

CALTRANS RUSLE2 – February 24, 2012

Frequently Asked Questions

The following questions are from Caltrans' RUSLE2 users in the Districts:

1. **Q** – How can I install the newest version of Caltrans RUSLE2 without losing my previous work?

A – Since all the work you do in RUSLE2 for profile runs is stored in the Caltrans_moses database, performing regular updates of the software will erase your work. The following sequence will retain your old profiles:

- 1) Create a new RUSLE2 folder on your C or D drive for installation. Name it differently than the other. **DO NOT INSTALL THIS NEW RUSLE2 OVER YOUR OLD RUSLE2** --You will lose your history of profile runs.
- 2) Download the attached ZIP file and open. Then Menu> Select All; Menu>Extract. Direct these files to the new folder you just created.
- 3) Drag the new, un-zipped, Caltrans_moses_02-10-2012.gbd database to a safe location that is away from your two RUSLE2 program folders. A “Database Archive” folder is a good idea.
- 4) Copy and paste your old/current Caltrans_moses database into the new RUSLE2 folder.
- 5) If the "California Soils" folder is not there already, Copy and paste it from the old RUSLE2 folder into the "Import" folder in the new RUSLE2 folder.
- 6) Launch the new RUSLE2 by double clicking on the RUSLE2.exe file. If it asks for a User Template, select "Caltrans Basic Complex Slope Advanced". Next, it should prompt you for a starting profile. If not, open profile- you should see a familiar window with all of your old profile runs. If not; do #7.
- 7) Verify database. Menu>Database and select Open Alternate to find your old database that you copied and pasted into the new RUSLE2 folder. Be carefull, it may have the same name as the one in the zip file (Caltrans_moses_02-10-2012). Select (turn dark) and click open. To see if you have the correct database, open a profile to get a message window showing your recent work on profiles runs. If this message box is sparse with none of your work, go look again for your database. Once you are certain you have the correct database, Menu>Database> then select Startup Database (a check should appear opposite the menu item).
- 8) You will probably need to put a new RUSLE2 icon on your desktop by using Windows Explorer and going into the Binaries folder and sending a shortcut of the RUSLE2.exe file to their desktop. You may want to rename the shortcut icon to indicate the version of RUSLE2 or the Caltrans_moses_xx database such as “RUSLE2_02-10-2012.”

9) Once you verify that the newly installed RUSLE2 and old database is attached and functioning correctly, you should delete the old RUSLE2 and folder.

2. **Q** – RUSLE2 has a problem with BFM-- it either calculates forever without reaching a final result or it crashes and hangs. How can this be fixed?

A – The problem is within the Caltrans_Moses database file for BFM. The database must be modified and there are three ways to do this: 1) Install the database included in the latest update (Caltrans_RUSLE2_02-09-2012.zip) but it will overwrite your previous work, 2) Use the “BFM fix.gdb” included in the latest update, 3) manually fix the Caltrans_Moses database. The steps for doing #2 and #3 follow:

Use BFM fix.gdb:

- 1) You are here because you want to use your old database to retain your work and fix the BFM problem. Before you go on, confirm that you have everything from Question 1 (above).
- 2) Begin by doing Menu>Database then select Import RUSLE2 database...
- 3) A window will open to the import folder where you select the "BFM fix.gdb" file.
- 4) Then the split screen will open and on the left side, simply check the very top box and all the contents will be selected.
- 5) Then check "none" on including dependent files and leave the selection set to "Import to same folder".
- 6) Then click "yes to all" on the Confirm object all replace prompt.

Manually fix the Caltrans_Moses:

- 1) Close all but the main window, Menu>File>Open>Management select Highly Disturbed/Post Construction Cut - Fill Surfaces/ Practices with Vegetation. Double click on Hydraulic Mulch, BFM 3400...
- 2) A new window will open for the BFM management showing 4 lines with the bottom two being identical- delete the entire bottom row by positioning your mouse on the left-most little square until it changes to a black arrow then click. With the line blacked, right click and select delete rows.
- 3) Next, scroll right and under "Cover matl add/remove" change 1700 to 3400.
- 4) Next, go to the top of the window and in the box opposite "Duration, yr" change 1 to 15.
- 5) Finally, click the save icon under File in the menu line and close the window.

3. **Q** – How can I tell which database is attached, which templates, or what version of RUSLE2 is in use?

A – Check the lower left corner of the large RUSLE2 window. You should see "R2_Caltrans", "Caltrans Basic Complex slope advanced", "Caltrans_moses_08-09-2011". Right clicking will allow you to modify these. The upper left corner shows the version of RUSLE2 being used.

4. **Q** – We have been using a tedious and cumbersome process of making screen shots of the RUSLE2 runs. Is there any way to print reports from RUSLE2?

A – There are three print report templates included in the latest update (Caltrans_RUSLE2_02-09-2012.zip). There is a single template for profiles and two for worksheets as there are two different types of worksheets. If you have a profile window open, you will only see a single template for printing profiles: “Caltrans RUSLE2 Profile Erosion Calculation Recors.pro.dot”. If you have a worksheet window open, you will see two templates: “Caltrans RUSLE2 Worksheet Compare Record.wrk.dot” and “Caltrans RUSLE2 Worksheet Erosion results only.wrk.dot”.

5. **Q** – What are worksheets and why would I want to use RUSLE2 worksheets?

A – Briefly the Worksheet view is a place where you can develop and compare multiple alternatives on the same hillslope and see and compare the outputs in one screen.

There are two worksheet tabs in the worksheet. The one on the left "Compare management alternatives for a single hillslope profile" is used to compare alternatives for the same set of site inputs. The upper part of the worksheet contains the inputs for location (climate), soil, and slope length and grade. The table in the lower part of the worksheet is designed to allow the management and supporting practices to be entered resulting in separate soil loss and sediment outputs for each line. Each line is actually a profile run where the climate, soil and slope inputs are the same but the management and supporting practices can be different. This is useful in rapidly comparing two or more post construction scenarios. You would not typically try to compare a pre construction scenario to one or more post treatments because the slope and soil inputs are not likely to be the same.

An advanced feature of the "Compare management alternatives for a single hillslope profile" tab is that if you have previously created and saved profile runs you can load these into a worksheet and the climate, soil and slope inputs in the previously saved original profiles is replaced by the climate, soil and slope inputs in the worksheet. This is a big time saver when numerous runs are being made on multiple sites. To use this feature, place the cursor in the "profile" box on a line and right click. Then choose "Load from File..." and select a previously saved profile. It is then loaded, and RUSLE2 replaces the climate, soil and slope inputs from the originally saved profiles with the information at the top of the worksheet and re-calculates the outputs.

The other worksheet tab "Compare individual hillslope profiles" is designed to compare different sites where all inputs are different or the same site before and after construction has altered the slope and soils inputs as well as the application of land treatment. All inputs are entered by drilling into a profile screen on each line. This is useful if comparing two or more different sites. Use this tab to compare soil loss and sediment delivery on a pre construction scenario to one or more post construction scenarios where the grading has changed the soil and slope grade and length. The main advantage of both worksheet approaches is the combined display of outputs in one place and the ability to

create printouts from these for documentation or plan submissions. The two worksheet print templates coincide with these two worksheet tabs.