

APPENDIX T

HEC-HMS MODEL FOR THE CALCULATION OF THE PMP PEAK DISCHARGE, ANTECEDENT MOISTURE CONDITION III

HMS * Summary of Results

Project : WCS

Run Name : PMP Dist A AMIII

Start of Run : 01Dec00 0000 Basin Model : 100YrAMIII3/24/06NOD
 End of Run : 05Dec00 0000 Met. Model : PMP Dist. A NOD
 Execution Time : 30Mar06 0838 Control Specs : Control PMP

Hydrologic Element	Discharge Peak (cfs)	Time of Peak	Volume (ac ft)	Drainage Area (sq mi)
Subbasin-4	1314.7	03 Dec 00 0600	1020.6	0.490
Reach-2	1314.7	03 Dec 00 0615	1020.6	0.490
Subbasin-2	2846.6	03 Dec 00 0600	2188.9	1.063
playa	2519.0	03 Dec 00 0644	1731.9	1.063
Reach-1	2519.0	03 Dec 00 0719	1731.9	1.063
Subbasin-1A	1849.8	03 Dec 00 0603	1449.7	0.691
Reach-1A	1849.8	03 Dec 00 0620	1449.7	0.691
Subbasin-1B	842.09	03 Dec 00 0600	651.59	0.314
Junction-1A	2689.0	03 Dec 00 0602	2101.3	1.005
Reach-1B	2689.0	03 Dec 00 0605	2101.3	1.005
Subbasin-3	418.53	03 Dec 00 0600	324.93	0.156
Junction-1	5399.3	03 Dec 00 0619	4158.1	2.224
Reach-3	5399.3	03 Dec 00 0636	4158.1	2.224
Subbasin-5A	514.51	03 Dec 00 0600	395.37	0.192
Junction-2	7143.7	03 Dec 00 0620	5574.0	2.906
Reach-4	7143.7	03 Dec 00 0641	5574.0	2.906
Subbasin-5B	709.89	03 Dec 00 0600	545.69	0.265
Junction-3	7765.5	03 Dec 00 0631	6119.7	3.171
Reach-5	7765.5	03 Dec 00 0645	6119.7	3.171
Subbasin-6	198.33	03 Dec 00 0600	152.38	0.074
Junction-4	7864.0	03 Dec 00 0638	6272.1	3.245
Reach-6	7864.0	03 Dec 00 0638	6272.1	3.245
Subbasin-7	278.66	03 Dec 00 0600	214.99	0.104
Junction-5	8123.7	03 Dec 00 0633	6487.1	3.349

File: StorageNOD11.xls

PLAYA ELEVATION, STORAGE, OUTFLOW

ELEVATION AND STORAGE

Elev	Area S.F.	Elev. Change	Ave S.F.	Storage C.F.	Total Storage C.F.	AC.-FT.
3478	402,878			0	0	
		2	517,775	1,035,550		
3480	632,672				1,035,550	24
		2	811,325	1,622,649		
3482	989,977				2,658,199	61
		2	2,375,467	4,750,934		
3484	3,760,957				7,409,133	170
		2	6,247,780	12,495,559		
3486	8,734,602				19,904,692	457
		2	10,261,979	20,523,958		
3488	11,789,356				40,428,650	928
		2	13,334,447	26,668,893		
3,490	14,879,537				67,097,543	1,540

OUTFLOW

WEIR EQUATION

$$Q=C*L*H^{3/2}$$

WHERE:

Q= FLOW, CFS

C= WEIR COEFFICIENT

L= HORIZONTAL LENGTH, FT

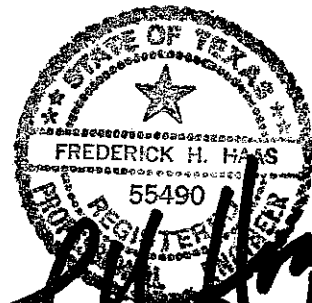
H= HEAD ON WEIR, FT

ASSUME TOP OF PLAYA IS ELEVATION 3486

LENGTH OF 3486 CONTOUR IS 241 FT.

ELEV FT	HEAD FT	Cw	Q CU FT/SEC
3,486.5	0.5	3.58	305
3,487.0	1.0	3.58	863
3,487.5	1.5	3.58	1,585
3,488.0	2.0	3.56	2,427
3,490.0	4.0	3.62	6,979

NOTE: Cw IS FROM WATER-RESOURCES ENGINEERING, LINSLEY AND FRANZINI



Handwritten signature and date:
 3/31/06

Meteorologic Model Input

HMS - Meteorologic Model

File Edit Help

Meteorologic Model: PMP Distribution A Subbasin List

Description: PMP with Distribution per figure in HMR 51

Precipitation Evapotranspiration

Method: User Hyetograph

Subbasin	"Gage" ID
Subbasin-1A	PMP Distribution A
Subbasin-2	PMP Distribution A
Subbasin-3	PMP Distribution A
Subbasin-4	PMP Distribution A
Subbasin-6	PMP Distribution A
Subbasin-1B	PMP Distribution A
Subbasin-7	PMP Distribution A
Subbasin-5B	PMP Distribution A
Subbasin-5A	PMP Distribution A

OK Apply Cancel

HMS * Basin Model * SCS Curve Number

Sort Help

Basin Model ID: 100YrAMIII3/24/06NOD

Subbasin Name	SCS Curve Number	Initial Abstraction (in)	Imperviousness (%)
Subbasin-1A	91		0.0
Subbasin-2	86		0.0
Subbasin-3	89		0.0
Subbasin-4	89		0.0
Subbasin-5B	86		0.0
Subbasin-6	86		0.0
Subbasin-1B	88		0.0
Subbasin-5A	86		0.0
Subbasin-7	87		0.0

OK Apply Cancel

HMS * Basin Model * SCS UH

Sort Help

Basin Model ID: 100YrAMIII3/24/06NOD

Time Units: Minutes

Subbasin Name	SCS Lag (min)
Subbasin-1A	86
Subbasin-2	65
Subbasin-3	44
Subbasin-4	39
Subbasin-5B	53
Subbasin-6	30
Subbasin-1B	44
Subbasin-5A	38
Subbasin-7	64

OK Apply Cancel

HMS * Basin Model * Lag Routing

Help

Basin Model ID : 100YrAMIII3/24/06NOD

Interval : Minutes

Reach Name	Lag (min)
Reach-1	35
Reach-2	15
Reach-3	17
Reach-4	21
Reach-5	14
Reach-1A	17
Reach-1B	3
Reach-6	0

OK Apply Cancel

HMS * Basin Model * Reservoir Editor

Edit File Help

Reservoir Name:

Description:

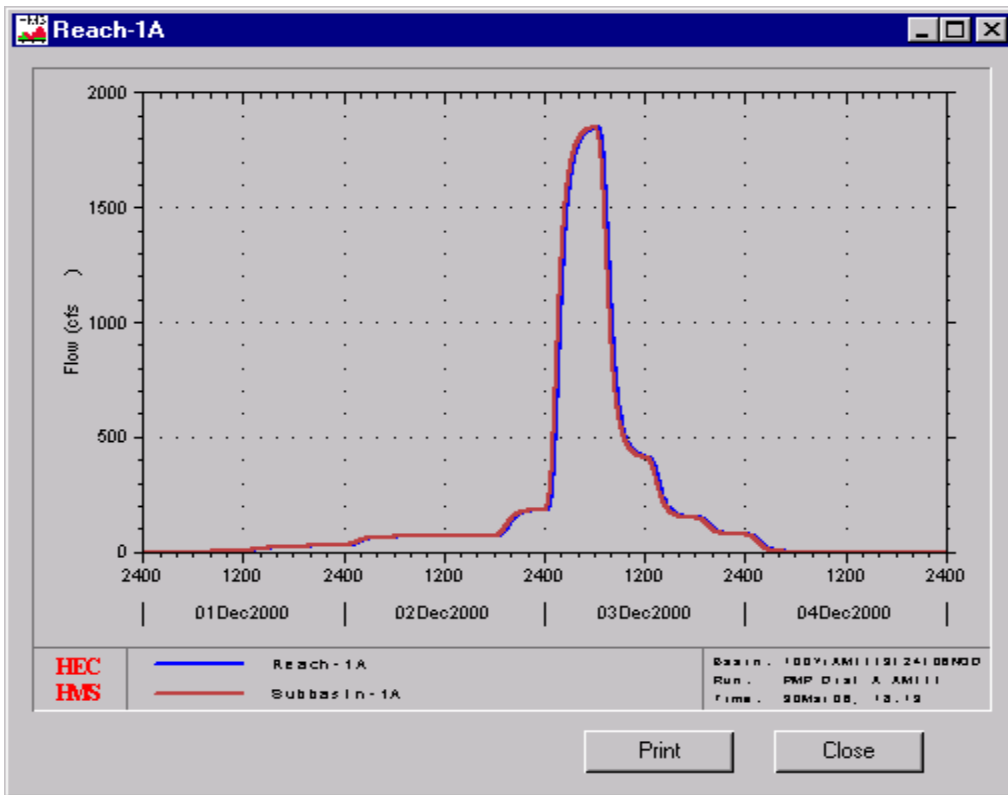
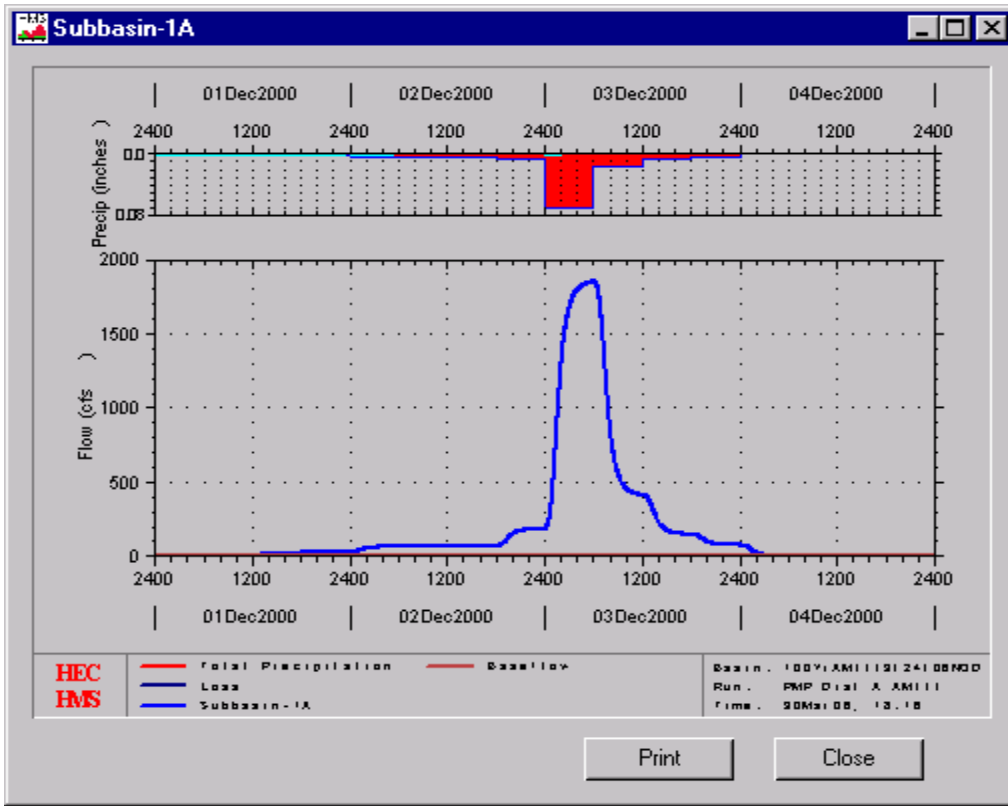
Storage

Method:

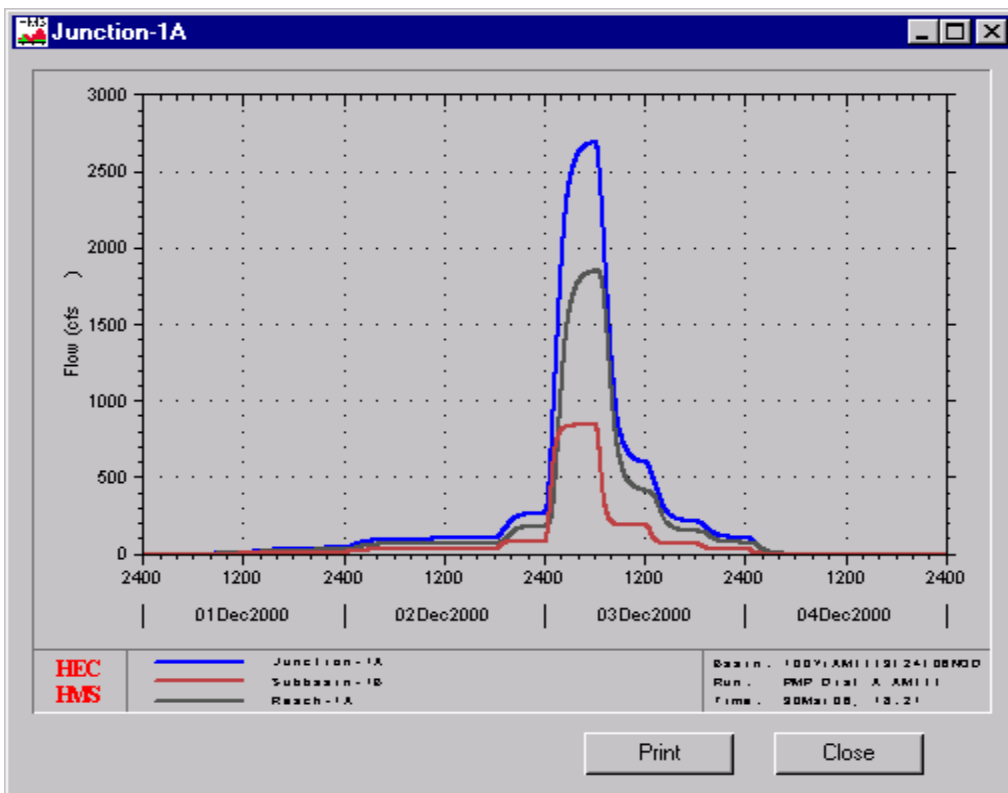
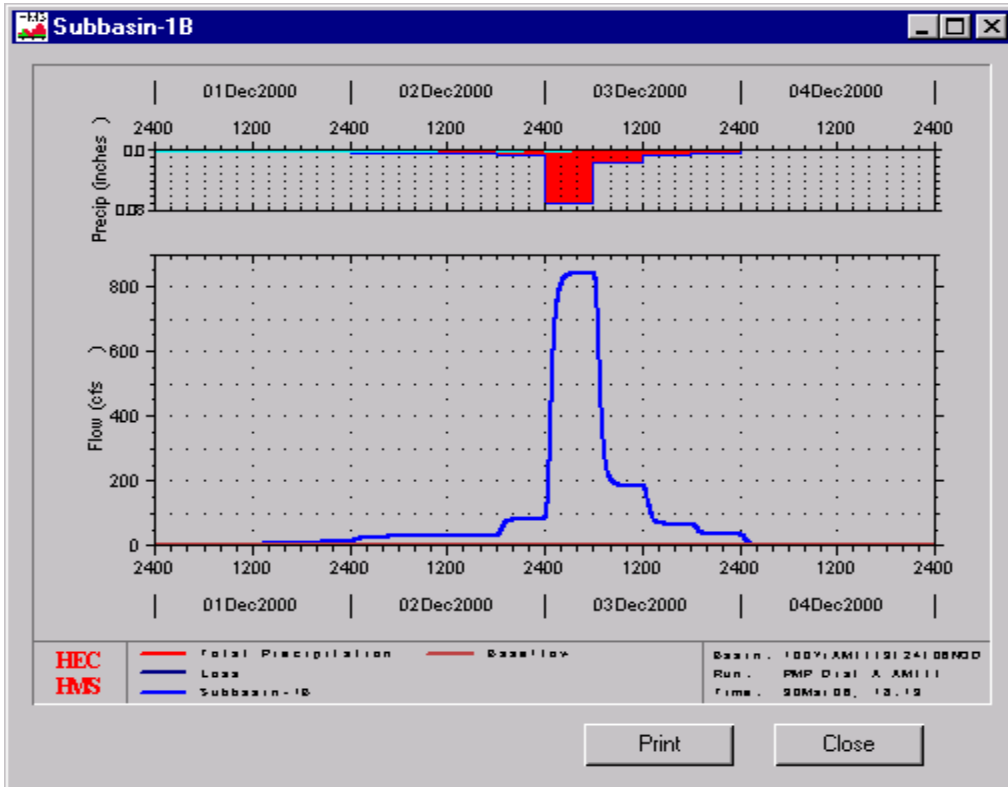
Initial

Elevation (ft)	Storage (acre-feet)	Outflow (cfs)
3478.0	0.0	0.0
3480.0	24.0	0.0
3482.0	61.0	0.0
3484.0	170.0	0.0
3486.0	457.0	0.0
3487.0	693.0	863.0
3488.0	928.0	2427.0
3490.0	1540.0	6979.0

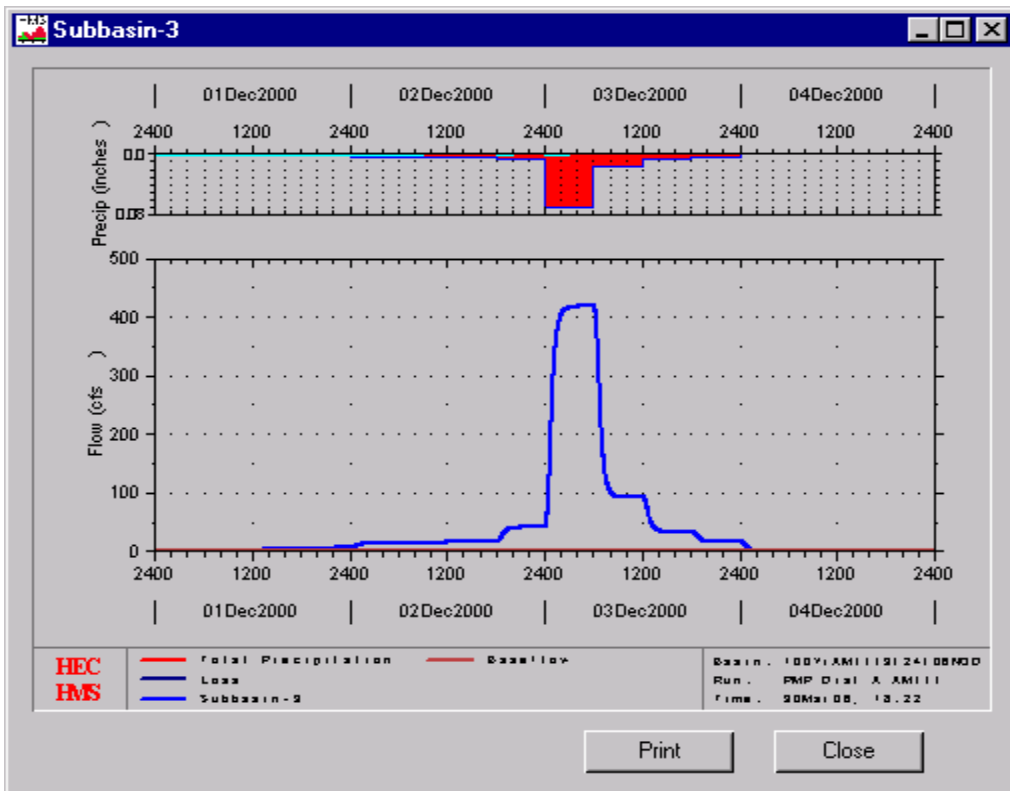
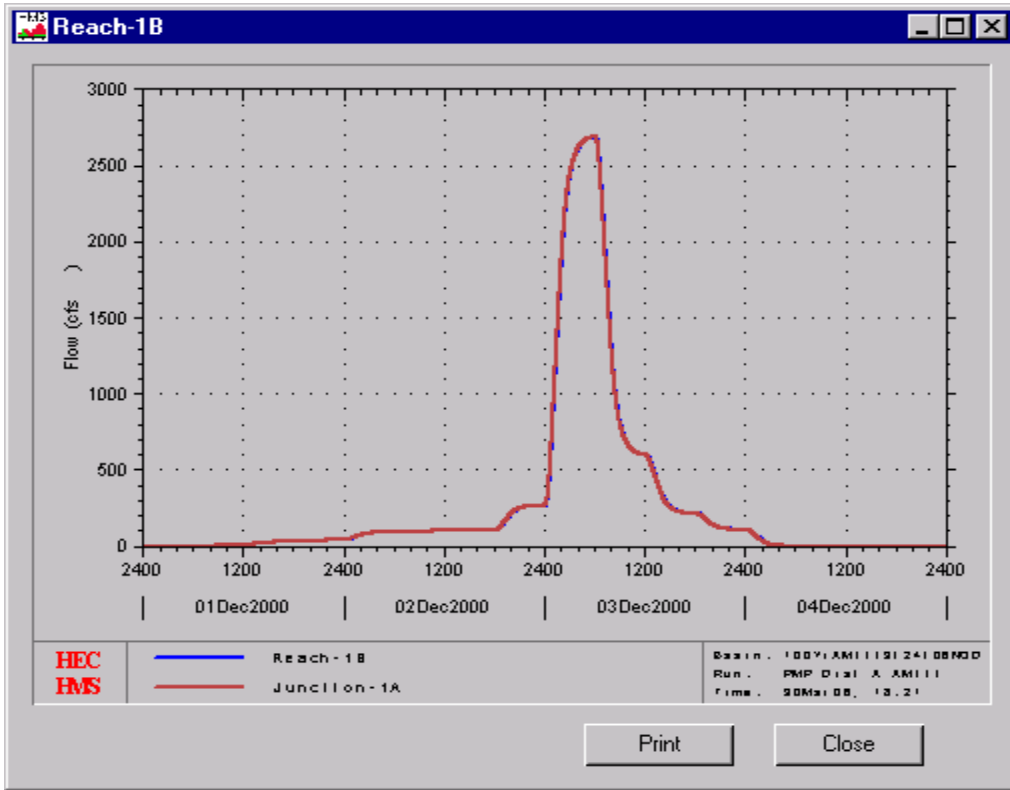
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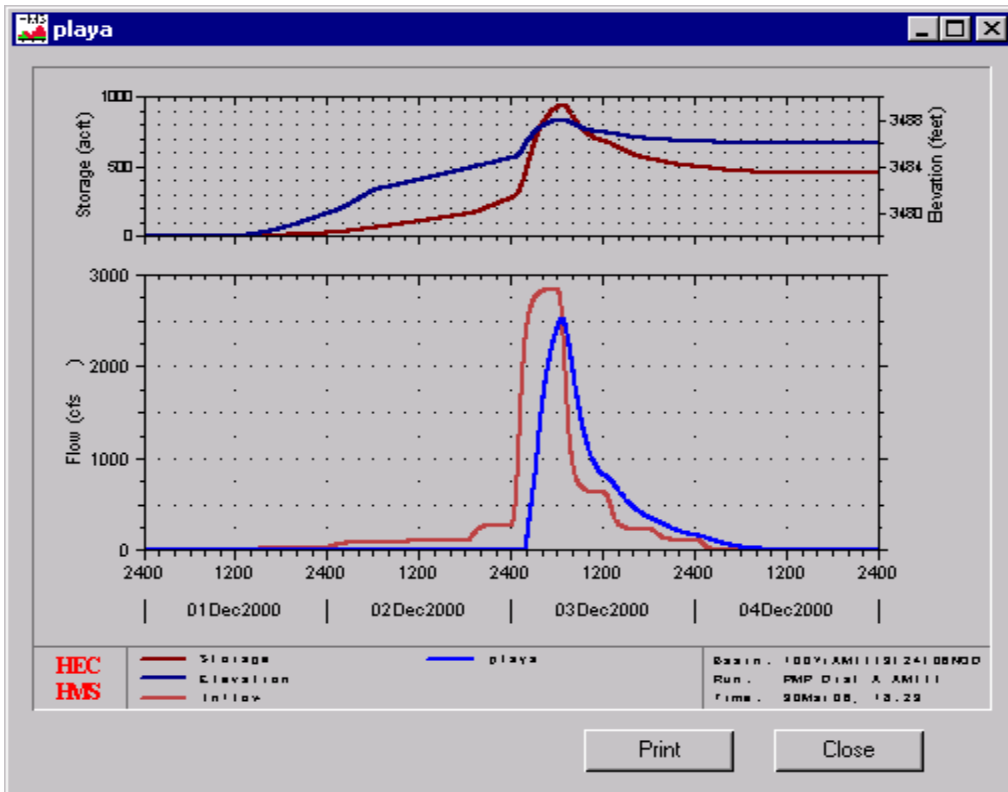
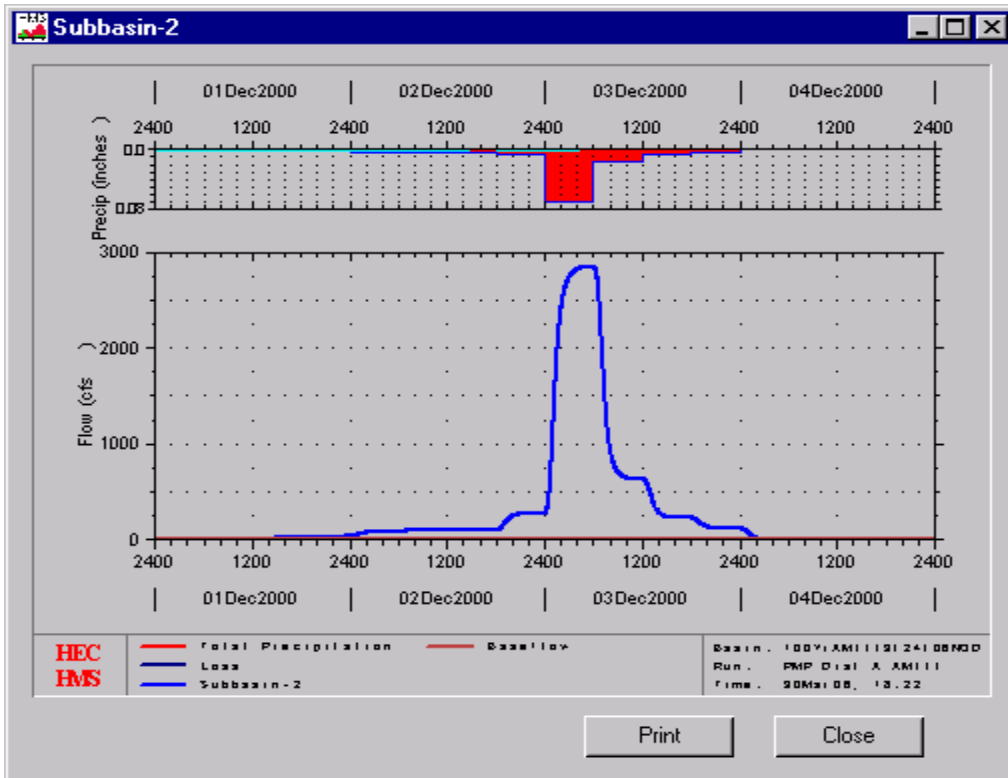
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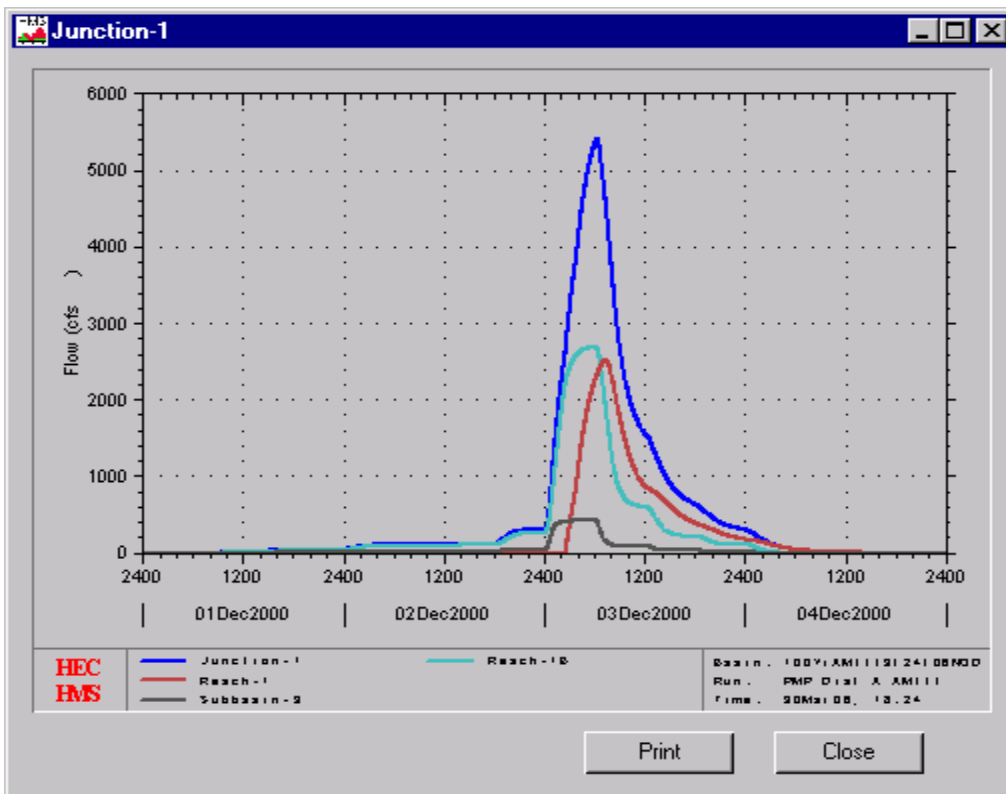
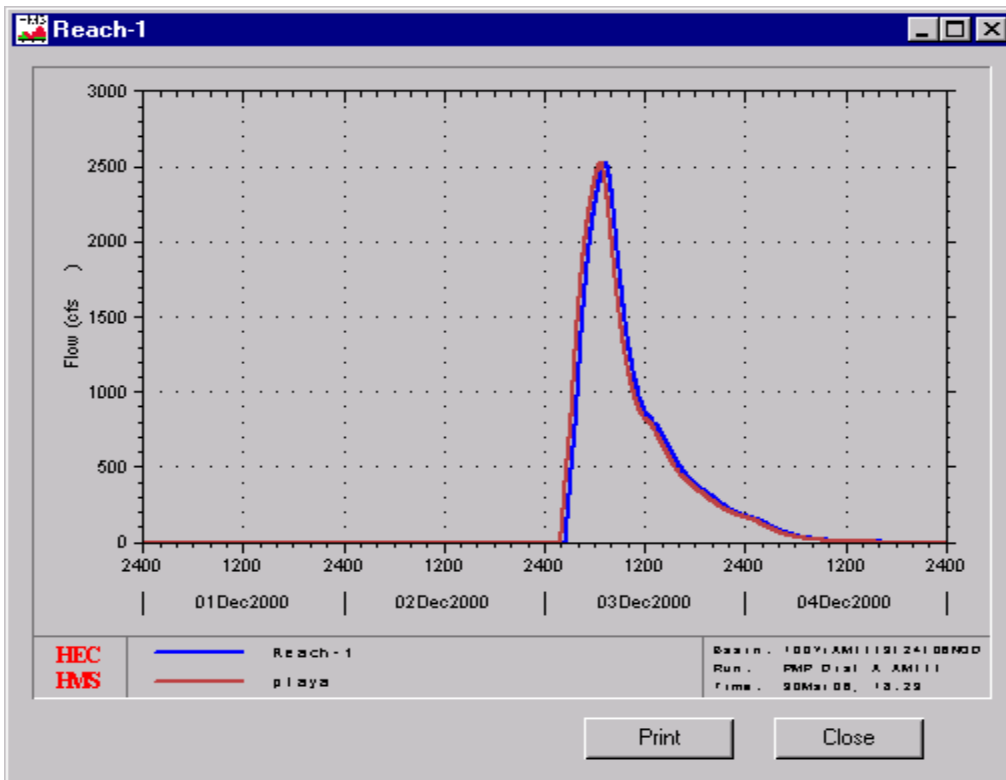
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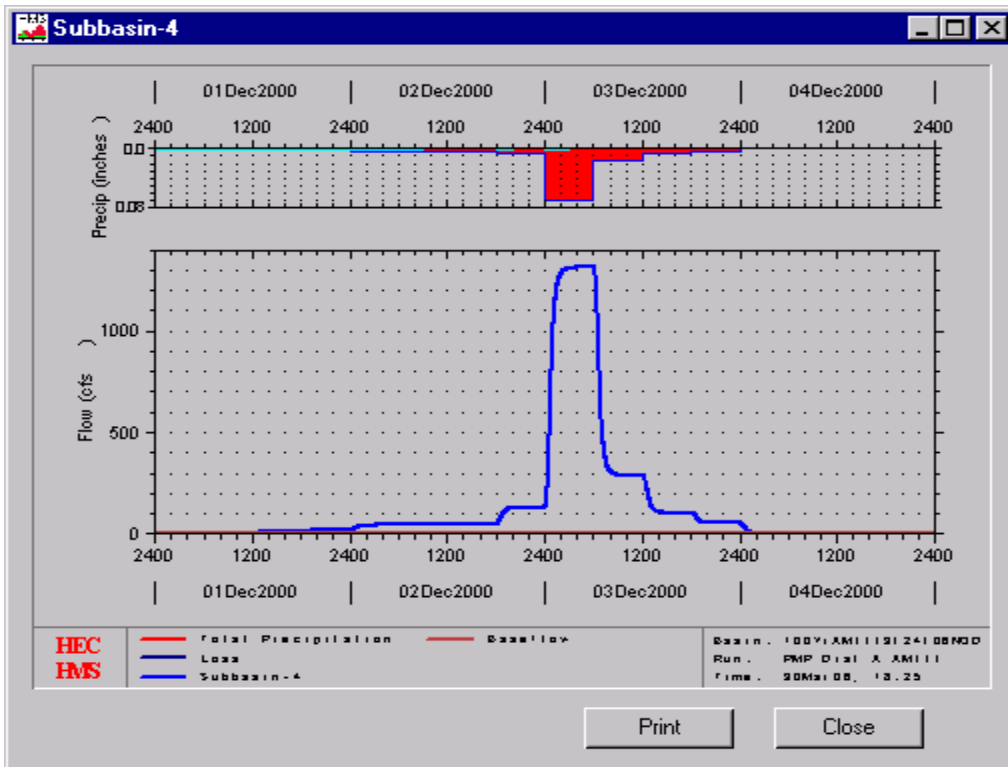
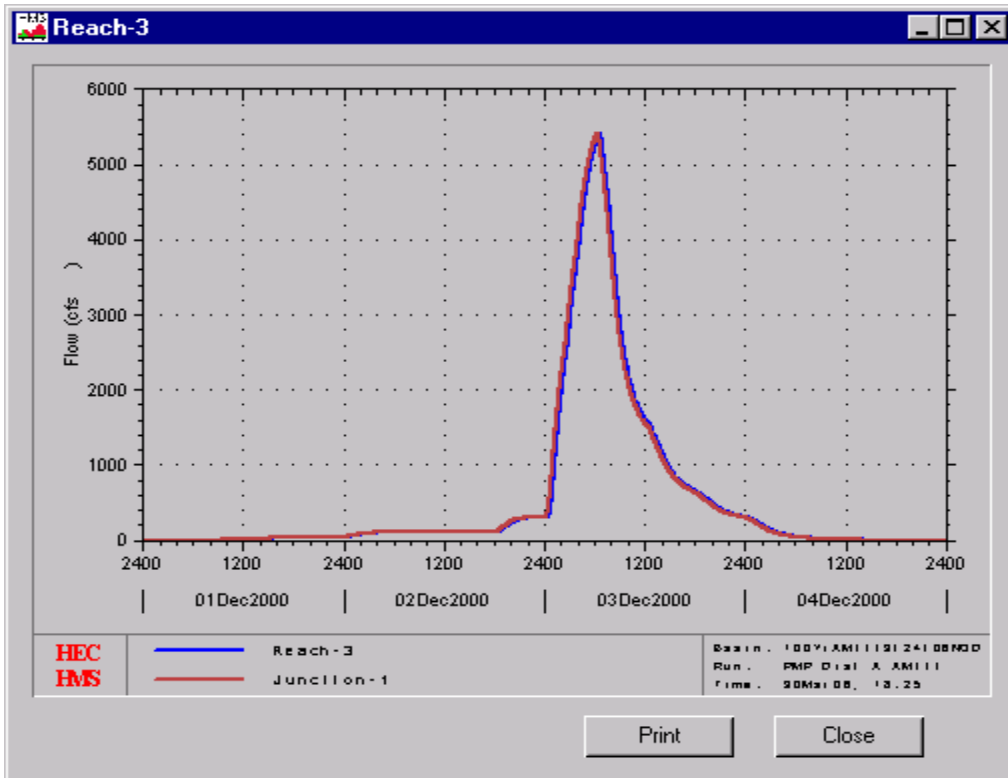
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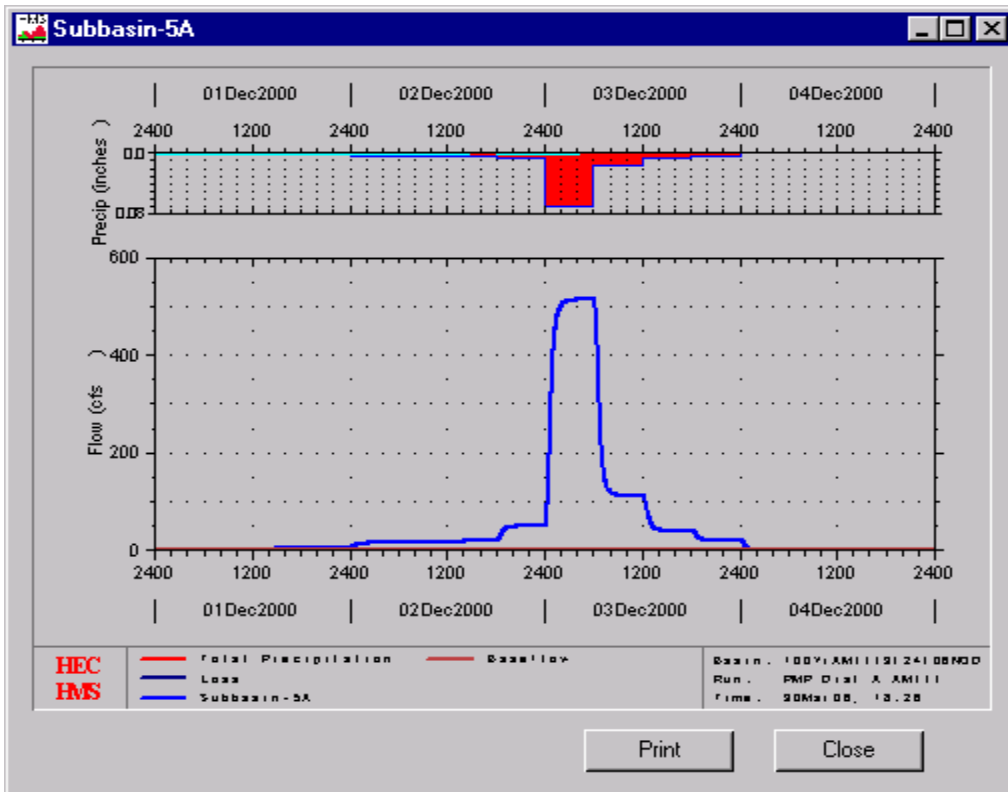
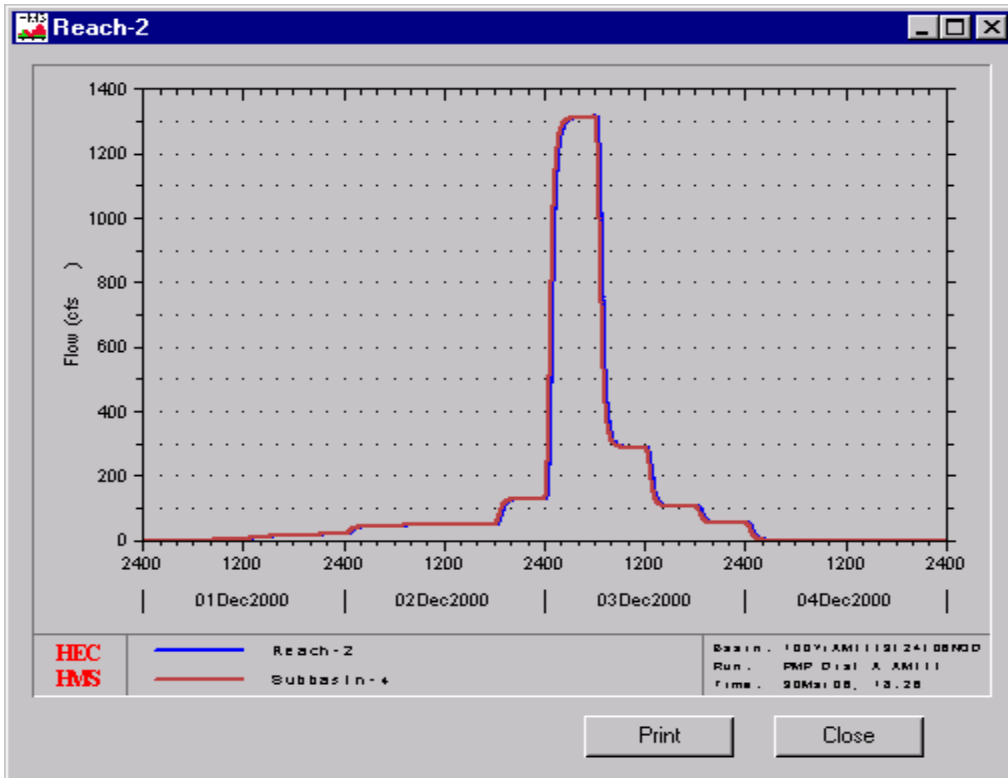
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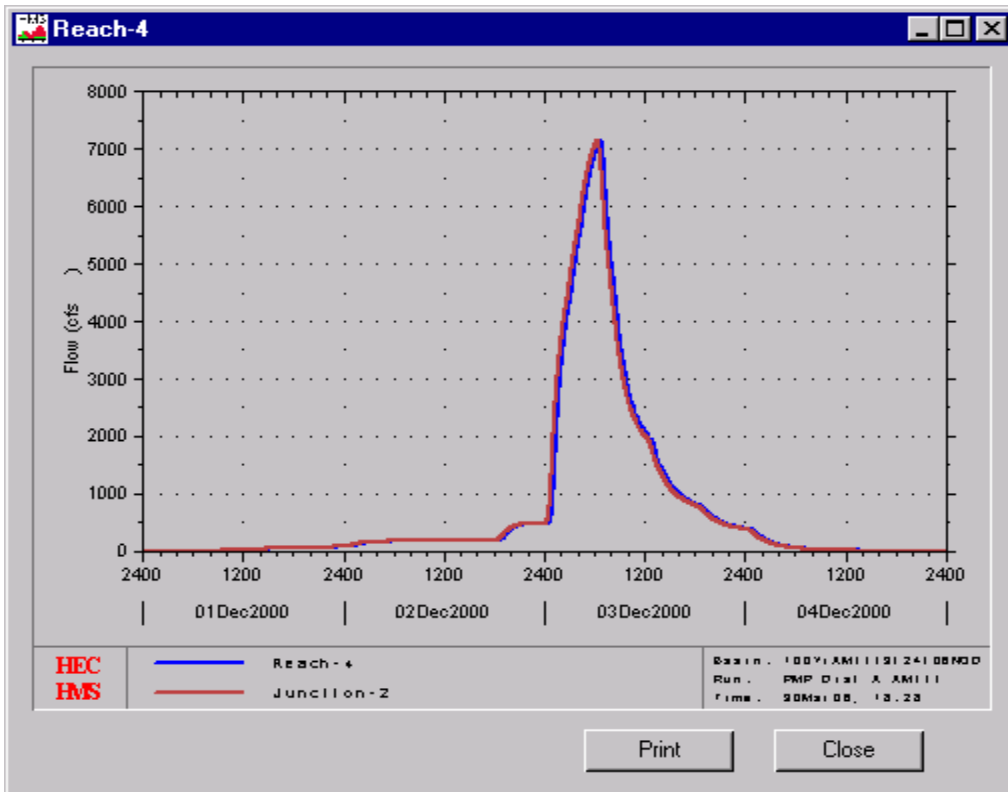
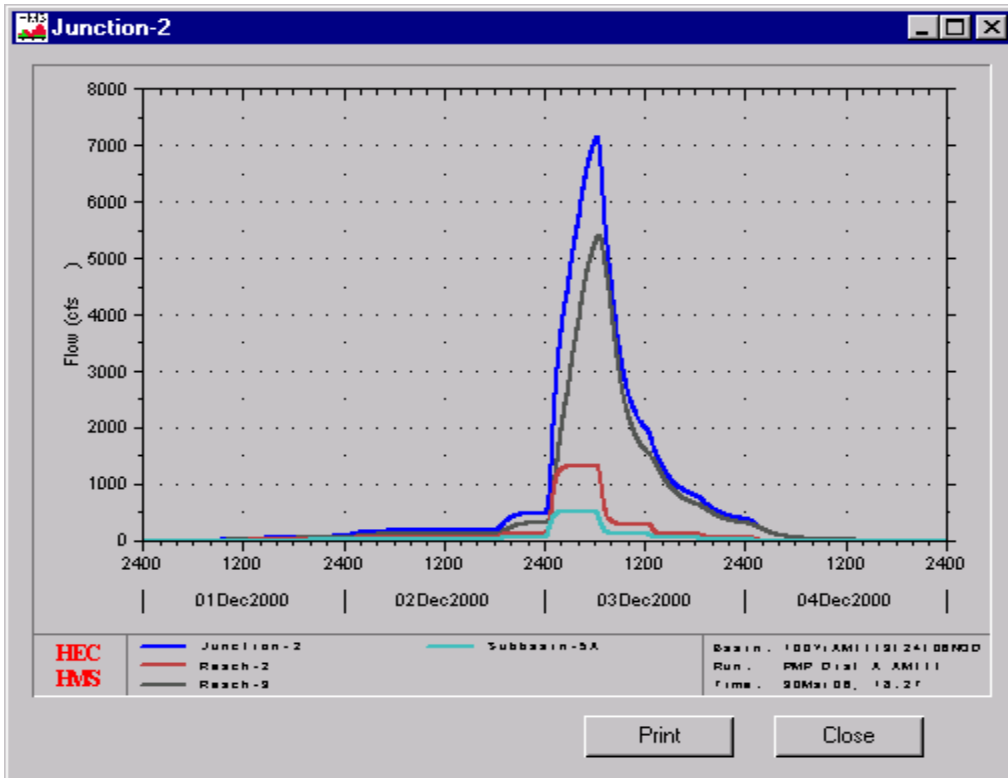
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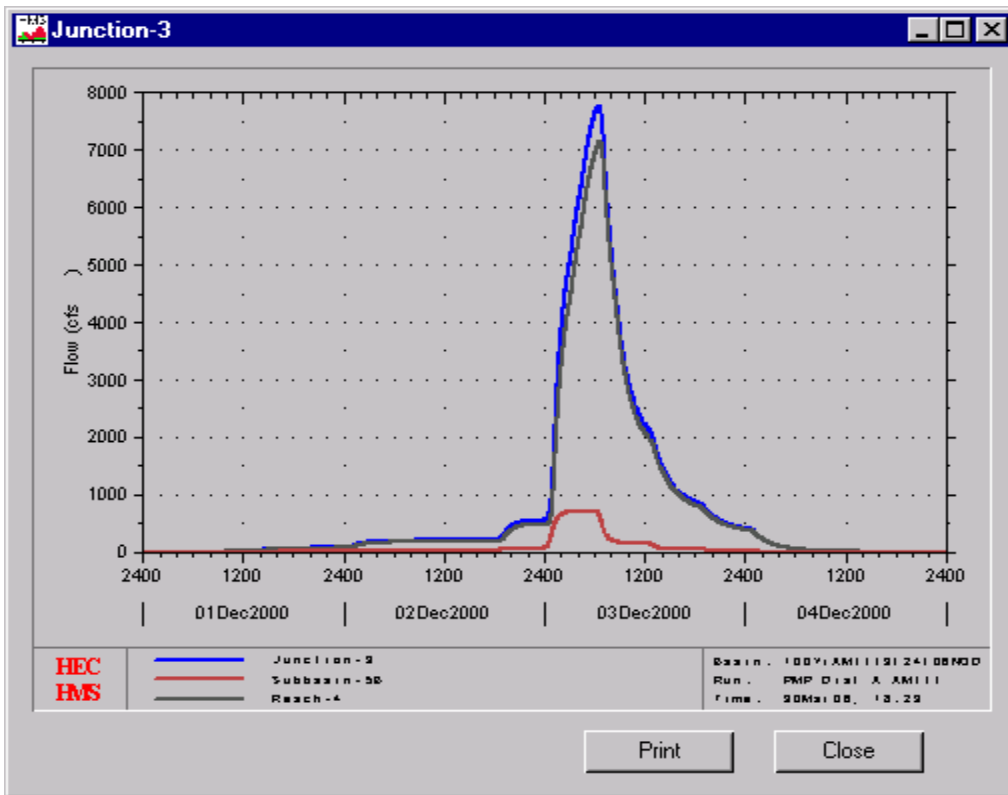
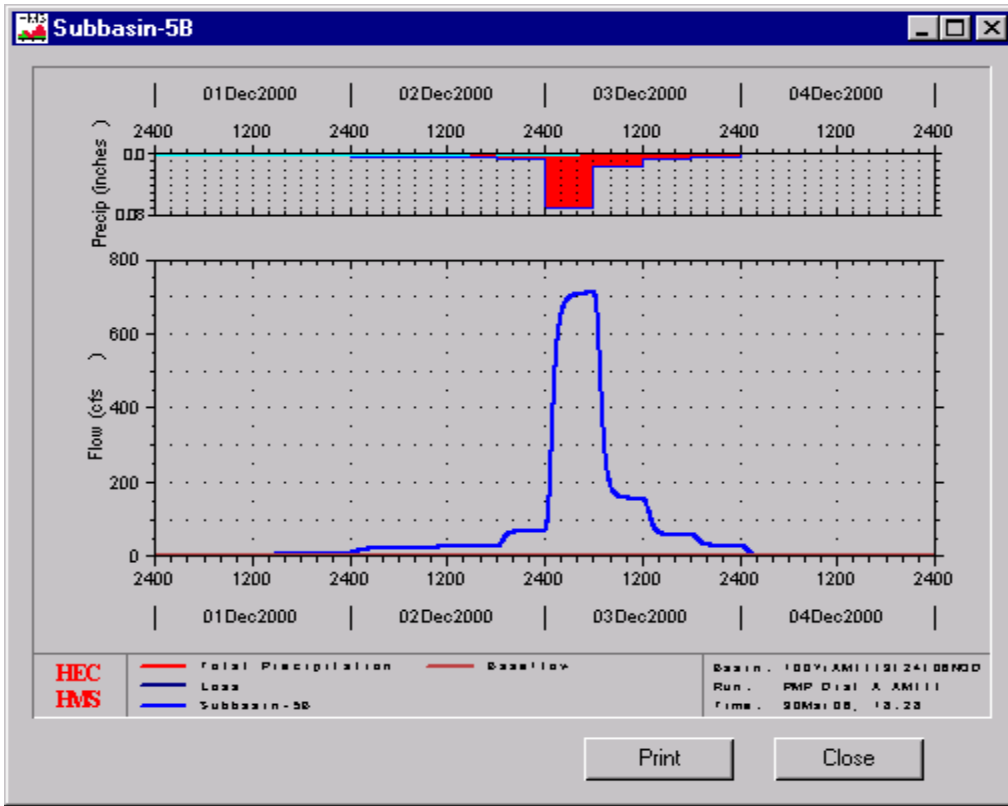
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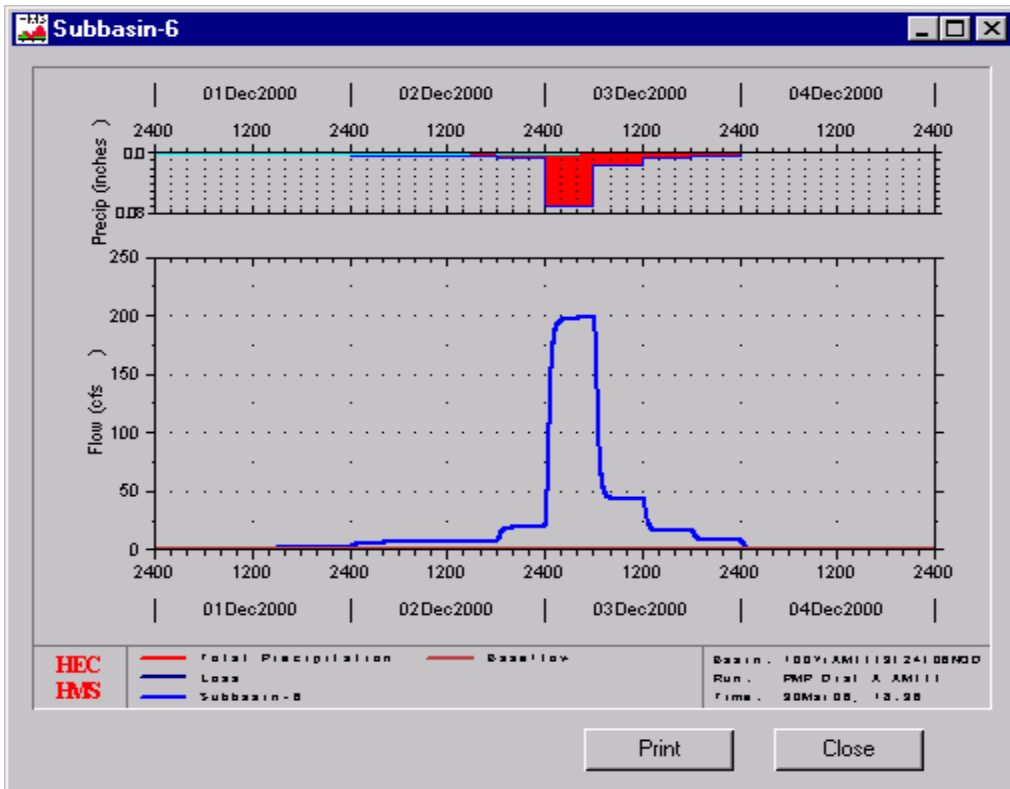
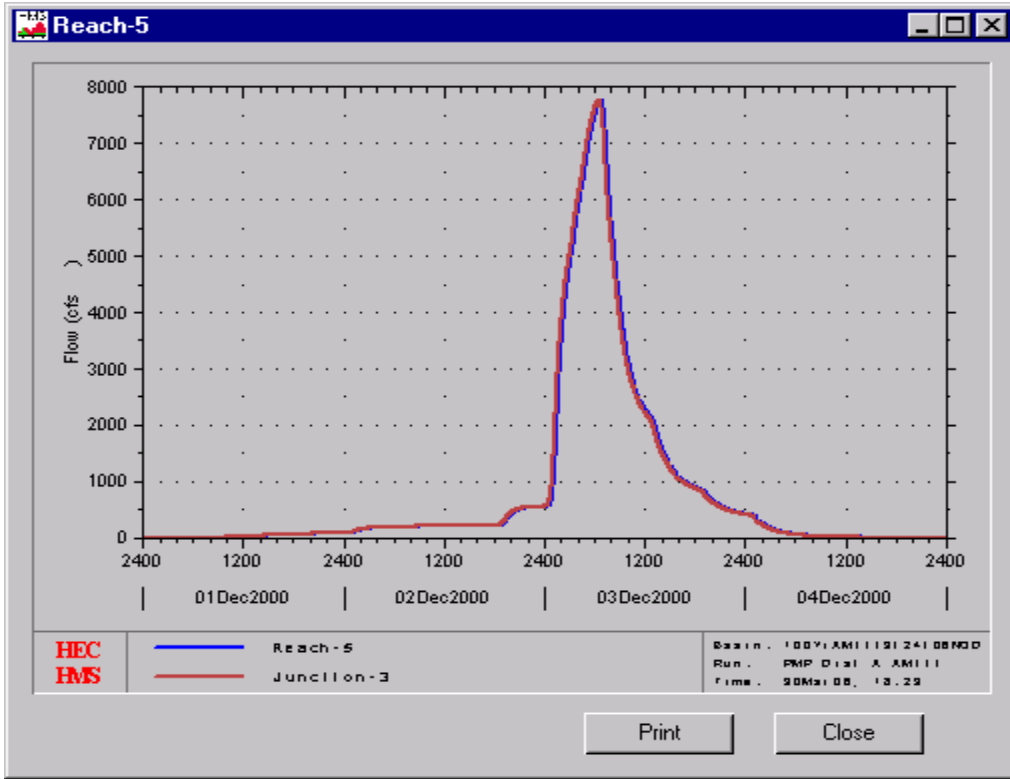
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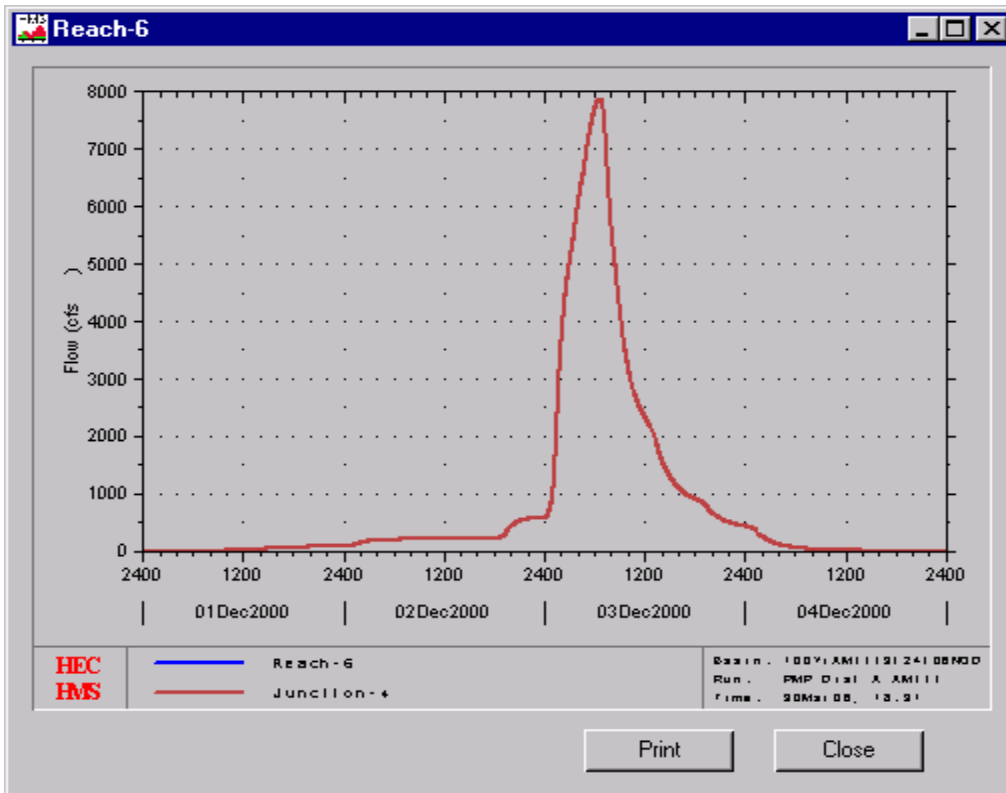
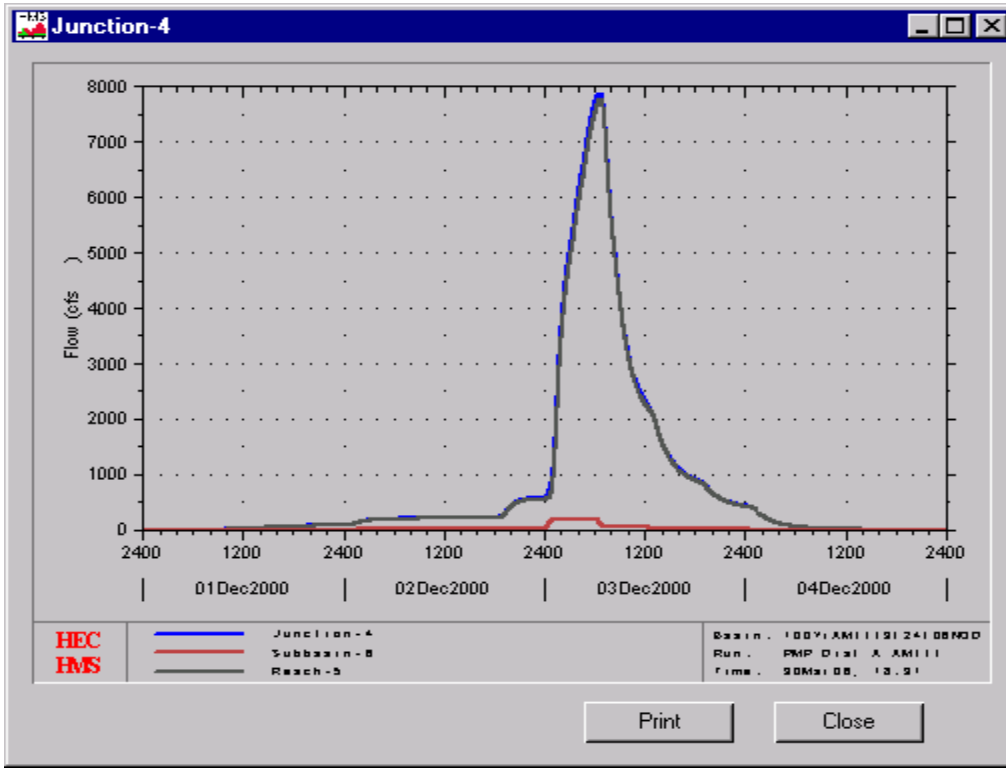
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