

## Release Notes - SOBEK 2.14.001 - July 2015

### New Features

- SOBEK-24274 Implementation of Drainage Channels (Lumped Y-Z profiles)
- SOBEK-23004 Implementation of pipes with infiltration
- SOBEK-24854 Functionality: Extra Resistance node
- SOBEK-20574 RTC-MATLAB coupling independent of MATLAB version

### Implemented Improvements

- SOBEK-49324 RR output should be reorganised to contain only relevant output depending on which RR-concept is used (HBV, NAM, SCS, LGSI, Wagmod)
- SOBEK-49315 PARSER: Give clear error message in case of failure when reading table data
- SOBEK-49292 Add error message when placing Extra Resistance nodes on same reach segment as structure
- SOBEK-49291 Add error message when placing Extra Resistance nodes on segments other than Open Channel or Open Channel with Lateral flow
- SOBEK-49290 Add error message when placing more than one Extra Resistance node on a reach segment
- SOBEK-49289 Add error message when placing Extra Resistance Node on a Reach Segment adjacent to a Boundary node
- SOBEK-49288 Add error message when placing Extra Resistance node on a h-calculation point, Connection Node or Boundary node
- SOBEK-49278 Make Tab-order consistent for all (sub)-windows of SETTINGS
- SOBEK-49276 Remove option Extra Resistance  $\Delta h = \eta \cdot \Delta x$  from UI, PARSER and FLOW
- SOBEK-49264 PARSER: check on consistency of table headers and number of columns
- SOBEK-49261 Improve Krayenhoff vd Leur accuracy and include in restart file
- SOBEK-49257 Delwaq: Increase maximum amount of fraction types and substances (up from 100)
- SOBEK-49062 ModelEdit, rename text string "Constant Intensity" into "Constant Rainfall"
- SOBEK-49026 Set Dispersion to Nothing/MissingValue instead of 0 for Closed Boundaries, Pumps and (actual) Closed Structures to prevent spikes
- SOBEK-48960 Make friction type for bed and ground layer consistent in friction.dat records of converted models
- SOBEK-48952 Controller improvements: 1. Use direct double precision values instead of copied single precision values for water level and flow. 2. User-defined initial discharge is not used by hydraulic controller for determining structure parameter at  $t=0+dt$
- SOBEK-48950 Change how CrossBuffFactor is used to calculate parser buffer size, allowing more models to simulate with default parsen.ini
- SOBEK-48937 Do not provide mean conveyance as output parameter
- SOBEK-48921 Change default storage of "Connection Node with Storage and Lateral Flow" from 0 to 0.1 (old models will not be changed automatically)
- SOBEK-48818 Increase amount of RR-Inflows SOBEKSIM can handle from 1000 to 5000
- SOBEK-48737 Allow users to allocate lateral discharge according to (1) Nearest water level point or (2) Lowest water level point in Settings
- SOBEK-48725 Extend the sobek adapter options with option for 1d\_flow\_boundary\_dat\_file and 1d\_flow\_control\_def\_file
- SOBEK-25181 Clarify universal weir input fields in ModelEdit
- SOBEK-25128 Change defaults for PowerGwl and PowerRz to 2.0 (from 1.0) in DELFT\_3B.INI (old models will not be changed automatically)
- SOBEK-25121 Remove unnecessary PARSER errors about External Structures
- SOBEK-25103 Once Hydraulic Trigger: Make triggering on weir located on 1D Dambreak possible (make relative-start-time and relative-vertical-lowering-time for the initial vertical lowering of the crest level possible)
- SOBEK-25102 Allow connection node interpolation over branches without profiles
- SOBEK-25079 Replace option "CorrectionForCulverts" with the new (similar) option "MaxLoweringCrossAtCulvert"
- SOBEK-25078 Disable automatic lowering of bed level at culverts below bed level and make "MaxLoweringCrossAtCulvert" a user-defined value in Settings
- SOBEK-25038 Remove deprecated 16-bit Map Converter application
- SOBEK-24934 Increase default density of air in SOBEK from 1 kg/m<sup>3</sup> to 1.205 kg/m<sup>3</sup> 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-24467 Include ReaHis executable in SOBEK setup
- SOBEK-23992 Improve error handling RR-Routing data (missing data) to give error message on missing data
- SOBEK-22936 Save disabling of map in Results in Maps and Schematisation
- SOBEK-25255 New node: Flow Connection Node with Lateral (no storage)

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### Resolved issues

SOBEK-49445	RR - correction unpaved Capsim UserFactVRZ should take into account timestepsize
SOBEK-49390	Various text changes on Dam Break Tab of the 1D Dam Break Reach
SOBEK-49386	Disable "Block function" and "Periodicity" for Controller Table at 1D-Dambreak
SOBEK-49380	Breach growth width in Verhey-vdKnaap not limited for Uc (critical flow velocity)
SOBEK-49353	Balance error in complicated networks with many RR-connections
SOBEK-49310	PARSER crashes when YZ-Profile is located on Channel with Diffuse Lateral
SOBEK-49309	Maximum Lowering of Bed Level at Culverts: sobek.log sometimes contains empty Link-ID in warning messages
SOBEK-49304	Left column of Relative time controller at 1D Dambreak contains relative time in Date-Time format instead of relative time
SOBEK-49242	ID in SOBEK.log messages about negative depth does not match with negative depth ID in flowanal.his
SOBEK-49195	Structure Names are not stored in HIA-file
SOBEK-49108	SideView: Flood fill does not fill manholes in SOBEK 2.13.002
SOBEK-49094	SUF-HYD import: DWA definitions are not taken into account in simulation
SOBEK-49083	Irrelevant sobek.log messages: Message about minimum width of Cross-Section not relevant at Top of Profile
SOBEK-49058	Coordinate shift at import SUFHVD does not work
SOBEK-49057	Rename "Rational Method" (1D Flow model) to "Area Based"
SOBEK-48954	DufLOW import error message: Profile definitions are written more than once
SOBEK-48942	Implement stricter checks on user-defined Y-Z profiles
SOBEK-48941	Dispersion is only calculated for first structure in compound structures
SOBEK-48905	Missing values for flow area are found for several structure types in STRUC.HIS
SOBEK-48838	Make definition of "Capacity reduction factors" for (External) Pump stations less strict (including allowing negative pump head)
SOBEK-48835	Balance error occurs in model when using different values for 'minimum surface in nodes' and 'minimum surface at street'
SOBEK-48815	Crash when using a very large amount of 2D boundaries
SOBEK-48764	Incorrect IDs in log file when Parser shows error: Illegal definition of trapezoidal cross section
SOBEK-48760	RR cannot to handle old pluvius.3b format for models with "Pipe with Runoff" and special area (regression in 2.13.002)
SOBEK-48703	MODELEdit: values for ground layer friction are not saved correctly
SOBEK-48679	For pressurized flow in both closed Tabulated & closed Y-Z profiles yields that the maximum waterdepth in computing the Bos&Bijkerk roughness is not limited to the inner height of the closed profile
SOBEK-25327	When boundary level is above surface, no runoff from unpaved is computed, even if storage on land is such that surface level + storage on land > boundary level
SOBEK-25326	When ground water (gw) exceeds surface, inactive drainage layers also become active
SOBEK-25289	Wrong bottom level in results when Profile.dat does not contain rl keyword (modeledit shows cross-section shift 0.0, Parser calculates differently)
SOBEK-25249	Paved node: After reopening single data editor and re-saving a node containing Sewer Type "Separate system" or "Improved Separate system", the setting for "DWF Sewer Pump Discharge" becomes the same as the setting for "Mixed/Rainfall Sewer Pump Discharge"
SOBEK-25200	RR-connection/bifurcation problem in case of user-defined distribution and non-numerical link IDs
SOBEK-25194	SOBEK results for vertically extended YZ profile are different than for original YZ profile (vertical walls should be assumed above highest cross section point)
SOBEK-25185	When .his file is provided to odssvr20.dll with / instead of \ slashes, the *.hia file is not found
SOBEK-25173	Unit for gravity is wrong in SIMULATE.REP: m2/s instead of m/s2
SOBEK-25169	Synchronize the assignment of (Point&Diffusive) Lateral Flows to h-points in SOBEK2 and SOBEK3
SOBEK-25129	Flow crashes in 1D2D computation without error message (access violation) when Q or QH-line boundary is located between active cells
SOBEK-25111	SideView error when importing user data: "Error while reading ascii-file with user data: Subscript out of range"
SOBEK-25089	Remove incorrect 2D-PARSER error about 2D-Dambreaks and remove unnecessary warnings about 2D boundaries
SOBEK-25086	ModelEdit very rarely mixes up the creation and use of 2D-Dambreak definitions
SOBEK-25085	Flow error message "For YZ-profile near node x change storage type from LOSS to RESERVOIR in Edit Storage on Surface Level i.c. WQ" can be given in Urban model without Y-Z profiles and without WQ module
SOBEK-25062	Rainfall input data in RR is lagging behind (Evaporation input data in RR is dealt with correctly)
SOBEK-25035	2.13.002: RR stops without error message when simulating simultaneous RR-Flow model sequentially (instead of stopping with a clear error message)

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SOBEK-25023	Message "No Convergence for CG Method" is not written to SOBEK.LOG
SOBEK-25021	Check Flow model incorrectly gives error 'incorrect measurement location defined for controller' for Hydraulic Controllers steered using structure values
SOBEK-25008	Extra Resistance Up and Down locations are switched in case of negative flow
SOBEK-25004	Interpolation for Extra Resistance Tables is in block mode instead of linear
SOBEK-24973	Flow crash without error in 1D2D model in SOBEK 2.12.004 and later (very rare regression in 2.13.002)
SOBEK-24960	PARSER: Skip wind records for non-existing branches instead of stopping simulation
SOBEK-24939	Options MinimumSurfaceInNode and MinimumSurfaceAtStreet did not always work (minimum storage was not added above surface level)
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-24899	RR drainage not correct in case groundwater level is above surface level
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-24822	Surface levels can be incorrect (values of ~ -99999) for Urban networks
SOBEK-24789	The velocity and waterlevel point in the message in the SOBEK.LOG file: "dt estimated at ...." are not related
SOBEK-24576	Rainfall Runoff HIS files sometimes contain parameters without description
SOBEK-24403	Case Analysis Tool crashes in Windows 8
SOBEK-24319	RR - Unpaved node with Capsim and Ernst might not always be drained correctly, fixed by implementing Double Precision for unpaved
SOBEK-24316	When RR-HBV is used in combination with a restart file, RR crashes
SOBEK-22107	SOBEK.LOG contains undesired CrLf's (new lines), possibly cutting off IDs
SOBEK-13739	Input visualisation: Elevation for culverts behaves differently than for universal weirs