NEW COARSE REFUSE TOE SEDIMENT POND

NPDES Discharge 012
Reference Plate 7-1 and 7-7

Design Criteria

10-year, 24-hour Watershed Hydrograph
25-year, 6-hour Watershed Hydrograph
100-year, 6-hour Watershed Hydrograph
100-year, 24-hour Watershed Hydrograph

Findings And Conclusions

COARSE REFUSE TOE SEDIMENT POND
DESCRIPTION

DESIGN CRITERIA

Pond

The Coarse Refuse Toe (CRT) drainage area is located at the base of the West Slurry Cell embankment. The drainage area covers the disturbed area between the bottom collection ditch and the first terrace, which is approximately 7.53 acres (shown in Plates 7-1 and 7-7). The soil conditions of the drainage is poor (CN=86).

The earthen embankment was designed to contain runoff from a 100-year 24-hour storm with a SCS Type 2 distribution from the drainage. The embankment is 10.8 foot high with a 20 feet wide crest. The side slopes of the embankment are 2h:1v downstream and 3h:1v upstream. The total volume of the pond is 2.3 acre-feet.

Approximately 3,400 cy of borrow was used in constructing this embankment. Twelve inches (12") of top soil was removed from the dam and borrow site prior to construction and stored in a top soil pile. After the useful life of the sediment pond, the borrow material will be returned to the site and recontoured to the approximate original contours. This site was seeded with the seed mixture shown in R645-301-300.

There is 2-inch decant pipe at elevation 6,179, which is three (3) feet above the allowed sediment height. Water is discharged through this pipe after a 24-hour period. The capacity of the pond at elevation 6179 feet is 0.52 acre-feet. The volume above this elevation is 1.78 acre-feet.

The SEDIMOT II model was used to model the hydrograph for a 100-year 24-hour storm with a SCS Type 2 distribution. The results are listed in the attached computer simulations. The total runoff volume for the 100-year 24 hour storm is .863 acre-foot. and the peak flow is 10.7 cfs.

Other Structures

Inlet Ditch

Mannings equation was used to evaluate the sizes of ditches. Channel flow was designed for the 100-year, 24 hour event. The Manning's n value of 0.03 was used because the grouted rip rap surface is left rough with protruding rock faces.

Slope = 2%
Width = 10 ft
Channel Depth = 2 ft
Channel Side Slope = 2h:1v
Freeboard = 0.5 ft

A (Acres)	R	K	Ls	C	P	Yield (Tons/Year)	Volume (Acre-Feet)
7.35	20	0.2	13	0.45	1	176	0.07

Note : Soil density is assumed as 125lb/ft^3.

FINDINGS AND CONCLUSIONS

The volume of pond above the decant pipe is 1.78 acre-feet, which is greater than the 100-year 24-hour runoff volume. The maximum sediment level has been set at elevation 6,176, which is one foot above the bottom of the pond. The sediment volume under elevation 6,176 is 0.1 acre-feet, which is greater than 0.07 acre-feet. The runoff volumes and peak flows for different storm events are listed as below.

Storm Type	Volume (Acre-Feet)	Peak Flow (cfs)
10-yr, 24-hr	.47	6.0
25-yr, 6-hr	.31	6.3
100-yr, 6-hr	.44	7.5
100-yr, 24-hr	.86	10.7

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
                                     * HMVersion    :  3.20                   *
*     (program description)          * Date         : 11/09/92                *
*                                    * Time         : 20:11:00                *
*                                    * Input file   : inputn                  *
*                                    * Output file  : new                     *
*                                    *                                        *
*                                    *                                        *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

```
::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
:::                                  :::
:::  Full Microcomputer Implementation :::
:::                by                :::
:::       Haestad Methods, Inc.      :::
:::                                  :::
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```

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*************************************************************
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      MINED LANDS FOR A SPECIFIED RAINFALL EVENT (SINGLE STORM)

      VERSION DATE 5-25-83

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      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

*************************************************************
*************************************************************

            ********************************************
                 WATERSHED IDENTIFICATION CODE
                 -----------------------------
                 New CRT Sediment Pond 10-yr 24-hr
            ********************************************

============================ STORM  INPUT ============================

QUESTION
   NO.

    1. STORM TYPE -                                    SCS'S TYPE 2
    2. RAINFALL DEPTH -                                  1.86 INCHES
    3. STORM DURATION -                                 24.00 HOURS
    4. TIME INCREMENT -                                   .10 HOURS

=======================================================================

========================== WATERSHED DATA ==========================

QUESTION
   NO.
    1. NUMBER OF JUNCTIONS - 1
```

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH NUMBER OF STRUCTURES

1 1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000

1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.012
10.20	.019	*	10.30	.025
10.40	.032	*	10.50	.038
10.60	.061	*	10.70	.072
10.80	.083	*	10.90	.093
11.00	.104	*	11.10	.180
11.20	.204	*	11.30	.227
11.40	.249	*	11.50	.271
11.60	2.838	*	11.70	3.895
11.80	4.754	*	11.90	5.460
12.00	6.046	*	12.10	1.204
12.20	1.221	*	12.30	1.238
12.40	1.254	*	12.50	1.269
12.60	.658	*	12.70	.662
12.80	.666	*	12.90	.670
13.00	.674	*	13.10	.494
13.20	.496	*	13.30	.498
13.40	.500	*	13.50	.502

13.60	.392	*	13.70	.393
13.80	.394	*	13.90	.395
14.00	.396	*	14.10	.284
14.20	.284	*	14.30	.285
14.40	.285	*	14.50	.286
14.60	.286	*	14.70	.287
14.80	.287	*	14.90	.288
15.00	.288	*	15.10	.289
15.20	.289	*	15.30	.290
15.40	.290	*	15.50	.291
15.60	.291	*	15.70	.292
15.80	.292	*	15.90	.293
16.00	.293	*	16.10	.176
16.20	.176	*	16.30	.177
16.40	.177	*	16.50	.177
16.60	.177	*	16.70	.177
16.80	.178	*	16.90	.178
17.00	.178	*	17.10	.178
17.20	.178	*	17.30	.178
17.40	.179	*	17.50	.179
17.60	.179	*	17.70	.179
17.80	.179	*	17.90	.179
18.00	.180	*	18.10	.180
18.20	.180	*	18.30	.180
18.40	.180	*	18.50	.180
18.60	.181	*	18.70	.181
18.80	.181	*	18.90	.181
19.00	.181	*	19.10	.181
19.20	.182	*	19.30	.182
19.40	.182	*	19.50	.182
19.60	.182	*	19.70	.182
19.80	.182	*	19.90	.183
20.00	.183	*	20.10	.122
20.20	.122	*	20.30	.122
20.40	.122	*	20.50	.122
20.60	.122	*	20.70	.122
20.80	.122	*	20.90	.122
21.00	.123	*	21.10	.123
21.20	.123	*	21.30	.123
21.40	.123	*	21.50	.123
21.60	.123	*	21.70	.123
21.80	.123	*	21.90	.123
22.00	.123	*	22.10	.123
22.20	.123	*	22.30	.123
22.40	.123	*	22.50	.124
22.60	.124	*	22.70	.124
22.80	.124	*	22.90	.124
23.00	.124	*	23.10	.124
23.20	.124	*	23.30	.124
23.40	.124	*	23.50	.124
23.60	.124	*	23.70	.124

```
* * * * * * * * * * * * * * * * * * * * * * * *
    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	7.53	86.00	.121	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	6.05	.74

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.86	INCHES
RUNOFF VOLUME	=	.4672	ACRE-FT
PEAK DISCHARGE	=	6.0462	CFS
AREA	=	7.5300	ACRES
TIME OF PEAK DISCHARGE	=	12.00	HRS

*** RUN COMPLETED ****

25-YEAR, 6-HOUR WATERSHED HYDROGRAPH

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*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/09/92              *
*                                      * Time         : 20:15:36              *
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*                                      * Output file  : new                   *
*                                      *                                      *
*                                      *                                      *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                      :::
:::  Full Microcomputer Implementation   :::
:::                 by                   :::
:::        Haestad Methods, Inc.         :::
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VERSION DATE 5-25-83

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****
****

****

WATERSHED IDENTIFICATION CODE

New CRT Sediment Pond 25-yr 6-hr

****

========== STORM INPUT ==========

QUESTION NO.		
1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	1.50 INCHES
3.	STORM DURATION -	6.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 1

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000

1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.696	*	2.70	2.612
2.80	4.125	*	2.90	5.310
3.00	6.254	*	3.10	1.276
3.20	1.302	*	3.30	1.328
3.40	1.352	*	3.50	1.376
3.60	.716	*	3.70	.722
3.80	.728	*	3.90	.733
4.00	.739	*	4.10	.543
4.20	.546	*	4.30	.548
4.40	.551	*	4.50	.554
4.60	.433	*	4.70	.434
4.80	.436	*	4.90	.438
5.00	.439	*	5.10	.315
5.20	.315	*	5.30	.316
5.40	.317	*	5.50	.318
5.60	.319	*	5.70	.319

* *

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	7.53	86.00	.121	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	6.25	.49

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.50	INCHES
RUNOFF VOLUME	=	.3088	ACRE-FT
PEAK DISCHARGE	=	6.2542	CFS
AREA	=	7.5300	ACRES
TIME OF PEAK DISCHARGE	=	3.00	HRS

100-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
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                                     * HMVersion    :  3.20                   *
*     (program description)          * Date         : 11/09/92                *
*                                    * Time         : 20:16:58                *
*                                    * Input file   : inputn                  *
*                                    * Output file  : new                     *
*                                    *                                        *
*                                    *                                        *
*******************************************************************************
```

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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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      VERSION DATE 5-25-83

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*************************************************************
*************************************************************
```

```
*********************************************
     WATERSHED IDENTIFICATION CODE
     -----------------------------
     New CRT Sediment Pond 100-yr 6-hr
*********************************************
```

```
============================  STORM  INPUT  ============================

QUESTION
   NO.

    1. STORM TYPE -                                      SCS'S TYPE 2
    2. RAINFALL DEPTH -                                    1.80 INCHES
    3. STORM DURATION -                                    6.00 HOURS
    4. TIME INCREMENT -                                     .10 HOURS

=========================================================================
```

```
===========================  WATERSHED DATA  ===========================

QUESTION
   NO.
    1. NUMBER OF JUNCTIONS - 1
```

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH NUMBER OF STRUCTURES

1 1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000

1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.024
2.60	1.919	*	2.70	4.372
2.80	6.184	*	2.90	7.560
3.00	8.630	*	3.10	1.737
3.20	1.766	*	3.30	1.794
3.40	1.820	*	3.50	1.846
3.60	.958	*	3.70	.965
3.80	.971	*	3.90	.977
4.00	.983	*	4.10	.721
4.20	.724	*	4.30	.727
4.40	.730	*	4.50	.733
4.60	.572	*	4.70	.574
4.80	.576	*	4.90	.578
5.00	.579	*	5.10	.415
5.20	.416	*	5.30	.417
5.40	.417	*	5.50	.418
5.60	.419	*	5.70	.420

* *

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	7.53	86.00	.121	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	8.63	.70

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.80	INCHES
RUNOFF VOLUME	=	.4397	ACRE-FT
PEAK DISCHARGE	=	8.6298	CFS
AREA	=	7.5300	ACRES
TIME OF PEAK DISCHARGE	=	3.00	HRS

100-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*         (program name)              * SEDIMOT S/N  : 1353220014             *
*                                     * HMVersion    :  3.20                  *
*      (program description)          * Date         : 11/09/92               *
*                                     * Time         : 20:08:50               *
*                                     * Input file   : inputn                 *
*                                     * Output file  : new                    *
*                                     *                                       *
*                                     *                                       *
*******************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

```
::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
:::                                  :::
:::  Full Microcomputer Implementation :::
:::                by                :::
:::        Haestad Methods, Inc.     :::
:::                                  :::
::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
```

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****
****

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VERSION DATE 5-25-83

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ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

****
****

****
WATERSHED IDENTIFICATION CODE

New CRT Sediment Pond 100-yr 24-hr
****

========== STORM INPUT ==========

QUESTION
NO.

1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	2.66 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 1

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH NUMBER OF STRUCTURES

1 1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000

1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.011	*	8.50	.016
8.60	.022	*	8.70	.026
8.80	.031	*	8.90	.036
9.00	.041	*	9.10	.052
9.20	.058	*	9.30	.064
9.40	.069	*	9.50	.075
9.60	.091	*	9.70	.098
9.80	.105	*	9.90	.112
10.00	.118	*	10.10	.161
10.20	.171	*	10.30	.181
10.40	.191	*	10.50	.201
10.60	.286	*	10.70	.303
10.80	.319	*	10.90	.336
11.00	.351	*	11.10	.574
11.20	.609	*	11.30	.643
11.40	.676	*	11.50	.708
11.60	6.581	*	11.70	8.023
11.80	9.136	*	11.90	10.013
12.00	10.714	*	12.10	2.099
12.20	2.118	*	12.30	2.137
12.40	2.156	*	12.50	2.173
12.60	1.124	*	12.70	1.128
12.80	1.132	*	12.90	1.137
13.00	1.141	*	13.10	.835
13.20	.837	*	13.30	.839
13.40	.841	*	13.50	.844

13.60	.658	*	13.70	.659
13.80	.660	*	13.90	.661
14.00	.662	*	14.10	.474
14.20	.474	*	14.30	.475
14.40	.476	*	14.50	.476
14.60	.477	*	14.70	.477
14.80	.478	*	14.90	.479
15.00	.479	*	15.10	.480
15.20	.480	*	15.30	.481
15.40	.481	*	15.50	.482
15.60	.483	*	15.70	.483
15.80	.484	*	15.90	.484
16.00	.485	*	16.10	.291
16.20	.291	*	16.30	.291
16.40	.292	*	16.50	.292
16.60	.292	*	16.70	.292
16.80	.292	*	16.90	.293
17.00	.293	*	17.10	.293
17.20	.293	*	17.30	.293
17.40	.293	*	17.50	.294
17.60	.294	*	17.70	.294
17.80	.294	*	17.90	.294
18.00	.295	*	18.10	.295
18.20	.295	*	18.30	.295
18.40	.295	*	18.50	.295
18.60	.296	*	18.70	.296
18.80	.296	*	18.90	.296
19.00	.296	*	19.10	.296
19.20	.297	*	19.30	.297
19.40	.297	*	19.50	.297
19.60	.297	*	19.70	.297
19.80	.298	*	19.90	.298
20.00	.298	*	20.10	.199
20.20	.199	*	20.30	.199
20.40	.199	*	20.50	.199
20.60	.199	*	20.70	.199
20.80	.199	*	20.90	.199
21.00	.199	*	21.10	.199
21.20	.200	*	21.30	.200
21.40	.200	*	21.50	.200
21.60	.200	*	21.70	.200
21.80	.200	*	21.90	.200
22.00	.200	*	22.10	.200
22.20	.200	*	22.30	.200
22.40	.200	*	22.50	.200
22.60	.200	*	22.70	.201
22.80	.201	*	22.90	.201
23.00	.201	*	23.10	.201
23.20	.201	*	23.30	.201
23.40	.201	*	23.50	.201
23.60	.201	*	23.70	.201

```
* * * * * * * * * * * * * * * * * * * * * * * *
    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
	7.53	86.00	.121	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	10.71	1.38

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.66	INCHES
RUNOFF VOLUME	=	.8630	ACRE-FT
PEAK DISCHARGE	=	10.7143	CFS
AREA	=	7.5300	ACRES
TIME OF PEAK DISCHARGE	=	12.00	HRS

*** RUN COMPLETED ****

RAILCUT SEDIMENT POND

NPDES Discharge 007
Reference 7-1 and 7-8

Design Criteria

10-year, 24-hour Watershed Hydrograph
25-year, 6-hour Watershed Hydrograph
25-year, 24-hour Watershed Hydrograph
100-year, 6-hour Watershed Hydrograph
100-year, 24-hour Watershed Hydrograph

Findings and Conclusions

RAILCUT SEDIMENT POND
DESCRIPTION

DESIGN CRITERIA

Pond

The Railcut Sediment Pond (NPDES 007) is located at the base of the Coarse Refuse Pile and captures the coarse refuse pile area and the southern slopes of the East and West Slurry Cells. The pond is an off channel, temporary sediment control structure with a total as-built volume of approximately 15.01 acre-feet. Surface water runoff from three watersheds plus the ponds own disturbance, for a total watershed of approximately 57.51 acres, is captured by the pond (shown in Plate 7-1 and 7-8).

The structure is a temporary pond as addressed in R645-301-732.200. The structure is not addressed by the MSHA criteria of 30 CFR 77.216(a). The pond meets the single-open channel spillway exemption of R645-301-742.225.2.

The pond discharge through a 48-inch culvert when the contained volume of the pond is 6.66 acre-feet. The pond has additional 6.57 acre-feet of temporary capacity between the outlet and freeboard elevation. This additional capacity simultaneously discharges when utilized.

The 48-inch CMP was designed to passes a 25-year, 6-hour storm event. The pond was designed to contain a volume for a 100-year, 6-hour storm event.

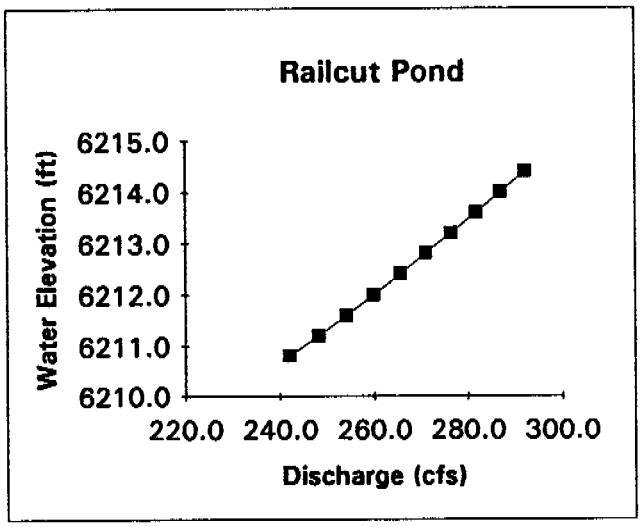
The 48-inch CMP can sustain a total blockage and the pond will contain the required storm event. The pond also contains a 2-inch decant pipe. The 2-inch decant pipe allows discharge of major storm events after appropriate settling times. The 2-inch pipe is normally closed.

SEDIMOT II model was used to simulate the hydrograph of different storm events. The results are listed in the attached computer simulations. The volume of runoff for a 100-year, 6-hour storm event is 4.25 acre-feet. The peak flow is 57.7 cfs.

Other Structures

<u>48-inch CMP Principal Spillway</u>

Slope = 2.56%
Diameter = 48 inch
n = 0.024
Flow Capacity = 292.2 cfs > 46.6 cfs.
The stage-discharge curve for this pipe is shown below.



2-inch Victaulic Decant Pipe

Slope = 3.72%
Diameter = 2 inch
n = 0.01
Flow Capacity = 0.08 cfs.

Sediment

Universal Soil Loss Equation A=RKLsCP was used to estimate sediment load.

Area	A (Acres)	R	K	Ls	C	P	Yield (Tons/Year)	Volume (Acre-Feet)
I	31.43	20	0.22	8.92	0.45	0.5	277	0.11
II	8.98	20	0.22	26.84	0.45	1	477	0.19
III	17.10	20	0.22	21.77	0.45	1	737	0.30
Total	57.51						1491	0.60

Note: Soil density is assumed as 125lb/ft^3.

FINDINGS AND CONCLUSIONS

The 10-year, 24-hour runoff volume (3.5 acre-feet) is less than the existing storm water capacity of 5.62. The sediment volume (0.6 acre-feet) is less than the existing 1.04 acre-feet of sediment load capacity. The runoff volumes and peak flows for different storm events are listed below.

Storm Type	Volume (Acre-Feet)	Peak Flow (cfs)
10-yr, 24-dr	3.50	33.5
25-yr, 6-hr	2.74	35.1
25-yr, 24-hr	4.81	46.8
100-yr, 6-hr	4.25	57.7
100-yr, 24-hr	5.57	54.2

10-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/10/92              *
*                                      * Time         : 21:39:36              *
*                                      * Input file   : RINP                  *
*                                      * Output file  : RAIL                  *
*                                      *                                      *
*                                      *                                      *
*******************************************************************************
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```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

```
::::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::::
:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
::::::::::::::::::::::::::::::::::::::::::
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```

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```
*************************************************************
*************************************************************

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      VERSION DATE 5-25-83

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      ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

*************************************************************
*************************************************************

          ********************************************
               WATERSHED IDENTIFICATION CODE
               -----------------------------
               RAILCUT SEDIMENT POND 10-YR 24-HR
          ********************************************

============================ STORM INPUT ============================

QUESTION
  NO.

   1. STORM TYPE -                                    SCS'S TYPE 2
   2. RAINFALL DEPTH -                                  1.84 INCHES
   3. STORM DURATION -                                 24.00 HOURS
   4. TIME INCREMENT -                                   .10 HOURS

=======================================================================

========================= WATERSHED DATA ============================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 2
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.15	.30

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

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

8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.015	*	10.30	.035
10.40	.058	*	10.50	.083
10.60	.111	*	10.70	.153
10.80	.209	*	10.90	.260
11.00	.306	*	11.10	.361
11.20	.471	*	11.30	.629
11.40	.756	*	11.50	.862
11.60	1.289	*	11.70	3.984
11.80	9.115	*	11.90	13.694
12.00	17.388	*	12.10	19.923
12.20	17.442	*	12.30	11.300
12.40	8.171	*	12.50	7.041
12.60	6.054	*	12.70	4.832
12.80	3.628	*	12.90	3.186
13.00	3.020	*	13.10	2.874
13.20	2.619	*	13.30	2.317
13.40	2.188	*	13.50	2.141
13.60	2.093	*	13.70	1.963
13.80	1.789	*	13.90	1.710
14.00	1.681	*	14.10	1.644
14.20	1.519	*	14.30	1.345
14.40	1.261	*	14.50	1.229
14.60	1.206	*	14.70	1.193
14.80	1.188	*	14.90	1.190
15.00	1.192	*	15.10	1.194
15.20	1.197	*	15.30	1.199
15.40	1.201	*	15.50	1.203
15.60	1.205	*	15.70	1.208
15.80	1.210	*	15.90	1.212
16.00	1.214	*	16.10	1.199
16.20	1.084	*	16.30	.907
16.40	.819	*	16.50	.784
16.60	.759	*	16.70	.742
16.80	.736	*	16.90	.736
17.00	.737	*	17.10	.738
17.20	.739	*	17.30	.739
17.40	.740	*	17.50	.741
17.60	.742	*	17.70	.742
17.80	.743	*	17.90	.744
18.00	.744	*	18.10	.745
18.20	.746	*	18.30	.746
18.40	.747	*	18.50	.748
18.60	.749	*	18.70	.749
18.80	.750	*	18.90	.751
19.00	.751	*	19.10	.752
19.20	.753	*	19.30	.753
19.40	.754	*	19.50	.755
19.60	.755	*	19.70	.756
19.80	.757	*	19.90	.757
20.00	.758	*	20.10	.750
20.20	.690	*	20.30	.598
20.40	.552	*	20.50	.533
20.60	.520	*	20.70	.512

20.80	.508	*	20.90	.508
21.00	.509	*	21.10	.509
21.20	.509	*	21.30	.510
21.40	.510	*	21.50	.510
21.60	.510	*	21.70	.511
21.80	.511	*	21.90	.511
22.00	.512	*	22.10	.512
22.20	.512	*	22.30	.512
22.40	.513	*	22.50	.513
22.60	.513	*	22.70	.513
22.80	.514	*	22.90	.514
23.00	.514	*	23.10	.515
23.20	.515	*	23.30	.515
23.40	.515	*	23.50	.516
23.60	.516	*	23.70	.516
23.80	.516	*	23.90	.517
24.00	.517	*	24.10	.499
24.20	.375	*	24.30	.187
24.40	.092	*	24.50	.054

* *

JUNCTION 1, BRANCH 1, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER	AREA	CURVE	TC	TT	ROUTING COEFFICIENTS		UNIT
	ACRES	NUMBER	HR	HR	K-HRS	X,	HYDRO
1	31.43	86.00	.260	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	19.92	.73

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	1.9116	ACRE-FT
PEAK DISCHARGE	=	19.9231	CFS
AREA	=	31.4300	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

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

8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.019
10.40	.032	*	10.50	.046
10.60	.061	*	10.70	.084
10.80	.114	*	10.90	.142
11.00	.167	*	11.10	.197
11.20	.257	*	11.30	.344
11.40	.414	*	11.50	.472
11.60	.680	*	11.70	2.144
11.80	4.996	*	11.90	7.501
12.00	9.530	*	12.10	10.977
12.20	9.606	*	12.30	6.121
12.40	4.427	*	12.50	3.792
12.60	3.259	*	12.70	2.606
12.80	1.970	*	12.90	1.731
13.00	1.640	*	13.10	1.563
13.20	1.425	*	13.30	1.261
13.40	1.191	*	13.50	1.166
13.60	1.141	*	13.70	1.070
13.80	.974	*	13.90	.931
14.00	.915	*	14.10	.897
14.20	.829	*	14.30	.732
14.40	.687	*	14.50	.669
14.60	.657	*	14.70	.650
14.80	.648	*	14.90	.649
15.00	.650	*	15.10	.651
15.20	.653	*	15.30	.654
15.40	.655	*	15.50	.656
15.60	.657	*	15.70	.658
15.80	.660	*	15.90	.661
16.00	.662	*	16.10	.655
16.20	.592	*	16.30	.493
16.40	.445	*	16.50	.426
16.60	.412	*	16.70	.404
16.80	.401	*	16.90	.402
17.00	.402	*	17.10	.402
17.20	.403	*	17.30	.403
17.40	.404	*	17.50	.404
17.60	.404	*	17.70	.405
17.80	.405	*	17.90	.406
18.00	.406	*	18.10	.406
18.20	.407	*	18.30	.407
18.40	.407	*	18.50	.408
18.60	.408	*	18.70	.409
18.80	.409	*	18.90	.409
19.00	.410	*	19.10	.410
19.20	.410	*	19.30	.411
19.40	.411	*	19.50	.412
19.60	.412	*	19.70	.412
19.80	.413	*	19.90	.413
20.00	.413	*	20.10	.410
20.20	.377	*	20.30	.325
20.40	.300	*	20.50	.290

20.60	.283	*	20.70	.279
20.80	.277	*	20.90	.277
21.00	.277	*	21.10	.278
21.20	.278	*	21.30	.278
21.40	.278	*	21.50	.278
21.60	.278	*	21.70	.278
21.80	.279	*	21.90	.279
22.00	.279	*	22.10	.279
22.20	.279	*	22.30	.279
22.40	.280	*	22.50	.280
22.60	.280	*	22.70	.280
22.80	.280	*	22.90	.280
23.00	.280	*	23.10	.281
23.20	.281	*	23.30	.281
23.40	.281	*	23.50	.281
23.60	.281	*	23.70	.281
23.80	.282	*	23.90	.282
24.00	.282	*	24.10	.274
24.20	.206	*	24.30	.100
24.40	.049	*	24.50	.028

```
* * * * * * * * * * * * * * * * * * * * * * * *
    JUNCTION  1, BRANCH  2, 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	17.10	86.00	.250	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	10.98	.73

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	1.0401	ACRE-FT
PEAK DISCHARGE	=	10.9768	CFS
AREA	=	17.1000	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

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

8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.017	*	10.50	.024
10.60	.032	*	10.70	.044
10.80	.060	*	10.90	.075
11.00	.088	*	11.10	.101
11.20	.132	*	11.30	.182
11.40	.217	*	11.50	.248
11.60	.281	*	11.70	1.020
11.80	2.651	*	11.90	3.968
12.00	5.057	*	12.10	5.999
12.20	5.239	*	12.30	3.050
12.40	2.221	*	12.50	1.845
12.60	1.591	*	12.70	1.299
12.80	.998	*	12.90	.883
13.00	.832	*	13.10	.801
13.20	.735	*	13.30	.647
13.40	.613	*	13.50	.599
13.60	.591	*	13.70	.555
13.80	.501	*	13.90	.480
14.00	.471	*	14.10	.466
14.20	.431	*	14.30	.375
14.40	.353	*	14.50	.344
14.60	.338	*	14.70	.335
14.80	.336	*	14.90	.337
15.00	.337	*	15.10	.338
15.20	.338	*	15.30	.339
15.40	.340	*	15.50	.340
15.60	.341	*	15.70	.342
15.80	.342	*	15.90	.343
16.00	.343	*	16.10	.344
16.20	.310	*	16.30	.251
16.40	.228	*	16.50	.217
16.60	.211	*	16.70	.208
16.80	.208	*	16.90	.208
17.00	.209	*	17.10	.209
17.20	.209	*	17.30	.209
17.40	.209	*	17.50	.210
17.60	.210	*	17.70	.210
17.80	.210	*	17.90	.210
18.00	.211	*	18.10	.211
18.20	.211	*	18.30	.211
18.40	.211	*	18.50	.212
18.60	.212	*	18.70	.212
18.80	.212	*	18.90	.212
19.00	.213	*	19.10	.213
19.20	.213	*	19.30	.213
19.40	.213	*	19.50	.213
19.60	.214	*	19.70	.214
19.80	.214	*	19.90	.214
20.00	.214	*	20.10	.214
20.20	.197	*	20.30	.166

20.40	.154	*	20.50	.149
20.60	.145	*	20.70	.144
20.80	.144	*	20.90	.144
21.00	.144	*	21.10	.144
21.20	.144	*	21.30	.144
21.40	.144	*	21.50	.144
21.60	.144	*	21.70	.144
21.80	.145	*	21.90	.145
22.00	.145	*	22.10	.145
22.20	.145	*	22.30	.145
22.40	.145	*	22.50	.145
22.60	.145	*	22.70	.145
22.80	.145	*	22.90	.145
23.00	.145	*	23.10	.146
23.20	.146	*	23.30	.146
23.40	.146	*	23.50	.146
23.60	.146	*	23.70	.146
23.80	.146	*	23.90	.146
24.00	.146	*	24.10	.146
24.20	.110	*	24.30	.047
24.40	.022	*	24.50	.011

* *

JUNCTION 2, 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	8.98	86.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	6.00	.73

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.5462	ACRE-FT
PEAK DISCHARGE	=	5.9986	CFS
AREA	=	8.9800	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.30	
PREVIOUS MUSKINGUM ROUTING K	=	.1500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	28.26	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.20	HRS
TOTAL DRAINAGE AREA	=	57.51	ACRES
TOTAL RUNOFF VOLUME	=	3.4979	AC-FT
PEAK RUNOFF DISCHARGE	=	33.50	CFS
TIME TO PEAK DISCHARGE	=	12.20	HRS

*** RUN COMPLETED ****

25-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/10/92              *
*                                      * Time         : 21:35:47              *
*                                      * Input file   : RINP                  *
*                                      * Output file  : RAIL                  *
*                                      *                                      *
*                                      *                                      *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
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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 5-25-83

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

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****
WATERSHED IDENTIFICATION CODE

RAILCUT SEDIMENT POND 25-YR 6-HR
****

========== STORM INPUT ==========

QUESTION NO.		
1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	1.62 INCHES
3.	STORM DURATION -	6.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 2

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.15	.30

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.075	*	2.70	1.411
2.80	5.747	*	2.90	11.919
3.00	17.881	*	3.10	22.204
3.20	20.115	*	3.30	13.208
3.40	9.771	*	3.50	8.594
3.60	7.489	*	3.70	6.025
3.80	4.542	*	3.90	3.996
4.00	3.795	*	4.10	3.618
4.20	3.302	*	4.30	2.924
4.40	2.764	*	4.50	2.708
4.60	2.648	*	4.70	2.486
4.80	2.267	*	4.90	2.168
5.00	2.133	*	5.10	2.087
5.20	1.930	*	5.30	1.709
5.40	1.603	*	5.50	1.563
5.60	1.535	*	5.70	1.518
5.80	1.512	*	5.90	1.515
6.00	1.519	*	6.10	1.468
6.20	1.104	*	6.30	.549
6.40	.270	*	6.50	.158

* *
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	31.43	86.00	.260	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	22.20	.57

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	1.5017	ACRE-FT
PEAK DISCHARGE	=	22.2036	CFS
AREA	=	31.4300	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000

2.60	.035	*	2.70	.736
2.80	3.121	*	2.90	6.527
3.00	9.799	*	3.10	12.246
3.20	11.098	*	3.30	7.176
3.40	5.306	*	3.50	4.636
3.60	4.036	*	3.70	3.251
3.80	2.466	*	3.90	2.172
4.00	2.061	*	4.10	1.967
4.20	1.797	*	4.30	1.591
4.40	1.505	*	4.50	1.474
4.60	1.443	*	4.70	1.355
4.80	1.234	*	4.90	1.181
5.00	1.161	*	5.10	1.138
5.20	1.053	*	5.30	.930
5.40	.873	*	5.50	.851
5.60	.835	*	5.70	.827
5.80	.825	*	5.90	.826
6.00	.828	*	6.10	.805
6.20	.605	*	6.30	.294
6.40	.143	*	6.50	.082

* *

JUNCTION 1, BRANCH 2, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

R SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	17.10	86.00	.250	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	12.25	.57

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.8170	ACRE-FT
PEAK DISCHARGE	=	12.2456	CFS
AREA	=	17.1000	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.054	*	2.70	.786
2.80	2.498	*	2.90	4.347
3.00	5.995	*	3.10	6.777
3.20	4.693	*	3.30	2.941
3.40	2.468	*	3.50	2.107
3.60	1.816	*	3.70	1.408
3.80	1.149	*	3.90	1.075
4.00	1.025	*	4.10	.976
4.20	.863	*	4.30	.787
4.40	.766	*	4.50	.752
4.60	.731	*	4.70	.664
4.80	.616	*	4.90	.603
5.00	.594	*	5.10	.576
5.20	.506	*	5.30	.457
5.40	.443	*	5.50	.433
5.60	.428	*	5.70	.427
5.80	.428	*	5.90	.429
6.00	.430	*	6.10	.394
6.20	.216	*	6.30	.087
6.40	.047	*	6.50	.019

* *
JUNCTION 2, 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
	8.98	86.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	6.78	.57

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.4291	ACRE-FT
PEAK DISCHARGE	=	6.7770	CFS
AREA	=	8.9800	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.30	
PREVIOUS MUSKINGUM ROUTING K	=	.1500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	30.56	CFS
TIME OF ROUTED PEAK DISCHARGE	=	3.30	HRS
TOTAL DRAINAGE AREA	=	57.51	ACRES
TOTAL RUNOFF VOLUME	=	2.7478	AC-FT
PEAK RUNOFF DISCHARGE	=	35.06	CFS
TIME TO PEAK DISCHARGE	=	3.20	HRS

*** RUN COMPLETED ****

25-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*****************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014            *
                                     * HMVersion    :  3.20                 *
*     (program description)          * Date         : 11/11/92              *
*                                    * Time         :  3:21:17              *
*                                    * Input file   : rinp                  *
*                                    * Output file  : rail                  *
*                                    *                                      *
*                                    *                                      *
*****************************************************************************
```

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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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*************************************************************
*************************************************************

      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 5-25-83

      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

*************************************************************
*************************************************************

          ********************************************
               WATERSHED IDENTIFICATION CODE
               -----------------------------
               RAILCUT SEDIMENT POND 25-YR 24-HR
          ********************************************

========================== STORM INPUT ==========================

QUESTION
  NO.

   1. STORM TYPE -                                  SCS'S TYPE 2
   2. RAINFALL DEPTH -                                2.20 INCHES
   3. STORM DURATION -                               24.00 HOURS
   4. TIME INCREMENT -                                .10 HOURS

=================================================================

========================= WATERSHED DATA =========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 2
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1

COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.15	.30

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

TION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

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

8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.021	*	9.50	.037
9.60	.055	*	9.70	.076
9.80	.101	*	9.90	.124
10.00	.147	*	10.10	.172
10.20	.211	*	10.30	.260
10.40	.302	*	10.50	.339
10.60	.381	*	10.70	.456
10.80	.557	*	10.90	.636
11.00	.701	*	11.10	.780
11.20	.963	*	11.30	1.226
11.40	1.417	*	11.50	1.560
11.60	2.219	*	11.70	6.377
11.80	13.908	*	11.90	20.027
12.00	24.607	*	12.10	27.579
12.20	23.868	*	12.30	15.388
12.40	11.042	*	12.50	9.436
12.60	8.060	*	12.70	6.405
12.80	4.796	*	12.90	4.204
13.00	3.980	*	13.10	3.782
13.20	3.444	*	13.30	3.043
13.40	2.871	*	13.50	2.808
13.60	2.742	*	13.70	2.570
13.80	2.341	*	13.90	2.236
14.00	2.197	*	14.10	2.147
14.20	1.984	*	14.30	1.755
14.40	1.645	*	14.50	1.603
14.60	1.573	*	14.70	1.554
14.80	1.547	*	14.90	1.549
15.00	1.552	*	15.10	1.554
15.20	1.556	*	15.30	1.559
15.40	1.561	*	15.50	1.563
15.60	1.566	*	15.70	1.568
15.80	1.570	*	15.90	1.572
16.00	1.575	*	16.10	1.554
16.20	1.405	*	16.30	1.176
16.40	1.061	*	16.50	1.016
16.60	.982	*	16.70	.961
16.80	.952	*	16.90	.953
17.00	.954	*	17.10	.955
17.20	.956	*	17.30	.956
17.40	.957	*	17.50	.958
17.60	.959	*	17.70	.959
17.80	.960	*	17.90	.961
18.00	.962	*	18.10	.962
18.20	.963	*	18.30	.964
18.40	.964	*	18.50	.965
18.60	.966	*	18.70	.967
18.80	.967	*	18.90	.968
19.00	.969	*	19.10	.969
19.20	.970	*	19.30	.971
19.40	.972	*	19.50	.972
19.60	.973	*	19.70	.974
19.80	.974	*	19.90	.975
20.00	.976	*	20.10	.965
20.20	.887	*	20.30	.769
20.40	.710	*	20.50	.686
20.60	.669	*	20.70	.658

20.80	.653	*	20.90	.654
21.00	.654	*	21.10	.654
21.20	.655	*	21.30	.655
21.40	.655	*	21.50	.655
21.60	.656	*	21.70	.656
21.80	.656	*	21.90	.657
22.00	.657	*	22.10	.657
22.20	.657	*	22.30	.658
22.40	.658	*	22.50	.658
22.60	.659	*	22.70	.659
22.80	.659	*	22.90	.659
23.00	.660	*	23.10	.660
23.20	.660	*	23.30	.661
23.40	.661	*	23.50	.661
23.60	.661	*	23.70	.662
23.80	.662	*	23.90	.662
24.00	.663	*	24.10	.640
24.20	.481	*	24.30	.239
24.40	.118	*	24.50	.069

* *

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	31.43	86.00	.260	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	27.58	1.00

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	2.6275	ACRE-FT
PEAK DISCHARGE	=	27.5793	CFS
AREA	=	31.4300	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

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

8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.012	*	9.50	.020
9.60	.030	*	9.70	.042
9.80	.055	*	9.90	.068
10.00	.081	*	10.10	.094
10.20	.115	*	10.30	.142
10.40	.165	*	10.50	.185
10.60	.208	*	10.70	.249
10.80	.305	*	10.90	.348
11.00	.383	*	11.10	.425
11.20	.525	*	11.30	.671
11.40	.774	*	11.50	.853
11.60	1.173	*	11.70	3.437
11.80	7.629	*	11.90	10.971
12.00	13.487	*	12.10	15.192
12.20	13.139	*	12.30	8.329
12.40	5.978	*	12.50	5.079
12.60	4.337	*	12.70	3.453
12.80	2.604	*	12.90	2.285
13.00	2.161	*	13.10	2.056
13.20	1.874	*	13.30	1.656
13.40	1.563	*	13.50	1.528
13.60	1.494	*	13.70	1.401
13.80	1.274	*	13.90	1.218
14.00	1.196	*	14.10	1.171
14.20	1.082	*	14.30	.955
14.40	.896	*	14.50	.872
14.60	.856	*	14.70	.846
14.80	.844	*	14.90	.845
15.00	.846	*	15.10	.847
15.20	.849	*	15.30	.850
15.40	.851	*	15.50	.852
15.60	.854	*	15.70	.855
15.80	.856	*	15.90	.857
16.00	.859	*	16.10	.849
16.20	.767	*	16.30	.639
16.40	.577	*	16.50	.552
16.60	.534	*	16.70	.523
16.80	.519	*	16.90	.520
17.00	.520	*	17.10	.521
17.20	.521	*	17.30	.521
17.40	.522	*	17.50	.522
17.60	.523	*	17.70	.523
17.80	.524	*	17.90	.524
18.00	.524	*	18.10	.525
18.20	.525	*	18.30	.526
18.40	.526	*	18.50	.526
18.60	.527	*	18.70	.527
18.80	.528	*	18.90	.528
19.00	.528	*	19.10	.529
19.20	.529	*	19.30	.529
19.40	.530	*	19.50	.530
19.60	.531	*	19.70	.531
19.80	.531	*	19.90	.532
20.00	.532	*	20.10	.527
20.20	.485	*	20.30	.418
20.40	.386	*	20.50	.373

20.60	.364	*	20.70	.358
20.80	.356	*	20.90	.356
21.00	.357	*	21.10	.357
21.20	.357	*	21.30	.357
21.40	.357	*	21.50	.357
21.60	.358	*	21.70	.358
21.80	.358	*	21.90	.358
22.00	.358	*	22.10	.358
22.20	.359	*	22.30	.359
22.40	.359	*	22.50	.359
22.60	.359	*	22.70	.359
22.80	.359	*	22.90	.360
23.00	.360	*	23.10	.360
23.20	.360	*	23.30	.360
23.40	.360	*	23.50	.361
23.60	.361	*	23.70	.361
23.80	.361	*	23.90	.361
24.00	.361	*	24.10	.351
24.20	.263	*	24.30	.128
24.40	.062	*	24.50	.036

* *

JUNCTION 1, BRANCH 2, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

ER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	17.10	86.00	.250	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	15.19	1.00

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	1.4295	ACRE-FT
PEAK DISCHARGE	=	15.1916	CFS
AREA	=	17.1000	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

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

8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.011
9.60	.016	*	9.70	.022
9.80	.029	*	9.90	.036
10.00	.042	*	10.10	.049
10.20	.060	*	10.30	.075
10.40	.087	*	10.50	.097
10.60	.107	*	10.70	.129
10.80	.160	*	10.90	.182
11.00	.201	*	11.10	.218
11.20	.271	*	11.30	.353
11.40	.406	*	11.50	.448
11.60	.493	*	11.70	1.651
11.80	4.069	*	11.90	5.809
12.00	7.161	*	12.10	8.292
12.20	7.147	*	12.30	4.135
12.40	2.988	*	12.50	2.463
12.60	2.112	*	12.70	1.719
12.80	1.318	*	12.90	1.165
13.00	1.097	*	13.10	1.053
13.20	.967	*	13.30	.849
13.40	.805	*	13.50	.786
13.60	.774	*	13.70	.727
13.80	.655	*	13.90	.628
14.00	.616	*	14.10	.609
14.20	.563	*	14.30	.489
14.40	.461	*	14.50	.448
14.60	.440	*	14.70	.437
14.80	.438	*	14.90	.438
15.00	.439	*	15.10	.440
15.20	.440	*	15.30	.441
15.40	.442	*	15.50	.442
15.60	.443	*	15.70	.443
15.80	.444	*	15.90	.445
16.00	.445	*	16.10	.446
16.20	.402	*	16.30	.325
16.40	.295	*	16.50	.282
16.60	.273	*	16.70	.269
16.80	.269	*	16.90	.270
17.00	.270	*	17.10	.270
17.20	.270	*	17.30	.270
17.40	.271	*	17.50	.271
17.60	.271	*	17.70	.271
17.80	.272	*	17.90	.272
18.00	.272	*	18.10	.272
18.20	.272	*	18.30	.273
18.40	.273	*	18.50	.273
18.60	.273	*	18.70	.273
18.80	.274	*	18.90	.274
19.00	.274	*	19.10	.274
19.20	.274	*	19.30	.275
19.40	.275	*	19.50	.275
19.60	.275	*	19.70	.275
19.80	.276	*	19.90	.276
20.00	.276	*	20.10	.276
20.20	.253	*	20.30	.214

20.40	.198	*	20.50	.191
20.60	.187	*	20.70	.185
20.80	.185	*	20.90	.185
21.00	.185	*	21.10	.185
21.20	.185	*	21.30	.185
21.40	.185	*	21.50	.185
21.60	.185	*	21.70	.186
21.80	.186	*	21.90	.186
22.00	.186	*	22.10	.186
22.20	.186	*	22.30	.186
22.40	.186	*	22.50	.186
22.60	.186	*	22.70	.186
22.80	.186	*	22.90	.187
23.00	.187	*	23.10	.187
23.20	.187	*	23.30	.187
23.40	.187	*	23.50	.187
23.60	.187	*	23.70	.187
23.80	.187	*	23.90	.187
24.00	.187	*	24.10	.187
24.20	.140	*	24.30	.060
24.40	.028	*	24.50	.014

* *

JUNCTION 2, 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	8.98	86.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	8.29	1.00

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	.7507	ACRE-FT
PEAK DISCHARGE	=	8.2920	CFS
AREA	=	8.9800	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.30	
PREVIOUS MUSKINGUM ROUTING K	=	.1500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	39.49	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.20	HRS
TOTAL DRAINAGE AREA	=	57.51	ACRES
TOTAL RUNOFF VOLUME	=	4.8077	AC-FT
PEAK RUNOFF DISCHARGE	=	46.64	CFS
TIME TO PEAK DISCHARGE	=	12.20	HRS

*** RUN COMPLETED ****

100-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
*                                    * HMVersion    :  3.20                   *
*     (program description)          * Date         : 11/10/92                *
*                                    * Time         : 21:42:46                *
*                                    * Input file   : RINP                    *
*                                    * Output file  : RAIL                    *
*                                    *                                        *
*                                    *                                        *
*******************************************************************************
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
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*************************************************************
*************************************************************

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      OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
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      VERSION DATE 5-25-83

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      ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

*************************************************************
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          ********************************************
               WATERSHED IDENTIFICATION CODE
               -----------------------------
               RAILCUT SEDIMENT POND 100-YR 6-HR
          ********************************************


============================ STORM  INPUT ============================

QUESTION
  NO.

   1. STORM TYPE -                                        SCS'S TYPE 2
   2. RAINFALL DEPTH -                                      2.05 INCHES
   3. STORM DURATION -                                      6.00 HOURS
   4. TIME INCREMENT -                                       .10 HOURS

======================================================================


========================== WATERSHED DATA ==========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 2
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1

COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.15	.30

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

TION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.016	*	2.50	.107
2.60	.610	*	2.70	4.085
2.80	12.208	*	2.90	21.378
3.00	29.331	*	3.10	34.720
3.20	30.756	*	3.30	20.013
3.40	14.597	*	3.50	12.650
3.60	10.901	*	3.70	8.704
3.80	6.534	*	3.90	5.734
4.00	5.434	*	4.10	5.169
4.20	4.709	*	4.30	4.163
4.40	3.931	*	4.50	3.846
4.60	3.757	*	4.70	3.523
4.80	3.210	*	4.90	3.067
5.00	3.014	*	5.10	2.947
5.20	2.723	*	5.30	2.409
5.40	2.259	*	5.50	2.202
5.60	2.160	*	5.70	2.135
5.80	2.126	*	5.90	2.129
6.00	2.133	*	6.10	2.061
6.20	1.550	*	6.30	.771
6.40	.379	*	6.50	.222

* *
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	31.43	86.00	.260	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	34.72	.89

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	2.3233	ACRE-FT
PEAK DISCHARGE	=	34.7203	CFS
AREA	=	31.4300	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.057

2.60	.309	*	2.70	2.175
2.80	6.668	*	2.90	11.714
3.00	16.079	*	3.10	19.141
3.20	16.954	*	3.30	10.857
3.40	7.916	*	3.50	6.816
3.60	5.869	*	3.70	4.695
3.80	3.547	*	3.90	3.116
4.00	2.950	*	4.10	2.810
4.20	2.563	*	4.30	2.266
4.40	2.140	*	4.50	2.093
4.60	2.048	*	4.70	1.921
4.80	1.748	*	4.90	1.670
5.00	1.641	*	5.10	1.607
5.20	1.485	*	5.30	1.311
5.40	1.230	*	5.50	1.198
5.60	1.176	*	5.70	1.163
5.80	1.159	*	5.90	1.161
6.00	1.163	*	6.10	1.130
6.20	.849	*	6.30	.412
6.40	.201	*	6.50	.115

* *

JUNCTION 1, BRANCH 2, 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	17.10	86.00	.250	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	19.14	.89

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	1.2640	ACRE-FT
PEAK DISCHARGE	=	19.1409	CFS
AREA	=	17.1000	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.027
2.60	.087	*	2.70	.962
2.80	3.469	*	2.90	6.207
3.00	8.543	*	3.10	10.492
3.20	9.289	*	3.30	5.443
3.40	3.987	*	3.50	3.322
3.60	2.866	*	3.70	2.340
3.80	1.796	*	3.90	1.590
4.00	1.498	*	4.10	1.440
4.20	1.322	*	4.30	1.162
4.40	1.102	*	4.50	1.076
4.60	1.060	*	4.70	.997
4.80	.898	*	4.90	.861
5.00	.845	*	5.10	.835
5.20	.773	*	5.30	.672
5.40	.633	*	5.50	.615
5.60	.604	*	5.70	.600
5.80	.601	*	5.90	.602
6.00	.603	*	6.10	.603
6.20	.453	*	6.30	.192
6.40	.091	*	6.50	.044

* *
JUNCTION 2, 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	8.98	86.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	10.49	.89

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	.6638	ACRE-FT
PEAK DISCHARGE	=	10.4915	CFS
AREA	=	8.9800	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.30	
PREVIOUS MUSKINGUM ROUTING K	=	.1500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	48.42	CFS
TIME OF ROUTED PEAK DISCHARGE	=	3.20	HRS
TOTAL DRAINAGE AREA	=	57.51	ACRES
TOTAL RUNOFF VOLUME	=	4.2511	AC-FT
PEAK RUNOFF DISCHARGE	=	57.71	CFS
TIME TO PEAK DISCHARGE	=	3.20	HRS

*** RUN COMPLETED ****

100-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/10/92              *
*                                      * Time         : 21:40:56              *
*                                      * Input file   : RINP                  *
*                                      * Output file  : RAIL                  *
*                                      *                                      *
*                                      *                                      *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
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:::                 by                 :::
:::        Haestad Methods, Inc.       :::
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VERSION DATE 5-25-83

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****
****

****
WATERSHED IDENTIFICATION CODE

RAILCUT SEDIMENT POND 100-YR 24-HR
****

========== STORM INPUT ==========

QUESTION
NO.

1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	2.40 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.

1. NUMBER OF JUNCTIONS - 2

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.15	.30

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

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

8.80	.000	*	8.90	.011
9.00	.025	*	9.10	.040
9.20	.059	*	9.30	.082
9.40	.104	*	9.50	.125
9.60	.148	*	9.70	.175
9.80	.207	*	9.90	.236
10.00	.262	*	10.10	.292
10.20	.342	*	10.30	.407
10.40	.460	*	10.50	.503
10.60	.552	*	10.70	.647
10.80	.777	*	10.90	.873
11.00	.947	*	11.10	1.040
11.20	1.268	*	11.30	1.594
11.40	1.822	*	11.50	1.987
11.60	2.784	*	11.70	7.812
11.80	16.753	*	11.90	23.742
12.00	28.794	*	12.10	31.986
12.20	27.551	*	12.30	17.726
12.40	12.679	*	12.50	10.797
12.60	9.196	*	12.70	7.294
12.80	5.456	*	12.90	4.780
13.00	4.522	*	13.10	4.295
13.20	3.908	*	13.30	3.452
13.40	3.256	*	13.50	3.183
13.60	3.108	*	13.70	2.912
13.80	2.652	*	13.90	2.532
14.00	2.487	*	14.10	2.431
14.20	2.245	*	14.30	1.985
14.40	1.861	*	14.50	1.813
14.60	1.778	*	14.70	1.757
14.80	1.749	*	14.90	1.751
15.00	1.753	*	15.10	1.756
15.20	1.758	*	15.30	1.761
15.40	1.763	*	15.50	1.765
15.60	1.768	*	15.70	1.770
15.80	1.772	*	15.90	1.774
16.00	1.777	*	16.10	1.754
16.20	1.585	*	16.30	1.326
16.40	1.197	*	16.50	1.145
16.60	1.108	*	16.70	1.084
16.80	1.074	*	16.90	1.075
17.00	1.075	*	17.10	1.076
17.20	1.077	*	17.30	1.078
17.40	1.079	*	17.50	1.079
17.60	1.080	*	17.70	1.081
17.80	1.082	*	17.90	1.082
18.00	1.083	*	18.10	1.084
18.20	1.085	*	18.30	1.085
18.40	1.086	*	18.50	1.087
18.60	1.088	*	18.70	1.088
18.80	1.089	*	18.90	1.090
19.00	1.090	*	19.10	1.091
19.20	1.092	*	19.30	1.093
19.40	1.093	*	19.50	1.094
19.60	1.095	*	19.70	1.095
19.80	1.096	*	19.90	1.097
20.00	1.097	*	20.10	1.085
20.20	.998	*	20.30	.865
20.40	.798	*	20.50	.772
20.60	.752	*	20.70	.740

20.80	.735	*	20.90	.735
21.00	.735	*	21.10	.735
21.20	.736	*	21.30	.736
21.40	.736	*	21.50	.737
21.60	.737	*	21.70	.737
21.80	.738	*	21.90	.738
22.00	.738	*	22.10	.738
22.20	.739	*	22.30	.739
22.40	.739	*	22.50	.740
22.60	.740	*	22.70	.740
22.80	.740	*	22.90	.741
23.00	.741	*	23.10	.741
23.20	.742	*	23.30	.742
23.40	.742	*	23.50	.742
23.60	.743	*	23.70	.743
23.80	.743	*	23.90	.744
24.00	.744	*	24.10	.718
24.20	.540	*	24.30	.268
24.40	.132	*	24.50	.077

* *

JUNCTION 1, BRANCH 1, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	31.43	86.00	.260	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	31.99	1.16

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	3.0443	ACRE-FT
PEAK DISCHARGE	=	31.9860	CFS
AREA	=	31.4300	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

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

8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.013	*	9.10	.022
9.20	.032	*	9.30	.045
9.40	.057	*	9.50	.069
9.60	.081	*	9.70	.096
9.80	.113	*	9.90	.129
10.00	.143	*	10.10	.159
10.20	.186	*	10.30	.223
10.40	.251	*	10.50	.275
10.60	.301	*	10.70	.353
10.80	.425	*	10.90	.477
11.00	.518	*	11.10	.567
11.20	.691	*	11.30	.872
11.40	.996	*	11.50	1.087
11.60	1.472	*	11.70	4.213
11.80	9.192	*	11.90	13.007
12.00	15.783	*	12.10	17.617
12.20	15.163	*	12.30	9.591
12.40	6.861	*	12.50	5.810
12.60	4.947	*	12.70	3.932
12.80	2.962	*	12.90	2.597
13.00	2.455	*	13.10	2.335
13.20	2.127	*	13.30	1.878
13.40	1.773	*	13.50	1.733
13.60	1.693	*	13.70	1.587
13.80	1.443	*	13.90	1.379
14.00	1.354	*	14.10	1.325
14.20	1.224	*	14.30	1.080
14.40	1.013	*	14.50	.987
14.60	.968	*	14.70	.957
14.80	.954	*	14.90	.955
15.00	.956	*	15.10	.958
15.20	.959	*	15.30	.960
15.40	.961	*	15.50	.963
15.60	.964	*	15.70	.965
15.80	.966	*	15.90	.968
16.00	.969	*	16.10	.958
16.20	.865	*	16.30	.721
16.40	.651	*	16.50	.623
16.60	.602	*	16.70	.590
16.80	.586	*	16.90	.586
17.00	.586	*	17.10	.587
17.20	.587	*	17.30	.588
17.40	.588	*	17.50	.589
17.60	.589	*	17.70	.589
17.80	.590	*	17.90	.590
18.00	.591	*	18.10	.591
18.20	.591	*	18.30	.592
18.40	.592	*	18.50	.593
18.60	.593	*	18.70	.593
18.80	.594	*	18.90	.594
19.00	.595	*	19.10	.595
19.20	.595	*	19.30	.596
19.40	.596	*	19.50	.597
19.60	.597	*	19.70	.597
19.80	.598	*	19.90	.598
20.00	.598	*	20.10	.593
20.20	.545	*	20.30	.470
20.40	.434	*	20.50	.420

20.60	.409	*	20.70	.403
20.80	.401	*	20.90	.401
21.00	.401	*	21.10	.401
21.20	.401	*	21.30	.401
21.40	.402	*	21.50	.402
21.60	.402	*	21.70	.402
21.80	.402	*	21.90	.402
22.00	.402	*	22.10	.403
22.20	.403	*	22.30	.403
22.40	.403	*	22.50	.403
22.60	.403	*	22.70	.404
22.80	.404	*	22.90	.404
23.00	.404	*	23.10	.404
23.20	.404	*	23.30	.405
23.40	.405	*	23.50	.405
23.60	.405	*	23.70	.405
23.80	.405	*	23.90	.405
24.00	.406	*	24.10	.394
24.20	.296	*	24.30	.144
24.40	.070	*	24.50	.040

* *

JUNCTION 1, BRANCH 2, 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	17.10	86.00	.250	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	17.62	1.16

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	1.6563	ACRE-FT
PEAK DISCHARGE	=	17.6172	CFS
AREA	=	17.1000	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

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

8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.011
9.20	.017	*	9.30	.024
9.40	.030	*	9.50	.036
9.60	.042	*	9.70	.050
9.80	.059	*	9.90	.068
10.00	.075	*	10.10	.082
10.20	.097	*	10.30	.117
10.40	.131	*	10.50	.144
10.60	.156	*	10.70	.183
10.80	.223	*	10.90	.250
11.00	.271	*	11.10	.291
11.20	.356	*	11.30	.459
11.40	.522	*	11.50	.570
11.60	.622	*	11.70	2.031
11.80	4.911	*	11.90	6.888
12.00	8.382	*	12.10	9.611
12.20	8.240	*	12.30	4.755
12.40	3.424	*	12.50	2.814
12.60	2.406	*	12.70	1.957
12.80	1.499	*	12.90	1.325
13.00	1.246	*	13.10	1.196
13.20	1.097	*	13.30	.963
13.40	.913	*	13.50	.891
13.60	.877	*	13.70	.824
13.80	.742	*	13.90	.711
14.00	.697	*	14.10	.689
14.20	.637	*	14.30	.553
14.40	.521	*	14.50	.507
14.60	.498	*	14.70	.494
14.80	.495	*	14.90	.495
15.00	.496	*	15.10	.497
15.20	.497	*	15.30	.498
15.40	.499	*	15.50	.499
15.60	.500	*	15.70	.501
15.80	.501	*	15.90	.502
16.00	.503	*	16.10	.503
16.20	.453	*	16.30	.367
16.40	.333	*	16.50	.318
16.60	.308	*	16.70	.304
16.80	.304	*	16.90	.304
17.00	.304	*	17.10	.304
17.20	.305	*	17.30	.305
17.40	.305	*	17.50	.305
17.60	.305	*	17.70	.306
17.80	.306	*	17.90	.306
18.00	.306	*	18.10	.307
18.20	.307	*	18.30	.307
18.40	.307	*	18.50	.307
18.60	.308	*	18.70	.308
18.80	.308	*	18.90	.308
19.00	.308	*	19.10	.309
19.20	.309	*	19.30	.309
19.40	.309	*	19.50	.309
19.60	.310	*	19.70	.310
19.80	.310	*	19.90	.310
20.00	.310	*	20.10	.310
20.20	.285	*	20.30	.240

20.40	.223	*	20.50	.215
20.60	.210	*	20.70	.208
20.80	.208	*	20.90	.208
21.00	.208	*	21.10	.208
21.20	.208	*	21.30	.208
21.40	.208	*	21.50	.208
21.60	.208	*	21.70	.209
21.80	.209	*	21.90	.209
22.00	.209	*	22.10	.209
22.20	.209	*	22.30	.209
22.40	.209	*	22.50	.209
22.60	.209	*	22.70	.209
22.80	.209	*	22.90	.209
23.00	.210	*	23.10	.210
23.20	.210	*	23.30	.210
23.40	.210	*	23.50	.210
23.60	.210	*	23.70	.210
23.80	.210	*	23.90	.210
24.00	.210	*	24.10	.210
24.20	.158	*	24.30	.067
24.40	.032	*	24.50	.015

* *

JUNCTION 2, 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	8.98	86.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	9.61	1.16

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	.8698	ACRE-FT
PEAK DISCHARGE	=	9.6113	CFS
AREA	=	8.9800	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.30	
PREVIOUS MUSKINGUM ROUTING K	=	.1500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	45.98	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.20	HRS
TOTAL DRAINAGE AREA	=	57.51	ACRES
TOTAL RUNOFF VOLUME	=	5.5703	AC-FT
PEAK RUNOFF DISCHARGE	=	54.22	CFS
TIME TO PEAK DISCHARGE	=	12.20	HRS

*** RUN COMPLETED ****

BORROW AREA POND

NPDES Discharge 016
Reference 7-12a and 7-12b

Design Criteria

10-year, 24-hour Watershed Hydrograph
25-year, 6-hour Watershed Hydrograph
25-year, 24-hour Watershed Hydrograph
100-year, 6-hour Watershed Hydrograph
100-year, 24-hour Watershed Hydrograph

Findings and Conclusions

BORROW AREA POND
DESCRIPTION

DESIGN CRITERIA

Pond

Borrow Area Pond is located northeast of the Old Coarse Refuse Road Sediment Pond. The total drainage area to this pond is approximately 297 acres, as shown in Plate 7-12b. The total capacity of the existing pond is 4.593 acre-feet (Shown in Plate 7-12a). The pond designed to contain 10-year, 24-hour runoff volume.

SEDIMOT II was used to simulate the hydrograph for different storm events. The simulated results are listed in the attached computer simulations. The resulting 10-year 24-hour runoff volume is 1.25 acre-feet. The peak flow is 1.58 cfs.

Other Structures

The spillway and ditch structures were designed to pass 25-year, 24-hour storm runoff. The Manning's n value was assumed as 0.03.

Inlet Ditch

Slope = 13%
Width = 3 ft
Channel Depth = 0.9 ft
Channel Side Slope = 2h:1v
Depth of Water Flow = 0.6 ft
Discharge Capacity = 27 cfs > 7.35 cfs

Emergency Spillway

Slope = 8%
Width = 10 ft
Channel Side Slope = 2.2h:1v
Depth of Water Flow = 1.0 ft
Discharge Capacity = 150 cfs > 7.35 cfs
Velocity =3.17 ft/s

Sediment

The Universal Soil Loss Equation A=RKLsCP was used to estimate sediment load.

Area	A (Acres)	R	K	Ls	C	P	Yield (Tons/Year)	Volume (Acre-Feet)
I	32.0	20	0.2	25	0.45	1	1440	0.58
II	21.8	20	0.2	10	0.45	1	392	0.16
III	162.0	20	0.2	12	0.45	1	3499	1.41
IV	19.0	20	0.2	25	0.45	1	855	0.35
V	63.0	20	0.2	2	0.45	1	226	0.09
Total	297.8						6412	2.59

Note: Soil density is assumed as 125lb/ft^3.

Since most of the drainage area is not included within the project area (not disturbed), consider a sediment delivery ration of 0.3, the total sediment yield will be 1924 tons (0.78 acre-feet).

FINDINGS AND CONCLUSIONS

The 10-year, 24 hour runoff volume (1.25 acre-feet) is less than the existing storm water capacity (1.327 acre-feet) and the sediment yield (0.78 acre-feet) is less than the existing sediment storage capacity of 0.913 acre-feet. The runoff volumes and peak flows for different storm events are listed as below.

Storm Type	Volume (Acre-Feet)	Peak Flow (cfs)
10-yr, 24-hr	1.25	1.58
25-yr, 6-hr	0.54	2.37
25-yr, 24-hr	3.02	7.35
100-yr, 6-hr	2.20	12.60
100-yr, 24-hr	4.31	14.20

10-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/24/92              *
*                                      * Time         :  9:18:46              *
*                                      * Input file   : bor1                  *
*                                      * Output file  : bor                   *
*                                      *                                      *
*                                      *                                      *
*******************************************************************************
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation  :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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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 5-25-83

DISCLAIMER: NEITHER THE UNIVERSITY NOR ANY OF ITS EMPLOYEES
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CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

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****

****
WATERSHED IDENTIFICATION CODE

BORROW AREA POND 10-YR 24-HR
****

========== STORM INPUT ==========

QUESTION
NO.

1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	1.84 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.

1. NUMBER OF JUNCTIONS - 3

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1
3	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.45	.29

==========

========== STRUCTURE INPUT FOR JUNCTION #3 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000

4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.000
12.20	.000	*	12.30	.009
12.40	.048	*	12.50	.114
12.60	.133	*	12.70	.113
12.80	.130	*	12.90	.147
13.00	.164	*	13.10	.159
13.20	.142	*	13.30	.150
13.40	.159	*	13.50	.168
13.60	.160	*	13.70	.144
13.80	.149	*	13.90	.154
14.00	.159	*	14.10	.144
14.20	.121	*	14.30	.123
14.40	.126	*	14.50	.128
14.60	.131	*	14.70	.134
14.80	.136	*	14.90	.139
15.00	.141	*	15.10	.144
15.20	.147	*	15.30	.149
15.40	.152	*	15.50	.154
15.60	.157	*	15.70	.160
15.80	.162	*	15.90	.165
16.00	.167	*	16.10	.141
16.20	.104	*	16.30	.104

16.40	.105	*	16.50	.106
16.60	.107	*	16.70	.107
16.80	.108	*	16.90	.109
17.00	.110	*	17.10	.111
17.20	.112	*	17.30	.113
17.40	.114	*	17.50	.115
17.60	.116	*	17.70	.116
17.80	.117	*	17.90	.118
18.00	.119	*	18.10	.120
18.20	.121	*	18.30	.122
18.40	.123	*	18.50	.124
18.60	.124	*	18.70	.125
18.80	.126	*	18.90	.127
19.00	.128	*	19.10	.129
19.20	.130	*	19.30	.131
19.40	.132	*	19.50	.132
19.60	.133	*	19.70	.134
19.80	.135	*	19.90	.136
20.00	.137	*	20.10	.118
20.20	.093	*	20.30	.093
20.40	.093	*	20.50	.093
20.60	.094	*	20.70	.094
20.80	.094	*	20.90	.095
21.00	.095	*	21.10	.096
21.20	.096	*	21.30	.096
21.40	.097	*	21.50	.097
21.60	.098	*	21.70	.098
21.80	.098	*	21.90	.099
22.00	.099	*	22.10	.099
22.20	.100	*	22.30	.100
22.40	.101	*	22.50	.101
22.60	.101	*	22.70	.102
22.80	.102	*	22.90	.102
23.00	.103	*	23.10	.103
23.20	.104	*	23.30	.104
23.40	.104	*	23.50	.105
23.60	.105	*	23.70	.105

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000

1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.000
12.20	.000	*	12.30	.015
12.40	.061	*	12.50	.109
12.60	.074	*	12.70	.086
12.80	.098	*	12.90	.110
13.00	.122	*	13.10	.097
13.20	.103	*	13.30	.110
13.40	.116	*	13.50	.122
13.60	.099	*	13.70	.103

13.80	.107	*	13.90	.110
14.00	.114	*	14.10	.084
14.20	.086	*	14.30	.088
14.40	.089	*	14.50	.091
14.60	.093	*	14.70	.095
14.80	.097	*	14.90	.099
15.00	.101	*	15.10	.102
15.20	.104	*	15.30	.106
15.40	.108	*	15.50	.110
15.60	.111	*	15.70	.113
15.80	.115	*	15.90	.117
16.00	.119	*	16.10	.072
16.20	.073	*	16.30	.073
16.40	.074	*	16.50	.075
16.60	.075	*	16.70	.076
16.80	.077	*	16.90	.077
17.00	.078	*	17.10	.078
17.20	.079	*	17.30	.080
17.40	.080	*	17.50	.081
17.60	.082	*	17.70	.082
17.80	.083	*	17.90	.084
18.00	.084	*	18.10	.085
18.20	.085	*	18.30	.086
18.40	.087	*	18.50	.087
18.60	.088	*	18.70	.089
18.80	.089	*	18.90	.090
19.00	.090	*	19.10	.091
19.20	.092	*	19.30	.092
19.40	.093	*	19.50	.093
19.60	.094	*	19.70	.095
19.80	.095	*	19.90	.096
20.00	.097	*	20.10	.065
20.20	.065	*	20.30	.065
20.40	.066	*	20.50	.066
20.60	.066	*	20.70	.066
20.80	.067	*	20.90	.067
21.00	.067	*	21.10	.067
21.20	.068	*	21.30	.068
21.40	.068	*	21.50	.068
21.60	.069	*	21.70	.069
21.80	.069	*	21.90	.070
22.00	.070	*	22.10	.070
22.20	.070	*	22.30	.071
22.40	.071	*	22.50	.071
22.60	.071	*	22.70	.072
22.80	.072	*	22.90	.072
23.00	.072	*	23.10	.073
23.20	.073	*	23.30	.073
23.40	.073	*	23.50	.074
23.60	.074	*	23.70	.074

```
* * * * * * * * * * * * * * * * * * * * * * * *
    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	31.00	61.00	.030	.000	.060	.42	.0
2	21.80	61.00	.030	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	.17	.05
2	.12	.05

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.1993	ACRE-FT
PEAK DISCHARGE	=	.2903	CFS
AREA	=	52.8000	ACRES
TIME OF PEAK DISCHARGE	=	13.50	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.000
12.20	.000	*	12.30	.017
12.40	.162	*	12.50	.444
12.60	.633	*	12.70	.608
12.80	.671	*	12.90	.746
13.00	.824	*	13.10	.849
13.20	.789	*	13.30	.803
13.40	.834	*	13.50	.872
13.60	.869	*	13.70	.802
13.80	.801	*	13.90	.814

14.00	.835	*	14.10	.803
14.20	.700	*	14.30	.676
14.40	.672	*	14.50	.677
14.60	.692	*	14.70	.706
14.80	.720	*	14.90	.734
15.00	.748	*	15.10	.762
15.20	.776	*	15.30	.790
15.40	.804	*	15.50	.818
15.60	.832	*	15.70	.846
15.80	.859	*	15.90	.873
16.00	.887	*	16.10	.814
16.20	.644	*	16.30	.593
16.40	.570	*	16.50	.562
16.60	.567	*	16.70	.572
16.80	.577	*	16.90	.582
17.00	.586	*	17.10	.591
17.20	.596	*	17.30	.601
17.40	.606	*	17.50	.611
17.60	.615	*	17.70	.620
17.80	.625	*	17.90	.630
18.00	.635	*	18.10	.639
18.20	.644	*	18.30	.649
18.40	.654	*	18.50	.658
18.60	.663	*	18.70	.668
18.80	.673	*	18.90	.677
19.00	.682	*	19.10	.687
19.20	.691	*	19.30	.696
19.40	.701	*	19.50	.705
19.60	.710	*	19.70	.715
19.80	.719	*	19.90	.724
20.00	.729	*	20.10	.676
20.20	.558	*	20.30	.521
20.40	.505	*	20.50	.498
20.60	.500	*	20.70	.502
20.80	.504	*	20.90	.506
21.00	.508	*	21.10	.510
21.20	.512	*	21.30	.514
21.40	.516	*	21.50	.518
21.60	.520	*	21.70	.522
21.80	.524	*	21.90	.526
22.00	.528	*	22.10	.530
22.20	.532	*	22.30	.534
22.40	.536	*	22.50	.538
22.60	.540	*	22.70	.543
22.80	.545	*	22.90	.547
23.00	.549	*	23.10	.551
23.20	.553	*	23.30	.555
23.40	.557	*	23.50	.559
23.60	.561	*	23.70	.563
23.80	.564	*	23.90	.566
24.00	.569	*	24.10	.436
24.20	.156	*	24.30	.065

* *

JUNCTION 1, BRANCH 2, 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	162.00	61.00	.160	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	.89	.05

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.6116	ACRE-FT
PEAK DISCHARGE	=	.8867	CFS
AREA	=	162.0000	ACRES
TIME OF PEAK DISCHARGE	=	16.00	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

[illegible]ON
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.000
12.20	.000	*	12.30	.000
12.40	.003	*	12.50	.018
12.60	.051	*	12.70	.078
12.80	.071	*	12.90	.076
13.00	.085	*	13.10	.095
13.20	.100	*	13.30	.090
13.40	.091	*	13.50	.095
13.60	.100	*	13.70	.101
13.80	.091	*	13.90	.091

14.00	.093	*	14.10	.096
14.20	.094	*	14.30	.079
14.40	.076	*	14.50	.076
14.60	.078	*	14.70	.079
14.80	.081	*	14.90	.083
15.00	.084	*	15.10	.086
15.20	.087	*	15.30	.089
15.40	.091	*	15.50	.092
15.60	.094	*	15.70	.095
15.80	.097	*	15.90	.099
16.00	.100	*	16.10	.101
16.20	.096	*	16.30	.072
16.40	.065	*	16.50	.064
16.60	.065	*	16.70	.065
16.80	.066	*	16.90	.066
17.00	.067	*	17.10	.067
17.20	.068	*	17.30	.068
17.40	.069	*	17.50	.069
17.60	.070	*	17.70	.071
17.80	.071	*	17.90	.072
18.00	.072	*	18.10	.073
18.20	.073	*	18.30	.074
18.40	.074	*	18.50	.075
18.60	.075	*	18.70	.076
18.80	.077	*	18.90	.077
19.00	.078	*	19.10	.078
19.20	.079	*	19.30	.079
19.40	.080	*	19.50	.080
19.60	.081	*	19.70	.081
19.80	.082	*	19.90	.082
20.00	.083	*	20.10	.083
20.20	.079	*	20.30	.063
20.40	.058	*	20.50	.057
20.60	.057	*	20.70	.057
20.80	.058	*	20.90	.058
21.00	.058	*	21.10	.058
21.20	.058	*	21.30	.059
21.40	.059	*	21.50	.059
21.60	.059	*	21.70	.060
21.80	.060	*	21.90	.060
22.00	.060	*	22.10	.061
22.20	.061	*	22.30	.061
22.40	.061	*	22.50	.061
22.60	.062	*	22.70	.062
22.80	.062	*	22.90	.062
23.00	.063	*	23.10	.063
23.20	.063	*	23.30	.063
23.40	.064	*	23.50	.064
23.60	.064	*	23.70	.064

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000

23.40	.211	*	23.50	.212
23.60	.212	*	23.70	.213
23.80	.214	*	23.90	.215
24.00	.215	*	24.10	.216
24.20	.162	*	24.30	.069
24.40	.033	*	24.50	.016

* *

JUNCTION 2, 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	19.00	61.00	.010	.000	.210	.35	.0
2	63.00	61.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	.11	.05
2	.34	.05

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.3096	ACRE-FT
PEAK DISCHARGE	=	.4377	CFS
AREA	=	82.0000	ACRES
TIME OF PEAK DISCHARGE	=	16.10	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.29	
PREVIOUS MUSKINGUM ROUTING K	=	.4500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	1.13	CFS
TIME OF ROUTED PEAK DISCHARGE	=	16.30	HRS
TOTAL DRAINAGE AREA	=	296.80	ACRES
TOTAL RUNOFF VOLUME	=	1.1205	AC-FT
PEAK RUNOFF DISCHARGE	=	1.55	CFS
TIME TO PEAK DISCHARGE	=	16.10	HRS

========== STRUCTURE DATA FOR JUNCTION #3 ==========

11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.000
12.20	.000	*	12.30	.000
12.40	.000	*	12.50	.062
12.60	.164	*	12.70	.226
12.80	.226	*	12.90	.250
13.00	.282	*	13.10	.312
13.20	.317	*	13.30	.301
13.40	.306	*	13.50	.318
13.60	.332	*	13.70	.327
13.80	.307	*	13.90	.306
14.00	.311	*	14.10	.318
14.20	.302	*	14.30	.269
14.40	.260	*	14.50	.258
14.60	.259	*	14.70	.262
14.80	.268	*	14.90	.273
15.00	.279	*	15.10	.284
15.20	.289	*	15.30	.295
15.40	.300	*	15.50	.305
15.60	.311	*	15.70	.316
15.80	.321	*	15.90	.326
16.00	.332	*	16.10	.336
16.20	.307	*	16.30	.251
16.40	.230	*	16.50	.222
16.60	.217	*	16.70	.215
16.80	.217	*	16.90	.219
17.00	.221	*	17.10	.223
17.20	.225	*	17.30	.227
17.40	.228	*	17.50	.230
17.60	.232	*	17.70	.234
17.80	.236	*	17.90	.238
18.00	.239	*	18.10	.241
18.20	.243	*	18.30	.245
18.40	.247	*	18.50	.248
18.60	.250	*	18.70	.252
18.80	.254	*	18.90	.256
19.00	.257	*	19.10	.259
19.20	.261	*	19.30	.263
19.40	.265	*	19.50	.266
19.60	.268	*	19.70	.270
19.80	.272	*	19.90	.273
20.00	.275	*	20.10	.277
20.20	.255	*	20.30	.216
20.40	.202	*	20.50	.195
20.60	.191	*	20.70	.190
20.80	.191	*	20.90	.192
21.00	.192	*	21.10	.193
21.20	.194	*	21.30	.195
21.40	.196	*	21.50	.196
21.60	.197	*	21.70	.198
21.80	.199	*	21.90	.199
22.00	.200	*	22.10	.201
22.20	.202	*	22.30	.202
22.40	.203	*	22.50	.204
22.60	.205	*	22.70	.206
22.80	.206	*	22.90	.207
23.00	.208	*	23.10	.209
23.20	.209	*	23.30	.210

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 3, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.016
.20	.016	*	.30	.016
.40	.016	*	.50	.016
.60	.016	*	.70	.016
.80	.016	*	.90	.016
1.00	.016	*	1.10	.019
1.20	.019	*	1.30	.019
1.40	.019	*	1.50	.019
1.60	.019	*	1.70	.019
1.80	.019	*	1.90	.019
2.00	.019	*	2.10	.019
2.20	.019	*	2.30	.019
2.40	.019	*	2.50	.019
2.60	.019	*	2.70	.019
2.80	.019	*	2.90	.019
3.00	.019	*	3.10	.023
3.20	.023	*	3.30	.023
3.40	.023	*	3.50	.023
3.60	.023	*	3.70	.023
3.80	.023	*	3.90	.023
4.00	.023	*	4.10	.026
4.20	.026	*	4.30	.026
4.40	.026	*	4.50	.026
4.60	.026	*	4.70	.026
4.80	.026	*	4.90	.026
5.00	.026	*	5.10	.026
5.20	.026	*	5.30	.026
5.40	.026	*	5.50	.026
5.60	.026	*	5.70	.026
5.80	.026	*	5.90	.026
6.00	.026	*	6.10	.032
6.20	.032	*	6.30	.032
6.40	.032	*	6.50	.032
6.60	.032	*	6.70	.032
6.80	.032	*	6.90	.032
7.00	.032	*	7.10	.032
7.20	.032	*	7.30	.032
7.40	.032	*	7.50	.032
7.60	.032	*	7.70	.032
7.80	.032	*	7.90	.032

8.00	.032	*	8.10	.042
8.20	.042	*	8.30	.042
8.40	.042	*	8.50	.042
8.60	.045	*	8.70	.045
8.80	.045	*	8.90	.045
9.00	.045	*	9.10	.052
9.20	.052	*	9.30	.052
9.40	.052	*	9.50	.052
9.60	.058	*	9.70	.058
9.80	.058	*	9.90	.058
10.00	.058	*	10.10	.074
10.20	.074	*	10.30	.074
10.40	.074	*	10.50	.074
10.60	.100	*	10.70	.100
10.80	.100	*	10.90	.100
11.00	.100	*	11.10	.155
11.20	.155	*	11.30	.155
11.40	.155	*	11.50	.155
11.60	1.227	*	11.70	1.227
11.80	1.227	*	11.90	1.227
12.00	1.226	*	12.10	.232
12.20	.232	*	12.30	.232
12.40	.232	*	12.50	.232
12.60	.119	*	12.70	.119
12.80	.119	*	12.90	.119
13.00	.119	*	13.10	.087
13.20	.087	*	13.30	.087
13.40	.087	*	13.50	.087
13.60	.068	*	13.70	.068
13.80	.068	*	13.90	.068
14.00	.068	*	14.10	.048
14.20	.048	*	14.30	.048
14.40	.048	*	14.50	.048
14.60	.048	*	14.70	.048
14.80	.048	*	14.90	.048
15.00	.048	*	15.10	.048
15.20	.048	*	15.30	.048
15.40	.048	*	15.50	.048
15.60	.048	*	15.70	.048
15.80	.048	*	15.90	.048
16.00	.048	*	16.10	.029
16.20	.029	*	16.30	.029
16.40	.029	*	16.50	.029
16.60	.029	*	16.70	.029
16.80	.029	*	16.90	.029
17.00	.029	*	17.10	.029
17.20	.029	*	17.30	.029
17.40	.029	*	17.50	.029
17.60	.029	*	17.70	.029
17.80	.029	*	17.90	.029
18.00	.029	*	18.10	.029
18.20	.029	*	18.30	.029
18.40	.029	*	18.50	.029
18.60	.029	*	18.70	.029
18.80	.029	*	18.90	.029
19.00	.029	*	19.10	.029
19.20	.029	*	19.30	.029
19.40	.029	*	19.50	.029
19.60	.029	*	19.70	.029
19.80	.029	*	19.90	.029

20.00	.029	*	20.10	.019
20.20	.019	*	20.30	.019
20.40	.019	*	20.50	.019
20.60	.019	*	20.70	.019
20.80	.019	*	20.90	.019
21.00	.019	*	21.10	.019
21.20	.019	*	21.30	.019
21.40	.019	*	21.50	.019
21.60	.019	*	21.70	.019
21.80	.019	*	21.90	.019
22.00	.019	*	22.10	.019
22.20	.019	*	22.30	.019
22.40	.019	*	22.50	.019
22.60	.019	*	22.70	.019
22.80	.019	*	22.90	.019
23.00	.019	*	23.10	.019
23.20	.019	*	23.30	.019
23.40	.019	*	23.50	.019
23.60	.019	*	23.70	.019

* *
JUNCTION 3, 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	.87	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.23	1.84

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.1334	ACRE-FT
PEAK DISCHARGE	=	1.2268	CFS
AREA	=	.8700	ACRES
TIME OF PEAK DISCHARGE	=	11.70	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X, = .00

PREVIOUS MUSKINGUM ROUTING K	=	.0000	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	1.55	CFS
TIME OF ROUTED PEAK DISCHARGE	=	16.10	HRS
TOTAL DRAINAGE AREA	=	297.67	ACRES
TOTAL RUNOFF VOLUME	=	1.2539	AC-FT
PEAK RUNOFF DISCHARGE	=	1.58	CFS
TIME TO PEAK DISCHARGE	=	14.00	HRS

*** RUN COMPLETED ****

25-YEAR, 6-HOUR WATERSHED HYDROGRAPH

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*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
*                                    * HMVersion    :  3.20                   *
*     (program description)          * Date         : 11/24/92                *
*                                    * Time         :  9:19:43                *
*                                    * Input file   : bor1                    *
*                                    * Output file  : bor                     *
*                                    *                                        *
*                                    *                                        *
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 xxxxx   xxxxxxx  xxxxxx   xxxxx  x     x   xxxxx   xxxxxxx
x     x  x       x     x    x    xx   xx  x     x     x
x        x       x     x    x    x x x x  x     x     x
 xxxxx   xxxxx   x     x    x    x  x  x  x     x     x
      x  x       x     x    x    x     x  x     x     x
x     x  x       x     x    x    x     x  x     x     x
 xxxxx   xxxxxxx  xxxxxx   xxxxx  x     x   xxxxx      x
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                by                  :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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```

37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

```
*************************************************************
*************************************************************

      UNIVERSITY OF KENTUCKY COMPUTER MODEL
      OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
      FOR MORE INFORMATION CONTACT THE AGRICULTURAL
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      VERSION DATE 5-25-83

      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

*************************************************************
*************************************************************

          ********************************************
               WATERSHED IDENTIFICATION CODE
               -----------------------------
               BORROW AREA POND 25-YR 6-HR
          ********************************************

========================== STORM INPUT ==========================

QUESTION
  NO.

   1. STORM TYPE -                                  SCS'S TYPE 2
   2. RAINFALL DEPTH -                                1.62 INCHES
   3. STORM DURATION -                                6.00 HOURS
   4. TIME INCREMENT -                                 .10 HOURS

=====================================================================

========================== WATERSHED DATA ==========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 3
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1
3	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.45	.29

==========

========== STRUCTURE INPUT FOR JUNCTION #3 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.036	*	3.50	.128
3.60	.168	*	3.70	.151
3.80	.177	*	3.90	.204
4.00	.230	*	4.10	.225
4.20	.203	*	4.30	.216

4.40	.230	*	4.50	.244
4.60	.232	*	4.70	.209
4.80	.217	*	4.90	.225
5.00	.233	*	5.10	.212
5.20	.178	*	5.30	.181
5.40	.185	*	5.50	.189
5.60	.193	*	5.70	.197
5.80	.201	*	5.90	.005

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.060	*	3.50	.134
3.60	.098	*	3.70	.117
3.80	.136	*	3.90	.155
4.00	.173	*	4.10	.138
4.20	.148	*	4.30	.158
4.40	.167	*	4.50	.177
4.60	.144	*	4.70	.150
4.80	.156	*	4.90	.162
5.00	.167	*	5.10	.123
5.20	.126	*	5.30	.129
5.40	.132	*	5.50	.135
5.60	.137	*	5.70	.140

* *
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	31.00	61.00	.030	.000	.060	.42	.0
2	21.80	61.00	.030	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	.25	.02
2	.18	.02

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.0761	ACRE-FT
PEAK DISCHARGE	=	.4206	CFS
AREA	=	52.8000	ACRES
TIME OF PEAK DISCHARGE	=	4.50	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000

1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.028	*	3.50	.260
3.60	.660	*	3.70	.766
3.80	.829	*	3.90	.960
4.00	1.085	*	4.10	1.198
4.20	1.146	*	4.30	1.127
4.40	1.172	*	4.50	1.228
4.60	1.278	*	4.70	1.200
4.80	1.159	*	4.90	1.176
5.00	1.204	*	5.10	1.221
5.20	1.086	*	5.30	1.001
5.40	.990	*	5.50	.991
5.60	1.008	*	5.70	1.030
5.80	1.052	*	5.90	1.073
6.00	1.095	*	6.10	1.049
6.20	.529	*	6.30	.188

* *
JUNCTION 1, BRANCH 2, 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	162.00	61.00	.160	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.28	.02

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.2335	ACRE-FT
PEAK DISCHARGE	=	1.2784	CFS
AREA	=	162.0000	ACRES
TIME OF PEAK DISCHARGE	=	4.60	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.001	*	3.50	.010
3.60	.052	*	3.70	.094
3.80	.092	*	3.90	.102
4.00	.117	*	4.10	.132
4.20	.141	*	4.30	.128
4.40	.130	*	4.50	.137
4.60	.145	*	4.70	.147
4.80	.133	*	4.90	.132
5.00	.136	*	5.10	.140
5.20	.137	*	5.30	.116
5.40	.112	*	5.50	.112
5.60	.115	*	5.70	.117
5.80	.119	*	5.90	.120

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.014	*	3.50	.100
3.60	.236	*	3.70	.280
3.80	.305	*	3.90	.359
4.00	.410	*	4.10	.447
4.20	.433	*	4.30	.428
4.40	.447	*	4.50	.468
4.60	.481	*	4.70	.456
4.80	.442	*	4.90	.449
5.00	.459	*	5.10	.460
5.20	.415	*	5.30	.384
5.40	.380	*	5.50	.380
5.60	.384	*	5.70	.391
5.80	.399	*	5.90	.407
6.00	.416	*	6.10	.386
6.20	.213	*	6.30	.085
6.40	.046	*	6.50	.019

* *

JUNCTION 2, 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	19.00	61.00	.010	.000	.210	.35	.0
2	63.00	61.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)

1	.15	.02
2	.48	.02

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.1182	ACRE-FT
PEAK DISCHARGE	=	.6255	CFS
AREA	=	82.0000	ACRES
TIME OF PEAK DISCHARGE	=	4.60	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.29	
PREVIOUS MUSKINGUM ROUTING K	=	.4500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	1.65	CFS
TIME OF ROUTED PEAK DISCHARGE	=	.00	HRS
TOTAL DRAINAGE AREA	=	296.80	ACRES
TOTAL RUNOFF VOLUME	=	.4278	AC-FT
PEAK RUNOFF DISCHARGE	=	2.28	CFS
TIME TO PEAK DISCHARGE	=	4.60	HRS

========== STRUCTURE DATA FOR JUNCTION #3 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 3, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.065
.20	.065	*	.30	.065
.40	.065	*	.50	.065
.60	.073	*	.70	.073
.80	.073	*	.90	.073
1.00	.073	*	1.10	.093
1.20	.093	*	1.30	.093
1.40	.093	*	1.50	.093

1.60	.125	*	1.70	.125
1.80	.125	*	1.90	.125
2.00	.125	*	2.10	.194
2.20	.194	*	2.30	.194
2.40	.194	*	2.50	.194
2.60	1.536	*	2.70	1.536
2.80	1.536	*	2.90	1.536
3.00	1.536	*	3.10	.291
3.20	.291	*	3.30	.291
3.40	.291	*	3.50	.291
3.60	.150	*	3.70	.150
3.80	.150	*	3.90	.150
4.00	.150	*	4.10	.109
4.20	.109	*	4.30	.109
4.40	.109	*	4.50	.109
4.60	.085	*	4.70	.085
4.80	.085	*	4.90	.085
5.00	.085	*	5.10	.061
5.20	.061	*	5.30	.061
5.40	.061	*	5.50	.061
5.60	.061	*	5.70	.061

* *

JUNCTION 3, 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	.87	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.54	1.62

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.1174	ACRE-FT
PEAK DISCHARGE	=	1.5364	CFS
AREA	=	.8700	ACRES
TIME OF PEAK DISCHARGE	=	2.90	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.00	
PREVIOUS MUSKINGUM ROUTING K	=	.0000	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	2.28	CFS
TIME OF ROUTED PEAK DISCHARGE	=	4.60	HRS
TOTAL DRAINAGE AREA	=	297.67	ACRES
TOTAL RUNOFF VOLUME	=	.5453	AC-FT
PEAK RUNOFF DISCHARGE	=	2.37	CFS
TIME TO PEAK DISCHARGE	=	4.60	HRS

*** RUN COMPLETED ****

25-YEAR, 24-HOUR WATERSHED HYDROGRAPH

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*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/24/92              *
*                                      * Time         :  9:21:00              *
*                                      * Input file   : bor1                  *
*                                      * Output file  : bor                   *
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*                                      *                                      *
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 xxxxx   xxxxxxx  xxxxxx   xxxxx  x     x   xxxxx   xxxxxxx
x     x  x       x     x    x    xx   xx  x     x     x
x        x       x     x    x    x x x x  x     x     x
 xxxxx   xxxxx   x     x    x    x  x  x  x     x     x
      x  x       x     x    x    x     x  x     x     x
x     x  x       x     x    x    x     x  x     x     x
 xxxxx   xxxxxxx  xxxxxx   xxxxx  x     x   xxxxx      x
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:::                                  :::
:::  Full Microcomputer Implementation :::
:::                by                :::
:::       Haestad Methods, Inc.      :::
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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
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VERSION DATE 5-25-83

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

****
****

****
WATERSHED IDENTIFICATION CODE

BORROW AREA POND 25-YR 24-HR
****

========== STORM INPUT ==========

QUESTION
NO.

1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	2.20 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.

1. NUMBER OF JUNCTIONS - 3

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1
3	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.45	.29

==========

========== STRUCTURE INPUT FOR JUNCTION #3 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000

4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.638	*	12.10	1.111
12.20	.631	*	12.30	.704
12.40	.791	*	12.50	.877
12.60	.753	*	12.70	.525
12.80	.541	*	12.90	.562
13.00	.584	*	13.10	.535
13.20	.456	*	13.30	.465
13.40	.476	*	13.50	.487
13.60	.451	*	13.70	.396
13.80	.401	*	13.90	.408
14.00	.415	*	14.10	.370
14.20	.306	*	14.30	.308
14.40	.311	*	14.50	.314
14.60	.318	*	14.70	.321
14.80	.324	*	14.90	.328
15.00	.331	*	15.10	.334
15.20	.337	*	15.30	.341
15.40	.344	*	15.50	.347
15.60	.350	*	15.70	.354
15.80	.357	*	15.90	.360
16.00	.363	*	16.10	.305
16.20	.223	*	16.30	.222

16.40	.223	*	16.50	.224
16.60	.226	*	16.70	.227
16.80	.228	*	16.90	.229
17.00	.230	*	17.10	.231
17.20	.232	*	17.30	.234
17.40	.235	*	17.50	.236
17.60	.237	*	17.70	.238
17.80	.239	*	17.90	.240
18.00	.241	*	18.10	.242
18.20	.244	*	18.30	.245
18.40	.246	*	18.50	.247
18.60	.248	*	18.70	.249
18.80	.250	*	18.90	.251
19.00	.252	*	19.10	.253
19.20	.254	*	19.30	.256
19.40	.257	*	19.50	.258
19.60	.259	*	19.70	.260
19.80	.261	*	19.90	.262
20.00	.263	*	20.10	.227
20.20	.178	*	20.30	.177
20.40	.178	*	20.50	.178
20.60	.179	*	20.70	.179
20.80	.179	*	20.90	.180
21.00	.180	*	21.10	.181
21.20	.181	*	21.30	.182
21.40	.182	*	21.50	.183
21.60	.183	*	21.70	.184
21.80	.184	*	21.90	.185
22.00	.185	*	22.10	.186
22.20	.186	*	22.30	.186
22.40	.187	*	22.50	.187
22.60	.188	*	22.70	.188
22.80	.189	*	22.90	.189
23.00	.190	*	23.10	.190
23.20	.191	*	23.30	.191
23.40	.192	*	23.50	.192
23.60	.192	*	23.70	.193

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000

1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	1.077	*	12.10	.408
12.20	.470	*	12.30	.532
12.40	.593	*	12.50	.653
12.60	.358	*	12.70	.374
12.80	.389	*	12.90	.405
13.00	.420	*	13.10	.316
13.20	.324	*	13.30	.332
13.40	.340	*	13.50	.347
13.60	.276	*	13.70	.280

13.80	.285	*	13.90	.290
14.00	.294	*	14.10	.213
14.20	.215	*	14.30	.218
14.40	.220	*	14.50	.223
14.60	.225	*	14.70	.227
14.80	.229	*	14.90	.232
15.00	.234	*	15.10	.236
15.20	.239	*	15.30	.241
15.40	.243	*	15.50	.246
15.60	.248	*	15.70	.250
15.80	.252	*	15.90	.255
16.00	.257	*	16.10	.155
16.20	.156	*	16.30	.157
16.40	.158	*	16.50	.158
16.60	.159	*	16.70	.160
16.80	.161	*	16.90	.162
17.00	.162	*	17.10	.163
17.20	.164	*	17.30	.165
17.40	.165	*	17.50	.166
17.60	.167	*	17.70	.168
17.80	.169	*	17.90	.169
18.00	.170	*	18.10	.171
18.20	.172	*	18.30	.172
18.40	.173	*	18.50	.174
18.60	.175	*	18.70	.176
18.80	.176	*	18.90	.177
19.00	.178	*	19.10	.179
19.20	.179	*	19.30	.180
19.40	.181	*	19.50	.182
19.60	.182	*	19.70	.183
19.80	.184	*	19.90	.185
20.00	.185	*	20.10	.124
20.20	.124	*	20.30	.125
20.40	.125	*	20.50	.125
20.60	.126	*	20.70	.126
20.80	.126	*	20.90	.127
21.00	.127	*	21.10	.127
21.20	.128	*	21.30	.128
21.40	.128	*	21.50	.129
21.60	.129	*	21.70	.129
21.80	.130	*	21.90	.130
22.00	.130	*	22.10	.131
22.20	.131	*	22.30	.131
22.40	.132	*	22.50	.132
22.60	.132	*	22.70	.133
22.80	.133	*	22.90	.133
23.00	.134	*	23.10	.134
23.20	.134	*	23.30	.135
23.40	.135	*	23.50	.135
23.60	.136	*	23.70	.136

* *

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	31.00	61.00	.030	.000	.060	.42	.0
2	21.80	61.00	.030	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.53	.12
2	1.08	.12

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	.5106	ACRE-FT
PEAK DISCHARGE	=	1.7146	CFS
AREA	=	52.8000	ACRES
TIME OF PEAK DISCHARGE	=	12.00	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	1.536	*	12.10	5.083
12.20	3.851	*	12.30	3.875
12.40	4.199	*	12.50	4.423
12.60	4.260	*	12.70	3.303
12.80	3.080	*	12.90	3.028
13.00	3.056	*	13.10	2.961
13.20	2.616	*	13.30	2.547
13.40	2.544	*	13.50	2.572
13.60	2.491	*	13.70	2.246
13.80	2.192	*	13.90	2.183

14.00	2.197	*	14.10	2.080
14.20	1.789	*	14.30	1.707
14.40	1.677	*	14.50	1.671
14.60	1.689	*	14.70	1.707
14.80	1.725	*	14.90	1.742
15.00	1.760	*	15.10	1.777
15.20	1.795	*	15.30	1.812
15.40	1.830	*	15.50	1.847
15.60	1.864	*	15.70	1.881
15.80	1.899	*	15.90	1.916
16.00	1.933	*	16.10	1.765
16.20	1.390	*	16.30	1.273
16.40	1.220	*	16.50	1.197
16.60	1.203	*	16.70	1.209
16.80	1.215	*	16.90	1.221
17.00	1.227	*	17.10	1.233
17.20	1.239	*	17.30	1.245
17.40	1.251	*	17.50	1.257
17.60	1.263	*	17.70	1.269
17.80	1.275	*	17.90	1.281
18.00	1.287	*	18.10	1.293
18.20	1.299	*	18.30	1.305
18.40	1.311	*	18.50	1.317
18.60	1.322	*	18.70	1.328
18.80	1.334	*	18.90	1.340
19.00	1.346	*	19.10	1.352
19.20	1.358	*	19.30	1.363
19.40	1.369	*	19.50	1.375
19.60	1.381	*	19.70	1.386
19.80	1.392	*	19.90	1.398
20.00	1.404	*	20.10	1.299
20.20	1.071	*	20.30	.999
20.40	.965	*	20.50	.951
20.60	.953	*	20.70	.956
20.80	.958	*	20.90	.961
21.00	.963	*	21.10	.966
21.20	.968	*	21.30	.971
21.40	.973	*	21.50	.976
21.60	.978	*	21.70	.981
21.80	.983	*	21.90	.986
22.00	.988	*	22.10	.991
22.20	.993	*	22.30	.996
22.40	.998	*	22.50	1.001
22.60	1.003	*	22.70	1.006
22.80	1.008	*	22.90	1.011
23.00	1.013	*	23.10	1.016
23.20	1.018	*	23.30	1.021
23.40	1.023	*	23.50	1.025
23.60	1.028	*	23.70	1.030
23.80	1.033	*	23.90	1.035
24.00	1.038	*	24.10	.796
24.20	.284	*	24.30	.119

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JUNCTION 1, BRANCH 2, 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	162.00	61.00	.160	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	5.08	.12

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	1.5666	ACRE-FT
PEAK DISCHARGE	=	5.0828	CFS
AREA	=	162.0000	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

ON
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.012	*	12.10	.162
12.20	.619	*	12.30	.451
12.40	.428	*	12.50	.463
12.60	.508	*	12.70	.507
12.80	.370	*	12.90	.338
13.00	.341	*	13.10	.350
13.20	.346	*	13.30	.297
13.40	.286	*	13.50	.289
13.60	.295	*	13.70	.290
13.80	.255	*	13.90	.247

14.00	.249	*	14.10	.251
14.20	.243	*	14.30	.202
14.40	.191	*	14.50	.190
14.60	.192	*	14.70	.194
14.80	.196	*	14.90	.198
15.00	.200	*	15.10	.202
15.20	.204	*	15.30	.206
15.40	.208	*	15.50	.210
15.60	.212	*	15.70	.214
15.80	.216	*	15.90	.218
16.00	.220	*	16.10	.221
16.20	.207	*	16.30	.156
16.40	.140	*	16.50	.137
16.60	.137	*	16.70	.138
16.80	.139	*	16.90	.139
17.00	.140	*	17.10	.141
17.20	.141	*	17.30	.142
17.40	.143	*	17.50	.143
17.60	.144	*	17.70	.145
17.80	.146	*	17.90	.146
18.00	.147	*	18.10	.148
18.20	.148	*	18.30	.149
18.40	.150	*	18.50	.150
18.60	.151	*	18.70	.152
18.80	.152	*	18.90	.153
19.00	.154	*	19.10	.154
19.20	.155	*	19.30	.156
19.40	.156	*	19.50	.157
19.60	.158	*	19.70	.158
19.80	.159	*	19.90	.160
20.00	.160	*	20.10	.160
20.20	.152	*	20.30	.120
20.40	.111	*	20.50	.109
20.60	.109	*	20.70	.109
20.80	.110	*	20.90	.110
21.00	.110	*	21.10	.110
21.20	.111	*	21.30	.111
21.40	.111	*	21.50	.112
21.60	.112	*	21.70	.112
21.80	.112	*	21.90	.113
22.00	.113	*	22.10	.113
22.20	.114	*	22.30	.114
22.40	.114	*	22.50	.114
22.60	.115	*	22.70	.115
22.80	.115	*	22.90	.116
23.00	.116	*	23.10	.116
23.20	.116	*	23.30	.117
23.40	.117	*	23.50	.117
23.60	.118	*	23.70	.118

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000

11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.000	*	12.10	.679
12.20	1.725	*	12.30	1.460
12.40	1.427	*	12.50	1.583
12.60	1.716	*	12.70	1.581
12.80	1.280	*	12.90	1.192
13.00	1.176	*	13.10	1.177
13.20	1.115	*	13.30	1.005
13.40	.977	*	13.50	.976
13.60	.983	*	13.70	.941
13.80	.862	*	13.90	.840
14.00	.837	*	14.10	.839
14.20	.785	*	14.30	.690
14.40	.657	*	14.50	.646
14.60	.640	*	14.70	.642
14.80	.649	*	14.90	.655
15.00	.662	*	15.10	.669
15.20	.675	*	15.30	.682
15.40	.689	*	15.50	.695
15.60	.702	*	15.70	.708
15.80	.715	*	15.90	.721
16.00	.728	*	16.10	.734
16.20	.665	*	16.30	.542
16.40	.495	*	16.50	.474
16.60	.462	*	16.70	.457
16.80	.460	*	16.90	.462
17.00	.464	*	17.10	.467
17.20	.469	*	17.30	.471
17.40	.473	*	17.50	.476
17.60	.478	*	17.70	.480
17.80	.483	*	17.90	.485
18.00	.487	*	18.10	.489
18.20	.492	*	18.30	.494
18.40	.496	*	18.50	.498
18.60	.501	*	18.70	.503
18.80	.505	*	18.90	.507
19.00	.510	*	19.10	.512
19.20	.514	*	19.30	.516
19.40	.518	*	19.50	.521
19.60	.523	*	19.70	.525
19.80	.527	*	19.90	.529
20.00	.532	*	20.10	.533
20.20	.491	*	20.30	.415
20.40	.386	*	20.50	.373
20.60	.365	*	20.70	.363
20.80	.363	*	20.90	.364
21.00	.365	*	21.10	.366
21.20	.367	*	21.30	.368
21.40	.369	*	21.50	.370
21.60	.371	*	21.70	.372
21.80	.373	*	21.90	.374
22.00	.375	*	22.10	.376
22.20	.377	*	22.30	.378
22.40	.379	*	22.50	.380
22.60	.381	*	22.70	.382
22.80	.382	*	22.90	.383
23.00	.384	*	23.10	.385
23.20	.386	*	23.30	.387

23.40	.388	*	23.50	.389
23.60	.390	*	23.70	.391
23.80	.392	*	23.90	.393
24.00	.394	*	24.10	.394
24.20	.296	*	24.30	.126
24.40	.060	*	24.50	.029

* *

JUNCTION 2, 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	19.00	61.00	.010	.000	.210	.35	.0
2	63.00	61.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	.94	.12
2	1.73	.12

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	.7930	ACRE-FT
PEAK DISCHARGE	=	2.3436	CFS
AREA	=	82.0000	ACRES
TIME OF PEAK DISCHARGE	=	12.20	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.29	
PREVIOUS MUSKINGUM ROUTING K	=	.4500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	5.47	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.90	HRS
TOTAL DRAINAGE AREA	=	296.80	ACRES
TOTAL RUNOFF VOLUME	=	2.8701	AC-FT
PEAK RUNOFF DISCHARGE	=	7.20	CFS
TIME TO PEAK DISCHARGE	=	12.70	HRS

========== STRUCTURE DATA FOR JUNCTION #3 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 3, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.019
.20	.019	*	.30	.019
.40	.019	*	.50	.019
.60	.019	*	.70	.019
.80	.019	*	.90	.019
1.00	.019	*	1.10	.023
1.20	.023	*	1.30	.023
1.40	.023	*	1.50	.023
1.60	.023	*	1.70	.023
1.80	.023	*	1.90	.023
2.00	.023	*	2.10	.023
2.20	.023	*	2.30	.023
2.40	.023	*	2.50	.023
2.60	.023	*	2.70	.023
2.80	.023	*	2.90	.023
3.00	.023	*	3.10	.027
3.20	.027	*	3.30	.027
3.40	.027	*	3.50	.027
3.60	.027	*	3.70	.027
3.80	.027	*	3.90	.027
4.00	.027	*	4.10	.031
4.20	.031	*	4.30	.031
4.40	.031	*	4.50	.031
4.60	.031	*	4.70	.031
4.80	.031	*	4.90	.031
5.00	.031	*	5.10	.031
5.20	.031	*	5.30	.031
5.40	.031	*	5.50	.031
5.60	.031	*	5.70	.031
5.80	.031	*	5.90	.031
6.00	.031	*	6.10	.039
6.20	.039	*	6.30	.039
6.40	.039	*	6.50	.039
6.60	.039	*	6.70	.039
6.80	.039	*	6.90	.039
7.00	.039	*	7.10	.039
7.20	.039	*	7.30	.039
7.40	.039	*	7.50	.039
7.60	.039	*	7.70	.039
7.80	.039	*	7.90	.039

8.00	.039	*	8.10	.050
8.20	.050	*	8.30	.050
8.40	.050	*	8.50	.050
8.60	.054	*	8.70	.054
8.80	.054	*	8.90	.054
9.00	.054	*	9.10	.062
9.20	.062	*	9.30	.062
9.40	.062	*	9.50	.062
9.60	.069	*	9.70	.069
9.80	.069	*	9.90	.069
10.00	.069	*	10.10	.089
10.20	.089	*	10.30	.089
10.40	.089	*	10.50	.089
10.60	.120	*	10.70	.120
10.80	.120	*	10.90	.120
11.00	.120	*	11.10	.185
11.20	.185	*	11.30	.185
11.40	.185	*	11.50	.186
11.60	1.467	*	11.70	1.467
11.80	1.467	*	11.90	1.467
12.00	1.466	*	12.10	.278
12.20	.278	*	12.30	.278
12.40	.278	*	12.50	.278
12.60	.143	*	12.70	.143
12.80	.143	*	12.90	.143
13.00	.143	*	13.10	.104
13.20	.104	*	13.30	.104
13.40	.104	*	13.50	.104
13.60	.081	*	13.70	.081
13.80	.081	*	13.90	.081
14.00	.081	*	14.10	.058
14.20	.058	*	14.30	.058
14.40	.058	*	14.50	.058
14.60	.058	*	14.70	.058
14.80	.058	*	14.90	.058
15.00	.058	*	15.10	.058
15.20	.058	*	15.30	.058
15.40	.058	*	15.50	.058
15.60	.058	*	15.70	.058
15.80	.058	*	15.90	.058
16.00	.058	*	16.10	.035
16.20	.035	*	16.30	.035
16.40	.035	*	16.50	.035
16.60	.035	*	16.70	.035
16.80	.035	*	16.90	.035
17.00	.035	*	17.10	.035
17.20	.035	*	17.30	.035
17.40	.035	*	17.50	.035
17.60	.035	*	17.70	.035
17.80	.035	*	17.90	.035
18.00	.035	*	18.10	.035
18.20	.035	*	18.30	.035
18.40	.035	*	18.50	.035
18.60	.035	*	18.70	.035
18.80	.035	*	18.90	.035
19.00	.035	*	19.10	.035
19.20	.035	*	19.30	.035
19.40	.035	*	19.50	.035
19.60	.035	*	19.70	.035
19.80	.035	*	19.90	.035

20.00	.035	*	20.10	.023
20.20	.023	*	20.30	.023
20.40	.023	*	20.50	.023
20.60	.023	*	20.70	.023
20.80	.023	*	20.90	.023
21.00	.023	*	21.10	.023
21.20	.023	*	21.30	.023
21.40	.023	*	21.50	.023
21.60	.023	*	21.70	.023
21.80	.023	*	21.90	.023
22.00	.023	*	22.10	.023
22.20	.023	*	22.30	.023
22.40	.023	*	22.50	.023
22.60	.023	*	22.70	.023
22.80	.023	*	22.90	.023
23.00	.023	*	23.10	.023
23.20	.023	*	23.30	.023
23.40	.023	*	23.50	.023
23.60	.023	*	23.70	.023

* *
JUNCTION 3, BRANCH 1, STRUCTURE 1
* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

NUMBER	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	.87	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.47	2.20

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	.1595	ACRE-FT
PEAK DISCHARGE	=	1.4668	CFS
AREA	=	.8700	ACRES
TIME OF PEAK DISCHARGE	=	11.90	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X, = .00

PREVIOUS MUSKINGUM ROUTING K	=	.0000	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	7.20	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.70	HRS
TOTAL DRAINAGE AREA	=	297.67	ACRES
TOTAL RUNOFF VOLUME	=	3.0296	AC-FT
PEAK RUNOFF DISCHARGE	=	7.35	CFS
TIME TO PEAK DISCHARGE	=	12.70	HRS

*** RUN COMPLETED ****

100-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*          (program name)              * SEDIMOT S/N  : 1353220014            *
*                                      * HMVersion    :  3.20                 *
*       (program description)          * Date         : 11/24/92              *
*                                      * Time         :  9:22:00              *
*                                      * Input file   : bor1                  *
*                                      * Output file  : bor                   *
*                                      *                                      *
*                                      *                                      *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                by                  :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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      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 5-25-83

      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

*************************************************************
*************************************************************

            ***********************************************
                 WATERSHED IDENTIFICATION CODE
                 -----------------------------
                 BORROW AREA POND 100-YR 6-HR
            ***********************************************


============================  STORM  INPUT  ============================

QUESTION
  NO.

   1. STORM TYPE -                                        SCS'S TYPE 2
   2. RAINFALL DEPTH -                                      2.05 INCHES
   3. STORM DURATION -                                      6.00 HOURS
   4. TIME INCREMENT -                                       .10 HOURS

=======================================================================


======================  WATERSHED DATA  ==========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 3
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1
3	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.45	.29

==========

========== STRUCTURE INPUT FOR JUNCTION #3 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	1.004	*	3.10	1.769
3.20	1.043	*	3.30	1.171
3.40	1.319	*	3.50	1.465
3.60	1.258	*	3.70	.879
3.80	.904	*	3.90	.941
4.00	.977	*	4.10	.895
4.20	.763	*	4.30	.777

4.40	.796	*	4.50	.815
4.60	.754	*	4.70	.662
4.80	.670	*	4.90	.681
5.00	.692	*	5.10	.618
5.20	.511	*	5.30	.513
5.40	.519	*	5.50	.524
5.60	.530	*	5.70	.535

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	1.696	*	3.10	.674
3.20	.781	*	3.30	.886
3.40	.989	*	3.50	1.091
3.60	.599	*	3.70	.625
3.80	.651	*	3.90	.677
4.00	.702	*	4.10	.528
4.20	.541	*	4.30	.555
4.40	.568	*	4.50	.581
4.60	.461	*	4.70	.468
4.80	.476	*	4.90	.484
5.00	.491	*	5.10	.356
5.20	.359	*	5.30	.363
5.40	.367	*	5.50	.371
5.60	.375	*	5.70	.379

* *
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	31.00	61.00	.030	.000	.060	.42	.0
	21.80	61.00	.030	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	2.41	.08
2	1.70	.08

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	.3654	ACRE-FT
PEAK DISCHARGE	=	2.6996	CFS
AREA	=	52.8000	ACRES
TIME OF PEAK DISCHARGE	=	3.00	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

ION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	2.313	*	3.10	8.100
3.20	6.281	*	3.30	6.383
3.40	6.969	*	3.50	7.381
3.60	7.116	*	3.70	5.521
3.80	5.151	*	3.90	5.063
4.00	5.111	*	4.10	4.952
4.20	4.375	*	4.30	4.258
4.40	4.252	*	4.50	4.299
4.60	4.162	*	4.70	3.752
4.80	3.660	*	4.90	3.645
5.00	3.668	*	5.10	3.471
5.20	2.985	*	5.30	2.849
5.40	2.797	*	5.50	2.787
5.60	2.816	*	5.70	2.845
5.80	2.874	*	5.90	2.903
6.00	2.931	*	6.10	2.258
6.20	.806	*	6.30	.337

* *
JUNCTION 1, BRANCH 2, 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	162.00	61.00	.160	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	8.10	.08

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	1.1210	ACRE-FT
PEAK DISCHARGE	=	8.1002	CFS
AREA	=	162.0000	ACRES
TIME OF PEAK DISCHARGE	=	3.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.019	*	3.10	.256
3.20	.979	*	3.30	.734
3.40	.707	*	3.50	.770
3.60	.848	*	3.70	.848
3.80	.619	*	3.90	.565
4.00	.570	*	4.10	.586
4.20	.578	*	4.30	.496
4.40	.479	*	4.50	.484
4.60	.492	*	4.70	.484
4.80	.426	*	4.90	.413
5.00	.415	*	5.10	.420
5.20	.405	*	5.30	.337
5.40	.319	*	5.50	.318
5.60	.320	*	5.70	.323
5.80	.326	*	5.90	.325

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	1.039
3.20	2.748	*	3.30	2.381
3.40	2.349	*	3.50	2.622
3.60	2.857	*	3.70	2.641
3.80	2.139	*	3.90	1.993
4.00	1.966	*	4.10	1.968
4.20	1.865	*	4.30	1.681
4.40	1.633	*	4.50	1.632
4.60	1.642	*	4.70	1.572
4.80	1.440	*	4.90	1.403
5.00	1.397	*	5.10	1.400
5.20	1.311	*	5.30	1.152
5.40	1.097	*	5.50	1.077
5.60	1.068	*	5.70	1.070
5.80	1.081	*	5.90	1.092
6.00	1.103	*	6.10	1.112
6.20	.839	*	6.30	.356
6.40	.169	*	6.50	.081

* *

JUNCTION 2, 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	19.00	61.00	.010	.000	.210	.35	.0
2	63.00	61.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)

1	1.48	.08
2	2.86	.08

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	.5674	ACRE-FT
PEAK DISCHARGE	=	3.7271	CFS
AREA	=	82.0000	ACRES
TIME OF PEAK DISCHARGE	=	3.20	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.29	
PREVIOUS MUSKINGUM ROUTING K	=	.4500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	9.09	CFS
TIME OF ROUTED PEAK DISCHARGE	=	3.90	HRS
TOTAL DRAINAGE AREA	=	296.80	ACRES
TOTAL RUNOFF VOLUME	=	2.0537	AC-FT
PEAK RUNOFF DISCHARGE	=	11.87	CFS
TIME TO PEAK DISCHARGE	=	3.70	HRS

========== STRUCTURE DATA FOR JUNCTION #3 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 3, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.082
.20	.082	*	.30	.082
.40	.082	*	.50	.082
.60	.092	*	.70	.092
.80	.092	*	.90	.092
1.00	.092	*	1.10	.118
1.20	.118	*	1.30	.118
1.40	.118	*	1.50	.118
1.60	.159	*	1.70	.159

1.80	.159	*	1.90	.159
2.00	.159	*	2.10	.246
2.20	.246	*	2.30	.246
2.40	.246	*	2.50	.246
2.60	1.944	*	2.70	1.944
2.80	1.944	*	2.90	1.944
3.00	1.944	*	3.10	.368
3.20	.368	*	3.30	.368
3.40	.368	*	3.50	.368
3.60	.189	*	3.70	.189
3.80	.189	*	3.90	.189
4.00	.189	*	4.10	.138
4.20	.138	*	4.30	.138
4.40	.138	*	4.50	.138
4.60	.107	*	4.70	.107
4.80	.107	*	4.90	.107
5.00	.107	*	5.10	.077
5.20	.077	*	5.30	.077
5.40	.077	*	5.50	.077
5.60	.077	*	5.70	.077

* *

JUNCTION 3, 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	.87	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.94	2.05

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	.1486	ACRE-FT
PEAK DISCHARGE	=	1.9442	CFS
AREA	=	.8700	ACRES
TIME OF PEAK DISCHARGE	=	2.90	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.00	
PREVIOUS MUSKINGUM ROUTING K	=	.0000	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	11.87	CFS
TIME OF ROUTED PEAK DISCHARGE	=	3.70	HRS
TOTAL DRAINAGE AREA	=	297.67	ACRES
TOTAL RUNOFF VOLUME	=	2.2023	AC-FT
PEAK RUNOFF DISCHARGE	=	12.06	CFS
TIME TO PEAK DISCHARGE	=	3.70	HRS

*** RUN COMPLETED ****

100-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
                                     * HMVersion    :  3.20                   *
*     (program description)          * Date         : 11/24/92                *
*                                    * Time         :  9:23:04                *
*                                    * Input file   : bor1                    *
*                                    * Output file  : bor                     *
*                                    *                                        *
*                                    *                                        *
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 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X       X     X    X    XX   XX  X     X     X
X        X       X     X    X    X X X X  X     X     X
 XXXXX   XXXXX   X     X    X    X  X  X  X     X     X
      X  X       X     X    X    X     X  X     X     X
X     X  X       X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                by                  :::
:::       Haestad Methods, Inc.        :::
:::                                    :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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*************************************************************
*************************************************************

      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 5-25-83

      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

*************************************************************
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          ********************************************
               WATERSHED IDENTIFICATION CODE
               -----------------------------
               BORROW AREA POND 100-YR 24-HR
          ********************************************


============================ STORM  INPUT ============================

QUESTION
  NO.

   1. STORM TYPE -                                    SCS'S TYPE 2
   2. RAINFALL DEPTH -                                  2.40 INCHES
   3. STORM DURATION -                                 24.00 HOURS
   4. TIME INCREMENT -                                   .10 HOURS

=====================================================================


============================ WATERSHED DATA ==========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 3
```

2. JUNCTION NUMBER OF BRANCHES

1	2
2	1
3	1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1
2	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00
2	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE INPUT FOR JUNCTION #2 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.45	.29

==========

========== STRUCTURE INPUT FOR JUNCTION #3 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000

4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.338
12.00	2.018	*	12.10	2.568
12.20	1.116	*	12.30	1.174
12.40	1.270	*	12.50	1.366
12.60	1.149	*	12.70	.789
12.80	.803	*	12.90	.827
13.00	.851	*	13.10	.774
13.20	.655	*	13.30	.664
13.40	.677	*	13.50	.689
13.60	.635	*	13.70	.556
13.80	.561	*	13.90	.568
14.00	.575	*	14.10	.513
14.20	.423	*	14.30	.424
14.40	.428	*	14.50	.431
14.60	.435	*	14.70	.439
14.80	.442	*	14.90	.446
15.00	.449	*	15.10	.453
15.20	.457	*	15.30	.460
15.40	.464	*	15.50	.467
15.60	.471	*	15.70	.475
15.80	.478	*	15.90	.482
16.00	.485	*	16.10	.407
16.20	.298	*	16.30	.296

16.40	.297	*	16.50	.298
16.60	.300	*	16.70	.301
16.80	.302	*	16.90	.303
17.00	.305	*	17.10	.306
17.20	.307	*	17.30	.308
17.40	.310	*	17.50	.311
17.60	.312	*	17.70	.313
17.80	.314	*	17.90	.316
18.00	.317	*	18.10	.318
18.20	.319	*	18.30	.321
18.40	.322	*	18.50	.323
18.60	.324	*	18.70	.325
18.80	.327	*	18.90	.328
19.00	.329	*	19.10	.330
19.20	.331	*	19.30	.333
19.40	.334	*	19.50	.335
19.60	.336	*	19.70	.337
19.80	.339	*	19.90	.340
20.00	.341	*	20.10	.295
20.20	.230	*	20.30	.229
20.40	.230	*	20.50	.230
20.60	.231	*	20.70	.231
20.80	.232	*	20.90	.232
21.00	.233	*	21.10	.233
21.20	.234	*	21.30	.234
21.40	.235	*	21.50	.235
21.60	.236	*	21.70	.236
21.80	.237	*	21.90	.237
22.00	.238	*	22.10	.238
22.20	.239	*	22.30	.239
22.40	.240	*	22.50	.240
22.60	.241	*	22.70	.242
22.80	.242	*	22.90	.243
23.00	.243	*	23.10	.244
23.20	.244	*	23.30	.245
23.40	.245	*	23.50	.246
23.60	.246	*	23.70	.247

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000

1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.571
12.00	2.631	*	12.10	.727
12.20	.797	*	12.30	.866
12.40	.934	*	12.50	1.001
12.60	.540	*	12.70	.557
12.80	.575	*	12.90	.592
13.00	.608	*	13.10	.455
13.20	.463	*	13.30	.472
13.40	.481	*	13.50	.490
13.60	.387	*	13.70	.392

13.80	.397	*	13.90	.403
14.00	.408	*	14.10	.294
14.20	.297	*	14.30	.300
14.40	.302	*	14.50	.305
14.60	.307	*	14.70	.310
14.80	.313	*	14.90	.315
15.00	.318	*	15.10	.320
15.20	.323	*	15.30	.325
15.40	.328	*	15.50	.330
15.60	.333	*	15.70	.335
15.80	.338	*	15.90	.340
16.00	.343	*	16.10	.207
16.20	.208	*	16.30	.209
16.40	.209	*	16.50	.210
16.60	.211	*	16.70	.212
16.80	.213	*	16.90	.214
17.00	.215	*	17.10	.216
17.20	.216	*	17.30	.217
17.40	.218	*	17.50	.219
17.60	.220	*	17.70	.221
17.80	.222	*	17.90	.223
18.00	.223	*	18.10	.224
18.20	.225	*	18.30	.226
18.40	.227	*	18.50	.228
18.60	.229	*	18.70	.229
18.80	.230	*	18.90	.231
19.00	.232	*	19.10	.233
19.20	.234	*	19.30	.234
19.40	.235	*	19.50	.236
19.60	.237	*	19.70	.238
19.80	.239	*	19.90	.239
20.00	.240	*	20.10	.161
20.20	.161	*	20.30	.161
20.40	.162	*	20.50	.162
20.60	.162	*	20.70	.163
20.80	.163	*	20.90	.164
21.00	.164	*	21.10	.164
21.20	.165	*	21.30	.165
21.40	.165	*	21.50	.166
21.60	.166	*	21.70	.166
21.80	.167	*	21.90	.167
22.00	.168	*	22.10	.168
22.20	.168	*	22.30	.169
22.40	.169	*	22.50	.169
22.60	.170	*	22.70	.170
22.80	.170	*	22.90	.171
23.00	.171	*	23.10	.171
23.20	.172	*	23.30	.172
23.40	.173	*	23.50	.173
23.60	.173	*	23.70	.174

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    JUNCTION  1, BRANCH  1, STRUCTURE  1
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*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	31.00	61.00	.030	.000	.060	.42	.0
	21.80	61.00	.030	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	3.74	.17
2	2.63	.17

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	.7362	ACRE-FT
PEAK DISCHARGE	=	4.6486	CFS
AREA	=	52.8000	ACRES
TIME OF PEAK DISCHARGE	=	12.00	HRS

========== STRUCTURE DATA FOR JUNCTION #1 ==========

ION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 2, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.602
12.00	6.703	*	12.10	12.377
12.20	7.899	*	12.30	7.191
12.40	7.082	*	12.50	7.009
12.60	6.590	*	12.70	5.027
12.80	4.618	*	12.90	4.481
13.00	4.476	*	13.10	4.302
13.20	3.775	*	13.30	3.652
13.40	3.626	*	13.50	3.647
13.60	3.515	*	13.70	3.157
13.80	3.068	*	13.90	3.045

14.00	3.055	*	14.10	2.883
14.20	2.473	*	14.30	2.355
14.40	2.308	*	14.50	2.295
14.60	2.315	*	14.70	2.334
14.80	2.354	*	14.90	2.373
15.00	2.393	*	15.10	2.412
15.20	2.431	*	15.30	2.451
15.40	2.470	*	15.50	2.489
15.60	2.508	*	15.70	2.527
15.80	2.546	*	15.90	2.565
16.00	2.584	*	16.10	2.356
16.20	1.854	*	16.30	1.696
16.40	1.624	*	16.50	1.592
16.60	1.599	*	16.70	1.605
16.80	1.612	*	16.90	1.619
17.00	1.625	*	17.10	1.632
17.20	1.639	*	17.30	1.645
17.40	1.652	*	17.50	1.658
17.60	1.665	*	17.70	1.672
17.80	1.678	*	17.90	1.685
18.00	1.691	*	18.10	1.698
18.20	1.704	*	18.30	1.711
18.40	1.717	*	18.50	1.724
18.60	1.730	*	18.70	1.737
18.80	1.743	*	18.90	1.750
19.00	1.756	*	19.10	1.763
19.20	1.769	*	19.30	1.775
19.40	1.782	*	19.50	1.788
19.60	1.794	*	19.70	1.801
19.80	1.807	*	19.90	1.814
20.00	1.820	*	20.10	1.683
20.20	1.387	*	20.30	1.293
20.40	1.249	*	20.50	1.230
20.60	1.232	*	20.70	1.235
20.80	1.238	*	20.90	1.241
21.00	1.243	*	21.10	1.246
21.20	1.249	*	21.30	1.252
21.40	1.255	*	21.50	1.257
21.60	1.260	*	21.70	1.263
21.80	1.265	*	21.90	1.268
22.00	1.271	*	22.10	1.274
22.20	1.276	*	22.30	1.279
22.40	1.282	*	22.50	1.285
22.60	1.287	*	22.70	1.290
22.80	1.293	*	22.90	1.296
23.00	1.298	*	23.10	1.301
23.20	1.304	*	23.30	1.306
23.40	1.309	*	23.50	1.312
23.60	1.314	*	23.70	1.317
23.80	1.320	*	23.90	1.322
24.00	1.325	*	24.10	1.016
24.20	.363	*	24.30	.151

* *

JUNCTION 1, BRANCH 2, 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	162.00	61.00	.160	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	12.38	.17

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	2.2588	ACRE-FT
PEAK DISCHARGE	=	12.3768	CFS
AREA	=	162.0000	ACRES
TIME OF PEAK DISCHARGE	=	12.10	HRS

========== STRUCTURE DATA FOR JUNCTION #2 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 2

==========

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000

2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000
11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.006
12.00	.113	*	12.10	.687
12.20	1.556	*	12.30	.929
12.40	.758	*	12.50	.763
12.60	.805	*	12.70	.783
12.80	.562	*	12.90	.505
13.00	.503	*	13.10	.513
13.20	.502	*	13.30	.428
13.40	.410	*	13.50	.412
13.60	.418	*	13.70	.409
13.80	.358	*	13.90	.346

14.00	.347	*	14.10	.349
14.20	.336	*	14.30	.279
14.40	.264	*	14.50	.262
14.60	.263	*	14.70	.265
14.80	.268	*	14.90	.270
15.00	.272	*	15.10	.274
15.20	.277	*	15.30	.279
15.40	.281	*	15.50	.283
15.60	.285	*	15.70	.288
15.80	.290	*	15.90	.292
16.00	.294	*	16.10	.295
16.20	.277	*	16.30	.207
16.40	.187	*	16.50	.183
16.60	.183	*	16.70	.183
16.80	.184	*	16.90	.185
17.00	.186	*	17.10	.186
17.20	.187	*	17.30	.188
17.40	.189	*	17.50	.189
17.60	.190	*	17.70	.191
17.80	.192	*	17.90	.192
18.00	.193	*	18.10	.194
18.20	.195	*	18.30	.195
18.40	.196	*	18.50	.197
18.60	.198	*	18.70	.198
18.80	.199	*	18.90	.200
19.00	.201	*	19.10	.201
19.20	.202	*	19.30	.203
19.40	.204	*	19.50	.204
19.60	.205	*	19.70	.206
19.80	.206	*	19.90	.207
20.00	.208	*	20.10	.208
20.20	.197	*	20.30	.156
20.40	.144	*	20.50	.141
20.60	.141	*	20.70	.141
20.80	.142	*	20.90	.142
21.00	.142	*	21.10	.143
21.20	.143	*	21.30	.143
21.40	.143	*	21.50	.144
21.60	.144	*	21.70	.144
21.80	.145	*	21.90	.145
22.00	.145	*	22.10	.146
22.20	.146	*	22.30	.146
22.40	.147	*	22.50	.147
22.60	.147	*	22.70	.148
22.80	.148	*	22.90	.148
23.00	.148	*	23.10	.149
23.20	.149	*	23.30	.149
23.40	.150	*	23.50	.150
23.60	.150	*	23.70	.151

JUNCTION 2, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.000
.20	.000	*	.30	.000
.40	.000	*	.50	.000
.60	.000	*	.70	.000
.80	.000	*	.90	.000
1.00	.000	*	1.10	.000
1.20	.000	*	1.30	.000
1.40	.000	*	1.50	.000
1.60	.000	*	1.70	.000
1.80	.000	*	1.90	.000
2.00	.000	*	2.10	.000
2.20	.000	*	2.30	.000
2.40	.000	*	2.50	.000
2.60	.000	*	2.70	.000
2.80	.000	*	2.90	.000
3.00	.000	*	3.10	.000
3.20	.000	*	3.30	.000
3.40	.000	*	3.50	.000
3.60	.000	*	3.70	.000
3.80	.000	*	3.90	.000
4.00	.000	*	4.10	.000
4.20	.000	*	4.30	.000
4.40	.000	*	4.50	.000
4.60	.000	*	4.70	.000
4.80	.000	*	4.90	.000
5.00	.000	*	5.10	.000
5.20	.000	*	5.30	.000
5.40	.000	*	5.50	.000
5.60	.000	*	5.70	.000
5.80	.000	*	5.90	.000
6.00	.000	*	6.10	.000
6.20	.000	*	6.30	.000
6.40	.000	*	6.50	.000
6.60	.000	*	6.70	.000
6.80	.000	*	6.90	.000
7.00	.000	*	7.10	.000
7.20	.000	*	7.30	.000
7.40	.000	*	7.50	.000
7.60	.000	*	7.70	.000
7.80	.000	*	7.90	.000
8.00	.000	*	8.10	.000
8.20	.000	*	8.30	.000
8.40	.000	*	8.50	.000
8.60	.000	*	8.70	.000
8.80	.000	*	8.90	.000
9.00	.000	*	9.10	.000
9.20	.000	*	9.30	.000
9.40	.000	*	9.50	.000
9.60	.000	*	9.70	.000
9.80	.000	*	9.90	.000
10.00	.000	*	10.10	.000
10.20	.000	*	10.30	.000
10.40	.000	*	10.50	.000
10.60	.000	*	10.70	.000
10.80	.000	*	10.90	.000
11.00	.000	*	11.10	.000
11.20	.000	*	11.30	.000

11.40	.000	*	11.50	.000
11.60	.000	*	11.70	.000
11.80	.000	*	11.90	.000
12.00	.311	*	12.10	2.581
12.20	4.264	*	12.30	2.997
12.40	2.677	*	12.50	2.751
12.60	2.777	*	12.70	2.457
12.80	1.956	*	12.90	1.793
13.00	1.745	*	13.10	1.727
13.20	1.622	*	13.30	1.452
13.40	1.402	*	13.50	1.392
13.60	1.394	*	13.70	1.329
13.80	1.212	*	13.90	1.176
14.00	1.168	*	14.10	1.167
14.20	1.089	*	14.30	.955
14.40	.907	*	14.50	.889
14.60	.880	*	14.70	.880
14.80	.887	*	14.90	.895
15.00	.902	*	15.10	.909
15.20	.917	*	15.30	.924
15.40	.931	*	15.50	.939
15.60	.946	*	15.70	.953
15.80	.961	*	15.90	.968
16.00	.975	*	16.10	.982
16.20	.889	*	16.30	.722
16.40	.659	*	16.50	.631
16.60	.614	*	16.70	.608
16.80	.610	*	16.90	.613
17.00	.615	*	17.10	.618
17.20	.621	*	17.30	.623
17.40	.626	*	17.50	.628
17.60	.631	*	17.70	.633
17.80	.636	*	17.90	.638
18.00	.641	*	18.10	.643
18.20	.646	*	18.30	.648
18.40	.651	*	18.50	.653
18.60	.655	*	18.70	.658
18.80	.660	*	18.90	.663
19.00	.665	*	19.10	.668
19.20	.670	*	19.30	.673
19.40	.675	*	19.50	.678
19.60	.680	*	19.70	.682
19.80	.685	*	19.90	.687
20.00	.690	*	20.10	.692
20.20	.636	*	20.30	.538
20.40	.500	*	20.50	.483
20.60	.473	*	20.70	.469
20.80	.470	*	20.90	.471
21.00	.472	*	21.10	.473
21.20	.474	*	21.30	.475
21.40	.476	*	21.50	.477
21.60	.478	*	21.70	.479
21.80	.480	*	21.90	.481
22.00	.482	*	22.10	.483
22.20	.484	*	22.30	.485
22.40	.487	*	22.50	.488
22.60	.489	*	22.70	.490
22.80	.491	*	22.90	.492
23.00	.493	*	23.10	.494
23.20	.495	*	23.30	.496

23.40	.497	*	23.50	.498
23.60	.499	*	23.70	.500
23.80	.501	*	23.90	.502
24.00	.503	*	24.10	.503
24.20	.378	*	24.30	.161
24.40	.076	*	24.50	.037

* *

JUNCTION 2, 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	19.00	61.00	.010	.000	.210	.35	.0
2	63.00	61.00	.210	.000	.000	.00	1.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	2.29	.17
2	4.26	.17

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	1.1433	ACRE-FT
PEAK DISCHARGE	=	5.8205	CFS
AREA	=	82.0000	ACRES
TIME OF PEAK DISCHARGE	=	12.20	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X,	=	.29	
PREVIOUS MUSKINGUM ROUTING K	=	.4500	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	10.46	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.60	HRS
TOTAL DRAINAGE AREA	=	296.80	ACRES
TOTAL RUNOFF VOLUME	=	4.1383	AC-FT
PEAK RUNOFF DISCHARGE	=	14.04	CFS
TIME TO PEAK DISCHARGE	=	12.60	HRS

========== STRUCTURE DATA FOR JUNCTION #3 ==========

QUESTION
NO.
1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 3, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.021
.20	.021	*	.30	.021
.40	.021	*	.50	.021
.60	.021	*	.70	.021
.80	.021	*	.90	.021
1.00	.021	*	1.10	.025
1.20	.025	*	1.30	.025
1.40	.025	*	1.50	.025
1.60	.025	*	1.70	.025
1.80	.025	*	1.90	.025
2.00	.025	*	2.10	.025
2.20	.025	*	2.30	.025
2.40	.025	*	2.50	.025
2.60	.025	*	2.70	.025
2.80	.025	*	2.90	.025
3.00	.025	*	3.10	.029
3.20	.029	*	3.30	.029
3.40	.029	*	3.50	.029
3.60	.029	*	3.70	.029
3.80	.029	*	3.90	.029
4.00	.029	*	4.10	.034
4.20	.034	*	4.30	.034
4.40	.034	*	4.50	.034
4.60	.034	*	4.70	.034
4.80	.034	*	4.90	.034
5.00	.034	*	5.10	.034
5.20	.034	*	5.30	.034
5.40	.034	*	5.50	.034
5.60	.034	*	5.70	.034
5.80	.034	*	5.90	.034
6.00	.034	*	6.10	.042
6.20	.042	*	6.30	.042
6.40	.042	*	6.50	.042
6.60	.042	*	6.70	.042
6.80	.042	*	6.90	.042
7.00	.042	*	7.10	.042
7.20	.042	*	7.30	.042
7.40	.042	*	7.50	.042
7.60	.042	*	7.70	.042
7.80	.042	*	7.90	.042

8.00	.042	*	8.10	.055
8.20	.055	*	8.30	.055
8.40	.055	*	8.50	.055
8.60	.059	*	8.70	.059
8.80	.059	*	8.90	.059
9.00	.059	*	9.10	.067
9.20	.067	*	9.30	.067
9.40	.067	*	9.50	.067
9.60	.076	*	9.70	.076
9.80	.076	*	9.90	.076
10.00	.076	*	10.10	.097
10.20	.097	*	10.30	.097
10.40	.097	*	10.50	.097
10.60	.131	*	10.70	.131
10.80	.131	*	10.90	.131
11.00	.131	*	11.10	.202
11.20	.202	*	11.30	.202
11.40	.202	*	11.50	.202
11.60	1.600	*	11.70	1.600
11.80	1.600	*	11.90	1.600
12.00	1.600	*	12.10	.303
12.20	.303	*	12.30	.303
12.40	.303	*	12.50	.303
12.60	.156	*	12.70	.156
12.80	.156	*	12.90	.156
13.00	.156	*	13.10	.114
13.20	.114	*	13.30	.114
13.40	.114	*	13.50	.114
13.60	.088	*	13.70	.088
13.80	.088	*	13.90	.088
14.00	.088	*	14.10	.063
14.20	.063	*	14.30	.063
14.40	.063	*	14.50	.063
14.60	.063	*	14.70	.063
14.80	.063	*	14.90	.063
15.00	.063	*	15.10	.063
15.20	.063	*	15.30	.063
15.40	.063	*	15.50	.063
15.60	.063	*	15.70	.063
15.80	.063	*	15.90	.063
16.00	.063	*	16.10	.038
16.20	.038	*	16.30	.038
16.40	.038	*	16.50	.038
16.60	.038	*	16.70	.038
16.80	.038	*	16.90	.038
17.00	.038	*	17.10	.038
17.20	.038	*	17.30	.038
17.40	.038	*	17.50	.038
17.60	.038	*	17.70	.038
17.80	.038	*	17.90	.038
18.00	.038	*	18.10	.038
18.20	.038	*	18.30	.038
18.40	.038	*	18.50	.038
18.60	.038	*	18.70	.038
18.80	.038	*	18.90	.038
19.00	.038	*	19.10	.038
19.20	.038	*	19.30	.038
19.40	.038	*	19.50	.038
19.60	.038	*	19.70	.038
19.80	.038	*	19.90	.038

20.00	.038	*	20.10	.025
20.20	.025	*	20.30	.025
20.40	.025	*	20.50	.025
20.60	.025	*	20.70	.025
20.80	.025	*	20.90	.025
21.00	.025	*	21.10	.025
21.20	.025	*	21.30	.025
21.40	.025	*	21.50	.025
21.60	.025	*	21.70	.025
21.80	.025	*	21.90	.025
22.00	.025	*	22.10	.025
22.20	.025	*	22.30	.025
22.40	.025	*	22.50	.025
22.60	.025	*	22.70	.025
22.80	.025	*	22.90	.025
23.00	.025	*	23.10	.025
23.20	.025	*	23.30	.025
23.40	.025	*	23.50	.025
23.60	.025	*	23.70	.025

* *

JUNCTION 3, 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	.87	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	1.60	2.40

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	.1740	ACRE-FT
PEAK DISCHARGE	=	1.6001	CFS
AREA	=	.8700	ACRES
TIME OF PEAK DISCHARGE	=	11.70	HRS

SUMMARY TABLE OF COMBINED HYDROGRAPH AND SEDIGRAPH VALUES

PREVIOUS MUSKINGUM ROUTING X, = .00

PREVIOUS MUSKINGUM ROUTING K	=	.0000	HRS
PREVIOUS ROUTED PEAK DISCHARGE	=	14.04	CFS
TIME OF ROUTED PEAK DISCHARGE	=	12.60	HRS
TOTAL DRAINAGE AREA	=	297.67	ACRES
TOTAL RUNOFF VOLUME	=	4.3123	AC-FT
PEAK RUNOFF DISCHARGE	=	14.20	CFS
TIME TO PEAK DISCHARGE	=	12.60	HRS

*** RUN COMPLETED ****

CLEAR WATER POND

NPDES Discharge 004
Reference Plate 7-1 and 7-4

Design Criteria

10-year, 24-hour Watershed Hydrograph
25-year, 6-hour Watershed Hydrograph
25-year, 24-hour Watershed Hydrograph
100-year, 6-hour Watershed Hydrograph
100-year, 24-hour Watershed Hydrograph

Findings and Conclusions

CLEAR WATER POND
DESCRIPTION

DESIGN CRITERIA

Pond

The Clear Water Pond (NPDES discharging point designation 004) is a water storage pond and final sediment treatment pond located immediately to Slurry Pond No. 1 and 2 (as shown in Plate 7-1 and 7-4). It is an off-channel, temporary impoundment with a total as-built contained volume of approximately 4.40 acre-feet measured to the bottom of the emergency spillway at discharge elevation 6523.5 feet. Fed by Slurry Pond No.1 and 2 through an 8-inch inlet pipe, the Clear Water Pond is constructed to store approximately 1.13 acre feet of water. In addition, the pond captures runoff from a small area immediately surrounding the pond.

4.85

The structure is a temporary impoundment as addressed in R645-301-733. The structure is not addressed by the MSHA criteria of 30 CFR 77.216(a). With the proposed modifications, the impoundment meets the combination of principal and emergency spillways specified in R645-301-743.130 and/or R645-301-742.223 by utilizing a perforated discharge standpipe as the primary spillway and an open channel spillway as an emergency spillway.

The impoundment requires a maximum of 1.13 acre-feet of storage as an impoundment for the Slurry Ponds. The impoundment is discharged through an 8-inch perforated pipe when the contained volume is approximately 2.29 acre-feet (as-built 1.16 acre-feet sediment volume plus a 1.13 acre-feet storage volume). The pond has an additional capacity of 2.11 acre-feet of temporary storage between the initial discharge elevation of the perforated pipe and the bottom of the emergency spillway. The emergency spillway was designed for a 25-year, 6-hour storm runoff.

SEDIMOT II was used to simulate the hydrograph for different storm events. The simulated results are listed in the attached computer simulations. The resulting 100-year 6-hour runoff volume is 0.34 acre-feet. The peak flow is 4.82 cfs.

Other Structures

<u>8-inch Perforated Pipe</u>

Slope = 3.94%
Diameter = 8 inch
n=0.01
Discharge Capacity = 3.16 cfs

<u>Emergency Spillway</u>

Slope = 2%

Width = 0.5 ft
Channel Side Slope = 3h:1v
Depth of Water = 0.42 ft
Flow Capacity = 1.73 cfs

Sum of the flow capacity of pipe and spillway is greater than the 100-year, 24-hour peak flow.

Sediment

The Universal Soil Loss Equation A=RKLsCP was used to estimate sediment load.

Area	A (Acres)	R	K	Ls	C	P	Yield (Tons/Year)	Volume (Acre-Feet)
I	2.2	20	0.2	0.5	0.45	1	1.98	
Total	2.2						1.98	0

Note: Soil density is assumed as 125lb/ft^3.

FINDINGS AND CONCLUSIONS

The 100-year, 24-hour runoff volume (0.34 acre-feet) is much less than the existing available storage capacity of 2.11 acre-feet. The runoff volumes and peak flows for different storm events are listed as below.

Storm Type	Volume (Acre-Feet)	Peak Flow (cfs)
10-yr, 24-dr	0.33	3.04
25-yr, 6-hr	0.29	3.81
25-yr, 24-hr	0.40	3.64
100-yr, 6-hr	0.37	4.82
100-yr, 24-hr	0.43	3.97

10-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
*                                    * HMVersion    :  3.20                   *
*      (program description)         * Date         : 11/19/92                *
*                                    * Time         : 16:44:44                *
*                                    * Input file   : *
*                                    * Output file  : CLEAR                   *
*                                    *                                        *
*                                    *                                        *
*******************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
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::::::::::::::::::::::::::::::::::::::::::
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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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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 5-25-83

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

****
****

****
WATERSHED IDENTIFICATION CODE

CLEAR WATER POND 10-YR 24-HR
****

========== STORM INPUT ==========

QUESTION NO.		
1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	1.84 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 1

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH NUMBER OF STRUCTURES

1 1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.040
.20	.040	*	.30	.040
.40	.040	*	.50	.040
.60	.040	*	.70	.040
.80	.040	*	.90	.040
1.00	.040	*	1.10	.048
1.20	.048	*	1.30	.048
1.40	.048	*	1.50	.048

1.60	.048	*	1.70	.048
1.80	.048	*	1.90	.048
2.00	.048	*	2.10	.048
2.20	.048	*	2.30	.048
2.40	.048	*	2.50	.048
2.60	.048	*	2.70	.048
2.80	.048	*	2.90	.048
3.00	.048	*	3.10	.056
3.20	.056	*	3.30	.056
3.40	.056	*	3.50	.056
3.60	.056	*	3.70	.056
3.80	.056	*	3.90	.056
4.00	.056	*	4.10	.064
4.20	.064	*	4.30	.064
4.40	.064	*	4.50	.064
4.60	.064	*	4.70	.064
4.80	.064	*	4.90	.064
5.00	.064	*	5.10	.064
5.20	.064	*	5.30	.064
5.40	.064	*	5.50	.064
5.60	.064	*	5.70	.064
5.80	.064	*	5.90	.064
6.00	.064	*	6.10	.080
6.20	.080	*	6.30	.080
6.40	.080	*	6.50	.080
6.60	.080	*	6.70	.080
6.80	.080	*	6.90	.080
7.00	.080	*	7.10	.080
7.20	.080	*	7.30	.080
7.40	.080	*	7.50	.080
7.60	.080	*	7.70	.080
7.80	.080	*	7.90	.080
8.00	.080	*	8.10	.104
8.20	.104	*	8.30	.104
8.40	.104	*	8.50	.104
8.60	.112	*	8.70	.112
8.80	.112	*	8.90	.112
9.00	.112	*	9.10	.128
9.20	.128	*	9.30	.128
9.40	.128	*	9.50	.128
9.60	.144	*	9.70	.144
9.80	.144	*	9.90	.144
10.00	.144	*	10.10	.184
10.20	.184	*	10.30	.184
10.40	.184	*	10.50	.184
10.60	.248	*	10.70	.248
10.80	.248	*	10.90	.248
11.00	.248	*	11.10	.385
11.20	.385	*	11.30	.385
11.40	.385	*	11.50	.385
11.60	3.046	*	11.70	3.046
11.80	3.046	*	11.90	3.046
12.00	3.045	*	12.10	.577
12.20	.577	*	12.30	.577
12.40	.577	*	12.50	.577
12.60	.297	*	12.70	.297
12.80	.297	*	12.90	.297
13.00	.297	*	13.10	.216
13.20	.216	*	13.30	.216
13.40	.216	*	13.50	.216

13.60	.168	*	13.70	.168
13.80	.168	*	13.90	.168
14.00	.168	*	14.10	.120
14.20	.120	*	14.30	.120
14.40	.120	*	14.50	.120
14.60	.120	*	14.70	.120
14.80	.120	*	14.90	.120
15.00	.120	*	15.10	.120
15.20	.120	*	15.30	.120
15.40	.120	*	15.50	.120
15.60	.120	*	15.70	.120
15.80	.120	*	15.90	.120
16.00	.120	*	16.10	.072
16.20	.072	*	16.30	.072
16.40	.072	*	16.50	.072
16.60	.072	*	16.70	.072
16.80	.072	*	16.90	.072
17.00	.072	*	17.10	.072
17.20	.072	*	17.30	.072
17.40	.072	*	17.50	.072
17.60	.072	*	17.70	.072
17.80	.072	*	17.90	.072
18.00	.072	*	18.10	.072
18.20	.072	*	18.30	.072
18.40	.072	*	18.50	.072
18.60	.072	*	18.70	.072
18.80	.072	*	18.90	.072
19.00	.072	*	19.10	.072
19.20	.072	*	19.30	.072
19.40	.072	*	19.50	.072
19.60	.072	*	19.70	.072
19.80	.072	*	19.90	.072
20.00	.072	*	20.10	.048
20.20	.048	*	20.30	.048
20.40	.048	*	20.50	.048
20.60	.048	*	20.70	.048
20.80	.048	*	20.90	.048
21.00	.048	*	21.10	.048
21.20	.048	*	21.30	.048
21.40	.048	*	21.50	.048
21.60	.048	*	21.70	.048
21.80	.048	*	21.90	.048
22.00	.048	*	22.10	.048
22.20	.048	*	22.30	.048
22.40	.048	*	22.50	.048
22.60	.048	*	22.70	.048
22.80	.048	*	22.90	.048
23.00	.048	*	23.10	.048
23.20	.048	*	23.30	.048
23.40	.048	*	23.50	.048
23.60	.048	*	23.70	.048

* *

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	2.16	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	3.05	1.84

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	1.84	INCHES
RUNOFF VOLUME	=	.3312	ACRE-FT
PEAK DISCHARGE	=	3.0457	CFS
AREA	=	2.1600	ACRES
TIME OF PEAK DISCHARGE	=	11.70	HRS

*** RUN COMPLETED ****

25-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
*****************************************************************************
*      (program name)              * SEDIMOT S/N  : 1353220014              *
*                                  * HMVersion    :  3.20                   *
*    (program description)         * Date         : 11/19/92                *
*                                  * Time         : 16:53:58                *
*                                  * Input file   : CL1                     *
*                                  * Output file  : CLEAR                   *
*                                  *                                        *
*                                  *                                        *
*****************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

```
::::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::::
:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
::::::::::::::::::::::::::::::::::::::::::
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```

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```
*************************************************************
*************************************************************

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      VERSION DATE 5-25-83

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      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL

*************************************************************
*************************************************************


            ********************************************
                 WATERSHED IDENTIFICATION CODE
                 -----------------------------
                 CLEAR WATER POND 25-YR 6-HR
            ********************************************


========================== STORM  INPUT ==========================

QUESTION
  NO.

   1. STORM TYPE -                                  SCS'S TYPE 2
   2. RAINFALL DEPTH -                                1.62 INCHES
   3. STORM DURATION -                                6.00 HOURS
   4. TIME INCREMENT -                                 .10 HOURS

=====================================================================


========================= WATERSHED DATA =========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 1
```

2. JUNCTION NUMBER OF BRANCHES

1 1

COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.161
.20	.161	*	.30	.161
.40	.161	*	.50	.161
.60	.181	*	.70	.181
.80	.181	*	.90	.181
1.00	.181	*	1.10	.231
1.20	.231	*	1.30	.231
1.40	.231	*	1.50	.231

1.60	.311	*	1.70	.311
1.80	.311	*	1.90	.311
2.00	.311	*	2.10	.482
2.20	.482	*	2.30	.482
2.40	.482	*	2.50	.482
2.60	3.814	*	2.70	3.814
2.80	3.814	*	2.90	3.814
3.00	3.814	*	3.10	.723
3.20	.723	*	3.30	.723
3.40	.723	*	3.50	.723
3.60	.371	*	3.70	.371
3.80	.371	*	3.90	.371
4.00	.371	*	4.10	.271
4.20	.271	*	4.30	.271
4.40	.271	*	4.50	.271
4.60	.211	*	4.70	.211
4.80	.211	*	4.90	.211
5.00	.211	*	5.10	.151
5.20	.151	*	5.30	.151
5.40	.151	*	5.50	.151
5.60	.151	*	5.70	.151

* *

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	2.16	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	3.81	1.62

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	1.62	INCHES
RUNOFF VOLUME	=	.2916	ACRE-FT
PEAK DISCHARGE	=	3.8145	CFS
AREA	=	2.1600	ACRES
TIME OF PEAK DISCHARGE	=	2.90	HRS

25-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
*                                    * HMVersion    :  3.20                   *
*      (program description)         * Date         : 11/19/92                *
*                                    * Time         : 16:55:28                *
*                                    * Input file   : CL1                     *
*                                    * Output file  : CLEAR                   *
*                                    *                                        *
*                                    *                                        *
*******************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

```
::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
:::                                  :::
:::  Full Microcomputer Implementation :::
:::                by                :::
:::       Haestad Methods, Inc.      :::
:::                                  :::
::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
```

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****
****

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****
****

****

WATERSHED IDENTIFICATION CODE

CLEAR WATER POND 25-YR 24-HR

****

========== STORM INPUT ==========

QUESTION NO.		
1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	2.20 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 1

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH NUMBER OF STRUCTURES

1 1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.048
.20	.048	*	.30	.048
.40	.048	*	.50	.048
.60	.048	*	.70	.048
.80	.048	*	.90	.048
1.00	.048	*	1.10	.057
1.20	.057	*	1.30	.057
1.40	.057	*	1.50	.057

1.60	.057	*	1.70	.057
1.80	.057	*	1.90	.057
2.00	.057	*	2.10	.057
2.20	.057	*	2.30	.057
2.40	.057	*	2.50	.057
2.60	.057	*	2.70	.057
2.80	.057	*	2.90	.057
3.00	.057	*	3.10	.067
3.20	.067	*	3.30	.067
3.40	.067	*	3.50	.067
3.60	.067	*	3.70	.067
3.80	.067	*	3.90	.067
4.00	.067	*	4.10	.077
4.20	.077	*	4.30	.077
4.40	.077	*	4.50	.077
4.60	.077	*	4.70	.077
4.80	.077	*	4.90	.077
5.00	.077	*	5.10	.077
5.20	.077	*	5.30	.077
5.40	.077	*	5.50	.077
5.60	.077	*	5.70	.077
5.80	.077	*	5.90	.077
6.00	.077	*	6.10	.096
6.20	.096	*	6.30	.096
6.40	.096	*	6.50	.096
6.60	.096	*	6.70	.096
6.80	.096	*	6.90	.096
7.00	.096	*	7.10	.096
7.20	.096	*	7.30	.096
7.40	.096	*	7.50	.096
7.60	.096	*	7.70	.096
7.80	.096	*	7.90	.096
8.00	.096	*	8.10	.125
8.20	.125	*	8.30	.125
8.40	.125	*	8.50	.125
8.60	.134	*	8.70	.134
8.80	.134	*	8.90	.134
9.00	.134	*	9.10	.153
9.20	.153	*	9.30	.153
9.40	.153	*	9.50	.153
9.60	.172	*	9.70	.172
9.80	.172	*	9.90	.172
10.00	.173	*	10.10	.220
10.20	.220	*	10.30	.220
10.40	.220	*	10.50	.220
10.60	.297	*	10.70	.297
10.80	.297	*	10.90	.297
11.00	.297	*	11.10	.460
11.20	.460	*	11.30	.460
11.40	.460	*	11.50	.461
11.60	3.642	*	11.70	3.642
11.80	3.642	*	11.90	3.642
12.00	3.641	*	12.10	.690
12.20	.690	*	12.30	.690
12.40	.690	*	12.50	.690
12.60	.355	*	12.70	.355
12.80	.355	*	12.90	.355
13.00	.355	*	13.10	.259
13.20	.259	*	13.30	.259
13.40	.259	*	13.50	.259

13.60	.201	*	13.70	.201
13.80	.201	*	13.90	.201
14.00	.201	*	14.10	.144
14.20	.144	*	14.30	.144
14.40	.144	*	14.50	.144
14.60	.144	*	14.70	.144
14.80	.144	*	14.90	.144
15.00	.144	*	15.10	.144
15.20	.144	*	15.30	.144
15.40	.144	*	15.50	.144
15.60	.144	*	15.70	.144
15.80	.144	*	15.90	.144
16.00	.144	*	16.10	.086
16.20	.086	*	16.30	.086
16.40	.086	*	16.50	.086
16.60	.086	*	16.70	.086
16.80	.086	*	16.90	.086
17.00	.086	*	17.10	.086
17.20	.086	*	17.30	.086
17.40	.086	*	17.50	.086
17.60	.086	*	17.70	.086
17.80	.086	*	17.90	.086
18.00	.086	*	18.10	.086
18.20	.086	*	18.30	.086
18.40	.086	*	18.50	.086
18.60	.086	*	18.70	.086
18.80	.086	*	18.90	.086
19.00	.086	*	19.10	.086
19.20	.086	*	19.30	.086
19.40	.086	*	19.50	.086
19.60	.086	*	19.70	.086
19.80	.086	*	19.90	.086
20.00	.086	*	20.10	.057
20.20	.057	*	20.30	.057
20.40	.057	*	20.50	.058
20.60	.057	*	20.70	.057
20.80	.057	*	20.90	.057
21.00	.057	*	21.10	.057
21.20	.057	*	21.30	.057
21.40	.057	*	21.50	.057
21.60	.057	*	21.70	.057
21.80	.057	*	21.90	.057
22.00	.057	*	22.10	.057
22.20	.057	*	22.30	.057
22.40	.057	*	22.50	.057
22.60	.057	*	22.70	.057
22.80	.057	*	22.90	.057
23.00	.057	*	23.10	.057
23.20	.057	*	23.30	.057
23.40	.057	*	23.50	.057
23.60	.057	*	23.70	.057

* *

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	2.16	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	3.64	2.20

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.20	INCHES
RUNOFF VOLUME	=	.3960	ACRE-FT
PEAK DISCHARGE	=	3.6416	CFS
AREA	=	2.1600	ACRES
TIME OF PEAK DISCHARGE	=	11.90	HRS

*** RUN COMPLETED ****

100-YEAR, 6-HOUR WATERSHED HYDROGRAPH

```
*****************************************************************************
*      (program name)                 * SEDIMOT S/N  : 1353220014            *
*                                     * HMVersion    :  3.20                 *
*    (program description)            * Date         : 11/19/92              *
*                                     * Time         : 16:56:12              *
*                                     * Input file   : CL1                   *
*                                     * Output file  : CLEAR                 *
*                                     *                                      *
*                                     *                                      *
*****************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

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::::::::::::::::::::::::::::::::::::::::
::::::::::::::::::::::::::::::::::::::::
:::                                  :::
:::  Full Microcomputer Implementation :::
:::                by                :::
:::       Haestad Methods, Inc.      :::
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      VERSION DATE 5-25-83

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*************************************************************
*************************************************************

          ********************************************
              WATERSHED IDENTIFICATION CODE
              -----------------------------
              CLEAR WATER POND 100-YR 6-HR
          ********************************************

============================ STORM  INPUT ============================

QUESTION
  NO.

   1. STORM TYPE -                                    SCS'S TYPE 2
   2. RAINFALL DEPTH -                                  2.05 INCHES
   3. STORM DURATION -                                  6.00 HOURS
   4. TIME INCREMENT -                                   .10 HOURS

=====================================================================

========================== WATERSHED DATA ==========================

QUESTION
  NO.
   1. NUMBER OF JUNCTIONS - 1
```

2. JUNCTION NUMBER OF BRANCHES

1 1

COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.203
.20	.203	*	.30	.203
.40	.203	*	.50	.203
.60	.229	*	.70	.229
.80	.229	*	.90	.229
1.00	.229	*	1.10	.292
1.20	.292	*	1.30	.292
1.40	.292	*	1.50	.292

1.60	.394	*	1.70	.394
1.80	.394	*	1.90	.394
2.00	.394	*	2.10	.610
2.20	.610	*	2.30	.610
2.40	.610	*	2.50	.610
2.60	4.827	*	2.70	4.827
2.80	4.827	*	2.90	4.827
3.00	4.826	*	3.10	.915
3.20	.915	*	3.30	.915
3.40	.915	*	3.50	.915
3.60	.470	*	3.70	.470
3.80	.470	*	3.90	.470
4.00	.470	*	4.10	.343
4.20	.343	*	4.30	.343
4.40	.343	*	4.50	.343
4.60	.267	*	4.70	.267
4.80	.267	*	4.90	.267
5.00	.267	*	5.10	.191
5.20	.191	*	5.30	.191
5.40	.191	*	5.50	.191
5.60	.191	*	5.70	.191

* *

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	2.16	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	4.83	2.05

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	6.00	HOURS
PRECIPITATION DEPTH	=	2.05	INCHES
RUNOFF VOLUME	=	.3690	ACRE-FT
PEAK DISCHARGE	=	4.8269	CFS
AREA	=	2.1600	ACRES
TIME OF PEAK DISCHARGE	=	2.90	HRS

100-YEAR, 24-HOUR WATERSHED HYDROGRAPH

```
*******************************************************************************
*        (program name)              * SEDIMOT S/N  : 1353220014              *
*                                    * HMVersion    :  3.20                   *
*      (program description)         * Date         : 11/19/92                *
*                                    * Time         : 16:57:05                *
*                                    * Input file   : CL1                     *
*                                    * Output file  : CLEAR                   *
*                                    *                                        *
*                                    *                                        *
*******************************************************************************
```

```
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX   XXXXXXX
X     X  X        X     X    X    XX   XX  X     X     X
X        X        X     X    X    X X X X  X     X     X
 XXXXX   XXXXX    X     X    X    X  X  X  X     X     X
      X  X        X     X    X    X     X  X     X     X
X     X  X        X     X    X    X     X  X     X     X
 XXXXX   XXXXXXX  XXXXXX   XXXXX  X     X   XXXXX      X
```

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:::                                    :::
:::  Full Microcomputer Implementation :::
:::                 by                 :::
:::        Haestad Methods, Inc.       :::
:::                                    :::
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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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 5-25-83

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

****
****

****
WATERSHED IDENTIFICATION CODE

CLEAR WATER POND 100-YR 24-HR
****

========== STORM INPUT ==========

QUESTION NO.		
1.	STORM TYPE -	SCS'S TYPE 2
2.	RAINFALL DEPTH -	2.40 INCHES
3.	STORM DURATION -	24.00 HOURS
4.	TIME INCREMENT -	.10 HOURS

==========

========== WATERSHED DATA ==========

QUESTION
NO.
1. NUMBER OF JUNCTIONS - 1

2. JUNCTION NUMBER OF BRANCHES

1 1

3. COMPUTATION - HYDROLOGY ONLY

==========

========== STRUCTURE INPUT FOR JUNCTION #1 ==========

BRANCH	NUMBER OF STRUCTURES
1	1

==========

========== BETWEEN STRUCTURE ROUTING PARAMETERS ==========

BRANCH NO.	BETWEEN	PARAMETERS 1 TIME	2 MUSK. K	3 MUSK. X,
1	PRIOR J OR S TO STRUCTURE 1	.00	.00	.00

==========

========== STRUCTURE DATA FOR JUNCTION #1 ==========

QUESTION NO.

1. NUMBER OF SUBWATERSHEDS - 1

==========

JUNCTION 1, BRANCH 1, STRUCTURE 1

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

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

TIME (HR)	DISCHARGE (CFS)	******* *	TIME (HR)	DISCHARGE (CFS)
.00	.000	*	.10	.052
.20	.052	*	.30	.052
.40	.052	*	.50	.052
.60	.052	*	.70	.052
.80	.052	*	.90	.052
1.00	.052	*	1.10	.063
1.20	.063	*	1.30	.063
1.40	.063	*	1.50	.063

1.60	.063	*	1.70	.063
1.80	.063	*	1.90	.063
2.00	.063	*	2.10	.063
2.20	.063	*	2.30	.063
2.40	.063	*	2.50	.063
2.60	.063	*	2.70	.063
2.80	.063	*	2.90	.063
3.00	.063	*	3.10	.073
3.20	.073	*	3.30	.073
3.40	.073	*	3.50	.073
3.60	.073	*	3.70	.073
3.80	.073	*	3.90	.073
4.00	.073	*	4.10	.084
4.20	.084	*	4.30	.084
4.40	.084	*	4.50	.084
4.60	.084	*	4.70	.084
4.80	.084	*	4.90	.084
5.00	.084	*	5.10	.084
5.20	.084	*	5.30	.084
5.40	.084	*	5.50	.084
5.60	.084	*	5.70	.084
5.80	.084	*	5.90	.084
6.00	.084	*	6.10	.105
6.20	.105	*	6.30	.105
6.40	.105	*	6.50	.105
6.60	.105	*	6.70	.105
6.80	.105	*	6.90	.105
7.00	.105	*	7.10	.105
7.20	.105	*	7.30	.105
7.40	.105	*	7.50	.105
7.60	.105	*	7.70	.105
7.80	.105	*	7.90	.105
8.00	.105	*	8.10	.136
8.20	.136	*	8.30	.136
8.40	.136	*	8.50	.136
8.60	.146	*	8.70	.146
8.80	.146	*	8.90	.146
9.00	.146	*	9.10	.167
9.20	.167	*	9.30	.167
9.40	.167	*	9.50	.167
9.60	.188	*	9.70	.188
9.80	.188	*	9.90	.188
10.00	.188	*	10.10	.240
10.20	.240	*	10.30	.240
10.40	.240	*	10.50	.240
10.60	.324	*	10.70	.324
10.80	.324	*	10.90	.324
11.00	.324	*	11.10	.502
11.20	.502	*	11.30	.502
11.40	.502	*	11.50	.503
11.60	3.973	*	11.70	3.973
11.80	3.973	*	11.90	3.973
12.00	3.972	*	12.10	.753
12.20	.753	*	12.30	.753
12.40	.753	*	12.50	.753
12.60	.387	*	12.70	.387
12.80	.387	*	12.90	.387
13.00	.387	*	13.10	.282
13.20	.282	*	13.30	.282
13.40	.282	*	13.50	.282

13.60	.220	*	13.70	.220
13.80	.220	*	13.90	.220
14.00	.220	*	14.10	.157
14.20	.157	*	14.30	.157
14.40	.157	*	14.50	.157
14.60	.157	*	14.70	.157
14.80	.157	*	14.90	.157
15.00	.157	*	15.10	.157
15.20	.157	*	15.30	.157
15.40	.157	*	15.50	.157
15.60	.157	*	15.70	.157
15.80	.157	*	15.90	.157
16.00	.157	*	16.10	.094
16.20	.094	*	16.30	.094
16.40	.094	*	16.50	.094
16.60	.094	*	16.70	.094
16.80	.094	*	16.90	.094
17.00	.094	*	17.10	.094
17.20	.094	*	17.30	.094
17.40	.094	*	17.50	.094
17.60	.094	*	17.70	.094
17.80	.094	*	17.90	.094
18.00	.094	*	18.10	.094
18.20	.094	*	18.30	.094
18.40	.094	*	18.50	.094
18.60	.094	*	18.70	.094
18.80	.094	*	18.90	.094
19.00	.094	*	19.10	.094
19.20	.094	*	19.30	.094
19.40	.094	*	19.50	.094
19.60	.094	*	19.70	.094
19.80	.094	*	19.90	.094
20.00	.094	*	20.10	.063
20.20	.063	*	20.30	.063
20.40	.063	*	20.50	.063
20.60	.063	*	20.70	.063
20.80	.063	*	20.90	.063
21.00	.063	*	21.10	.063
21.20	.063	*	21.30	.063
21.40	.063	*	21.50	.063
21.60	.063	*	21.70	.063
21.80	.063	*	21.90	.063
22.00	.063	*	22.10	.063
22.20	.063	*	22.30	.063
22.40	.063	*	22.50	.063
22.60	.063	*	22.70	.063
22.80	.063	*	22.90	.063
23.00	.063	*	23.10	.063
23.20	.063	*	23.30	.063
23.40	.063	*	23.50	.063
23.60	.063	*	23.70	.063

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    JUNCTION  1, BRANCH  1, STRUCTURE  1
* * * * * * * * * * * * * * * * * * * * * * * *
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*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER S	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X,	UNIT HYDRO
1	2.16	100.00	.000	.000	.000	.00	.0

* * * COMPUTED VALUES FOR INDIVIDUAL WATERSHEDS * * *

WATERSHED	PEAK FLOW (CFS)	RUNOFF (INCHES)
1	3.97	2.40

***** SUMMARY TABLE FOR TOTAL WATERSHED *****

STORM DURATION	=	24.00	HOURS
PRECIPITATION DEPTH	=	2.40	INCHES
RUNOFF VOLUME	=	.4320	ACRE-FT
PEAK DISCHARGE	=	3.9727	CFS
AREA	=	2.1600	ACRES
TIME OF PEAK DISCHARGE	=	11.70	HRS

*** RUN COMPLETED ****