

G-15 Grander 1984

Scott

MUD CREEK
SEDIMENT REMOVAL PROJECT
SILT MEASUREMENT UPDATE
9/12/84

Grander
Project Report

Silt depths were determined on 3 previously designated sections of Mud Creek. (2 control #1 experimental). Each section consists of 6 consecutively numbered transects beginning at the upstream end. Silt measurements were taken along each transect at 1.5 ~~foot~~ (46 cm) intervals beginning 1.5 ft. from the south bank.

TRANSECT 1 *upper control* Stream Width 3.8 m

Silt Measurement	Water Surface To Silt (cm)	Water Surface to Bottom (cm)	Silt Depth (cm)
1	48	119	71
2	56	97	41
3	51	90	39
4	62	88	26
5	71	91	20
6	67	71	4
7	57	79	22
8	--	--	0

Mean Silt Depth ~~27.9~~ 31.9

TRANSECT 2 Stream Width 4.3 m

Silt Measurement	Water Surface To Silt (cm)	Water Surface to Bottom (cm)	Silt Depth (cm)
1	64	100	36
2	66	94	28
3	67	93	26
4	70	87	17
5	66	95	29
6	62	101	39
7	64	97	33
8	64	78	14
9	--	--	<u>0</u>

Mean Silt Depth ~~24.6~~ 27.6

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TRANSECT 3

Stream Width 4.1 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	66	95	29
2	67	97	30
3	57	98	41
4	60	97	37
5	60	100	40
6	58	93	35
7	65	87	22
8	60	96	<u>36</u>

Mean Silt Depth 33.8

TRANSECT 4

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	61	90	29
2	63	92	29
3	55	103	48
4	61	103	42
5	55	103	48
6	56	105	49
7	61	103	42
8	61	94	33
9	56	81	<u>25</u>

Mean Silt Depth 38.3

TRANSECT 5

Stream Width 5.4 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	66	100	34
2	68	102	34
3	69	109	40
4	63	109	46
5	62	109	47
6	64	109	45
7	60	114	54
8	65	118	53
9	70	110	40
10	70	100	30
11	61	79	<u>18</u>

Mean Silt Depth 40.0

TRANSECT 6

Stream Width 5.5 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	60	69	9
2	62	84	22
3	64	88	24
4	59	94	35
5	61	107	46
6	61	105	44
7	58	122	64
8	72	124	52
9	62	126	64
10	51	133	82
11	59	106	<u>47</u>

Mean Silt Depth ~~44.4~~
44.4

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Middle Experimental Section

TRANSECT 1

Stream Width 6.2 m *point*

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	48	52	4
2	60	178	118
3	80	206	126
4	86	208	122
5	80	220	140
6	97	210	113
7	96	213	117
8	93	184	91
9	78	168	90
10	73	164	91
11	70	115	45
12	67	101	34
13	45	103	<u>58</u>

Mean Silt Depth 88.4

TRANSECT 2

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	29	30	1
2	46	52	6
3	47	119	72
4	52	134	82
5	56	101	45
6	57	98	41
7	64	97	33
8	66	94	28
9	62	96	<u>34</u>

Mean Silt Depth 38

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TRANSECT 3

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	52	103	51
2	59	105	46
3	57	109	52
4	60	107	47
5	66	106	40
6	63	104	41
7	64	103	39
8	65	100	35
9	59	100	41
10	57	104	47

Mean Silt Depth ~~43.9~~ 44.0

TRANSECT 4

Stream Width 5.7 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	54	113	59
2	58	83	25
3	61	135	74
4	63	108	45
5	69	104	35
6	73	105	32
7	83	104	21
8	79	105	26
9	80	92	12
10	74	91	17
11	68	96	28
12	50	70	20

Mean Silt Depth 32.8

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TRANSECT 5

Stream Width 4.9 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	60	80	20
2	66	91	25
3	68	96	28
4	68	99	31
5	67	97	30
6	69	98	29
7	70	94	24
8	74	112	38
9	71	93	22
10	65	90	<u>25</u>

Mean Silt Depth 27.2

TRANSECT 6

Stream Width 5.4 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	55	69	14
2	65	83	18
3	65	160	95
4	69	162	93
5	69	113	44
6	61	111	50
7	64	111	47
8	65	142	77
9	71	147	76
10	66	149	83
11	60	142+	<u>82</u>

Mean Silt Depth ~~61.7~~ 62.0

(cont...)

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Down Stream Control Section

TRANSECT 1

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	47	89	42
2	52	91	39
3	52	97	45
4	70	99	29
5	64	103	39
6	56	108	52
7	63	110	47
8	66	108	42
9	78	100	<u>22</u>

Mean Silt Depth ~~39.7~~ 40.0

TRANSECT 2

Stream Width 3.75

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	42	86	44
2	54	75	21
3	60	96	36
4	50	97	47
5	73	105	32
6	60	141	81
7	66	107	41
8	50	103	<u>53</u>

Mean Silt Depth 44.4

(cont...)

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TRANSECT 3

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	51	105	54
2	44	86	42
3	59	100	41
4	72	97	25
5	72	101	29
6	64	107	43
7	54	130	76
8	30	129	99
9	38	100	62

Mean Silt Depth 52.3

TRANSECT 4

Stream Width 5.1 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	43	109	66
2	52	122	70
3	48	127	79
4	59	128	69
5	68	134	66
6	77	134	57
7	84	137	53
8	83	144	61
9	69	125	56
10	60	140	80

Mean Silt Depth ~~65.7~~
 66.0

(Cont...)



TRANSECT 5

Stream Width 4.5 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	53	114	61
2	45	112	67
3	50	118	68
4	52	118	66
5	55	122	67
6	53	97	44
7	54	101	47
8	51	82	31
9	60	77	17

Mean Silt Depth 52

TRANSECT 6

Stream Width 4.6 m

<u>Silt Measurement</u>	<u>Water Surface To Silt (cm)</u>	<u>Water Surface to Bottom (cm)</u>	<u>Silt Depth (cm)</u>
1	51	81	30
2	55	94	39
3	61	137	76
4	66	118	52
5	58	127	69
6	58	119	61
7	55	115	60
8	56	90	34
9	60	90	30

Mean Silt Depth 50

MEAN SILT DEPTHS
BY SECTION

Upstream Control
 Middle Experimental Section
 Down Stream Control

~~34.9 cm~~ / 36.8
~~48.6 cm~~ / 50.3 ?
 50.7 cm / 51.0

