

## **APPENDIX G**

### **HEC-HMS MODEL FOR THE CALCULATION OF THE DEVELOPED LOW LEVEL & BYPRODUCT FACILITY 100-YEAR PEAK DISCHARGES**

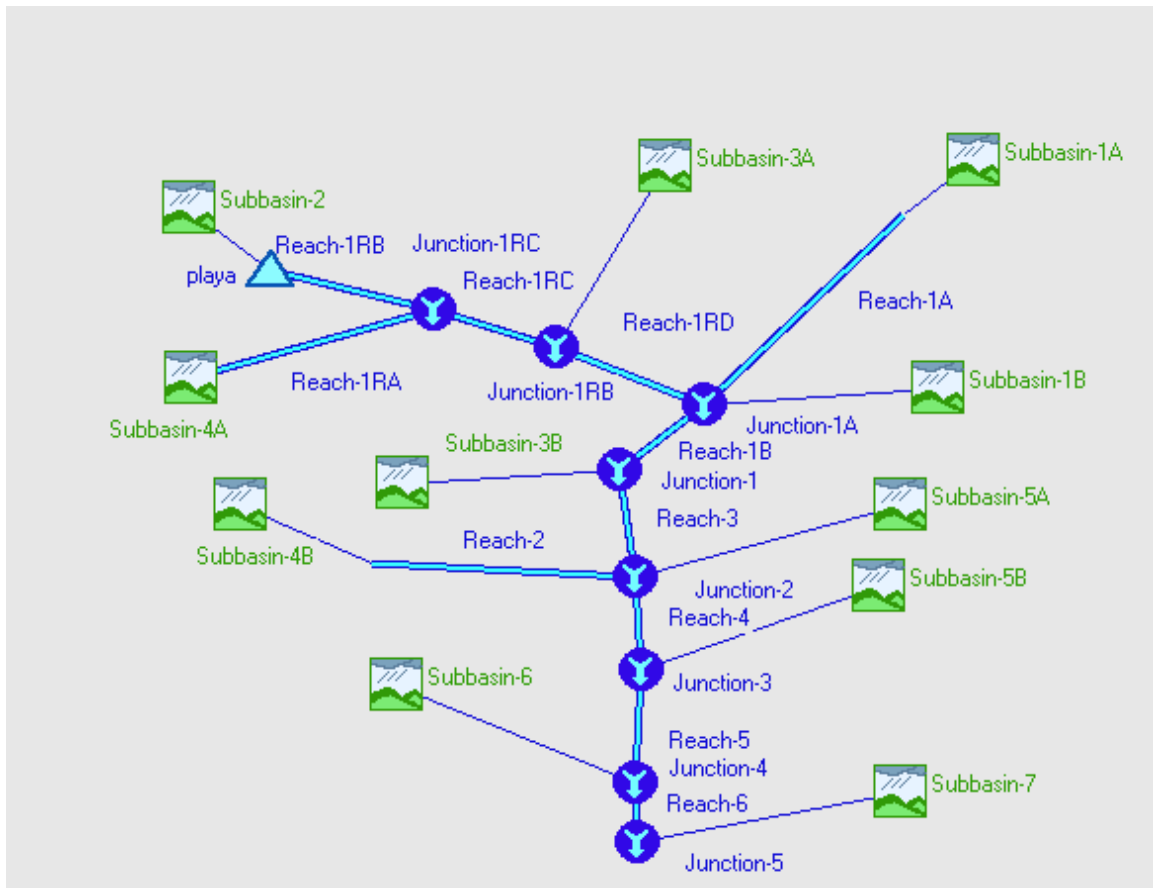
# HMS \* Summary of Results

Project : WCS

Run Name : 100YrNOD3/11/06

Start of Run : 01Dec00 0000 Basin Model : 100YrAM3/11/06NOD  
 End of Run : 02Dec00 0000 Met. Model : Met100 Year  
 Execution Time : 20Mar06 1832 Control Specs : Control 1

| Hydrologic Element | Discharge Peak (cfs) | Time of Peak   | Volume (ac ft) | Drainage Area (sq mi) |
|--------------------|----------------------|----------------|----------------|-----------------------|
| Subbasin-4B        | 239.00               | 01 Dec 00 1240 | 42.425         | 0.423                 |
| Reach-2            | 239.00               | 01 Dec 00 1255 | 42.172         | 0.423                 |
| Subbasin-4A        | 43.152               | 01 Dec 00 1232 | 6.7441         | 0.067                 |
| Reach-1RA          | 43.152               | 01 Dec 00 1235 | 6.7361         | 0.067                 |
| Subbasin-2         | 440.24               | 01 Dec 00 1305 | 105.39         | 1.063                 |
| playa              | 0.0                  | 30 Nov 00 2400 | 0.0            | 1.063                 |
| Reach-1RB          | 0.0                  | 30 Nov 00 2400 | 0.0            | 1.063                 |
| Junction-1RC       | 43.152               | 01 Dec 00 1235 | 6.7361         | 1.130                 |
| Reach-1RC          | 43.152               | 01 Dec 00 1240 | 6.7228         | 1.130                 |
| Subbasin-3A        | 55.732               | 01 Dec 00 1229 | 8.3632         | 0.083                 |
| Junction-1RB       | 96.283               | 01 Dec 00 1234 | 15.086         | 1.213                 |
| Reach-1RD          | 96.283               | 01 Dec 00 1250 | 14.990         | 1.213                 |
| Subbasin-1A        | 256.61               | 01 Dec 00 1328 | 73.808         | 0.691                 |
| Reach-1A           | 256.61               | 01 Dec 00 1344 | 73.328         | 0.691                 |
| Subbasin-1B        | 174.42               | 01 Dec 00 1241 | 31.477         | 0.314                 |
| Junction-1A        | 384.76               | 01 Dec 00 1302 | 119.80         | 2.218                 |
| Reach-1B           | 384.76               | 01 Dec 00 1305 | 119.65         | 2.218                 |
| Subbasin-3B        | 57.918               | 01 Dec 00 1223 | 7.5802         | 0.075                 |
| Junction-1         | 405.72               | 01 Dec 00 1302 | 127.23         | 2.293                 |
| Reach-3            | 405.72               | 01 Dec 00 1319 | 126.34         | 2.293                 |
| Subbasin-5A        | 118.86               | 01 Dec 00 1234 | 19.306         | 0.192                 |
| Junction-2         | 678.91               | 01 Dec 00 1303 | 187.82         | 2.908                 |
| Reach-4            | 678.91               | 01 Dec 00 1324 | 186.20         | 2.908                 |
| Subbasin-5B        | 128.06               | 01 Dec 00 1251 | 26.440         | 0.265                 |
| Junction-3         | 770.36               | 01 Dec 00 1320 | 212.64         | 3.173                 |
| Reach-5            | 770.36               | 01 Dec 00 1334 | 211.39         | 3.173                 |
| Subbasin-6         | 54.403               | 01 Dec 00 1225 | 7.4715         | 0.074                 |
| Junction-4         | 782.50               | 01 Dec 00 1333 | 218.86         | 3.247                 |
| Reach-6            | 782.50               | 01 Dec 00 1333 | 218.86         | 3.247                 |
| Subbasin-7         | 43.582               | 01 Dec 00 1304 | 10.316         | 0.104                 |
| Junction-5         | 817.50               | 01 Dec 00 1332 | 229.18         | 3.351                 |



HMS \* Basin Model \* SCS Curve Number

Sort Help

Basin Model ID: 100YrAM3/11/06NOD

| Subbasin Name | SCS Curve Number | Initial Abstraction (in) | Imperviousness (%) |
|---------------|------------------|--------------------------|--------------------|
| Subbasin-1A   | 62               |                          | 0.0                |
| Subbasin-2    | 60               |                          | 0.0                |
| Subbasin-3B   | 60               |                          | 0.0                |
| Subbasin-4B   | 60               |                          | 0.0                |
| Subbasin-5B   | 60               |                          | 0.0                |
| Subbasin-6    | 60               |                          | 0.0                |
| Subbasin-1B   | 60               |                          | 0.0                |
| Subbasin-5A   | 60               |                          | 0.0                |
| Subbasin-7    | 60               |                          | 0.0                |
| Subbasin-4A   | 60               |                          | 0.0                |
| Subbasin-3A   | 60               |                          | 0.0                |

**HMS \* Basin Model \* SCS UH**

Sort Help

Basin Model ID: 100YrAM3/11/06NOD

Time Units : Minutes

| Subbasin Name | SCS Lag (min) |
|---------------|---------------|
| Subbasin-1A   | 86            |
| Subbasin-2    | 65            |
| Subbasin-3B   | 28            |
| Subbasin-4B   | 43            |
| Subbasin-5B   | 53            |
| Subbasin-6    | 30            |
| Subbasin-1B   | 44            |
| Subbasin-5A   | 38            |
| Subbasin-7    | 64            |
| Subbasin-4A   | 36            |
| Subbasin-3A   | 34            |

**HMS \* Basin Model \* Lag Routing**

Help

Basin Model ID : 100YrAM3/11/06NOD

Interval : Minutes

| Reach Name | Lag (min) |
|------------|-----------|
| Reach-1RB  | 13        |
| Reach-2    | 15        |
| Reach-3    | 17        |
| Reach-4    | 21        |
| Reach-5    | 14        |
| Reach-1A   | 16.8      |
| Reach-6    | 0         |
| Reach-1RA  | 3         |
| Reach-1RC  | 5.7       |
| Reach-1RD  | 16.3      |
| Reach-1B   | 3         |

HMS \* Basin Model \* Reservoir Editor

Edit File Help

Reservoir Name:

Description:  ...

Storage Outlet Spillway Overflow Dam Break

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        |

# Meteorologic Model Input

The screenshot shows the 'HMS \* Meteorologic Model' application window. It features a menu bar with 'File', 'Edit', and 'Help'. Below the menu bar, there are two input fields: 'Meteorologic Model:' with the value 'Met100 Year' and 'Description:' with the value '100 Year, 24 Hour Storm'. A tabbed interface is visible with 'Precipitation' and 'Evapotranspiration' tabs. The 'Precipitation' tab is active, showing a 'Method:' dropdown menu set to 'SCS Hypothetical Storm'. Below this, there is a 'Storm Selection:' dropdown menu set to 'Type II' and a 'Storm Depth (in):' text input field containing the value '6.0'.

HMS \* Meteorologic Model

File Edit Help

Meteorologic Model: Met100 Year

Description: 100 Year, 24 Hour Storm

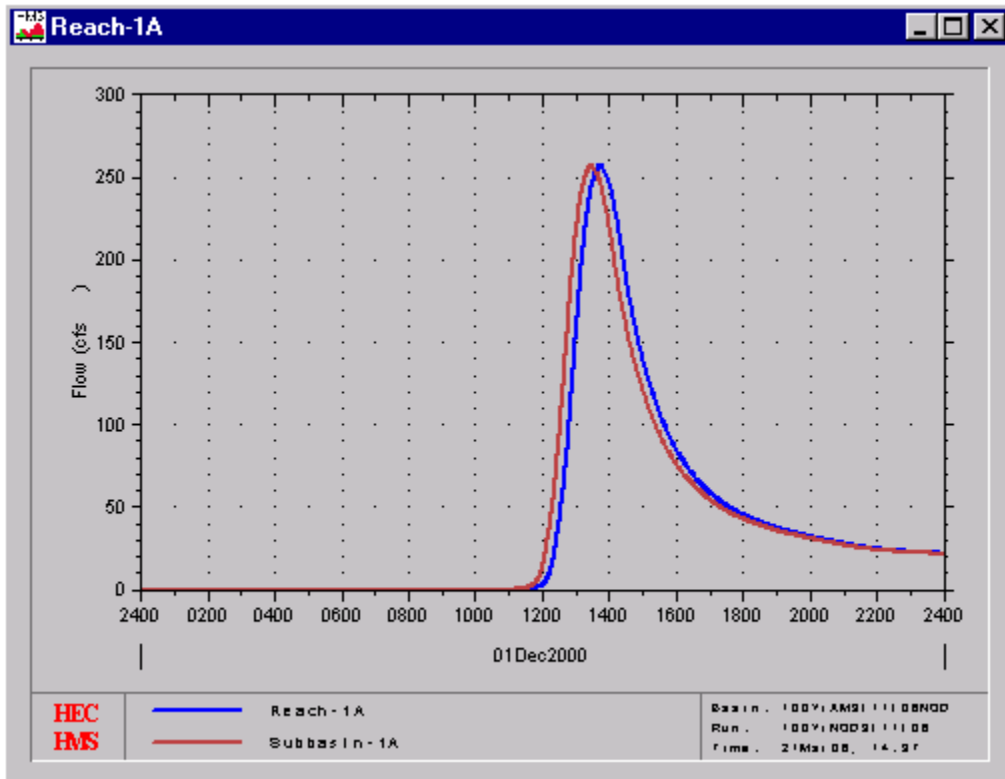
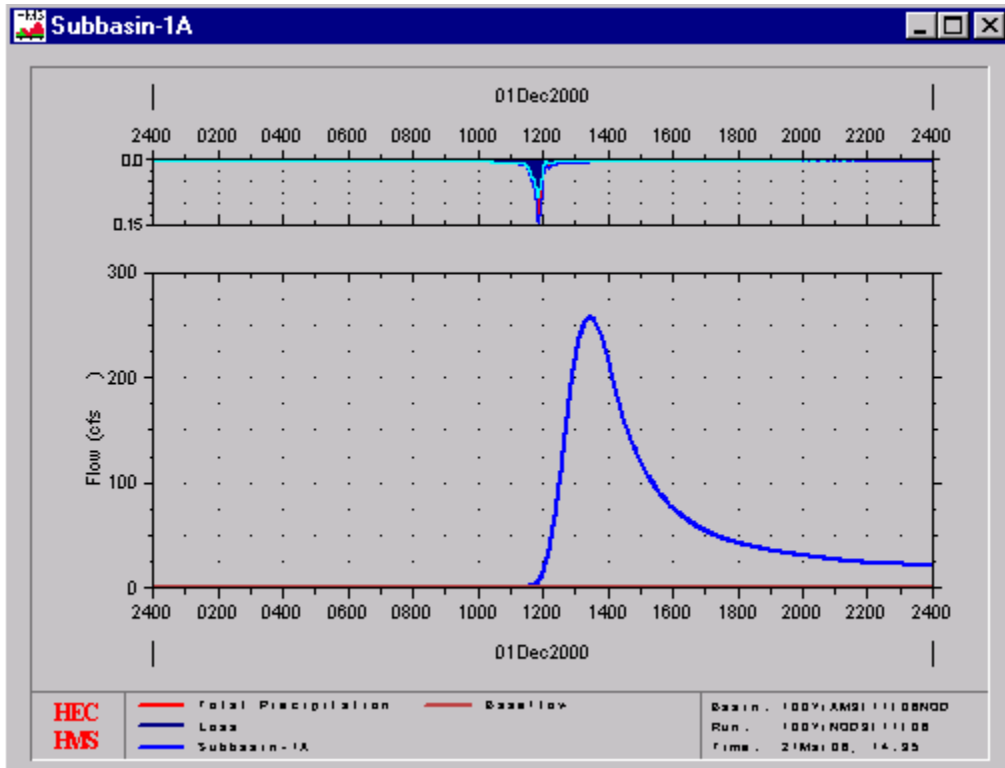
Precipitation Evapotranspiration

Method: SCS Hypothetical Storm

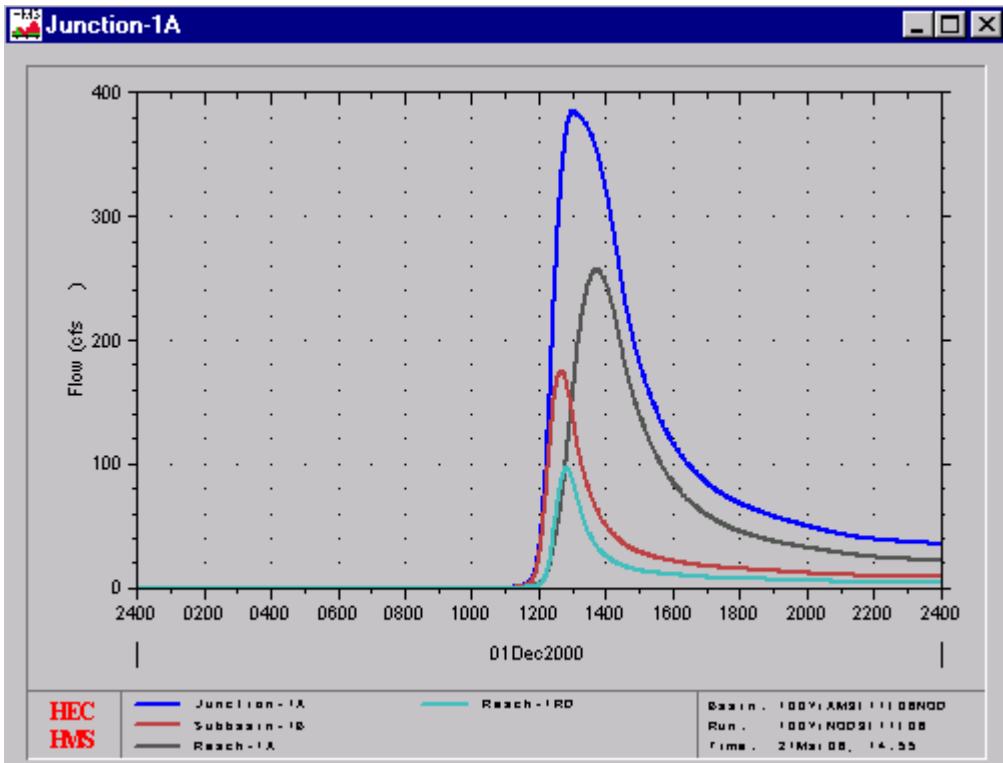
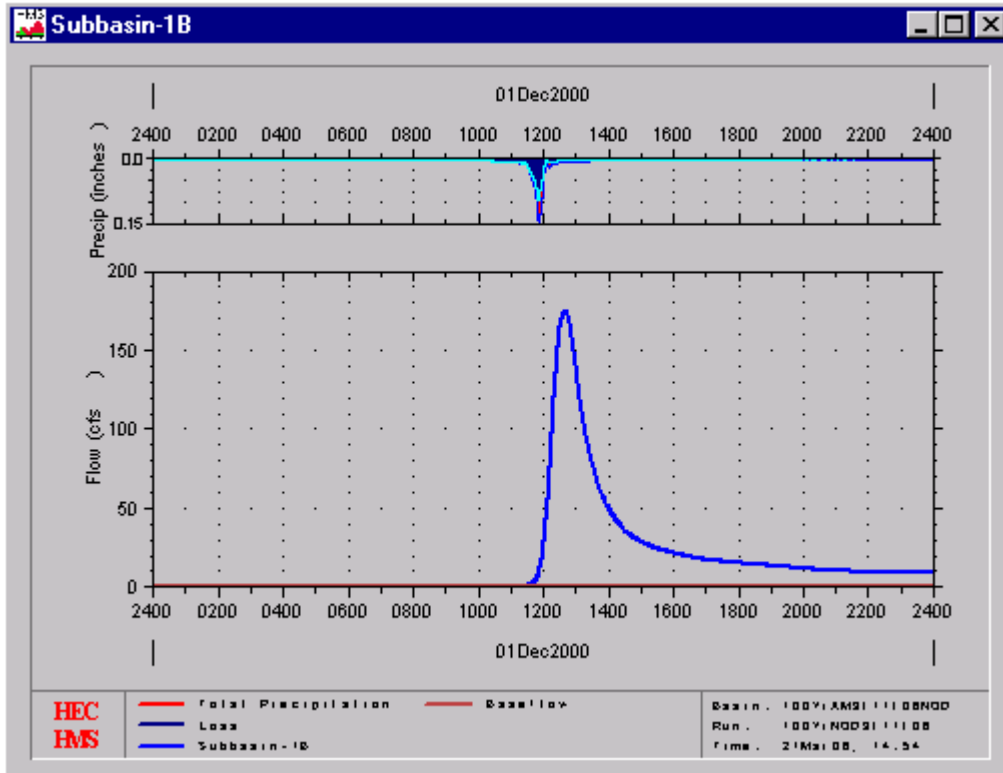
Storm Selection: Type II

Storm Depth (in): 6.0

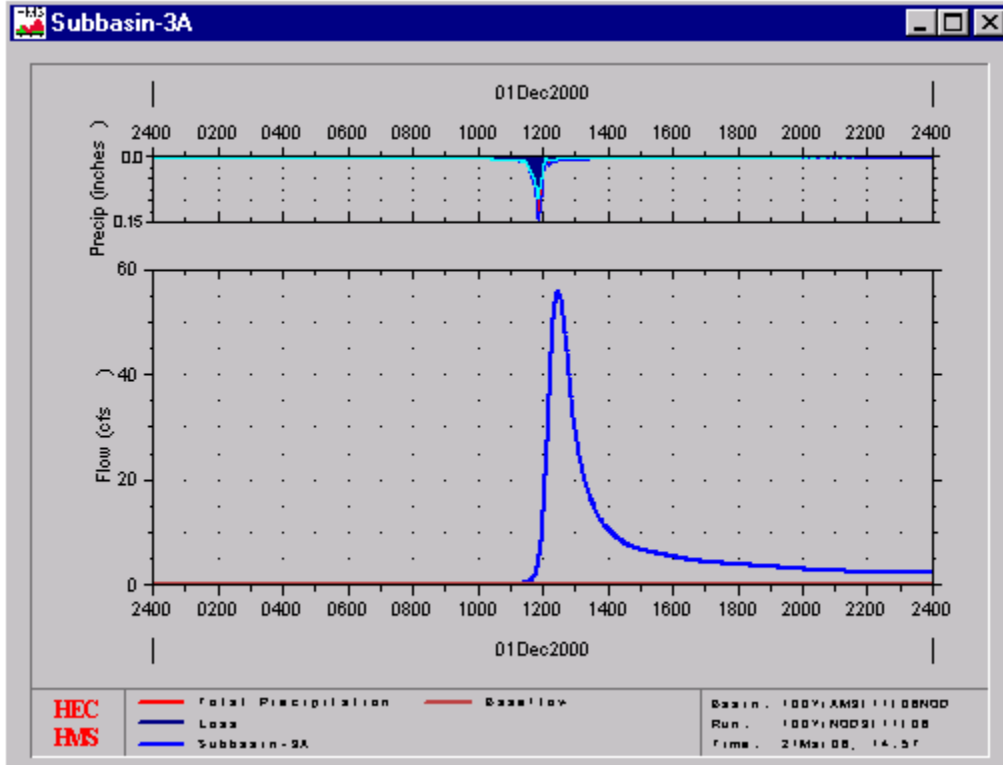
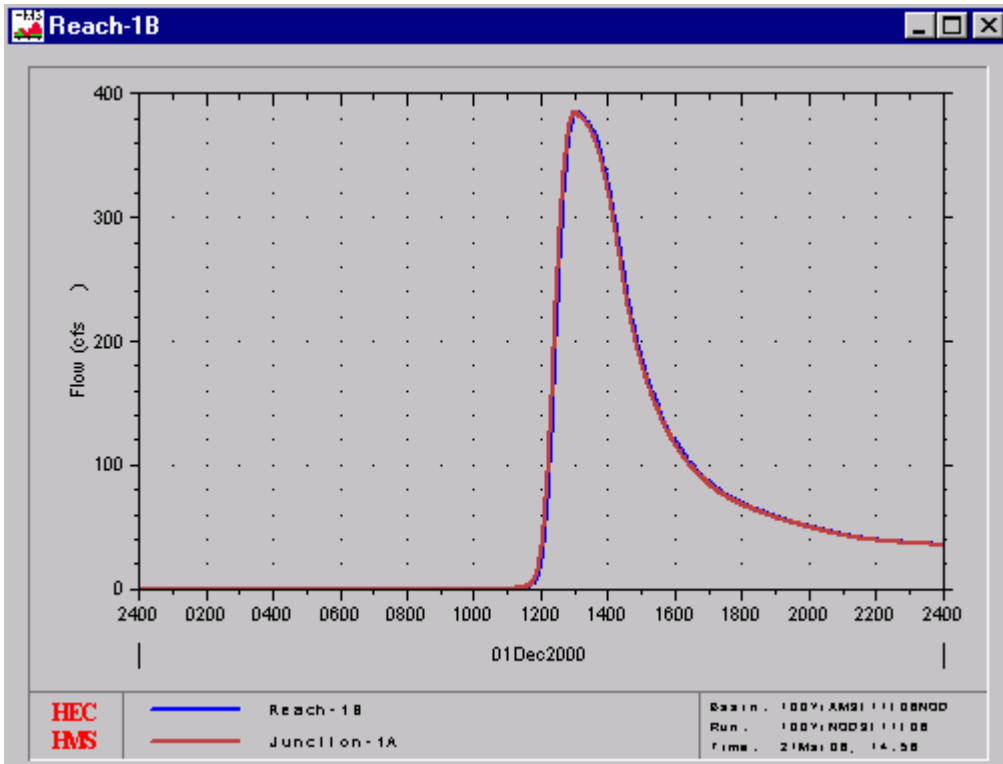
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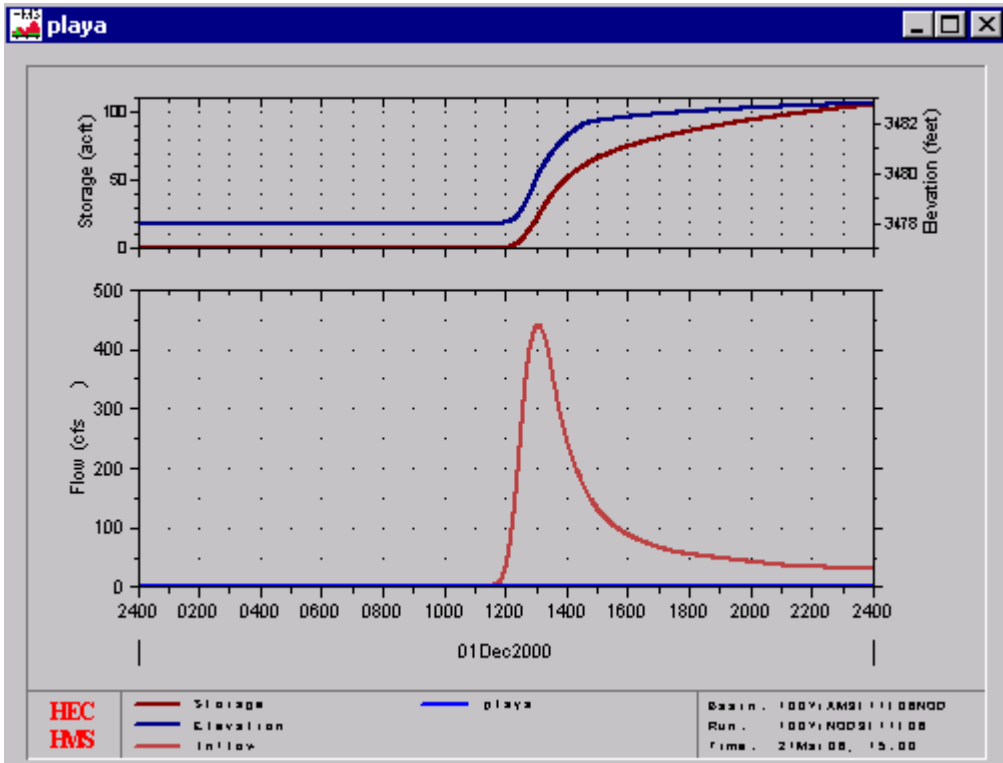
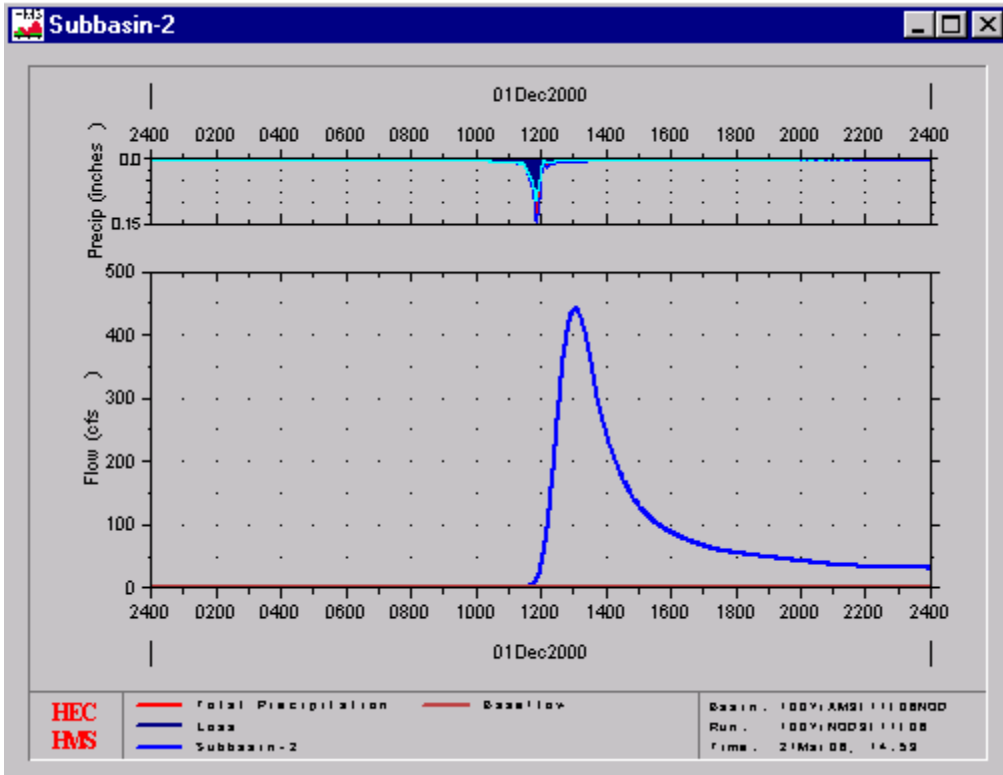
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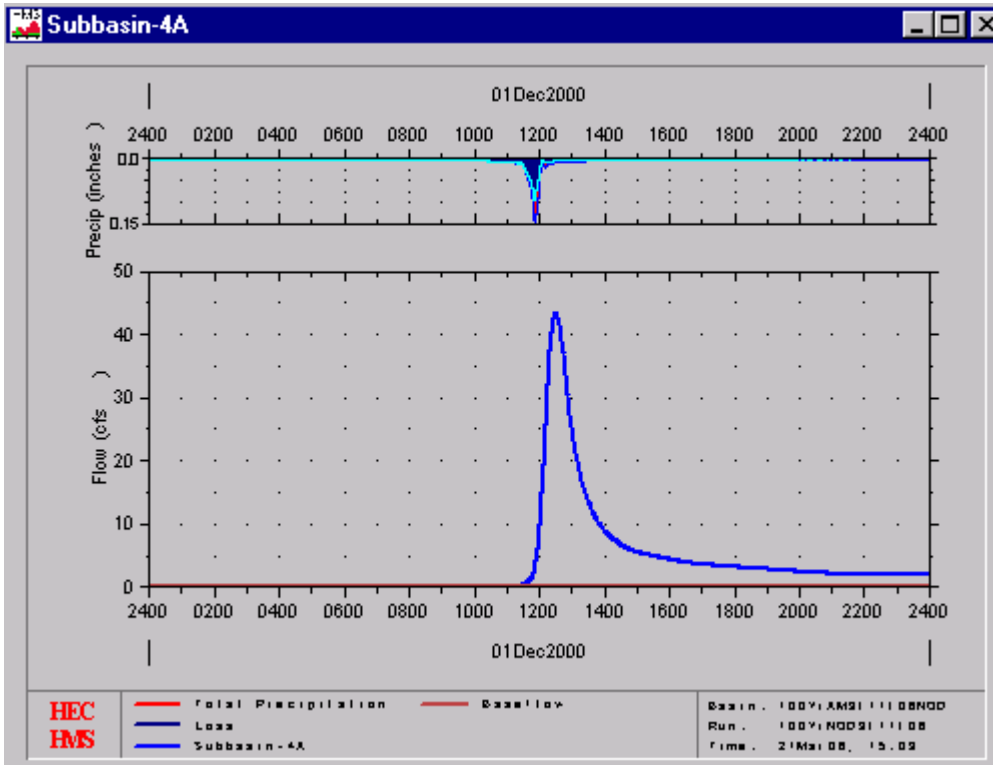
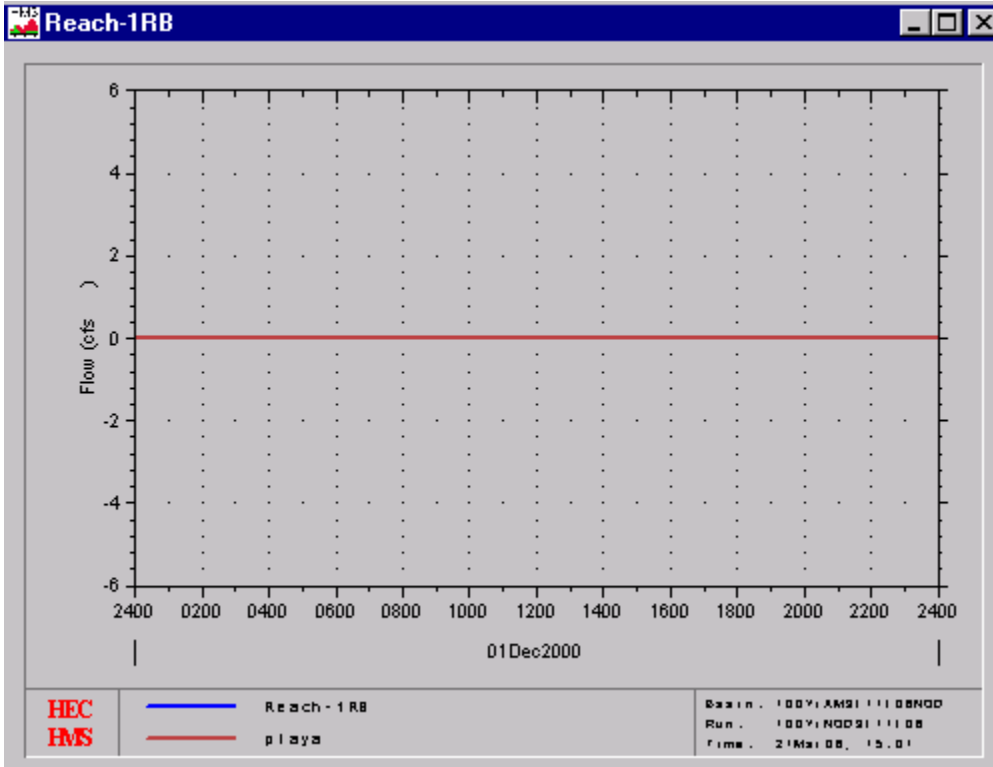
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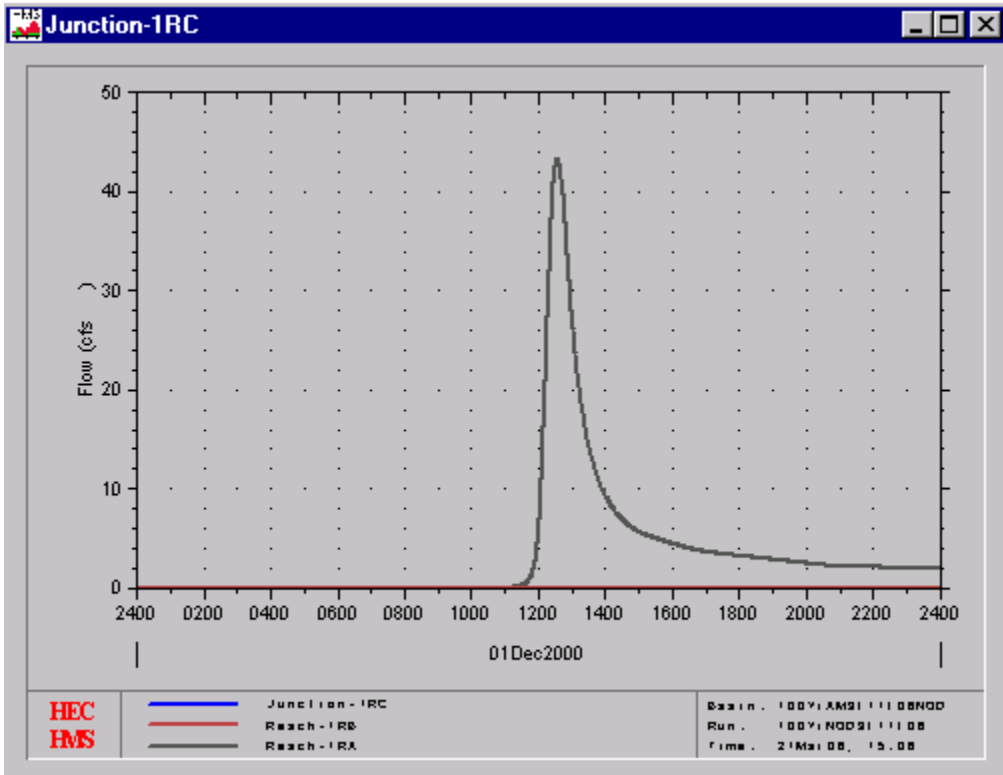
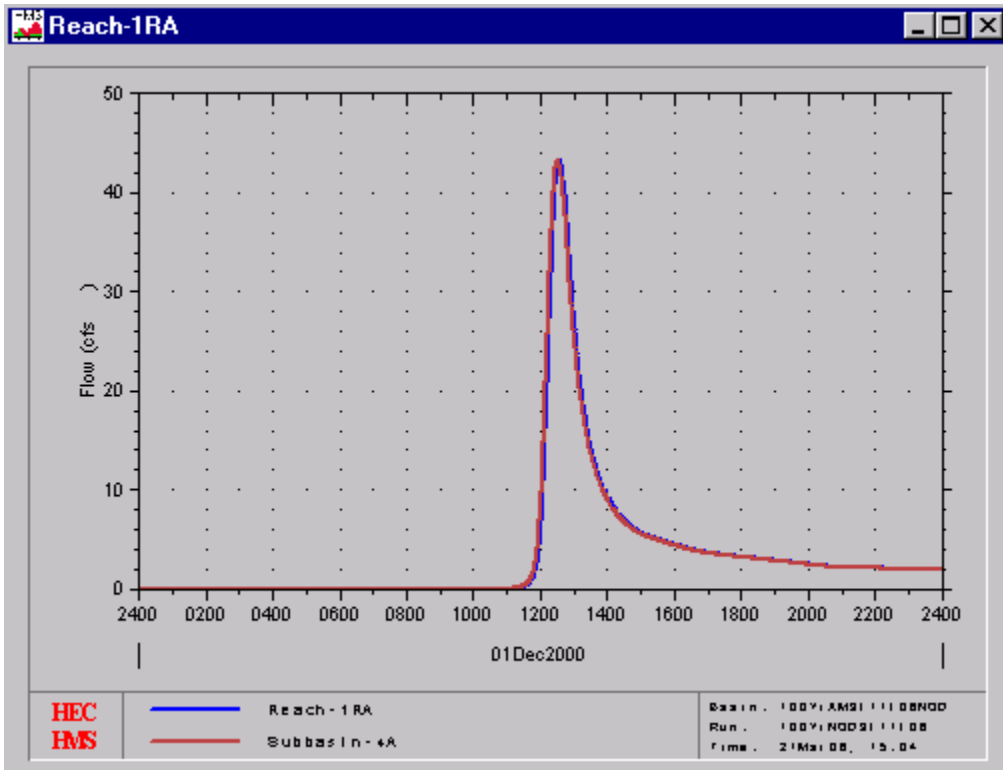
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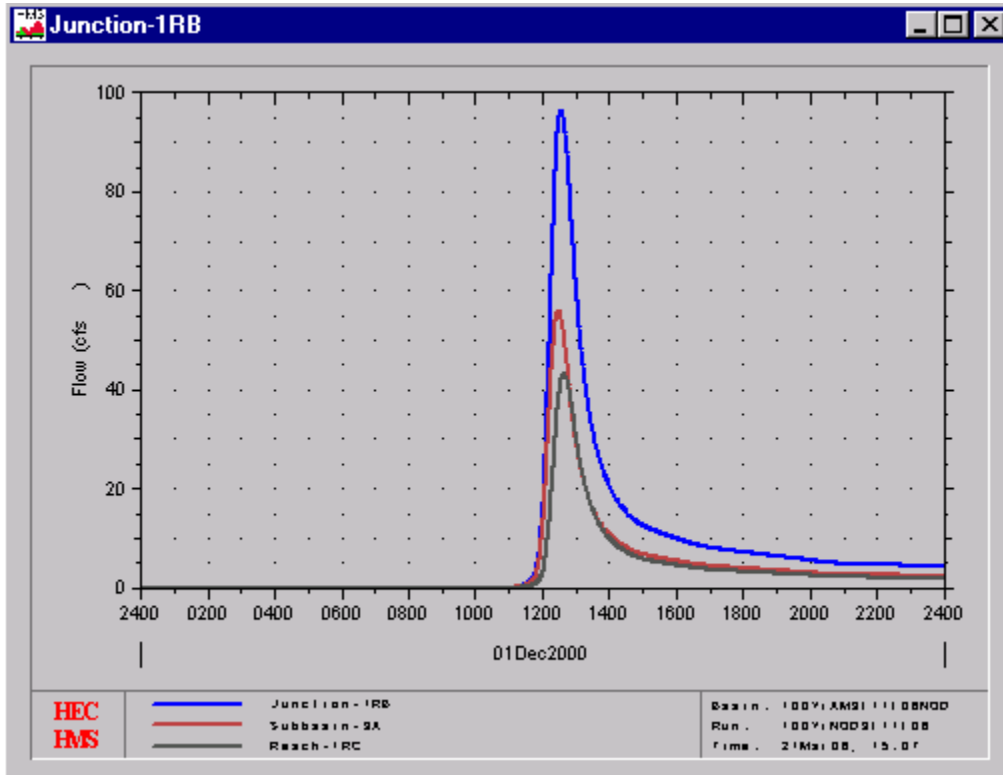
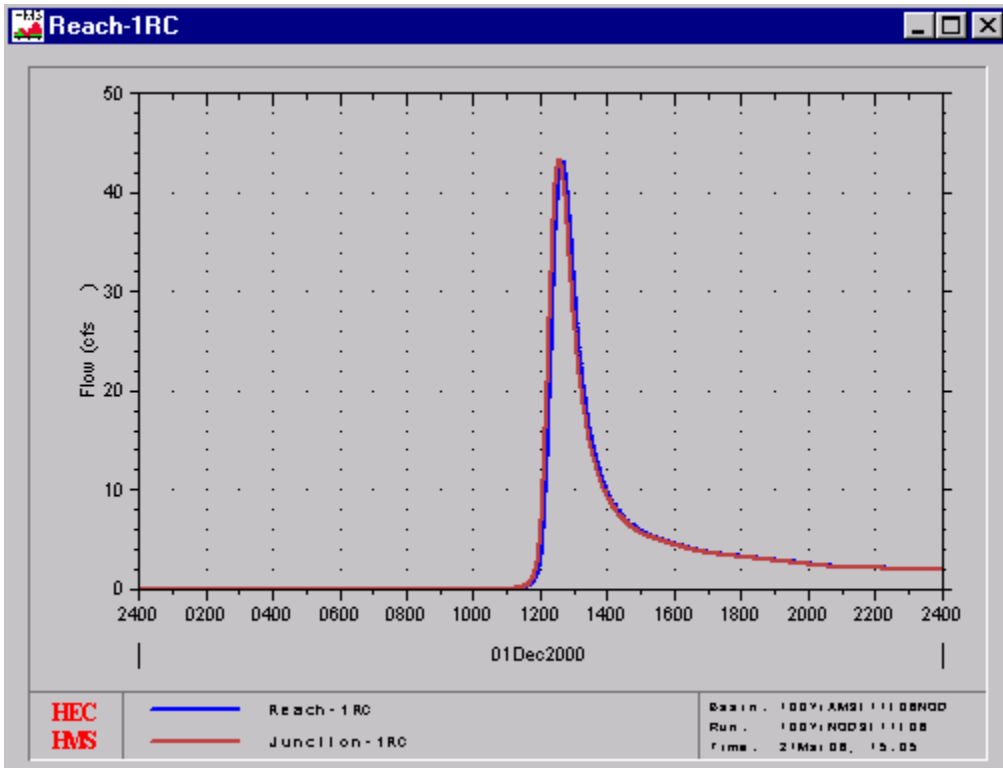
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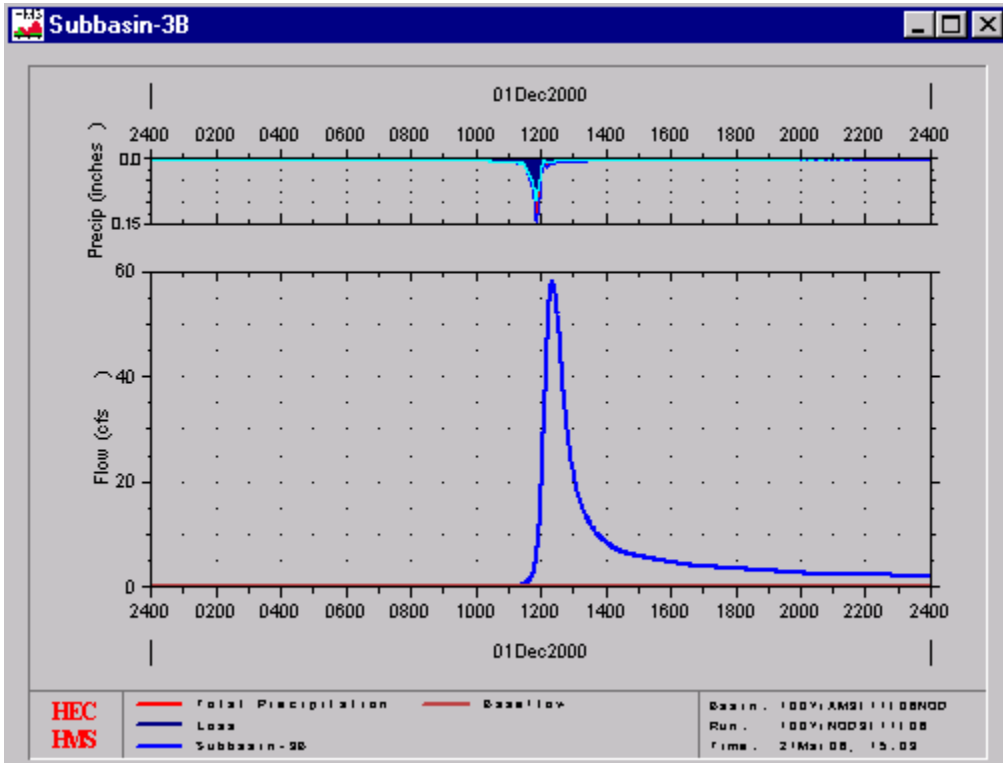
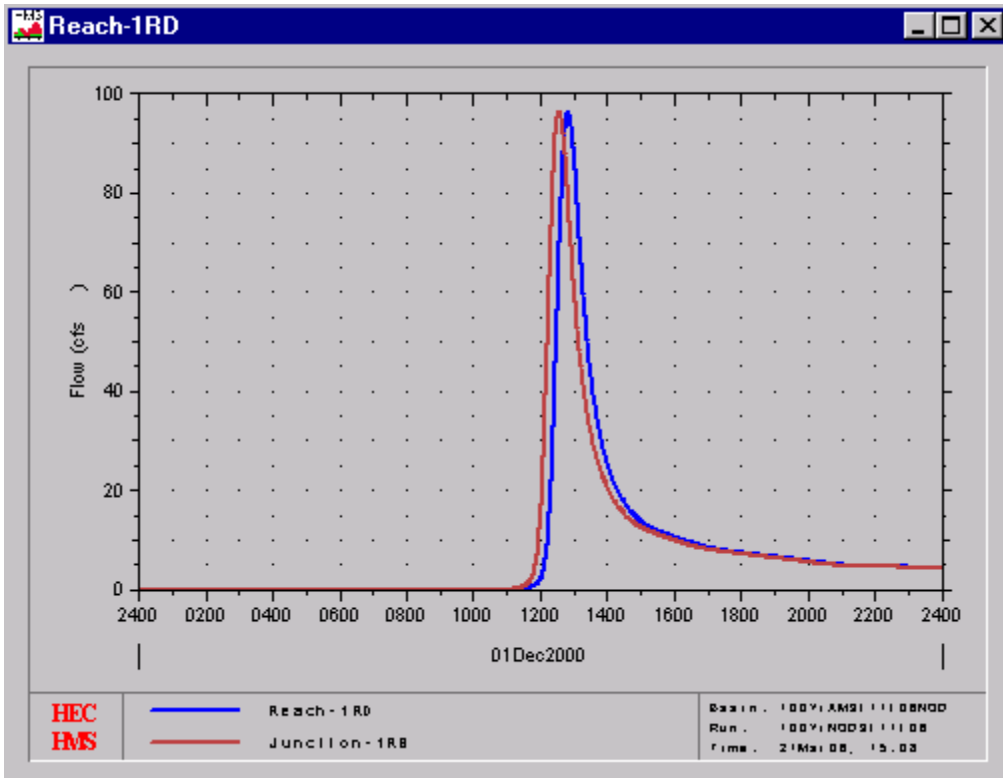
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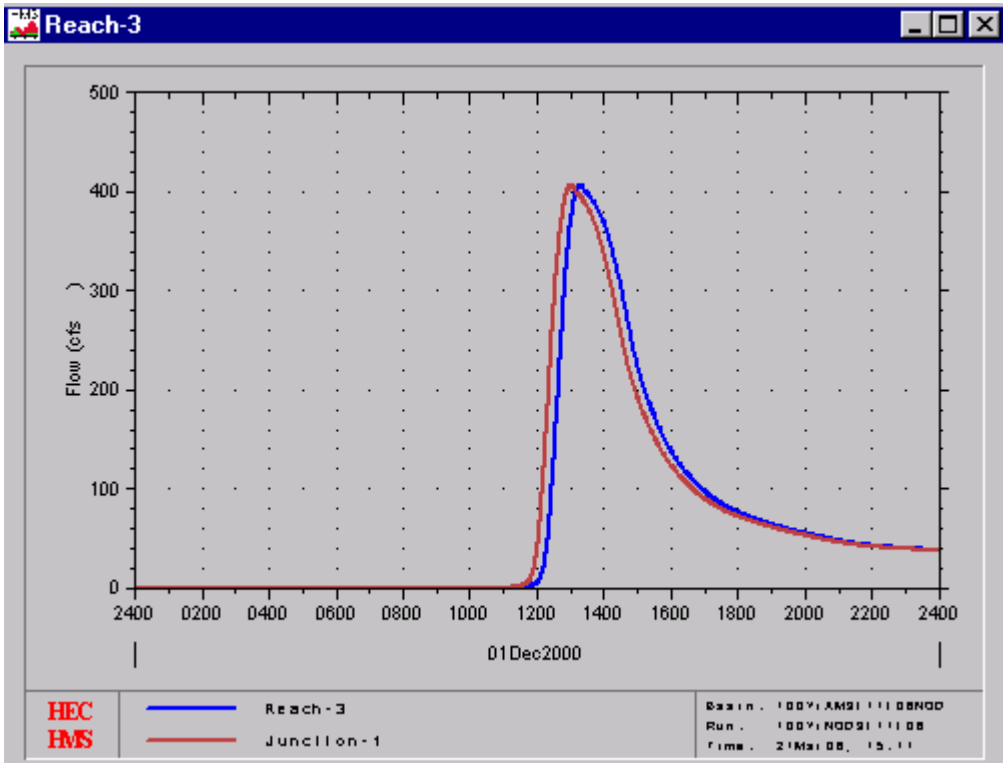
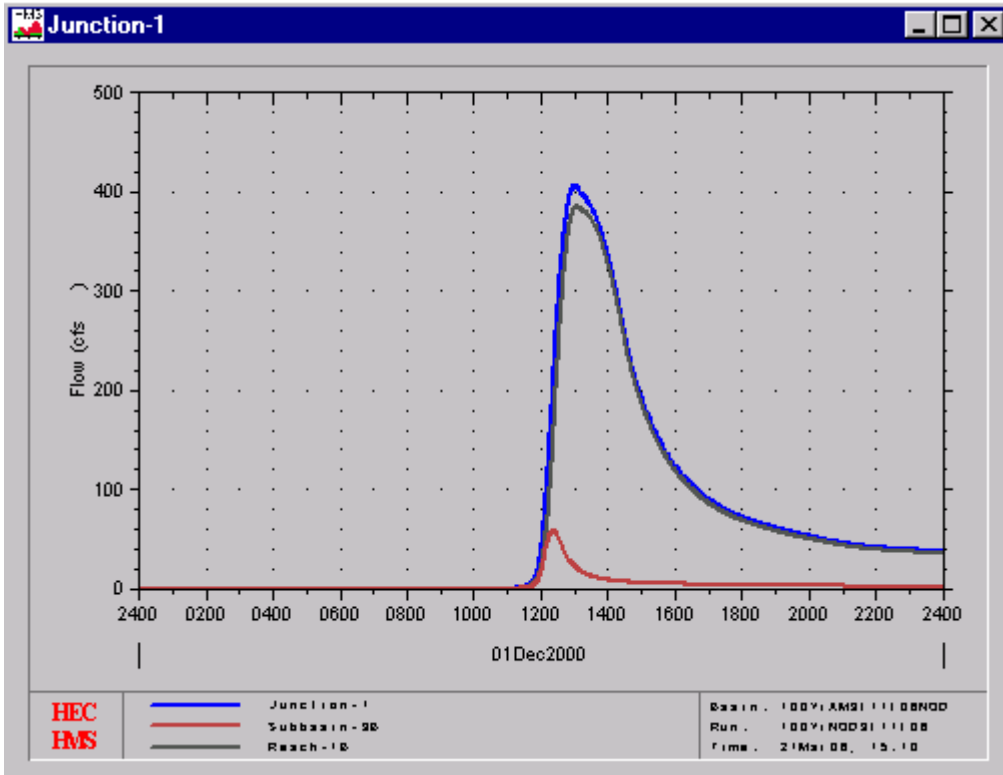
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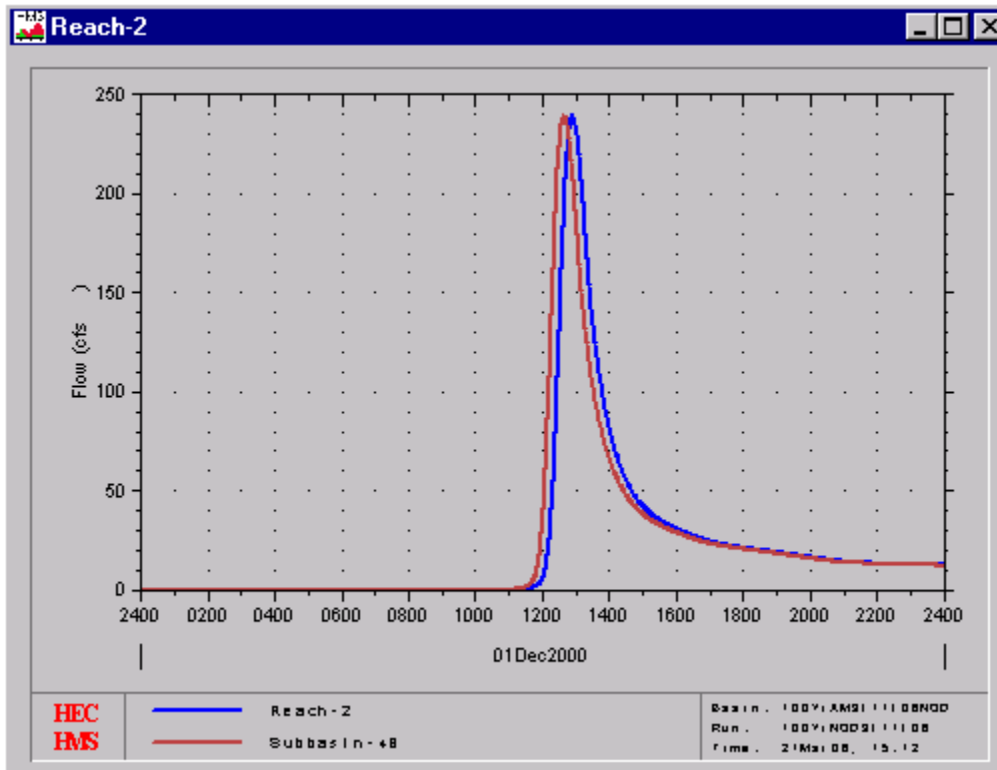
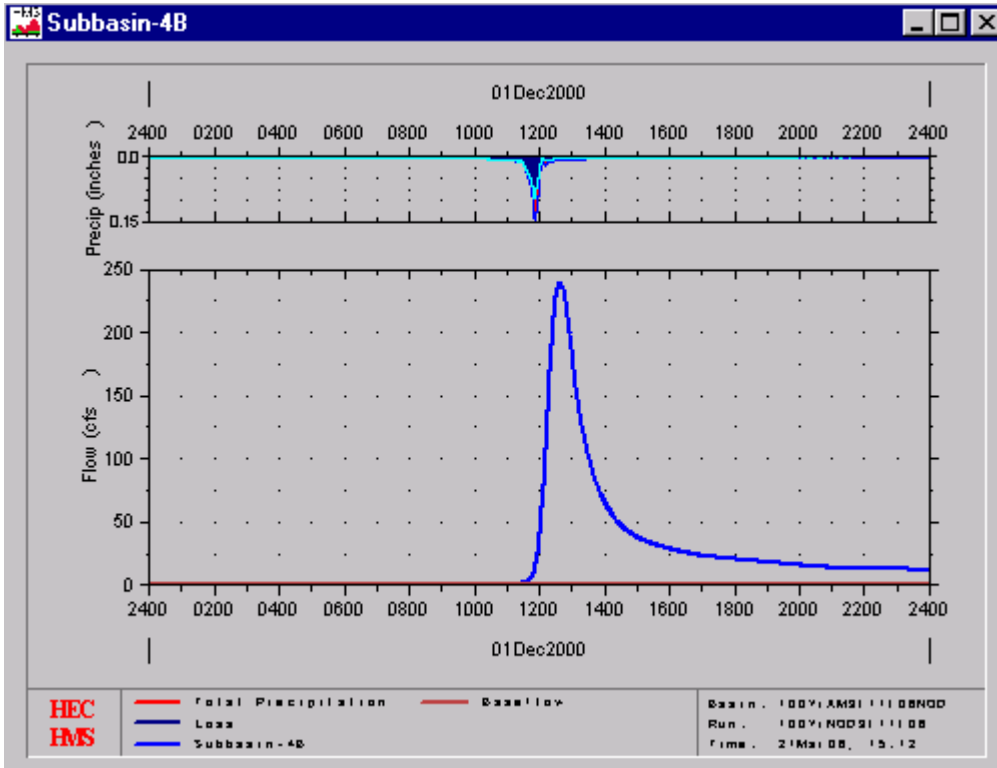
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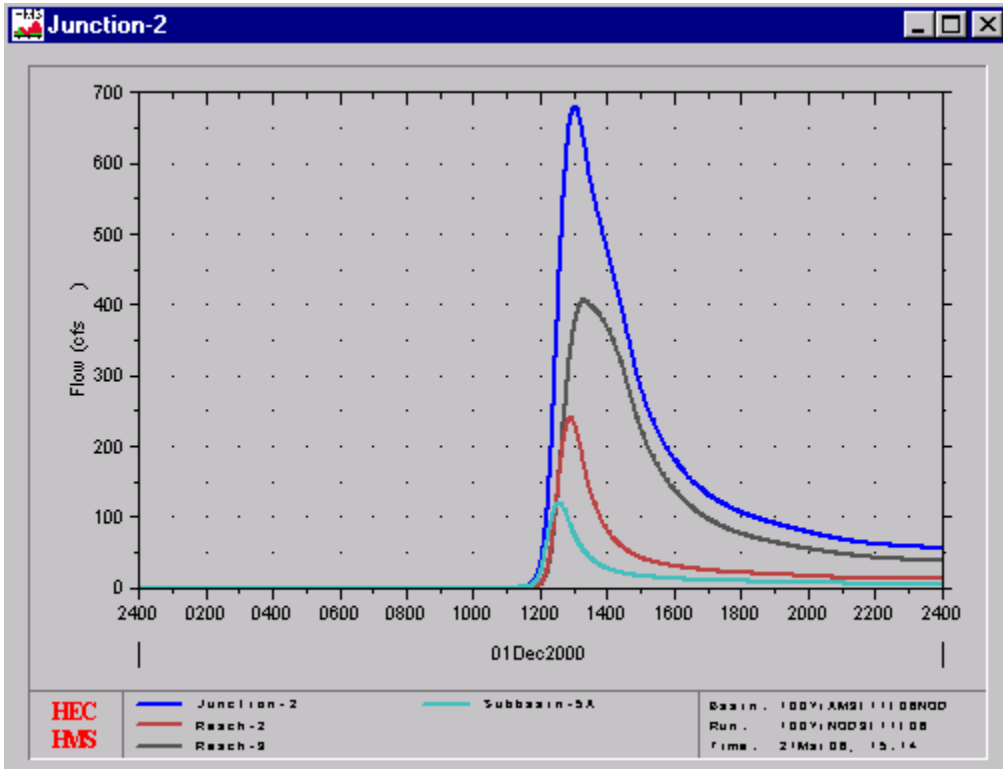
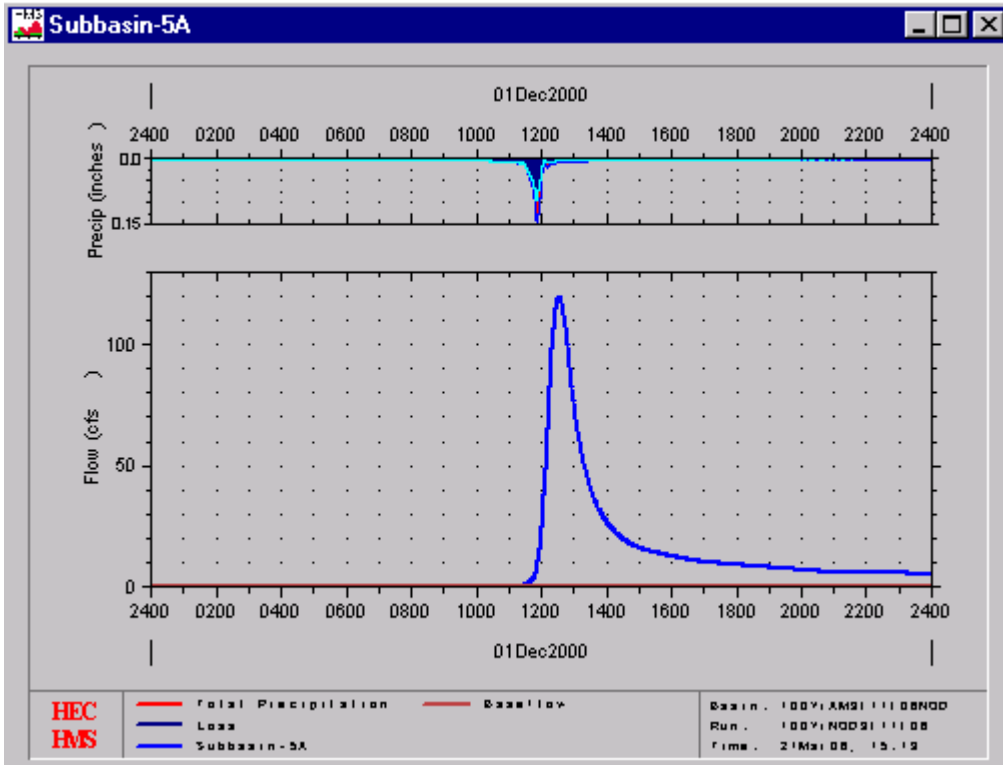
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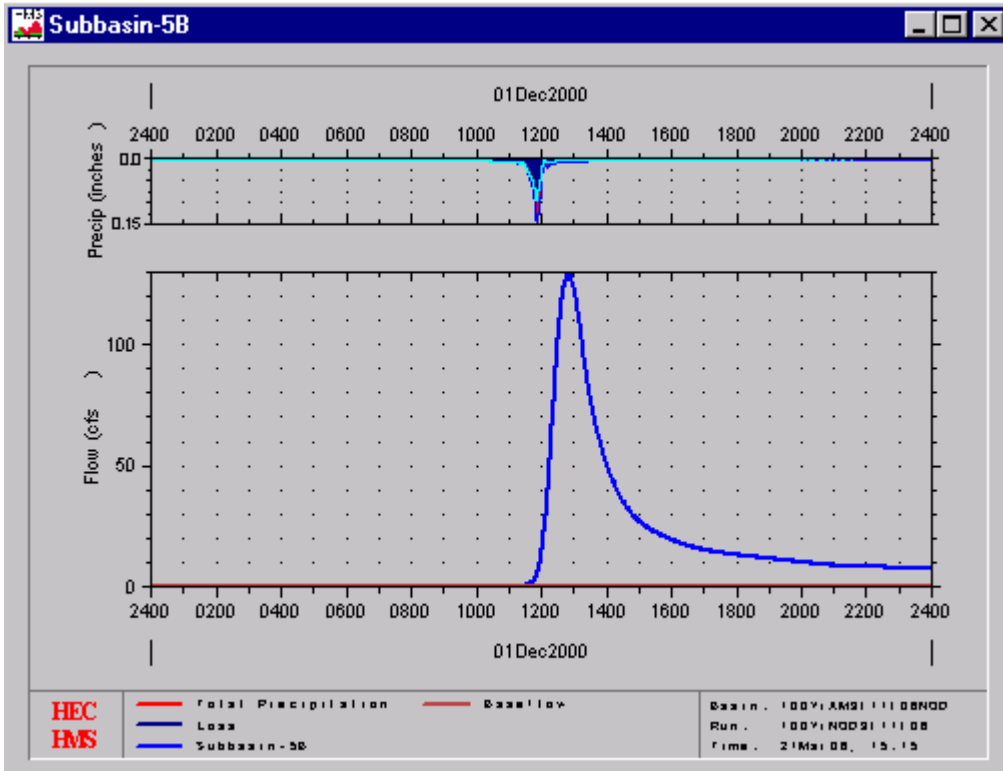
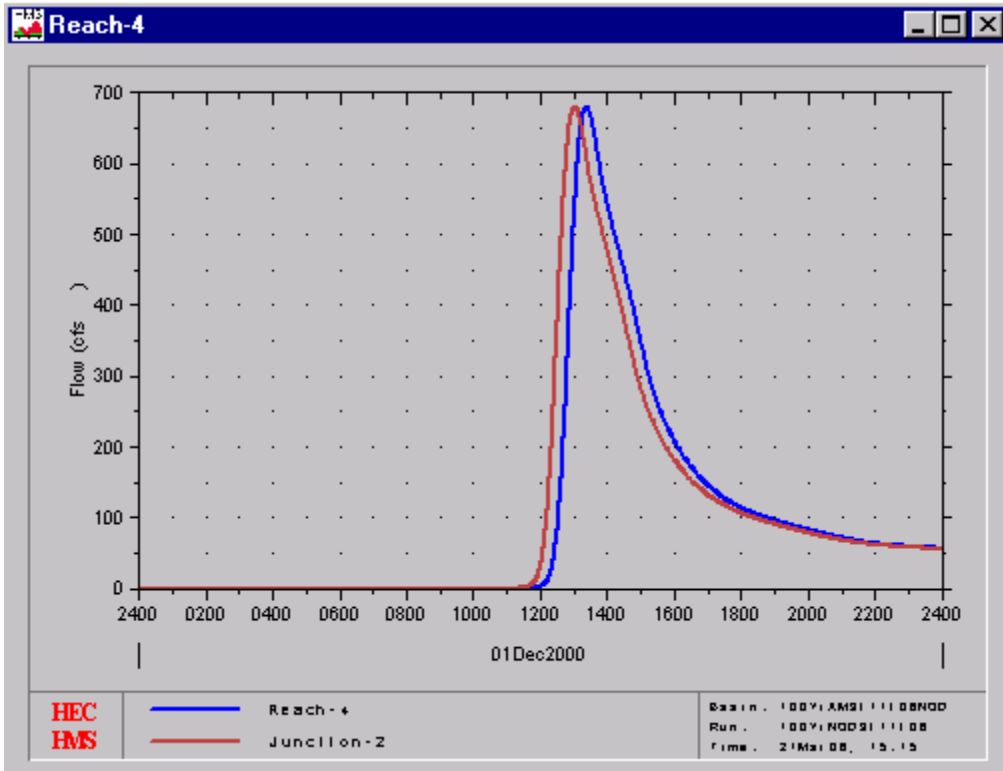
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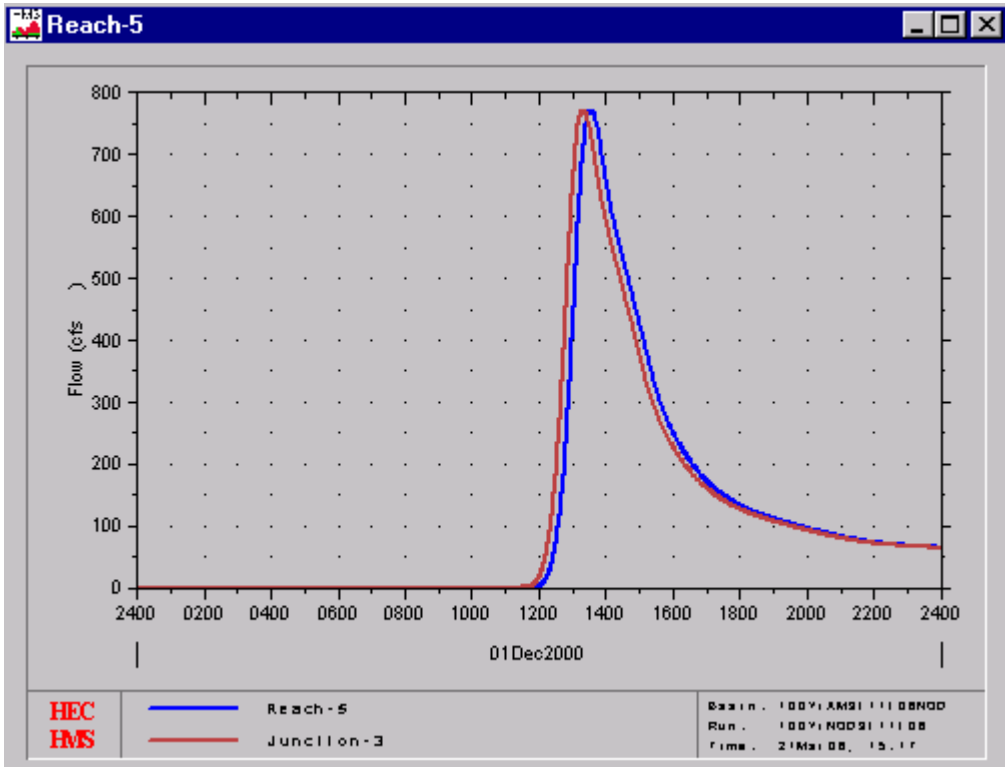
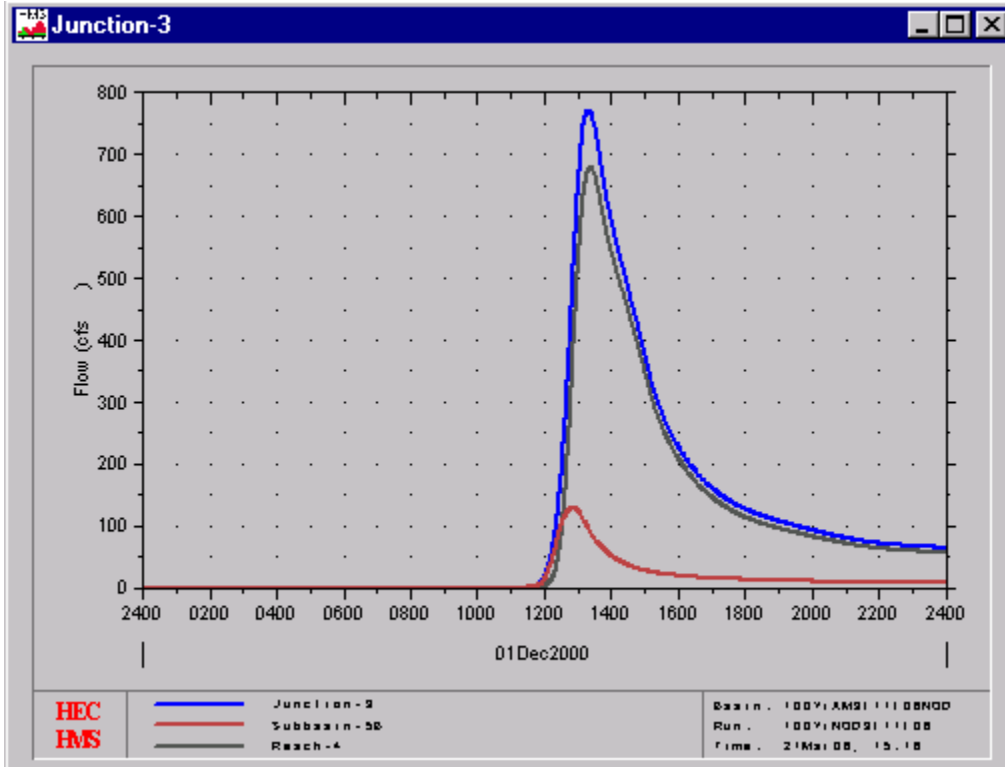
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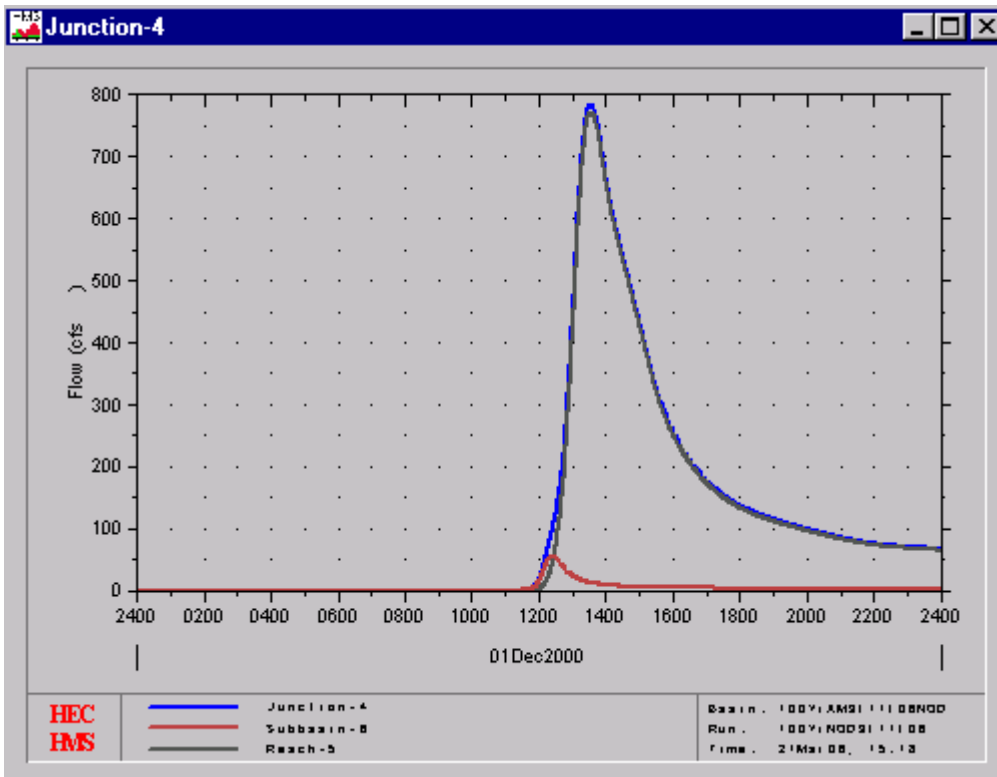
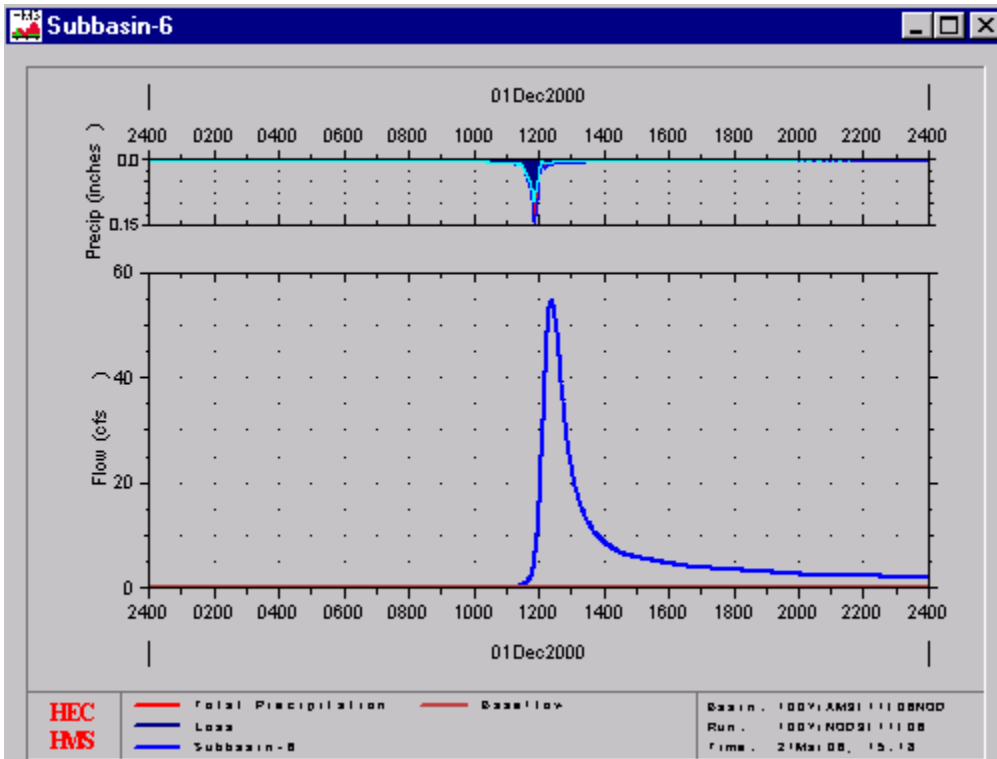
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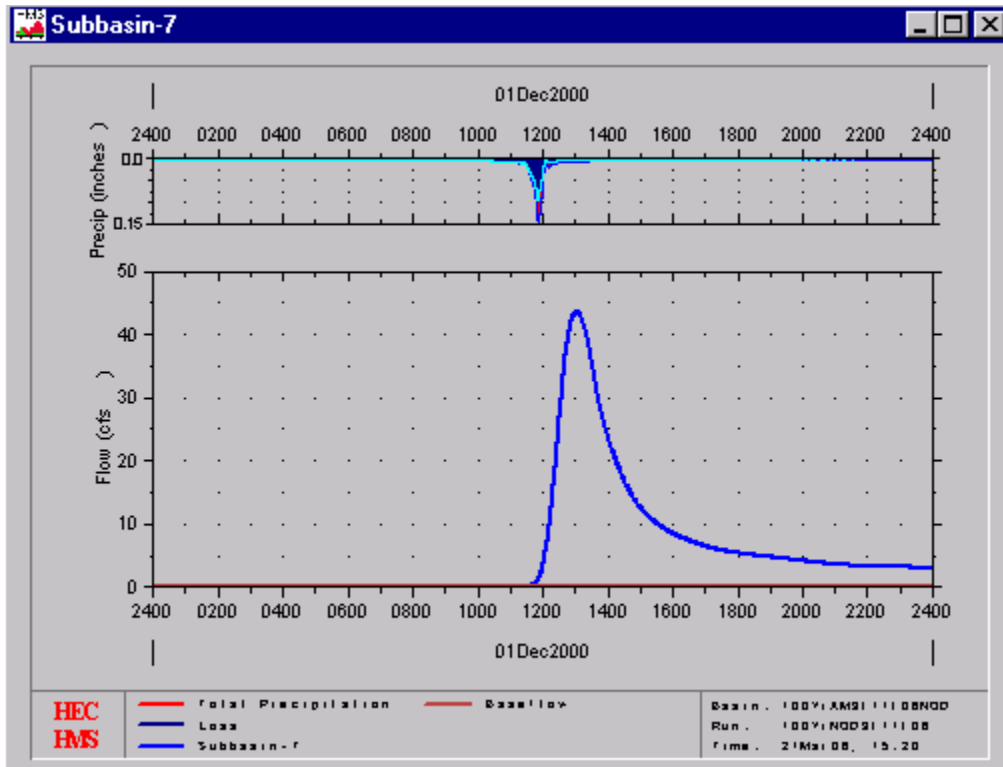
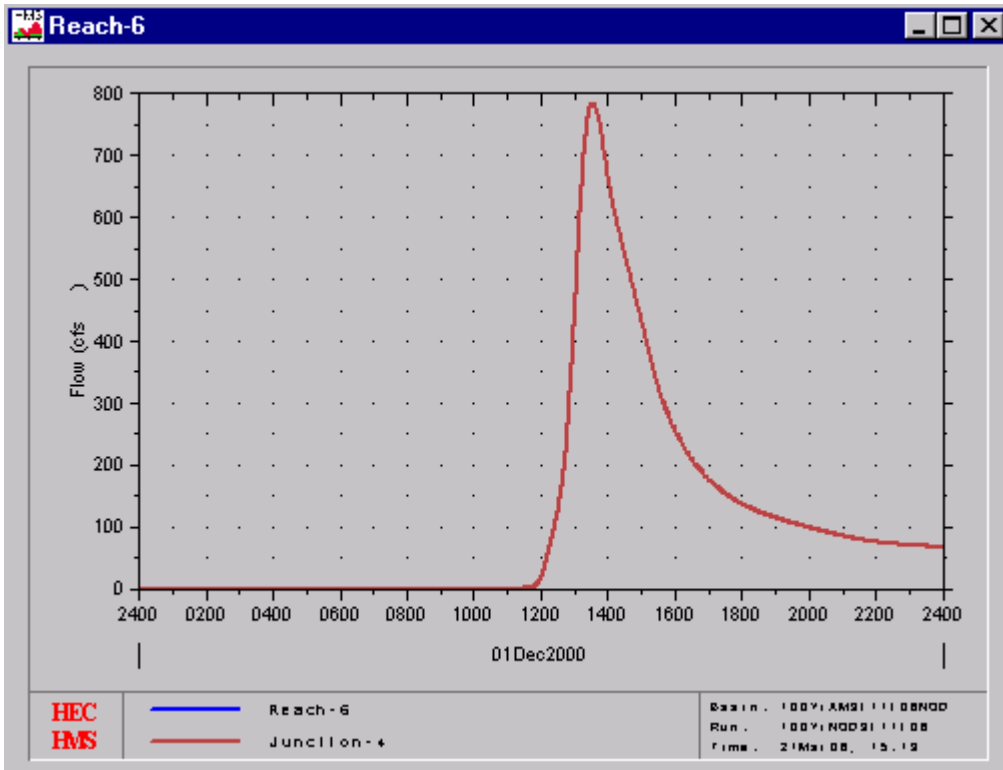
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