Quick Start Guide

Download and Run Caltrans RUSLE2
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Caltrans RUSLE2 is an interactive computer program that estimates soil erosion based on the Universal Soil Loss Equation (USLE, Wischmeier and Smith, 1960). The Caltrans RUSLE2 software predicts erosion based on project site characteristics: climate (R), soil (K), slope steepness (S), slope length (L), compaction/tillage practices (P), and vegetative or mulch cover (C), Erosion prediction using Caltrans RUSLE2 is an approved method in the Construction General Permit for demonstrating final stabilization.

A. Download Caltrans RUSLE2

1. Go to the Caltrans Division of Design, Storm Water Tools website and download the SW_EP_RUSLE2_zip.zip file.
2. Follow the instructions for downloading and installing Caltrans RUSLE2 provided in the "Caltrans RUSLE2 Instructions for Installation" document.
3. Before running the RUSLE2 program for the first time, make sure to first delete any existing versions of RUSLE from your computer.

B. How to Run RUSLE2

1. Open the "RUSLE2" folder, select the "Binaries" folder, and open the "Rusle2.exe" file.
2. Select "OK" to close the window that appears – it is a warning note for advanced users.
3. The first time you open RUSLE2, an "Introduction" window appears.
   a. Select "Profile" under question 1. Where would you like to start?
   b. Select the "Caltrans Basic Complex slope advanced" option under question 2. Which template would you like to use?
4. Create a new RUSLE2 profile or modify an existing one:
   a. In the "File" menu of the main toolbar, select "Open" then select "Profile."
   b. An "Open" window appears. Open the profile "default" to begin a new profile.
   c. To save your profile, always do a "save as" so you do save over the existing "default" profile.

    d. To open an existing profile, in Step 4b, search for your file when the "Open" window appears and open that one instead of the "default" profile.

5. Modify **climate (R)** by
   a. Selecting the ▼ symbol on the right side of the "Location" box
   b. Climate options are organized by Caltrans District or California County.
   c. To open a folder or make a selection, double-click on the climate file.

6. Modify **slope steepness (S)** by entering the numeric value (%) of your slope.

7. Modify **slope length (L)** by entering the numeric value of the horizontal slope length for your site.

8. Modify **soil (K)** by:
   a. Selecting "Soil" tab.
   b. Click on the ▼ symbol on the right side of the "Soil" field to view the soil options.
   c. Soils are organized by soil texture or California region or County.
   d. Double click to open a folder or to select the soil type corresponding to your site.

9. Modify **C and P Factors to select BMPs.**
   a. Select the "Management" tab. The C and P factors are combined into "Management" options in RUSLE2.
   b. Click on the ▼ symbol on the right side of the "Management" field to view the management options.
   c. Double click to open a folder or to select the BMP or vegetative cover that corresponds to your site.
   d. BMPs organization:
      i. Pre-construction phase BMPs are found under the "Existing Undisturbed Vegetative Cover" folder.
      ii. Construction phase BMPs are found under the "Construction with Temporary Practices" subfolder within the "Highly Disturbed" folder.
      iii. Post-construction phase BMPs are found under the "Post Construction Cut/Fill Surfaces" subfolder within the "Highly Disturbed" folder.

10. Predicted **erosion results** are reported in tons per acre per year (t/ac/yr). The results are displayed in two fields at the top right corner of the RUSLE2 profile: "Soil loss erodible portion" and "Sediment delivery."

C. Where to Find RUSLE2 Help

1. The Caltrans RUSLE2 training class is not currently available.

   a. Caltrans Environmental Department of Environmental Analysis (DEA) is working on having a contractor provide training in the next couple years.

2. Caltrans Erosion Prediction Procedure Manual

   a. Go to Caltrans Division of Design, Storm Water Tools website (see step in A.1).

   b. Download EPP Manual from "Erosion Prediction Procedure" section of website.

   c. The EPP Manual details how to predict erosion on Caltrans construction sites, the components and development history of the RUSLE2 program, and the resources available to users in the EPP Manual appendices.