



Appendix D Construction General Permit Risk Level Determination Documentation



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R Factor (R=35.4)

Calculate R Factor

Facility Information

Start Date: 06/01/2020	Latitude: 37.9468
End Date: 06/01/2021	Longitude: -121.2759

Calculation Results

Rainfall erosivity factor (R Factor) = **35.39**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an [area where EPA is the permitting authority](#), you must submit a Notice of Intent (NOI) through the [NPDES eReporting Tool \(NeT\)](#). Otherwise, you must seek coverage under your state's CGP.

Source: U.S EPA

K Factor (K=0.24)

Soil K-Factor: 0.24

The soil-erodibility factor (K) represents: (1) the susceptibility of soil or surface material to erosion, (2) the transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff, although these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high runoff rates and large runoff volumes. For more information on the Construction General Permit and references for the RUSLE, please visit the SWRCB Construction Stormwater Program

Source: Water Quality Planning Tool



Watershed Information

CALWATER WATERSHED

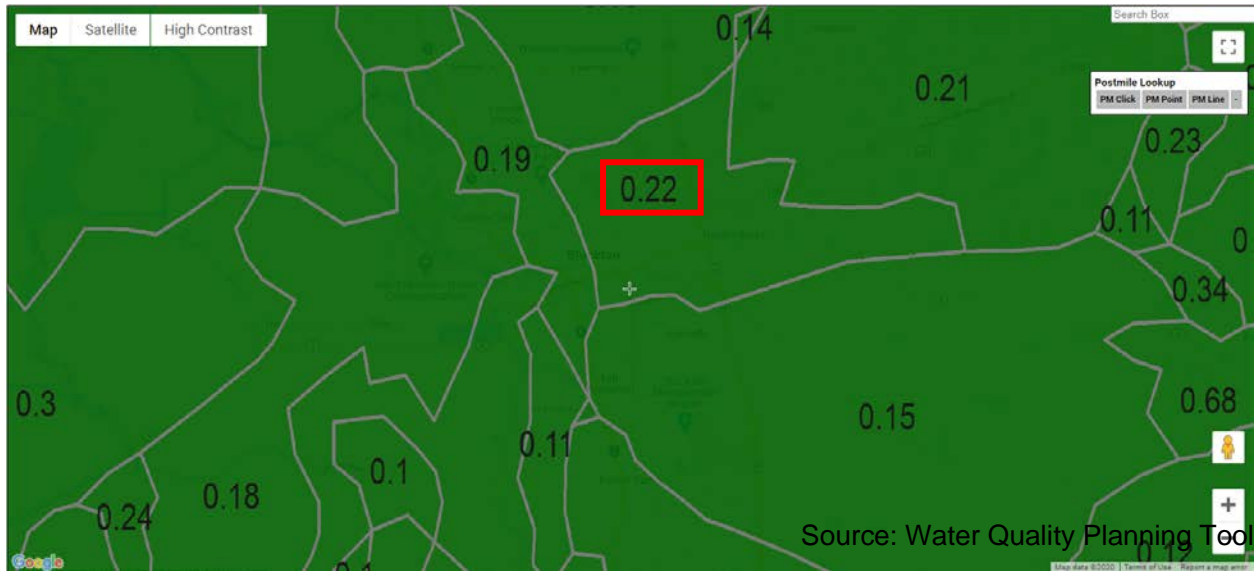
Hydrologic Unit	NORTH VALLEY FLOOR	Hydrologic Area	Lower Calaveras	Hydrologic Sub-Area #	531.30
Hydrologic Sub-Area Name	undefined	Planning Watershed	6531300000	HSA Area (acres)	127102
Latitude, Longitude	37.9467, -121.2759				

WATERSHED BOUNDARY DATASET

Watershed	Mormon Slough	Subwatershed	McLeod Lake-Mormon Slough	Hydrologic Unit Code	180400030303
Average Annual Precipitation (inches)	13.48				

Source: Water Quality Planning Tool

LS Factor (R=0.22)





Sediment Risk Factor Worksheet		Entry
A) R Factor		
<p>Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.</p> <p>https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites#getTool</p>		
R Factor Value		35.39
B) K Factor (weighted average, by area, for all site soils)		
<p>The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.</p> <p>Site-specific K factor guidance</p>		
K Factor Value		0.24
C) LS Factor (weighted average, by area, for all slopes)		
<p>The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.</p> <p>LS Table</p>		
LS Factor Value		0.22
Watershed Erosion Estimate (=RxKxLS) in tons/acre		1.868592
Site Sediment Risk Factor		Low
Low Sediment Risk: < 15 tons/acre		
Medium Sediment Risk: >=15 and <75 tons/acre		
High Sediment Risk: >= 75 tons/acre		



Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment ? For help with impaired waterbodies please check the attached worksheet or visit the link below: 2006 Approved Sediment-impaired WBs Worksheet http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml OR	No	Low
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp		

Combined Risk Level Matrix				
		<u>Sediment Risk</u>		
		Low	Medium	High
<u>Receiving Water Risk</u>	Low	Level 1	Level 2	
	High	Level 2		Level 3
Project Sediment Risk:		Low		
Project RW Risk:		Low		
Project Combined Risk:		Level 1		