SILICA BURN

Silica Fire Erosion Plot – Transect #1 (Length - 42ft) Sept. 21, 1980

COMPUTATION SHEET

Starting at W end, 54% slope, rocky cover 45%
light burn, Due South aspect
Aug. 12, 1980 - Rain storm.

— Gran Rhodus
Phil McColley
— R. Roberts

Rill #	Distance ft. from #1 pin	Width (in.)	Depth (in.)	Area (sq. in.)	Shape (□V∪)
1	2.4	0.75	0.5	0.38	∪
2	2.6	0.75	0.5	0.38	"
3	3.7	0.25	0.5	0.13	"
4	4.0	1.0	0.5	0.50	"
5	2.6	2.0	0.75	1.50	"
6	5.8	4.0	1.75	7.0	"
7	7.1	1.5	0.75	1.13	"
8	8.9	2.25	0.75	1.69	"
9	9.4	3.0	1.0	3.0	"
10	9.9	2.0	0.25	0.50	"
11	11.3	2.0	0.75	1.5	"
12	11.8	2.75	0.5	1.38	"
13	12.4	1.25	1.0	1.25	"
14	13.6	3.50	1.0	3.5	"
15	14.6	1.0	0.25	0.25	"
16	16.0	1.0	1.0	1.0	"
17	19.0	4.0	1.25	5.0	"
18	21.3	1.0	0.5	0.5	"
19	24.1	0.5	0.25	0.13	"
20	25.5	2.25	1.25	2.81	"
21	26.6	1.5	0.5	0.75	"
22	27.2	1.5	0.5	0.75	"
23	28.1	2.0	0.5	1.0	"
24	29.2	1.5	0.25	0.38	"
25	29.7	2.0	0.5	1.0	"
26	30.6	1.0	0.5	0.5	"
27	31.1	2.5	0.5	1.25	"
28	32.6	2.0	1.5	1.5	"
29	33.7	3.5	0.5	1.75	"
30	34.6	3.0	0.5	1.5	"
31	37.6	2.25	0.75	1.69	"
32	38.2	1.5	1.0	1.5	"

COMPUTATION SHEET

Subject

Rill #	Distance. (ft from #1 pin)	Width (in.)	Depth (in.)	Area (sq in.)	Shape (△ v ⊔)
33	39.6	3.5	0.25	0.88	⊔
34	40.1	2.5	0.75	1.88	"
35	40.6	2.5	1.0	2.5	"
36	41.0	0.75	1.0	0.75	"
37	41.2	1.75	0.75	1.31	"

72"

$$\frac{54.42 \text{ in.}^2}{3} = 18.14 \text{ tons/Acre}$$

42ft = 504"

$$\frac{72"}{504} = .14 \times 100 = 14\% \text{ area effected}$$

Silica Fire Erosion Plot - Transect #2 (Length 42ft) Sept. 21, 1980

COMPUTATION SHEET

Starting at E. end, 63% slope, 45% rocky area
light burn, due South aspect.

G. Rhodus
P. McColley
R. Roberts

Aug. 12, 1980 - Rain storm:

Rill #	Distance (ft from #1 pin)	Width (in.)	Depth (in.)	Area (sq in.)	Shape (□VU)
1	0.8	2.0	1.0	2.0	□
2	1.2	2.0	0.5	1.0	"
3	1.5	2.5	0.25	0.63	"
4	2.1	5.0	0.25	1.25	"
5	3.0	1.0	0.75	0.75	"
6	3.2	1.0	0.75	0.75	"
7	3.5	1.5	0.5	0.75	"
8	4.4	2.5	0.5	1.25	U
9	4.8	13.0	0.5	6.5	"
10	6.1	3.5	1.0	3.5	"
11	6.7	7.5	1.0	7.5	"
12	7.7	3.5	0.75	2.63	"
13	8.4	4.0	0.5	2.0	"
14	8.9	3.0	0.5	1.5	"
15	9.3	1.5	0.75	1.13	"
16	9.5	1.5	1.0	1.5	"
17	9.8	4.0	1.75	7.0	"
18	11.2	14.0	1.75	24.5	"
19	12.8	2.0	1.5	1.5	V
20	13.3	3.0	1.75	2.63	V
21	15.0	5.0	1.75	8.75	U
22	16.0	3.0	0.5	1.5	"
23	16.5	3.0	1.0	3.0	"
24	16.9	1.5	0.5	0.75	"
25	17.3	4.5	1.25	5.63	"
26	18.6	3.5	2.0	3.5	"
27	19.4	13.0	1.25	16.25	"
28	20.8	1.0	0.5	0.5	"
29	22.8	17.0	1.25	21.25	"
30	24.6	40.0	1.5	60.0	"
31	28.9	27.0	2.5	67.5	"
32	31.6	16.0	1.0	16.0	"

Silica Fire Erosion Plot - Transect #2

COMPUTATION SHEET

Rill #	Distance (ft from pin #1)	Width (in.)	Depth (in.)	Area (Sq in.)	Shape (⎿⎽V⎵U)
33	33.4	6.0	0.5	3.0	⎿
34	34.1	3.5	0.25	0.88	"
35	35.7	7.0	0.5	3.5	"
36	36.6	8.0	1.0	8.0	"
37	37.5	2.5	0.5	1.25	"
38	38.1	2.5	0.75	1.88	"
39	38.7	8.0	0.75	6.0	"
40	39.9	25.0	3.0	75.0	"

Width total: 275"

$$\frac{374.41 \text{ in.}^2}{3} = 124.8 \text{ tons/Acre}$$

42 ft = 504"

$$\frac{275"}{504"} = .55 \times 100 = 55\% \text{ area affected}$$

Silica Fire Erosion Plot - Transect #3 (length-42ft) Sept. 21, 1980

COMPUTATION SHEET

Running from 1 SE → N.W. Slopes 53%

Elevation 2,830' NNE aspect.

1   2

G. Rhodus
P. McColley
R. Roberts

Rill #	Distance (ft from #1 pin)	Width (in.)	Depth (in.)	Area (sq in.)	Shape (□VLI)
1	4.8	11.0	0.5	5.5	□
2	7.4	7.0	0.5	3.5	"
3	8.6	3.5	0.25	0.88	"
4	12.6	4.0	0.5	2.0	"
5	13.9	5.0	0.75	3.75	"
6	14.7	2.5	0.25	0.63	"
7	15.4	2.0	0.5	1.0	"
8	15.7	3.0	0.5	1.5	"
9	17.0	3.0	0.5	1.5	"
10	17.4	6.0	0.75	4.5	"
11	18.0	2.0	0.25	0.5	"
12	18.3	5.0	0.5	2.5	"
13	19.5	2.0	0.5	1.0	"
14	19.8	3.5	0.5	1.75	"
15	20.8	4.0	0.25	1.0	"
16	21.8	13.0	1.00	13.0	"
17	23.8	5.0	1.00	5.0	"
18	25.0	1.5	0.5	0.75	"
19	25.6	1.0	0.75	0.38	V
20	26.3	3.5	0.25	0.88	□
21	27.1	2.5	0.5	1.25	"
22	27.8	1.5	0.25	0.38	"
23	31.5	4.0	0.5	2.0	"
24	33.3	1.0	0.5	0.5	"
25	33.7	4.0	0.75	3.0	"
26	34.7	1.5	0.5	0.75	"
27	36.0	1.0	0.75	0.75	"
28	36.9	4.0	0.75	3.0	"
29	37.3	22.0	1.0	22.0	"
30	39.6	4.5	0.5	2.25	"

(Note: most sheet erosion across X-sections)

Silica Fire Erosion Plot - Transect #3 - Page 2

COMPUTATION SHEET

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Rill #	Distance (ft from #1 pin)	Width (in.)	Depth (in.)	Area (sq.in.)	Shape (☐ V U)
31	40.0	7.0	0.5	3.5	☐
32	40.7	5.0	0.5	2.5	"
33	41.7	3.0	0.5	1.5	"

148.5"

$$\frac{94.90}{3} = 31.63 \text{ tons/Acre}$$

42 ft = 504"

$$\frac{148.5}{504} = .29 \times 100 = 29\% \text{ area effected}$$

Tons/Acre

Transect #1 = 18.14
Transect #2 = 124.80
Transect #3 = 31.60
174.57

$$\frac{174.57}{3} = 58.19 \text{ ton/Acre aver. loss}$$

Silica Fire Erosion Plot - Control (Unburned)   Sept. 26, 1980

COMPUTATION SHEET

Aspect SSE (162°), Transect bearing 44°, Slope 41%

——— Gran Rhodus
——·—— Phil McColle

Rill #	Distance (ft. from #1 Pin)	Width (in.)	Depth (in.)	Area (sq. in.)	Shape (□ v ∪)
1	8.1	2.5	0.12	0.3	∪
2	10.3	1.0	0.12	0.12	"
3	18.1	1.0	0.25	0.25	"
4	18.7	1.5	0.12	0.18	"
5	20.1	4.0	0.12	0.48	"
6	22.5	2.0	0.12	0.24	"
7	29.3	2.0	0.75	1.5	"
8	32.5	1.0	0.12	0.12	"
9	34.3	5.0	0.12	0.60	"
10	37.5	2.0	0.12	0.24	"
11	39.9	3.0	0.12	0.36	"
12	41.0	1.0	0.12	0.12	"
13	41.5	2.5	0.12	0.30	"

28.5"
(2.375 ft)

$$\frac{4.81 \text{ in}^2}{3} = 1.60 \text{ tons/Acre}$$

$$\frac{2.375}{42} = .057 \times 100 = 5.7\% \text{ area effected}$$