ArcSWAT 2012.10_1.11 Release Notes
Updated 9/16/13

AcrcGIS Compatibility:
ArcSWAT 2012.10_1.10 is compatible with ArcGIS 10.1, build 3143.

SWAT2012.exe Version:
The SWAT2012.exe Revision 591 is packaged with ArcSWAT 2012.10_1.10.

Changes from Version 2012.10_0.11:

1. Modified the point source/inlet editing interface regarding how the type of point source/inlet (constant, daily, etc.) is checked, reducing the chance for errors to be encountered.
2. Modified the header line in the .hru files to print "Slope:" instead of "Slope". This was necessary for SWAT-CUP compliance.
3. Modified the ranges for PLAPS and TLAPS in the "subrng" table in the SWAT2012.mdb database.
4. Fixed the printing of the pcp.pcp and tmp.tmp files so that lat, lon, and elevation are printed correctly.
5. Fixed a problem with the .sub file editing interface regarding the flag to use subbasin specific .sno files. There were situations where this flag (SUBSNOW in the sub table) was being unintentionally set back to a value of "0".

Changes from Version 2012.10_1.9:

6. Fixed an issue introduced in 2012.10_1.9 with the delineation of HRUs when the split HRUs option was used AND the new split HRU land classes were not already part of the original land use class. The split HRUs were not getting created correctly in 2012.10_1.9.
7. Updated the WGN tables in the "ArcSWAT_WeatherDatabase.mdb" database. Problems with dew point temperature and half hour rainfall intensity value identified in the previous version of the database have been fixed.

Changes from Version 2012.10_1.8:

8. Calculation of closest weather stations to each subbasin: A bug was fixed that could occur if the distance from the weather station to the subbasin "center" was equal to 0. In these situations, the second closest station was selected. This issues had been corrected.
9. Assignment of subbasin Lat/Long: The subbasin Lat and Long attributes (in watershed feature class) were modified so that they are first calculated as the centroid of the subbasin. If the centroid falls outside the subbasin boundary, then the subbasin lat/long is calculated as the "label point" of the subbasin. The "label point" will always be within the subbasin boundary.
10. RunSWAT: When the SWAT model is run, the "swat2012.exe" file is now deleted from the TxtInOut folder once the process finishes (change made for SWAT-CUP).

11. CHLA_SUBCO: The min, max, and default values for this parameter were modified in the swat2012.mdb database.
12. Watershed Delineation: Parts of the watershed delineation code were modified to help improve stability, particularly during stream delineation.
13. Atmo.Atm: The writing of this file was corrected. Values for atmospheric deposition are now stored in the BSN tables and are editable through the bsn edit interface.
14. Reading weather station location files: Problems associated with reading in text files of weather station location (found on some computers) was fixed.
15. HRU Splitting: The process of splitting HRUs into sub-HRUs was found to potentially result in duplicate HRUs (same subbasin, land use, soil, slope). The HRU splitting process was re-written to correct this potential problem.
16. Measured PET File: The documentation on how to handle and format measured PET data was corrected in the ArcSWAT documentation.
17. Irrigation Sources: The use of reservoirs as irrigation sources was not being handled correctly. One of the problems was in associated printing of the .mgt files. Another problem was in the sorting of the irrigation sources in the MGT interface. These issues have been corrected.

Changes from Version 2012.10_1.7:

1. The default subbasin channel slope (CH_S1) had been set to the mean subbasin slope (the SLO1 field in the Watershed feature class). The more appropriate value to use is the longest flow path slope (the CSL field in the Watershed feature class). The default value for the CH_S1 value is now set to the longest flow path slope.
2. In the .hru files, the parameter CFDEC was only being printed out 1 digit to the right of the decimal. The precision has been increased to 3 digits to the right of the decimal.
3. In the .bsn file, the parameter PC_BSN was only being printed out 2 digit to the right of the decimal. The precision has been increased to 3 digits to the right of the decimal.
4. In the BSN edit interface, the CN_FROZ was assigned to either "inactive" or "active". Now, the parameter takes a specific value (default = 0 .000862) and prints that to the .bsn file.

ArcSWAT 2012 Version Notes:

ArcSWAT for SWAT 2012 includes several changes from ArcSWAT for SWAT 2009. Some of the more significant updates include the following:

1. SSURGO Soils Integration: Integration with SSURGO-based spatial soils dataset and has been included in the Land Use/Soils/Slope Overlay process. In addition, a national database of SSURGO soils attributes has been developed. This database can be downloaded from the SWAT web site at: http://swat.tamu.edu/software/arcswat/ .
2. Expanded Weather Database: An expanded monthly weather database for the United States is now included with the ArcSWAT install package. This database, "ArcSWAT_WeatherDatabase.mdb", contains monthly weather statistics (for the SWAT weather generator) for over 18,000 stations. There are four different time periods

represented, allowing for comparative analysis suitable for climate change studies. These time periods include, 1960 – 1990, 1970-2000, 1980-2010, and 1960-2010.

3. Updated ArcSWAT Table Management: The interface for writing of default SWAT input tables has been re-designed. In addition to the change to the user interface, the back-end processing which creates the default tables is now conducted without the use of ESRI ArcObjects software. This has allowed a significant expansion in the functionality of the ArcSWAT companion software, SWATEditor. SWATEditor can now process and the weather data and generate all input tables, no longer requiring ArcGIS for this purpose.
4. Users can now change the weather inputs multiple times without needing to re-write and/or edit the SWAT input tables before re-running the model. **Note: ArcSWAT 2012 no longer supports dBase format weather input files. Only text files are allowed. See that ArcSWAT 2012 documentation for format requirements.**
5. New DRAINMOD Sub-Surface Drainage: New options for simulating sub-surface drainage have been added to SWAT and the ArcSWAT interface. The new DRAINMOD drainage option follows is accessible through the HRU table editing interface.
6. Urban BMPs: Four new urban BMPS can now be simulated with SWAT 2012 and can be parameterized using the ArcSWAT interface. The new BMPs include Detention Ponds, Wet Ponds, Retention/Irrigation Basins, and Sedimentation/Filtration Basins. These BMPs can be accessed from the PND table editing interface.
7. Expanded Output Files: A significantly larger number of SWAT output files can now be read into the SWATOutput database. There are now 15 different SWAT output files that can be imported for analysis.
8. SwatCheck: SWAT model output in the output.std file can now be analyzed for possible errors or unreasonable values through the SwatCheck program, accessed directly from ArcSWAT.
9. Updates to the SWAT 2012 model executable: The SWAT2012 model executable includes some changes to the SWAT2009 model executable. In some cases, results obtained from the SWAT2012 model will not be the same as the SWAT2009 model.