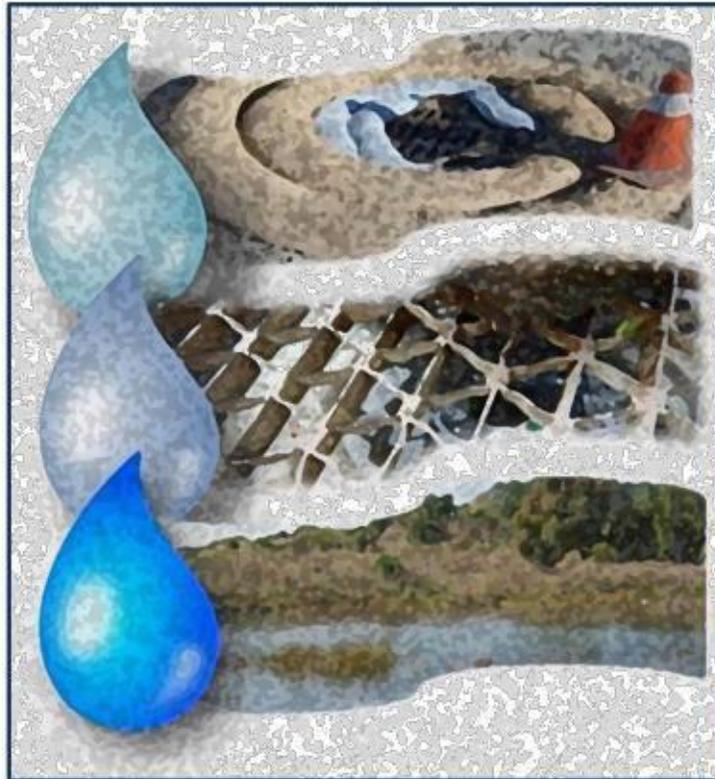


STATEWIDE CONSTRUCTION STORMWATER GENERAL PERMIT

DISCHARGER'S GUIDE

**RAINFALL EROSION
(R) FACTOR CALCULATOR**



Last Revised: February 2024

Rainfall Erosivity (R) Factor Calculator:

The California [Statewide Construction Stormwater General Permit](#) requires construction stormwater dischargers to determine each construction site’s overall risk to water quality, which is separated into two elements – sediment risk and receiving water risk. The site sediment risk is determined by multiplying the rainfall erosivity (R), soil erodibility (K), and length-slope (LS) factors from the Revised Universal Soil Loss Equation to obtain an estimate of site-related soil loss.

The Construction Stormwater General Permit requires dischargers to use the United States Environmental Protection Agency (EPA) [Rainfall Erosivity Factor Calculator](https://lew.epa.gov/) (https://lew.epa.gov/) to determine a construction site’s site-specific R factor. In November 2020, California Water Board staff was notified that the Rainfall Erosivity Factor Calculator only calculates an R factor for up to one year of construction activity due to recent EPA changes to the calculator. Therefore, recent use of the EPA Rainfall Erosivity Calculator will result in an incorrect output for a site’s sediment risk for multi-year construction projects.

The following guidance demonstrates how a site’s R factor is calculated using the current version of the EPA’s Rainfall Erosivity Calculator.

For sites with construction activities spanning one year or less:

1. Input the estimated start and end dates of construction in “mm/dd/yyyy” format. For construction activities that span multiple years, perform separate R factor calculations for each year of planned construction activities, as demonstrated further in this guidance document.

Note: The period of construction activity begins at initial earth disturbance, including the vertical build, and ends with final stabilization of the site.

Start Date:	End Date:
<input type="text" value="11/01/2025"/>	<input type="text" value="10/31/2026"/>

2. Locate the construction site by entering the address or latitude and longitude into the “Location” box; or use the map to zoom in and click on site location.

Location:



3. Click the “Calculate R Factor” button to view the R factor site.



4. The R factor output displays as shown below.

Facility Information	
Start Date: 11/01/2025	Latitude: 38.5790
End Date: 10/31/2026	Longitude: -121.4735

Calculation Results
Rainfall erosivity factor (R Factor) = 45.49

For sites with construction activities spanning multiple years:

Separate the duration of construction activities into individual annual periods and repeat the R factor calculation for each additional year (or portion of a year). An example is provided below.

Note: For leap years, such as 2024, the Rainfall Erosivity Factor Calculator’s calendar year ends on December 30 and will fail to calculate an R factor if December 31 is used. Non-leap years still end on December 31.

To determine the site’s overall R factor, add the individual R factors per year and enter the result into the Notice of Intent (NOI) to determine the site’s sediment risk.

Example: Construction activities start on November 1, 2025
Final stabilization on August 15, 2028

Separate into individual periods: 11/01/2025 to 10/31/2026
11/01/2026 to 10/31/2027
11/01/2027 to 08/15/2028

Calculate the R factor for each period and sum the results.

Period	R factor
11/01/2025 to 10/31/2026	45.49
11/01/2026 to 10/31/2027	45.49
11/01/2027 to 08/15/2028	42.13
Total	133.11

The site’s overall R factor between November 1, 2025, and August 15, 2028, is: 133.11