RELEASE NOTES

BASELINE 7.1.0

(December 2025)

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1 Overview

Name   :   BASELINE
Version   :   7.1.0
Date   :   December 2025
Classification :   release
Distribution   :   https://iplo.nl/thema/water/applicaties-modellen/watermanagementmodellen/baseline/ (see Downloads)

The following tools are part of the installation:

* Bas2FM   1.0.30
* Baseline7 Input Module (BIM6)   each tool has a separate version
* Baseline7 Validation tools   34 (Protocol), 58 (Content)
* Baseline7 Convertor   4
* Baseline7 Waterlevel tool   0.1.7
* Baseline7 Fetch tool   2.0.0
* Baseline7 Special Elevation Model tool   1.0.0
* Baseline7 Raster1x1 To Points5x5   1.2
* Baseline7 Applying Subgrid Method   1.2
* Baswaq.exe (conversion to SWAN)   2.68

Baseline 7 is intended to generate input for the sixth-generation models of Rijkswaterstaat.

Baseline 7 is the successor of Baseline 6. It was necessary to replace Baseline 6, as it is based on ArcMap and ESRI stopped the support of ArcMap in 2024. Therefore the migration of Baseline to ArcGIS Pro was started. The approach has been a one-to-one migration of functionalities and dataprotocol. In July 2024 Baseline 7.0.0 became available and an update was scheduled for December 2024. This lead to Baseline 7.0.1 and 7.0.2, in which most of the known defects of the final Baseline 6 release (6.3.4) were addressed and solved.

Baseline 7.1.0 is compatible with D-HYDRO Suite 2023.01 (and higher) and with ArcGIS Pro 3.0 up to 3.4.2.

Please, take good notice of the "*Known issues*".

2   Documentation

1. Baseline7_Installation_Manual.pdf

2. Baseline7_Dataprotocol.pdf

3. Baseline7_Help.pdf

3   Major changes

3.1   In BASELINE 7.1.0

The main changes are:
- Added new (python) tool: Raster 1x1 To Points 5x5 in the Advanced tools section
- Added new (python) tool: Applying Subgrid Method in the Model section
- Updated Set Crest Elevation tool to include a new method (cross section for determining maximum value)
- Improved logging, while running multiple messages are now displayed
- Added Save option in the Batch tool to save the currently selected variants in a variant_list.txt
- A variant_list.txt file can now be selected in the Batch tool to add multiple variants (instead of the directory)
- Added licenses check per tool in the toolbar
- The toolbar is now only enabled in supported ArcGIS Pro versions
- Improvements in the Baseline Python toolbox
- Improved validation for the Clip, Assimilation and Merge tools
- Improved installer. Files are removed correctly when installed and deinstalled

The issues that are fixed:
- Assimilate sometimes fails to merge land use polygons due to corrupted geometries
- Appending operation sometimes fails while not giving an error
  - This operation should be more stable and improves the appending of event tableRequirements

3.2   In BASELINE 7.0.2

The main changes are:
- It is now possible to choose the "Program files" folder in the installer (see 6.4).
- Digital signing issues resolved.
- Other add-ins won't be removed when Baseline 7 is de-installed.
- Preparation tool Add variant/measure renamed to Create variant/measure.
- TOC is updated when the Preparation tools 01 to 06 are executed using the toolbar.
- Preparation tools 01 and 06 back up the input data in \data\source\elevation.gdb
- Preparation tools 03, 04 and 05 generate elevations in 2 decimals.
- Various improvements of Preparation tools 01 to 06.
- Preparation tool 11 Create lists aborts when non-valid featureclasses are found.
- Preparation tool 12 Create land use polygons improved.
- Various errors Content / Protocol check resolved.
  - Assimilaten validation updated and improved:
  - Check if measures exists;
  - Protocol check for each measure;

- Assimilation aborts when errors are found during validation.
- Error checking (empty feature classes) added to Conversion to D-Flow FM
- The output of Conversion to D-Flow FM is equal to Baseline 7.0.1.
- Dockpanes can be closed after a successful run (disabled by default) (see 6.5).

3.3 In BASELINE 7.0.1

The main changes are:
- Tool *'Set active variant'*: on activation the legend of terrains in the database is updated / adjusted automatically.
- Assimilate tool: improved error message for example in case of an erroneous measure or in case a variant is mixed.
- Selections are now processed correctly in Preparation tools 02, 03, 04 and 05.
- Event points are now correctly loaded in a Measure.
- Logging of Python tools now includes the version information.
- Running the Preparation tool 01 (*Routes & events to lines & points*) en tool 06 (*Lines & points to routes & events*) will make a backup of the input data in the submap data\source\elevation.
- Preparation tool 08 (*Create measure contour*) has been improved.
- Preparation tool 05 (*Add terrain edge within open water bodies*) has been improved.
- Generation of trachytopes, calibration_sections and bed_characteristics (*Convert to D-Flow FM*) has been improved and accelerated.
- Protocolcheck now also checks for wrong projections.

3.4 In BASELINE 7.0.0

As stated in Overview, the application is unchanged in functionality and dataprotocol compared to Baseline 6. All functions are migrated to ArcGIS Pro.

The following has been changed:
- The look and feel of ArcGIS Pro has been adopted:
  - The Baseline menu has been changed to a tab in the toolbar
  - Tools are opened in Dockpanes
- Some tools are removed or displaced:
  - *Clip* is displaced to *Data management*
  - *Check variant* is displaced to *Preparation*
  - *Add variant/measure* is displaced to *Preparation*
  - *Advanced tool* is placed in a separate section
  - *Add schematization* is displaced to Models
  - *Erase* is removed
  - *Add area* is removed
  - *3D Vertices* tool is displaced to *Tools*

4 Requirements

- ArcGIS Pro 3.0 up to 3.4.2
  - License: Advanced, with extensions:
    - 3D Analyst
    - Spatial Analist (only for 'conversion to D-Flow FM' using the option 'elevation interpolation) and for Subgrid'
  - System requirements: https://pro.arcgis.com/en/pro-app/latest/get-started/arcgis-pro-system-requirements.htm
- Shapely 2.0.4+

5 Known issues

- Some tools do not work in ArcGIS Pro 3.4.3 up to 3.5 due to a known bug in the 'Interpolate shape' geoprocessing tool.
- The tool *To SWAN* is deactivated for a Sea variant and a Clip dataset. This is also a known defect in Baseline 6 and Deltares is investigating a new approach in the conversion of data to SWAN.
- In case the user activates the function *Convert to D-Flow FM* twice on the same variant, small differences (in the sixth decimal) can occur in the roughness fractions in the file *trachtytopes.arl*.
- The function *Maptool 3DLineLabels* shows the labels of all feature classes (*terrain_edge_3d_lines* and *terrain_jump_3d_routes*) which are loaded in the TOC and shown within the box, the user has drawn. So, also the labels of those feature classes which are not visible.
- Preparation tool 05 (*Add terrain edge within open water bodies*) only works on a selection; this in contrast to the tools 02, 03 and 04, which work on all features in case no selection has been made.

6 Tips and tricks

6.1 Baswaq.exe

It might happen that on activating the *To SWAN* tool the *Baswaq.exe* is not found or an error is thrown. In case this occurs, check the installation folder (C:\Users\<User>\AppData\Local\Baseline7) and remove the *settings.settings* file. This will imply a sort of reset. If this does not resolve the problem, you need to report it …

6.2 Intermediate results

Intermediate results will be removed automatically with the tools: *Assimilate*, *Merge* and *To SWAN*. If you want to keep the results as a check, open the *settings.settings* file in the installation folder (C:\Users\<User>\AppData\Local\Baseline7) and change *SaveIntermediate* to 'True' (<add key="SaveIntermediate" value="True" />). This will leave the intermediate results: for *Assimilate* the *Merged_measure*; for *Merge* the *Intermediate variants*; for *To SWAN* all Baswaq input files and the SWAN terrain.

6.3 Protocol check

The final result of a protocol check is stored the *status.json* file. This file is stored for each variant in the <Variant>/Metainfo folder and is added every time a protocol check is activated in

Baseline 7. You can set *last_protocol_result* to 'true' to avoid a mandatory protocol check in case the check goes wrong.

6.4   Installing Baseline in Program Files

To install Baseline in the program files directory, you need to select the 'Per machine' option in the installer. You are required to be an admin to do this. The installer will automatically ask for Admin rights when the installation starts. In case this does not happen, follow these steps to run the installer as admin:

1) Open a command prompt as an administrator
2) Paste the path of the installer in the command prompt (<path>/Baseline.Installer.msi)
3) Run the installer by pressing enter

This will install Baseline in the C:/Program Files/Baseline7. The Addin will still use the local use appdata folder (C:\Users\<user>\AppData\Local\Baseline7) for localized data (python toolbox, templates & settings). Those will be copied from the installation folder (if not present already).

6.5   Closing dockpanes after running a tool succesfully

You can enable the setting to close dockpanes after running a tool successfully by editing the settings file. Open the settings.settings (C:\Users\<User>\AppData\Local\Baseline7) and change the value of "CloseToolAfterRun" to "True" (<add key="CloseToolAfterRun" value="False" />).

7   Overview of improvements (on reported bugs)

This overview is for the user who reported a bug in a previous release and wants to check whether it has been fixed.

The following issue have been fixed in Baseline 7.1.0

Issue key	Summary	Resolution
BASELINE-1110	fout in contentcheck	Fixed
BASELINE-1115	W2023_4.02a - Uitbreiding met bij RWS-ON beschikbare tools	Fixed
BASELINE-1150	Aangepaste measure.lyrx voor ArcGIS Pro	Fixed
BASELINE-1152	W&B 4.4 Twee featureclasses lijnen na het omzetten van routes	Fixed
BASELINE-1154	W&B 4.6 Omzetten lijnen zelfde start- en eindpunt	Fixed
BASELINE-1160	Converter B5 > 7 needs an existing output folder	Fixed
BASELINE-1161	Converter 5>7 geeft error	Fixed
BASELINE-1166	Installing shapely	Done
BASELINE-1167	Fout inmixen Baseline maatregel	Fixed
BASELINE-1170	Betere checks op de attributen van de verschillende features	Fixed
BASELINE-1171	Error in assimilating elevated_line_events of terrain_jump_3d_events	Fixed
BASELINE-1177	Bij runnen Assimilatin of measure word niet gecheckt welke licentie er aan staat	Fixed
BASELINE-1178	Vreemde resultaten D-HYdro berekenigen als gevolg van fout in Assimilation	Fixed
BASELINE-1180	conversion to D-flow FM scherm is niet meer up to date	Fixed
BASELINE-1182	ArcGis Pro crasht bij Conversion to D-Flow FM (bij update elevation)	Fixed
BASELINE-1183	Interpolateshape in ArcGIS Pro 3.4.3+	Fixed
BASELINE-1187	RWS-ON tool A: 1x1 lodingen naar 5x5	Fixed
BASELINE-1188	RWS-ON tool B: kades en kribben maximale hoogte uit dwarsprofiel	Fixed
BASELINE-1134	W&B-4: logging in los log bestand en na openen niet live te volgen.	Fixed