Table 2.1: Fort Bragg 30-year monthly average precipitation

Fort Bragg Precipitation 30-year monthly averages (years 1971-2000).	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
30-year Monthly Avg (mm)	106.17	89.66	109.22	84.84	97.03	115.82	145.80	115.32	102.87	77.98	76.20	81.53	1202.44

Table 2.2: Fort Bragg 30-year Normal Monthly Mean Temperatures, Mean Monthly Temperatures and potential evapotranspiration.

Fort Bragg Temperature 30-year (1971-2000) Normal Monthly Mean Temperatures, Mean Monthly Temperatures and potential evapotranspiration (PET) calculated using the Hamon Method.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
30-year Monthly Mean (F)	42.9	46.1	53.5	61.8	69.9	77.4	81.3	79.5	73.7	62.7	53.7	45.9	62.37
Mean Daily Temp (F)	42.33	49.19	54.28	61.19	68.45	80.48	78.68	77.67	72.15	60.15	49.70	49.29	61.96
Mean Daily Temp (C)	5.74	9.55	12.38	16.22	20.25	26.93	25.93	25.37	22.30	15.64	9.83	9.61	16.65
Mean PET (mm/day)	1.322324	1.775561	2.308798	3.192825	4.277244	6.439223	5.962381	5.487112	4.288991	2.704192	1.739834	1.636921	3.427951

Table 4.1: Vegetation height map recoding values to simulate weighted runoff.

Vegetation Height Values		Weighted runoff as % rainfall excess	Surface description
From	To		
-0.2600	0.0013	0.8000	bare soil (disturbed)
0.0013	30.0000	0.2000	vegetation present

Table 4.2: Cover factor recoding values to simulate surface types.

Vegetation Height Values		C-factor	Surface description
From	To		
-0.2600	0.0013	0.9000	bare soil (disturbed)
0.0013	0.5000	0.0130	grass; 0% canopy, 80% ground cover
0.5000	2.0000	0.0310	weeds to scrub; 75% canopy, 60% ground cover
2.0000	5.0000	0.0120	scrub to small trees; 75% canopy, 80% ground cover
5.0000	27.0000	0.0110	tall trees; 75% canopy, 95-100% ground cover

Table 5.1: Modeled results of spatially variable *Factor C* with weighted and non-weighted flow.

Spatially variable Factor C
with weighted and non-weighted flow

	Real world DEM		Initial Model State		Fill Dam 1		Fill Dam 2		Fill Dam 3		Grade 3		Rip Rap	
	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow
Soil loss potential tons/(acre.year)	39.34	31.90	35.72	29.11	40.63	32.47	41.11	32.93	38.45	31.08	41.42	33.74	37.95	31.22
Percent change from real world			-9.18	-8.72										
Percent change from initial model state					13.74	11.52	15.09	13.12	7.63	6.76	15.95	15.90	6.22	7.22

Table 5.2: Modeled results of variable erosion based on flow concentration with spatially variable *Factor C*.

Variable Erosion based on flow concentration
with spatially variable Factor C

	Real world DEM		Initial Model State		Fill Dam 1		Fill Dam 2		Fill Dam 3		Grade 3		Rip Rap	
	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas	erosion in light flow areas	erosion in concen-trated flow areas
Soil loss potential tons/(acre.year)	26.32	450.28	24.28	439.27	24.54	570.14	25.01	579.54	24.47	530.28	26.73	497.94	24.41	541.64
Percent change from real world			-7.75	-2.45										
Percent change from initial model state					1.06	29.79	3.00	31.93	0.78	20.72	10.11	13.36	0.53	23.31

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Table 5.3: Modeled results of uniform *Factor C* = 0.1 with weighted and non-weighted flow.

Uniform Factor C = 0.1
with weighted and non-weighted flow

	Real world DEM		Initial Model State		Fill Dam 1		Fill Dam 2		Fill Dam 3		Grade 3		Rip Rap	
	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow	non-weighted flow	weighted flow
Soil loss potential tons/(acre.year)	8.44	6.26	7.74	5.81	8.23	5.93	8.34	6.03	7.99	5.83	8.51	6.29	8.41	6.35
Percent change from real world			-8.28	-7.23										
Percent change from initial model state					6.32	2.02	7.70	3.75	3.18	0.35	9.94	8.21	8.65	9.35

Table 5.4: Soil loss potential for each modeled scenario.

	Soil loss potential tons/(acre.year)	Model Parameters
Real World DEM		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas
Initial Model State		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas
Fill Dam 1		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas
Fill Dam 2		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas

	Soil loss potential tons/(acre.year)	Model Parameters
Fill Dam 3		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas
Grade 3		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas
Rip Rap		**Spatially Variable Factor C**
	31.90	weighted flow
	39.34	non-weighted flow
		Uniform Factor C = 0.1
	6.26	weighted flow
	8.44	non-weighted flow
		Spatially Variable C (non-weighted flow)
	26.32	soil loss in light flow areas
	450.28	soil loss in concentrated flow areas