

REPORT OF 1962 SURVEY OF SEDIMENT BASINS AT STREAM
GAGE SITES 1, 2, & 3 ON THE H.J. ANDREWS
EXPERIMENTAL FOREST

by

Dick Fredriksen

Sediment basins below stream gaging stations were remeasured for the seventh consecutive year on August 15 and 16. Three years have passed since construction of logging roads into watershed number 3. Watersheds 1 and 2 have been maintained in an undisturbed condition.

MEASUREMENT STANDARDS:

The average bottom elevation of the ponds has been determined by running levels from a reference spike in an adjacent tree. To forestall the possibility of losing the reference spike through windfall or some other natural occurrence, supplementary reference spikes were installed at watersheds 1 and 2. Both spikes are in the top of stumps adjacent to the outlets from the ponds. Watershed 3 has been previously referenced to a USGS bench mark on the flume.

CALCULATIONS:

Sediment accumulation was determined by the procedure outlined by Sturges in 1959. Because a tape was not available for our use when we began at watershed 3, a string line was made with knots at intervals of three feet. The string had stretched about 0.7 feet in 50 feet, so some readings on the up-stream bank were eliminated and the previous average bottom elevation recalculated. We assume the string had not stretched at watershed 2 where it was first used.

DISCUSSION:

A summary of the sediment accumulation for years previous has been compiled by Arthur Wollum in the 1961 report. Two items of new information will be covered in this report: 1) on December 19, 1961, a catastrophic slide gutted better than one half mile of stream channel in watershed 3. The slide began below the middle road constructed in 1959. 2711 cu. ft. of material was measured in the pond on January 11th., most of it arising from this one slide. On March 30th. the basin was cleared of sediment accumulated during the last seven years and a new base measurement was made on March 30, 1962. 2) Virtually no sediment was carried from watershed 3 after March 30th, so we were particularly interested in the accuracy of our methods. It was significant to find that only a modest increase of .011 feet was detected on August 15th.

SEDIMENT ACCUMULATION 1961-62

- ① increase due to 12-19-62 slide
- ② after sediment removal
- ③ " " " " recalculated
- ④ annual measurement.

SEDIMENT ACCUMULATION 1961-62

Accessed +	Loc. Points	Line of sight	Ave. red rds.	Ave. bottom clav.	Change in bottom d. so. ft.	Barin area ft ²	Total accum. ft ³	Ave. accum. ft ³ /ac.
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1962 257 113.120 6.981 106.139 +.187 2153 +292.22 +.233

1962 223 107.930 6.288 101.642 +.045 2016 +90.72 +.609

 $+1.646 \quad 1647 \quad 2710.96 \quad 10.94 \textcircled{1}$

8-30-62 180 97.700 7.597 89.800 -1.44 1647 -2374.97 (2)

3-30-62 169 97.700 7.977 89.723 (1)

8-15-62 169 98.610 8.876 89.734 +.011 1647 +18.12 +.072(4)

- ① increase ^{due} to 12-19-62 slide
- ② after sediment removal
- ③ " " " recalculated
- ④ annual measurement.

Sediment Accumulation W#3 to Jan 11, 1962 (after slide)

Year	No. Points of sight	line of sight	Ave. top reading	Ave. bottom Elev.	change in bottom Elev.	Basin area in ft ²	Total accum. ft ³	Ave. accm. ft/acre
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Watershed #3 250 acres

1961	136		98.890	93.78	89.572			
	32		98.900	8.960	89.940			
wt. acc.					89.579			
					+1.646	1647	2710.62	10.84
1-11-62	1-11-62		98.940	7.695	91.245			

Watershed #3 after emptying sediment pond

3-30-62	180		97.700	7.897	89.803	-1.442	1647	-2.37497	sed. removed during clearing
3-30-62	169		97.700	7.977	89.723				
8-18-62	169		98.610	8.576	89.734	+0.011	1647	+18.12	.072

Drainage for
8-18-62 during

ELEVATIONS OF SEDIMENT ACCUMULATED IN CATCHMENT BASINS

Experimental Area H.H. Rodgers
Basin Location 1011E2

Date 1-11-62
Party: Level
Rod Smith
Notes End of line

Station	Line 1 N.I.	Line 2 N.I.	Line 3 N.I.	Line 4 N.I.	Line 5 N.I.	Line 6 N.I.
00	At. 0.8	At. 1.4	At. 1.5	At. 1.3	At. 1.3	At. 1.1
03	7.70 WE 0.5	8.09	8.34	8.09	8.14	8.21
06	7.74 WE 1.0	8.37	8.21	7.57	7.55	7.85
09	7.75 WE 0.2	8.80	8.22	7.65	7.76	7.98
12	WE 0.5	9.07	8.91	8.19	8.05	8.04
15	7.51 WE 0.0	9.08	8.93	8.38	8.23	8.05
18	WE 2.3	8.58 WE 0.5	8.07	8.00	7.91	7.22
21	WE 1.8	7.91 WE 1.0	7.66	6.75	6.74	7.02
24	WE 0.5	7.39	6.71	6.66	6.80	7.04
27	7.4 WE 0.5	7.12	6.73	6.74	7.02	7.22
30	7.15 WE 0.5	6.78	6.70	6.79	7.16	7.23
33	7.05 WE 1.0	6.81	6.80	6.88	6.85	6.98
36	6.76 WE 3.0	6.93	6.79	6.91	6.79	6.94
39	7.11 WE 3.5	7.06	7.12	6.94	6.81	6.99
42	7.74 WE 3.5	7.66	7.14	6.87	7.00	7.15
45	7.91	8.12	7.24	6.71	WE 4.0	WE 4.4
48	7.44	7.28	7.36	WE 4.8		
51	6.23 WE 5.0	WE 4.0	WE 4.0			
54						
57	(13)	(16)	Chalk T.P. 93	(15)	(14)	(14)
60	94.85	125.05	120.93	109.13	102.81	102.82

Bm
Spice assumed
FS. spike

B.S. Brass plate

B.S. Spike

FS T.P.

Spilling

Rod

Star.

Rod

Star.

Rod

Star.

Rod

Star.

100.00

4.84

104.84

0.41

104.43

2.40

102.40

8.20

110.60

2.98

113.58

98.94

Spilling

8.13

8.09

8.15

8.19

8.43

8.20

1792.74
181 = 7.685

L.S. Log

95

2.98

98.94

MEASUREMENTS OF SEDIMENT ACCUMULATED IN CATCHMENT BASINS

Experimental Area H.T. Meadows
Basin Location US 42

Date 1-11-62
Party Level
Rod Level
Notes Level

Station	Line 7 N.E.	Line 8 N.E.	Line 9 N.E.	Line 10 N.E.	Line 11 N.E.	Line 12 N.E.
00	At 0.8	At 1.0	At 1.5	At 1.6	At 2.2	At 2.0
03	8.04	7.73	8.16	7.94	7.93	7.74
06	7.78	7.86	7.62	7.59	7.48	7.43
09	7.73	7.73	7.76	7.70	7.56	7.54
12	7.86	7.81	8.00	7.96	7.88	7.64
15	7.86	7.71	8.16	8.01	7.72	7.62
18	7.40	7.94	8.22	8.10	7.75	7.65
21	7.54	8.29	8.18	8.09	7.97	7.85
24	8.04	8.46	8.70	8.46	8.43	8.14
27	7.80	8.31	8.52	8.80	8.59	7.76
30	7.49	7.55	8.00	8.59 side Loc	8.05	7.95 WE 2.5
33	6.92	8.04	8.23	7.33 on log	8.19	8.31 WE 1.0
36	7.05	8.75	7.98	8.75	8.17	7.40 WE 3.0
39	7.38	WE 37.8	WE 38.8	WE 37.4	7.23	
42	WE 39.5			WE 42.9	7.23	
45				7.21	7.26	
48				6.99 WE 47.0		
51	TP 2.98				TP 2.98	TP 2.98
54						
57	(13)	(12)	(12)	(14)	(15)	(12)
60	98.89	96.18	97.03	111.52	117.47	93.03

RELATIONS OF SEDIMENT ACCUMULATED IN CATCHMENT BASINS

Experimental Area
Basin Location

W. H. Anderson
1962

Date *1-11-62*
Party *W. H. Anderson*
and
Notes *W. H. Anderson*

Station Line 9 Line 14 Line 15 Line 16

00	AT 2.5	AT 1.4
03	8.09	7.26 WE 0.0
06	7.88	7.95 WE 1.0
09	8.08	8.26 WE 1.8
12	8.17	8.52 WE 2.4
15	8.05	8.60 WE 1.9
18	8.71	7.82 WE 0.3
21	8.63 WE 2.0	WE 1.9.0
24	8.33 WE 1.0	
27	7.78 WE 0.5	
30	WE 0.3 from #28	
33		
36		

TP 2.98

(9)

(6)

73.72

48.41

ELEVATIONS OF SEDIMENT ACCUMULATED IN CATCHMENT BASINS

FORM RI-2

Water sheds
Benchmark:
H.I.
Elev.

Experimental Area: W-T Andrew Eq. for
Basin Location: Waterford #2

Date: 8-30-79
Party: Level Dictator
Rod _____
Notes Page

[illegible]

SI - 100 SOIL STABILIZATION

Water-sheds

Benchmark:

H.I.

Elev.

ELEVATIONS OF SEDIMENT ACCUMULATED IN CATCHMENT BASINS

FORM RI-2

Experimental Area: 117A

Basin Location: 401142

Date: 6-22-62

Party: Level

Rod

Notes

Transsects (Designated in ft. starting at crest of dam)

Station*	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.
1	9.75	9.40	9.40	9.40	9.40	9.40	9.40	9.40
2	9.50	9.30	9.30	9.30	9.30	9.30	9.30	9.30
3	9.75	9.50	9.50	9.50	9.50	9.50	9.50	9.50
4	9.60	9.40	9.40	9.40	9.40	9.40	9.40	9.40
5	9.61	9.40	9.40	9.40	9.40	9.40	9.40	9.40
6	9.40	9.20	9.20	9.20	9.20	9.20	9.20	9.20
7	9.50	9.30	9.30	9.30	9.30	9.30	9.30	9.30
8	9.55	9.35	9.35	9.35	9.35	9.35	9.35	9.35
9	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
10	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
11	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
12	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
13	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
14	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
15	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
16	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
17	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
18	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
19	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
20	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
21	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
22	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
23	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
24	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
25	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
26	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
27	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
28	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
29	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
30	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
31	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
32	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
33	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
34	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
35	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
36	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
37	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
38	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
39	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
40	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
41	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
42	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
43	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
44	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
45	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
46	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
47	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
48	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
49	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
50	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
51	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
52	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
53	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
54	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
55	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
56	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
57	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
58	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
59	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
60	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
61	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
62	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
63	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
64	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
65	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
66	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
67	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
68	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
69	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
70	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
71	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
72	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
73	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
74	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
75	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
76	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
77	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
78	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
79	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
80	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
81	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
82	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
83	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
84	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
85	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
86	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
87	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
88	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
89	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
90	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
91	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
92	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
93	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
94	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
95	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
96	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
97	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
98	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
99	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55
100	9.75	9.55	9.55	9.55	9.55	9.55	9.55	9.55

Total
Average
Numbered to right starting with 1 border line which extends upstream from left end of dam.

H.T. Andrews Exp. Forz

WS#1

9-16-62

	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6
00						
03						
06	3.24	3.49	3.80	3.79	3.65	3.64
09	4.87	5.88 WE 7.9	6.19 WE 7.7	6.25 WE 7.8	6.21 WE 7.8	6.05 WE 7.9
12	6.30 WE 1.4	7.23	8.03	8.10	7.89	7.74
15	6.79 WE 1.7	9.02	9.39	9.34	8.60	9.47
18	6.09 WE 2.0	9.06	10.13	10.54	10.51	10.10
21	6.78 WE 2.6	9.05	10.11	10.00	9.83	9.61
24	5.99 WE 2.6	8.53 on rock	9.73	9.29	9.17	8.86
27	5.66 WE 2.5	8.55	9.11	8.50	8.71	8.57
30	4.96 WE 0.0	7.61 on rock	8.72	8.60	8.43	8.51
33	WE 32.0	7.52 WE 1.5	8.29	8.22	8.14	8.28
36		6.88 WE 1.2	7.88	7.89	8.51	8.92
39		6.51 WE 1.3	7.30	7.54	8.39	8.73
42		5.18 WE 0.9	7.07	7.28	8.25	8.37
45		5.6 WE 0.0	6.50	7.09	7.98	8.25
48		4.78 WE 0.2	5.30 on rock	6.88	7.51	7.30
51		3.54 WE 0.5	5.98	6.82	6.85	7.15
54		on bank	6.02 WE 6.3	6.04	5.85	6.57
57			4.45	5.75	5.59	6.25
60			3.86	5.17	5.15	6.11
63				4.51 WE 0.8	4.64	5.91
66				3.79 WE 0.6	4.24	5.78
69				3.97	4.20	5.35
72					4.12	4.30
75					4.21	

⑦
4.657

⑩
79.31

⑪
125.75

⑫
143.68

⑬
158.87

⑭
167.31

Red on BM - 13.12

" " " beginning line 5 - 13.12 on

" " " ending line 5 - 13.12

trailing point - spike on stump north of creek = 0.66

line of sight 1170.0m

W 381

	line 7	line 8	line 9	line 10	line 11	line 12
00						
01						
02	3.61 WE 9.0	3.56 WE 9.8	3.10	3.10	2.97	
03	5.64	4.75	4.14 WE 9.9	3.73	3.53	
04	7.48	6.81	6.34	5.34 WE 11.4	4.35 WE 12.8	3.26
05	9.12	8.29	7.81	7.35	6.36	4.53 WE 15.0
06	9.05	9.57	9.57	8.69	7.89	5.75
07	9.41	9.41	9.75	9.78	8.24	6.00
08	9.64	8.74	9.29	9.70	7.50	4.92
09	8.57	8.35	8.69	9.18	7.66	4.31
10	8.21	7.64	7.57	8.44	7.45	4.01 WE 20.0
11	8.26	7.71	7.61	7.64	6.51	4.13
12	8.62	8.70	7.99	7.20	6.72	4.57
13	8.94	8.82	8.46	7.15	6.69	4.99 WE 24.1
14	8.79	8.60	8.35	7.08	6.34	5.23
15	8.46	8.32	7.72	6.53	5.79	5.59
16	7.99	7.44	6.66	6.09	5.76	5.84
17	7.33	7.11	6.51	6.07	6.00	5.83
18	6.97	6.99	6.61	6.29	6.13	5.64
19	6.78	6.73	6.30	6.12	5.90	5.52
20	6.52	6.59	6.26	6.03	5.84	5.18
21	6.46	6.54	6.24	6.19	5.65	4.94 WE 25.9
22	6.22	6.45	6.22	5.71	5.25	4.03
23	5.86	6.09	5.64	5.18	4.66 WE 24.1	3.17
24	4.89	4.85	4.85	4.89	3.31	
25	4.73 WE 22.4	3.72 WE 22.8	4.26 WE 23.5	4.04 WE 23.7		

22
16.05

23
14.54

24
15.31

25
14.64

19
12.32

18
9.91

3/3

Assoc rod ndy = 6.991

Elevations of Sediment Accumulated in Catchment Basins

H.T. Andrews
Watershed #2

Date: 8/14/62
level Frederickson
Rod Rothman

Station	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	
00							
03		3.86	4.38	4.83 WE 3.5	5.38 WE 3.2	5.65 4.0	
06		4.85 WE 7.0	5.74 WE 6.4	6.61	6.64	6.92	
09	WE 1.0	6.08	6.69	7.18	7.12	7.12	
12	WE 0.3	5.74	6.75	7.22	7.18	7.19	
15	WE 1.0	6.13	6.93	6.91	6.82	7.25	
18	WE 1.3	6.19	6.80	6.46	7.02	7.03	
21	WE 0.3	6.15	6.56	6.39	6.94	6.99	
24	WE 0.6	6.55	6.40	6.83	6.85	7.09	
27	WE 1.2	6.29	6.55	6.80	6.93	7.39	
30	WE 1.5	6.37	6.63	6.74	7.37	7.48	
33	WE 0.5	6.49	6.53	6.86	7.55	7.42	
36	WE 2.8	6.00	6.24	6.93	7.52	7.59	
39	WE 1.7	6.02	6.18	6.55	7.37	7.44	
42	WE 2.0	6.07	5.78 WE 4.4	5.69 WE 4.0	5.89 WE 4.9	6.23 WE 4.5	
45	WE 4.2	5.13	4.98	4.76	5.10	5.28	
48			4.72	4.66	4.97	4.79	
51			4.70	4.65	4.62	4.59	
54			4.66	4.66	4.72	4.62	
57			4.64				
60							
	① 12.65	② 62.26	③ 98.18	④ 106.10	⑤ 115.99	⑥ 117.95	

Rod on BM 7.94

Recheck on Ben 7.93 after #21 on line 1+2.

Reh. on Ben 7.93 ending

On spike for stump 5.975
below spillway.

H.T. Andrews
Watershed #2

Date: 8/14/62

	Line 7	Line 8	Line 9	Line 10	Line 11	Line 12
00						
03	5.13 WE 3.7	4.57 WE 4.5	5.09 WE 4.2	4.59 WE 4.5	4.57 WE 4.6	3.89 WE 5.7
06	6.16 ✓	6.25 ✓	6.67 ✓	6.20 ✓	6.32 ✓	5.81 ✓
09	6.94	6.87	7.20	6.98	6.98	6.32
12	7.13	6.96	7.12	7.02	6.99	6.46
15	7.20	7.00	6.88	6.61	6.65	6.64
18	6.95	6.80	6.68	6.47	6.37	6.34
21	6.92	6.79	6.66	6.46	6.49	6.44
24	7.04	6.91	6.67	6.65	6.72	6.88
27	7.29	7.02	6.81	6.95	6.89	6.68
30	7.36	6.88	6.85	7.02	6.81	6.73
33	7.42	7.02	6.80	6.70	6.74	6.76
36	7.48	7.13	6.52	6.30	6.69	6.79
39	7.32	6.73	6.11 WE 40.3	5.97	6.56	6.60
42	6.30 WE 43.1	5.15 WE 41.4	4.93	5.33 WE 41.2	5.51 WE 41.8	6.05 WE 43.5
45	5.03	4.64	4.87	5.04	5.19	5.09 ✓
48	4.93	4.56	4.81 ✓	5.11 ✓	5.01 ✓	4.91
51	4.65 ✓	4.61 ✓	5.11	5.01	4.70	3.74
54	4.58	4.68	4.56	4.47	4.08	
57						
60						
	(16) 106.12	(16) 101.32	(13) 95.58	(15) 94.81	(15) 95.82	(14) 89.59

H.T. Andrews
W₂ #2

Date: 8/14/62

00
03
06
09
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Line 13	Line 14	Line 15	Line 16	Line 17	Line 18
4.01	4.09	4.69	5.11	5.75 spillway 5.67 water pump 6.12 WE 1.5 WE 2.8	
5.89 WE 6.0	5.25 WE 6.3	5.91 WE 4.9	6.23 WE 2.40	6.10 WE 1.7	
6.35 ✓	6.49 ✓	6.24	6.49	5.88 WE 1.0	4.90 ✓
6.61	6.35	6.43	6.29	5.88 WE 0.9	5.66 ✓ WE 0.0
6.92	6.50	6.11	6.06	5.85 WE 1.5.9	4.50 ✓
6.25	6.25	6.06	6.06	5.17 ✓	4.23
6.43	6.14	6.26	6.03	4.17	
6.67	6.10	6.30	5.50 WE 2.40		
6.61	6.42	6.20	4.20 ✓		
6.33	6.53	5.88	4.26		
6.67	6.87	4.35 WE 3.1.1			
6.57	5.94 WE 3.8.0	4.46 ✓			
6.20	4.53				
6.80	4.26 ✓				
4.22 WE 4.2.7					
3.82					
⑬ 82.37	⑭ 71.88	⑪ 64.20	⑨ 46.76	⑥ 35.00	① 5.66

total = 1402.32
points = 223
6.288
6.277 m. red. only.

IN CATCHMENT BASINS

Experimental Area: H.T. Andrews
Basin Location: (11) S #2

Date: 10-2-62
Party: Level Salisbury
Rod Speeldea
Notes End of

[illegible]

RI - NW
SOIL STABILIZATION
Watersheds

Benchmark:

H.I.

Elev.

ELEVATIONS OF SEDIMENT ACCUMULATED
IN CATCHMENT BASINS

FORM RI-2

Date: 10-2-62

Party: Level Engineers

Rod

Notes

Experimental Area: H.I. Andrews
Basin Location: W542

Station#	Transects (Designated in ft. starting at crest of dam)												
	9	10	11	12	13	14							
	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.							
00	4.52	4.57	4.62	4.67	4.72	4.77							
01	4.53	4.58	4.63	4.68	4.73	4.78							
02	4.54	4.59	4.64	4.69	4.74	4.79							
03	4.55	4.60	4.65	4.70	4.75	4.80							
04	4.56	4.61	4.66	4.71	4.76	4.81							
05	4.57	4.62	4.67	4.72	4.77	4.82							
06	4.58	4.63	4.68	4.73	4.78	4.83							
07	4.59	4.64	4.69	4.74	4.79	4.84							
08	4.60	4.65	4.70	4.75	4.80	4.85							
09	4.61	4.66	4.71	4.76	4.81	4.86							
10	4.62	4.67	4.72	4.77	4.82	4.87							
11	4.63	4.68	4.73	4.78	4.83	4.88							
12	4.64	4.69	4.74	4.79	4.84	4.89							
13	4.65	4.70	4.75	4.80	4.85	4.90							
14	4.66	4.71	4.76	4.81	4.86	4.91							
15	4.67	4.72	4.77	4.82	4.87	4.92							
16	4.68	4.73	4.78	4.83	4.88	4.93							
17	4.69	4.74	4.79	4.84	4.89	4.94							
18	4.70	4.75	4.80	4.85	4.90	4.95							
19	4.71	4.76	4.81	4.86	4.91	4.96							
20	4.72	4.77	4.82	4.87	4.92	4.97							
21	4.73	4.78	4.83	4.88	4.93	4.98							
22	4.74	4.79	4.84	4.89	4.94	4.99							
23	4.75	4.80	4.85	4.90	4.95	5.00							
24	4.76	4.81	4.86	4.91	4.96	5.01							
25	4.77	4.82	4.87	4.92	4.97	5.02							
26	4.78	4.83	4.88	4.93	4.98	5.03							
27	4.79	4.84	4.89	4.94	4.99	5.04							
28	4.80	4.85	4.90	4.95	5.00	5.05							
29	4.81	4.86	4.91	4.96	5.01	5.06							
30	4.82	4.87	4.92	4.97	5.02	5.07							
31	4.83	4.88	4.93	4.98	5.03	5.08							
32	4.84	4.89	4.94	4.99	5.04	5.09							
33	4.85	4.90	4.95	5.00	5.05	5.10							
34	4.86	4.91	4.96	5.01	5.06	5.11							
35	4.87	4.92	4.97	5.02	5.07	5.12							
36	4.88	4.93	4.98	5.03	5.08	5.13							
37	4.89	4.94	4.99	5.04	5.09	5.14							
38	4.90	4.95	5.00	5.05	5.10	5.15							
39	4.91	4.96	5.01	5.06	5.11	5.16							
40	4.92	4.97	5.02	5.07	5.12	5.17							
41	4.93	4.98	5.03	5.08	5.13	5.18							
42	4.94	4.99	5.04	5.09	5.14	5.19							
43	4.95	5.00	5.05	5.10	5.15	5.20							
44	4.96	5.01	5.06	5.11	5.16	5.21							
45	4.97	5.02	5.07	5.12	5.17	5.22							
46	4.98	5.03	5.08	5.13	5.18	5.23							
47	4.99	5.04	5.09	5.14	5.19	5.24							
48	5.00	5.05	5.10	5.15	5.20	5.25							
49	5.01	5.06	5.11	5.16	5.21	5.26							
50	5.02	5.07	5.12	5.17	5.22	5.27							
51	5.03	5.08	5.13	5.18	5.23	5.28							
52	5.04	5.09	5.14	5.19	5.24	5.29							
53	5.05	5.10	5.15	5.20	5.25	5.30							
54	5.06	5.11	5.16	5.21	5.26	5.31							
55	5.07	5.12	5.17	5.22	5.27	5.32							
56	5.08	5.13	5.18	5.23	5.28	5.33							
57	5.09	5.14	5.19	5.24	5.29	5.34							
58	5.10	5.15	5.20	5.25	5.30	5.35							
59	5.11	5.16	5.21	5.26	5.31	5.36							
60	5.12	5.17	5.22	5.27	5.32	5.37							
61	5.13	5.18	5.23	5.28	5.33	5.38							
62	5.14	5.19	5.24	5.29	5.34	5.39							
63	5.15	5.20	5.25	5.30	5.35	5.40							
64	5.16	5.21	5.26	5.31	5.36	5.41							
65	5.17	5.22	5.27	5.32	5.37	5.42							
66	5.18	5.23	5.28	5.33	5.38	5.43							
67	5.19	5.24	5.29	5.34	5.39	5.44							
68	5.20	5.25	5.30	5.35	5.40	5.45							
69	5.21	5.26	5.31	5.36	5.41	5.46							
70	5.22	5.27	5.32	5.37	5.42	5.47							
71	5.23	5.28	5.33	5.38	5.43	5.48							
72	5.24	5.29	5.34	5.39	5.44	5.49							
73	5.25	5.30	5.35	5.40	5.45	5.50							
74	5.26	5.31	5.36	5.41	5.46	5.51							
75	5.27	5.32	5.37	5.42	5.47	5.52							
76	5.28	5.33	5.38	5.43	5.48	5.53							
77	5.29	5.34	5.39	5.44	5.49	5.54							
78	5.30	5.35	5.40	5.45	5.50	5.55							
79	5.31	5.36	5.41	5.46	5.51	5.56							
80	5.32	5.37	5.42	5.47	5.52	5.57							
81	5.33	5.38	5.43	5.48	5.53	5.58							
82	5.34	5.39	5.44	5.49	5.54	5.59							
83	5.35	5.40	5.45	5.50	5.55	5.60							
84	5.36	5.41	5.46	5.51	5.56	5.61							
85	5.37	5.42	5.47	5.52	5.57	5.62							
86	5.38	5.43	5.48	5.53	5.58	5.63							
87	5.39	5.44	5.49	5.54	5.59	5.64							
88	5.40	5.45	5.50	5.55	5.60	5.65							
89	5.41	5.46	5.51	5.56	5.61	5.66							
90	5.42	5.47	5.52	5.57	5.62	5.67							
91	5.43	5.48	5.53	5.58	5.63	5.68							
92	5.44	5.49	5.54	5.59	5.64	5.69							
93	5.45	5.50	5.55	5.60	5.65	5.70							
94	5.46	5.51	5.56	5.61	5.66	5.71							
95	5.47	5.52	5.57	5.62	5.67	5.72							
96	5.48	5.53	5.58	5.63	5.68	5.73							
97	5.49	5.54	5.59	5.64	5.69	5.74							
98	5.50	5.55	5.60	5.65	5.70	5.75							
99	5.51	5.56	5.61	5.66	5.71	5.76							
100	5.52	5.57	5.62	5.67	5.72	5.77							
101	5.53	5.58	5.63	5.68	5.73	5.78							
102	5.54	5.59	5.64	5.69	5.74	5.79							
103	5.55	5.60	5.65	5.70	5.75	5.80							
104	5.56	5.61	5.66	5.71	5.76	5.81							
105	5.57	5.62	5.67	5.72	5.77	5.82							
106	5.58	5.63	5.68	5.73	5.78	5.83							
107	5.59	5.64	5.69	5.74	5.79	5.84							
108	5.60	5.65	5.70	5.75	5.80	5.85							
109	5.61	5.66	5.71	5.76	5.81	5.86							
110	5.62	5.67	5.72	5.77	5.82	5.87							
111	5.63	5.68	5.73	5.78	5.83	5.88							
112	5.64	5.69	5.74	5.79	5.84	5.89							
113	5.65	5.70	5.75	5.80	5.85	5.90							
114	5.66	5.71	5.76	5.81	5.86	5.91							
115	5.67	5.72	5.77	5.82	5.87	5.92							
116	5.68	5.73	5.78	5.83	5.88	5.93							
117	5.69	5.74	5.79	5.84	5.89	5.94							
118	5.70	5.75	5.80	5.85	5.90	5.95							
119	5.71	5.76	5.81	5.86	5.91	5.96							
120	5.72	5.77	5.82	5.87	5.92	5.97							
121	5.73	5.78	5.83	5.88	5.93	5.98							
122	5.74	5.79	5.84	5.89	5.94	5.99							
123	5.75	5.80	5.85	5.90	5.95	6.00							
124	5.76	5.81	5.86	5.91	5.96	6.01							
125	5.77	5.82	5.87	5.92	5.97	6.02							
126	5.78	5.83	5.88	5.93	5.98	6.03							
127	5.79	5.84	5.89	5.94	5.99	6.04							
128	5.80	5.85	5.90	5.95	6.00	6.05							
129	5.81	5.86	5.91	5.96	6.01	6.06							
130	5.82	5.87	5.92	5.97	6.02	6.07							
131	5.83	5.88	5.93	5.98	6.03	6.08							
132	5.84	5.89	5.94	5.99	6.04	6.09							
133	5.85	5.90	5.95	6.00	6.05	6.10							
134	5.86	5.91	5.96	6.01	6.06	6.11							
135	5.87	5.92	5.97	6.02	6.07	6.12							
136	5.88	5.93	5.98	6.03	6.08	6.13							
137	5.89	5.94	5.99	6.04	6.09	6.14							
138	5.90	5.95	6.00	6.05	6.10	6.15							
139	5.91	5.96	6.01	6.06	6.11	6.16							
140	5.92	5.97	6.02	6.07	6.12	6.17							
141	5.93	5.98	6.03	6.08	6.13	6.18							
142	5.94	5.99	6.04	6.09	6.14	6.19							
143	5.95	6.00	6.05	6.10	6.15	6.20							
144	5.96	6.01	6.06	6.11	6.16	6.21							
145	5.97	6.02	6.07	6.12	6.17	6.22							
146	5.98	6.03	6.08	6.13	6.18	6.23							
147	5.99	6.04	6.09	6.14	6.19	6.24							
148	6.00	6.05	6.10	6.15	6.20	6.25							
149	6.01	6.06	6.11	6.16	6.21	6.26							
150	6.02	6.07	6.12	6.17	6.22	6.27							
151	6.03	6.08	6.13	6.18	6.23	6.28							
152	6.04	6.09	6.14	6.19	6.24	6.29							
153	6.05	6.10	6.15	6.20	6.25	6.30							
154	6.06	6.11	6.16	6.21	6.26	6.31							
155	6.07	6.12	6.17	6.22	6.27	6.32							
156	6.08												

Benchmark:
H.I.
Elev.

Experimental Area: H.I. Andrews
Basin Location: US 42

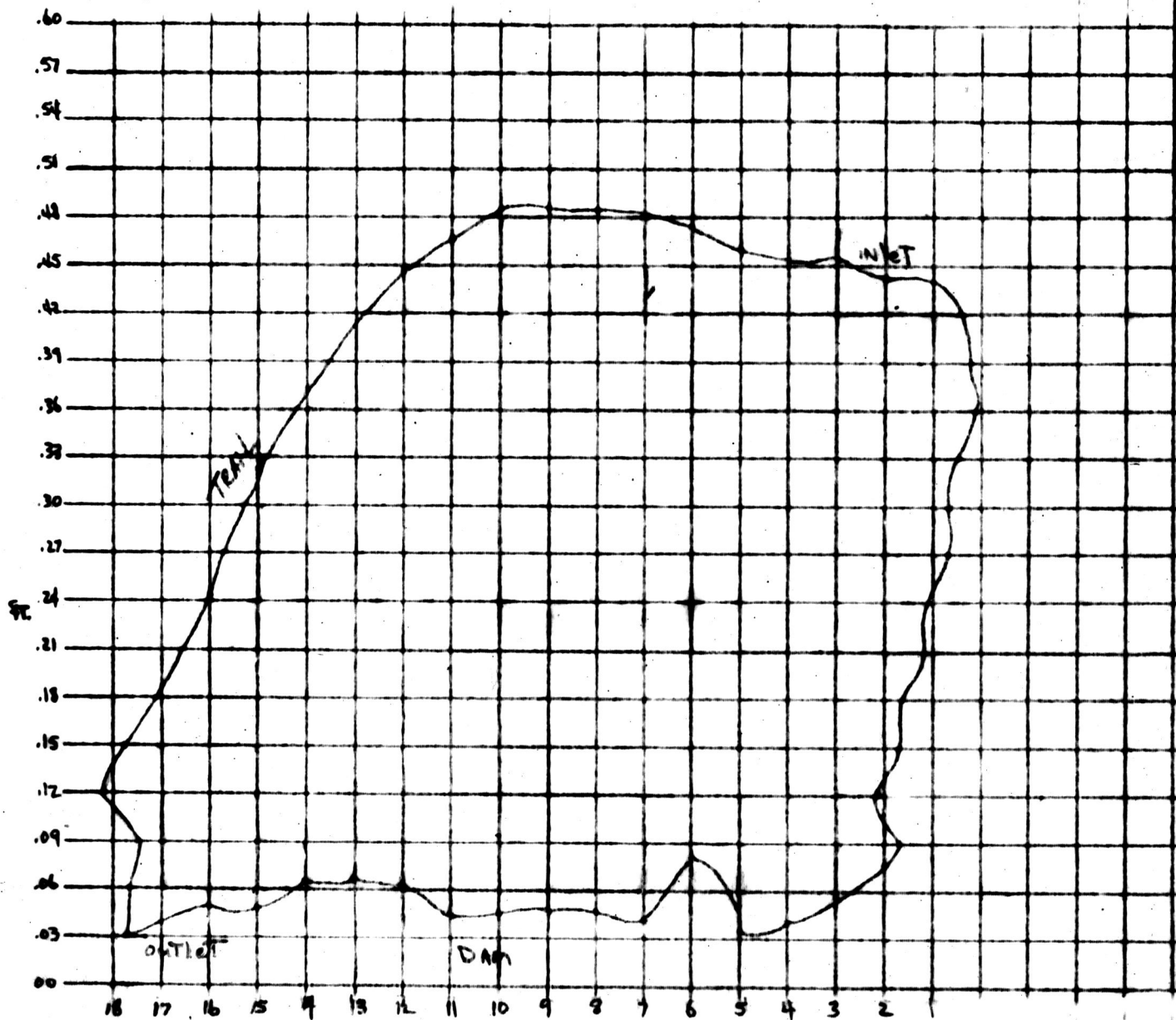
Date: 10-3-62
Party: Level Embedment
Rod Spagelberg
Notes Embedment

Station#	Transects (Designated in ft. starting at crest of dam)				
	Line Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.	H.I. Elev.
00					
01	464	510	604		
02	606	580	623		
03	634	609	607		
04	654	626	592		
05	644	595	578		
06	650	611	538		
07	650	590	433		
08	643	537	418		
09	589	433	418		
10	585	425			
11	427				
12					
13					
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86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
Total					
Average					

Numbered to right starting with 1 at border line which extends upstream from left end of dam.

As of 10/3/62 = 1167.05 = 6.589

As of 10/3/62 = 1167.05 = 6.589



ft

WS #2 Sediment Basin
Approx 1831 sq ft

$$\text{Area} = \frac{\# \text{ dots} \times \# (\text{ft}^2/\text{in}^2)}{\# \text{ dots}/\text{in}^2} = \frac{1057}{64} \times 111 = 1831 \text{ ft}^2$$

$$\text{Area} = (\# \text{ large squares} \times 9) + \# \text{ small squares} = (175 \times 9) + 256 = 1831 \text{ ft}^2$$

Elevations of Sediment Accumulated in Catchment Basins

Experimental Area: H.T. Andrews Exp. For.
Basin Location: Watershed #2

Date: 8-18-62

Party: Leed Rollins
Red Friedman
Notes Rollins

	line 1	line 2	line 3	line 4	line 5	line 6	
08							
09	7.45' W.E. 1.7	9.35'	9.42	9.68	9.62	9.59	
06	2.27' W.E. 7	9.40	9.64	9.62	9.51	9.64	
09	7.08' W.E. 0	9.18	9.52	9.58	9.54	9.64	
12		8.90	9.48	9.69	9.58	9.50	
15	6.77' W.E. 0	8.81	9.53	9.51	9.64	9.64	
18	7.10' W.E. 3	7.34' W.E. 3	9.40	9.52	9.57	9.43	
21		7.55' W.E. 1.0	9.40	9.48	9.50	9.50	
24		8.52' W.E. 2.0	9.31	9.39	9.35	9.31	
27	7.12' W.E. 5	8.58	9.17	9.30	9.30	9.35	
30	7.37' W.E. 3	8.67	9.18	9.19	9.19	9.16	
33	7.46' W.E. 8	8.54	8.91	9.16	9.07	9.31	
36	7.87' W.E. 2.2	8.26	8.89	9.06	9.08	8.49	
39	2.90' W.E. 2.8	8.44	8.72	8.82	8.28	7.28	
42	7.66' W.E. 2.8	7.88	7.88	8.18	7.07	5.62 W.E. 40.0	
45	7.02' W.E. 2.8	7.62	7.64 W.E. 46.0	7.20 W.E. 46.0	W.E. 42.3		
48	5.71' W.E. 46.0	6.38 W.E. 46.0	6.05				
51	(11) 79.81	(15) 127.04	(13) 136.04	77.0 2.635 (14) 130.18	(17) 151.73	77.0 2.635 (19) 119.64	
54							
57							
60							

Spikes assumed 100

100

F.S. spike	rod	5.75
	elev.	105.25
B.S. brass plate	rod	1.35
	elev.	104.40
B.S. spike	rod	4.18
	elev.	104.18
F.S. T.P.	rod	8.20
	elev.	96.98
B.S. TP	rod	2.63
L.S. Elev.	elev.	98.67

H.T. Andrews Exp. For WS#3

8-15-62

	line 7	line 8	line 9	line 10	line 11	line 12
00						
03	9.56	9.75 4 2.40	10.06 1.5'	10.19 4.6	andam	9.68 45'
06	9.71	9.91	9.80	9.98	10.18	9.68
09	9.73	9.69	9.58	9.74	9.78	9.38
12	9.80	9.54	9.49	9.65	9.71	9.43
15	9.59	9.53	9.60	9.77	9.47	9.39
18	9.62	9.45	9.51	9.61	9.39	9.35
21	9.42	9.38	9.44	9.43	9.39	9.25
24	9.34	9.43	9.42	9.47	9.25	8.54
27	9.31	9.46	9.41	9.29	8.74	7.90
30	9.33	9.28	9.35	8.78	7.93	7.73
33	9.13	9.00	8.62	7.04 m log	7.92	6.95 WS 1.0
36	7.89	7.14	7.24 WS 35.5	7.32	7.86	7.01 10.2
39	6.23 WS 38.3	WS 36.2			7.11 WS 37	
42					7.00	
45				7.01	6.92	
48	(13)	(11)		6.60 WS 36.5		
51	112.45	104.42	(12) 104.23	(13) 113.88	(14) 120.70	(15) 104.24

Runs along
water edge

H.T. Andrews Exp. For.
WS# 3

8-15-62

373

	Line 13	Line 14
00	ant?	
03	ant on rock	7.00 NE 0.0
06	9.11	7.83 W 1.2
09	9.22	8.09 " 1.1
12	9.26	8.26 " 2.0
15	9.12	8.05 " 1.8
18	9.10	7.50 on W. 6
21	8.12 on bank	
24	7.96	
27	2.82 W 6.3	TP = 7.635

Spillway = 7.03
7.05
7.05
7.05
7.06

①
69.92

②
46.73

1500.12
169