APPENDIX 7-9

Small Area Exemption Calculations

I hereby certify that the design contained herein was prepared by myself and is true and correct to the best of my knowledge.

Richard B. White

Richard B. White, P.E.

REGISTERED PROFESSIONAL ENGINEER
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RICHARD B. WHITE
STATE OF UTAH

2/10/88

SMALL AREA EXEMPTION
SEDIMENT-YIELD CALCULATIONS

SAE-1

Design storm → 10-yr, 24-hr = 2.50 in

No. of junctions = 1
No. of branches = 1

Specific gravity of eroded sediment = 2.50 (default value)
Coef. for distributing sed. load = 1.5 (default value)
Submerged bulk sp. gravity = 1.25 (fine to medium)

Particle size distribution → see sed. pond calcs.

No. of structures = 1
Between structures routing parameters = All Ø

No. of subwatersheds = 1
Type of structure → grass filter

Watershed data:
Area = 0.02 ac
CN = 75
T_c → use upland method for 10 ft @ 66.7% slope
(use short grass pasture curve on page 2 of this calc.)

$$T_c = \frac{10 \text{ ft}}{5.6 \text{ ft/s}} = 1.8 \text{ s} = 0.001 \text{ hr}$$

Unit hydrograph and surf. condition = agricultural (reclaimed)

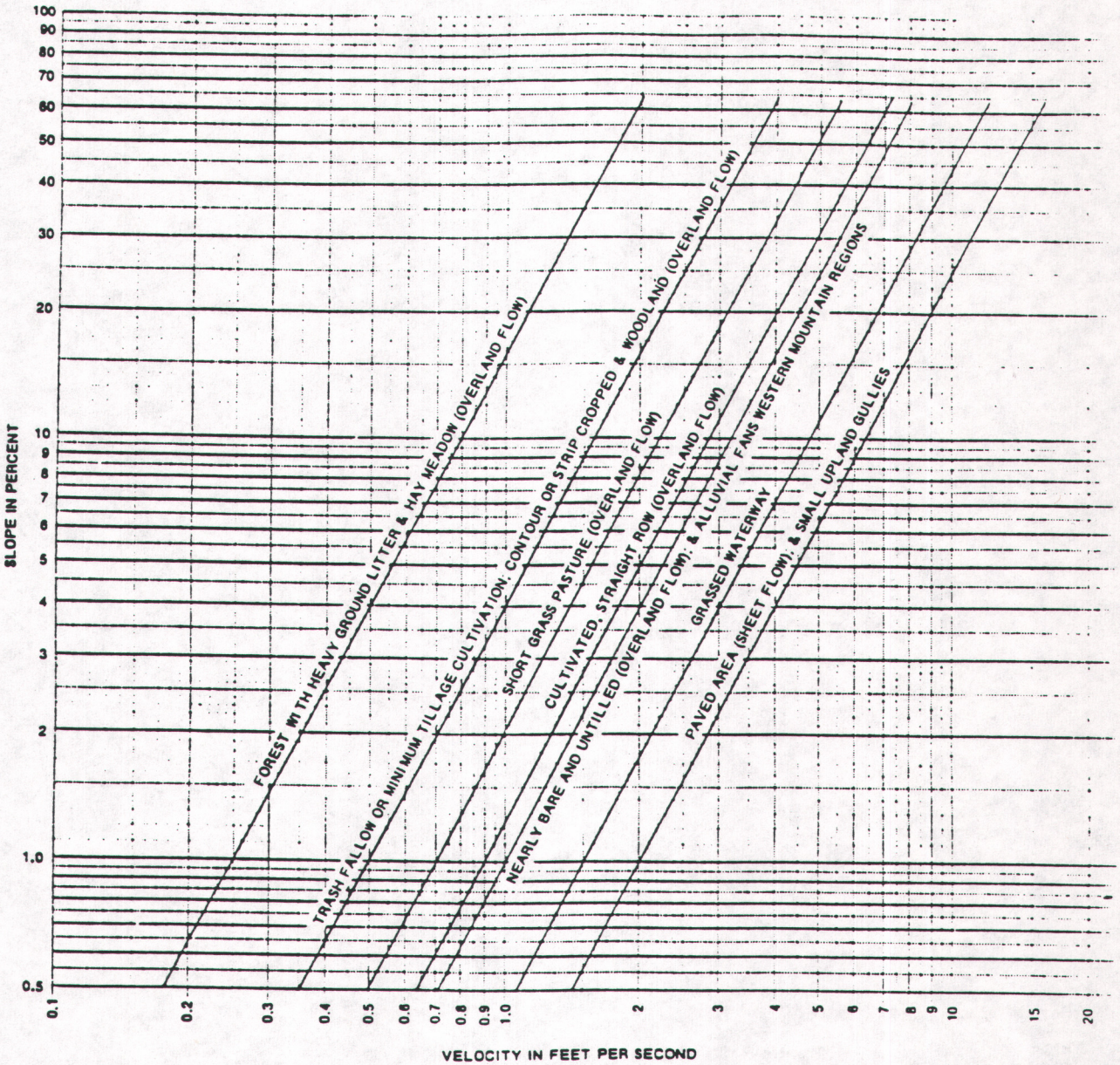
Sediment-yield calcs. → MUSLE
K = 0.15 (see sed. pond calcs. - reclaimed areas)
l = 5 ft (site map)
S = 66.7% (1.5 h : 1 v)
CP = 0.01 (see sed. pond calcs. - reclaimed areas)

Assume lower 5 ft of strip behaves as grass filter.

SEDIMOT II results → peak effluent conc. = 12 mg/l. See attached printout.

EARTHFAX ENGINEERING, INC.
ENGINEERS / SCIENTISTS

PROJECT _____ PAGE _____ OF _____
COMPUTED TEW DATE 6 Jun 1986
CHECKED _____ DATE _____



SAE-2

Design storm → 2.50 in (24-hr)

No. of junctions → 1
No. of branches → 1

No. of subwatersheds = 2 (1 undisturbed, 1 reclaimed)
Type of structure = pond (sed. trap – see pg. 4 of this calc.)

Watershed data (subwatershed 1 – undisturbed)
Area = 0.90 ac
CN = 69

$T_c = 1.67L$

$$L = \frac{l^{0.8}(s+1)^{0.7}}{1900\, Y^{0.5}}$$

$l = 300$ ft

$$S = \frac{1000}{69} - 10 = 4.49$$

$$Y = \left(\frac{(940\text{ ft})(40\text{ ft})}{(0.90\text{ ac})(43{,}560\text{ ft}^2/\text{ac})}\right)(100) = 95.9\%$$

$T_c = 0.028$ hr

Sed. yield calcs. → MUSLE
K = 0.15
L = 50 ft (site map, field obs.)
S = 95.9%
CP = 0.005 (Barfield et al., 1981 – woodland)

Data for subwatershed 2 (reclaimed)
Area = 0.34 ac
CN = 75
T_c → use upland method
110 ft @ 20% (eastern slope) → $\frac{110\text{ ft}}{3.1\text{ ft/s}} = 35.5$ s

170 ft @ 2% (pad) → $\frac{170\text{ ft}}{1.0\text{ ft/s}} = 170$ s

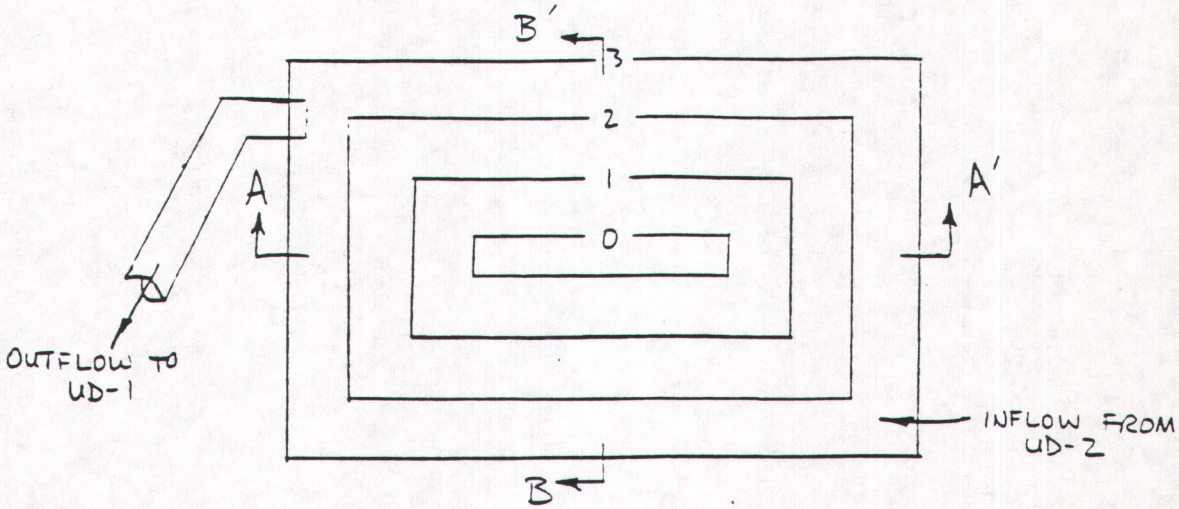
150 ft @ 25% (access road) → $\frac{150\text{ ft}}{3.5\text{ ft/s}} = 42.9$ s

$$T_c = \frac{35.5\text{ s} + 170\text{ s} + 42.9\text{ s}}{3600\text{ s/hr}} = 0.069$$

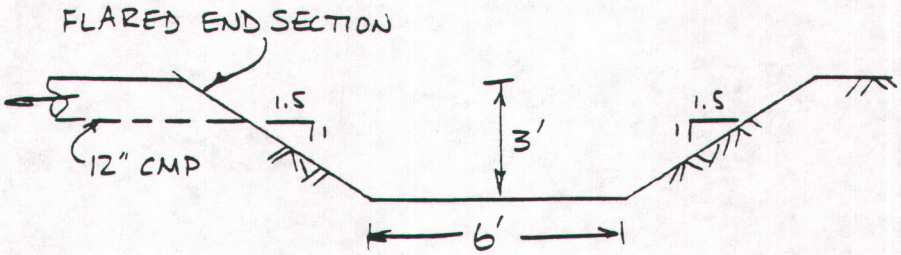
Sed. yield calcs → K = 0.15
L = 100 ft

$$S = \frac{(110)(20) + (170)(2) + (150)(25)}{110 + 170 + 150} = 14.6\%$$

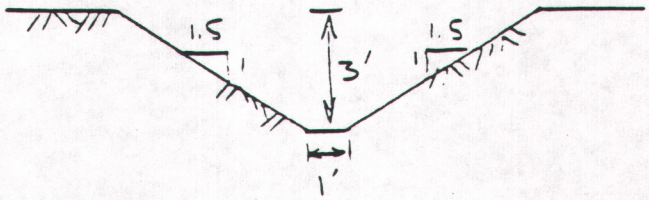
CP = 0.01 (see sed. pond calcs.)



SAE-2 SEDIMENT TRAP
PLAN VIEW
SCALE: 1" = 5'



SECTION A-A'
ELEV. VIEW
SCALE: 1" = 5'



SECTION B-B'
ELEV. VIEW
SCALE: 1" = 5'

Stage-area-capacity data for SAE-2 sed. trap:

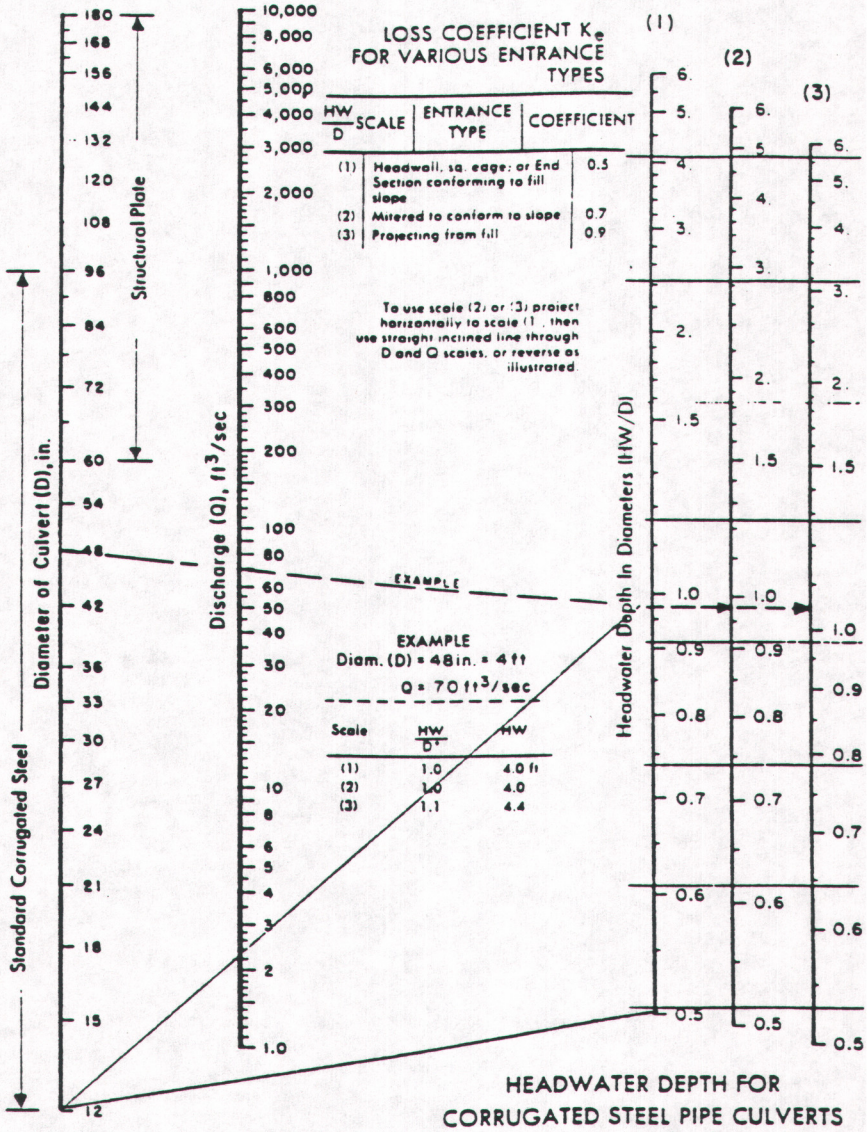
Relative Elev. (ft)	Area (ac)	Volume (AF)
0.0	0.0001	
		0.0005
1.0	0.0008	
		0.0014
2.0	0.0019	
		0.0023
2.5	0.0026	
		0.0030
3.0	0.0034	

Stage-discharge data (from pg. 6 of this calc.):

Relative Elev. (ft)	Discharge (cfs)	
0.0	0.0	
1.0	0.0	
2.0	0.0	— culvert invert
2.5	0.7	
3.0	2.4	

All other input parameters — see SAE-1 data

SEDIMOT II output (attached):
Peak effluent sed. concentration = 2898 mg/l
Peak influent sed. conc. from undisturbed WS = 17,320 mg/l
Peak influent sed. conc. from reclaimed WS = 1652 mg/l



HEADWATER DEPTH FOR CORRUGATED STEEL PIPE CULVERTS WITH INLET CONTROL

FHWA HEC 5

SAE-3

Design storm = 2.50 in (24 hr)

No. of junctions = 1
No. of branches = 1

Watershed data → reclaimed portion (no appreciable sed. yield from rock-covered slope).

Area = 0.20 ac
CN = 75
T_c → use upland method for 30 ft @ 1% slope

$$T_c = \frac{30\ ft}{0.7\ ft/s} = 42.9\ s = 0.012\ hr$$

Sediment-yield calcs. — MUSLE

K = 0.15
l = 25 ft
S = 1.0%
CP = 0.01

Assume lower 5 ft behaves as grass filter.

Remainder of inputs as for SAE-1.

SEDIMOT II results → peak effluent conc. = 2 mg/l

-- SEDPL --

SEDIMOT II MODEL FOR THE IBM PC-XT
CONVERTED BY TECH ENGINEERING INC.
VERSION 1.10 NOVEMBER 17,1983

UNIVERSITY OF KENTUCKY COMPUTER MODEL
OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
FOR MORE INFORMATION CONTACT THE AGRICULTURAL
ENGINEERING DEPARTMENT
THE UK MODEL IS A DESIGN MODEL DEVELOPED TO PREDICT
THE HYDRAULIC AND SEDIMENT RESPONSE FROM SURFACE
MINED LANDS FOR A SPECIFIED RAINFALL EVENT (SINGLE STORM)
VERSION DATE 9-23-83
DISCLAIMER: NEITHER THE UNIVERSITY NOR ANY OF ITS EMPLOYEES
ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

THE FOLLOWING VALUES ARE NOW PREDICTED BY SEDIMOT II.
THEY CAN BE FOUND IN SUMMARY TABLES.

1. PERIOD OF SIGNIFICANT CONCENTRATION
2. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
3. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD
4. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
5. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD

ALL CONCENTRATIONS ARE IN ML/L.

WATERSHED IDENTIFICATION CODE

SMALL AREA EXEMPTIONS - SAE-1

INPUT PARTICLE SIZE-PERCENT FINER [illegible]

SIZE.MM	.250	.100	.050	.010	.005	.001
	.000					
PCT FINER NO. 1	100.000	50.000	35.000	19.000	15.000	2.000
	.000					

**********INPUT VALUES**********

STORM DURATION	=	24.00	HOURS
PRECIPATION DEPTH	=	2.50	INCHES
SPECIFIC GRAVITY	=	2.50	
LOAD RATE EXPONENT FACTOR	=	1.50	
SUBMERGED BULK SPECIFIC GRAVITY	=	1.25	

```
* * * * * * * * * * * * * * * * * * * * * * * * * * *
JUNCTION  1. BRANCH  1. STRUCTURE  1
* * * * * * * * * * * * * * * * * * * * * * * * * * *
*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***
WATER    AREA     CURVE      TC       TT     ROUTING COEFFICIENTS    UNIT
SHED     ACRES    NUMBER     HR       HR        K-HRS        X       HYDRO
-----------------------------------------------------------------------------
 1        .02     75.00     .001     .000      .000         .00       .0
*** SEDIMENT INPUT VALUES FOR SUBWATERSHEDS ***
WATER    SEG      SOIL      LENGTH     SLOPE      CP       PART      SURF
SHED     NUM       K         FEET       PCT      VALUE     DEN       COND
-----------------------------------------------------------------------------
 1        1       .15        5.0       99.70     .010      1.0        .0
* * * * * * * * * * * * * * * * * * * * * * * * * * *
GRASS FILTER RESULTS
* * * * * * * * * * * * * * * * * * * * * * * * * * *
!!!!!!!!!!!!!!!!!!!!!!!!!!!!  W A R N I N G  !!!!!!!!!!!!!!!!!!!!!!!!!!!!
GRASS FILTER SLOPE
IS NOT WITHIN THE EXPECTED LIMITS. THE
VALUE MUST BE NO SMALLER THAN   .0100 AND IF POSSIBLE SHOULD NOT EXCEED
  10.000. SEDIMOT WILL CONTINUE WITH THE VALUE ENTERED.   99.7000 .NUD
IT MAY CAUSE INACCURACIES OR EVEN TERMINATION LATER IN THE PROGRAM
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
***** GRASS FILTER PROPERTIES *****
-----------------------------------------
SEGMENT NUMBER = 1
MANNING'S FRICTION FACTOR        =     .0150
CHANNEL SLOPE                    =   99.7000  PERCENT
GRASS SPACING                    =     .5000  INCH
GRASS HEIGHT                     =    6.0000  INCH
FILTER WIDTH                     =  150.0000  FEET
FILTER LENGTH                    =    5.0000  FEET
INFILTRATION RATE                =     .1000  IN/HR
STIFFNESS COEFFICIENT            =   20.0000  N-M SQ
***** SUMMARY TABLE *****
-----------------------------
SPECIFIC GRAVITY OF SEDIMENT      =        2.50
BULK SPECIFIC GRAVITY             =        1.25
VISCOSITY                         =       .0090  CM**2/SEC
CRITICAL PRONE VELOCITY           =      1.0367  FT/S
PEAK FLOW DEPTH                   =         .00  INCH
FILTER TRAVEL TIME                =       .1000  HR
FILTER INFILTRATION RATE          =       .0015  CFS
TOTAL INFILTRATION VOLUME         =       .0000  ACRE-FT
WEDGE LOCATION                    =         .00  FEET
SEDIMENT DEPTH ZONE D             =       .0009  INCH
OUTFLOW RUNOFF VOLUME             =         .00  ACRE-FT
PEAK DISCHARGE RATE               =         .01  CFS
PEAK EFFLUENT CONCENTRATION       =       12.44  MG/L
PEAK SETTLEABLE CONCENTRATION     =       .0000  ML/L
PEAK SETTLEABLE CONCENTRATION     =         .00  MG/L
TOTAL MASS DISCHARGED             =         .00  TONS
TRAP EFFICIENCY                   =       99.85  PERCENT
PERIOD OF SIGNIFICANT CONCENTRATION  =          .10   HRS
VOLUME WEIGHTED AVERAGE SETTLEABLE
  CONCENTRATION DURING PERIOD OF
  SIGNIFICANT CONCENTRATION       =          .00   ML/L
VOLUME WEIGHTED AVERAGE SETTLEABLE
  CONCENTRATION DURING PEAK 24 HOUR
  PERIOD                          =          .00   ML/L
ARITHMETIC AVERAGE SETTLEABLE
  CONCENTRATION DURING PERIOD OF
  SIGNIFICANT CONCENTRATION       =          .00   ML/L
```

PERIOD

**** OVERALL TRAP EFFICIENCY OF ALL SEDIMENTS= [illegible] ****

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE.MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
SIZE.MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	*******	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000

10.80	.000	.000	*	[illegible]	.000	.000
11.00	.000	.000	*	[illegible]	.000	.000
11.20	.000	.000	*	11.30	.000	.000
11.40	.000	.000	*	11.50	.000	.000
11.60	.000	.000	*	11.70	.000	.000
11.80	.000	.000	*	11.90	.000	.000
12.00	.011	8.471	*	12.10	.013	10.445
12.20	.000	.000	*	12.30	.000	.000
12.40	.000	.000	*	12.50	.000	.000
12.60	.000	.000	*	12.70	.000	.000
12.80	.000	.000	*	12.90	.000	.000
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13.40	.000	.000	*	13.50	.000	.000
13.60	.000	.000	*	13.70	.000	.000
13.80	.000	.000	*	13.90	.000	.000
14.00	.000	.000	*	14.10	.000	.000
14.20	.000	.000	*	14.30	.000	.000
14.40	.000	.000	*	14.50	.000	.000
14.60	.000	.000	*	14.70	.000	.000
14.80	.000	.000	*	14.90	.000	.000
15.00	.000	.000	*	15.10	.000	.000
15.20	.000	.000	*	15.30	.000	.000
15.40	.000	.000	*	15.50	.000	.000
15.60	.000	.000	*	15.70	.000	.000
15.80	.000	.000	*	15.90	.000	.000
16.00	.000	.000	*	16.10	.000	.000
16.20	.000	.000	*	16.30	.000	.000
16.40	.000	.000	*	16.50	.000	.000
16.60	.000	.000	*	16.70	.000	.000
16.80	.000	.000	*	16.90	.000	.000
17.00	.000	.000	*	17.10	.000	.000
17.20	.000	.000	*	17.30	.000	.000
17.40	.000	.000	*	17.50	.000	.000
17.60	.000	.000	*	17.70	.000	.000
17.80	.000	.000	*	17.90	.000	.000
18.00	.000	.000	*	18.10	.000	.000
18.20	.000	.000	*	18.30	.000	.000
18.40	.000	.000	*	18.50	.000	.000
18.60	.000	.000	*	18.70	.000	.000
18.80	.000	.000	*	18.90	.000	.000
19.00	.000	.000	*	19.10	.000	.000
19.20	.000	.000	*	19.30	.000	.000
19.40	.000	.000	*	19.50	.000	.000
19.60	.000	.000	*	19.70	.000	.000
19.80	.000	.000	*	19.90	.000	.000
20.00	.000	.000	*	20.10	.000	.000
20.20	.000	.000	*	20.30	.000	.000
20.40	.000	.000	*	20.50	.000	.000
20.60	.000	.000	*	20.70	.000	.000
20.80	.000	.000	*	20.90	.000	.000
21.00	.000	.000	*	21.10	.000	.000
21.20	.000	.000	*	21.30	.000	.000
21.40	.000	.000	*	21.50	.000	.000
21.60	.000	.000	*	21.70	.000	.000
21.80	.000	.000	*	21.90	.000	.000
22.00	.000	.000	*	22.10	.000	.000
22.20	.000	.000	*	22.30	.000	.000
22.40	.000	.000	*	22.50	.000	.000
22.60	.000	.000	*	22.70	.000	.000
22.80	.000	.000	*	22.90	.000	.000
23.00	.000	.000	*	23.10	.000	.000
23.20	.000	.000	*	23.30	.000	.000
[illegible]	.000	.000	*	[illegible]	.000	.000

-- SEDPC --

SEDIMOT II MODEL FOR THE IBM PC/XT
CONVERTED BY TECH ENGINEERING INC.
VERSION 1.10 NOVEMBER 17,1983

UNIVERSITY OF KENTUCKY COMPUTER MODEL
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THEY CAN BE FOUND IN SUMMARY TABLES.

1. PERIOD OF SIGNIFICANT CONCENTRATION
2. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
3. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD
4. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
5. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD

ALL CONCENTRATIONS ARE IN ML/L.

WATERSHED IDENTIFICATION CODE

SMALL AREA EXEMPTIONS - SAE-2

INPUT PARTICLE SIZE-PERCENT FINER DISTRIBUTIONS

SIZE,mm	.250	.100	.050	.010	.005	.001
PCT FINER NO. 1	100.000	50.000	25.000	5.000	15.000	5.000
	.000					

INPUT VALUES

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.50	INCHES
SPECIFIC GRAVITY	=	2.50	
LOAD RATE EXPONENT FACTOR	=	1.50	
SUBMERGED BULK SPECIFIC GRAVITY	=	1.15	

* *

JUNCTION 1. BRANCH 1. STRUCTURE 1

* *

***** RESULTS FROM SUBWATERSHED 1 *****

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE,MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	100.0000	50.0000	35.0000	15.0000	15.0000	5.0000
SIZE,MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000
10.40	.000	.000	*	10.50	.000	.000
10.60	.000	.000	*	10.70	.000	.000
10.80	.000	.000	*	10.90	.000	.000

10.00	.000	.000	+	10.10	.000	.000
10.20	.000	.000	+	10.30	.000	.000
10.40	.000	.000	+	10.50	.000	.000
10.60	.000	.000	+	10.70	.000	.000
10.80	.000	.000	+	10.90	.000	.000
11.00	.000	.000	+	11.10	.000	.000
11.20	.000	.000	+	11.30	.000	.000
11.40	.000	.000	+	11.50	.000	.000
11.60	.000	.000	+	11.70	.000	[illegible]
11.80	.198	12001.400	+	11.90	.010	[illegible]
12.00	.415	17321.400	+	12.10	.080	[illegible]
12.20	.[illegible]	8206.700	+	12.30	.09[illegible]	[illegible]
12.40	.099	9477.390	+	12.50	.102	[illegible]
12.60	.063	6240.910	+	12.70	.054	[illegible]
12.80	.055	6332.150	+	12.90	.05[illegible]	[illegible]
13.00	.05[illegible]	5418.080	+	13.10	.047	[illegible]
13.20	.042	5541.990	+	13.30	.040	[illegible]
13.40	.043	5567.790	+	13.50	.043	[illegible]
13.60	.034	4975.130	+	13.70	.034	[illegible]
13.80	.034	5006.530	+	13.90	.035	[illegible]
14.00	.035	5041.160	+	14.10	.025	[illegible]
14.20	.025	4267.560	+	14.30	.025	[illegible]
14.40	.025	4702.850	+	14.50	.025	[illegible]
14.60	.026	4721.880	+	14.70	.026	[illegible]
14.80	.026	4740.750	+	14.90	.026	[illegible]
15.00	.026	4756.320	+	15.10	.026	[illegible]
15.20	.026	4777.660	+	15.30	.026	[illegible]
15.40	.026	4795.830	+	15.50	.027	[illegible]
15.60	.027	4413.670	+	15.70	.027	[illegible]
15.80	.027	4431.520	+	15.90	.027	[illegible]
16.00	.027	4448.550	+	16.10	.016	[illegible]
16.20	.016	3456.990	+	16.30	.016	[illegible]
16.40	.016	3464.940	+	16.50	.016	[illegible]
16.60	.016	3472.790	+	16.70	.017	[illegible]
16.80	.017	3480.480	+	16.90	.017	[illegible]
17.00	.017	3488.530	+	17.10	.017	[illegible]
17.20	.017	3496.310	+	17.30	.017	[illegible]
17.40	.017	3504.150	+	17.50	.017	[illegible]
17.60	.017	3511.610	+	17.70	.017	[illegible]
17.80	.017	3519.360	+	17.90	.017	[illegible]
18.00	.017	3526.930	+	18.10	.017	[illegible]
18.20	.017	3534.540	+	18.30	.017	[illegible]
18.40	.017	3541.930	+	18.50	.017	[illegible]
18.60	.017	3549.340	+	18.70	.017	[illegible]
18.80	.017	3556.700	+	18.90	.017	[illegible]
19.00	.017	3564.000	+	19.10	.017	[illegible]
19.20	.017	3571.410	+	19.30	.017	[illegible]
19.40	.018	3578.550	+	19.50	.018	[illegible]
19.60	.018	3585.730	+	19.70	.018	[illegible]
19.80	.018	3592.910	+	19.90	.018	[illegible]
20.00	.018	3600.020	+	20.10	.012	[illegible]
20.20	.012	2944.380	+	20.30	.012	[illegible]
20.40	.012	2948.300	+	20.50	.012	[illegible]
20.60	.012	2952.080	+	20.70	.012	[illegible]
20.80	.012	2955.800	+	20.90	.012	[illegible]
21.00	.012	2958.710	+	21.10	.012	[illegible]
21.20	.012	2963.380	+	21.30	.012	[illegible]
21.40	.012	2967.110	+	21.50	.012	[illegible]
21.60	.012	2970.810	+	21.70	.012	[illegible]
21.80	.012	2974.500	+	21.90	.012	[illegible]
22.00	.012	2978.280	+	22.10	.012	[illegible]
[illegible]	.012	2981.940	+	[illegible]	.012	[illegible]
[illegible]	.012	2985.4[illegible]	+	[illegible]	.012	[illegible]
[illegible]	.012	[illegible]	+	[illegible]	.012	[illegible]

[illegible]	.012	3000.[illegible]	*	[illegible]	[illegible]	[illegible]
23.40	.012	3003.650	*	23.50	.012	[illegible]
23.60	.012	3007.300	*	23.70	.012	3008.910

***** RESULTS FROM SUBWATERSHED 2 *****

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE.MM	.2500	.1000	.0500	.0100	.0050	[illegible]
PERCENT FINER	100.0000	50.0000	35.0000	19.0000	15.0000	[illegible]
SIZE.MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000

[illegible]	.000	.000	+	[illegible]	.000	.000
10.80	.000	.000	+	10.90	.000	.000
11.00	.000	.000	+	11.10	.000	.000
11.20	.000	.000	+	11.30	.000	.000
11.40	.000	.000	+	11.50	.000	.000
[illegible]	.050	741.015	+	11.70	[illegible]	[illegible]
[illegible]	.163	1341.680	+	11.90	.208	1215.640
12.00	.246	1651.650	+	12.10	[illegible]	[illegible]
12.20	.051	759.014	+	12.30	.057	[illegible]
12.40	.054	774.601	+	12.50	[illegible]	[illegible]
[illegible]	.029	565.121	+	12.70	.029	[illegible]
12.80	.029	570.587	+	12.90	[illegible]	[illegible]
13.00	.030	575.848	+	13.10	.022	[illegible]
[illegible]	.022	495.442	+	13.30	[illegible]	[illegible]
13.40	.022	498.559	+	13.50	.017	[illegible]
13.60	.018	447.234	+	13.70	.018	[illegible]
[illegible]	.018	441.279	+	13.90	.018	[illegible]
14.00	.018	446.270	+	14.10	[illegible]	[illegible]
14.20	.013	378.507	+	14.30	[illegible]	[illegible]
14.40	.017	379.688	+	14.50	.017	380.274
14.60	.017	380.857	+	14.70	.017	381.428
14.80	.017	[illegible]	+	14.90	.017	[illegible]
15.00	.013	287.142	+	15.10	.013	287.704
15.20	.013	384.260	+	15.30	.013	381.917
15.40	.013	385.374	+	15.50	.013	[illegible]
15.60	.013	386.467	+	15.70	.014	387.017
15.80	.014	387.552	+	15.90	.014	388.075
16.00	.014	388.556	+	16.10	.000	.000
16.20	.000	.000	+	16.30	.000	.000
16.40	.000	.000	+	16.50	.000	.000
16.60	.000	.000	+	16.70	.000	.000
16.80	.000	.000	+	16.90	.000	.000
17.00	.000	.000	+	17.10	.000	.000
17.20	.000	.000	+	17.30	.000	.000
17.40	.000	.000	+	17.50	.000	.000
17.60	.000	.000	+	17.70	.000	.000
17.80	.000	.000	+	17.90	.000	.000
18.00	.000	.000	+	18.10	.000	.000
18.20	.000	.000	+	18.30	.000	.000
18.40	.000	.000	+	18.50	.000	.000
18.60	.000	.000	+	18.70	.000	.000
18.80	.000	.000	+	18.90	.000	.000
19.00	.000	.000	+	19.10	.000	.000
19.20	.000	.000	+	19.30	.000	.000
19.40	.000	.000	+	19.50	.000	.000
19.60	.000	.000	+	19.70	.000	.000
19.80	.000	.000	+	19.90	.000	.000
20.00	.000	.000	+	20.10	.000	.000
20.20	.000	.000	+	20.30	.000	.000
20.40	.000	.000	+	20.50	.000	.000
20.60	.000	.000	+	20.70	.000	.000
20.80	.000	.000	+	20.90	.000	.000
21.00	.000	.000	+	21.10	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	21.70	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000
[illegible]	.000	.000	+	[illegible]	.000	.000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X	UNIT HYDRO
1	.90	69.00	.028	.000	.000	.00	[illegible]
2	.34	75.00	.069	.000	.000	.00	[illegible]

*** SEDIMENT INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	SEG NUM	SOIL K	LENGTH FEET	SLOPE PCT	CP VALUE	[illegible]	SURF COND
1	1	.15	50.0	95.90	.005	[illegible]	[illegible]
2	1	.15	100.0	14.50	.010	[illegible]	0

* *

POND RESULTS

* *

***** CONTROL VARIABLES OPTIONS *****

FLOW	FRACTN	ISDO	NRHP	NSP	NCSIN
[illegible]	0	1	[illegible]	[illegible]	[illegible]

***** BASIN GEOMETRY *****

STAGE (FT)	AREA (ACRES)	AVERAGE DEPTH (FT)	DISCHARGE (CFS)	CAPACITY (ACRE-FT)
.00	.000	.00	.00	.00
1.00	.001	.50	.00	.00
2.00	.002	1.25	.00	.00
2.50	.003	1.56	.70	.00
7.00	.003	1.91	2.40	.00

***** STORM EVENT SUMMARY *****

TURBULENCE FACTOR	=	[illegible]	
PERMANENT POOL CAPACITY	=	.002	ACRE-FT
DEAD STORAGE	=	20.00	PERCENT
TIME INCREMENT OUTFLOW	=	[illegible]	HRS
VISCOSITY	=	.009	GM**2/SEC
INFLOW RUNOFF VOLUME	=	.050	ACRE-FT
OUTFLOW ROUTED VOLUME	=	.050	ACRE-FT
STORM VOLUME DISCHARGED (PLUG FLOW)	=	.050	ACRE-FT
POND VOLUME AT PEAK STAGE	=	.002	ACRE-FT
PEAK STAGE	=	2.451	FT
PEAK INFLOW RATE	=	[illegible]	CFS
PEAK DISCHARGE RATE	=	[illegible]	CFS
PEAK INFLOW SEDIMENT CONCENTRATION	=	11505.00	MG/L
PEAK EFFLUENT SEDIMENT CONCENTRATION	=	2897.65	MG/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	.4125	ML/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	515.96	MG/L
STORM AVERAGE EFFLUENT CONCENTRATION	=	1280.06	MG/L
AVERAGE EFFLUENT SEDIMENT CONCENTRATION	=	1280.06	MG/L
BASIN TRAP EFFICIENCY	=	[illegible]	PERCENT
DETENTION TIME OF FLOW WITH SEDIMENT	=	[illegible]	HRS
DETENTION TIME FROM HYDROGRAPH CENTERS	=	[illegible]	HRS
DETENTION TIME INCLUDING STORED FLOW	=	[illegible]	HRS
SEDIMENT LOAD DISCHARGED	=	[illegible]	[illegible]
PERIOD OF SIGNIFICANT CONCENTRATION	=	[illegible]	HRS
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	[illegible]	ML/L
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD	=	[illegible]	ML/L
ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	[illegible]	[illegible]

PERIOD

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE.MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	100.0000	100.0000	100.0000	81.7620	65.0384	26.1354
SIZE.MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***
(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
.40	.000	.000	*	4.50	.000	.000
.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
.60	.000	.000	*	9.70	.000	.000
.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000
10.40	.000	.000	*	10.50	.000	.000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11.00	.000	.000	*	11.10	.000	.000
11.20	.000	.000	*	11.30	.000	.000
11.40	.000	.000	*	11.50	.000	.000
11.60	.035	4.783	*	11.70	.146	214.345
11.80	.319	1201.840	*	11.90	.498	2341.330
12.00	.631	2897.650	*	12.10	.309	3586.060
12.20	.076	1619.240	*	12.30	.174	1245.330
12.40	.141	1297.300	*	12.50	.160	1336.260
12.60	.103	1268.280	*	12.70	.075	1115.390
12.80	.087	1013.500	*	12.90	.064	971.315
13.00	.087	957.260	*	13.10	.070	929.777
13.20	.061	878.813	*	13.30	.066	841.359
13.40	.065	821.121	*	13.50	.066	811.676
13.60	.056	793.017	*	13.70	.060	761.909
13.80	.053	736.925	*	13.90	.052	720.868
14.00	.053	711.350	*	14.10	.042	691.223
14.20	.036	661.977	*	14.30	.039	636.793
14.40	.038	616.621	*	14.50	.039	602.008
14.60	.039	591.845	*	14.70	.039	584.981
14.80	.039	580.589	*	14.90	.039	577.946
15.00	.039	576.554	*	15.10	.039	576.046
15.20	.040	576.173	*	15.30	.040	576.756
15.40	.040	577.676	*	15.50	.040	578.841
15.60	.040	580.183	*	15.70	.040	581.655
15.80	.040	583.222	*	15.90	.041	584.952
16.00	.041	586.516	*	16.10	.024	572.803
16.20	.013	547.715	*	16.30	.019	532.609
16.40	.016	524.821	*	16.50	.017	520.483
16.60	.016	519.094	*	16.70	.017	519.514
16.80	.017	521.291	*	16.90	.017	523.898
17.00	.017	527.064	*	17.10	.017	530.526
17.20	.017	534.117	*	17.30	.017	537.709
17.40	.017	541.221	*	17.50	.017	544.602
17.60	.017	547.814	*	17.70	.017	550.844
17.80	.017	553.690	*	17.90	.017	556.349
18.00	.017	558.829	*	18.10	.017	561.142
18.20	.017	563.300	*	18.30	.017	565.313
18.40	.017	567.194	*	18.50	.017	568.958
18.60	.017	570.614	*	18.70	.017	572.175
18.80	.017	573.652	*	18.90	.017	575.052
19.00	.017	576.387	*	19.10	.017	577.661
19.20	.017	578.886	*	19.30	.017	580.064
19.40	.017	581.200	*	19.50	.018	582.301
19.60	.018	583.370	*	19.70	.018	584.411
19.80	.018	585.427	*	19.90	.018	586.422
20.00	.018	587.398	*	20.10	.014	582.004
20.20	.011	571.010	*	20.30	.012	561.583
20.40	.012	553.126	*	20.50	.012	545.009
20.60	.012	537.410	*	20.70	.012	530.329
20.80	.012	523.529	*	20.90	.012	517.305
21.00	.012	511.561	*	21.10	.012	506.278
21.20	.012	501.437	*	21.30	.012	497.016
21.40	.012	492.992	*	21.50	.012	489.340
21.60	.012	486.072	*	21.70	.012	483.049
21.80	.012	480.359	*	21.90	.012	477.944
22.00	.012	475.781	*	22.10	.012	473.847
22.20	.012	472.124	*	22.30	.012	470.594
22.40	.012	469.236	*	22.50	.012	468.076
22.60	.012	466.983	*	22.70	.012	466.058
22.80	.012	465.252	*	22.90	.012	464.555
23.00	.012	463.956	*	23.10	.012	463.445
23.20	.012	463.016	*	23.30	.012	462.659
23.40	.012	462.349	*	23.50	.012	462.140
[illegible]	[illegible]	461.968	*	[illegible]	[illegible]	461.844

-- SEDPC --

SEDIMOT II MODEL FOR THE IBM PC XT
CONVERTED BY TECH ENGINEERING INC.
VERSION 1.10 NOVEMBER 17.1983

UNIVERSITY OF KENTUCKY COMPUTER MODEL
OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
FOR MORE INFORMATION CONTACT THE AGRICULTURAL
ENGINEERING DEPARTMENT
THE UK MODEL IS A DESIGN MODEL DEVELOPED TO PREDICT
THE HYDRAULIC AND SEDIMENT RESPONSE FROM SURFACE
MINED LANDS FOR A SPECIFIED RAINFALL EVENT (SINGLE STORM)
VERSION DATE 9-23-83
DISCLAIMER: NEITHER THE UNIVERSITY NOR ANY OF ITS EMPLOYEES
ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

THE FOLLOWING VALUES ARE NOW PREDICTED BY SEDIMOT II.
THEY CAN BE FOUND IN SUMMARY TABLES.

1. PERIOD OF SIGNIFICANT CONCENTRATION
2. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
3. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD
4. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION
5. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD

ALL CONCENTRATIONS ARE IN ML/L.

WATERSHED IDENTIFICATION CODE

SMALL AREA EXEMPTIONS - SAE-3

INPUT PARTICLE SIZE-PERCENT FINER DISTRIBUTIONS

SIZE.MM	.250	.100	.050	.010	.005	.001
	.000					
PCT FINER NO. 1	100.000	50.000	35.000	19.000	15.000	6.000
	.000					

**********INPUT VALUES**********

STORM DURATION	=	24.00	HOURS
PRECIPATION DEPTH	=	2.50	INCHES
SPECIFIC GRAVITY	=	2.50	
LOAD RATE EXPONENT FACTOR	=	1.50	
SUBMERGED BULK SPECIFIC GRAVITY	=	1.25	

* *

JUNCTION 1. BRANCH 1. STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X	UNIT HYDRO
1	.20	75.00	.012	.000	.000	.00	.0

*** SEDIMENT INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	SEG NUM	SOIL K	LENGTH FEET	SLOPE PCT	CP VALUE	PART OPT	SURF COND
1	1	.15	25.0	1.00	.010	1.0	.0

* *

GRASS FILTER RESULTS

* *

***** GRASS FILTER PROPERTIES *****

SEGMENT NUMBER = 1

MANNING'S FRICTION FACTOR	=	.0130	
CHANNEL SLOPE	=	1.0000	PERCENT
GRASS SPACING	=	.6000	INCH
GRASS HEIGHT	=	6.0000	INCH
FILTER WIDTH	=	240.0000	FEET
FILTER LENGTH	=	5.0000	FEET
INFILTRATION RATE	=	.1000	IN/HR
STIFFNESS COEFFICIENT	=	20.0000	N-M SQ

***** SUMMARY TABLE *****

SPECIFIC GRAVITY OF SEDIMENT	=	2.50	
BULK SPECIFIC GRAVITY	=	1.25	
VISCOSITY	=	.0090	CM**2/SEC
CRITICAL PRONE VELOCITY	=	1.0367	FT/S
PEAK FLOW DEPTH	=	.03	INCH
FILTER TRAVEL TIME	=	.1000	HR
FILTER INFILTRATION RATE	=	.0028	CFS
TOTAL INFILTRATION VOLUME	=	.0006	ACRE-FT
WEDGE LOCATION	=	.02	FEET
SEDIMENT DEPTH ZONE D	=	.0000	INCH
OUTFLOW RUNOFF VOLUME	=	.01	ACRE-FT
PEAK DISCHARGE RATE	=	.14	CFS
PEAK EFFLUENT CONCENTRATION	=	1.69	MG/L
PEAK SETTLEABLE CONCENTRATION	=	.0000	ML/L
PEAK SETTLEABLE CONCENTRATION	=	.00	MG/L
TOTAL MASS DISCHARGED	=	.00	TONS
TRAP EFFICIENCY	=	98.34	PERCENT

PERIOD OF SIGNIFICANT CONCENTRATION = 2.40 HRS

VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION = .00 ML/L

VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD = .00 ML/L

ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION = .00 ML/L

ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD = .00 ML/L

**** OVERALL TRAP EFFICIENCY OF ALL SEGMENTS= 98.34 **********

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE.MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000

*** HYDROGRAPH AND SEDIMENT GRAPH ***
(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
.60	.000	.000	*	5.70	.000	.000
.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000
10.40	.000	.000	*	10.50	.000	.000
10.60	.000	.000	*	10.70	.000	.000
.80	.000	.000	*	10.90	.000	.000
.00	.000	.000	*	11.10	.000	.000
1.20	.000	.000	*	11.30	.000	.000
11.40	.000	.000	*	11.50	.000	.000
11.60	.000	.000	*	11.70	.000	.000

12.20	.027	.057	*	12.30	.028	.059
12.40	.028	.061	*	12.50	.029	.066
12.60	.030	.068	*	12.70	.014	.017
12.80	.014	.017	*	12.90	.015	.017
13.00	.015	.017	*	13.10	.015	.018
13.20	.010	.009	*	13.30	.010	.009
13.40	.010	.009	*	13.50	.010	.009
13.60	.011	.009	*	13.70	.008	.005
13.80	.008	.005	*	13.90	.008	.005
14.00	.008	.005	*	14.10	.008	.005
14.20	.000	.000	*	14.30	.000	.000
14.40	.000	.000	*	14.50	.000	.000
14.60	.000	.000	*	14.70	.000	.000
14.80	.000	.000	*	14.90	.000	.000
15.00	.000	.000	*	15.10	.000	.000
15.20	.000	.000	*	15.30	.000	.000
15.40	.000	.000	*	15.50	.000	.000
15.60	.000	.000	*	15.70	.000	.000
15.80	.000	.000	*	15.90	.000	.000
16.00	.000	.000	*	16.10	.000	.000
16.20	.000	.000	*	16.30	.000	.000
16.40	.000	.000	*	16.50	.000	.000
16.60	.000	.000	*	16.70	.000	.000
16.80	.000	.000	*	16.90	.000	.000
17.00	.000	.000	*	17.10	.000	.000
17.20	.000	.000	*	17.30	.000	.000
17.40	.000	.000	*	17.50	.000	.000
17.60	.000	.000	*	17.70	.000	.000
17.80	.000	.000	*	17.90	.000	.000
18.00	.000	.000	*	18.10	.000	.000
18.20	.000	.000	*	18.30	.000	.000
18.40	.000	.000	*	18.50	.000	.000
18.60	.000	.000	*	18.70	.000	.000
18.80	.000	.000	*	18.90	.000	.000
19.00	.000	.000	*	19.10	.000	.000
19.20	.000	.000	*	19.30	.000	.000
19.40	.000	.000	*	19.50	.000	.000
19.60	.000	.000	*	19.70	.000	.000
19.80	.000	.000	*	19.90	.000	.000
20.00	.000	.000	*	20.10	.000	.000
20.20	.000	.000	*	20.30	.000	.000
20.40	.000	.000	*	20.50	.000	.000
20.60	.000	.000	*	20.70	.000	.000
20.80	.000	.000	*	20.90	.000	.000
21.00	.000	.000	*	21.10	.000	.000
21.20	.000	.000	*	21.30	.000	.000
21.40	.000	.000	*	21.50	.000	.000
21.60	.000	.000	*	21.70	.000	.000
21.80	.000	.000	*	21.90	.000	.000
22.00	.000	.000	*	22.10	.000	.000
22.20	.000	.000	*	22.30	.000	.000
22.40	.000	.000	*	22.50	.000	.000
22.60	.000	.000	*	22.70	.000	.000
22.80	.000	.000	*	22.90	.000	.000
23.00	.000	.000	*	23.10	.000	.000
23.20	.000	.000	*	23.30	.000	.000
23.40	.000	.000	*	23.50	.000	.000
23.60	.000	.000	*	23.70	.000	.000
23.80	.000	.000	*	23.90	.000	.000

*** RUN COMPLETED ****