

MEMO



TO: City Engineer's Office
455 N. Main
Wichita, KS 67202
ATTN: V.R. Huang, P.E.

PROJECT NO. 36-97012-1-3917
PROJECT: Bradley Fair 3rd Addition
and SWD #119
DATE: January 17, 1997

COPIES TO:

36-96109-042 thru BER

FROM: Michael W. Berry

REFERENCE: Drainage Plan

PLEASE ADVISE IMMEDIATELY OF ANY MISCONCEPTIONS OR OMISSIONS YOU BELIEVE TO BE CONTAINED HEREIN.

Transmitted herewith is the drainage plan for the referenced project.

The computations for the pond system made for Bradley Fair 2nd Addition, originally submitted December 18, 1995, have been revised herein to reflect the actual design information for Bradley Fair Parkway Phase 2 (City Proj. 472-82732) and for Storm Water Drain No. 119 (City Proj. 468-82602). These changes are as follows:

1. Drainage Area for Pond No. 1 has been reduced.
 - a. Bradley Fair 3rd Addition Lot 1 has been diverted to 21st Street.
 - b. Nearly all of Bradley Fair 3rd Addition Lot 2 has been diverted to Middle Branch Gypsum Creek.
 - c. Street drainage for Bradley Fair Parkway has been diverted from Pond No. 1 to Pond No. 2.
2. Drainage outlet pipe for Pond No. 1 has been reduced to 48-inch in accordance with reduction in drainage area.
3. Reserve area adjacent to Pond Nos. 2 and 3 is proposed to be increased in size, and the contributing area to these ponds has been increased accordingly.

The proposed ponds and control structures for Pond Nos. 2, 3 and 4 are based on preliminary information only. These are subject to change as design development by the platting engineer for those properties takes place. The contributing areas for each pond from Bradley Fair 3rd Addition are tabulated on the Drainage Plan drawing (attached).

A revised hydrologic model (HEC-1) reflecting the design of SWD 119 and Bradley Fair Parkway Phase 2 is attached.

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E &100 (s16.6H &18D &12A &181F*****
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* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* MAY 1991 *
* VERSION 4.0.1E *
* Lahey F77L-EM/32 version 5.01 *
* Dodson & Associates, Inc. *
* RUN DATE 01/16/97 TIME 12:18:35 *
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*
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 551-1748 *
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X X XXXXXX XXXX X
X X X X X XX
X X X X X
XXXXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXX XXXX XXX
    
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
 THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
 DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

1 ID Bradley Fair Drainage Plan
 2 ID 5-, 10-, 25-, & 100-Year Storms
 3 ID Professional Engineering Consultants
 4 ID Wichita, Ks
 5 ID DRC 11/20/95
 6 ID REVISED MWB 12/02/96
 7 ID REVISED PDM 1/17/97
 8 ID File: T:\DAR\HEC1\BRADLEY8.IH1
 9 ID PEC PROJ NO 32-96109-042
 10 IT 6 01FEB95 0600 0 02FEB95 1154
 11 IN 30 01FEB95 0600
 12 IO 3 0
 13 JR PREC 0.5902 0.6875 0.8125 1.000

*DIAGRAM

*
 * REVISED CONTRIBUTING DRAINAGE AREA TO POND NO. 1 FROM 57 AC TO 40 AC AS A
 * RESULT OF CHANGES MADE IN DESIGN OF BRADLEY FAIR PARKWAY
 * REVISED POND #2 & #3 STATIC ELEVATION TO CONCUR WITH FUTURE ROAD TO SOUTH
 * OUTLET FROM POND #1 CHANGED TO 48" RCP AS A RESULT OF REVISED DRAINAGE AREA
 *

14 KK UNDEV UNDEVELOPED CONDITIONS
 15 BA .0625
 16 PB 7.8
 17 PC 0.08 .09 .10 .11 .12 .133 .147 .163 .181 .204
 18 PC .235 .283 .663 .735 .772 .799 .820 .835 .850 .865
 19 PC .880 .890 .900 .910 .916 .925 .934 .943 .952 .958
 20 PC .964 .970 .976 .982 .988 .994 1.000
 21 LS 0 76 0
 22 UD 0.20
 *
 *

23 KK BASIN1 COMMERCIAL DEVELOPED CONDITIONS
 24 BA .0625
 25 PB 7.8
 26 PC 0.08 .09 .10 .11 .12 .133 .147 .163 .181 .204
 27 PC .235 .283 .663 .735 .772 .799 .820 .835 .850 .865
 28 PC .880 .890 .900 .910 .916 .925 .934 .943 .952 .958
 29 PC .964 .970 .976 .982 .988 .994 1.000
 30 LS 0 92 0
 31 UD 0.15
 *
 *

* 48" OUTLET PIPE FOR POND #1
 * REVISED 1/17/97 U/S F/L = 195.0
 * 6' X 4' CONTROL STRUCTURE
 * WEIR ELEV 200.00 TARGET DWS 100 YR = 202.0

32 KK POND1
 * PLAN 3 BIG ISLAND, NO ENCROACHMENT ON LOT 3
 33 RS 1 ELEV 200.
 34 SA 4.20 4.67
 35 SE 200. 202.
 36 SQ 0 20 60 110 145 150 155 165 200

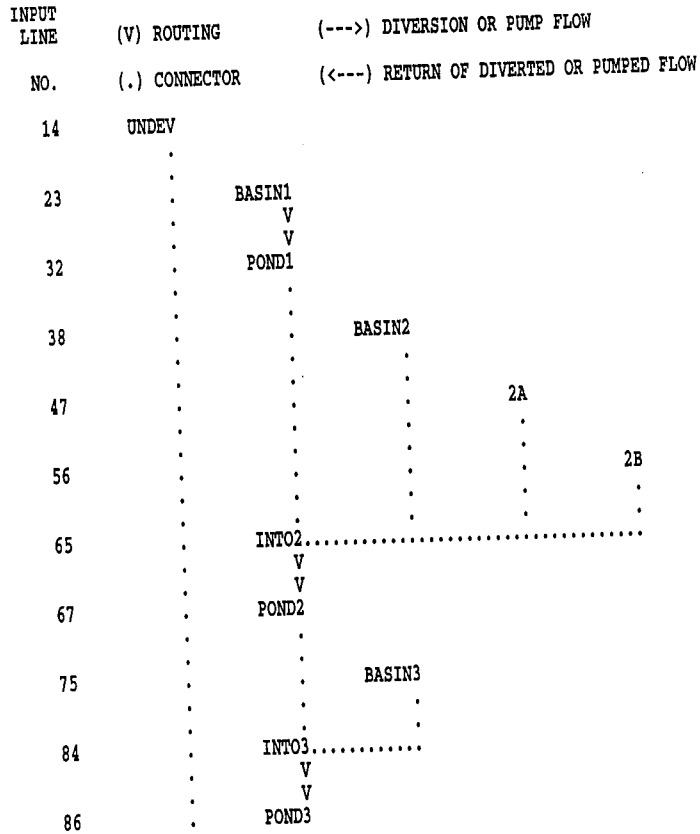
HEC-1 INPUT

LINE	ID	1	2	3	4	5	6	7	8	9	10
37	SE	200	200.4	200.8	201.4	201.6	201.8	202.2	203.	206	
	*										
	*										
	*	REVISED -- ADDED BASINS 2A AND 2B TO TOTAL DRAINAGE AREA FOR BASIN 2									
38	KK	BASIN2 COMMERCIAL DEVELOPED CONDITIONS									
39	BA	0.004									
40	PB	7.8									
41	PC	0.08	.09	.10	.11	.12	.133	.147	.163	.181	.204
42	PC	.235	.283	.663	.735	.772	.799	.820	.835	.850	.865
43	PC	.880	.890	.900	.910	.916	.925	.934	.943	.952	.958
44	PC	.964	.970	.976	.982	.988	.994	1.000			
45	LS	0	92	0							
46	UD	0.15									
	*										
47	KK	2A COMMERCIAL DEVELOPED CONDITIONS									
48	BA	.0066									
49	PB	7.8									
50	PC	0.08	.09	.10	.11	.12	.133	.147	.163	.181	.204
51	PC	.235	.283	.663	.735	.772	.799	.820	.835	.850	.865
52	PC	.880	.890	.900	.910	.916	.925	.934	.943	.952	.958
53	PC	.964	.970	.976	.982	.988	.994	1.000			
54	LS	0	96	0							
55	UD	0.15									
	*										
56	KK	2B COMMERCIAL DEVELOPED CONDITIONS									
57	BA	.001									
58	PB	7.8									
59	PC	0.08	.09	.10	.11	.12	.133	.147	.163	.181	.204
60	PC	.235	.283	.663	.735	.772	.799	.820	.835	.850	.865
61	PC	.880	.890	.900	.910	.916	.925	.934	.943	.952	.958
62	PC	.964	.970	.976	.982	.988	.994	1.000			
63	LS	0	98	0							
64	UD	.09									
	*										
	*										
65	KK	INTO2 COMBINE HYDROGRAPHS FOR BASIN 2, 2A, 2B AND OUT OF POND #1									
66	HC	4									
	*										
	*										
	*	5' RIPRAP CHANNEL SPILLWAY FOR POND #2									
67	KK	POND2									
68	RS	1	ELEV	192							
69	SA	0.5	0.8								
70	SE	192	194								
71	SQ	0	40	60	80	90	100	110	120	130	140
72	SQ	150	160	170	180	190	200				
73	SE	192	192.95	193.18	193.35	193.42	193.5	193.56	193.61	193.67	193.72
74	SE	193.78	193.84	193.89	193.93	193.98	194.02				
	*										
	*										

HEC-1 INPUT

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
75	KK BASIN3 COMMERCIAL DEVELOPED CONDITIONS
76	BA .00456
77	PB 7.8
78	PC 0.08 .09 .10 .11 .12 .133 .147 .163 .181 .204
79	PC .235 .283 .663 .735 .772 .799 .820 .835 .850 .865
80	PC .880 .890 .900 .910 .916 .925 .934 .943 .952 .958
81	PC .964 .970 .976 .982 .988 .994 1.000
82	LS 0 92 0
83	UD 0.15 * *
84	KK INTO3 COMBINE HYDROGRAPHS FOR BASIN 3 AND OUT OF POND #2
85	HC 2 * * * 5' RIPRAP CHANNEL SPILLWAY FOR POND #3
86	KK POND3
87	RS 1 ELEV 184.0
88	SA 0.5 0.8
89	SE 184 187
90	SQ 0 40 60 80 90 100 110 120 130 140
91	SQ 150 160 170 180 190 200
92	SE 184 184.95 185.18 185.35 185.42 185.5 185.56 185.61 185.67 185.72
93	SE 185.78 185.84 185.89 185.93 185.98 186.02 * *
94	ZZ

SCHMATIC DIAGRAM OF STREAM NETWORK



(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*   MAY 1991 *
*   VERSION 4.0.1E *
*   Lahey F77L-EM/32 version 5.01 *
*   Dodson & Associates, Inc. *
* RUN DATE 01/16/97 TIME 12:18:35 *
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*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
*   609 SECOND STREET *
*   DAVIS, CALIFORNIA 95616 *
*   (916) 551-1748 *
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Bradley Fair Drainage Plan
5-, 10-, 25-, & 100-Year Storms
Professional Engineering Consultants
Wichita, Ks
DRC 11/20/95
REVISED MWB 12/02/96
REVISED PDM 1/17/97
File: T:\DAR\HEC1\BRADLEY8.IH1
PEC PROJ NO 32-96109-042

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12 IO OUTPUT CONTROL VARIABLES
      IPRINT      3 PRINT CONTROL
      IPLOT       0 PLOT CONTROL
      QSCAL       0. HYDROGRAPH PLOT SCALE

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IT HYDROGRAPH TIME DATA
    NMIN      6 MINUTES IN COMPUTATION INTERVAL
    IDATE     1FEB95 STARTING DATE
    ITIME     0600 STARTING TIME
    NQ        300 NUMBER OF HYDROGRAPH ORDINATES
    NDDATE    2FEB95 ENDING DATE
    NDTIME    1154 ENDING TIME
    ICENT     19 CENTURY MARK

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COMPUTATION INTERVAL 0.10 HOURS
TOTAL TIME BASE 29.90 HOURS

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ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-FEET
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

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JP MULTI-PLAN OPTION
   NPLAN 1 NUMBER OF PLANS

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JR MULTI-RATIO OPTION
   RATIOS OF PRECIPITATION
   0.59 0.69 0.81 1.00

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*****
* UNDEV * UNDEVELOPED CONDITIONS
* * *
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11 IN TIME DATA FOR INPUT TIME SERIES
      JKMIN      30 TIME INTERVAL IN MINUTES
      JKDATE     1FEB95 STARTING DATE
      JKTIME     600 STARTING TIME

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SUBBASIN RUNOFF DATA

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15 BA SUBBASIN CHARACTERISTICS
      TAREA 0.06 SUBBASIN AREA

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PRECIPITATION DATA

30 LS SCS LOSS RATE
 STRTL 0.17 INITIAL ABSTRACTION
 CRVNBR 92.00 CURVE NUMBER
 RTIMP 0.00 PERCENT IMPERVIOUS AREA

31 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG 0.15 LAG

UNIT HYDROGRAPH
 10 END-OF-PERIOD ORDINATES

71. 152. 103. 43. 19. 8. 4. 2. 1. 0.

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.95, TOTAL EXCESS = 6.85

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
241.	6.00	6-HR	24-HR	72-HR	29.90-HR	
		(CFS)	37.	12.	9.	9.
		(INCHES)	5.534	6.846	6.846	6.846
		(AC-FT)	18.	23.	23.	23.

CUMULATIVE AREA = 0.06 SQ MI

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

HYDROGRAPH AT STATION BASIN1
 FOR PLAN 1, RATIO = 0.59

TOTAL RAINFALL = 4.60, TOTAL LOSS = 0.90, TOTAL EXCESS = 3.70

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
134.	6.00	6-HR	24-HR	72-HR	29.90-HR	
		(CFS)	20.	6.	5.	5.
		(INCHES)	3.026	3.703	3.703	3.703
		(AC-FT)	10.	12.	12.	12.

CUMULATIVE AREA = 0.06 SQ MI

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

HYDROGRAPH AT STATION BASIN1
 FOR PLAN 1, RATIO = 0.69

TOTAL RAINFALL = 5.36, TOTAL LOSS = 0.92, TOTAL EXCESS = 4.44

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
159.	6.00	6-HR	24-HR	72-HR	29.90-HR	
		(CFS)	24.	7.	6.	6.
		(INCHES)	3.622	4.444	4.444	4.444
		(AC-FT)	12.	15.	15.	15.

CUMULATIVE AREA = 0.06 SQ MI

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

HYDROGRAPH AT STATION BASIN1
 FOR PLAN 1, RATIO = 0.81

TOTAL RAINFALL = 6.34, TOTAL LOSS = 0.94, TOTAL EXCESS = 5.40

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
192.	6.00	6-HR	24-HR	72-HR	29.90-HR	
		(CFS)	29.	9.	7.	7.
		(INCHES)	4.388	5.402	5.402	5.402
		(AC-FT)	15.	18.	18.	18.

CUMULATIVE AREA = 0.06 SQ MI

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

HYDROGRAPH AT STATION BASIN1
 FOR PLAN 1, RATIO = 1.00

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.95, TOTAL EXCESS = 6.85

PEAK FLOW (CFS) 241.	TIME (HR) 6.00		MAXIMUM AVERAGE FLOW			
		(CFS)	6-HR	24-HR	72-HR	29.90-HR
		(INCHES)	37.	12.	9.	9.
		(AC-FT)	5.534	6.846	6.846	6.846
			18.	23.	23.	23.

CUMULATIVE AREA = 0.06 SQ MI

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32 KK * POND1 *
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HYDROGRAPH ROUTING DATA

33 RS	STORAGE ROUTING									
	NSTPS	1	NUMBER OF SUBREACHES							
	ITYP		ELEV TYPE OF INITIAL CONDITION							
	RSVRIC	200.00	INITIAL CONDITION							
	X	0.00	WORKING R AND D COEFFICIENT							
34 SA	AREA	4.2	4.7							
35 SE	ELEVATION	200.00	202.00							
36 SQ	DISCHARGE	0.	20.	60.	110.	145.	150.	155.	165.	200.
37 SE	ELEVATION	200.00	200.40	200.80	201.40	201.60	201.80	202.20	203.00	206.00

COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	8.87
ELEVATION	200.00	202.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	1.70	3.43	6.11	7.02	7.94	8.87	9.80	13.66	29.54
OUTFLOW	0.00	20.00	60.00	110.00	145.00	150.00	152.50	155.00	165.00	200.00
ELEVATION	200.00	200.40	200.80	201.40	201.60	201.80	202.00	202.20	203.00	206.00

*** ** ** ** *

HYDROGRAPH AT STATION POND1
FOR PLAN 1, RATIO = 0.59

PEAK FLOW (CFS) 69.	TIME (HR) 6.20		MAXIMUM AVERAGE FLOW			
		(CFS)	6-HR	24-HR	72-HR	29.90-HR
		(INCHES)	20.	6.	5.	5.
		(AC-FT)	2.964	3.703	3.703	3.703
			10.	12.	12.	12.

PEAK STORAGE (AC-FT) 4.	TIME (HR) 6.20		MAXIMUM AVERAGE STORAGE			
		(AC-FT)	6-HR	24-HR	72-HR	29.90-HR
			1.	0.	0.	0.

PEAK STAGE (FEET) 200.91	TIME (HR) 6.20		MAXIMUM AVERAGE STAGE			
		(FEET)	6-HR	24-HR	72-HR	29.90-HR
			200.33	200.11	200.09	200.09

CUMULATIVE AREA = 0.06 SQ MI

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HYDROGRAPH AT STATION POND1
FOR PLAN 1, RATIO = 0.69

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
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(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
83.	6.20	(CFS)	24.	7.	6.	6.
		(INCHES)	3.550	4.444	4.444	4.444
		(AC-FT)	12.	15.	15.	15.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
5.	6.20		2.	1.	0.	0.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
201.07	6.20		200.38	200.12	200.10	200.10

CUMULATIVE AREA = 0.06 SQ MI

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HYDROGRAPH AT STATION POND1
FOR PLAN 1, RATIO = 0.81

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
101.	6.20	(CFS)	29.	9.	7.	7.
		(INCHES)	4.305	5.401	5.402	5.402
		(AC-FT)	14.	18.	18.	18.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
6.	6.20		2.	1.	1.	1.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
201.29	6.20		200.45	200.15	200.12	200.12

CUMULATIVE AREA = 0.06 SQ MI

*** **

HYDROGRAPH AT STATION POND1
FOR PLAN 1, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
140.	6.20	(CFS)	37.	12.	9.	9.
		(INCHES)	5.438	6.845	6.846	6.846
		(AC-FT)	18.	23.	23.	23.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
7.	6.20		2.	1.	1.	1.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
201.57	6.20		200.54	200.18	200.15	200.15

CUMULATIVE AREA = 0.06 SQ MI

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* *
38 KK * BASIN2 * COMMERCIAL DEVELOPED CONDITIONS
* *

11 IN TIME DATA FOR INPUT TIME SERIES
JXMIN 30 TIME INTERVAL IN MINUTES
JXDATE 1FEB95 STARTING DATE
JXTIME 600 STARTING TIME

SUBBASIN RUNOFF DATA

39 BA SUBBASIN CHARACTERISTICS

0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

54 LS SCS LOSS RATE
 STRTL 0.08 INITIAL ABSTRACTION
 CRVNBR 96.00 CURVE NUMBER
 RTIMP 0.00 PERCENT IMPERVIOUS AREA

55 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG 0.15 LAG

UNIT HYDROGRAPH
 10 END-OF-PERIOD ORDINATES

8. 16. 11. 4. 2. 1. 0. 0. 0. 0.

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.48, TOTAL EXCESS = 7.32

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
26.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	4.	1.	1.	1.
		(INCHES)	5.808	7.321	7.321	7.321
		(AC-FT)	2.	3.	3.	3.

CUMULATIVE AREA = 0.01 SQ MI

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

HYDROGRAPH AT STATION 2A
 FOR PLAN 1, RATIO = 0.59

TOTAL RAINFALL = 4.60, TOTAL LOSS = 0.46, TOTAL EXCESS = 4.14

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
15.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	2.	1.	1.	1.
		(INCHES)	3.328	4.139	4.139	4.139
		(AC-FT)	1.	1.	1.	1.

CUMULATIVE AREA = 0.01 SQ MI

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

HYDROGRAPH AT STATION 2A
 FOR PLAN 1, RATIO = 0.69

TOTAL RAINFALL = 5.36, TOTAL LOSS = 0.47, TOTAL EXCESS = 4.89

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
18.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	3.	1.	1.	1.
		(INCHES)	3.919	4.893	4.893	4.893
		(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = 0.01 SQ MI

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

HYDROGRAPH AT STATION 2A
 FOR PLAN 1, RATIO = 0.81

TOTAL RAINFALL = 6.34, TOTAL LOSS = 0.47, TOTAL EXCESS = 5.86

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
21.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	3.	1.	1.	1.
		(INCHES)	4.676	5.864	5.864	5.864
		(AC-FT)	2.	2.	2.	2.

CUMULATIVE AREA = 0.01 SQ MI

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

HYDROGRAPH AT STATION 2A
 FOR PLAN 1, RATIO = 1.00

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.48, TOTAL EXCESS = 7.32

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
26.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	4.	1.	1.	1.
		(INCHES)	5.808	7.321	7.321	7.321
		(AC-FT)	2.	3.	3.	3.

CUMULATIVE AREA = 0.01 SQ MI

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56 KK * 2B * COMMERCIAL DEVELOPED CONDITIONS
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11 IN TIME DATA FOR INPUT TIME SERIES
      JXMIN 30 TIME INTERVAL IN MINUTES
      JXDATE 1FEB95 STARTING DATE
      JXTIME 600 STARTING TIME
    
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SUBBASIN RUNOFF DATA

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57 BA SUBBASIN CHARACTERISTICS
      TAREA 0.00 SUBBASIN AREA
    
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PRECIPITATION DATA

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58 PB STORM 7.80 BASIN TOTAL PRECIPITATION
    
```

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59 PI INCREMENTAL PRECIPITATION PATTERN
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.01 0.01 0.01 0.01 0.01
      0.01 0.01 0.01 0.01 0.01 0.08 0.08 0.08 0.08 0.08
      0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
      0.01 0.01 0.01 0.01 0.01 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
      0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
    
```

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63 LS SCS LOSS RATE
      STRTL 0.04 INITIAL ABSTRACTION
      CRVNER 98.00 CURVE NUMBER
      RTIMP 0.00 PERCENT IMPERVIOUS AREA
    
```

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64 UD SCS DIMENSIONLESS UNITGRAPH
      TLAG 0.09 LAG
    
```

UNIT HYDROGRAPH
7 END-OF-PERIOD ORDINATES

3. 3. 1. 0. 0. 0.

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.24, TOTAL EXCESS = 7.56

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
4.	6.00		6-HR	24-HR	72-HR	29.90-HR
		(CFS)	1.	0.	0.	0.
		(INCHES)	5.910	7.560	7.560	7.560
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = 0.00 SQ MI

*** **

HYDROGRAPH AT STATION 2B
FOR PLAN 1, RATIO = 0.59

TOTAL RAINFALL = 4.60, TOTAL LOSS = 0.24, TOTAL EXCESS = 4.37

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
2.	6.00	(CFS) 0.	0.	0.	0.
		(INCHES) 3.450	4.367	4.367	4.367
		(AC-FT) 0.	0.	0.	0.

CUMULATIVE AREA = 0.00 SQ MI

*** **

HYDROGRAPH AT STATION 2B
FOR PLAN 1, RATIO = 0.69

TOTAL RAINFALL = 5.36, TOTAL LOSS = 0.24, TOTAL EXCESS = 5.13

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
3.	6.00	(CFS) 0.	0.	0.	0.
		(INCHES) 4.036	5.125	5.125	5.125
		(AC-FT) 0.	0.	0.	0.

CUMULATIVE AREA = 0.00 SQ MI

*** **

HYDROGRAPH AT STATION 2B
FOR PLAN 1, RATIO = 0.81

TOTAL RAINFALL = 6.34, TOTAL LOSS = 0.24, TOTAL EXCESS = 6.10

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
3.	6.00	(CFS) 1.	0.	0.	0.
		(INCHES) 4.786	6.099	6.099	6.099
		(AC-FT) 0.	0.	0.	0.

CUMULATIVE AREA = 0.00 SQ MI

*** **

HYDROGRAPH AT STATION 2B
FOR PLAN 1, RATIO = 1.00

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.24, TOTAL EXCESS = 7.56

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
4.	6.00	(CFS) 1.	0.	0.	0.
		(INCHES) 5.910	7.560	7.560	7.560
		(AC-FT) 0.	0.	0.	0.

CUMULATIVE AREA = 0.00 SQ MI

* *
65 KK * INTO2 * COMBINE HYDROGRAPHS FOR BASIN 2, 2A, 2B AND OUT OF POND #1
* *

66 HC HYDROGRAPH COMBINATION

ICOMP 4 NUMBER OF HYDROGRAPHS TO COMBINE

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

HYDROGRAPH AT STATION INTO2
FOR PLAN 1, RATIO = 0.59

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
87.	6.10	(CFS) 24.	7.	6.	6.
		(INCHES) 2.992	3.750	3.751	3.751
		(AC-FT) 12.	15.	15.	15.

CUMULATIVE AREA = 0.07 SQ MI

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

HYDROGRAPH AT STATION INTO2
FOR PLAN 1, RATIO = 0.69

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
104.	6.10	(CFS) 29.	9.	7.	7.
		(INCHES) 3.578	4.493	4.493	4.493
		(AC-FT) 14.	18.	18.	18.

CUMULATIVE AREA = 0.07 SQ MI

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

HYDROGRAPH AT STATION INTO2
FOR PLAN 1, RATIO = 0.81

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
126.	6.10	(CFS) 35.	11.	9.	9.
		(INCHES) 4.332	5.452	5.452	5.452
		(AC-FT) 17.	22.	22.	22.

CUMULATIVE AREA = 0.07 SQ MI

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

HYDROGRAPH AT STATION INTO2
FOR PLAN 1, RATIO = 1.00

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
167.	6.10	(CFS) 44.	14.	11.	11.
		(INCHES) 5.465	6.897	6.898	6.898
		(AC-FT) 22.	27.	27.	27.

CUMULATIVE AREA = 0.07 SQ MI

* *
67 KK * POND2 *
* *

HYDROGRAPH ROUTING DATA

68 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRC 192.00 INITIAL CONDITION
X 0.00 WORKING R AND D COEFFICIENT

69 SA	AREA	0.5	0.8								
70 SE	ELEVATION	192.00	194.00								
71 SQ	DISCHARGE	0.	40.	60.	80.	90.	100.	110.	120.	130.	140.
		150.	160.	170.	180.	190.	200.				
73 SE	ELEVATION	192.00	192.95	193.18	193.35	193.42	193.50	193.56	193.61	193.67	193.72
		193.78	193.84	193.89	193.93	193.98	194.02				

COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	1.29
ELEVATION	192.00	194.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.54	0.69	0.80	0.85	0.91	0.95	0.99	1.03	1.07
OUTFLOW	0.00	40.00	60.00	80.00	90.00	100.00	110.00	120.00	130.00	140.00
ELEVATION	192.00	192.95	193.18	193.35	193.42	193.50	193.56	193.61	193.67	193.72

STORAGE	1.12	1.16	1.20	1.23	1.27	1.29	1.30
OUTFLOW	150.00	160.00	170.00	180.00	190.00	195.00	200.00
ELEVATION	193.78	193.84	193.89	193.93	193.98	194.00	194.02

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 110. TO 200.
 THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
 THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

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

HYDROGRAPH AT STATION POND2
 FOR PLAN 1, RATIO = 0.59

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
85.	6.20	(CFS)	6-HR	24-HR	72-HR	29.90-HR
		(INCHES)	2.990	3.750	3.751	3.751
		(AC-FT)	12.	15.	15.	15.
PEAK STORAGE (AC-FT)	TIME (HR)		MAXIMUM AVERAGE STORAGE			
1.	6.20		6-HR	24-HR	72-HR	29.90-HR
			0.	0.	0.	0.
PEAK STAGE (FEET)	TIME (HR)		MAXIMUM AVERAGE STAGE			
193.38	6.20		6-HR	24-HR	72-HR	29.90-HR
			192.51	192.16	192.13	192.13

CUMULATIVE AREA = 0.07 SQ MI

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

HYDROGRAPH AT STATION POND2
 FOR PLAN 1, RATIO = 0.69

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW			
101.	6.20	(CFS)	6-HR	24-HR	72-HR	29.90-HR
		(INCHES)	3.576	4.493	4.493	4.493
		(AC-FT)	14.	18.	18.	18.
PEAK STORAGE (AC-FT)	TIME (HR)		MAXIMUM AVERAGE STORAGE			
1.	6.20		6-HR	24-HR	72-HR	29.90-HR
			0.	0.	0.	0.
PEAK STAGE (FEET)	TIME (HR)		MAXIMUM AVERAGE STAGE			
193.51	6.20		6-HR	24-HR	72-HR	29.90-HR
			192.57	192.19	192.15	192.15

CUMULATIVE AREA = 0.07 SQ MI

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

HYDROGRAPH AT STATION POND2
 FOR PLAN 1, RATIO = 0.81

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

82 LS SCS LOSS RATE
 STRTL 0.17 INITIAL ABSTRACTION
 CRVNR 92.00 CURVE NUMBER
 RTIMP 0.00 PERCENT IMPERVIOUS AREA

83 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG 0.15 LAG

UNIT HYDROGRAPH
 10 END-OF-PERIOD ORDINATES

5. 11. 8. 3. 1. 1. 0. 0. 0. 0.

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.95, TOTAL EXCESS = 6.85

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
18.	6.00	(CFS) 3.	1.	1.	1.
		(INCHES) 5.534	6.846	6.846	6.846
		(AC-FT) 1.	2.	2.	2.

CUMULATIVE AREA = 0.00 SQ MI

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

HYDROGRAPH AT STATION BASIN3
 FOR PLAN 1, RATIO = 0.59

TOTAL RAINFALL = 4.60, TOTAL LOSS = 0.90, TOTAL EXCESS = 3.70

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
10.	6.00	(CFS) 1.	0.	0.	0.
		(INCHES) 3.026	3.703	3.703	3.703
		(AC-FT) 1.	1.	1.	1.

CUMULATIVE AREA = 0.00 SQ MI

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

HYDROGRAPH AT STATION BASIN3
 FOR PLAN 1, RATIO = 0.69

TOTAL RAINFALL = 5.36, TOTAL LOSS = 0.92, TOTAL EXCESS = 4.44

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
12.	6.00	(CFS) 2.	1.	0.	0.
		(INCHES) 3.622	4.444	4.444	4.444
		(AC-FT) 1.	1.	1.	1.

CUMULATIVE AREA = 0.00 SQ MI

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

HYDROGRAPH AT STATION BASIN3
 FOR PLAN 1, RATIO = 0.81

TOTAL RAINFALL = 6.34, TOTAL LOSS = 0.94, TOTAL EXCESS = 5.40

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
14.	6.00	(CFS) 2.	1.	1.	1.
		(INCHES) 4.388	5.402	5.402	5.402
		(AC-FT) 1.	1.	1.	1.

CUMULATIVE AREA = 0.00 SQ MI

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

HYDROGRAPH AT STATION BASIN3
FOR PLAN 1, RATIO = 1.00

TOTAL RAINFALL = 7.80, TOTAL LOSS = 0.95, TOTAL EXCESS = 6.85

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
18.	6.00	(CFS) 3.	1.	1.	1.
		(INCHES) 5.534	6.846	6.846	6.846
		(AC-FT) 1.	2.	2.	2.

CUMULATIVE AREA = 0.00 SQ MI

*** **

* *
84 KK * INTO3 * COMBINE HYDROGRAPHS FOR BASIN 3 AND OUT OF POND #2
* *

85 HC HYDROGRAPH COMBINATION
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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

HYDROGRAPH AT STATION INTO3
FOR PLAN 1, RATIO = 0.59

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
90.	6.20	(CFS) 25.	8.	6.	6.
		(INCHES) 2.990	3.748	3.748	3.748
		(AC-FT) 13.	16.	16.	16.

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION INTO3
FOR PLAN 1, RATIO = 0.69

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
108.	6.20	(CFS) 30.	9.	8.	8.
		(INCHES) 3.575	4.490	4.490	4.490
		(AC-FT) 15.	19.	19.	19.

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION INTO3
FOR PLAN 1, RATIO = 0.81

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
134.	6.10	(CFS) 37.	12.	9.	9.
		(INCHES) 4.329	5.449	5.449	5.449
		(AC-FT) 18.	23.	23.	23.

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION INTO3
FOR PLAN 1, RATIO = 1.00

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
176.	6.20	(CFS) 46.	15.	12.	12.
		(INCHES) 5.461	6.894	6.895	6.895
		(AC-FT) 23.	29.	29.	29.

CUMULATIVE AREA = 0.08 SQ MI

*** **

*
* POND3 *
*

HYDROGRAPH ROUTING DATA

87 RS	STORAGE ROUTING										
	NSTPS	1 NUMBER OF SUBREACHES									
	ITYP	ELEV TYPE OF INITIAL CONDITION									
	RSVRC	184.00	INITIAL CONDITION								
	X	0.00 WORKING R AND D COEFFICIENT									
88 SA	AREA	0.5	0.8								
89 SE	ELEVATION	184.00	187.00								
90 SQ	DISCHARGE	0.	40.	60.	80.	90.	100.	110.	120.	130.	140.
		150.	160.	170.	180.	190.	200.				
92 SE	ELEVATION	184.00	184.95	185.18	185.35	185.42	185.50	185.56	185.61	185.67	185.72
		185.78	185.84	185.89	185.93	185.98	186.02				

COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	1.93
ELEVATION	184.00	187.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.52	0.65	0.76	0.80	0.85	0.89	0.92	0.96	1.00
OUTFLOW	0.00	40.00	60.00	80.00	90.00	100.00	110.00	120.00	130.00	140.00
ELEVATION	184.00	184.95	185.18	185.35	185.42	185.50	185.56	185.61	185.67	185.72
STORAGE	1.04	1.08	1.11	1.14	1.17	1.20	1.93			
OUTFLOW	150.00	160.00	170.00	180.00	190.00	200.00	444.95			
ELEVATION	185.78	185.84	185.89	185.93	185.98	186.02	187.00			

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 100. TO 445.
THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

*** **

HYDROGRAPH AT STATION POND3
FOR PLAN 1, RATIO = 0.59

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	29.90-HR
87.	6.20	(CFS) 25.	8.	6.	6.
		(INCHES) 2.988	3.748	3.748	3.748
		(AC-FT) 13.	16.	16.	16.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	29.90-HR
1.	6.20	0.	0.	0.	0.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	29.90-HR
185.40	6.20	184.53	184.17	184.14	184.14

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION POND3
FOR PLAN 1, RATIO = 0.69

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
108.	6.20	(CFS)	30.	9.	8.	8.
		(INCHES)	3.573	4.490	4.490	4.490
		(AC-FT)	15.	19.	19.	19.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
1.	6.20		0.	0.	0.	0.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
185.55	6.20		184.60	184.20	184.16	184.16

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION POND3
FOR PLAN 1, RATIO = 0.81

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
133.	6.20	(CFS)	37.	12.	9.	9.
		(INCHES)	4.327	5.449	5.449	5.449
		(AC-FT)	18.	23.	23.	23.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
1.	6.20		0.	0.	0.	0.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
185.68	6.20		184.68	184.23	184.18	184.18

CUMULATIVE AREA = 0.08 SQ MI

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

HYDROGRAPH AT STATION POND3
FOR PLAN 1, RATIO = 1.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	29.90-HR
175.	6.20	(CFS)	46.	15.	12.	12.
		(INCHES)	5.459	6.894	6.895	6.895
		(AC-FT)	23.	29.	29.	29.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	29.90-HR
1.	6.20		0.	0.	0.	0.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	29.90-HR
185.91	6.20		184.79	184.27	184.22	184.22

CUMULATIVE AREA = 0.08 SQ MI

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
 TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION			
				RATIO 1	RATIO 2	RATIO 3	RATIO 4
				0.59	0.69	0.81	1.00
HYDROGRAPH AT	UNDEV	0.06	1 FLOW	75.	97.	125.	170.
			TIME	6.10	6.10	6.10	6.10
HYDROGRAPH AT	BASIN1	0.06	1 FLOW	134.	159.	192.	241.
			TIME	6.00	6.00	6.00	6.00
ROUTED TO	POND1	0.06	1 FLOW	69.	83.	101.	140.
			TIME	6.20	6.20	6.20	6.20
			** PEAK STAGES IN FEET **				
			1 STAGE	200.91	201.07	201.29	201.57
			TIME	6.20	6.20	6.20	6.20
HYDROGRAPH AT	BASIN2	0.00	1 FLOW	9.	10.	12.	15.
			TIME	6.00	6.00	6.00	6.00
HYDROGRAPH AT	2A	0.01	1 FLOW	15.	18.	21.	26.
			TIME	6.00	6.00	6.00	6.00
HYDROGRAPH AT	2B	0.00	1 FLOW	2.	3.	3.	4.
			TIME	6.00	6.00	6.00	6.00
4 COMBINED AT	INTO2	0.07	1 FLOW	87.	104.	126.	167.
			TIME	6.10	6.10	6.10	6.10
ROUTED TO	POND2	0.07	1 FLOW	85.	101.	123.	166.
			TIME	6.20	6.20	6.20	6.20
			** PEAK STAGES IN FEET **				
			1 STAGE	193.38	193.51	193.63	193.87
			TIME	6.20	6.20	6.20	6.20
HYDROGRAPH AT	BASIN3	0.00	1 FLOW	10.	12.	14.	18.
			TIME	6.00	6.00	6.00	6.00
2 COMBINED AT	INTO3	0.08	1 FLOW	90.	108.	134.	176.
			TIME	6.20	6.20	6.10	6.20
ROUTED TO	POND3	0.08	1 FLOW	87.	108.	133.	175.
			TIME	6.20	6.20	6.20	6.20
			** PEAK STAGES IN FEET **				
			1 STAGE	185.40	185.55	185.68	185.91
			TIME	6.20	6.20	6.20	6.20

*** NORMAL END OF HEC-1 ***