

Tables for Soil Judging

Table 1. Relationship of Soil Texture, Bedrock, and Percent Slope to Surface Runoff

<u>Texture of Finest Textured Horizon in Upper 36"</u>				
Surface Runoff	Coarse and Moderately coarse <u>%Slope</u>	Medium and Moderately fine <u>%Slope</u>	Fine <u>%Slope</u>	Bedrock at Less than 36" <u>%Slope</u>
Rapid	More than 30%	More than 15%	More than 10%	More than 10%
Medium	15% to 30%	5% to 15%	2% to 10%	2% to 10%
Slow	0% to 15%	0% to 5%	0% to 2%	0% to 2%
NoneAreas subject to ponding.....			
NoneAreas subject to flooding.....			

Table 2. Inches of Available Water Holding Capacity for Soil of Various Texture Groups Per Inch of Soil

Soil Texture Group	<u>Available Water Holding Capacity</u>	
	<u>Range (inches/in.)</u>	<u>Average (inches/in.)</u>
Fine.....	.15 - .20	.20
Moderately Fine.....	.20 - .25	.25
Medium.....	.20 - .30	.30
Moderately coarse.....	.10 - .20	.15
Coarse.....	less than .10	.05
Organic soils (peat and muck).....	less than .25	.15

Table 4. Values of the Topographic Factor (LS) for Specific Combination of Slope Length and Steepness

Slope (percentage)	<u>Slope length (feet)</u>									
	25	50	75	100	150	200	300	400	500	600
0.8.....	0.09	0.10	0.11	0.11	0.12	0.13	0.14	0.15	0.16	0.16
2.....	0.13	0.16	0.19	0.20	0.23	0.25	0.28	0.31	0.33	0.34
3.....	0.19	0.23	0.26	0.29	0.33	0.35	0.40	0.44	0.47	0.49
4.....	0.23	0.30	0.36	0.40	0.47	0.53	0.62	0.70	0.76	0.82
5.....	0.27	0.38	0.46	0.54	0.66	0.76	0.93	1.07	1.20	1.31
6.....	0.34	0.48	0.58	0.67	0.82	0.95	1.17	1.35	1.50	1.65
8.....	0.50	0.70	0.86	0.99	1.21	1.41	1.72	1.98	2.22	2.43
10.....	0.69	0.97	1.19	1.37	1.68	1.94	2.37	2.74	3.06	3.36
12.....	0.90	1.28	1.56	1.80	2.21	2.55	3.13	3.61	4.04	4.42
14.....	1.15	1.62	1.99	2.30	2.81	3.25	3.98	4.59	5.13	5.62
16.....	1.42	2.01	2.46	2.84	3.48	4.01	4.92	5.68	6.35	6.95
18.....	1.72	2.43	2.97	3.43	4.21	3.86	5.95	6.87	7.68	8.41
20.....	2.04	2.88	3.53	4.08	5.00	5.77	7.07	8.16	9.12	10.00

Both slope length and slope steepness must be determined on the specific field segment where you are estimating soils erosion. Slope length is the distance from the point of origin or overland flow to the point where (1) the slope gradient decreases enough that sediment deposition begins, (2) the runoff water becomes a concentrated flow, or (3) the runoff enters a well-defined channel that may be part of the natural drainage network or a constructed channel such as a grass waterway or terrace channel.