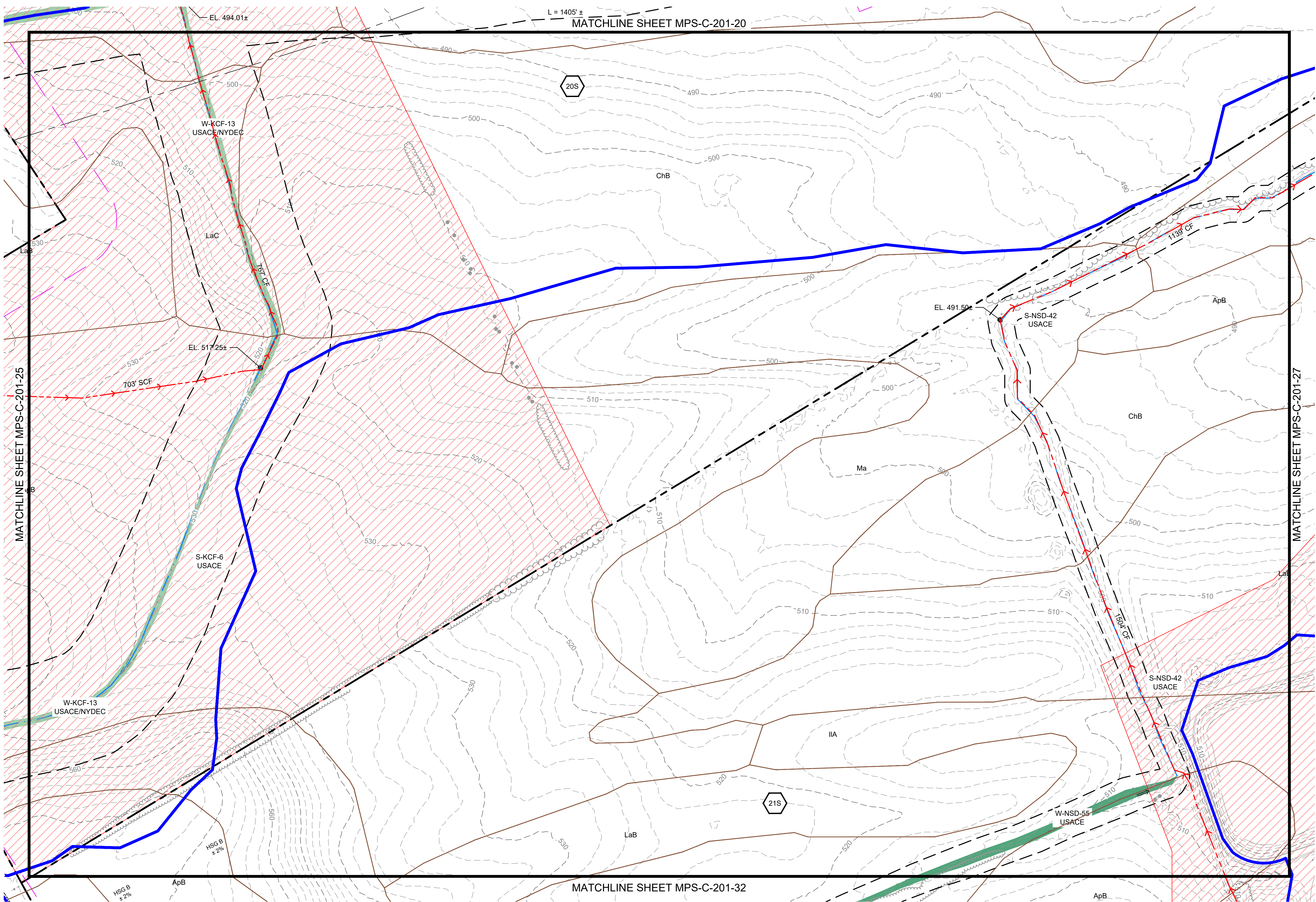


# **Mill Point Solar I Project**

## **Preliminary Stormwater Pollution Prevention Plan (SWPPP)**

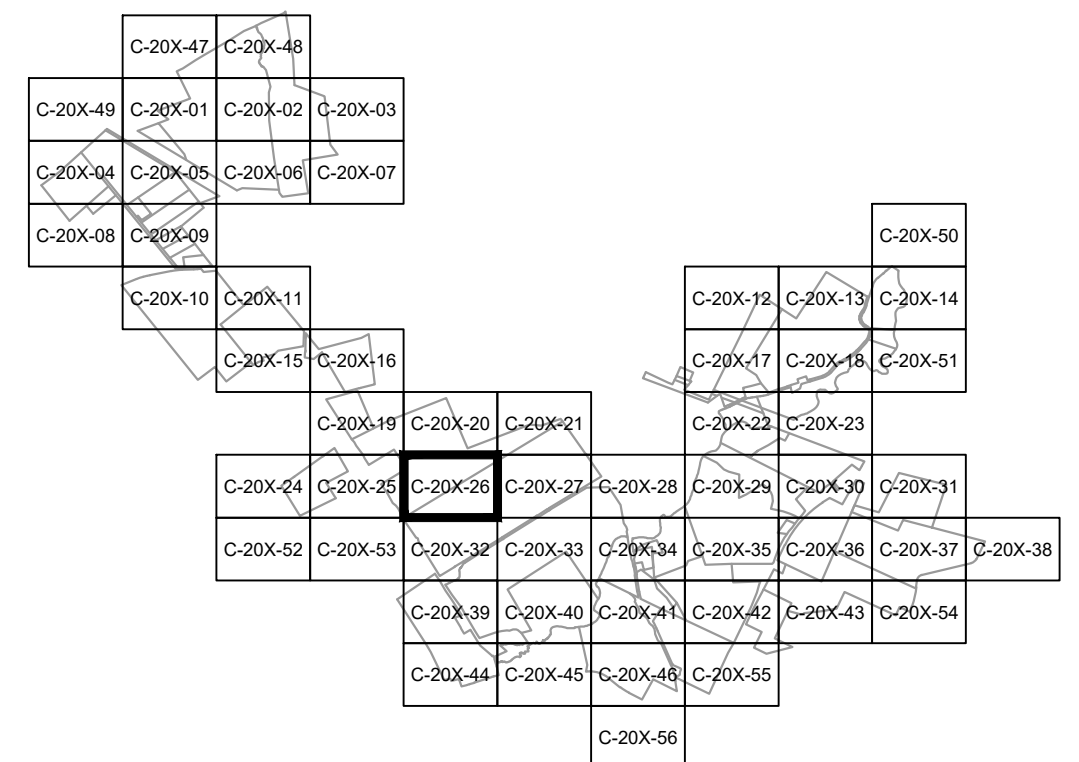
Part 3 of 4





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square symbol (1R)
- SUBCATCHMENT ID: Hexagon symbol (1S)
- POND ID: Triangle symbol (1P)
- STUDY POINT ID: Square symbol (SP1)
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION

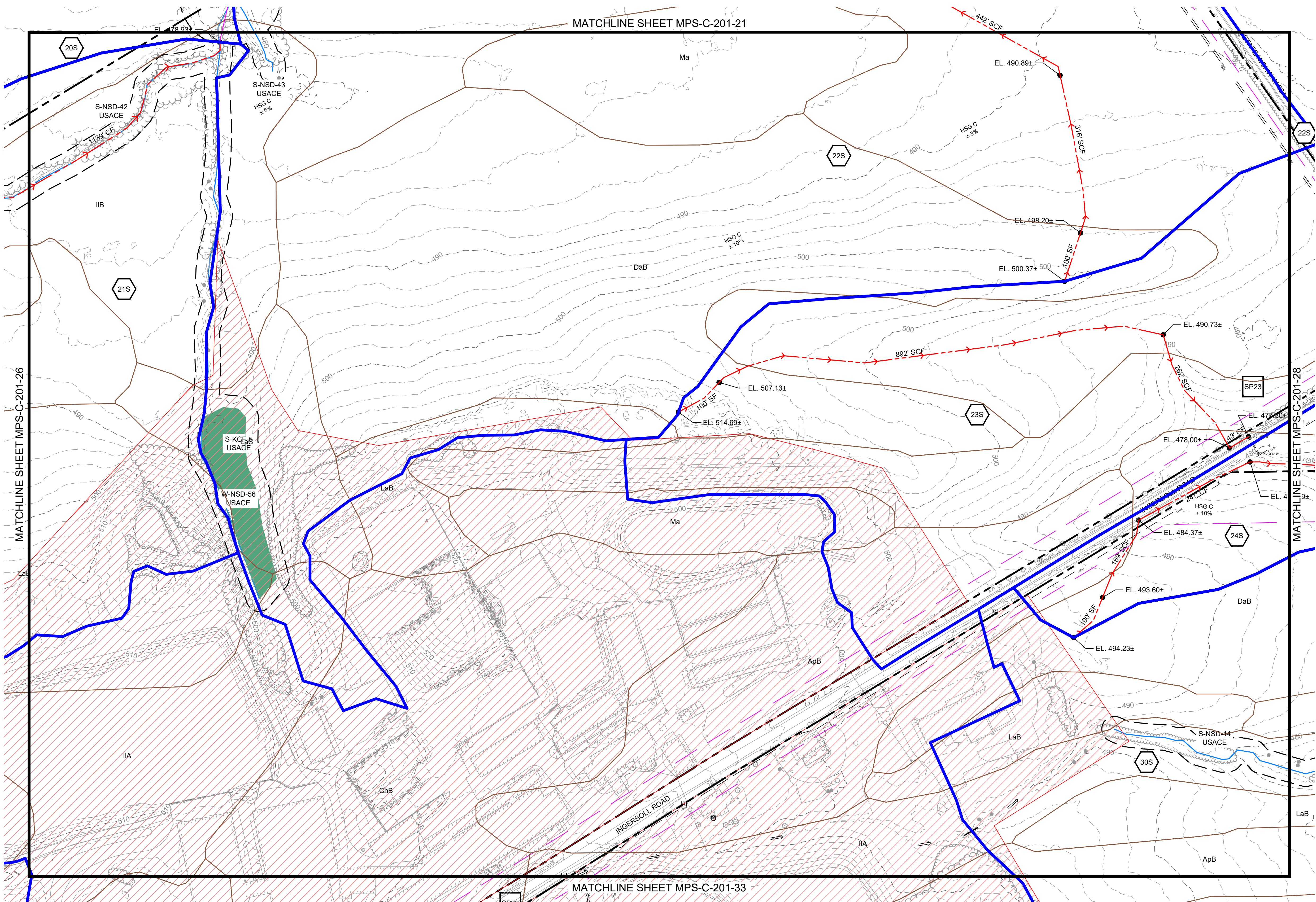


|     |                 | 249 Western Avenue<br>Augusta, ME 04330 |     | PROJECT NO: 443269 |     |  |
|-----|-----------------|---|-----|--------------------|-----|--|
| REV | DESCRIPTION     | DATE                                    | DES | CHK                | APP |  |
| -   | -               | -                                       | -   | -                  | -   |  |
| -   | -               | -                                       | -   | -                  | -   |  |
| A   | ISSUED FOR 94-C | 10/20/2023                              | CMW | PMM                | PMM |  |

|  |  |  |              |                  |  |
|--|--|--|--------------|------------------|--|
| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED |  | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN |              | GLEN<br>NEW YORK |  |
| REVIEW 1<br>REVIEW 2                                 | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE |  | MPS-C-201-26 | REV.<br>A        |  |

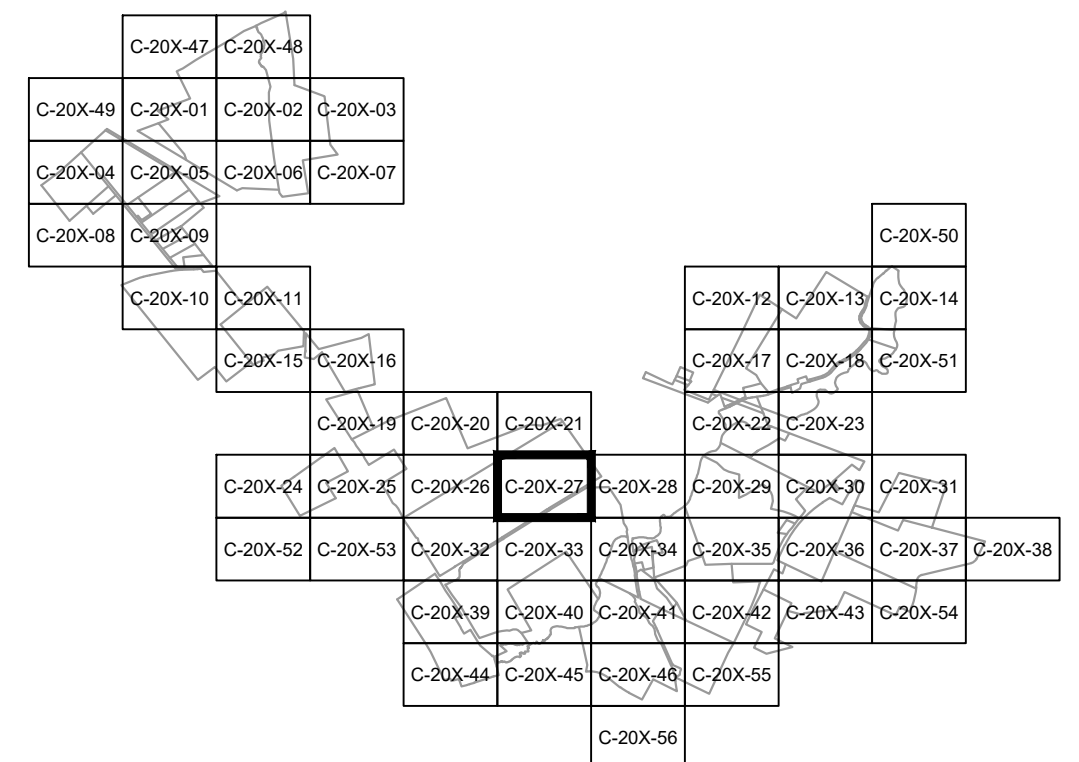
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|                 | -   | -           | -    | -   | -   | -   |
|                 | -   | -           | -    | -   | -   | -   |





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----------------|-----|-----------------|------------|-----|-----|-----|
|                 | -   |                 |            |     |     |     |
|                 | -   |                 |            |     |     |     |
|                 | -   |                 |            |     |     |     |
|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE



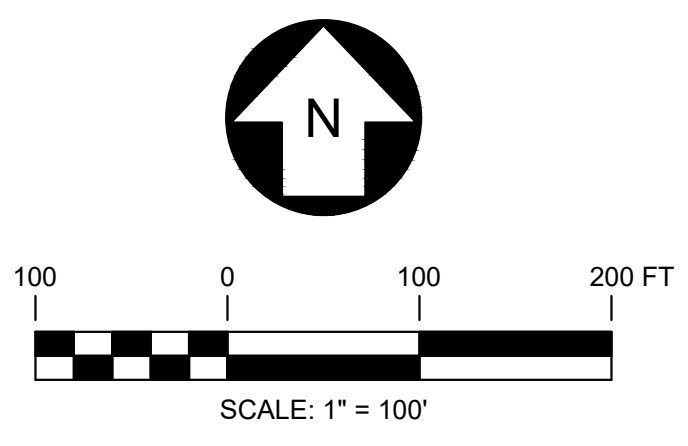
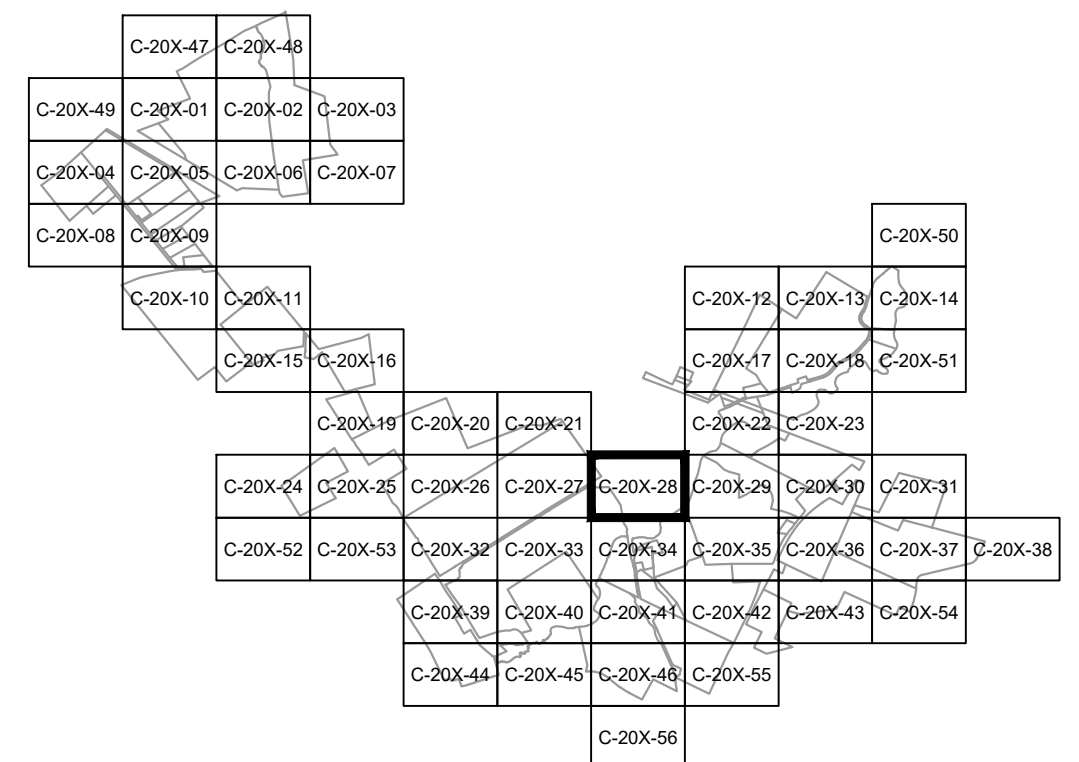
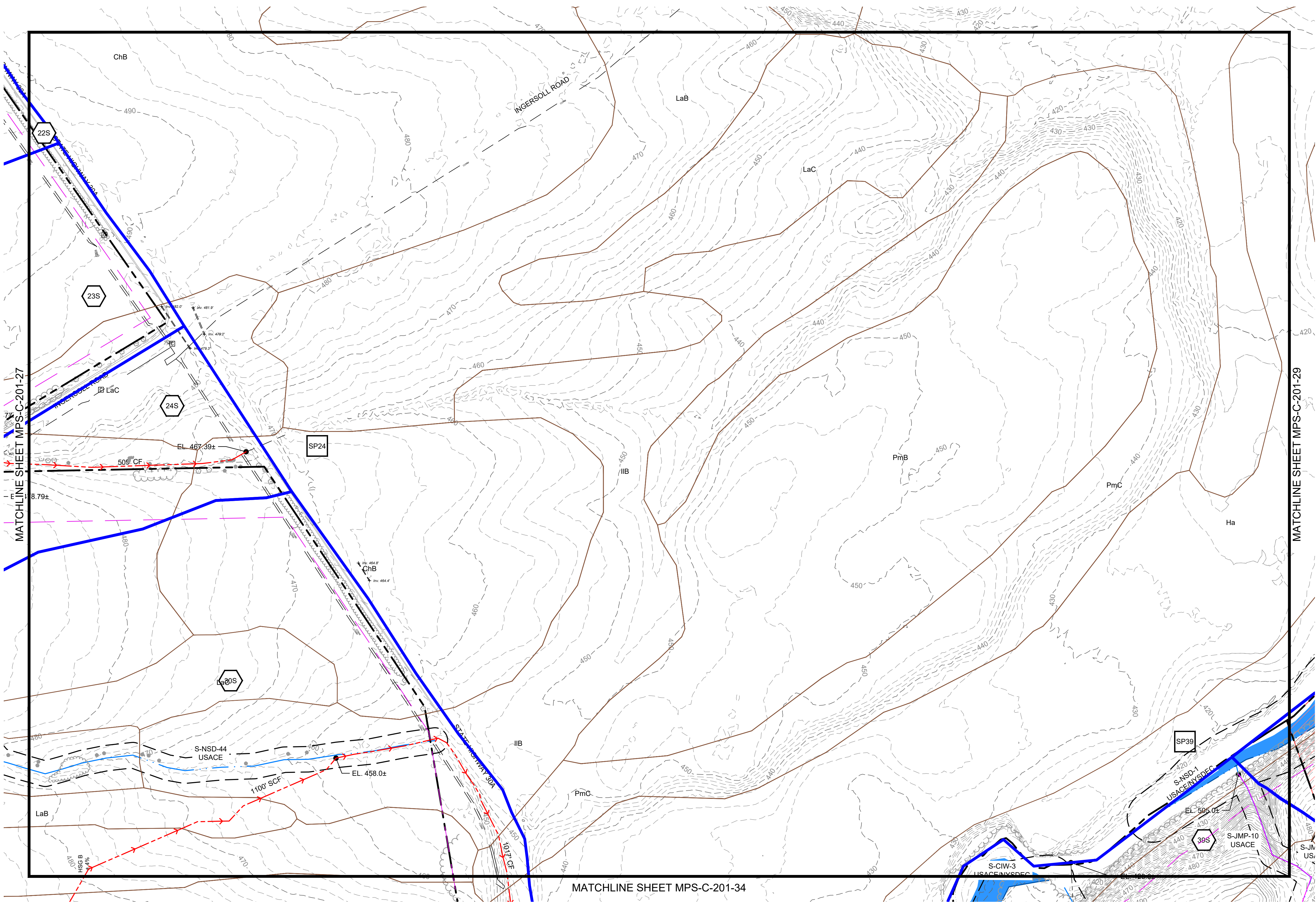
MPS-C-201-27

REV. A



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



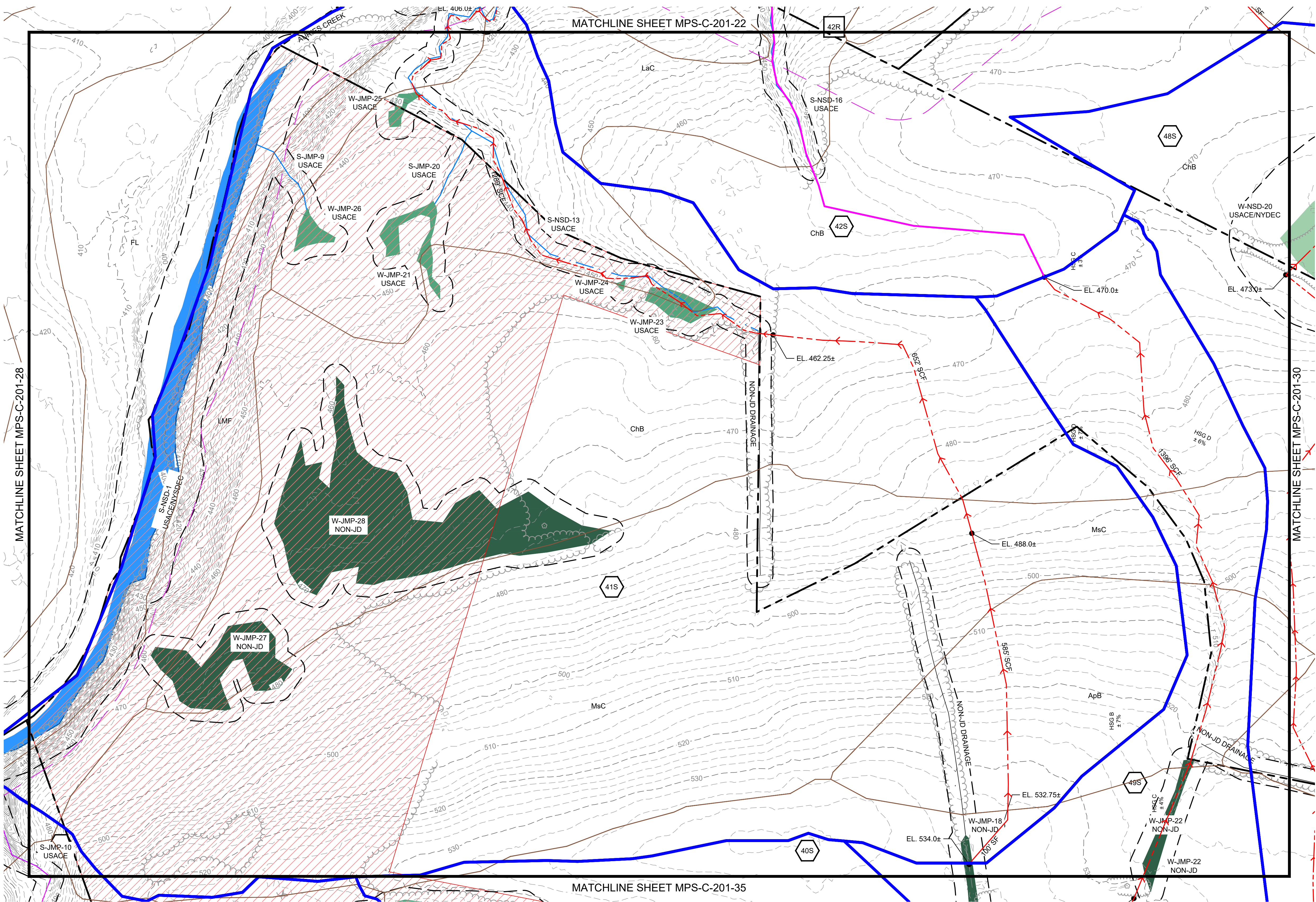
**PRELIMINARY**  
NOT FOR CONSTRUCTION



|   |   |             |                    |     |     |     |
|---|---|-------------|--------------------|-----|-----|-----|
|   | 249 Western Avenue<br>Augusta, ME 04330 |             | PROJECT NO: 443269 |     |     |     |
|   | REV                                     | DESCRIPTION | DATE               | DES | CHK | APP |
|   | -                                       |             | -                  | -   | -   |     |
|   | -                                       |             | -                  | -   | -   |     |
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| A | ISSUED FOR 94-C                         |             | 10/20/2023         | CMW | PMM | PMM |

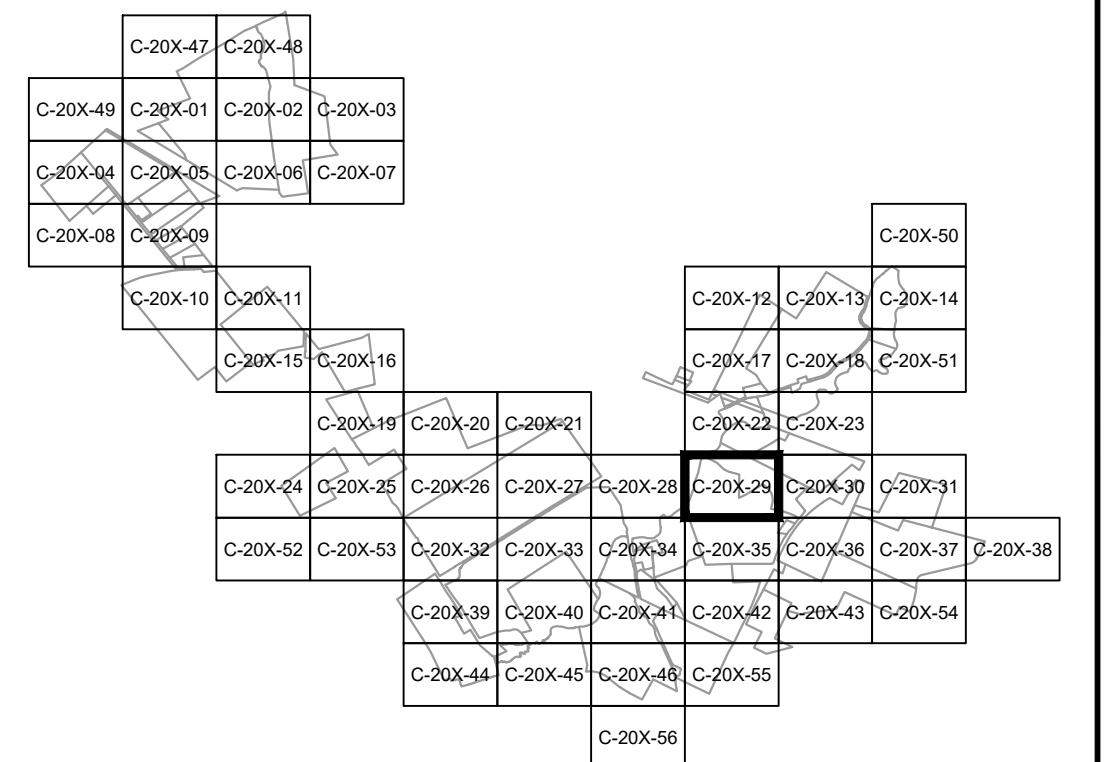
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|-----------------|---------------------------------|--------------|
| PMM<br>DESIGNED | MILL POINT SOLAR PROJECT        |              |
| PMM<br>DRAWN    | CONNECTGEN, LLC                 |              |
| PMM<br>CHECKED  | PRE-DEVELOPMENT STORMWATER PLAN |              |
| APPROVED        | GLEN                            | NEW YORK     |
| REVIEW 1        | 03/01/2023<br>DATE              |              |
| REVIEW 2        | 1" = 100'<br>SCALE              | MPS-C-201-28 |
|                 |                                 | REV.<br>A    |





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

REVIEW 1  
REVIEW 2

03/01/2023  
DATE






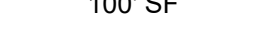

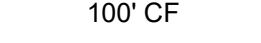
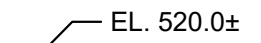
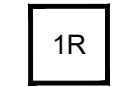
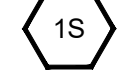
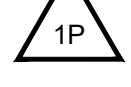


MPS-C-201-29

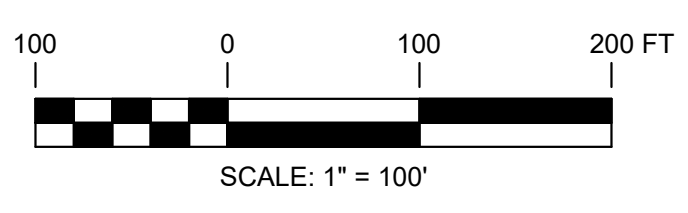
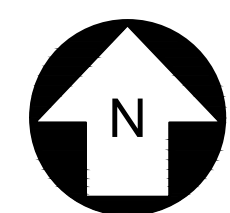
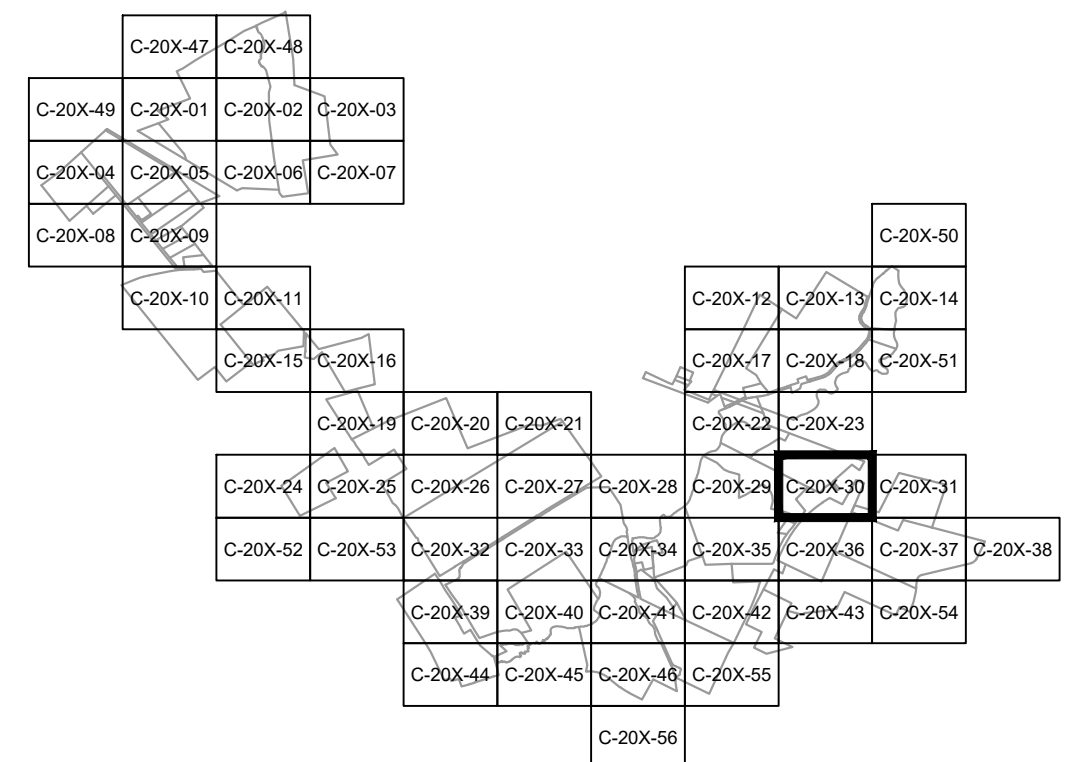
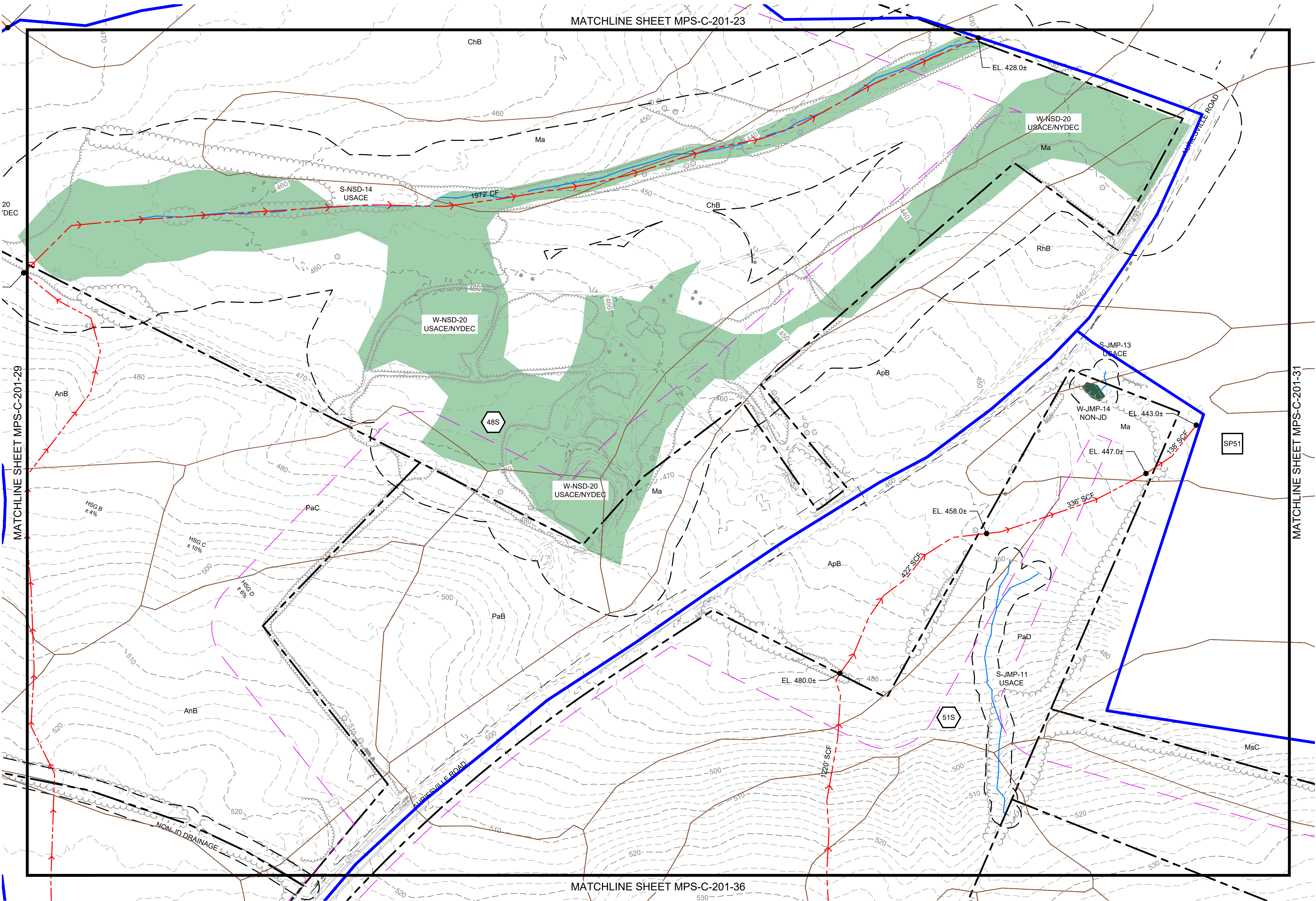
REV. A



MATCHLINE SHEET MPS-C-201-23

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 
- SHALLOW CONCENTRATED FLOW 
- CHANNEL FLOW 
- SPOT ELEVATION 
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE



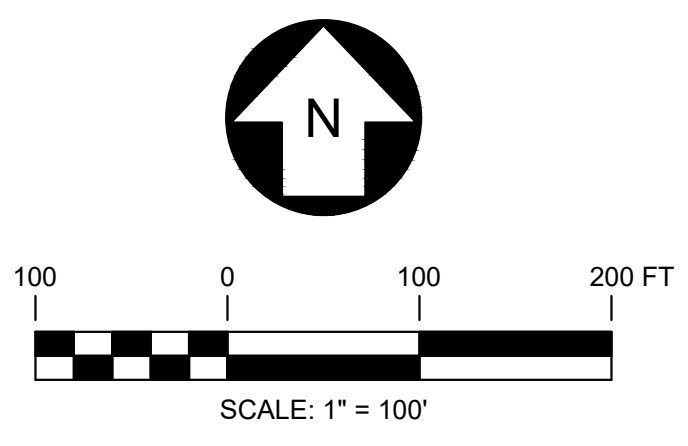
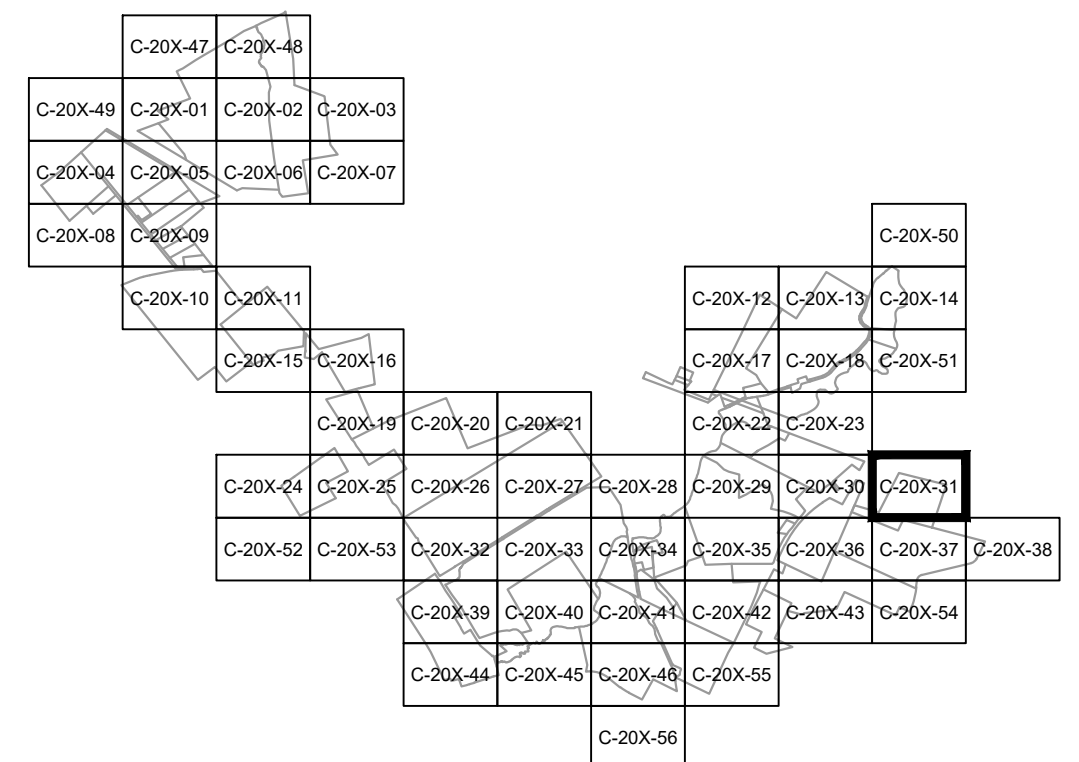
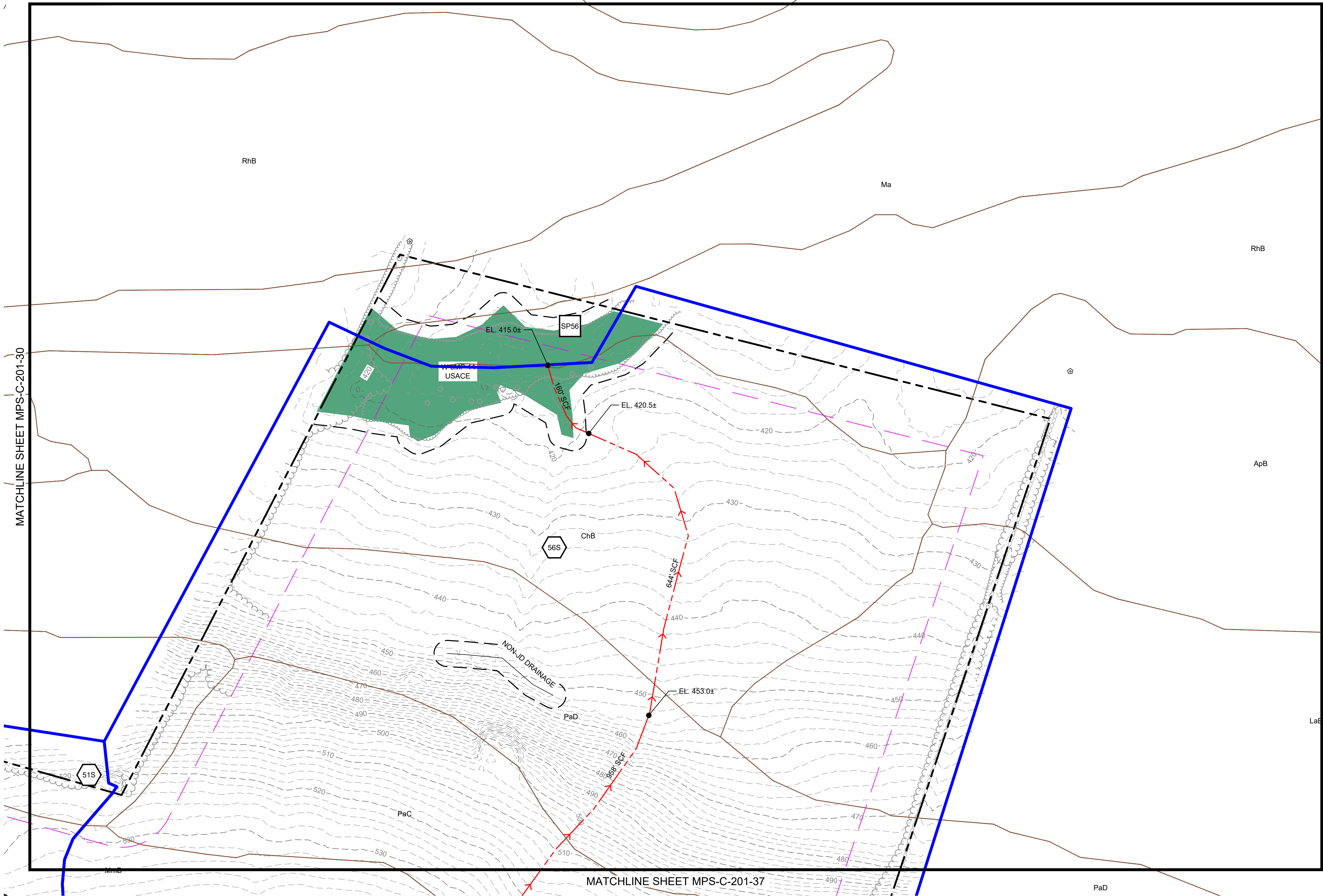
MPS-C-201-30

REV.  
A



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
-  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

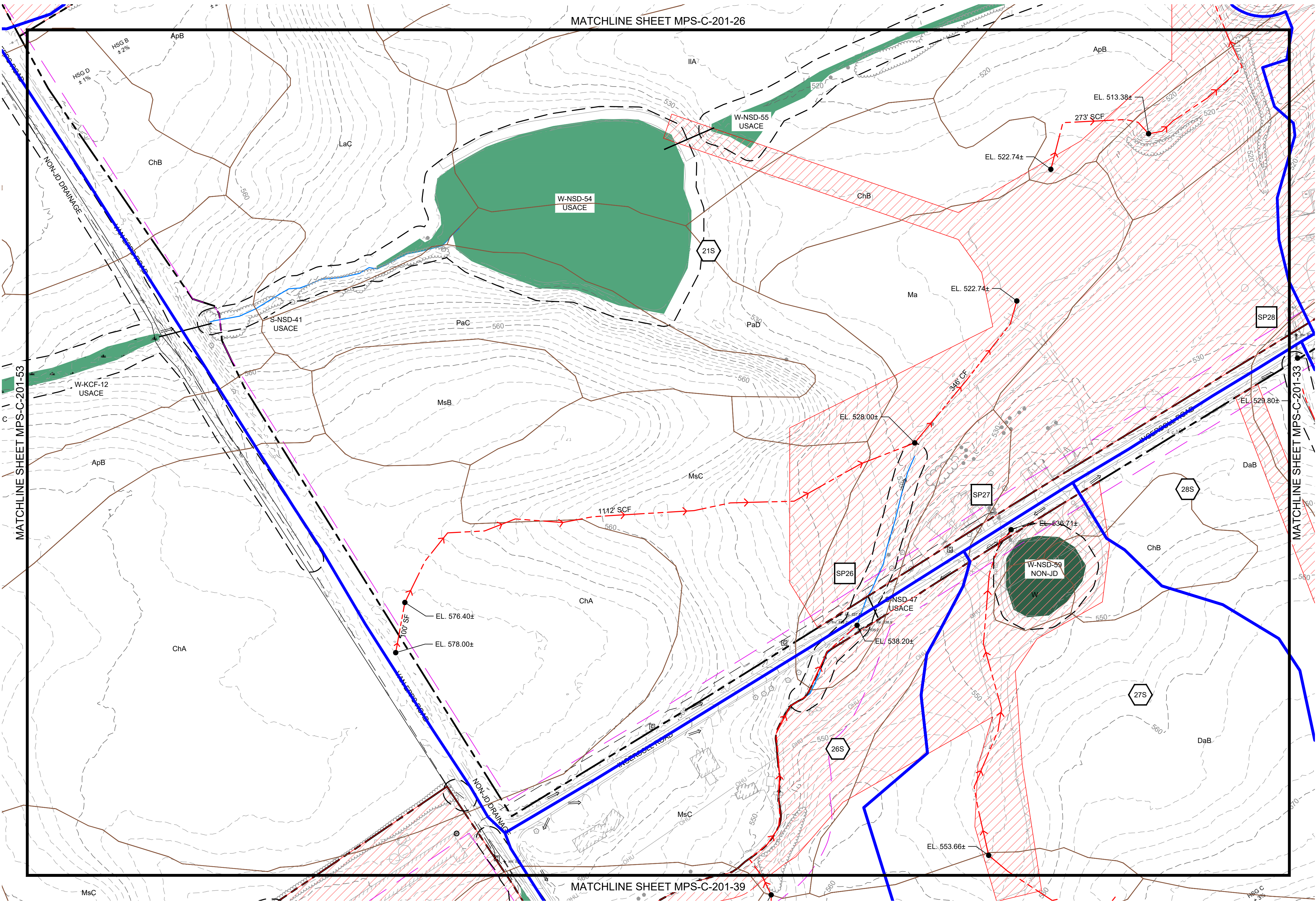
03/01/2023  
DATE



MPS-C-201-31

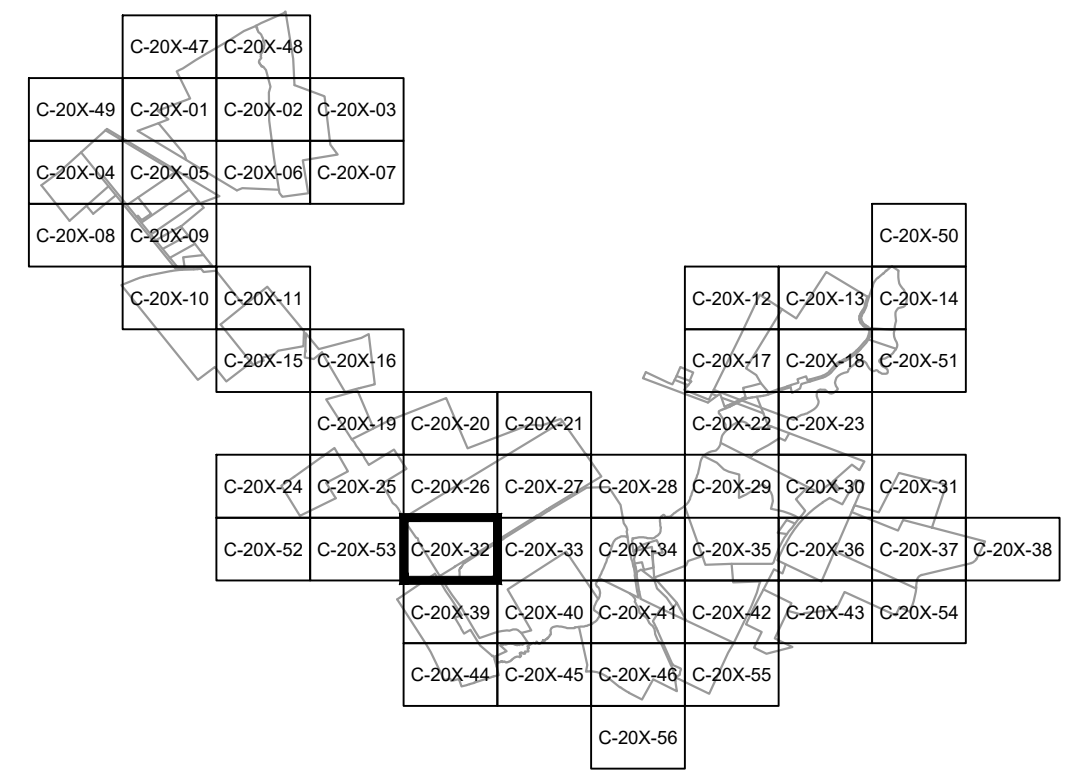
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

|              |                 |                 |
|--------------|-----------------|-----------------|
| PMM DESIGNED | GLEN            | NEW YORK        |
| PMM DRAWN    |                 |                 |
| PMM CHECKED  |                 |                 |
| APPROVED     |                 |                 |
| REVIEW 1     |                 |                 |
| REVIEW 2     | 03/01/2023 DATE | 1" = 100' SCALE |

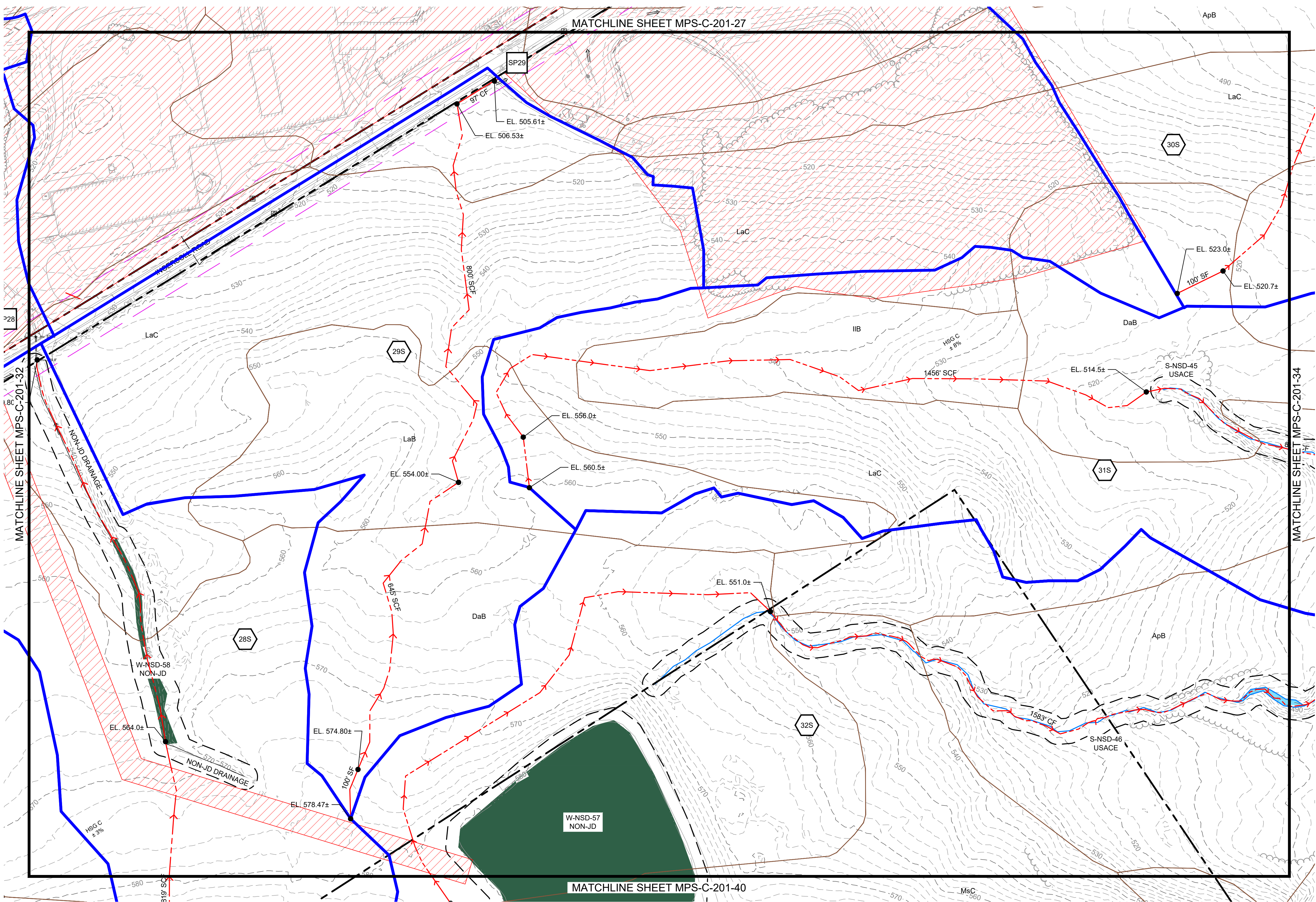
MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN



MPS-C-201-32

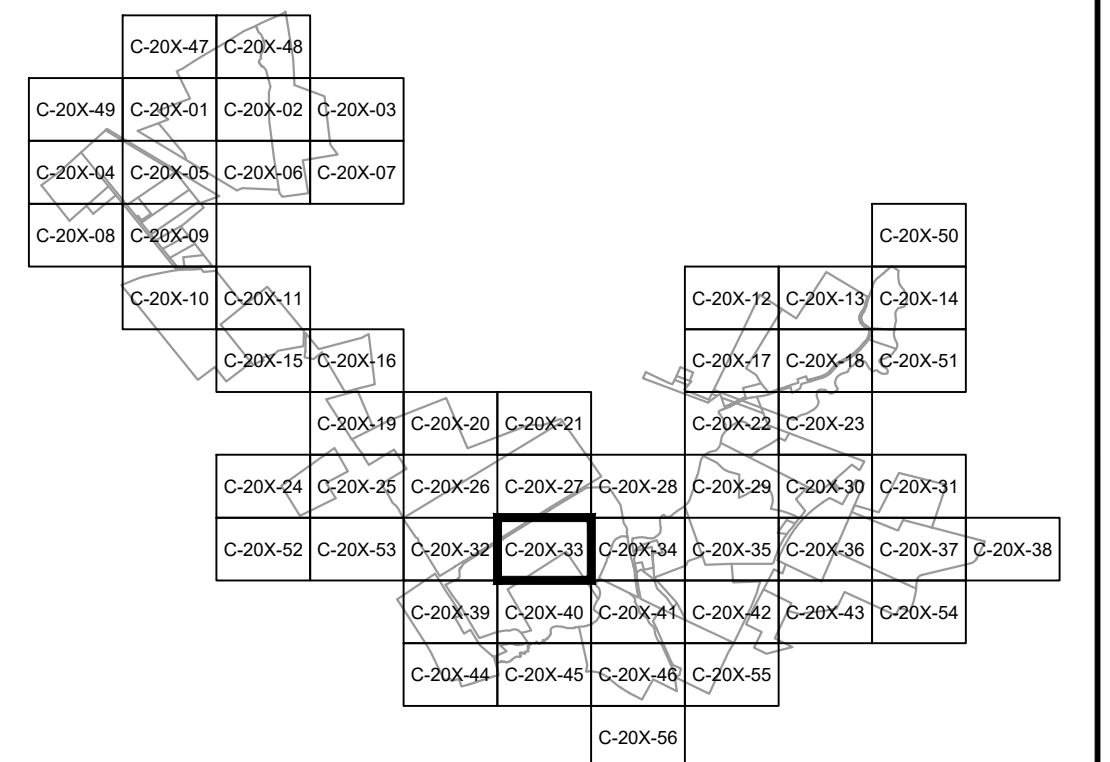
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
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| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN  
GLEN NEW YORK

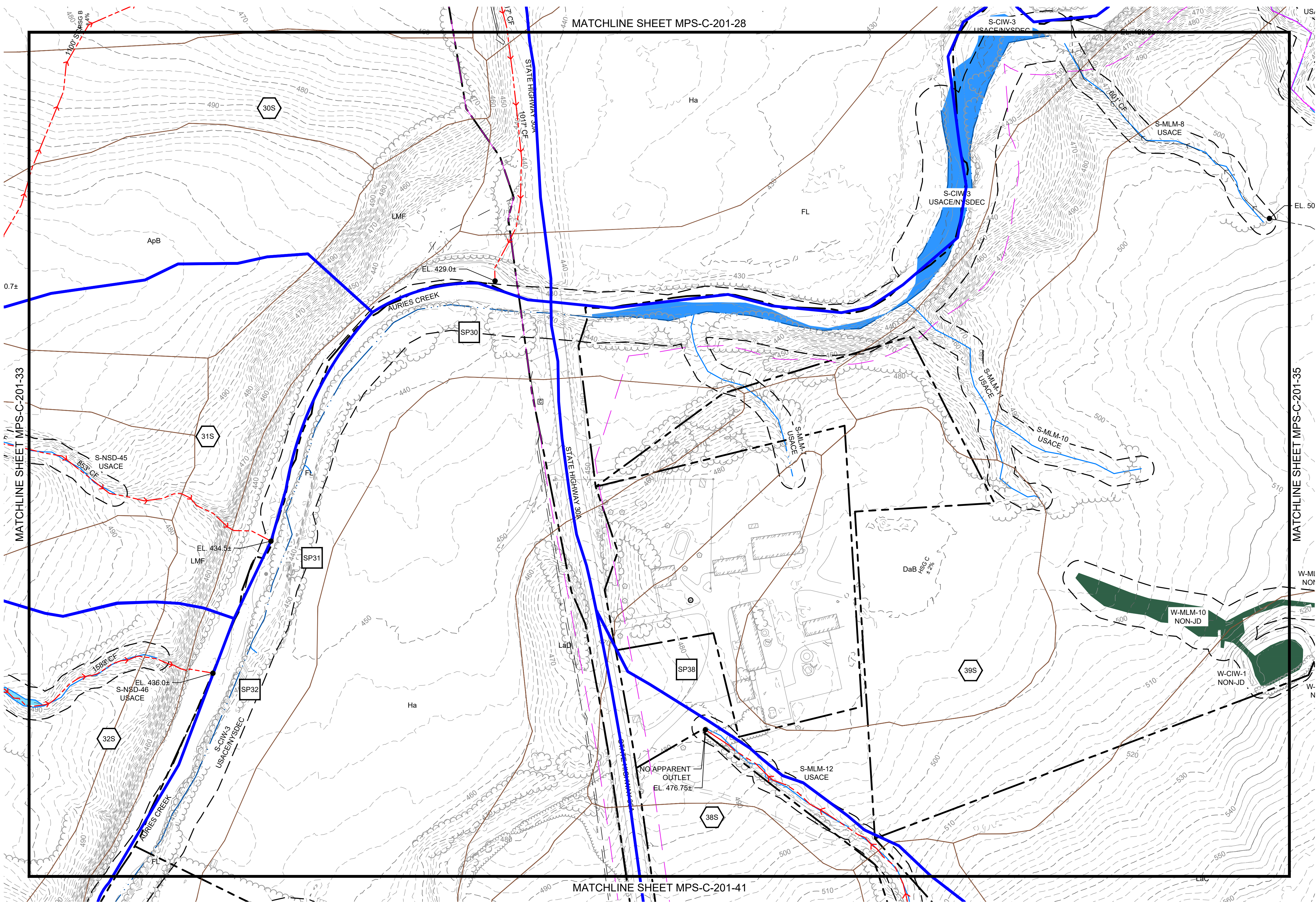
03/01/2023  
DATE



MPS-C-201-33

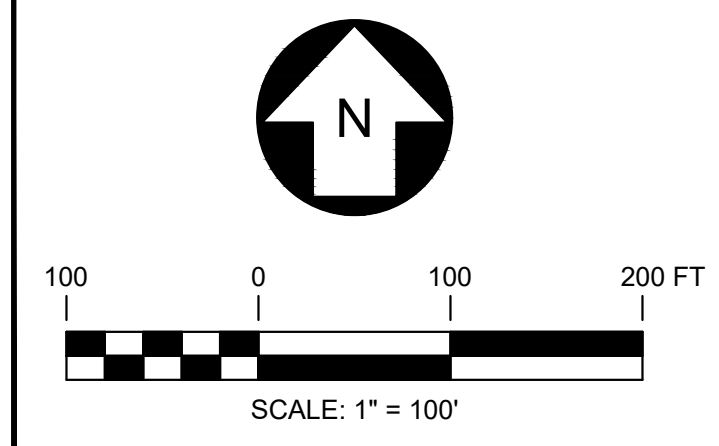
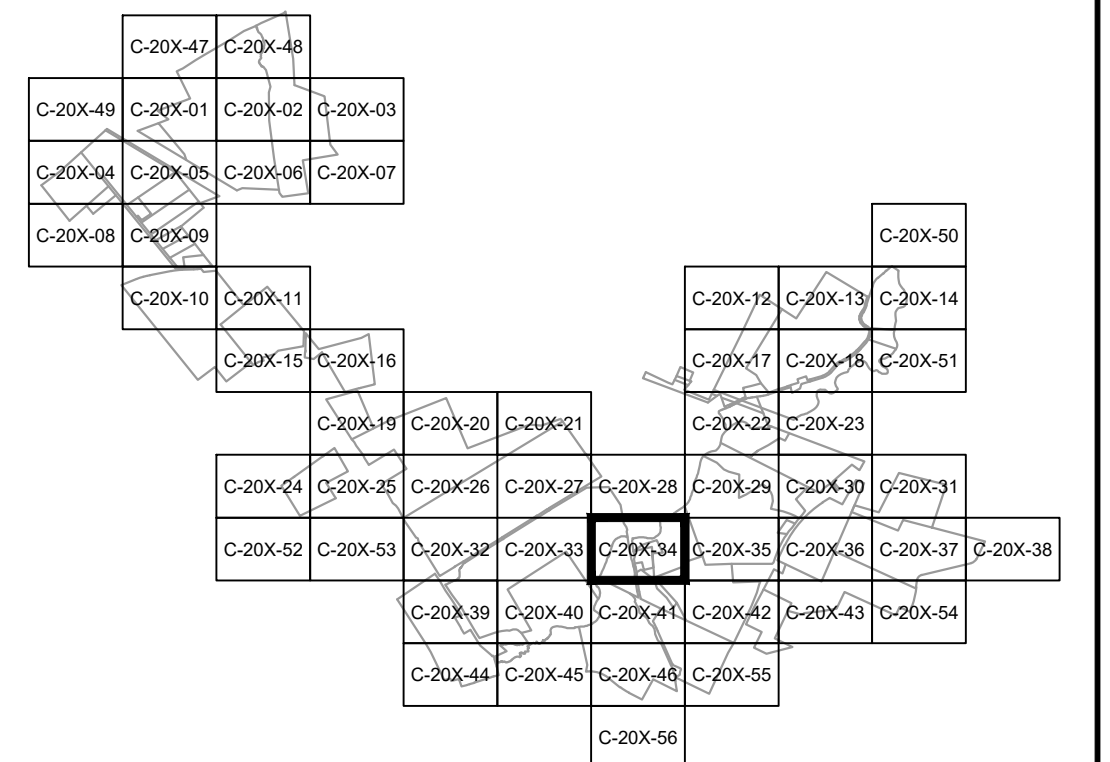
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Box with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Box with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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|                 | -   | -               | -          | -   | -   | -   |
|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

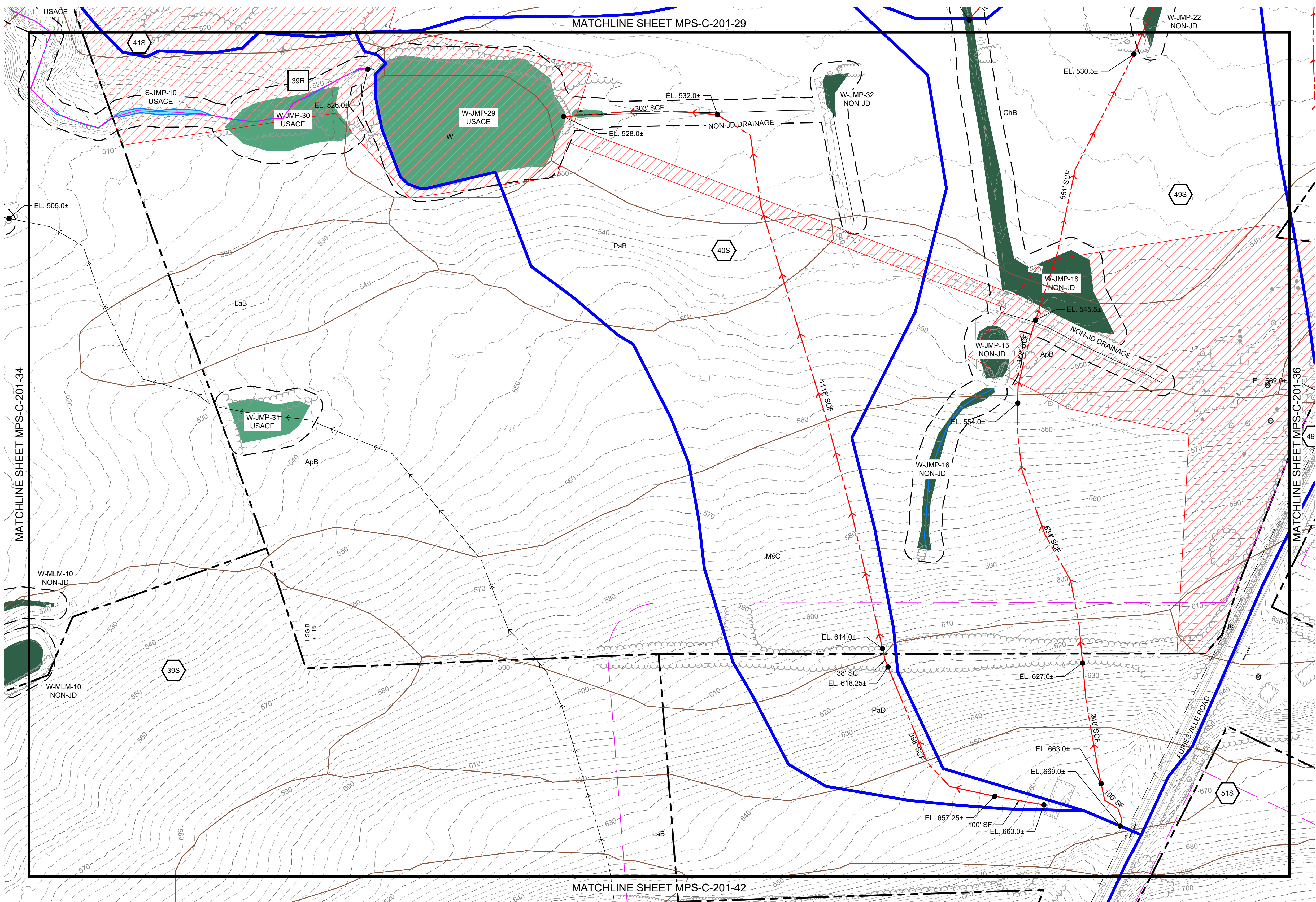
03/01/2023  
DATE



MPS-C-201-34

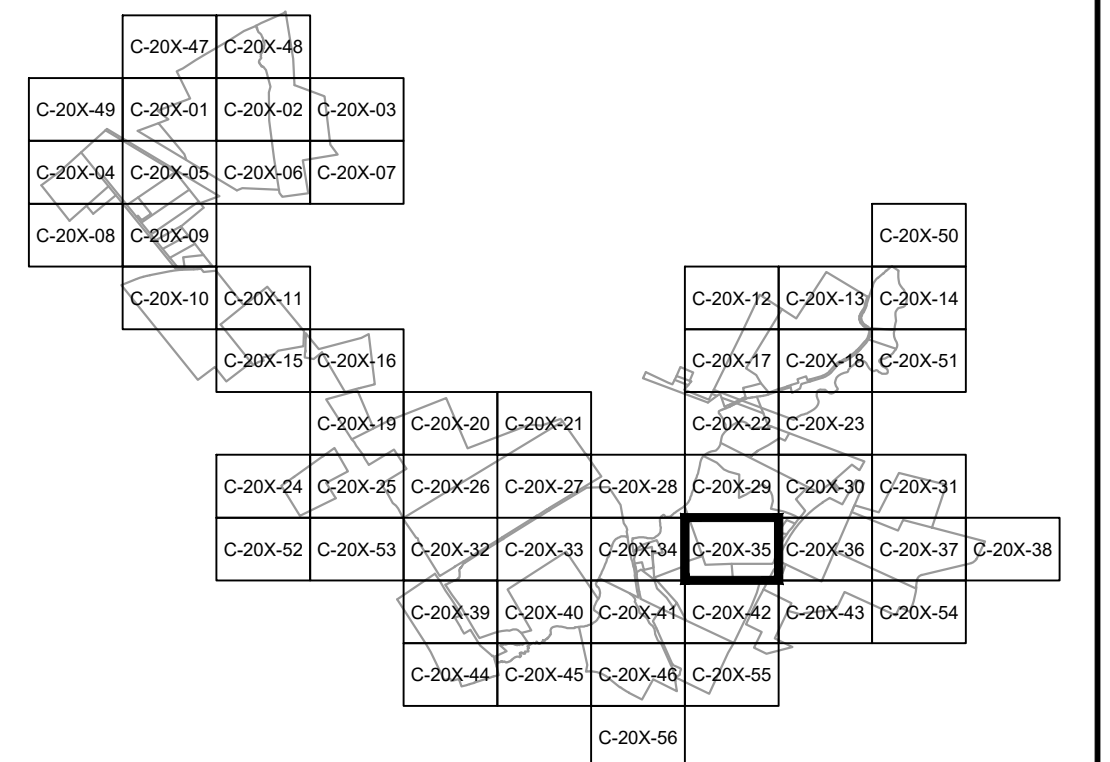
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Dashed blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE



MPS-C-201-35

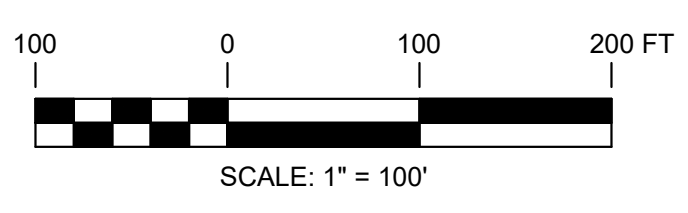
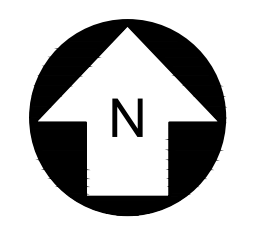
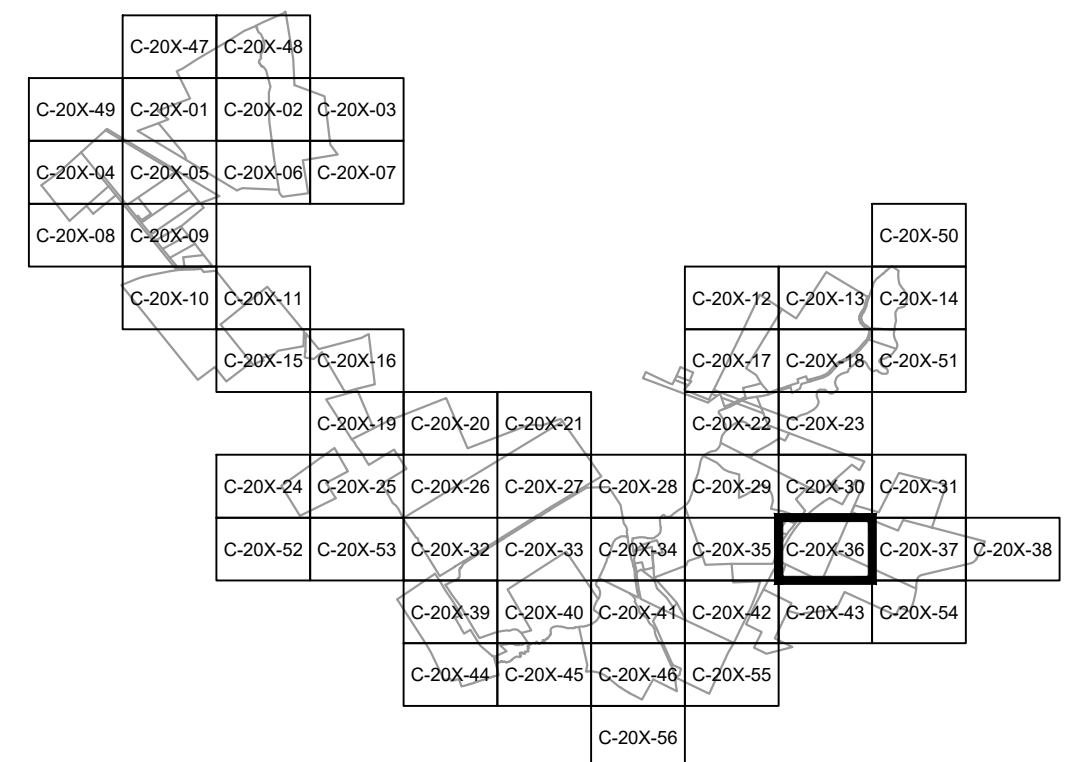
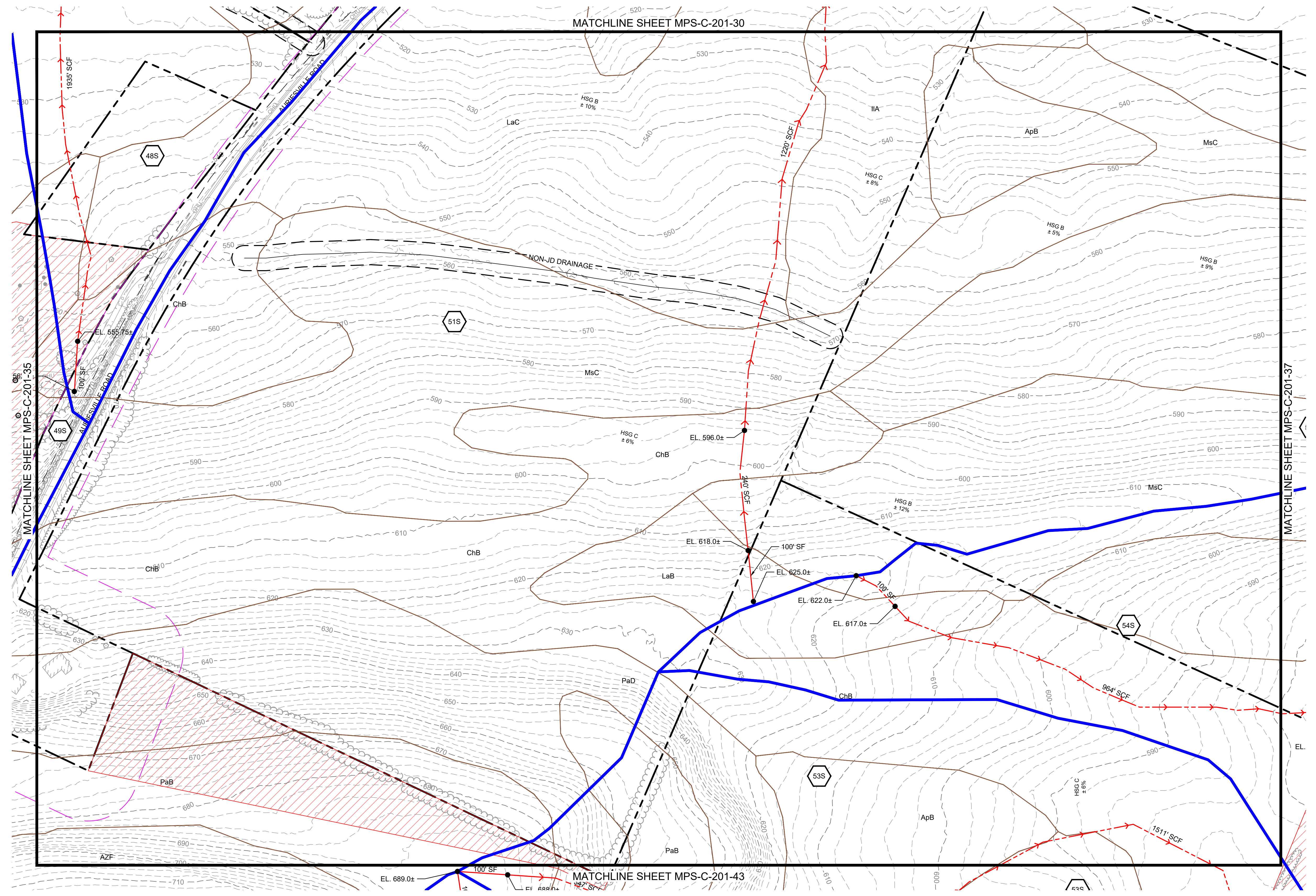
REV. A



MATCHLINE SHEET MPS-C-201-30

LEGEND

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

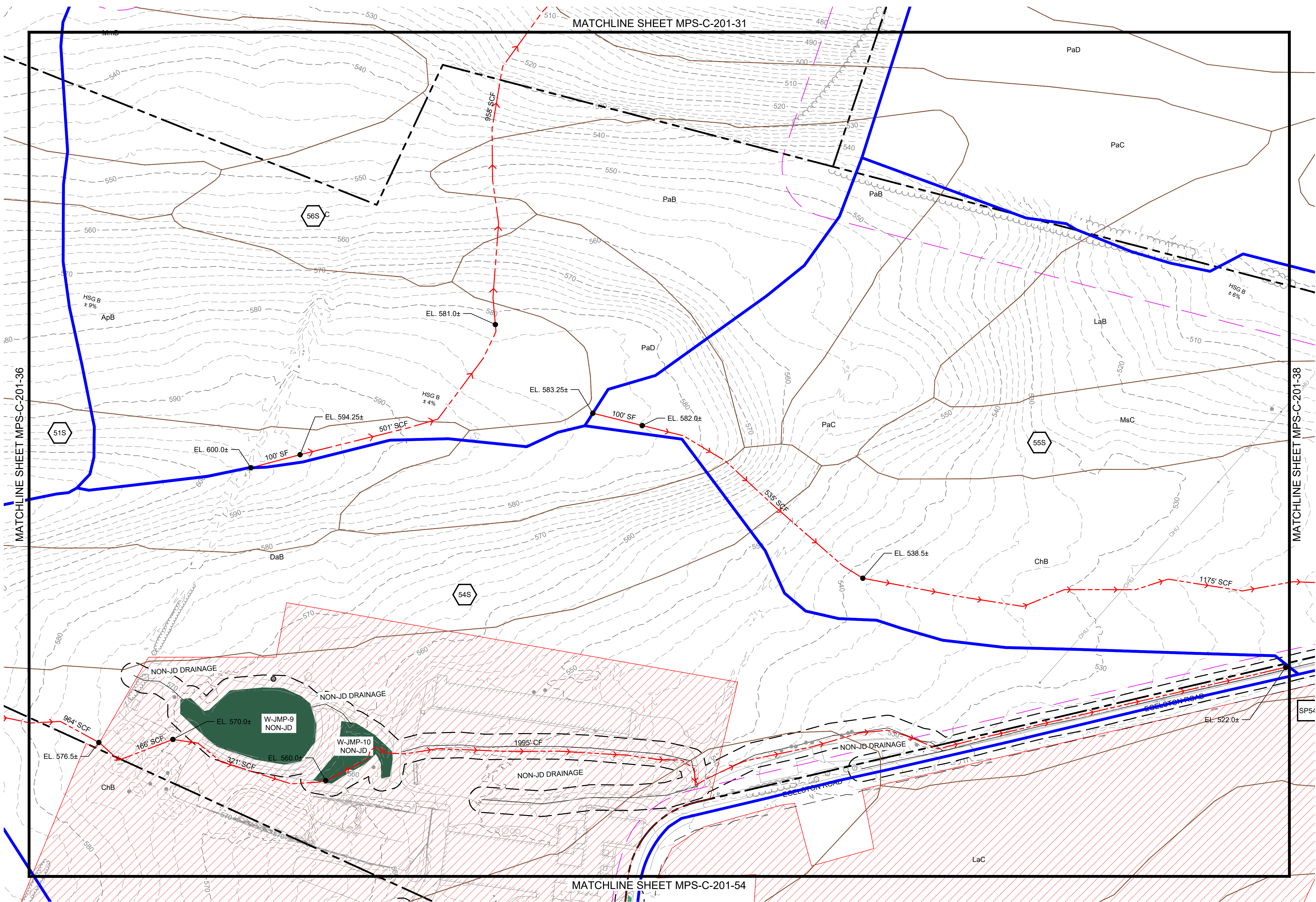
03/01/2023  
DATE



MPS-C-201-36

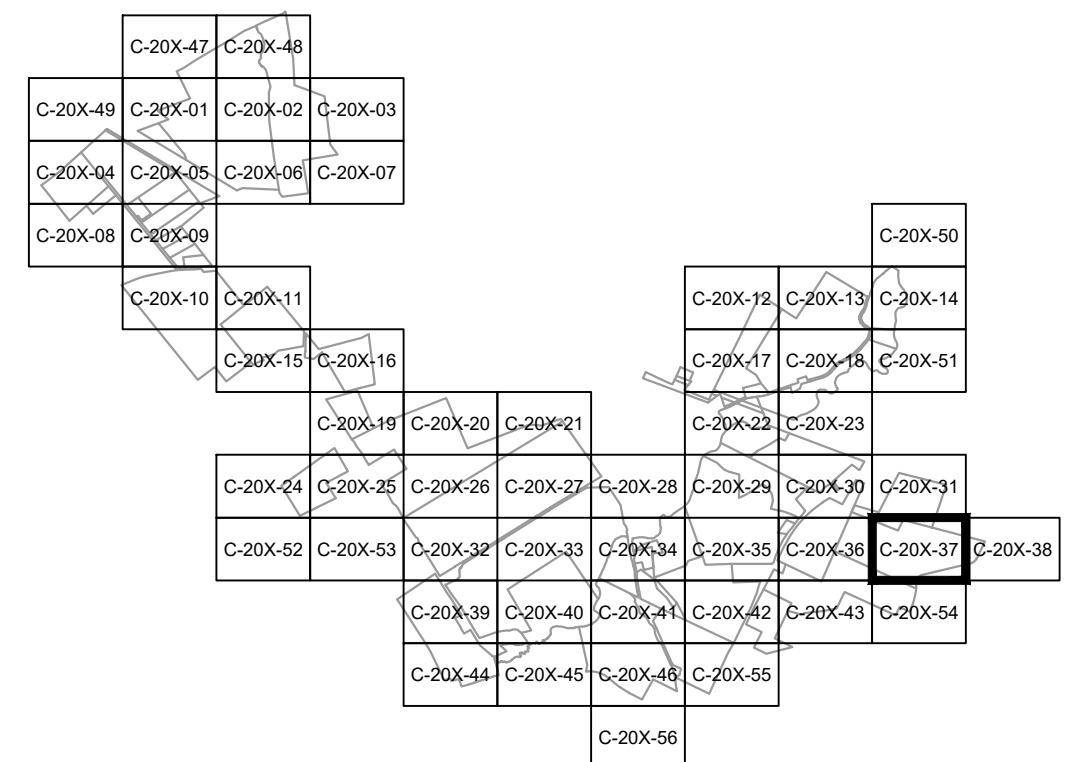
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF (Blue line)
- SHALLOW CONCENTRATED FLOW: 100' SCF (Red dashed line)
- CHANNEL FLOW: 100' CF (Black dashed line)
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION

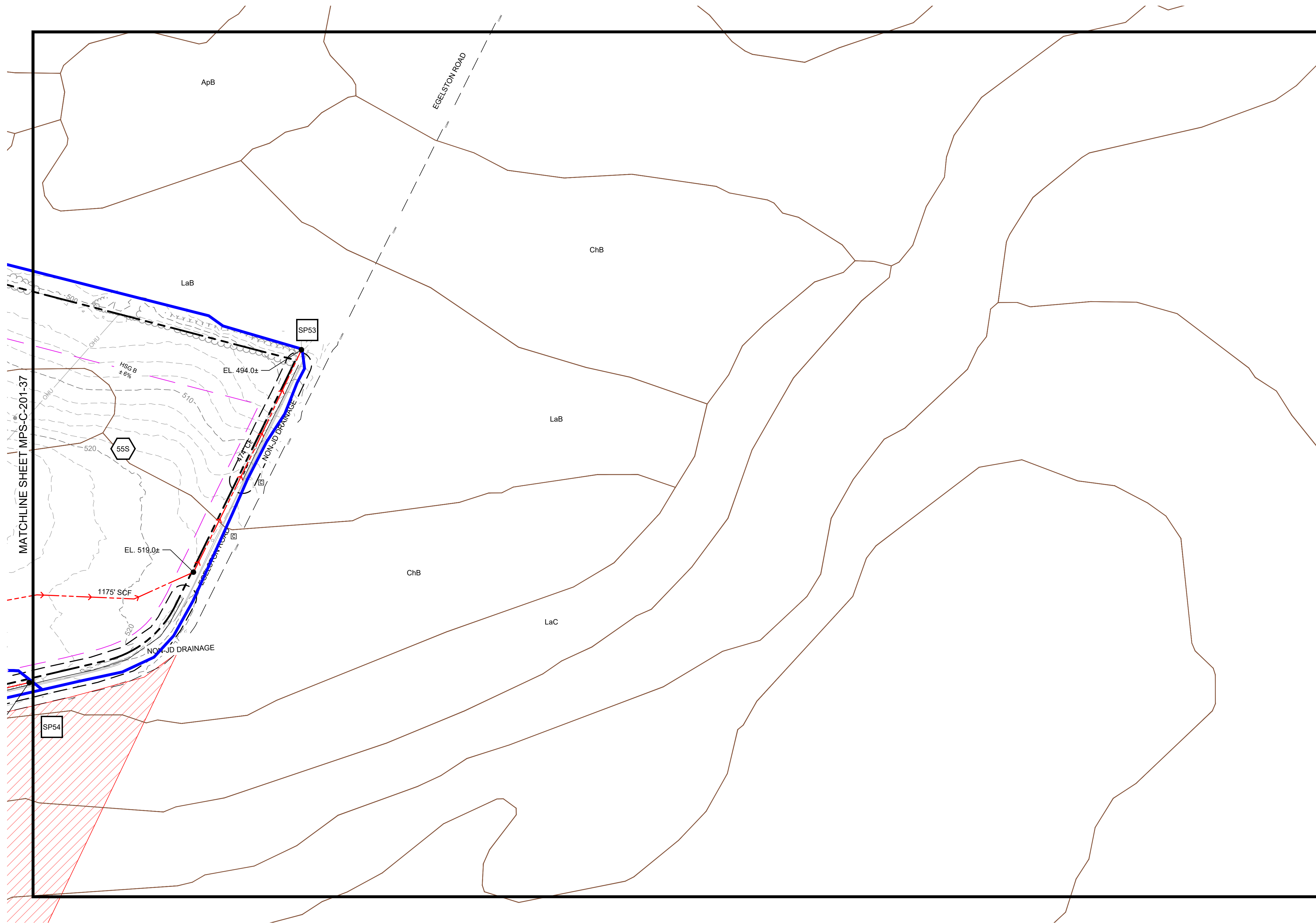


|   |                 |                    |     |     |     |
|---|-----------------|--------------------|-----|-----|-----|
| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |     |     |     |
| REV                                     | DESCRIPTION     | DATE               | DES | CHK | APP |
| -                                       | -               | -                  | -   | -   | -   |
| -                                       | -               | -                  | -   | -   | -   |
| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW | PMM | PMM |

|  |  |  |                  |
|--|--|--|------------------|
| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN |  | GLEN<br>NEW YORK |
|  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE                                       |  |                  |

| REFERENCE ITEMS | REV | DESCRIPTION | DATE | DES | CHK | APP |
|-----------------|-----|-------------|------|-----|-----|-----|
|                 | -   | -           | -    | -   | -   | -   |
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|                 | -   | -           | -    | -   | -   | -   |

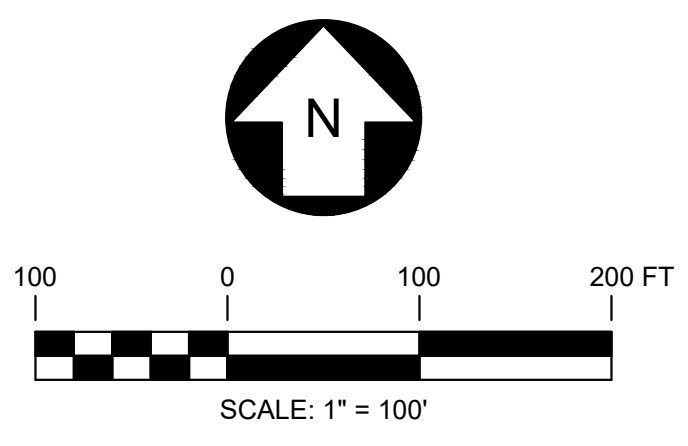
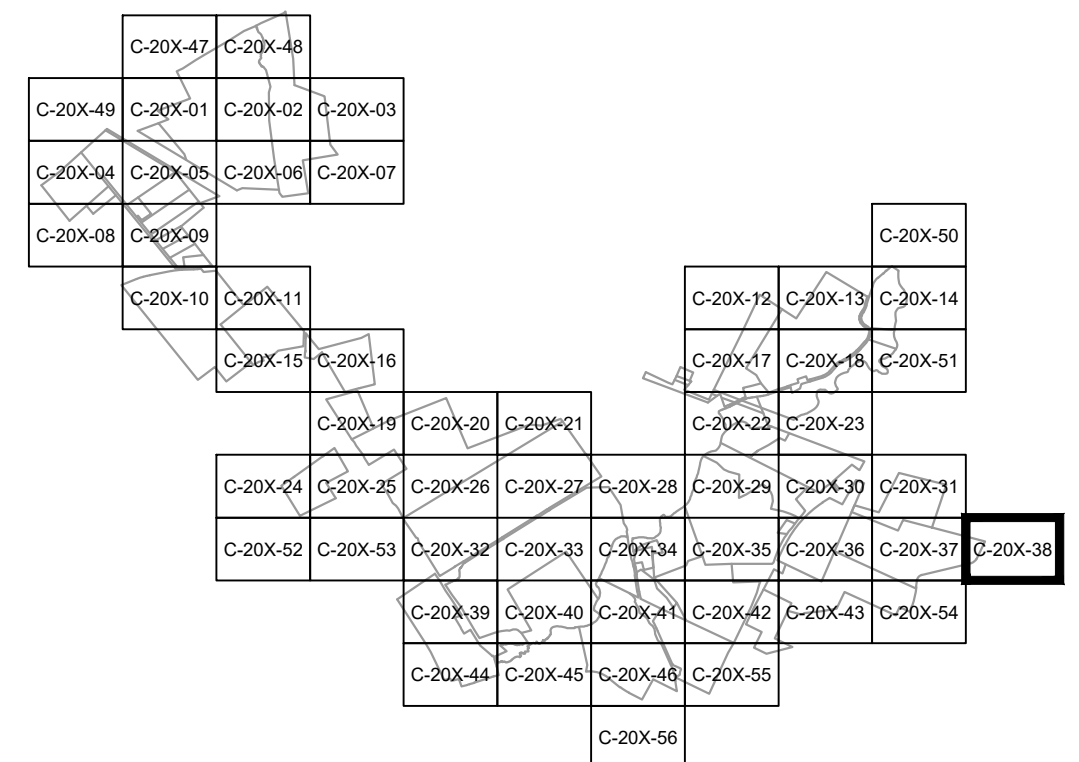




**LEGEND**

|                                 |            |
|---------------------------------|------------|
| SUBCATCHMENT BOUNDARY           |            |
| TIME OF CONCENTRATION FLOW LINE |            |
| REACH                           |            |
| SHEET FLOW                      | 100' SF    |
| SHALLOW CONCENTRATED FLOW       | 100' SCF   |
| CHANNEL FLOW                    | 100' CF    |
| SPOT ELEVATION                  | EL. 520.0± |
| REACH ID                        |            |
| SUBCATCHMENT ID                 |            |
| POND ID                         |            |
| STUDY POINT ID                  |            |
| SOILS BOUNDARY                  |            |

MATCHLINE SHEET MPS-C-201-37



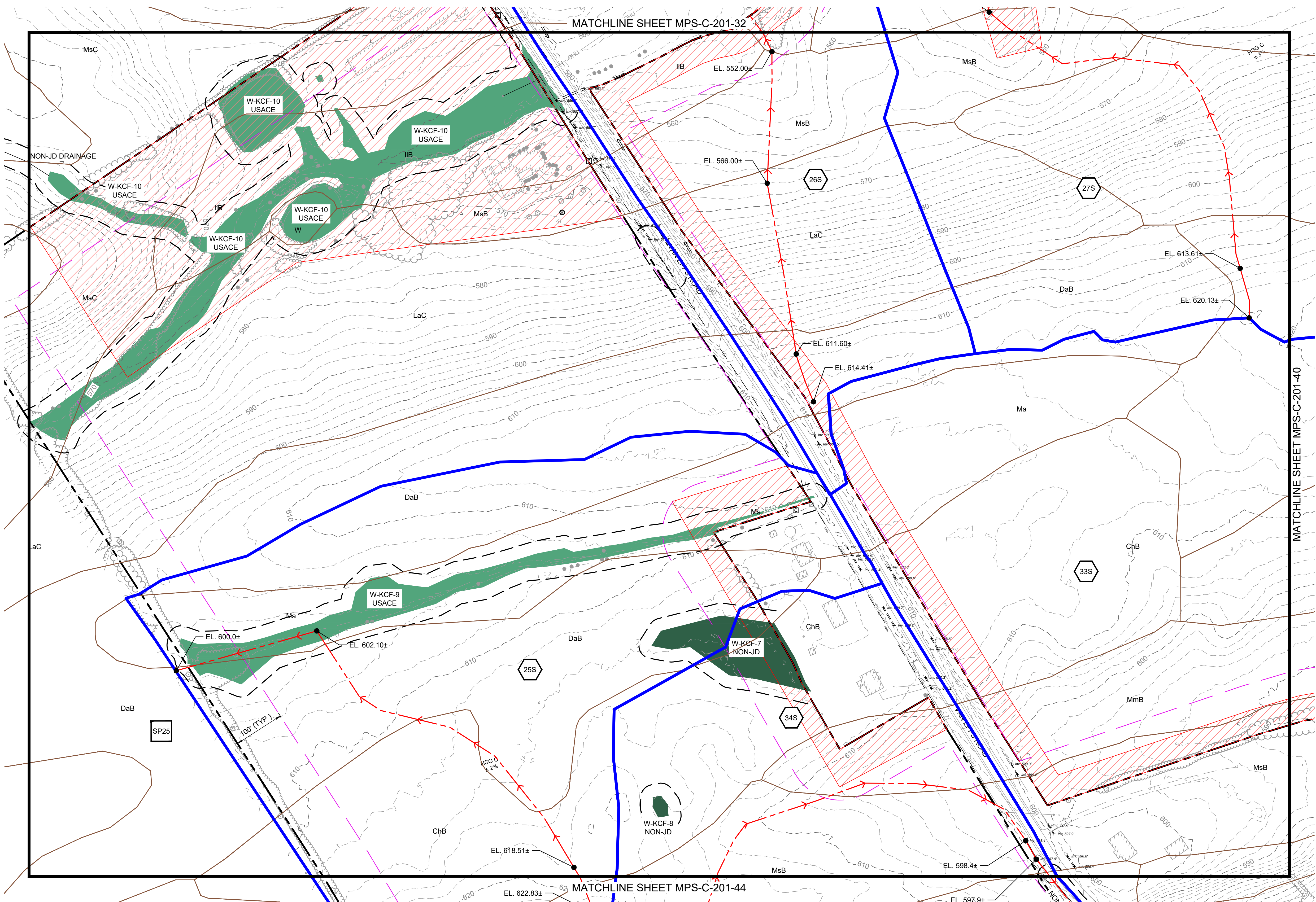
**PRELIMINARY**  
NOT FOR CONSTRUCTION



|   |                 |                    |             |      |     |     |
|---|-----------------|--------------------|-------------|------|-----|-----|
| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
|   |                 | REV                | DESCRIPTION | DATE | DES | CHK |
| -                                       | -               | -                  | -           | -    | -   | -   |
| -                                       | -               | -                  | -           | -    | -   | -   |
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| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

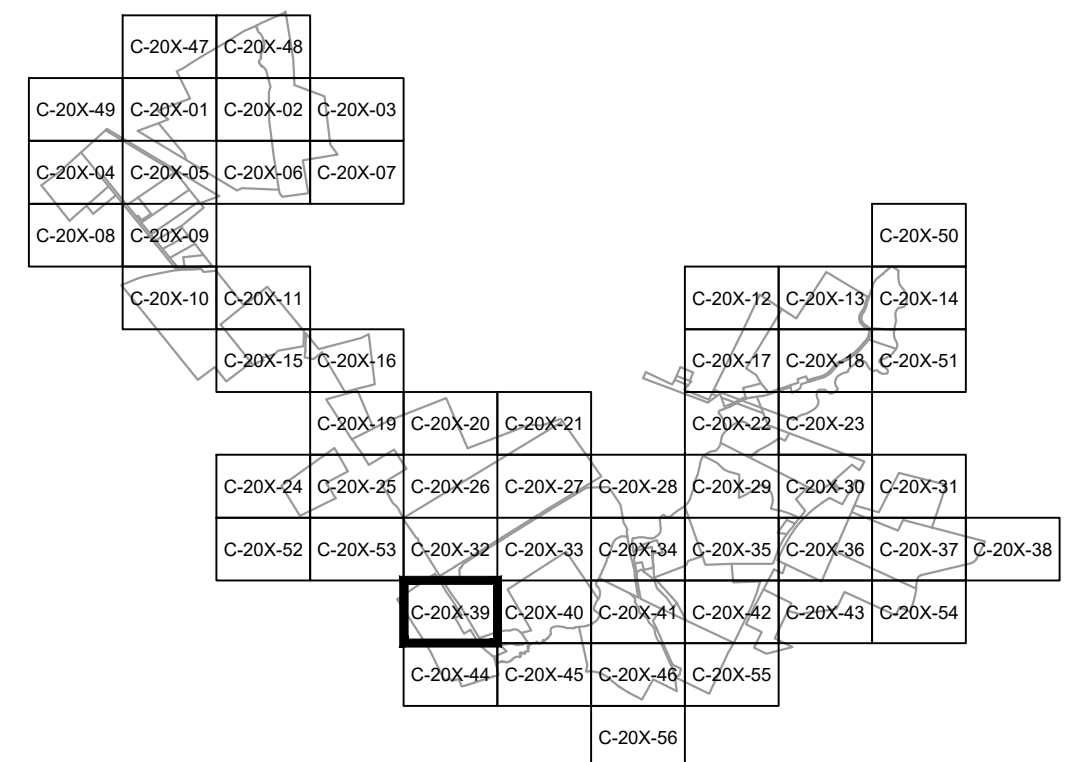
|  |                          |  |              |
|--|--------------------------|--|--------------|
| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>-<br>APPROVED | MILL POINT SOLAR PROJECT |  | NEW YORK     |
|  | CONNECTGEN, LLC          |  |              |
| PRE-DEVELOPMENT STORMWATER PLAN                                    |                          |  |              |
| GLEN   |                          |  |              |
| REVIEW 1   | 03/01/2023               |  | MPS-C-201-38 |
| REVIEW 2   | DATE                     |  |              |
| SCALE: 1" = 100'   |                          |  | REV. A       |





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue solid line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----------------|-----|-----------------|------------|-----|-----|-----|
|                 | -   | -               | -          | -   | -   | -   |
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|                 | -   | -               | -          | -   | -   | -   |
|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

REVIEW 1  
REVIEW 2

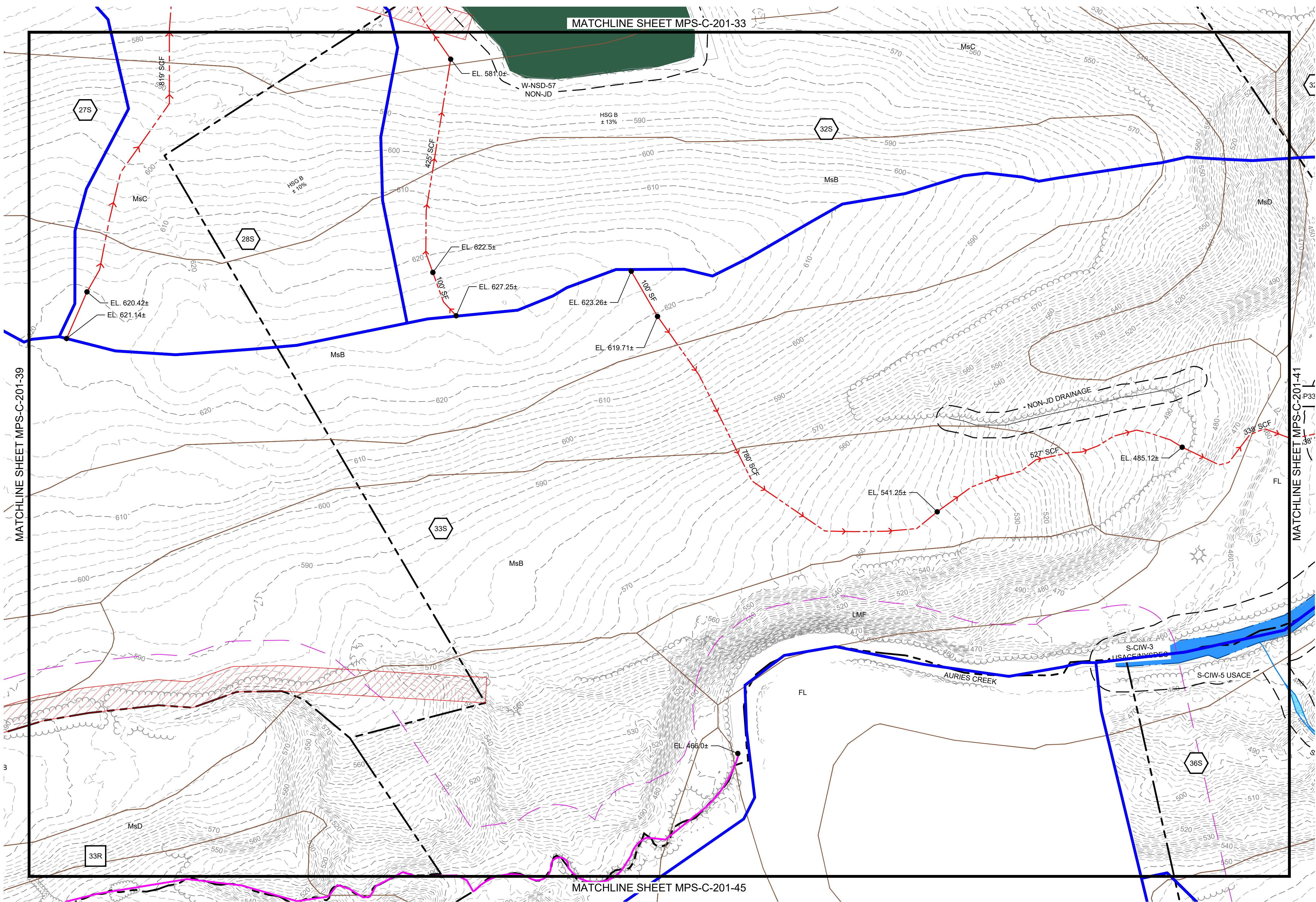
03/01/2023  
DATE  
1" = 100'  
SCALE



MPS-C-201-39

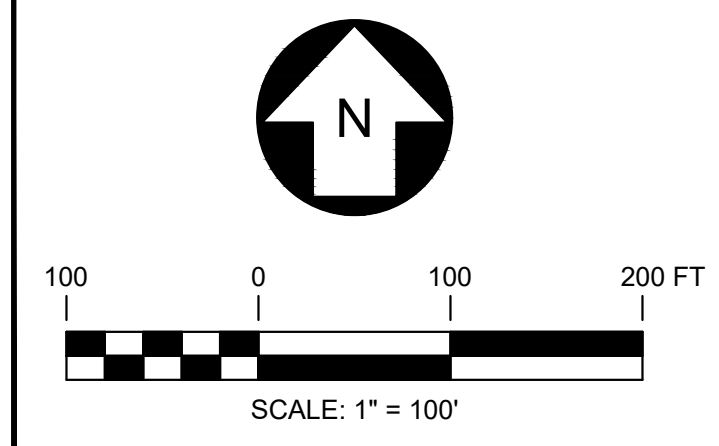
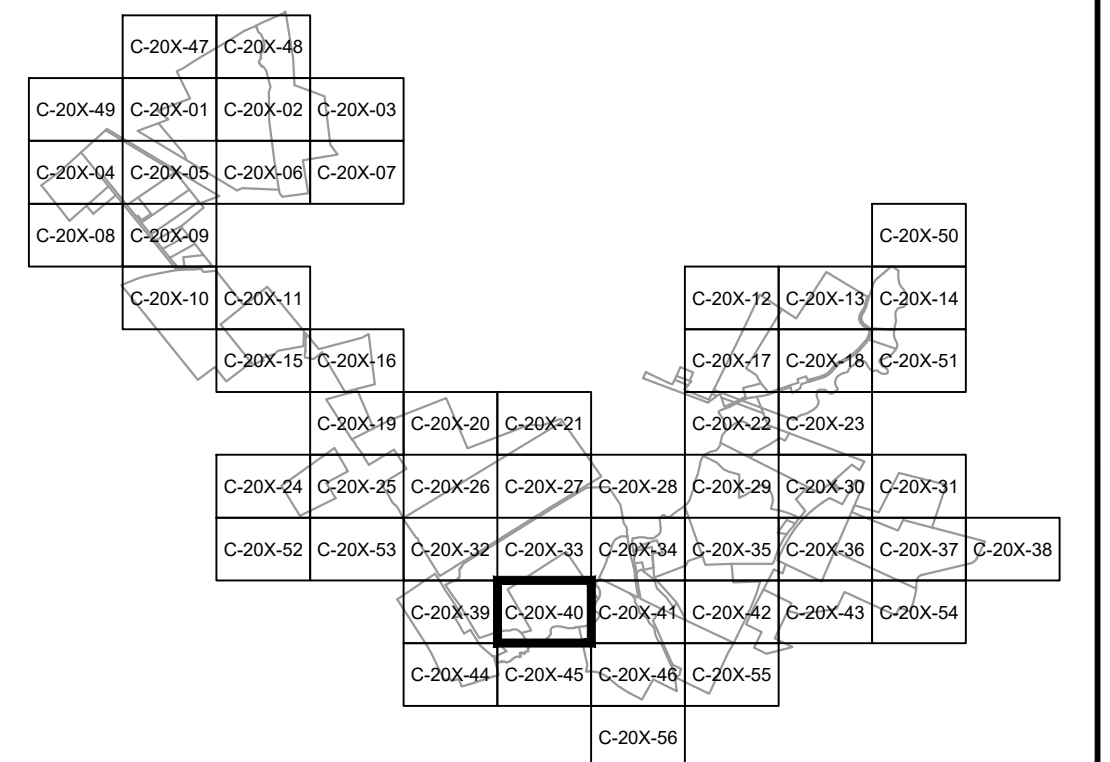
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

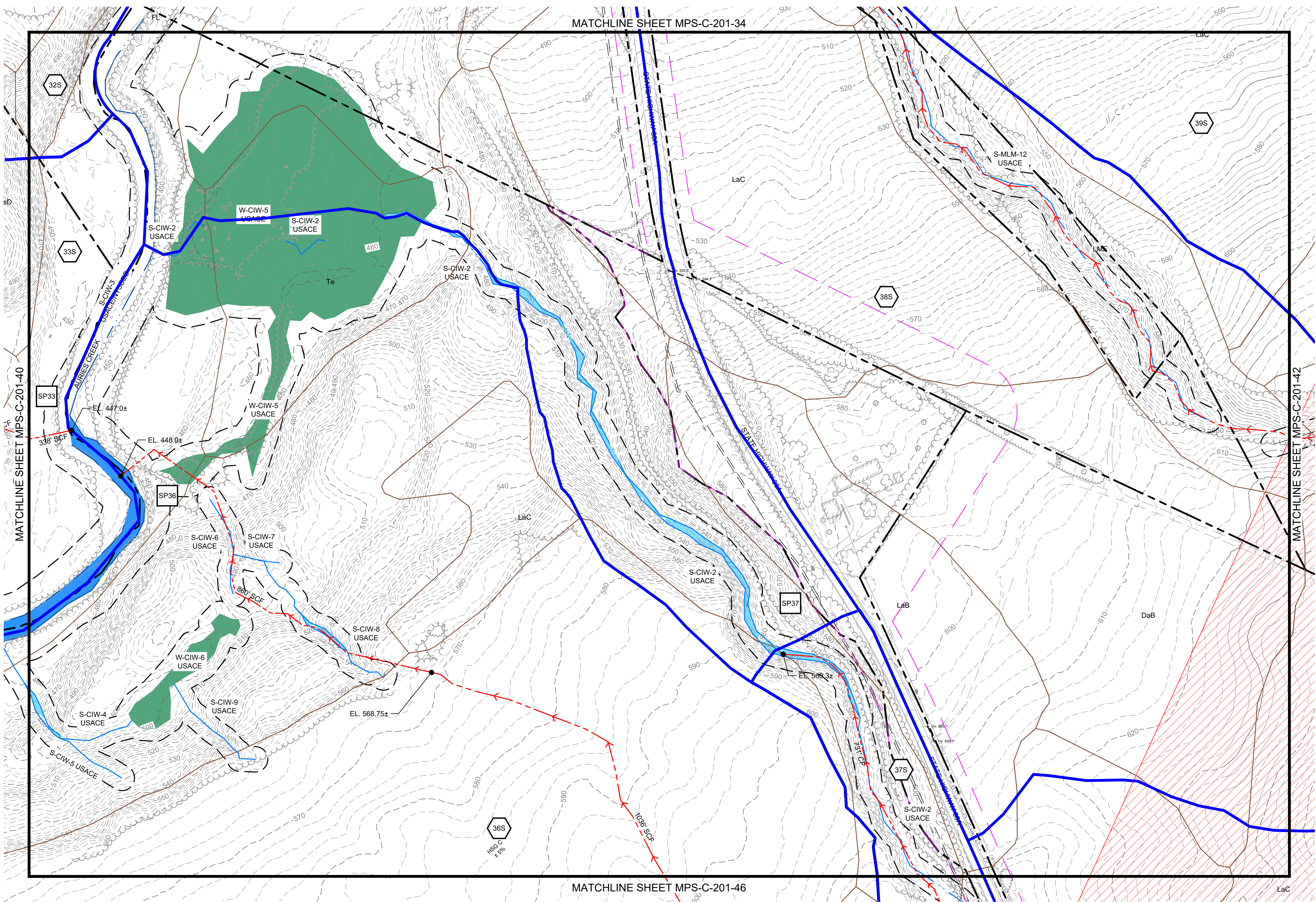
|              |            |
|--------------|------------|
| PMM DESIGNED | GLEN       |
| PMM DRAWN    |            |
| PMM CHECKED  |            |
| APPROVED     |            |
| REVIEW 1     |            |
| REVIEW 2     | 03/01/2023 |
| DATE         | 1" = 100'  |
| SCALE        |            |

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

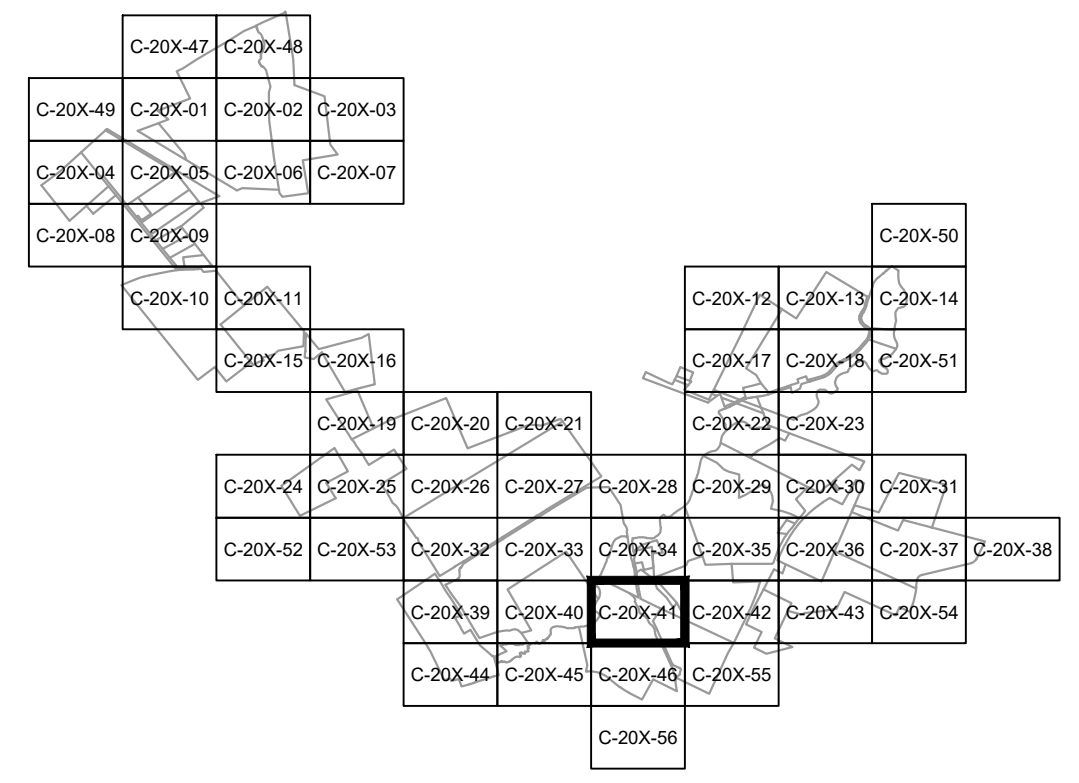
TRC  
MPS-C-201-40  
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue dashed line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF (light blue area)
- SHALLOW CONCENTRATED FLOW: 100' SCF (light blue line)
- CHANNEL FLOW: 100' CF (blue line)
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



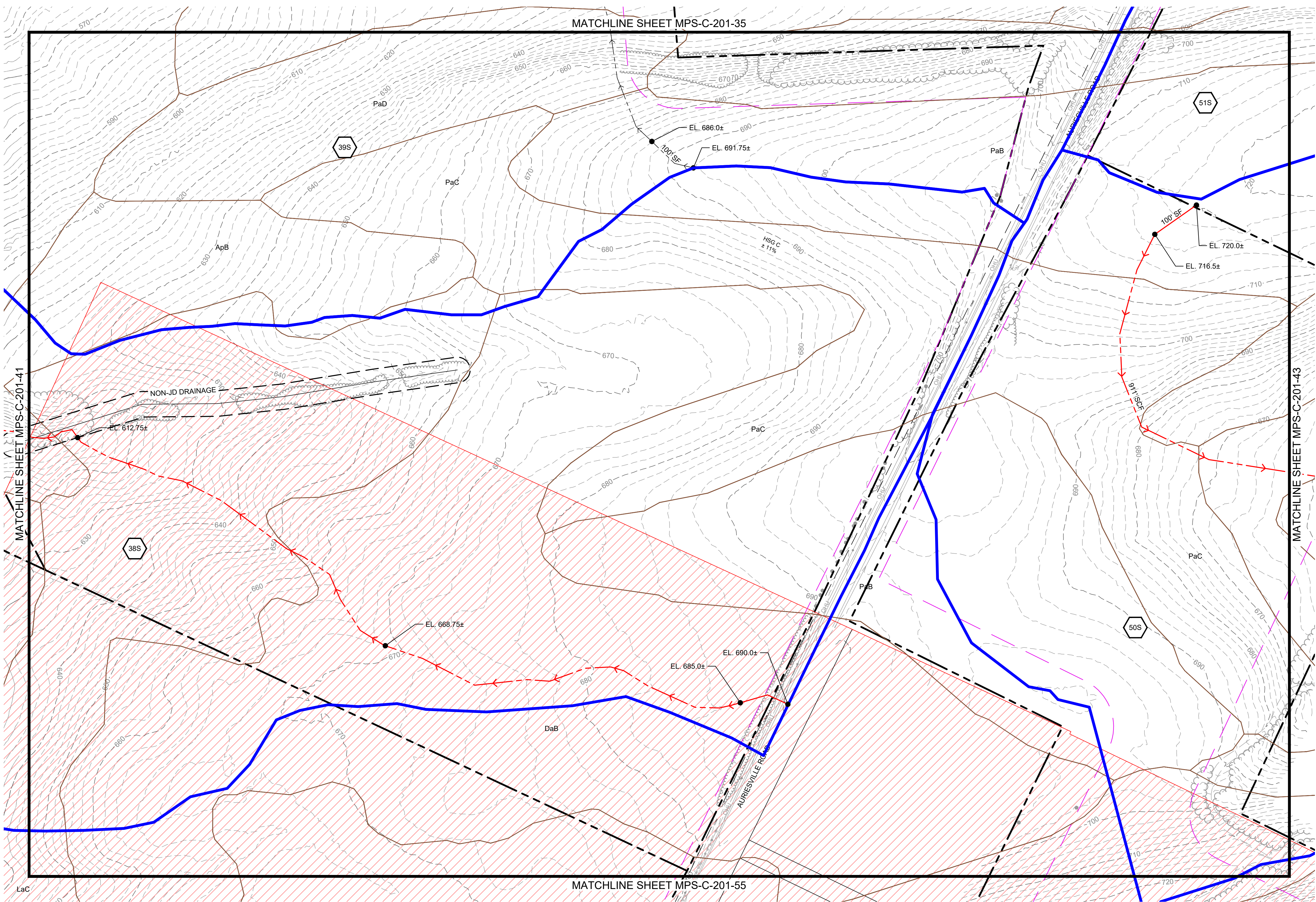
**PRELIMINARY**  
NOT FOR CONSTRUCTION



|   | 249 Western Avenue<br>Augusta, ME 04330 |             | PROJECT NO: 443269 |     |     |     |
|---|---|-------------|--------------------|-----|-----|-----|
|   | REV                                     | DESCRIPTION | DATE               | DES | CHK | APP |
|   | -                                       |             | -                  | -   | -   | -   |
|   | -                                       |             | -                  | -   | -   | -   |
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| A | ISSUED FOR 94-C                         |             | 10/20/2023         | CMW | PMM | PMM |

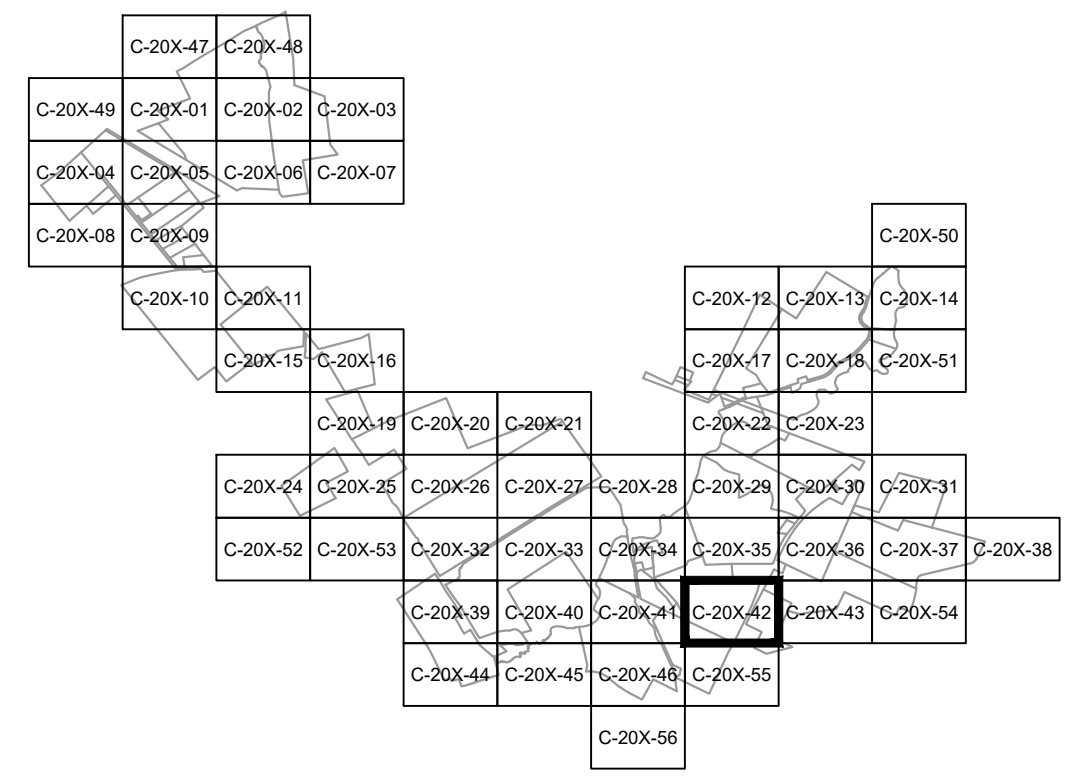
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|--|--|----------|--|--------------|--------|
| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN |          |  | MPS-C-201-41 | REV. A |
|  | GLEN   | NEW YORK |  |              |        |





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

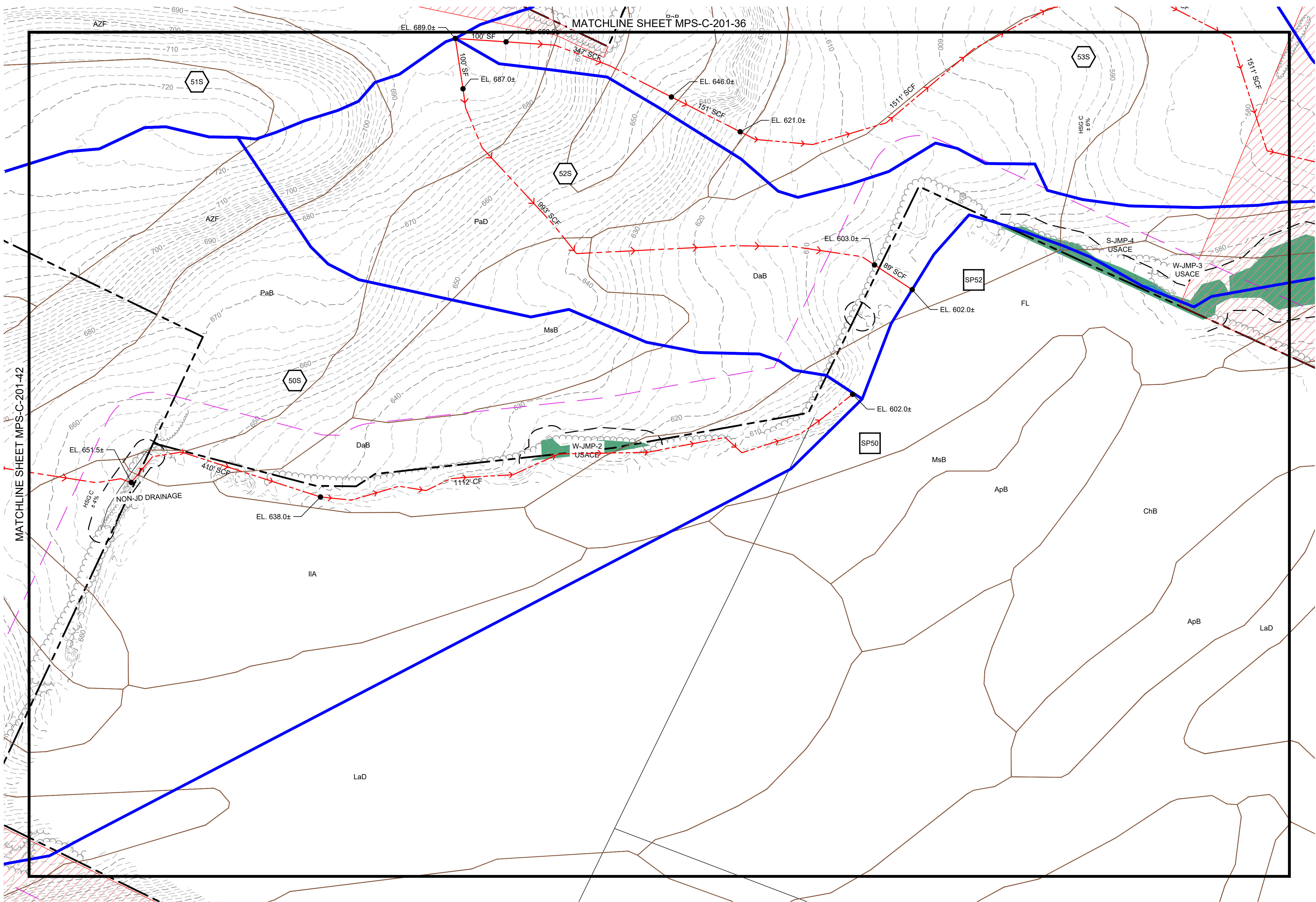
03/01/2023  
DATE



MPS-C-201-42

REV.  
A



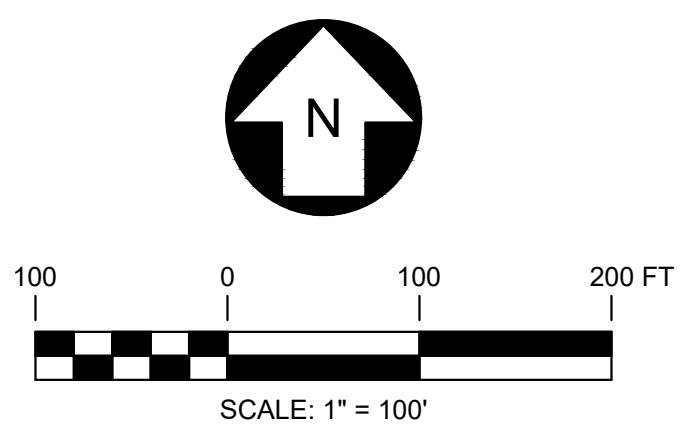
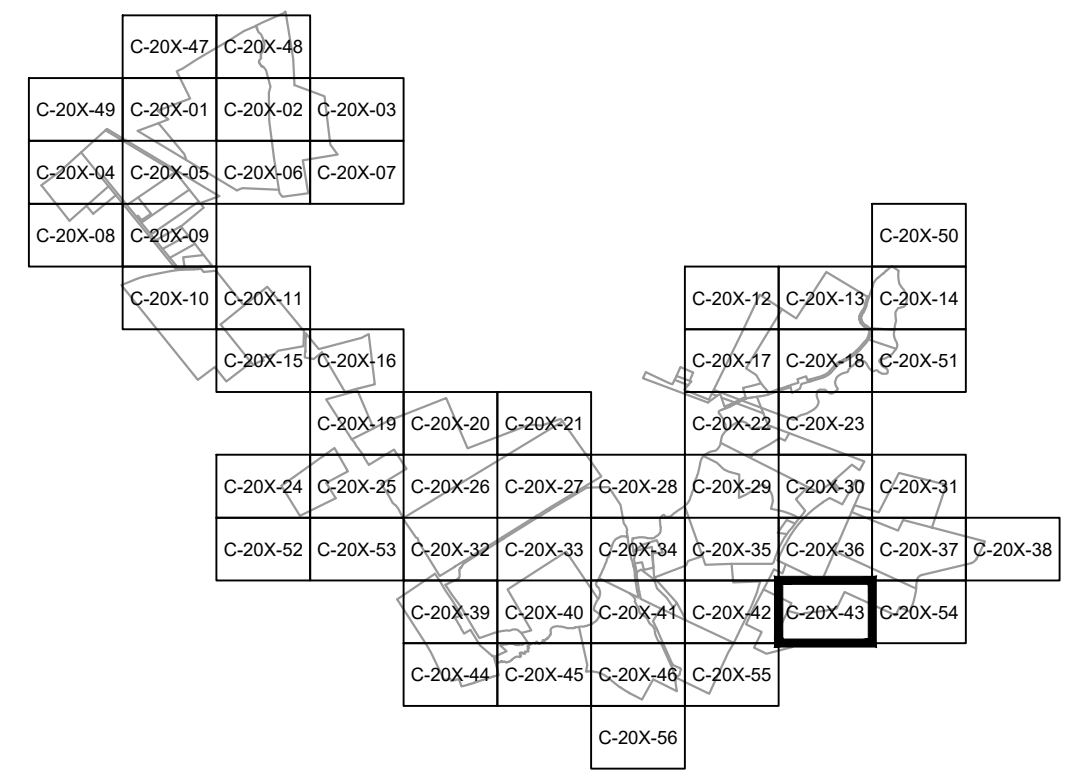


**LEGEND**

- SUBCATCHMENT BOUNDARY: —
- TIME OF CONCENTRATION FLOW LINE: - - -
- REACH: —○—
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: ● EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 51S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY: —

MATCHLINE SHEET MPS-C-201-42

MATCHLINE SHEET MPS-C-201-36



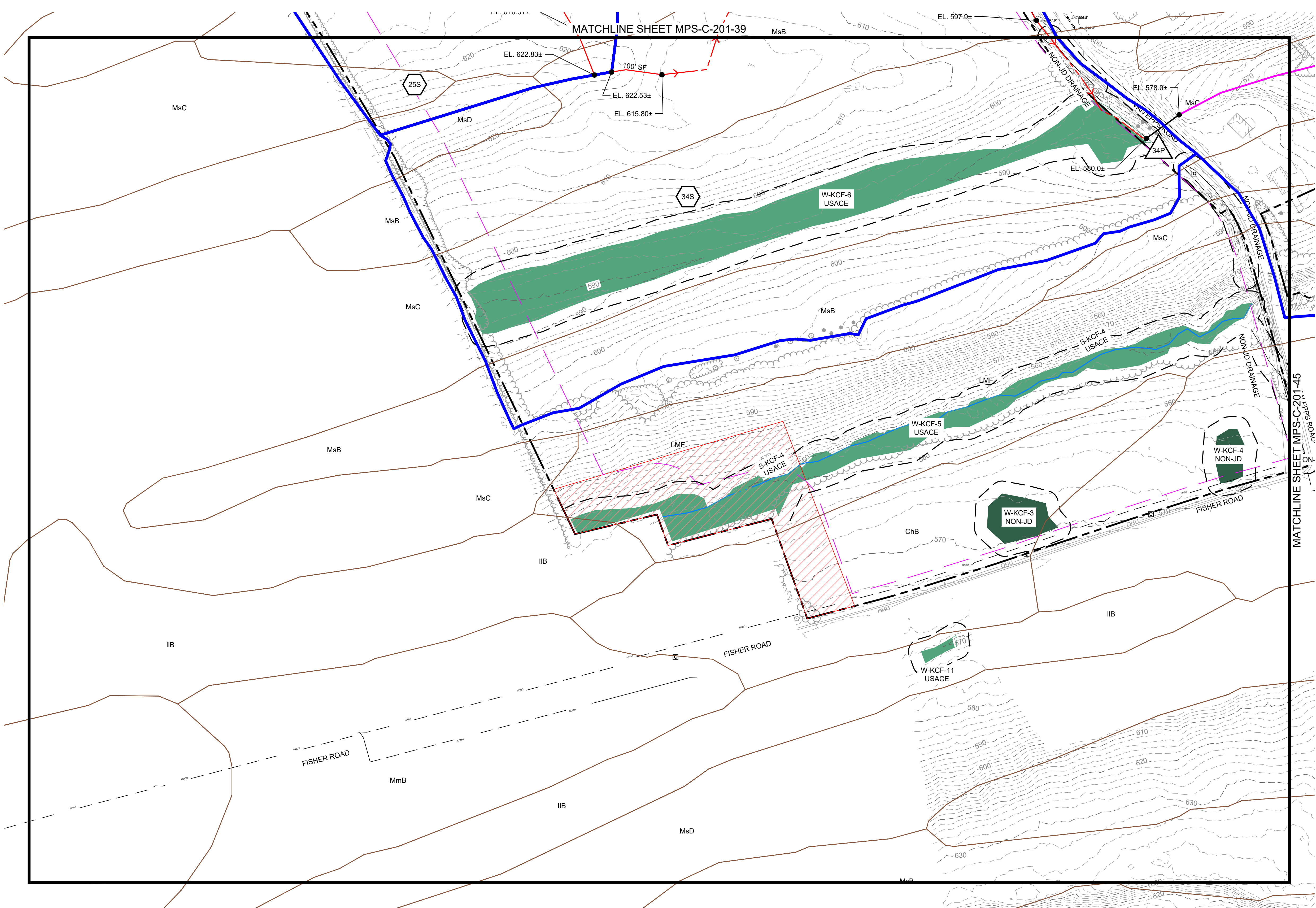
**PRELIMINARY**  
NOT FOR CONSTRUCTION



|   |                 |                    |             |      |     |     |
|---|-----------------|--------------------|-------------|------|-----|-----|
| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
|   |                 | REV                | DESCRIPTION | DATE | DES | CHK |
|   |                 |                    |             |      |     |     |
|   |                 |                    |             |      |     |     |
| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

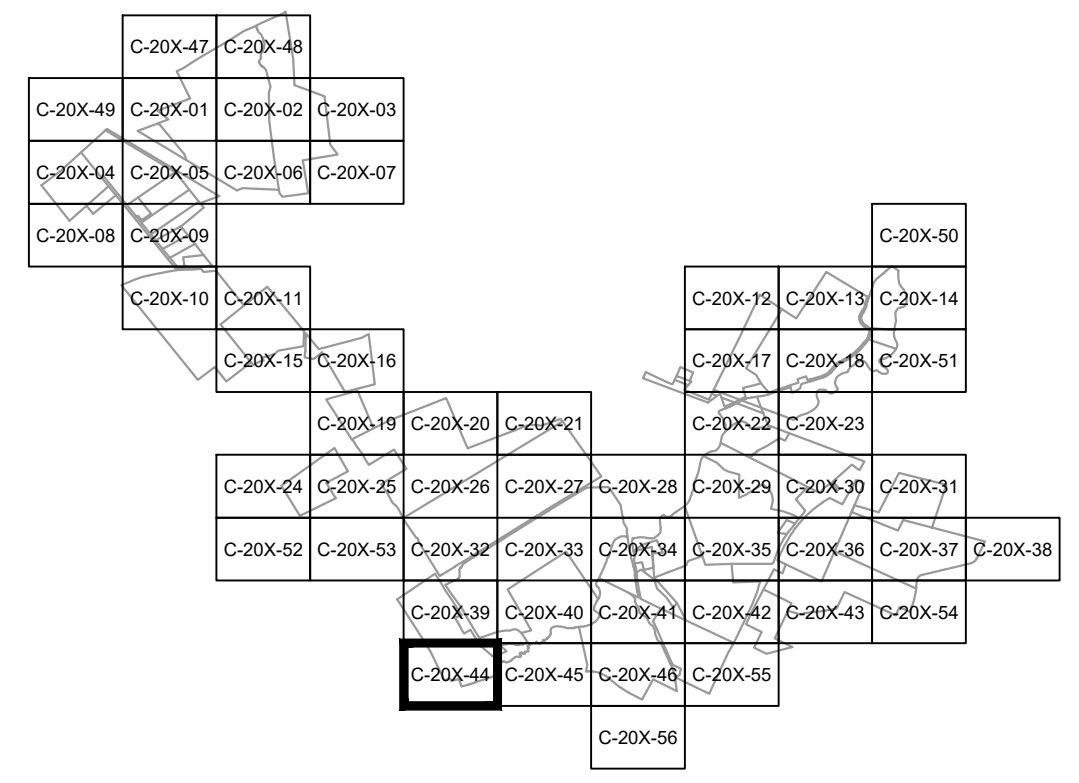
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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN |  | GLEN<br>NEW YORK |
|   | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE                                       |  |                  |





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

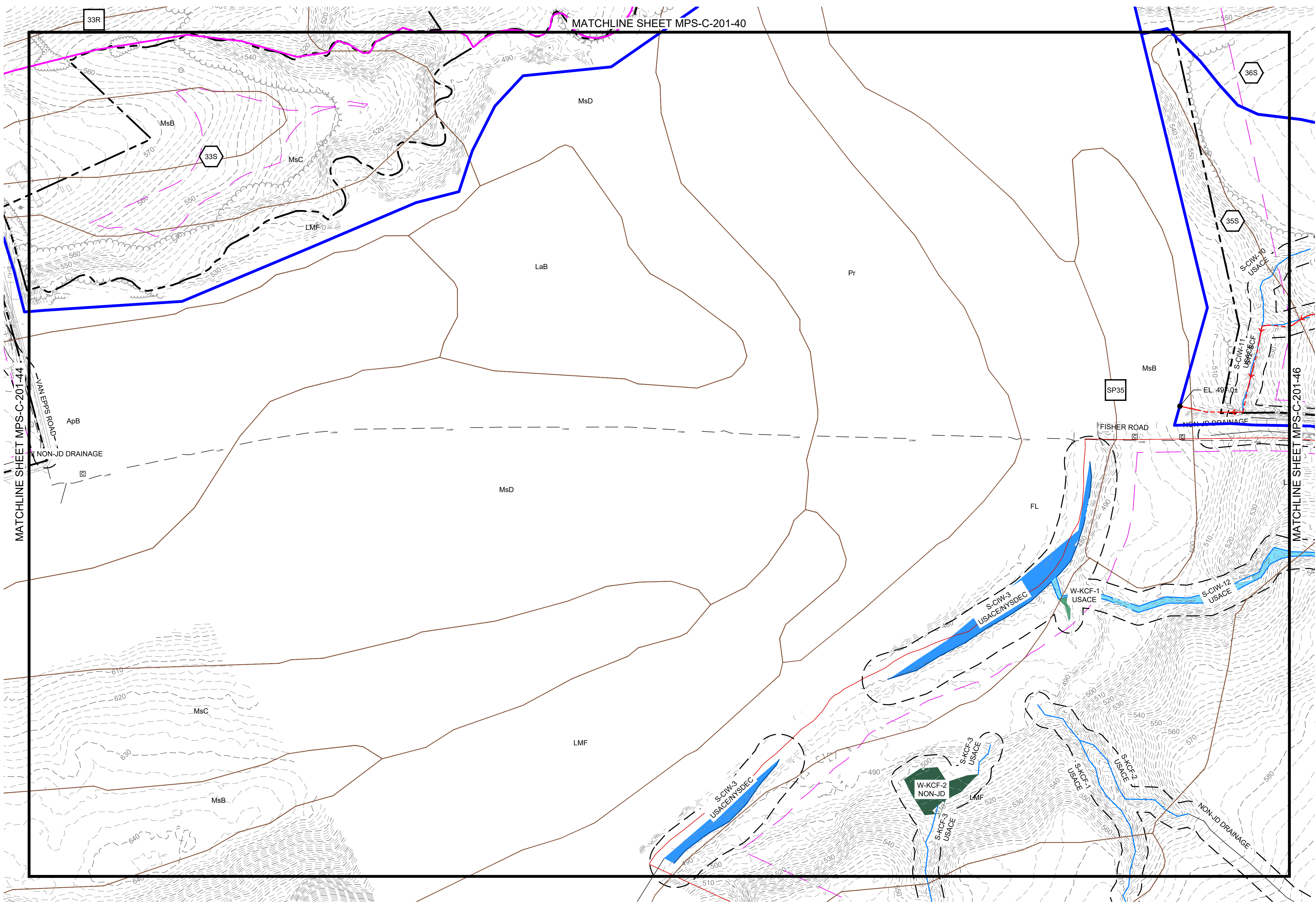
03/01/2023  
DATE



MPS-C-201-44

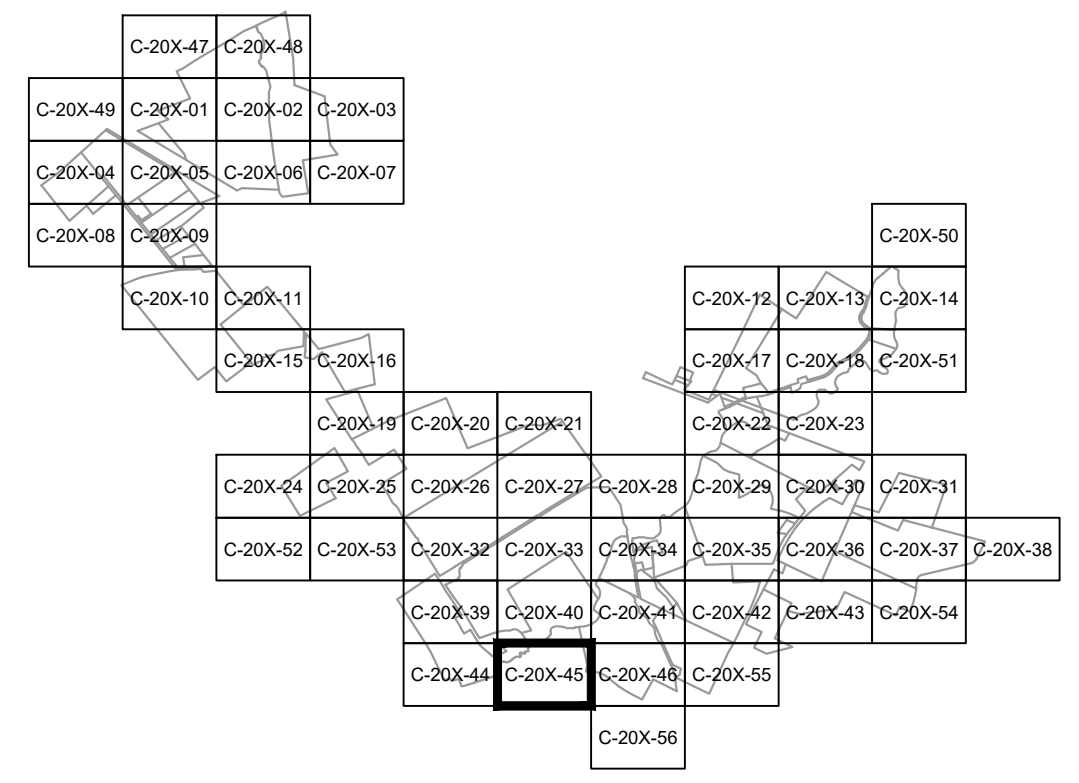
REV.  
A





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



|     |                 | 249 Western Avenue<br>Augusta, ME 04330 |     | PROJECT NO: 443269 |     |  |
|-----|-----------------|---|-----|--------------------|-----|--|
| REV | DESCRIPTION     | DATE                                    | DES | CHK                | APP |  |
| -   | -               | -                                       | -   | -                  | -   |  |
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| A   | ISSUED FOR 94-C | 10/20/2023                              | CMW | PMM                | PMM |  |




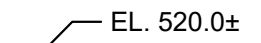
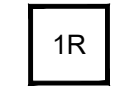
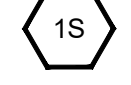
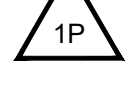


|              |  |
|--------------|--|
| PMM DESIGNED | <p>MILL POINT SOLAR PROJECT<br/>CONNECTGEN, LLC<br/>PRE-DEVELOPMENT STORMWATER PLAN</p> <p>GLEN NEW YORK</p> |
| PMM DRAWN    |  |
| PMM CHECKED  |  |
| APPROVED     |  |
| REVIEW 1     |  |
| REVIEW 2     | <p>03/01/2023<br/>DATE</p> <p>1" = 100'<br/>SCALE</p>  |
|              |  |
| MPS-C-201-45 |  |
| REV.         | A  |

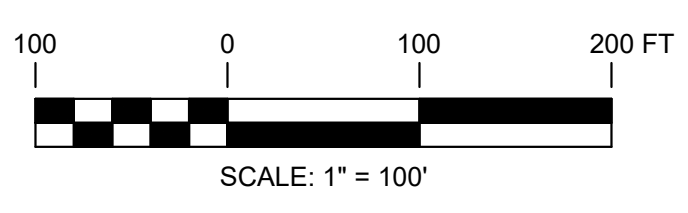
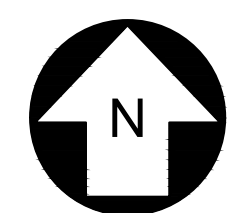
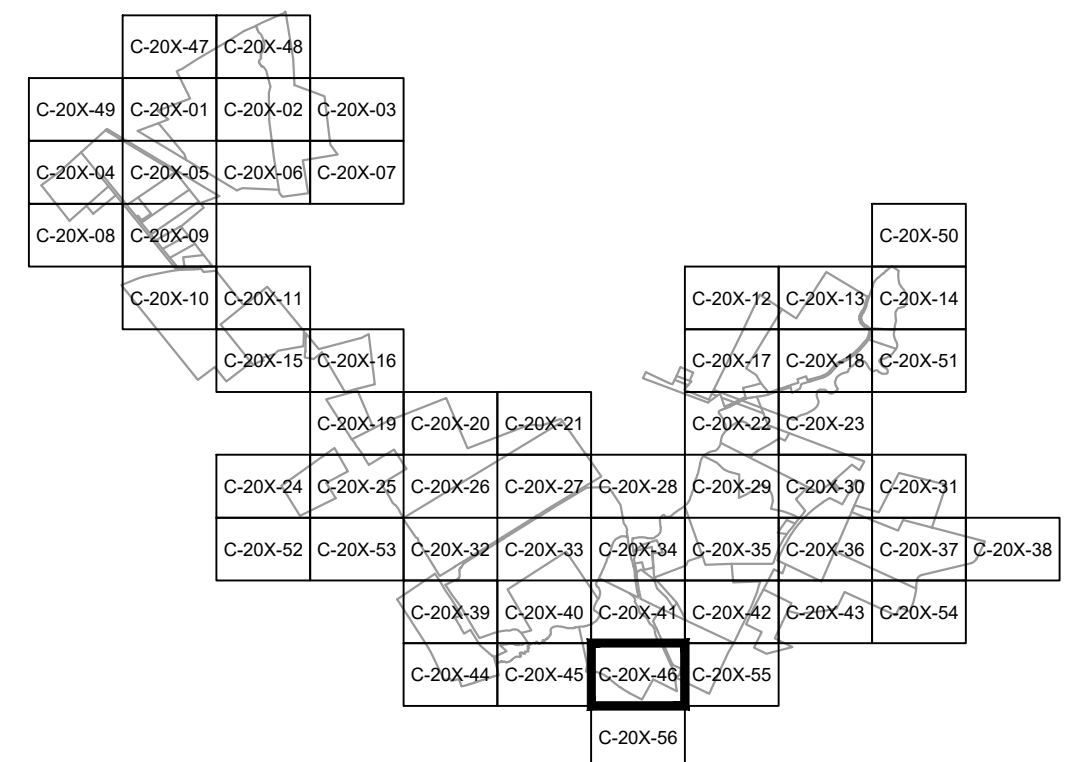
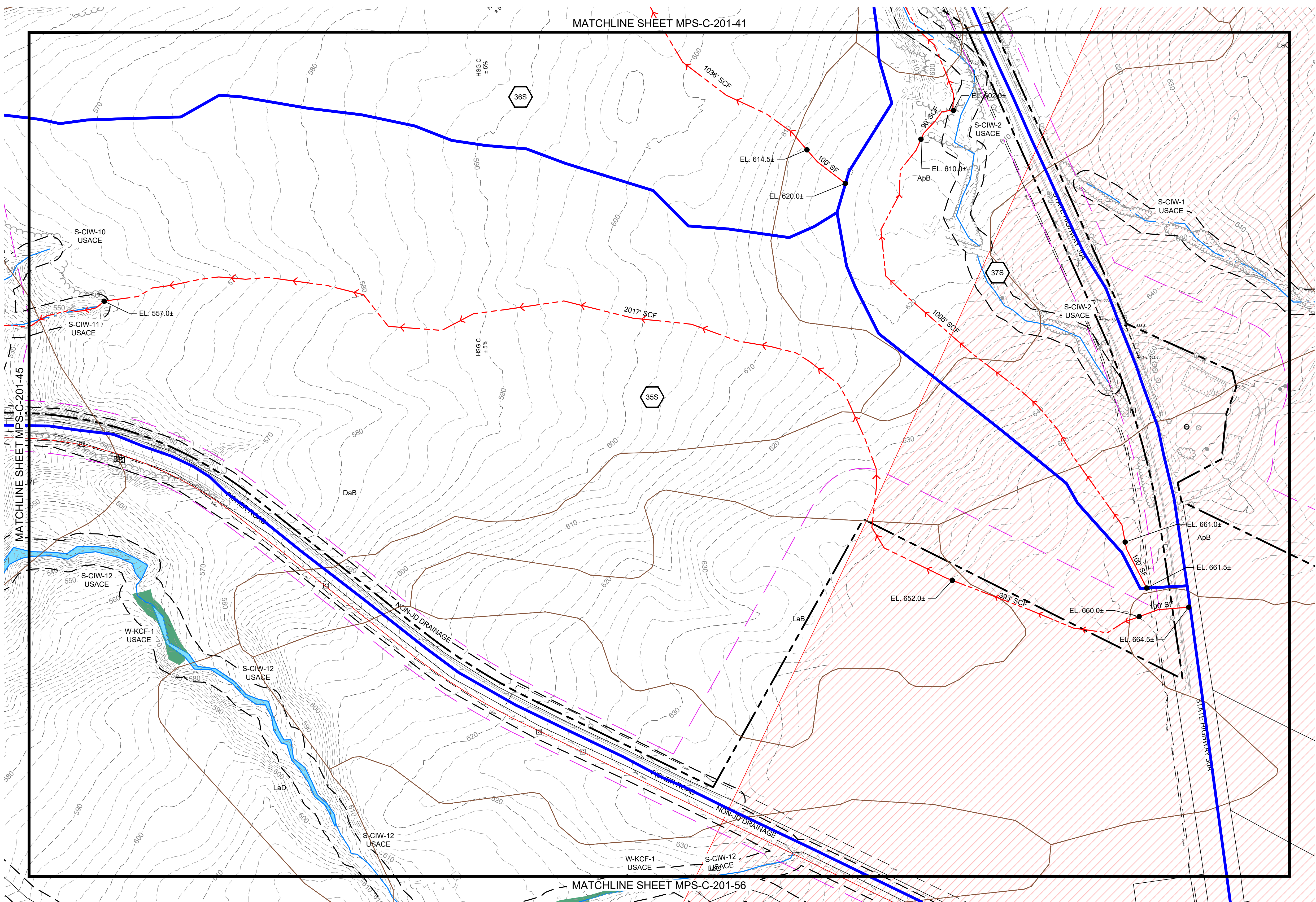


MATCHLINE SHEET MPS-C-201-41

MATCHLINE SHEET MPS-C-201-56

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID  1R
- SUBCATCHMENT ID  1S
- POND ID  1P
- STUDY POINT ID  SP1
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE

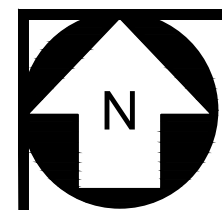
1" = 100'  
SCALE



MPS-C-201-46

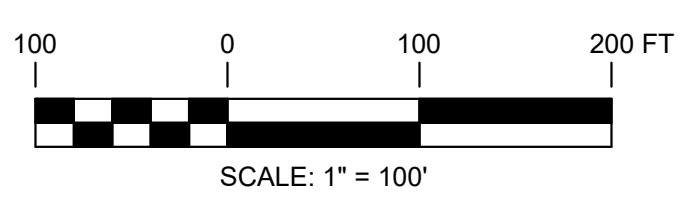
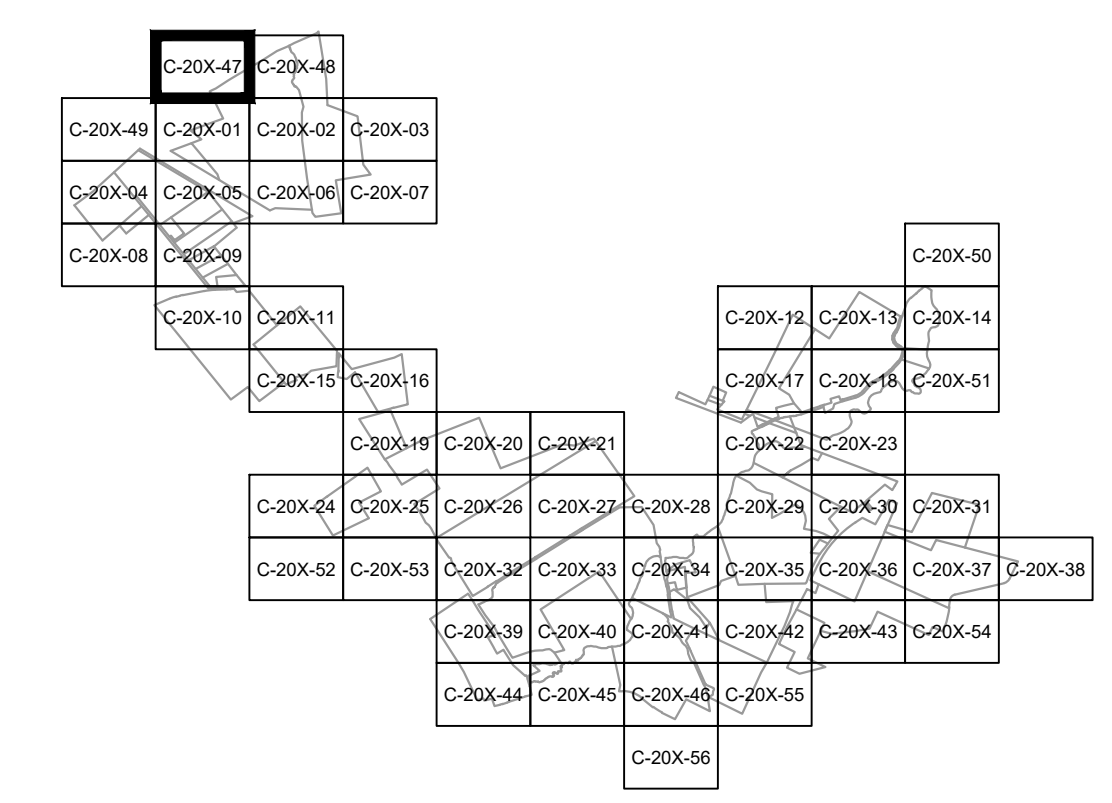
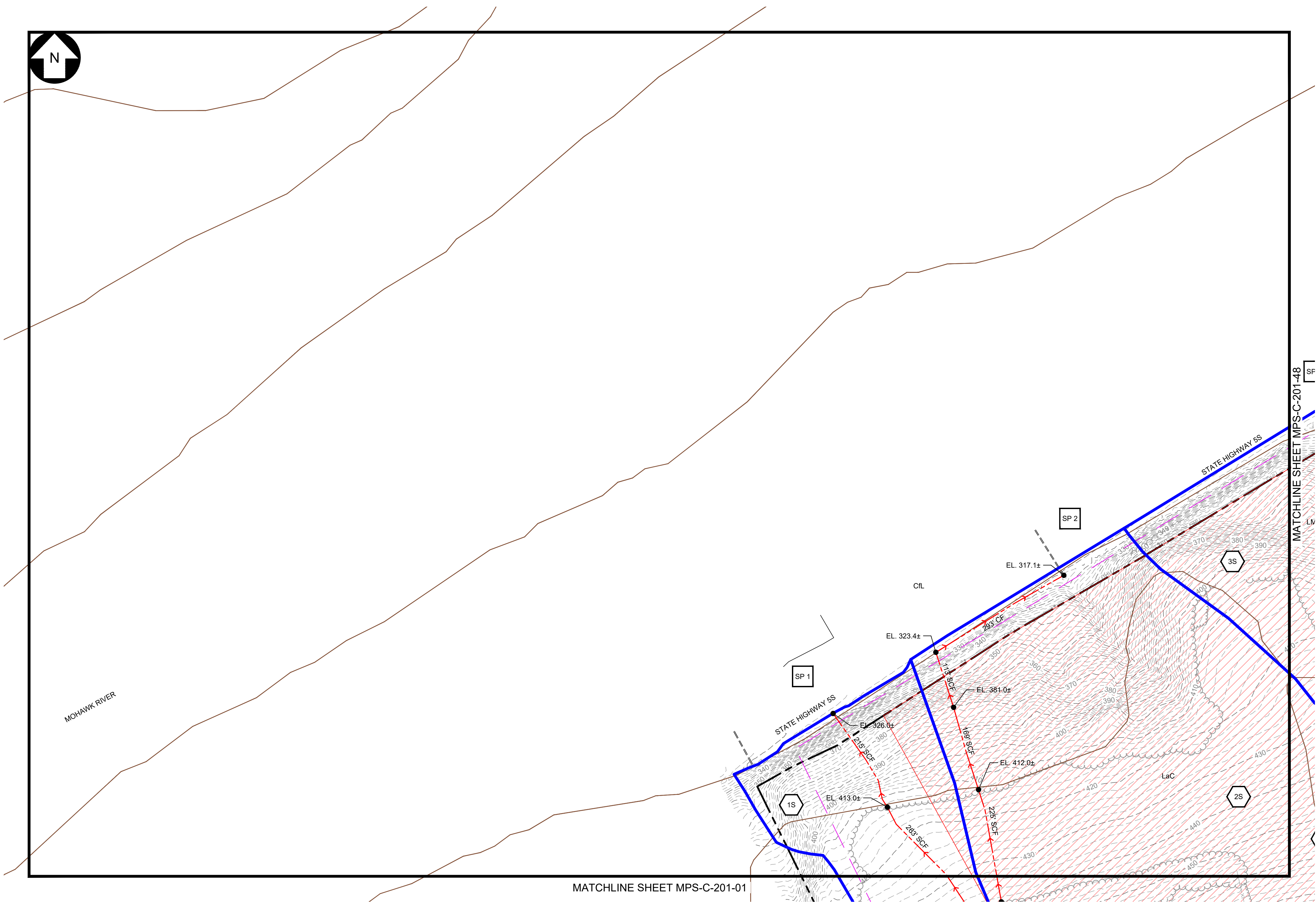
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



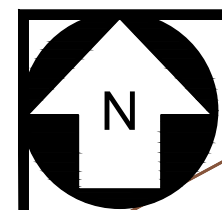
| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

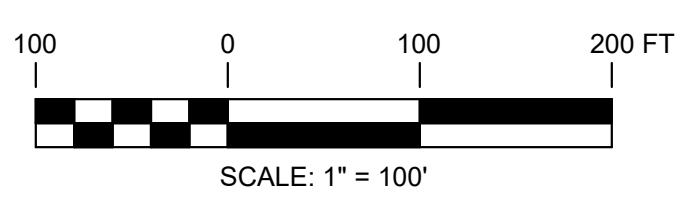
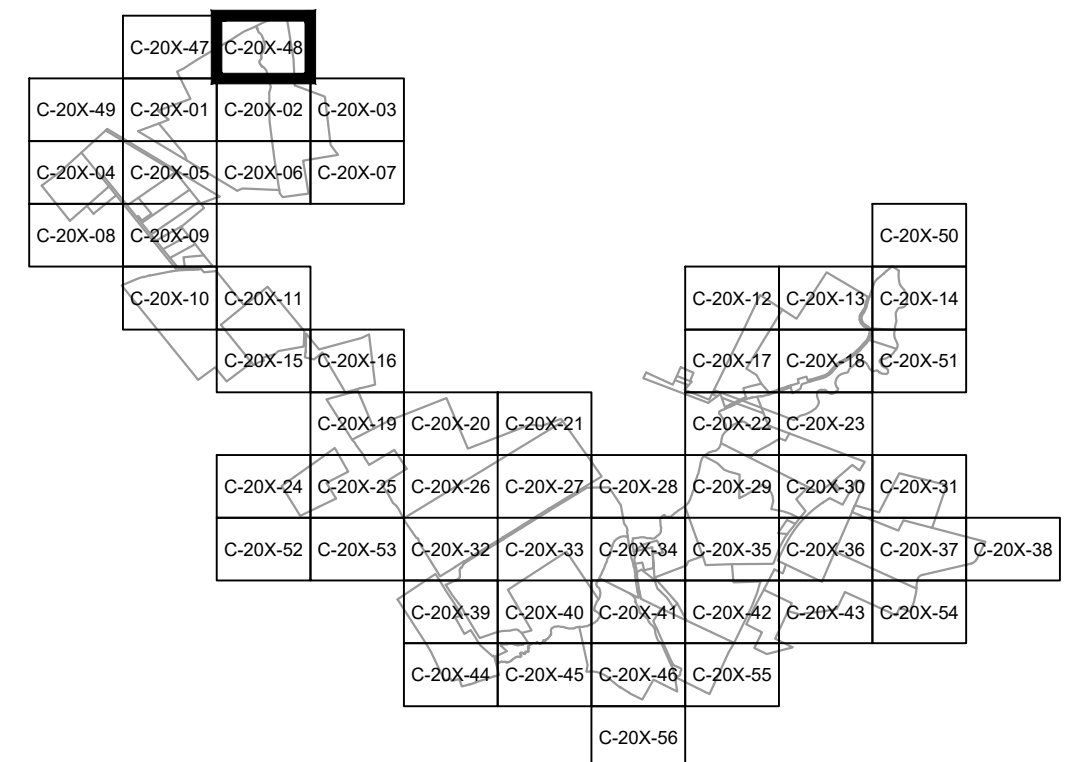
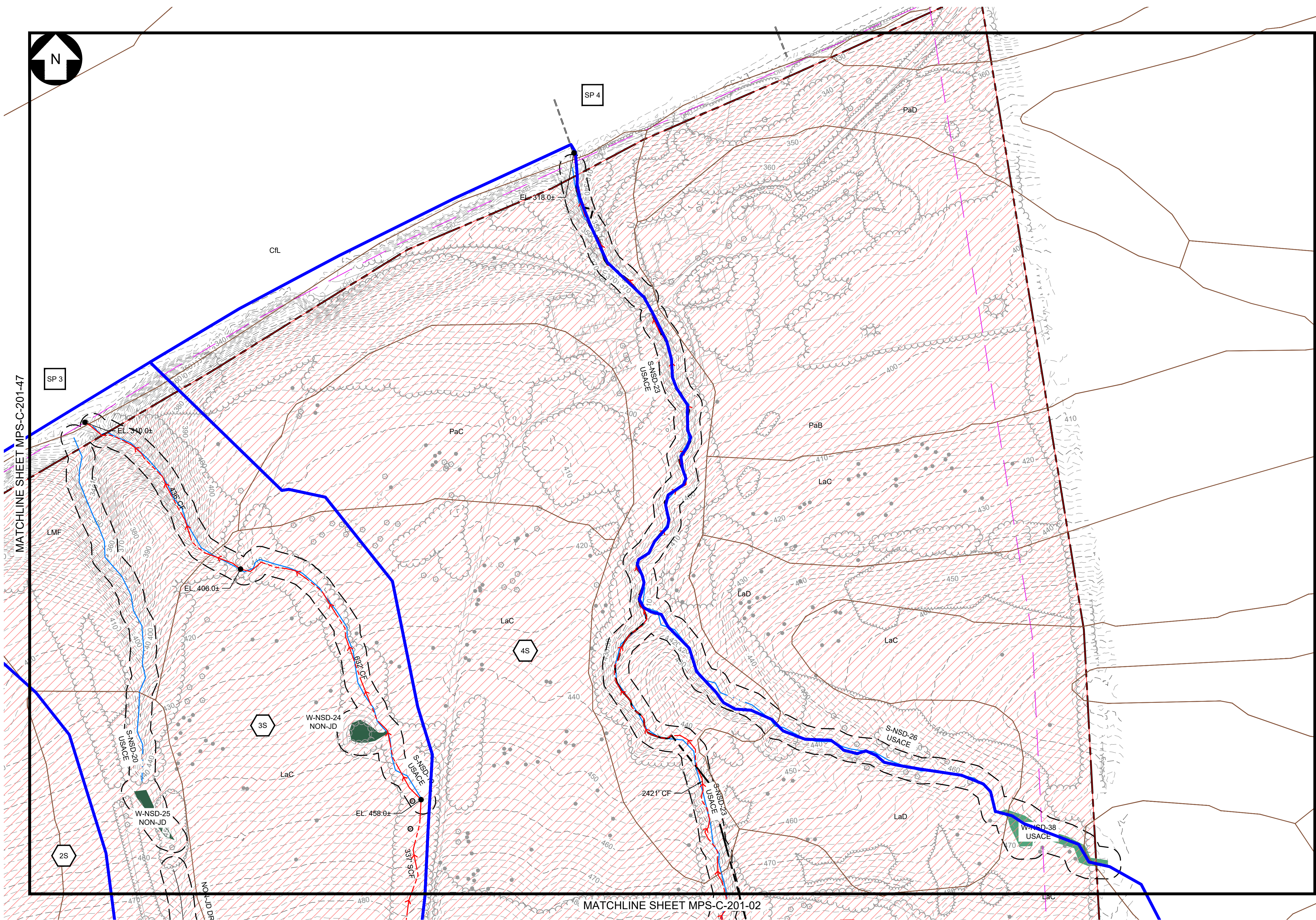
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| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>PRE-DEVELOPMENT STORMWATER PLAN</b> | NEW YORK            |
| REVIEW 1<br>REVIEW 2                                 | GLEN<br>03/01/2023<br>DATE<br>1" = 100'<br>SCALE  | TRC<br>MPS-C-201-47 |
|  |   | REV. A              |





**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

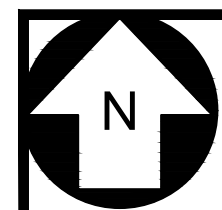
03/01/2023  
DATE



MPS-C-201-48

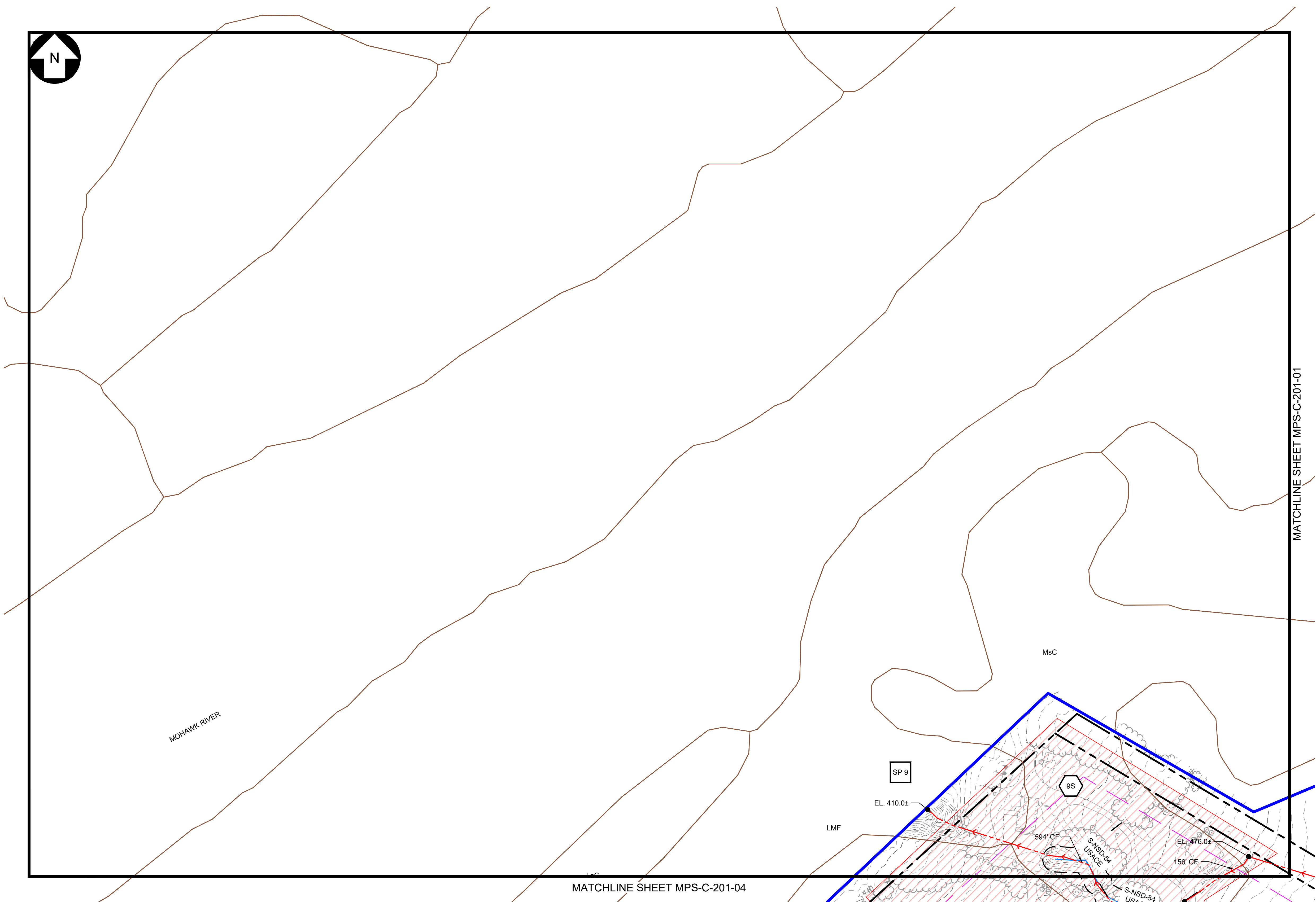
REV.  
A





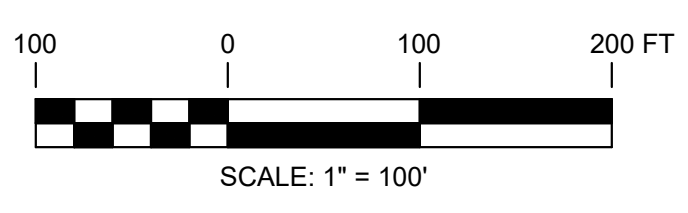
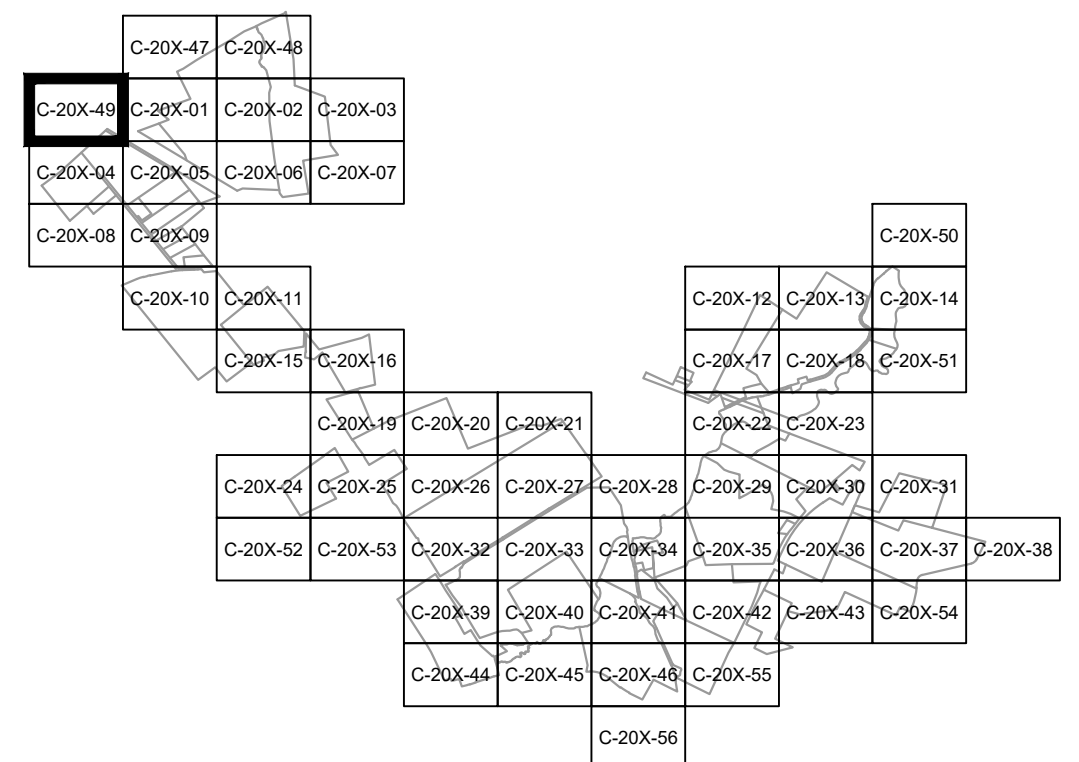
**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-201-01

MATCHLINE SHEET MPS-C-201-04



**PRELIMINARY**  
NOT FOR CONSTRUCTION



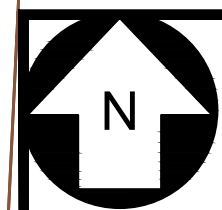
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

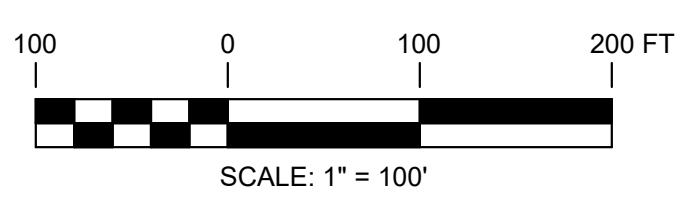
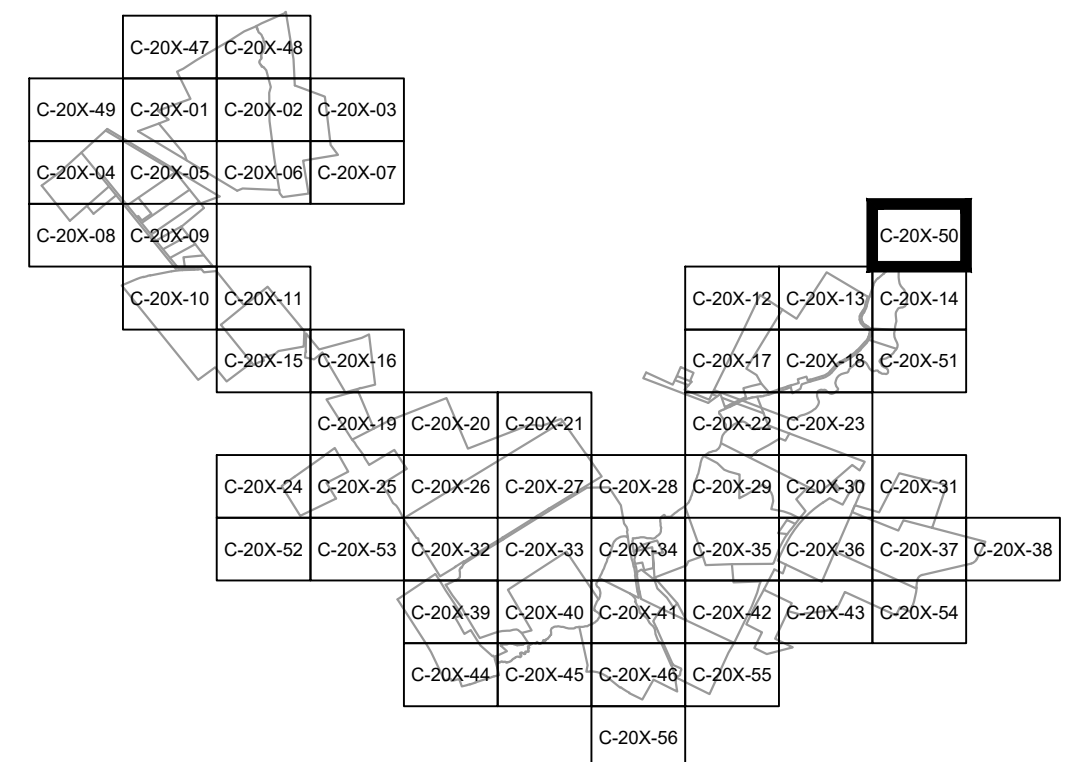
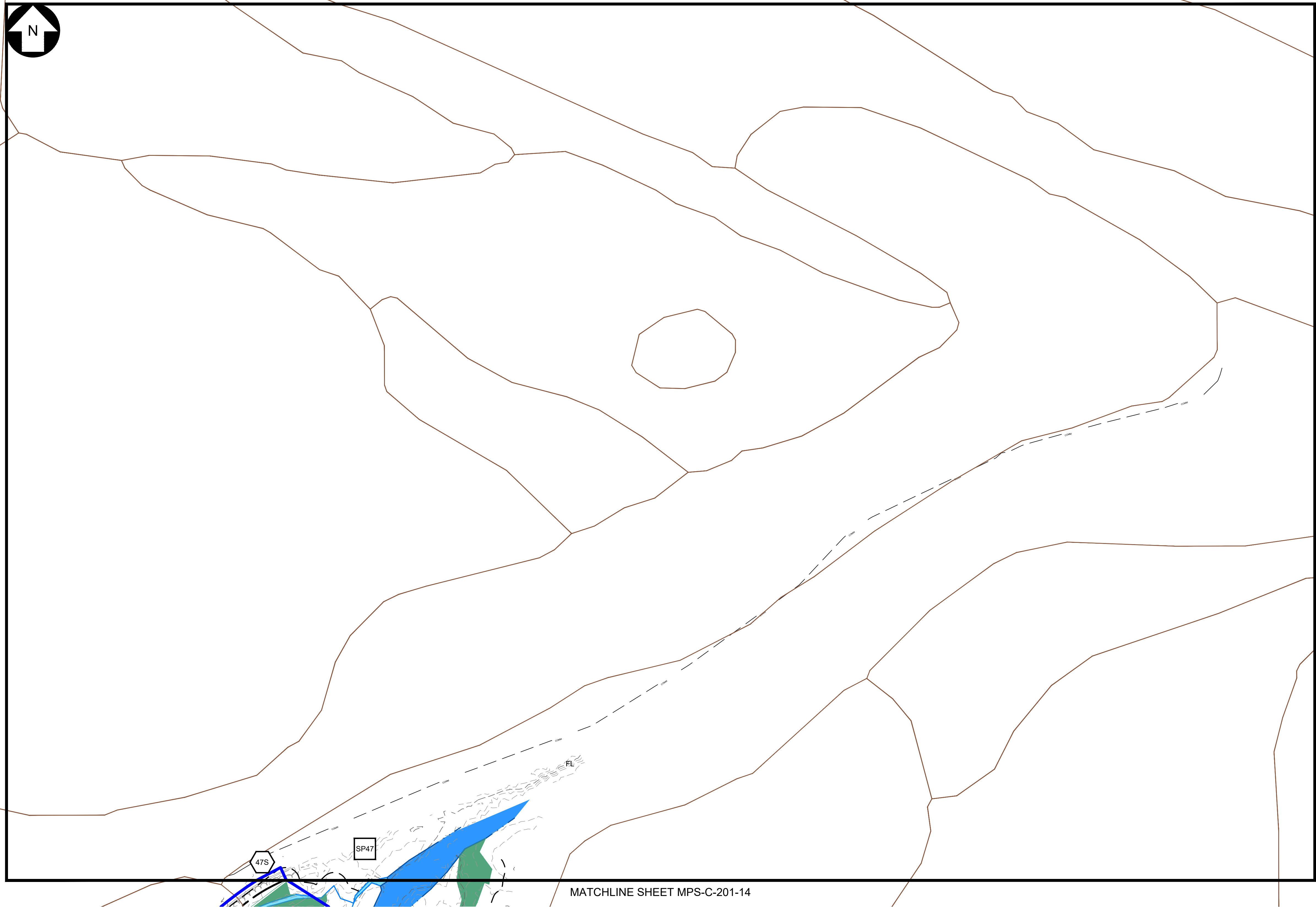
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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>PRE-DEVELOPMENT STORMWATER PLAN</b> | NEW YORK |
| GLEN  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |          |
| REVIEW 1  | MPS-C-201-49  | REV. A   |
| REVIEW 2  |   |          |





**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - - - -
- REACH —●—●—
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----------------|-----|-----------------|------------|-----|-----|-----|
|                 | -   |                 | -          | -   | -   | -   |
|                 | -   |                 | -          | -   | -   | -   |
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|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |





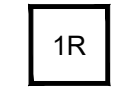
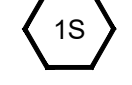
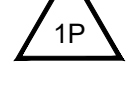


249 Western Avenue  
Augusta, ME 04330

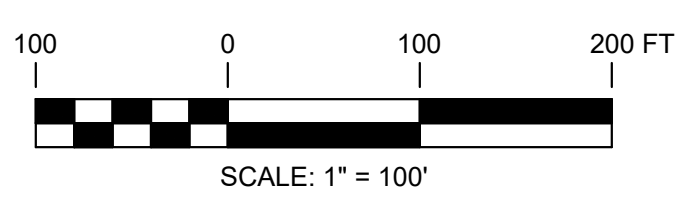
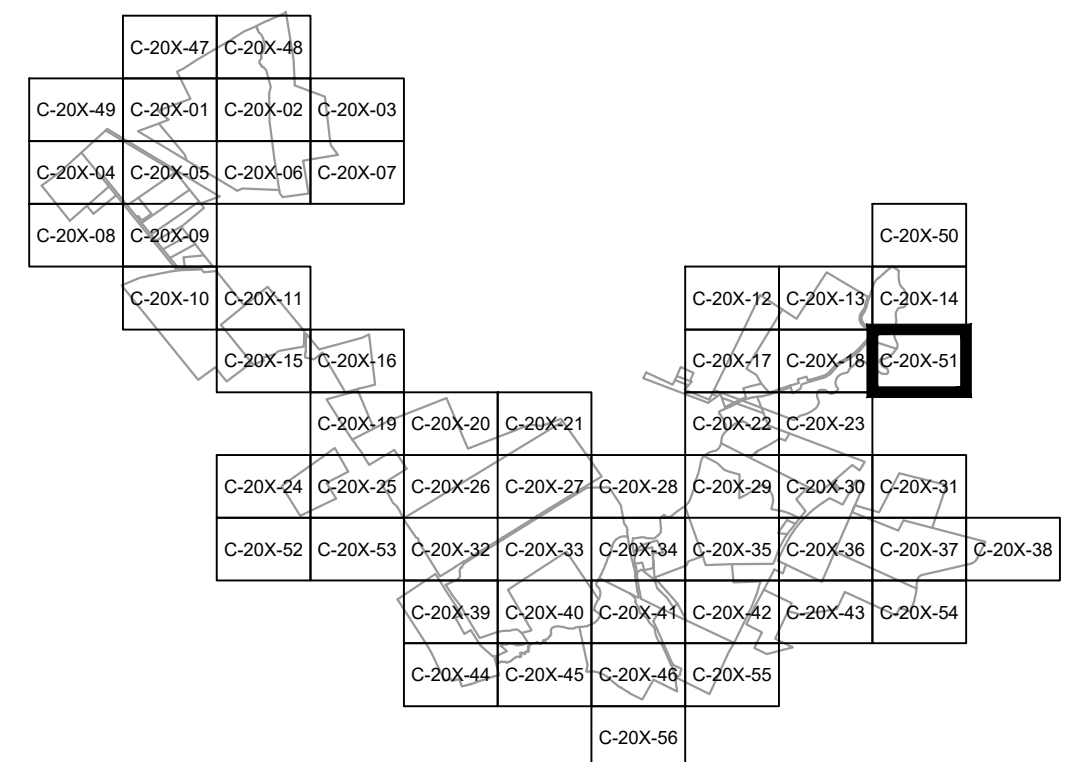
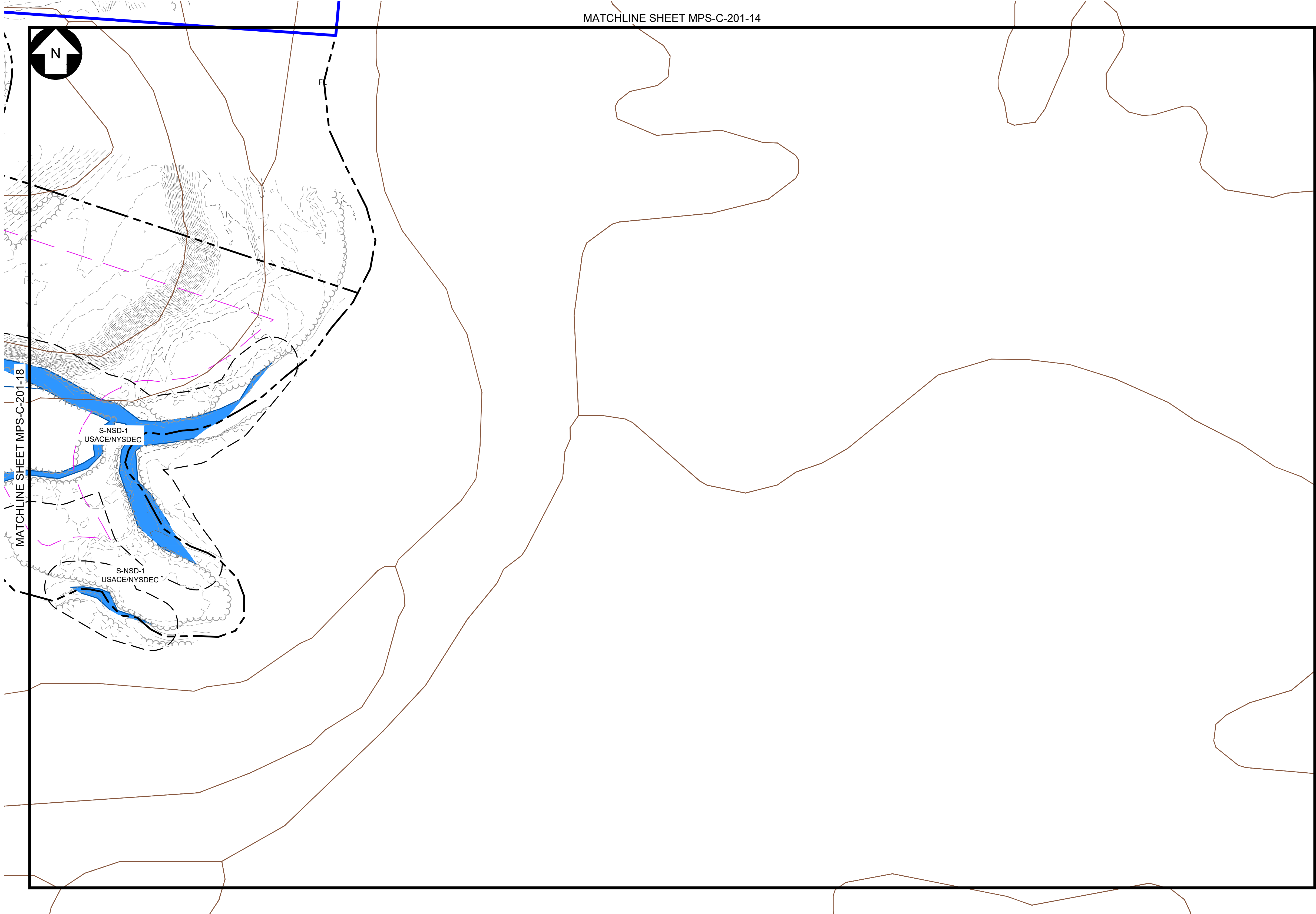
PROJECT NO: 443269

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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>-<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>PRE-DEVELOPMENT STORMWATER PLAN</b> |           |
| GLEN   | NEW YORK  |           |
| REVIEW 1<br>-<br>REVIEW 2  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |           |
|  | MPS-C-201-50  | REV.<br>A |




LEGEND


- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



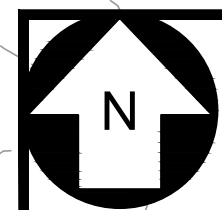
**PRELIMINARY**  
NOT FOR CONSTRUCTION



|  |                 | 249 Western Avenue<br>Augusta, ME 04330 |     | PROJECT NO: 443269 |     |  |
|---|-----------------|---|-----|--------------------|-----|--|
| REV   | DESCRIPTION     | DATE                                    | DES | CHK                | APP |  |
| -   | -               | -                                       | -   | -                  | -   |  |
| -   | -               | -                                       | -   | -                  | -   |  |
| -   | -               | -                                       | -   | -                  | -   |  |
| A   | ISSUED FOR 94-C | 10/20/2023                              | CMW | PMM                | PMM |  |

|                 |  |   |              |      |
|-----------------|--|---|--------------|------|
| PMM<br>DESIGNED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN | GLEN  | NEW YORK     |      |
| PMM<br>DRAWN    |  |   |              |      |
| PMM<br>CHECKED  |  |   |              |      |
| PMM<br>APPROVED |  |   |              |      |
| REVIEW 1        | 03/01/2023<br>DATE   |  | MPS-C-201-51 | REV. |
| REVIEW 2        | 1" = 100'<br>SCALE   |   |              | A    |

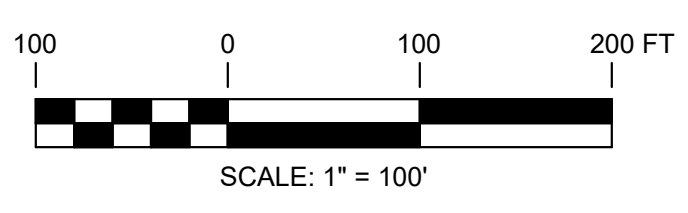
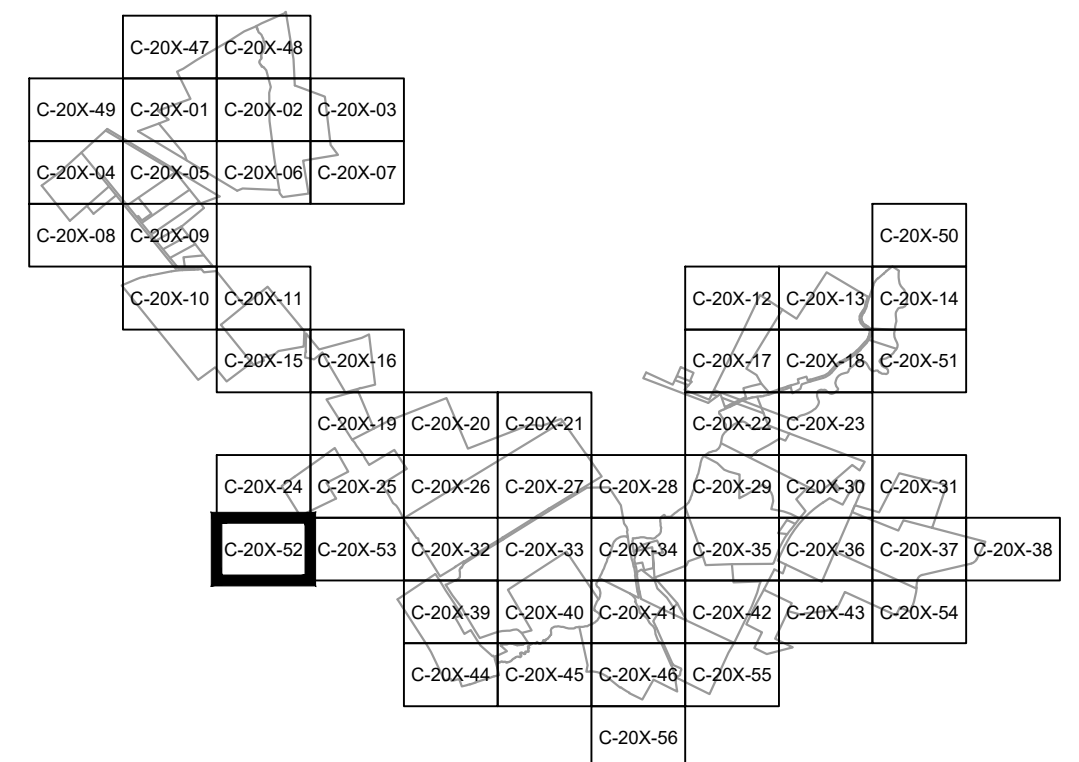
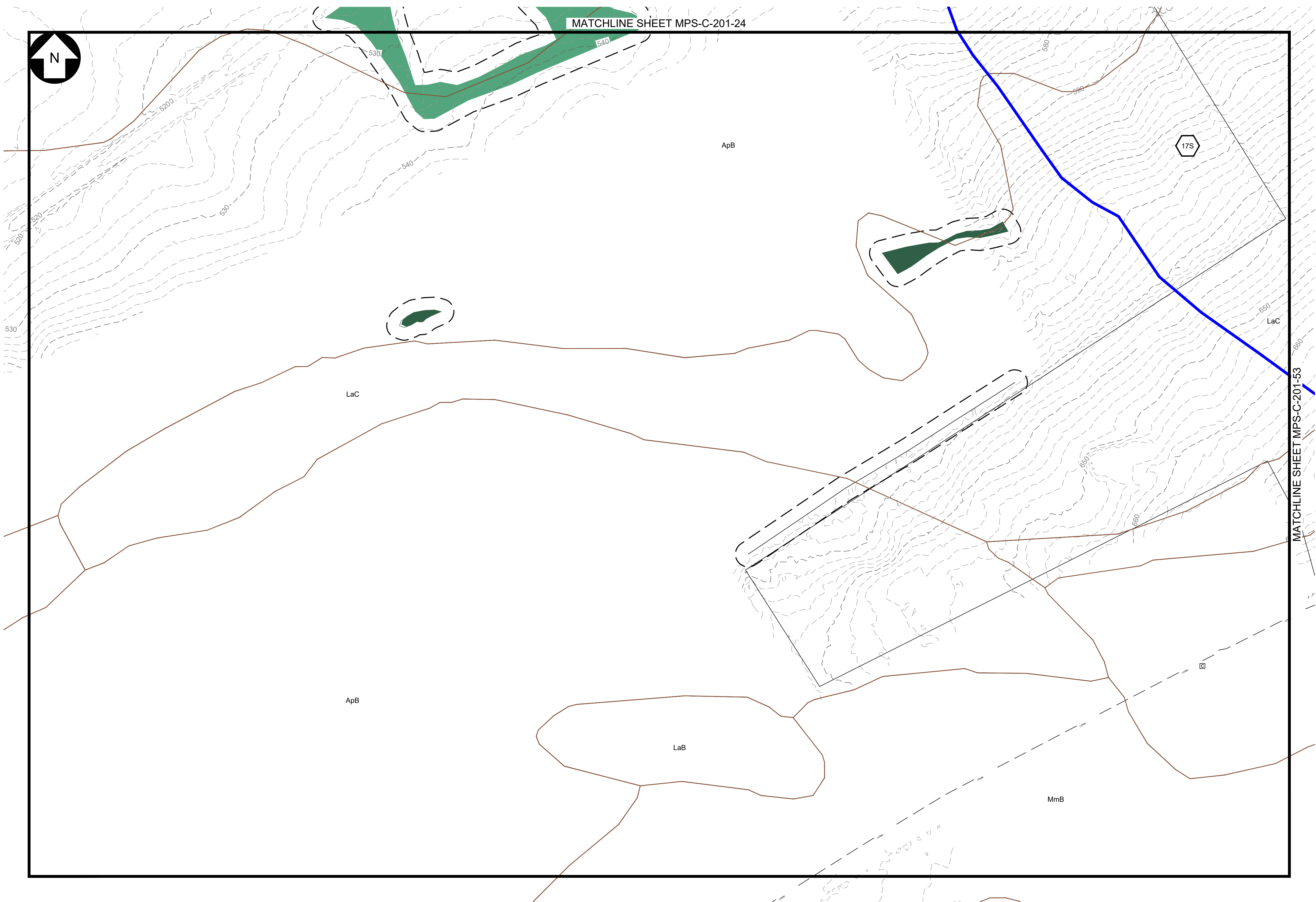




MATCHLINE SHEET MPS-C-201-24

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



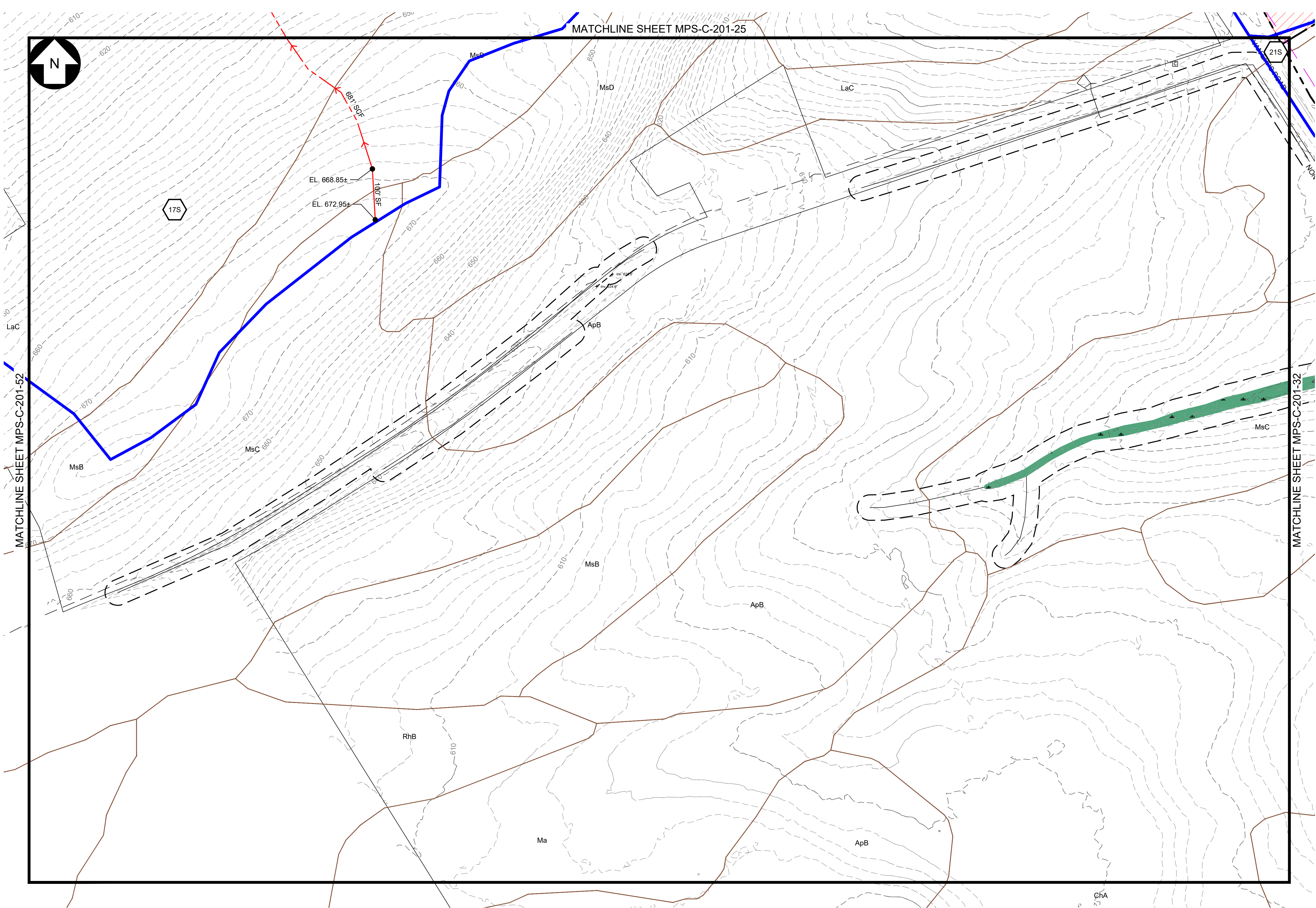
249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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|                 | -   |                 |            |     |     |     |
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|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

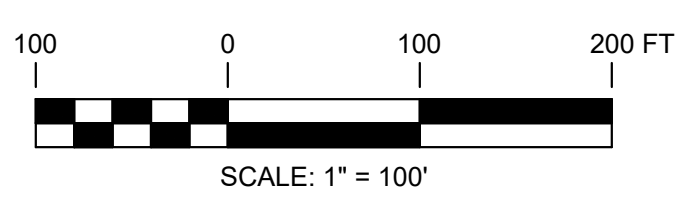
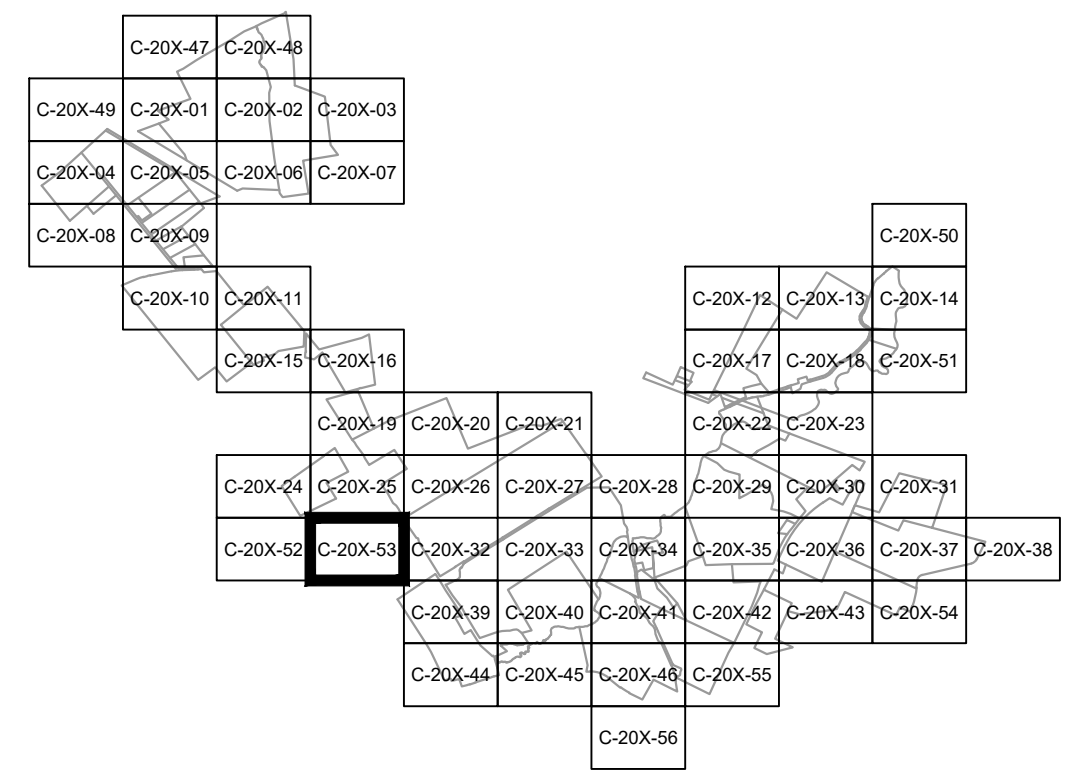
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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>PRE-DEVELOPMENT STORMWATER PLAN</b> |                  |
|   | GLEN <span style="float: right;">NEW YORK</span>  |                  |
| REVIEW 1<br>REVIEW 2  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  | <br>MPS-C-201-52 |
|   |   | REV. A           |





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
NOT FOR CONSTRUCTION



| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |     |     |     |
|---|-----------------|--------------------|-----|-----|-----|
| REV                                     | DESCRIPTION     | DATE               | DES | CHK | APP |
| -                                       | -               | -                  | -   | -   | -   |
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| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW | PMM | PMM |

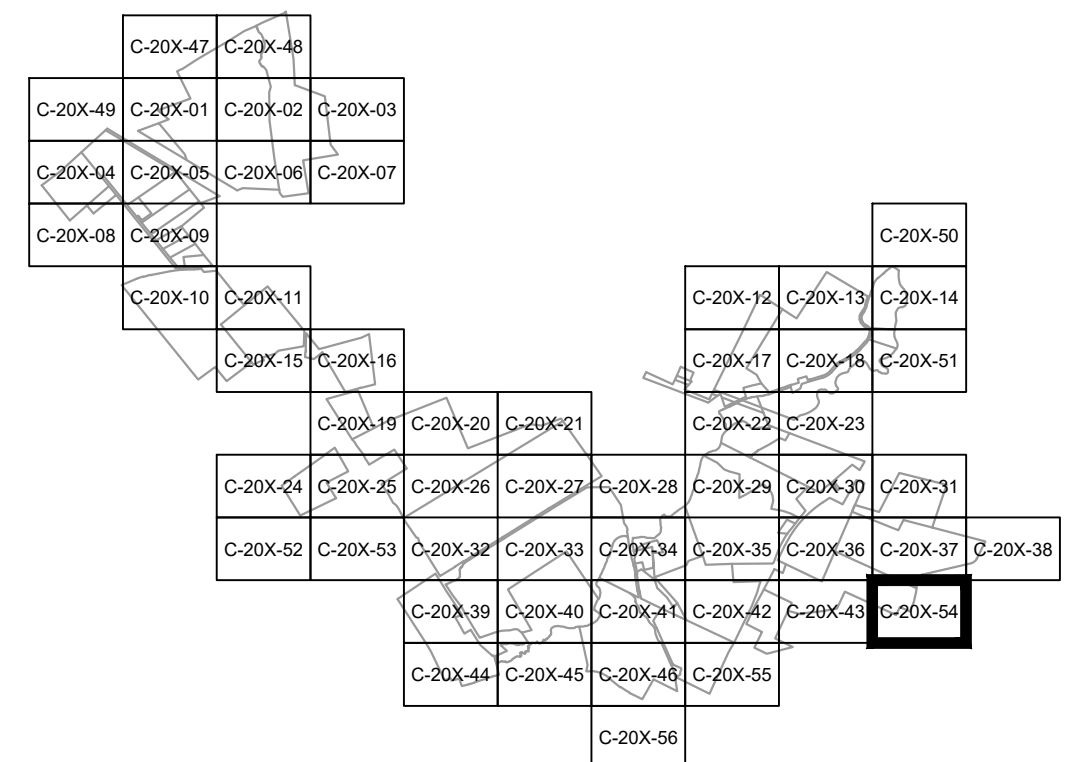
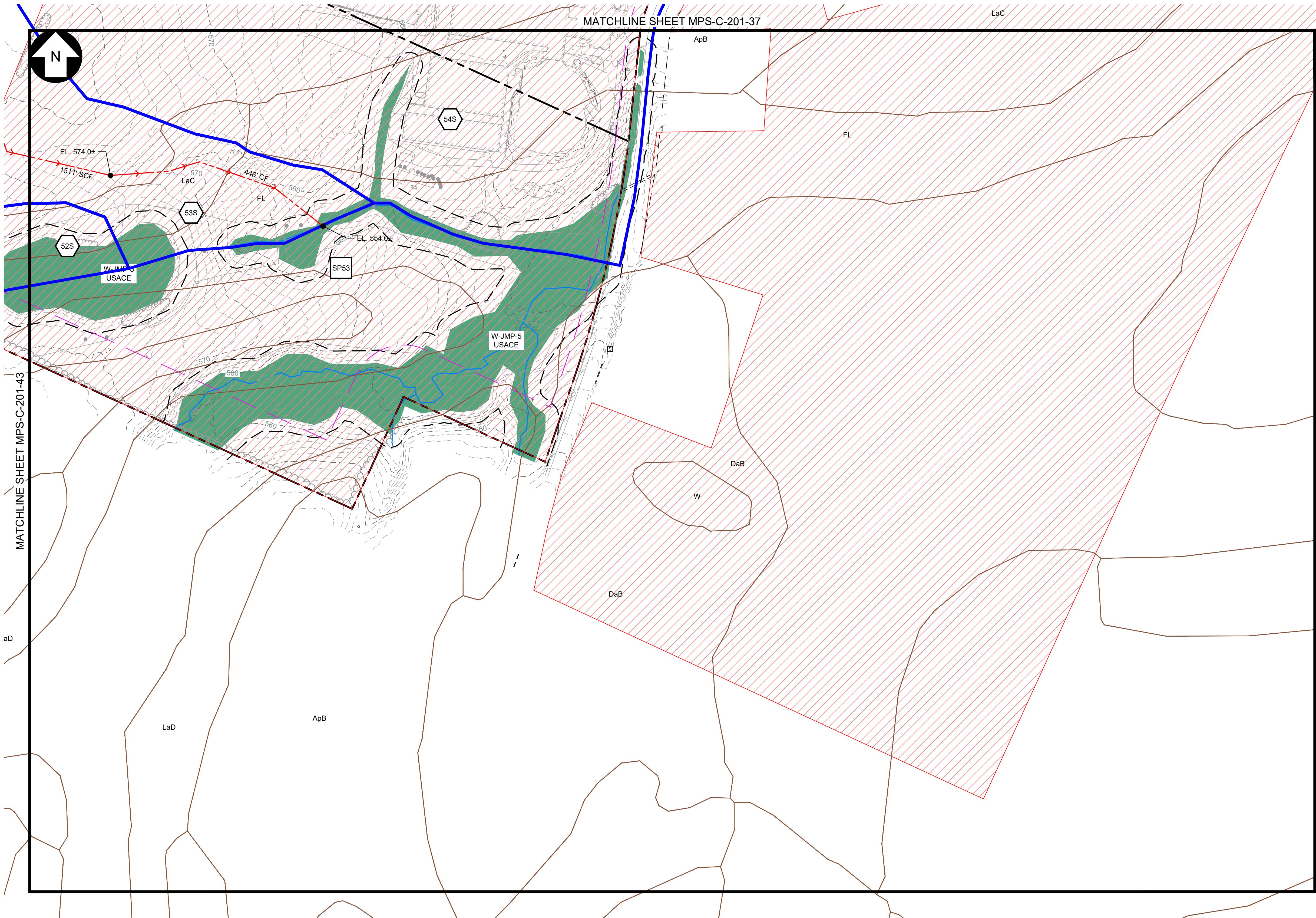
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| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN<br>GLEN NEW YORK | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE |  | MPS-C-201-53 | REV. A |
|--|---|--|--|--------------|--------|



MATCHLINE SHEET MPS-C-201-37

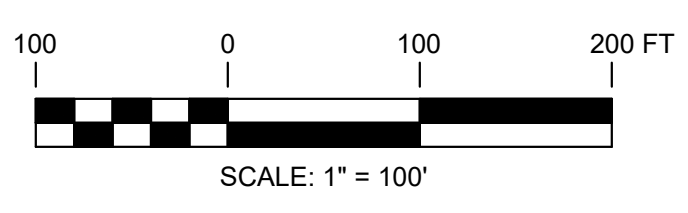
LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION FLOW LINE
- REACH
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY



MATCHLINE SHEET MPS-C-201-43

aD



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM  
DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
PRE-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

REVIEW 1  
REVIEW 2

03/01/2023  
DATE  
1" = 100'  
SCALE

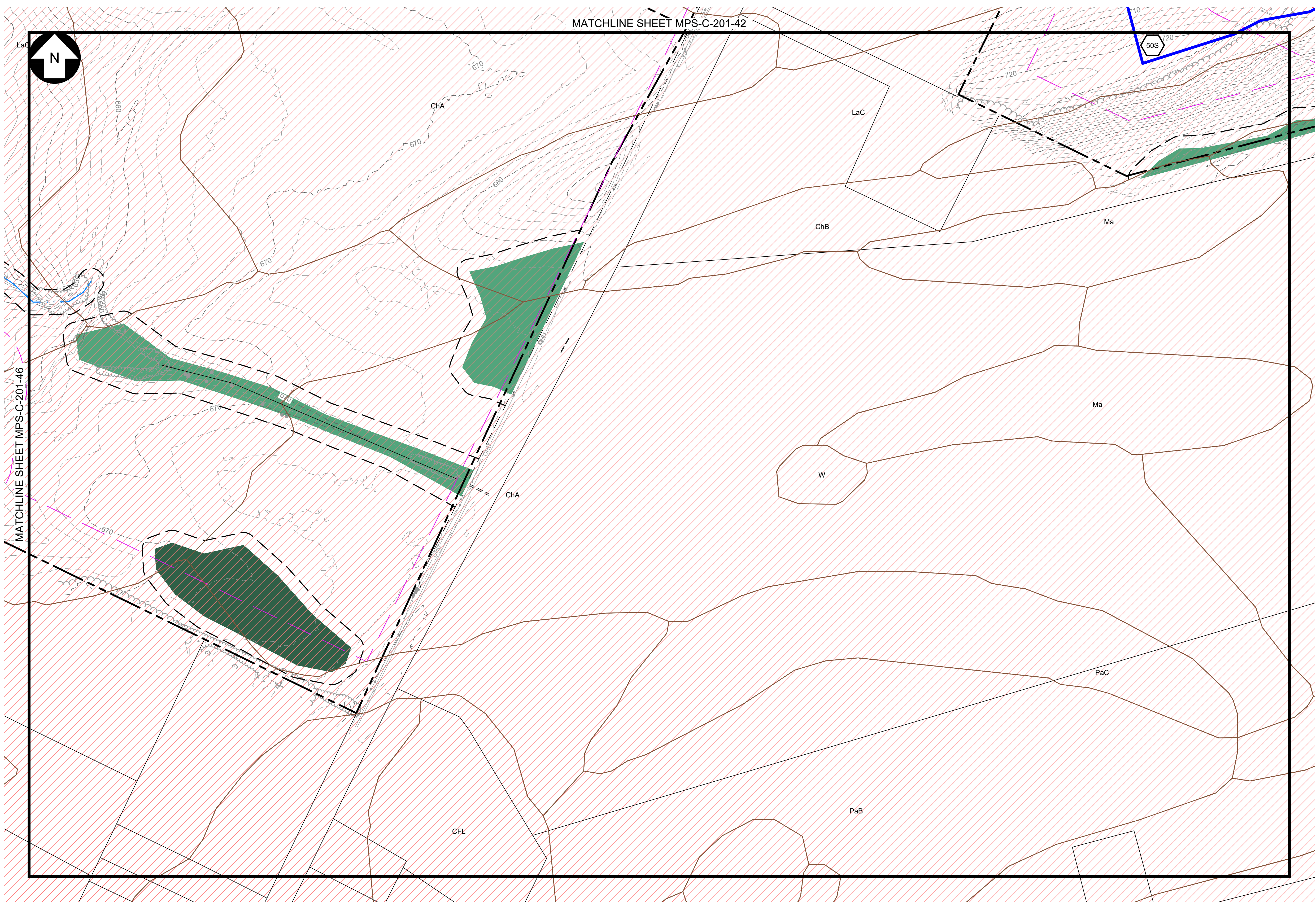
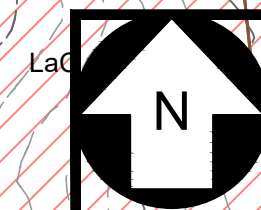


MPS-C-201-54

REV.  
A



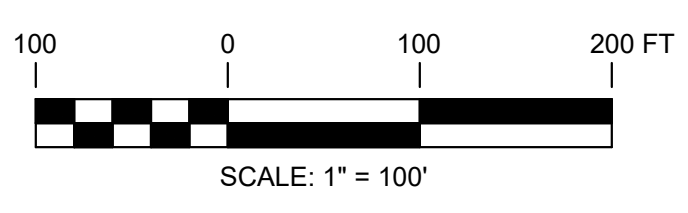
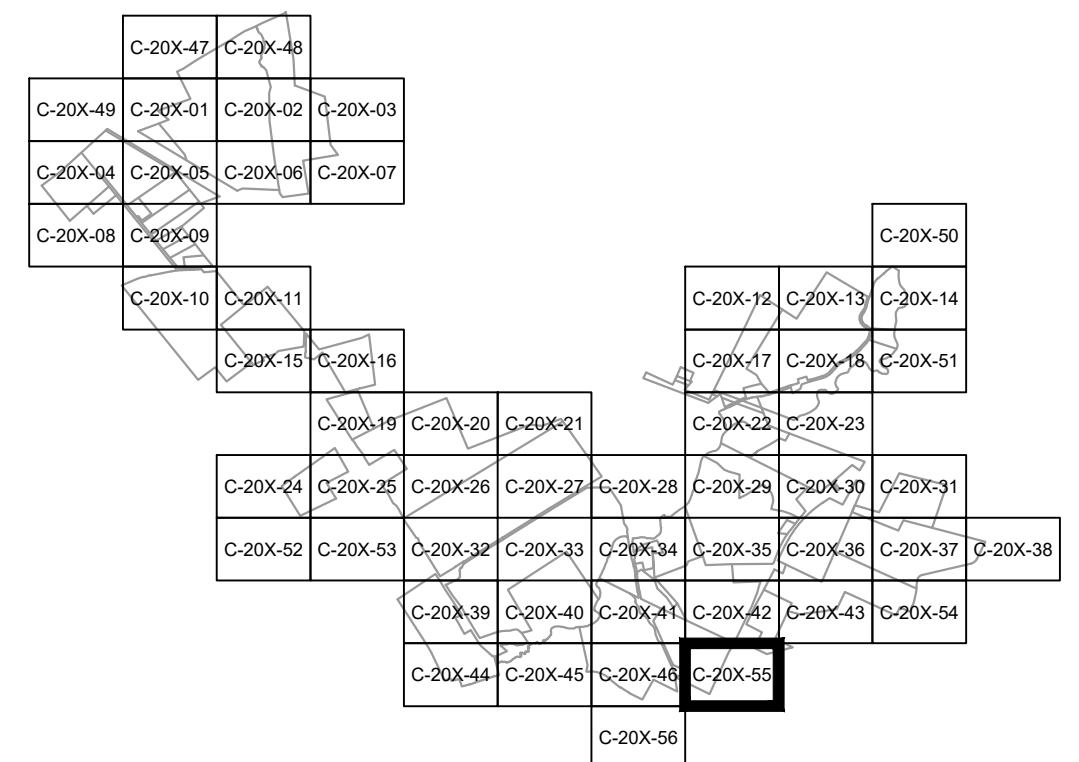
MATCHLINE SHEET MPS-C-201-42



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —○—
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

MATCHLINE SHEET MPS-C-201-46



**PRELIMINARY**  
NOT FOR CONSTRUCTION



|  |                 |                    |     |     |     |
|--|-----------------|--------------------|-----|-----|-----|
| <b>TRC</b> 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |     |     |     |
| REV  | DESCRIPTION     | DATE               | DES | CHK | APP |
| -  | -               | -                  | -   | -   | -   |
| -  | -               | -                  | -   | -   | -   |
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| A  | ISSUED FOR 94-C | 10/20/2023         | CMW | PMM | PMM |

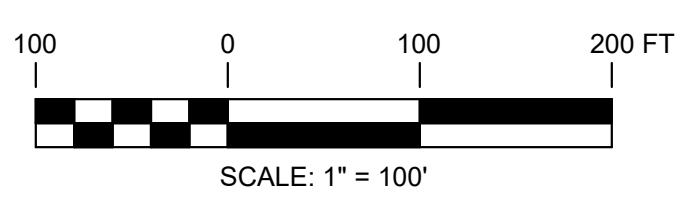
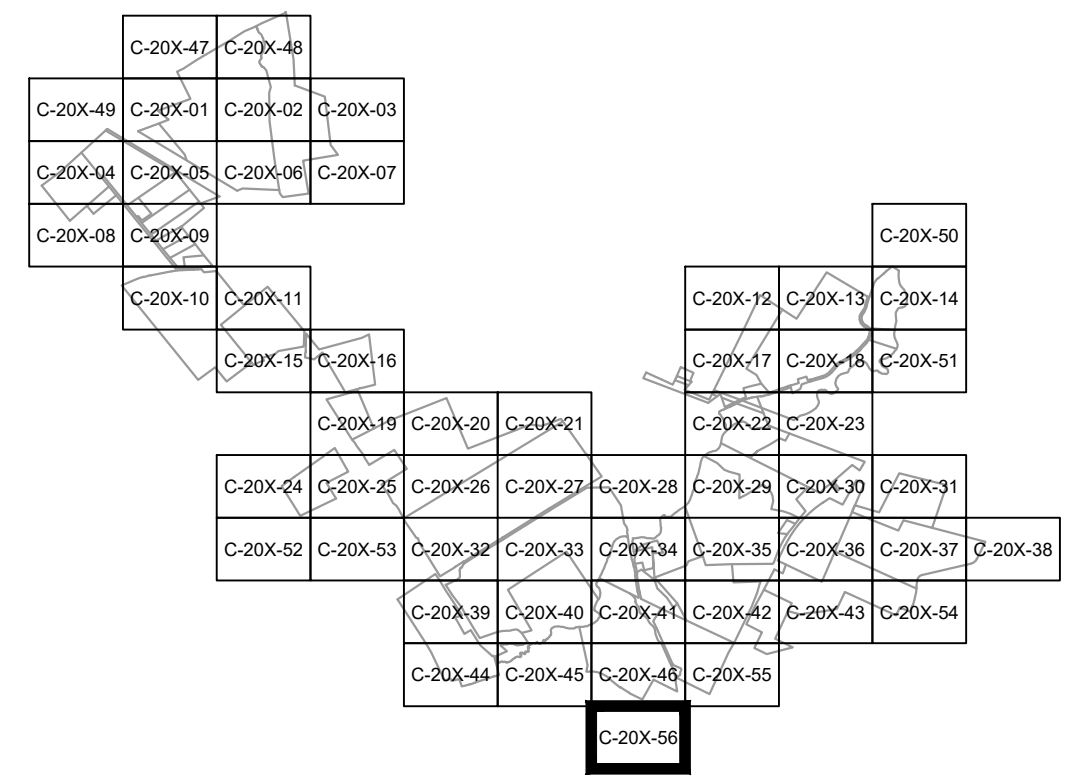
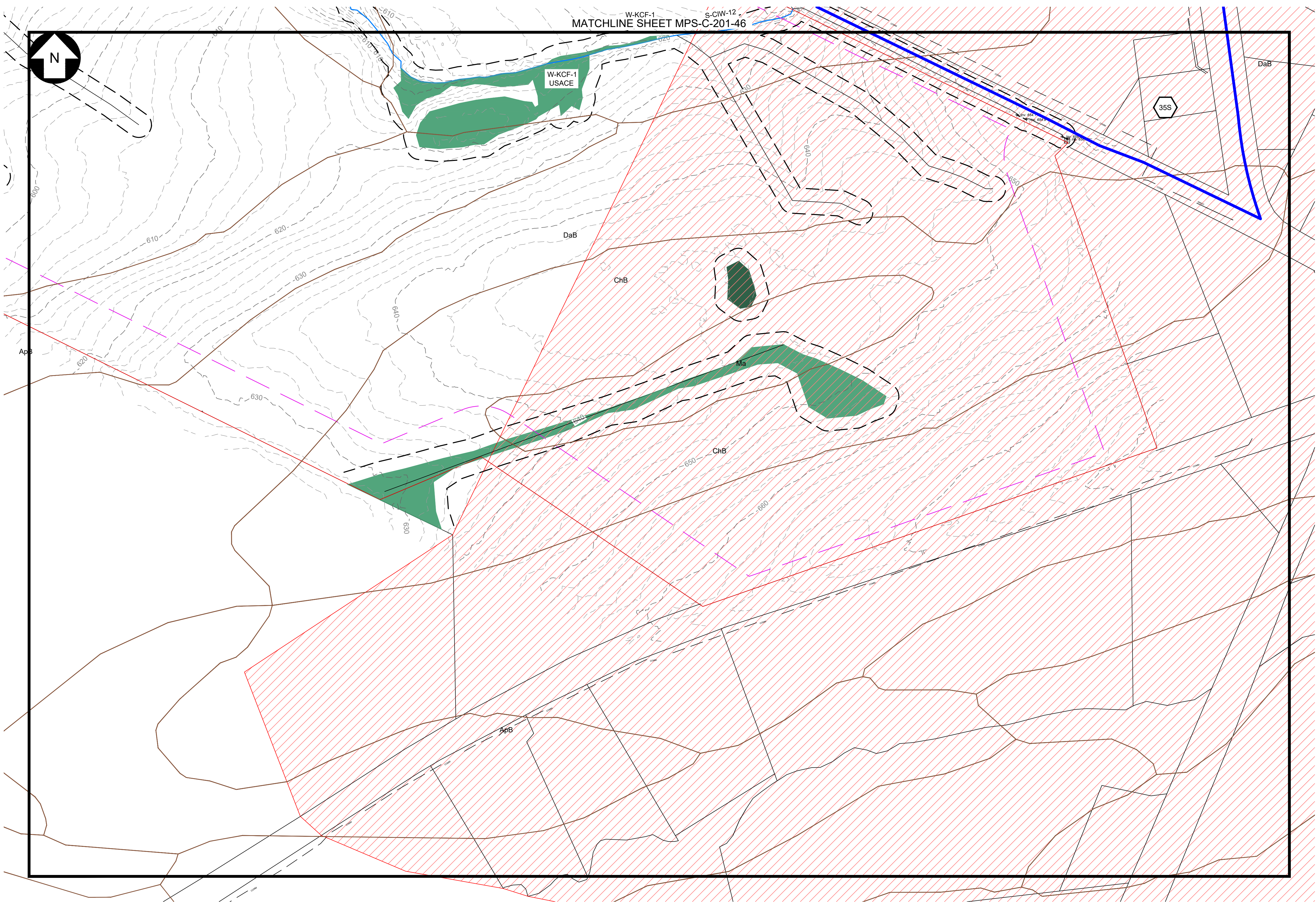
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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>-<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN | NEW YORK |
| GLEN   | GLEN  | NEW YORK |
| REVIEW 1   | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |          |
| REVIEW 2   | MPS-C-201-55  | REV. A   |



MATCHLINE SHEET MPS-C-201-46

LEGEND

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY - - -



**PRELIMINARY**  
NOT FOR CONSTRUCTION



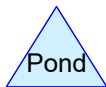
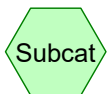
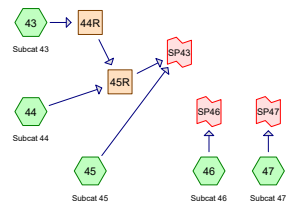
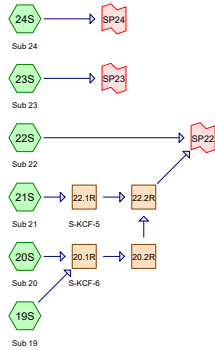
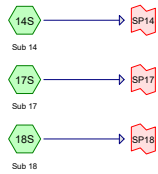
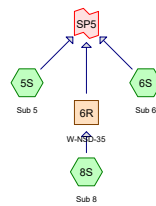
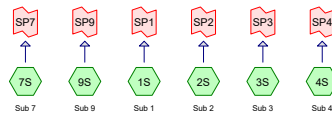
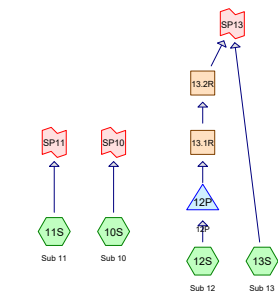
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|---|-----------------|--------------------|-------------|------|-----|-----|
| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
|   |                 | REV                | DESCRIPTION | DATE | DES | CHK |
|   |                 |                    |             |      |     |     |
| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

|  |  |              |                  |
|--|--|--------------|------------------|
| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>PRE-DEVELOPMENT STORMWATER PLAN |              | GLEN<br>NEW YORK |
|  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE                                       | MPS-C-201-56 |                  |



## **Appendix K – Pre-Development HydroCAD Model**





**Routing Diagram for Mill Pt Pre 1**  
 Prepared by TRC Companies, Printed 1/8/2024  
 HydroCAD® 10.20-4a s/n 01402 © 2023 HydroCAD Software Solutions LLC



# Mill Pt Pre 1

Prepared by TRC Companies

HydroCAD® 10.20-4a s/n 01402 © 2023 HydroCAD Software Solutions LLC

Printed 1/8/2024

Page 2

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type    | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|---------------|-------|---------|------------------|-----|----------------|-----|
| 1      | 1-year     | Type II 24-hr |       | Default | 24.00            | 1   | 2.17           | 2   |
| 2      | 10-year    | Type II 24-hr |       | Default | 24.00            | 1   | 3.50           | 2   |
| 3      | 100-year   | Type II 24-hr |       | Default | 24.00            | 1   | 5.72           | 2   |



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## Area Listing (all nodes)

| Area<br>(acres)  | CN        | Description<br>(subcatchment-numbers)  |
|------------------|-----------|--|
| 0.502            | 39        | >75% Grass cover, Good, HSG A (47)   |
| 24.904           | 61        | >75% Grass cover, Good, HSG B (9S, 10S, 11S, 17S, 20S, 21S, 23S, 24S, 45, 47)  |
| 20.145           | 74        | >75% Grass cover, Good, HSG C (9S, 10S, 11S, 12S, 17S, 21S, 24S, 43, 45)   |
| 5.639            | 80        | >75% Grass cover, Good, HSG D (10S, 14S, 17S)  |
| 0.940            | 30        | Brush, Good, HSG A (45, 46, 47)  |
| 14.146           | 48        | Brush, Good, HSG B (4S, 9S, 10S, 11S, 13S, 14S, 18S, 20S, 21S, 22S, 23S, 45, 46, 47)   |
| 6.222            | 65        | Brush, Good, HSG C (4S, 9S, 10S, 11S, 13S, 14S, 19S, 20S, 21S, 22S, 23S, 45)   |
| 9.473            | 73        | Brush, Good, HSG D (9S, 10S, 14S, 18S, 19S, 20S, 45, 46)   |
| 12.888           | 96        | Gravel surface (4S, 9S, 10S, 11S, 12S, 13S, 17S, 21S, 22S, 23S, 24S, 45)   |
| 6.504            | 98        | Impervious surface (4S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 20S, 21S, 22S, 23S, 24S, 43, 45, 46, 47)   |
| 21.008           | 30        | Meadow, non-grazed, HSG A (43, 44, 45, 46, 47)   |
| 384.066          | 58        | Meadow, non-grazed, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43, 44, 45, 46, 47) |
| 334.025          | 71        | Meadow, non-grazed, HSG C (3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43, 44, 45)                 |
| 70.074           | 78        | Meadow, non-grazed, HSG D (7S, 8S, 9S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 43, 44, 45)   |
| 6.190            | 98        | Surface water (9S, 10S, 11S, 19S, 20S, 21S, 45, 46)  |
| 21.522           | 30        | Woods, Good, HSG A (43, 44, 45, 46, 47)  |
| 115.702          | 55        | Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 20S, 21S, 22S, 23S, 43, 44, 45, 46, 47)                       |
| 47.386           | 70        | Woods, Good, HSG C (3S, 4S, 5S, 6S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 20S, 21S, 22S, 24S, 43, 44, 45)   |
| 28.126           | 77        | Woods, Good, HSG D (7S, 8S, 10S, 14S, 17S, 18S, 19S, 20S, 22S, 43, 44, 45, 46)   |
| <b>1,129.462</b> | <b>64</b> | <b>TOTAL AREA</b>  |



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**Soil Listing (all nodes)**

| Area<br>(acres)  | Soil<br>Group | Subcatchment<br>Numbers   |
|------------------|---------------|---|
| 43.972           | HSG A         | 43, 44, 45, 46, 47  |
| 538.818          | HSG B         | 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 13S, 14S, 17S, 18S, 19S, 20S,<br>21S, 22S, 23S, 24S, 43, 44, 45, 46, 47 |
| 407.778          | HSG C         | 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S, 20S, 21S,<br>22S, 23S, 24S, 43, 44, 45            |
| 113.312          | HSG D         | 7S, 8S, 9S, 10S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 43, 44, 45, 46   |
| 25.582           | Other         | 4S, 9S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S, 20S, 21S, 22S, 23S, 24S, 43,<br>45, 46, 47                            |
| <b>1,129.462</b> |               | <b>TOTAL AREA</b>   |



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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |  |
|---------------------------------|--|
| <b>Subcatchment 1S: Sub 1</b>   | Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=0.04"<br>Flow Length=1,005' Tc=13.1 min CN=56 Runoff=0.03 cfs 0.020 af  |
| <b>Subcatchment 2S: Sub 2</b>   | Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=0.05"<br>Flow Length=1,307' Tc=14.1 min CN=57 Runoff=0.10 cfs 0.073 af |
| <b>Subcatchment 3S: Sub 3</b>   | Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=0.09"<br>Flow Length=2,507' Tc=25.3 min CN=60 Runoff=0.54 cfs 0.264 af |
| <b>Subcatchment 4S: Sub 4</b>   | Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=0.14"<br>Flow Length=4,160' Tc=35.5 min CN=63 Runoff=3.41 cfs 1.110 af |
| <b>Subcatchment 5S: Sub 5</b>   | Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=0.18"<br>Flow Length=1,946' Tc=24.6 min CN=65 Runoff=1.30 cfs 0.266 af |
| <b>Subcatchment 6S: Sub 6</b>   | Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=0.21"<br>Flow Length=1,894' Tc=48.6 min CN=66 Runoff=1.03 cfs 0.280 af |
| <b>Subcatchment 7S: Sub 7</b>   | Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=0.07"<br>Flow Length=2,117' Tc=40.9 min CN=58 Runoff=0.53 cfs 0.365 af |
| <b>Subcatchment 8S: Sub 8</b>   | Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=0.28"<br>Flow Length=2,902' Tc=63.3 min CN=69 Runoff=5.24 cfs 1.378 af |
| <b>Subcatchment 9S: Sub 9</b>   | Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=0.16"<br>Flow Length=2,945' Tc=45.6 min CN=64 Runoff=2.90 cfs 0.935 af |
| <b>Subcatchment 10S: Sub 10</b> | Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=0.34"<br>Flow Length=2,047' Tc=36.1 min CN=71 Runoff=3.89 cfs 0.624 af |
| <b>Subcatchment 11S: Sub 11</b> | Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=0.21"<br>Flow Length=1,622' Tc=18.4 min CN=66 Runoff=2.01 cfs 0.303 af |
| <b>Subcatchment 12S: Sub 12</b> | Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=1.65"<br>Tc=6.0 min CN=95 Runoff=13.00 cfs 0.666 af                     |
| <b>Subcatchment 13S: Sub 13</b> | Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=0.16"<br>Flow Length=848' Tc=17.7 min CN=64 Runoff=0.73 cfs 0.142 af   |
| <b>Subcatchment 14S: Sub 14</b> | Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=0.23"<br>Flow Length=4,131' Tc=49.6 min CN=67 Runoff=5.46 cfs 1.393 af |
| <b>Subcatchment 17S: Sub 17</b> | Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=0.09"<br>Flow Length=3,526' Tc=35.1 min CN=60 Runoff=1.46 cfs 0.761 af |
| <b>Subcatchment 18S: Sub 18</b> | Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=0.28"<br>Flow Length=2,382' Tc=42.2 min CN=69 Runoff=5.31 cfs 1.065 af |



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|                                   |   |
|-----------------------------------|---|
| <b>Subcatchment 19S: Sub 19</b>   | Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=0.37"<br>Flow Length=1,760' Tc=30.4 min CN=72 Runoff=6.43 cfs 0.869 af                        |
| <b>Subcatchment 20S: Sub 20</b>   | Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=0.21"<br>Flow Length=1,829' Tc=20.0 min CN=66 Runoff=7.65 cfs 1.213 af                        |
| <b>Subcatchment 21S: Sub 21</b>   | Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=0.21"<br>Flow Length=4,201' Tc=42.5 min CN=66 Runoff=8.36 cfs 2.117 af                       |
| <b>Subcatchment 22S: Sub 22</b>   | Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=0.34"<br>Flow Length=1,834' Tc=47.0 min CN=71 Runoff=9.05 cfs 1.748 af                        |
| <b>Subcatchment 23S: Sub 23</b>   | Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=0.28"<br>Flow Length=1,297' Tc=33.0 min CN=69 Runoff=2.30 cfs 0.392 af                        |
| <b>Subcatchment 24S: Sub 24</b>   | Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=0.43"<br>Flow Length=1,025' Tc=23.1 min CN=74 Runoff=1.93 cfs 0.197 af                         |
| <b>Subcatchment 43: Subcat 43</b> | Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=0.31"<br>Flow Length=2,795' Tc=40.7 min CN=70 Runoff=4.73 cfs 0.874 af                        |
| <b>Subcatchment 44: Subcat 44</b> | Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=0.31"<br>Flow Length=2,470' Tc=41.7 min CN=70 Runoff=6.33 cfs 1.188 af                        |
| <b>Subcatchment 45: Subcat 45</b> | Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=0.08"<br>Flow Length=2,198' Tc=29.8 min CN=59 Runoff=0.37 cfs 0.223 af                        |
| <b>Subcatchment 46: Subcat 46</b> | Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.00"<br>Flow Length=1,524' Tc=54.0 min CN=42 Runoff=0.00 cfs 0.000 af                        |
| <b>Subcatchment 47: Subcat 47</b> | Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.00"<br>Flow Length=1,854' Tc=31.7 min CN=41 Runoff=0.00 cfs 0.000 af                        |
| <b>Reach 6R: W-NSD-35</b>         | Avg. Flow Depth=0.20' Max Vel=2.23 fps Inflow=5.24 cfs 1.378 af<br>n=0.035 L=1,882.0' S=0.0276 '/ Capacity=90.86 cfs Outflow=4.92 cfs 1.378 af    |
| <b>Reach 13.1R:</b>               | Avg. Flow Depth=0.08' Max Vel=2.21 fps Inflow=1.38 cfs 0.666 af<br>n=0.030 L=165.0' S=0.0727 '/ Capacity=48.67 cfs Outflow=1.38 cfs 0.666 af      |
| <b>Reach 13.2R:</b>               | Avg. Flow Depth=0.13' Max Vel=4.62 fps Inflow=1.38 cfs 0.666 af<br>n=0.035 L=232.0' S=0.2069 '/ Capacity=1,230.81 cfs Outflow=1.38 cfs 0.666 af   |
| <b>Reach 20.1R: S-KCF-6</b>       | Avg. Flow Depth=0.62' Max Vel=1.69 fps Inflow=13.49 cfs 2.082 af<br>n=0.030 L=1,405.0' S=0.0028 '/ Capacity=141.69 cfs Outflow=10.22 cfs 2.082 af |
| <b>Reach 20.2R:</b>               | Avg. Flow Depth=0.42' Max Vel=2.39 fps Inflow=10.22 cfs 2.082 af<br>n=0.035 L=1,322.0' S=0.0121 '/ Capacity=250.41 cfs Outflow=9.37 cfs 2.082 af  |
| <b>Reach 22.1R: S-KCF-5</b>       | Avg. Flow Depth=0.39' Max Vel=1.90 fps Inflow=8.36 cfs 2.117 af<br>n=0.030 L=665.0' S=0.0060 '/ Capacity=89.91 cfs Outflow=8.20 cfs 2.117 af      |
| <b>Reach 22.2R:</b>               | Avg. Flow Depth=0.59' Max Vel=2.35 fps Inflow=16.63 cfs 4.199 af<br>n=0.035 L=707.0' S=0.0075 '/ Capacity=86.27 cfs Outflow=16.35 cfs 4.199 af    |



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|                      |   |
|----------------------|---|
| <b>Reach 44R:</b>    | Avg. Flow Depth=0.37' Max Vel=2.96 fps Inflow=4.73 cfs 0.874 af<br>n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=4.70 cfs 0.874 af    |
| <b>Reach 45R:</b>    | Avg. Flow Depth=0.40' Max Vel=4.05 fps Inflow=10.97 cfs 2.062 af<br>n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=10.91 cfs 2.062 af |
| <b>Pond 12P: 12P</b> | Peak Elev=507.40' Storage=10,579 cf Inflow=13.00 cfs 0.666 af<br>8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.38 cfs 0.666 af     |
| <b>Link SP1:</b>     | Inflow=0.03 cfs 0.020 af<br>Primary=0.03 cfs 0.020 af   |
| <b>Link SP10:</b>    | Inflow=3.89 cfs 0.624 af<br>Primary=3.89 cfs 0.624 af   |
| <b>Link SP11:</b>    | Inflow=2.01 cfs 0.303 af<br>Primary=2.01 cfs 0.303 af   |
| <b>Link SP13:</b>    | Inflow=2.11 cfs 0.808 af<br>Primary=2.11 cfs 0.808 af   |
| <b>Link SP14:</b>    | Inflow=5.46 cfs 1.393 af<br>Primary=5.46 cfs 1.393 af   |
| <b>Link SP17:</b>    | Inflow=1.46 cfs 0.761 af<br>Primary=1.46 cfs 0.761 af   |
| <b>Link SP18:</b>    | Inflow=5.31 cfs 1.065 af<br>Primary=5.31 cfs 1.065 af   |
| <b>Link SP2:</b>     | Inflow=0.10 cfs 0.073 af<br>Primary=0.10 cfs 0.073 af   |
| <b>Link SP22:</b>    | Inflow=21.82 cfs 5.947 af<br>Primary=21.82 cfs 5.947 af   |
| <b>Link SP23:</b>    | Inflow=2.30 cfs 0.392 af<br>Primary=2.30 cfs 0.392 af   |
| <b>Link SP24:</b>    | Inflow=1.93 cfs 0.197 af<br>Primary=1.93 cfs 0.197 af   |
| <b>Link SP3:</b>     | Inflow=0.54 cfs 0.264 af<br>Primary=0.54 cfs 0.264 af   |
| <b>Link SP4:</b>     | Inflow=3.41 cfs 1.110 af<br>Primary=3.41 cfs 1.110 af   |
| <b>Link SP43:</b>    | Inflow=11.22 cfs 2.284 af<br>Primary=11.22 cfs 2.284 af   |



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**Link SP46:**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Link SP47:**

Inflow=0.00 cfs 0.000 af  
Primary=0.00 cfs 0.000 af

**Link SP5:**

Inflow=6.08 cfs 1.924 af  
Primary=6.08 cfs 1.924 af

**Link SP7:**

Inflow=0.53 cfs 0.365 af  
Primary=0.53 cfs 0.365 af

**Link SP9:**

Inflow=2.90 cfs 0.935 af  
Primary=2.90 cfs 0.935 af

**Total Runoff Area = 1,129.462 ac   Runoff Volume = 18.465 af   Average Runoff Depth = 0.20"**  
**98.88% Pervious = 1,116.768 ac   1.12% Impervious = 12.694 ac**



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**Summary for Subcatchment 1S: Sub 1**

Runoff = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af, Depth= 0.04"  
 Routed to Link SP1 :

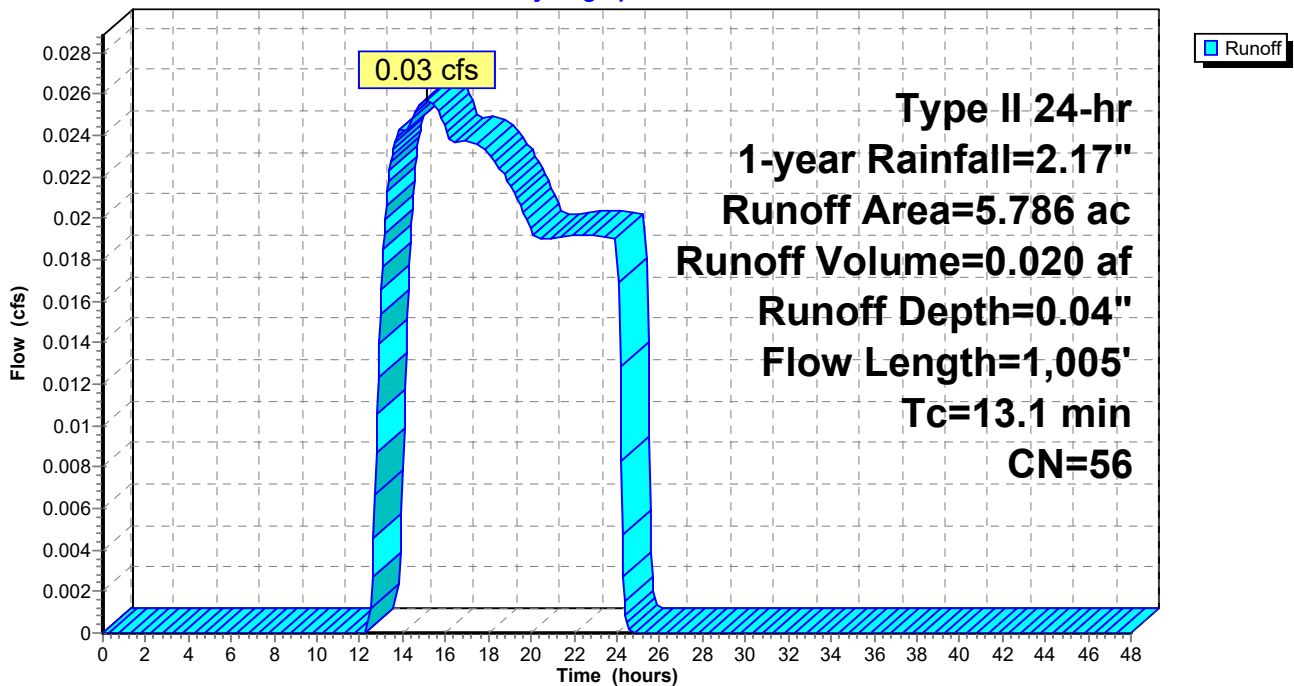
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.500     | 58 | Meadow, non-grazed, HSG B |
| 4.286     | 55 | Woods, Good, HSG B        |
| 5.786     | 56 | Weighted Average          |
| 5.786     |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0620        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.9      | 427           | 0.2390        | 2.44              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.0      | 263           | 0.0980        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.1      | 215           | 0.4050        | 3.18              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 13.1     | 1,005         | Total         |                   |                |  |

**Subcatchment 1S: Sub 1**

Hydrograph





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**Summary for Subcatchment 2S: Sub 2**

Runoff = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af, Depth= 0.05"

Routed to Link SP2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

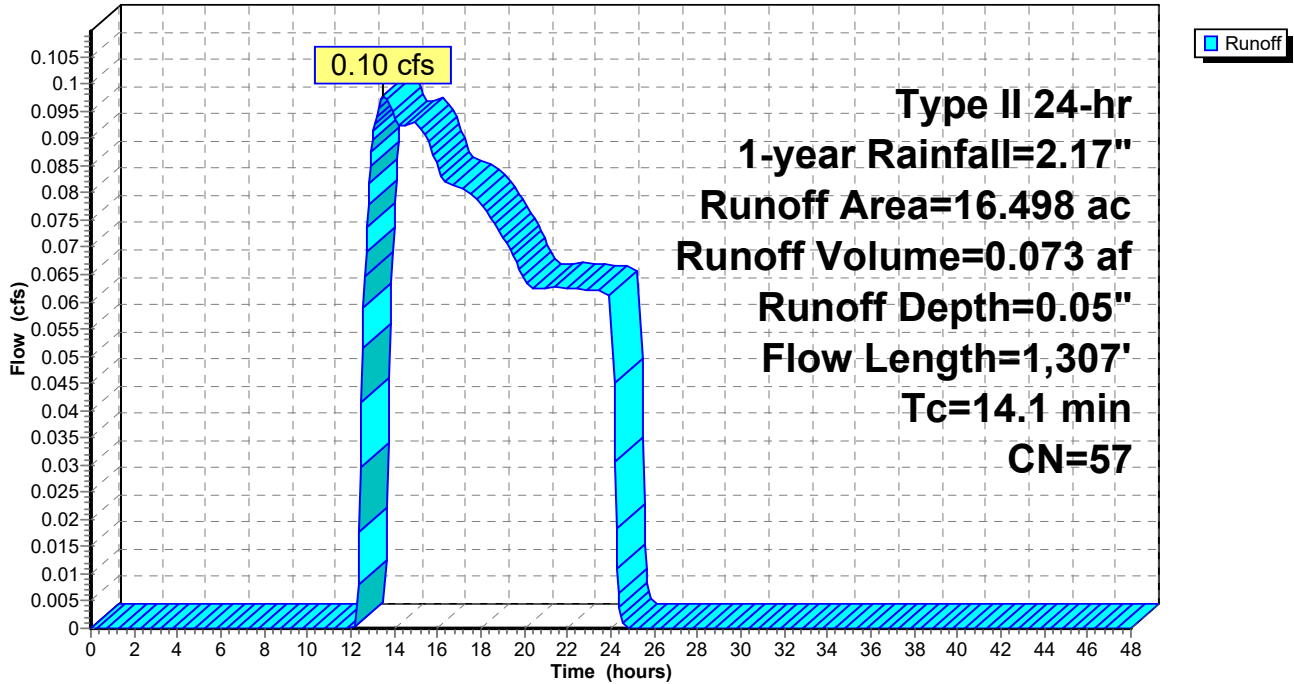
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.619     | 58 | Meadow, non-grazed, HSG B |
| 7.879     | 55 | Woods, Good, HSG B        |
| 16.498    | 57 | Weighted Average          |
| 16.498    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 5.8      | 100           | 0.1010        | 0.29              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.8      | 407           | 0.2420        | 2.46              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 225           | 0.1200        | 2.42              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 169           | 0.1830        | 2.14              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.5      | 113           | 0.5100        | 3.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.2      | 293           | 0.0220        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 14.1     | 1,307         | Total         |                   |                |  |



Subcatchment 2S: Sub 2

Hydrograph





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**Summary for Subcatchment 3S: Sub 3**

Runoff = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af, Depth= 0.09"  
 Routed to Link SP3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

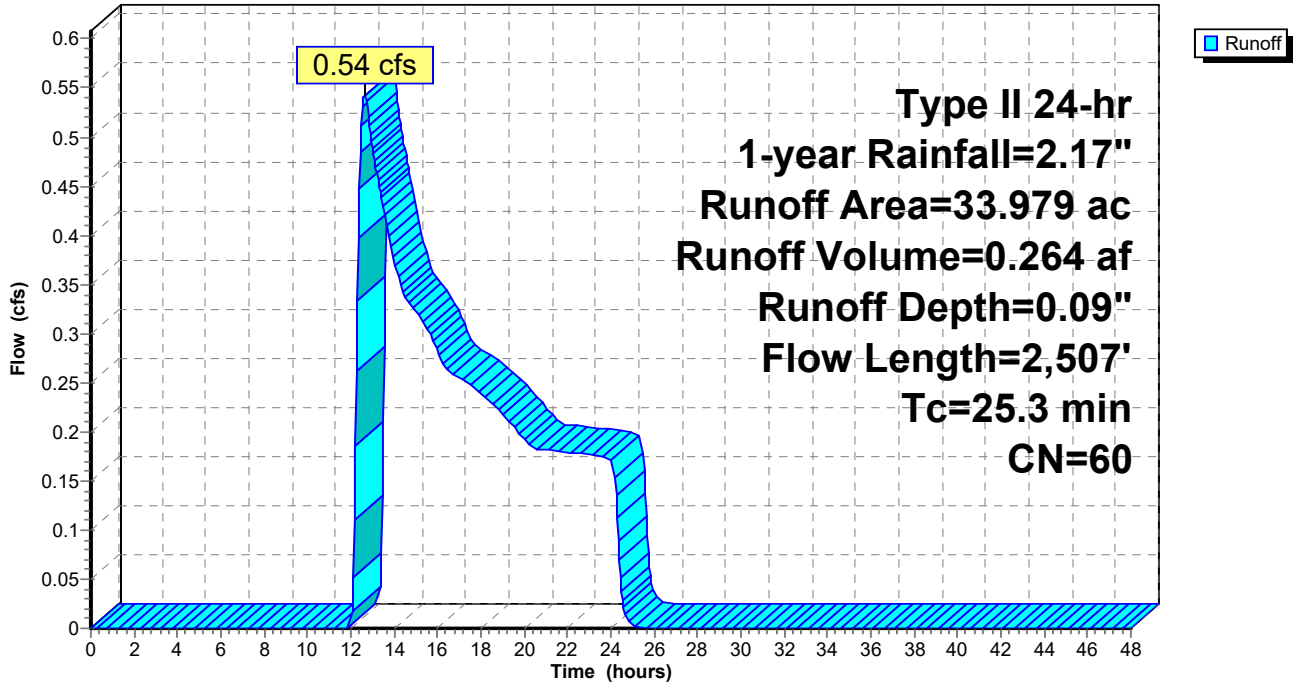
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 17.630    | 58 | Meadow, non-grazed, HSG B |
| 7.609     | 71 | Meadow, non-grazed, HSG C |
| 8.319     | 55 | Woods, Good, HSG B        |
| 0.421     | 70 | Woods, Good, HSG C        |
| 33.979    | 60 | Weighted Average          |
| 33.979    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.1      | 147           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.5      | 480           | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.2      | 375           | 0.0770        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 337           | 0.0950        | 1.54              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.5      | 632           |               | 4.29              |                | <b>Direct Entry, CF</b>  |
| 1.0      | 436           |               | 7.04              |                | <b>Direct Entry, CF</b>  |
| 25.3     | 2,507         | Total         |                   |                |  |



Subcatchment 3S: Sub 3

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 4S: Sub 4**

Runoff = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af, Depth= 0.14"

Routed to Link SP4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

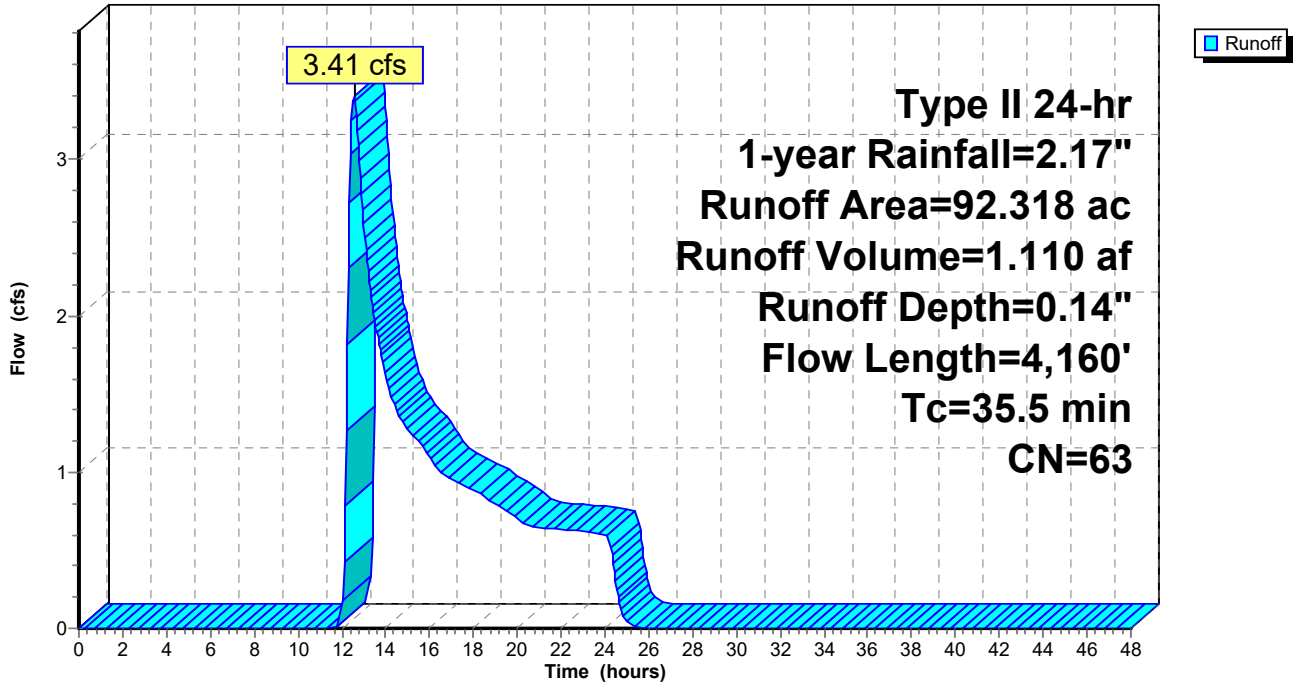
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.259   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 42.704    | 58 | Meadow, non-grazed, HSG B |
| 33.177    | 71 | Meadow, non-grazed, HSG C |
| 1.021     | 48 | Brush, Good, HSG B        |
| 1.934     | 65 | Brush, Good, HSG C        |
| 9.736     | 55 | Woods, Good, HSG B        |
| 3.163     | 70 | Woods, Good, HSG C        |
| 92.318    | 63 | Weighted Average          |
| 92.059    |    | 99.72% Pervious Area      |
| 0.259     |    | 0.28% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.9      | 100           | 0.1900        | 0.17              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"     |
| 1.8      | 295           | 0.1550        | 2.76              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 17.1     | 1,344         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.7      | 2,421         |               | 6.01              |                | <b>Direct Entry, CF</b>  |
| 35.5     | 4,160         | Total         |                   |                |  |



Subcatchment 4S: Sub 4

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 1.30 cfs @ 12.30 hrs, Volume= 0.266 af, Depth= 0.18"  
 Routed to Link SP5 :

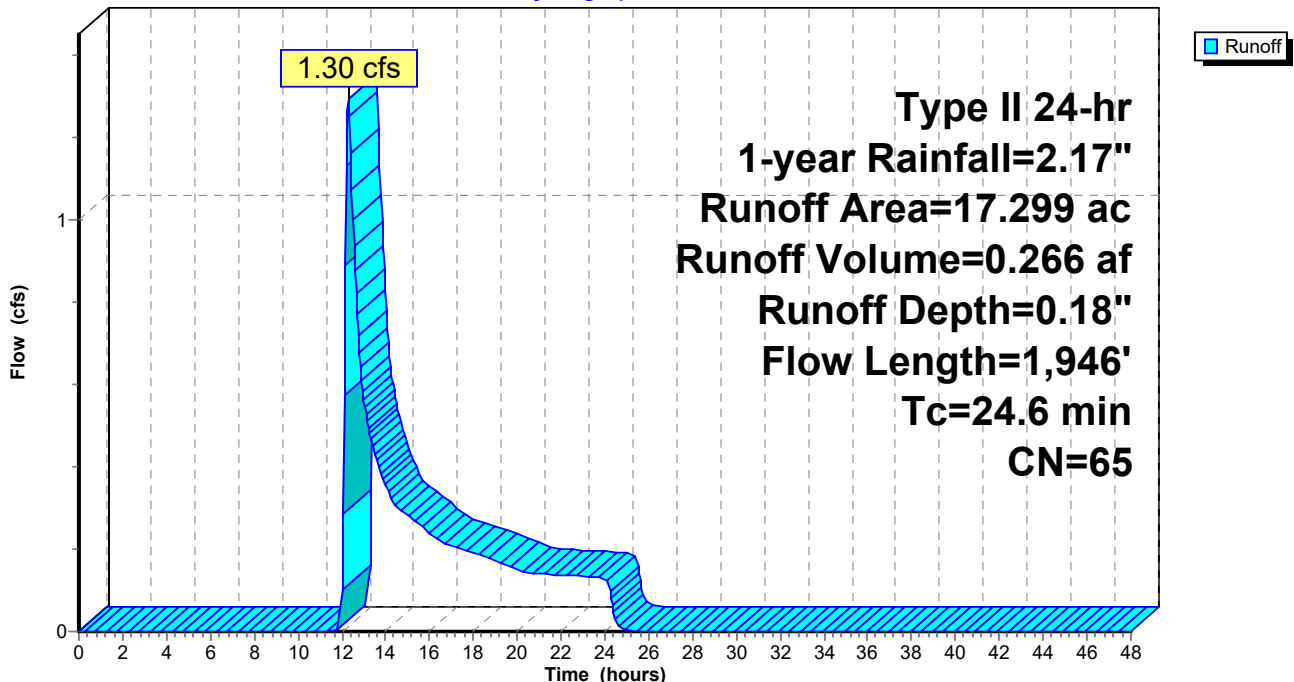
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.709     | 58 | Meadow, non-grazed, HSG B |
| 8.414     | 71 | Meadow, non-grazed, HSG C |
| 2.614     | 55 | Woods, Good, HSG B        |
| 1.562     | 70 | Woods, Good, HSG C        |
| 17.299    | 65 | Weighted Average          |
| 17.299    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.9      | 607           | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.3      | 195           | 0.0780        | 1.40              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 4.7      | 1,044         |               | 3.70              |                | <b>Direct Entry, CF</b>  |
| 24.6     | 1,946         | Total         |                   |                |  |

**Subcatchment 5S: Sub 5**

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 1.03 cfs @ 12.69 hrs, Volume= 0.280 af, Depth= 0.21"  
 Routed to Link SP5 :

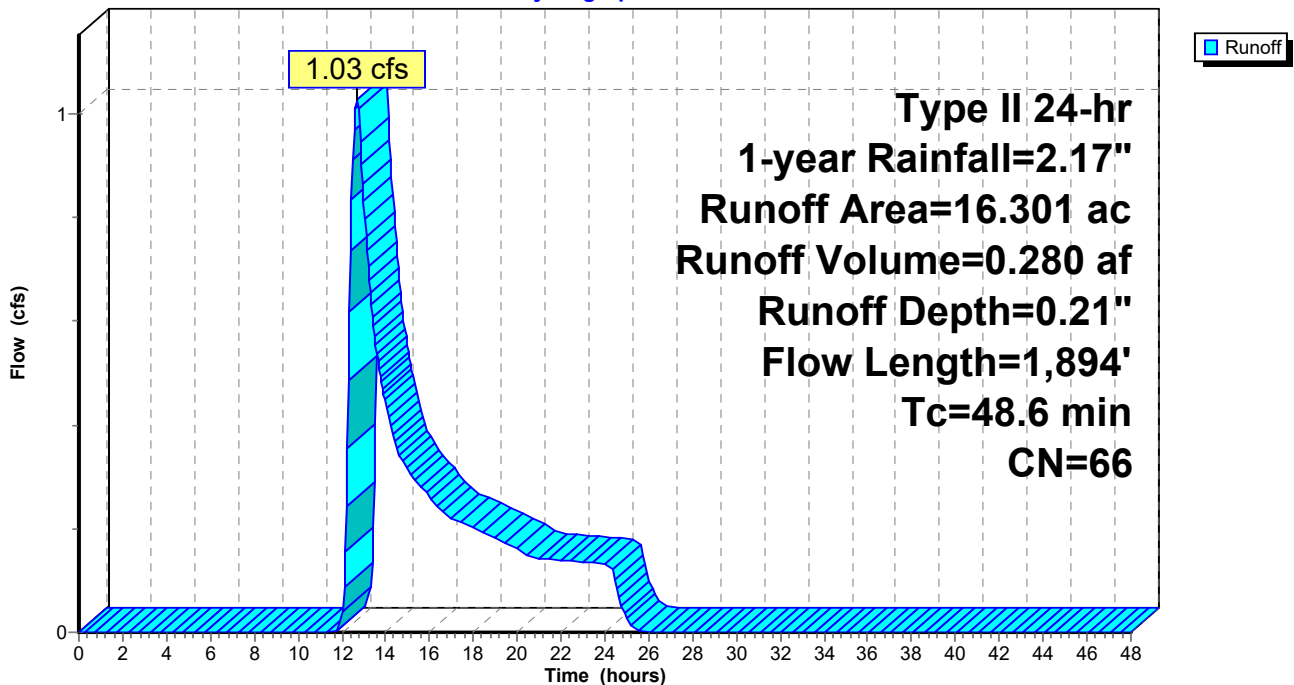
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.743     | 58 | Meadow, non-grazed, HSG B |
| 9.449     | 71 | Meadow, non-grazed, HSG C |
| 1.459     | 55 | Woods, Good, HSG B        |
| 0.650     | 70 | Woods, Good, HSG C        |
| 16.301    | 66 | Weighted Average          |
| 16.301    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 19.8     | 1,554         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 240           |               | 3.81              |                | <b>Direct Entry, CF</b>  |
| 48.6     | 1,894         | Total         |                   |                |  |

**Subcatchment 6S: Sub 6**

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af, Depth= 0.07"  
 Routed to Link SP7 :

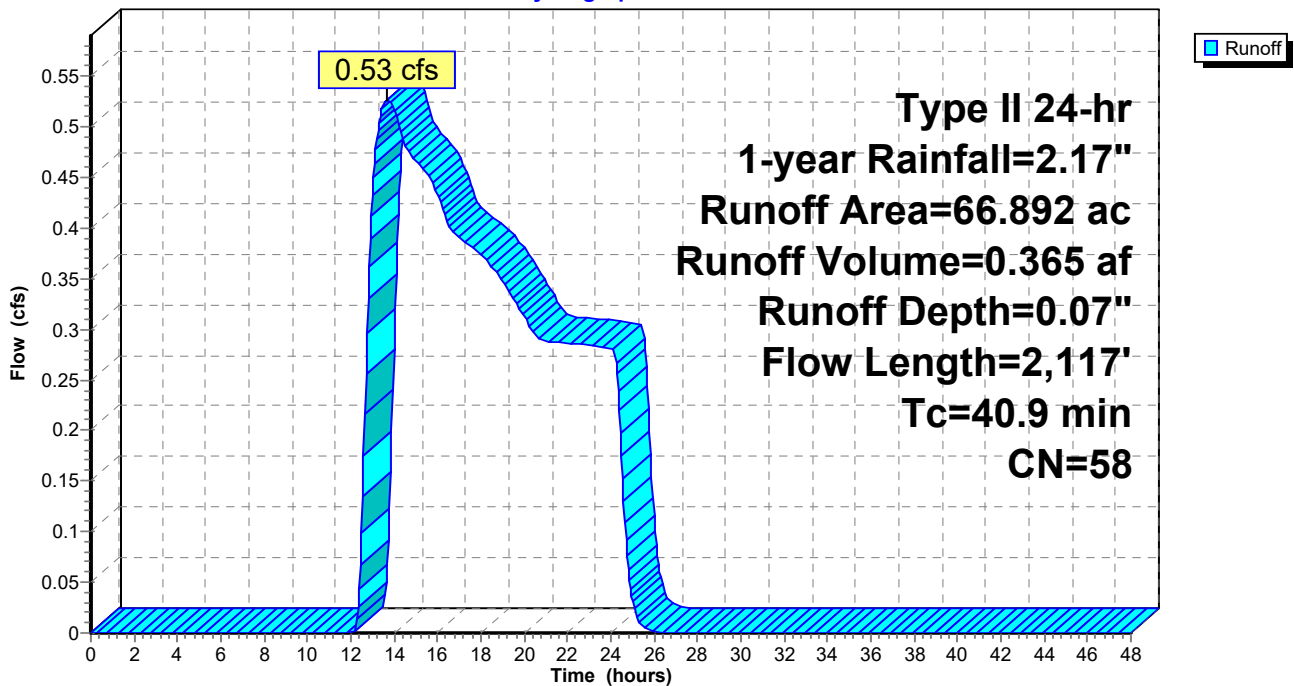
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 50.262    | 58 | Meadow, non-grazed, HSG B |
| 0.107     | 71 | Meadow, non-grazed, HSG C |
| 1.124     | 78 | Meadow, non-grazed, HSG D |
| 15.225    | 55 | Woods, Good, HSG B        |
| 0.174     | 77 | Woods, Good, HSG D        |
| 66.892    | 58 | Weighted Average          |
| 66.892    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 9.7      | 786           | 0.0370        | 1.35              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 1,231         |               | 6.01              |                | <b>Direct Entry,</b>   |
| 40.9     | 2,117         | Total         |                   |                |  |

**Subcatchment 7S: Sub 7**

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 5.24 cfs @ 12.85 hrs, Volume= 1.378 af, Depth= 0.28"  
 Routed to Reach 6R : W-NSD-35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

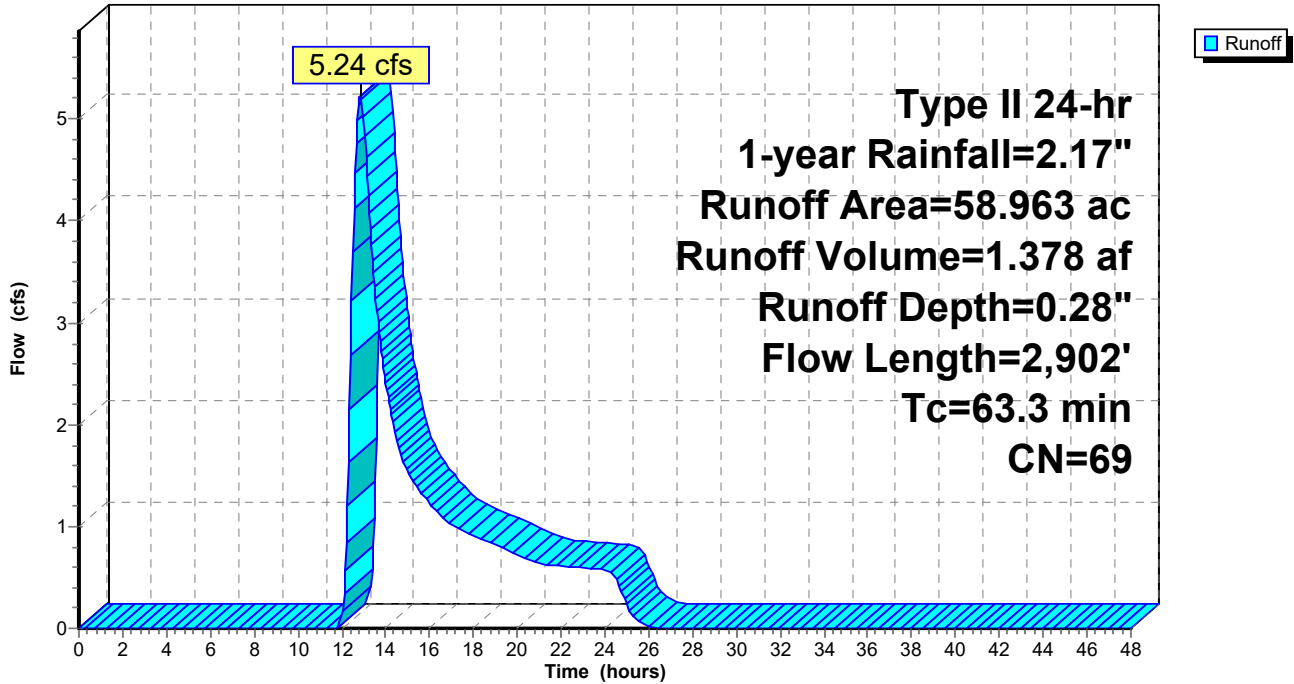
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 6.143     | 58 | Meadow, non-grazed, HSG B |
| 28.450    | 71 | Meadow, non-grazed, HSG C |
| 8.117     | 78 | Meadow, non-grazed, HSG D |
| 5.746     | 55 | Woods, Good, HSG B        |
| 8.581     | 70 | Woods, Good, HSG C        |
| 1.926     | 77 | Woods, Good, HSG D        |
| 58.963    | 69 | Weighted Average          |
| 58.963    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 23.7     | 100           | 0.0030        | 0.07              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.6      | 315           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 23.1     | 727           | 0.0110        | 0.52              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.9      | 1,760         |               | 2.97              |                | <b>Direct Entry, CF</b>  |
| 63.3     | 2,902         | Total         |                   |                |  |



Subcatchment 8S: Sub 8

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 9S: Sub 9**

Runoff = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af, Depth= 0.16"

Routed to Link SP9 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

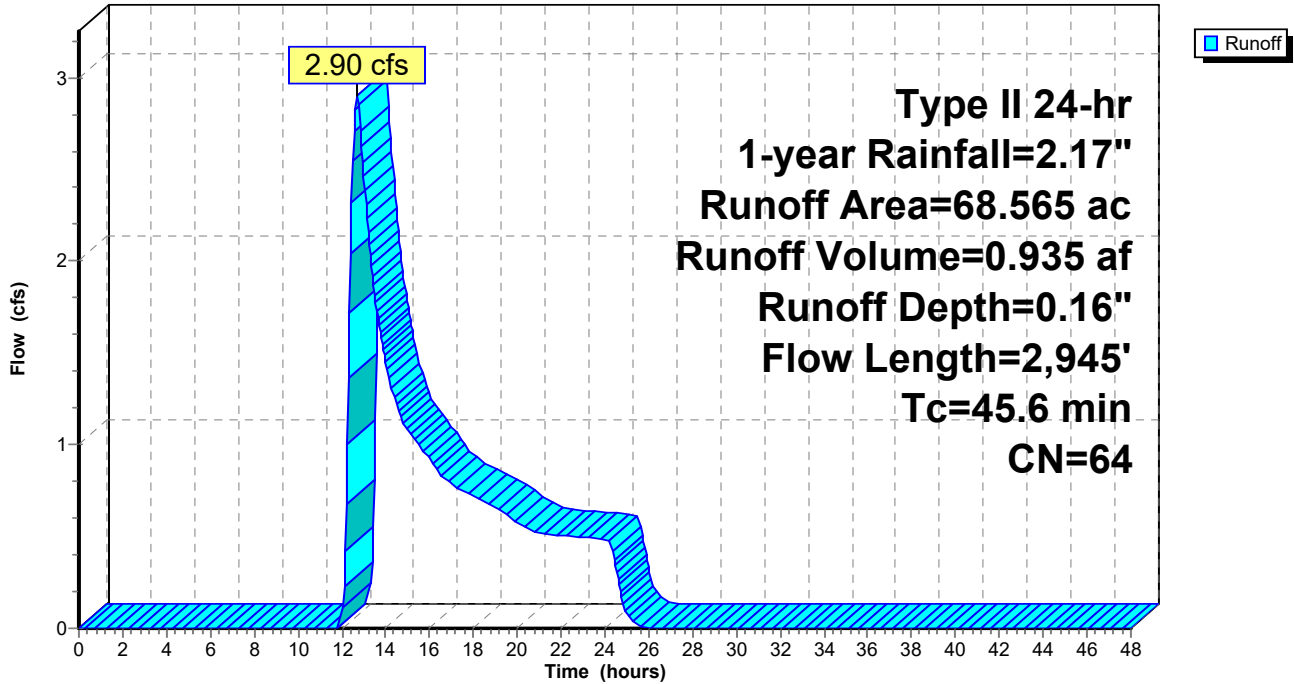
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.430   | 98 | Surface water                 |
| * 0.332   | 98 | Impervious surface            |
| * 2.628   | 96 | Gravel surface                |
| 6.553     | 61 | >75% Grass cover, Good, HSG B |
| 8.430     | 74 | >75% Grass cover, Good, HSG C |
| 23.963    | 58 | Meadow, non-grazed, HSG B     |
| 7.746     | 71 | Meadow, non-grazed, HSG C     |
| 2.113     | 78 | Meadow, non-grazed, HSG D     |
| 2.871     | 48 | Brush, Good, HSG B            |
| 0.820     | 65 | Brush, Good, HSG C            |
| 0.014     | 73 | Brush, Good, HSG D            |
| 11.085    | 55 | Woods, Good, HSG B            |
| 1.580     | 70 | Woods, Good, HSG C            |
| 68.565    | 64 | Weighted Average              |
| 67.803    |    | 98.89% Pervious Area          |
| 0.762     |    | 1.11% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 13.8     | 841           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.9     | 1,254         | 0.0750        | 1.92              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 156           |               | 1.63              |                | <b>Direct Entry,</b>   |
| 1.4      | 594           |               | 7.07              |                | <b>Direct Entry,</b>   |
| 45.6     | 2,945         | Total         |                   |                |  |



Subcatchment 9S: Sub 9

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 10S: Sub 10**

Runoff = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af, Depth= 0.34"

Routed to Link SP10 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.008   | 98 | Surface water                 |
| * 0.081   | 98 | Impervious surface            |
| * 0.828   | 96 | Gravel surface                |
| 5.353     | 61 | >75% Grass cover, Good, HSG B |
| 3.453     | 74 | >75% Grass cover, Good, HSG C |
| 3.647     | 80 | >75% Grass cover, Good, HSG D |
| 0.693     | 58 | Meadow, non-grazed, HSG B     |
| 0.956     | 71 | Meadow, non-grazed, HSG C     |
| 0.200     | 48 | Brush, Good, HSG B            |
| 1.811     | 65 | Brush, Good, HSG C            |
| 3.089     | 73 | Brush, Good, HSG D            |
| 0.917     | 55 | Woods, Good, HSG B            |
| 0.043     | 70 | Woods, Good, HSG C            |
| 0.157     | 77 | Woods, Good, HSG D            |
| 22.236    | 71 | Weighted Average              |
| 21.147    |    | 95.10% Pervious Area          |
| 1.089     |    | 4.90% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 10.9     | 100           | 0.0210        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 22.7     | 1,347         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.5      | 600           | 0.0225        | 3.97              | 19.83          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 36.1     | 2,047         | Total         |                   |                |   |



**Mill Pt Pre 1**

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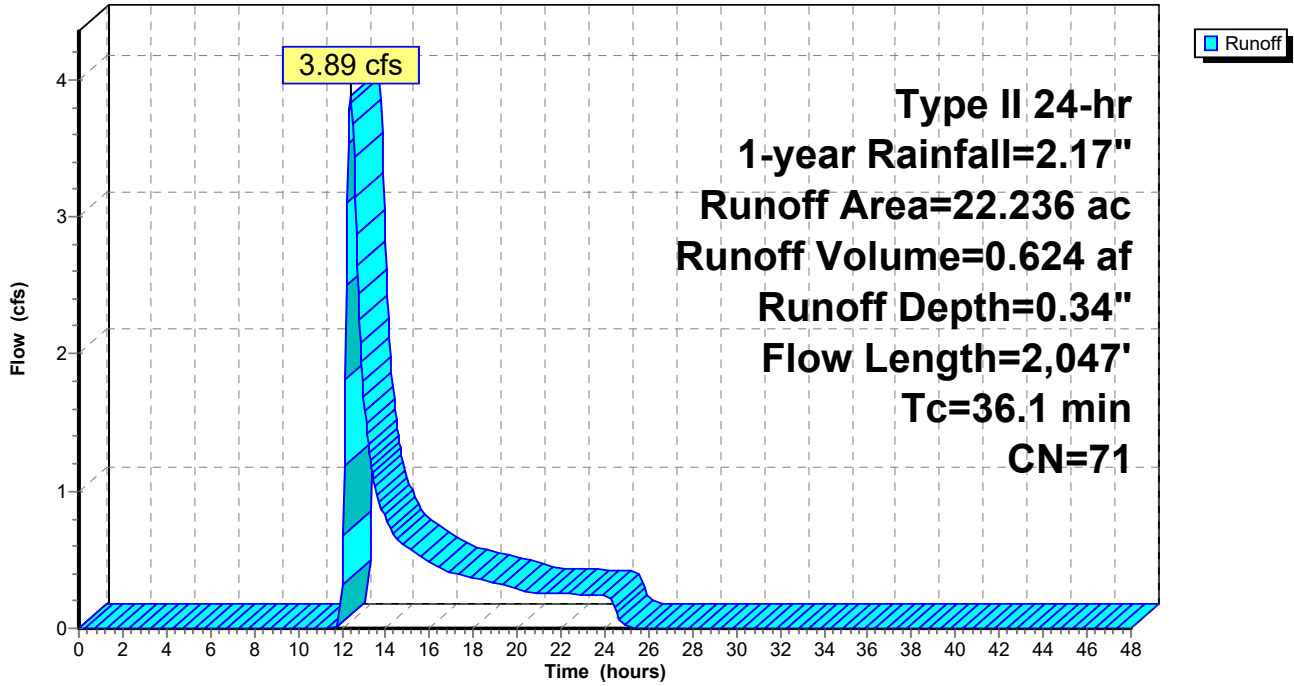
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 10S: Sub 10**

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 11S: Sub 11**

Runoff = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af, Depth= 0.21"  
 Routed to Link SP11 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

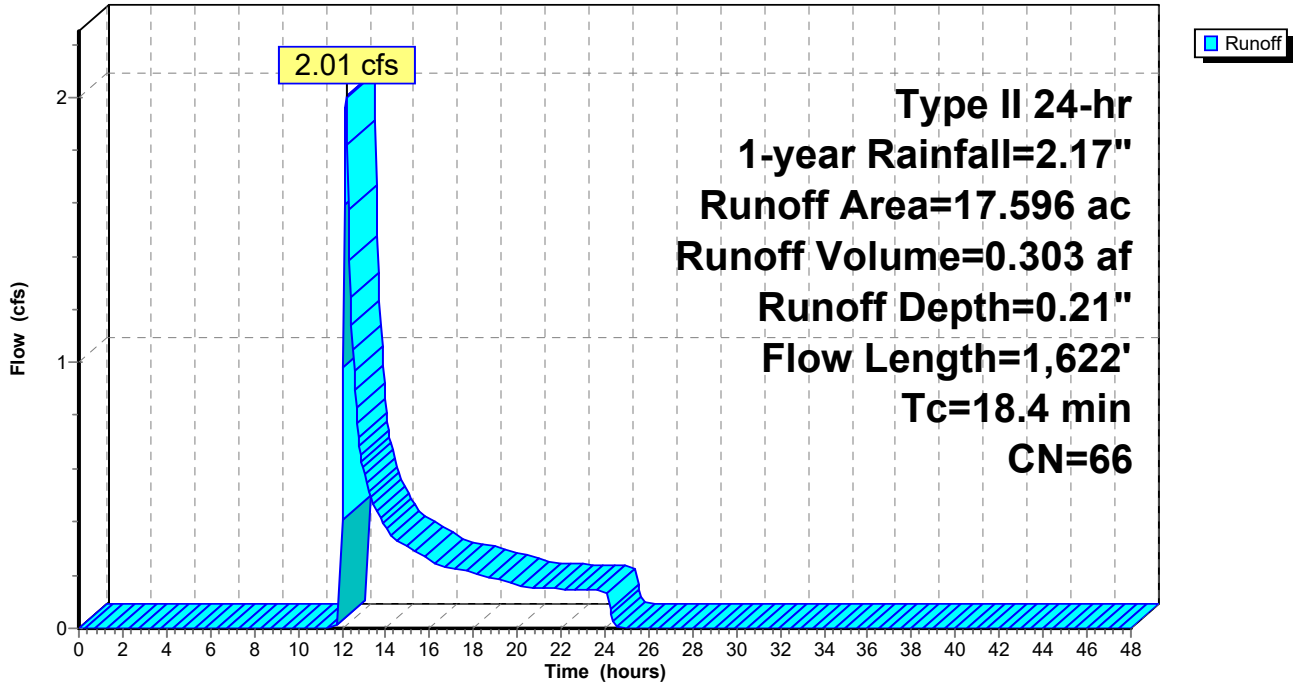
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.372   | 98 | Surface water                 |
| * 0.016   | 98 | Impervious surface            |
| * 2.385   | 96 | Gravel surface                |
| 2.824     | 61 | >75% Grass cover, Good, HSG B |
| 1.292     | 74 | >75% Grass cover, Good, HSG C |
| 1.394     | 58 | Meadow, non-grazed, HSG B     |
| 1.371     | 71 | Meadow, non-grazed, HSG C     |
| 0.199     | 48 | Brush, Good, HSG B            |
| 0.163     | 65 | Brush, Good, HSG C            |
| 7.256     | 55 | Woods, Good, HSG B            |
| 0.324     | 70 | Woods, Good, HSG C            |
| 17.596    | 66 | Weighted Average              |
| 17.208    |    | 97.79% Pervious Area          |
| 0.388     |    | 2.21% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.2      | 100           | 0.0320        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.9      | 579           | 0.0240        | 2.49              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps   |
| 2.6      | 277           | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 102           | 0.2650        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.0      | 564           | 0.0300        | 4.80              | 28.78          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 18.4     | 1,622         | Total         |                   |                |   |



Subcatchment 11S: Sub 11

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 13.00 cfs @ 11.96 hrs, Volume= 0.666 af, Depth= 1.65"  
 Routed to Pond 12P : 12P

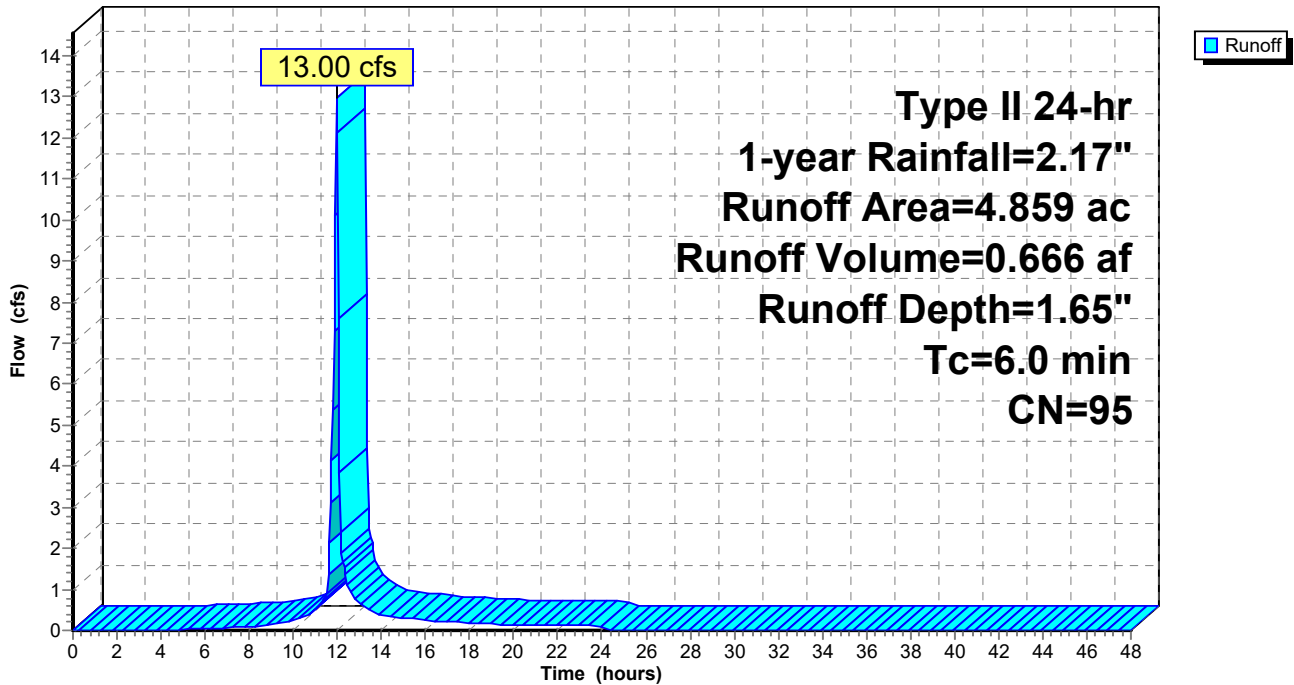
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 4.639   | 96 | Gravel surface                |
| 0.220     | 74 | >75% Grass cover, Good, HSG C |
| 4.859     | 95 | Weighted Average              |
| 4.859     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description           |
|----------|---------------|---------------|-------------------|----------------|-----------------------|
| 6.0      |               |               |                   |                | Direct Entry, Minimum |

**Subcatchment 12S: Sub 12**

Hydrograph





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**Summary for Subcatchment 13S: Sub 13**

Runoff = 0.73 cfs @ 12.20 hrs, Volume= 0.142 af, Depth= 0.16"  
 Routed to Link SP13 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

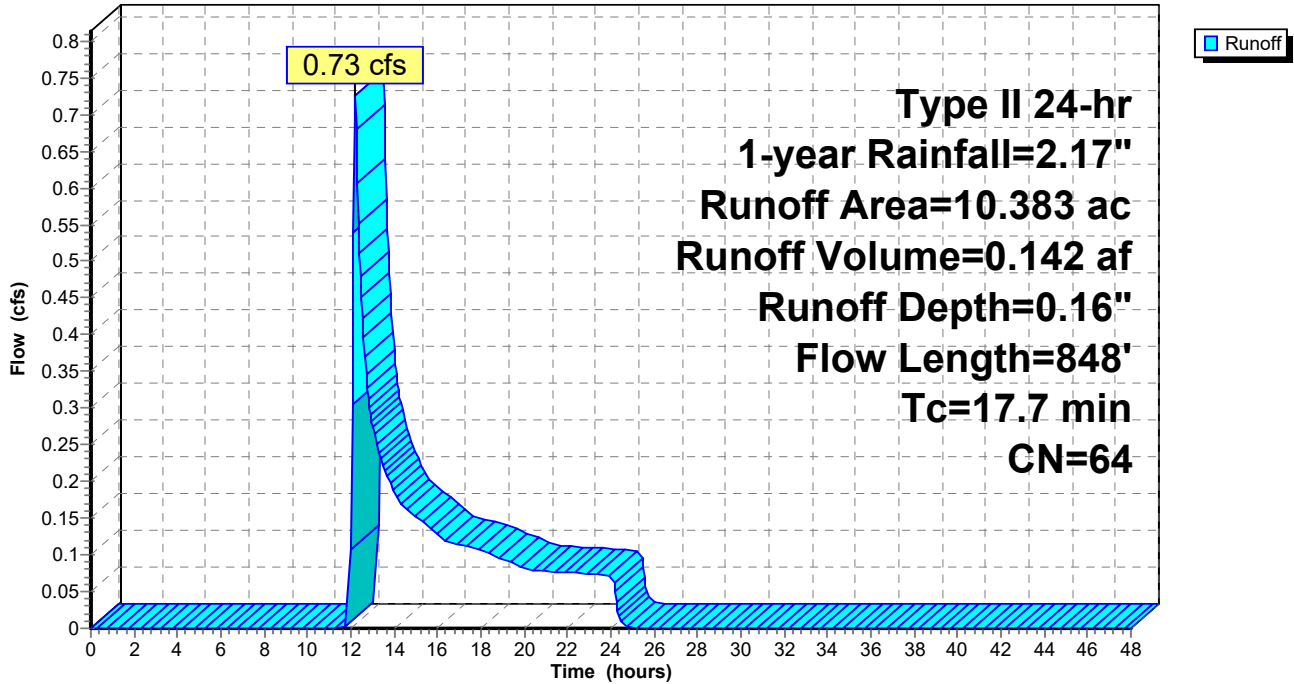
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.021   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 1.560     | 58 | Meadow, non-grazed, HSG B |
| 4.128     | 71 | Meadow, non-grazed, HSG C |
| 0.084     | 48 | Brush, Good, HSG B        |
| 0.134     | 65 | Brush, Good, HSG C        |
| 3.807     | 55 | Woods, Good, HSG B        |
| 0.325     | 70 | Woods, Good, HSG C        |
| 10.383    | 64 | Weighted Average          |
| 10.362    |    | 99.80% Pervious Area      |
| 0.021     |    | 0.20% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.4      | 525           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.7      | 62            | 0.0970        | 1.56              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 161           | 0.1330        | 1.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 17.7     | 848           | Total         |                   |                |  |



Subcatchment 13S: Sub 13

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 14S: Sub 14**

Runoff = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af, Depth= 0.23"  
 Routed to Link SP14 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

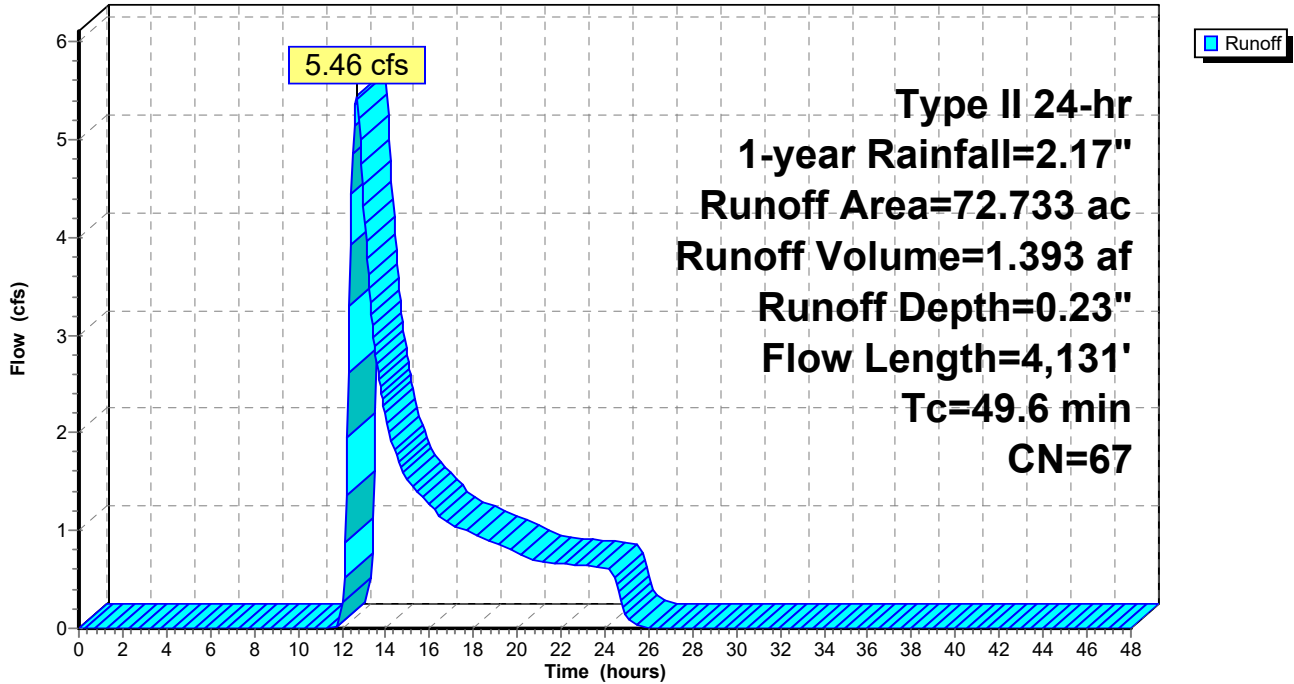
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.307   | 98 | Impervious surface            |
| 0.760     | 80 | >75% Grass cover, Good, HSG D |
| 19.939    | 58 | Meadow, non-grazed, HSG B     |
| 36.007    | 71 | Meadow, non-grazed, HSG C     |
| 0.100     | 78 | Meadow, non-grazed, HSG D     |
| 0.667     | 48 | Brush, Good, HSG B            |
| 0.121     | 65 | Brush, Good, HSG C            |
| 1.517     | 73 | Brush, Good, HSG D            |
| 3.147     | 55 | Woods, Good, HSG B            |
| 9.611     | 70 | Woods, Good, HSG C            |
| 0.557     | 77 | Woods, Good, HSG D            |
| 72.733    | 67 | Weighted Average              |
| 72.426    |    | 99.58% Pervious Area          |
| 0.307     |    | 0.42% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.0      | 50            | 0.0600        | 0.09              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 5.6      | 50            | 0.0280        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.7      | 465           | 0.0270        | 1.15              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 9.8      | 1,433         | 0.0120        | 2.43              | 18.23          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 20.0 '/' Top.W=25.00'<br>n= 0.030 Earth, grassed & winding |
| 18.5     | 2,133         | 0.0080        | 1.93              | 7.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 6.0 '/' Top.W=11.00'<br>n= 0.035 Earth, dense weeds        |
| 49.6     | 4,131         | Total         |                   |                |   |



Subcatchment 14S: Sub 14

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 17S: Sub 17**

Runoff = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af, Depth= 0.09"  
 Routed to Link SP17 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

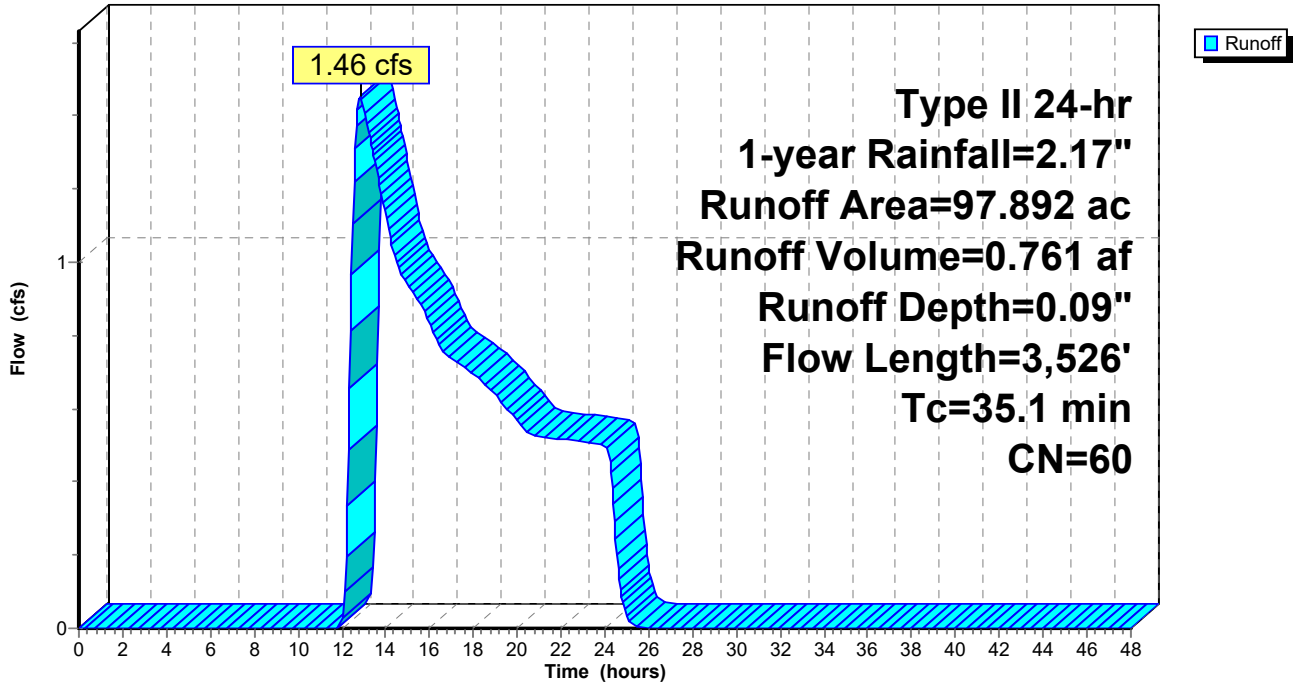
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.153   | 98 | Impervious surface            |
| * 0.105   | 96 | Gravel surface                |
| 3.000     | 61 | >75% Grass cover, Good, HSG B |
| 0.324     | 74 | >75% Grass cover, Good, HSG C |
| 1.232     | 80 | >75% Grass cover, Good, HSG D |
| 78.791    | 58 | Meadow, non-grazed, HSG B     |
| 0.375     | 71 | Meadow, non-grazed, HSG C     |
| 4.855     | 78 | Meadow, non-grazed, HSG D     |
| 7.632     | 55 | Woods, Good, HSG B            |
| 0.085     | 70 | Woods, Good, HSG C            |
| 0.340     | 77 | Woods, Good, HSG D            |
| 97.892    | 60 | Weighted Average              |
| 96.739    |    | 98.82% Pervious Area          |
| 1.153     |    | 1.18% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 5.2      | 681           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.3     | 1,098         | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.2     | 1,647         | 0.0140        | 2.68              | 6.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00'<br>n= 0.030 Earth, grassed & winding |
| 35.1     | 3,526         | Total         |                   |                |   |



Subcatchment 17S: Sub 17

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af, Depth= 0.28"  
 Routed to Link SP18 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

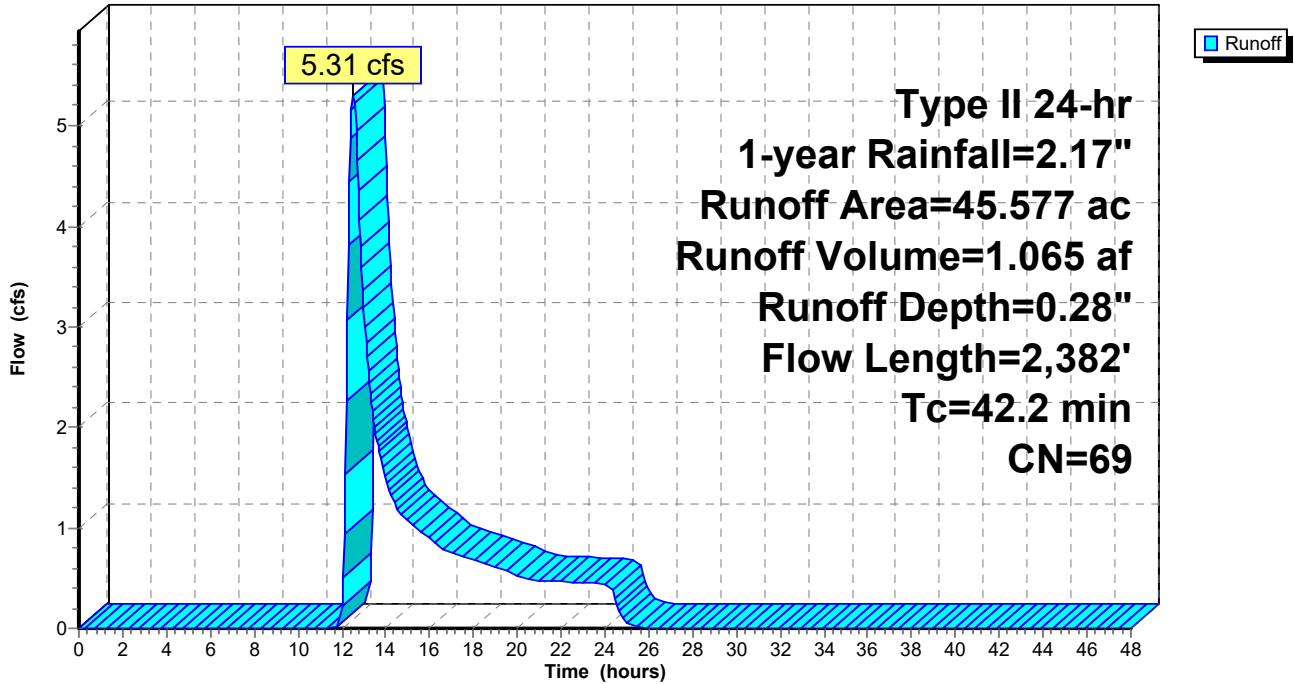
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.335   | 98 | Impervious surface        |
| 9.521     | 58 | Meadow, non-grazed, HSG B |
| 19.657    | 71 | Meadow, non-grazed, HSG C |
| 8.775     | 78 | Meadow, non-grazed, HSG D |
| 2.586     | 48 | Brush, Good, HSG B        |
| 4.116     | 73 | Brush, Good, HSG D        |
| 0.587     | 77 | Woods, Good, HSG D        |
| 45.577    | 69 | Weighted Average          |
| 45.242    |    | 99.26% Pervious Area      |
| 0.335     |    | 0.74% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.6     | 100           | 0.0180        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 10.5     | 668           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 459           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 128           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 12.9     | 1,027         |               | 1.33              |                | <b>Direct Entry, CF</b>  |
| 42.2     | 2,382         | Total         |                   |                |  |



Subcatchment 18S: Sub 18

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 6.43 cfs @ 12.32 hrs, Volume= 0.869 af, Depth= 0.37"  
 Routed to Reach 20.1R : S-KCF-6

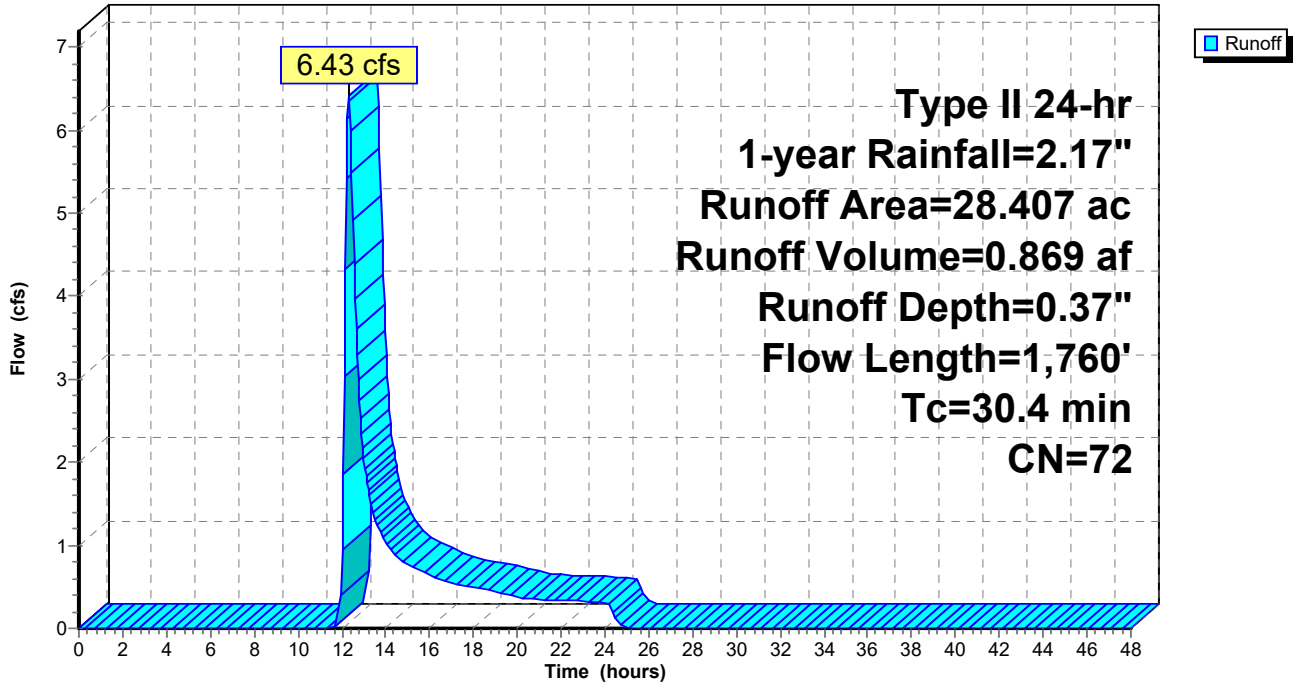
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.153   | 98 | Surface water             |
| 2.120     | 58 | Meadow, non-grazed, HSG B |
| 18.359    | 71 | Meadow, non-grazed, HSG C |
| 7.318     | 78 | Meadow, non-grazed, HSG D |
| 0.227     | 65 | Brush, Good, HSG C        |
| 0.105     | 73 | Brush, Good, HSG D        |
| 0.125     | 77 | Woods, Good, HSG D        |
| 28.407    | 72 | Weighted Average          |
| 28.254    |    | 99.46% Pervious Area      |
| 0.153     |    | 0.54% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 212           | 0.1120        | 2.34              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.0     | 635           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.7     | 813           | 0.0330        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 30.4     | 1,760         | Total         |                   |                |  |

Subcatchment 19S: Sub 19

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 20S: Sub 20**

Runoff = 7.65 cfs @ 12.21 hrs, Volume= 1.213 af, Depth= 0.21"  
 Routed to Reach 20.1R : S-KCF-6

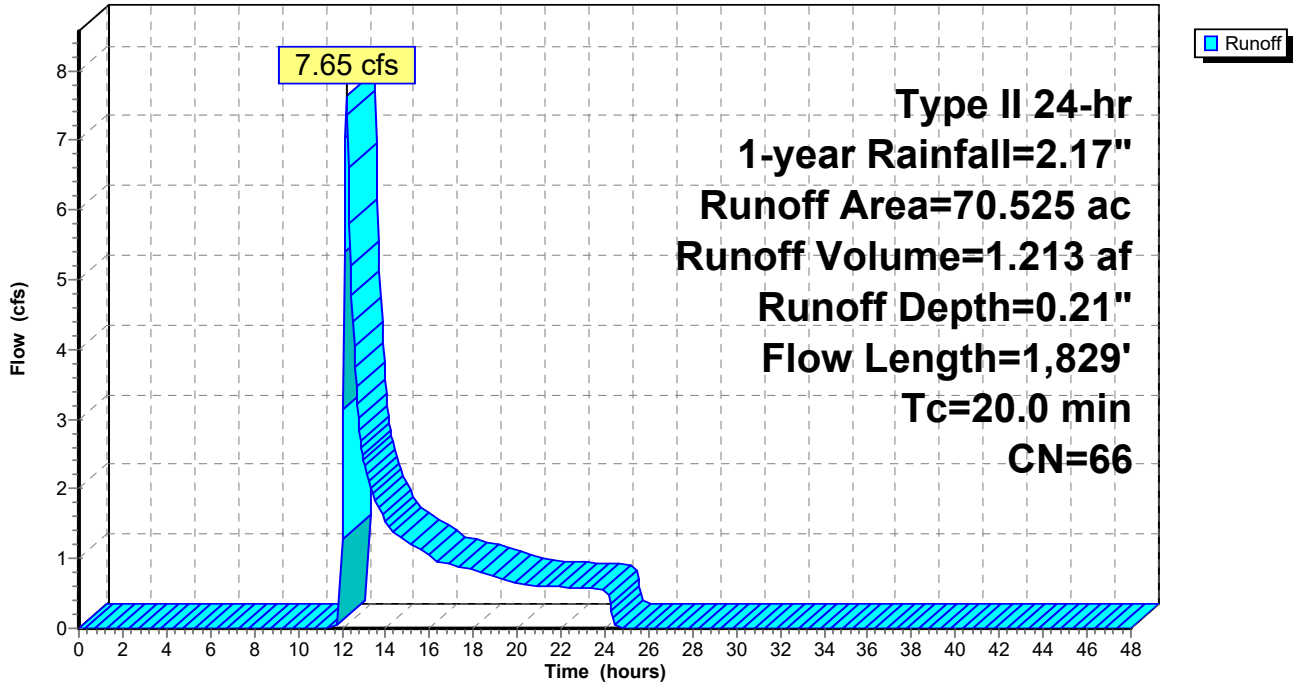
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.044   | 98 | Surface water                 |
| * 0.508   | 98 | Impervious surface            |
| 3.657     | 61 | >75% Grass cover, Good, HSG B |
| 29.608    | 58 | Meadow, non-grazed, HSG B     |
| 22.967    | 71 | Meadow, non-grazed, HSG C     |
| 12.748    | 78 | Meadow, non-grazed, HSG D     |
| 0.147     | 48 | Brush, Good, HSG B            |
| 0.032     | 65 | Brush, Good, HSG C            |
| 0.133     | 73 | Brush, Good, HSG D            |
| 0.124     | 55 | Woods, Good, HSG B            |
| 0.523     | 70 | Woods, Good, HSG C            |
| 0.034     | 77 | Woods, Good, HSG D            |
| 70.525    | 66 | Weighted Average              |
| 69.973    |    | 99.22% Pervious Area          |
| 0.552     |    | 0.78% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.7      | 100           | 0.0700        | 0.25              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 2.6      | 259           | 0.0580        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 8.8      | 703           | 0.0360        | 1.33              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.9      | 767           | 0.0300        | 6.81              | 54.44          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=1.00' Z= 3.0 '/' Top.W=11.00'<br>n= 0.030 Earth, grassed & winding |
| 20.0     | 1,829         | Total         |                   |                |  |

Subcatchment 20S: Sub 20

Hydrograph





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**Summary for Subcatchment 21S: Sub 21**

Runoff = 8.36 cfs @ 12.58 hrs, Volume= 2.117 af, Depth= 0.21"  
 Routed to Reach 22.1R : S-KCF-5

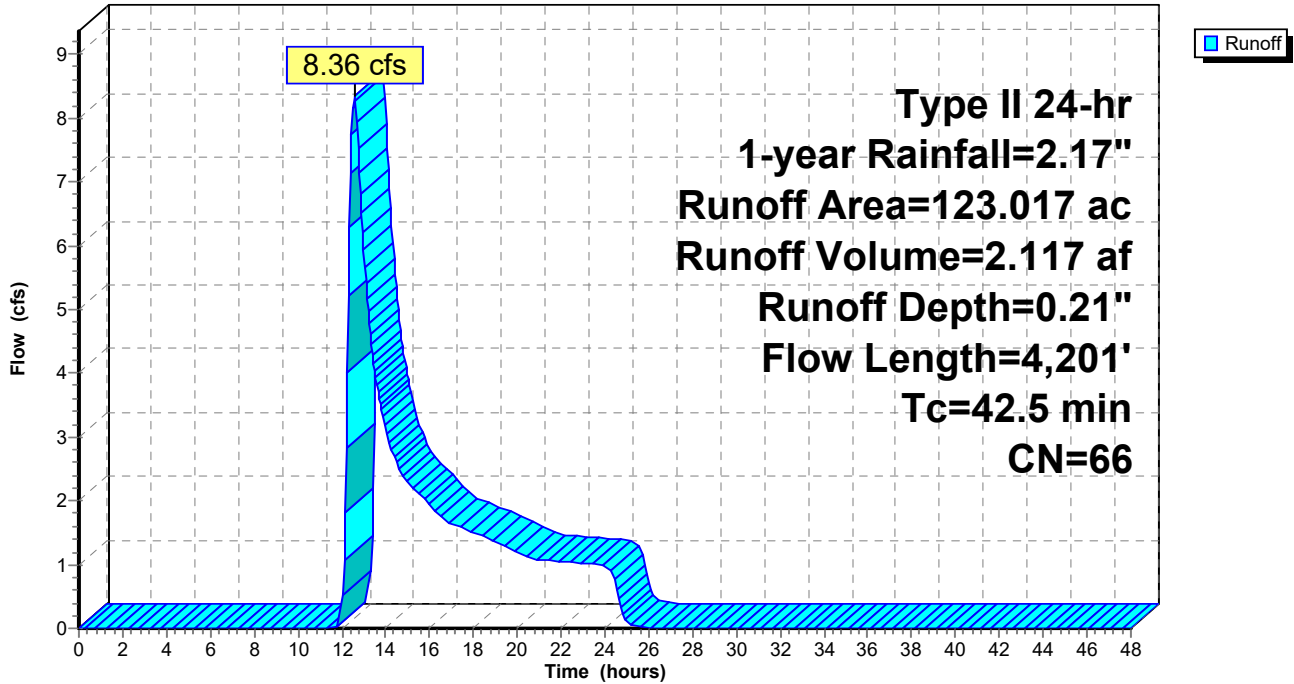
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 3.145   | 98 | Surface water                 |
| * 0.950   | 98 | Impervious surface            |
| * 0.528   | 96 | Gravel surface                |
| 0.616     | 61 | >75% Grass cover, Good, HSG B |
| 1.689     | 74 | >75% Grass cover, Good, HSG C |
| 54.805    | 58 | Meadow, non-grazed, HSG B     |
| 54.707    | 71 | Meadow, non-grazed, HSG C     |
| 2.342     | 78 | Meadow, non-grazed, HSG D     |
| 0.747     | 48 | Brush, Good, HSG B            |
| 0.437     | 65 | Brush, Good, HSG C            |
| 0.758     | 55 | Woods, Good, HSG B            |
| 2.293     | 70 | Woods, Good, HSG C            |
| 123.017   | 66 | Weighted Average              |
| 118.922   |    | 96.67% Pervious Area          |
| 4.095     |    | 3.33% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.1     | 100           | 0.0160        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 12.6     | 1,112         | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.2      | 346           | 0.0150        | 2.58              | 13.52          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 9.0 ' Top.W=15.00'<br>n= 0.035 Earth, dense weeds |
| 8.3      | 1,504         | 0.0150        | 3.03              | 15.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 7.3      | 1,139         | 0.0110        | 2.60              | 12.98          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 42.5     | 4,201         | Total         |                   |                |  |

Subcatchment 21S: Sub 21

Hydrograph





**Mill Pt Pre 1**

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 9.05 cfs @ 12.58 hrs, Volume= 1.748 af, Depth= 0.34"  
 Routed to Link SP22 :

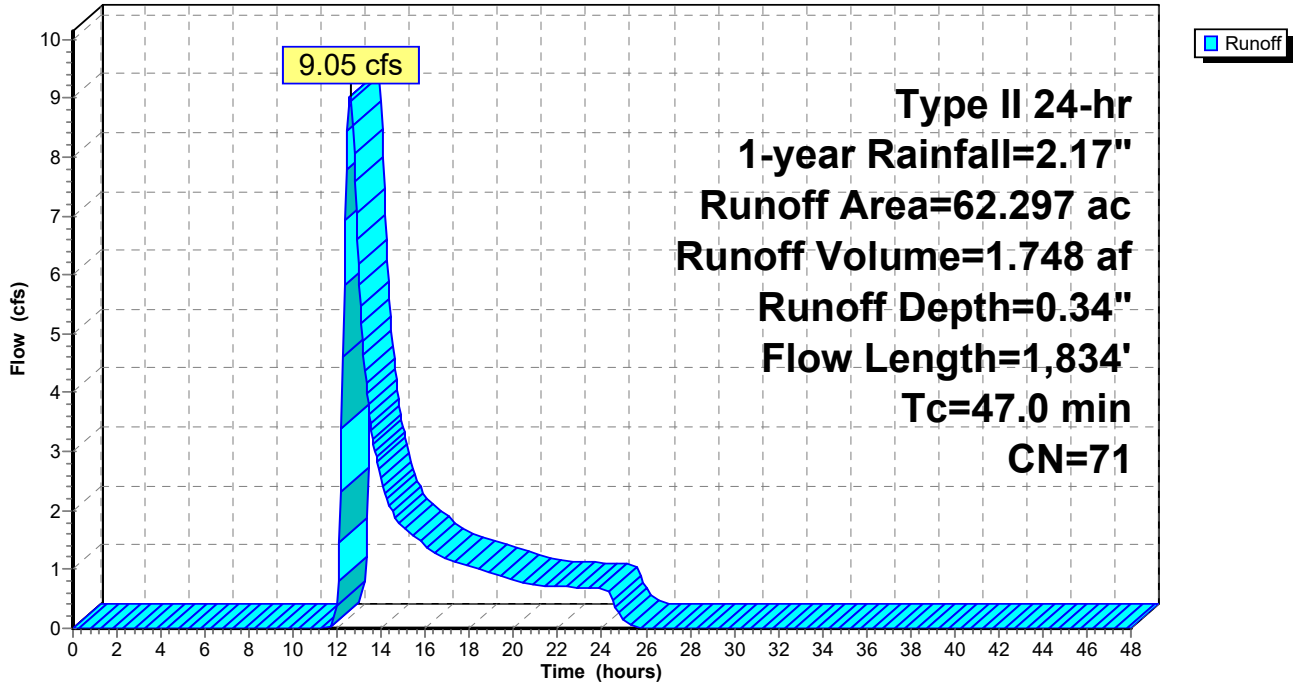
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.373   | 98 | Impervious surface        |
| * 0.117   | 96 | Gravel surface            |
| 2.935     | 58 | Meadow, non-grazed, HSG B |
| 38.064    | 71 | Meadow, non-grazed, HSG C |
| 5.928     | 78 | Meadow, non-grazed, HSG D |
| 0.322     | 48 | Brush, Good, HSG B        |
| 0.178     | 65 | Brush, Good, HSG C        |
| 1.858     | 55 | Woods, Good, HSG B        |
| 7.519     | 70 | Woods, Good, HSG C        |
| 5.003     | 77 | Woods, Good, HSG D        |
| 62.297    | 71 | Weighted Average          |
| 61.924    |    | 99.40% Pervious Area      |
| 0.373     |    | 0.60% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 316           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.2      | 442           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.3      | 305           | 0.0120        | 0.55              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 11.3     | 515           | 0.0230        | 0.76              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 156           |               | 1.73              |                | <b>Direct Entry, CF</b>  |
| 47.0     | 1,834         | Total         |                   |                |  |

Subcatchment 22S: Sub 22

Hydrograph





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**Summary for Subcatchment 23S: Sub 23**

Runoff = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af, Depth= 0.28"

Routed to Link SP23 :

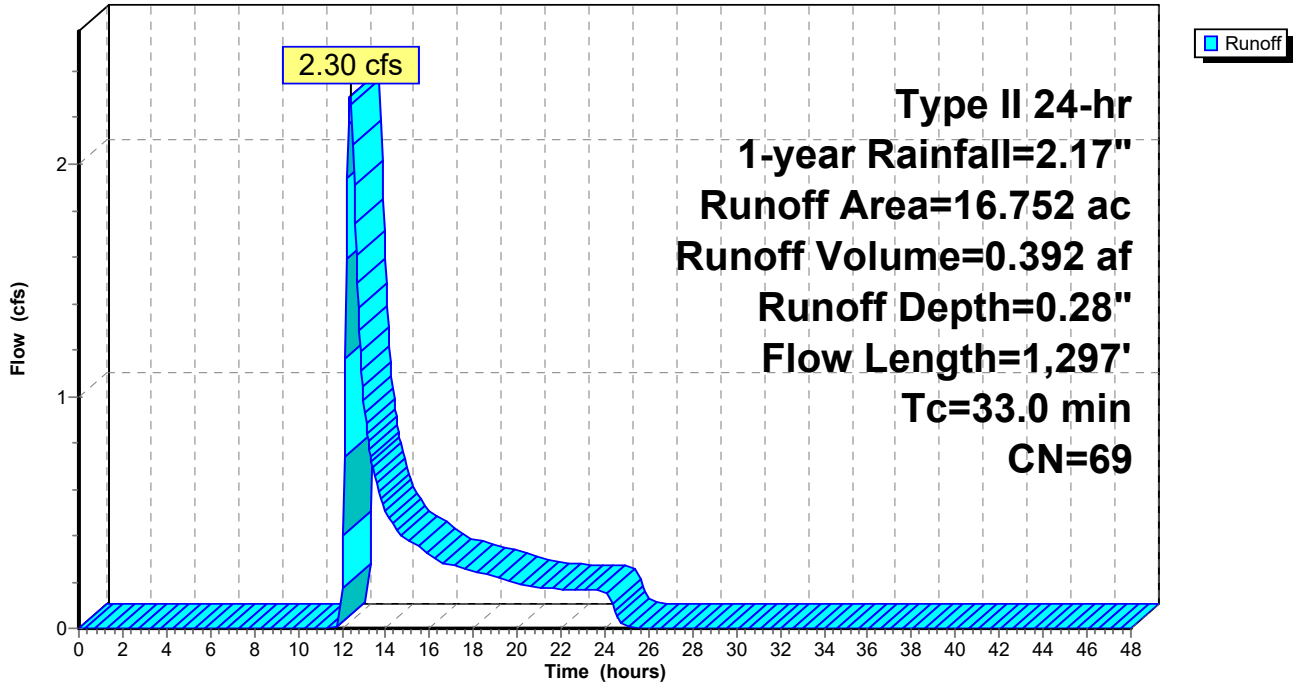
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.387   | 98 | Impervious surface            |
| * 0.929   | 96 | Gravel surface                |
| 0.421     | 61 | >75% Grass cover, Good, HSG B |
| 4.958     | 58 | Meadow, non-grazed, HSG B     |
| 9.559     | 71 | Meadow, non-grazed, HSG C     |
| 0.403     | 78 | Meadow, non-grazed, HSG D     |
| 0.012     | 48 | Brush, Good, HSG B            |
| 0.052     | 65 | Brush, Good, HSG C            |
| 0.031     | 55 | Woods, Good, HSG B            |
| 16.752    | 69 | Weighted Average              |
| 16.365    |    | 97.69% Pervious Area          |
| 0.387     |    | 2.31% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.2     | 100           | 0.0760        | 0.12              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 15.8     | 892           | 0.0180        | 0.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.8      | 262           | 0.0490        | 1.55              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.2      | 43            | 0.0160        | 4.00              | 24.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.0     | 1,297         | Total         |                   |                |   |

Subcatchment 23S: Sub 23

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 24S: Sub 24**

Runoff = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af, Depth= 0.43"  
 Routed to Link SP24 :

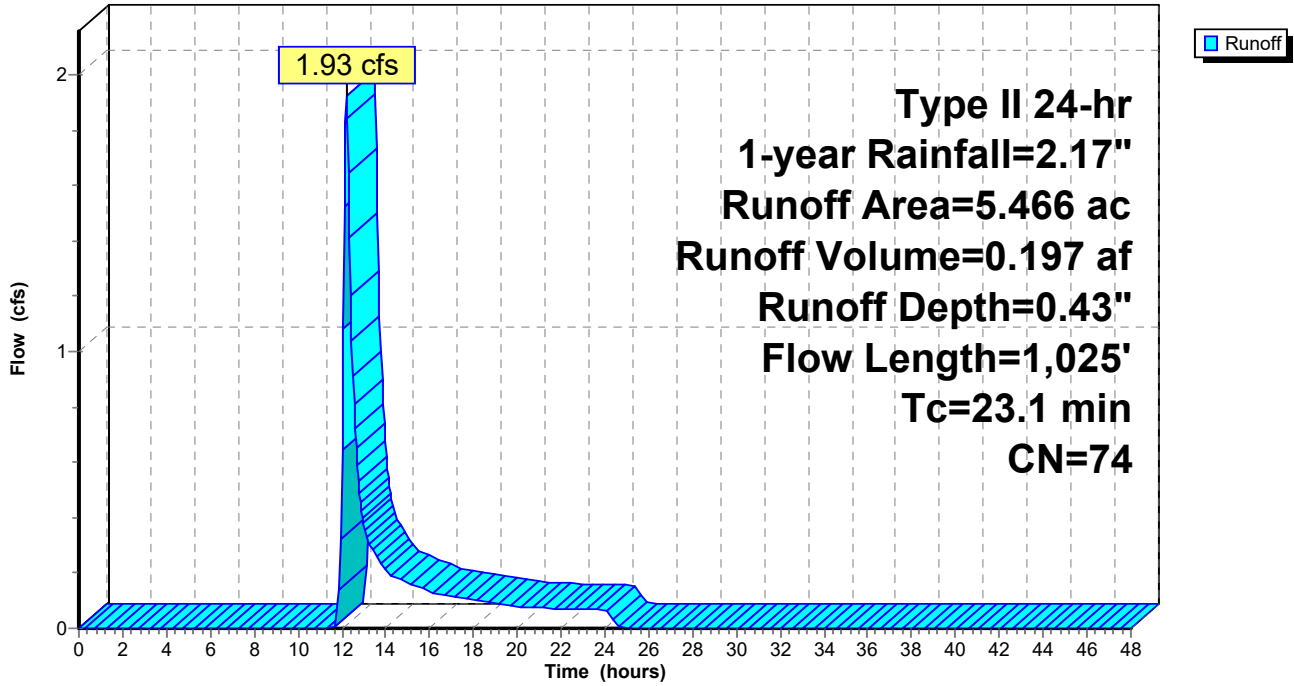
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.421   | 98 | Impervious surface            |
| * 0.036   | 96 | Gravel surface                |
| 0.093     | 61 | >75% Grass cover, Good, HSG B |
| 1.916     | 74 | >75% Grass cover, Good, HSG C |
| 0.252     | 58 | Meadow, non-grazed, HSG B     |
| 2.730     | 71 | Meadow, non-grazed, HSG C     |
| 0.018     | 70 | Woods, Good, HSG C            |
| 5.466     | 74 | Weighted Average              |
| 5.045     |    | 92.30% Pervious Area          |
| 0.421     |    | 7.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 1.7      | 169           | 0.0550        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.1      | 247           | 0.0230        | 3.64              | 12.74          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00'<br>n= 0.035 Earth, dense weeds |
| 2.4      | 509           | 0.0220        | 3.47              | 13.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 23.1     | 1,025         | Total         |                   |                |   |

Subcatchment 24S: Sub 24

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 43: Subcat 43**

Runoff = 4.73 cfs @ 12.49 hrs, Volume= 0.874 af, Depth= 0.31"

Routed to Reach 44R :

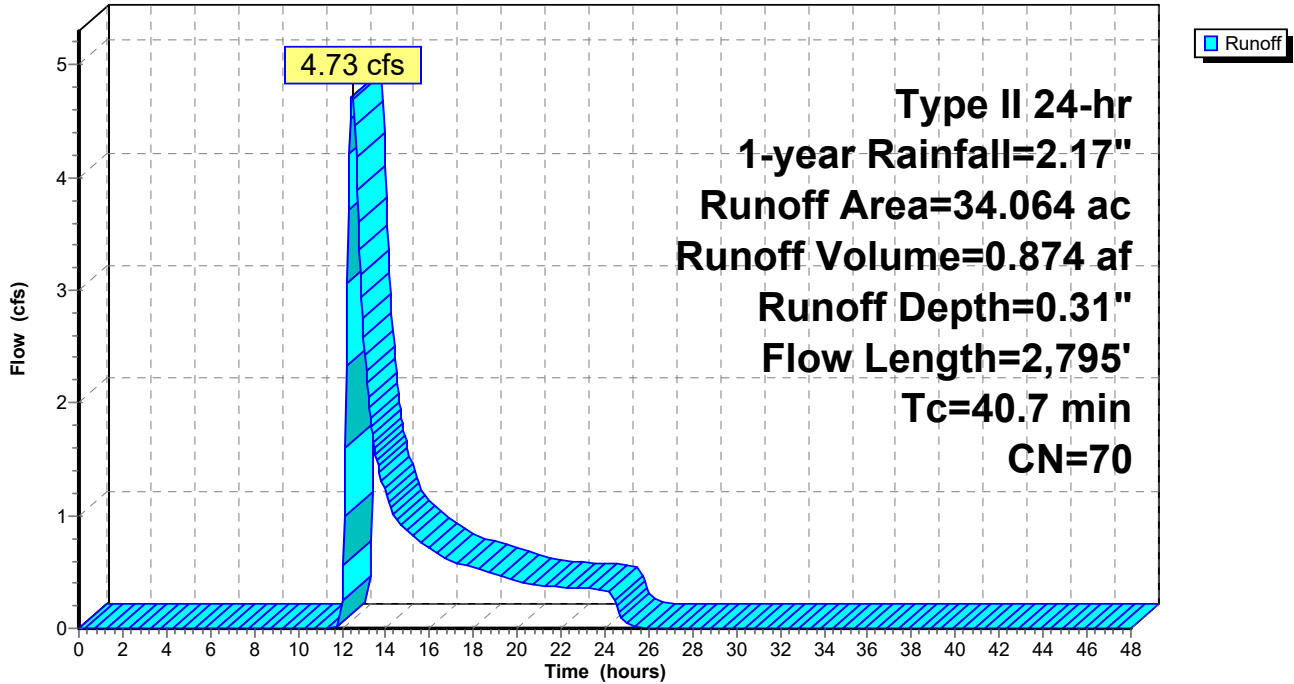
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.157   | 98 | Impervious surface            |
| 2.153     | 74 | >75% Grass cover, Good, HSG C |
| 0.186     | 30 | Meadow, non-grazed, HSG A     |
| 1.331     | 58 | Meadow, non-grazed, HSG B     |
| 15.965    | 71 | Meadow, non-grazed, HSG C     |
| 6.575     | 78 | Meadow, non-grazed, HSG D     |
| 1.643     | 30 | Woods, Good, HSG A            |
| 0.352     | 55 | Woods, Good, HSG B            |
| 2.445     | 70 | Woods, Good, HSG C            |
| 3.257     | 77 | Woods, Good, HSG D            |
| 34.064    | 70 | Weighted Average              |
| 33.907    |    | 99.54% Pervious Area          |
| 0.157     |    | 0.46% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 26.2     | 1,556         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 5.1      | 1,139         | 0.0320        | 3.76              | 13.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 ' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 40.7     | 2,795         | Total         |                   |                |   |

Subcatchment 43: Subcat 43

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 44: Subcat 44**

[47] Hint: Peak is 114% of capacity of segment #3

Runoff = 6.33 cfs @ 12.50 hrs, Volume= 1.188 af, Depth= 0.31"  
 Routed to Reach 45R :

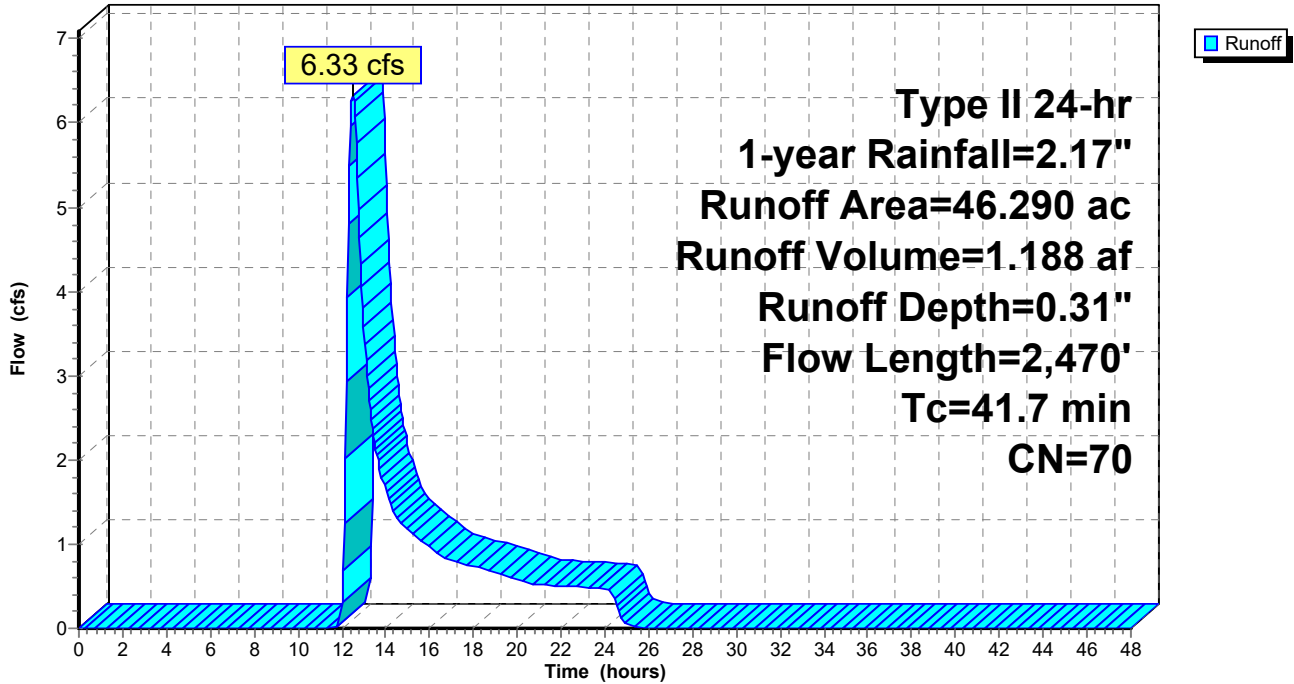
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.094     | 30 | Meadow, non-grazed, HSG A |
| 0.097     | 58 | Meadow, non-grazed, HSG B |
| 7.842     | 71 | Meadow, non-grazed, HSG C |
| 6.921     | 78 | Meadow, non-grazed, HSG D |
| 1.607     | 30 | Woods, Good, HSG A        |
| 6.395     | 55 | Woods, Good, HSG B        |
| 8.029     | 70 | Woods, Good, HSG C        |
| 15.305    | 77 | Woods, Good, HSG D        |
| 46.290    | 70 | Weighted Average          |
| 46.290    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 21.9     | 100           | 0.0260        | 0.08              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 9.2      | 409           | 0.0220        | 0.74              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 5.2      | 715           | 0.0320        | 2.31              | 5.55           | <b>Parabolic Channel,</b><br>W=18.00' D=0.20' Area=2.4 sf Perim=18.0'<br>n= 0.030 Earth, grassed & winding                  |
| 5.4      | 1,246         | 0.0350        | 3.83              | 14.37          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 41.7     | 2,470         | Total         |                   |                |   |

Subcatchment 44: Subcat 44

Hydrograph





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**Summary for Subcatchment 45: Subcat 45**

Runoff = 0.37 cfs @ 13.00 hrs, Volume= 0.223 af, Depth= 0.08"  
 Routed to Link SP43 :

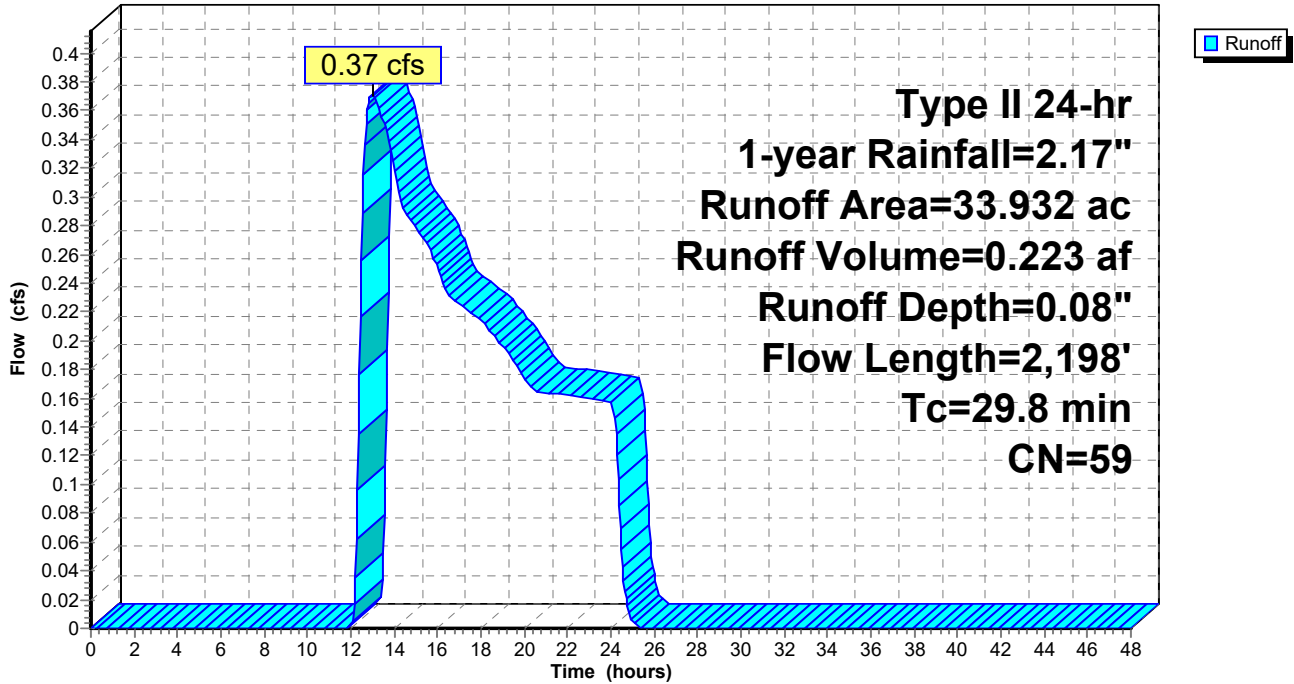
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.056   | 98 | Surface water                 |
| * 0.600   | 98 | Impervious surface            |
| * 0.045   | 96 | Gravel surface                |
| 0.358     | 61 | >75% Grass cover, Good, HSG B |
| 0.668     | 74 | >75% Grass cover, Good, HSG C |
| 0.893     | 30 | Meadow, non-grazed, HSG A     |
| 10.865    | 58 | Meadow, non-grazed, HSG B     |
| 6.386     | 71 | Meadow, non-grazed, HSG C     |
| 2.755     | 78 | Meadow, non-grazed, HSG D     |
| 0.369     | 30 | Brush, Good, HSG A            |
| 4.141     | 48 | Brush, Good, HSG B            |
| 0.313     | 65 | Brush, Good, HSG C            |
| 0.221     | 73 | Brush, Good, HSG D            |
| 2.407     | 30 | Woods, Good, HSG A            |
| 3.328     | 55 | Woods, Good, HSG B            |
| 0.214     | 70 | Woods, Good, HSG C            |
| 0.313     | 77 | Woods, Good, HSG D            |
| 33.932    | 59 | Weighted Average              |
| 33.276    |    | 98.07% Pervious Area          |
| 0.656     |    | 1.93% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 6.5      | 396           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.8      | 223           | 0.0900        | 2.10              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 3.4      | 196           | 0.0360        | 0.95              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 5.7      | 1,283         | 0.0370        | 3.77              | 10.38          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00'<br>n= 0.040 Winding stream, pools & shoals |
| 29.8     | 2,198         | Total         |                   |                |  |

Subcatchment 45: Subcat 45

Hydrograph





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**Summary for Subcatchment 46: Subcat 46**

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"  
 Routed to Link SP46 :

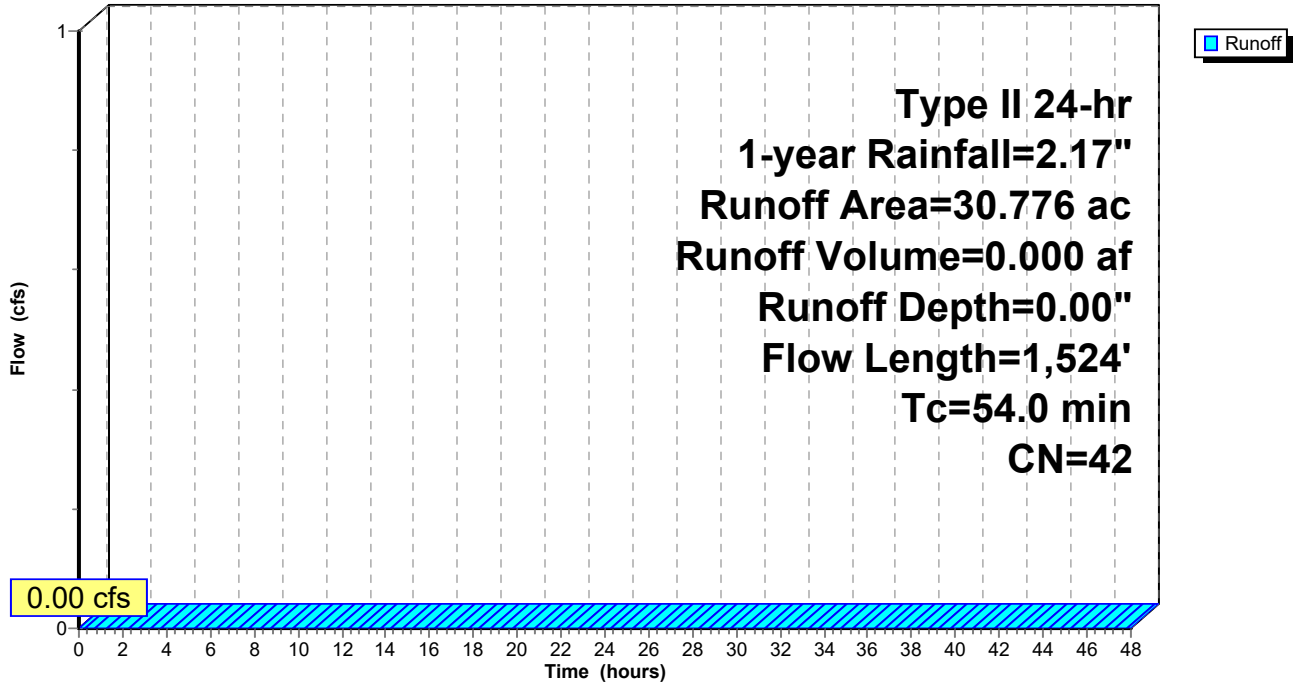
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.982   | 98 | Surface water             |
| * 0.226   | 98 | Impervious surface        |
| 2.832     | 30 | Meadow, non-grazed, HSG A |
| 1.255     | 58 | Meadow, non-grazed, HSG B |
| 0.520     | 30 | Brush, Good, HSG A        |
| 0.462     | 48 | Brush, Good, HSG B        |
| 0.278     | 73 | Brush, Good, HSG D        |
| 14.773    | 30 | Woods, Good, HSG A        |
| 9.100     | 55 | Woods, Good, HSG B        |
| 0.348     | 77 | Woods, Good, HSG D        |
| 30.776    | 42 | Weighted Average          |
| 29.568    |    | 96.07% Pervious Area      |
| 1.208     |    | 3.93% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 36.5     | 774           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 5.2      | 153           | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 245           | 0.4120        | 3.21              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.2      | 79            | 0.0510        | 1.13              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.4      | 173           |               | 6.95              |                | <b>Lake or Reservoir,</b><br>Mean Depth= 1.50'                       |
| 54.0     | 1,524         | Total         |                   |                |  |

Subcatchment 46: Subcat 46

Hydrograph





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**Summary for Subcatchment 47: Subcat 47**

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"  
 Routed to Link SP47 :

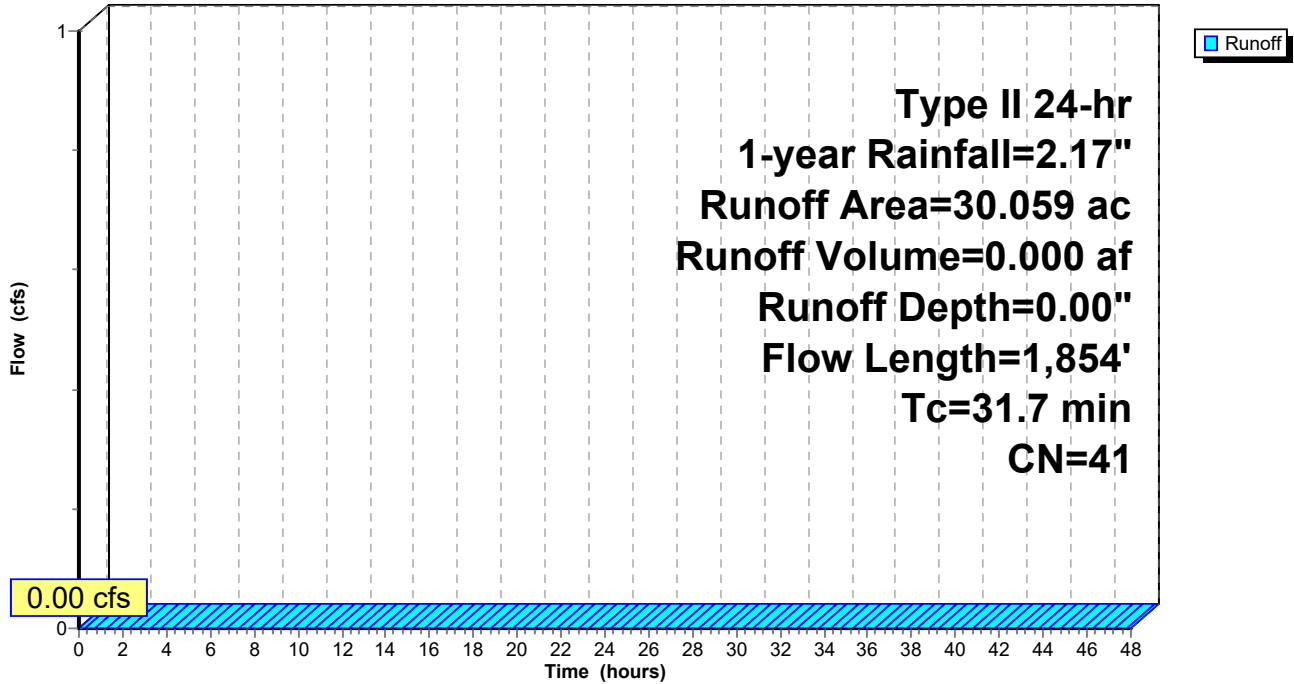
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.378   | 98 | Impervious surface            |
| 0.502     | 39 | >75% Grass cover, Good, HSG A |
| 2.029     | 61 | >75% Grass cover, Good, HSG B |
| 17.003    | 30 | Meadow, non-grazed, HSG A     |
| 3.669     | 58 | Meadow, non-grazed, HSG B     |
| 0.051     | 30 | Brush, Good, HSG A            |
| 0.687     | 48 | Brush, Good, HSG B            |
| 1.092     | 30 | Woods, Good, HSG A            |
| 4.648     | 55 | Woods, Good, HSG B            |
| 30.059    | 41 | Weighted Average              |
| 29.681    |    | 98.74% Pervious Area          |
| 0.378     |    | 1.26% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 18.7     | 992           | 0.0160        | 0.89              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.1      | 88            | 0.0680        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 3.5      | 674           | 0.0180        | 3.19              | 13.54          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00'<br>n= 0.035 Earth, dense weeds |
| 31.7     | 1,854         | Total         |                   |                |  |

Subcatchment 47: Subcat 47

Hydrograph





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**Summary for Reach 6R: W-NSD-35**

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 5.24 cfs @ 12.85 hrs, Volume= 1.378 af  
Outflow = 4.92 cfs @ 13.26 hrs, Volume= 1.378 af, Atten= 6%, Lag= 24.6 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.23 fps, Min. Travel Time= 14.1 min  
Avg. Velocity = 0.81 fps, Avg. Travel Time= 38.7 min

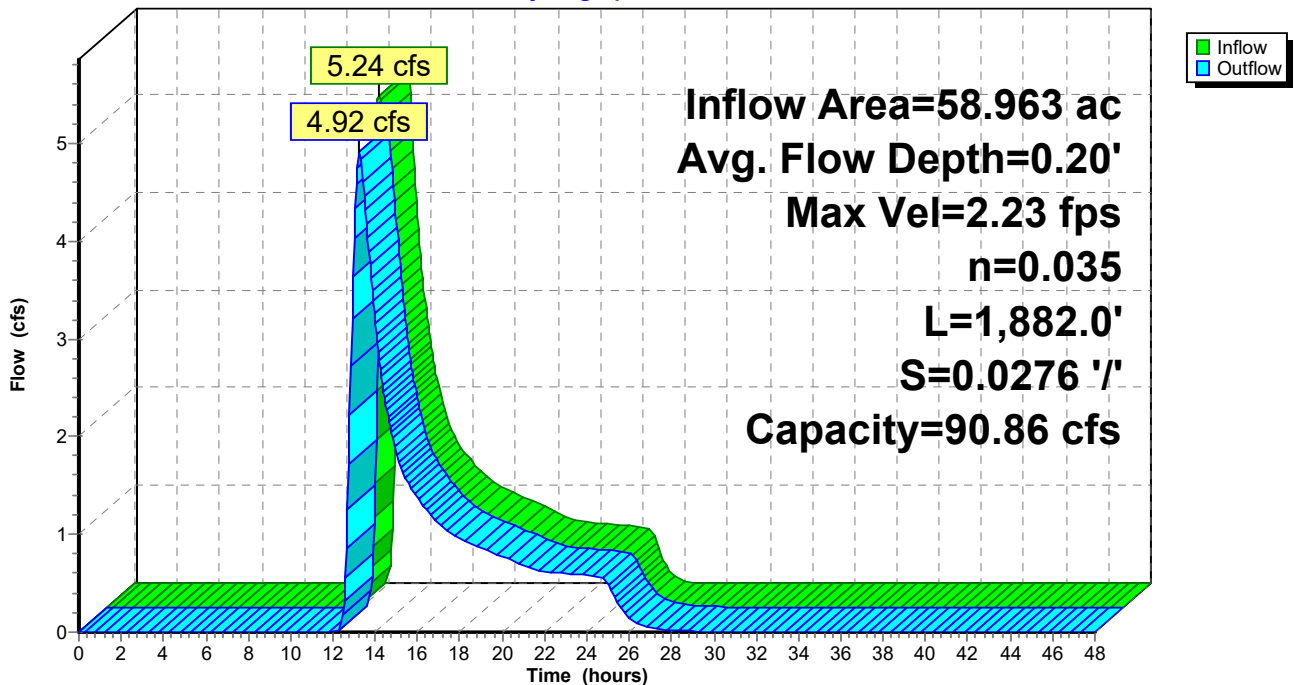
Peak Storage= 4,151 cf @ 13.03 hrs  
Average Depth at Peak Storage= 0.20' , Surface Width= 12.37'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 '/'  
Inlet Invert= 542.00', Outlet Invert= 490.00'



**Reach 6R: W-NSD-35**

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 13.1R:

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.64" for 1-year event  
Inflow = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af  
Outflow = 1.38 cfs @ 12.39 hrs, Volume= 0.666 af, Atten= 0%, Lag= 2.1 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.21 fps, Min. Travel Time= 1.2 min  
Avg. Velocity = 1.20 fps, Avg. Travel Time= 2.3 min

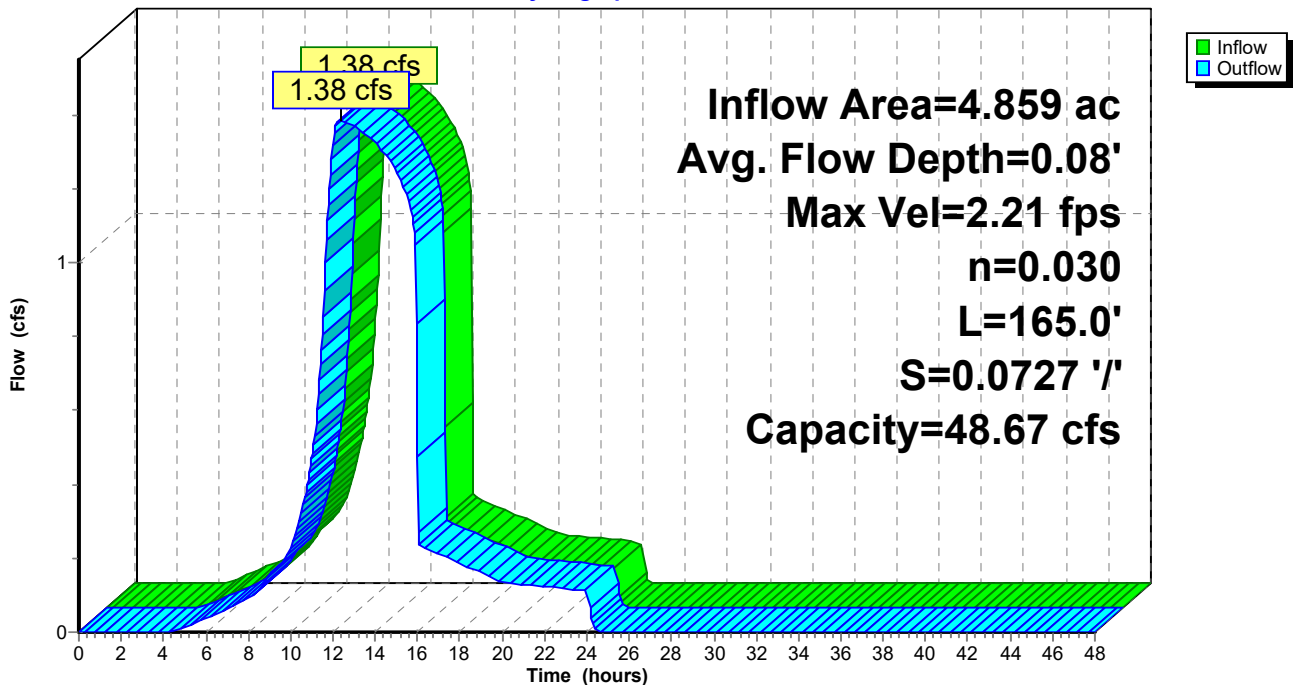
Peak Storage= 103 cf @ 12.37 hrs  
Average Depth at Peak Storage= 0.08' , Surface Width= 9.28'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



### Reach 13.1R:

Hydrograph





# Mill Pt Pre 1

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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 13.2R:

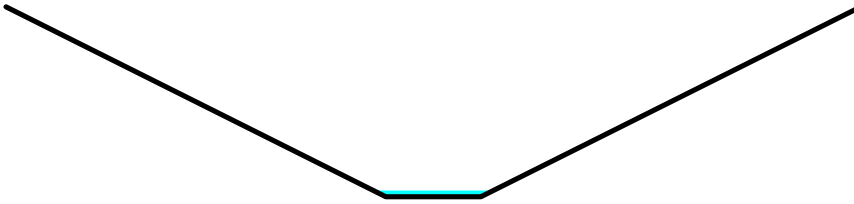
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.03' @ 12.40 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.64" for 1-year event  
Inflow = 1.38 cfs @ 12.39 hrs, Volume= 0.666 af  
Outflow = 1.38 cfs @ 12.42 hrs, Volume= 0.666 af, Atten= 0%, Lag= 1.4 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.62 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 2.77 fps, Avg. Travel Time= 1.4 min

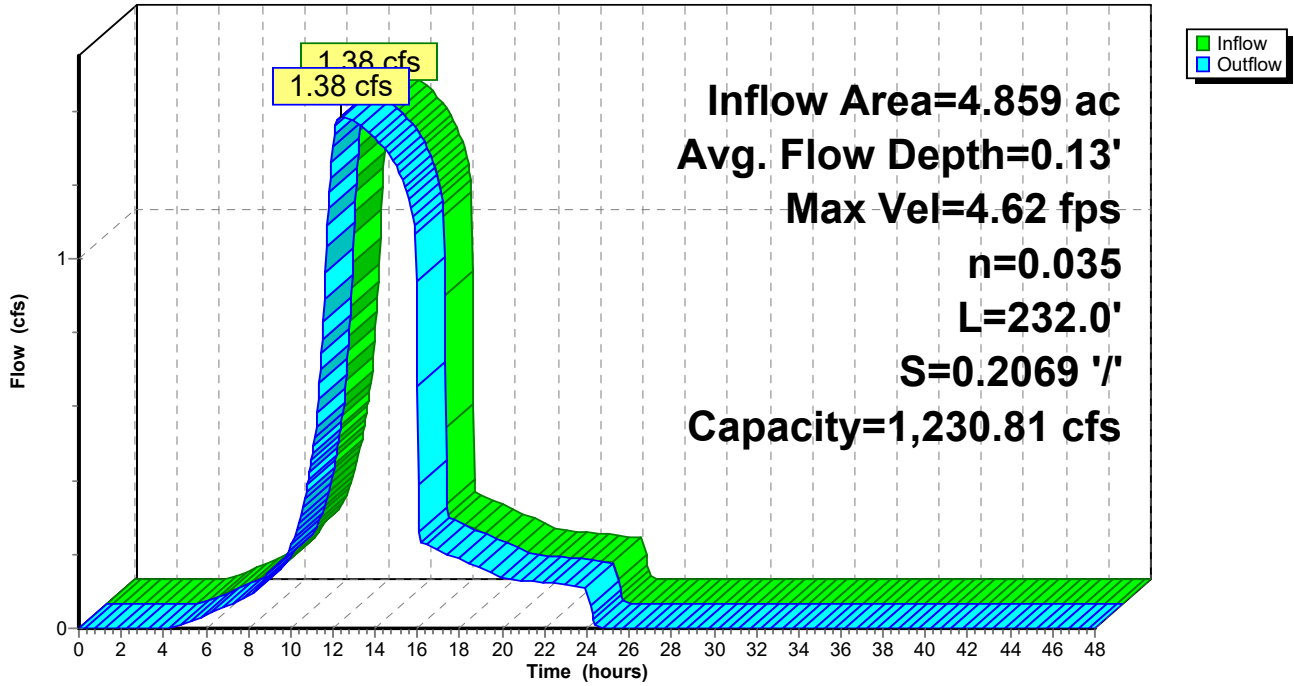
Peak Storage= 69 cf @ 12.40 hrs  
Average Depth at Peak Storage= 0.13' , Surface Width= 2.53'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



Reach 13.2R:

Hydrograph





# Mill Pt Pre 1

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Type II 24-hr 1-year Rainfall=2.17"

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## Summary for Reach 20.1R: S-KCF-6

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 13.49 cfs @ 12.25 hrs, Volume= 2.082 af  
Outflow = 10.22 cfs @ 12.69 hrs, Volume= 2.082 af, Atten= 24%, Lag= 26.3 min  
Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.69 fps, Min. Travel Time= 13.9 min  
Avg. Velocity= 0.54 fps, Avg. Travel Time= 43.6 min

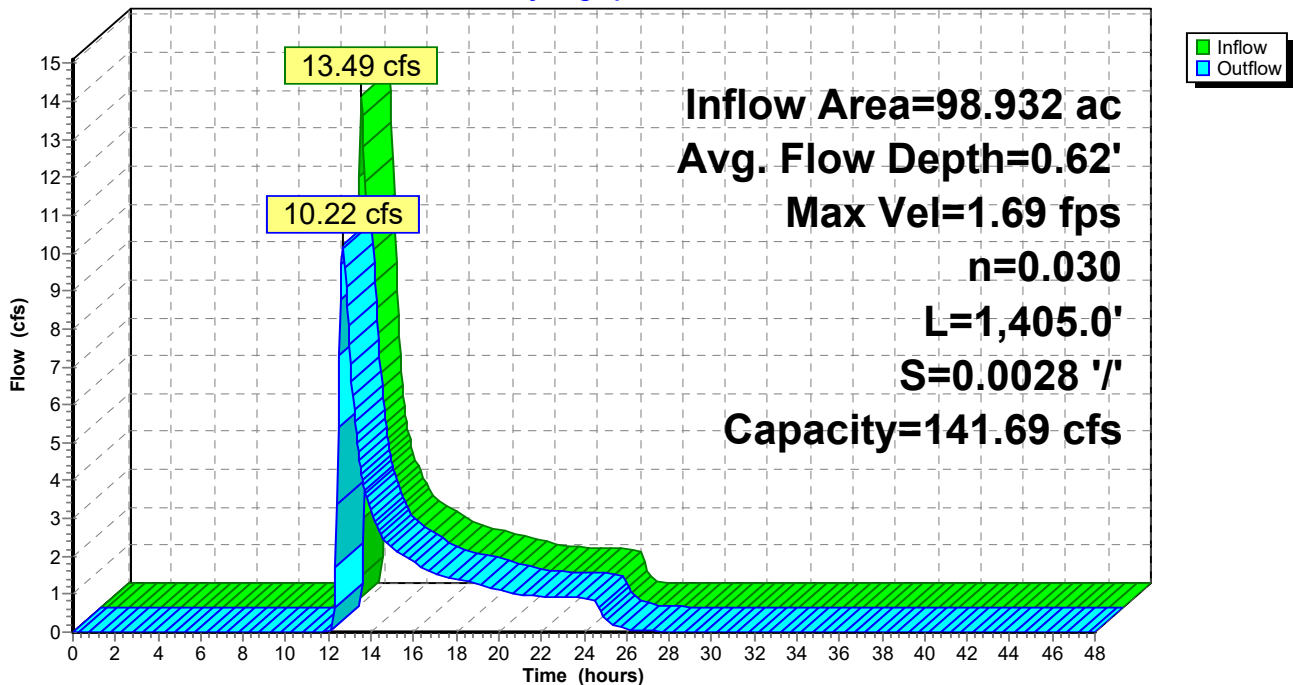
Peak Storage= 8,537 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.62' , Surface Width= 11.70'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 ' / ' Top Width= 23.00'  
Length= 1,405.0' Slope= 0.0028 ' / '  
Inlet Invert= 494.00', Outlet Invert= 490.00'



### Reach 20.1R: S-KCF-6

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 20.2R:**

[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.01' @ 25.10 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.25" for 1-year event  
 Inflow = 10.22 cfs @ 12.69 hrs, Volume= 2.082 af  
 Outflow = 9.37 cfs @ 12.98 hrs, Volume= 2.082 af, Atten= 8%, Lag= 17.7 min  
 Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 2.39 fps, Min. Travel Time= 9.2 min  
 Avg. Velocity = 0.81 fps, Avg. Travel Time= 27.2 min

Peak Storage= 5,179 cf @ 12.83 hrs  
 Average Depth at Peak Storage= 0.42' , Surface Width= 10.54'  
 Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

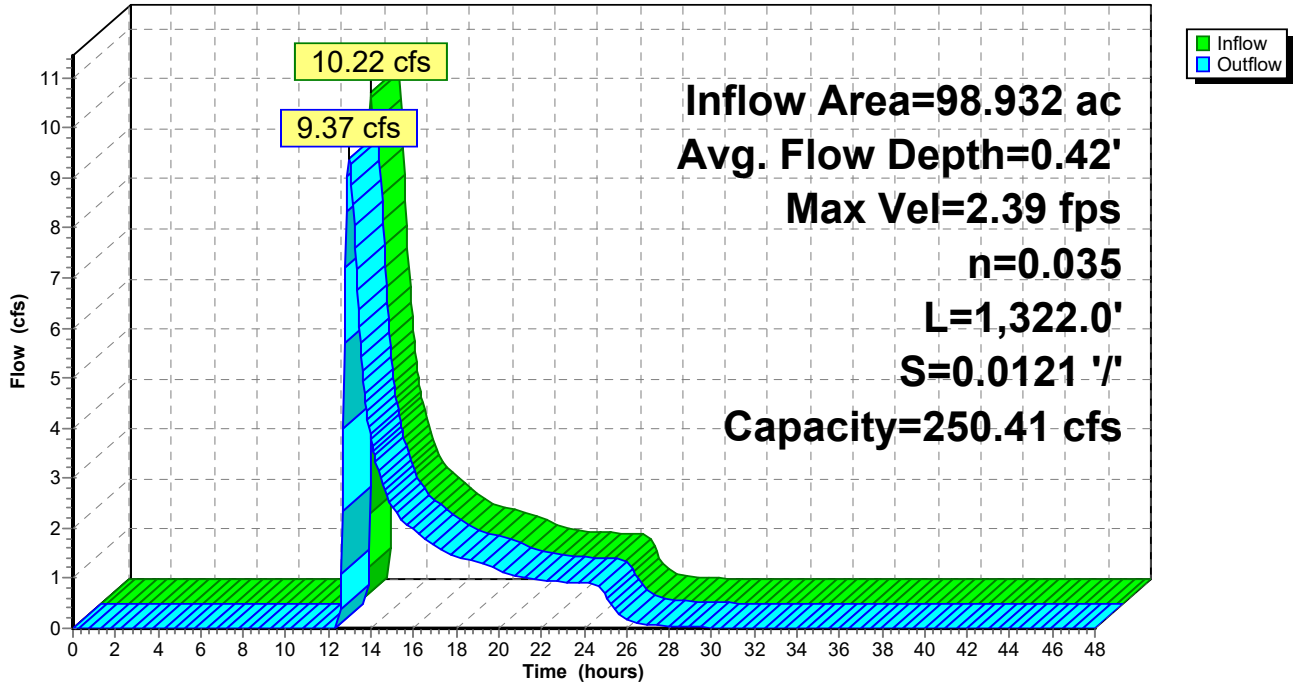
8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
 Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
 Length= 1,322.0' Slope= 0.0121 '/'  
 Inlet Invert= 490.00', Outlet Invert= 474.00'





Reach 20.2R:

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 22.1R: S-KCF-5**

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 8.36 cfs @ 12.58 hrs, Volume= 2.117 af  
Outflow = 8.20 cfs @ 12.75 hrs, Volume= 2.117 af, Atten= 2%, Lag= 10.2 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.90 fps, Min. Travel Time= 5.8 min  
Avg. Velocity = 0.78 fps, Avg. Travel Time= 14.2 min

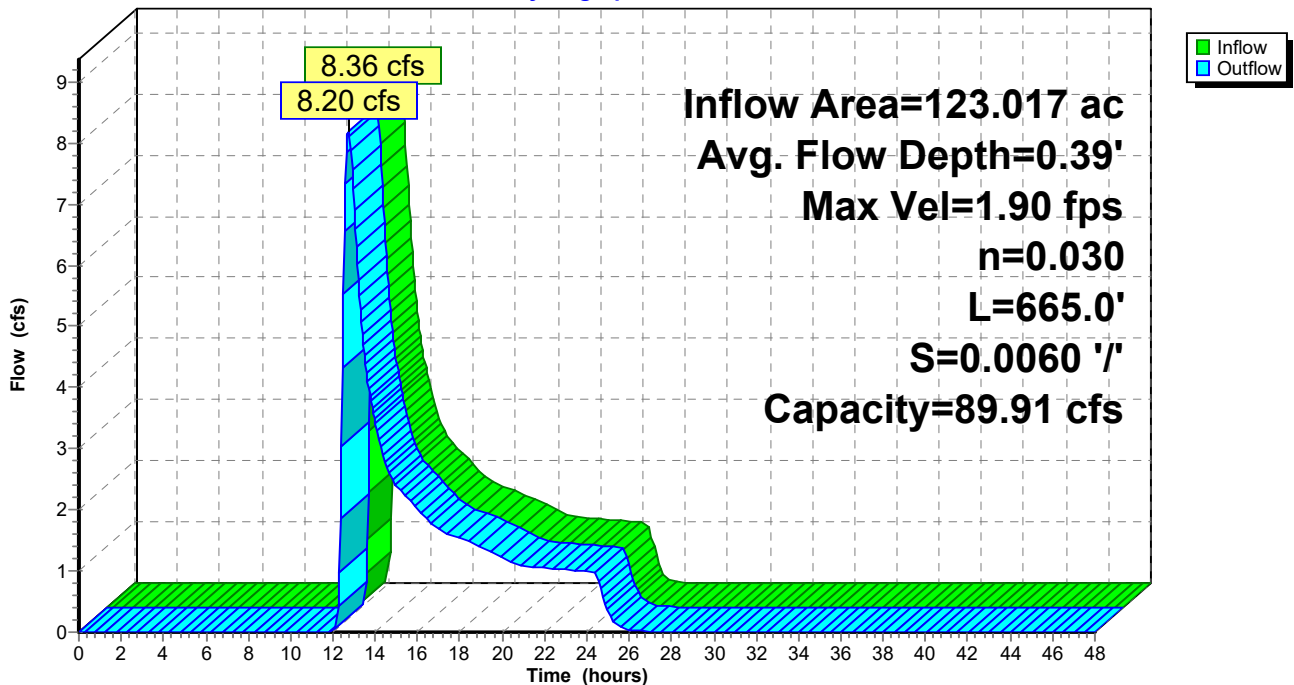
Peak Storage= 2,876 cf @ 12.65 hrs  
Average Depth at Peak Storage= 0.39' , Surface Width= 12.32'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'



**Reach 22.1R: S-KCF-5**

Hydrograph





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**Summary for Reach 22.2R:**

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 0.21' @ 13.15 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 0.26' @ 13.05 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 0.23" for 1-year event

Inflow = 16.63 cfs @ 12.92 hrs, Volume= 4.199 af

Outflow = 16.35 cfs @ 13.07 hrs, Volume= 4.199 af, Atten= 2%, Lag= 9.1 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.35 fps, Min. Travel Time= 5.0 min

Avg. Velocity= 0.72 fps, Avg. Travel Time= 16.4 min

Peak Storage= 4,934 cf @ 12.99 hrs

Average Depth at Peak Storage= 0.59' , Surface Width= 13.56'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

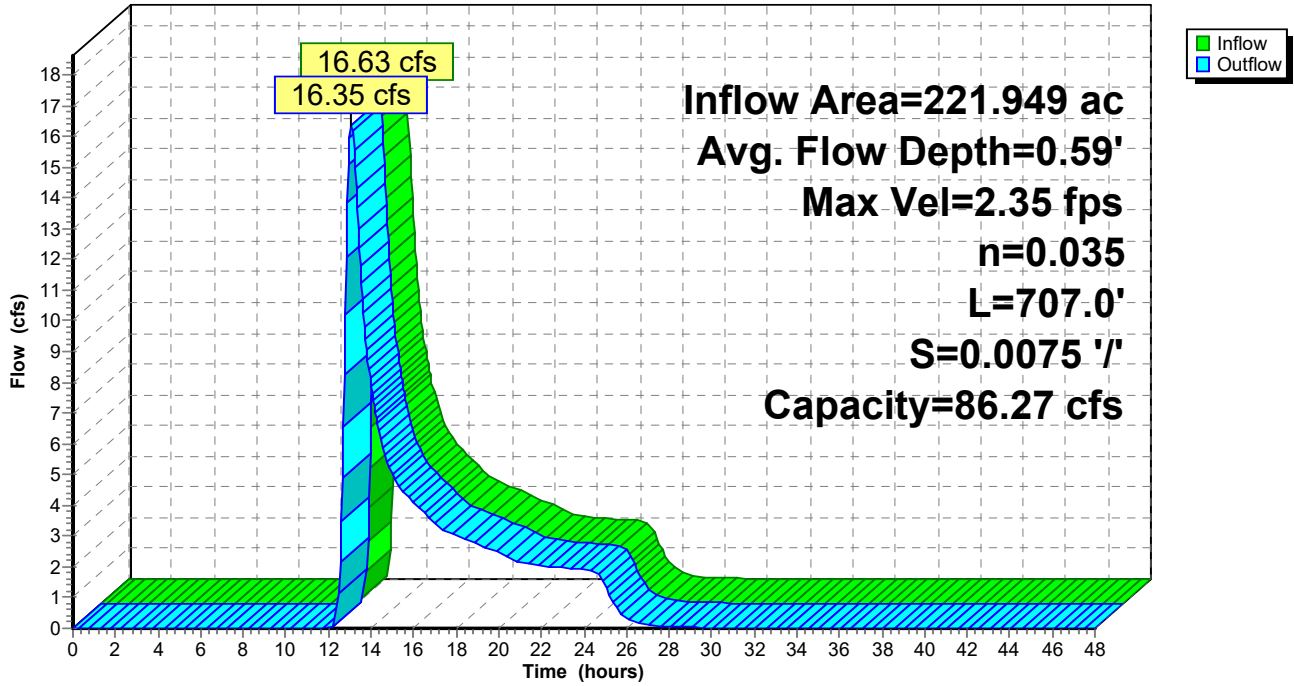
Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'



Reach 22.2R:

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 44R:**

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 0.31" for 1-year event  
Inflow = 4.73 cfs @ 12.49 hrs, Volume= 0.874 af  
Outflow = 4.70 cfs @ 12.57 hrs, Volume= 0.874 af, Atten= 1%, Lag= 5.1 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.96 fps, Min. Travel Time= 2.8 min  
Avg. Velocity= 1.33 fps, Avg. Travel Time= 6.2 min

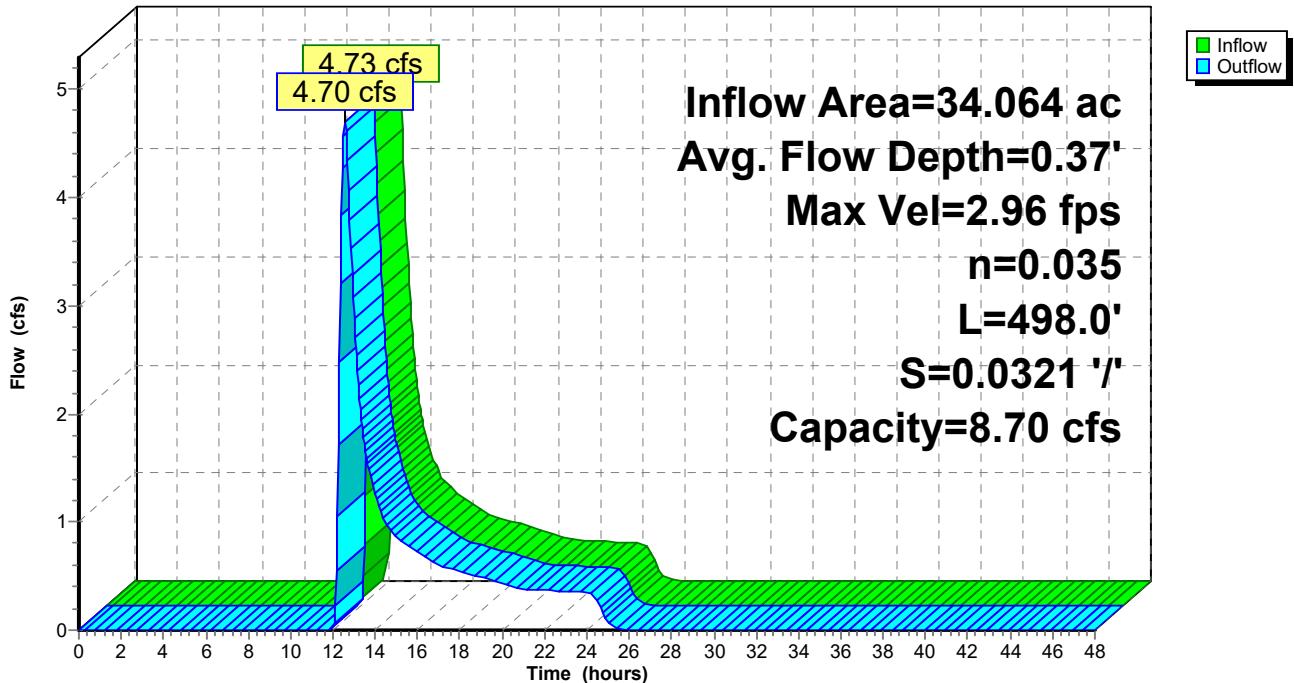
Peak Storage= 792 cf @ 12.52 hrs  
Average Depth at Peak Storage= 0.37' , Surface Width= 6.49'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'



**Reach 44R:**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Reach 45R:**

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.03' @ 12.65 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 0.31" for 1-year event  
Inflow = 10.97 cfs @ 12.54 hrs, Volume= 2.062 af  
Outflow = 10.91 cfs @ 12.60 hrs, Volume= 2.062 af, Atten= 1%, Lag= 3.8 min  
Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.05 fps, Min. Travel Time= 2.2 min  
Avg. Velocity = 1.47 fps, Avg. Travel Time= 6.1 min

Peak Storage= 1,451 cf @ 12.56 hrs  
Average Depth at Peak Storage= 0.40' , Surface Width= 7.59'  
Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

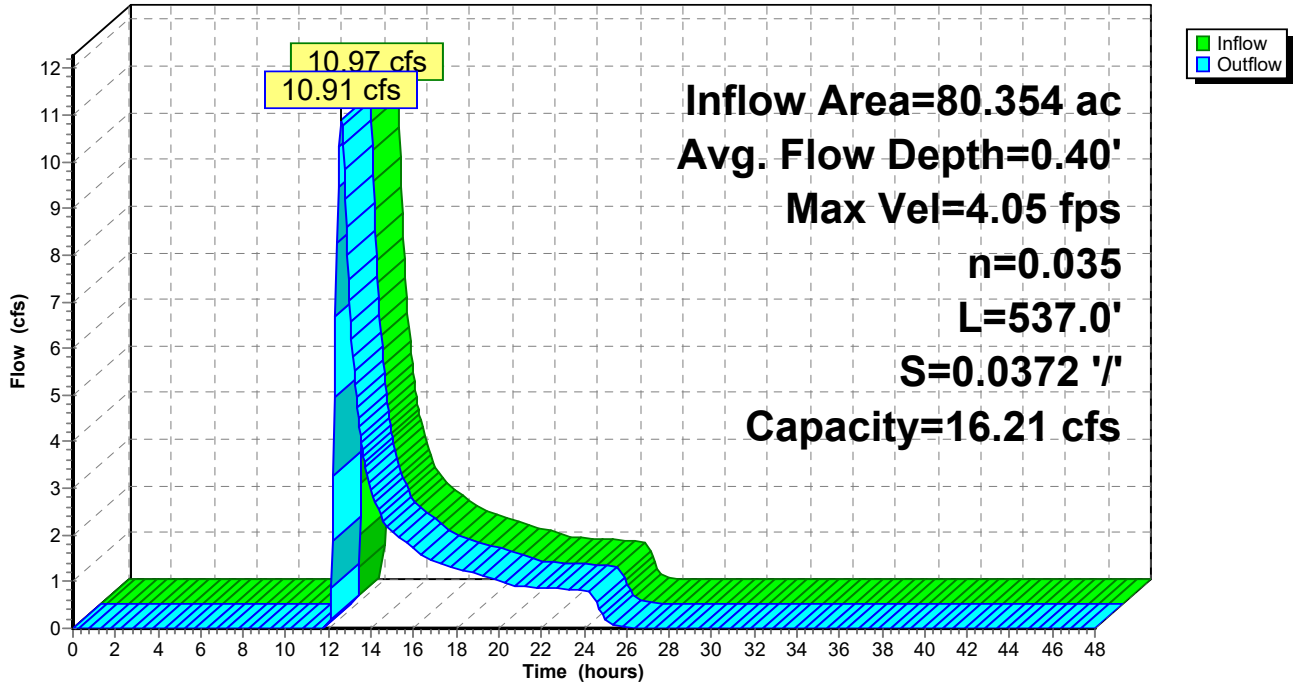
6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 8.00'  
Length= 537.0' Slope= 0.0372 '/'  
Inlet Invert= 388.00', Outlet Invert= 368.00'





Reach 45R:

Hydrograph



**Mill Pt Pre 1**

Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 1.65" for 1-year event  
 Inflow = 13.00 cfs @ 11.96 hrs, Volume= 0.666 af  
 Outflow = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af, Atten= 89%, Lag= 23.6 min  
 Primary = 1.38 cfs @ 12.36 hrs, Volume= 0.666 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 507.40' @ 12.36 hrs Surf.Area= 20,577 sf Storage= 10,579 cf

Plug-Flow detention time= 52.9 min calculated for 0.666 af (100% of inflow)  
 Center-of-Mass det. time= 52.6 min ( 843.2 - 790.5 )

| Volume           | Invert            | Avail.Storage | Storage Description  |                        |                  |
|------------------|-------------------|---------------|--|------------------------|------------------|
| #1               | 505.00'           | 349,932 cf    | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                        |                  |
| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet)                                     | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
| 505.00           | 50                | 25.0          | 0  | 0                      | 50               |
| 506.00           | 138               | 45.5          | 90   | 90                     | 170              |
| 508.00           | 39,705            | 811.5         | 28,123   | 28,213                 | 52,417           |
| 510.00           | 80,589            | 1,415.9       | 117,907  | 146,120                | 159,570          |
| 512.00           | 124,830           | 2,053.3       | 203,812  | 349,932                | 335,572          |

| Device | Routing | Invert  | Outlet Devices   |
|--------|---------|---------|--|
| #1     | Primary | 505.00' | <b>8.0" Round Culvert</b><br>L= 172.7' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |

**Primary OutFlow** Max=1.38 cfs @ 12.36 hrs HW=507.40' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.38 cfs @ 3.97 fps)



**Mill Pt Pre 1**

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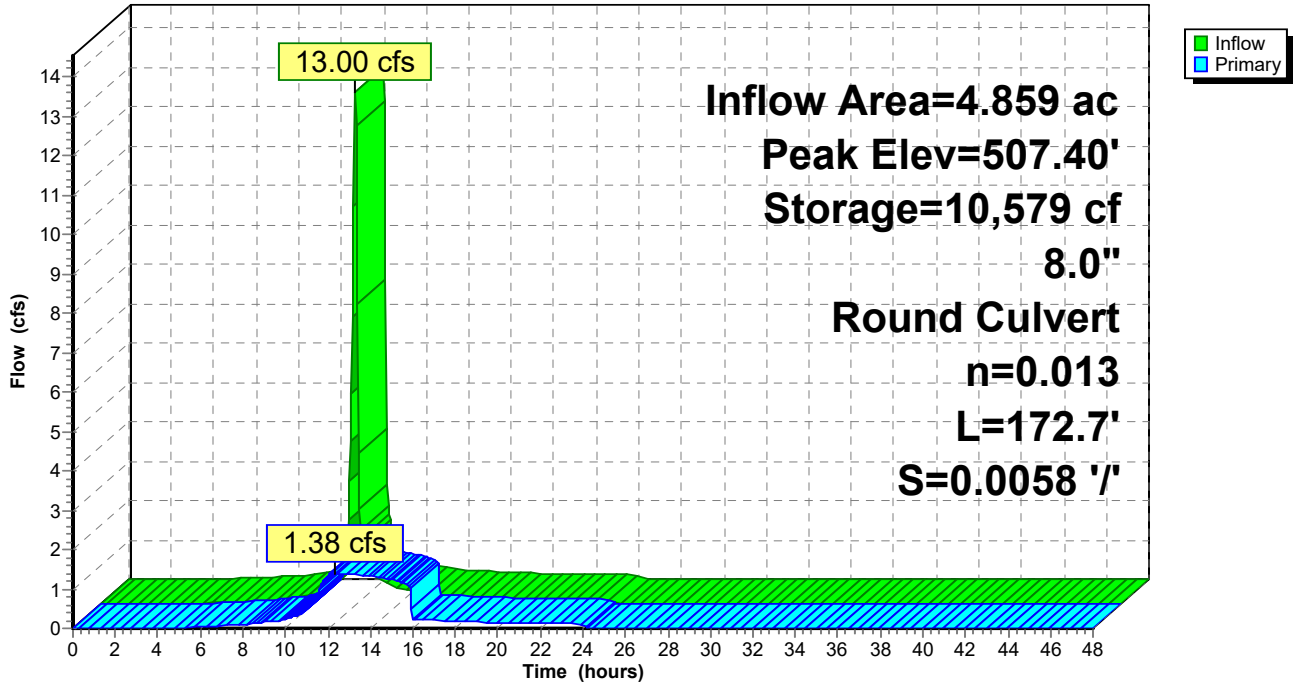
Type II 24-hr 1-year Rainfall=2.17"

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**Pond 12P: 12P**

Hydrograph

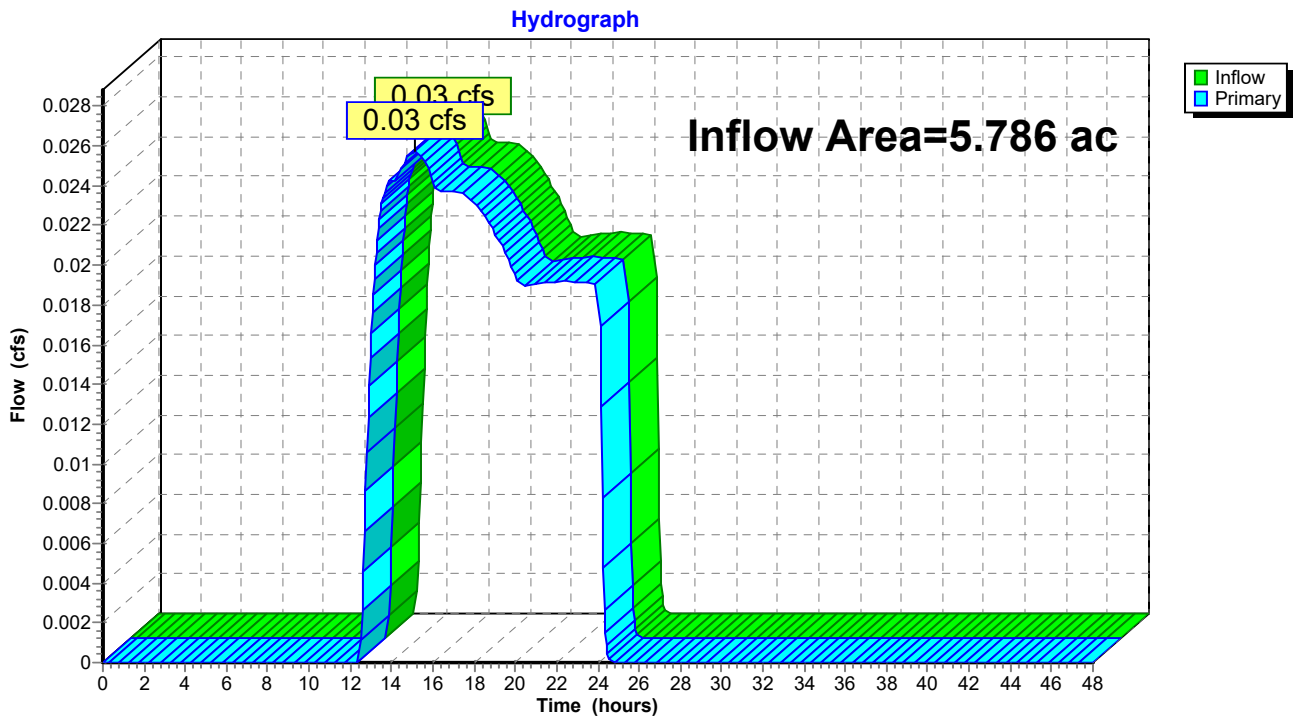


### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 0.04" for 1-year event  
Inflow = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af  
Primary = 0.03 cfs @ 15.11 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:





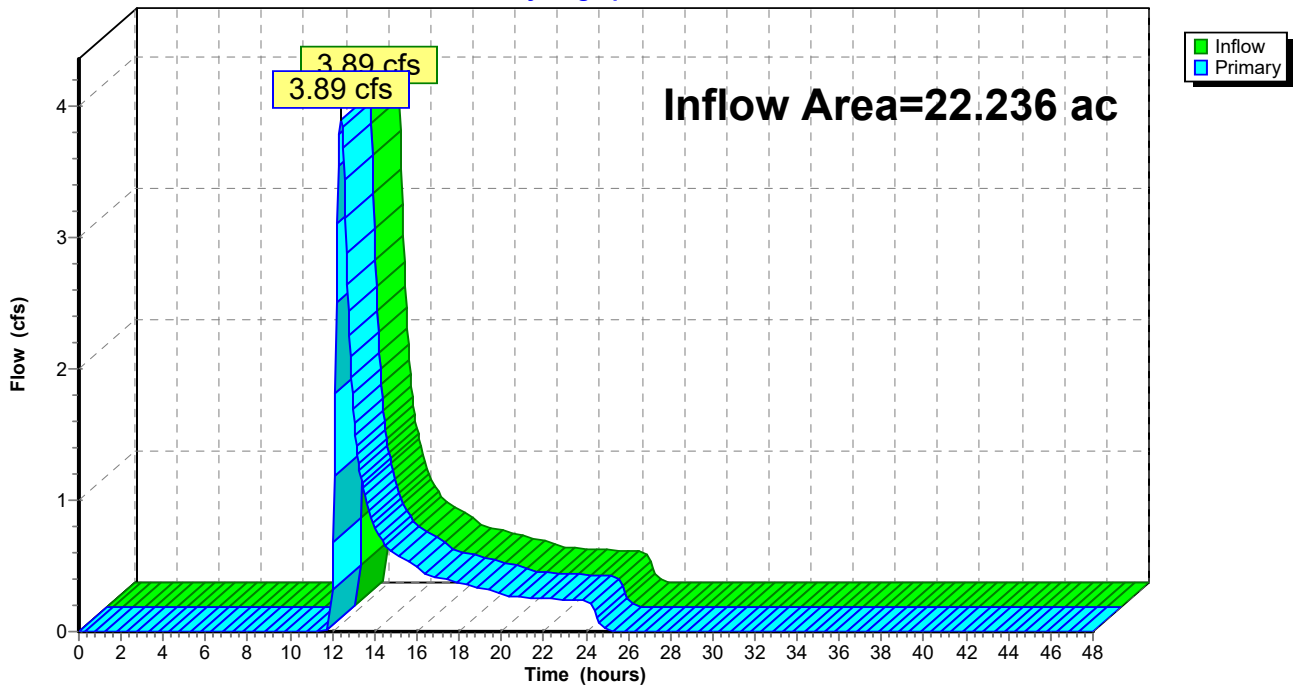
### Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 0.34" for 1-year event  
Inflow = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af  
Primary = 3.89 cfs @ 12.41 hrs, Volume= 0.624 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP10:

Hydrograph



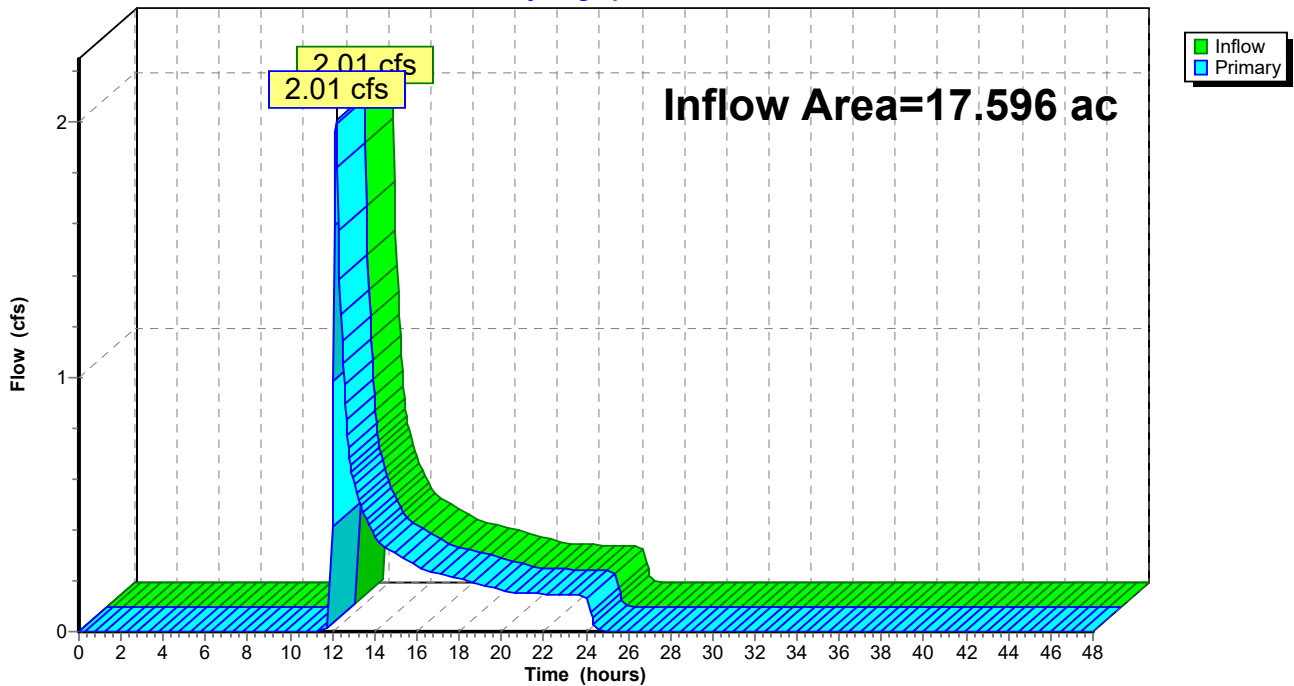
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af  
Primary = 2.01 cfs @ 12.18 hrs, Volume= 0.303 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph





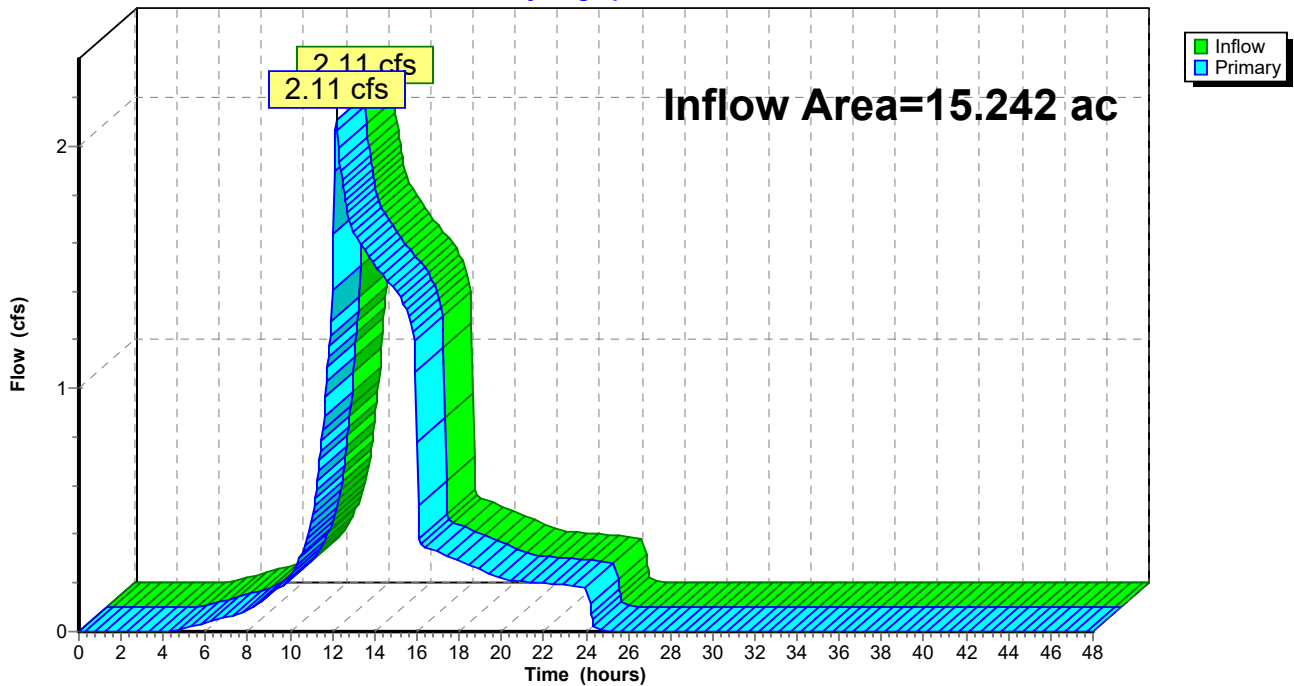
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 0.64" for 1-year event  
Inflow = 2.11 cfs @ 12.20 hrs, Volume= 0.808 af  
Primary = 2.11 cfs @ 12.20 hrs, Volume= 0.808 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



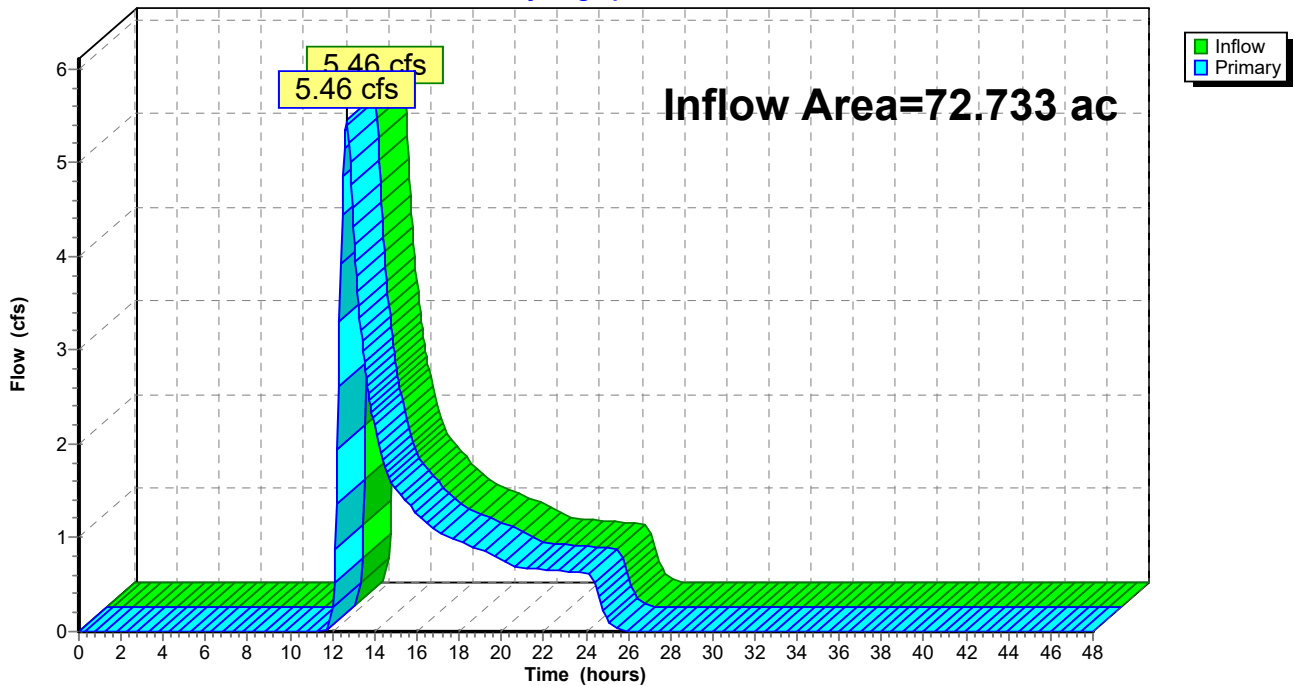
### Summary for Link SP14:

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af  
Primary = 5.46 cfs @ 12.67 hrs, Volume= 1.393 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP14:

Hydrograph





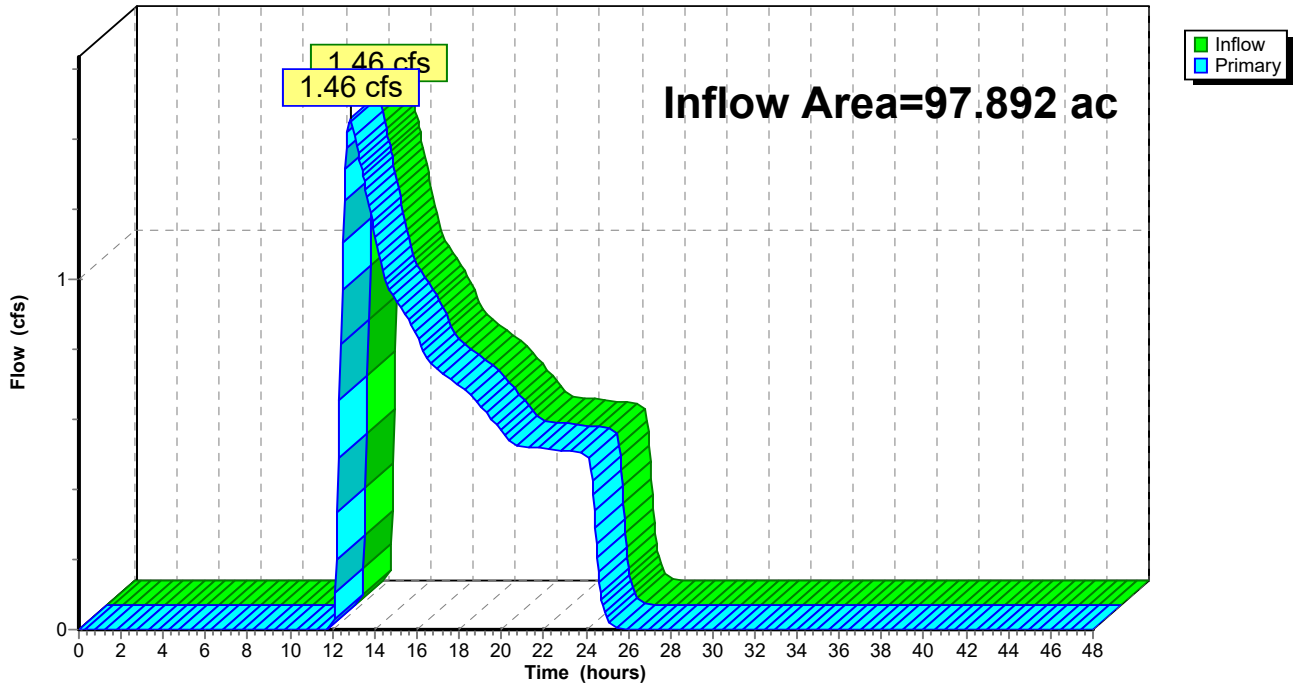
### Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af  
Primary = 1.46 cfs @ 12.84 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP17:

Hydrograph



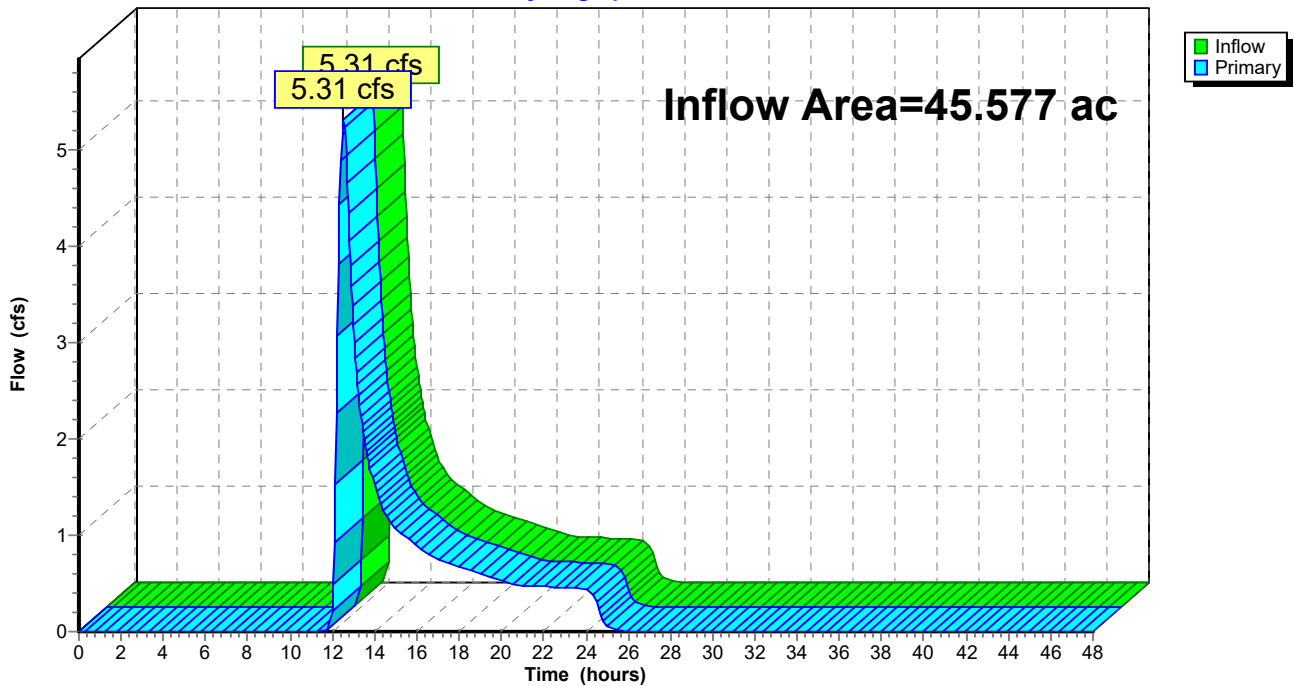
### Summary for Link SP18:

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af  
Primary = 5.31 cfs @ 12.52 hrs, Volume= 1.065 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP18:

Hydrograph



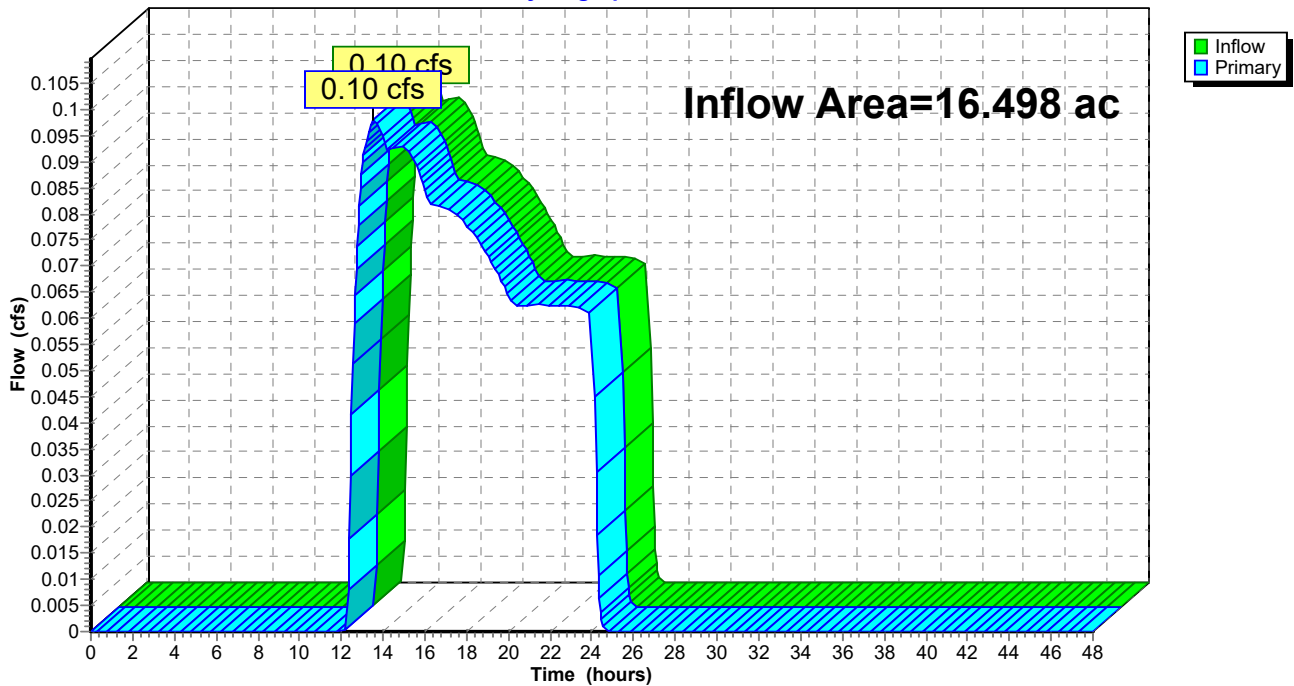
### Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 0.05" for 1-year event  
Inflow = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af  
Primary = 0.10 cfs @ 13.52 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP2:

Hydrograph





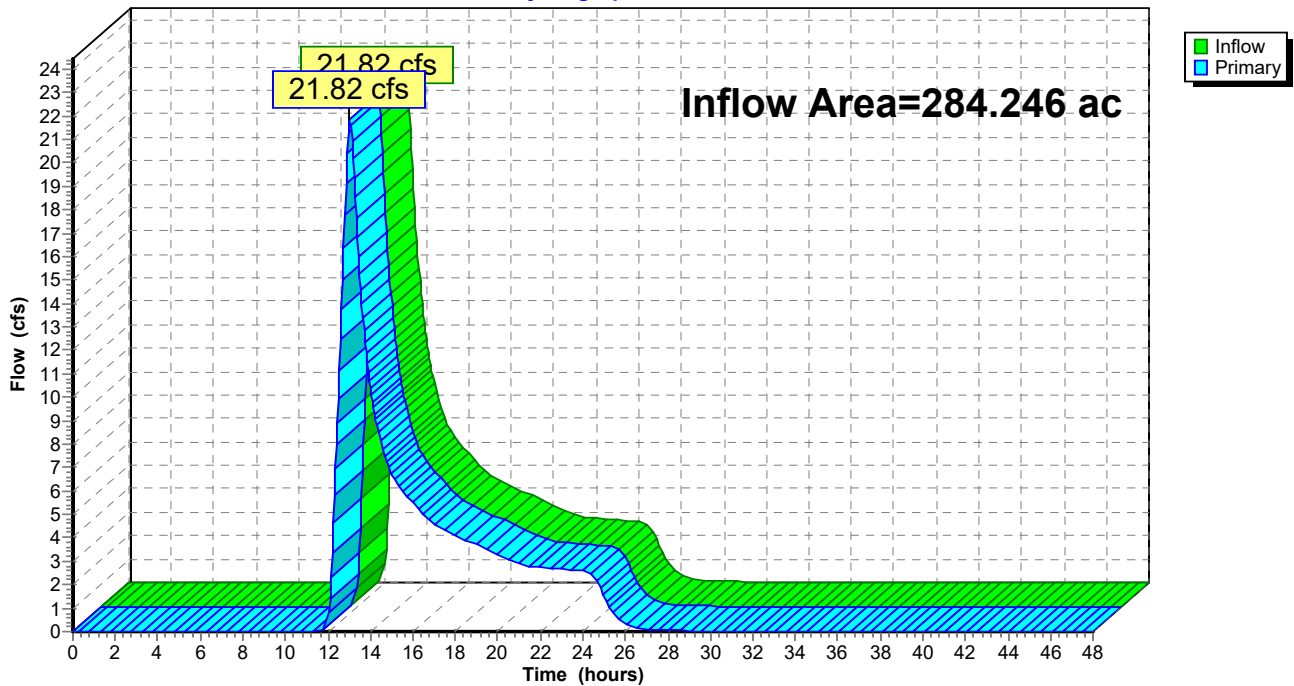
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 21.82 cfs @ 13.03 hrs, Volume= 5.947 af  
Primary = 21.82 cfs @ 13.03 hrs, Volume= 5.947 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph



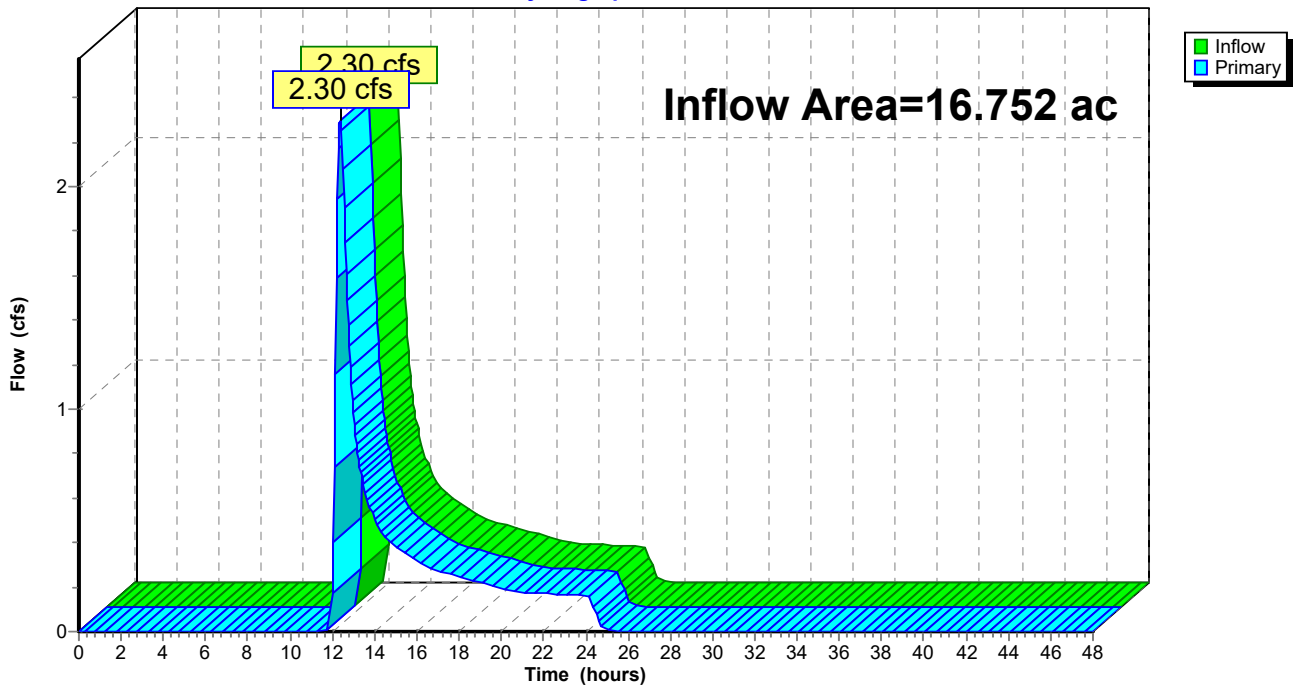
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af  
Primary = 2.30 cfs @ 12.38 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



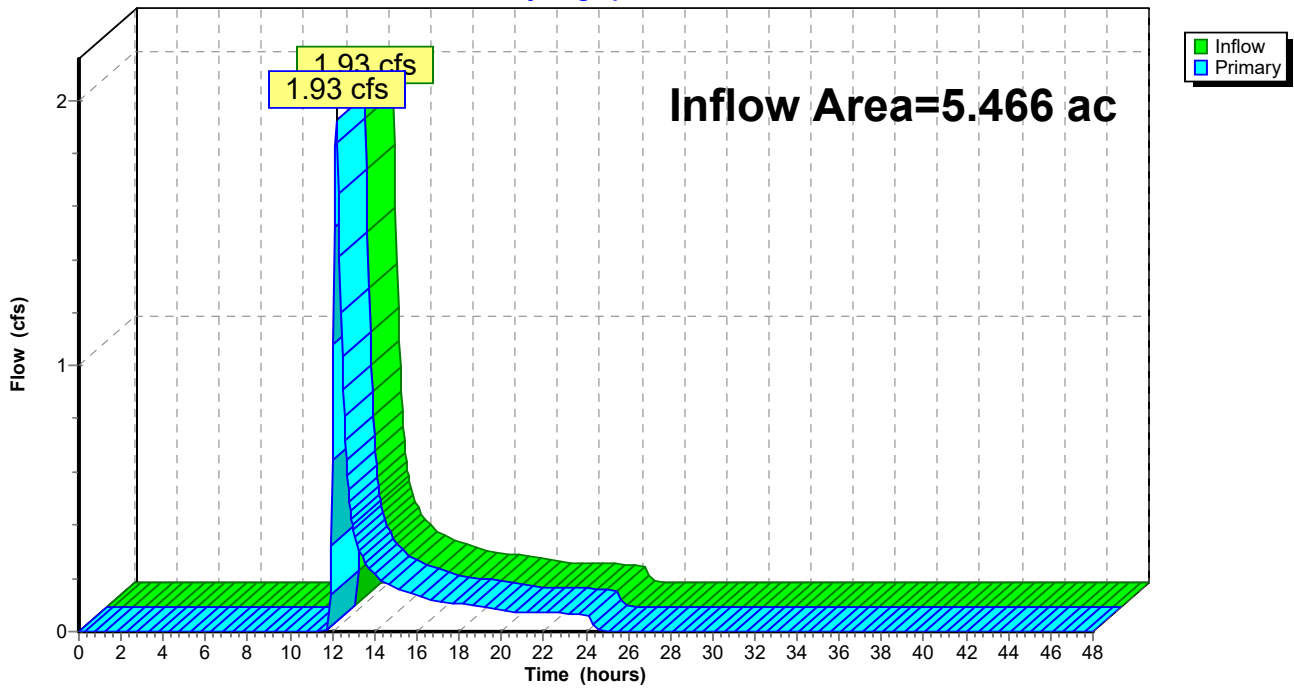
Summary for Link SP24:

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 0.43" for 1-year event  
Inflow = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af  
Primary = 1.93 cfs @ 12.20 hrs, Volume= 0.197 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP24:

Hydrograph





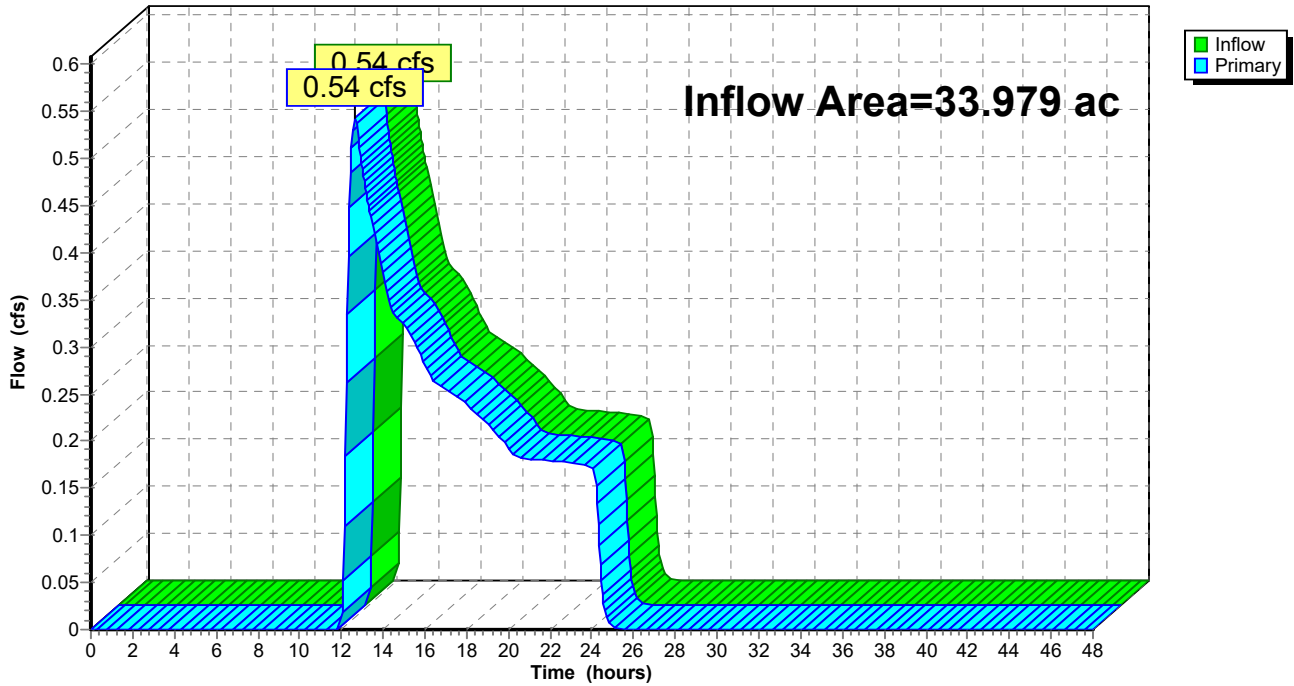
### Summary for Link SP3:

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af  
Primary = 0.54 cfs @ 12.64 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP3:

Hydrograph



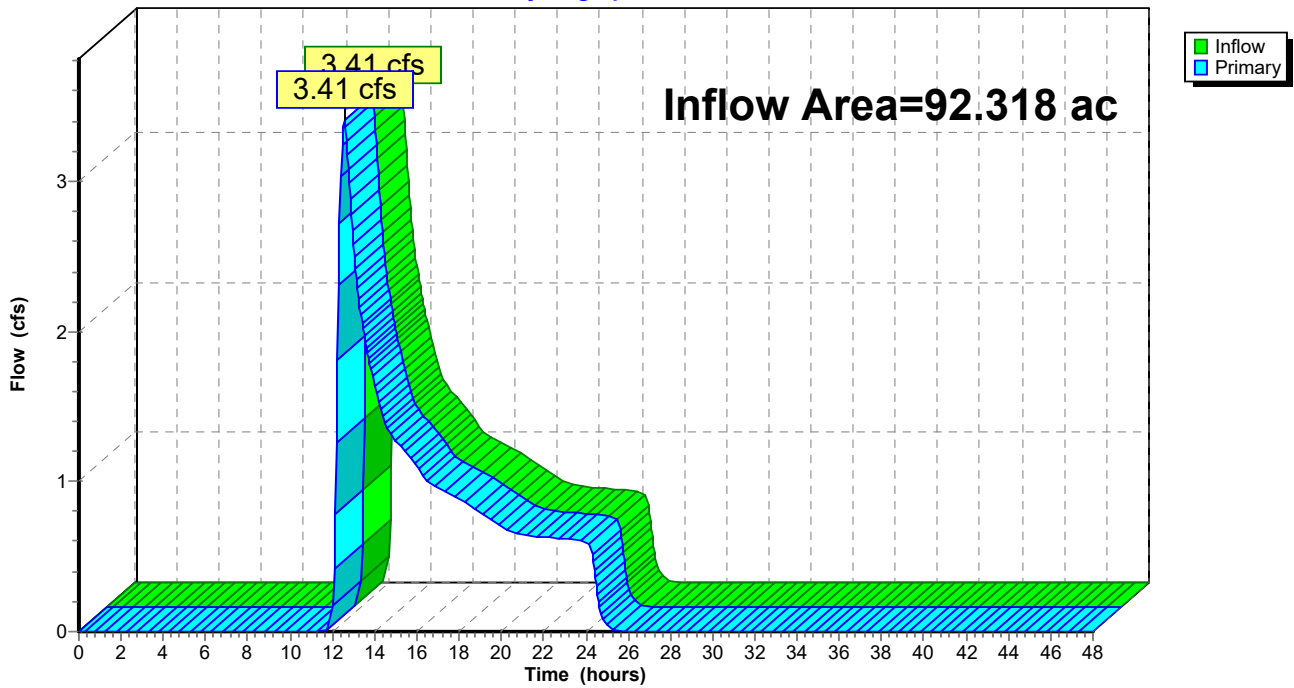
### Summary for Link SP4:

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af  
Primary = 3.41 cfs @ 12.55 hrs, Volume= 1.110 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP4:

Hydrograph



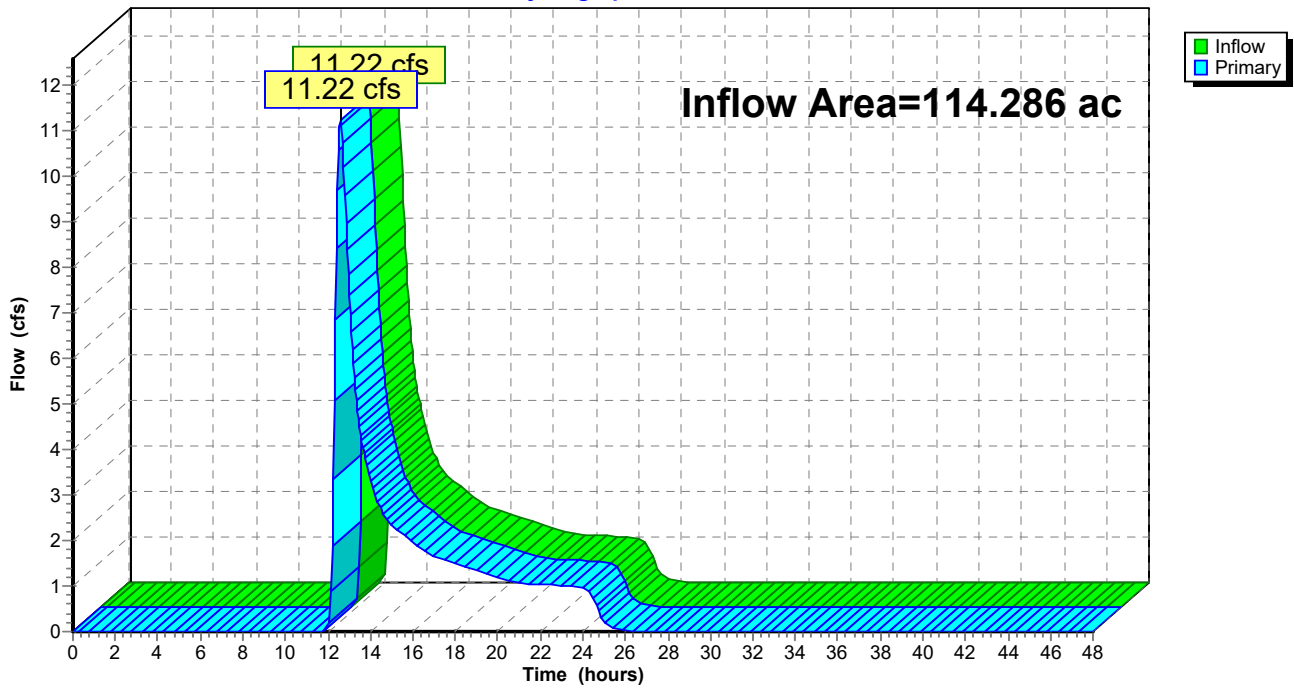
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 0.24" for 1-year event  
Inflow = 11.22 cfs @ 12.60 hrs, Volume= 2.284 af  
Primary = 11.22 cfs @ 12.60 hrs, Volume= 2.284 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph





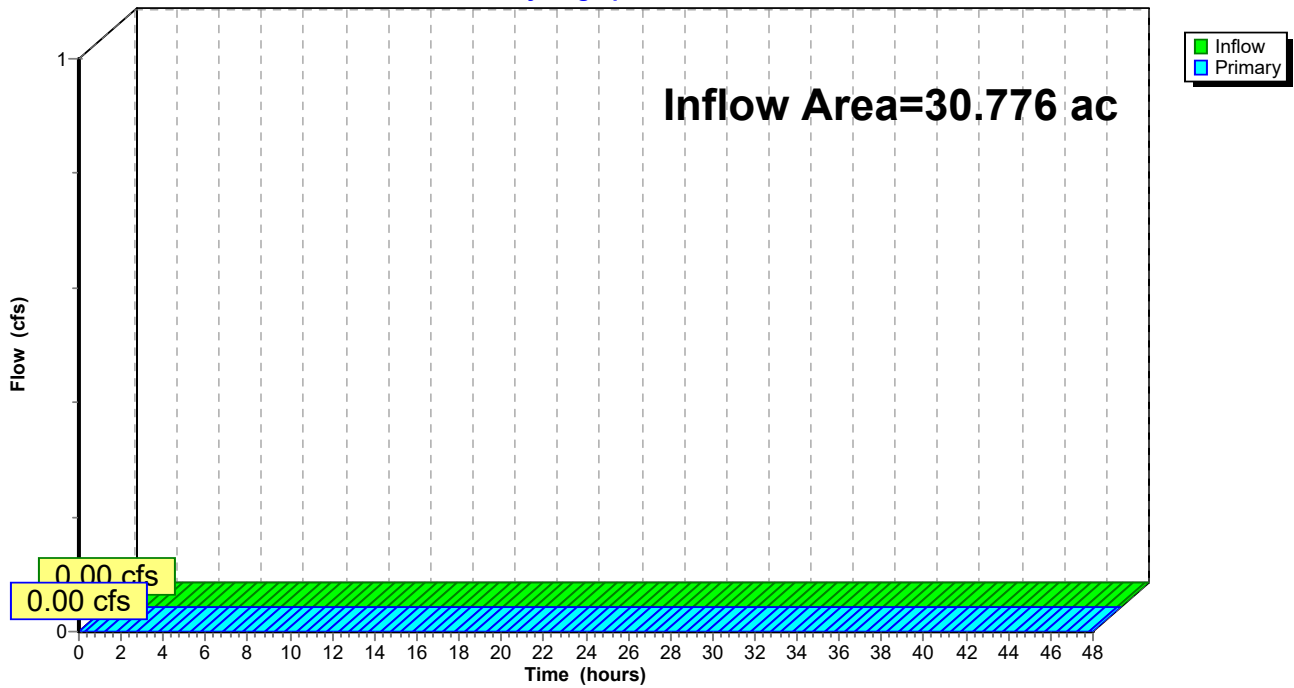
Summary for Link SP46:

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.00" for 1-year event  
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP46:

Hydrograph

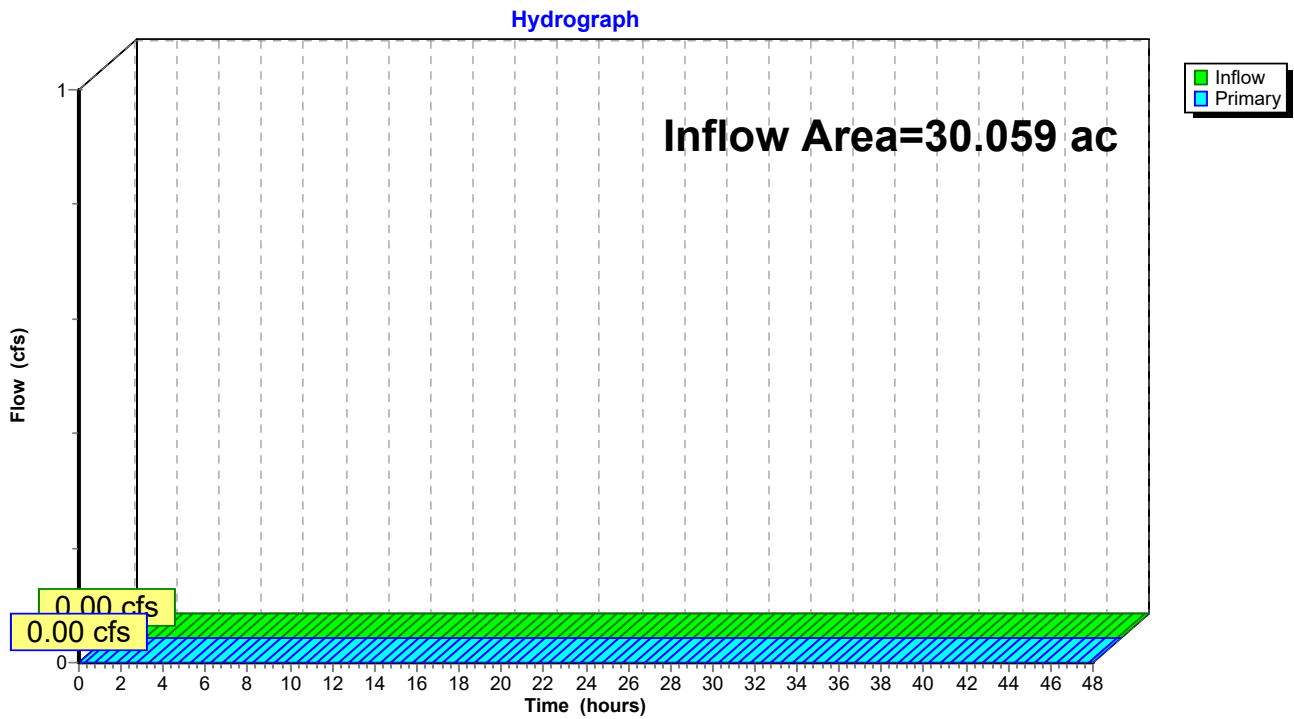


### Summary for Link SP47:

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.00" for 1-year event  
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP47:



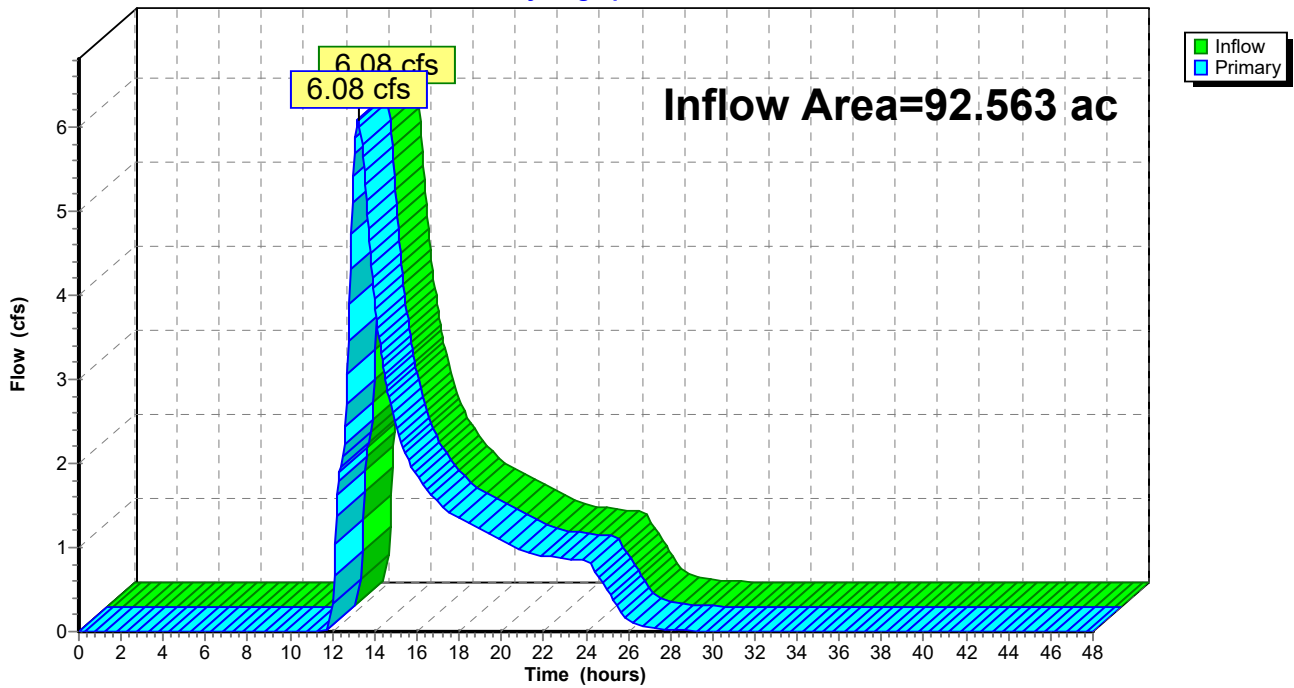
Summary for Link SP5:

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 6.08 cfs @ 13.23 hrs, Volume= 1.924 af  
Primary = 6.08 cfs @ 13.23 hrs, Volume= 1.924 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP5:

Hydrograph





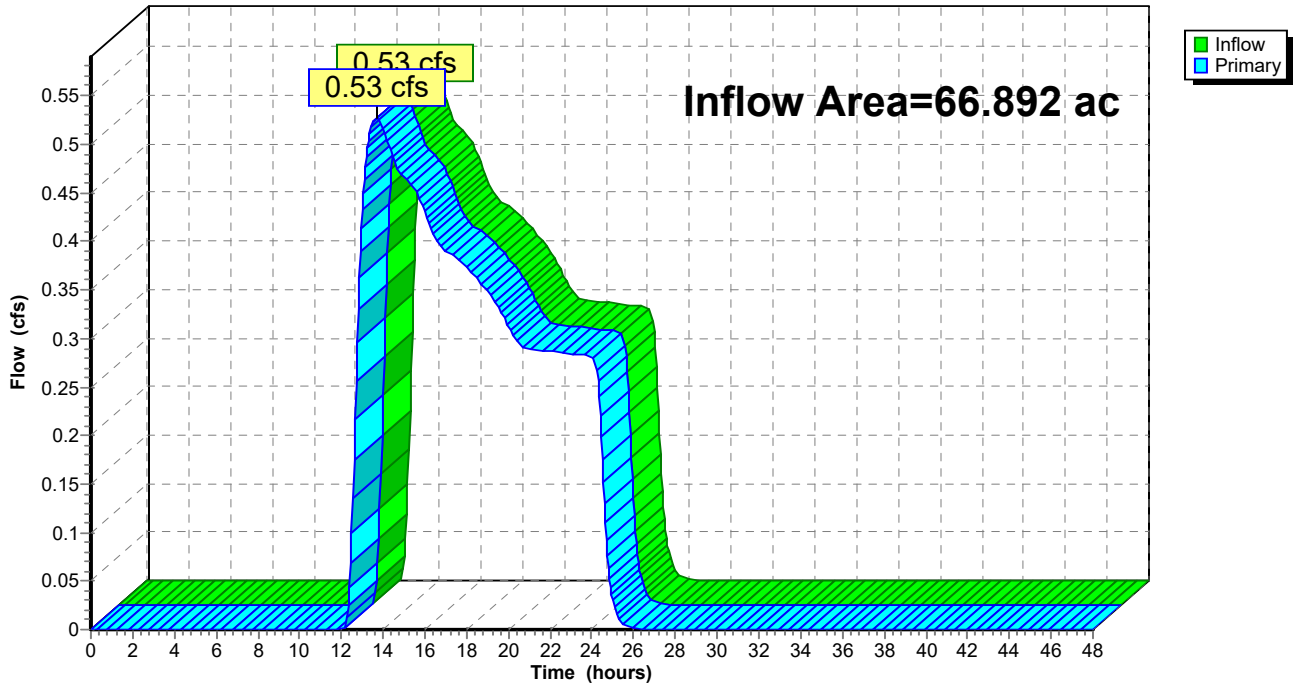
Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 0.07" for 1-year event  
Inflow = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af  
Primary = 0.53 cfs @ 13.70 hrs, Volume= 0.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP7:

Hydrograph



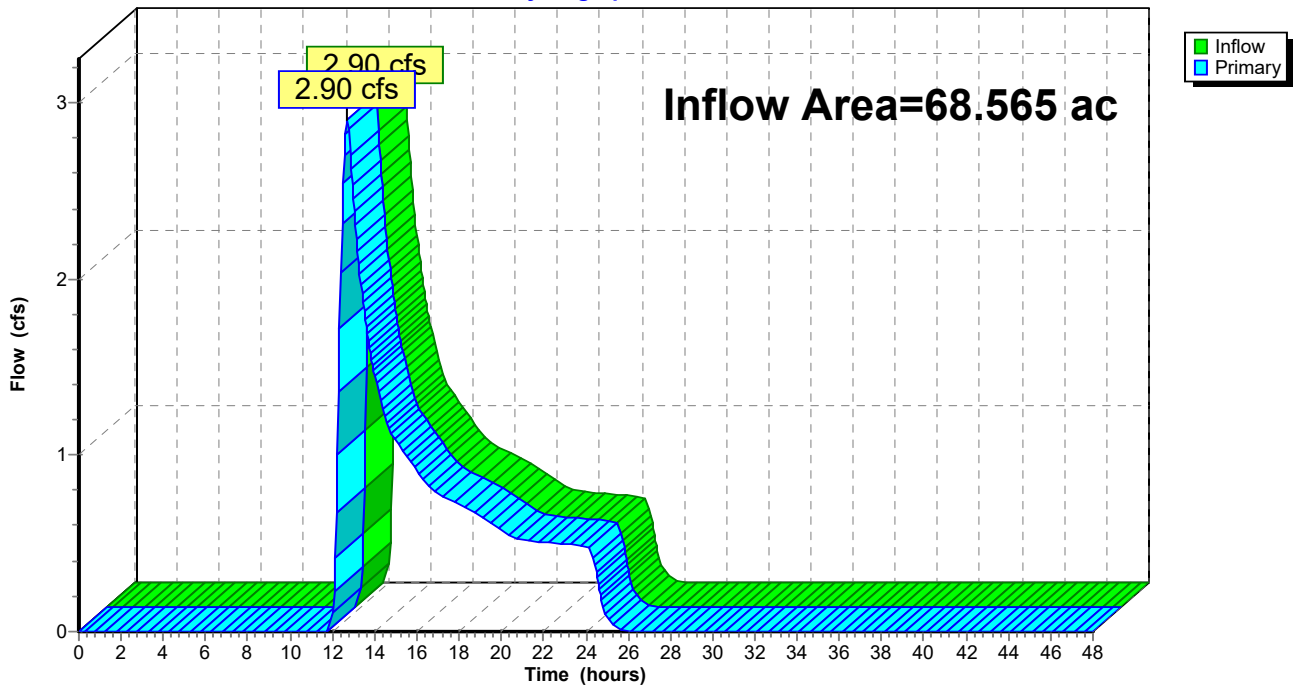
Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af  
Primary = 2.90 cfs @ 12.69 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP9:

Hydrograph



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*Type II 24-hr 10-year Rainfall=3.50"*

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |   |
|---------------------------------|---|
| <b>Subcatchment 1S: Sub 1</b>   | Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=0.38"<br>Flow Length=1,005' Tc=13.1 min CN=56 Runoff=1.74 cfs 0.183 af   |
| <b>Subcatchment 2S: Sub 2</b>   | Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=0.42"<br>Flow Length=1,307' Tc=14.1 min CN=57 Runoff=5.64 cfs 0.572 af  |
| <b>Subcatchment 3S: Sub 3</b>   | Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=0.53"<br>Flow Length=2,507' Tc=25.3 min CN=60 Runoff=11.88 cfs 1.505 af |
| <b>Subcatchment 4S: Sub 4</b>   | Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=0.66"<br>Flow Length=4,160' Tc=35.5 min CN=63 Runoff=35.64 cfs 5.074 af |
| <b>Subcatchment 5S: Sub 5</b>   | Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=0.75"<br>Flow Length=1,946' Tc=24.6 min CN=65 Runoff=10.52 cfs 1.084 af |
| <b>Subcatchment 6S: Sub 6</b>   | Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=0.80"<br>Flow Length=1,894' Tc=48.6 min CN=66 Runoff=6.63 cfs 1.087 af  |
| <b>Subcatchment 7S: Sub 7</b>   | Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=0.45"<br>Flow Length=2,117' Tc=40.9 min CN=58 Runoff=12.87 cfs 2.525 af |
| <b>Subcatchment 8S: Sub 8</b>   | Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=0.95"<br>Flow Length=2,902' Tc=63.3 min CN=69 Runoff=25.13 cfs 4.687 af |
| <b>Subcatchment 9S: Sub 9</b>   | Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=0.71"<br>Flow Length=2,945' Tc=45.6 min CN=64 Runoff=24.39 cfs 4.029 af |
| <b>Subcatchment 10S: Sub 10</b> | Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=1.06"<br>Flow Length=2,047' Tc=36.1 min CN=71 Runoff=16.44 cfs 1.971 af |
| <b>Subcatchment 11S: Sub 11</b> | Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=0.80"<br>Flow Length=1,622' Tc=18.4 min CN=66 Runoff=14.10 cfs 1.174 af |
| <b>Subcatchment 12S: Sub 12</b> | Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=2.94"<br>Tc=6.0 min CN=95 Runoff=22.37 cfs 1.190 af                      |
| <b>Subcatchment 13S: Sub 13</b> | Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=0.71"<br>Flow Length=848' Tc=17.7 min CN=64 Runoff=7.14 cfs 0.610 af    |
| <b>Subcatchment 14S: Sub 14</b> | Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=0.85"<br>Flow Length=4,131' Tc=49.6 min CN=67 Runoff=31.66 cfs 5.152 af |
| <b>Subcatchment 17S: Sub 17</b> | Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=0.53"<br>Flow Length=3,526' Tc=35.1 min CN=60 Runoff=27.14 cfs 4.335 af |
| <b>Subcatchment 18S: Sub 18</b> | Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=0.95"<br>Flow Length=2,382' Tc=42.2 min CN=69 Runoff=26.15 cfs 3.623 af |



**Mill Pt Pre 1**

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*Type II 24-hr 10-year Rainfall=3.50"*

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|                                   |   |
|-----------------------------------|---|
| <b>Subcatchment 19S: Sub 19</b>   | Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=1.12"<br>Flow Length=1,760' Tc=30.4 min CN=72 Runoff=25.36 cfs 2.653 af                         |
| <b>Subcatchment 20S: Sub 20</b>   | Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=0.80"<br>Flow Length=1,829' Tc=20.0 min CN=66 Runoff=53.77 cfs 4.704 af                         |
| <b>Subcatchment 21S: Sub 21</b>   | Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=0.80"<br>Flow Length=4,201' Tc=42.5 min CN=66 Runoff=55.18 cfs 8.204 af                        |
| <b>Subcatchment 22S: Sub 22</b>   | Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=1.06"<br>Flow Length=1,834' Tc=47.0 min CN=71 Runoff=38.12 cfs 5.522 af                         |
| <b>Subcatchment 23S: Sub 23</b>   | Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=0.95"<br>Flow Length=1,297' Tc=33.0 min CN=69 Runoff=11.48 cfs 1.332 af                         |
| <b>Subcatchment 24S: Sub 24</b>   | Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=1.24"<br>Flow Length=1,025' Tc=23.1 min CN=74 Runoff=6.60 cfs 0.565 af                           |
| <b>Subcatchment 43: Subcat 43</b> | Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=1.01"<br>Flow Length=2,795' Tc=40.7 min CN=70 Runoff=21.57 cfs 2.862 af                         |
| <b>Subcatchment 44: Subcat 44</b> | Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=1.01"<br>Flow Length=2,470' Tc=41.7 min CN=70 Runoff=28.83 cfs 3.889 af                         |
| <b>Subcatchment 45: Subcat 45</b> | Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=0.49"<br>Flow Length=2,198' Tc=29.8 min CN=59 Runoff=9.30 cfs 1.390 af                          |
| <b>Subcatchment 46: Subcat 46</b> | Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.04"<br>Flow Length=1,524' Tc=54.0 min CN=42 Runoff=0.12 cfs 0.096 af                          |
| <b>Subcatchment 47: Subcat 47</b> | Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.03"<br>Flow Length=1,854' Tc=31.7 min CN=41 Runoff=0.09 cfs 0.065 af                          |
| <b>Reach 6R: W-NSD-35</b>         | Avg. Flow Depth=0.49' Max Vel=3.83 fps Inflow=25.13 cfs 4.687 af<br>n=0.035 L=1,882.0' S=0.0276 '/' Capacity=90.86 cfs Outflow=24.41 cfs 4.687 af   |
| <b>Reach 13.1R:</b>               | Avg. Flow Depth=0.09' Max Vel=2.26 fps Inflow=1.49 cfs 1.190 af<br>n=0.030 L=165.0' S=0.0727 '/' Capacity=48.67 cfs Outflow=1.49 cfs 1.190 af       |
| <b>Reach 13.2R:</b>               | Avg. Flow Depth=0.14' Max Vel=4.74 fps Inflow=1.49 cfs 1.190 af<br>n=0.035 L=232.0' S=0.2069 '/' Capacity=1,230.81 cfs Outflow=1.49 cfs 1.190 af    |
| <b>Reach 20.1R: S-KCF-6</b>       | Avg. Flow Depth=1.68' Max Vel=2.95 fps Inflow=75.36 cfs 7.357 af<br>n=0.030 L=1,405.0' S=0.0028 '/' Capacity=141.69 cfs Outflow=64.59 cfs 7.357 af  |
| <b>Reach 20.2R:</b>               | Avg. Flow Depth=1.21' Max Vel=4.35 fps Inflow=64.59 cfs 7.357 af<br>n=0.035 L=1,322.0' S=0.0121 '/' Capacity=250.41 cfs Outflow=60.88 cfs 7.357 af  |
| <b>Reach 22.1R: S-KCF-5</b>       | Avg. Flow Depth=1.15' Max Vel=3.56 fps Inflow=55.18 cfs 8.204 af<br>n=0.030 L=665.0' S=0.0060 '/' Capacity=89.91 cfs Outflow=54.76 cfs 8.204 af     |
| <b>Reach 22.2R:</b>               | Avg. Flow Depth=1.76' Max Vel=4.27 fps Inflow=115.67 cfs 15.561 af<br>n=0.035 L=707.0' S=0.0075 '/' Capacity=86.27 cfs Outflow=114.21 cfs 15.561 af |

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|                      |   |
|----------------------|---|
| <b>Reach 44R:</b>    | Avg. Flow Depth=0.84' Max Vel=4.11 fps Inflow=21.57 cfs 2.862 af<br>n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=21.39 cfs 2.862 af  |
| <b>Reach 45R:</b>    | Avg. Flow Depth=1.11' Max Vel=5.98 fps Inflow=50.04 cfs 6.750 af<br>n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=49.71 cfs 6.750 af |
| <b>Pond 12P: 12P</b> | Peak Elev=507.82' Storage=21,706 cf Inflow=22.37 cfs 1.190 af<br>8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.49 cfs 1.190 af     |
| <b>Link SP1:</b>     | Inflow=1.74 cfs 0.183 af<br>Primary=1.74 cfs 0.183 af   |
| <b>Link SP10:</b>    | Inflow=16.44 cfs 1.971 af<br>Primary=16.44 cfs 1.971 af   |
| <b>Link SP11:</b>    | Inflow=14.10 cfs 1.174 af<br>Primary=14.10 cfs 1.174 af   |
| <b>Link SP13:</b>    | Inflow=8.61 cfs 1.800 af<br>Primary=8.61 cfs 1.800 af   |
| <b>Link SP14:</b>    | Inflow=31.66 cfs 5.152 af<br>Primary=31.66 cfs 5.152 af   |
| <b>Link SP17:</b>    | Inflow=27.14 cfs 4.335 af<br>Primary=27.14 cfs 4.335 af   |
| <b>Link SP18:</b>    | Inflow=26.15 cfs 3.623 af<br>Primary=26.15 cfs 3.623 af   |
| <b>Link SP2:</b>     | Inflow=5.64 cfs 0.572 af<br>Primary=5.64 cfs 0.572 af   |
| <b>Link SP22:</b>    | Inflow=149.08 cfs 21.084 af<br>Primary=149.08 cfs 21.084 af   |
| <b>Link SP23:</b>    | Inflow=11.48 cfs 1.332 af<br>Primary=11.48 cfs 1.332 af   |
| <b>Link SP24:</b>    | Inflow=6.60 cfs 0.565 af<br>Primary=6.60 cfs 0.565 af   |
| <b>Link SP3:</b>     | Inflow=11.88 cfs 1.505 af<br>Primary=11.88 cfs 1.505 af   |
| <b>Link SP4:</b>     | Inflow=35.64 cfs 5.074 af<br>Primary=35.64 cfs 5.074 af   |
| <b>Link SP43:</b>    | Inflow=57.18 cfs 8.140 af<br>Primary=57.18 cfs 8.140 af   |

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**Link SP46:**

Inflow=0.12 cfs 0.096 af  
Primary=0.12 cfs 0.096 af

**Link SP47:**

Inflow=0.09 cfs 0.065 af  
Primary=0.09 cfs 0.065 af

**Link SP5:**

Inflow=31.00 cfs 6.859 af  
Primary=31.00 cfs 6.859 af

**Link SP7:**

Inflow=12.87 cfs 2.525 af  
Primary=12.87 cfs 2.525 af

**Link SP9:**

Inflow=24.39 cfs 4.029 af  
Primary=24.39 cfs 4.029 af

**Total Runoff Area = 1,129.462 ac   Runoff Volume = 70.083 af   Average Runoff Depth = 0.74"**  
**98.88% Pervious = 1,116.768 ac   1.12% Impervious = 12.694 ac**



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**Summary for Subcatchment 1S: Sub 1**

Runoff = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af, Depth= 0.38"  
 Routed to Link SP1 :

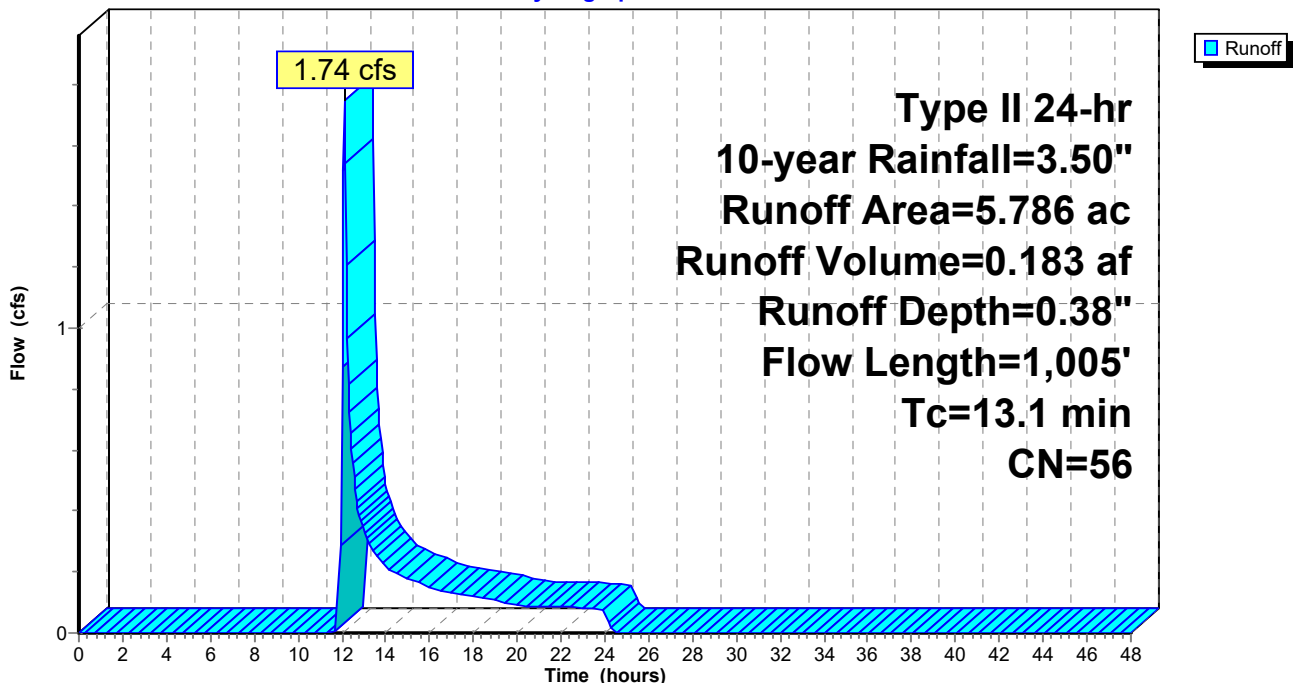
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.500     | 58 | Meadow, non-grazed, HSG B |
| 4.286     | 55 | Woods, Good, HSG B        |
| 5.786     | 56 | Weighted Average          |
| 5.786     |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0620        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.9      | 427           | 0.2390        | 2.44              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.0      | 263           | 0.0980        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.1      | 215           | 0.4050        | 3.18              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 13.1     | 1,005         | Total         |                   |                |  |

**Subcatchment 1S: Sub 1**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 2S: Sub 2**

Runoff = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af, Depth= 0.42"  
 Routed to Link SP2 :

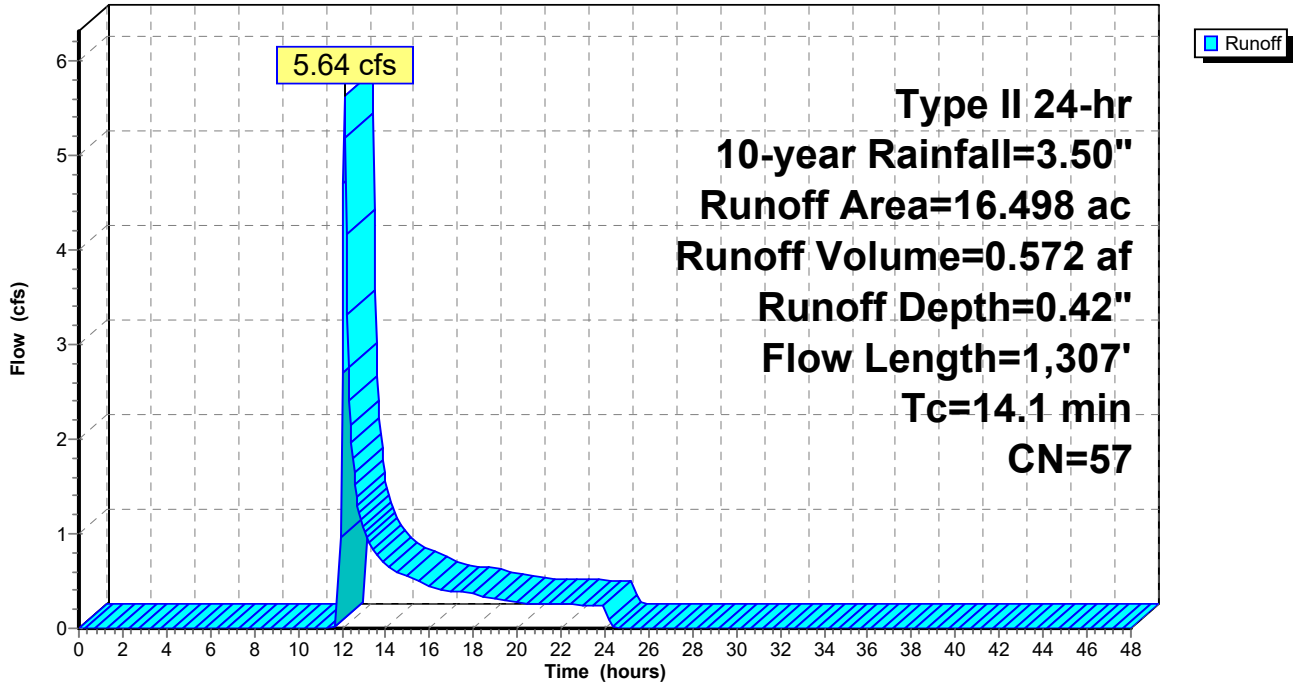
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.619     | 58 | Meadow, non-grazed, HSG B |
| 7.879     | 55 | Woods, Good, HSG B        |
| 16.498    | 57 | Weighted Average          |
| 16.498    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 5.8      | 100           | 0.1010        | 0.29              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.8      | 407           | 0.2420        | 2.46              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 225           | 0.1200        | 2.42              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 169           | 0.1830        | 2.14              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.5      | 113           | 0.5100        | 3.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.2      | 293           | 0.0220        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 14.1     | 1,307         | Total         |                   |                |  |

Subcatchment 2S: Sub 2

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 3S: Sub 3**

Runoff = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af, Depth= 0.53"  
 Routed to Link SP3 :

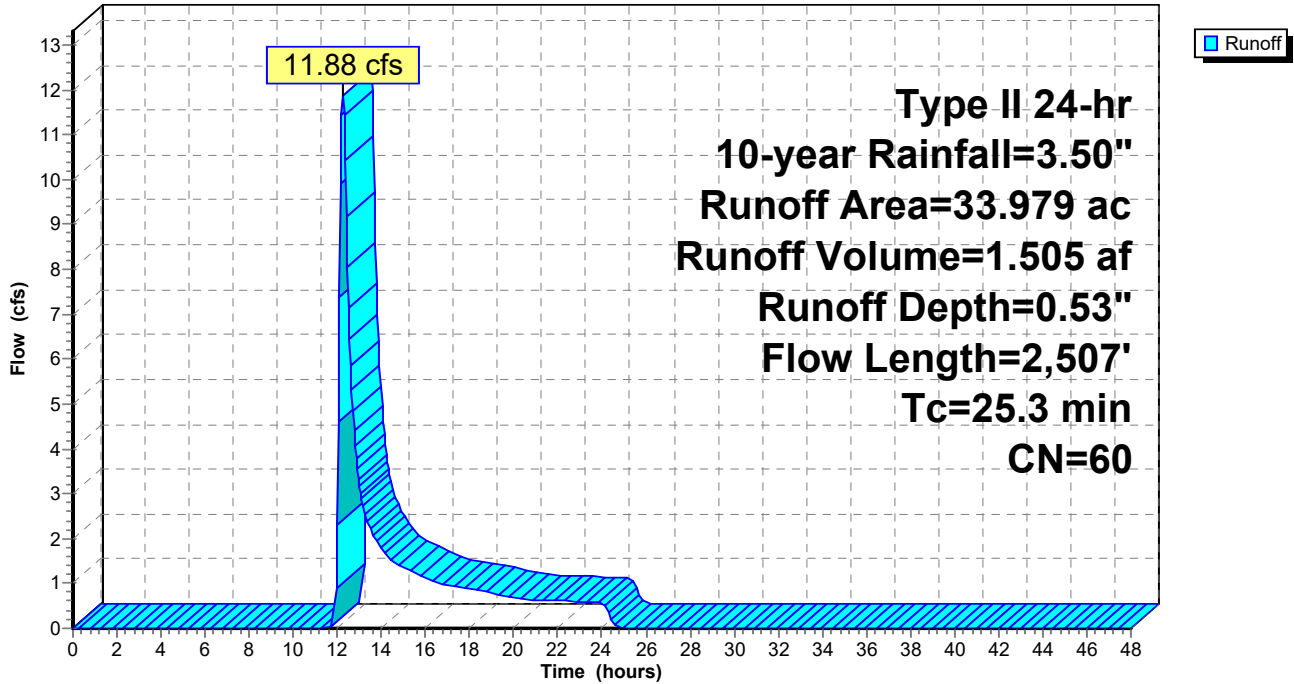
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 17.630    | 58 | Meadow, non-grazed, HSG B |
| 7.609     | 71 | Meadow, non-grazed, HSG C |
| 8.319     | 55 | Woods, Good, HSG B        |
| 0.421     | 70 | Woods, Good, HSG C        |
| 33.979    | 60 | Weighted Average          |
| 33.979    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.1      | 147           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.5      | 480           | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.2      | 375           | 0.0770        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 337           | 0.0950        | 1.54              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.5      | 632           |               | 4.29              |                | <b>Direct Entry, CF</b>  |
| 1.0      | 436           |               | 7.04              |                | <b>Direct Entry, CF</b>  |
| 25.3     | 2,507         | Total         |                   |                |  |

Subcatchment 3S: Sub 3

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 4S: Sub 4**

Runoff = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af, Depth= 0.66"  
 Routed to Link SP4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

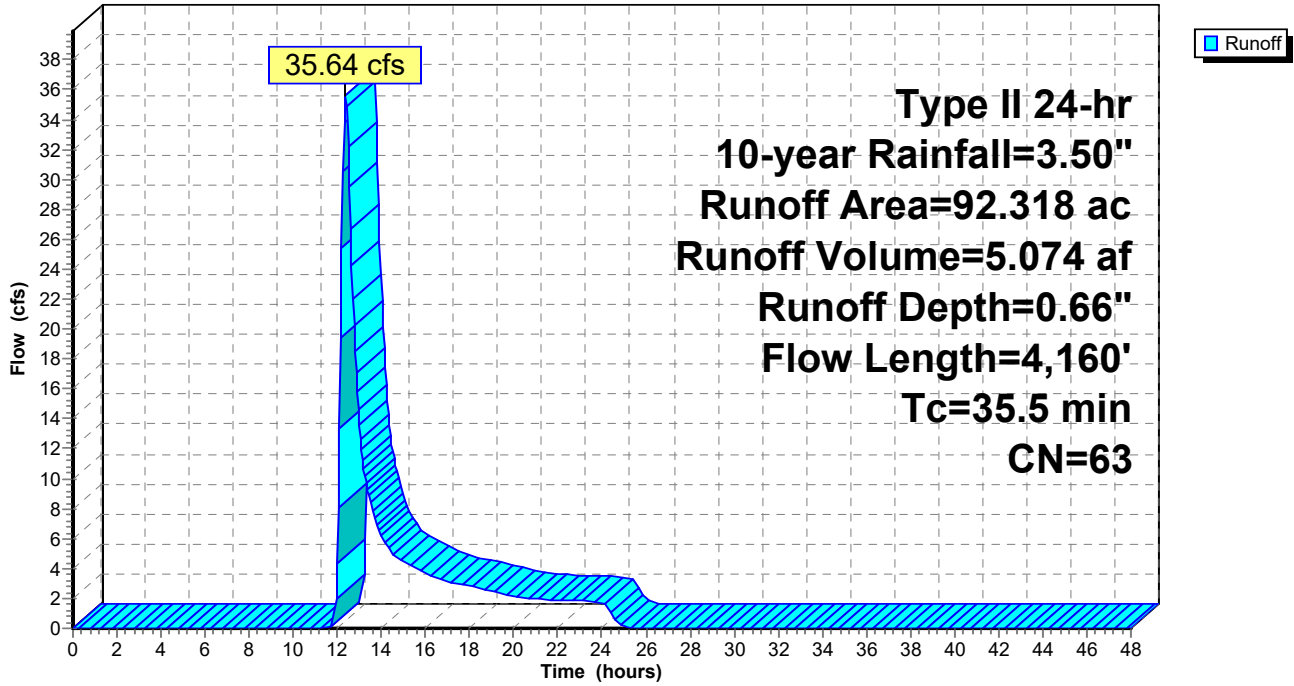
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.259   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 42.704    | 58 | Meadow, non-grazed, HSG B |
| 33.177    | 71 | Meadow, non-grazed, HSG C |
| 1.021     | 48 | Brush, Good, HSG B        |
| 1.934     | 65 | Brush, Good, HSG C        |
| 9.736     | 55 | Woods, Good, HSG B        |
| 3.163     | 70 | Woods, Good, HSG C        |
| 92.318    | 63 | Weighted Average          |
| 92.059    |    | 99.72% Pervious Area      |
| 0.259     |    | 0.28% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.9      | 100           | 0.1900        | 0.17              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"     |
| 1.8      | 295           | 0.1550        | 2.76              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 17.1     | 1,344         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.7      | 2,421         |               | 6.01              |                | <b>Direct Entry, CF</b>  |
| 35.5     | 4,160         | Total         |                   |                |  |



Subcatchment 4S: Sub 4

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 10.52 cfs @ 12.22 hrs, Volume= 1.084 af, Depth= 0.75"  
 Routed to Link SP5 :

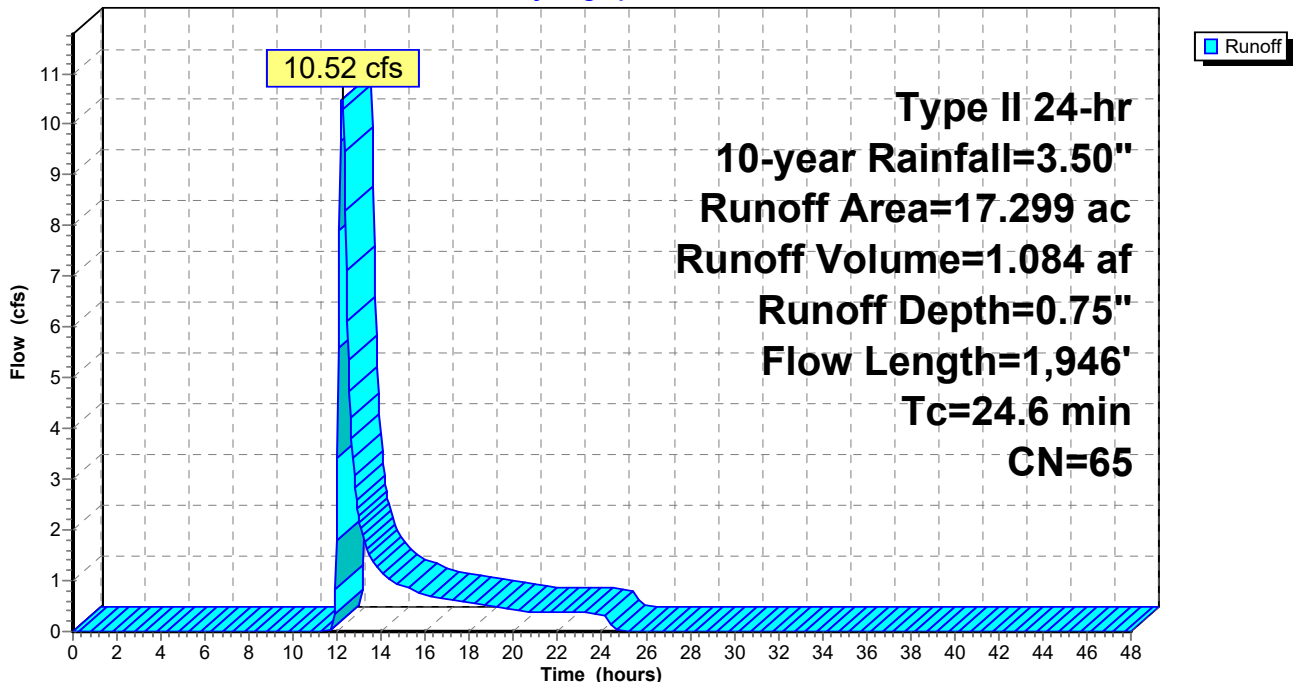
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.709     | 58 | Meadow, non-grazed, HSG B |
| 8.414     | 71 | Meadow, non-grazed, HSG C |
| 2.614     | 55 | Woods, Good, HSG B        |
| 1.562     | 70 | Woods, Good, HSG C        |
| 17.299    | 65 | Weighted Average          |
| 17.299    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.9      | 607           | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.3      | 195           | 0.0780        | 1.40              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 4.7      | 1,044         |               | 3.70              |                | <b>Direct Entry, CF</b>  |
| 24.6     | 1,946         | Total         |                   |                |  |

**Subcatchment 5S: Sub 5**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 6.63 cfs @ 12.55 hrs, Volume= 1.087 af, Depth= 0.80"  
 Routed to Link SP5 :

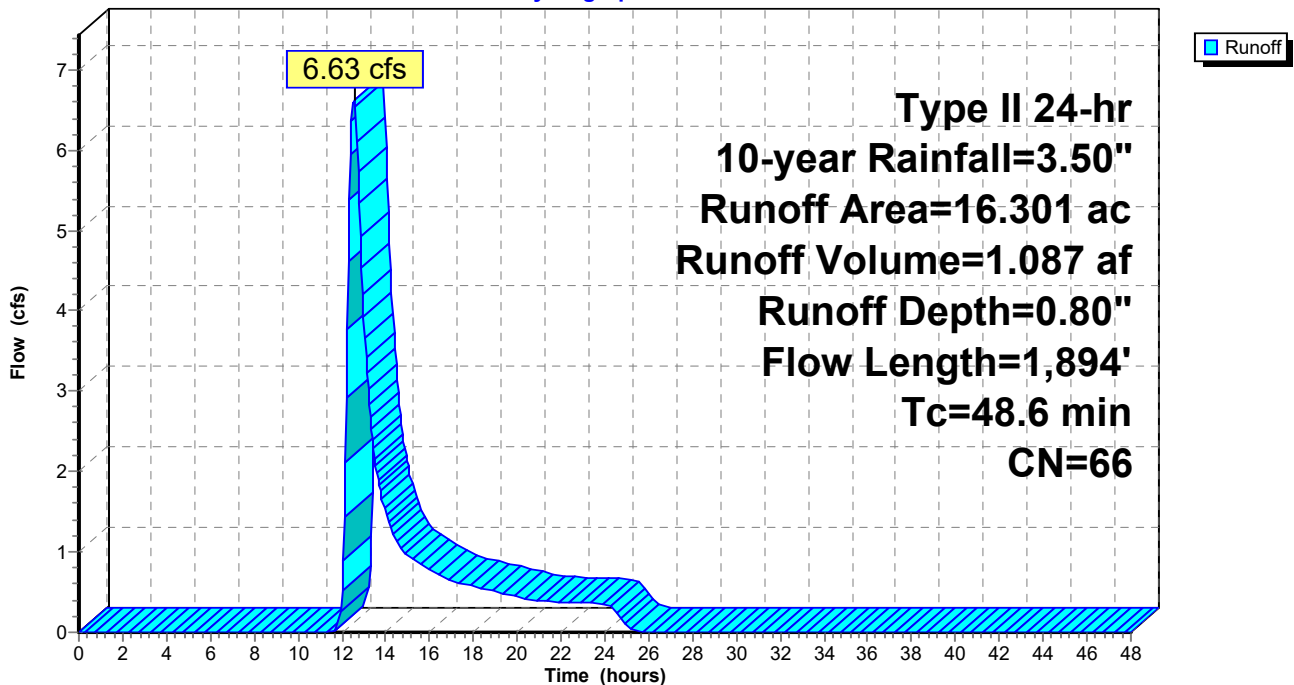
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.743     | 58 | Meadow, non-grazed, HSG B |
| 9.449     | 71 | Meadow, non-grazed, HSG C |
| 1.459     | 55 | Woods, Good, HSG B        |
| 0.650     | 70 | Woods, Good, HSG C        |
| 16.301    | 66 | Weighted Average          |
| 16.301    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 19.8     | 1,554         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 240           |               | 3.81              |                | <b>Direct Entry, CF</b>  |
| 48.6     | 1,894         | Total         |                   |                |  |

**Subcatchment 6S: Sub 6**

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af, Depth= 0.45"  
 Routed to Link SP7 :

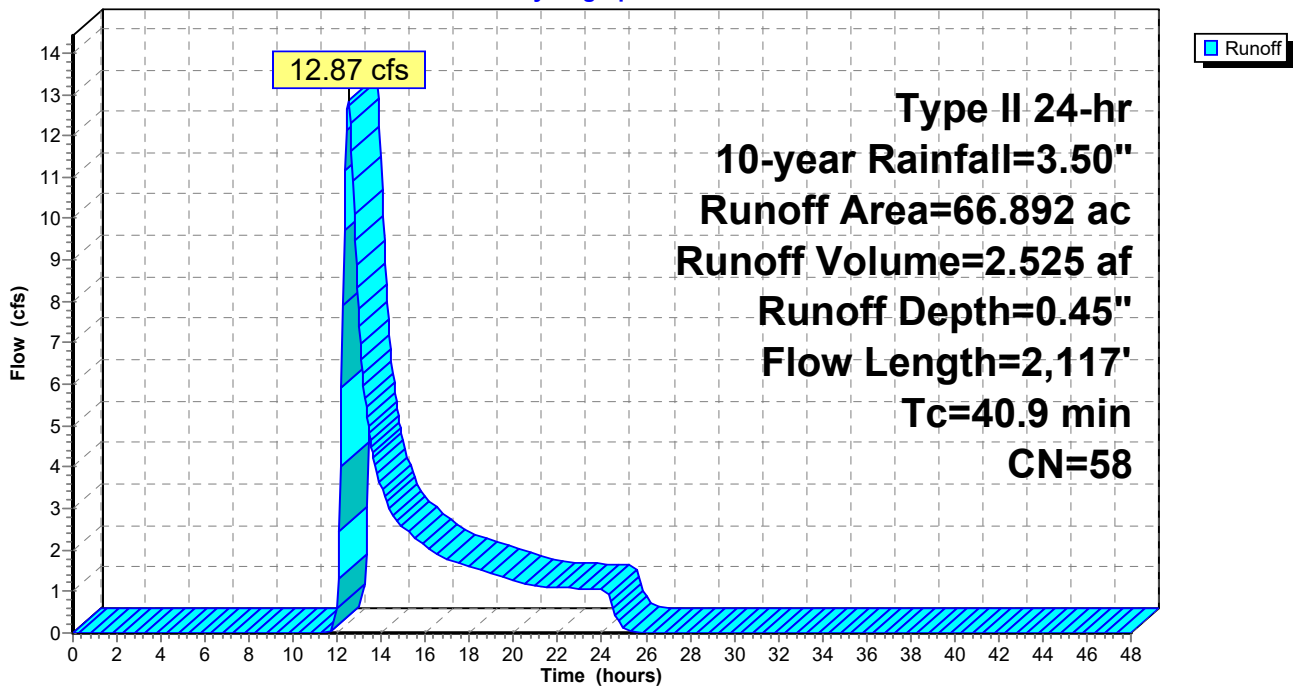
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 50.262    | 58 | Meadow, non-grazed, HSG B |
| 0.107     | 71 | Meadow, non-grazed, HSG C |
| 1.124     | 78 | Meadow, non-grazed, HSG D |
| 15.225    | 55 | Woods, Good, HSG B        |
| 0.174     | 77 | Woods, Good, HSG D        |
| 66.892    | 58 | Weighted Average          |
| 66.892    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 9.7      | 786           | 0.0370        | 1.35              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 1,231         |               | 6.01              |                | <b>Direct Entry,</b>   |
| 40.9     | 2,117         | Total         |                   |                |  |

**Subcatchment 7S: Sub 7**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 25.13 cfs @ 12.74 hrs, Volume= 4.687 af, Depth= 0.95"  
Routed to Reach 6R : W-NSD-35

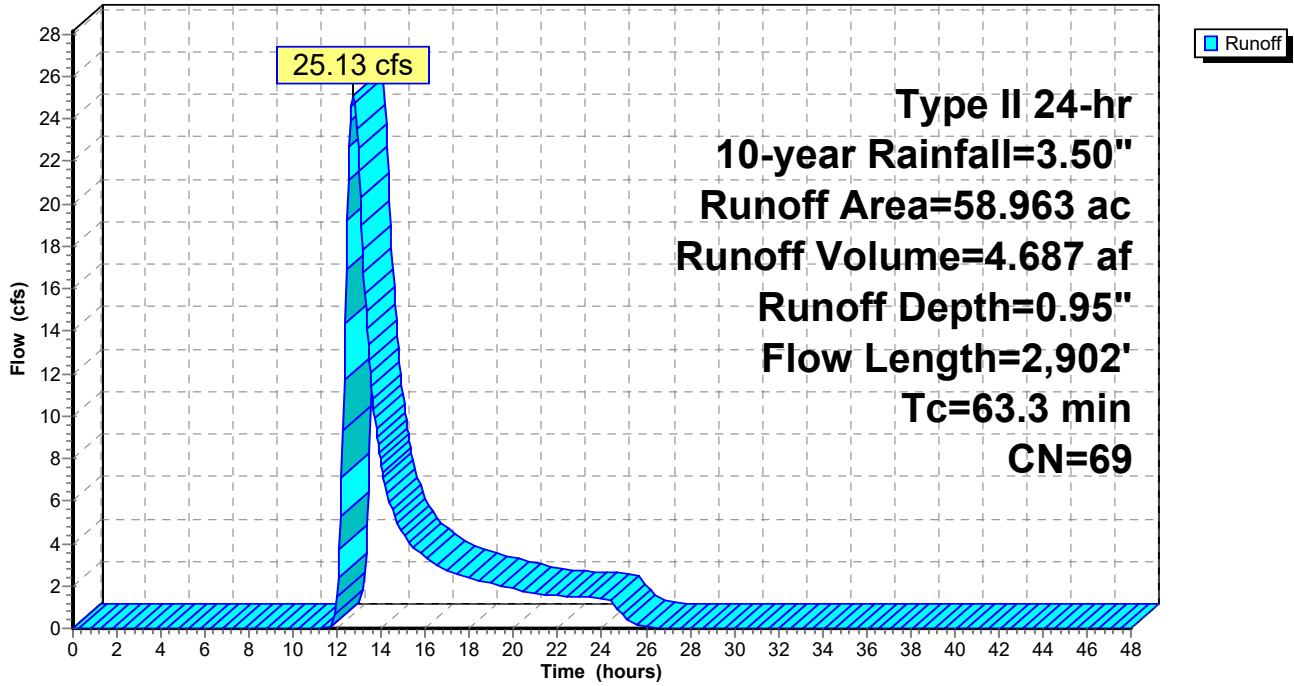
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 6.143     | 58 | Meadow, non-grazed, HSG B |
| 28.450    | 71 | Meadow, non-grazed, HSG C |
| 8.117     | 78 | Meadow, non-grazed, HSG D |
| 5.746     | 55 | Woods, Good, HSG B        |
| 8.581     | 70 | Woods, Good, HSG C        |
| 1.926     | 77 | Woods, Good, HSG D        |
| 58.963    | 69 | Weighted Average          |
| 58.963    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 23.7     | 100           | 0.0030        | 0.07              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.6      | 315           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 23.1     | 727           | 0.0110        | 0.52              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.9      | 1,760         |               | 2.97              |                | <b>Direct Entry, CF</b>  |
| 63.3     | 2,902         | Total         |                   |                |  |

Subcatchment 8S: Sub 8

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 9S: Sub 9**

Runoff = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af, Depth= 0.71"

Routed to Link SP9 :

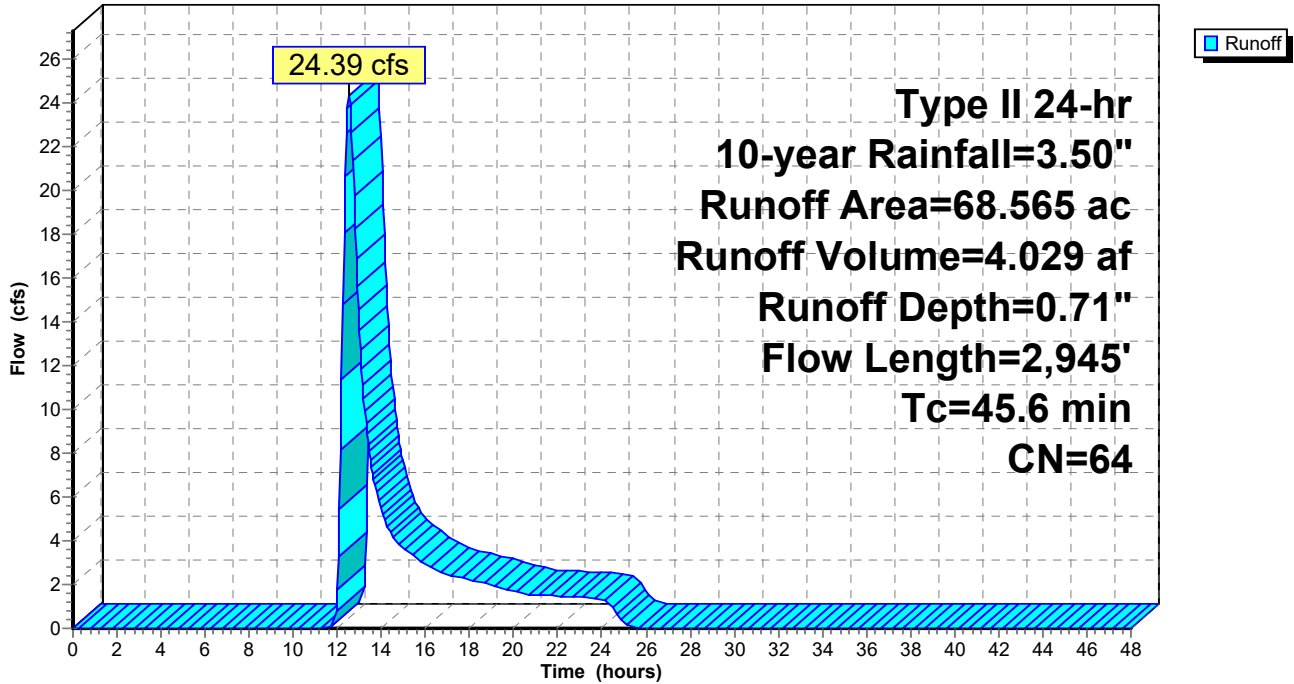
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.430   | 98 | Surface water                 |
| * 0.332   | 98 | Impervious surface            |
| * 2.628   | 96 | Gravel surface                |
| 6.553     | 61 | >75% Grass cover, Good, HSG B |
| 8.430     | 74 | >75% Grass cover, Good, HSG C |
| 23.963    | 58 | Meadow, non-grazed, HSG B     |
| 7.746     | 71 | Meadow, non-grazed, HSG C     |
| 2.113     | 78 | Meadow, non-grazed, HSG D     |
| 2.871     | 48 | Brush, Good, HSG B            |
| 0.820     | 65 | Brush, Good, HSG C            |
| 0.014     | 73 | Brush, Good, HSG D            |
| 11.085    | 55 | Woods, Good, HSG B            |
| 1.580     | 70 | Woods, Good, HSG C            |
| 68.565    | 64 | Weighted Average              |
| 67.803    |    | 98.89% Pervious Area          |
| 0.762     |    | 1.11% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 13.8     | 841           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.9     | 1,254         | 0.0750        | 1.92              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 156           |               | 1.63              |                | <b>Direct Entry,</b>   |
| 1.4      | 594           |               | 7.07              |                | <b>Direct Entry,</b>   |
| 45.6     | 2,945         | Total         |                   |                |  |

Subcatchment 9S: Sub 9

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 10S: Sub 10**

Runoff = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af, Depth= 1.06"

Routed to Link SP10 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

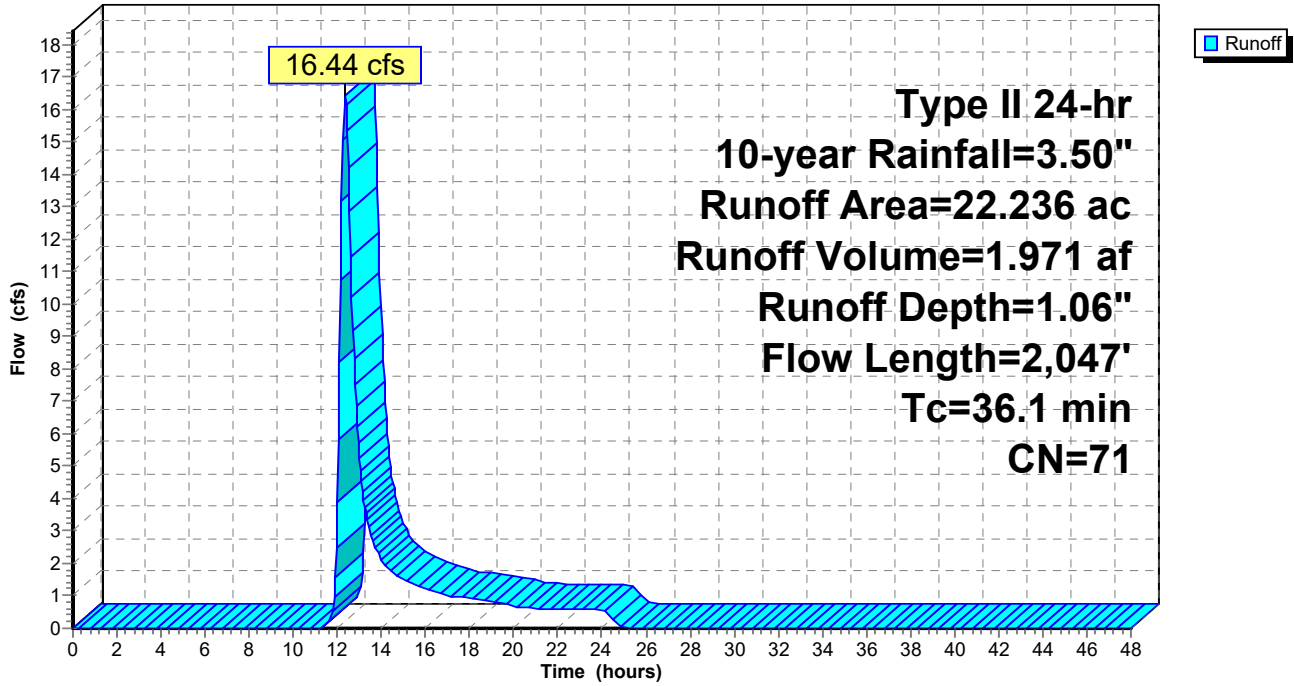
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.008   | 98 | Surface water                 |
| * 0.081   | 98 | Impervious surface            |
| * 0.828   | 96 | Gravel surface                |
| 5.353     | 61 | >75% Grass cover, Good, HSG B |
| 3.453     | 74 | >75% Grass cover, Good, HSG C |
| 3.647     | 80 | >75% Grass cover, Good, HSG D |
| 0.693     | 58 | Meadow, non-grazed, HSG B     |
| 0.956     | 71 | Meadow, non-grazed, HSG C     |
| 0.200     | 48 | Brush, Good, HSG B            |
| 1.811     | 65 | Brush, Good, HSG C            |
| 3.089     | 73 | Brush, Good, HSG D            |
| 0.917     | 55 | Woods, Good, HSG B            |
| 0.043     | 70 | Woods, Good, HSG C            |
| 0.157     | 77 | Woods, Good, HSG D            |
| 22.236    | 71 | Weighted Average              |
| 21.147    |    | 95.10% Pervious Area          |
| 1.089     |    | 4.90% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 10.9     | 100           | 0.0210        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 22.7     | 1,347         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.5      | 600           | 0.0225        | 3.97              | 19.83          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 36.1     | 2,047         | Total         |                   |                |   |



Subcatchment 10S: Sub 10

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 11S: Sub 11**

Runoff = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af, Depth= 0.80"

Routed to Link SP11 :

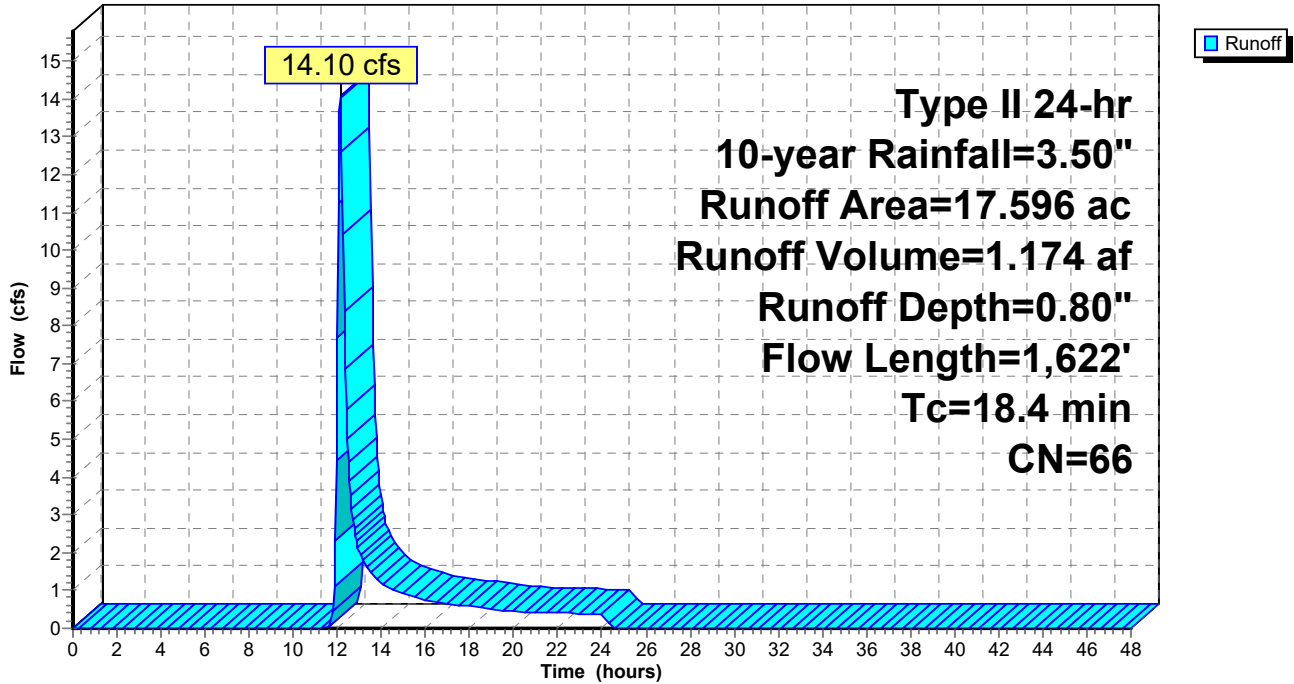
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.372   | 98 | Surface water                 |
| * 0.016   | 98 | Impervious surface            |
| * 2.385   | 96 | Gravel surface                |
| 2.824     | 61 | >75% Grass cover, Good, HSG B |
| 1.292     | 74 | >75% Grass cover, Good, HSG C |
| 1.394     | 58 | Meadow, non-grazed, HSG B     |
| 1.371     | 71 | Meadow, non-grazed, HSG C     |
| 0.199     | 48 | Brush, Good, HSG B            |
| 0.163     | 65 | Brush, Good, HSG C            |
| 7.256     | 55 | Woods, Good, HSG B            |
| 0.324     | 70 | Woods, Good, HSG C            |
| 17.596    | 66 | Weighted Average              |
| 17.208    |    | 97.79% Pervious Area          |
| 0.388     |    | 2.21% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.2      | 100           | 0.0320        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.9      | 579           | 0.0240        | 2.49              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps   |
| 2.6      | 277           | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 102           | 0.2650        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.0      | 564           | 0.0300        | 4.80              | 28.78          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 18.4     | 1,622         | Total         |                   |                |   |

Subcatchment 11S: Sub 11

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 22.37 cfs @ 11.96 hrs, Volume= 1.190 af, Depth= 2.94"  
 Routed to Pond 12P : 12P

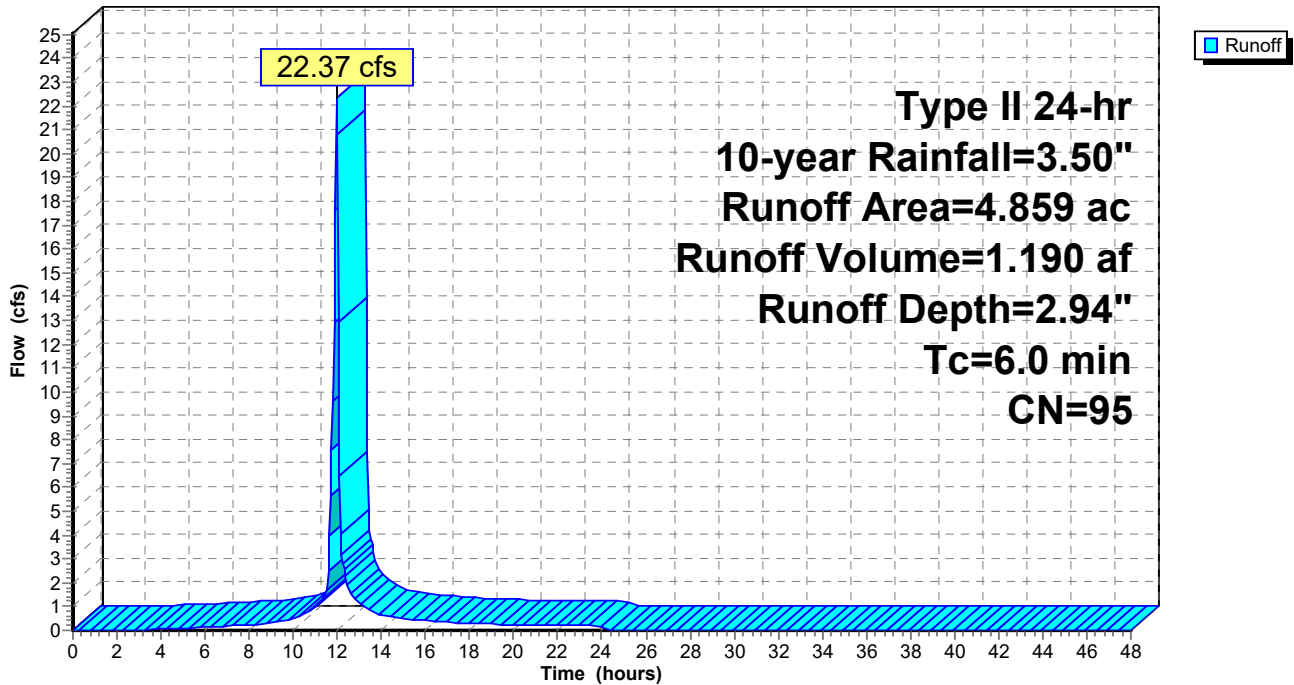
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 4.639   | 96 | Gravel surface                |
| 0.220     | 74 | >75% Grass cover, Good, HSG C |
| 4.859     | 95 | Weighted Average              |
| 4.859     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description           |
|----------|---------------|---------------|-------------------|----------------|-----------------------|
| 6.0      |               |               |                   |                | Direct Entry, Minimum |

**Subcatchment 12S: Sub 12**

Hydrograph



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**Summary for Subcatchment 13S: Sub 13**

Runoff = 7.14 cfs @ 12.13 hrs, Volume= 0.610 af, Depth= 0.71"  
 Routed to Link SP13 :

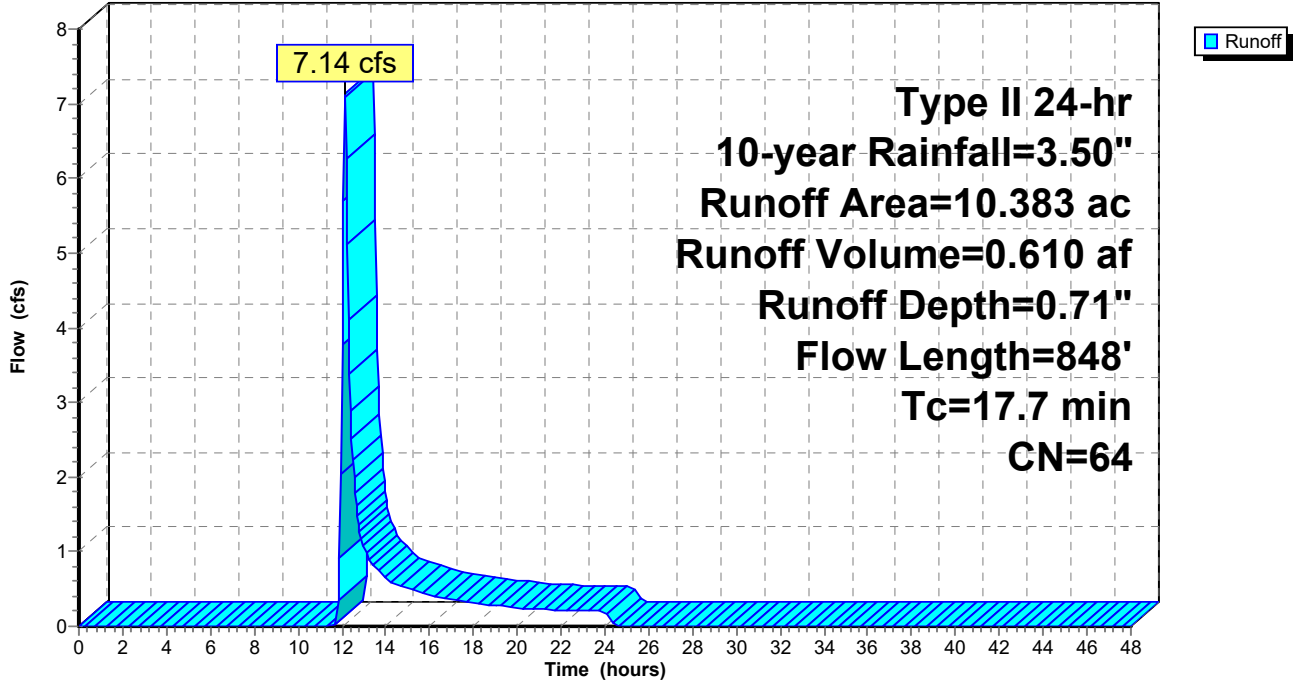
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.021   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 1.560     | 58 | Meadow, non-grazed, HSG B |
| 4.128     | 71 | Meadow, non-grazed, HSG C |
| 0.084     | 48 | Brush, Good, HSG B        |
| 0.134     | 65 | Brush, Good, HSG C        |
| 3.807     | 55 | Woods, Good, HSG B        |
| 0.325     | 70 | Woods, Good, HSG C        |
| 10.383    | 64 | Weighted Average          |
| 10.362    |    | 99.80% Pervious Area      |
| 0.021     |    | 0.20% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.4      | 525           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.7      | 62            | 0.0970        | 1.56              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 161           | 0.1330        | 1.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 17.7     | 848           | Total         |                   |                |  |

Subcatchment 13S: Sub 13

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 14S: Sub 14**

[47] Hint: Peak is 174% of capacity of segment #4

[47] Hint: Peak is 411% of capacity of segment #5

Runoff = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af, Depth= 0.85"  
 Routed to Link SP14 :

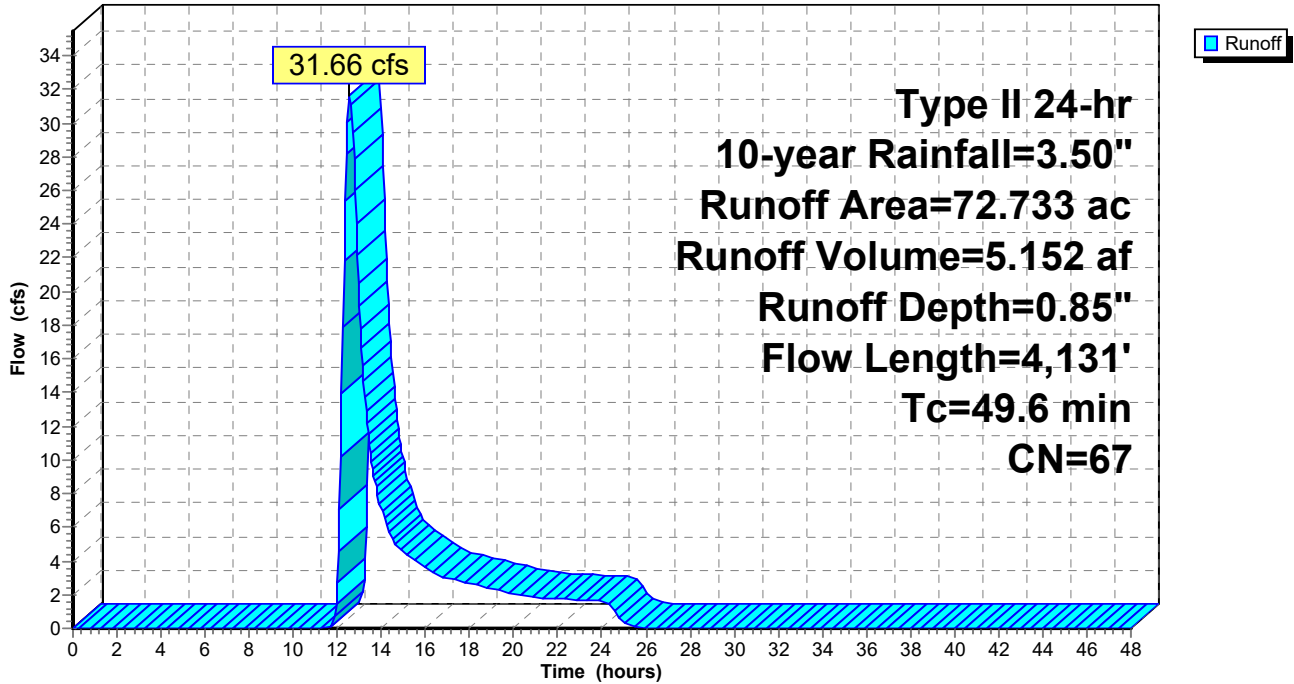
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.307   | 98 | Impervious surface            |
| 0.760     | 80 | >75% Grass cover, Good, HSG D |
| 19.939    | 58 | Meadow, non-grazed, HSG B     |
| 36.007    | 71 | Meadow, non-grazed, HSG C     |
| 0.100     | 78 | Meadow, non-grazed, HSG D     |
| 0.667     | 48 | Brush, Good, HSG B            |
| 0.121     | 65 | Brush, Good, HSG C            |
| 1.517     | 73 | Brush, Good, HSG D            |
| 3.147     | 55 | Woods, Good, HSG B            |
| 9.611     | 70 | Woods, Good, HSG C            |
| 0.557     | 77 | Woods, Good, HSG D            |
| 72.733    | 67 | Weighted Average              |
| 72.426    |    | 99.58% Pervious Area          |
| 0.307     |    | 0.42% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.0      | 50            | 0.0600        | 0.09              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 5.6      | 50            | 0.0280        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.7      | 465           | 0.0270        | 1.15              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 9.8      | 1,433         | 0.0120        | 2.43              | 18.23          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 20.0 ' Top.W=25.00'<br>n= 0.030 Earth, grassed & winding |
| 18.5     | 2,133         | 0.0080        | 1.93              | 7.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 6.0 ' Top.W=11.00'<br>n= 0.035 Earth, dense weeds        |
| 49.6     | 4,131         | Total         |                   |                |   |

Subcatchment 14S: Sub 14

Hydrograph



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**Summary for Subcatchment 17S: Sub 17**

[47] Hint: Peak is 405% of capacity of segment #4

Runoff = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af, Depth= 0.53"  
 Routed to Link SP17 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

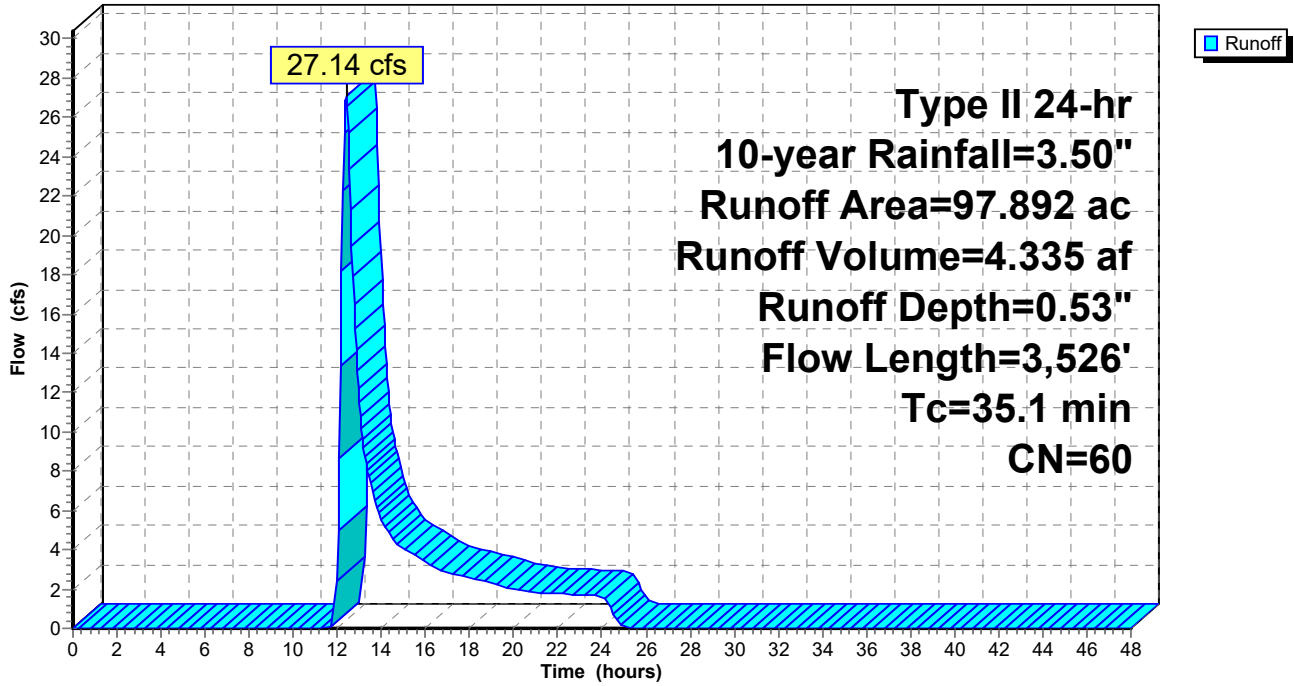
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.153   | 98 | Impervious surface            |
| * 0.105   | 96 | Gravel surface                |
| 3.000     | 61 | >75% Grass cover, Good, HSG B |
| 0.324     | 74 | >75% Grass cover, Good, HSG C |
| 1.232     | 80 | >75% Grass cover, Good, HSG D |
| 78.791    | 58 | Meadow, non-grazed, HSG B     |
| 0.375     | 71 | Meadow, non-grazed, HSG C     |
| 4.855     | 78 | Meadow, non-grazed, HSG D     |
| 7.632     | 55 | Woods, Good, HSG B            |
| 0.085     | 70 | Woods, Good, HSG C            |
| 0.340     | 77 | Woods, Good, HSG D            |
| 97.892    | 60 | Weighted Average              |
| 96.739    |    | 98.82% Pervious Area          |
| 1.153     |    | 1.18% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 5.2      | 681           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.3     | 1,098         | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.2     | 1,647         | 0.0140        | 2.68              | 6.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00'<br>n= 0.030 Earth, grassed & winding |
| 35.1     | 3,526         | Total         |                   |                |   |



Subcatchment 17S: Sub 17

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af, Depth= 0.95"  
 Routed to Link SP18 :

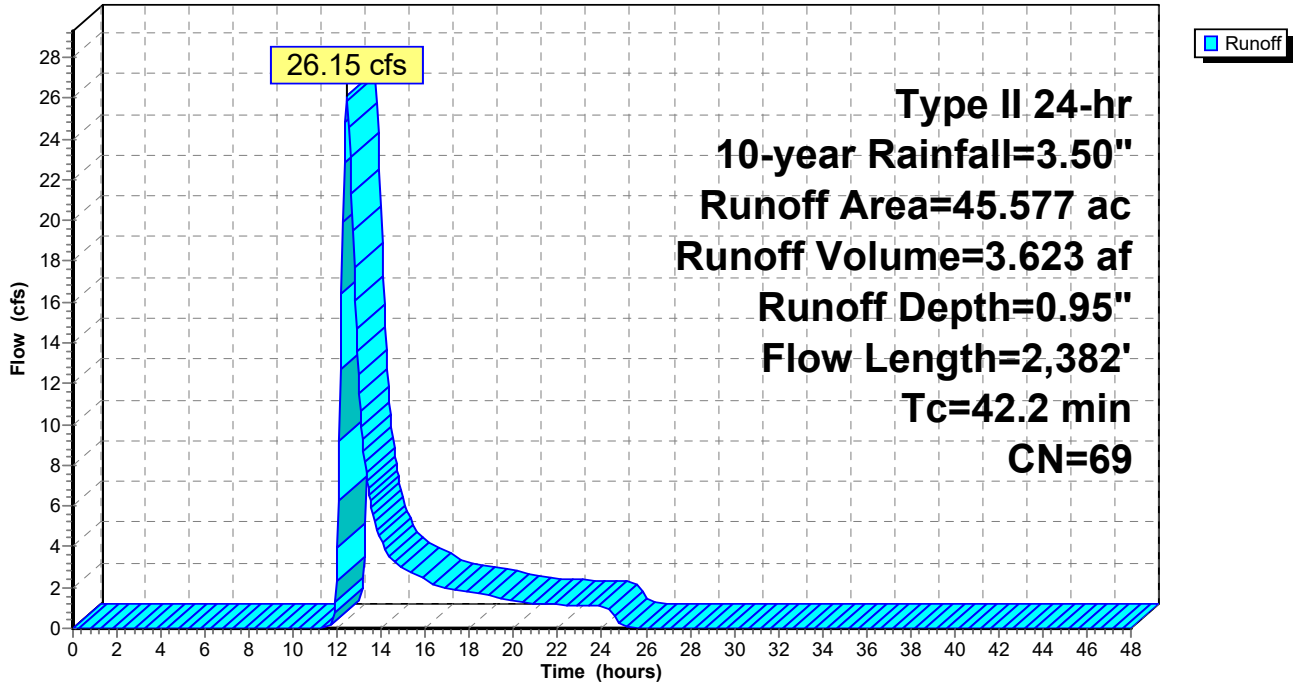
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.335   | 98 | Impervious surface        |
| 9.521     | 58 | Meadow, non-grazed, HSG B |
| 19.657    | 71 | Meadow, non-grazed, HSG C |
| 8.775     | 78 | Meadow, non-grazed, HSG D |
| 2.586     | 48 | Brush, Good, HSG B        |
| 4.116     | 73 | Brush, Good, HSG D        |
| 0.587     | 77 | Woods, Good, HSG D        |
| 45.577    | 69 | Weighted Average          |
| 45.242    |    | 99.26% Pervious Area      |
| 0.335     |    | 0.74% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.6     | 100           | 0.0180        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 10.5     | 668           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 459           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 128           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 12.9     | 1,027         |               | 1.33              |                | <b>Direct Entry, CF</b>  |
| 42.2     | 2,382         | Total         |                   |                |  |

Subcatchment 18S: Sub 18

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 25.36 cfs @ 12.27 hrs, Volume= 2.653 af, Depth= 1.12"  
 Routed to Reach 20.1R : S-KCF-6

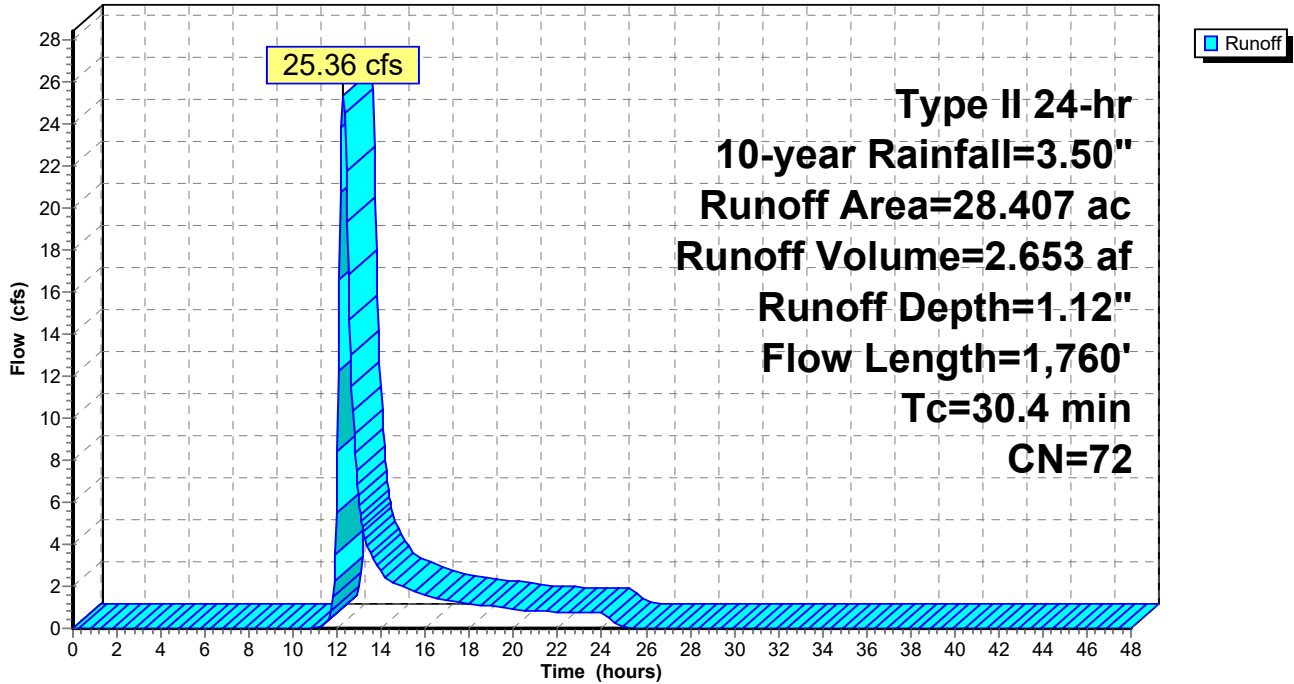
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.153   | 98 | Surface water             |
| 2.120     | 58 | Meadow, non-grazed, HSG B |
| 18.359    | 71 | Meadow, non-grazed, HSG C |
| 7.318     | 78 | Meadow, non-grazed, HSG D |
| 0.227     | 65 | Brush, Good, HSG C        |
| 0.105     | 73 | Brush, Good, HSG D        |
| 0.125     | 77 | Woods, Good, HSG D        |
| 28.407    | 72 | Weighted Average          |
| 28.254    |    | 99.46% Pervious Area      |
| 0.153     |    | 0.54% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 212           | 0.1120        | 2.34              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.0     | 635           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.7     | 813           | 0.0330        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 30.4     | 1,760         | Total         |                   |                |  |

Subcatchment 19S: Sub 19

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 20S: Sub 20**

Runoff = 53.77 cfs @ 12.15 hrs, Volume= 4.704 af, Depth= 0.80"  
 Routed to Reach 20.1R : S-KCF-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

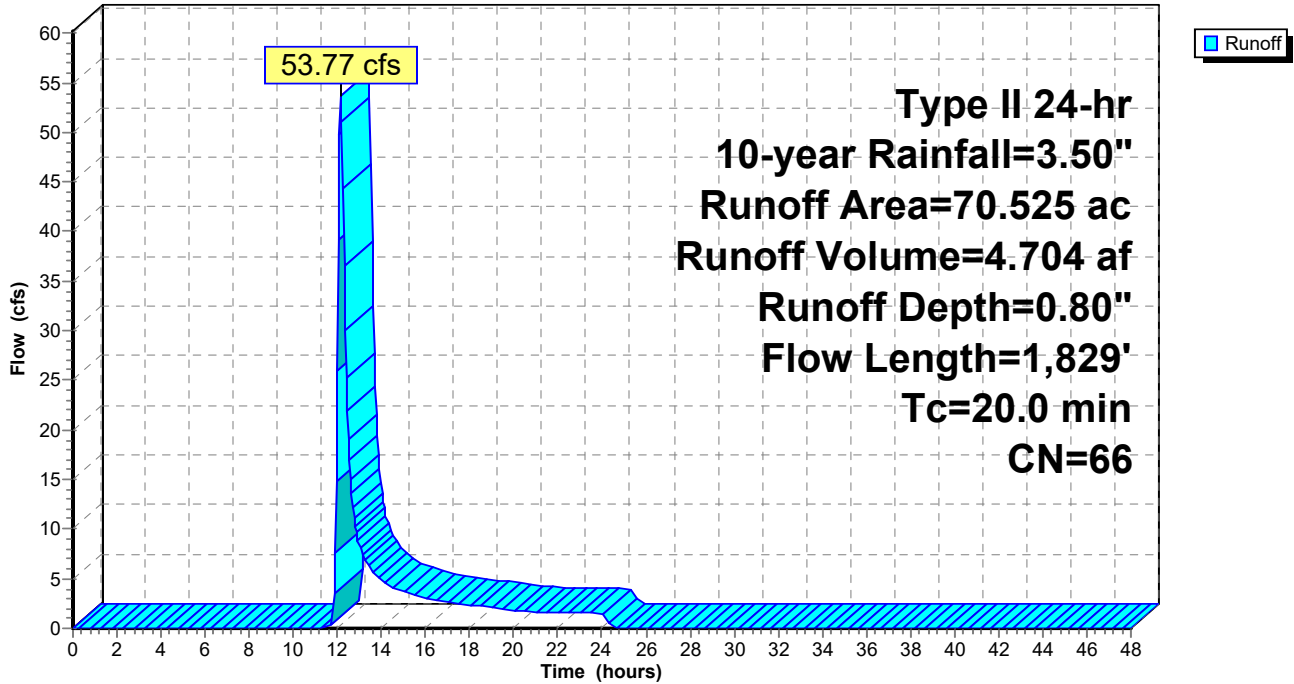
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.044   | 98 | Surface water                 |
| * 0.508   | 98 | Impervious surface            |
| 3.657     | 61 | >75% Grass cover, Good, HSG B |
| 29.608    | 58 | Meadow, non-grazed, HSG B     |
| 22.967    | 71 | Meadow, non-grazed, HSG C     |
| 12.748    | 78 | Meadow, non-grazed, HSG D     |
| 0.147     | 48 | Brush, Good, HSG B            |
| 0.032     | 65 | Brush, Good, HSG C            |
| 0.133     | 73 | Brush, Good, HSG D            |
| 0.124     | 55 | Woods, Good, HSG B            |
| 0.523     | 70 | Woods, Good, HSG C            |
| 0.034     | 77 | Woods, Good, HSG D            |
| 70.525    | 66 | Weighted Average              |
| 69.973    |    | 99.22% Pervious Area          |
| 0.552     |    | 0.78% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 6.7      | 100           | 0.0700        | 0.25              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 2.6      | 259           | 0.0580        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 8.8      | 703           | 0.0360        | 1.33              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.9      | 767           | 0.0300        | 6.81              | 54.44          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=1.00' Z= 3.0 ' /' Top.W=11.00'<br>n= 0.030 Earth, grassed & winding |
| 20.0     | 1,829         | Total         |                   |                |   |



Subcatchment 20S: Sub 20

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 21S: Sub 21**

[47] Hint: Peak is 408% of capacity of segment #3

[47] Hint: Peak is 364% of capacity of segment #4

[47] Hint: Peak is 425% of capacity of segment #5

Runoff = 55.18 cfs @ 12.46 hrs, Volume= 8.204 af, Depth= 0.80"  
 Routed to Reach 22.1R : S-KCF-5

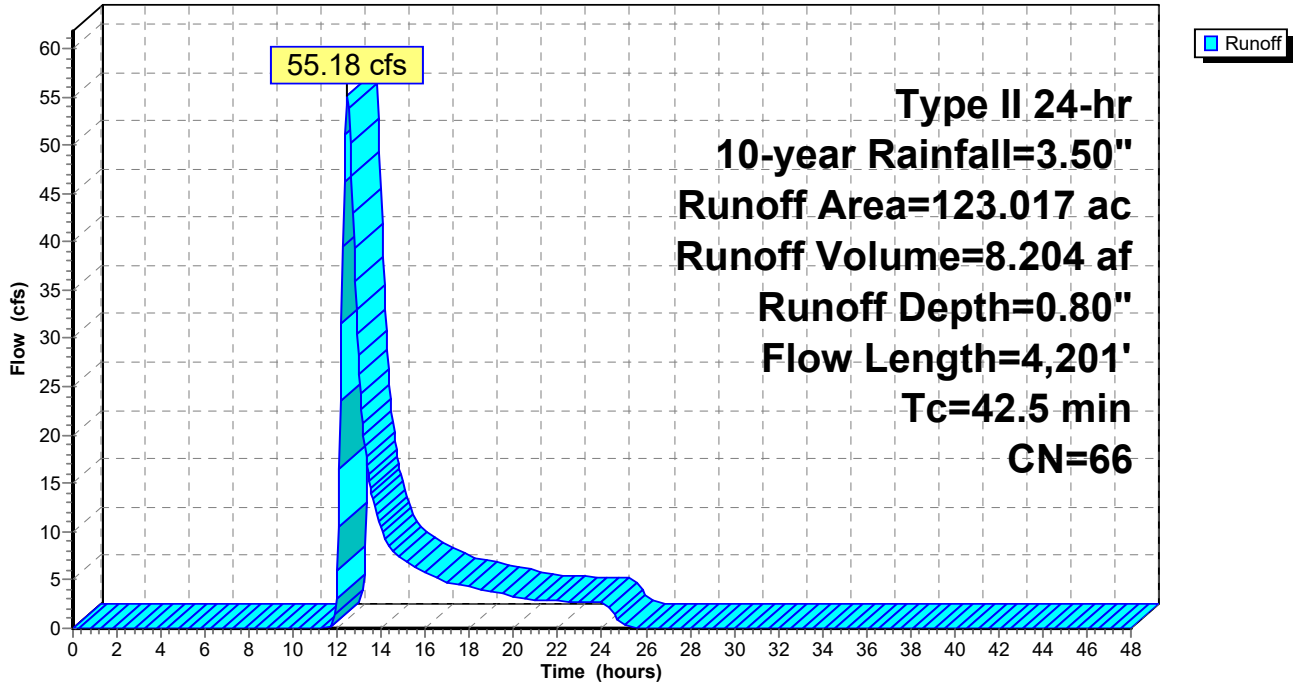
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 3.145   | 98 | Surface water                 |
| * 0.950   | 98 | Impervious surface            |
| * 0.528   | 96 | Gravel surface                |
| 0.616     | 61 | >75% Grass cover, Good, HSG B |
| 1.689     | 74 | >75% Grass cover, Good, HSG C |
| 54.805    | 58 | Meadow, non-grazed, HSG B     |
| 54.707    | 71 | Meadow, non-grazed, HSG C     |
| 2.342     | 78 | Meadow, non-grazed, HSG D     |
| 0.747     | 48 | Brush, Good, HSG B            |
| 0.437     | 65 | Brush, Good, HSG C            |
| 0.758     | 55 | Woods, Good, HSG B            |
| 2.293     | 70 | Woods, Good, HSG C            |
| 123.017   | 66 | Weighted Average              |
| 118.922   |    | 96.67% Pervious Area          |
| 4.095     |    | 3.33% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 12.1     | 100           | 0.0160        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 12.6     | 1,112         | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.2      | 346           | 0.0150        | 2.58              | 13.52          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 9.0 ' /' Top.W=15.00'<br>n= 0.035 Earth, dense weeds |
| 8.3      | 1,504         | 0.0150        | 3.03              | 15.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 7.3      | 1,139         | 0.0110        | 2.60              | 12.98          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' /' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 42.5     | 4,201         | Total         |                   |                |   |

Subcatchment 21S: Sub 21

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 38.12 cfs @ 12.50 hrs, Volume= 5.522 af, Depth= 1.06"  
 Routed to Link SP22 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

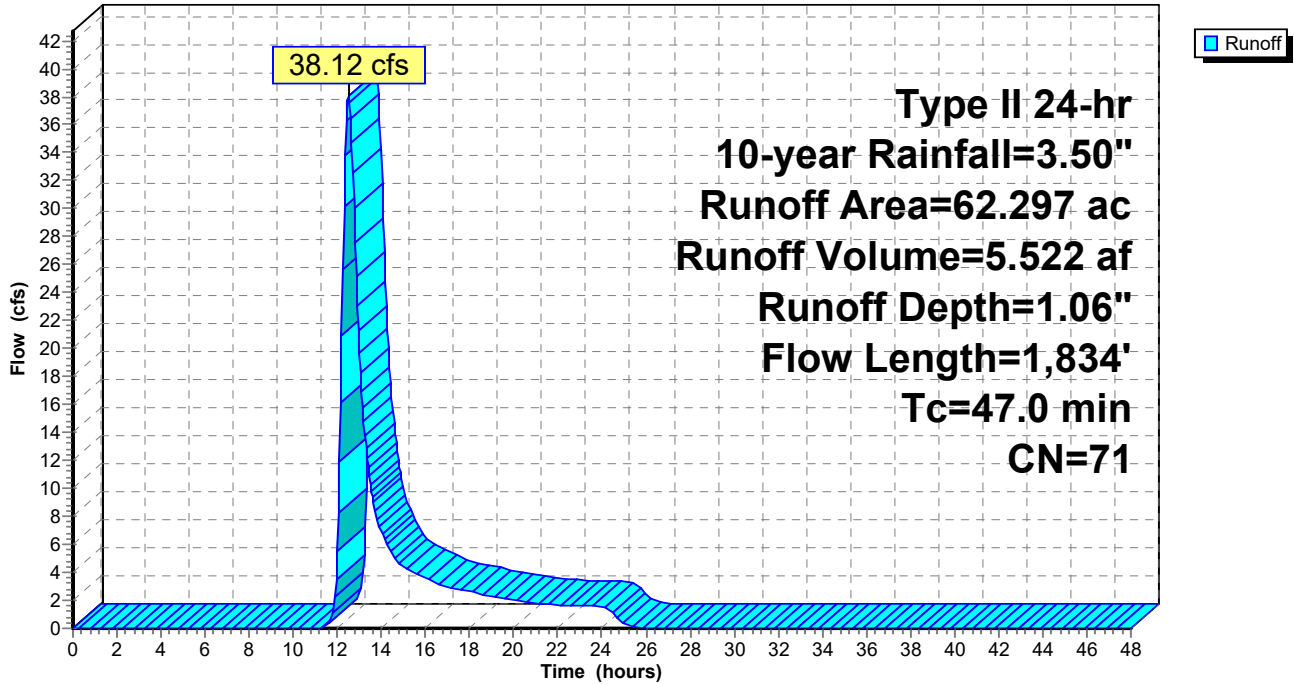
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.373   | 98 | Impervious surface        |
| * 0.117   | 96 | Gravel surface            |
| 2.935     | 58 | Meadow, non-grazed, HSG B |
| 38.064    | 71 | Meadow, non-grazed, HSG C |
| 5.928     | 78 | Meadow, non-grazed, HSG D |
| 0.322     | 48 | Brush, Good, HSG B        |
| 0.178     | 65 | Brush, Good, HSG C        |
| 1.858     | 55 | Woods, Good, HSG B        |
| 7.519     | 70 | Woods, Good, HSG C        |
| 5.003     | 77 | Woods, Good, HSG D        |
| 62.297    | 71 | Weighted Average          |
| 61.924    |    | 99.40% Pervious Area      |
| 0.373     |    | 0.60% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 316           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.2      | 442           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.3      | 305           | 0.0120        | 0.55              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 11.3     | 515           | 0.0230        | 0.76              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 156           |               | 1.73              |                | <b>Direct Entry, CF</b>  |
| 47.0     | 1,834         | Total         |                   |                |  |



Subcatchment 22S: Sub 22

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 23S: Sub 23**

Runoff = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af, Depth= 0.95"  
 Routed to Link SP23 :

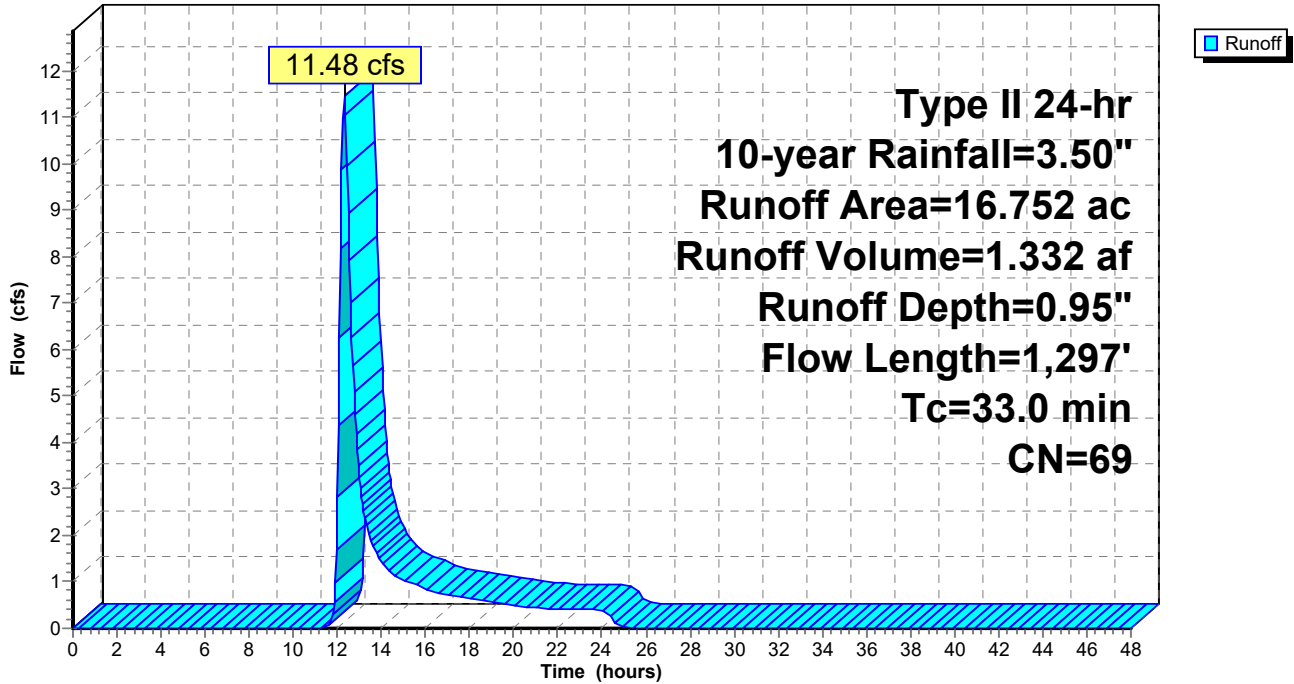
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.387   | 98 | Impervious surface            |
| * 0.929   | 96 | Gravel surface                |
| 0.421     | 61 | >75% Grass cover, Good, HSG B |
| 4.958     | 58 | Meadow, non-grazed, HSG B     |
| 9.559     | 71 | Meadow, non-grazed, HSG C     |
| 0.403     | 78 | Meadow, non-grazed, HSG D     |
| 0.012     | 48 | Brush, Good, HSG B            |
| 0.052     | 65 | Brush, Good, HSG C            |
| 0.031     | 55 | Woods, Good, HSG B            |
| 16.752    | 69 | Weighted Average              |
| 16.365    |    | 97.69% Pervious Area          |
| 0.387     |    | 2.31% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.2     | 100           | 0.0760        | 0.12              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 15.8     | 892           | 0.0180        | 0.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.8      | 262           | 0.0490        | 1.55              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.2      | 43            | 0.0160        | 4.00              | 24.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.0     | 1,297         | Total         |                   |                |   |

Subcatchment 23S: Sub 23

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 24S: Sub 24**

Runoff = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af, Depth= 1.24"  
 Routed to Link SP24 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

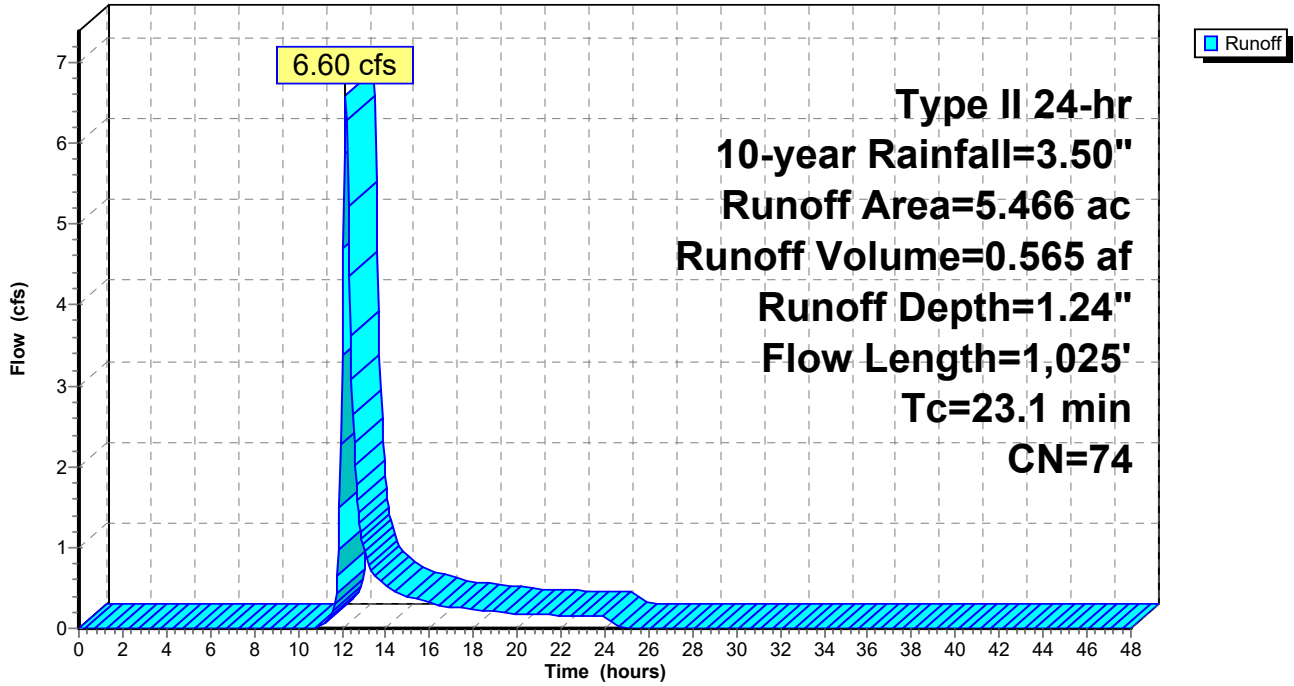
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.421   | 98 | Impervious surface            |
| * 0.036   | 96 | Gravel surface                |
| 0.093     | 61 | >75% Grass cover, Good, HSG B |
| 1.916     | 74 | >75% Grass cover, Good, HSG C |
| 0.252     | 58 | Meadow, non-grazed, HSG B     |
| 2.730     | 71 | Meadow, non-grazed, HSG C     |
| 0.018     | 70 | Woods, Good, HSG C            |
| 5.466     | 74 | Weighted Average              |
| 5.045     |    | 92.30% Pervious Area          |
| 0.421     |    | 7.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 1.7      | 169           | 0.0550        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.1      | 247           | 0.0230        | 3.64              | 12.74          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00'<br>n= 0.035 Earth, dense weeds |
| 2.4      | 509           | 0.0220        | 3.47              | 13.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 23.1     | 1,025         | Total         |                   |                |   |



Subcatchment 24S: Sub 24

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 43: Subcat 43**

[47] Hint: Peak is 164% of capacity of segment #3

Runoff = 21.57 cfs @ 12.42 hrs, Volume= 2.862 af, Depth= 1.01"  
 Routed to Reach 44R :

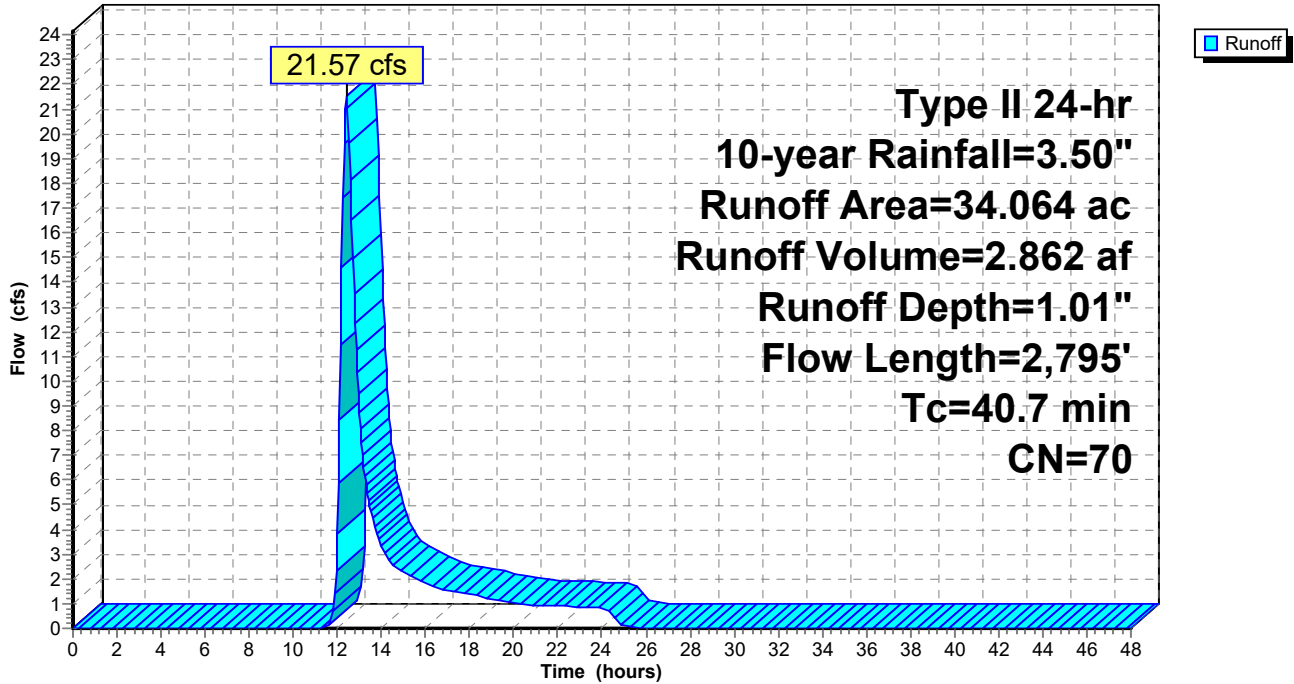
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.157   | 98 | Impervious surface            |
| 2.153     | 74 | >75% Grass cover, Good, HSG C |
| 0.186     | 30 | Meadow, non-grazed, HSG A     |
| 1.331     | 58 | Meadow, non-grazed, HSG B     |
| 15.965    | 71 | Meadow, non-grazed, HSG C     |
| 6.575     | 78 | Meadow, non-grazed, HSG D     |
| 1.643     | 30 | Woods, Good, HSG A            |
| 0.352     | 55 | Woods, Good, HSG B            |
| 2.445     | 70 | Woods, Good, HSG C            |
| 3.257     | 77 | Woods, Good, HSG D            |
| 34.064    | 70 | Weighted Average              |
| 33.907    |    | 99.54% Pervious Area          |
| 0.157     |    | 0.46% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 26.2     | 1,556         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 5.1      | 1,139         | 0.0320        | 3.76              | 13.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 40.7     | 2,795         | Total         |                   |                |   |

Subcatchment 43: Subcat 43

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 44: Subcat 44**

[47] Hint: Peak is 520% of capacity of segment #3

[47] Hint: Peak is 201% of capacity of segment #4

Runoff = 28.83 cfs @ 12.43 hrs, Volume= 3.889 af, Depth= 1.01"  
 Routed to Reach 45R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

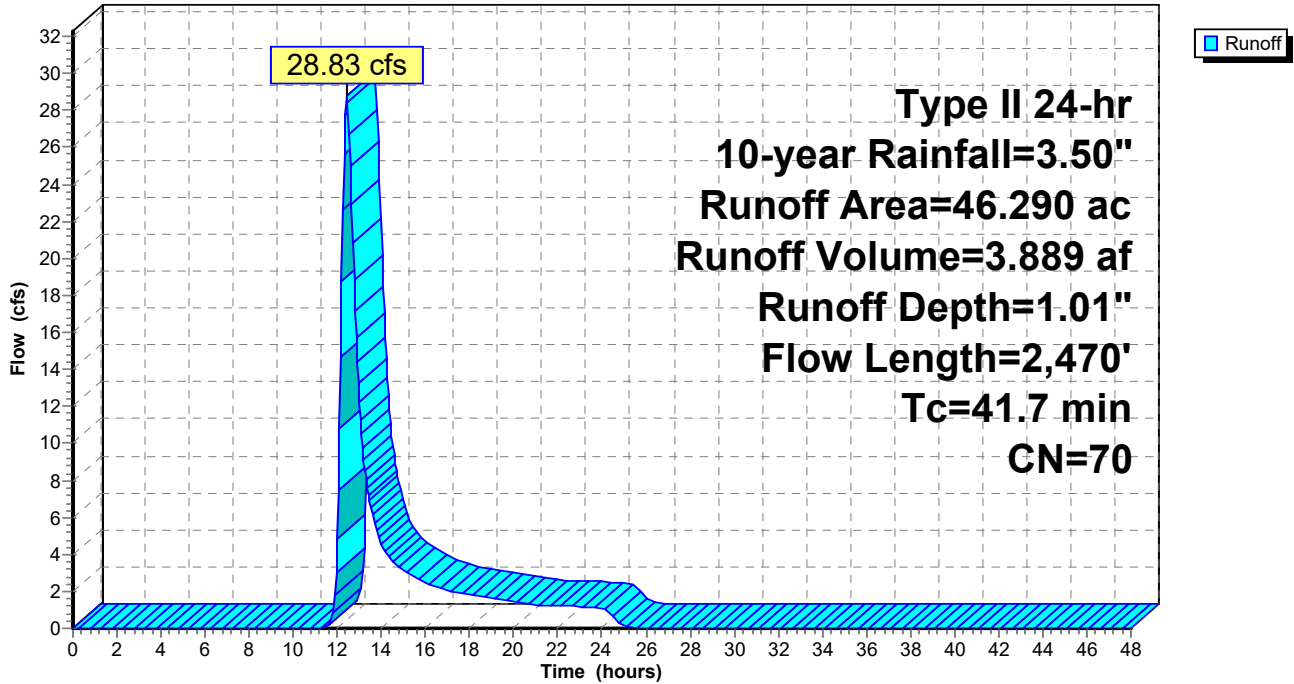
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.094     | 30 | Meadow, non-grazed, HSG A |
| 0.097     | 58 | Meadow, non-grazed, HSG B |
| 7.842     | 71 | Meadow, non-grazed, HSG C |
| 6.921     | 78 | Meadow, non-grazed, HSG D |
| 1.607     | 30 | Woods, Good, HSG A        |
| 6.395     | 55 | Woods, Good, HSG B        |
| 8.029     | 70 | Woods, Good, HSG C        |
| 15.305    | 77 | Woods, Good, HSG D        |
| 46.290    | 70 | Weighted Average          |
| 46.290    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 21.9     | 100           | 0.0260        | 0.08              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 9.2      | 409           | 0.0220        | 0.74              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 5.2      | 715           | 0.0320        | 2.31              | 5.55           | <b>Parabolic Channel,</b><br>W=18.00' D=0.20' Area=2.4 sf Perim=18.0'<br>n= 0.030 Earth, grassed & winding                  |
| 5.4      | 1,246         | 0.0350        | 3.83              | 14.37          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 41.7     | 2,470         | Total         |                   |                |   |



Subcatchment 44: Subcat 44

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 45: Subcat 45**

Runoff = 9.30 cfs @ 12.32 hrs, Volume= 1.390 af, Depth= 0.49"  
 Routed to Link SP43 :

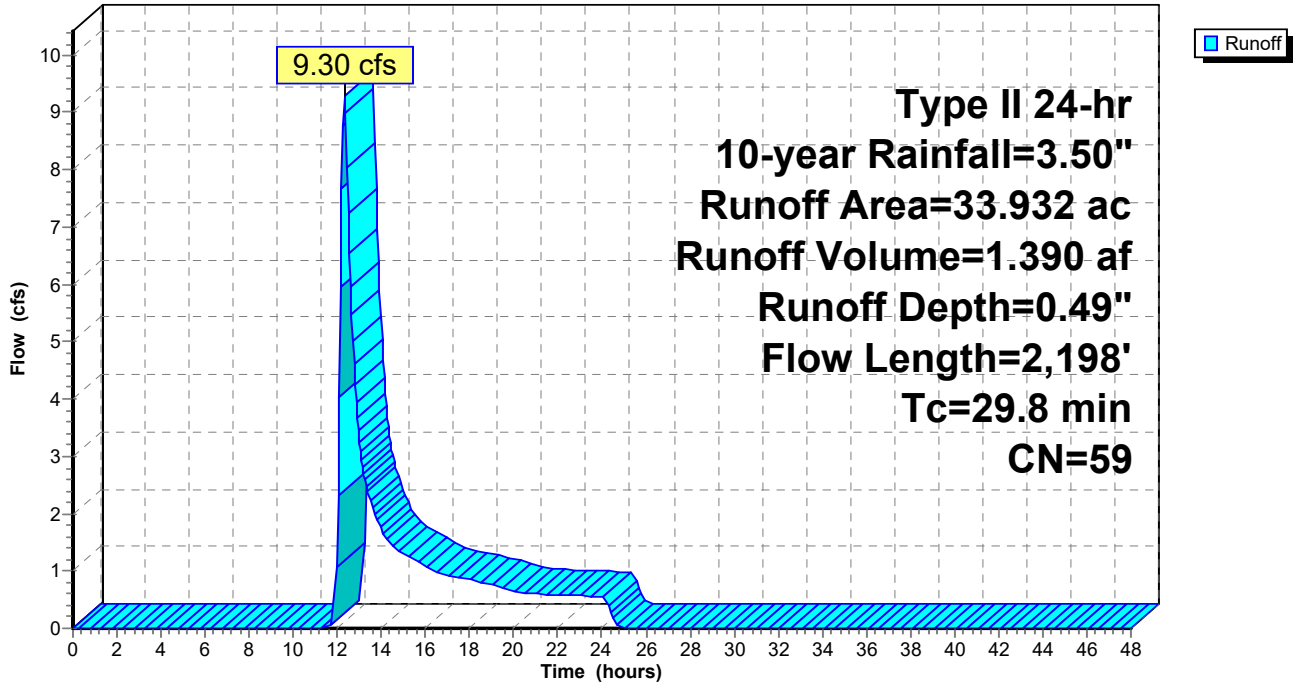
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.056   | 98 | Surface water                 |
| * 0.600   | 98 | Impervious surface            |
| * 0.045   | 96 | Gravel surface                |
| 0.358     | 61 | >75% Grass cover, Good, HSG B |
| 0.668     | 74 | >75% Grass cover, Good, HSG C |
| 0.893     | 30 | Meadow, non-grazed, HSG A     |
| 10.865    | 58 | Meadow, non-grazed, HSG B     |
| 6.386     | 71 | Meadow, non-grazed, HSG C     |
| 2.755     | 78 | Meadow, non-grazed, HSG D     |
| 0.369     | 30 | Brush, Good, HSG A            |
| 4.141     | 48 | Brush, Good, HSG B            |
| 0.313     | 65 | Brush, Good, HSG C            |
| 0.221     | 73 | Brush, Good, HSG D            |
| 2.407     | 30 | Woods, Good, HSG A            |
| 3.328     | 55 | Woods, Good, HSG B            |
| 0.214     | 70 | Woods, Good, HSG C            |
| 0.313     | 77 | Woods, Good, HSG D            |
| 33.932    | 59 | Weighted Average              |
| 33.276    |    | 98.07% Pervious Area          |
| 0.656     |    | 1.93% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 6.5      | 396           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.8      | 223           | 0.0900        | 2.10              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 3.4      | 196           | 0.0360        | 0.95              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 5.7      | 1,283         | 0.0370        | 3.77              | 10.38          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00'<br>n= 0.040 Winding stream, pools & shoals |
| 29.8     | 2,198         | Total         |                   |                |  |

Subcatchment 45: Subcat 45

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 46: Subcat 46**

Runoff = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af, Depth= 0.04"  
 Routed to Link SP46 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

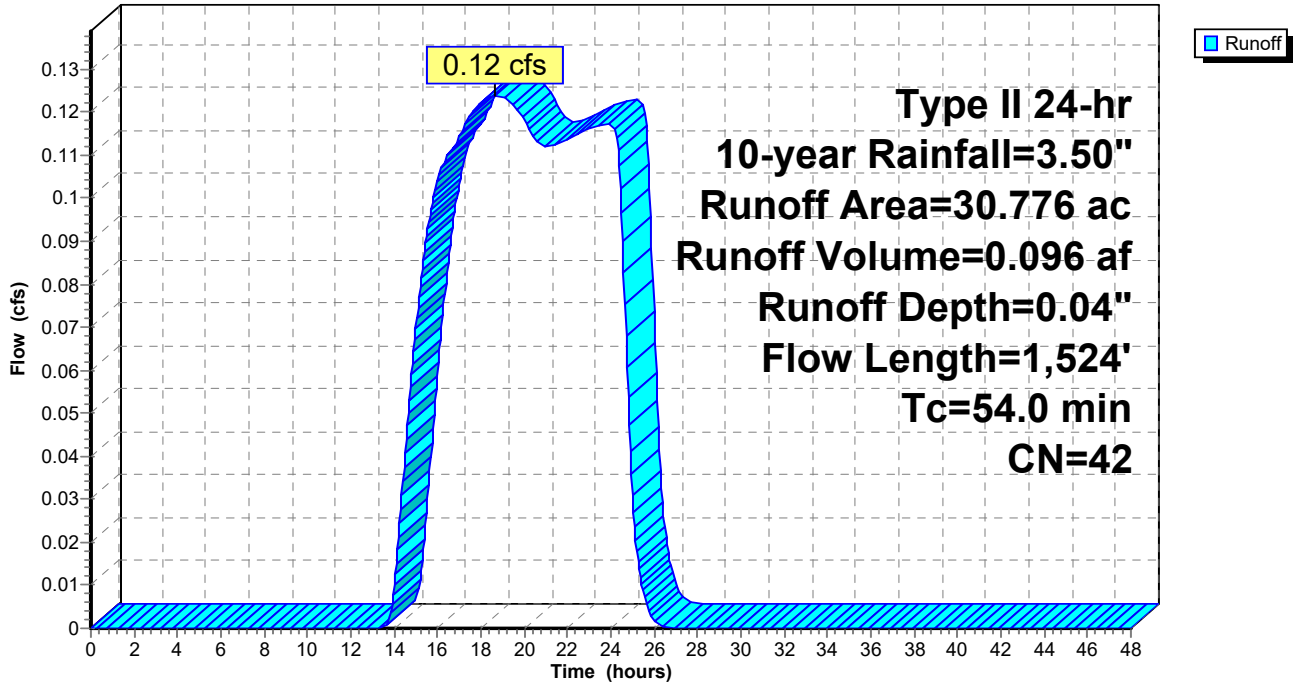
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.982   | 98 | Surface water             |
| * 0.226   | 98 | Impervious surface        |
| 2.832     | 30 | Meadow, non-grazed, HSG A |
| 1.255     | 58 | Meadow, non-grazed, HSG B |
| 0.520     | 30 | Brush, Good, HSG A        |
| 0.462     | 48 | Brush, Good, HSG B        |
| 0.278     | 73 | Brush, Good, HSG D        |
| 14.773    | 30 | Woods, Good, HSG A        |
| 9.100     | 55 | Woods, Good, HSG B        |
| 0.348     | 77 | Woods, Good, HSG D        |
| 30.776    | 42 | Weighted Average          |
| 29.568    |    | 96.07% Pervious Area      |
| 1.208     |    | 3.93% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 36.5     | 774           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 5.2      | 153           | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 245           | 0.4120        | 3.21              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.2      | 79            | 0.0510        | 1.13              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.4      | 173           |               | 6.95              |                | <b>Lake or Reservoir,</b><br>Mean Depth= 1.50'                       |
| 54.0     | 1,524         | Total         |                   |                |  |



Subcatchment 46: Subcat 46

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 47: Subcat 47**

Runoff = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af, Depth= 0.03"

Routed to Link SP47 :

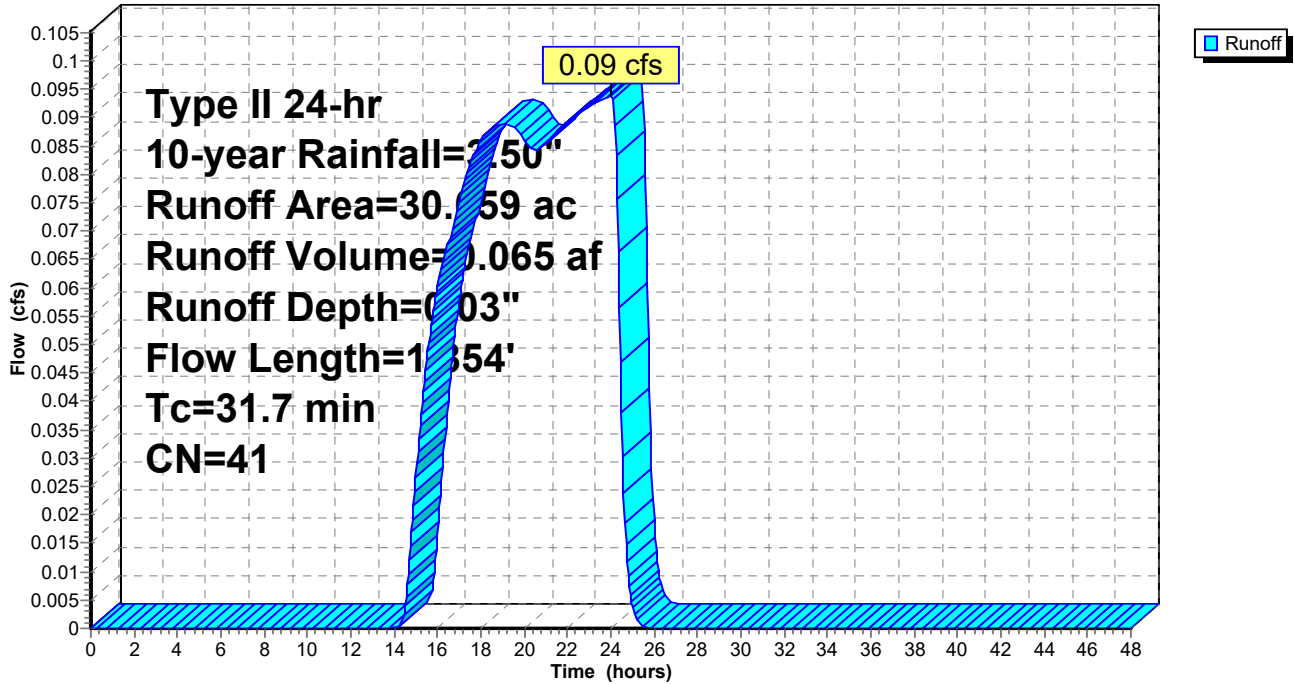
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.378   | 98 | Impervious surface            |
| 0.502     | 39 | >75% Grass cover, Good, HSG A |
| 2.029     | 61 | >75% Grass cover, Good, HSG B |
| 17.003    | 30 | Meadow, non-grazed, HSG A     |
| 3.669     | 58 | Meadow, non-grazed, HSG B     |
| 0.051     | 30 | Brush, Good, HSG A            |
| 0.687     | 48 | Brush, Good, HSG B            |
| 1.092     | 30 | Woods, Good, HSG A            |
| 4.648     | 55 | Woods, Good, HSG B            |
| 30.059    | 41 | Weighted Average              |
| 29.681    |    | 98.74% Pervious Area          |
| 0.378     |    | 1.26% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 18.7     | 992           | 0.0160        | 0.89              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.1      | 88            | 0.0680        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 3.5      | 674           | 0.0180        | 3.19              | 13.54          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00'<br>n= 0.035 Earth, dense weeds |
| 31.7     | 1,854         | Total         |                   |                |  |

Subcatchment 47: Subcat 47

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 6R: W-NSD-35

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 25.13 cfs @ 12.74 hrs, Volume= 4.687 af  
Outflow = 24.41 cfs @ 12.97 hrs, Volume= 4.687 af, Atten= 3%, Lag= 14.3 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.83 fps, Min. Travel Time= 8.2 min  
Avg. Velocity= 1.12 fps, Avg. Travel Time= 28.1 min

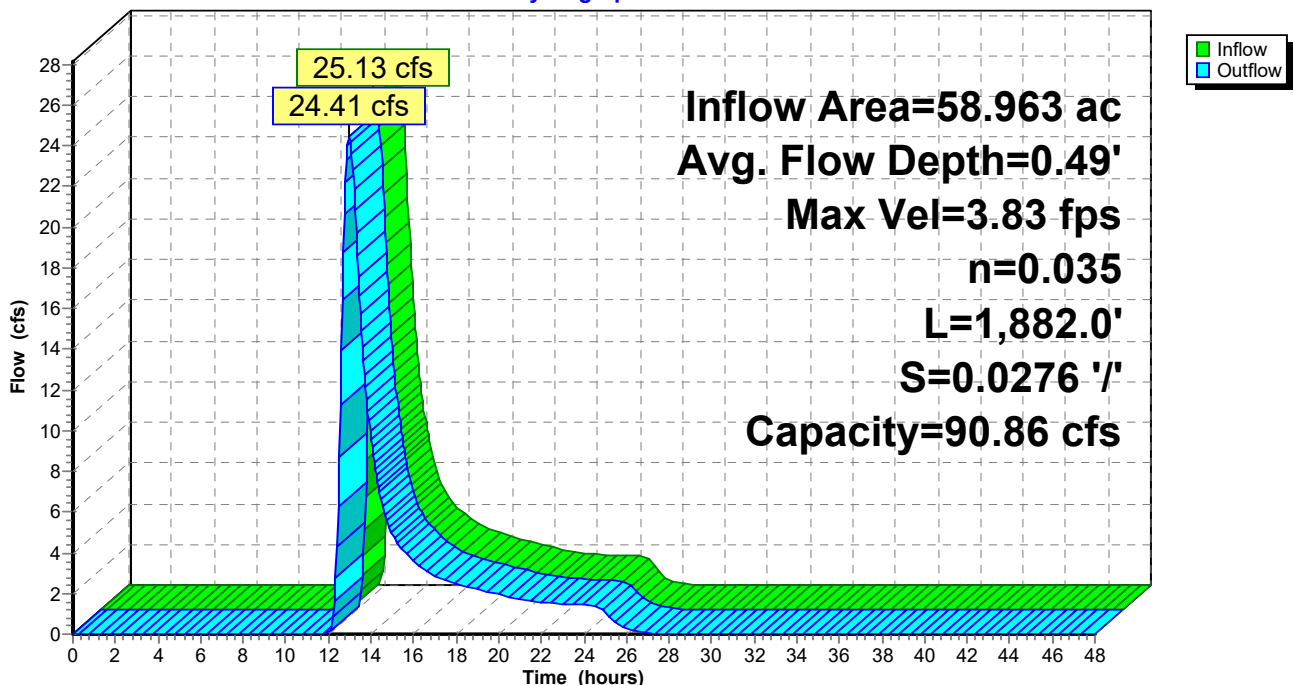
Peak Storage= 12,019 cf @ 12.84 hrs  
Average Depth at Peak Storage= 0.49' , Surface Width= 15.91'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 ' / ' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 ' / '  
Inlet Invert= 542.00', Outlet Invert= 490.00'



## Reach 6R: W-NSD-35

### Hydrograph





# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 13.1R:

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
Inflow = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af  
Outflow = 1.49 cfs @ 12.64 hrs, Volume= 1.190 af, Atten= 0%, Lag= 2.2 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.26 fps, Min. Travel Time= 1.2 min  
Avg. Velocity = 1.49 fps, Avg. Travel Time= 1.8 min

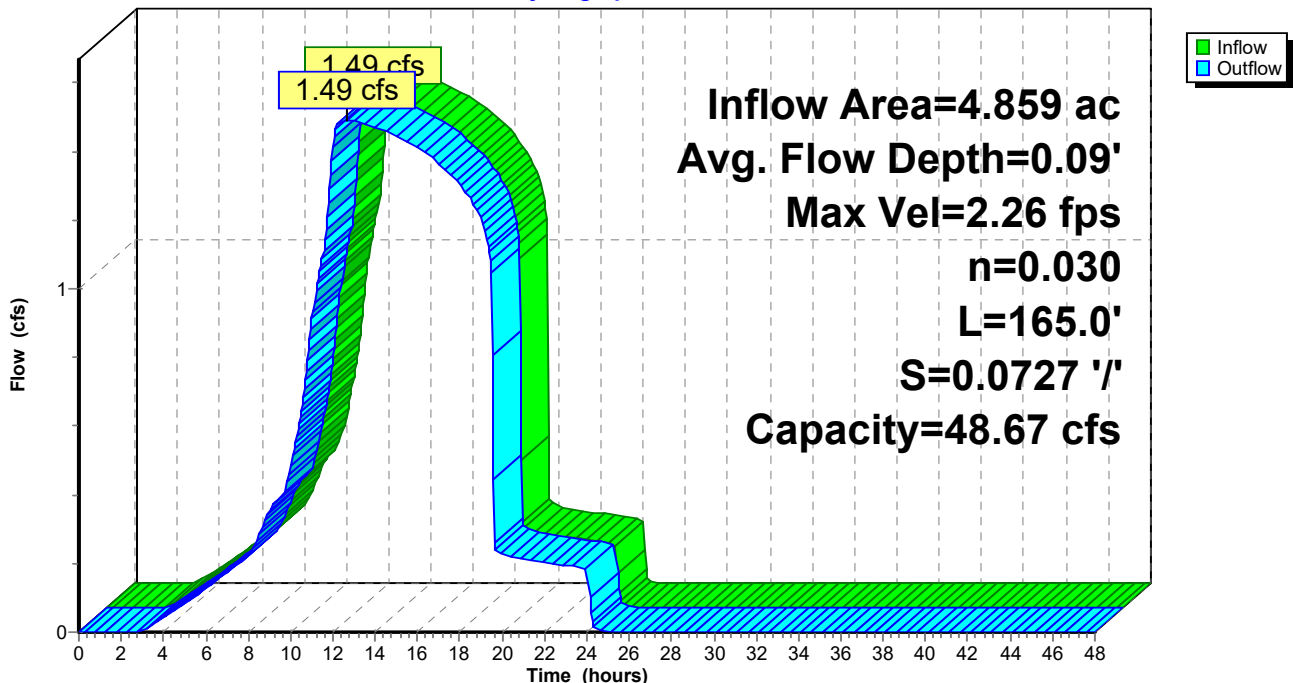
Peak Storage= 108 cf @ 12.62 hrs  
Average Depth at Peak Storage= 0.09' , Surface Width= 9.41'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



### Reach 13.1R:

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 13.2R:

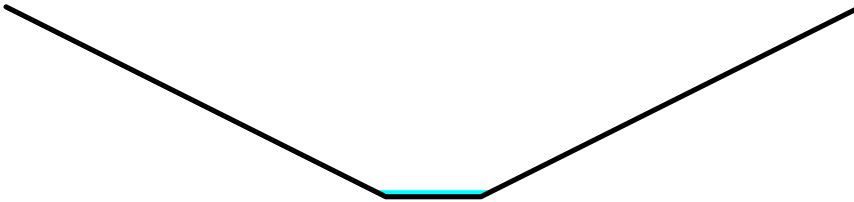
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.04' @ 12.65 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
Inflow = 1.49 cfs @ 12.64 hrs, Volume= 1.190 af  
Outflow = 1.49 cfs @ 12.67 hrs, Volume= 1.190 af, Atten= 0%, Lag= 1.5 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.74 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 3.27 fps, Avg. Travel Time= 1.2 min

Peak Storage= 73 cf @ 12.65 hrs  
Average Depth at Peak Storage= 0.14' , Surface Width= 2.55'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



**Mill Pt Pre 1**

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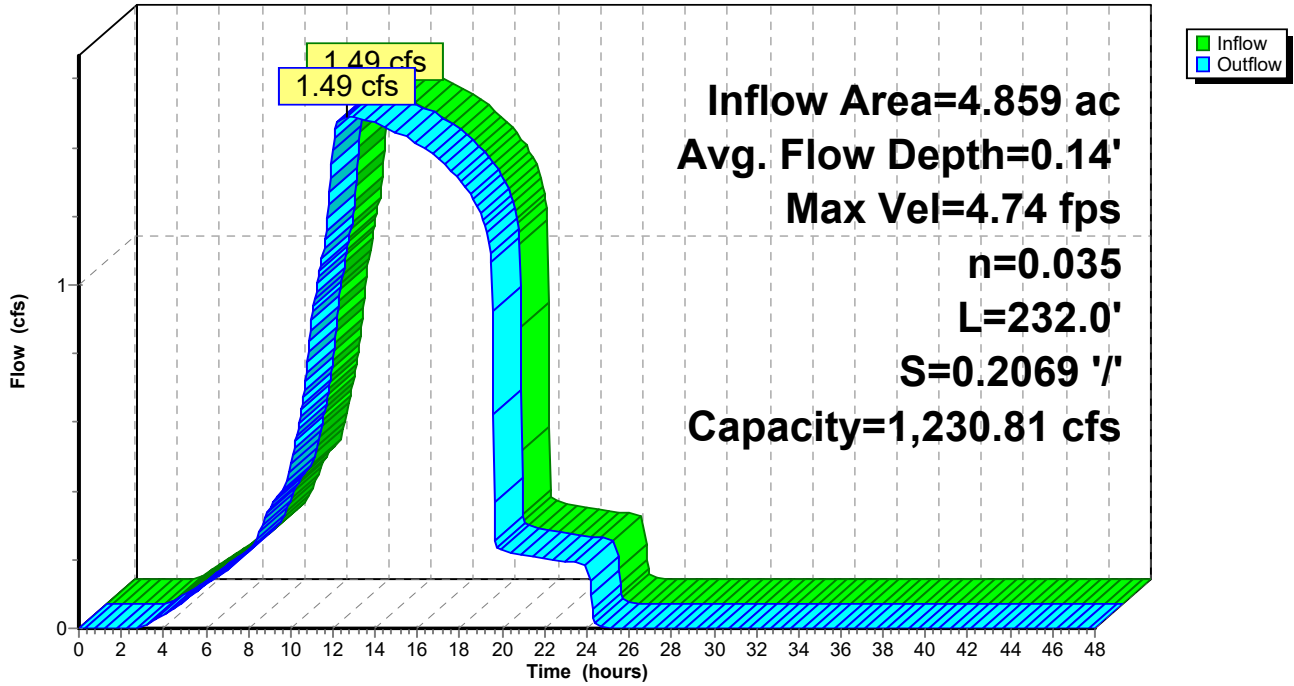
Type II 24-hr 10-year Rainfall=3.50"

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**Reach 13.2R:**

Hydrograph



# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 20.1R: S-KCF-6

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 75.36 cfs @ 12.18 hrs, Volume= 7.357 af  
Outflow = 64.59 cfs @ 12.42 hrs, Volume= 7.357 af, Atten= 14%, Lag= 14.4 min  
Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.95 fps, Min. Travel Time= 7.9 min  
Avg. Velocity = 0.72 fps, Avg. Travel Time= 32.6 min

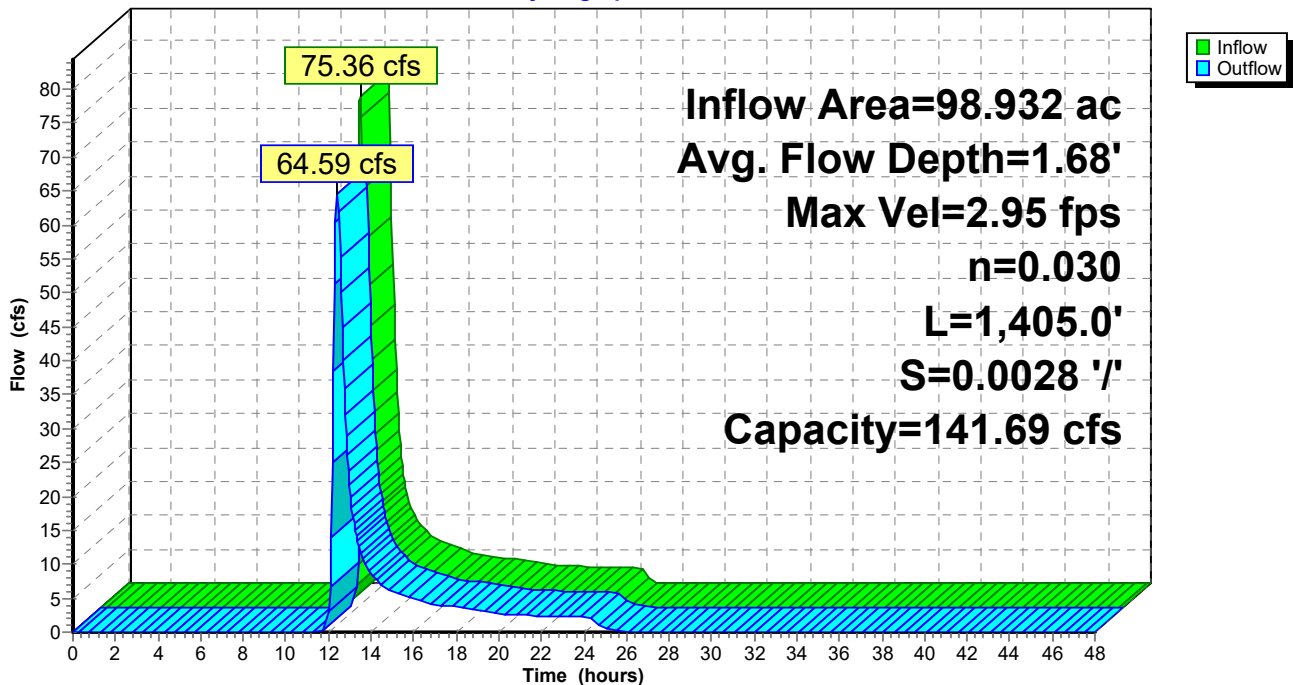
Peak Storage= 30,906 cf @ 12.28 hrs  
Average Depth at Peak Storage= 1.68' , Surface Width= 18.11'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,405.0' Slope= 0.0028 '/'  
Inlet Invert= 494.00', Outlet Invert= 490.00'



### Reach 20.1R: S-KCF-6

Hydrograph





# Mill Pt Pre 1

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 20.2R:

[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.01' @ 25.00 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 64.59 cfs @ 12.42 hrs, Volume= 7.357 af  
Outflow = 60.88 cfs @ 12.58 hrs, Volume= 7.357 af, Atten= 6%, Lag= 9.5 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.35 fps, Min. Travel Time= 5.1 min  
Avg. Velocity= 1.08 fps, Avg. Travel Time= 20.4 min

Peak Storage= 18,611 cf @ 12.49 hrs  
Average Depth at Peak Storage= 1.21' , Surface Width= 15.26'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,322.0' Slope= 0.0121 '/'  
Inlet Invert= 490.00', Outlet Invert= 474.00'



**Mill Pt Pre 1**

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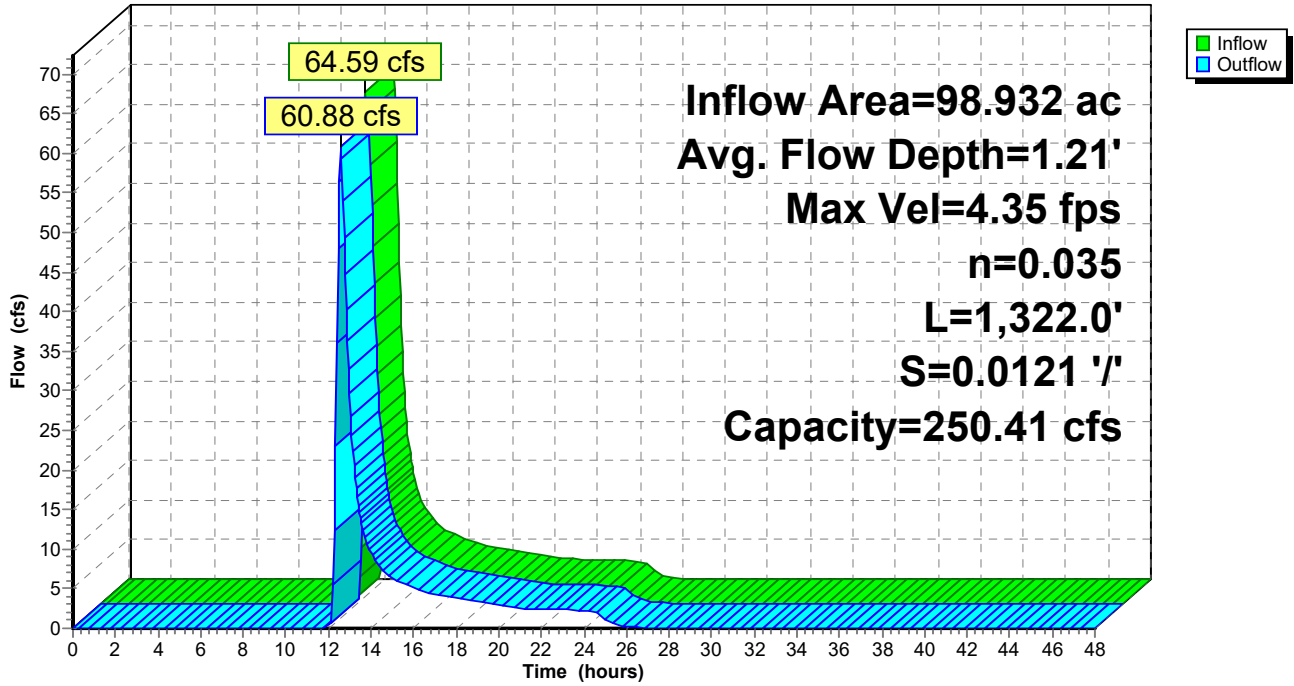
Type II 24-hr 10-year Rainfall=3.50"

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**Reach 20.2R:**

Hydrograph



# Mill Pt Pre 1

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## Summary for Reach 22.1R: S-KCF-5

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 55.18 cfs @ 12.46 hrs, Volume= 8.204 af  
Outflow = 54.76 cfs @ 12.55 hrs, Volume= 8.204 af, Atten= 1%, Lag= 5.4 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.56 fps, Min. Travel Time= 3.1 min  
Avg. Velocity= 1.15 fps, Avg. Travel Time= 9.6 min

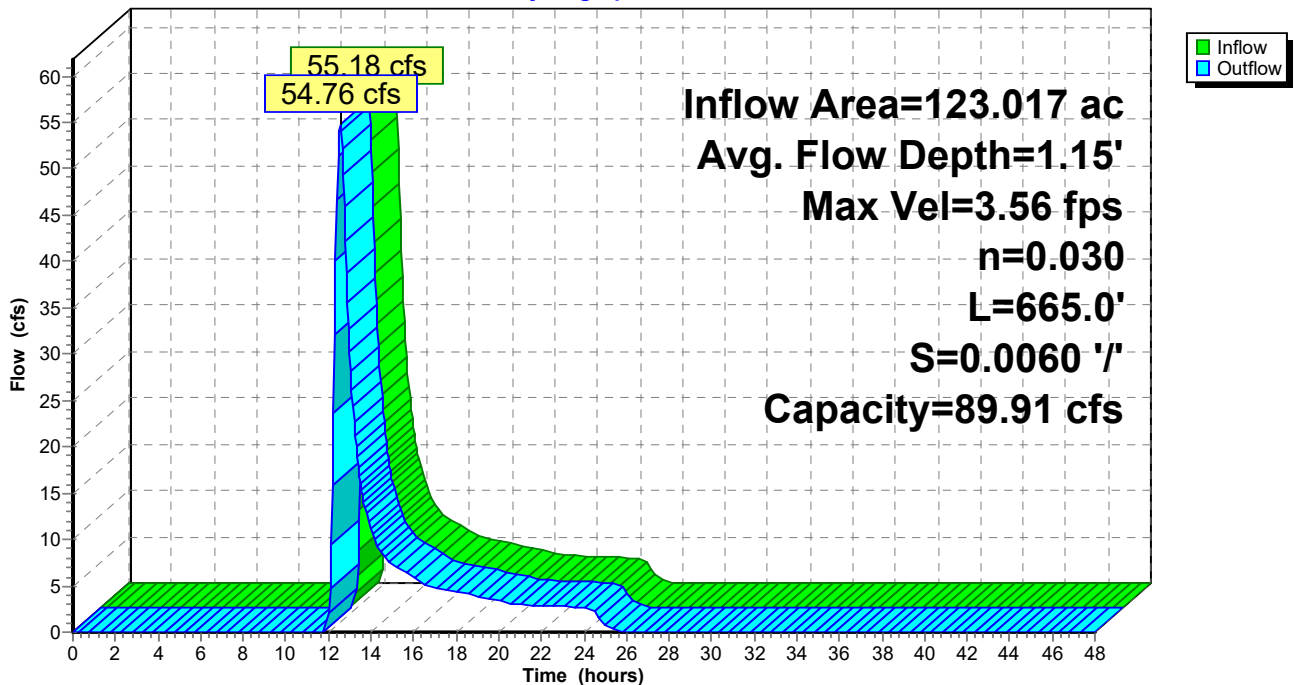
Peak Storage= 10,232 cf @ 12.50 hrs  
Average Depth at Peak Storage= 1.15' , Surface Width= 16.87'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'



## Reach 22.1R: S-KCF-5

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 22.2R:**

[91] Warning: Storage range exceeded by 0.26'

[55] Hint: Peak inflow is 134% of Manning's capacity

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 0.66' @ 12.70 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 0.67' @ 12.65 hrs

[64] Warning: Exceeded Reach 22.1R outlet bank by 0.26' @ 12.61 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 0.84" for 10-year event

Inflow = 115.67 cfs @ 12.57 hrs, Volume= 15.561 af

Outflow = 114.21 cfs @ 12.66 hrs, Volume= 15.561 af, Atten= 1%, Lag= 5.2 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.27 fps, Min. Travel Time= 2.8 min

Avg. Velocity= 1.00 fps, Avg. Travel Time= 11.8 min

Peak Storage= 18,916 cf @ 12.61 hrs

Average Depth at Peak Storage= 1.76' , Surface Width= 20.58'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'





**Mill Pt Pre 1**

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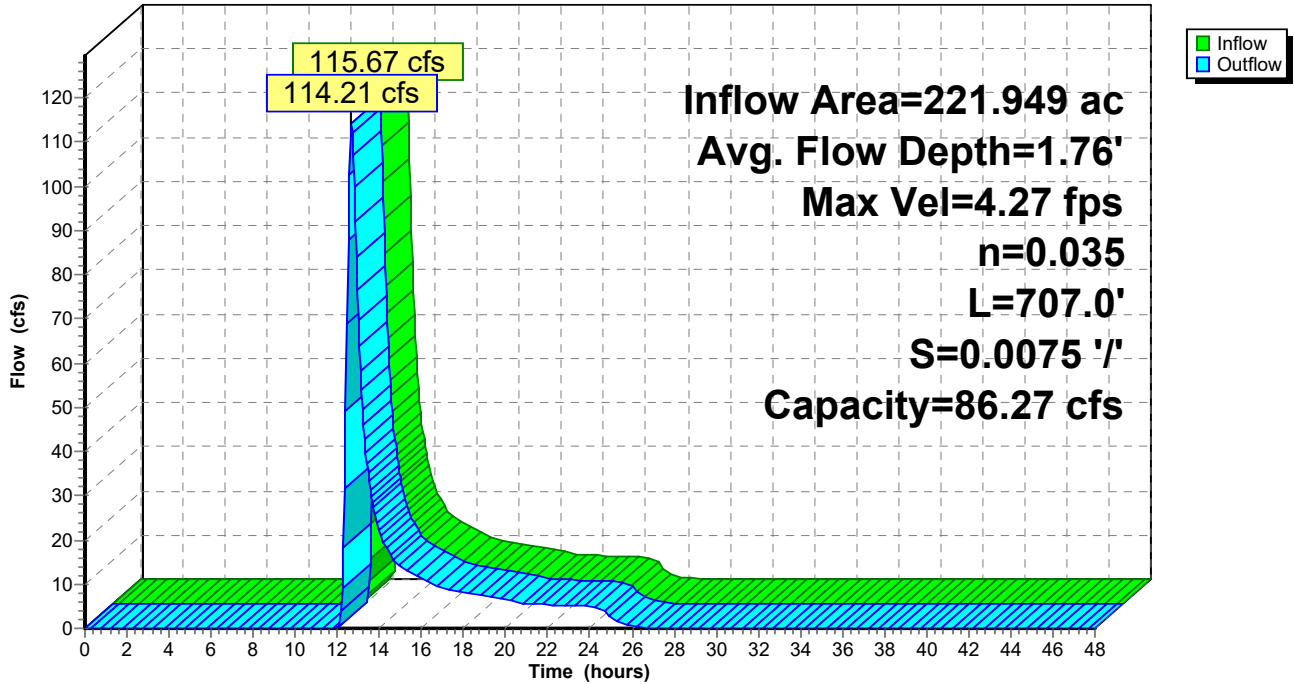
Type II 24-hr 10-year Rainfall=3.50"

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**Reach 22.2R:**

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 44R:**

[91] Warning: Storage range exceeded by 0.34'

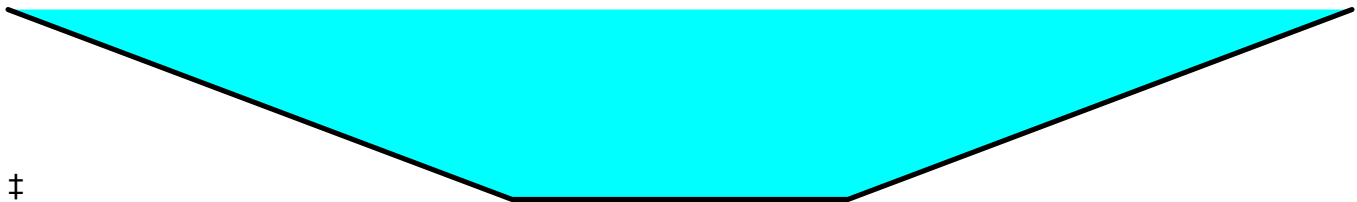
[55] Hint: Peak inflow is 248% of Manning's capacity

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 1.01" for 10-year event  
Inflow = 21.57 cfs @ 12.42 hrs, Volume= 2.862 af  
Outflow = 21.39 cfs @ 12.48 hrs, Volume= 2.862 af, Atten= 1%, Lag= 3.8 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.11 fps, Min. Travel Time= 2.0 min  
Avg. Velocity= 1.74 fps, Avg. Travel Time= 4.8 min

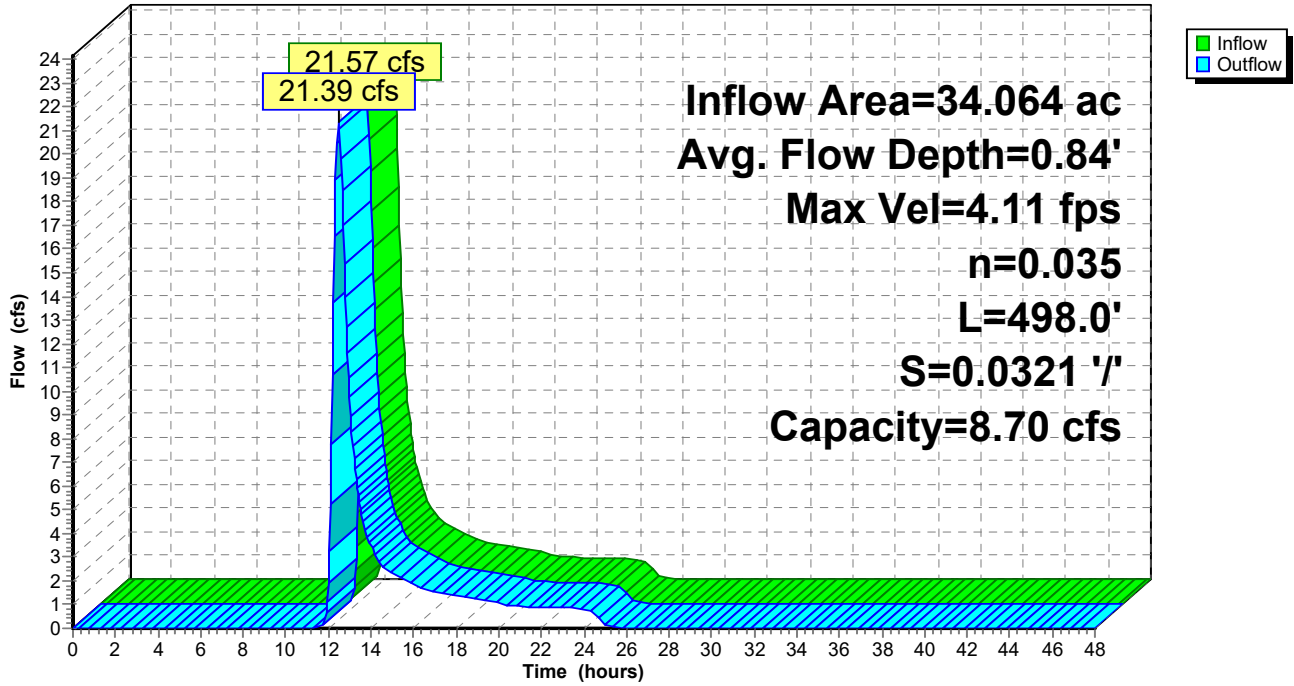
Peak Storage= 2,598 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.84' , Surface Width= 12.09'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'



Reach 44R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Reach 45R:**

[91] Warning: Storage range exceeded by 0.61'

[55] Hint: Peak inflow is 309% of Manning's capacity

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.27' @ 12.50 hrs

[64] Warning: Exceeded Reach 44R outlet bank by 0.61' @ 12.47 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 1.01" for 10-year event  
Inflow = 50.04 cfs @ 12.45 hrs, Volume= 6.750 af  
Outflow = 49.71 cfs @ 12.50 hrs, Volume= 6.750 af, Atten= 1%, Lag= 2.9 min  
Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 5.98 fps, Min. Travel Time= 1.5 min  
Avg. Velocity= 2.05 fps, Avg. Travel Time= 4.4 min

Peak Storage= 4,477 cf @ 12.47 hrs  
Average Depth at Peak Storage= 1.11' , Surface Width= 10.42'  
Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

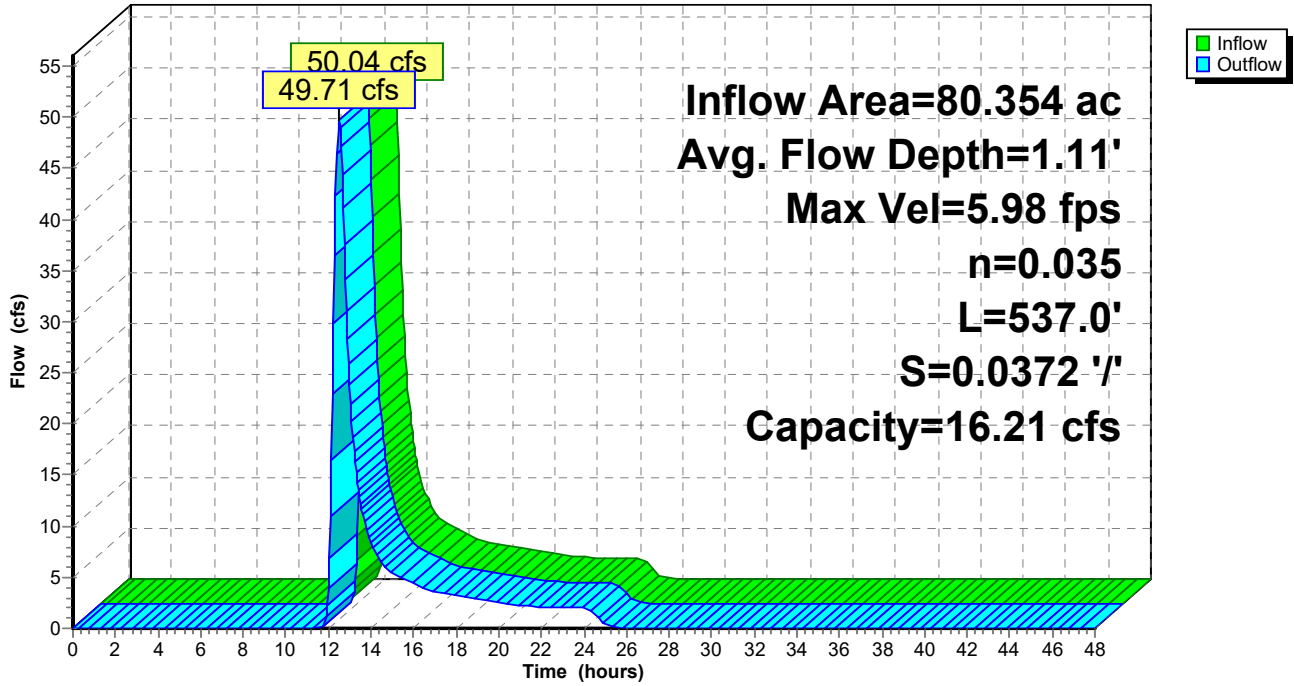
6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 8.00'  
Length= 537.0' Slope= 0.0372 '/'  
Inlet Invert= 388.00', Outlet Invert= 368.00'





Reach 45R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 2.94" for 10-year event  
 Inflow = 22.37 cfs @ 11.96 hrs, Volume= 1.190 af  
 Outflow = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af, Atten= 93%, Lag= 38.5 min  
 Primary = 1.49 cfs @ 12.61 hrs, Volume= 1.190 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 507.82' @ 12.61 hrs Surf.Area= 33,317 sf Storage= 21,706 cf

Plug-Flow detention time= 112.8 min calculated for 1.189 af (100% of inflow)  
 Center-of-Mass det. time= 112.6 min ( 887.4 - 774.8 )

| Volume              | Invert               | Avail.Storage    | Storage Description  |                           |                     |
|---------------------|----------------------|------------------|--|---------------------------|---------------------|
| #1                  | 505.00'              | 349,932 cf       | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                           |                     |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Perim.<br>(feet) | Inc.Store<br>(cubic-feet)                                  | Cum.Store<br>(cubic-feet) | Wet.Area<br>(sq-ft) |
| 505.00              | 50                   | 25.0             | 0  | 0                         | 50                  |
| 506.00              | 138                  | 45.5             | 90   | 90                        | 170                 |
| 508.00              | 39,705               | 811.5            | 28,123   | 28,213                    | 52,417              |
| 510.00              | 80,589               | 1,415.9          | 117,907  | 146,120                   | 159,570             |
| 512.00              | 124,830              | 2,053.3          | 203,812  | 349,932                   | 335,572             |

| Device | Routing | Invert  | Outlet Devices   |
|--------|---------|---------|--|
| #1     | Primary | 505.00' | <b>8.0" Round Culvert</b><br>L= 172.7' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |

**Primary OutFlow** Max=1.49 cfs @ 12.61 hrs HW=507.82' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.49 cfs @ 4.26 fps)

**Mill Pt Pre 1**

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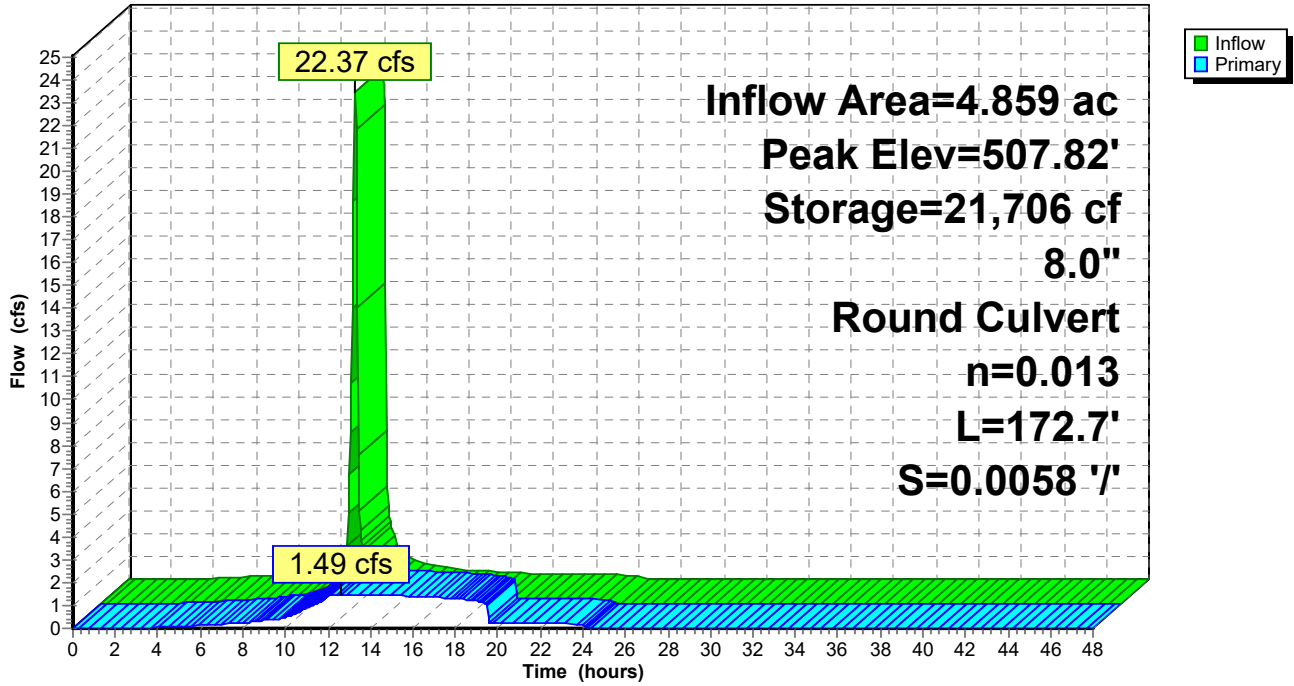
Type II 24-hr 10-year Rainfall=3.50"

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**Pond 12P: 12P**

Hydrograph



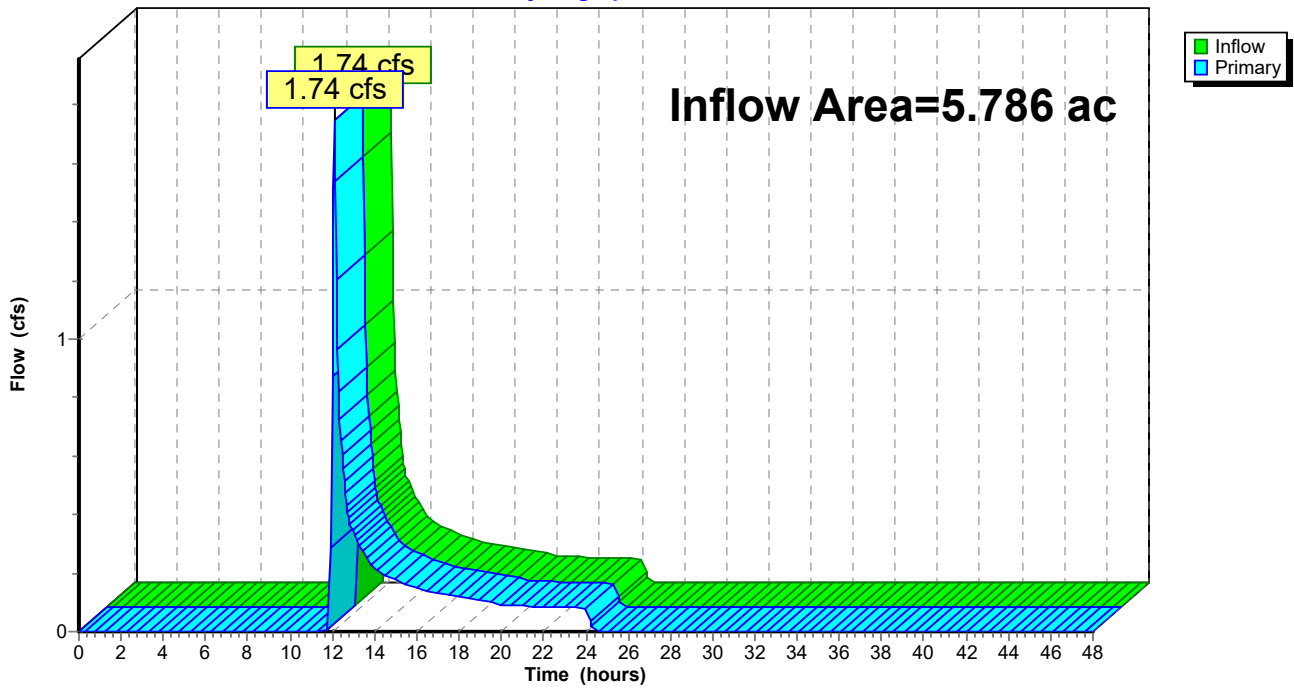
### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 0.38" for 10-year event  
Inflow = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af  
Primary = 1.74 cfs @ 12.10 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:

Hydrograph





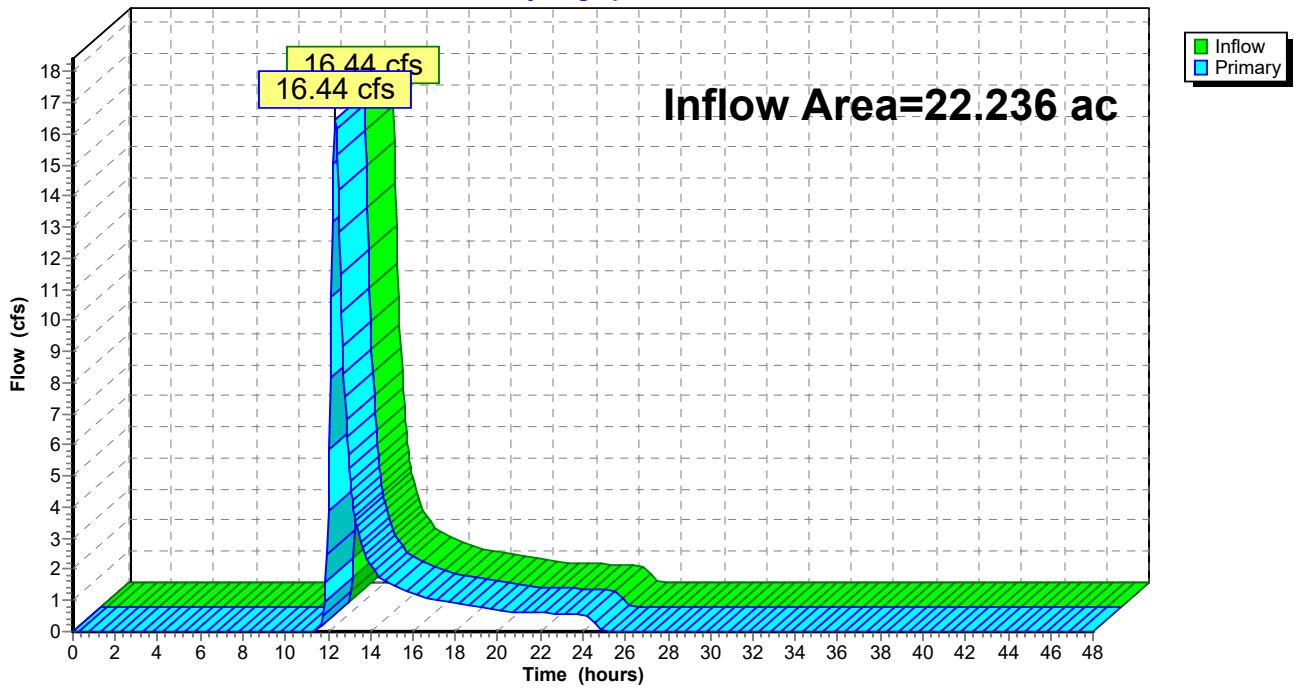
### Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 1.06" for 10-year event  
Inflow = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af  
Primary = 16.44 cfs @ 12.35 hrs, Volume= 1.971 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP10:

Hydrograph



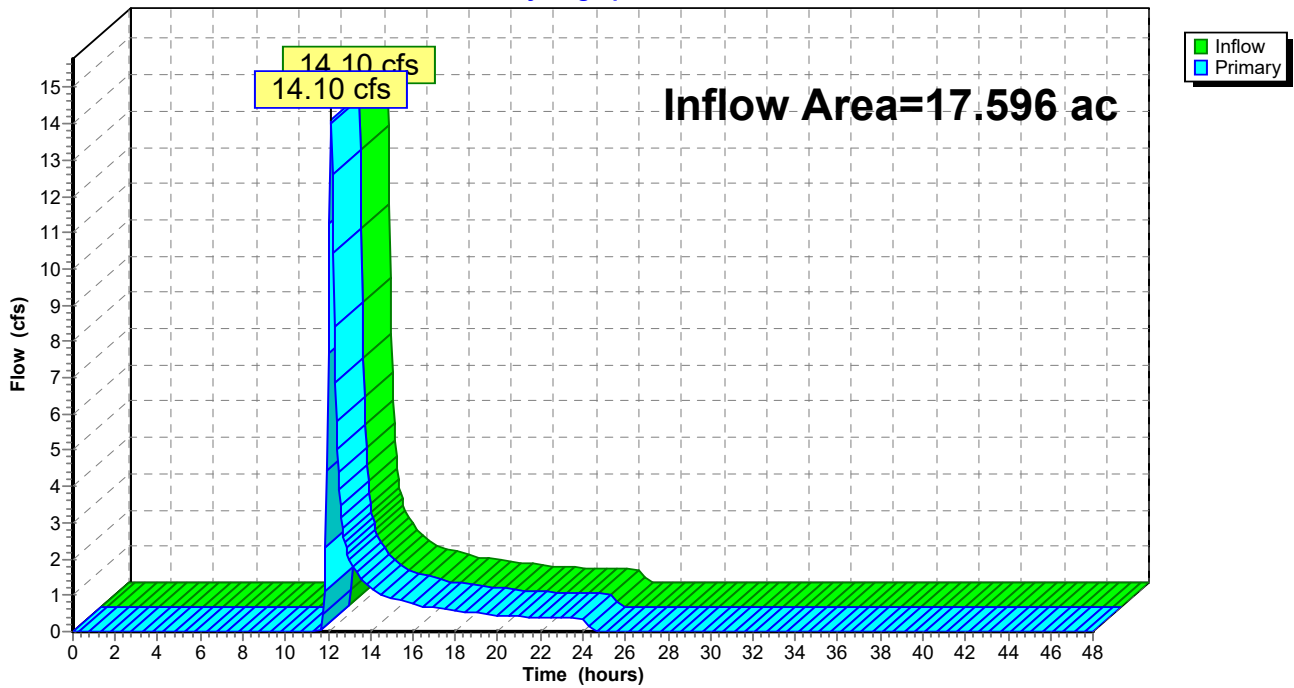
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af  
Primary = 14.10 cfs @ 12.13 hrs, Volume= 1.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph



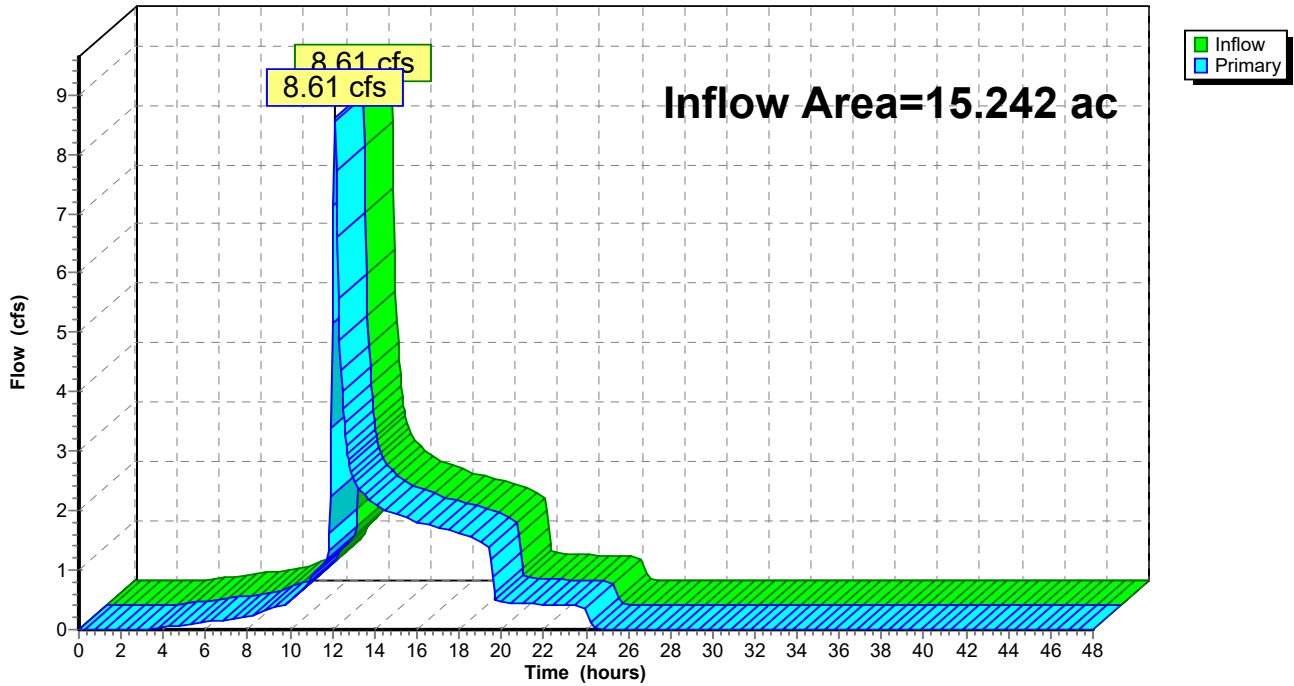
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 1.42" for 10-year event  
Inflow = 8.61 cfs @ 12.13 hrs, Volume= 1.800 af  
Primary = 8.61 cfs @ 12.13 hrs, Volume= 1.800 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 10-year Rainfall=3.50"

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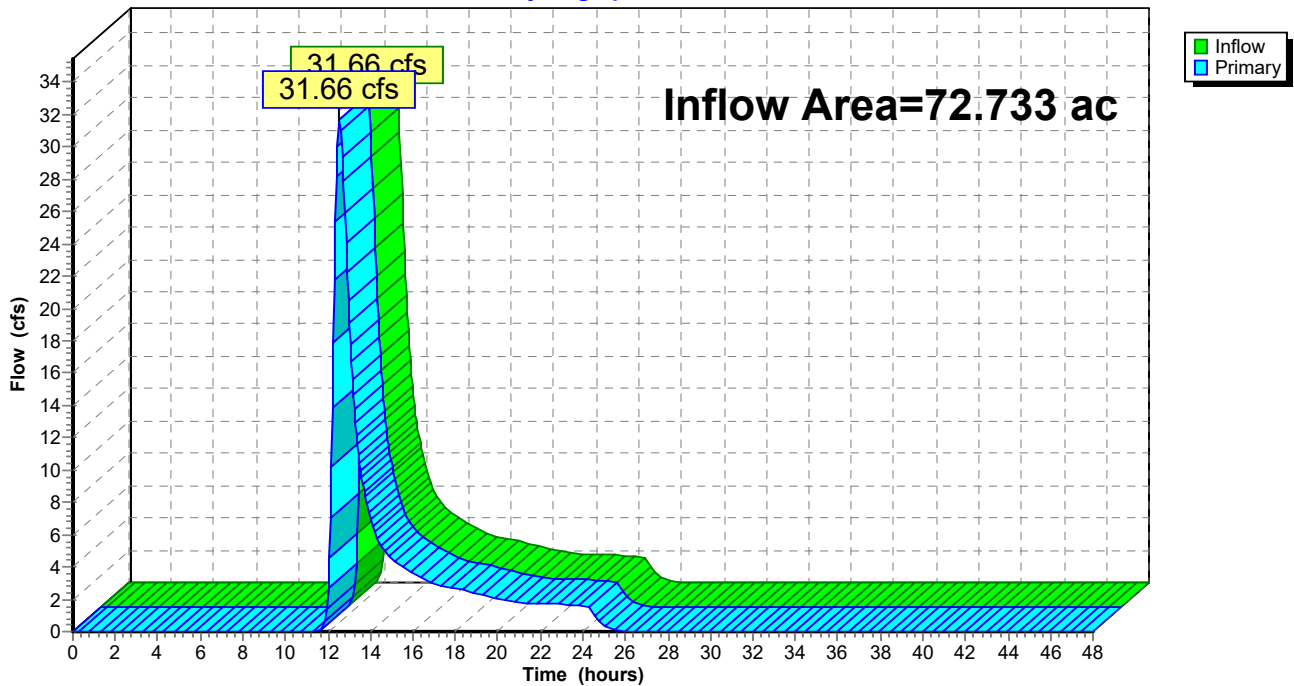
**Summary for Link SP14:**

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af  
Primary = 31.66 cfs @ 12.56 hrs, Volume= 5.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP14:**

Hydrograph





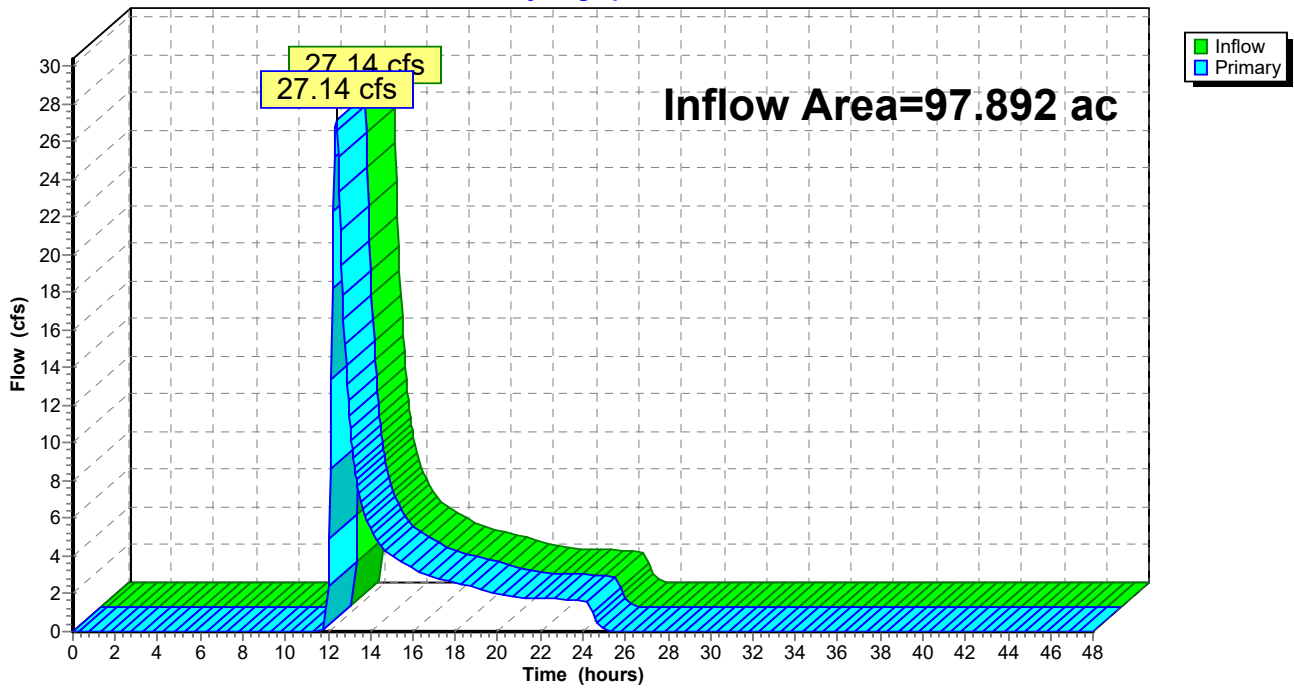
### Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af  
Primary = 27.14 cfs @ 12.39 hrs, Volume= 4.335 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP17:

Hydrograph



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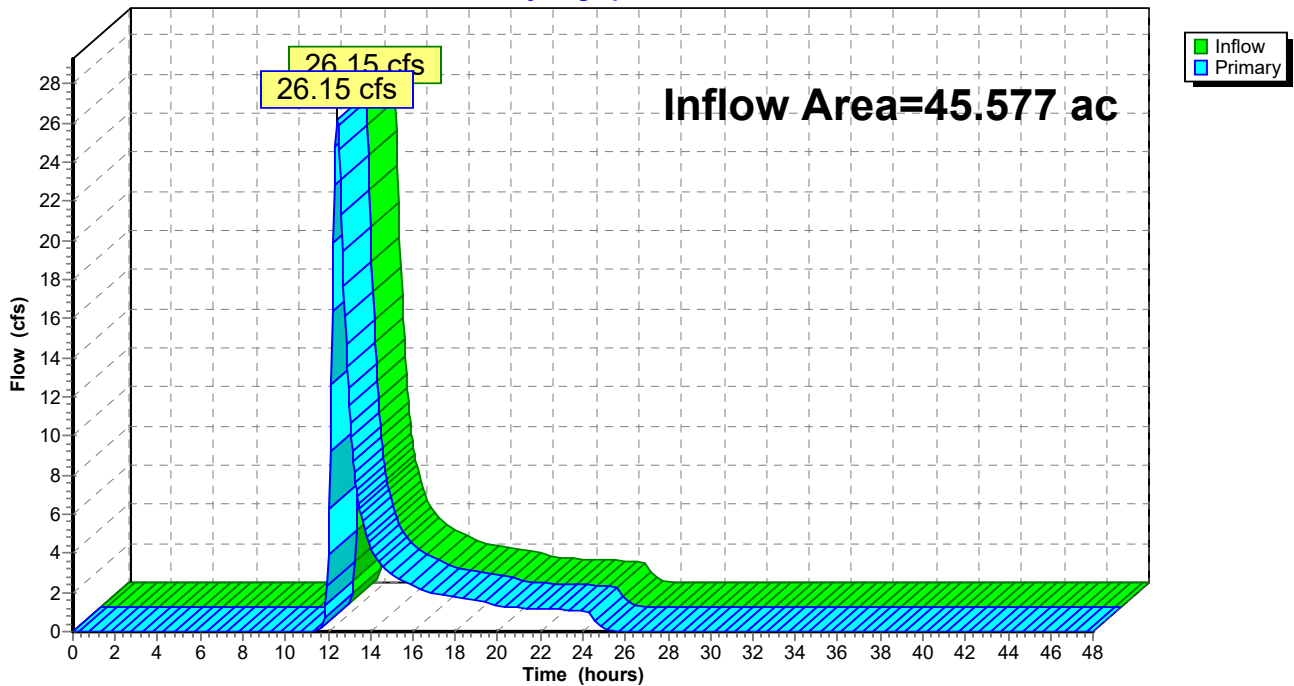
## Summary for Link SP18:

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af  
Primary = 26.15 cfs @ 12.44 hrs, Volume= 3.623 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP18:

Hydrograph



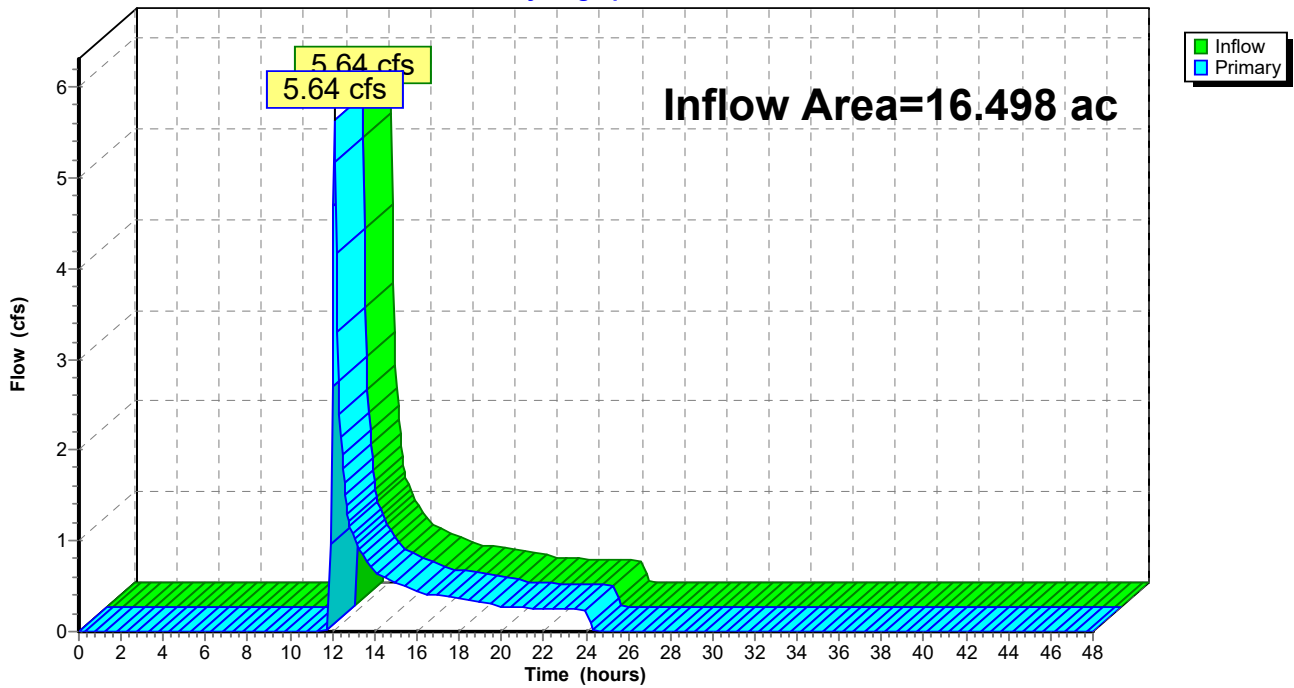
### Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 0.42" for 10-year event  
Inflow = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af  
Primary = 5.64 cfs @ 12.11 hrs, Volume= 0.572 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP2:

Hydrograph



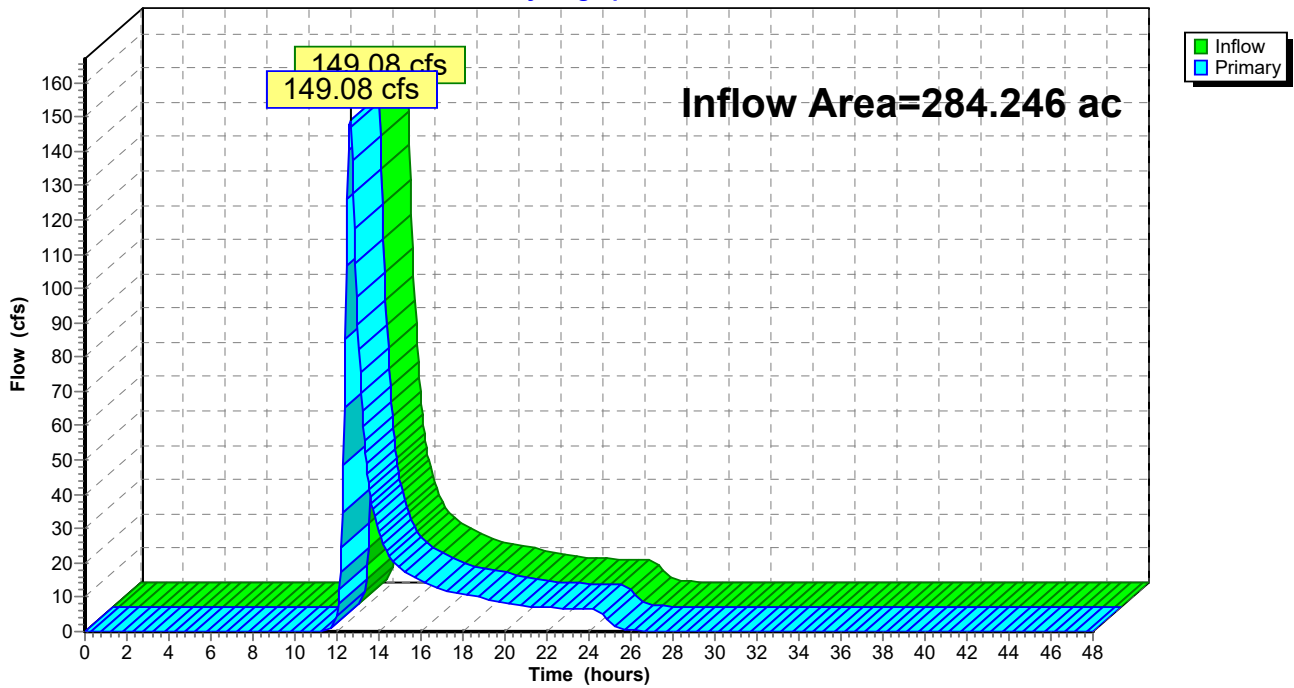
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 149.08 cfs @ 12.64 hrs, Volume= 21.084 af  
Primary = 149.08 cfs @ 12.64 hrs, Volume= 21.084 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph





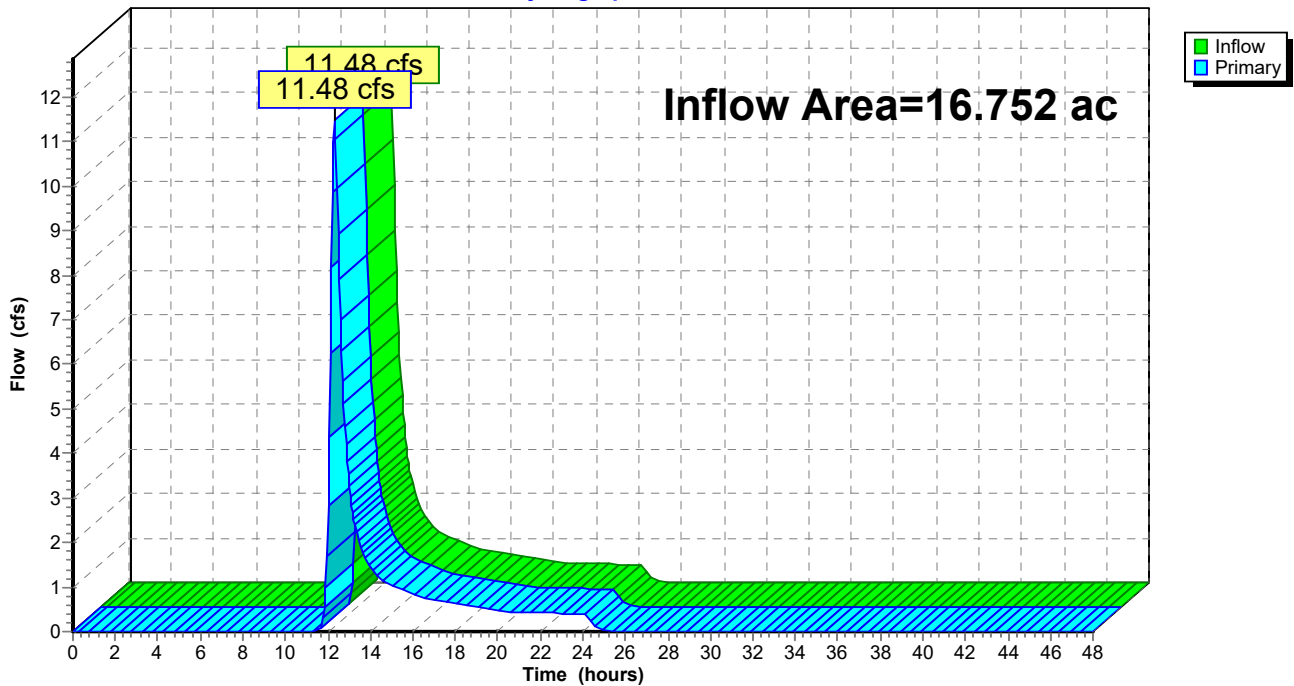
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af  
Primary = 11.48 cfs @ 12.32 hrs, Volume= 1.332 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



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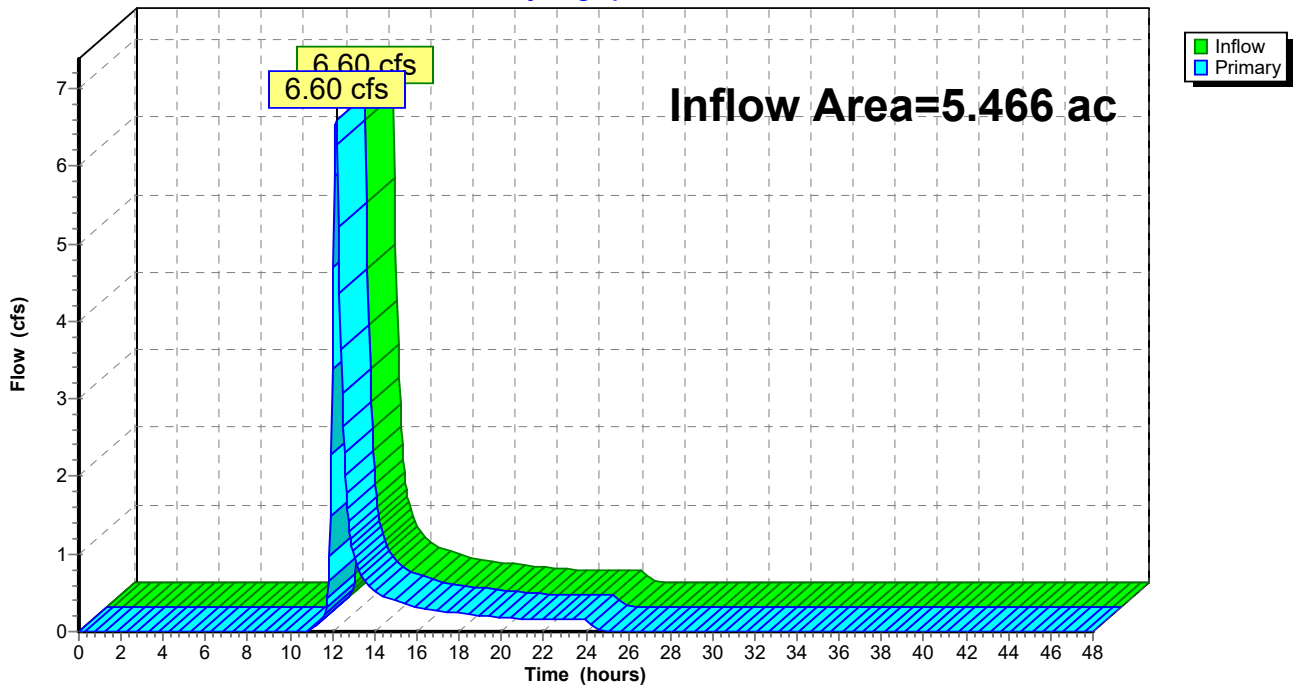
**Summary for Link SP24:**

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 1.24" for 10-year event  
Inflow = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af  
Primary = 6.60 cfs @ 12.18 hrs, Volume= 0.565 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP24:**

Hydrograph



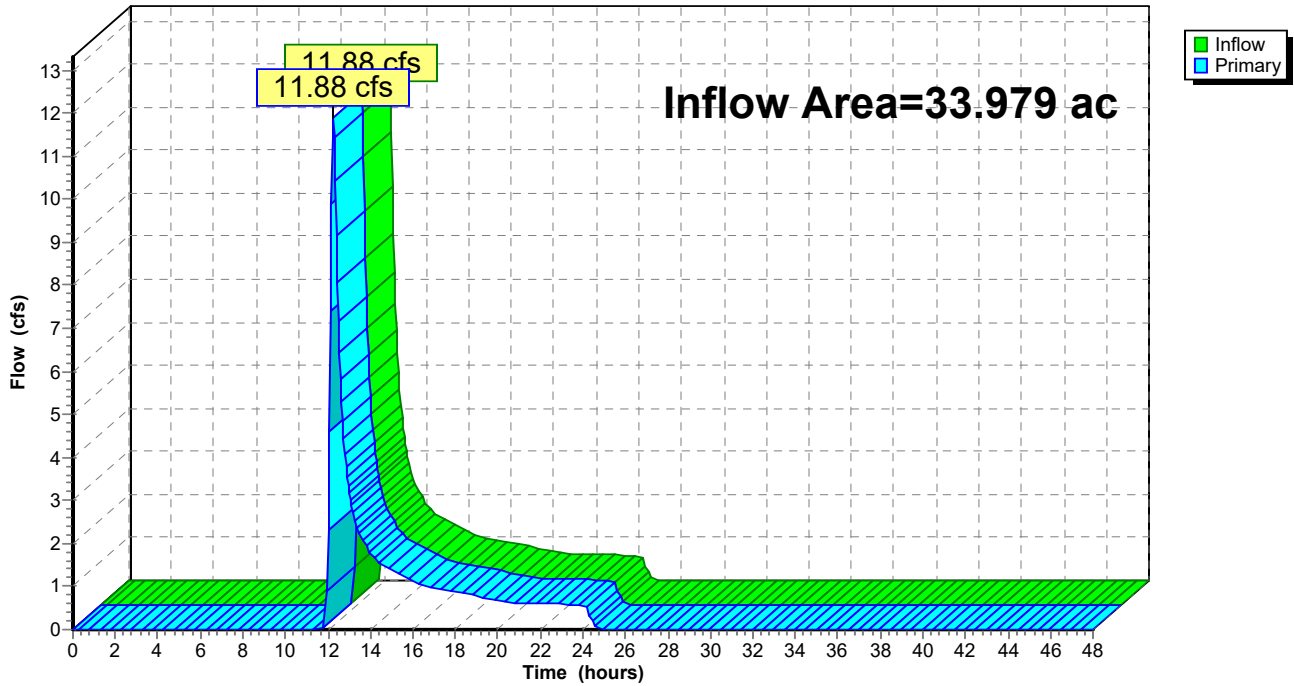
### Summary for Link SP3:

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af  
Primary = 11.88 cfs @ 12.25 hrs, Volume= 1.505 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP3:

Hydrograph



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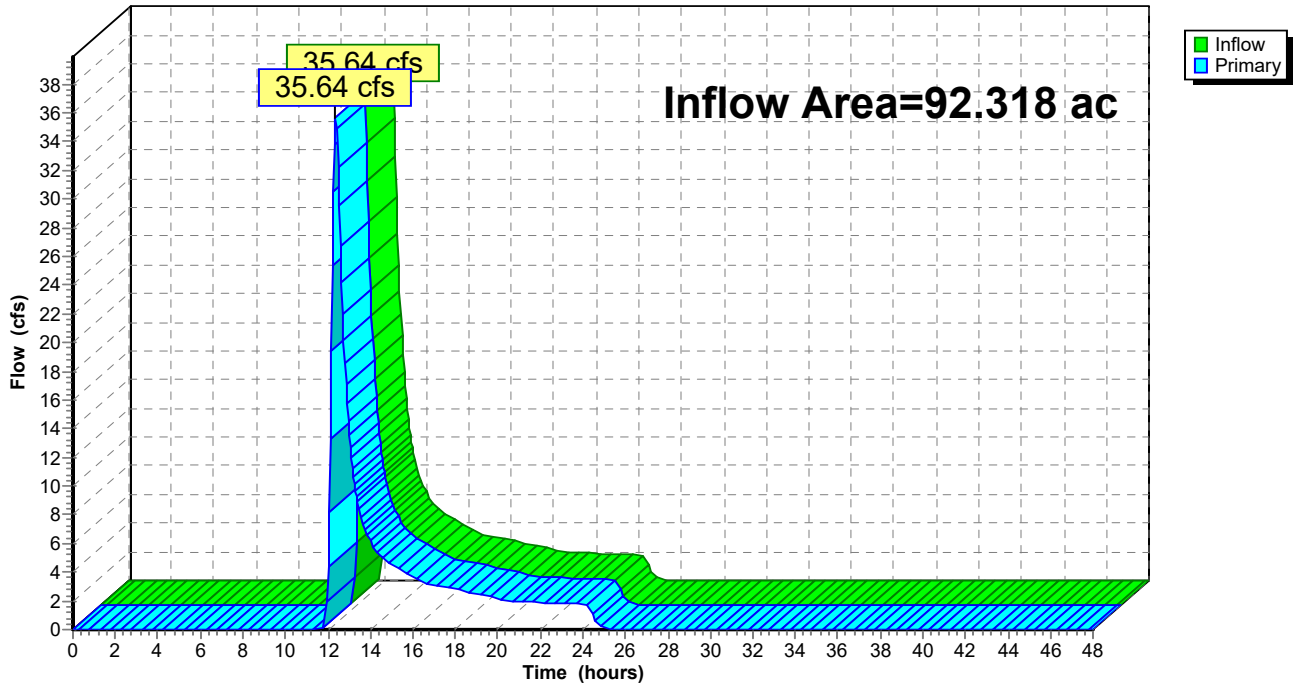
**Summary for Link SP4:**

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af  
Primary = 35.64 cfs @ 12.37 hrs, Volume= 5.074 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP4:**

Hydrograph





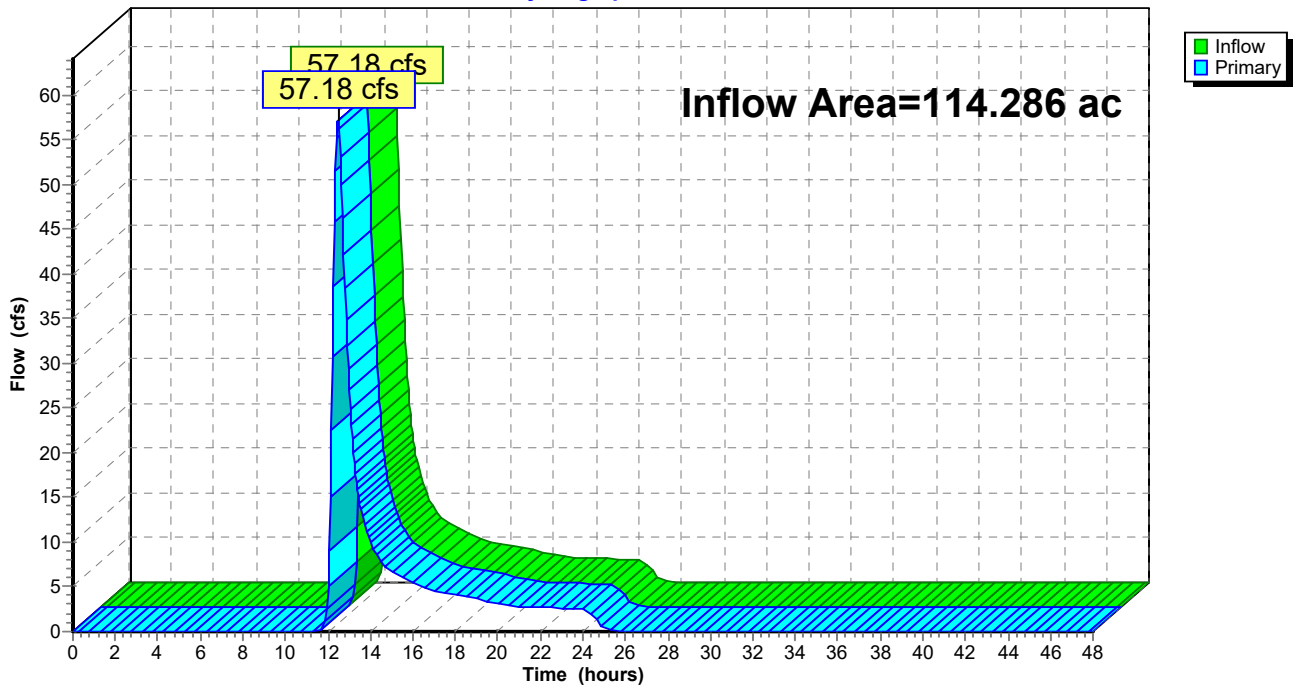
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 57.18 cfs @ 12.47 hrs, Volume= 8.140 af  
Primary = 57.18 cfs @ 12.47 hrs, Volume= 8.140 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph



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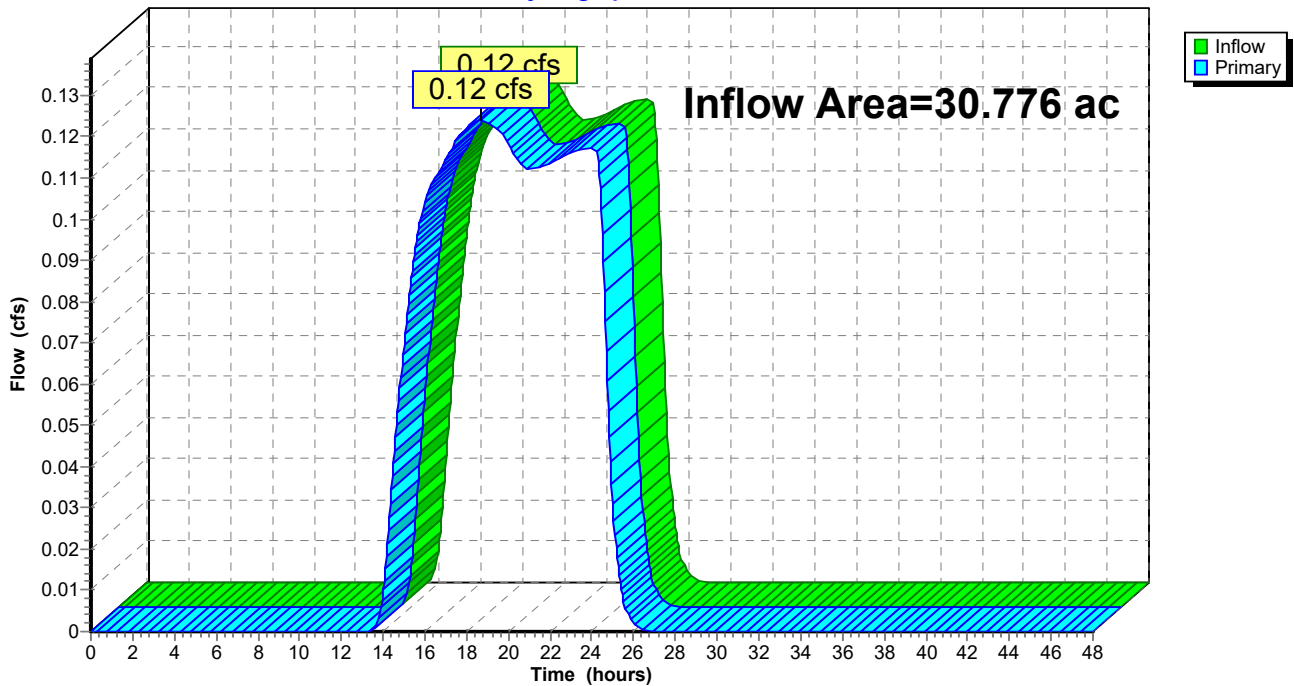
**Summary for Link SP46:**

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.04" for 10-year event  
Inflow = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af  
Primary = 0.12 cfs @ 18.66 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP46:**

Hydrograph



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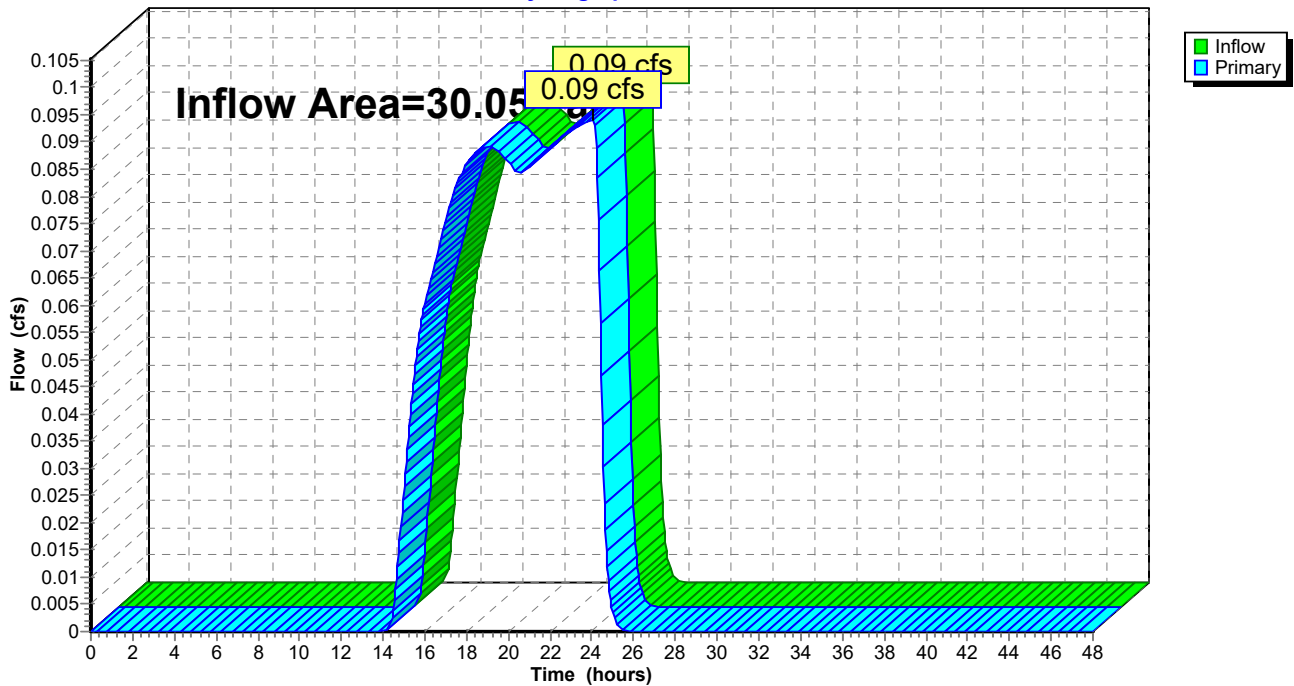
**Summary for Link SP47:**

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.03" for 10-year event  
Inflow = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af  
Primary = 0.09 cfs @ 24.01 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP47:**

Hydrograph



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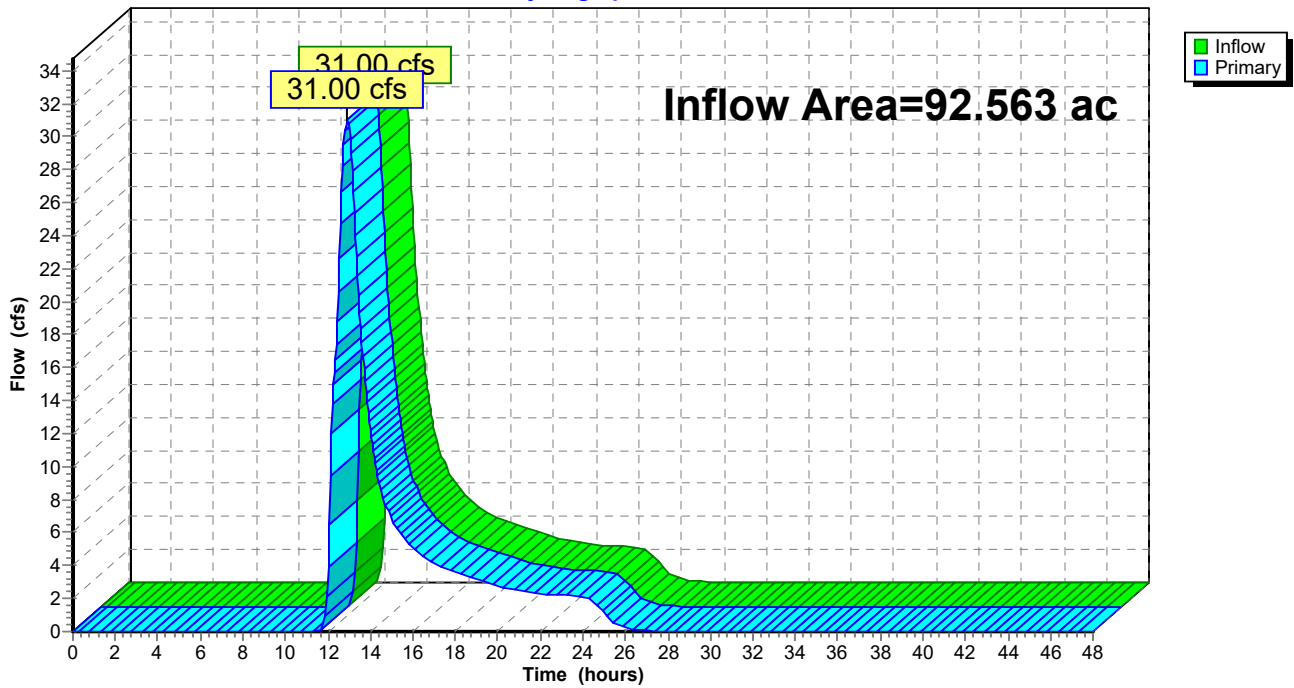
**Summary for Link SP5:**

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 0.89" for 10-year event  
Inflow = 31.00 cfs @ 12.90 hrs, Volume= 6.859 af  
Primary = 31.00 cfs @ 12.90 hrs, Volume= 6.859 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP5:**

Hydrograph





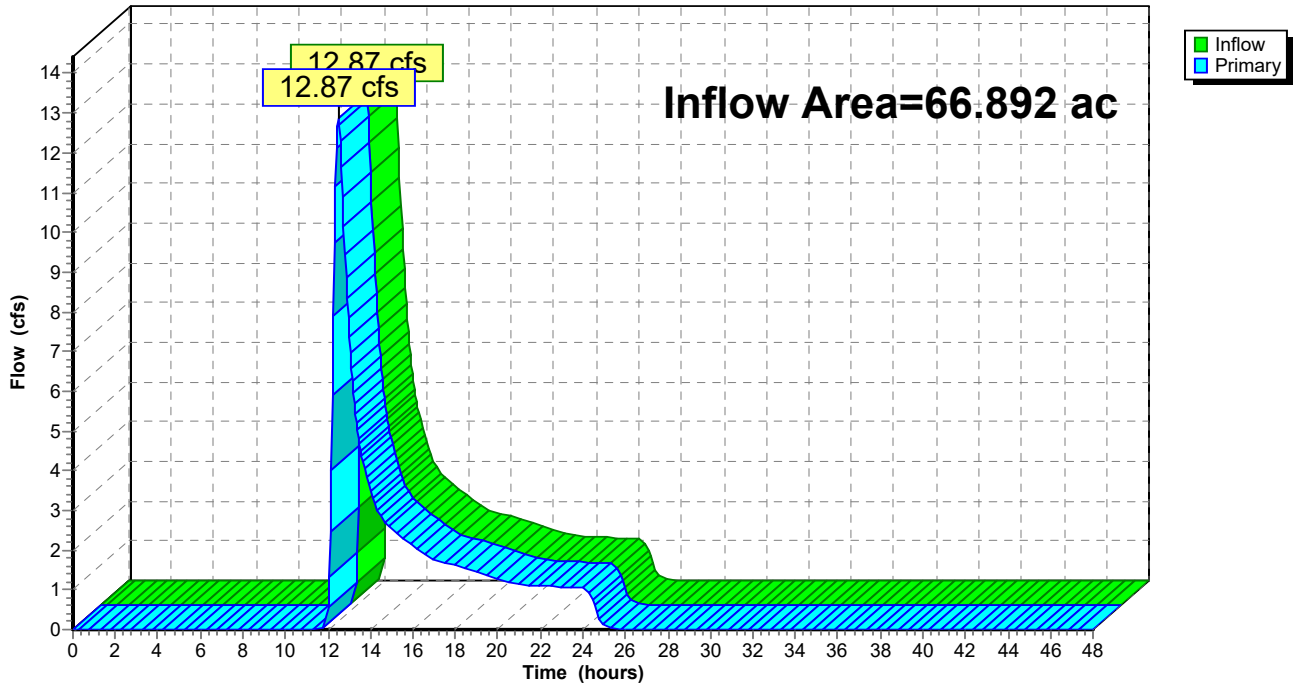
Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 0.45" for 10-year event  
Inflow = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af  
Primary = 12.87 cfs @ 12.50 hrs, Volume= 2.525 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP7:

Hydrograph



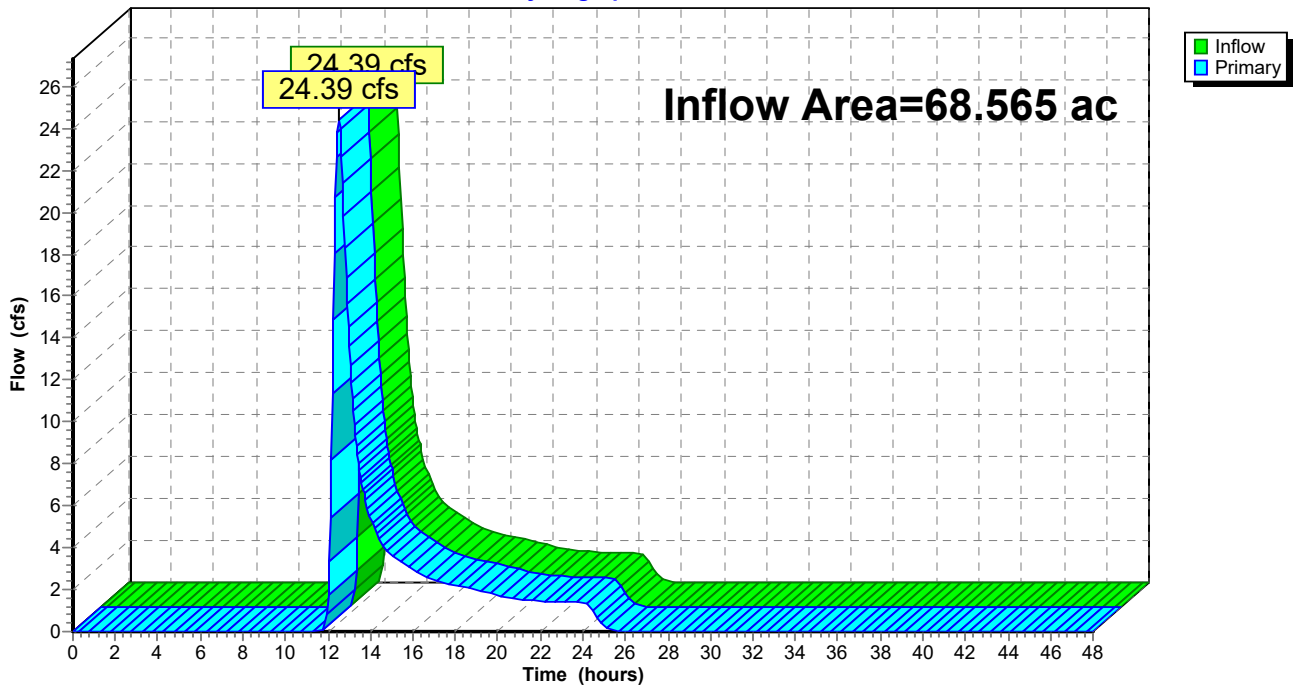
### Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af  
Primary = 24.39 cfs @ 12.52 hrs, Volume= 4.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP9:

Hydrograph



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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |   |
|---------------------------------|---|
| <b>Subcatchment 1S: Sub 1</b>   | Runoff Area=5.786 ac 0.00% Impervious Runoff Depth=1.43"<br>Flow Length=1,005' Tc=13.1 min CN=56 Runoff=10.41 cfs 0.691 af    |
| <b>Subcatchment 2S: Sub 2</b>   | Runoff Area=16.498 ac 0.00% Impervious Runoff Depth=1.51"<br>Flow Length=1,307' Tc=14.1 min CN=57 Runoff=30.30 cfs 2.074 af   |
| <b>Subcatchment 3S: Sub 3</b>   | Runoff Area=33.979 ac 0.00% Impervious Runoff Depth=1.74"<br>Flow Length=2,507' Tc=25.3 min CN=60 Runoff=52.70 cfs 4.930 af   |
| <b>Subcatchment 4S: Sub 4</b>   | Runoff Area=92.318 ac 0.28% Impervious Runoff Depth=1.98"<br>Flow Length=4,160' Tc=35.5 min CN=63 Runoff=133.29 cfs 15.256 af |
| <b>Subcatchment 5S: Sub 5</b>   | Runoff Area=17.299 ac 0.00% Impervious Runoff Depth=2.15"<br>Flow Length=1,946' Tc=24.6 min CN=65 Runoff=35.19 cfs 3.099 af   |
| <b>Subcatchment 6S: Sub 6</b>   | Runoff Area=16.301 ac 0.00% Impervious Runoff Depth=2.23"<br>Flow Length=1,894' Tc=48.6 min CN=66 Runoff=21.70 cfs 3.036 af   |
| <b>Subcatchment 7S: Sub 7</b>   | Runoff Area=66.892 ac 0.00% Impervious Runoff Depth=1.58"<br>Flow Length=2,117' Tc=40.9 min CN=58 Runoff=65.69 cfs 8.835 af   |
| <b>Subcatchment 8S: Sub 8</b>   | Runoff Area=58.963 ac 0.00% Impervious Runoff Depth=2.50"<br>Flow Length=2,902' Tc=63.3 min CN=69 Runoff=73.45 cfs 12.263 af  |
| <b>Subcatchment 9S: Sub 9</b>   | Runoff Area=68.565 ac 1.11% Impervious Runoff Depth=2.07"<br>Flow Length=2,945' Tc=45.6 min CN=64 Runoff=86.90 cfs 11.804 af  |
| <b>Subcatchment 10S: Sub 10</b> | Runoff Area=22.236 ac 4.90% Impervious Runoff Depth=2.67"<br>Flow Length=2,047' Tc=36.1 min CN=71 Runoff=44.88 cfs 4.956 af   |
| <b>Subcatchment 11S: Sub 11</b> | Runoff Area=17.596 ac 2.21% Impervious Runoff Depth=2.23"<br>Flow Length=1,622' Tc=18.4 min CN=66 Runoff=44.67 cfs 3.277 af   |
| <b>Subcatchment 12S: Sub 12</b> | Runoff Area=4.859 ac 0.00% Impervious Runoff Depth=5.13"<br>Tc=6.0 min CN=95 Runoff=37.76 cfs 2.079 af                        |
| <b>Subcatchment 13S: Sub 13</b> | Runoff Area=10.383 ac 0.20% Impervious Runoff Depth=2.07"<br>Flow Length=848' Tc=17.7 min CN=64 Runoff=24.66 cfs 1.788 af     |
| <b>Subcatchment 14S: Sub 14</b> | Runoff Area=72.733 ac 0.42% Impervious Runoff Depth=2.32"<br>Flow Length=4,131' Tc=49.6 min CN=67 Runoff=99.70 cfs 14.066 af  |
| <b>Subcatchment 17S: Sub 17</b> | Runoff Area=97.892 ac 1.18% Impervious Runoff Depth=1.74"<br>Flow Length=3,526' Tc=35.1 min CN=60 Runoff=121.08 cfs 14.202 af |
| <b>Subcatchment 18S: Sub 18</b> | Runoff Area=45.577 ac 0.74% Impervious Runoff Depth=2.50"<br>Flow Length=2,382' Tc=42.2 min CN=69 Runoff=76.28 cfs 9.479 af   |

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Type II 24-hr 100-year Rainfall=5.72"

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|                                   |  |
|-----------------------------------|--|
| <b>Subcatchment 19S: Sub 19</b>   | Runoff Area=28.407 ac 0.54% Impervious Runoff Depth=2.77"<br>Flow Length=1,760' Tc=30.4 min CN=72 Runoff=66.82 cfs 6.547 af                            |
| <b>Subcatchment 20S: Sub 20</b>   | Runoff Area=70.525 ac 0.78% Impervious Runoff Depth=2.23"<br>Flow Length=1,829' Tc=20.0 min CN=66 Runoff=170.25 cfs 13.134 af                          |
| <b>Subcatchment 21S: Sub 21</b>   | Runoff Area=123.017 ac 3.33% Impervious Runoff Depth=2.23"<br>Flow Length=4,201' Tc=42.5 min CN=66 Runoff=180.43 cfs 22.910 af                         |
| <b>Subcatchment 22S: Sub 22</b>   | Runoff Area=62.297 ac 0.60% Impervious Runoff Depth=2.67"<br>Flow Length=1,834' Tc=47.0 min CN=71 Runoff=104.33 cfs 13.886 af                          |
| <b>Subcatchment 23S: Sub 23</b>   | Runoff Area=16.752 ac 2.31% Impervious Runoff Depth=2.50"<br>Flow Length=1,297' Tc=33.0 min CN=69 Runoff=33.25 cfs 3.484 af                            |
| <b>Subcatchment 24S: Sub 24</b>   | Runoff Area=5.466 ac 7.70% Impervious Runoff Depth=2.95"<br>Flow Length=1,025' Tc=23.1 min CN=74 Runoff=16.40 cfs 1.344 af                             |
| <b>Subcatchment 43: Subcat 43</b> | Runoff Area=34.064 ac 0.46% Impervious Runoff Depth=2.58"<br>Flow Length=2,795' Tc=40.7 min CN=70 Runoff=60.76 cfs 7.337 af                            |
| <b>Subcatchment 44: Subcat 44</b> | Runoff Area=46.290 ac 0.00% Impervious Runoff Depth=2.58"<br>Flow Length=2,470' Tc=41.7 min CN=70 Runoff=81.24 cfs 9.971 af                            |
| <b>Subcatchment 45: Subcat 45</b> | Runoff Area=33.932 ac 1.93% Impervious Runoff Depth=1.66"<br>Flow Length=2,198' Tc=29.8 min CN=59 Runoff=44.42 cfs 4.701 af                            |
| <b>Subcatchment 46: Subcat 46</b> | Runoff Area=30.776 ac 3.93% Impervious Runoff Depth=0.52"<br>Flow Length=1,524' Tc=54.0 min CN=42 Runoff=4.48 cfs 1.338 af                             |
| <b>Subcatchment 47: Subcat 47</b> | Runoff Area=30.059 ac 1.26% Impervious Runoff Depth=0.47"<br>Flow Length=1,854' Tc=31.7 min CN=41 Runoff=4.75 cfs 1.174 af                             |
| <b>Reach 6R: W-NSD-35</b>         | Avg. Flow Depth=0.89' Max Vel=5.32 fps Inflow=73.45 cfs 12.263 af<br>n=0.035 L=1,882.0' S=0.0276 '/' Capacity=90.86 cfs Outflow=72.45 cfs 12.263 af    |
| <b>Reach 13.1R:</b>               | Avg. Flow Depth=0.09' Max Vel=2.32 fps Inflow=1.61 cfs 2.078 af<br>n=0.030 L=165.0' S=0.0727 '/' Capacity=48.67 cfs Outflow=1.61 cfs 2.078 af          |
| <b>Reach 13.2R:</b>               | Avg. Flow Depth=0.14' Max Vel=4.86 fps Inflow=1.61 cfs 2.078 af<br>n=0.035 L=232.0' S=0.2069 '/' Capacity=1,230.81 cfs Outflow=1.61 cfs 2.078 af       |
| <b>Reach 20.1R: S-KCF-6</b>       | Avg. Flow Depth=3.07' Max Vel=3.99 fps Inflow=227.84 cfs 19.682 af<br>n=0.030 L=1,405.0' S=0.0028 '/' Capacity=141.69 cfs Outflow=206.83 cfs 19.682 af |
| <b>Reach 20.2R:</b>               | Avg. Flow Depth=2.24' Max Vel=6.08 fps Inflow=206.83 cfs 19.682 af<br>n=0.035 L=1,322.0' S=0.0121 '/' Capacity=250.41 cfs Outflow=199.93 cfs 19.682 af |
| <b>Reach 22.1R: S-KCF-5</b>       | Avg. Flow Depth=2.31' Max Vel=4.84 fps Inflow=180.43 cfs 22.910 af<br>n=0.030 L=665.0' S=0.0060 '/' Capacity=89.91 cfs Outflow=178.76 cfs 22.910 af    |
| <b>Reach 22.2R:</b>               | Avg. Flow Depth=4.19' Max Vel=5.12 fps Inflow=377.18 cfs 42.592 af<br>n=0.035 L=707.0' S=0.0075 '/' Capacity=86.27 cfs Outflow=371.05 cfs 42.592 af    |



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|                      |   |
|----------------------|---|
| <b>Reach 44R:</b>    | Avg. Flow Depth=1.88' Max Vel=4.47 fps Inflow=60.76 cfs 7.337 af<br>n=0.035 L=498.0' S=0.0321 '/' Capacity=8.70 cfs Outflow=60.27 cfs 7.337 af      |
| <b>Reach 45R:</b>    | Avg. Flow Depth=2.73' Max Vel=6.58 fps Inflow=141.03 cfs 17.308 af<br>n=0.035 L=537.0' S=0.0372 '/' Capacity=16.21 cfs Outflow=140.13 cfs 17.308 af |
| <b>Pond 12P: 12P</b> | Peak Elev=508.35' Storage=43,067 cf Inflow=37.76 cfs 2.079 af<br>8.0" Round Culvert n=0.013 L=172.7' S=0.0058 '/' Outflow=1.61 cfs 2.078 af         |
| <b>Link SP1:</b>     | Inflow=10.41 cfs 0.691 af<br>Primary=10.41 cfs 0.691 af   |
| <b>Link SP10:</b>    | Inflow=44.88 cfs 4.956 af<br>Primary=44.88 cfs 4.956 af   |
| <b>Link SP11:</b>    | Inflow=44.67 cfs 3.277 af<br>Primary=44.67 cfs 3.277 af   |
| <b>Link SP13:</b>    | Inflow=26.22 cfs 3.866 af<br>Primary=26.22 cfs 3.866 af   |
| <b>Link SP14:</b>    | Inflow=99.70 cfs 14.066 af<br>Primary=99.70 cfs 14.066 af   |
| <b>Link SP17:</b>    | Inflow=121.08 cfs 14.202 af<br>Primary=121.08 cfs 14.202 af   |
| <b>Link SP18:</b>    | Inflow=76.28 cfs 9.479 af<br>Primary=76.28 cfs 9.479 af   |
| <b>Link SP2:</b>     | Inflow=30.30 cfs 2.074 af<br>Primary=30.30 cfs 2.074 af   |
| <b>Link SP22:</b>    | Inflow=473.35 cfs 56.478 af<br>Primary=473.35 cfs 56.478 af   |
| <b>Link SP23:</b>    | Inflow=33.25 cfs 3.484 af<br>Primary=33.25 cfs 3.484 af   |
| <b>Link SP24:</b>    | Inflow=16.40 cfs 1.344 af<br>Primary=16.40 cfs 1.344 af   |
| <b>Link SP3:</b>     | Inflow=52.70 cfs 4.930 af<br>Primary=52.70 cfs 4.930 af   |
| <b>Link SP4:</b>     | Inflow=133.29 cfs 15.256 af<br>Primary=133.29 cfs 15.256 af   |
| <b>Link SP43:</b>    | Inflow=173.96 cfs 22.009 af<br>Primary=173.96 cfs 22.009 af   |

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**Link SP46:**

Inflow=4.48 cfs 1.338 af  
Primary=4.48 cfs 1.338 af

**Link SP47:**

Inflow=4.75 cfs 1.174 af  
Primary=4.75 cfs 1.174 af

**Link SP5:**

Inflow=95.55 cfs 18.398 af  
Primary=95.55 cfs 18.398 af

**Link SP7:**

Inflow=65.69 cfs 8.835 af  
Primary=65.69 cfs 8.835 af

**Link SP9:**

Inflow=86.90 cfs 11.804 af  
Primary=86.90 cfs 11.804 af

**Total Runoff Area = 1,129.462 ac Runoff Volume = 197.663 af Average Runoff Depth = 2.10"**  
**98.88% Pervious = 1,116.768 ac 1.12% Impervious = 12.694 ac**

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**Summary for Subcatchment 1S: Sub 1**

Runoff = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af, Depth= 1.43"  
 Routed to Link SP1 :

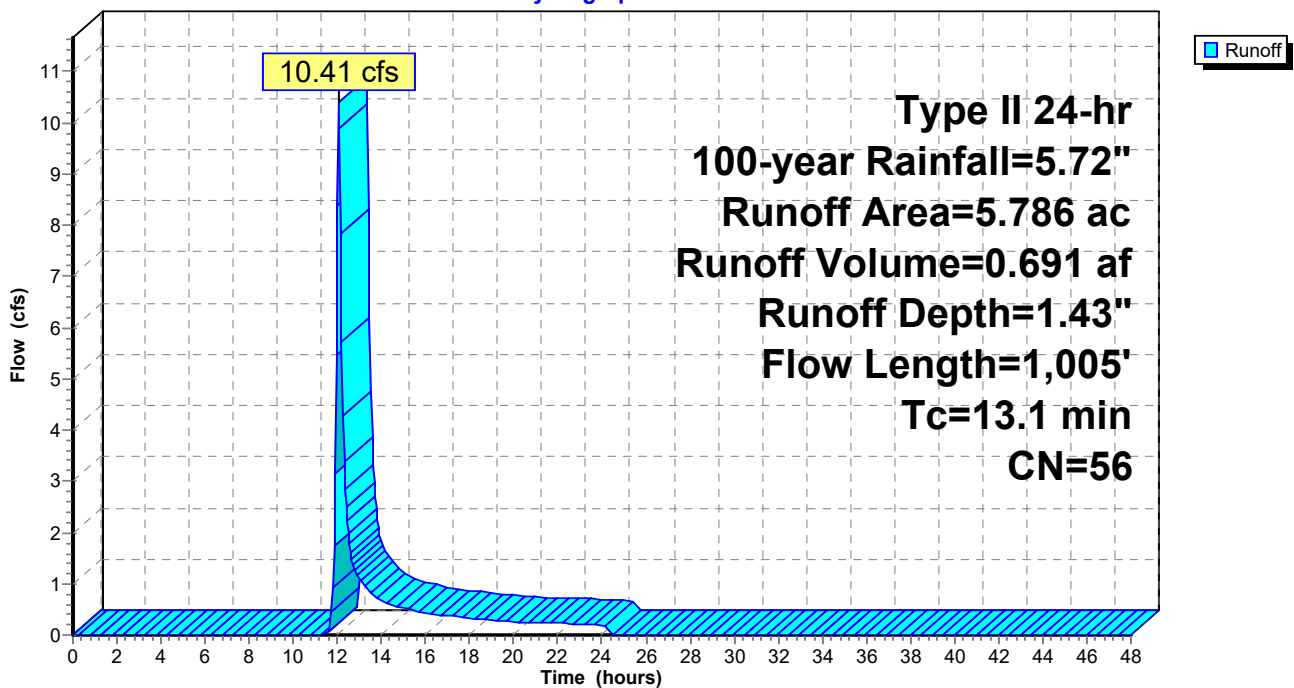
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.500     | 58 | Meadow, non-grazed, HSG B |
| 4.286     | 55 | Woods, Good, HSG B        |
| 5.786     | 56 | Weighted Average          |
| 5.786     |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0620        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.9      | 427           | 0.2390        | 2.44              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.0      | 263           | 0.0980        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.1      | 215           | 0.4050        | 3.18              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 13.1     | 1,005         | Total         |                   |                |  |

**Subcatchment 1S: Sub 1**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 2S: Sub 2**

Runoff = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af, Depth= 1.51"

Routed to Link SP2 :

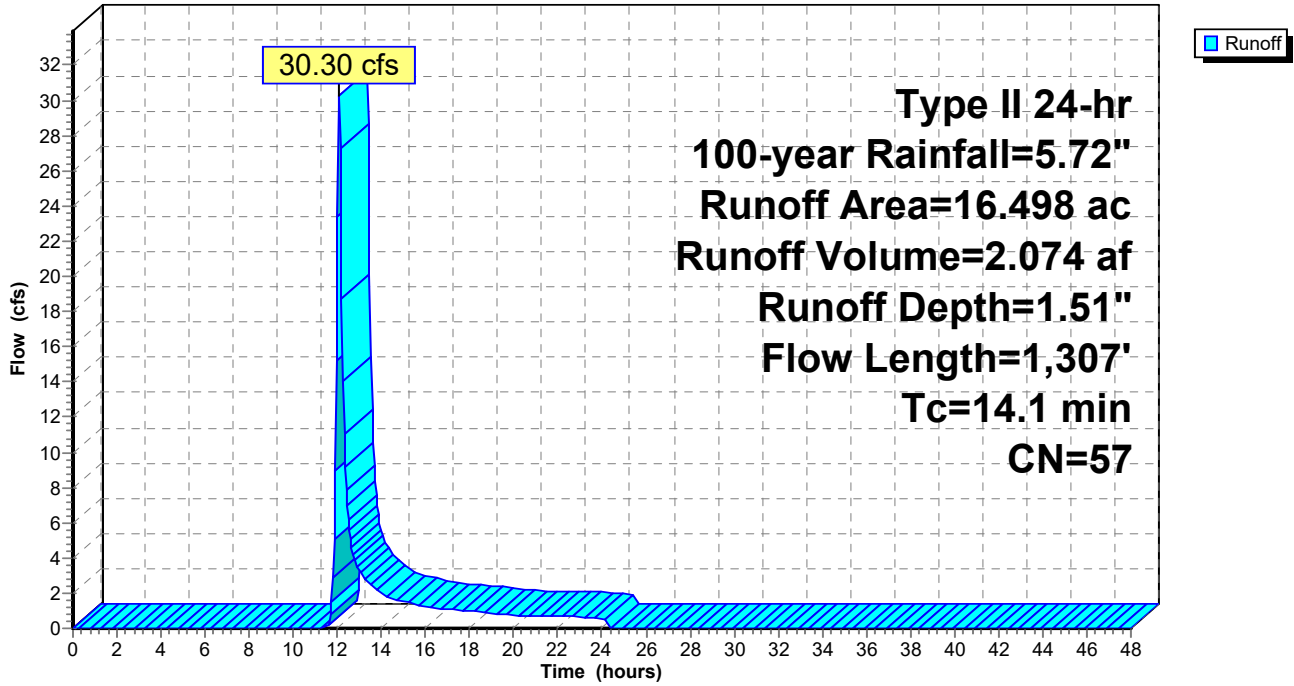
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.619     | 58 | Meadow, non-grazed, HSG B |
| 7.879     | 55 | Woods, Good, HSG B        |
| 16.498    | 57 | Weighted Average          |
| 16.498    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 5.8      | 100           | 0.1010        | 0.29              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.8      | 407           | 0.2420        | 2.46              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 225           | 0.1200        | 2.42              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 169           | 0.1830        | 2.14              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.5      | 113           | 0.5100        | 3.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.2      | 293           | 0.0220        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 14.1     | 1,307         | Total         |                   |                |  |

Subcatchment 2S: Sub 2

Hydrograph





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**Summary for Subcatchment 3S: Sub 3**

Runoff = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af, Depth= 1.74"  
Routed to Link SP3 :

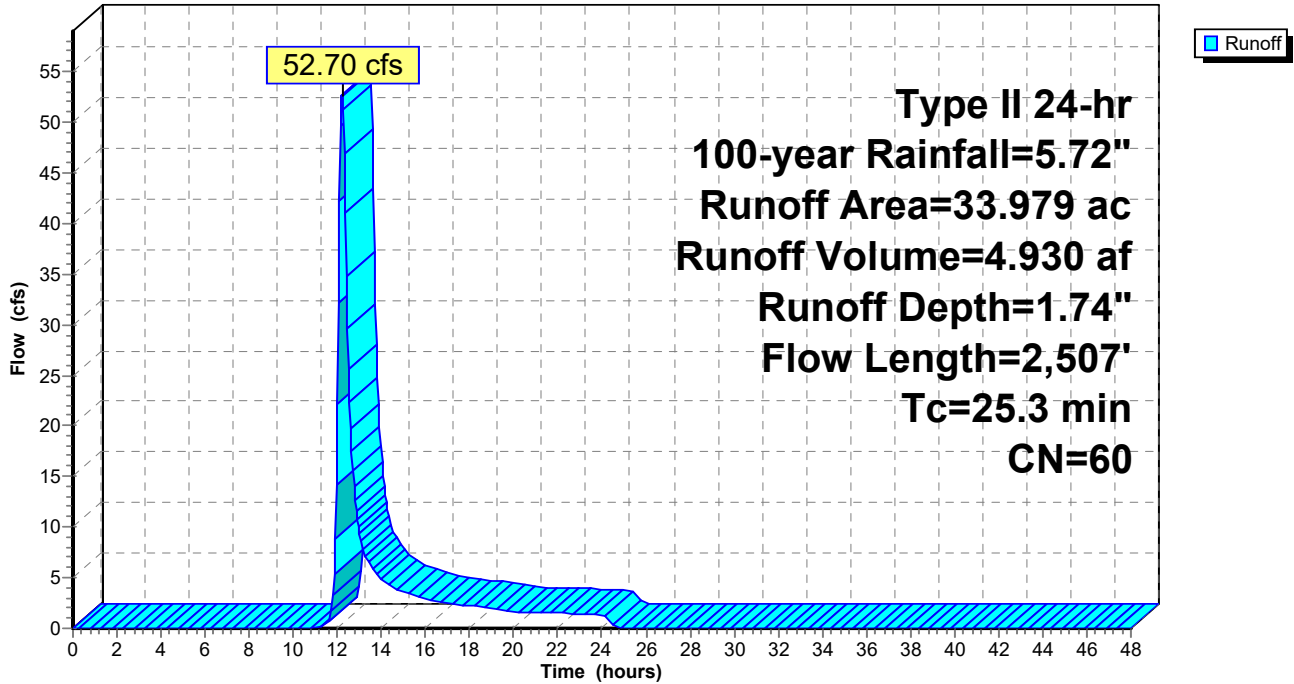
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 17.630    | 58 | Meadow, non-grazed, HSG B |
| 7.609     | 71 | Meadow, non-grazed, HSG C |
| 8.319     | 55 | Woods, Good, HSG B        |
| 0.421     | 70 | Woods, Good, HSG C        |
| 33.979    | 60 | Weighted Average          |
| 33.979    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.1      | 147           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.5      | 480           | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.2      | 375           | 0.0770        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 337           | 0.0950        | 1.54              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 2.5      | 632           |               | 4.29              |                | <b>Direct Entry, CF</b>  |
| 1.0      | 436           |               | 7.04              |                | <b>Direct Entry, CF</b>  |
| 25.3     | 2,507         | Total         |                   |                |  |

Subcatchment 3S: Sub 3

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 4S: Sub 4**

Runoff = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af, Depth= 1.98"

Routed to Link SP4 :

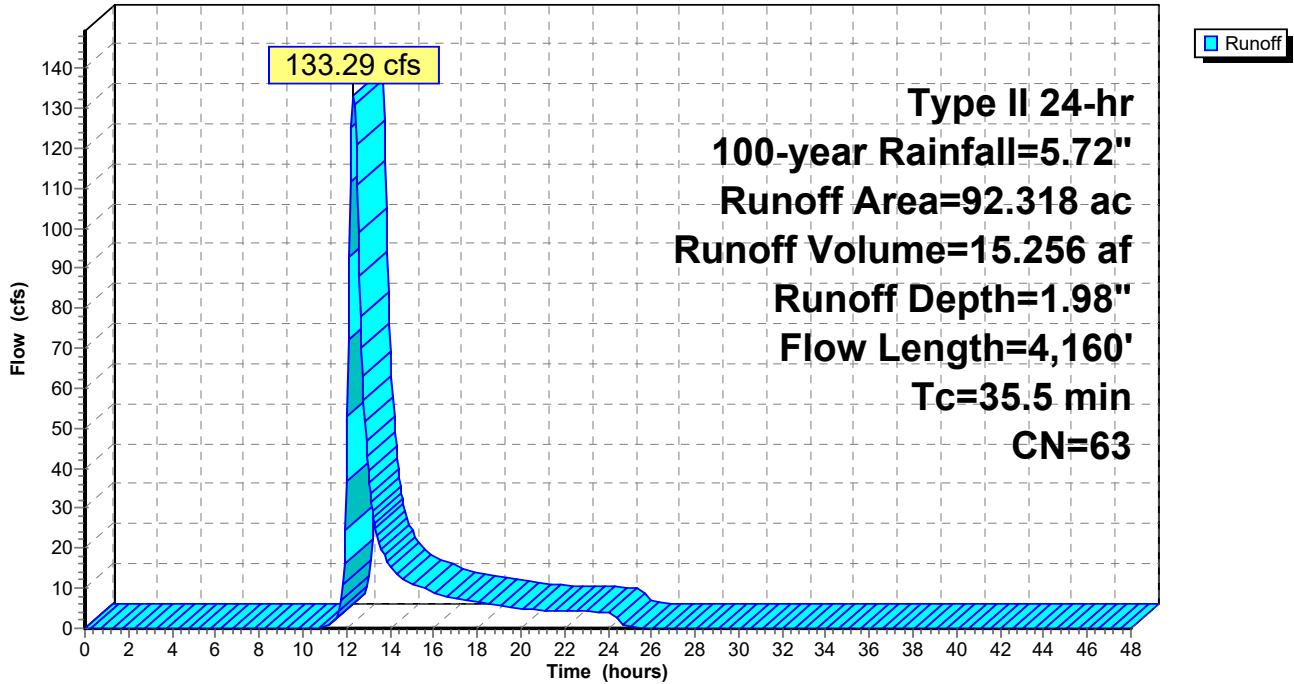
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.259   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 42.704    | 58 | Meadow, non-grazed, HSG B |
| 33.177    | 71 | Meadow, non-grazed, HSG C |
| 1.021     | 48 | Brush, Good, HSG B        |
| 1.934     | 65 | Brush, Good, HSG C        |
| 9.736     | 55 | Woods, Good, HSG B        |
| 3.163     | 70 | Woods, Good, HSG C        |
| 92.318    | 63 | Weighted Average          |
| 92.059    |    | 99.72% Pervious Area      |
| 0.259     |    | 0.28% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.9      | 100           | 0.1900        | 0.17              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"     |
| 1.8      | 295           | 0.1550        | 2.76              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 17.1     | 1,344         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.7      | 2,421         |               | 6.01              |                | <b>Direct Entry, CF</b>  |
| 35.5     | 4,160         | Total         |                   |                |  |

Subcatchment 4S: Sub 4

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 5S: Sub 5**

Runoff = 35.19 cfs @ 12.19 hrs, Volume= 3.099 af, Depth= 2.15"  
 Routed to Link SP5 :

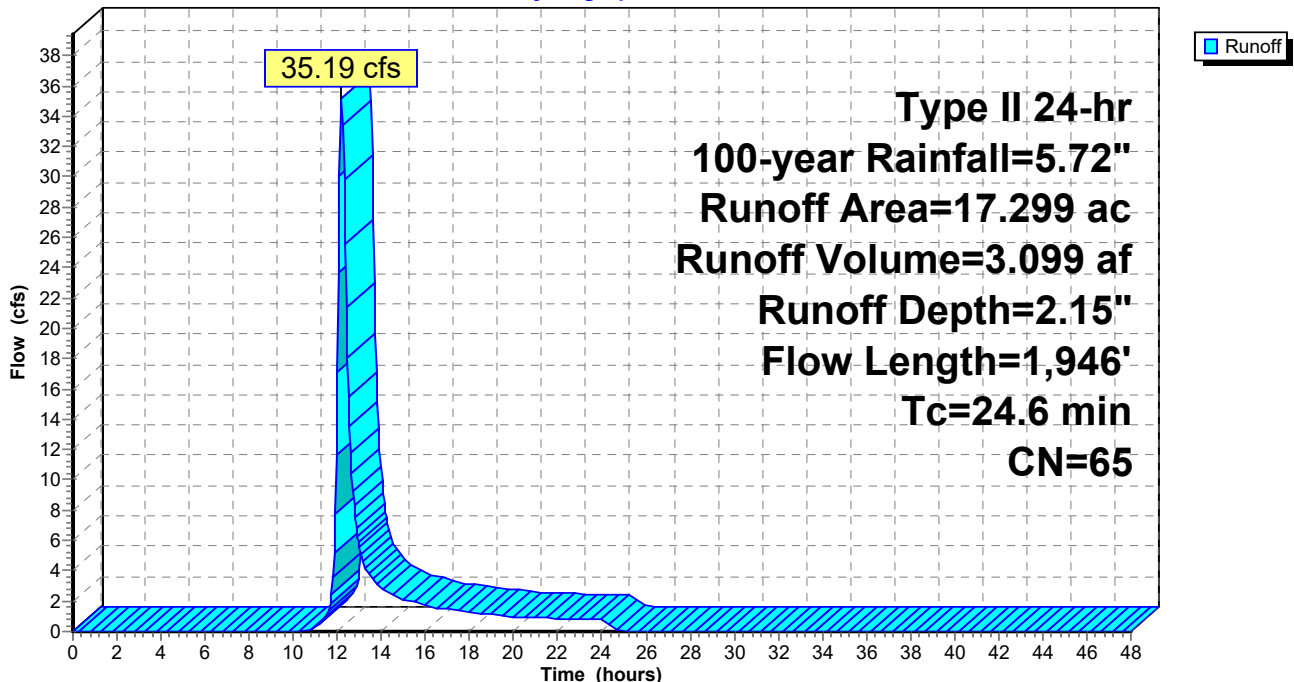
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.709     | 58 | Meadow, non-grazed, HSG B |
| 8.414     | 71 | Meadow, non-grazed, HSG C |
| 2.614     | 55 | Woods, Good, HSG B        |
| 1.562     | 70 | Woods, Good, HSG C        |
| 17.299    | 65 | Weighted Average          |
| 17.299    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.9      | 607           | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.3      | 195           | 0.0780        | 1.40              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 4.7      | 1,044         |               | 3.70              |                | <b>Direct Entry, CF</b>  |
| 24.6     | 1,946         | Total         |                   |                |  |

**Subcatchment 5S: Sub 5**

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 6S: Sub 6**

Runoff = 21.70 cfs @ 12.50 hrs, Volume= 3.036 af, Depth= 2.23"  
 Routed to Link SP5 :

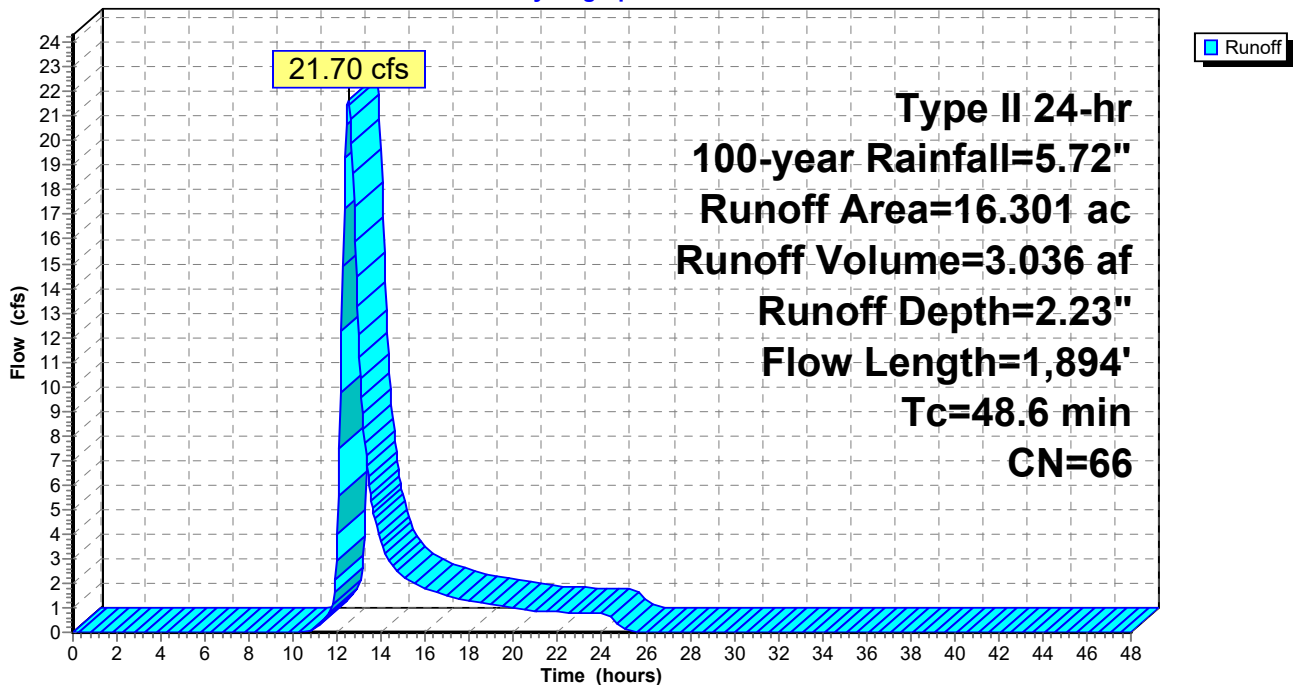
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 4.743     | 58 | Meadow, non-grazed, HSG B |
| 9.449     | 71 | Meadow, non-grazed, HSG C |
| 1.459     | 55 | Woods, Good, HSG B        |
| 0.650     | 70 | Woods, Good, HSG C        |
| 16.301    | 66 | Weighted Average          |
| 16.301    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 19.8     | 1,554         | 0.0350        | 1.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 240           |               | 3.81              |                | <b>Direct Entry, CF</b>  |
| 48.6     | 1,894         | Total         |                   |                |  |

**Subcatchment 6S: Sub 6**

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 7S: Sub 7**

Runoff = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af, Depth= 1.58"  
 Routed to Link SP7 :

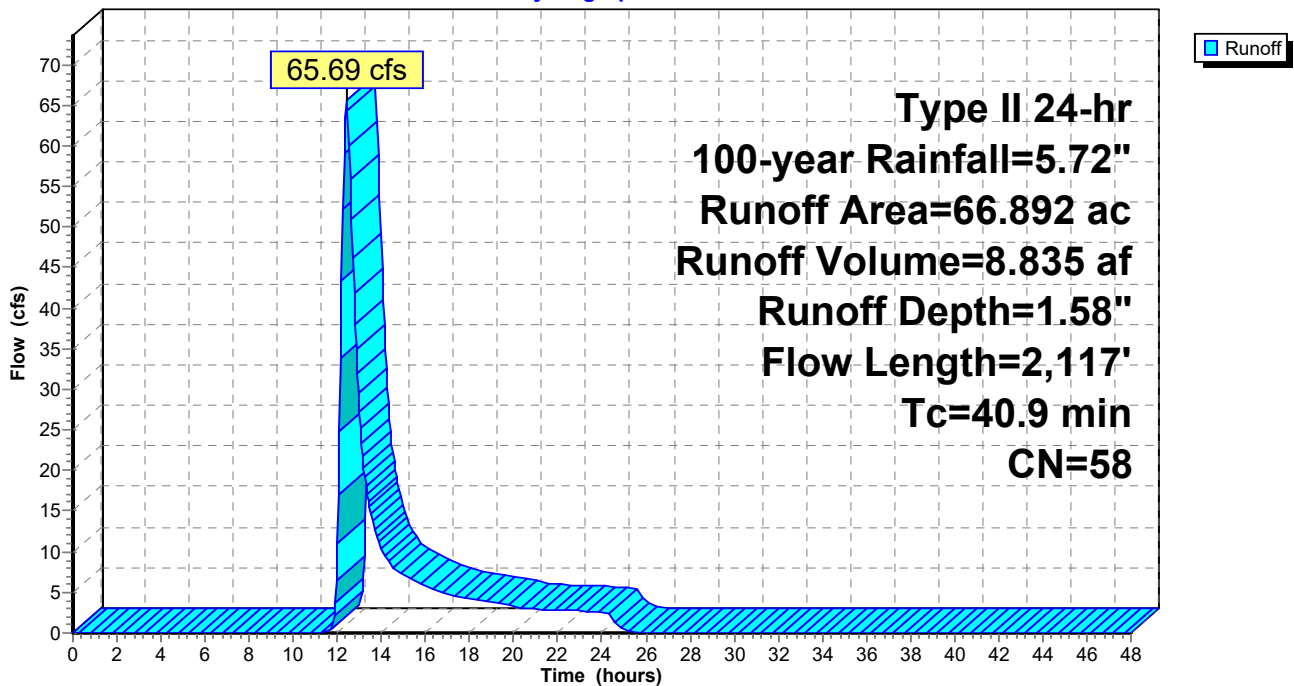
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 50.262    | 58 | Meadow, non-grazed, HSG B |
| 0.107     | 71 | Meadow, non-grazed, HSG C |
| 1.124     | 78 | Meadow, non-grazed, HSG D |
| 15.225    | 55 | Woods, Good, HSG B        |
| 0.174     | 77 | Woods, Good, HSG D        |
| 66.892    | 58 | Weighted Average          |
| 66.892    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 27.8     | 100           | 0.0020        | 0.06              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 9.7      | 786           | 0.0370        | 1.35              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 1,231         |               | 6.01              |                | <b>Direct Entry,</b>   |
| 40.9     | 2,117         | Total         |                   |                |  |

**Subcatchment 7S: Sub 7**

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 8S: Sub 8**

Runoff = 73.45 cfs @ 12.69 hrs, Volume= 12.263 af, Depth= 2.50"  
 Routed to Reach 6R : W-NSD-35

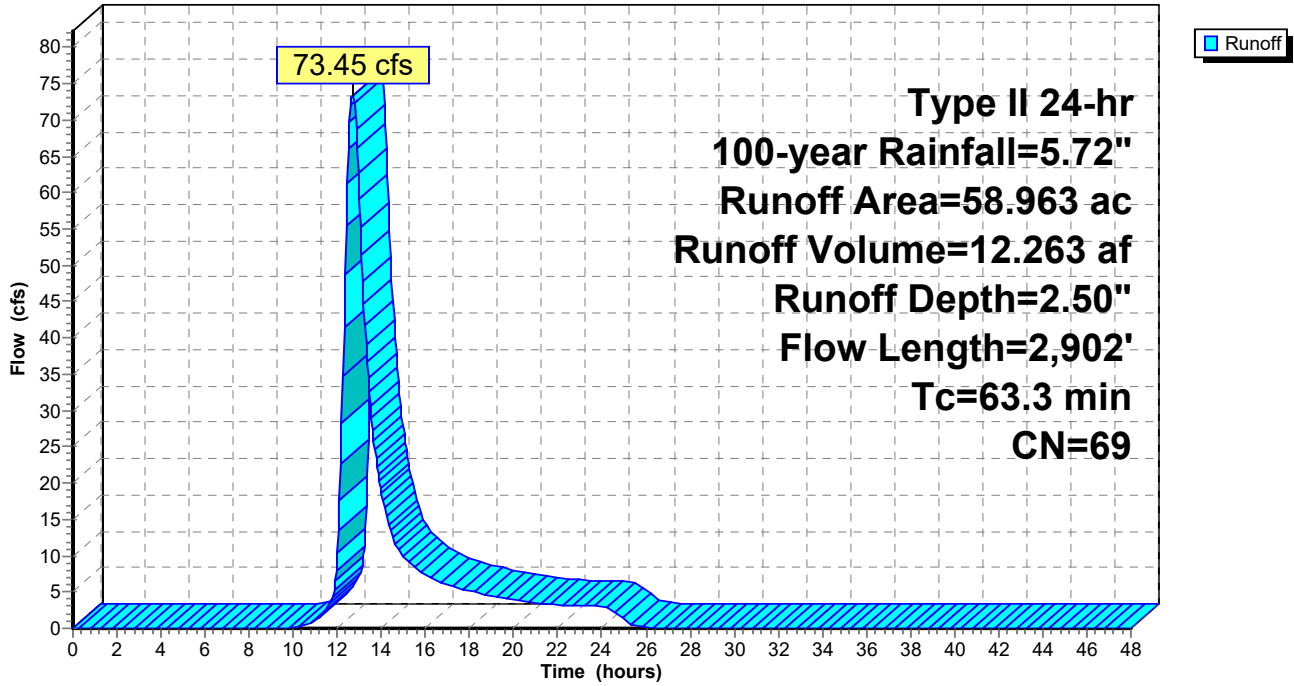
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 6.143     | 58 | Meadow, non-grazed, HSG B |
| 28.450    | 71 | Meadow, non-grazed, HSG C |
| 8.117     | 78 | Meadow, non-grazed, HSG D |
| 5.746     | 55 | Woods, Good, HSG B        |
| 8.581     | 70 | Woods, Good, HSG C        |
| 1.926     | 77 | Woods, Good, HSG D        |
| 58.963    | 69 | Weighted Average          |
| 58.963    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 23.7     | 100           | 0.0030        | 0.07              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 6.6      | 315           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 23.1     | 727           | 0.0110        | 0.52              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.9      | 1,760         |               | 2.97              |                | <b>Direct Entry, CF</b>  |
| 63.3     | 2,902         | Total         |                   |                |  |

Subcatchment 8S: Sub 8

Hydrograph



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**Summary for Subcatchment 9S: Sub 9**

Runoff = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af, Depth= 2.07"

Routed to Link SP9 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 100-year Rainfall=5.72"

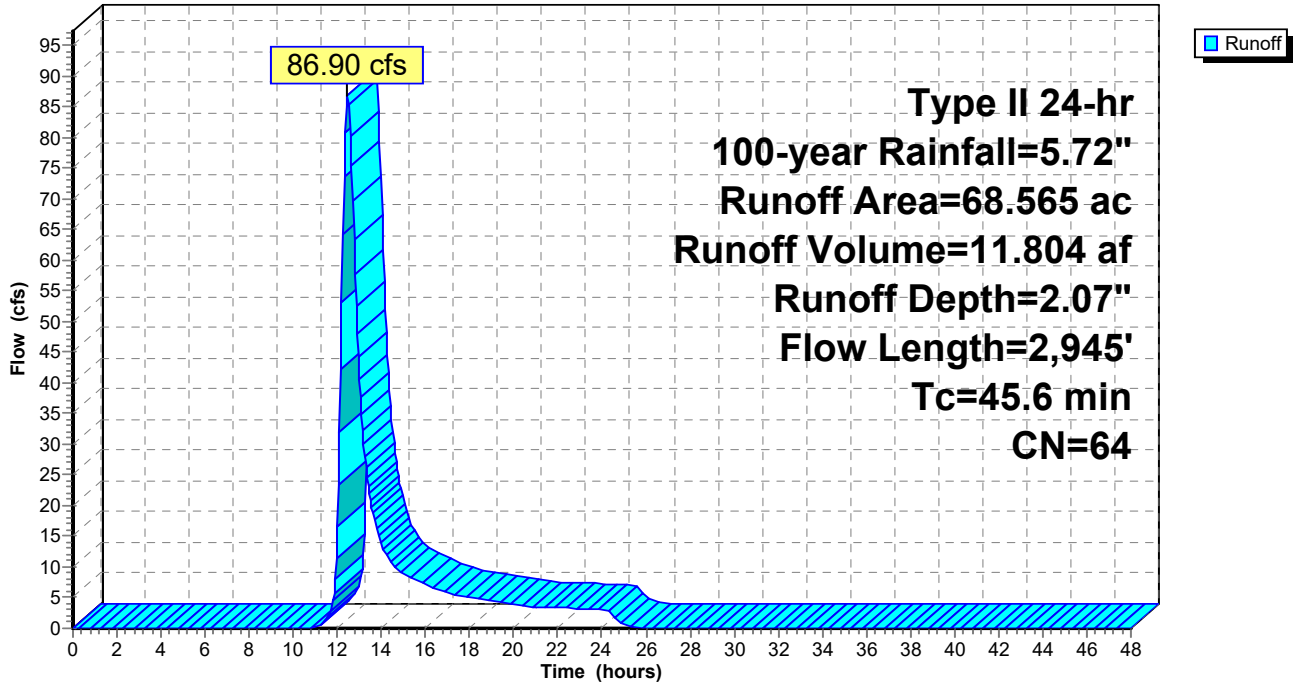
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.430   | 98 | Surface water                 |
| * 0.332   | 98 | Impervious surface            |
| * 2.628   | 96 | Gravel surface                |
| 6.553     | 61 | >75% Grass cover, Good, HSG B |
| 8.430     | 74 | >75% Grass cover, Good, HSG C |
| 23.963    | 58 | Meadow, non-grazed, HSG B     |
| 7.746     | 71 | Meadow, non-grazed, HSG C     |
| 2.113     | 78 | Meadow, non-grazed, HSG D     |
| 2.871     | 48 | Brush, Good, HSG B            |
| 0.820     | 65 | Brush, Good, HSG C            |
| 0.014     | 73 | Brush, Good, HSG D            |
| 11.085    | 55 | Woods, Good, HSG B            |
| 1.580     | 70 | Woods, Good, HSG C            |
| 68.565    | 64 | Weighted Average              |
| 67.803    |    | 98.89% Pervious Area          |
| 0.762     |    | 1.11% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 13.8     | 841           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.9     | 1,254         | 0.0750        | 1.92              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 156           |               | 1.63              |                | <b>Direct Entry,</b>   |
| 1.4      | 594           |               | 7.07              |                | <b>Direct Entry,</b>   |
| 45.6     | 2,945         | Total         |                   |                |  |



Subcatchment 9S: Sub 9

Hydrograph



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**Summary for Subcatchment 10S: Sub 10**

[47] Hint: Peak is 226% of capacity of segment #3

Runoff = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af, Depth= 2.67"  
 Routed to Link SP10 :

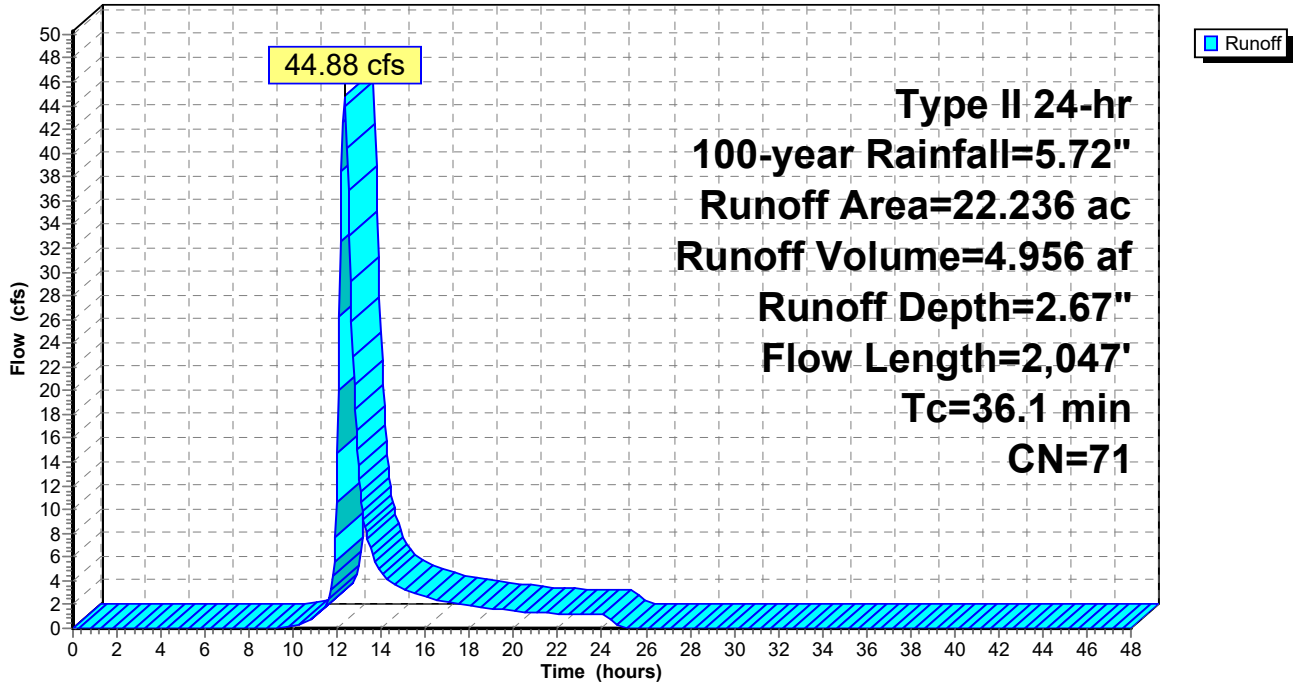
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.008   | 98 | Surface water                 |
| * 0.081   | 98 | Impervious surface            |
| * 0.828   | 96 | Gravel surface                |
| 5.353     | 61 | >75% Grass cover, Good, HSG B |
| 3.453     | 74 | >75% Grass cover, Good, HSG C |
| 3.647     | 80 | >75% Grass cover, Good, HSG D |
| 0.693     | 58 | Meadow, non-grazed, HSG B     |
| 0.956     | 71 | Meadow, non-grazed, HSG C     |
| 0.200     | 48 | Brush, Good, HSG B            |
| 1.811     | 65 | Brush, Good, HSG C            |
| 3.089     | 73 | Brush, Good, HSG D            |
| 0.917     | 55 | Woods, Good, HSG B            |
| 0.043     | 70 | Woods, Good, HSG C            |
| 0.157     | 77 | Woods, Good, HSG D            |
| 22.236    | 71 | Weighted Average              |
| 21.147    |    | 95.10% Pervious Area          |
| 1.089     |    | 4.90% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 10.9     | 100           | 0.0210        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 22.7     | 1,347         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.5      | 600           | 0.0225        | 3.97              | 19.83          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 36.1     | 2,047         | Total         |                   |                |   |

Subcatchment 10S: Sub 10

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 11S: Sub 11**

[47] Hint: Peak is 155% of capacity of segment #5

Runoff = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af, Depth= 2.23"  
 Routed to Link SP11 :

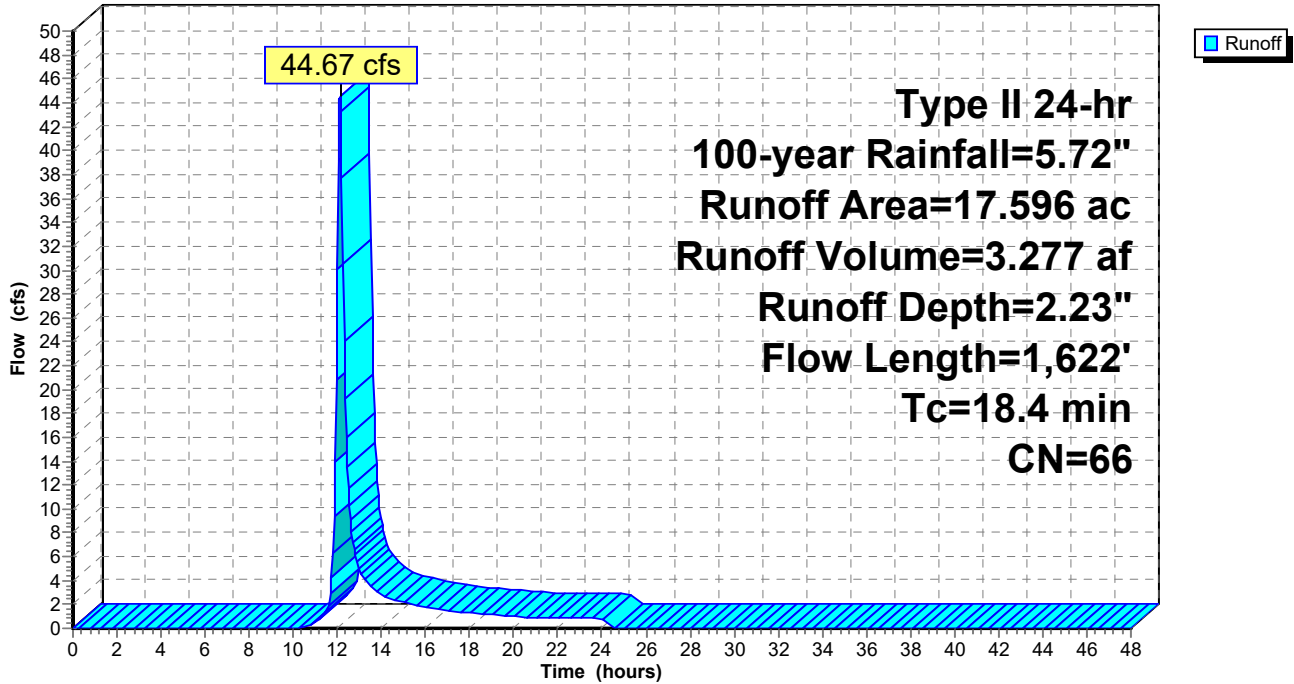
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.372   | 98 | Surface water                 |
| * 0.016   | 98 | Impervious surface            |
| * 2.385   | 96 | Gravel surface                |
| 2.824     | 61 | >75% Grass cover, Good, HSG B |
| 1.292     | 74 | >75% Grass cover, Good, HSG C |
| 1.394     | 58 | Meadow, non-grazed, HSG B     |
| 1.371     | 71 | Meadow, non-grazed, HSG C     |
| 0.199     | 48 | Brush, Good, HSG B            |
| 0.163     | 65 | Brush, Good, HSG C            |
| 7.256     | 55 | Woods, Good, HSG B            |
| 0.324     | 70 | Woods, Good, HSG C            |
| 17.596    | 66 | Weighted Average              |
| 17.208    |    | 97.79% Pervious Area          |
| 0.388     |    | 2.21% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.2      | 100           | 0.0320        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.9      | 579           | 0.0240        | 2.49              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps   |
| 2.6      | 277           | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 102           | 0.2650        | 2.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.0      | 564           | 0.0300        | 4.80              | 28.78          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 18.4     | 1,622         | Total         |                   |                |   |

Subcatchment 11S: Sub 11

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 12S: Sub 12**

Runoff = 37.76 cfs @ 11.96 hrs, Volume= 2.079 af, Depth= 5.13"  
 Routed to Pond 12P : 12P

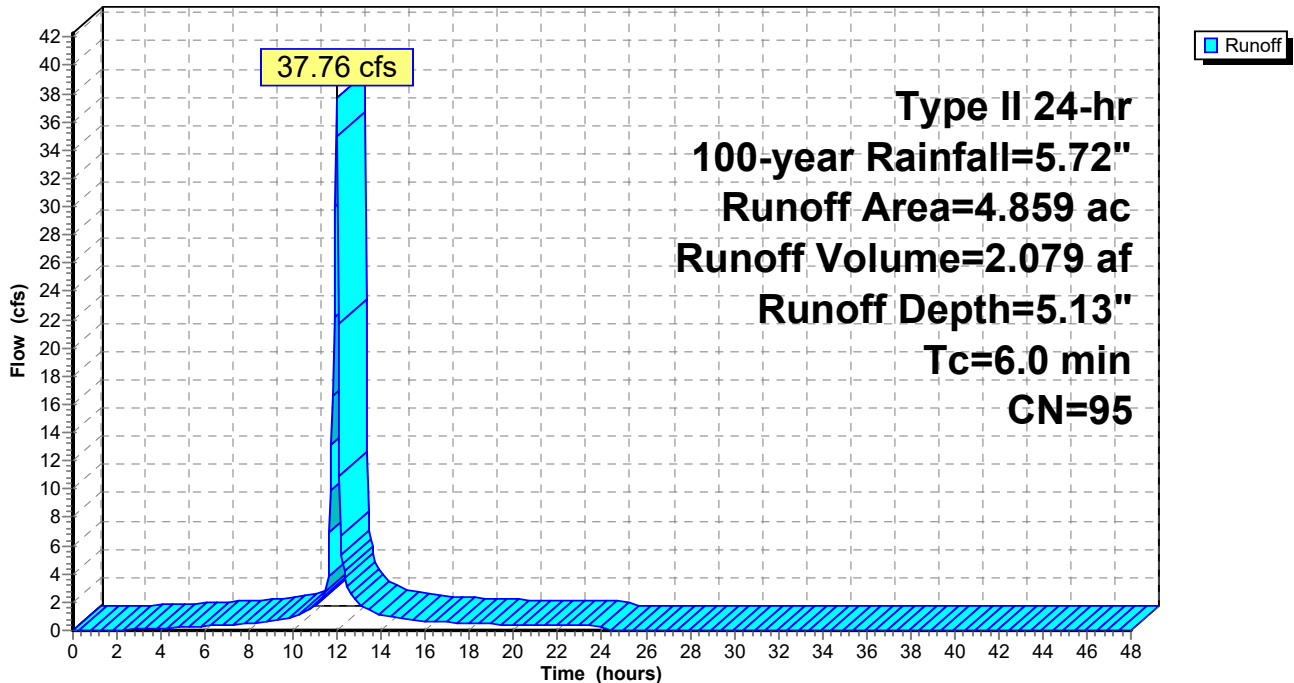
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 4.639   | 96 | Gravel surface                |
| 0.220     | 74 | >75% Grass cover, Good, HSG C |
| 4.859     | 95 | Weighted Average              |
| 4.859     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description           |
|----------|---------------|---------------|-------------------|----------------|-----------------------|
| 6.0      |               |               |                   |                | Direct Entry, Minimum |

**Subcatchment 12S: Sub 12**

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 13S: Sub 13**

Runoff = 24.66 cfs @ 12.11 hrs, Volume= 1.788 af, Depth= 2.07"

Routed to Link SP13 :

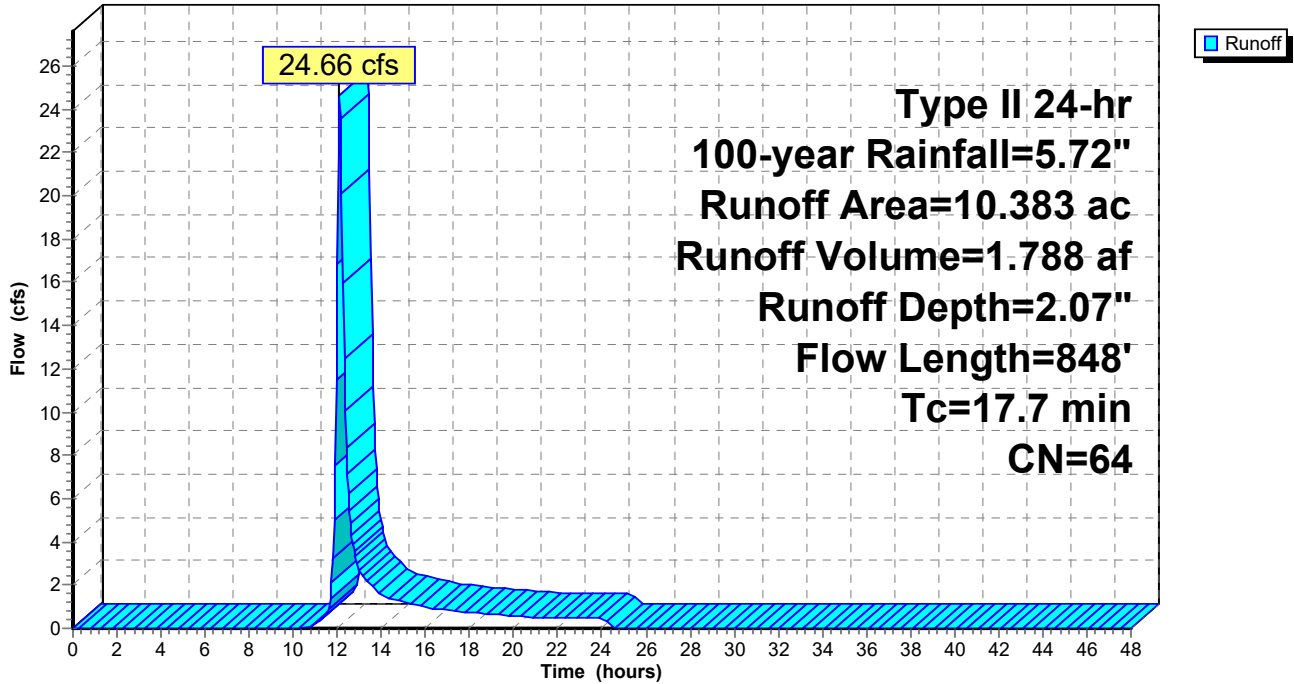
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.021   | 98 | Impervious surface        |
| * 0.324   | 96 | Gravel surface            |
| 1.560     | 58 | Meadow, non-grazed, HSG B |
| 4.128     | 71 | Meadow, non-grazed, HSG C |
| 0.084     | 48 | Brush, Good, HSG B        |
| 0.134     | 65 | Brush, Good, HSG C        |
| 3.807     | 55 | Woods, Good, HSG B        |
| 0.325     | 70 | Woods, Good, HSG C        |
| 10.383    | 64 | Weighted Average          |
| 10.362    |    | 99.80% Pervious Area      |
| 0.021     |    | 0.20% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.4      | 525           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.7      | 62            | 0.0970        | 1.56              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 161           | 0.1330        | 1.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 17.7     | 848           | Total         |                   |                |  |

Subcatchment 13S: Sub 13

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 14S: Sub 14**

[47] Hint: Peak is 547% of capacity of segment #4

[47] Hint: Peak is 1295% of capacity of segment #5

Runoff = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af, Depth= 2.32"  
 Routed to Link SP14 :

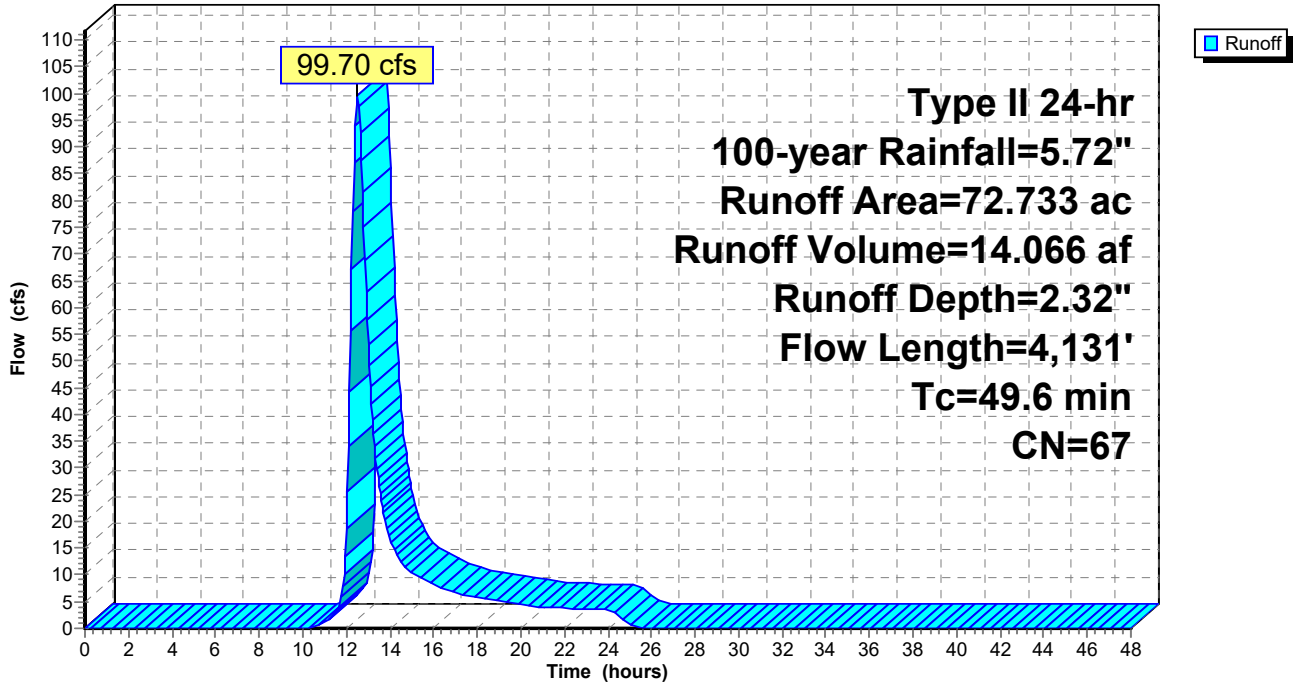
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.307   | 98 | Impervious surface            |
| 0.760     | 80 | >75% Grass cover, Good, HSG D |
| 19.939    | 58 | Meadow, non-grazed, HSG B     |
| 36.007    | 71 | Meadow, non-grazed, HSG C     |
| 0.100     | 78 | Meadow, non-grazed, HSG D     |
| 0.667     | 48 | Brush, Good, HSG B            |
| 0.121     | 65 | Brush, Good, HSG C            |
| 1.517     | 73 | Brush, Good, HSG D            |
| 3.147     | 55 | Woods, Good, HSG B            |
| 9.611     | 70 | Woods, Good, HSG C            |
| 0.557     | 77 | Woods, Good, HSG D            |
| 72.733    | 67 | Weighted Average              |
| 72.426    |    | 99.58% Pervious Area          |
| 0.307     |    | 0.42% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.0      | 50            | 0.0600        | 0.09              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"   |
| 5.6      | 50            | 0.0280        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 6.7      | 465           | 0.0270        | 1.15              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 9.8      | 1,433         | 0.0120        | 2.43              | 18.23          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 20.0 ' /' Top.W=25.00'<br>n= 0.030 Earth, grassed & winding |
| 18.5     | 2,133         | 0.0080        | 1.93              | 7.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=0.50' Z= 6.0 ' /' Top.W=11.00'<br>n= 0.035 Earth, dense weeds        |
| 49.6     | 4,131         | Total         |                   |                |  |

Subcatchment 14S: Sub 14

Hydrograph





**Mill Pt Pre 1**

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**Summary for Subcatchment 17S: Sub 17**

[47] Hint: Peak is 1807% of capacity of segment #4

Runoff = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af, Depth= 1.74"  
 Routed to Link SP17 :

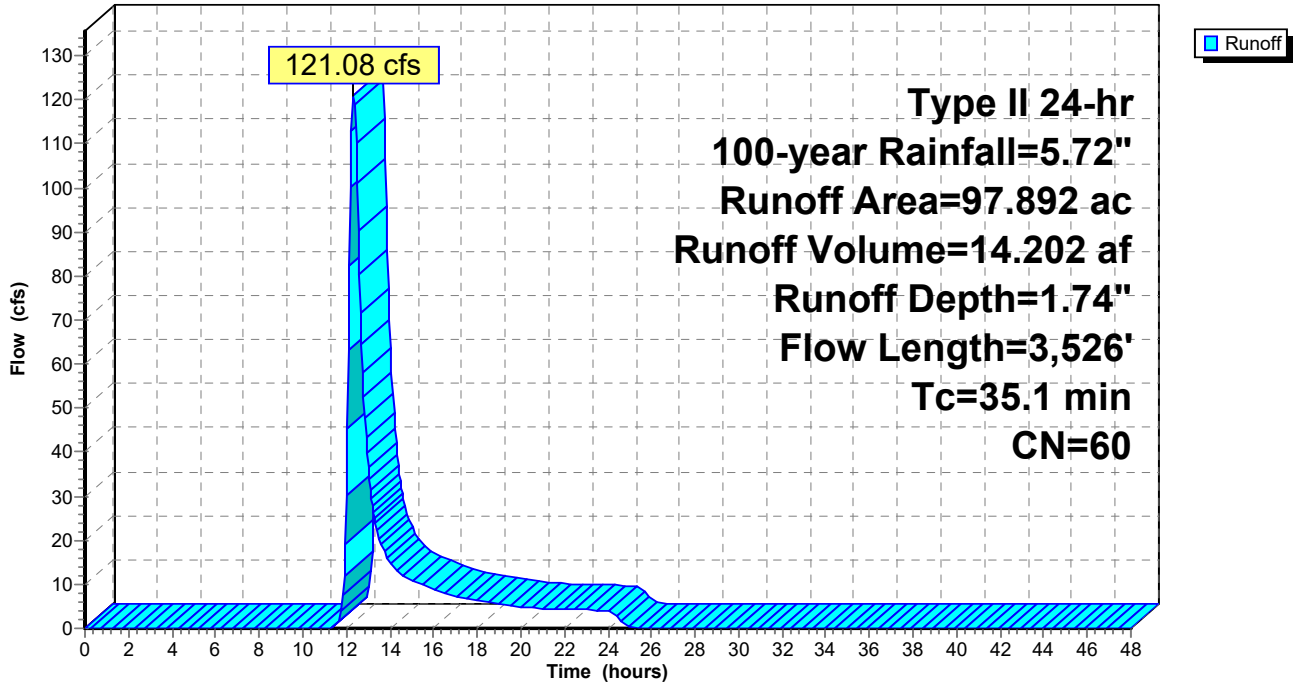
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.153   | 98 | Impervious surface            |
| * 0.105   | 96 | Gravel surface                |
| 3.000     | 61 | >75% Grass cover, Good, HSG B |
| 0.324     | 74 | >75% Grass cover, Good, HSG C |
| 1.232     | 80 | >75% Grass cover, Good, HSG D |
| 78.791    | 58 | Meadow, non-grazed, HSG B     |
| 0.375     | 71 | Meadow, non-grazed, HSG C     |
| 4.855     | 78 | Meadow, non-grazed, HSG D     |
| 7.632     | 55 | Woods, Good, HSG B            |
| 0.085     | 70 | Woods, Good, HSG C            |
| 0.340     | 77 | Woods, Good, HSG D            |
| 97.892    | 60 | Weighted Average              |
| 96.739    |    | 98.82% Pervious Area          |
| 1.153     |    | 1.18% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 5.2      | 681           | 0.0990        | 2.20              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.3     | 1,098         | 0.0650        | 1.78              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 10.2     | 1,647         | 0.0140        | 2.68              | 6.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 6.0 '/' Top.W=8.00'<br>n= 0.030 Earth, grassed & winding |
| 35.1     | 3,526         | Total         |                   |                |   |

Subcatchment 17S: Sub 17

Hydrograph



**Mill Pt Pre 1**

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**Summary for Subcatchment 18S: Sub 18**

Runoff = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af, Depth= 2.50"  
 Routed to Link SP18 :

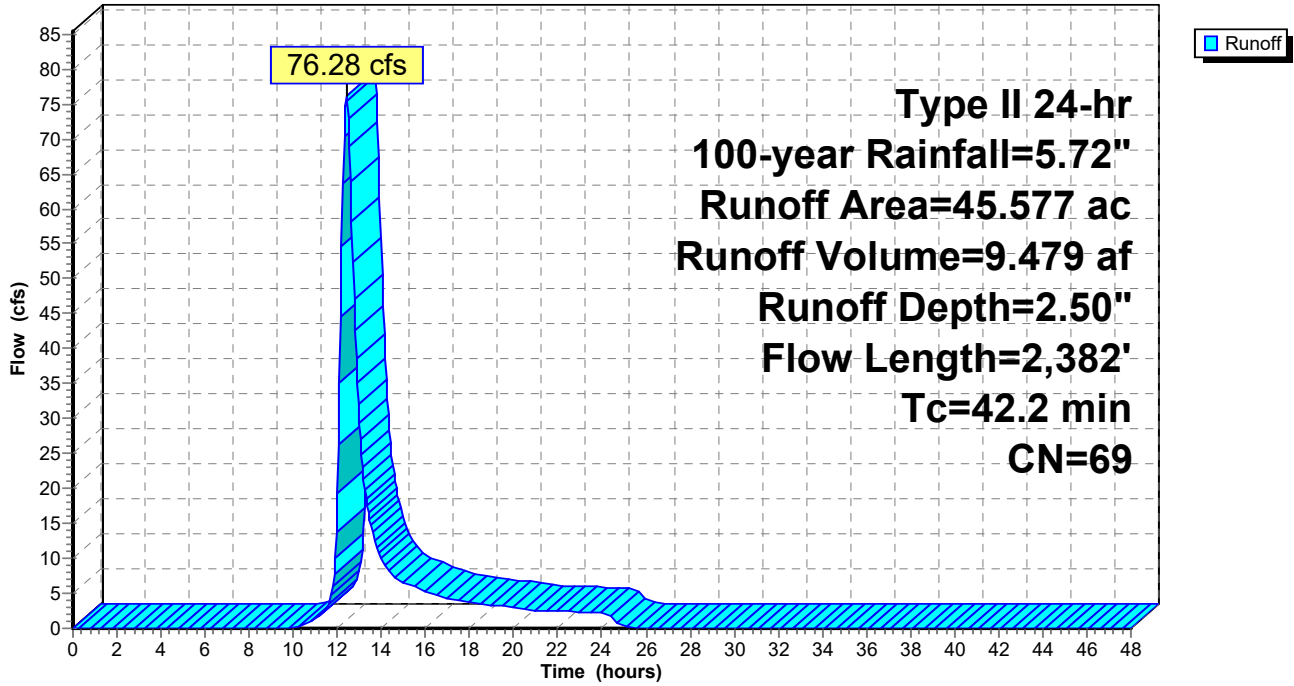
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.335   | 98 | Impervious surface        |
| 9.521     | 58 | Meadow, non-grazed, HSG B |
| 19.657    | 71 | Meadow, non-grazed, HSG C |
| 8.775     | 78 | Meadow, non-grazed, HSG D |
| 2.586     | 48 | Brush, Good, HSG B        |
| 4.116     | 73 | Brush, Good, HSG D        |
| 0.587     | 77 | Woods, Good, HSG D        |
| 45.577    | 69 | Weighted Average          |
| 45.242    |    | 99.26% Pervious Area      |
| 0.335     |    | 0.74% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.6     | 100           | 0.0180        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 10.5     | 668           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 459           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 128           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 12.9     | 1,027         |               | 1.33              |                | <b>Direct Entry, CF</b>  |
| 42.2     | 2,382         | Total         |                   |                |  |

Subcatchment 18S: Sub 18

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 19S: Sub 19**

Runoff = 66.82 cfs @ 12.25 hrs, Volume= 6.547 af, Depth= 2.77"  
 Routed to Reach 20.1R : S-KCF-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

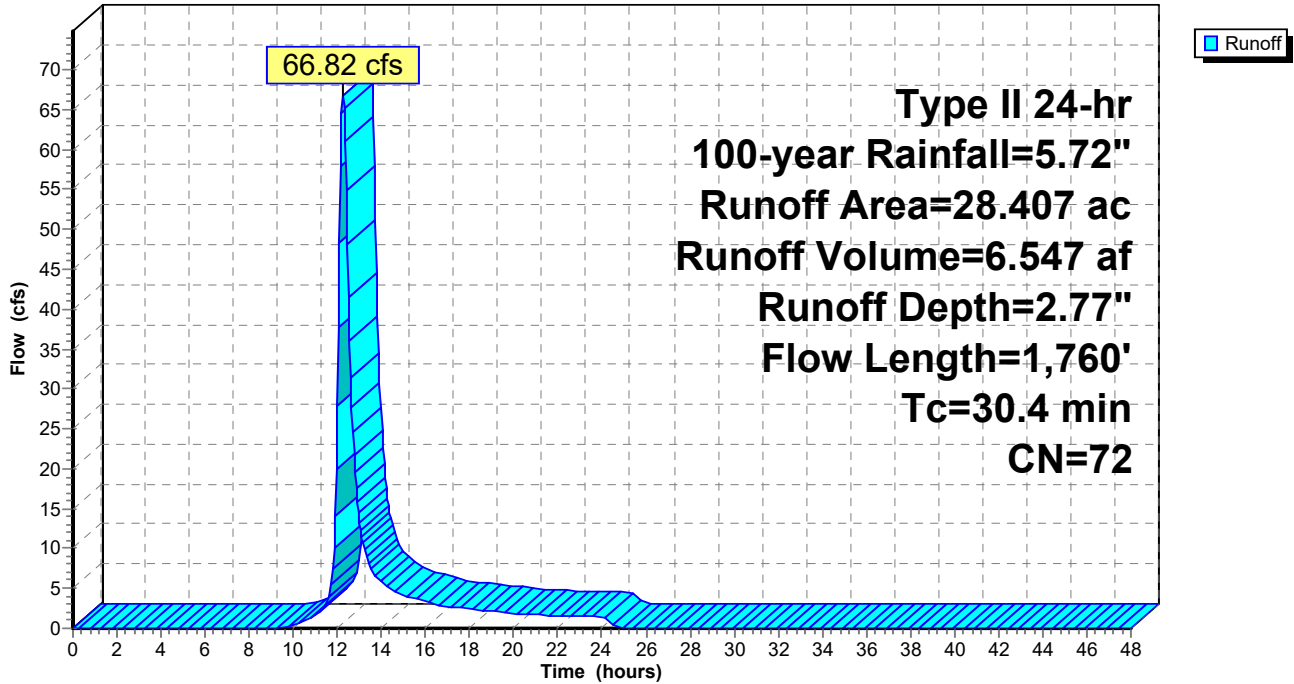
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.153   | 98 | Surface water             |
| 2.120     | 58 | Meadow, non-grazed, HSG B |
| 18.359    | 71 | Meadow, non-grazed, HSG C |
| 7.318     | 78 | Meadow, non-grazed, HSG D |
| 0.227     | 65 | Brush, Good, HSG C        |
| 0.105     | 73 | Brush, Good, HSG D        |
| 0.125     | 77 | Woods, Good, HSG D        |
| 28.407    | 72 | Weighted Average          |
| 28.254    |    | 99.46% Pervious Area      |
| 0.153     |    | 0.54% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 212           | 0.1120        | 2.34              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.0     | 635           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 10.7     | 813           | 0.0330        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 30.4     | 1,760         | Total         |                   |                |  |



Subcatchment 19S: Sub 19

Hydrograph



**Mill Pt Pre 1**

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**Summary for Subcatchment 20S: Sub 20**

[47] Hint: Peak is 313% of capacity of segment #4

Runoff = 170.25 cfs @ 12.14 hrs, Volume= 13.134 af, Depth= 2.23"  
 Routed to Reach 20.1R : S-KCF-6

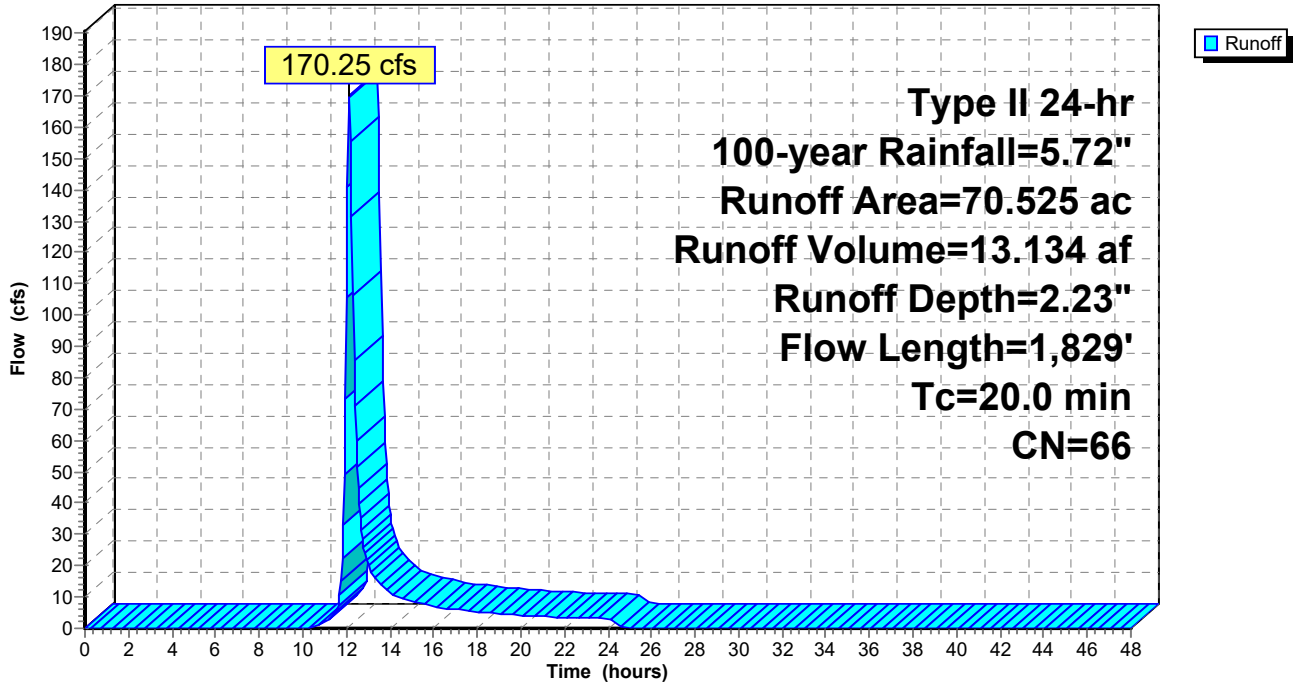
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.044   | 98 | Surface water                 |
| * 0.508   | 98 | Impervious surface            |
| 3.657     | 61 | >75% Grass cover, Good, HSG B |
| 29.608    | 58 | Meadow, non-grazed, HSG B     |
| 22.967    | 71 | Meadow, non-grazed, HSG C     |
| 12.748    | 78 | Meadow, non-grazed, HSG D     |
| 0.147     | 48 | Brush, Good, HSG B            |
| 0.032     | 65 | Brush, Good, HSG C            |
| 0.133     | 73 | Brush, Good, HSG D            |
| 0.124     | 55 | Woods, Good, HSG B            |
| 0.523     | 70 | Woods, Good, HSG C            |
| 0.034     | 77 | Woods, Good, HSG D            |
| 70.525    | 66 | Weighted Average              |
| 69.973    |    | 99.22% Pervious Area          |
| 0.552     |    | 0.78% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.7      | 100           | 0.0700        | 0.25              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 2.6      | 259           | 0.0580        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 8.8      | 703           | 0.0360        | 1.33              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.9      | 767           | 0.0300        | 6.81              | 54.44          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=5.00' D=1.00' Z= 3.0 ' Top.W=11.00'<br>n= 0.030 Earth, grassed & winding |
| 20.0     | 1,829         | Total         |                   |                |  |

Subcatchment 20S: Sub 20

Hydrograph



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**Summary for Subcatchment 21S: Sub 21**

[47] Hint: Peak is 1334% of capacity of segment #3

[47] Hint: Peak is 1191% of capacity of segment #4

[47] Hint: Peak is 1390% of capacity of segment #5

Runoff = 180.43 cfs @ 12.42 hrs, Volume= 22.910 af, Depth= 2.23"  
 Routed to Reach 22.1R : S-KCF-5

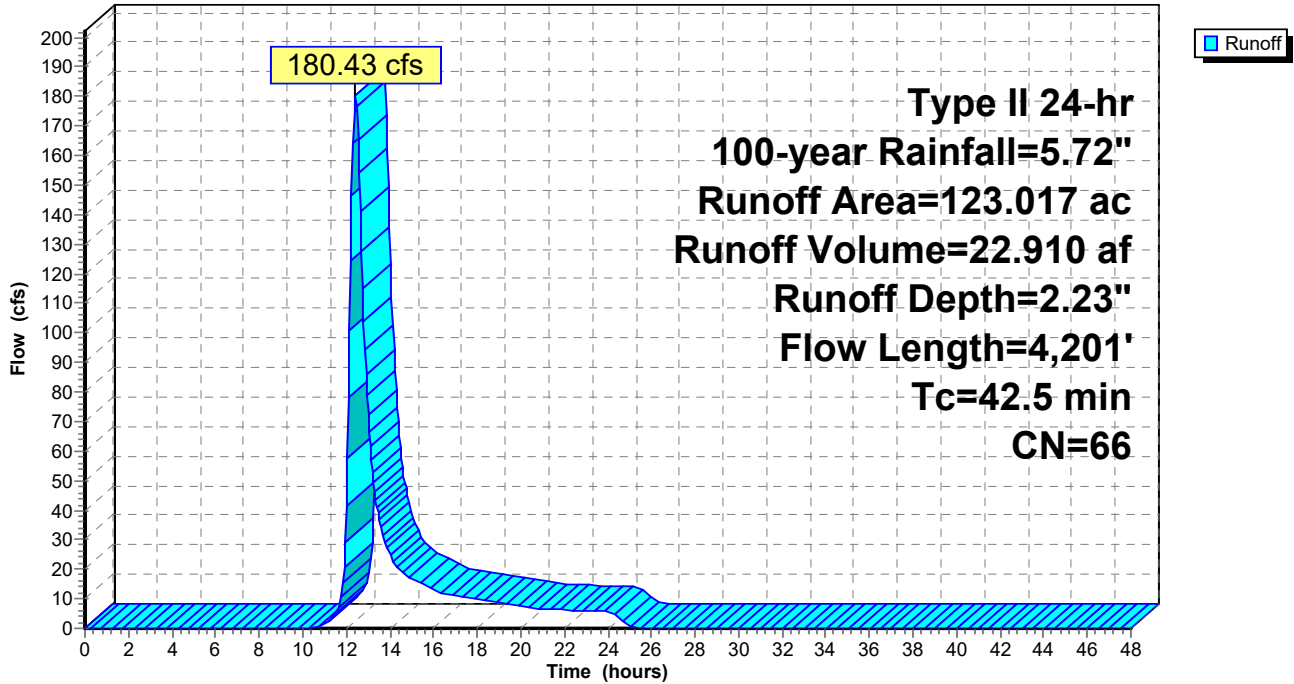
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 3.145   | 98 | Surface water                 |
| * 0.950   | 98 | Impervious surface            |
| * 0.528   | 96 | Gravel surface                |
| 0.616     | 61 | >75% Grass cover, Good, HSG B |
| 1.689     | 74 | >75% Grass cover, Good, HSG C |
| 54.805    | 58 | Meadow, non-grazed, HSG B     |
| 54.707    | 71 | Meadow, non-grazed, HSG C     |
| 2.342     | 78 | Meadow, non-grazed, HSG D     |
| 0.747     | 48 | Brush, Good, HSG B            |
| 0.437     | 65 | Brush, Good, HSG C            |
| 0.758     | 55 | Woods, Good, HSG B            |
| 2.293     | 70 | Woods, Good, HSG C            |
| 123.017   | 66 | Weighted Average              |
| 118.922   |    | 96.67% Pervious Area          |
| 4.095     |    | 3.33% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.1     | 100           | 0.0160        | 0.14              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 12.6     | 1,112         | 0.0440        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.2      | 346           | 0.0150        | 2.58              | 13.52          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 9.0 ' / ' Top.W=15.00'<br>n= 0.035 Earth, dense weeds |
| 8.3      | 1,504         | 0.0150        | 3.03              | 15.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' / ' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 7.3      | 1,139         | 0.0110        | 2.60              | 12.98          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 2.0 ' / ' Top.W=11.00'<br>n= 0.035 Earth, dense weeds |
| 42.5     | 4,201         | Total         |                   |                |  |

Subcatchment 21S: Sub 21

Hydrograph





**Mill Pt Pre 1**

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**Summary for Subcatchment 22S: Sub 22**

Runoff = 104.33 cfs @ 12.47 hrs, Volume= 13.886 af, Depth= 2.67"  
 Routed to Link SP22 :

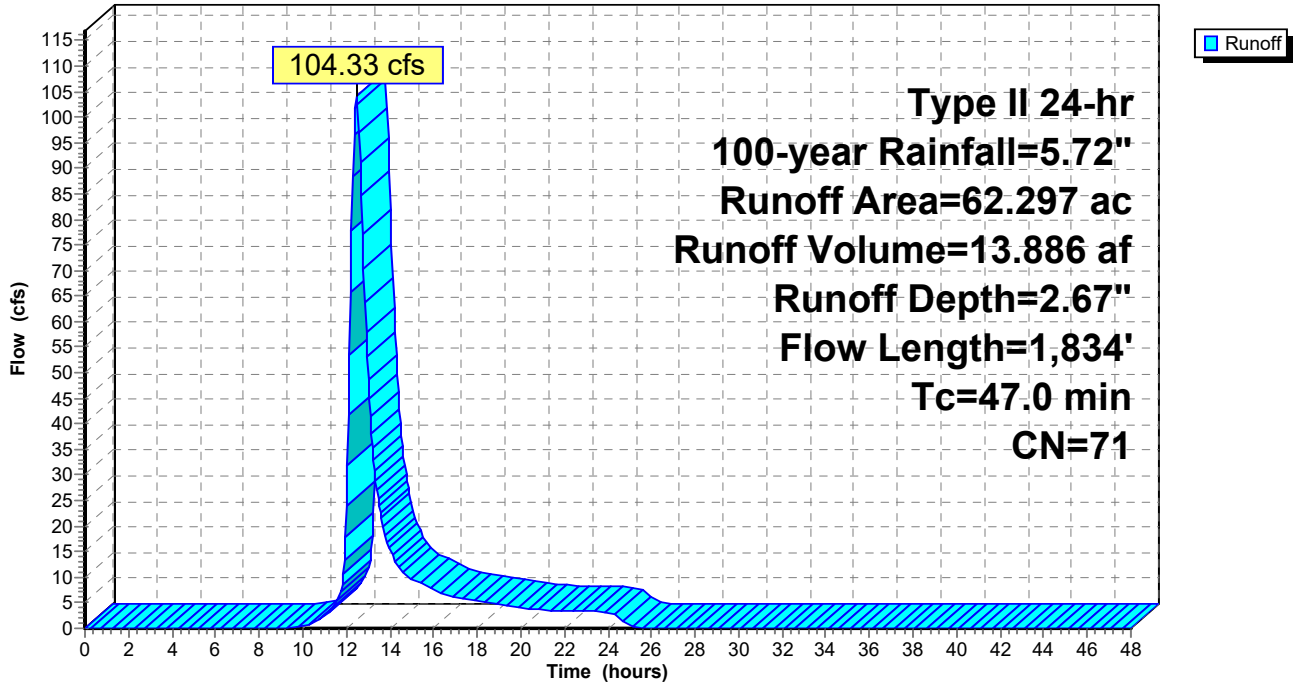
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.373   | 98 | Impervious surface        |
| * 0.117   | 96 | Gravel surface            |
| 2.935     | 58 | Meadow, non-grazed, HSG B |
| 38.064    | 71 | Meadow, non-grazed, HSG C |
| 5.928     | 78 | Meadow, non-grazed, HSG D |
| 0.322     | 48 | Brush, Good, HSG B        |
| 0.178     | 65 | Brush, Good, HSG C        |
| 1.858     | 55 | Woods, Good, HSG B        |
| 7.519     | 70 | Woods, Good, HSG C        |
| 5.003     | 77 | Woods, Good, HSG D        |
| 62.297    | 71 | Weighted Average          |
| 61.924    |    | 99.40% Pervious Area      |
| 0.373     |    | 0.60% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.7     | 100           | 0.0220        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 316           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.2      | 442           | 0.0130        | 0.80              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.3      | 305           | 0.0120        | 0.55              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 11.3     | 515           | 0.0230        | 0.76              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.5      | 156           |               | 1.73              |                | <b>Direct Entry, CF</b>  |
| 47.0     | 1,834         | Total         |                   |                |  |

Subcatchment 22S: Sub 22

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 23S: Sub 23**

[47] Hint: Peak is 138% of capacity of segment #4

Runoff = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af, Depth= 2.50"  
 Routed to Link SP23 :

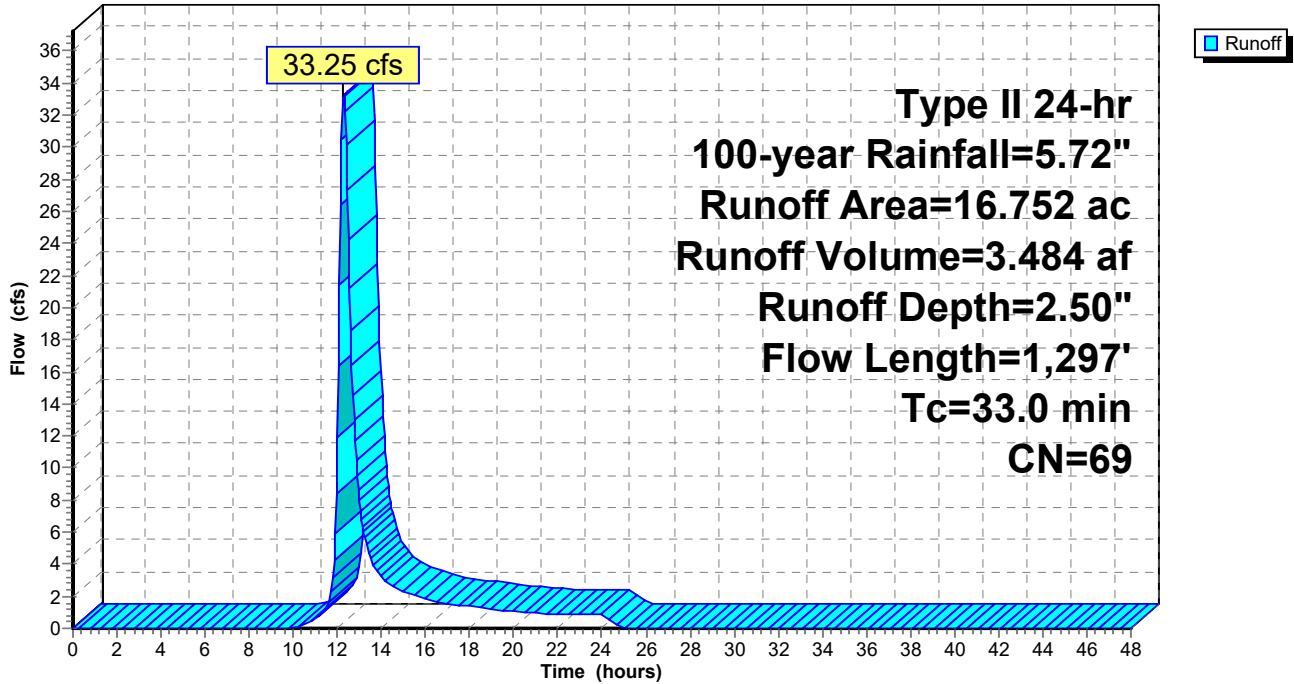
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.387   | 98 | Impervious surface            |
| * 0.929   | 96 | Gravel surface                |
| 0.421     | 61 | >75% Grass cover, Good, HSG B |
| 4.958     | 58 | Meadow, non-grazed, HSG B     |
| 9.559     | 71 | Meadow, non-grazed, HSG C     |
| 0.403     | 78 | Meadow, non-grazed, HSG D     |
| 0.012     | 48 | Brush, Good, HSG B            |
| 0.052     | 65 | Brush, Good, HSG C            |
| 0.031     | 55 | Woods, Good, HSG B            |
| 16.752    | 69 | Weighted Average              |
| 16.365    |    | 97.69% Pervious Area          |
| 0.387     |    | 2.31% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.2     | 100           | 0.0760        | 0.12              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 15.8     | 892           | 0.0180        | 0.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 2.8      | 262           | 0.0490        | 1.55              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.2      | 43            | 0.0160        | 4.00              | 24.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=3.00' D=1.00' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.0     | 1,297         | Total         |                   |                |   |

Subcatchment 23S: Sub 23

Hydrograph



**Mill Pt Pre 1**

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**Summary for Subcatchment 24S: Sub 24**

[47] Hint: Peak is 129% of capacity of segment #3

[47] Hint: Peak is 126% of capacity of segment #4

Runoff = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af, Depth= 2.95"  
 Routed to Link SP24 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

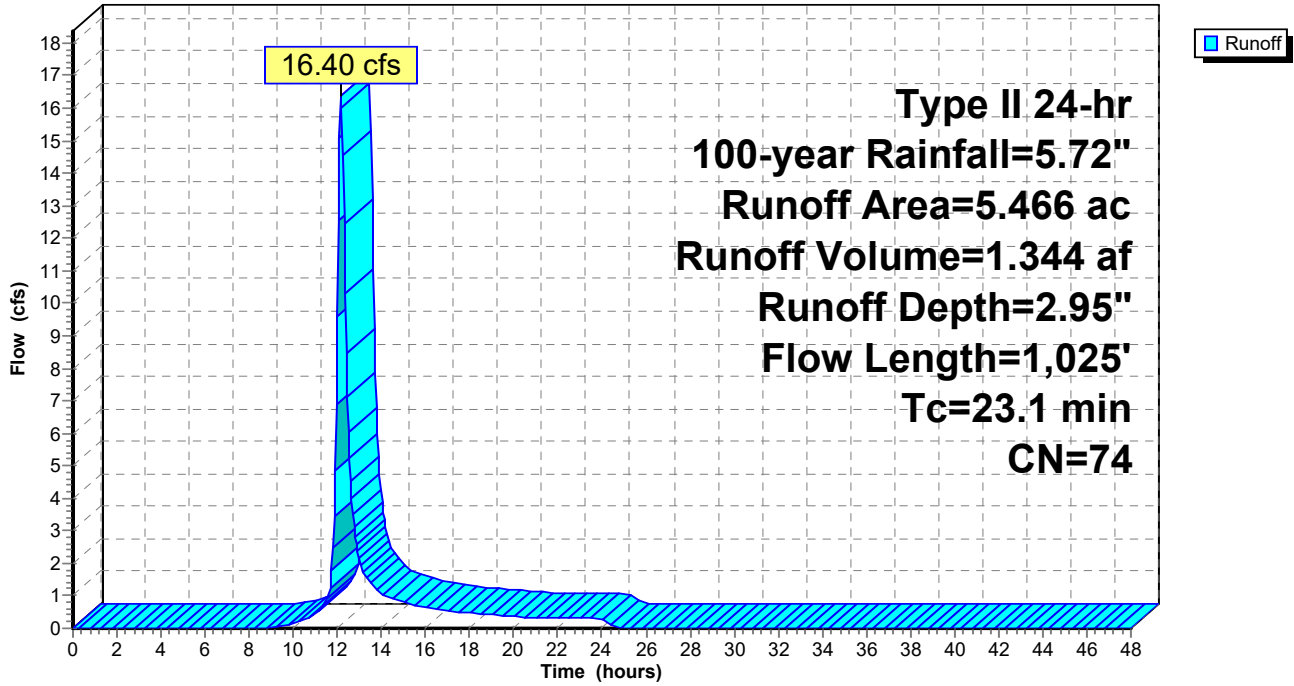
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.421   | 98 | Impervious surface            |
| * 0.036   | 96 | Gravel surface                |
| 0.093     | 61 | >75% Grass cover, Good, HSG B |
| 1.916     | 74 | >75% Grass cover, Good, HSG C |
| 0.252     | 58 | Meadow, non-grazed, HSG B     |
| 2.730     | 71 | Meadow, non-grazed, HSG C     |
| 0.018     | 70 | Woods, Good, HSG C            |
| 5.466     | 74 | Weighted Average              |
| 5.045     |    | 92.30% Pervious Area          |
| 0.421     |    | 7.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 17.9     | 100           | 0.0060        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 1.7      | 169           | 0.0550        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.1      | 247           | 0.0230        | 3.64              | 12.74          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00'<br>n= 0.035 Earth, dense weeds |
| 2.4      | 509           | 0.0220        | 3.47              | 13.02          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 23.1     | 1,025         | Total         |                   |                |   |



Subcatchment 24S: Sub 24

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 43: Subcat 43**

[47] Hint: Peak is 462% of capacity of segment #3

Runoff = 60.76 cfs @ 12.39 hrs, Volume= 7.337 af, Depth= 2.58"  
 Routed to Reach 44R :

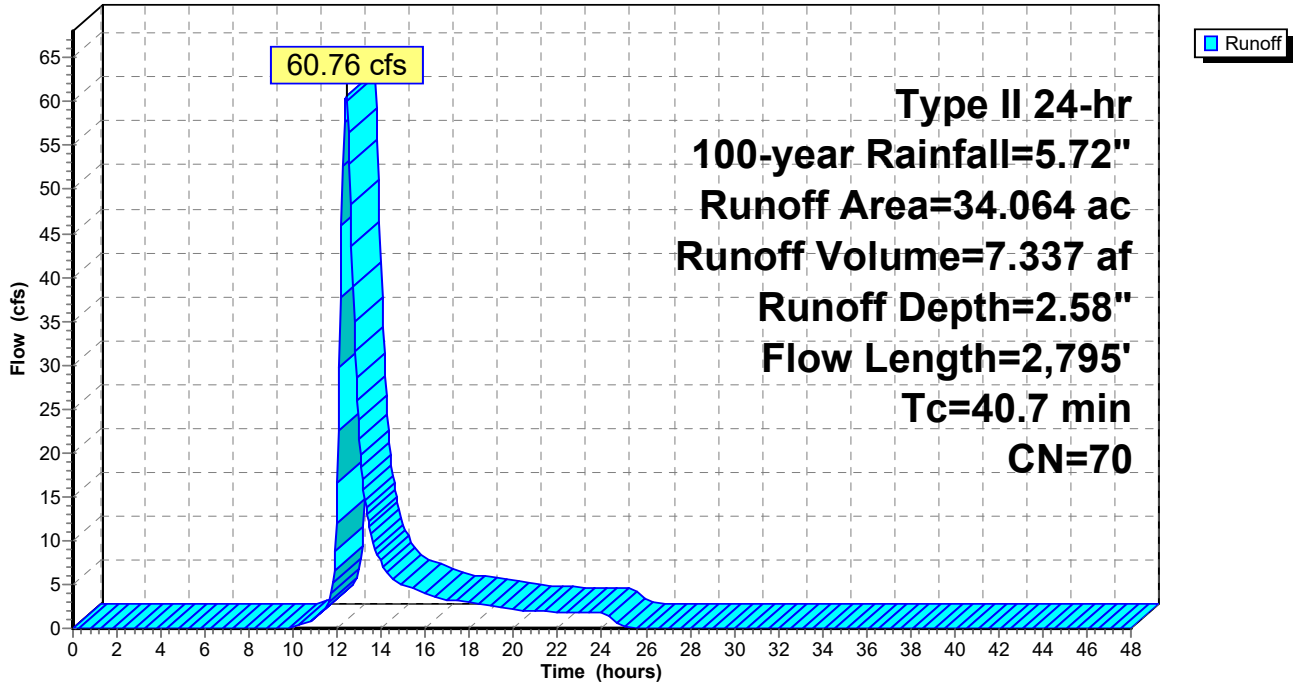
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.157   | 98 | Impervious surface            |
| 2.153     | 74 | >75% Grass cover, Good, HSG C |
| 0.186     | 30 | Meadow, non-grazed, HSG A     |
| 1.331     | 58 | Meadow, non-grazed, HSG B     |
| 15.965    | 71 | Meadow, non-grazed, HSG C     |
| 6.575     | 78 | Meadow, non-grazed, HSG D     |
| 1.643     | 30 | Woods, Good, HSG A            |
| 0.352     | 55 | Woods, Good, HSG B            |
| 2.445     | 70 | Woods, Good, HSG C            |
| 3.257     | 77 | Woods, Good, HSG D            |
| 34.064    | 70 | Weighted Average              |
| 33.907    |    | 99.54% Pervious Area          |
| 0.157     |    | 0.46% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 26.2     | 1,556         | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 5.1      | 1,139         | 0.0320        | 3.76              | 13.15          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 2.0 '/' Top.W=8.00'<br>n= 0.040 Winding stream, pools & shoals |
| 40.7     | 2,795         | Total         |                   |                |   |

Subcatchment 43: Subcat 43

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 44: Subcat 44**

[47] Hint: Peak is 1464% of capacity of segment #3

[47] Hint: Peak is 565% of capacity of segment #4

Runoff = 81.24 cfs @ 12.40 hrs, Volume= 9.971 af, Depth= 2.58"  
 Routed to Reach 45R :

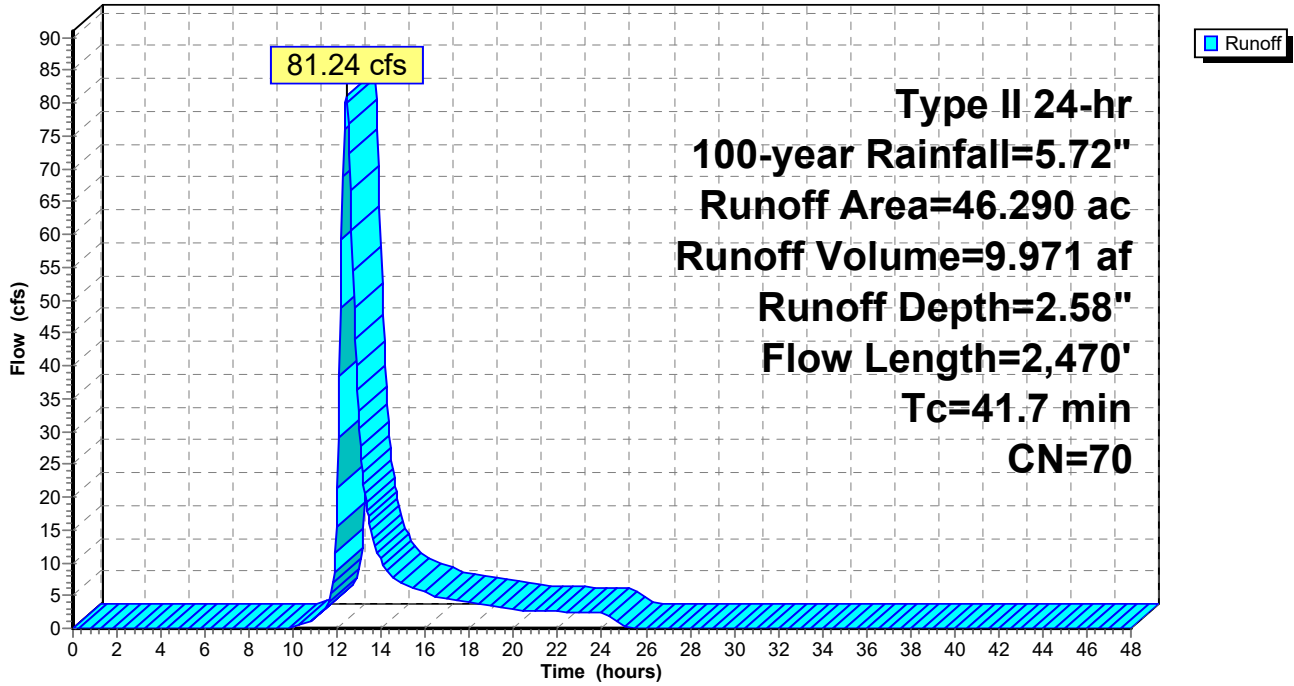
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.094     | 30 | Meadow, non-grazed, HSG A |
| 0.097     | 58 | Meadow, non-grazed, HSG B |
| 7.842     | 71 | Meadow, non-grazed, HSG C |
| 6.921     | 78 | Meadow, non-grazed, HSG D |
| 1.607     | 30 | Woods, Good, HSG A        |
| 6.395     | 55 | Woods, Good, HSG B        |
| 8.029     | 70 | Woods, Good, HSG C        |
| 15.305    | 77 | Woods, Good, HSG D        |
| 46.290    | 70 | Weighted Average          |
| 46.290    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 21.9     | 100           | 0.0260        | 0.08              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 2.50"  |
| 9.2      | 409           | 0.0220        | 0.74              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 5.2      | 715           | 0.0320        | 2.31              | 5.55           | <b>Parabolic Channel,</b><br>W=18.00' D=0.20' Area=2.4 sf Perim=18.0'<br>n= 0.030 Earth, grassed & winding                  |
| 5.4      | 1,246         | 0.0350        | 3.83              | 14.37          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.040 Winding stream, pools & shoals |
| 41.7     | 2,470         | Total         |                   |                |   |

Subcatchment 44: Subcat 44

Hydrograph





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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 45: Subcat 45**

[47] Hint: Peak is 428% of capacity of segment #5

Runoff = 44.42 cfs @ 12.27 hrs, Volume= 4.701 af, Depth= 1.66"  
 Routed to Link SP43 :

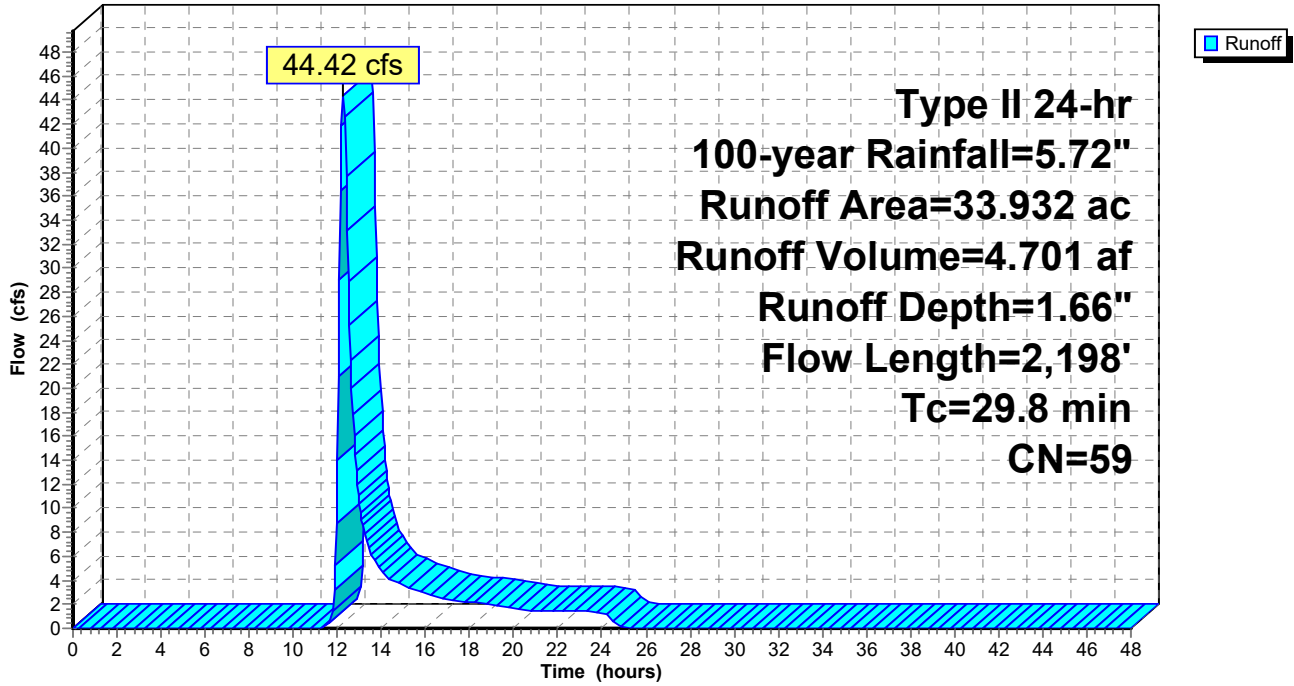
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.056   | 98 | Surface water                 |
| * 0.600   | 98 | Impervious surface            |
| * 0.045   | 96 | Gravel surface                |
| 0.358     | 61 | >75% Grass cover, Good, HSG B |
| 0.668     | 74 | >75% Grass cover, Good, HSG C |
| 0.893     | 30 | Meadow, non-grazed, HSG A     |
| 10.865    | 58 | Meadow, non-grazed, HSG B     |
| 6.386     | 71 | Meadow, non-grazed, HSG C     |
| 2.755     | 78 | Meadow, non-grazed, HSG D     |
| 0.369     | 30 | Brush, Good, HSG A            |
| 4.141     | 48 | Brush, Good, HSG B            |
| 0.313     | 65 | Brush, Good, HSG C            |
| 0.221     | 73 | Brush, Good, HSG D            |
| 2.407     | 30 | Woods, Good, HSG A            |
| 3.328     | 55 | Woods, Good, HSG B            |
| 0.214     | 70 | Woods, Good, HSG C            |
| 0.313     | 77 | Woods, Good, HSG D            |
| 33.932    | 59 | Weighted Average              |
| 33.276    |    | 98.07% Pervious Area          |
| 0.656     |    | 1.93% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.5      | 396           | 0.0210        | 1.01              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.8      | 223           | 0.0900        | 2.10              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.4      | 196           | 0.0360        | 0.95              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 5.7      | 1,283         | 0.0370        | 3.77              | 10.38          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' Top.W=7.00'<br>n= 0.040 Winding stream, pools & shoals |
| 29.8     | 2,198         | Total         |                   |                |   |

Subcatchment 45: Subcat 45

Hydrograph



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**Summary for Subcatchment 46: Subcat 46**

Runoff = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af, Depth= 0.52"  
 Routed to Link SP46 :

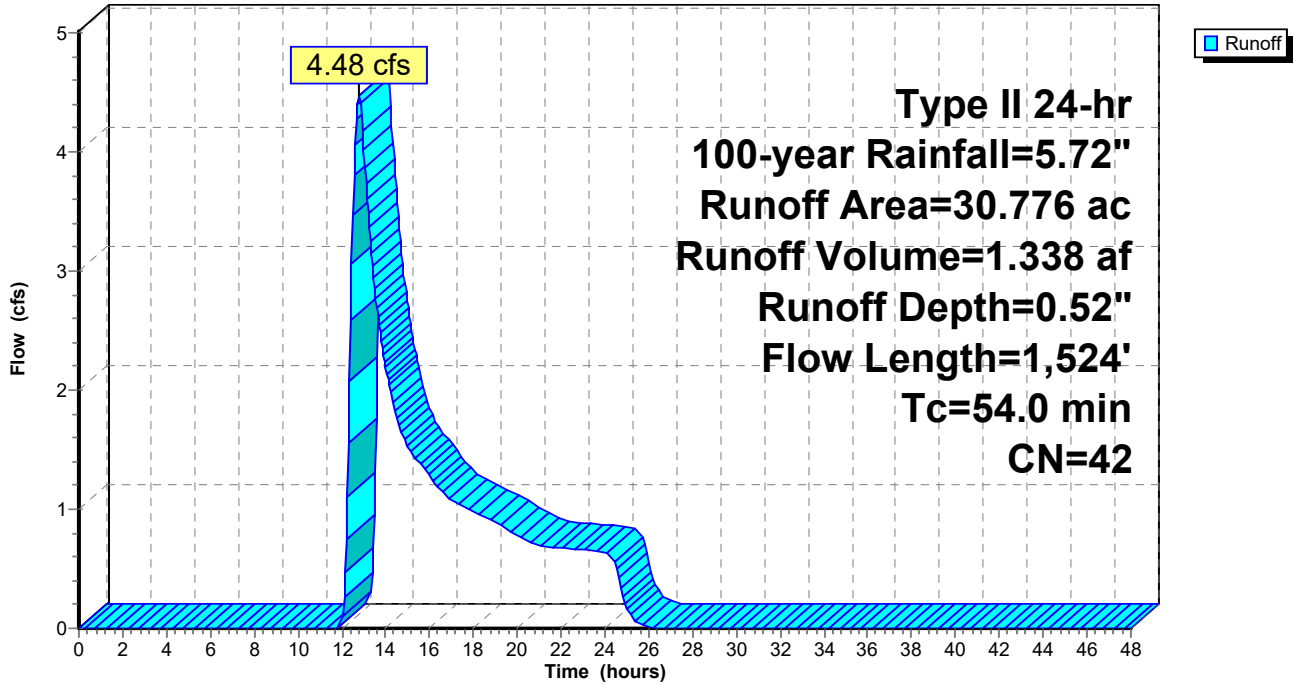
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.982   | 98 | Surface water             |
| * 0.226   | 98 | Impervious surface        |
| 2.832     | 30 | Meadow, non-grazed, HSG A |
| 1.255     | 58 | Meadow, non-grazed, HSG B |
| 0.520     | 30 | Brush, Good, HSG A        |
| 0.462     | 48 | Brush, Good, HSG B        |
| 0.278     | 73 | Brush, Good, HSG D        |
| 14.773    | 30 | Woods, Good, HSG A        |
| 9.100     | 55 | Woods, Good, HSG B        |
| 0.348     | 77 | Woods, Good, HSG D        |
| 30.776    | 42 | Weighted Average          |
| 29.568    |    | 96.07% Pervious Area      |
| 1.208     |    | 3.93% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.4      | 100           | 0.0300        | 0.18              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 36.5     | 774           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 5.2      | 153           | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.3      | 245           | 0.4120        | 3.21              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 1.2      | 79            | 0.0510        | 1.13              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 0.4      | 173           |               | 6.95              |                | <b>Lake or Reservoir,</b><br>Mean Depth= 1.50'                       |
| 54.0     | 1,524         | Total         |                   |                |  |

Subcatchment 46: Subcat 46

Hydrograph



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**Summary for Subcatchment 47: Subcat 47**

Runoff = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af, Depth= 0.47"

Routed to Link SP47 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

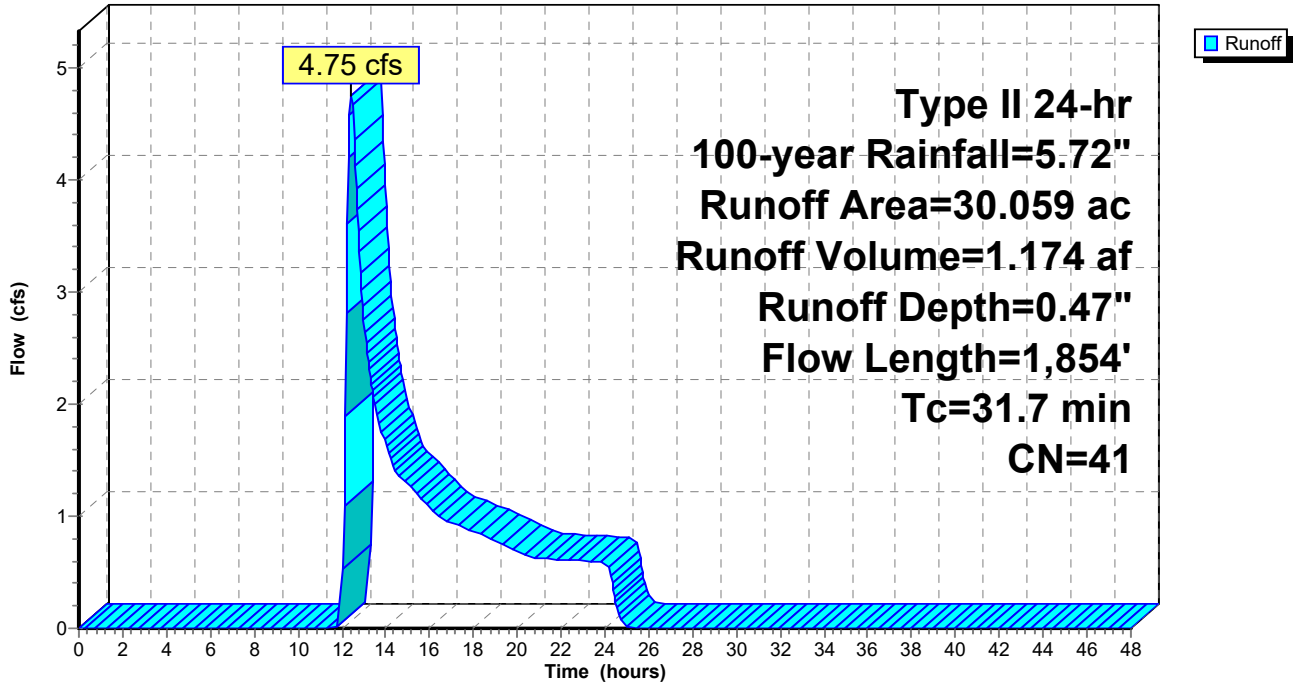
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.378   | 98 | Impervious surface            |
| 0.502     | 39 | >75% Grass cover, Good, HSG A |
| 2.029     | 61 | >75% Grass cover, Good, HSG B |
| 17.003    | 30 | Meadow, non-grazed, HSG A     |
| 3.669     | 58 | Meadow, non-grazed, HSG B     |
| 0.051     | 30 | Brush, Good, HSG A            |
| 0.687     | 48 | Brush, Good, HSG B            |
| 1.092     | 30 | Woods, Good, HSG A            |
| 4.648     | 55 | Woods, Good, HSG B            |
| 30.059    | 41 | Weighted Average              |
| 29.681    |    | 98.74% Pervious Area          |
| 0.378     |    | 1.26% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.4      | 100           | 0.0400        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 18.7     | 992           | 0.0160        | 0.89              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 1.1      | 88            | 0.0680        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 3.5      | 674           | 0.0180        | 3.19              | 13.54          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=7.00' D=0.50' Z= 3.0 '/' Top.W=10.00'<br>n= 0.035 Earth, dense weeds |
| 31.7     | 1,854         | Total         |                   |                |  |



Subcatchment 47: Subcat 47

Hydrograph



# Mill Pt Pre 1

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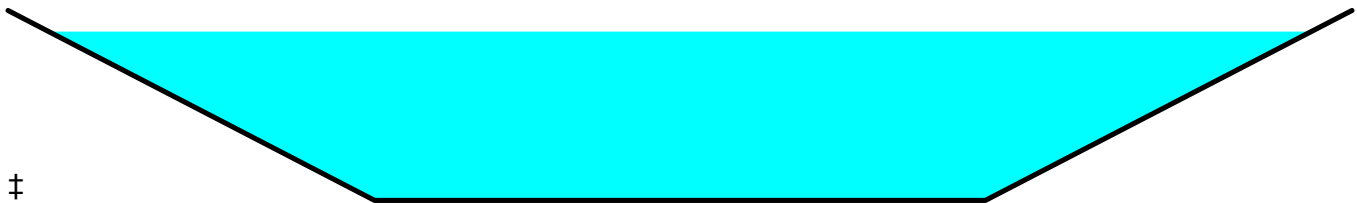
## Summary for Reach 6R: W-NSD-35

Inflow Area = 58.963 ac, 0.00% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 73.45 cfs @ 12.69 hrs, Volume= 12.263 af  
Outflow = 72.45 cfs @ 12.86 hrs, Volume= 12.263 af, Atten= 1%, Lag= 10.1 min  
Routed to Link SP5 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 5.32 fps, Min. Travel Time= 5.9 min  
Avg. Velocity= 1.42 fps, Avg. Travel Time= 22.2 min

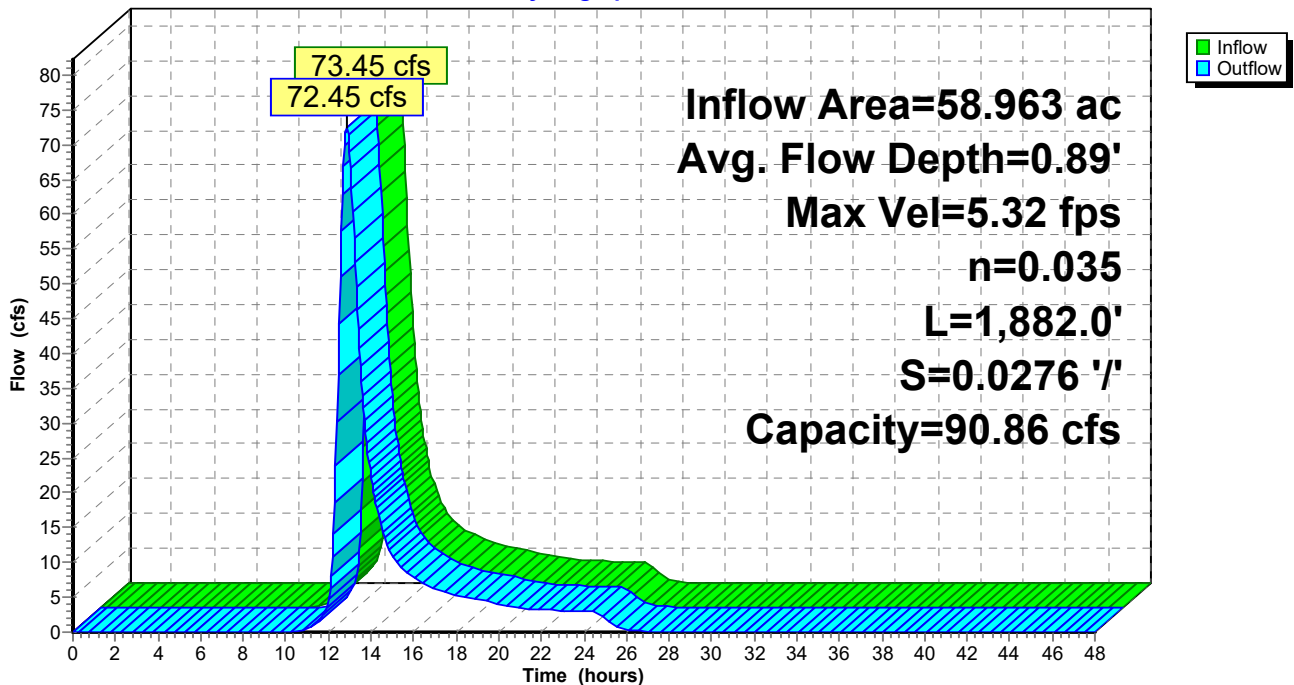
Peak Storage= 25,633 cf @ 12.76 hrs  
Average Depth at Peak Storage= 0.89' , Surface Width= 20.66'  
Bank-Full Depth= 1.00' Flow Area= 16.0 sf, Capacity= 90.86 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 ' / ' Top Width= 22.00'  
Length= 1,882.0' Slope= 0.0276 ' / '  
Inlet Invert= 542.00', Outlet Invert= 490.00'



## Reach 6R: W-NSD-35

Hydrograph



# Mill Pt Pre 1

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## Summary for Reach 13.1R:

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
Inflow = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af  
Outflow = 1.61 cfs @ 13.24 hrs, Volume= 2.078 af, Atten= 0%, Lag= 2.0 min  
Routed to Reach 13.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.32 fps, Min. Travel Time= 1.2 min  
Avg. Velocity = 1.85 fps, Avg. Travel Time= 1.5 min

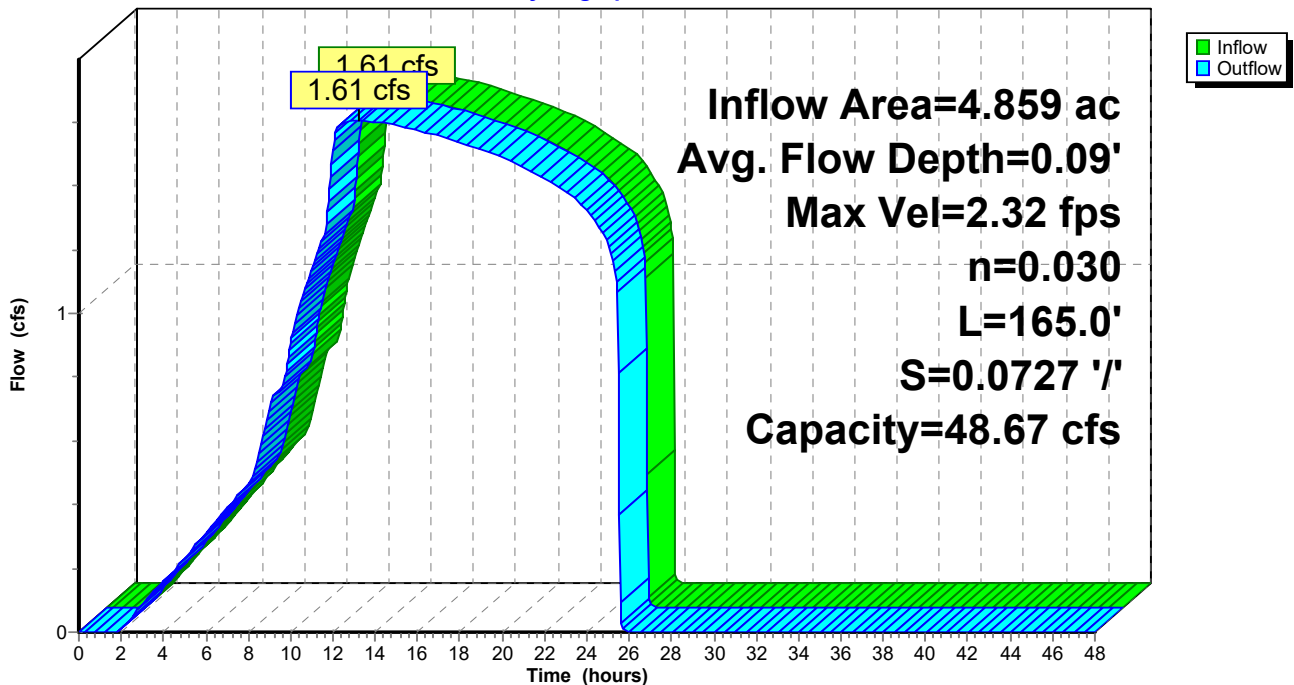
Peak Storage= 114 cf @ 13.22 hrs  
Average Depth at Peak Storage= 0.09' , Surface Width= 9.56'  
Bank-Full Depth= 0.50' Flow Area= 8.0 sf, Capacity= 48.67 cfs

6.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 20.0 ' / ' Top Width= 26.00'  
Length= 165.0' Slope= 0.0727 ' / '  
Inlet Invert= 503.90', Outlet Invert= 491.90'



### Reach 13.1R:

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 13.2R:**

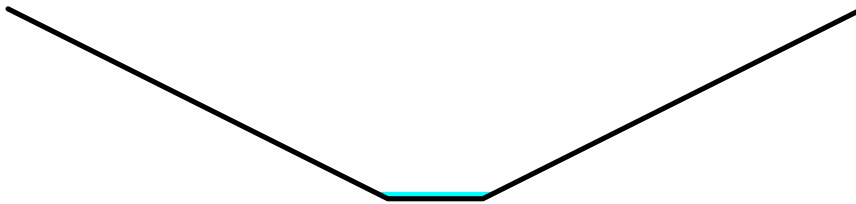
[61] Hint: Exceeded Reach 13.1R outlet invert by 0.04' @ 13.25 hrs

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
Inflow = 1.61 cfs @ 13.24 hrs, Volume= 2.078 af  
Outflow = 1.61 cfs @ 13.26 hrs, Volume= 2.078 af, Atten= 0%, Lag= 1.4 min  
Routed to Link SP13 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.86 fps, Min. Travel Time= 0.8 min  
Avg. Velocity = 3.98 fps, Avg. Travel Time= 1.0 min

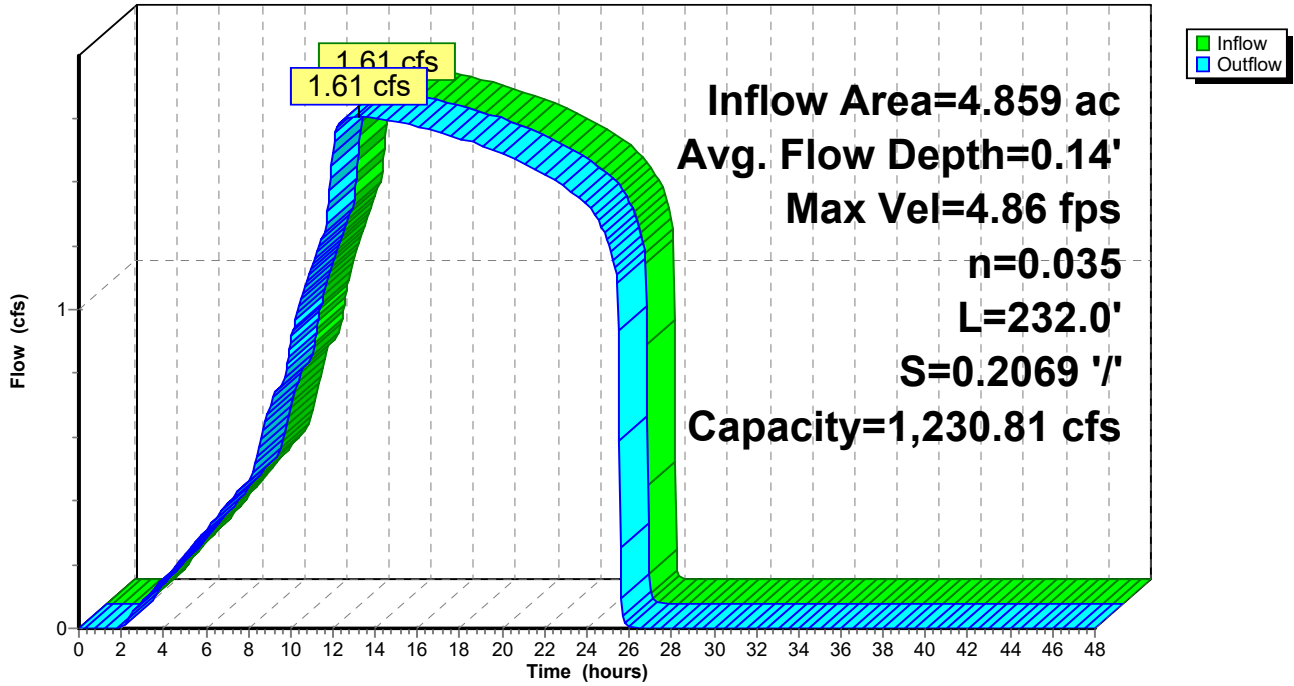
Peak Storage= 77 cf @ 13.25 hrs  
Average Depth at Peak Storage= 0.14' , Surface Width= 2.58'  
Bank-Full Depth= 4.00' Flow Area= 40.0 sf, Capacity= 1,230.81 cfs

2.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 2.0 '/' Top Width= 18.00'  
Length= 232.0' Slope= 0.2069 '/'  
Inlet Invert= 491.80', Outlet Invert= 443.80'



Reach 13.2R:

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 20.1R: S-KCF-6**

[91] Warning: Storage range exceeded by 0.57'

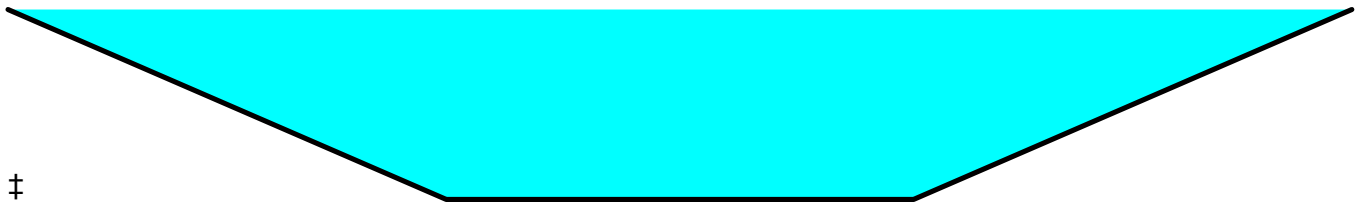
[55] Hint: Peak inflow is 161% of Manning's capacity

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 2.39" for 100-year event  
Inflow = 227.84 cfs @ 12.16 hrs, Volume= 19.682 af  
Outflow = 206.83 cfs @ 12.33 hrs, Volume= 19.682 af, Atten= 9%, Lag= 10.5 min  
Routed to Reach 20.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.99 fps, Min. Travel Time= 5.9 min  
Avg. Velocity= 0.90 fps, Avg. Travel Time= 26.0 min

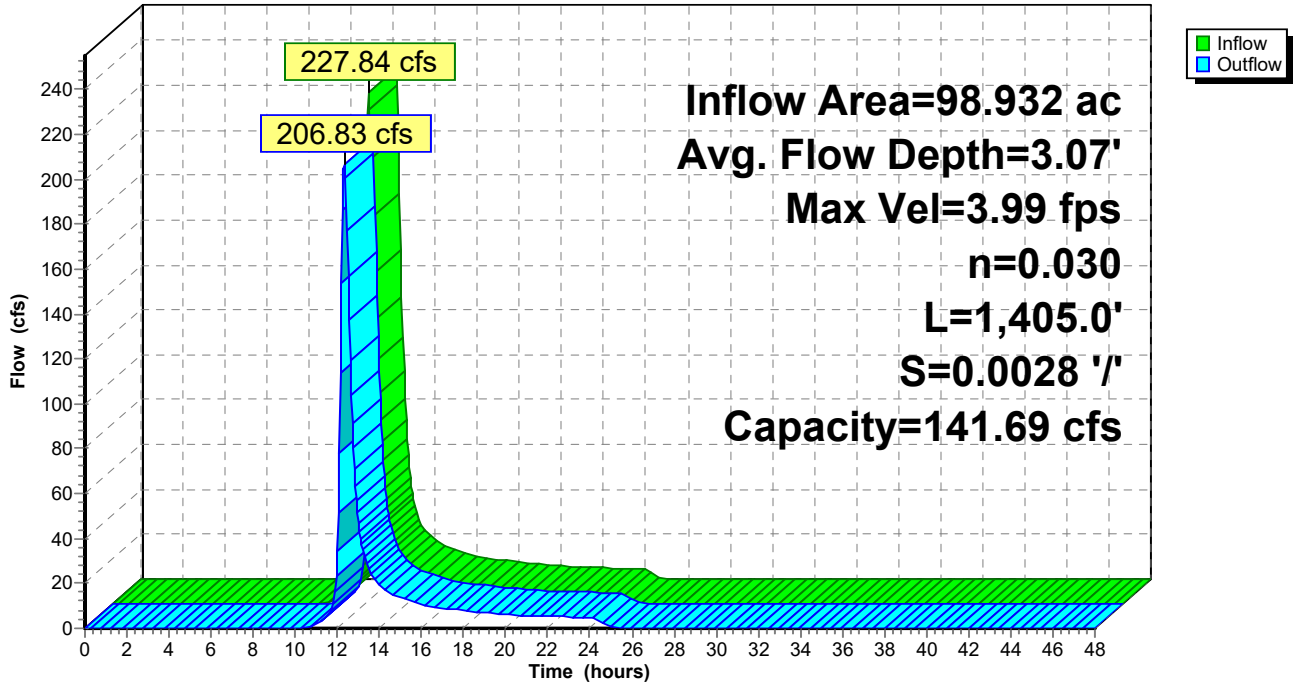
Peak Storage= 72,865 cf @ 12.23 hrs  
Average Depth at Peak Storage= 3.07' , Surface Width= 26.43'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 141.69 cfs

8.00' x 2.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,405.0' Slope= 0.0028 '/'  
Inlet Invert= 494.00', Outlet Invert= 490.00'



Reach 20.1R: S-KCF-6

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 20.2R:**

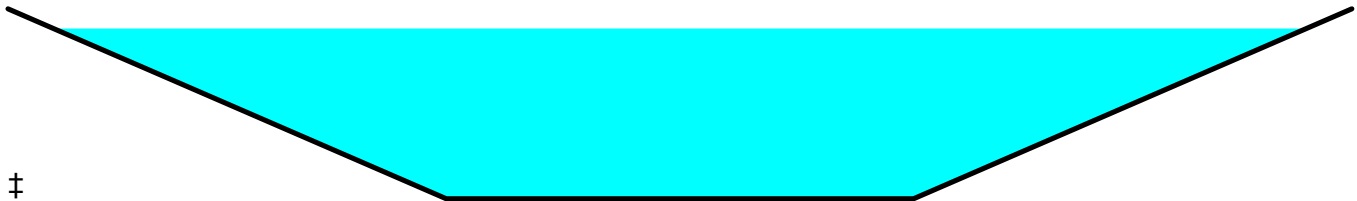
[62] Hint: Exceeded Reach 20.1R OUTLET depth by 0.02' @ 24.95 hrs

Inflow Area = 98.932 ac, 0.71% Impervious, Inflow Depth = 2.39" for 100-year event  
Inflow = 206.83 cfs @ 12.33 hrs, Volume= 19.682 af  
Outflow = 199.93 cfs @ 12.44 hrs, Volume= 19.682 af, Atten= 3%, Lag= 6.7 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 6.08 fps, Min. Travel Time= 3.6 min  
Avg. Velocity= 1.35 fps, Avg. Travel Time= 16.3 min

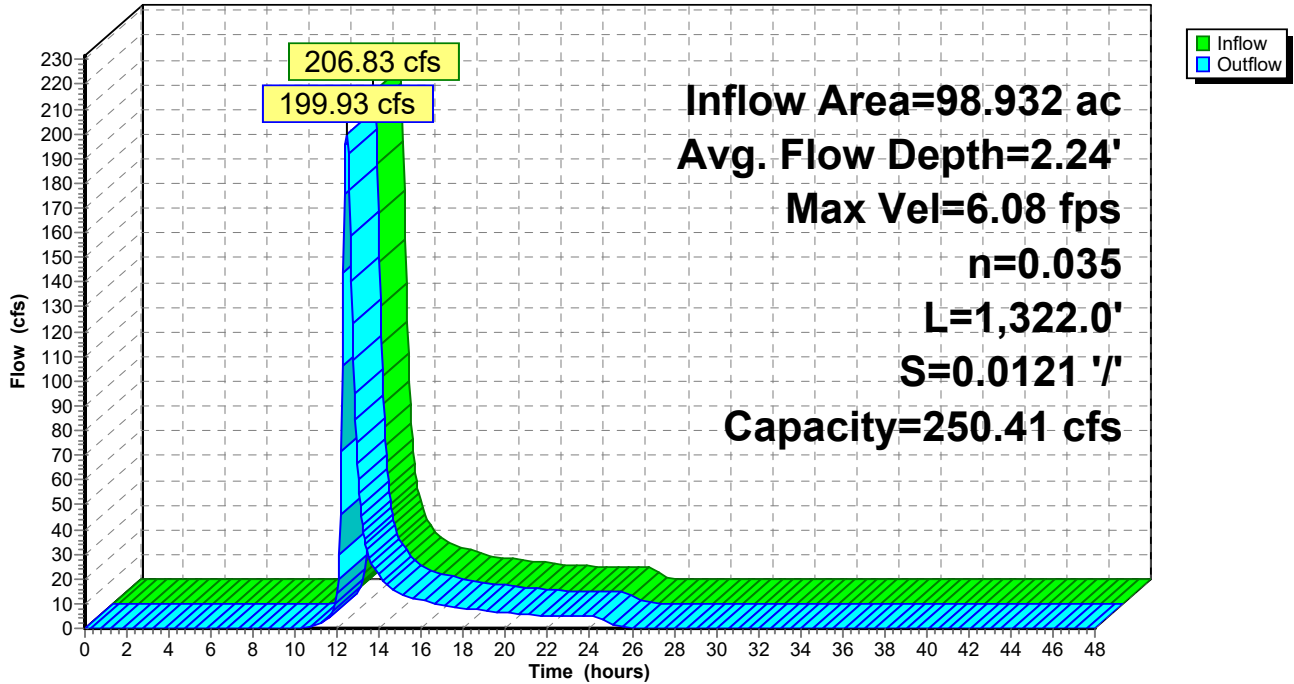
Peak Storage= 43,630 cf @ 12.38 hrs  
Average Depth at Peak Storage= 2.24' , Surface Width= 21.45'  
Bank-Full Depth= 2.50' Flow Area= 38.8 sf, Capacity= 250.41 cfs

8.00' x 2.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 3.0 '/' Top Width= 23.00'  
Length= 1,322.0' Slope= 0.0121 '/'  
Inlet Invert= 490.00', Outlet Invert= 474.00'



Reach 20.2R:

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 22.1R: S-KCF-5**

[91] Warning: Storage range exceeded by 0.81'

[55] Hint: Peak inflow is 201% of Manning's capacity

Inflow Area = 123.017 ac, 3.33% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 180.43 cfs @ 12.42 hrs, Volume= 22.910 af  
Outflow = 178.76 cfs @ 12.49 hrs, Volume= 22.910 af, Atten= 1%, Lag= 4.4 min  
Routed to Reach 22.2R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.84 fps, Min. Travel Time= 2.3 min  
Avg. Velocity= 1.49 fps, Avg. Travel Time= 7.4 min

Peak Storage= 24,618 cf @ 12.45 hrs  
Average Depth at Peak Storage= 2.31' , Surface Width= 23.83'  
Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 89.91 cfs

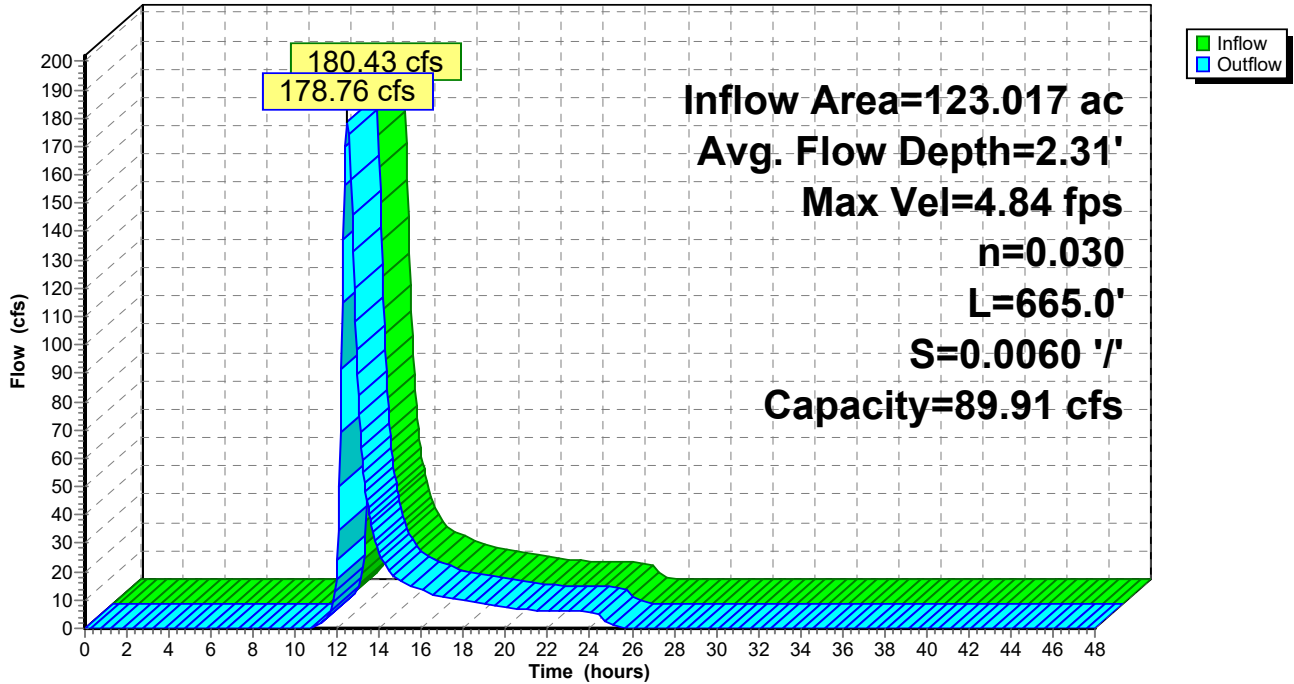
10.00' x 1.50' deep channel, n= 0.030 Earth, grassed & winding  
Side Slope Z-value= 3.0 '/' Top Width= 19.00'  
Length= 665.0' Slope= 0.0060 '/'  
Inlet Invert= 478.00', Outlet Invert= 474.00'





Reach 22.1R: S-KCF-5

Hydrograph



**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 22.2R:**

[91] Warning: Storage range exceeded by 2.69'

[55] Hint: Peak inflow is 437% of Manning's capacity

[62] Hint: Exceeded Reach 20.2R OUTLET depth by 2.14' @ 12.55 hrs

[64] Warning: Exceeded Reach 20.2R outlet bank by 1.69' @ 12.50 hrs

[62] Hint: Exceeded Reach 22.1R OUTLET depth by 1.91' @ 12.50 hrs

[64] Warning: Exceeded Reach 22.1R outlet bank by 2.69' @ 12.50 hrs

Inflow Area = 221.949 ac, 2.16% Impervious, Inflow Depth = 2.30" for 100-year event

Inflow = 377.18 cfs @ 12.46 hrs, Volume= 42.592 af

Outflow = 371.05 cfs @ 12.54 hrs, Volume= 42.592 af, Atten= 2%, Lag= 4.6 min

Routed to Link SP22 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.12 fps, Min. Travel Time= 2.3 min

Avg. Velocity= 1.25 fps, Avg. Travel Time= 9.4 min

Peak Storage= 51,431 cf @ 12.50 hrs

Average Depth at Peak Storage= 4.19' , Surface Width= 35.14'

Bank-Full Depth= 1.50' Flow Area= 21.8 sf, Capacity= 86.27 cfs

10.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 3.0 '/' Top Width= 19.00'

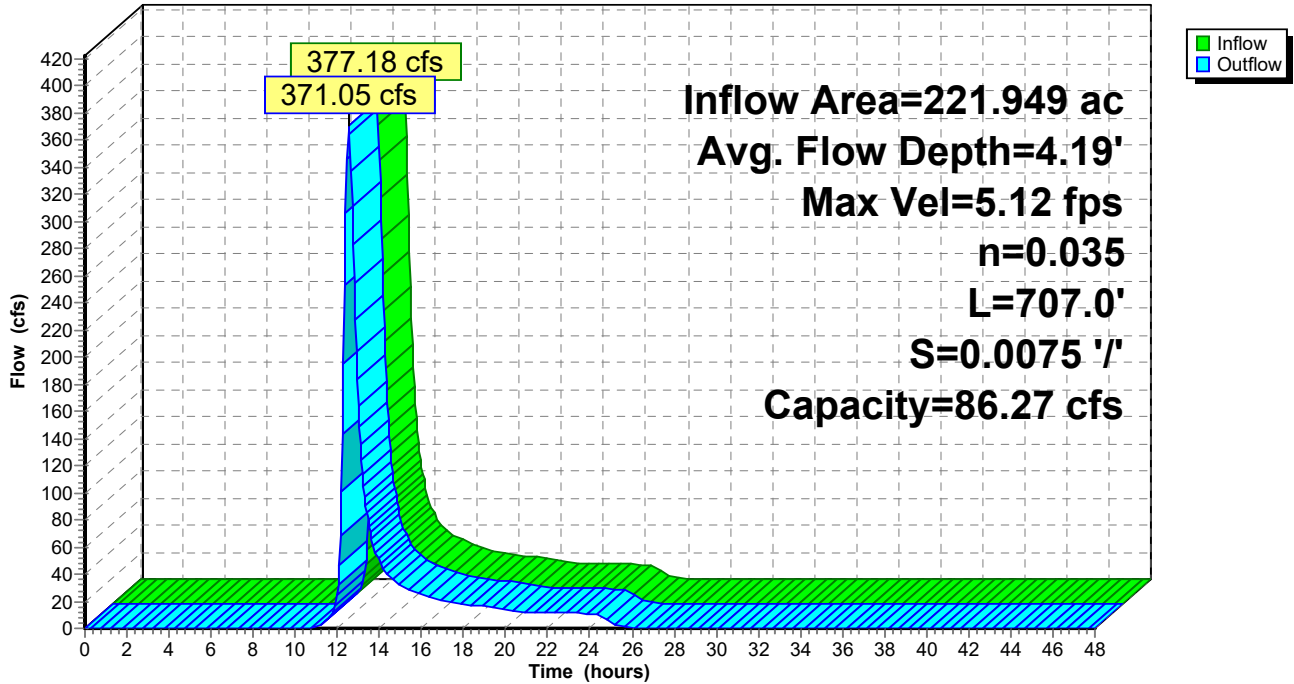
Length= 707.0' Slope= 0.0075 '/'

Inlet Invert= 474.00', Outlet Invert= 468.67'



Reach 22.2R:

Hydrograph



**Mill Pt Pre 1**

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**Summary for Reach 44R:**

[91] Warning: Storage range exceeded by 1.38'

[55] Hint: Peak inflow is 698% of Manning's capacity

Inflow Area = 34.064 ac, 0.46% Impervious, Inflow Depth = 2.58" for 100-year event  
Inflow = 60.76 cfs @ 12.39 hrs, Volume= 7.337 af  
Outflow = 60.27 cfs @ 12.45 hrs, Volume= 7.337 af, Atten= 1%, Lag= 3.9 min  
Routed to Reach 45R :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.47 fps, Min. Travel Time= 1.9 min  
Avg. Velocity = 2.07 fps, Avg. Travel Time= 4.0 min

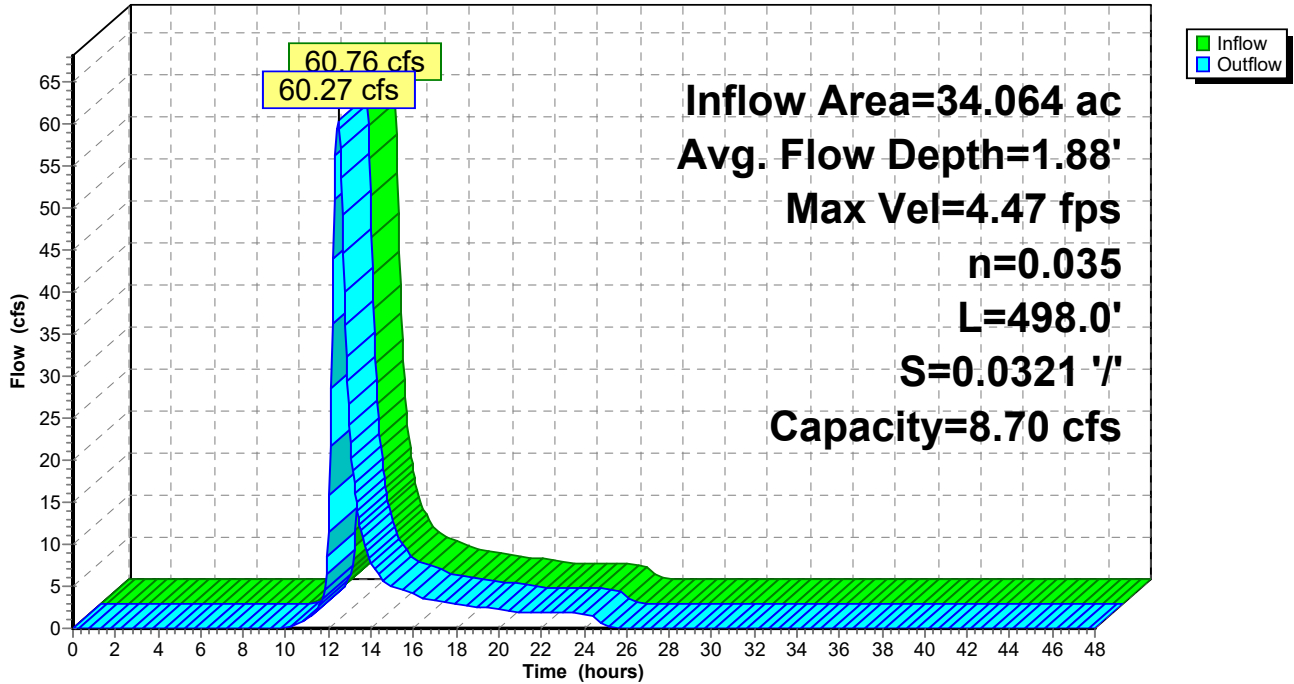
Peak Storage= 6,737 cf @ 12.42 hrs  
Average Depth at Peak Storage= 1.88' , Surface Width= 24.61'  
Bank-Full Depth= 0.50' Flow Area= 2.5 sf, Capacity= 8.70 cfs

2.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds  
Side Slope Z-value= 6.0 '/' Top Width= 8.00'  
Length= 498.0' Slope= 0.0321 '/'  
Inlet Invert= 404.00', Outlet Invert= 388.00'



Reach 44R:

Hydrograph





**Mill Pt Pre 1**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Reach 45R:**

[91] Warning: Storage range exceeded by 2.23'

[55] Hint: Peak inflow is 870% of Manning's capacity

[62] Hint: Exceeded Reach 44R OUTLET depth by 0.87' @ 12.50 hrs

[64] Warning: Exceeded Reach 44R outlet bank by 2.23' @ 12.45 hrs

Inflow Area = 80.354 ac, 0.20% Impervious, Inflow Depth = 2.58" for 100-year event

Inflow = 141.03 cfs @ 12.42 hrs, Volume= 17.308 af

Outflow = 140.13 cfs @ 12.47 hrs, Volume= 17.308 af, Atten= 1%, Lag= 2.7 min

Routed to Link SP43 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.58 fps, Min. Travel Time= 1.4 min

Avg. Velocity = 2.58 fps, Avg. Travel Time= 3.5 min

Peak Storage= 11,468 cf @ 12.45 hrs

Average Depth at Peak Storage= 2.73' , Surface Width= 16.94'

Bank-Full Depth= 0.50' Flow Area= 3.5 sf, Capacity= 16.21 cfs

6.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 2.0 '/' Top Width= 8.00'

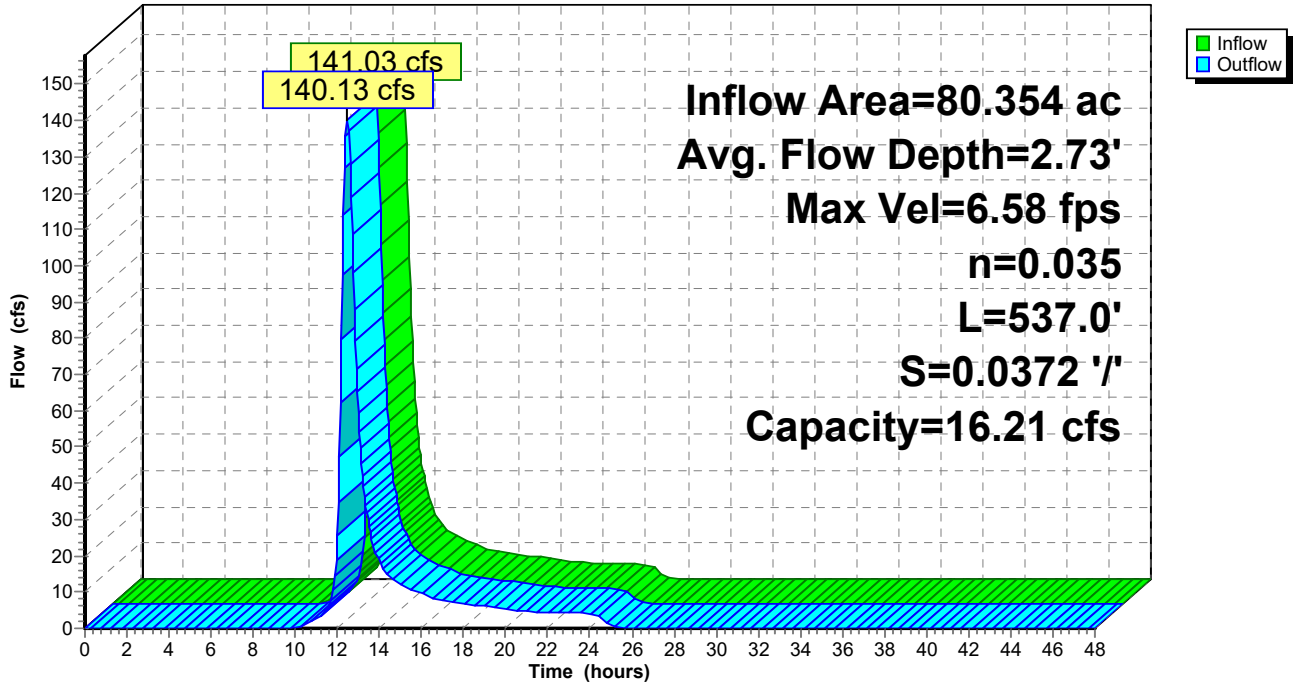
Length= 537.0' Slope= 0.0372 '/'

Inlet Invert= 388.00', Outlet Invert= 368.00'



Reach 45R:

Hydrograph



**Mill Pt Pre 1**

Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Pond 12P: 12P**

Inflow Area = 4.859 ac, 0.00% Impervious, Inflow Depth = 5.13" for 100-year event  
 Inflow = 37.76 cfs @ 11.96 hrs, Volume= 2.079 af  
 Outflow = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af, Atten= 96%, Lag= 74.4 min  
 Primary = 1.61 cfs @ 13.20 hrs, Volume= 2.078 af  
 Routed to Reach 13.1R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3  
 Peak Elev= 508.35' @ 13.20 hrs Surf.Area= 45,786 sf Storage= 43,067 cf

Plug-Flow detention time= 232.4 min calculated for 2.078 af (100% of inflow)  
 Center-of-Mass det. time= 232.2 min ( 993.3 - 761.1 )

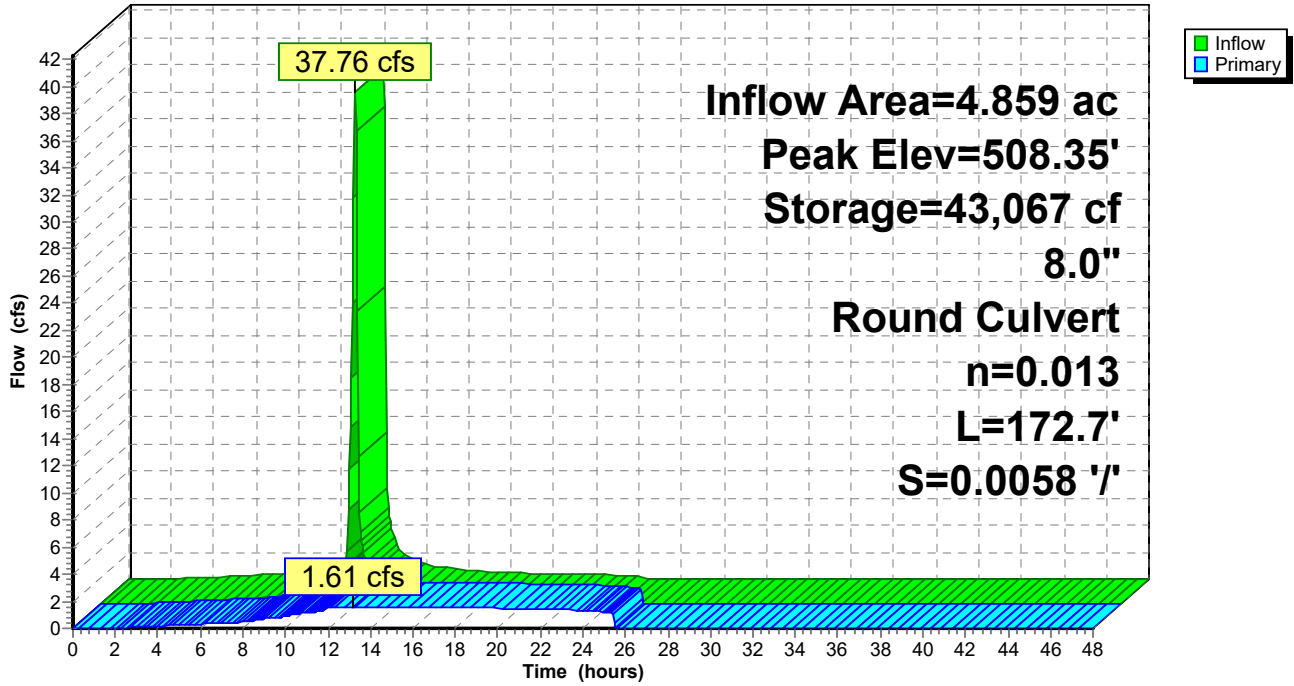
| Volume           | Invert            | Avail.Storage | Storage Description  |                        |                  |
|------------------|-------------------|---------------|--|------------------------|------------------|
| #1               | 505.00'           | 349,932 cf    | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                        |                  |
| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet)                                     | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
| 505.00           | 50                | 25.0          | 0  | 0                      | 50               |
| 506.00           | 138               | 45.5          | 90   | 90                     | 170              |
| 508.00           | 39,705            | 811.5         | 28,123   | 28,213                 | 52,417           |
| 510.00           | 80,589            | 1,415.9       | 117,907  | 146,120                | 159,570          |
| 512.00           | 124,830           | 2,053.3       | 203,812  | 349,932                | 335,572          |

| Device | Routing | Invert  | Outlet Devices   |
|--------|---------|---------|--|
| #1     | Primary | 505.00' | <b>8.0" Round Culvert</b><br>L= 172.7' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 505.00' / 504.00' S= 0.0058 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf |

**Primary OutFlow** Max=1.61 cfs @ 13.20 hrs HW=508.35' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.61 cfs @ 4.60 fps)

Pond 12P: 12P

Hydrograph

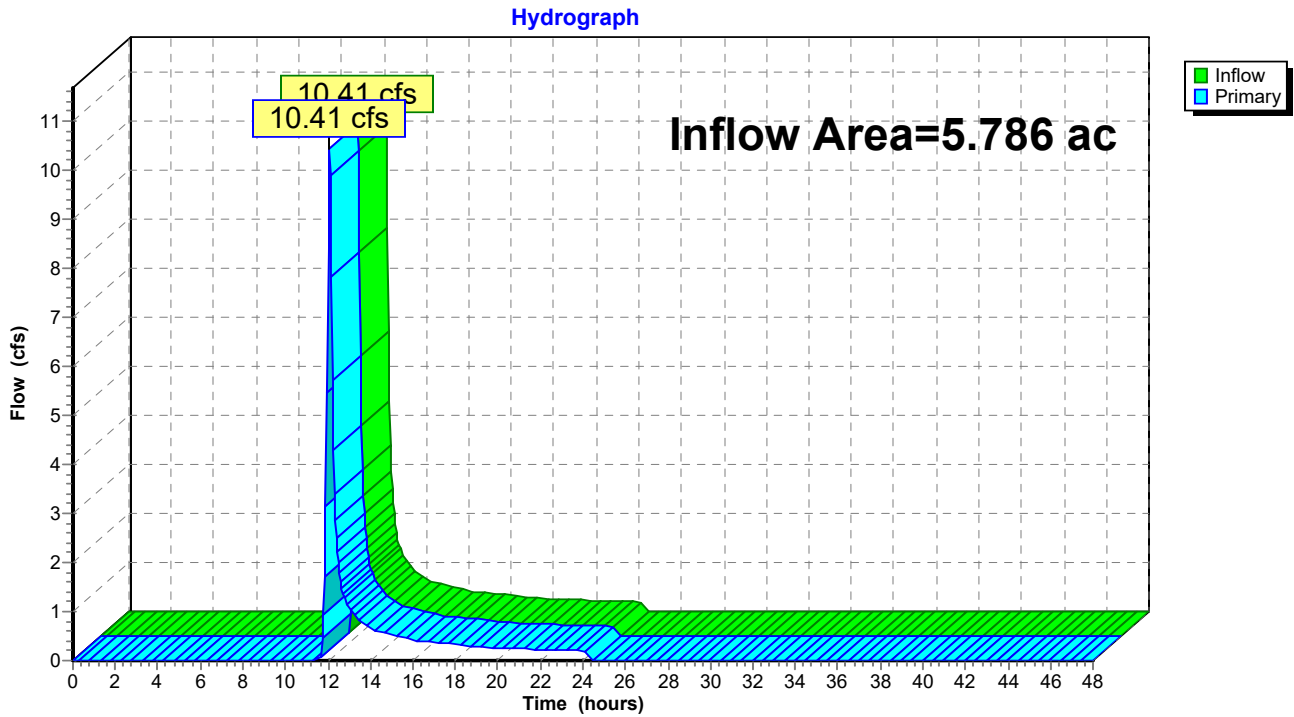


### Summary for Link SP1:

Inflow Area = 5.786 ac, 0.00% Impervious, Inflow Depth = 1.43" for 100-year event  
Inflow = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af  
Primary = 10.41 cfs @ 12.07 hrs, Volume= 0.691 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP1:





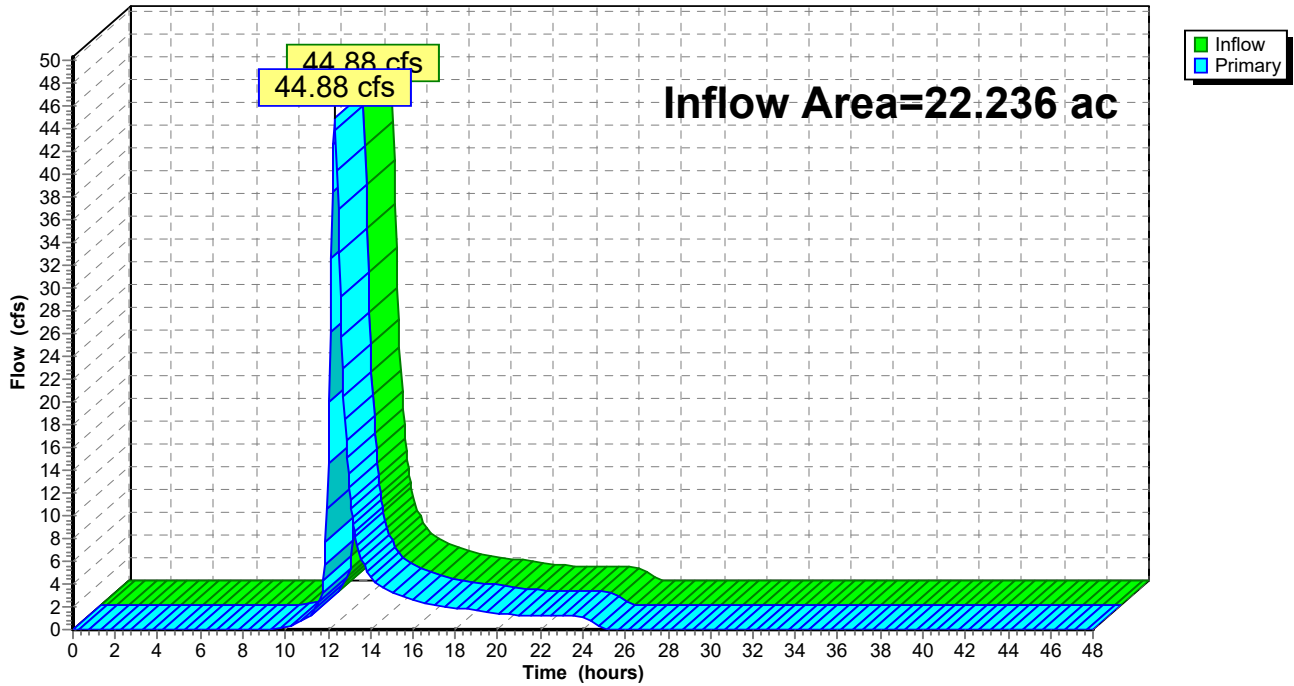
### Summary for Link SP10:

Inflow Area = 22.236 ac, 4.90% Impervious, Inflow Depth = 2.67" for 100-year event  
Inflow = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af  
Primary = 44.88 cfs @ 12.32 hrs, Volume= 4.956 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP10:

Hydrograph



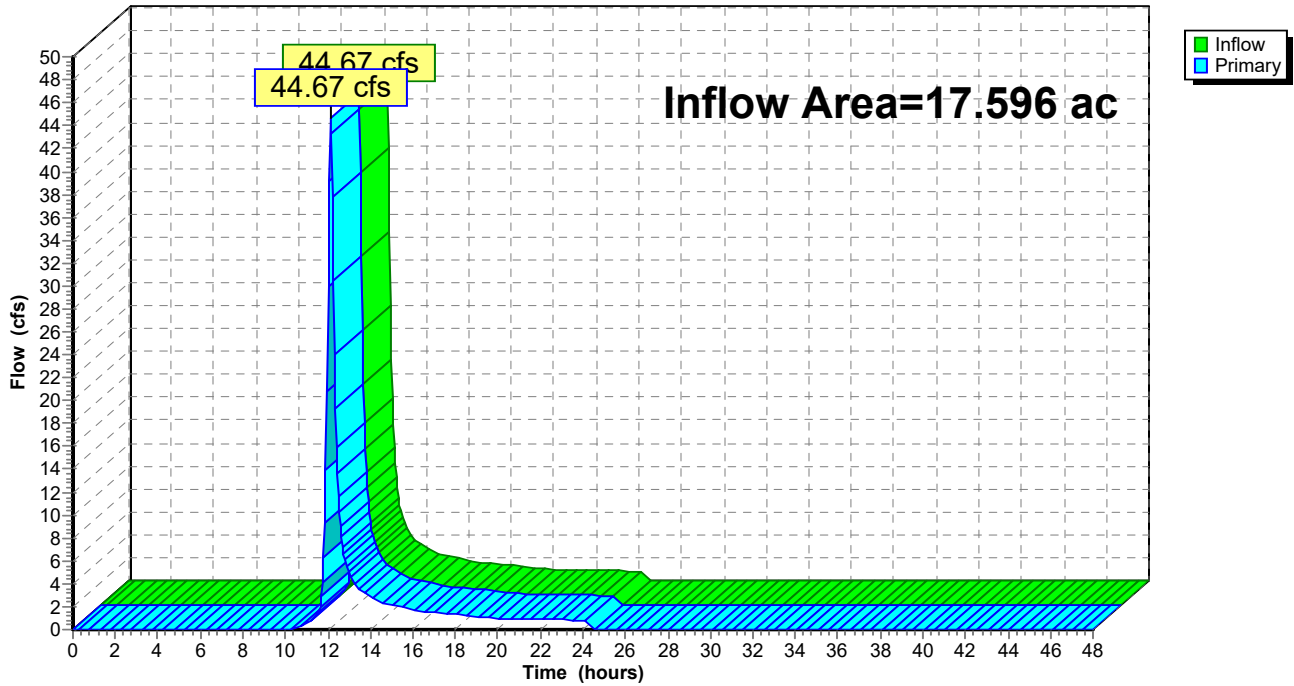
### Summary for Link SP11:

Inflow Area = 17.596 ac, 2.21% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af  
Primary = 44.67 cfs @ 12.12 hrs, Volume= 3.277 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP11:

Hydrograph



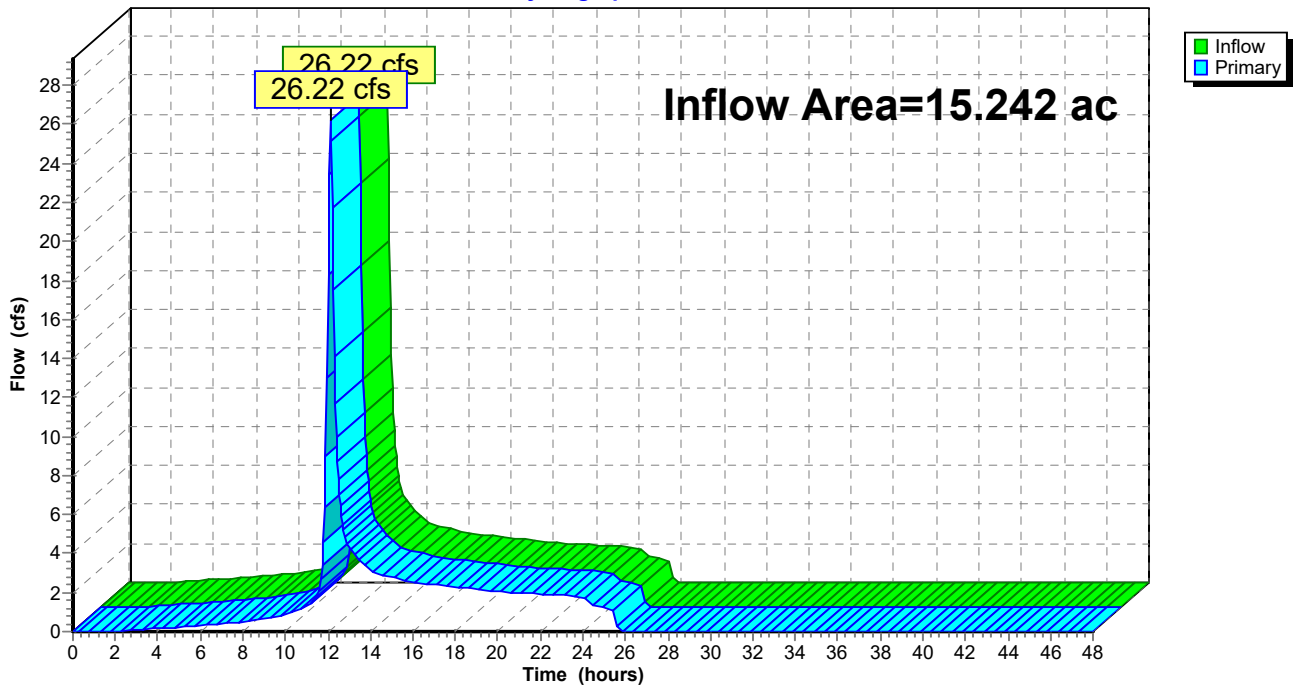
### Summary for Link SP13:

Inflow Area = 15.242 ac, 0.14% Impervious, Inflow Depth = 3.04" for 100-year event  
Inflow = 26.22 cfs @ 12.11 hrs, Volume= 3.866 af  
Primary = 26.22 cfs @ 12.11 hrs, Volume= 3.866 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP13:

Hydrograph



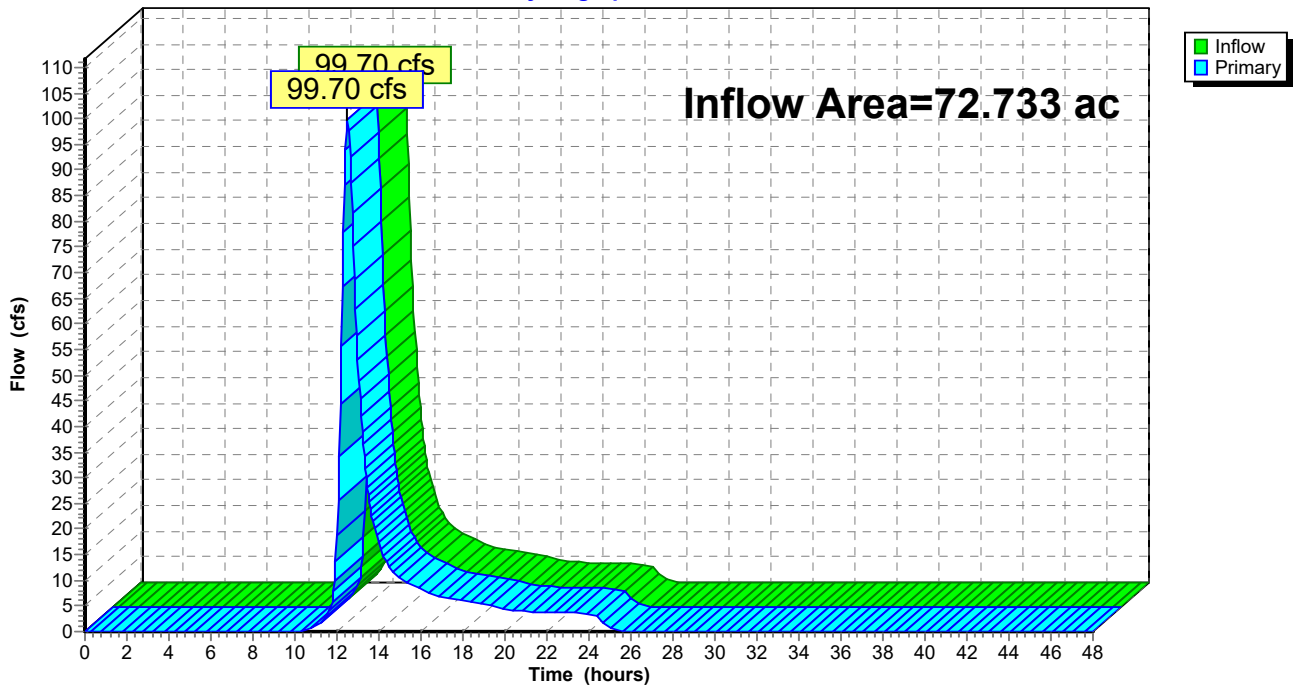
### Summary for Link SP14:

Inflow Area = 72.733 ac, 0.42% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af  
Primary = 99.70 cfs @ 12.51 hrs, Volume= 14.066 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP14:

Hydrograph



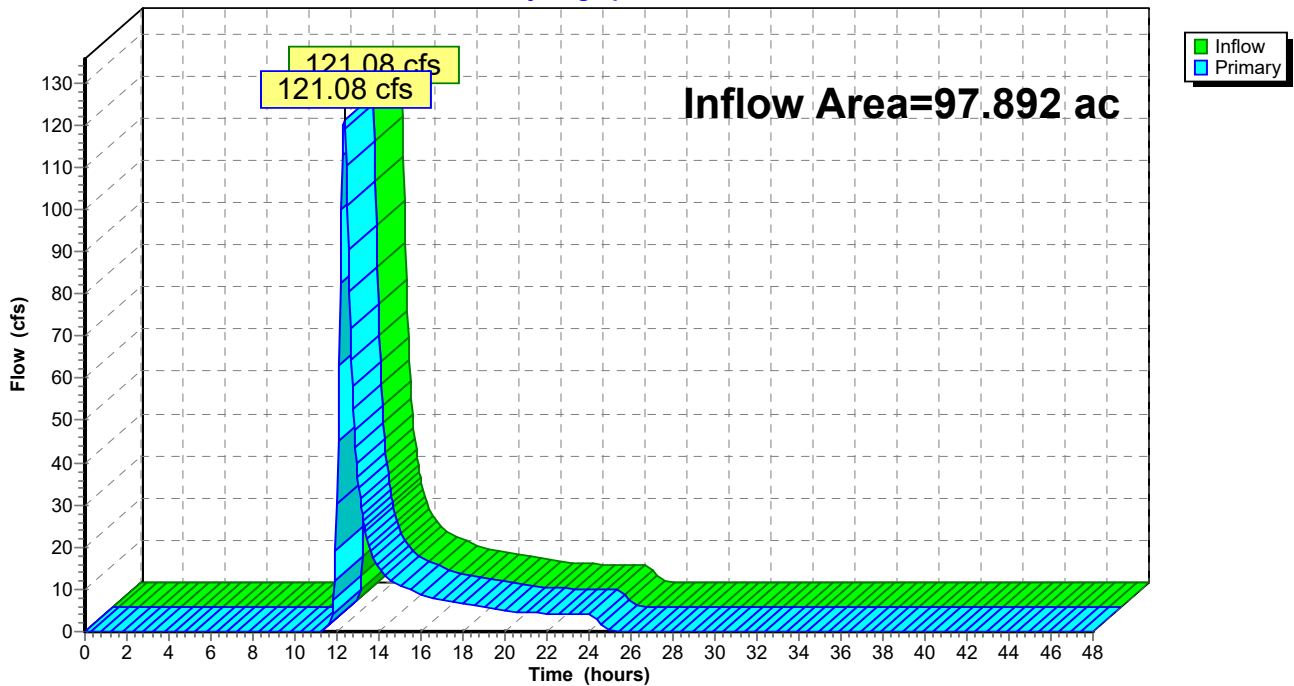
Summary for Link SP17:

Inflow Area = 97.892 ac, 1.18% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af  
Primary = 121.08 cfs @ 12.34 hrs, Volume= 14.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP17:

Hydrograph



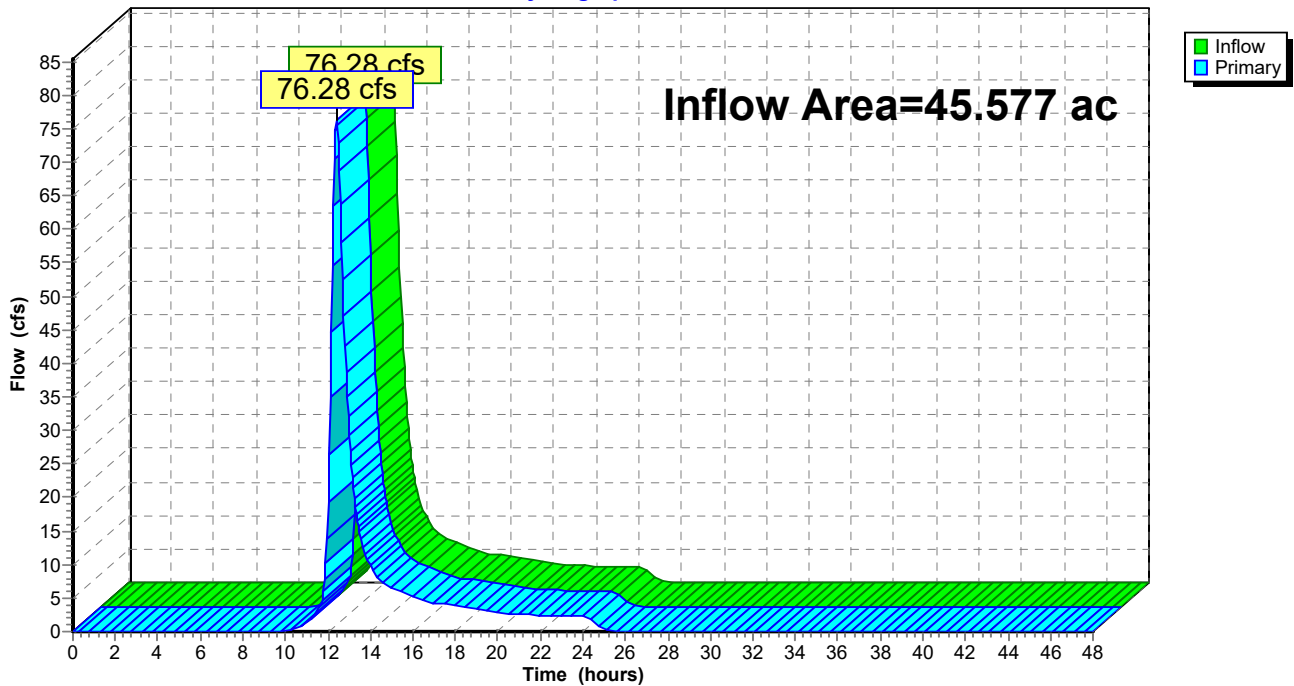
### Summary for Link SP18:

Inflow Area = 45.577 ac, 0.74% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af  
Primary = 76.28 cfs @ 12.41 hrs, Volume= 9.479 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP18:

Hydrograph





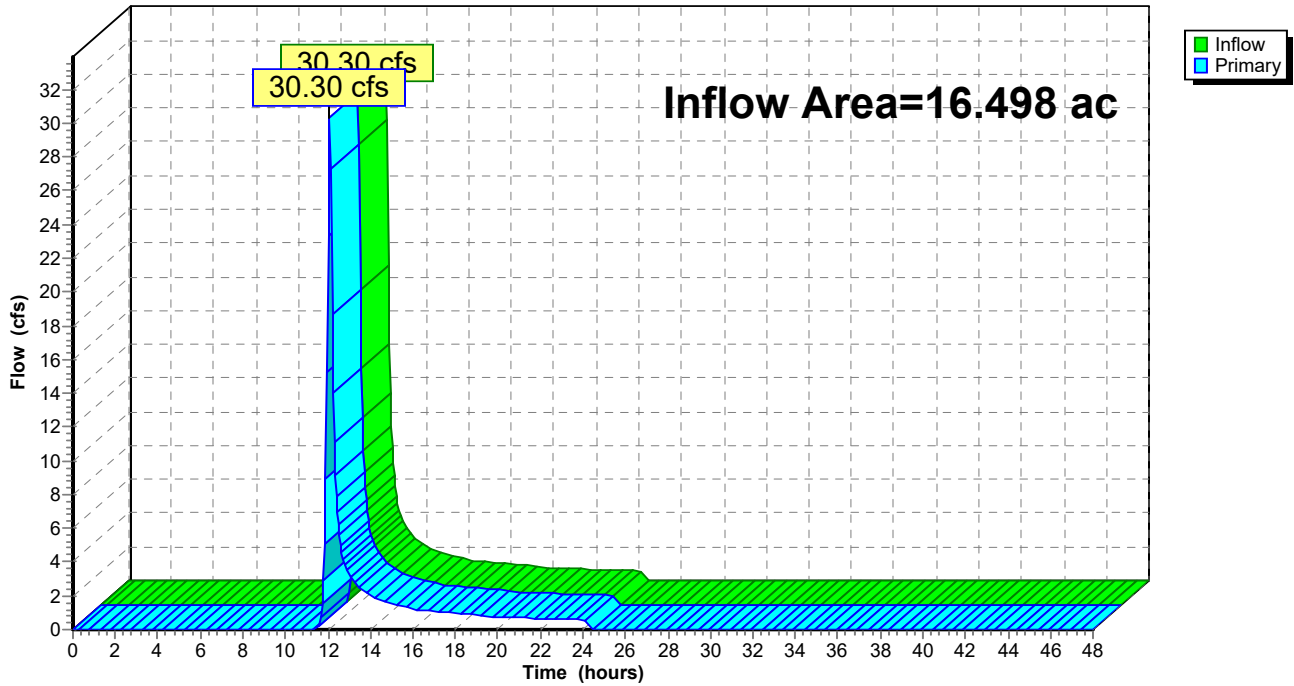
Summary for Link SP2:

Inflow Area = 16.498 ac, 0.00% Impervious, Inflow Depth = 1.51" for 100-year event  
Inflow = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af  
Primary = 30.30 cfs @ 12.08 hrs, Volume= 2.074 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP2:

Hydrograph



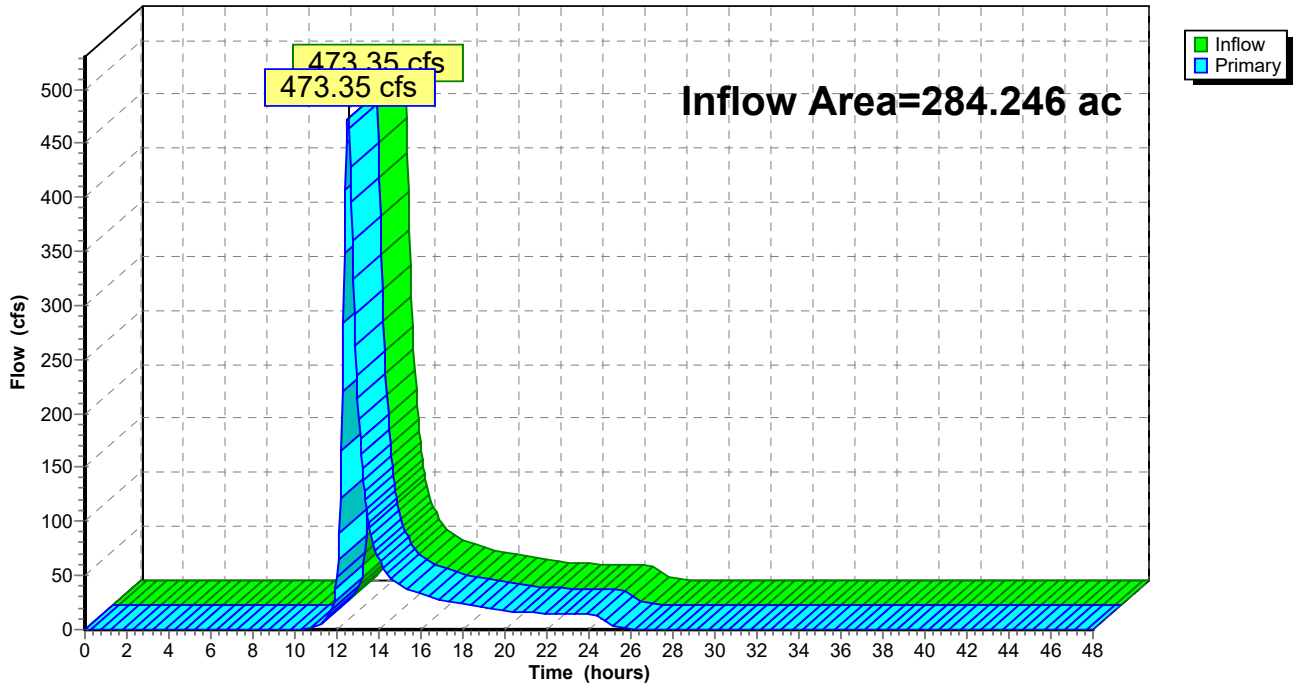
### Summary for Link SP22:

Inflow Area = 284.246 ac, 1.82% Impervious, Inflow Depth = 2.38" for 100-year event  
Inflow = 473.35 cfs @ 12.53 hrs, Volume= 56.478 af  
Primary = 473.35 cfs @ 12.53 hrs, Volume= 56.478 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP22:

Hydrograph



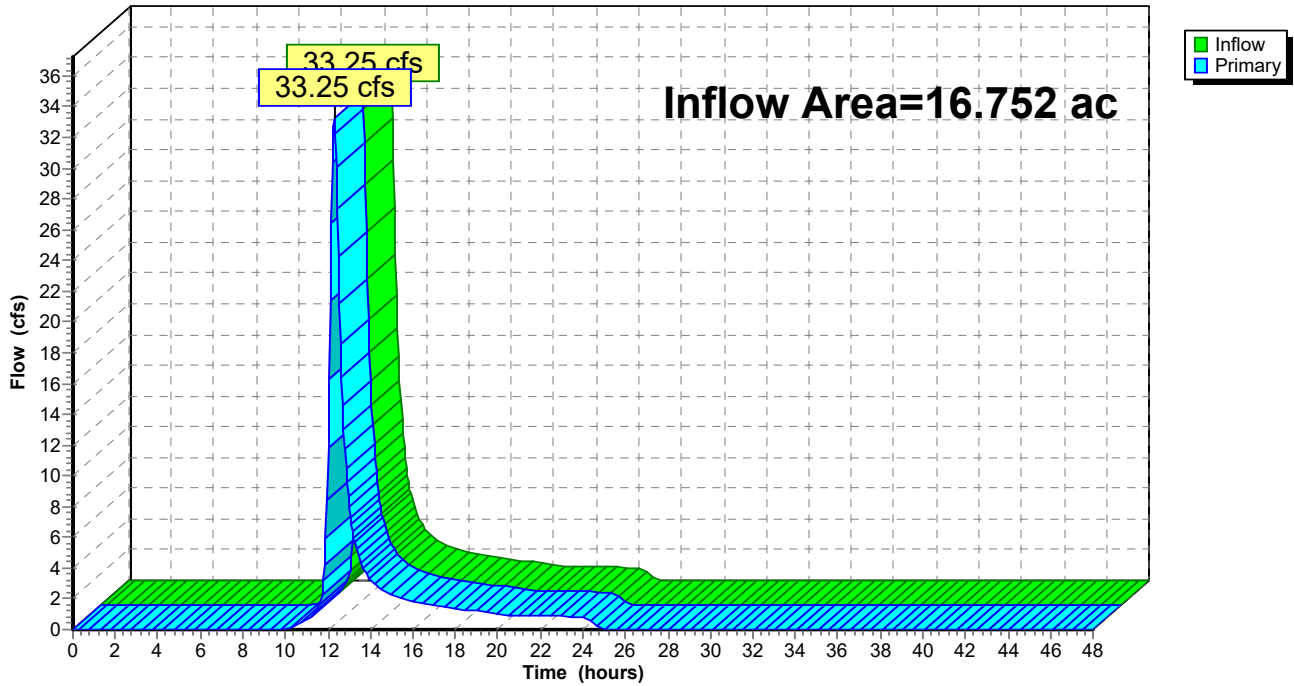
### Summary for Link SP23:

Inflow Area = 16.752 ac, 2.31% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af  
Primary = 33.25 cfs @ 12.29 hrs, Volume= 3.484 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP23:

Hydrograph



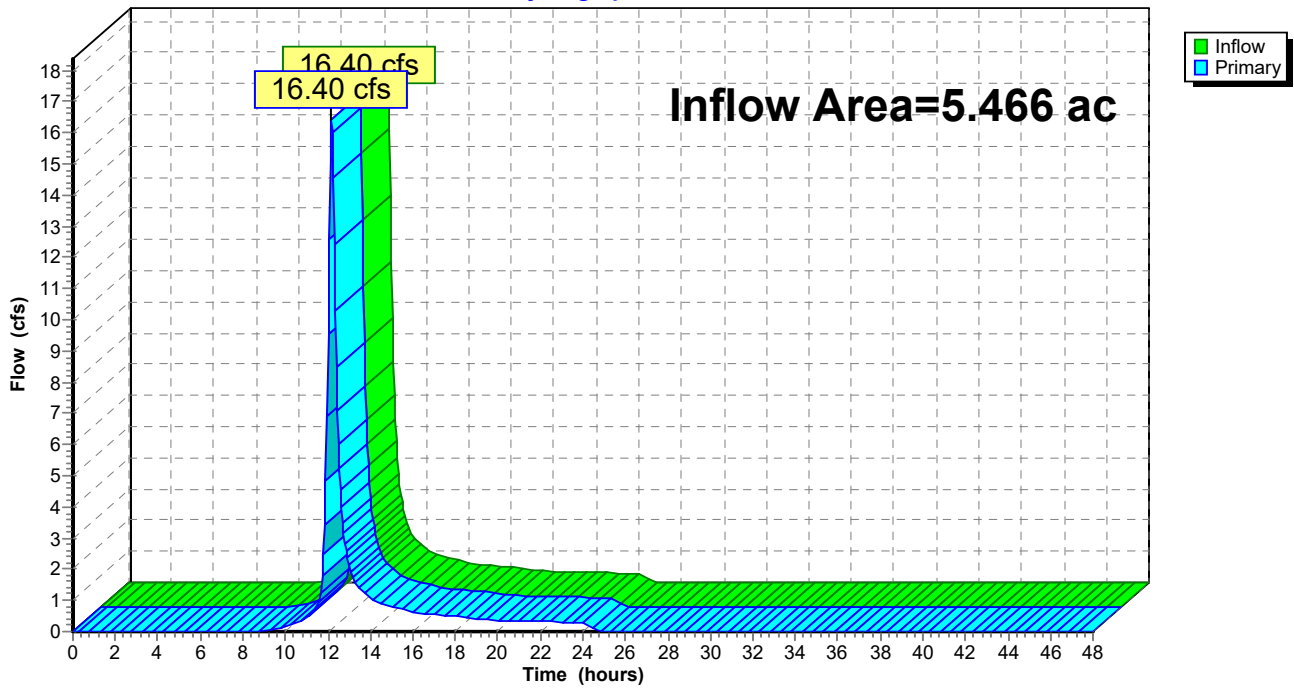
### Summary for Link SP24:

Inflow Area = 5.466 ac, 7.70% Impervious, Inflow Depth = 2.95" for 100-year event  
Inflow = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af  
Primary = 16.40 cfs @ 12.16 hrs, Volume= 1.344 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP24:

Hydrograph



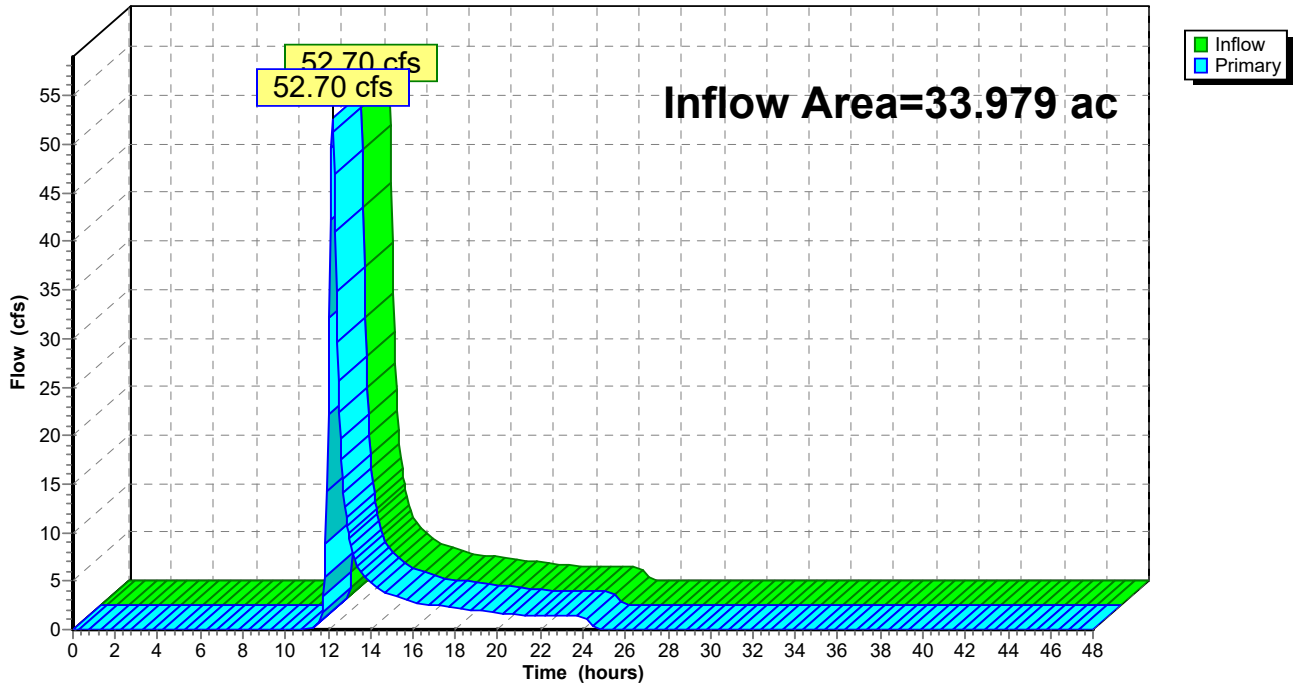
Summary for Link SP3:

Inflow Area = 33.979 ac, 0.00% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af  
Primary = 52.70 cfs @ 12.21 hrs, Volume= 4.930 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP3:

Hydrograph



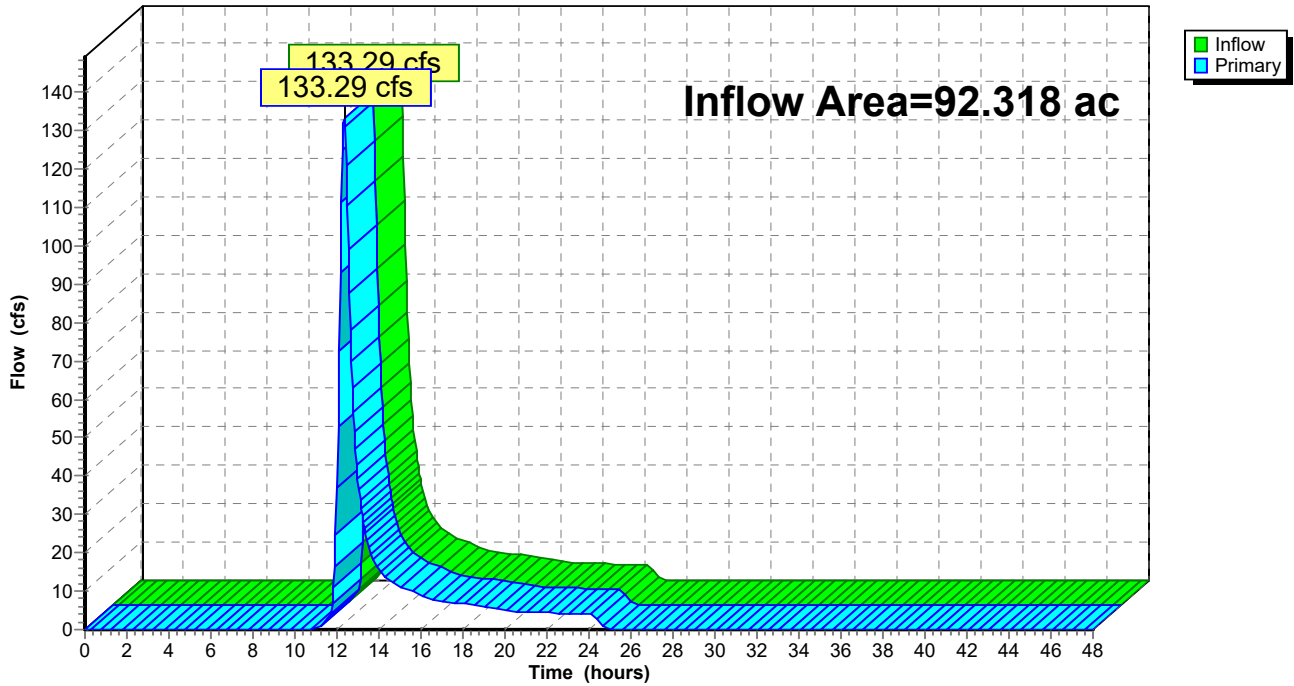
### Summary for Link SP4:

Inflow Area = 92.318 ac, 0.28% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af  
Primary = 133.29 cfs @ 12.33 hrs, Volume= 15.256 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP4:

Hydrograph





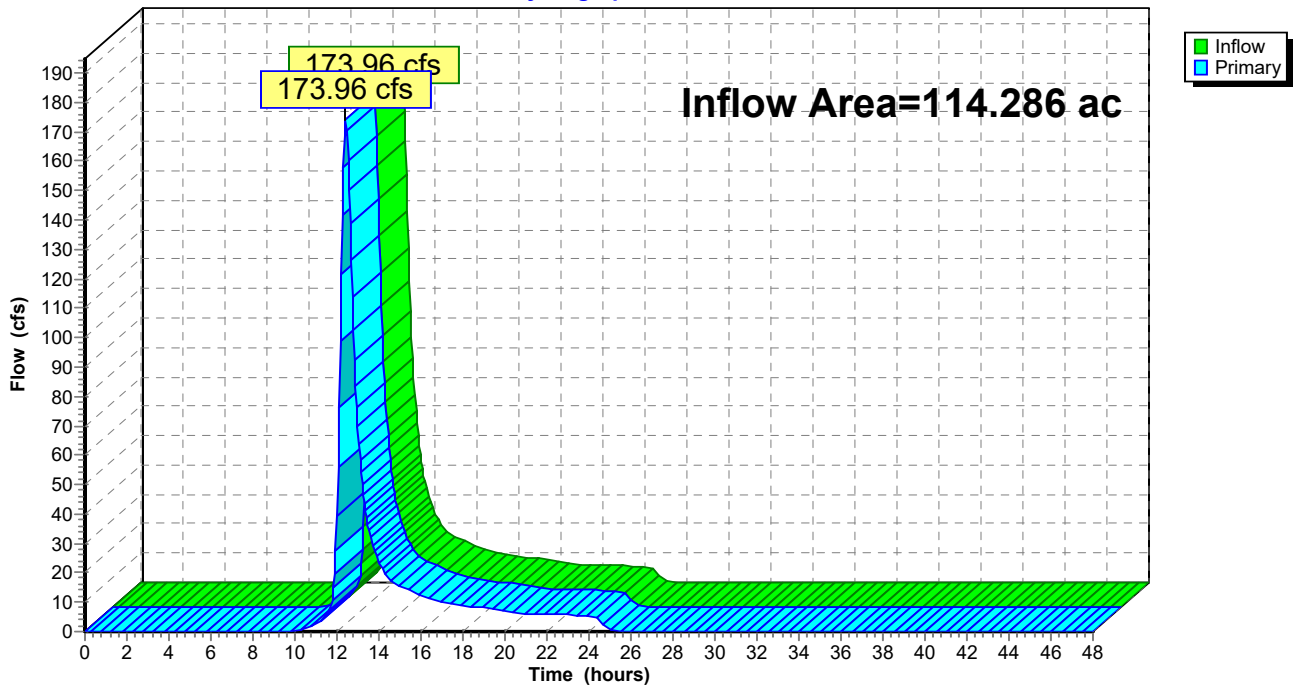
### Summary for Link SP43:

Inflow Area = 114.286 ac, 0.71% Impervious, Inflow Depth = 2.31" for 100-year event  
Inflow = 173.96 cfs @ 12.42 hrs, Volume= 22.009 af  
Primary = 173.96 cfs @ 12.42 hrs, Volume= 22.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP43:

Hydrograph



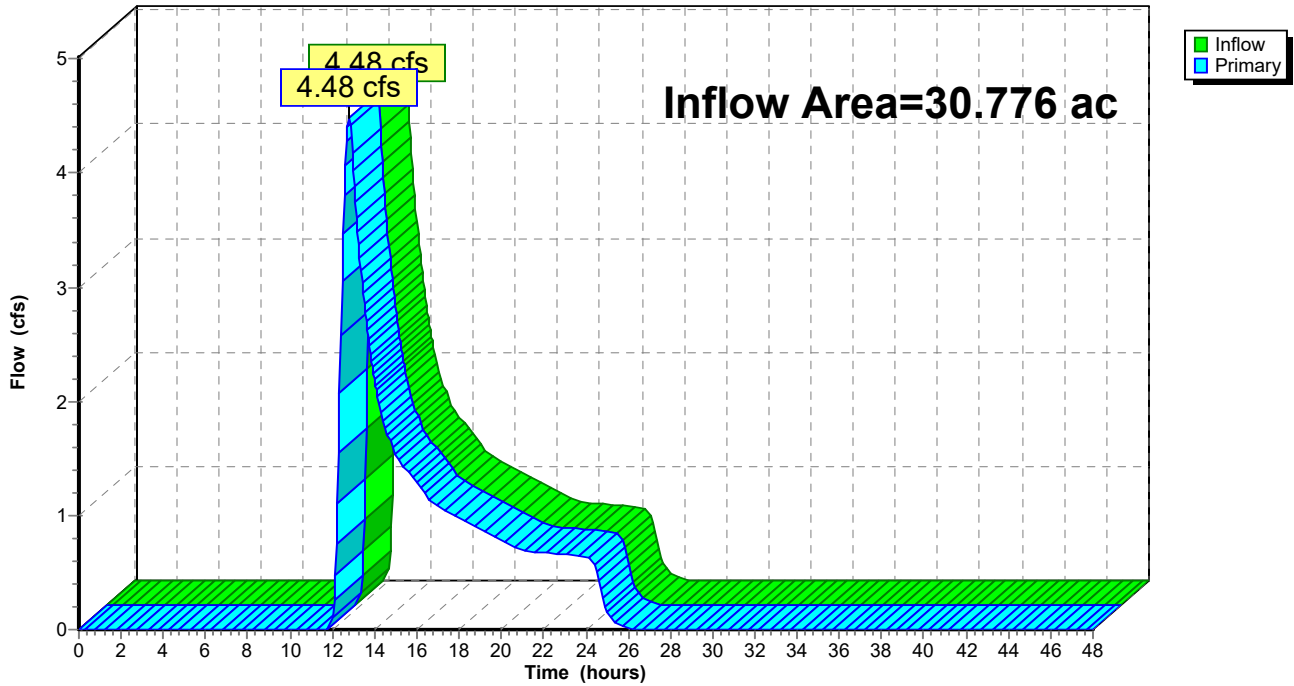
### Summary for Link SP46:

Inflow Area = 30.776 ac, 3.93% Impervious, Inflow Depth = 0.52" for 100-year event  
Inflow = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af  
Primary = 4.48 cfs @ 12.79 hrs, Volume= 1.338 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP46:

Hydrograph



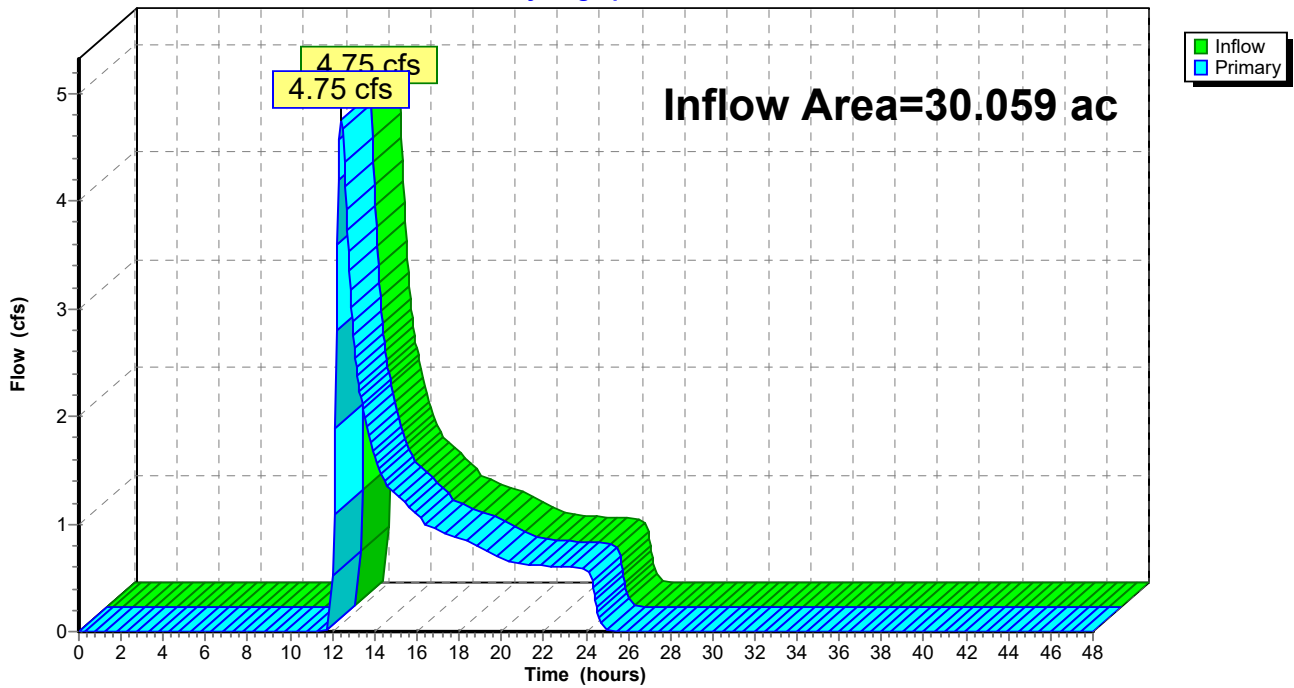
### Summary for Link SP47:

Inflow Area = 30.059 ac, 1.26% Impervious, Inflow Depth = 0.47" for 100-year event  
Inflow = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af  
Primary = 4.75 cfs @ 12.43 hrs, Volume= 1.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP47:

Hydrograph



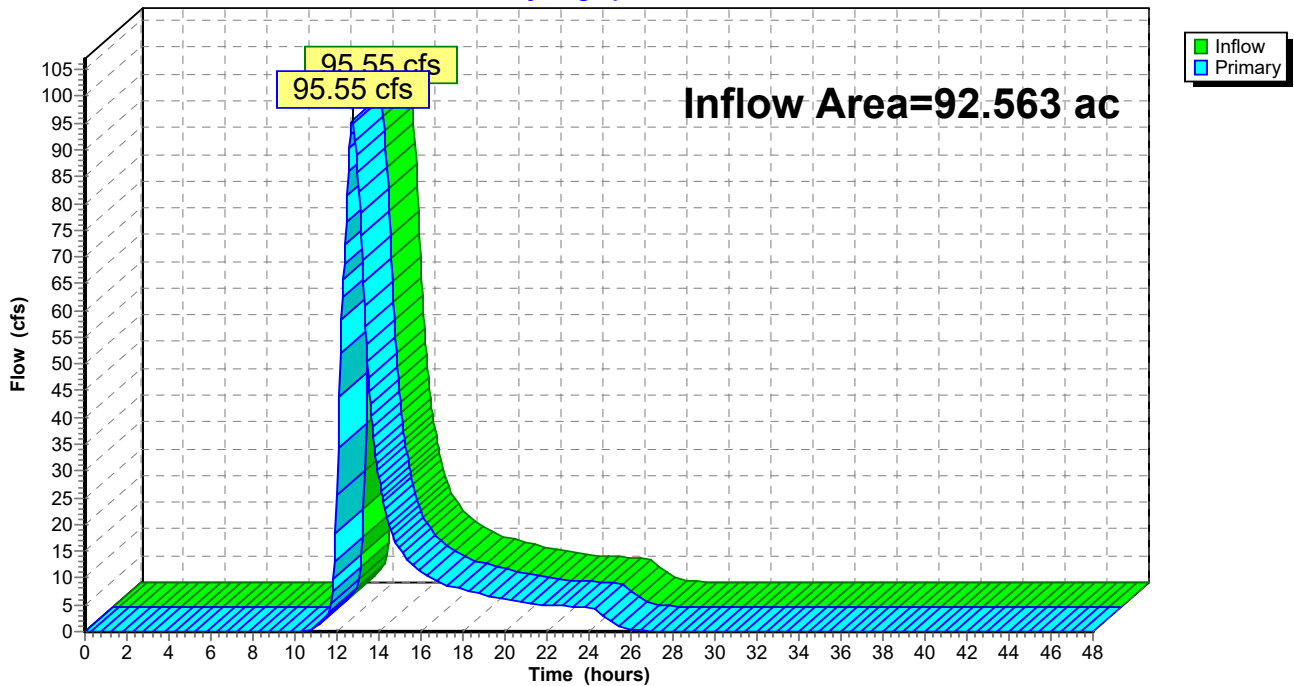
### Summary for Link SP5:

Inflow Area = 92.563 ac, 0.00% Impervious, Inflow Depth = 2.39" for 100-year event  
Inflow = 95.55 cfs @ 12.75 hrs, Volume= 18.398 af  
Primary = 95.55 cfs @ 12.75 hrs, Volume= 18.398 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP5:

Hydrograph



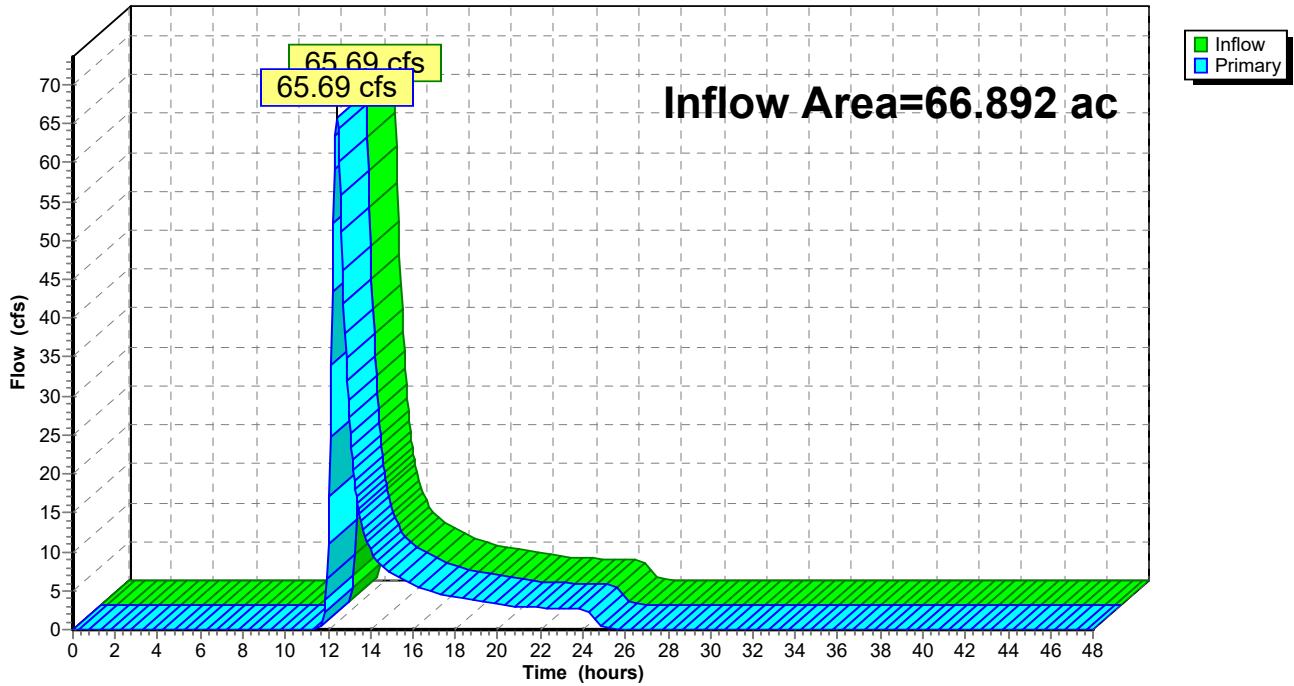
### Summary for Link SP7:

Inflow Area = 66.892 ac, 0.00% Impervious, Inflow Depth = 1.58" for 100-year event  
Inflow = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af  
Primary = 65.69 cfs @ 12.42 hrs, Volume= 8.835 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP7:

Hydrograph



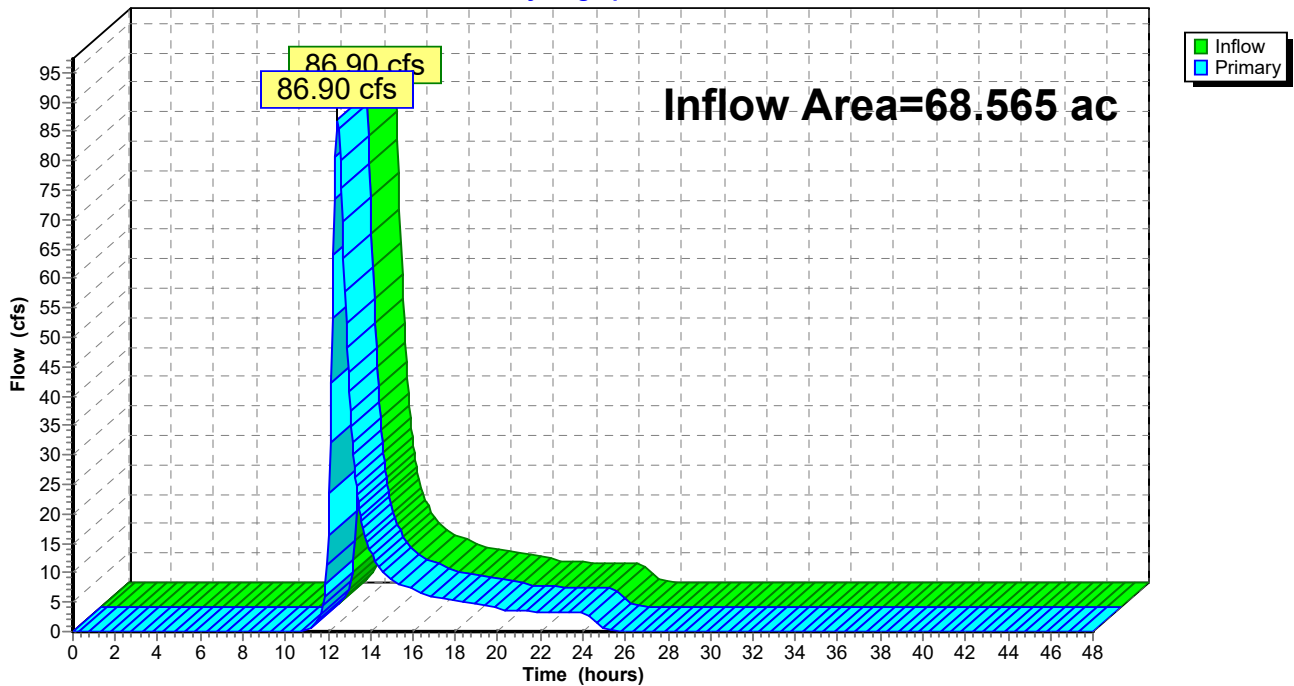
Summary for Link SP9:

Inflow Area = 68.565 ac, 1.11% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af  
Primary = 86.90 cfs @ 12.47 hrs, Volume= 11.804 af, Atten= 0%, Lag= 0.0 min

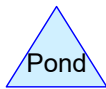
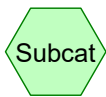
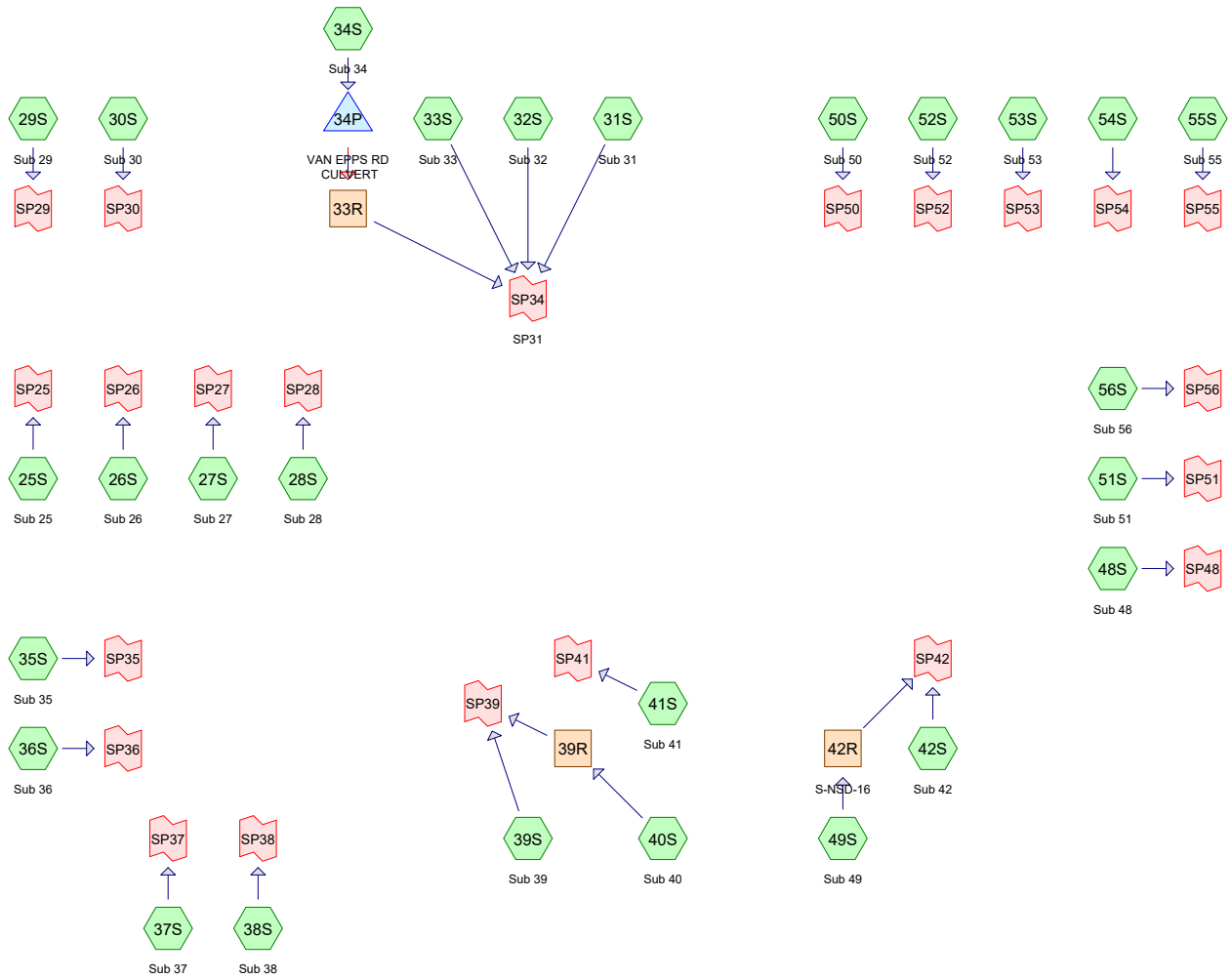
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP9:

Hydrograph







**Routing Diagram for Mill Pt Pre 2**  
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### Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type    | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|---------------|-------|---------|------------------|-----|----------------|-----|
| 1      | 1-year     | Type II 24-hr |       | Default | 24.00            | 1   | 2.17           | 2   |
| 2      | 10-year    | Type II 24-hr |       | Default | 24.00            | 1   | 3.50           | 2   |
| 3      | 100-year   | Type II 24-hr |       | Default | 24.00            | 1   | 5.72           | 2   |

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### Area Listing (all nodes)

| Area<br>(acres)  | CN        | Description<br>(subcatchment-numbers)   |
|------------------|-----------|---|
| 26.016           | 61        | >75% Grass cover, Good, HSG B (26S, 28S, 30S, 33S, 34S, 35S, 38S, 39S, 40S, 48S, 49S, 51S, 54S)   |
| 18.652           | 74        | >75% Grass cover, Good, HSG C (25S, 26S, 28S, 30S, 34S, 35S, 39S, 48S, 49S, 51S, 54S)   |
| 2.068            | 80        | >75% Grass cover, Good, HSG D (25S, 48S)  |
| 13.524           | 48        | Brush, Good, HSG B (25S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)                                      |
| 20.478           | 65        | Brush, Good, HSG C (30S, 32S, 35S, 36S, 38S, 39S, 40S, 42S, 48S, 49S, 50S, 51S, 53S, 54S, 55S, 56S)   |
| 3.868            | 73        | Brush, Good, HSG D (25S, 39S, 48S, 50S, 51S, 52S)   |
| 0.927            | 96        | Gravel surface (26S, 27S, 28S, 29S, 30S, 33S, 48S)  |
| 2.487            | 96        | Gravel surface, HSG D (34S, 36S, 38S, 39S, 40S, 49S)  |
| 1.693            | 98        | Imperviopus surface (48S)   |
| 0.606            | 98        | Impervious (37S)  |
| 3.198            | 98        | Impervious surface (25S, 26S, 27S, 29S, 30S, 33S, 51S)  |
| 0.114            | 98        | Impervoius surface (28S)  |
| 0.098            | 30        | Meadow, non-grazed, HSG A (30S)   |
| 410.172          | 58        | Meadow, non-grazed, HSG B (25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S) |
| 424.994          | 71        | Meadow, non-grazed, HSG C (25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)      |
| 38.790           | 78        | Meadow, non-grazed, HSG D (25S, 26S, 27S, 33S, 39S, 40S, 41S, 48S, 50S, 51S, 52S)   |
| 3.749            | 98        | Surface water (27S, 32S, 48S)   |
| 7.259            | 98        | Unconnected roofs, HSG D (34S, 35S, 36S, 38S, 39S, 40S, 41S, 49S, 50S, 54S, 55S)  |
| 9.815            | 98        | Water Surface, HSG D (36S, 39S, 40S, 41S, 42S, 49S, 50S, 52S, 53S, 54S)   |
| 4.198            | 30        | Woods, Good, HSG A (30S, 38S)   |
| 152.793          | 55        | Woods, Good, HSG B (30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 54S, 55S, 56S)                                      |
| 34.558           | 70        | Woods, Good, HSG C (30S, 31S, 33S, 35S, 36S, 39S, 40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S)   |
| 4.456            | 77        | Woods, Good, HSG D (39S, 41S, 48S, 49S, 50S, 51S, 52S)  |
| <b>1,184.513</b> | <b>65</b> | <b>TOTAL AREA</b>   |

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### Soil Listing (all nodes)

| Area<br>(acres)  | Soil<br>Group | Subcatchment<br>Numbers  |
|------------------|---------------|--|
| 4.296            | HSG A         | 30S, 38S   |
| 602.505          | HSG B         | 25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 37S, 38S, 39S,<br>40S, 41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S |
| 498.682          | HSG C         | 25S, 26S, 27S, 28S, 29S, 30S, 31S, 32S, 33S, 34S, 35S, 36S, 38S, 39S, 40S,<br>41S, 42S, 48S, 49S, 50S, 51S, 52S, 53S, 54S, 55S, 56S      |
| 68.743           | HSG D         | 25S, 26S, 27S, 33S, 34S, 35S, 36S, 38S, 39S, 40S, 41S, 42S, 48S, 49S, 50S,<br>51S, 52S, 53S, 54S, 55S                                    |
| 10.287           | Other         | 25S, 26S, 27S, 28S, 29S, 30S, 32S, 33S, 37S, 48S, 51S  |
| <b>1,184.513</b> |               | <b>TOTAL AREA</b>  |

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |   |
|---------------------------------|---|
| <b>Subcatchment 25S: Sub 25</b> | Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=0.37"<br>Flow Length=1,103' Tc=22.2 min CN=72 Runoff=5.45 cfs 0.589 af  |
| <b>Subcatchment 26S: Sub 26</b> | Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=0.18"<br>Flow Length=1,324' Tc=18.0 min CN=65 Runoff=1.36 cfs 0.229 af  |
| <b>Subcatchment 27S: Sub 27</b> | Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=0.21"<br>Flow Length=1,602' Tc=17.8 min CN=66 Runoff=2.68 cfs 0.392 af  |
| <b>Subcatchment 28S: Sub 28</b> | Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=0.18"<br>Flow Length=1,727' Tc=27.4 min CN=65 Runoff=1.51 cfs 0.329 af  |
| <b>Subcatchment 29S: Sub 29</b> | Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=0.13"<br>Flow Length=1,648' Tc=26.3 min CN=62 Runoff=0.59 cfs 0.202 af  |
| <b>Subcatchment 30S: Sub 30</b> | Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=0.16"<br>Flow Length=2,217' Tc=29.3 min CN=64 Runoff=1.90 cfs 0.494 af  |
| <b>Subcatchment 31S: Sub 31</b> | Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=0.11"<br>Flow Length=2,409' Tc=31.8 min CN=61 Runoff=0.53 cfs 0.230 af  |
| <b>Subcatchment 32S: Sub 32</b> | Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=0.11"<br>Flow Length=3,284' Tc=36.1 min CN=61 Runoff=0.91 cfs 0.408 af  |
| <b>Subcatchment 33S: Sub 33</b> | Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=0.08"<br>Flow Length=1,749' Tc=22.2 min CN=59 Runoff=1.03 cfs 0.599 af  |
| <b>Subcatchment 34S: Sub 34</b> | Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=0.13"<br>Flow Length=1,344' Tc=23.4 min CN=62 Runoff=0.82 cfs 0.271 af  |
| <b>Subcatchment 35S: Sub 35</b> | Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=0.18"<br>Flow Length=3,022' Tc=38.7 min CN=65 Runoff=3.19 cfs 0.842 af  |
| <b>Subcatchment 36S: Sub 36</b> | Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=0.14"<br>Flow Length=1,996' Tc=23.3 min CN=63 Runoff=2.07 cfs 0.560 af  |
| <b>Subcatchment 37S: Sub 37</b> | Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=0.09"<br>Flow Length=1,926' Tc=33.1 min CN=60 Runoff=0.16 cfs 0.081 af  |
| <b>Subcatchment 38S: Sub 38</b> | Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=0.16"<br>Flow Length=3,404' Tc=47.6 min CN=64 Runoff=2.95 cfs 0.973 af  |
| <b>Subcatchment 39S: Sub 39</b> | Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=0.13"<br>Flow Length=2,852' Tc=30.0 min CN=62 Runoff=3.35 cfs 1.203 af |
| <b>Subcatchment 40S: Sub 40</b> | Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=0.28"<br>Flow Length=1,917' Tc=28.9 min CN=69 Runoff=3.15 cfs 0.488 af  |

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|                                      |   |
|--------------------------------------|---|
| <b>Subcatchment41S: Sub 41</b>       | Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=0.14"<br>Flow Length=2,626' Tc=33.1 min CN=63 Runoff=2.29 cfs 0.723 af                      |
| <b>Subcatchment42S: Sub 42</b>       | Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=0.13"<br>Flow Length=890' Tc=21.1 min CN=62 Runoff=1.62 cfs 0.514 af                        |
| <b>Subcatchment48S: Sub 48</b>       | Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=0.37"<br>Flow Length=4,007' Tc=38.1 min CN=72 Runoff=15.16 cfs 2.406 af                     |
| <b>Subcatchment49S: Sub 49</b>       | Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=0.16"<br>Flow Length=2,999' Tc=38.0 min CN=64 Runoff=1.56 cfs 0.459 af                      |
| <b>Subcatchment50S: Sub 50</b>       | Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=0.25"<br>Flow Length=2,533' Tc=29.4 min CN=68 Runoff=5.73 cfs 0.970 af                      |
| <b>Subcatchment51S: Sub 51</b>       | Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=0.16"<br>Flow Length=2,611' Tc=36.7 min CN=64 Runoff=4.89 cfs 1.415 af                     |
| <b>Subcatchment52S: Sub 52</b>       | Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=0.28"<br>Flow Length=1,182' Tc=22.0 min CN=69 Runoff=2.70 cfs 0.346 af                      |
| <b>Subcatchment53S: Sub 53</b>       | Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=0.23"<br>Flow Length=2,555' Tc=37.9 min CN=67 Runoff=1.89 cfs 0.410 af                      |
| <b>Subcatchment54S:</b>              | Runoff Area=47.810 ac 7.82% Impervious Runoff Depth=0.28"<br>Flow Length=3,546' Tc=37.3 min UI Adjusted CN=69 Runoff=6.04 cfs 1.117 af          |
| <b>Subcatchment55S: Sub 55</b>       | Runoff Area=27.116 ac 0.71% Impervious Runoff Depth=0.21"<br>Flow Length=2,284' Tc=32.1 min CN=66 Runoff=2.18 cfs 0.467 af                      |
| <b>Subcatchment56S: Sub 56</b>       | Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=0.23"<br>Flow Length=2,363' Tc=30.5 min CN=67 Runoff=6.36 cfs 1.202 af                      |
| <b>Reach 33R:</b>                    | Avg. Flow Depth=0.26' Max Vel=1.11 fps Inflow=0.82 cfs 0.271 af<br>n=0.100 L=1,875.0' S=0.0597 '/' Capacity=10.60 cfs Outflow=0.58 cfs 0.271 af |
| <b>Reach 39R:</b>                    | Avg. Flow Depth=0.40' Max Vel=1.91 fps Inflow=3.15 cfs 0.488 af<br>n=0.100 L=1,110.0' S=0.0991 '/' Capacity=86.68 cfs Outflow=2.69 cfs 0.488 af |
| <b>Reach 42R: S-NSD-16</b>           | Avg. Flow Depth=0.34' Max Vel=1.27 fps Inflow=1.56 cfs 0.459 af<br>n=0.100 L=1,790.0' S=0.0531 '/' Capacity=51.95 cfs Outflow=1.21 cfs 0.459 af |
| <b>Pond 34P: VAN EPPS RD CULVERT</b> | Peak Elev=580.48' Storage=12 cf Inflow=0.82 cfs 0.271 af<br>Primary=0.82 cfs 0.271 af Secondary=0.00 cfs 0.000 af Outflow=0.82 cfs 0.271 af     |
| <b>Link SP25:</b>                    | Inflow=5.45 cfs 0.589 af<br>Primary=5.45 cfs 0.589 af   |
| <b>Link SP26:</b>                    | Inflow=1.36 cfs 0.229 af<br>Primary=1.36 cfs 0.229 af   |
| <b>Link SP27:</b>                    | Inflow=2.68 cfs 0.392 af<br>Primary=2.68 cfs 0.392 af   |



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|                        |   |
|------------------------|---|
| <b>Link SP28:</b>      | Inflow=1.51 cfs 0.329 af<br>Primary=1.51 cfs 0.329 af   |
| <b>Link SP29:</b>      | Inflow=0.59 cfs 0.202 af<br>Primary=0.59 cfs 0.202 af   |
| <b>Link SP30:</b>      | Inflow=1.90 cfs 0.494 af<br>Primary=1.90 cfs 0.494 af   |
| <b>Link SP34: SP31</b> | Inflow=2.78 cfs 1.508 af<br>Primary=2.78 cfs 1.508 af   |
| <b>Link SP35:</b>      | Inflow=3.19 cfs 0.842 af<br>Primary=3.19 cfs 0.842 af   |
| <b>Link SP36:</b>      | Inflow=2.07 cfs 0.560 af<br>Primary=2.07 cfs 0.560 af   |
| <b>Link SP37:</b>      | Inflow=0.16 cfs 0.081 af<br>Primary=0.16 cfs 0.081 af   |
| <b>Link SP38:</b>      | Inflow=2.95 cfs 0.973 af<br>Primary=2.95 cfs 0.973 af   |
| <b>Link SP39:</b>      | Inflow=5.95 cfs 1.691 af<br>Primary=5.95 cfs 1.691 af   |
| <b>Link SP41:</b>      | Inflow=2.29 cfs 0.723 af<br>Primary=2.29 cfs 0.723 af   |
| <b>Link SP42:</b>      | Inflow=2.10 cfs 0.974 af<br>Primary=2.10 cfs 0.974 af   |
| <b>Link SP48:</b>      | Inflow=15.16 cfs 2.406 af<br>Primary=15.16 cfs 2.406 af |
| <b>Link SP50:</b>      | Inflow=5.73 cfs 0.970 af<br>Primary=5.73 cfs 0.970 af   |
| <b>Link SP51:</b>      | Inflow=4.89 cfs 1.415 af<br>Primary=4.89 cfs 1.415 af   |
| <b>Link SP52:</b>      | Inflow=2.70 cfs 0.346 af<br>Primary=2.70 cfs 0.346 af   |
| <b>Link SP53:</b>      | Inflow=1.89 cfs 0.410 af<br>Primary=1.89 cfs 0.410 af   |
| <b>Link SP54:</b>      | Inflow=6.04 cfs 1.117 af<br>Primary=6.04 cfs 1.117 af   |

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**Link SP55:**

Inflow=2.18 cfs 0.467 af  
Primary=2.18 cfs 0.467 af

**Link SP56:**

Inflow=6.36 cfs 1.202 af  
Primary=6.36 cfs 1.202 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 17.921 af   Average Runoff Depth = 0.18"**  
**97.77% Pervious = 1,158.079 ac   2.23% Impervious = 26.434 ac**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 25S: Sub 25**

Runoff = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af, Depth= 0.37"  
 Routed to Link SP25 :

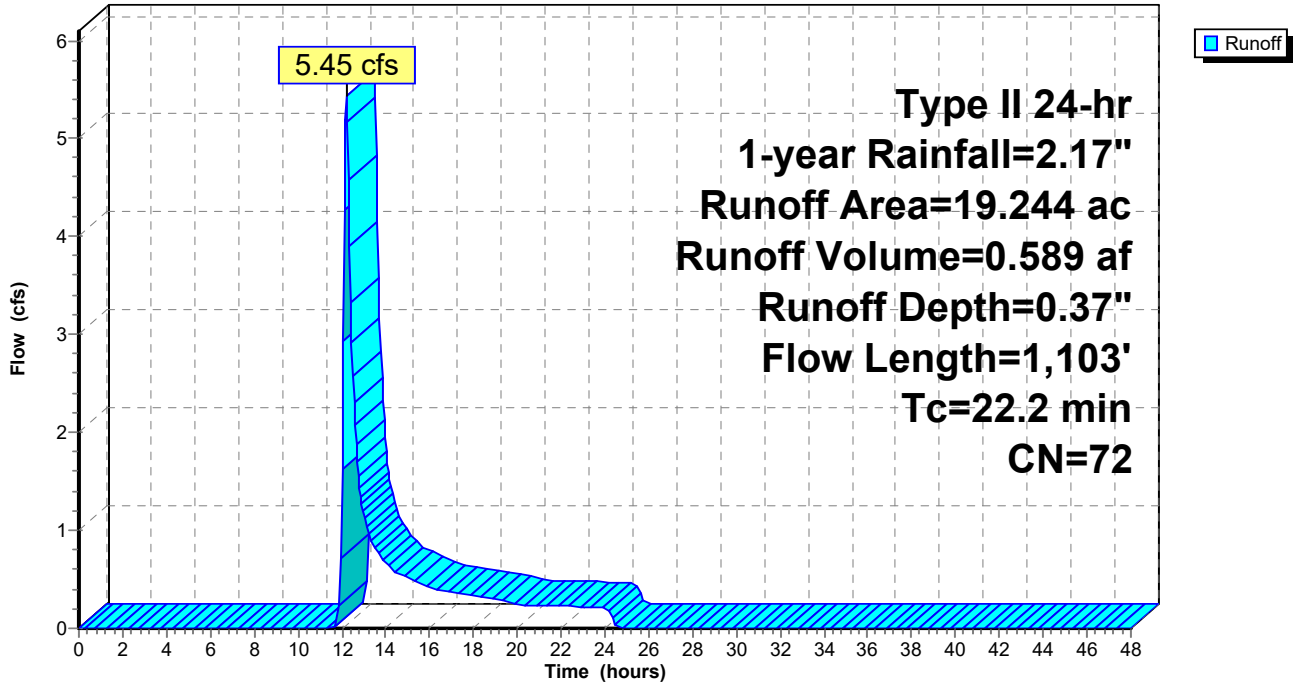
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.100   | 98 | Impervious surface            |
| 0.475     | 74 | >75% Grass cover, Good, HSG C |
| 0.497     | 80 | >75% Grass cover, Good, HSG D |
| 0.785     | 58 | Meadow, non-grazed, HSG B     |
| 13.183    | 71 | Meadow, non-grazed, HSG C     |
| 3.694     | 78 | Meadow, non-grazed, HSG D     |
| 0.050     | 48 | Brush, Good, HSG B            |
| 0.274     | 71 | Meadow, non-grazed, HSG C     |
| 0.186     | 73 | Brush, Good, HSG D            |
| 19.244    | 72 | Weighted Average              |
| 19.144    |    | 99.48% Pervious Area          |
| 0.100     |    | 0.52% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.3     | 717           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 286           |               | 1.77              |                | <b>Direct Entry, CF</b>  |
| 22.2     | 1,103         | Total         |                   |                |  |

Subcatchment 25S: Sub 25

Hydrograph



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**Summary for Subcatchment 26S: Sub 26**

Runoff = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af, Depth= 0.18"  
 Routed to Link SP26 :

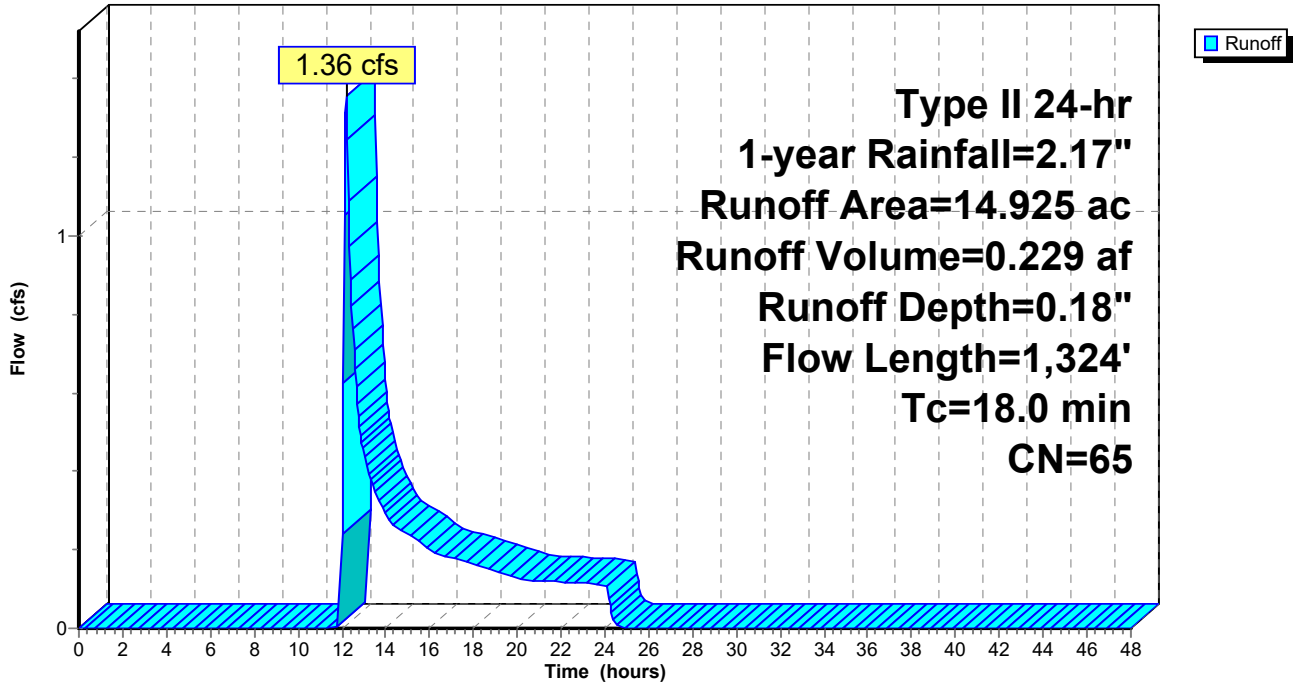
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.672   | 98 | Impervious surface            |
| * 0.189   | 96 | Gravel surface                |
| 3.102     | 61 | >75% Grass cover, Good, HSG B |
| 0.965     | 74 | >75% Grass cover, Good, HSG C |
| 6.796     | 58 | Meadow, non-grazed, HSG B     |
| 3.029     | 71 | Meadow, non-grazed, HSG C     |
| 0.172     | 78 | Meadow, non-grazed, HSG D     |
| 14.925    | 65 | Weighted Average              |
| 14.253    |    | 95.50% Pervious Area          |
| 0.672     |    | 4.50% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.7      | 100           | 0.0280        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.2      | 340           | 0.1340        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 259           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 625           |               | 3.06              |                | <b>Direct Entry, CF</b>  |
| 18.0     | 1,324         | Total         |                   |                |  |

Subcatchment 26S: Sub 26

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 27S: Sub 27**

Runoff = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af, Depth= 0.21"  
 Routed to Link SP27 :

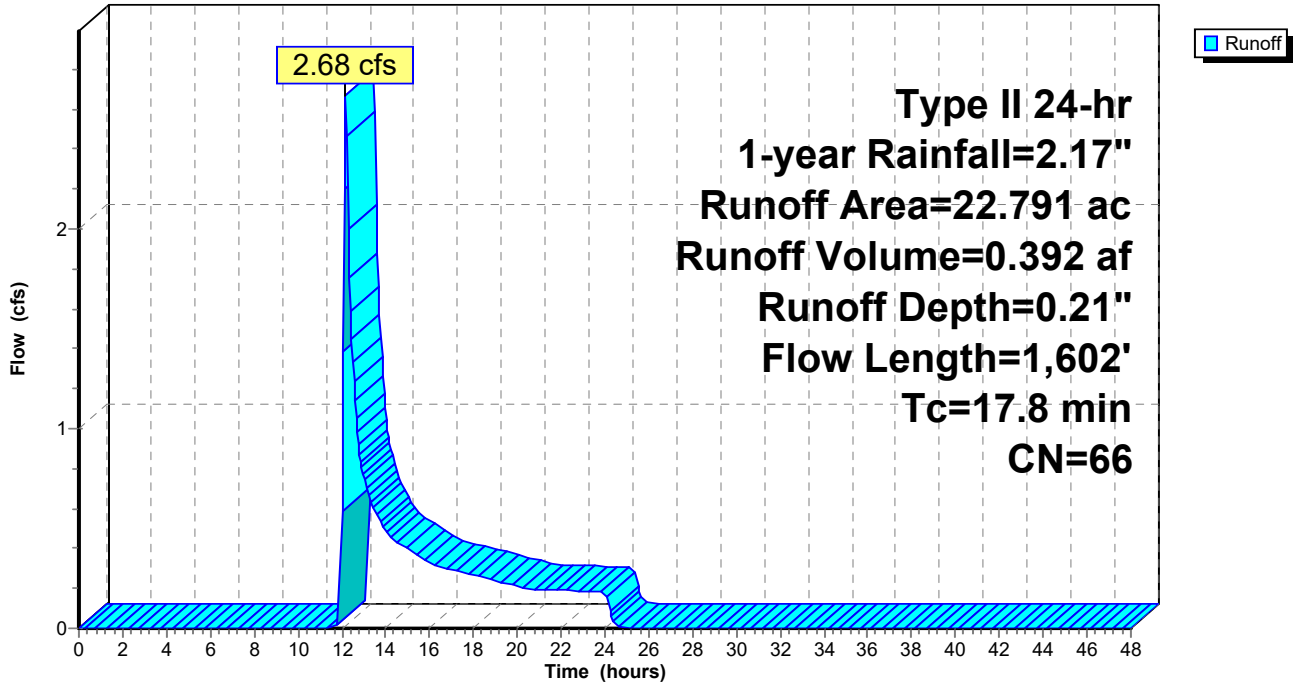
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.381   | 98 | Surface water             |
| * 0.064   | 98 | Impervious surface        |
| * 0.034   | 96 | Gravel surface            |
| 9.647     | 58 | Meadow, non-grazed, HSG B |
| 12.525    | 71 | Meadow, non-grazed, HSG C |
| 0.140     | 78 | Meadow, non-grazed, HSG D |
| 22.791    | 66 | Weighted Average          |
| 22.346    |    | 98.05% Pervious Area      |
| 0.445     |    | 1.95% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.9      | 100           | 0.0650        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.4      | 832           | 0.0720        | 1.88              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.5      | 670           |               | 3.19              |                | <b>Direct Entry, CF</b>  |
| 17.8     | 1,602         | Total         |                   |                |  |

Subcatchment 27S: Sub 27

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 28S: Sub 28**

Runoff = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af, Depth= 0.18"  
 Routed to Link SP28 :

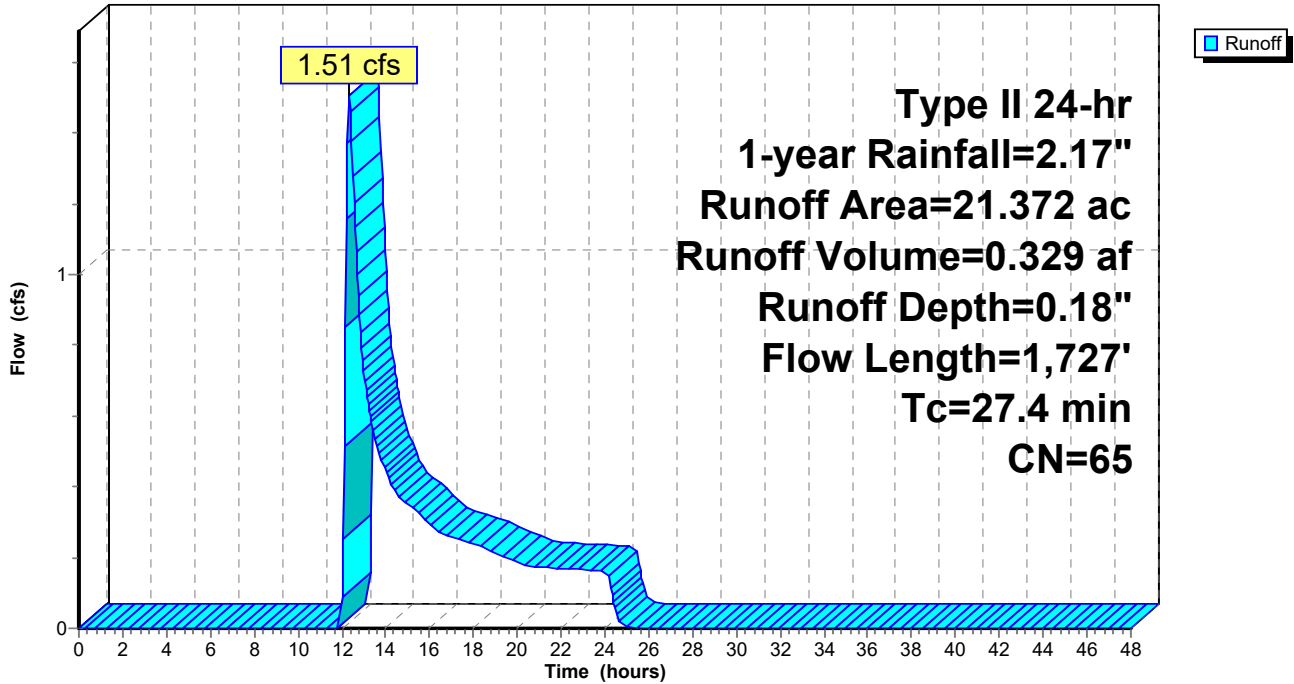
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.114   | 98 | Impervious surface            |
| * 0.018   | 96 | Gravel surface                |
| 1.037     | 61 | >75% Grass cover, Good, HSG B |
| 0.949     | 74 | >75% Grass cover, Good, HSG C |
| 9.049     | 58 | Meadow, non-grazed, HSG B     |
| 10.205    | 71 | Meadow, non-grazed, HSG C     |
| 21.372    | 65 | Weighted Average              |
| 21.258    |    | 99.47% Pervious Area          |
| 0.114     |    | 0.53% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 16.9     | 100           | 0.0070        | 0.10              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 7.4      | 819           | 0.0700        | 1.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.1      | 808           | 0.0420        | 4.36              | 6.53           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 27.4     | 1,727         | Total         |                   |                |   |

Subcatchment 28S: Sub 28

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 29S: Sub 29**

Runoff = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af, Depth= 0.13"  
 Routed to Link SP29 :

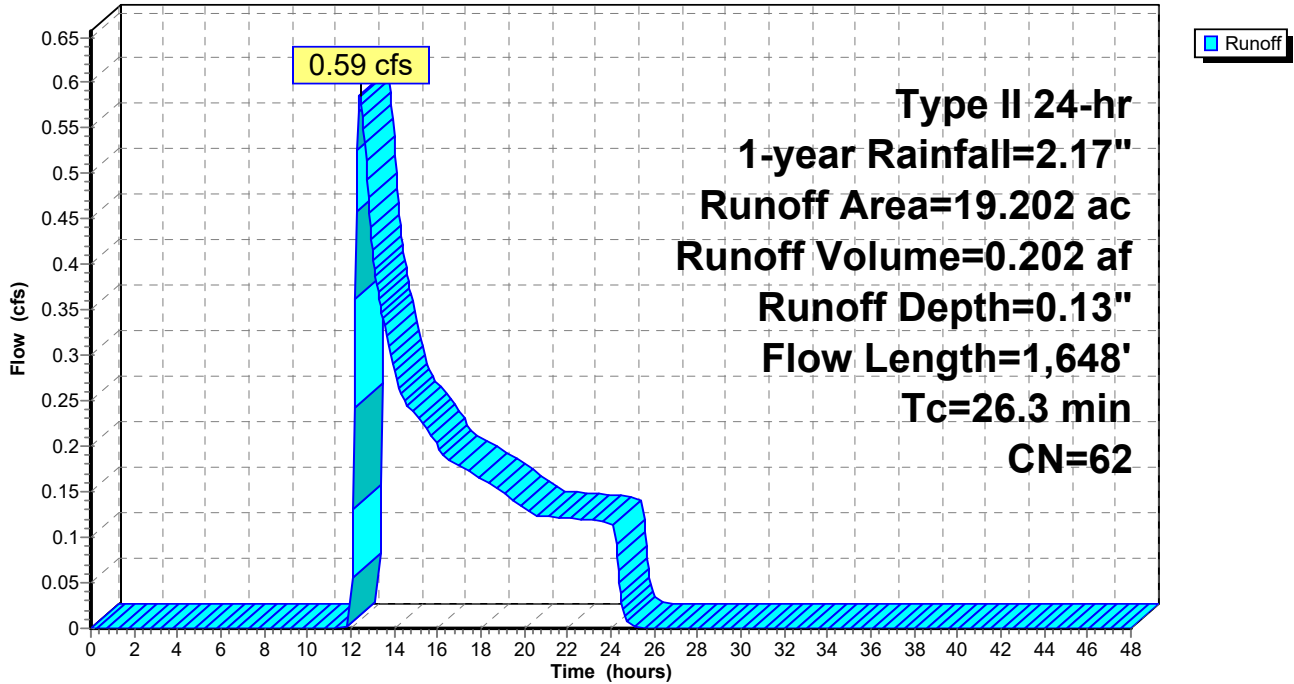
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.233   | 98 | Impervious surface        |
| * 0.063   | 96 | Gravel surface            |
| 13.291    | 58 | Meadow, non-grazed, HSG B |
| 5.615     | 71 | Meadow, non-grazed, HSG C |
| 19.202    | 62 | Weighted Average          |
| 18.969    |    | 98.79% Pervious Area      |
| 0.233     |    | 1.21% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.7      | 100           | 0.0370        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.9      | 661           | 0.0310        | 1.23              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.9      | 806           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.8      | 81            |               | 1.69              |                | <b>Direct Entry, CF</b>  |
| 26.3     | 1,648         | Total         |                   |                |  |

Subcatchment 29S: Sub 29

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 30S: Sub 30**

Runoff = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af, Depth= 0.16"  
 Routed to Link SP30 :

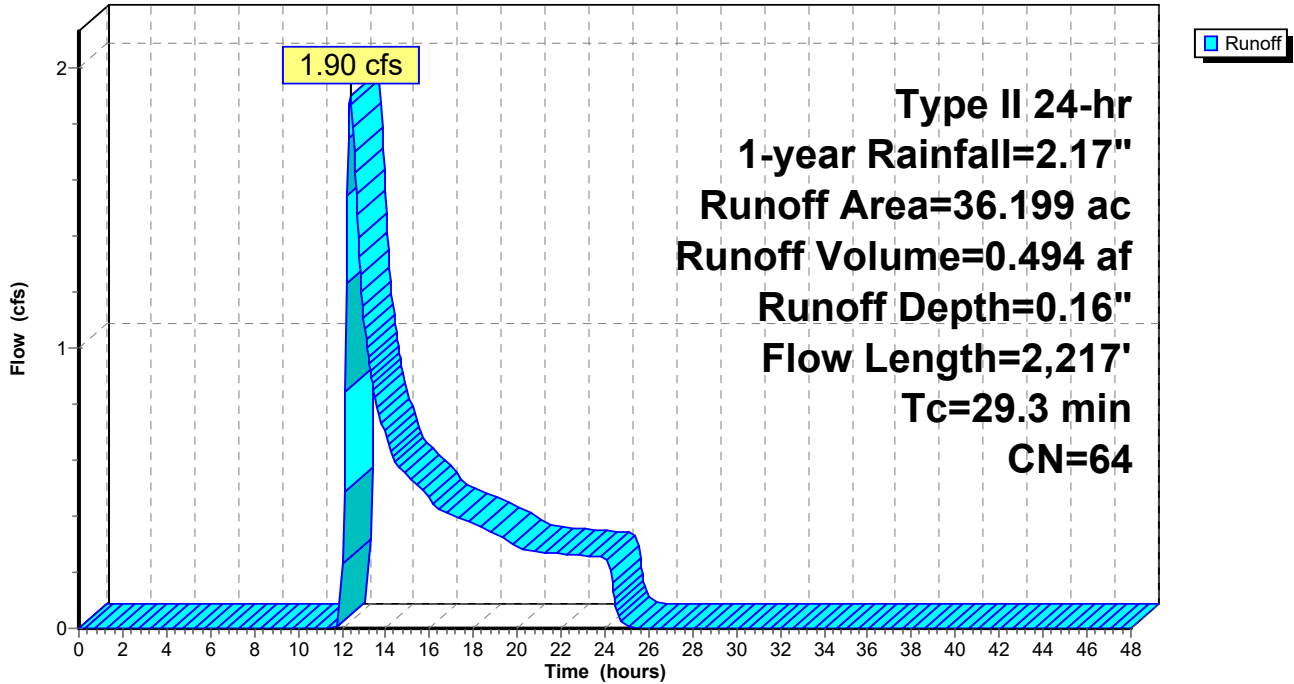
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.444   | 98 | Impervious surface            |
| * 0.471   | 96 | Gravel surface                |
| 0.222     | 61 | >75% Grass cover, Good, HSG B |
| 0.026     | 74 | >75% Grass cover, Good, HSG C |
| 0.098     | 30 | Meadow, non-grazed, HSG A     |
| 16.283    | 58 | Meadow, non-grazed, HSG B     |
| 15.759    | 71 | Meadow, non-grazed, HSG C     |
| 0.215     | 48 | Brush, Good, HSG B            |
| 0.283     | 65 | Brush, Good, HSG C            |
| 0.099     | 30 | Woods, Good, HSG A            |
| 2.287     | 55 | Woods, Good, HSG B            |
| 0.012     | 70 | Woods, Good, HSG C            |
| 36.199    | 64 | Weighted Average              |
| 35.755    |    | 98.77% Pervious Area          |
| 0.444     |    | 1.23% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 15.4     | 1,100         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 3.8      | 1,017         | 0.0290        | 4.46              | 12.25          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00'<br>n= 0.030 Earth, grassed & winding |
| 29.3     | 2,217         | Total         |                   |                |  |

Subcatchment 30S: Sub 30

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 31S: Sub 31**

Runoff = 0.53 cfs @ 12.65 hrs, Volume= 0.230 af, Depth= 0.11"  
 Routed to Link SP34 : SP31

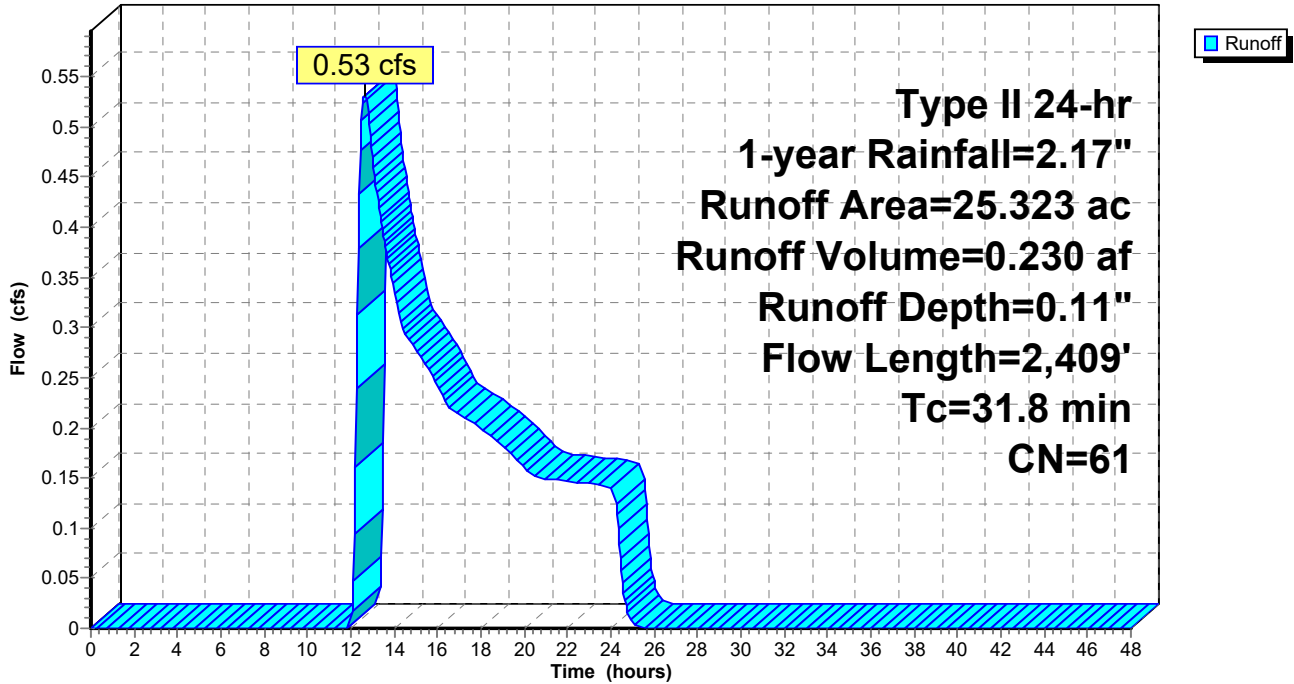
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 12.515    | 58 | Meadow, non-grazed, HSG B |
| 7.070     | 71 | Meadow, non-grazed, HSG C |
| 0.029     | 48 | Brush, Good, HSG B        |
| 5.404     | 55 | Woods, Good, HSG B        |
| 0.305     | 70 | Woods, Good, HSG C        |
| 25.323    | 61 | Weighted Average          |
| 25.323    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 20.4     | 1,456         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.4      | 853           | 0.0938        | 4.18              | 4.18           | <b>Parabolic Channel,</b><br>W=3.00' D=0.50' Area=1.0 sf Perim=3.2'<br>n= 0.050 Mountain streams w/large boulders |
| 31.8     | 2,409         | Total         |                   |                |   |

Subcatchment 31S: Sub 31

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 32S: Sub 32**

Runoff = 0.91 cfs @ 12.72 hrs, Volume= 0.408 af, Depth= 0.11"  
 Routed to Link SP34 : SP31

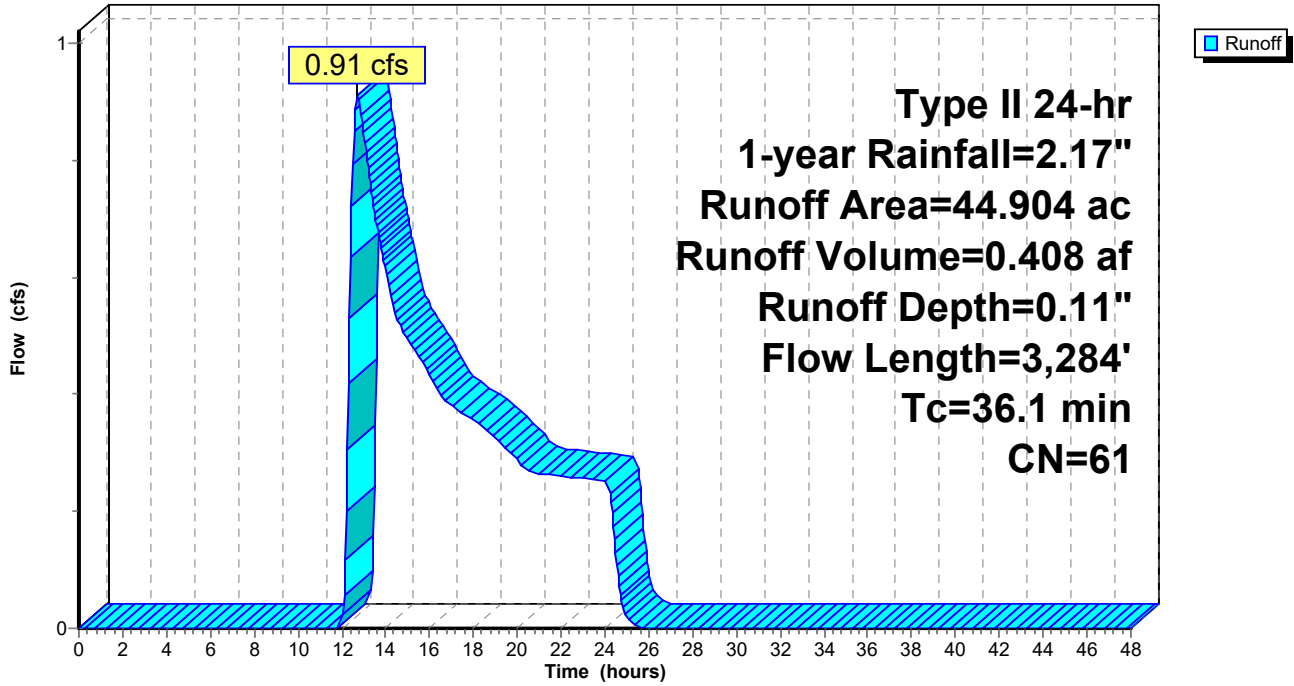
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 2.796   | 98 | Surface water             |
| 20.102    | 58 | Meadow, non-grazed, HSG B |
| 5.829     | 71 | Meadow, non-grazed, HSG C |
| 0.127     | 48 | Brush, Good, HSG B        |
| 0.286     | 65 | Brush, Good, HSG C        |
| 15.764    | 55 | Woods, Good, HSG B        |
| 44.904    | 61 | Weighted Average          |
| 42.108    |    | 93.77% Pervious Area      |
| 2.796     |    | 6.23% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 7.8      | 100           | 0.0475        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.2      | 425           | 0.0976        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 17.5     | 1,176         | 0.0257        | 1.12              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 7.6      | 1,583         | 0.0726        | 3.48              | 9.29           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.080 Earth, long dense weeds |
| 36.1     | 3,284         | Total         |                   |                |   |

Subcatchment 32S: Sub 32

Hydrograph





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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 1.03 cfs @ 12.70 hrs, Volume= 0.599 af, Depth= 0.08"  
 Routed to Link SP34 : SP31

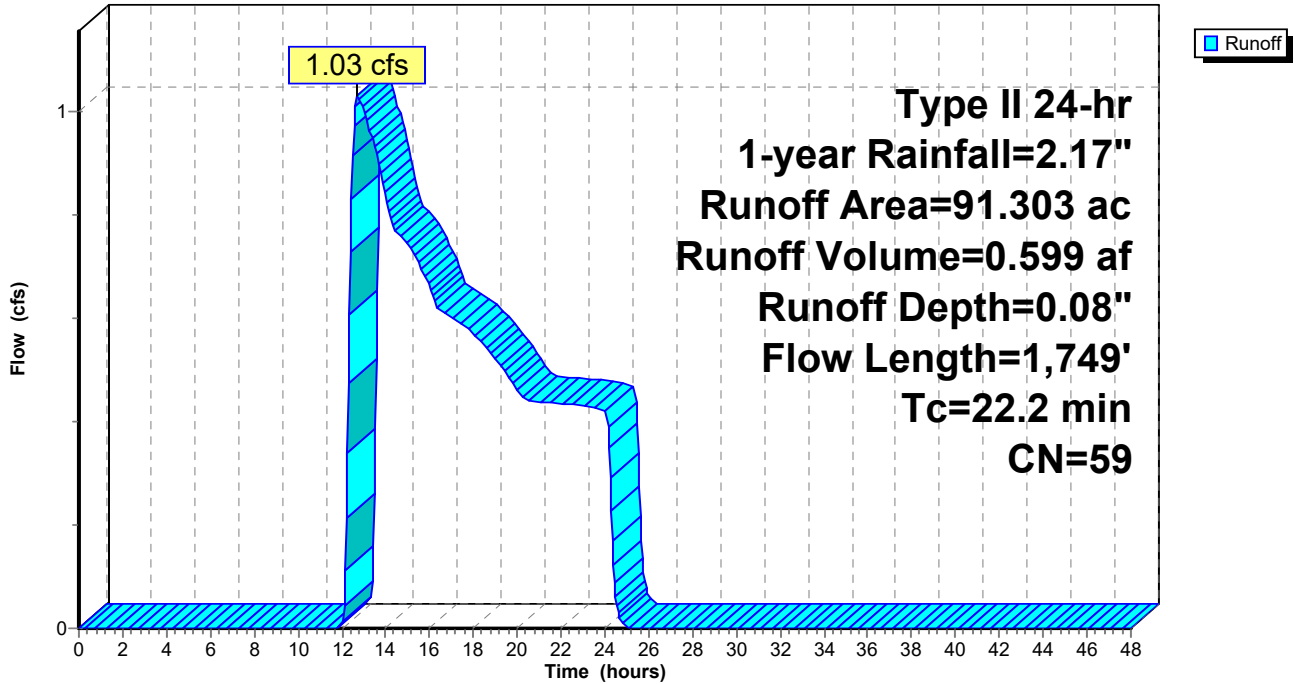
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.618   | 98 | Impervious surface            |
| * 0.042   | 96 | Gravel surface                |
| 3.828     | 61 | >75% Grass cover, Good, HSG B |
| 45.219    | 58 | Meadow, non-grazed, HSG B     |
| 9.199     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 78 | Meadow, non-grazed, HSG D     |
| 0.415     | 48 | Brush, Good, HSG B            |
| 28.566    | 55 | Woods, Good, HSG B            |
| 0.282     | 70 | Woods, Good, HSG C            |
| 91.303    | 59 | Weighted Average              |
| 90.685    |    | 99.32% Pervious Area          |
| 0.618     |    | 0.68% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.8      | 780           | 0.1010        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.9      | 531           | 0.1059        | 2.28              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 338           | 0.1005        | 1.59              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.2     | 1,749         | Total         |                   |                |  |

Subcatchment 33S: Sub 33

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 34S: Sub 34**

Runoff = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af, Depth= 0.13"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

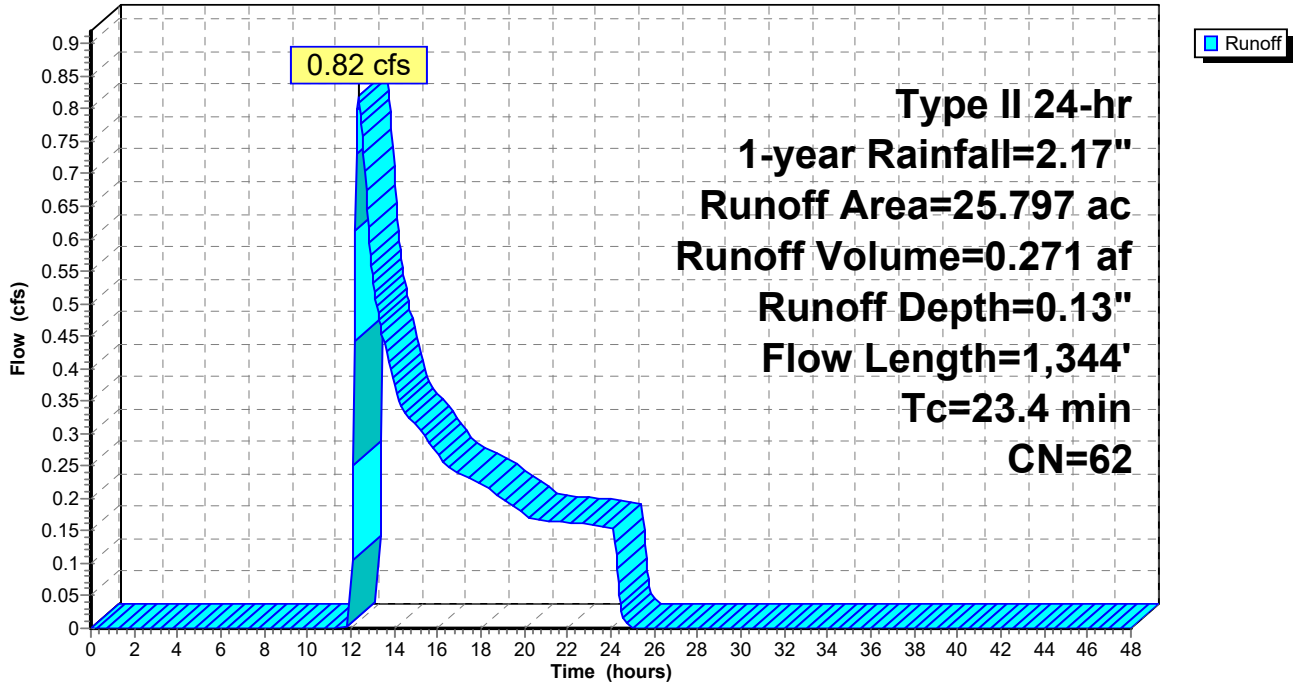
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.189     | 48 | Brush, Good, HSG B            |
| 0.183     | 96 | Gravel surface, HSG D         |
| 0.299     | 98 | Unconnected roofs, HSG D      |
| 16.490    | 58 | Meadow, non-grazed, HSG B     |
| 3.646     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 61 | >75% Grass cover, Good, HSG B |
| 1.498     | 74 | >75% Grass cover, Good, HSG C |
| 0.358     | 55 | Woods, Good, HSG B            |
| 25.797    | 62 | Weighted Average              |
| 25.498    |    | 98.84% Pervious Area          |
| 0.299     |    | 1.16% Impervious Area         |
| 0.299     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.8      | 100           | 0.0675        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 14.9     | 878           | 0.0198        | 0.98              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                               |
| 0.2      | 42            | 0.0119        | 2.99              | 3.66           | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.025 Corrugated metal |
| 1.5      | 324           | 0.0552        | 3.52              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps                                 |
| 23.4     | 1,344         | Total         |                   |                |  |

Subcatchment 34S: Sub 34

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 35S: Sub 35**

Runoff = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af, Depth= 0.18"  
 Routed to Link SP35 :

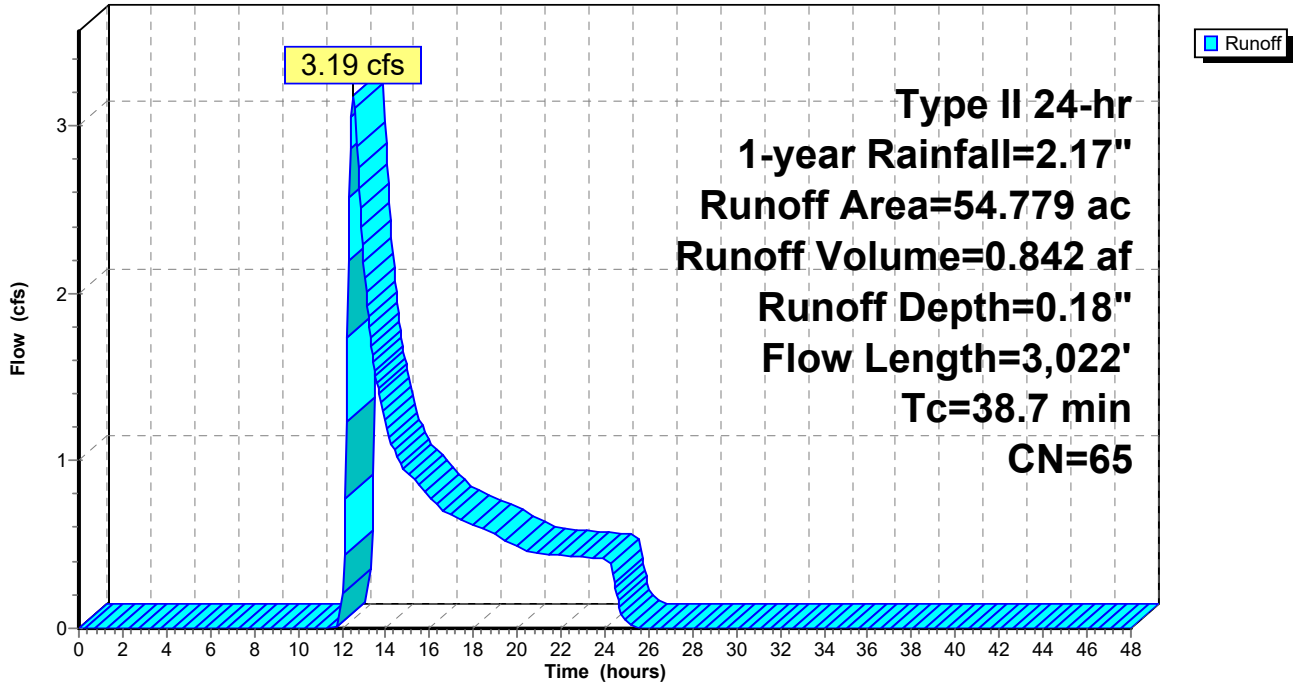
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.105     | 48 | Brush, Good, HSG B            |
| 0.087     | 65 | Brush, Good, HSG C            |
| 1.101     | 98 | Unconnected roofs, HSG D      |
| 23.620    | 58 | Meadow, non-grazed, HSG B     |
| 24.783    | 71 | Meadow, non-grazed, HSG C     |
| 0.319     | 61 | >75% Grass cover, Good, HSG B |
| 1.326     | 74 | >75% Grass cover, Good, HSG C |
| 1.942     | 55 | Woods, Good, HSG B            |
| 1.496     | 70 | Woods, Good, HSG C            |
| 54.779    | 65 | Weighted Average              |
| 53.678    |    | 97.99% Pervious Area          |
| 1.101     |    | 2.01% Impervious Area         |
| 1.101     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.6      | 393           | 0.0204        | 1.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 22.1     | 2,017         | 0.0471        | 1.52              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 2.0      | 512           | 0.1172        | 4.19              | 8.39           | <b>Parabolic Channel,</b><br>W=3.00' D=1.00' Area=2.0 sf Perim=3.7'<br>n= 0.080 Earth, long dense weeds |
| 38.7     | 3,022         | Total         |                   |                |   |

Subcatchment 35S: Sub 35

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 36S: Sub 36**

Runoff = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af, Depth= 0.14"  
 Routed to Link SP36 :

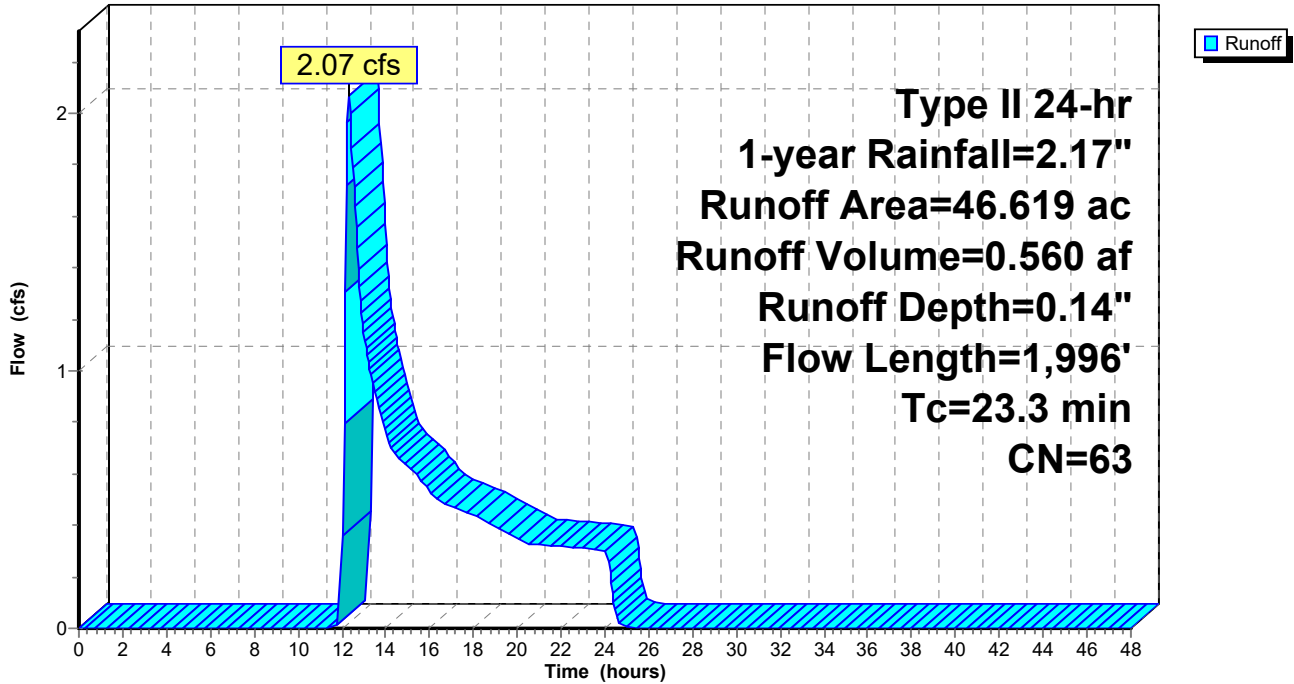
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.405     | 48 | Brush, Good, HSG B        |
| 0.013     | 65 | Brush, Good, HSG C        |
| 0.081     | 96 | Gravel surface, HSG D     |
| 0.007     | 98 | Unconnected roofs, HSG D  |
| 2.271     | 58 | Meadow, non-grazed, HSG B |
| 21.338    | 71 | Meadow, non-grazed, HSG C |
| 0.513     | 98 | Water Surface, HSG D      |
| 20.987    | 55 | Woods, Good, HSG B        |
| 1.004     | 70 | Woods, Good, HSG C        |
| 46.619    | 63 | Weighted Average          |
| 46.099    |    | 98.88% Pervious Area      |
| 0.520     |    | 1.12% Impervious Area     |
| 0.007     |    | 1.35% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.4      | 100           | 0.0550        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.7     | 1,036         | 0.0442        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 4.2      | 860           | 0.1400        | 3.38              | 5.91           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 3.0 '/' Top.W=5.00'<br>n= 0.080 Earth, long dense weeds |
| 23.3     | 1,996         | Total         |                   |                |  |

Subcatchment 36S: Sub 36

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af, Depth= 0.09"  
 Routed to Link SP37 :

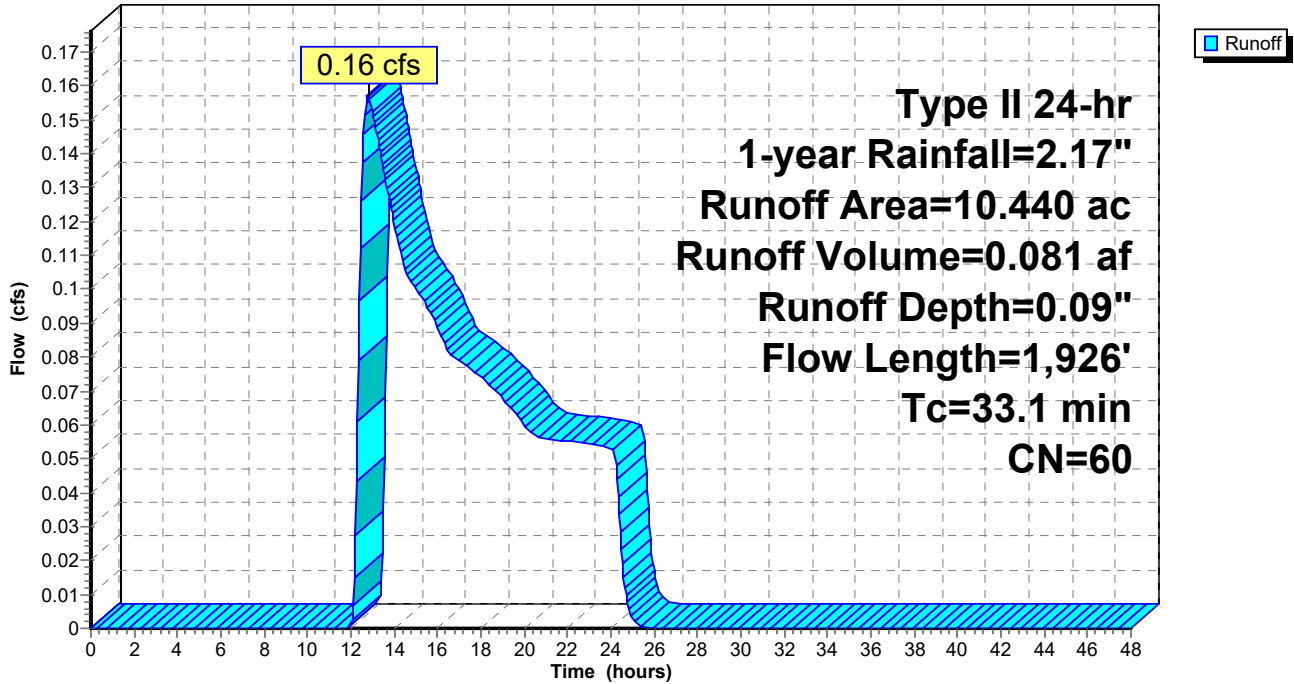
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.161     | 58 | Meadow, non-grazed, HSG B |
| 1.673     | 55 | Woods, Good, HSG B        |
| * 0.606   | 98 | Impervious                |
| 10.440    | 60 | Weighted Average          |
| 9.834     |    | 94.20% Pervious Area      |
| 0.606     |    | 5.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 19.3     | 100           | 0.0050        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 10.6     | 1,005         | 0.0507        | 1.58              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.0      | 90            | 0.0889        | 1.49              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.2      | 731           | 0.0570        | 5.59              | 20.95          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.1     | 1,926         | Total         |                   |                |   |

Subcatchment 37S: Sub 37

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af, Depth= 0.16"  
 Routed to Link SP38 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.161     | 48 | Brush, Good, HSG B            |
| 0.399     | 65 | Brush, Good, HSG C            |
| 0.626     | 96 | Gravel surface, HSG D         |
| 1.297     | 98 | Unconnected roofs, HSG D      |
| 26.775    | 58 | Meadow, non-grazed, HSG B     |
| 35.528    | 71 | Meadow, non-grazed, HSG C     |
| 1.081     | 61 | >75% Grass cover, Good, HSG B |
| 4.099     | 30 | Woods, Good, HSG A            |
| 0.349     | 55 | Woods, Good, HSG B            |
| 71.315    | 64 | Weighted Average              |
| 70.018    |    | 98.18% Pervious Area          |
| 1.297     |    | 1.82% Impervious Area         |
| 1.297     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.9     | 739           | 0.0220        | 1.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.6      | 753           | 0.0744        | 1.91              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 21.4     | 1,812         | 0.0800        | 1.41              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 47.6     | 3,404         | Total         |                   |                |  |

**Mill Pt Pre 2**

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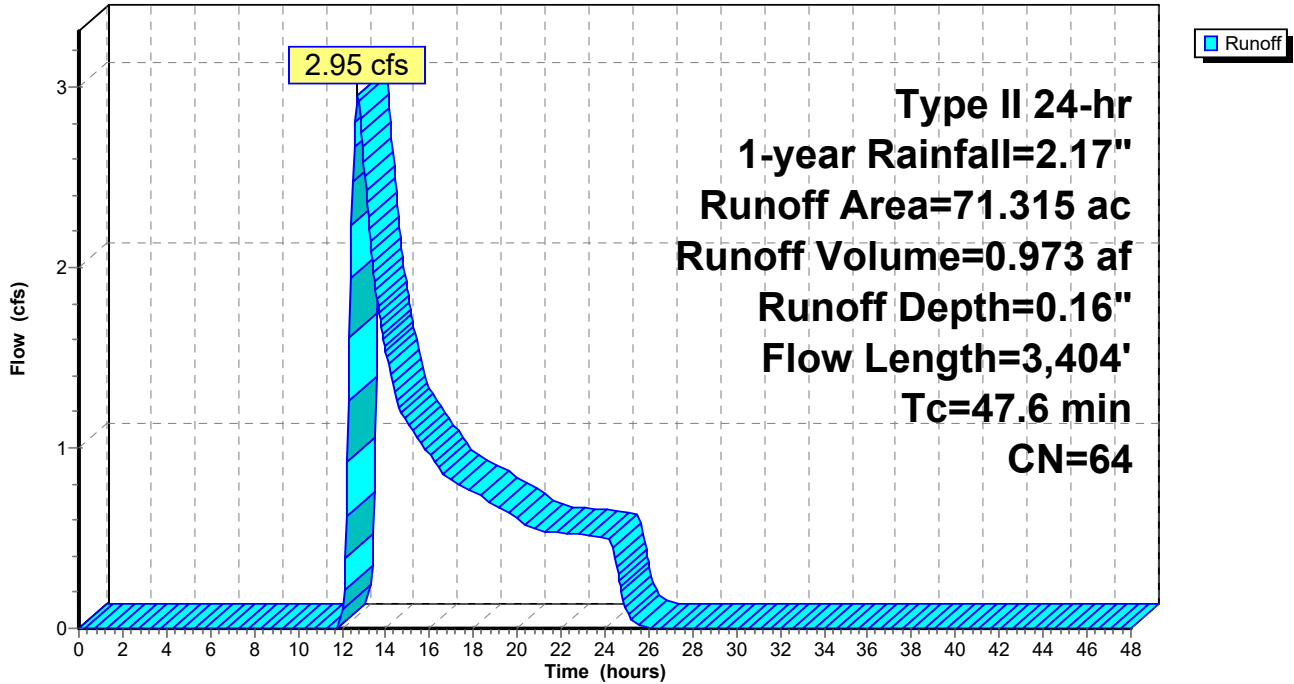
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 38S: Sub 38**

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 39S: Sub 39**

Runoff = 3.35 cfs @ 12.50 hrs, Volume= 1.203 af, Depth= 0.13"  
 Routed to Link SP39 :

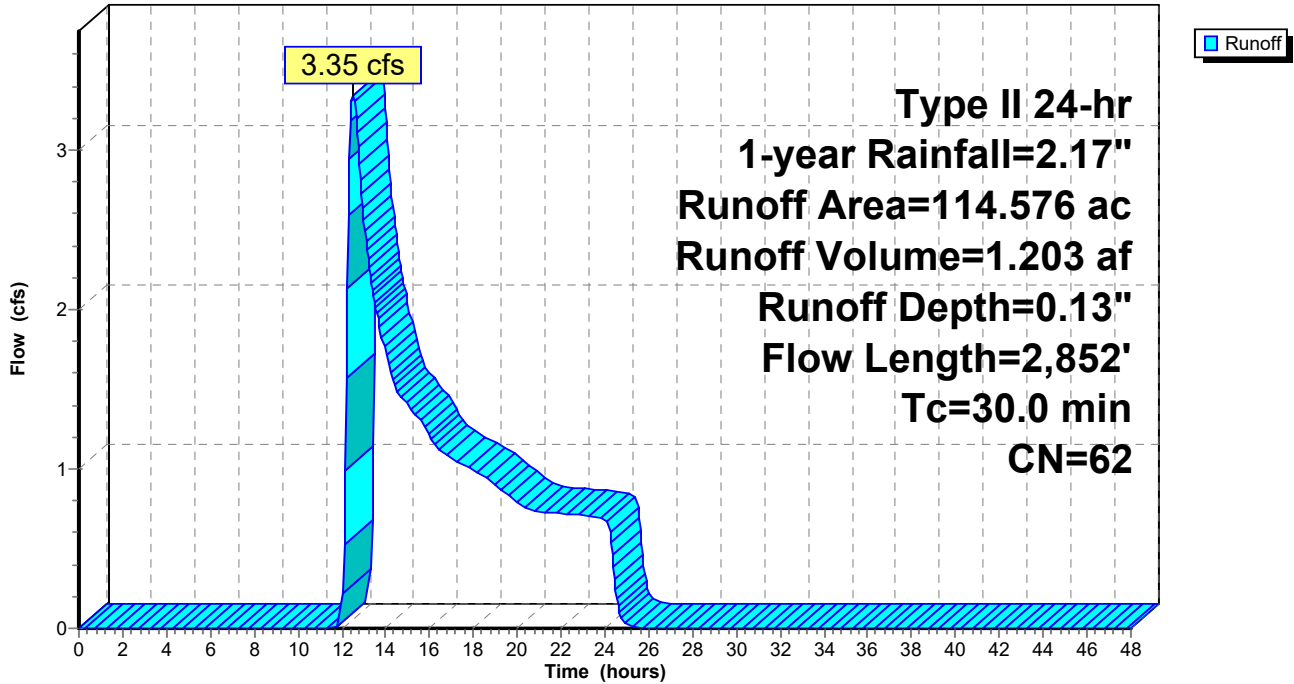
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.475     | 48 | Brush, Good, HSG B            |
| 0.336     | 65 | Brush, Good, HSG C            |
| 0.314     | 73 | Brush, Good, HSG D            |
| 1.088     | 96 | Gravel surface, HSG D         |
| 0.964     | 98 | Unconnected roofs, HSG D      |
| 60.275    | 58 | Meadow, non-grazed, HSG B     |
| 18.779    | 71 | Meadow, non-grazed, HSG C     |
| 2.256     | 78 | Meadow, non-grazed, HSG D     |
| 6.253     | 61 | >75% Grass cover, Good, HSG B |
| 3.233     | 74 | >75% Grass cover, Good, HSG C |
| 1.913     | 98 | Water Surface, HSG D          |
| 17.544    | 55 | Woods, Good, HSG B            |
| 0.343     | 70 | Woods, Good, HSG C            |
| 0.803     | 77 | Woods, Good, HSG D            |
| 114.576   | 62 | Weighted Average              |
| 111.699   |    | 97.49% Pervious Area          |
| 2.877     |    | 2.51% Impervious Area         |
| 0.964     |    | 33.51% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 17.7     | 2,151         | 0.0840        | 2.03              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.2      | 601           | 0.1490        | 1.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.0     | 2,852         | Total         |                   |                |  |

Subcatchment 39S: Sub 39

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 3.15 cfs @ 12.32 hrs, Volume= 0.488 af, Depth= 0.28"

Routed to Reach 39R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.016     | 65 | Brush, Good, HSG C            |
| 0.235     | 96 | Gravel surface, HSG D         |
| 0.018     | 98 | Unconnected roofs, HSG D      |
| 6.944     | 58 | Meadow, non-grazed, HSG B     |
| 10.584    | 71 | Meadow, non-grazed, HSG C     |
| 0.095     | 78 | Meadow, non-grazed, HSG D     |
| 0.089     | 61 | >75% Grass cover, Good, HSG B |
| 1.640     | 98 | Water Surface, HSG D          |
| 0.643     | 55 | Woods, Good, HSG B            |
| 0.616     | 70 | Woods, Good, HSG C            |
| 20.880    | 69 | Weighted Average              |
| 19.222    |    | 92.06% Pervious Area          |
| 1.658     |    | 7.94% Impervious Area         |
| 0.018     |    | 1.09% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.6      | 358           | 0.1089        | 2.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.4      | 38            | 0.1118        | 1.67              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.8      | 1,118         | 0.0733        | 1.90              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.8      | 303           | 0.0132        | 0.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 28.9     | 1,917         | Total         |                   |                |  |

**Mill Pt Pre 2**

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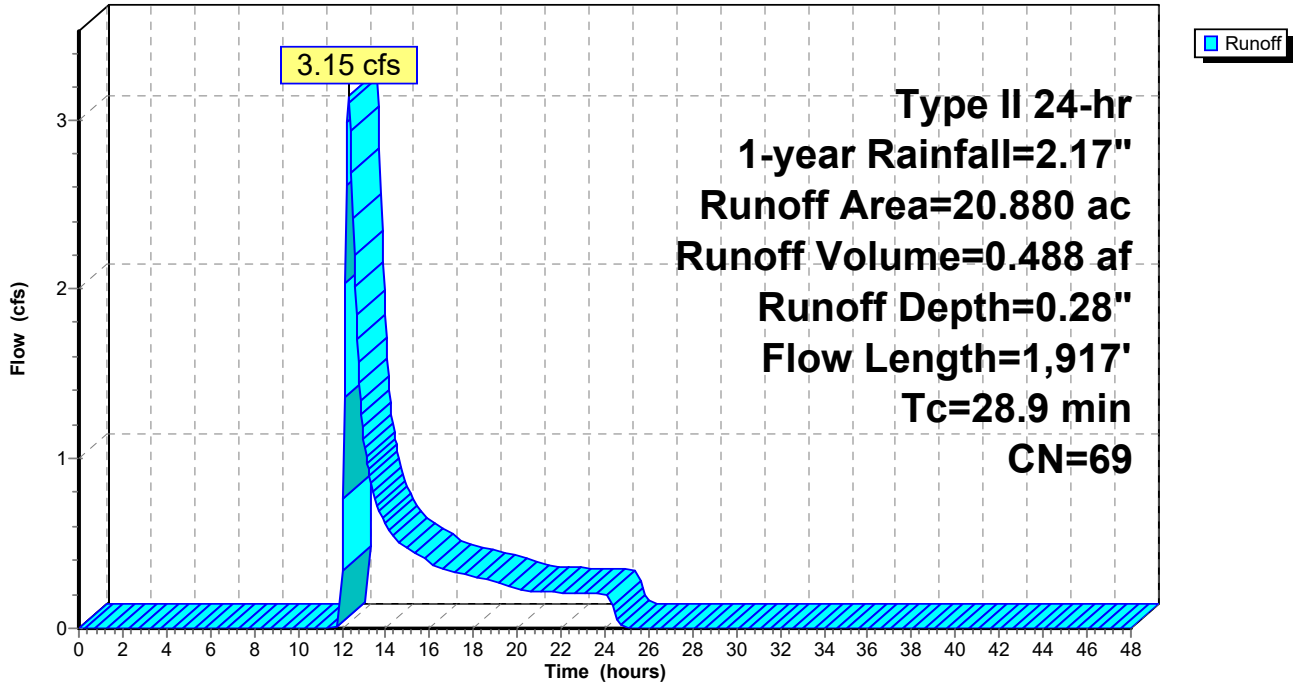
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 40S: Sub 40**

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af, Depth= 0.14"  
 Routed to Link SP41 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.378     | 48 | Brush, Good, HSG B        |
| 0.001     | 98 | Unconnected roofs, HSG D  |
| 18.363    | 58 | Meadow, non-grazed, HSG B |
| 8.734     | 71 | Meadow, non-grazed, HSG C |
| 2.287     | 78 | Meadow, non-grazed, HSG D |
| 1.531     | 98 | Water Surface, HSG D      |
| 19.479    | 55 | Woods, Good, HSG B        |
| 9.335     | 70 | Woods, Good, HSG C        |
| 0.057     | 77 | Woods, Good, HSG D        |
| 60.165    | 63 | Weighted Average          |
| 58.633    |    | 97.45% Pervious Area      |
| 1.532     |    | 2.55% Impervious Area     |
| 0.001     |    | 0.07% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 585           | 0.0765        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.8      | 652           | 0.0395        | 1.39              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.9      | 1,289         | 0.0436        | 3.13              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 33.1     | 2,626         | Total         |                   |                |  |

**Mill Pt Pre 2**

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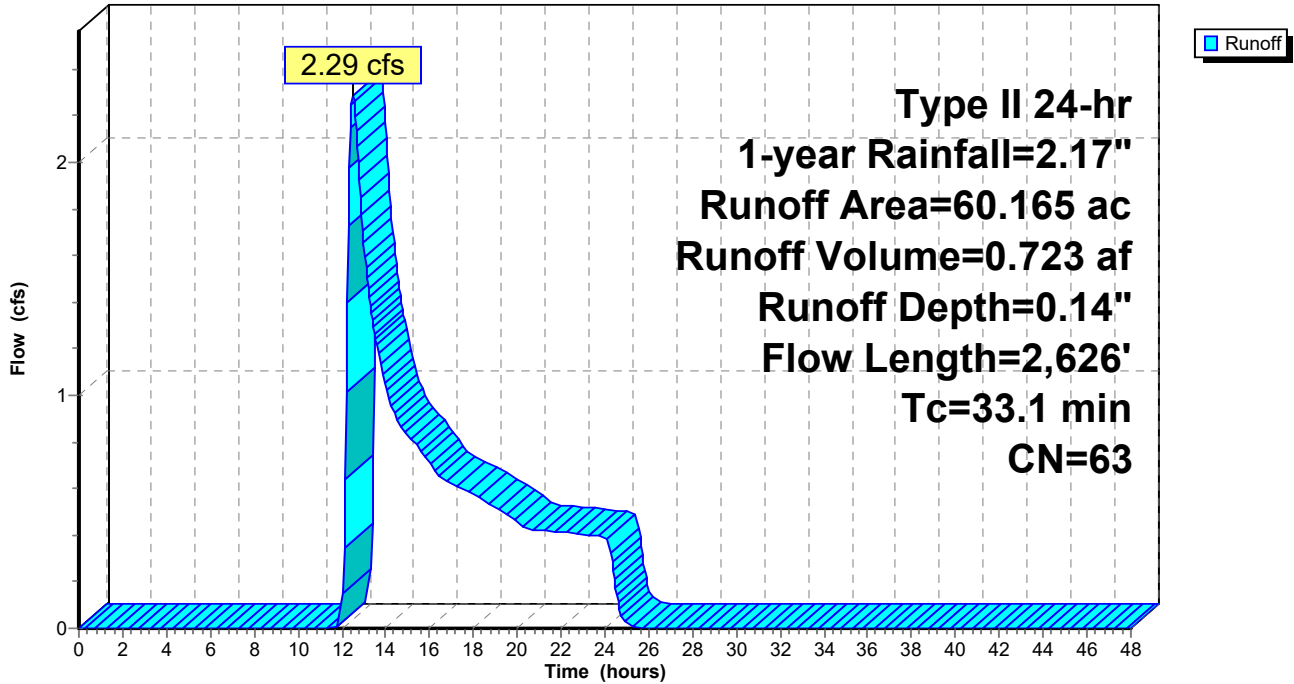
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 41S: Sub 41**

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 1.62 cfs @ 12.31 hrs, Volume= 0.514 af, Depth= 0.13"  
 Routed to Link SP42 :

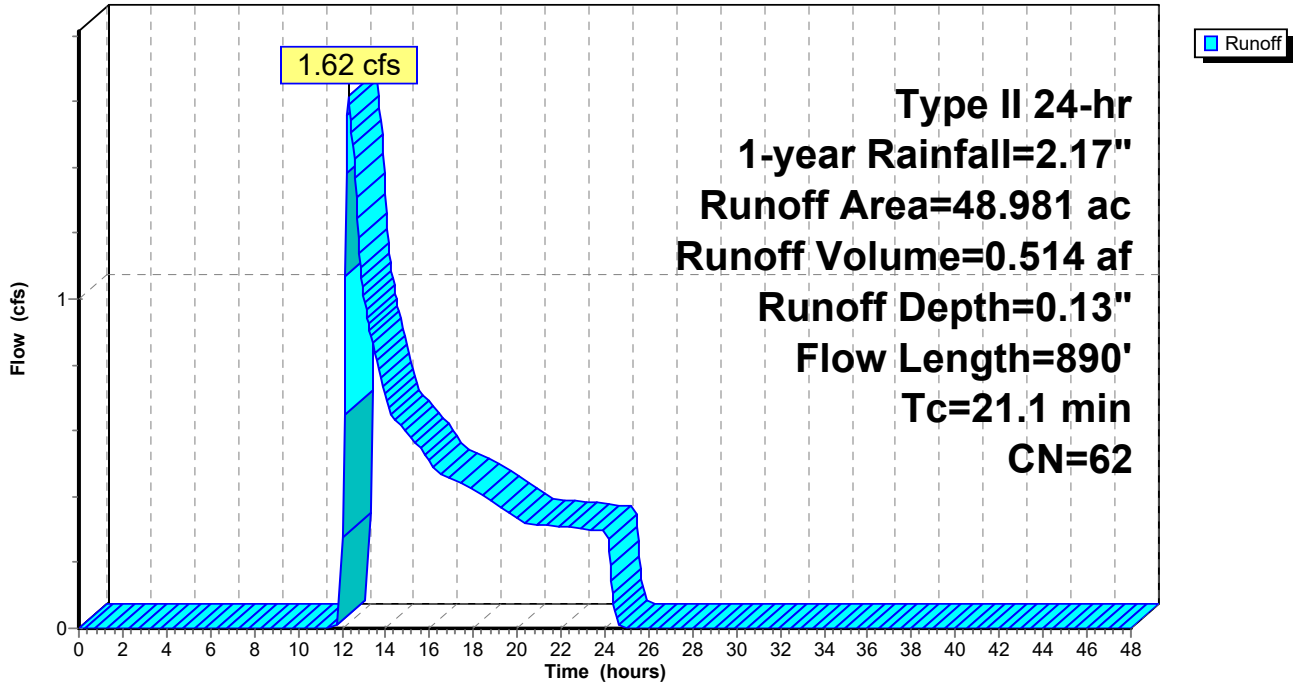
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.795     | 48 | Brush, Good, HSG B        |
| 0.967     | 65 | Brush, Good, HSG C        |
| 3.291     | 58 | Meadow, non-grazed, HSG B |
| 11.478    | 71 | Meadow, non-grazed, HSG C |
| 1.886     | 98 | Water Surface, HSG D      |
| 27.090    | 55 | Woods, Good, HSG B        |
| 3.474     | 70 | Woods, Good, HSG C        |
| 48.981    | 62 | Weighted Average          |
| 47.095    |    | 96.15% Pervious Area      |
| 1.886     |    | 3.85% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 3.2      | 234           | 0.0299        | 1.21              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 556           | 0.1704        | 2.06              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 21.1     | 890           | Total         |                   |                |  |

Subcatchment 42S: Sub 42

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 48S: Sub 48**

Runoff = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af, Depth= 0.37"

Routed to Link SP48 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.572   | 98 | Surface water                 |
| * 1.693   | 98 | Impervious surface            |
| * 0.110   | 96 | Gravel surface                |
| 0.416     | 61 | >75% Grass cover, Good, HSG B |
| 3.809     | 74 | >75% Grass cover, Good, HSG C |
| 1.571     | 80 | >75% Grass cover, Good, HSG D |
| 9.889     | 58 | Meadow, non-grazed, HSG B     |
| 26.970    | 71 | Meadow, non-grazed, HSG C     |
| 21.544    | 78 | Meadow, non-grazed, HSG D     |
| 0.763     | 48 | Brush, Good, HSG B            |
| 4.514     | 65 | Brush, Good, HSG C            |
| 2.800     | 73 | Brush, Good, HSG D            |
| 0.194     | 55 | Woods, Good, HSG B            |
| 0.882     | 70 | Woods, Good, HSG C            |
| 2.929     | 77 | Woods, Good, HSG D            |
| 78.656    | 72 | Weighted Average              |
| 76.391    |    | 97.12% Pervious Area          |
| 2.265     |    | 2.88% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.0      | 100           | 0.0625        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 22.2     | 1,935         | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 8.9      | 1,972         | 0.0230        | 3.68              | 19.31          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00'<br>n= 0.035 Earth, dense weeds |
| 38.1     | 4,007         | Total         |                   |                |  |

**Mill Pt Pre 2**

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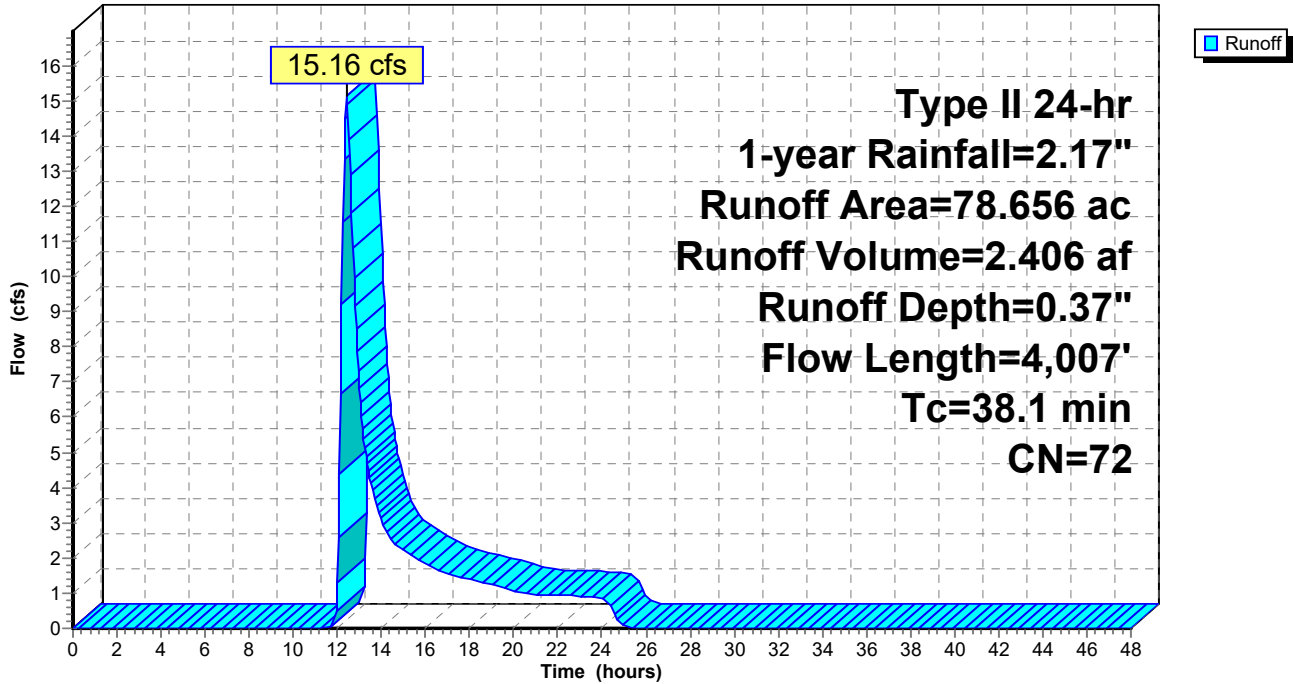
Type II 24-hr 1-year Rainfall=2.17"

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**Subcatchment 48S: Sub 48**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 49S: Sub 49**

Runoff = 1.56 cfs @ 12.56 hrs, Volume= 0.459 af, Depth= 0.16"  
 Routed to Reach 42R : S-NSD-16

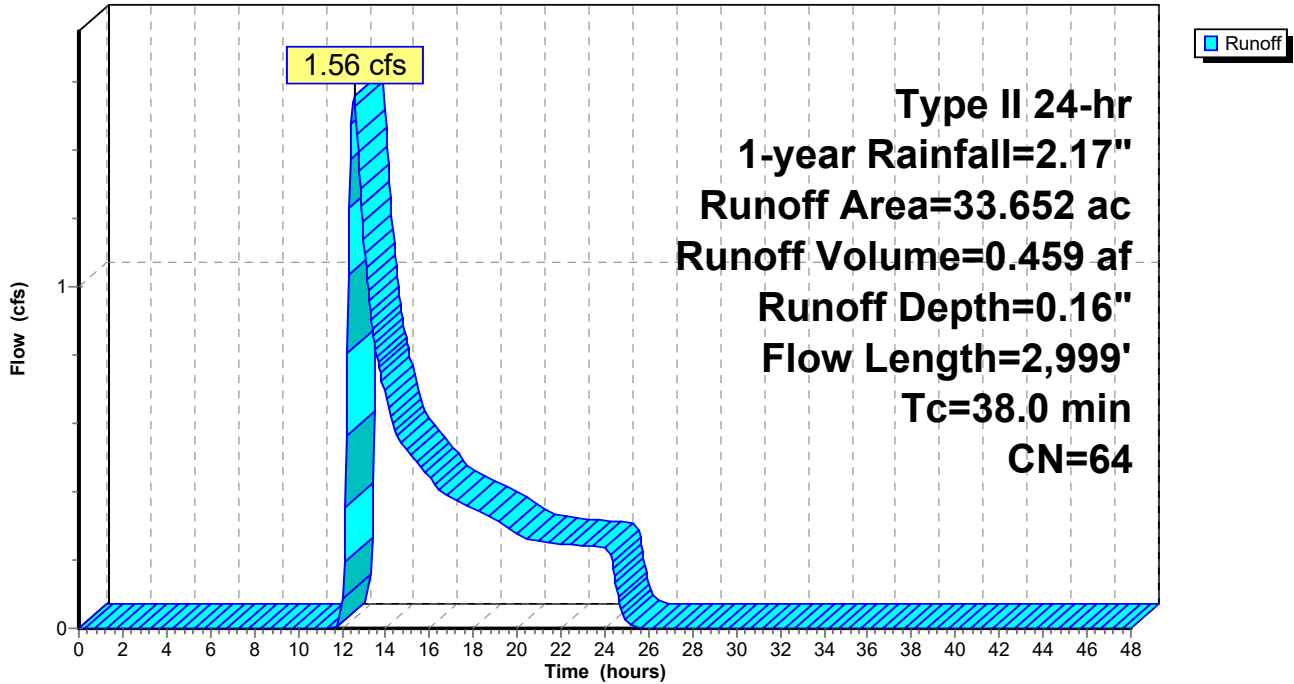
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.496     | 48 | Brush, Good, HSG B            |
| 1.174     | 65 | Brush, Good, HSG C            |
| 0.274     | 96 | Gravel surface, HSG D         |
| 0.570     | 98 | Unconnected roofs, HSG D      |
| 13.748    | 58 | Meadow, non-grazed, HSG B     |
| 12.594    | 71 | Meadow, non-grazed, HSG C     |
| 1.421     | 61 | >75% Grass cover, Good, HSG B |
| 0.238     | 74 | >75% Grass cover, Good, HSG C |
| 0.029     | 98 | Water Surface, HSG D          |
| 1.071     | 55 | Woods, Good, HSG B            |
| 0.984     | 70 | Woods, Good, HSG C            |
| 0.053     | 77 | Woods, Good, HSG D            |
| 33.652    | 64 | Weighted Average              |
| 33.053    |    | 98.22% Pervious Area          |
| 0.599     |    | 1.78% Impervious Area         |
| 0.570     |    | 95.16% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 240           | 0.1500        | 2.71              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 534           | 0.1367        | 2.59              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.8      | 168           | 0.0506        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.2      | 561           | 0.0267        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 1,396         | 0.0434        | 1.46              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 38.0     | 2,999         | Total         |                   |                |  |

Subcatchment 49S: Sub 49

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 50S: Sub 50**

Runoff = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af, Depth= 0.25"  
 Routed to Link SP50 :

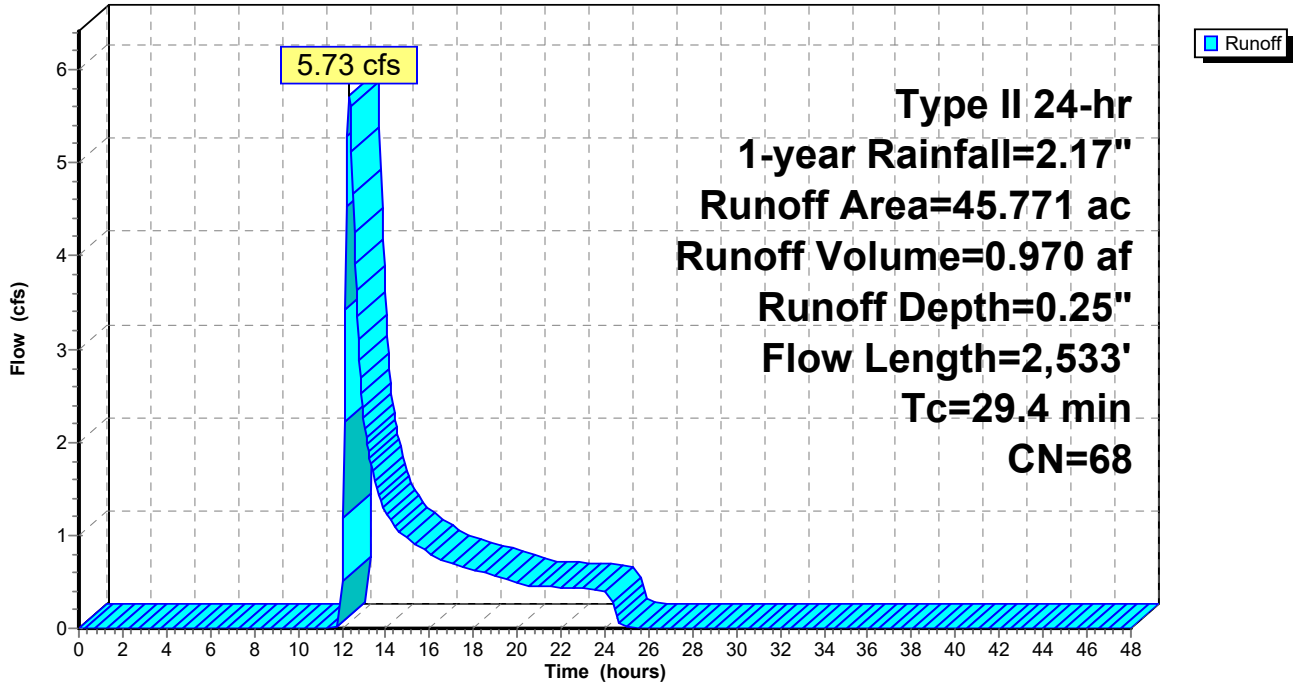
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.310     | 48 | Brush, Good, HSG B        |
| 3.852     | 65 | Brush, Good, HSG C        |
| 0.150     | 73 | Brush, Good, HSG D        |
| 0.163     | 98 | Unconnected roofs, HSG D  |
| 3.353     | 58 | Meadow, non-grazed, HSG B |
| 23.813    | 71 | Meadow, non-grazed, HSG C |
| 2.446     | 78 | Meadow, non-grazed, HSG D |
| 0.409     | 98 | Water Surface, HSG D      |
| 5.669     | 55 | Woods, Good, HSG B        |
| 5.353     | 70 | Woods, Good, HSG C        |
| 0.253     | 77 | Woods, Good, HSG D        |
| 45.771    | 68 | Weighted Average          |
| 45.199    |    | 98.75% Pervious Area      |
| 0.572     |    | 1.25% Impervious Area     |
| 0.163     |    | 28.50% Unconnected        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 8.1      | 911           | 0.0710        | 1.87              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 7.5      | 410           | 0.0330        | 0.91              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 4.9      | 1,112         | 0.0320        | 3.80              | 5.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 ' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 29.4     | 2,533         | Total         |                   |                |   |

Subcatchment 50S: Sub 50

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 51S: Sub 51**

Runoff = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af, Depth= 0.16"  
 Routed to Link SP51 :

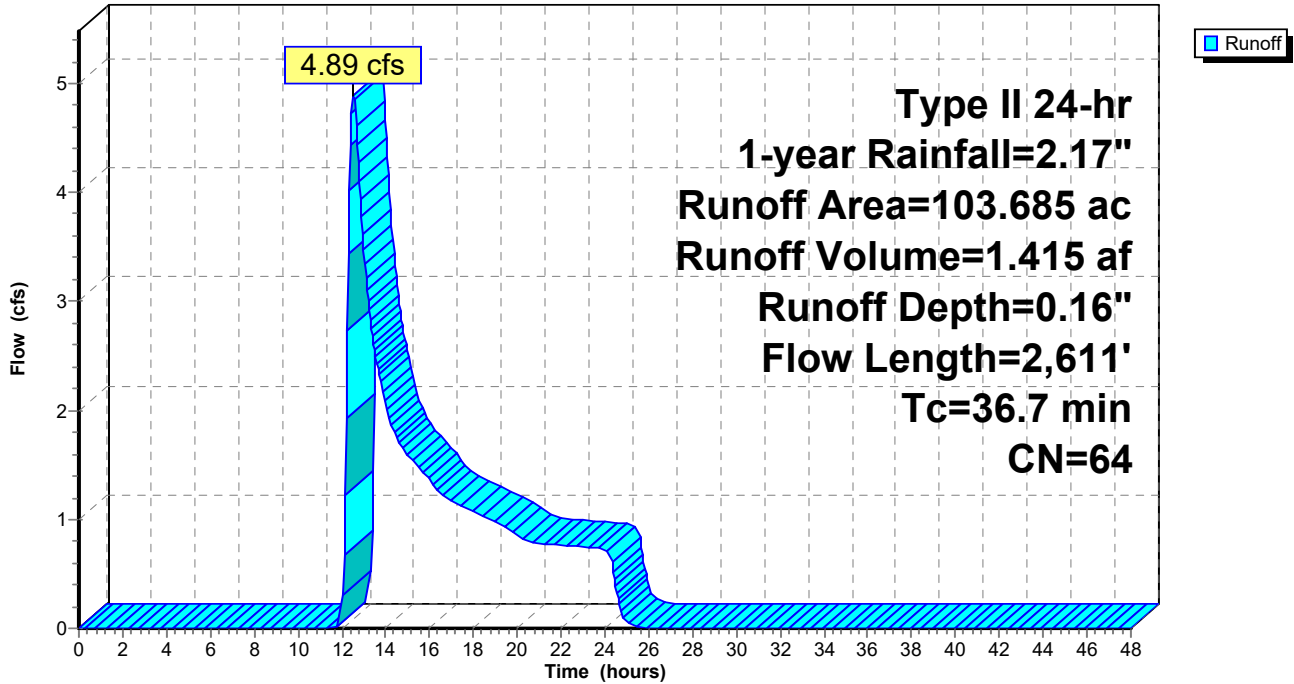
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.067   | 98 | Impervious surface            |
| 2.753     | 61 | >75% Grass cover, Good, HSG B |
| 1.096     | 74 | >75% Grass cover, Good, HSG C |
| 49.195    | 58 | Meadow, non-grazed, HSG B     |
| 39.362    | 71 | Meadow, non-grazed, HSG C     |
| 2.576     | 78 | Meadow, non-grazed, HSG D     |
| 0.936     | 48 | Brush, Good, HSG B            |
| 0.917     | 65 | Brush, Good, HSG C            |
| 0.252     | 73 | Brush, Good, HSG D            |
| 1.975     | 55 | Woods, Good, HSG B            |
| 3.395     | 70 | Woods, Good, HSG C            |
| 0.161     | 77 | Woods, Good, HSG D            |
| 103.685   | 64 | Weighted Average              |
| 102.618   |    | 98.97% Pervious Area          |
| 1.067     |    | 1.03% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 12.6     | 1,592         | 0.0908        | 2.11              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.3      | 435           | 0.0586        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.4      | 336           | 0.0327        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.0      | 148           | 0.0270        | 0.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 36.7     | 2,611         | Total         |                   |                |  |

Subcatchment 51S: Sub 51

Hydrograph



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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 52S: Sub 52**

Runoff = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af, Depth= 0.28"  
 Routed to Link SP52 :

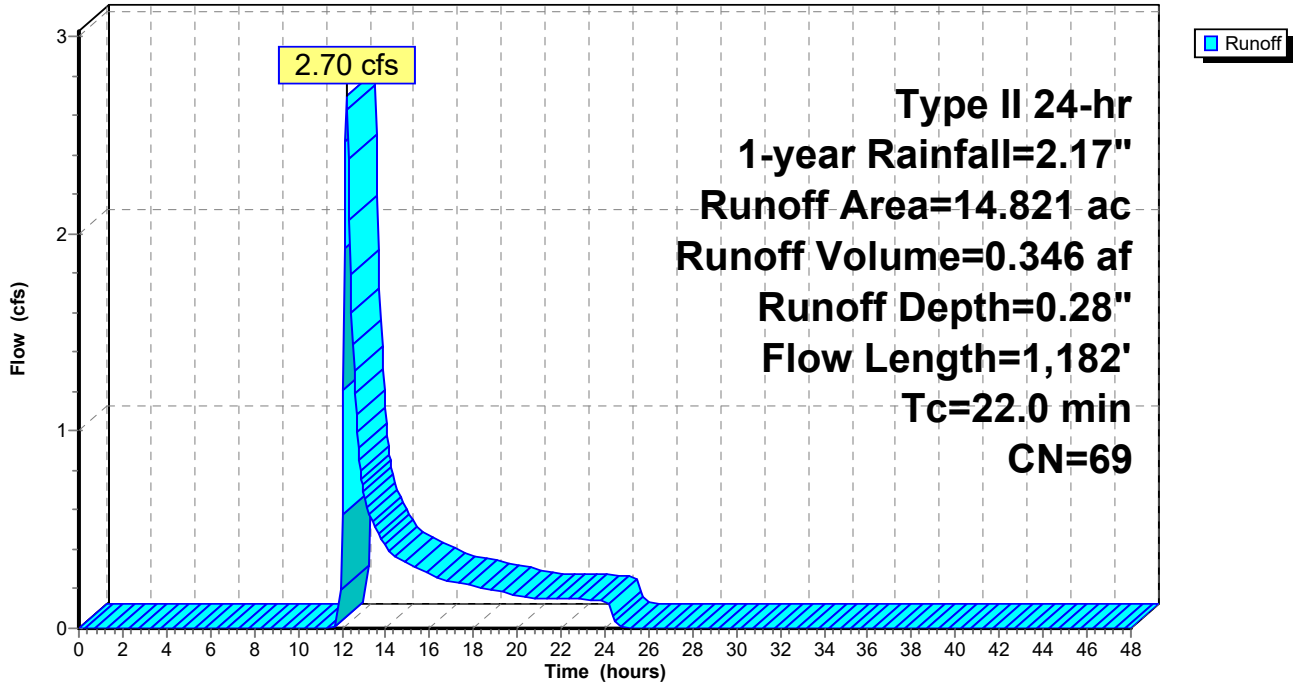
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.561     | 48 | Brush, Good, HSG B        |
| 0.166     | 73 | Brush, Good, HSG D        |
| 1.696     | 58 | Meadow, non-grazed, HSG B |
| 10.185    | 71 | Meadow, non-grazed, HSG C |
| 0.446     | 78 | Meadow, non-grazed, HSG D |
| 0.413     | 98 | Water Surface, HSG D      |
| 0.321     | 55 | Woods, Good, HSG B        |
| 0.833     | 70 | Woods, Good, HSG C        |
| 0.200     | 77 | Woods, Good, HSG D        |
| 14.821    | 69 | Weighted Average          |
| 14.408    |    | 97.21% Pervious Area      |
| 0.413     |    | 2.79% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.1     | 100           | 0.0200        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.1      | 993           | 0.0850        | 2.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.8      | 89            | 0.0112        | 0.53              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.0     | 1,182         | Total         |                   |                |  |

Subcatchment 52S: Sub 52

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 53S: Sub 53**

Runoff = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af, Depth= 0.23"  
 Routed to Link SP53 :

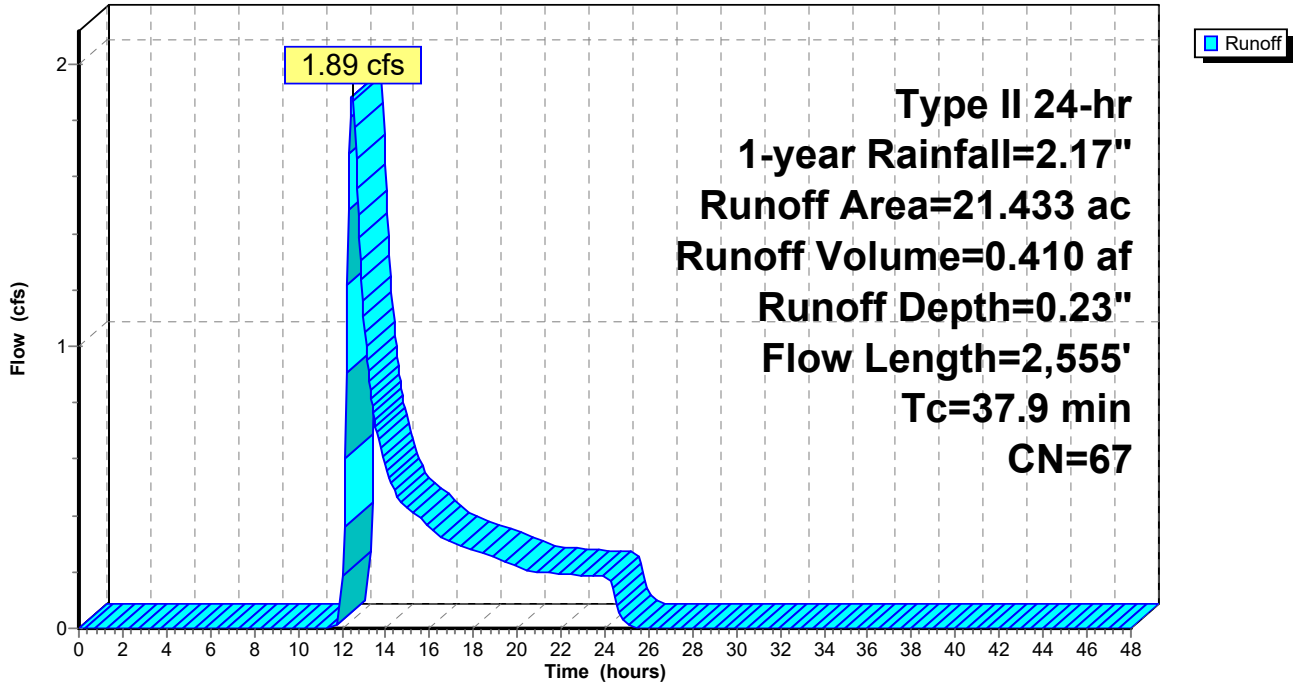
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.581     | 48 | Brush, Good, HSG B        |
| 0.993     | 65 | Brush, Good, HSG C        |
| 4.029     | 58 | Meadow, non-grazed, HSG B |
| 14.178    | 71 | Meadow, non-grazed, HSG C |
| 0.386     | 98 | Water Surface, HSG D      |
| 0.266     | 70 | Woods, Good, HSG C        |
| 21.433    | 67 | Weighted Average          |
| 21.047    |    | 98.20% Pervious Area      |
| 0.386     |    | 1.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.6     | 100           | 0.0100        | 0.11              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 2.4      | 347           | 0.1210        | 2.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.9      | 151           | 0.1656        | 2.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 19.3     | 1,511         | 0.0347        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 446           | 0.2690        | 11.02             | 16.53          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 37.9     | 2,555         | Total         |                   |                |   |

Subcatchment 53S: Sub 53

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Subcatchment 54S:**

Runoff = 6.04 cfs @ 12.45 hrs, Volume= 1.117 af, Depth= 0.28"  
 Routed to Link SP54 :

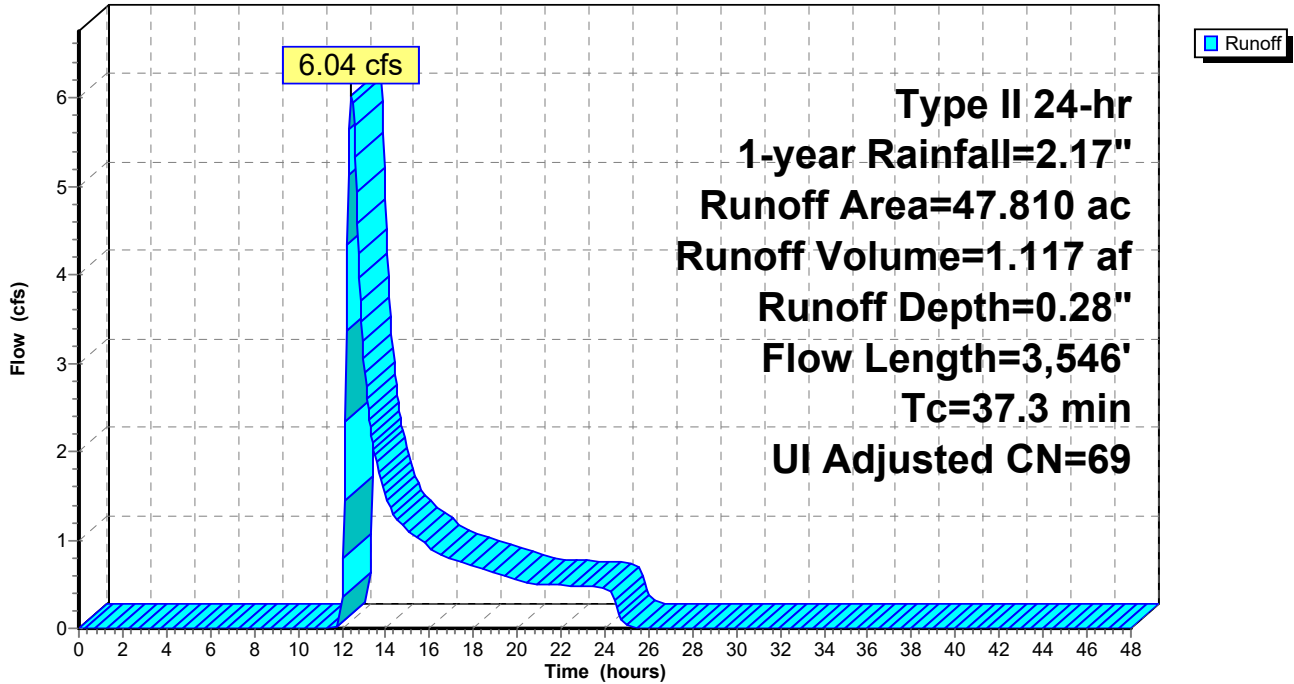
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 2.222     | 48 |     | Brush, Good, HSG B            |
| 4.975     | 65 |     | Brush, Good, HSG C            |
| 2.646     | 98 |     | Unconnected roofs, HSG D      |
| 5.842     | 58 |     | Meadow, non-grazed, HSG B     |
| 23.555    | 71 |     | Meadow, non-grazed, HSG C     |
| 2.361     | 61 |     | >75% Grass cover, Good, HSG B |
| 5.037     | 74 |     | >75% Grass cover, Good, HSG C |
| 1.095     | 98 |     | Water Surface, HSG D          |
| 0.043     | 55 |     | Woods, Good, HSG B            |
| 0.034     | 70 |     | Woods, Good, HSG C            |
| 47.810    | 70 | 69  | Weighted Average, UI Adjusted |
| 44.069    |    |     | 92.18% Pervious Area          |
| 3.741     |    |     | 7.82% Impervious Area         |
| 2.646     |    |     | 70.73% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.2     | 964           | 0.0420        | 1.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.8      | 166           | 0.0392        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 1.9      | 321           | 0.0312        | 2.84              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps  |
| 13.7     | 1,995         | 0.0253        | 2.42              | 8.07           | <b>Parabolic Channel,</b><br>W=5.00' D=1.00' Area=3.3 sf Perim=5.5'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 37.3     | 3,546         | Total         |                   |                |  |

Subcatchment 54S:

Hydrograph



**Mill Pt Pre 2**

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**Summary for Subcatchment 55S: Sub 55**

Runoff = 2.18 cfs @ 12.41 hrs, Volume= 0.467 af, Depth= 0.21"

Routed to Link SP55 :

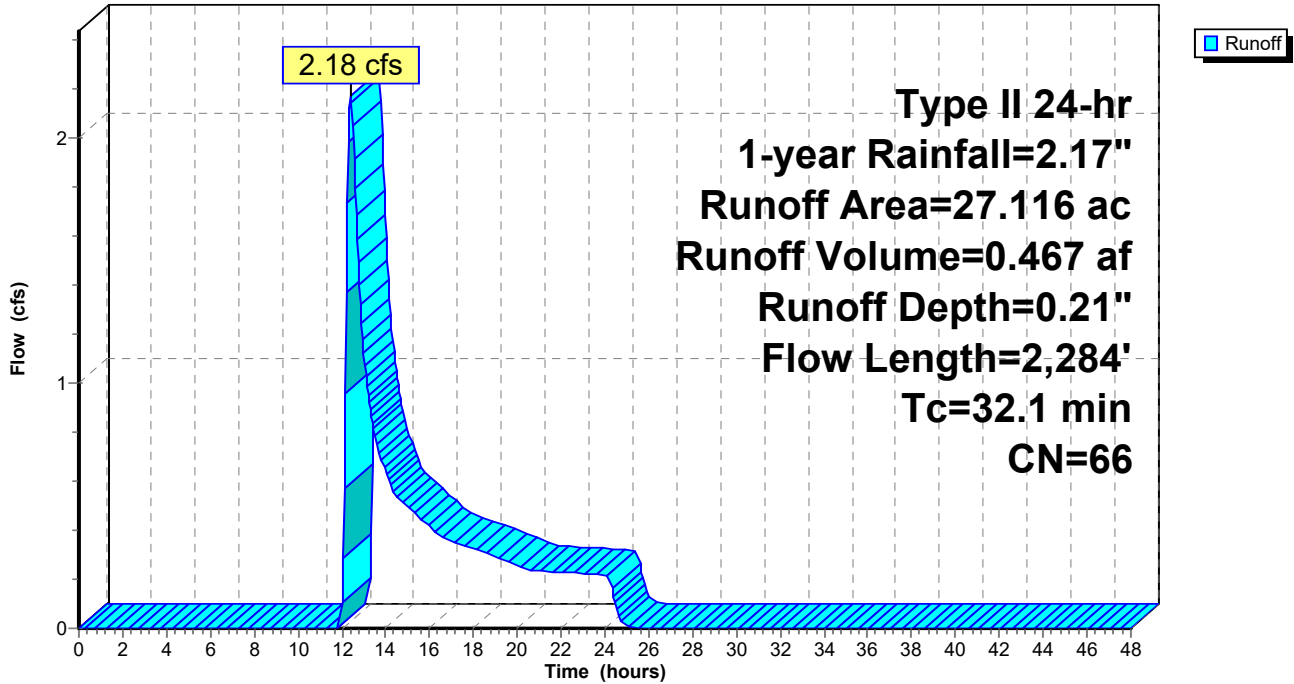
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.416     | 48 | Brush, Good, HSG B        |
| 0.206     | 65 | Brush, Good, HSG C        |
| 0.193     | 98 | Unconnected roofs, HSG D  |
| 9.177     | 58 | Meadow, non-grazed, HSG B |
| 16.698    | 71 | Meadow, non-grazed, HSG C |
| 0.190     | 55 | Woods, Good, HSG B        |
| 0.236     | 70 | Woods, Good, HSG C        |
| 27.116    | 66 | Weighted Average          |
| 26.923    |    | 99.29% Pervious Area      |
| 0.193     |    | 0.71% Impervious Area     |
| 0.193     |    | 100.00% Unconnected       |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 4.5      | 535           | 0.0813        | 2.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 11.9     | 1,175         | 0.0549        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.3      | 474           | 0.0527        | 3.39              | 9.05           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 32.1     | 2,284         | Total         |                   |                |  |

Subcatchment 55S: Sub 55

Hydrograph



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**Summary for Subcatchment 56S: Sub 56**

Runoff = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af, Depth= 0.23"  
 Routed to Link SP56 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 1-year Rainfall=2.17"

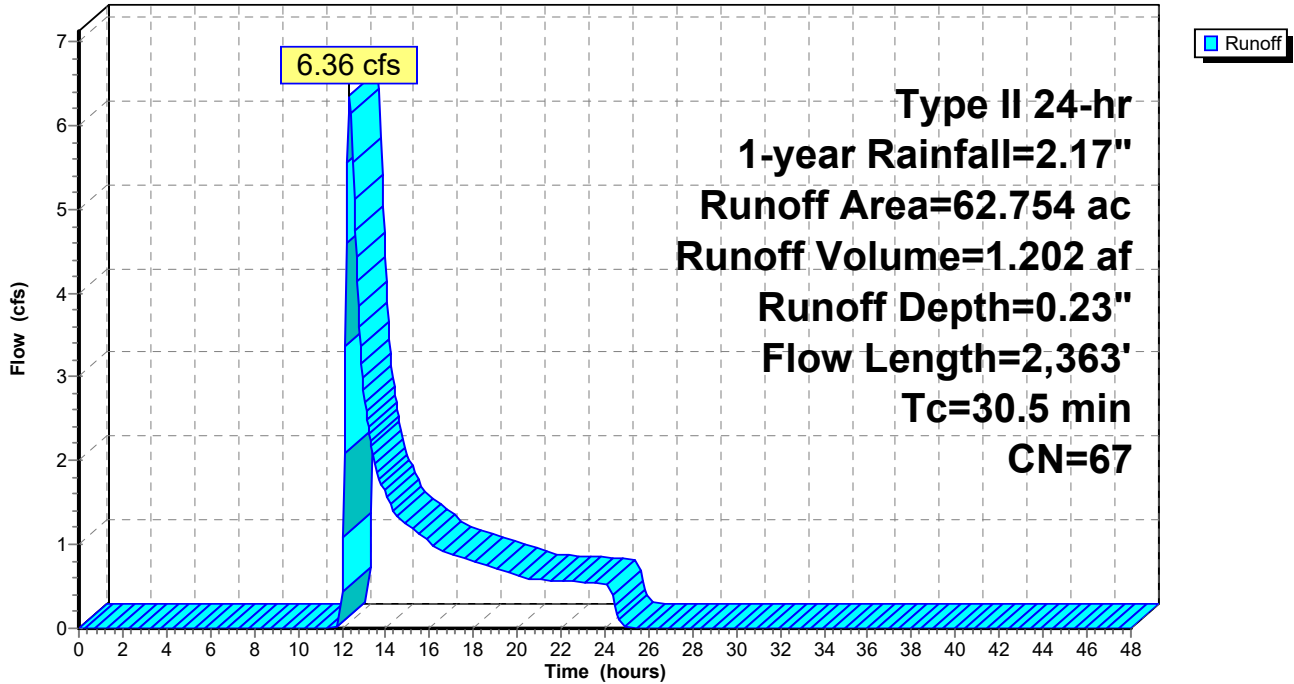
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.895     | 48 | Brush, Good, HSG B        |
| 1.460     | 65 | Brush, Good, HSG C        |
| 13.366    | 58 | Meadow, non-grazed, HSG B |
| 40.081    | 71 | Meadow, non-grazed, HSG C |
| 1.244     | 55 | Woods, Good, HSG B        |
| 5.708     | 70 | Woods, Good, HSG C        |
| 62.754    | 67 | Weighted Average          |
| 62.754    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.3      | 501           | 0.0264        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.2      | 958           | 0.1336        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.8      | 644           | 0.0505        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.9      | 160           | 0.0344        | 0.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.5     | 2,363         | Total         |                   |                |  |



Subcatchment 56S: Sub 56

Hydrograph



# Mill Pt Pre 2

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## Summary for Reach 33R:

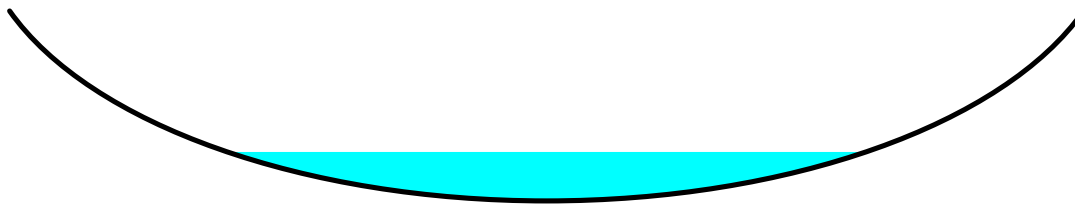
[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 0.26'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.13" for 1-year event  
Inflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
Outflow = 0.58 cfs @ 13.36 hrs, Volume= 0.271 af, Atten= 29%, Lag= 59.9 min  
Routed to Link SP34 : SP31

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.11 fps, Min. Travel Time= 28.2 min  
Avg. Velocity = 0.42 fps, Avg. Travel Time= 75.1 min

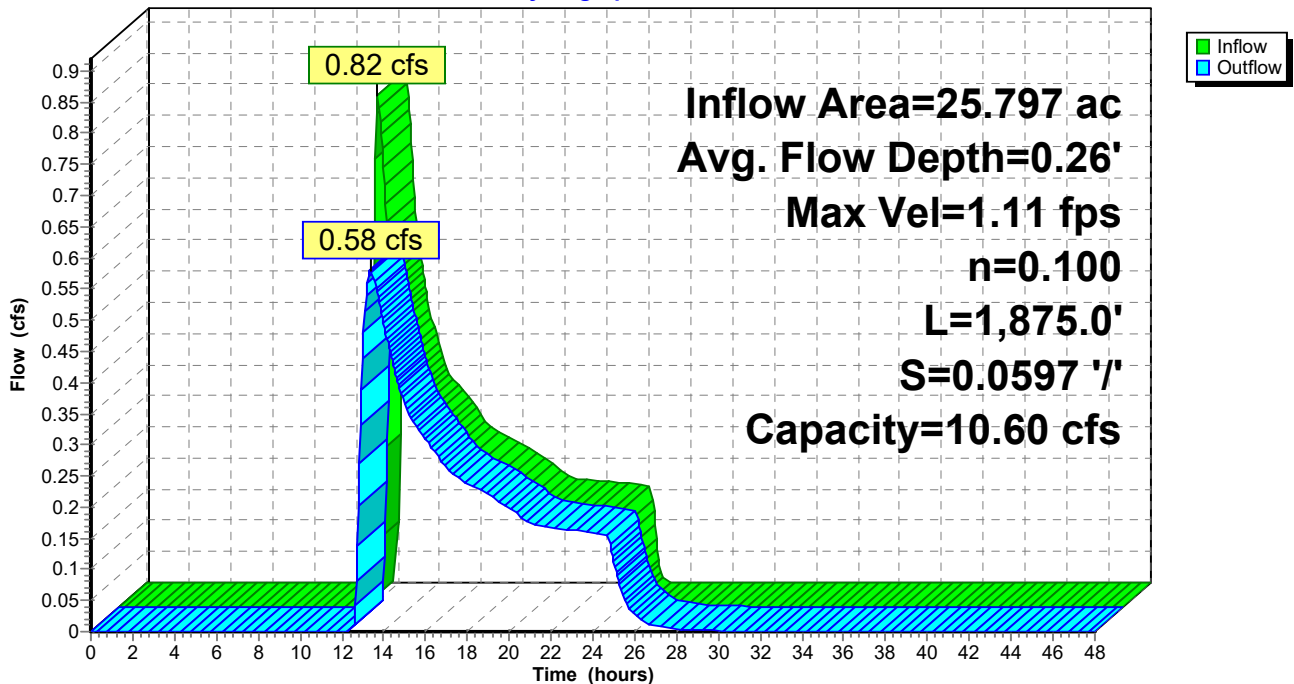
Peak Storage= 982 cf @ 12.89 hrs  
Average Depth at Peak Storage= 0.26' , Surface Width= 3.05'  
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,875.0' Slope= 0.0597 '/'  
Inlet Invert= 578.00', Outlet Invert= 466.00'



## Reach 33R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 1-year Rainfall=2.17"

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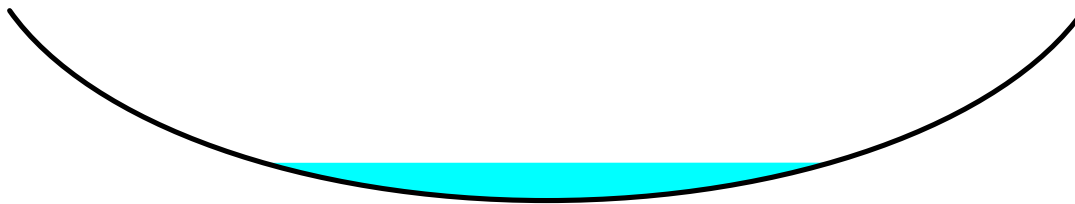
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 3.15 cfs @ 12.32 hrs, Volume= 0.488 af  
Outflow = 2.69 cfs @ 12.61 hrs, Volume= 0.488 af, Atten= 14%, Lag= 17.8 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.91 fps, Min. Travel Time= 9.7 min  
Avg. Velocity = 0.76 fps, Avg. Travel Time= 24.3 min

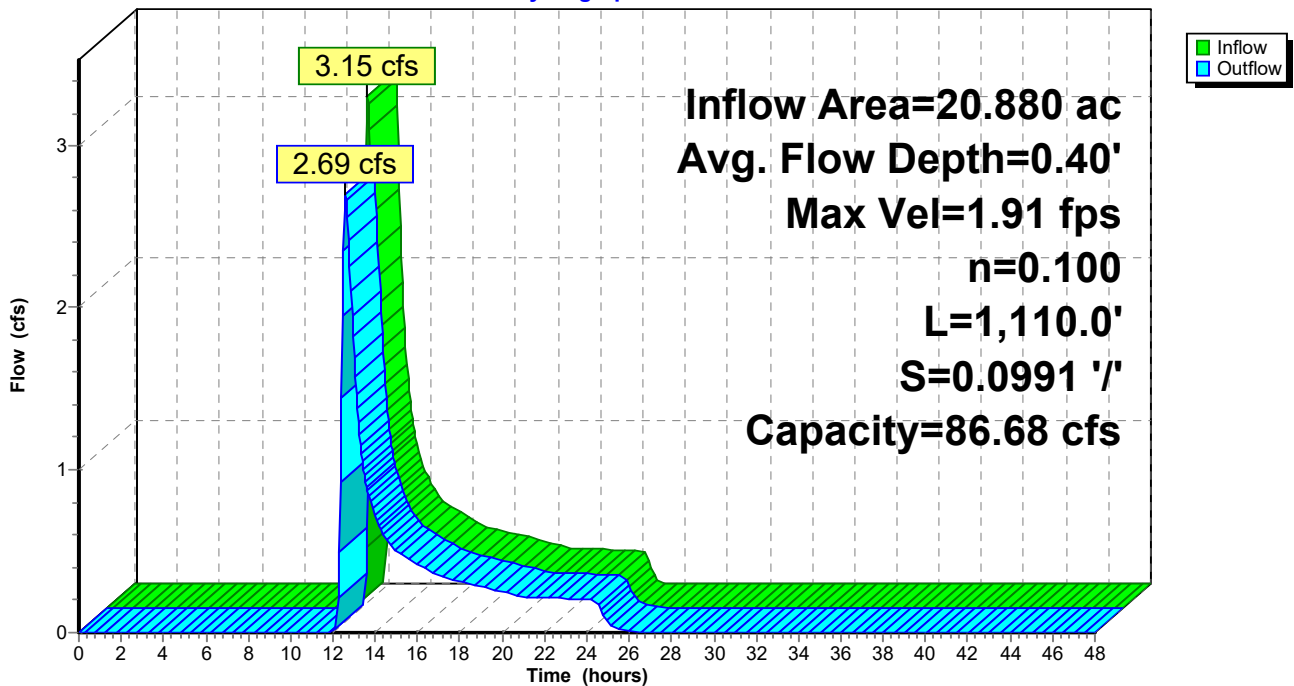
Peak Storage= 1,571 cf @ 12.45 hrs  
Average Depth at Peak Storage= 0.40' , Surface Width= 5.35'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 1-year Rainfall=2.17"

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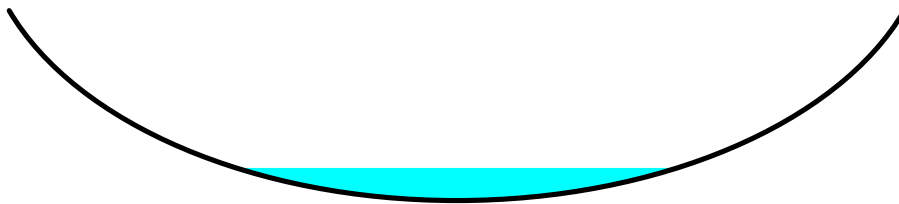
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 1.56 cfs @ 12.56 hrs, Volume= 0.459 af  
Outflow = 1.21 cfs @ 13.33 hrs, Volume= 0.459 af, Atten= 23%, Lag= 45.9 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 1.27 fps, Min. Travel Time= 23.5 min  
Avg. Velocity = 0.52 fps, Avg. Travel Time= 57.7 min

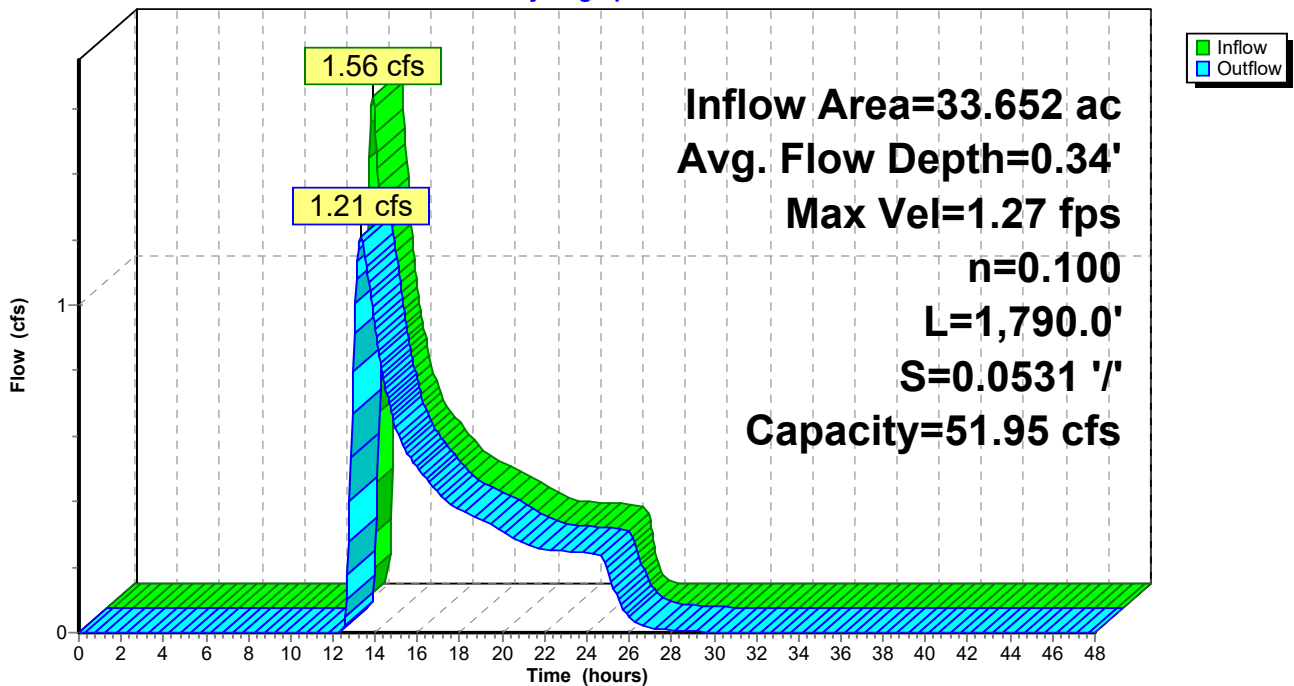
Peak Storage= 1,704 cf @ 12.93 hrs  
Average Depth at Peak Storage= 0.34' , Surface Width= 4.15'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



**Mill Pt Pre 2**

Type II 24-hr 1-year Rainfall=2.17"

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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.13" for 1-year event  
 Inflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
 Outflow = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.4 min  
 Primary = 0.82 cfs @ 12.36 hrs, Volume= 0.271 af  
 Routed to Reach 33R :  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 580.48' @ 12.36 hrs Surf.Area= 67 sf Storage= 12 cf

Plug-Flow detention time= 0.2 min calculated for 0.271 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 998.2 - 998.1 )

| Volume           | Invert            | Avail.Storage | Storage Description  |                        |                  |  |
|------------------|-------------------|---------------|--|------------------------|------------------|--|
| #1               | 580.00'           | 32,769 cf     | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                        |                  |  |
| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet)                                     | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |  |
| 580.00           | 1                 | 5.0           | 0  | 0                      | 1                |  |
| 582.00           | 935               | 220.0         | 644  | 644                    | 3,857            |  |
| 584.00           | 6,900             | 505.0         | 6,917  | 7,561                  | 20,316           |  |
| 585.00           | 12,860            | 515.0         | 9,727  | 17,288                 | 21,274           |  |
| 586.00           | 18,260            | 645.0         | 15,481   | 32,769                 | 33,289           |  |

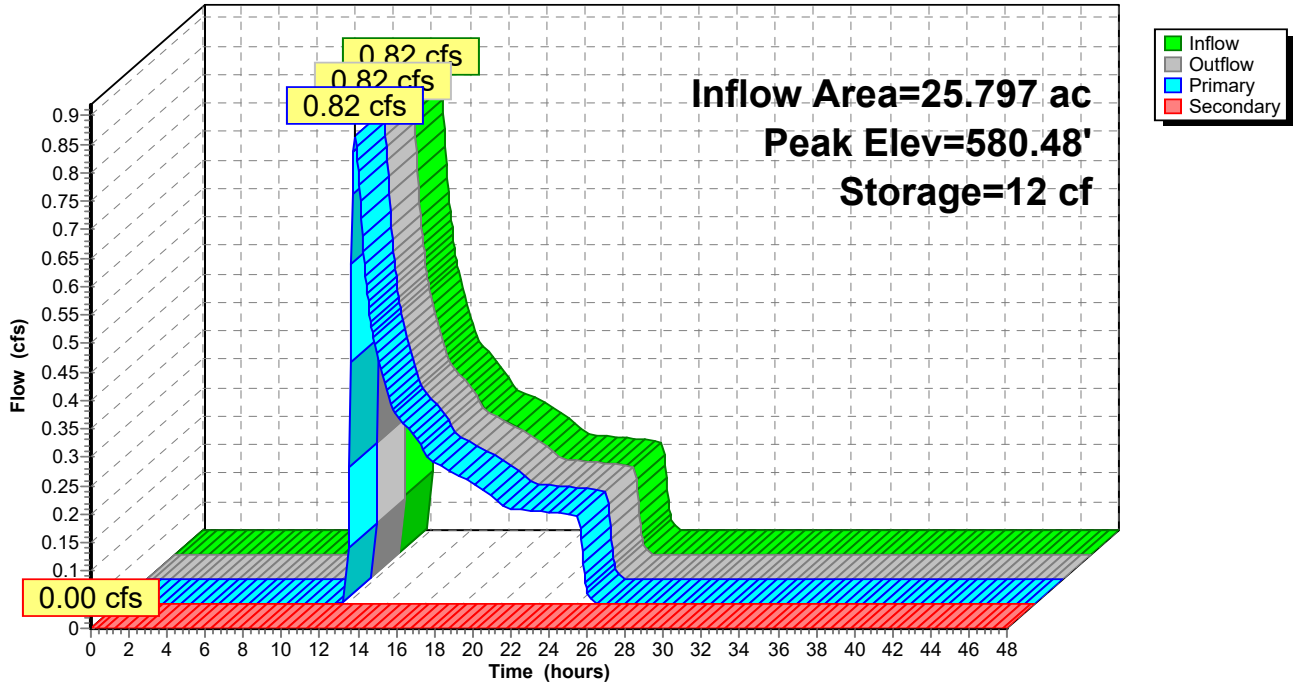
| Device | Routing   | Invert  | Outlet Devices   |
|--------|-----------|---------|--|
| #1     | Primary   | 580.00' | <b>15.0" Round Culvert</b><br>L= 79.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf |
| #2     | Secondary | 585.00' | <b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63                |

**Primary OutFlow** Max=0.82 cfs @ 12.36 hrs HW=580.48' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 0.82 cfs @ 1.87 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=580.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



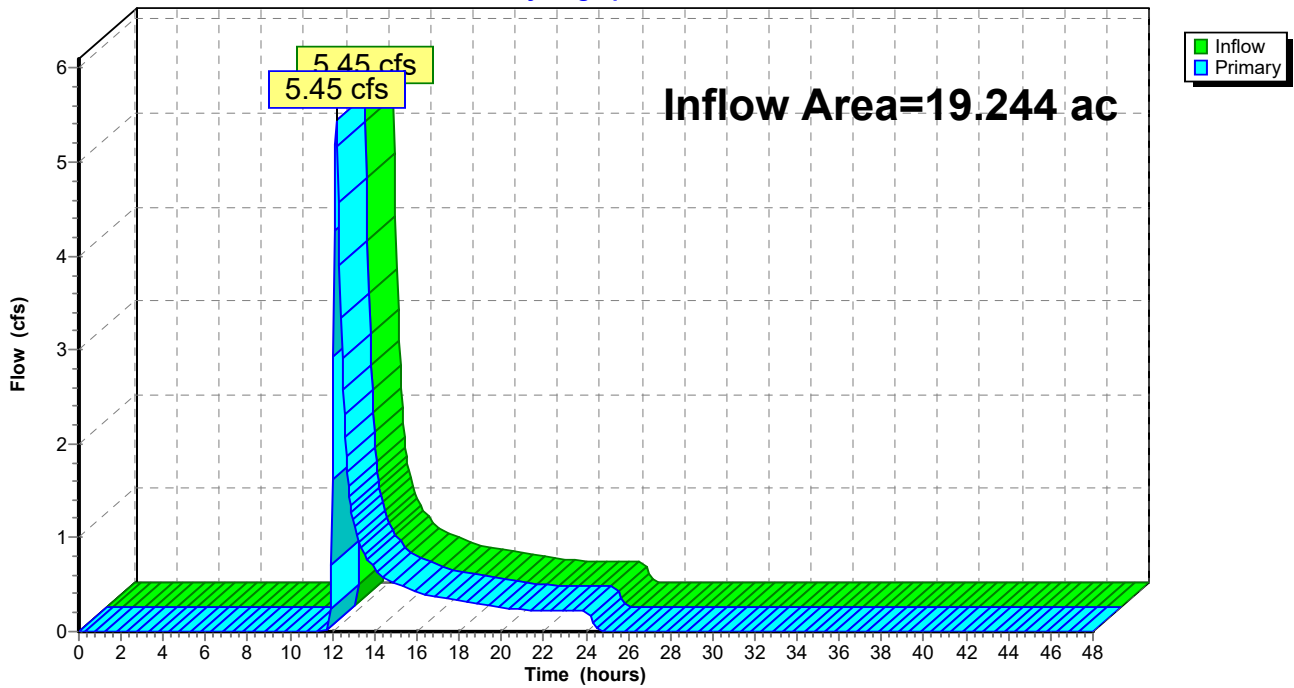
Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 0.37" for 1-year event  
Inflow = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af  
Primary = 5.45 cfs @ 12.20 hrs, Volume= 0.589 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP25:

Hydrograph





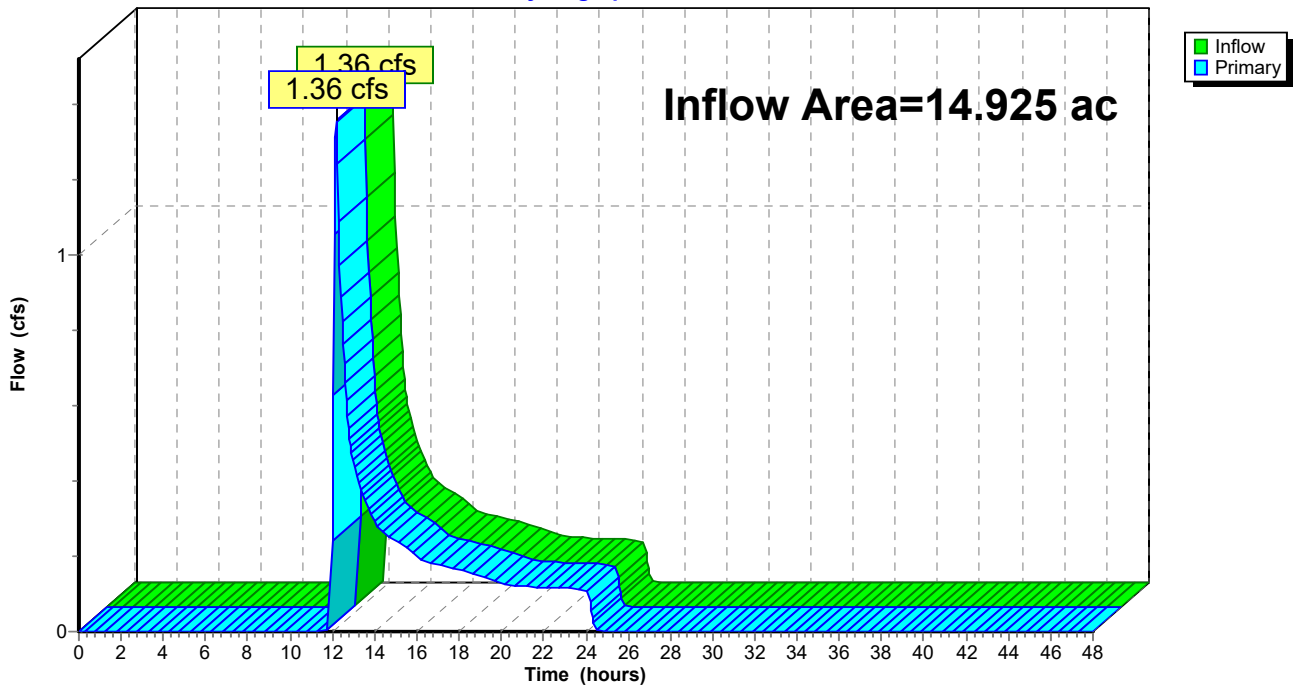
### Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af  
Primary = 1.36 cfs @ 12.19 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP26:

Hydrograph



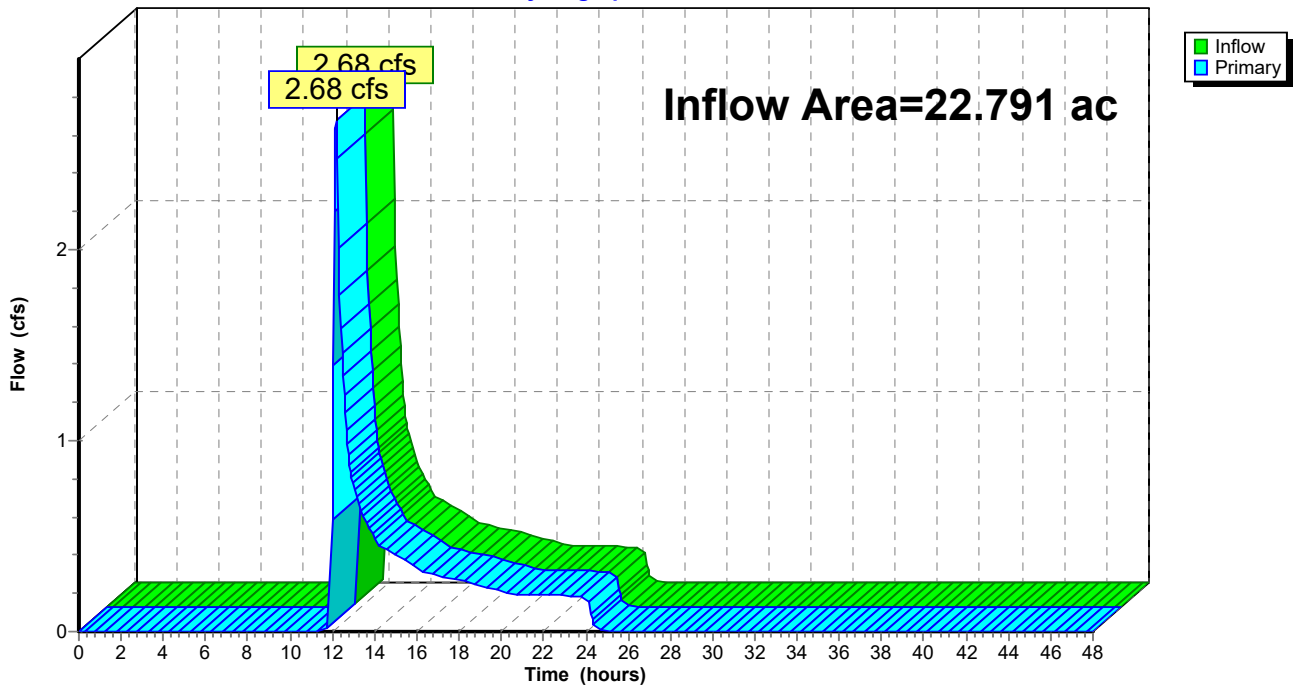
Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af  
Primary = 2.68 cfs @ 12.17 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP27:

Hydrograph



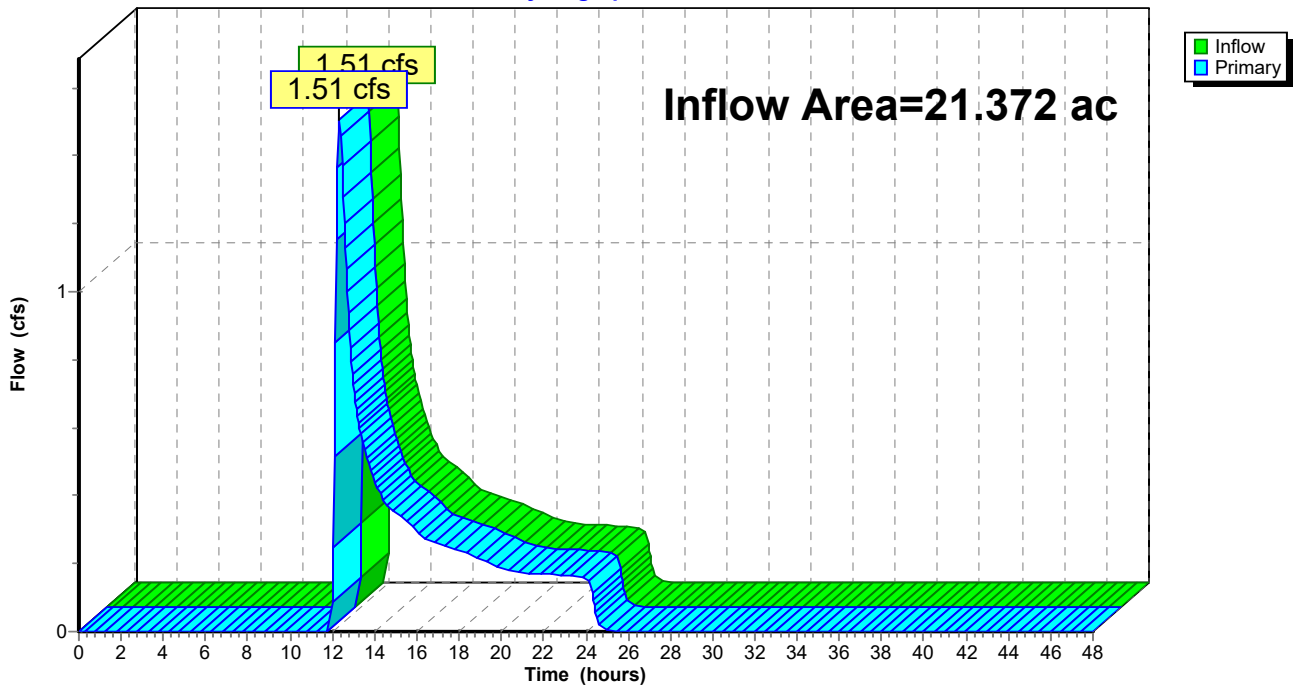
Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af  
Primary = 1.51 cfs @ 12.34 hrs, Volume= 0.329 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP28:

Hydrograph



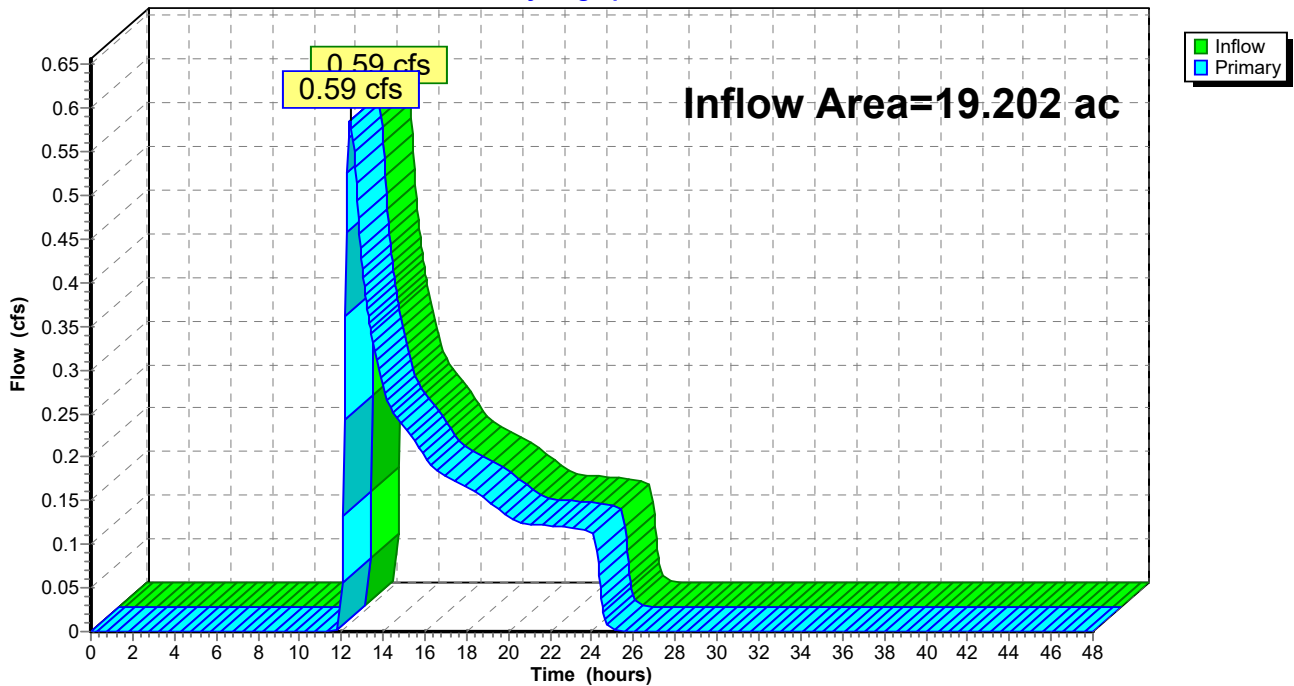
### Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 0.13" for 1-year event  
Inflow = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af  
Primary = 0.59 cfs @ 12.42 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP29:

Hydrograph



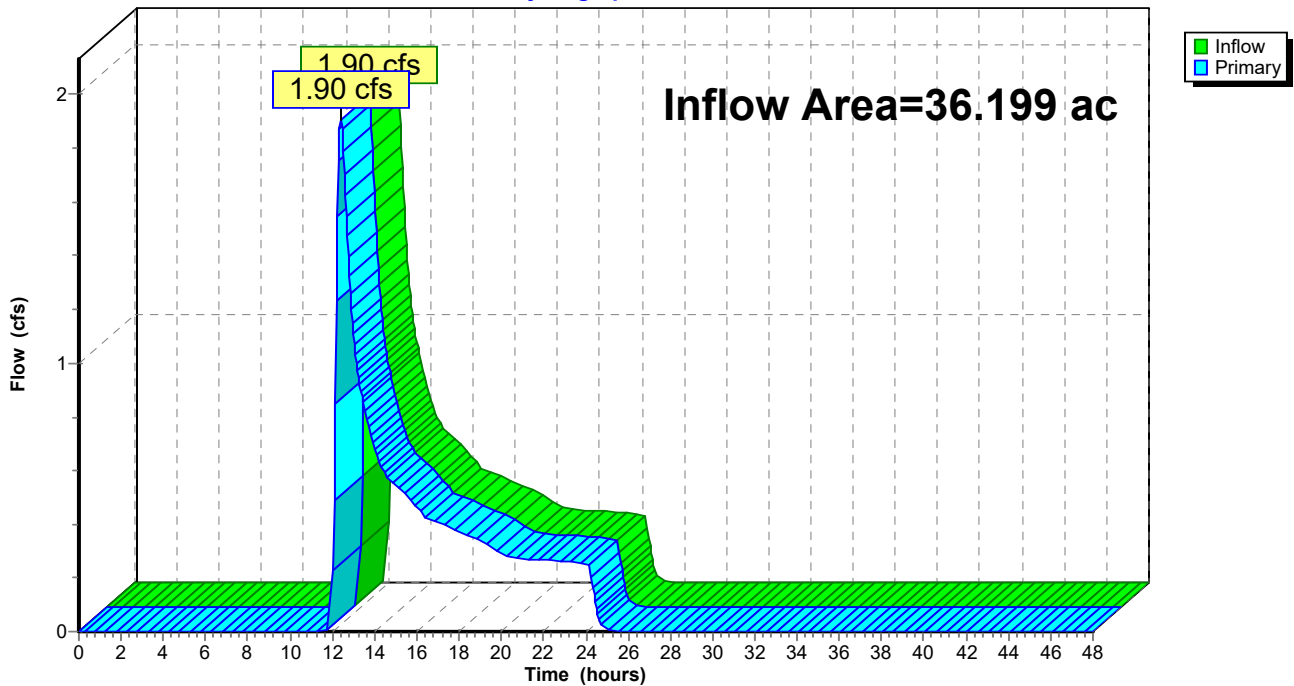
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af  
Primary = 1.90 cfs @ 12.40 hrs, Volume= 0.494 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



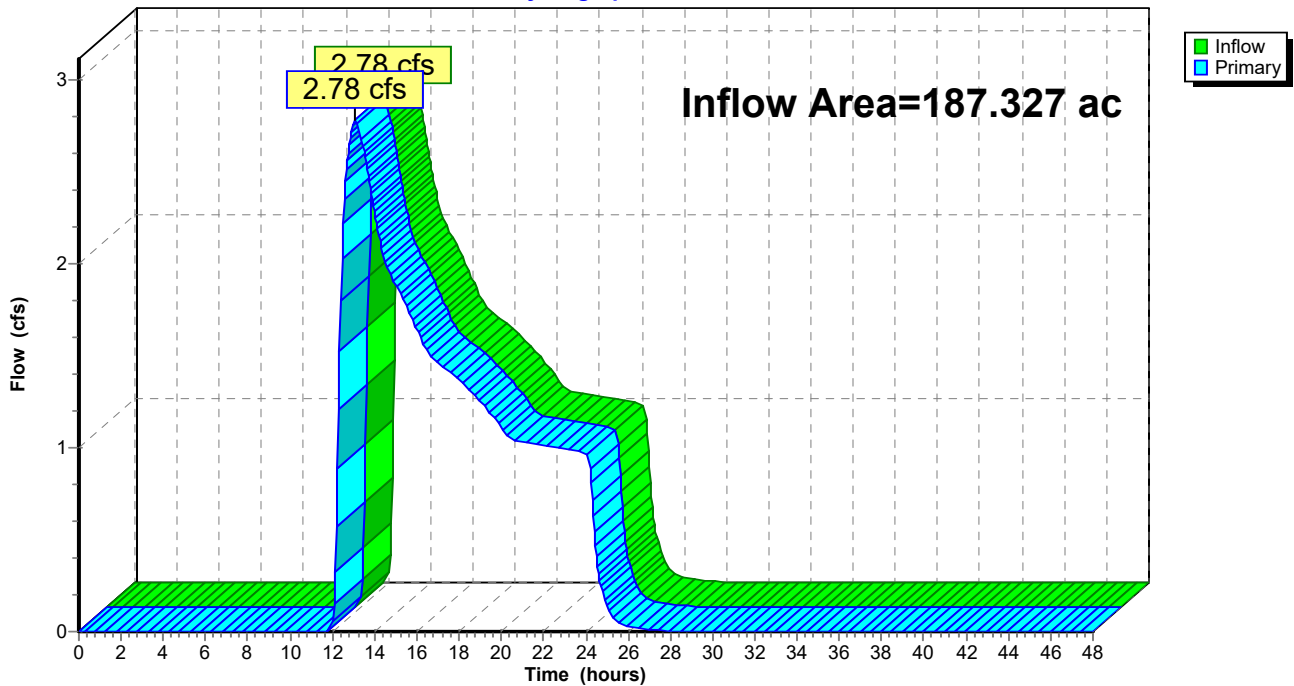
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 0.10" for 1-year event  
Inflow = 2.78 cfs @ 13.09 hrs, Volume= 1.508 af  
Primary = 2.78 cfs @ 13.09 hrs, Volume= 1.508 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



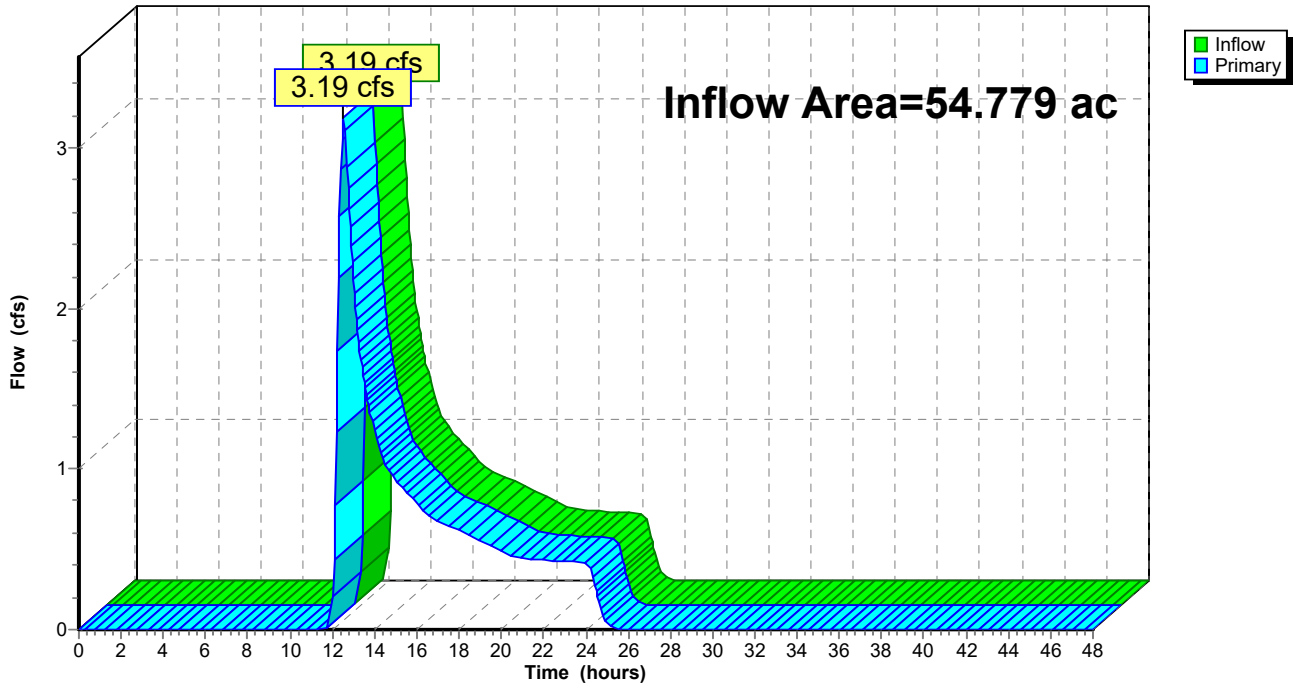
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 0.18" for 1-year event  
Inflow = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af  
Primary = 3.19 cfs @ 12.54 hrs, Volume= 0.842 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph





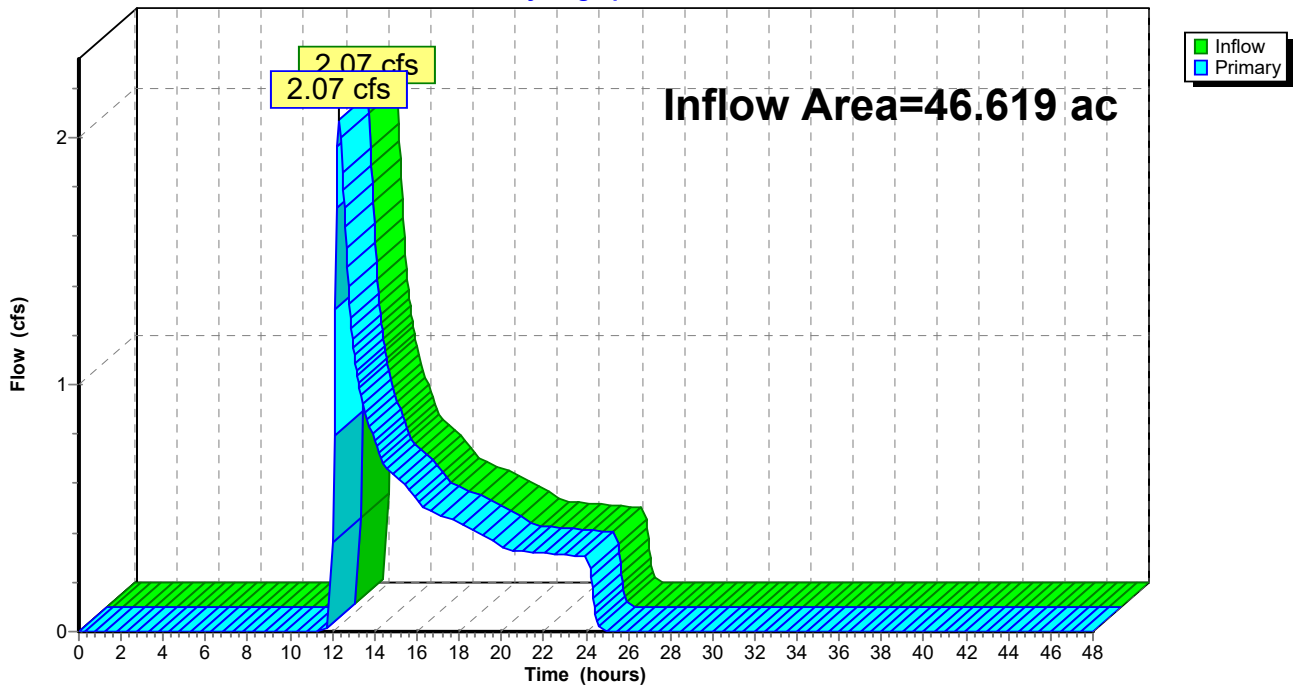
### Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af  
Primary = 2.07 cfs @ 12.32 hrs, Volume= 0.560 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP36:

Hydrograph



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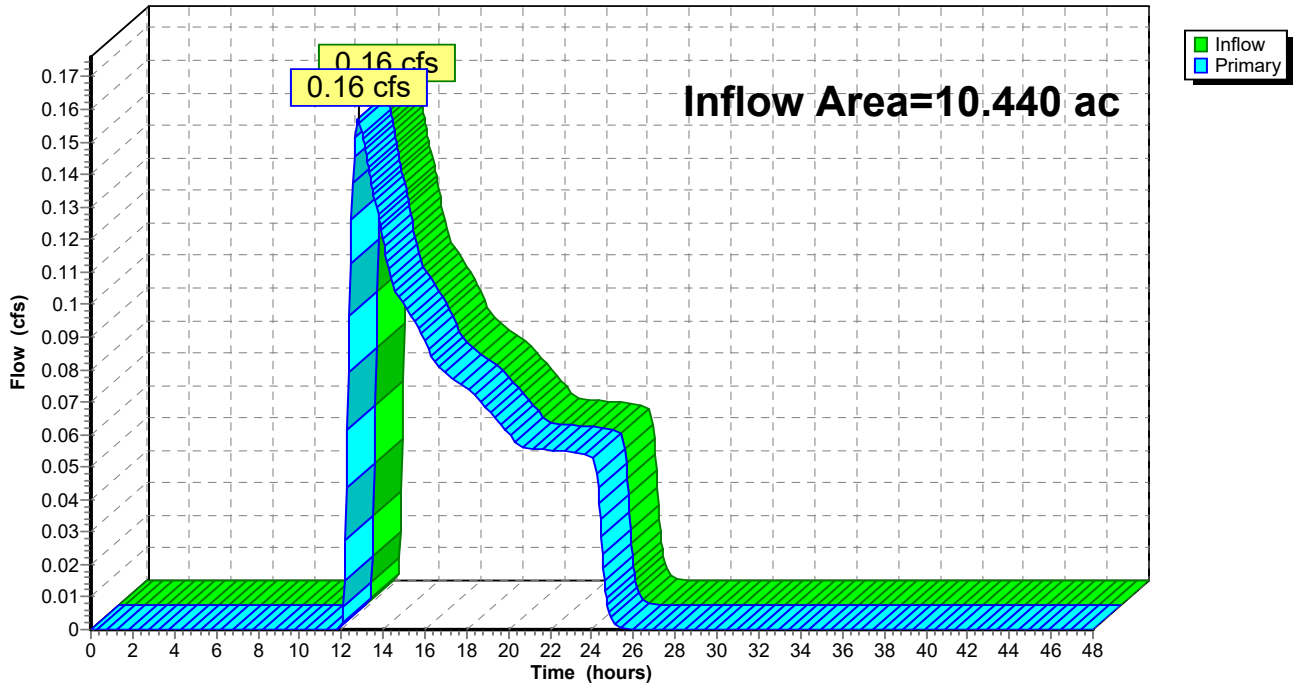
**Summary for Link SP37:**

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 0.09" for 1-year event  
Inflow = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af  
Primary = 0.16 cfs @ 12.80 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP37:**

Hydrograph



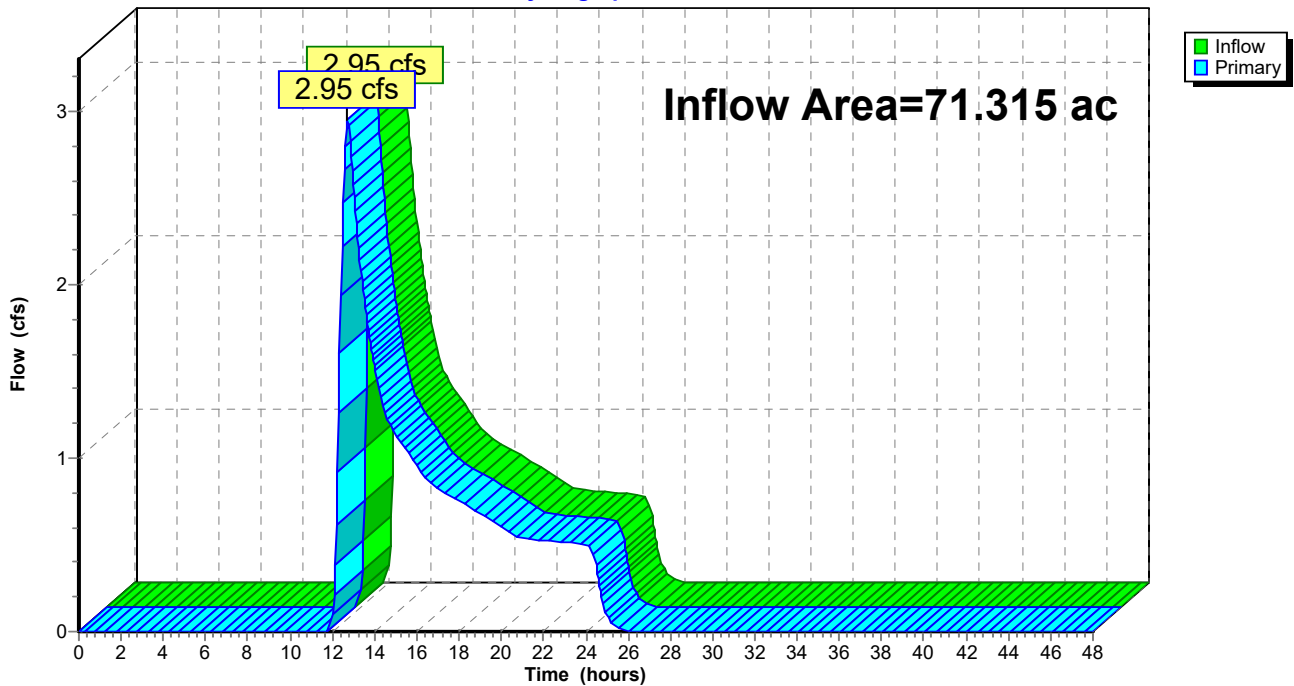
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af  
Primary = 2.95 cfs @ 12.72 hrs, Volume= 0.973 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph



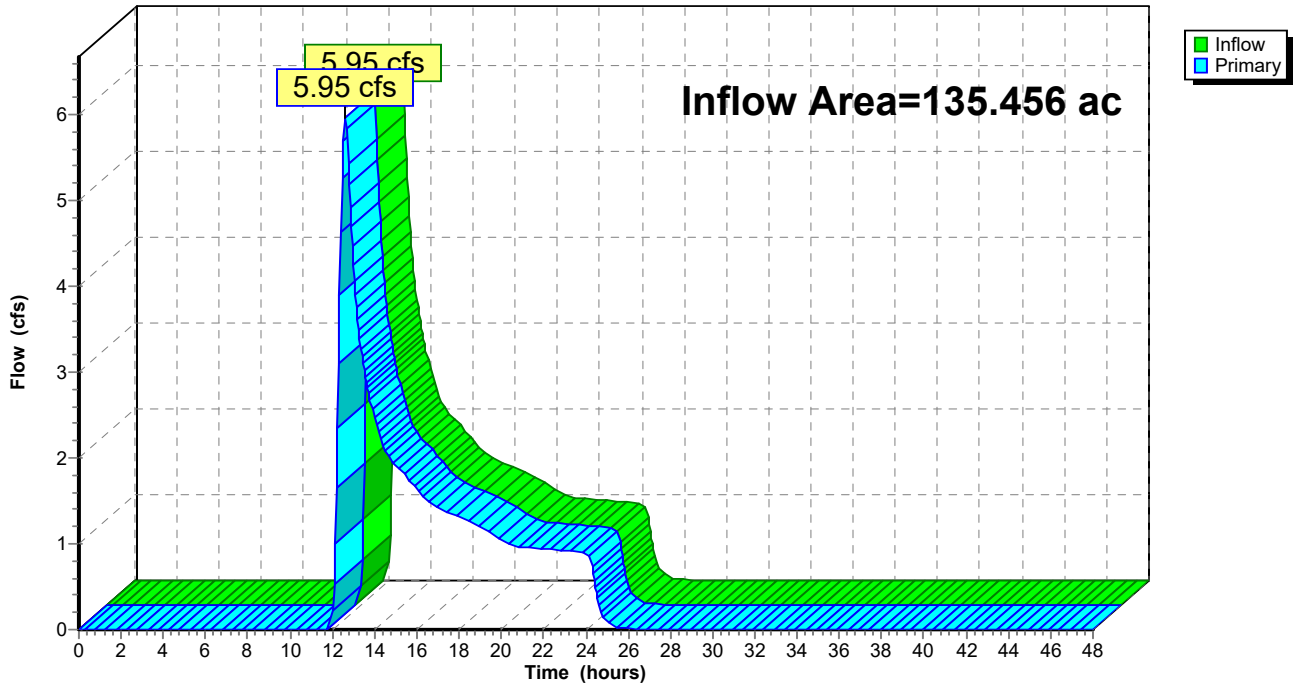
### Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 0.15" for 1-year event  
Inflow = 5.95 cfs @ 12.59 hrs, Volume= 1.691 af  
Primary = 5.95 cfs @ 12.59 hrs, Volume= 1.691 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP39:

Hydrograph



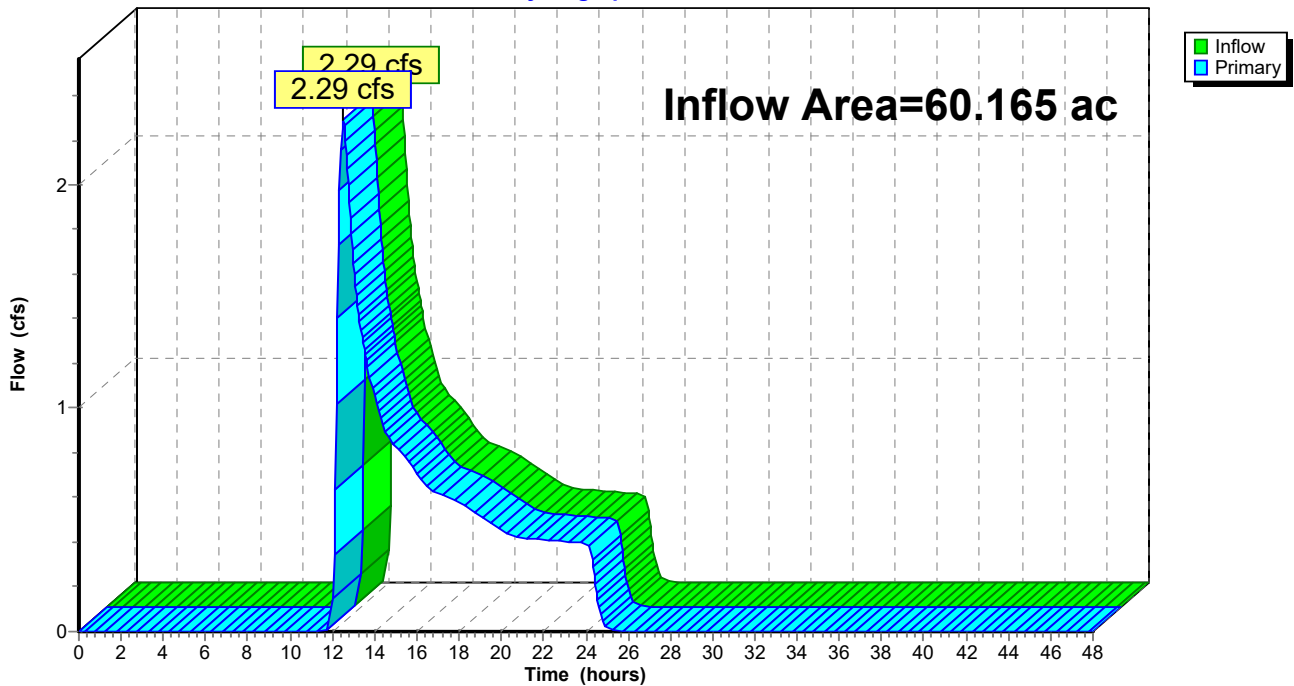
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af  
Primary = 2.29 cfs @ 12.51 hrs, Volume= 0.723 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



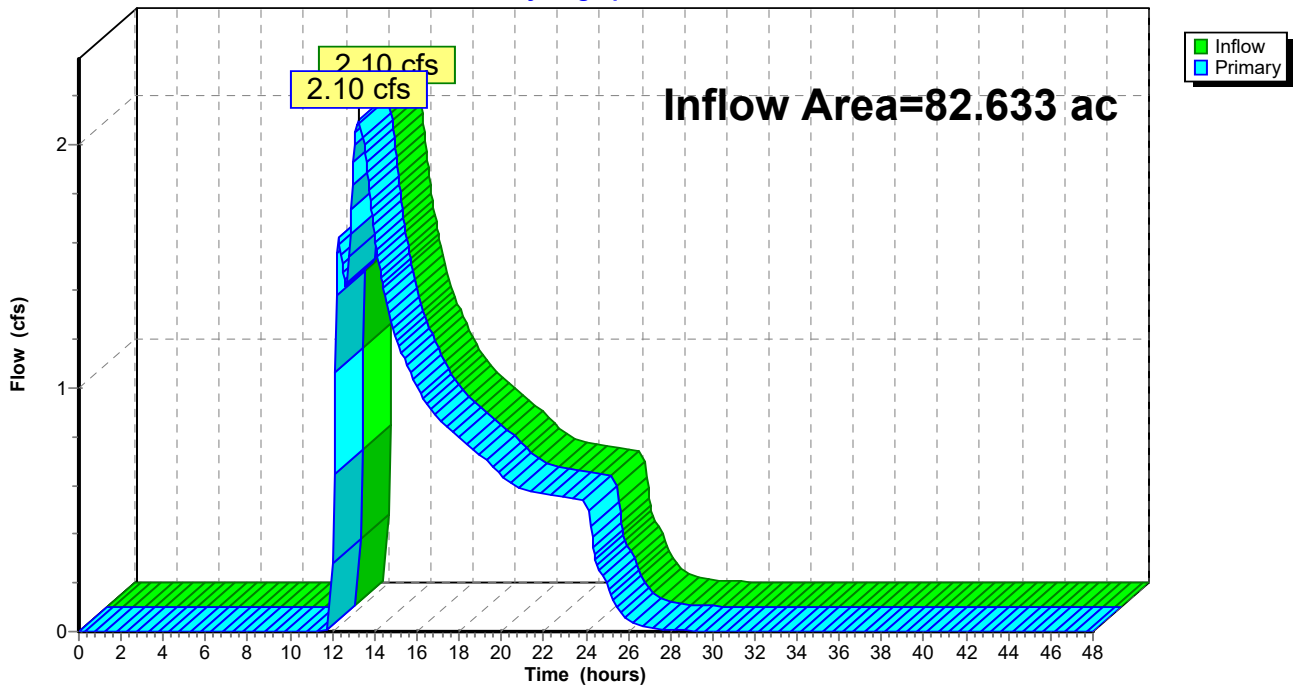
### Summary for Link SP42:

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 0.14" for 1-year event  
Inflow = 2.10 cfs @ 13.24 hrs, Volume= 0.974 af  
Primary = 2.10 cfs @ 13.24 hrs, Volume= 0.974 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP42:

Hydrograph



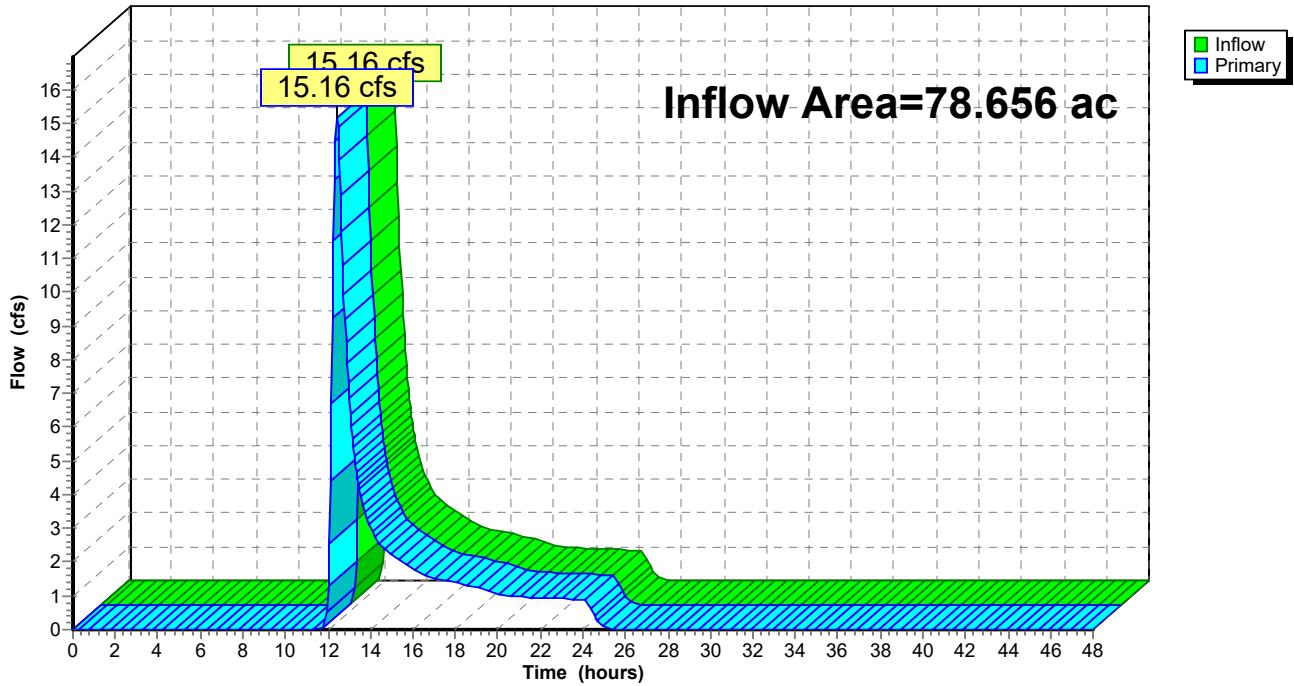
### Summary for Link SP48:

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 0.37" for 1-year event  
Inflow = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af  
Primary = 15.16 cfs @ 12.42 hrs, Volume= 2.406 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP48:

Hydrograph





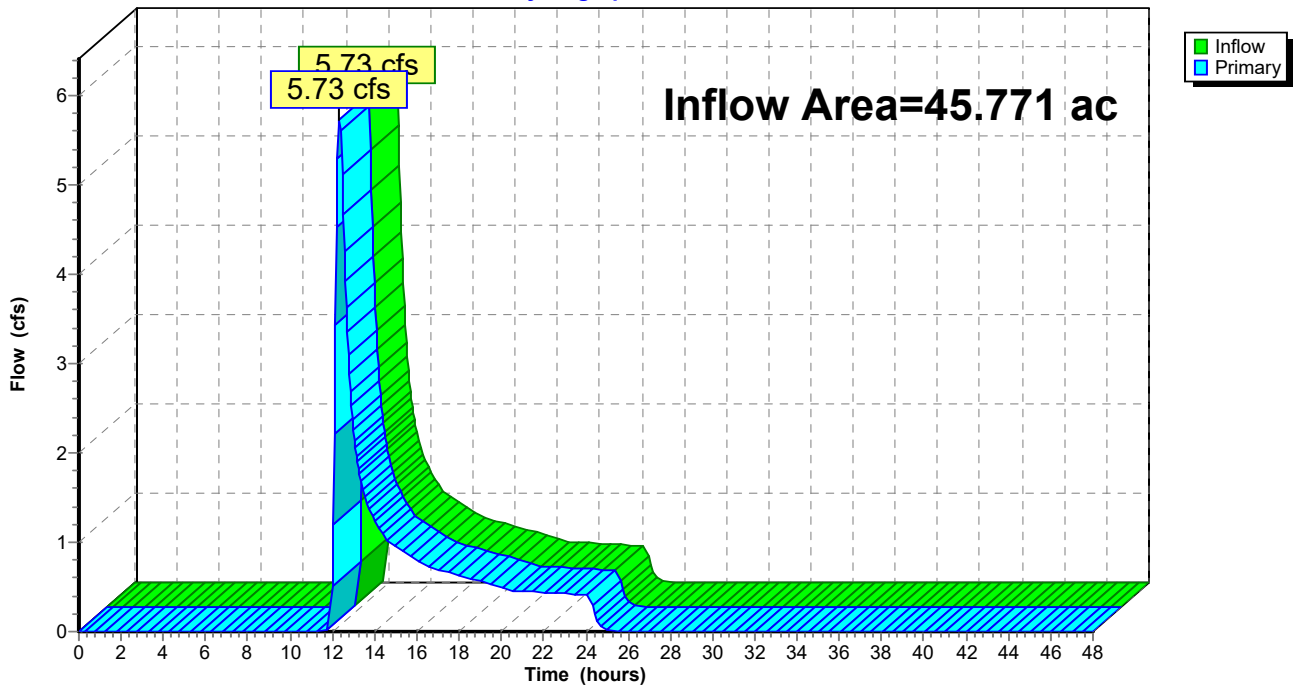
### Summary for Link SP50:

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 0.25" for 1-year event  
Inflow = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af  
Primary = 5.73 cfs @ 12.33 hrs, Volume= 0.970 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP50:

Hydrograph



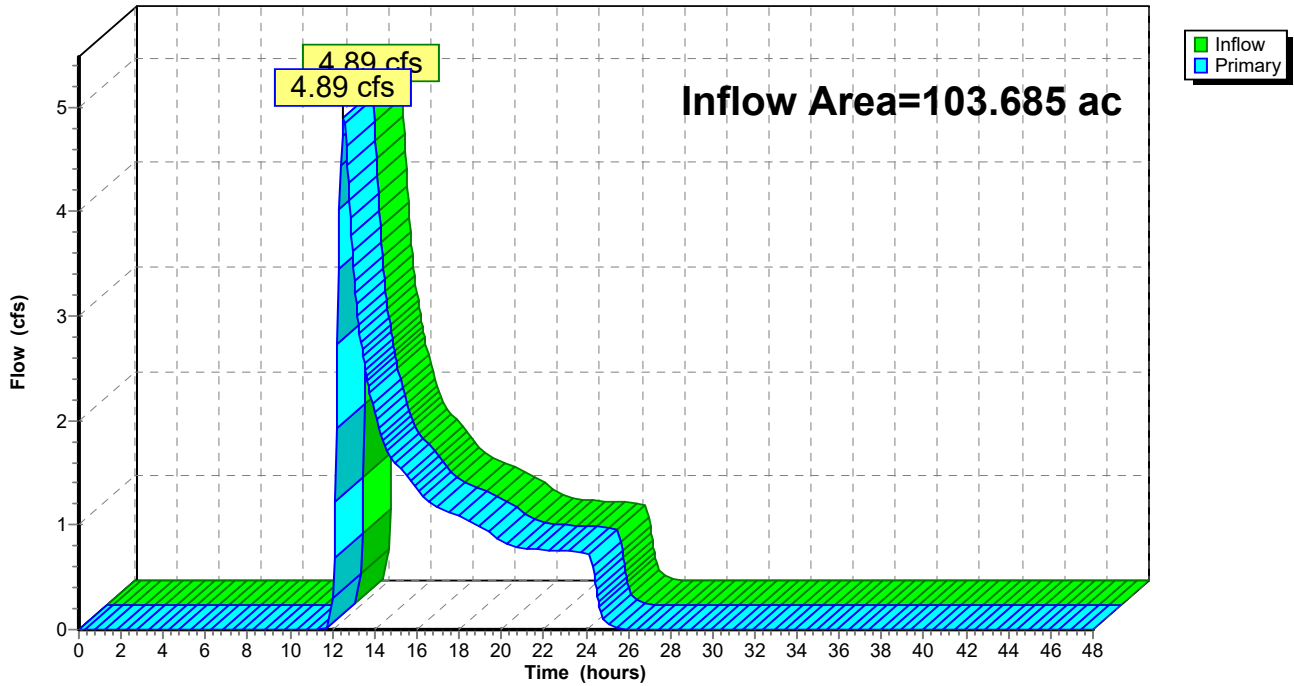
### Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 0.16" for 1-year event  
Inflow = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af  
Primary = 4.89 cfs @ 12.54 hrs, Volume= 1.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph



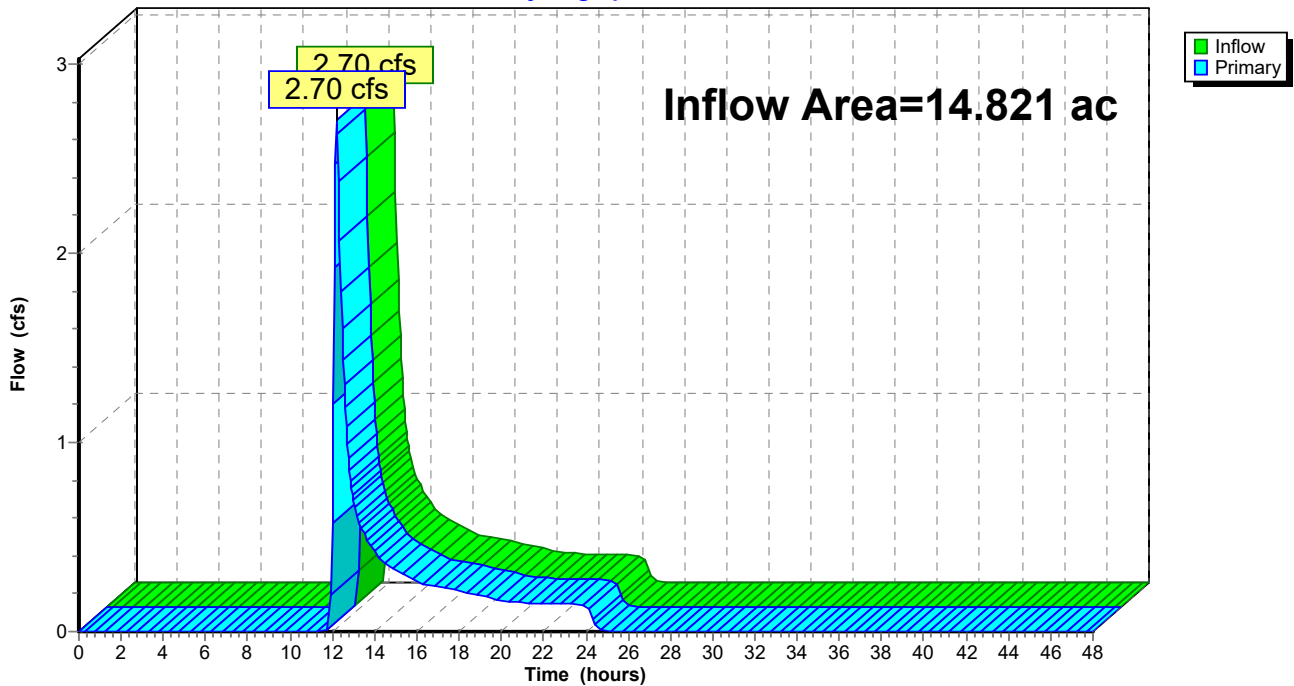
### Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af  
Primary = 2.70 cfs @ 12.21 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP52:

Hydrograph



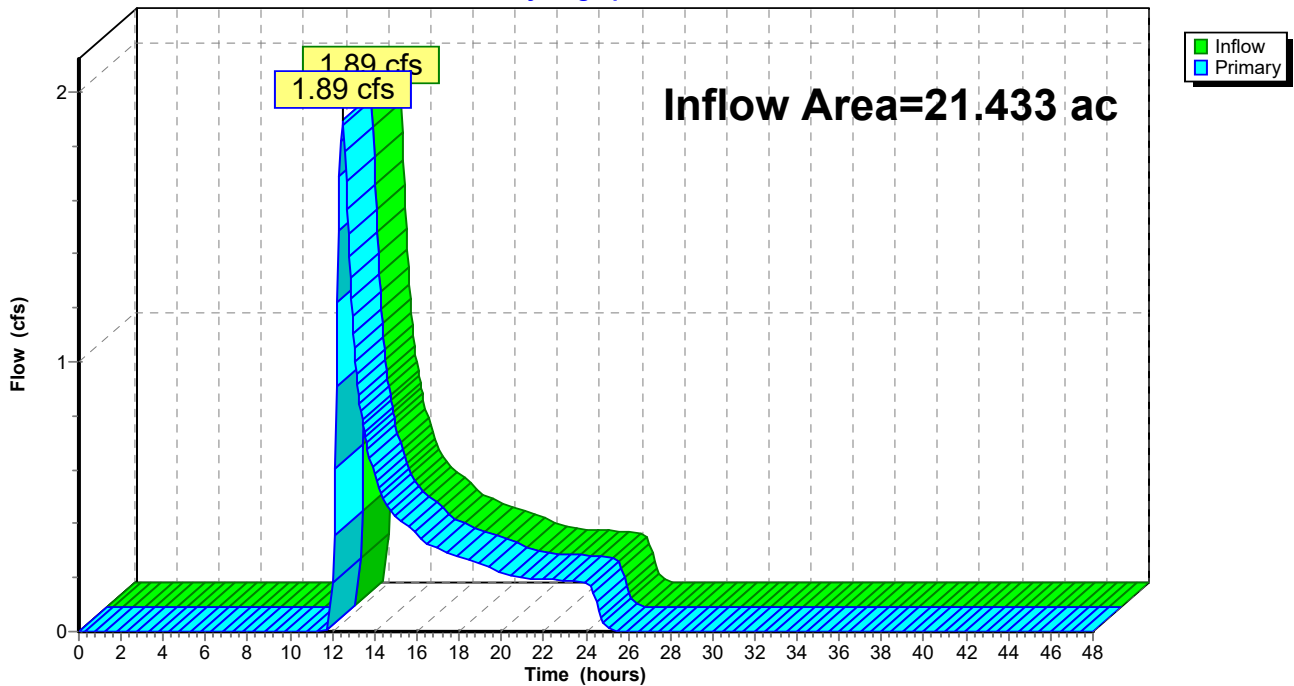
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af  
Primary = 1.89 cfs @ 12.48 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph



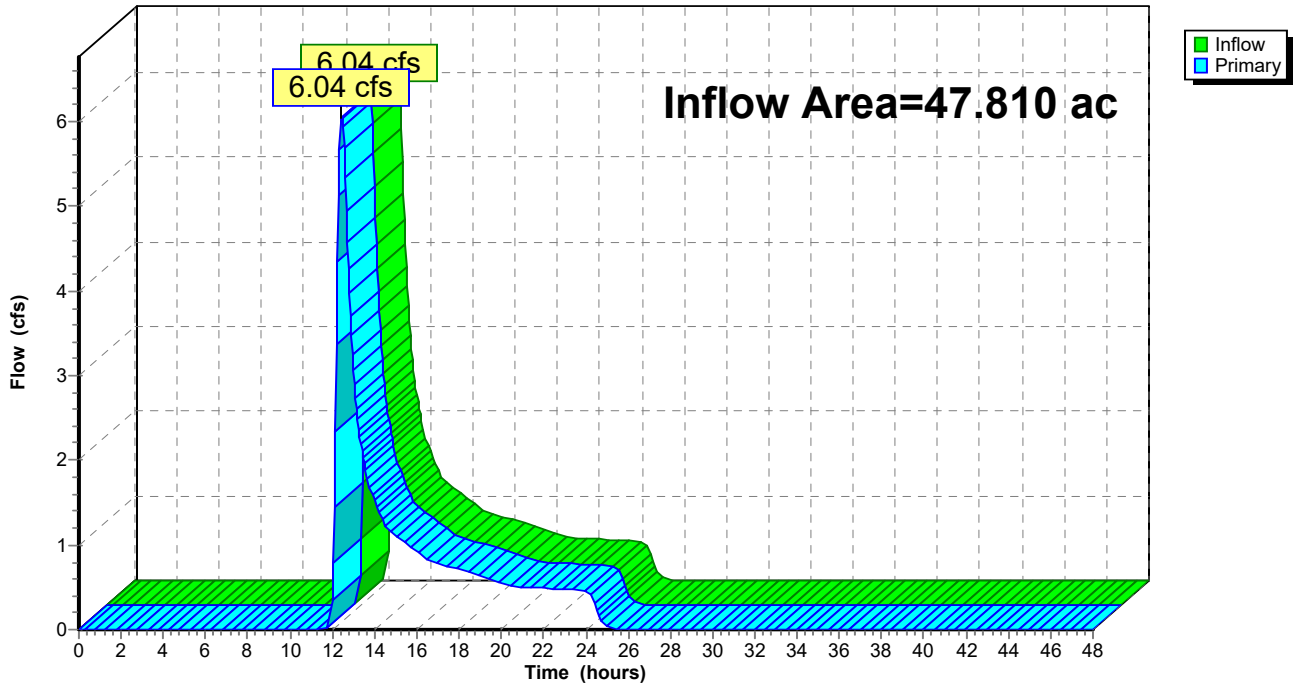
### Summary for Link SP54:

Inflow Area = 47.810 ac, 7.82% Impervious, Inflow Depth = 0.28" for 1-year event  
Inflow = 6.04 cfs @ 12.45 hrs, Volume= 1.117 af  
Primary = 6.04 cfs @ 12.45 hrs, Volume= 1.117 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



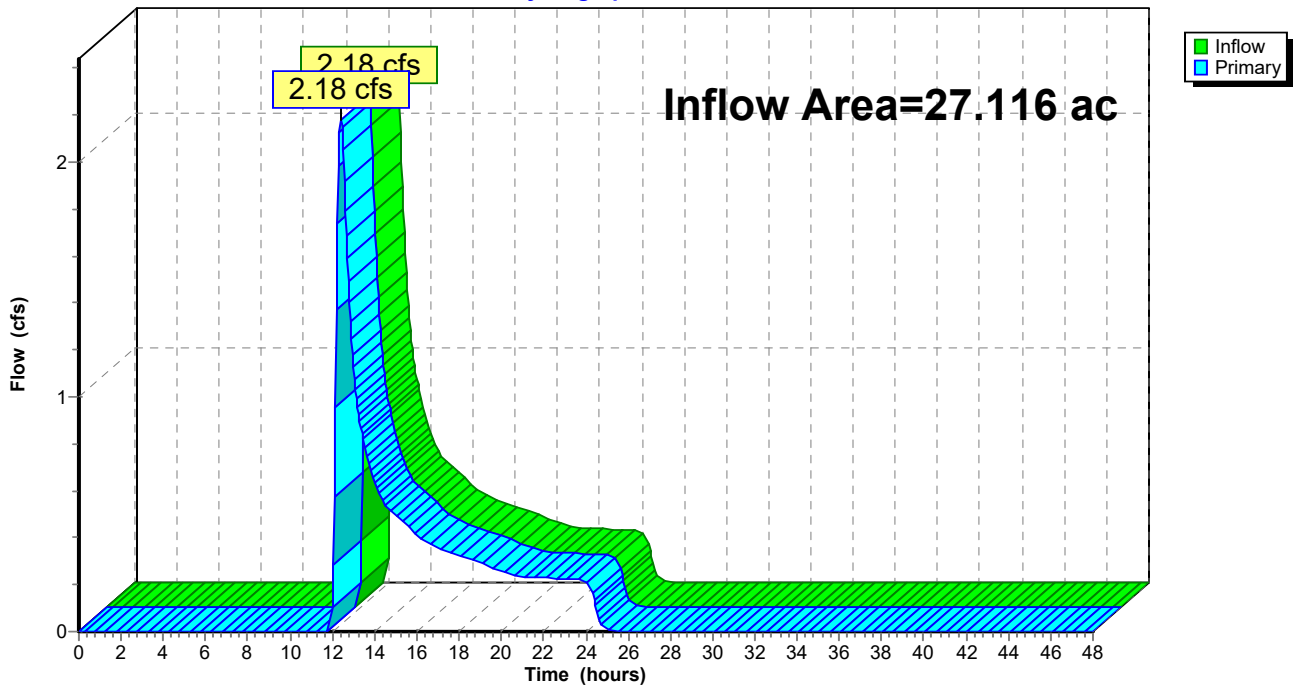
Summary for Link SP55:

Inflow Area = 27.116 ac, 0.71% Impervious, Inflow Depth = 0.21" for 1-year event  
Inflow = 2.18 cfs @ 12.41 hrs, Volume= 0.467 af  
Primary = 2.18 cfs @ 12.41 hrs, Volume= 0.467 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP55:

Hydrograph



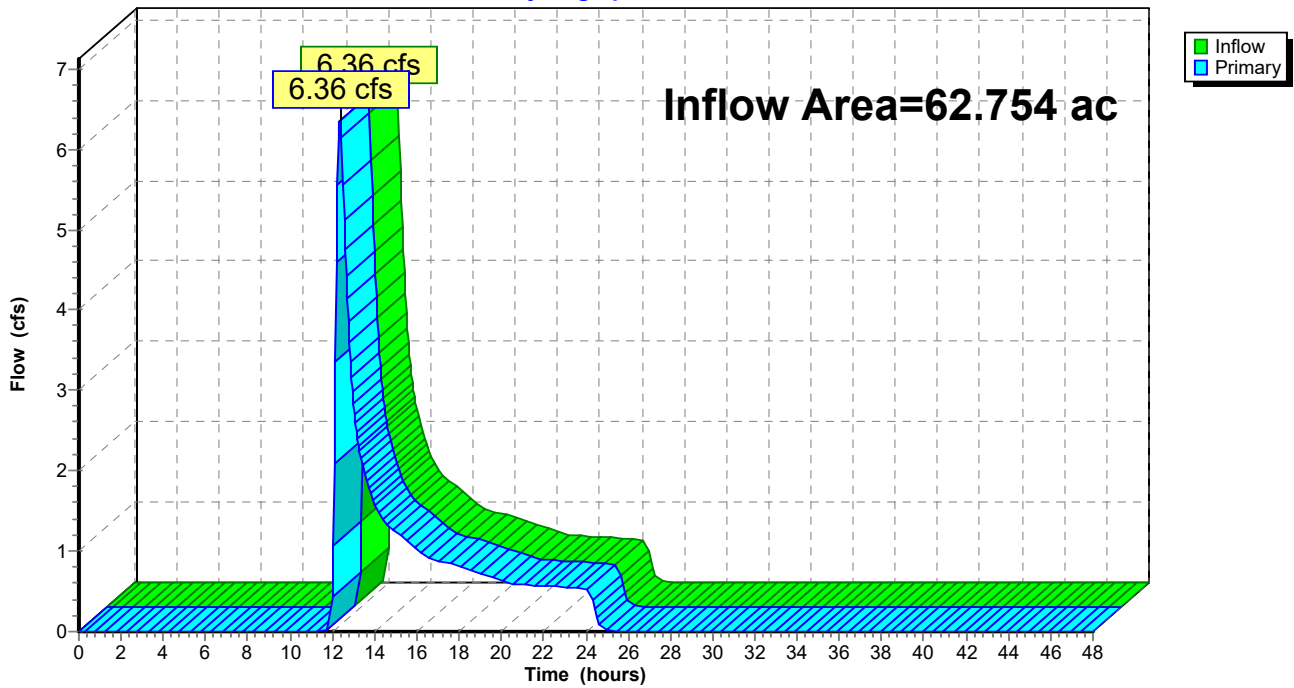
### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 0.23" for 1-year event  
Inflow = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af  
Primary = 6.36 cfs @ 12.36 hrs, Volume= 1.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph





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*Type II 24-hr 10-year Rainfall=3.50"*

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |  |
|---------------------------------|--|
| <b>Subcatchment 25S: Sub 25</b> | Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=1.12"<br>Flow Length=1,103' Tc=22.2 min CN=72 Runoff=21.20 cfs 1.798 af  |
| <b>Subcatchment 26S: Sub 26</b> | Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=0.75"<br>Flow Length=1,324' Tc=18.0 min CN=65 Runoff=11.13 cfs 0.935 af  |
| <b>Subcatchment 27S: Sub 27</b> | Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=0.80"<br>Flow Length=1,602' Tc=17.8 min CN=66 Runoff=18.63 cfs 1.520 af  |
| <b>Subcatchment 28S: Sub 28</b> | Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=0.75"<br>Flow Length=1,727' Tc=27.4 min CN=65 Runoff=12.05 cfs 1.339 af  |
| <b>Subcatchment 29S: Sub 29</b> | Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=0.62"<br>Flow Length=1,648' Tc=26.3 min CN=62 Runoff=8.27 cfs 0.985 af   |
| <b>Subcatchment 30S: Sub 30</b> | Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=0.71"<br>Flow Length=2,217' Tc=29.3 min CN=64 Runoff=17.68 cfs 2.127 af  |
| <b>Subcatchment 31S: Sub 31</b> | Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=0.57"<br>Flow Length=2,409' Tc=31.8 min CN=61 Runoff=8.50 cfs 1.209 af   |
| <b>Subcatchment 32S: Sub 32</b> | Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=0.57"<br>Flow Length=3,284' Tc=36.1 min CN=61 Runoff=13.78 cfs 2.143 af  |
| <b>Subcatchment 33S: Sub 33</b> | Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=0.49"<br>Flow Length=1,749' Tc=22.2 min CN=59 Runoff=30.81 cfs 3.740 af  |
| <b>Subcatchment 34S: Sub 34</b> | Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=0.62"<br>Flow Length=1,344' Tc=23.4 min CN=62 Runoff=12.06 cfs 1.323 af  |
| <b>Subcatchment 35S: Sub 35</b> | Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=0.75"<br>Flow Length=3,022' Tc=38.7 min CN=65 Runoff=24.07 cfs 3.433 af  |
| <b>Subcatchment 36S: Sub 36</b> | Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=0.66"<br>Flow Length=1,996' Tc=23.3 min CN=63 Runoff=24.27 cfs 2.562 af  |
| <b>Subcatchment 37S: Sub 37</b> | Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=0.53"<br>Flow Length=1,926' Tc=33.1 min CN=60 Runoff=3.02 cfs 0.462 af   |
| <b>Subcatchment 38S: Sub 38</b> | Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=0.71"<br>Flow Length=3,404' Tc=47.6 min CN=64 Runoff=24.59 cfs 4.190 af  |
| <b>Subcatchment 39S: Sub 39</b> | Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=0.62"<br>Flow Length=2,852' Tc=30.0 min CN=62 Runoff=44.91 cfs 5.877 af |
| <b>Subcatchment 40S: Sub 40</b> | Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=0.95"<br>Flow Length=1,917' Tc=28.9 min CN=69 Runoff=15.72 cfs 1.660 af  |

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|                                      |  |
|--------------------------------------|--|
| <b>Subcatchment41S: Sub 41</b>       | Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=0.66"<br>Flow Length=2,626' Tc=33.1 min CN=63 Runoff=24.38 cfs 3.307 af                      |
| <b>Subcatchment42S: Sub 42</b>       | Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=0.62"<br>Flow Length=890' Tc=21.1 min CN=62 Runoff=24.51 cfs 2.512 af                        |
| <b>Subcatchment48S: Sub 48</b>       | Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=1.12"<br>Flow Length=4,007' Tc=38.1 min CN=72 Runoff=59.86 cfs 7.347 af                      |
| <b>Subcatchment49S: Sub 49</b>       | Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=0.71"<br>Flow Length=2,999' Tc=38.0 min CN=64 Runoff=13.64 cfs 1.977 af                      |
| <b>Subcatchment50S: Sub 50</b>       | Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=0.90"<br>Flow Length=2,533' Tc=29.4 min CN=68 Runoff=31.56 cfs 3.438 af                      |
| <b>Subcatchment51S: Sub 51</b>       | Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=0.71"<br>Flow Length=2,611' Tc=36.7 min CN=64 Runoff=43.05 cfs 6.092 af                     |
| <b>Subcatchment52S: Sub 52</b>       | Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=0.95"<br>Flow Length=1,182' Tc=22.0 min CN=69 Runoff=13.42 cfs 1.178 af                      |
| <b>Subcatchment53S: Sub 53</b>       | Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=0.85"<br>Flow Length=2,555' Tc=37.9 min CN=67 Runoff=11.37 cfs 1.518 af                      |
| <b>Subcatchment54S:</b>              | Runoff Area=47.810 ac 7.82% Impervious Runoff Depth=0.95"<br>Flow Length=3,546' Tc=37.3 min UI Adjusted CN=69 Runoff=29.99 cfs 3.801 af          |
| <b>Subcatchment55S: Sub 55</b>       | Runoff Area=27.116 ac 0.71% Impervious Runoff Depth=0.80"<br>Flow Length=2,284' Tc=32.1 min CN=66 Runoff=14.93 cfs 1.808 af                      |
| <b>Subcatchment56S: Sub 56</b>       | Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=0.85"<br>Flow Length=2,363' Tc=30.5 min CN=67 Runoff=38.94 cfs 4.445 af                      |
| <b>Reach 33R:</b>                    | Avg. Flow Depth=0.84' Max Vel=2.37 fps Inflow=7.83 cfs 1.323 af<br>n=0.100 L=1,875.0' S=0.0597 '/ Capacity=10.60 cfs Outflow=7.31 cfs 1.323 af   |
| <b>Reach 39R:</b>                    | Avg. Flow Depth=0.87' Max Vel=3.19 fps Inflow=15.72 cfs 1.660 af<br>n=0.100 L=1,110.0' S=0.0991 '/ Capacity=86.68 cfs Outflow=14.73 cfs 1.660 af |
| <b>Reach 42R: S-NSD-16</b>           | Avg. Flow Depth=1.00' Max Vel=2.52 fps Inflow=13.64 cfs 1.977 af<br>n=0.100 L=1,790.0' S=0.0531 '/ Capacity=51.95 cfs Outflow=11.83 cfs 1.977 af |
| <b>Pond 34P: VAN EPPS RD CULVERT</b> | Peak Elev=583.44' Storage=4,362 cf Inflow=12.06 cfs 1.323 af<br>Primary=7.83 cfs 1.323 af Secondary=0.00 cfs 0.000 af Outflow=7.83 cfs 1.323 af  |
| <b>Link SP25:</b>                    | Inflow=21.20 cfs 1.798 af<br>Primary=21.20 cfs 1.798 af  |
| <b>Link SP26:</b>                    | Inflow=11.13 cfs 0.935 af<br>Primary=11.13 cfs 0.935 af  |
| <b>Link SP27:</b>                    | Inflow=18.63 cfs 1.520 af<br>Primary=18.63 cfs 1.520 af  |

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|                        |   |
|------------------------|---|
| <b>Link SP28:</b>      | Inflow=12.05 cfs 1.339 af<br>Primary=12.05 cfs 1.339 af |
| <b>Link SP29:</b>      | Inflow=8.27 cfs 0.985 af<br>Primary=8.27 cfs 0.985 af   |
| <b>Link SP30:</b>      | Inflow=17.68 cfs 2.127 af<br>Primary=17.68 cfs 2.127 af |
| <b>Link SP34: SP31</b> | Inflow=49.57 cfs 8.415 af<br>Primary=49.57 cfs 8.415 af |
| <b>Link SP35:</b>      | Inflow=24.07 cfs 3.433 af<br>Primary=24.07 cfs 3.433 af |
| <b>Link SP36:</b>      | Inflow=24.27 cfs 2.562 af<br>Primary=24.27 cfs 2.562 af |
| <b>Link SP37:</b>      | Inflow=3.02 cfs 0.462 af<br>Primary=3.02 cfs 0.462 af   |
| <b>Link SP38:</b>      | Inflow=24.59 cfs 4.190 af<br>Primary=24.59 cfs 4.190 af |
| <b>Link SP39:</b>      | Inflow=57.34 cfs 7.536 af<br>Primary=57.34 cfs 7.536 af |
| <b>Link SP41:</b>      | Inflow=24.38 cfs 3.307 af<br>Primary=24.38 cfs 3.307 af |
| <b>Link SP42:</b>      | Inflow=24.60 cfs 4.489 af<br>Primary=24.60 cfs 4.489 af |
| <b>Link SP48:</b>      | Inflow=59.86 cfs 7.347 af<br>Primary=59.86 cfs 7.347 af |
| <b>Link SP50:</b>      | Inflow=31.56 cfs 3.438 af<br>Primary=31.56 cfs 3.438 af |
| <b>Link SP51:</b>      | Inflow=43.05 cfs 6.092 af<br>Primary=43.05 cfs 6.092 af |
| <b>Link SP52:</b>      | Inflow=13.42 cfs 1.178 af<br>Primary=13.42 cfs 1.178 af |
| <b>Link SP53:</b>      | Inflow=11.37 cfs 1.518 af<br>Primary=11.37 cfs 1.518 af |
| <b>Link SP54:</b>      | Inflow=29.99 cfs 3.801 af<br>Primary=29.99 cfs 3.801 af |

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*Type II 24-hr 10-year Rainfall=3.50"*

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**Link SP55:**

Inflow=14.93 cfs 1.808 af  
Primary=14.93 cfs 1.808 af

**Link SP56:**

Inflow=38.94 cfs 4.445 af  
Primary=38.94 cfs 4.445 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 72.728 af   Average Runoff Depth = 0.74"**  
**97.77% Pervious = 1,158.079 ac   2.23% Impervious = 26.434 ac**

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**Summary for Subcatchment 25S: Sub 25**

Runoff = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af, Depth= 1.12"  
 Routed to Link SP25 :

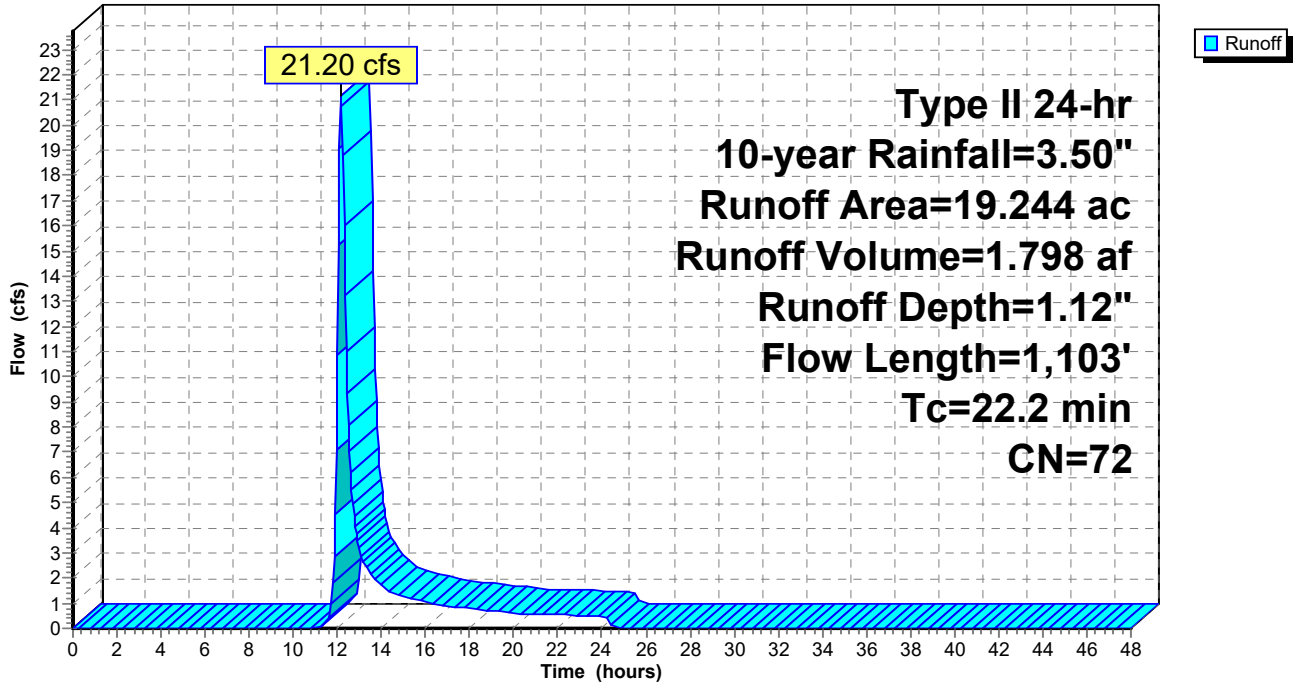
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.100   | 98 | Impervious surface            |
| 0.475     | 74 | >75% Grass cover, Good, HSG C |
| 0.497     | 80 | >75% Grass cover, Good, HSG D |
| 0.785     | 58 | Meadow, non-grazed, HSG B     |
| 13.183    | 71 | Meadow, non-grazed, HSG C     |
| 3.694     | 78 | Meadow, non-grazed, HSG D     |
| 0.050     | 48 | Brush, Good, HSG B            |
| 0.274     | 71 | Meadow, non-grazed, HSG C     |
| 0.186     | 73 | Brush, Good, HSG D            |
| 19.244    | 72 | Weighted Average              |
| 19.144    |    | 99.48% Pervious Area          |
| 0.100     |    | 0.52% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.3     | 717           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 286           |               | 1.77              |                | <b>Direct Entry, CF</b>  |
| 22.2     | 1,103         | Total         |                   |                |  |

Subcatchment 25S: Sub 25

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 26S: Sub 26**

Runoff = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af, Depth= 0.75"  
 Routed to Link SP26 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.672   | 98 | Impervious surface            |
| * 0.189   | 96 | Gravel surface                |
| 3.102     | 61 | >75% Grass cover, Good, HSG B |
| 0.965     | 74 | >75% Grass cover, Good, HSG C |
| 6.796     | 58 | Meadow, non-grazed, HSG B     |
| 3.029     | 71 | Meadow, non-grazed, HSG C     |
| 0.172     | 78 | Meadow, non-grazed, HSG D     |
| 14.925    | 65 | Weighted Average              |
| 14.253    |    | 95.50% Pervious Area          |
| 0.672     |    | 4.50% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.7      | 100           | 0.0280        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.2      | 340           | 0.1340        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 259           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 625           |               | 3.06              |                | <b>Direct Entry, CF</b>  |
| 18.0     | 1,324         | Total         |                   |                |  |



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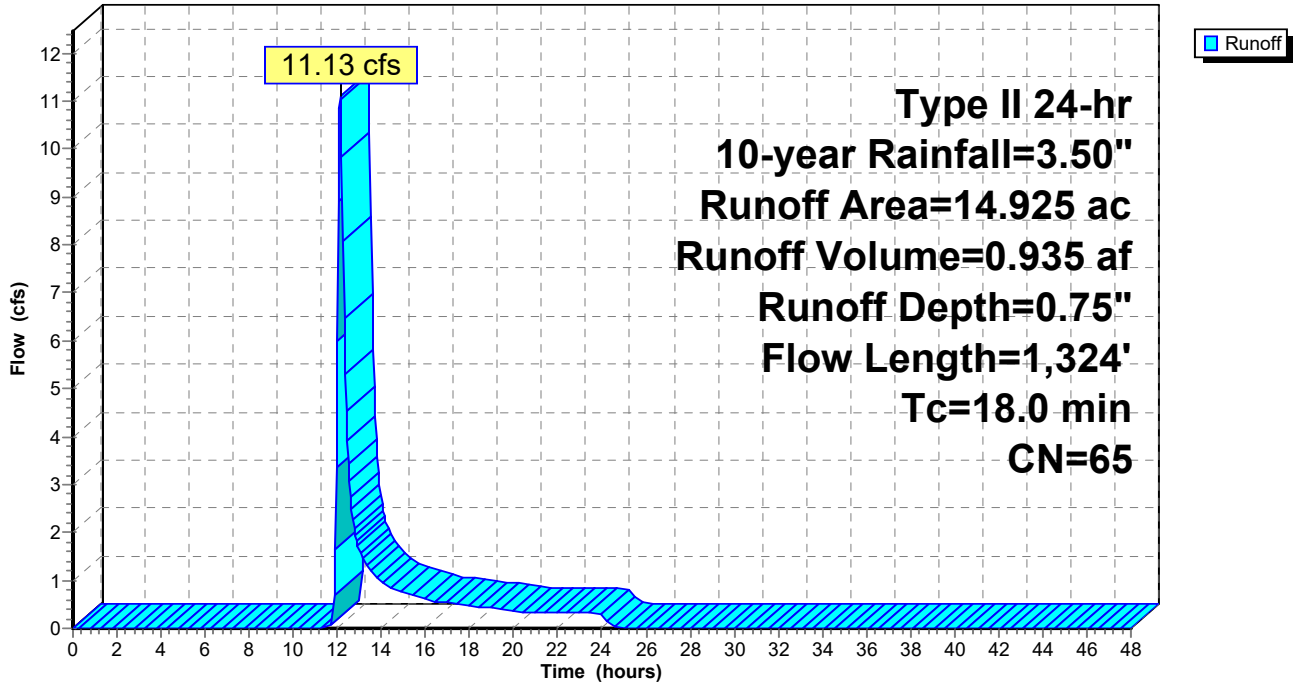
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 26S: Sub 26**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 27S: Sub 27**

Runoff = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af, Depth= 0.80"  
 Routed to Link SP27 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.381   | 98 | Surface water             |
| * 0.064   | 98 | Impervious surface        |
| * 0.034   | 96 | Gravel surface            |
| 9.647     | 58 | Meadow, non-grazed, HSG B |
| 12.525    | 71 | Meadow, non-grazed, HSG C |
| 0.140     | 78 | Meadow, non-grazed, HSG D |
| 22.791    | 66 | Weighted Average          |
| 22.346    |    | 98.05% Pervious Area      |
| 0.445     |    | 1.95% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.9      | 100           | 0.0650        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.4      | 832           | 0.0720        | 1.88              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.5      | 670           |               | 3.19              |                | <b>Direct Entry, CF</b>  |
| 17.8     | 1,602         | Total         |                   |                |  |

**Mill Pt Pre 2**

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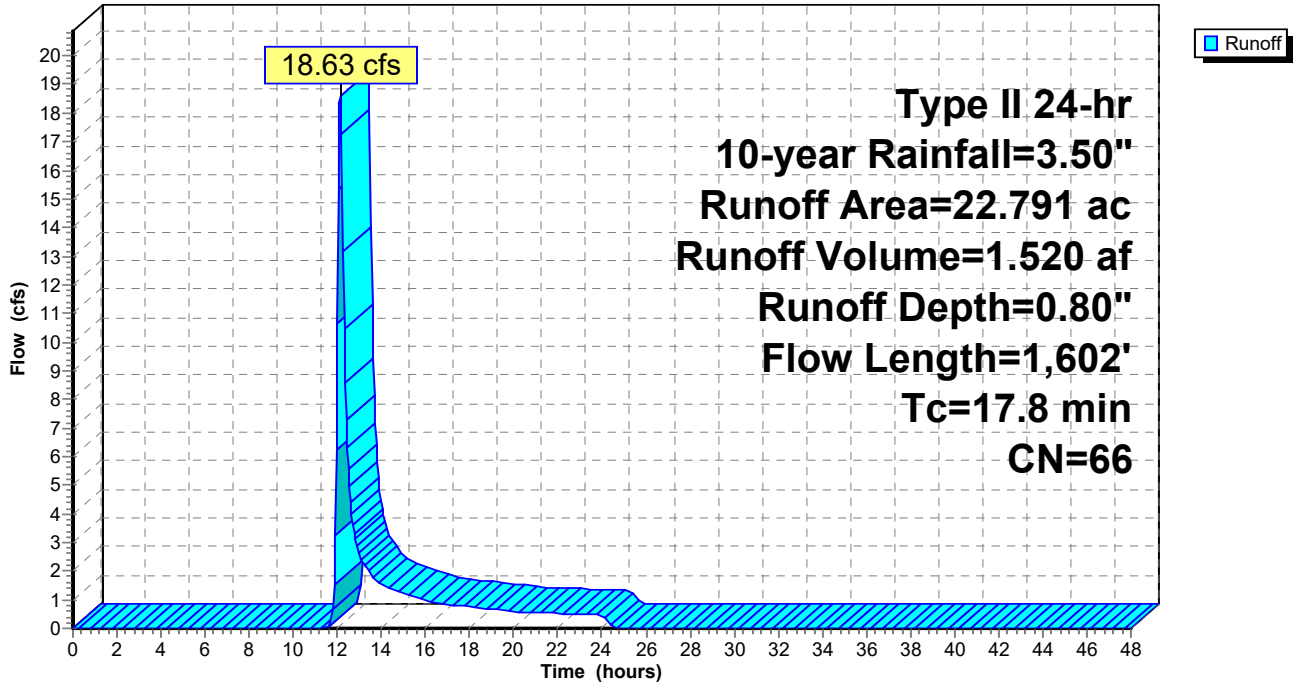
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 27S: Sub 27**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 28S: Sub 28**

[47] Hint: Peak is 184% of capacity of segment #3

Runoff = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af, Depth= 0.75"  
 Routed to Link SP28 :

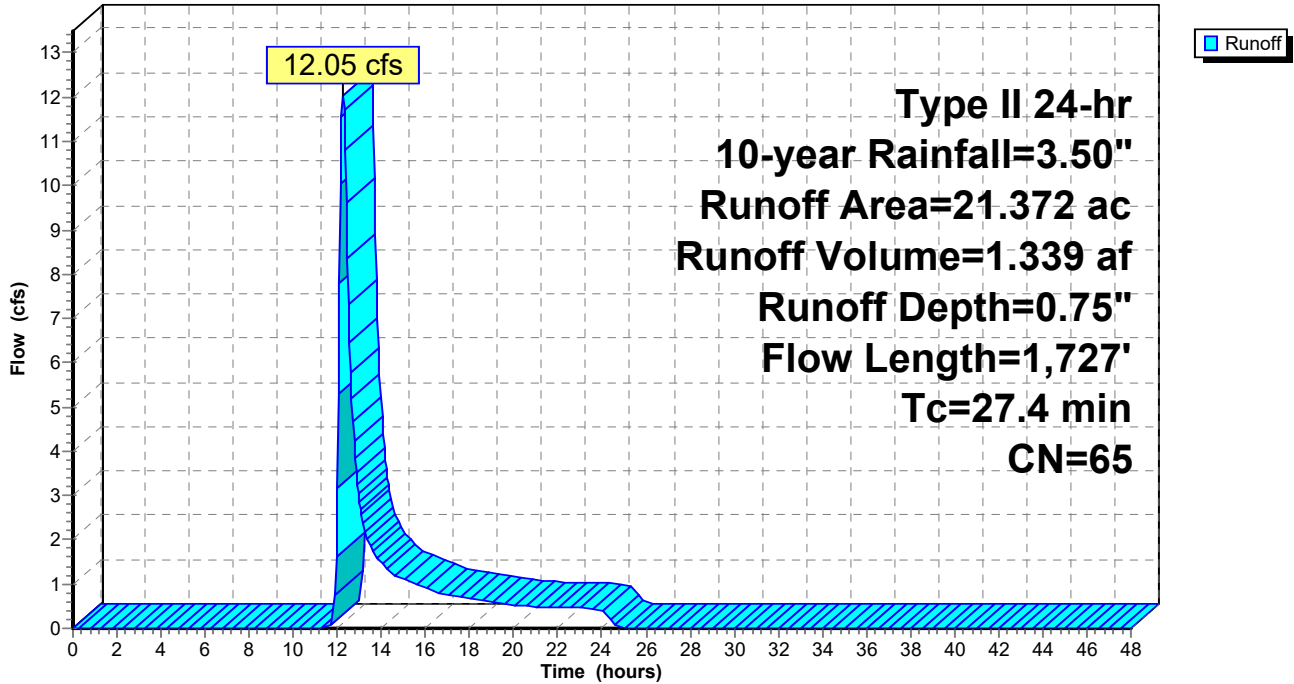
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.114   | 98 | Impervious surface            |
| * 0.018   | 96 | Gravel surface                |
| 1.037     | 61 | >75% Grass cover, Good, HSG B |
| 0.949     | 74 | >75% Grass cover, Good, HSG C |
| 9.049     | 58 | Meadow, non-grazed, HSG B     |
| 10.205    | 71 | Meadow, non-grazed, HSG C     |
| 21.372    | 65 | Weighted Average              |
| 21.258    |    | 99.47% Pervious Area          |
| 0.114     |    | 0.53% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 16.9     | 100           | 0.0070        | 0.10              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 7.4      | 819           | 0.0700        | 1.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.1      | 808           | 0.0420        | 4.36              | 6.53           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 27.4     | 1,727         | Total         |                   |                |   |

Subcatchment 28S: Sub 28

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 29S: Sub 29**

Runoff = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af, Depth= 0.62"  
 Routed to Link SP29 :

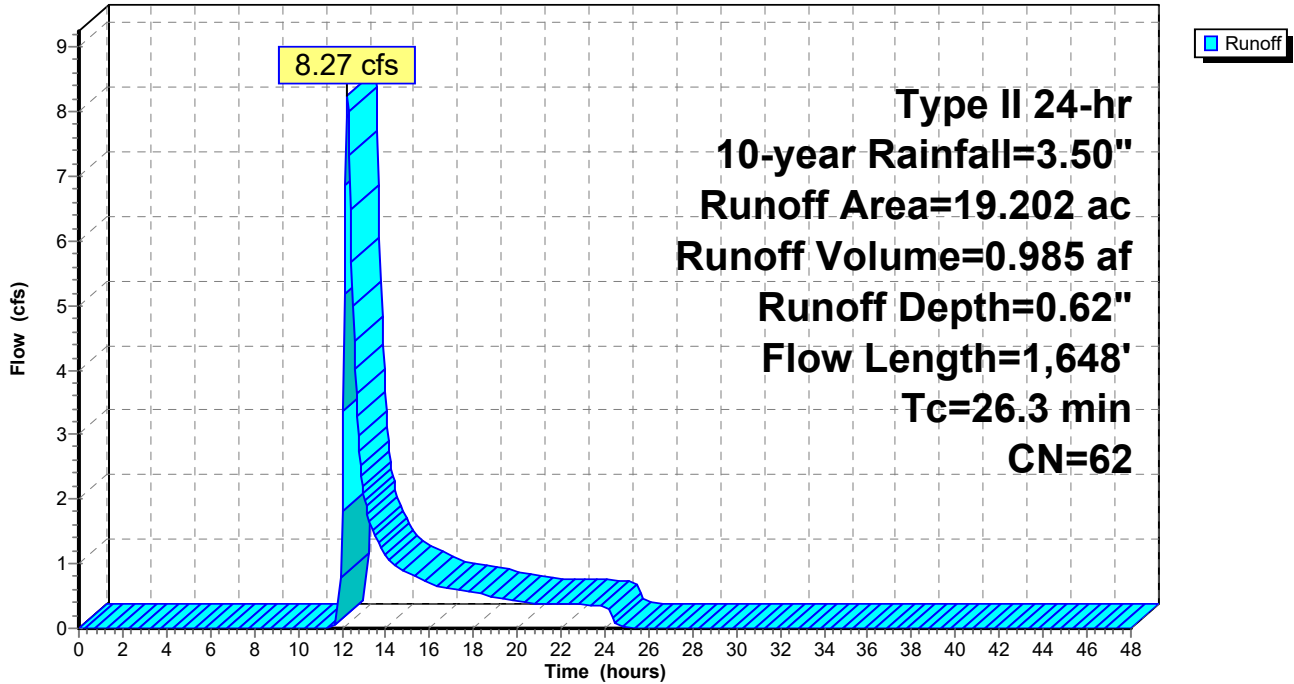
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.233   | 98 | Impervious surface        |
| * 0.063   | 96 | Gravel surface            |
| 13.291    | 58 | Meadow, non-grazed, HSG B |
| 5.615     | 71 | Meadow, non-grazed, HSG C |
| 19.202    | 62 | Weighted Average          |
| 18.969    |    | 98.79% Pervious Area      |
| 0.233     |    | 1.21% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.7      | 100           | 0.0370        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.9      | 661           | 0.0310        | 1.23              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.9      | 806           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.8      | 81            |               | 1.69              |                | <b>Direct Entry, CF</b>  |
| 26.3     | 1,648         | Total         |                   |                |  |

Subcatchment 29S: Sub 29

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 30S: Sub 30**

[47] Hint: Peak is 144% of capacity of segment #3

Runoff = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af, Depth= 0.71"  
 Routed to Link SP30 :

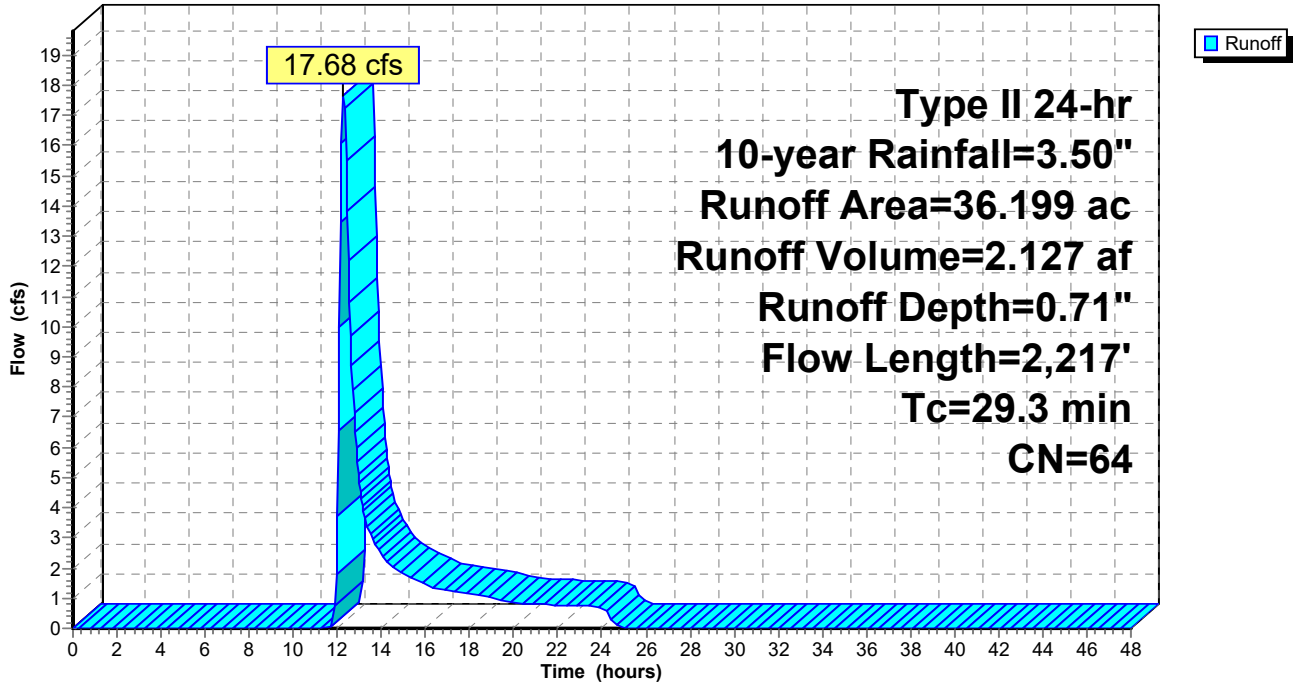
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.444   | 98 | Impervious surface            |
| * 0.471   | 96 | Gravel surface                |
| 0.222     | 61 | >75% Grass cover, Good, HSG B |
| 0.026     | 74 | >75% Grass cover, Good, HSG C |
| 0.098     | 30 | Meadow, non-grazed, HSG A     |
| 16.283    | 58 | Meadow, non-grazed, HSG B     |
| 15.759    | 71 | Meadow, non-grazed, HSG C     |
| 0.215     | 48 | Brush, Good, HSG B            |
| 0.283     | 65 | Brush, Good, HSG C            |
| 0.099     | 30 | Woods, Good, HSG A            |
| 2.287     | 55 | Woods, Good, HSG B            |
| 0.012     | 70 | Woods, Good, HSG C            |
| 36.199    | 64 | Weighted Average              |
| 35.755    |    | 98.77% Pervious Area          |
| 0.444     |    | 1.23% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 15.4     | 1,100         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 3.8      | 1,017         | 0.0290        | 4.46              | 12.25          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00'<br>n= 0.030 Earth, grassed & winding |
| 29.3     | 2,217         | Total         |                   |                |  |

Subcatchment 30S: Sub 30

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 31S: Sub 31**

[47] Hint: Peak is 203% of capacity of segment #3

Runoff = 8.50 cfs @ 12.34 hrs, Volume= 1.209 af, Depth= 0.57"  
 Routed to Link SP34 : SP31

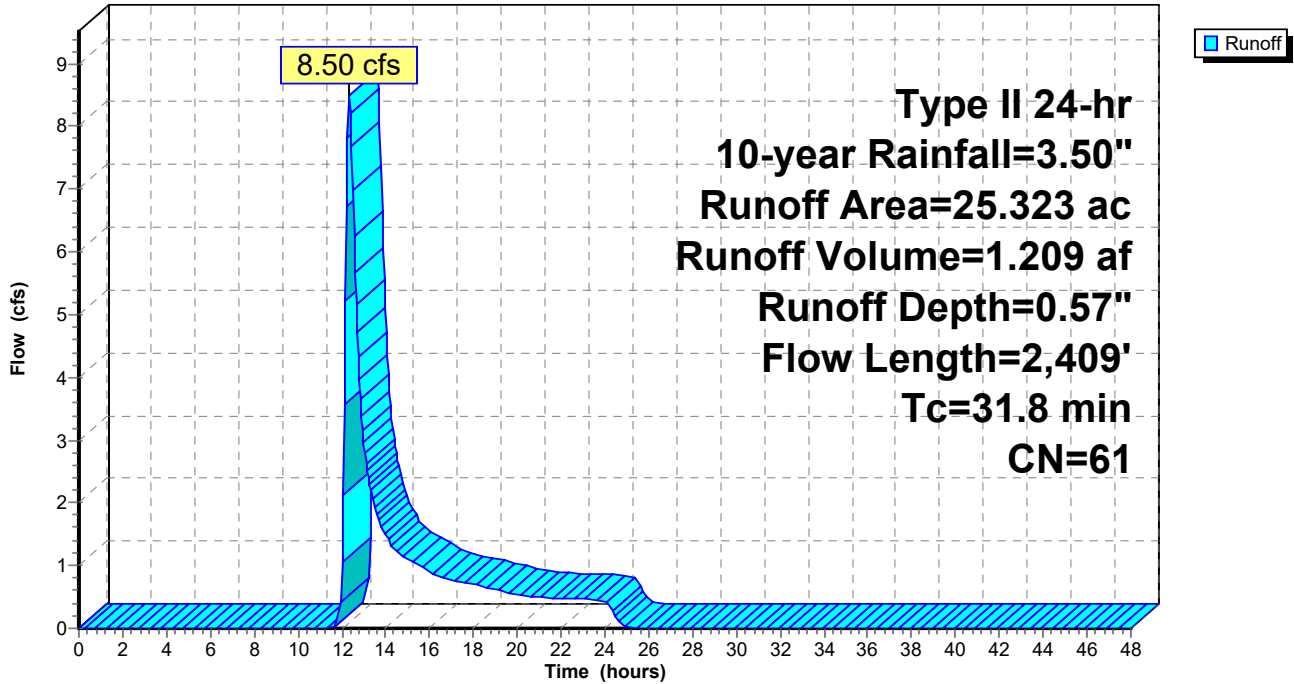
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 12.515    | 58 | Meadow, non-grazed, HSG B |
| 7.070     | 71 | Meadow, non-grazed, HSG C |
| 0.029     | 48 | Brush, Good, HSG B        |
| 5.404     | 55 | Woods, Good, HSG B        |
| 0.305     | 70 | Woods, Good, HSG C        |
| 25.323    | 61 | Weighted Average          |
| 25.323    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 20.4     | 1,456         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.4      | 853           | 0.0938        | 4.18              | 4.18           | <b>Parabolic Channel,</b><br>W=3.00' D=0.50' Area=1.0 sf Perim=3.2'<br>n= 0.050 Mountain streams w/large boulders |
| 31.8     | 2,409         | Total         |                   |                |   |

Subcatchment 31S: Sub 31

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 32S: Sub 32**

[47] Hint: Peak is 148% of capacity of segment #4

Runoff = 13.78 cfs @ 12.40 hrs, Volume= 2.143 af, Depth= 0.57"  
 Routed to Link SP34 : SP31

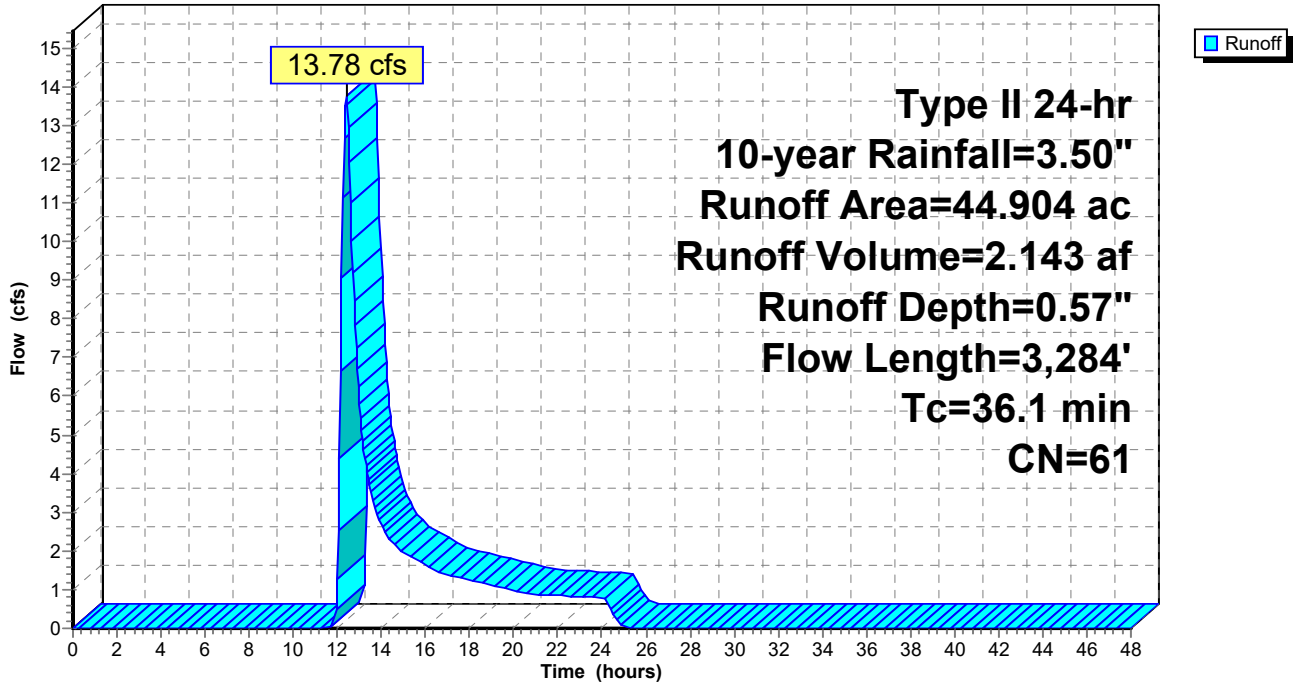
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 2.796   | 98 | Surface water             |
| 20.102    | 58 | Meadow, non-grazed, HSG B |
| 5.829     | 71 | Meadow, non-grazed, HSG C |
| 0.127     | 48 | Brush, Good, HSG B        |
| 0.286     | 65 | Brush, Good, HSG C        |
| 15.764    | 55 | Woods, Good, HSG B        |
| 44.904    | 61 | Weighted Average          |
| 42.108    |    | 93.77% Pervious Area      |
| 2.796     |    | 6.23% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 7.8      | 100           | 0.0475        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.2      | 425           | 0.0976        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 17.5     | 1,176         | 0.0257        | 1.12              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 7.6      | 1,583         | 0.0726        | 3.48              | 9.29           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.080 Earth, long dense weeds |
| 36.1     | 3,284         | Total         |                   |                |   |

Subcatchment 32S: Sub 32

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 30.81 cfs @ 12.21 hrs, Volume= 3.740 af, Depth= 0.49"  
 Routed to Link SP34 : SP31

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

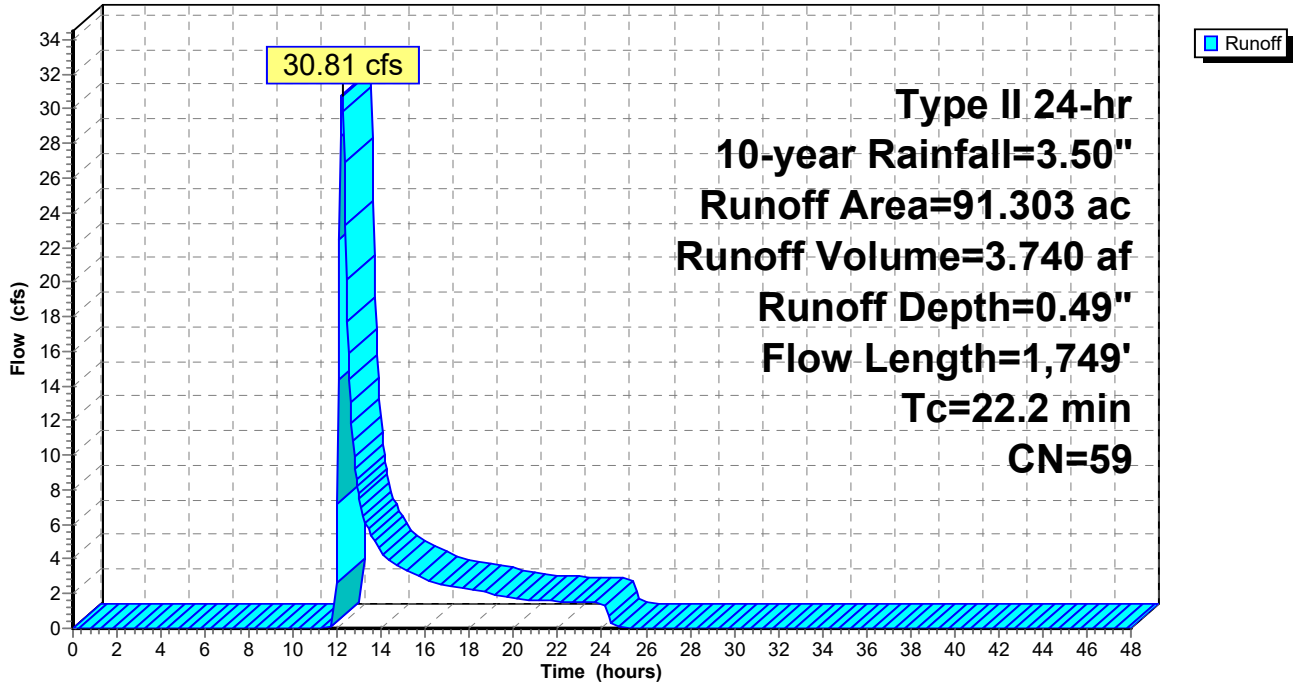
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.618   | 98 | Impervious surface            |
| * 0.042   | 96 | Gravel surface                |
| 3.828     | 61 | >75% Grass cover, Good, HSG B |
| 45.219    | 58 | Meadow, non-grazed, HSG B     |
| 9.199     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 78 | Meadow, non-grazed, HSG D     |
| 0.415     | 48 | Brush, Good, HSG B            |
| 28.566    | 55 | Woods, Good, HSG B            |
| 0.282     | 70 | Woods, Good, HSG C            |
| 91.303    | 59 | Weighted Average              |
| 90.685    |    | 99.32% Pervious Area          |
| 0.618     |    | 0.68% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.8      | 780           | 0.1010        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.9      | 531           | 0.1059        | 2.28              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 338           | 0.1005        | 1.59              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.2     | 1,749         | Total         |                   |                |  |



Subcatchment 33S: Sub 33

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**Summary for Subcatchment 34S: Sub 34**

[47] Hint: Peak is 329% of capacity of segment #3

Runoff = 12.06 cfs @ 12.21 hrs, Volume= 1.323 af, Depth= 0.62"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.189     | 48 | Brush, Good, HSG B            |
| 0.183     | 96 | Gravel surface, HSG D         |
| 0.299     | 98 | Unconnected roofs, HSG D      |
| 16.490    | 58 | Meadow, non-grazed, HSG B     |
| 3.646     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 61 | >75% Grass cover, Good, HSG B |
| 1.498     | 74 | >75% Grass cover, Good, HSG C |
| 0.358     | 55 | Woods, Good, HSG B            |
| 25.797    | 62 | Weighted Average              |
| 25.498    |    | 98.84% Pervious Area          |
| 0.299     |    | 1.16% Impervious Area         |
| 0.299     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.8      | 100           | 0.0675        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 14.9     | 878           | 0.0198        | 0.98              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                               |
| 0.2      | 42            | 0.0119        | 2.99              | 3.66           | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.025 Corrugated metal |
| 1.5      | 324           | 0.0552        | 3.52              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps                                 |
| 23.4     | 1,344         | Total         |                   |                |  |

**Mill Pt Pre 2**

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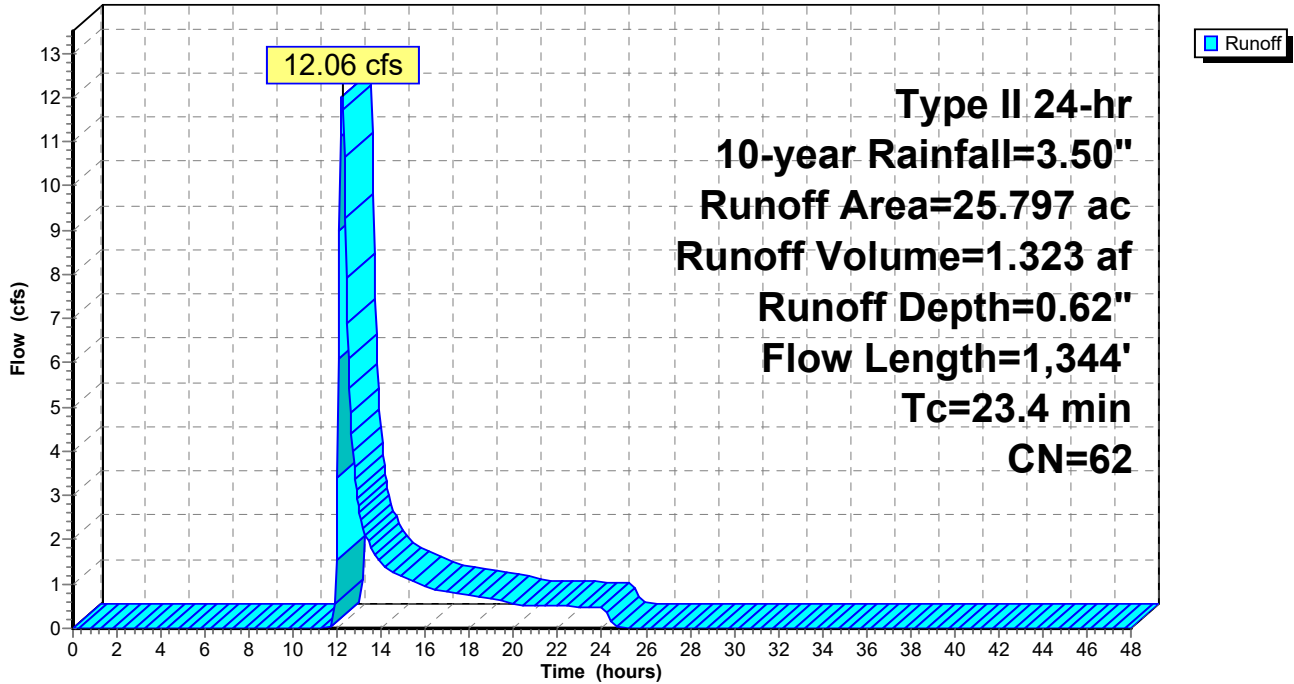
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 34S: Sub 34**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 35S: Sub 35**

[47] Hint: Peak is 287% of capacity of segment #4

Runoff = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af, Depth= 0.75"  
 Routed to Link SP35 :

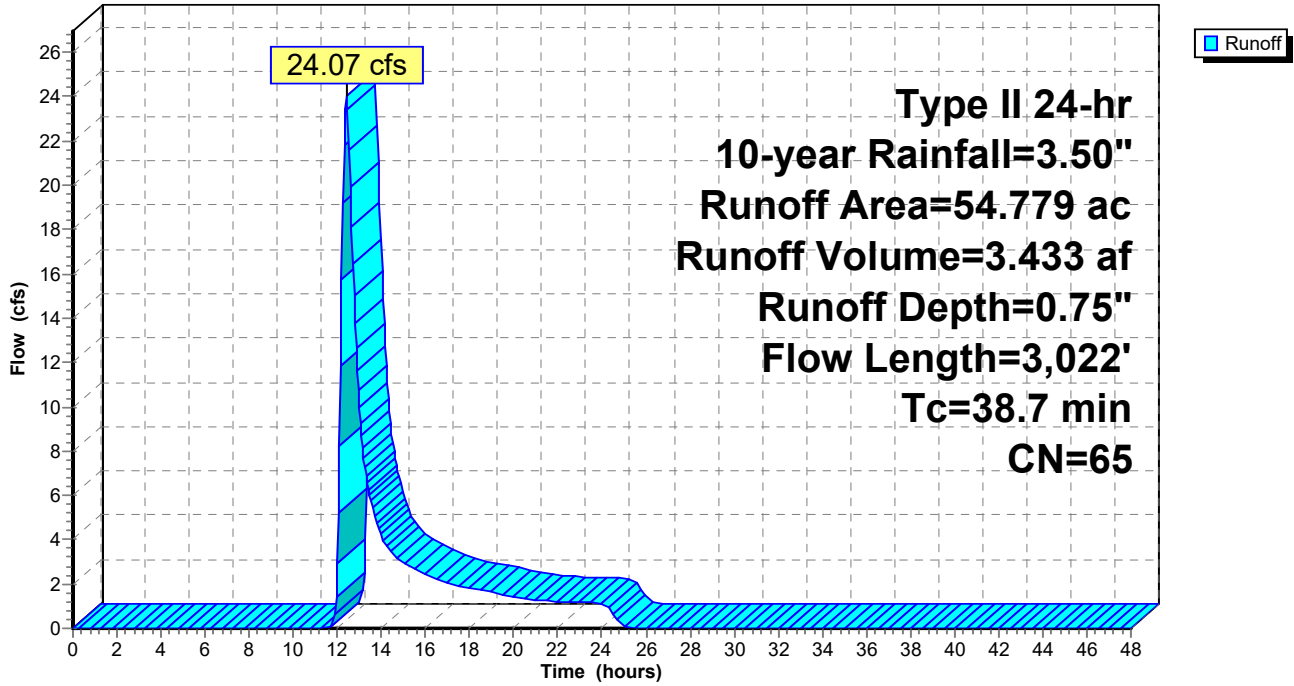
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.105     | 48 | Brush, Good, HSG B            |
| 0.087     | 65 | Brush, Good, HSG C            |
| 1.101     | 98 | Unconnected roofs, HSG D      |
| 23.620    | 58 | Meadow, non-grazed, HSG B     |
| 24.783    | 71 | Meadow, non-grazed, HSG C     |
| 0.319     | 61 | >75% Grass cover, Good, HSG B |
| 1.326     | 74 | >75% Grass cover, Good, HSG C |
| 1.942     | 55 | Woods, Good, HSG B            |
| 1.496     | 70 | Woods, Good, HSG C            |
| 54.779    | 65 | Weighted Average              |
| 53.678    |    | 97.99% Pervious Area          |
| 1.101     |    | 2.01% Impervious Area         |
| 1.101     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.6      | 393           | 0.0204        | 1.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 22.1     | 2,017         | 0.0471        | 1.52              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 2.0      | 512           | 0.1172        | 4.19              | 8.39           | <b>Parabolic Channel,</b><br>W=3.00' D=1.00' Area=2.0 sf Perim=3.7'<br>n= 0.080 Earth, long dense weeds |
| 38.7     | 3,022         | Total         |                   |                |   |

Subcatchment 35S: Sub 35

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 36S: Sub 36**

[47] Hint: Peak is 410% of capacity of segment #3

Runoff = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af, Depth= 0.66"  
 Routed to Link SP36 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.405     | 48 | Brush, Good, HSG B        |
| 0.013     | 65 | Brush, Good, HSG C        |
| 0.081     | 96 | Gravel surface, HSG D     |
| 0.007     | 98 | Unconnected roofs, HSG D  |
| 2.271     | 58 | Meadow, non-grazed, HSG B |
| 21.338    | 71 | Meadow, non-grazed, HSG C |
| 0.513     | 98 | Water Surface, HSG D      |
| 20.987    | 55 | Woods, Good, HSG B        |
| 1.004     | 70 | Woods, Good, HSG C        |
| 46.619    | 63 | Weighted Average          |
| 46.099    |    | 98.88% Pervious Area      |
| 0.520     |    | 1.12% Impervious Area     |
| 0.007     |    | 1.35% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.4      | 100           | 0.0550        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.7     | 1,036         | 0.0442        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 4.2      | 860           | 0.1400        | 3.38              | 5.91           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 3.0 '/' Top.W=5.00'<br>n= 0.080 Earth, long dense weeds |
| 23.3     | 1,996         | Total         |                   |                |  |

**Mill Pt Pre 2**

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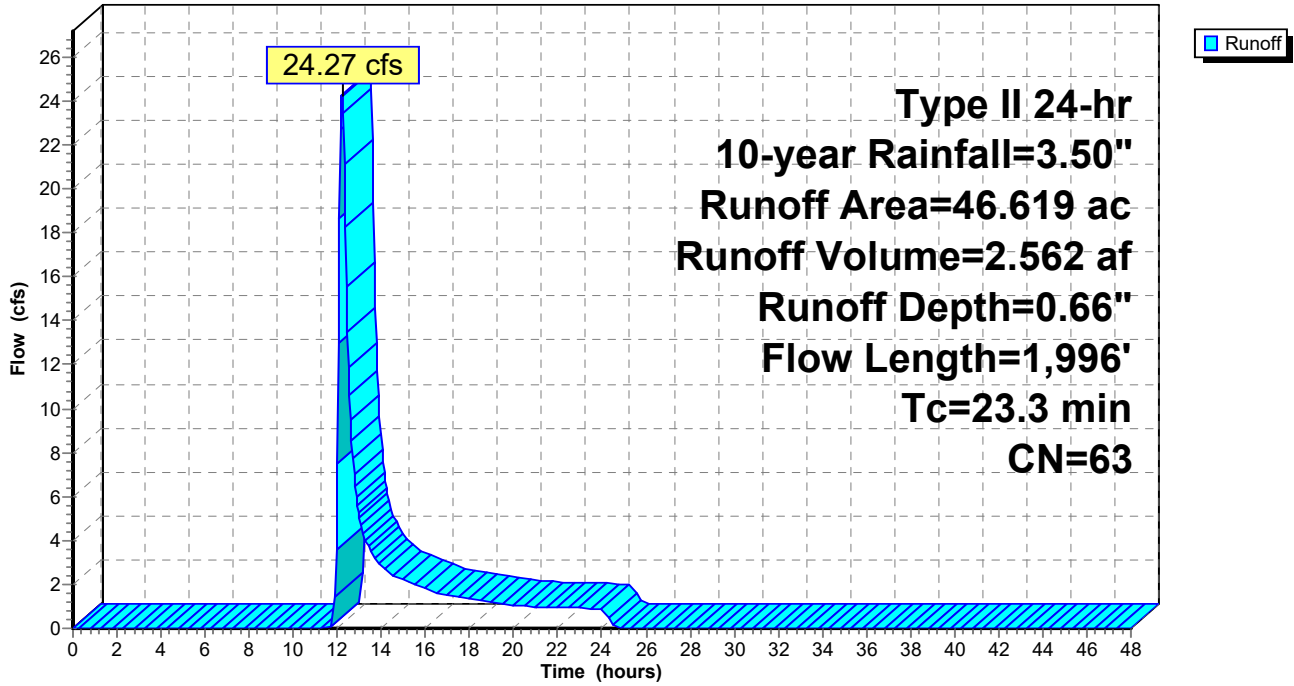
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 36S: Sub 36**

Hydrograph





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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af, Depth= 0.53"  
 Routed to Link SP37 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.161     | 58 | Meadow, non-grazed, HSG B |
| 1.673     | 55 | Woods, Good, HSG B        |
| * 0.606   | 98 | Impervious                |
| 10.440    | 60 | Weighted Average          |
| 9.834     |    | 94.20% Pervious Area      |
| 0.606     |    | 5.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 19.3     | 100           | 0.0050        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 10.6     | 1,005         | 0.0507        | 1.58              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.0      | 90            | 0.0889        | 1.49              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.2      | 731           | 0.0570        | 5.59              | 20.95          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.1     | 1,926         | Total         |                   |                |   |

**Mill Pt Pre 2**

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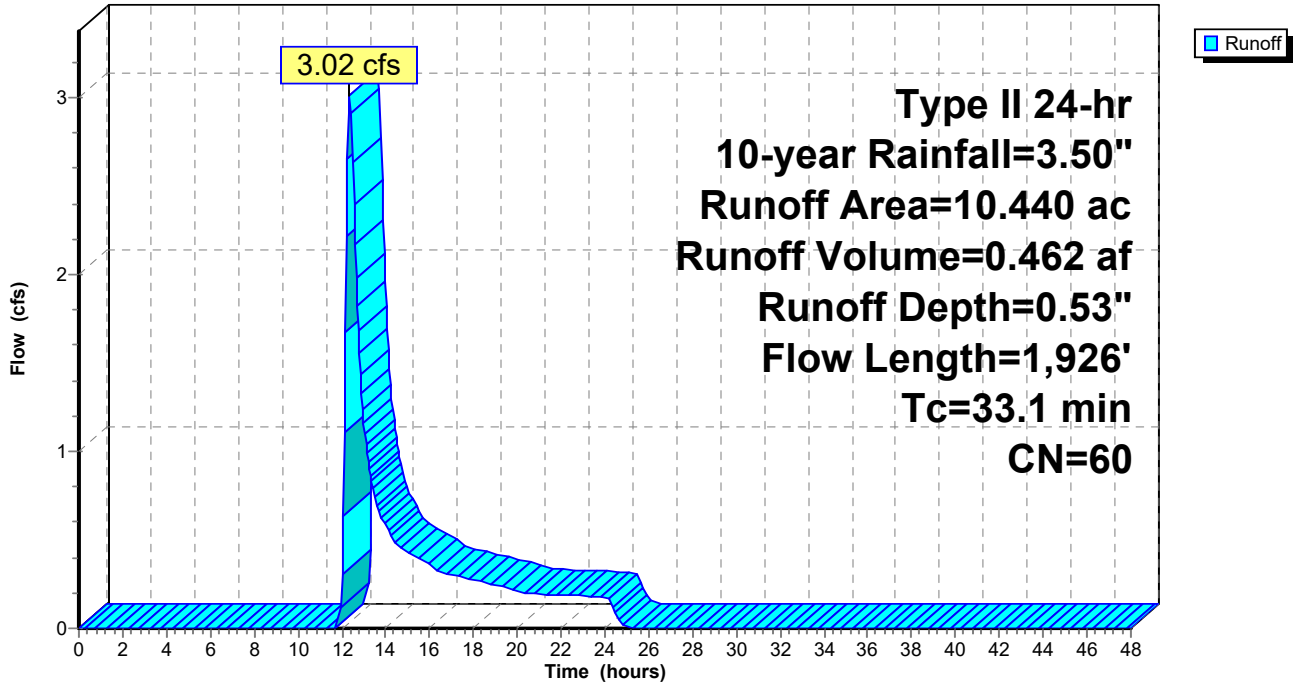
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 37S: Sub 37**

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af, Depth= 0.71"  
 Routed to Link SP38 :

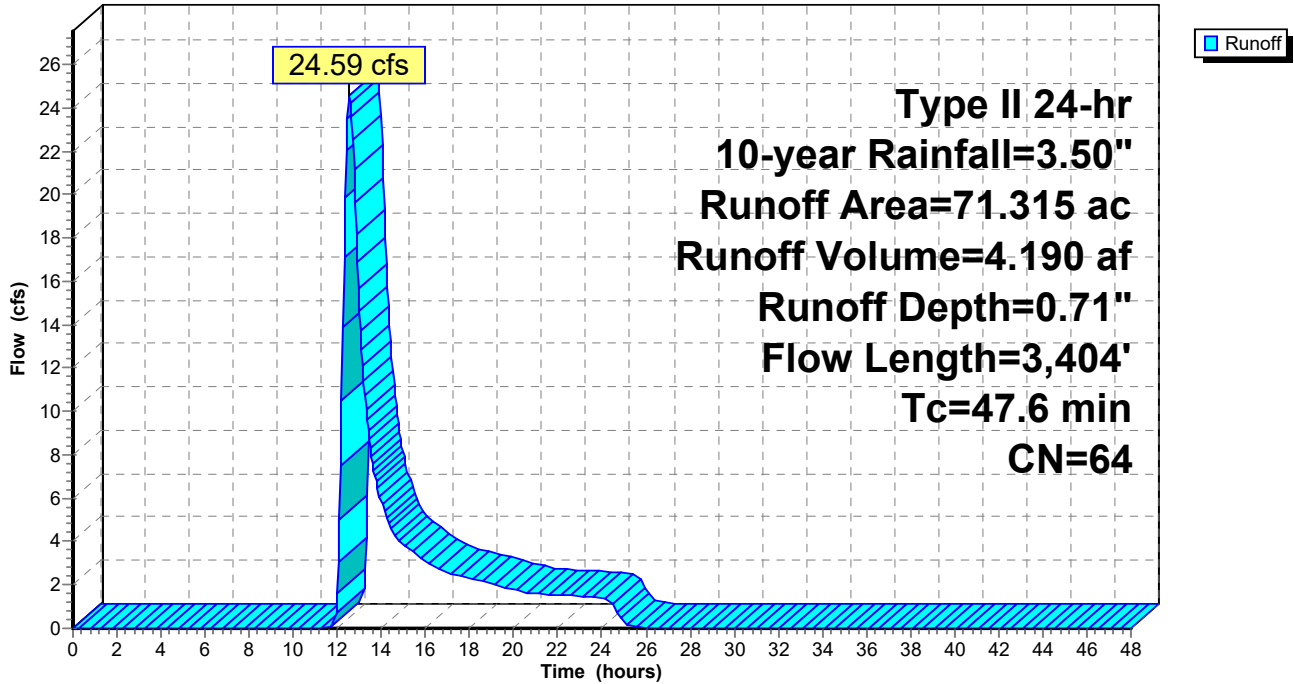
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.161     | 48 | Brush, Good, HSG B            |
| 0.399     | 65 | Brush, Good, HSG C            |
| 0.626     | 96 | Gravel surface, HSG D         |
| 1.297     | 98 | Unconnected roofs, HSG D      |
| 26.775    | 58 | Meadow, non-grazed, HSG B     |
| 35.528    | 71 | Meadow, non-grazed, HSG C     |
| 1.081     | 61 | >75% Grass cover, Good, HSG B |
| 4.099     | 30 | Woods, Good, HSG A            |
| 0.349     | 55 | Woods, Good, HSG B            |
| 71.315    | 64 | Weighted Average              |
| 70.018    |    | 98.18% Pervious Area          |
| 1.297     |    | 1.82% Impervious Area         |
| 1.297     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.9     | 739           | 0.0220        | 1.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.6      | 753           | 0.0744        | 1.91              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 21.4     | 1,812         | 0.0800        | 1.41              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 47.6     | 3,404         | Total         |                   |                |  |

Subcatchment 38S: Sub 38

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 39S: Sub 39**

Runoff = 44.91 cfs @ 12.31 hrs, Volume= 5.877 af, Depth= 0.62"  
 Routed to Link SP39 :

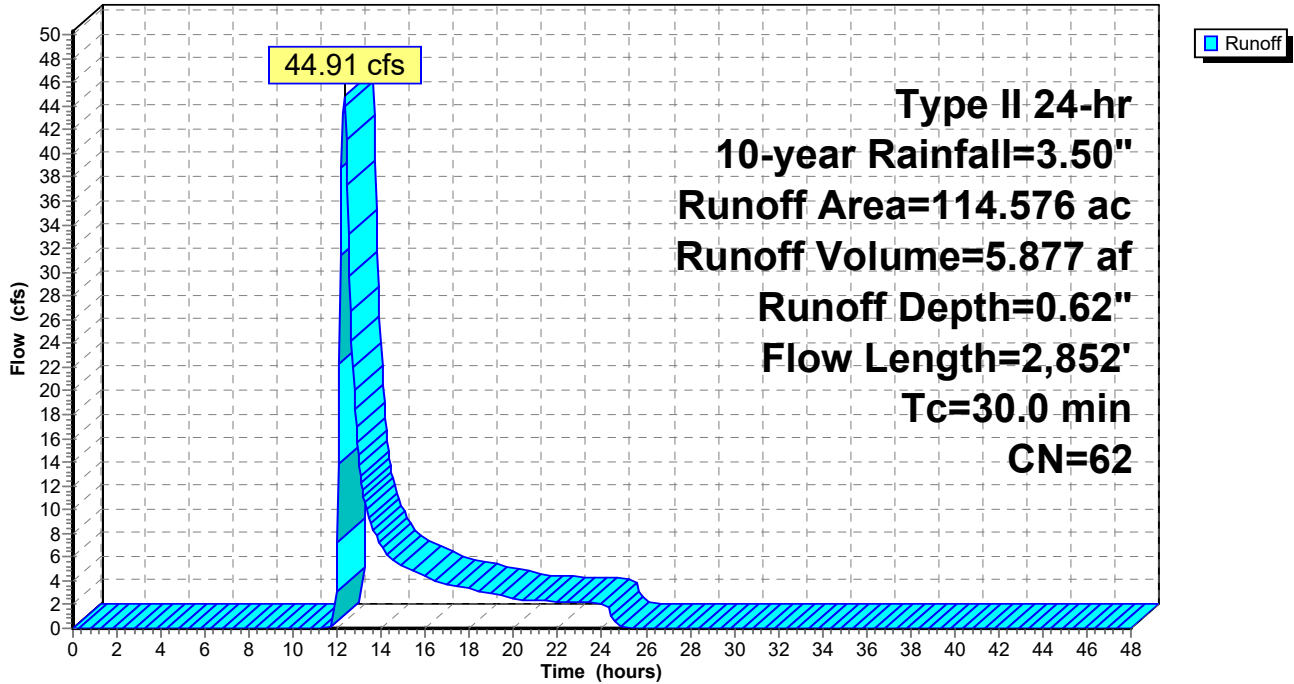
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.475     | 48 | Brush, Good, HSG B            |
| 0.336     | 65 | Brush, Good, HSG C            |
| 0.314     | 73 | Brush, Good, HSG D            |
| 1.088     | 96 | Gravel surface, HSG D         |
| 0.964     | 98 | Unconnected roofs, HSG D      |
| 60.275    | 58 | Meadow, non-grazed, HSG B     |
| 18.779    | 71 | Meadow, non-grazed, HSG C     |
| 2.256     | 78 | Meadow, non-grazed, HSG D     |
| 6.253     | 61 | >75% Grass cover, Good, HSG B |
| 3.233     | 74 | >75% Grass cover, Good, HSG C |
| 1.913     | 98 | Water Surface, HSG D          |
| 17.544    | 55 | Woods, Good, HSG B            |
| 0.343     | 70 | Woods, Good, HSG C            |
| 0.803     | 77 | Woods, Good, HSG D            |
| 114.576   | 62 | Weighted Average              |
| 111.699   |    | 97.49% Pervious Area          |
| 2.877     |    | 2.51% Impervious Area         |
| 0.964     |    | 33.51% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 17.7     | 2,151         | 0.0840        | 2.03              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.2      | 601           | 0.1490        | 1.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.0     | 2,852         | Total         |                   |                |  |

Subcatchment 39S: Sub 39

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 15.72 cfs @ 12.26 hrs, Volume= 1.660 af, Depth= 0.95"

Routed to Reach 39R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

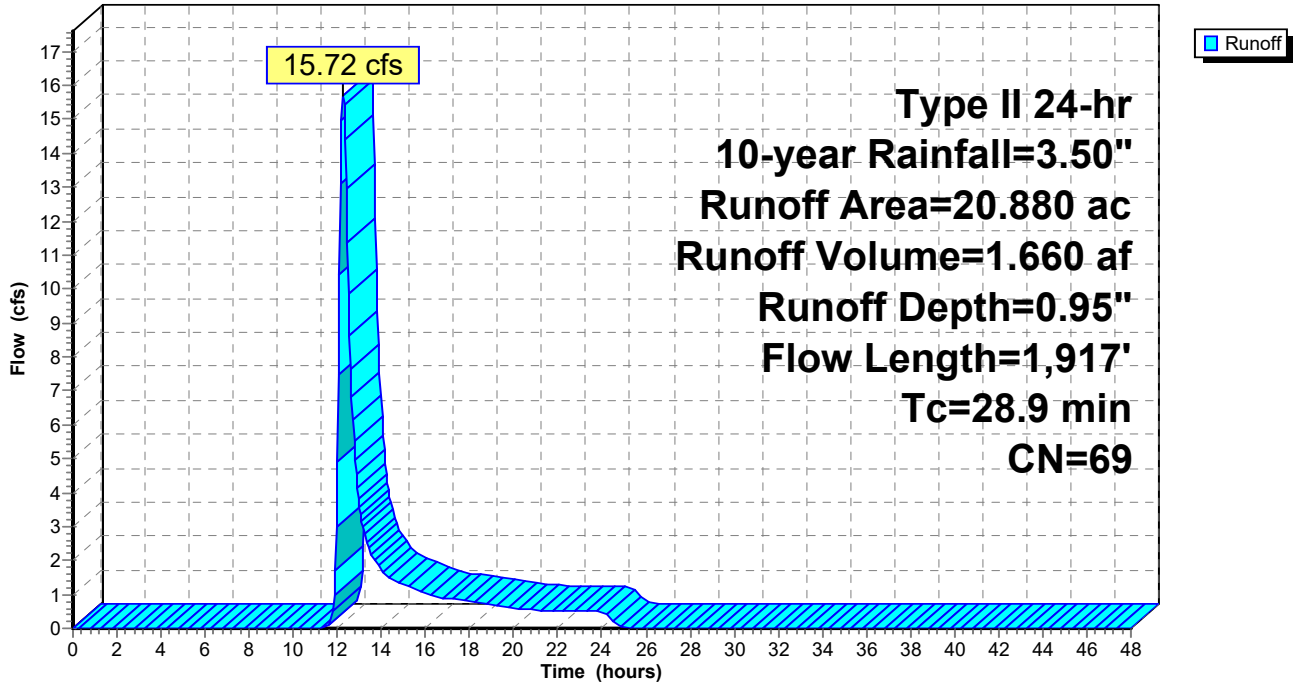
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.016     | 65 | Brush, Good, HSG C            |
| 0.235     | 96 | Gravel surface, HSG D         |
| 0.018     | 98 | Unconnected roofs, HSG D      |
| 6.944     | 58 | Meadow, non-grazed, HSG B     |
| 10.584    | 71 | Meadow, non-grazed, HSG C     |
| 0.095     | 78 | Meadow, non-grazed, HSG D     |
| 0.089     | 61 | >75% Grass cover, Good, HSG B |
| 1.640     | 98 | Water Surface, HSG D          |
| 0.643     | 55 | Woods, Good, HSG B            |
| 0.616     | 70 | Woods, Good, HSG C            |
| 20.880    | 69 | Weighted Average              |
| 19.222    |    | 92.06% Pervious Area          |
| 1.658     |    | 7.94% Impervious Area         |
| 0.018     |    | 1.09% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.6      | 358           | 0.1089        | 2.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.4      | 38            | 0.1118        | 1.67              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.8      | 1,118         | 0.0733        | 1.90              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.8      | 303           | 0.0132        | 0.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 28.9     | 1,917         | Total         |                   |                |  |



Subcatchment 40S: Sub 40

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af, Depth= 0.66"  
 Routed to Link SP41 :

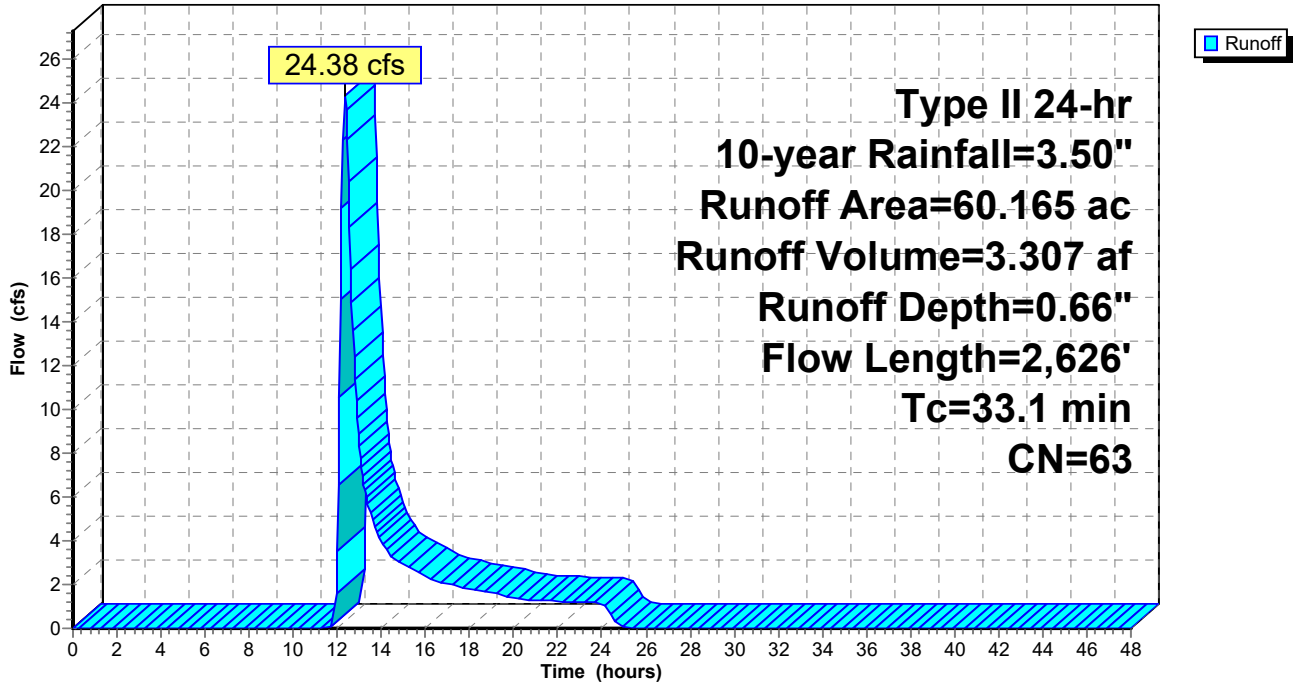
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.378     | 48 | Brush, Good, HSG B        |
| 0.001     | 98 | Unconnected roofs, HSG D  |
| 18.363    | 58 | Meadow, non-grazed, HSG B |
| 8.734     | 71 | Meadow, non-grazed, HSG C |
| 2.287     | 78 | Meadow, non-grazed, HSG D |
| 1.531     | 98 | Water Surface, HSG D      |
| 19.479    | 55 | Woods, Good, HSG B        |
| 9.335     | 70 | Woods, Good, HSG C        |
| 0.057     | 77 | Woods, Good, HSG D        |
| 60.165    | 63 | Weighted Average          |
| 58.633    |    | 97.45% Pervious Area      |
| 1.532     |    | 2.55% Impervious Area     |
| 0.001     |    | 0.07% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 585           | 0.0765        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.8      | 652           | 0.0395        | 1.39              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.9      | 1,289         | 0.0436        | 3.13              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 33.1     | 2,626         | Total         |                   |                |  |

Subcatchment 41S: Sub 41

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 24.51 cfs @ 12.18 hrs, Volume= 2.512 af, Depth= 0.62"

Routed to Link SP42 :

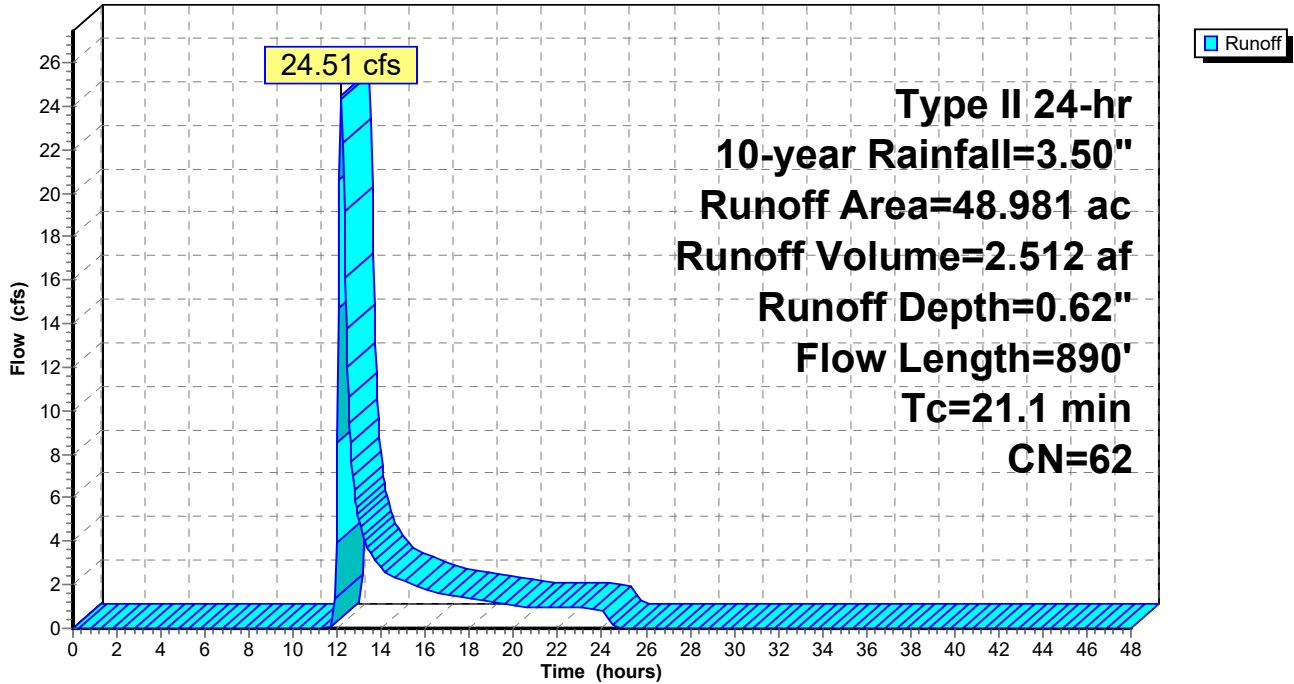
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.795     | 48 | Brush, Good, HSG B        |
| 0.967     | 65 | Brush, Good, HSG C        |
| 3.291     | 58 | Meadow, non-grazed, HSG B |
| 11.478    | 71 | Meadow, non-grazed, HSG C |
| 1.886     | 98 | Water Surface, HSG D      |
| 27.090    | 55 | Woods, Good, HSG B        |
| 3.474     | 70 | Woods, Good, HSG C        |
| 48.981    | 62 | Weighted Average          |
| 47.095    |    | 96.15% Pervious Area      |
| 1.886     |    | 3.85% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 3.2      | 234           | 0.0299        | 1.21              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 556           | 0.1704        | 2.06              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 21.1     | 890           | Total         |                   |                |  |

Subcatchment 42S: Sub 42

Hydrograph



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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 48S: Sub 48**

[47] Hint: Peak is 310% of capacity of segment #3

Runoff = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af, Depth= 1.12"  
 Routed to Link SP48 :

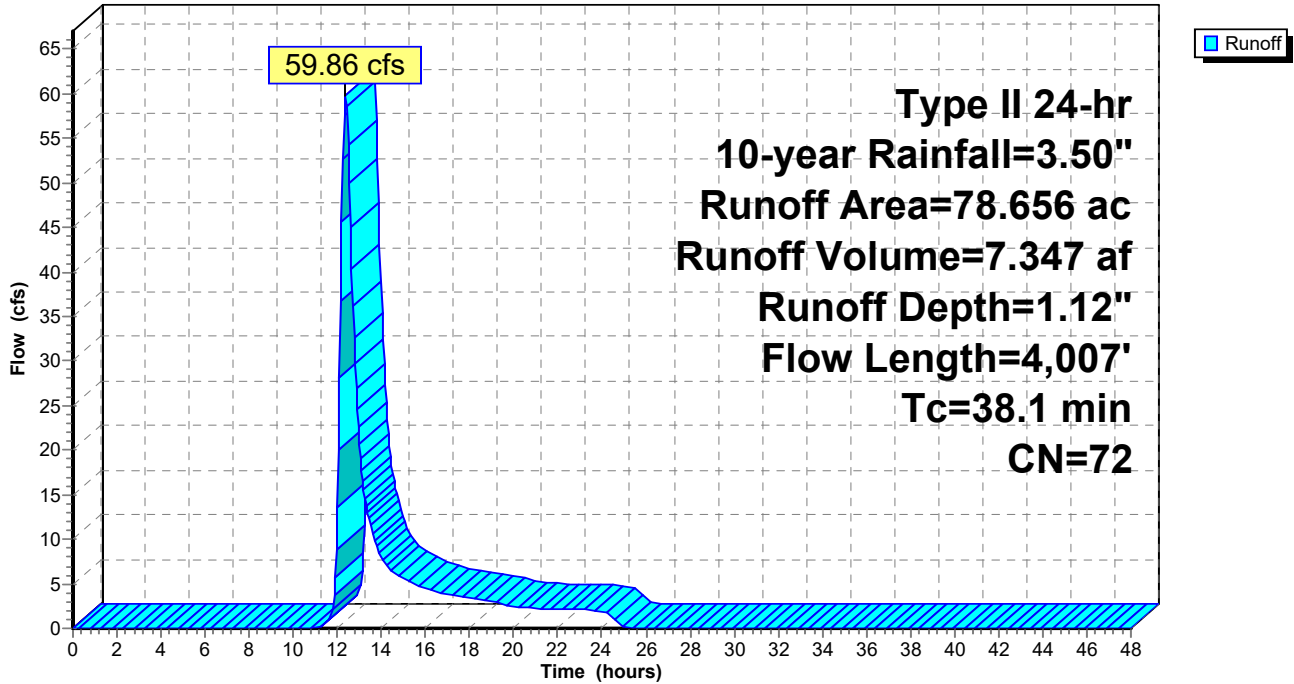
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.572   | 98 | Surface water                 |
| * 1.693   | 98 | Imperviopus surface           |
| * 0.110   | 96 | Gravel surface                |
| 0.416     | 61 | >75% Grass cover, Good, HSG B |
| 3.809     | 74 | >75% Grass cover, Good, HSG C |
| 1.571     | 80 | >75% Grass cover, Good, HSG D |
| 9.889     | 58 | Meadow, non-grazed, HSG B     |
| 26.970    | 71 | Meadow, non-grazed, HSG C     |
| 21.544    | 78 | Meadow, non-grazed, HSG D     |
| 0.763     | 48 | Brush, Good, HSG B            |
| 4.514     | 65 | Brush, Good, HSG C            |
| 2.800     | 73 | Brush, Good, HSG D            |
| 0.194     | 55 | Woods, Good, HSG B            |
| 0.882     | 70 | Woods, Good, HSG C            |
| 2.929     | 77 | Woods, Good, HSG D            |
| 78.656    | 72 | Weighted Average              |
| 76.391    |    | 97.12% Pervious Area          |
| 2.265     |    | 2.88% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.0      | 100           | 0.0625        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 22.2     | 1,935         | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 8.9      | 1,972         | 0.0230        | 3.68              | 19.31          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00'<br>n= 0.035 Earth, dense weeds |
| 38.1     | 4,007         | Total         |                   |                |  |

Subcatchment 48S: Sub 48

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 49S: Sub 49**

Runoff = 13.64 cfs @ 12.41 hrs, Volume= 1.977 af, Depth= 0.71"  
 Routed to Reach 42R : S-NSD-16

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.496     | 48 | Brush, Good, HSG B            |
| 1.174     | 65 | Brush, Good, HSG C            |
| 0.274     | 96 | Gravel surface, HSG D         |
| 0.570     | 98 | Unconnected roofs, HSG D      |
| 13.748    | 58 | Meadow, non-grazed, HSG B     |
| 12.594    | 71 | Meadow, non-grazed, HSG C     |
| 1.421     | 61 | >75% Grass cover, Good, HSG B |
| 0.238     | 74 | >75% Grass cover, Good, HSG C |
| 0.029     | 98 | Water Surface, HSG D          |
| 1.071     | 55 | Woods, Good, HSG B            |
| 0.984     | 70 | Woods, Good, HSG C            |
| 0.053     | 77 | Woods, Good, HSG D            |
| 33.652    | 64 | Weighted Average              |
| 33.053    |    | 98.22% Pervious Area          |
| 0.599     |    | 1.78% Impervious Area         |
| 0.570     |    | 95.16% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 240           | 0.1500        | 2.71              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 534           | 0.1367        | 2.59              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.8      | 168           | 0.0506        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.2      | 561           | 0.0267        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 1,396         | 0.0434        | 1.46              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 38.0     | 2,999         | Total         |                   |                |  |

**Mill Pt Pre 2**

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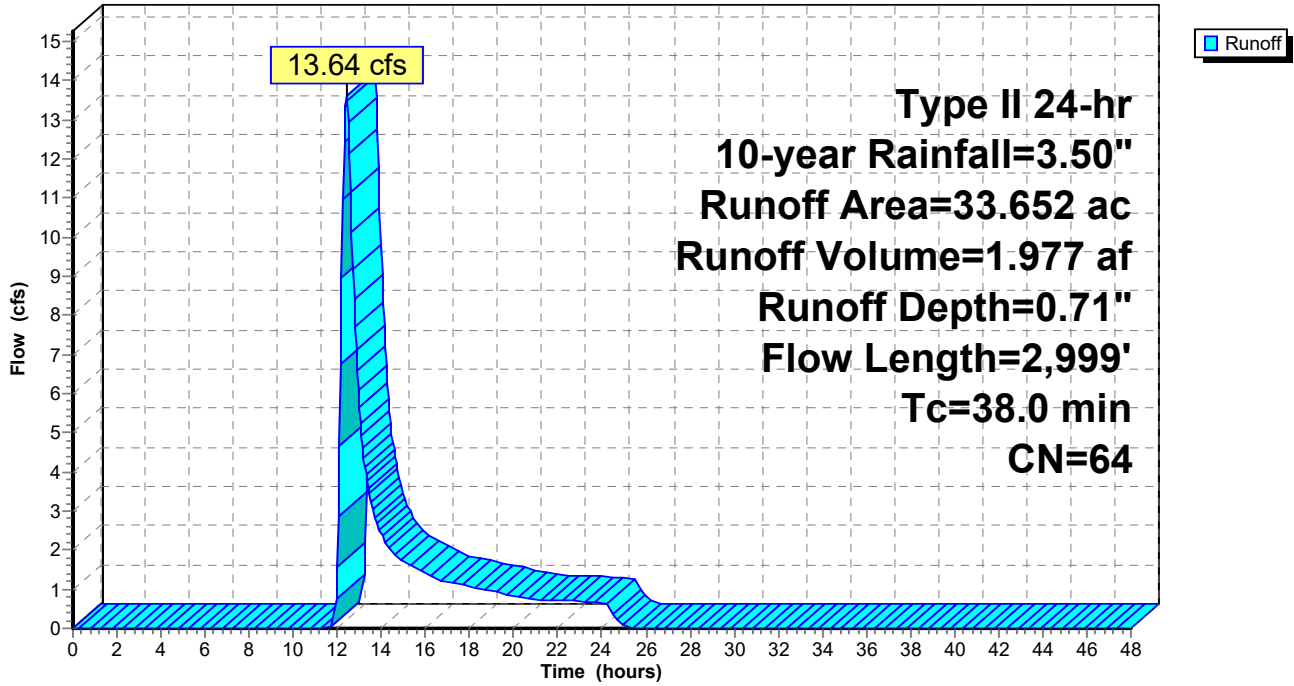
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 49S: Sub 49**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 50S: Sub 50**

[47] Hint: Peak is 554% of capacity of segment #4

Runoff = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af, Depth= 0.90"  
 Routed to Link SP50 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.310     | 48 | Brush, Good, HSG B        |
| 3.852     | 65 | Brush, Good, HSG C        |
| 0.150     | 73 | Brush, Good, HSG D        |
| 0.163     | 98 | Unconnected roofs, HSG D  |
| 3.353     | 58 | Meadow, non-grazed, HSG B |
| 23.813    | 71 | Meadow, non-grazed, HSG C |
| 2.446     | 78 | Meadow, non-grazed, HSG D |
| 0.409     | 98 | Water Surface, HSG D      |
| 5.669     | 55 | Woods, Good, HSG B        |
| 5.353     | 70 | Woods, Good, HSG C        |
| 0.253     | 77 | Woods, Good, HSG D        |
| 45.771    | 68 | Weighted Average          |
| 45.199    |    | 98.75% Pervious Area      |
| 0.572     |    | 1.25% Impervious Area     |
| 0.163     |    | 28.50% Unconnected        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 8.1      | 911           | 0.0710        | 1.87              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 7.5      | 410           | 0.0330        | 0.91              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 4.9      | 1,112         | 0.0320        | 3.80              | 5.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 ' /' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 29.4     | 2,533         | Total         |                   |                |  |

**Mill Pt Pre 2**

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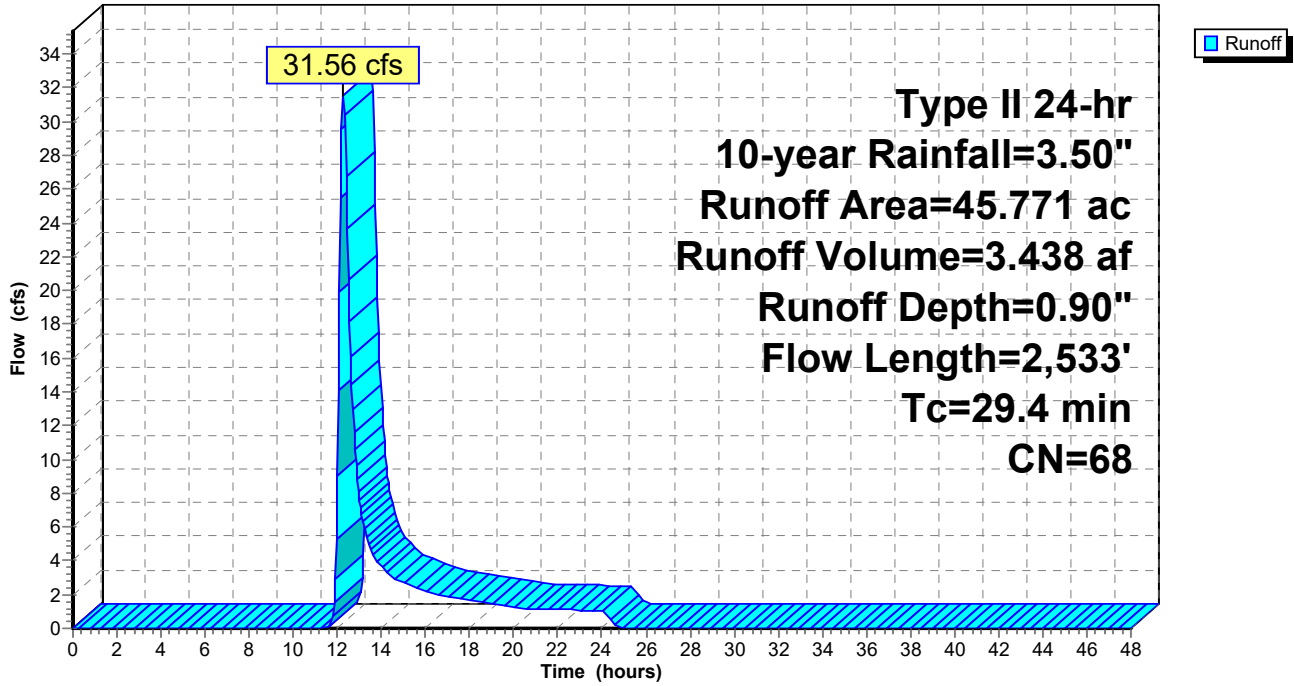
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 50S: Sub 50**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 51S: Sub 51**

Runoff = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af, Depth= 0.71"  
 Routed to Link SP51 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.067   | 98 | Impervious surface            |
| 2.753     | 61 | >75% Grass cover, Good, HSG B |
| 1.096     | 74 | >75% Grass cover, Good, HSG C |
| 49.195    | 58 | Meadow, non-grazed, HSG B     |
| 39.362    | 71 | Meadow, non-grazed, HSG C     |
| 2.576     | 78 | Meadow, non-grazed, HSG D     |
| 0.936     | 48 | Brush, Good, HSG B            |
| 0.917     | 65 | Brush, Good, HSG C            |
| 0.252     | 73 | Brush, Good, HSG D            |
| 1.975     | 55 | Woods, Good, HSG B            |
| 3.395     | 70 | Woods, Good, HSG C            |
| 0.161     | 77 | Woods, Good, HSG D            |
| 103.685   | 64 | Weighted Average              |
| 102.618   |    | 98.97% Pervious Area          |
| 1.067     |    | 1.03% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 12.6     | 1,592         | 0.0908        | 2.11              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.3      | 435           | 0.0586        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.4      | 336           | 0.0327        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.0      | 148           | 0.0270        | 0.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 36.7     | 2,611         | Total         |                   |                |  |

**Mill Pt Pre 2**

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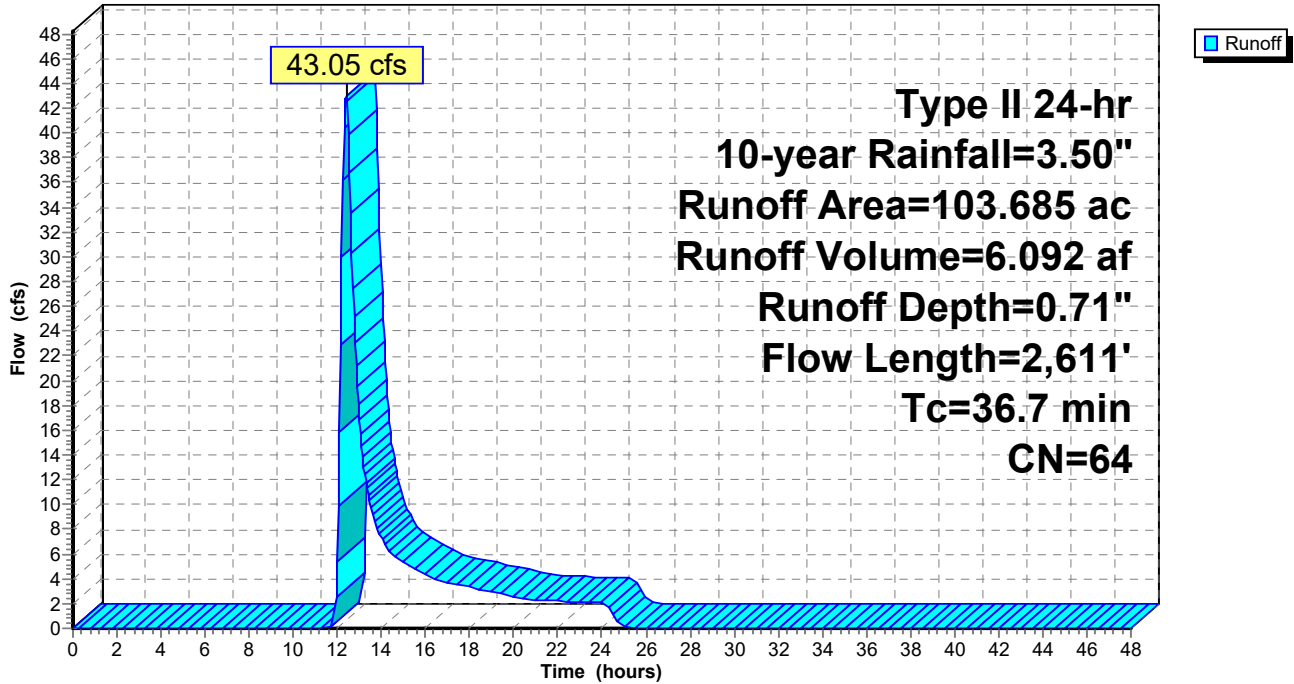
Type II 24-hr 10-year Rainfall=3.50"

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**Subcatchment 51S: Sub 51**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 52S: Sub 52**

Runoff = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af, Depth= 0.95"  
 Routed to Link SP52 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

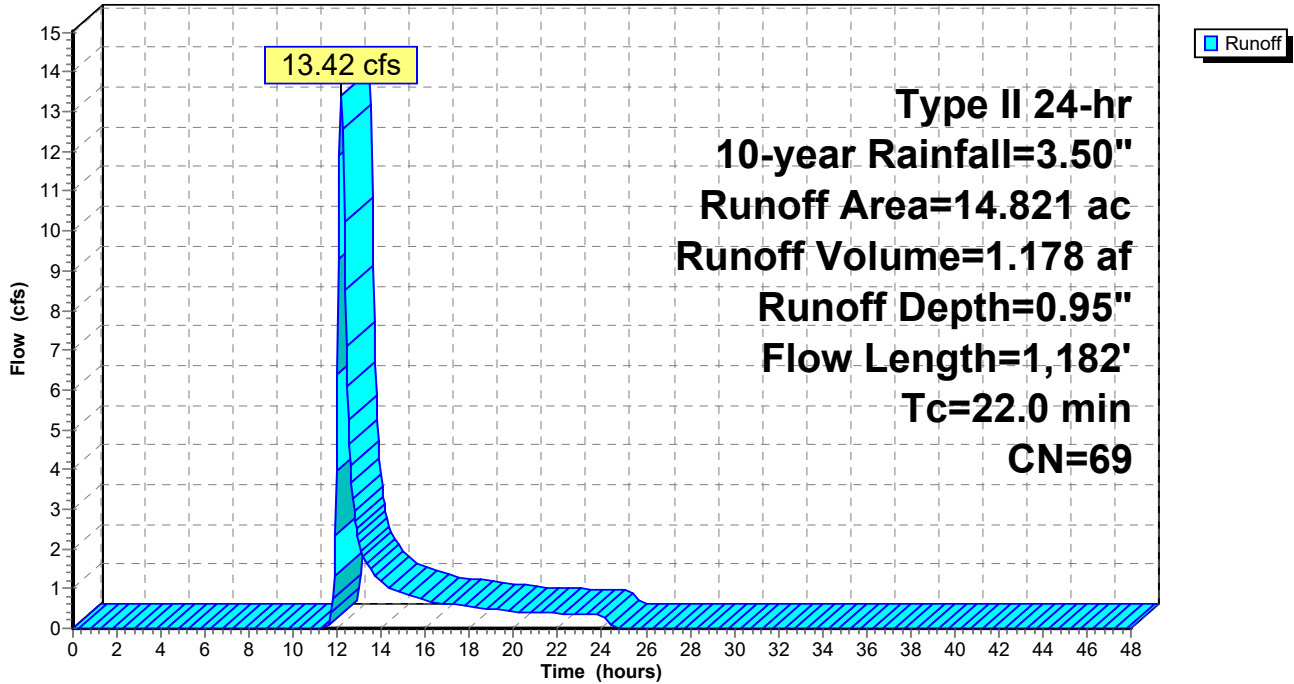
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.561     | 48 | Brush, Good, HSG B        |
| 0.166     | 73 | Brush, Good, HSG D        |
| 1.696     | 58 | Meadow, non-grazed, HSG B |
| 10.185    | 71 | Meadow, non-grazed, HSG C |
| 0.446     | 78 | Meadow, non-grazed, HSG D |
| 0.413     | 98 | Water Surface, HSG D      |
| 0.321     | 55 | Woods, Good, HSG B        |
| 0.833     | 70 | Woods, Good, HSG C        |
| 0.200     | 77 | Woods, Good, HSG D        |
| 14.821    | 69 | Weighted Average          |
| 14.408    |    | 97.21% Pervious Area      |
| 0.413     |    | 2.79% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.1     | 100           | 0.0200        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.1      | 993           | 0.0850        | 2.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.8      | 89            | 0.0112        | 0.53              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.0     | 1,182         | Total         |                   |                |  |



Subcatchment 52S: Sub 52

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 53S: Sub 53**

Runoff = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af, Depth= 0.85"  
 Routed to Link SP53 :

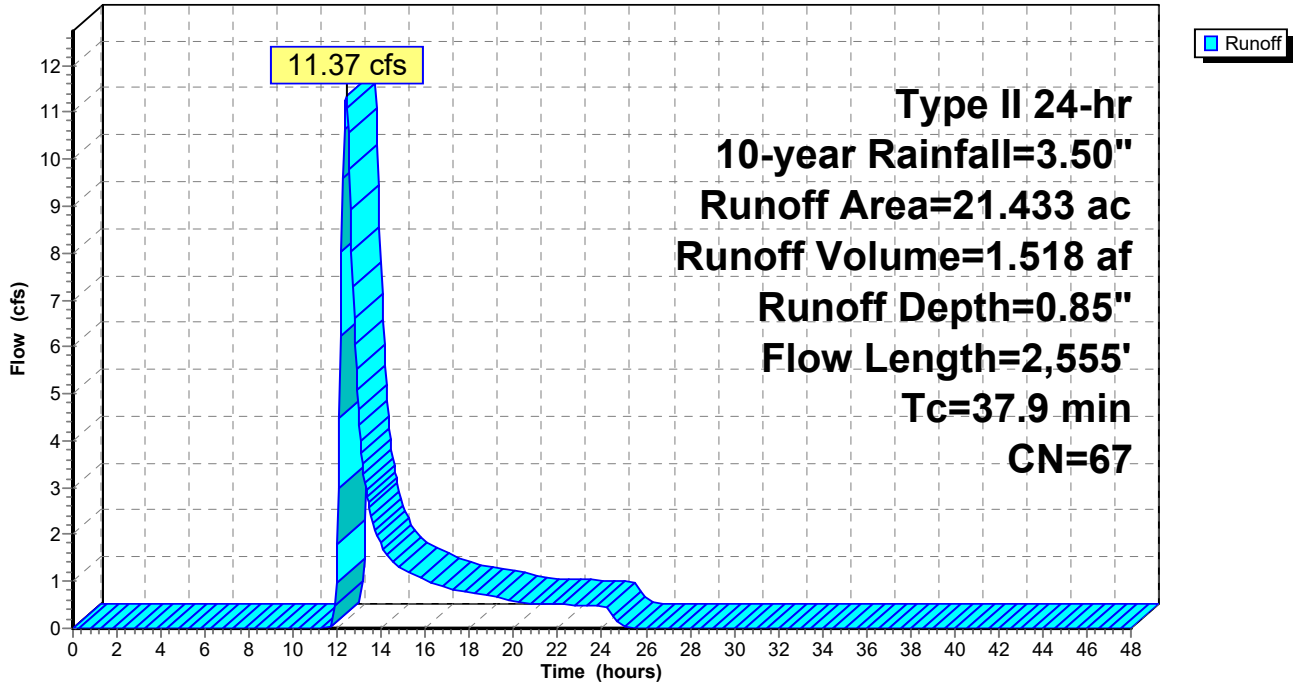
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.581     | 48 | Brush, Good, HSG B        |
| 0.993     | 65 | Brush, Good, HSG C        |
| 4.029     | 58 | Meadow, non-grazed, HSG B |
| 14.178    | 71 | Meadow, non-grazed, HSG C |
| 0.386     | 98 | Water Surface, HSG D      |
| 0.266     | 70 | Woods, Good, HSG C        |
| 21.433    | 67 | Weighted Average          |
| 21.047    |    | 98.20% Pervious Area      |
| 0.386     |    | 1.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.6     | 100           | 0.0100        | 0.11              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 2.4      | 347           | 0.1210        | 2.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.9      | 151           | 0.1656        | 2.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 19.3     | 1,511         | 0.0347        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 446           | 0.2690        | 11.02             | 16.53          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 37.9     | 2,555         | Total         |                   |                |   |

Subcatchment 53S: Sub 53

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 54S:**

[47] Hint: Peak is 372% of capacity of segment #5

Runoff = 29.99 cfs @ 12.38 hrs, Volume= 3.801 af, Depth= 0.95"  
 Routed to Link SP54 :

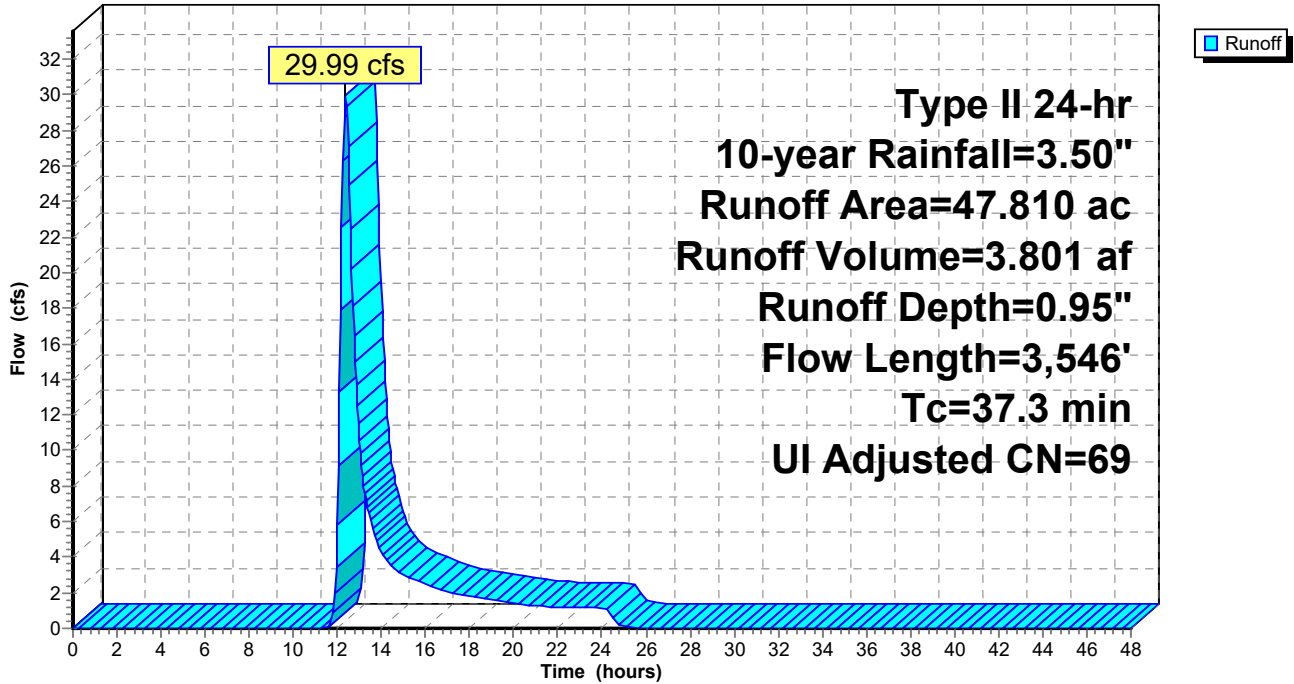
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 2.222     | 48 |     | Brush, Good, HSG B            |
| 4.975     | 65 |     | Brush, Good, HSG C            |
| 2.646     | 98 |     | Unconnected roofs, HSG D      |
| 5.842     | 58 |     | Meadow, non-grazed, HSG B     |
| 23.555    | 71 |     | Meadow, non-grazed, HSG C     |
| 2.361     | 61 |     | >75% Grass cover, Good, HSG B |
| 5.037     | 74 |     | >75% Grass cover, Good, HSG C |
| 1.095     | 98 |     | Water Surface, HSG D          |
| 0.043     | 55 |     | Woods, Good, HSG B            |
| 0.034     | 70 |     | Woods, Good, HSG C            |
| 47.810    | 70 | 69  | Weighted Average, UI Adjusted |
| 44.069    |    |     | 92.18% Pervious Area          |
| 3.741     |    |     | 7.82% Impervious Area         |
| 2.646     |    |     | 70.73% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.2     | 964           | 0.0420        | 1.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.8      | 166           | 0.0392        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 1.9      | 321           | 0.0312        | 2.84              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps  |
| 13.7     | 1,995         | 0.0253        | 2.42              | 8.07           | <b>Parabolic Channel,</b><br>W=5.00' D=1.00' Area=3.3 sf Perim=5.5'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 37.3     | 3,546         | Total         |                   |                |  |

Subcatchment 54S:

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 55S: Sub 55**

[47] Hint: Peak is 165% of capacity of segment #4

Runoff = 14.93 cfs @ 12.31 hrs, Volume= 1.808 af, Depth= 0.80"  
 Routed to Link SP55 :

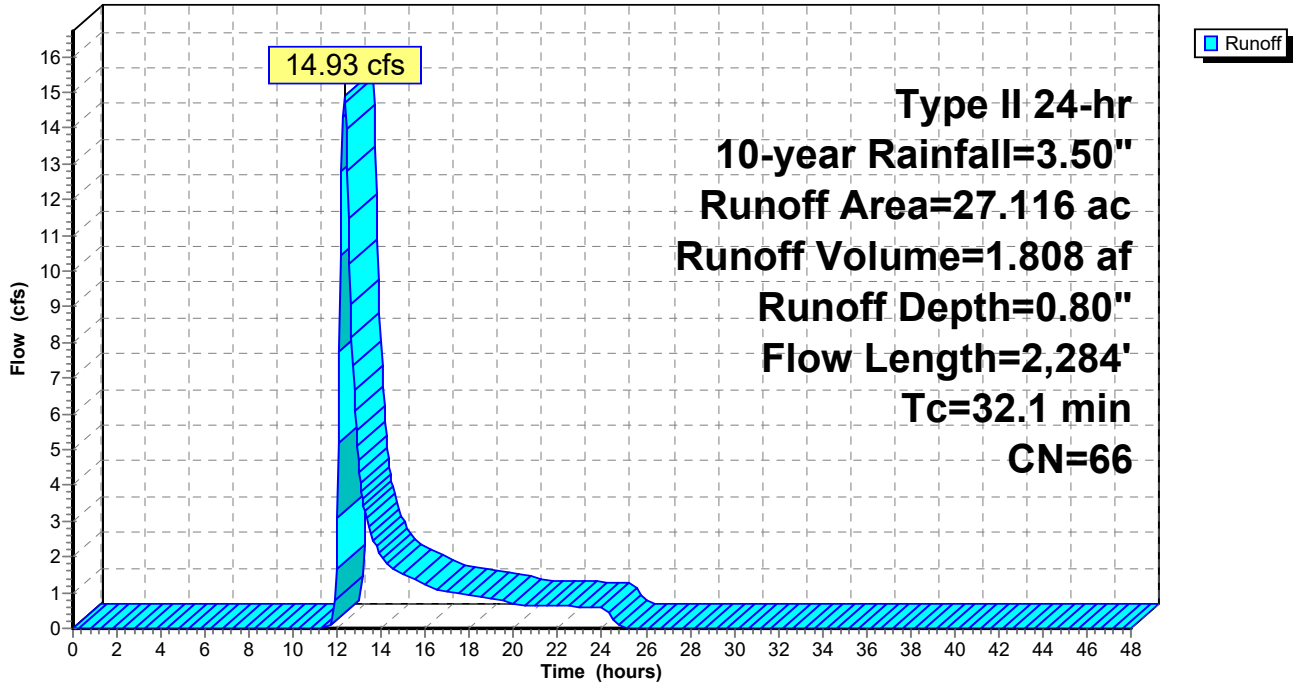
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.416     | 48 | Brush, Good, HSG B        |
| 0.206     | 65 | Brush, Good, HSG C        |
| 0.193     | 98 | Unconnected roofs, HSG D  |
| 9.177     | 58 | Meadow, non-grazed, HSG B |
| 16.698    | 71 | Meadow, non-grazed, HSG C |
| 0.190     | 55 | Woods, Good, HSG B        |
| 0.236     | 70 | Woods, Good, HSG C        |
| 27.116    | 66 | Weighted Average          |
| 26.923    |    | 99.29% Pervious Area      |
| 0.193     |    | 0.71% Impervious Area     |
| 0.193     |    | 100.00% Unconnected       |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 4.5      | 535           | 0.0813        | 2.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 11.9     | 1,175         | 0.0549        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.3      | 474           | 0.0527        | 3.39              | 9.05           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 32.1     | 2,284         | Total         |                   |                |  |

Subcatchment 55S: Sub 55

Hydrograph





**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Subcatchment 56S: Sub 56**

Runoff = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af, Depth= 0.85"  
 Routed to Link SP56 :

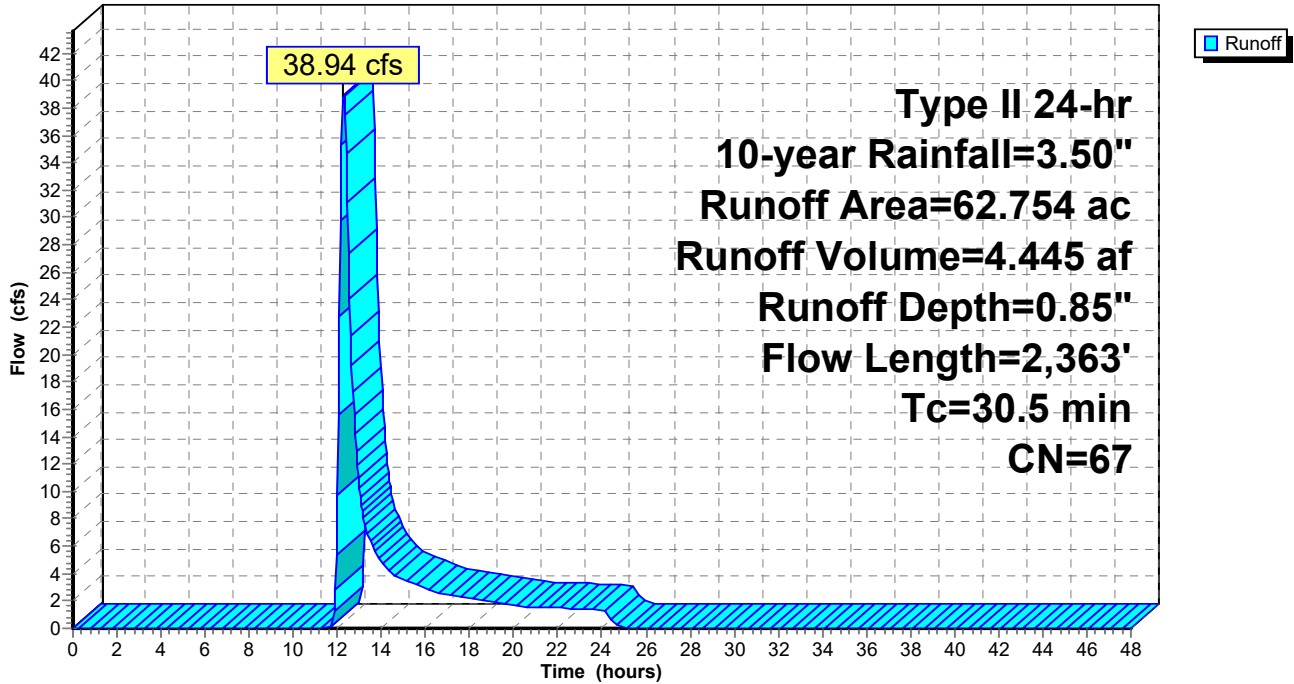
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 10-year Rainfall=3.50"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.895     | 48 | Brush, Good, HSG B        |
| 1.460     | 65 | Brush, Good, HSG C        |
| 13.366    | 58 | Meadow, non-grazed, HSG B |
| 40.081    | 71 | Meadow, non-grazed, HSG C |
| 1.244     | 55 | Woods, Good, HSG B        |
| 5.708     | 70 | Woods, Good, HSG C        |
| 62.754    | 67 | Weighted Average          |
| 62.754    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.3      | 501           | 0.0264        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.2      | 958           | 0.1336        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.8      | 644           | 0.0505        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.9      | 160           | 0.0344        | 0.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.5     | 2,363         | Total         |                   |                |  |

Subcatchment 56S: Sub 56

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 10-year Rainfall=3.50"

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## Summary for Reach 33R:

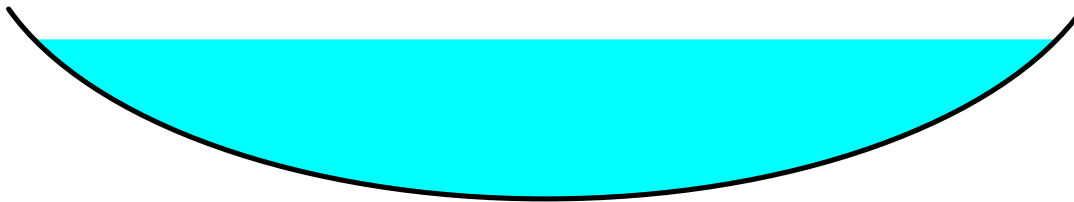
[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 0.84'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.62" for 10-year event  
Inflow = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af  
Outflow = 7.31 cfs @ 12.86 hrs, Volume= 1.323 af, Atten= 7%, Lag= 27.2 min  
Routed to Link SP34 : SP31

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.37 fps, Min. Travel Time= 13.2 min  
Avg. Velocity = 0.58 fps, Avg. Travel Time= 53.6 min

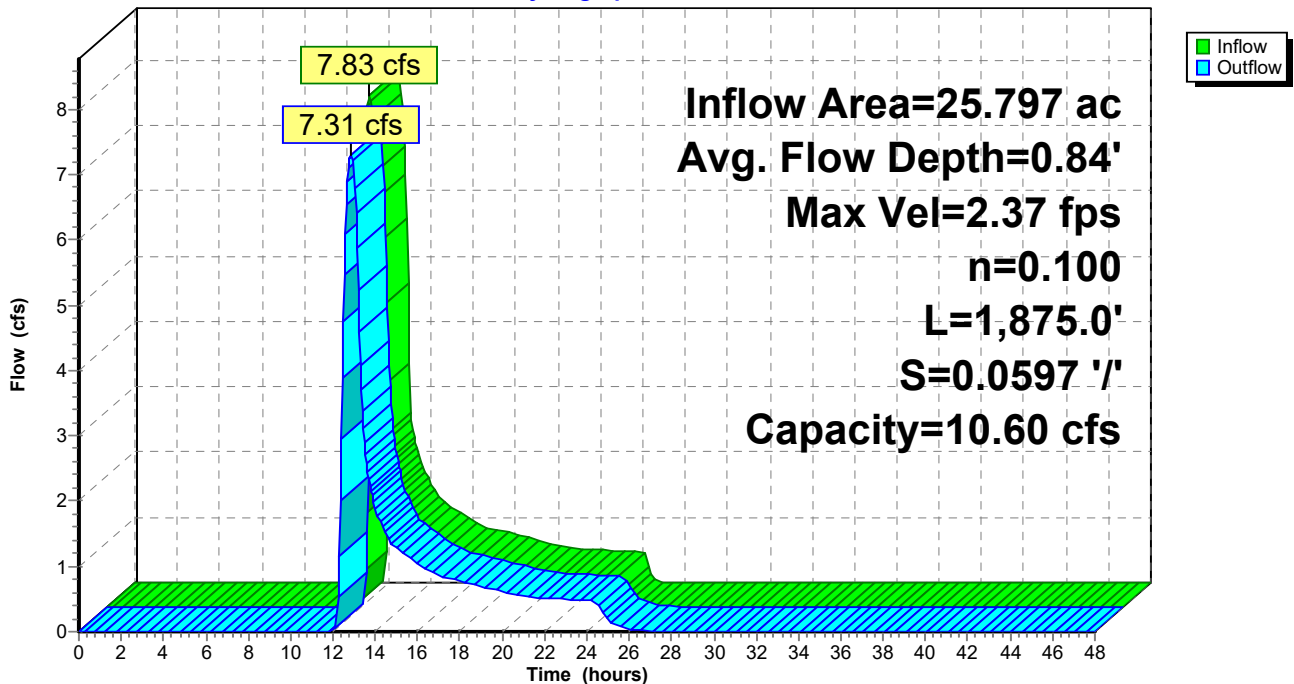
Peak Storage= 5,774 cf @ 12.64 hrs  
Average Depth at Peak Storage= 0.84' , Surface Width= 5.50'  
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,875.0' Slope= 0.0597 '/'  
Inlet Invert= 578.00', Outlet Invert= 466.00'



## Reach 33R:

Hydrograph



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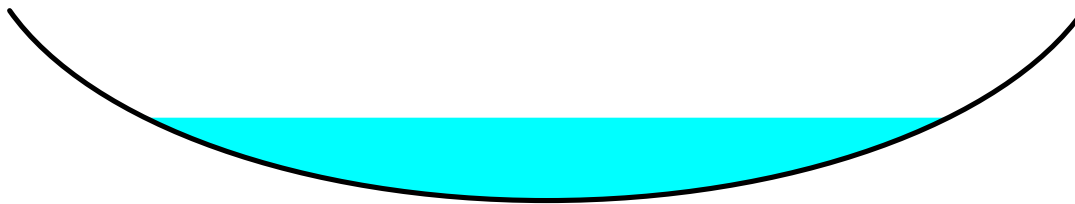
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 15.72 cfs @ 12.26 hrs, Volume= 1.660 af  
Outflow = 14.73 cfs @ 12.43 hrs, Volume= 1.660 af, Atten= 6%, Lag= 10.4 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.19 fps, Min. Travel Time= 5.8 min  
Avg. Velocity = 1.00 fps, Avg. Travel Time= 18.5 min

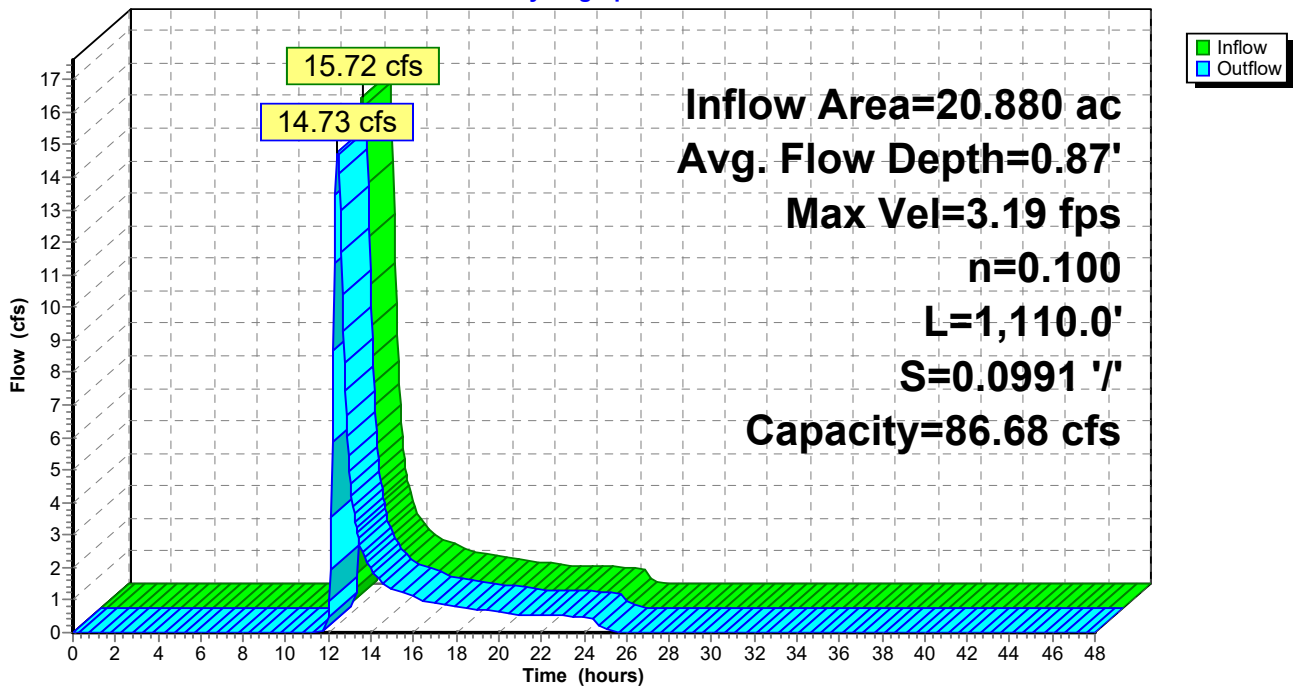
Peak Storage= 5,125 cf @ 12.34 hrs  
Average Depth at Peak Storage= 0.87' , Surface Width= 7.93'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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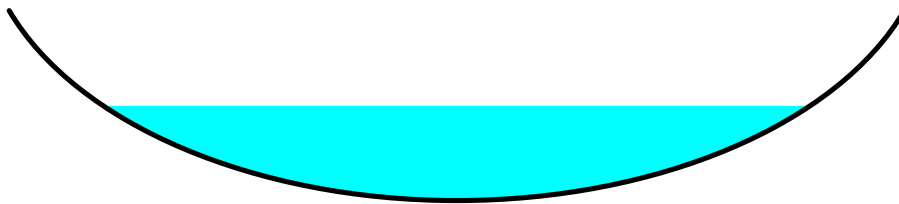
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 13.64 cfs @ 12.41 hrs, Volume= 1.977 af  
Outflow = 11.83 cfs @ 12.77 hrs, Volume= 1.977 af, Atten= 13%, Lag= 21.4 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 2.52 fps, Min. Travel Time= 11.8 min  
Avg. Velocity = 0.70 fps, Avg. Travel Time= 42.4 min

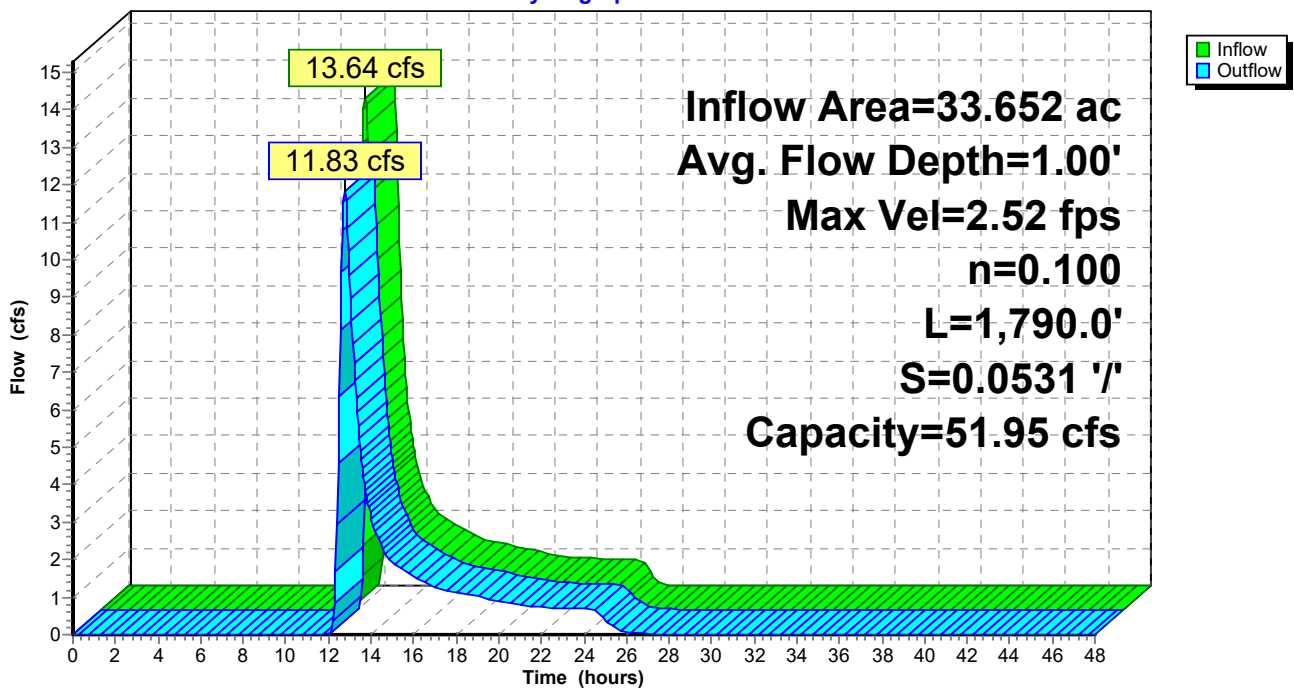
Peak Storage= 8,402 cf @ 12.57 hrs  
Average Depth at Peak Storage= 1.00' , Surface Width= 7.06'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 10-year Rainfall=3.50"

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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 0.62" for 10-year event  
 Inflow = 12.06 cfs @ 12.21 hrs, Volume= 1.323 af  
 Outflow = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af, Atten= 35%, Lag= 11.7 min  
 Primary = 7.83 cfs @ 12.41 hrs, Volume= 1.323 af  
 Routed to Reach 33R :  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 583.44' @ 12.41 hrs Surf.Area= 4,691 sf Storage= 4,362 cf

Plug-Flow detention time= 2.5 min calculated for 1.322 af (100% of inflow)  
 Center-of-Mass det. time= 2.5 min ( 915.9 - 913.3 )

| Volume           | Invert            | Avail.Storage | Storage Description  |                        |                  |  |
|------------------|-------------------|---------------|--|------------------------|------------------|--|
| #1               | 580.00'           | 32,769 cf     | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                        |                  |  |
| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet)                                     | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |  |
| 580.00           | 1                 | 5.0           | 0  | 0                      | 1                |  |
| 582.00           | 935               | 220.0         | 644  | 644                    | 3,857            |  |
| 584.00           | 6,900             | 505.0         | 6,917  | 7,561                  | 20,316           |  |
| 585.00           | 12,860            | 515.0         | 9,727  | 17,288                 | 21,274           |  |
| 586.00           | 18,260            | 645.0         | 15,481   | 32,769                 | 33,289           |  |

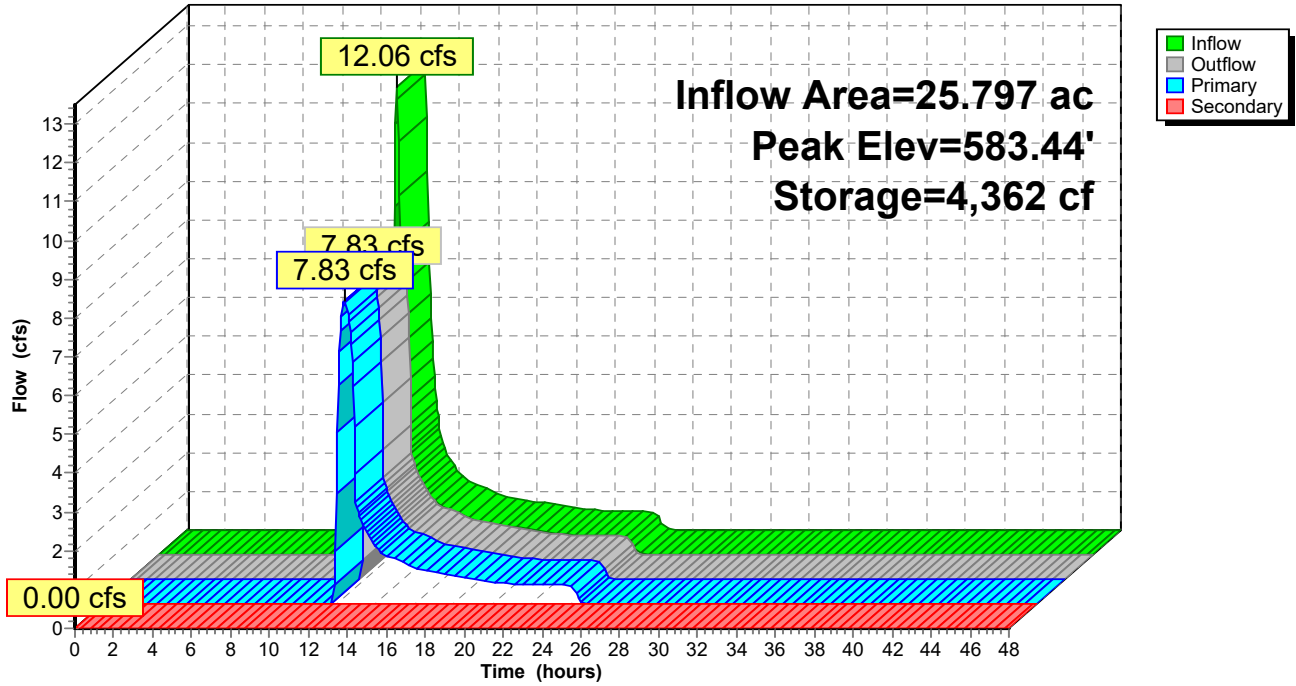
| Device | Routing   | Invert  | Outlet Devices   |
|--------|-----------|---------|--|
| #1     | Primary   | 580.00' | <b>15.0" Round Culvert</b><br>L= 79.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf |
| #2     | Secondary | 585.00' | <b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63                |

**Primary OutFlow** Max=7.83 cfs @ 12.41 hrs HW=583.44' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 7.83 cfs @ 6.38 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=580.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



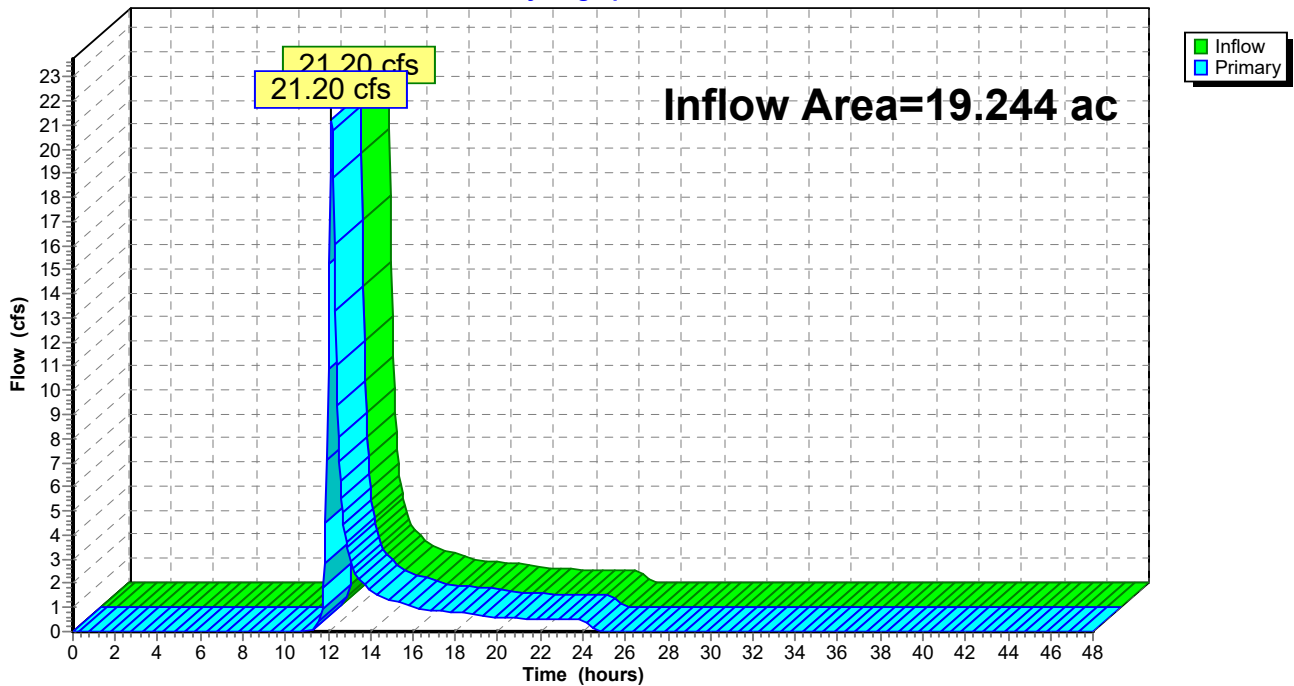
### Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 1.12" for 10-year event  
Inflow = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af  
Primary = 21.20 cfs @ 12.17 hrs, Volume= 1.798 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP25:

Hydrograph





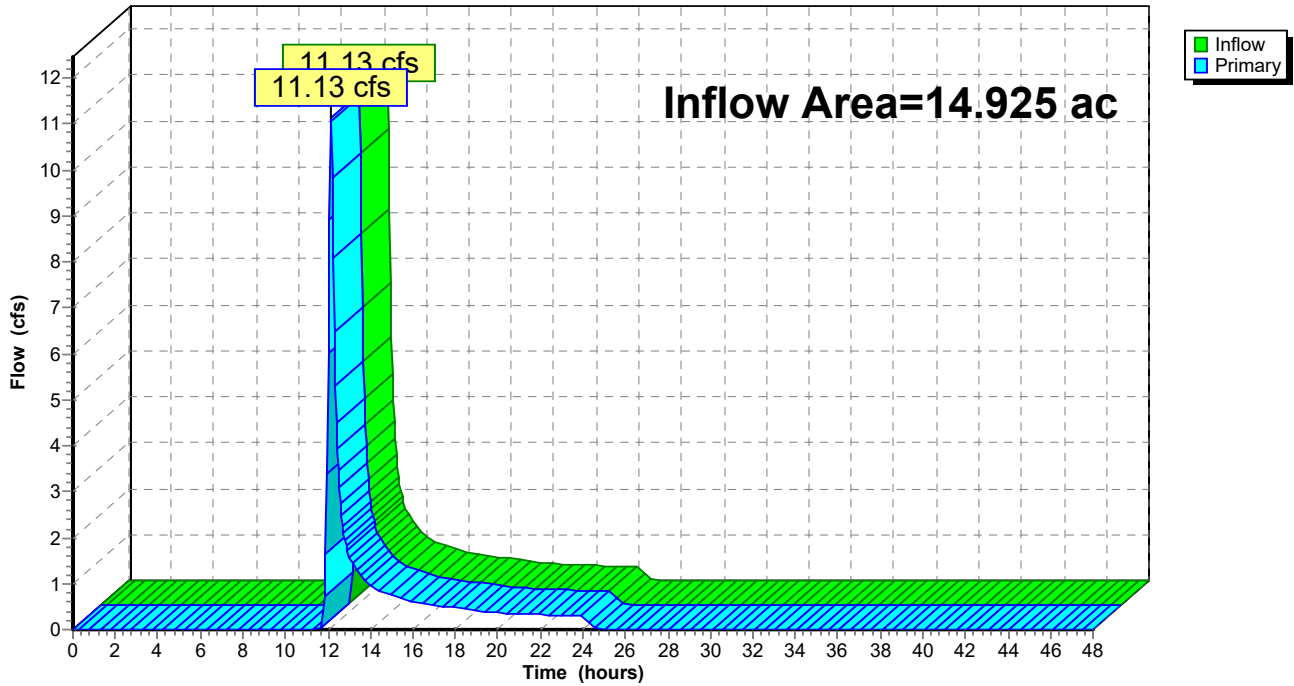
Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af  
Primary = 11.13 cfs @ 12.13 hrs, Volume= 0.935 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP26:

Hydrograph



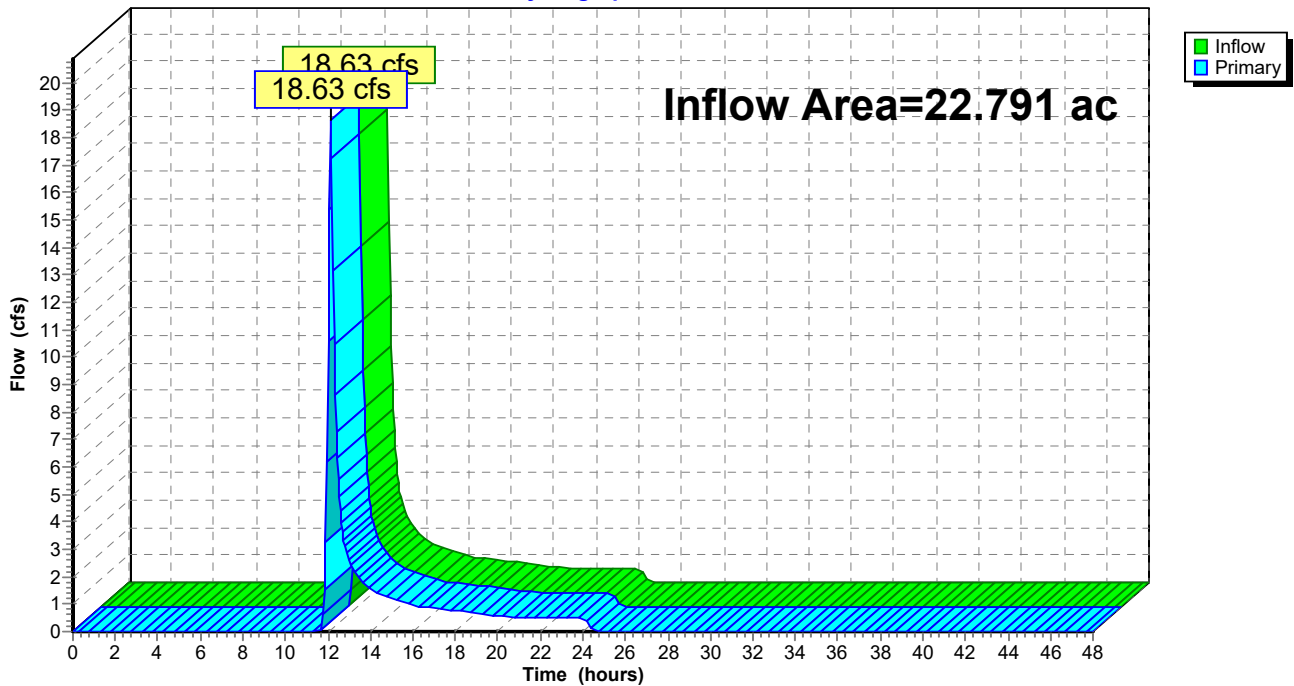
### Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af  
Primary = 18.63 cfs @ 12.13 hrs, Volume= 1.520 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP27:

Hydrograph



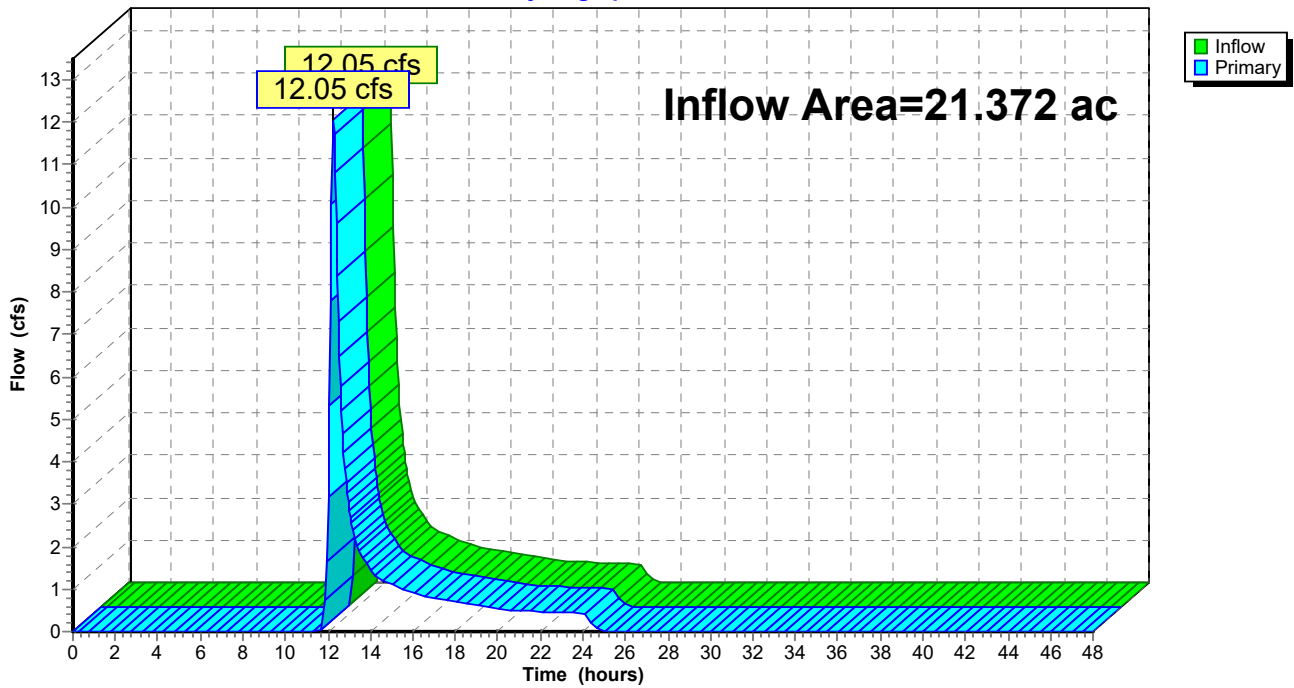
### Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af  
Primary = 12.05 cfs @ 12.25 hrs, Volume= 1.339 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP28:

Hydrograph



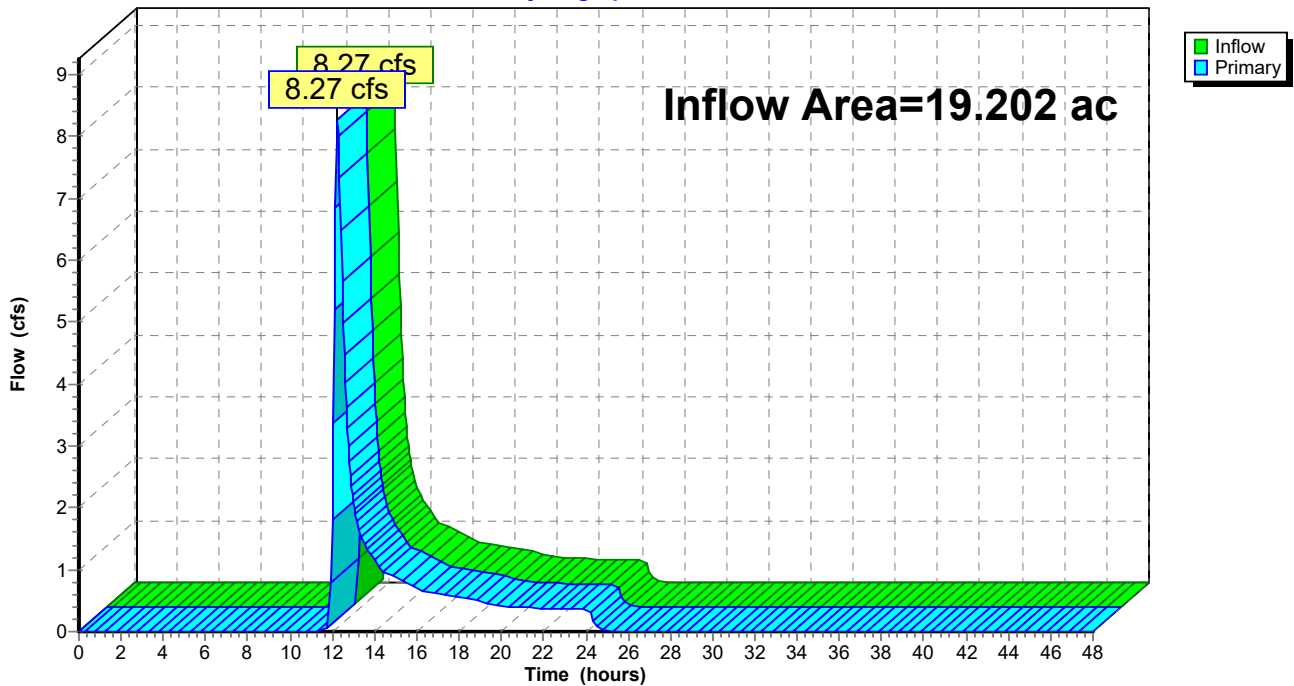
Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 0.62" for 10-year event  
Inflow = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af  
Primary = 8.27 cfs @ 12.25 hrs, Volume= 0.985 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP29:

Hydrograph



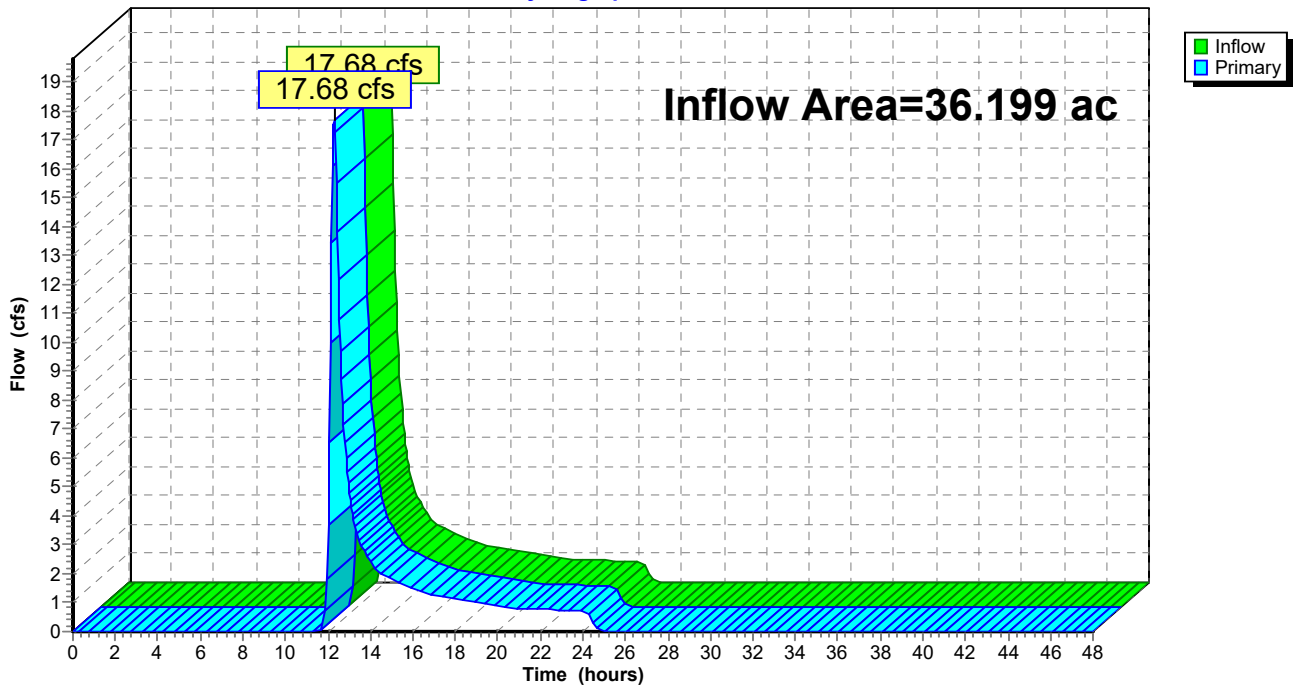
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af  
Primary = 17.68 cfs @ 12.28 hrs, Volume= 2.127 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



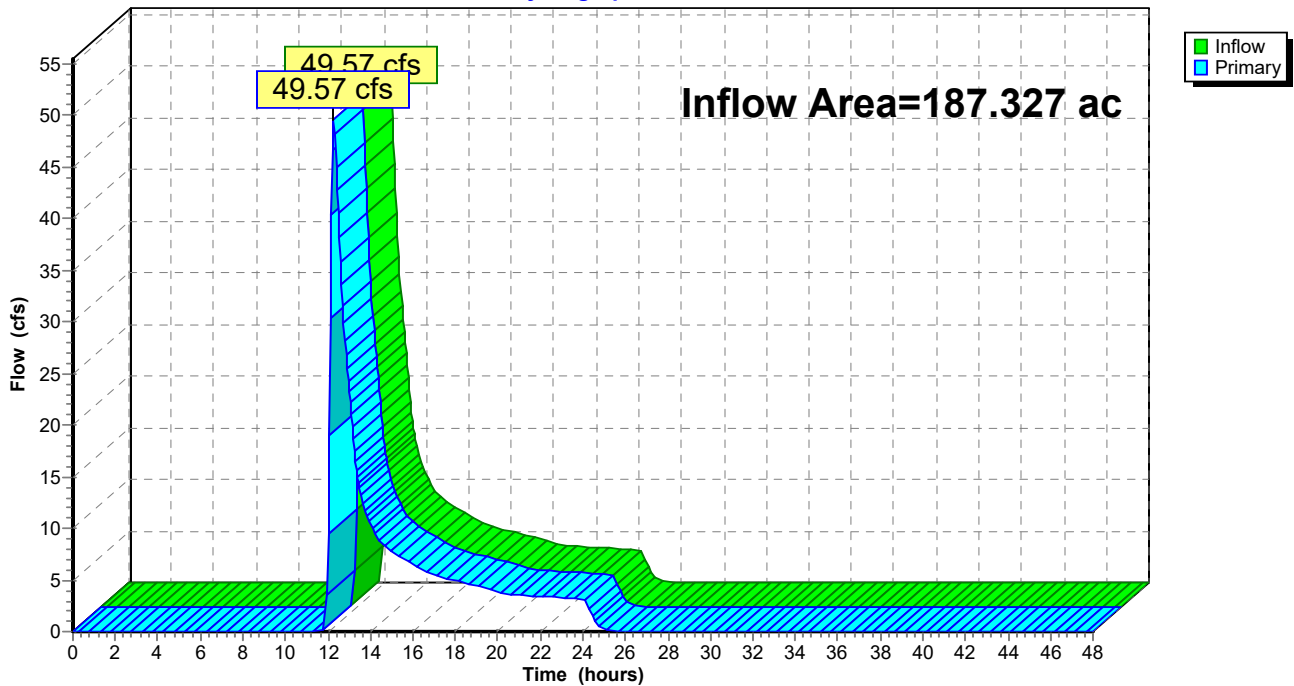
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 0.54" for 10-year event  
Inflow = 49.57 cfs @ 12.27 hrs, Volume= 8.415 af  
Primary = 49.57 cfs @ 12.27 hrs, Volume= 8.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



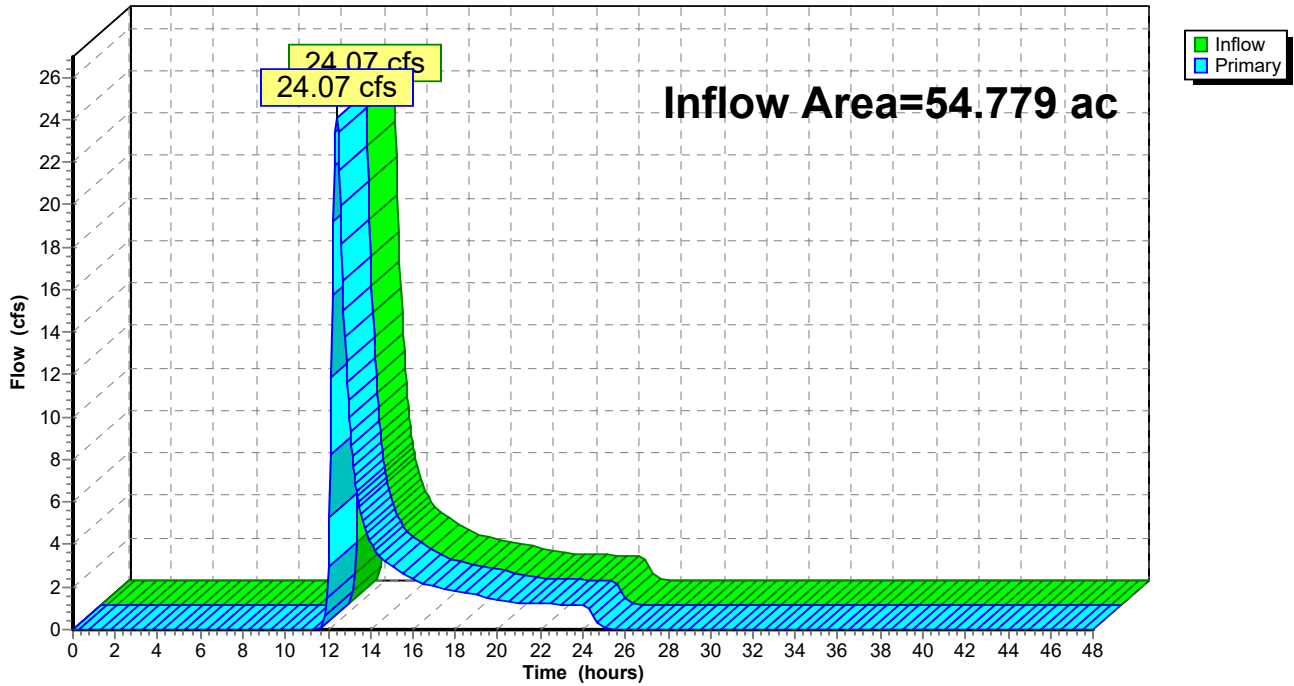
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 0.75" for 10-year event  
Inflow = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af  
Primary = 24.07 cfs @ 12.41 hrs, Volume= 3.433 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph



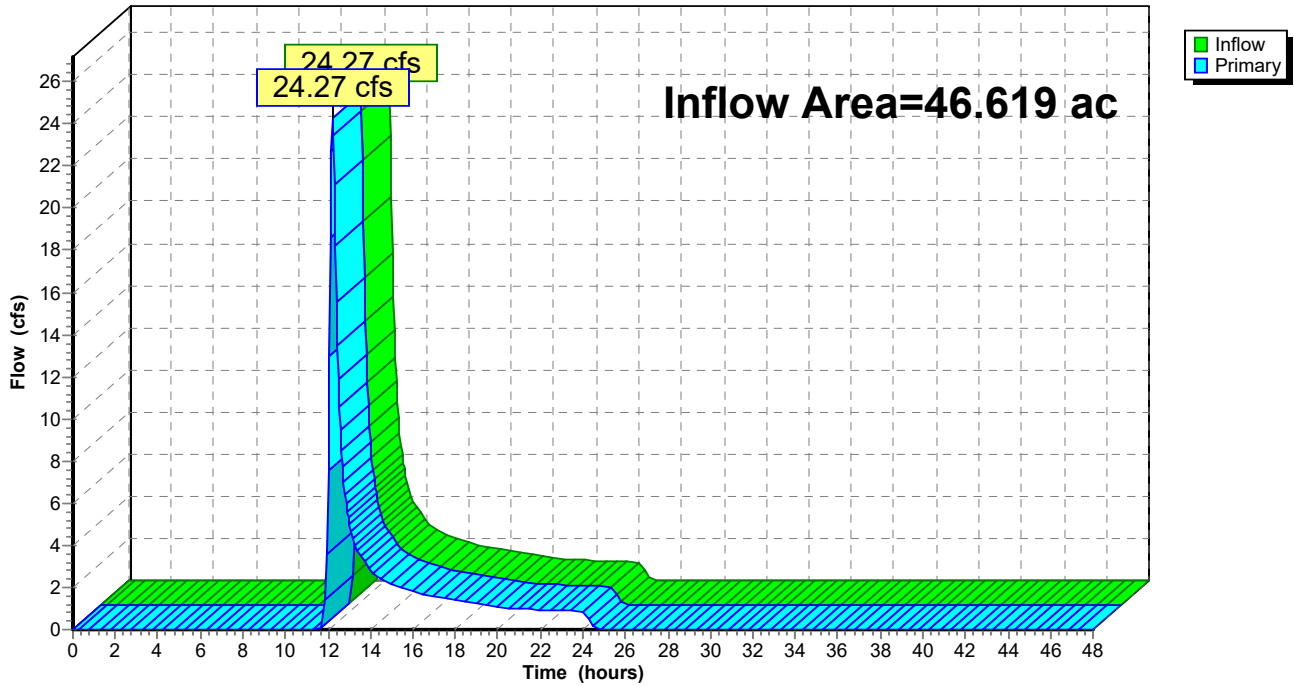
Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af  
Primary = 24.27 cfs @ 12.21 hrs, Volume= 2.562 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP36:

Hydrograph





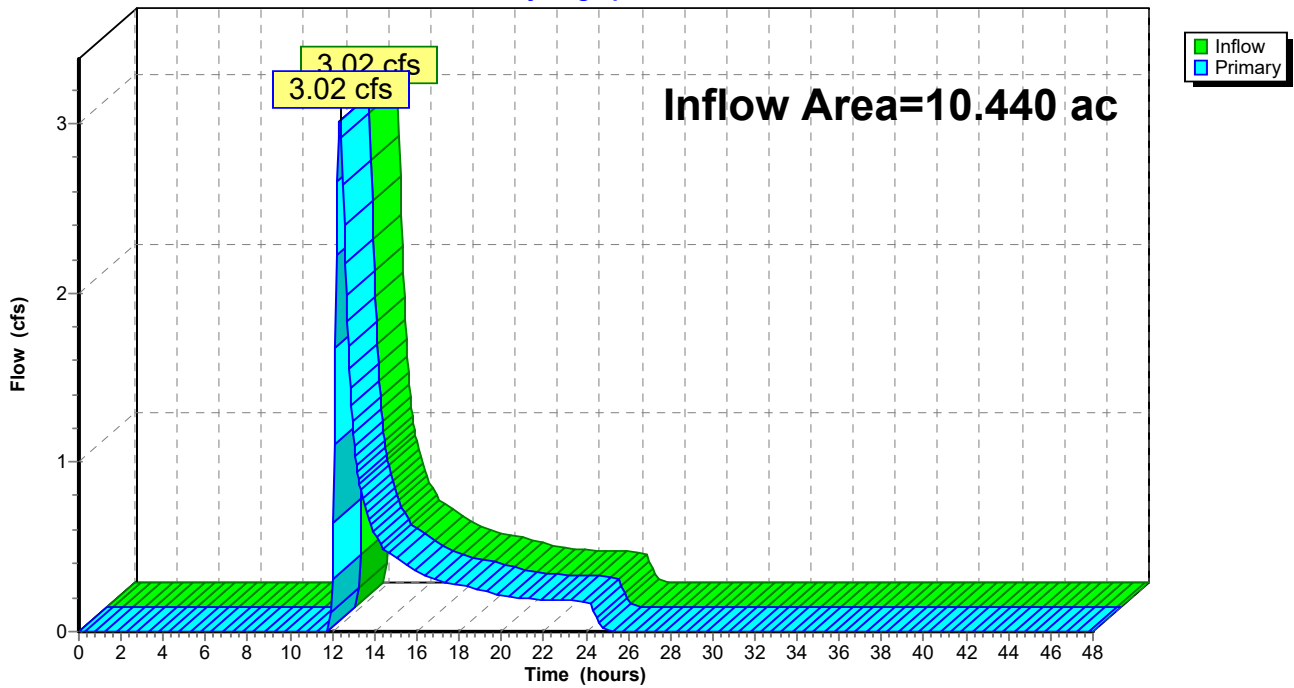
### Summary for Link SP37:

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 0.53" for 10-year event  
Inflow = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af  
Primary = 3.02 cfs @ 12.36 hrs, Volume= 0.462 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP37:

Hydrograph



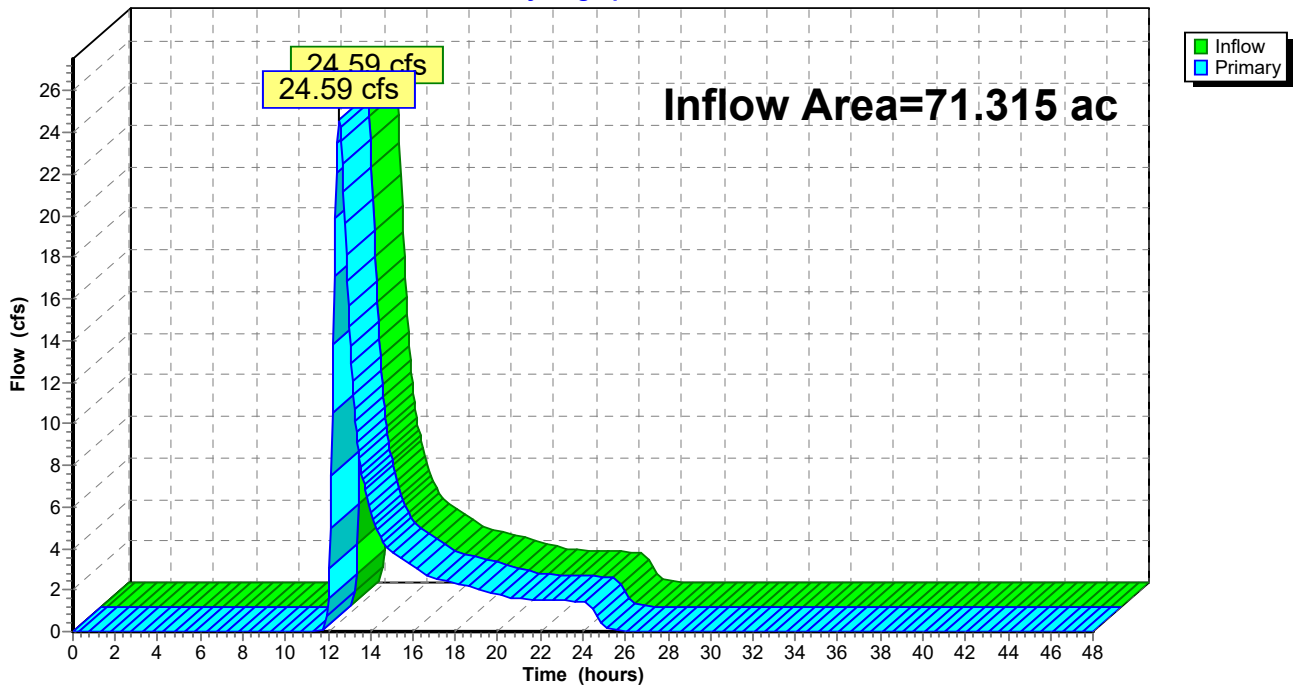
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af  
Primary = 24.59 cfs @ 12.55 hrs, Volume= 4.190 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph



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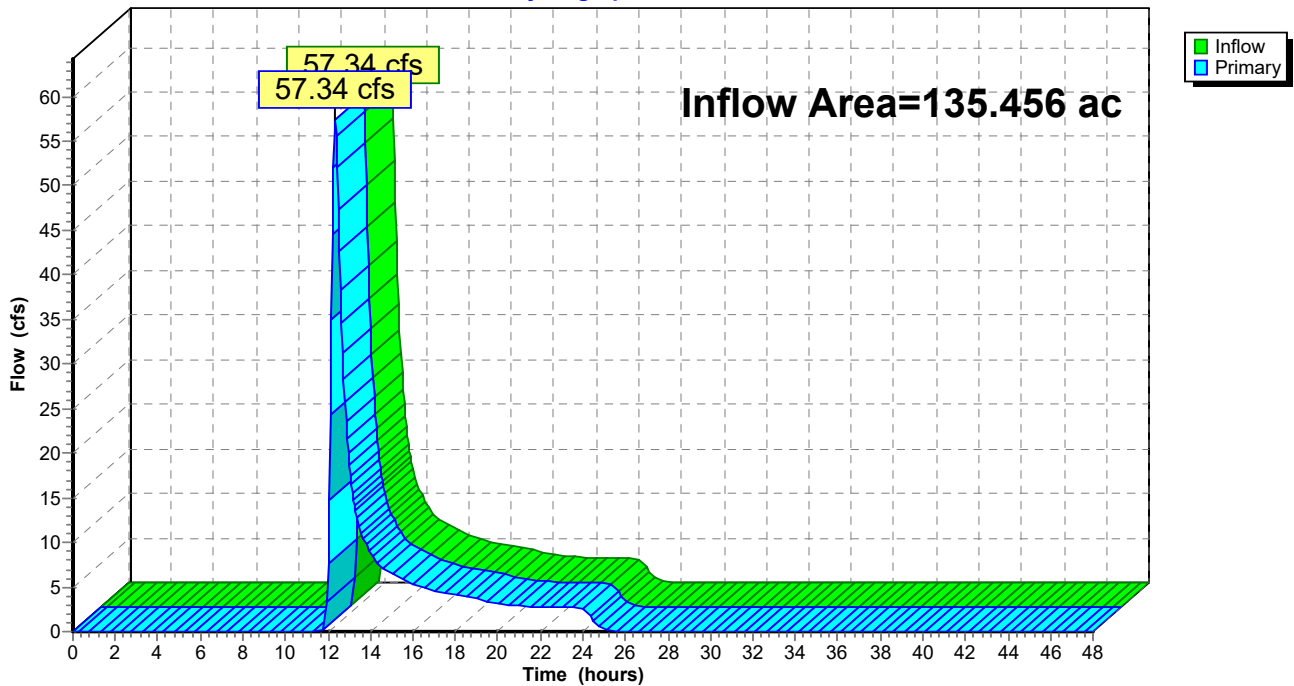
## Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 0.67" for 10-year event  
Inflow = 57.34 cfs @ 12.34 hrs, Volume= 7.536 af  
Primary = 57.34 cfs @ 12.34 hrs, Volume= 7.536 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP39:

Hydrograph



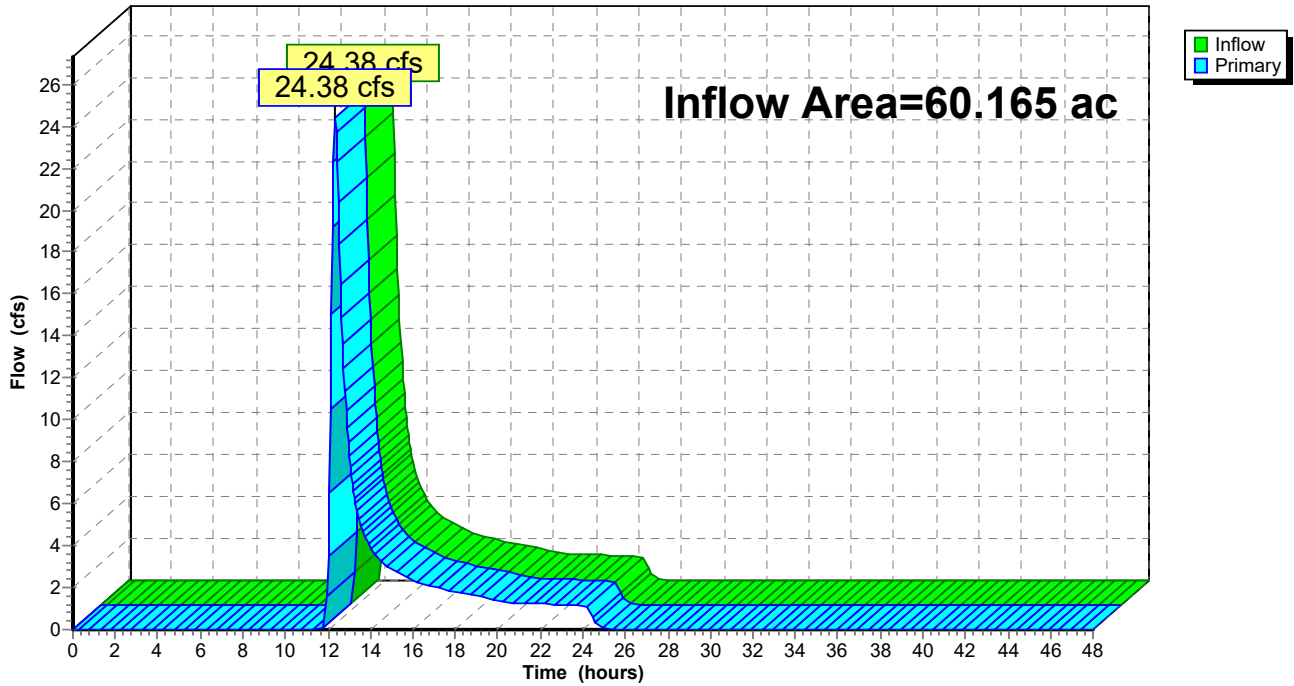
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 0.66" for 10-year event  
Inflow = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af  
Primary = 24.38 cfs @ 12.34 hrs, Volume= 3.307 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



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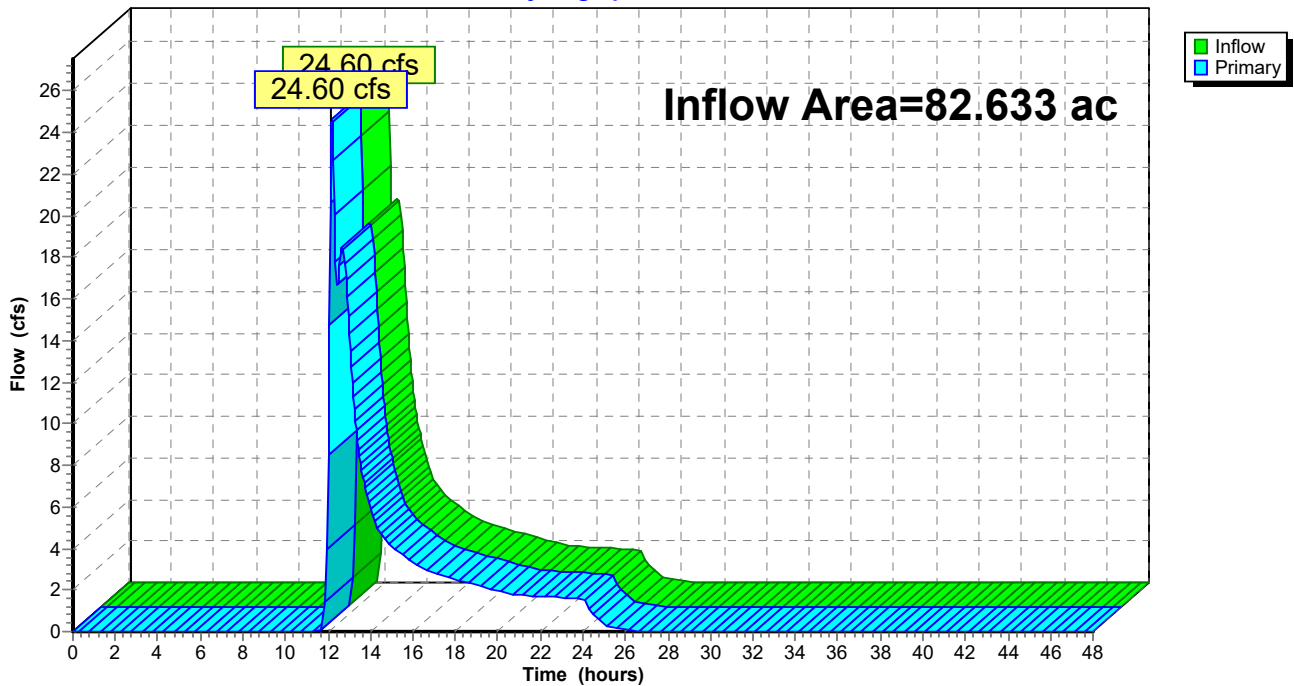
**Summary for Link SP42:**

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 0.65" for 10-year event  
Inflow = 24.60 cfs @ 12.18 hrs, Volume= 4.489 af  
Primary = 24.60 cfs @ 12.18 hrs, Volume= 4.489 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP42:**

Hydrograph



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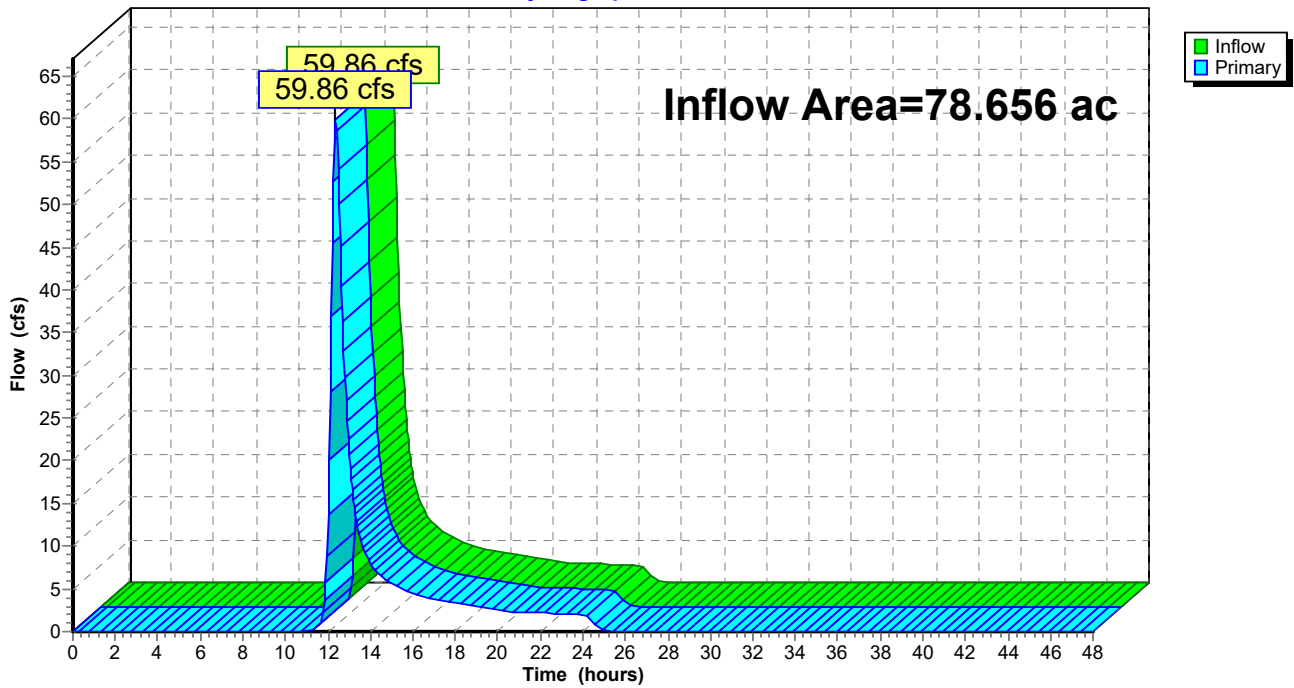
**Summary for Link SP48:**

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 1.12" for 10-year event  
Inflow = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af  
Primary = 59.86 cfs @ 12.37 hrs, Volume= 7.347 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

**Link SP48:**

Hydrograph



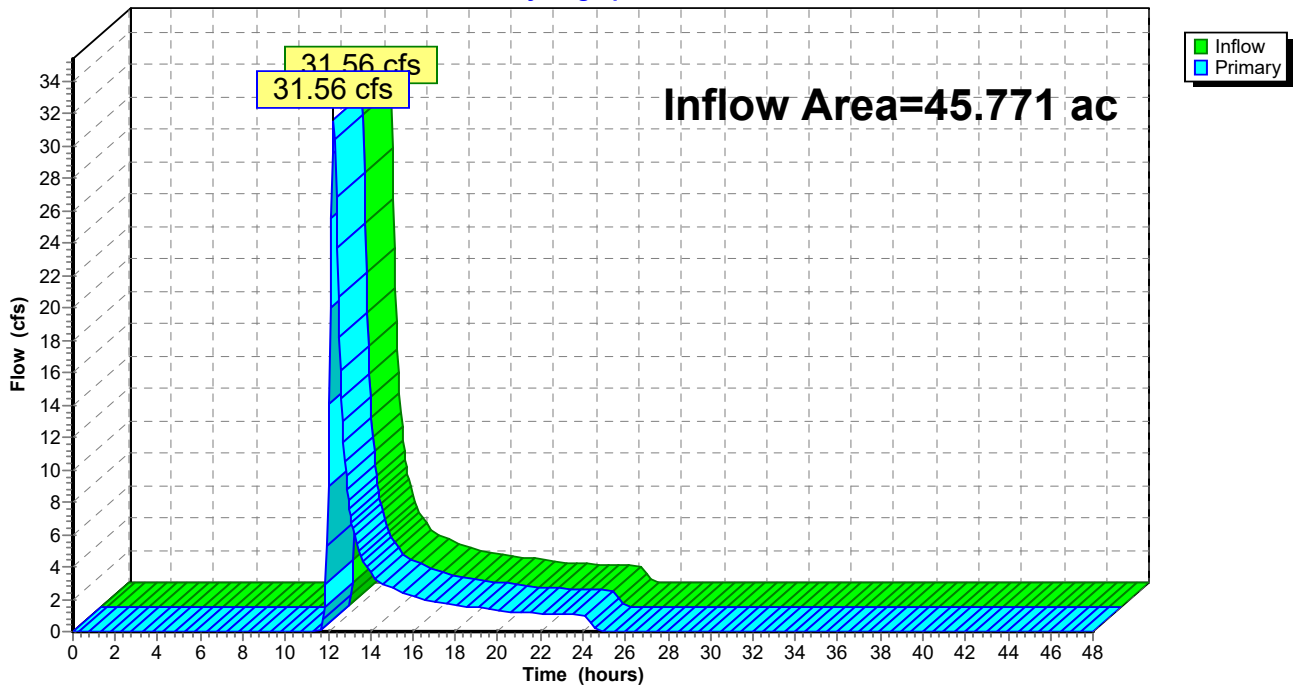
### Summary for Link SP50:

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 0.90" for 10-year event  
Inflow = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af  
Primary = 31.56 cfs @ 12.27 hrs, Volume= 3.438 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP50:

Hydrograph



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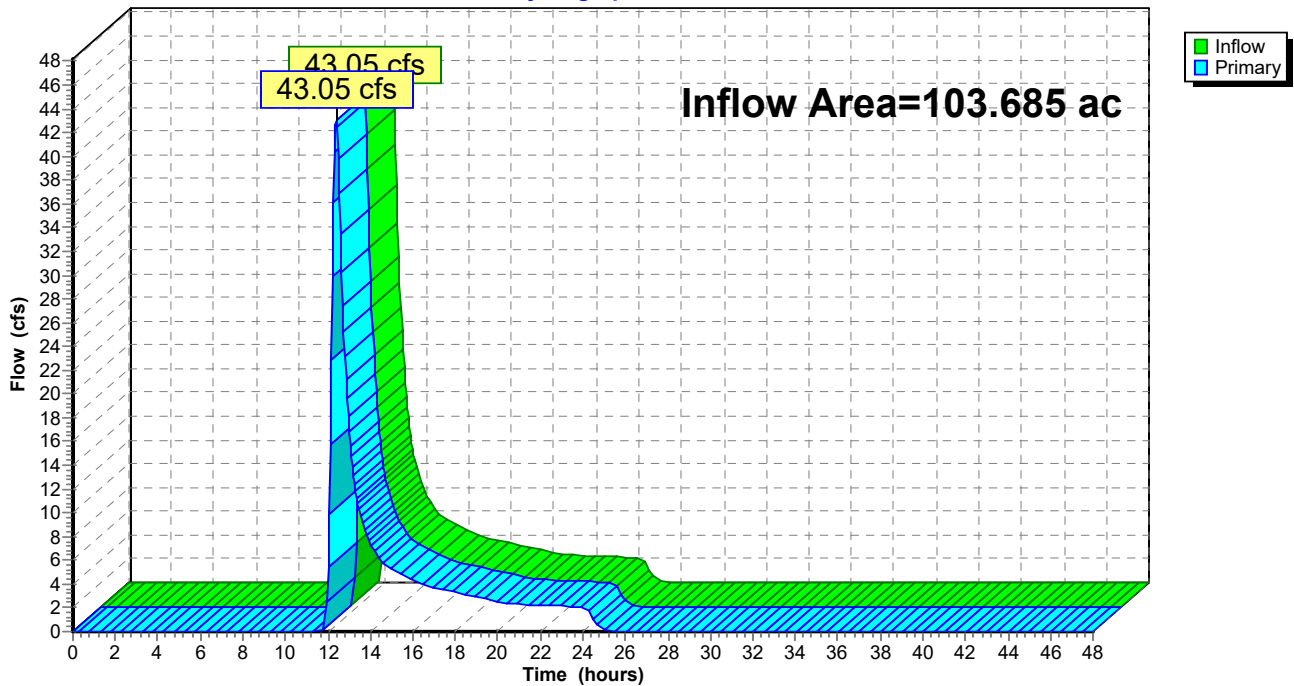
## Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 0.71" for 10-year event  
Inflow = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af  
Primary = 43.05 cfs @ 12.39 hrs, Volume= 6.092 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph





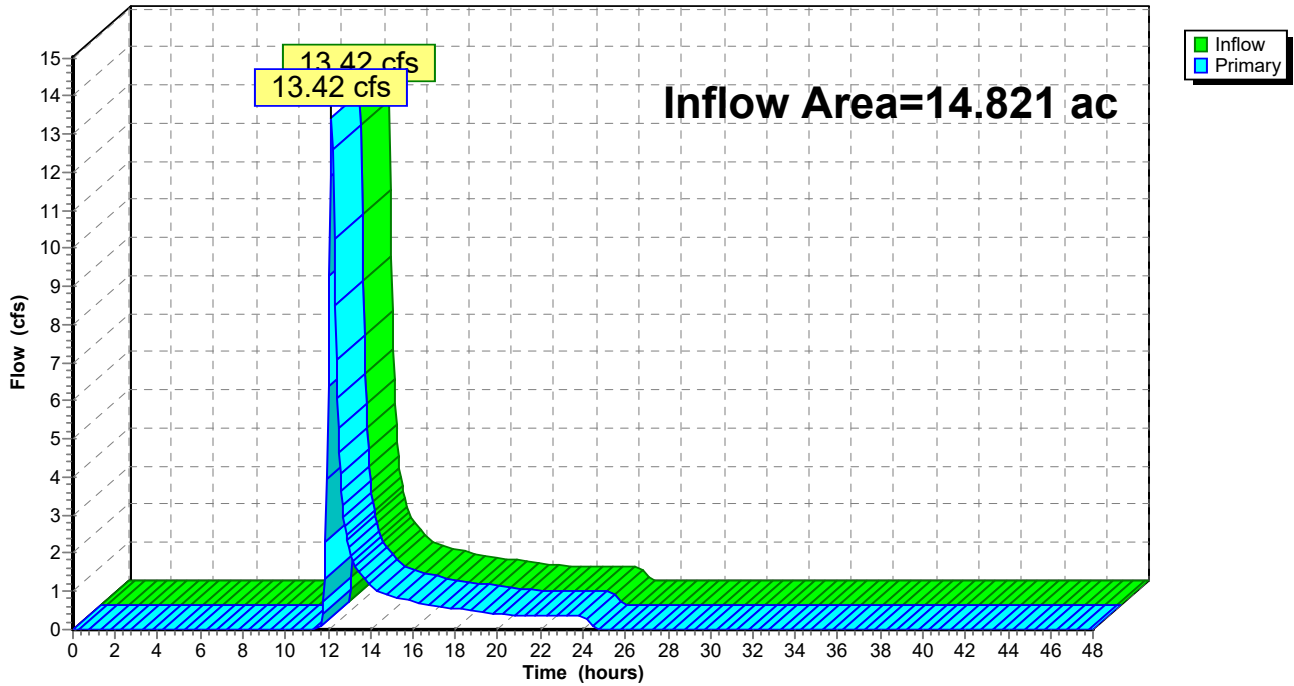
### Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af  
Primary = 13.42 cfs @ 12.17 hrs, Volume= 1.178 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP52:

Hydrograph



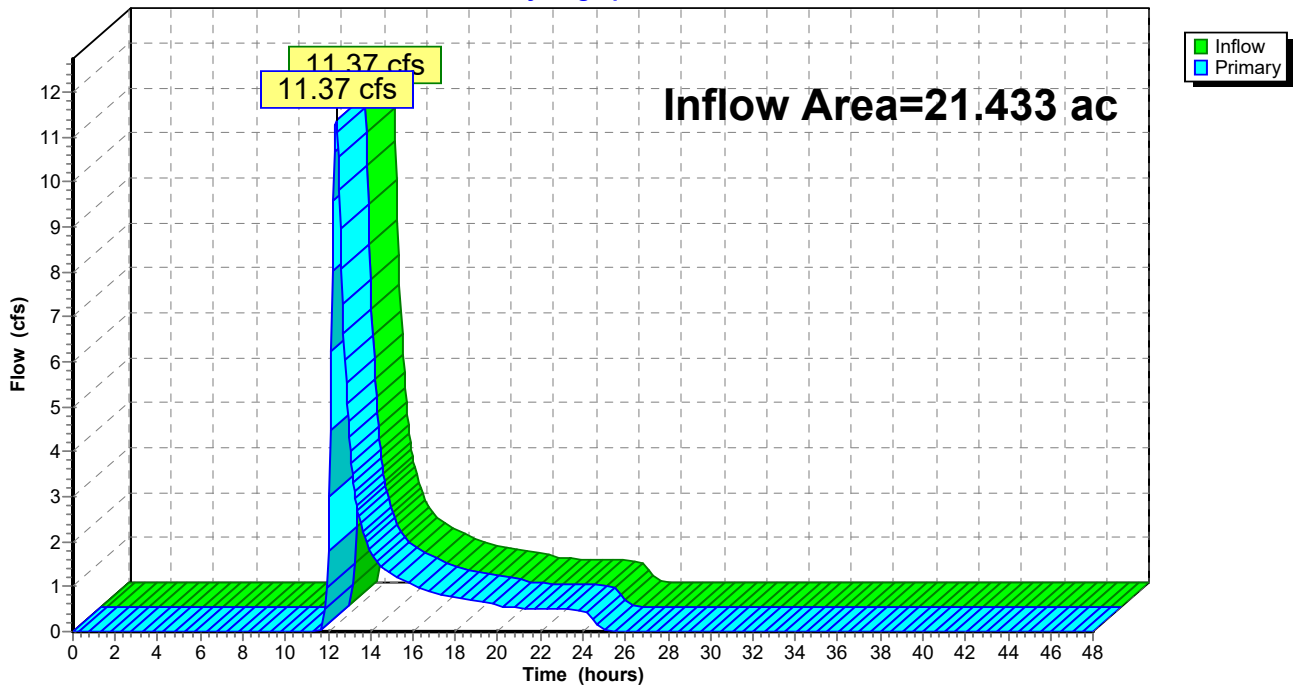
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af  
Primary = 11.37 cfs @ 12.39 hrs, Volume= 1.518 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph



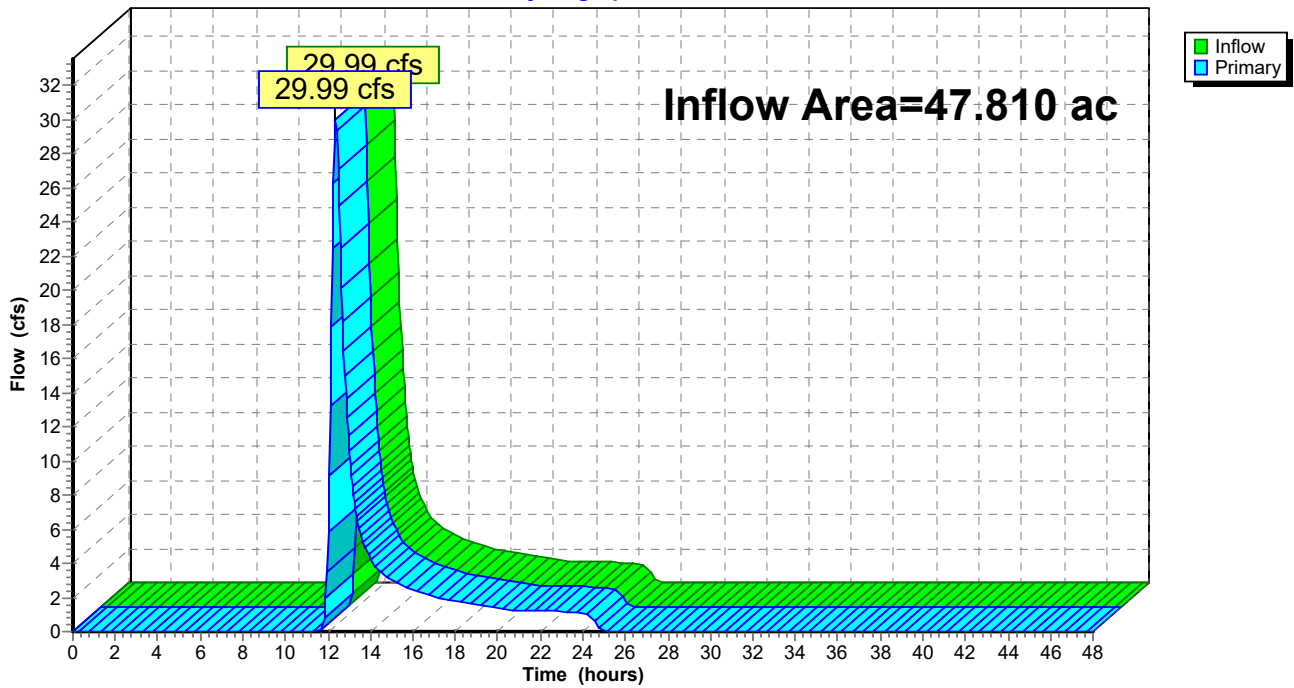
### Summary for Link SP54:

Inflow Area = 47.810 ac, 7.82% Impervious, Inflow Depth = 0.95" for 10-year event  
Inflow = 29.99 cfs @ 12.38 hrs, Volume= 3.801 af  
Primary = 29.99 cfs @ 12.38 hrs, Volume= 3.801 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



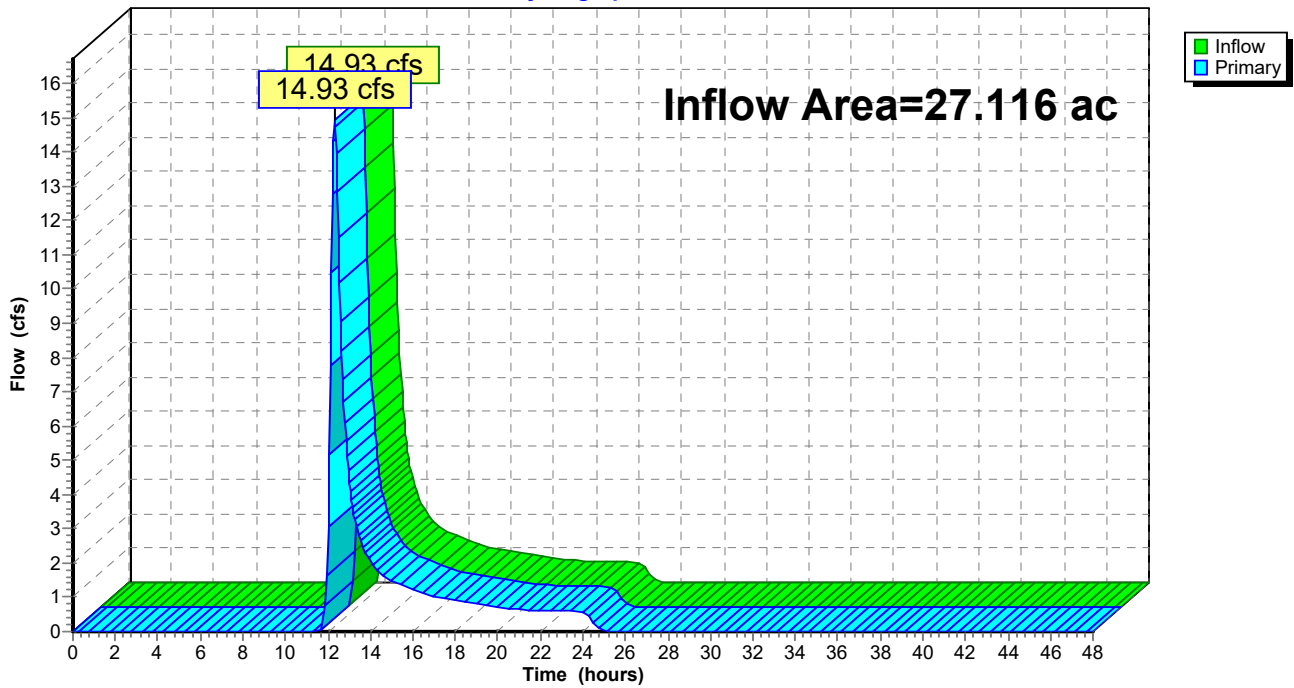
### Summary for Link SP55:

Inflow Area = 27.116 ac, 0.71% Impervious, Inflow Depth = 0.80" for 10-year event  
Inflow = 14.93 cfs @ 12.31 hrs, Volume= 1.808 af  
Primary = 14.93 cfs @ 12.31 hrs, Volume= 1.808 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP55:

Hydrograph



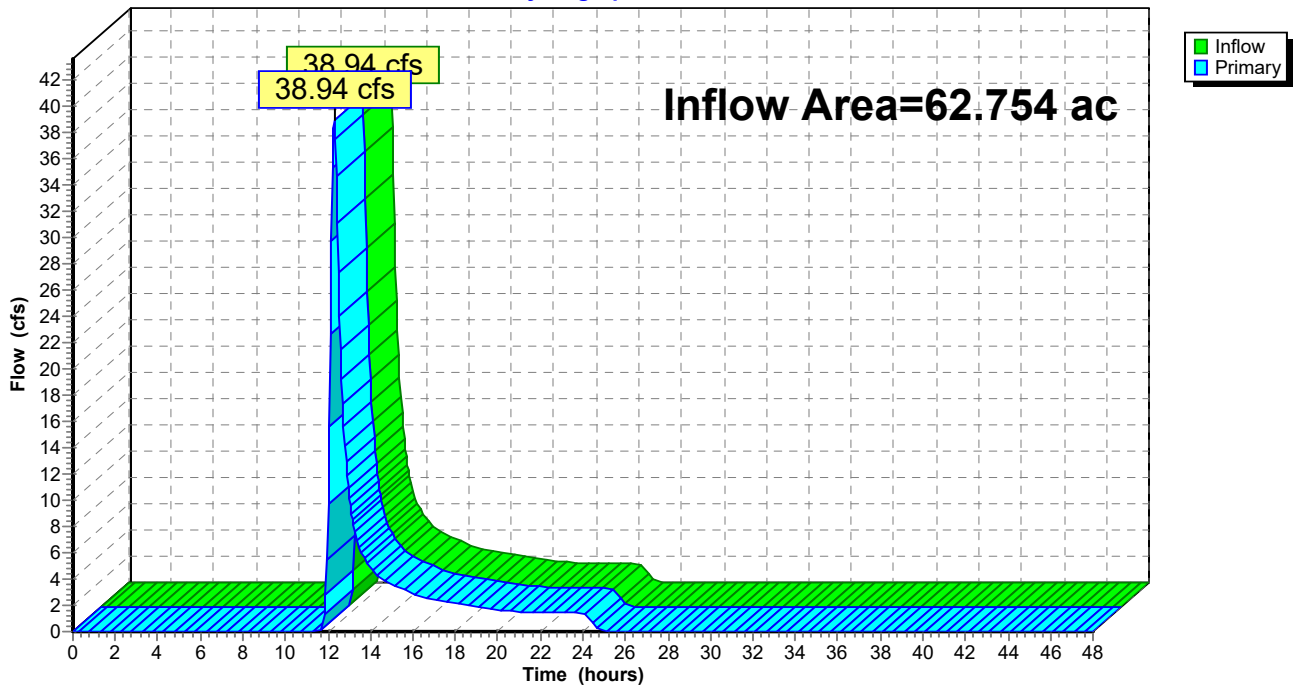
### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 0.85" for 10-year event  
Inflow = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af  
Primary = 38.94 cfs @ 12.29 hrs, Volume= 4.445 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph



**Mill Pt Pre 2**

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

|                                 |  |
|---------------------------------|--|
| <b>Subcatchment 25S: Sub 25</b> | Runoff Area=19.244 ac 0.52% Impervious Runoff Depth=2.77"<br>Flow Length=1,103' Tc=22.2 min CN=72 Runoff=55.28 cfs 4.436 af    |
| <b>Subcatchment 26S: Sub 26</b> | Runoff Area=14.925 ac 4.50% Impervious Runoff Depth=2.15"<br>Flow Length=1,324' Tc=18.0 min CN=65 Runoff=36.72 cfs 2.674 af    |
| <b>Subcatchment 27S: Sub 27</b> | Runoff Area=22.791 ac 1.95% Impervious Runoff Depth=2.23"<br>Flow Length=1,602' Tc=17.8 min CN=66 Runoff=58.97 cfs 4.244 af    |
| <b>Subcatchment 28S: Sub 28</b> | Runoff Area=21.372 ac 0.53% Impervious Runoff Depth=2.15"<br>Flow Length=1,727' Tc=27.4 min CN=65 Runoff=40.53 cfs 3.829 af    |
| <b>Subcatchment 29S: Sub 29</b> | Runoff Area=19.202 ac 1.21% Impervious Runoff Depth=1.90"<br>Flow Length=1,648' Tc=26.3 min CN=62 Runoff=32.39 cfs 3.042 af    |
| <b>Subcatchment 30S: Sub 30</b> | Runoff Area=36.199 ac 1.23% Impervious Runoff Depth=2.07"<br>Flow Length=2,217' Tc=29.3 min CN=64 Runoff=62.67 cfs 6.232 af    |
| <b>Subcatchment 31S: Sub 31</b> | Runoff Area=25.323 ac 0.00% Impervious Runoff Depth=1.82"<br>Flow Length=2,409' Tc=31.8 min CN=61 Runoff=35.46 cfs 3.842 af    |
| <b>Subcatchment 32S: Sub 32</b> | Runoff Area=44.904 ac 6.23% Impervious Runoff Depth=1.82"<br>Flow Length=3,284' Tc=36.1 min CN=61 Runoff=57.52 cfs 6.813 af    |
| <b>Subcatchment 33S: Sub 33</b> | Runoff Area=91.303 ac 0.68% Impervious Runoff Depth=1.66"<br>Flow Length=1,749' Tc=22.2 min CN=59 Runoff=145.80 cfs 12.648 af  |
| <b>Subcatchment 34S: Sub 34</b> | Runoff Area=25.797 ac 1.16% Impervious Runoff Depth=1.90"<br>Flow Length=1,344' Tc=23.4 min CN=62 Runoff=46.80 cfs 4.087 af    |
| <b>Subcatchment 35S: Sub 35</b> | Runoff Area=54.779 ac 2.01% Impervious Runoff Depth=2.15"<br>Flow Length=3,022' Tc=38.7 min CN=65 Runoff=82.01 cfs 9.814 af    |
| <b>Subcatchment 36S: Sub 36</b> | Runoff Area=46.619 ac 1.12% Impervious Runoff Depth=1.98"<br>Flow Length=1,996' Tc=23.3 min CN=63 Runoff=89.17 cfs 7.704 af    |
| <b>Subcatchment 37S: Sub 37</b> | Runoff Area=10.440 ac 5.80% Impervious Runoff Depth=1.74"<br>Flow Length=1,926' Tc=33.1 min CN=60 Runoff=13.48 cfs 1.515 af    |
| <b>Subcatchment 38S: Sub 38</b> | Runoff Area=71.315 ac 1.82% Impervious Runoff Depth=2.07"<br>Flow Length=3,404' Tc=47.6 min CN=64 Runoff=87.58 cfs 12.278 af   |
| <b>Subcatchment 39S: Sub 39</b> | Runoff Area=114.576 ac 2.51% Impervious Runoff Depth=1.90"<br>Flow Length=2,852' Tc=30.0 min CN=62 Runoff=176.76 cfs 18.153 af |
| <b>Subcatchment 40S: Sub 40</b> | Runoff Area=20.880 ac 7.94% Impervious Runoff Depth=2.50"<br>Flow Length=1,917' Tc=28.9 min CN=69 Runoff=45.31 cfs 4.343 af    |

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|                                      |   |
|--------------------------------------|---|
| <b>Subcatchment41S: Sub 41</b>       | Runoff Area=60.165 ac 2.55% Impervious Runoff Depth=1.98"<br>Flow Length=2,626' Tc=33.1 min CN=63 Runoff=91.27 cfs 9.943 af                         |
| <b>Subcatchment42S: Sub 42</b>       | Runoff Area=48.981 ac 3.85% Impervious Runoff Depth=1.90"<br>Flow Length=890' Tc=21.1 min CN=62 Runoff=95.07 cfs 7.761 af                           |
| <b>Subcatchment48S: Sub 48</b>       | Runoff Area=78.656 ac 2.88% Impervious Runoff Depth=2.77"<br>Flow Length=4,007' Tc=38.1 min CN=72 Runoff=158.49 cfs 18.129 af                       |
| <b>Subcatchment49S: Sub 49</b>       | Runoff Area=33.652 ac 1.78% Impervious Runoff Depth=2.07"<br>Flow Length=2,999' Tc=38.0 min CN=64 Runoff=48.68 cfs 5.794 af                         |
| <b>Subcatchment50S: Sub 50</b>       | Runoff Area=45.771 ac 1.25% Impervious Runoff Depth=2.41"<br>Flow Length=2,533' Tc=29.4 min CN=68 Runoff=94.34 cfs 9.184 af                         |
| <b>Subcatchment51S: Sub 51</b>       | Runoff Area=103.685 ac 1.03% Impervious Runoff Depth=2.07"<br>Flow Length=2,611' Tc=36.7 min CN=64 Runoff=153.74 cfs 17.851 af                      |
| <b>Subcatchment52S: Sub 52</b>       | Runoff Area=14.821 ac 2.79% Impervious Runoff Depth=2.50"<br>Flow Length=1,182' Tc=22.0 min CN=69 Runoff=38.30 cfs 3.083 af                         |
| <b>Subcatchment53S: Sub 53</b>       | Runoff Area=21.433 ac 1.80% Impervious Runoff Depth=2.32"<br>Flow Length=2,555' Tc=37.9 min CN=67 Runoff=35.62 cfs 4.145 af                         |
| <b>Subcatchment54S:</b>              | Runoff Area=47.810 ac 7.82% Impervious Runoff Depth=2.50"<br>Flow Length=3,546' Tc=37.3 min UI Adjusted CN=69 Runoff=87.15 cfs 9.944 af             |
| <b>Subcatchment55S: Sub 55</b>       | Runoff Area=27.116 ac 0.71% Impervious Runoff Depth=2.23"<br>Flow Length=2,284' Tc=32.1 min CN=66 Runoff=48.40 cfs 5.050 af                         |
| <b>Subcatchment56S: Sub 56</b>       | Runoff Area=62.754 ac 0.00% Impervious Runoff Depth=2.32"<br>Flow Length=2,363' Tc=30.5 min CN=67 Runoff=121.25 cfs 12.137 af                       |
| <b>Reach 33R:</b>                    | Avg. Flow Depth=1.84' Max Vel=3.26 fps Inflow=37.08 cfs 4.087 af<br>n=0.100 L=1,875.0' S=0.0597 '/ Capacity=10.60 cfs Outflow=29.27 cfs 4.087 af    |
| <b>Reach 39R:</b>                    | Avg. Flow Depth=1.45' Max Vel=4.43 fps Inflow=45.31 cfs 4.343 af<br>n=0.100 L=1,110.0' S=0.0991 '/ Capacity=86.68 cfs Outflow=43.63 cfs 4.343 af    |
| <b>Reach 42R: S-NSD-16</b>           | Avg. Flow Depth=1.88' Max Vel=3.74 fps Inflow=48.68 cfs 5.794 af<br>n=0.100 L=1,790.0' S=0.0531 '/ Capacity=51.95 cfs Outflow=45.20 cfs 5.794 af    |
| <b>Pond 34P: VAN EPPS RD CULVERT</b> | Peak Elev=585.71' Storage=27,689 cf Inflow=46.80 cfs 4.087 af<br>Primary=10.52 cfs 3.300 af Secondary=26.56 cfs 0.788 af Outflow=37.08 cfs 4.087 af |
| <b>Link SP25:</b>                    | Inflow=55.28 cfs 4.436 af<br>Primary=55.28 cfs 4.436 af   |
| <b>Link SP26:</b>                    | Inflow=36.72 cfs 2.674 af<br>Primary=36.72 cfs 2.674 af   |
| <b>Link SP27:</b>                    | Inflow=58.97 cfs 4.244 af<br>Primary=58.97 cfs 4.244 af   |

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|                        |   |
|------------------------|---|
| <b>Link SP28:</b>      | Inflow=40.53 cfs 3.829 af<br>Primary=40.53 cfs 3.829 af     |
| <b>Link SP29:</b>      | Inflow=32.39 cfs 3.042 af<br>Primary=32.39 cfs 3.042 af     |
| <b>Link SP30:</b>      | Inflow=62.67 cfs 6.232 af<br>Primary=62.67 cfs 6.232 af     |
| <b>Link SP34: SP31</b> | Inflow=227.89 cfs 27.390 af<br>Primary=227.89 cfs 27.390 af |
| <b>Link SP35:</b>      | Inflow=82.01 cfs 9.814 af<br>Primary=82.01 cfs 9.814 af     |
| <b>Link SP36:</b>      | Inflow=89.17 cfs 7.704 af<br>Primary=89.17 cfs 7.704 af     |
| <b>Link SP37:</b>      | Inflow=13.48 cfs 1.515 af<br>Primary=13.48 cfs 1.515 af     |
| <b>Link SP38:</b>      | Inflow=87.58 cfs 12.278 af<br>Primary=87.58 cfs 12.278 af   |
| <b>Link SP39:</b>      | Inflow=215.84 cfs 22.496 af<br>Primary=215.84 cfs 22.496 af |
| <b>Link SP41:</b>      | Inflow=91.27 cfs 9.943 af<br>Primary=91.27 cfs 9.943 af     |
| <b>Link SP42:</b>      | Inflow=101.59 cfs 13.554 af<br>Primary=101.59 cfs 13.554 af |
| <b>Link SP48:</b>      | Inflow=158.49 cfs 18.129 af<br>Primary=158.49 cfs 18.129 af |
| <b>Link SP50:</b>      | Inflow=94.34 cfs 9.184 af<br>Primary=94.34 cfs 9.184 af     |
| <b>Link SP51:</b>      | Inflow=153.74 cfs 17.851 af<br>Primary=153.74 cfs 17.851 af |
| <b>Link SP52:</b>      | Inflow=38.30 cfs 3.083 af<br>Primary=38.30 cfs 3.083 af     |
| <b>Link SP53:</b>      | Inflow=35.62 cfs 4.145 af<br>Primary=35.62 cfs 4.145 af     |
| <b>Link SP54:</b>      | Inflow=87.15 cfs 9.944 af<br>Primary=87.15 cfs 9.944 af     |



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**Link SP55:**

Inflow=48.40 cfs 5.050 af  
Primary=48.40 cfs 5.050 af

**Link SP56:**

Inflow=121.25 cfs 12.137 af  
Primary=121.25 cfs 12.137 af

**Total Runoff Area = 1,184.513 ac   Runoff Volume = 208.672 af   Average Runoff Depth = 2.11"**  
**97.77% Pervious = 1,158.079 ac   2.23% Impervious = 26.434 ac**

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**Summary for Subcatchment 25S: Sub 25**

Runoff = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af, Depth= 2.77"  
 Routed to Link SP25 :

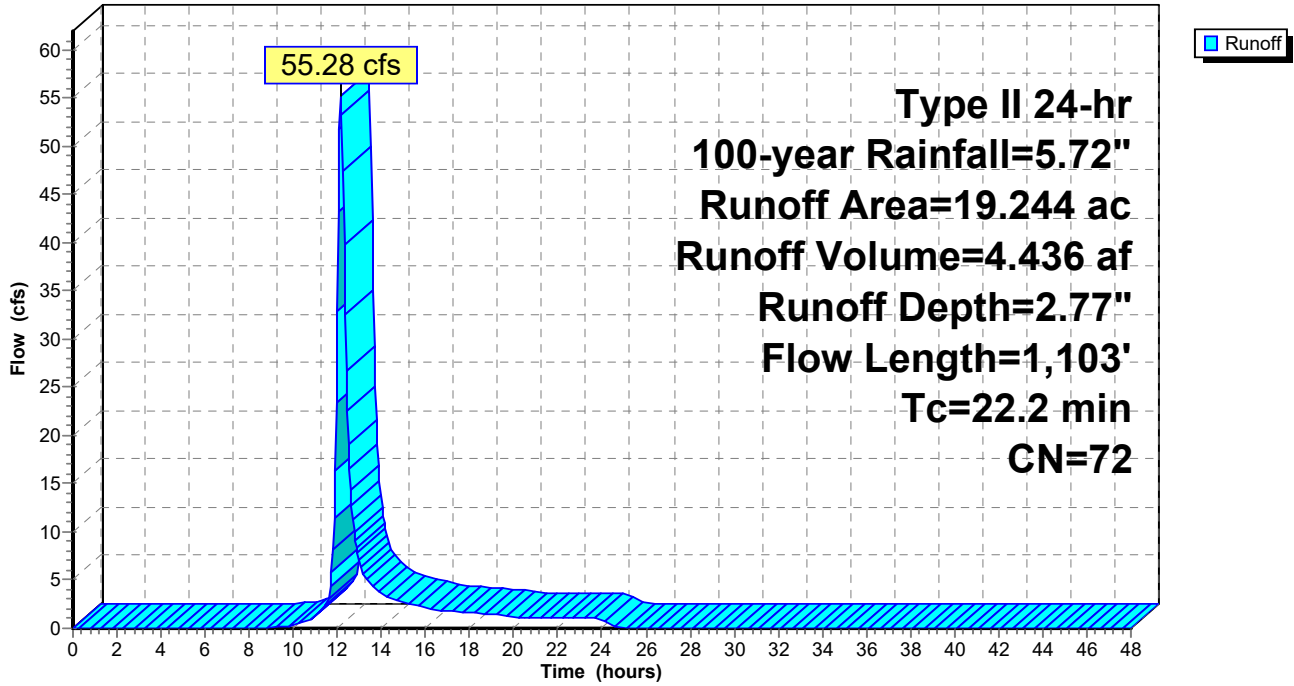
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.100   | 98 | Impervious surface            |
| 0.475     | 74 | >75% Grass cover, Good, HSG C |
| 0.497     | 80 | >75% Grass cover, Good, HSG D |
| 0.785     | 58 | Meadow, non-grazed, HSG B     |
| 13.183    | 71 | Meadow, non-grazed, HSG C     |
| 3.694     | 78 | Meadow, non-grazed, HSG D     |
| 0.050     | 48 | Brush, Good, HSG B            |
| 0.274     | 71 | Meadow, non-grazed, HSG C     |
| 0.186     | 73 | Brush, Good, HSG D            |
| 19.244    | 72 | Weighted Average              |
| 19.144    |    | 99.48% Pervious Area          |
| 0.100     |    | 0.52% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.2      | 100           | 0.0430        | 0.20              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.3     | 717           | 0.0230        | 1.06              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 286           |               | 1.77              |                | <b>Direct Entry, CF</b>  |
| 22.2     | 1,103         | Total         |                   |                |  |

Subcatchment 25S: Sub 25

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 26S: Sub 26**

Runoff = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af, Depth= 2.15"  
 Routed to Link SP26 :

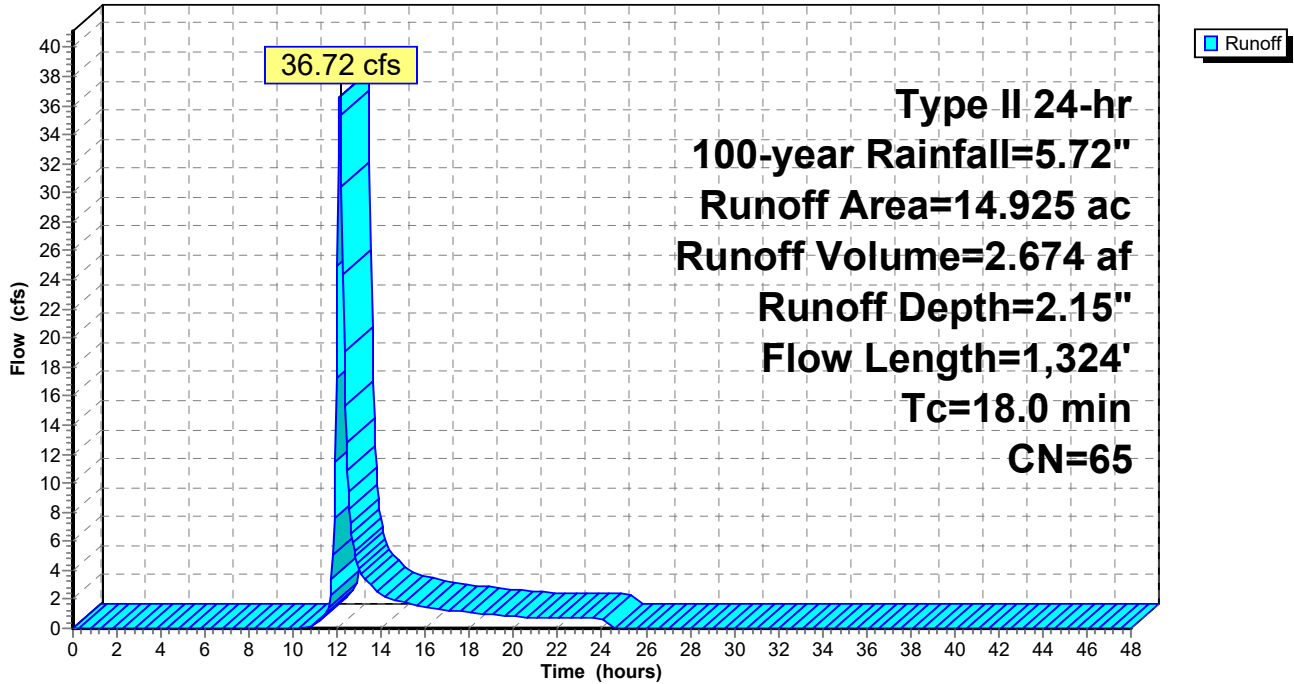
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.672   | 98 | Impervious surface            |
| * 0.189   | 96 | Gravel surface                |
| 3.102     | 61 | >75% Grass cover, Good, HSG B |
| 0.965     | 74 | >75% Grass cover, Good, HSG C |
| 6.796     | 58 | Meadow, non-grazed, HSG B     |
| 3.029     | 71 | Meadow, non-grazed, HSG C     |
| 0.172     | 78 | Meadow, non-grazed, HSG D     |
| 14.925    | 65 | Weighted Average              |
| 14.253    |    | 95.50% Pervious Area          |
| 0.672     |    | 4.50% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 9.7      | 100           | 0.0280        | 0.17              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.2      | 340           | 0.1340        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.7      | 259           | 0.0540        | 1.63              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 625           |               | 3.06              |                | <b>Direct Entry, CF</b>  |
| 18.0     | 1,324         | Total         |                   |                |  |

Subcatchment 26S: Sub 26

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 27S: Sub 27**

Runoff = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af, Depth= 2.23"  
 Routed to Link SP27 :

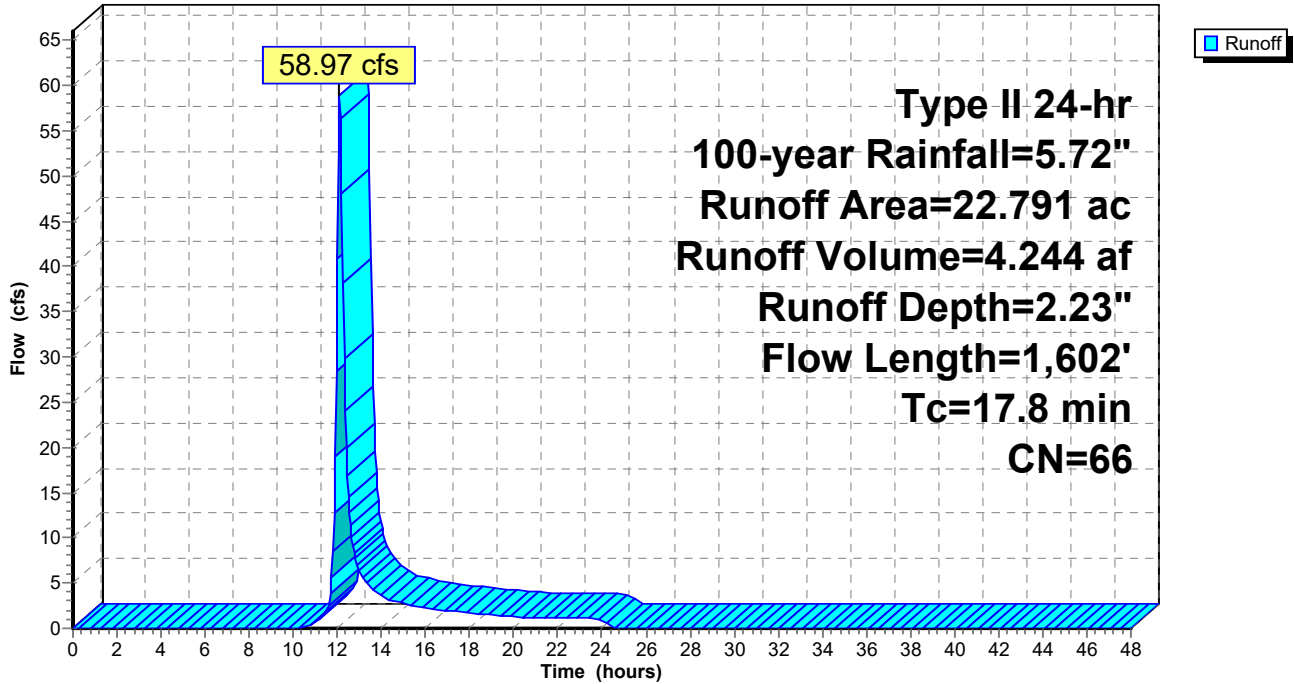
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.381   | 98 | Surface water             |
| * 0.064   | 98 | Impervious surface        |
| * 0.034   | 96 | Gravel surface            |
| 9.647     | 58 | Meadow, non-grazed, HSG B |
| 12.525    | 71 | Meadow, non-grazed, HSG C |
| 0.140     | 78 | Meadow, non-grazed, HSG D |
| 22.791    | 66 | Weighted Average          |
| 22.346    |    | 98.05% Pervious Area      |
| 0.445     |    | 1.95% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.9      | 100           | 0.0650        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.4      | 832           | 0.0720        | 1.88              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.5      | 670           |               | 3.19              |                | <b>Direct Entry, CF</b>  |
| 17.8     | 1,602         | Total         |                   |                |  |

Subcatchment 27S: Sub 27

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 28S: Sub 28**

[47] Hint: Peak is 620% of capacity of segment #3

Runoff = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af, Depth= 2.15"  
 Routed to Link SP28 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

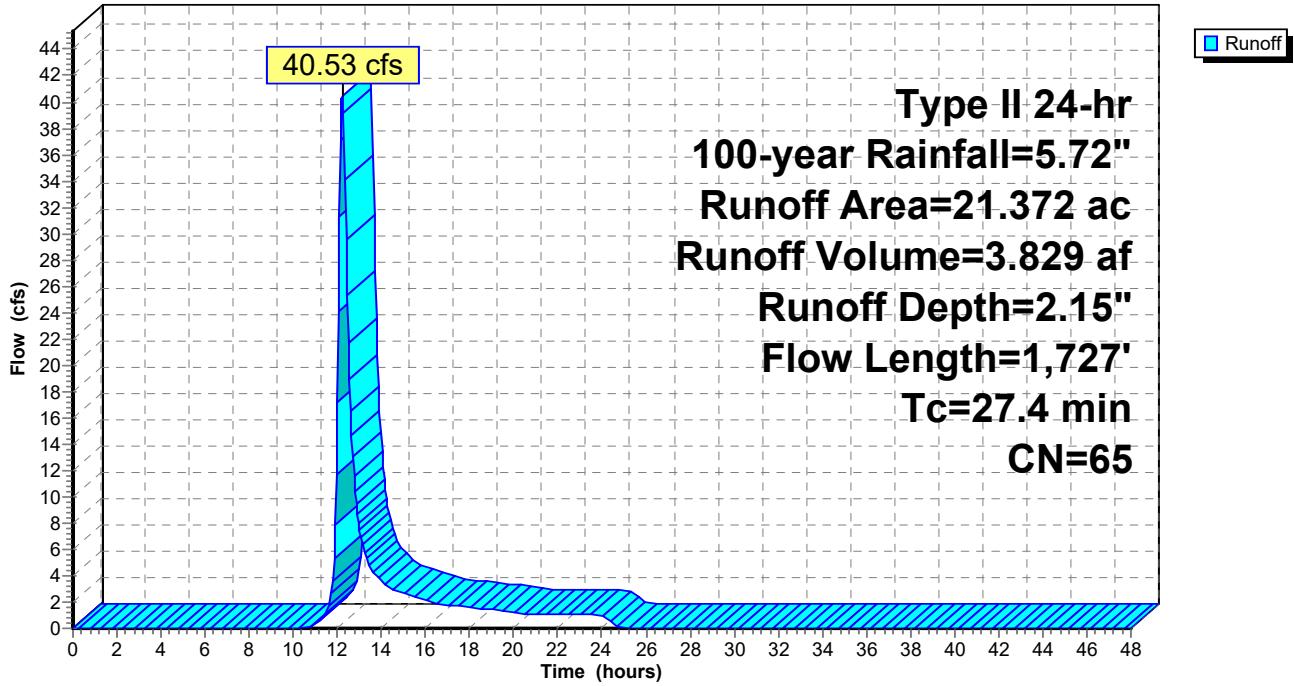
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.114   | 98 | Impervious surface            |
| * 0.018   | 96 | Gravel surface                |
| 1.037     | 61 | >75% Grass cover, Good, HSG B |
| 0.949     | 74 | >75% Grass cover, Good, HSG C |
| 9.049     | 58 | Meadow, non-grazed, HSG B     |
| 10.205    | 71 | Meadow, non-grazed, HSG C     |
| 21.372    | 65 | Weighted Average              |
| 21.258    |    | 99.47% Pervious Area          |
| 0.114     |    | 0.53% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 16.9     | 100           | 0.0070        | 0.10              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 7.4      | 819           | 0.0700        | 1.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.1      | 808           | 0.0420        | 4.36              | 6.53           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 '/' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 27.4     | 1,727         | Total         |                   |                |   |



Subcatchment 28S: Sub 28

Hydrograph



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**Summary for Subcatchment 29S: Sub 29**

Runoff = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af, Depth= 1.90"  
 Routed to Link SP29 :

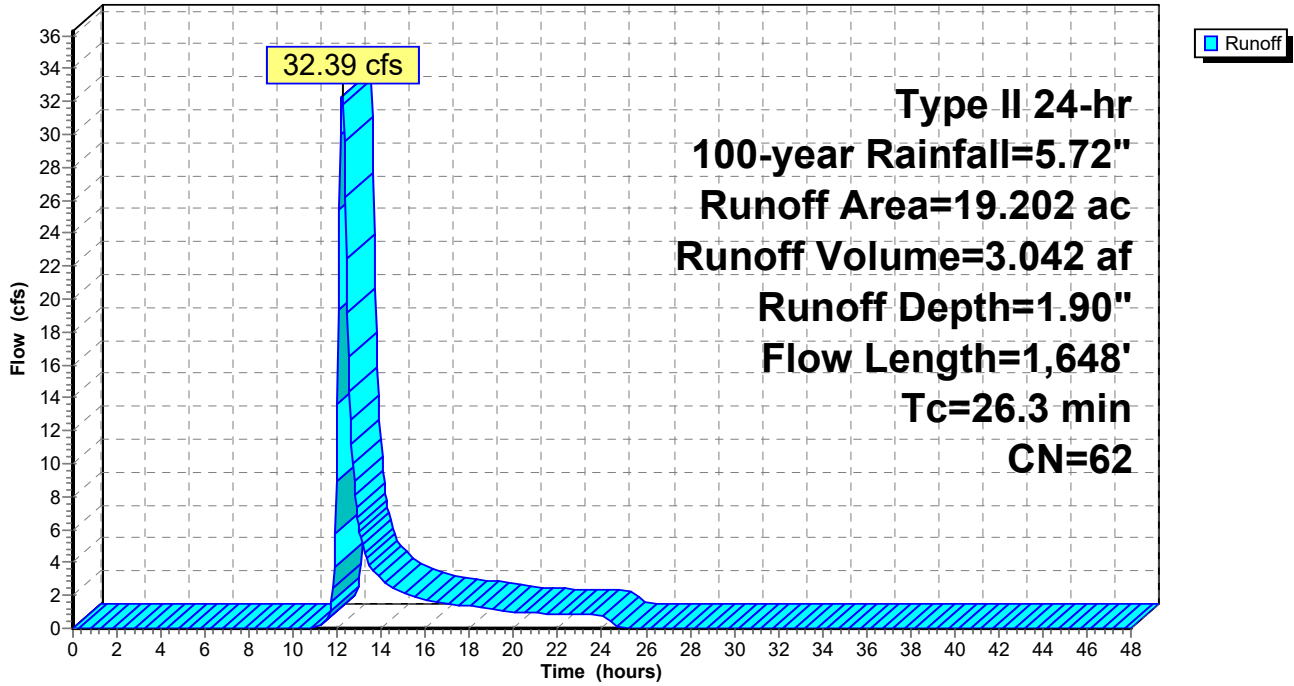
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 0.233   | 98 | Impervious surface        |
| * 0.063   | 96 | Gravel surface            |
| 13.291    | 58 | Meadow, non-grazed, HSG B |
| 5.615     | 71 | Meadow, non-grazed, HSG C |
| 19.202    | 62 | Weighted Average          |
| 18.969    |    | 98.79% Pervious Area      |
| 0.233     |    | 1.21% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.7      | 100           | 0.0370        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.9      | 661           | 0.0310        | 1.23              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.9      | 806           | 0.0590        | 1.70              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.8      | 81            |               | 1.69              |                | <b>Direct Entry, CF</b>  |
| 26.3     | 1,648         | Total         |                   |                |  |

Subcatchment 29S: Sub 29

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 30S: Sub 30**

[47] Hint: Peak is 511% of capacity of segment #3

Runoff = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af, Depth= 2.07"  
 Routed to Link SP30 :

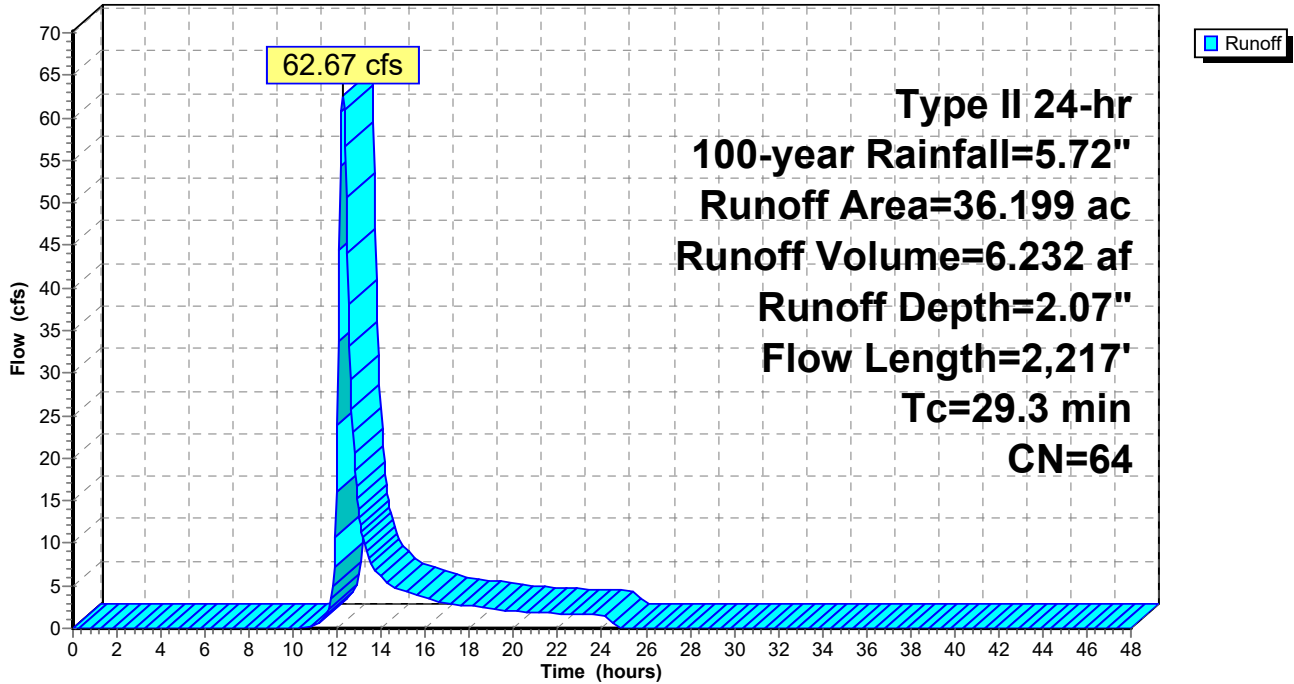
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.444   | 98 | Impervious surface            |
| * 0.471   | 96 | Gravel surface                |
| 0.222     | 61 | >75% Grass cover, Good, HSG B |
| 0.026     | 74 | >75% Grass cover, Good, HSG C |
| 0.098     | 30 | Meadow, non-grazed, HSG A     |
| 16.283    | 58 | Meadow, non-grazed, HSG B     |
| 15.759    | 71 | Meadow, non-grazed, HSG C     |
| 0.215     | 48 | Brush, Good, HSG B            |
| 0.283     | 65 | Brush, Good, HSG C            |
| 0.099     | 30 | Woods, Good, HSG A            |
| 2.287     | 55 | Woods, Good, HSG B            |
| 0.012     | 70 | Woods, Good, HSG C            |
| 36.199    | 64 | Weighted Average              |
| 35.755    |    | 98.77% Pervious Area          |
| 0.444     |    | 1.23% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 10.1     | 100           | 0.0250        | 0.16              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 15.4     | 1,100         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 3.8      | 1,017         | 0.0290        | 4.46              | 12.25          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=4.00' D=0.50' Z= 3.0 ' /' Top.W=7.00'<br>n= 0.030 Earth, grassed & winding |
| 29.3     | 2,217         | Total         |                   |                |  |

Subcatchment 30S: Sub 30

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 31S: Sub 31**

[47] Hint: Peak is 848% of capacity of segment #3

Runoff = 35.46 cfs @ 12.29 hrs, Volume= 3.842 af, Depth= 1.82"  
 Routed to Link SP34 : SP31

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 12.515    | 58 | Meadow, non-grazed, HSG B |
| 7.070     | 71 | Meadow, non-grazed, HSG C |
| 0.029     | 48 | Brush, Good, HSG B        |
| 5.404     | 55 | Woods, Good, HSG B        |
| 0.305     | 70 | Woods, Good, HSG C        |
| 25.323    | 61 | Weighted Average          |
| 25.323    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 20.4     | 1,456         | 0.0290        | 1.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 3.4      | 853           | 0.0938        | 4.18              | 4.18           | <b>Parabolic Channel,</b><br>W=3.00' D=0.50' Area=1.0 sf Perim=3.2'<br>n= 0.050 Mountain streams w/large boulders |
| 31.8     | 2,409         | Total         |                   |                |   |

**Mill Pt Pre 2**

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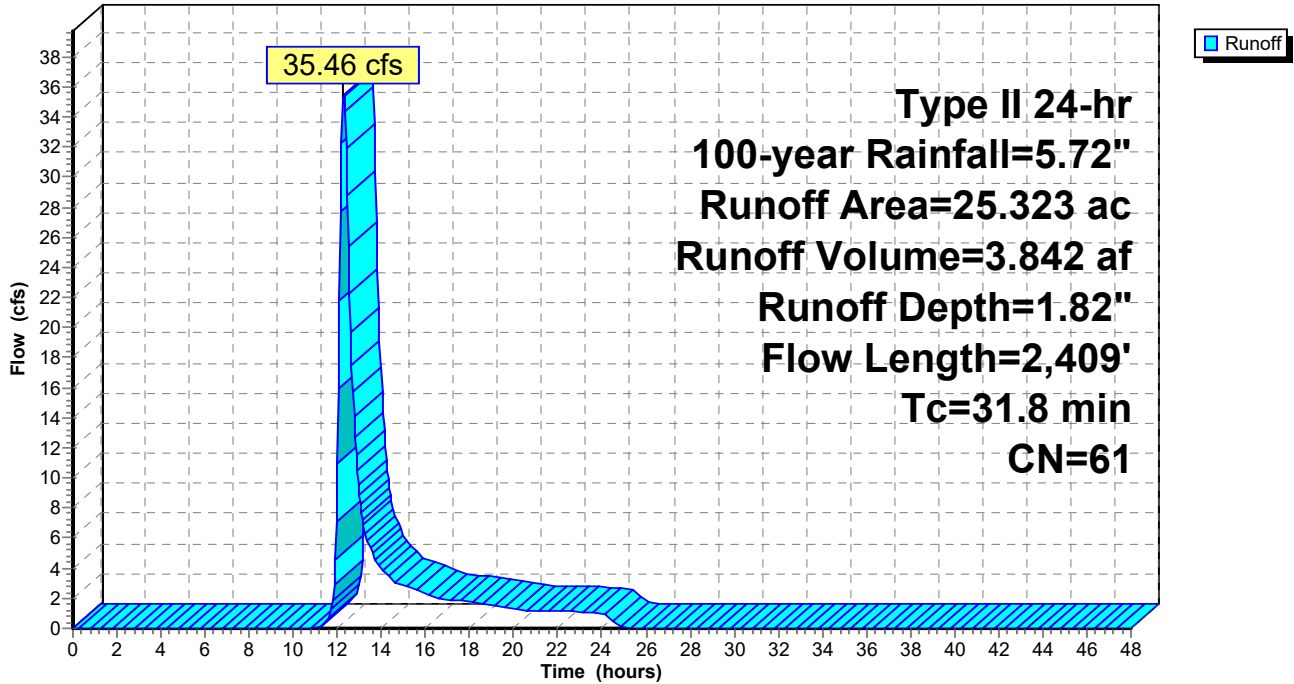
Type II 24-hr 100-year Rainfall=5.72"

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**Subcatchment 31S: Sub 31**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 32S: Sub 32**

[47] Hint: Peak is 619% of capacity of segment #4

Runoff = 57.52 cfs @ 12.35 hrs, Volume= 6.813 af, Depth= 1.82"  
 Routed to Link SP34 : SP31

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| * 2.796   | 98 | Surface water             |
| 20.102    | 58 | Meadow, non-grazed, HSG B |
| 5.829     | 71 | Meadow, non-grazed, HSG C |
| 0.127     | 48 | Brush, Good, HSG B        |
| 0.286     | 65 | Brush, Good, HSG C        |
| 15.764    | 55 | Woods, Good, HSG B        |
| 44.904    | 61 | Weighted Average          |
| 42.108    |    | 93.77% Pervious Area      |
| 2.796     |    | 6.23% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 7.8      | 100           | 0.0475        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 3.2      | 425           | 0.0976        | 2.19              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 17.5     | 1,176         | 0.0257        | 1.12              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 7.6      | 1,583         | 0.0726        | 3.48              | 9.29           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.080 Earth, long dense weeds |
| 36.1     | 3,284         | Total         |                   |                |   |



**Mill Pt Pre 2**

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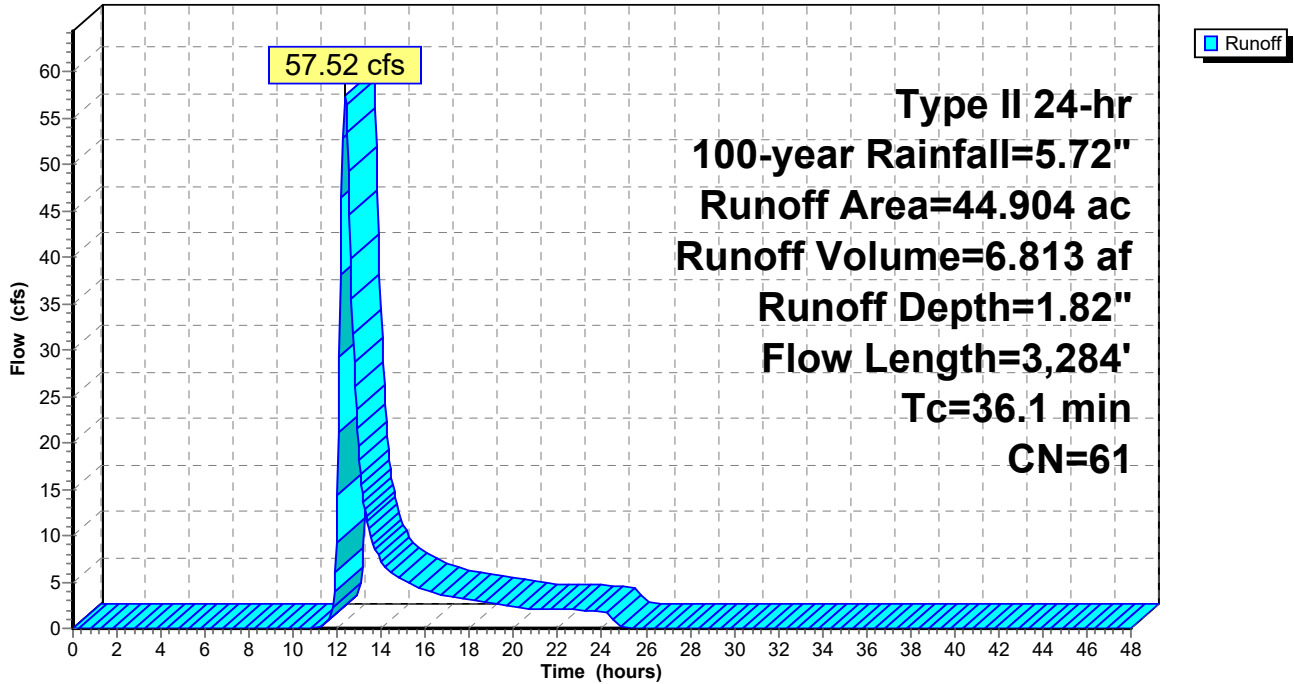
Type II 24-hr 100-year Rainfall=5.72"

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**Subcatchment 32S: Sub 32**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 33S: Sub 33**

Runoff = 145.80 cfs @ 12.17 hrs, Volume= 12.648 af, Depth= 1.66"  
 Routed to Link SP34 : SP31

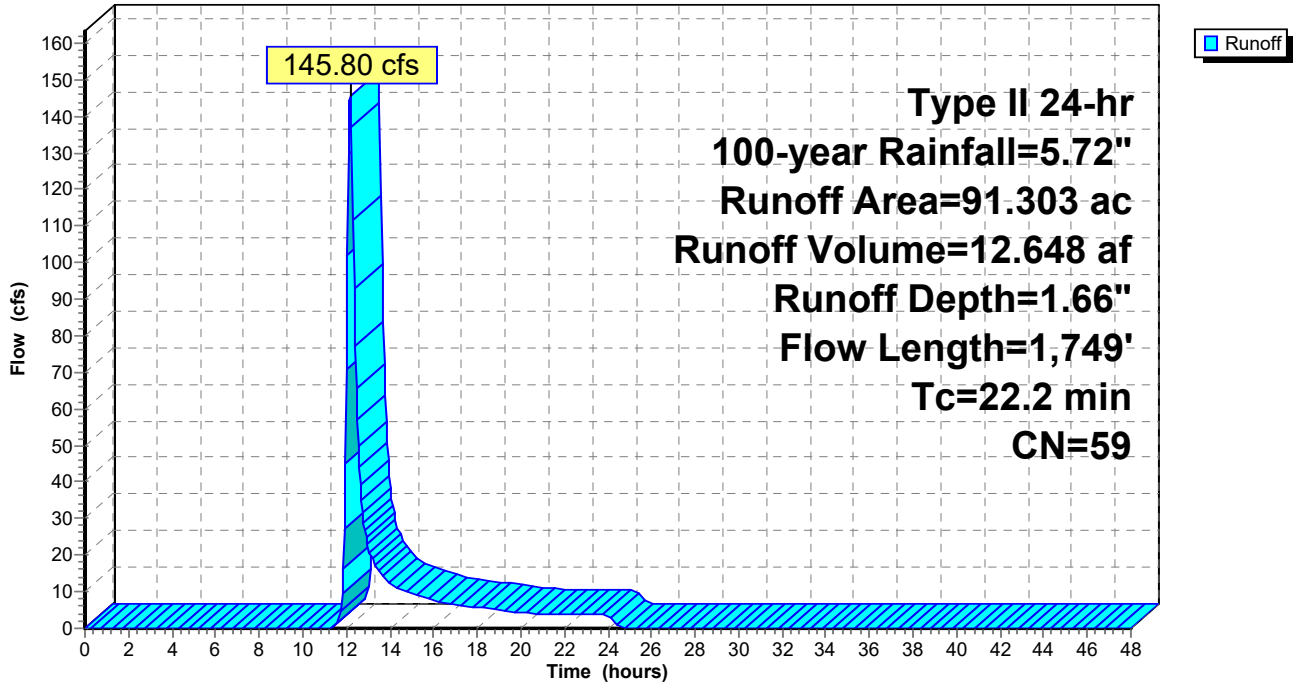
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.618   | 98 | Impervious surface            |
| * 0.042   | 96 | Gravel surface                |
| 3.828     | 61 | >75% Grass cover, Good, HSG B |
| 45.219    | 58 | Meadow, non-grazed, HSG B     |
| 9.199     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 78 | Meadow, non-grazed, HSG D     |
| 0.415     | 48 | Brush, Good, HSG B            |
| 28.566    | 55 | Woods, Good, HSG B            |
| 0.282     | 70 | Woods, Good, HSG C            |
| 91.303    | 59 | Weighted Average              |
| 90.685    |    | 99.32% Pervious Area          |
| 0.618     |    | 0.68% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.8      | 780           | 0.1010        | 2.22              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.9      | 531           | 0.1059        | 2.28              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.6      | 338           | 0.1005        | 1.59              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.2     | 1,749         | Total         |                   |                |  |

Subcatchment 33S: Sub 33

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 34S: Sub 34**

[47] Hint: Peak is 1277% of capacity of segment #3

Runoff = 46.80 cfs @ 12.18 hrs, Volume= 4.087 af, Depth= 1.90"  
 Routed to Pond 34P : VAN EPPS RD CULVERT

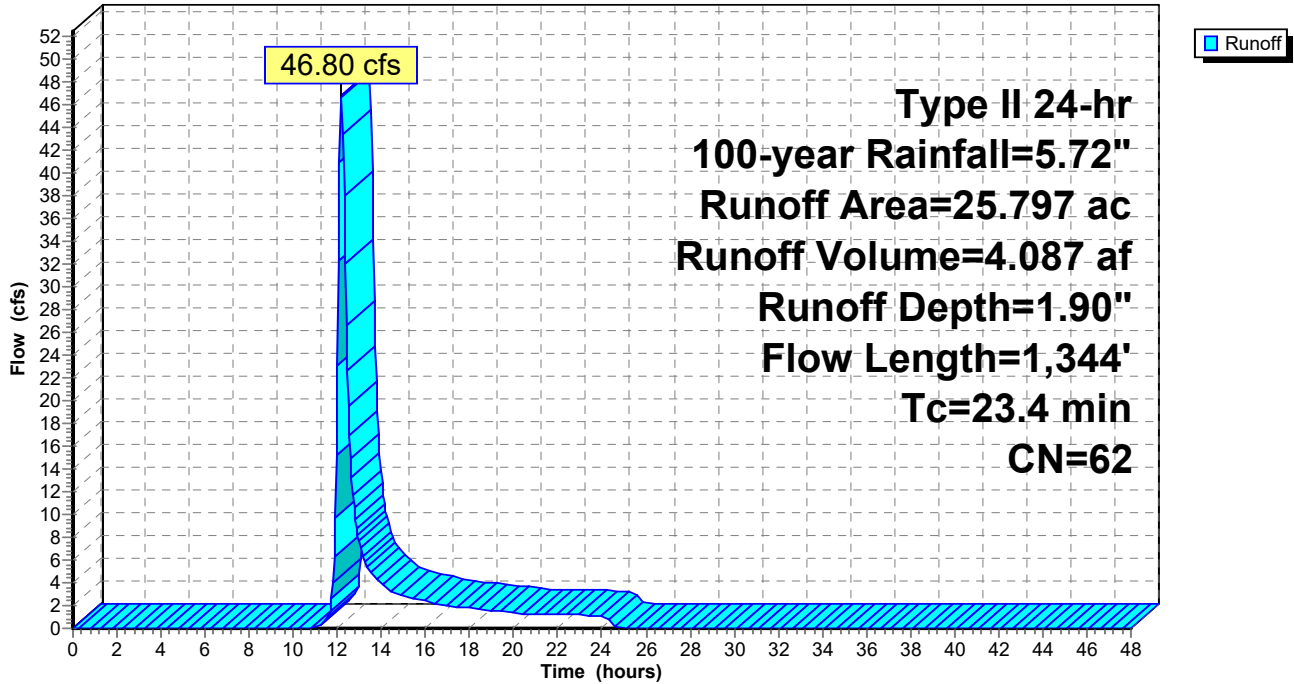
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.189     | 48 | Brush, Good, HSG B            |
| 0.183     | 96 | Gravel surface, HSG D         |
| 0.299     | 98 | Unconnected roofs, HSG D      |
| 16.490    | 58 | Meadow, non-grazed, HSG B     |
| 3.646     | 71 | Meadow, non-grazed, HSG C     |
| 3.134     | 61 | >75% Grass cover, Good, HSG B |
| 1.498     | 74 | >75% Grass cover, Good, HSG C |
| 0.358     | 55 | Woods, Good, HSG B            |
| 25.797    | 62 | Weighted Average              |
| 25.498    |    | 98.84% Pervious Area          |
| 0.299     |    | 1.16% Impervious Area         |
| 0.299     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 6.8      | 100           | 0.0675        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 14.9     | 878           | 0.0198        | 0.98              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                               |
| 0.2      | 42            | 0.0119        | 2.99              | 3.66           | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.025 Corrugated metal |
| 1.5      | 324           | 0.0552        | 3.52              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps                                 |
| 23.4     | 1,344         | Total         |                   |                |  |

Subcatchment 34S: Sub 34

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 35S: Sub 35**

[47] Hint: Peak is 978% of capacity of segment #4

Runoff = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af, Depth= 2.15"  
 Routed to Link SP35 :

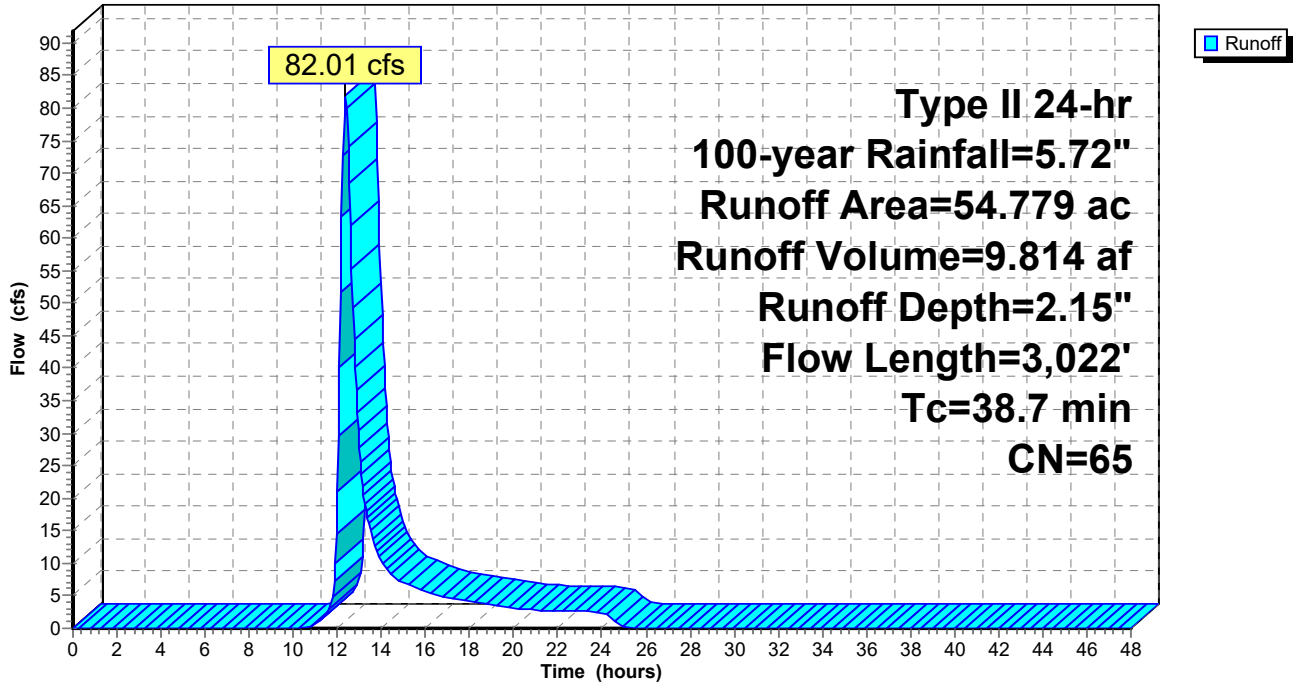
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.105     | 48 | Brush, Good, HSG B            |
| 0.087     | 65 | Brush, Good, HSG C            |
| 1.101     | 98 | Unconnected roofs, HSG D      |
| 23.620    | 58 | Meadow, non-grazed, HSG B     |
| 24.783    | 71 | Meadow, non-grazed, HSG C     |
| 0.319     | 61 | >75% Grass cover, Good, HSG B |
| 1.326     | 74 | >75% Grass cover, Good, HSG C |
| 1.942     | 55 | Woods, Good, HSG B            |
| 1.496     | 70 | Woods, Good, HSG C            |
| 54.779    | 65 | Weighted Average              |
| 53.678    |    | 97.99% Pervious Area          |
| 1.101     |    | 2.01% Impervious Area         |
| 1.101     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 8.0      | 100           | 0.0450        | 0.21              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 6.6      | 393           | 0.0204        | 1.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 22.1     | 2,017         | 0.0471        | 1.52              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps                                    |
| 2.0      | 512           | 0.1172        | 4.19              | 8.39           | <b>Parabolic Channel,</b><br>W=3.00' D=1.00' Area=2.0 sf Perim=3.7'<br>n= 0.080 Earth, long dense weeds |
| 38.7     | 3,022         | Total         |                   |                |   |

Subcatchment 35S: Sub 35

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 36S: Sub 36**

[47] Hint: Peak is 1508% of capacity of segment #3

Runoff = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af, Depth= 1.98"  
 Routed to Link SP36 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

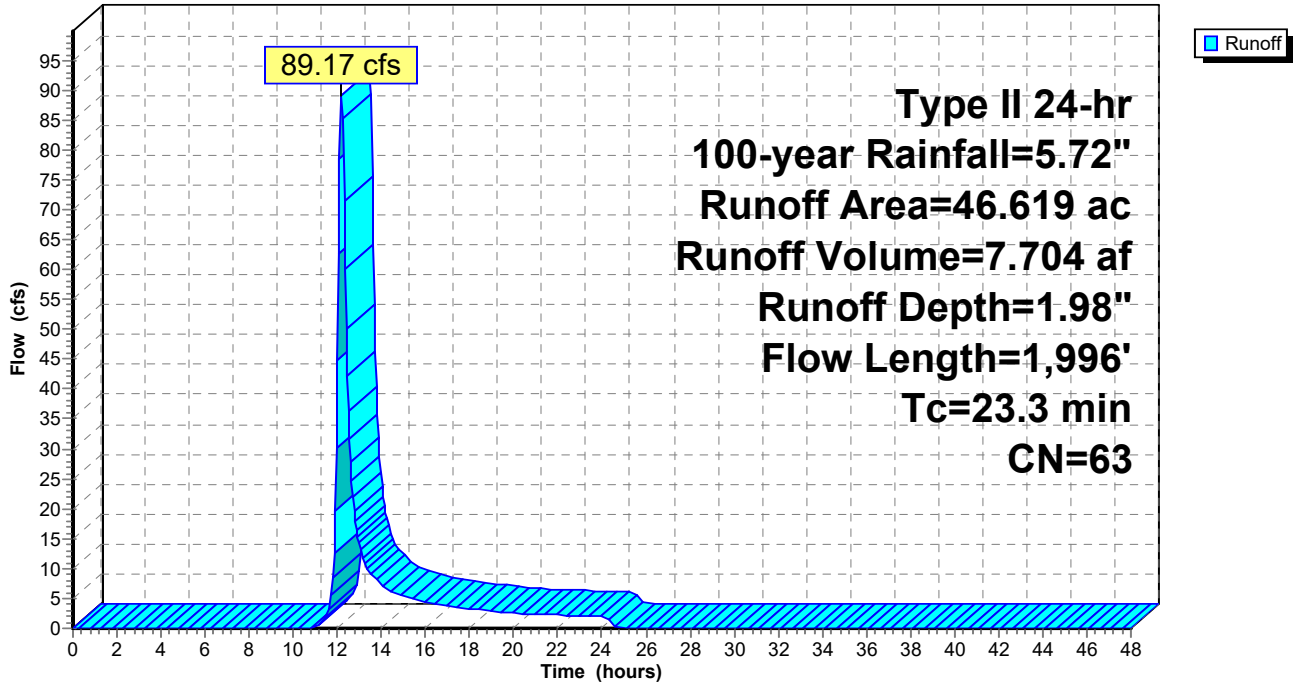
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.405     | 48 | Brush, Good, HSG B        |
| 0.013     | 65 | Brush, Good, HSG C        |
| 0.081     | 96 | Gravel surface, HSG D     |
| 0.007     | 98 | Unconnected roofs, HSG D  |
| 2.271     | 58 | Meadow, non-grazed, HSG B |
| 21.338    | 71 | Meadow, non-grazed, HSG C |
| 0.513     | 98 | Water Surface, HSG D      |
| 20.987    | 55 | Woods, Good, HSG B        |
| 1.004     | 70 | Woods, Good, HSG C        |
| 46.619    | 63 | Weighted Average          |
| 46.099    |    | 98.88% Pervious Area      |
| 0.520     |    | 1.12% Impervious Area     |
| 0.007     |    | 1.35% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.4      | 100           | 0.0550        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.7     | 1,036         | 0.0442        | 1.47              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 4.2      | 860           | 0.1400        | 3.38              | 5.91           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 3.0 '/' Top.W=5.00'<br>n= 0.080 Earth, long dense weeds |
| 23.3     | 1,996         | Total         |                   |                |  |



Subcatchment 36S: Sub 36

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 37S: Sub 37**

Runoff = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af, Depth= 1.74"  
 Routed to Link SP37 :

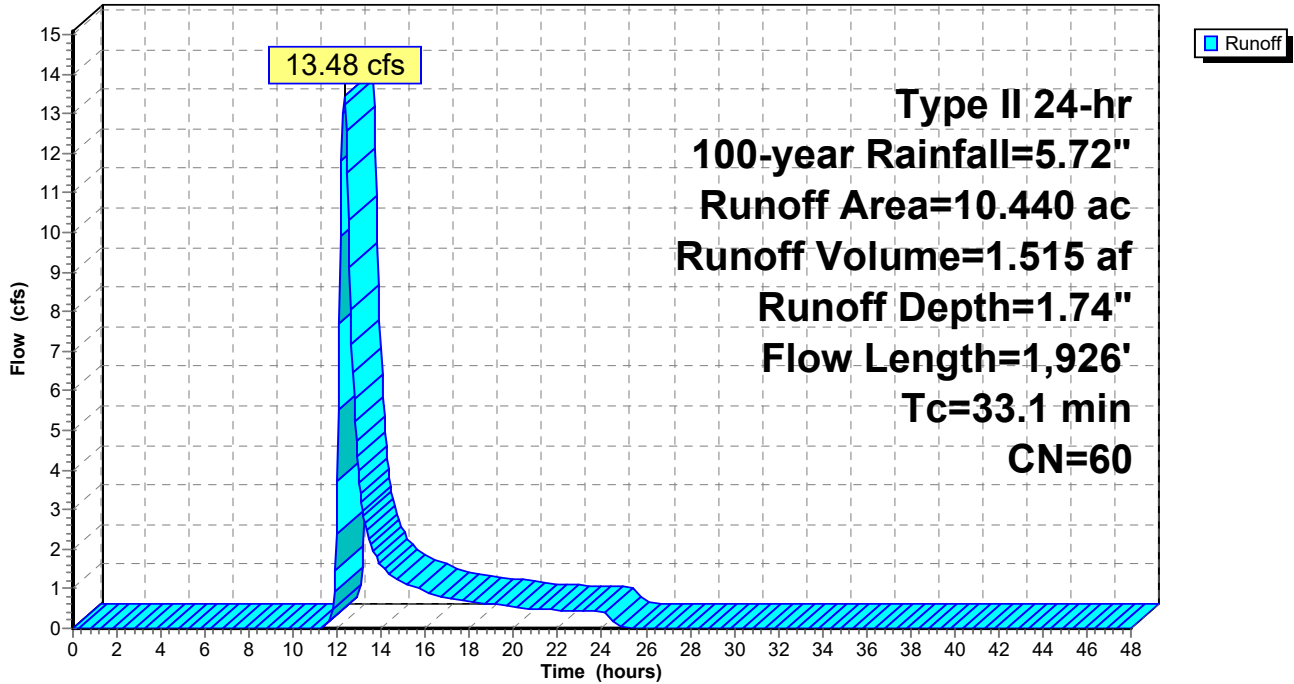
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 8.161     | 58 | Meadow, non-grazed, HSG B |
| 1.673     | 55 | Woods, Good, HSG B        |
| * 0.606   | 98 | Impervious                |
| 10.440    | 60 | Weighted Average          |
| 9.834     |    | 94.20% Pervious Area      |
| 0.606     |    | 5.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 19.3     | 100           | 0.0050        | 0.09              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 10.6     | 1,005         | 0.0507        | 1.58              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 1.0      | 90            | 0.0889        | 1.49              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps   |
| 2.2      | 731           | 0.0570        | 5.59              | 20.95          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=6.00' D=0.50' Z= 3.0 '/' Top.W=9.00'<br>n= 0.035 Earth, dense weeds |
| 33.1     | 1,926         | Total         |                   |                |   |

Subcatchment 37S: Sub 37

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 38S: Sub 38**

Runoff = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af, Depth= 2.07"  
 Routed to Link SP38 :

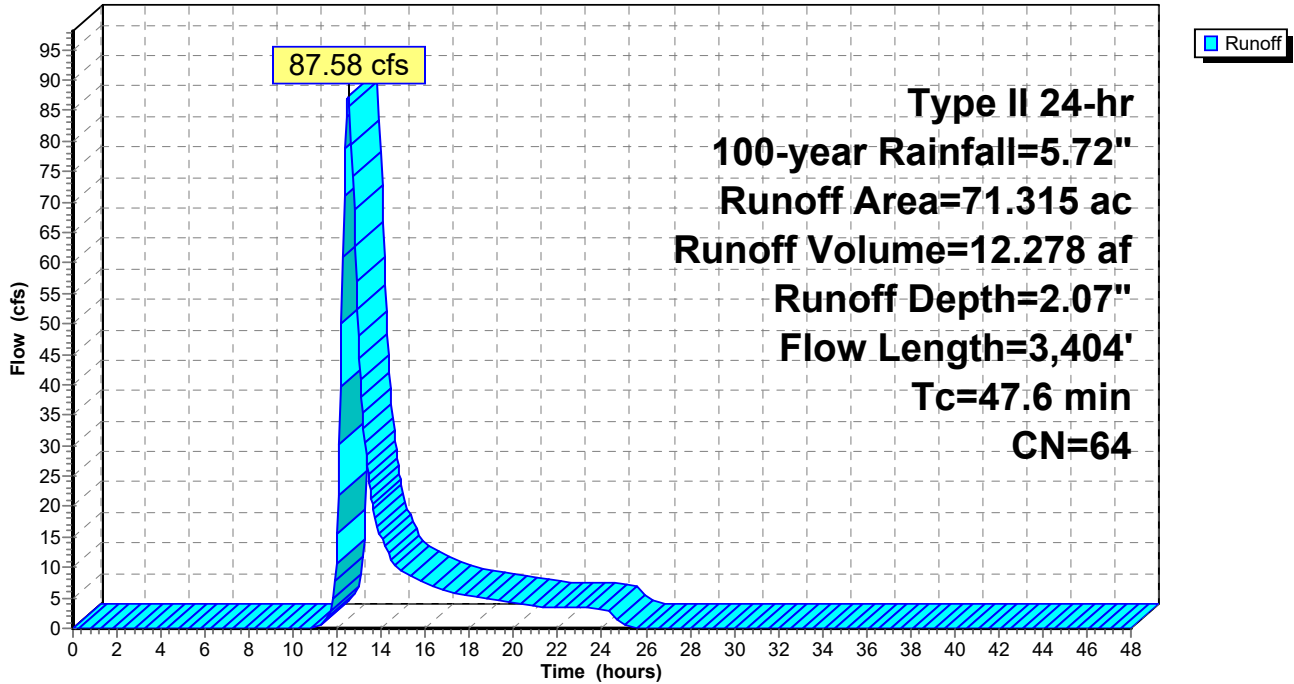
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.161     | 48 | Brush, Good, HSG B            |
| 0.399     | 65 | Brush, Good, HSG C            |
| 0.626     | 96 | Gravel surface, HSG D         |
| 1.297     | 98 | Unconnected roofs, HSG D      |
| 26.775    | 58 | Meadow, non-grazed, HSG B     |
| 35.528    | 71 | Meadow, non-grazed, HSG C     |
| 1.081     | 61 | >75% Grass cover, Good, HSG B |
| 4.099     | 30 | Woods, Good, HSG A            |
| 0.349     | 55 | Woods, Good, HSG B            |
| 71.315    | 64 | Weighted Average              |
| 70.018    |    | 98.18% Pervious Area          |
| 1.297     |    | 1.82% Impervious Area         |
| 1.297     |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 11.9     | 739           | 0.0220        | 1.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.6      | 753           | 0.0744        | 1.91              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 21.4     | 1,812         | 0.0800        | 1.41              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 47.6     | 3,404         | Total         |                   |                |  |

Subcatchment 38S: Sub 38

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 39S: Sub 39**

Runoff = 176.76 cfs @ 12.27 hrs, Volume= 18.153 af, Depth= 1.90"

Routed to Link SP39 :

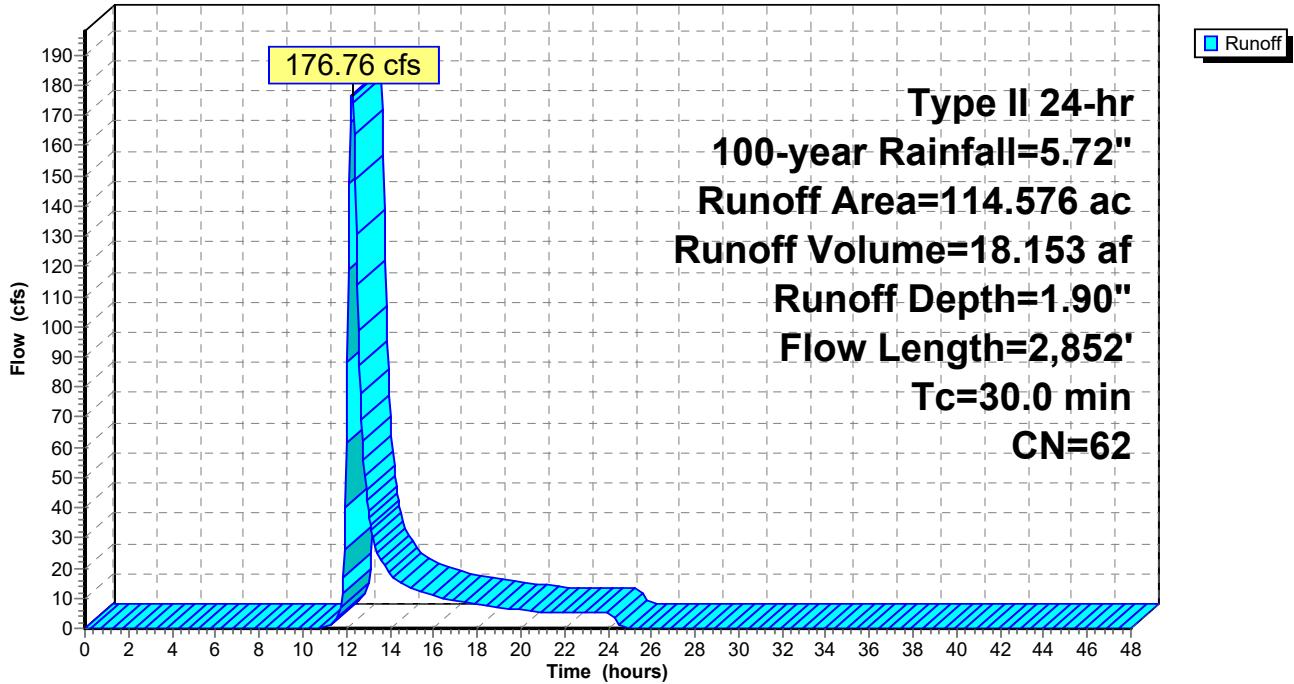
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.475     | 48 | Brush, Good, HSG B            |
| 0.336     | 65 | Brush, Good, HSG C            |
| 0.314     | 73 | Brush, Good, HSG D            |
| 1.088     | 96 | Gravel surface, HSG D         |
| 0.964     | 98 | Unconnected roofs, HSG D      |
| 60.275    | 58 | Meadow, non-grazed, HSG B     |
| 18.779    | 71 | Meadow, non-grazed, HSG C     |
| 2.256     | 78 | Meadow, non-grazed, HSG D     |
| 6.253     | 61 | >75% Grass cover, Good, HSG B |
| 3.233     | 74 | >75% Grass cover, Good, HSG C |
| 1.913     | 98 | Water Surface, HSG D          |
| 17.544    | 55 | Woods, Good, HSG B            |
| 0.343     | 70 | Woods, Good, HSG C            |
| 0.803     | 77 | Woods, Good, HSG D            |
| 114.576   | 62 | Weighted Average              |
| 111.699   |    | 97.49% Pervious Area          |
| 2.877     |    | 2.51% Impervious Area         |
| 0.964     |    | 33.51% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 17.7     | 2,151         | 0.0840        | 2.03              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 5.2      | 601           | 0.1490        | 1.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.0     | 2,852         | Total         |                   |                |  |

Subcatchment 39S: Sub 39

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 40S: Sub 40**

Runoff = 45.31 cfs @ 12.24 hrs, Volume= 4.343 af, Depth= 2.50"  
 Routed to Reach 39R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

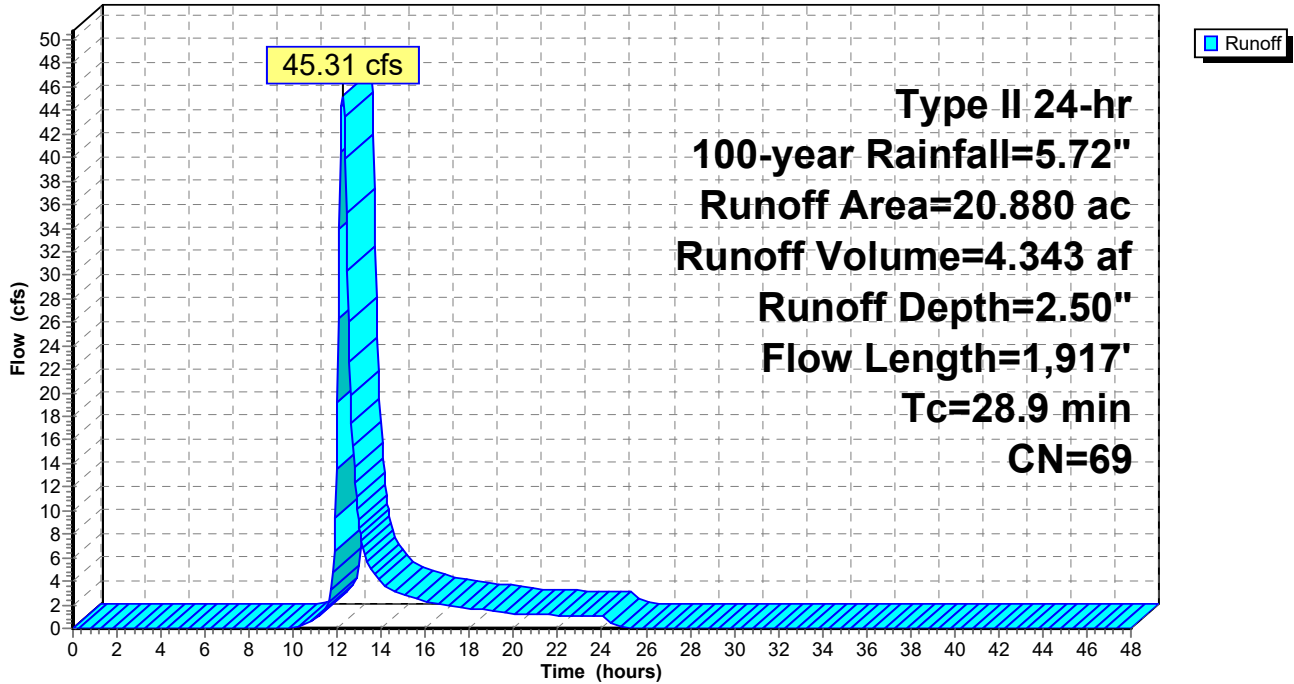
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.016     | 65 | Brush, Good, HSG C            |
| 0.235     | 96 | Gravel surface, HSG D         |
| 0.018     | 98 | Unconnected roofs, HSG D      |
| 6.944     | 58 | Meadow, non-grazed, HSG B     |
| 10.584    | 71 | Meadow, non-grazed, HSG C     |
| 0.095     | 78 | Meadow, non-grazed, HSG D     |
| 0.089     | 61 | >75% Grass cover, Good, HSG B |
| 1.640     | 98 | Water Surface, HSG D          |
| 0.643     | 55 | Woods, Good, HSG B            |
| 0.616     | 70 | Woods, Good, HSG C            |
| 20.880    | 69 | Weighted Average              |
| 19.222    |    | 92.06% Pervious Area          |
| 1.658     |    | 7.94% Impervious Area         |
| 0.018     |    | 1.09% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 2.6      | 358           | 0.1089        | 2.31              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.4      | 38            | 0.1118        | 1.67              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 9.8      | 1,118         | 0.0733        | 1.90              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.8      | 303           | 0.0132        | 0.57              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 28.9     | 1,917         | Total         |                   |                |  |



Subcatchment 40S: Sub 40

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 41S: Sub 41**

Runoff = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af, Depth= 1.98"  
 Routed to Link SP41 :

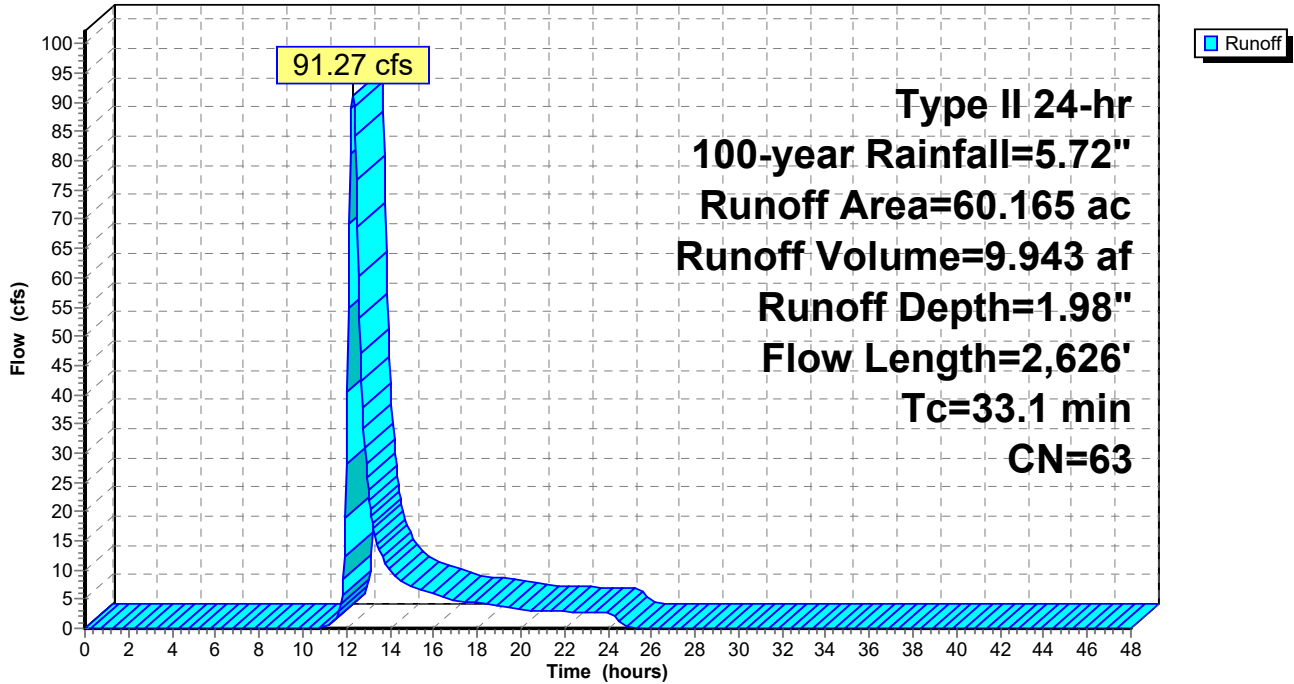
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.378     | 48 | Brush, Good, HSG B        |
| 0.001     | 98 | Unconnected roofs, HSG D  |
| 18.363    | 58 | Meadow, non-grazed, HSG B |
| 8.734     | 71 | Meadow, non-grazed, HSG C |
| 2.287     | 78 | Meadow, non-grazed, HSG D |
| 1.531     | 98 | Water Surface, HSG D      |
| 19.479    | 55 | Woods, Good, HSG B        |
| 9.335     | 70 | Woods, Good, HSG C        |
| 0.057     | 77 | Woods, Good, HSG D        |
| 60.165    | 63 | Weighted Average          |
| 58.633    |    | 97.45% Pervious Area      |
| 1.532     |    | 2.55% Impervious Area     |
| 0.001     |    | 0.07% Unconnected         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 5.0      | 585           | 0.0765        | 1.94              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 7.8      | 652           | 0.0395        | 1.39              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.9      | 1,289         | 0.0436        | 3.13              |                | <b>Shallow Concentrated Flow,</b><br>Grassed Waterway Kv= 15.0 fps   |
| 33.1     | 2,626         | Total         |                   |                |  |

Subcatchment 41S: Sub 41

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 42S: Sub 42**

Runoff = 95.07 cfs @ 12.15 hrs, Volume= 7.761 af, Depth= 1.90"

Routed to Link SP42 :

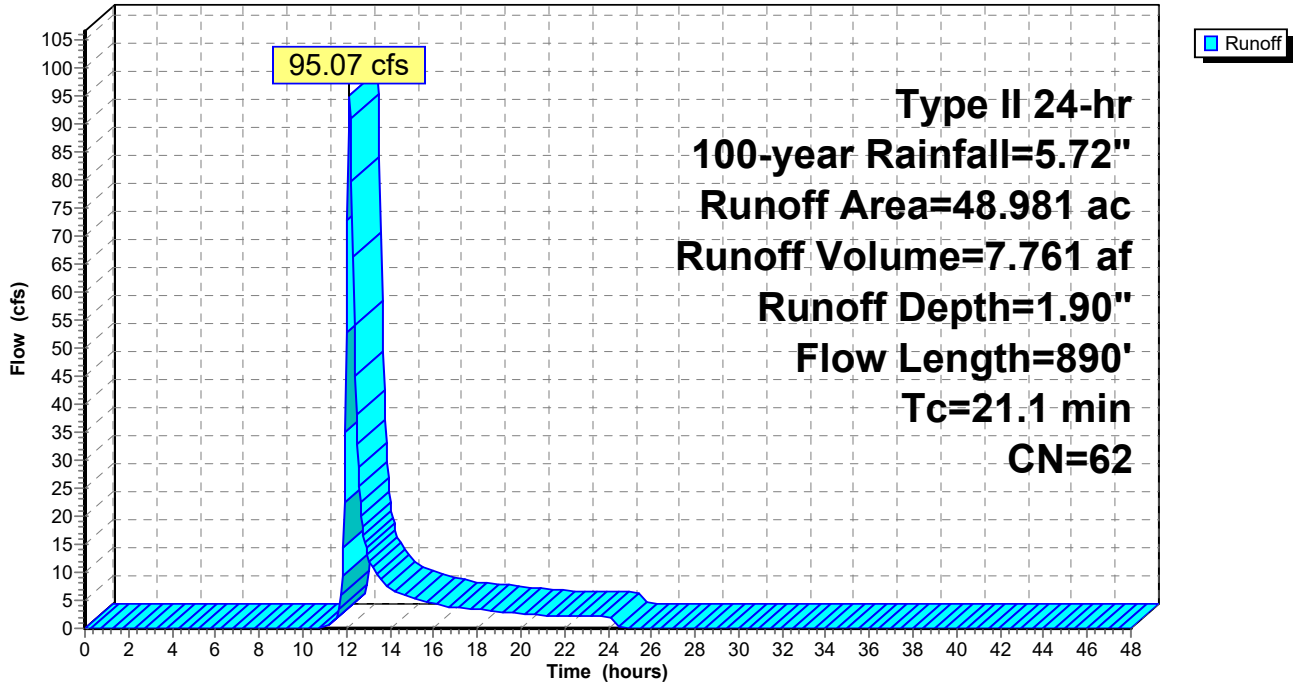
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.795     | 48 | Brush, Good, HSG B        |
| 0.967     | 65 | Brush, Good, HSG C        |
| 3.291     | 58 | Meadow, non-grazed, HSG B |
| 11.478    | 71 | Meadow, non-grazed, HSG C |
| 1.886     | 98 | Water Surface, HSG D      |
| 27.090    | 55 | Woods, Good, HSG B        |
| 3.474     | 70 | Woods, Good, HSG C        |
| 48.981    | 62 | Weighted Average          |
| 47.095    |    | 96.15% Pervious Area      |
| 1.886     |    | 3.85% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 3.2      | 234           | 0.0299        | 1.21              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.5      | 556           | 0.1704        | 2.06              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 21.1     | 890           | Total         |                   |                |  |

Subcatchment 42S: Sub 42

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 48S: Sub 48**

[47] Hint: Peak is 821% of capacity of segment #3

Runoff = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af, Depth= 2.77"  
 Routed to Link SP48 :

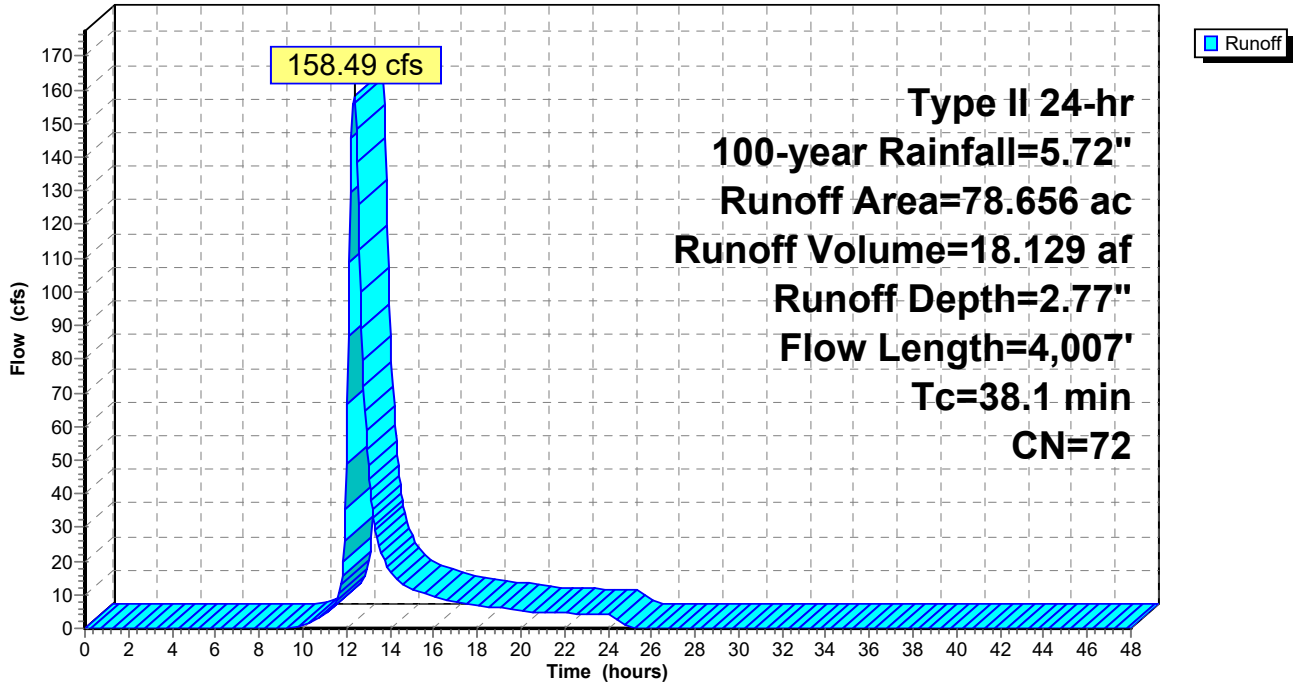
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 0.572   | 98 | Surface water                 |
| * 1.693   | 98 | Imperviopus surface           |
| * 0.110   | 96 | Gravel surface                |
| 0.416     | 61 | >75% Grass cover, Good, HSG B |
| 3.809     | 74 | >75% Grass cover, Good, HSG C |
| 1.571     | 80 | >75% Grass cover, Good, HSG D |
| 9.889     | 58 | Meadow, non-grazed, HSG B     |
| 26.970    | 71 | Meadow, non-grazed, HSG C     |
| 21.544    | 78 | Meadow, non-grazed, HSG D     |
| 0.763     | 48 | Brush, Good, HSG B            |
| 4.514     | 65 | Brush, Good, HSG C            |
| 2.800     | 73 | Brush, Good, HSG D            |
| 0.194     | 55 | Woods, Good, HSG B            |
| 0.882     | 70 | Woods, Good, HSG C            |
| 2.929     | 77 | Woods, Good, HSG D            |
| 78.656    | 72 | Weighted Average              |
| 76.391    |    | 97.12% Pervious Area          |
| 2.265     |    | 2.88% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.0      | 100           | 0.0625        | 0.24              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 22.2     | 1,935         | 0.0430        | 1.45              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 8.9      | 1,972         | 0.0230        | 3.68              | 19.31          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=9.00' D=0.50' Z= 3.0 '/' Top.W=12.00'<br>n= 0.035 Earth, dense weeds |
| 38.1     | 4,007         | Total         |                   |                |  |

Subcatchment 48S: Sub 48

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 49S: Sub 49**

Runoff = 48.68 cfs @ 12.36 hrs, Volume= 5.794 af, Depth= 2.07"  
 Routed to Reach 42R : S-NSD-16

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

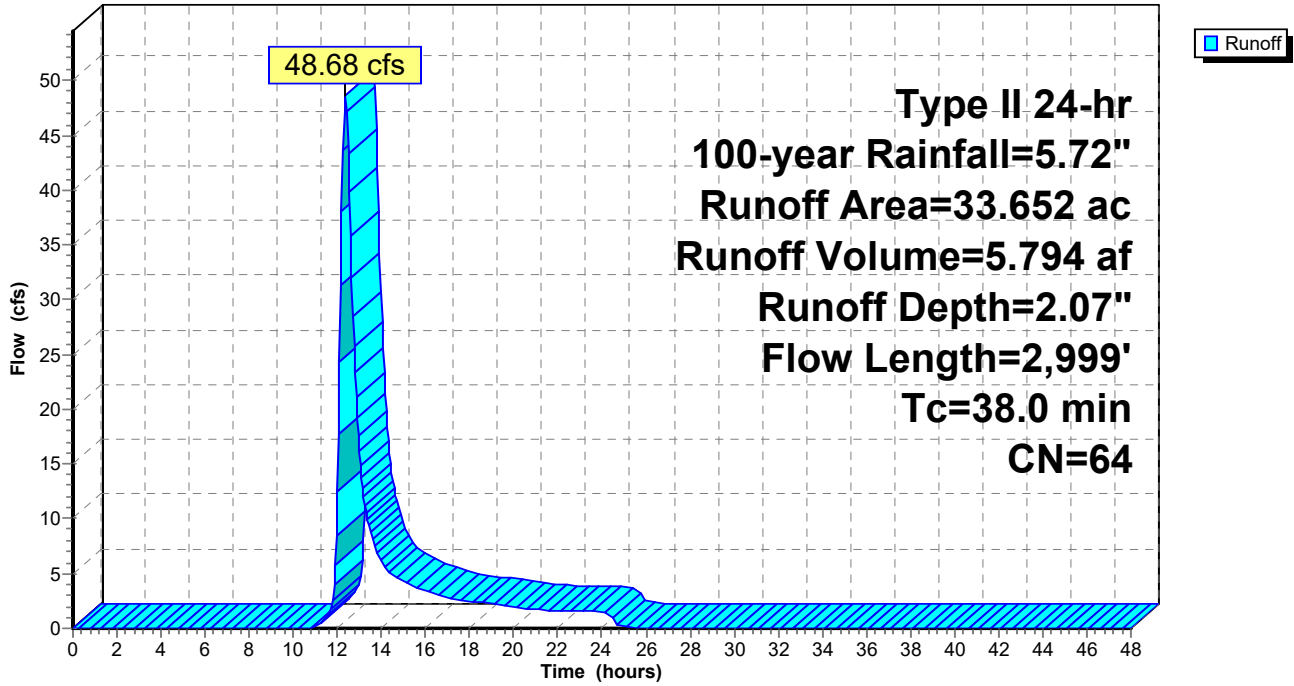
| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.496     | 48 | Brush, Good, HSG B            |
| 1.174     | 65 | Brush, Good, HSG C            |
| 0.274     | 96 | Gravel surface, HSG D         |
| 0.570     | 98 | Unconnected roofs, HSG D      |
| 13.748    | 58 | Meadow, non-grazed, HSG B     |
| 12.594    | 71 | Meadow, non-grazed, HSG C     |
| 1.421     | 61 | >75% Grass cover, Good, HSG B |
| 0.238     | 74 | >75% Grass cover, Good, HSG C |
| 0.029     | 98 | Water Surface, HSG D          |
| 1.071     | 55 | Woods, Good, HSG B            |
| 0.984     | 70 | Woods, Good, HSG C            |
| 0.053     | 77 | Woods, Good, HSG D            |
| 33.652    | 64 | Weighted Average              |
| 33.053    |    | 98.22% Pervious Area          |
| 0.599     |    | 1.78% Impervious Area         |
| 0.570     |    | 95.16% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.1      | 100           | 0.0600        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 1.5      | 240           | 0.1500        | 2.71              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.4      | 534           | 0.1367        | 2.59              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.8      | 168           | 0.0506        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 8.2      | 561           | 0.0267        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 1,396         | 0.0434        | 1.46              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 38.0     | 2,999         | Total         |                   |                |  |



Subcatchment 49S: Sub 49

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 50S: Sub 50**

[47] Hint: Peak is 1655% of capacity of segment #4

Runoff = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af, Depth= 2.41"  
 Routed to Link SP50 :

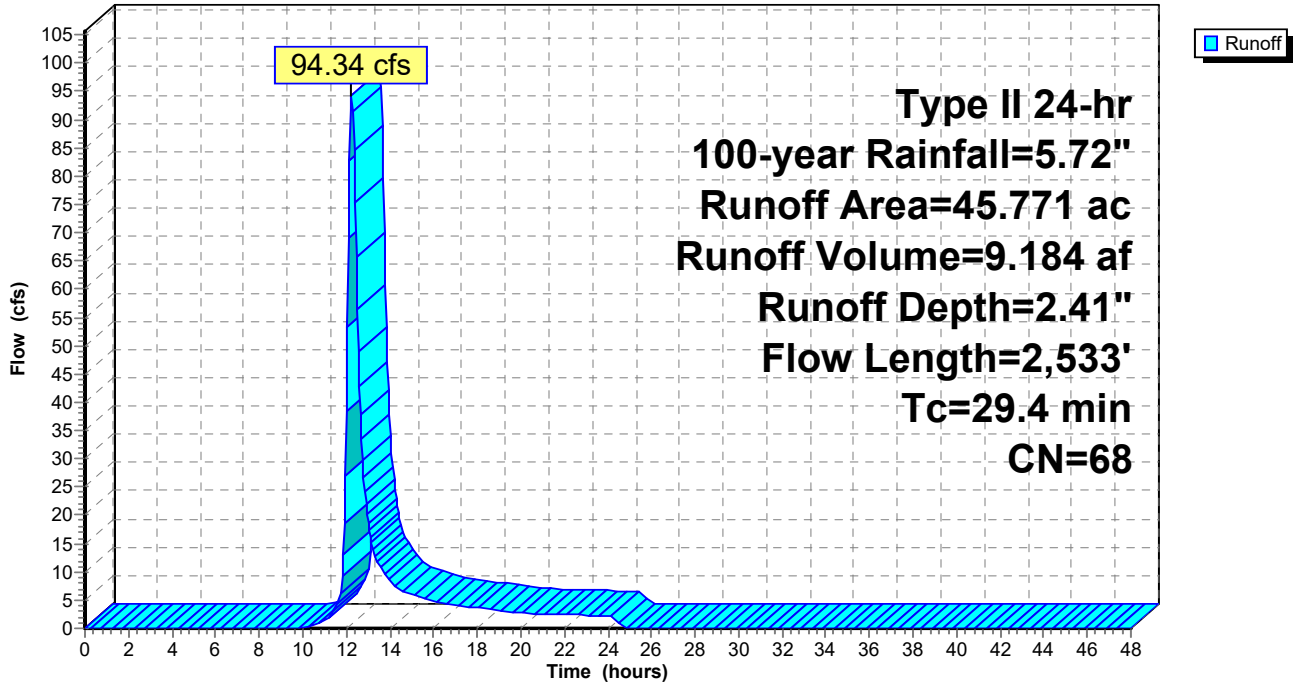
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.310     | 48 | Brush, Good, HSG B        |
| 3.852     | 65 | Brush, Good, HSG C        |
| 0.150     | 73 | Brush, Good, HSG D        |
| 0.163     | 98 | Unconnected roofs, HSG D  |
| 3.353     | 58 | Meadow, non-grazed, HSG B |
| 23.813    | 71 | Meadow, non-grazed, HSG C |
| 2.446     | 78 | Meadow, non-grazed, HSG D |
| 0.409     | 98 | Water Surface, HSG D      |
| 5.669     | 55 | Woods, Good, HSG B        |
| 5.353     | 70 | Woods, Good, HSG C        |
| 0.253     | 77 | Woods, Good, HSG D        |
| 45.771    | 68 | Weighted Average          |
| 45.199    |    | 98.75% Pervious Area      |
| 0.572     |    | 1.25% Impervious Area     |
| 0.163     |    | 28.50% Unconnected        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 8.9      | 100           | 0.0350        | 0.19              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 8.1      | 911           | 0.0710        | 1.87              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 7.5      | 410           | 0.0330        | 0.91              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 4.9      | 1,112         | 0.0320        | 3.80              | 5.70           | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 ' /' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 29.4     | 2,533         | Total         |                   |                |  |

Subcatchment 50S: Sub 50

Hydrograph



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**Summary for Subcatchment 51S: Sub 51**

Runoff = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af, Depth= 2.07"

Routed to Link SP51 :

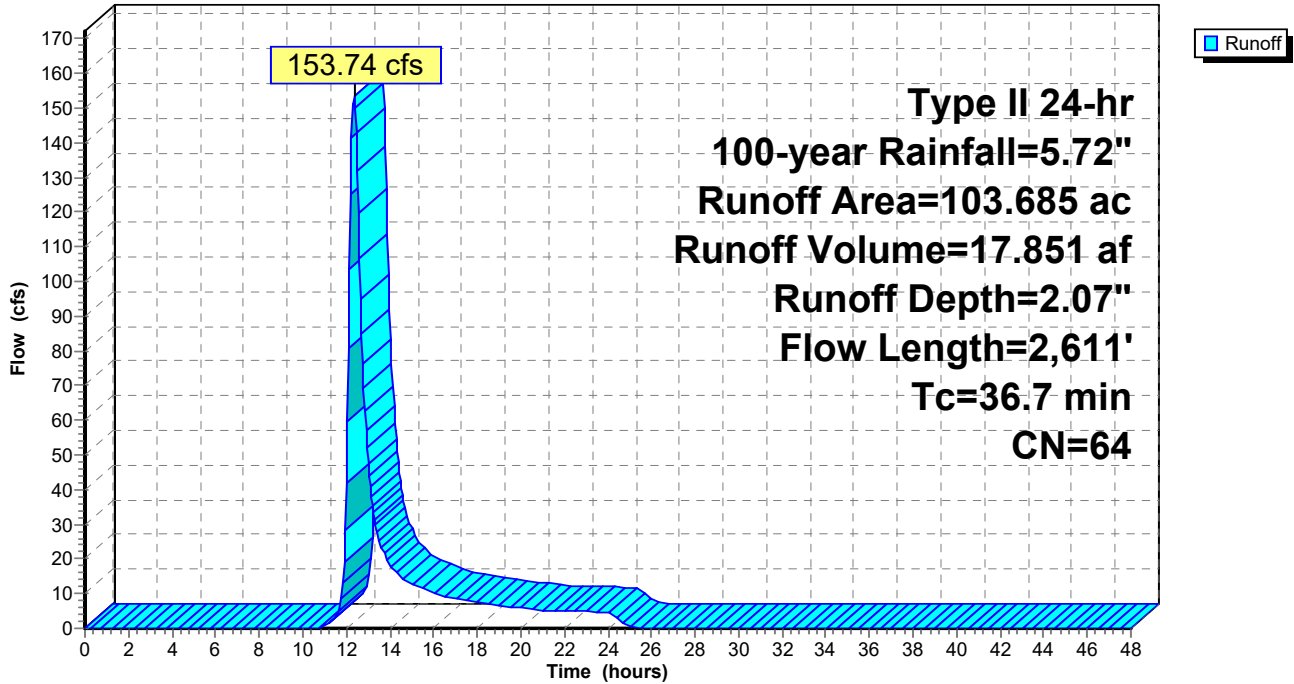
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| * 1.067   | 98 | Impervious surface            |
| 2.753     | 61 | >75% Grass cover, Good, HSG B |
| 1.096     | 74 | >75% Grass cover, Good, HSG C |
| 49.195    | 58 | Meadow, non-grazed, HSG B     |
| 39.362    | 71 | Meadow, non-grazed, HSG C     |
| 2.576     | 78 | Meadow, non-grazed, HSG D     |
| 0.936     | 48 | Brush, Good, HSG B            |
| 0.917     | 65 | Brush, Good, HSG C            |
| 0.252     | 73 | Brush, Good, HSG D            |
| 1.975     | 55 | Woods, Good, HSG B            |
| 3.395     | 70 | Woods, Good, HSG C            |
| 0.161     | 77 | Woods, Good, HSG D            |
| 103.685   | 64 | Weighted Average              |
| 102.618   |    | 98.97% Pervious Area          |
| 1.067     |    | 1.03% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 12.4     | 100           | 0.0150        | 0.13              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 12.6     | 1,592         | 0.0908        | 2.11              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.3      | 435           | 0.0586        | 1.69              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 4.4      | 336           | 0.0327        | 1.27              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 3.0      | 148           | 0.0270        | 0.82              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 36.7     | 2,611         | Total         |                   |                |  |

Subcatchment 51S: Sub 51

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 52S: Sub 52**

Runoff = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af, Depth= 2.50"

Routed to Link SP52 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.561     | 48 | Brush, Good, HSG B        |
| 0.166     | 73 | Brush, Good, HSG D        |
| 1.696     | 58 | Meadow, non-grazed, HSG B |
| 10.185    | 71 | Meadow, non-grazed, HSG C |
| 0.446     | 78 | Meadow, non-grazed, HSG D |
| 0.413     | 98 | Water Surface, HSG D      |
| 0.321     | 55 | Woods, Good, HSG B        |
| 0.833     | 70 | Woods, Good, HSG C        |
| 0.200     | 77 | Woods, Good, HSG D        |
| 14.821    | 69 | Weighted Average          |
| 14.408    |    | 97.21% Pervious Area      |
| 0.413     |    | 2.79% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 11.1     | 100           | 0.0200        | 0.15              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 8.1      | 993           | 0.0850        | 2.04              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.8      | 89            | 0.0112        | 0.53              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 22.0     | 1,182         | Total         |                   |                |  |

**Mill Pt Pre 2**

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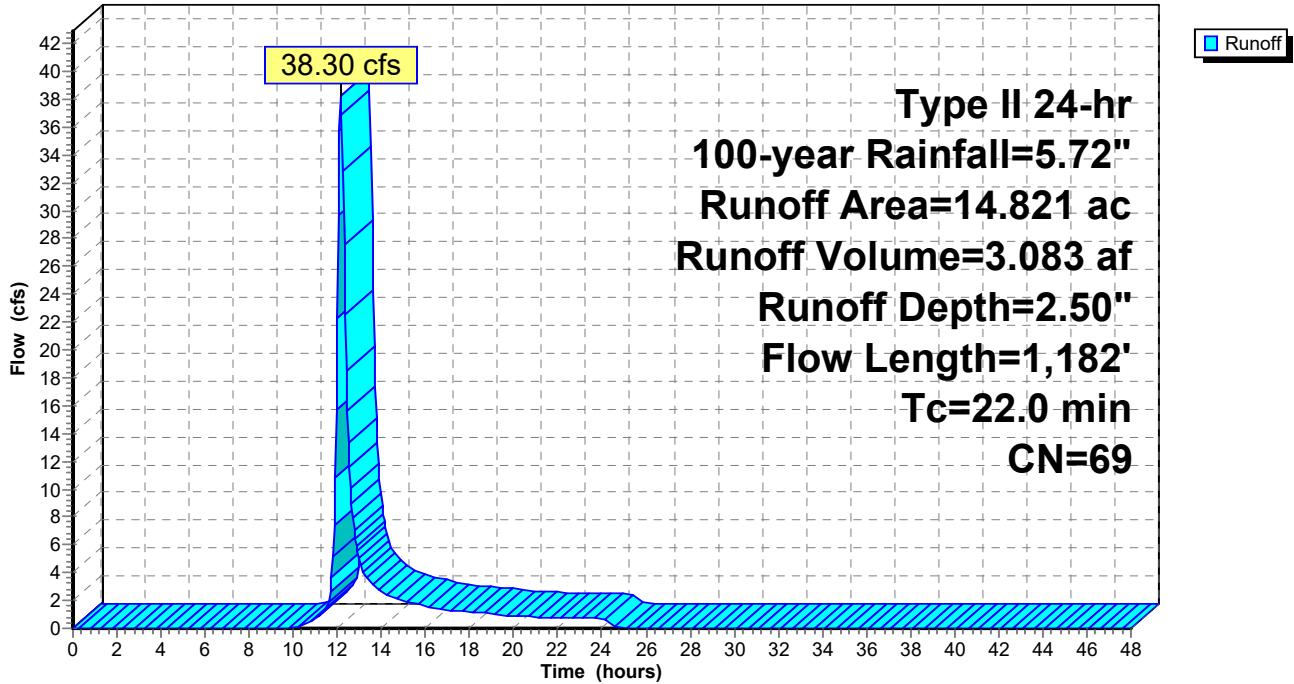
Type II 24-hr 100-year Rainfall=5.72"

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**Subcatchment 52S: Sub 52**

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 53S: Sub 53**

[47] Hint: Peak is 215% of capacity of segment #5

Runoff = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af, Depth= 2.32"  
 Routed to Link SP53 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

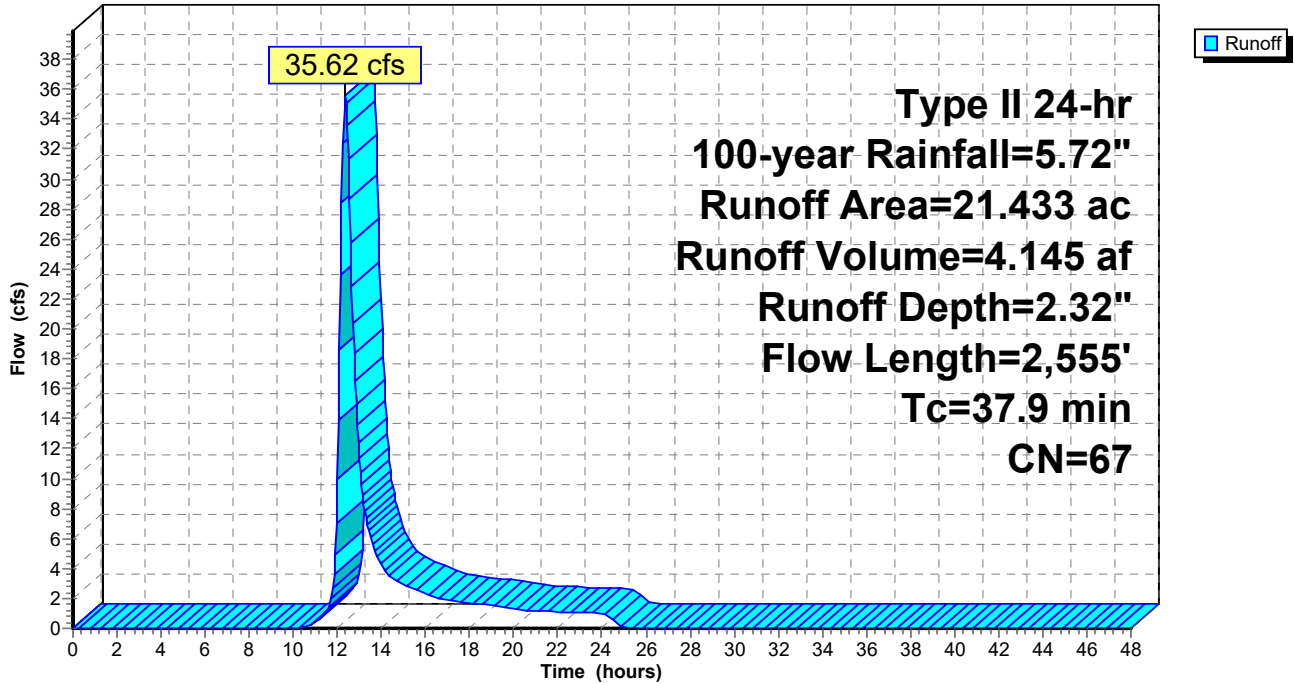
| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 1.581     | 48 | Brush, Good, HSG B        |
| 0.993     | 65 | Brush, Good, HSG C        |
| 4.029     | 58 | Meadow, non-grazed, HSG B |
| 14.178    | 71 | Meadow, non-grazed, HSG C |
| 0.386     | 98 | Water Surface, HSG D      |
| 0.266     | 70 | Woods, Good, HSG C        |
| 21.433    | 67 | Weighted Average          |
| 21.047    |    | 98.20% Pervious Area      |
| 0.386     |    | 1.80% Impervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---|
| 14.6     | 100           | 0.0100        | 0.11              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"   |
| 2.4      | 347           | 0.1210        | 2.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.9      | 151           | 0.1656        | 2.85              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 19.3     | 1,511         | 0.0347        | 1.30              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps  |
| 0.7      | 446           | 0.2690        | 11.02             | 16.53          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=2.00' D=0.50' Z= 2.0 ' Top.W=4.00'<br>n= 0.035 Earth, dense weeds |
| 37.9     | 2,555         | Total         |                   |                |   |



Subcatchment 53S: Sub 53

Hydrograph



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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 54S:**

[47] Hint: Peak is 1080% of capacity of segment #5

Runoff = 87.15 cfs @ 12.35 hrs, Volume= 9.944 af, Depth= 2.50"  
 Routed to Link SP54 :

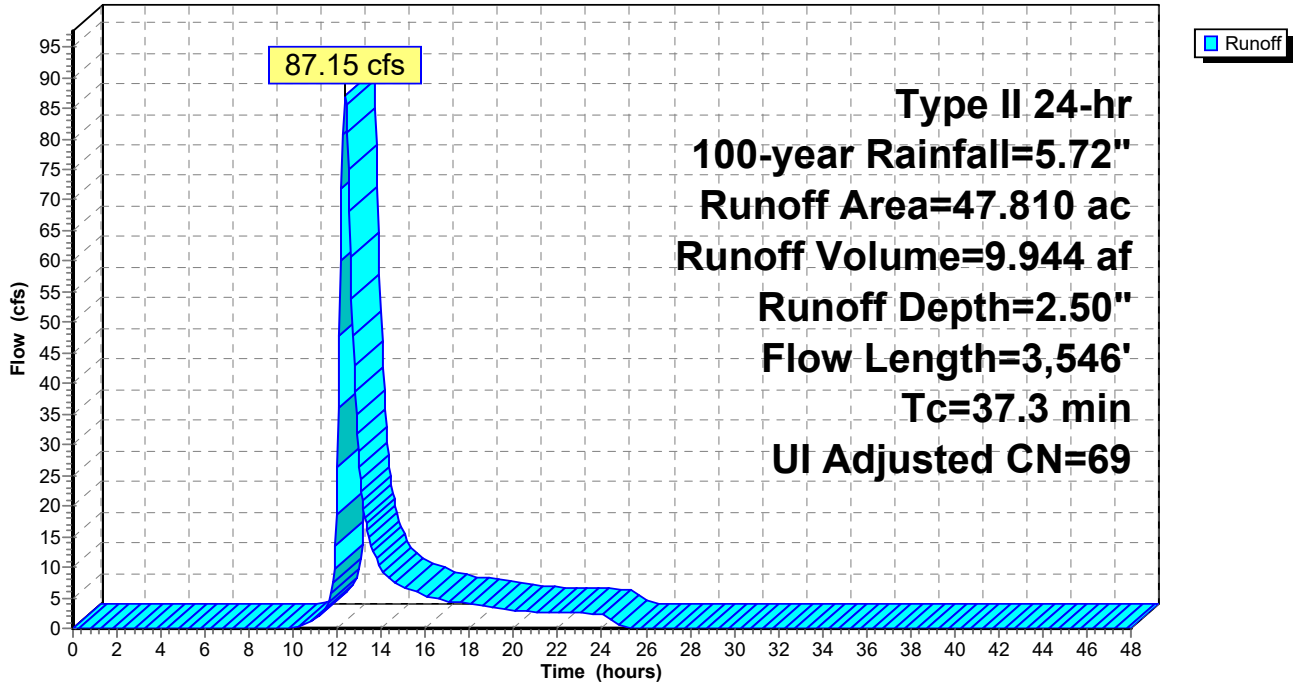
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 2.222     | 48 |     | Brush, Good, HSG B            |
| 4.975     | 65 |     | Brush, Good, HSG C            |
| 2.646     | 98 |     | Unconnected roofs, HSG D      |
| 5.842     | 58 |     | Meadow, non-grazed, HSG B     |
| 23.555    | 71 |     | Meadow, non-grazed, HSG C     |
| 2.361     | 61 |     | >75% Grass cover, Good, HSG B |
| 5.037     | 74 |     | >75% Grass cover, Good, HSG C |
| 1.095     | 98 |     | Water Surface, HSG D          |
| 0.043     | 55 |     | Woods, Good, HSG B            |
| 0.034     | 70 |     | Woods, Good, HSG C            |
| 47.810    | 70 | 69  | Weighted Average, UI Adjusted |
| 44.069    |    |     | 92.18% Pervious Area          |
| 3.741     |    |     | 7.82% Impervious Area         |
| 2.646     |    |     | 70.73% Unconnected            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.7      | 100           | 0.0500        | 0.22              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 11.2     | 964           | 0.0420        | 1.43              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.8      | 166           | 0.0392        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps  |
| 1.9      | 321           | 0.0312        | 2.84              |                | <b>Shallow Concentrated Flow,</b><br>Unpaved Kv= 16.1 fps  |
| 13.7     | 1,995         | 0.0253        | 2.42              | 8.07           | <b>Parabolic Channel,</b><br>W=5.00' D=1.00' Area=3.3 sf Perim=5.5'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 37.3     | 3,546         | Total         |                   |                |  |

Subcatchment 54S:

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 55S: Sub 55**

[47] Hint: Peak is 535% of capacity of segment #4

Runoff = 48.40 cfs @ 12.28 hrs, Volume= 5.050 af, Depth= 2.23"  
 Routed to Link SP55 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.416     | 48 | Brush, Good, HSG B        |
| 0.206     | 65 | Brush, Good, HSG C        |
| 0.193     | 98 | Unconnected roofs, HSG D  |
| 9.177     | 58 | Meadow, non-grazed, HSG B |
| 16.698    | 71 | Meadow, non-grazed, HSG C |
| 0.190     | 55 | Woods, Good, HSG B        |
| 0.236     | 70 | Woods, Good, HSG C        |
| 27.116    | 66 | Weighted Average          |
| 26.923    |    | 99.29% Pervious Area      |
| 0.193     |    | 0.71% Impervious Area     |
| 0.193     |    | 100.00% Unconnected       |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 13.4     | 100           | 0.0125        | 0.12              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"  |
| 4.5      | 535           | 0.0813        | 2.00              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 11.9     | 1,175         | 0.0549        | 1.64              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps   |
| 2.3      | 474           | 0.0527        | 3.39              | 9.05           | <b>Parabolic Channel,</b><br>W=4.00' D=1.00' Area=2.7 sf Perim=4.6'<br>n= 0.070 Sluggish weedy reaches w/pools |
| 32.1     | 2,284         | Total         |                   |                |  |

**Mill Pt Pre 2**

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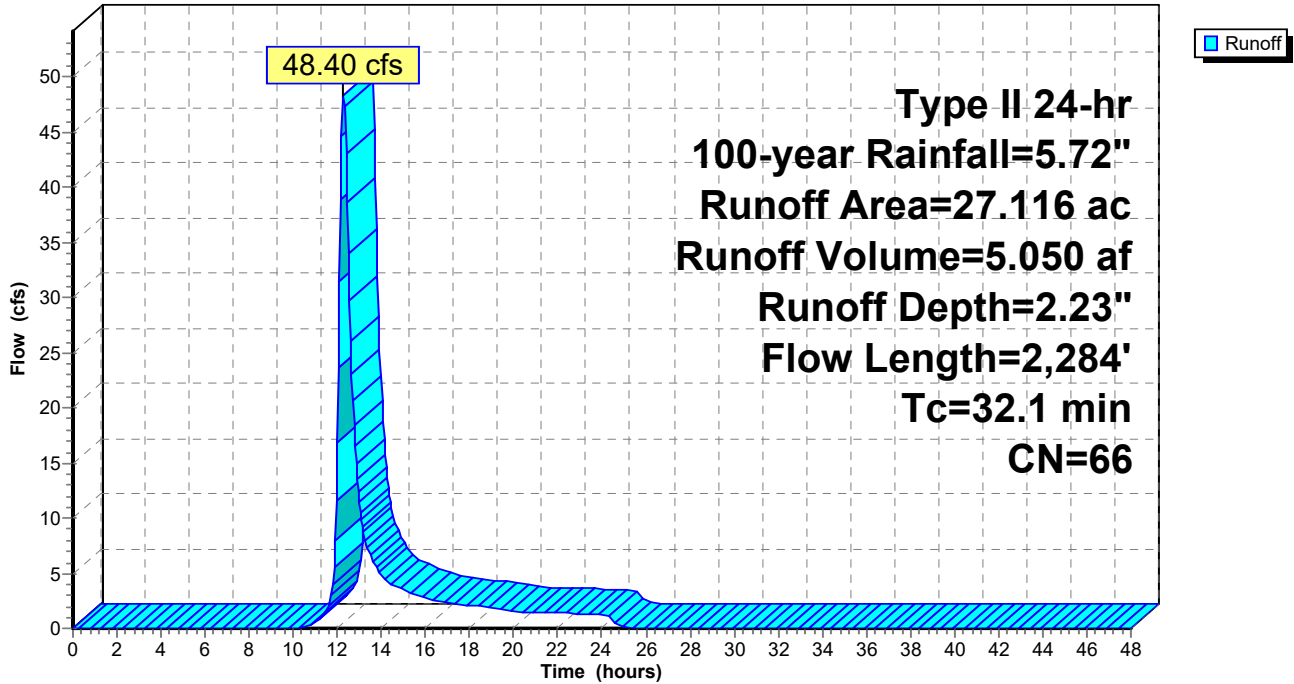
Type II 24-hr 100-year Rainfall=5.72"

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**Subcatchment 55S: Sub 55**

Hydrograph



**Mill Pt Pre 2**

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Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Subcatchment 56S: Sub 56**

Runoff = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af, Depth= 2.32"  
 Routed to Link SP56 :

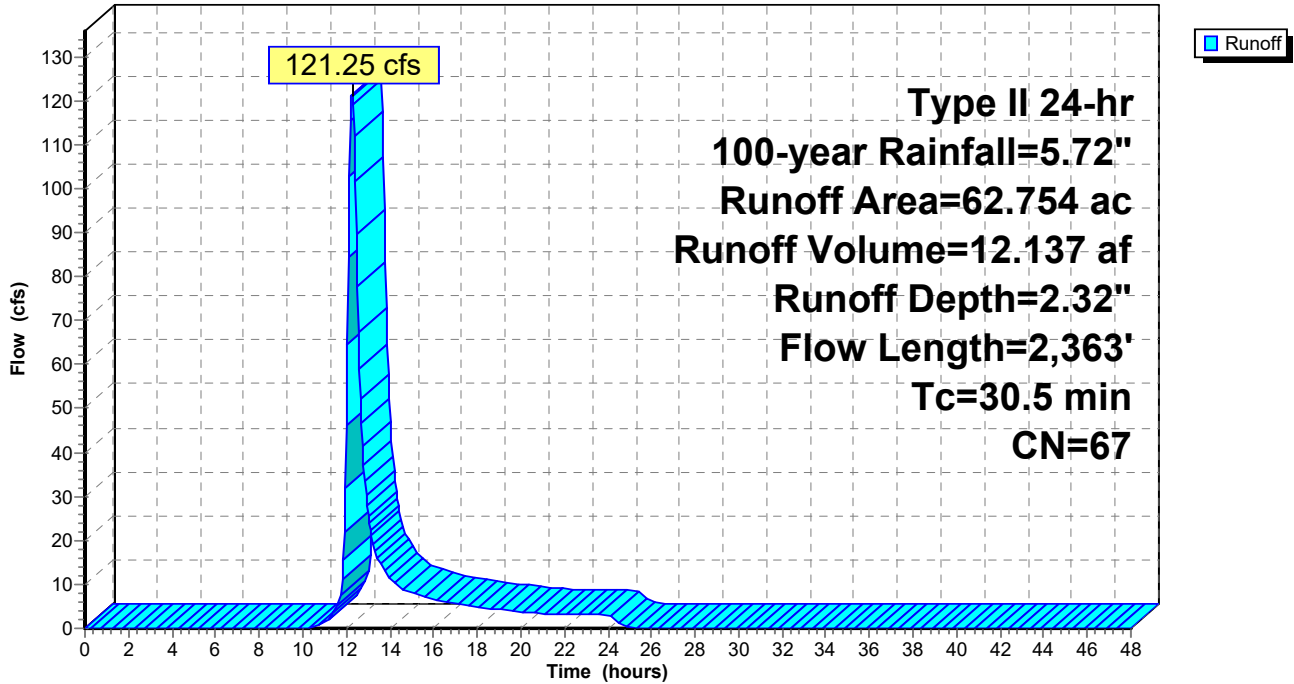
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Type II 24-hr 100-year Rainfall=5.72"

| Area (ac) | CN | Description               |
|-----------|----|---------------------------|
| 0.895     | 48 | Brush, Good, HSG B        |
| 1.460     | 65 | Brush, Good, HSG C        |
| 13.366    | 58 | Meadow, non-grazed, HSG B |
| 40.081    | 71 | Meadow, non-grazed, HSG C |
| 1.244     | 55 | Woods, Good, HSG B        |
| 5.708     | 70 | Woods, Good, HSG C        |
| 62.754    | 67 | Weighted Average          |
| 62.754    |    | 100.00% Pervious Area     |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description  |
|----------|---------------|---------------|-------------------|----------------|--|
| 7.3      | 100           | 0.0575        | 0.23              |                | <b>Sheet Flow,</b><br>Grass: Short n= 0.150 P2= 2.50"                |
| 7.3      | 501           | 0.0264        | 1.14              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.2      | 958           | 0.1336        | 2.56              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 6.8      | 644           | 0.0505        | 1.57              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.9      | 160           | 0.0344        | 0.93              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps            |
| 30.5     | 2,363         | Total         |                   |                |  |

Subcatchment 56S: Sub 56

Hydrograph



## Mill Pt Pre 2

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Type II 24-hr 100-year Rainfall=5.72"

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### Summary for Reach 33R:

[91] Warning: Storage range exceeded by 0.84'

[55] Hint: Peak inflow is 350% of Manning's capacity

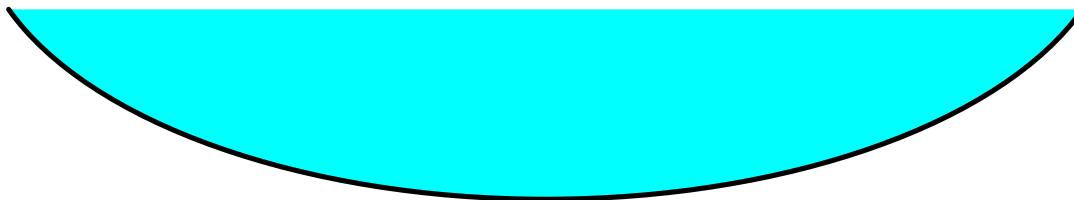
[79] Warning: Submerged Pond 34P Primary device # 1 OUTLET by 1.84'

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 1.90" for 100-year event  
Inflow = 37.08 cfs @ 12.31 hrs, Volume= 4.087 af  
Outflow = 29.27 cfs @ 12.61 hrs, Volume= 4.087 af, Atten= 21%, Lag= 17.8 min  
Routed to Link SP34 : SP31

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.26 fps, Min. Travel Time= 9.6 min  
Avg. Velocity = 0.75 fps, Avg. Travel Time= 41.8 min

Peak Storage= 16,904 cf @ 12.45 hrs  
Average Depth at Peak Storage= 1.84' , Surface Width= 8.13'  
Bank-Full Depth= 1.00' Flow Area= 4.0 sf, Capacity= 10.60 cfs

6.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,875.0' Slope= 0.0597 '/'  
Inlet Invert= 578.00', Outlet Invert= 466.00'





**Mill Pt Pre 2**

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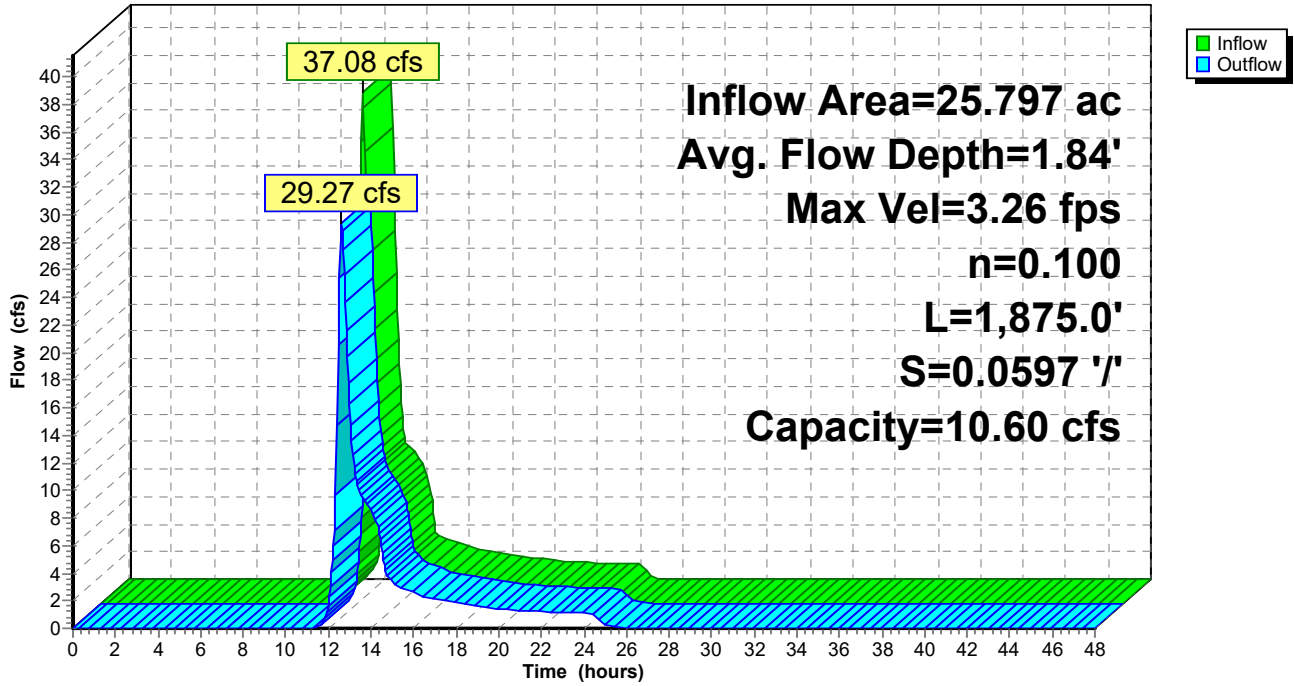
Type II 24-hr 100-year Rainfall=5.72"

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**Reach 33R:**

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 100-year Rainfall=5.72"

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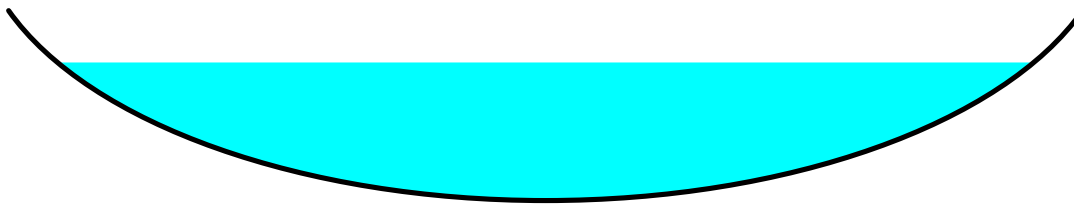
## Summary for Reach 39R:

Inflow Area = 20.880 ac, 7.94% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 45.31 cfs @ 12.24 hrs, Volume= 4.343 af  
Outflow = 43.63 cfs @ 12.37 hrs, Volume= 4.343 af, Atten= 4%, Lag= 7.4 min  
Routed to Link SP39 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 4.43 fps, Min. Travel Time= 4.2 min  
Avg. Velocity = 1.24 fps, Avg. Travel Time= 14.9 min

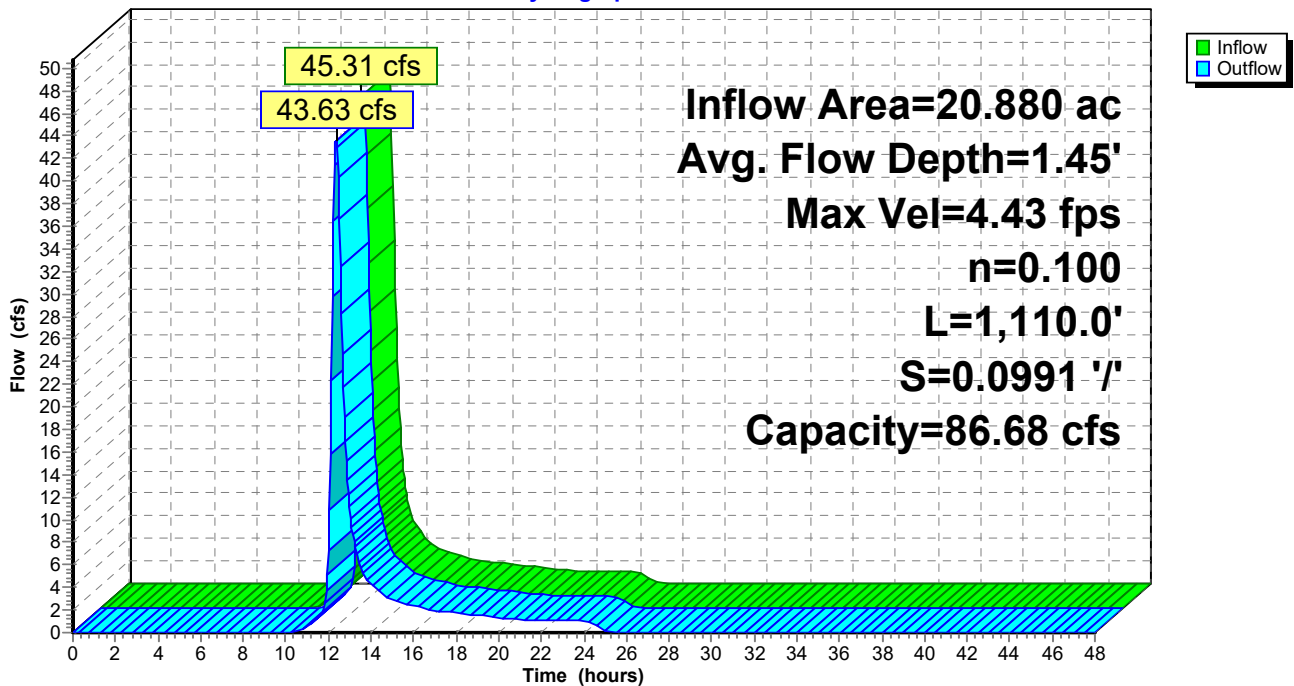
Peak Storage= 11,003 cf @ 12.29 hrs  
Average Depth at Peak Storage= 1.45' , Surface Width= 10.23'  
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 86.68 cfs

12.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,110.0' Slope= 0.0991 '/'  
Inlet Invert= 526.00', Outlet Invert= 416.00'



## Reach 39R:

Hydrograph



# Mill Pt Pre 2

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Type II 24-hr 100-year Rainfall=5.72"

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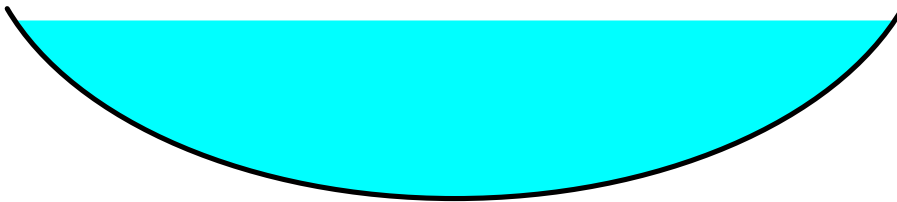
## Summary for Reach 42R: S-NSD-16

Inflow Area = 33.652 ac, 1.78% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 48.68 cfs @ 12.36 hrs, Volume= 5.794 af  
Outflow = 45.20 cfs @ 12.60 hrs, Volume= 5.794 af, Atten= 7%, Lag= 14.5 min  
Routed to Link SP42 :

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
Max. Velocity= 3.74 fps, Min. Travel Time= 8.0 min  
Avg. Velocity = 0.89 fps, Avg. Travel Time= 33.7 min

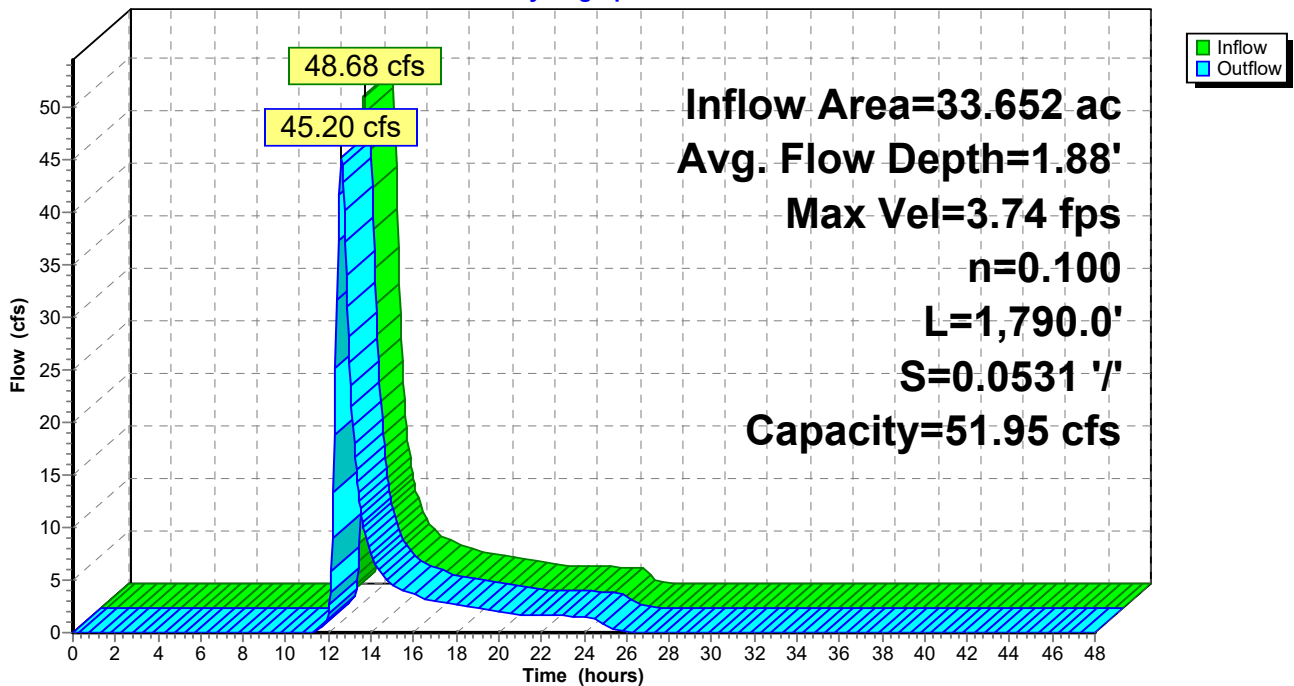
Peak Storage= 21,682 cf @ 12.47 hrs  
Average Depth at Peak Storage= 1.88' , Surface Width= 9.69'  
Bank-Full Depth= 2.00' Flow Area= 13.3 sf, Capacity= 51.95 cfs

10.00' x 2.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage  
Length= 1,790.0' Slope= 0.0531 '/'  
Inlet Invert= 470.00', Outlet Invert= 375.00'



## Reach 42R: S-NSD-16

Hydrograph



**Mill Pt Pre 2**

Type II 24-hr 100-year Rainfall=5.72"

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**Summary for Pond 34P: VAN EPPS RD CULVERT**

Inflow Area = 25.797 ac, 1.16% Impervious, Inflow Depth = 1.90" for 100-year event  
 Inflow = 46.80 cfs @ 12.18 hrs, Volume= 4.087 af  
 Outflow = 37.08 cfs @ 12.31 hrs, Volume= 4.087 af, Atten= 21%, Lag= 7.9 min  
 Primary = 10.52 cfs @ 12.31 hrs, Volume= 3.300 af  
 Routed to Reach 33R :  
 Secondary = 26.56 cfs @ 12.31 hrs, Volume= 0.788 af  
 Routed to Reach 33R :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 585.71' @ 12.31 hrs Surf.Area= 16,588 sf Storage= 27,689 cf

Plug-Flow detention time= 11.0 min calculated for 4.083 af (100% of inflow)  
 Center-of-Mass det. time= 11.0 min ( 884.4 - 873.3 )

| Volume           | Invert            | Avail.Storage | Storage Description  |                        |                  |  |
|------------------|-------------------|---------------|--|------------------------|------------------|--|
| #1               | 580.00'           | 32,769 cf     | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                        |                  |  |
| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet)                                     | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |  |
| 580.00           | 1                 | 5.0           | 0  | 0                      | 1                |  |
| 582.00           | 935               | 220.0         | 644  | 644                    | 3,857            |  |
| 584.00           | 6,900             | 505.0         | 6,917  | 7,561                  | 20,316           |  |
| 585.00           | 12,860            | 515.0         | 9,727  | 17,288                 | 21,274           |  |
| 586.00           | 18,260            | 645.0         | 15,481   | 32,769                 | 33,289           |  |

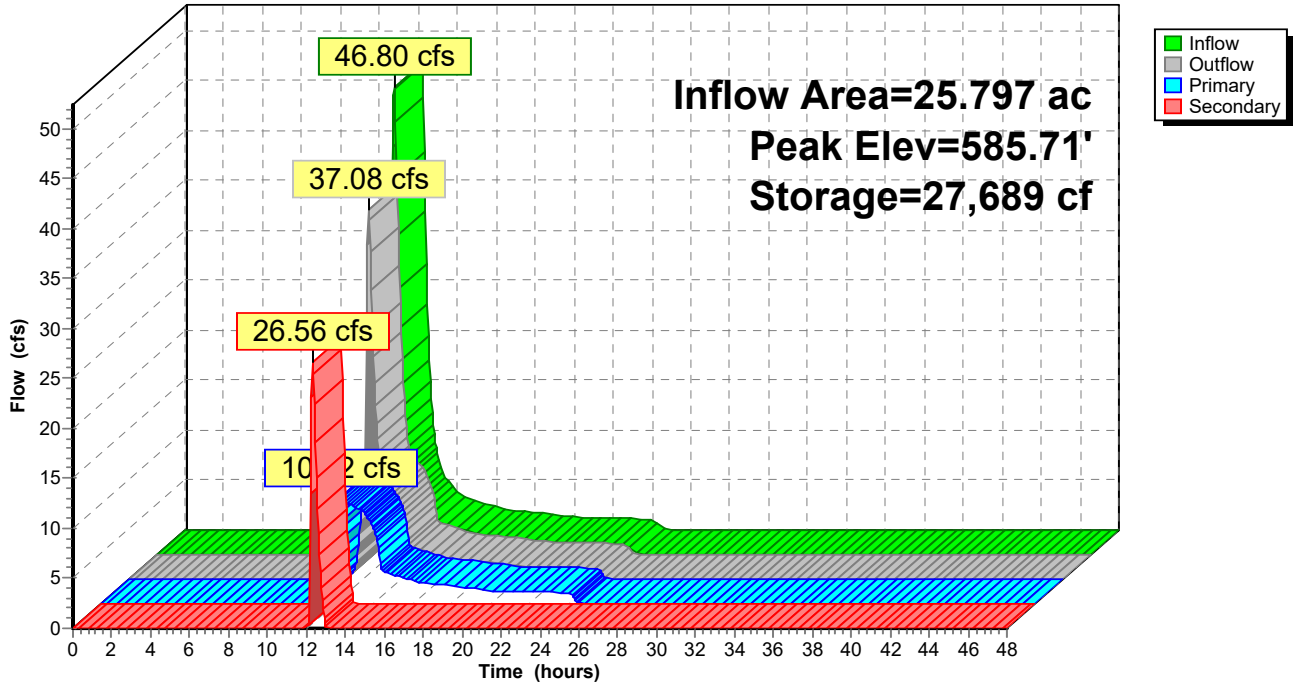
| Device | Routing   | Invert  | Outlet Devices   |
|--------|-----------|---------|--|
| #1     | Primary   | 580.00' | <b>15.0" Round Culvert</b><br>L= 79.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 580.00' / 578.00' S= 0.0253 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf |
| #2     | Secondary | 585.00' | <b>15.0' long + 3.0 ' /' SideZ x 25.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63                |

**Primary OutFlow** Max=10.51 cfs @ 12.31 hrs HW=585.70' (Free Discharge)  
 ↑1=Culvert (Inlet Controls 10.51 cfs @ 8.56 fps)

**Secondary OutFlow** Max=26.12 cfs @ 12.31 hrs HW=585.70' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 26.12 cfs @ 2.18 fps)

### Pond 34P: VAN EPPS RD CULVERT

Hydrograph



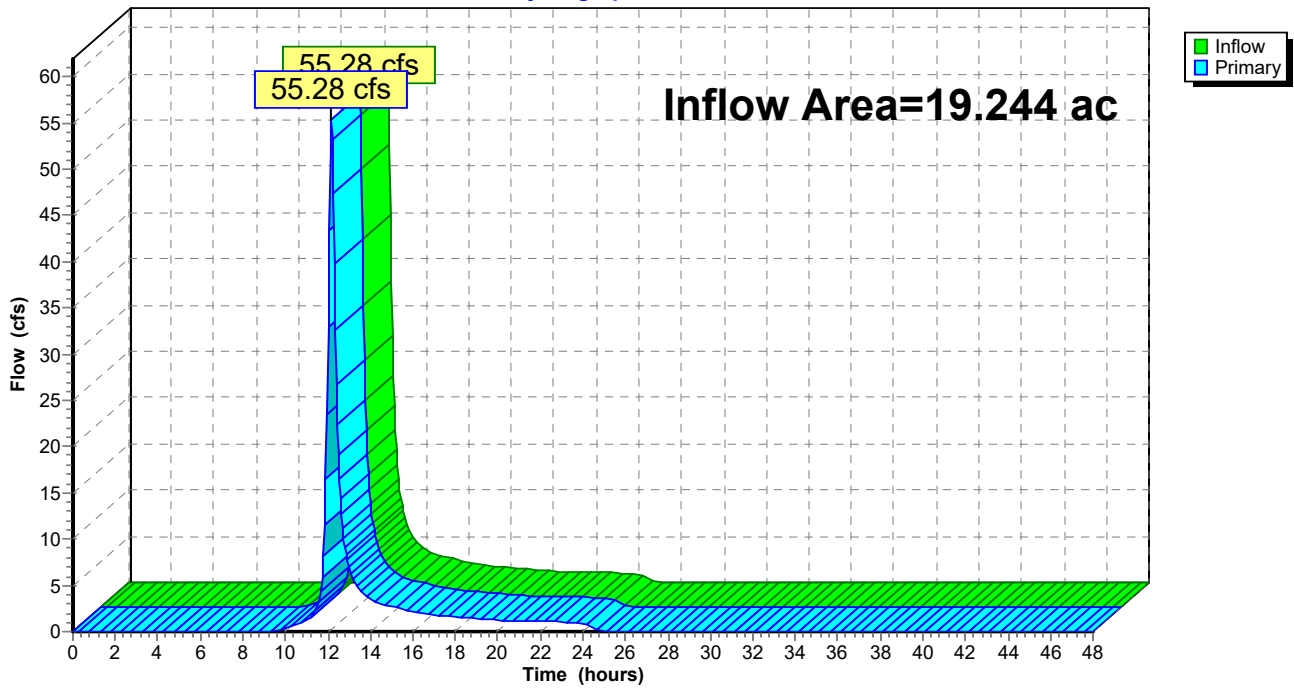
### Summary for Link SP25:

Inflow Area = 19.244 ac, 0.52% Impervious, Inflow Depth = 2.77" for 100-year event  
Inflow = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af  
Primary = 55.28 cfs @ 12.16 hrs, Volume= 4.436 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP25:

Hydrograph



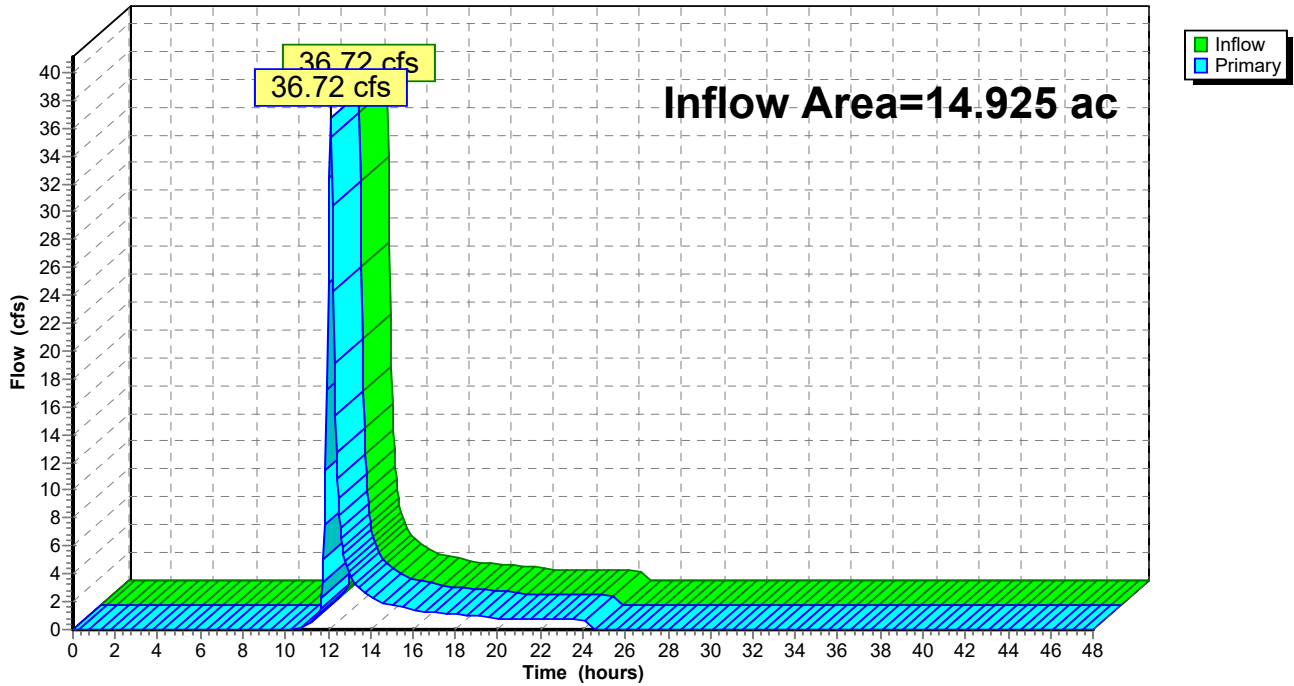
### Summary for Link SP26:

Inflow Area = 14.925 ac, 4.50% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af  
Primary = 36.72 cfs @ 12.11 hrs, Volume= 2.674 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP26:

Hydrograph



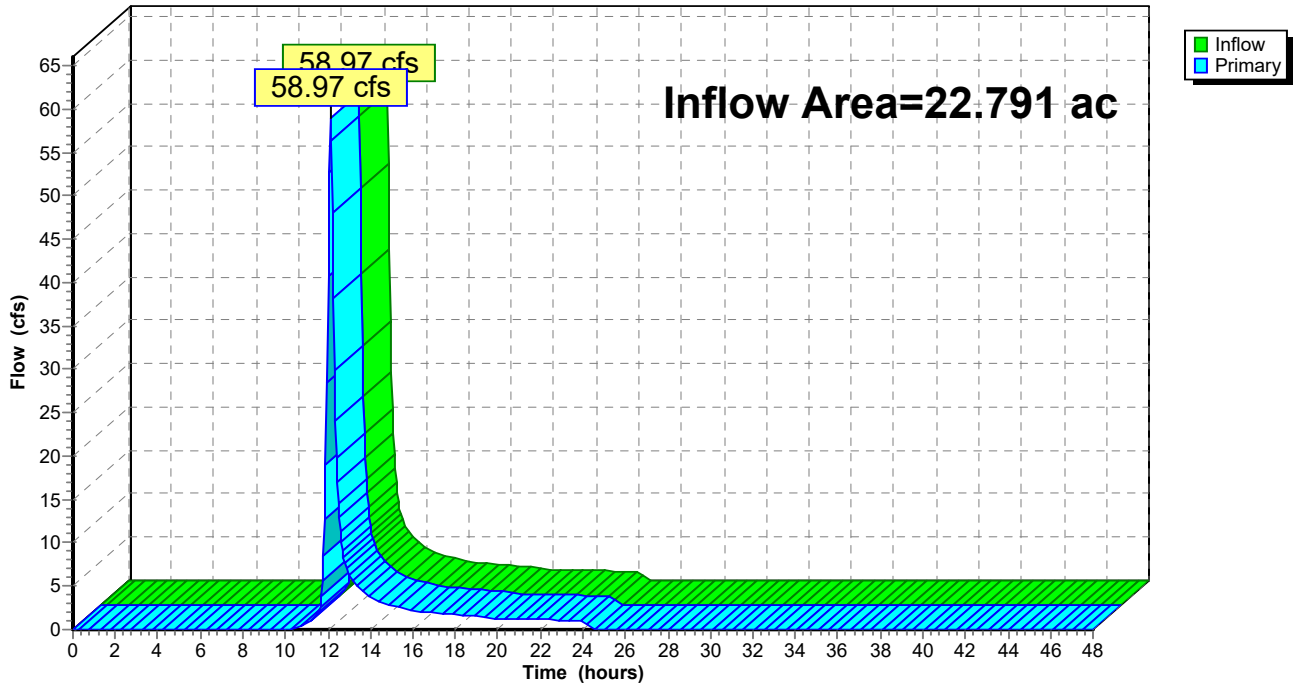
### Summary for Link SP27:

Inflow Area = 22.791 ac, 1.95% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af  
Primary = 58.97 cfs @ 12.11 hrs, Volume= 4.244 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP27:

Hydrograph





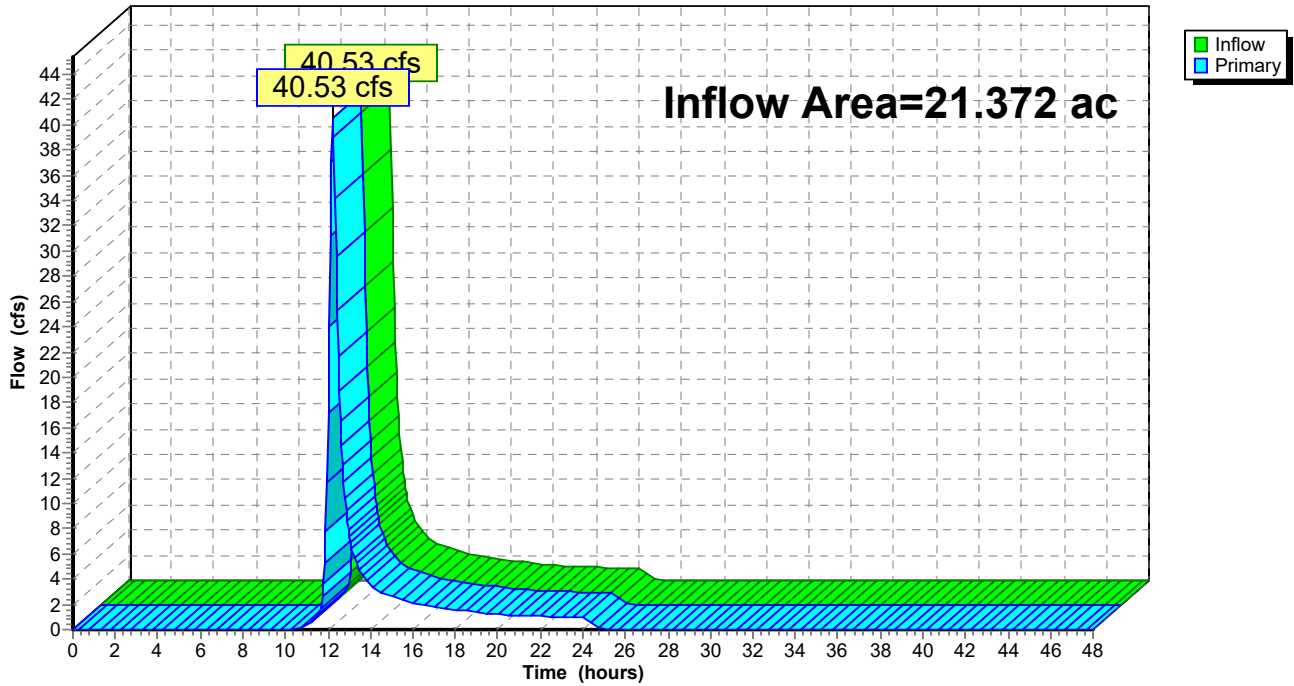
Summary for Link SP28:

Inflow Area = 21.372 ac, 0.53% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af  
Primary = 40.53 cfs @ 12.23 hrs, Volume= 3.829 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP28:

Hydrograph



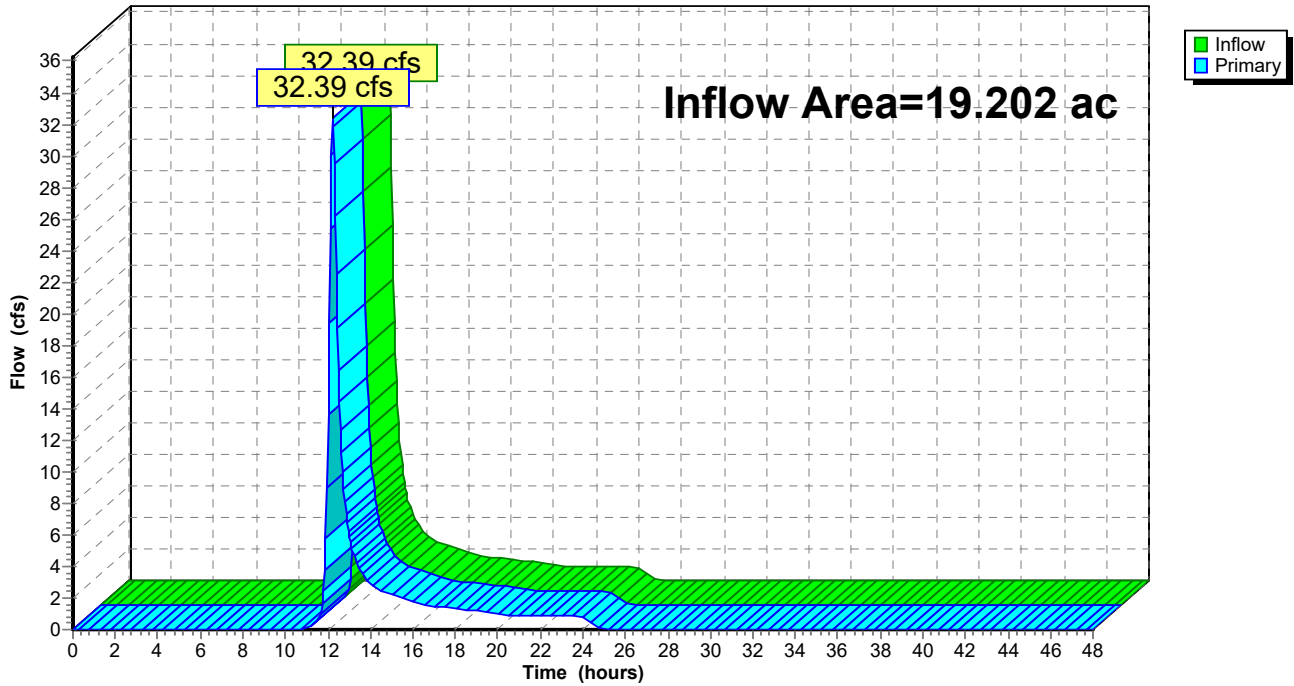
Summary for Link SP29:

Inflow Area = 19.202 ac, 1.21% Impervious, Inflow Depth = 1.90" for 100-year event  
Inflow = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af  
Primary = 32.39 cfs @ 12.22 hrs, Volume= 3.042 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SP29:

Hydrograph



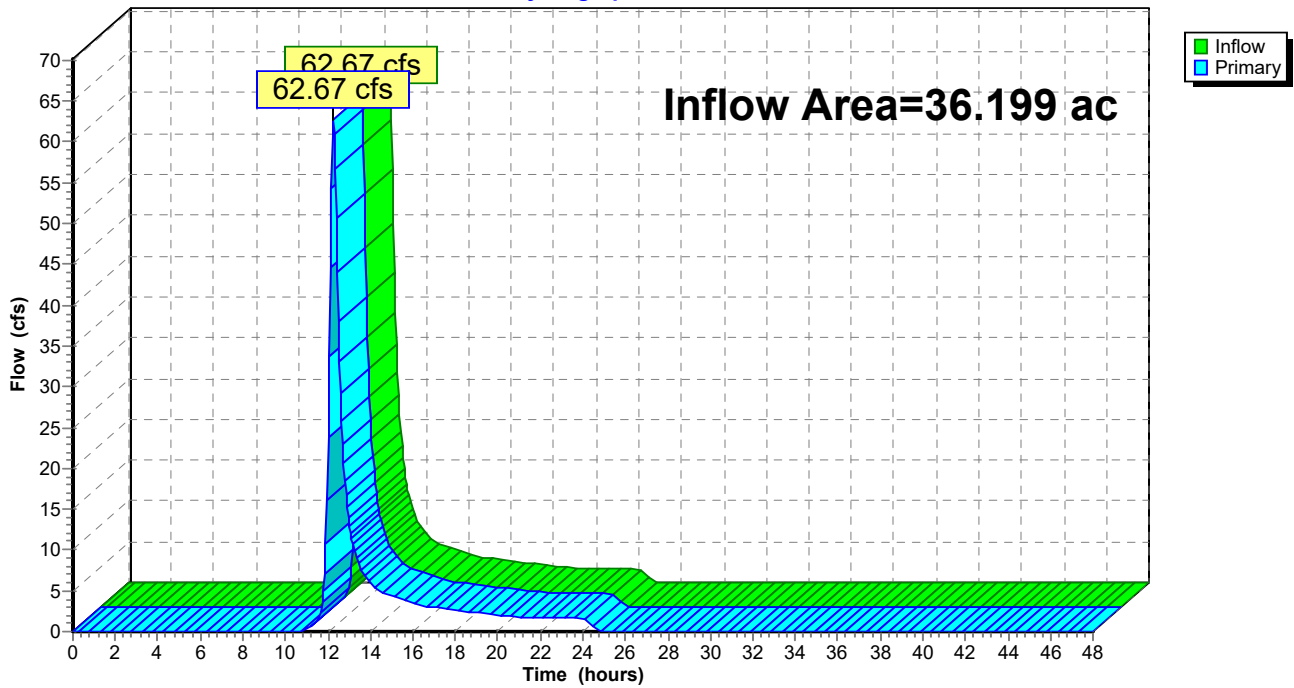
### Summary for Link SP30:

Inflow Area = 36.199 ac, 1.23% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af  
Primary = 62.67 cfs @ 12.25 hrs, Volume= 6.232 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP30:

Hydrograph



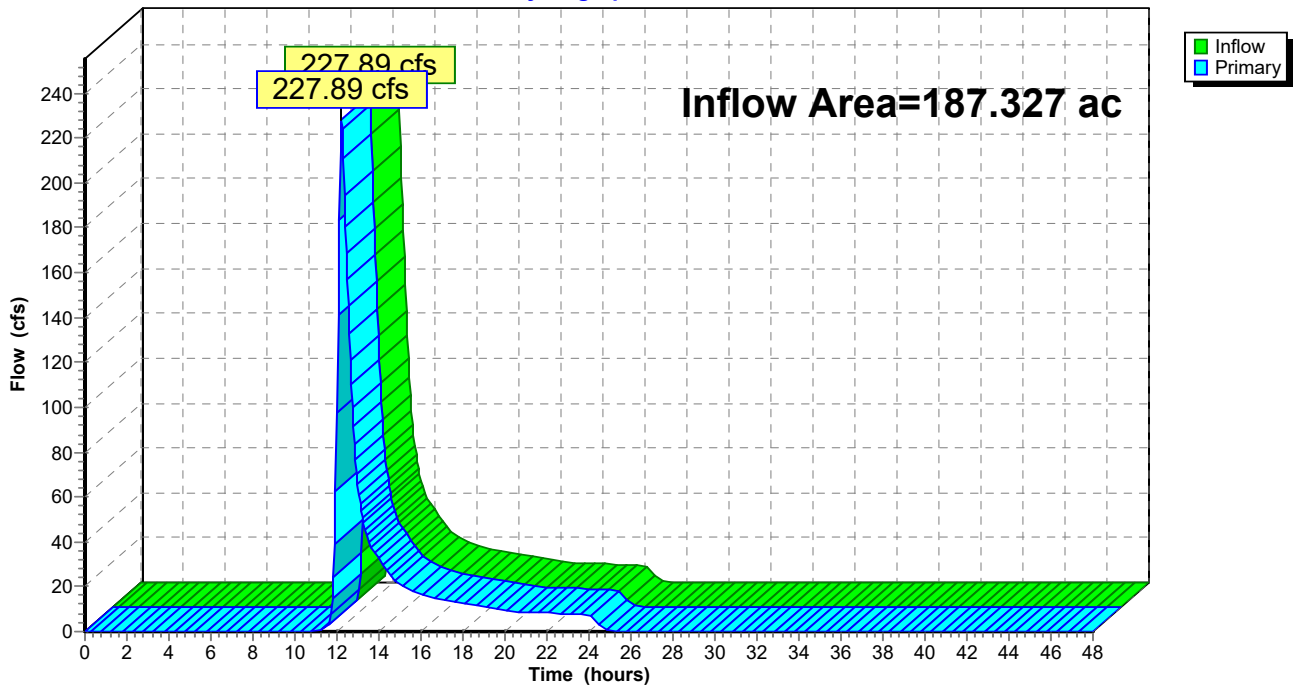
### Summary for Link SP34: SP31

Inflow Area = 187.327 ac, 1.98% Impervious, Inflow Depth = 1.75" for 100-year event  
Inflow = 227.89 cfs @ 12.22 hrs, Volume= 27.390 af  
Primary = 227.89 cfs @ 12.22 hrs, Volume= 27.390 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP34: SP31

Hydrograph



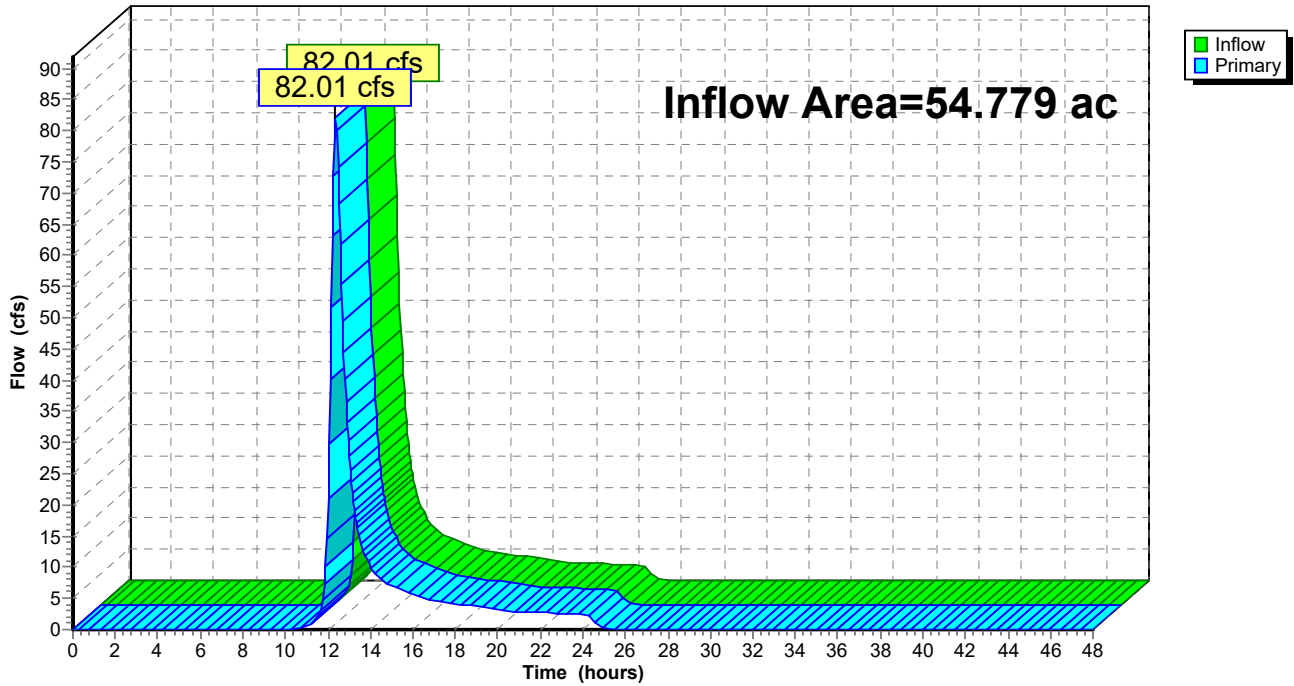
### Summary for Link SP35:

Inflow Area = 54.779 ac, 2.01% Impervious, Inflow Depth = 2.15" for 100-year event  
Inflow = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af  
Primary = 82.01 cfs @ 12.37 hrs, Volume= 9.814 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP35:

Hydrograph



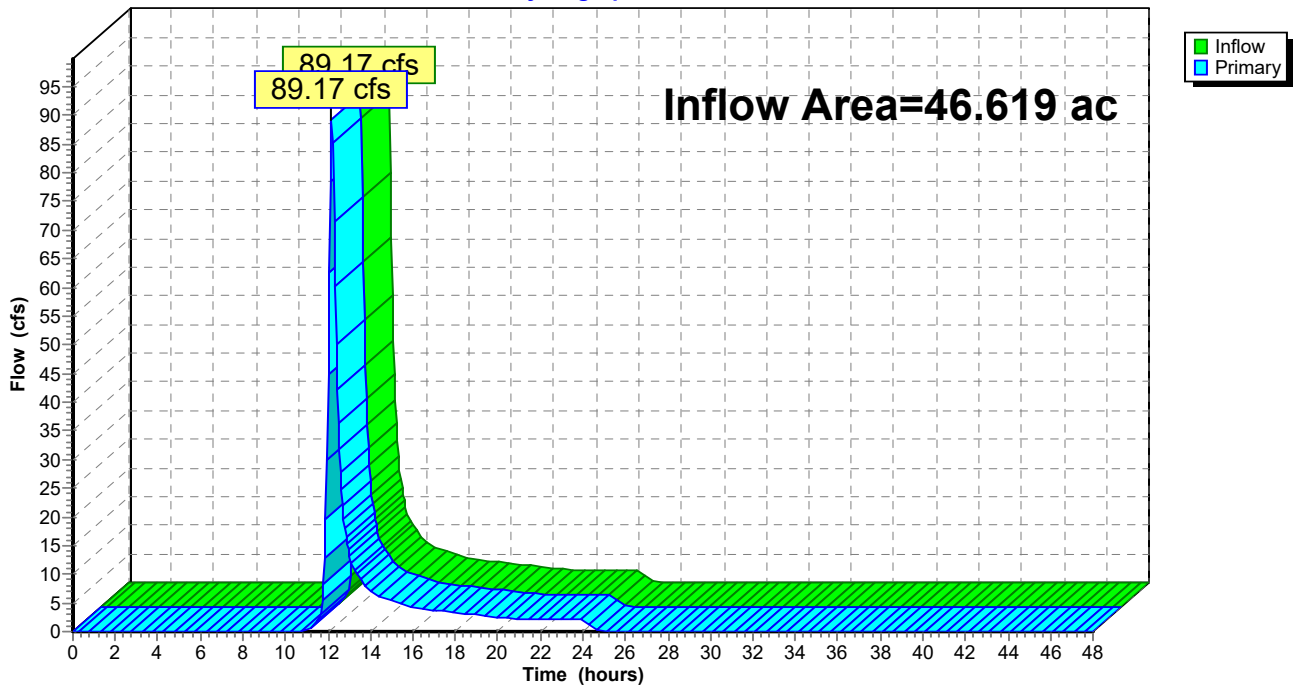
### Summary for Link SP36:

Inflow Area = 46.619 ac, 1.12% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af  
Primary = 89.17 cfs @ 12.18 hrs, Volume= 7.704 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP36:

Hydrograph



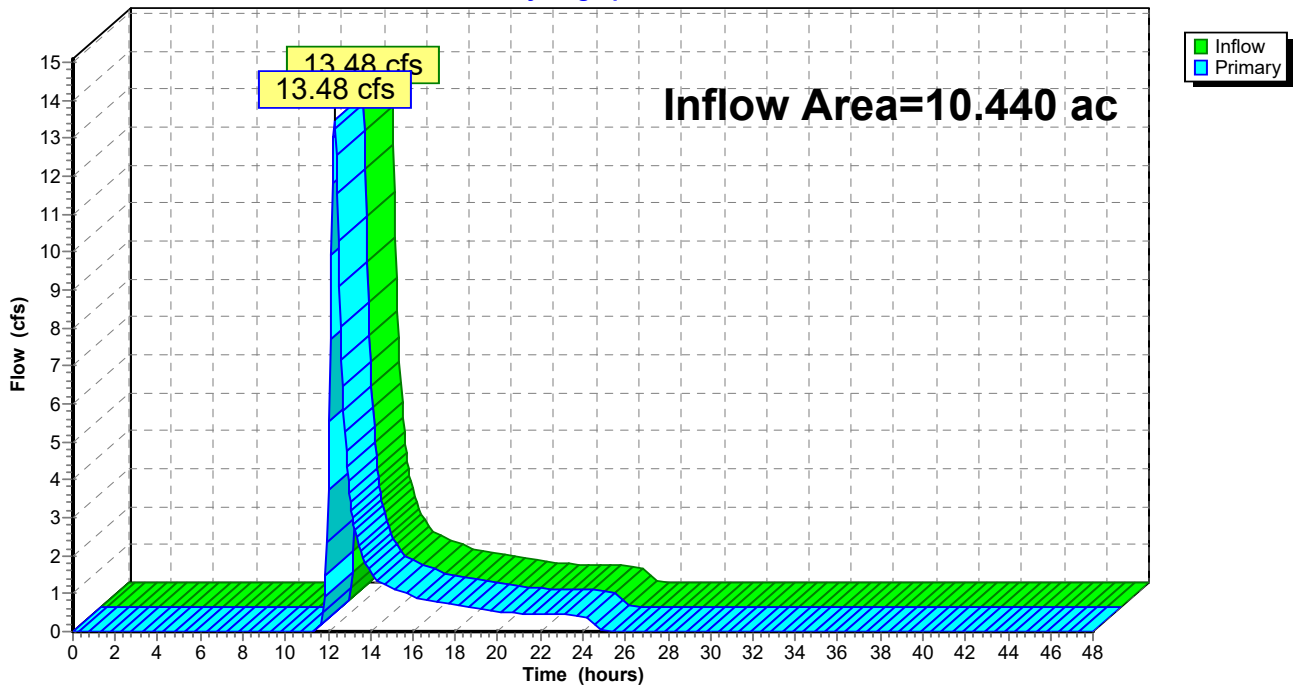
### Summary for Link SP37:

Inflow Area = 10.440 ac, 5.80% Impervious, Inflow Depth = 1.74" for 100-year event  
Inflow = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af  
Primary = 13.48 cfs @ 12.31 hrs, Volume= 1.515 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP37:

Hydrograph



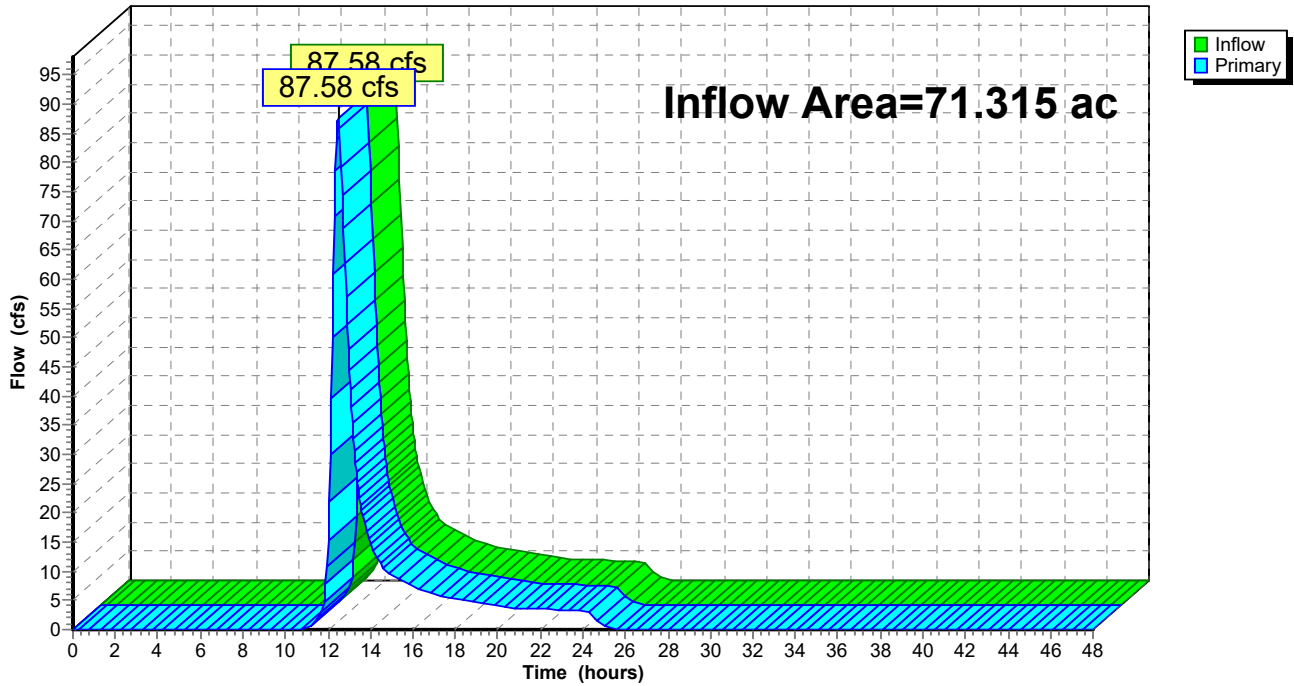
### Summary for Link SP38:

Inflow Area = 71.315 ac, 1.82% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af  
Primary = 87.58 cfs @ 12.49 hrs, Volume= 12.278 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP38:

Hydrograph





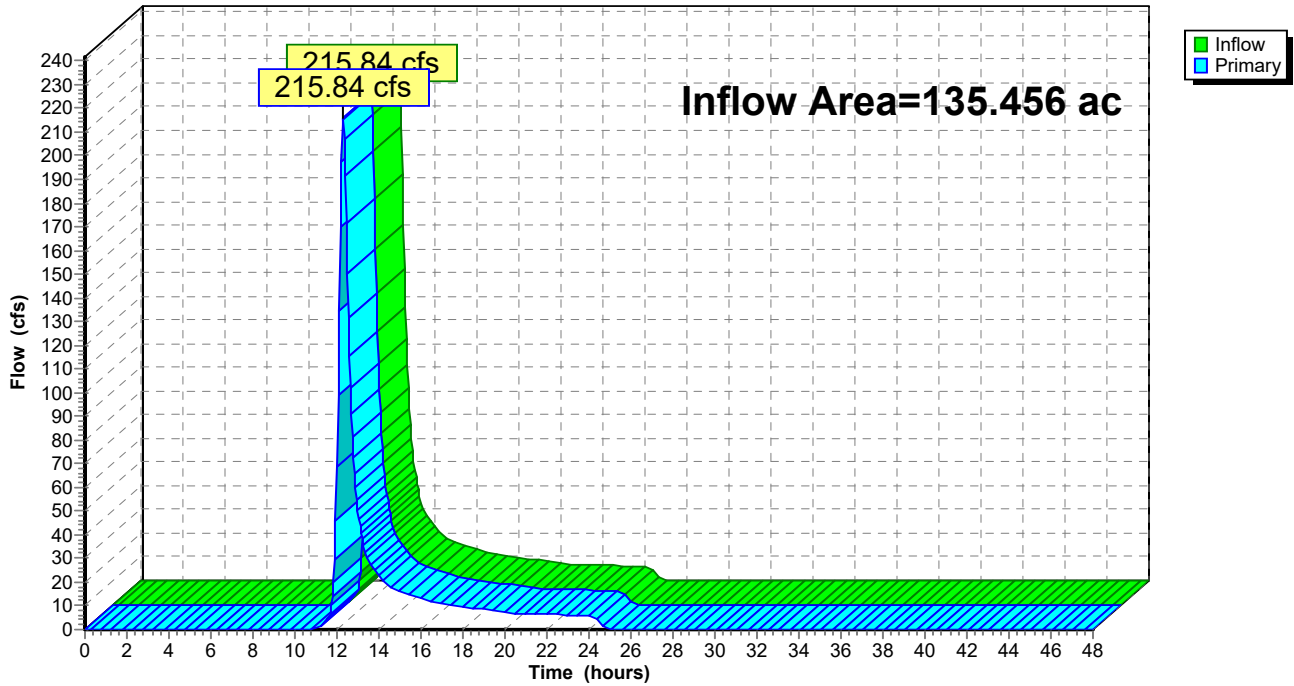
### Summary for Link SP39:

Inflow Area = 135.456 ac, 3.35% Impervious, Inflow Depth = 1.99" for 100-year event  
Inflow = 215.84 cfs @ 12.29 hrs, Volume= 22.496 af  
Primary = 215.84 cfs @ 12.29 hrs, Volume= 22.496 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP39:

Hydrograph



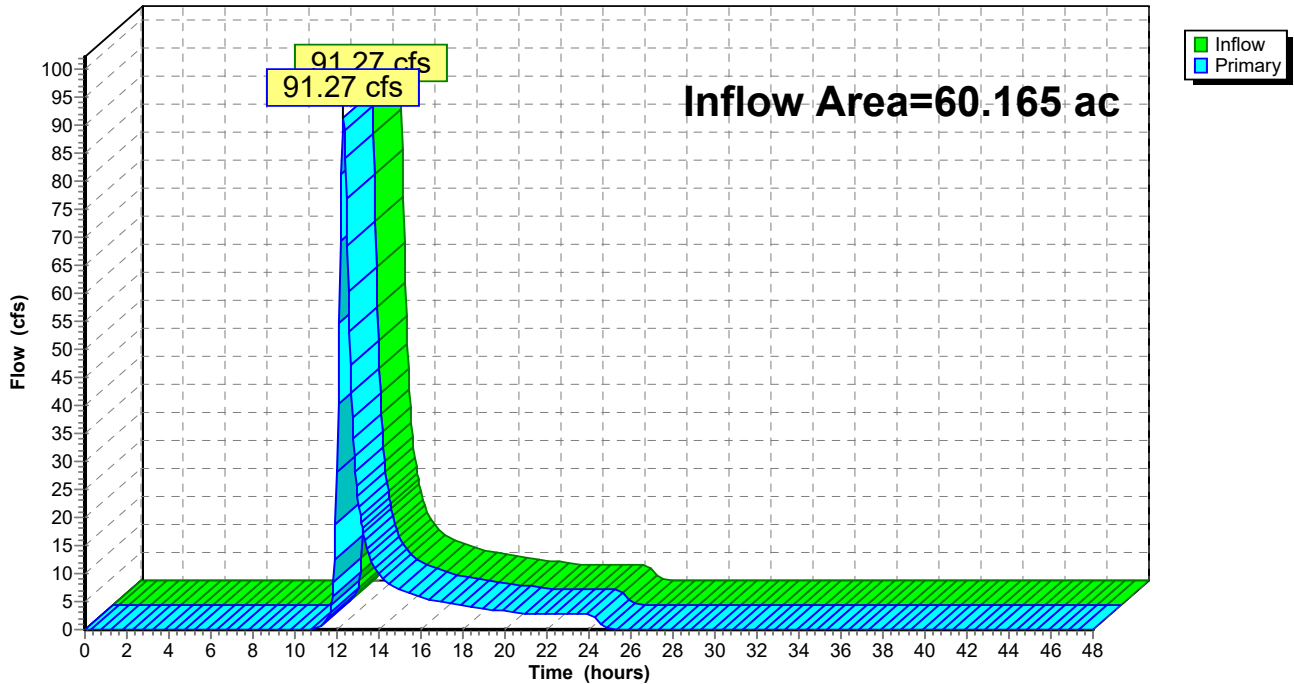
### Summary for Link SP41:

Inflow Area = 60.165 ac, 2.55% Impervious, Inflow Depth = 1.98" for 100-year event  
Inflow = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af  
Primary = 91.27 cfs @ 12.30 hrs, Volume= 9.943 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP41:

Hydrograph



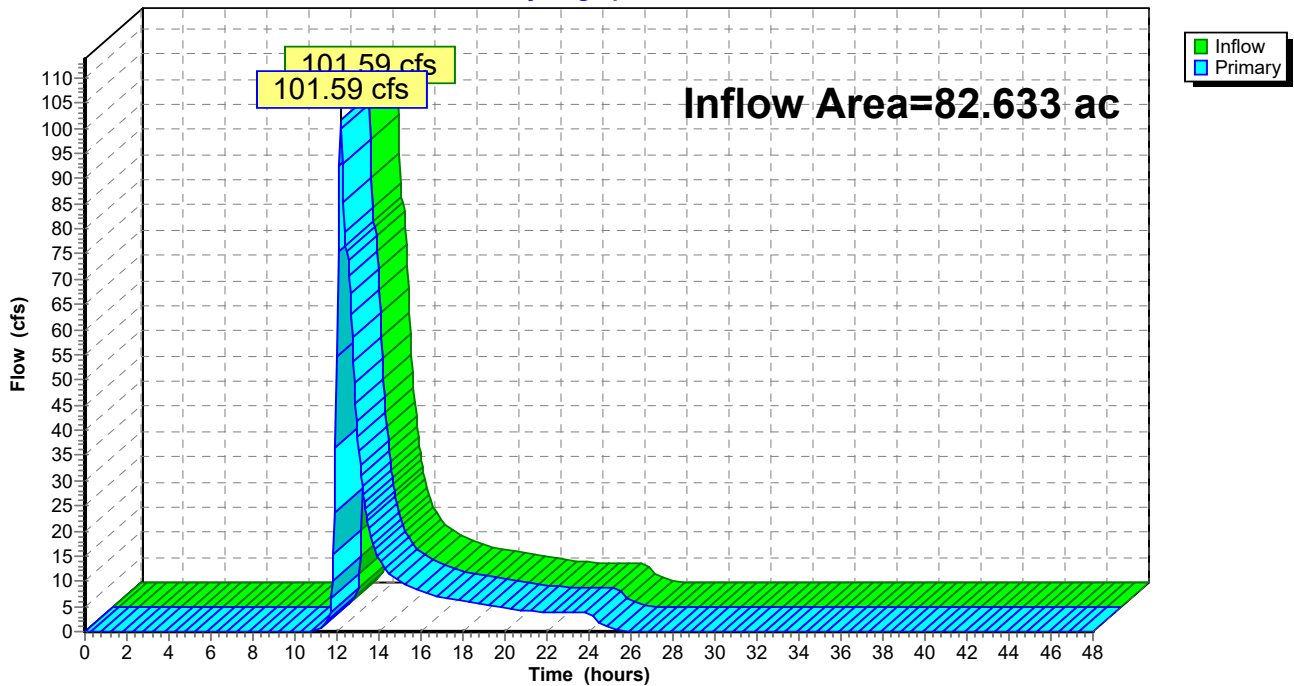
### Summary for Link SP42:

Inflow Area = 82.633 ac, 3.01% Impervious, Inflow Depth = 1.97" for 100-year event  
Inflow = 101.59 cfs @ 12.17 hrs, Volume= 13.554 af  
Primary = 101.59 cfs @ 12.17 hrs, Volume= 13.554 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP42:

Hydrograph



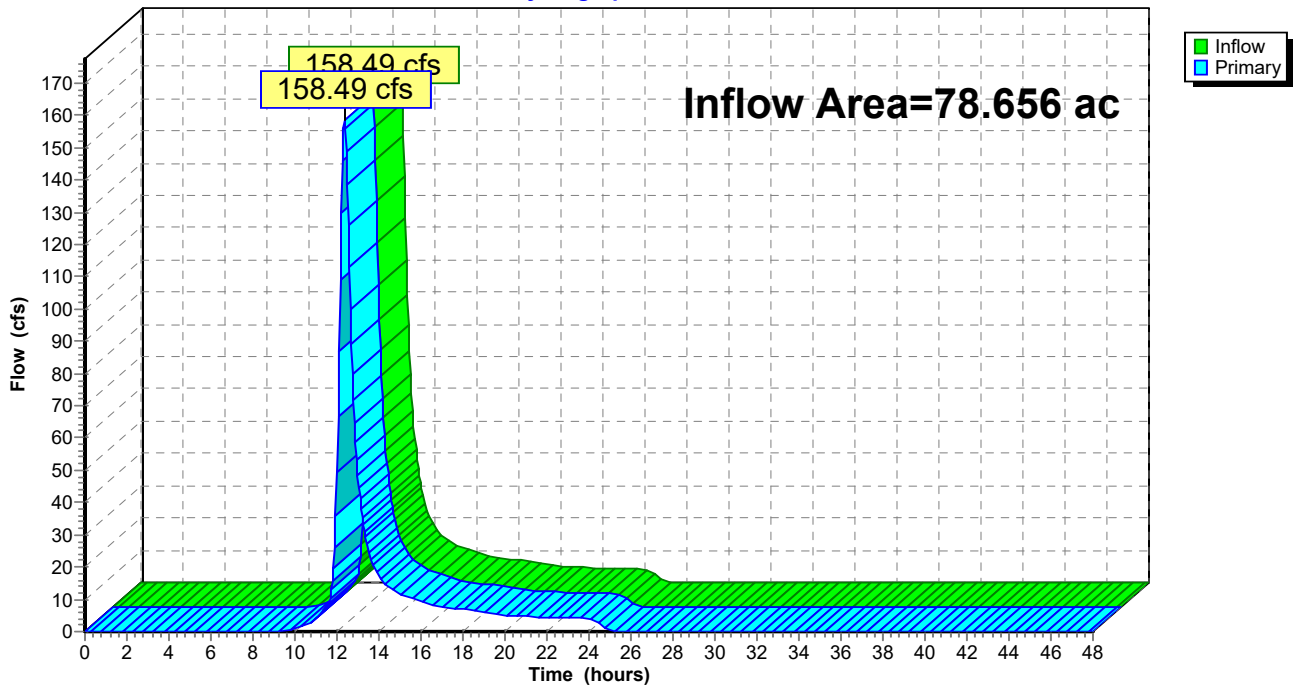
### Summary for Link SP48:

Inflow Area = 78.656 ac, 2.88% Impervious, Inflow Depth = 2.77" for 100-year event  
Inflow = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af  
Primary = 158.49 cfs @ 12.35 hrs, Volume= 18.129 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP48:

Hydrograph



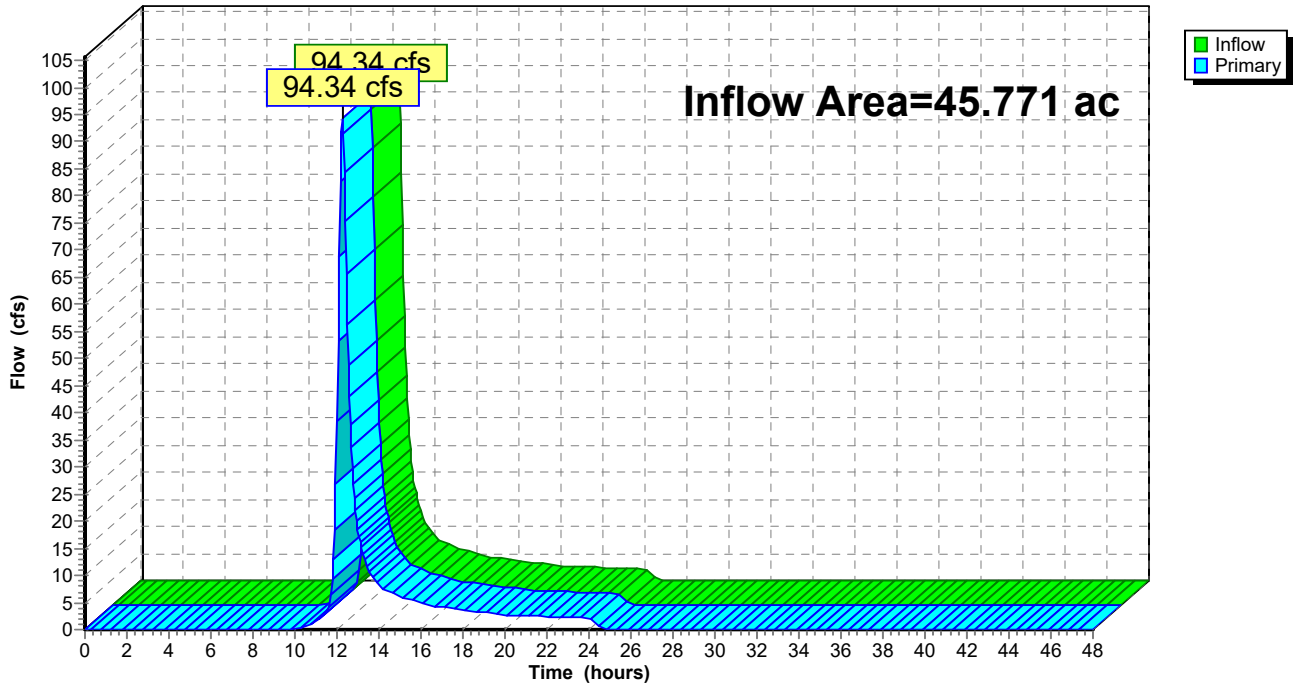
### Summary for Link SP50:

Inflow Area = 45.771 ac, 1.25% Impervious, Inflow Depth = 2.41" for 100-year event  
Inflow = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af  
Primary = 94.34 cfs @ 12.25 hrs, Volume= 9.184 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP50:

Hydrograph



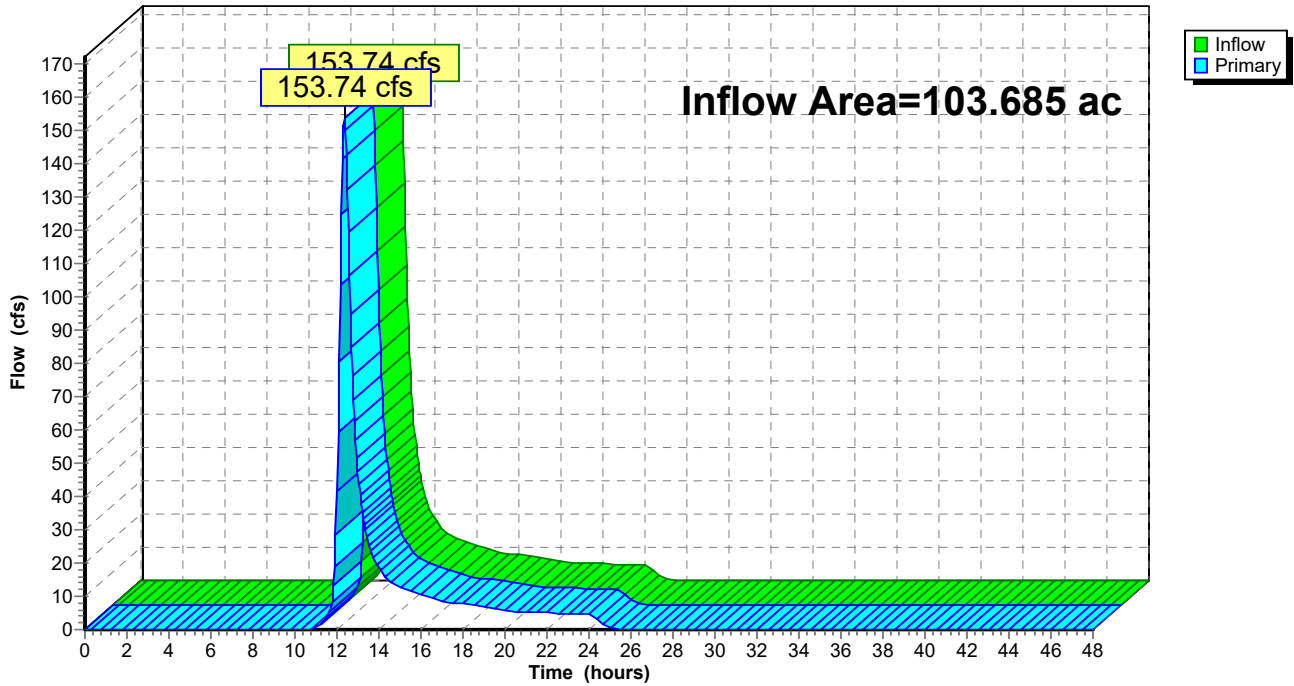
### Summary for Link SP51:

Inflow Area = 103.685 ac, 1.03% Impervious, Inflow Depth = 2.07" for 100-year event  
Inflow = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af  
Primary = 153.74 cfs @ 12.35 hrs, Volume= 17.851 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP51:

Hydrograph



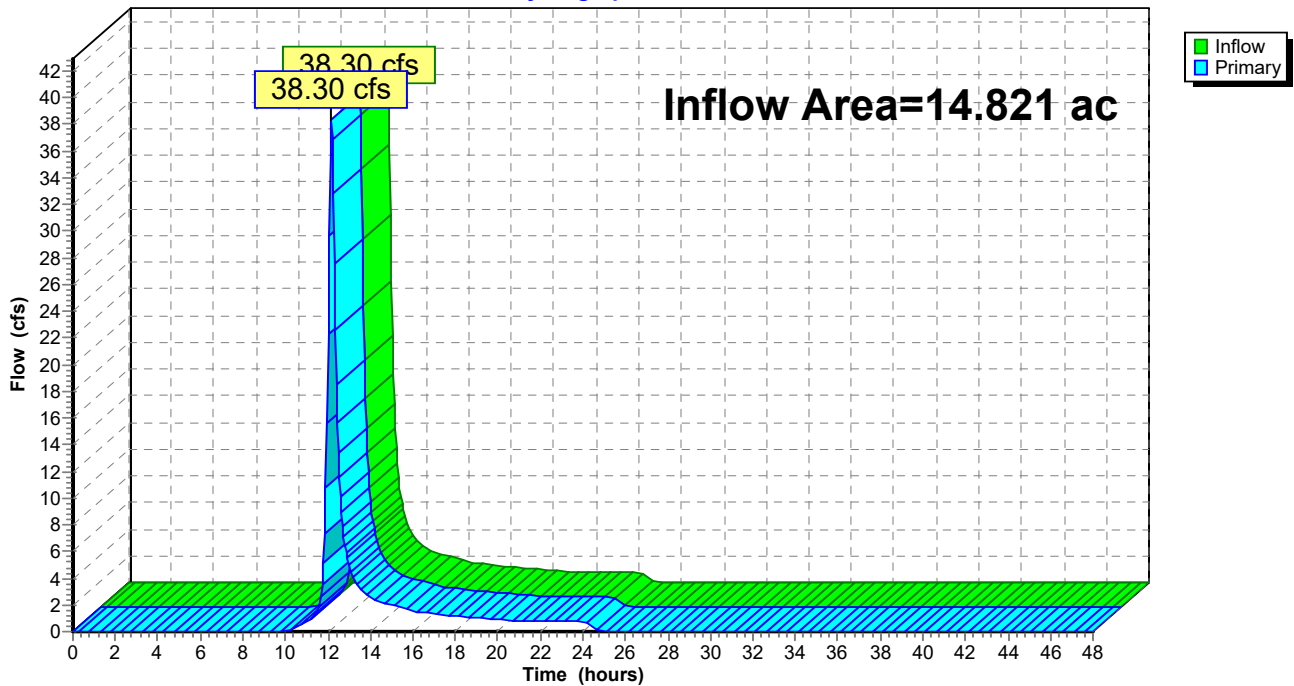
### Summary for Link SP52:

Inflow Area = 14.821 ac, 2.79% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af  
Primary = 38.30 cfs @ 12.16 hrs, Volume= 3.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP52:

Hydrograph



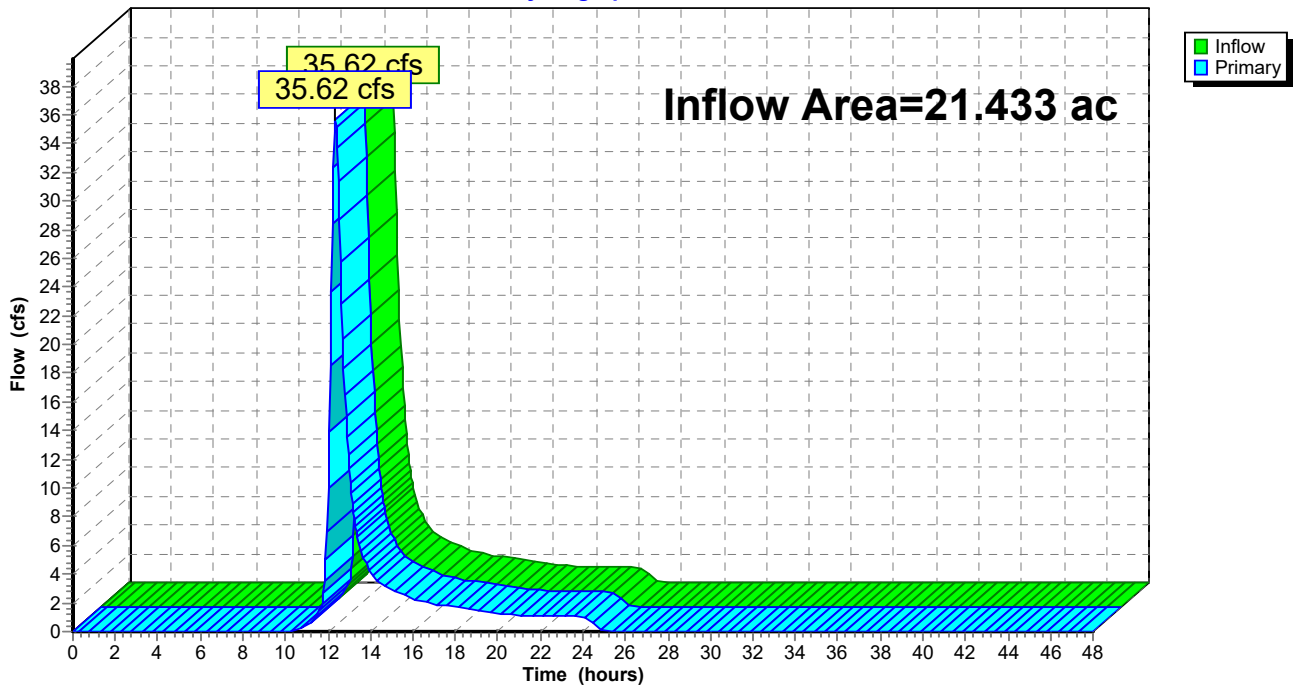
### Summary for Link SP53:

Inflow Area = 21.433 ac, 1.80% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af  
Primary = 35.62 cfs @ 12.36 hrs, Volume= 4.145 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP53:

Hydrograph





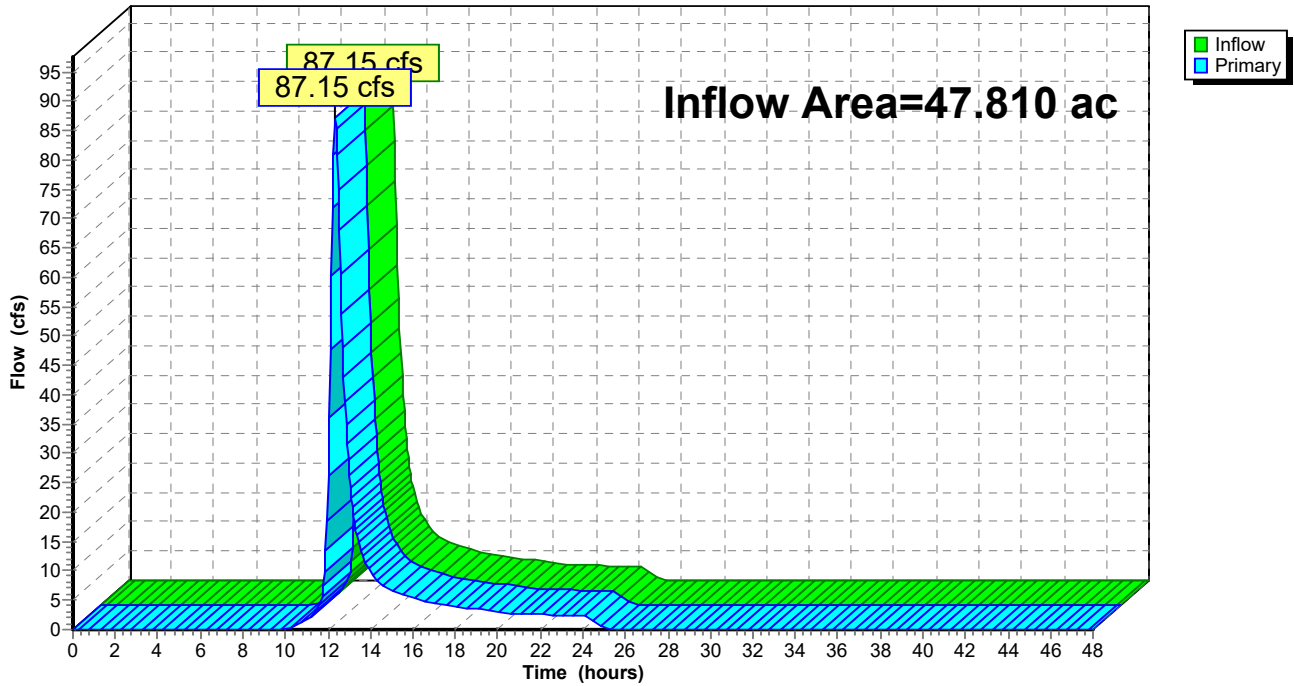
### Summary for Link SP54:

Inflow Area = 47.810 ac, 7.82% Impervious, Inflow Depth = 2.50" for 100-year event  
Inflow = 87.15 cfs @ 12.35 hrs, Volume= 9.944 af  
Primary = 87.15 cfs @ 12.35 hrs, Volume= 9.944 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP54:

Hydrograph



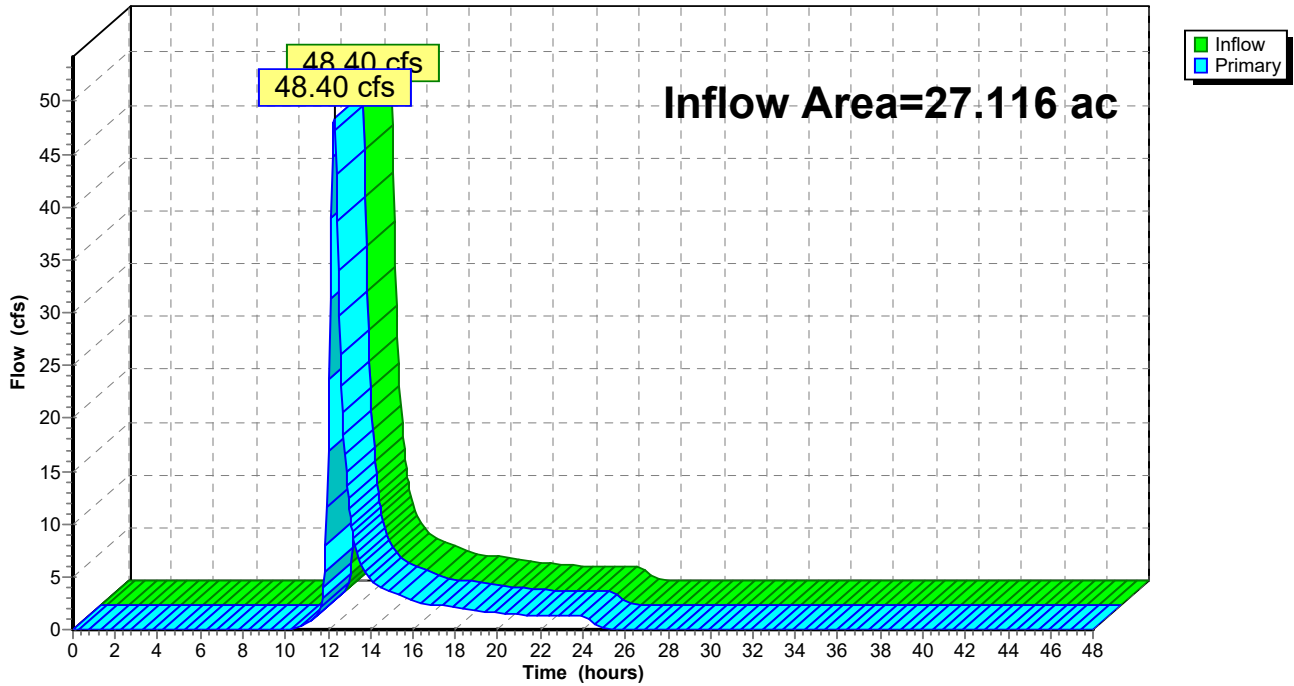
### Summary for Link SP55:

Inflow Area = 27.116 ac, 0.71% Impervious, Inflow Depth = 2.23" for 100-year event  
Inflow = 48.40 cfs @ 12.28 hrs, Volume= 5.050 af  
Primary = 48.40 cfs @ 12.28 hrs, Volume= 5.050 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP55:

Hydrograph



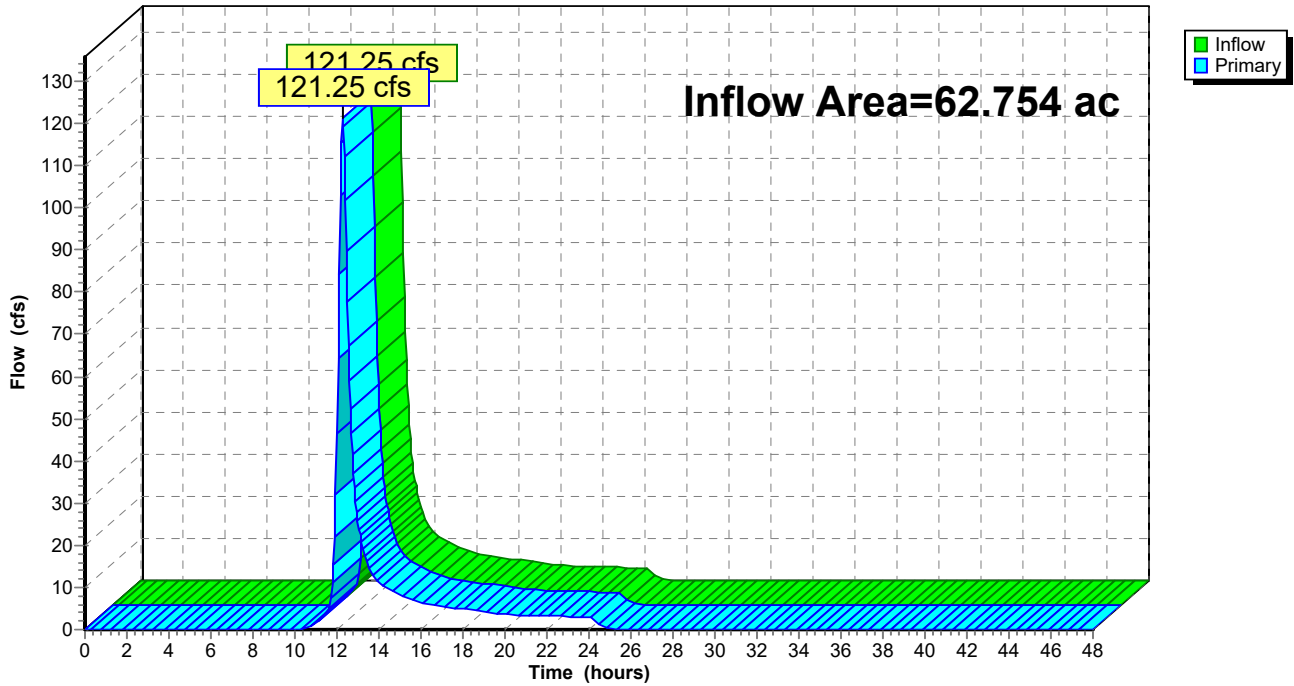
### Summary for Link SP56:

Inflow Area = 62.754 ac, 0.00% Impervious, Inflow Depth = 2.32" for 100-year event  
Inflow = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af  
Primary = 121.25 cfs @ 12.26 hrs, Volume= 12.137 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

### Link SP56:

Hydrograph



## **Appendix L – Post-Development Modeling**

- Post-Development Subcatchment Map -
- Post-Development HydroCAD Model -

Note: Documents provided in this Appendix are preliminary and will be amended and finalized for the Final SWPPP prior to construction.

## **Appendix L – Post-Development Subcatchment Map**



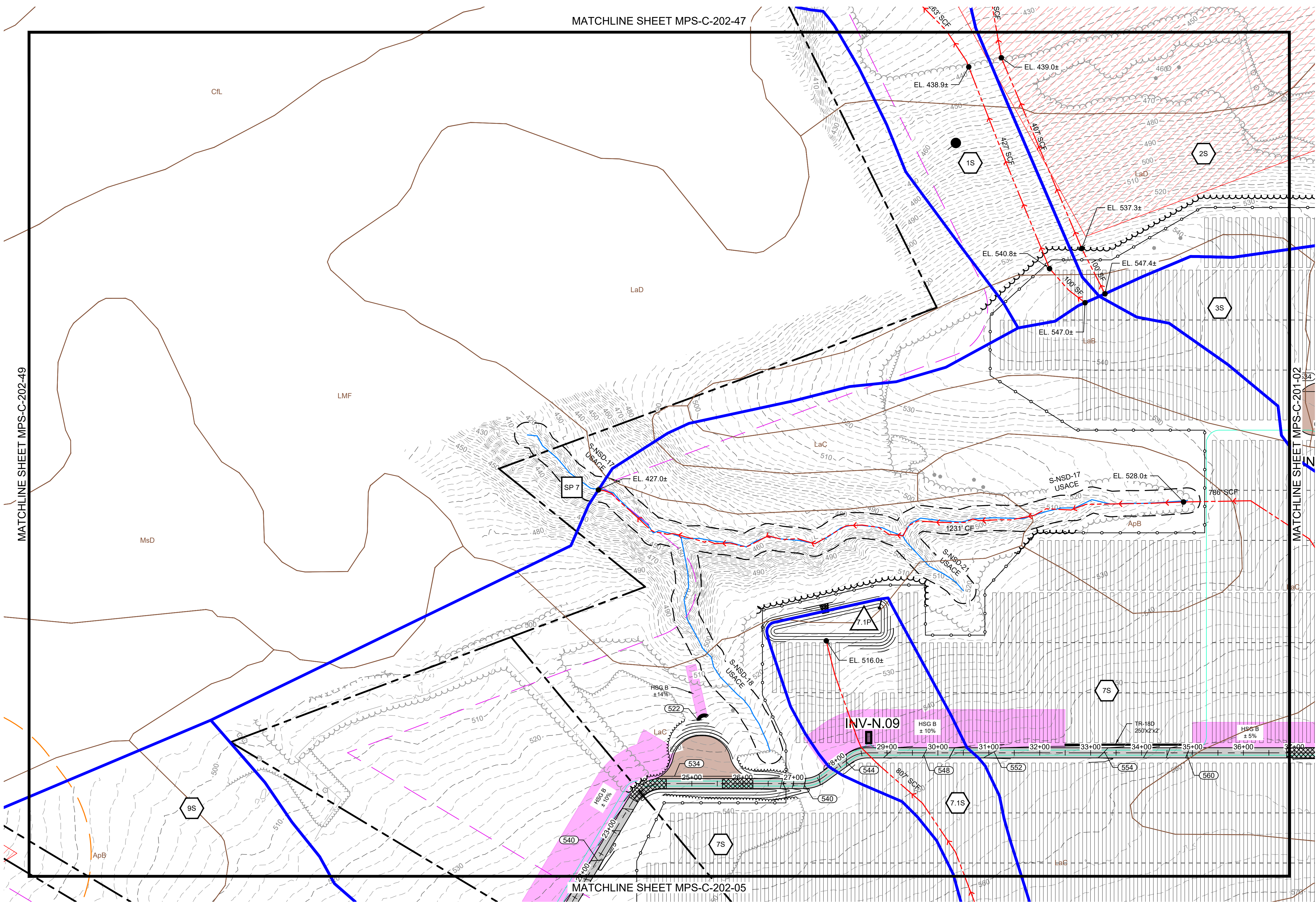
MATCHLINE SHEET MPS-C-202-47

LEGEND

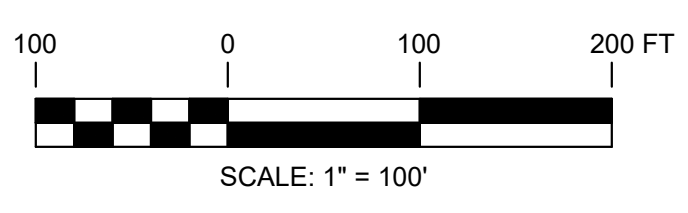
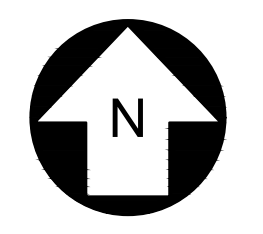
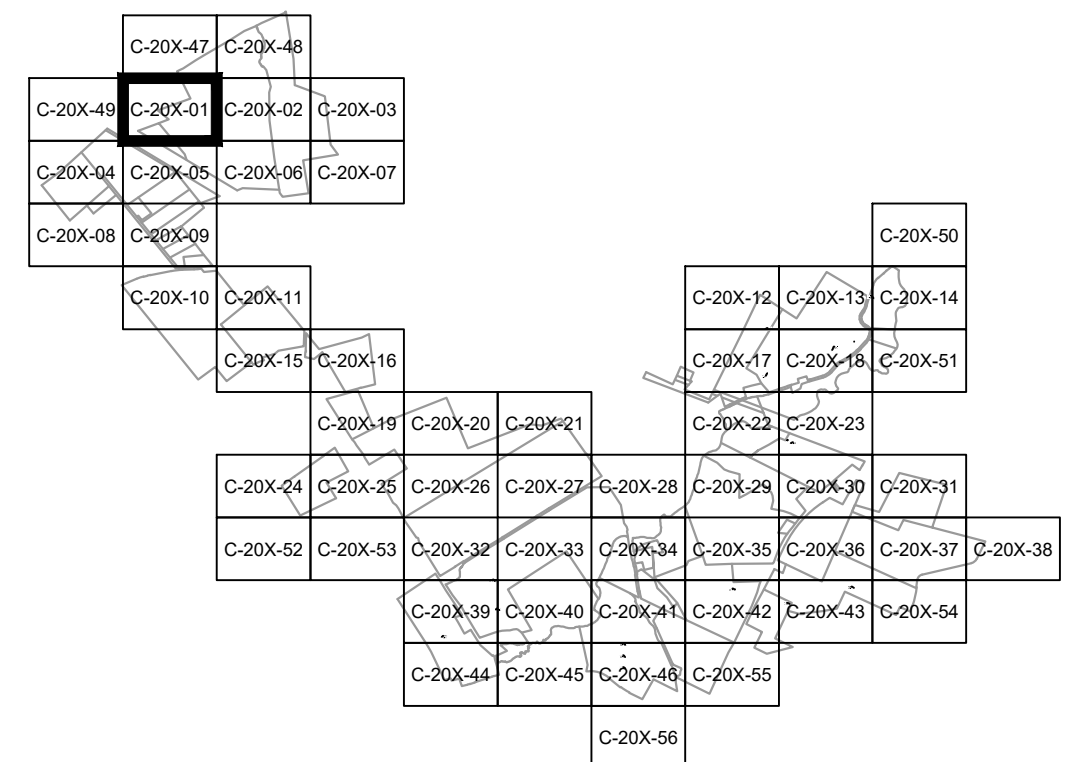
- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —

MATCHLINE SHEET MPS-C-202-49

MATCHLINE SHEET MPS-C-201-02



MATCHLINE SHEET MPS-C-202-05



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249 Western Avenue  
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| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
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| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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GLEN NEW YORK

REVIEW 1  
REVIEW 2

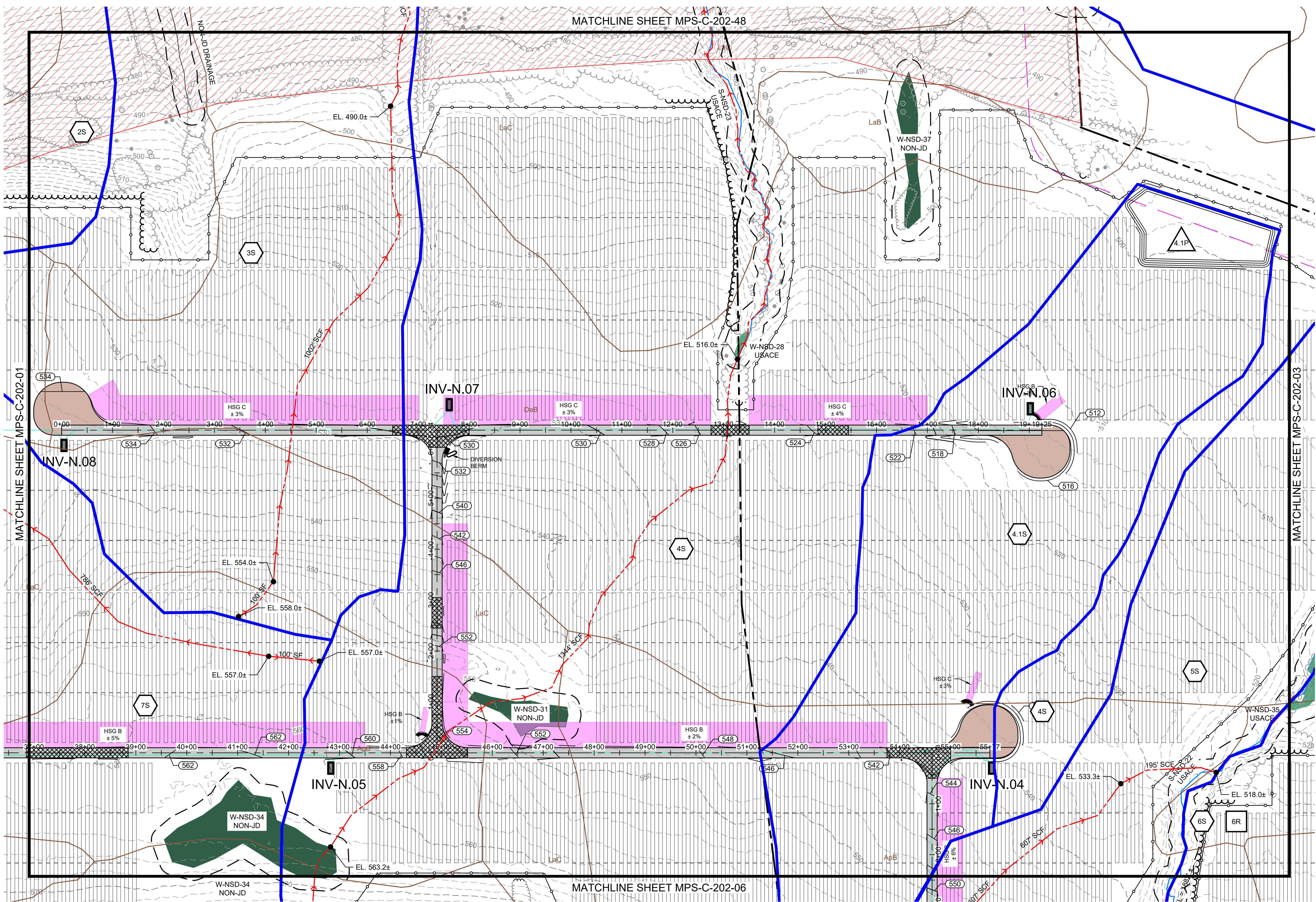
03/01/2023  
DATE  
1" = 100'  
SCALE



MPS-C-202-01

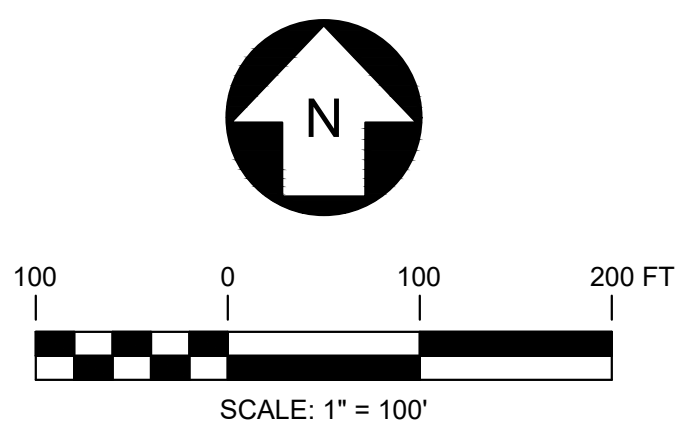
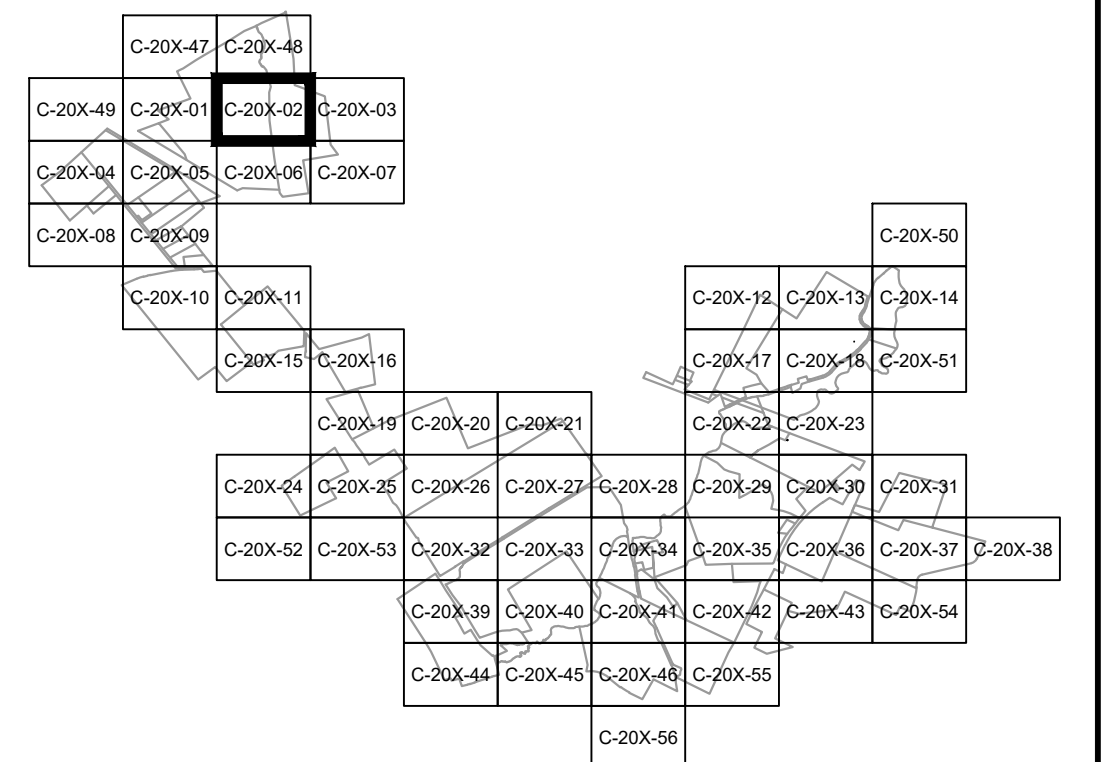
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY: Brown line



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249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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| PMM CHECKED  |          |
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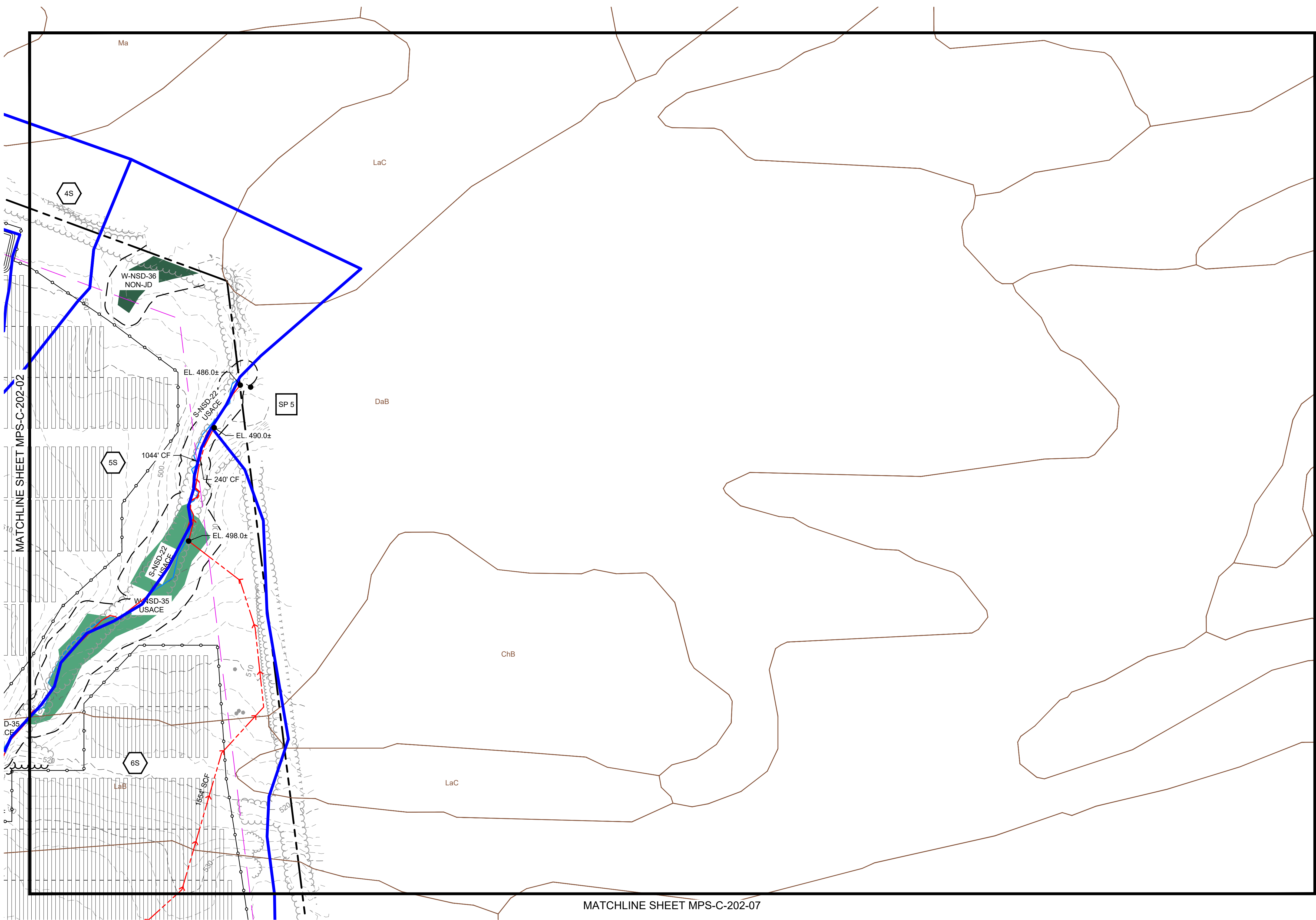
GLEN NEW YORK

03/01/2023  
DATE  
1" = 100'  
SCALE

MPS-C-202-02

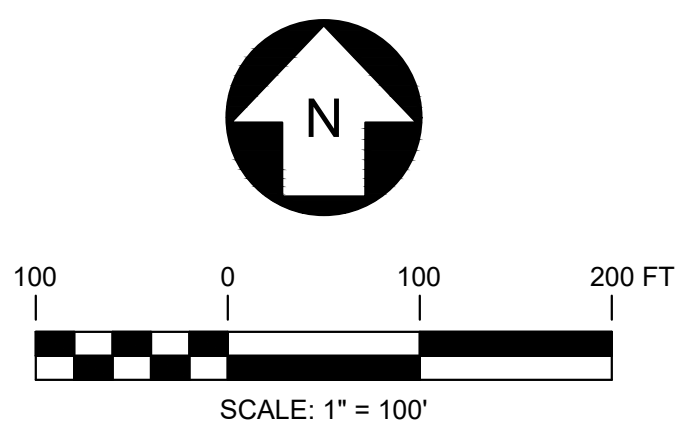
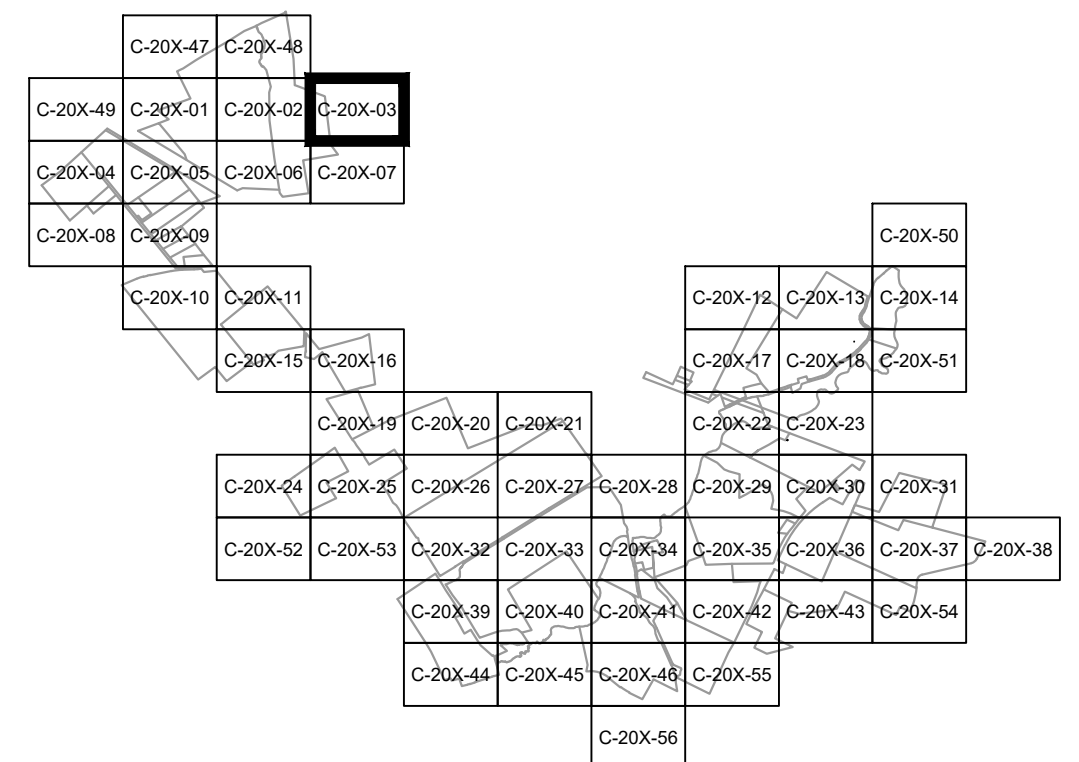
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



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**TRC** 249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE

1" = 100'  
SCALE

**TRC**

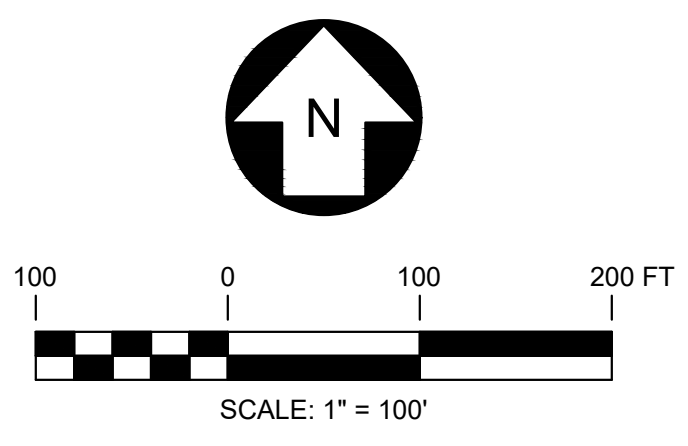
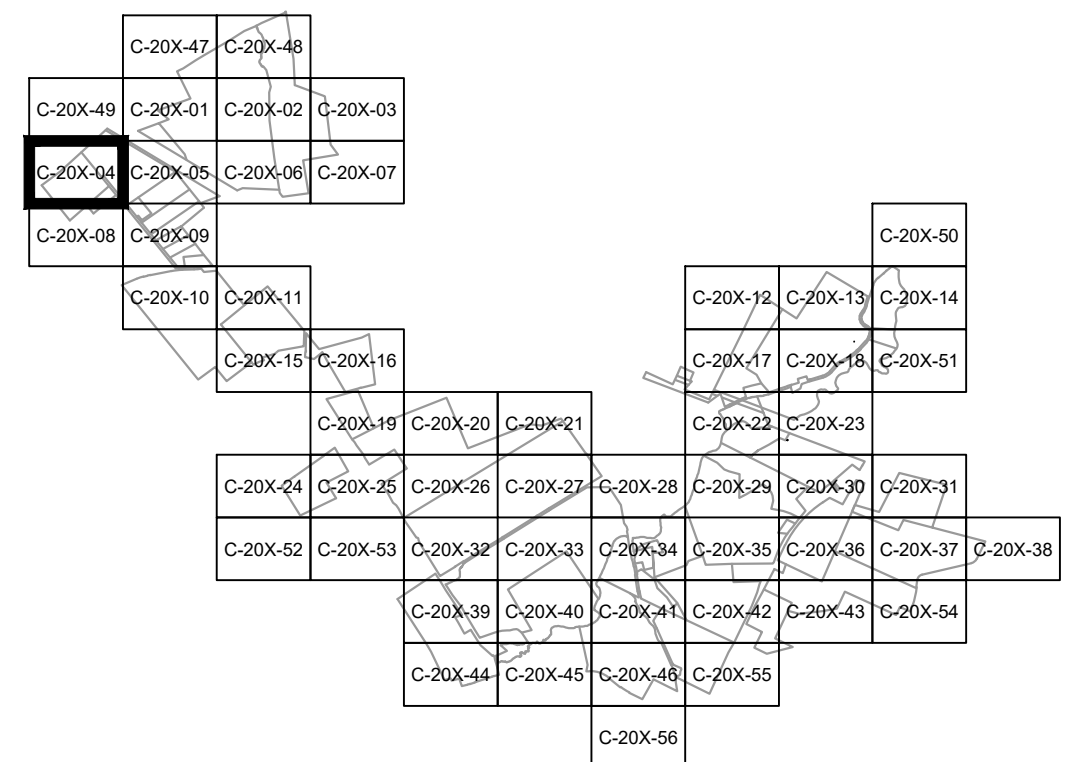
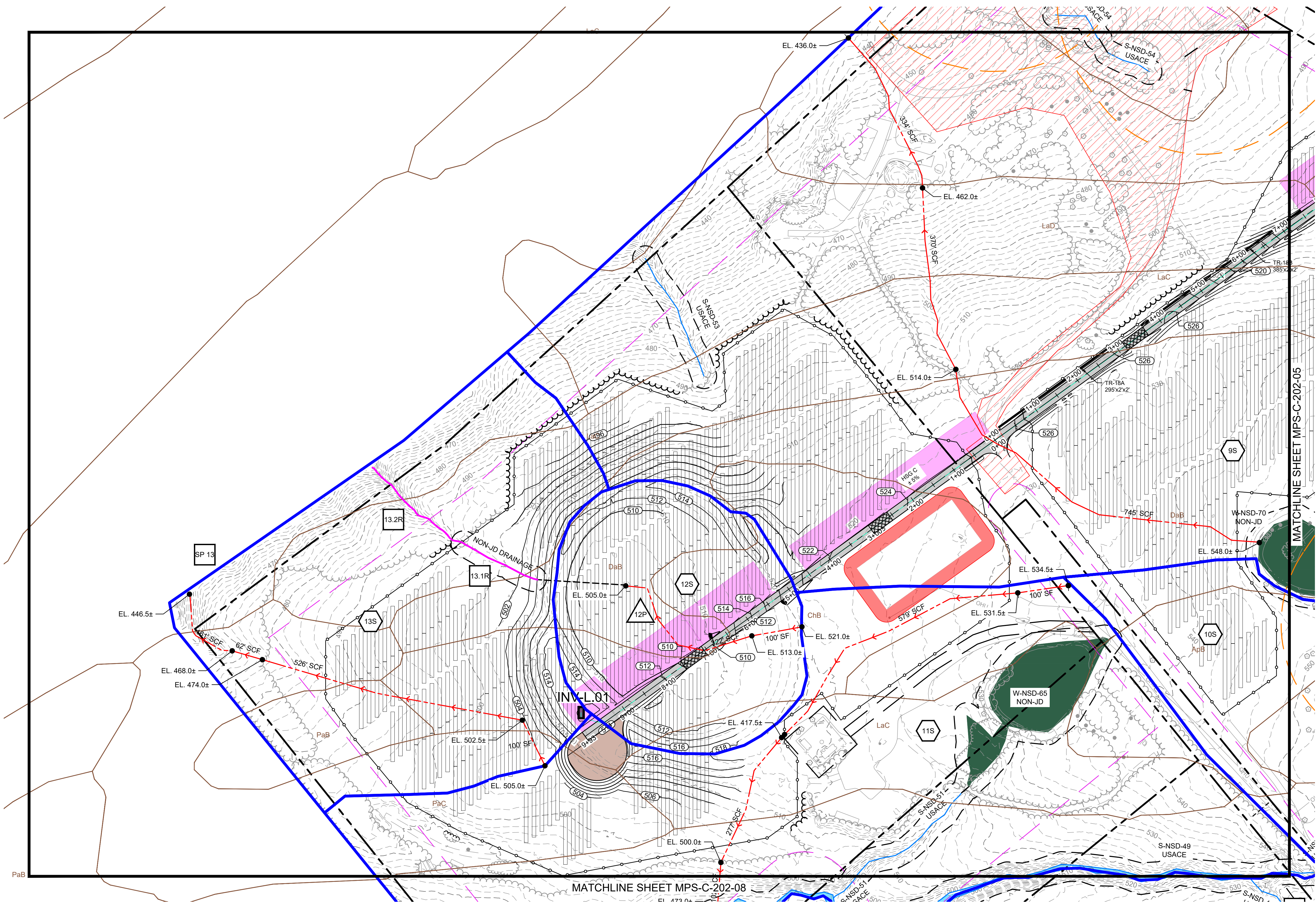
MPS-C-202-03

REV. A



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



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249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REFERENCE ITEMS | REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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|                 | A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

**MILL POINT SOLAR PROJECT**  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

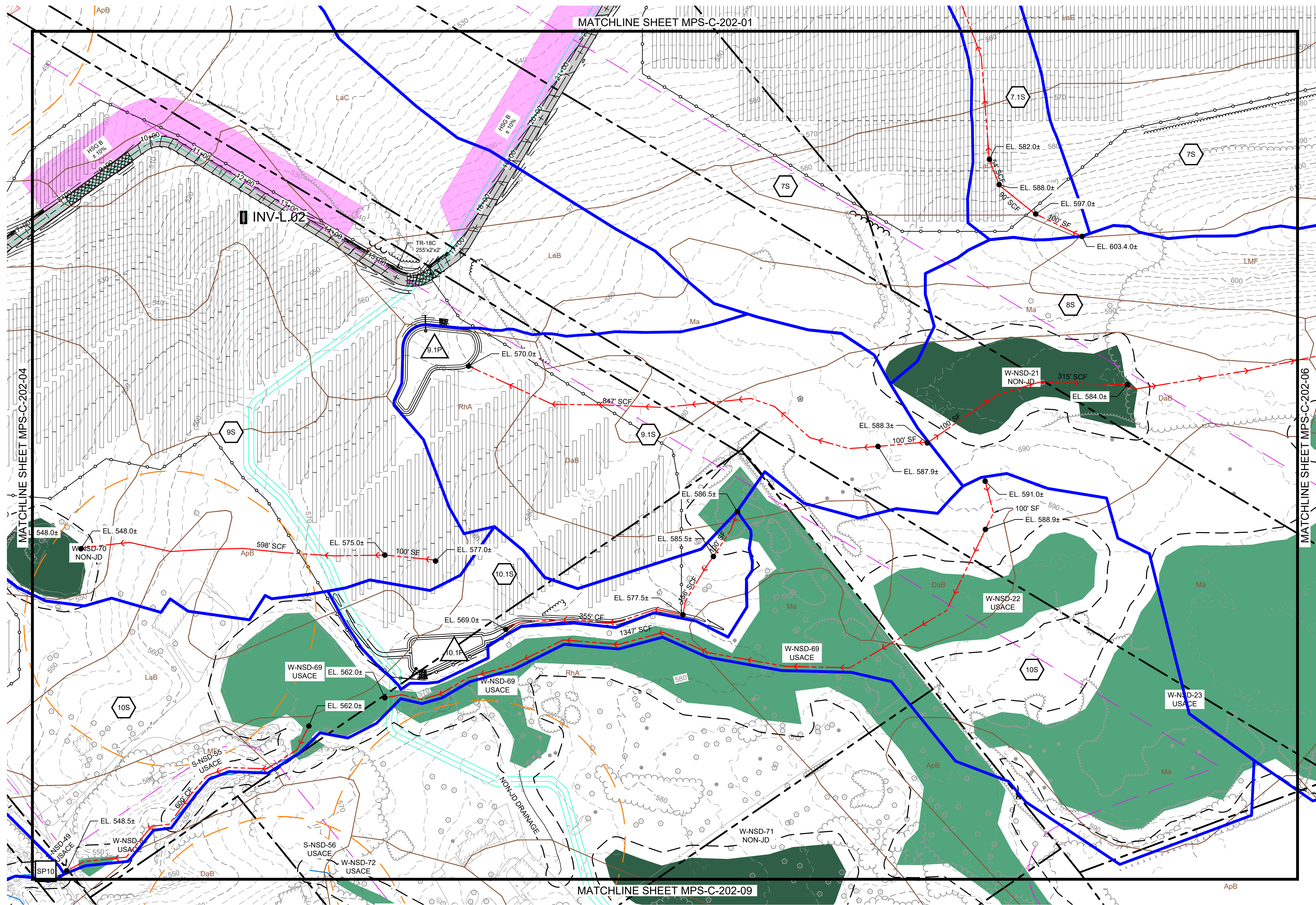
03/01/2023  
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MPS-C-202-04

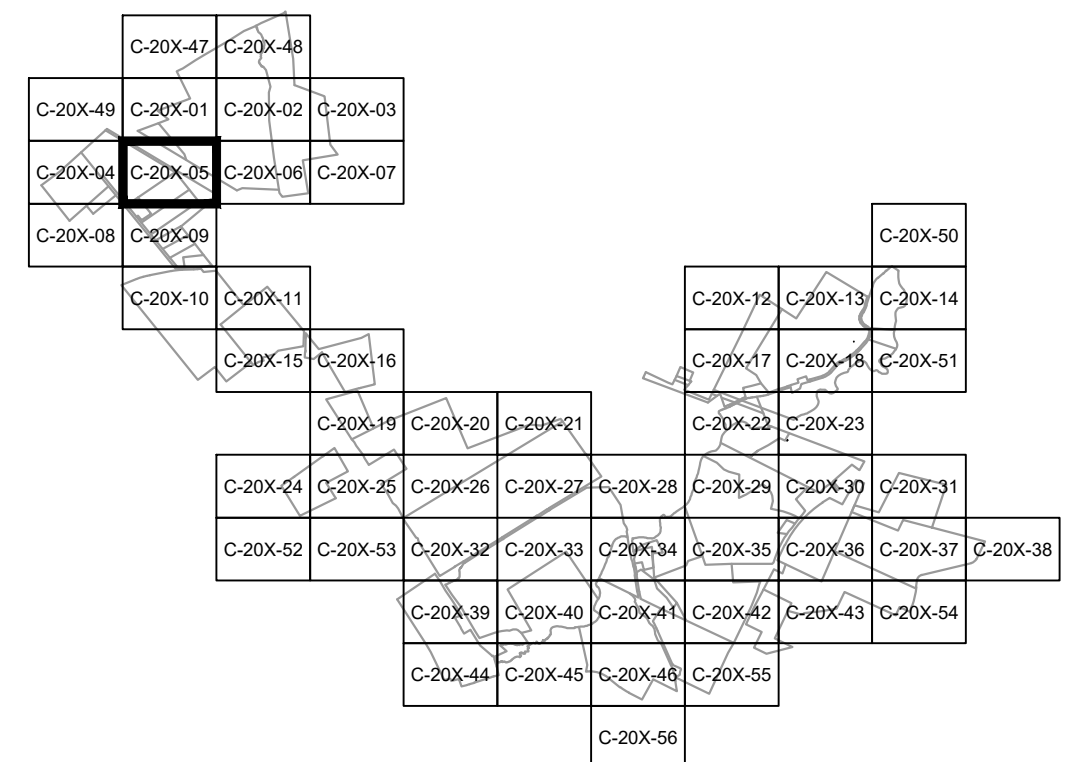
REV. A





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrows
- REACH: Pink line with circles
- SHEET FLOW: 100' SF (light blue area)
- SHALLOW CONCENTRATED FLOW: 100' SCF (light red area)
- CHANNEL FLOW: 100' CF (light blue line)
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Dashed brown line



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249 Western Avenue  
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PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

REVIEW 1  
REVIEW 2

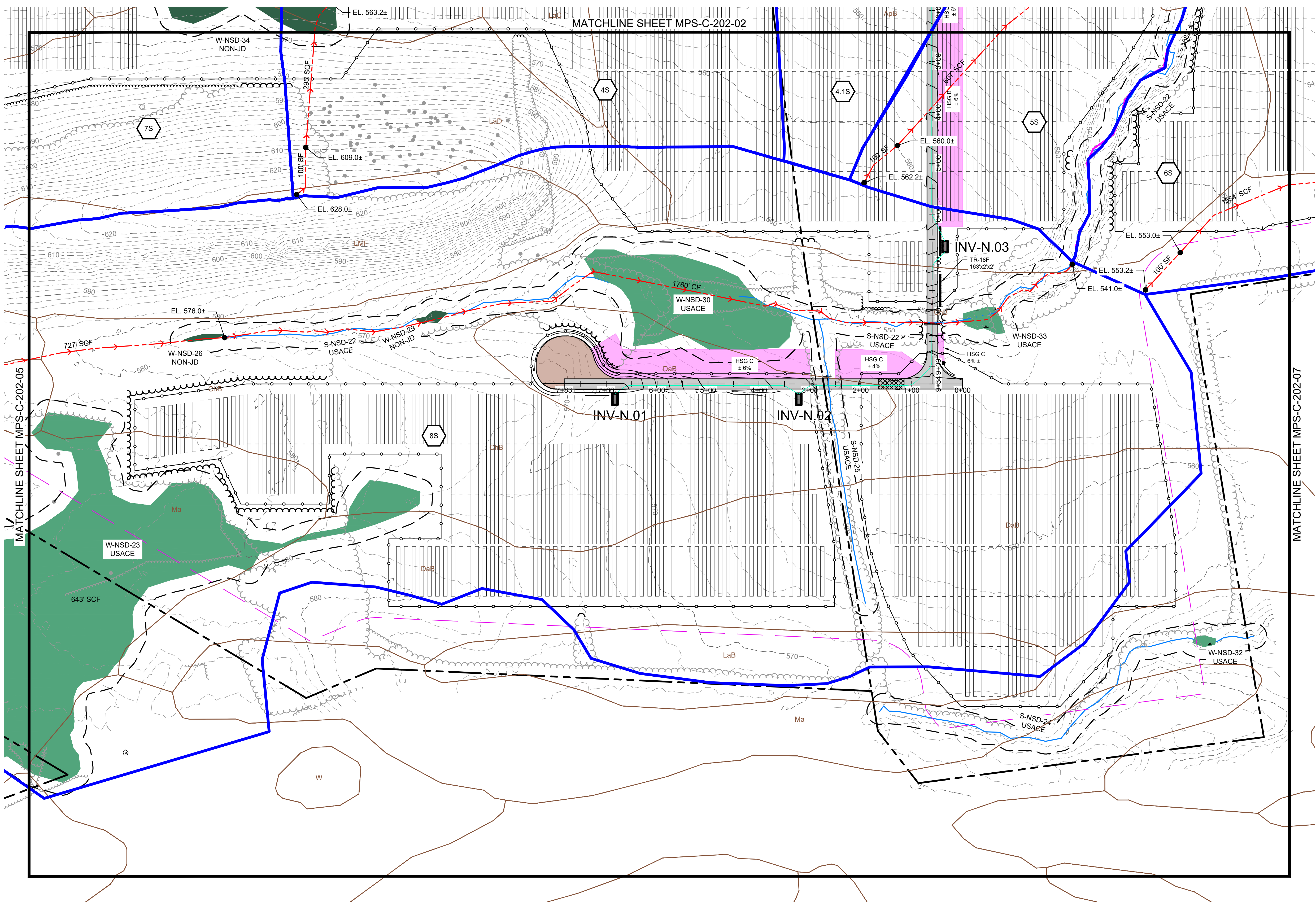
03/01/2023  
DATE  
1" = 100'  
SCALE



MPS-C-202-05

REV. A





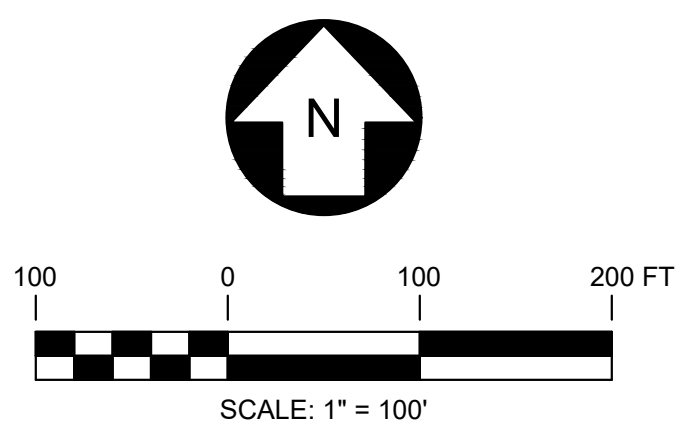
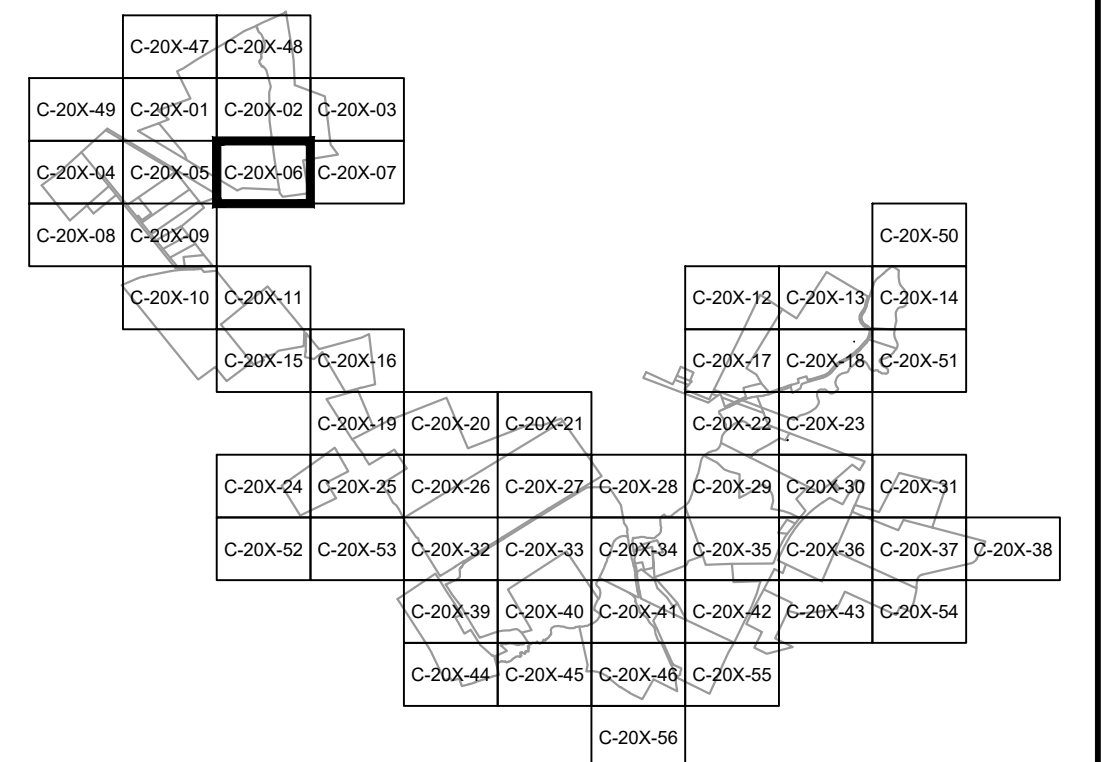
**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:

MATCHLINE SHEET MPS-C-202-05

MATCHLINE SHEET MPS-C-202-02

MATCHLINE SHEET MPS-C-202-07



**PRELIMINARY**  
NOT FOR CONSTRUCTION







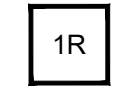
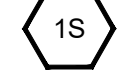



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| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
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|   |                 |                    |             |      |     |     |
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| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

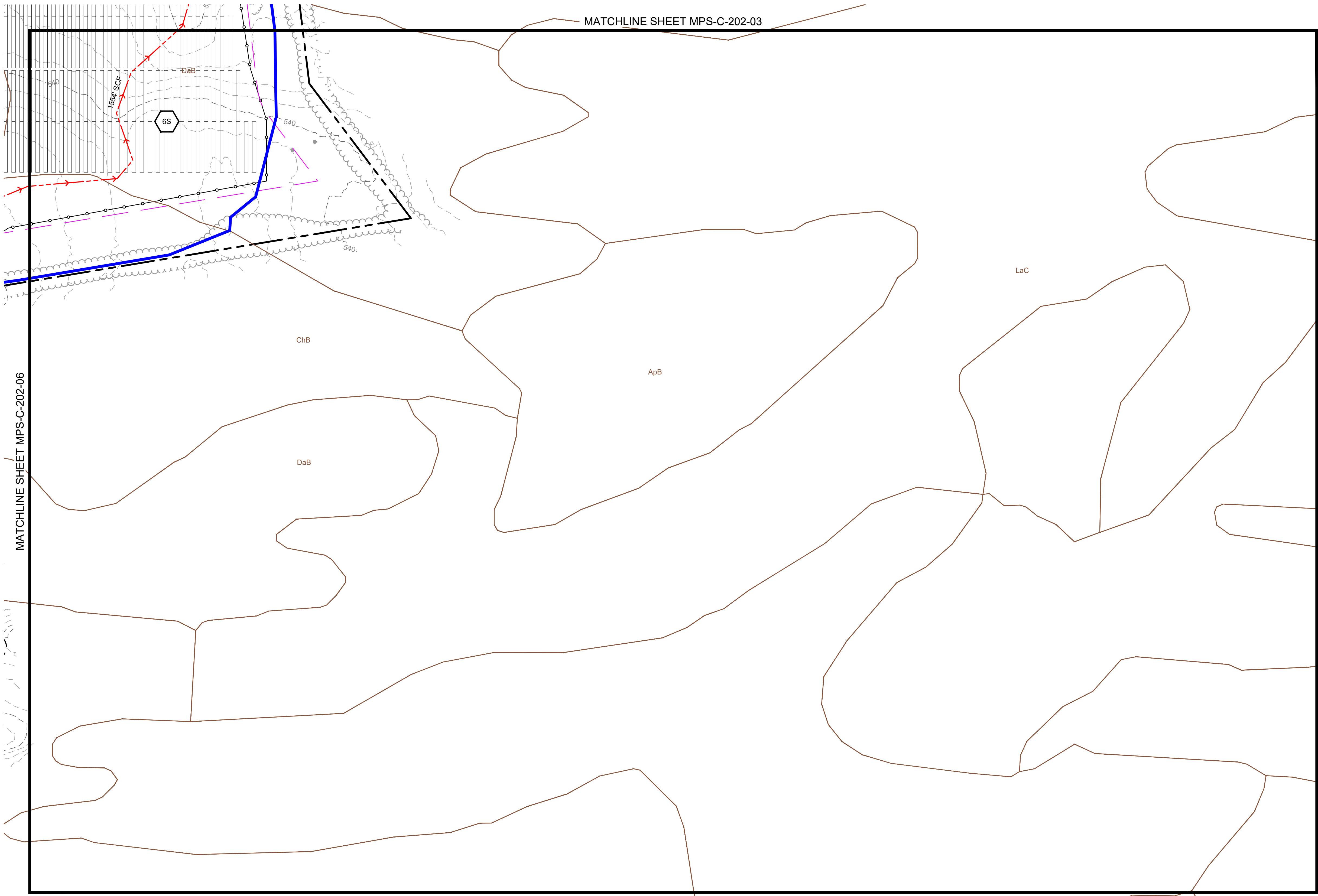
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| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>POST-DEVELOPMENT STORMWATER PLAN |  | GLEN<br>NEW YORK |
|  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |  |                  |



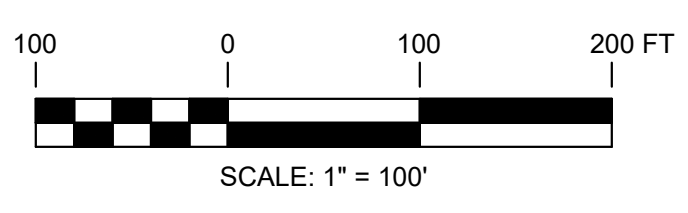
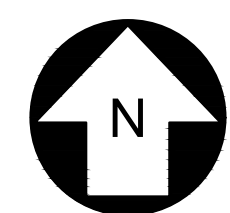
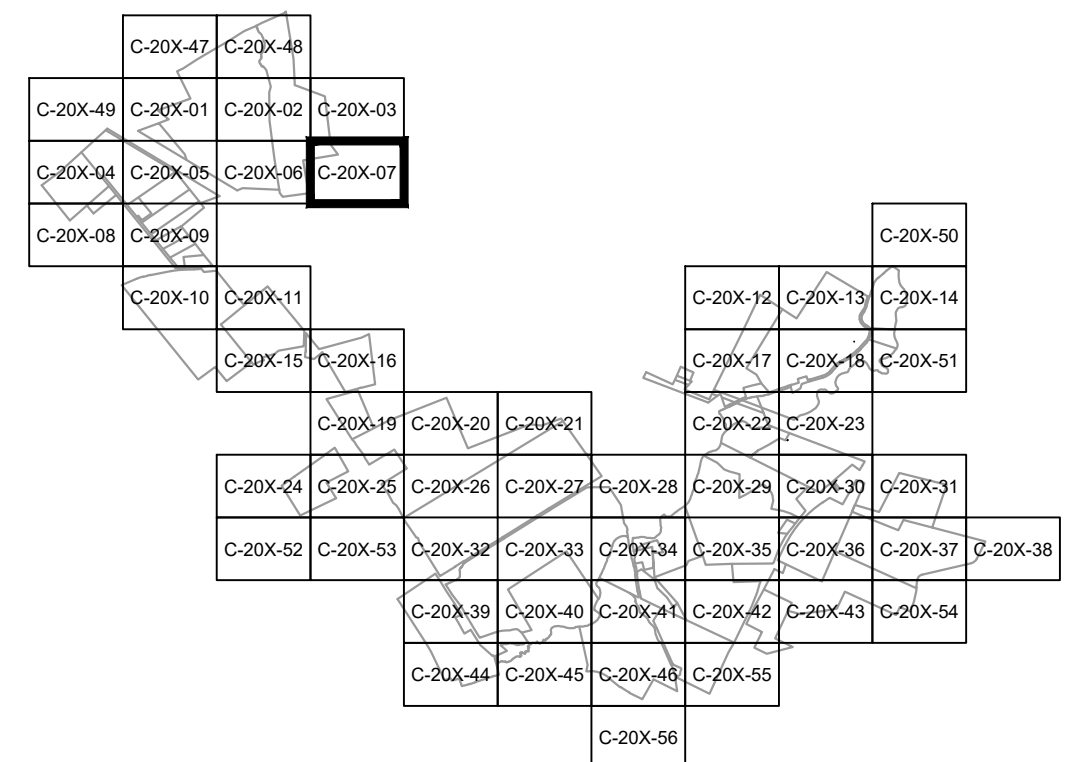
MATCHLINE SHEET MPS-C-202-03

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 





MATCHLINE SHEET MPS-C-202-06



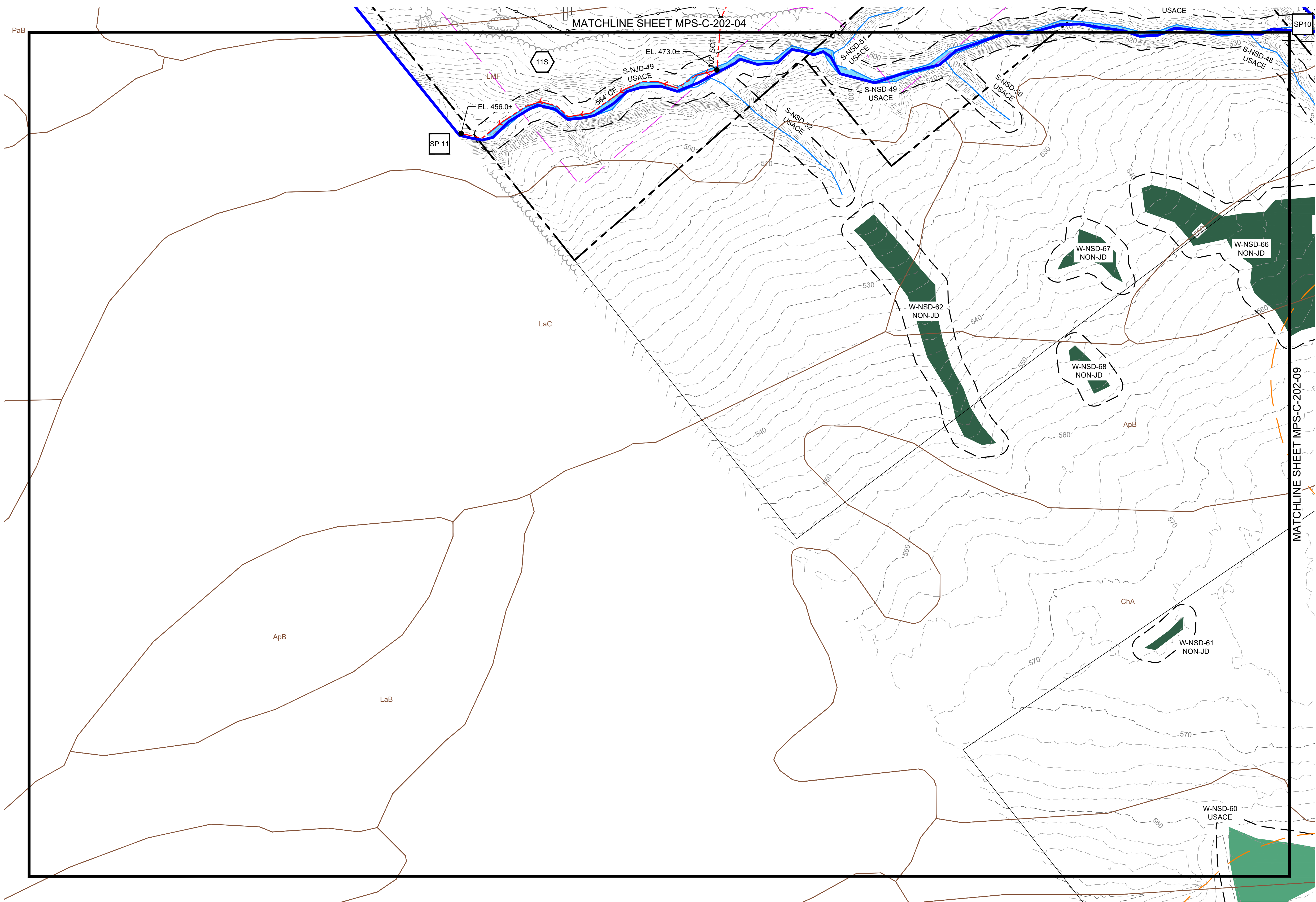
**PRELIMINARY**  
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|  249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
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| A   | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

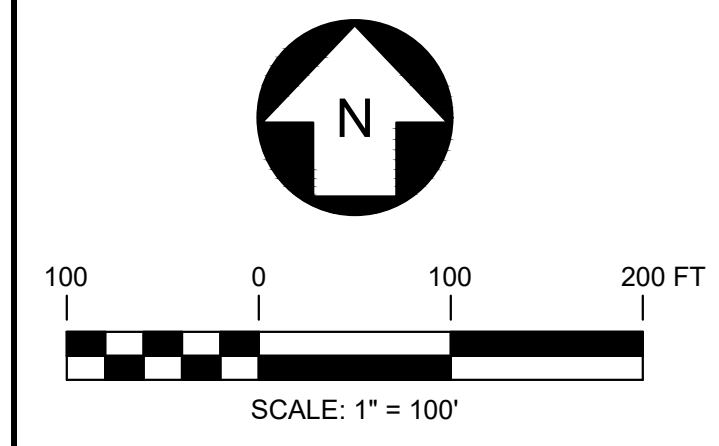
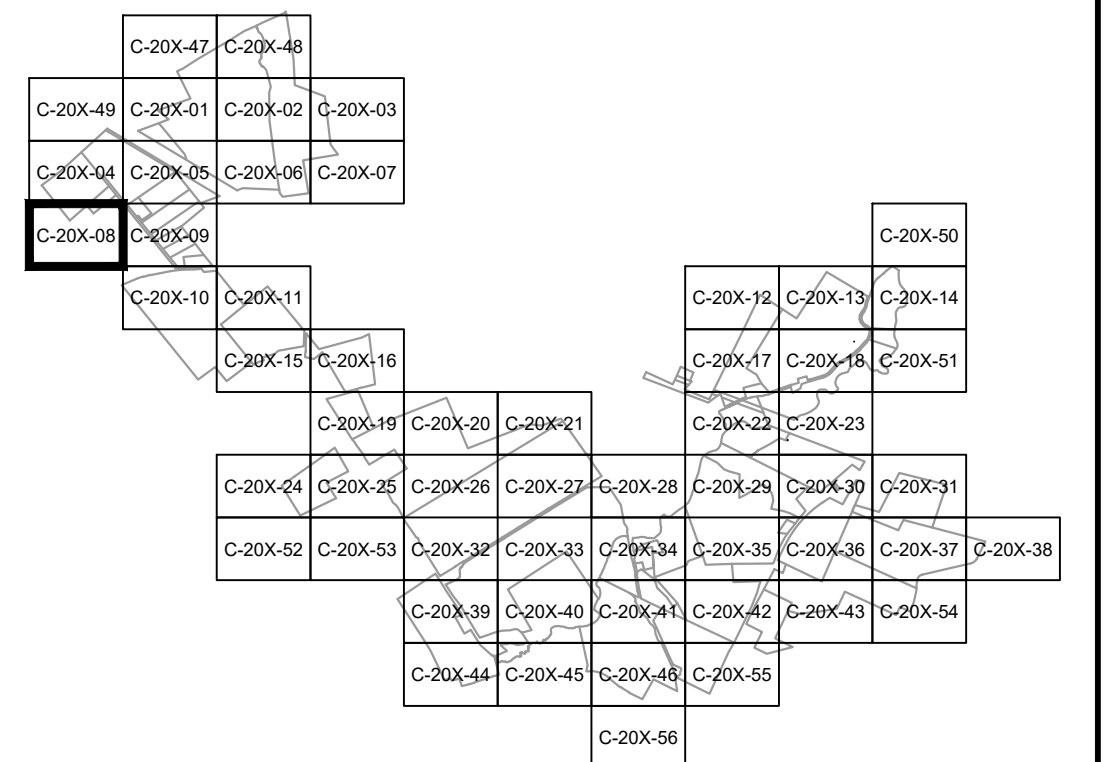
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|---|---|--|------------------|
| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>POST-DEVELOPMENT STORMWATER PLAN |  | GLEN<br>NEW YORK |
|   | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |  MPS-C-202-07 |                  |





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue dashed line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: Black dot with label (e.g., EL. 520.0±)
- REACH ID: Square symbol (1R)
- SUBCATCHMENT ID: Hexagon symbol (1S)
- POND ID: Triangle symbol (1P)
- STUDY POINT ID: Square symbol (SP1)
- SOILS BOUNDARY: Brown solid line



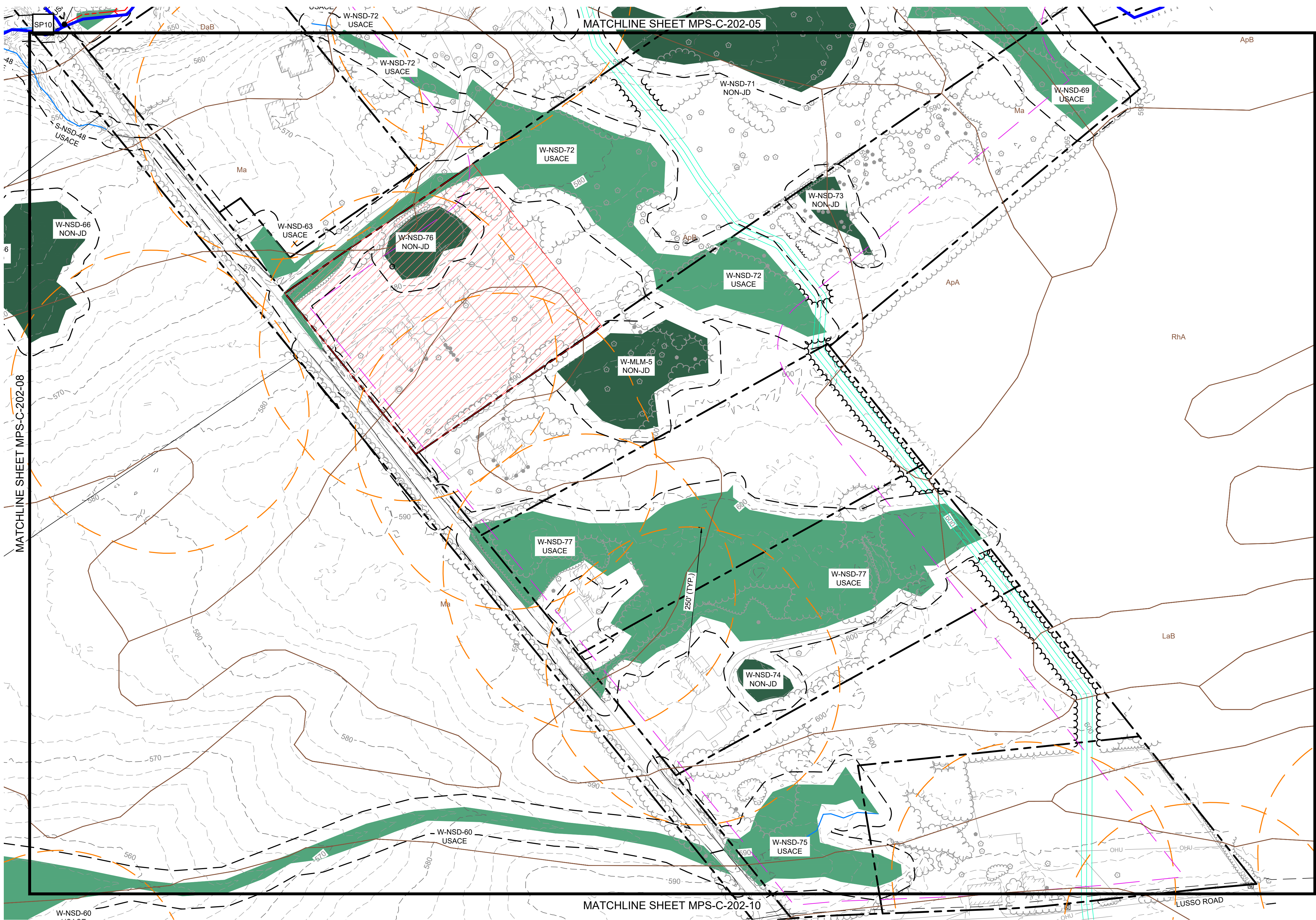
**PRELIMINARY**  
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| 249 Western Avenue<br>Augusta, ME 04330 |                 | PROJECT NO: 443269 |             |      |     |     |
|   |                 | REV                | DESCRIPTION | DATE | DES | CHK |
|   |                 |                    |             |      |     |     |
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| A                                       | ISSUED FOR 94-C | 10/20/2023         | CMW         | PMM  | PMM |     |

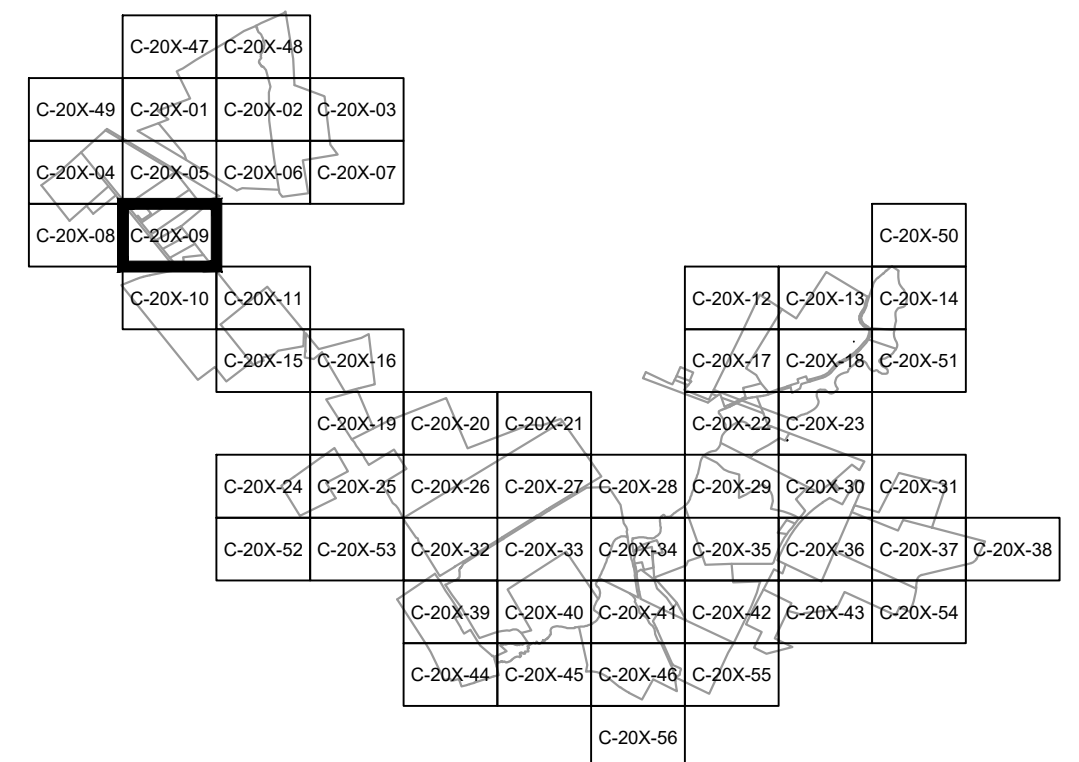
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|--|--|--|------------------|
| PMM DESIGNED<br>PMM DRAWN<br>PMM CHECKED<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>POST-DEVELOPMENT STORMWATER PLAN</b> |  | GLEN<br>NEW YORK |
|  | REVIEW 1<br>REVIEW 2   | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE |                  |





**LEGEND**

- SUBCATCHMENT BOUNDARY: Blue dashed line
- TIME OF CONCENTRATION FLOW LINE: Red dashed line with arrow
- REACH: Pink dashed line with circles
- SHEET FLOW: 100' SF (Orange dashed line)
- SHALLOW CONCENTRATED FLOW: 100' SCF (Cyan dashed line)
- CHANNEL FLOW: 100' CF (Black dashed line)
- SPOT ELEVATION: Black dot with 'EL. 520.0±'
- REACH ID: Square with '1R'
- SUBCATCHMENT ID: Hexagon with '1S'
- POND ID: Triangle with '1P'
- STUDY POINT ID: Square with 'SP1'
- SOILS BOUNDARY: Brown dashed line



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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DESIGNED  
PMM  
DRAWN  
PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN  
GLEN NEW YORK

REVIEW 1  
REVIEW 2

03/01/2023  
DATE  
1" = 100'  
SCALE







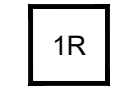
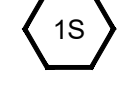
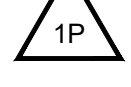


MPS-C-202-09

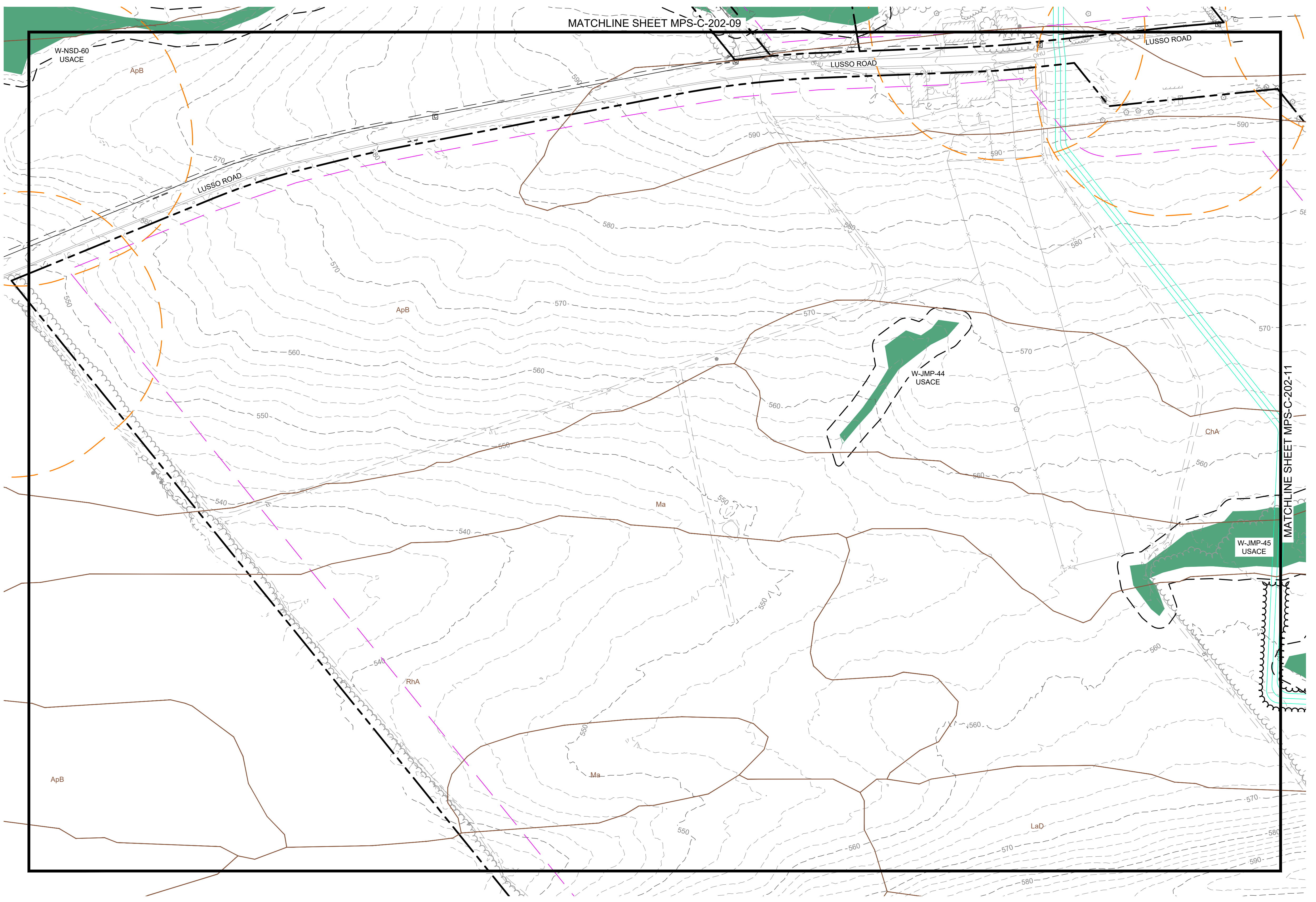
REV.  
A



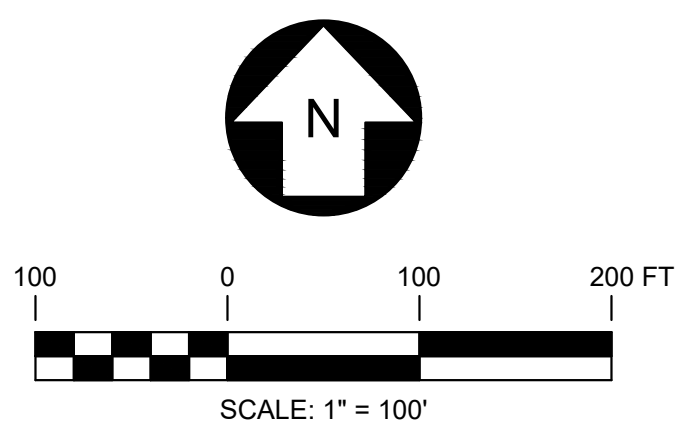
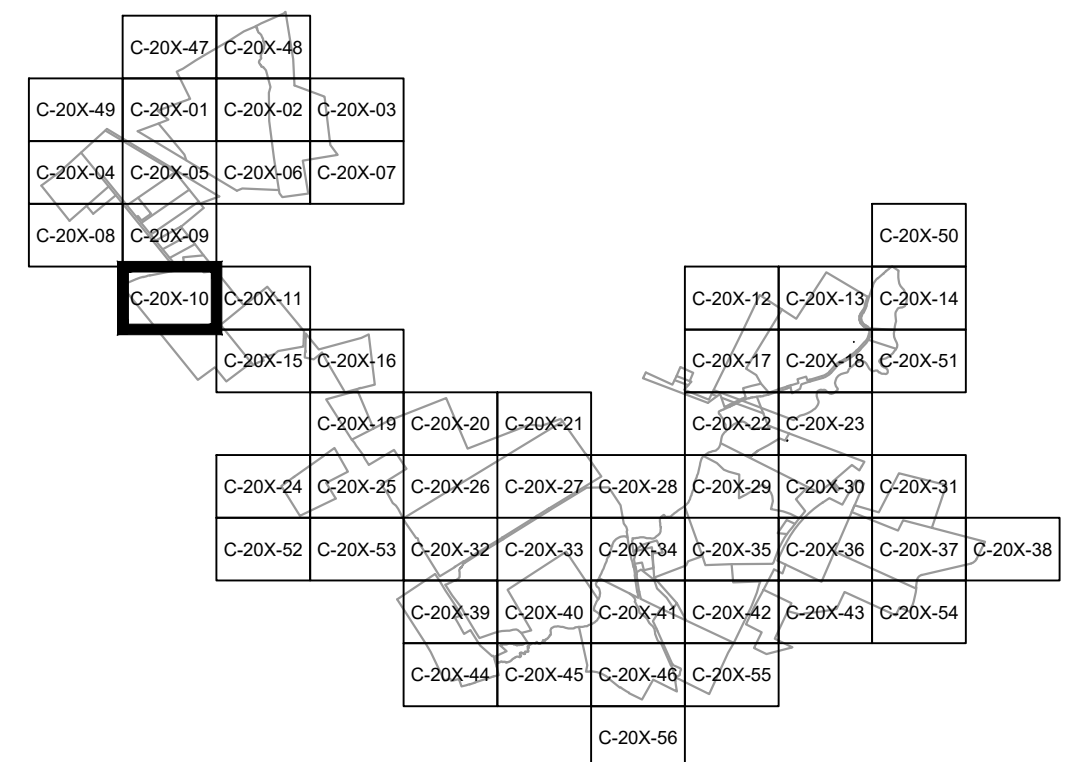
MATCHLINE SHEET MPS-C-202-09

LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 




MATCHLINE SHEET MPS-C-202-11




**PRELIMINARY**  
NOT FOR CONSTRUCTION

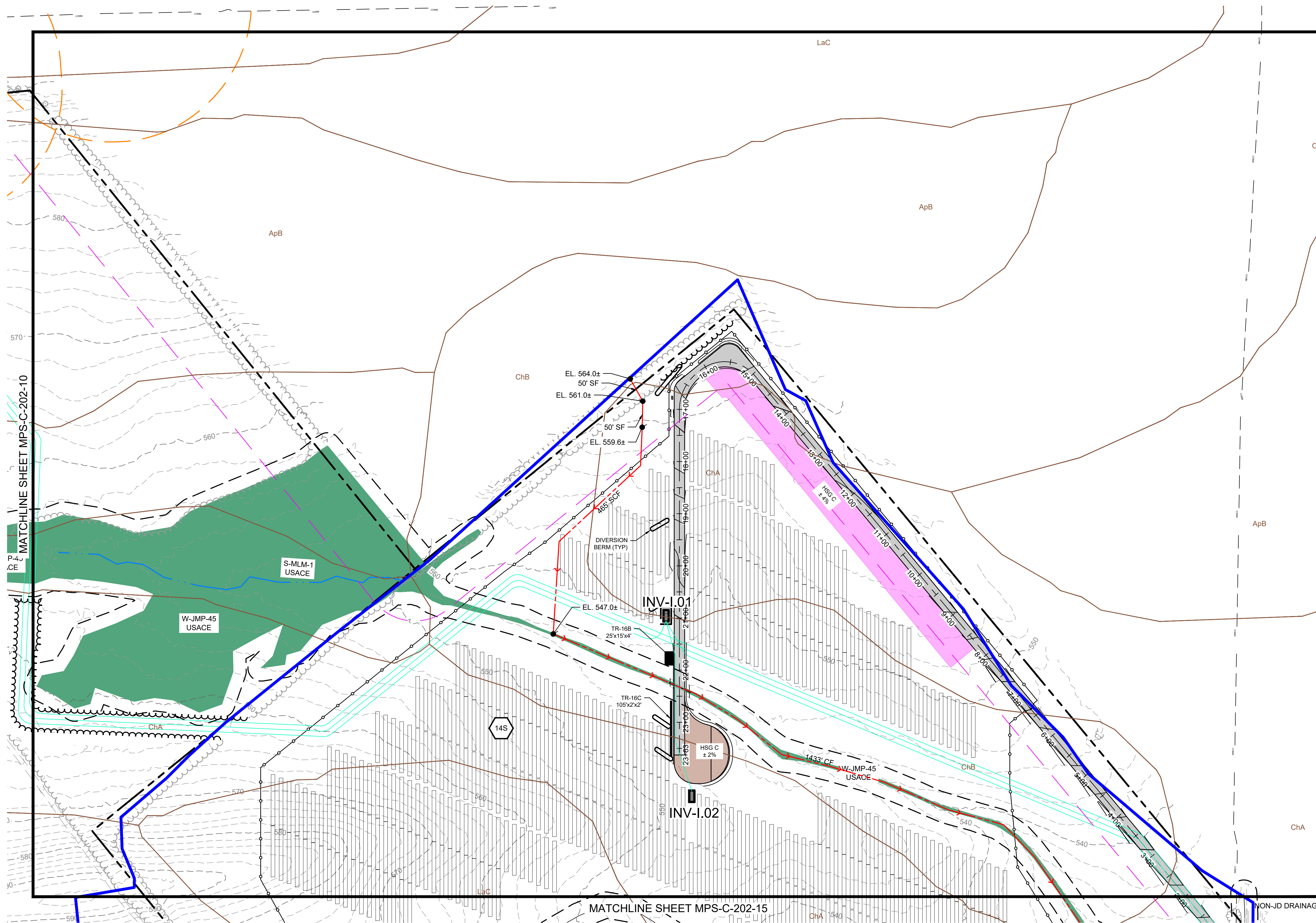


|  |                 | 249 Western Avenue<br>Augusta, ME 04330 |     | PROJECT NO: 443269 |     |  |  |
|---|-----------------|---|-----|--------------------|-----|--|--|
| REV   | DESCRIPTION     | DATE                                    | DES | CHK                | APP |  |  |
| -   | -               | -                                       | -   | -                  | -   |  |  |
| -   | -               | -                                       | -   | -                  | -   |  |  |
| A   | ISSUED FOR 94-C | 10/20/2023                              | CMW | PMM                | PMM |  |  |

| REFERENCE ITEMS | REV | DESCRIPTION | DATE | DES | CHK | APP |
|-----------------|-----|-------------|------|-----|-----|-----|
|                 | -   | -           | -    | -   | -   | -   |
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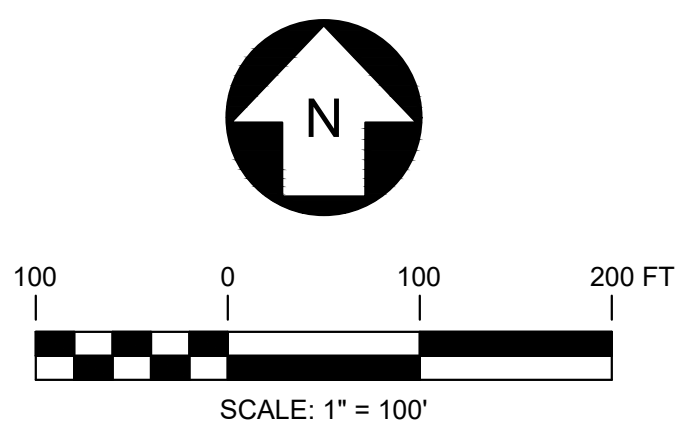
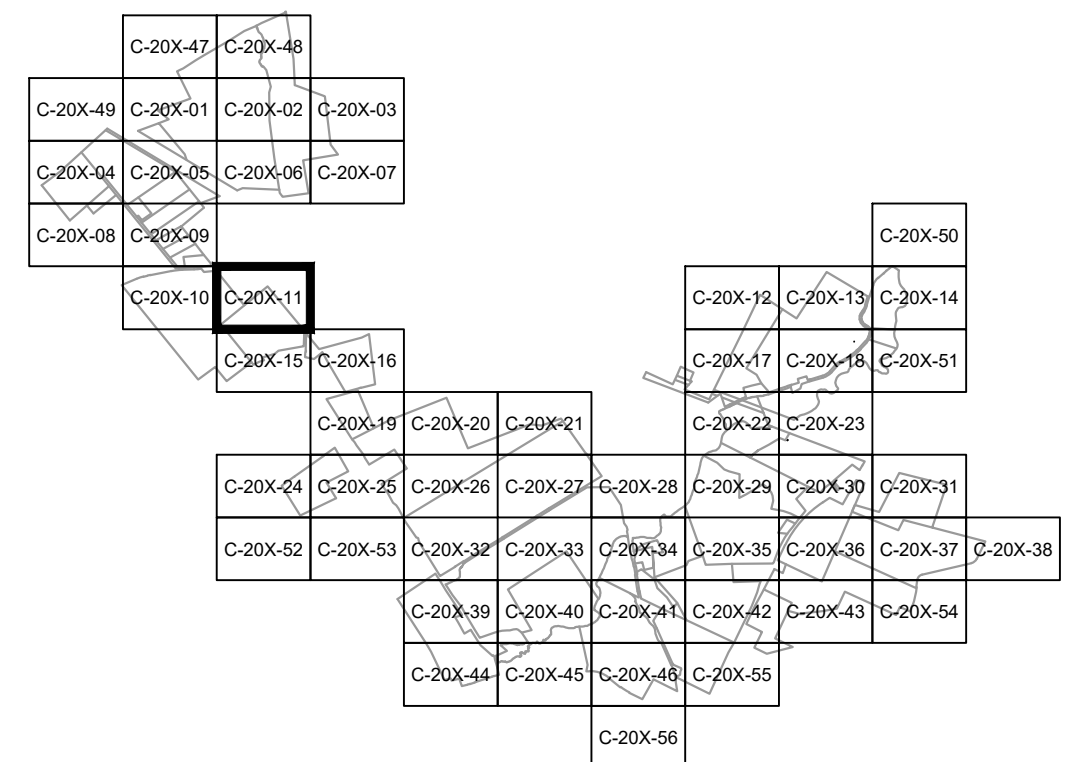
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|---|---|---|--------------|
| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | MILL POINT SOLAR PROJECT<br>CONNECTGEN, LLC<br>POST-DEVELOPMENT STORMWATER PLAN |   | NEW YORK     |
|   | GLEN  |   |              |
| REVIEW 1<br>REVIEW 2  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE  |  | MPS-C-202-10 |
|   |   |   | REV. A       |





**LEGEND**

- SUBCATCHMENT BOUNDARY:
- TIME OF CONCENTRATION FLOW LINE:
- REACH:
- SHEET FLOW: 100' SF
- SHALLOW CONCENTRATED FLOW: 100' SCF
- CHANNEL FLOW: 100' CF
- SPOT ELEVATION: EL. 520.0±
- REACH ID: 1R
- SUBCATCHMENT ID: 1S
- POND ID: 1P
- STUDY POINT ID: SP1
- SOILS BOUNDARY:



**PRELIMINARY**  
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249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE



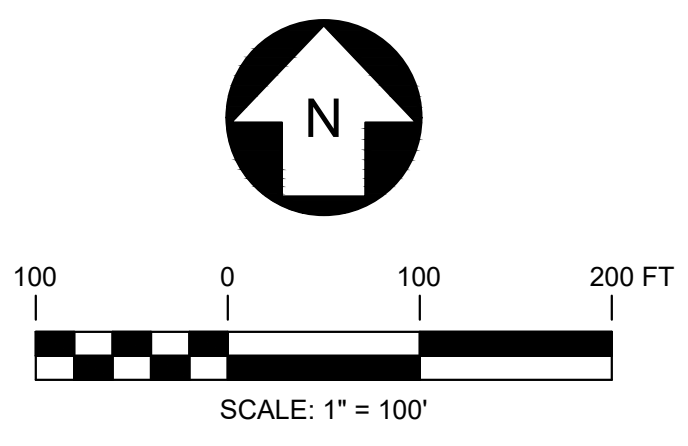
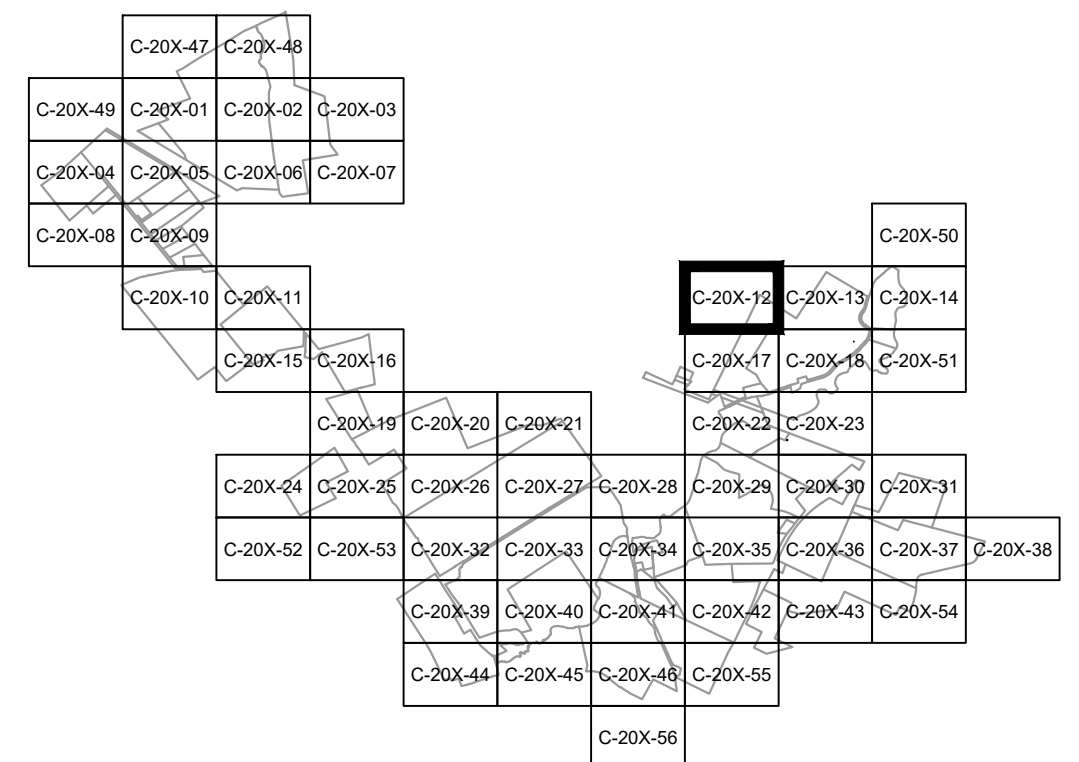
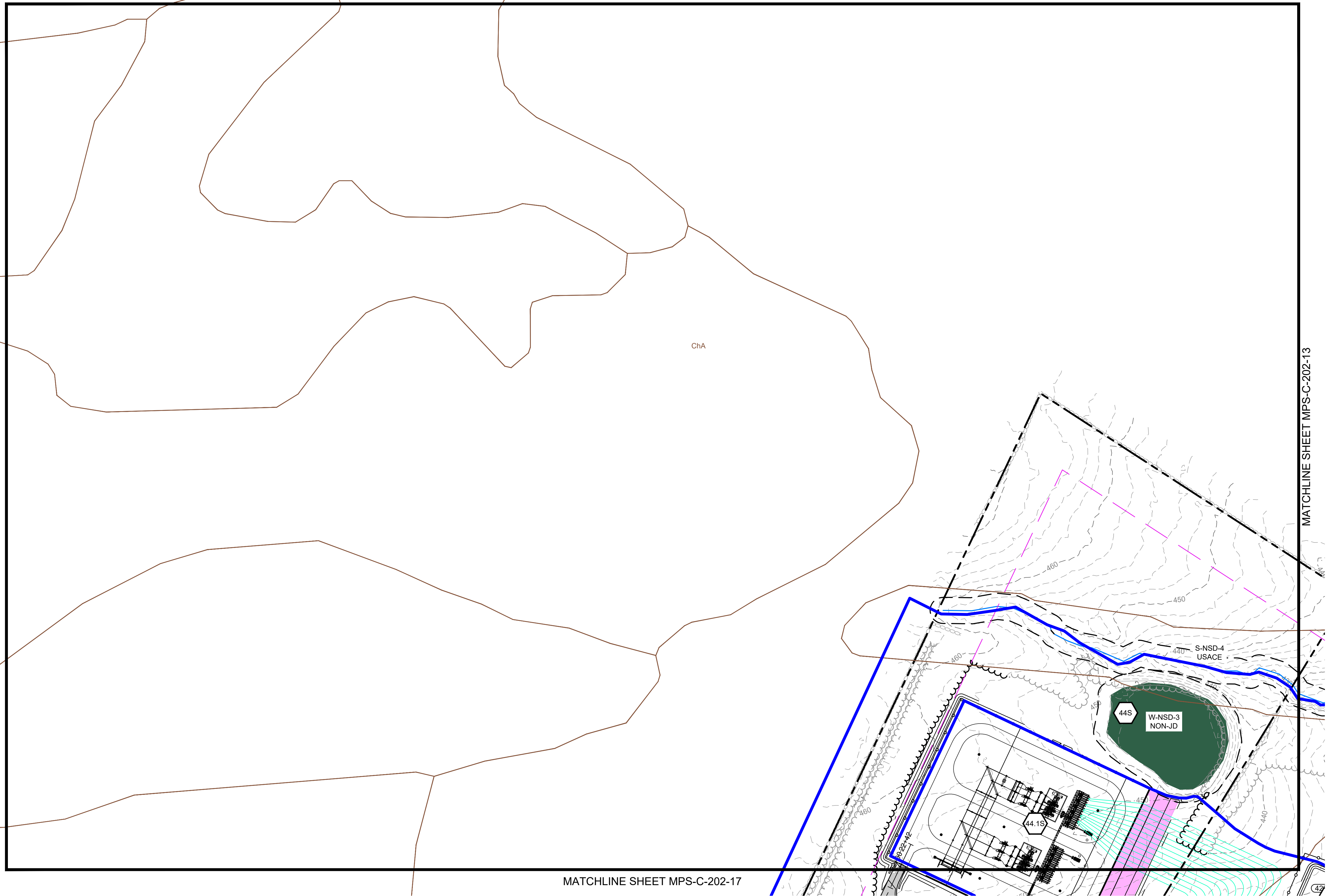
MPS-C-202-11

REV.  
A



**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



**PRELIMINARY**  
NOT FOR CONSTRUCTION



| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
|-----|-----------------|------------|-----|-----|-----|
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| -   | -               | -          | -   | -   | -   |
| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

249 Western Avenue  
Augusta, ME 04330

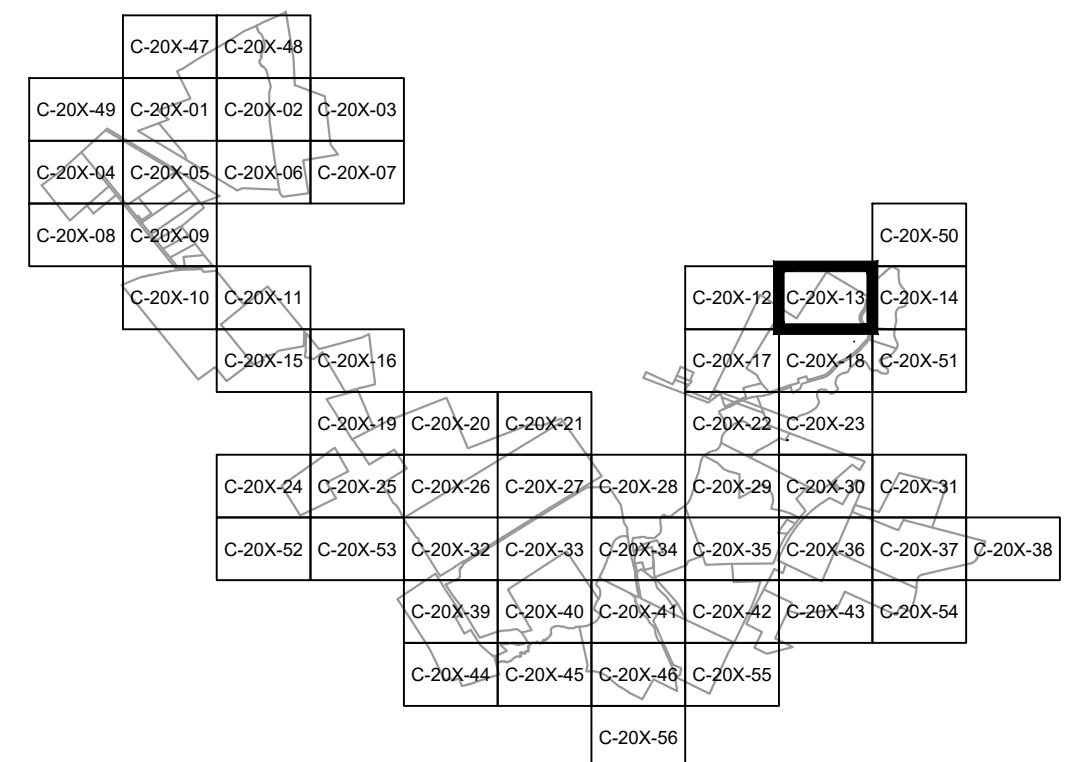
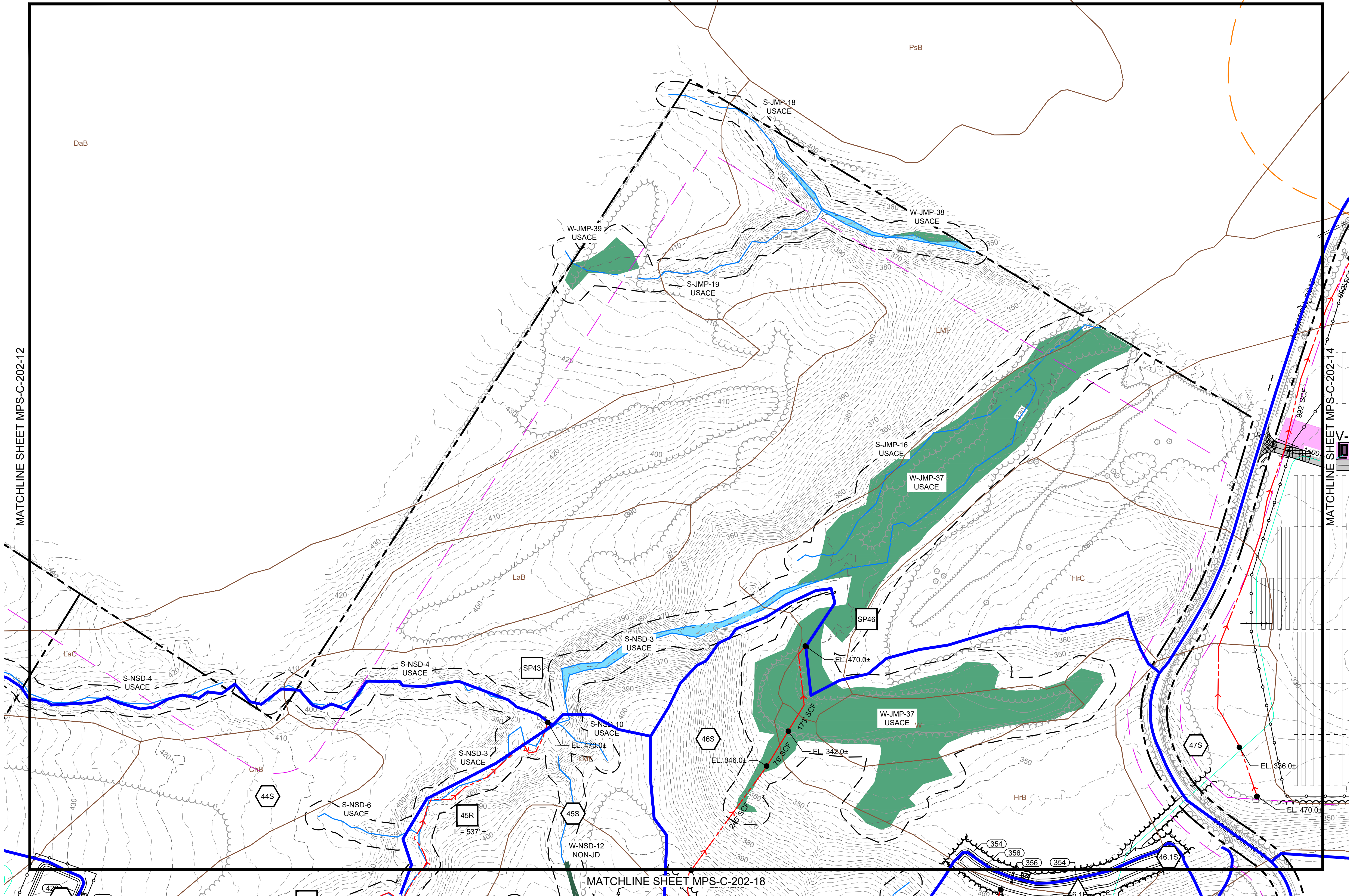
PROJECT NO: 443269

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| PMM<br>DESIGNED<br>PMM<br>DRAWN<br>PMM<br>CHECKED<br>APPROVED | <b>MILL POINT SOLAR PROJECT</b><br><b>CONNECTGEN, LLC</b><br><b>POST-DEVELOPMENT STORMWATER PLAN</b> | NEW YORK |
| GLEN  | 03/01/2023<br>DATE<br>1" = 100'<br>SCALE   |          |
| REVIEW 1  | MPS-C-202-12   | REV. A   |
| REVIEW 2  |  |          |



**LEGEND**

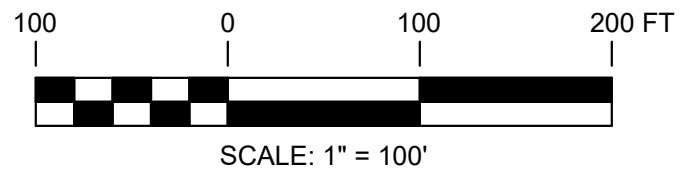
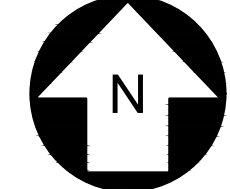
- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-202-12

MATCHLINE SHEET MPS-C-202-14

MATCHLINE SHEET MPS-C-202-18



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249 Western Avenue  
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PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

PMM DESIGNED  
PMM DRAWN  
PMM CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN NEW YORK

03/01/2023  
DATE




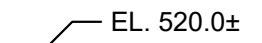

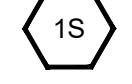





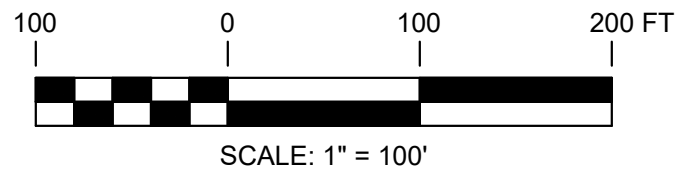
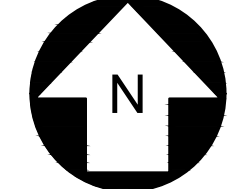
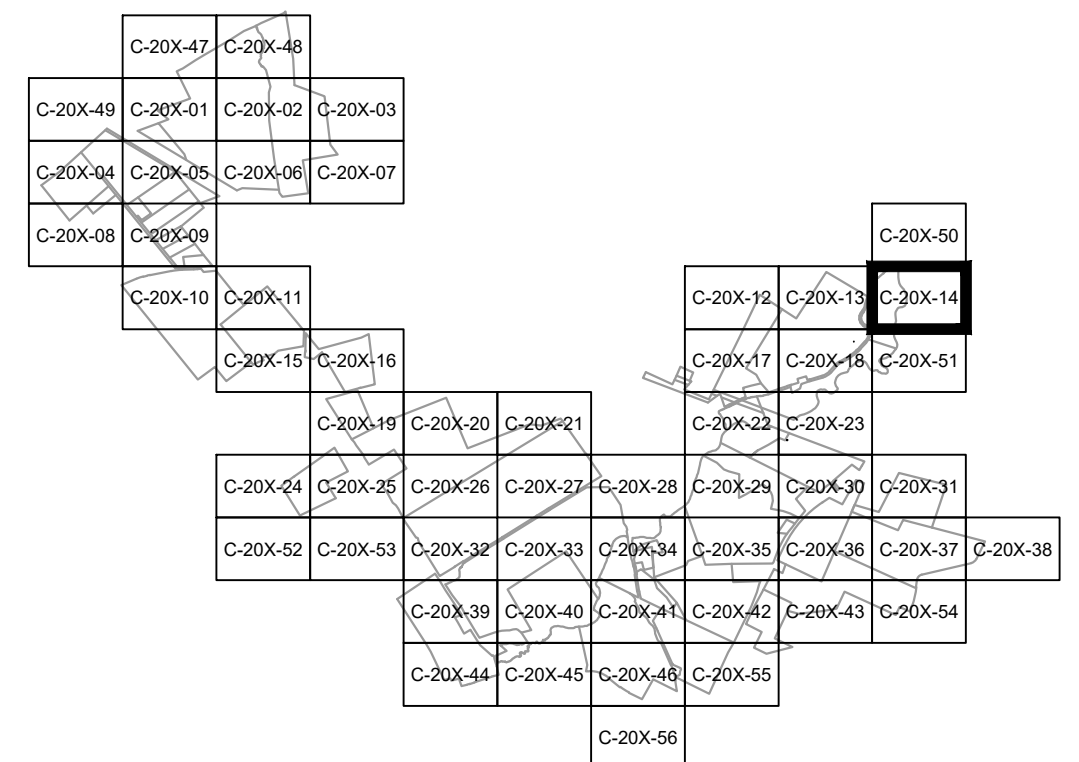
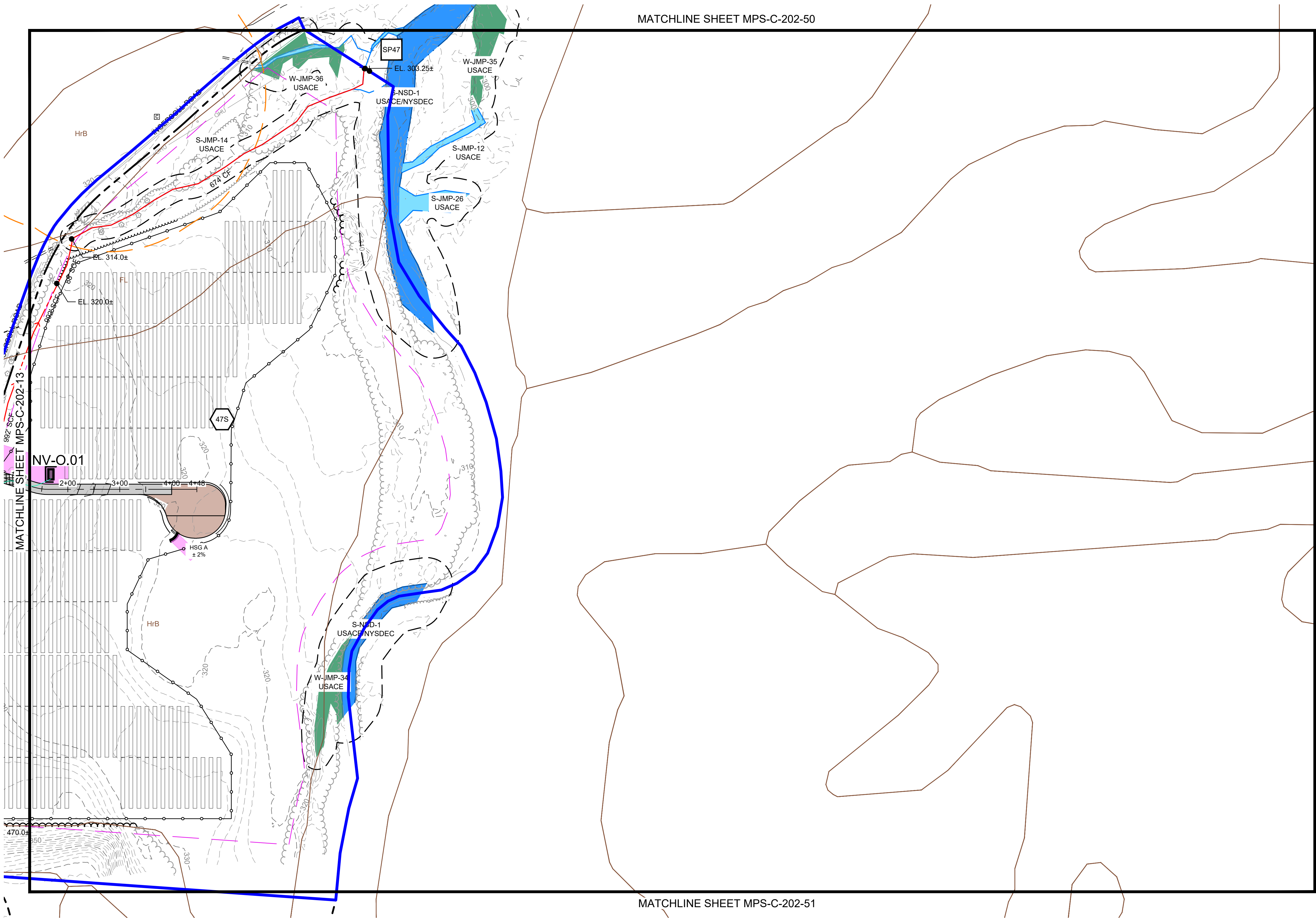
MPS-C-202-13

REV. A



LEGEND

- SUBCATCHMENT BOUNDARY 
- TIME OF CONCENTRATION FLOW LINE 
- REACH 
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION  EL. 520.0±
- REACH ID 
- SUBCATCHMENT ID 
- POND ID 
- STUDY POINT ID 
- SOILS BOUNDARY 



**PRELIMINARY**  
NOT FOR CONSTRUCTION



249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE



MPS-C-202-14

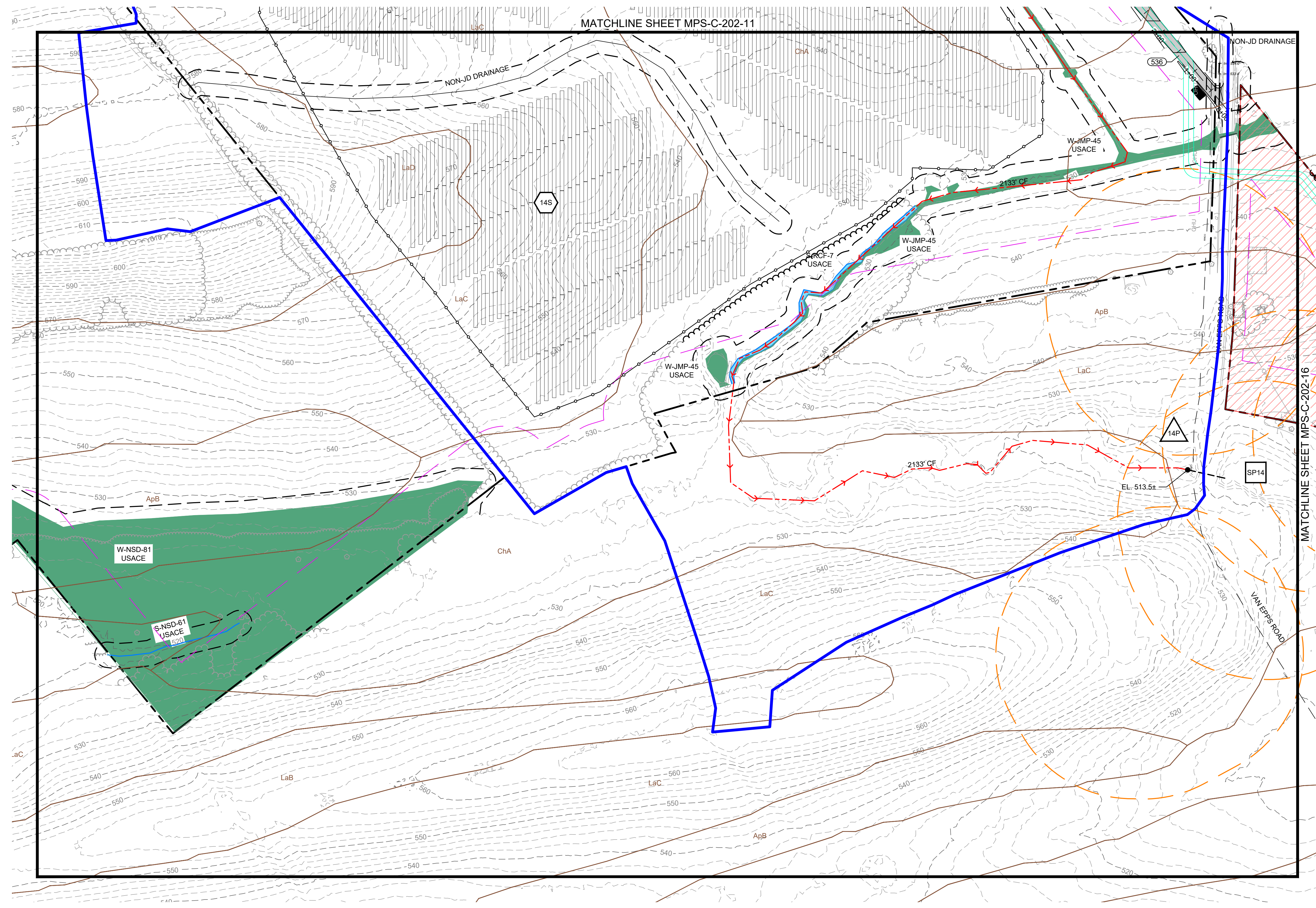
REV.  
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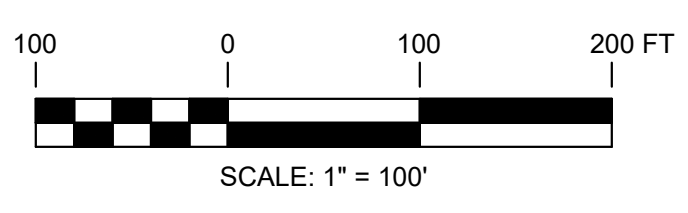
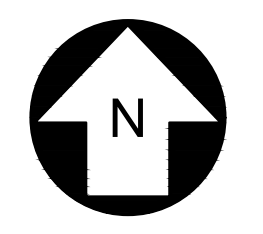
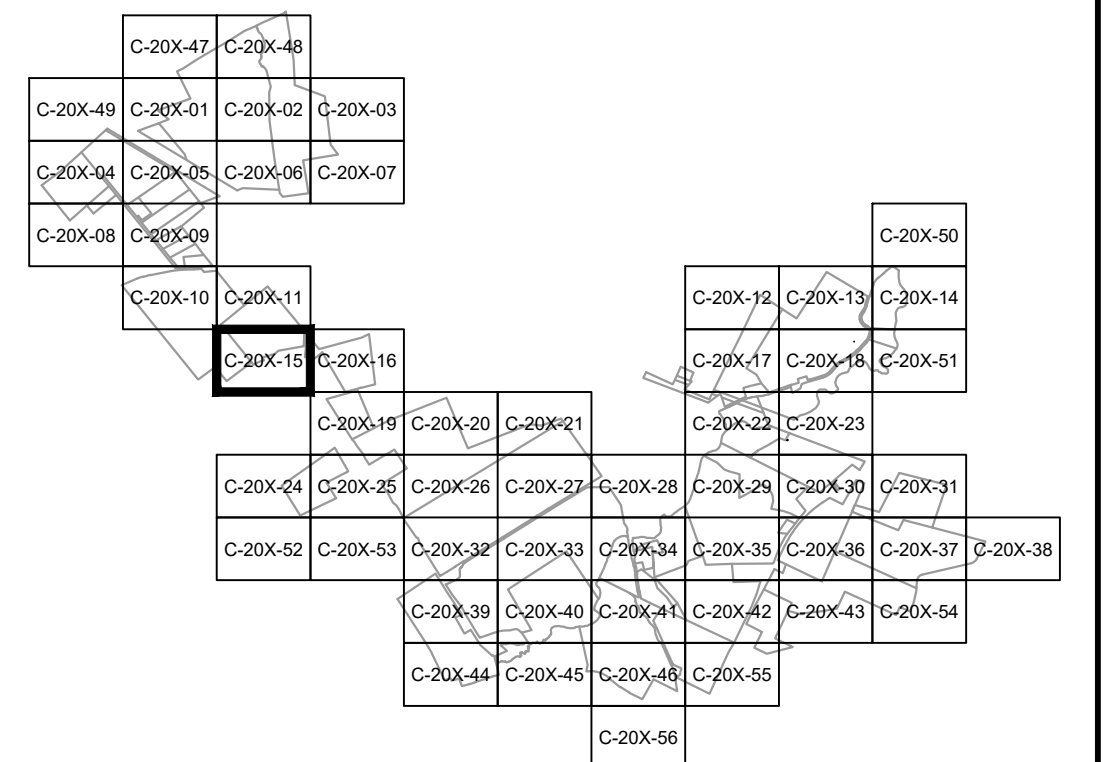
MATCHLINE SHEET MPS-C-202-11

**LEGEND**

- SUBCATCHMENT BOUNDARY —
- TIME OF CONCENTRATION FLOW LINE - - -
- REACH —
- SHEET FLOW 100' SF
- SHALLOW CONCENTRATED FLOW 100' SCF
- CHANNEL FLOW 100' CF
- SPOT ELEVATION ● EL. 520.0±
- REACH ID 1R
- SUBCATCHMENT ID 1S
- POND ID 1P
- STUDY POINT ID SP1
- SOILS BOUNDARY —



MATCHLINE SHEET MPS-C-202-16



**PRELIMINARY**  
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249 Western Avenue  
Augusta, ME 04330

PROJECT NO: 443269

| REV | DESCRIPTION     | DATE       | DES | CHK | APP |
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| A   | ISSUED FOR 94-C | 10/20/2023 | CMW | PMM | PMM |

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PMM  
CHECKED  
APPROVED

MILL POINT SOLAR PROJECT  
CONNECTGEN, LLC  
POST-DEVELOPMENT STORMWATER PLAN

GLEN

NEW YORK

03/01/2023  
DATE  
1" = 100'  
SCALE



MPS-C-202-15

REV.  
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