iMOD

Deltares

Enabling Delta Life

Release Notes

iMOD

Release Notes

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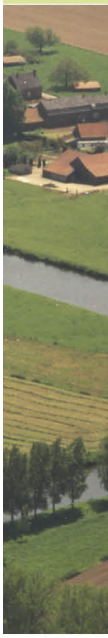
Version	**3.01.00**	**iMOD_V3_01_00_X32R.exe (for 32-bit systems)** **iMOD_V3_01_00_X64R.exe (for 64-bit systems)**
Date	18-9-2015	
Based On	3.00.00	
Changed Functionality	SVN 32	- Displays Bitmaps in the SOLID TOOL, in cross-sections and 3D displays.
	SVN 33	- MODFLOW2000 does not have the capability as MODFLOW2005 does, to use LENUNI and ITMUNI; when importing a MODFLOW2000 model LENUNI and ITMUNI are set separately.
	SVN 46	- Keywords MONTHLY and YEARLY added to the functionality of the iMODBATCH function XYZ2IDF. In combination with a transient IPF (including a TXT file), it is possible to grid the IPF for mean values for selected years or months.
	SVN 46	- Changed ACCURACY from EPSILON(1.0) to 0.0 in the IMODPATH. This influences the minimal velocity that determines whether a particles does not move anymore, by changing it into 0.0 m/day, particles will continue until they truly stop. The value EPSILON(1.0) yielded the value 1.1920929E-07 m/day.
	SVN 48	- Changed the method to write the borehole information in TXT file for IPF files created by the iMODBATCH function DINO2IPF, in situation whereby no values are read, the value becomes "None".
	SVN 70	- The iMODBatch function IMPORTMODFLOW has been modified such that it can read external files with a MODFLOW-88 format. - The iMODBatch function ISGGRID has been extended to export the gridded data to a MODFLOW river file (SCD format).
	SVN 79	- The keywords for the SOLIDTOOL are changed from TOP and BOT into INT to make it possible to construct subsoils with an uneven number of interfaces. - The Darcian upscaling method reviewed and updated.
	SVN 91	- The iMODBATCH function ISGGRID extended to support the export to svatswnr_drng.inp used by MetaSWAP. - Problems with rendering on a Remote Desktop Server(s) related to Winteracter 10. Included an iMOD version based on Winteracter 8 that does not have these problems. In this Winteracter 8 - Remote Desktop Server-version some (minor) functionalities of iMOD are not supported on the RDP-server(s).
	SVN 165	- SOLIDTOOL corrects layers that crosses the lowest layer.
	SVN 166	- IMODBATCH the function IPFSAMPLE includes the parameter IACOL to specify the column to start inserting the sampled data.
	SVN 299	- Enlarged fields (20/50) to (52) in *.dlf files.
New Functionality	SVN 39	- Added the iMODBATCH functionality UTM2LATLONG to transform IDF UTM coordinates to a Lat-Long IPF with data, e.g. to be gridded by the IMODBATCH functionality XYZ2IDF.
	SVN 43	- Added functionality to the WATERBALANCE TOOL to use hours, minutes and seconds as time scales, so IDF files with date and time identifications become processed, e.g. HEAD_20141231063000 as the head on the 31^st of December 2014 at 6hours, 30 minutes and 0 seconds. - Added functionality to the TIMESERIES TOOL to plot time series using hours, minutes and seconds as time scale.
	SVN 48	- Increase the size for the grid fields automatically in IPFANALYSE whenever borelogs/time series are identified.
	SVN 51	- Reading IPF files with associated TXT files with long dates (yyyymmddhhmmss).



	SVN 70	- Added the iMOD Batch functionality ISGADDSTAGE to add and/or modify existing waterlevels in an ISG file from a given IPF file with timeseries.
	SVN 71	- Added the functionalities *Go Back to Previous Extent* and *Go to Next Extent* on the main icon bar and the *Cross-Section* window.
	SVN 163	- Export possible from the SOLID tool to the GEO format as used by GeoSoftware of Deltares. - The SOLID tool supports the dynamic use of different cell size for each interface. - In IMPORTMODFLOW function the Modflow scheme 1996 is supported. - Size of the profile tool increased and gave it a red colour.
	SVN 236	- Reading of *.MAP files from PCRaster.
	SVN 269	- Context-sensitive HELP-functionality: adding section-bookmarks to the iMOD User Manual and synchronize the list of bookmarks in iMOD.
	SVN 283	- The IDF-function for exportation of IDF-files to ascii-files is extended with the "Export given extent"-functionality.
	SVN 290	Reading of GEF files, as addition to iMODBATch function GEF2IPF.
Fixed Bugs	SVN 34	- Bug in IPFSAMPLING in combination with CSV-file format.
	SVN 46	- SAVE button didn't work for steady-state configuration, also the selection of a different model layer didn't responded accordingly.
	SVN 47	- Bug in iMODPATH using NCON=0 should be NCON=1.
	SVN 51	- Bug in IDFCALC whenever the function MIN,MAX,MEAN or SUM is selected; the variable LEX was not initiated. - Bug in X64 versions only: in displaying the license agreement, the variable IU was not initiated.
	SVN 60	- Bug in WATERBALANCE as a result of implementation of SVN 43, dates with 8 digits didn't work anymore.
	SVN 70	- Bug in default legends that could not be saved temporarily whenever a relative pathname was specified by the USER keyword in the preference file.
	SVN 72	- Bug on the *Add Topography* window as the coordinates could not be manipulated appropriately.
	SVN 76	- Bug in memory allocation for the Quick-Response Tool. - Bug in reading IPF files as CSV using the double quotes.
	SVN 77	- Bug in display of IFF lines in the 3D Tool that are vertically.
	SVN 88	- Export format for the output files for iMODPATH (IFF and IPF) synchronized. - Identical algorithm used in the postprocessing of pathlines in the iMODBATCH function iMODPATH, to determine appropriate cell indices for points as used in iMODFLOW. This means that points that are exactly on the boundary of model cell will be assigned to the i+1 cell instead of i.
	SVN 163	- Bug in creation of legend where the difference exceeds the range of a single precision real, namely >10.0+e37. For those cases the legend will be inaccurate but iMOD will not hang. - The display of the *NodataValue* of an IDF is displayed correctly in MapInfo and IDF Edit displays.
	SVN 213	- Bug in *Compute Mean Values...*, after measuring the mean the specific dialog window cannot be closed neither it is possible to proceed with the iMOD session.
	SVN 216	- Bug in positioning of labels in 3D-tool. Labels did disappeared when turning the 3D-schematisation under certain angles.
	SVN 218	- Update of keywords vor iMOD Batch in code.
	SVN 226	- Fix coordinates in CreateIDF whenever changes are made in the dialog.
	SVN 240	- Correct reading of run-files in the ModelTool without bounding coordinates in submodels.

	SVN 254	- iMOD Batch reading of keuword with an extra space after the "="-signs raised a problem. This has been fixed, as it was noticed by the GxG-function in iMOD Batch using the keyword IPERIOD=.
	SVN 267	- Changed the keyword CROSS-SECTION_IN to CROSSSECTION_IN
	SVN 287	- Fixed bug in reading *prf having a last empty line.
	SVN 298	- No capitalizing input from *.ini file.
	SVN 299	- Colouring of the correct field using DLF legends.

Version	**3.2.00**	**iMOD_V3_2_X32R.exe (for 32-bit systems) iMOD_V3_2_X64R.exe (for 64-bit systems)**
Date	11-11-2015	
Based On	3.01.00	
Changed Functionality	SVN 305	- Reading/assignment of DLF files (maximal 10) for usage within Profile Tool, 3D Tool and IPF Analyse.
	SVN 309	- Usage of the DLF field colourwidth to display boreholes with variable widths. - include the keyword STOPERROR in BAS file for convergence issues in Modflow2005.
	SVN 312	- Labeling of IPF files in the 3D tool can be specific selected for each IPF separately.
	SVN 320	- ISGGRID create nodatavalues (-9999.00) for cells not intersected by lines.
	SVN 325	- IMPORTSOBEK stopped whenever actual length weren't equal to the lengths based upon the nodes of the segment. The import now is not stopped but a warning is issued to the file importsobek.log and the process continues. - Enlarged fields (20/50) to (52) in *.dlf files.
New Functionality	SVN 305	- Add screen number for IPF and IFF in the profile tool. - Use different legends for IPF files (*DLF).
	SVN 309	- Save DLF legends in IMF-files. - Manually activate display of IPF/IFF files during moving/drawing the cross-section. - Mousemove coupled to location in identification window in IPF Analyse via Profile Tool.
	SVN 320	- Saving of solid files during editing without leaving the cross-section tool. - Extended the IMODBatch functionality ISGEXPORT with keyword IEXPORT to denote export of calculation points or cross-sections.
	SVN 326	- Remove and/or modify more nodes in SOLIDTOOL simultaneously
	SVN 341	- Added Inf and NaN in IDF Edit to search on those values in the IDF files.
	SVN 343	- Added an active/deactive code per line in the SolidTool. Now per line it can be specified whether or not it need to be included in the solid.
	SVN 351	- Added functionality in the 3D Tool to zoom to predefined zoom scales. - Display the lines in the cross-sections as true splines or straight lines.
	SVN 364	- Change timesteps in the projectmanager. - Save cross-sections and 3D Tool configurations in a iMOD Demo-mode.

	SVN 370	- Include the option sign() as a function in IDF Calc, subtract only whenever the sign of the two are equal and use pointer values to note the type of difference. - the iMODFLOW-executable present in the *{installfolder}* will be invoked instead of the iMODFLOW-executable copied to {installfolder}\MODELS\{Result Folder}.
	SVN 375	- Usage of preference colours for the default legend. - Apply a value in IDFCalc to "trim" outcome of calculation whenever the outcome is less than a specified absolute value
	SVN 401	- Export to Modflow2005, give explicitly if the model is 3D or Quasi 3D.
Fixed Bugs	SVN 306	- iMODBatch ISGSIMPLIFY removal of first and last calculation point in case stage were completely flat. - iMODBatch CREATESOF correct usage of given OUTLET points to stop tracing the drainage level.
	SVN 309	- Screen number were outgreyed in Profile Tool. - Export of BND to Modflow2005 created constant head along submodel as it was filled with nodata from IDF.
	SVN 312	- Display of bitmaps in 3D Tool in combination with bitmaps attached to solid cross-sections.
	SVN 343	- Total length of line in SolidTool didn't match true length, only visible in cross-sections with many points.
	SVN 351	- Delete of spf will not shift attached bitmaps appropriately.
	SVN 376	- Use of small-caps for FUNC in IDFCALC gave errors.
	SVN 378	- Bug in smoothing the IDF files whenever the file to be used for the smoothing exceeds the size of the IDF to be smoothed upon.

Version	**3.2.1**	**iMOD_V3_2_1_X32R.exe (for 32-bit systems)** **iMOD_V3_2_1_X64R.exe (for 64-bit systems)**
Date	24-11-2015	
Based On	3.2	
New Functionality	SVN 440	iMOD-GUI can now invoke iMODFLOW using foldernames containing spaces.
Changed Functionality		
Fixed Bugs		

Version	**3.3**	**iMOD_V3_3_X32R.exe (for 32-bit systems)** **iMOD_V3_3_X64R.exe (for 64-bit systems)**
Date	25-03-2016	
Based On	3.2.1	
New Functionality	SVN 439	- Specify the option to reduce sizes of boreholes if they do not fit next to each other and thus may overlap.
	SVN 466	- Added iMODBatch function RUNFILE, to create *.PRF from *.RUN files and/or create *.RUN files out of *.PRJ files.

	SVN 471	- Project Manager supports now the creation of RUNFILES. - PlugIn Tool is added as an additional tool to support external programs or scripts to be invoked by iMOD and exchange input and output. - Added an extra MetaSWAP output component to the waterbalance tool (BDGPSSW).
	SVN 471	- The Interactive Pathline Simulator tool for animating groundwater flow.
	SVN 487	- Added units to waterbalance items.
	SVN 502	- Added an option to change the transparancy of individual IDF files in the 3D Tool.
	SVN 512	- The IPS functionality can now be started from the Pathline Tool.
	SVN 520	- The usage of breaklines in the SOLID Tool is made available in the GUI. - Coordinates in the Profile Tool can be decreased in number by specifying a minimal distance between coordinates. - Compute differences in IDFTIMESERIES can handle IDF files with hours, minutes and seconds.
	SVN 528	- Automatic spinner in 3-D. - Entry of scale ratio in the Profile Tool. - Display label and size on the cross-section for the SOLID Tool on 2D
	SVN 541	- Kriging settings can be defined per interface.
	SVN 544	- Automatic rendering of the image in a circular movement in 3D by pressing the spacebar.
	SVN 546	- Bitmap in the background of cross-sections in the SOLID Tool can be temporarily hidden and fixed so that it cannot be moved while adjusting the lines of the cross-section.
Changed Functionality	SVN 422	- Solid Tool; Compute Interfaces window. Export to *.geo is with the "version" name attached to the keyword VERSION.
	SVN 439	- Spline mode in Solid Tool is "off" by default, for export to IPF or GEO.
	SVN 489	- The IPS module can create a temporary submodel for particle tracking purposes. - The reading module or the imodpath entries has been made similar to other scaling modules.
	SVN 504	- PNG, PCX and JPG file can now by used as background images, and can be resized and flipped horizontally and vertically. - iMODBatch function CREATEIDF will NOT ask to overwrite existing IDF-files while importing ASC-files, GUI still does. - Read in GEN file in Profile Tool are corrected for duplicated points.
	SVN 507	- Previous foldernames are saved to be re-used in next search in folders.
	SVN 512	- Pathline Tool creates its runfile in the RUNFILE folder instead of the TMP folder, it also creates a stamp of the chosen model result folder in the filename. - Adjustment of the NODATA value in the IDF file, causes that the content of the IDF file itself will be changed accordingly. So values that are equal to the previous NODATA value, will become adapted to the new NODATA value. - Bitmaps that can be positioned behind the cross section in the solid tool, can be stretched and moved interactively whenever the corresponding bitmap is selected from the Add Background Image dialog. - Background Images may be BMP, PNG, PCX and JPG files.
	SVN 516	- IFF attributes can be plotted all, also whenever the number of columns are enlarged above 7.

Fixed Bugs	SVN 418	- Translate x,y coordinates from shape files into GEN files using the double-precision format. - Non-existing background files are turned off and properly reset.
	SVN 427	- Bug in reading the CLR files and display them in the preference tab.
	SVN 429	- Bug in collecting correct dates in the waterbalance tool.
	SVN 432	- When defining a new function using iMODBatch, now the correct function is presented (instead of the next function from the list of available functions).
	SVN 443	- Whenever IPF files are not active in profile tool setting the snapping option was not available.
	SVN 466	- Bug in ISG grid in combination with 2d and 1d cross-sections.
	SVN 467	- iMODBATCH function MKWELLIPF ignored ICLAY variable.
	SVN 471	- Bugfix in Compute GXG. Selecting correct surface level.
	SVN 472	- Bigfux in iMODBatch PLOT function - usage of IPF files for timeseries plotting.
	SVN 482	- Usage of particles pass through all weak sinks gave problems whenever the weak sinks approaches a strong cell as an internal value 0f FRAC=0.99 was used to denote a strong cell, FRAC is now 1.0 and maximized to be 1.0 numerically. - Applying a fraction for iMODPATH (ISNK=3) didn't work from iMODBatch.
	SVN 486	- Computation of SUMC in IDFSCALE option 14, went wrong. - Applying lower-left coordinates in IDFSCALE went wrong.
	SVN 489	- Default colouring of IDF files was maximized to 50, following files got colour number 1, now the colour numbering continues.
	SVN 502	- Bug reading GEN files for overlays. - Intersect for non-equidistantial cell went wrong, created a killing bug for the profile-tool. - 3D tool with non-equidistantial IDF gave bug. - In profiletool, whenever a knickpoint was positioned outside the selected IDF, the profile length didn't take into account the extra space of the cross-section outside the IDf file.
	SVN 509	- Import of Modflow2005 the LENUNI variabel didn't applied correctly to EVT package and the elevation in the DIS whenever LAYCON=0.
	SVN 515	- Bug in timeseries export.
	SVN 528	- Load SHP file in CreateIDF from Polygons/lines.
	SVN 544	- Rasterizing ISG didn't take into account stages with nodata values for transient mean values.
	SVN 616	- Bug in Solid Tool by using the "pan" function in Zoom-in modus.

Version	**3.00.01**	**iMODFLOW_V3_00_01_METASWAP_SVN1004_X32R.exe (for X32-bit systems)** **iMODFLOW_V3_00_01_METASWAP_SVN1004_X64R.exe (for X64-bit systems)**
Date	15-10-2014	
Based On	3.00.00	
New Functionality		
Changed Functionality		linked with MetaSWAP SubVersion number 1004 from repository https://repos.deltares.nl/repos/GWSobek/trunk/src/modmsw/
Fixed Bugs	SVN 49	When a GEN-file coincides exactly with cell face no HFB-cell face was assigned resulting in a barrier with a hole. This bug has partially been fixed; with the real world test model NHI the bug fix works, however, the standard USGS HFB-test still fails because the test contains a barrier partly at a cell face. Version 3.00.01 was released because the bug manifests only in exceptional cases; a subsequent bugfix is planned to also fix these exceptional cases.

Version	**3.00.02**	**iMODFLOW_V3_00_02_METASWAP_SVN1004_X32R.exe (for X32-bit systems)** **iMODFLOW_V3_00_02_METASWAP_SVN1004_X64R.exe (for X63-bit systems)**
Date	20-11-2014	
Based On	3.00.01	
New Functionality		
Changed Functionality		
Fixed Bugs	SVN 80 SVN 81 SVN 82	IMOD-319: default value added for KVA-module (1.0). IMOD-327: bug fixed upscaling anisotropy factor (most frequent occurrence). Bug fixed applying factor for recharge.

Version	**3.01.00**	**iMODFLOW_V3_01_00_METASWAP_SVN1031_X64R.exe (for 64-systems)** **iMODFLOW_V3_01_00_X32R.exe (for 32-bit systems)** **iMODFLOW_V3_01_00_X64R.exe (for 64-bit systems)**
Date	17-07-2015	
Based On	3.00.02	
New Functionality	SVN 194	In Perched Water Table PWT-package: new conceptual enhancements implemented for how groundwater flows at the edges of a Perched Water Tables to avoid some numerical instabilities.

Changed Functionality		linked with MetaSWAP SubVersion number 1032 from repository https://repos.deltares.nl/repos/GWSobek/trunk/src/modmsw/
	SVN 188	Update for VS2008 (EXTERNAL statements removed) - Update for interface MODFLOW-TRANSOL.
	SVN 194	HFB-package update (based on an earlier implementation in iMODFLOW 2.6.) improving the discretization of curved lines to the model grid.
	SVN 202	PEST package update based on iMODFLOW 2.6.
	SVN 221	Update for TRANSOL interface.
	SVN 242	Update interface with TRANSOL to previous version.
	SVN 259	Some minor iPEST-messages and I/O adjustments.
	SVN 260	Removed 'modflow' subdirectory from output results directory.
	SVN 214, 215, 228-230, 234, 246	Update of iMOD license text.
Fixed Bugs	SVN 105	In SGWF2BCF7C: adding uninitialized variable CR to variables list.
	SVN 191	Initialization of constant CNSTNT added for u1drel and u2dint.
	SVN 212	In HFB package: minor error-correction for case that lines are outside model domain.
	SVN 238	In Grid2MetaSWAP: reading ascii files standard with xllcorner and yllcorner which also could be xllcenter and yllcenter.
	SVN 257	In coupling Modflow-MetaSWAP with Mozart: change of general missing parameter value.
	SVN 258	In HFB package: minor error-correction for case that lines are outside model domain.
	SVN 261	In ISG package: a small change in the ISG calculation routine was made.
	SVN 261	Automated scaling factor: the computation of the simulation window was sometimes incorrect in case the extent of the entered model was not exactly divisible by the cell size of the model.

Version	**3.2**	**iMODFLOW_V3_2_METASWAP_SVN1044_X64R.exe (for 64-systems) iMODFLOW_V3_2_X32R.exe (for 32-bit systems)**
Date	10-09-2015	
Based On	3.01.00	
New Functionality		
Changed Functionality		linked with MetaSWAP SubVersion nr. 1044 from repository https://repos.deltares.nl/repos/GWSobek/trunk/src/modmsw/
Fixed Bugs	SVN 317	Bug fix uninitialized arrays when using the ANI package. This problem may result in a floating point error at some machines.
	SVN 318	Bug fix automatic assigning ISG to layer: a floating point error (division by zero) might occur are specific machines.
	SVN 344	Bug fixes CHD-package: 1. input start/end head was swapped; 2. iMOD usage of factors (e.g. h = 0.5h1 + 0.5h2) was incorrect.
	SVN 352	Bug fix ISG 2-D cross sections.

Version	**3.2.1**	**iMODFLOW_V3_2_1_METASWAP_SVN1044_X64R.exe (for 64-systems) iMODFLOW_V3_2_1_X32R.exe (for 32-bit systems)**
Date	20-11-2015	
Based On	3.2	
New Functionality	SVN 438	iMODFLOW can now work with foldernames containing spaces.
Changed Functionality		
Fixed Bugs		

Version	**3.3**	**iMODFLOW_V3_3_METASWAP_SVN1047_X64R.exe (for 64-systems) iMODFLOW_V3_3_X32R.exe (for 32-bit systems)**
Date	25-03-2016	
Based On	3.2.1	
New Functionality		
Changed Functionality		linked with MetaSWAP SubVersion nr. 1047 from repository https://repos.deltares.nl/repos/GWSobek/trunk/src/modmsw/
Fixed Bugs	SVN 561 SVN 618 SVN 621	Restoring the gridding functionality of flow-width in ISG. Bug fix Metadata package (MET) timestep management in MODFLOW, causing a delayed read of transient well data. This bug was relevant when defining stress period lengths that were larger than the available time discretisation present in the ipf- and txt-files used as the source of the abstraction data. Adjusted scaling of well extraction from median value to mean values weighted to time - usage of nodata values in txt files.

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