

1973-1985 Surface Erosion Metadata - pulled from archive by Don Henshaw / updated by Steve Taylor, Sept. 11, 2007.

GE01

Title : HJ Andrews erosion studies (formerly IE)

Primary investigator: Swanson, F.J.

Beginning date: 12/73 Ending date : 07/85

Format 1 - Complete field & lab data for size class > 1/4"
GE011.FIN - Complete set: all years, sites

Format 2 - Complete field & lab data for size classes < 1/4"
GE012.FIN - Complete set: all years, sites

Format 3 - Erosion rates by watershed by year
GE013.FIN - Watersheds 9 & 10

Format 4 - Summary of weights by watershed by year (almost)
GE014.FIN - Watersheds 9 & 10

Format 5 - Misc expander values
GE015.DAT - Misc expander values for WS 9 & 10

$0.25 \text{ in} \frac{2.54 \text{ cm}}{\text{in}} \frac{10 \text{ mm}}{\text{cm}}$

$6 \text{ mm} \frac{1 \text{ cm}}{10 \text{ mm}} \frac{1 \text{ in}}{2.54 \text{ cm}}$

GE01

ABSTRACTOR:

Swanson, Fred

DATE:

901115

KEYWORDS:

Sediment yield, erosion, litter, logging, sediment budget.

PARAMETERS:

VEGETATION ZONE:

COMMUNITY TYPE:

TAXA:

SOIL TYPE:

RESEARCH AREA/REGION:

Western Cascades of Oregon.

SITE LOCATION:

H. J. Andrews Experimental Forest: Watersheds 1, 2, 3, 9, 10 & Hi-15;
Coyote Creek; and Bull Run area.

PERMANENT PLOTS:

None.

↑ (?)

STUDY PURPOSE, GOALS:

1) Determine natural rates of sediment yield (organic and inorganic) based on collections in sediment basins at the bottom of each watershed. 2) Determine rates of sediment yield through time following a management treatment of clearcutting without burning 3) determine rates of surface erosion transport of soil to stream channels under natural and post-clearcut without burning conditions. This is all part of an effort to compile sediment budgets for natural and logged conditions.

SITE CHARACTER:

Data span period of old-growth forest through period of accelerated erosion following clearcutting in the summer of 1975. For a description of watershed 10 see 63,48. Watershed 10 is a old-growth (450 year old) Douglas-fir - western hemlock dominated forest. It is steep and rocky (45% ave slope) SW aspect. Watershed 9 is a 100 yr old fire-origin stand.

EXPERIMENTAL/SAMPLING DESIGN:

Sediment basins constructed at base of each watershed. Basins are subsampled as they are cleaned. Surface erosion collectors (lateral movement in stream team terminology) have been placed in the field in a variety of designs. Main design on watershed 9 and 10 is 30 boxes (0.5 m opening upslope) placed at 20m interval along channel perimeter.

METHODS:

Sediment yield basins are cleaned several times per year, subsamples are returned to Corvallis for segregation (<2, 2-6, and >6 mm) for both organic and inorganic fractions. Surface erosion collectors were cleaned monthly through 1981 and quarterly thereafter. Sample processing and data reduction is the same as for sediment basin samples. A written description of methods is on file with USFS RWU-1653, FSL, Field notes-FSL nm 363,64, FSL-204,

UPDATE HISTORY:

COMMENTS:

Complete field & lab data for size class > 1/4"

Variable	Co- ded	Format	Columns	Units	Definition
DATA CODE		A2	1-2		Data code ("IE")
SMPLTYPE	Y	A1	3-3		Type of sample
FRMTTYPE		A2	4-5		Format type
LOCATION	Y	1X,A4	7-10		Location
DATETIME		I9	11-19	YYMMDDH	Date and time sample collected
LABNUM		I4	20-23		Lab number of sample
MULT		F5.1	24-28		Multiplier
TOTALWT		2X,F8.2	31-38	GRAMS	Total weight of sample
CLASSWTL		F8.2	39-46	GRAMS	Weight of large class (>1/4") part of sample
INORGWTL		F8.2	47-54	GRAMS	Weight of inorganic part of large class
ORGWTL		F8.2	55-62	GRAMS	Weight of organic part of large class

Complete field & lab data for size classes < 1/4"

Variable	Co- ded	Format	Columns	Units	Definition
DATA CODE		A2	1-2		Data code ("IE")
SMPLTYPE	Y	A1	3-3		Type of sample
FRMTTYPE		A2	4-5		Format type
LOCATION	Y	1X,A4	7-10		Location
DATE TIME		I9	11-19	YYMMDDH	Date and time sample collected
LABNUM		I4	20-23		Lab number of sample
MULT		F5.1	24-28		Multiplier
CLASSWTM		2X,F8.2	31-38	GRAMS	Weight of medium class (1/4" - 2mm) part of sample
INORGWTM		F8.2	39-46	GRAMS	Weight of inorganic part of medium class
ORGWTM		F8.2	47-54	GRAMS	Weight of organic part of medium class
CLASSWTS		F8.2	55-62	GRAMS	Weight of small class (<2mm) part of sample
INORGWTS		F8.2	63-70	GRAMS	Weight of inorganic part of small class
ORGWTS		F8.2	71-78	GRAMS	Weight of organic part of small class

Erosion rates by watershed by year

Variable	Co- ded	Format	Columns	Units	Definition
-----	---	-----	-----	-----	-----
DATA CODE		A2	1-2		DATA CODE ('IE')
WS		1X,I2	4-5		WATERSHED
WY		1X,I2	7-8		WATERYEAR
DATEBGN		1X,I6	10-15	YYMMDD	START DATE
DATEEND		1X,I6	17-22	YYMMDD	END DATE
DAYS		1X,I3	24-26	DAYS	NUMBER OF DAYS IN PERIOD
BOXES		1X,I2	28-29	BOXES	NUMBER OF BOXES
TOTALWT		1X,F7.1	31-37	G	TOTAL WEIGHT OF SAMPLES
RATEDAY		1X,F5.2	39-43	G/M/DAY	EROSION RATE PER DAY
RATEYEAR		1X,F6.1	45-50	G/M/YR	EROSION RATE PER YEAR
SURFACE		1X,F6.1	52-57	KG/YR	TOTAL SURFACE EROSION
COLLUMV		1X,F5.2	59-63	KG/HA/Y	COLLUVIUM PRODUCTION

Summary of weights by watershed by year (almost)

Variable	Co- ded	Format	Columns	Units	Definition
-----	---	-----	-----	-----	-----
DATACODE		A2	1-2		DATA CODE ("IE")
WS		1X,I2	4-5		WATERSHED
DATEBGN		1X,I6	7-12	YYMMDD	START DATE
DATEEND		1X,I6	14-19	YYMMDD	END DATE
INORGWT		1X,I3	21-23	KG	WEIGHT OF INGANICS IN SAMPLE
ORGWT		1X,I2	25-26	KG	WEIGHT OF ORGANICS IN SAMPLE
TOTALWT		1X,F6.2	28-33	KG	TOTAL WEIGHT OF SAMPLE

Misc expander values

Variable	Co- ded	Format	Columns	Units	Definition
-----	---	-----	-----	-----	-----
DATA CODE		A2	1-2		Data code ("IE")
SMPLTYPE	Y	A1	3-3		Type of sample (all are from sed basins)
FRMTTYPE		A2	4-5		Format type (all blank but assumed to be from p2 and p3 data)
LOCATION	Y	1X,A4	7-10		Location
DATETIME		I9	11-19	YYMMDDH	Date and time sample collected
LABNUM		I4	20-23		Lab number of sample
MULT		F5.1	24-28		Multiplier
EXPANDER		F3.1	29-31		Expander (probably due to a LAB subdivision of the sample)

HJ Andrews erosion studies (formerly IE)

Variable: LOCATION

0001 If SMPLTYPE=U: south aspect HJA watershed 9 top ridge
 0002 If SMPLTYPE=U: south aspect HJA watershed 9 bottom lower ridge
 0002 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 2
 0003 If SMPLTYPE=U: north aspect HJA near watershed 10 farthest
 0004 If SMPLTYPE=U: north aspect HJA near watershed 10 middle
 0004 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 4
 0005 If SMPLTYPE=U: southwest aspect HJA near watershed 10 closest
 0006 If SMPLTYPE=U: south aspect HJA near watershed 10 top of watershed
 0006 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 6
 0007 If SMPLTYPE=L: clearcut site (with IT thrufall collectors)
 0007 If SMPLTYPE=U: south aspect HJA near watershed 10 (defunct?)
 0007 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 7
 0011 If SMPLTYPE=L: clearcut site (with IT thrufall collectors)
 0014 If SMPLTYPE=L: clearcut site (with IT thrufall collectors)
 0021 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 21
 0023 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 23
 0026 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 26
 0034 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 34
 0038 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 38
 003A Litterfall: old-growth control site A
 003B Litterfall: old-growth control site B (with IT thrufall collector
 004A Litterfall: old-growth control site B (with IT thrufall collector
 004B Litterfall: old-growth control site B (with IT thrufall collector
 0054 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 54
 0055 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 55
 005A Litterfall: old-growth control site B (with IT thrufall collector
 005B Litterfall: old-growth control site B (with IT thrufall collector
 0060 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 60
 0066 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 66
 0078 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 78
 0084 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 84
 0086 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 86
 0087 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 87
 0090 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 90
 0101 HJA watershed 1 erosion box #1
 0102 HJA watershed 1 erosion box #2
 0102 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 102
 0103 HJA watershed 1 erosion box #3
 0104 HJA watershed 1 erosion box #4
 0105 HJA watershed 1 erosion box #5
 0106 HJA watershed 1 erosion box #6
 0107 HJA watershed 1 erosion box #7
 0108 HJA watershed 1 erosion box #8
 0113 If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 113
 > Codes continued on next page <

HJ Andrews erosion studies (formerly IE)

Variable: LOCATION

0123	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 123
0130	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 130
0131	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 131
0133	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 133
0136	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 136
0137	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 137
0143	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 143
0146	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 146
0170	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 170
0178	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 178
0191	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 191
0196	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 196
0201	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 201
0204	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 204
0207	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 207
0211	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 211
0216	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 216
0218	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 218
0229	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 229
0246	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 246
0247	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 247
0260	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 260
0264	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 264
0266	If SMPLTYPE=B: Hi-15 upslope erosion boxes; sample box number 266
1001	If SMPLTYPE=E: HJA watershed 10 event box #1
1001	If SMPLTYPE=B: HJA watershed 10 erosion box #1, streambank latera
1002	If SMPLTYPE=E: HJA watershed 10 event box #2
1002	If SMPLTYPE=B: HJA watershed 10 erosion box #2, streambank latera
1003	If SMPLTYPE=E: HJA watershed 10 event box #3
1003	If SMPLTYPE=B: HJA watershed 10 erosion box #3, streambank latera
1004	If SMPLTYPE=E: HJA watershed 10 event box #4
1004	If SMPLTYPE=B: HJA watershed 10 erosion box #4, streambank latera.
1005	HJA watershed 10 erosion box #5, streambank lateral movement
1006	HJA watershed 10 erosion box #6, streambank lateral movement
1007	HJA watershed 10 erosion box #7, streambank lateral movement
1008	HJA watershed 10 erosion box #8, streambank lateral movement
1009	HJA watershed 10 erosion box #9, streambank lateral movement
1010	HJA watershed 10 erosion box #10, streambank lateral movement
1011	HJA watershed 10 erosion box #11, streambank lateral movement
1012	HJA watershed 10 erosion box #12, streambank lateral movement
1013	HJA watershed 10 erosion box #13, streambank lateral movement
1014	HJA watershed 10 erosion box #14, streambank lateral movement
1015	HJA watershed 10 erosion box #15, streambank lateral movement

> Codes continued on next page <

HJ Andrews erosion studies (formerly IE)

Variable: LOCATION

1016	HJA watershed	10	erosion box #16,	streambank lateral movement
1017	HJA watershed	10	erosion box #17,	streambank lateral movement
1018	HJA watershed	10	erosion box #18,	streambank lateral movement
1019	HJA watershed	10	erosion box #19,	streambank lateral movement
1020	HJA watershed	10	erosion box #20,	streambank lateral movement
1021	HJA watershed	10	erosion box #21,	streambank lateral movement
1022	HJA watershed	10	erosion box #22,	streambank lateral movement
1023	HJA watershed	10	erosion box #23,	streambank lateral movement
1024	HJA watershed	10	erosion box #24,	streambank lateral movement
1025	HJA watershed	10	erosion box #25,	streambank lateral movement
1026	HJA watershed	10	erosion box #26,	streambank lateral movement
1027	HJA watershed	10	erosion box #27,	streambank lateral movement
1028	HJA watershed	10	erosion box #28,	streambank lateral movement
1029	HJA watershed	10	erosion box #29,	streambank lateral movement
1030	HJA watershed	10	erosion box #30,	streambank lateral movement
1031	HJA watershed	10	erosion box #31,	streambank lateral movement
1032	HJA watershed	10	erosion box #32,	streambank lateral movement
1033	HJA watershed	10	erosion box #33,	streambank lateral movement
1034	HJA watershed	10	erosion box #34,	streambank lateral movement
1035	HJA watershed	10	erosion box #35,	upslope lateral movement, subla
1036	HJA watershed	10	erosion box #36,	upslope lateral movement, subla
1037	HJA watershed	10	erosion box #37,	upslope lateral movement, subla
1038	HJA watershed	10	erosion box #38,	upslope lateral movement, subla
1039	HJA watershed	10	erosion box #39,	upslope lateral movement, subla
1040	HJA watershed	10	erosion box #40,	upslope lateral movement, subla
1041	HJA watershed	10	erosion box #41,	upslope lateral movement, subla
1042	HJA watershed	10	erosion box #42,	upslope lateral movement, subla
1043	HJA watershed	10	erosion box #43,	upslope lateral movement, subla
1044	HJA watershed	10	erosion box #44,	upslope lateral movement, subla
1045	HJA watershed	10	erosion box #45,	upslope lateral movement, subla
1046	HJA watershed	10	erosion box #46,	upslope lateral movement, subla
1047	HJA watershed	10	erosion box #47,	upslope lateral movement, subla
1048	HJA watershed	10	erosion box #48,	upslope lateral movement, subla
1049	HJA watershed	10	erosion box #49,	upslope lateral movement, subla
1050	HJA watershed	10	erosion box #50,	upslope lateral movement, subla
1051	HJA watershed	10	erosion box #51,	upslope lateral movement, subla
1052	HJA watershed	10	erosion box #52,	upslope lateral movement, subla
1053	HJA watershed	10	erosion box #53,	upslope lateral movement, subla
1054	HJA watershed	10	erosion box #54,	upslope lateral movement, subla
0901	HJA watershed	9	erosion box #1	
0902	HJA watershed	9	erosion box #2	
0903	HJA watershed	9	erosion box #3	
0904	HJA watershed	9	erosion box #4	

> Codes continued on next page <

