WinSLAMM v 10.2.0 Program Modifications - Final, 9/30/15

Interface, Data Input and Calculation Changes and Corrections
1. Added the ability to import an image into the drainage system map area.
2. Added Land Use Type to land use output names for each land use tab in tabbed output.
3. Modified the Source Area Particle Size Distribution button on the Current File Data form to access and change all source area Particle Size Distribution files using the Particle Size Distribution file listed on the Current File Data form.
4. User-defined Land Use Label names are is now listed in input data printouts.
5. Applied the critical particle size calculation process to all appropriate control practices.
6. Corrected stormfilter database name error that occurred when opening a file. Error had no effect on calculations.
7. Changed the maximum allowable runoff for pervious areas due to soil compaction from the Rv row number for the pervious area soil type to Rv = 3, for paved parking areas, so that pervious areas with compacted soil would reflect the compaction.
8. Corrected procedure call error due to Mannings n function getting a zero V x R value.
9. Changed text references of void ratio to porosity.
10. User can now end execution during a model run when the program is processing control practices.

Biofilters
11. Biofilter stage-discharge curve corrections.
12. Added Biofilter overflow warning to alert user that biofilter overflowed and results may be inaccurate if the biofilters is too small.
13. Added residence time calculation to the Biofilter control practice for each event (in the detailed output file) and for the model run (in the Control Practice Summary Tab).
14. Corrected Biofilter sharp crested weir error where program was using the .dat file variable format for the biofilter end contraction variable. Changed the .dat file import format to match the v 10 format.
15. Added reset variable to Biofilters to prevent any further reduction in time step values when the time increment value gets too small, and increased minimum time step from 0.1875 minutes to 0.75 minutes.

Porous Pavement
16. Added Porous Pavement icon to drainage system.
17. Corrected two minor Porous Pavement problems that caused differences between two identical PP practices in the same file.
18. Corrected Porous Pavement errors that allowed the control practice summary output to be different than the main summary output for runoff volume under certain conditions.
19. To calculate the PP area in the aggregate bedding if the pavement to base area ratio is different than 1, changed gPP(PPNm).Area * 43560 * mVoidRatio(a) * Ratio to gPP(PPNm).Area * 43560 * mVoidRatio(a) / Ratio, to correctly calculate the area of the aggregate bedding.

Wet Detention Ponds
20. Corrected subscript out of range error in Wet Detention Ponds when entering all 20 stage-area values.
21. Changed Wet Detention Pond stage increments to equal 100 times the maximum stage depth. Corrected Wet Detention Pond Other Outlet stage discharge error that prevented the other outlet

stage discharge curve from calculating the discharge for the stage increment with 0 cfs and the next stage increment with the first discharge for the other outlet.

22. Added mass lost to natural seepage basin calculation.

Streets, High Traffic Urban Areas and Freeways

23. Added street width calculation to input data printout.
24. Updated v 9.4 parameter file and street dirt value update code to import .dat files into v 10.2.
25. Corrected mapping error in Freeway Land Use from runoff coefficient parameter file to source areas 19-27.
26. Modified street cleaning detailed output #194, #195, #197, #198 and #199 to include project file name and path, to consistently save these parameter files in the project file directory.
27. Corrected the street cleaning problem that prevented user-defined street cleaning coefficients m and B from being applied in the calculations.
28. Fixed high traffic urban source area parameter data entry issue that brought up message box unnecessarily. Added Source Area PSD file name to input file output listing, corrected divide by zero error when printing high traffic urban highway input data, removed unneeded text when printing input values, improved formatting when printing street width information, and corrected case range for high traffic urban streets.
29. Corrected error that prevented source area .cpz file updates done using button in Current File Data for Freeway land uses, source areas 1 to 14.
30. Added Grass Swales as High Traffic Urban source area control practice option.

Other Control Practice

31. Added feature to reduce the non-control outfall load by the mass of sediment removed by Other Devices, when the other devices are used to remove the off-site drainage areas of a drainage basin.
32. Changed Other Device significant figures from 2 decimal point to 4 decimal points to correct the problem where the event by event volume numbers are calculated correctly, but the hydrographs are reduced by the fraction 0.01 rather than 0.01 x 0.001.

Filter Strips

33. Changed the effective flow length test for Filter Strips from less than zero to less than or equal to zero to prevent calculation errors that occur when the effective filter strip length is exactly equal to zero.

Grass Swales

34. To accurately track mass loss, changed grass swale particulate reduction calculation approach to weigh the TSS reduction calculation by the incremental effluent volume rather than the incremental infiltrated volume.
35. Corrected error that allowed grass swale effluent hydrograph to not account for all the flow leaving the swale system if the fraction of the area served by swales was less than 1.0.