

Release Notes - SOBEK - May 2013: 2.13.002

New Features

SOBEK-21941 Functionality to allow interpolation of Cross-Section data over a "Flow - Connection Node"
SOBEK-23728 Create HIS-File (PUMP.HIS) to store specific Pump Output
SOBEK-21026 Create HIS-File (MEASSTAT.HIS) to store output data of measurement stations

Implemented Improvements

SOBEK-24934 Increase default density of air in SOBEK from 1 kg/m³ to 1.205 kg/m³ for new models (old models will not be changed automatically)
SOBEK-24889 Settings: Disable "Steady Calculation" option for 1D modules when 2D has been enabled
SOBEK-24882 Set default simulation time step of 1D Rural and Urban modules to 1 minute (was 1 hour)
SOBEK-24879 Restore 2D Settings option "Assume lowest level of embankments" and several YZ-Profile and 1D2D-Connection issues
SOBEK-24791 Write lateral flow output at calculation points
SOBEK-24786 Remove linkage node type from 'Add Node' menu
SOBEK-24759 Capsum refinement: limit percolation from unsaturated zone to groundwater to Ksat; this may also lead to limits on infiltration from surface to unsaturated zone
SOBEK-24744 Allow larger values for Boundaries in / Boundaries out to be written in SIMULATE.REP file
SOBEK-24743 Store Parsen.msg and Parsen.dmp files in WORK directory instead of in CMTWORK
SOBEK-24742 Enable pressure line in SideView by default
SOBEK-24735 Write "Lateral flow reduction" as output (allowing easy visualising of locations where lateral flow is reduced)
SOBEK-24594 Remove references to "crash" from simulate messages to prevent user confusion when simulation stops with error message
Settings: It should not be possible to select both the Urban and Water Quality modules together even when selecting additional modules (for instance RR)
SOBEK-24588 Upgrade PARSER from NEFIS 3.11 to NEFIS 5.06
SOBEK-24358 ModelEdit: Do not allow SCS surface of 0
Settings: Add option "Allowable Lateral Outflow Volume / Available Water Volume (default = 0.9)", allowing users to choose how much volume of water can be laterally withdrawn per time step. Note: Set value to 0.2 for compatibility with old SOBEK results
SOBEK-24342 Do not allow most non-alphanumeric characters when defining/editing IDs (question marks, commas, etc.)
SOBEK-24335 Parser: Do not process LATERAL.DAT when not necessary (improving performance)
SOBEK-24309 Automatically reduce time-step in case the lateral inflow at a reach segment is larger than the volume stored in this reach segment
Flow error messages: "Street level of storage node with node-ID 'ID' is lower than the bottom level" should be given for all relevant locations instead of 1-by-1
SOBEK-24303 Do not show deprecated Installation Type (StandAlone) during installation summary
SOBEK-24270 Give warning in Parser when table length > periodicity
SOBEK-24252 SOBEK.log file contains "BalanceOut", must be "Balance error" and other minor SOBEK.log improvements
ModelEdit: Do not allow PID controller initial steer-value (e.g. structure parameter) to differ between Controller tab and Structure Definition Tab
SOBEK-24107 Make all controllers double precision (reducing difficult to explain controller behaviour due to rounding issues)
SOBEK-24105 Remove license check from Simulate
SOBEK-24104 Implement check on Monotonic Increasing/Decreasing values for "Relative-from-value Time Controller" into PARSER
SOBEK-24090 Only monotonic in-time rising steer-values or monotonic in-time descending steer-values should be allowed in the controller table of a "Relative-from-value Time Controller"
SOBEK-24088 Add cross-section ID to parser error messages about cross-section definitions
SOBEK-24053 First line in 2D ascii files should not begin with "/" run: dm1 , crea....." since GIS software (e.g. ArcGIS) expects 'ncols' at the first line
SOBEK-23994 Detailed information about simulation duration and timestep reductions should be written in TIMERS.HIS
SOBEK-23947 When present on same branch, delete Local (or Branch-wise) Friction' record when saving Cross-Section with 'Cross-Section Friction' (Y-Z or Asymmetrical Trapezium profiles)
SOBEK-23824 Add table input for pump stages of "Flow - Pump Station", allowing easier input of pump data
SOBEK-23812 Use relative paths to store roughness grids (instead of absolute paths)
SOBEK-23744 Remove limitation for number of (RR-) links of 2 * number of nodes
SOBEK-23708 In the reduction table of a "Flow - Pump station" only positive value for pump head (h-delivery minus h-suction) and only reduction factors varying between 0 and 1 should be allowed
SOBEK-23706 SOBEK-Stekker: Add Rational Method functionality to SUF-OW importer
SOBEK-23691 For waterlevels equal or larger than the crown level (Bovenkant/Binnenkant/Buis) of all closed cross-section types (including closed Tabulated profiles), missing values for the Froude number should be given instead of zero value
SOBEK-23643 RR: Make salt computations double precision
SOBEK-23555 Show RR balance error message when both the balance error as % of inflow > 1% AND the balance error as % of the inflow > 1%
SOBEK-23075 Improve error message when "Unpaved Surface Flow Link" branch is used for groundwater outflow
SOBEK-22590 Make minimum nonzero volume test for unpaved storage on land consistent with minimum volume criterion in salt computations (both are now 1.0 E-4)
SOBEK-22200 Store u- and v- velocities in 2D restart files
SOBEK-21107 Steady flow must not be possible when RR or RTC are active

Documentation

SOBEK-24596 Add documentation for time step reductions and 'Simulation output at Reach Segments' to manual

Resolved issues

SOBEK-24903 PARSER does not stop with error message in case of missing FLDI-records, (used for diffuse laterals or "Flow - Channel with lateral discharge") causing unexpected behaviour or crash without error message
SOBEK-24834 Possible RR crash in model with many deleted objects with runoff (fixed by updated Manhole/Pipe with runoff reading routine for lots of unused/deleted data)
SOBEK-24821 SideView: Surface levels are not shown correctly at boundaries
SOBEK-24813 1D2D: Simulation can stop with (Windows) error in models with non-uniform distribution of data and no-data cells along rows and/or along columns
SOBEK-24796 Bottom levels incorrect in dimensions at Nodes (calcdim.his)
SOBEK-24796 Error when simulating model as assembly (As) and connecting multiple branches to boundary; Error 457 (This key is already associated with an element of this collection) in procedure CheckUniques of Module General
SOBEK-24765 MODELEDIT: Variable Capacity for Sewer Pump of Paved Node shows runtime error
SOBEK-24755 Column headers of Multiple Data Editor export are divided over multiple rows
SOBEK-24623 Instability in SOBEK due to large lateral inflows
SOBEK-24602 At reach segments that contain a culvert with an invert level above the bottom of the adjacent cross section, SOBEK uses the invert level as the bottom of the cross section for computing the water volume
SOBEK-24601 User Defined Objects: "Selected fraction" of "Flow - Channel with lateral discharge" is not saved correctly after reopening the User Defined Objects editor
SOBEK-24501 1D2D: When simulating with the option "Assume Highest Level of Embankments", 2D grid cell bottom levels can be raised with maximum 1D profile width instead of to highest 1D profile level
SOBEK-24475 SOBEKSIM creates incorrect number of locations in CALCDIM.HIS, causing mismatch with CALCPNT.HIS
SOBEK-24444 ModelEdit: Infrequent Run-time error '457' in Windows 7 when editing 2D grid friction
SOBEK-24383 Possible incorrect check for flooding levels when using Dutch regional settings in combination with user-defined numerical parameters
SOBEK-24354 Warning message "Street level lower than well depth in node..." is shown for nodes without storage where it is irrelevant
SOBEK-24339 Round, Trapezium and Egg-shaped cross sections can be calculated incorrectly when model contains > 9999 cross sections
SOBEK-24333 Street levels are incorrect for manholes connected to 2D-Grid
SOBEK-24332 Simulate error message: The Simulation ended prematurely: Module Unknown
SOBEK-24255 Time and Hydraulic Triggers: Periodicity of the Evaluation criteria [e.g. And/Or] is not always dealt with correctly
SOBEK-24196 For update frequency > 1, the steer value lags one time-step behind
SOBEK-24195 MODELEDIT crashes after changing Connection Node with Interpolation into Boundary Node
SOBEK-24161 Periodicity of "Hydraulic Trigger" and Periodicity of "Combined Time Hydraulic Trigger" does not work correctly
SOBEK-24152 Number of incremental output classes in output file is one higher than the number of incremental output classes defined in user interface
SOBEK-24146 Relative-from-value Time Controller with descending Controller Table does not work correctly in case last row of the Table has been reached and Controller Table has not yet been made absolute again
SOBEK-24120 Time-Trigger with periodicity does not work correctly when (time) length of "Time - Trigger" table is >= the periodicity of the Time-Trigger.
SOBEK-24113 Simulation can sometimes stop without error message when interpolation over connection nodes is used
SOBEK-24083 Relative-Time Controller and Relative-from-value Time Controller: At T=t+dt the relative time table should be made absolute using point-in-time T=t instead of T=t
SOBEK-24039 Lateral discharge value at the first time step not written to Qlat.his file (Qlat=0 is written instead)
SOBEK-24019 SBKCLEANUP does not remove FLDI-records when channel type has changed from channel with lateral into normal channel
SOBEK-23964 Crash without error when storage node bottom level > bottom level of branch
SOBEK-23937 Location tab of "Flow - Channel with lateral discharge" shows white square
SOBEK-23850 1D2D: When the bottom level of a 1D node with storage does not match 1D branch bed level, the underlying 2D grid cell bed level can be incorrectly modified
SOBEK-23822 Confusing definition of top level of bottom reservoir in case option "Closed" or "Loss" is used for the Street level, e.g. top level of bottom reservoir is street level
SOBEK-23782 Flow - Connection node with storage and lateral flow requires storage area > 0 but chooses a default value for storage of 0

SOBEK-23749 Water can enter model from 2D water level boundary even when defined water level is far below the bed level of the adjacent 2D gridcell

SOBEK-23729 Bos&Bijkerk formula in closed Tabulated profile gives unexpected Chezy value and hence discharge, froude and conveyance

SOBEK-23703 Reduction Table in "Flow - Pump Station" is not applied correctly for negative pump direction. Erroneous pump capacity reduction when water level at suction-side is above the water level at the delivery-side of the pump and vice versa

SOBEK-23702 Chezy output in Flow History output for Delwaq and in RSegSub not consistent (Chezy in RsegSub output is incorrect)

SOBEK-23700 Reduction Table in "Flow - Pump Station" is not applied correctly for positive pump direction. Erroneous pump capacity reduction when water level at suction-side is above the water level at the delivery-side of the pump and vice versa

SOBEK-23696 No dead band triggers applied for RPM2 to RPM6 when Suction and Delivery switch-on-levels and switch-off-levels are defined

SOBEK-23652 Online Visualisation: Inconsistency in waterdepth output. In the downstream velocity node incorrect waterdepth is given. In upstream velocity node the correct waterdepth is given

SOBEK-22978 Problems with SOBEK-RR restart file due to read-error for Sacramento data

SOBEK-22885 Incorrect array-index used for unpaved-surfacewater link to RR-open water node, possibly causing unexplained behaviour

SOBEK-22716 RR can crash with error: subscript out of range - RunoffComputationOption

SOBEK-22715 RR-RTC on-line communication file is extended with some parameters, but not yet accepted by RTC

SOBEK-22596 Location ID and description (name) do not match after cutting off part of a model containing named boundaries

SOBEK-22483 Given names of grid points/reaches/links are not written to HIA-Files

SOBEK-22093 Salt computations in RR: Incorrect in case of flow from RR-CF connection to unpaved node

SOBEK-21490 Synchronisation issues in Flow-RTC computation (solved by changing RTC time computations from Single- to Double Precision)

Beta functionality

SOBEK-22102 Implementation of green roof in NWRW urban runoff model (Beta status)

SOBEK-21210 Functionality: SOBEK YZ Cross Section Builder (Beta status)

SOBEK-20844 SideView and reachseg.his energy line functionality for pipes (Beta status)

SOBEK-14076 RR Functionality of Wadi (infiltration & percolation out of sewer to ground water) (Beta status)

SOBEK-11160 Functionality: Extra Resistance node (Beta status)