Business License C-3881

Drainage Report

Merritt Reserve

Situated at 1224 Rolesville Road
Rolesville, North Carolina 27587

Prepared For

BRD Land & Investment Management, LLC
6433 Bannington Road
Charlotte, NC 28226

Prepared by
American Engineering Associates Southeast
4020 Westchase Blvd., Suite 450
Raleigh, NC 27607

September 3rd, 2025

Drainage Report

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Merritt Reserve Supplemental

General

This project is located in Roseville, North Carolina just West of the intersection between Roseville Road and Fowler Road, approximately 3200' southeast of Louisburg Road (US 401). The site is currently undeveloped and wooded.

The property for this project is bordered to the east by Rolesville Road, undeveloped wooded land to the south, Harris Creek along the western property line, and an existing subdivision is located to the north. The entire project is located within the Neuse River Basin.

The purpose of the project is to provide a residential subdivision consisting of both single-family homes and townhouses. The proposed subdivision, Merritt Reserve, will have 505 total lots built across 143.097 acres, with space dedicated for two future commercial sites.

The purpose of this report is to provide information pertaining to the proposed subdivision and its drainage network.

Effect at Merritt Reserve's Discharge Points

The chart below indicates drainage areas associated with each discharge point (POI) for this project. An exhibit will be included in the appendix of this report indicating locations of all POI's referenced in this chart. These values include any offsite areas that may be contributing to the overall flow at the POI's. There are currently no existing impervious areas on this site.

POI	Pre-Dev Drainage Area (Acres)	Post-Dev Drainage Area (Acres)
1	37.96	39.10
2	24.05	14.75
3	9.31	3.24
4	17.97	18.21
5	32.09	42.31
6	17.64	22.29
7	13.25	8.86

There are a total of ten wet ponds proposed to service this subdivision. An exhibit will be included in the appendix of this report indicating locations of all wet ponds being proposed. These ponds are large enough to restrain the post-development flow to or below that of the pre-development flow for the 1-year storm event and the 10-year storm event. Flow calculations are provided in the Appendix of this report. A summary of the flows are shown below:

Total Site Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	76.54 cfs	48.03 cfs
10 Year	246.16 cfs	170.96 cfs
25 Year	328.59 cfs	364.55 cfs
100 Year	469.74 cfs	734.81 cfs

POI #1 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	15.81 cfs	14.17 cfs
10 Year	38.17 cfs	47.98 cfs
25 Year	76.33 cfs	122.57 cfs
100 Year	110.86 cfs	214.81 cfs

POI #2 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	12.16 cfs	0.91 cfs
10 Year	38.17 cfs	13.03 cfs
25 Year	50.89 cfs	33.57 cfs
100 Year	72.33 cfs	62.04 cfs

POI #3 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	2.30 cfs	1.42 cfs
10 Year	8.247 cfs	4.80 cfs
25 Year	11.27 cfs	6.47 cfs
100 Year	16.46 cfs	9.323 cfs

POI #4 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	7.03 cfs	3.91 cfs
10 Year	30.27 cfs	17.18 cfs
25 Year	42.39 cfs	26.15 cfs
100 Year	63.50 cfs	102.00 cfs

POI #5 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	19.43 cfs	10.74 cfs
10 Year	58.60 cfs	45.46 cfs
25 Year	77.58 cfs	92.89 cfs
100 Year	109.54 cfs	201.87 cfs

POI #6 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	15.71 cfs	11.26 cfs
10 Year	42.77 cfs	40.87 cfs
25 Year	55.62 cfs	88.28 cfs
100 Year	76.94 cfs	165.85 cfs

POI #7 Flow Summary		
Storm	Pre-development Flow	Post-development Flow
1 Year	13.17 cfs	8.16 cfs
10 Year	37.83 cfs	23.45 cfs
25 Year	49.71 cfs	29.25 cfs
100 Year	69.53 cfs	47.53 cfs

Effect at SCM Outlet Points

The calculations at the outlet point are shown in the Appendix. The outlet velocity is calculated by using the width of the outlet end of the rip-rap, the slope of the ground at the outlet, Manning's n for rip-rap (0.045) and the flow shown for the ten-year storm. If this produces an erosive velocity, then a plunge pool is considered. The calculations for these are in the Appendix.

The results of the initial calculations show that the outfalls have velocities that may be erosive (greater than 4 fps). Rip-rap shall be used to slow the flow at the outlet to a non-erosive velocity. The design parameters of the rip-rap pads are shown in the appendix.

Structural Stability of Receiving Surface Waters

As the maximum flow is not increased, the stability of the downstream waters should not be affected.

Appendix

USGS Site Map……..8

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Culvert Calculations……915-917

USGS Site Map

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

ROLESVILLE QUADRANGLE
NORTH CAROLINA
7.5-MINUTE SERIES

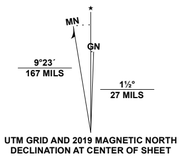


Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 17S

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2020 - July 2020
Roads..... U.S. Census Bureau, 2016
Names.....GNIS, 1980 - 2022
Hydrography.....National Hydrography Dataset, 2001 - 2021
Contours.....National Elevation Dataset, 2008
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available



UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
QV
Grid Zone Designation
17S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.



QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Grissom
2 Franklinton
3 Louisburg
4 Wake Forest
5 Bunn West
6 Raleigh East
7 Knightdale
8 Zebulon

ADJOINING QUADRANGLES

ROAD CLASSIFICATION

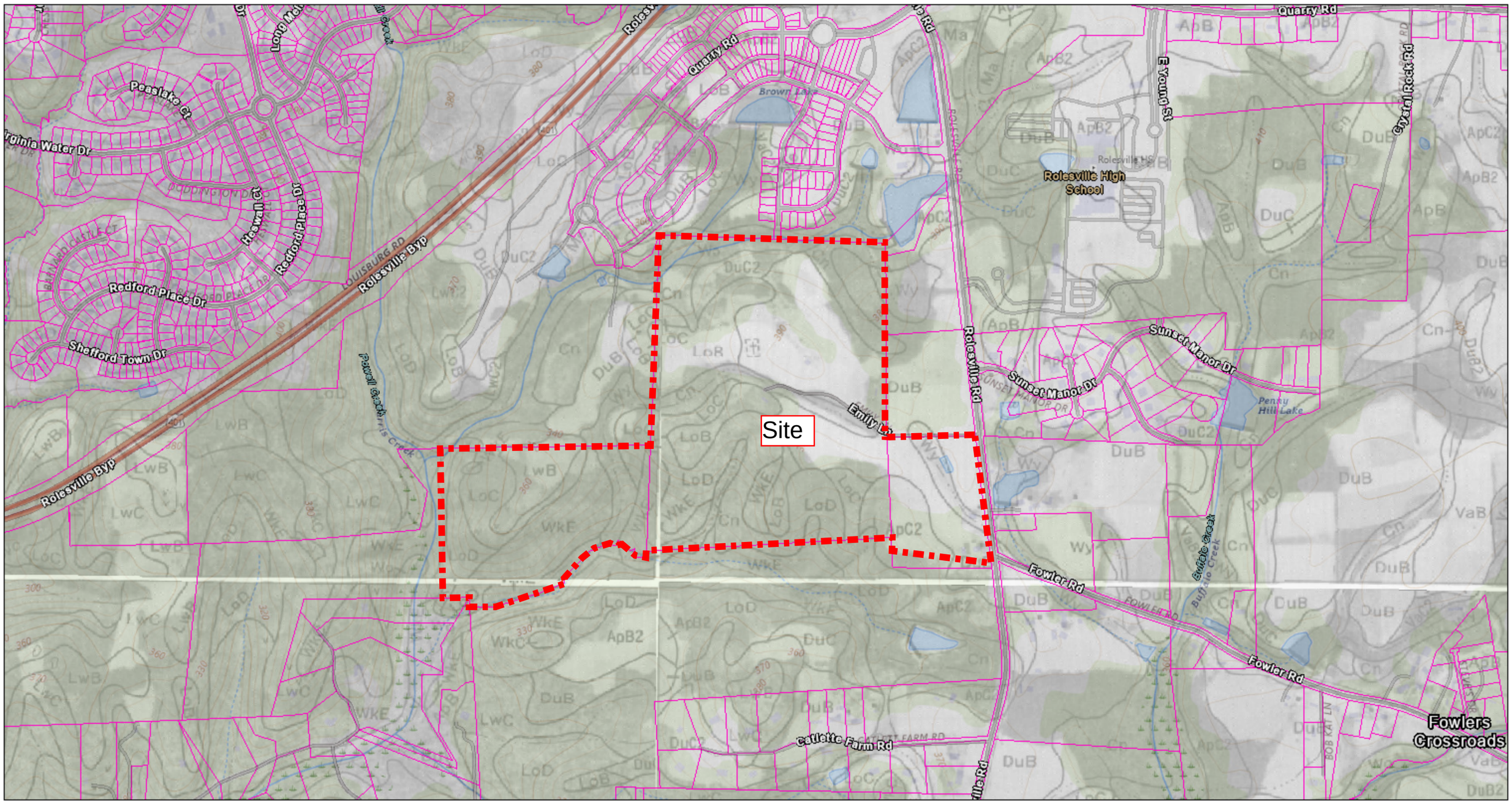
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

ROLESVILLE, NC
2022

NSN 7643016379170
NGA REF NO.USGSX24K38453

Soils Map

ArcGIS Web Map



4/7/2025, 2:29:58 AM

1:10,915

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

North Carolina Parcels (Polygons) - Parcels

Layers

Red: Band_1

Green: Band_2

Blue: Band_3

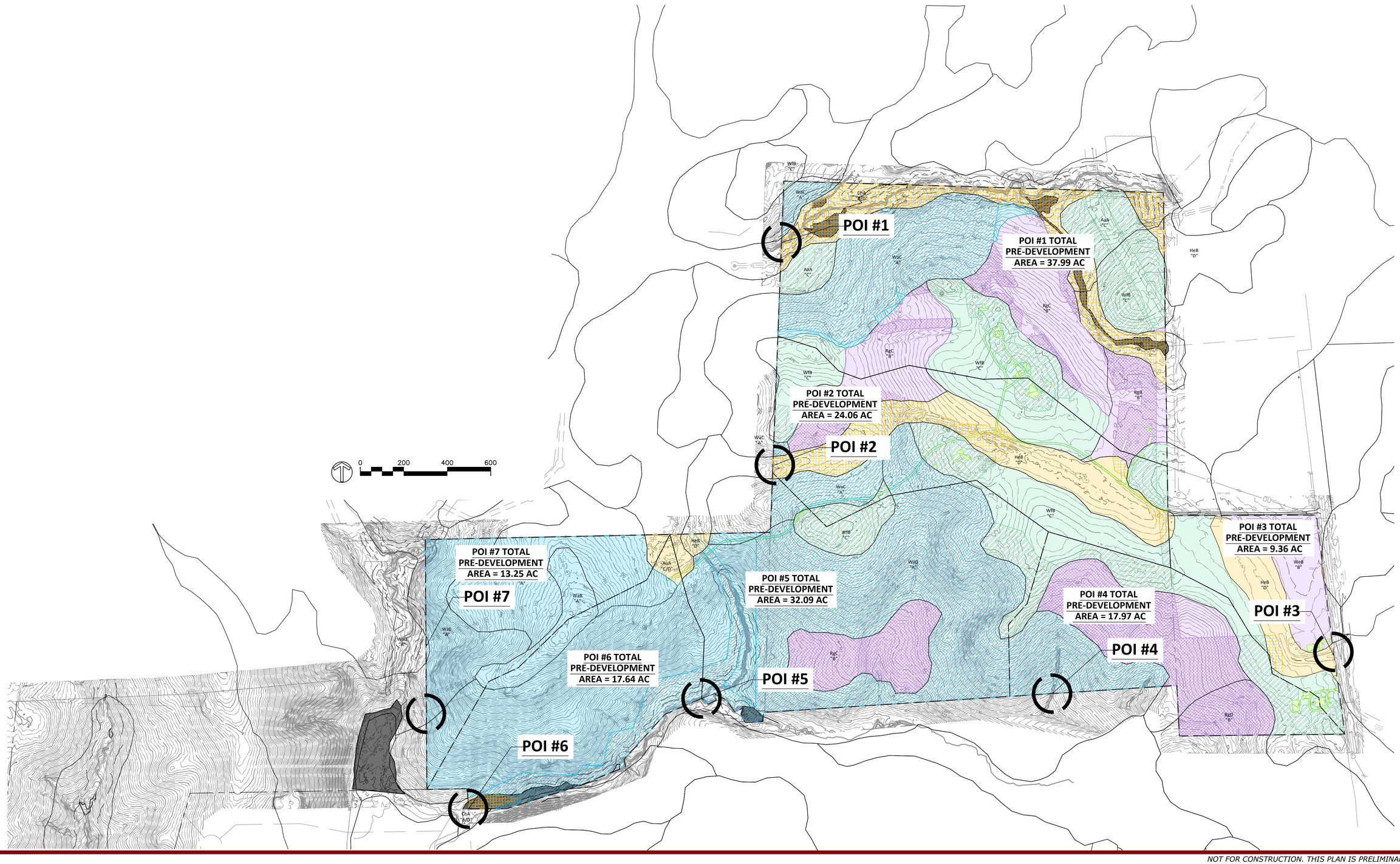
255 - 1

Major River Basins

NC Counties

Natural Resources Conservation Service (NRCS), NCDOT Project ATLAS SWEEP group, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land

Pre & Post Drainage Areas Exhibit



NOT FOR CONSTRUCTION. THIS PLAN IS PRELIMINARY AND SUBJECT TO CHANGE

PRE DEVELOPMENT DRAINAGE AREA EXHIBIT

ROLESVILLE, NC | MERRIT PROPERTY

PREPARED FOR

APRIL 14, 2025

AMERICAN Engineering

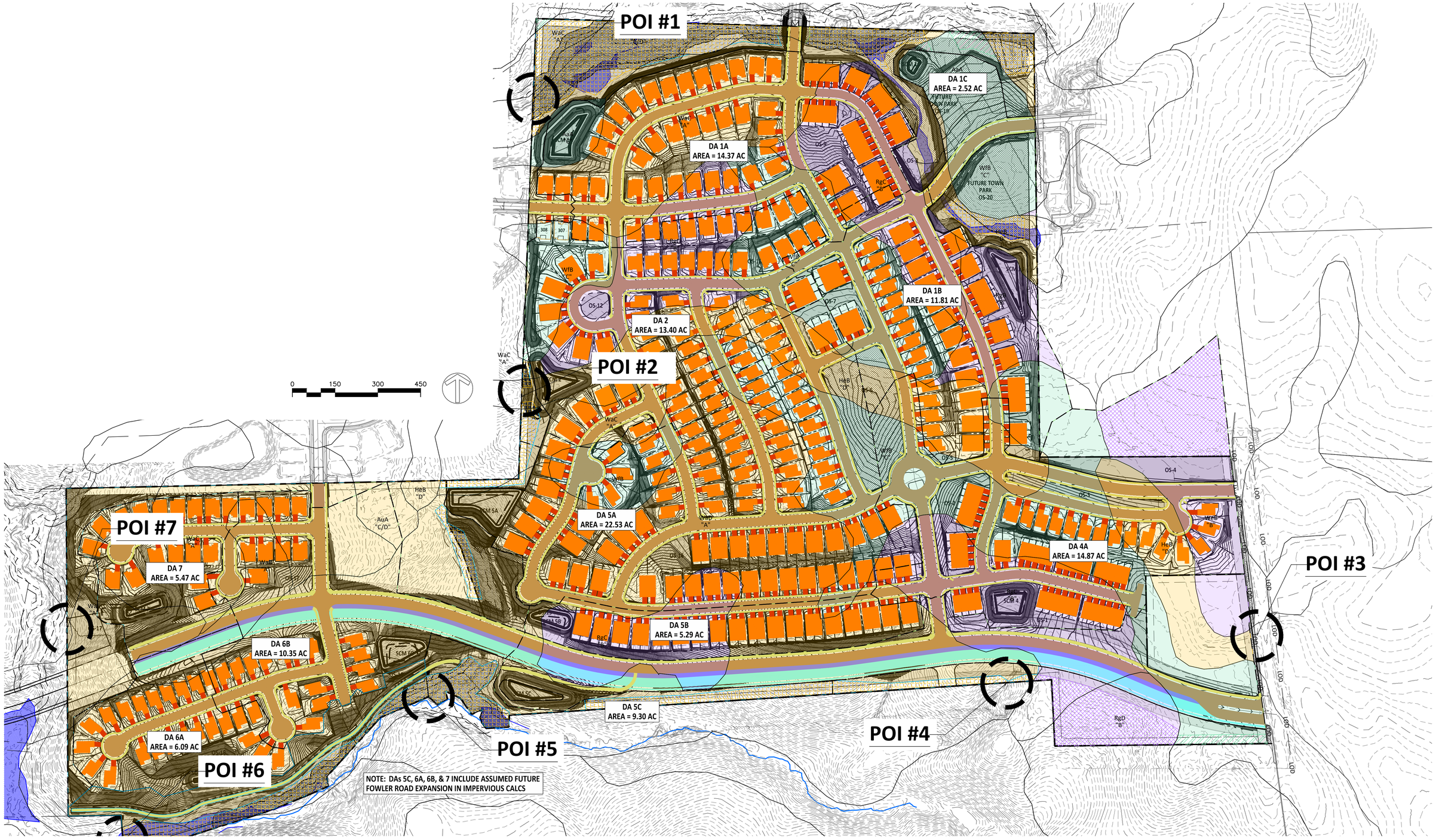
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2025-04-14



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POST DEVELOPMENT DRAINAGE AREA EXHIBIT

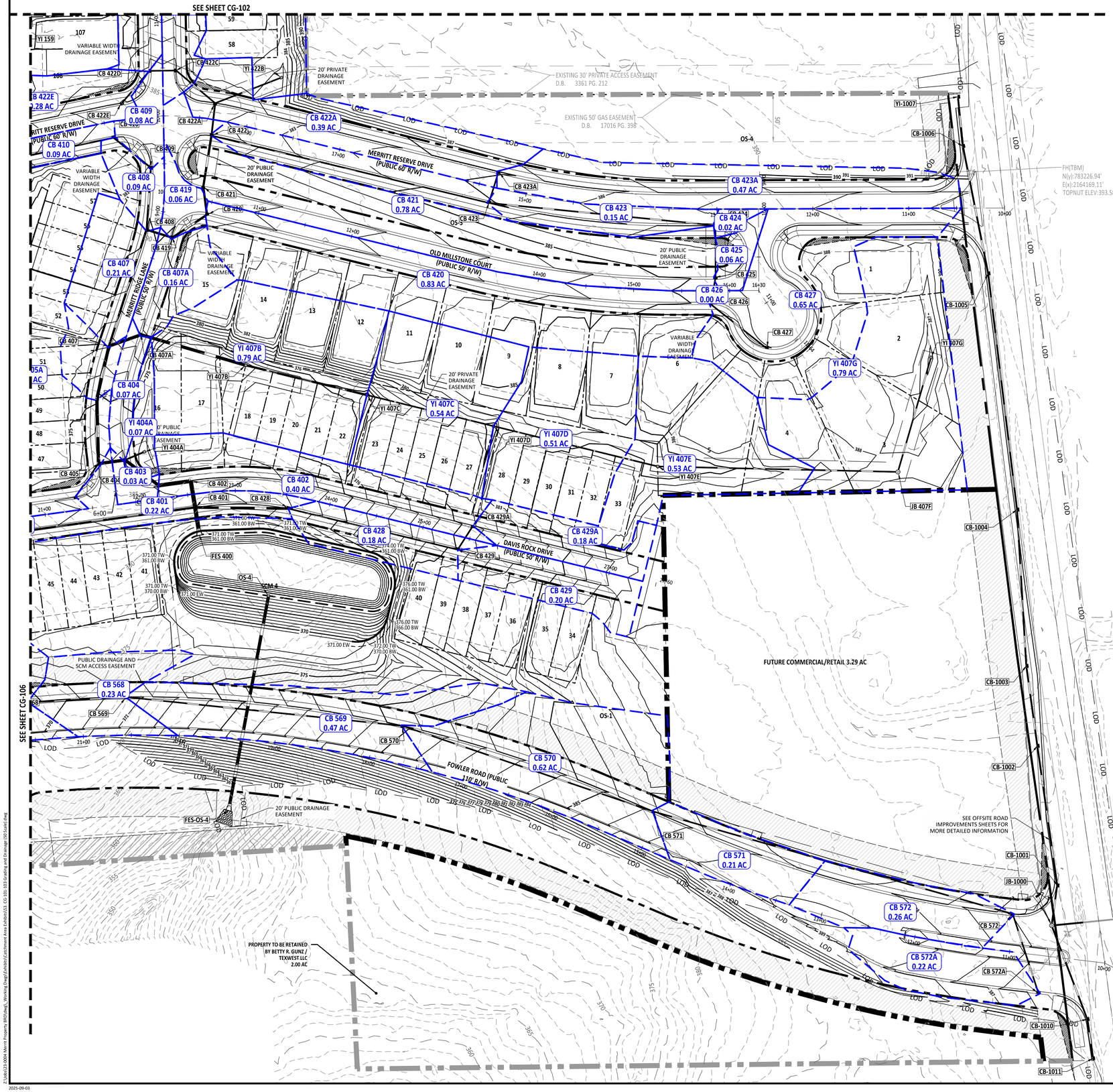
ROLESVILLE, NC | MERRIT PROPERTY

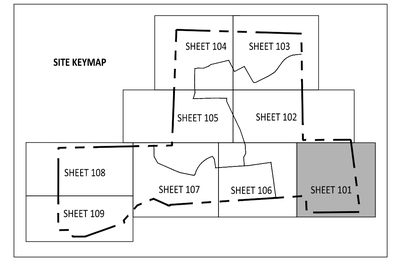
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PROJECT # R230004
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2025-04-14





GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

NORTH CAROLINA ENGINEERING ASSOCIATES SOUTHEAST C-3881 CERTIFICATE OF AUTHORIZATION

PRELIMINARY

PRELIMINARY NOT FOR RECORDATION, SALE OR CONVEYANCE DO NOT USE FOR CONSTRUCTION
36528 ENGINEER JACOB P. KLEIN

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WAKE COUNTY NC 27312

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SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

CG-101

North Carolina 811 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Jobs\23-0004 Merritt Property BRP\Revit_ Working Drawings\Exhibits\Catchment Area Exhibits\S3_CG-101-103 Grading and Drainage 150 Scale1.dwg

2025-09-03

SEE SHEET CG-104

SEE SHEET CG-103

SEE SHEET CG-105

SEE SHEET CG-106

SEE SHEET CG-101

CB 150A 0.13 AC
CB 216A 0.11 AC
CB 150 0.22 AC
CB 144 0.60 AC
CB 215 0.04 AC
CB 216 0.05 AC
CB 217A 0.22 AC
YI 151A 1.09 AC
YI 156 0.60 AC
CB 217 0.15 AC
CB 151 0.15 AC
CB 149 0.38 AC
CB 152 0.06 AC
CB 153 0.05 AC
CB 143 0.53 AC
YI 157 0.64 AC
CB 142 0.44 AC
YI 141 0.08 AC
CB 532 0.09 AC
CB 532A 0.10 AC
CB 533 0.17 AC
CB 154 0.15 AC
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CB 422D 0.20 AC
YI 422B 0.58 AC
CB 413 0.41 AC
CB 414 0.97 AC
CB 528A 1.32 AC
YI 159 0.66 AC
CB 422C 0.23 AC
CB 536A 0.22 AC
YI 524F 0.22 AC
CB 529 0.20 AC
YI 525B 0.23 AC
CB 422E 0.28 AC
CB 409 0.08 AC
CB 422A 0.39 AC
CB 535 0.14 AC
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CB 528 0.10 AC
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CB 411 0.09 AC
CB 408 0.09 AC
CB 419 0.06 AC
CB 421 0.78 AC
CB 423A 0.47 AC
CB 423 0.15 AC
CB 424 0.02 AC
CB 425 0.06 AC
CB 416 0.01 AC
CB 417 0.03 AC
CB 418 0.09 AC
CB 527 0.06 AC
CB 524A 0.35 AC
CB 525A 0.13 AC
CB 526 0.16 AC
CB 433A 0.21 AC
CB 433 0.13 AC
CB 534 0.07 AC
CB 407 0.21 AC
CB 407A 0.16 AC
CB 420 0.83 AC

OS-1B
SCM 1B
FES 140
OS-1
OS-2
OS-3
OS-4
OS-5
OS-6

STRIPS DRIVE (PUBLIC 50' R/W)
IOCUND STREET (PUBLIC 50' R/W)
CRACKED GRANITE LANE (PUBLIC 50' R/W)
BENT IRON LANE (PUBLIC 50' R/W)
TRIPLE EDGE WAY (PUBLIC 50' R/W)
MARRITT RIDGE LANE (PUBLIC 50' R/W)
MERRITT RESERVE DRIVE (PUBLIC 60' R/W)
OLD MILLSTONE COURT (PUBLIC 50' R/W)

EXISTING GRAVESITE NOT TO BE DISTURBED

VARIABLE WIDTH DRAINAGE EASEMENT

20' PRIVATE DRAINAGE EASEMENT

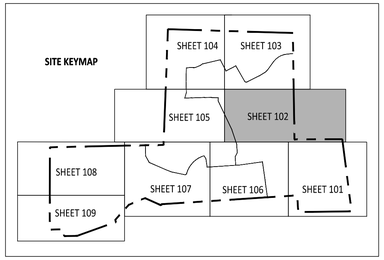
20' PUBLIC DRAINAGE EASEMENT

EXISTING 50' GAS EASEMENT D.B. 17016 PG. 398

SCM ACCESS & MAINTENANCE EASEMENT

N/F
OPTIMAL DEVELOPMENT, LLC
D.B. 18224 PAGE 1209
B.M. 1985 PAGE 1807
PIN# 1768.03-33-7689
LAND USE: VACANT
ZONING: RL

SITE KEYMAP



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

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4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

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JAMES K. KLEIN

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MERRITT RESERVE

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WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
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DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

CG-102

PROJECT NUMBER = CID-25-02

North Carolina 811 811.org
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

J:\Job\23-0004 Merritt Property BBP\Revit_Working Drwgs\Exhibits\Catchment Area Exhibit\SS3 CG-101-103 Grading and Drainage (50 Scale).dwg

2025-09-03

THE POINT
YOUNG ST. PUD
SUBDIVISION
(CID-24-08)

N/F
BROOKFIELD HOLDINGS(THE POINTE), LLC
D.B. 18774 PAGE 748
B.M. 2021 PAGE 1745
PIN# 1768.10-25-46.98
LAND USE: ACRES GREATER THAN 10 WITH HOUSE
ZONING: R&PUD

THIS AREA 2:1 GRADE TO STAY OUT OF EX. BUFFERS AND EASEMENTS

SCM ACCESS & MAINTENANCE EASEMENT

FUTURE TOWN PARK OS-19

FUTURE TOWN PARK OS-20

THE POINT YOUNG ST. PUD SUBDIVISION (CID-24-08)

EXISTING SEWER EASEMENT D.B. 16913 P.G. 120

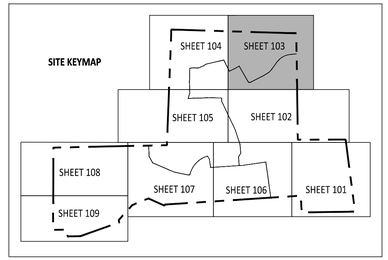
N/F
ASHTON RALEIGH RESIDENTIAL, LLC
D.B. 17720 PAGE 1663
B.M. 2021 PAGE 1745
PIN# 1768.03-34-7557
LAND USE: VACANT
ZONING: R&PUD

SCM ACCESS & MAINTENANCE EASEMENT

SEE SHEET CG-104

SEE SHEET CG-102

SITE KEYMAP



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

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CATCHMENT AREAS

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WAKE COUNTY NC 27312

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DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

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SHEET NO.:

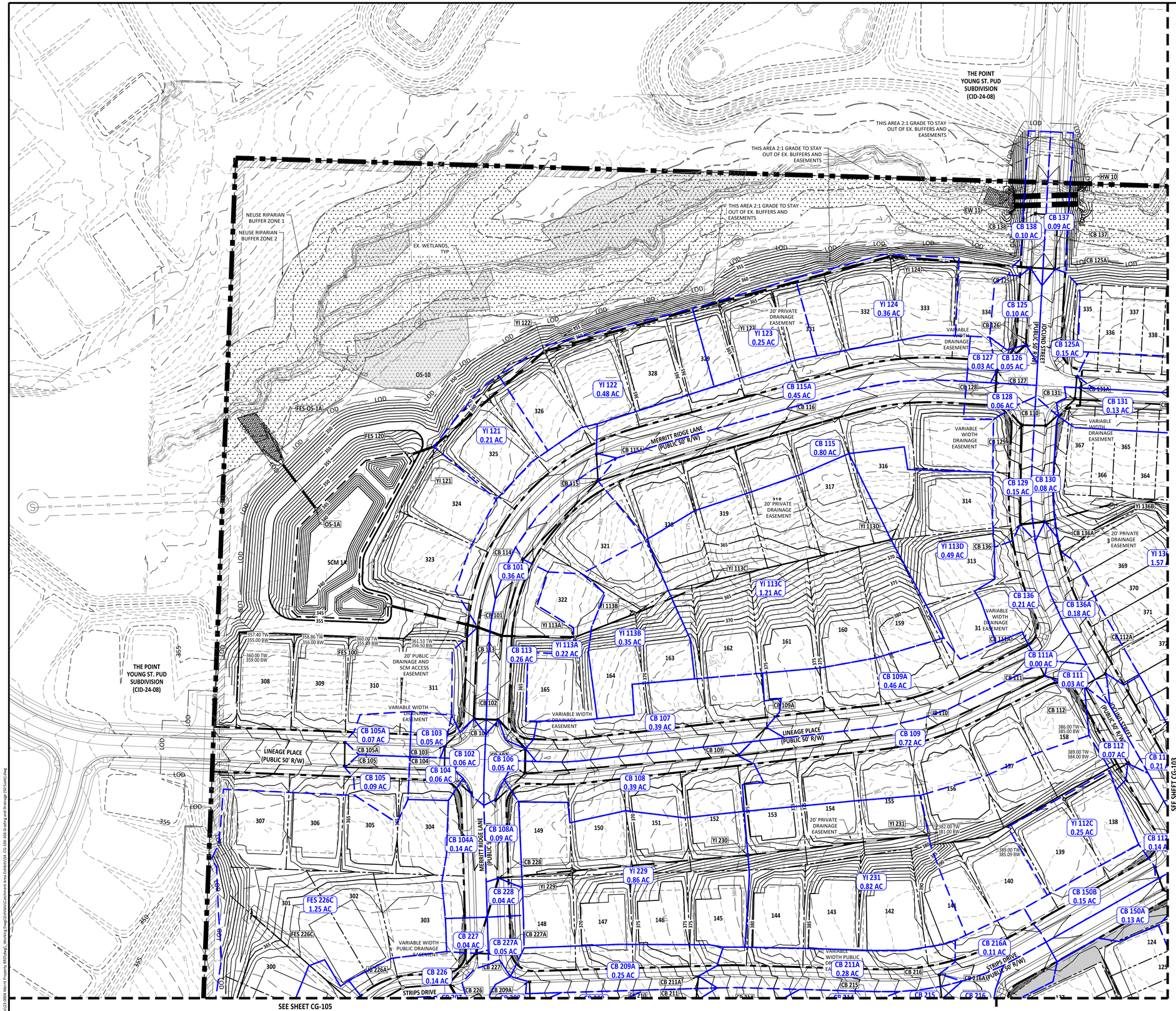
CG-103

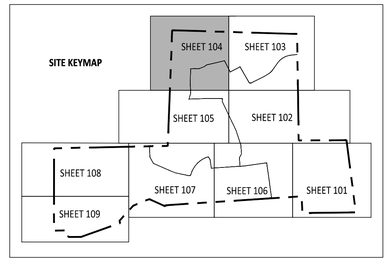
PROJECT NUMBER = CID-25-02

North Carolina 811
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North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Jobs\23-0004 Merritt Property (BRD\dwg_Working Dwgs\Exhibits\Catchment Area Exhibits\03_CG-103 Grading and Drainage (50 Scale).dwg

2025-09-03





GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 36528 JAKOB P. KLEIN

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MERRITT RESERVE

GRADING AND DRAINAGE

ROLESVILLE RD
WAKE COUNTY NC 27312

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DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

GRADING AND DRAINAGE

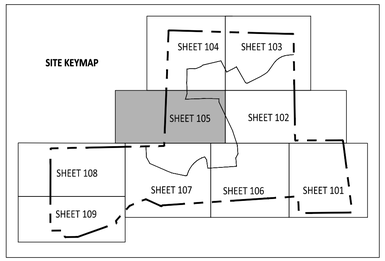
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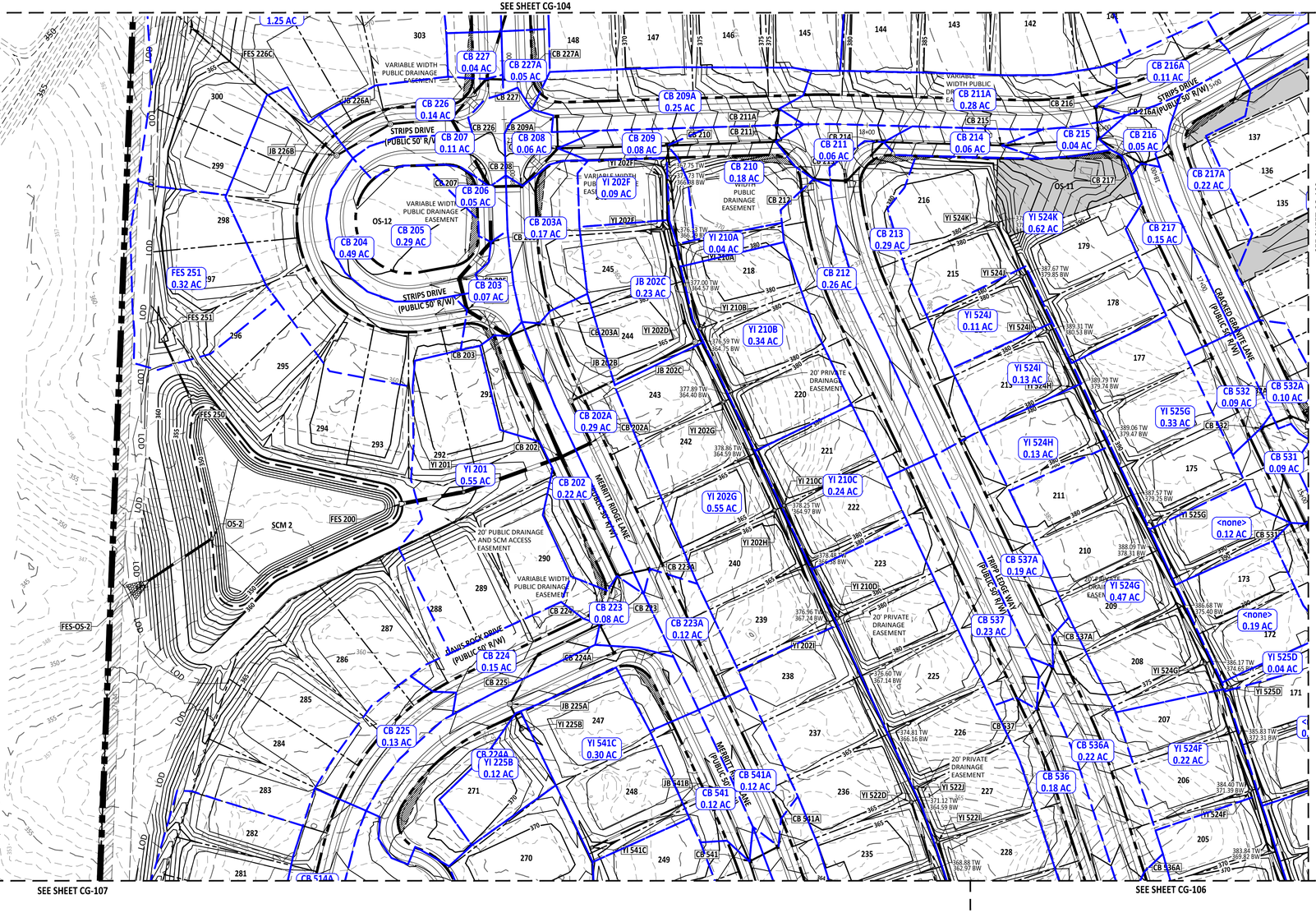
CG-104

North Carolina 811 Call Before You Dig
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Jobs\23-0004 Merritt Property (BRP,Mwl)_Working Dwg\Exhibits\Catchment Area Exhibits\SX_CG-104-106 Grading and Drainage (SS Scale).dwg

2025-09-03





GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

NORTH CAROLINA AMERICAN ENGINEERING ASSOCIATES SOUTHEAST, P.A. C-3881 CERTIFICATE OF AUTHORIZATION

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36528
ENGINEER
JACOB P. KLEIN

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MERRITT RESERVE

CATCHMENT AREAS

ROLESVILLE RD
WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
CHECKED BY:	JK
DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

CG-105

North Carolina 811 811 or 1-800-632-4949

*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Jobs\23-0004 Merrit Property (BRO)\dwg_Working Dwgs\Exhibits\Catchment Area Exhibits\04_CG-104-106 Grading and Drainage (30 Scale).dwg

2025-09-03

SEE SHEET CG-105

SEE SHEET CG-102

SEE SHEET CG-107

SEE SHEET CG-101

CB 541A 0.12 AC

CB 536 0.18 AC

CB 536A 0.20 AC

YI 525B 0.23 AC

YI 522B 0.84 AC

CB 539 0.20 AC

CB 539A 1.30 AC

CB 535 0.14 AC

CB 535A 0.17 AC

YI 524D 0.51 AC

CB 528 0.10 AC

CB 527 0.06 AC

CB 524A 0.35 AC

CB 525A 0.13 AC

CB 526 0.16 AC

CB 538 0.07 AC

CB 534 0.07 AC

CB 522A 0.11 AC

CB 524 0.07 AC

CB 525 0.13 AC

CB 520 0.10 AC

CB 521 0.08 AC

CB 522 0.07 AC

CB 523 0.14 AC

CB 416 0.01 AC

CB 418 0.09 AC

CB 417 0.03 AC

CB 415 0.15 AC

CB 433 0.13 AC

CB 433A 0.21 AC

CB 412 0.04 AC

CB 410 0.09 AC

CB 411 0.09 AC

CB 422E 0.28 AC

CB 409 0.08 AC

CB 408 0.09 AC

CB 419 0.06 AC

CB 407 0.21 AC

CB 407A 0.16 AC

CB 405A 1.09 AC

CB 404 0.07 AC

YI 404A 0.07 AC

CB 403 0.03 AC

CB 401 0.22 AC

CB 432 0.08 AC

CB 436A 0.30 AC

CB 431 0.02 AC

CB 430 0.00 AC

CB 435 0.08 AC

CB 434 0.07 AC

CB 436 0.20 AC

CB 567B 0.15 AC

CB 568 0.23 AC

CB 567 0.35 AC

YI 517L 1.05 AC

YI 517H 0.91 AC

YI 517K 0.36 AC

YI 517C 1.78 AC

YI 517F 0.95 AC

CB 517B 0.18 AC

CB 509A 0.18 AC

CB 510A 0.27 AC

CB 510 0.37 AC

CB 509 0.21 AC

CB 508 0.15 AC

CB 566 1.27 AC

CB 565 1.46 AC

CB 564 1.04 AC

MERRITT RESERVE DRIVE (PUBLIC 60' R/W)

MERRITT RIDGE LANE (PUBLIC 50' R/W)

CRACKED GRANITE LANE (PUBLIC 50' R/W)

DOGWOOD STREET (PUBLIC 60' R/W)

DAVIS ROCK DRIVE (PUBLIC 50' R/W)

FOWLER ROAD (PUBLIC 110' R/W)

VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT

20' PRIVATE DRAINAGE EASEMENT

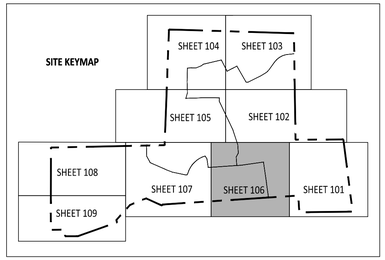
20' PUBLIC DRAINAGE EASEMENT

3' COR UTILITY EASEMENT

LOD

FES 400

SITE KEYMAP



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

NORTH CAROLINA AMERICAN ENGINEERING ASSOCIATES SOUTHEAST C-3851 CERTIFICATE OF AUTHORIZATION

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MERRITT RESERVE

CATCHMENT AREAS

ROLESVILLE RD
WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
CHECKED BY:	JK
DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

CG-106

North Carolina 811

*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Job\23-0004 Merrit Property (BRD)\dwg_Working Dwgs\Exhibits\Catchment Area Exhibits\04. CG-106 Grading and Drainage (50 Scale).dwg

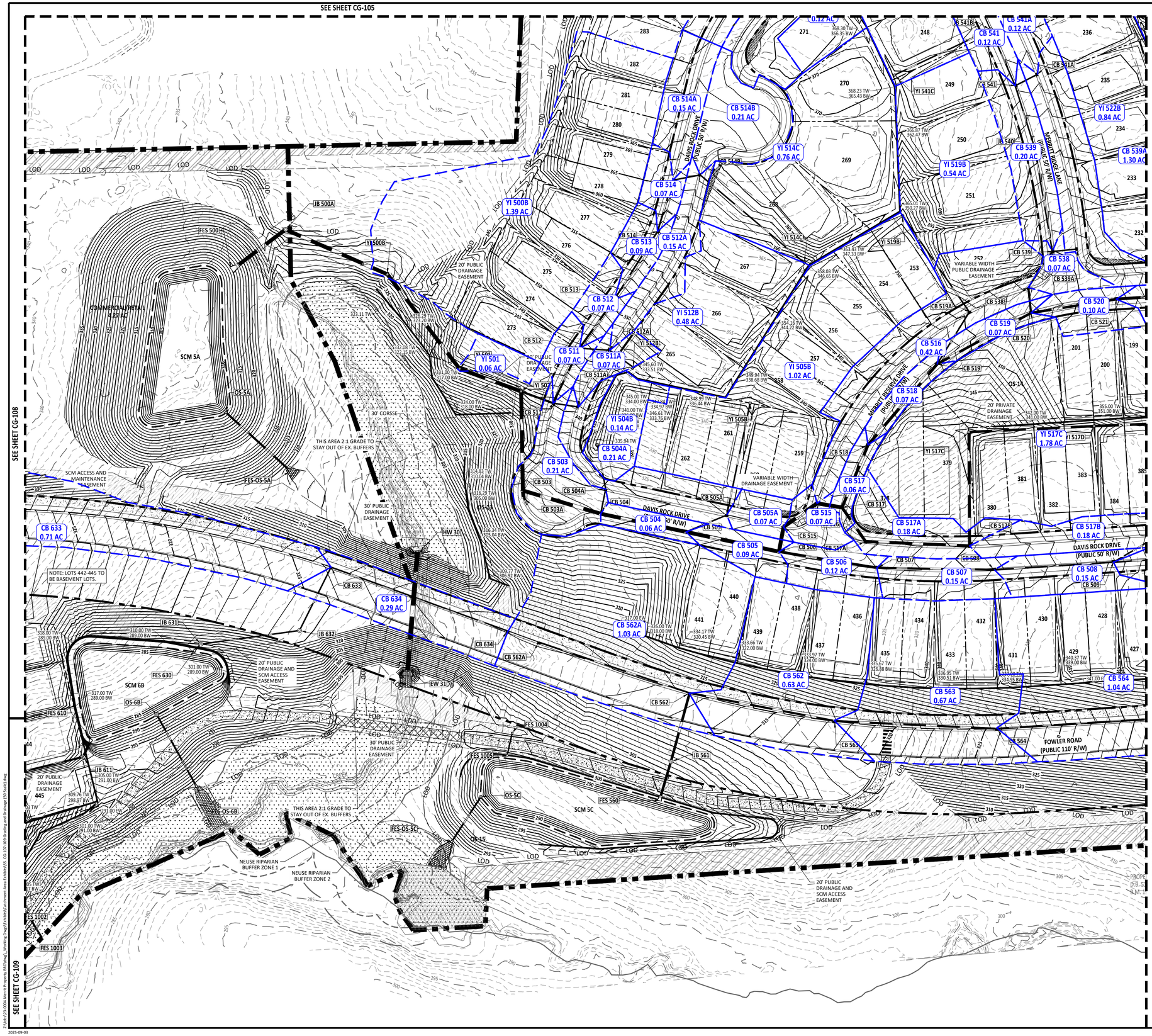
2025-09-03

SEE SHEET CG-105

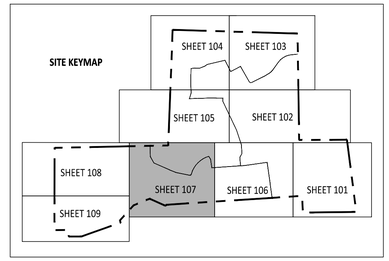
SEE SHEET CG-108

SEE SHEET CG-109

SEE SHEET CG-106



SITE KEYMAP



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering

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Raleigh, NC 27607
919-469-1101

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JAMES M. MAJOR 36528 ENGINEER

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MERRITT RESERVE

CATCHMENT AREAS

ROLESVILLE RD
WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
CHECKED BY:	JK
DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

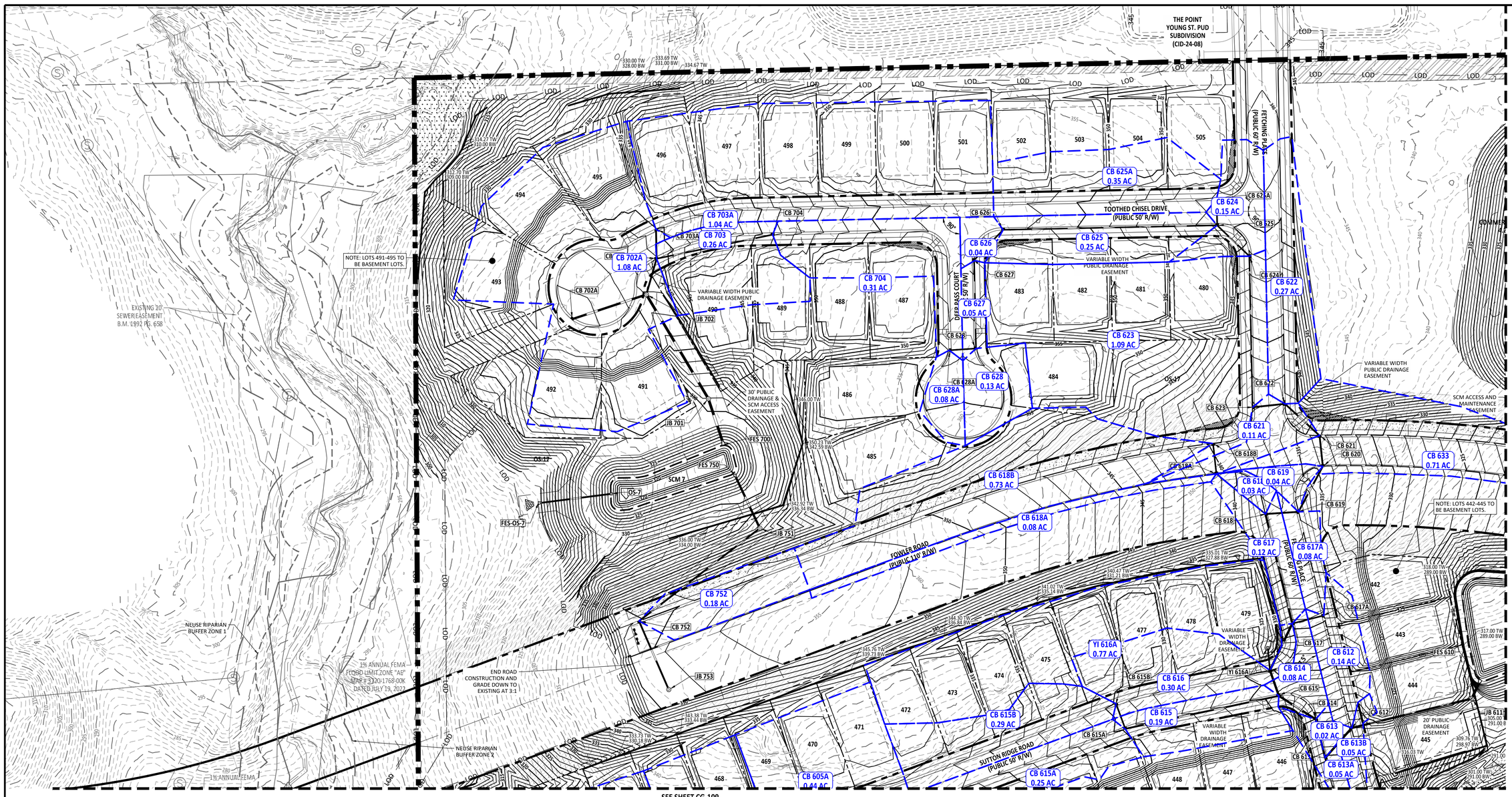
CG-107

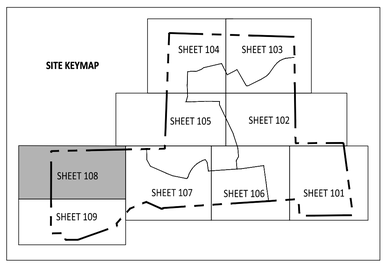
North Carolina 811 811

*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

Z:\Jobs\23-0004 Merritt Property (BSP)\Revit_Working Dwgs\Exhibits\Catchment Area Exhibits\SS_CG-107-109 Grading and Drainage (SS Static).dwg

2025-09-03





GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

PROJECT NUMBER = CID-25-02

North Carolina 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

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4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

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JAKOB P. KLEIN 36528 ENGINEER

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MERRITT RESERVE

CATCHMENT AREAS

ROLESVILLE RD
WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
CHECKED BY:	JK
DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

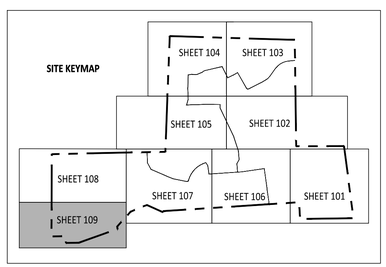
CG-108

Z:\Jobs\23-0004 Merritt Property (BSP)\wp_ Working Dwgs\Exhibits\Catchment Area Exhibits\SS_CG-107-109 Grading and Drainage (50 Scale).dwg

2025-09-03



SITE KEYMAP



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft

PROJECT NUMBER = CID-25-02

AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
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919-469-1101

NORTH CAROLINA ENGINEERING CERTIFICATION OF AUTHORIZATION AMERICAN ENGINEERING ASSOCIATES SOUTHEAST C-3861

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MERRITT RESERVE

CATCHMENT AREAS

ROLESVILLE RD
WAKE COUNTY NC 27312

JOB NUMBER:	23-0004
CHECKED BY:	JK
DRAWN BY:	DH/MA/LL
DATE:	08/04/2025

SHEET TITLE:

CATCHMENT AREAS

SHEET NO.:

CG-109

North Carolina 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htms

Z:\Job\23-0004 Merritt Property BRDP\Revit_Working Dwgs\Exhibits\Catchment Area Exhibit\SSS_CG-107-109 Grading and Drainage (50 Scale).dwg

2025-09-03

Merritt Reserve SCM Sizing Calculations

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #1 Calcs Daniel Huckaby 8/4/2025 POI #1

PreDev - POI #1			**1653661**	**S.F.**	**37.96**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils	326337	7.49	61	12.04	
	Pasture (Lightly Grazed) - C Soils	188532	4.33	74	8.44	
	Pasture (Lightly Grazed) - D Soils	34829	0.80	80	1.68	
	Woods/Wetlands-A Soils	0	0.00	36	0.00	
	Woods/Wetalnds-B Soils	152346	3.50	60	5.53	
	Woods/Wetlands-C Soils	280637	6.44	73	12.39	
	Woods/Wetalnds-D Soils	660142	15.15	79	31.54	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	10944	0.25	98	0.65	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**37.97**	Composite "CN"	**72.26**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1420**	**55.31**	**7.28**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #2 Calcs Daniel Huckaby 8/4/2025 POI #2

PreDev - POI #2			**1047856**	**S.F.**	**24.06**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils	72145	1.66	61	4.20	
	Pasture (Lightly Grazed) - C Soils	316063	7.26	74	22.32	
	Pasture (Lightly Grazed) - D Soils	168367	3.87	80	12.85	
	Woods/Wetlands-A Soils	0	0.00	36	0.00	
	Woods/Wetalnds-B Soils	62836	1.44	60	3.60	
	Woods/Wetlands-C Soils	133633	3.07	73	9.31	
	Woods/Wetalnds-D Soils	271015	6.22	79	20.43	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	22900	0.53	98	2.14	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**24.03**	Composite "CN"	**74.86**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**2170**	**42.54**	**13.14**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #3 Calcs Daniel Huckaby 8/4/2025 POI #3

PreDev - POI #3			**405829**	**S.F.**	**9.32**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils	139113	3.19	61	20.91	
	Pasture (Lightly Grazed) - C Soils	107458	2.47	74	19.59	
	Pasture (Lightly Grazed) - D Soils	132816	3.05	80	26.18	
	Woods/Wetlands-A Soils		0.00	36	0.00	
	Woods/Wetalnds-B Soils		0.00	60	0.00	
	Woods/Wetlands-C Soils	10999	0.25	73	1.98	
	Woods/Wetalnds-D Soils	10113	0.23	79	1.97	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	5330	0.12	98	1.29	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**9.32**	Composite "CN"	**71.92**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1081**	**5.21**	**13.19**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #4 Calcs Daniel Huckaby 8/4/2025 POI #4

PreDev - POI #4			**782618**	**S.F.**	**17.97**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils	36183	0.83	61	2.82	
	Pasture (Lightly Grazed) - C Soils	57811	1.33	74	5.47	
	Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
	Woods/Wetlands-A Soils	0	0.00	36	0.00	
	Woods/Wetalnds-B Soils	365668	8.39	60	28.03	
	Woods/Wetlands-C Soils	148604	3.41	73	13.86	
	Woods/Wetalnds-D Soils	169700	3.90	79	17.13	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	4652	0.11	98	0.58	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**17.97**	Composite "CN"	**67.89**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**599**	**41.8**	**2.99**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #5 Calcs Daniel Huckaby 8/4/2025 POI #5

PreDev - POI #5			**1397336**	**S.F.**	**32.08**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
	Pasture (Lightly Grazed) - C Soils	32699	0.75	74	1.73	
	Pasture (Lightly Grazed) - D Soils	0	0.00	80	0.00	
	Woods/Wetlands-A Soils	0	0.00	36	0.00	
	Woods/Wetalnds-B Soils	185859	4.27	60	7.98	
	Woods/Wetlands-C Soils	116168	2.67	73	6.07	
	Woods/Wetalnds-D Soils	1057064	24.27	79	59.76	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	5546	0.13	98	0.39	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**32.08**	Composite "CN"	**75.93**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**2078**	**113.76**	**8.56**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #6 Calcs Daniel Huckaby 8/4/2025 POI #6

PreDev - POI #6			**768646**	**S.F.**	**17.65**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
	Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
	Pasture (Lightly Grazed) - D Soils	0	0.00	80	0.00	
	Woods/Wetlands-A Soils	0	0.00	36	0.00	
	Woods/Wetalnds-B Soils		0.00	60	0.00	
	Woods/Wetlands-C Soils		0.00	73	0.00	
	Woods/Wetalnds-D Soils	768068	17.63	79	78.94	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof	578	0.01	98	0.07	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**17.65**	Composite "CN"	**79.01**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1947**	**74**	**9.37**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PreDev POI #7 Calcs Daniel Huckaby 8/4/2025 POI #7

PreDev - POI #7			**577248**	**S.F.**	**13.25**	**Ac**
	Land Use	**Area, SF**	**Area, AC**	CN	Wtd. CN	
	Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
	Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
	Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
	Pasture (Lightly Grazed) - D Soils	0	0.00	80	0.00	
	Woods/Wetlands-A Soils		0.00	36	0.00	
	Woods/Wetalnds-B Soils		0.00	60	0.00	
	Woods/Wetlands-C Soils		0.00	73	0.00	
	Woods/Wetalnds-D Soils	577248	13.25	79	79.00	
	Open Space - A Soils		0.00	49	0.00	
	Open Space - B Soils		0.00	69	0.00	
	Open Space - C Soils		0.00	79	0.00	
	Open Space - D Soils		0.00	84	0.00	
	Compacted Soil/Roof		0.00	98	0.00	
	Sidewalks		0.00	98	0.00	
	Driveways (in ROW)		0.00	98	0.00	
	Roadway + C&G (not Sidewalks)		0.00	98	0.00	
	Open Water		0.00	98	0.00	
	Total (Check):		**13.25**	Composite "CN"	**79.00**	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**665**	**67.71**	**2.80**	Minutes

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #1A Daniel Huckaby 8/4/2025 SCM #1A

PostDev DA to SCM #1A			644665	S.F.	14.80	Ac	
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**		
	Roadways + C&G (not Sidewalks)	94219	2.16	98	14.32		
	Roofs (Impervious on lots)	203467	4.67	98	30.93		
	Driveways (in ROW)	8700	0.20	98	1.32		
	Sidewalks	27873	0.64	98	4.24		
	Openspace- A Soils	0	0.00	39	0.00		
	Openspace- B Soils	92452	2.12	61	8.75		
	Openspace- C Soils	48678	1.12	74	5.59		
	Openspace- D Soils	155240	3.56	80	19.26		
	Woods/Wetlands-A Soils		0.00	30	0.00		
	Woods/Wetlands-B Soils		0.00	55	0.00		
	Woods/Wetlands-C Soils		0.00	70	0.00		
	Woods/Wetlands-D Soils		0.00	77	0.00		
	Lands Taken Up by BMP	14036	0.32	98	2.13		
	Open Water (Existing Ponds)		0.00	98	0.00		
	Total (Check):		**14.80**	Composite "CN"	**86.55**		
			Percent Impervious		54.03%		
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**		
	Tc, min.= 60*.00013*L^.77/S^.385		**1540**	**43**	**8.81**	Minutes	7.67
	Percent Impervious			54.03%			
			Pond Design Depth, ft.:	4.50			
	SA/DA Factor:			**1.50**	From NCDEQ SA/DA Chart		
	Min.SCM Surface Area:			9661	S.F.	OK	
SCM #1A Design Elements:			V_{PP}, c.f.	Perimeter, ft.	V_{shelf}, c.f.	A_{bottom}, s.f.	D Avg, ft
	D_{avg} = VPP-V_{shelf} /A shelf bottom		44,493	417 ft	312.75	8,959	4.93 OK
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
	Forebay Volume is 15-20% of Main Pool Volume VPP		V_{PP}, c.f.	V_{FB}, c.f.	V_{FB}/V_{PP} (%)		
			44,493	7,532 ft	16.93	OK	
Treatment Volume Requirement:							
	DA to SCM:		14.799	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		54.03%				
Total Runoff for 1" Event= S in Ac-Ft:	Rv=0.05+.009*(%Impervious)		0.54	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.66	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. = W_{QV}		28808.23				
Treatment Volume Provided, Cu.Ft.	Treatment Volume to Be Stored:		28808	Cu. FT			
	Volume Achieved at Elev.		**348.56**	Orifice Dia	**2.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		**346.5**	Elev Diff, H., ft.	2.06		
	Effective Operating Head (1/3 H)		0.6782		Q=.62*8.02(H^0.5)*A,sq.ft.		4
	Hours to Drawdown Treatm't Vol.		**57.35**	Hrs., (48 Hr Min.)			48

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	4.0	5.0	6.0	7.0	≥8.0
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

Interpolation Table, should be automatic

	4	5		
50%	1.51	1.31	1.41	
60%	1.77	1.49	1.63	
	1.615	1.382	1.499	1.499

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	201101	0.311947	92451.59
C Soils	105885	0.164248	48678.21
D Soils	334679	0.519152	153861
		296370	

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #1B Daniel Huckaby 8/4/2025 SCM #1B

PostDev DA to SCM #1B			527680	S.F.	12.11	Ac	
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**		
	Roadways + C&G (not Sidewalks)	55988	1.29	98	10.40		
	Roofs (Impervious on lots) + Assumed 50% of Amenity Area (25,000 SF)	185811	4.27	98	34.51		
	Driveways (in ROW)	5500	0.13	98	1.02		
	Sidewalks	17429	0.40	98	3.24		
	Openspace- A Soils	0	0.00	39	0.00		
	Openspace- B Soils	102343	2.35	61	11.83		
	Openspace- C Soils	111926	2.57	74	15.70		
	Openspace- D Soils	39803	0.91	80	6.03		
	Woods/Wetlands-A Soils		0.00	30	0.00		
	Woods/Wetlands-B Soils		0.00	55	0.00		
	Woods/Wetlands-C Soils		0.00	70	0.00		
	Woods/Wetlands-D Soils		0.00	77	0.00		
	Lands Taken Up by BMP	8880	0.20	98	1.65		
	Open Water (Existing Ponds)		0.00	98	0.00		
	Total (Check):		**12.11**	Composite "CN"	**84.38**		
			Percent Impervious		51.85%		
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**		
	Tc, min.= 60*.00013*L^.77/S^.385		**1578**	**22**	**11.72**	Minutes	
	Percent Impervious			51.85%			
			Pond Design Depth, ft.:	4.50			
	SA/DA Factor:			**1.45**	From NCDEQ SA/DA Chart		
	Min.SCM Surface Area:			7655	S.F.	OK	
SCM #1B Design Elements:			VPP, c.f.	Perimeter, ft.	V_{shelf}, c.f.	A_{bottom}, s.f.	D Avg, ft
	D_{avg} = VPP-V_{shelf} /A shelf bottom		24,503	8169	4,492.00	4,285	4.67
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
	Forebay Volume is 15-20% of Main Pool Volume VPP		V_{PP}, c.f.	V_{FB}, c.f.	V_{FB}/V_{PP} (%)		
			24,503	36,040 ft	147.08	Resize Forebay	
Treatment Volume Requirement:							
	DA to SCM:		12.114	Ac.			
Rv=0.05+.009*(%Impervious)	Composite % Impervious (Above) =		51.85%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.52	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.52	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		22719.27				
Treatment Volume Provided, Cu.	Treatment Volume to Be Stored:		22719	Cu. FT			
	Volume Achieved at Elev.		**377.50**	Orifice Dia	**2.00**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		375.5	Elev Diff, H., ft.	2.00490471		
	Effective Operating Head (1/3 H)		0.661618554		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**71.56**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

6.08

Interpolation Table, should be automatic

	4	5		
50%	1.51	1.31	1.41	
60%	1.77	1.49	1.63	
	1.558	1.343	1.451	1.451

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	212556	0.402812	102343.3
C Soils	232458	0.440528	111925.9
D Soils	82610	0.156553	39775.79
		254072	

16052 377

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #1C Daniel Huckaby 8/4/2025 SCM #1C

PostDev DA to SCM #1C			109845	S.F.	2.52	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks)	16545	0.38	98	14.76	
	No Future Park Impevious assumed	0	0.00	98	0.00	
	Driveways (in ROW)	0	0.00	98	0.00	
	Sidewalks	4726	0.11	98	4.22	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	0	0.00	61	0.00	
	Openspace- C Soils	62918	1.44	74	42.39	
	Openspace- D Soils	7456	0.17	80	5.43	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils		0.00	55	0.00	
	Woods/Wetlands-C Soils	15000	0.34	70	9.56	
	Woods/Wetlands-D Soils		0.00	77	0.00	
	Lands Taken Up by BMP	3200	0.07	98	2.85	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		**2.52**	Composite "CN"	**79.21**	
			Percent Impervious		22.28%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**641**	**25.8**	**3.90**	Minutes
	Percent Impervious			22.28%		
			Pond Design Depth, ft.:	4.50		
	SA/DA Factor:			**0.70**	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			774	S.F.	OK

SCM #1C Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		5,717	2037	1,152.00	885	5.16
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
Treatment Volume Requirement:							
	DA to SCM:		2.522	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		22.28%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.25	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.05	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		2293.01				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		2293	Cu. FT			
	Volume Achieved at Elev.		**361.13**	Orifice Dia	**1.00**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		360.5	Elev Diff, H., ft.	0.63		
	Effective Operating Head (1/3 H)		0.206643091		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**51.69**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	4.0	5.0	6.0	7.0	≥8.0
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

0.49

Interpolation Table, should be automatic

	4	5		
20%	0.69	0.61	0.65	
30%	0.94	0.84	0.89	
	0.747	0.662	0.705	0.705

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	0	0	0
C Soils	98207	0.894051	62917.92
D Soils	11638	0.105949	7456.075
		70374	

1762 361

5970 362

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #1 Bypass #1

Daniel Huckaby 8/4/2025 POI #1 Bypass #1

PostDev POI #1 Bypass #1

		118455	S.F.	2.72	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils	25787	0.59	80	17.42	
Woods/Wetlands-A Soils		0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils		0.00	73	0.00	
Woods/Wetlands-D Soils	17909	0.41	79	11.94	
Open Space - A Soils		0.00	49	0.00	
Open Space - B Soils	6613	0.15	69	3.85	
Open Space - C Soils	68146	1.56	79	45.45	
Open Space - D Soils		0.00	84	0.00	
Roadways + C&G (not Sidewalks)		0.00	98	0.00	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks		0.00	98	0.00	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**2.72**	Composite "CN"	**78.66**	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**345**	**12**	**2.56**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #1 Bypass #2

Daniel Huckaby 8/4/2025 POI #1 Bypass #2

PostDev POI #1 Bypass #2

		158414	S.F.	3.64	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils	0	0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
Woods/Wetlands-A Soils		0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils	9452	0.22	73	4.36	
Woods/Wetlands-D Soils	52215	1.20	79	26.04	
Open Space - A Soils	0	0.00	49	0.00	
Open Space - B Soils	12260	0.28	69	5.34	
Open Space - C Soils	20183	0.46	79	10.07	
Open Space - D Soils	64304	1.48	84	34.10	
Roadways + C&G (not Sidewalks)		0.00	98	0.00	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks		0.00	98	0.00	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**3.64**	Composite "CN"	**79.90**	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**1147**	**31.45**	**7.07**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #1 Bypass #3

Daniel Huckaby 8/4/2025 POI #1 Bypass #3

PostDev POI #1 Bypass #3

		196700	S.F.	4.52	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
Woods/Wetlands-A Soils	0	0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils	1326	0.03	73	0.49	
Woods/Wetlands-D Soils	140456	3.22	79	56.41	
Open Space - A Soils	0	0.00	49	0.00	
Open Space - B Soils		0.00	69	0.00	
Open Space - C Soils	9941	0.23	79	3.99	
Open Space - D Soils	36949	0.85	84	15.78	
Roadways + C&G (not Sidewalks)	4390	0.10	98	2.19	
Roofs (Impervious on lots)	1664	0.04	98	0.83	
Driveways (in ROW)	400	0.01	98	0.20	
Sidewalks	1574	0.04	98	0.78	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**4.52**	Composite "CN"	**80.67**	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**1055**	**24**	**7.12**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #2 Daniel Huckaby 8/4/2025 SCM #2

PostDev DA to SCM #2			634829	S.F.	14.57	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks)	69828	1.60	98	10.78	
	Roofs (Impervious on lots)	191273	4.39	98	29.53	
	Driveways (in ROW)	5500	0.13	98	0.85	
	Sidewalks	20585	0.47	98	3.18	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	97876	2.25	61	9.40	
	Openspace- C Soils	106236	2.44	74	12.38	
	Openspace- D Soils	129214	2.97	80	16.28	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils		0.00	55	0.00	
	Woods/Wetlands-C Soils		0.00	70	0.00	
	Woods/Wetlands-D Soils		0.00	77	0.00	
	Lands Taken Up by BMP	14317	0.33	98	2.21	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		**14.57**	Composite "CN"	**84.62**	
			Percent Impervious		47.49%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1320**	**40.5**	**7.54**	Minutes
	Percent Impervious			47.49%		
			Pond Design Depth, ft.:	4.50		
	SA/DA Factor:			**1.35**	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			8561	S.F.	OK

SCM #2 Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		21,646	7133	4,050.00	3,811	4.62
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
Treatment Volume Requirement:							
	DA to SCM:		14.574	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		47.49%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.48	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.58	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		25257.85				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		25258	Cu. FT			
	Volume Achieved at Elev.		**353.08**	Orifice Dia	**2.00**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		351.5	Elev Diff, H., ft.	1.58		
	Effective Operating Head (1/3 H)		0.520285346		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**89.71**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

6.59

Interpolation Table, should be automatic

	4	5		
40%	1.24	1.09	1.165	
50%	1.51	1.31	1.41	
	1.442	1.255	1.349	1.349

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	186407	0.293633	97875.65
C Soils	202330	0.318716	106236.2
D Soils	246092	0.387651	129214.1
		333326	

1.00

23945 353
41079 354
1312.85

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #2 Bypass #1

Daniel Huckaby 8/4/2025 POI #2 Bypass #1

PostDev POI #2 Bypass #1

		16294	S.F.	0.37	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.0	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.0	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.0	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.0	80	0.00	
Woods/Wetlands-A Soils	0	0.0	36	0.00	
Woods/Wetlands-B Soils		0.0	60	0.00	
Woods/Wetlands-C Soils	803	0.0	73	3.60	
Woods/Wetlands-D Soils	5944	0.1	79	28.82	
Open Space - A Soils	0	0.0	49	0.00	
Open Space - B Soils		0.0	69	0.00	
Open Space - C Soils		0.0	79	0.00	
Open Space - D Soils	9547	0.2	84	49.22	
Roadways + C&G (not Sidewalks)		0.0	98	0.00	
Roofs (Impervious on lots)		0.0	98	0.00	
Driveways (in ROW)		0.0	98	0.00	
Sidewalks		0.0	98	0.00	
Open Water (Existing Ponds)		0.0	98	0.00	
Total (Check):		**0.37**	Composite "CN"	**81.63**	
		Percent Impervious		0%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**188**	**15.3**	**1.16**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #3 Daniel Huckaby 8/4/2025 POI #3

PostDev - POI #3

		141123	**S.F.**	**3.24**	**Ac**
Land Use	**Area, SF**	**Area, AC**	**CN**	**Wtd. CN**	
Pasture (Lightly Grazed) - A Soils		0.0	39	0.00	
Pasture (Lightly Grazed) - B Soils	34600	0.8	61	14.96	
Pasture (Lightly Grazed) - C Soils	48265	1.1	74	25.31	
Pasture (Lightly Grazed) - D Soils	58258	1.3	80	33.03	
Woods/Wetlands-A Soils		0.0	36	0.00	
Woods/Wetalnds-B Soils		0.0	60	0.00	
Woods/Wetlands-C Soils		0.0	73	0.00	
Woods/Wetalnds-D Soils		0.0	79	0.00	
Open Space - A Soils		0.0	49	0.00	
Open Space - B Soils		0.0	69	0.00	
Open Space - C Soils		0.0	79	0.00	
Open Space - D Soils		0.0	84	0.00	
Compacted Soil/Roof		0.0	98	0.00	
Sidewalks		0.0	98	0.00	
Driveways (in ROW)		0.0	98	0.00	
Roadway + C&G (not Sidewalks)		0.0	98	0.00	
Open Water		0.0	98	0.00	
Total (Check):		**3.24**	Composite "CN"	**73.29**	
		Percent Impervious		0%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**496**	**3.9**	**6.00**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #4 Daniel Huckaby 8/4/2025 SCM #4

PostDev DA to SCM #4			859537	S.F.	19.73	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks) + Offsite Dirt Road	153846	3.53	98	17.54	
	Roofs (Impervious on lots)	132361	3.04	98	15.09	
	Driveways (in ROW)	8700	0.20	98	0.99	
	Sidewalks	40195	0.92	98	4.58	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	186709	4.29	61	13.25	
	Openspace- C Soils	137338	3.15	74	11.82	
	Openspace- D Soils	65093	1.49	80	6.06	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils	122505	2.81	55	7.84	
	Woods/Wetlands-C Soils		0.00	70	0.00	
	Woods/Wetlands-D Soils		0.00	77	0.00	
	Lands Taken Up by BMP	12790	0.29	98	1.46	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		**19.73**	Composite "CN"	**78.64**	
			Percent Impervious		40.47%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1434**	**31.5**	**9.14**	Minutes
	Percent Impervious			40.47%		
			Pond Design Depth, ft.:	3.50		
	SA/DA Factor:			**1.39**	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			11931	S.F.	OK

SCM #4 Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		33,183	7439	3,986.75	4,367	6.69
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**3.50**
Treatment Volume Requirement:							
	DA to SCM:		19.732	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		40.47%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.41	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.68	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		29673.30				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		29673	Cu. FT			
	Volume Achieved at Elev.		**362.53**	Orifice Dia	**2.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		360.5	Elev Diff, H., ft.	2.03		
	Effective Operating Head (1/3 H)		0.670186412		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**59.43**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

7.69

Interpolation Table, should be automatic

	3	4		
40%	1.51	1.24	1.375	
50%	1.79	1.51	1.65	
	1.523	1.253	1.388	1.388

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	412405	0.479799	186709
C Soils	303353	0.352926	137337.6
D Soils	143192	0.166592	64827.62
		389140	

	40	
354.92	354.12	

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #4 Bypass #1

Daniel Huckaby 8/4/2025 POI #4 Bypass #1

PostDev POI #4 Bypass #1

		159836	S.F.	3.67	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.0	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.0	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.0	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.0	80	0.00	
Woods/Wetlands-A Soils	0	0.0	36	0.00	
Woods/Wetlands-B Soils	72703	1.7	60	27.29	
Woods/Wetlands-C Soils	10483	0.2	73	4.79	
Woods/Wetlands-D Soils	19734	0.5	79	9.75	
Open Space - A Soils	0	0.0	49	0.00	
Open Space - B Soils	17529	0.4	69	7.57	
Open Space - C Soils	13019	0.3	79	6.43	
Open Space - D Soils	26368	0.6	84	13.86	
Roadways + C&G (not Sidewalks)		0.0	98	0.00	
Roofs (Impervious on lots)		0.0	98	0.00	
Driveways (in ROW)		0.0	98	0.00	
Sidewalks		0.0	98	0.00	
Open Water (Existing Ponds)		0.0	98	0.00	
Total (Check):		**3.67**	Composite "CN"	**69.69**	
		Percent Impervious		0%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**145**	**18.5**	**0.80**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #5A Daniel Huckaby 8/4/2025 SCM #5A

PostDev DA to SCM #5A			1194964	S.F.	27.43	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks)	142665	3.28	98	11.70	
	Roofs (Impervious on lots)	406206	9.33	98	33.31	
	Driveways (in ROW)	15400	0.35	98	1.26	
	Sidewalks	45384	1.04	98	3.72	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	29197	0.67	61	1.49	
	Openspace- C Soils	127692	2.93	74	7.91	
	Openspace- D Soils	363007	8.33	80	24.30	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils		0.00	55	0.00	
	Woods/Wetlands-C Soils		0.00	70	0.00	
	Woods/Wetlands-D Soils	50993	1.17	77	3.29	
	Lands Taken Up by BMP	14419	0.33	98	1.18	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		**27.43**	Composite "CN"	**88.17**	
			Percent Impervious		52.23%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		**1996**	**75.5**	**9.57**	Minutes
	Percent Impervious			52.23%		
			Pond Design Depth, ft.:	6.50		
	SA/DA Factor:			**1.08**	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			12893	S.F.	OK

SCM #5A Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		43,618	16358	8,654.50	12,757	2.74
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**6.50**
Treatment Volume Requirement:							
	DA to SCM:		27.433	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		52.23%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.52	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		1.19	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		51784.57				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		51785	Cu. FT			
	Volume Achieved at Elev.		**313.47**	Orifice Dia	**3.00**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		310.5	Elev Diff, H., ft.	2.97		
	Effective Operating Head (1/3 H)		0.97850201		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**59.61**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

14.00

Interpolation Table, should be automatic

	6	7		
50%	1.13	0.95	1.04	
60%	1.31	1.12	1.215	
	1.170	0.988	1.079	1.079

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	67109	0.05616	29197.34
C Soils	293496	0.245611	127692.3
D Soils	834293	0.698174	362978.7
		519897	

42527 313

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #5C Daniel Huckaby 8/4/2025 SCM #5C

PostDev DA to SCM #5C			546543	S.F.	12.55	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks)	182994	4.20	98	32.81	
	Roofs (Impervious on lots)	75600	1.74	98	13.56	
	Driveways (in ROW)		0.00	98	0.00	
	Sidewalks	84999	1.95	98	15.24	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	90215	2.07	61	10.07	
	Openspace- C Soils	16670	0.38	74	2.26	
	Openspace- D Soils	81671	1.87	80	11.95	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils		0.00	55	0.00	
	Woods/Wetlands-C Soils		0.00	70	0.00	
	Woods/Wetlands-D Soils		0.00	77	0.00	
	Lands Taken Up by BMP	14394	0.33	98	2.58	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		12.55	Composite "CN"	88.47	
			Percent Impervious		65.50%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		2930	97.5	13.51	Minutes
	Percent Impervious			65.50%		
			Pond Design Depth, ft.:	5.50		
	SA/DA Factor:			1.55	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			8493	S.F.	OK

SCM #5C Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		18,735	6328	3,515.75	3,187	4.78
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**5.50**
Treatment Volume Requirement:							
	DA to SCM:		12.547	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		65.50%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.64	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.67	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		29126.29				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		29126	Cu. FT			
	Volume Achieved at Elev.		**293.28**	Orifice Dia	**2.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		291.5	Elev Diff, H., ft.	1.77790553		
	Effective Operating Head (1/3 H)		0.586708825		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**62.35**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

7.89

Interpolation Table, should be automatic

	5	6		
60%	1.49	1.31	1.4	
70%	1.8	1.56	1.68	
	1.661	1.448	1.554	1.554

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	261495	0.478453	90215.14
C Soils	48320	0.08841	16670.28
D Soils	301210	0.551119	103916.7
		188556	

24271	293
41742	294

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #5 Bypass #1

Daniel Huckaby 8/4/2025 POI #5 Bypass #1

PostDev POI #5 Bypass #1

		117981	S.F.	2.71	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
Woods/Wetlands-A Soils	0	0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils		0.00	73	0.00	
Woods/Wetlands-D Soils	24063	0.55	79	16.11	
Open Space - A Soils	0	0.00	49	0.00	
Open Space - B Soils	12846	0.29	69	7.51	
Open Space - C Soils		0.00	79	0.00	
Open Space - D Soils	81072	1.86	84	57.72	
Roadways + C&G (not Sidewalks)		0.00	98	0.00	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks		0.00	98	0.00	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**2.71**	Composite "CN"	**81.35**	
		Percent Impervious		0%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**580**	**51.2**	**2.67**	Minutes
Percent Impervious			0.0%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #5 Bypass #2

Daniel Huckaby 8/4/2025 POI #5 Bypass #2

PostDev POI #5 Bypass #2

		95350	S.F.	2.19	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
Woods/Wetlands-A Soils	0	0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils		0.00	73	0.00	
Woods/Wetlands-D Soils	64435	1.48	79	53.39	
Open Space - A Soils	0	0.00	49	0.00	
Open Space - B Soils		0.00	69	0.00	
Open Space - C Soils		0.00	79	0.00	
Open Space - D Soils	29668	0.68	84	26.14	
Roadways + C&G (not Sidewalks)		0.00	98	0.00	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks	1247	0.03	98	1.28	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**2.19**	Composite "CN"	**80.80**	
		Percent Impervious		1%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**299**	**25**	**1.63**	Minutes
Percent Impervious			1.3%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #6A Daniel Huckaby 8/4/2025 SCM #6A

PostDev DA to SCM #6A			282312	S.F.	6.48	Ac	
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**		
	Roadways + C&G (not Sidewalks)	28603	0.66	98	9.93		
	Roofs (Impervious on lots)	66103	1.52	98	22.95		
	Driveways (in ROW)	1800	0.04	98	0.62		
	Sidewalks	8150	0.19	98	2.83		
	Openspace- A Soils	0	0.00	39	0.00		
	Openspace- B Soils	0	0.00	61	0.00		
	Openspace- C Soils	0	0.00	74	0.00		
	Openspace- D Soils	174224	4.00	80	49.37		
	Woods/Wetlands-A Soils		0.00	30	0.00		
	Woods/Wetlands-B Soils		0.00	55	0.00		
	Woods/Wetlands-C Soils		0.00	70	0.00		
	Woods/Wetlands-D Soils		0.00	77	0.00		
	Lands Taken Up by BMP	3432	0.08	98	1.19		
	Open Water (Existing Ponds)		0.00	98	0.00		
	Total (Check):		**6.48**	Composite "CN"	**86.89**		
			Percent Impervious		38.29%		
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**		
	Tc, min.= 60*.00013*L^.77/S^.385		**652**	**37**	**3.46**	Minutes	2.40
	Percent Impervious			38.29%			
			Pond Design Depth, ft.:	4.50			
	SA/DA Factor:			**1.12**	From NCDEQ SA/DA Chart		
	Min.SCM Surface Area:			3156	S.F.	OK	

SCM #6A Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		5,809	2537	1,492.00	450	9.59
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
Treatment Volume Requirement:							
	DA to SCM:		6.481	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		38.29%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.39	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.21	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		9282.90				
Treatment Volume Provided, Cu.	Treatment Volume to Be Stored:		9283	Cu. FT			
	Volume Achieved at Elev.		**278.42**	Orifice Dia	**1.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		276.5	Elev Diff, H., ft.	1.92		
	Effective Operating Head (1/3 H)		0.632117707		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**53.18**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

Interpolation Table, should be automatic

	4	5		
30%	0.94	0.84	0.89	
40%	1.24	1.09	1.165	
	1.189	1.047	1.118	1.118

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	0	0	0
C Soils	0	0	0
D Soils	259337	0.918618	160045.4
		174224	

6826	278	
12739	279	

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #6B Daniel Huckaby 8/4/2025 SCM #6B

PostDev DA to SCM #6B			420674	S.F.	9.66	Ac
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
	Roadways + C&G (not Sidewalks)	120606	2.77	98	28.10	
	Roofs (Impervious on lots)	65502	1.50	98	15.26	
	Driveways (in ROW)	3100	0.07	98	0.72	
	Sidewalks	42282	0.97	98	9.85	
	Openspace- A Soils	0	0.00	39	0.00	
	Openspace- B Soils	0	0.00	61	0.00	
	Openspace- C Soils	0	0.00	74	0.00	
	Openspace- D Soils	177382	4.07	80	33.73	
	Woods/Wetlands-A Soils		0.00	30	0.00	
	Woods/Wetlands-B Soils		0.00	55	0.00	
	Woods/Wetlands-C Soils		0.00	70	0.00	
	Woods/Wetlands-D Soils		0.00	77	0.00	
	Lands Taken Up by BMP	11802	0.27	98	2.75	
	Open Water (Existing Ponds)		0.00	98	0.00	
	Total (Check):		9.66	Composite "CN"	90.41	
			Percent Impervious		57.83%	
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
	Tc, min.= 60*.00013*L^.77/S^.385		1403	66.6	6.68	Minutes
	Percent Impervious			57.83%		
			Pond Design Depth, ft.:	4.50		
	SA/DA Factor:			1.58	From NCDEQ SA/DA Chart	
	Min.SCM Surface Area:			6657	S.F.	OK

SCM #6B Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		40,947	10489	5,572.75	7,265	4.87
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
Treatment Volume Requirement:							
	DA to SCM:		9.657	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		57.83%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.57	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.46	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		19999.71				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		20000	Cu. FT			
	Volume Achieved at Elev.		**290.02**	Orifice Dia	**2.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		288.5	Elev Diff, H., ft.	1.52		
	Effective Operating Head (1/3 H)		0.50282433		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**46.24**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	4.0	5.0	6.0	7.0	≥8.0
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

5.31

Interpolation Table, should be automatic

	4	5		
50%	1.51	1.31	1.41	
60%	1.77	1.49	1.63	
	1.714	1.451	1.582	1.582

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	0	0	0
C Soils	0	0	0
D Soils	531758	1.264062	224221.8
		177382	

19669 290

33617 291

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #6 Bypass #1 Daniel Huckaby 8/4/2025 POI #6 Bypass #1

PostDev POI #6 Bypass #1

		205399	S.F.	4.72	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils		0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils		0.00	80	0.00	
Woods/Wetlands-A Soils	0	0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils		0.00	73	0.00	
Woods/Wetlands-D Soils	58834	1.35	79	22.63	
Open Space - A Soils	0	0.00	49	0.00	
Open Space - B Soils		0.00	69	0.00	
Open Space - C Soils		0.00	79	0.00	
Open Space - D Soils	132465	3.04	84	54.17	
Roadways + C&G (not Sidewalks)		0.00	98	0.00	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks	14100	0.32	98	6.73	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**4.72**	Composite "CN"	**83.53**	
		Percent Impervious		7%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**1551**	**50**	**8.38**	Minutes
Percent Impervious			6.9%		

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev to SCM #7 Daniel Huckaby 8/4/2025 SCM #7

PostDev DA to SCM #7			232057	S.F.	5.33	Ac	
	Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**		
	Roadways + C&G (not Sidewalks)	28157	0.65	98	11.89		
	Roofs (Impervious on lots)	57070	1.31	98	24.10		
	Driveways (in ROW)	1500	0.03	98	0.63		
	Sidewalks	10373	0.24	98	4.38		
	Openspace- A Soils	0	0.00	39	0.00		
	Openspace- B Soils	0	0.00	61	0.00		
	Openspace- C Soils	0	0.00	74	0.00		
	Openspace- D Soils	130907	3.01	80	45.13		
	Woods/Wetlands-A Soils		0.00	30	0.00		
	Woods/Wetlands-B Soils		0.00	55	0.00		
	Woods/Wetlands-C Soils		0.00	70	0.00		
	Woods/Wetlands-D Soils		0.00	77	0.00		
	Lands Taken Up by BMP	4050	0.09	98	1.71		
	Open Water (Existing Ponds)		0.00	98	0.00		
	Total (Check):		5.33	Composite "CN"	87.85		
			Percent Impervious		43.59%		
	Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**		
	Tc, min.= 60*.00013*L^.77/S^.385		1794	24	13.15	Minutes	
	Percent Impervious			43.59%			
			Pond Design Depth, ft.:	4.50			
	SA/DA Factor:			1.25	From NCDEQ SA/DA Chart		
	Min.SCM Surface Area:			2907	S.F.	OK	

SCM #7 Design Elements:			VPP, c.f.	Perimeter, ft.	Vshelf, c.f.	Abottom, s.f.	D Avg, ft
	Davg = VPP-Vshelf /A shelf bottom		7,894	3117	1,792.75	900	6.78
	(From HydraFlow Attachment)				Design Pond Depth, ft.=		**4.50**
Treatment Volume Requirement:							
	DA to SCM:		5.327	Ac.			
Rv=0.05-.009*(%Impervious)	Composite % Impervious (Above) =		43.59%				
Total Runoff for 1" Event= S in Ac	Rv=0.05+.009*(%Impervious)		0.44	inch/inch			
Treatment "S" in Cu. Ft. =	Total Runoff for 1" Event= S in Ac-Ft:		0.20	S=1"*Rv*Drainage Area/12			
Treatment Volume to Be Stored:	Treatment "S" in Cu. Ft. =		8553.15				
Treatment Volume Provided, Cu.F	Treatment Volume to Be Stored:		8553	Cu. FT			
	Volume Achieved at Elev.		**319.11**	Orifice Dia	**1.50**	Inch Drawdown Pipe	
	Drawdown Pipe Elev.		317.5	Elev Diff, H., ft.	1.61		
	Effective Operating Head (1/3 H)		0.530785405		Q=.62*8.02(H^0.5)*A,sq.ft.		
	Hours to Drawdown Treatm't Vol.		**53.47**	Hrs., (48 Hr Min.)			

Table 1: Piedmont and Mountain SA/DA Table (Adapted from Driscoll, 1986)

Percent Impervious Cover	Permanent Pool Average Depth (ft)					
	3.0	*4.0*	*5.0*	*6.0*	*7.0*	*≥8.0*
10%	0.51	0.43	0.37	0.30	0.27	0.25
20%	0.84	0.69	0.61	0.51	0.44	0.40
30%	1.17	0.94	0.84	0.72	0.61	0.56
40%	1.51	1.24	1.09	0.91	0.78	0.71
50%	1.79	1.51	1.31	1.13	0.95	0.87
60%	2.09	1.77	1.49	1.31	1.12	1.03
70%	2.51	2.09	1.80	1.56	1.34	1.17
80%	2.92	2.41	2.07	1.82	1.62	1.40
90%	3.25	2.64	2.31	2.04	1.84	1.59
100%	3.55	2.79	2.52	2.34	2.04	1.75

2.23

Interpolation Table, should be automatic

	4	5		
40%	1.24	1.09	1.165	
50%	1.51	1.31	1.41	
	1.337	1.169	1.253	1.253

Open Space Soil Mix Percents

A soils	0	0	0
B Soils	0	0	0
C Soils	0	0	0
D Soils	232091	1.000147	130926.2
		130907	

7833 319

14474 320

Merritt Reserve Supplemental & Supporting Info for Hydrograph Generation

PostDev POI #7 Bypass #1

Daniel Huckaby 8/4/2025 POI #7 Bypass #1

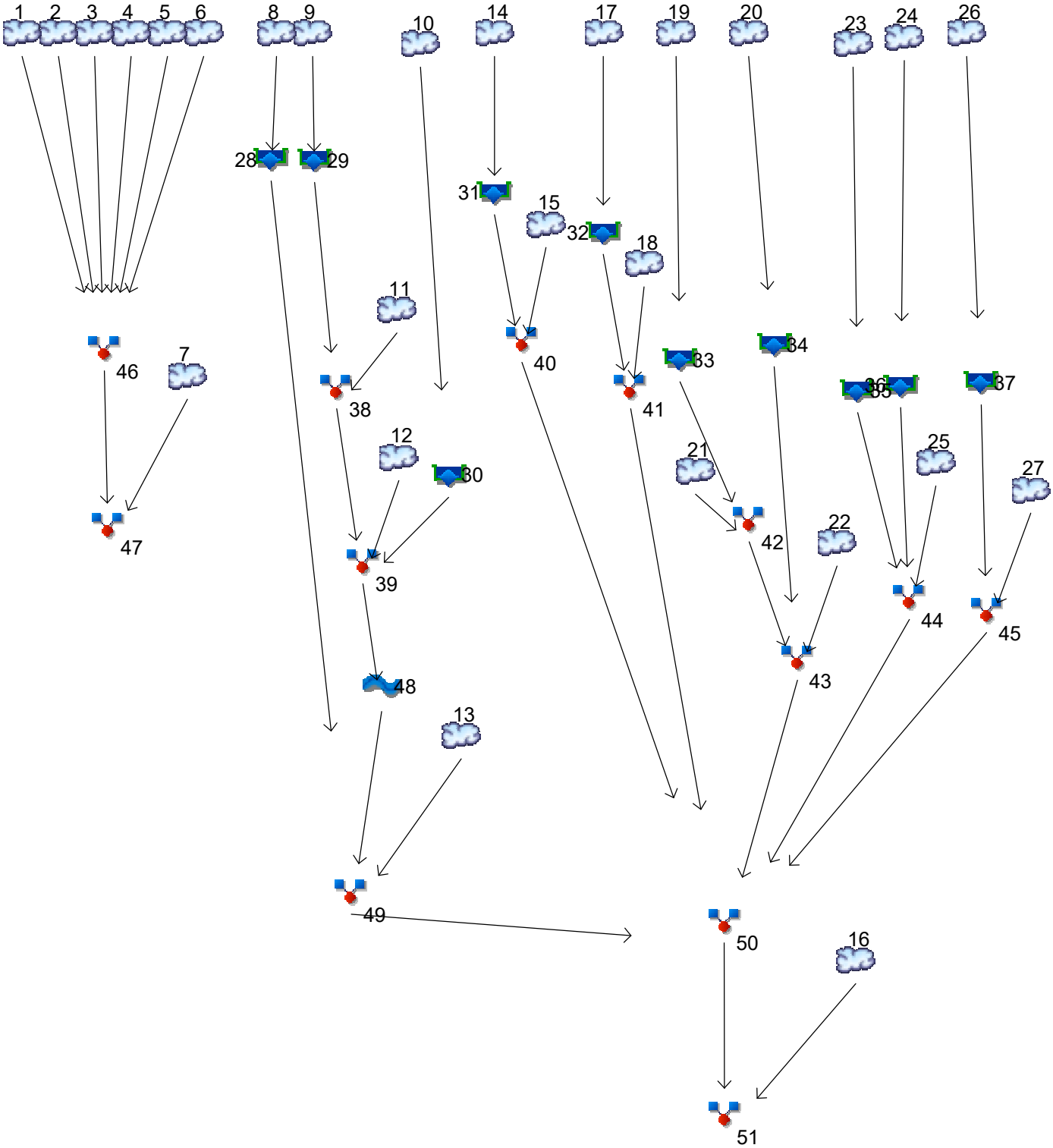
PostDev POI #7 Bypass #1

		158570	S.F.	3.64	Ac
Land Use	**Area, SF**	**Area, Ac.**	**"CN"**	**Wtd'd "CN"**	
Pasture (Lightly Grazed) - A Soils	0	0.00	39	0.00	
Pasture (Lightly Grazed) - B Soils		0.00	61	0.00	
Pasture (Lightly Grazed) - C Soils		0.00	74	0.00	
Pasture (Lightly Grazed) - D Soils	0	0.00	80	0.00	
Woods/Wetlands-A Soils		0.00	36	0.00	
Woods/Wetlands-B Soils		0.00	60	0.00	
Woods/Wetlands-C Soils		0.00	73	0.00	
Woods/Wetlands-D Soils	52964	1.22	79	26.39	
Open Space - A Soils		0.00	49	0.00	
Open Space - B Soils		0.00	69	0.00	
Open Space - C Soils		0.00	79	0.00	
Open Space - D Soils	101758	2.34	84	53.90	
Roadways + C&G (not Sidewalks)	2993	0.07	98	1.85	
Roofs (Impervious on lots)		0.00	98	0.00	
Driveways (in ROW)		0.00	98	0.00	
Sidewalks	855	0.02	98	0.53	
Open Water (Existing Ponds)		0.00	98	0.00	
Total (Check):		**3.64**	Composite "CN"	**82.67**	
		Percent Impervious		2%	
Tc (Kirpich):		**Length**	**Elev Delta**	**Tc=**	
Tc, min.= 60*.00013*L^.77/S^.385		**257**	**53**	**1.03**	Minutes
Percent Impervious			2.4%		

SCM Hydrographs Calculations

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023



Project: Merritt Reserve Hydrographs.gpw	Monday, 08 / 4 / 2025

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	15.81	-------	-------	-------	56.08	76.33	93.19	110.86	PreDev POI #1
2	SCS Runoff	------	12.16	-------	-------	-------	38.17	50.89	61.39	72.33	PreDev POI #2
3	SCS Runoff	------	2.300	-------	-------	-------	8.247	11.27	13.80	16.46	PreDev to POI #3
4	SCS Runoff	------	7.033	-------	-------	-------	30.27	42.39	52.60	63.50	PreDev to POI #4
5	SCS Runoff	------	19.43	-------	-------	-------	58.60	77.58	93.21	109.54	PreDev to POI #5
6	SCS Runoff	------	15.71	-------	-------	-------	42.77	55.62	66.11	76.94	PreDev to POI #6
7	SCS Runoff	------	13.17	-------	-------	-------	37.83	49.71	59.44	69.53	PreDev to POI #7
8	SCS Runoff	------	37.05	-------	-------	-------	81.64	101.43	117.30	133.52	PostDev to SCM 1A
9	SCS Runoff	------	24.97	-------	-------	-------	58.13	73.05	85.05	97.35	PostDev to SCM 1B
10	SCS Runoff	------	4.662	-------	-------	-------	12.05	15.53	18.36	21.27	PostDev to SCM 1C
11	SCS Runoff	------	4.134	-------	-------	-------	11.10	14.38	17.05	19.81	PostDev to POI #1 Bypass 1
12	SCS Runoff	------	4.703	-------	-------	-------	12.41	16.00	18.92	21.94	PostDev to POI #1 Bypass 2
13	SCS Runoff	------	8.519	-------	-------	-------	21.47	27.47	32.32	37.31	PostDev to POI #1 Bypass 3
14	SCS Runoff	------	32.89	-------	-------	-------	76.25	95.75	111.42	127.46	PostDev to SCM 2
15	SCS Runoff	------	0.795	-------	-------	-------	1.926	2.443	2.860	3.287	PostDev to POI #2 Bypass
16	SCS Runoff	------	1.421	-------	-------	-------	4.795	6.474	7.867	9.323	PostDev to POI #3
17	SCS Runoff	------	33.06	-------	-------	-------	87.19	112.72	133.47	154.86	PostDev to SCM 4
18	SCS Runoff	------	3.736	-------	-------	-------	12.83	17.35	21.21	25.28	PostDev to POI #4 Bypass
19	SCS Runoff	------	73.99	-------	-------	-------	157.03	193.59	222.86	252.75	PostDev to SCM 5A
20	SCS Runoff	------	31.17	-------	-------	-------	66.17	81.58	93.93	106.53	PostDev to SCM 5C
21	SCS Runoff	------	5.660	-------	-------	-------	13.88	17.66	20.71	23.84	PostDev to POI #5 Bypass 1
22	SCS Runoff	------	4.486	-------	-------	-------	11.09	14.14	16.61	19.14	PostDev to POI #5 Bypass 2
23	SCS Runoff	------	16.55	-------	-------	-------	35.40	43.71	50.36	57.15	PostDev to SCM 6A
24	SCS Runoff	------	35.55	-------	-------	-------	74.28	91.27	104.87	118.76	PostDev to SCM 6B
25	SCS Runoff	------	9.958	-------	-------	-------	23.54	29.67	34.61	39.67	PostDev to POI #6 Bypass
26	SCS Runoff	------	12.89	-------	-------	-------	27.74	34.30	39.55	44.91	PostDev to SCM 7
27	SCS Runoff	------	8.086	-------	-------	-------	19.30	24.39	28.49	32.70	PostDev to POI #7 Bypass
28	Reservoir	8	1.484	-------	-------	-------	13.50	51.24	73.62	99.88	PostDev to SCM 1A
29	Reservoir	9	1.187	-------	-------	-------	17.28	34.05	43.18	63.65	PostDev to SCM 1B
30	Reservoir	10	0.038	-------	-------	-------	3.380	11.30	14.28	16.83	PostDev to SCM 1C
31	Reservoir	14	0.827	-------	-------	-------	12.78	33.23	37.97	61.50	PostDev to SCM 2
32	Reservoir	17	0.750	-------	-------	-------	11.16	21.26	50.23	94.93	PostDev to SCM 4
33	Reservoir	19	3.735	-------	-------	-------	26.15	54.83	72.99	121.76	PostDev to SCM 5A
34	Reservoir	20	2.374	-------	-------	-------	16.33	33.93	47.14	73.05	PostDev to SCM 5C

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
35	Reservoir	23	1.347	-------	-------	-------	12.99	19.56	26.01	37.64	PostDev to SCM 6A
36	Reservoir	24	1.904	-------	-------	-------	9.381	43.91	62.69	89.65	PostDev to SCM 6B
37	Reservoir	26	3.225	-------	-------	-------	10.59	21.78	28.80	35.68	PostDev to SCM 7
38	Combine	11, 29,	4.275	-------	-------	-------	21.21	44.23	53.04	78.18	PostDev POI #1 to Culv1
39	Combine	12, 30, 38	8.754	-------	-------	-------	32.77	67.86	82.90	109.58	PostDev POI #1 to Culv2
40	Combine	15, 31,	0.914	-------	-------	-------	13.03	33.57	38.38	62.04	PostDev to POI #2
41	Combine	18, 32,	3.908	-------	-------	-------	17.18	26.15	53.71	102.00	PostDev to POI #4
42	Combine	21, 33,	6.134	-------	-------	-------	27.94	57.48	75.81	125.67	PostDev to POI #5 to Culv3
43	Combine	22, 34, 42	10.74	-------	-------	-------	45.46	92.89	124.67	201.87	PostDev to POI #5
44	Combine	25, 35, 36,	11.26	-------	-------	-------	40.87	88.28	119.15	165.85	PostDev to POI #6
45	Combine	27, 37,	8.161	-------	-------	-------	23.45	29.25	35.62	47.53	PostDev to POI #7
46	Combine	1, 2, 3,	68.08	-------	-------	-------	219.71	294.99	357.35	422.44	PreDev Total
47	Combine	4, 5, 6, 7, 46	76.54	-------	-------	-------	245.16	328.59	397.67	469.74	PreDev Total Combined
48	Reach	39	7.867	-------	-------	-------	31.58	62.42	77.71	106.99	PostDev POI#1 Culv 2 Reach
49	Combine	13, 28, 48	14.17	-------	-------	-------	47.98	122.57	169.16	214.84	PostDev POI #1 Combined
50	Combine	40, 41, 43,	47.68	-------	-------	-------	168.97	360.50	490.45	729.39	PostDev Total
51	Combine	44, 45, 49 16, 50	48.03	-------	-------	-------	170.96	364.55	494.46	734.81	PostDev Total Combined

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	15.81	2	744	99,160	------	------	------	PreDev POI #1
2	SCS Runoff	12.16	2	744	75,992	------	------	------	PreDev POI #2
3	SCS Runoff	2.300	2	774	24,648	------	------	------	PreDev to POI #3
4	SCS Runoff	7.033	2	734	36,249	------	------	------	PreDev to POI #4
5	SCS Runoff	19.43	2	740	108,426	------	------	------	PreDev to POI #5
6	SCS Runoff	15.71	2	734	70,485	------	------	------	PreDev to POI #6
7	SCS Runoff	13.17	2	728	47,742	------	------	------	PreDev to POI #7
8	SCS Runoff	37.05	2	718	84,885	------	------	------	PostDev to SCM 1A
9	SCS Runoff	24.97	2	720	64,800	------	------	------	PostDev to SCM 1B
10	SCS Runoff	4.662	2	718	9,323	------	------	------	PostDev to SCM 1C
11	SCS Runoff	4.134	2	722	10,894	------	------	------	PostDev to POI #1 Bypass 1
12	SCS Runoff	4.703	2	726	15,064	------	------	------	PostDev to POI #1 Bypass 2
13	SCS Runoff	8.519	2	720	19,498	------	------	------	PostDev to POI #1 Bypass 3
14	SCS Runoff	32.89	2	718	75,235	------	------	------	PostDev to SCM 2
15	SCS Runoff	0.795	2	718	1,599	------	------	------	PostDev to POI #2 Bypass
16	SCS Runoff	1.421	2	746	9,198	------	------	------	PostDev to POI #3
17	SCS Runoff	33.06	2	720	75,826	------	------	------	PostDev to SCM 4
18	SCS Runoff	3.736	2	718	7,808	------	------	------	PostDev to POI #4 Bypass
19	SCS Runoff	73.99	2	718	170,263	------	------	------	PostDev to SCM 5A
20	SCS Runoff	31.17	2	720	81,076	------	------	------	PostDev to SCM 5C
21	SCS Runoff	5.660	2	718	11,360	------	------	------	PostDev to POI #5 Bypass 1
22	SCS Runoff	4.486	2	718	8,994	------	------	------	PostDev to POI #5 Bypass 2
23	SCS Runoff	16.55	2	716	33,678	------	------	------	PostDev to SCM 6A
24	SCS Runoff	35.55	2	716	72,701	------	------	------	PostDev to SCM 6B
25	SCS Runoff	9.958	2	718	22,794	------	------	------	PostDev to POI #6 Bypass
26	SCS Runoff	12.89	2	720	33,495	------	------	------	PostDev to SCM 7
27	SCS Runoff	8.086	2	718	16,289	------	------	------	PostDev to POI #7 Bypass
28	Reservoir	1.484	2	828	83,621	8	349.85	51,013	PostDev to SCM 1A
29	Reservoir	1.187	2	830	63,113	9	378.57	38,015	PostDev to SCM 1B
30	Reservoir	0.038	2	1442	8,482	10	362.67	7,717	PostDev to SCM 1C
31	Reservoir	0.827	2	948	60,321	14	354.71	53,772	PostDev to SCM 2
32	Reservoir	0.750	2	1046	71,806	17	364.10	54,689	PostDev to SCM 4
33	Reservoir	3.735	2	796	168,638	19	315.65	99,155	PostDev to SCM 5A
34	Reservoir	2.374	2	772	78,303	20	294.29	47,380	PostDev to SCM 5C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

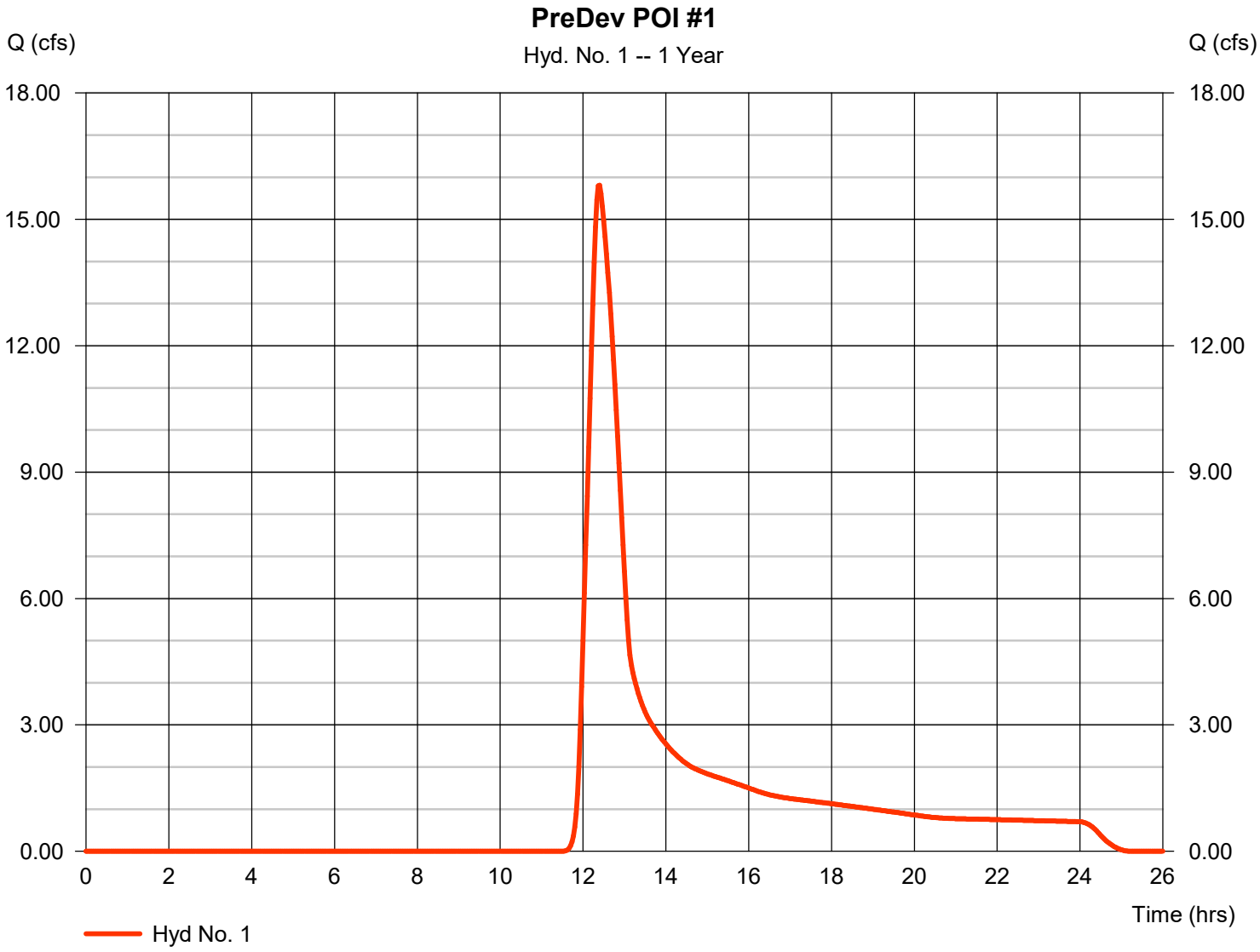
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	1.347	2	750	33,579	23	279.69	17,580	PostDev to SCM 6A
36	Reservoir	1.904	2	774	71,697	24	291.58	41,989	PostDev to SCM 6B
37	Reservoir	3.225	2	734	33,350	26	325.13	15,462	PostDev to SCM 7
38	Combine	4.275	2	722	74,007	11, 29,	------	------	PostDev POI #1 to Culv1
39	Combine	8.754	2	722	97,553	12, 30, 38	------	------	PostDev POI #1 to Culv2
40	Combine	0.914	2	718	61,920	15, 31,	------	------	PostDev to POI #2
41	Combine	3.908	2	718	79,615	18, 32,	------	------	PostDev to POI #4
42	Combine	6.134	2	720	179,998	21, 33,	------	------	PostDev to POI #5 to Culv3
43	Combine	10.74	2	718	267,295	22, 34, 42	------	------	PostDev to POI #5
44	Combine	11.26	2	720	128,069	25, 35, 36,	------	------	PostDev to POI #6
45	Combine	8.161	2	718	49,639	27, 37,	------	------	PostDev to POI #7
46	Combine	68.08	2	740	414,960	1, 2, 3,	------	------	PreDev Total
47	Combine	76.54	2	738	462,702	4, 5, 6, 7, 46	------	------	PreDev Total Combined
48	Reach	7.867	2	728	97,537	39	------	------	PostDev POI#1 Culv 2 Reach
49	Combine	14.17	2	722	200,657	13, 28, 48	------	------	PostDev POI #1 Combined
50	Combine	47.68	2	718	787,195	40, 41, 43,	------	------	PostDev Total
51	Combine	48.03	2	718	796,393	44, 45, 49 16, 50	------	------	PostDev Total Combined

Hydrograph Report

Hyd. No. 1

PreDev POI #1

Hydrograph type	=	SCS Runoff	Peak discharge	=	15.81 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	99,160 cuft
Drainage area	=	37.960 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	46.50 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

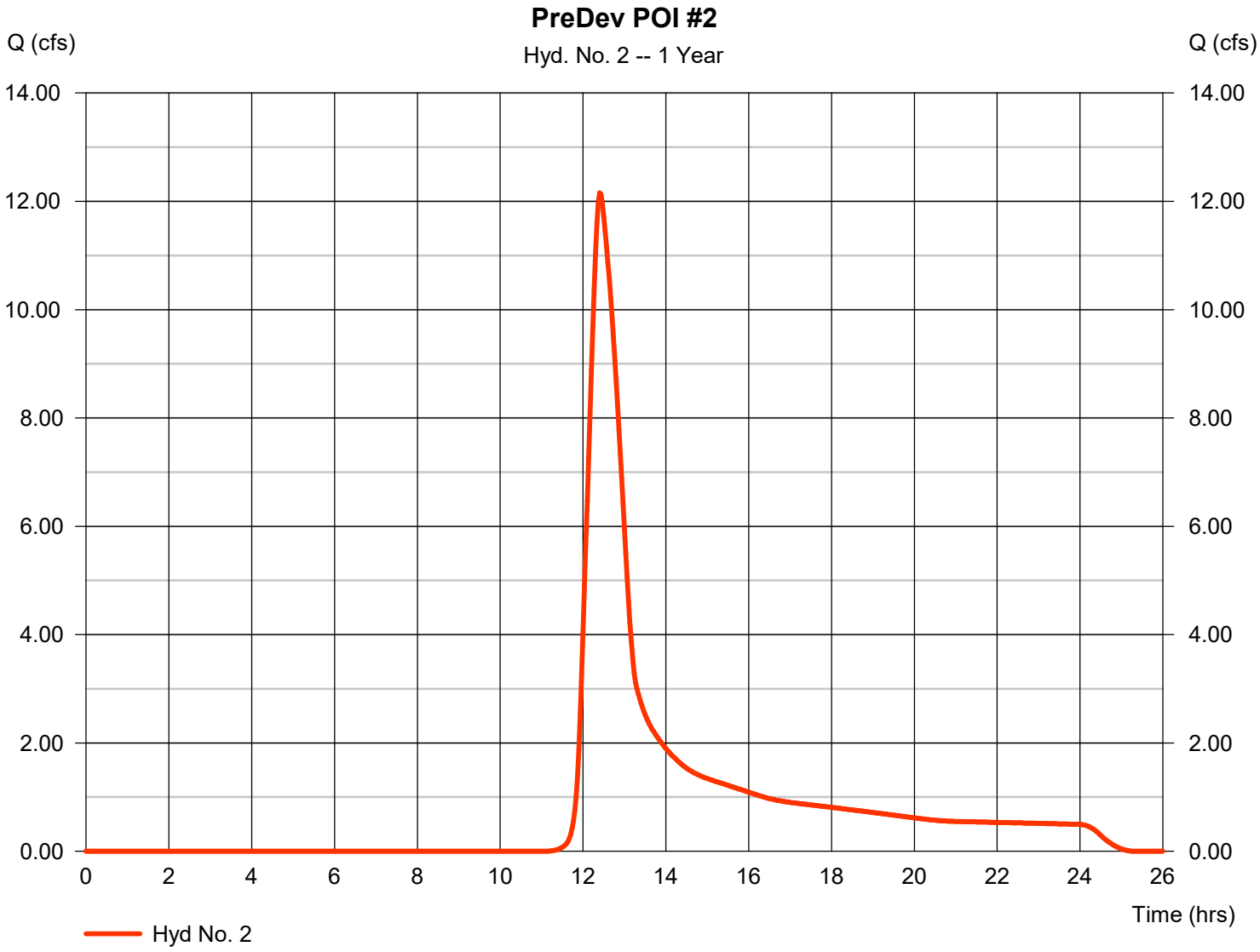


Hydrograph Report

Hyd. No. 2

PreDev POI #2

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.16 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	75,992 cuft
Drainage area	=	24.050 ac	Curve number	=	75
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	48.70 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

Hyd. No. 3

PreDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.300 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.90 hrs
Time interval	=	2 min	Hyd. volume	=	24,648 cuft
Drainage area	=	9.310 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	92.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

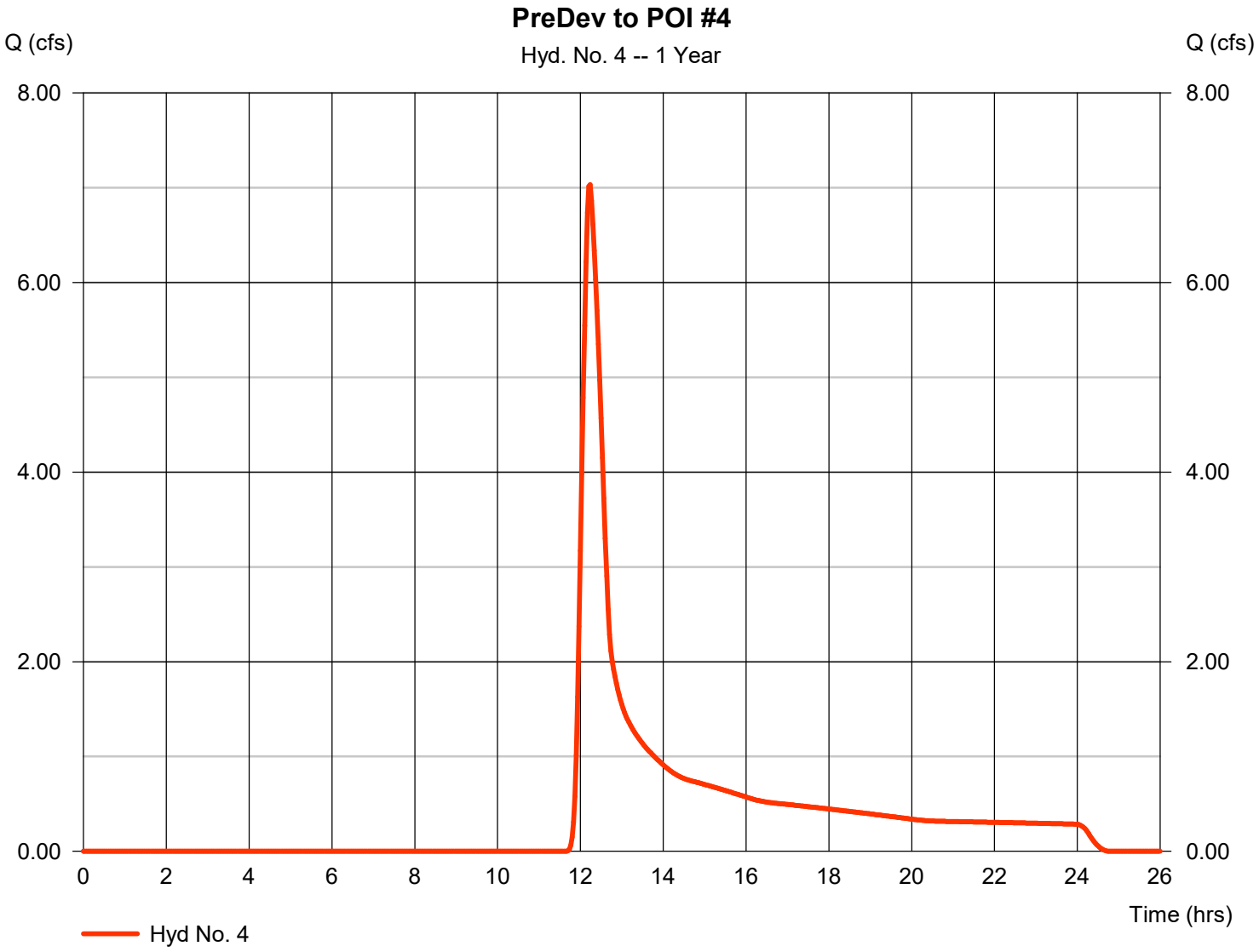


Hydrograph Report

Hyd. No. 4

PreDev to POI #4

Hydrograph type	= SCS Runoff	Peak discharge	= 7.033 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 36,249 cuft
Drainage area	= 17.970 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 28.80 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

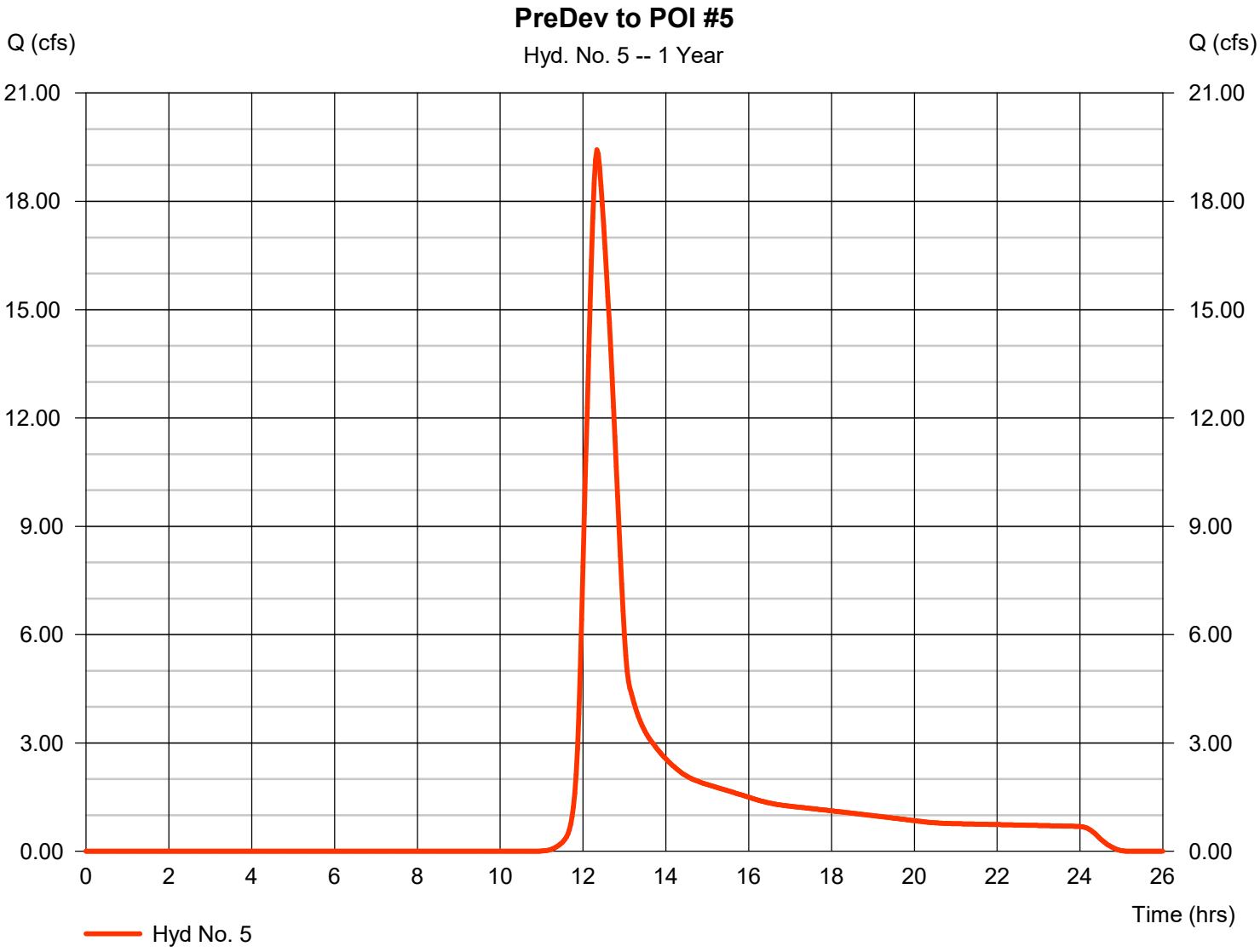


Hydrograph Report

Hyd. No. 5

PreDev to POI #5

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.43 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	108,426 cuft
Drainage area	=	32.090 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	43.30 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

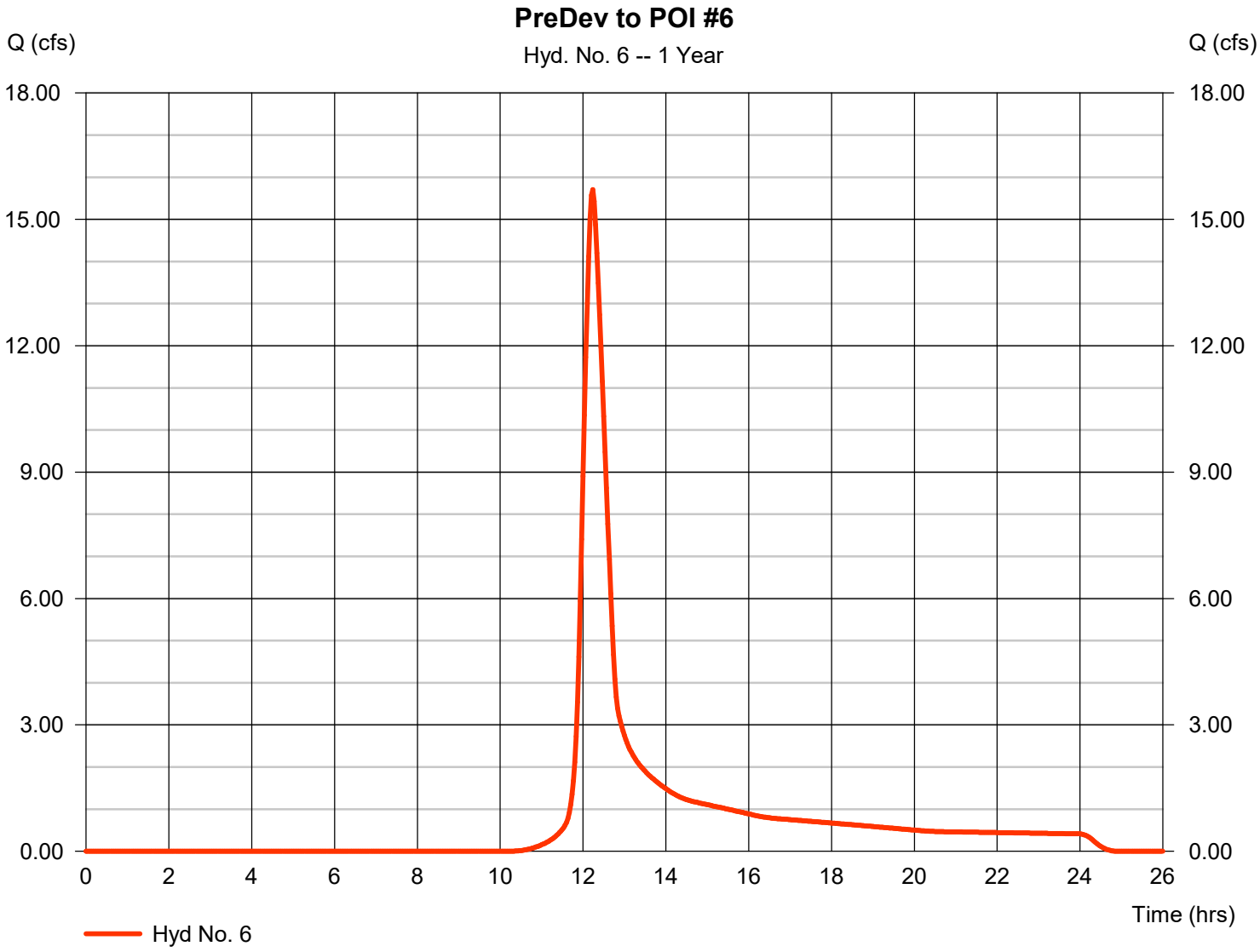


Hydrograph Report

Hyd. No. 6

PreDev to POI #6

Hydrograph type	=	SCS Runoff	Peak discharge	=	15.71 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	70,485 cuft
Drainage area	=	17.640 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	32.90 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

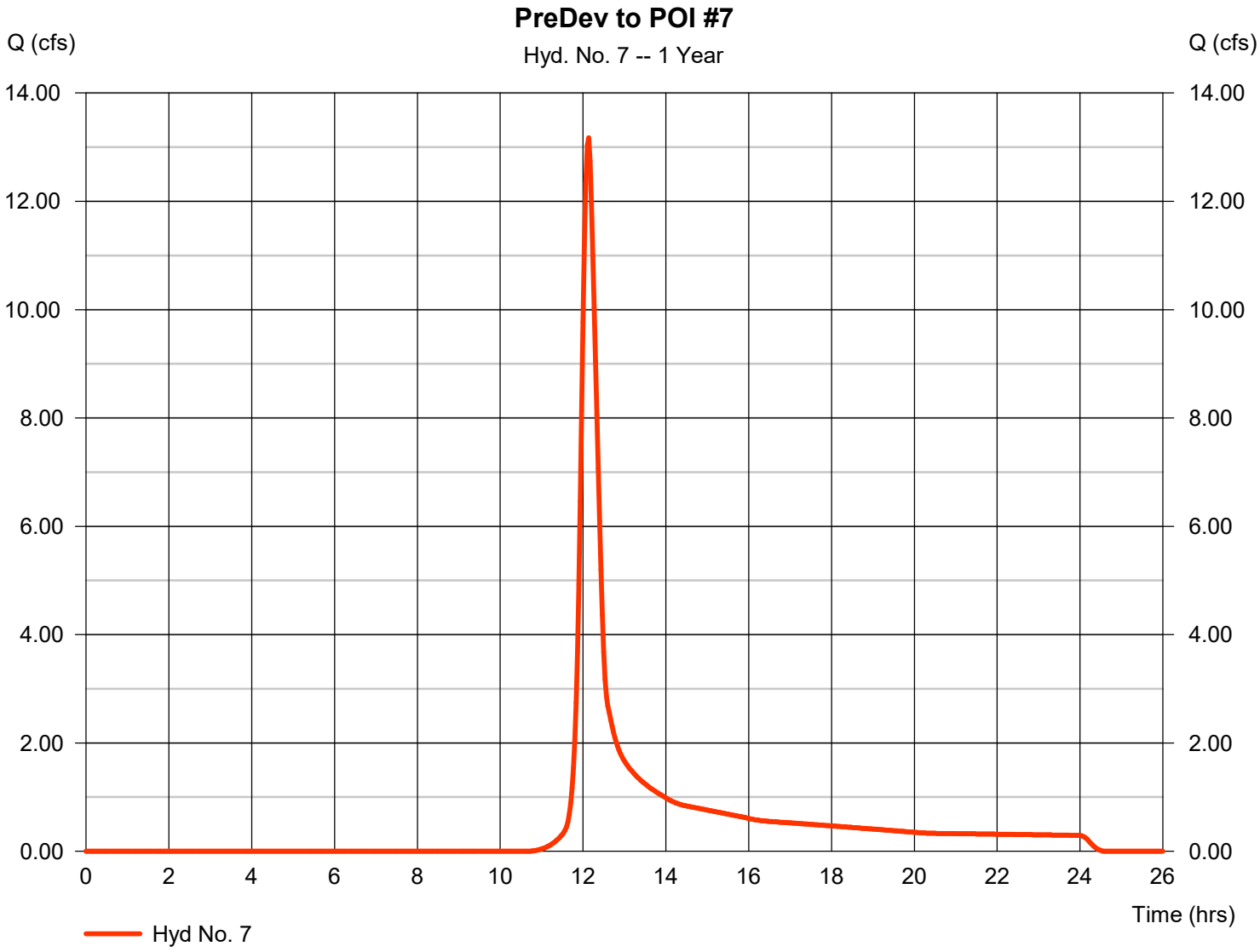


Hydrograph Report

Hyd. No. 7

PreDev to POI #7

Hydrograph type	=	SCS Runoff	Peak discharge	=	13.17 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	47,742 cuft
Drainage area	=	13.250 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	22.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

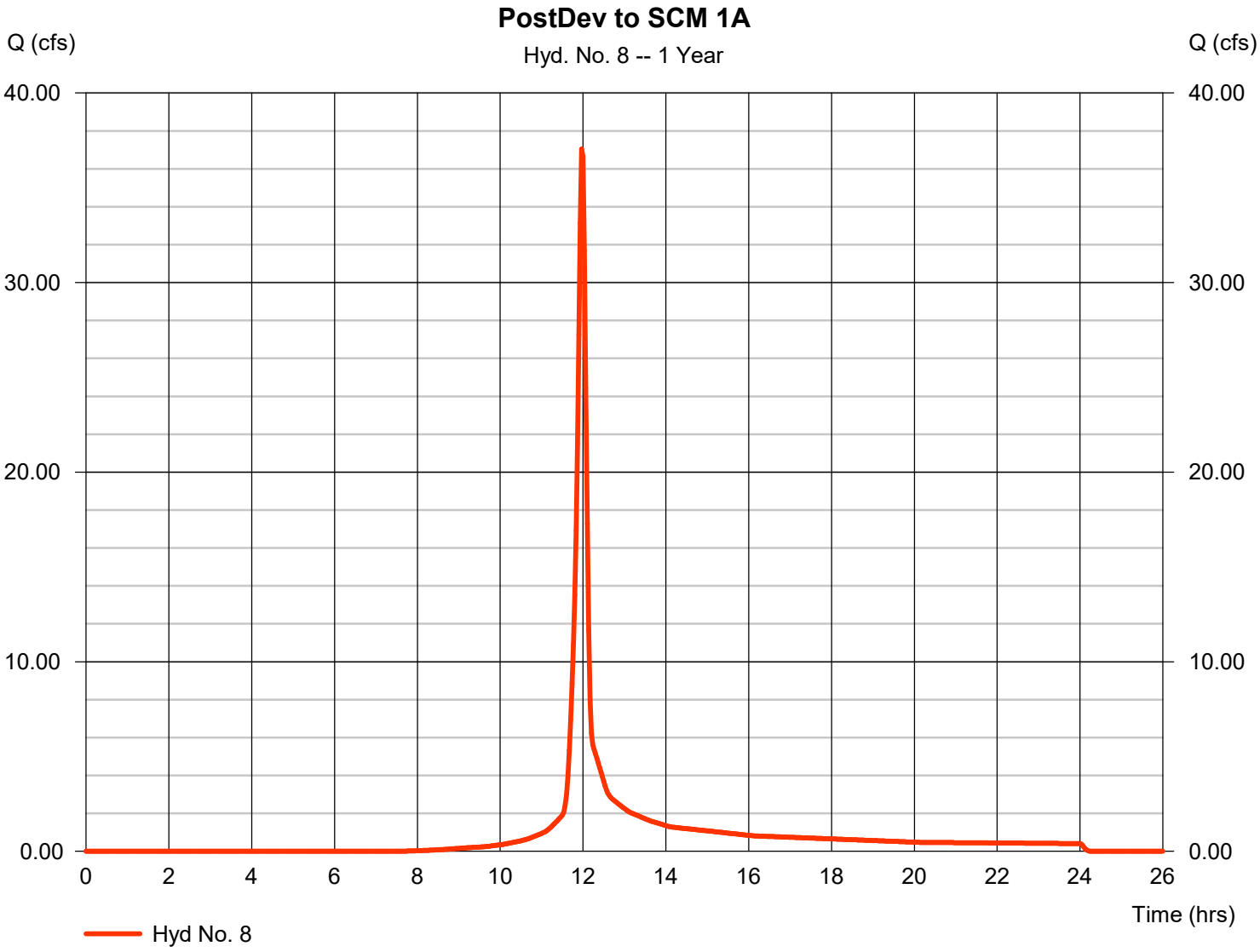


Hydrograph Report

Hyd. No. 8

PostDev to SCM 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	37.05 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	84,885 cuft
Drainage area	=	14.800 ac	Curve number	=	86.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.30 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

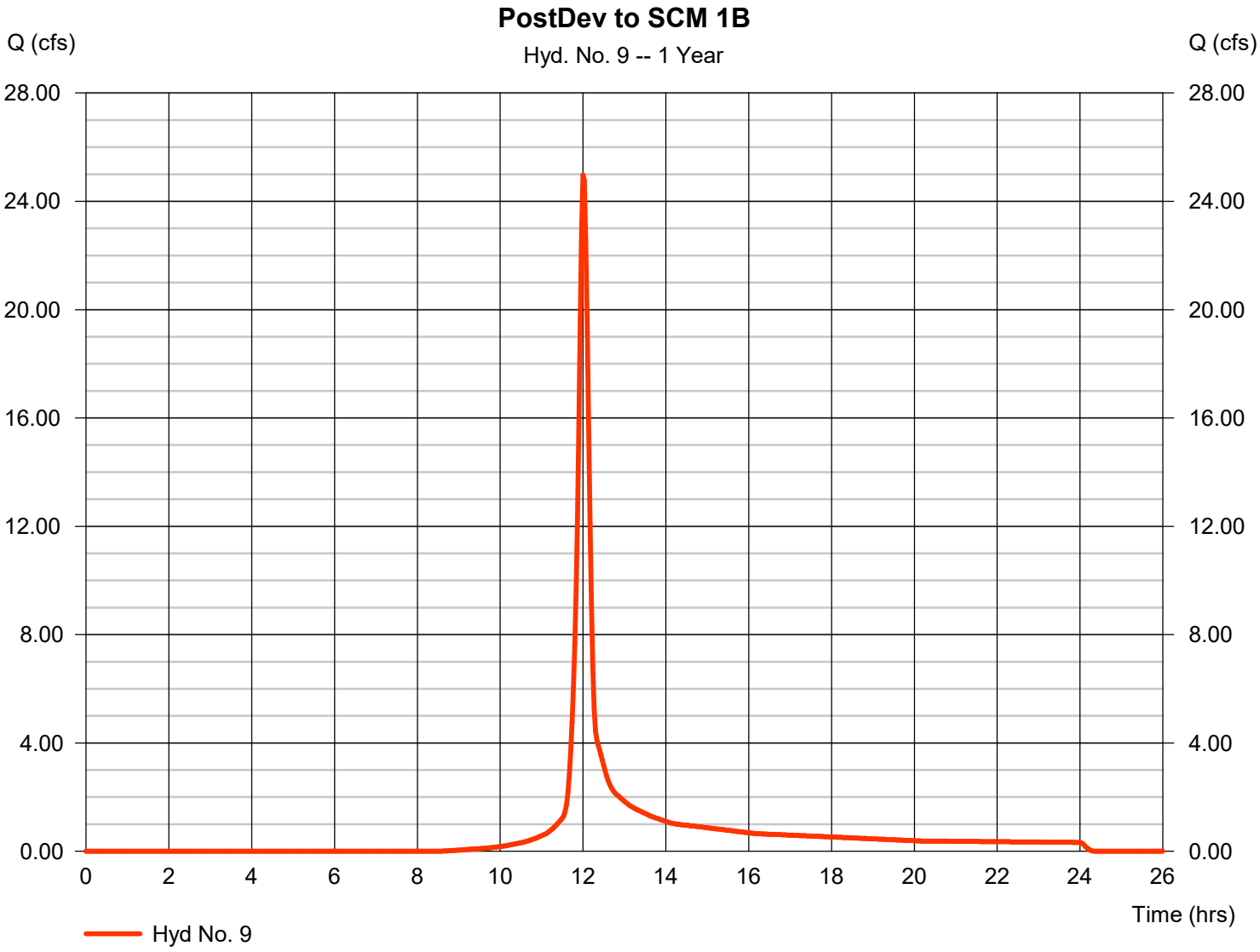


Hydrograph Report

Hyd. No. 9

PostDev to SCM 1B

Hydrograph type	= SCS Runoff	Peak discharge	= 24.97 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 64,800 cuft
Drainage area	= 12.110 ac	Curve number	= 84.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.10 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

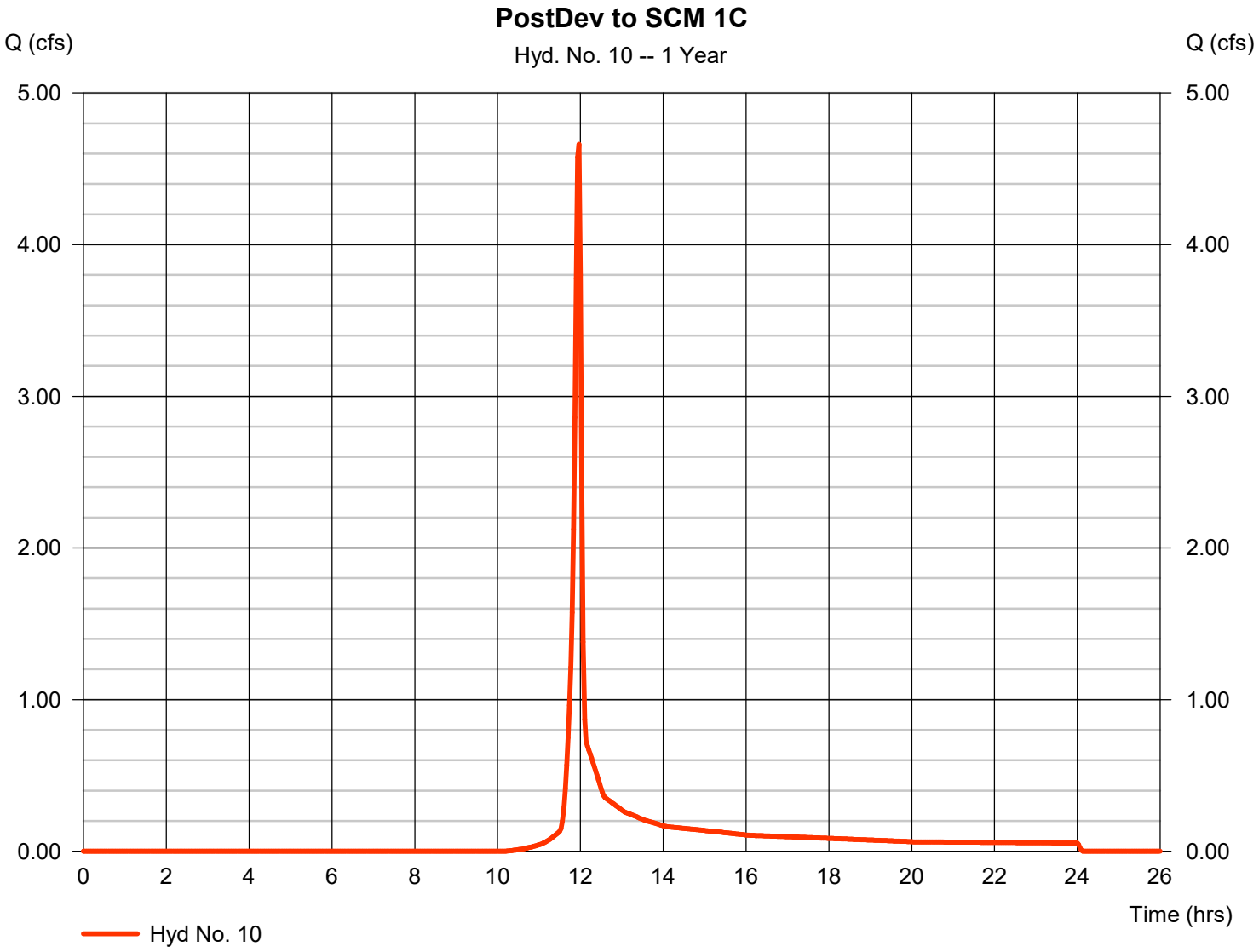


Hydrograph Report

Hyd. No. 10

PostDev to SCM 1C

Hydrograph type	= SCS Runoff	Peak discharge	= 4.662 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 9,323 cuft
Drainage area	= 2.520 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

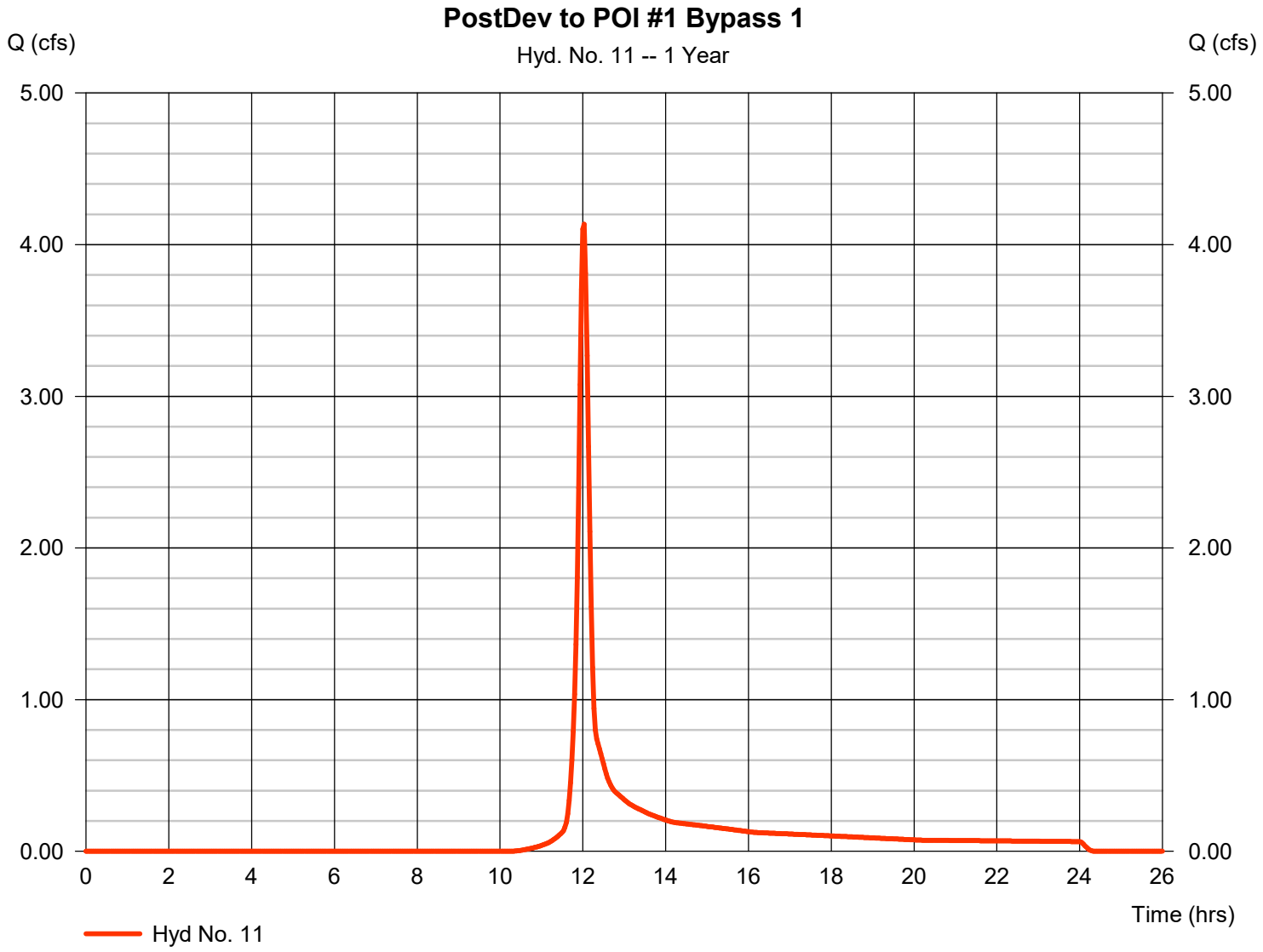


Hydrograph Report

Hyd. No. 11

PostDev to POI #1 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 4.134 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 10,894 cuft
Drainage area	= 2.720 ac	Curve number	= 78.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

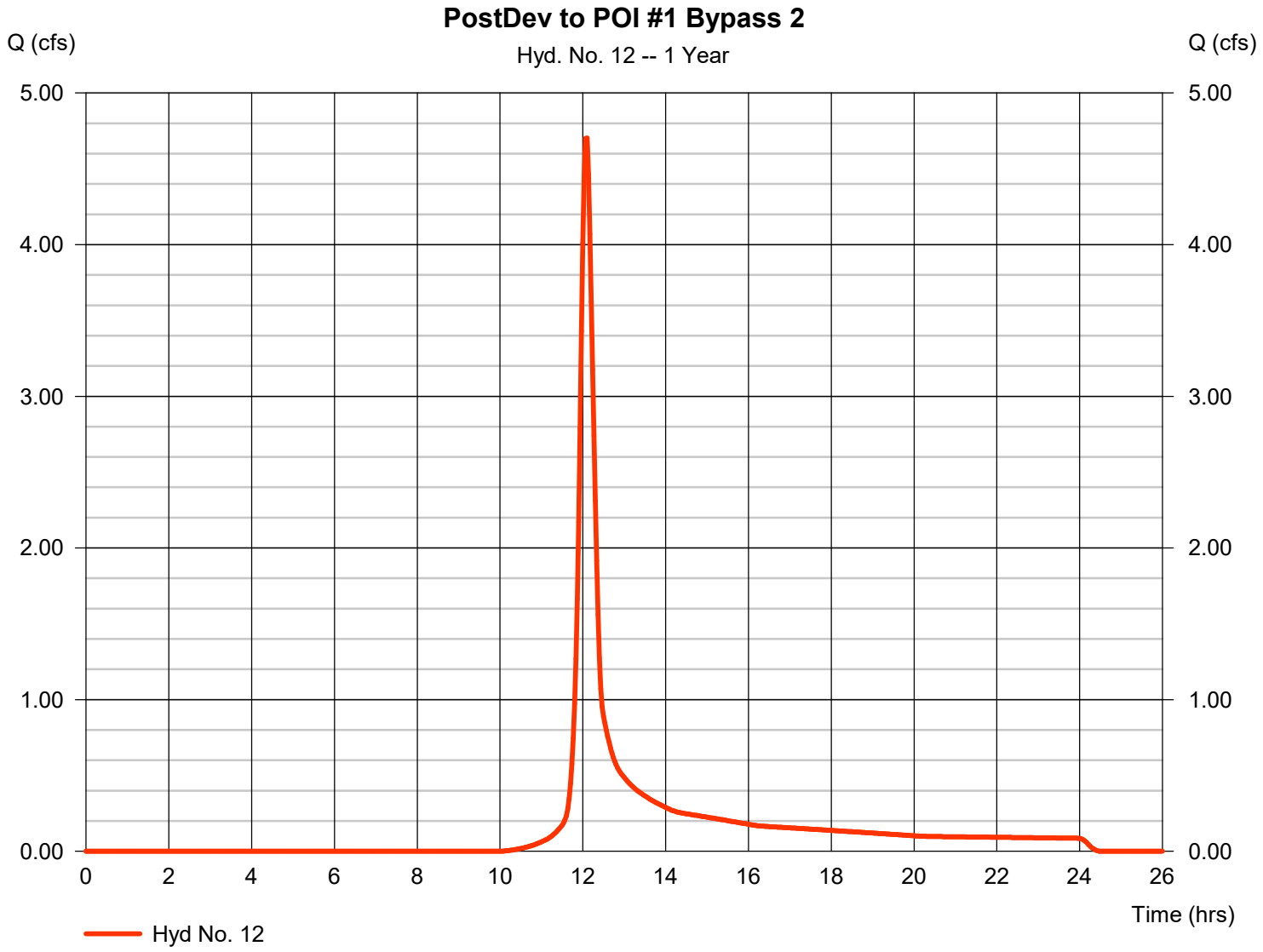


Hydrograph Report

Hyd. No. 12

PostDev to POI #1 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.703 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 15,064 cuft
Drainage area	= 3.640 ac	Curve number	= 79.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

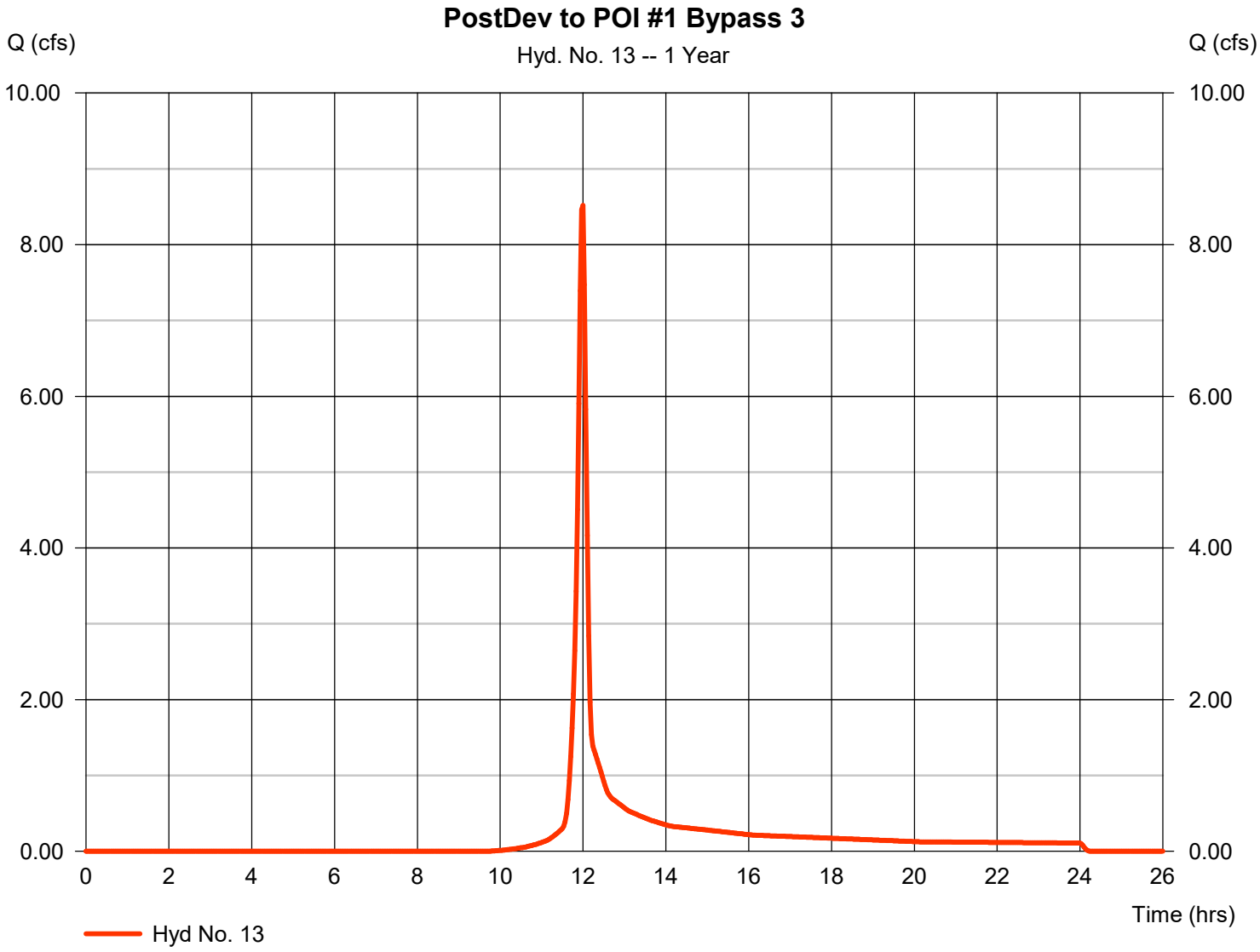


Hydrograph Report

Hyd. No. 13

PostDev to POI #1 Bypass 3

Hydrograph type	= SCS Runoff	Peak discharge	= 8.519 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 19,498 cuft
Drainage area	= 4.520 ac	Curve number	= 80.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 9.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

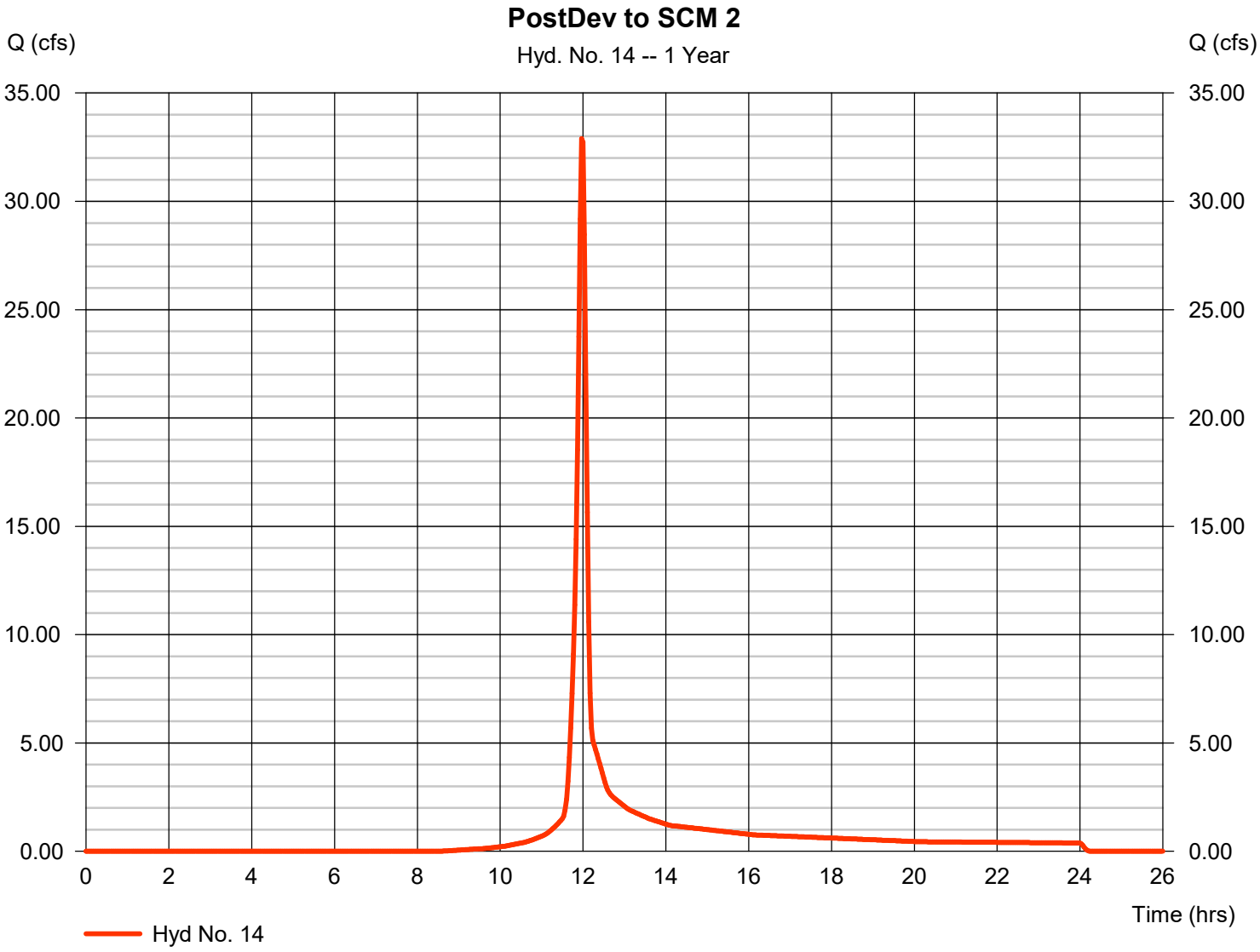


Hydrograph Report

Hyd. No. 14

PostDev to SCM 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.89 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	75,235 cuft
Drainage area	=	14.570 ac	Curve number	=	84.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.10 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

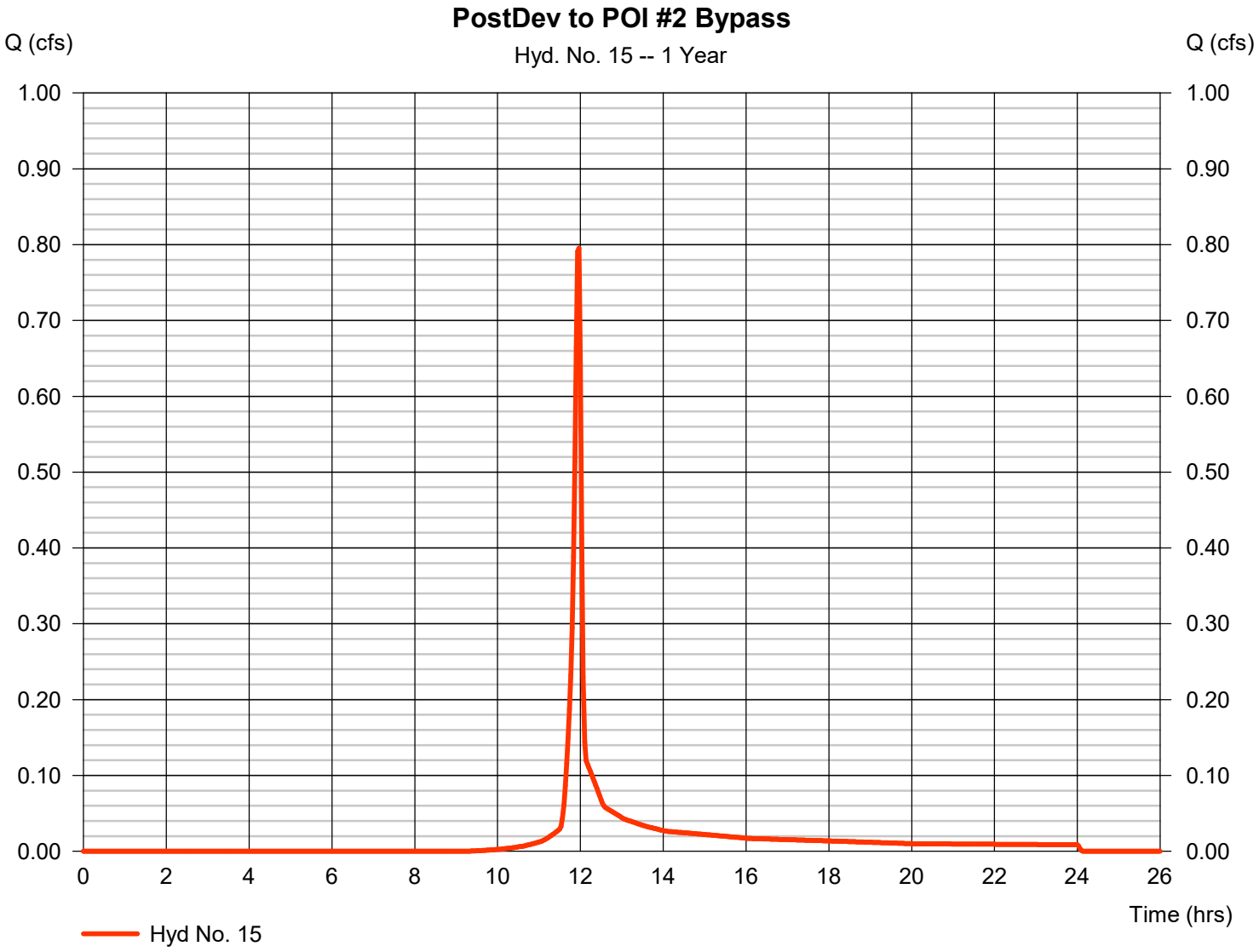


Hydrograph Report

Hyd. No. 15

PostDev to POI #2 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.795 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	1,599 cuft
Drainage area	=	0.370 ac	Curve number	=	82
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

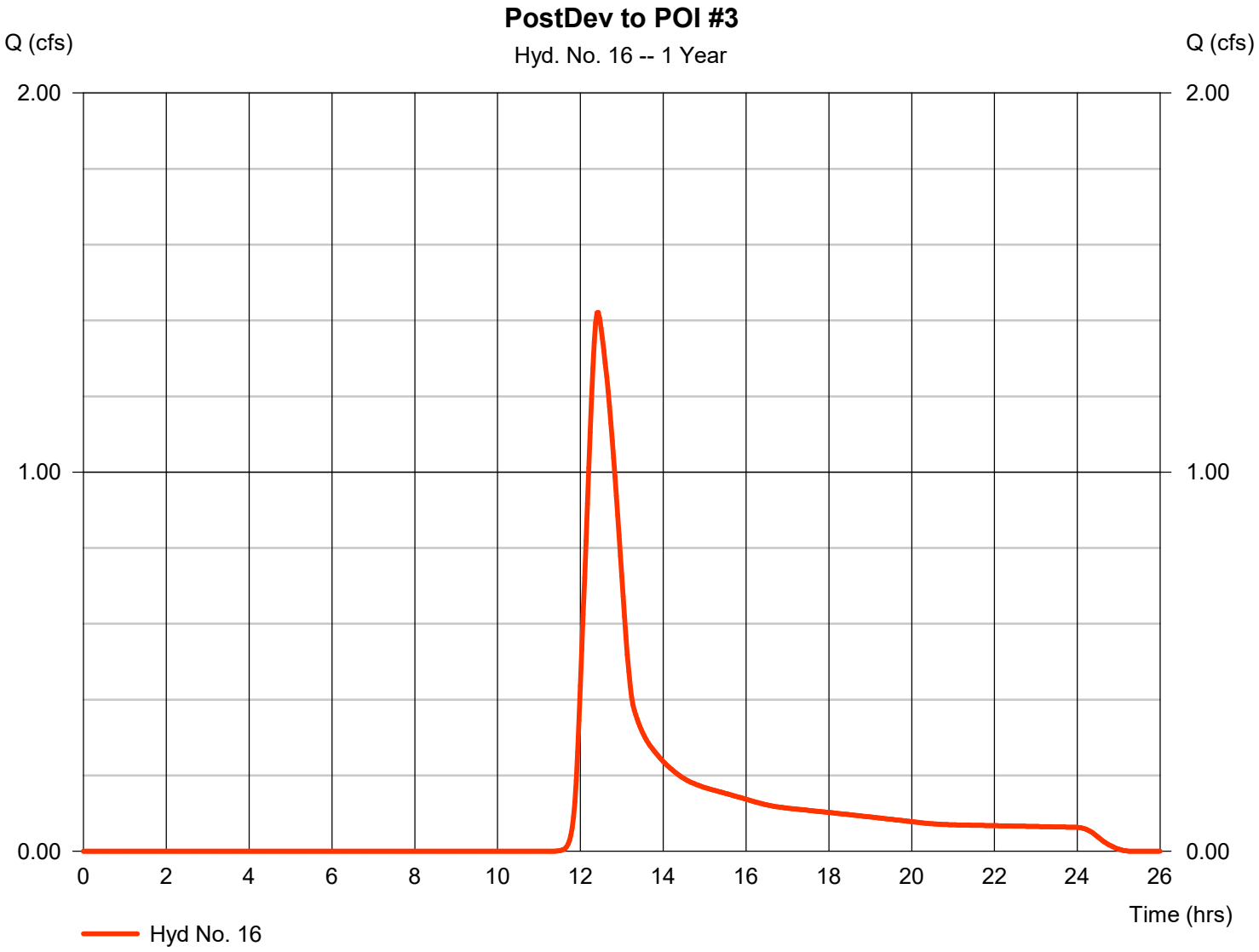


Hydrograph Report

Hyd. No. 16

PostDev to POI #3

Hydrograph type	= SCS Runoff	Peak discharge	= 1.421 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.43 hrs
Time interval	= 2 min	Hyd. volume	= 9,198 cuft
Drainage area	= 3.240 ac	Curve number	= 73.2
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 49.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

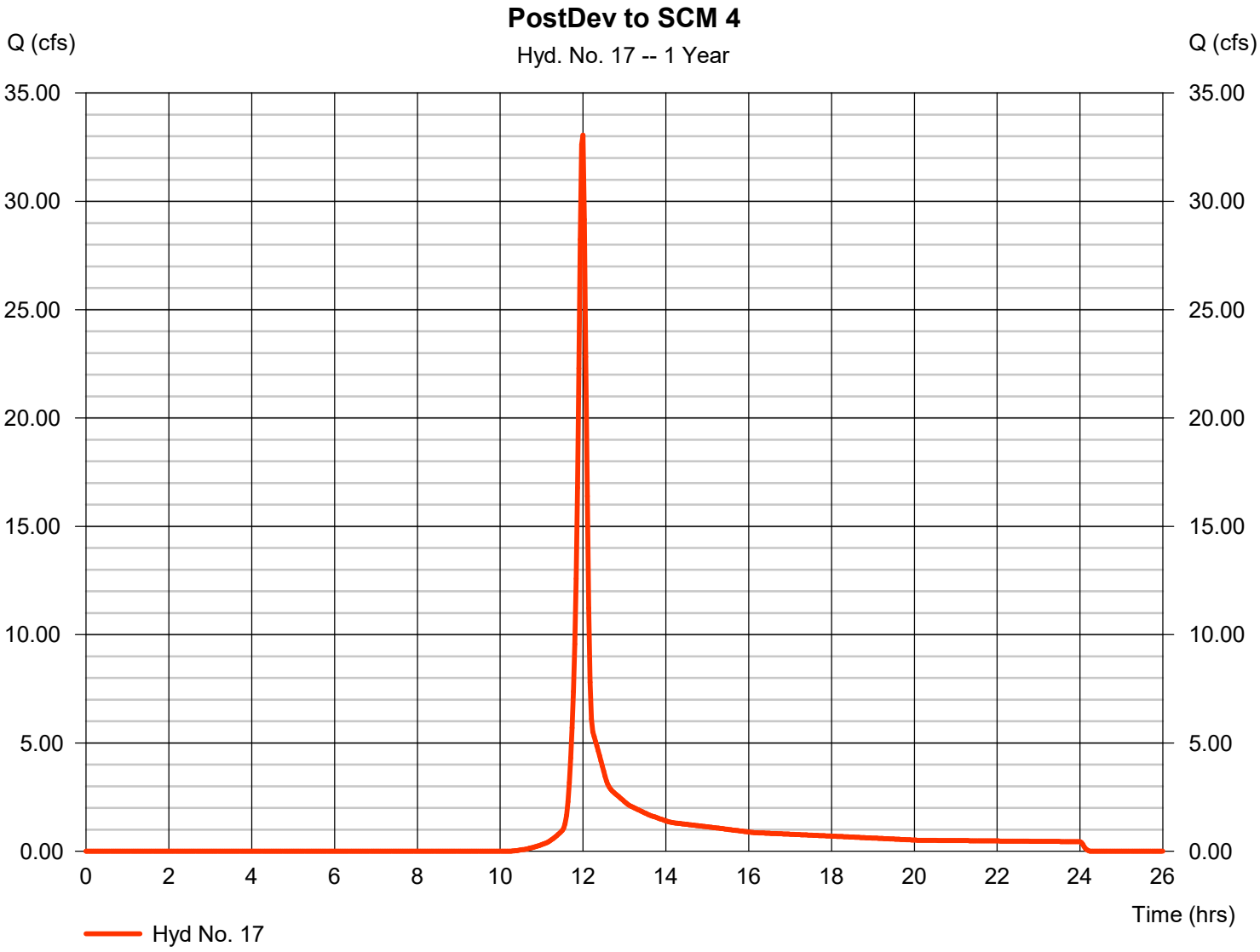


Hydrograph Report

Hyd. No. 17

PostDev to SCM 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	33.06 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	75,826 cuft
Drainage area	=	19.420 ac	Curve number	=	78.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.50 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

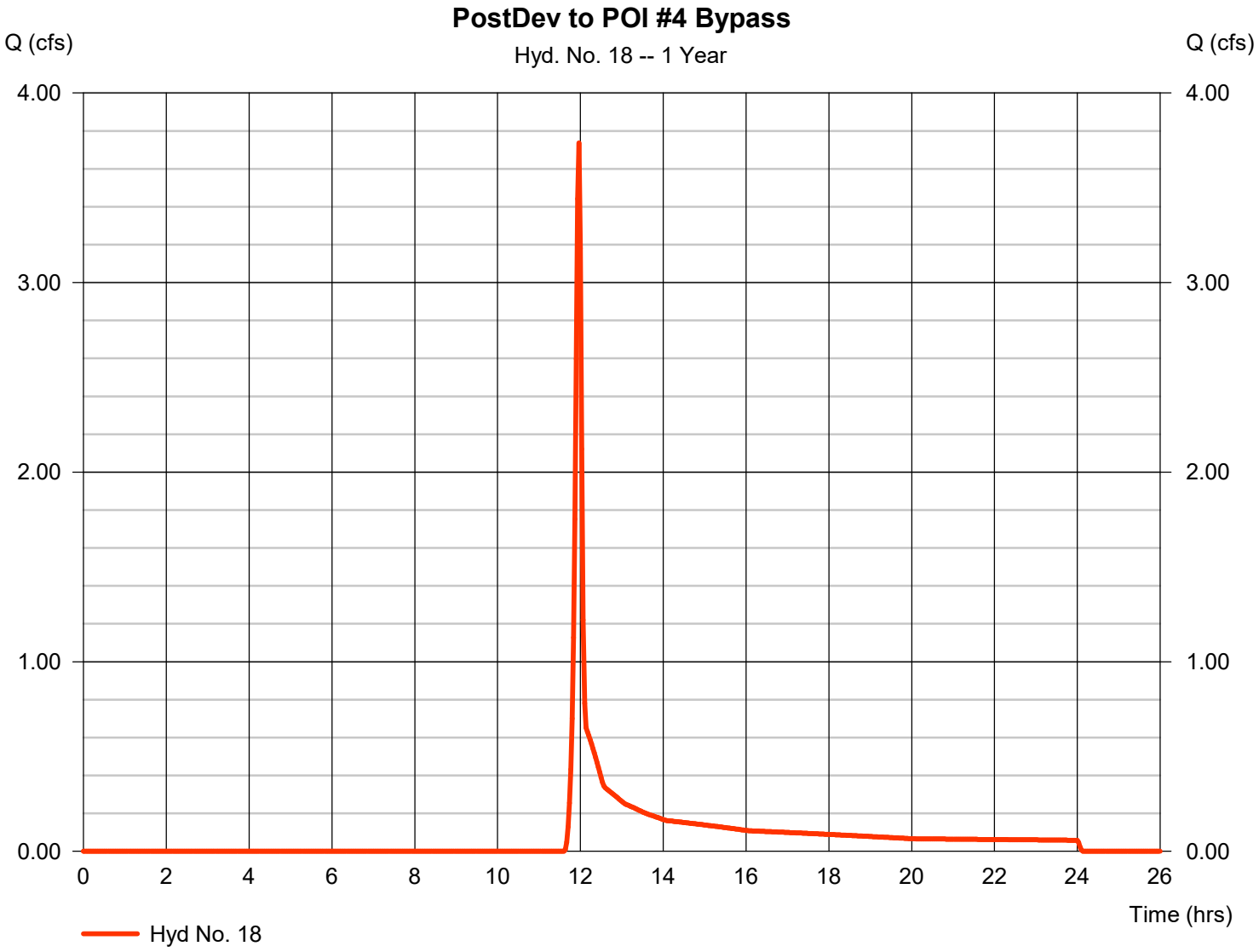


Hydrograph Report

Hyd. No. 18

PostDev to POI #4 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.736 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	7,808 cuft
Drainage area	=	3.670 ac	Curve number	=	69.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

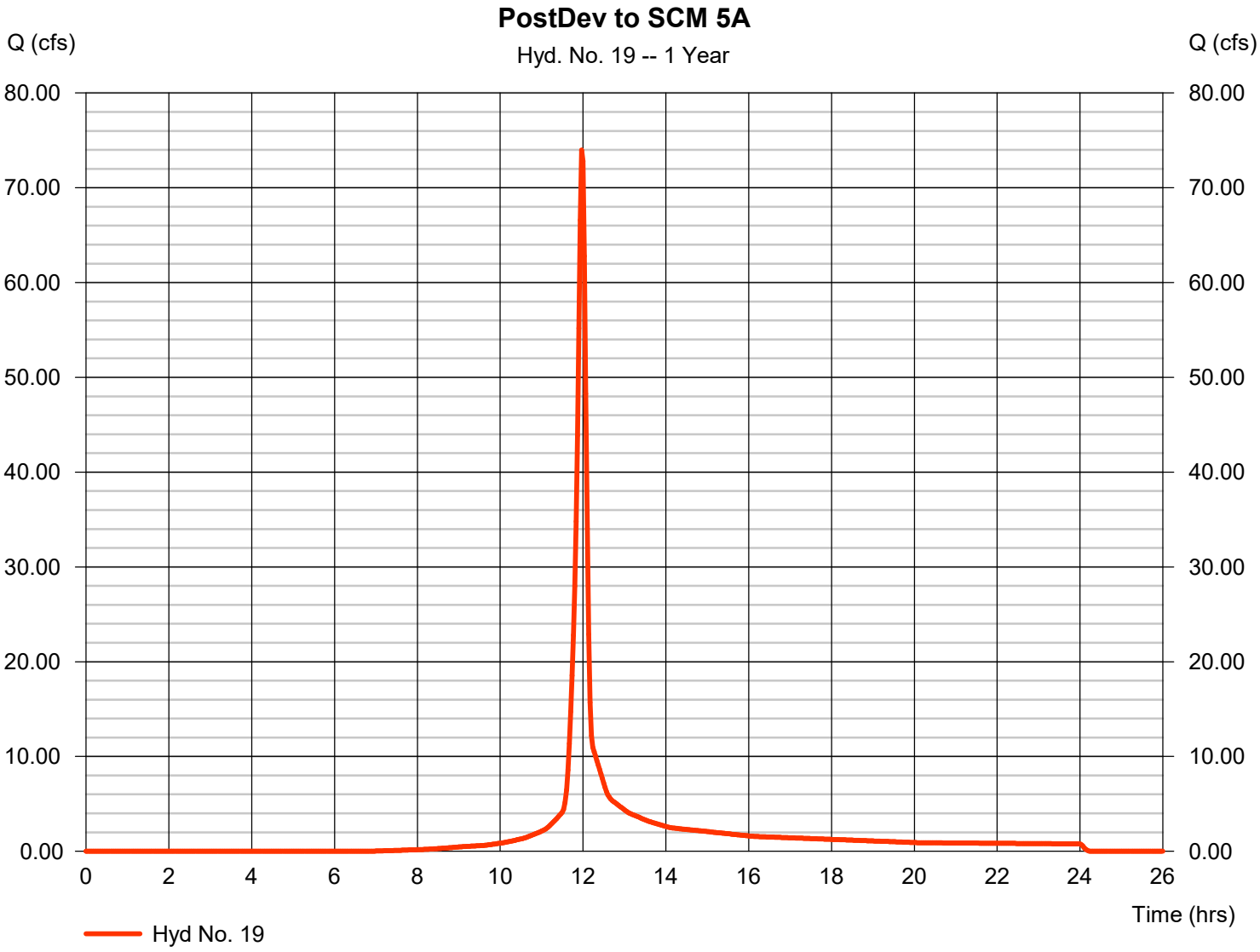


Hydrograph Report

Hyd. No. 19

PostDev to SCM 5A

Hydrograph type	=	SCS Runoff	Peak discharge	=	73.99 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	170,263 cuft
Drainage area	=	27.430 ac	Curve number	=	88.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.10 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

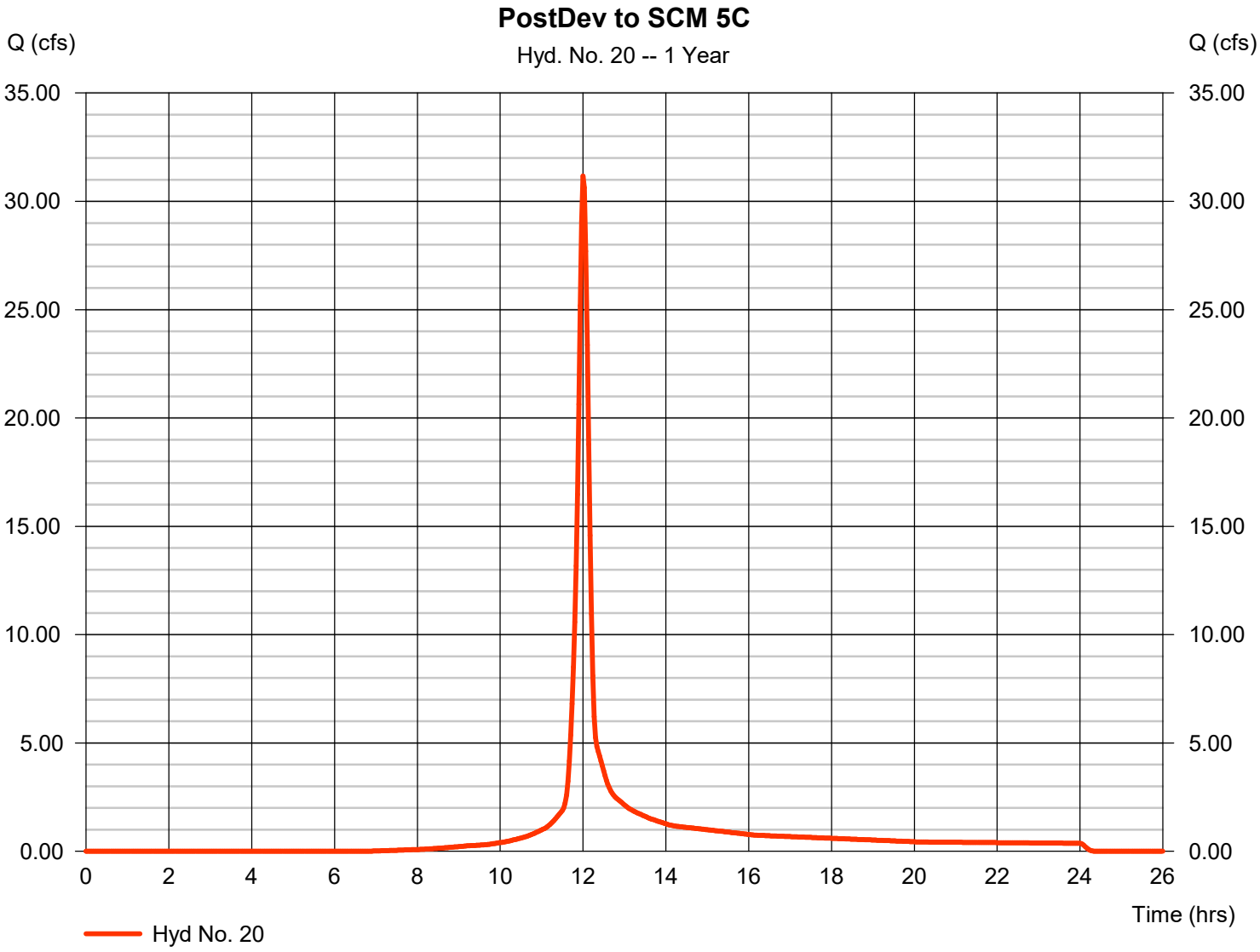


Hydrograph Report

Hyd. No. 20

PostDev to SCM 5C

Hydrograph type	=	SCS Runoff	Peak discharge	=	31.17 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	81,076 cuft
Drainage area	=	12.550 ac	Curve number	=	88.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.80 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

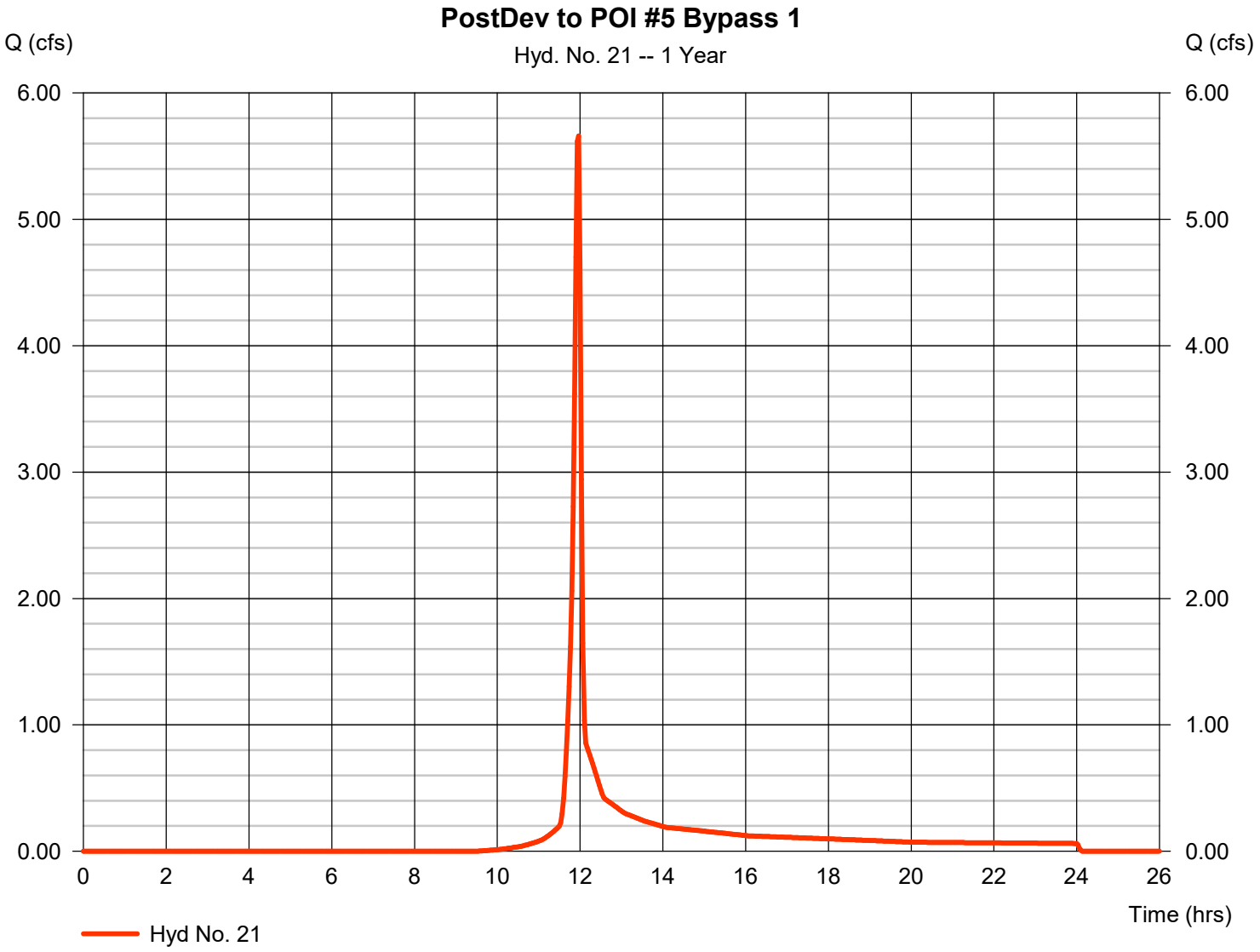


Hydrograph Report

Hyd. No. 21

PostDev to POI #5 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 5.660 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 11,360 cuft
Drainage area	= 2.710 ac	Curve number	= 81.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

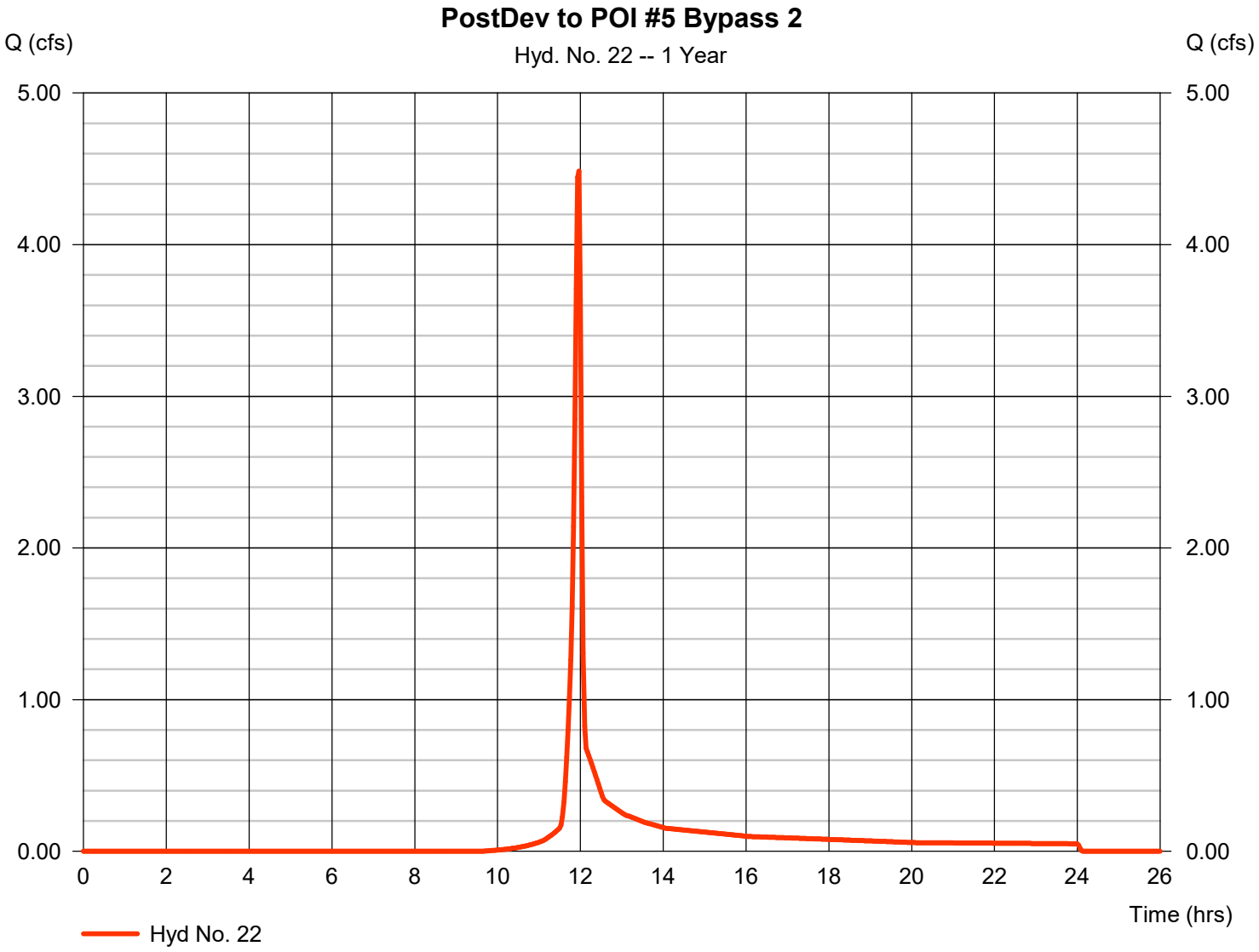


Hydrograph Report

Hyd. No. 22

PostDev to POI #5 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.486 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 8,994 cuft
Drainage area	= 2.190 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

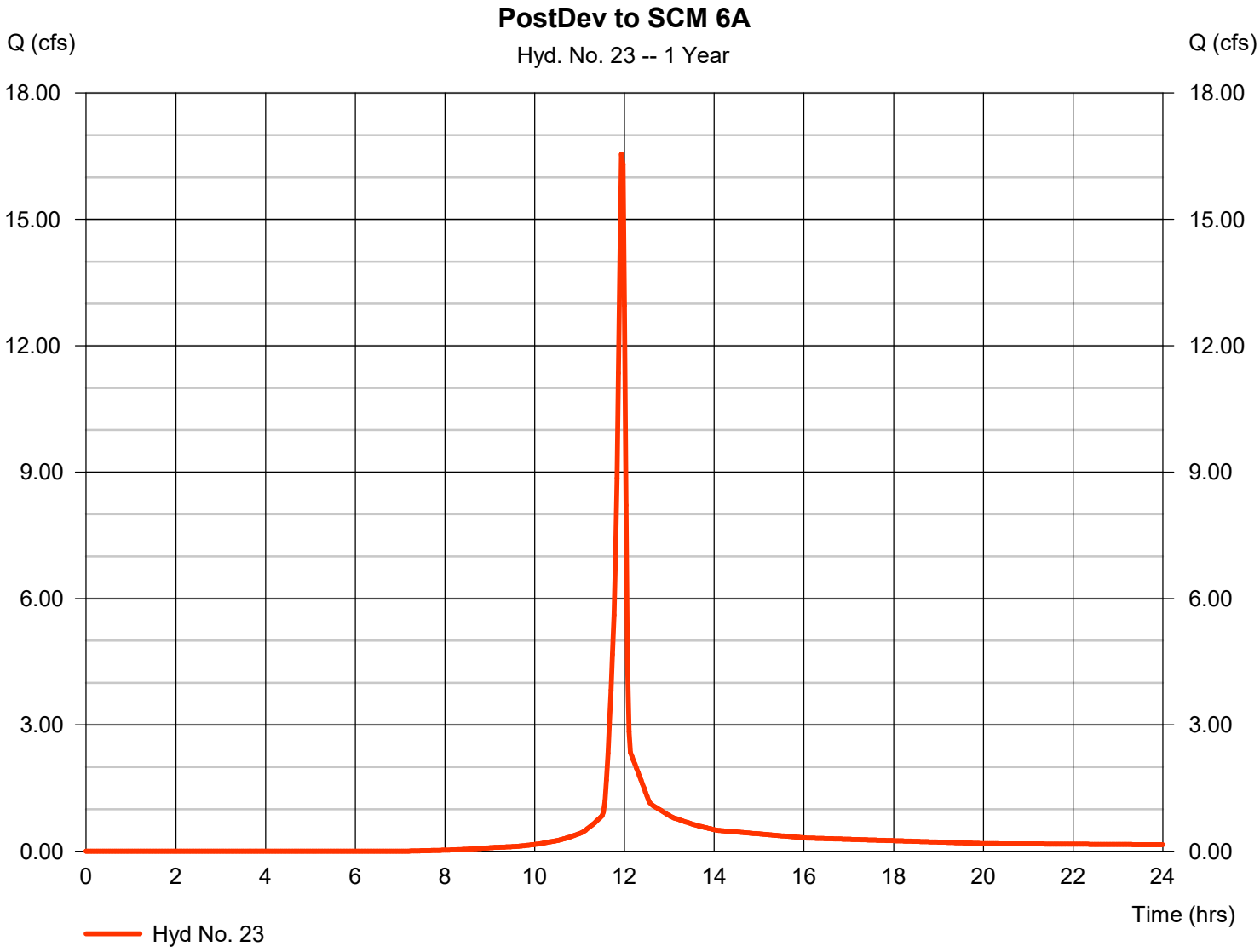


Hydrograph Report

Hyd. No. 23

PostDev to SCM 6A

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.55 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	33,678 cuft
Drainage area	=	5.950 ac	Curve number	=	87.6
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

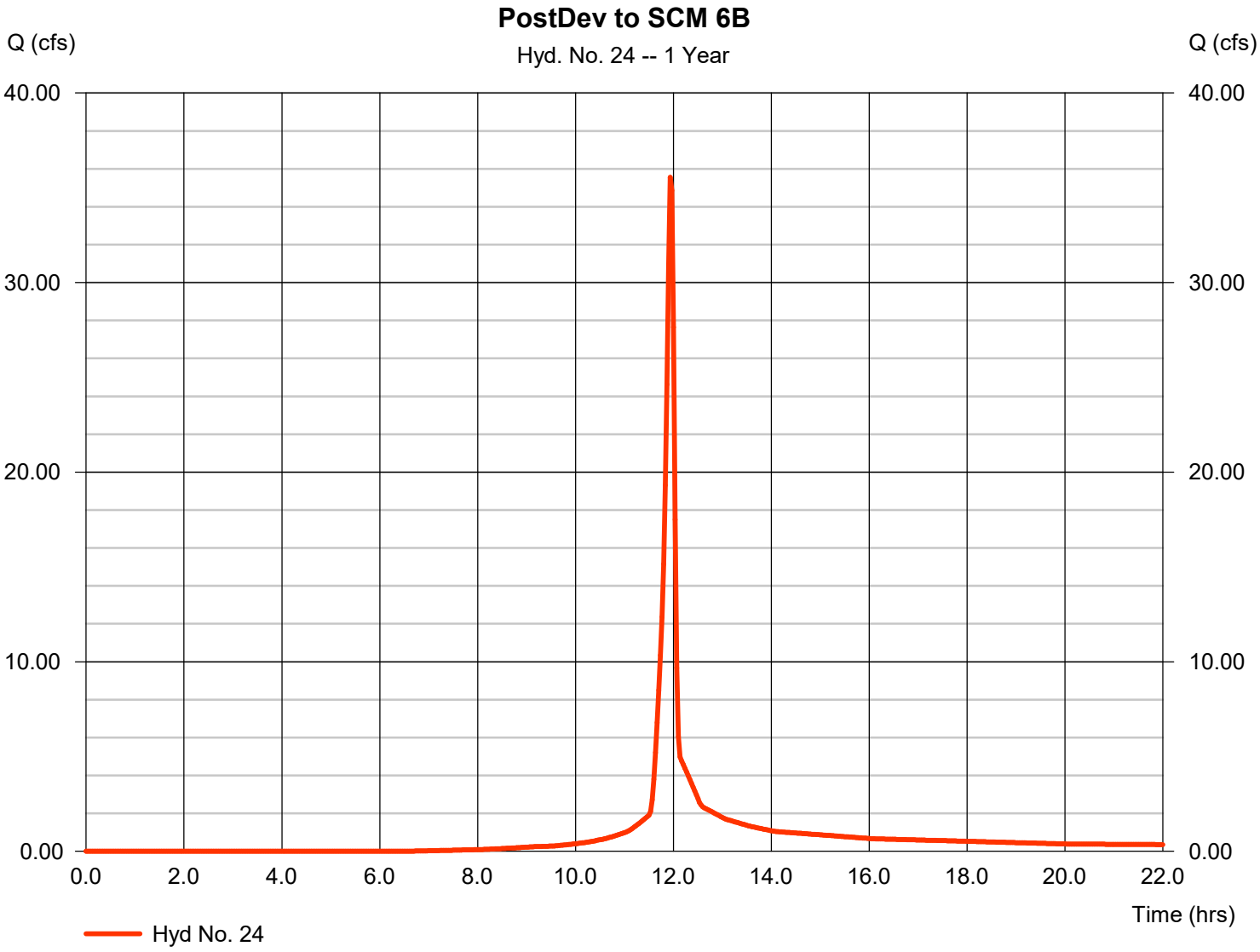


Hydrograph Report

Hyd. No. 24

PostDev to SCM 6B

Hydrograph type	= SCS Runoff	Peak discharge	= 35.55 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 72,701 cuft
Drainage area	= 12.210 ac	Curve number	= 88.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.30 min
Total precip.	= 2.86 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

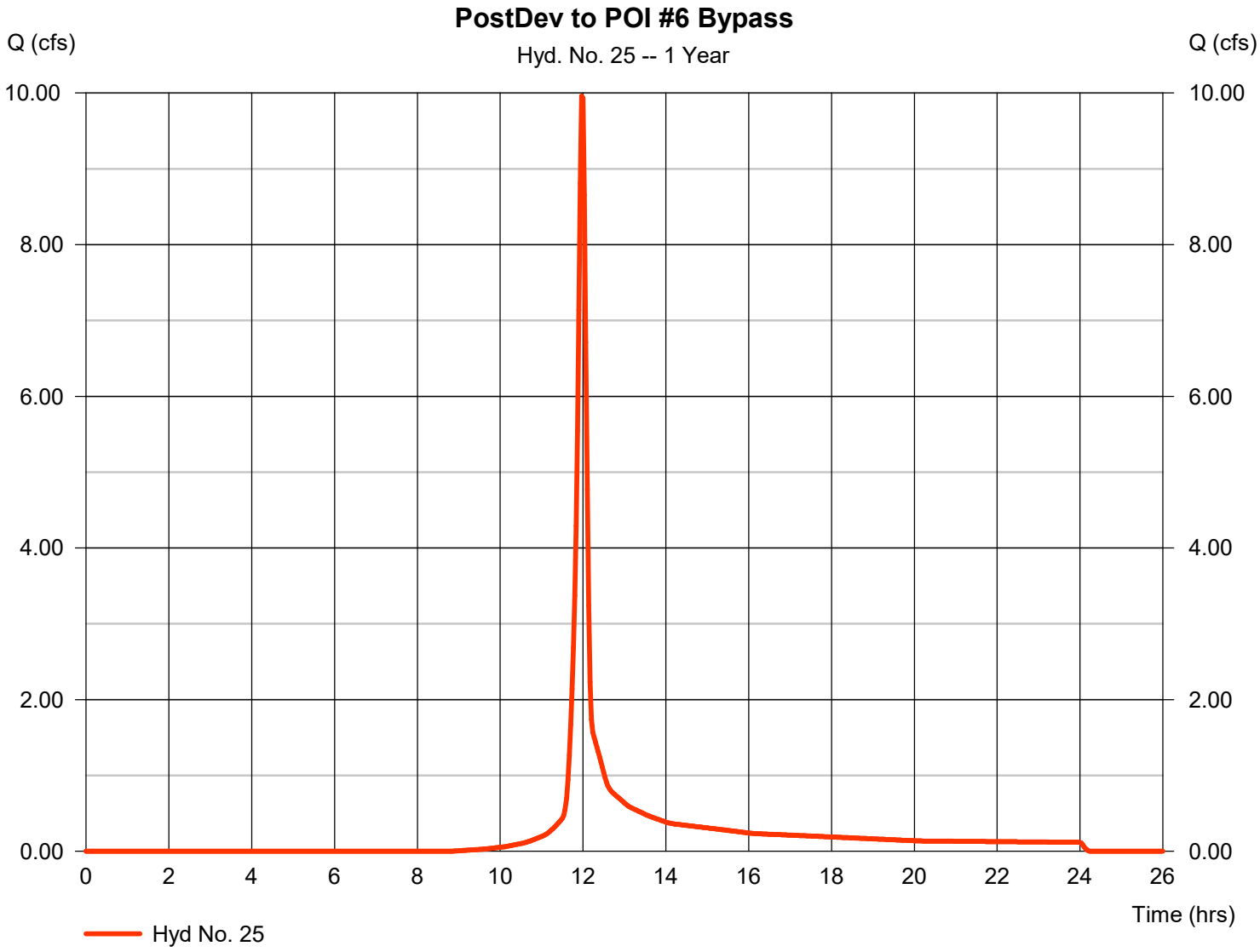


Hydrograph Report

Hyd. No. 25

PostDev to POI #6 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.958 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	22,794 cuft
Drainage area	=	4.590 ac	Curve number	=	83.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

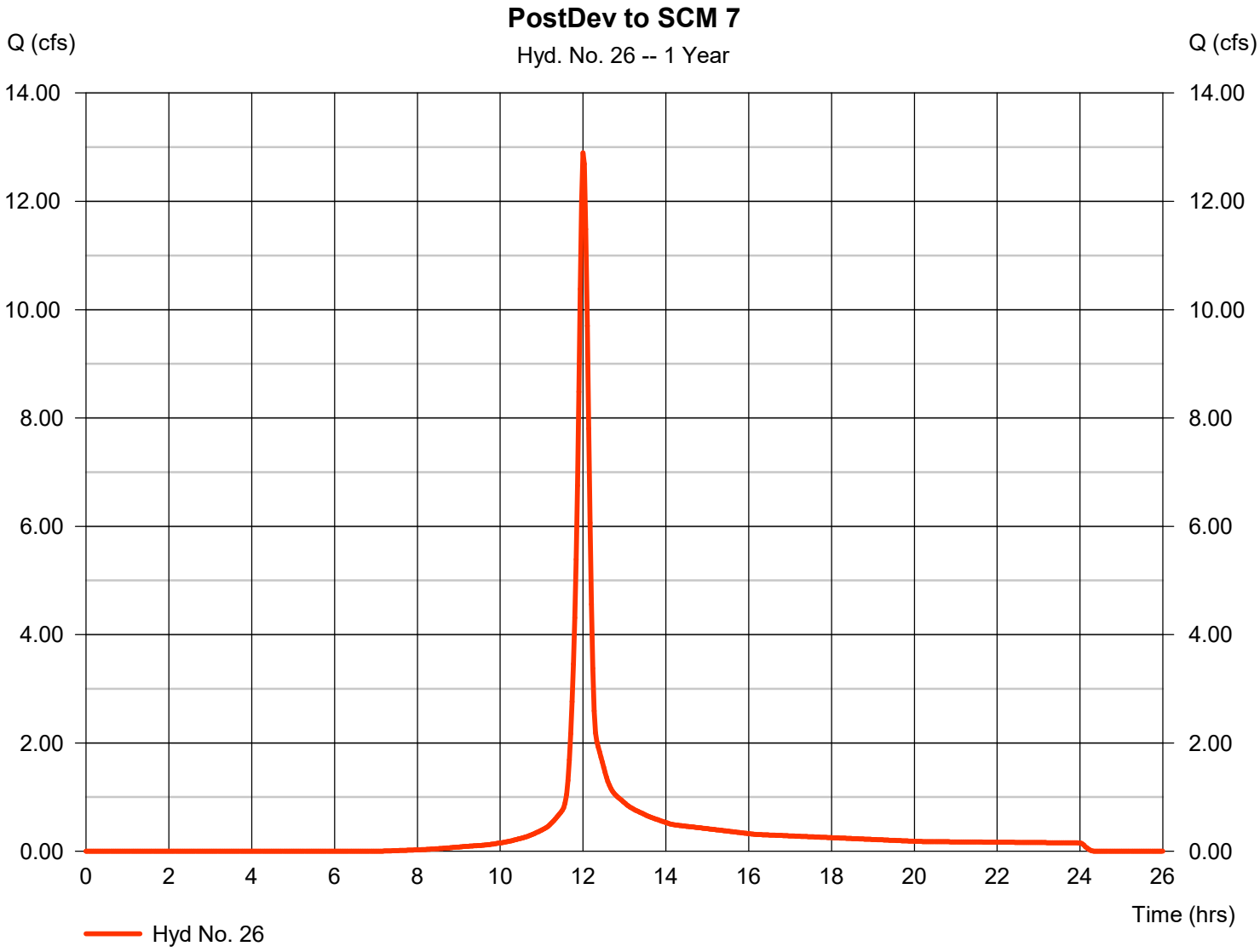


Hydrograph Report

Hyd. No. 26

PostDev to SCM 7

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.89 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	33,495 cuft
Drainage area	=	5.330 ac	Curve number	=	87.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.40 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

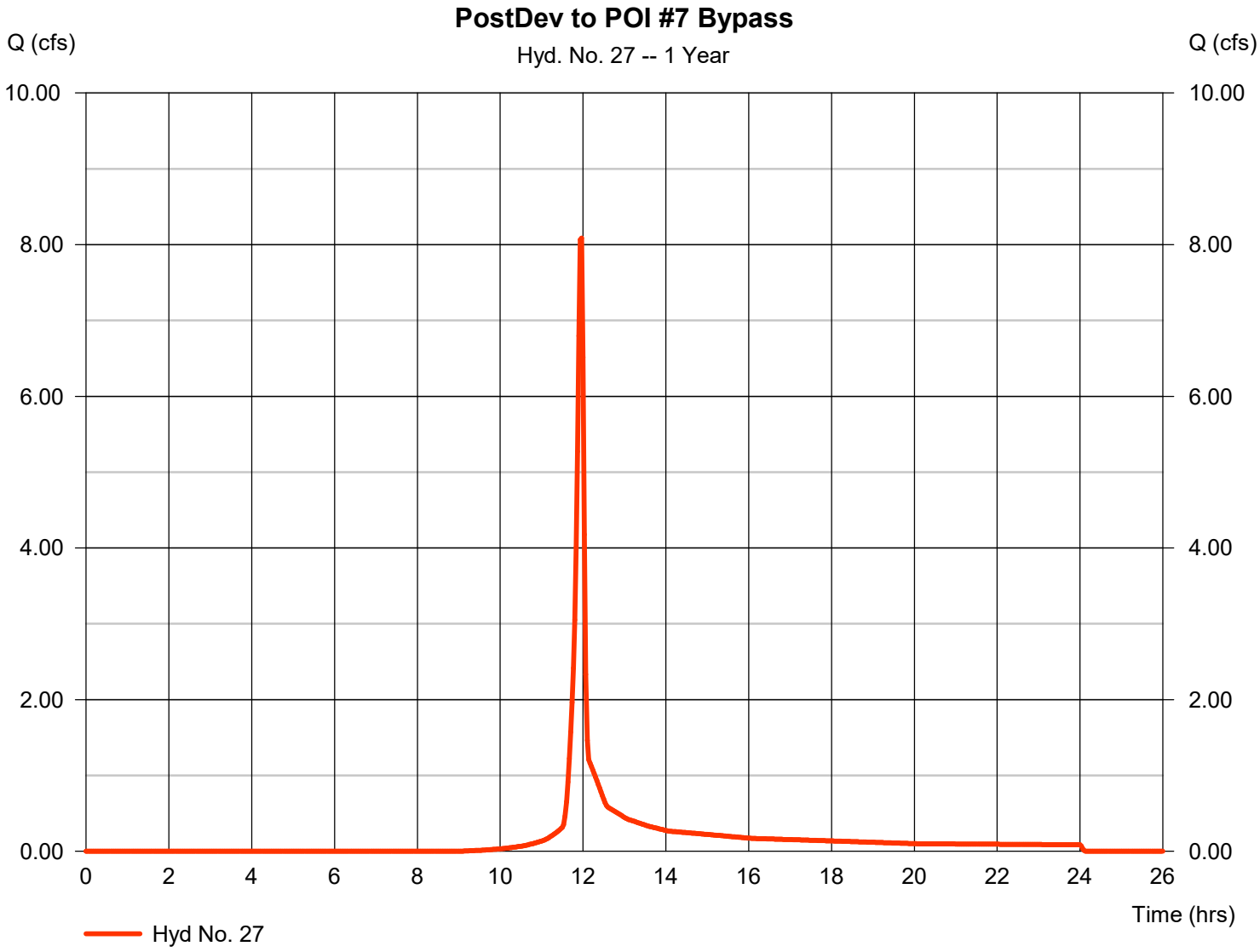


Hydrograph Report

Hyd. No. 27

PostDev to POI #7 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.086 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	16,289 cuft
Drainage area	=	3.640 ac	Curve number	=	82.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.86 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



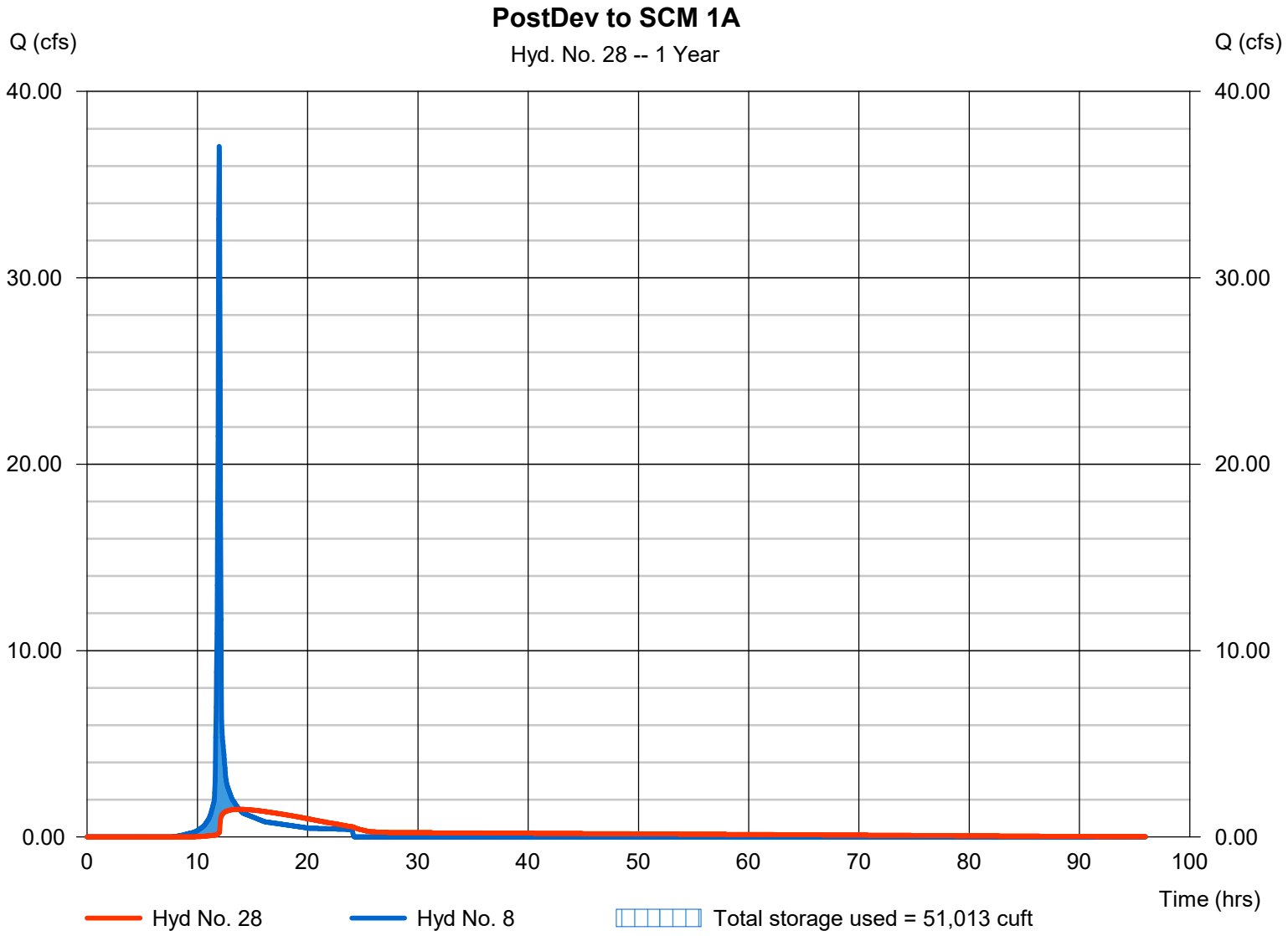
Hydrograph Report

Hyd. No. 28

PostDev to SCM 1A

Hydrograph type	= Reservoir	Peak discharge	= 1.484 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.80 hrs
Time interval	= 2 min	Hyd. volume	= 83,621 cuft
Inflow hyd. No.	= 8 - PostDev to SCM 1A	Max. Elevation	= 349.85 ft
Reservoir name	= SCM 1A	Max. Storage	= 51,013 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - SCM 1A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 346.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	346.50	12,463	0	0
0.50	347.00	14,170	6,653	6,653
1.50	348.00	15,126	14,644	21,297
2.50	349.00	16,101	15,609	36,906
3.50	350.00	17,080	16,586	53,493
4.50	351.00	18,040	17,556	71,049
5.50	352.00	18,971	18,502	89,551
6.50	353.00	19,870	19,417	108,967
7.50	354.00	20,742	20,302	129,270
8.50	355.00	21,591	21,163	150,433

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 30.00	2.50	3.00	0.00
Span (in)	= 30.00	2.50	12.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 346.00	346.50	348.75	0.00
Length (ft)	= 112.00	0.00	0.00	0.00
Slope (%)	= 1.78	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

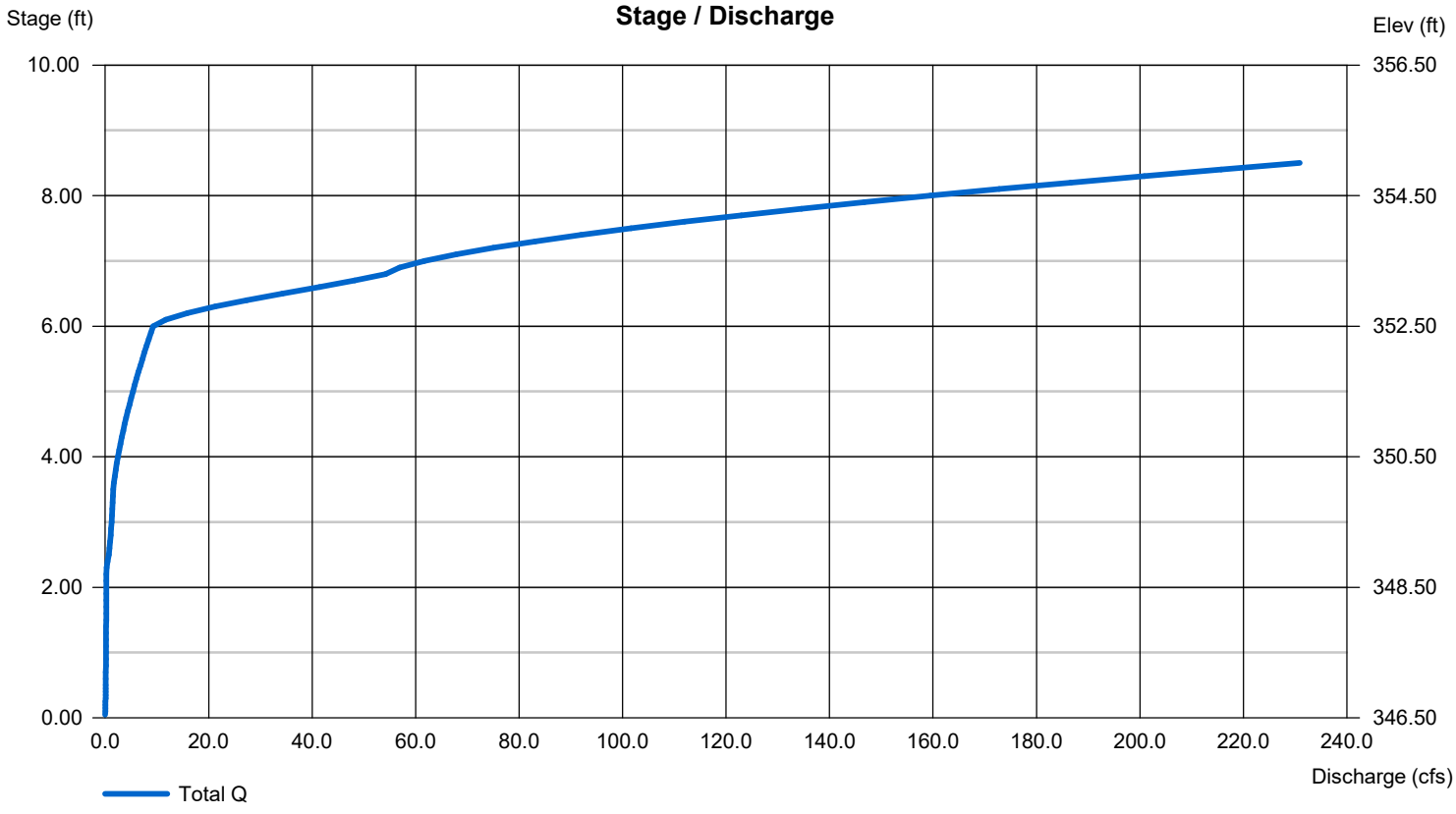
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 19.50	30.00	0.50	Inactive
Crest El. (ft)	= 352.50	353.35	350.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	Rect
Multi-Stage	= Yes	No	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



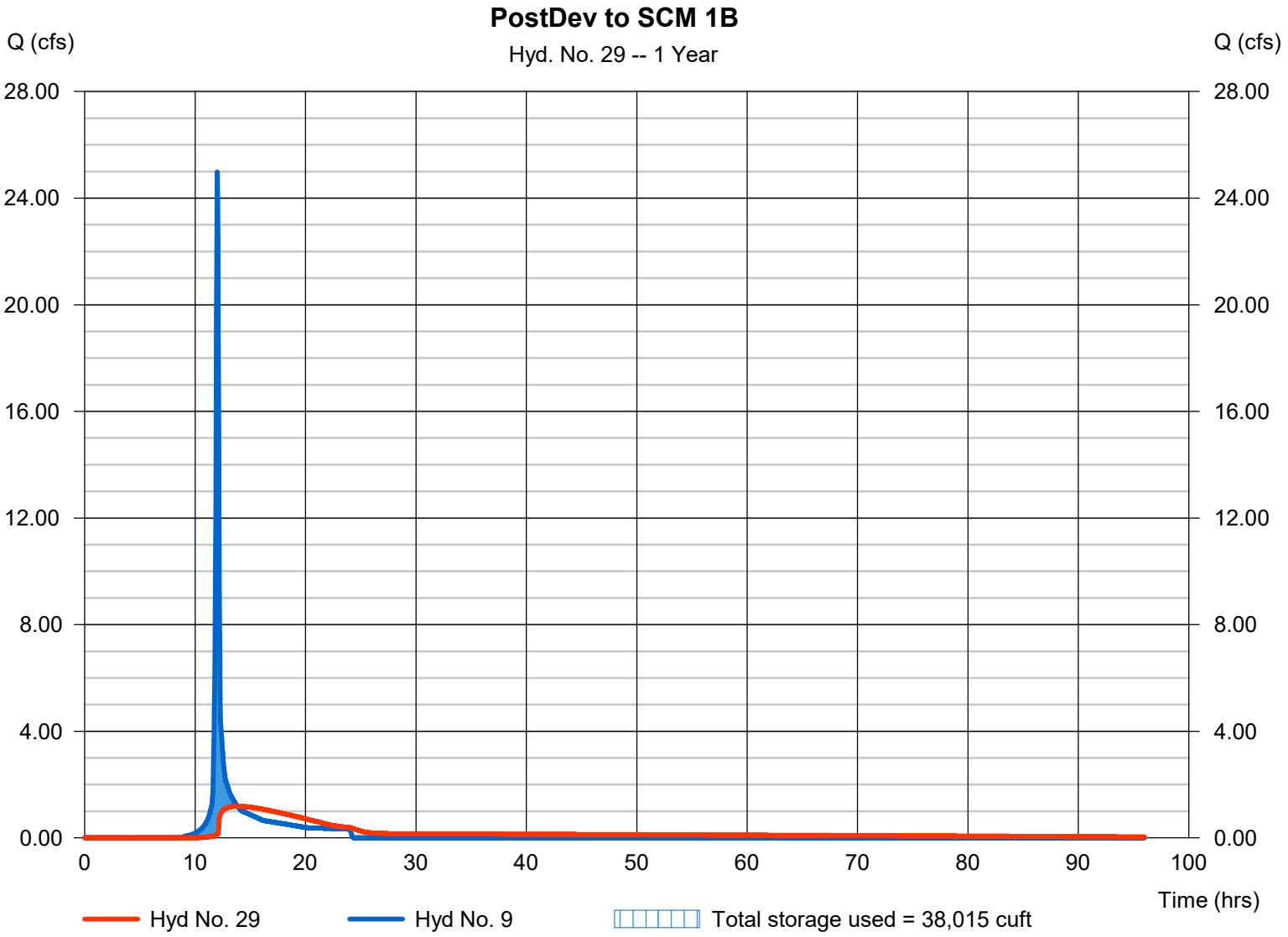
Hydrograph Report

Hyd. No. 29

PostDev to SCM 1B

Hydrograph type	= Reservoir	Peak discharge	= 1.187 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.83 hrs
Time interval	= 2 min	Hyd. volume	= 63,113 cuft
Inflow hyd. No.	= 9 - PostDev to SCM 1B	Max. Elevation	= 378.57 ft
Reservoir name	= SCM 1B	Max. Storage	= 38,015 cuft

Storage Indication method used.



Pond No. 2 - SCM 1B

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 375.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	375.50	8,880	0	0
0.50	376.00	10,320	4,795	4,795
1.50	377.00	12,224	11,257	16,052
2.50	378.00	14,212	13,204	29,257
3.50	379.00	16,374	15,279	44,535
4.50	380.00	18,741	17,542	62,078
5.50	381.00	21,329	20,019	82,097
6.50	382.00	24,184	22,739	104,836
7.50	383.00	27,569	25,855	130,692

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	2.00	3.00	0.00
Span (in)	= 24.00	2.00	12.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 375.00	375.50	377.75	0.00
Length (ft)	= 72.00	0.00	0.00	0.00
Slope (%)	= 1.37	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

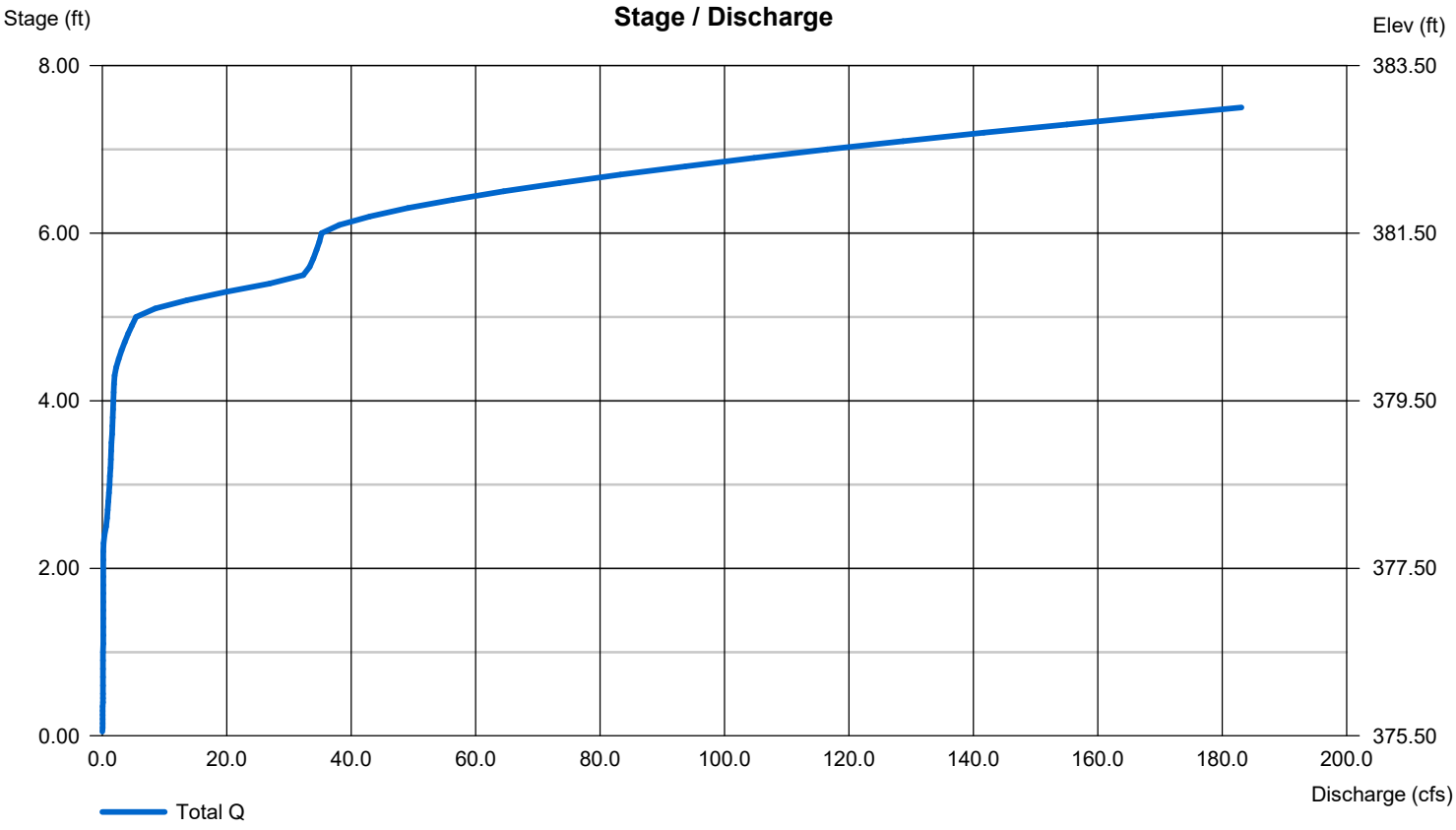
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 22.50	30.00	1.50	Inactive
Crest El. (ft)	= 380.50	381.50	379.75	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	Rect
Multi-Stage	= Yes	No	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



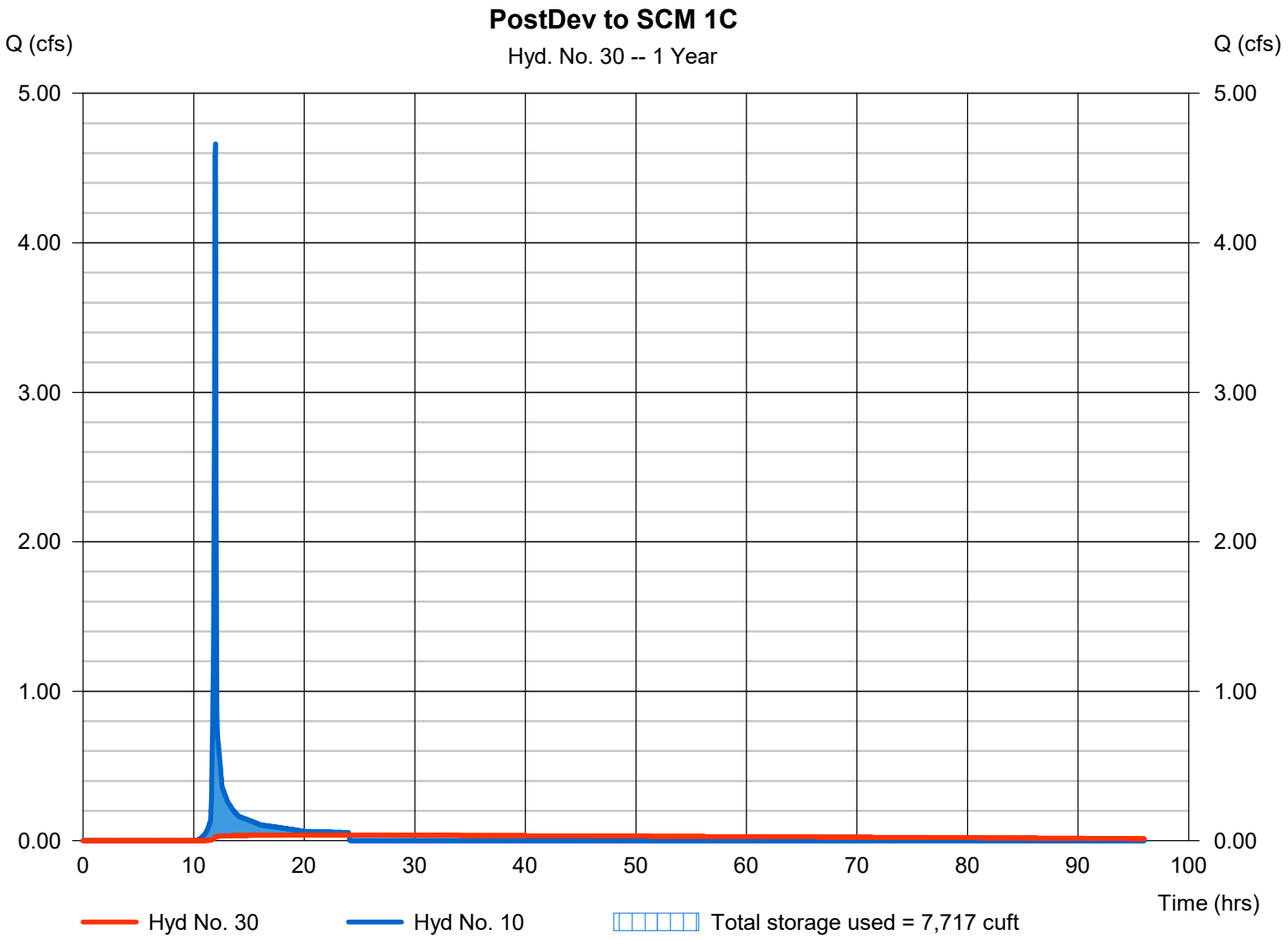
Hydrograph Report

Hyd. No. 30

PostDev to SCM 1C

Hydrograph type	= Reservoir	Peak discharge	= 0.038 cfs
Storm frequency	= 1 yrs	Time to peak	= 24.03 hrs
Time interval	= 2 min	Hyd. volume	= 8,482 cuft
Inflow hyd. No.	= 10 - PostDev to SCM 1C	Max. Elevation	= 362.67 ft
Reservoir name	= SCM 1C	Max. Storage	= 7,717 cuft

Storage Indication method used.



Pond Report

Pond No. 3 - SCM 1C

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 360.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	360.50	2,572	0	0
0.50	361.00	3,165	1,432	1,432
1.50	362.00	3,813	3,484	4,915
2.50	363.00	4,518	4,160	9,075
3.50	364.00	5,280	4,894	13,969
4.50	365.00	6,099	5,684	19,653
5.50	366.00	6,974	6,531	26,184

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	1.00	0.00	0.00
Span (in)	= 18.00	1.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 360.00	360.50	0.00	0.00
Length (ft)	= 67.00	0.00	0.00	0.00
Slope (%)	= 0.74	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

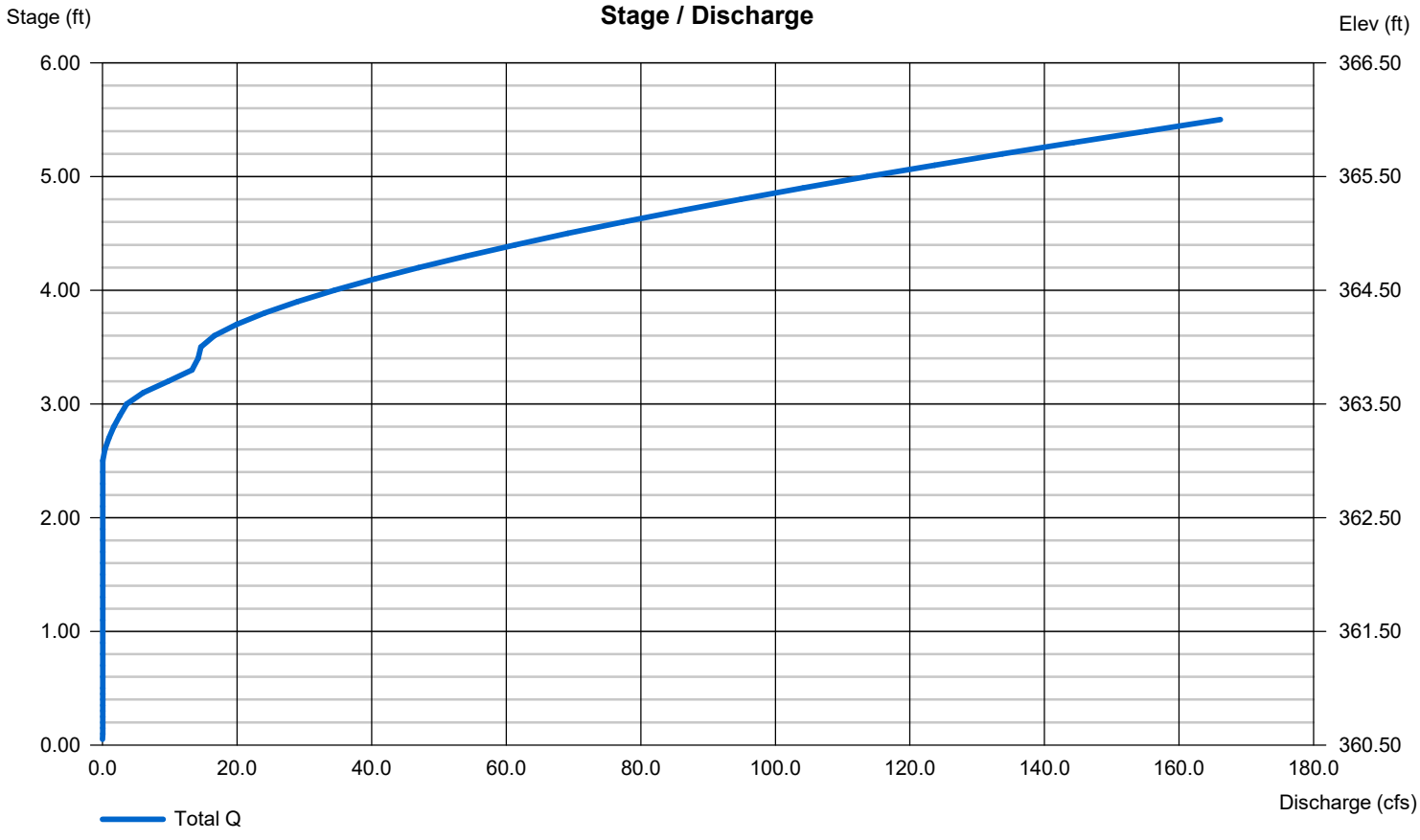
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 13.00	20.00	3.00	0.00
Crest El. (ft)	= 363.50	364.00	363.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



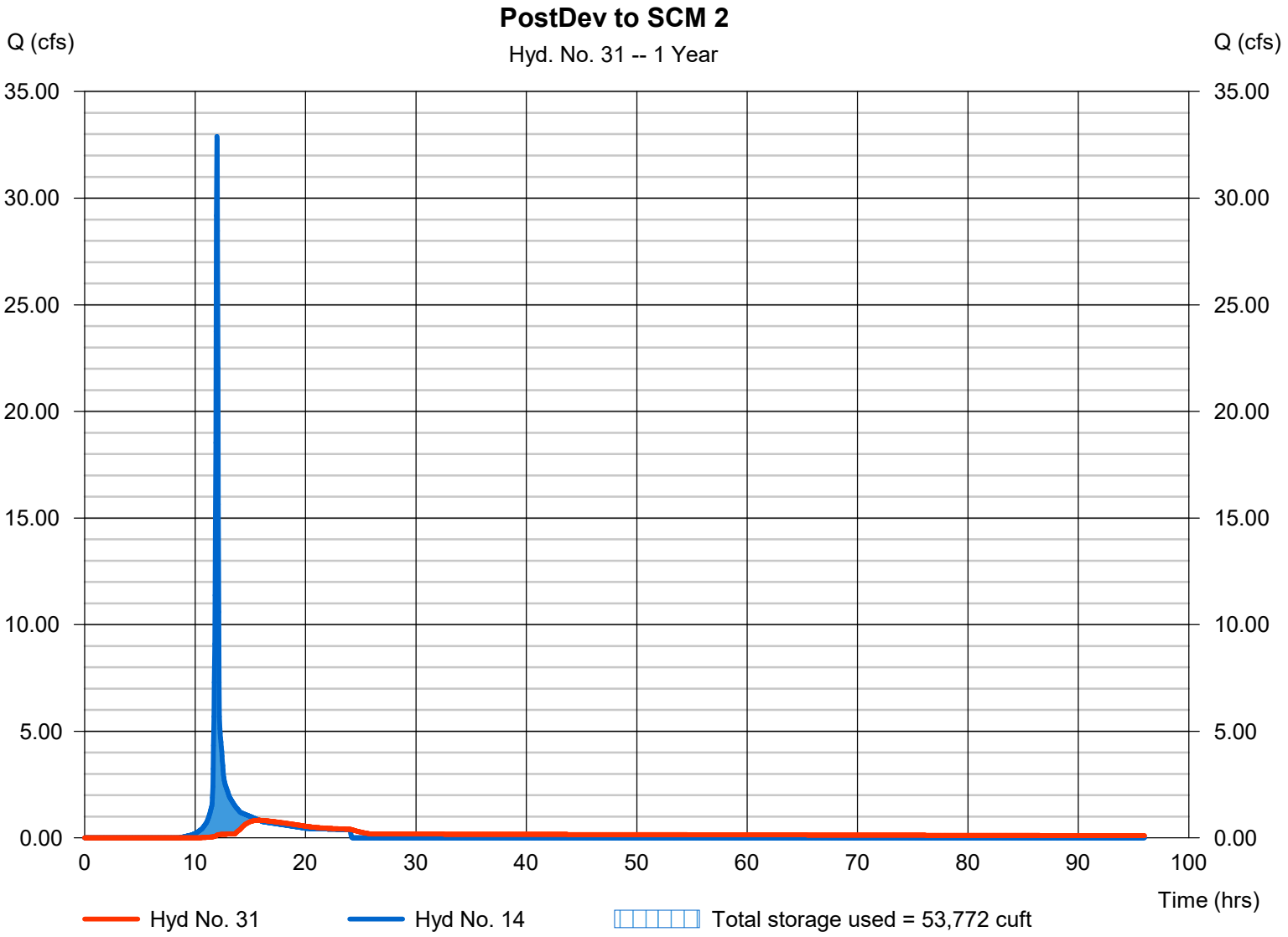
Hydrograph Report

Hyd. No. 31

PostDev to SCM 2

Hydrograph type	= Reservoir	Peak discharge	= 0.827 cfs
Storm frequency	= 1 yrs	Time to peak	= 15.80 hrs
Time interval	= 2 min	Hyd. volume	= 60,321 cuft
Inflow hyd. No.	= 14 - PostDev to SCM 2	Max. Elevation	= 354.71 ft
Reservoir name	= SCM 2	Max. Storage	= 53,772 cuft

Storage Indication method used.



Pond Report

Pond No. 4 - SCM 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 351.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	351.50	14,317	0	0
0.50	352.00	15,998	7,574	7,574
1.50	353.00	16,749	16,370	23,945
2.50	354.00	17,527	17,135	41,079
3.50	355.00	18,333	17,927	59,006
4.50	356.00	19,166	18,746	77,752
5.50	357.00	20,026	19,592	97,345
6.50	358.00	20,913	20,466	117,811
7.50	359.00	21,828	21,367	139,177
8.50	360.00	22,827	22,323	161,501

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	2.00	3.00	0.00
Span (in)	= 24.00	2.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 351.00	351.50	354.50	0.00
Length (ft)	= 65.00	0.00	0.00	0.00
Slope (%)	= 1.55	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

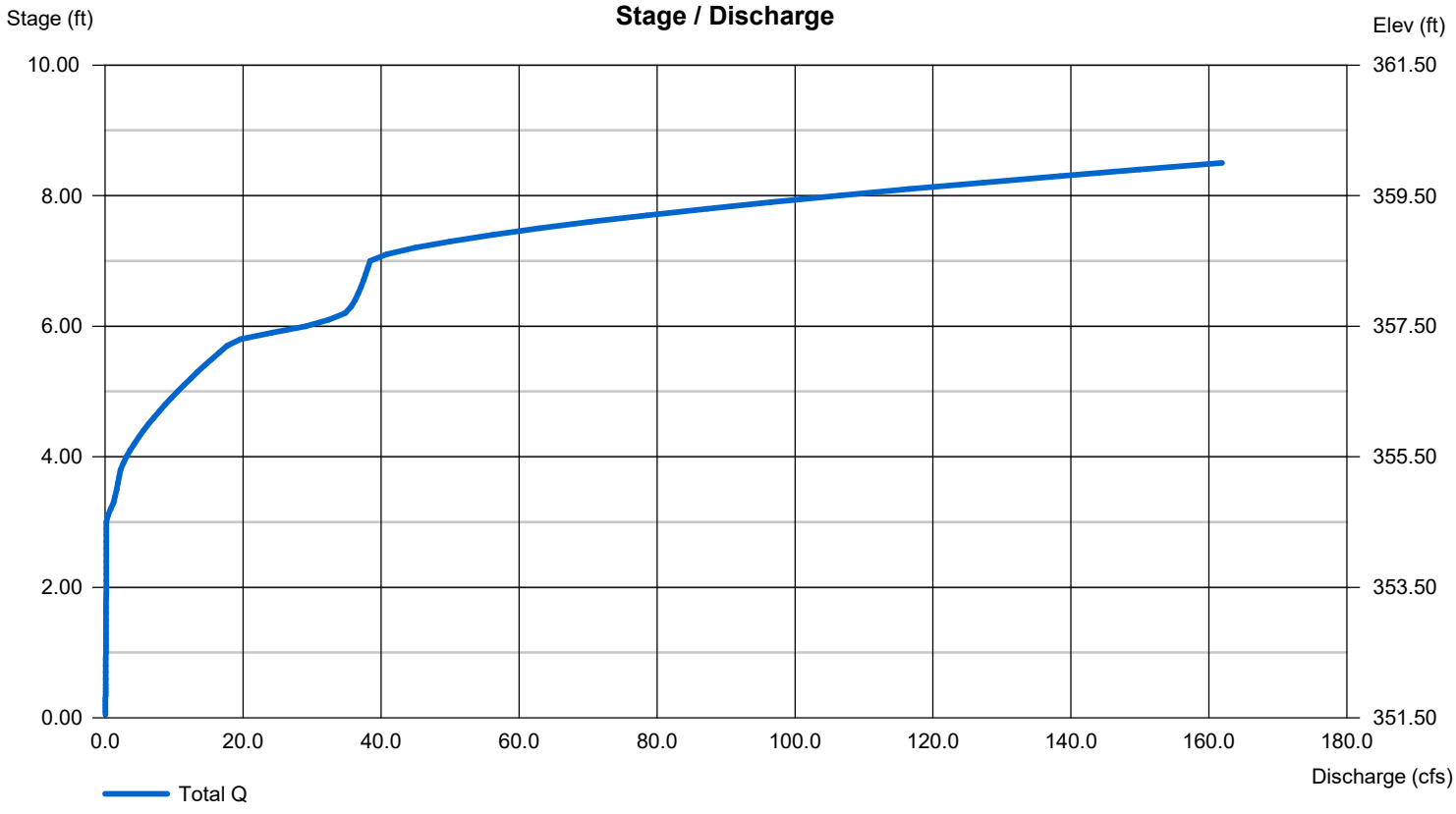
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 22.50	25.00	1.50	Inactive
Crest El. (ft)	= 357.25	358.50	355.25	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	Rect
Multi-Stage	= Yes	No	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



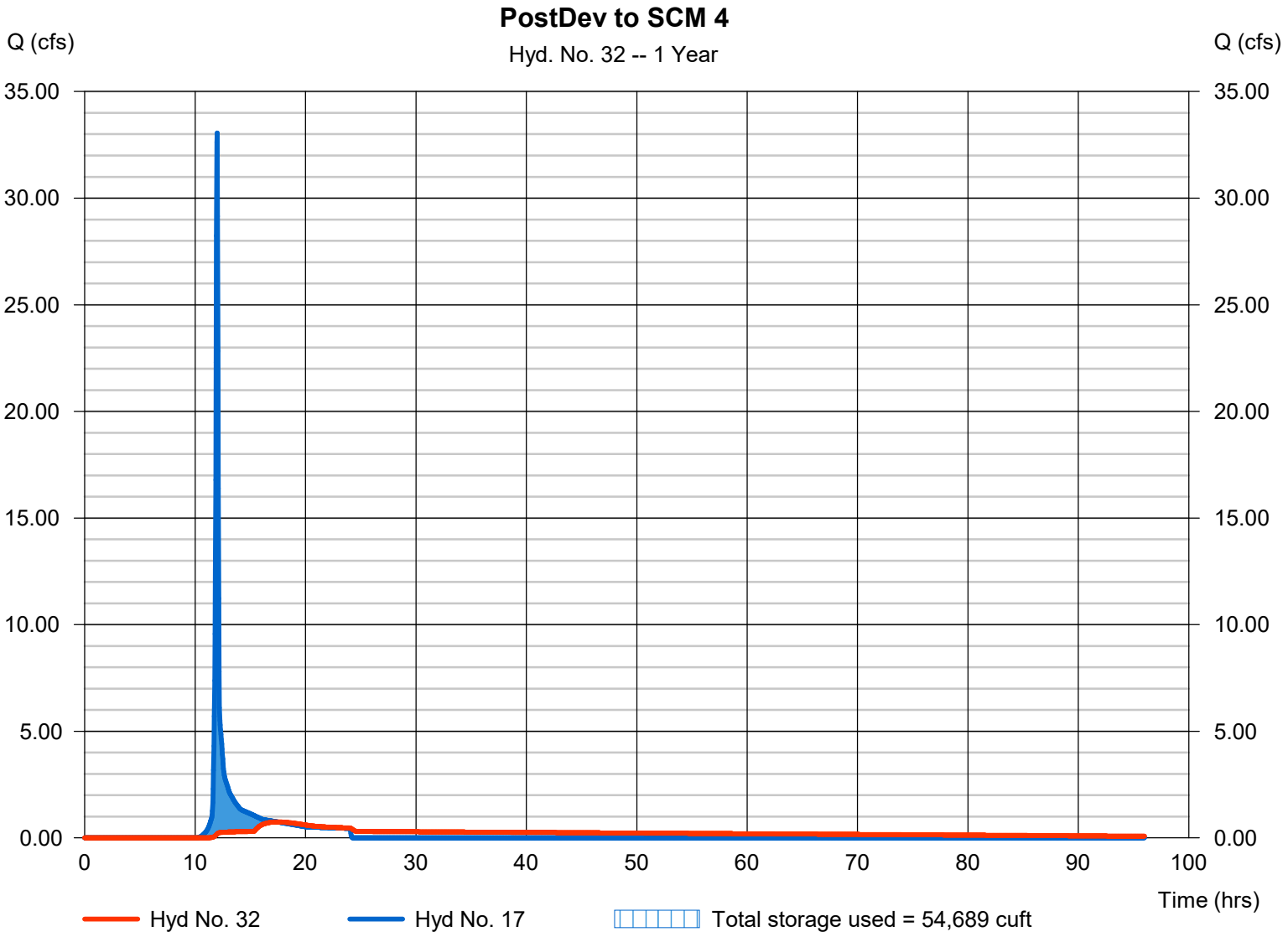
Hydrograph Report

Hyd. No. 32

PostDev to SCM 4

Hydrograph type	= Reservoir	Peak discharge	= 0.750 cfs
Storm frequency	= 1 yrs	Time to peak	= 17.43 hrs
Time interval	= 2 min	Hyd. volume	= 71,806 cuft
Inflow hyd. No.	= 17 - PostDev to SCM 4	Max. Elevation	= 364.10 ft
Reservoir name	= SCM 4	Max. Storage	= 54,689 cuft

Storage Indication method used.



Pond Report

Pond No. 5 - SCM 4

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 360.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	360.50	12,790	0	0
0.50	361.00	14,375	6,787	6,787
1.50	362.00	15,056	14,713	21,499
2.50	363.00	15,744	15,397	36,897
3.50	364.00	16,437	16,088	52,984
4.50	365.00	17,136	16,784	69,768
5.50	366.00	17,841	17,486	87,253
6.50	367.00	18,543	18,189	105,443
7.50	368.00	19,231	18,884	124,327
8.50	369.00	19,900	19,563	143,889
9.50	370.00	20,544	20,219	164,108
10.50	371.00	21,226	20,882	184,990

Culvert / Orifice Structures

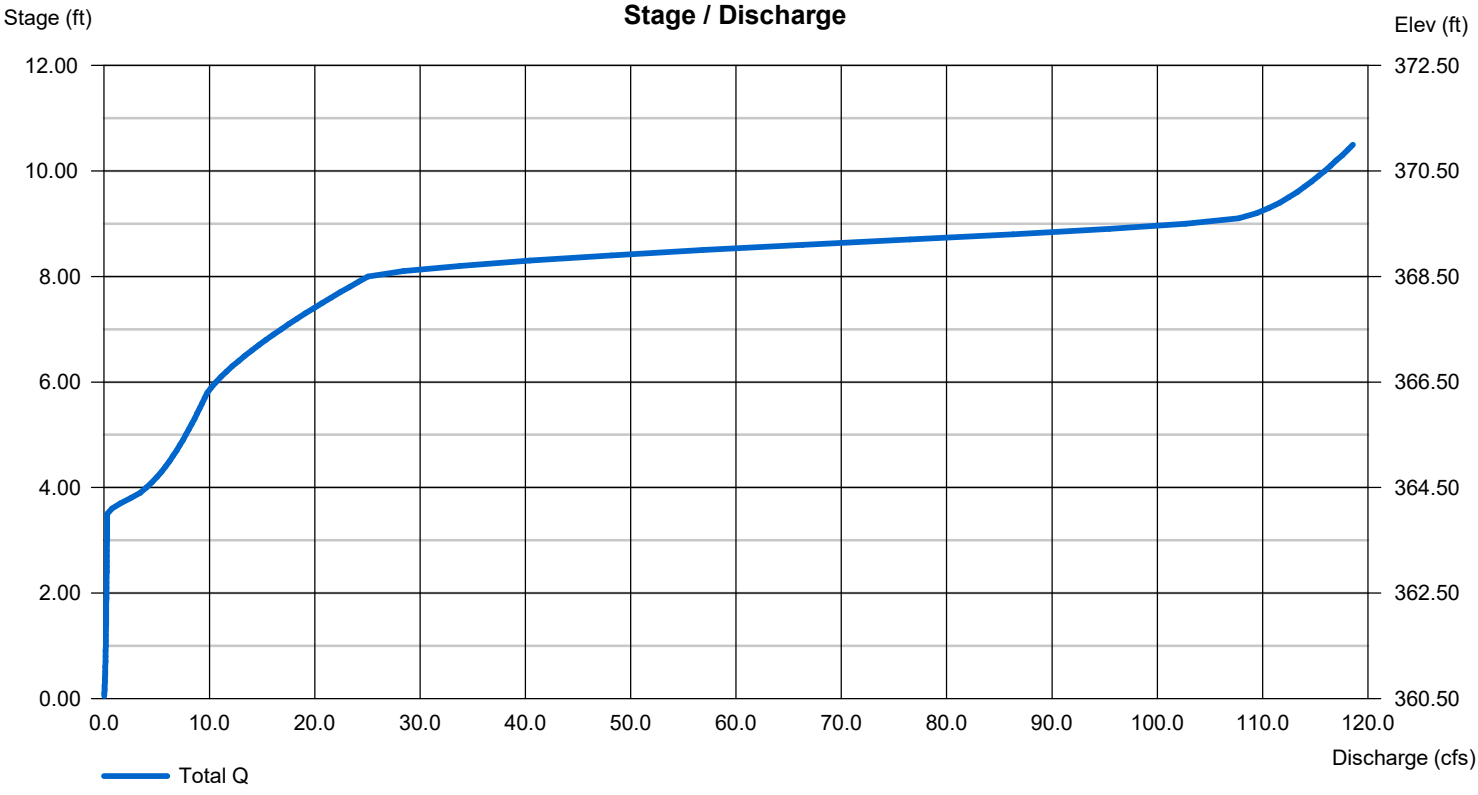
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	2.50	4.00	0.00
Span (in)	= 36.00	2.50	24.00	0.00
No. Barrels	= 1	1	2	0
Invert El. (ft)	= 357.00	360.50	364.00	0.00
Length (ft)	= 201.00	0.00	0.00	0.00
Slope (%)	= 0.99	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 23.00	1.00	Inactive	Inactive
Crest El. (ft)	= 368.50	366.25	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Rect	Rect	Rect
Multi-Stage	= Yes	Yes	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



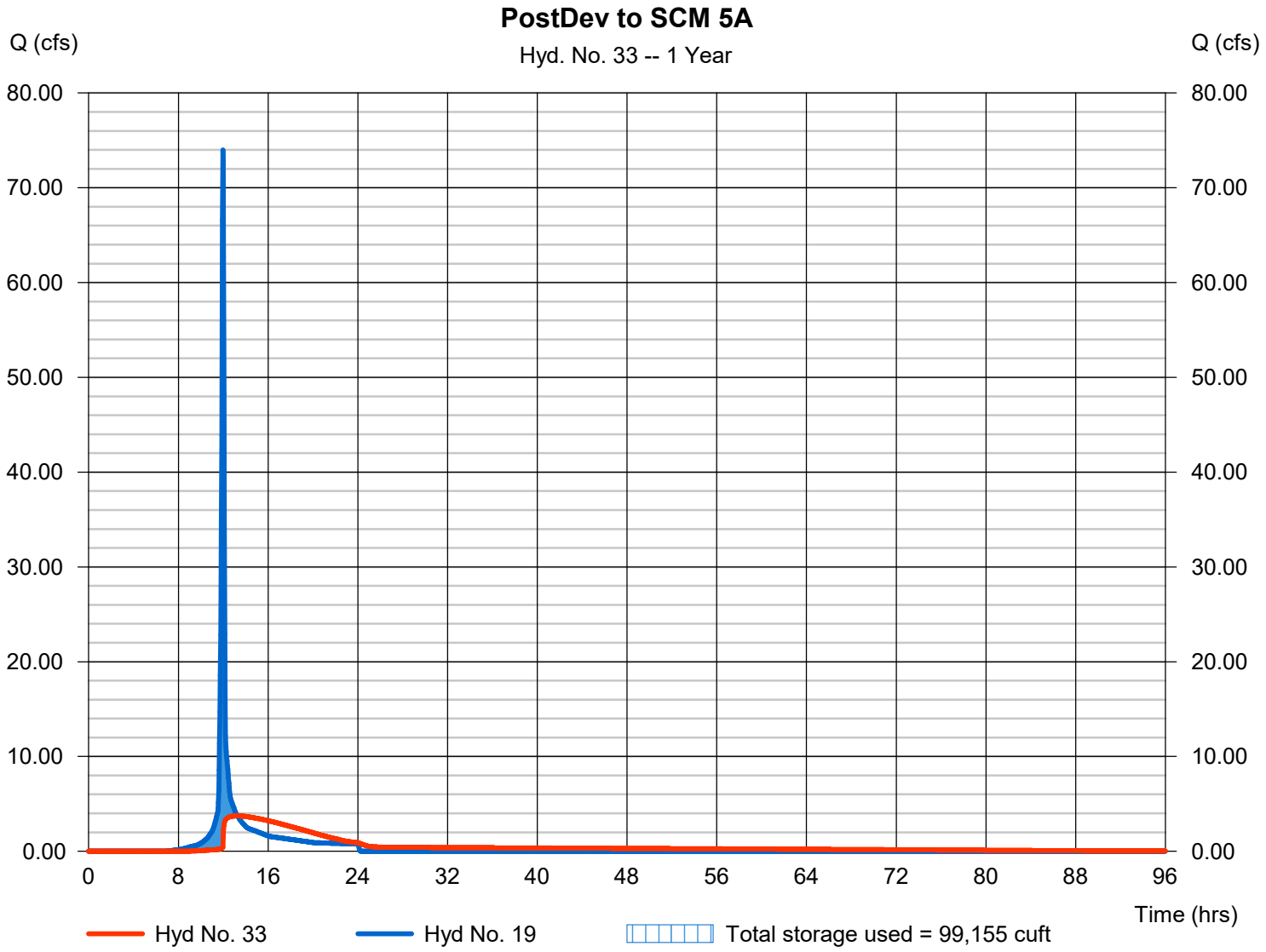
Hydrograph Report

Hyd. No. 33

PostDev to SCM 5A

Hydrograph type	=	Reservoir	Peak discharge	=	3.735 cfs
Storm frequency	=	1 yrs	Time to peak	=	13.27 hrs
Time interval	=	2 min	Hyd. volume	=	168,638 cuft
Inflow hyd. No.	=	19 - PostDev to SCM 5A	Max. Elevation	=	315.65 ft
Reservoir name	=	SCM 5A	Max. Storage	=	99,155 cuft

Storage Indication method used.



Pond Report

Pond No. 6 - SCM 5A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 310.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	310.50	14,419	0	0
0.50	311.00	15,915	7,580	7,580
1.50	312.00	17,467	16,683	24,263
2.50	313.00	19,077	18,264	42,527
3.50	314.00	20,743	19,902	62,429
4.50	315.00	22,465	21,596	84,026
5.50	316.00	24,244	23,347	107,372
6.50	317.00	26,079	25,153	132,526
7.50	318.00	27,971	27,017	159,542
8.50	319.00	29,920	28,937	188,479
9.50	320.00	31,925	30,914	219,393
10.50	321.00	33,987	32,947	252,341
11.50	322.00	36,105	35,037	287,378
12.50	323.00	38,280	37,184	324,561

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	3.00	3.00	0.00
Span (in)	= 24.00	3.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 306.00	310.50	313.75	0.00
Length (ft)	= 87.00	0.00	0.00	0.00
Slope (%)	= 3.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

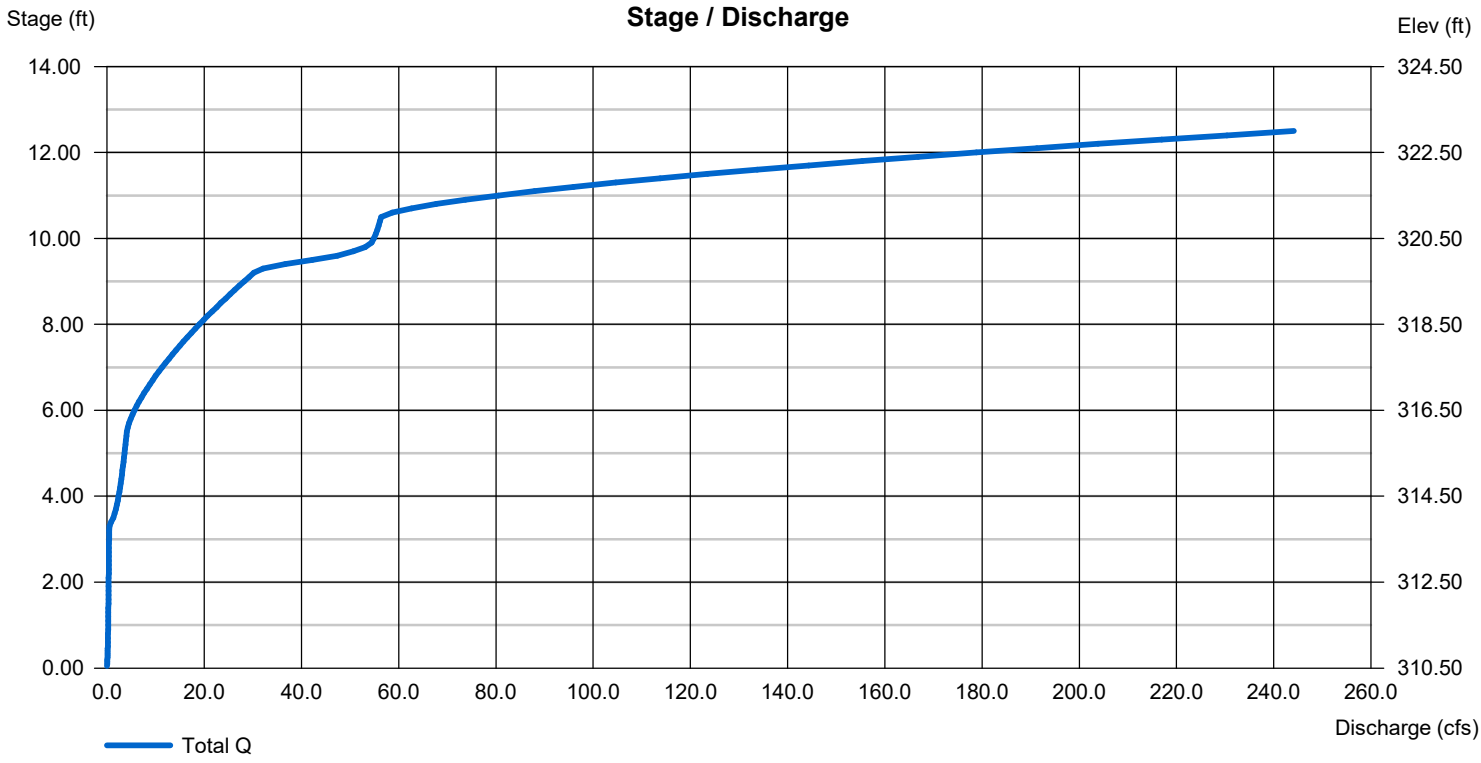
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 23.00	25.00	1.00	0.00
Crest El. (ft)	= 319.75	321.00	316.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



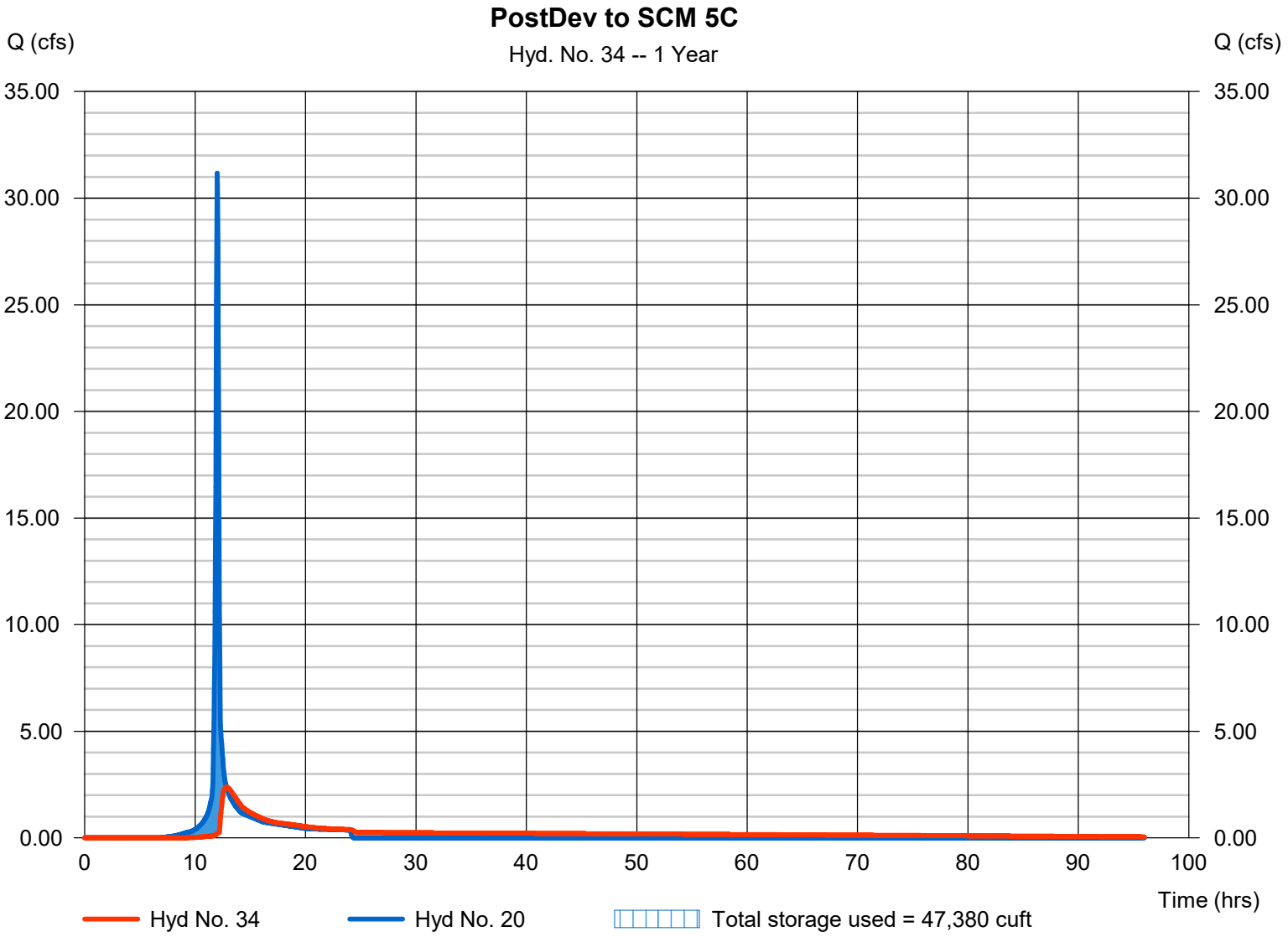
Hydrograph Report

Hyd. No. 34

PostDev to SCM 5C

Hydrograph type	= Reservoir	Peak discharge	= 2.374 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.87 hrs
Time interval	= 2 min	Hyd. volume	= 78,303 cuft
Inflow hyd. No.	= 20 - PostDev to SCM 5C	Max. Elevation	= 294.29 ft
Reservoir name	= SCM 5C	Max. Storage	= 47,380 cuft

Storage Indication method used.



Pond Report

Pond No. 8 - SCM 5C

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 291.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	291.50	14,394	0	0
0.50	292.00	16,197	7,643	7,643
1.50	293.00	17,220	16,704	24,347
2.50	294.00	18,165	17,689	42,035
3.50	295.00	19,063	18,610	60,646
4.50	296.00	19,849	19,453	80,098
5.50	297.00	20,551	20,197	100,295
6.50	298.00	21,192	20,869	121,164
7.50	299.00	21,868	21,527	142,691

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	2.50	4.00	0.00
Span (in)	= 24.00	2.50	24.00	0.00
No. Barrels	= 1	1	2	0
Invert El. (ft)	= 291.00	291.50	294.00	0.00
Length (ft)	= 78.00	0.00	0.00	0.00
Slope (%)	= 1.30	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

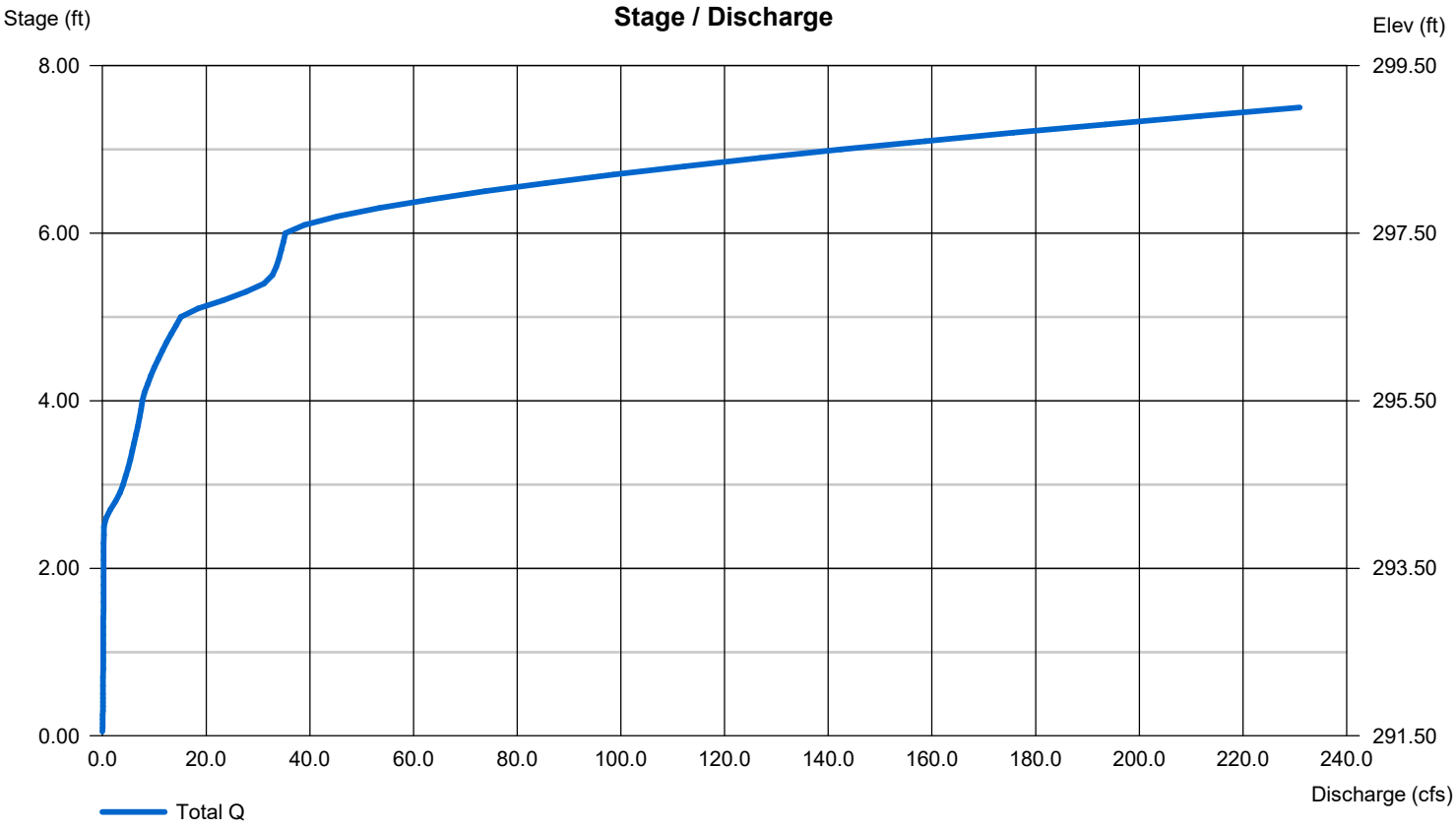
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 22.50	40.00	1.50	0.00
Crest El. (ft)	= 296.50	297.50	295.50	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



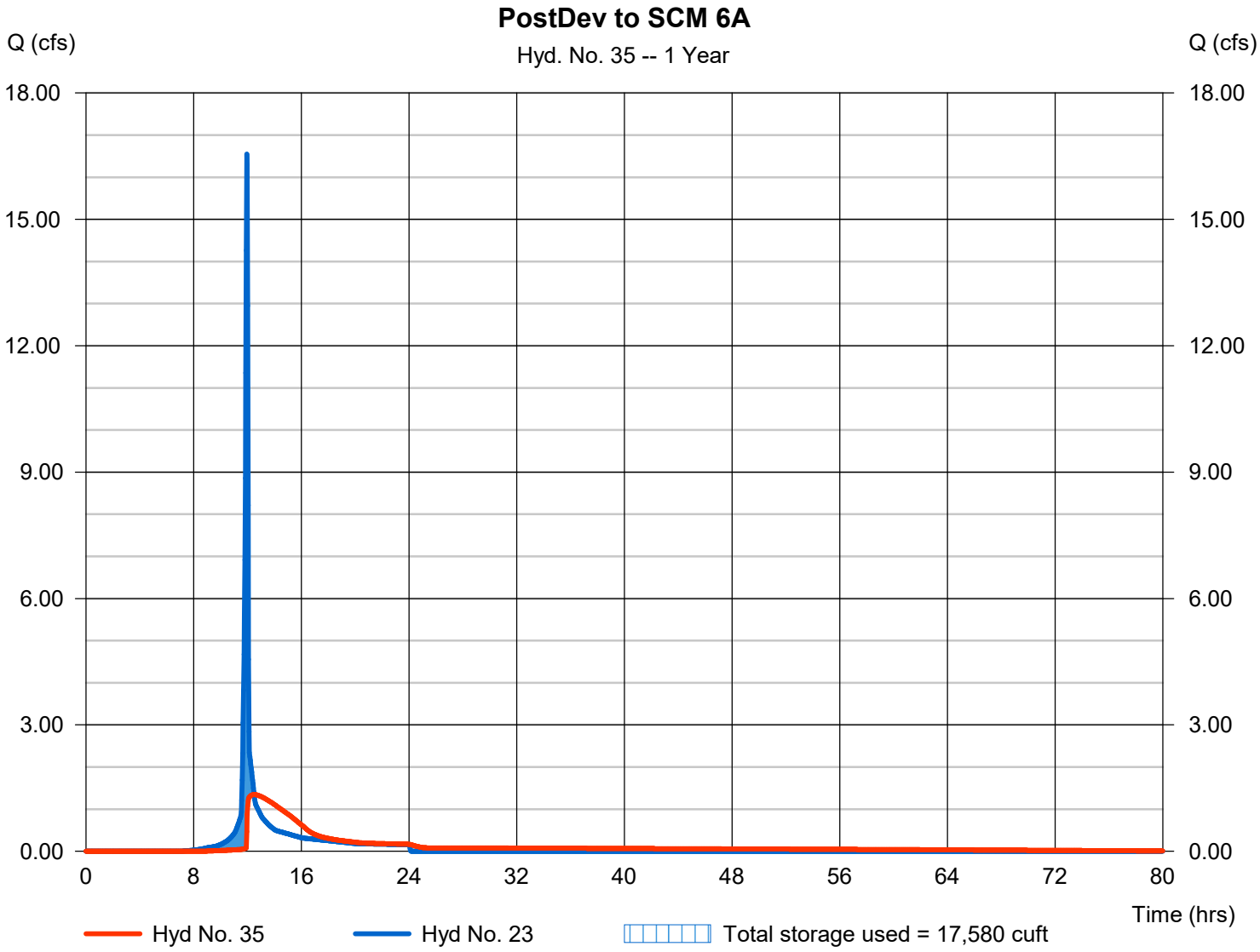
Hydrograph Report

Hyd. No. 35

PostDev to SCM 6A

Hydrograph type	=	Reservoir	Peak discharge	=	1.347 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.50 hrs
Time interval	=	2 min	Hyd. volume	=	33,579 cuft
Inflow hyd. No.	=	23 - PostDev to SCM 6A	Max. Elevation	=	279.69 ft
Reservoir name	=	SCM 6A	Max. Storage	=	17,580 cuft

Storage Indication method used.



Pond Report

Pond No. 9 - SCM 6A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 276.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	276.50	3,432	0	0
0.50	277.00	4,383	1,949	1,949
1.50	278.00	5,390	4,877	6,826
2.50	279.00	6,454	5,913	12,739
3.50	280.00	7,575	7,006	19,746
4.50	281.00	8,752	8,156	27,901
5.50	282.00	9,986	9,361	37,263
6.50	283.00	11,277	10,624	47,887
7.50	284.00	12,624	11,943	59,830

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	1.50	3.00	0.00
Span (in)	= 18.00	1.50	12.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 276.00	276.50	278.50	0.00
Length (ft)	= 105.00	0.00	0.00	0.00
Slope (%)	= 3.82	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

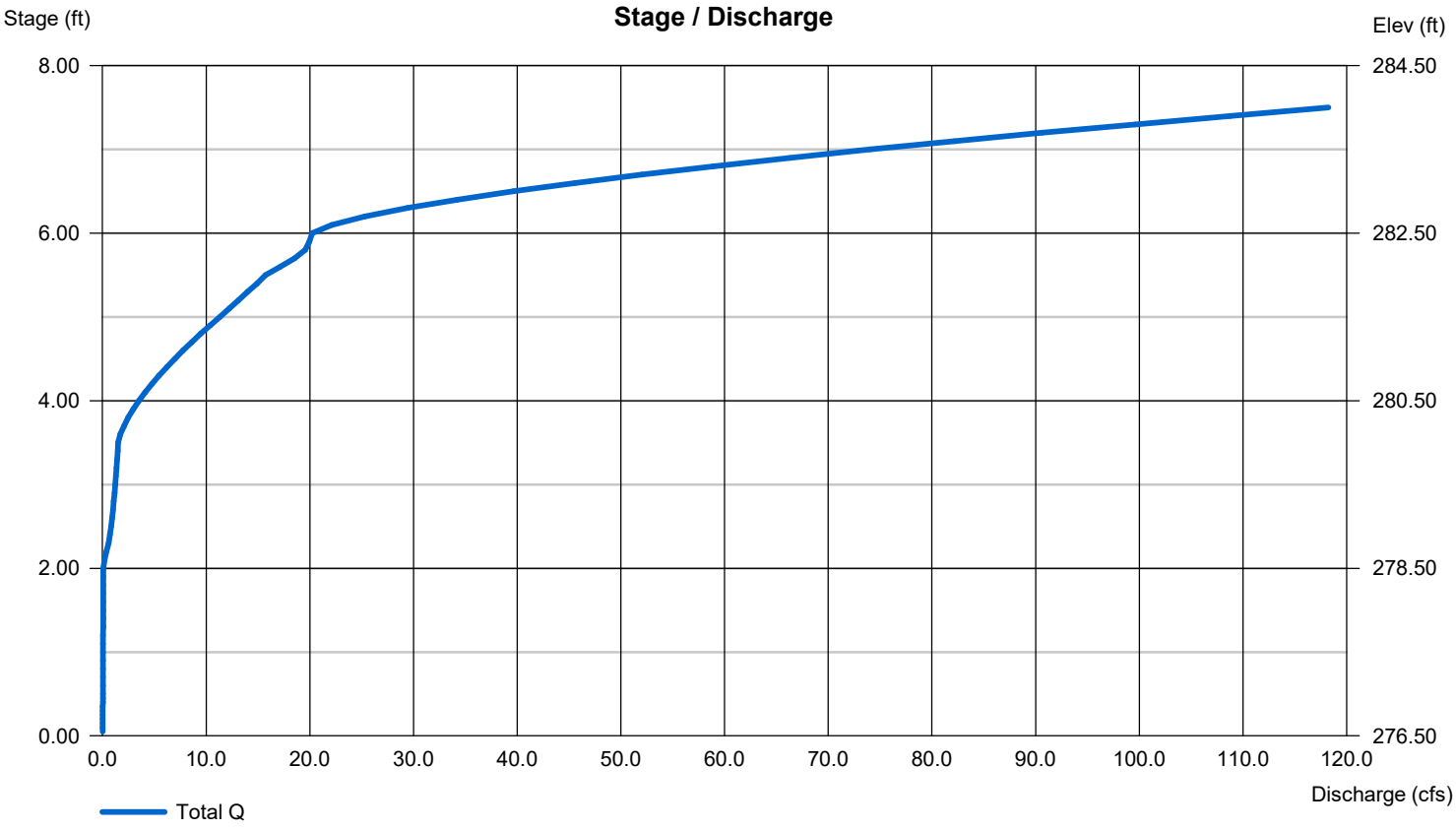
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 18.50	20.00	1.50	0.00
Crest El. (ft)	= 282.00	282.50	280.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



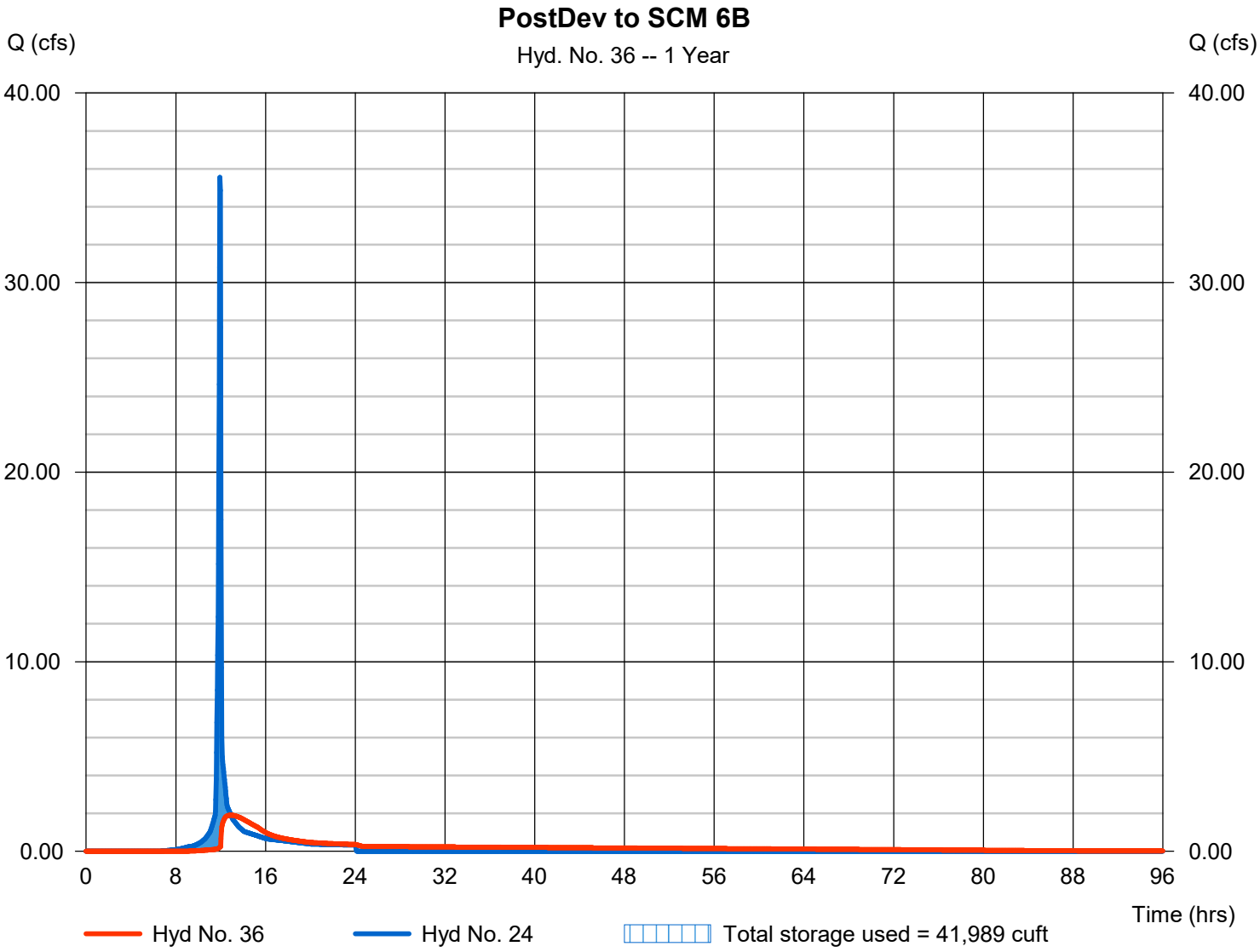
Hydrograph Report

Hyd. No. 36

PostDev to SCM 6B

Hydrograph type	=	Reservoir	Peak discharge	=	1.904 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.90 hrs
Time interval	=	2 min	Hyd. volume	=	71,697 cuft
Inflow hyd. No.	=	24 - PostDev to SCM 6B	Max. Elevation	=	291.58 ft
Reservoir name	=	SCM 6B	Max. Storage	=	41,989 cuft

Storage Indication method used.



Pond Report

Pond No. 10 - SCM 6B

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 288.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	288.50	11,802	0	0
0.50	289.00	13,172	6,240	6,240
1.50	290.00	13,686	13,427	19,667
2.50	291.00	14,205	13,943	33,610
3.50	292.00	14,728	14,464	48,074
4.50	293.00	15,255	14,989	63,063
5.50	294.00	15,785	15,518	78,581
6.50	295.00	16,318	16,049	94,630
7.50	296.00	16,856	16,585	111,215
8.50	297.00	17,398	17,125	128,339

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	2.50	3.00	0.00
Span (in)	= 24.00	2.50	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 284.00	288.50	291.00	0.00
Length (ft)	= 135.00	0.00	0.00	0.00
Slope (%)	= 1.48	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

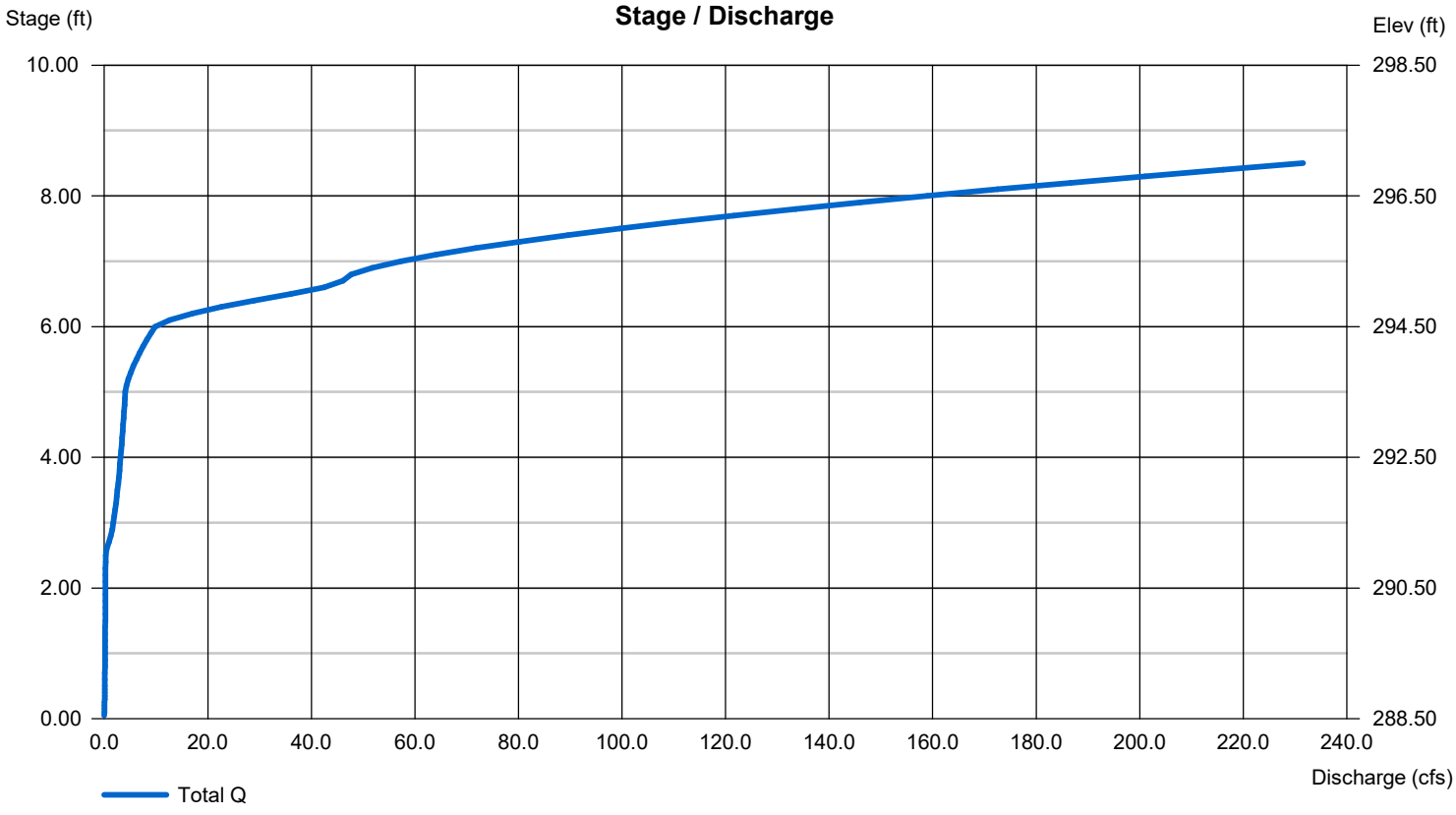
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 18.50	30.00	1.50	Inactive
Crest El. (ft)	= 294.50	295.25	293.50	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	Rect	Rect
Multi-Stage	= Yes	No	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



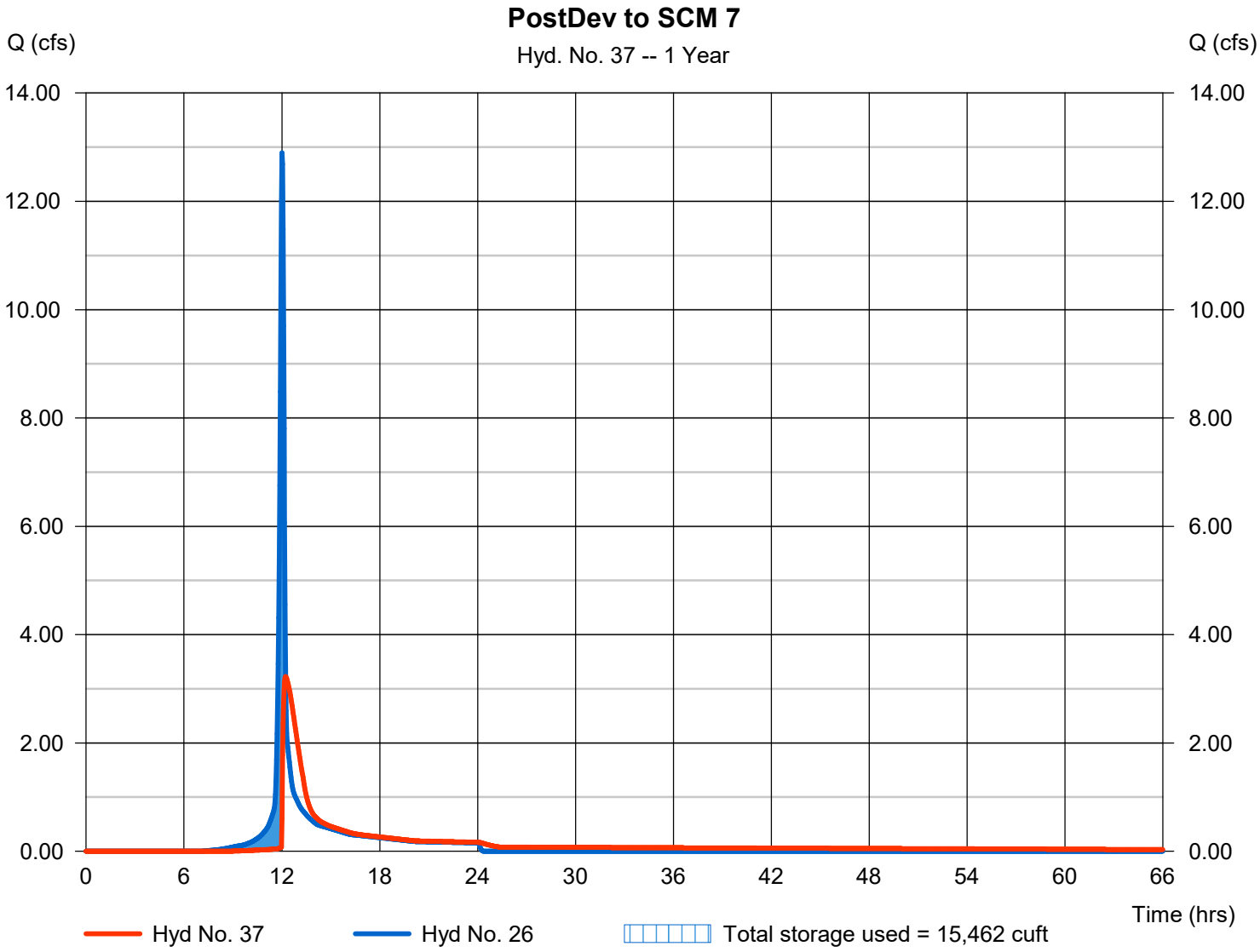
Hydrograph Report

Hyd. No. 37

PostDev to SCM 7

Hydrograph type	=	Reservoir	Peak discharge	=	3.225 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	33,350 cuft
Inflow hyd. No.	=	26 - PostDev to SCM 7	Max. Elevation	=	325.13 ft
Reservoir name	=	SCM 7	Max. Storage	=	15,462 cuft

Storage Indication method used.



Pond Report

Pond No. 11 - SCM 7

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 322.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	322.50	4,050	0	0
0.50	323.00	5,047	2,269	2,269
1.50	324.00	6,097	5,563	7,833
2.50	325.00	7,203	6,642	14,474
3.50	326.00	8,366	7,776	22,251
4.50	327.00	9,586	8,968	31,219
5.50	328.00	10,861	10,216	41,435
6.50	329.00	12,194	11,520	52,955

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	1.50	3.00	0.00
Span (in)	= 18.00	1.50	12.00	0.00
No. Barrels	= 1	1	3	0
Invert El. (ft)	= 318.00	322.50	324.25	0.00
Length (ft)	= 87.00	0.00	0.00	0.00
Slope (%)	= 5.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

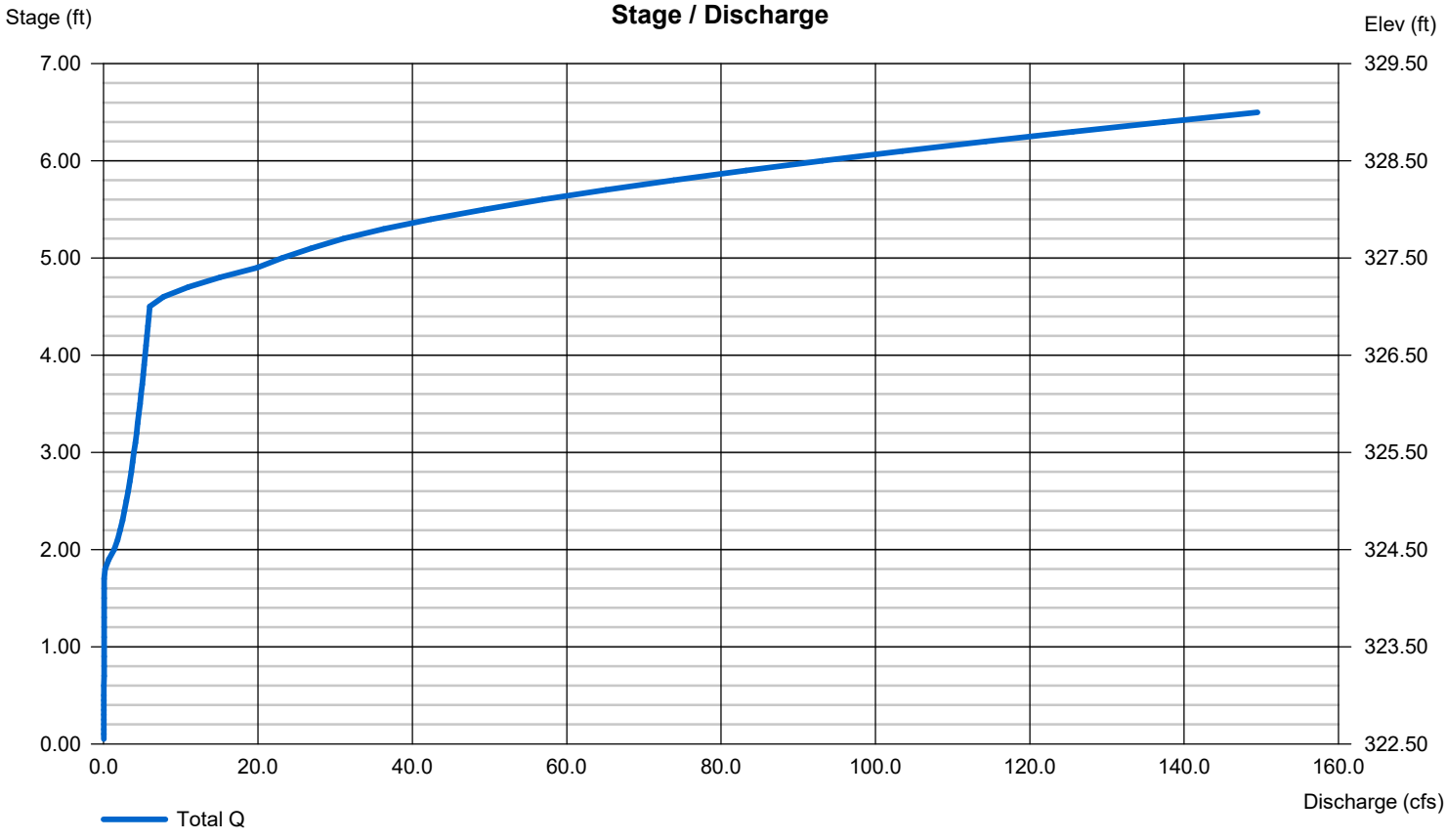
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 16.00	20.00	Inactive	0.00
Crest El. (ft)	= 327.00	327.50	320.50	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Rect	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

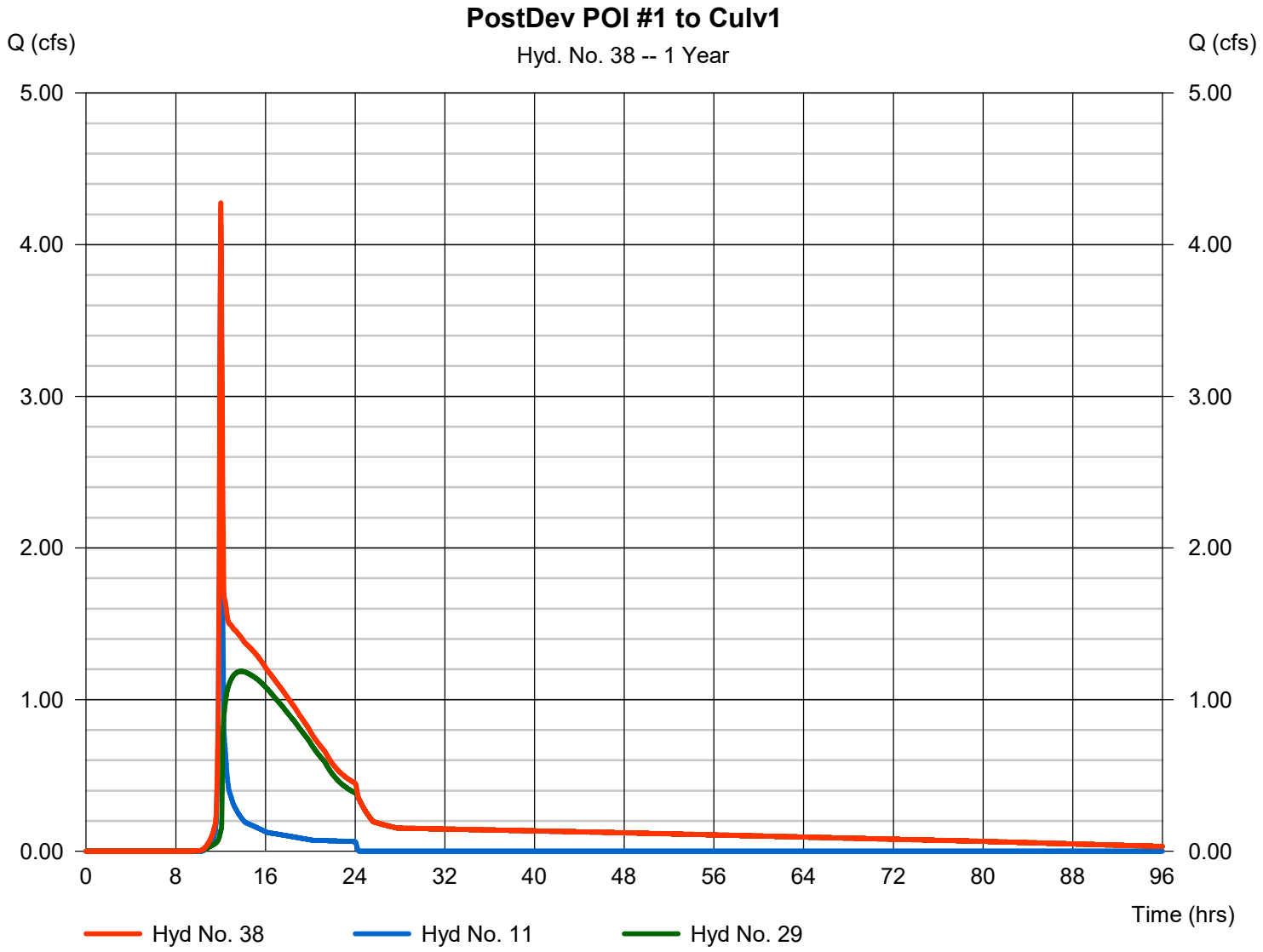


Hydrograph Report

Hyd. No. 38

PostDev POI #1 to Culv1

Hydrograph type	= Combine	Peak discharge	= 4.275 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 74,007 cuft
Inflow hyds.	= 11, 29	Contrib. drain. area	= 2.720 ac

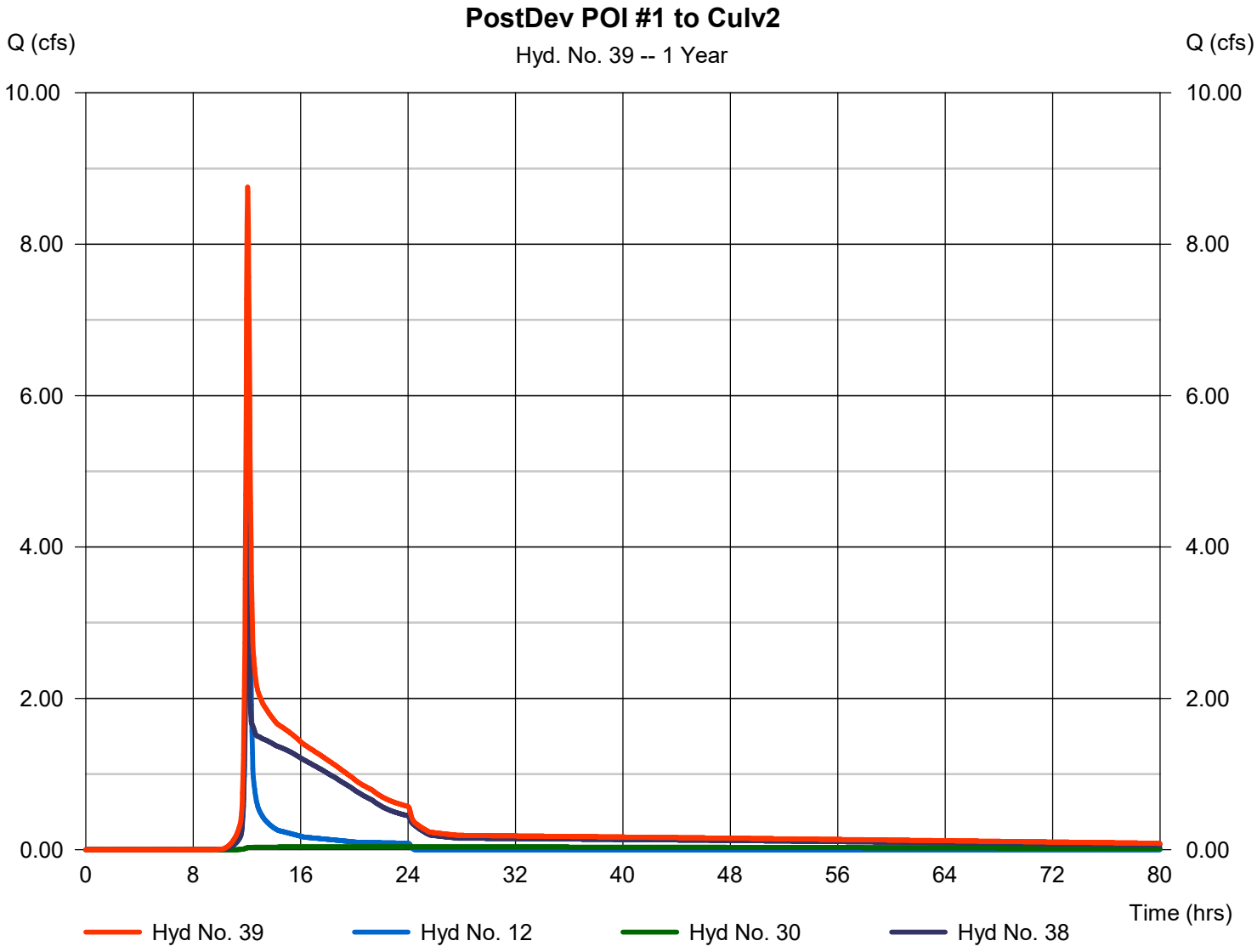


Hydrograph Report

Hyd. No. 39

PostDev POI #1 to Culv2

Hydrograph type	= Combine	Peak discharge	= 8.754 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 97,553 cuft
Inflow hyds.	= 12, 30, 38	Contrib. drain. area	= 3.640 ac

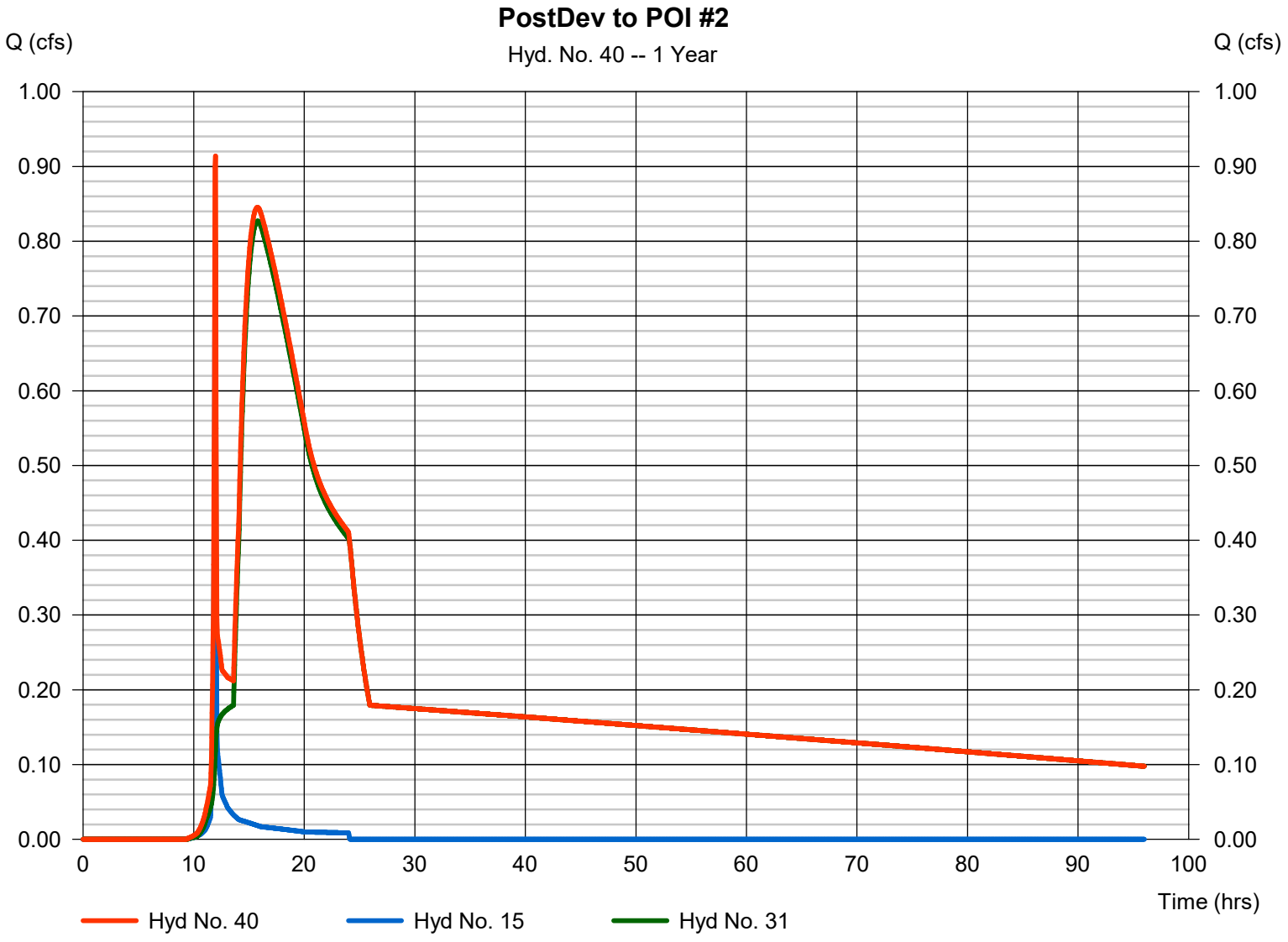


Hydrograph Report

Hyd. No. 40

PostDev to POI #2

Hydrograph type	= Combine	Peak discharge	= 0.914 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 61,920 cuft
Inflow hyds.	= 15, 31	Contrib. drain. area	= 0.370 ac

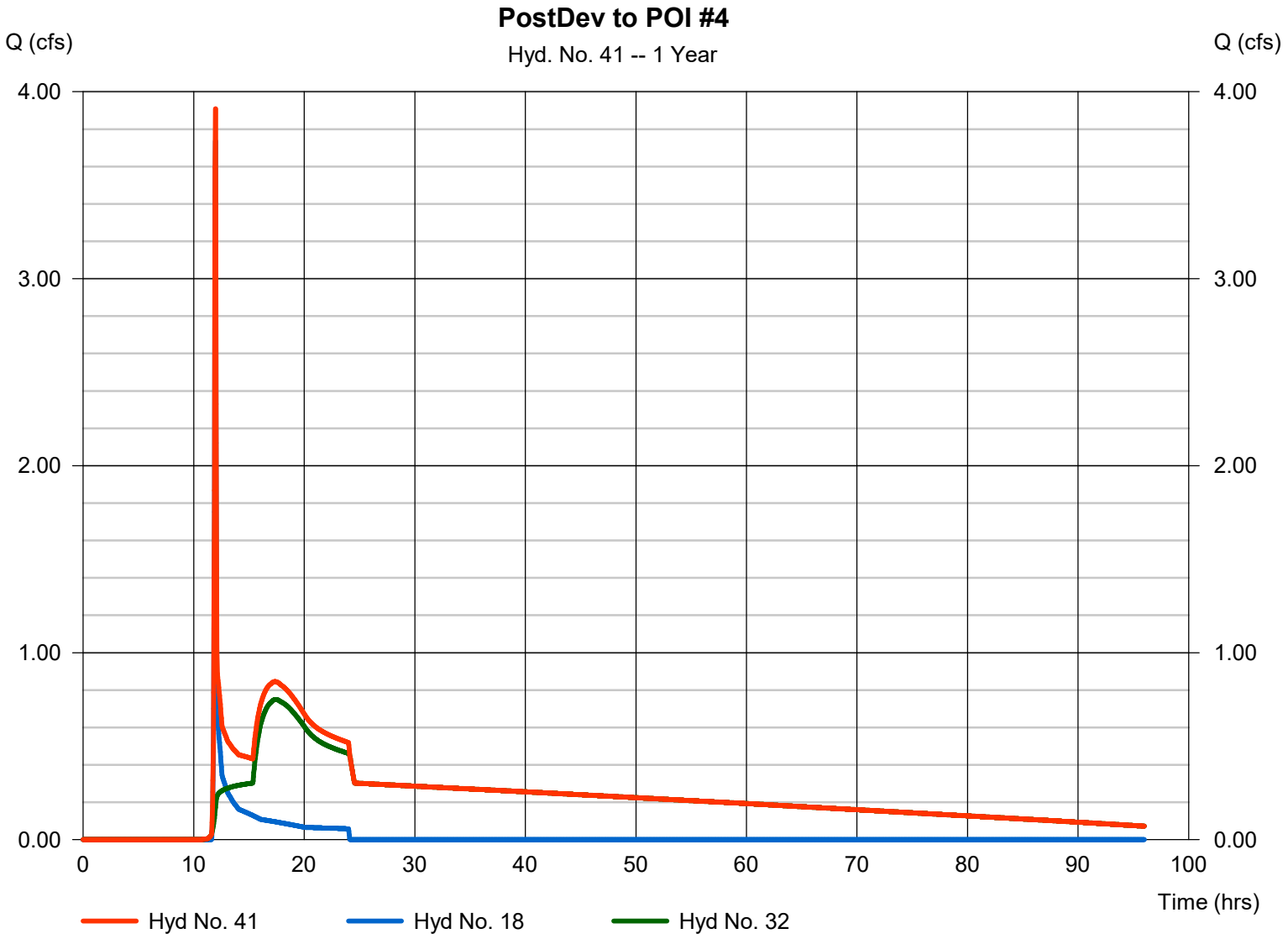


Hydrograph Report

Hyd. No. 41

PostDev to POI #4

Hydrograph type	=	Combine	Peak discharge	=	3.908 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	79,615 cuft
Inflow hyds.	=	18, 32	Contrib. drain. area	=	3.670 ac

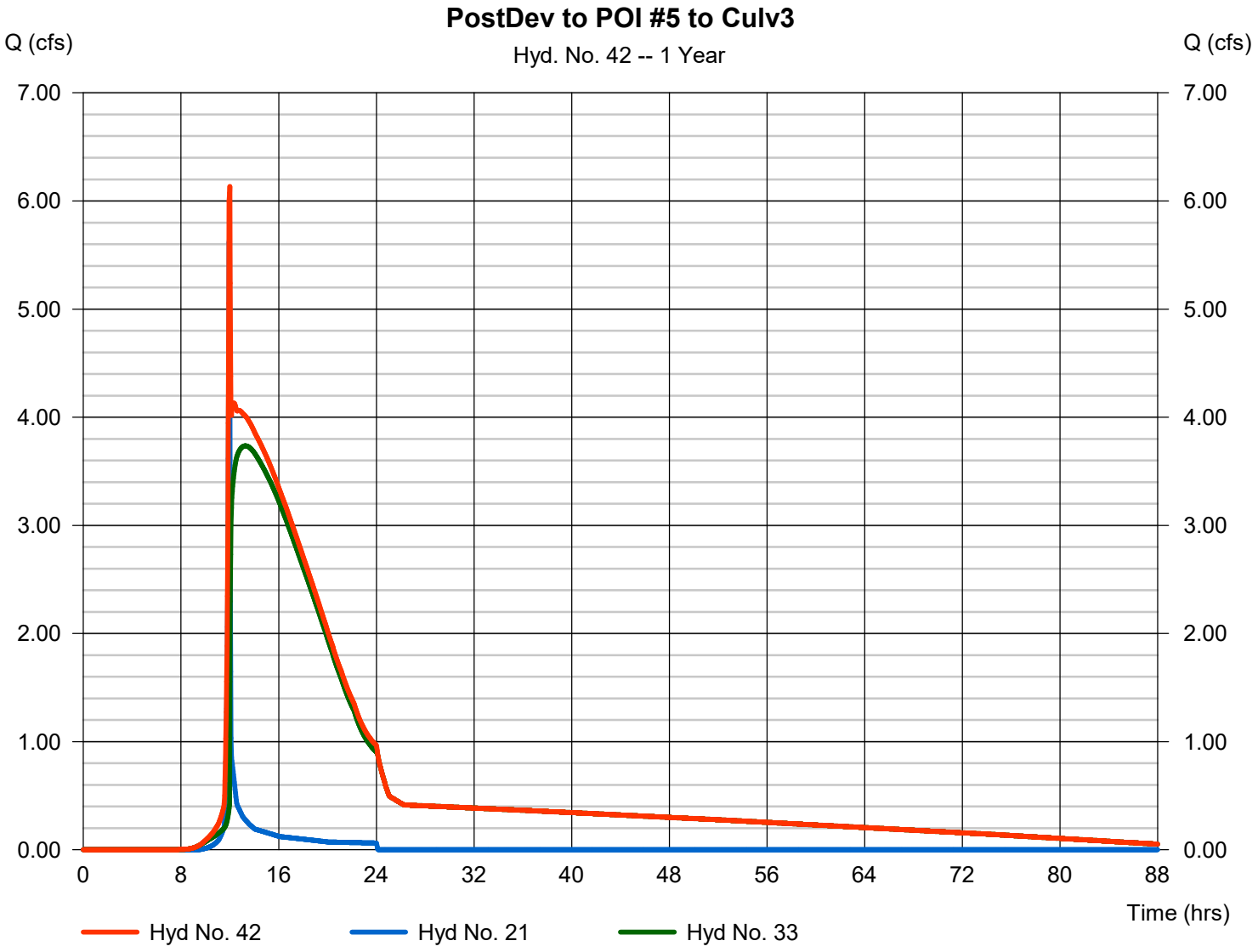


Hydrograph Report

Hyd. No. 42

PostDev to POI #5 to Culv3

Hydrograph type	= Combine	Peak discharge	= 6.134 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 179,998 cuft
Inflow hyds.	= 21, 33	Contrib. drain. area	= 2.710 ac

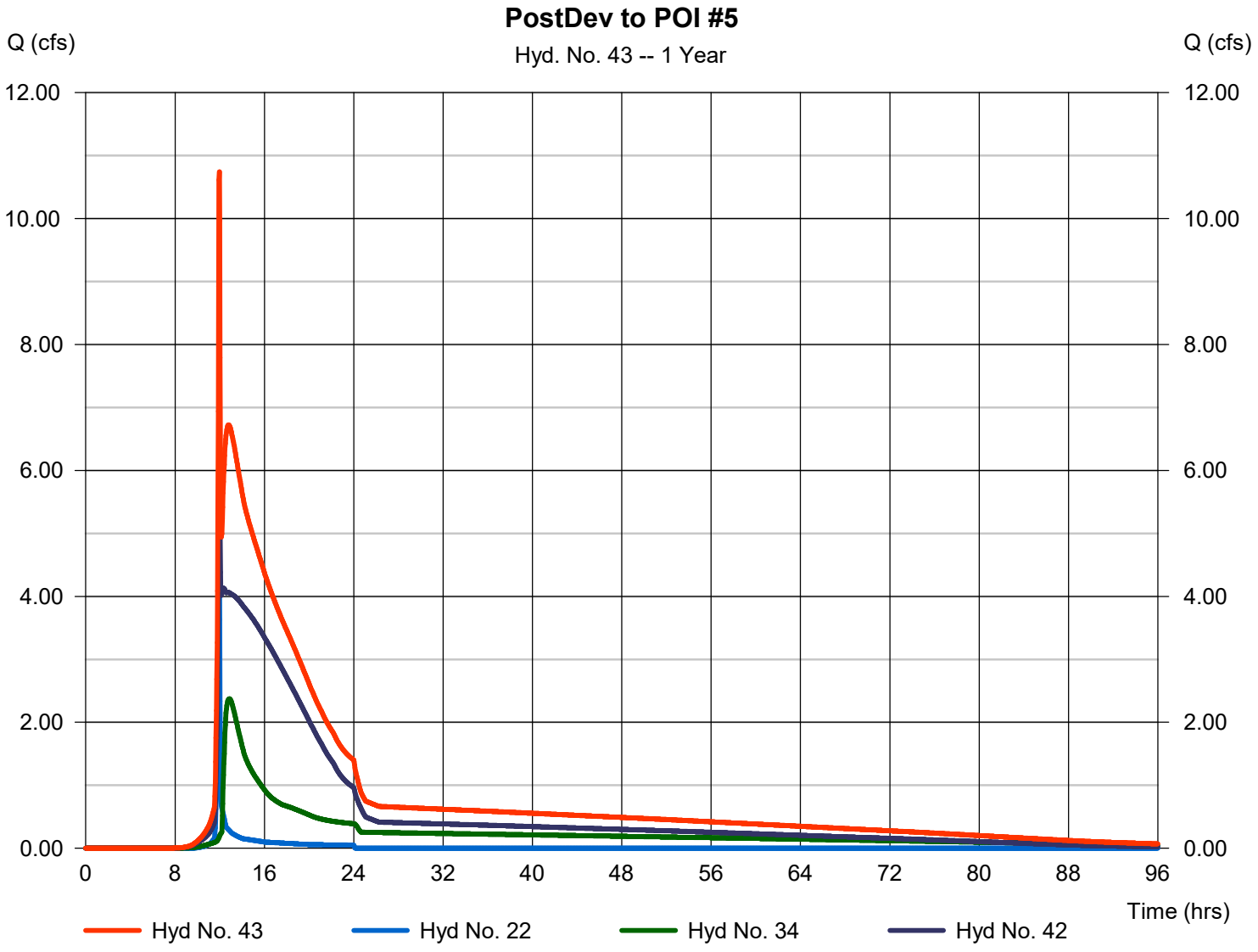


Hydrograph Report

Hyd. No. 43

PostDev to POI #5

Hydrograph type	=	Combine	Peak discharge	=	10.74 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	267,295 cuft
Inflow hyds.	=	22, 34, 42	Contrib. drain. area	=	2.190 ac

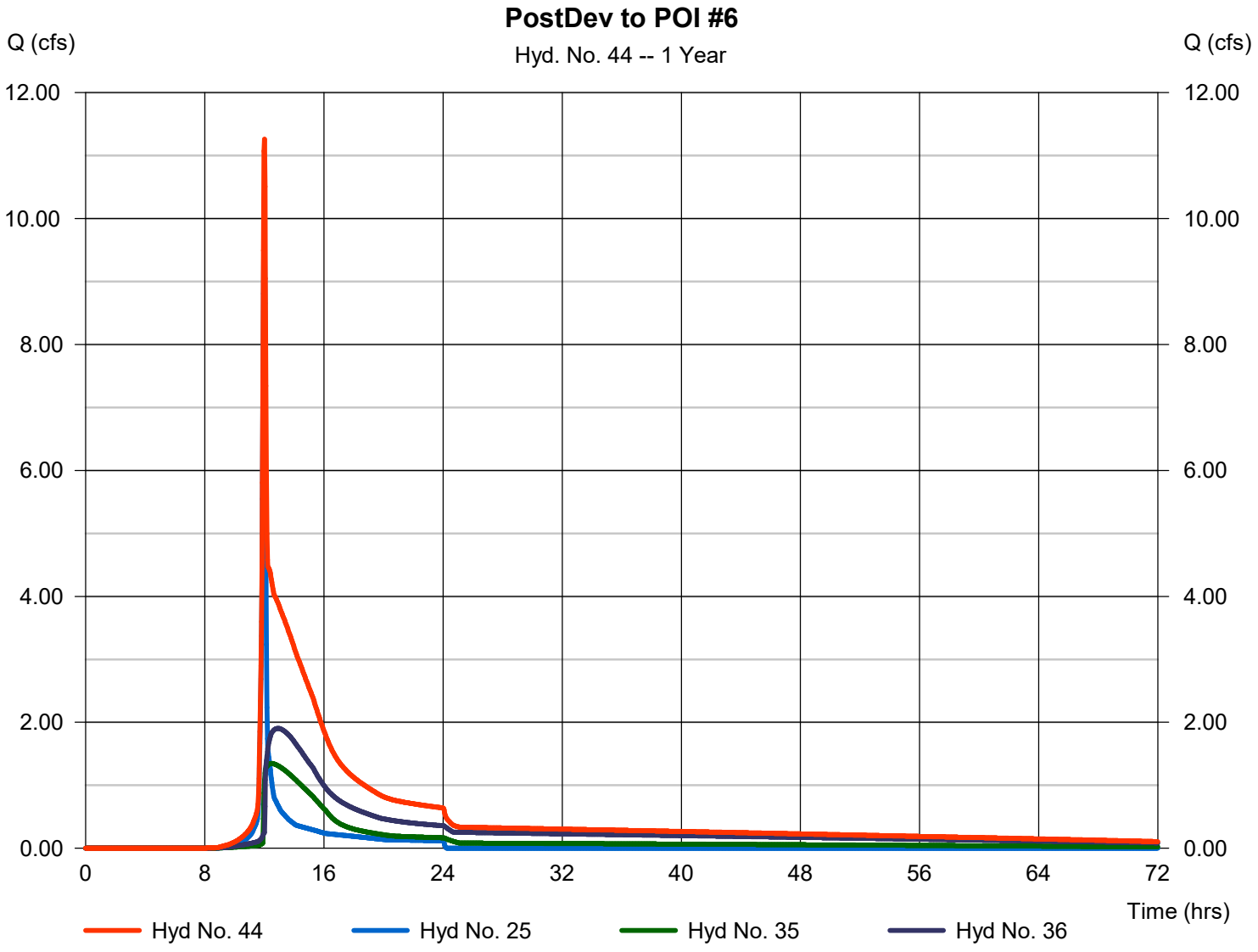


Hydrograph Report

Hyd. No. 44

PostDev to POI #6

Hydrograph type	= Combine	Peak discharge	= 11.26 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 128,069 cuft
Inflow hyds.	= 25, 35, 36	Contrib. drain. area	= 4.590 ac

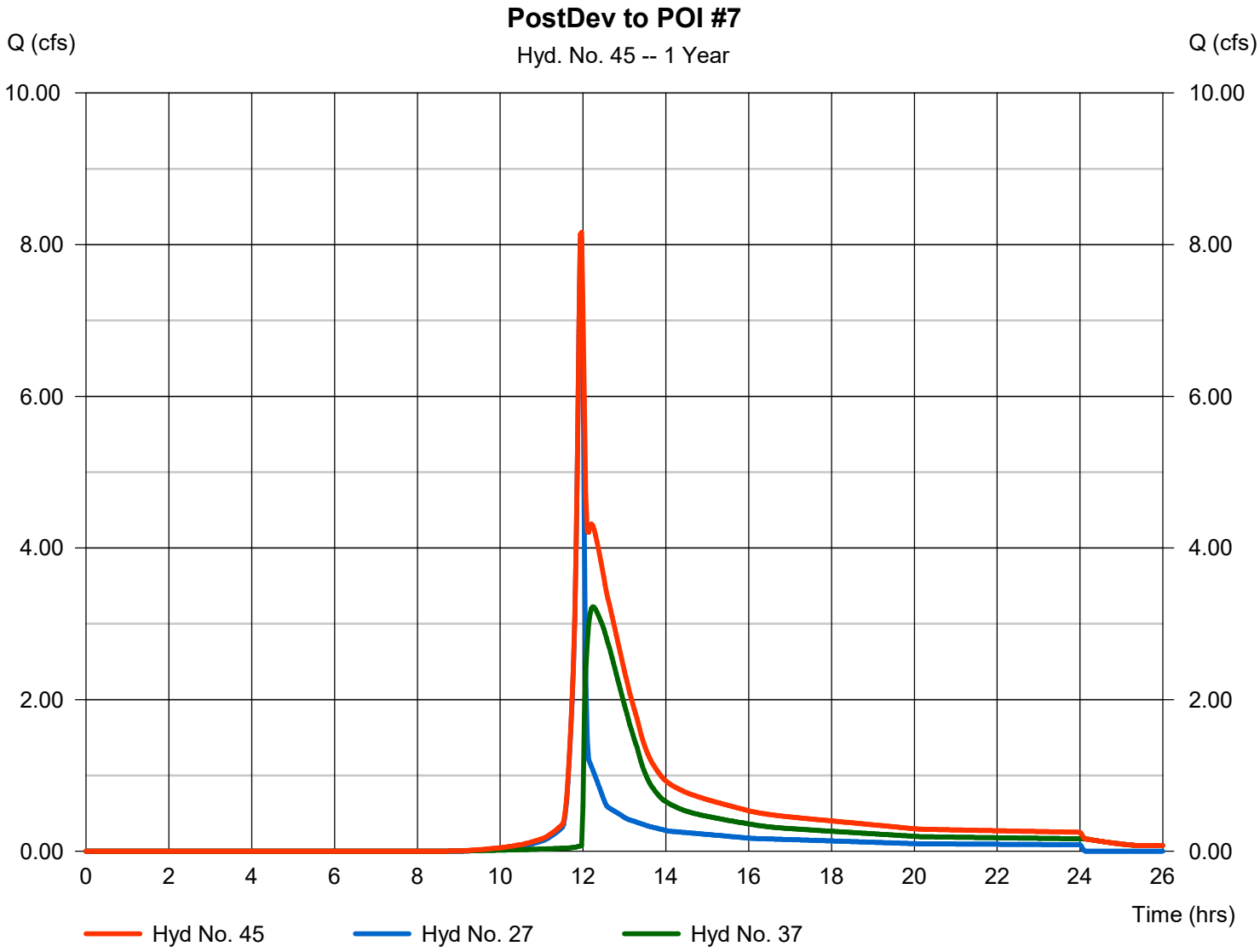


Hydrograph Report

Hyd. No. 45

PostDev to POI #7

Hydrograph type	= Combine	Peak discharge	= 8.161 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 49,639 cuft
Inflow hyds.	= 27, 37	Contrib. drain. area	= 3.640 ac

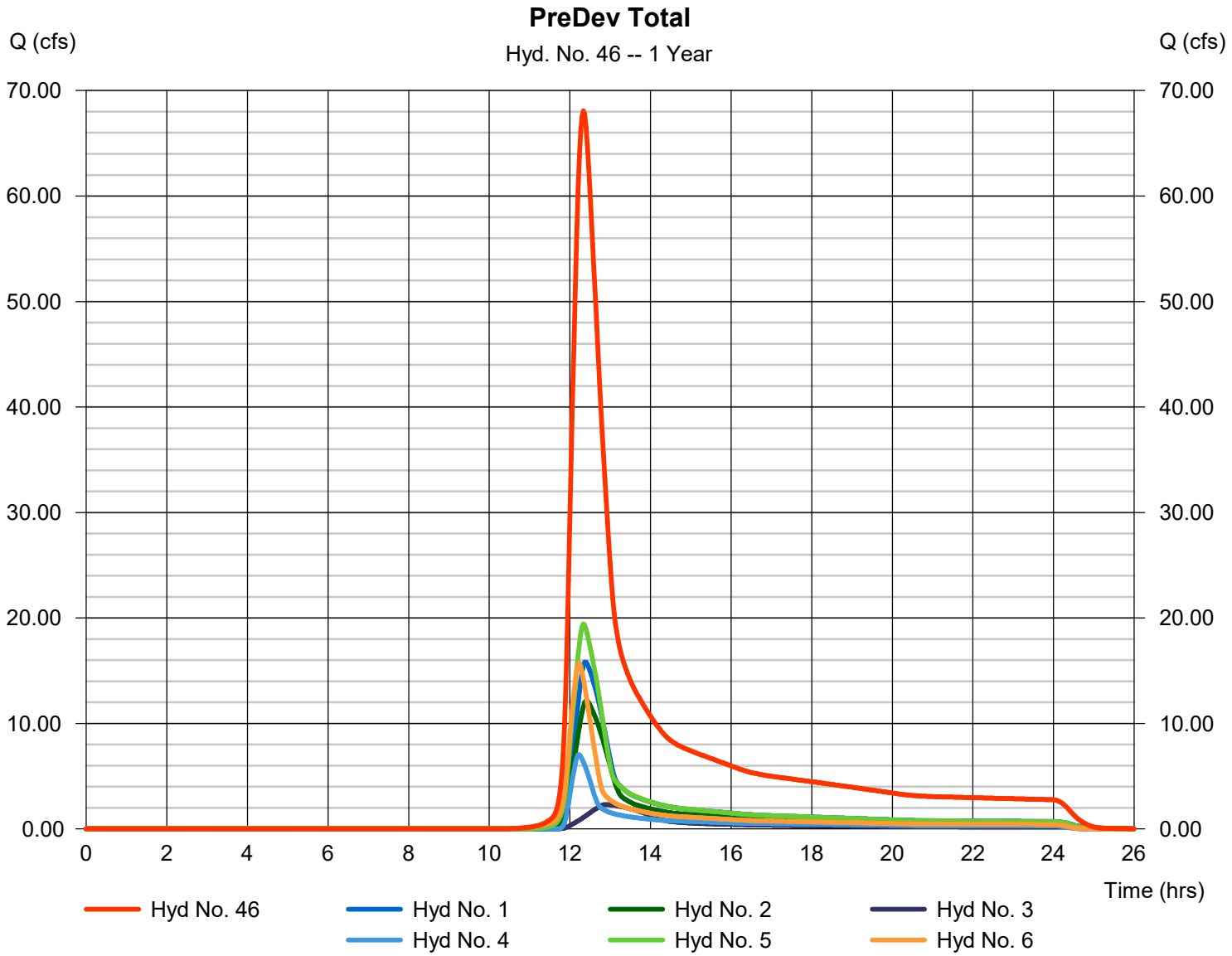


Hydrograph Report

Hyd. No. 46

PreDev Total

Hydrograph type	= Combine	Peak discharge	= 68.08 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.33 hrs
Time interval	= 2 min	Hyd. volume	= 414,960 cuft
Inflow hyds.	= 1, 2, 3, 4, 5, 6	Contrib. drain. area	= 139.020 ac

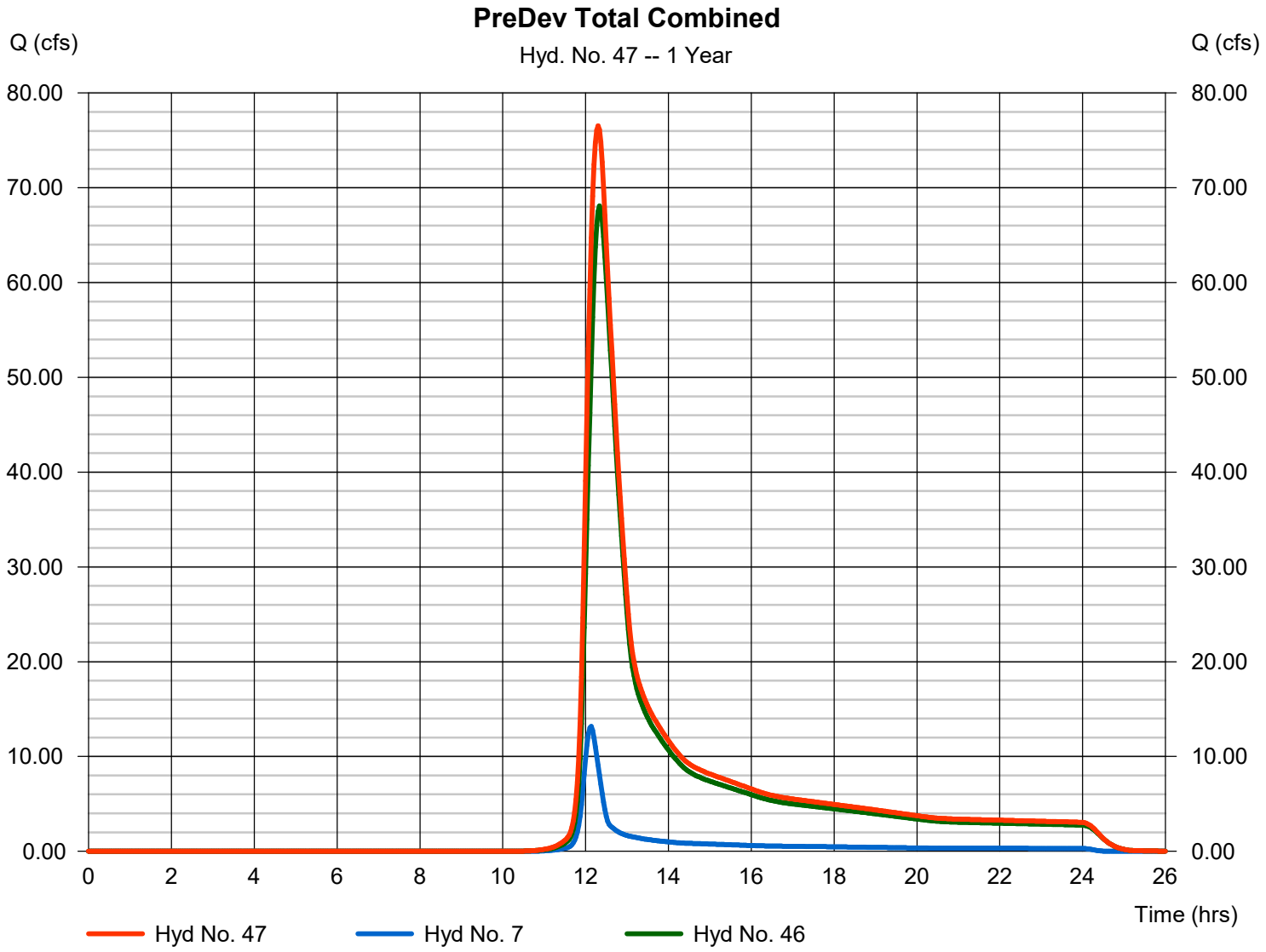


Hydrograph Report

Hyd. No. 47

PreDev Total Combined

Hydrograph type	= Combine	Peak discharge	= 76.54 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 462,702 cuft
Inflow hyds.	= 7, 46	Contrib. drain. area	= 13.250 ac



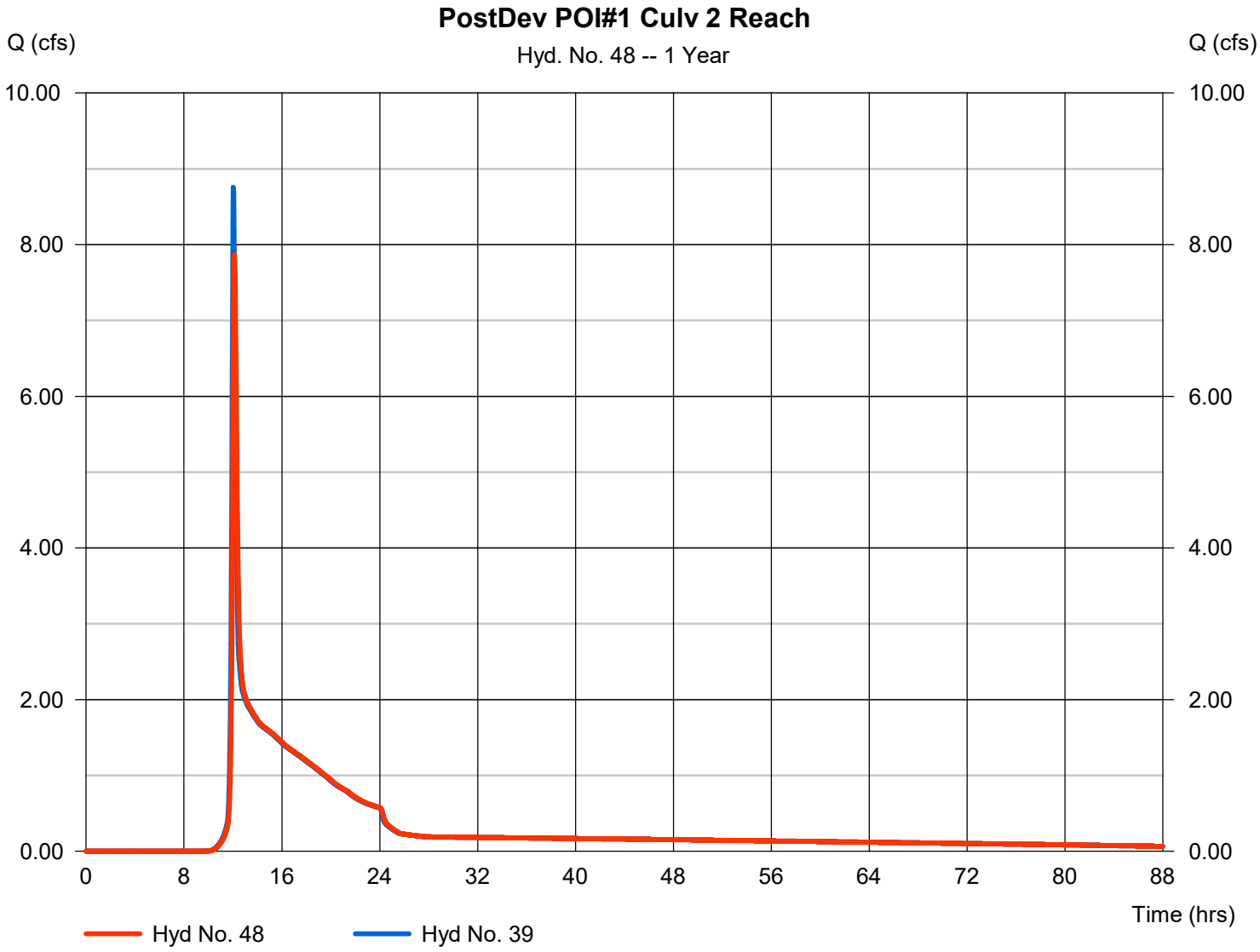
Hydrograph Report

Hyd. No. 48

PostDev POI#1 Culv 2 Reach

Hydrograph type	= Reach	Peak discharge	= 7.867 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 97,537 cuft
Inflow hyd. No.	= 39 - PostDev POI #1 to Culv2	Section type	= Trapezoidal
Reach length	= 992.0 ft	Channel slope	= 1.2 %
Manning's n	= 0.040	Bottom width	= 5.0 ft
Side slope	= 1.0:1	Max. depth	= 3.5 ft
Rating curve x	= 1.418	Rating curve m	= 1.427
Ave. velocity	= 2.44 ft/s	Routing coeff.	= 0.3483

Modified Att-Kin routing method used.

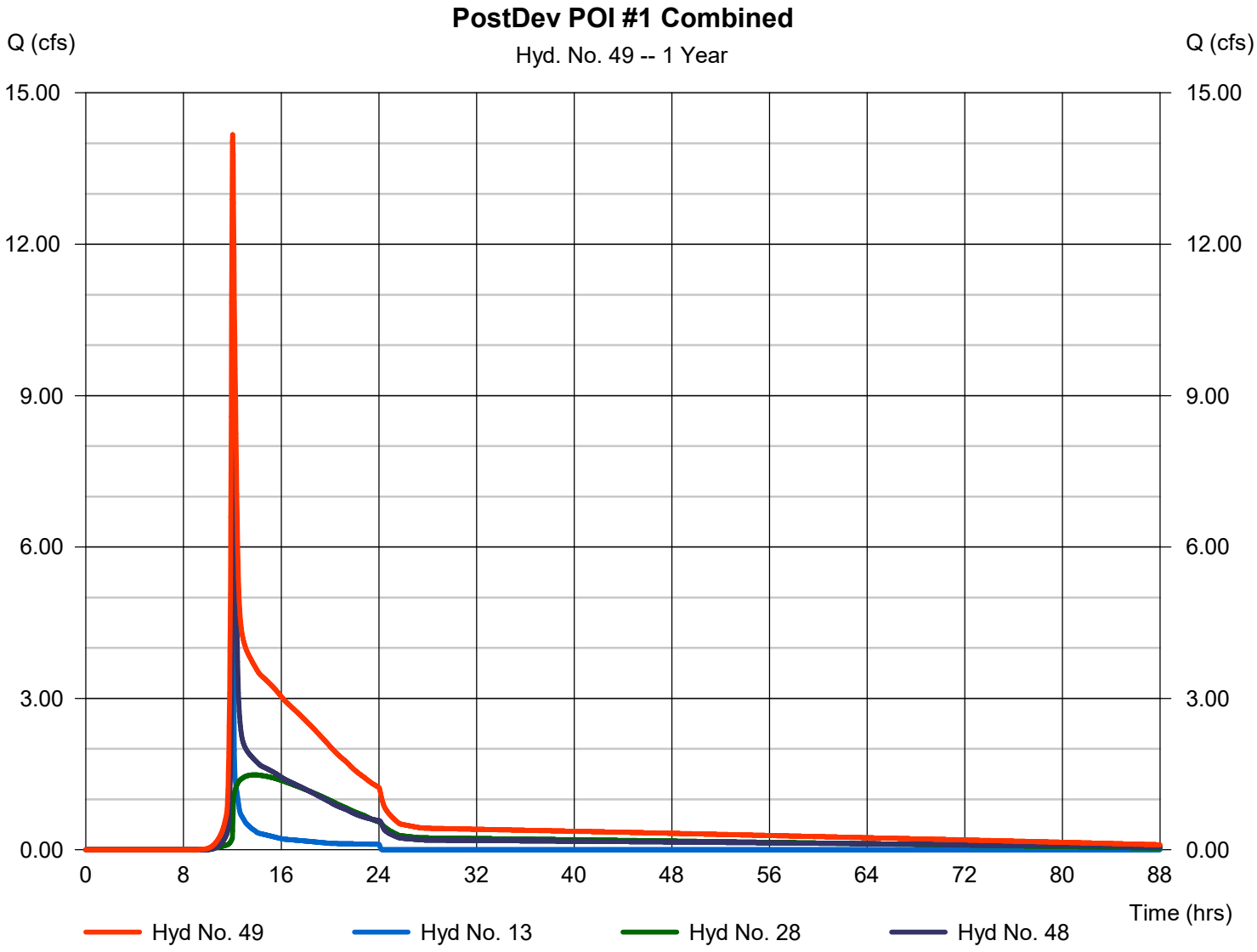


Hydrograph Report

Hyd. No. 49

PostDev POI #1 Combined

Hydrograph type	=	Combine	Peak discharge	=	14.17 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	200,657 cuft
Inflow hyds.	=	13, 28, 48	Contrib. drain. area	=	4.520 ac

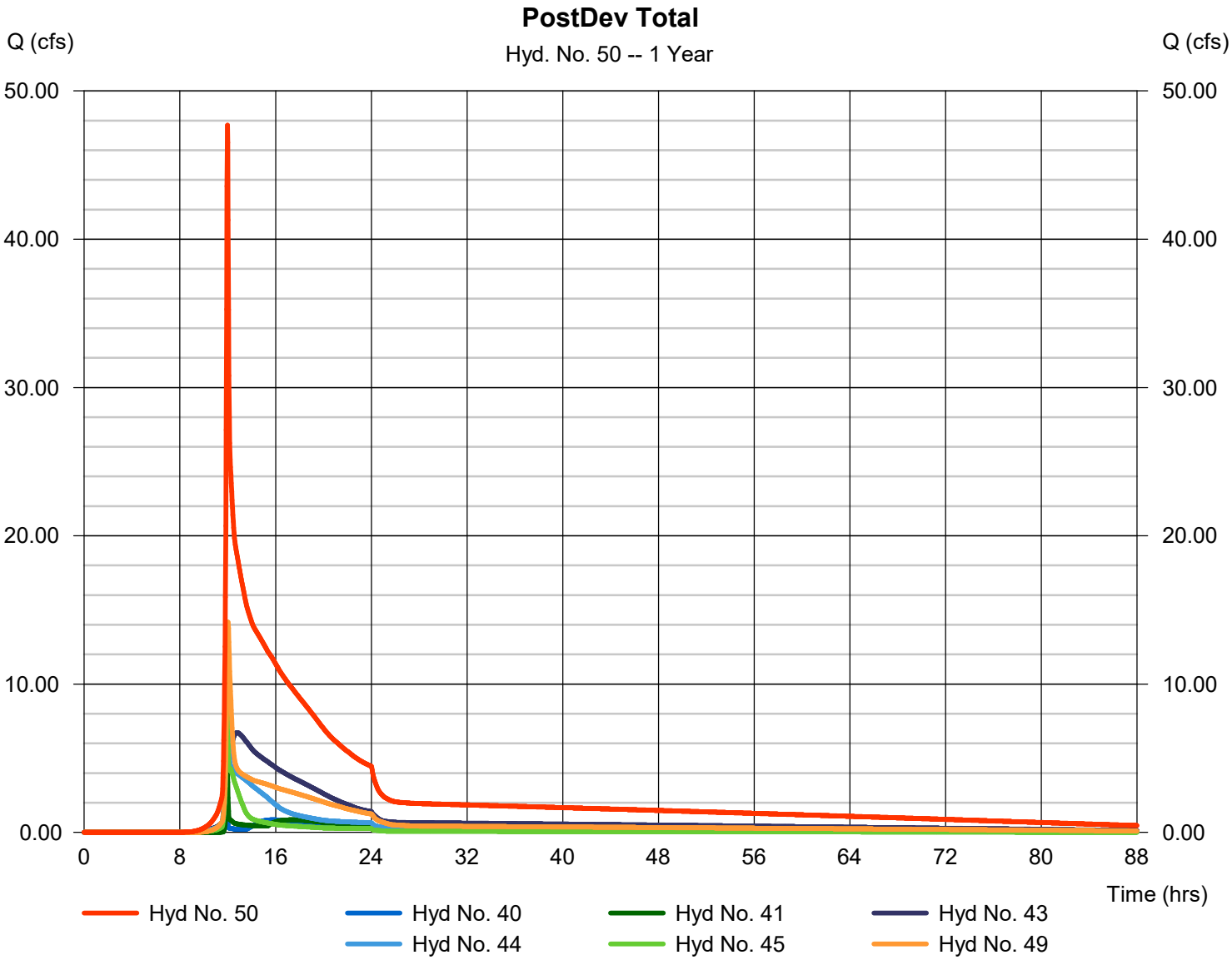


Hydrograph Report

Hyd. No. 50

PostDev Total

Hydrograph type	= Combine	Peak discharge	= 47.68 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 787,195 cuft
Inflow hyds.	= 40, 41, 43, 44, 45, 49	Contrib. drain. area	= 0.000 ac

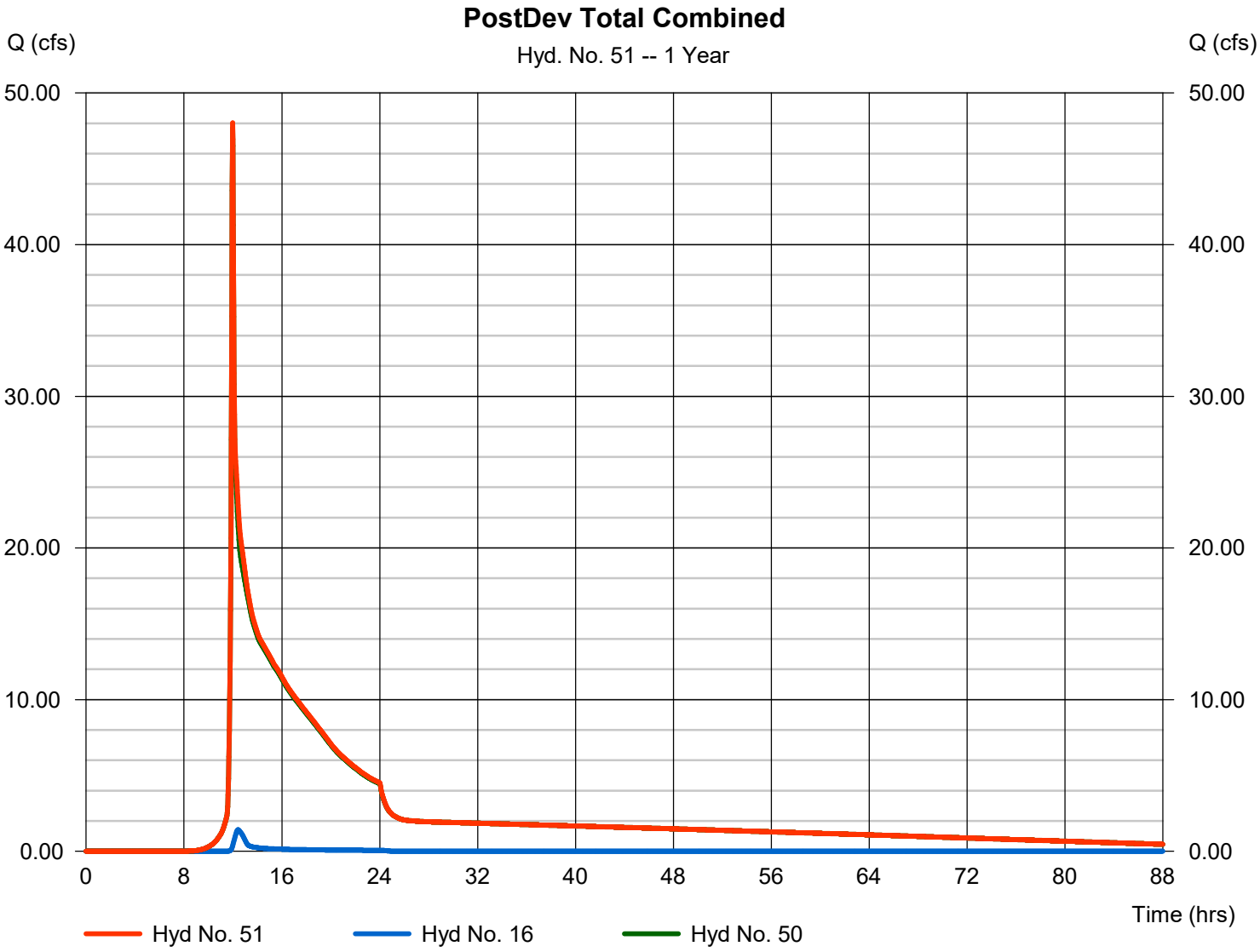


Hydrograph Report

Hyd. No. 51

PostDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	48.03 cfs
Storm frequency	=	1 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	796,393 cuft
Inflow hyds.	=	16, 50	Contrib. drain. area	=	3.240 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	56.08	2	742	306,475	------	------	------	PreDev POI #1
2	SCS Runoff	38.17	2	744	218,081	------	------	------	PreDev POI #2
3	SCS Runoff	8.247	2	770	76,181	------	------	------	PreDev to POI #3
4	SCS Runoff	30.27	2	732	125,401	------	------	------	PreDev to POI #4
5	SCS Runoff	58.60	2	740	304,018	------	------	------	PreDev to POI #5
6	SCS Runoff	42.77	2	732	184,994	------	------	------	PreDev to POI #6
7	SCS Runoff	37.83	2	726	130,873	------	------	------	PreDev to POI #7
8	SCS Runoff	81.64	2	718	191,970	------	------	------	PostDev to SCM 1A
9	SCS Runoff	58.13	2	720	152,522	------	------	------	PostDev to SCM 1B
10	SCS Runoff	12.05	2	716	24,470	------	------	------	PostDev to SCM 1C
11	SCS Runoff	11.10	2	720	28,775	------	------	------	PostDev to POI #1 Bypass 1
12	SCS Runoff	12.41	2	724	38,794	------	------	------	PostDev to POI #1 Bypass 2
13	SCS Runoff	21.47	2	718	49,392	------	------	------	PostDev to POI #1 Bypass 3
14	SCS Runoff	76.25	2	718	177,426	------	------	------	PostDev to SCM 2
15	SCS Runoff	1.926	2	716	3,945	------	------	------	PostDev to POI #2 Bypass
16	SCS Runoff	4.795	2	744	27,573	------	------	------	PostDev to POI #3
17	SCS Runoff	87.19	2	718	199,862	------	------	------	PostDev to SCM 4
18	SCS Runoff	12.83	2	718	25,689	------	------	------	PostDev to POI #4 Bypass
19	SCS Runoff	157.03	2	718	373,046	------	------	------	PostDev to SCM 5A
20	SCS Runoff	66.17	2	720	176,982	------	------	------	PostDev to SCM 5C
21	SCS Runoff	13.88	2	716	28,368	------	------	------	PostDev to POI #5 Bypass 1
22	SCS Runoff	11.09	2	716	22,645	------	------	------	PostDev to POI #5 Bypass 2
23	SCS Runoff	35.40	2	716	74,615	------	------	------	PostDev to SCM 6A
24	SCS Runoff	74.28	2	716	157,824	------	------	------	PostDev to SCM 6B
25	SCS Runoff	23.54	2	718	54,596	------	------	------	PostDev to POI #6 Bypass
26	SCS Runoff	27.74	2	720	73,932	------	------	------	PostDev to SCM 7
27	SCS Runoff	19.30	2	716	39,635	------	------	------	PostDev to POI #7 Bypass
28	Reservoir	13.50	2	732	190,514	8	352.64	102,020	PostDev to SCM 1A
29	Reservoir	17.28	2	734	150,387	9	380.76	77,261	PostDev to SCM 1B
30	Reservoir	3.380	2	724	23,081	10	363.48	11,427	PostDev to SCM 1C
31	Reservoir	12.78	2	732	162,198	14	356.74	92,213	PostDev to SCM 2
32	Reservoir	11.16	2	742	195,667	17	366.61	98,367	PostDev to SCM 4
33	Reservoir	26.15	2	732	371,223	19	319.29	197,373	PostDev to SCM 5A
34	Reservoir	16.33	2	734	174,089	20	296.54	90,938	PostDev to SCM 5C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

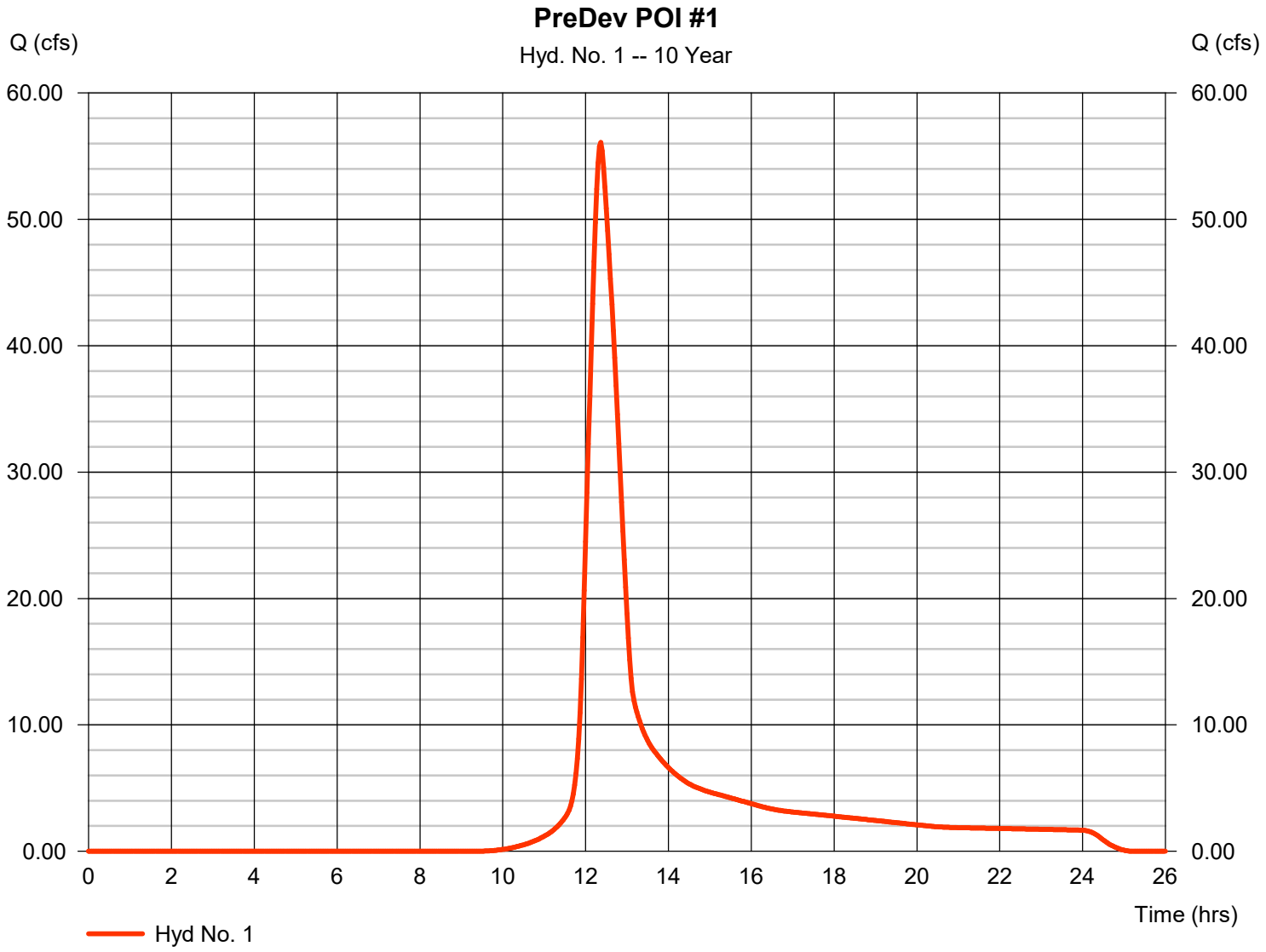
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	12.99	2	724	74,511	23	281.69	34,340	PostDev to SCM 6A
36	Reservoir	9.381	2	730	156,780	24	294.45	85,732	PostDev to SCM 6B
37	Reservoir	10.59	2	732	73,785	26	327.19	33,144	PostDev to SCM 7
38	Combine	21.21	2	732	179,162	11, 29,	------	------	PostDev POI #1 to Culv1
39	Combine	32.77	2	732	241,037	12, 30, 38	------	------	PostDev POI #1 to Culv2
40	Combine	13.03	2	732	166,143	15, 31,	------	------	PostDev to POI #2
41	Combine	17.18	2	718	221,356	18, 32,	------	------	PostDev to POI #4
42	Combine	27.94	2	730	399,591	21, 33,	------	------	PostDev to POI #5 to Culv3
43	Combine	45.46	2	734	596,324	22, 34, 42	------	------	PostDev to POI #5
44	Combine	40.87	2	720	285,888	25, 35, 36,	------	------	PostDev to POI #6
45	Combine	23.45	2	718	113,419	27, 37,	------	------	PostDev to POI #7
46	Combine	219.71	2	738	1,215,150	1, 2, 3,	------	------	PreDev Total
47	Combine	245.16	2	736	1,346,024	4, 5, 6, 7, 46	------	------	PreDev Total Combined
48	Reach	31.58	2	734	241,024	39	------	------	PostDev POI#1 Culv 2 Reach
49	Combine	47.98	2	734	480,930	13, 28, 48	------	------	PostDev POI #1 Combined
50	Combine	168.97	2	720	1,864,061	40, 41, 43,	------	------	PostDev Total
51	Combine	170.96	2	720	1,891,632	44, 45, 49 16, 50	------	------	PostDev Total Combined

Hydrograph Report

Hyd. No. 1

PreDev POI #1

Hydrograph type	=	SCS Runoff	Peak discharge	=	56.08 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	306,475 cuft
Drainage area	=	37.960 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	46.50 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

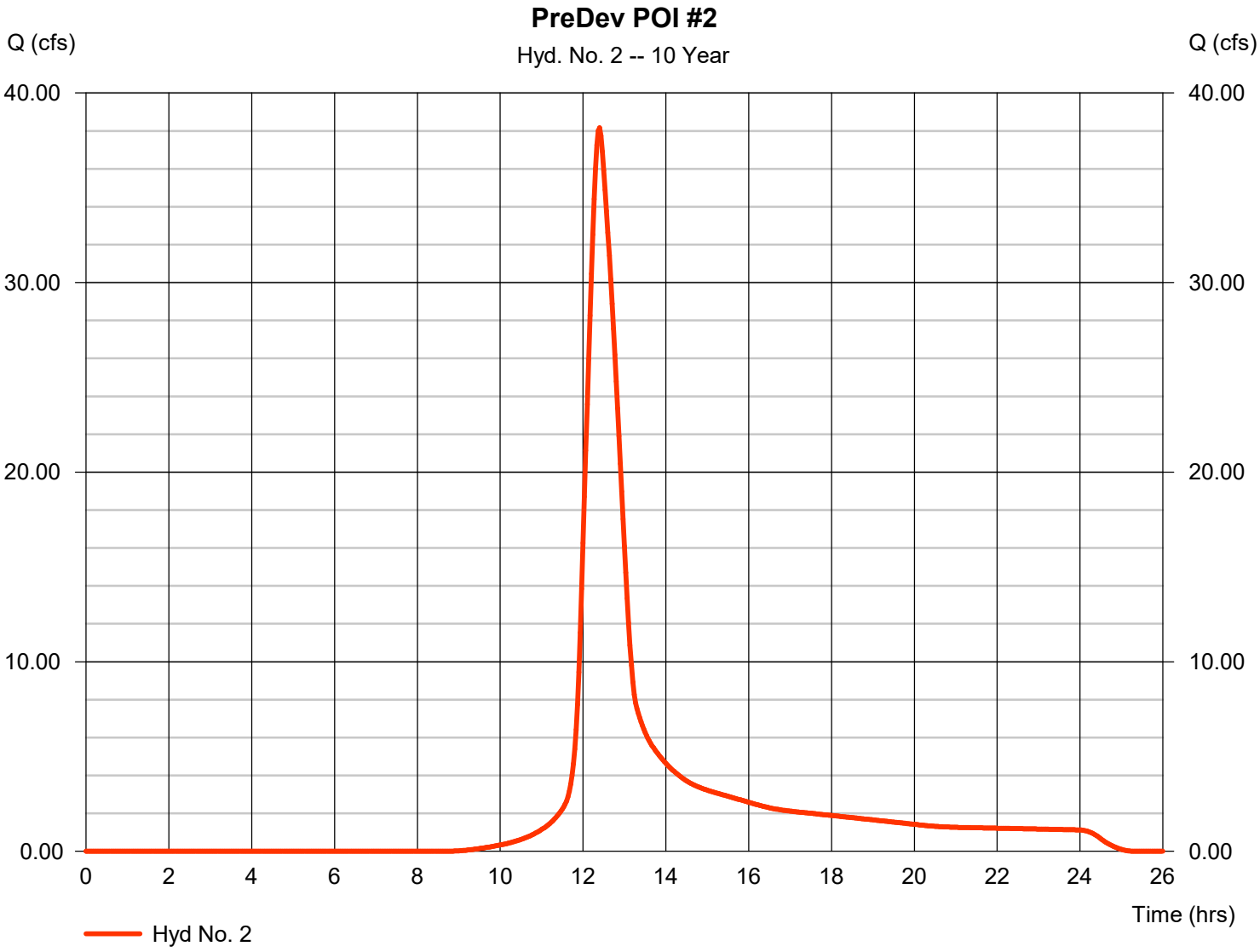


Hydrograph Report

Hyd. No. 2

PreDev POI #2

Hydrograph type	=	SCS Runoff	Peak discharge	=	38.17 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	218,081 cuft
Drainage area	=	24.050 ac	Curve number	=	75
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	48.70 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

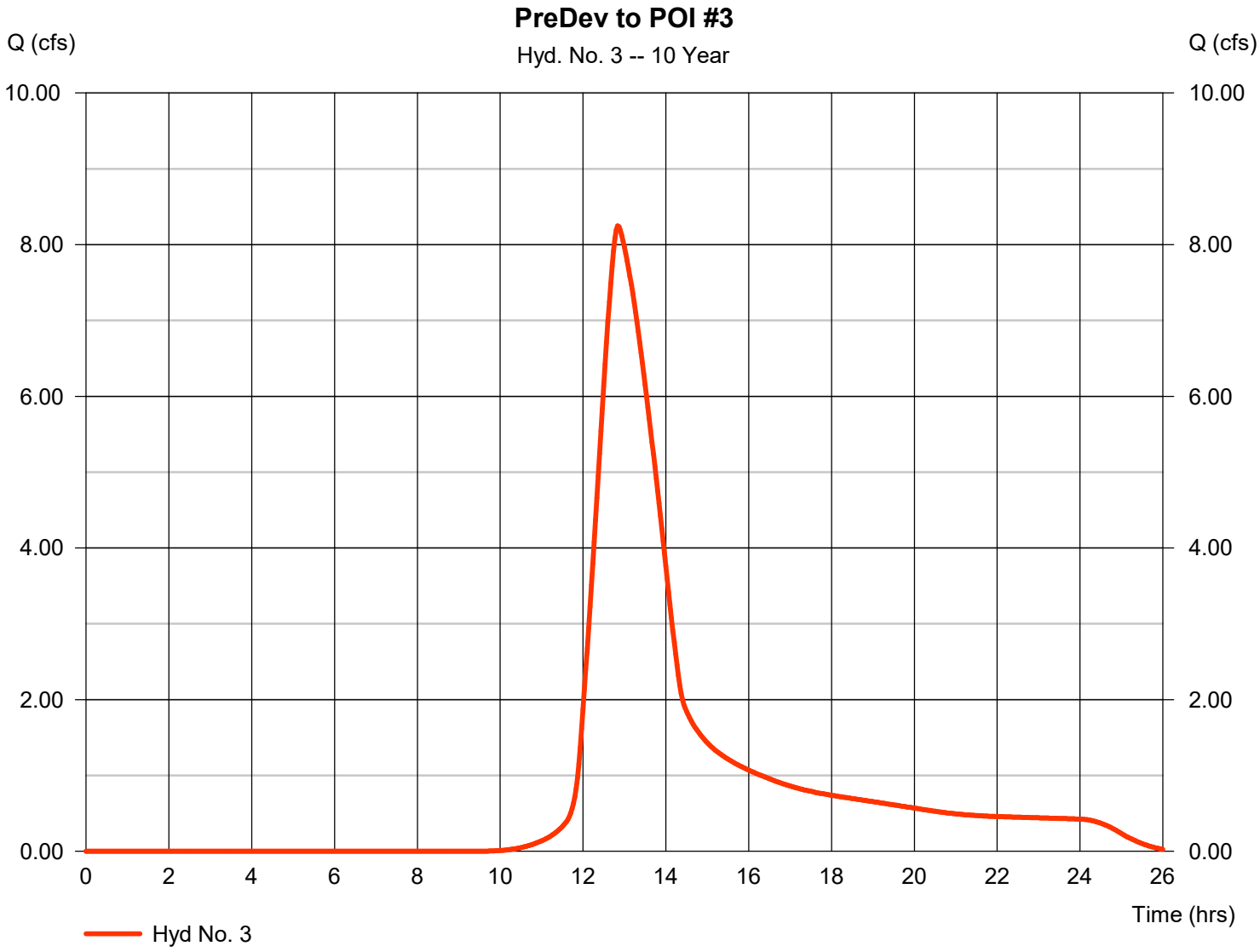


Hydrograph Report

Hyd. No. 3

PreDev to POI #3

Hydrograph type	= SCS Runoff	Peak discharge	= 8.247 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.83 hrs
Time interval	= 2 min	Hyd. volume	= 76,181 cuft
Drainage area	= 9.310 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 92.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

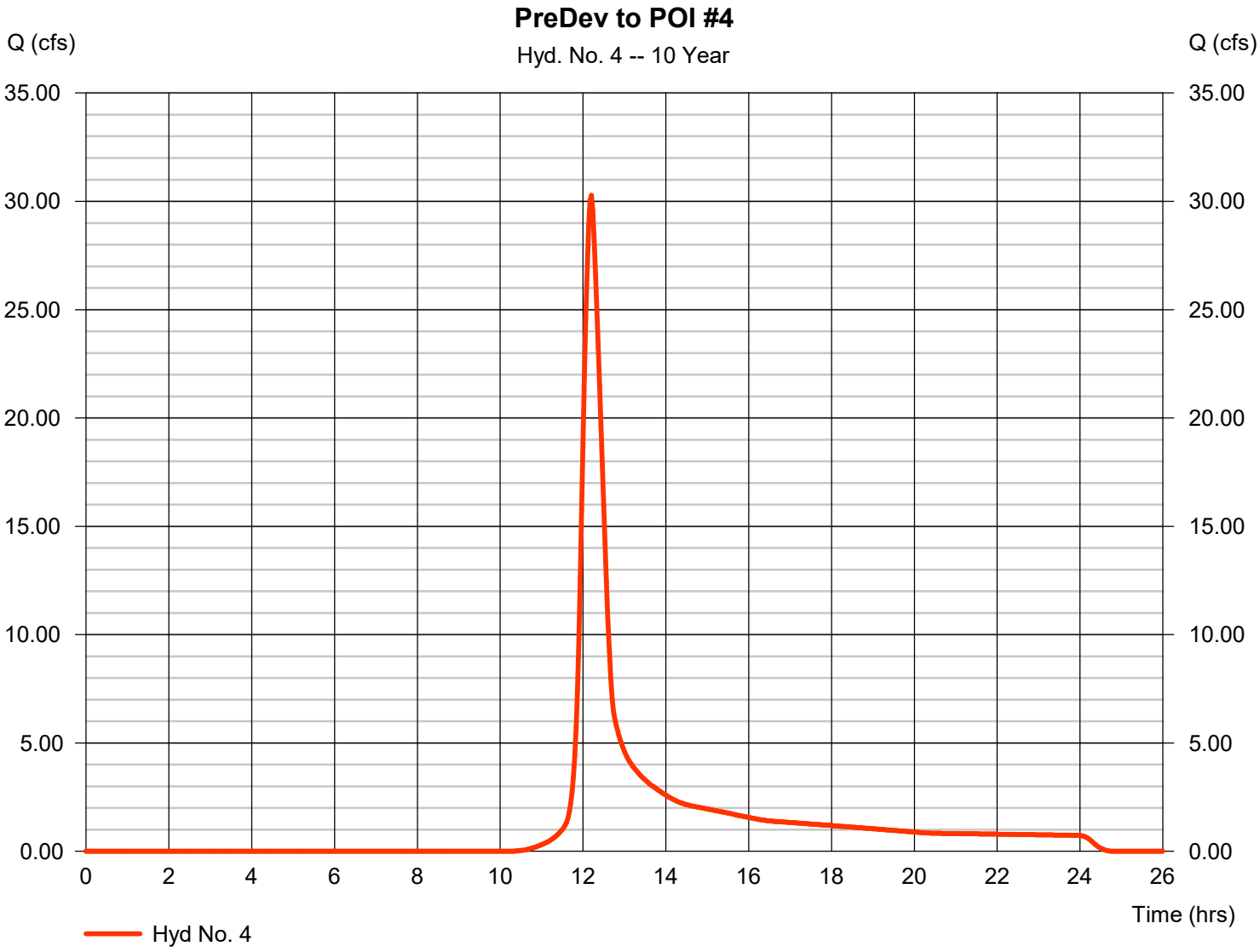


Hydrograph Report

Hyd. No. 4

PreDev to POI #4

Hydrograph type	=	SCS Runoff	Peak discharge	=	30.27 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	125,401 cuft
Drainage area	=	17.970 ac	Curve number	=	68
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	28.80 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

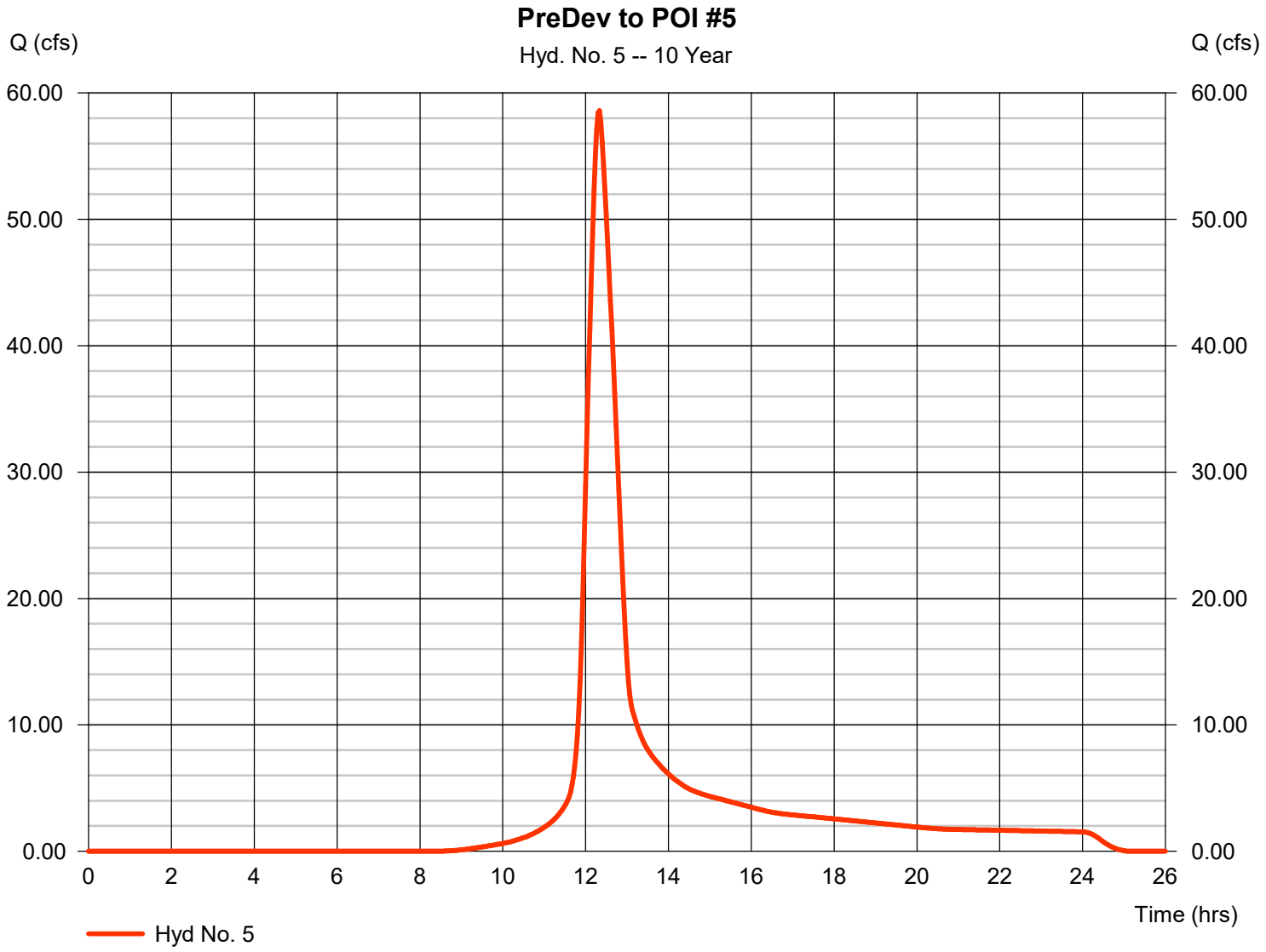


Hydrograph Report

Hyd. No. 5

PreDev to POI #5

Hydrograph type	=	SCS Runoff	Peak discharge	=	58.60 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	304,018 cuft
Drainage area	=	32.090 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	43.30 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

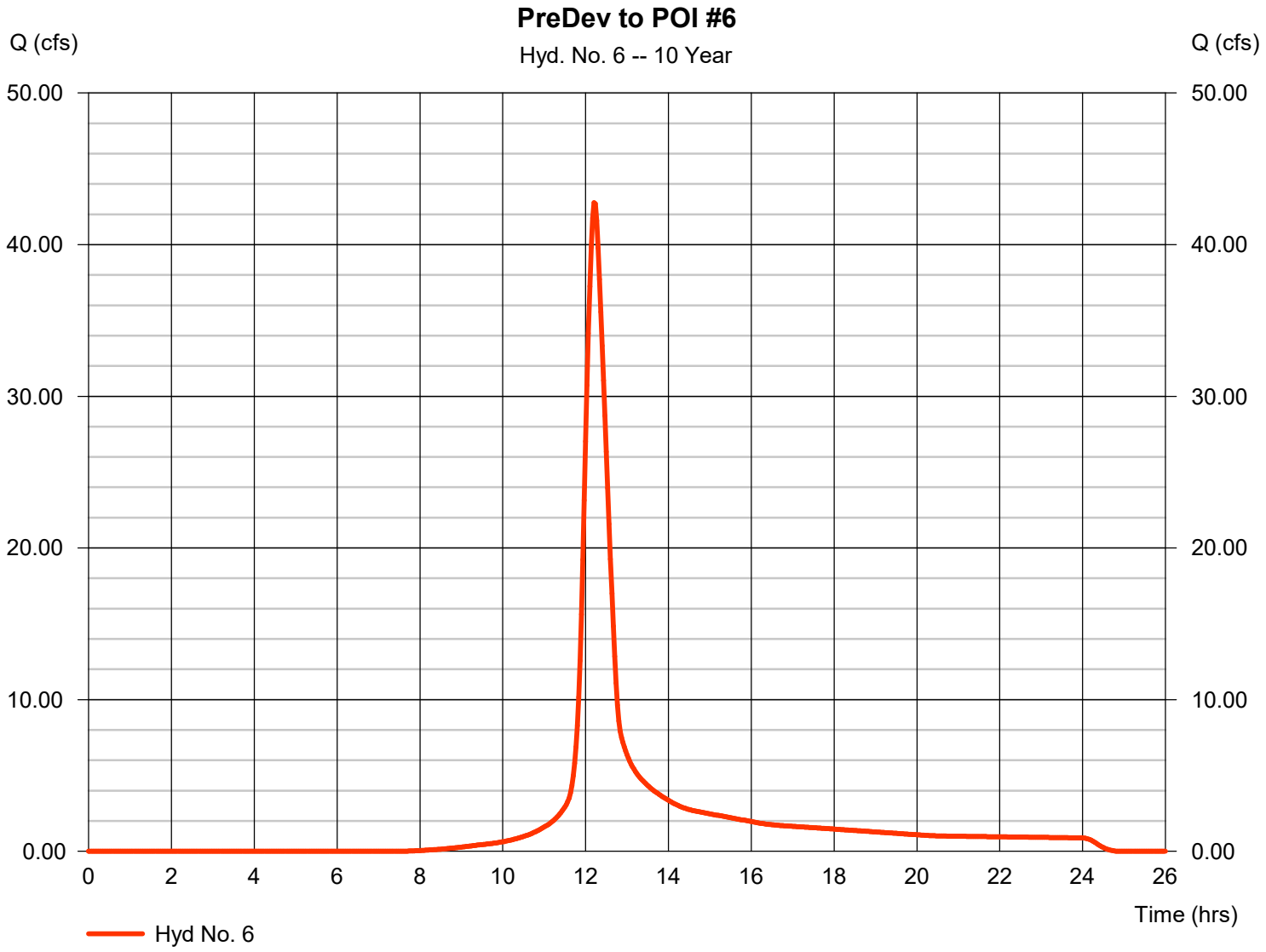


Hydrograph Report

Hyd. No. 6

PreDev to POI #6

Hydrograph type	=	SCS Runoff	Peak discharge	=	42.77 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	184,994 cuft
Drainage area	=	17.640 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	32.90 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

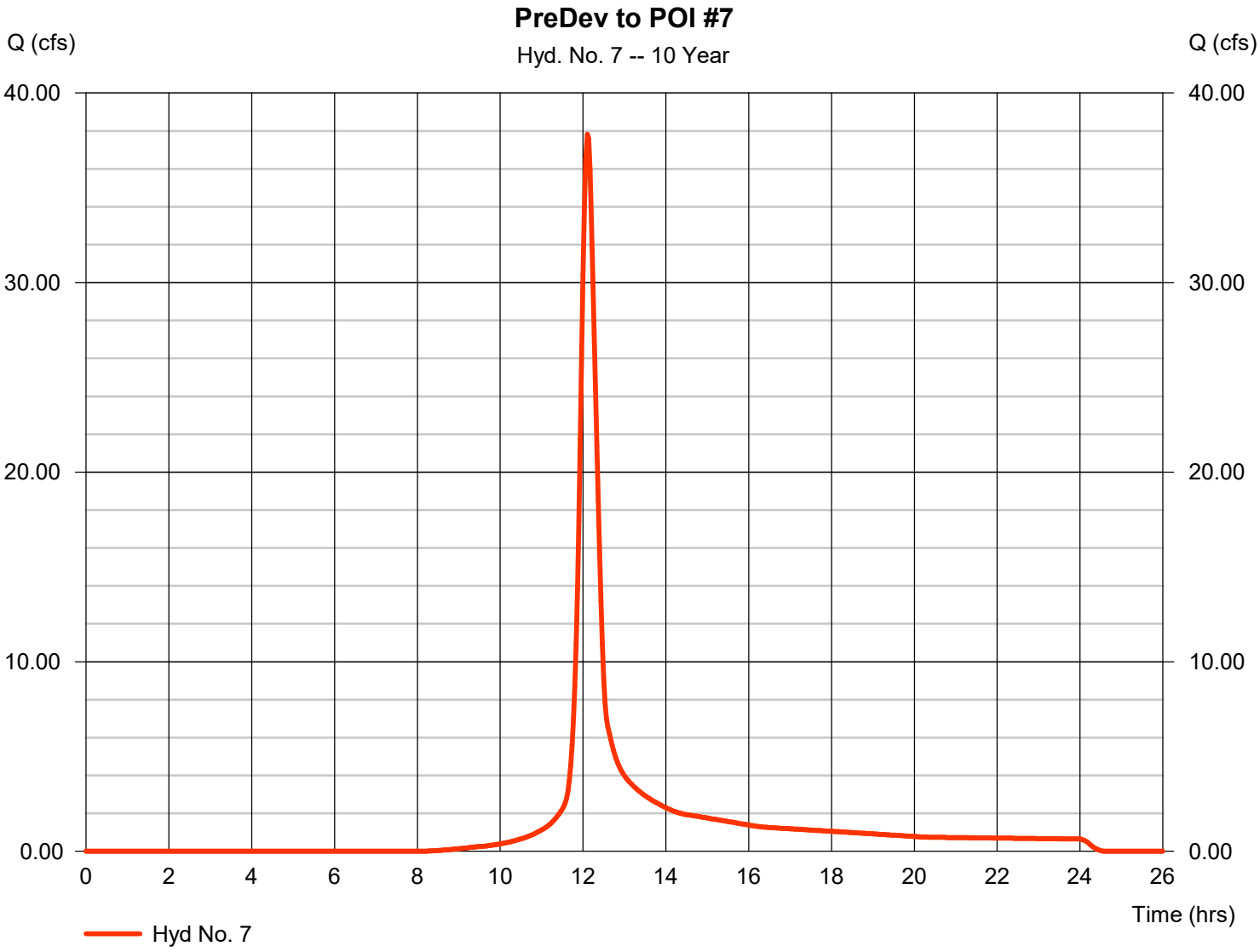


Hydrograph Report

Hyd. No. 7

PreDev to POI #7

Hydrograph type	=	SCS Runoff	Peak discharge	=	37.83 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	130,873 cuft
Drainage area	=	13.250 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	22.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

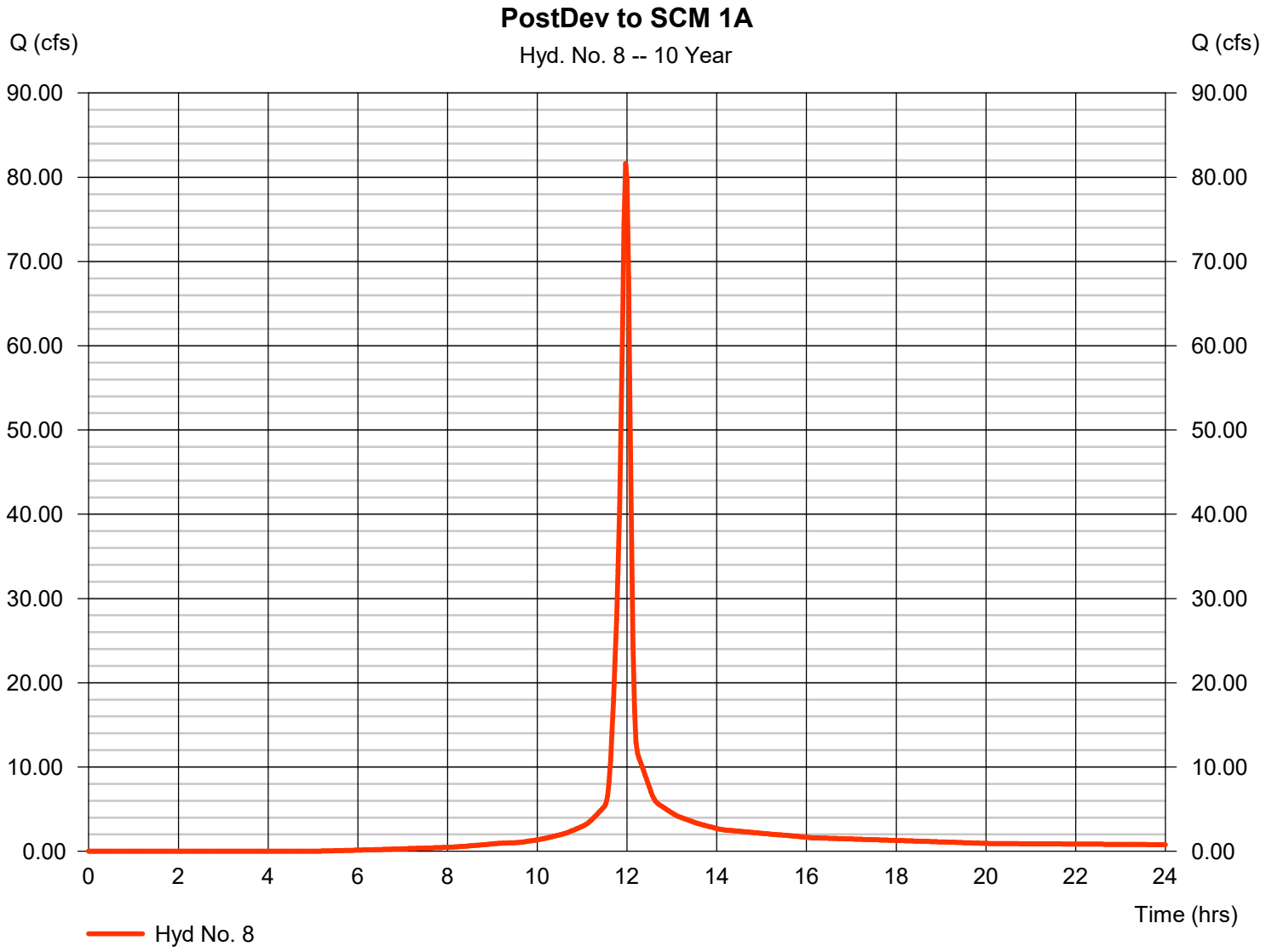


Hydrograph Report

Hyd. No. 8

PostDev to SCM 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	81.64 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	191,970 cuft
Drainage area	=	14.800 ac	Curve number	=	86.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.30 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

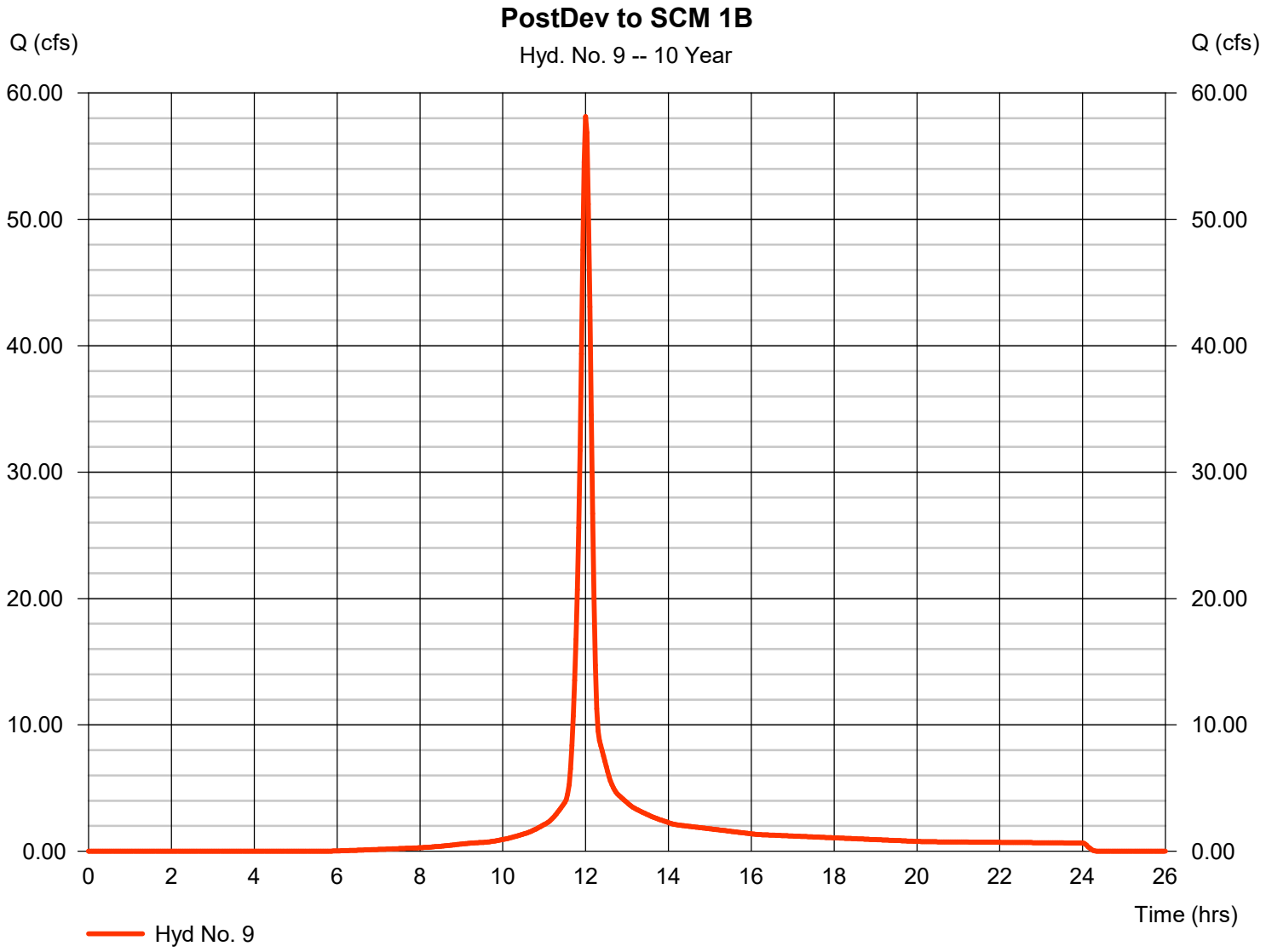


Hydrograph Report

Hyd. No. 9

PostDev to SCM 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	58.13 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	152,522 cuft
Drainage area	=	12.110 ac	Curve number	=	84.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.10 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

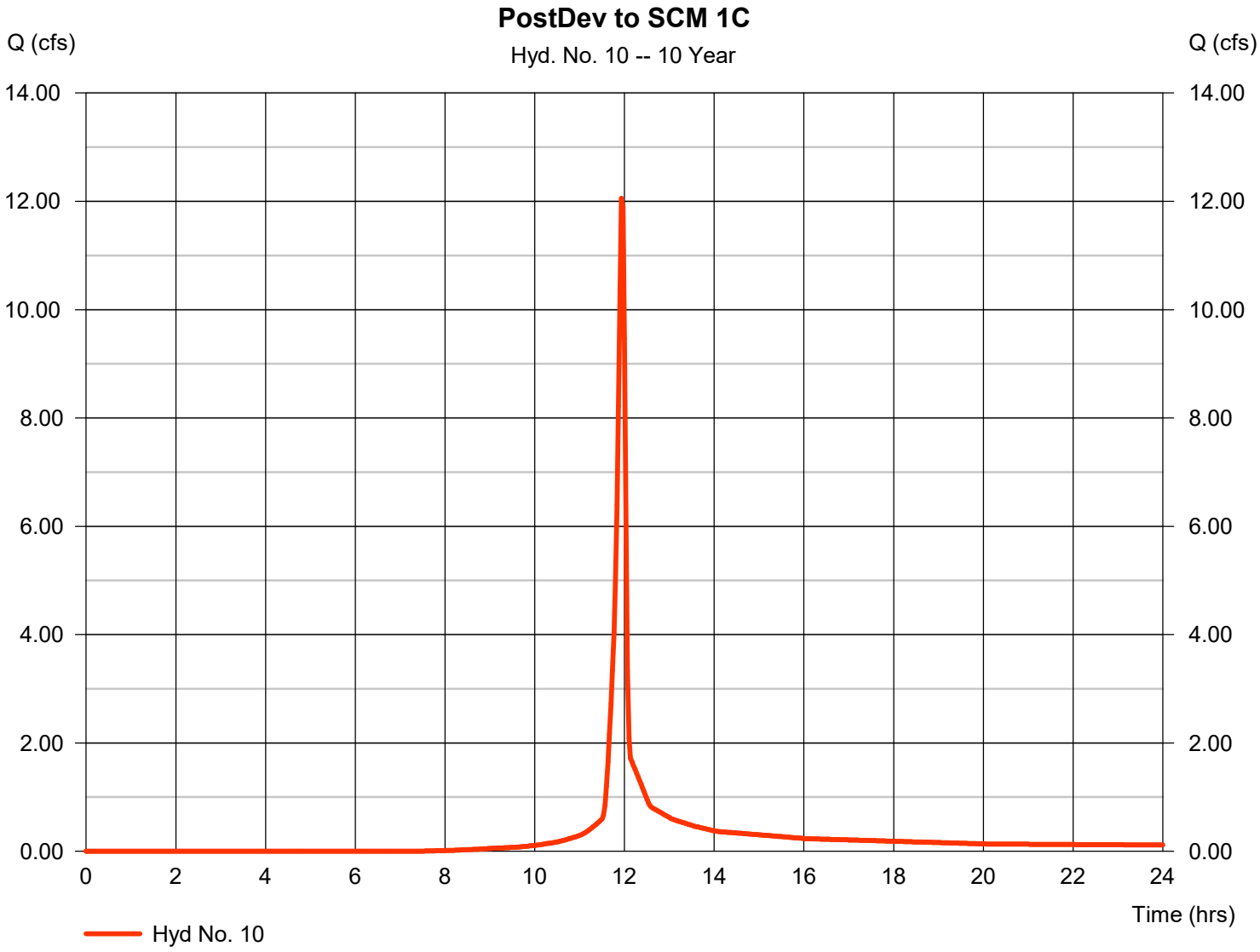


Hydrograph Report

Hyd. No. 10

PostDev to SCM 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.05 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	24,470 cuft
Drainage area	=	2.520 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

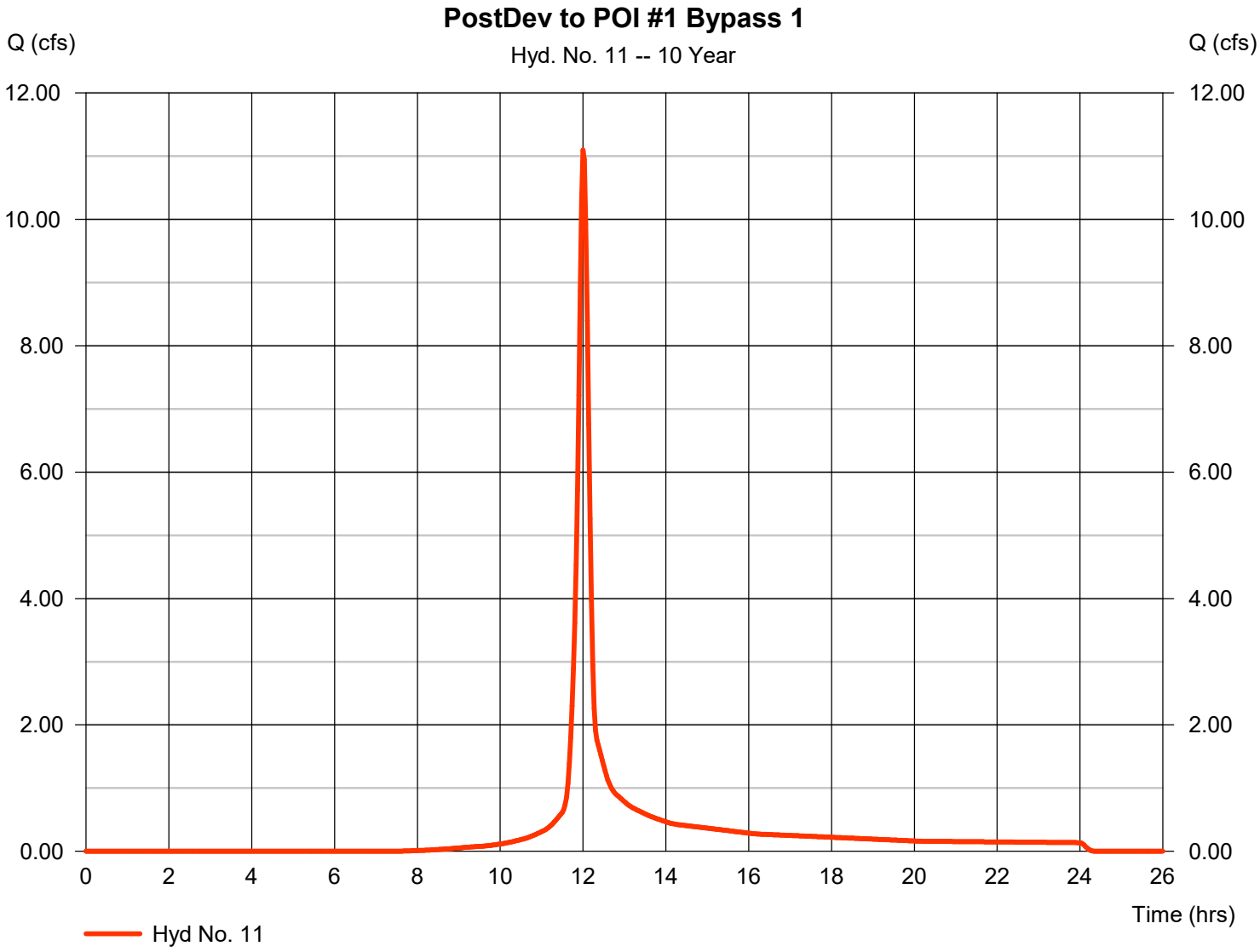


Hydrograph Report

Hyd. No. 11

PostDev to POI #1 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 11.10 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 28,775 cuft
Drainage area	= 2.720 ac	Curve number	= 78.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

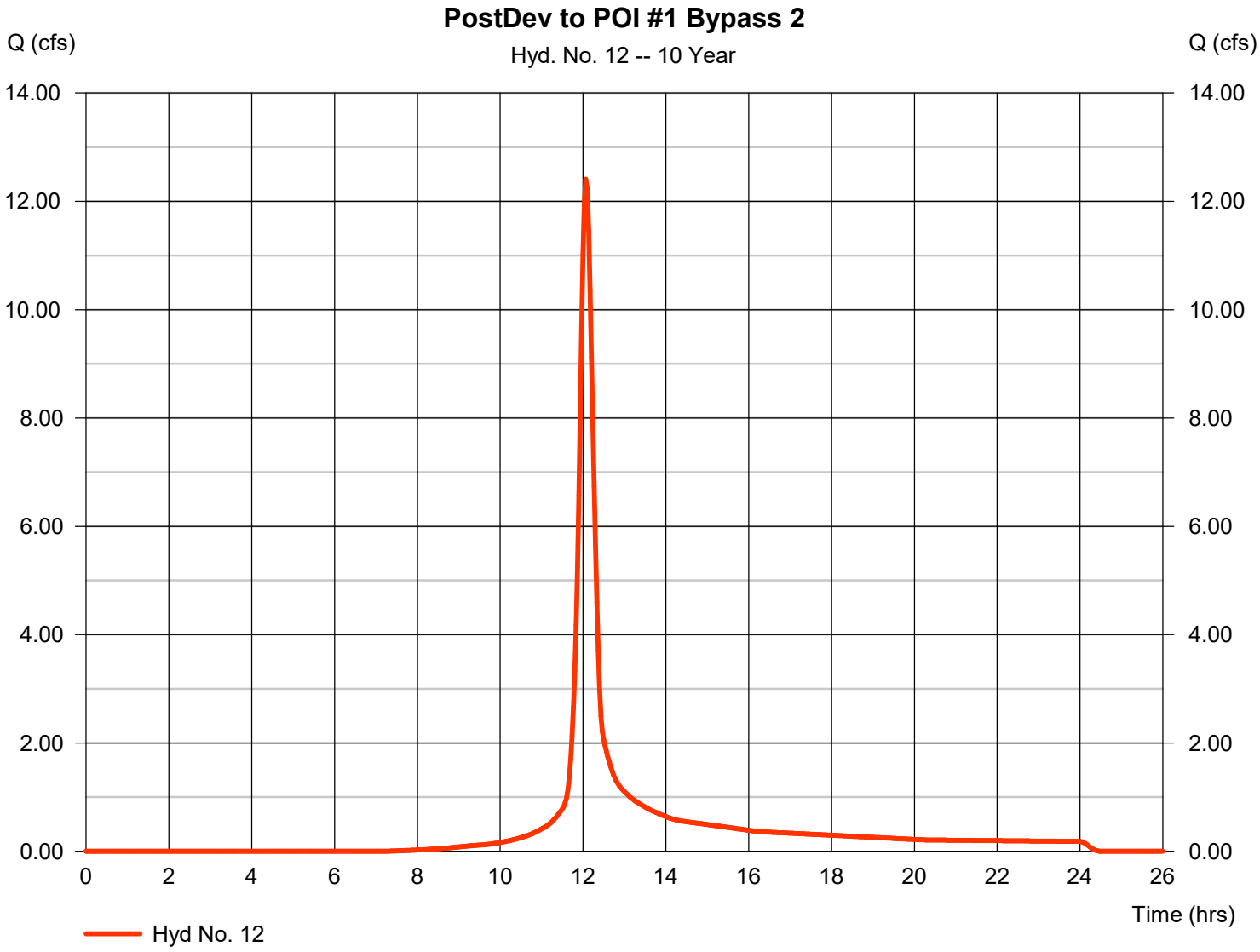


Hydrograph Report

Hyd. No. 12

PostDev to POI #1 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 12.41 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 38,794 cuft
Drainage area	= 3.640 ac	Curve number	= 79.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

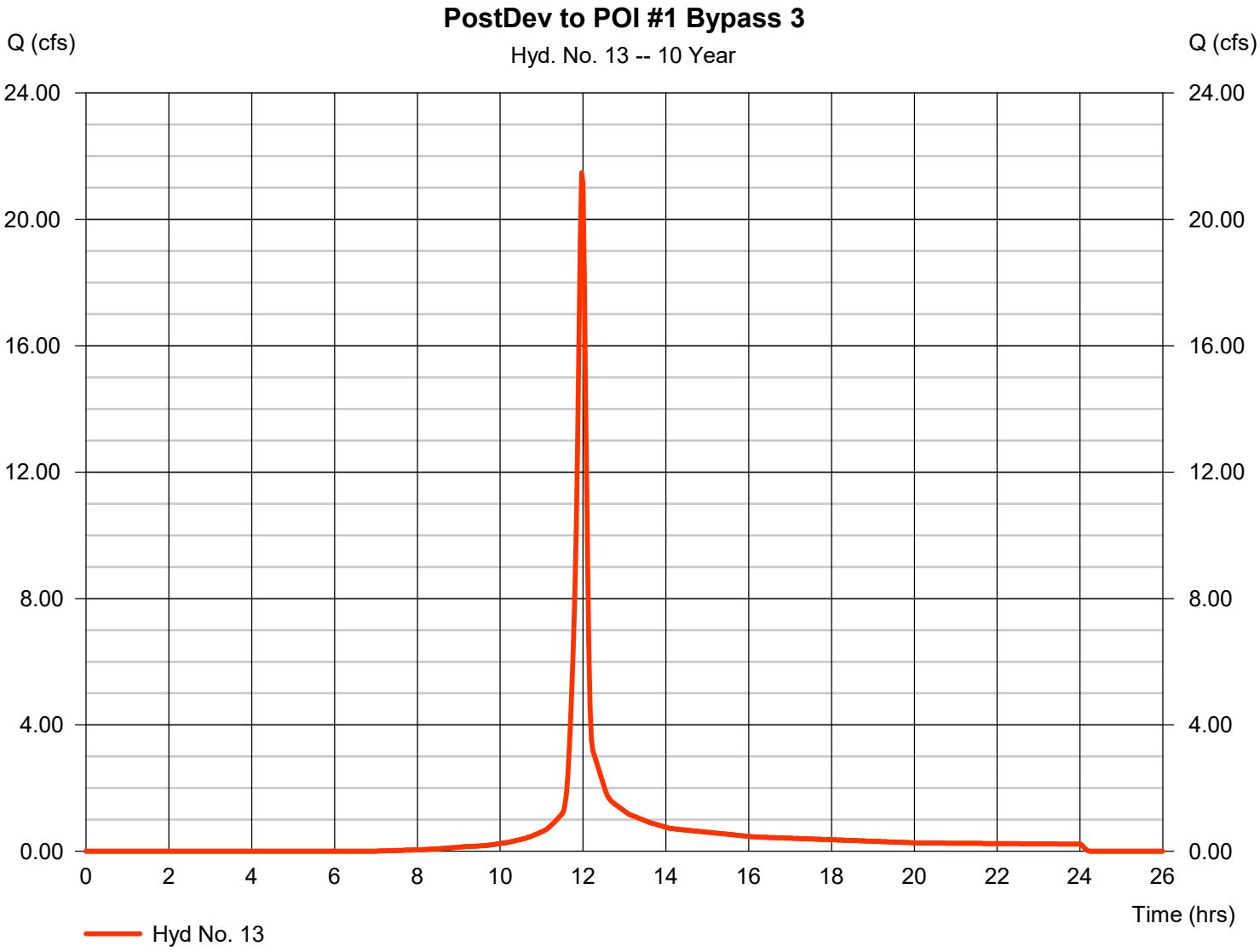


Hydrograph Report

Hyd. No. 13

PostDev to POI #1 Bypass 3

Hydrograph type	= SCS Runoff	Peak discharge	= 21.47 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 49,392 cuft
Drainage area	= 4.520 ac	Curve number	= 80.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 9.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

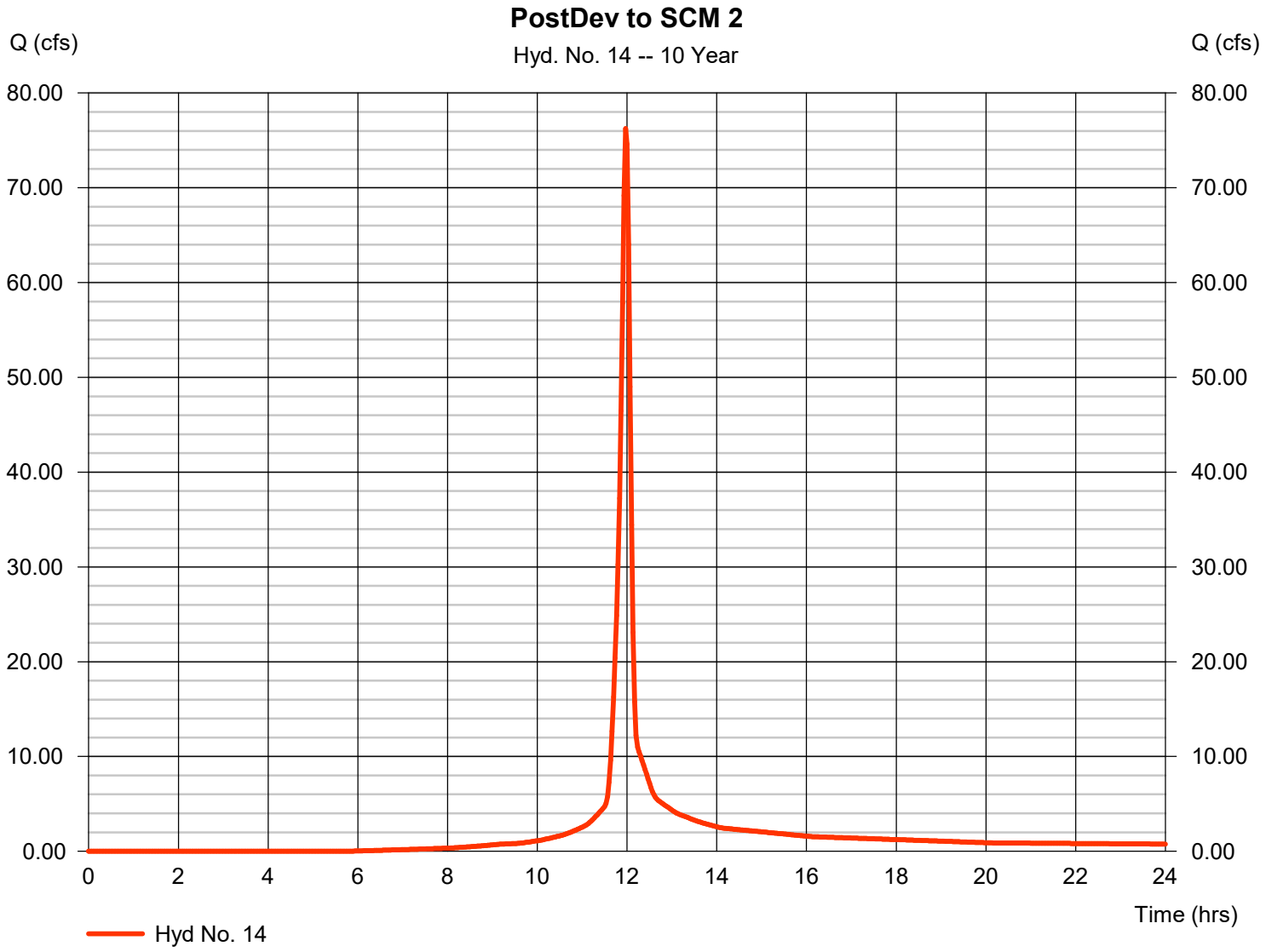


Hydrograph Report

Hyd. No. 14

PostDev to SCM 2

Hydrograph type	= SCS Runoff	Peak discharge	= 76.25 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 177,426 cuft
Drainage area	= 14.570 ac	Curve number	= 84.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

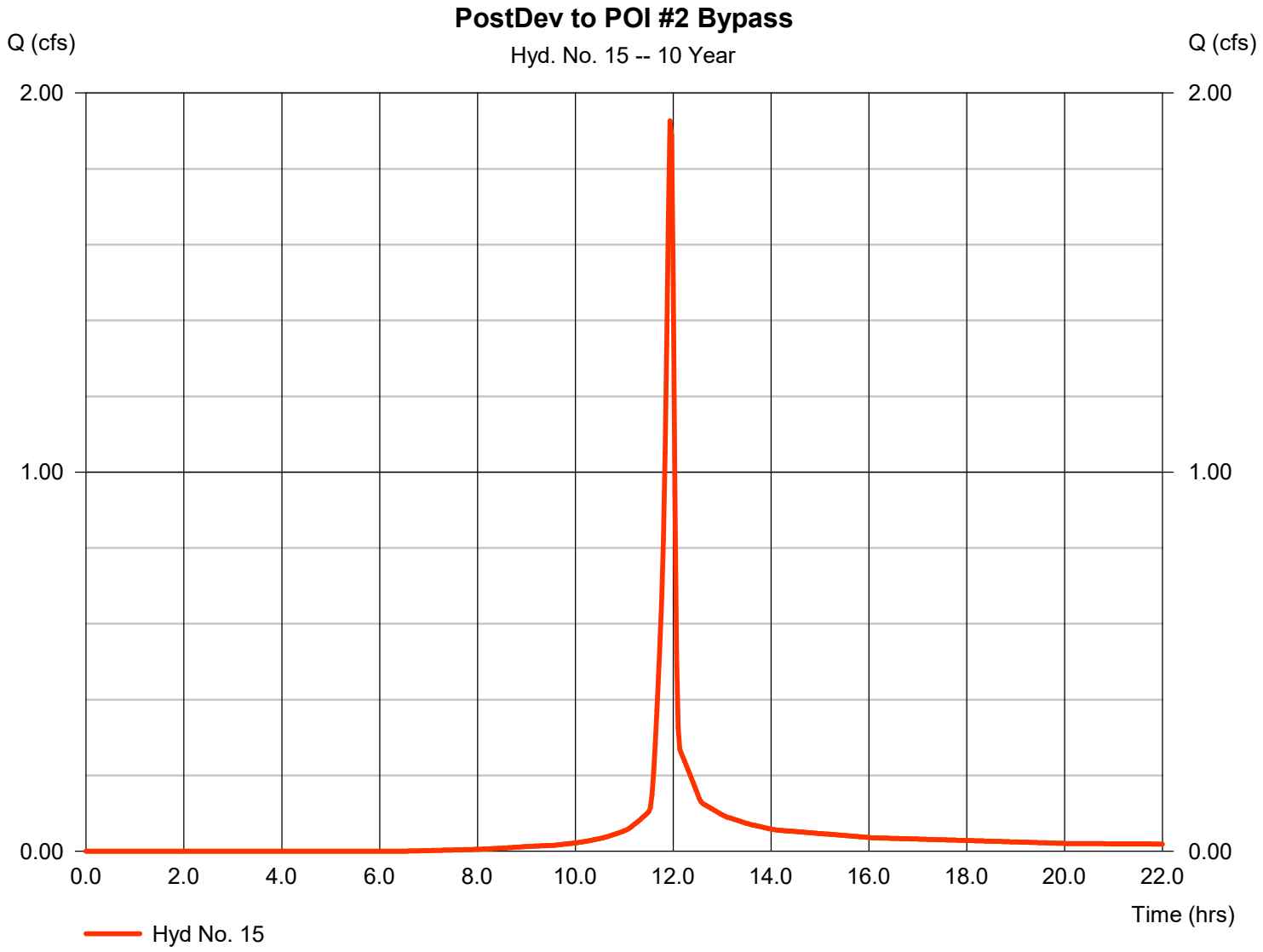


Hydrograph Report

Hyd. No. 15

PostDev to POI #2 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.926 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	3,945 cuft
Drainage area	=	0.370 ac	Curve number	=	82
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

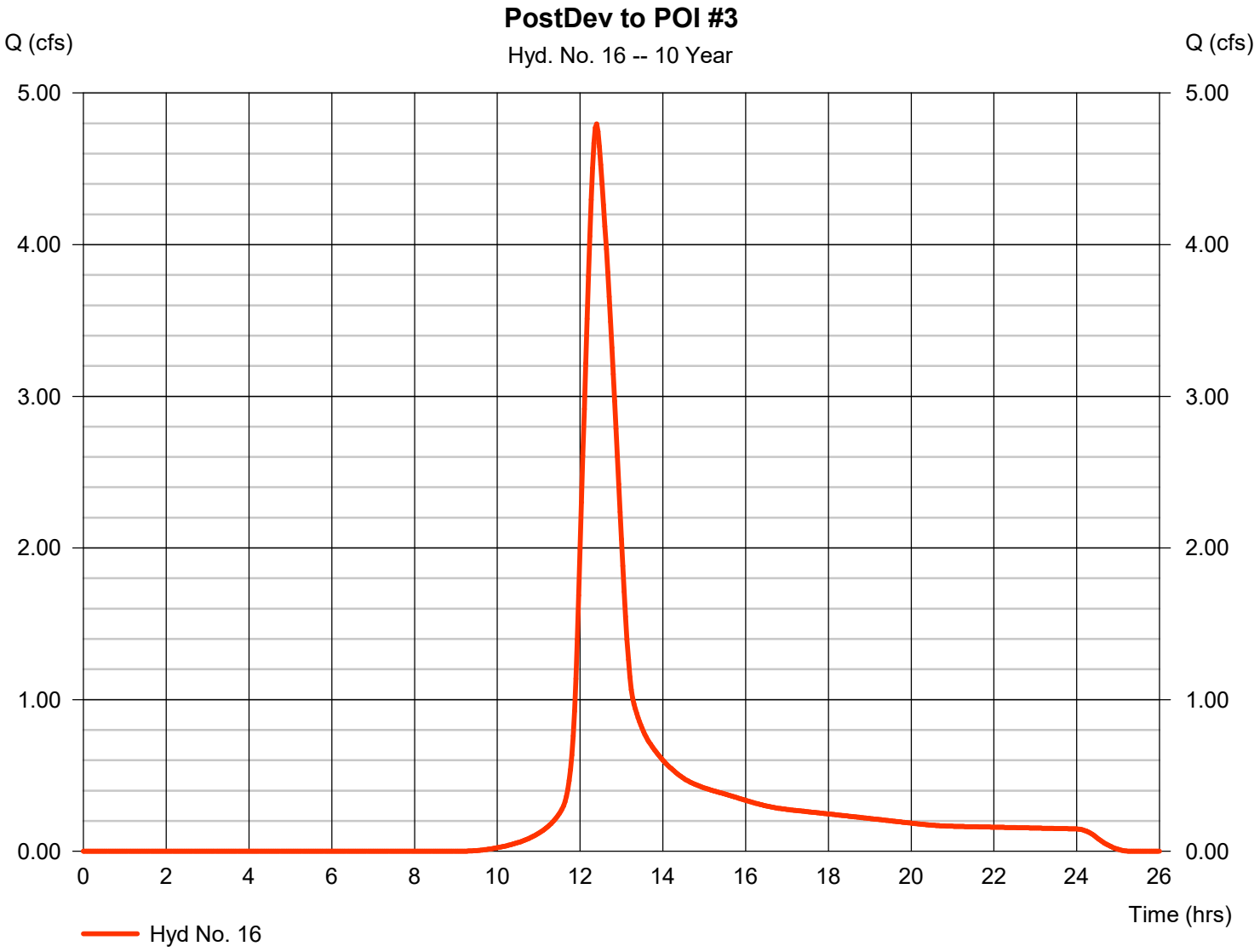


Hydrograph Report

Hyd. No. 16

PostDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.795 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	27,573 cuft
Drainage area	=	3.240 ac	Curve number	=	73.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	49.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

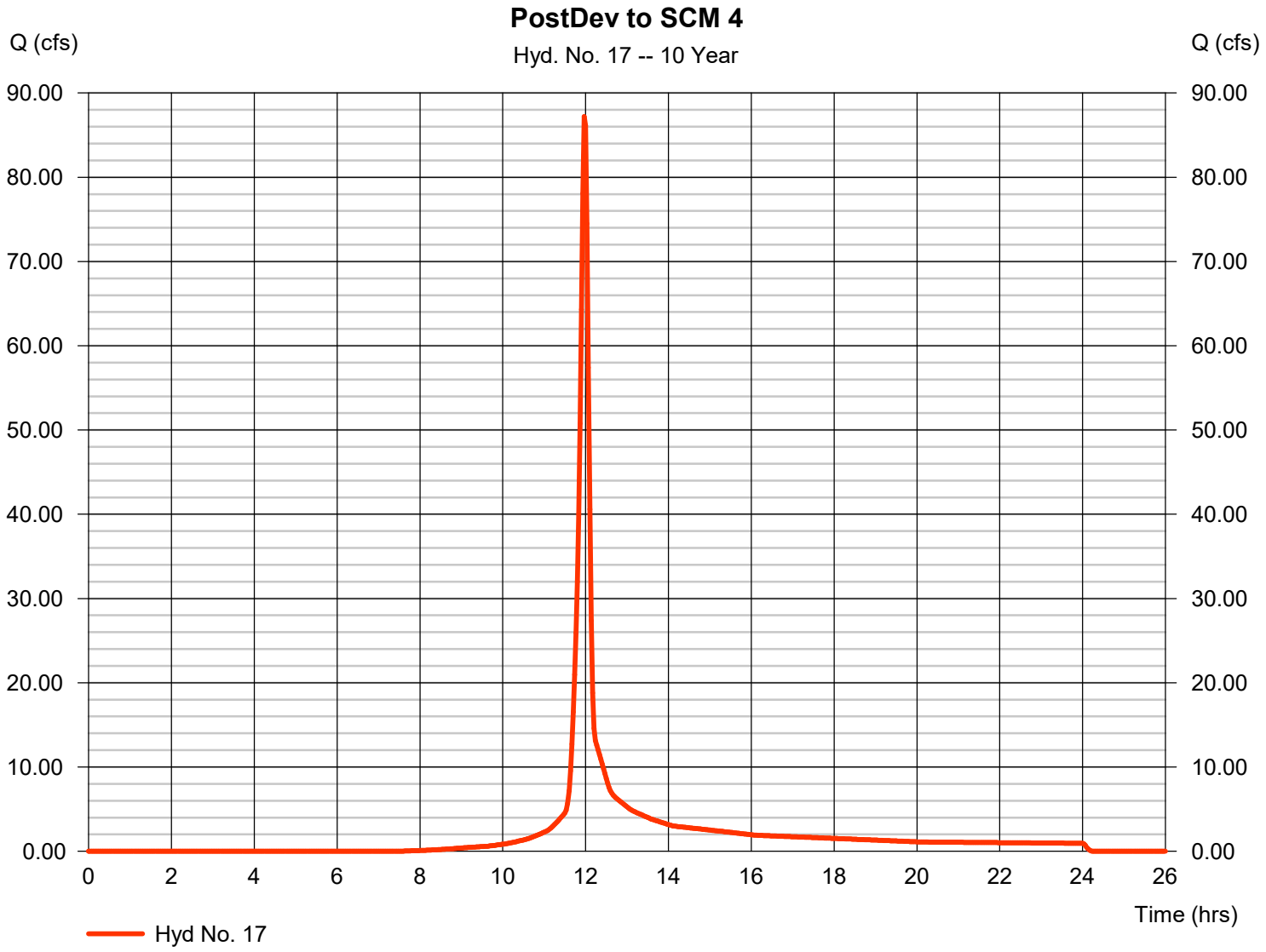


Hydrograph Report

Hyd. No. 17

PostDev to SCM 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	87.19 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	199,862 cuft
Drainage area	=	19.420 ac	Curve number	=	78.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.50 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

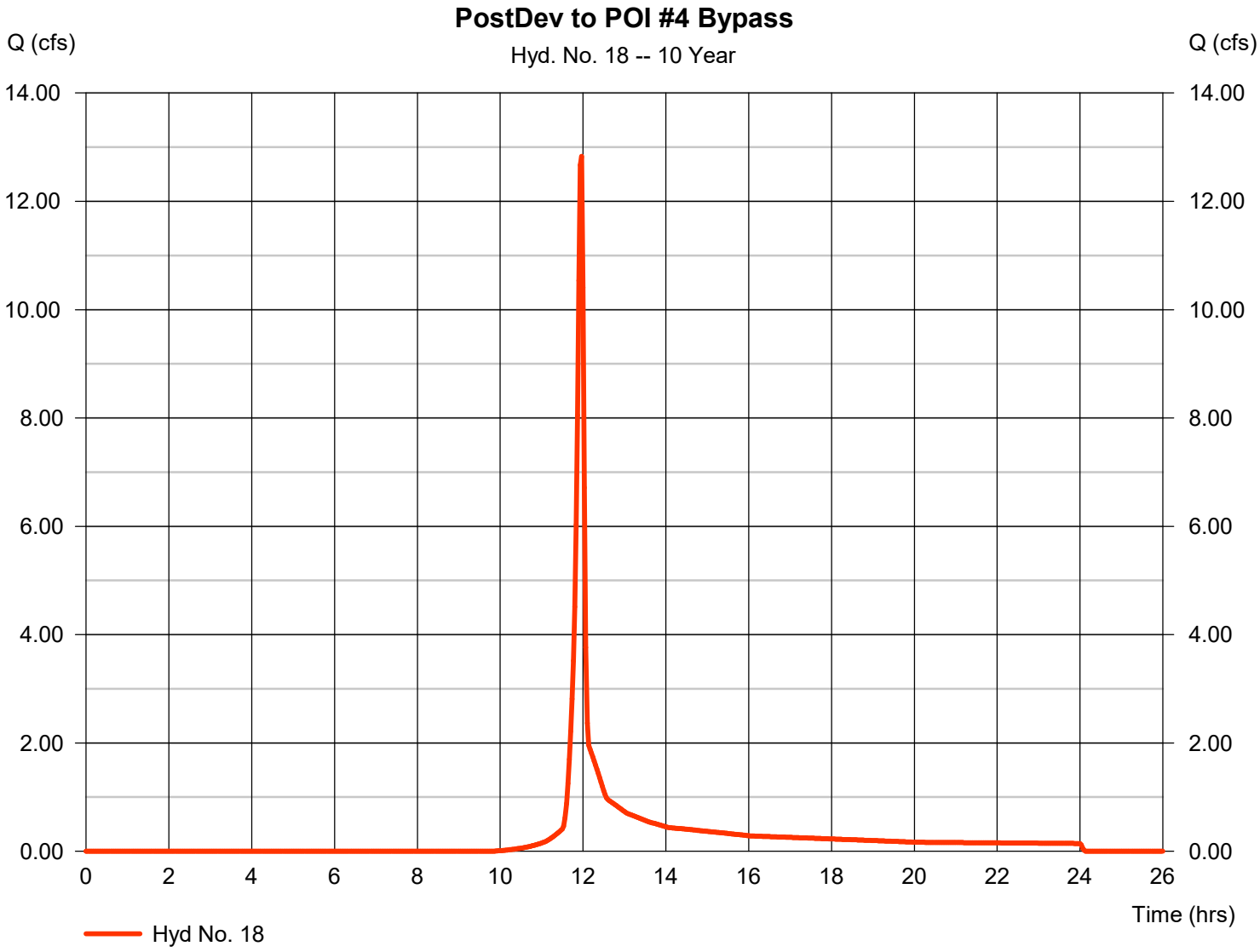


Hydrograph Report

Hyd. No. 18

PostDev to POI #4 Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 12.83 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 25,689 cuft
Drainage area	= 3.670 ac	Curve number	= 69.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

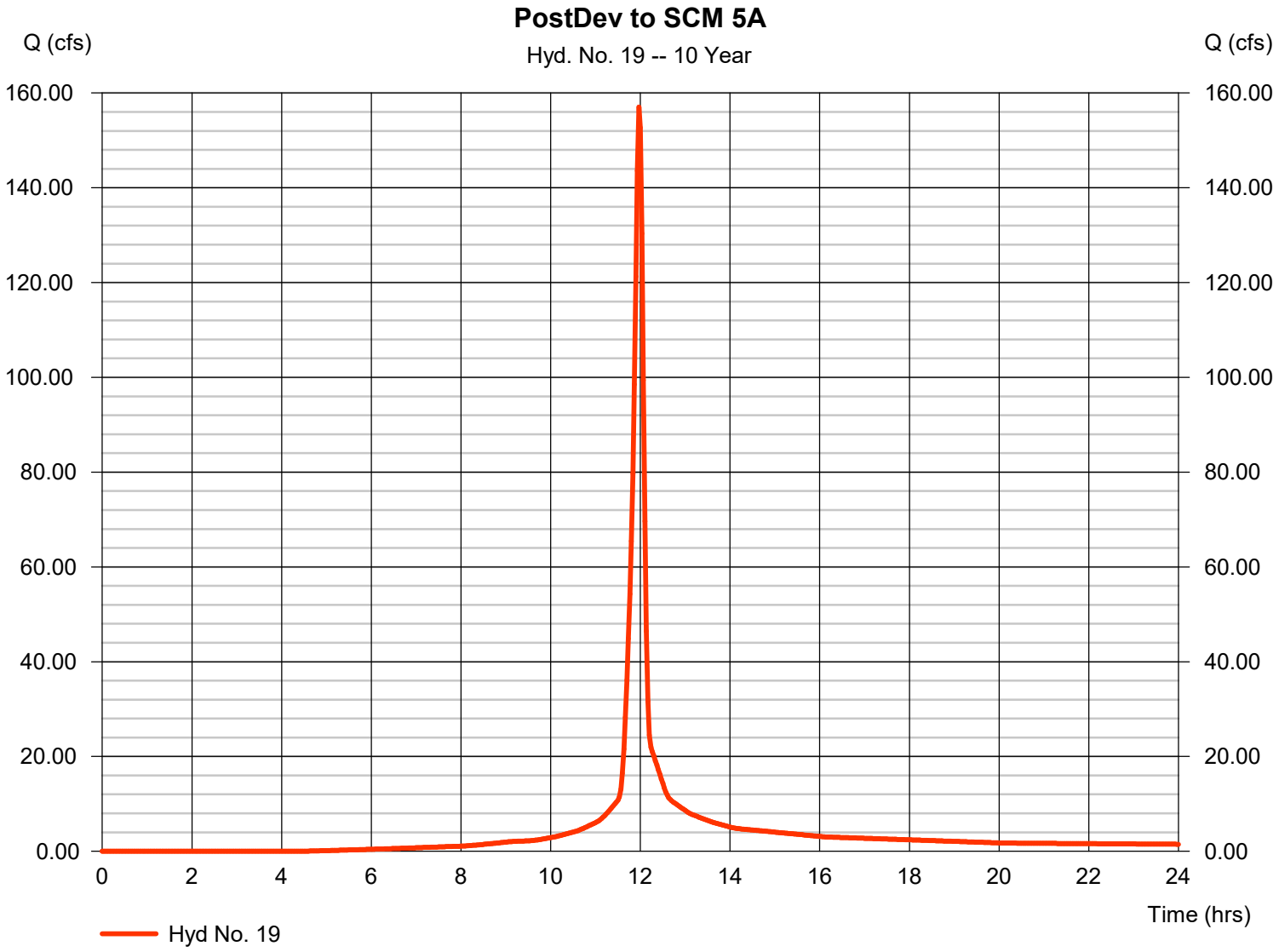


Hydrograph Report

Hyd. No. 19

PostDev to SCM 5A

Hydrograph type	=	SCS Runoff	Peak discharge	=	157.03 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	373,046 cuft
Drainage area	=	27.430 ac	Curve number	=	88.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.10 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

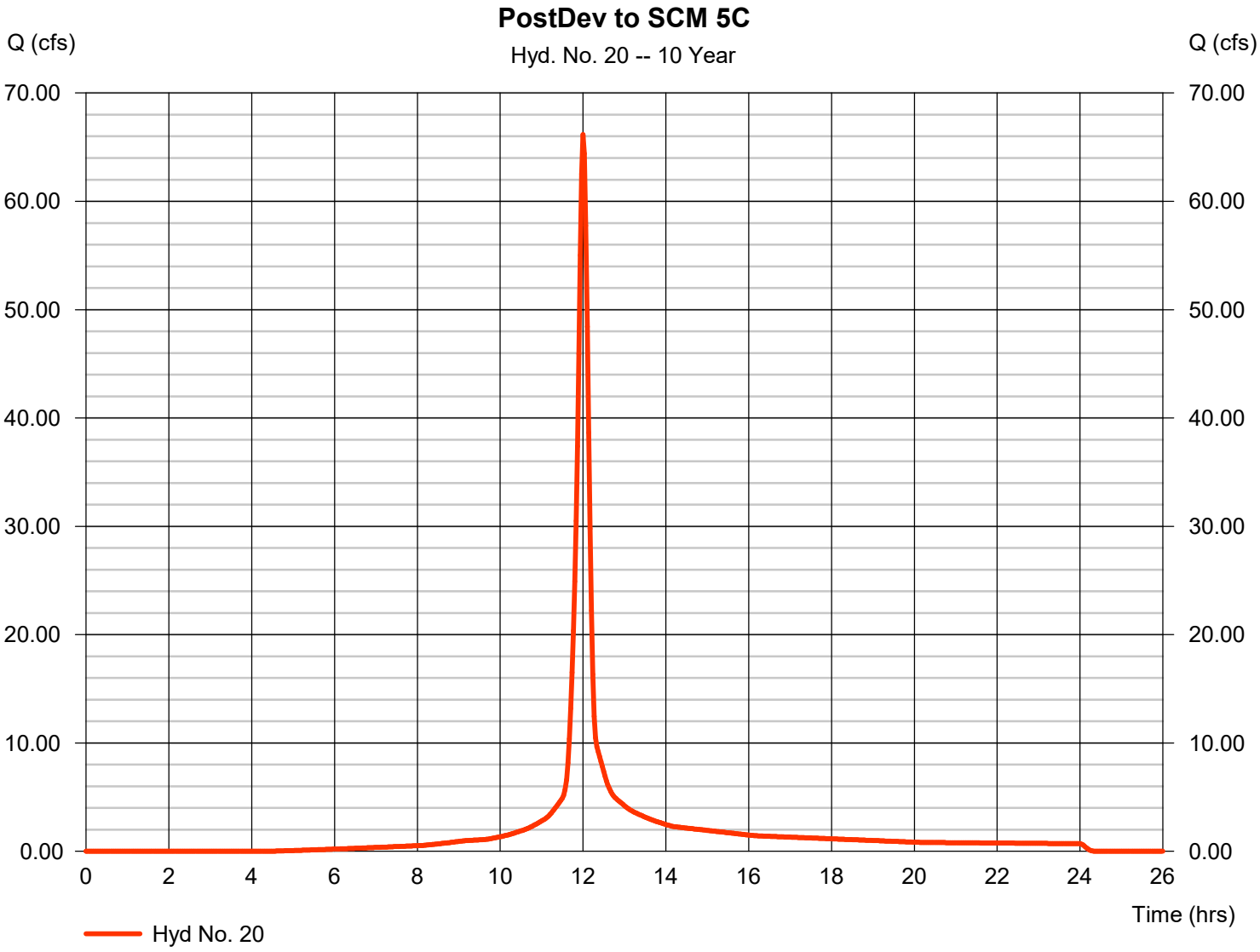


Hydrograph Report

Hyd. No. 20

PostDev to SCM 5C

Hydrograph type	=	SCS Runoff	Peak discharge	=	66.17 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	176,982 cuft
Drainage area	=	12.550 ac	Curve number	=	88.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.80 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

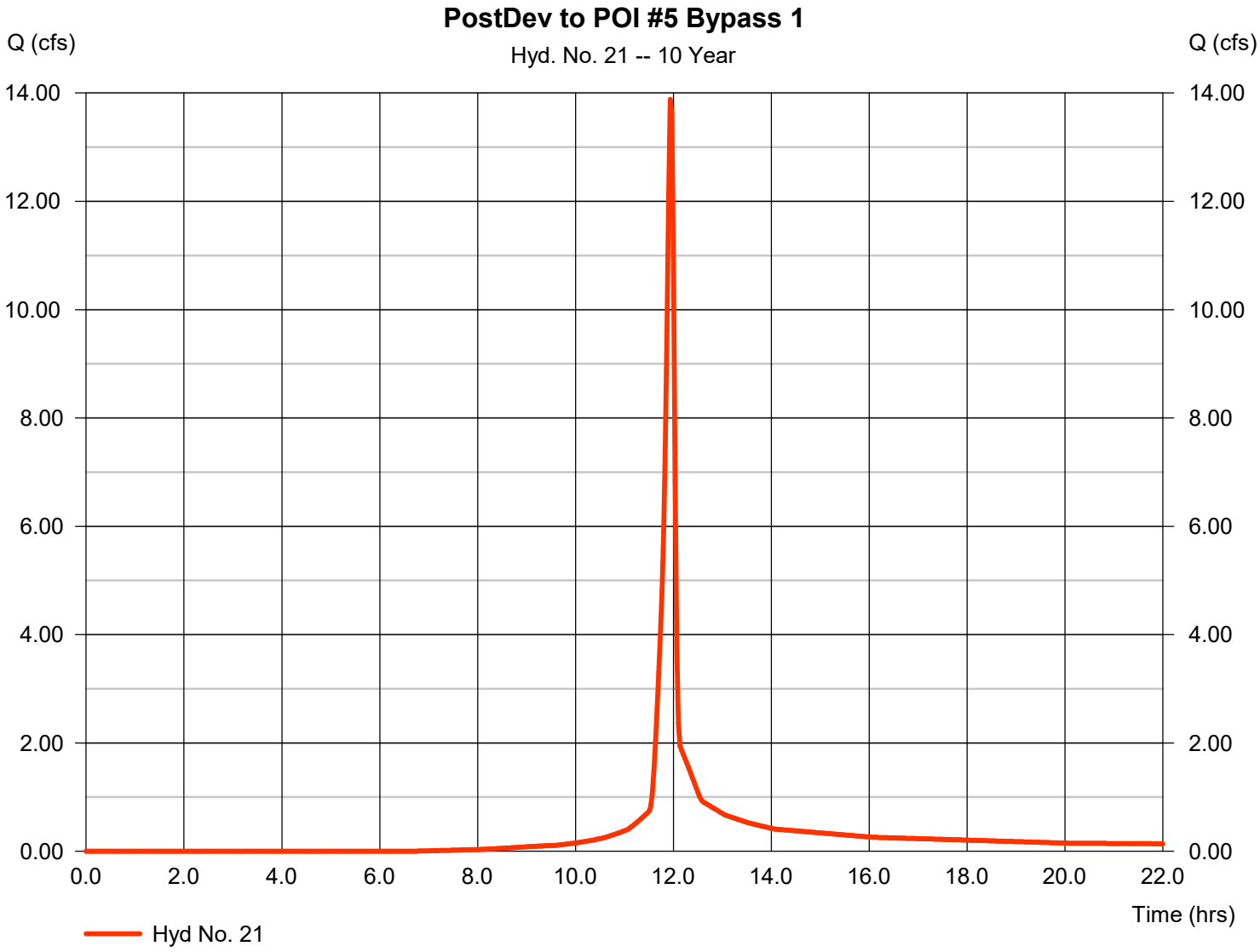


Hydrograph Report

Hyd. No. 21

PostDev to POI #5 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 13.88 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 28,368 cuft
Drainage area	= 2.710 ac	Curve number	= 81.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

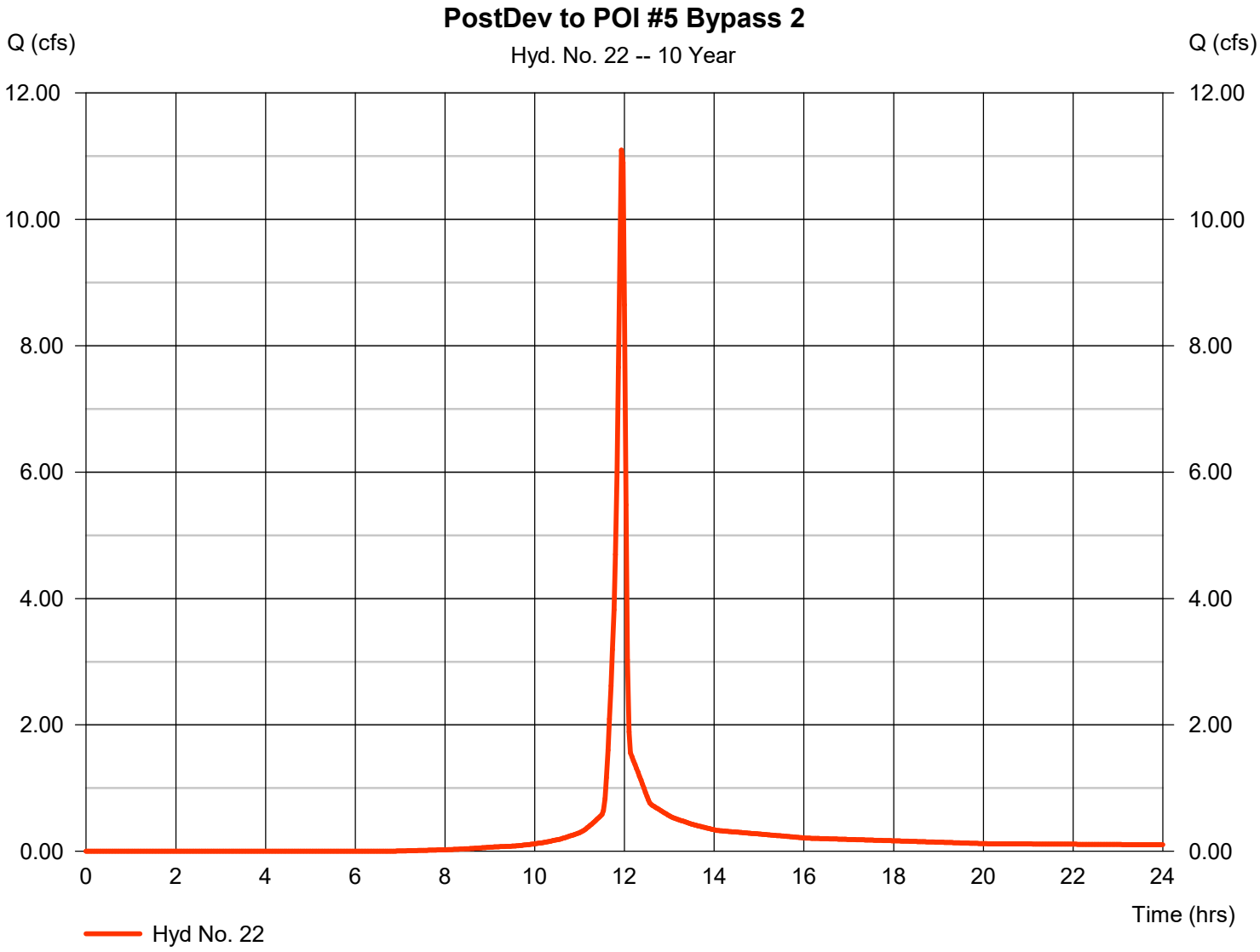


Hydrograph Report

Hyd. No. 22

PostDev to POI #5 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 11.09 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 22,645 cuft
Drainage area	= 2.190 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.06 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

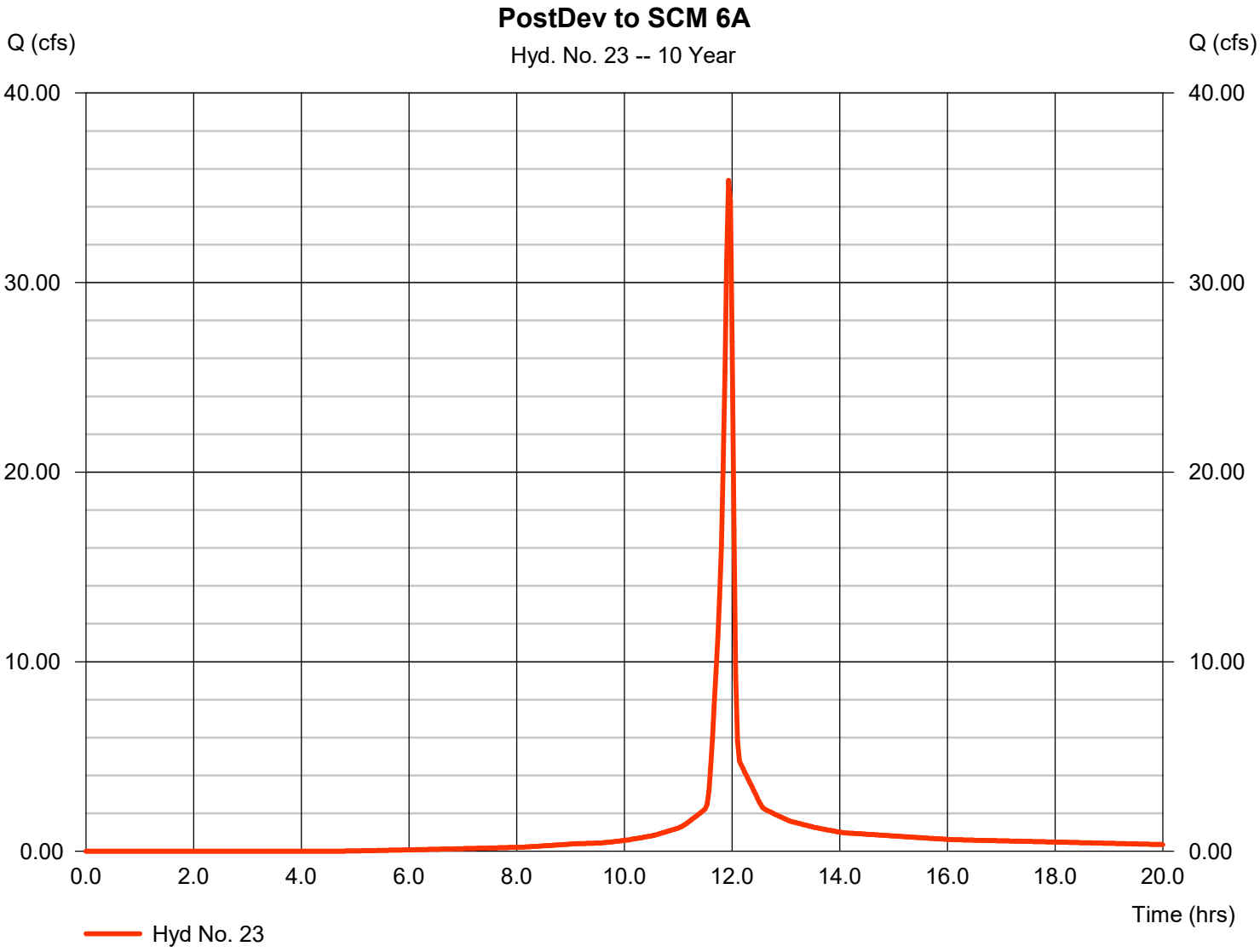


Hydrograph Report

Hyd. No. 23

PostDev to SCM 6A

Hydrograph type	=	SCS Runoff	Peak discharge	=	35.40 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	74,615 cuft
Drainage area	=	5.950 ac	Curve number	=	87.6
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

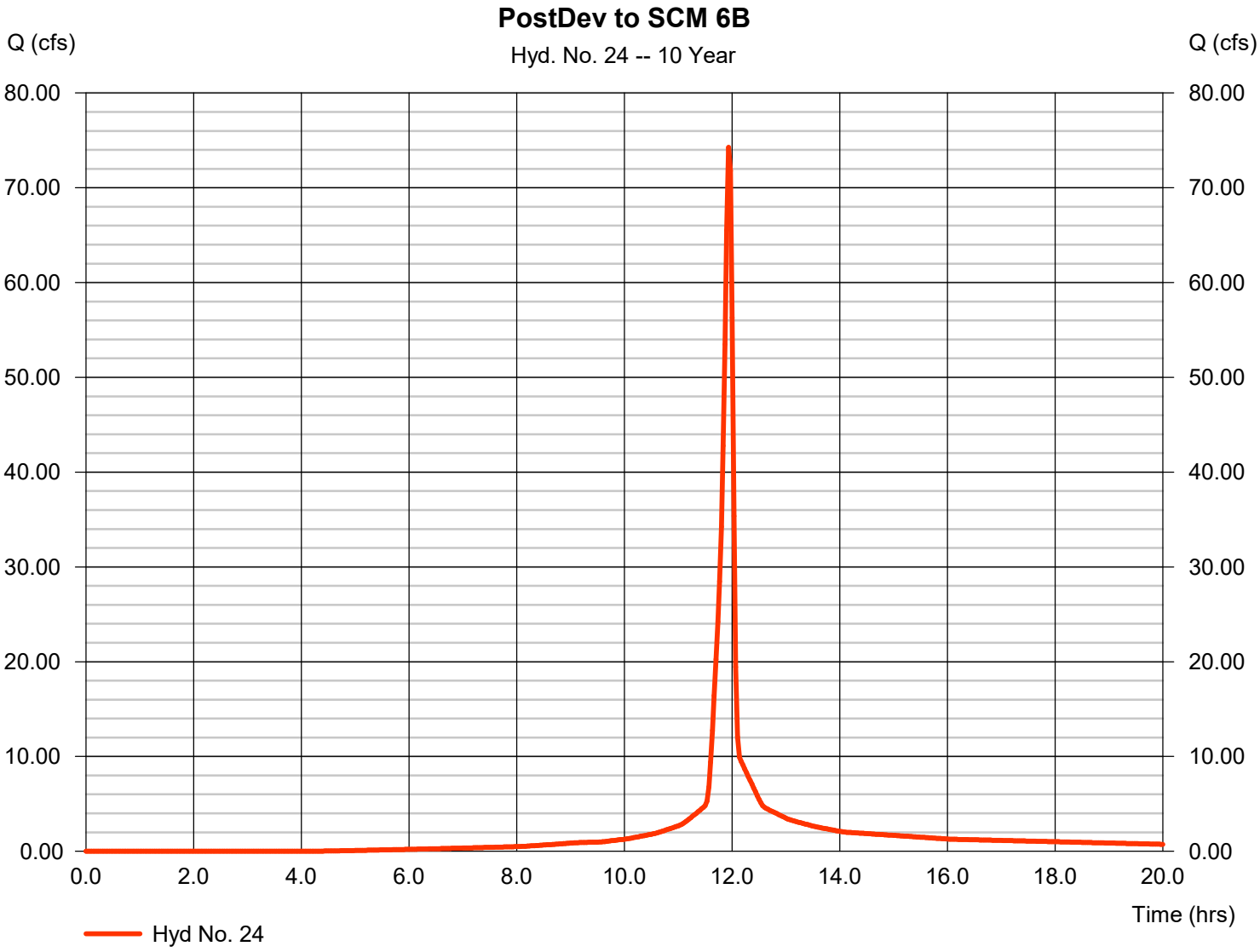


Hydrograph Report

Hyd. No. 24

PostDev to SCM 6B

Hydrograph type	=	SCS Runoff	Peak discharge	=	74.28 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	157,824 cuft
Drainage area	=	12.210 ac	Curve number	=	88.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.30 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

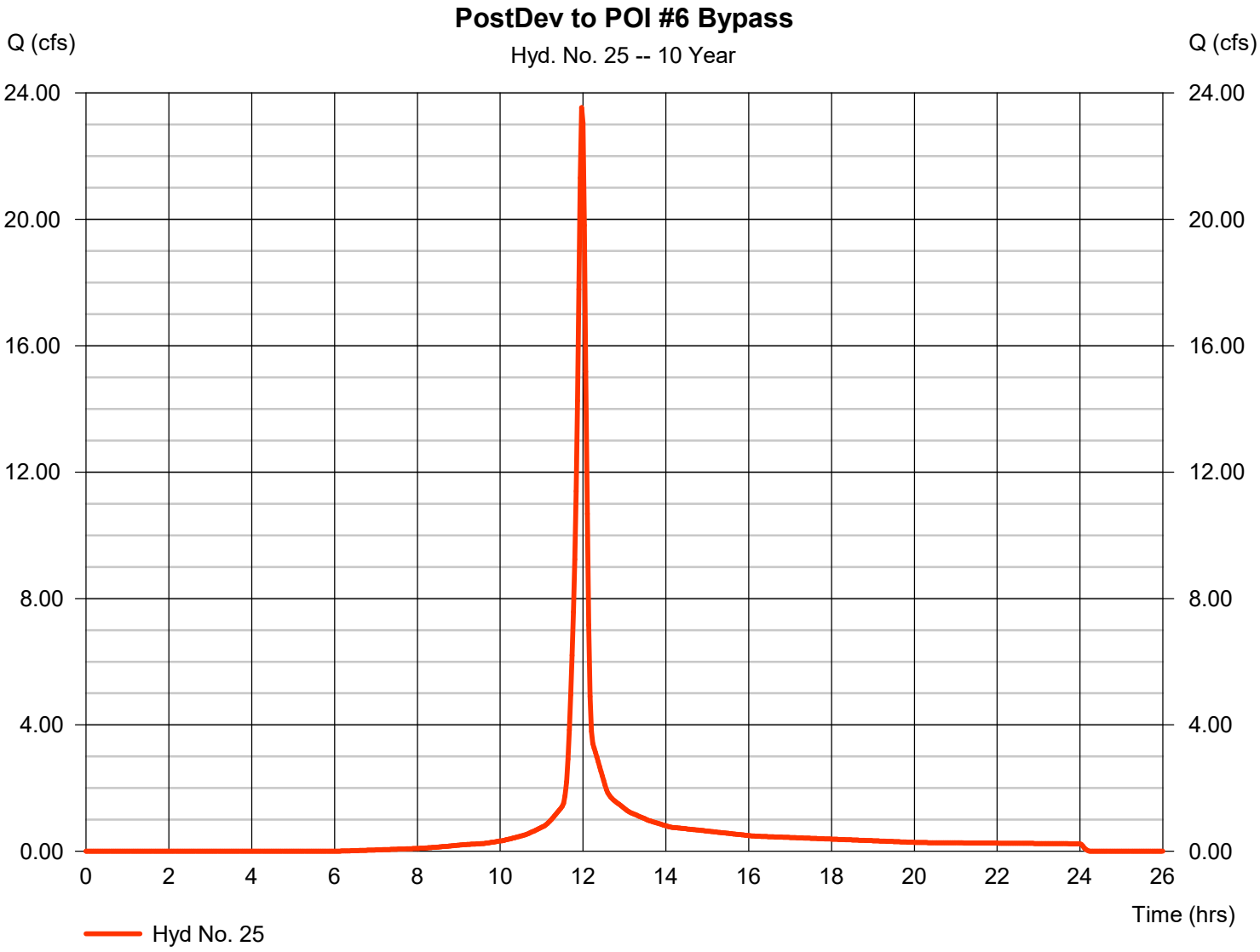


Hydrograph Report

Hyd. No. 25

PostDev to POI #6 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	23.54 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	54,596 cuft
Drainage area	=	4.590 ac	Curve number	=	83.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

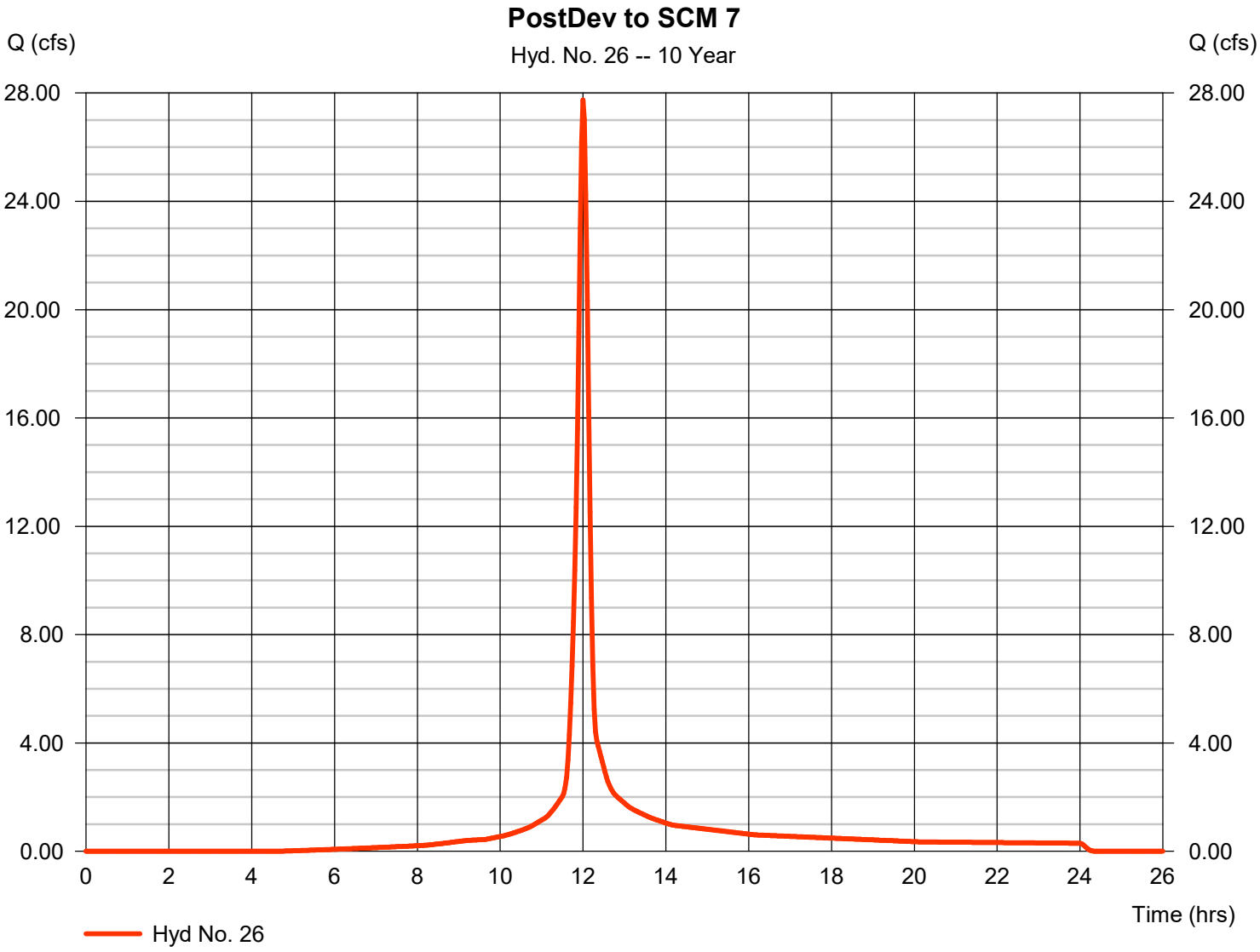


Hydrograph Report

Hyd. No. 26

PostDev to SCM 7

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.74 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	73,932 cuft
Drainage area	=	5.330 ac	Curve number	=	87.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.40 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

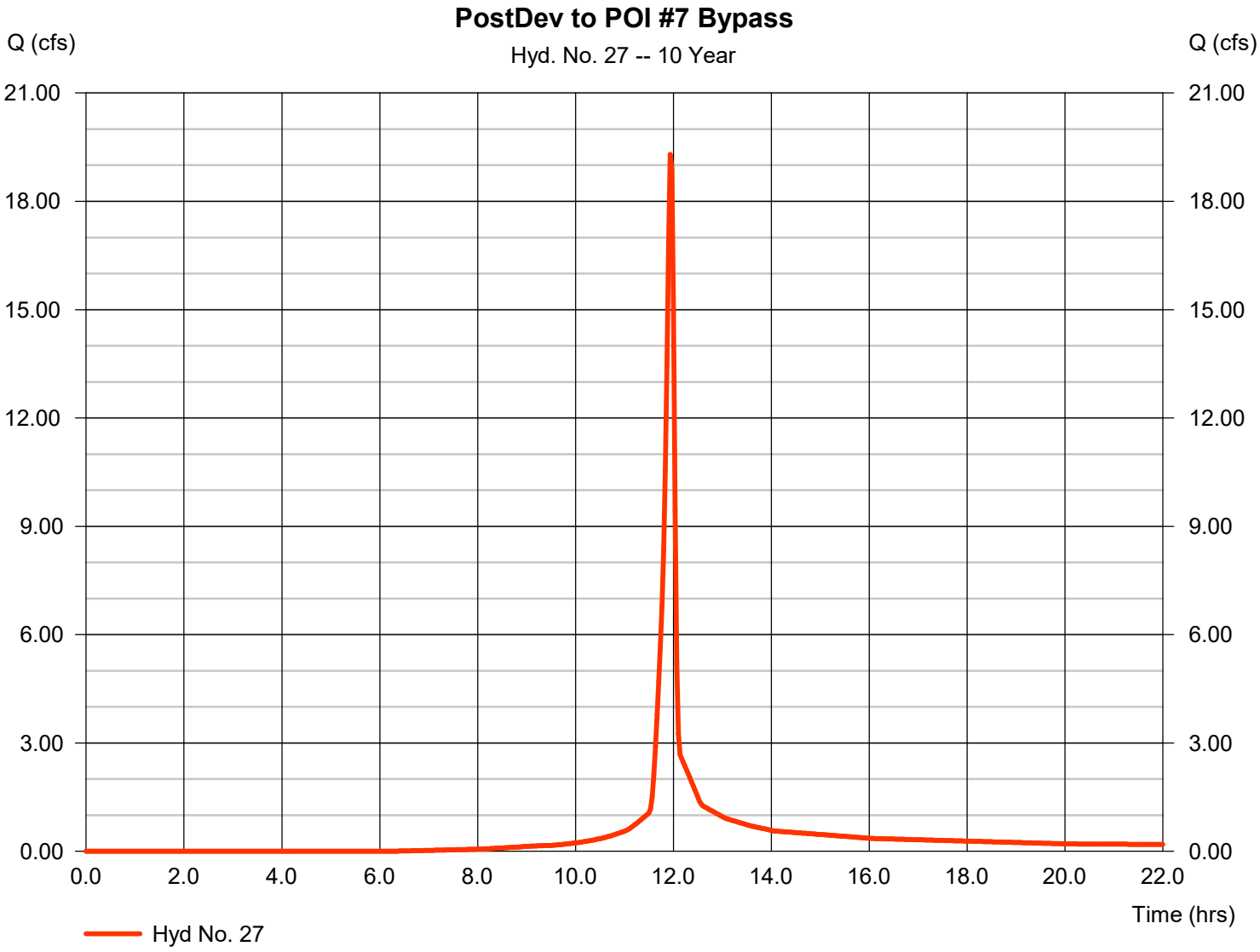


Hydrograph Report

Hyd. No. 27

PostDev to POI #7 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.30 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	39,635 cuft
Drainage area	=	3.640 ac	Curve number	=	82.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.06 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



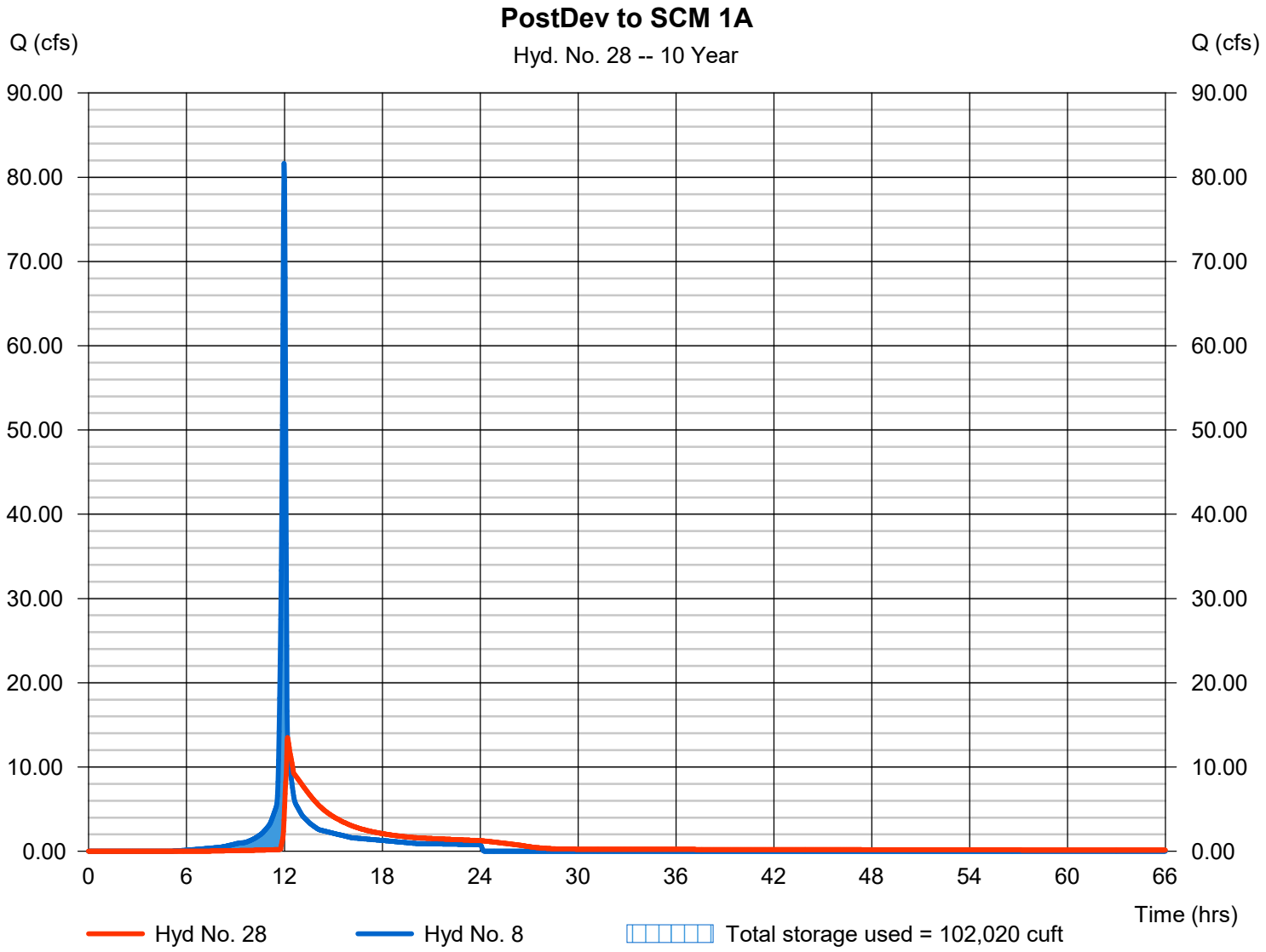
Hydrograph Report

Hyd. No. 28

PostDev to SCM 1A

Hydrograph type	=	Reservoir	Peak discharge	=	13.50 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	190,514 cuft
Inflow hyd. No.	=	8 - PostDev to SCM 1A	Max. Elevation	=	352.64 ft
Reservoir name	=	SCM 1A	Max. Storage	=	102,020 cuft

Storage Indication method used.



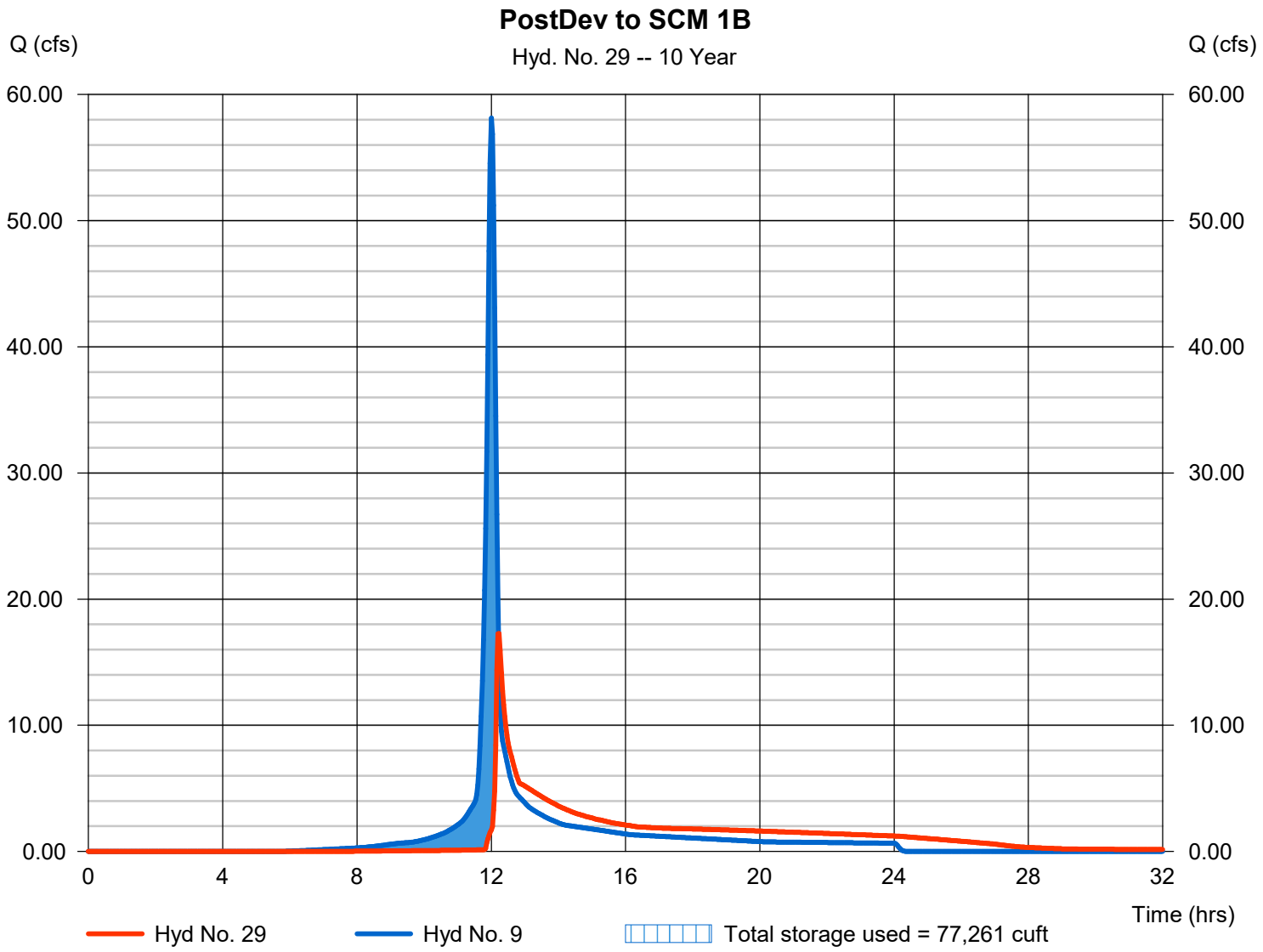
Hydrograph Report

Hyd. No. 29

PostDev to SCM 1B

Hydrograph type	=	Reservoir	Peak discharge	=	17.28 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	150,387 cuft
Inflow hyd. No.	=	9 - PostDev to SCM 1B	Max. Elevation	=	380.76 ft
Reservoir name	=	SCM 1B	Max. Storage	=	77,261 cuft

Storage Indication method used.



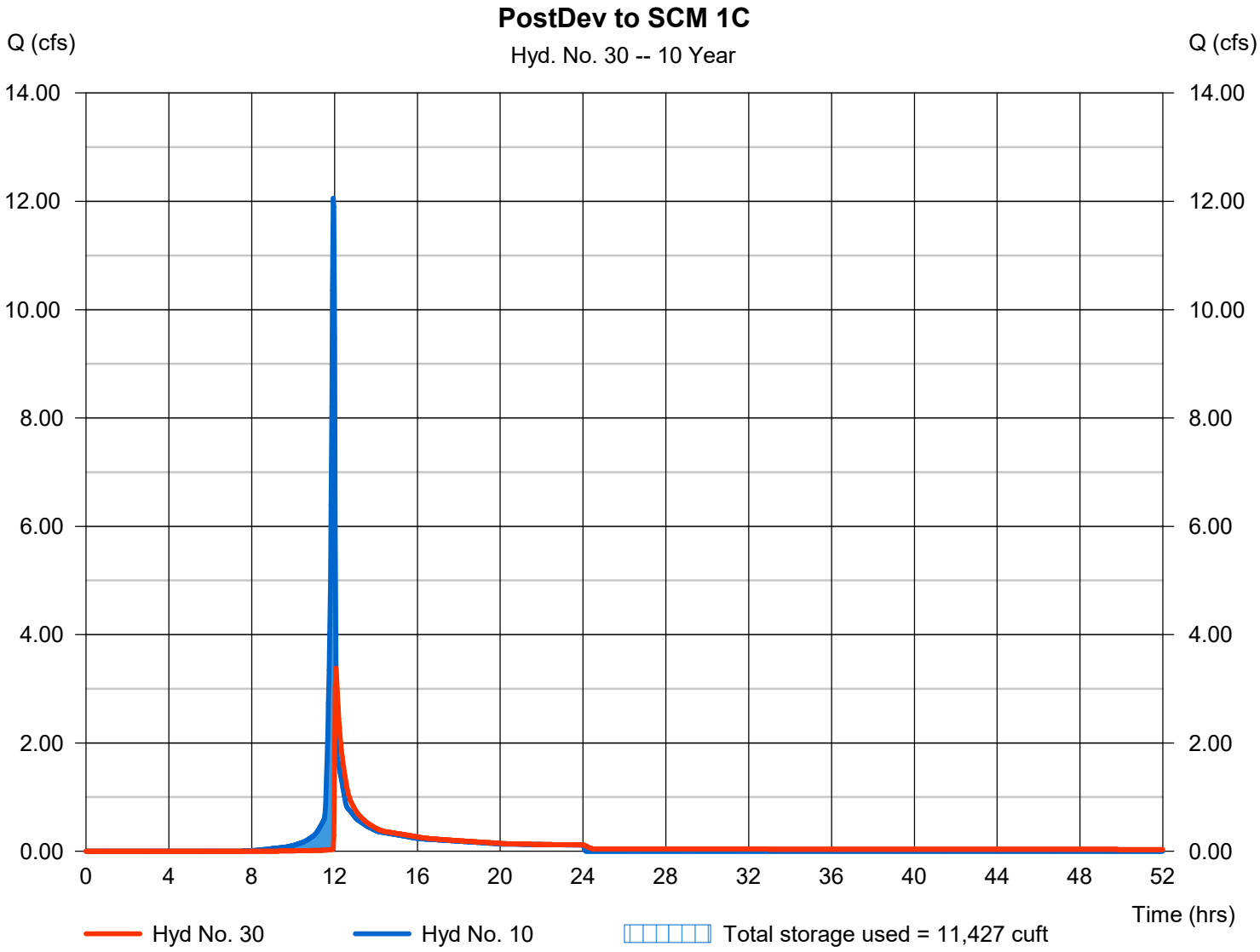
Hydrograph Report

Hyd. No. 30

PostDev to SCM 1C

Hydrograph type	= Reservoir	Peak discharge	= 3.380 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 23,081 cuft
Inflow hyd. No.	= 10 - PostDev to SCM 1C	Max. Elevation	= 363.48 ft
Reservoir name	= SCM 1C	Max. Storage	= 11,427 cuft

Storage Indication method used.



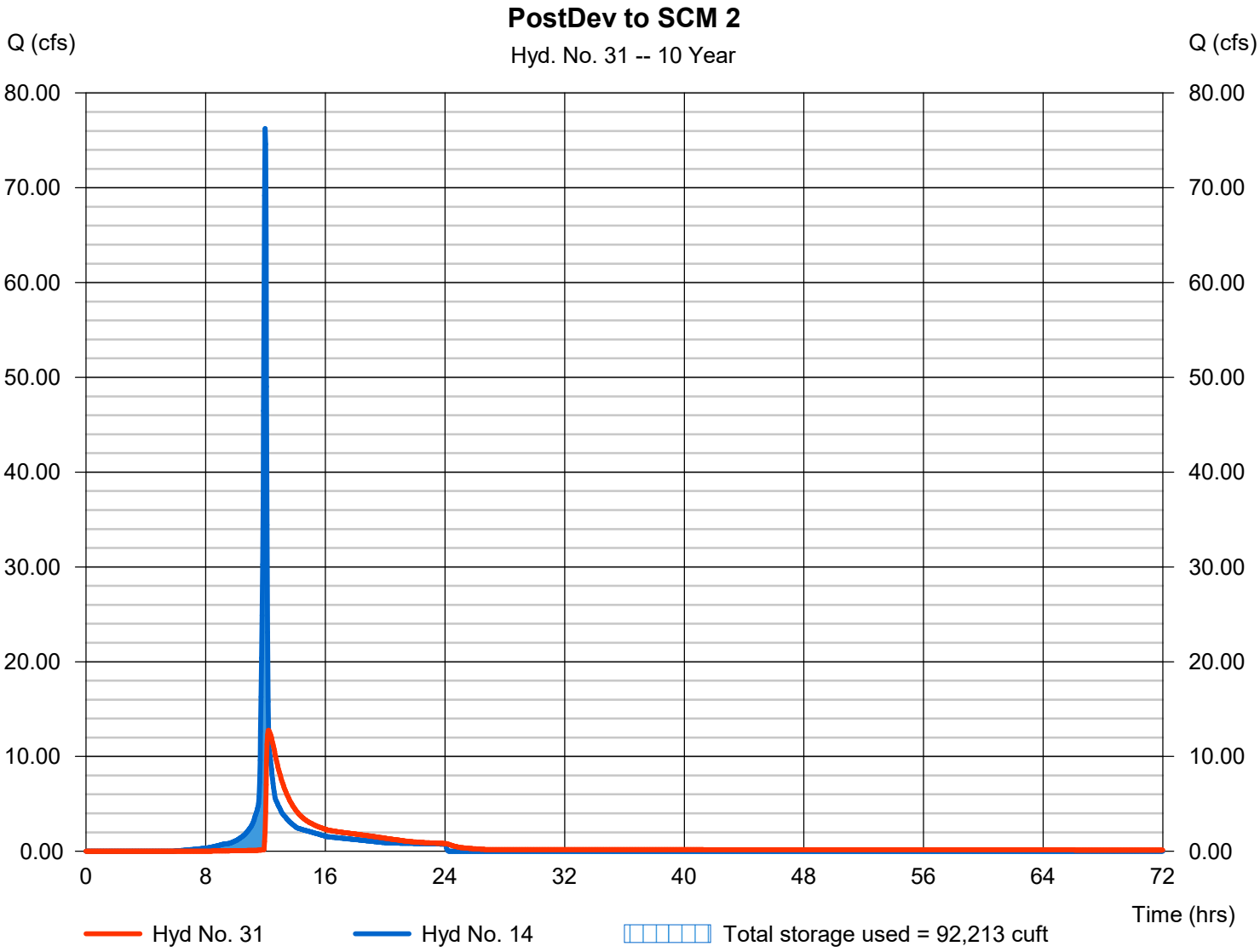
Hydrograph Report

Hyd. No. 31

PostDev to SCM 2

Hydrograph type	=	Reservoir	Peak discharge	=	12.78 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	162,198 cuft
Inflow hyd. No.	=	14 - PostDev to SCM 2	Max. Elevation	=	356.74 ft
Reservoir name	=	SCM 2	Max. Storage	=	92,213 cuft

Storage Indication method used.



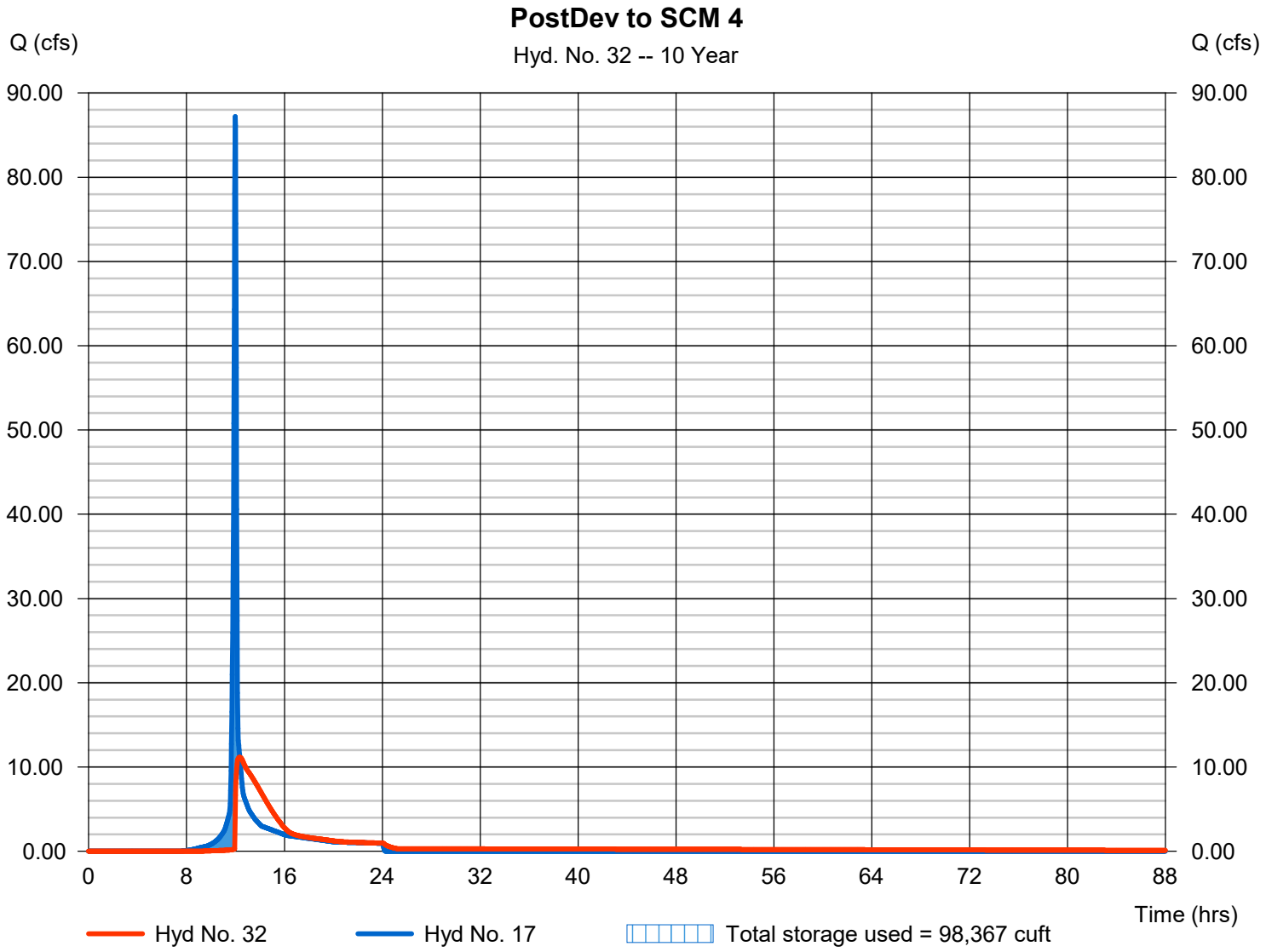
Hydrograph Report

Hyd. No. 32

PostDev to SCM 4

Hydrograph type	=	Reservoir	Peak discharge	=	11.16 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	195,667 cuft
Inflow hyd. No.	=	17 - PostDev to SCM 4	Max. Elevation	=	366.61 ft
Reservoir name	=	SCM 4	Max. Storage	=	98,367 cuft

Storage Indication method used.



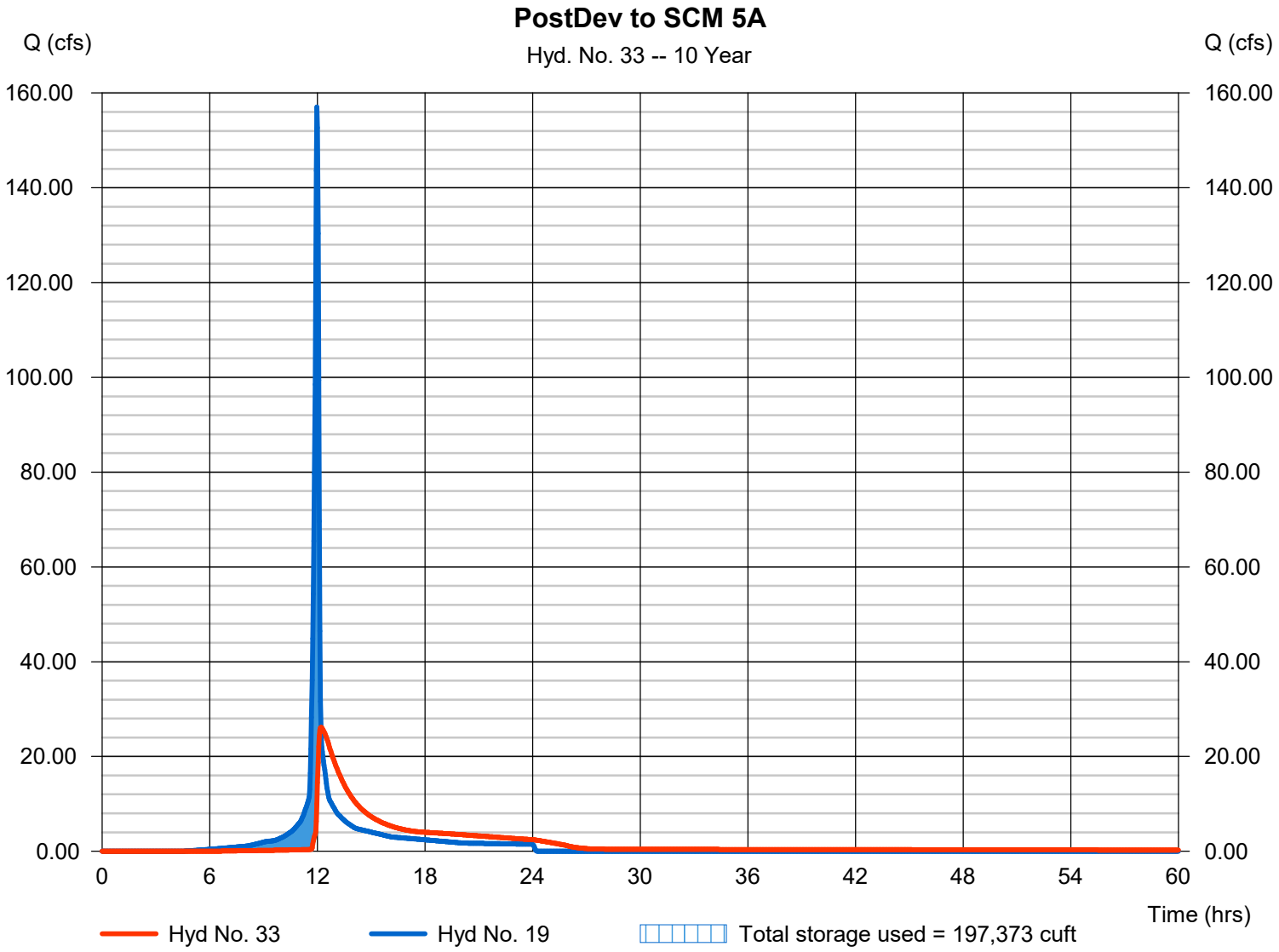
Hydrograph Report

Hyd. No. 33

PostDev to SCM 5A

Hydrograph type	= Reservoir	Peak discharge	= 26.15 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 371,223 cuft
Inflow hyd. No.	= 19 - PostDev to SCM 5A	Max. Elevation	= 319.29 ft
Reservoir name	= SCM 5A	Max. Storage	= 197,373 cuft

Storage Indication method used.



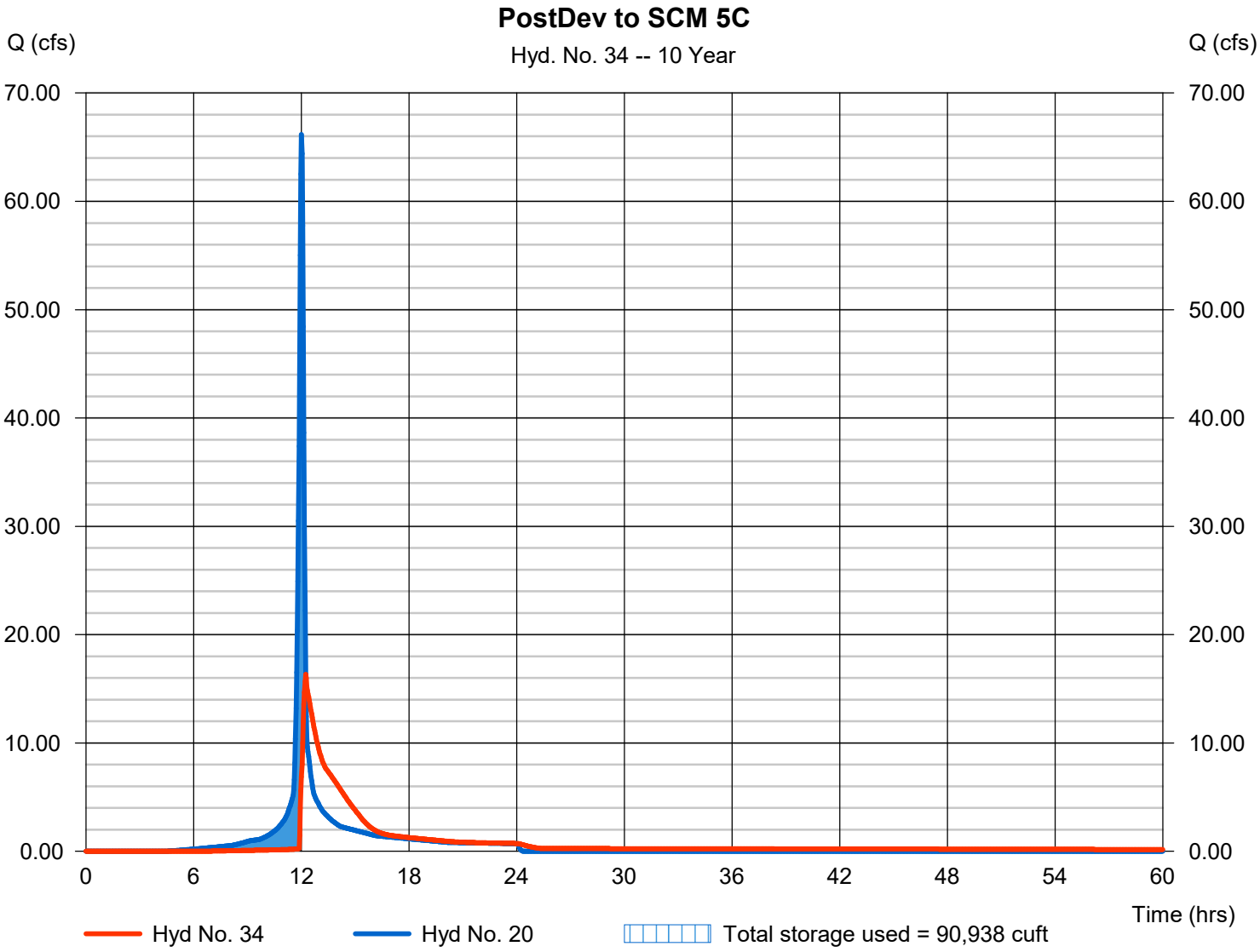
Hydrograph Report

Hyd. No. 34

PostDev to SCM 5C

Hydrograph type	=	Reservoir	Peak discharge	=	16.33 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	174,089 cuft
Inflow hyd. No.	=	20 - PostDev to SCM 5C	Max. Elevation	=	296.54 ft
Reservoir name	=	SCM 5C	Max. Storage	=	90,938 cuft

Storage Indication method used.



Hydrograph Report

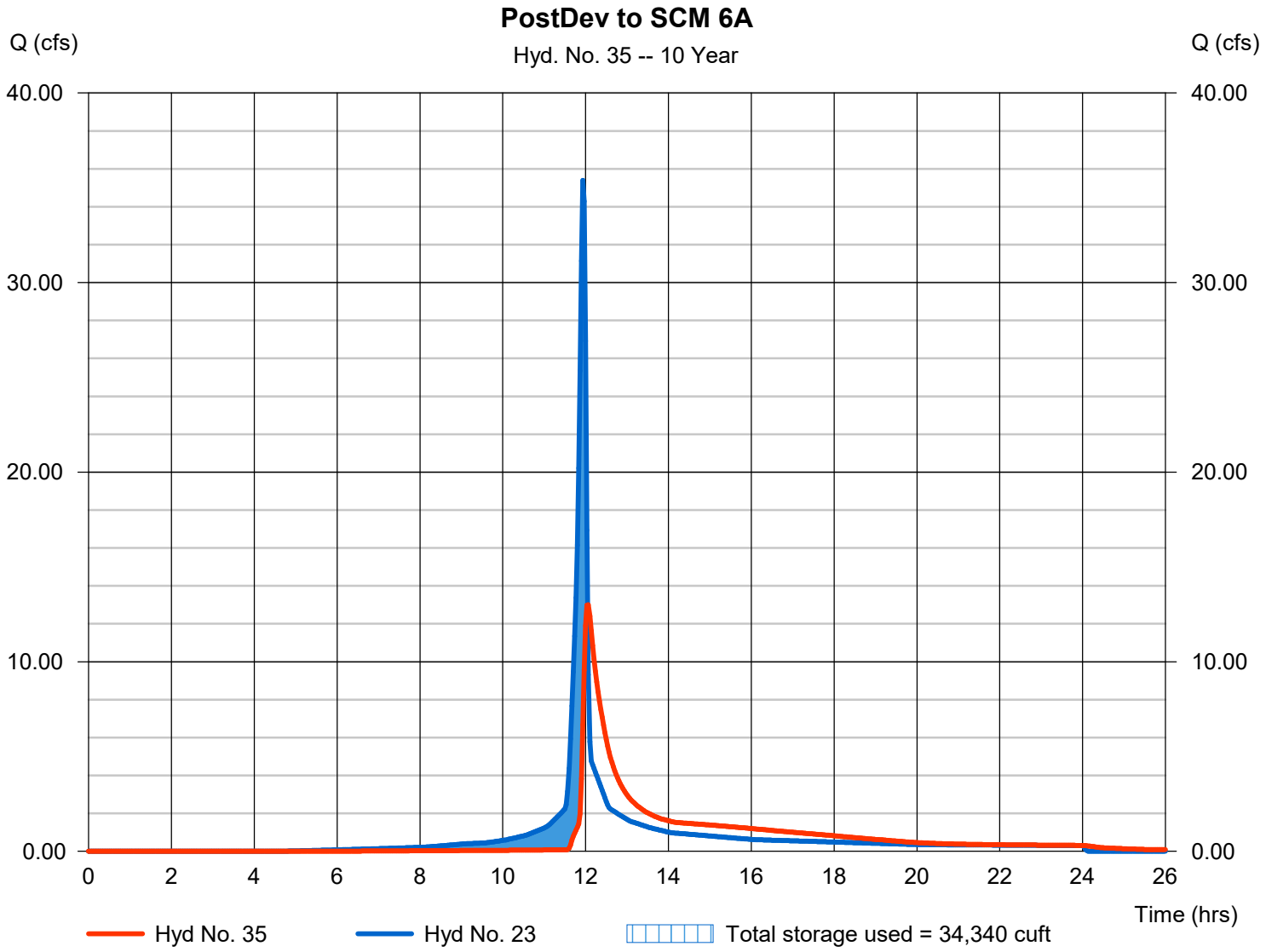
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 35

PostDev to SCM 6A

Hydrograph type	= Reservoir	Peak discharge	= 12.99 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 74,511 cuft
Inflow hyd. No.	= 23 - PostDev to SCM 6A	Max. Elevation	= 281.69 ft
Reservoir name	= SCM 6A	Max. Storage	= 34,340 cuft

Storage Indication method used.



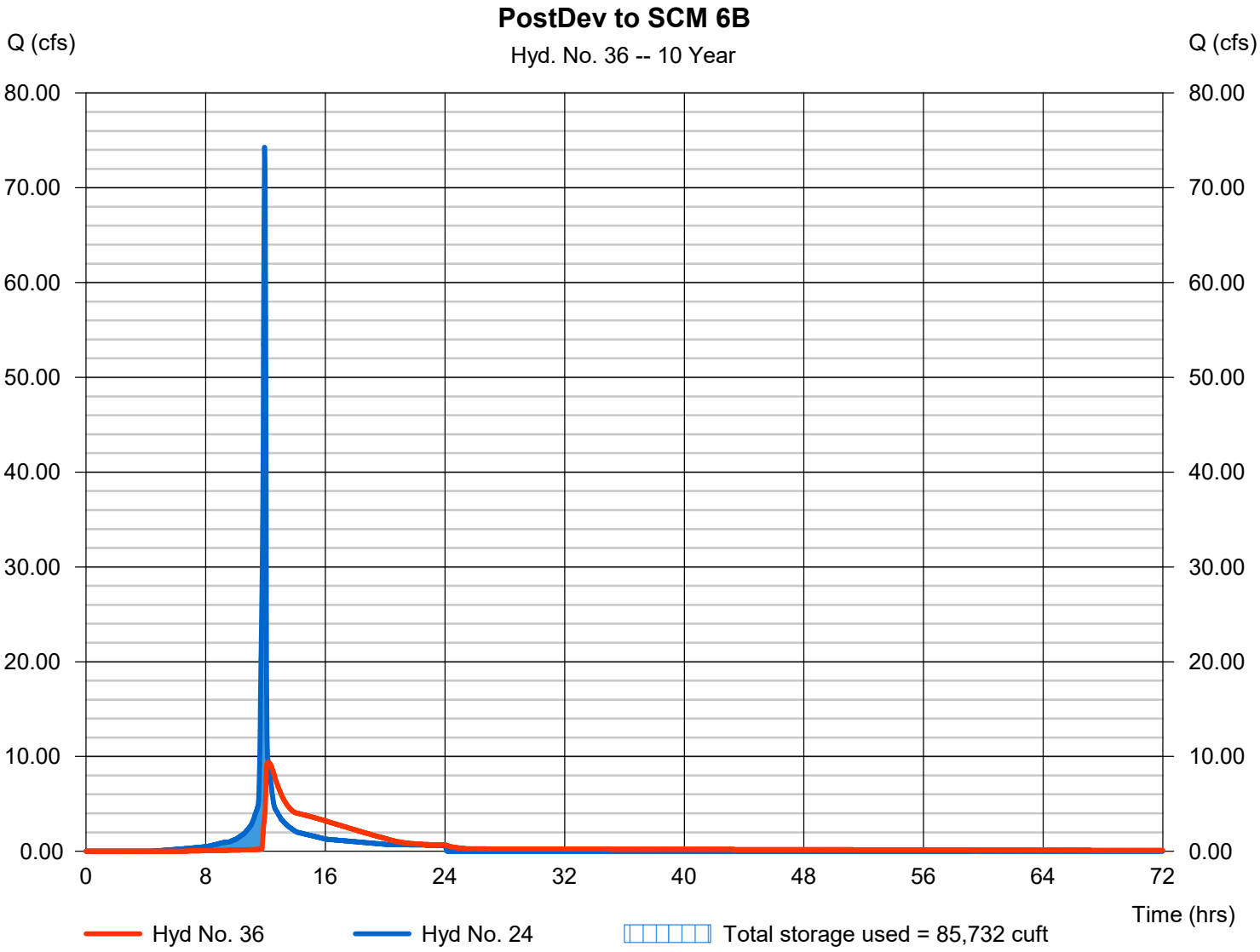
Hydrograph Report

Hyd. No. 36

PostDev to SCM 6B

Hydrograph type	=	Reservoir	Peak discharge	=	9.381 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	156,780 cuft
Inflow hyd. No.	=	24 - PostDev to SCM 6B	Max. Elevation	=	294.45 ft
Reservoir name	=	SCM 6B	Max. Storage	=	85,732 cuft

Storage Indication method used.



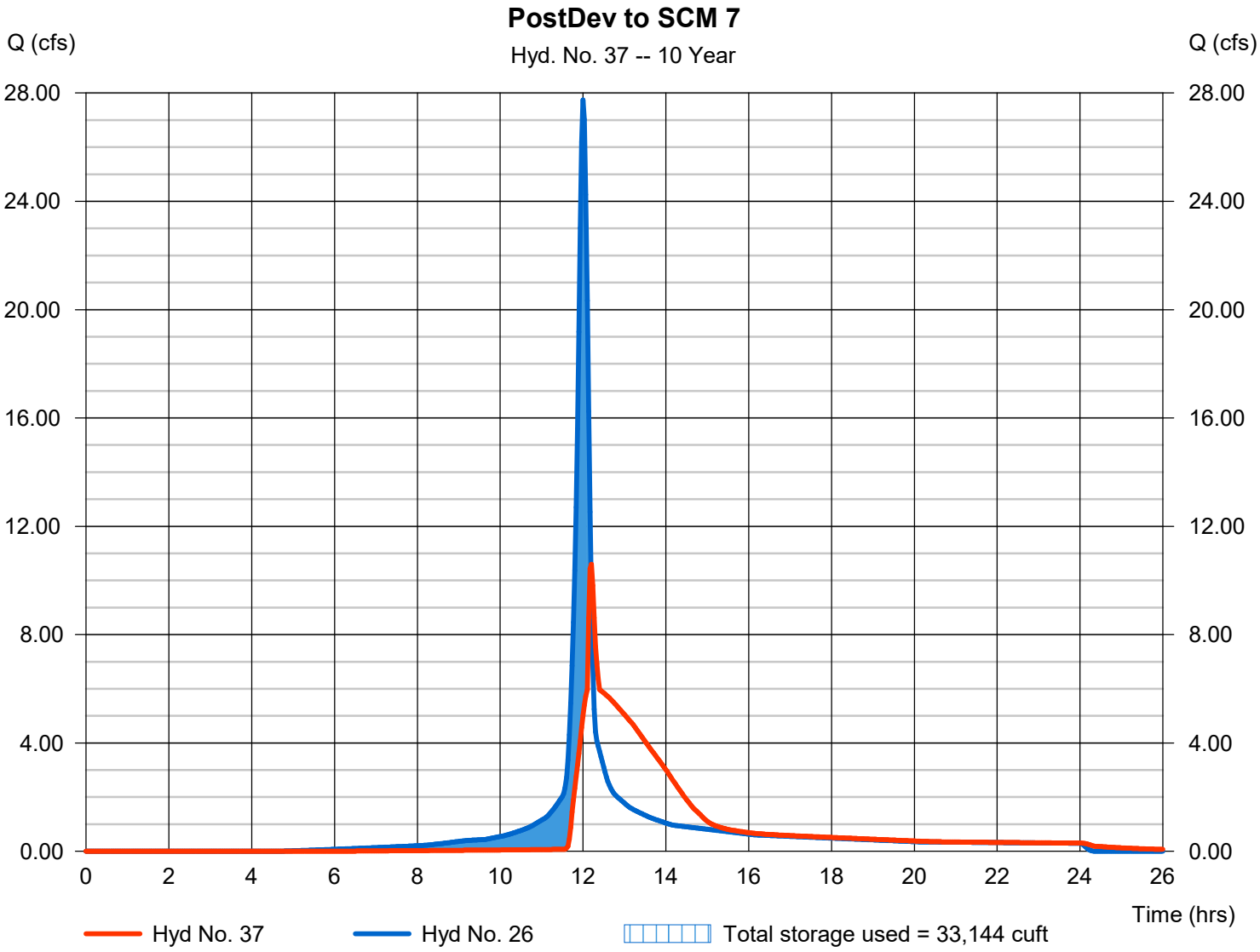
Hydrograph Report

Hyd. No. 37

PostDev to SCM 7

Hydrograph type	=	Reservoir	Peak discharge	=	10.59 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	73,785 cuft
Inflow hyd. No.	=	26 - PostDev to SCM 7	Max. Elevation	=	327.19 ft
Reservoir name	=	SCM 7	Max. Storage	=	33,144 cuft

Storage Indication method used.

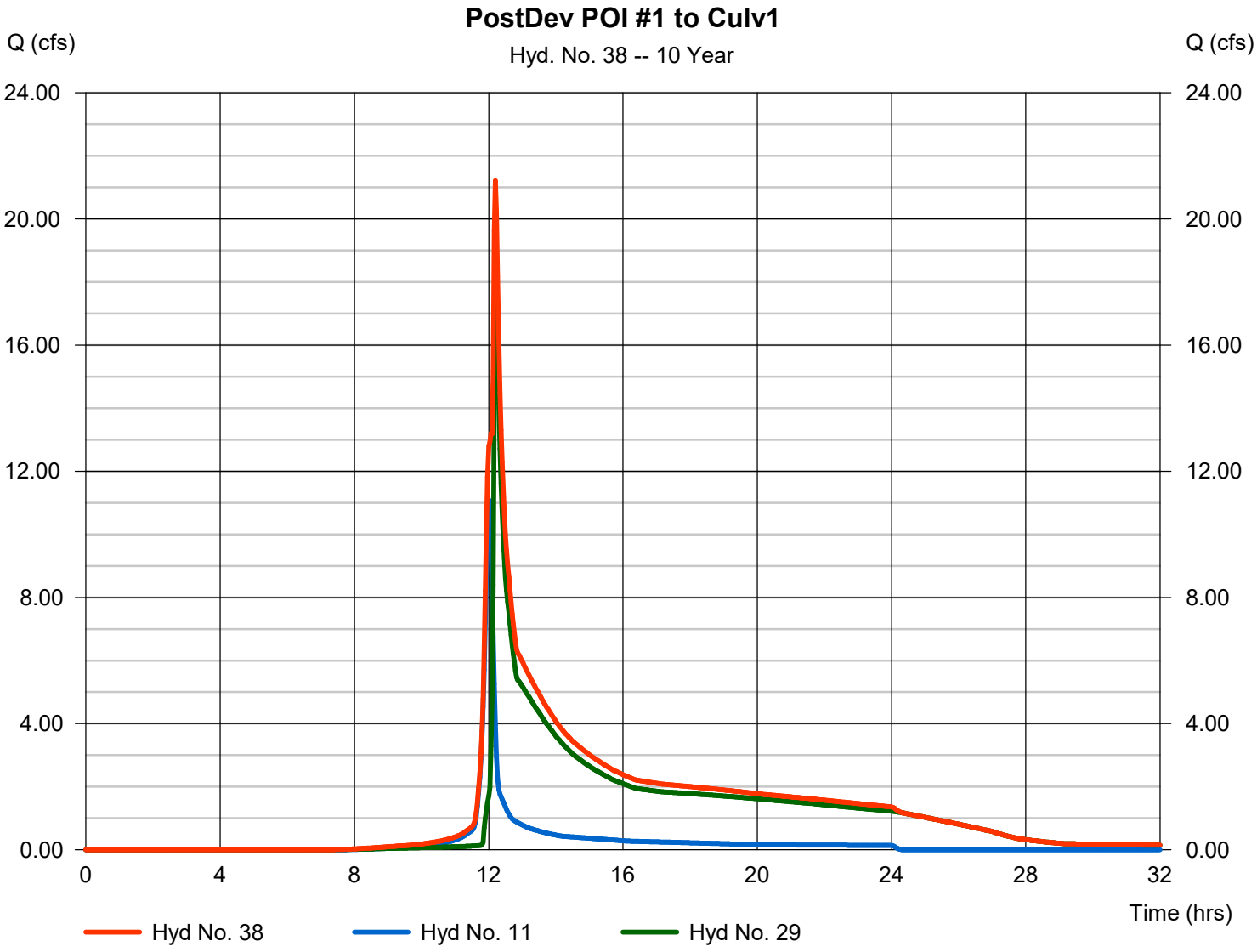


Hydrograph Report

Hyd. No. 38

PostDev POI #1 to Culv1

Hydrograph type	=	Combine	Peak discharge	=	21.21 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	179,162 cuft
Inflow hyds.	=	11, 29	Contrib. drain. area	=	2.720 ac

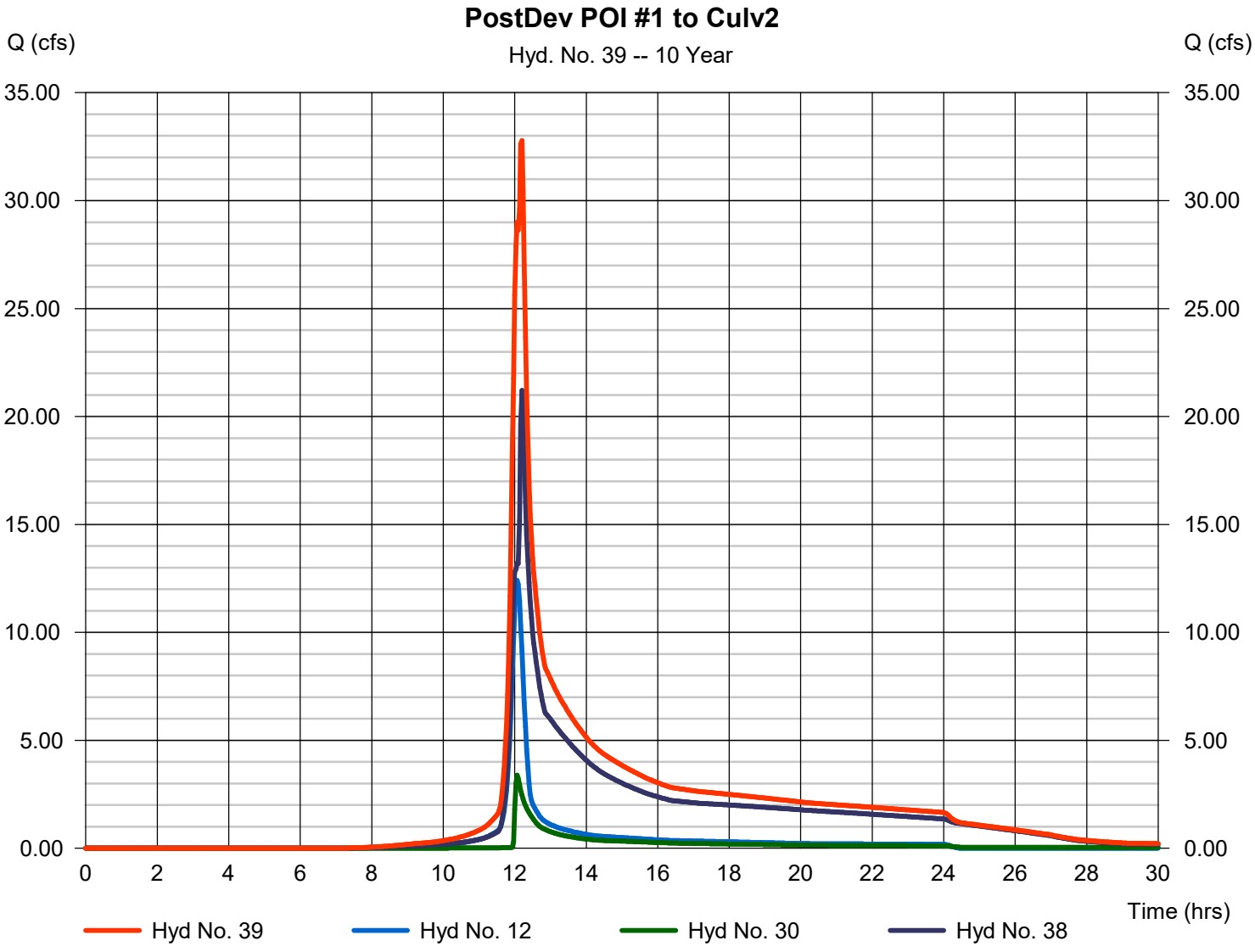


Hydrograph Report

Hyd. No. 39

PostDev POI #1 to Culv2

Hydrograph type	=	Combine	Peak discharge	=	32.77 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	241,037 cuft
Inflow hyds.	=	12, 30, 38	Contrib. drain. area	=	3.640 ac

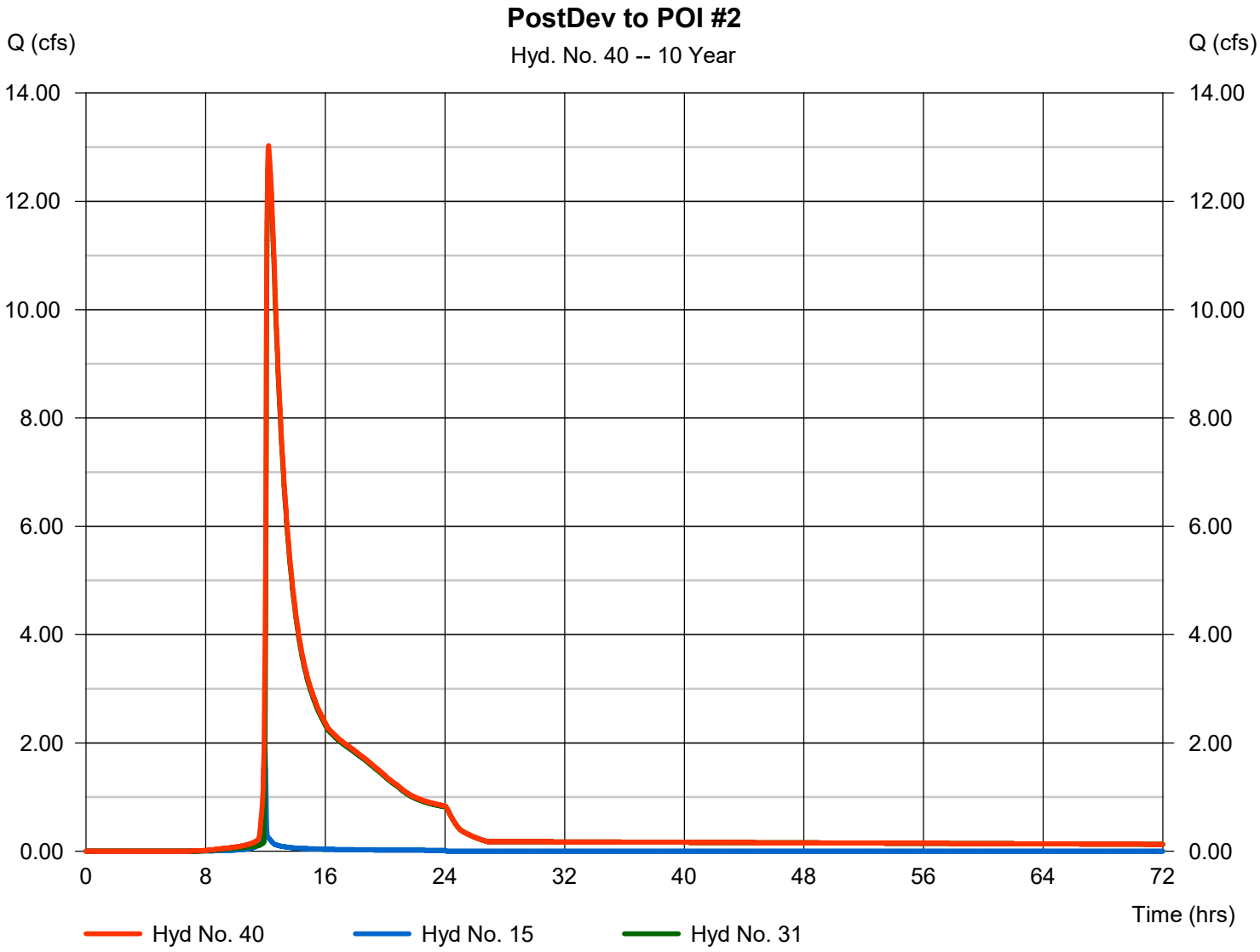


Hydrograph Report

Hyd. No. 40

PostDev to POI #2

Hydrograph type	=	Combine	Peak discharge	=	13.03 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	166,143 cuft
Inflow hyds.	=	15, 31	Contrib. drain. area	=	0.370 ac

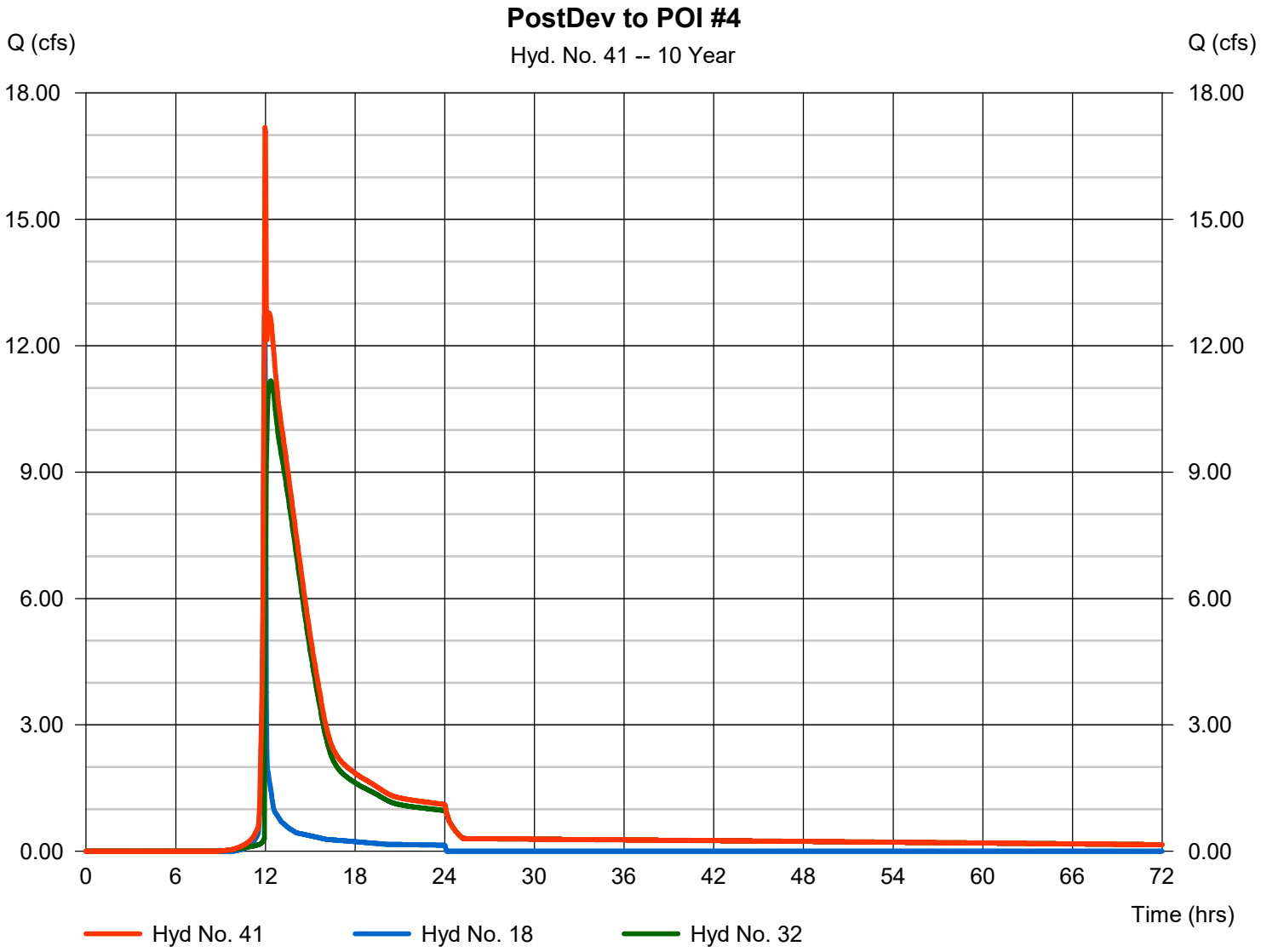


Hydrograph Report

Hyd. No. 41

PostDev to POI #4

Hydrograph type	=	Combine	Peak discharge	=	17.18 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	221,356 cuft
Inflow hyds.	=	18, 32	Contrib. drain. area	=	3.670 ac

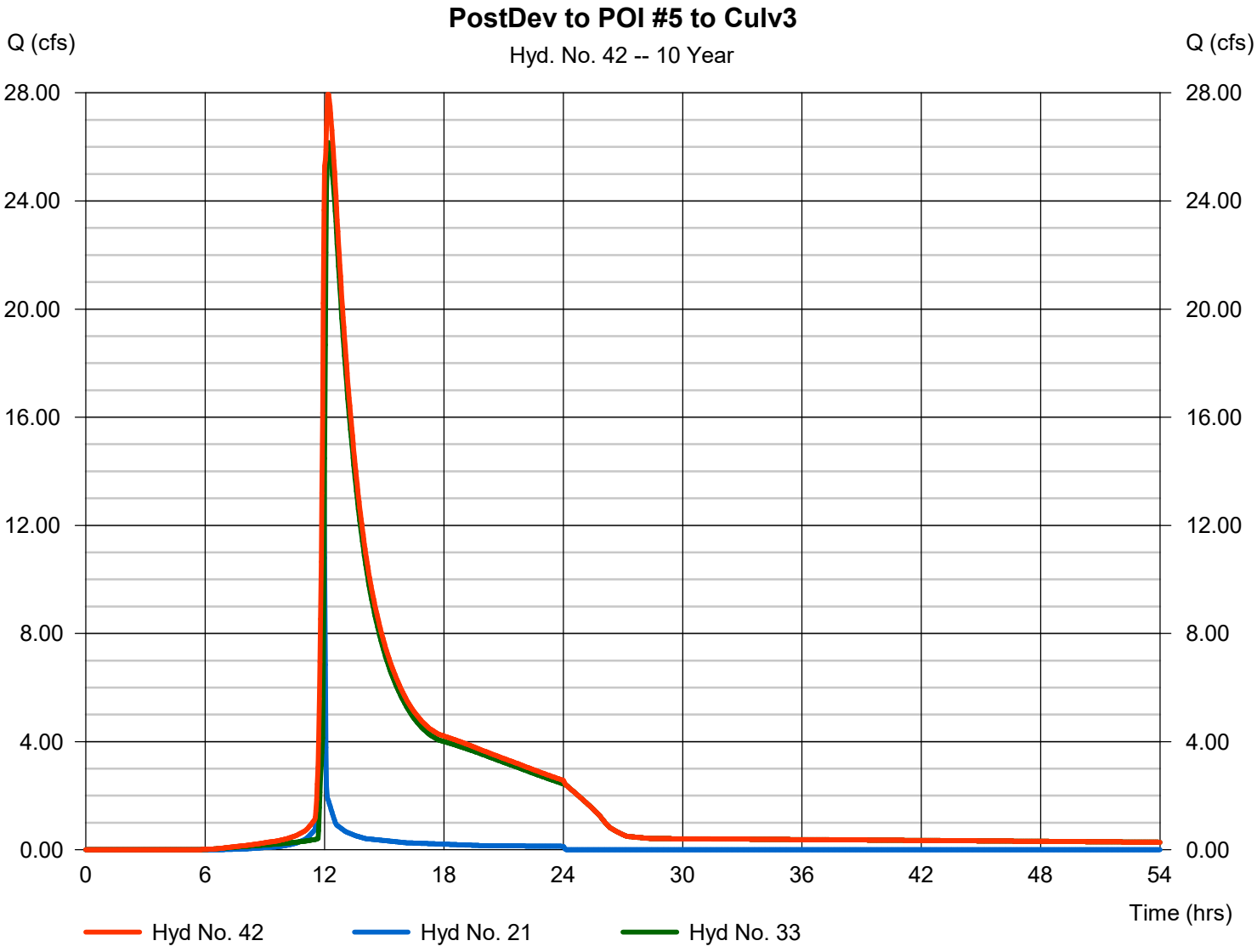


Hydrograph Report

Hyd. No. 42

PostDev to POI #5 to Culv3

Hydrograph type	= Combine	Peak discharge	= 27.94 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 399,591 cuft
Inflow hyds.	= 21, 33	Contrib. drain. area	= 2.710 ac

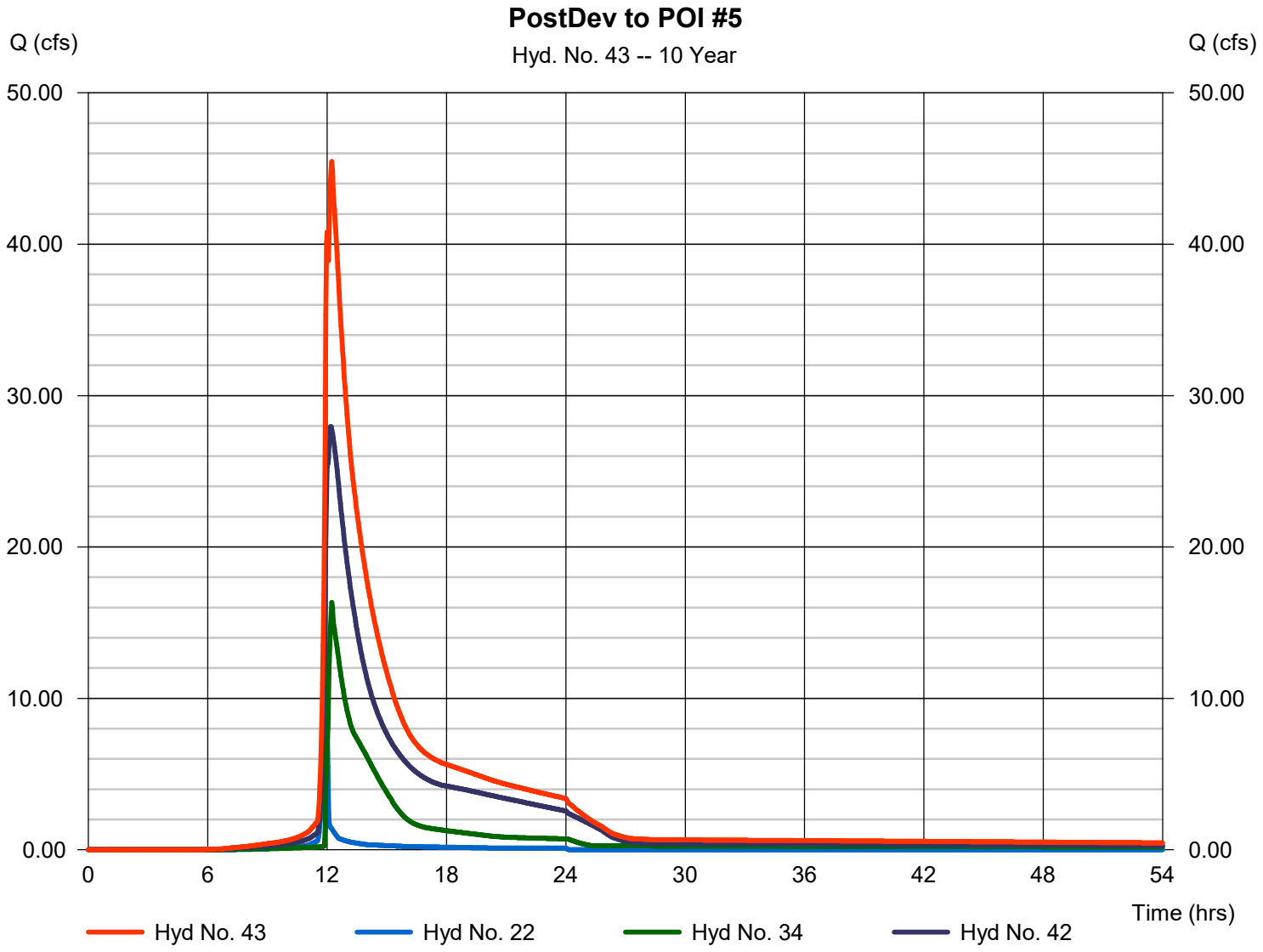


Hydrograph Report

Hyd. No. 43

PostDev to POI #5

Hydrograph type	= Combine	Peak discharge	= 45.46 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 596,324 cuft
Inflow hyds.	= 22, 34, 42	Contrib. drain. area	= 2.190 ac

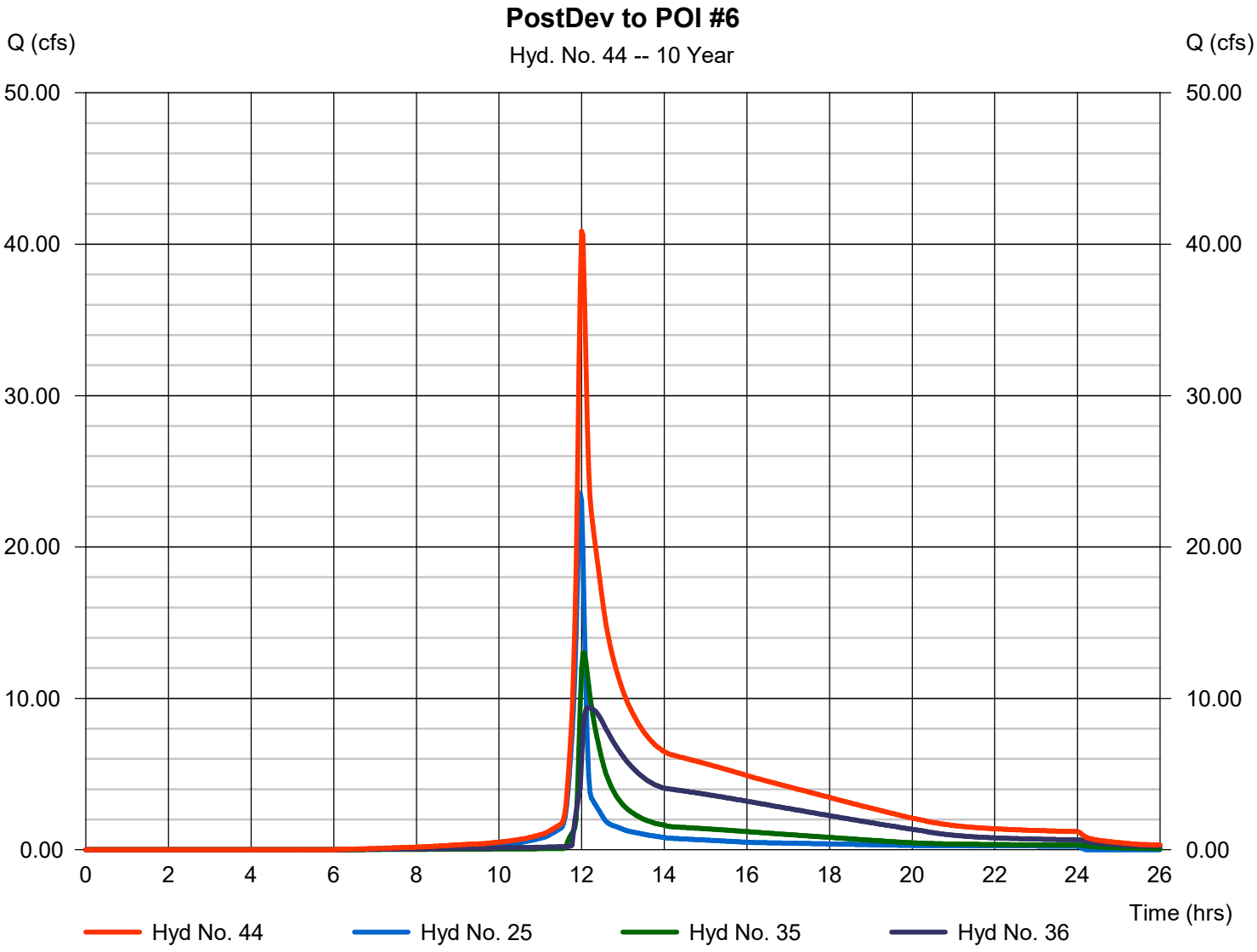


Hydrograph Report

Hyd. No. 44

PostDev to POI #6

Hydrograph type	= Combine	Peak discharge	= 40.87 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 285,888 cuft
Inflow hyds.	= 25, 35, 36	Contrib. drain. area	= 4.590 ac

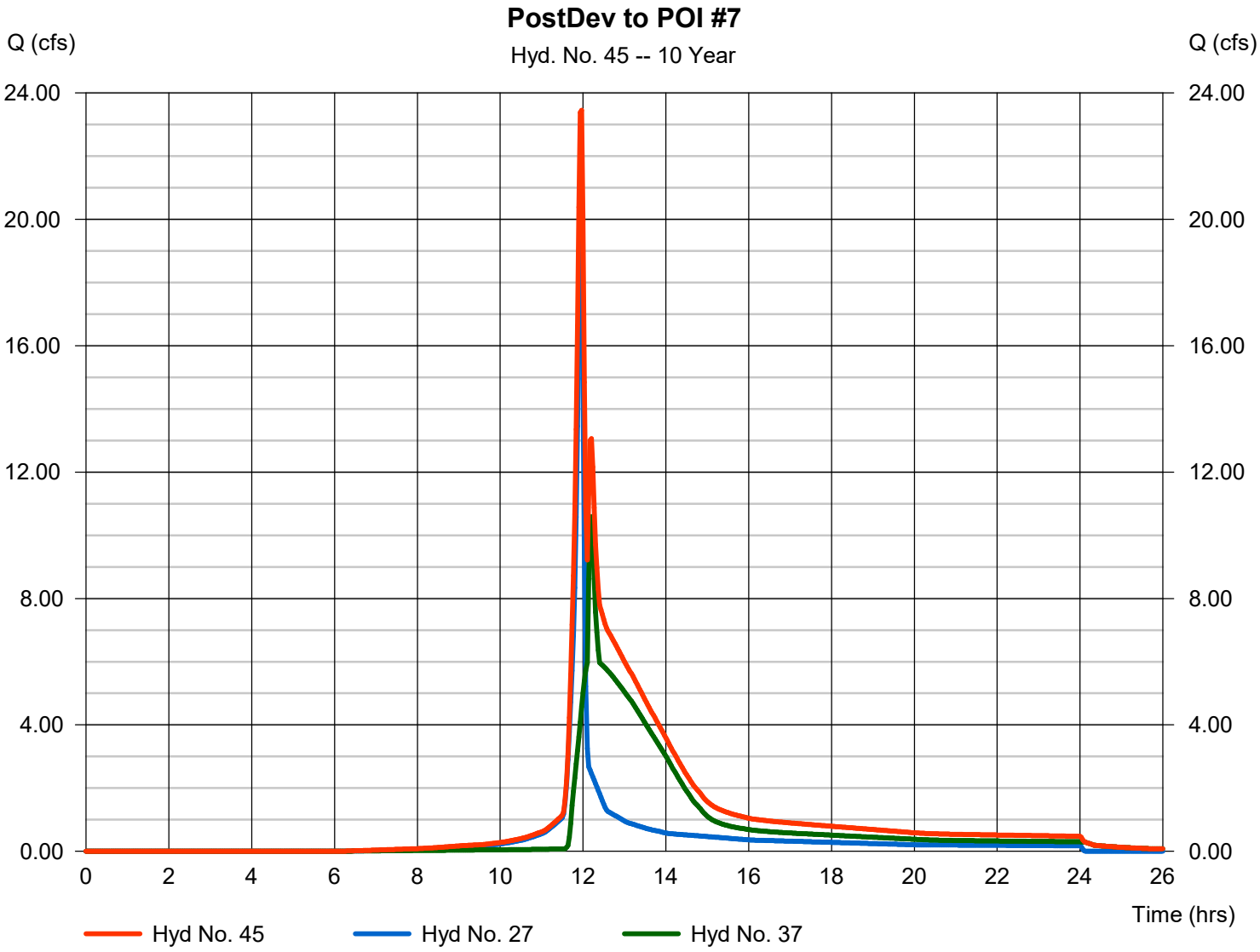


Hydrograph Report

Hyd. No. 45

PostDev to POI #7

Hydrograph type	=	Combine	Peak discharge	=	23.45 cfs
Storm frequency	=	10 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	113,419 cuft
Inflow hyds.	=	27, 37	Contrib. drain. area	=	3.640 ac

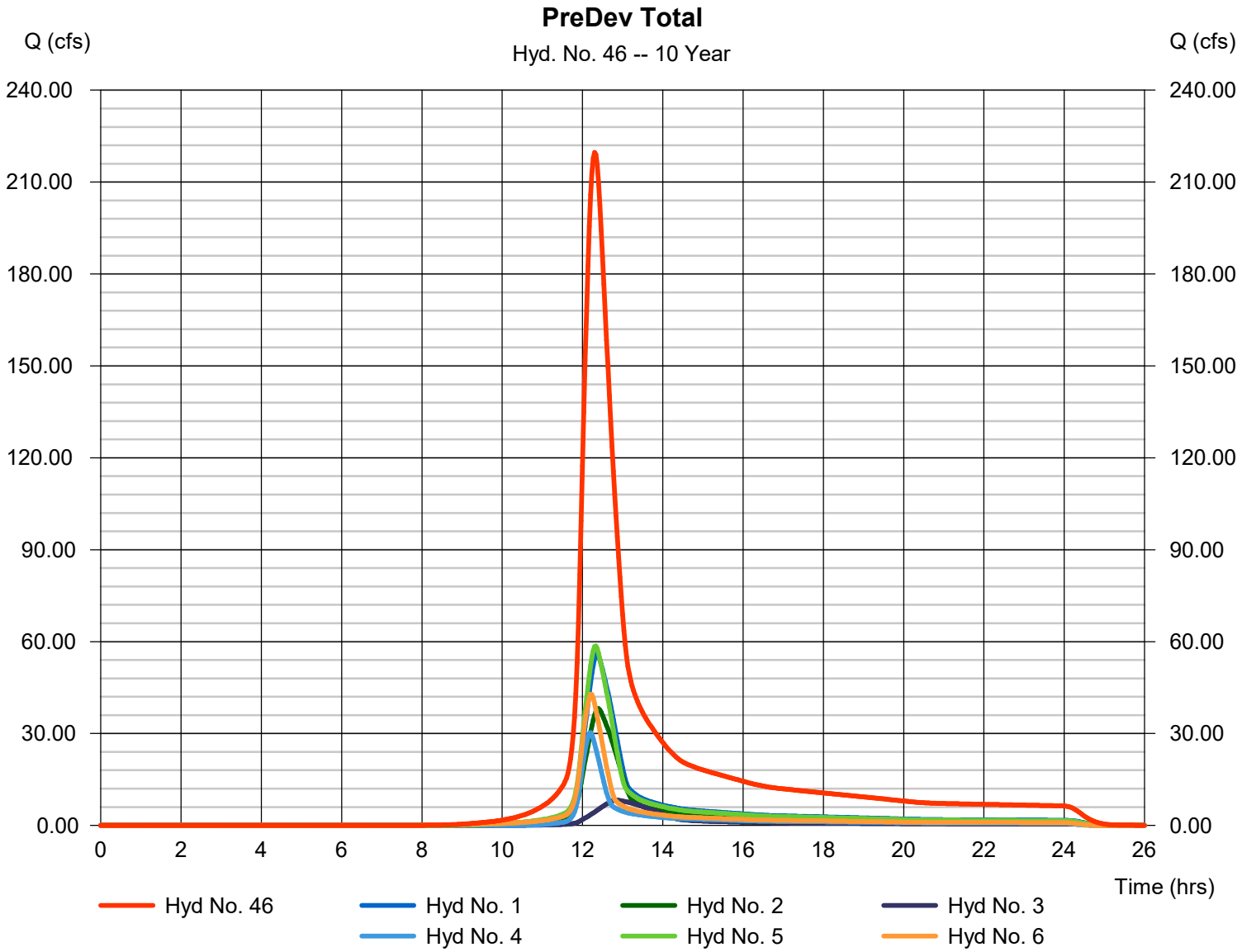


Hydrograph Report

Hyd. No. 46

PreDev Total

Hydrograph type	= Combine	Peak discharge	= 219.71 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 1,215,150 cuft
Inflow hyds.	= 1, 2, 3, 4, 5, 6	Contrib. drain. area	= 139.020 ac

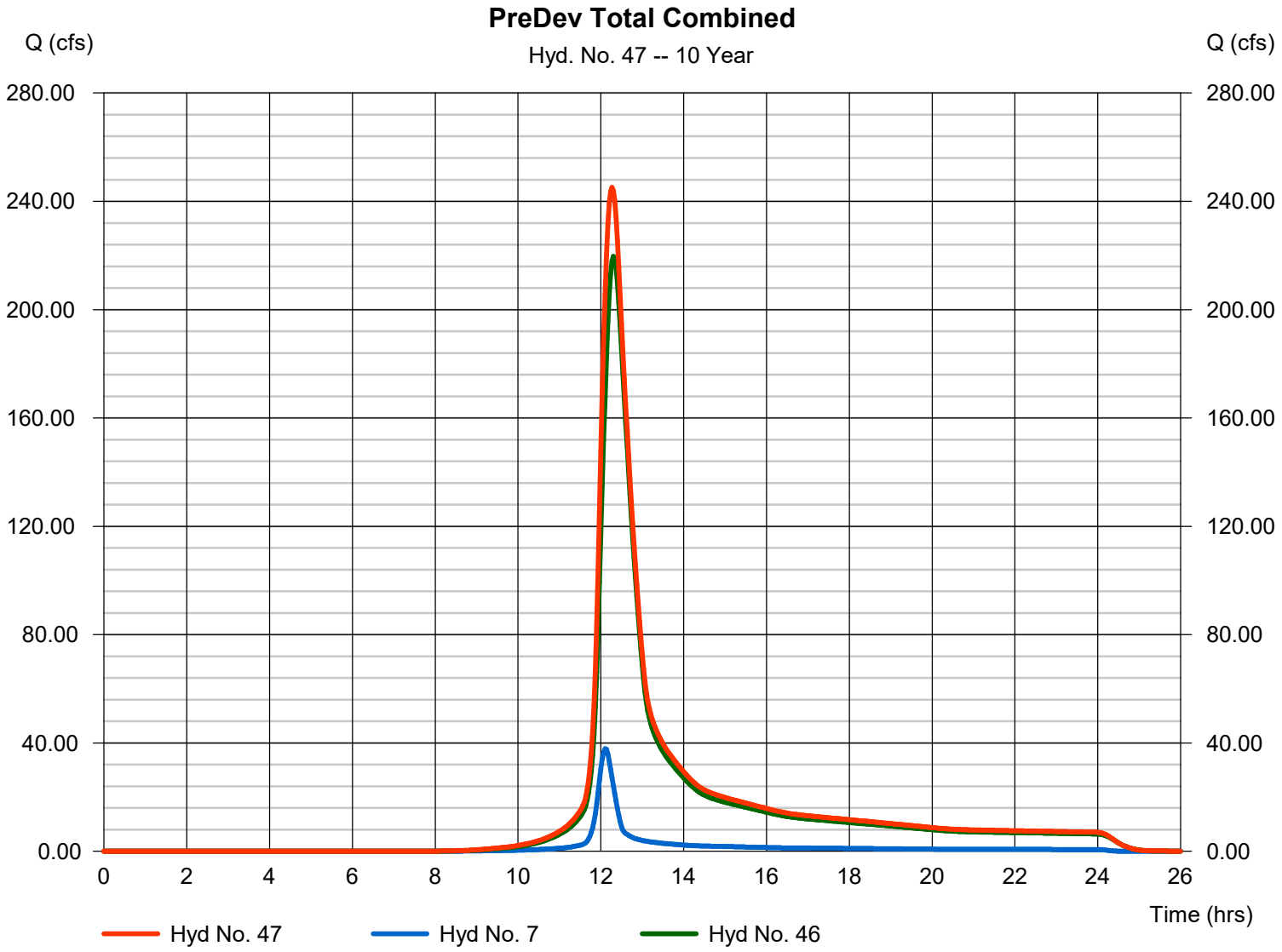


Hydrograph Report

Hyd. No. 47

PreDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	245.16 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.27 hrs
Time interval	=	2 min	Hyd. volume	=	1,346,024 cuft
Inflow hyds.	=	7, 46	Contrib. drain. area	=	13.250 ac



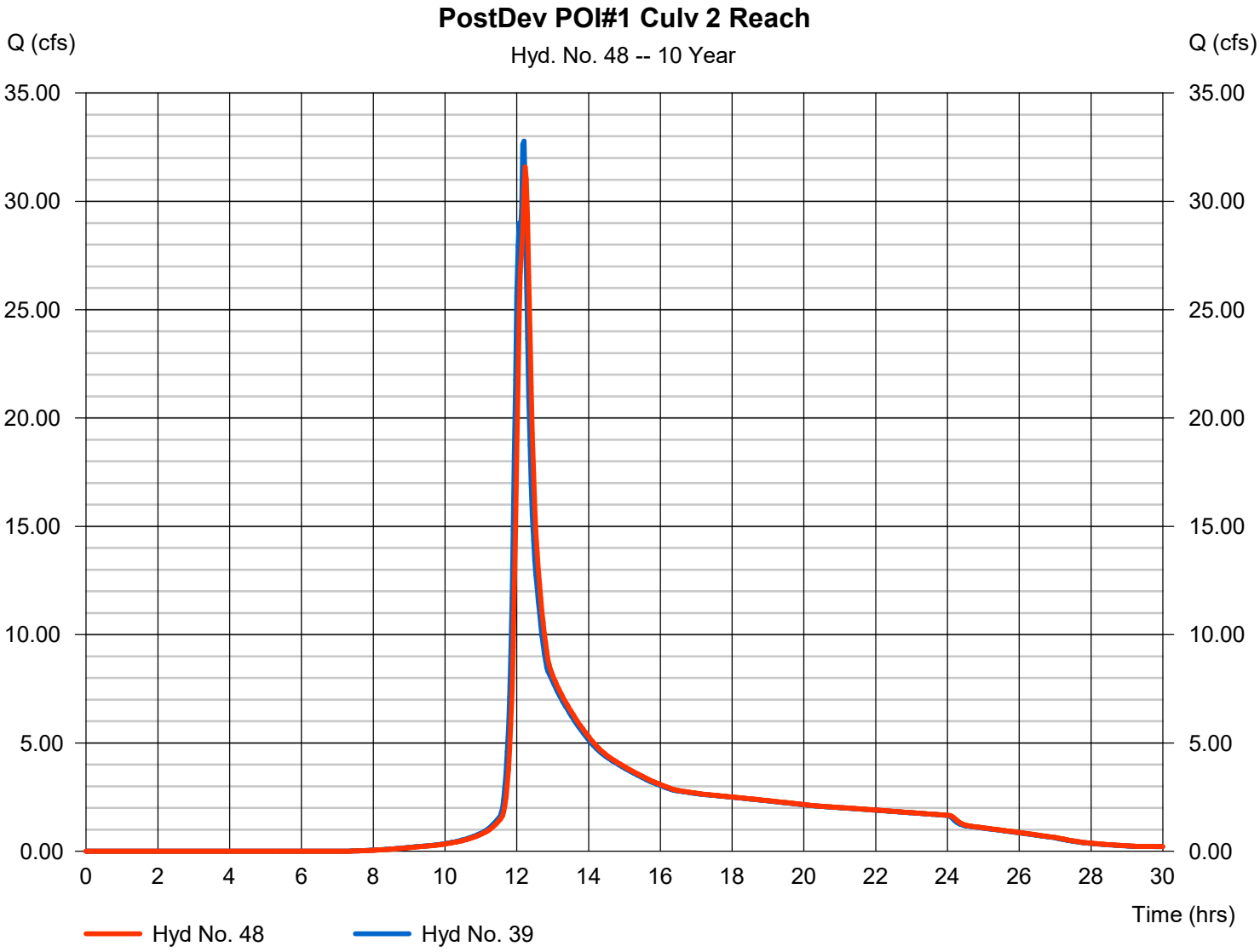
Hydrograph Report

Hyd. No. 48

PostDev POI#1 Culv 2 Reach

Hydrograph type	=	Reach	Peak discharge	=	31.58 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.23 hrs
Time interval	=	2 min	Hyd. volume	=	241,024 cuft
Inflow hyd. No.	=	39 - PostDev POI #1 to Culv2	Section type	=	Trapezoidal
Reach length	=	992.0 ft	Channel slope	=	1.2 %
Manning's n	=	0.040	Bottom width	=	5.0 ft
Side slope	=	1.0:1	Max. depth	=	3.5 ft
Rating curve x	=	1.418	Rating curve m	=	1.427
Ave. velocity	=	3.63 ft/s	Routing coeff.	=	0.4768

Modified Att-Kin routing method used.

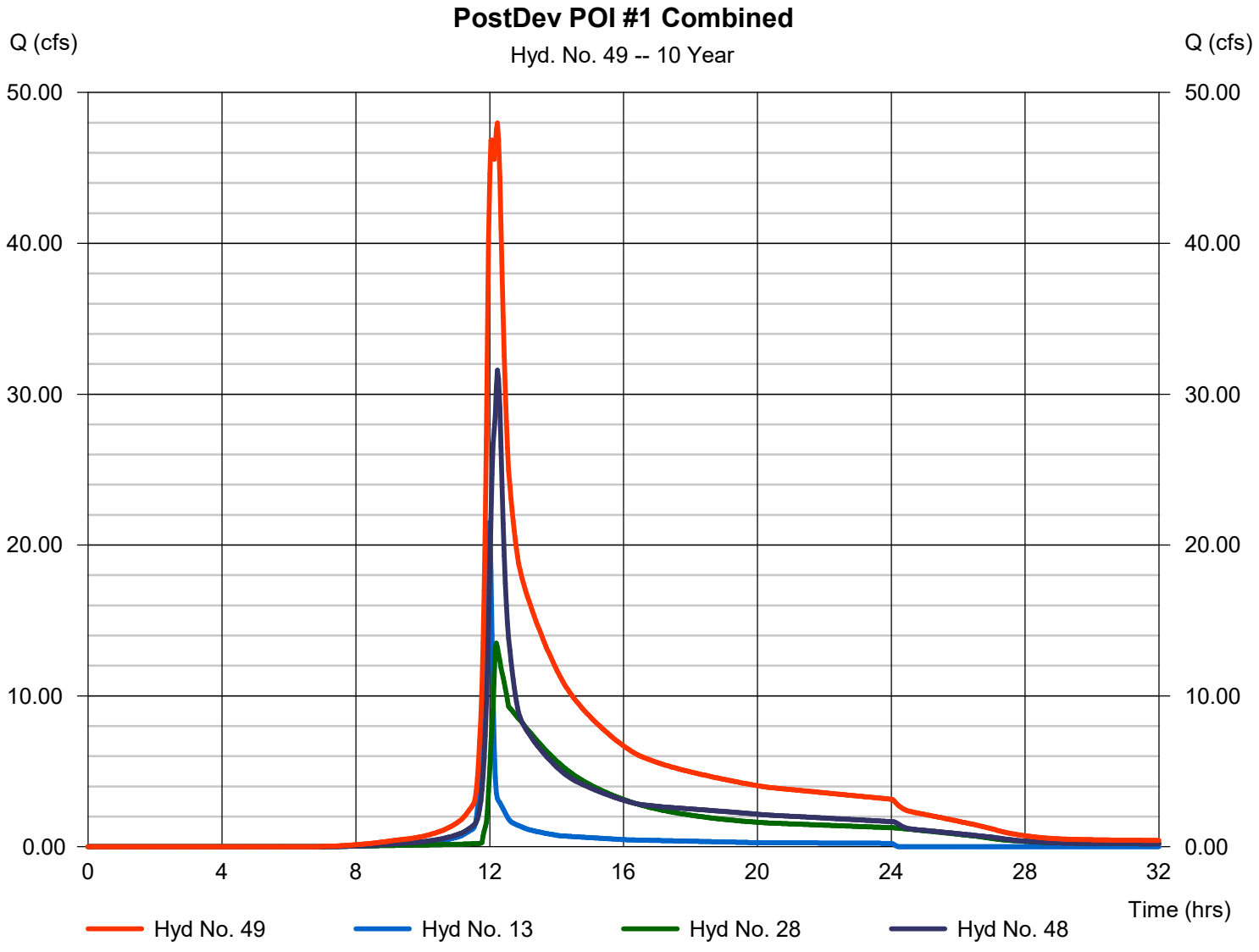


Hydrograph Report

Hyd. No. 49

PostDev POI #1 Combined

Hydrograph type	= Combine	Peak discharge	= 47.98 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 480,930 cuft
Inflow hyds.	= 13, 28, 48	Contrib. drain. area	= 4.520 ac

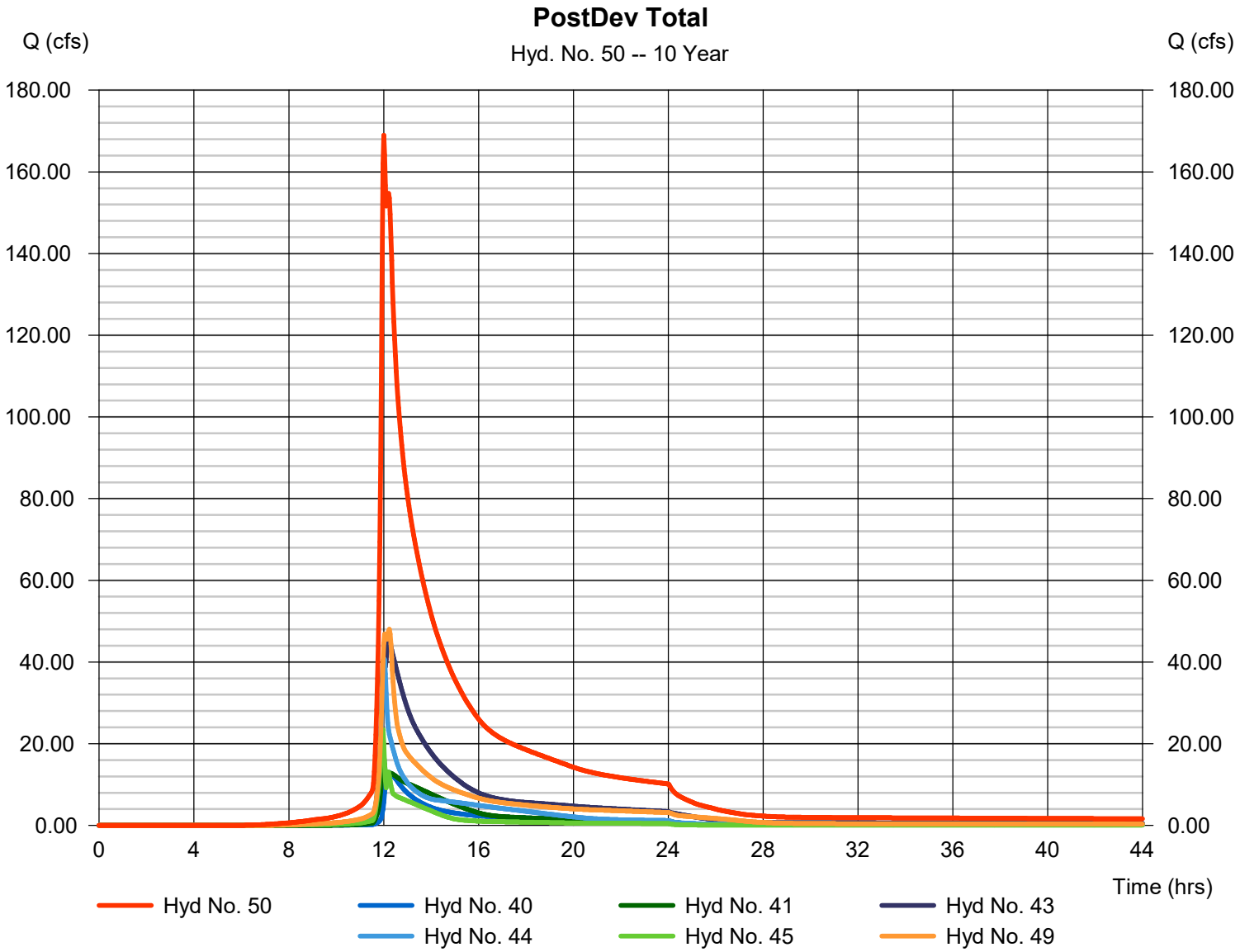


Hydrograph Report

Hyd. No. 50

PostDev Total

Hydrograph type	= Combine	Peak discharge	= 168.97 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 1,864,061 cuft
Inflow hyds.	= 40, 41, 43, 44, 45, 49	Contrib. drain. area	= 0.000 ac

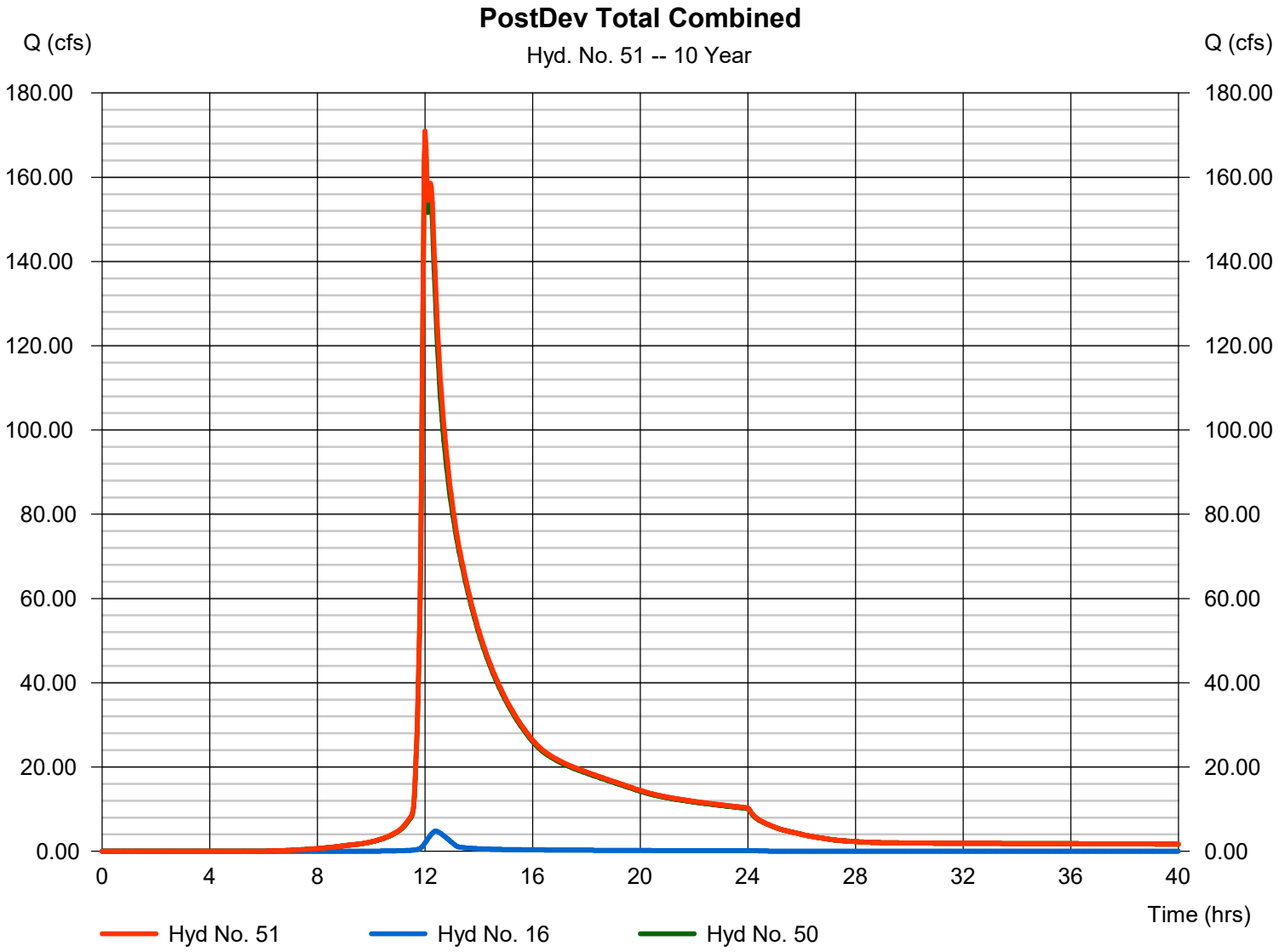


Hydrograph Report

Hyd. No. 51

PostDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	170.96 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	1,891,632 cuft
Inflow hyds.	=	16, 50	Contrib. drain. area	=	3.240 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	76.33	2	742	412,121	------	------	------	PreDev POI #1
2	SCS Runoff	50.89	2	744	288,761	------	------	------	PreDev POI #2
3	SCS Runoff	11.27	2	770	102,442	------	------	------	PreDev to POI #3
4	SCS Runoff	42.39	2	732	172,464	------	------	------	PreDev to POI #4
5	SCS Runoff	77.58	2	740	400,571	------	------	------	PreDev to POI #5
6	SCS Runoff	55.62	2	732	240,302	------	------	------	PreDev to POI #6
7	SCS Runoff	49.71	2	726	171,606	------	------	------	PreDev to POI #7
8	SCS Runoff	101.43	2	718	241,319	------	------	------	PostDev to SCM 1A
9	SCS Runoff	73.05	2	720	193,435	------	------	------	PostDev to SCM 1B
10	SCS Runoff	15.53	2	716	31,786	------	------	------	PostDev to SCM 1C
11	SCS Runoff	14.38	2	720	37,430	------	------	------	PostDev to POI #1 Bypass 1
12	SCS Runoff	16.00	2	724	50,185	------	------	------	PostDev to POI #1 Bypass 2
13	SCS Runoff	27.47	2	718	63,664	------	------	------	PostDev to POI #1 Bypass 3
14	SCS Runoff	95.75	2	718	225,116	------	------	------	PostDev to SCM 2
15	SCS Runoff	2.443	2	716	5,055	------	------	------	PostDev to POI #2 Bypass
16	SCS Runoff	6.474	2	744	36,845	------	------	------	PostDev to POI #3
17	SCS Runoff	112.72	2	718	259,855	------	------	------	PostDev to SCM 4
18	SCS Runoff	17.35	2	718	34,983	------	------	------	PostDev to POI #4 Bypass
19	SCS Runoff	193.59	2	718	465,658	------	------	------	PostDev to SCM 5A
20	SCS Runoff	81.58	2	720	220,739	------	------	------	PostDev to SCM 5C
21	SCS Runoff	17.66	2	716	36,451	------	------	------	PostDev to POI #5 Bypass 1
22	SCS Runoff	14.14	2	716	29,149	------	------	------	PostDev to POI #5 Bypass 2
23	SCS Runoff	43.71	2	716	93,369	------	------	------	PostDev to SCM 6A
24	SCS Runoff	91.27	2	716	196,604	------	------	------	PostDev to SCM 6B
25	SCS Runoff	29.67	2	718	69,509	------	------	------	PostDev to POI #6 Bypass
26	SCS Runoff	34.30	2	720	92,439	------	------	------	PostDev to SCM 7
27	SCS Runoff	24.39	2	716	50,637	------	------	------	PostDev to POI #7 Bypass
28	Reservoir	51.24	2	726	239,810	8	353.25	114,054	PostDev to SCM 1A
29	Reservoir	34.05	2	730	191,189	9	381.23	87,217	PostDev to SCM 1B
30	Reservoir	11.30	2	720	30,391	10	363.74	12,716	PostDev to SCM 1C
31	Reservoir	33.23	2	728	209,790	14	357.63	110,301	PostDev to SCM 2
32	Reservoir	21.26	2	730	255,627	17	368.06	125,569	PostDev to SCM 4
33	Reservoir	54.83	2	728	463,766	19	320.49	235,378	PostDev to SCM 5A
34	Reservoir	33.93	2	730	217,825	20	297.18	104,051	PostDev to SCM 5C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

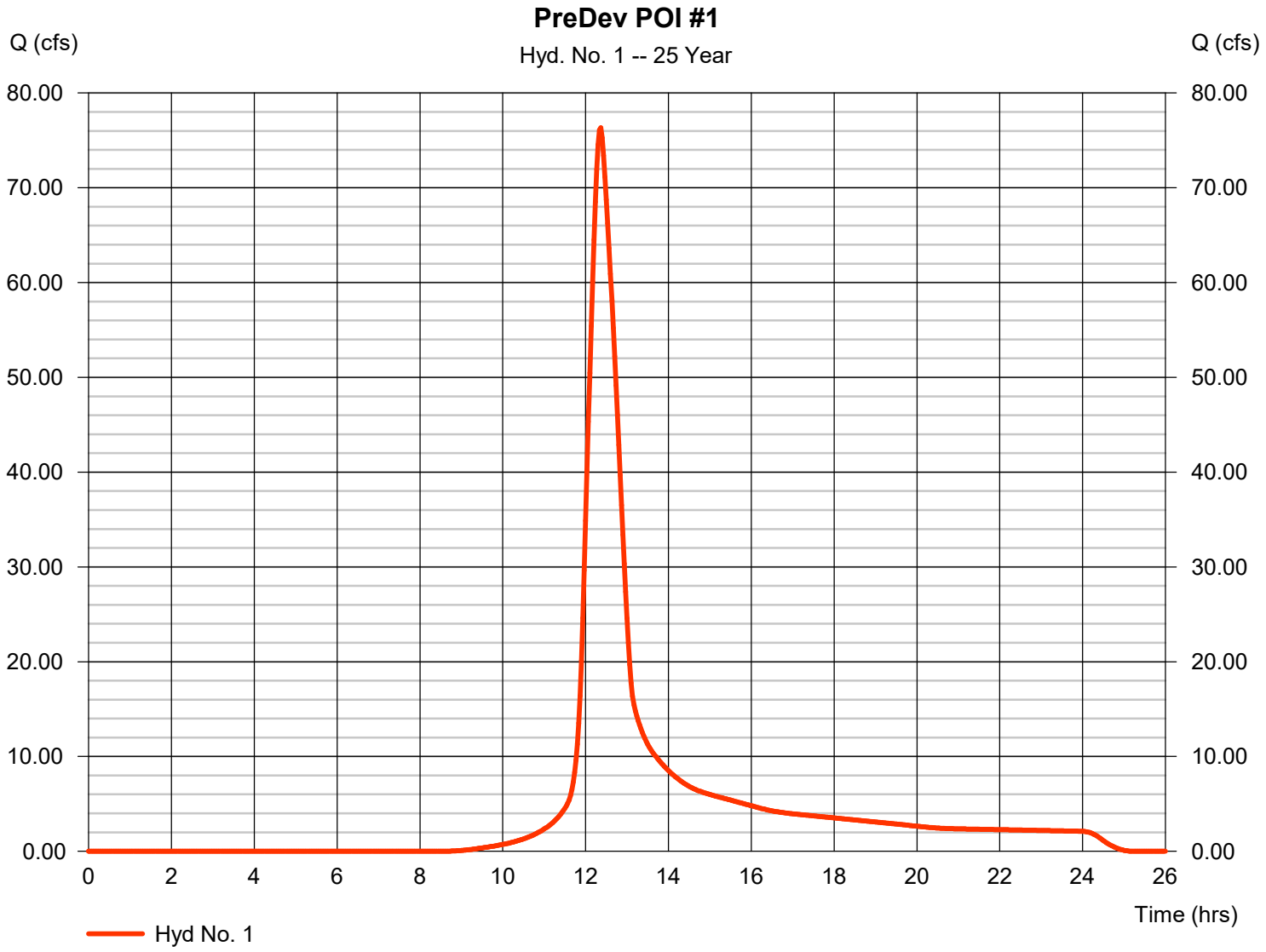
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	19.56	2	722	93,264	23	282.31	40,508	PostDev to SCM 6A
36	Reservoir	43.91	2	722	195,550	24	295.14	96,947	PostDev to SCM 6B
37	Reservoir	21.78	2	728	92,290	26	327.46	35,907	PostDev to SCM 7
38	Combine	44.23	2	726	228,619	11, 29,	------	------	PostDev POI #1 to Culv1
39	Combine	67.86	2	724	309,196	12, 30, 38	------	------	PostDev POI #1 to Culv2
40	Combine	33.57	2	728	214,845	15, 31,	------	------	PostDev to POI #2
41	Combine	26.15	2	718	290,611	18, 32,	------	------	PostDev to POI #4
42	Combine	57.48	2	726	500,218	21, 33,	------	------	PostDev to POI #5 to Culv3
43	Combine	92.89	2	728	747,192	22, 34, 42	------	------	PostDev to POI #5
44	Combine	88.28	2	722	358,323	25, 35, 36,	------	------	PostDev to POI #6
45	Combine	29.25	2	716	142,927	27, 37,	------	------	PostDev to POI #7
46	Combine	294.99	2	738	1,616,660	1, 2, 3,	------	------	PreDev Total
47	Combine	328.59	2	736	1,788,268	4, 5, 6, 7, 46	------	------	PreDev Total Combined
48	Reach	62.42	2	728	309,183	39	------	------	PostDev POI#1 Culv 2 Reach
49	Combine	122.57	2	726	612,658	13, 28, 48	------	------	PostDev POI #1 Combined
50	Combine	360.50	2	726	2,366,553	40, 41, 43,	------	------	PostDev Total
51	Combine	364.55	2	726	2,403,397	44, 45, 49 16, 50	------	------	PostDev Total Combined

Hydrograph Report

Hyd. No. 1

PreDev POI #1

Hydrograph type	=	SCS Runoff	Peak discharge	=	76.33 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	412,121 cuft
Drainage area	=	37.960 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	46.50 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

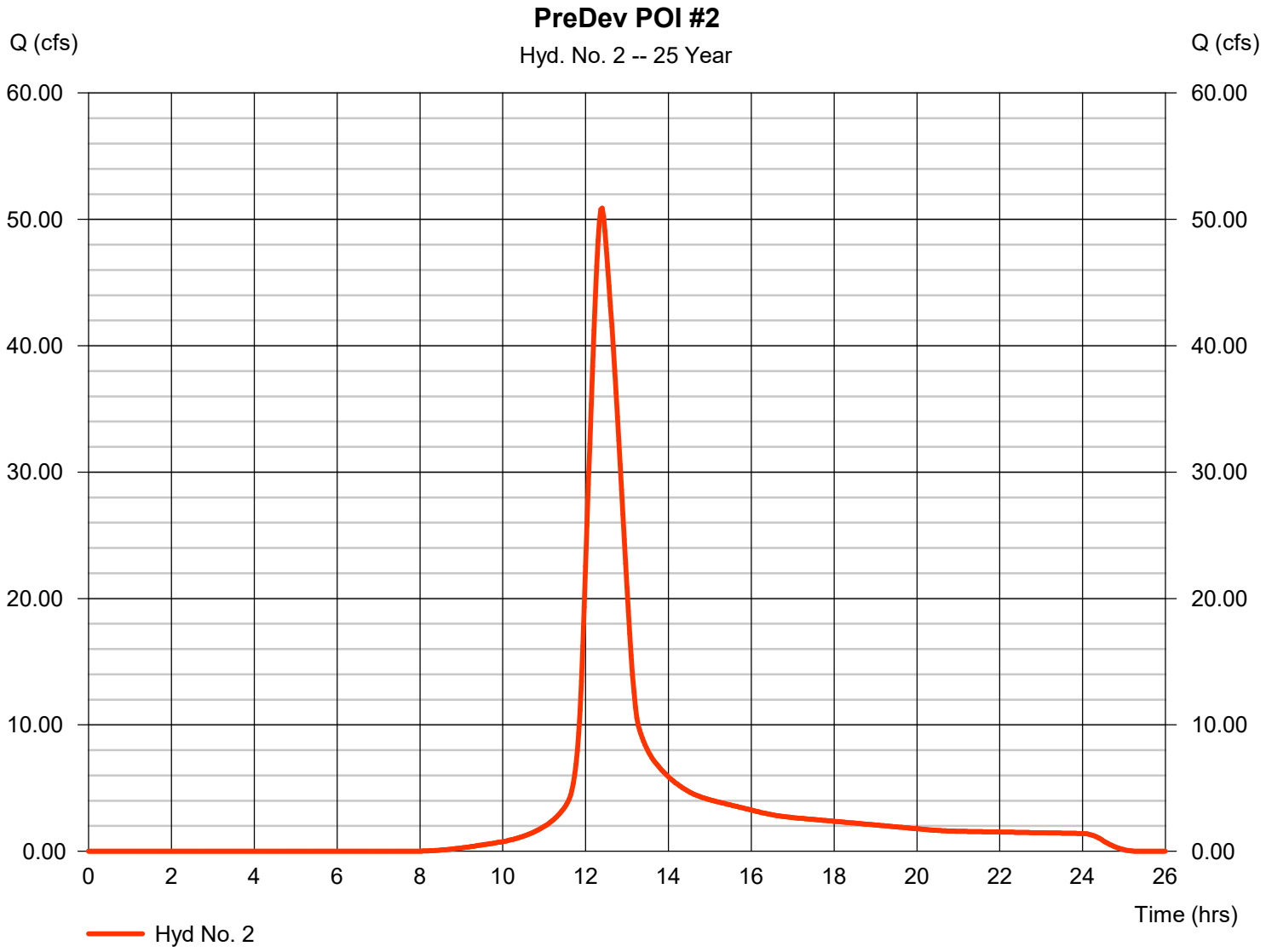


Hydrograph Report

Hyd. No. 2

PreDev POI #2

Hydrograph type	=	SCS Runoff	Peak discharge	=	50.89 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	288,761 cuft
Drainage area	=	24.050 ac	Curve number	=	75
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	48.70 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

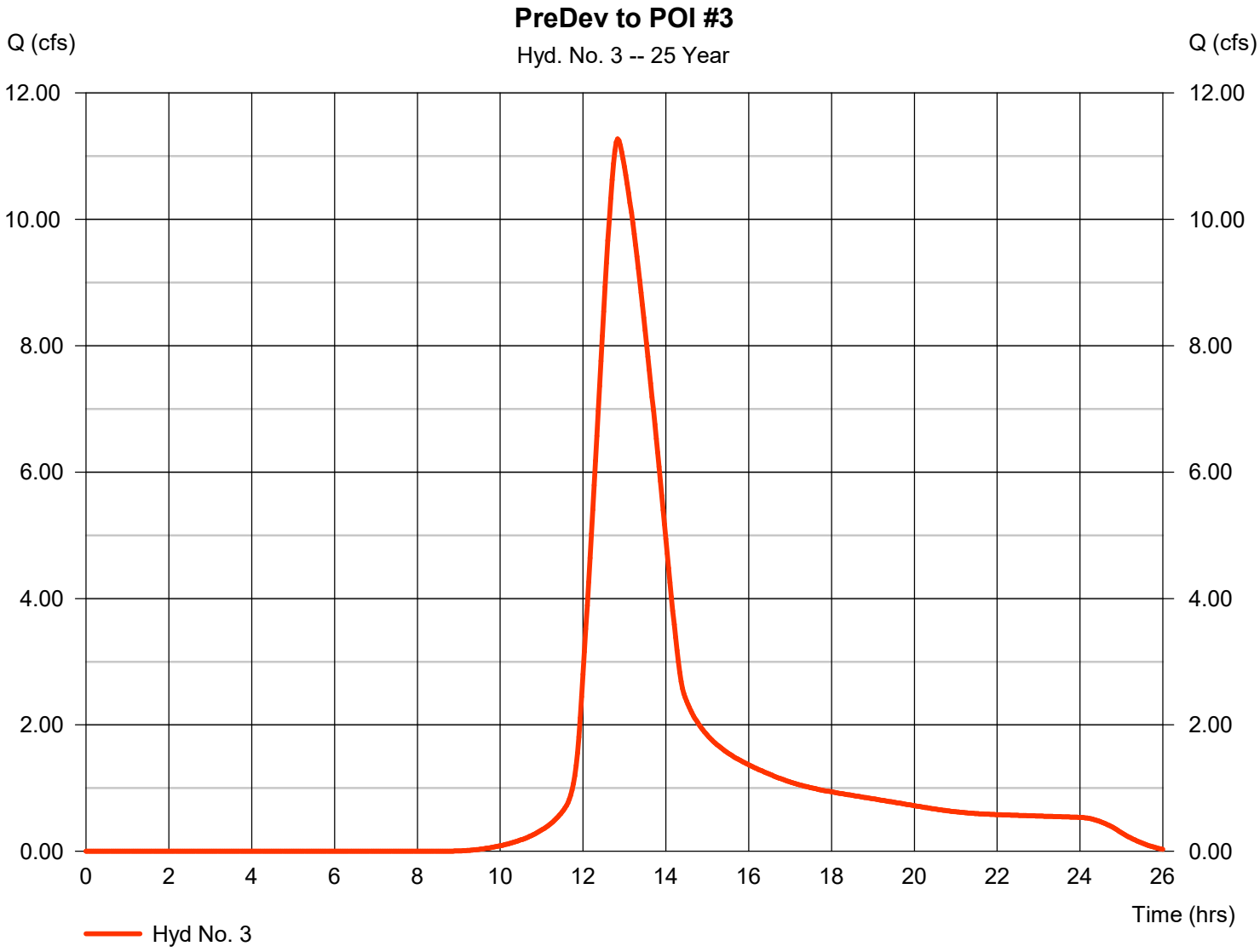


Hydrograph Report

Hyd. No. 3

PreDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	11.27 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.83 hrs
Time interval	=	2 min	Hyd. volume	=	102,442 cuft
Drainage area	=	9.310 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	92.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

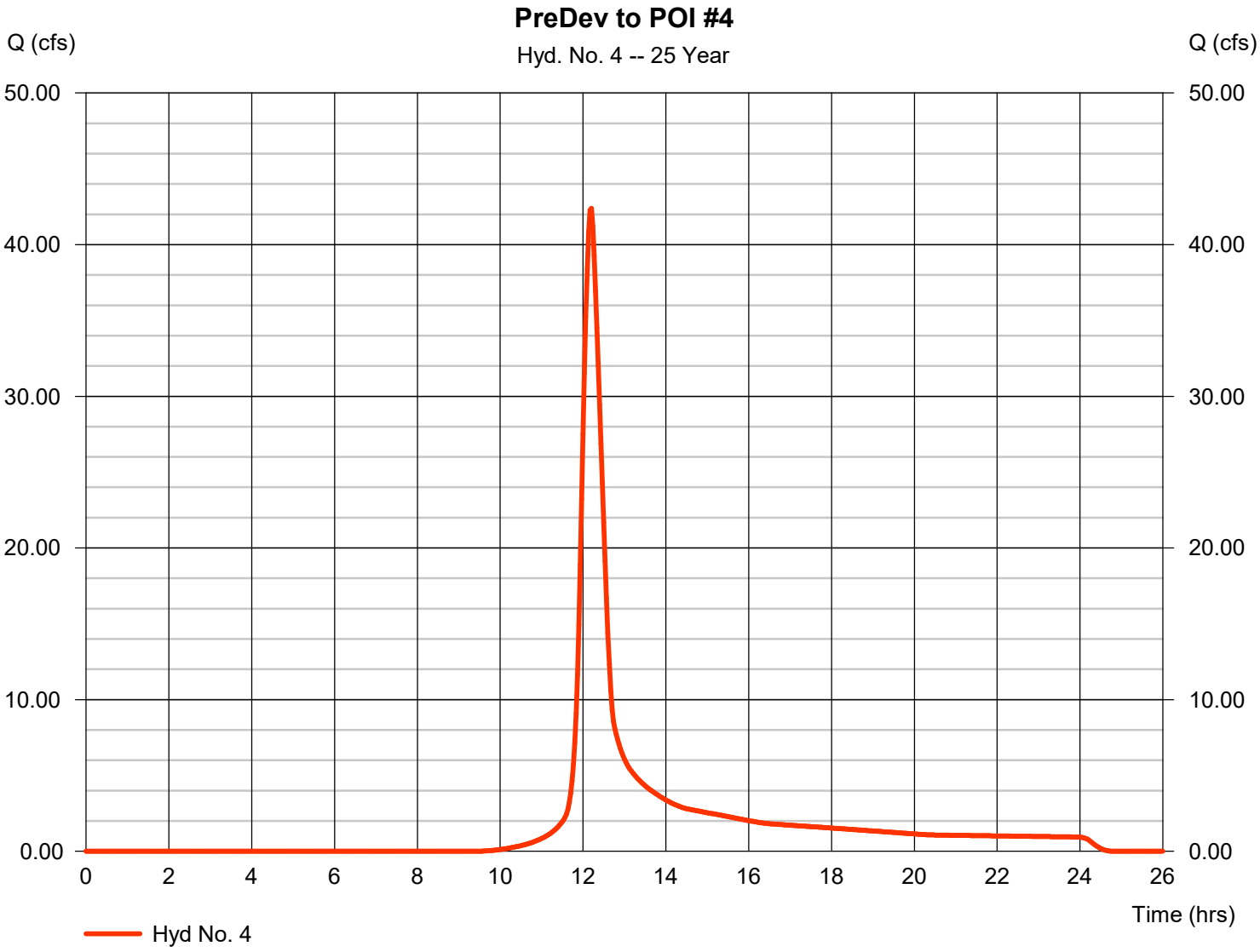


Hydrograph Report

Hyd. No. 4

PreDev to POI #4

Hydrograph type	=	SCS Runoff	Peak discharge	=	42.39 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	172,464 cuft
Drainage area	=	17.970 ac	Curve number	=	68
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	28.80 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

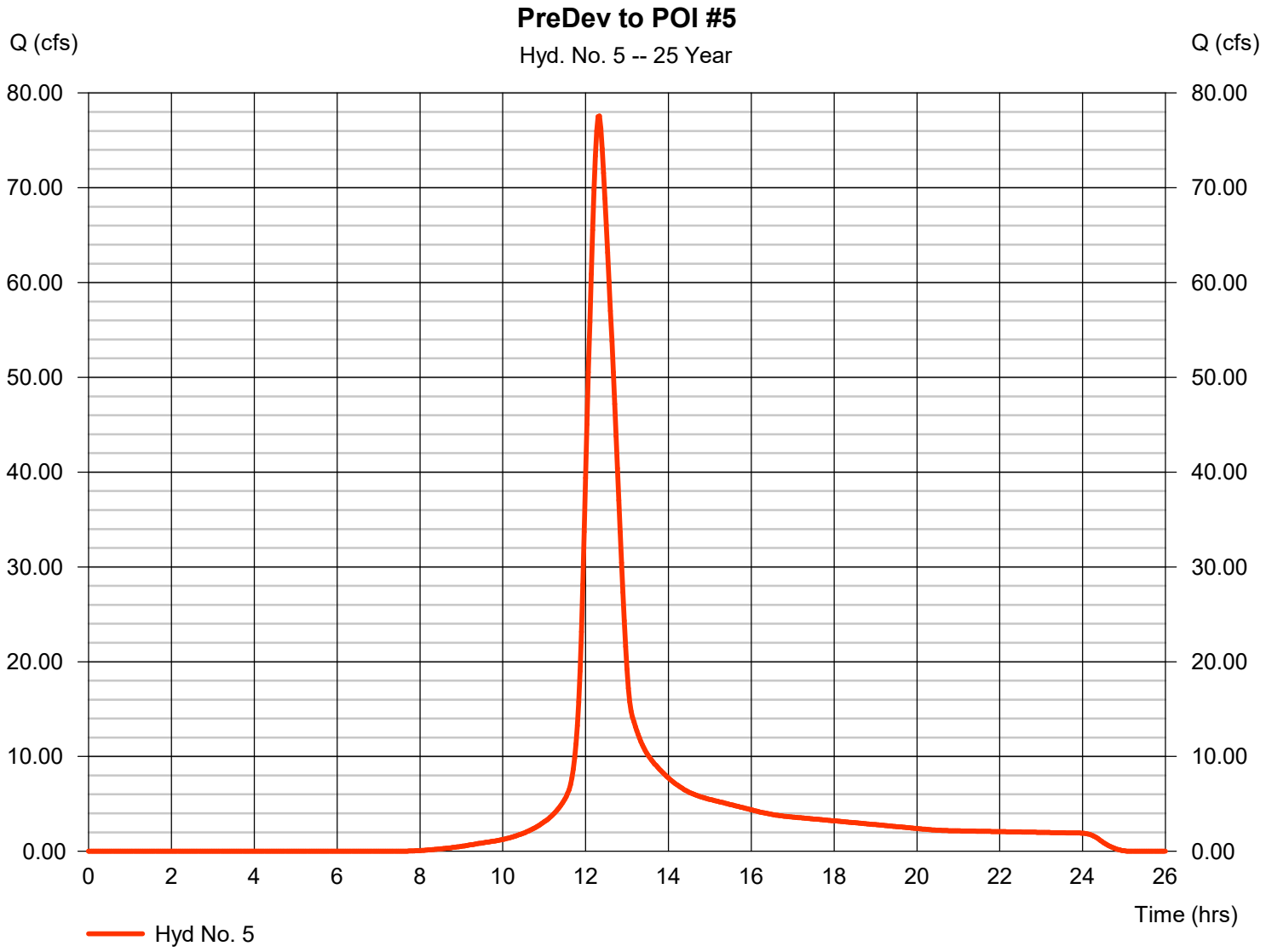


Hydrograph Report

Hyd. No. 5

PreDev to POI #5

Hydrograph type	=	SCS Runoff	Peak discharge	=	77.58 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.33 hrs
Time interval	=	2 min	Hyd. volume	=	400,571 cuft
Drainage area	=	32.090 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	43.30 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

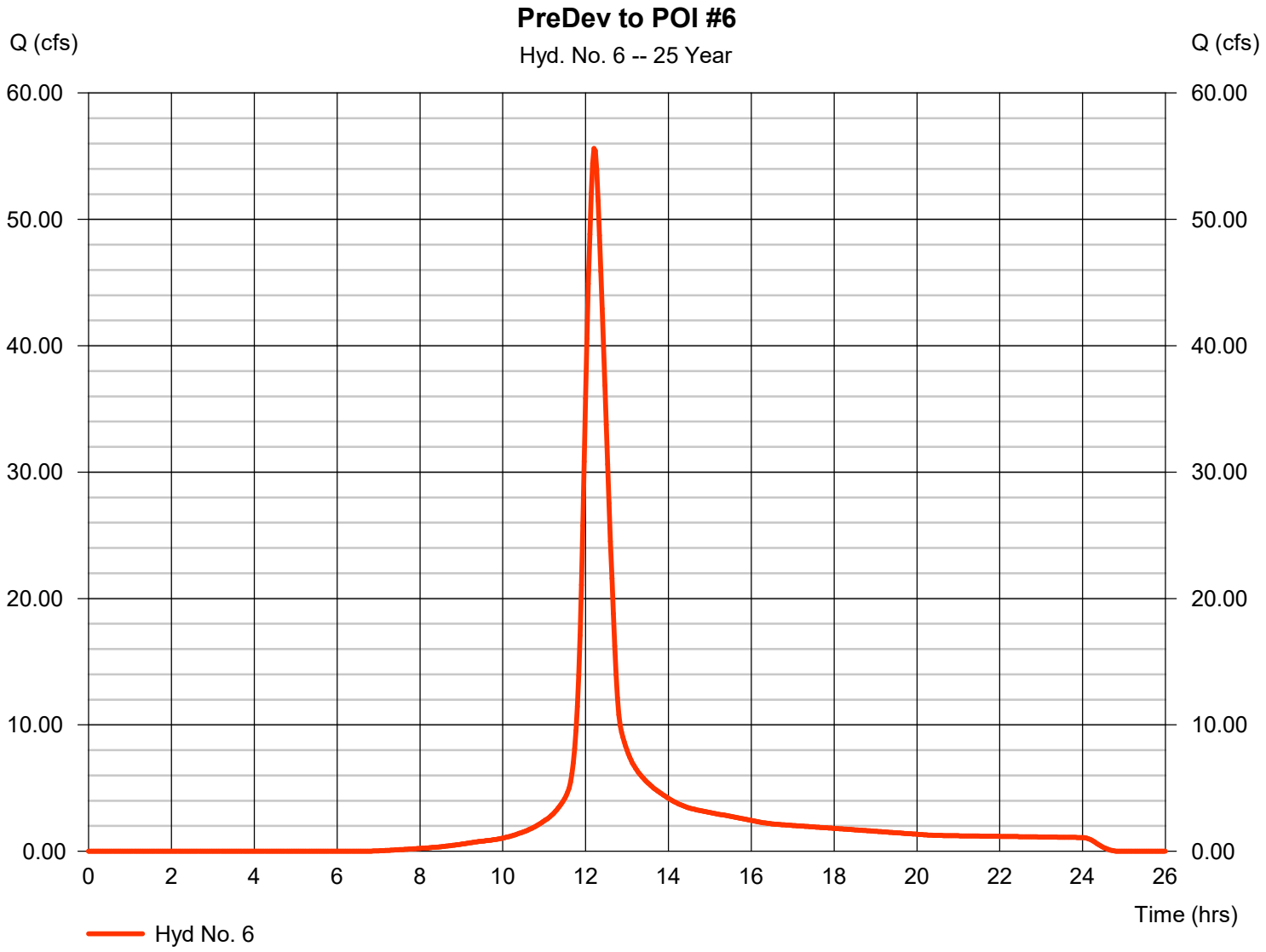


Hydrograph Report

Hyd. No. 6

PreDev to POI #6

Hydrograph type	=	SCS Runoff	Peak discharge	=	55.62 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	240,302 cuft
Drainage area	=	17.640 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	32.90 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

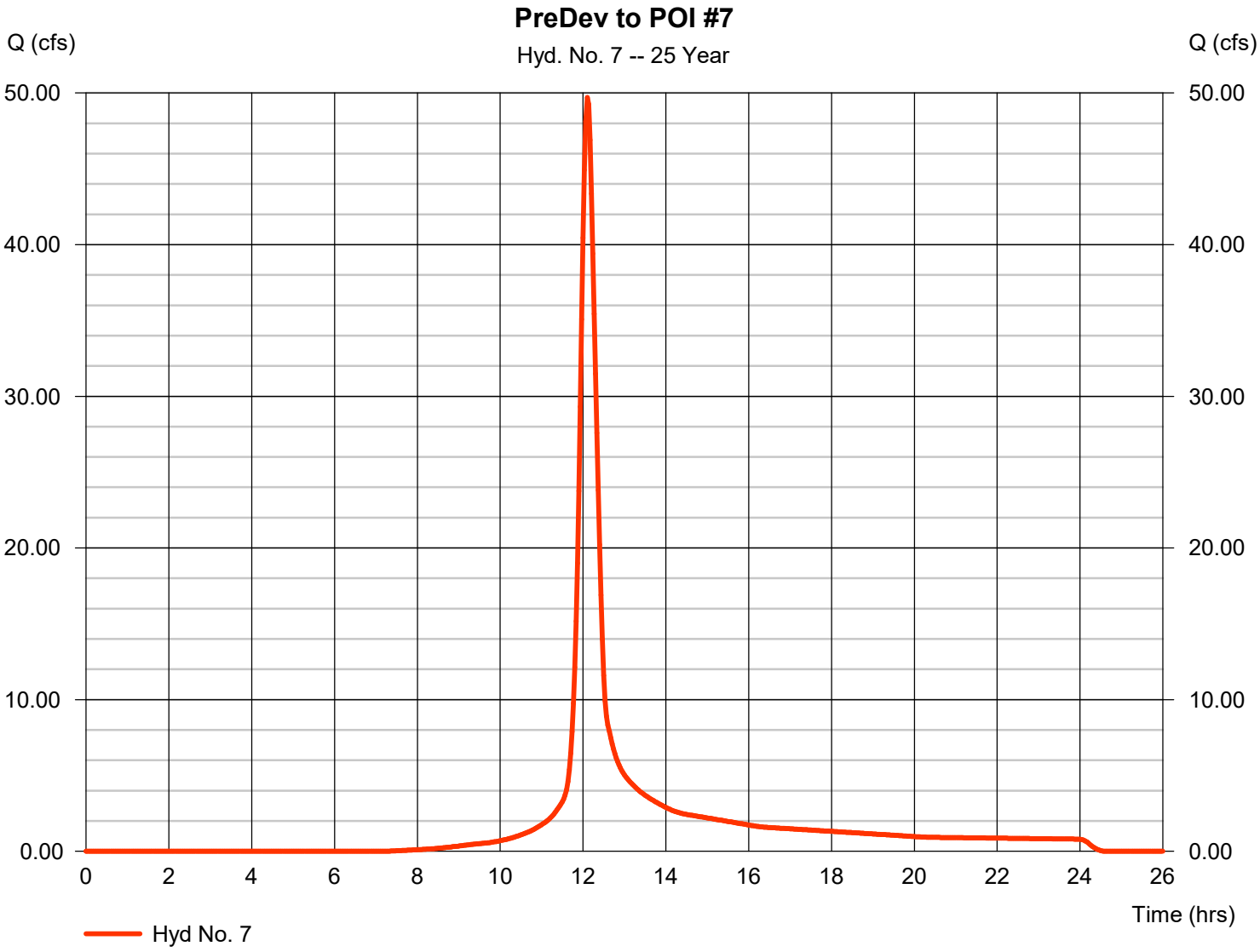


Hydrograph Report

Hyd. No. 7

PreDev to POI #7

Hydrograph type	=	SCS Runoff	Peak discharge	=	49.71 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	171,606 cuft
Drainage area	=	13.250 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	22.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

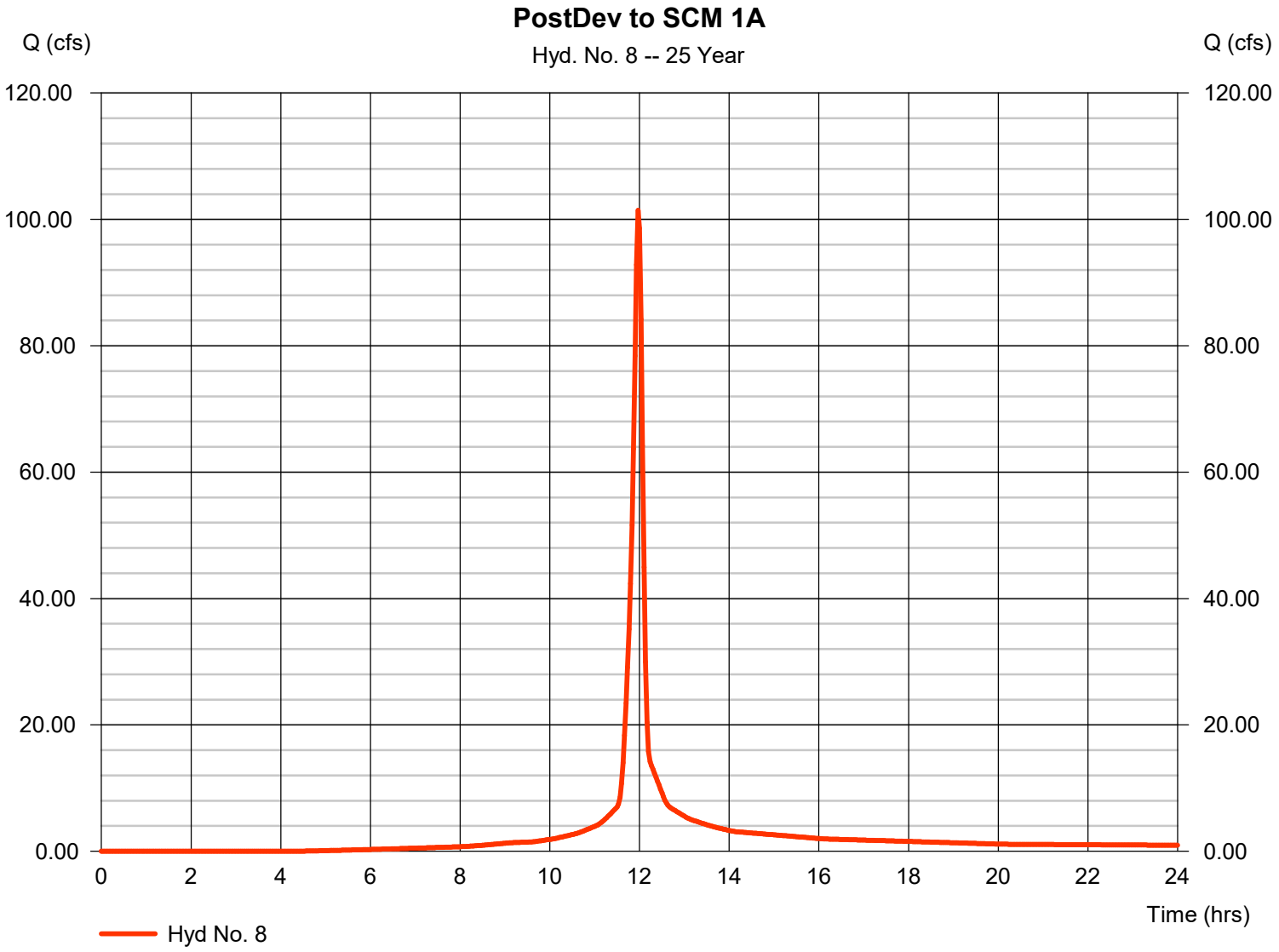


Hydrograph Report

Hyd. No. 8

PostDev to SCM 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	101.43 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	241,319 cuft
Drainage area	=	14.800 ac	Curve number	=	86.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.30 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

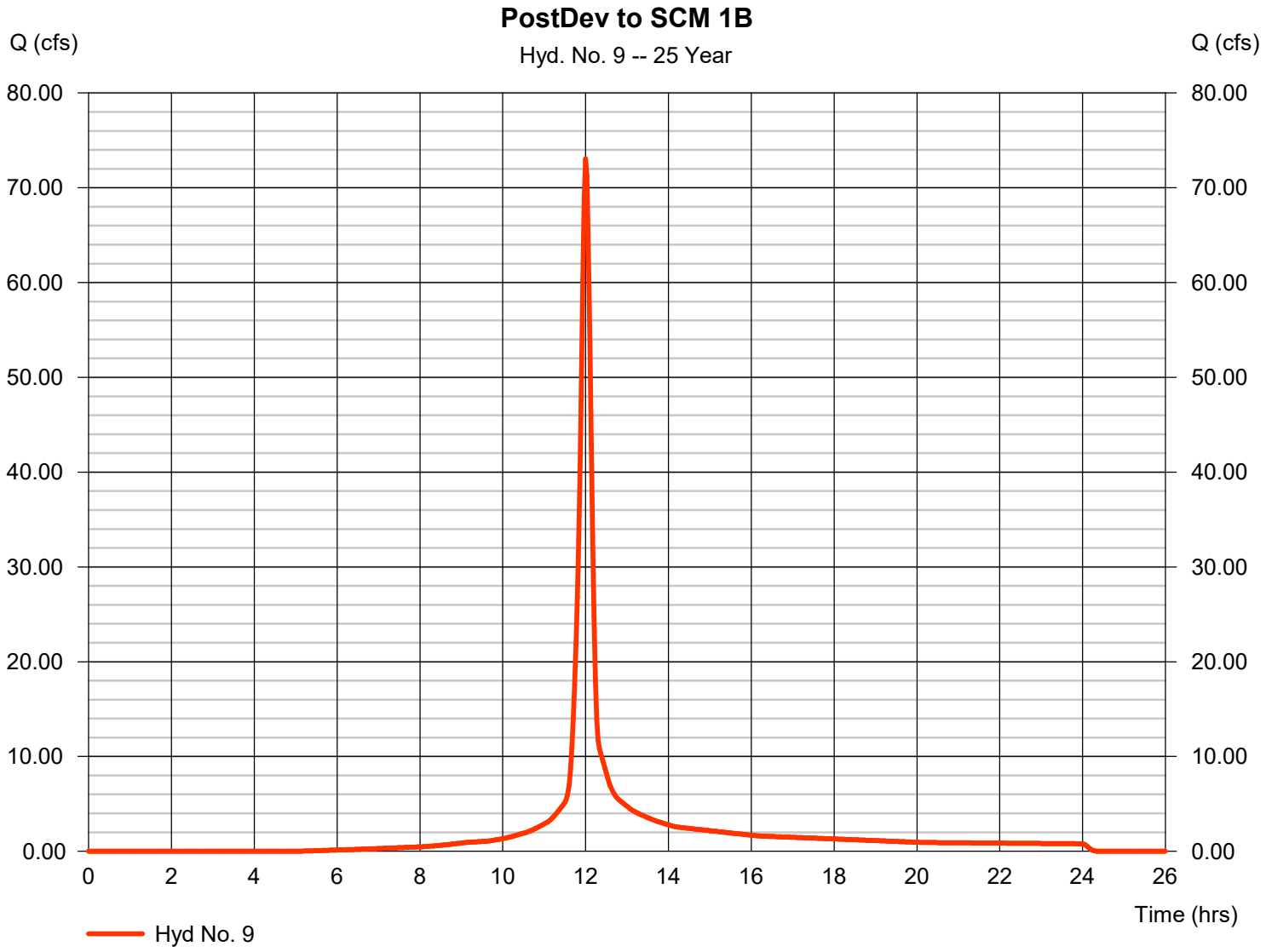


Hydrograph Report

Hyd. No. 9

PostDev to SCM 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	73.05 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	193,435 cuft
Drainage area	=	12.110 ac	Curve number	=	84.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.10 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

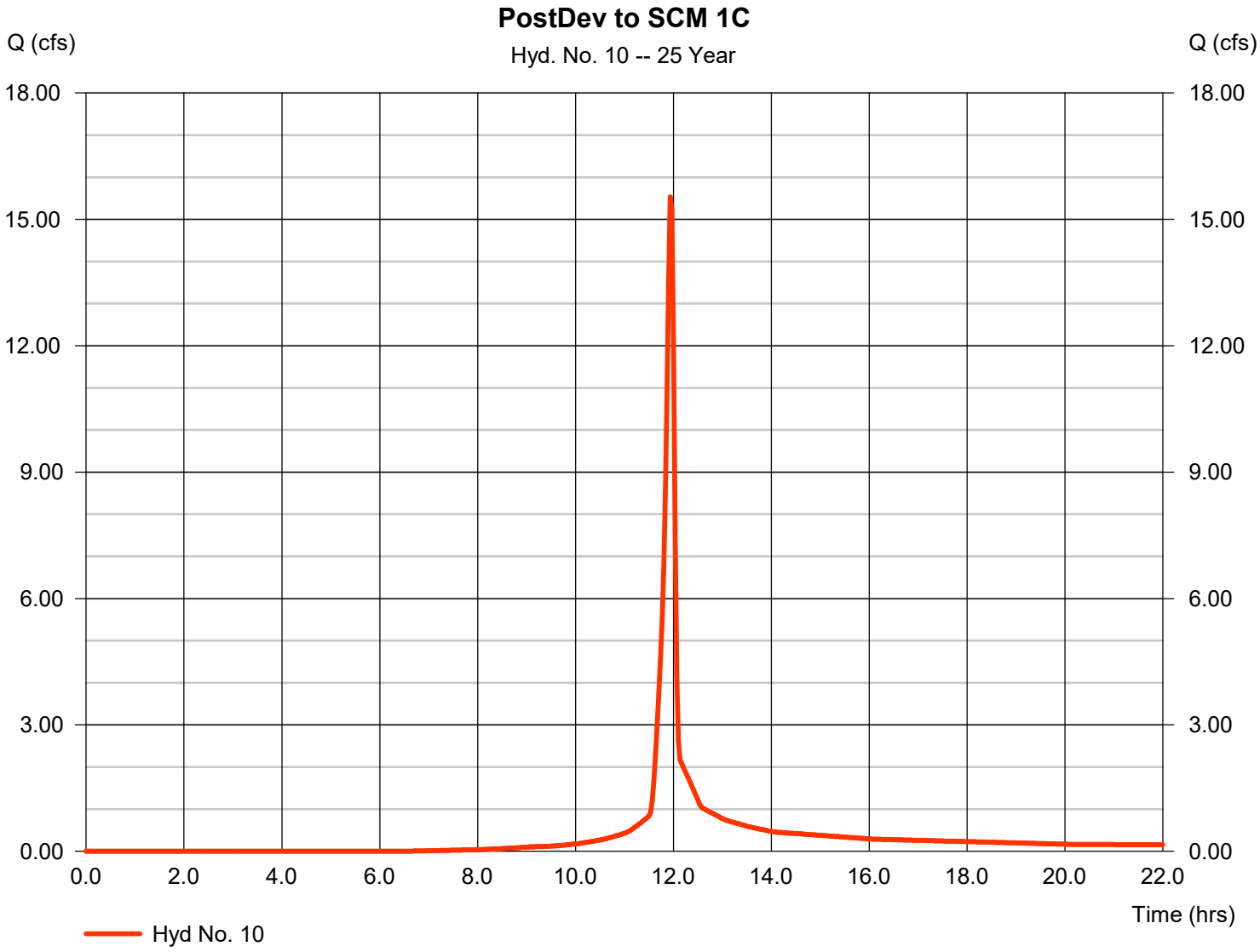


Hydrograph Report

Hyd. No. 10

PostDev to SCM 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	15.53 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	31,786 cuft
Drainage area	=	2.520 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

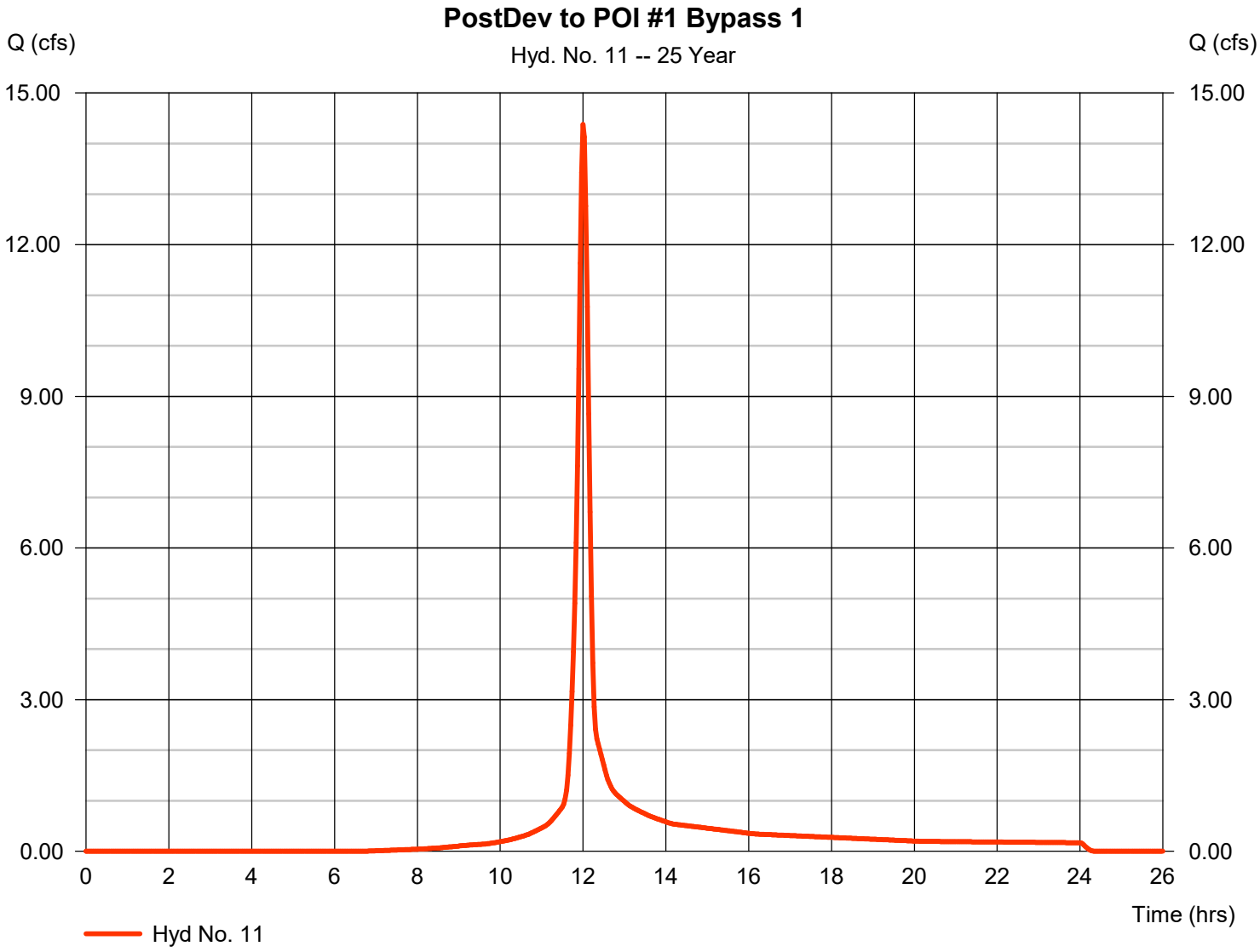


Hydrograph Report

Hyd. No. 11

PostDev to POI #1 Bypass 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.38 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	37,430 cuft
Drainage area	=	2.720 ac	Curve number	=	78.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

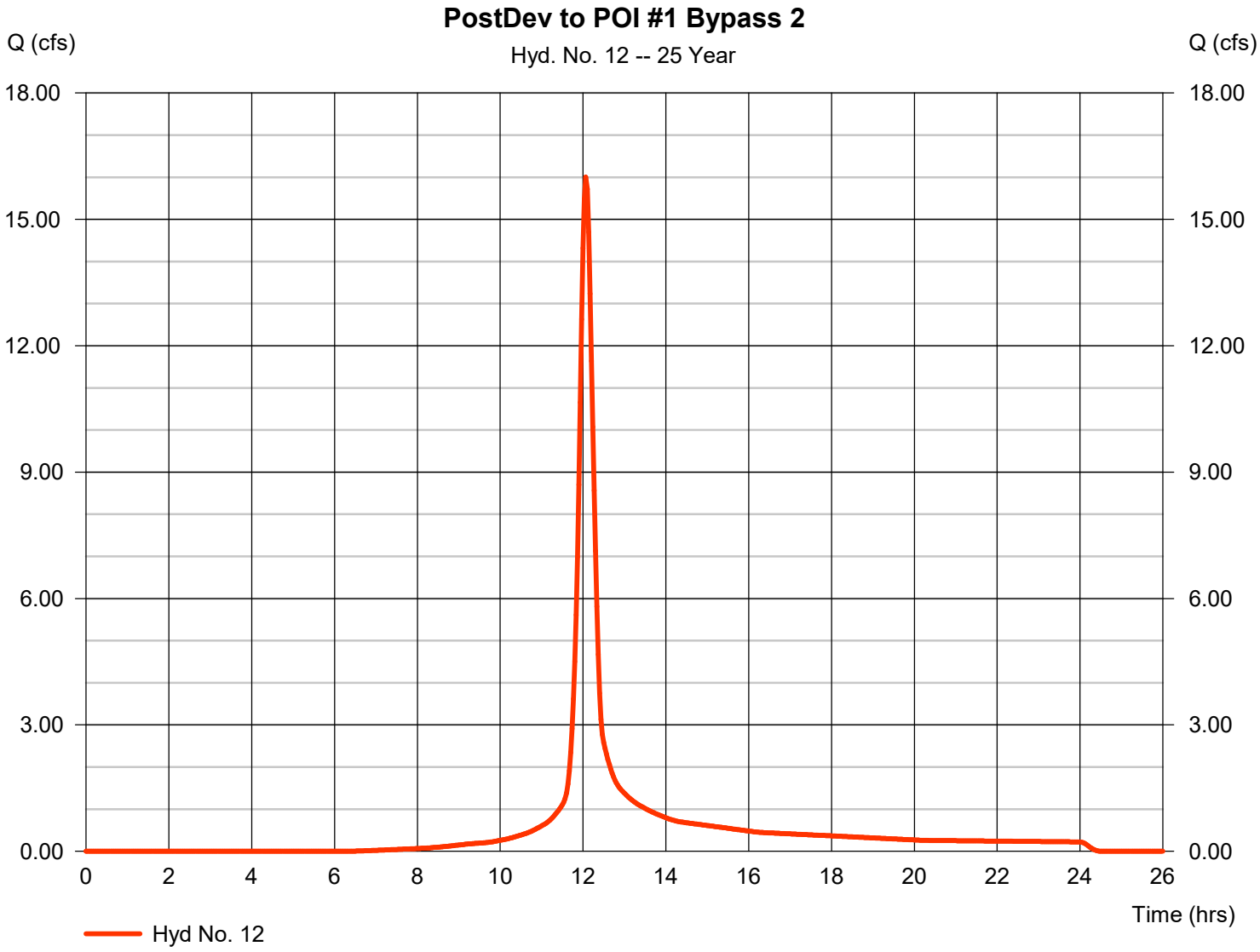


Hydrograph Report

Hyd. No. 12

PostDev to POI #1 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 16.00 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 50,185 cuft
Drainage area	= 3.640 ac	Curve number	= 79.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.00 min
Total precip.	= 6.03 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

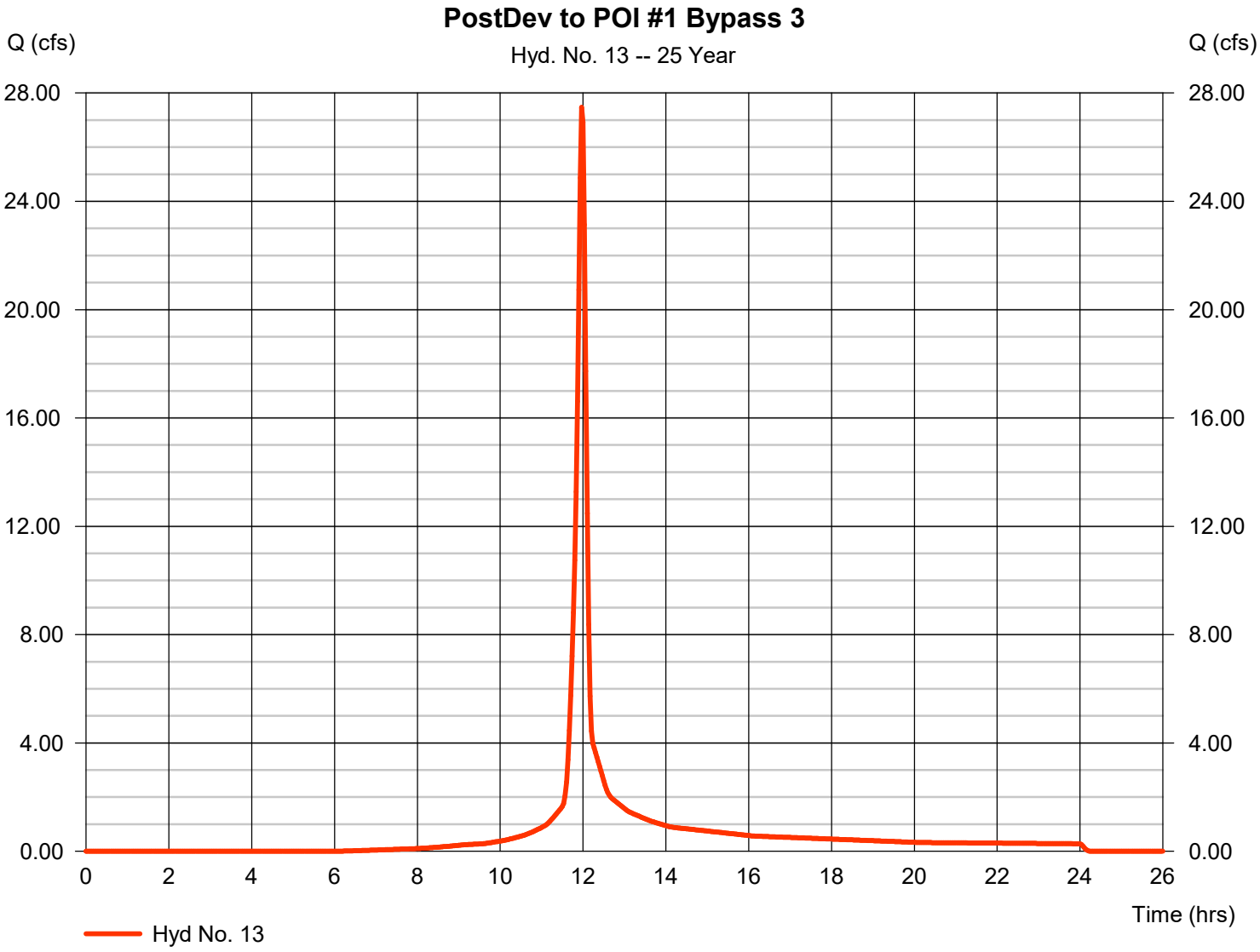


Hydrograph Report

Hyd. No. 13

PostDev to POI #1 Bypass 3

Hydrograph type	= SCS Runoff	Peak discharge	= 27.47 cfs
Storm frequency	= 25 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 63,664 cuft
Drainage area	= 4.520 ac	Curve number	= 80.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 9.00 min
Total precip.	= 6.03 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

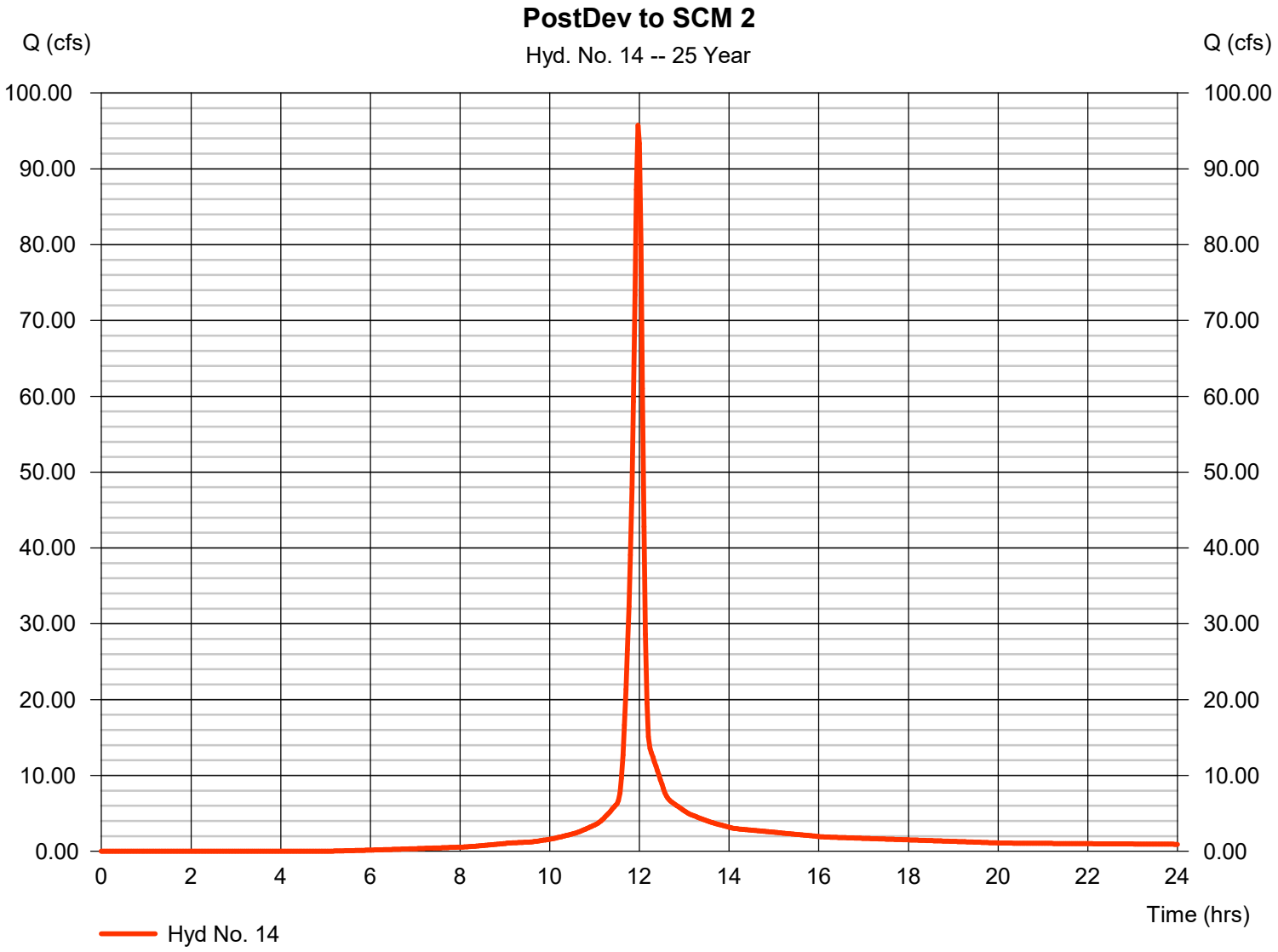


Hydrograph Report

Hyd. No. 14

PostDev to SCM 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	95.75 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	225,116 cuft
Drainage area	=	14.570 ac	Curve number	=	84.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.10 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

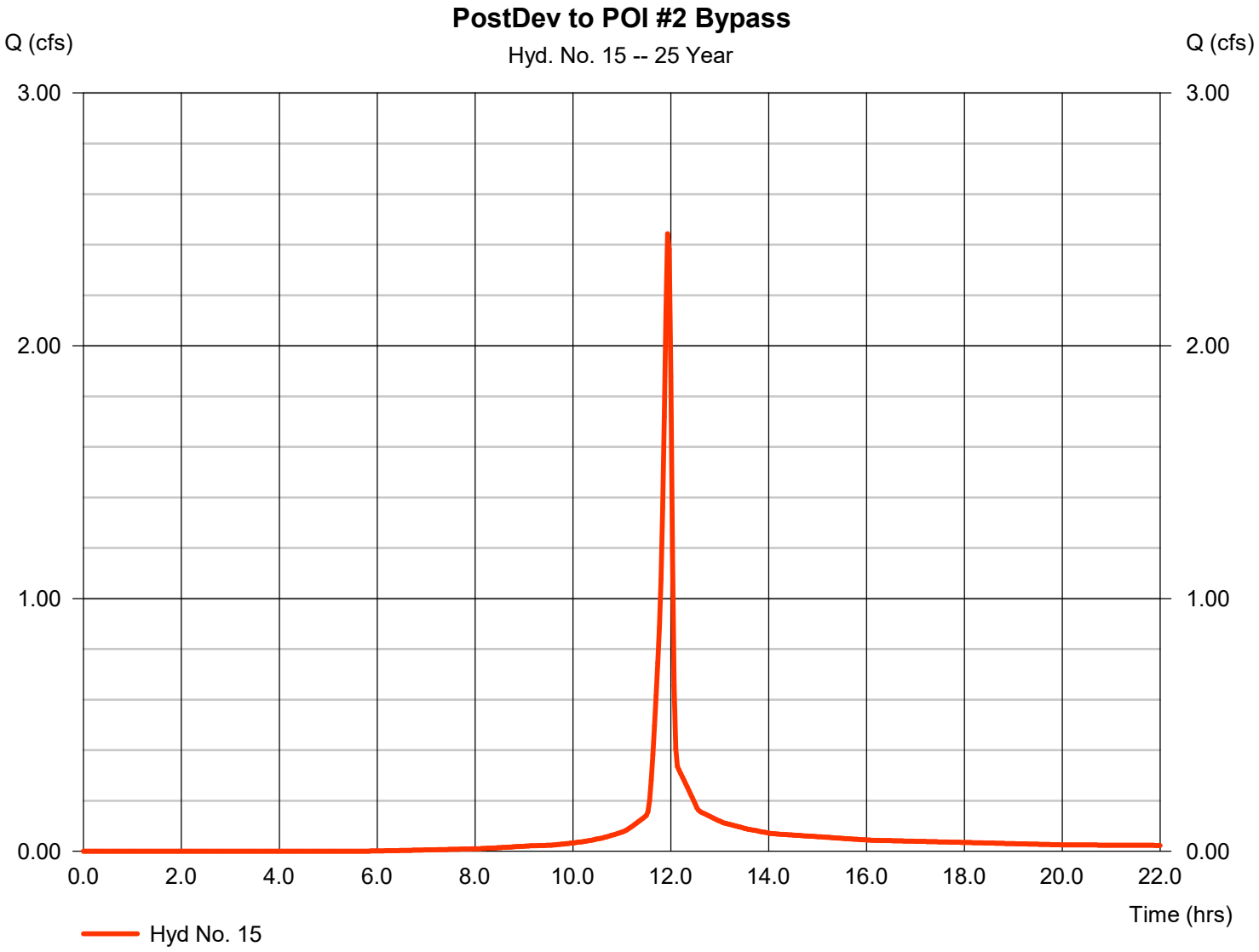


Hydrograph Report

Hyd. No. 15

PostDev to POI #2 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.443 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	5,055 cuft
Drainage area	=	0.370 ac	Curve number	=	82
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

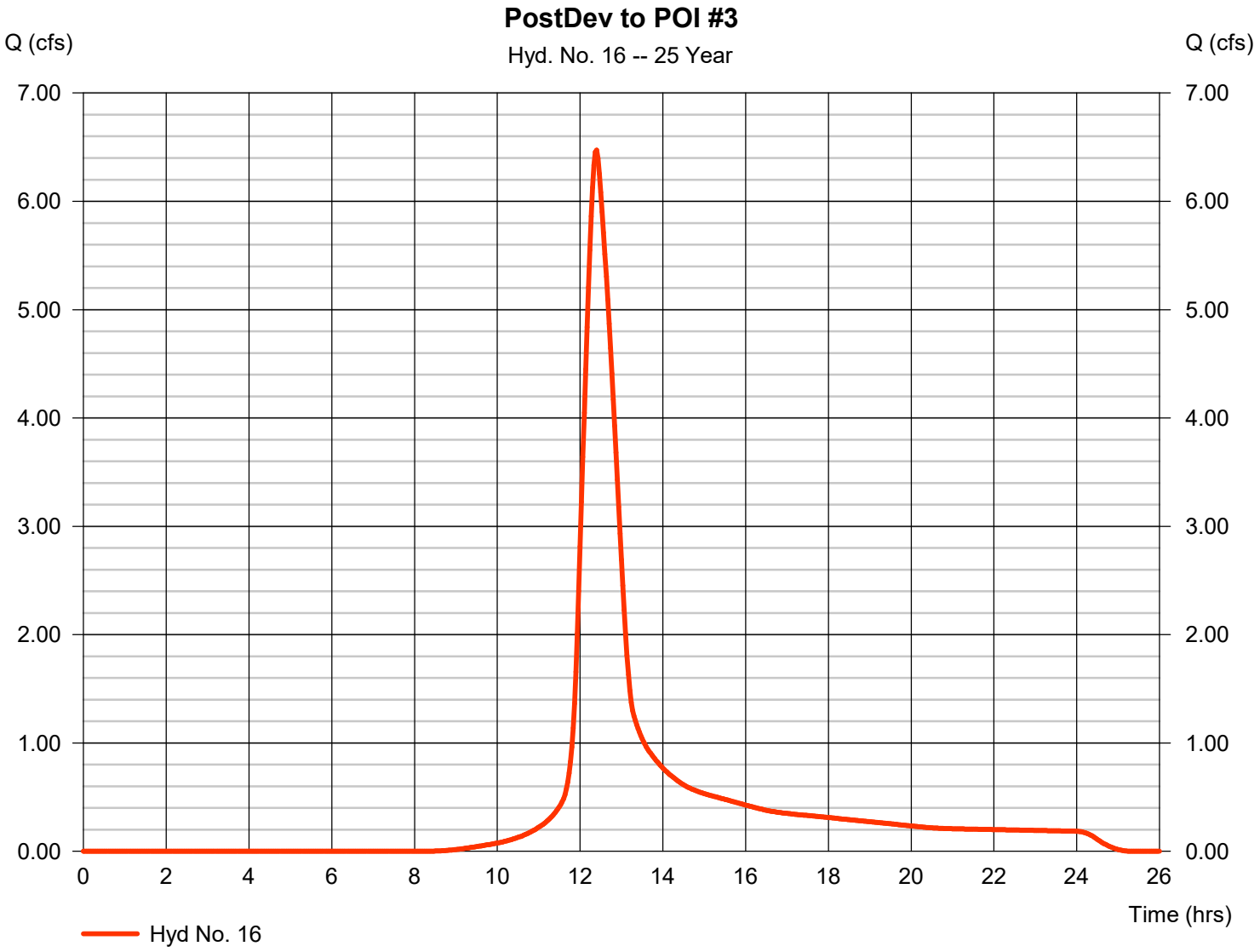


Hydrograph Report

Hyd. No. 16

PostDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.474 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	36,845 cuft
Drainage area	=	3.240 ac	Curve number	=	73.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	49.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

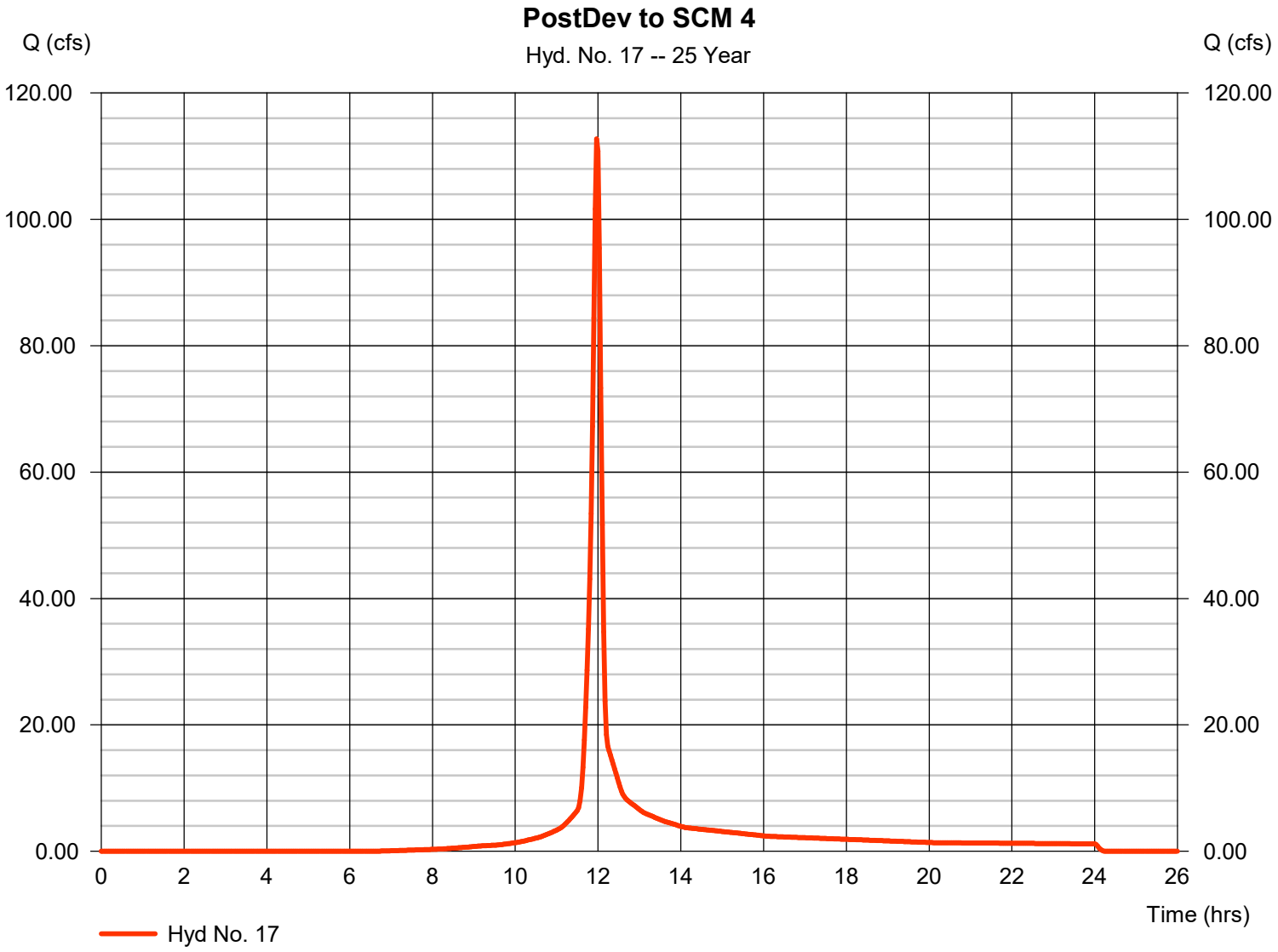


Hydrograph Report

Hyd. No. 17

PostDev to SCM 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	112.72 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	259,855 cuft
Drainage area	=	19.420 ac	Curve number	=	78.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.50 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

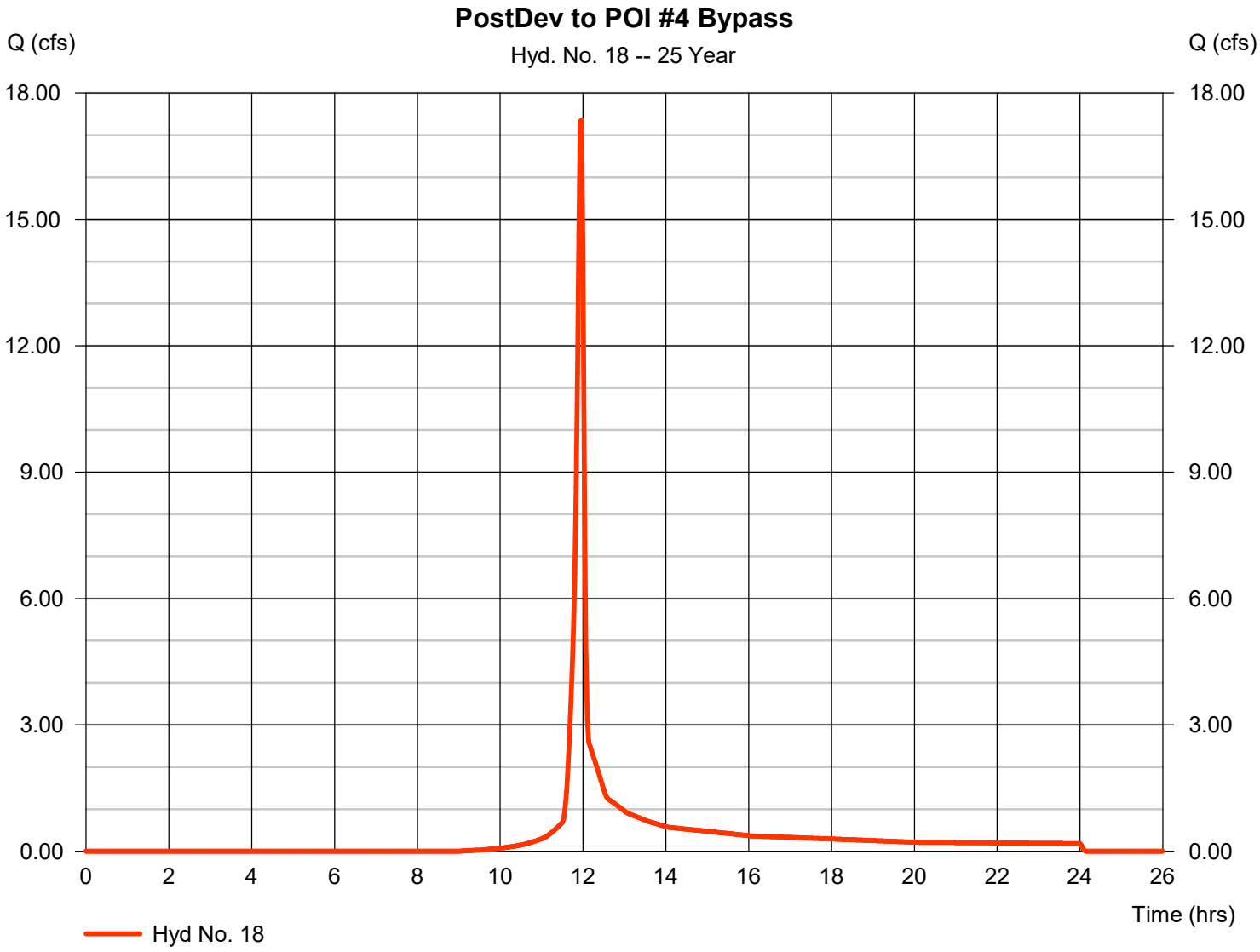


Hydrograph Report

Hyd. No. 18

PostDev to POI #4 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.35 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	34,983 cuft
Drainage area	=	3.670 ac	Curve number	=	69.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

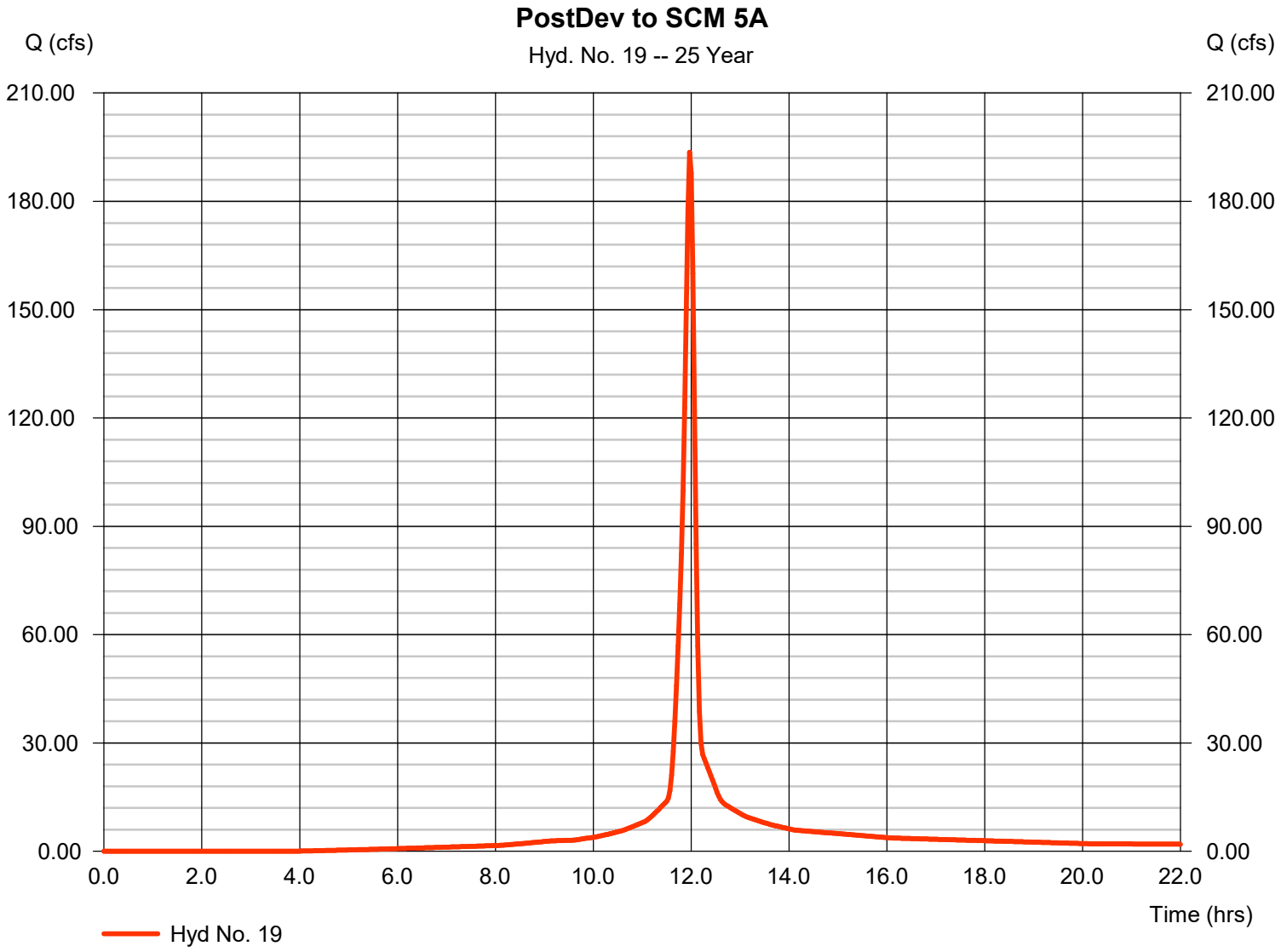


Hydrograph Report

Hyd. No. 19

PostDev to SCM 5A

Hydrograph type	=	SCS Runoff	Peak discharge	=	193.59 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	465,658 cuft
Drainage area	=	27.430 ac	Curve number	=	88.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.10 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

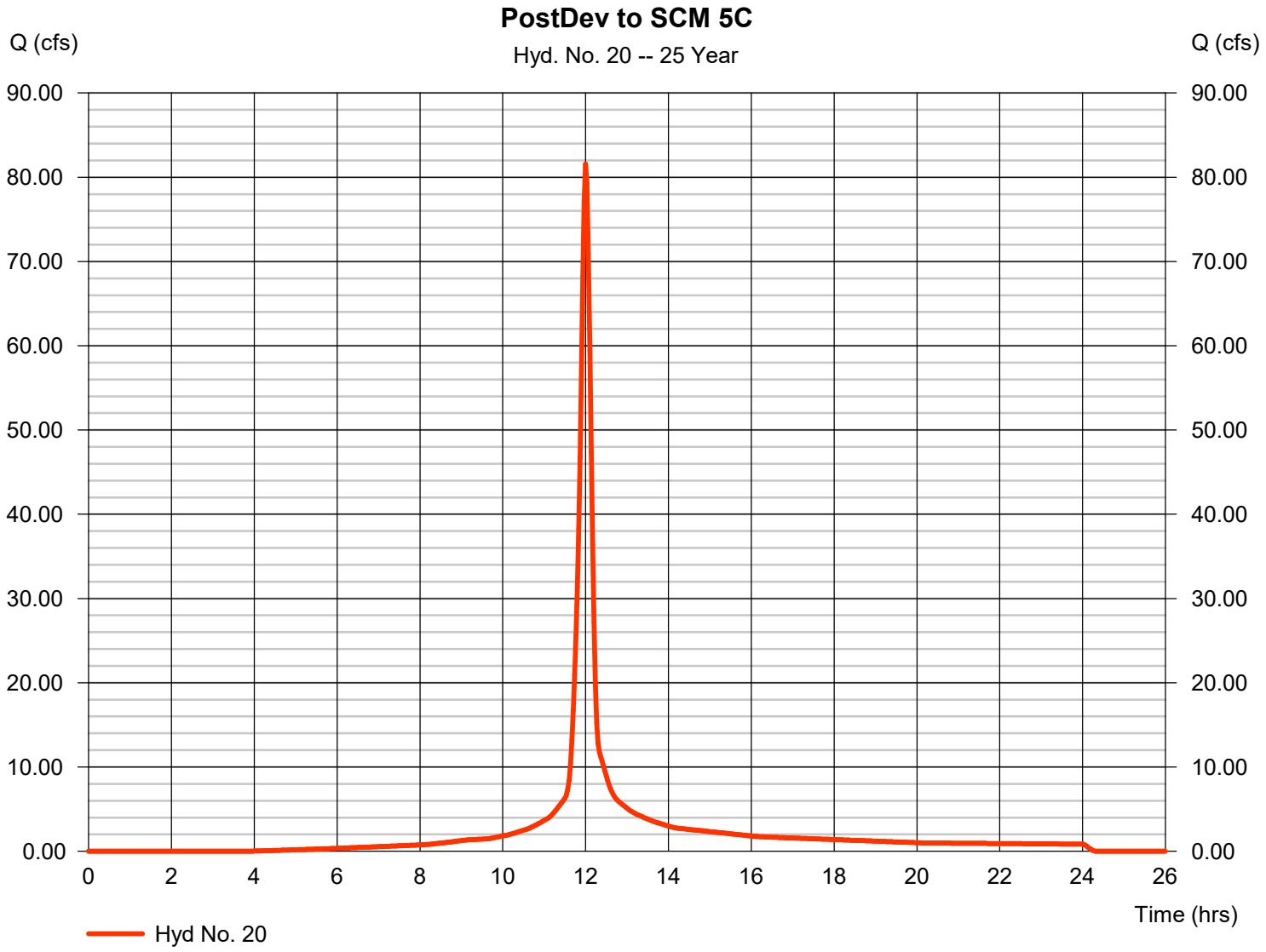


Hydrograph Report

Hyd. No. 20

PostDev to SCM 5C

Hydrograph type	=	SCS Runoff	Peak discharge	=	81.58 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	220,739 cuft
Drainage area	=	12.550 ac	Curve number	=	88.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.80 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

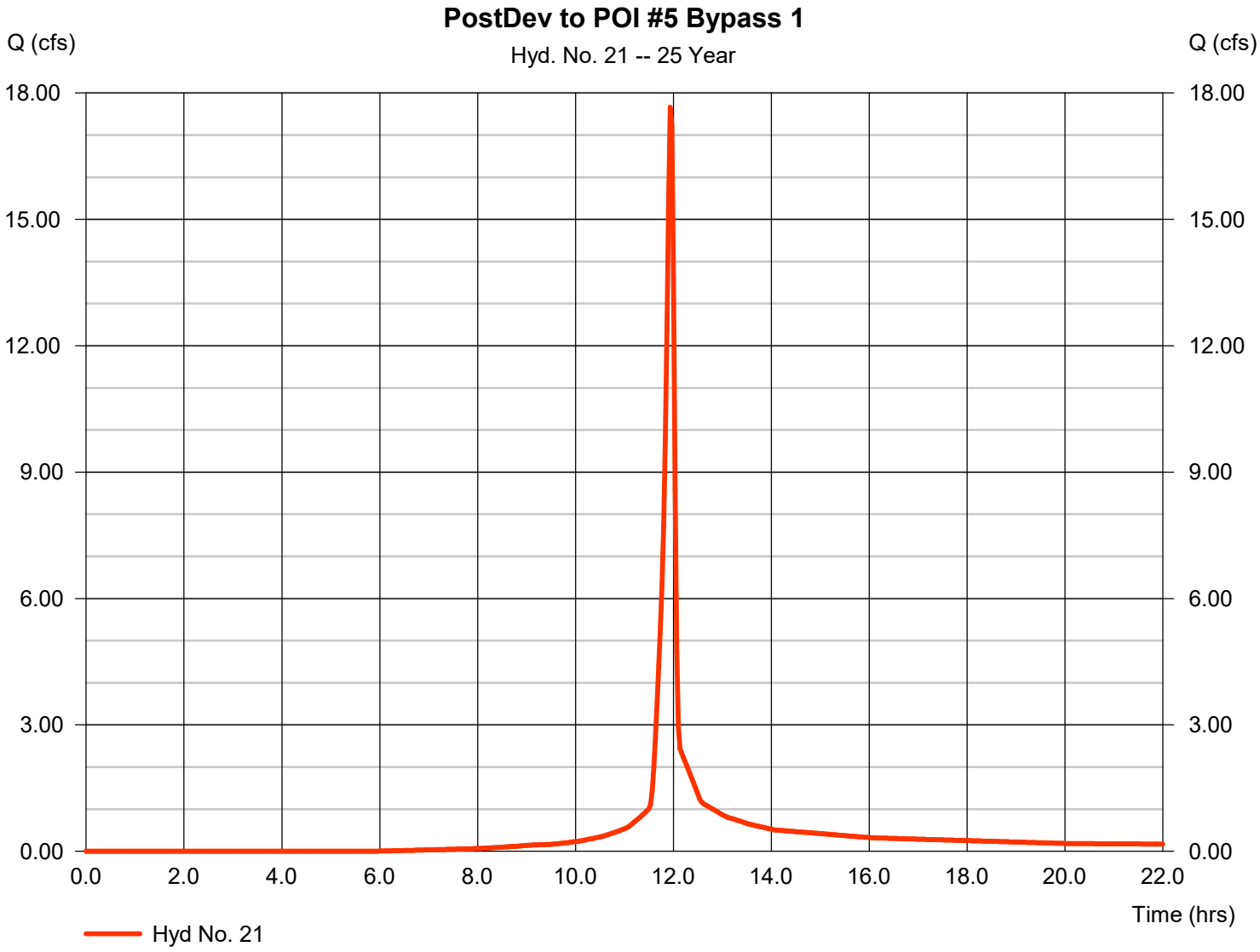


Hydrograph Report

Hyd. No. 21

PostDev to POI #5 Bypass 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.66 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	36,451 cuft
Drainage area	=	2.710 ac	Curve number	=	81.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

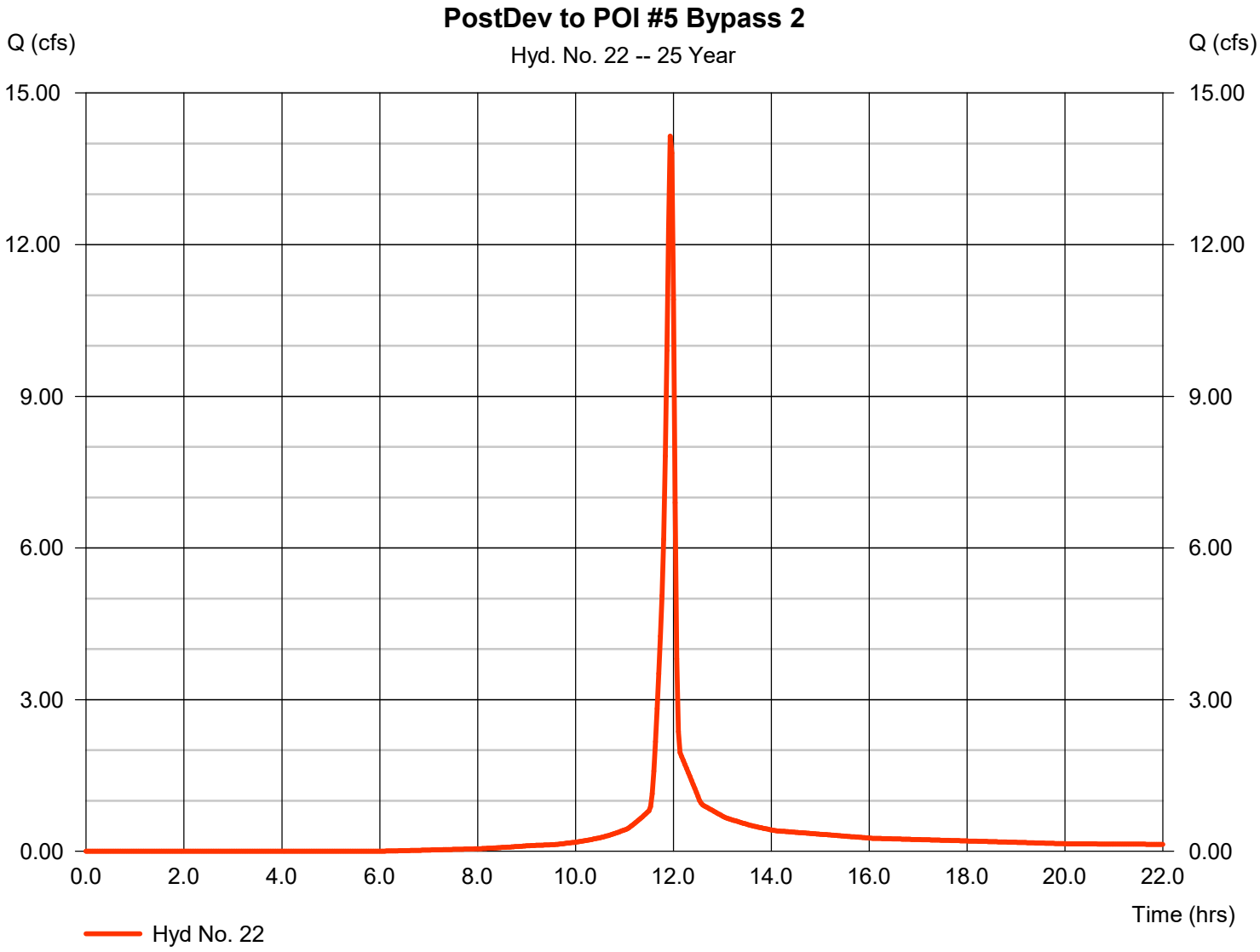


Hydrograph Report

Hyd. No. 22

PostDev to POI #5 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 14.14 cfs
Storm frequency	= 25 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 29,149 cuft
Drainage area	= 2.190 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.03 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

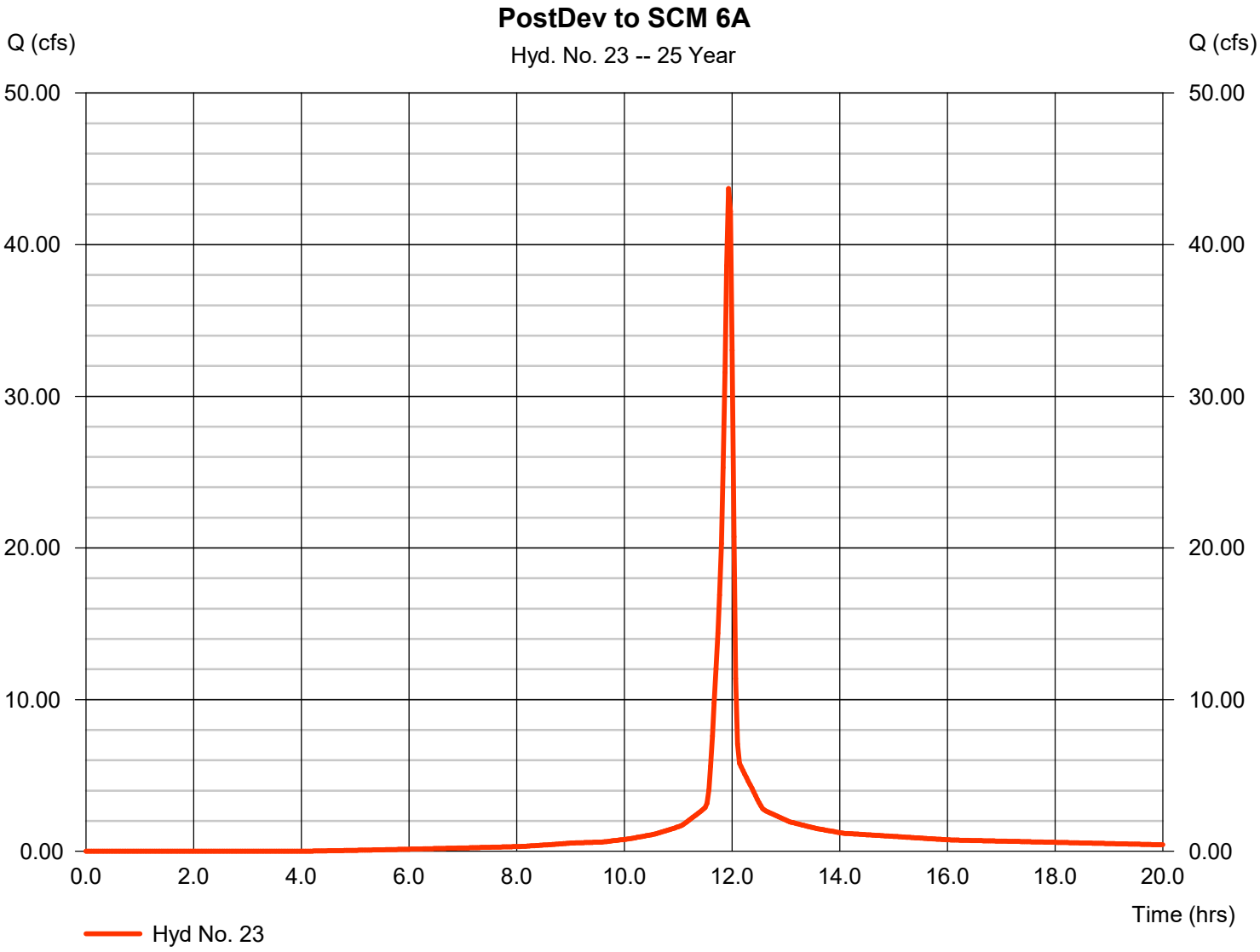


Hydrograph Report

Hyd. No. 23

PostDev to SCM 6A

Hydrograph type	=	SCS Runoff	Peak discharge	=	43.71 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	93,369 cuft
Drainage area	=	5.950 ac	Curve number	=	87.6
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

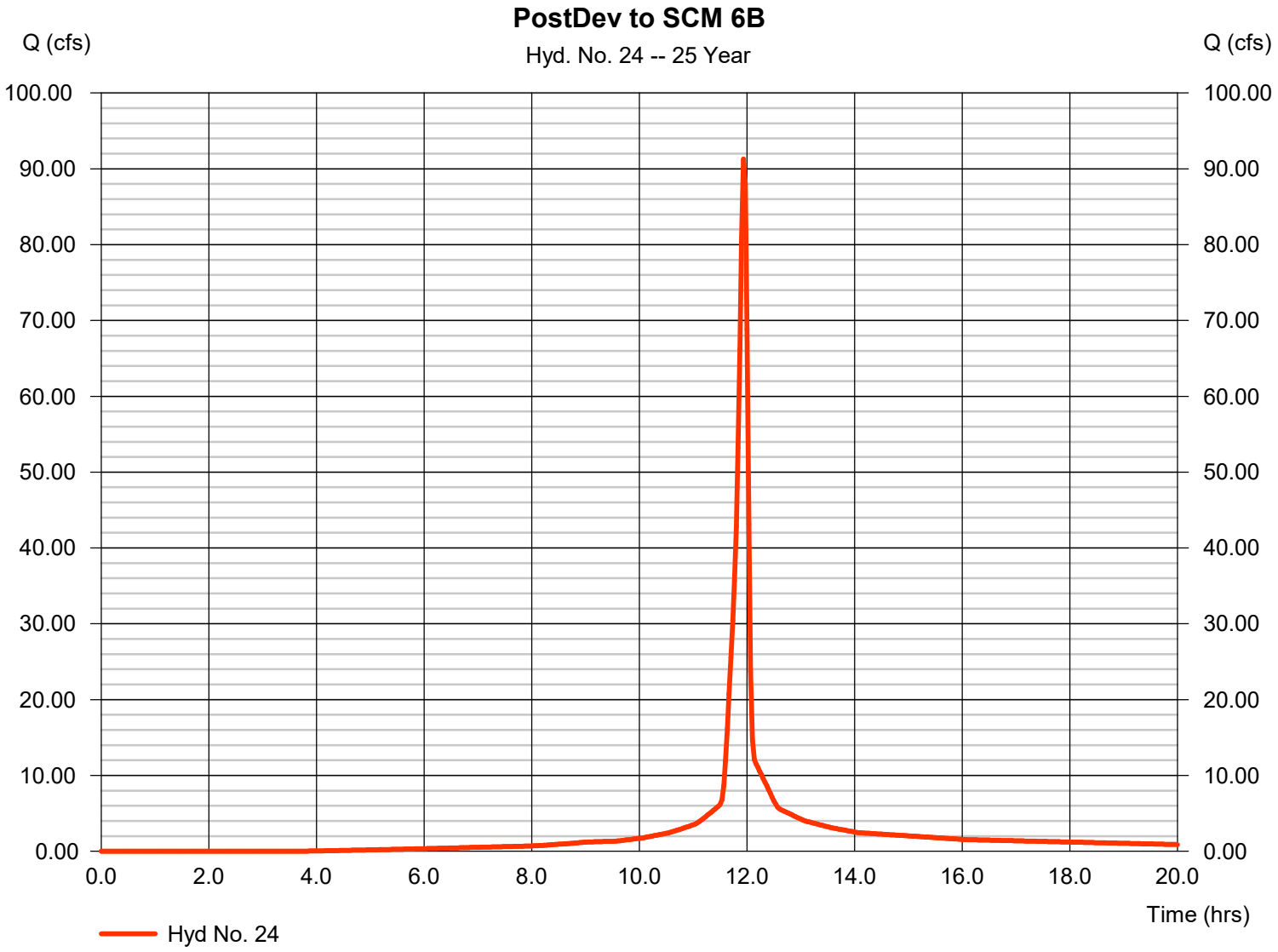


Hydrograph Report

Hyd. No. 24

PostDev to SCM 6B

Hydrograph type	=	SCS Runoff	Peak discharge	=	91.27 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	196,604 cuft
Drainage area	=	12.210 ac	Curve number	=	88.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.30 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

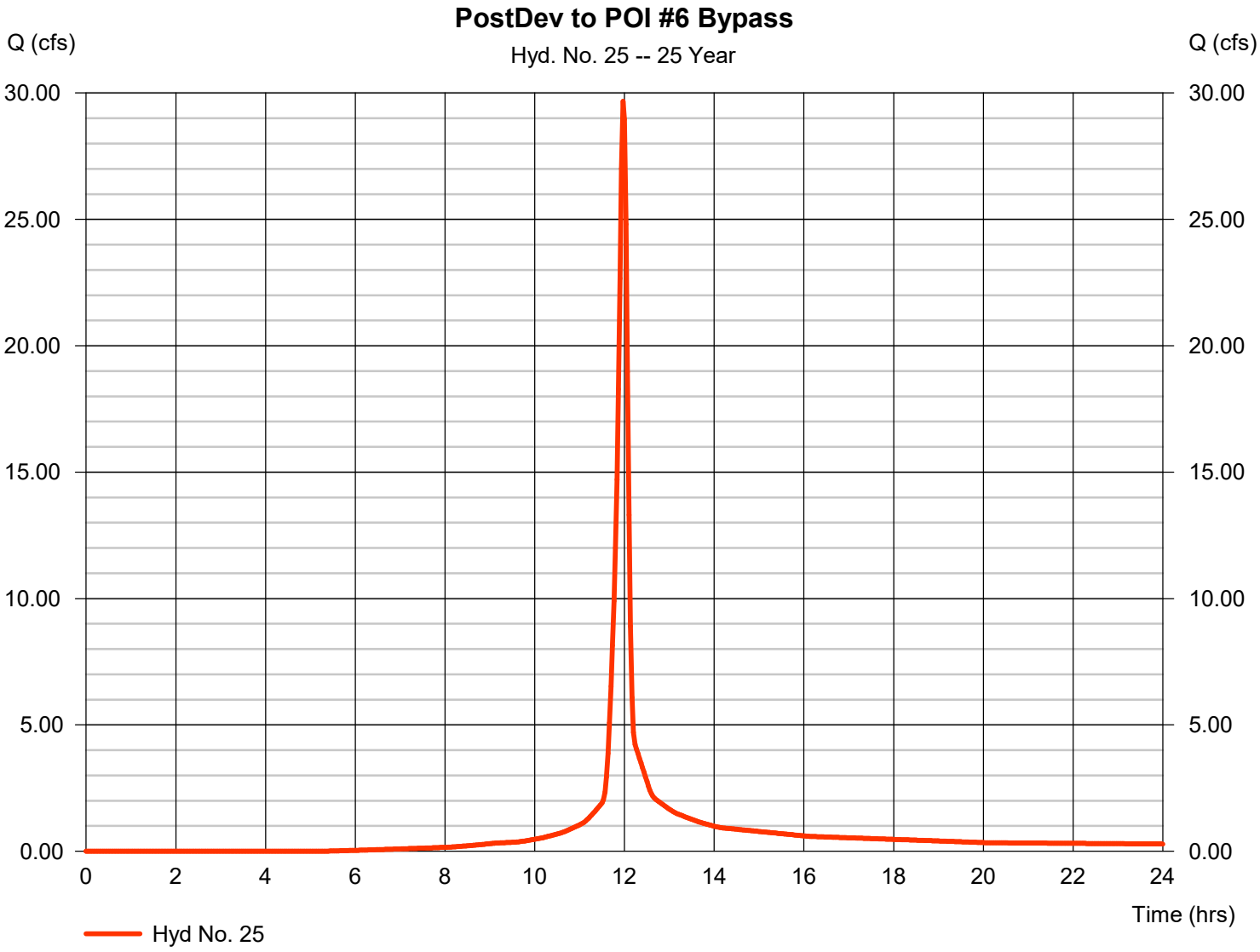


Hydrograph Report

Hyd. No. 25

PostDev to POI #6 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	29.67 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	69,509 cuft
Drainage area	=	4.590 ac	Curve number	=	83.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

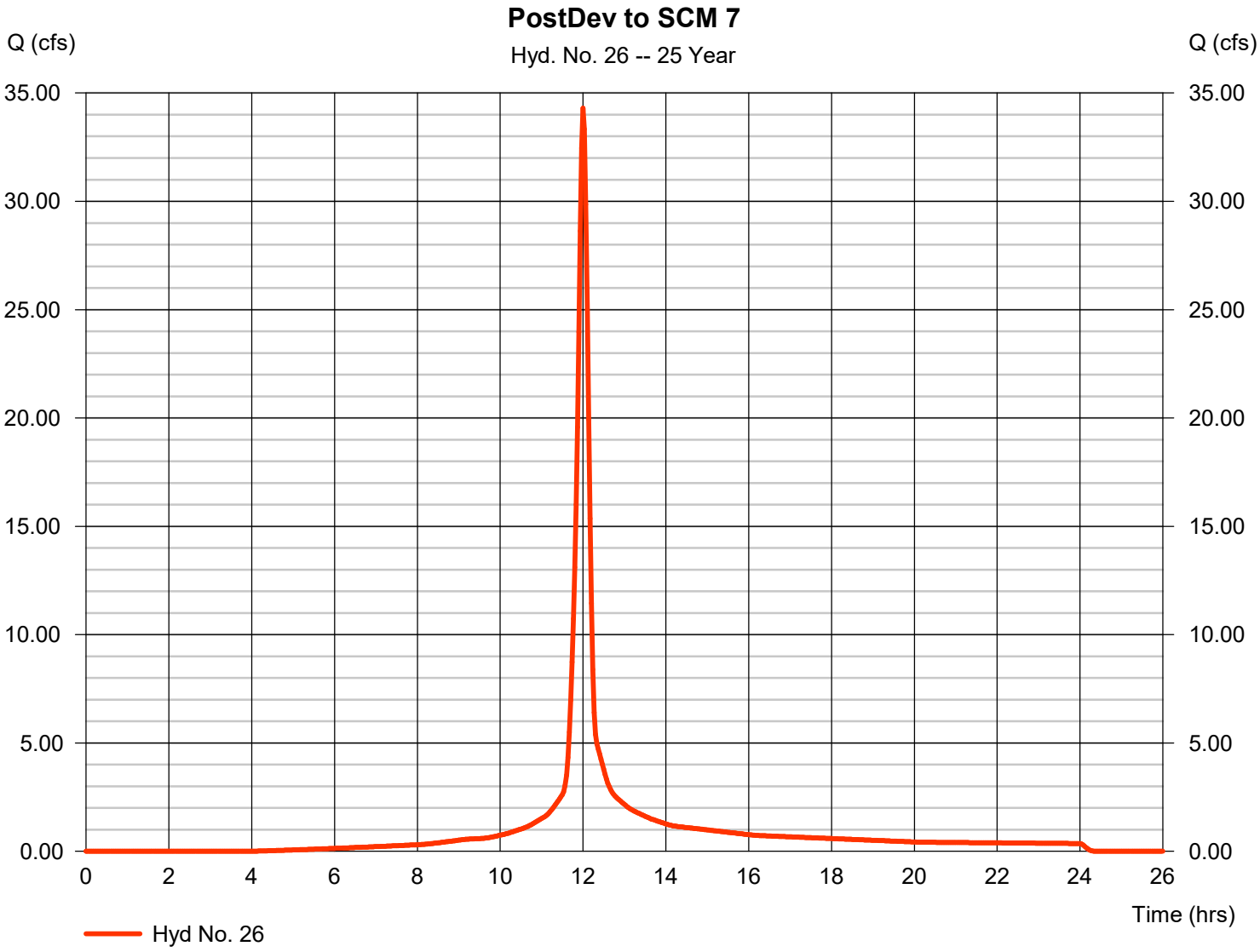


Hydrograph Report

Hyd. No. 26

PostDev to SCM 7

Hydrograph type	=	SCS Runoff	Peak discharge	=	34.30 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	92,439 cuft
Drainage area	=	5.330 ac	Curve number	=	87.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.40 min
Total precip.	=	6.03 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

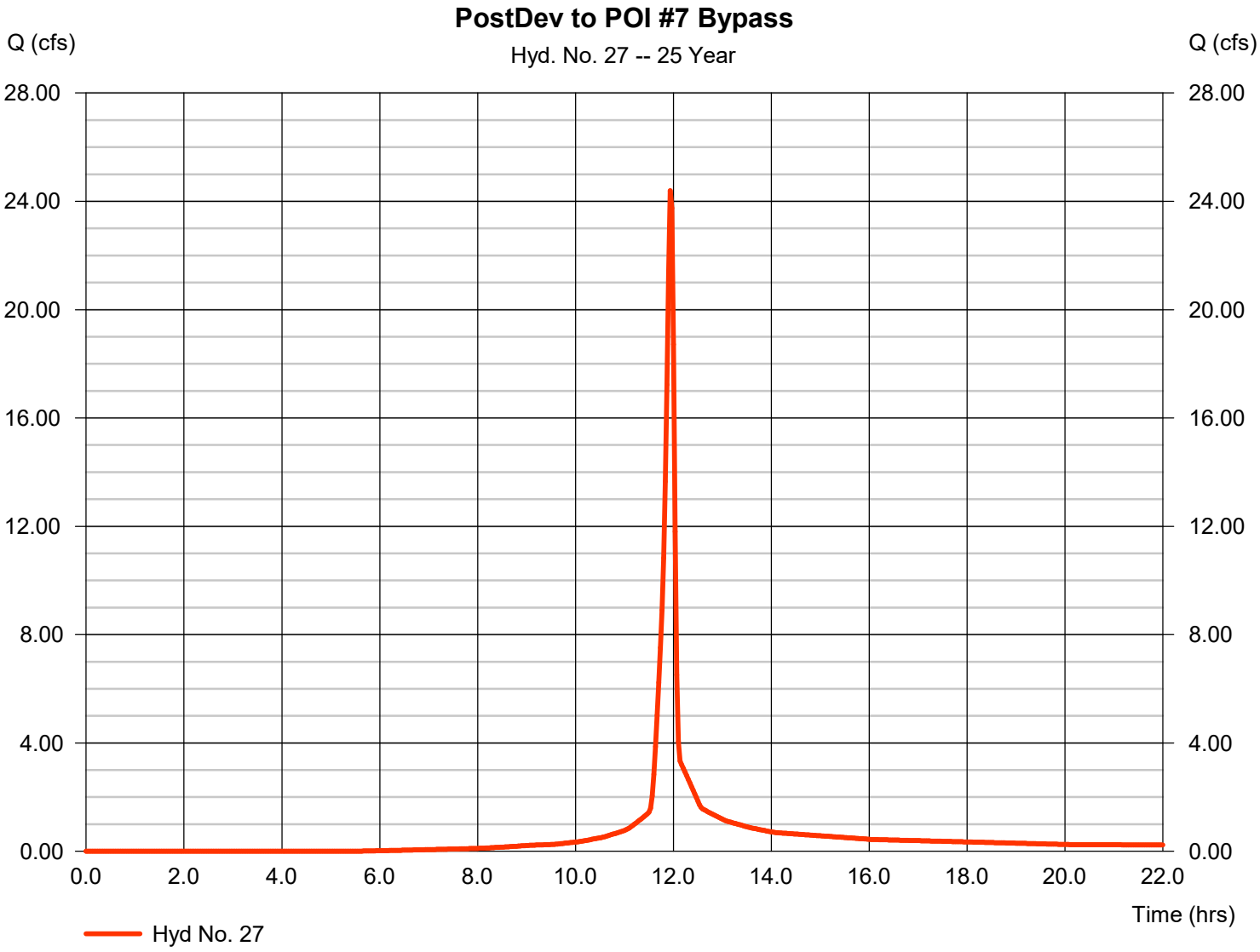


Hydrograph Report

Hyd. No. 27

PostDev to POI #7 Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 24.39 cfs
Storm frequency	= 25 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 50,637 cuft
Drainage area	= 3.640 ac	Curve number	= 82.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.03 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



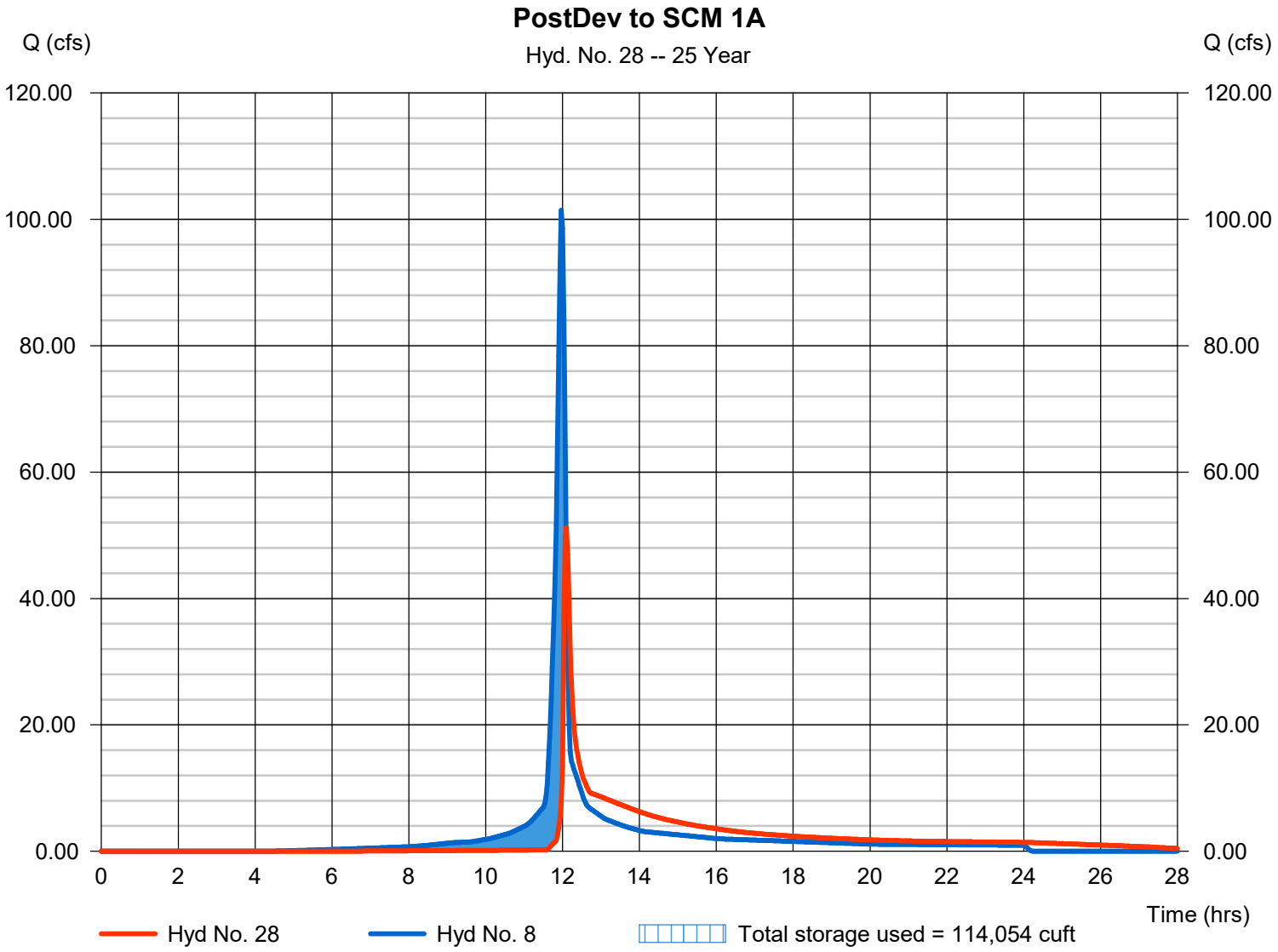
Hydrograph Report

Hyd. No. 28

PostDev to SCM 1A

Hydrograph type	=	Reservoir	Peak discharge	=	51.24 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	239,810 cuft
Inflow hyd. No.	=	8 - PostDev to SCM 1A	Max. Elevation	=	353.25 ft
Reservoir name	=	SCM 1A	Max. Storage	=	114,054 cuft

Storage Indication method used.



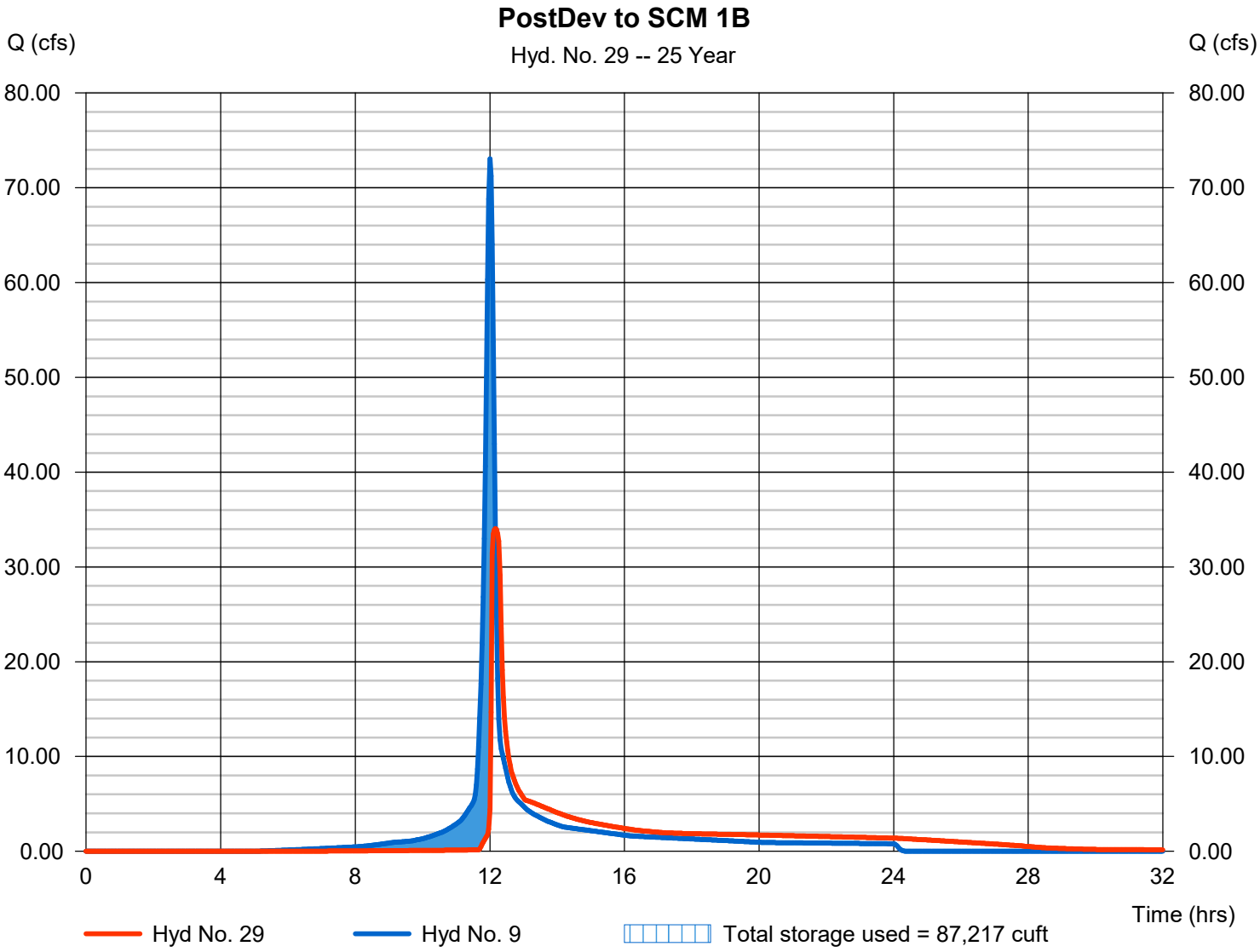
Hydrograph Report

Hyd. No. 29

PostDev to SCM 1B

Hydrograph type	=	Reservoir	Peak discharge	=	34.05 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	191,189 cuft
Inflow hyd. No.	=	9 - PostDev to SCM 1B	Max. Elevation	=	381.23 ft
Reservoir name	=	SCM 1B	Max. Storage	=	87,217 cuft

Storage Indication method used.



Hydrograph Report

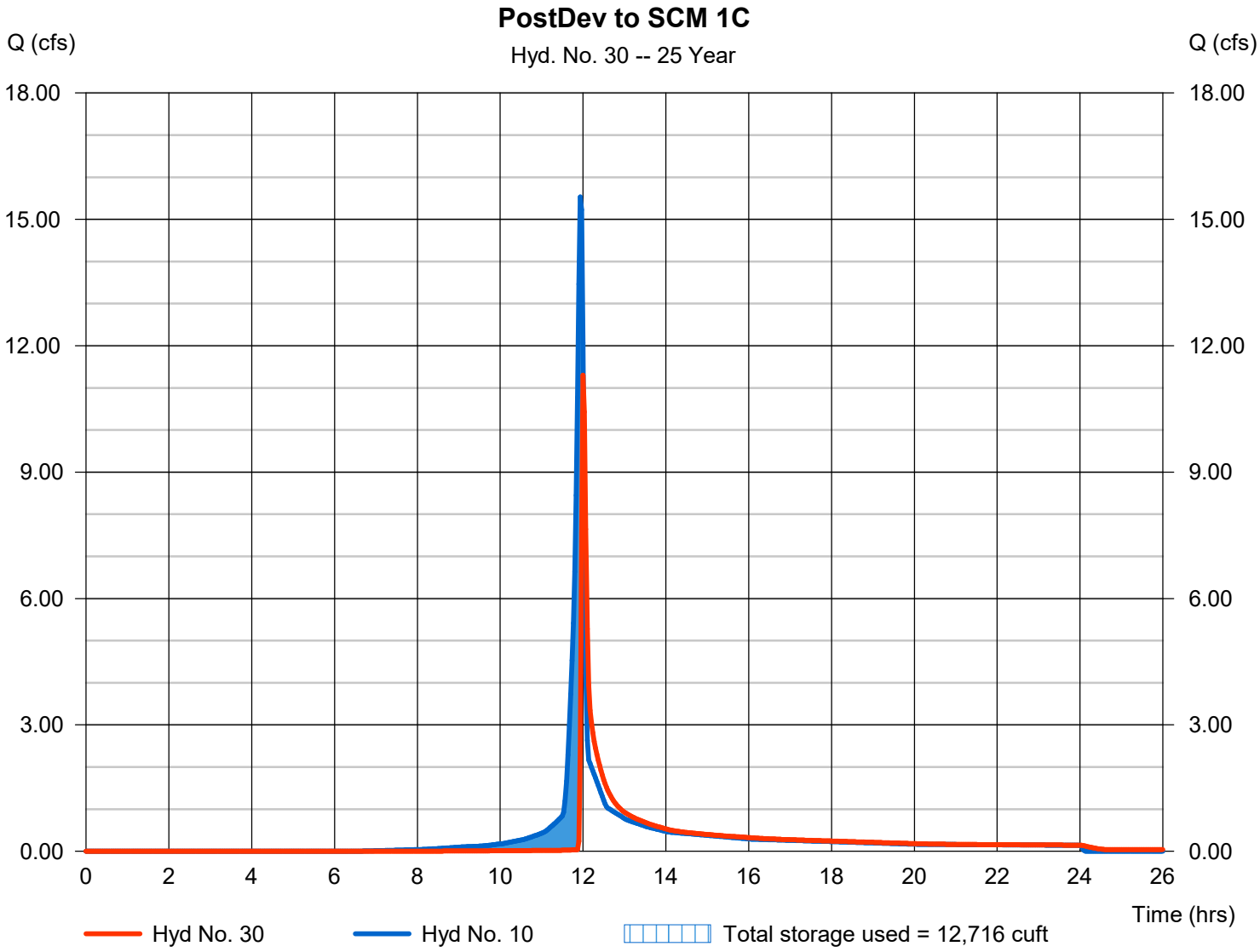
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 30

PostDev to SCM 1C

Hydrograph type	=	Reservoir	Peak discharge	=	11.30 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	30,391 cuft
Inflow hyd. No.	=	10 - PostDev to SCM 1C	Max. Elevation	=	363.74 ft
Reservoir name	=	SCM 1C	Max. Storage	=	12,716 cuft

Storage Indication method used.



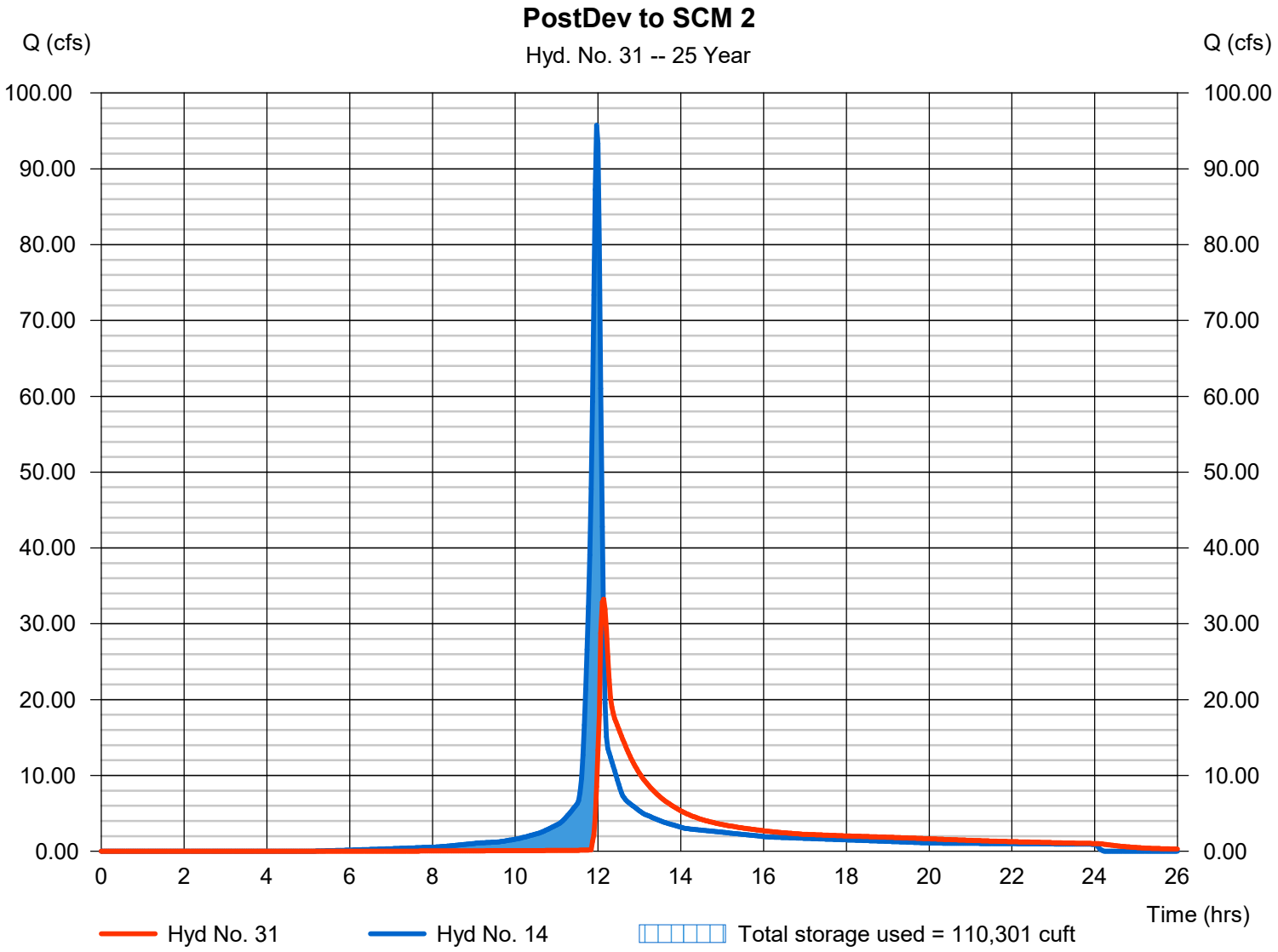
Hydrograph Report

Hyd. No. 31

PostDev to SCM 2

Hydrograph type	=	Reservoir	Peak discharge	=	33.23 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	209,790 cuft
Inflow hyd. No.	=	14 - PostDev to SCM 2	Max. Elevation	=	357.63 ft
Reservoir name	=	SCM 2	Max. Storage	=	110,301 cuft

Storage Indication method used.



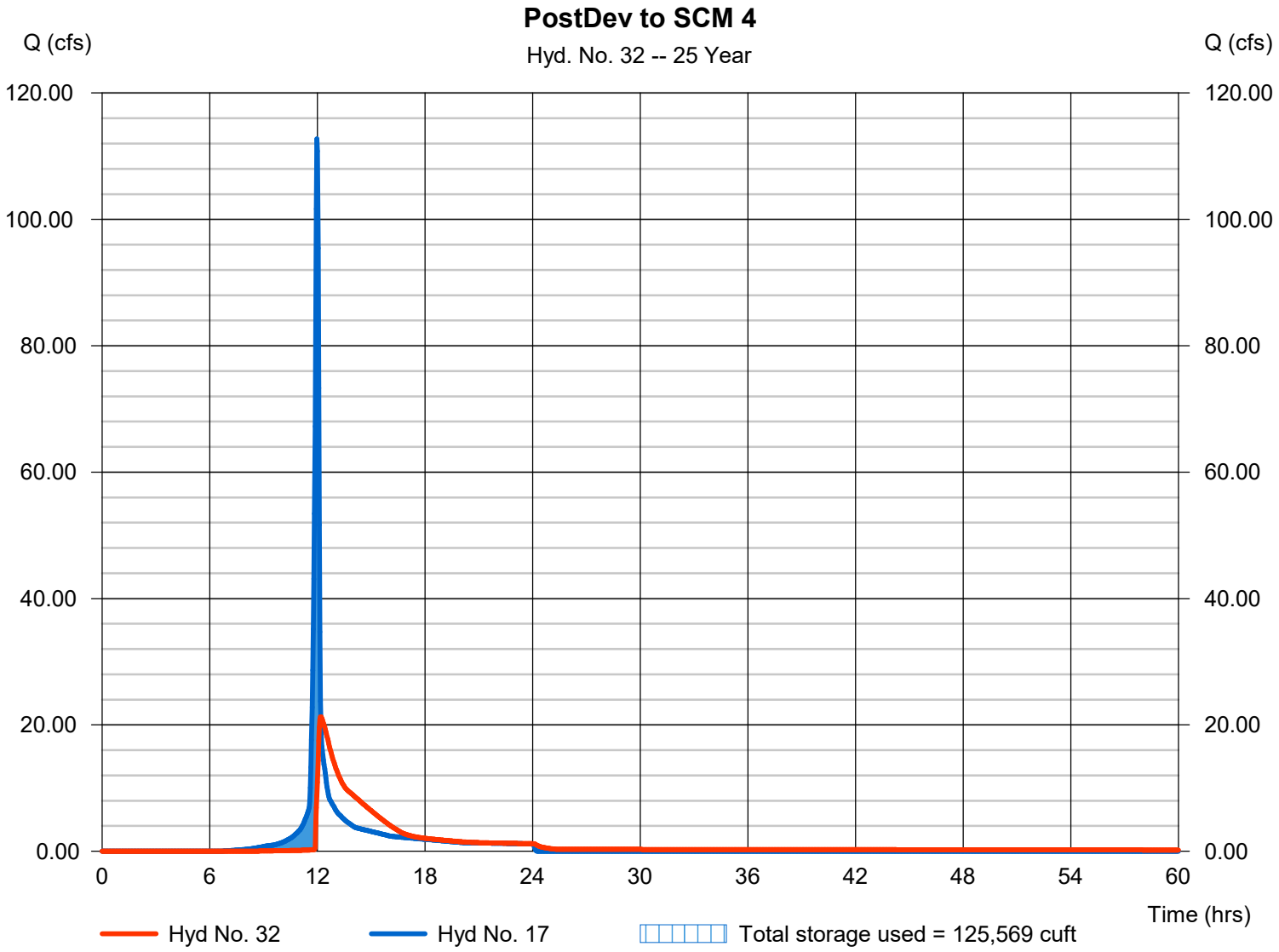
Hydrograph Report

Hyd. No. 32

PostDev to SCM 4

Hydrograph type	= Reservoir	Peak discharge	= 21.26 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 255,627 cuft
Inflow hyd. No.	= 17 - PostDev to SCM 4	Max. Elevation	= 368.06 ft
Reservoir name	= SCM 4	Max. Storage	= 125,569 cuft

Storage Indication method used.



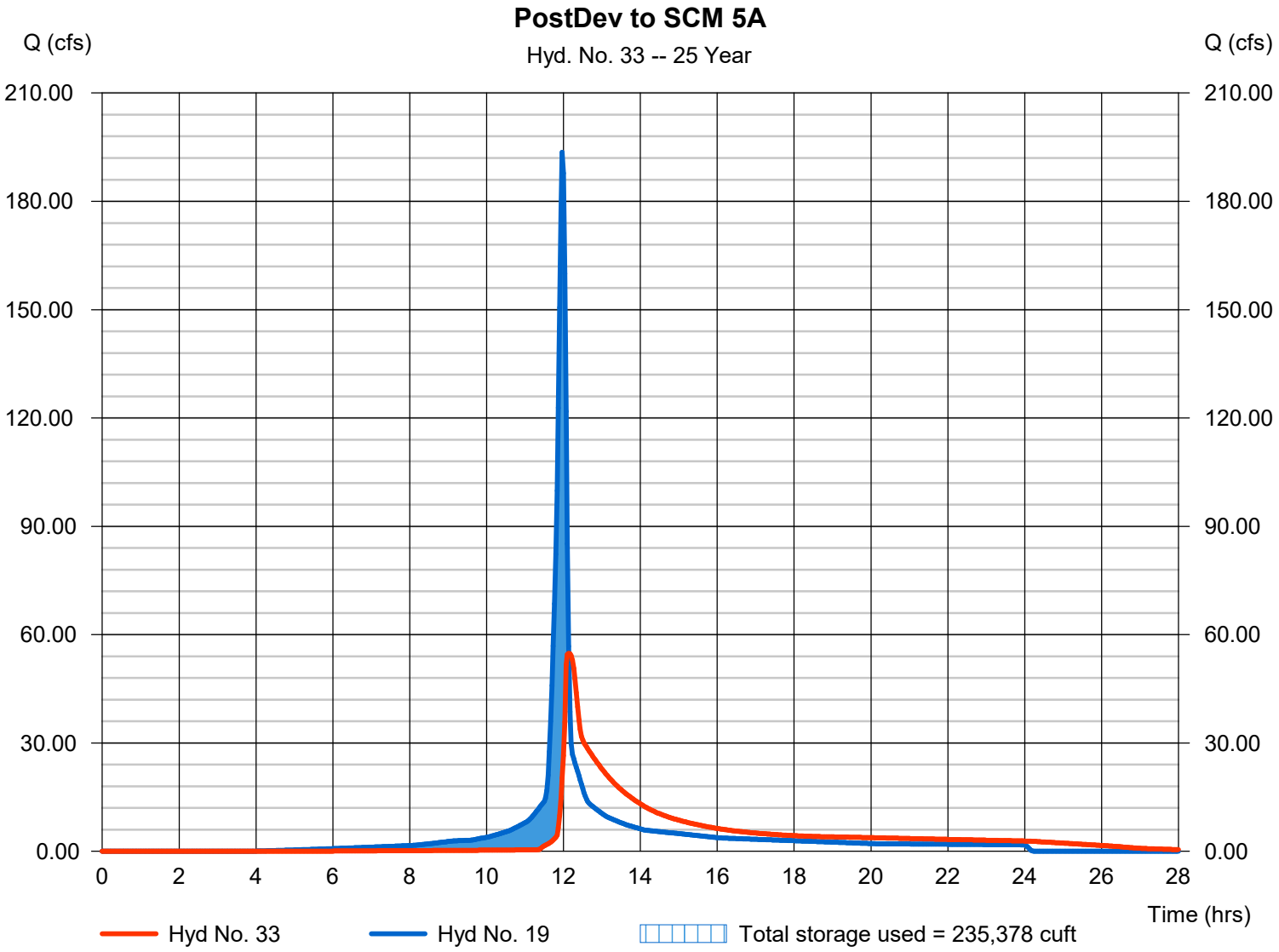
Hydrograph Report

Hyd. No. 33

PostDev to SCM 5A

Hydrograph type	=	Reservoir	Peak discharge	=	54.83 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	463,766 cuft
Inflow hyd. No.	=	19 - PostDev to SCM 5A	Max. Elevation	=	320.49 ft
Reservoir name	=	SCM 5A	Max. Storage	=	235,378 cuft

Storage Indication method used.



Hydrograph Report

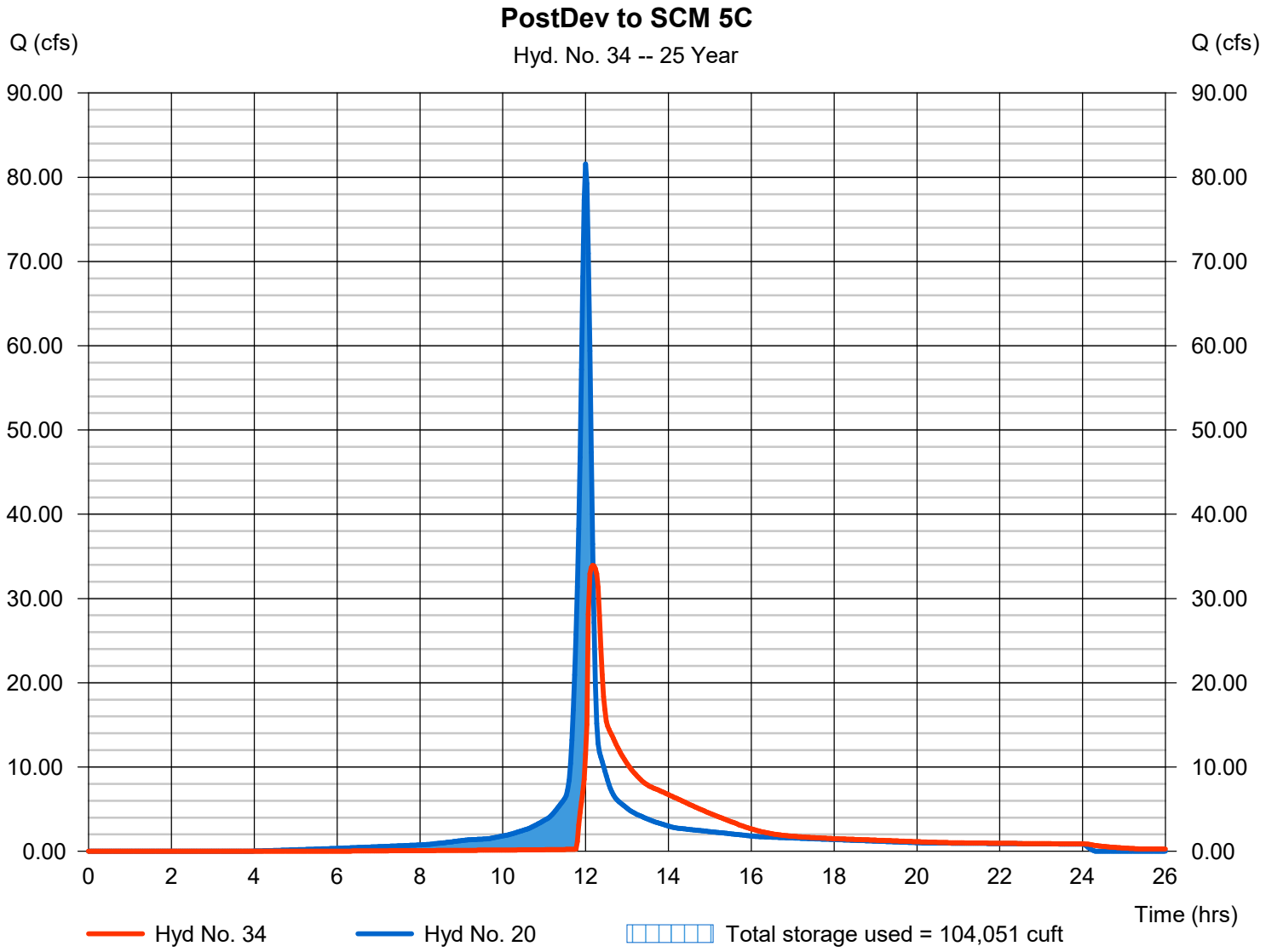
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 34

PostDev to SCM 5C

Hydrograph type	=	Reservoir	Peak discharge	=	33.93 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	217,825 cuft
Inflow hyd. No.	=	20 - PostDev to SCM 5C	Max. Elevation	=	297.18 ft
Reservoir name	=	SCM 5C	Max. Storage	=	104,051 cuft

Storage Indication method used.



Hydrograph Report

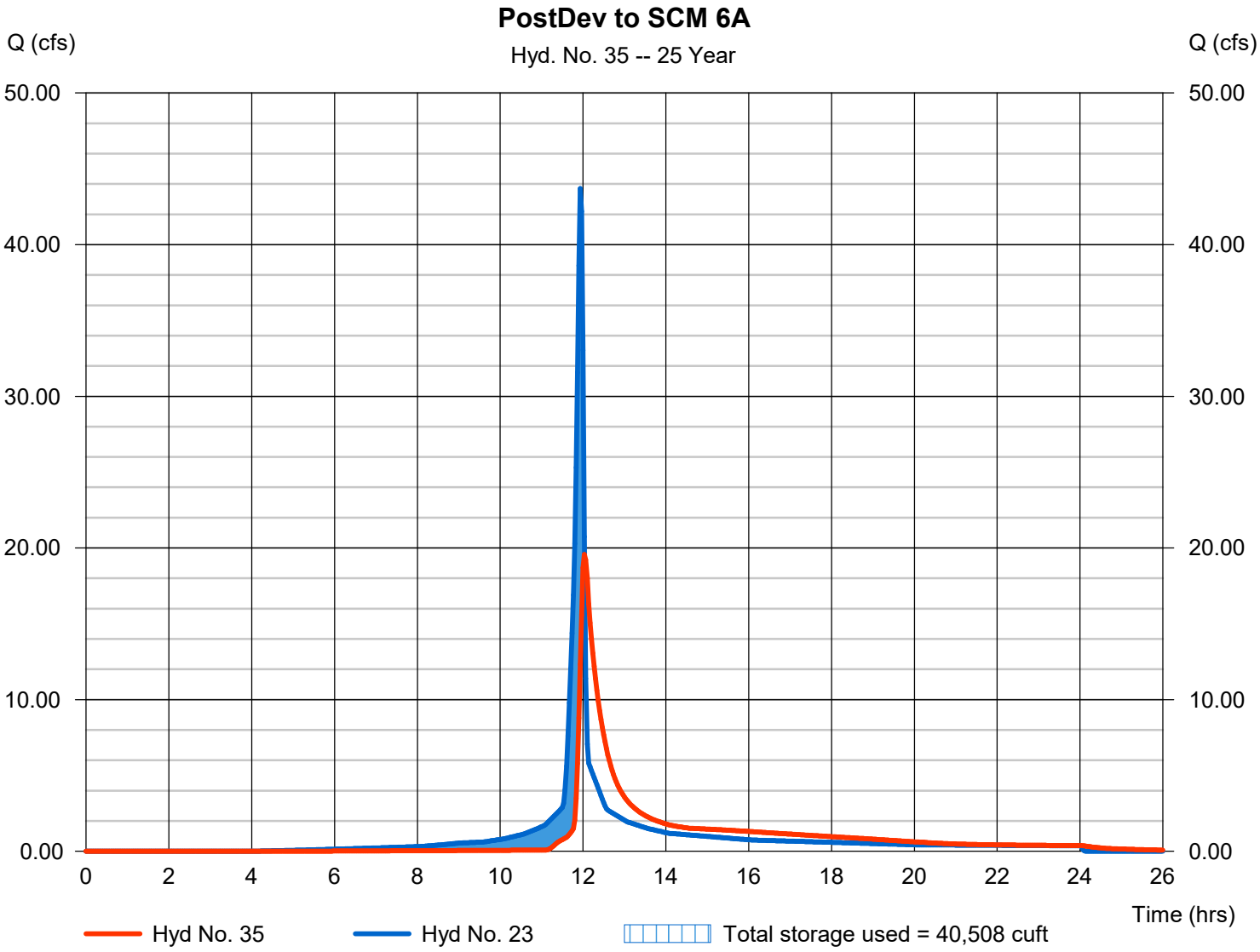
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 35

PostDev to SCM 6A

Hydrograph type	= Reservoir	Peak discharge	= 19.56 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 93,264 cuft
Inflow hyd. No.	= 23 - PostDev to SCM 6A	Max. Elevation	= 282.31 ft
Reservoir name	= SCM 6A	Max. Storage	= 40,508 cuft

Storage Indication method used.



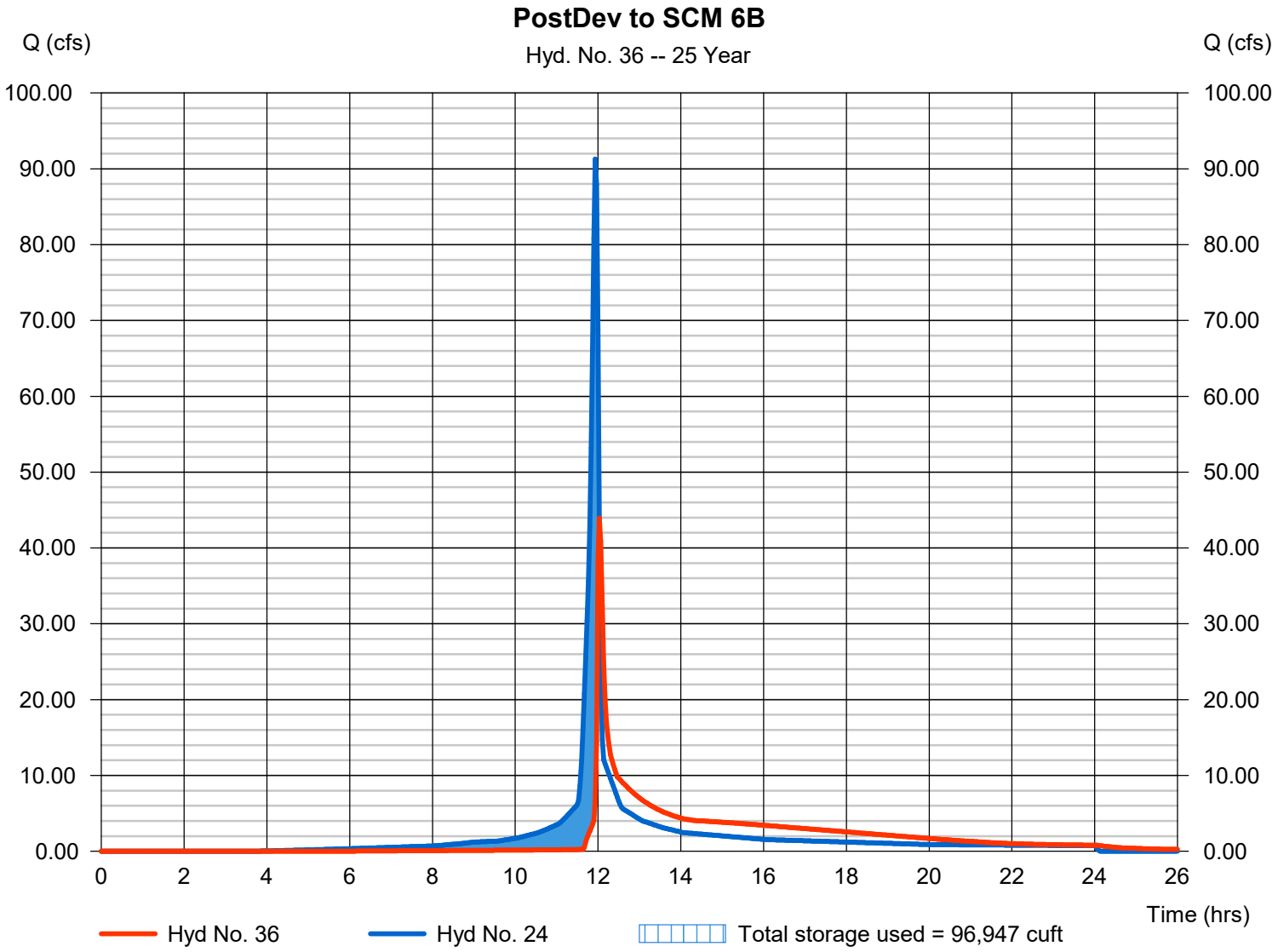
Hydrograph Report

Hyd. No. 36

PostDev to SCM 6B

Hydrograph type	=	Reservoir	Peak discharge	=	43.91 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	195,550 cuft
Inflow hyd. No.	=	24 - PostDev to SCM 6B	Max. Elevation	=	295.14 ft
Reservoir name	=	SCM 6B	Max. Storage	=	96,947 cuft

Storage Indication method used.



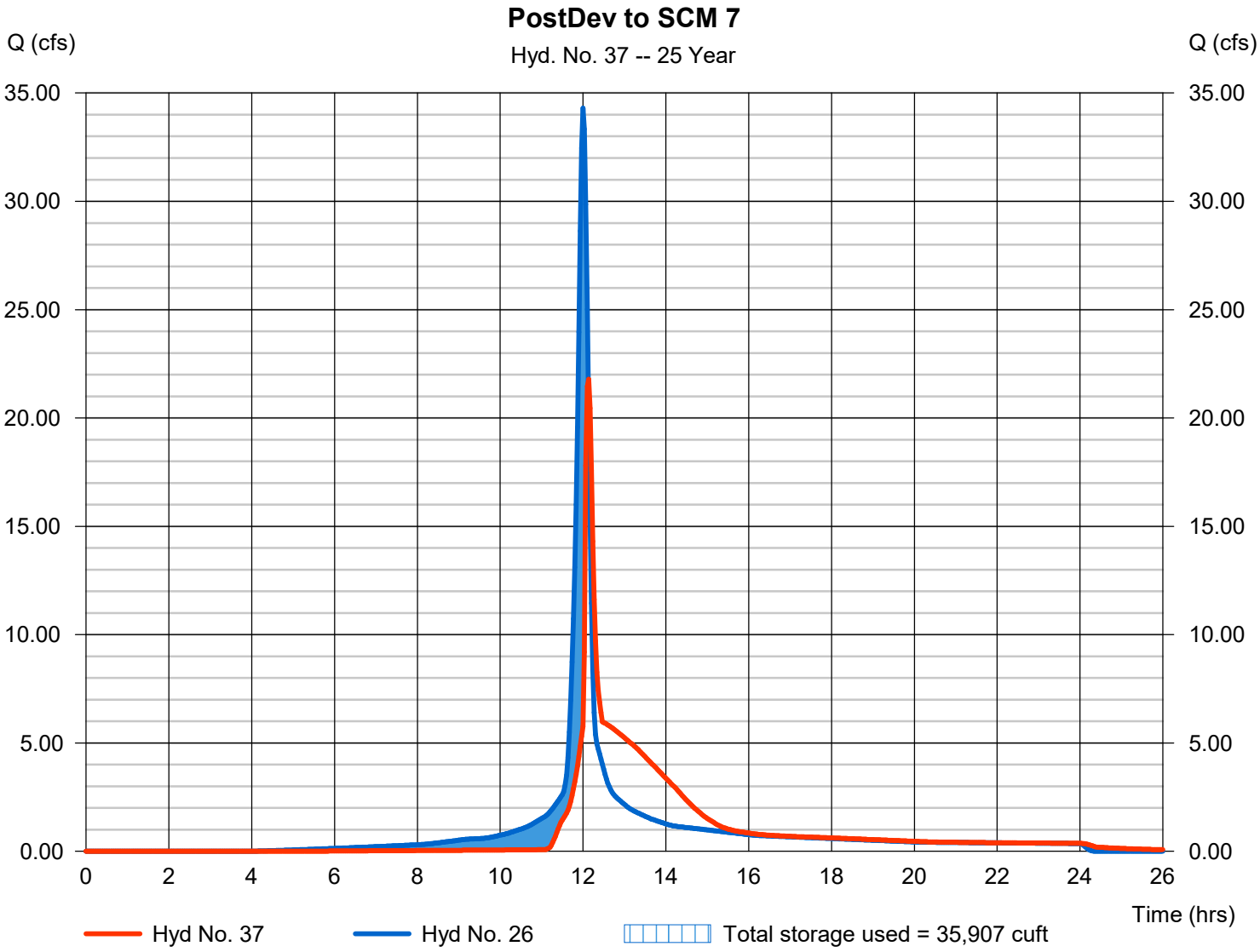
Hydrograph Report

Hyd. No. 37

PostDev to SCM 7

Hydrograph type	=	Reservoir	Peak discharge	=	21.78 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	92,290 cuft
Inflow hyd. No.	=	26 - PostDev to SCM 7	Max. Elevation	=	327.46 ft
Reservoir name	=	SCM 7	Max. Storage	=	35,907 cuft

Storage Indication method used.

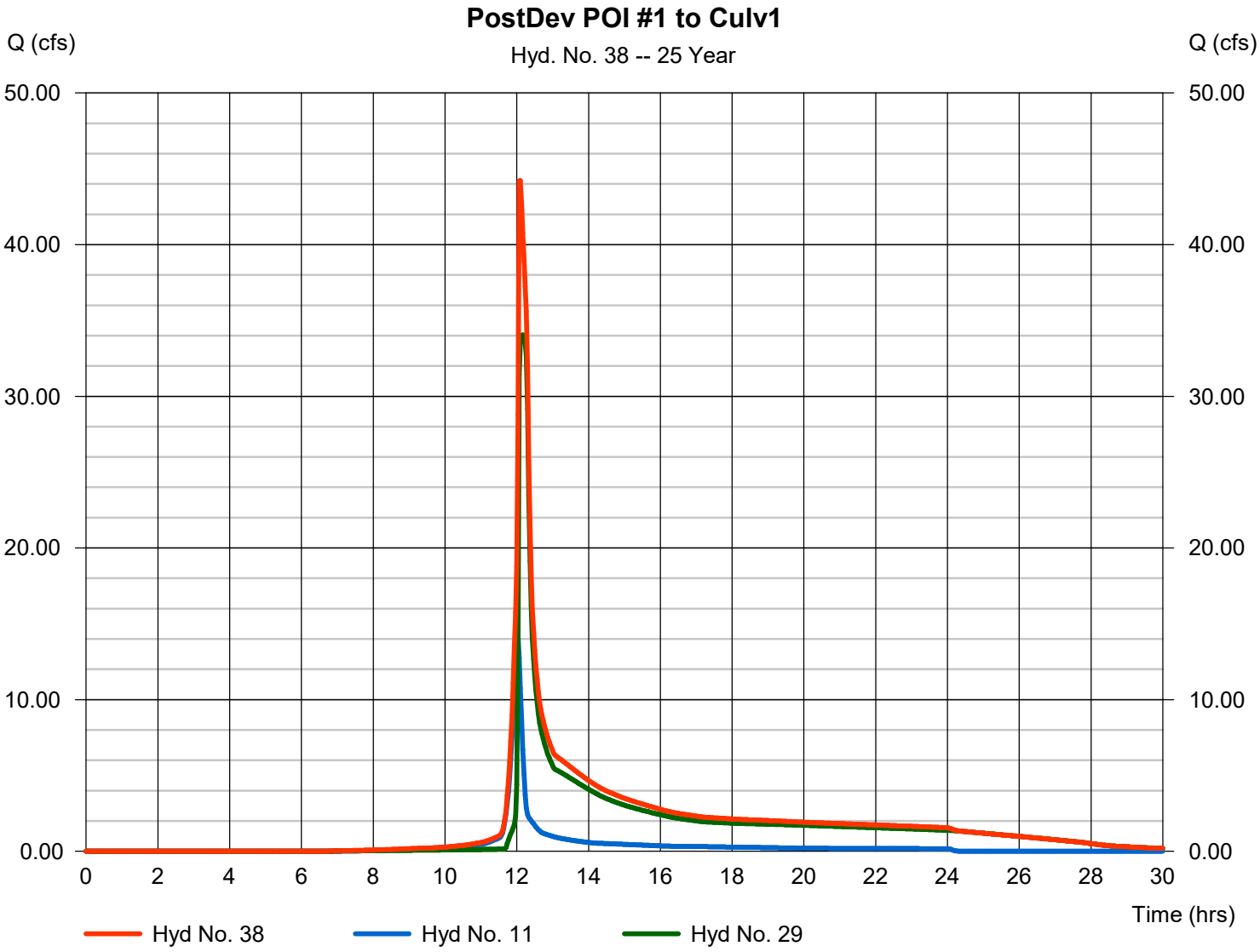


Hydrograph Report

Hyd. No. 38

PostDev POI #1 to Culv1

Hydrograph type	= Combine	Peak discharge	= 44.23 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 228,619 cuft
Inflow hyds.	= 11, 29	Contrib. drain. area	= 2.720 ac

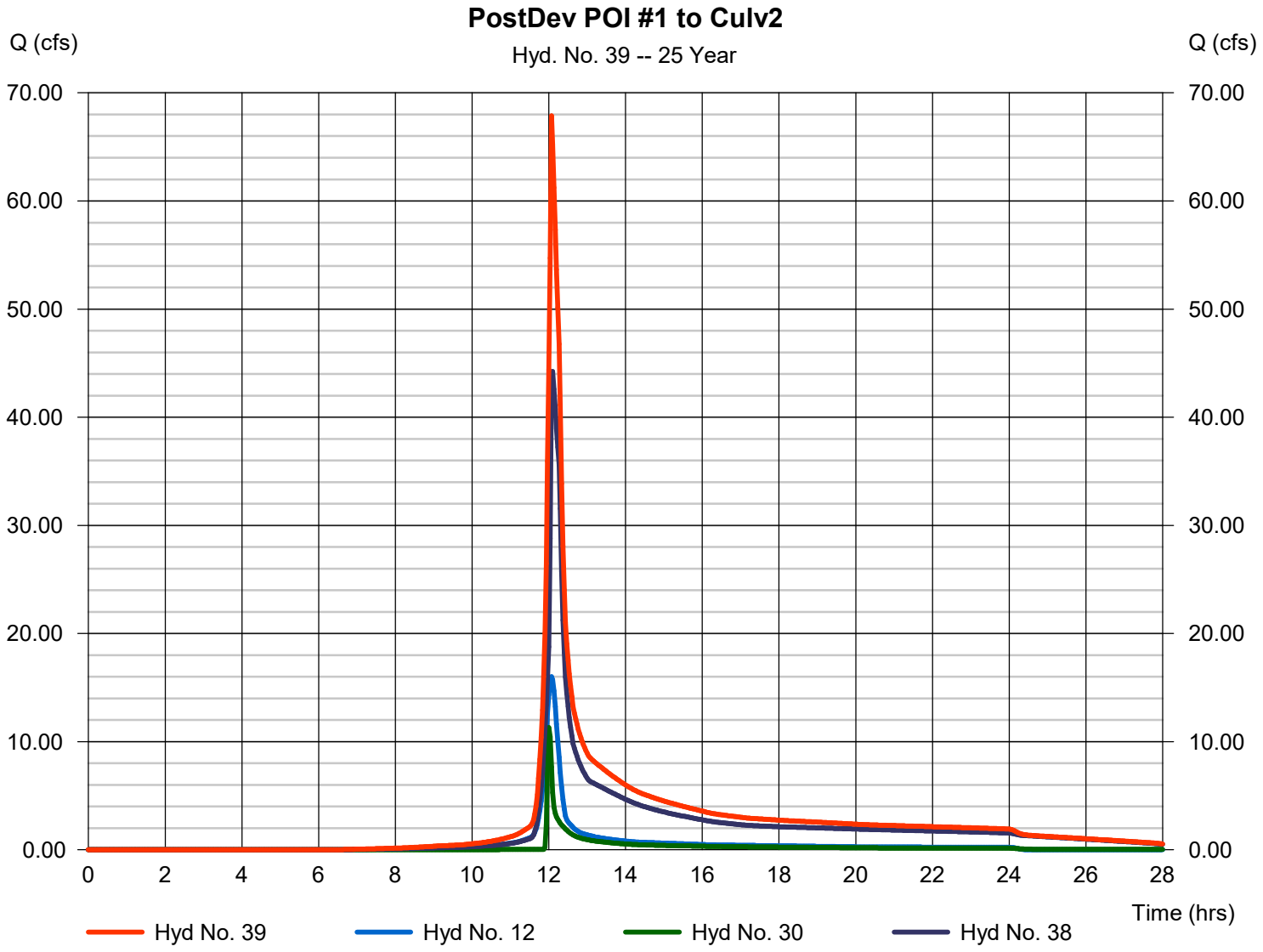


Hydrograph Report

Hyd. No. 39

PostDev POI #1 to Culv2

Hydrograph type	= Combine	Peak discharge	= 67.86 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 309,196 cuft
Inflow hyds.	= 12, 30, 38	Contrib. drain. area	= 3.640 ac

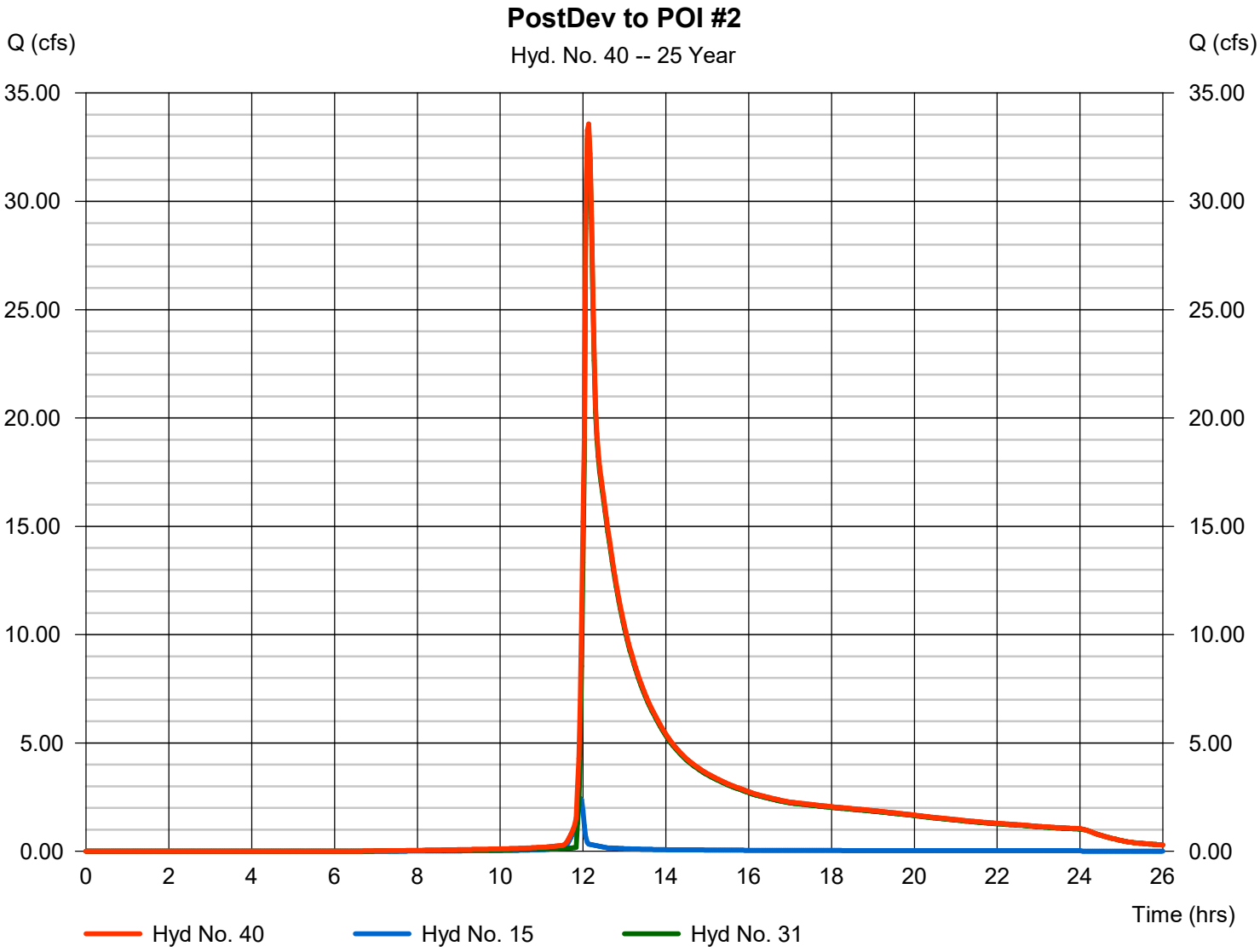


Hydrograph Report

Hyd. No. 40

PostDev to POI #2

Hydrograph type	= Combine	Peak discharge	= 33.57 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 214,845 cuft
Inflow hyds.	= 15, 31	Contrib. drain. area	= 0.370 ac

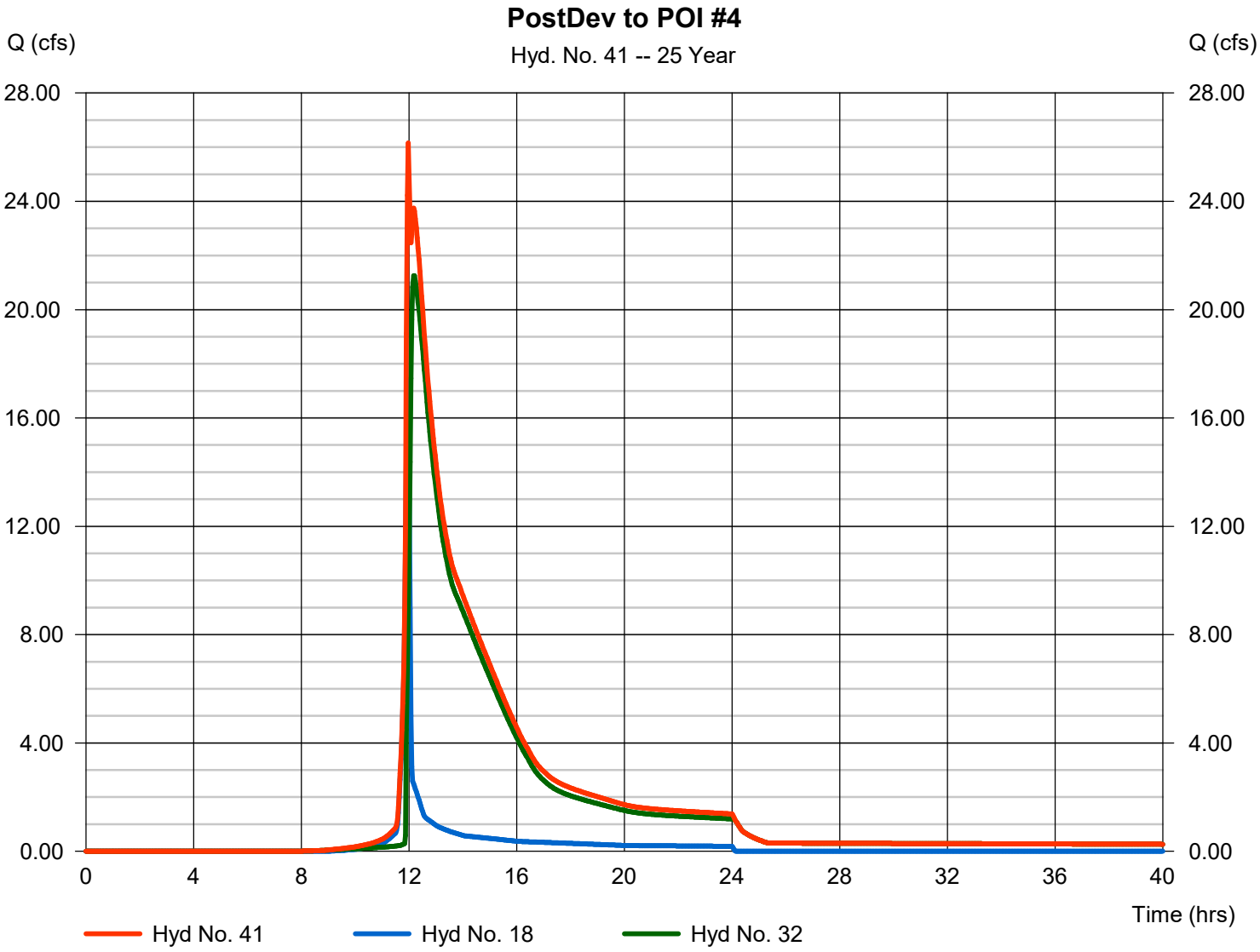


Hydrograph Report

Hyd. No. 41

PostDev to POI #4

Hydrograph type	=	Combine	Peak discharge	=	26.15 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	290,611 cuft
Inflow hyds.	=	18, 32	Contrib. drain. area	=	3.670 ac

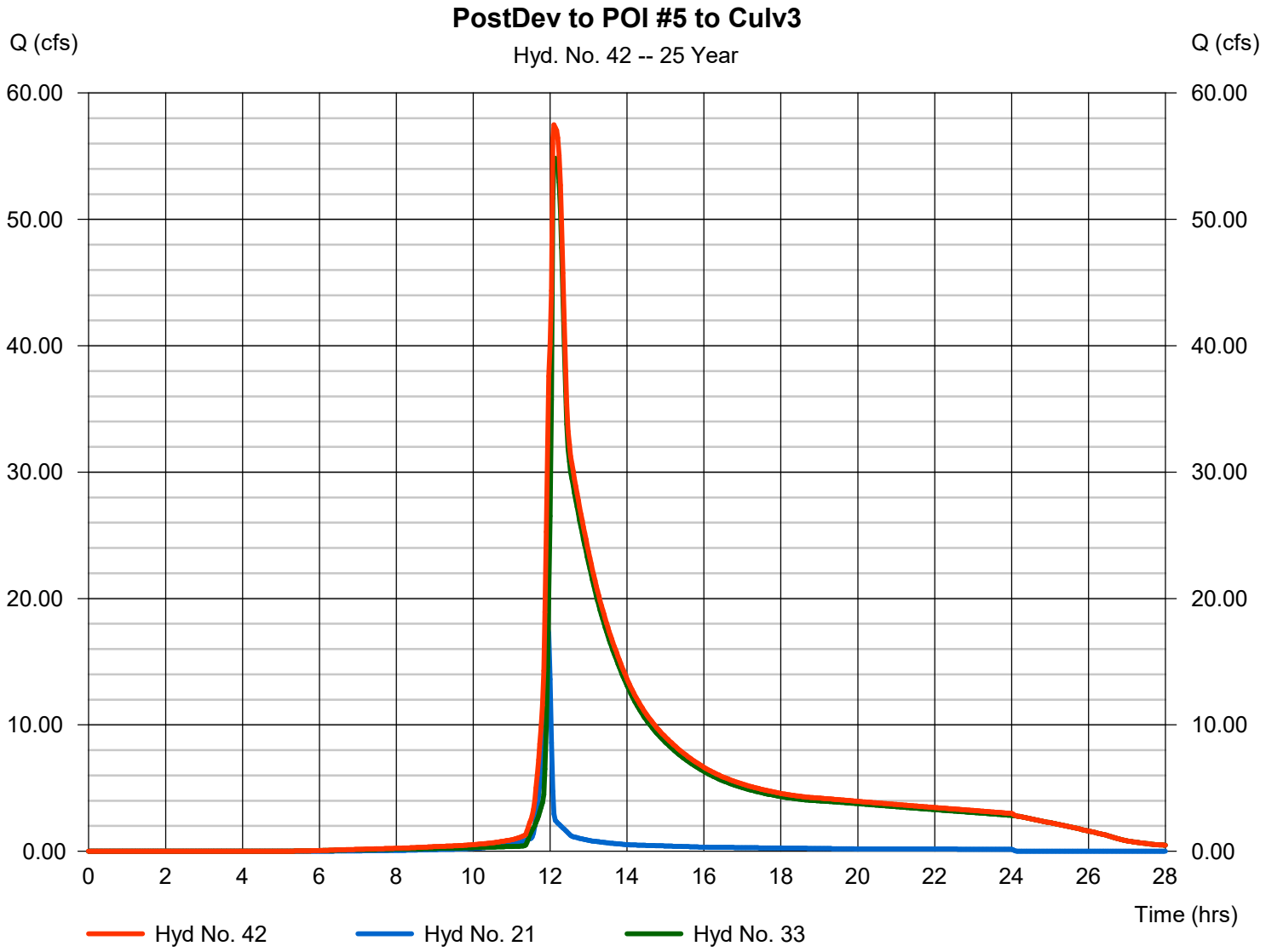


Hydrograph Report

Hyd. No. 42

PostDev to POI #5 to Culv3

Hydrograph type	= Combine	Peak discharge	= 57.48 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 500,218 cuft
Inflow hyds.	= 21, 33	Contrib. drain. area	= 2.710 ac

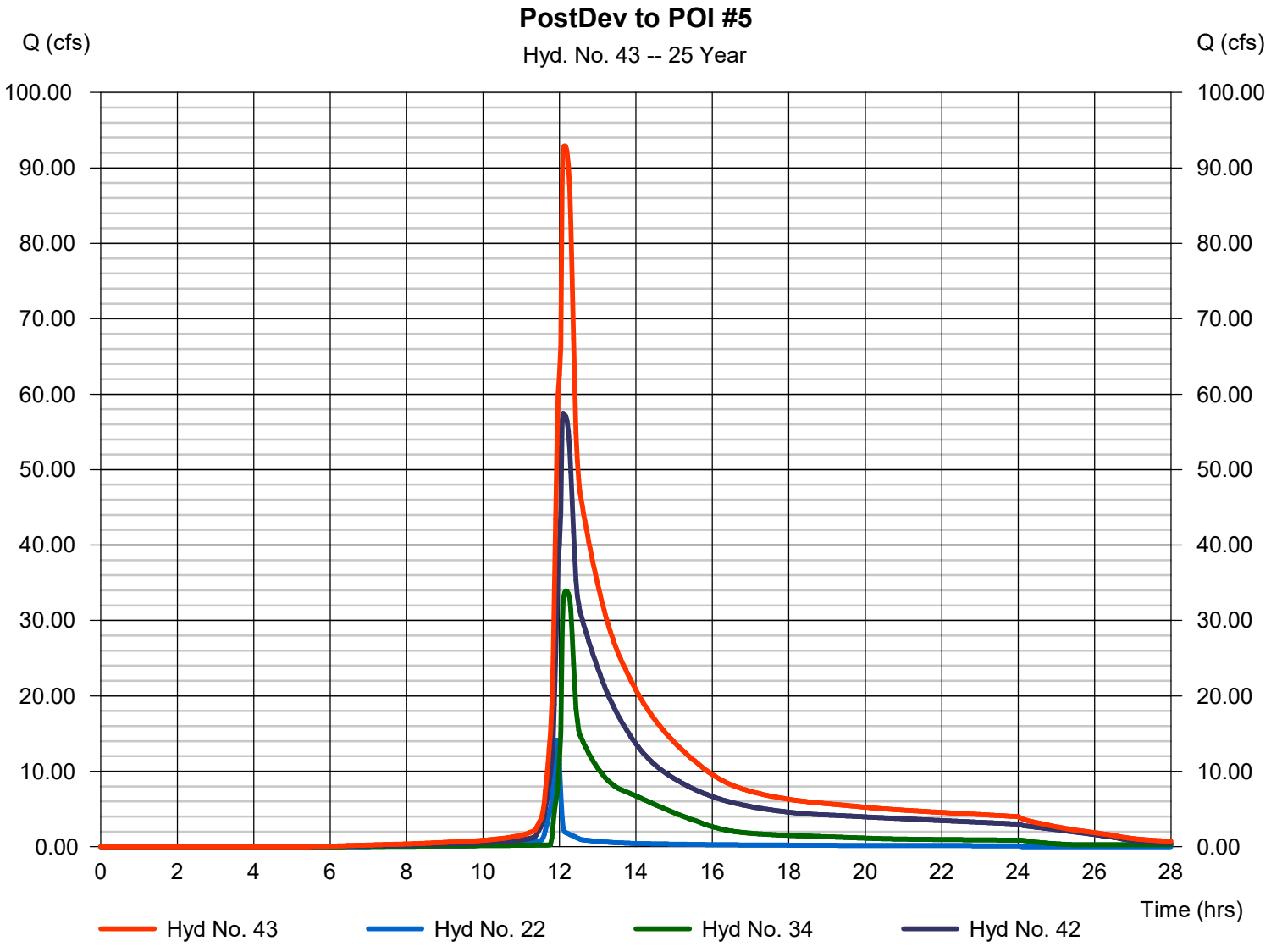


Hydrograph Report

Hyd. No. 43

PostDev to POI #5

Hydrograph type	= Combine	Peak discharge	= 92.89 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 747,192 cuft
Inflow hyds.	= 22, 34, 42	Contrib. drain. area	= 2.190 ac

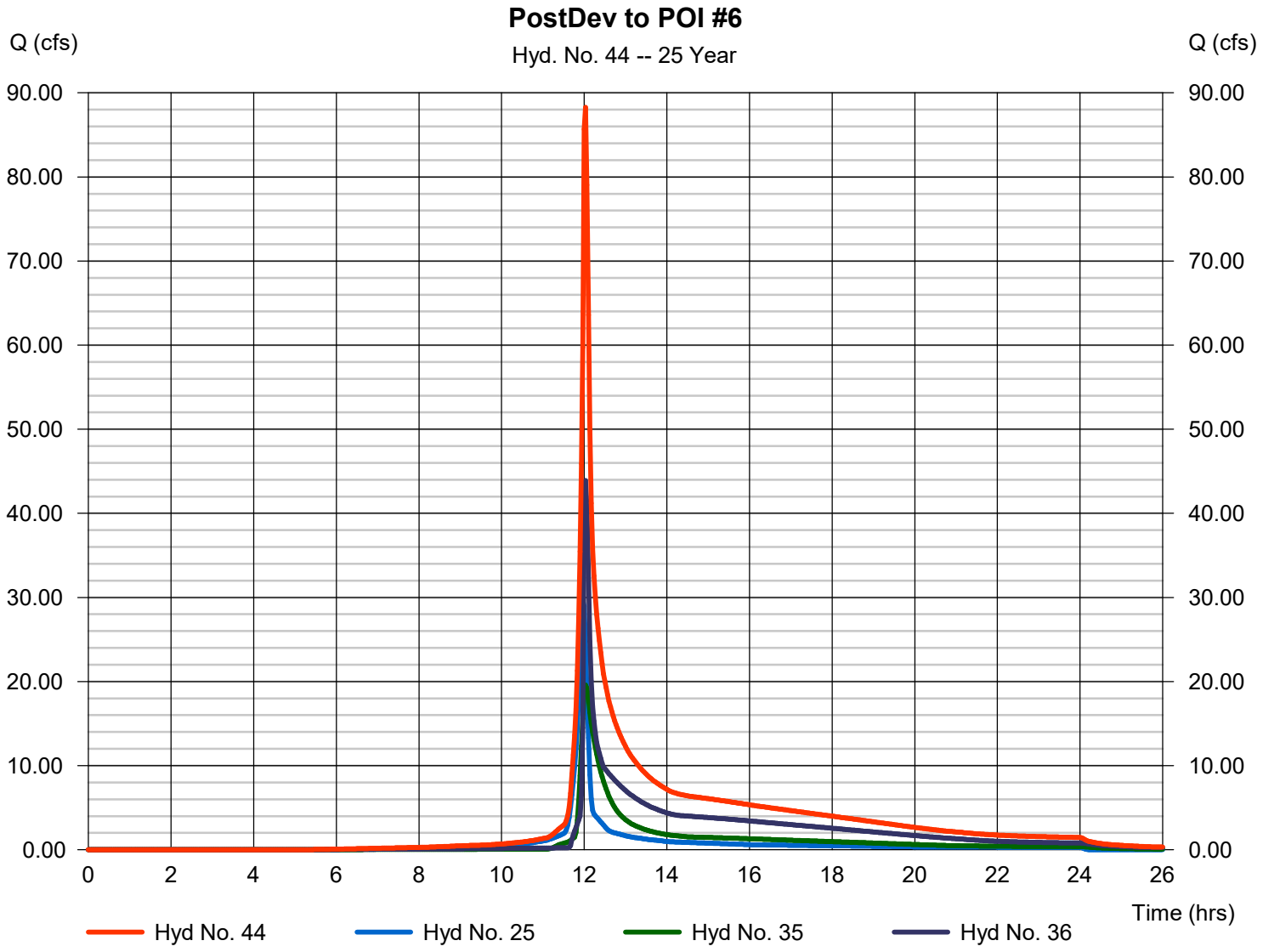


Hydrograph Report

Hyd. No. 44

PostDev to POI #6

Hydrograph type	= Combine	Peak discharge	= 88.28 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 358,323 cuft
Inflow hyds.	= 25, 35, 36	Contrib. drain. area	= 4.590 ac

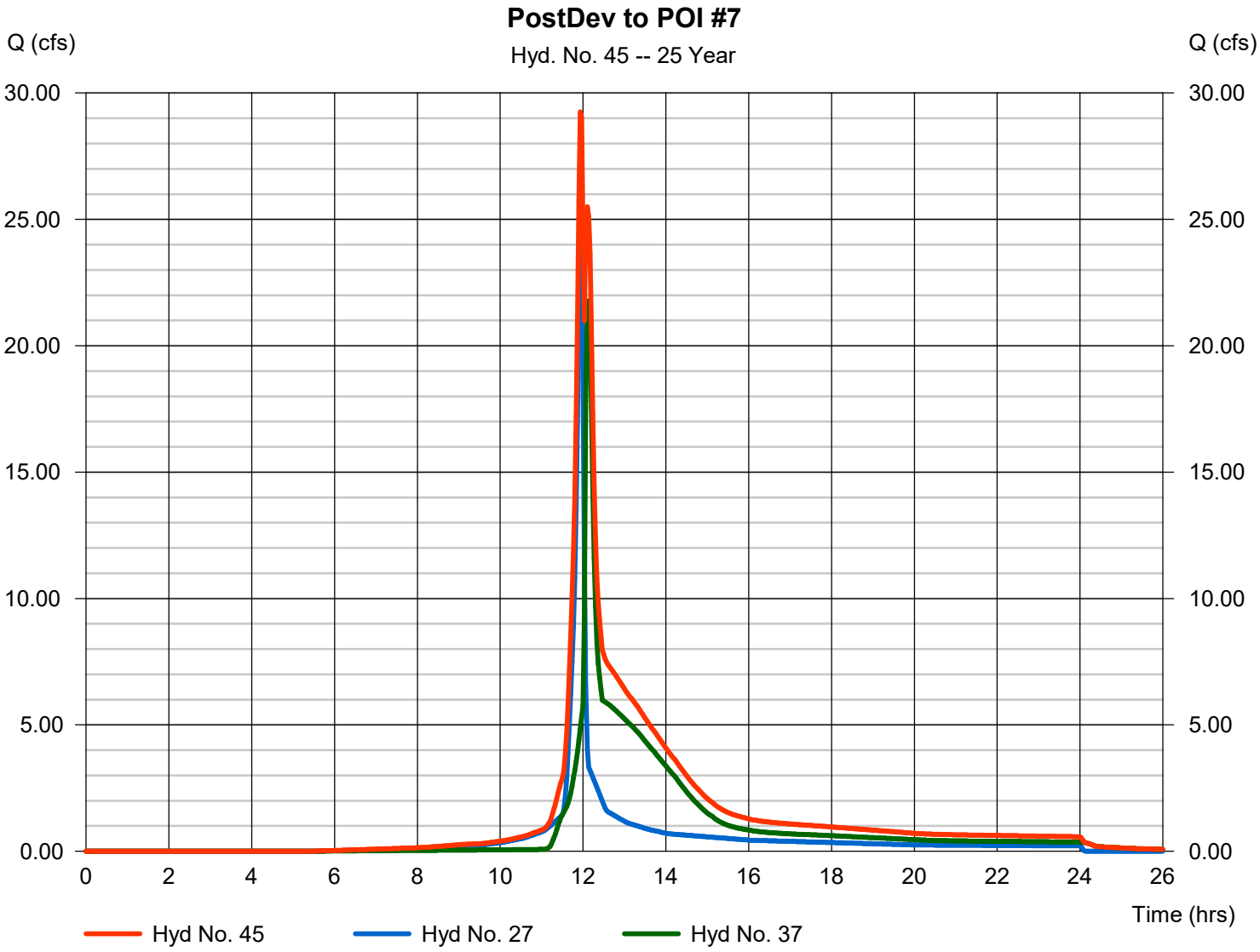


Hydrograph Report

Hyd. No. 45

PostDev to POI #7

Hydrograph type	=	Combine	Peak discharge	=	29.25 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	142,927 cuft
Inflow hyds.	=	27, 37	Contrib. drain. area	=	3.640 ac

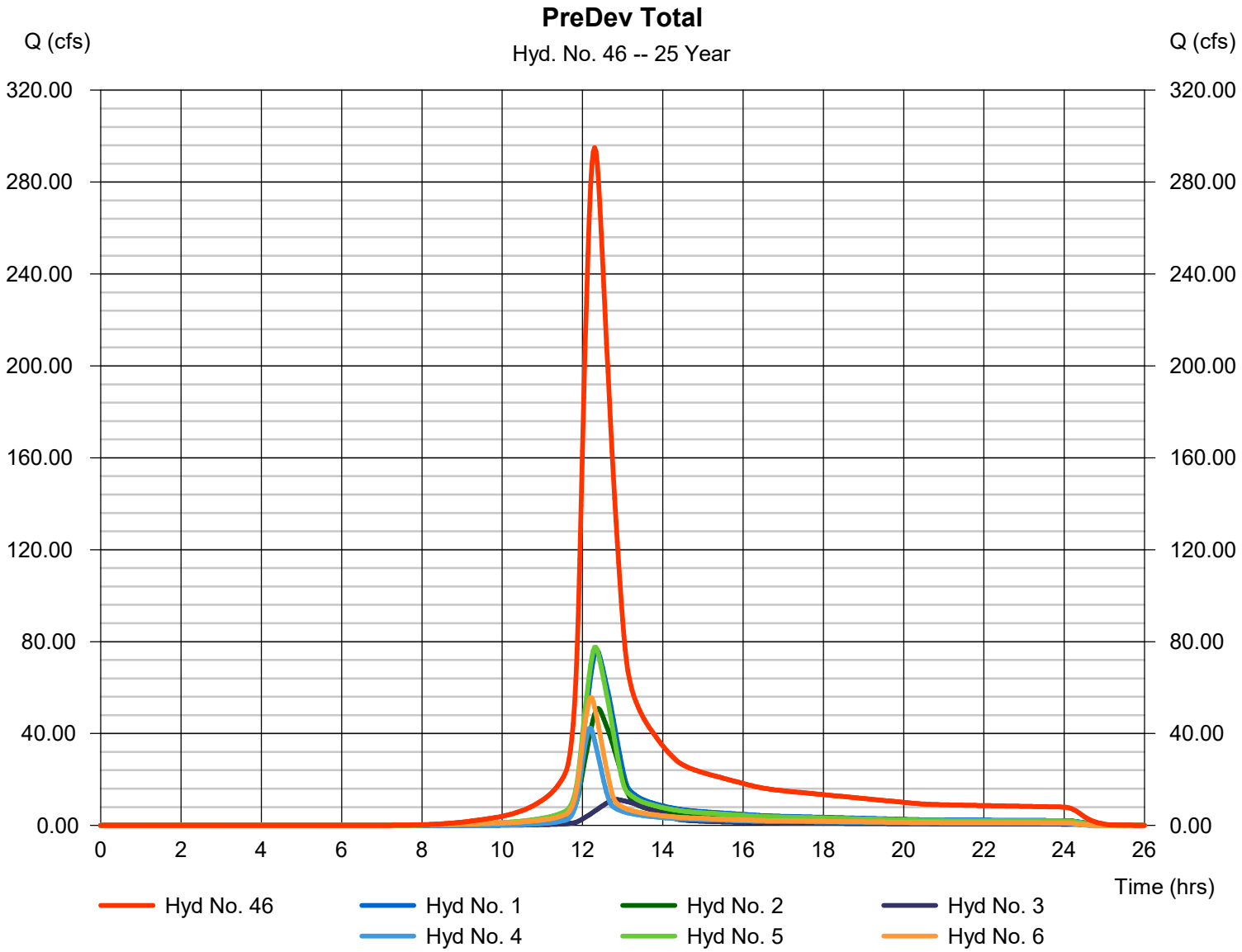


Hydrograph Report

Hyd. No. 46

PreDev Total

Hydrograph type	=	Combine	Peak discharge	=	294.99 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,616,660 cuft
Inflow hyds.	=	1, 2, 3, 4, 5, 6	Contrib. drain. area	=	139.020 ac

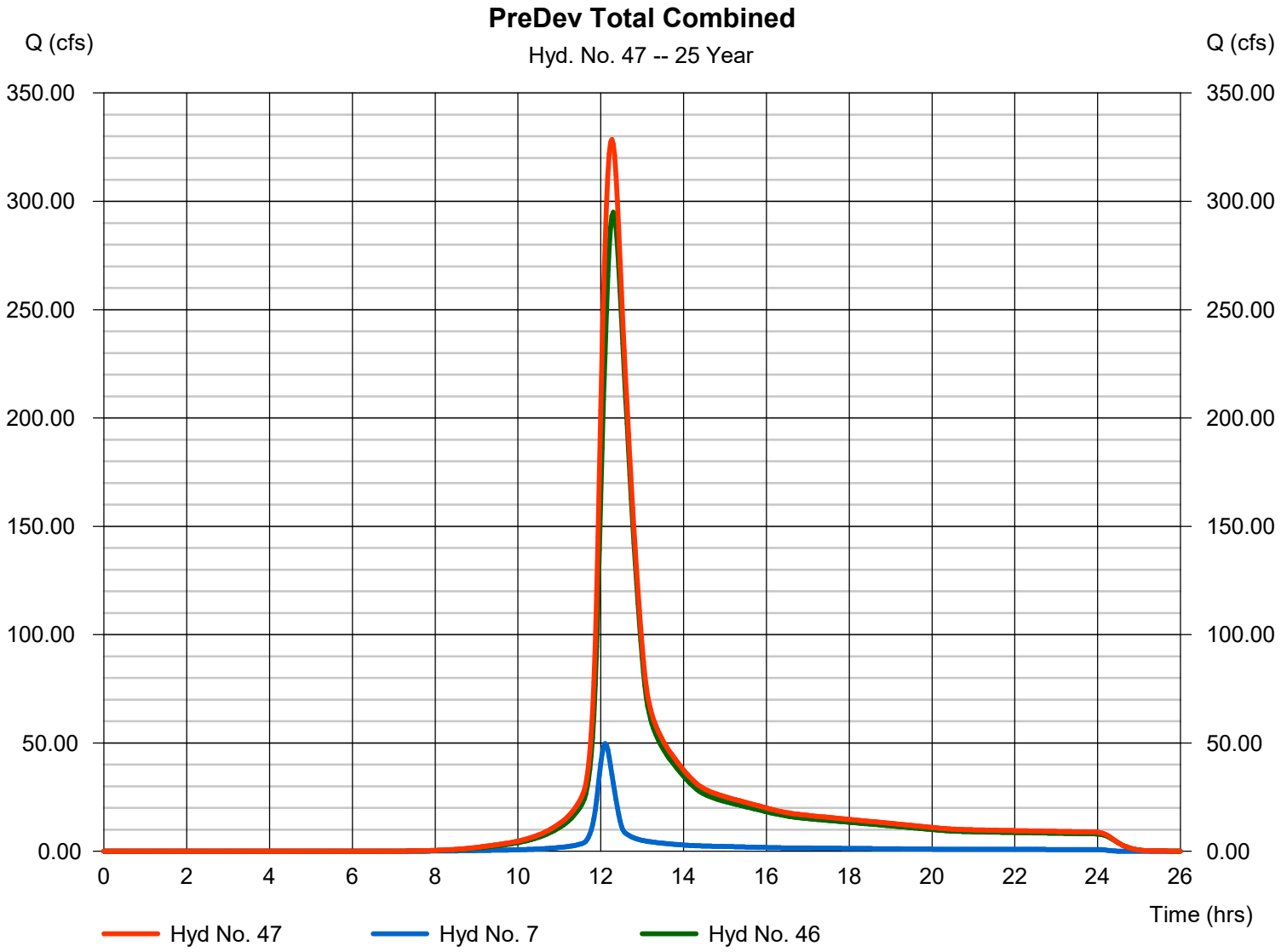


Hydrograph Report

Hyd. No. 47

PreDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	328.59 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.27 hrs
Time interval	=	2 min	Hyd. volume	=	1,788,268 cuft
Inflow hyds.	=	7, 46	Contrib. drain. area	=	13.250 ac



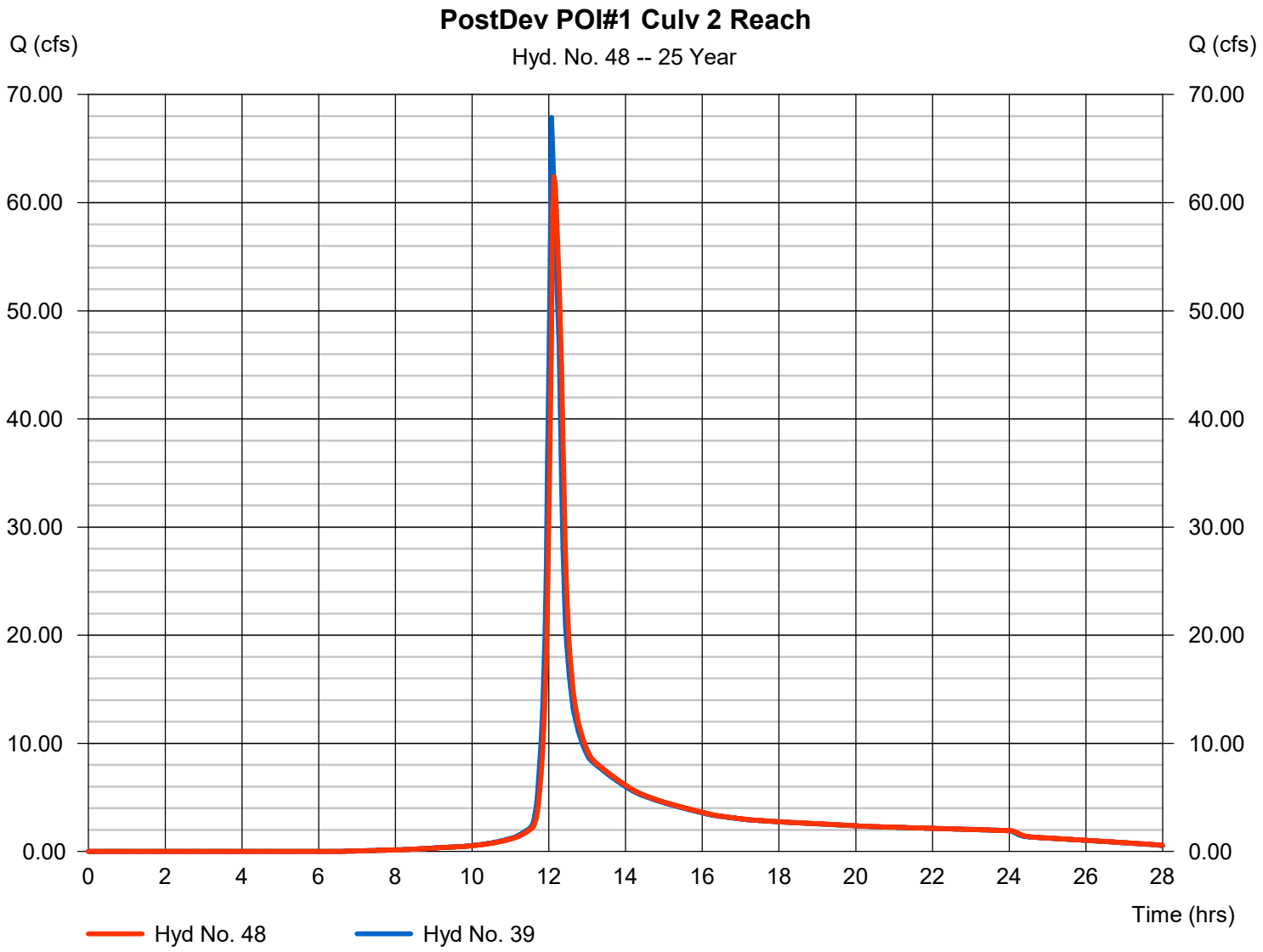
Hydrograph Report

Hyd. No. 48

PostDev POI#1 Culv 2 Reach

Hydrograph type	=	Reach	Peak discharge	=	62.42 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	309,183 cuft
Inflow hyd. No.	=	39 - PostDev POI #1 to Culv2	Section type	=	Trapezoidal
Reach length	=	992.0 ft	Channel slope	=	1.2 %
Manning's n	=	0.040	Bottom width	=	5.0 ft
Side slope	=	1.0:1	Max. depth	=	3.5 ft
Rating curve x	=	1.418	Rating curve m	=	1.427
Ave. velocity	=	4.51 ft/s	Routing coeff.	=	0.5603

Modified Att-Kin routing method used.

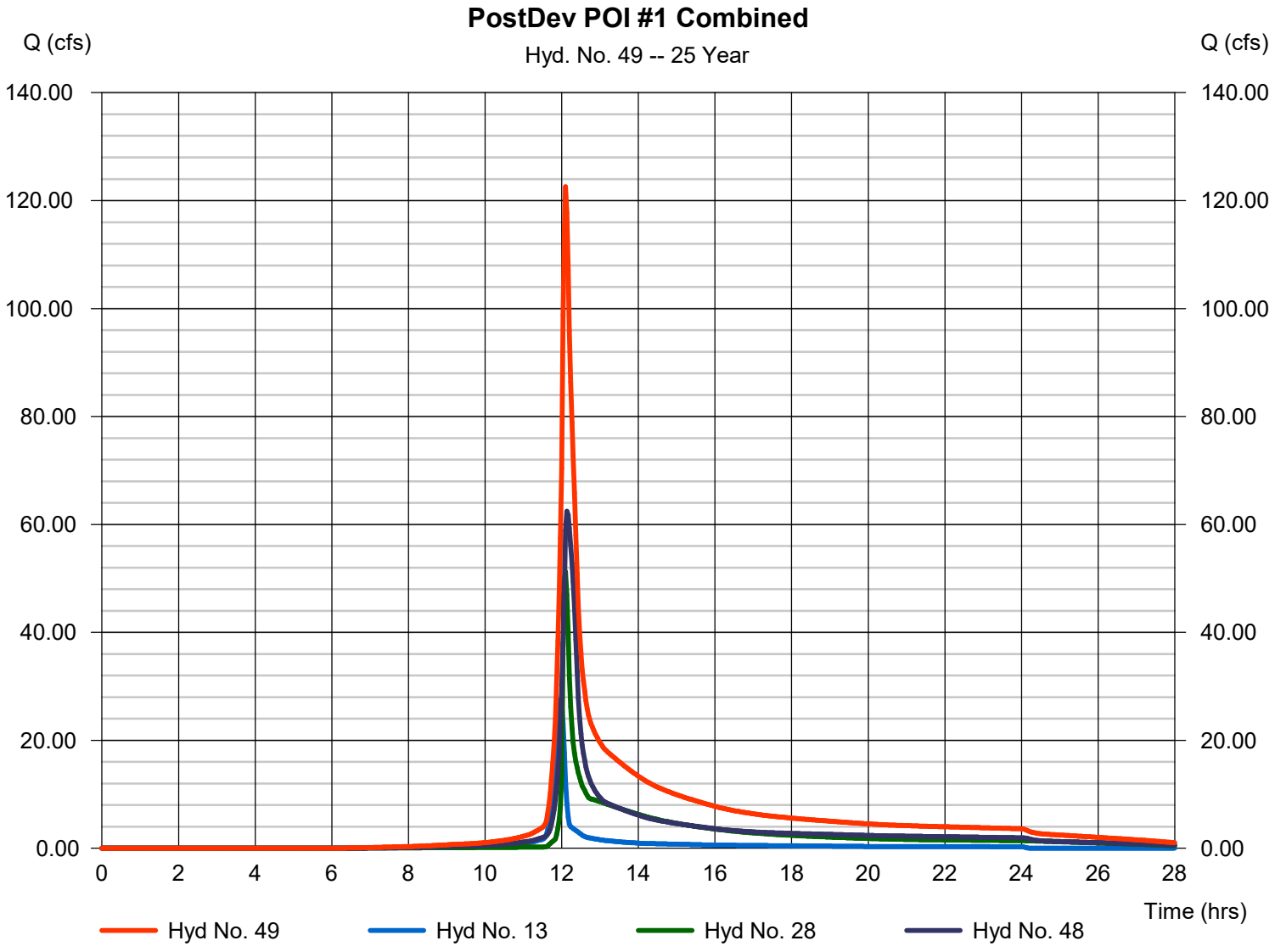


Hydrograph Report

Hyd. No. 49

PostDev POI #1 Combined

Hydrograph type	=	Combine	Peak discharge	=	122.57 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	612,658 cuft
Inflow hyds.	=	13, 28, 48	Contrib. drain. area	=	4.520 ac

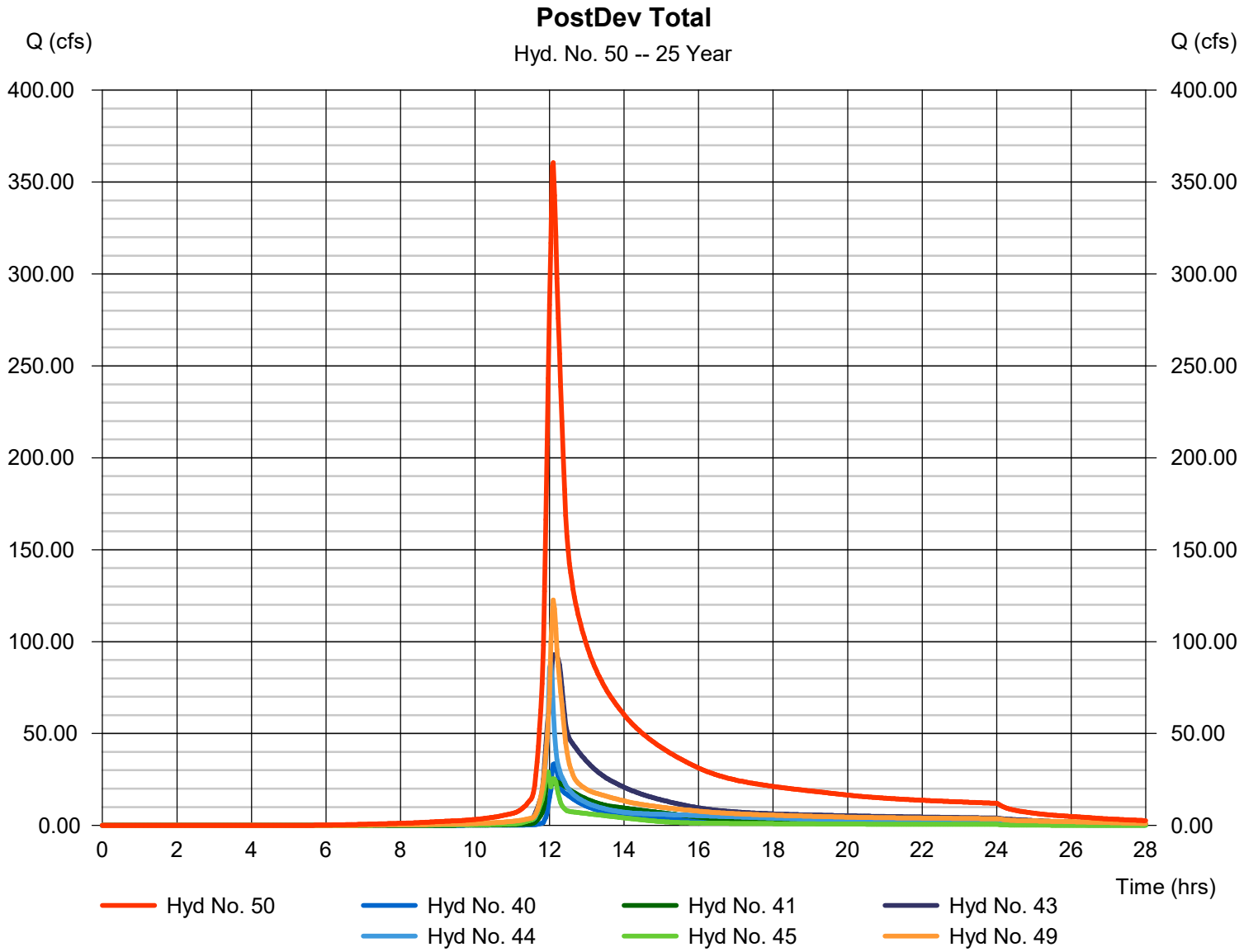


Hydrograph Report

Hyd. No. 50

PostDev Total

Hydrograph type	= Combine	Peak discharge	= 360.50 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 2,366,553 cuft
Inflow hyds.	= 40, 41, 43, 44, 45, 49	Contrib. drain. area	= 0.000 ac

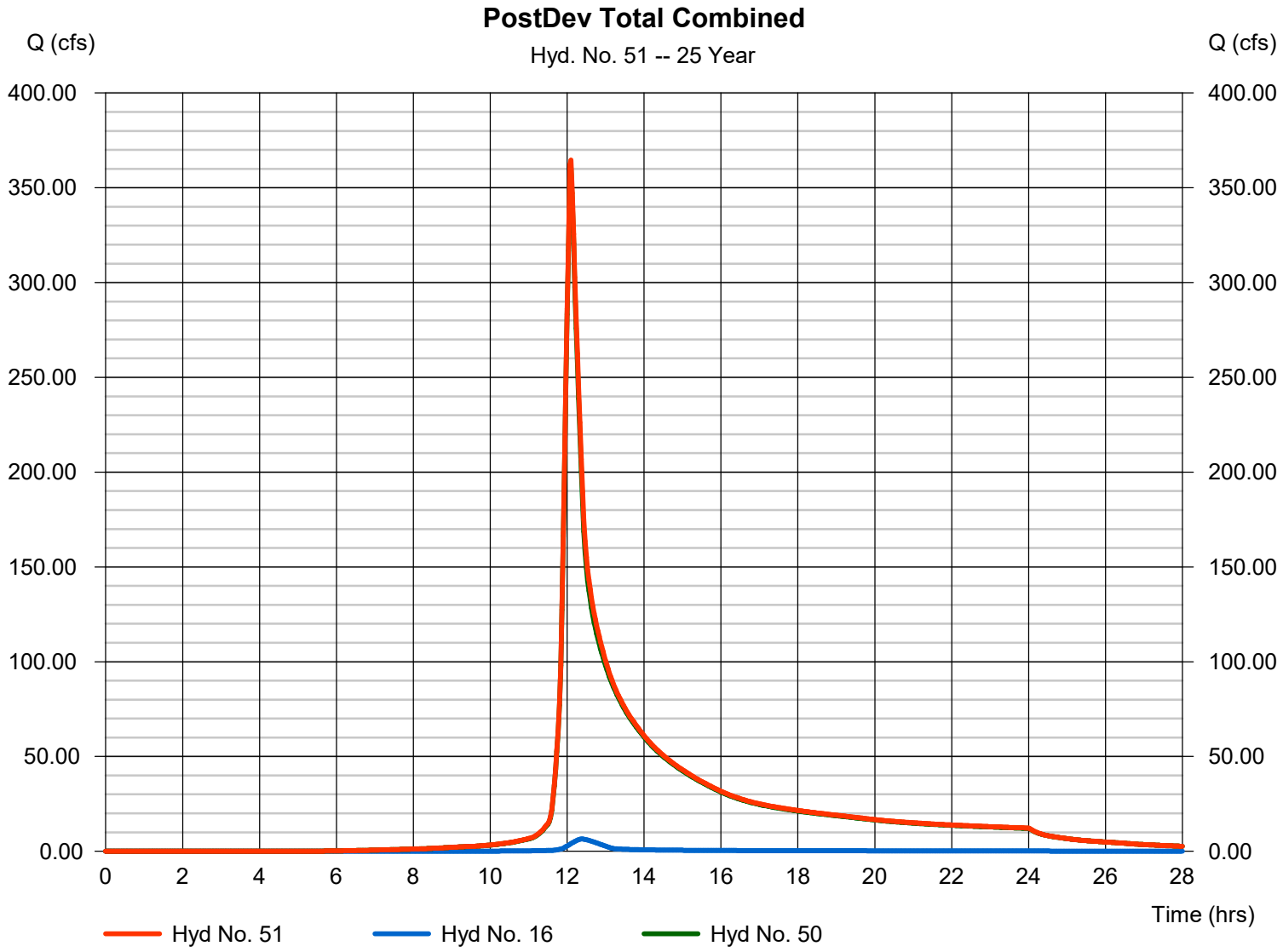


Hydrograph Report

Hyd. No. 51

PostDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	364.55 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	2,403,397 cuft
Inflow hyds.	=	16, 50	Contrib. drain. area	=	3.240 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	93.19	2	742	500,878	------	------	------	PreDev POI #1
2	SCS Runoff	61.39	2	744	347,676	------	------	------	PreDev POI #2
3	SCS Runoff	13.80	2	770	124,505	------	------	------	PreDev to POI #3
4	SCS Runoff	52.60	2	732	212,466	------	------	------	PreDev to POI #4
5	SCS Runoff	93.21	2	738	480,852	------	------	------	PreDev to POI #5
6	SCS Runoff	66.11	2	732	285,970	------	------	------	PreDev to POI #6
7	SCS Runoff	59.44	2	726	205,393	------	------	------	PreDev to POI #7
8	SCS Runoff	117.30	2	718	281,483	------	------	------	PostDev to SCM 1A
9	SCS Runoff	85.05	2	720	226,854	------	------	------	PostDev to SCM 1B
10	SCS Runoff	18.36	2	716	37,827	------	------	------	PostDev to SCM 1C
11	SCS Runoff	17.05	2	720	44,581	------	------	------	PostDev to POI #1 Bypass 1
12	SCS Runoff	18.92	2	724	59,572	------	------	------	PostDev to POI #1 Bypass 2
13	SCS Runoff	32.32	2	718	75,406	------	------	------	PostDev to POI #1 Bypass 3
14	SCS Runoff	111.42	2	718	264,077	------	------	------	PostDev to SCM 2
15	SCS Runoff	2.860	2	716	5,966	------	------	------	PostDev to POI #2 Bypass
16	SCS Runoff	7.867	2	744	44,609	------	------	------	PostDev to POI #3
17	SCS Runoff	133.47	2	718	309,414	------	------	------	PostDev to SCM 4
18	SCS Runoff	21.21	2	716	42,843	------	------	------	PostDev to POI #4 Bypass
19	SCS Runoff	222.86	2	718	540,838	------	------	------	PostDev to SCM 5A
20	SCS Runoff	93.93	2	720	256,249	------	------	------	PostDev to SCM 5C
21	SCS Runoff	20.71	2	716	43,091	------	------	------	PostDev to POI #5 Bypass 1
22	SCS Runoff	16.61	2	716	34,496	------	------	------	PostDev to POI #5 Bypass 2
23	SCS Runoff	50.36	2	716	108,606	------	------	------	PostDev to SCM 6A
24	SCS Runoff	104.87	2	716	228,061	------	------	------	PostDev to SCM 6B
25	SCS Runoff	34.61	2	718	81,711	------	------	------	PostDev to POI #6 Bypass
26	SCS Runoff	39.55	2	720	107,470	------	------	------	PostDev to SCM 7
27	SCS Runoff	28.49	2	716	59,652	------	------	------	PostDev to POI #7 Bypass
28	Reservoir	73.62	2	724	279,940	8	353.68	122,788	PostDev to SCM 1A
29	Reservoir	43.18	2	730	224,528	9	381.70	98,101	PostDev to SCM 1B
30	Reservoir	14.28	2	720	36,428	10	363.92	13,571	PostDev to SCM 1C
31	Reservoir	37.97	2	728	248,668	14	358.36	125,487	PostDev to SCM 2
32	Reservoir	50.23	2	728	305,163	17	368.92	142,396	PostDev to SCM 4
33	Reservoir	72.99	2	728	538,897	19	321.39	265,923	PostDev to SCM 5A
34	Reservoir	47.14	2	730	253,321	20	297.72	115,387	PostDev to SCM 5C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

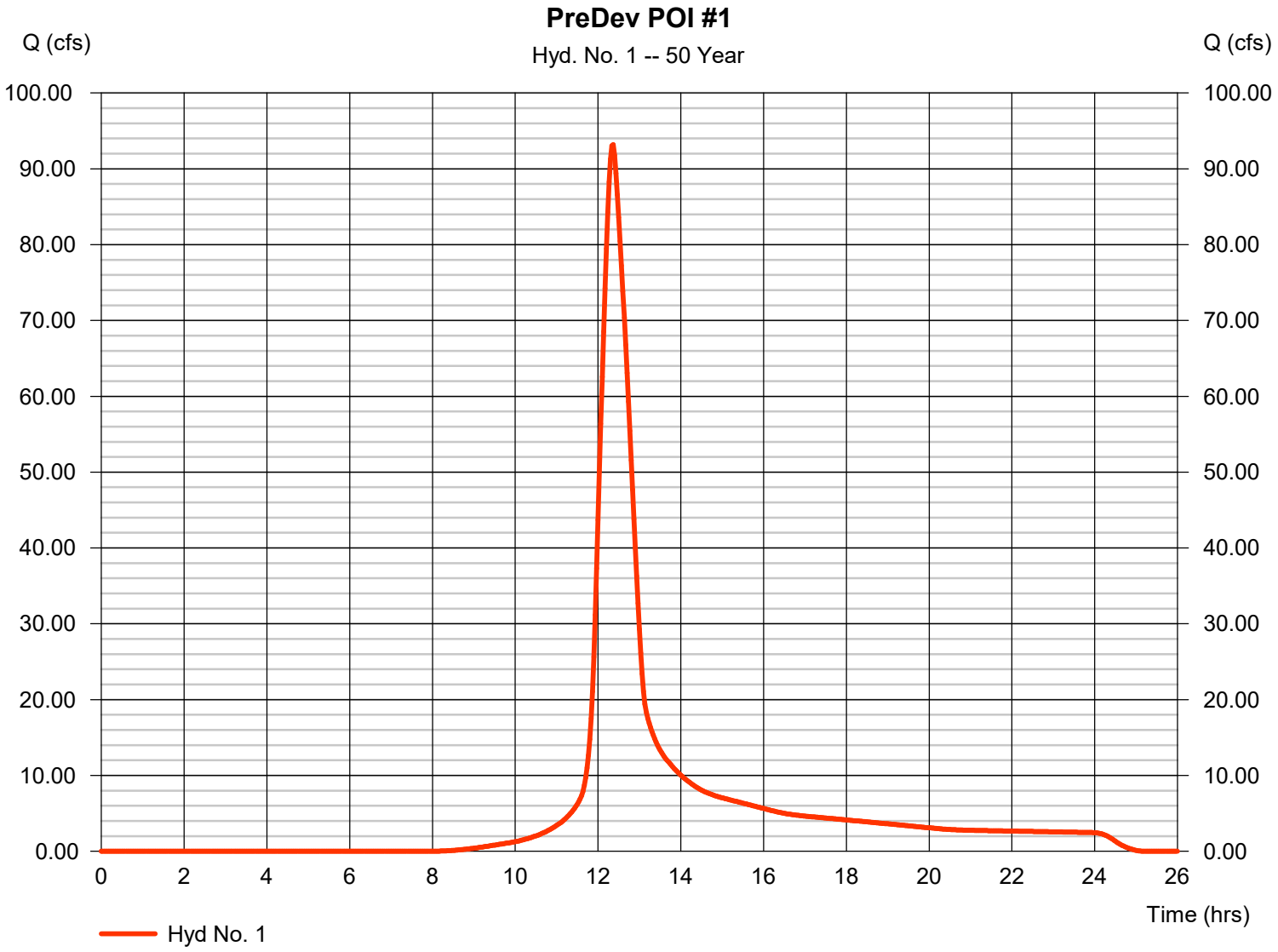
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	26.01	2	722	108,501	23	282.72	44,881	PostDev to SCM 6A
36	Reservoir	62.69	2	722	227,000	24	295.58	104,243	PostDev to SCM 6B
37	Reservoir	28.80	2	726	107,321	26	327.65	37,819	PostDev to SCM 7
38	Combine	53.04	2	728	269,110	11, 29,	------	------	PostDev POI #1 to Culv1
39	Combine	82.90	2	722	365,110	12, 30, 38	------	------	PostDev POI #1 to Culv2
40	Combine	38.38	2	726	254,635	15, 31,	------	------	PostDev to POI #2
41	Combine	53.71	2	726	348,006	18, 32,	------	------	PostDev to POI #4
42	Combine	75.81	2	728	581,989	21, 33,	------	------	PostDev to POI #5 to Culv3
43	Combine	124.67	2	728	869,805	22, 34, 42	------	------	PostDev to POI #5
44	Combine	119.15	2	720	417,212	25, 35, 36,	------	------	PostDev to POI #6
45	Combine	35.62	2	722	166,974	27, 37,	------	------	PostDev to POI #7
46	Combine	357.35	2	738	1,952,346	1, 2, 3,	------	------	PreDev Total
47	Combine	397.67	2	736	2,157,739	4, 5, 6, 7, 46	------	------	PreDev Total Combined
48	Reach	77.71	2	726	365,098	39	------	------	PostDev POI#1 Culv 2 Reach
49	Combine	169.16	2	724	720,443	13, 28, 48	------	------	PostDev POI #1 Combined
50	Combine	490.45	2	722	2,777,072	40, 41, 43,	------	------	PostDev Total
51	Combine	494.46	2	722	2,821,684	44, 45, 49 16, 50	------	------	PostDev Total Combined

Hydrograph Report

Hyd. No. 1

PreDev POI #1

Hydrograph type	=	SCS Runoff	Peak discharge	=	93.19 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	500,878 cuft
Drainage area	=	37.960 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	46.50 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

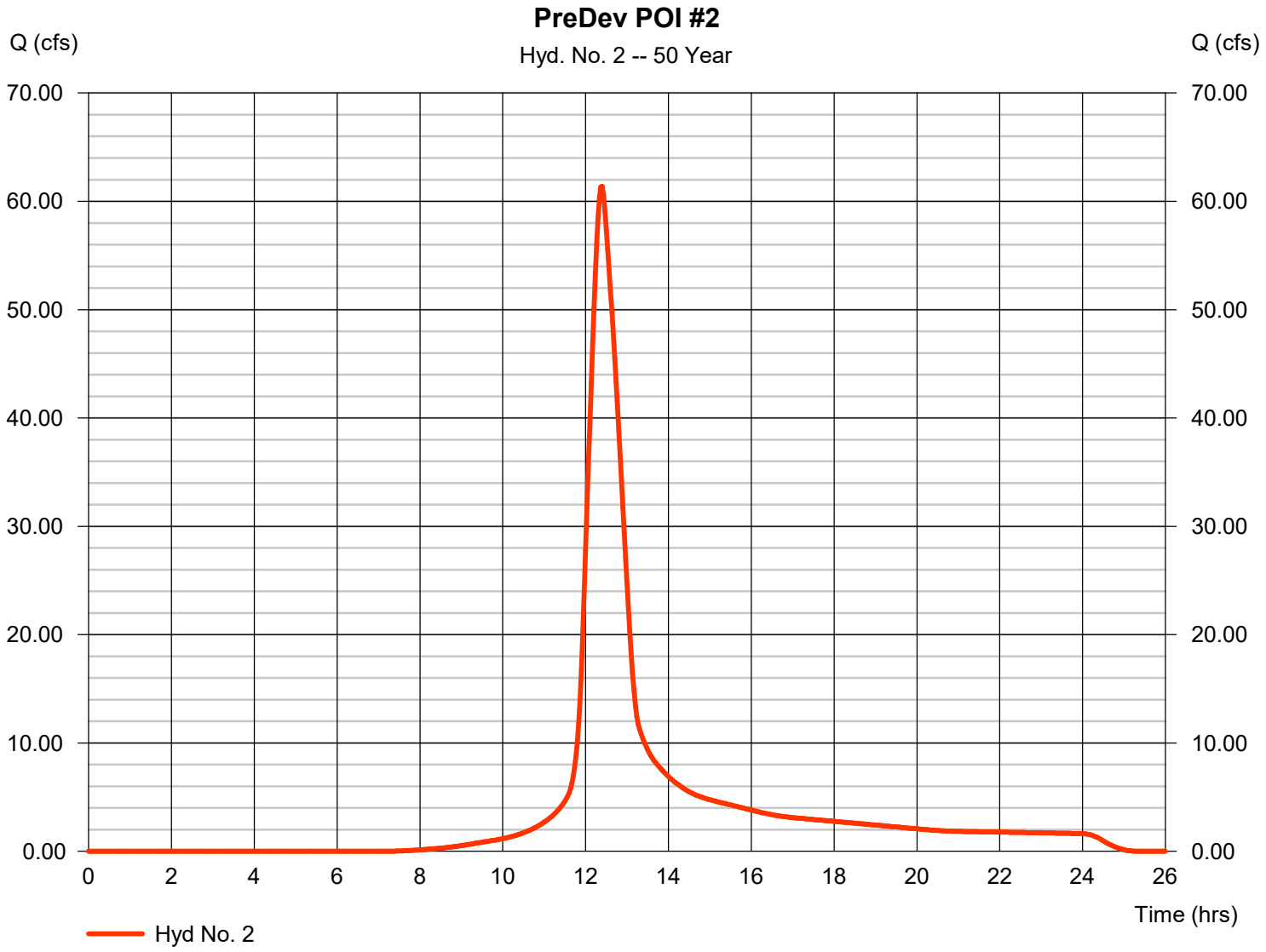


Hydrograph Report

Hyd. No. 2

PreDev POI #2

Hydrograph type	=	SCS Runoff	Peak discharge	=	61.39 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	347,676 cuft
Drainage area	=	24.050 ac	Curve number	=	75
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	48.70 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

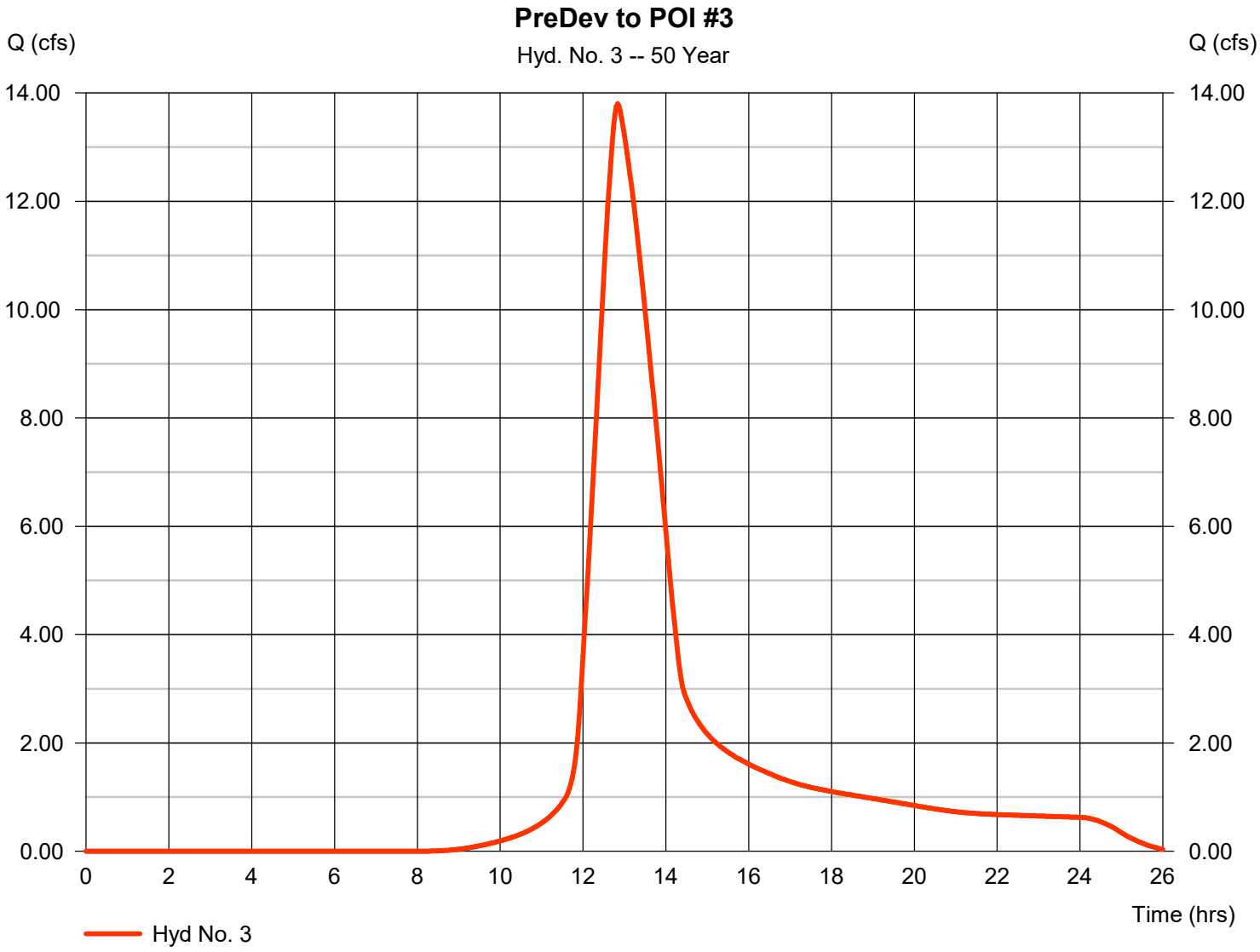


Hydrograph Report

Hyd. No. 3

PreDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	13.80 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.83 hrs
Time interval	=	2 min	Hyd. volume	=	124,505 cuft
Drainage area	=	9.310 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	92.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

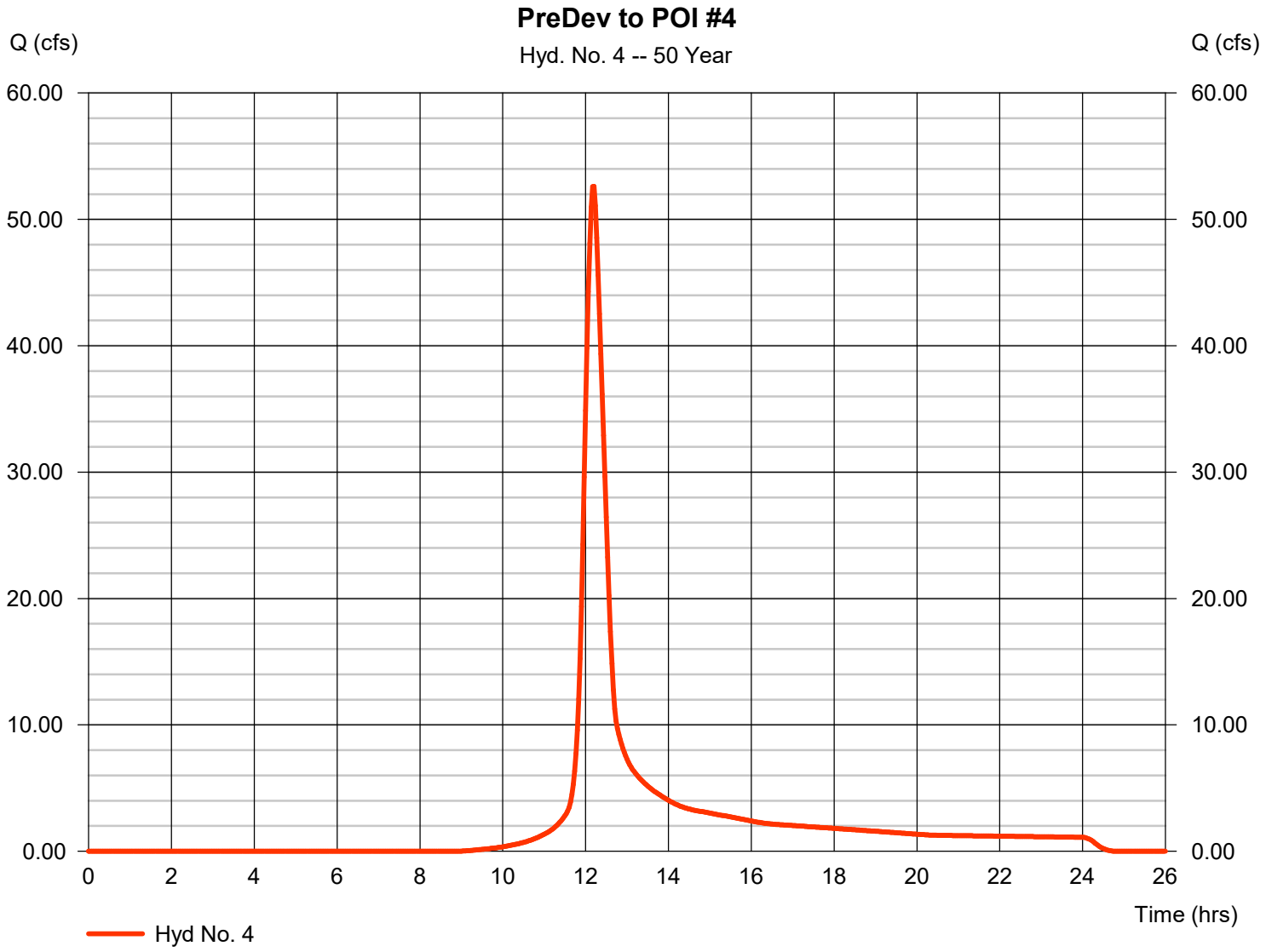


Hydrograph Report

Hyd. No. 4

PreDev to POI #4

Hydrograph type	=	SCS Runoff	Peak discharge	=	52.60 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	212,466 cuft
Drainage area	=	17.970 ac	Curve number	=	68
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	28.80 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

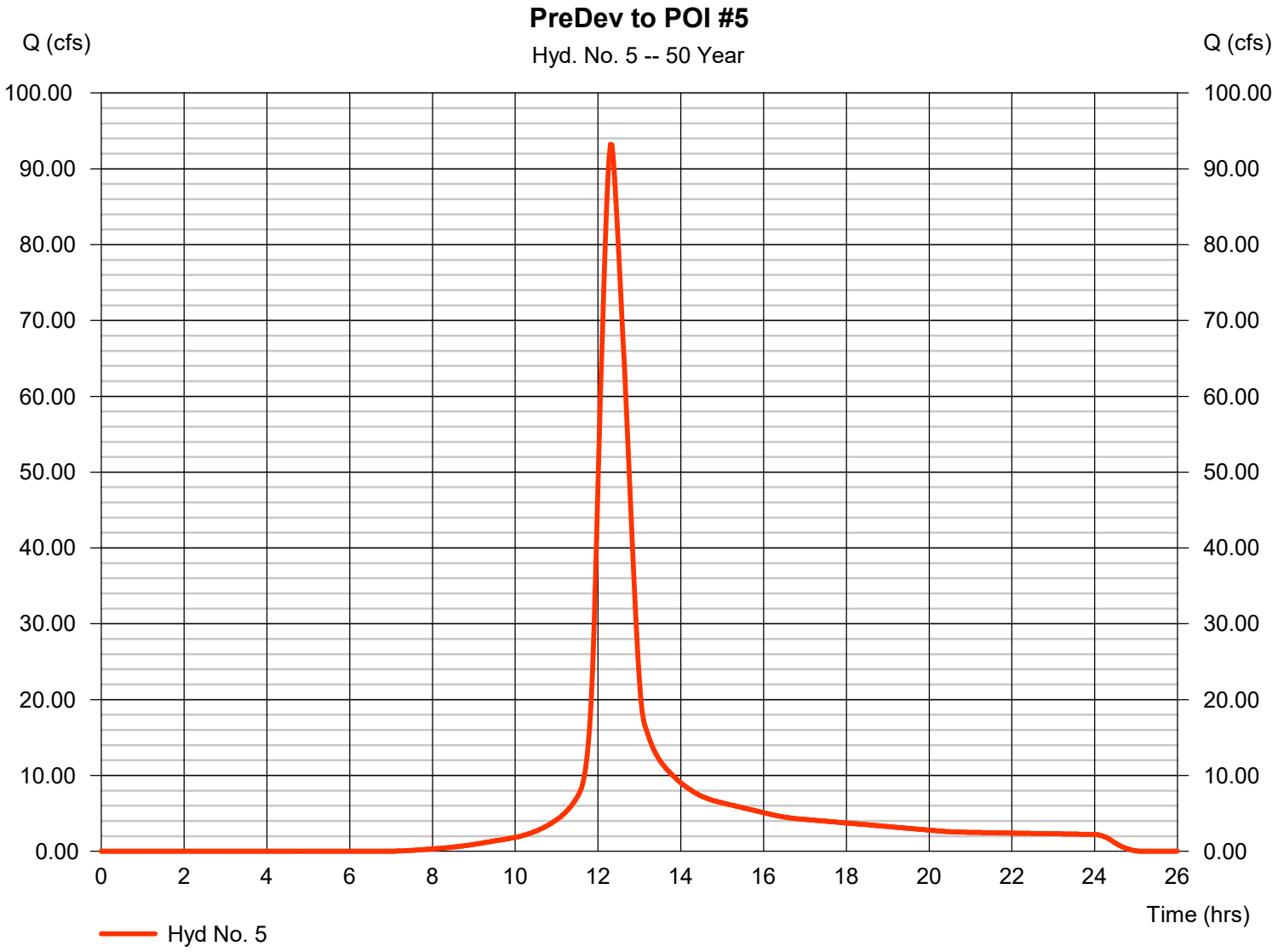


Hydrograph Report

Hyd. No. 5

PreDev to POI #5

Hydrograph type	=	SCS Runoff	Peak discharge	=	93.21 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	480,852 cuft
Drainage area	=	32.090 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	43.30 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

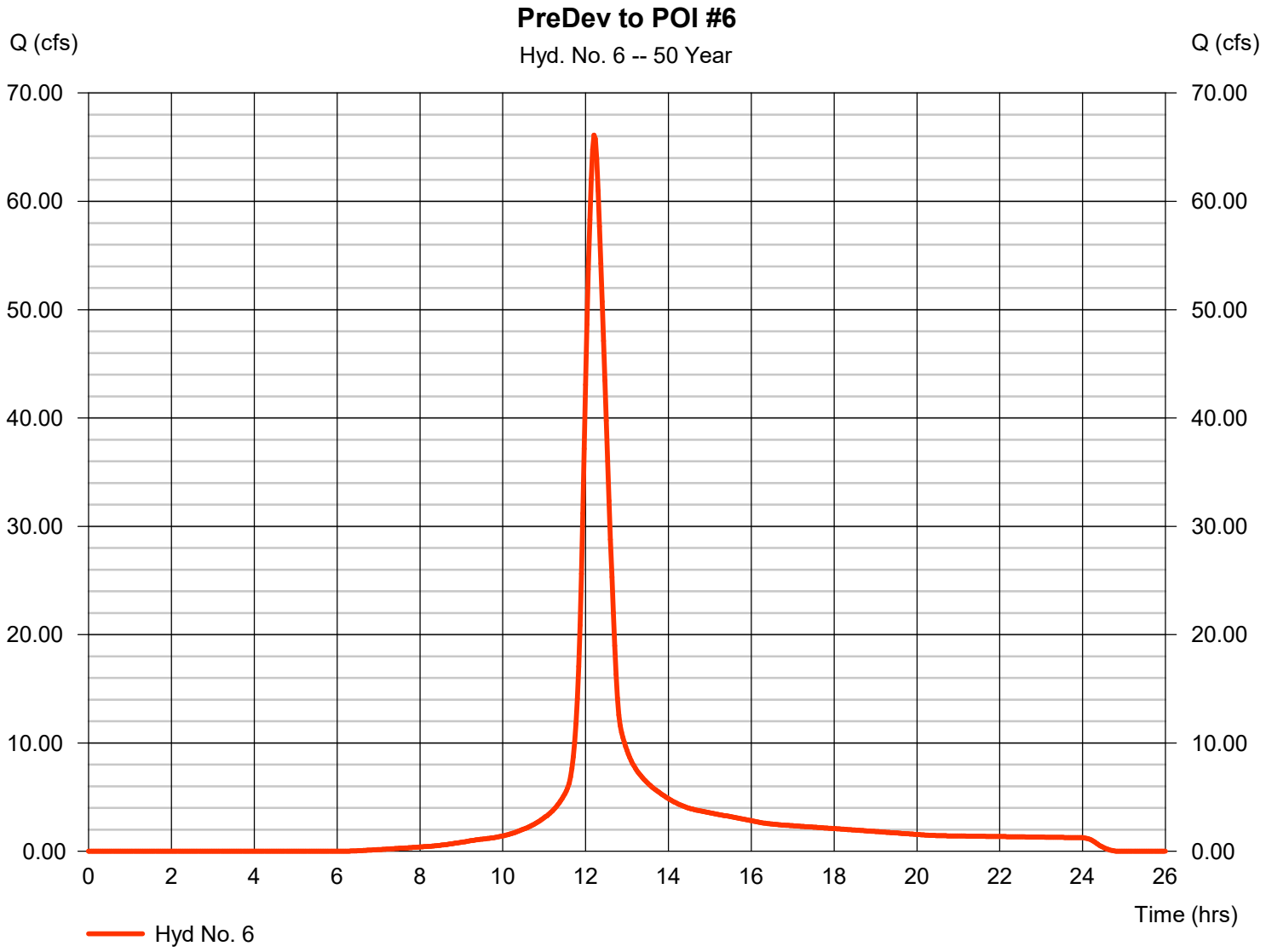


Hydrograph Report

Hyd. No. 6

PreDev to POI #6

Hydrograph type	=	SCS Runoff	Peak discharge	=	66.11 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	285,970 cuft
Drainage area	=	17.640 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	32.90 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

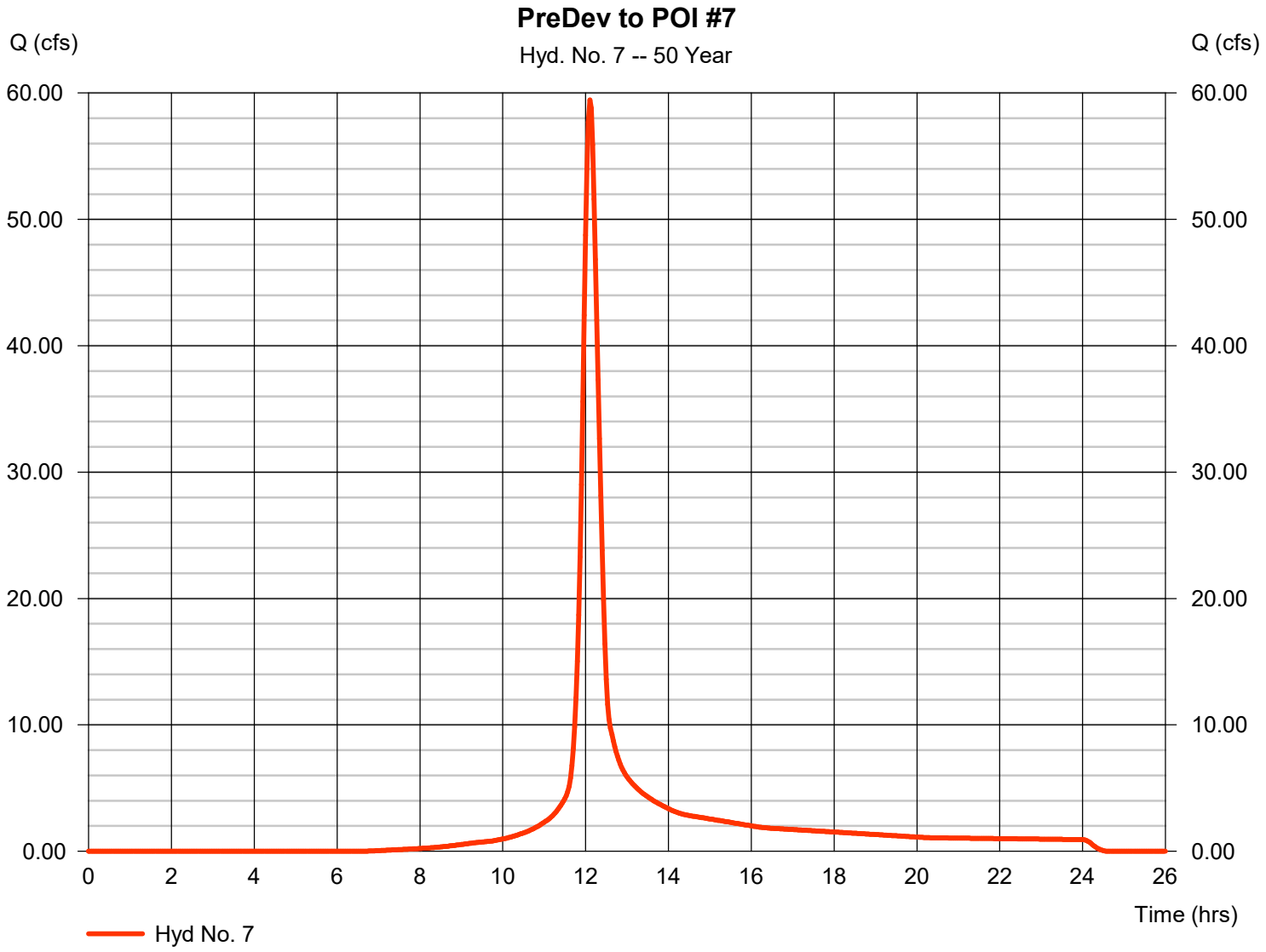


Hydrograph Report

Hyd. No. 7

PreDev to POI #7

Hydrograph type	=	SCS Runoff	Peak discharge	=	59.44 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	205,393 cuft
Drainage area	=	13.250 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	22.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

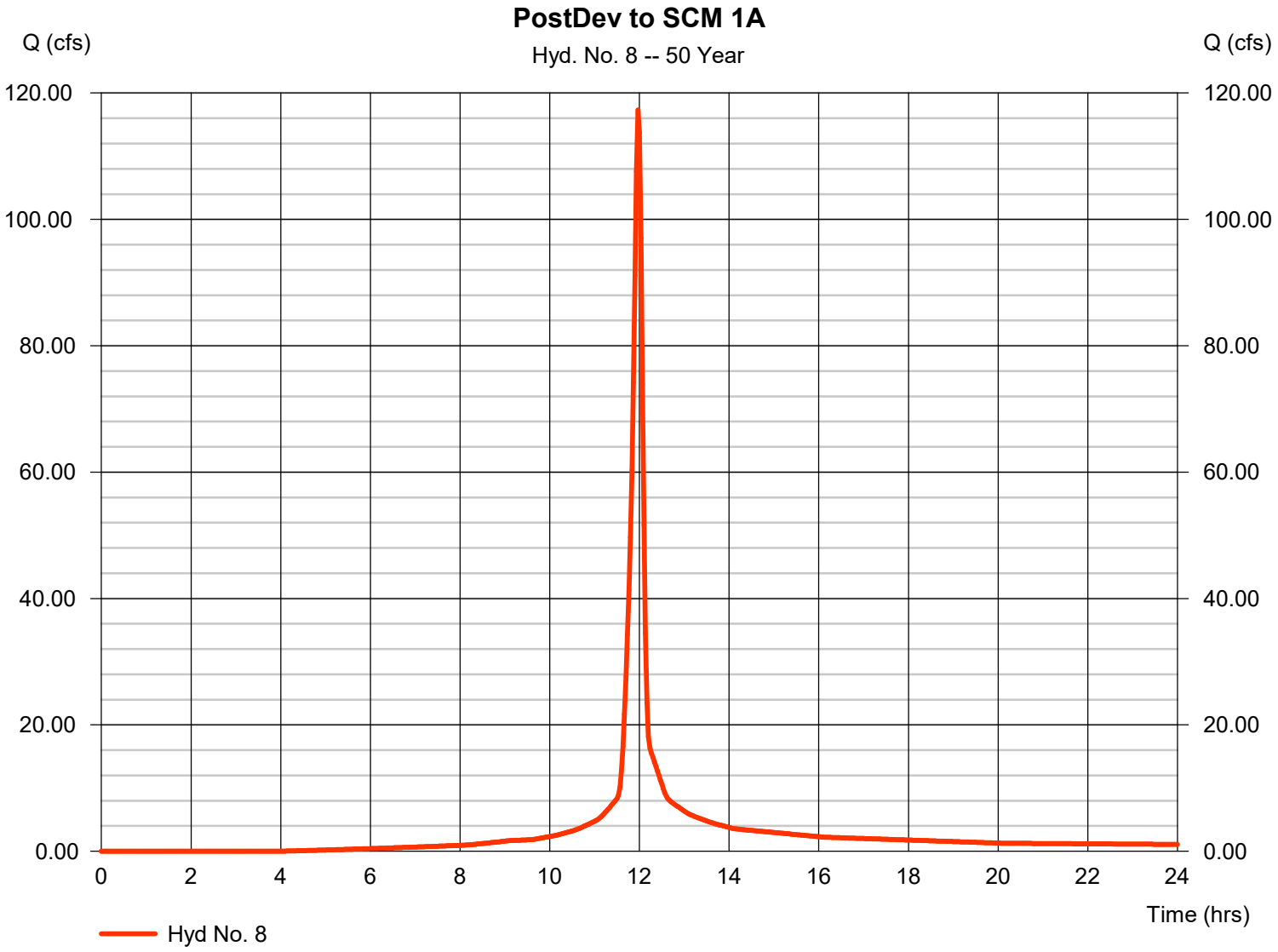


Hydrograph Report

Hyd. No. 8

PostDev to SCM 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	117.30 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	281,483 cuft
Drainage area	=	14.800 ac	Curve number	=	86.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.30 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

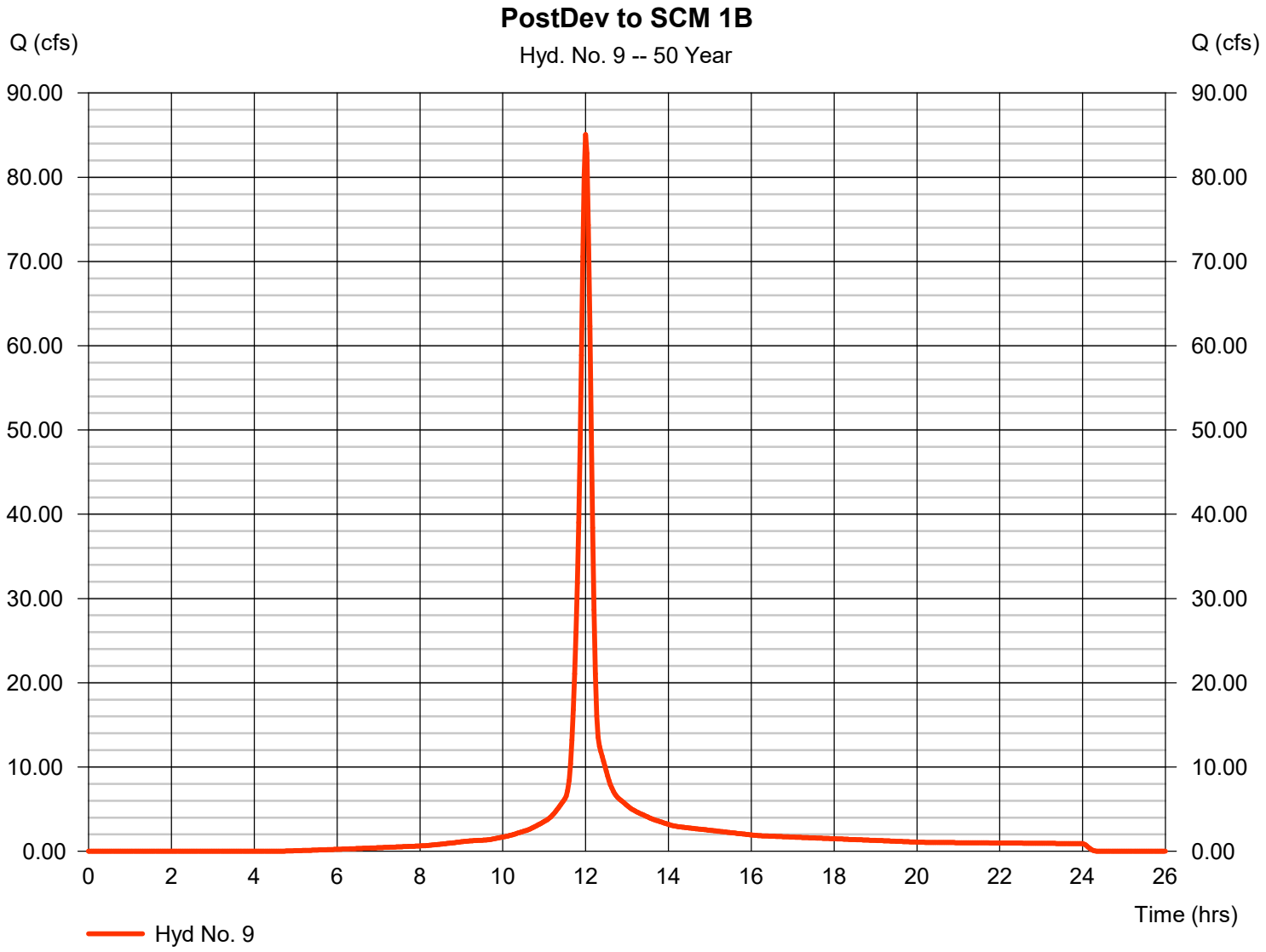


Hydrograph Report

Hyd. No. 9

PostDev to SCM 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	85.05 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	226,854 cuft
Drainage area	=	12.110 ac	Curve number	=	84.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.10 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

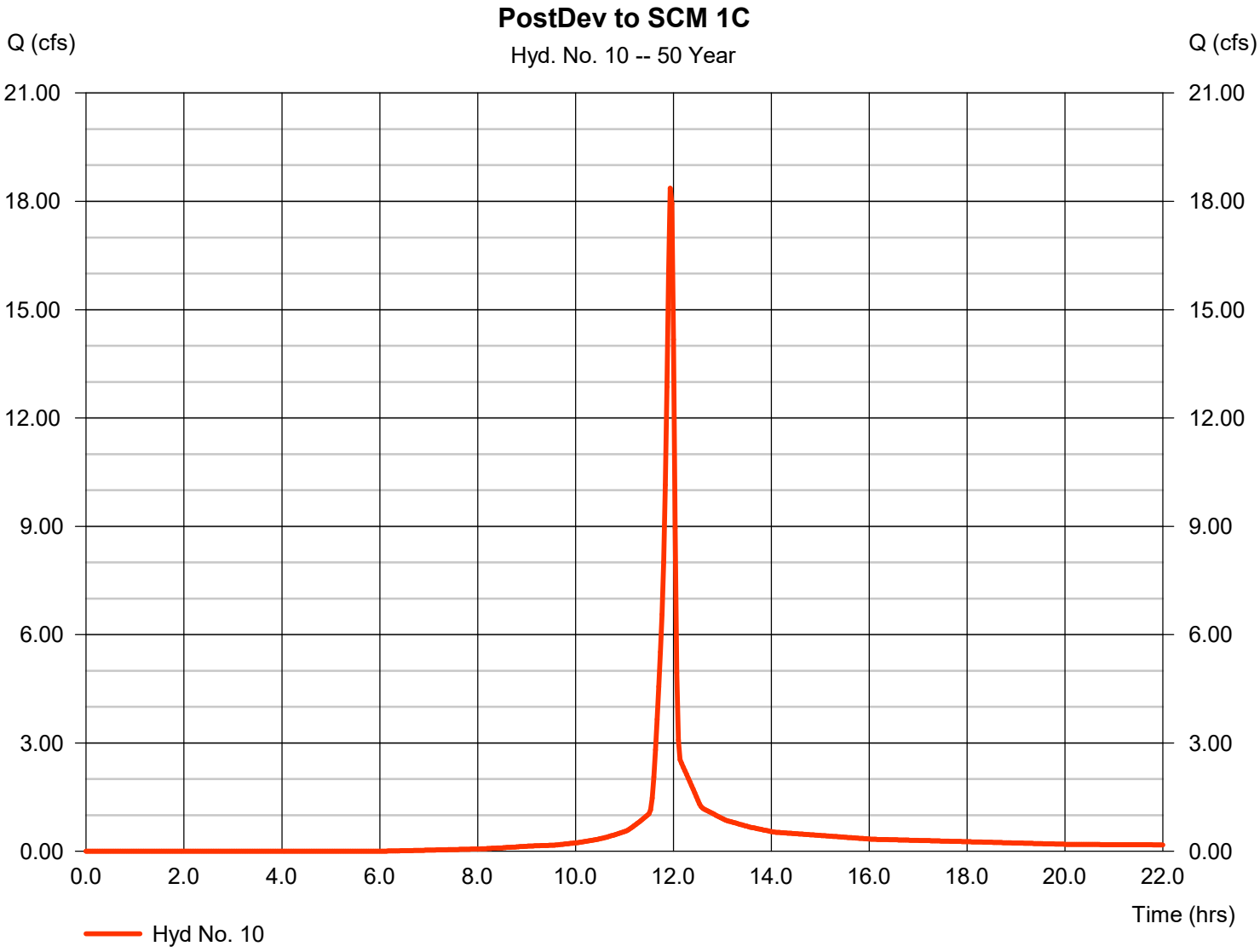


Hydrograph Report

Hyd. No. 10

PostDev to SCM 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	18.36 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	37,827 cuft
Drainage area	=	2.520 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

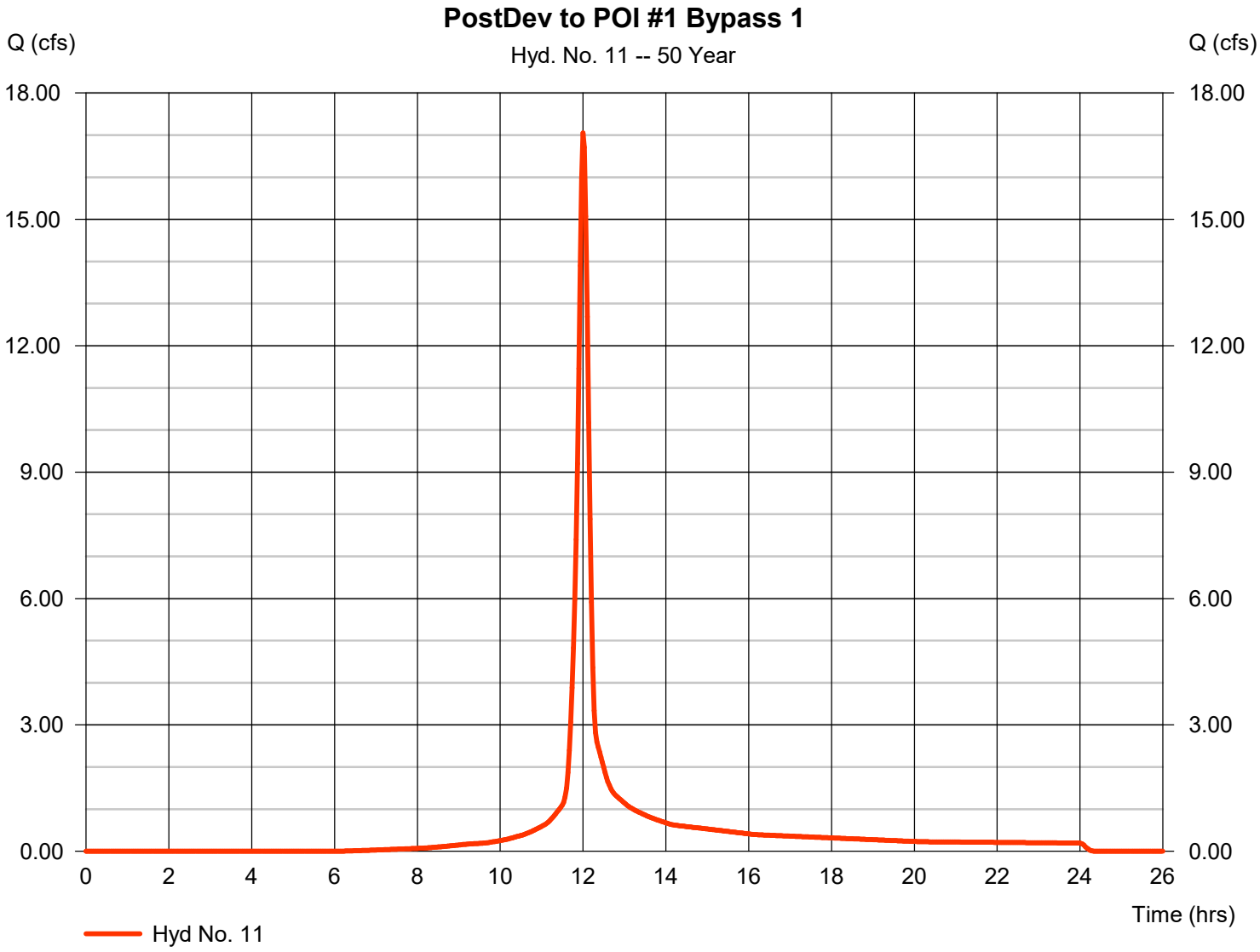


Hydrograph Report

Hyd. No. 11

PostDev to POI #1 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 17.05 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 44,581 cuft
Drainage area	= 2.720 ac	Curve number	= 78.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

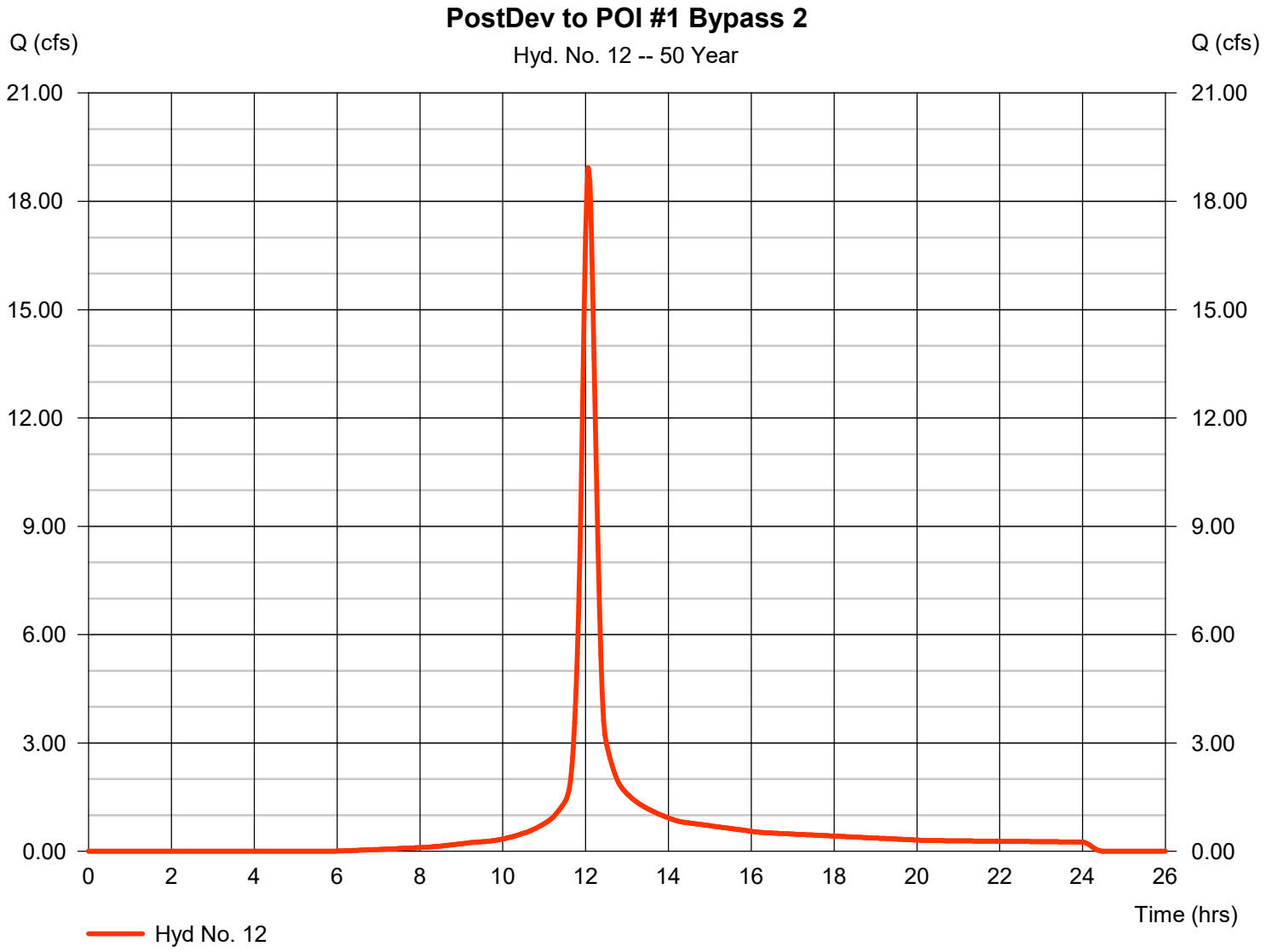


Hydrograph Report

Hyd. No. 12

PostDev to POI #1 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 18.92 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 59,572 cuft
Drainage area	= 3.640 ac	Curve number	= 79.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

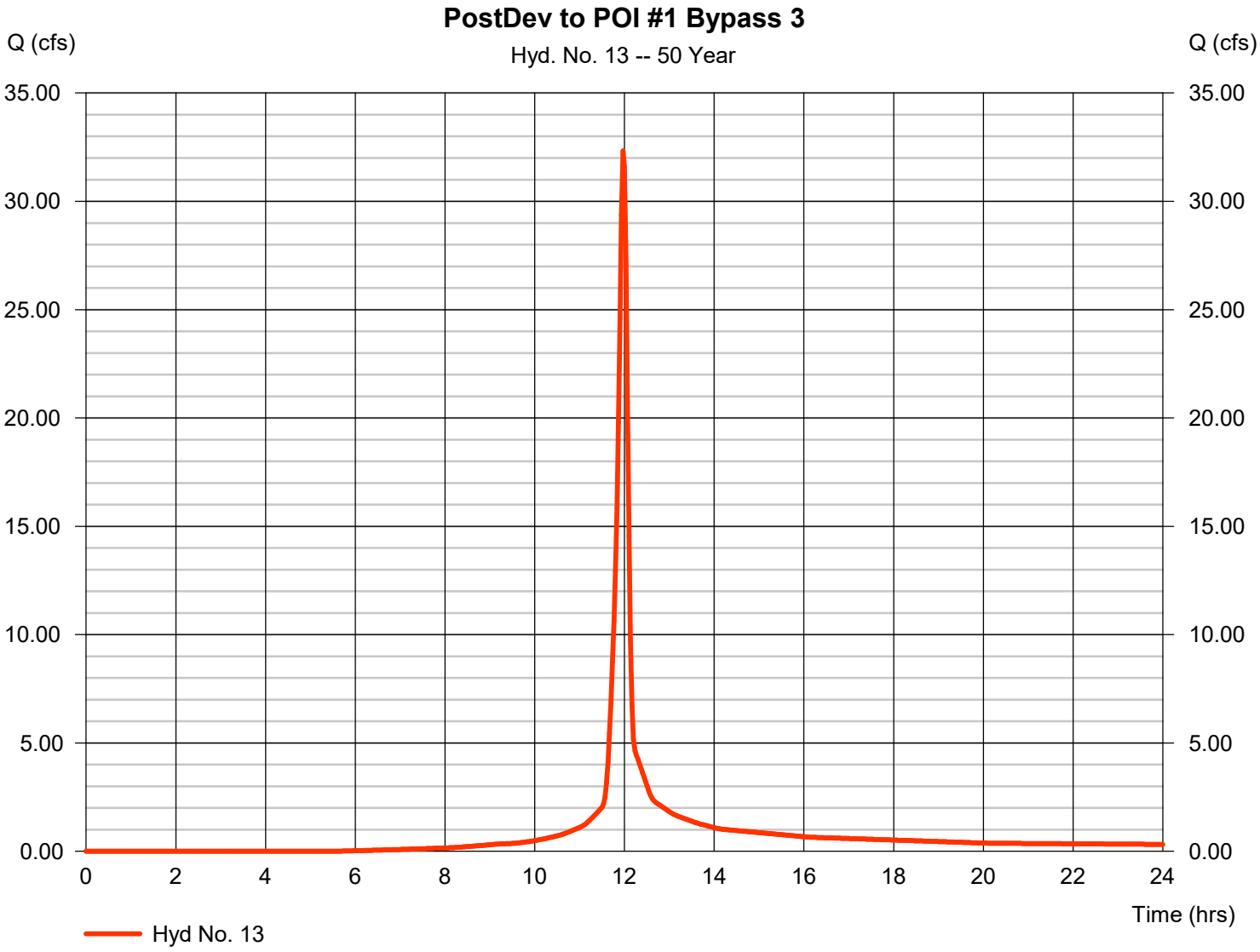


Hydrograph Report

Hyd. No. 13

PostDev to POI #1 Bypass 3

Hydrograph type	= SCS Runoff	Peak discharge	= 32.32 cfs
Storm frequency	= 50 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 75,406 cuft
Drainage area	= 4.520 ac	Curve number	= 80.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 9.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

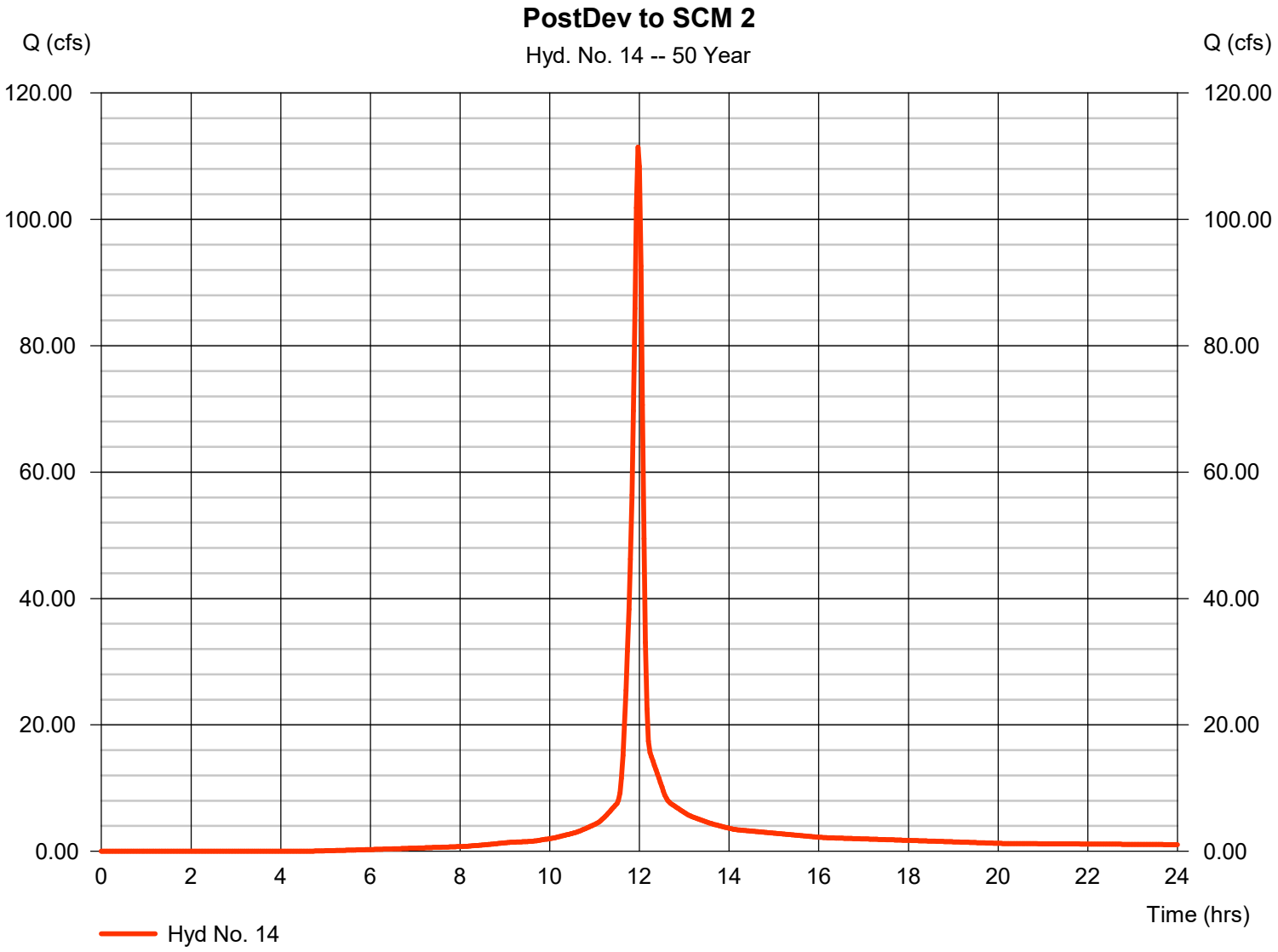


Hydrograph Report

Hyd. No. 14

PostDev to SCM 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	111.42 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	264,077 cuft
Drainage area	=	14.570 ac	Curve number	=	84.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.10 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

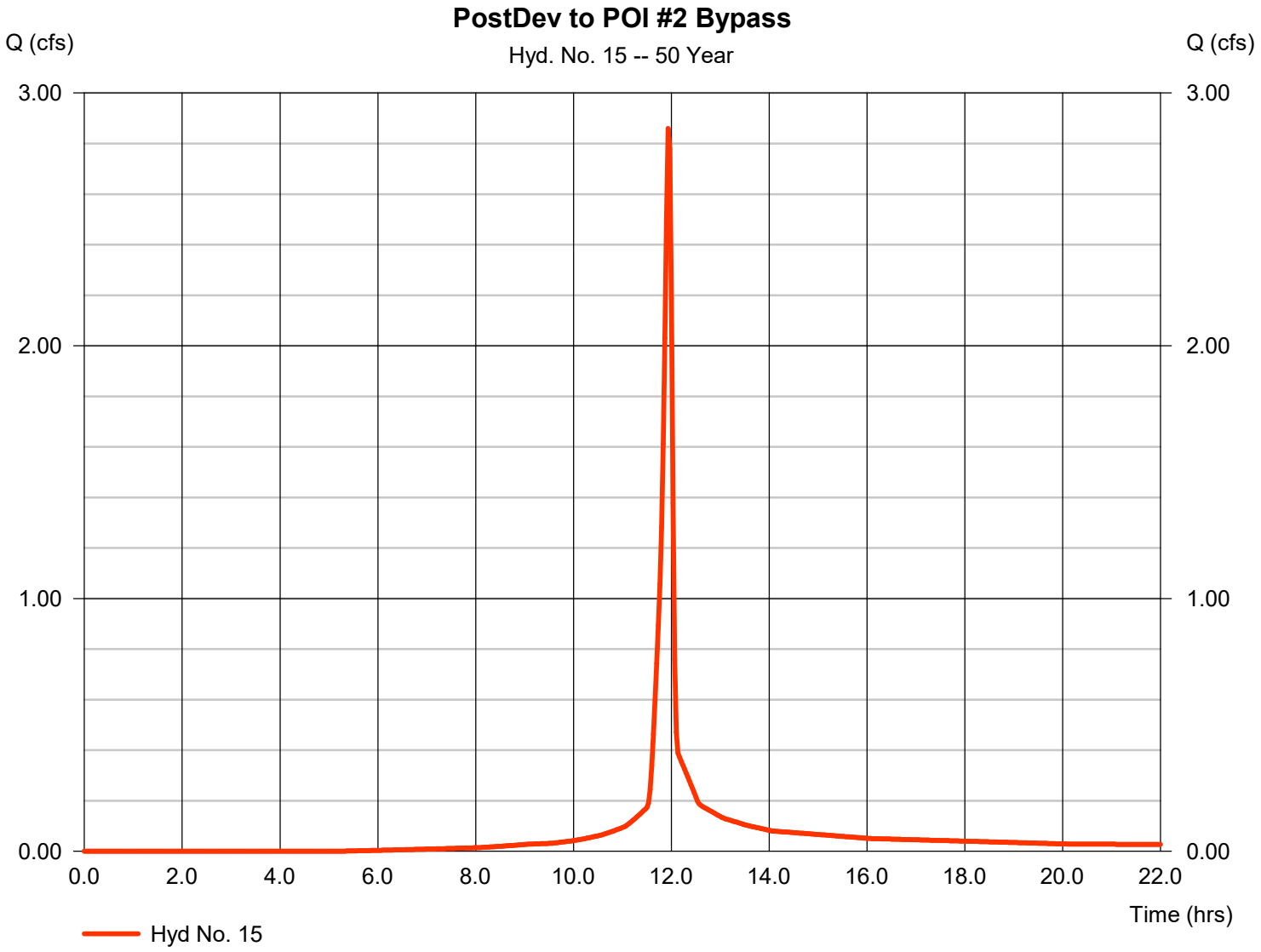


Hydrograph Report

Hyd. No. 15

PostDev to POI #2 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.860 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	5,966 cuft
Drainage area	=	0.370 ac	Curve number	=	82
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

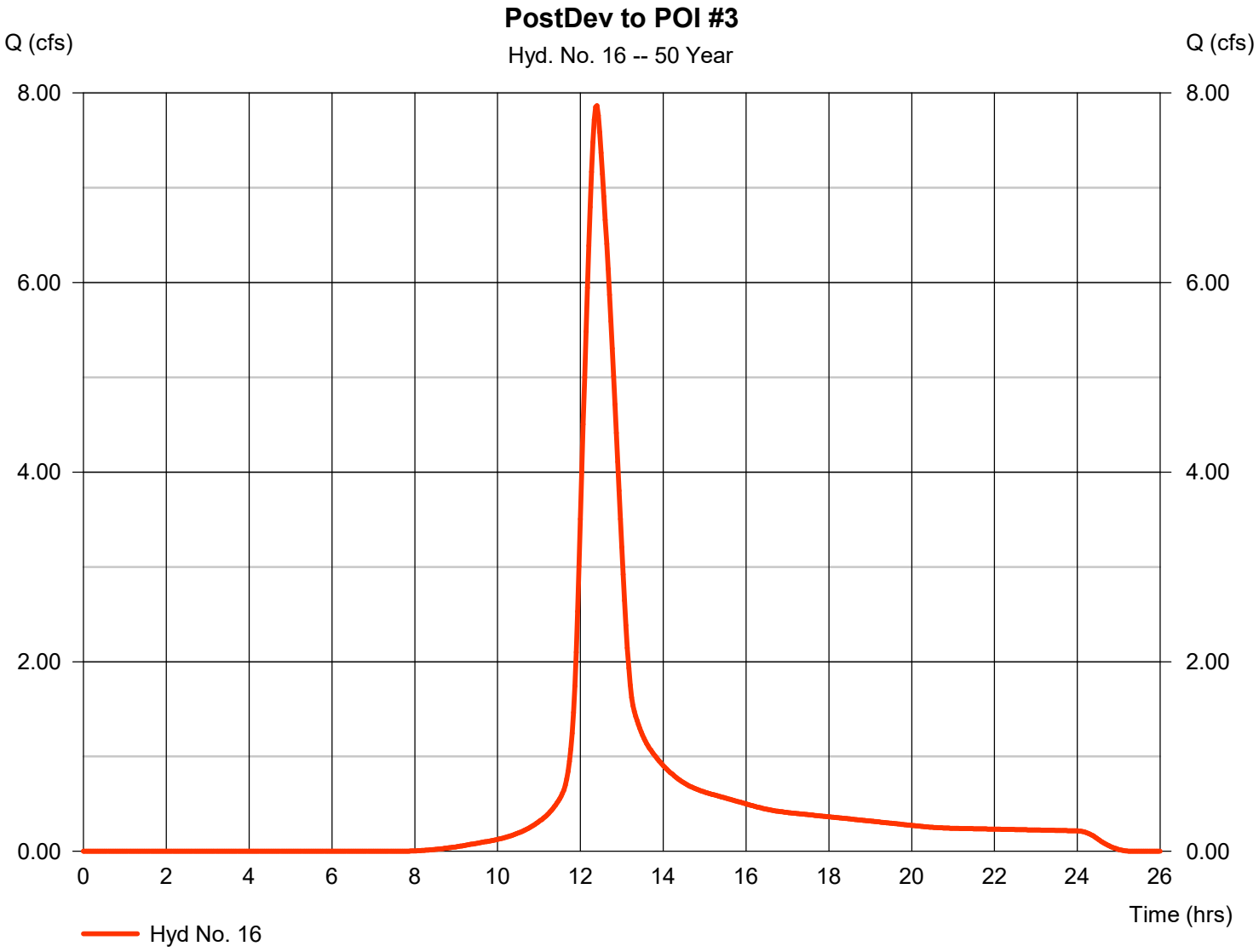


Hydrograph Report

Hyd. No. 16

PostDev to POI #3

Hydrograph type	= SCS Runoff	Peak discharge	= 7.867 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.40 hrs
Time interval	= 2 min	Hyd. volume	= 44,609 cuft
Drainage area	= 3.240 ac	Curve number	= 73.2
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 49.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

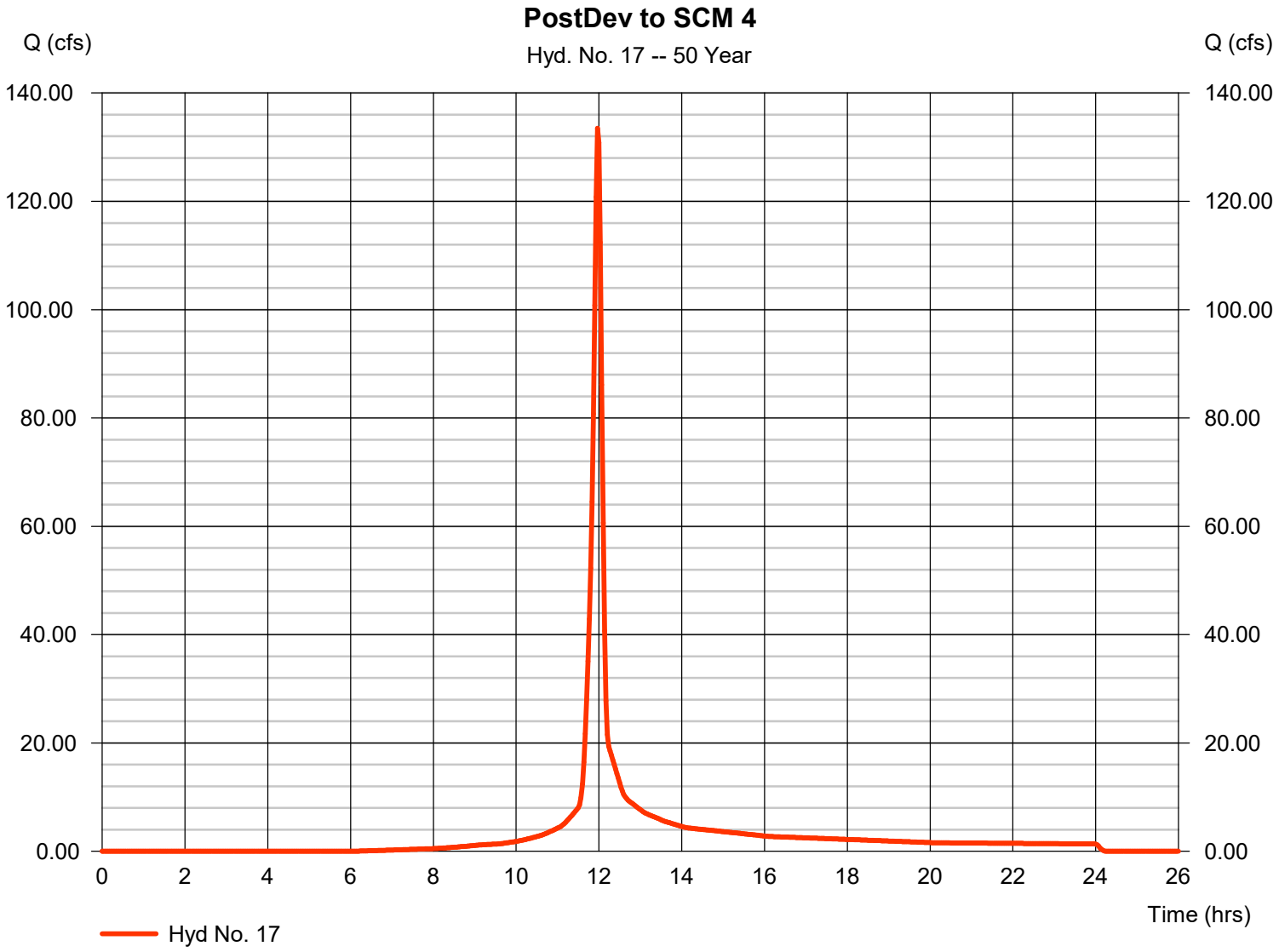


Hydrograph Report

Hyd. No. 17

PostDev to SCM 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	133.47 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	309,414 cuft
Drainage area	=	19.420 ac	Curve number	=	78.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.50 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

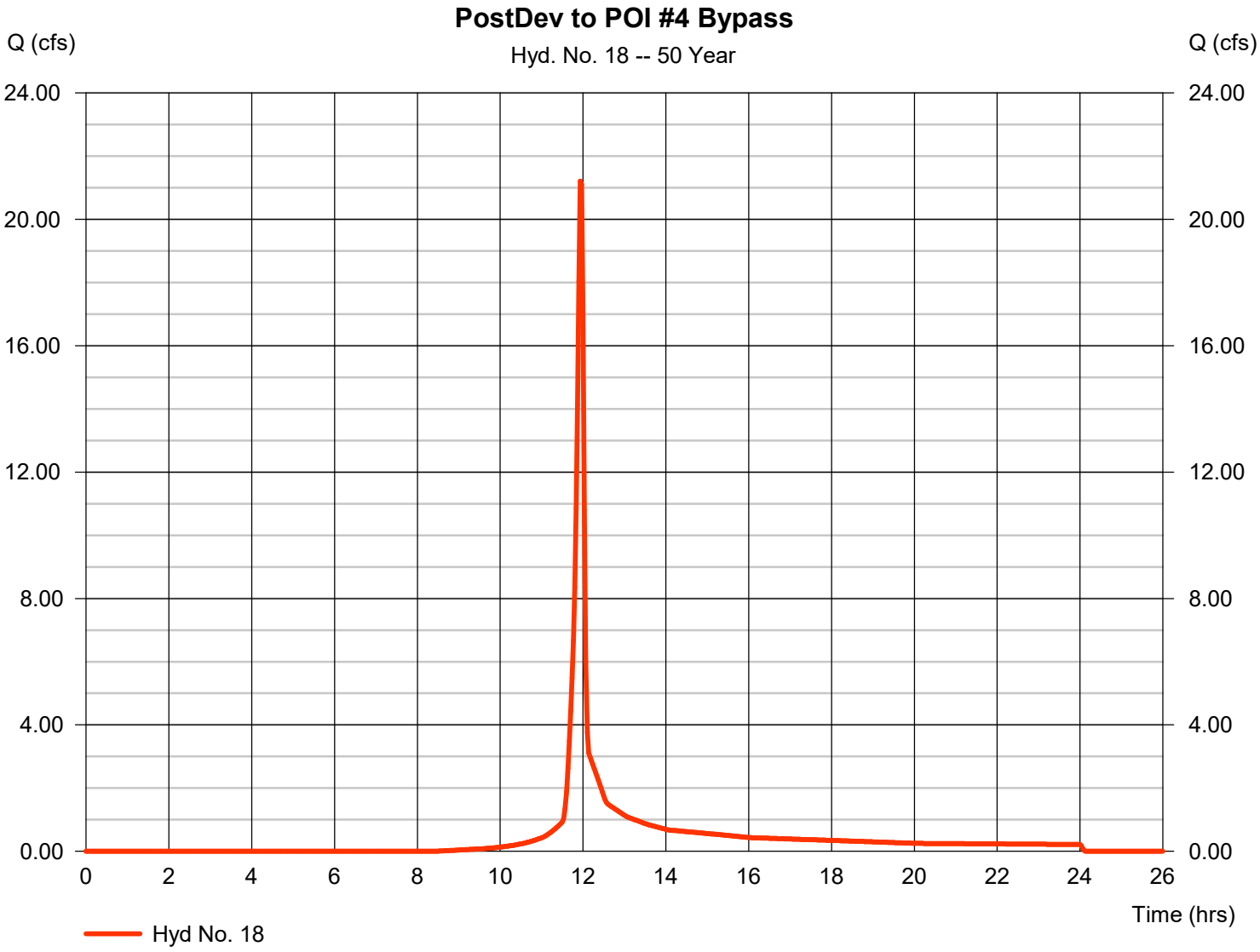


Hydrograph Report

Hyd. No. 18

PostDev to POI #4 Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 21.21 cfs
Storm frequency	= 50 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 42,843 cuft
Drainage area	= 3.670 ac	Curve number	= 69.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

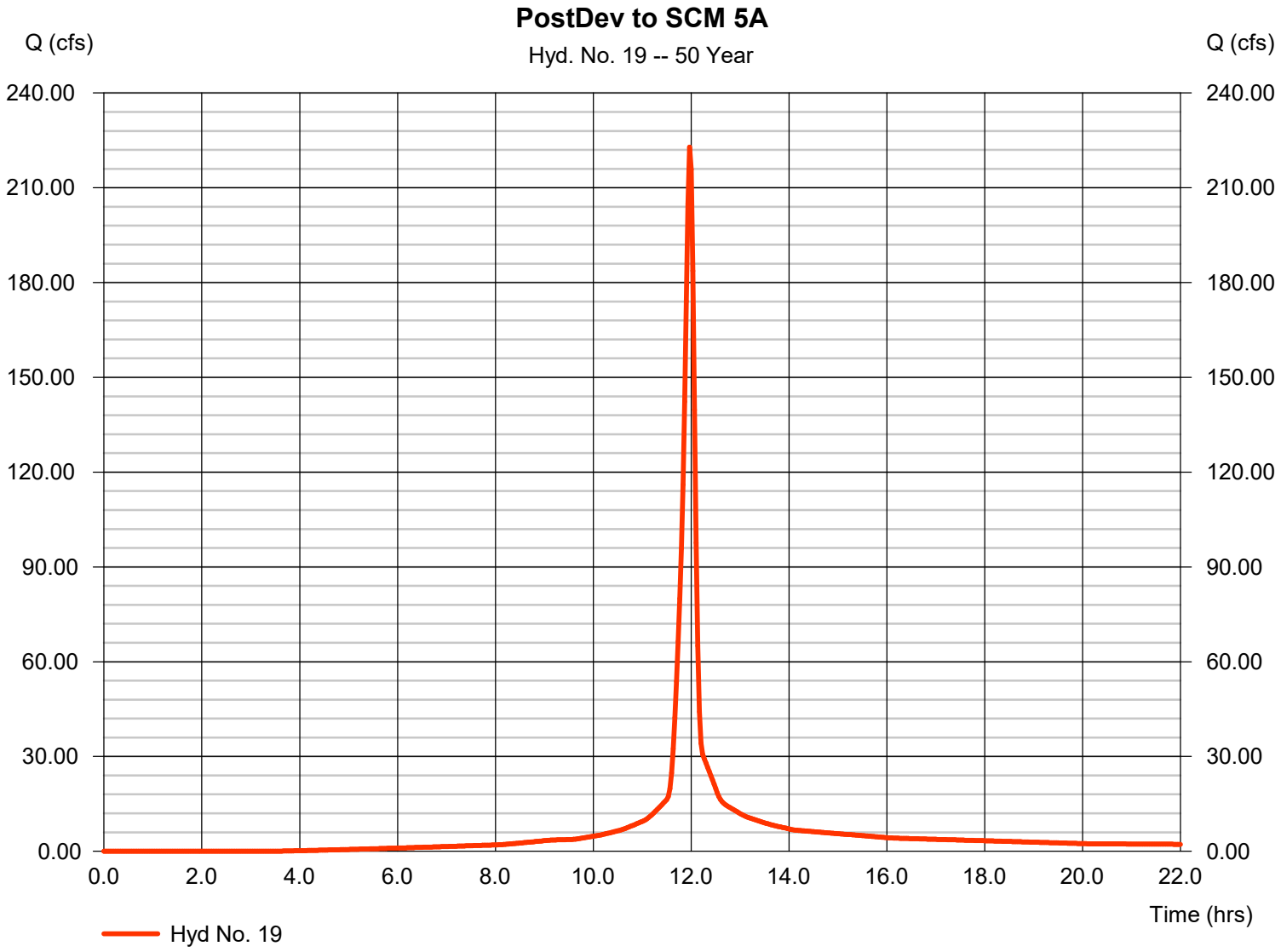


Hydrograph Report

Hyd. No. 19

PostDev to SCM 5A

Hydrograph type	=	SCS Runoff	Peak discharge	=	222.86 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	540,838 cuft
Drainage area	=	27.430 ac	Curve number	=	88.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.10 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

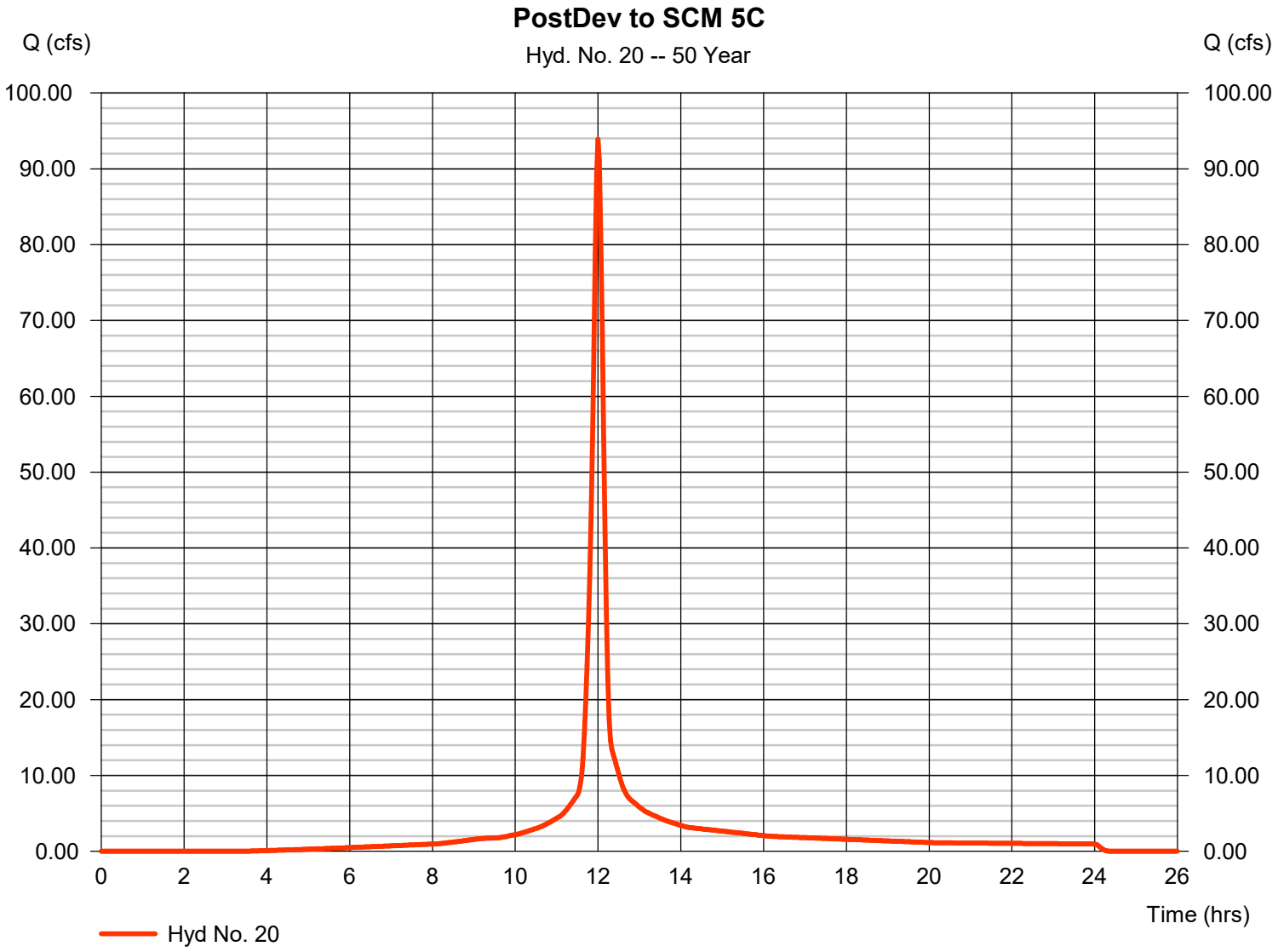


Hydrograph Report

Hyd. No. 20

PostDev to SCM 5C

Hydrograph type	=	SCS Runoff	Peak discharge	=	93.93 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	256,249 cuft
Drainage area	=	12.550 ac	Curve number	=	88.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.80 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

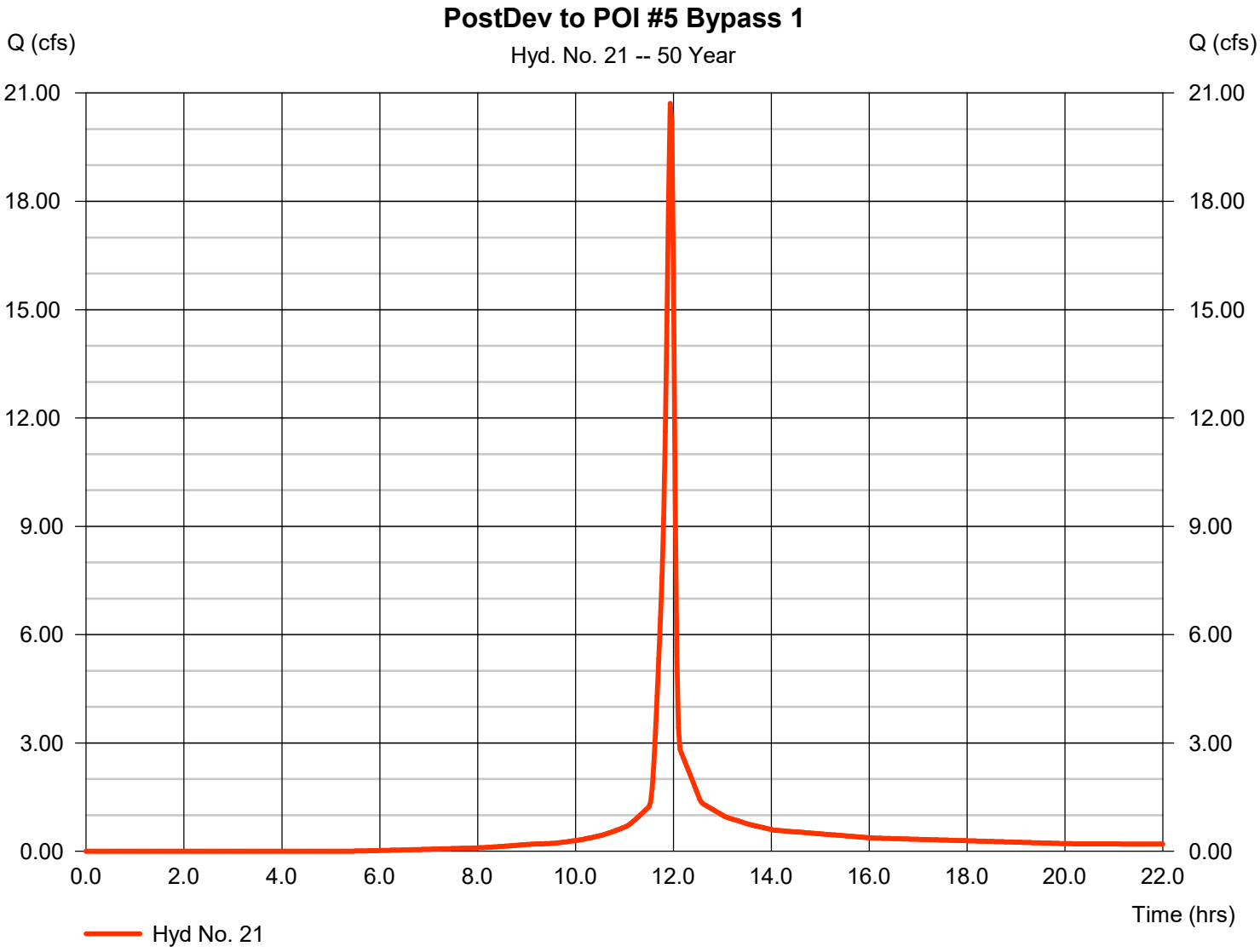


Hydrograph Report

Hyd. No. 21

PostDev to POI #5 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 20.71 cfs
Storm frequency	= 50 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 43,091 cuft
Drainage area	= 2.710 ac	Curve number	= 81.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

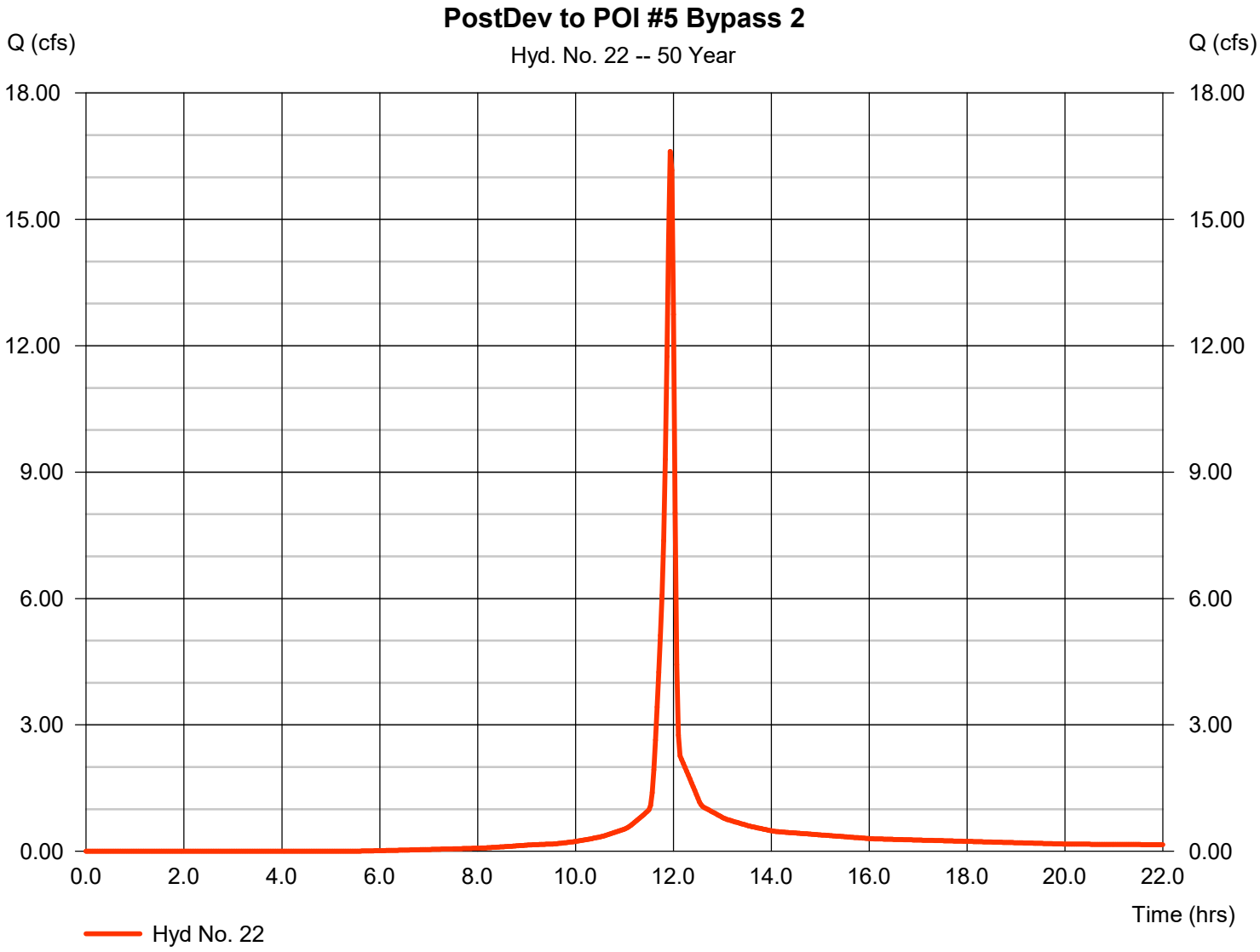


Hydrograph Report

Hyd. No. 22

PostDev to POI #5 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 16.61 cfs
Storm frequency	= 50 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 34,496 cuft
Drainage area	= 2.190 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

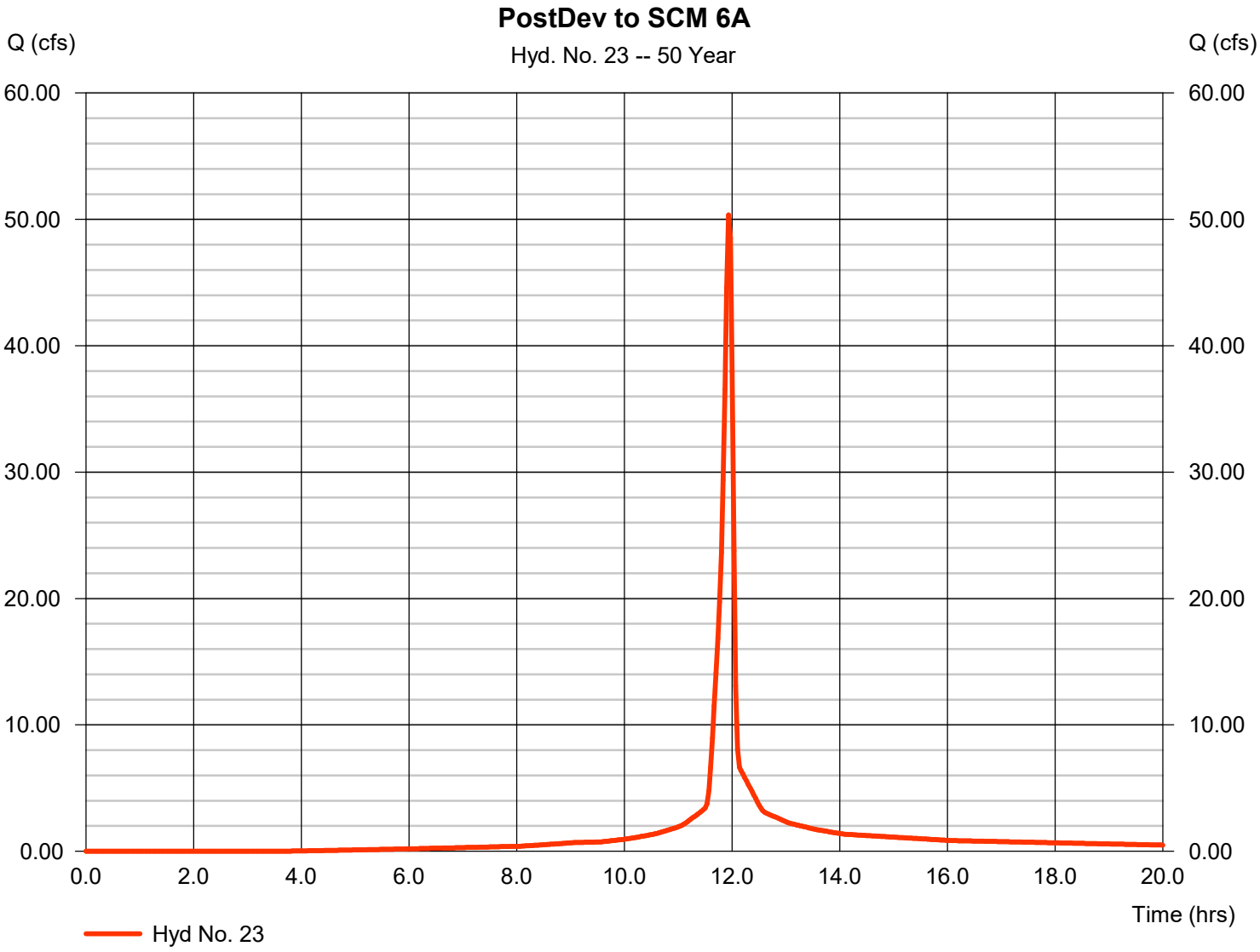


Hydrograph Report

Hyd. No. 23

PostDev to SCM 6A

Hydrograph type	=	SCS Runoff	Peak discharge	=	50.36 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	108,606 cuft
Drainage area	=	5.950 ac	Curve number	=	87.6
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

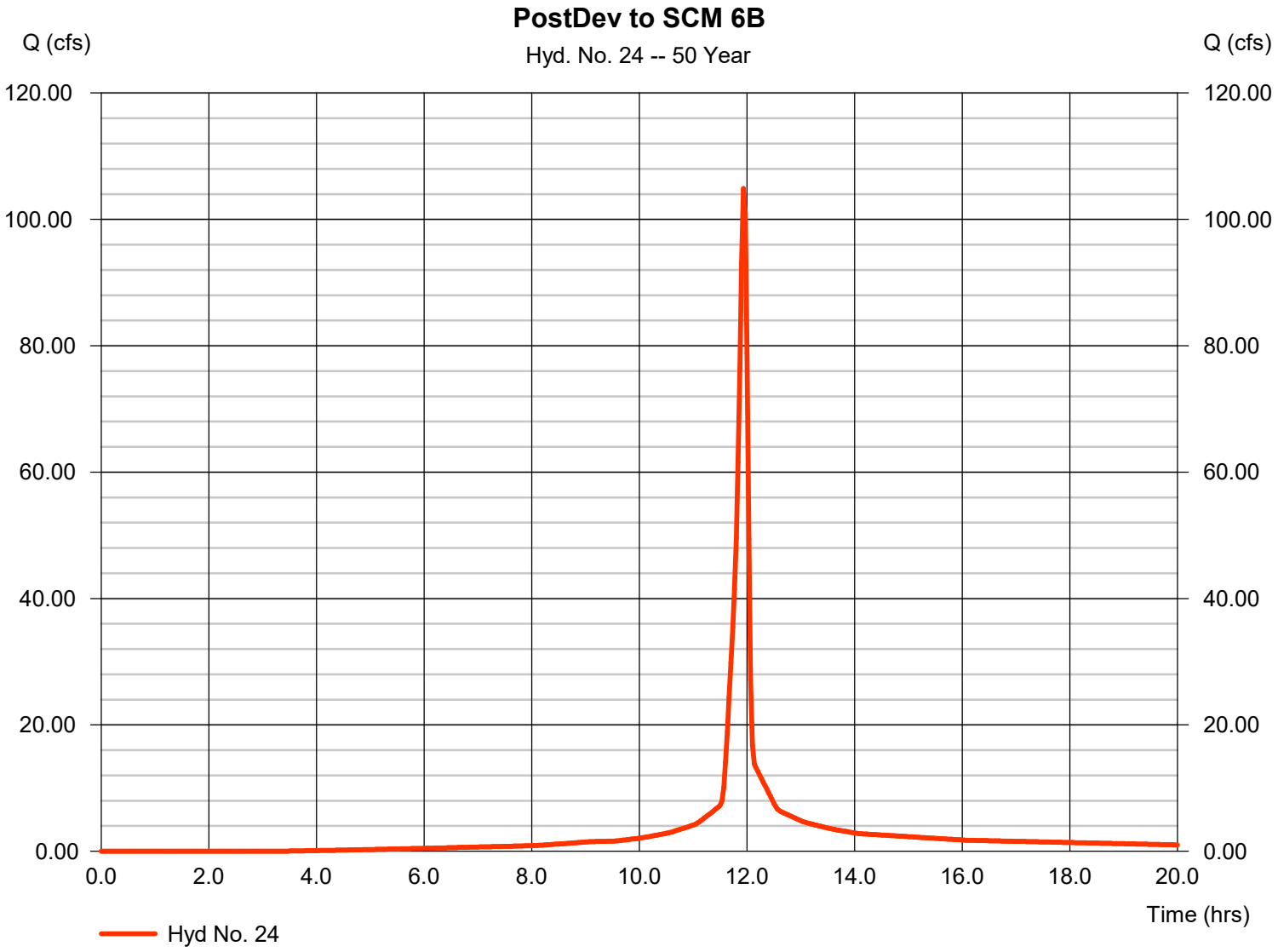


Hydrograph Report

Hyd. No. 24

PostDev to SCM 6B

Hydrograph type	=	SCS Runoff	Peak discharge	=	104.87 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	228,061 cuft
Drainage area	=	12.210 ac	Curve number	=	88.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.30 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

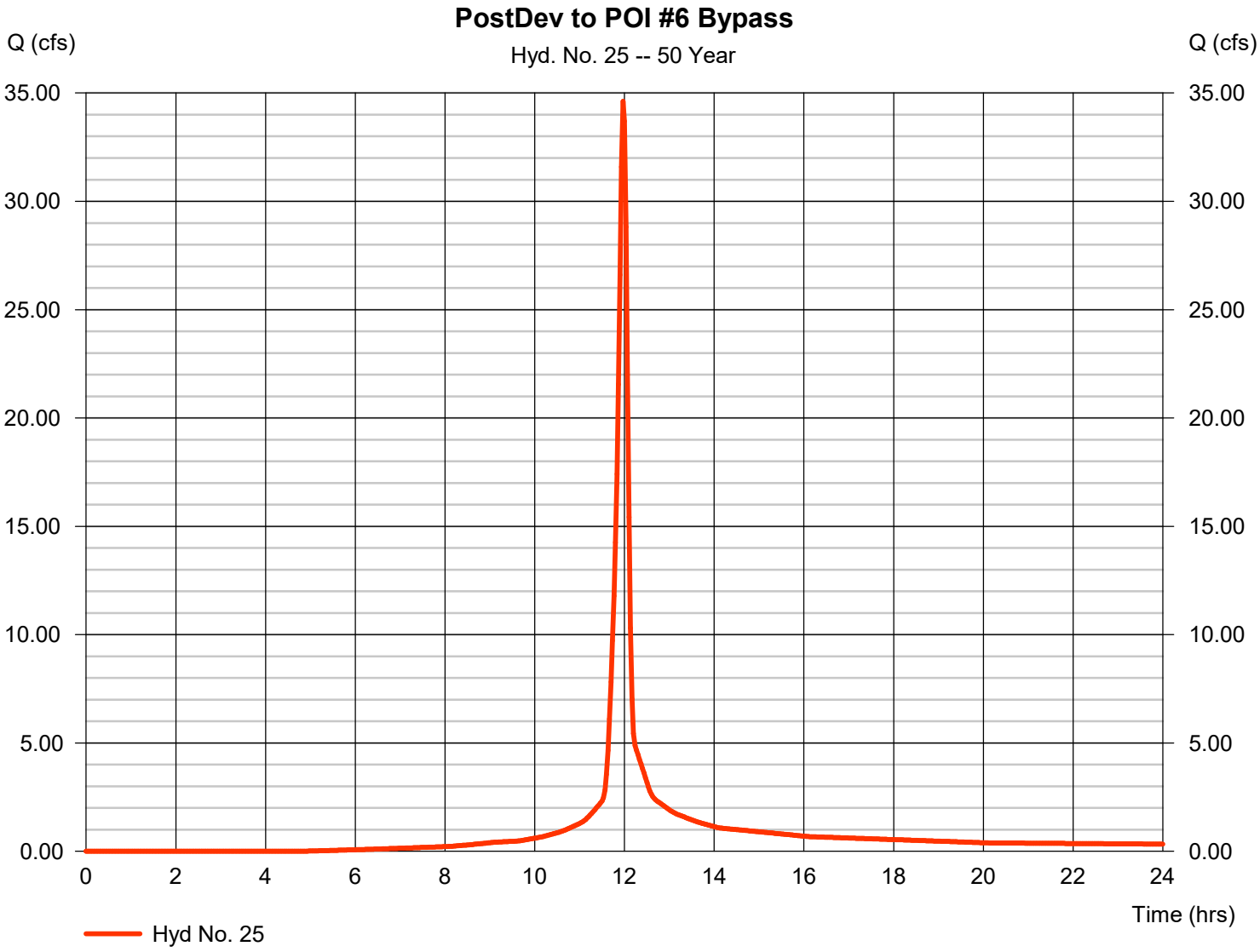


Hydrograph Report

Hyd. No. 25

PostDev to POI #6 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	34.61 cfs
Storm frequency	=	50 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	81,711 cuft
Drainage area	=	4.590 ac	Curve number	=	83.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	6.81 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

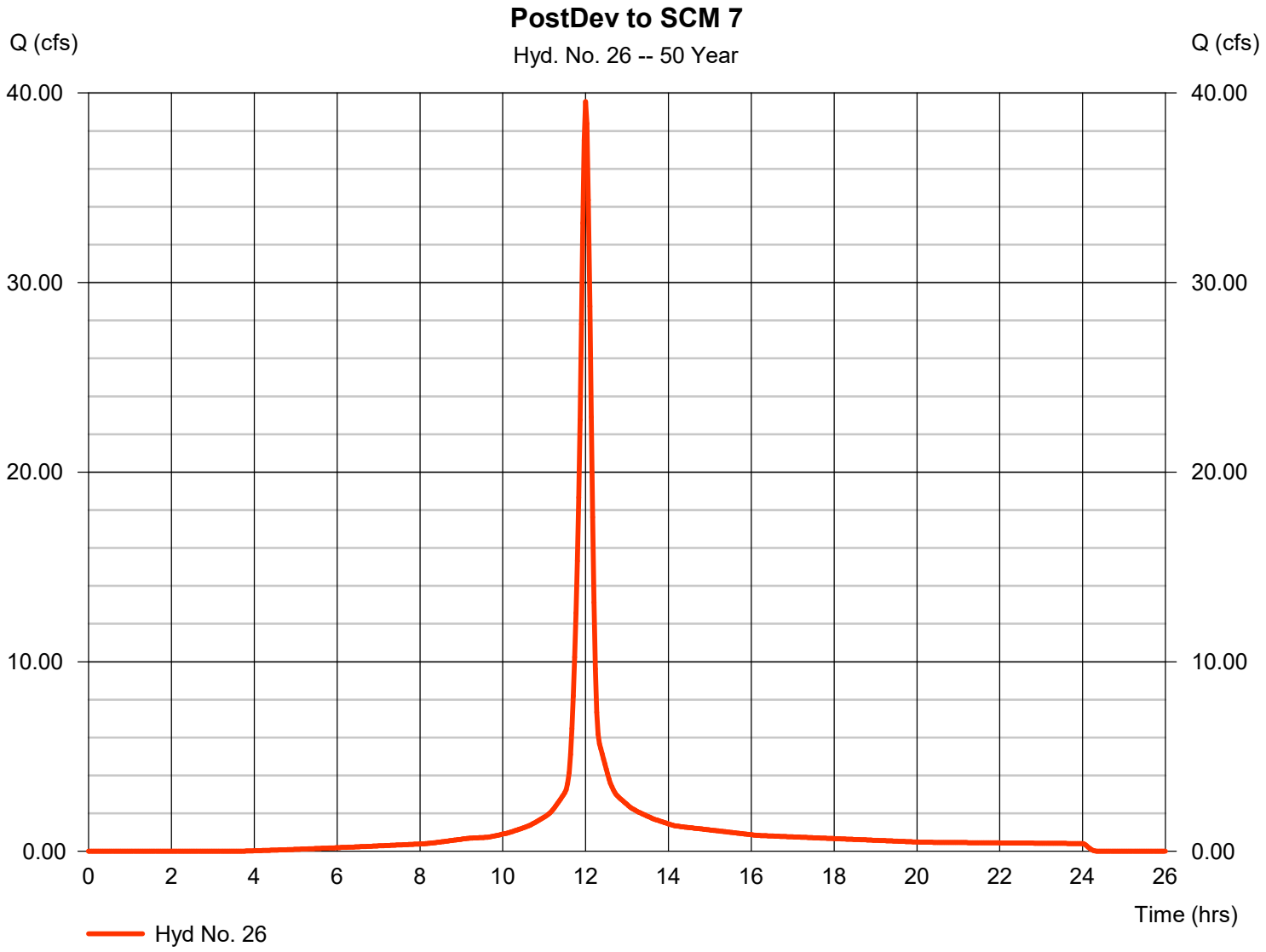


Hydrograph Report

Hyd. No. 26

PostDev to SCM 7

Hydrograph type	= SCS Runoff	Peak discharge	= 39.55 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 107,470 cuft
Drainage area	= 5.330 ac	Curve number	= 87.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.40 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

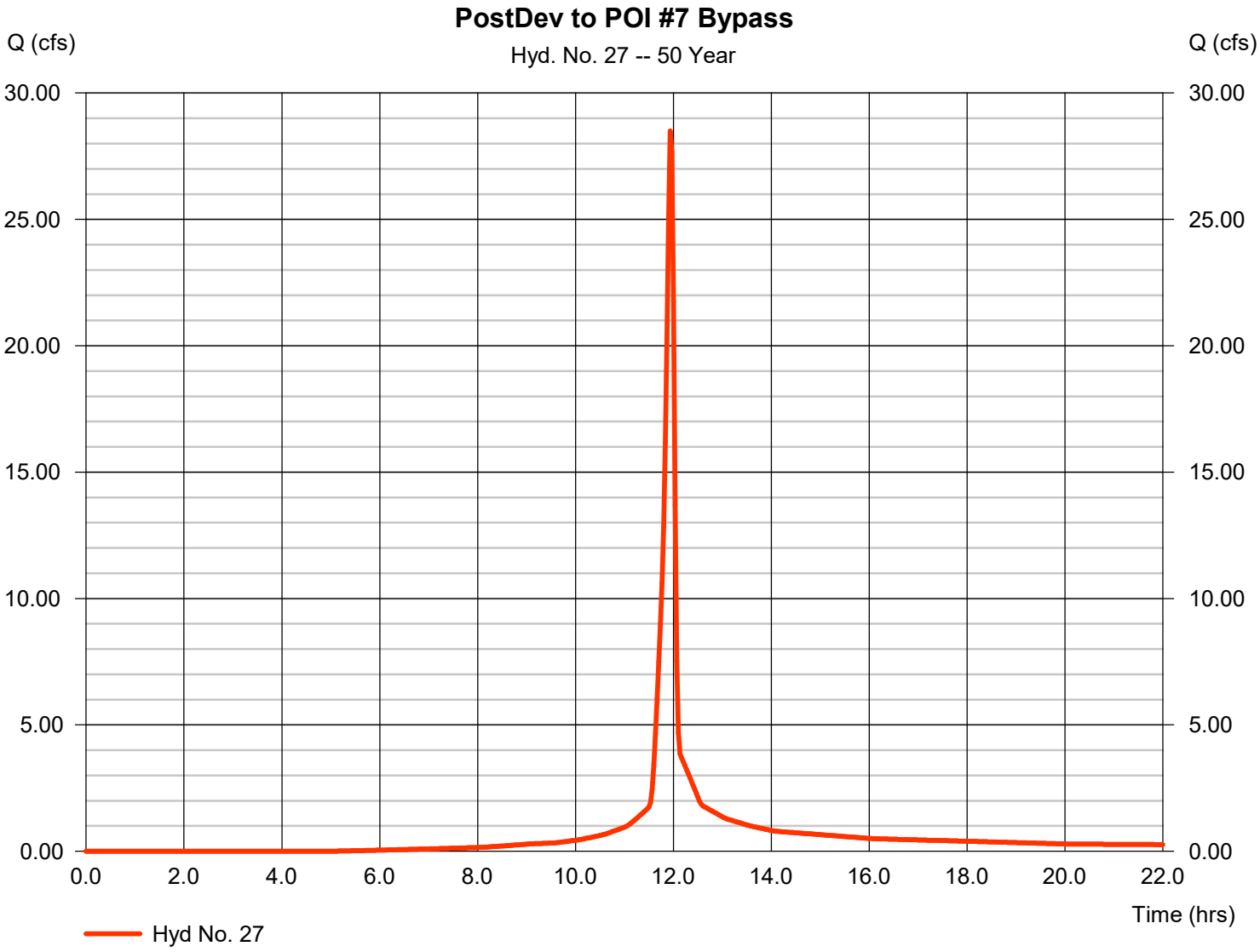


Hydrograph Report

Hyd. No. 27

PostDev to POI #7 Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 28.49 cfs
Storm frequency	= 50 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 59,652 cuft
Drainage area	= 3.640 ac	Curve number	= 82.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



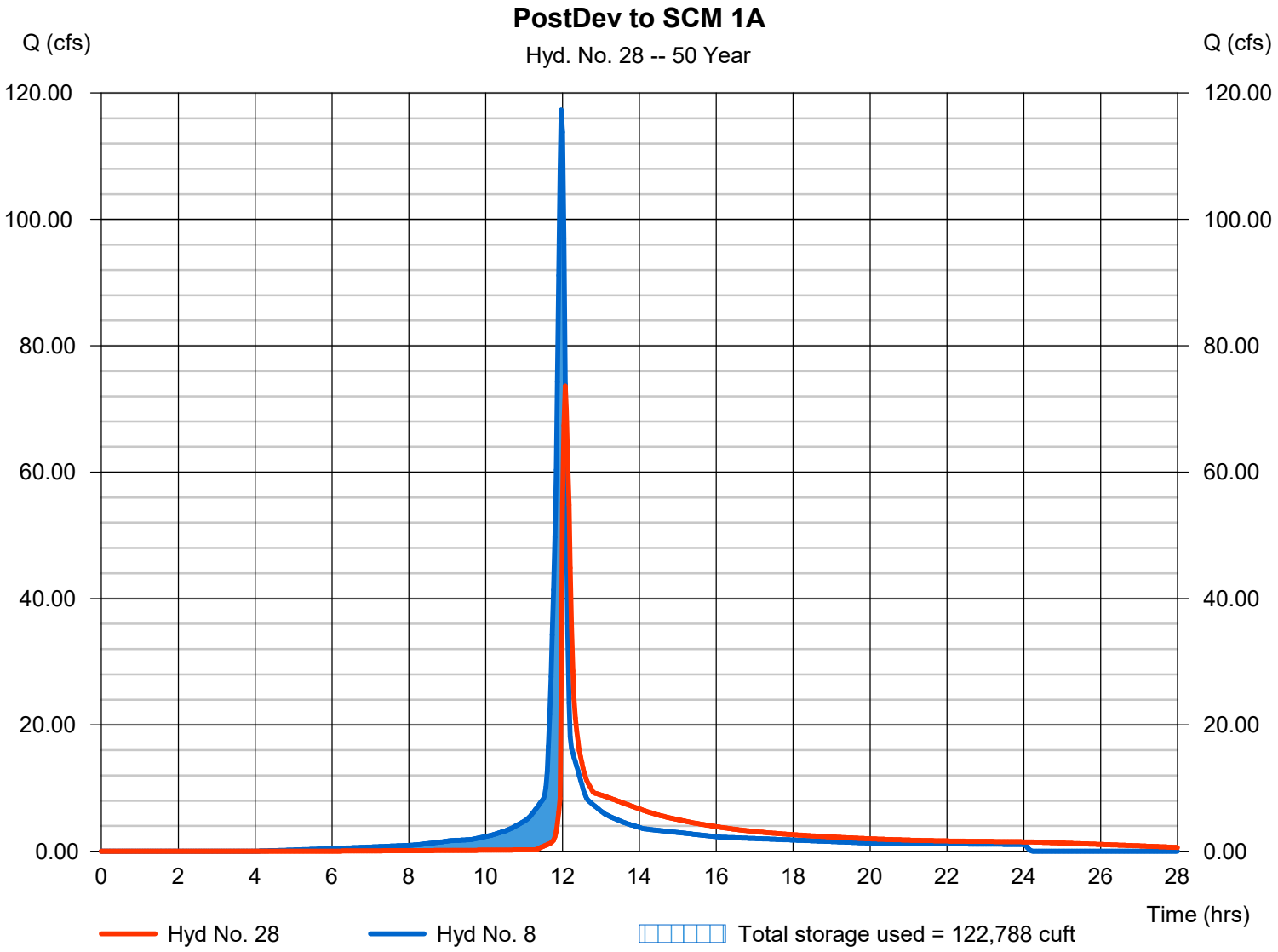
Hydrograph Report

Hyd. No. 28

PostDev to SCM 1A

Hydrograph type	=	Reservoir	Peak discharge	=	73.62 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	279,940 cuft
Inflow hyd. No.	=	8 - PostDev to SCM 1A	Max. Elevation	=	353.68 ft
Reservoir name	=	SCM 1A	Max. Storage	=	122,788 cuft

Storage Indication method used.



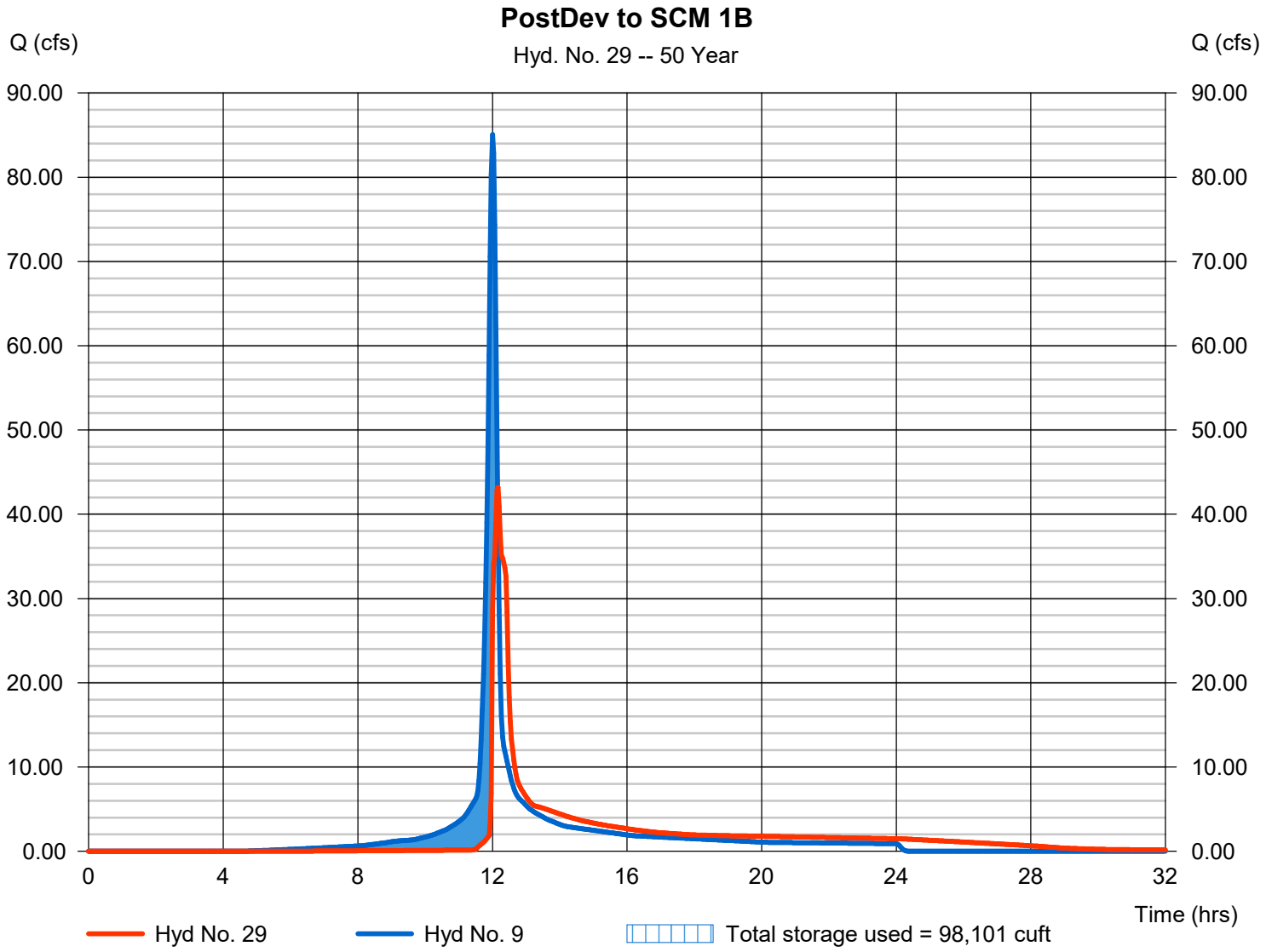
Hydrograph Report

Hyd. No. 29

PostDev to SCM 1B

Hydrograph type	=	Reservoir	Peak discharge	=	43.18 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	224,528 cuft
Inflow hyd. No.	=	9 - PostDev to SCM 1B	Max. Elevation	=	381.70 ft
Reservoir name	=	SCM 1B	Max. Storage	=	98,101 cuft

Storage Indication method used.



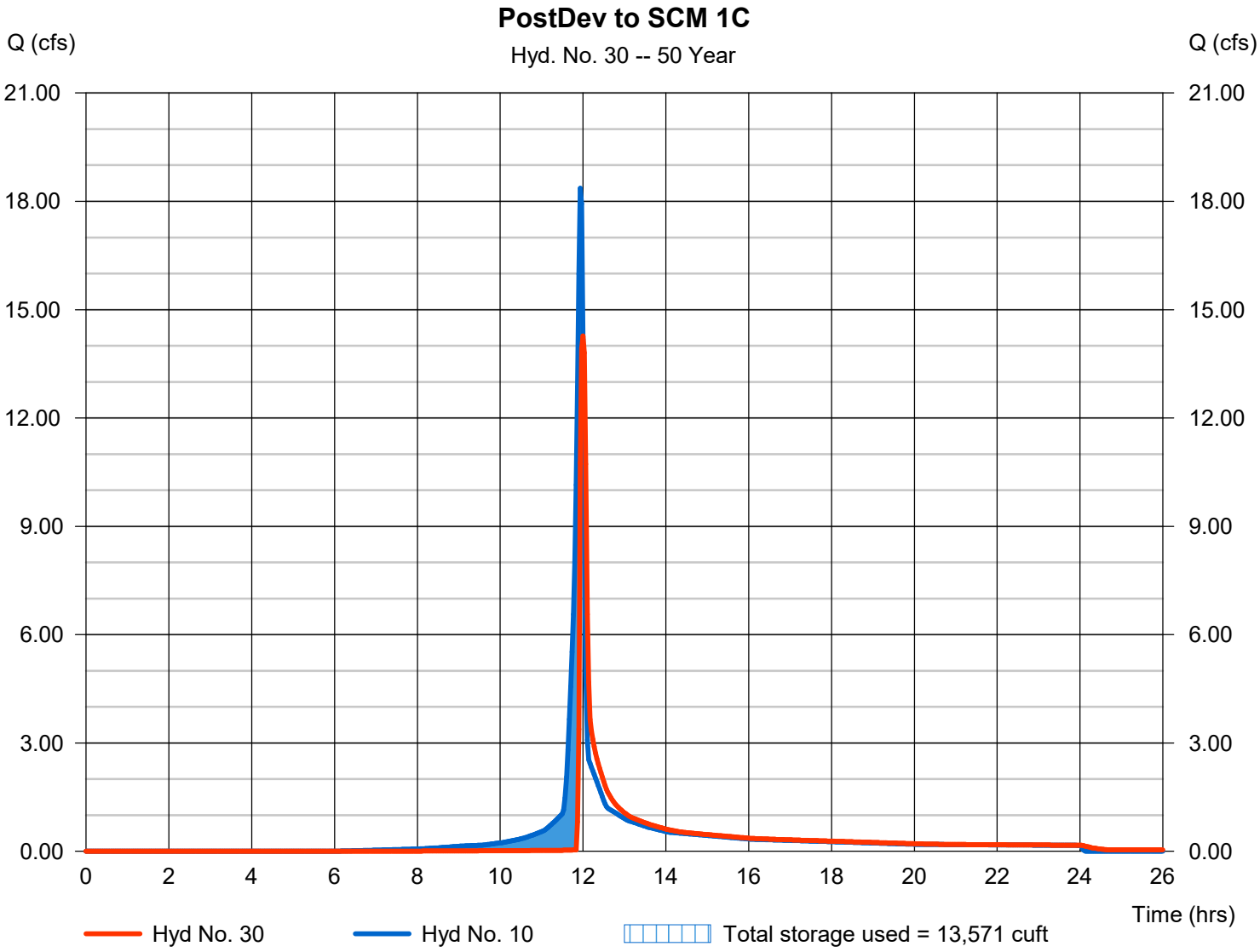
Hydrograph Report

Hyd. No. 30

PostDev to SCM 1C

Hydrograph type	=	Reservoir	Peak discharge	=	14.28 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	36,428 cuft
Inflow hyd. No.	=	10 - PostDev to SCM 1C	Max. Elevation	=	363.92 ft
Reservoir name	=	SCM 1C	Max. Storage	=	13,571 cuft

Storage Indication method used.



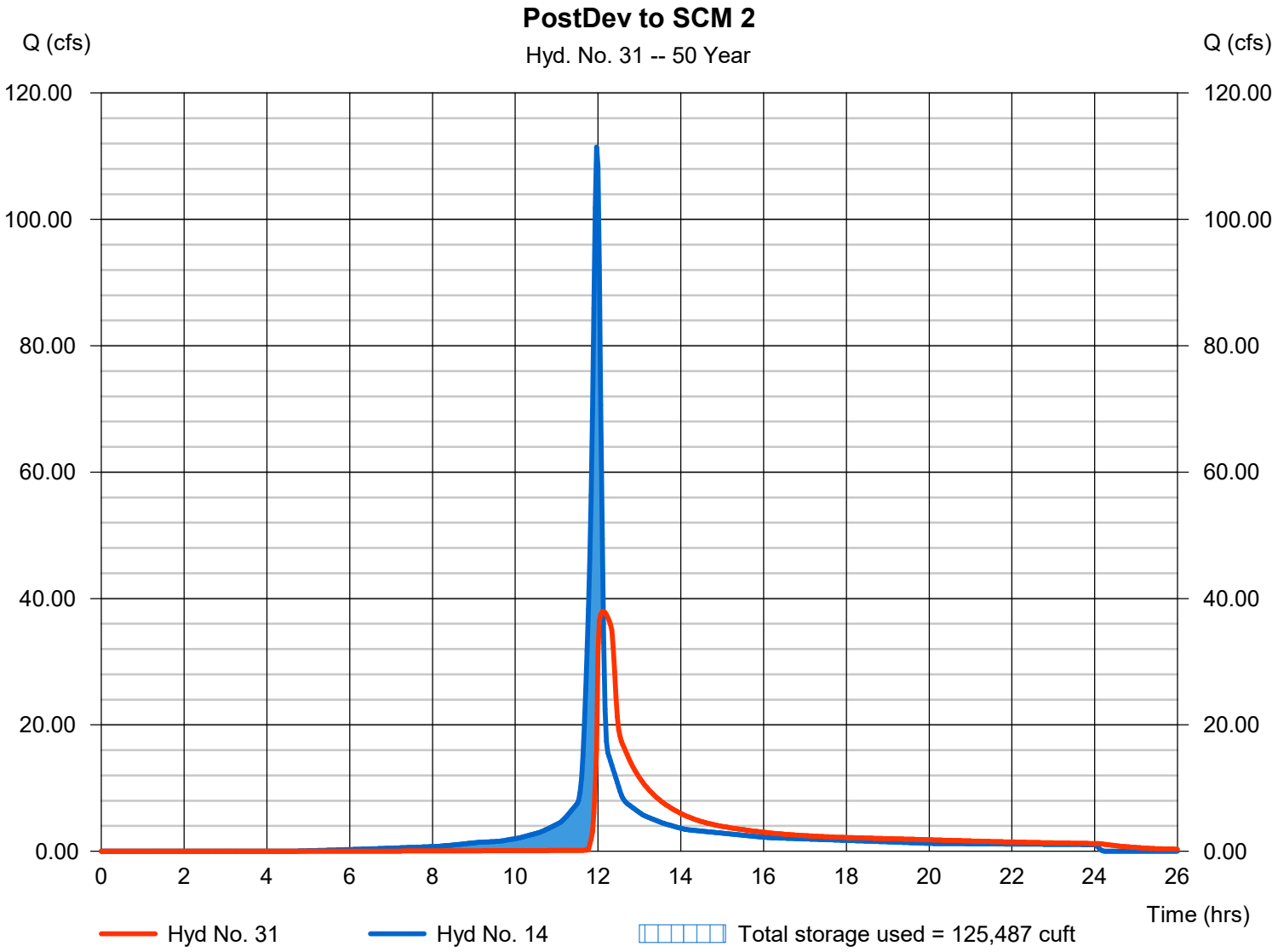
Hydrograph Report

Hyd. No. 31

PostDev to SCM 2

Hydrograph type	=	Reservoir	Peak discharge	=	37.97 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	248,668 cuft
Inflow hyd. No.	=	14 - PostDev to SCM 2	Max. Elevation	=	358.36 ft
Reservoir name	=	SCM 2	Max. Storage	=	125,487 cuft

Storage Indication method used.



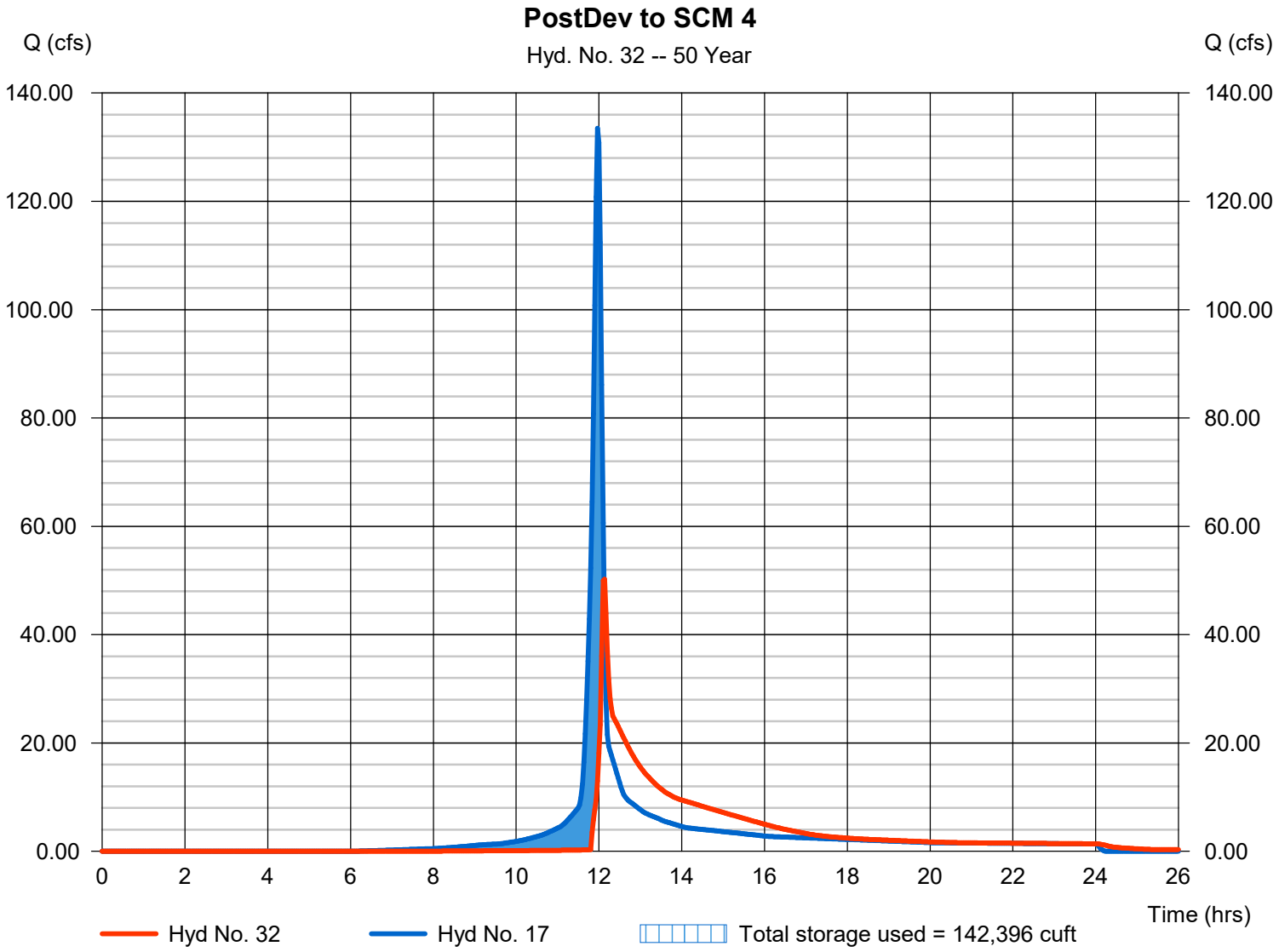
Hydrograph Report

Hyd. No. 32

PostDev to SCM 4

Hydrograph type	=	Reservoir	Peak discharge	=	50.23 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	305,163 cuft
Inflow hyd. No.	=	17 - PostDev to SCM 4	Max. Elevation	=	368.92 ft
Reservoir name	=	SCM 4	Max. Storage	=	142,396 cuft

Storage Indication method used.



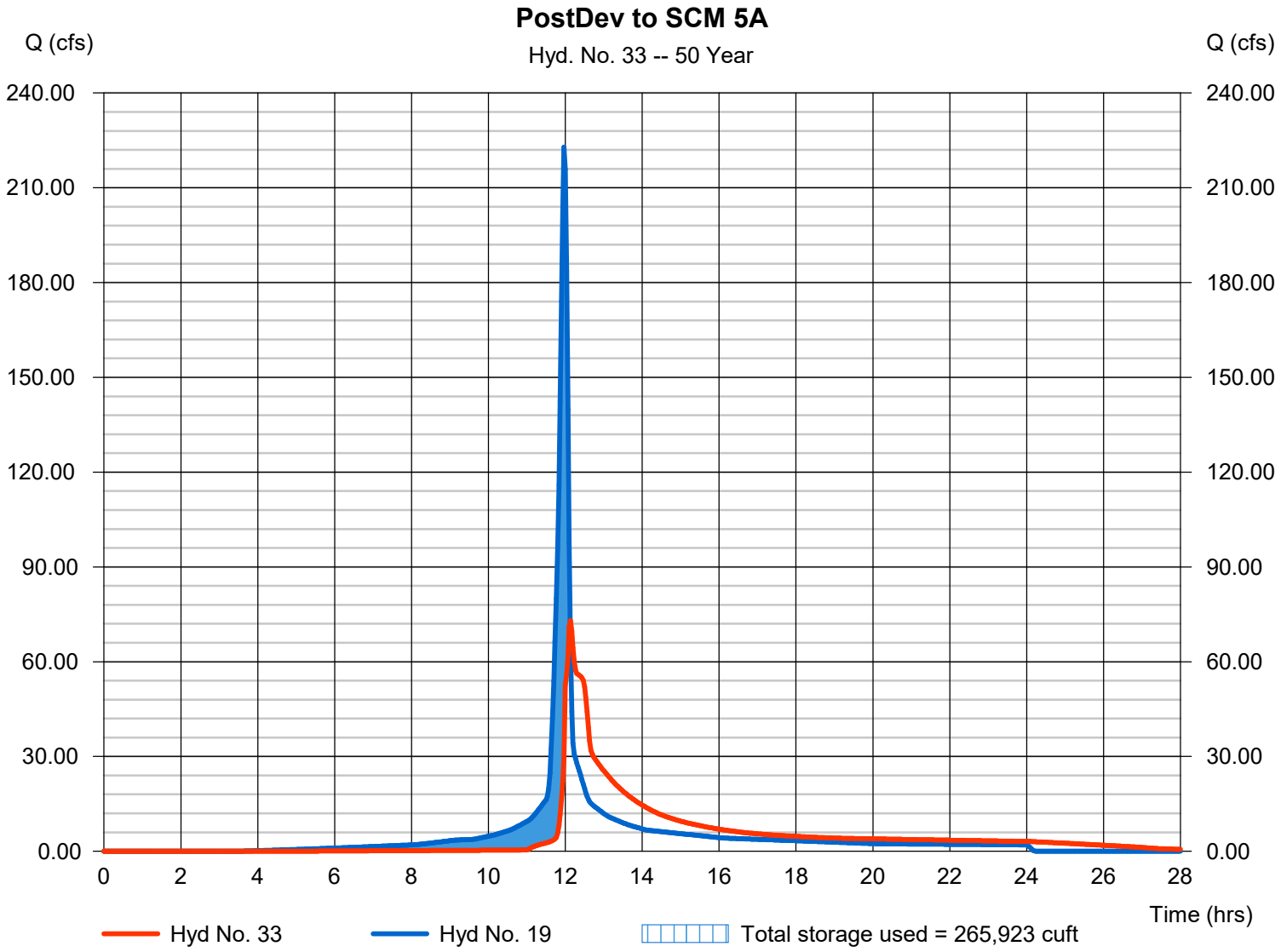
Hydrograph Report

Hyd. No. 33

PostDev to SCM 5A

Hydrograph type	=	Reservoir	Peak discharge	=	72.99 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	538,897 cuft
Inflow hyd. No.	=	19 - PostDev to SCM 5A	Max. Elevation	=	321.39 ft
Reservoir name	=	SCM 5A	Max. Storage	=	265,923 cuft

Storage Indication method used.



Hydrograph Report

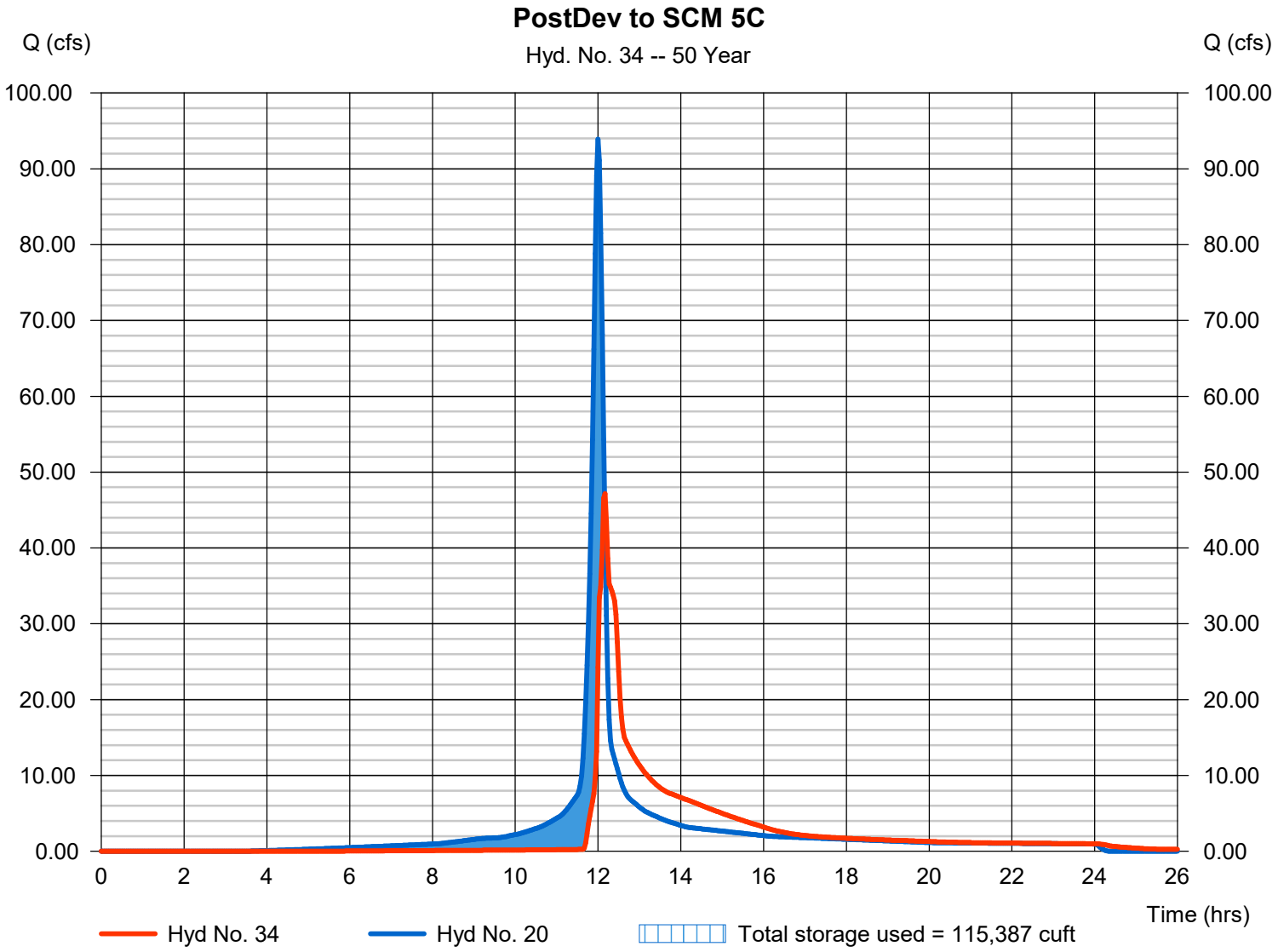
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 34

PostDev to SCM 5C

Hydrograph type	= Reservoir	Peak discharge	= 47.14 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 253,321 cuft
Inflow hyd. No.	= 20 - PostDev to SCM 5C	Max. Elevation	= 297.72 ft
Reservoir name	= SCM 5C	Max. Storage	= 115,387 cuft

Storage Indication method used.



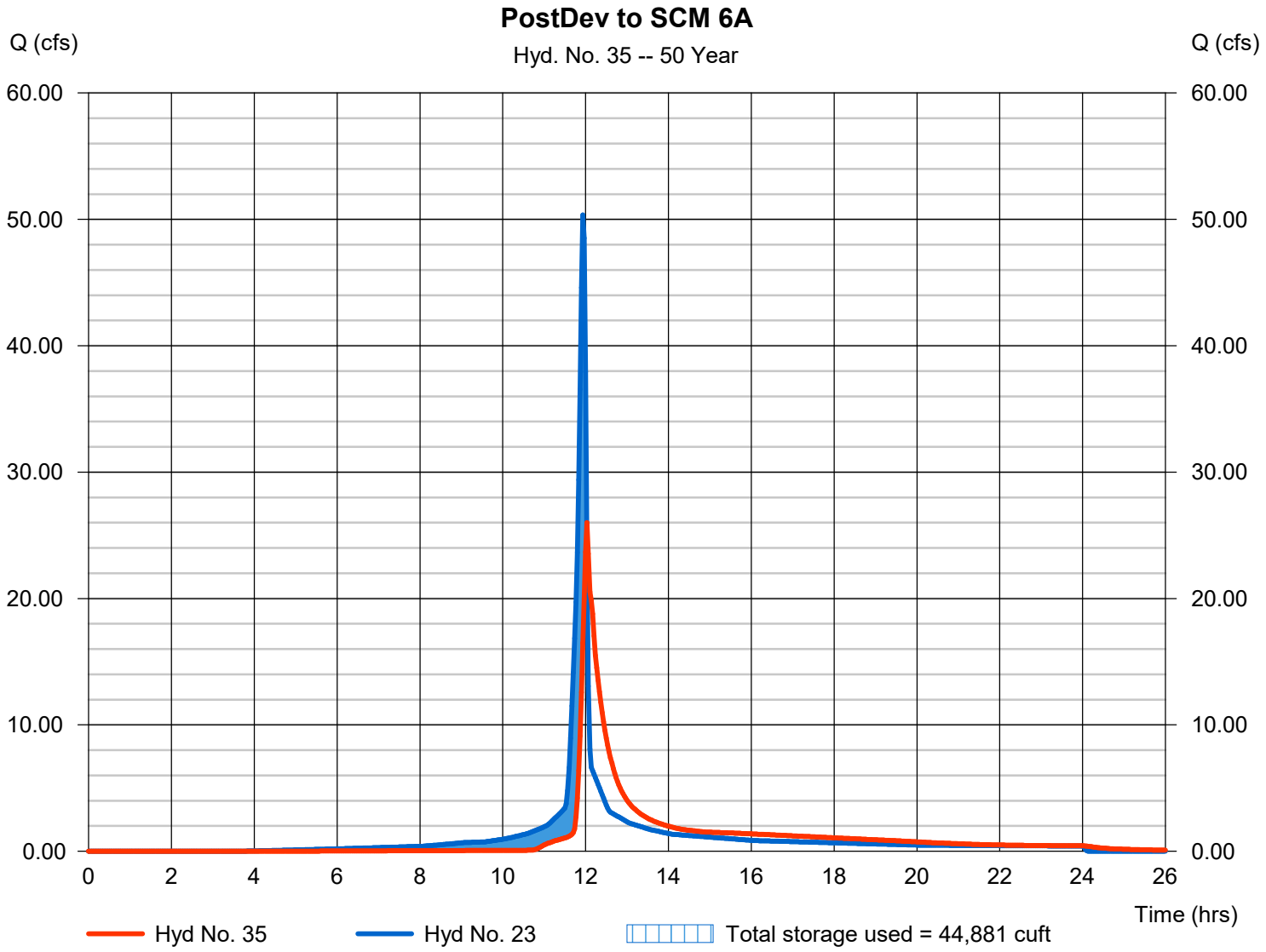
Hydrograph Report

Hyd. No. 35

PostDev to SCM 6A

Hydrograph type	= Reservoir	Peak discharge	= 26.01 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 108,501 cuft
Inflow hyd. No.	= 23 - PostDev to SCM 6A	Max. Elevation	= 282.72 ft
Reservoir name	= SCM 6A	Max. Storage	= 44,881 cuft

Storage Indication method used.



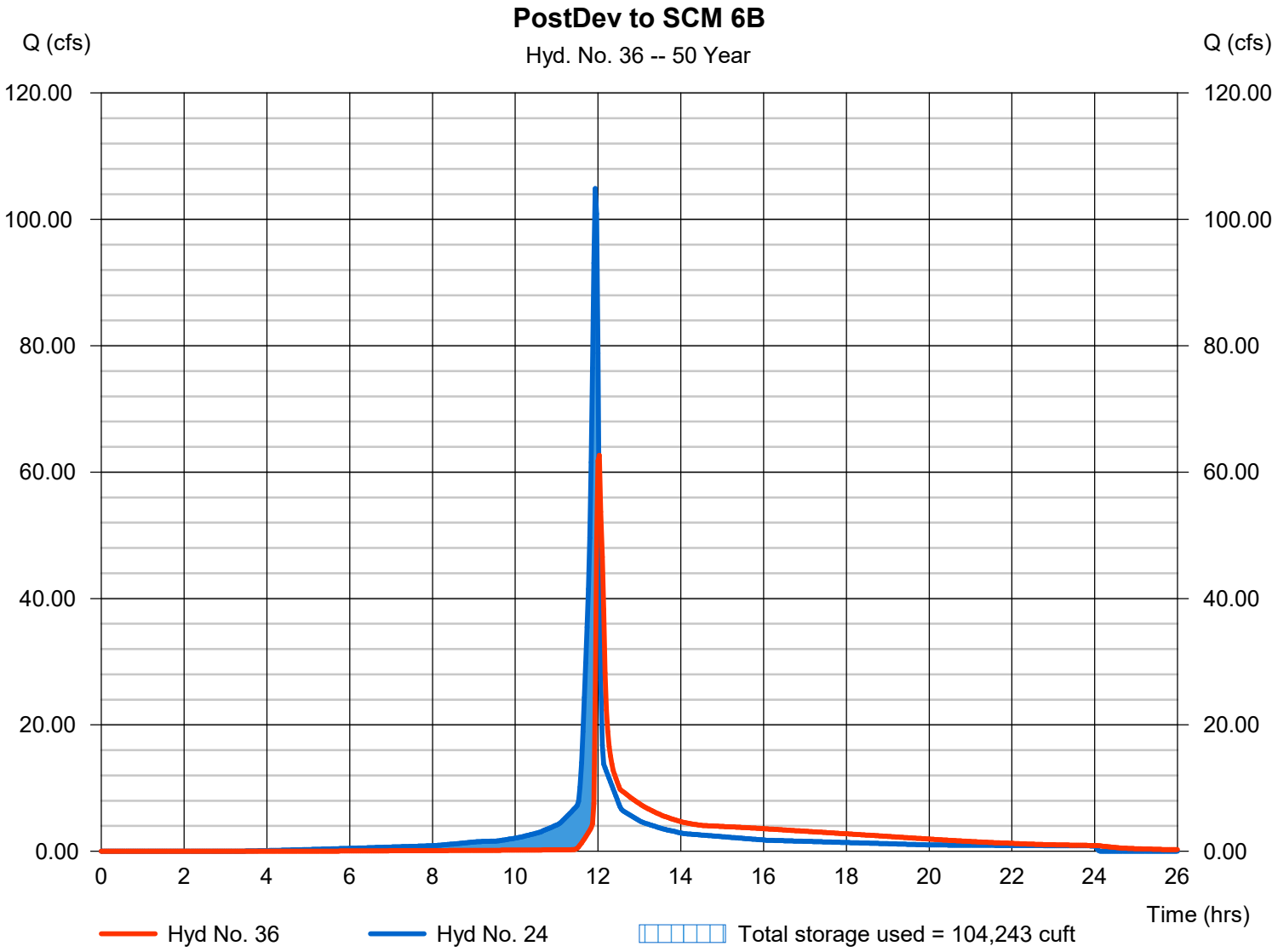
Hydrograph Report

Hyd. No. 36

PostDev to SCM 6B

Hydrograph type	=	Reservoir	Peak discharge	=	62.69 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	227,000 cuft
Inflow hyd. No.	=	24 - PostDev to SCM 6B	Max. Elevation	=	295.58 ft
Reservoir name	=	SCM 6B	Max. Storage	=	104,243 cuft

Storage Indication method used.



Hydrograph Report

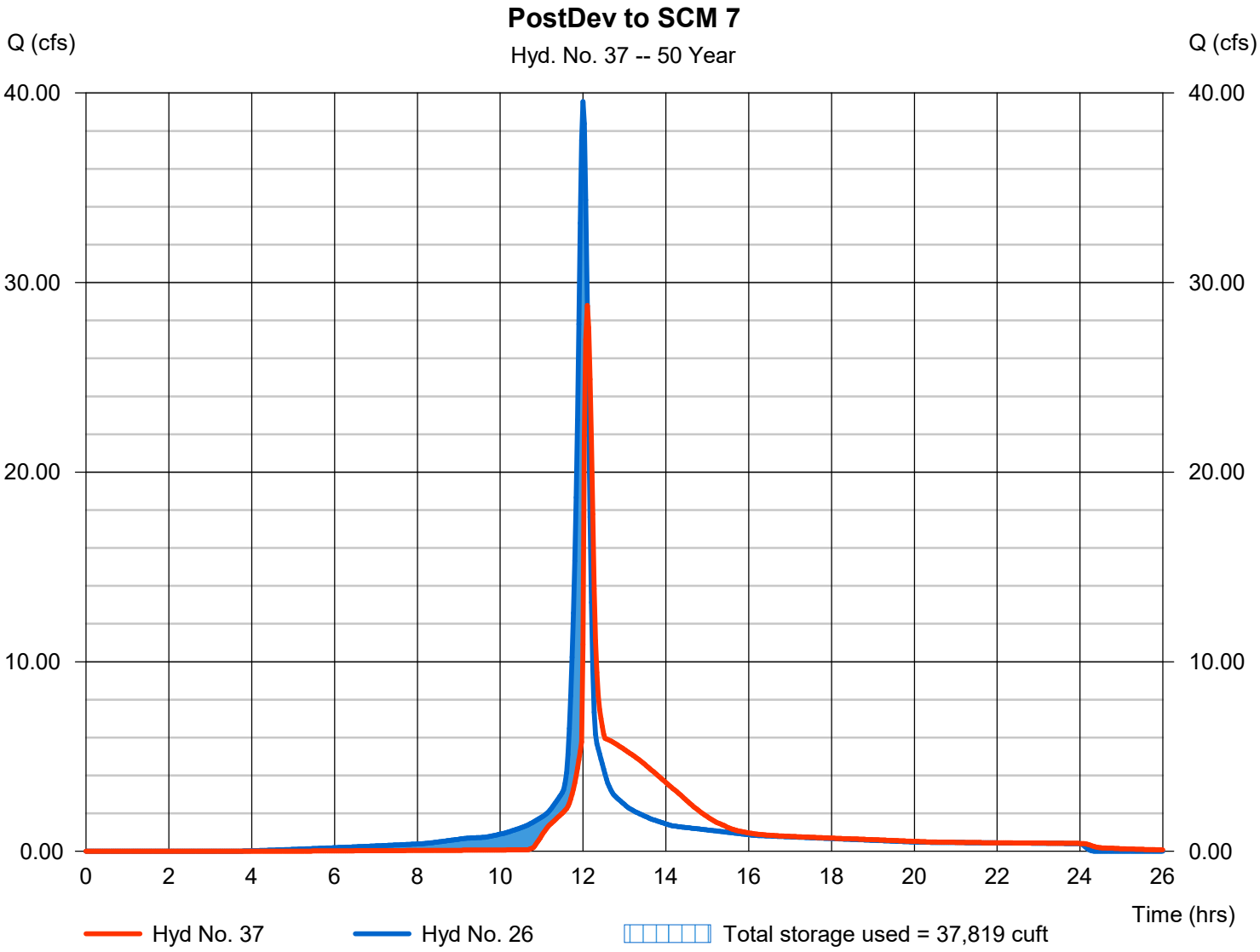
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 37

PostDev to SCM 7

Hydrograph type	=	Reservoir	Peak discharge	=	28.80 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	107,321 cuft
Inflow hyd. No.	=	26 - PostDev to SCM 7	Max. Elevation	=	327.65 ft
Reservoir name	=	SCM 7	Max. Storage	=	37,819 cuft

Storage Indication method used.

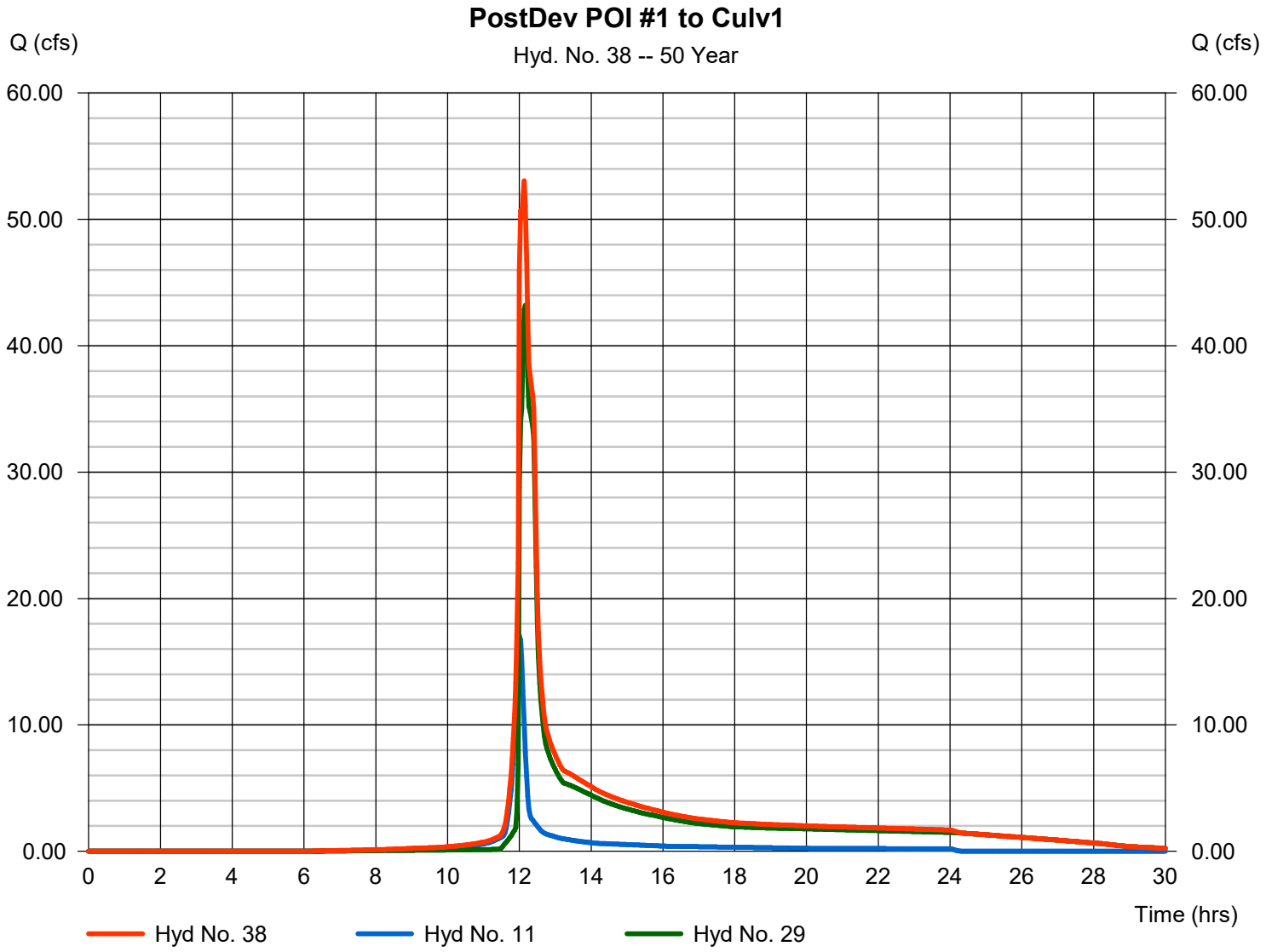


Hydrograph Report

Hyd. No. 38

PostDev POI #1 to Culv1

Hydrograph type	= Combine	Peak discharge	= 53.04 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 269,110 cuft
Inflow hyds.	= 11, 29	Contrib. drain. area	= 2.720 ac

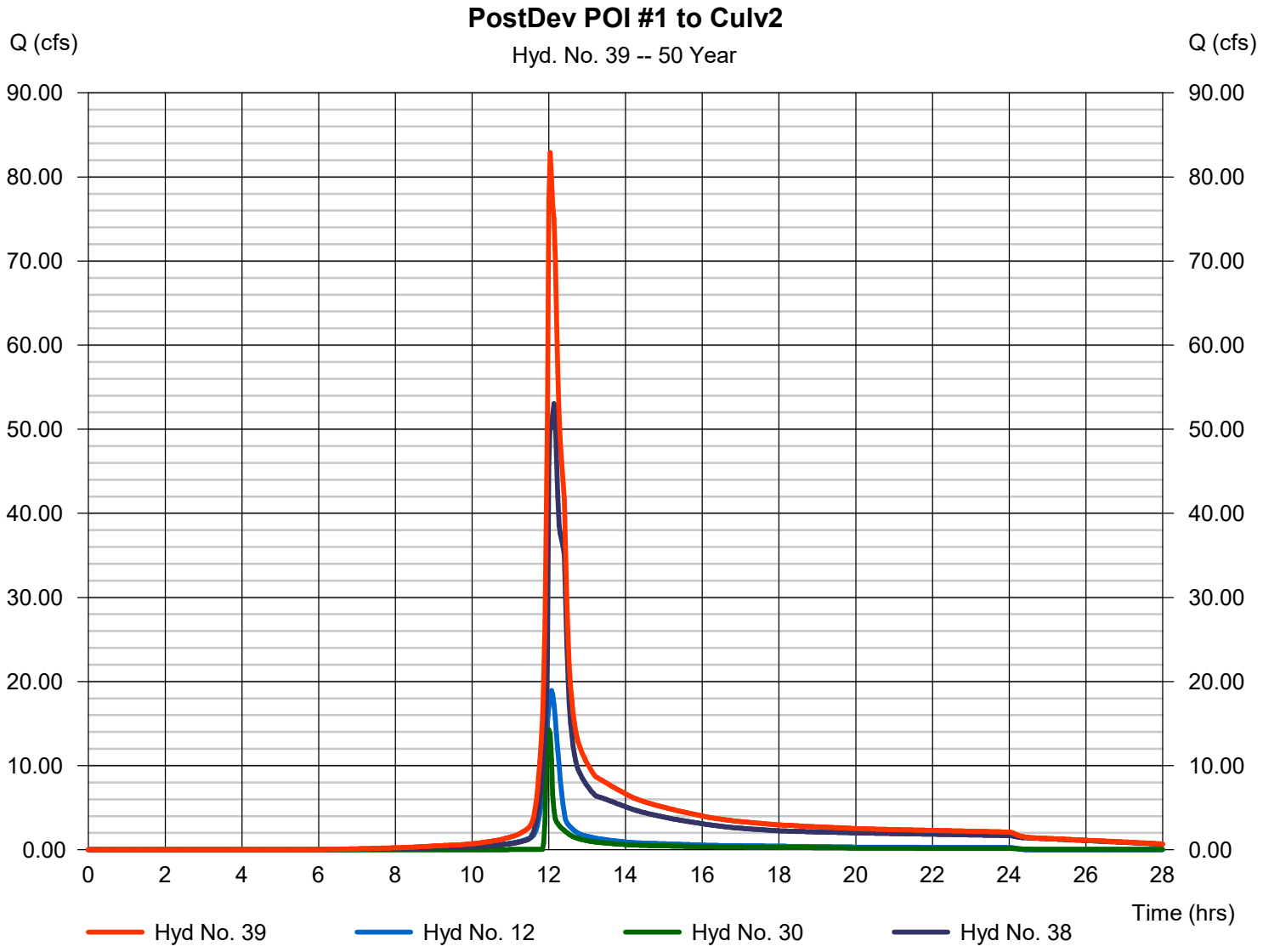


Hydrograph Report

Hyd. No. 39

PostDev POI #1 to Culv2

Hydrograph type	=	Combine	Peak discharge	=	82.90 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	365,110 cuft
Inflow hyds.	=	12, 30, 38	Contrib. drain. area	=	3.640 ac

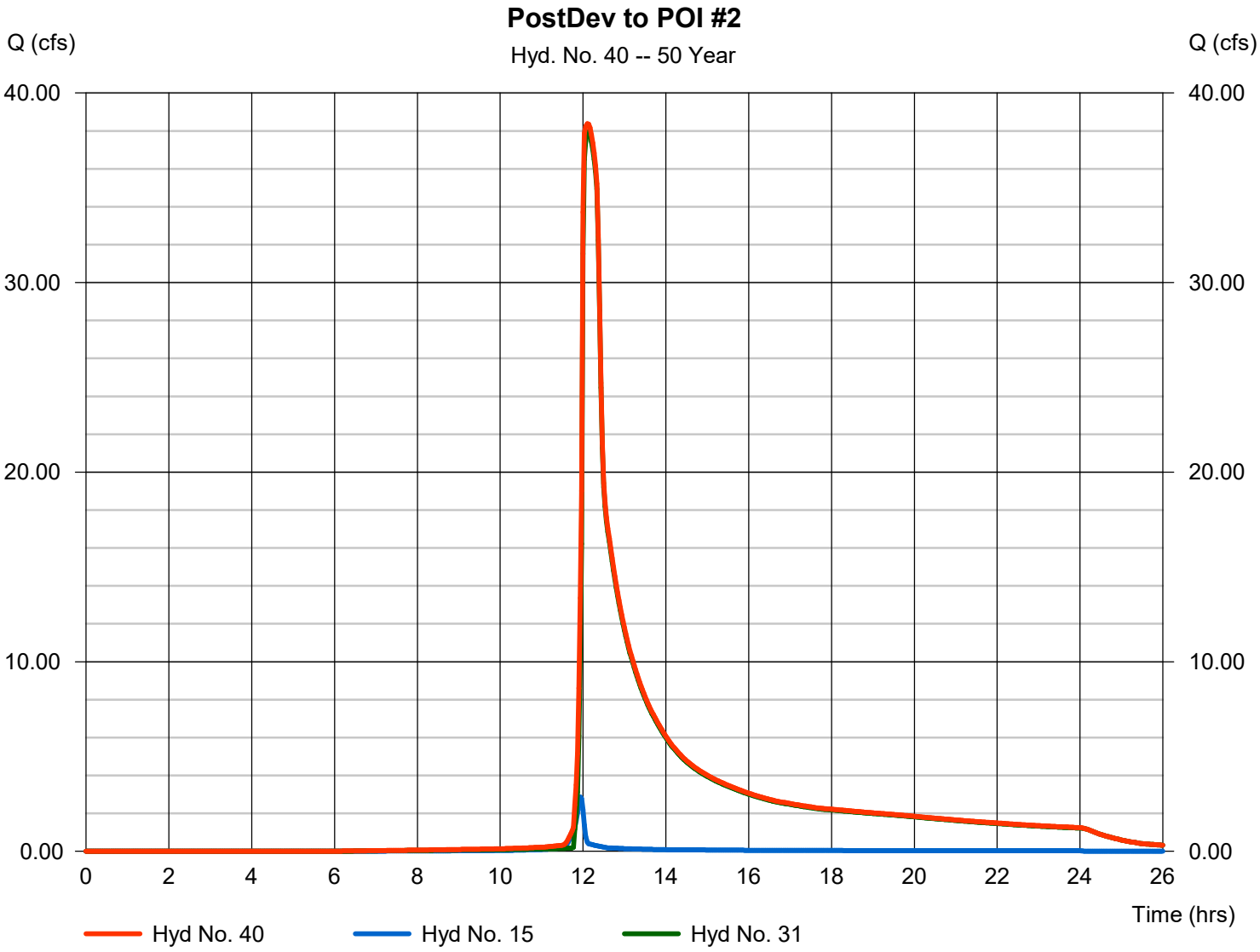


Hydrograph Report

Hyd. No. 40

PostDev to POI #2

Hydrograph type	=	Combine	Peak discharge	=	38.38 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	254,635 cuft
Inflow hyds.	=	15, 31	Contrib. drain. area	=	0.370 ac

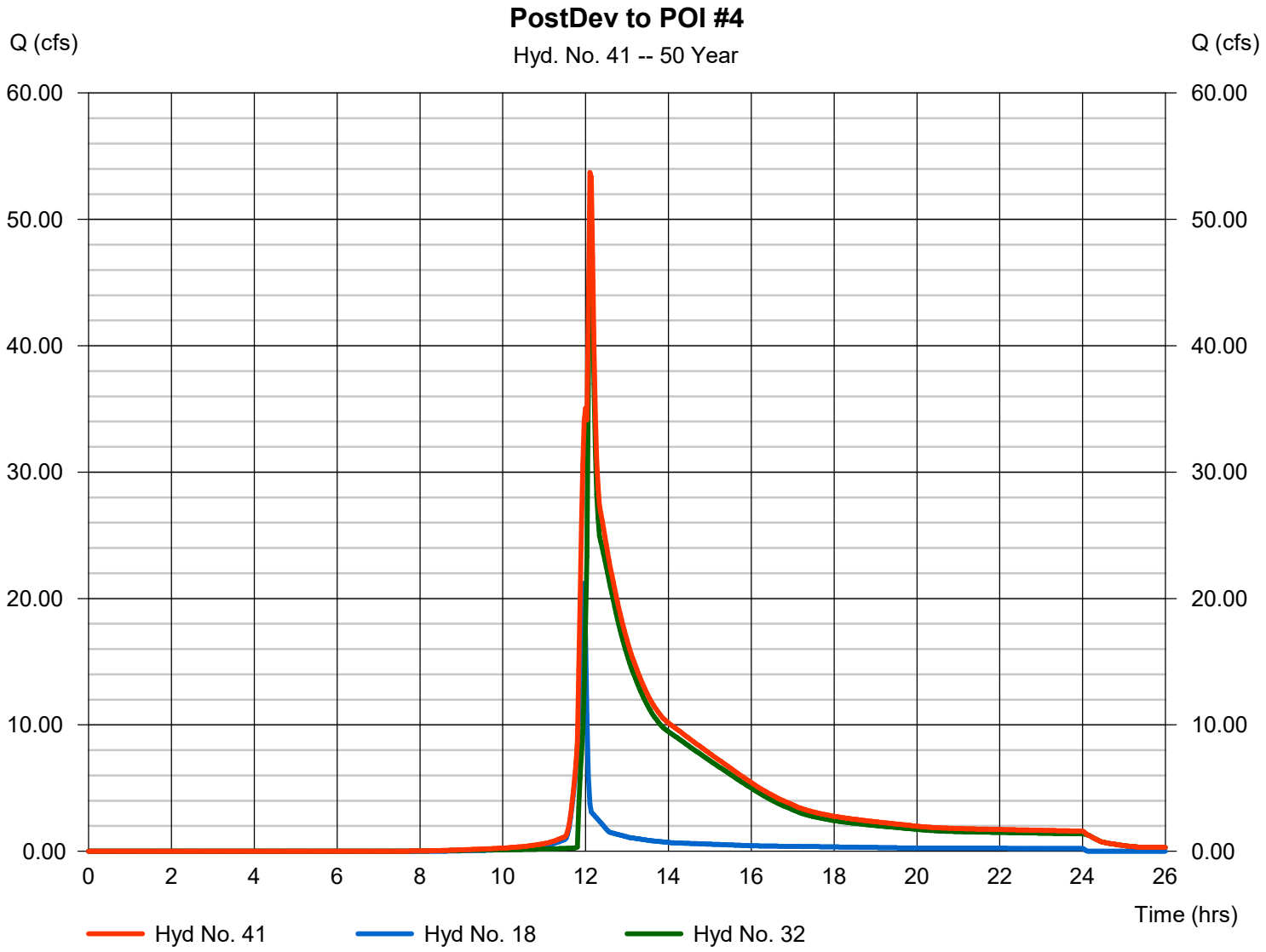


Hydrograph Report

Hyd. No. 41

PostDev to POI #4

Hydrograph type	=	Combine	Peak discharge	=	53.71 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	348,006 cuft
Inflow hyds.	=	18, 32	Contrib. drain. area	=	3.670 ac

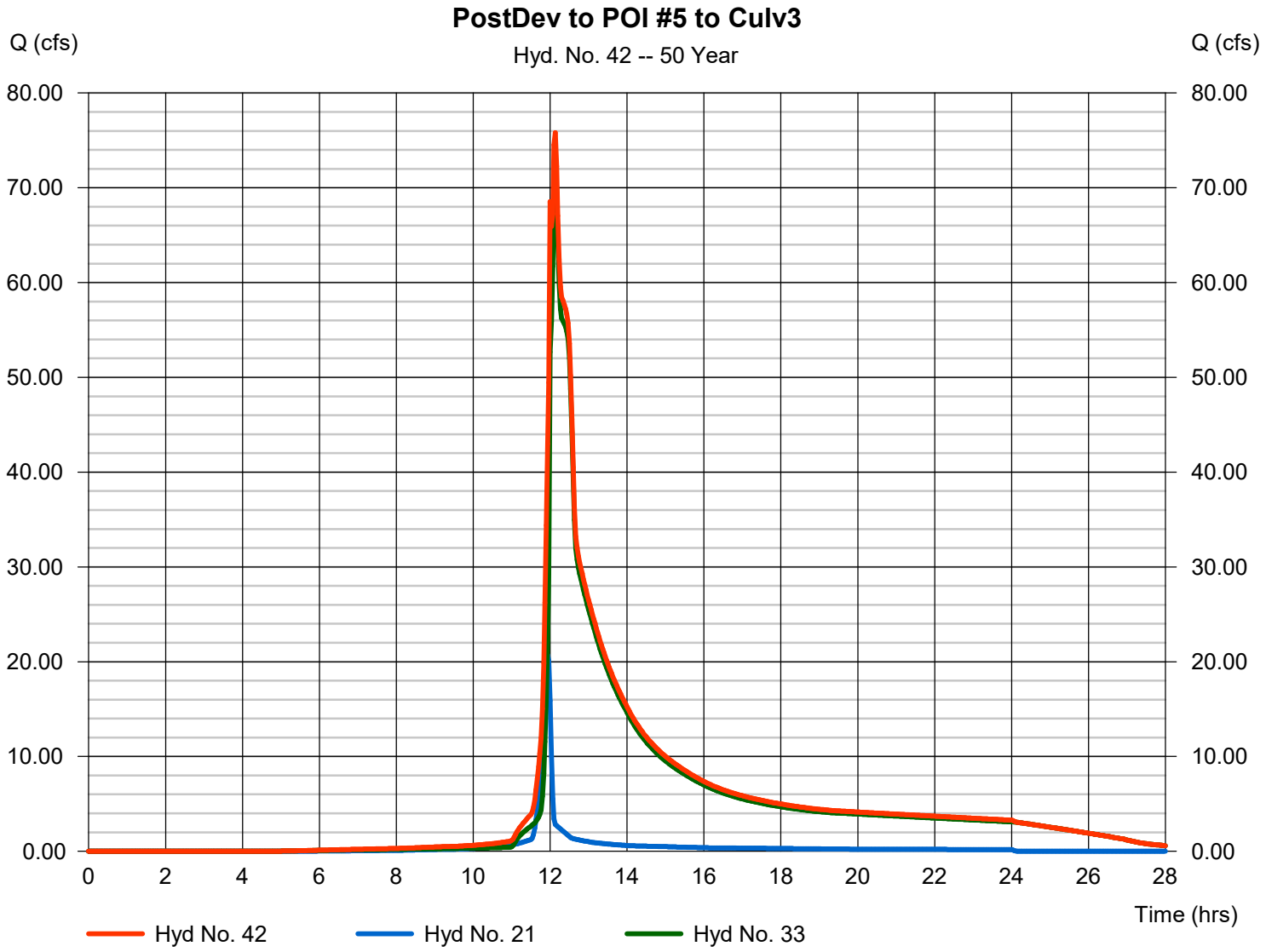


Hydrograph Report

Hyd. No. 42

PostDev to POI #5 to Culv3

Hydrograph type	=	Combine	Peak discharge	=	75.81 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	581,989 cuft
Inflow hyds.	=	21, 33	Contrib. drain. area	=	2.710 ac

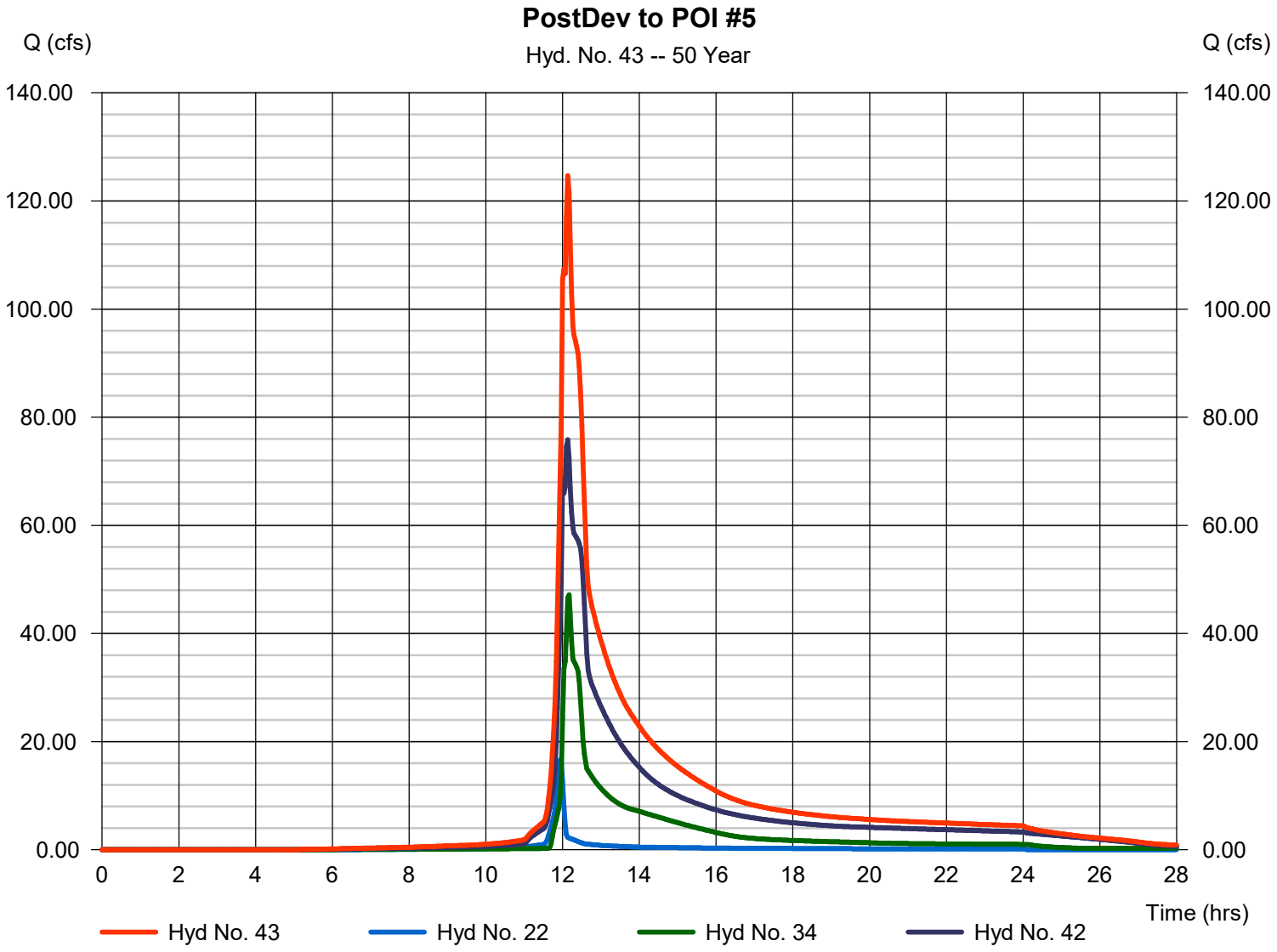


Hydrograph Report

Hyd. No. 43

PostDev to POI #5

Hydrograph type	=	Combine	Peak discharge	=	124.67 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	869,805 cuft
Inflow hyds.	=	22, 34, 42	Contrib. drain. area	=	2.190 ac

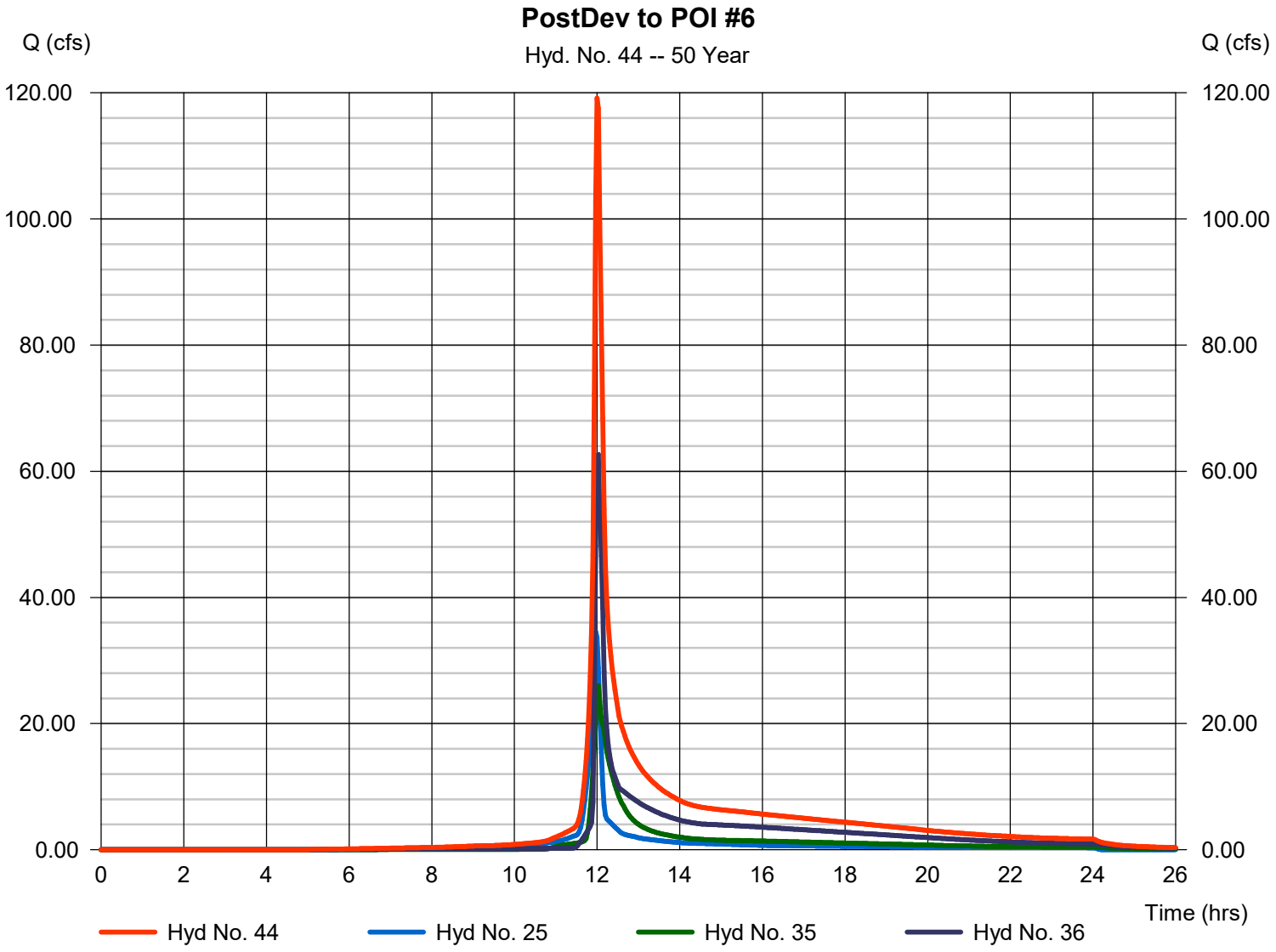


Hydrograph Report

Hyd. No. 44

PostDev to POI #6

Hydrograph type	= Combine	Peak discharge	= 119.15 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 417,212 cuft
Inflow hyds.	= 25, 35, 36	Contrib. drain. area	= 4.590 ac

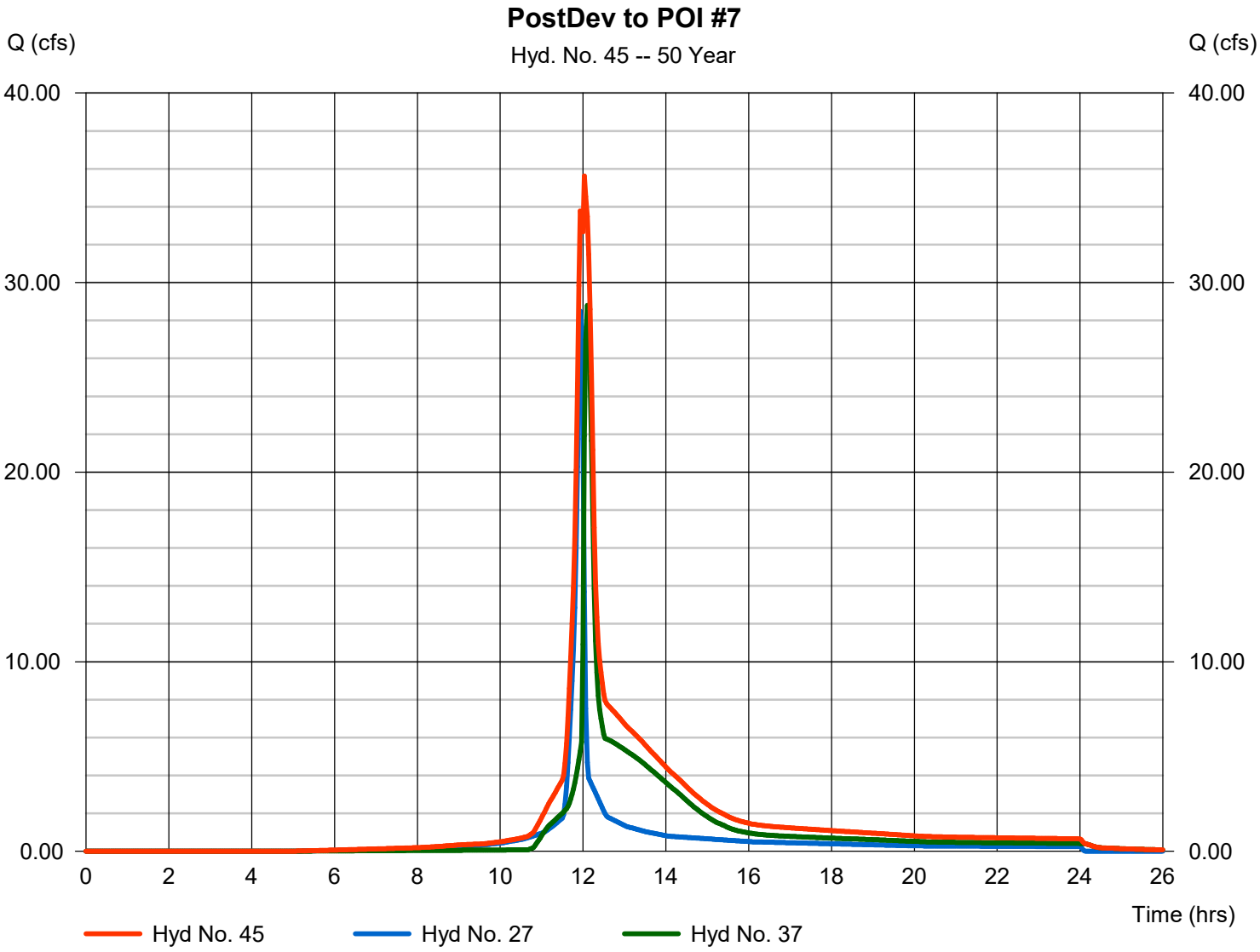


Hydrograph Report

Hyd. No. 45

PostDev to POI #7

Hydrograph type	=	Combine	Peak discharge	=	35.62 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	166,974 cuft
Inflow hyds.	=	27, 37	Contrib. drain. area	=	3.640 ac

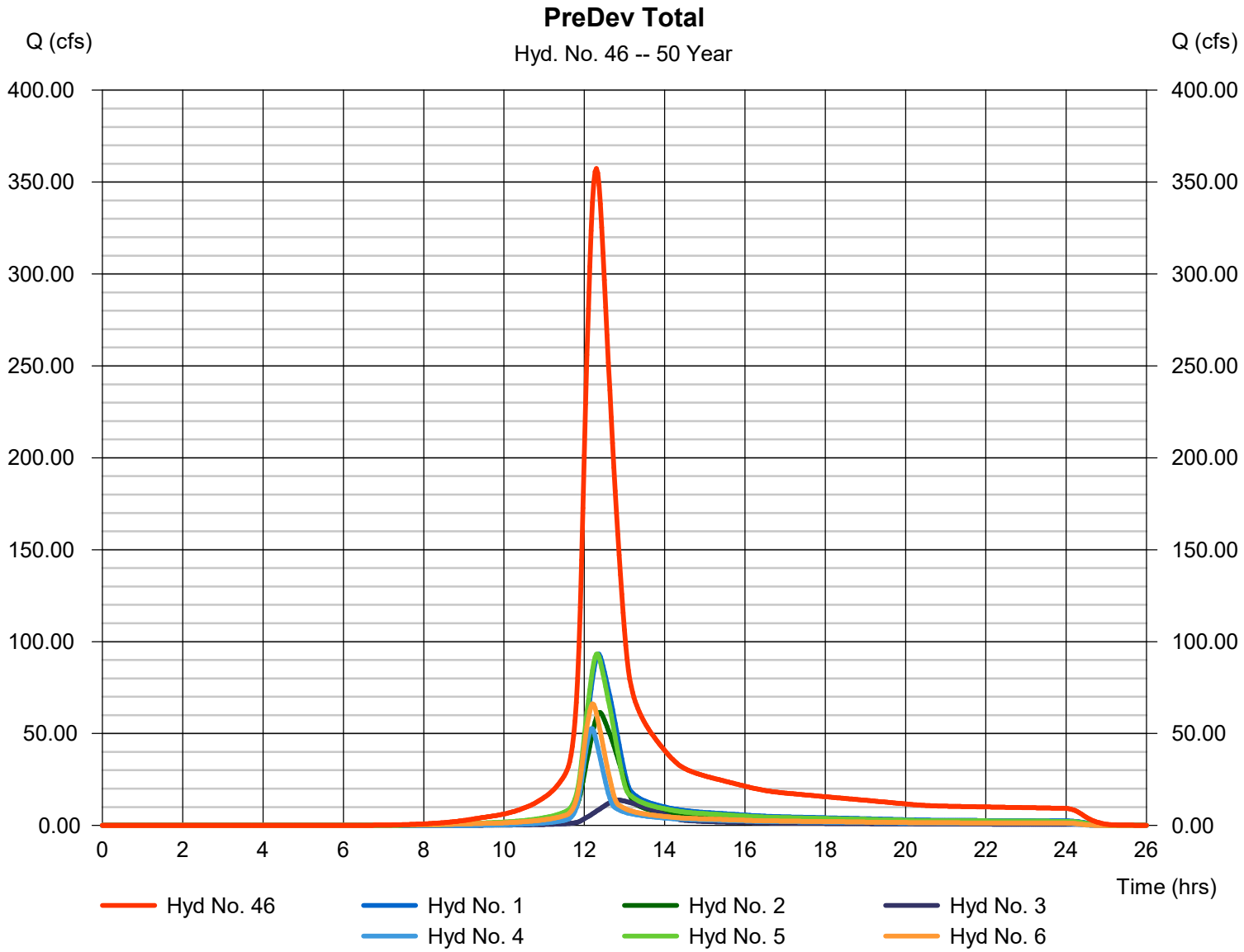


Hydrograph Report

Hyd. No. 46

PreDev Total

Hydrograph type	=	Combine	Peak discharge	=	357.35 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	1,952,346 cuft
Inflow hyds.	=	1, 2, 3, 4, 5, 6	Contrib. drain. area	=	139.020 ac

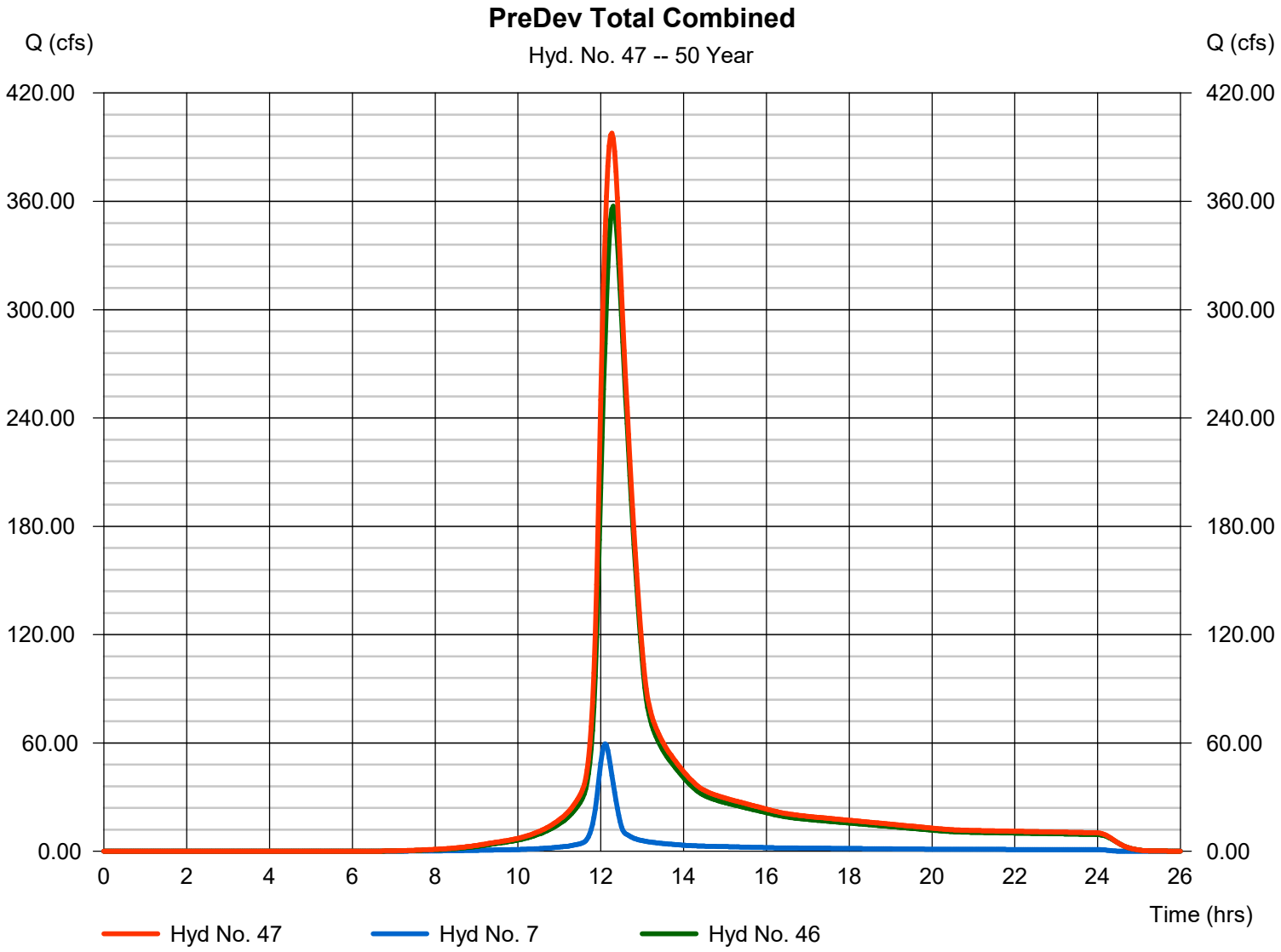


Hydrograph Report

Hyd. No. 47

PreDev Total Combined

Hydrograph type	= Combine	Peak discharge	= 397.67 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 2,157,739 cuft
Inflow hyds.	= 7, 46	Contrib. drain. area	= 13.250 ac



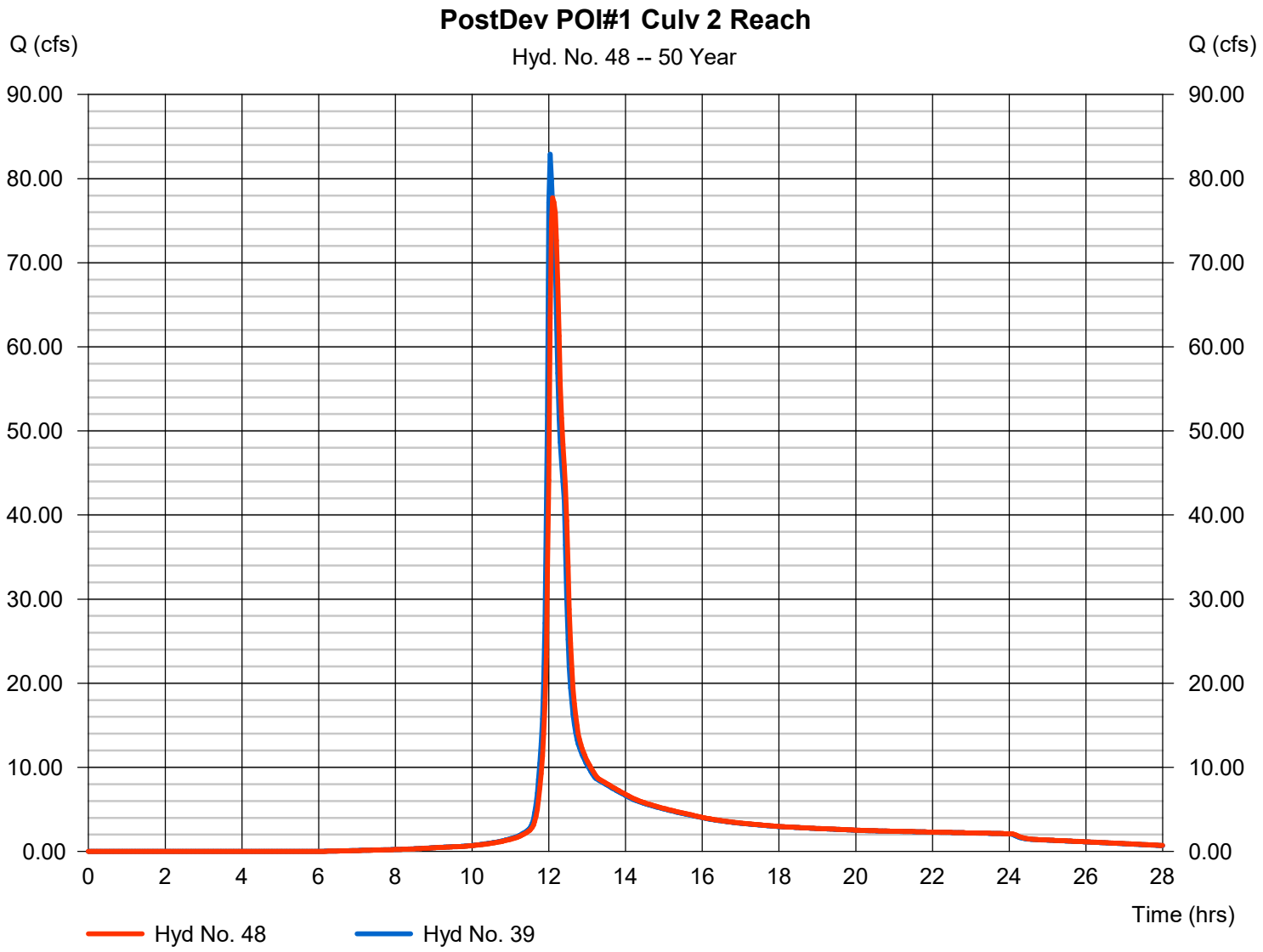
Hydrograph Report

Hyd. No. 48

PostDev POI#1 Culv 2 Reach

Hydrograph type	= Reach	Peak discharge	= 77.71 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 365,098 cuft
Inflow hyd. No.	= 39 - PostDev POI #1 to Culv2	Section type	= Trapezoidal
Reach length	= 992.0 ft	Channel slope	= 1.2 %
Manning's n	= 0.040	Bottom width	= 5.0 ft
Side slope	= 1.0:1	Max. depth	= 3.5 ft
Rating curve x	= 1.418	Rating curve m	= 1.427
Ave. velocity	= 4.79 ft/s	Routing coeff.	= 0.5847

Modified Att-Kin routing method used.

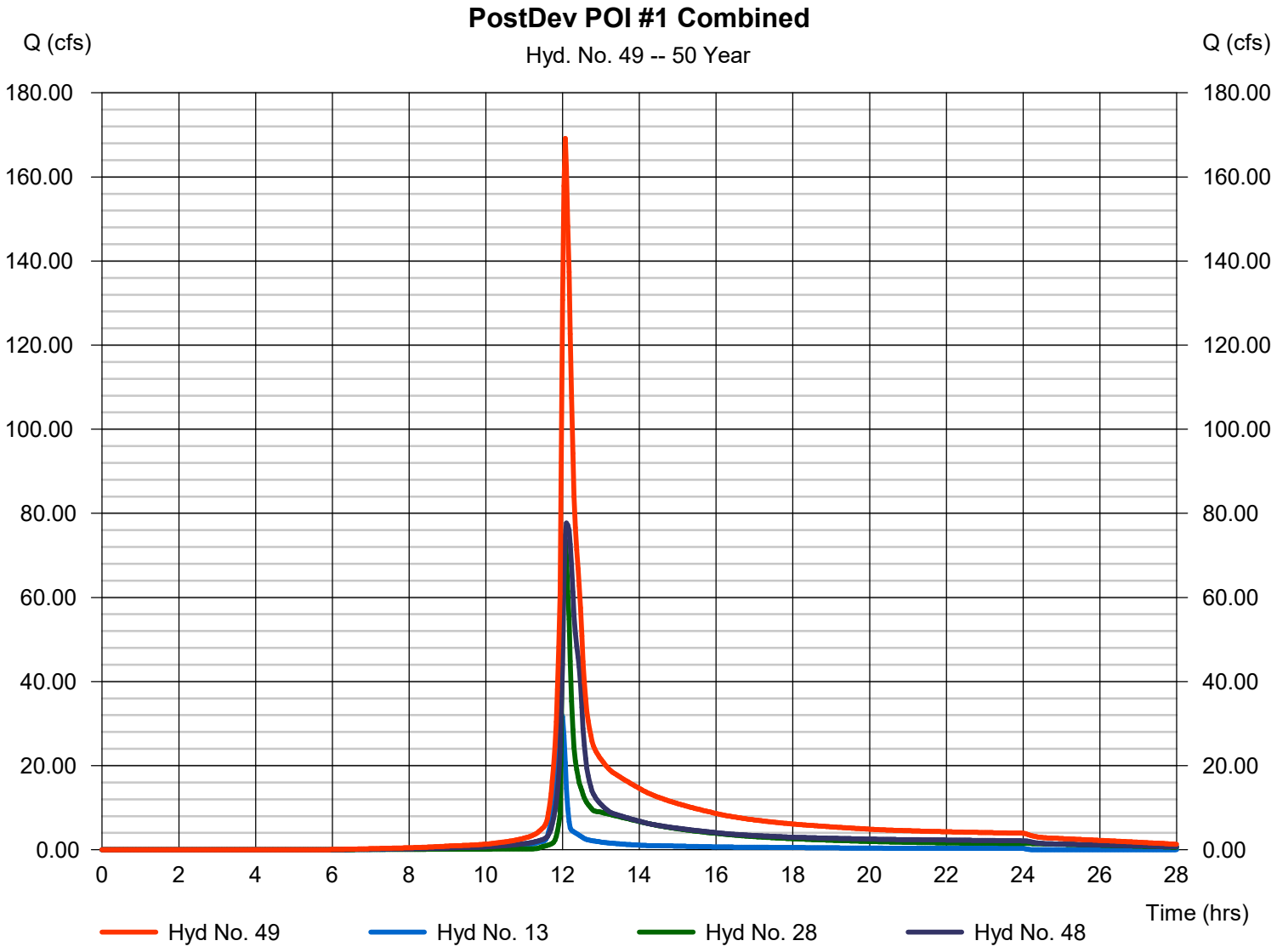


Hydrograph Report

Hyd. No. 49

PostDev POI #1 Combined

Hydrograph type	=	Combine	Peak discharge	=	169.16 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	720,443 cuft
Inflow hyds.	=	13, 28, 48	Contrib. drain. area	=	4.520 ac

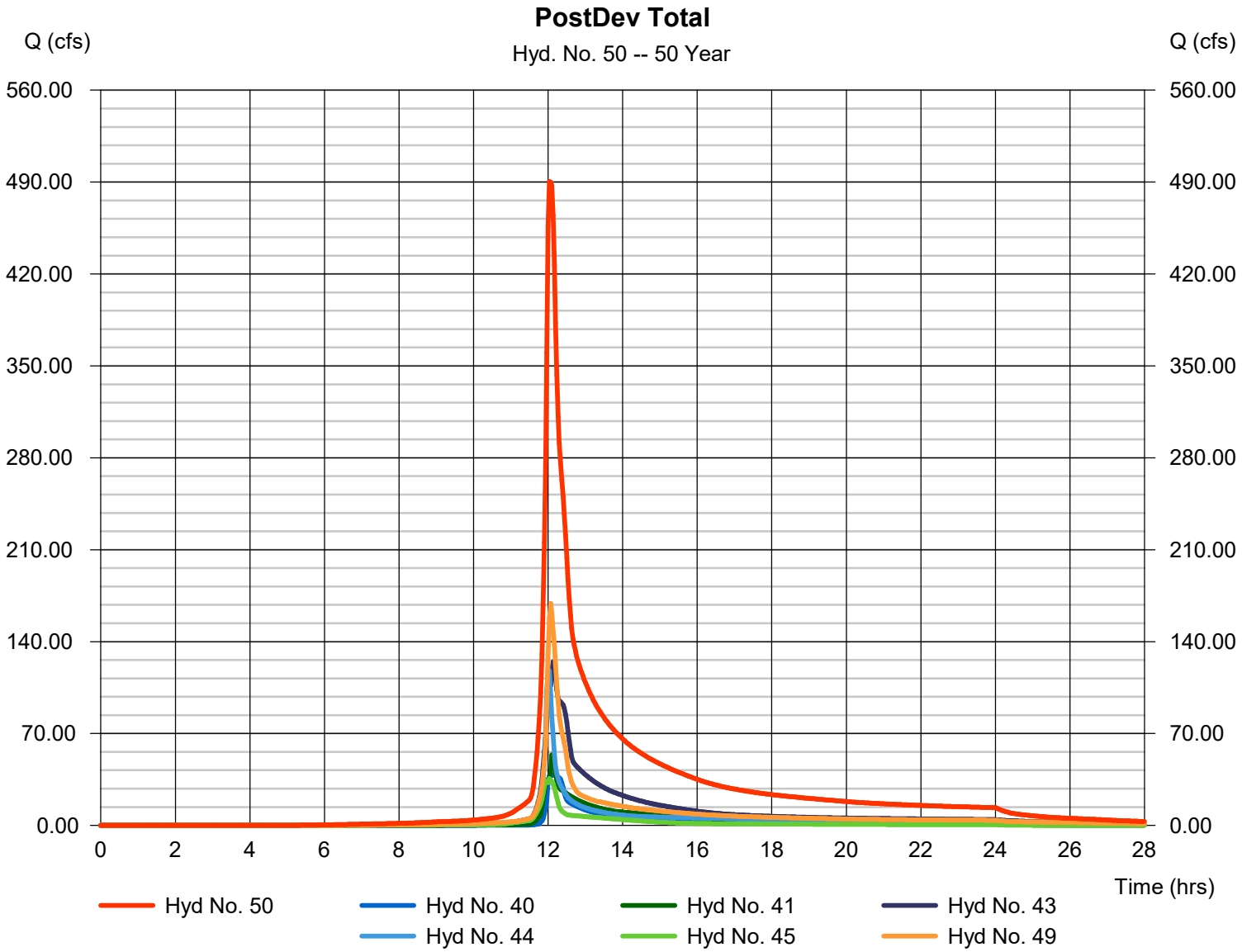


Hydrograph Report

Hyd. No. 50

PostDev Total

Hydrograph type	= Combine	Peak discharge	= 490.45 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 2,777,072 cuft
Inflow hyds.	= 40, 41, 43, 44, 45, 49	Contrib. drain. area	= 0.000 ac

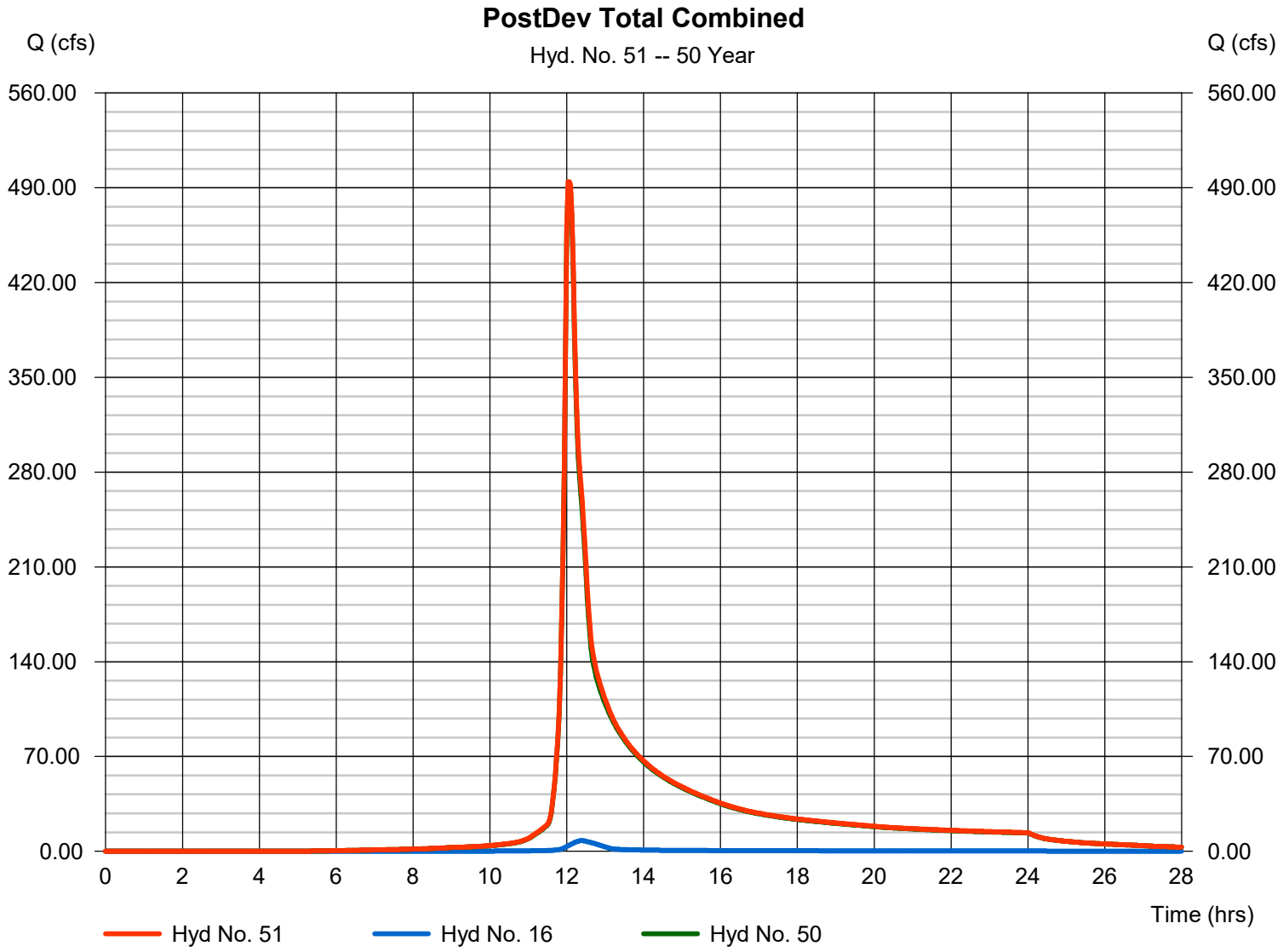


Hydrograph Report

Hyd. No. 51

PostDev Total Combined

Hydrograph type	=	Combine	Peak discharge	=	494.46 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	2,821,684 cuft
Inflow hyds.	=	16, 50	Contrib. drain. area	=	3.240 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	110.86	2	742	594,596	------	------	------	PreDev POI #1
2	SCS Runoff	72.33	2	742	409,549	------	------	------	PreDev POI #2
3	SCS Runoff	16.46	2	770	147,800	------	------	------	PreDev to POI #3
4	SCS Runoff	63.50	2	730	255,043	------	------	------	PreDev to POI #4
5	SCS Runoff	109.54	2	738	565,024	------	------	------	PreDev to POI #5
6	SCS Runoff	76.94	2	732	333,625	------	------	------	PreDev to POI #6
7	SCS Runoff	69.53	2	726	240,760	------	------	------	PreDev to POI #7
8	SCS Runoff	133.52	2	718	322,996	------	------	------	PostDev to SCM 1A
9	SCS Runoff	97.35	2	720	261,476	------	------	------	PostDev to SCM 1B
10	SCS Runoff	21.27	2	716	44,130	------	------	------	PostDev to SCM 1C
11	SCS Runoff	19.81	2	720	52,047	------	------	------	PostDev to POI #1 Bypass 1
12	SCS Runoff	21.94	2	724	69,355	------	------	------	PostDev to POI #1 Bypass 2
13	SCS Runoff	37.31	2	718	87,628	------	------	------	PostDev to POI #1 Bypass 3
14	SCS Runoff	127.46	2	718	304,445	------	------	------	PostDev to SCM 2
15	SCS Runoff	3.287	2	716	6,913	------	------	------	PostDev to POI #2 Bypass
16	SCS Runoff	9.323	2	744	52,790	------	------	------	PostDev to POI #3
17	SCS Runoff	154.86	2	718	361,144	------	------	------	PostDev to SCM 4
18	SCS Runoff	25.28	2	716	51,179	------	------	------	PostDev to POI #4 Bypass
19	SCS Runoff	252.75	2	718	618,410	------	------	------	PostDev to SCM 5A
20	SCS Runoff	106.53	2	720	292,883	------	------	------	PostDev to SCM 5C
21	SCS Runoff	23.84	2	716	49,997	------	------	------	PostDev to POI #5 Bypass 1
22	SCS Runoff	19.14	2	716	40,060	------	------	------	PostDev to POI #5 Bypass 2
23	SCS Runoff	57.15	2	716	124,338	------	------	------	PostDev to SCM 6A
24	SCS Runoff	118.76	2	716	260,504	------	------	------	PostDev to SCM 6B
25	SCS Runoff	39.67	2	718	94,365	------	------	------	PostDev to POI #6 Bypass
26	SCS Runoff	44.91	2	720	122,986	------	------	------	PostDev to SCM 7
27	SCS Runoff	32.70	2	716	69,011	------	------	------	PostDev to POI #7 Bypass
28	Reservoir	99.88	2	722	321,422	8	353.98	128,906	PostDev to SCM 1A
29	Reservoir	63.65	2	728	259,078	9	381.99	104,598	PostDev to SCM 1B
30	Reservoir	16.83	2	720	42,728	10	364.11	14,574	PostDev to SCM 1C
31	Reservoir	61.50	2	726	288,947	14	358.98	138,732	PostDev to SCM 2
32	Reservoir	94.93	2	724	356,875	17	369.39	151,866	PostDev to SCM 4
33	Reservoir	121.76	2	726	616,422	19	321.98	286,742	PostDev to SCM 5A
34	Reservoir	73.05	2	726	289,941	20	297.99	121,038	PostDev to SCM 5C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

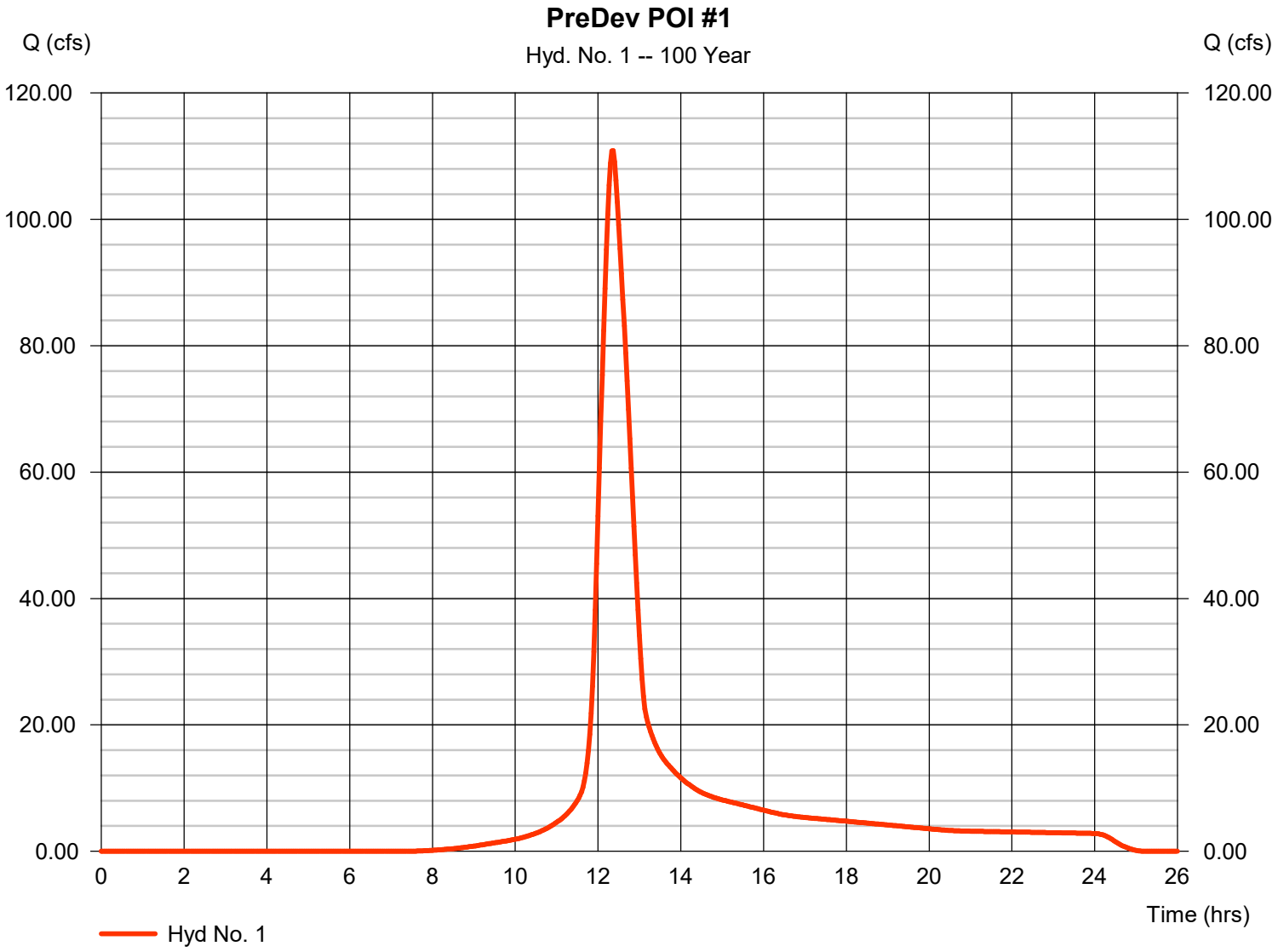
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	37.64	2	720	124,232	23	282.96	47,503	PostDev to SCM 6A
36	Reservoir	89.65	2	720	259,436	24	295.90	109,569	PostDev to SCM 6B
37	Reservoir	35.68	2	726	122,837	26	327.79	39,271	PostDev to SCM 7
38	Combine	78.18	2	726	311,125	11, 29,	------	------	PostDev POI #1 to Culv1
39	Combine	109.58	2	726	423,208	12, 30, 38	------	------	PostDev POI #1 to Culv2
40	Combine	62.04	2	726	295,860	15, 31,	------	------	PostDev to POI #2
41	Combine	102.00	2	724	408,053	18, 32,	------	------	PostDev to POI #4
42	Combine	125.67	2	726	666,419	21, 33,	------	------	PostDev to POI #5 to Culv3
43	Combine	201.87	2	726	996,419	22, 34, 42	------	------	PostDev to POI #5
44	Combine	165.85	2	720	478,033	25, 35, 36,	------	------	PostDev to POI #6
45	Combine	47.53	2	720	191,848	27, 37,	------	------	PostDev to POI #7
46	Combine	422.44	2	738	2,305,636	1, 2, 3,	------	------	PreDev Total
47	Combine	469.74	2	736	2,546,395	4, 5, 6, 7, 46	------	------	PreDev Total Combined
48	Reach	106.99	2	728	423,196	39	------	------	PostDev POI#1 Culv 2 Reach
49	Combine	214.84	2	724	832,246	13, 28, 48	------	------	PostDev POI #1 Combined
50	Combine	729.39	2	724	3,202,459	40, 41, 43, 44, 45, 49	------	------	PostDev Total
51	Combine	734.81	2	724	3,255,249	16, 50	------	------	PostDev Total Combined

Hydrograph Report

Hyd. No. 1

PreDev POI #1

Hydrograph type	=	SCS Runoff	Peak discharge	=	110.86 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	594,596 cuft
Drainage area	=	37.960 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	46.50 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

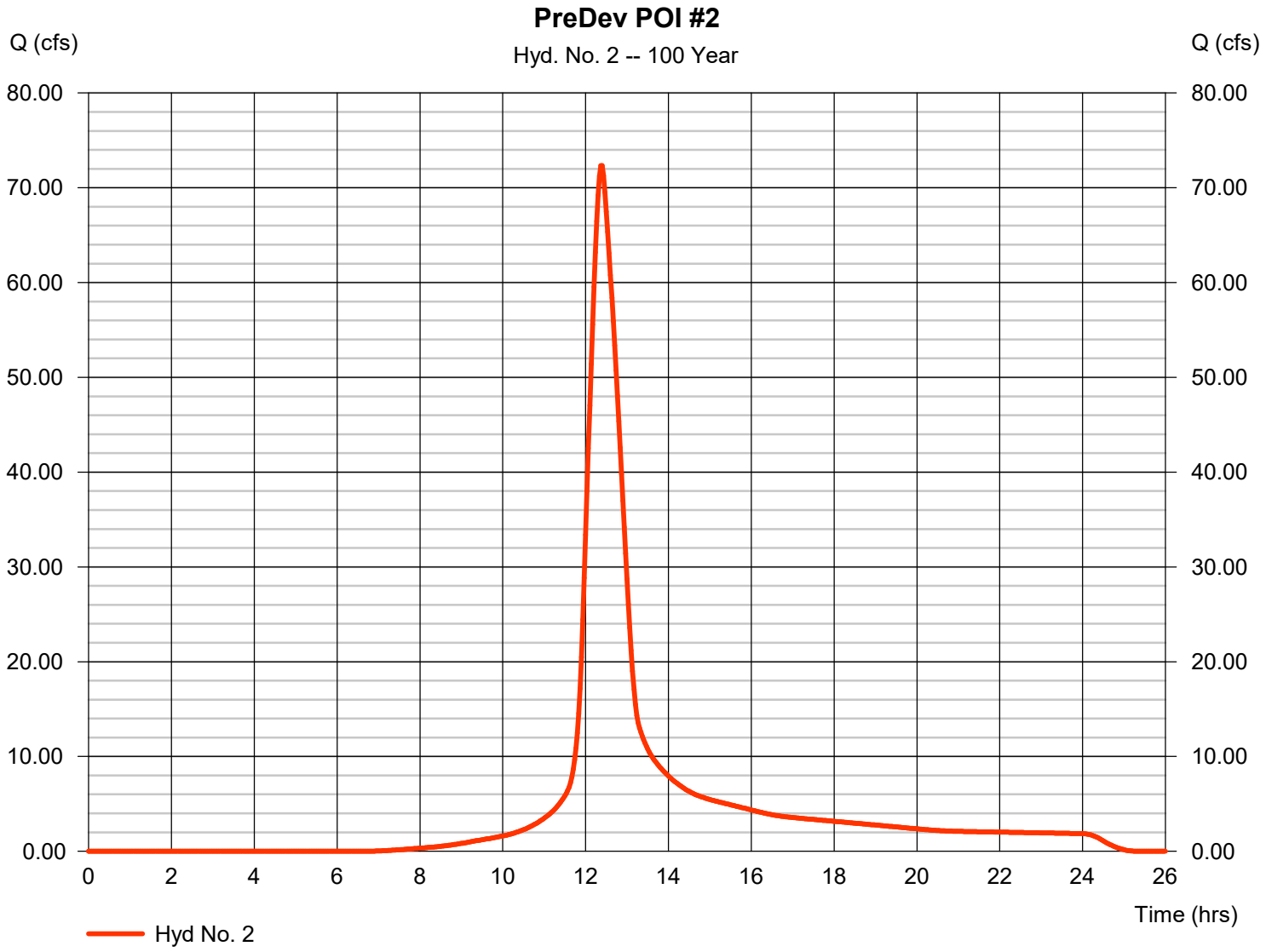


Hydrograph Report

Hyd. No. 2

PreDev POI #2

Hydrograph type	=	SCS Runoff	Peak discharge	=	72.33 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.37 hrs
Time interval	=	2 min	Hyd. volume	=	409,549 cuft
Drainage area	=	24.050 ac	Curve number	=	75
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	48.70 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

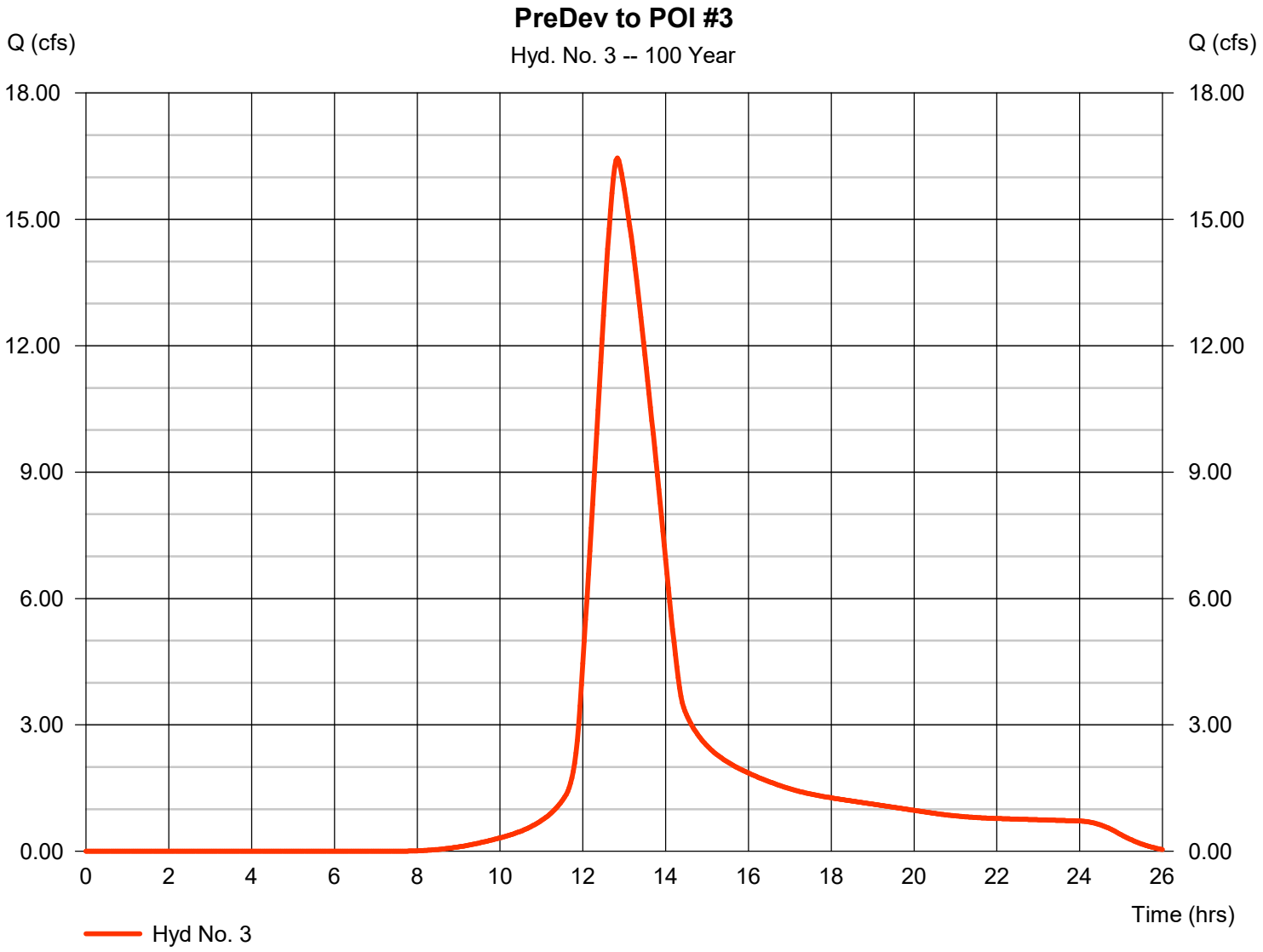


Hydrograph Report

Hyd. No. 3

PreDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.46 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.83 hrs
Time interval	=	2 min	Hyd. volume	=	147,800 cuft
Drainage area	=	9.310 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	92.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

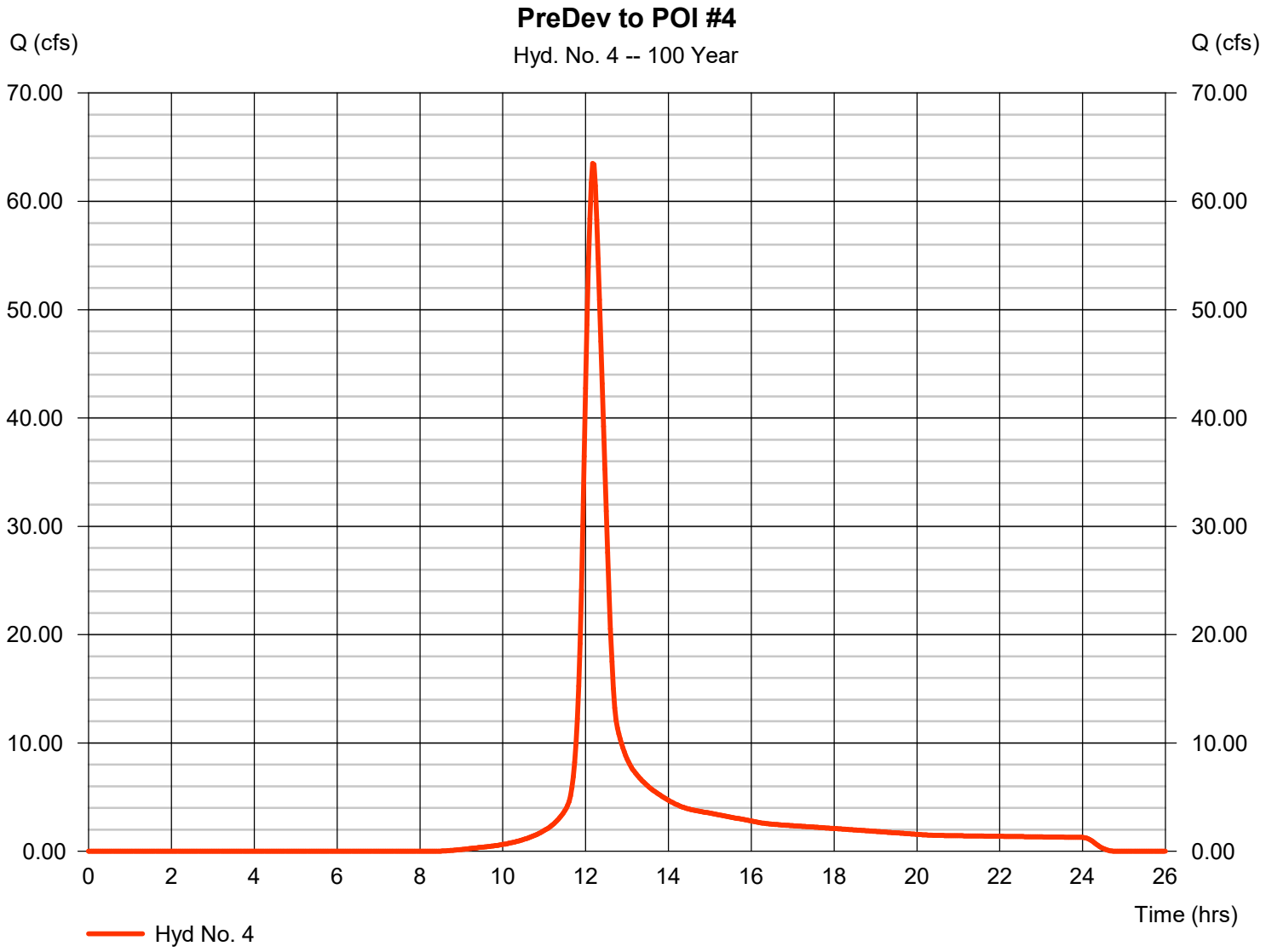


Hydrograph Report

Hyd. No. 4

PreDev to POI #4

Hydrograph type	=	SCS Runoff	Peak discharge	=	63.50 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	255,043 cuft
Drainage area	=	17.970 ac	Curve number	=	68
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	28.80 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

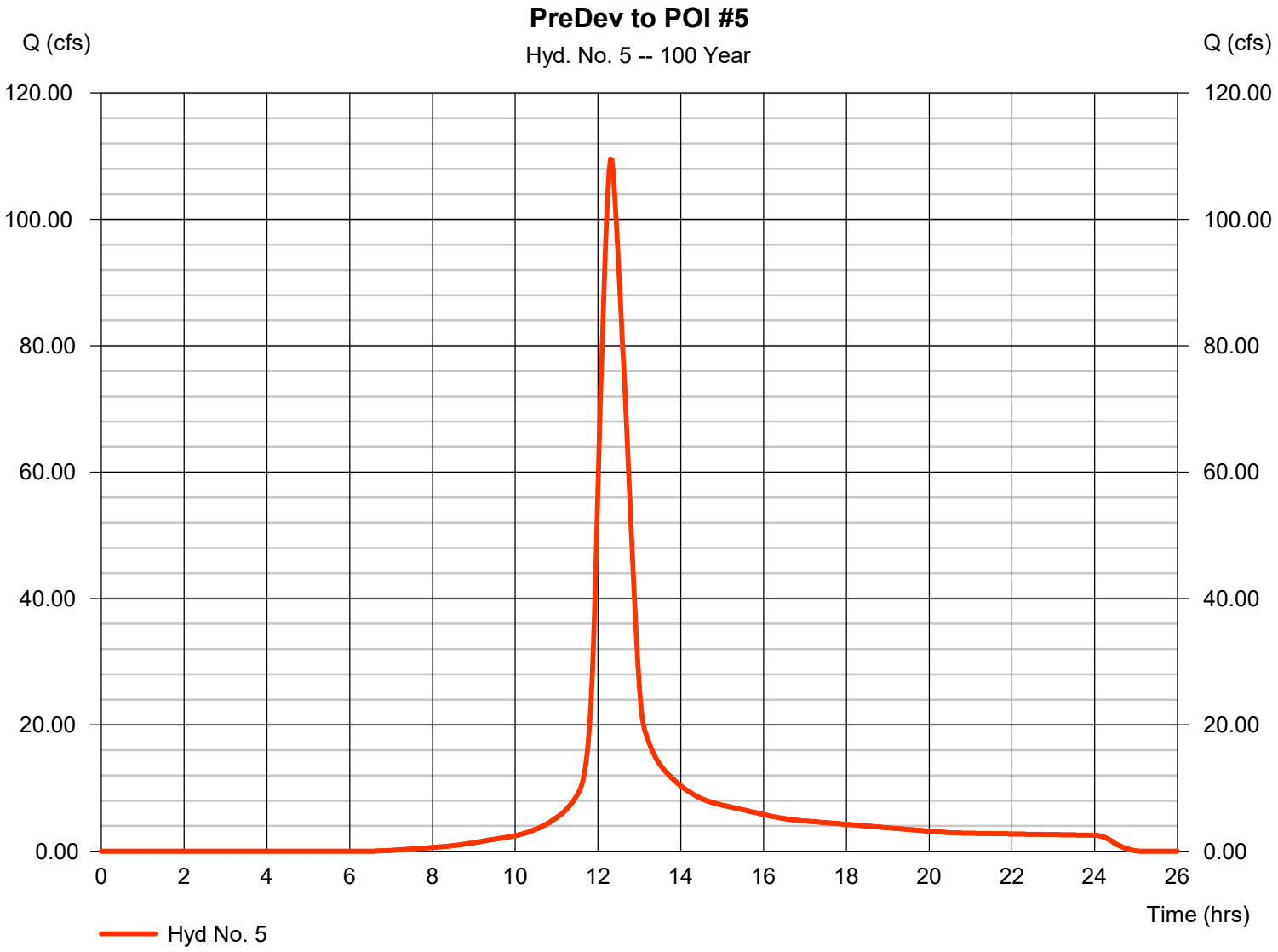


Hydrograph Report

Hyd. No. 5

PreDev to POI #5

Hydrograph type	=	SCS Runoff	Peak discharge	=	109.54 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	565,024 cuft
Drainage area	=	32.090 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	43.30 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

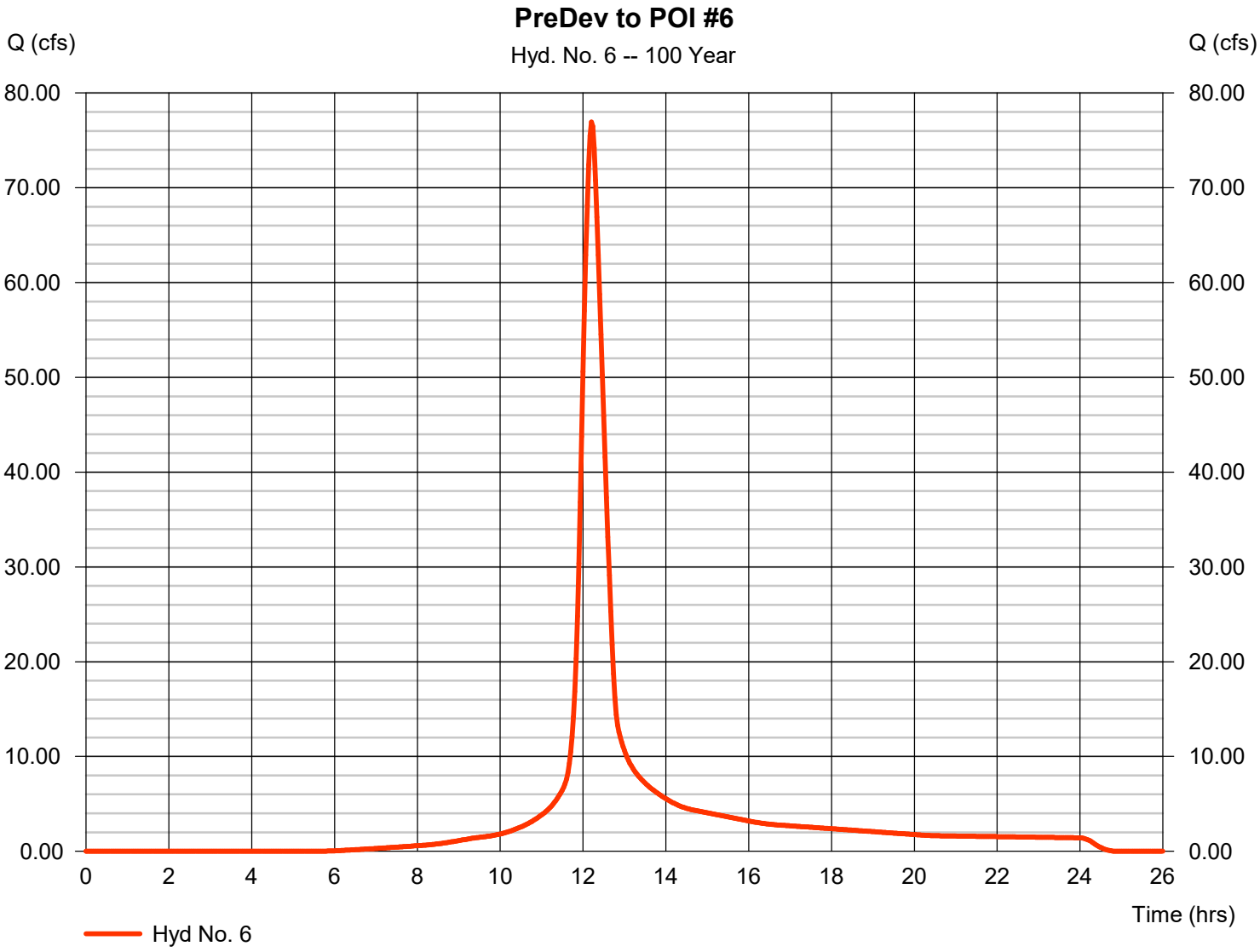


Hydrograph Report

Hyd. No. 6

PreDev to POI #6

Hydrograph type	=	SCS Runoff	Peak discharge	=	76.94 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.20 hrs
Time interval	=	2 min	Hyd. volume	=	333,625 cuft
Drainage area	=	17.640 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	32.90 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

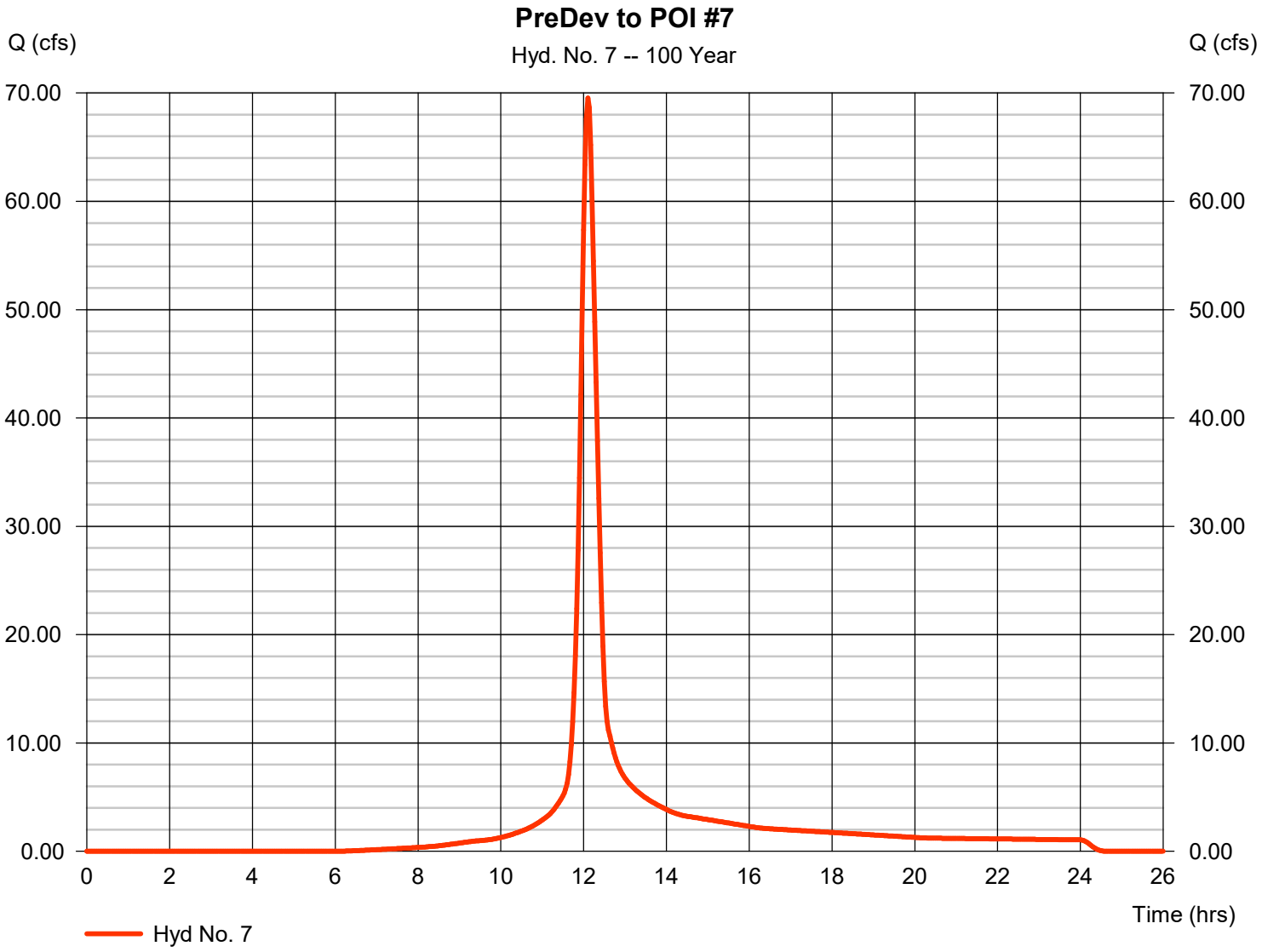


Hydrograph Report

Hyd. No. 7

PreDev to POI #7

Hydrograph type	=	SCS Runoff	Peak discharge	=	69.53 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	240,760 cuft
Drainage area	=	13.250 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	22.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

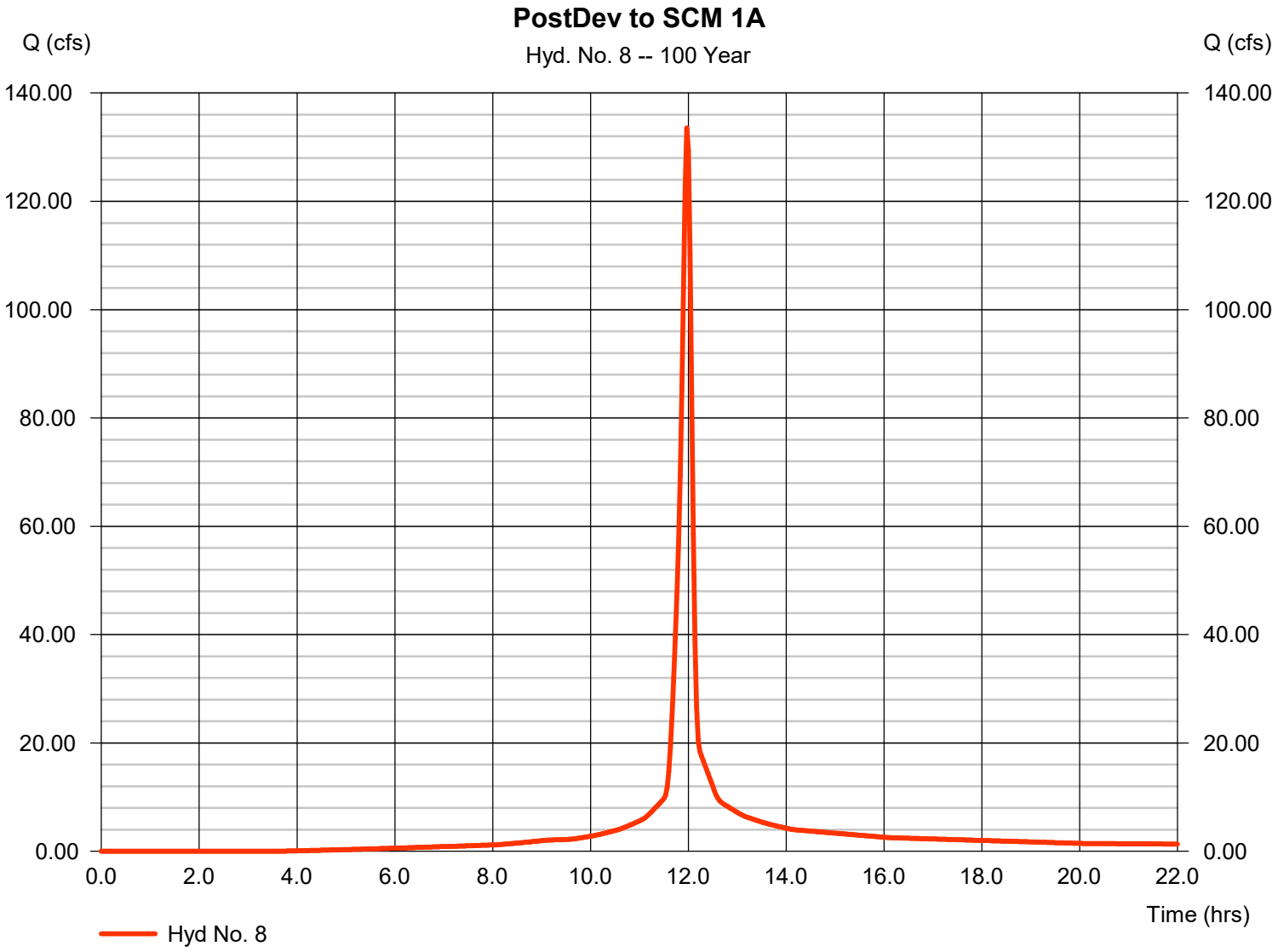


Hydrograph Report

Hyd. No. 8

PostDev to SCM 1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	133.52 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	322,996 cuft
Drainage area	=	14.800 ac	Curve number	=	86.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.30 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

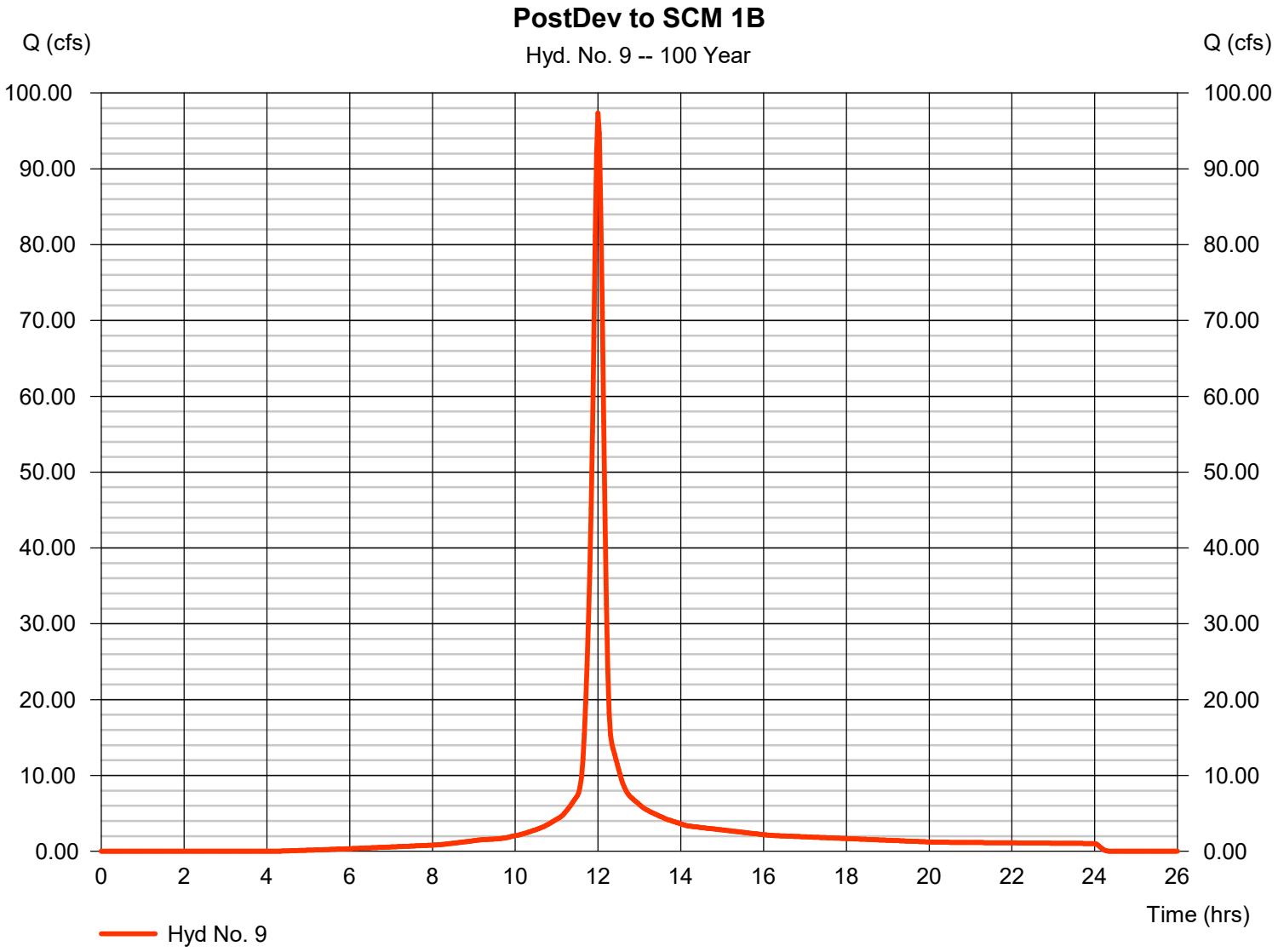


Hydrograph Report

Hyd. No. 9

PostDev to SCM 1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	97.35 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	261,476 cuft
Drainage area	=	12.110 ac	Curve number	=	84.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.10 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

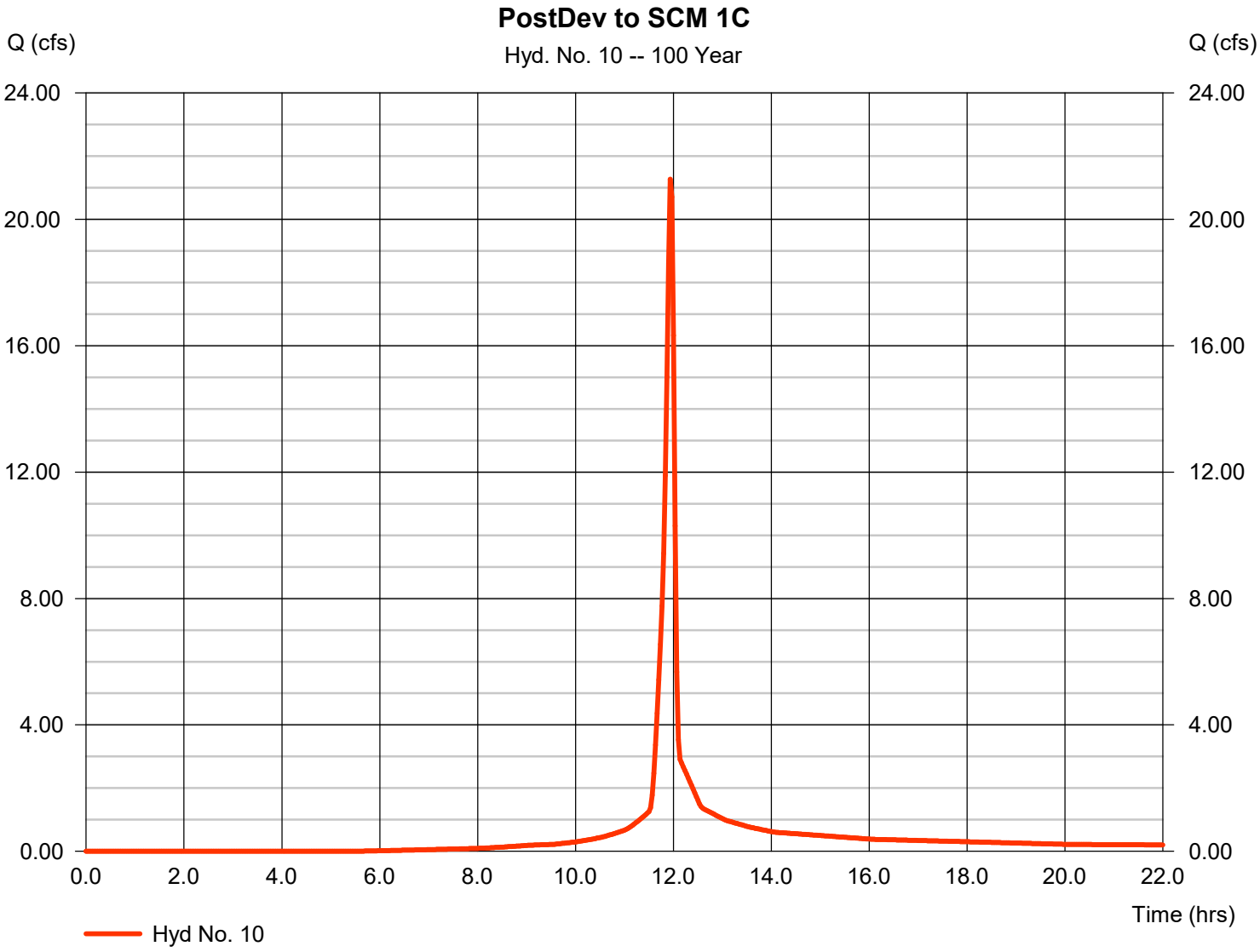


Hydrograph Report

Hyd. No. 10

PostDev to SCM 1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	21.27 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	44,130 cuft
Drainage area	=	2.520 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

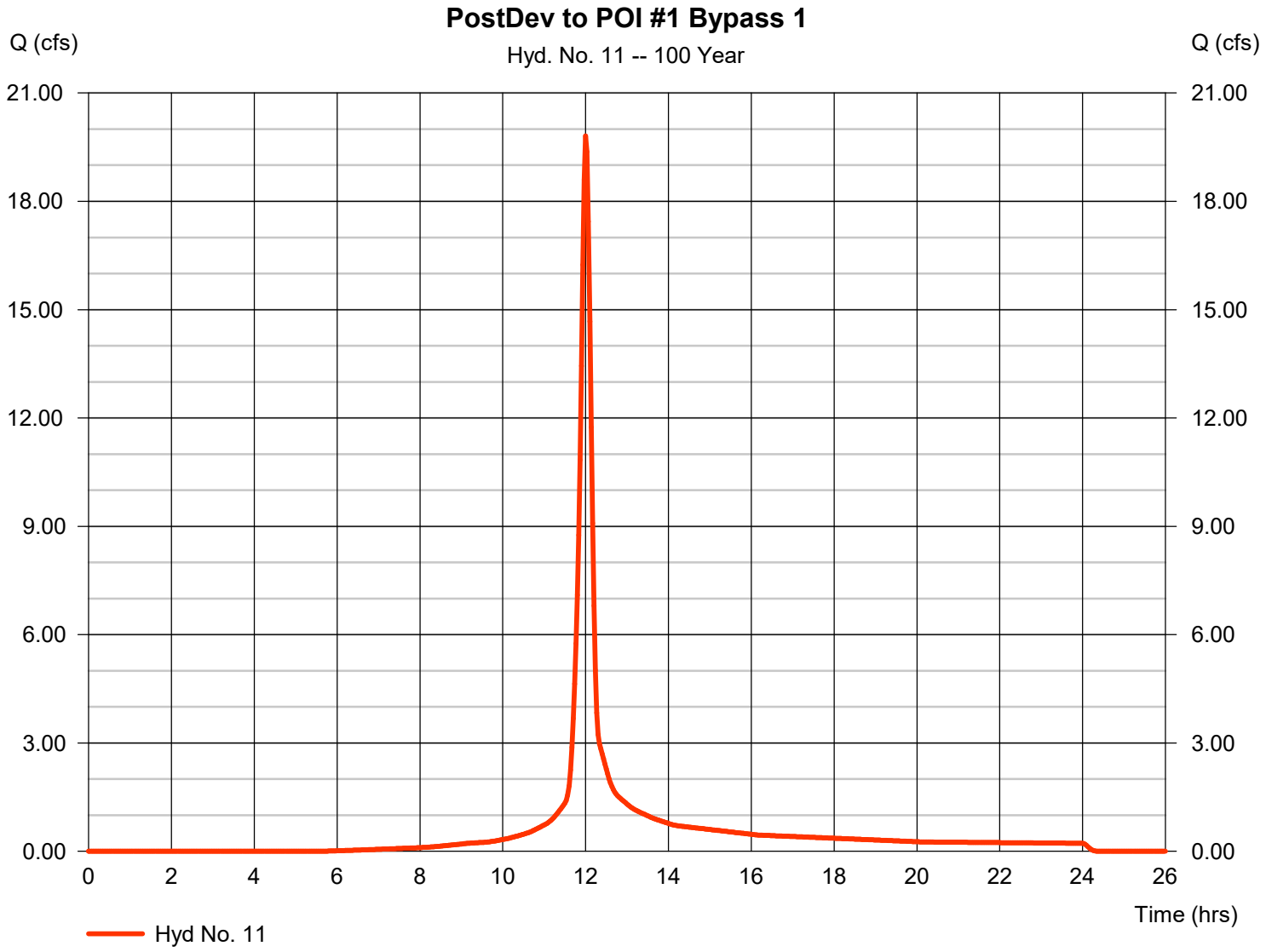


Hydrograph Report

Hyd. No. 11

PostDev to POI #1 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 19.81 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 52,047 cuft
Drainage area	= 2.720 ac	Curve number	= 78.7
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

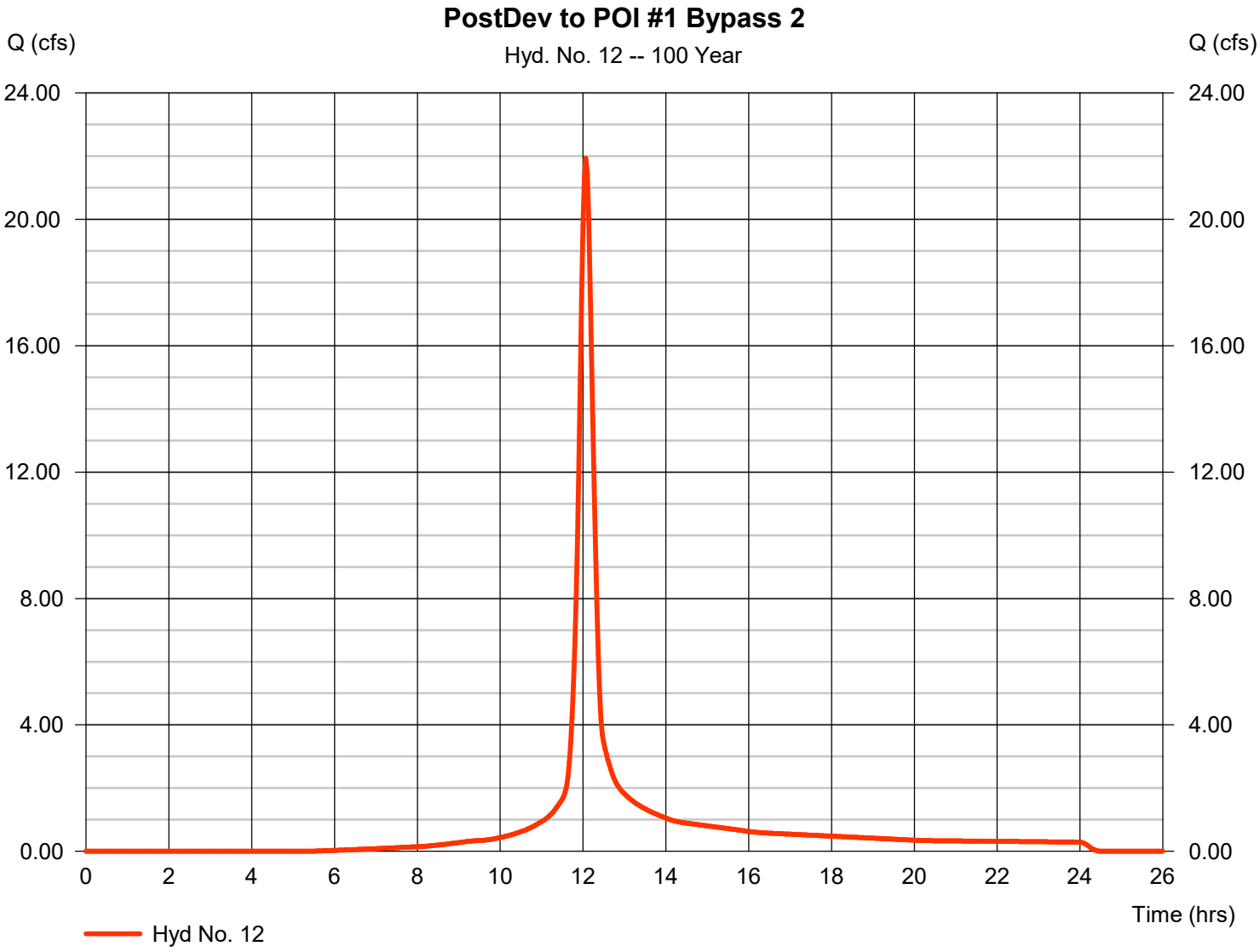


Hydrograph Report

Hyd. No. 12

PostDev to POI #1 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 21.94 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 69,355 cuft
Drainage area	= 3.640 ac	Curve number	= 79.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.00 min
Total precip.	= 7.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

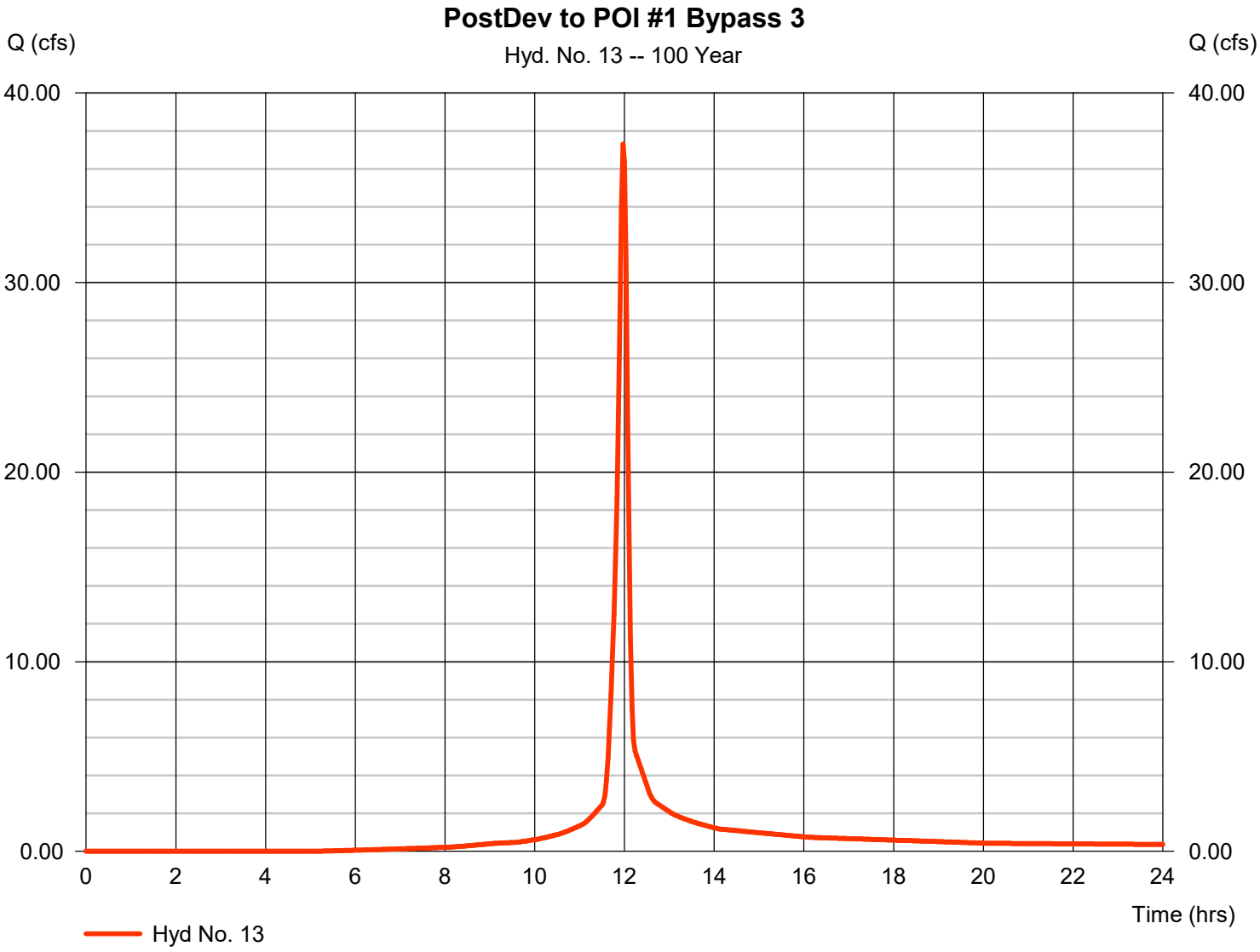


Hydrograph Report

Hyd. No. 13

PostDev to POI #1 Bypass 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	37.31 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	87,628 cuft
Drainage area	=	4.520 ac	Curve number	=	80.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

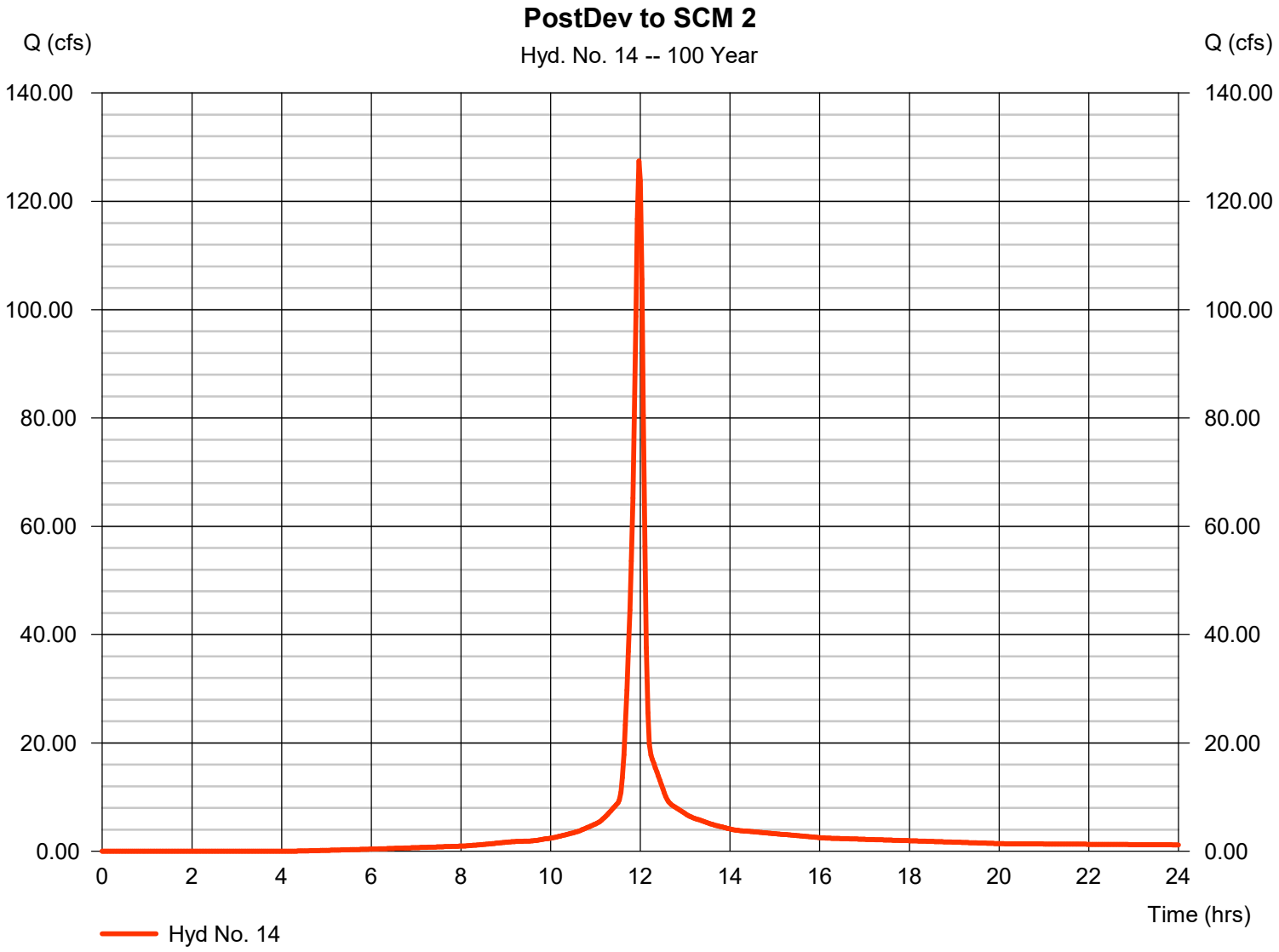


Hydrograph Report

Hyd. No. 14

PostDev to SCM 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	127.46 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	304,445 cuft
Drainage area	=	14.570 ac	Curve number	=	84.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.10 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

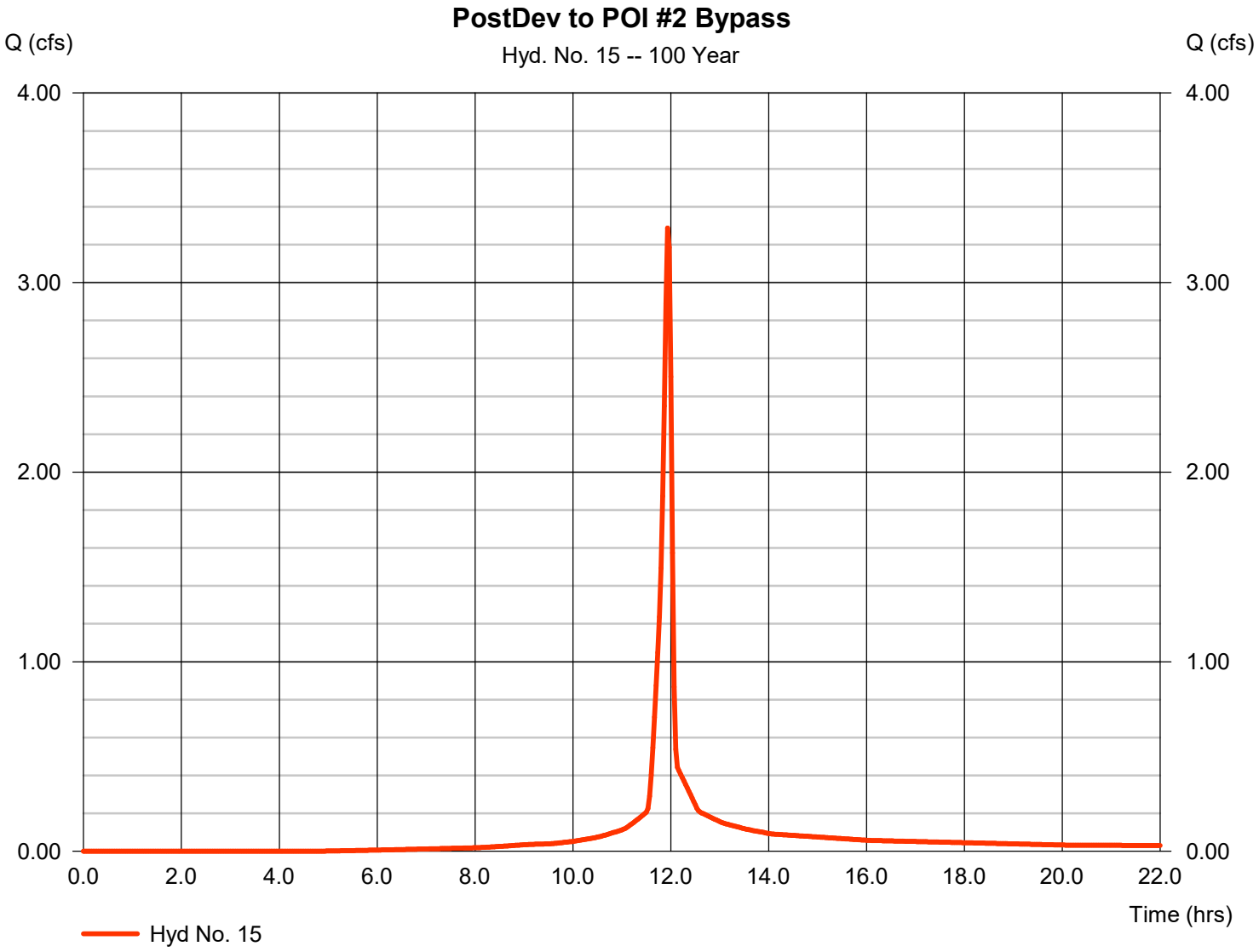


Hydrograph Report

Hyd. No. 15

PostDev to POI #2 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.287 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	6,913 cuft
Drainage area	=	0.370 ac	Curve number	=	82
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

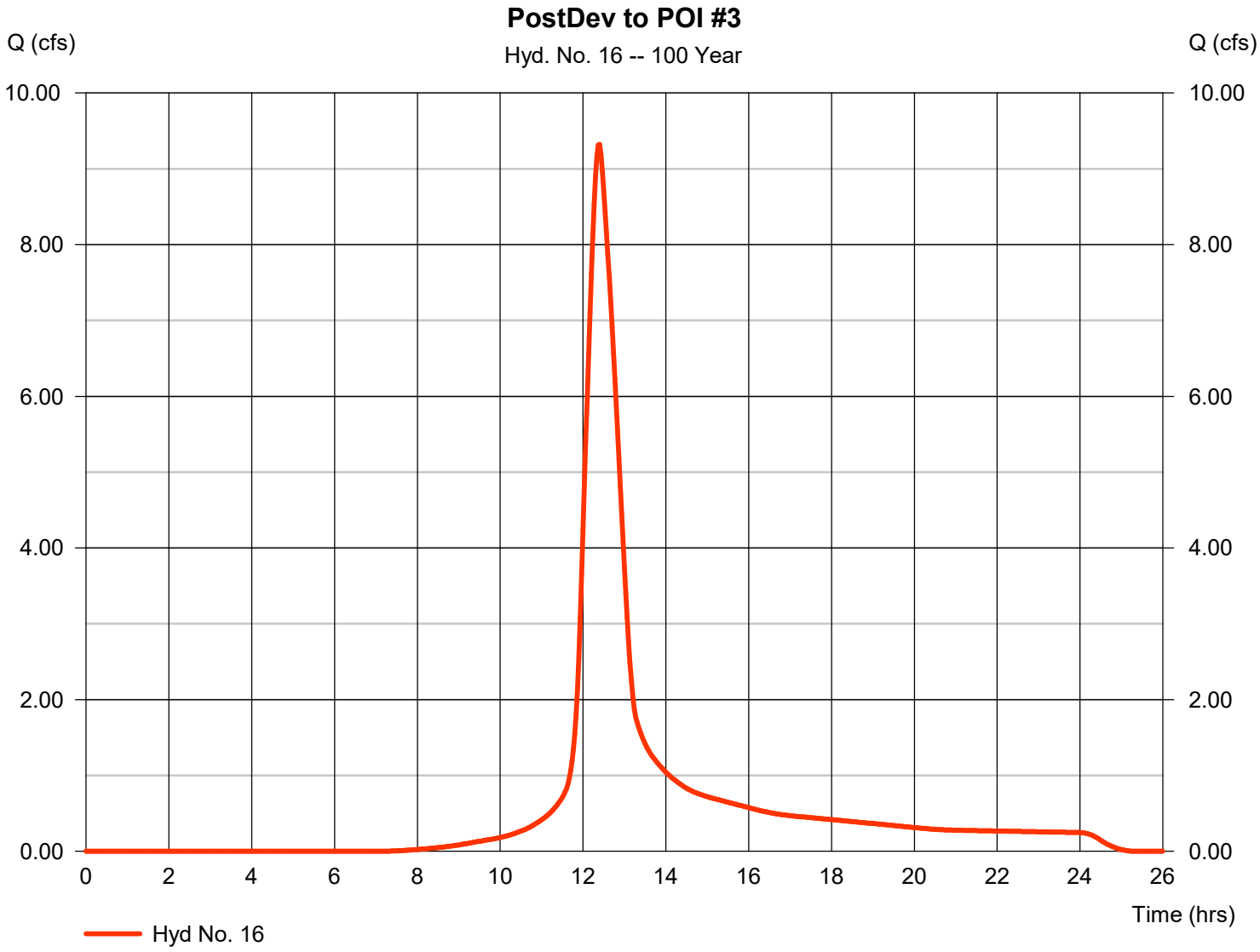


Hydrograph Report

Hyd. No. 16

PostDev to POI #3

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.323 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.40 hrs
Time interval	=	2 min	Hyd. volume	=	52,790 cuft
Drainage area	=	3.240 ac	Curve number	=	73.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	49.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

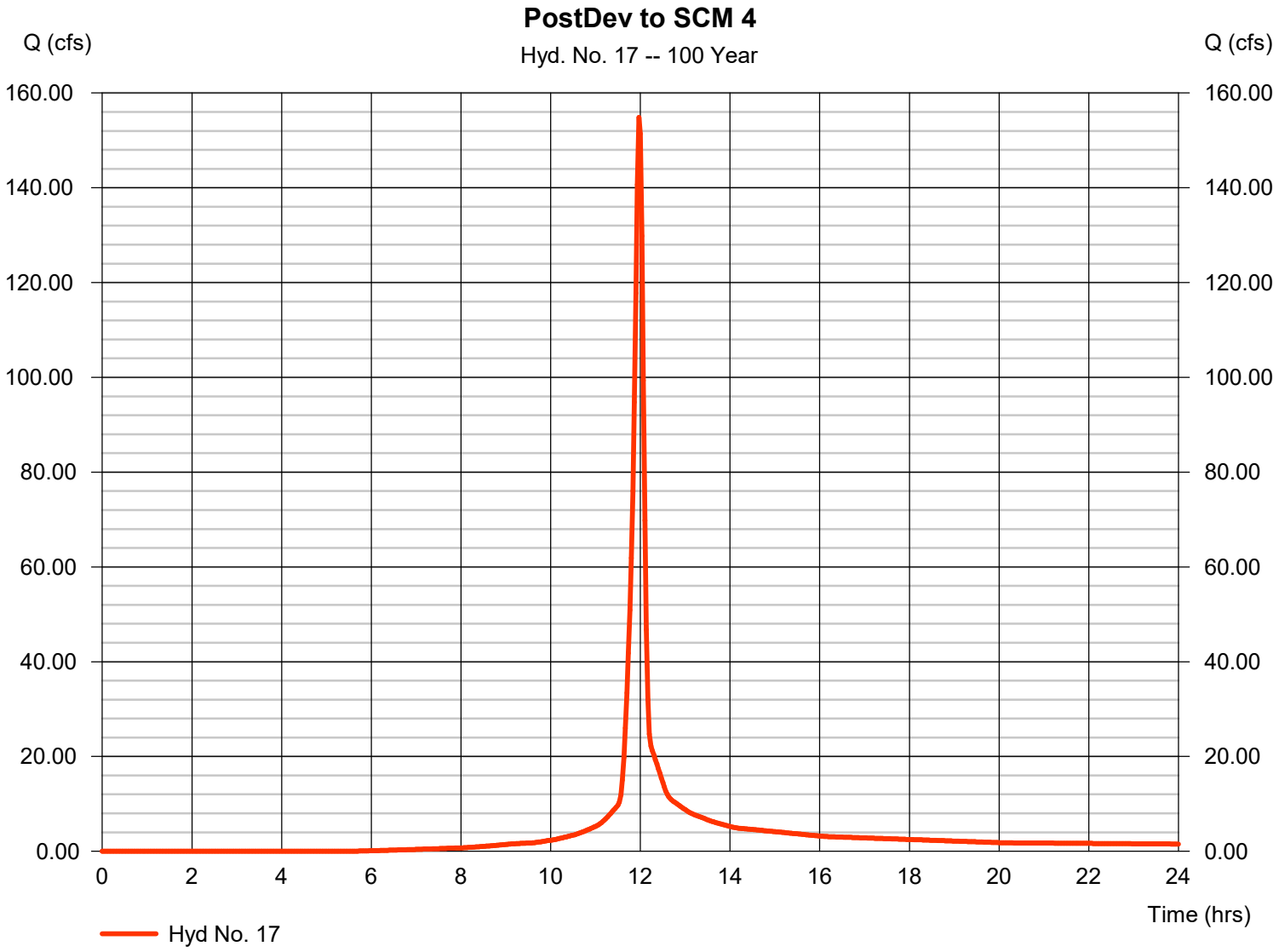


Hydrograph Report

Hyd. No. 17

PostDev to SCM 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	154.86 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	361,144 cuft
Drainage area	=	19.420 ac	Curve number	=	78.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.50 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

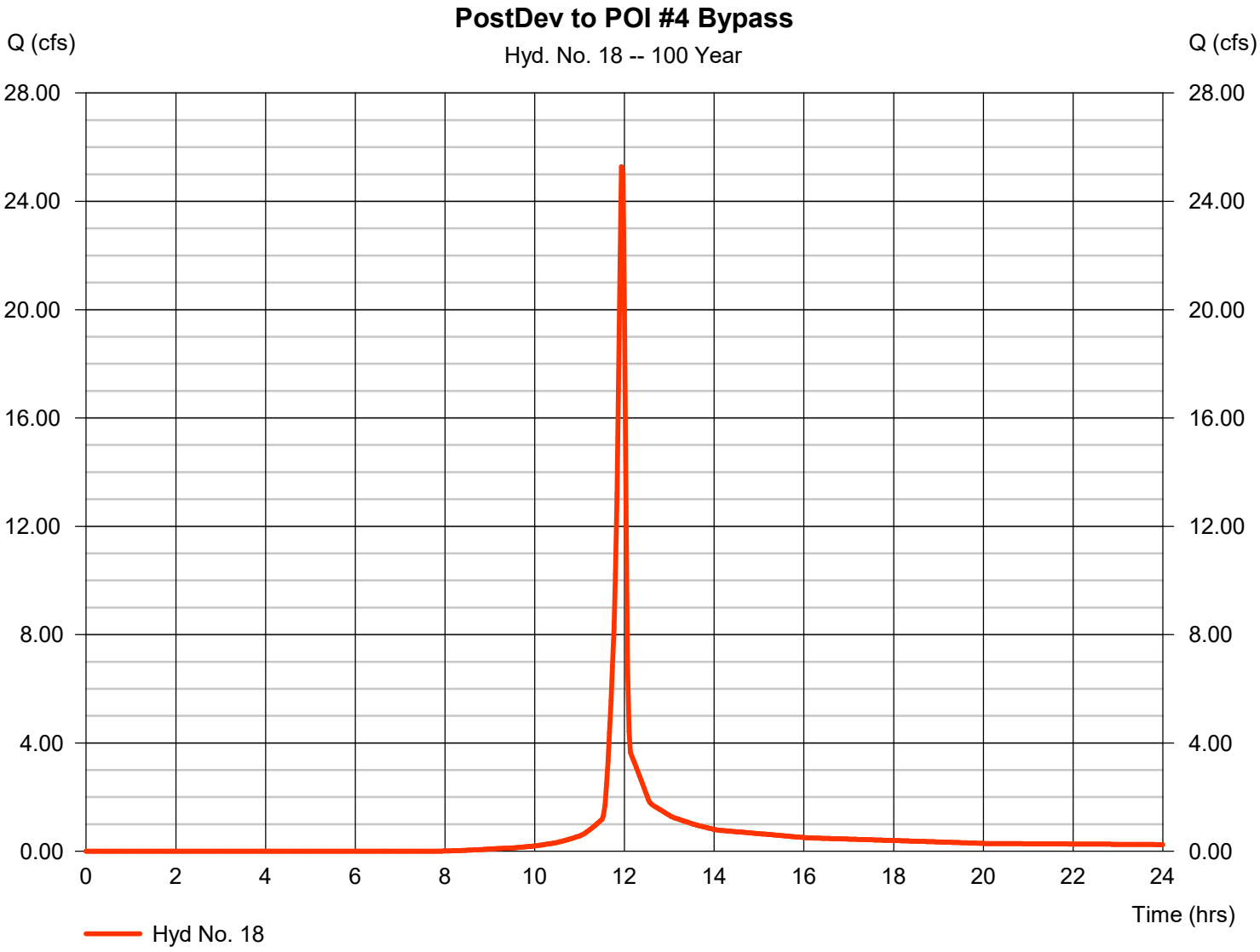


Hydrograph Report

Hyd. No. 18

PostDev to POI #4 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	25.28 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	51,179 cuft
Drainage area	=	3.670 ac	Curve number	=	69.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

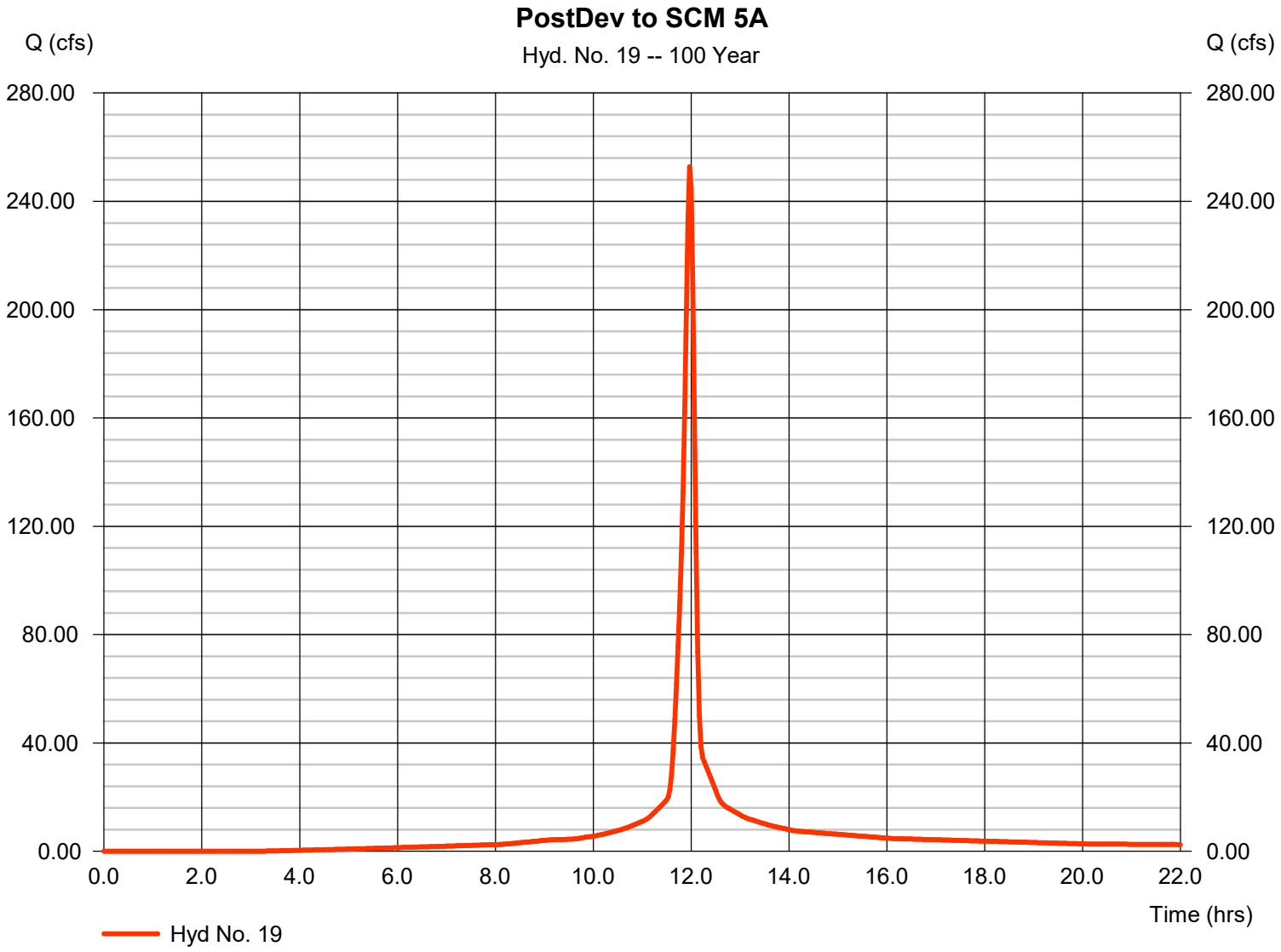


Hydrograph Report

Hyd. No. 19

PostDev to SCM 5A

Hydrograph type	=	SCS Runoff	Peak discharge	=	252.75 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	618,410 cuft
Drainage area	=	27.430 ac	Curve number	=	88.2
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.10 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

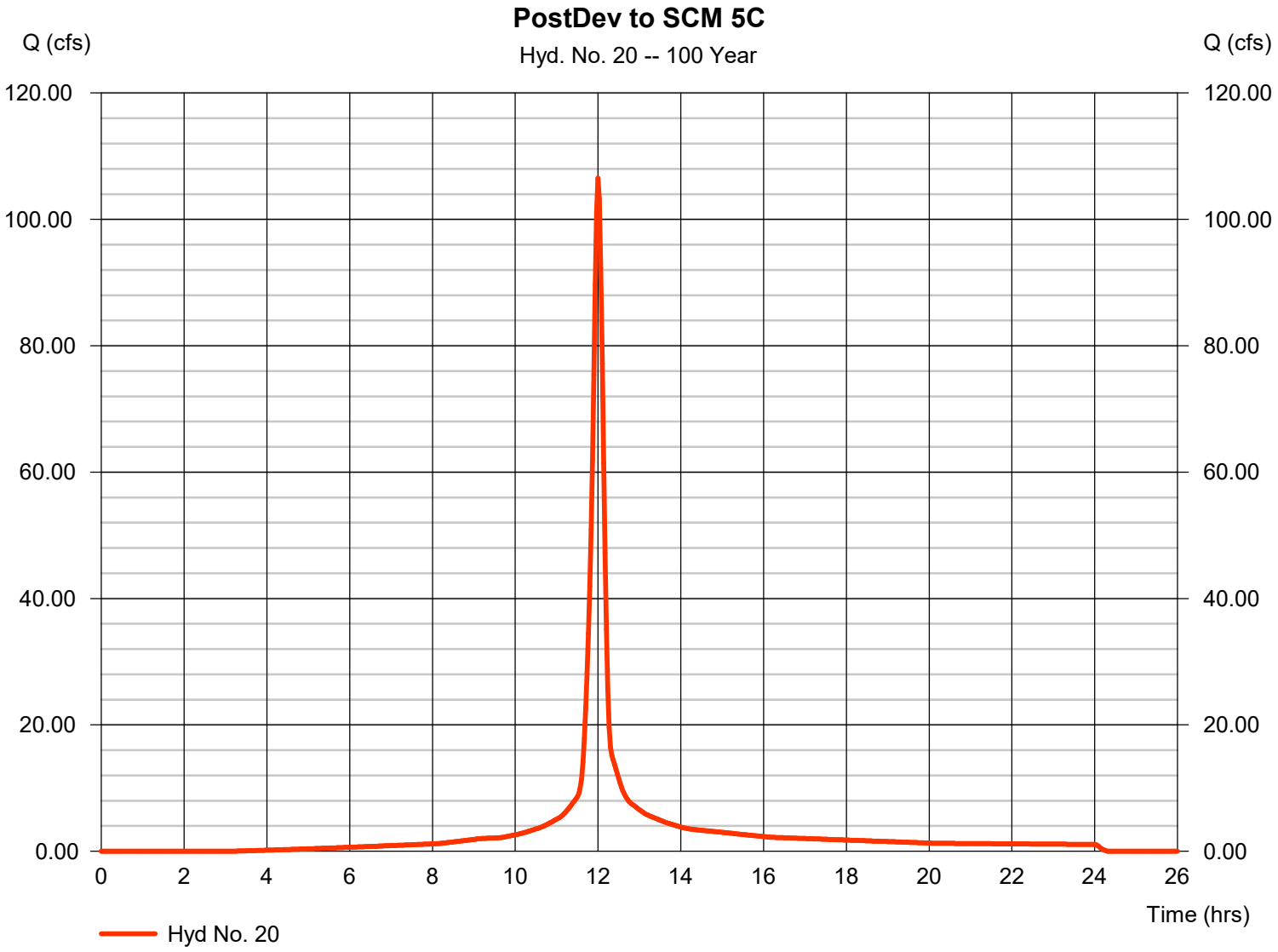


Hydrograph Report

Hyd. No. 20

PostDev to SCM 5C

Hydrograph type	=	SCS Runoff	Peak discharge	=	106.53 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	292,883 cuft
Drainage area	=	12.550 ac	Curve number	=	88.4
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.80 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

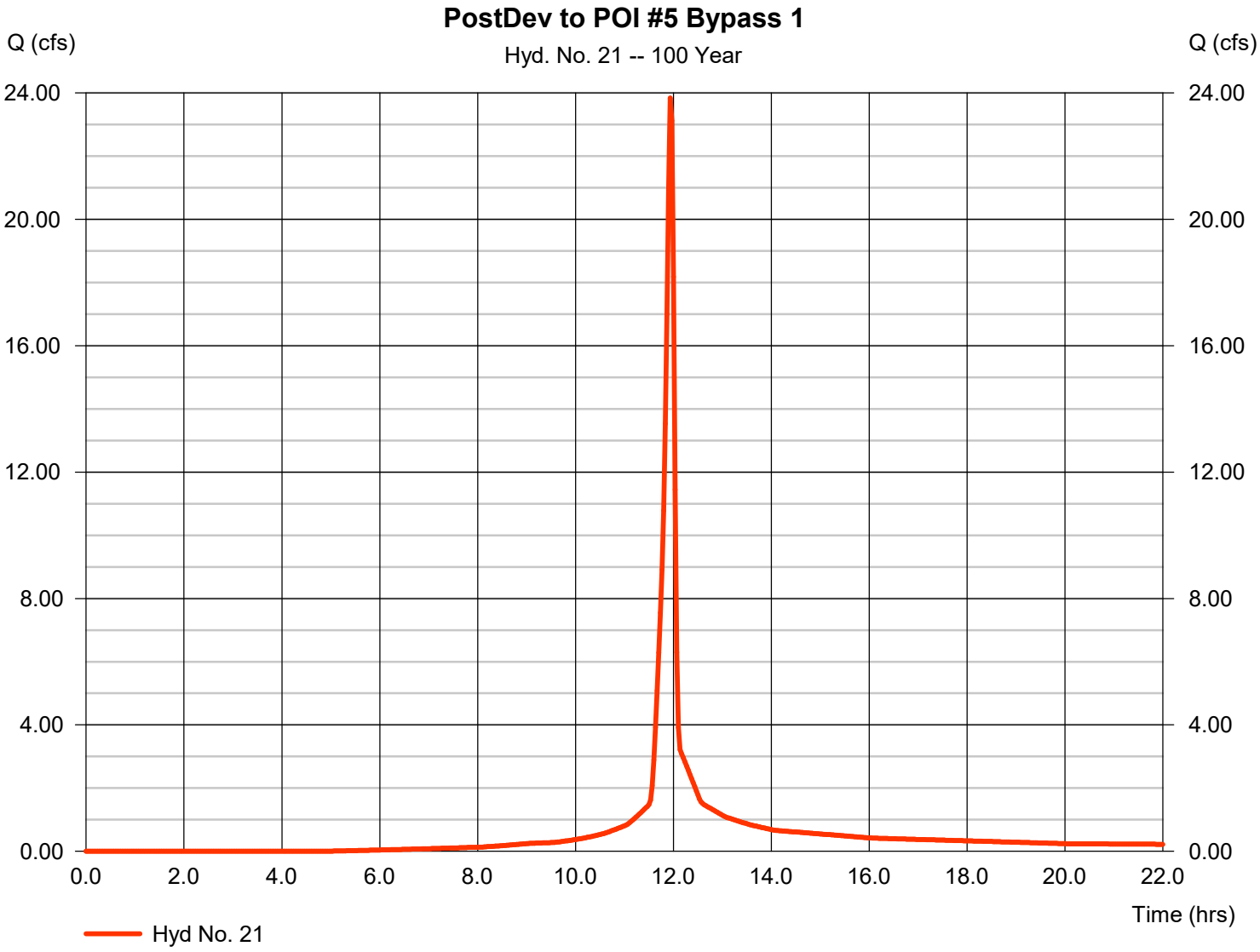


Hydrograph Report

Hyd. No. 21

PostDev to POI #5 Bypass 1

Hydrograph type	= SCS Runoff	Peak discharge	= 23.84 cfs
Storm frequency	= 100 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 49,997 cuft
Drainage area	= 2.710 ac	Curve number	= 81.4
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

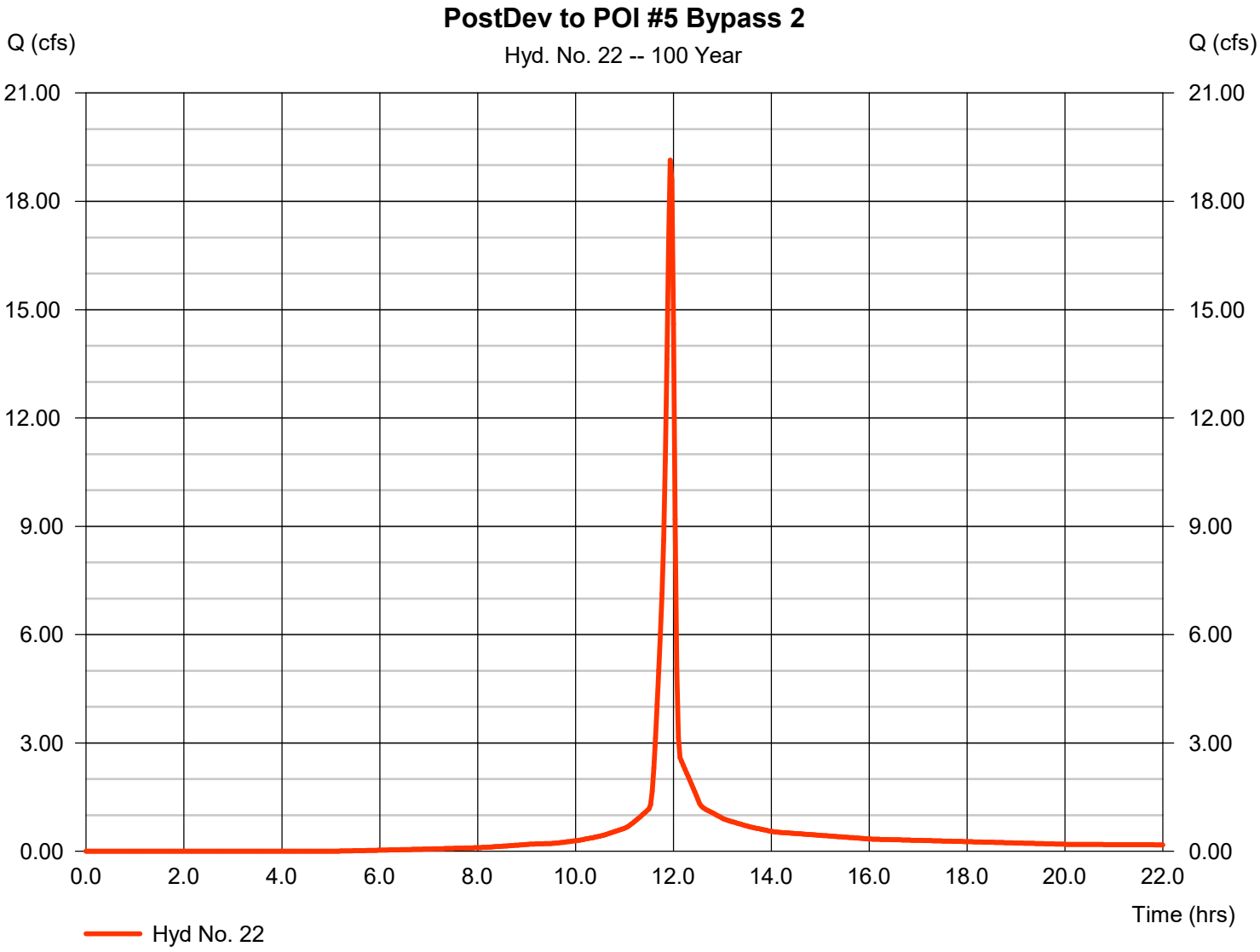


Hydrograph Report

Hyd. No. 22

PostDev to POI #5 Bypass 2

Hydrograph type	= SCS Runoff	Peak discharge	= 19.14 cfs
Storm frequency	= 100 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 40,060 cuft
Drainage area	= 2.190 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

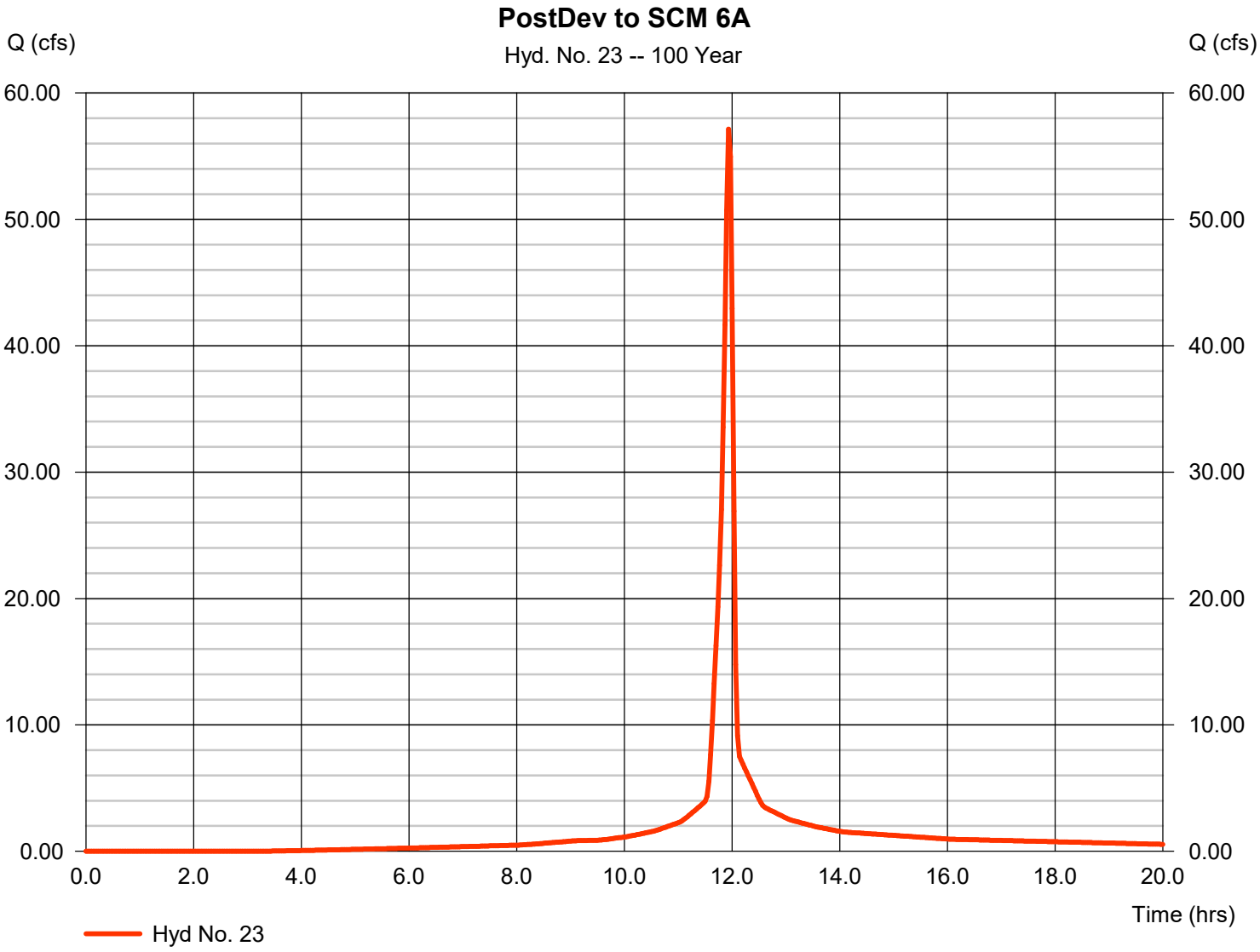


Hydrograph Report

Hyd. No. 23

PostDev to SCM 6A

Hydrograph type	=	SCS Runoff	Peak discharge	=	57.15 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	124,338 cuft
Drainage area	=	5.950 ac	Curve number	=	87.6
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

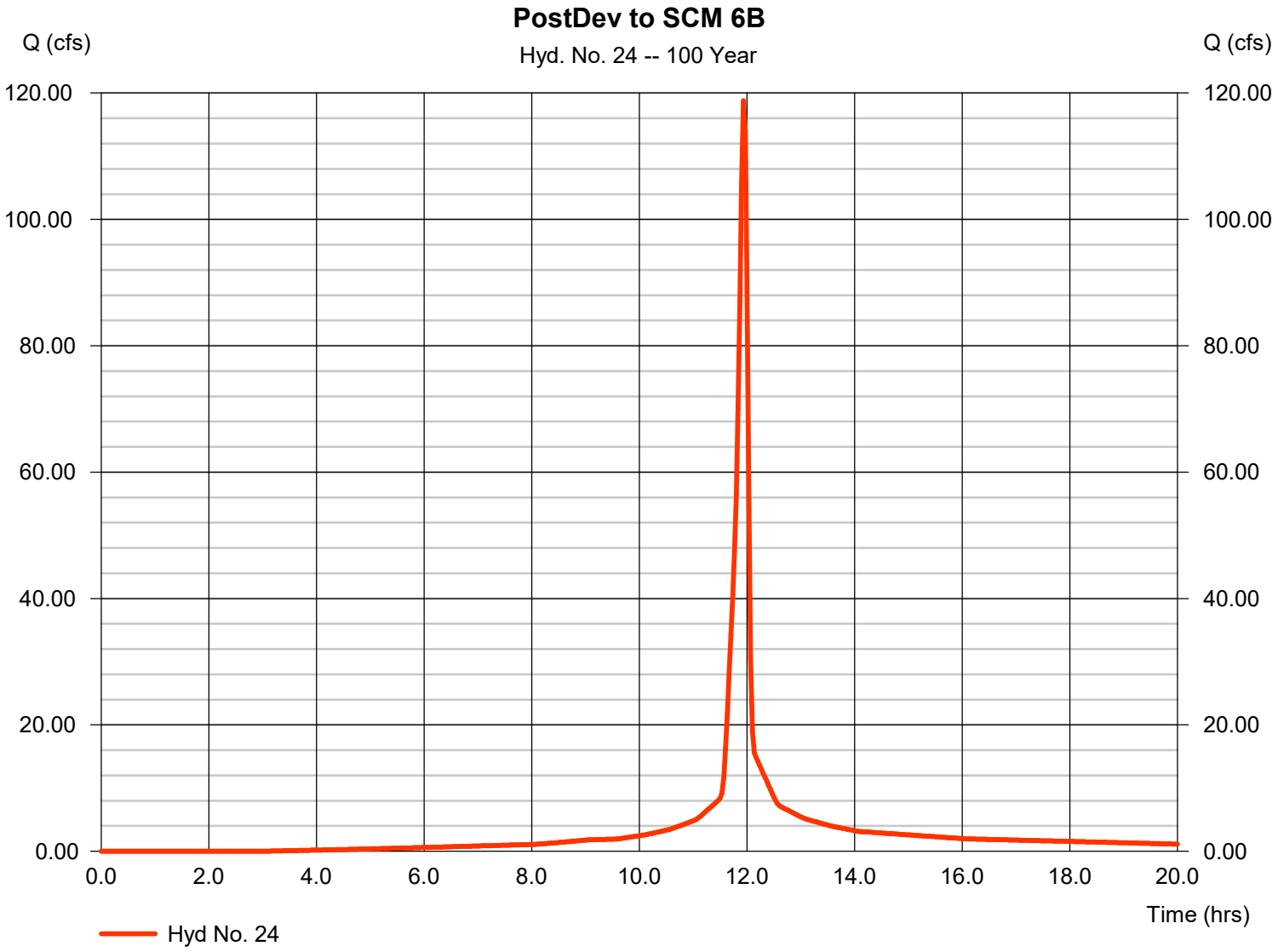


Hydrograph Report

Hyd. No. 24

PostDev to SCM 6B

Hydrograph type	=	SCS Runoff	Peak discharge	=	118.76 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	260,504 cuft
Drainage area	=	12.210 ac	Curve number	=	88.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.30 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

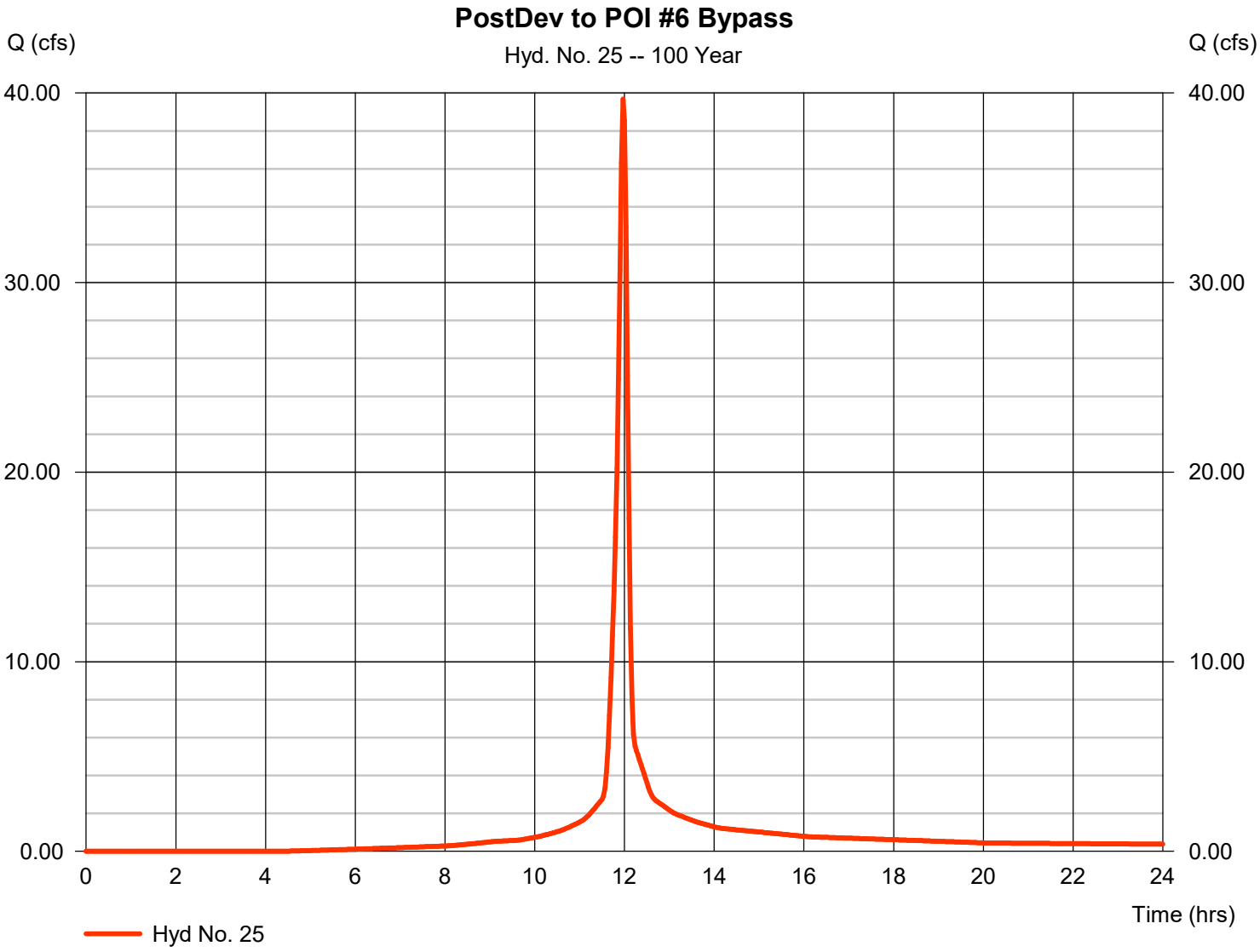


Hydrograph Report

Hyd. No. 25

PostDev to POI #6 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	39.67 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.97 hrs
Time interval	=	2 min	Hyd. volume	=	94,365 cuft
Drainage area	=	4.590 ac	Curve number	=	83.5
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

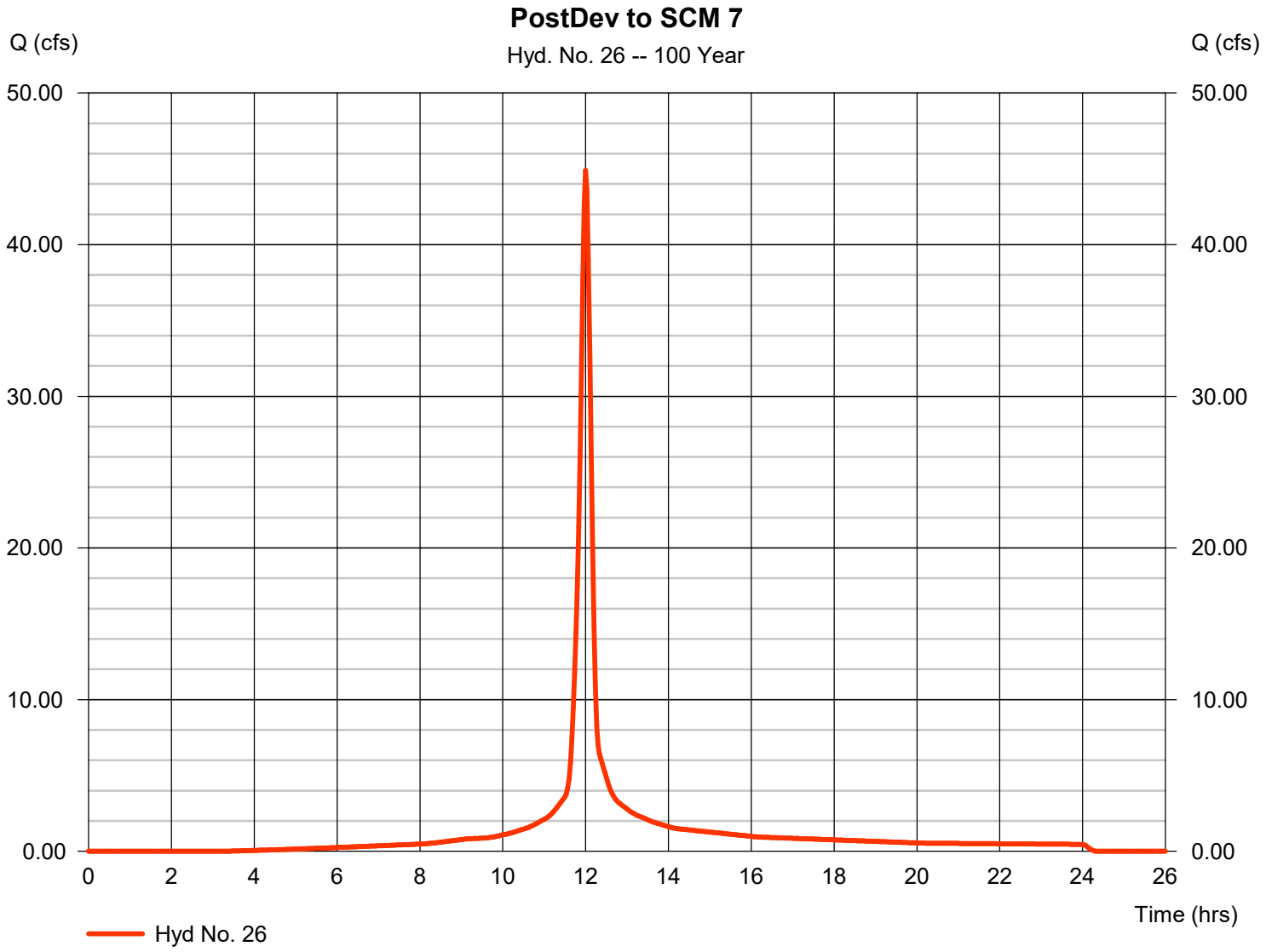


Hydrograph Report

Hyd. No. 26

PostDev to SCM 7

Hydrograph type	= SCS Runoff	Peak discharge	= 44.91 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 122,986 cuft
Drainage area	= 5.330 ac	Curve number	= 87.8
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.40 min
Total precip.	= 7.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

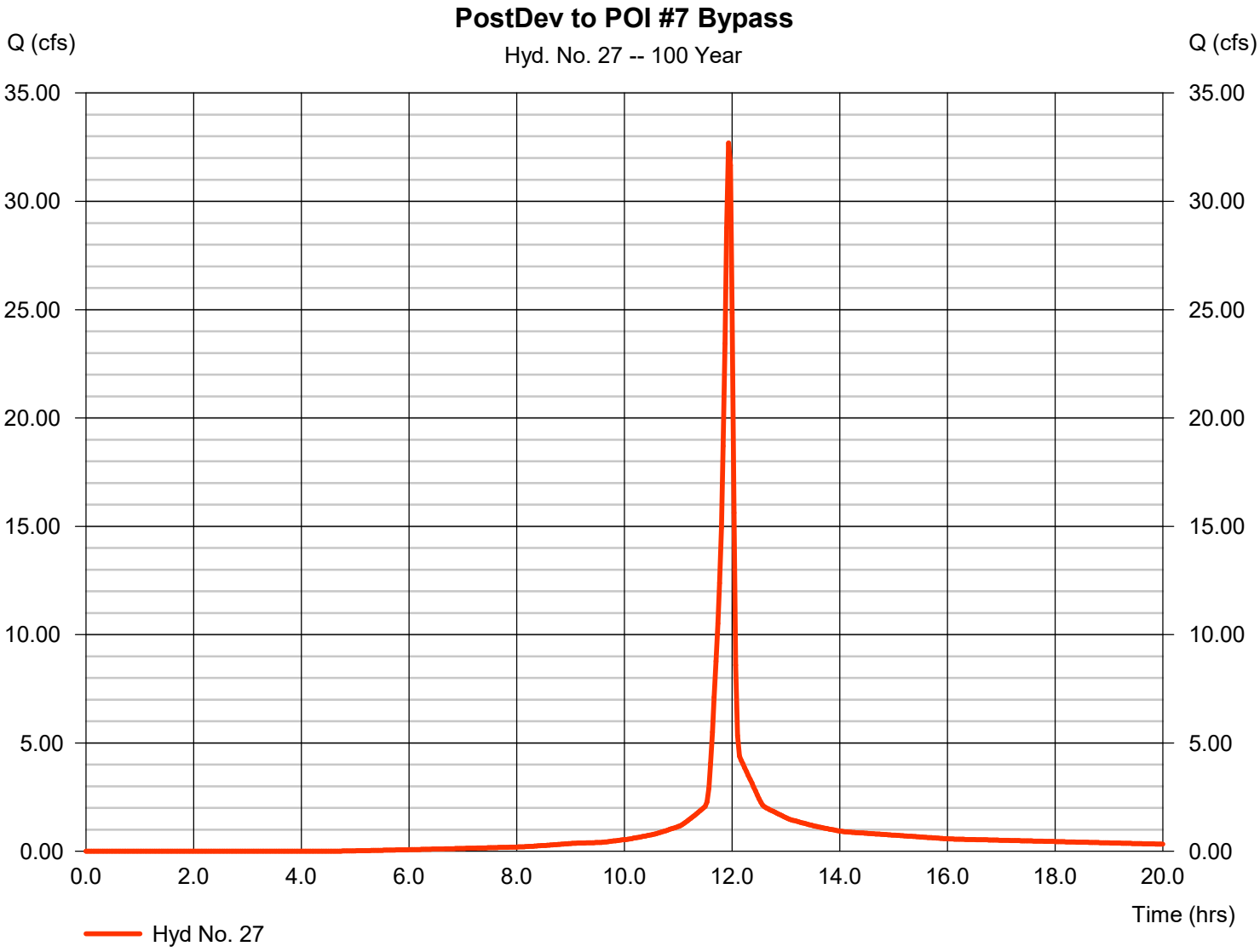


Hydrograph Report

Hyd. No. 27

PostDev to POI #7 Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.70 cfs
Storm frequency	=	100 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	69,011 cuft
Drainage area	=	3.640 ac	Curve number	=	82.7
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.61 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



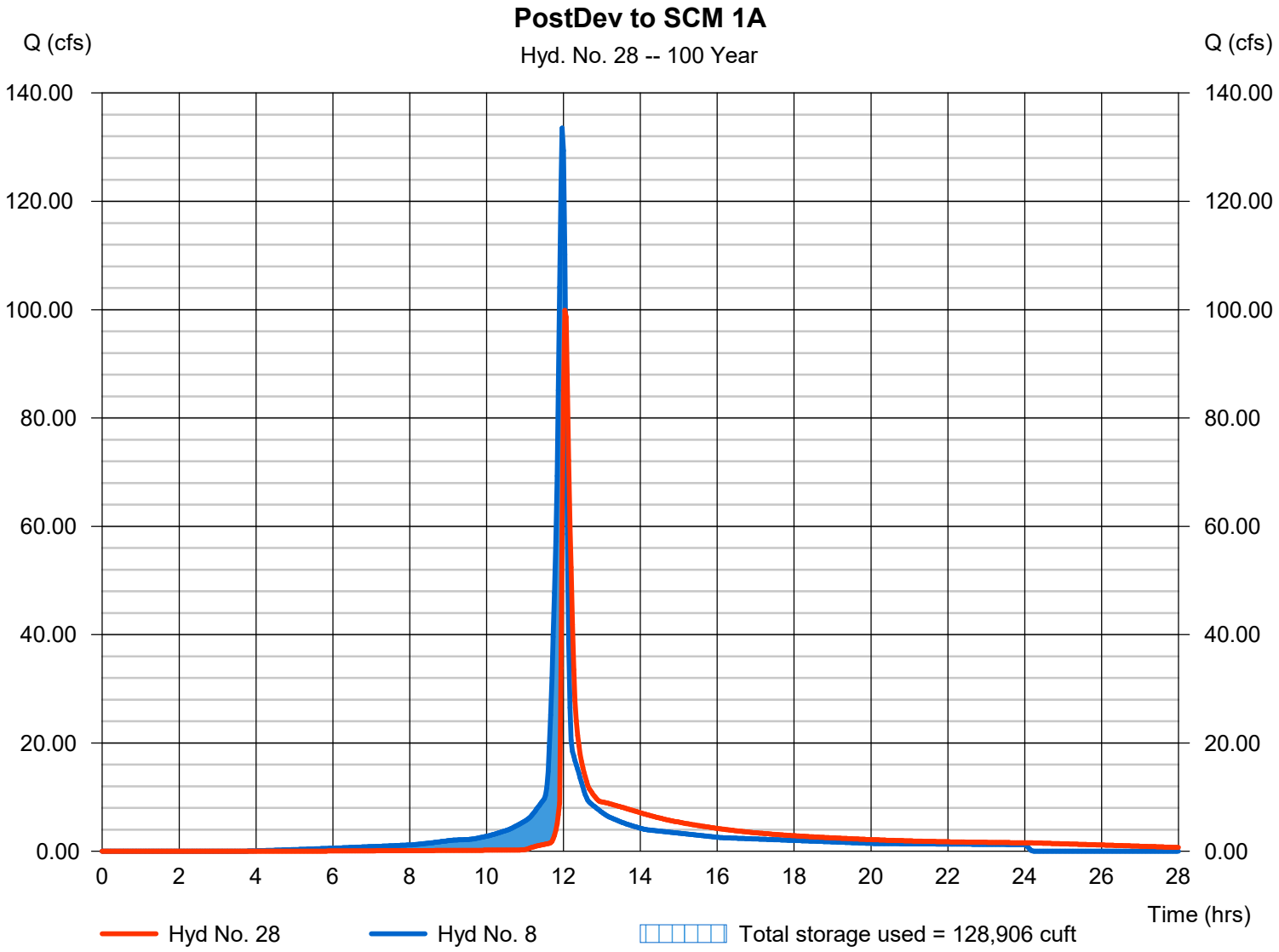
Hydrograph Report

Hyd. No. 28

PostDev to SCM 1A

Hydrograph type	=	Reservoir	Peak discharge	=	99.88 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	321,422 cuft
Inflow hyd. No.	=	8 - PostDev to SCM 1A	Max. Elevation	=	353.98 ft
Reservoir name	=	SCM 1A	Max. Storage	=	128,906 cuft

Storage Indication method used.



Hydrograph Report

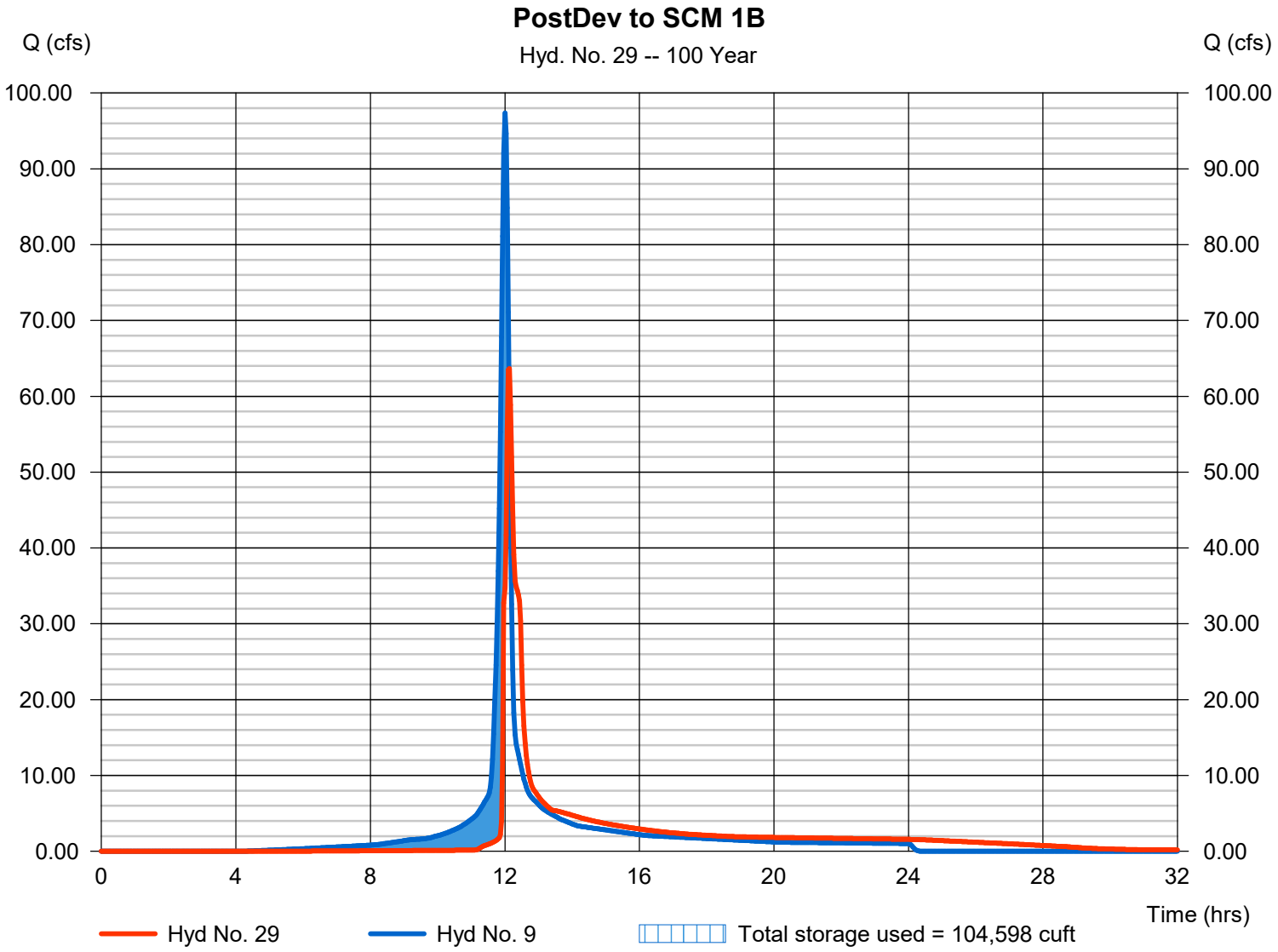
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 4 / 2025

Hyd. No. 29

PostDev to SCM 1B

Hydrograph type	= Reservoir	Peak discharge	= 63.65 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 259,078 cuft
Inflow hyd. No.	= 9 - PostDev to SCM 1B	Max. Elevation	= 381.99 ft
Reservoir name	= SCM 1B	Max. Storage	= 104,598 cuft

Storage Indication method used.



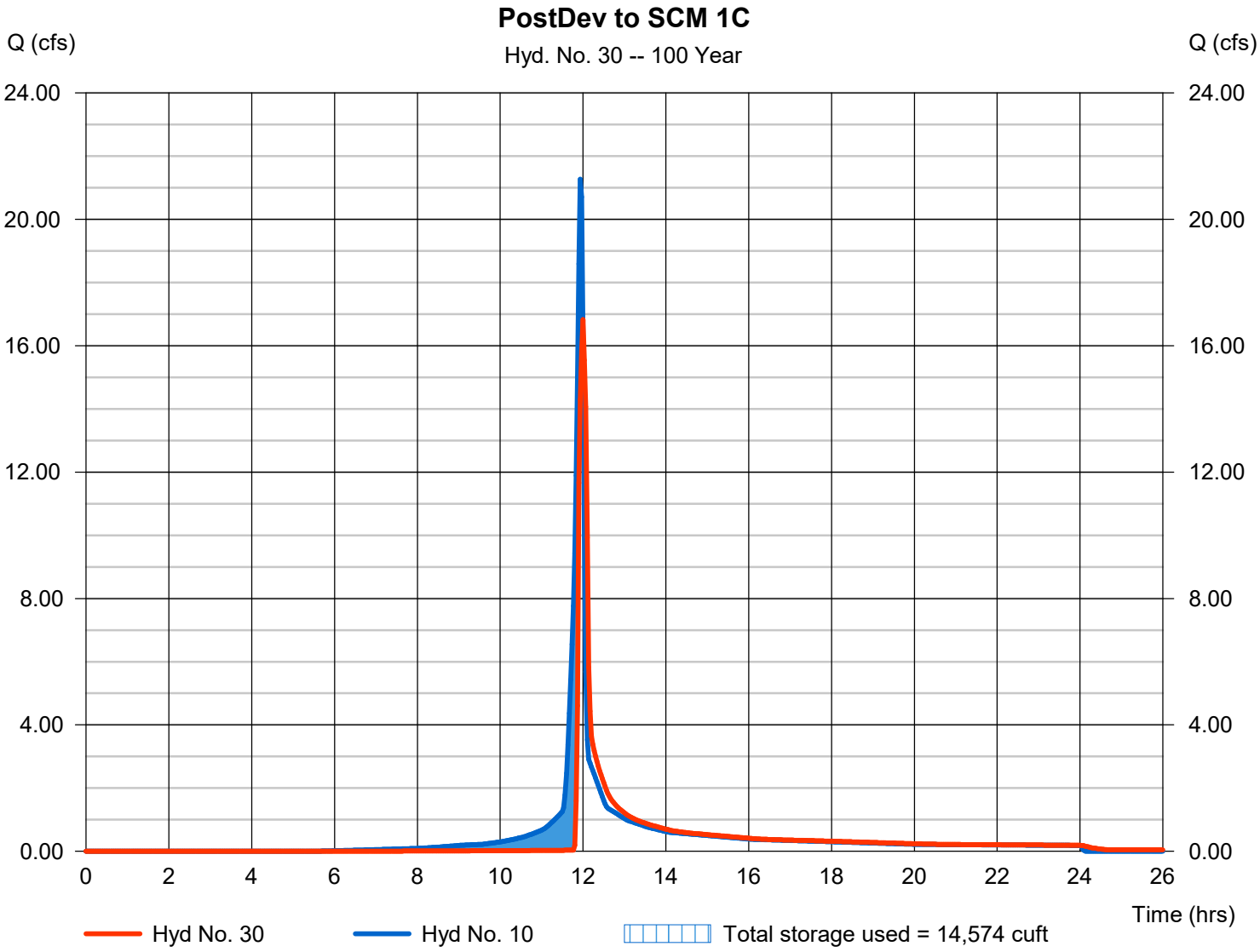
Hydrograph Report

Hyd. No. 30

PostDev to SCM 1C

Hydrograph type	=	Reservoir	Peak discharge	=	16.83 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	42,728 cuft
Inflow hyd. No.	=	10 - PostDev to SCM 1C	Max. Elevation	=	364.11 ft
Reservoir name	=	SCM 1C	Max. Storage	=	14,574 cuft

Storage Indication method used.



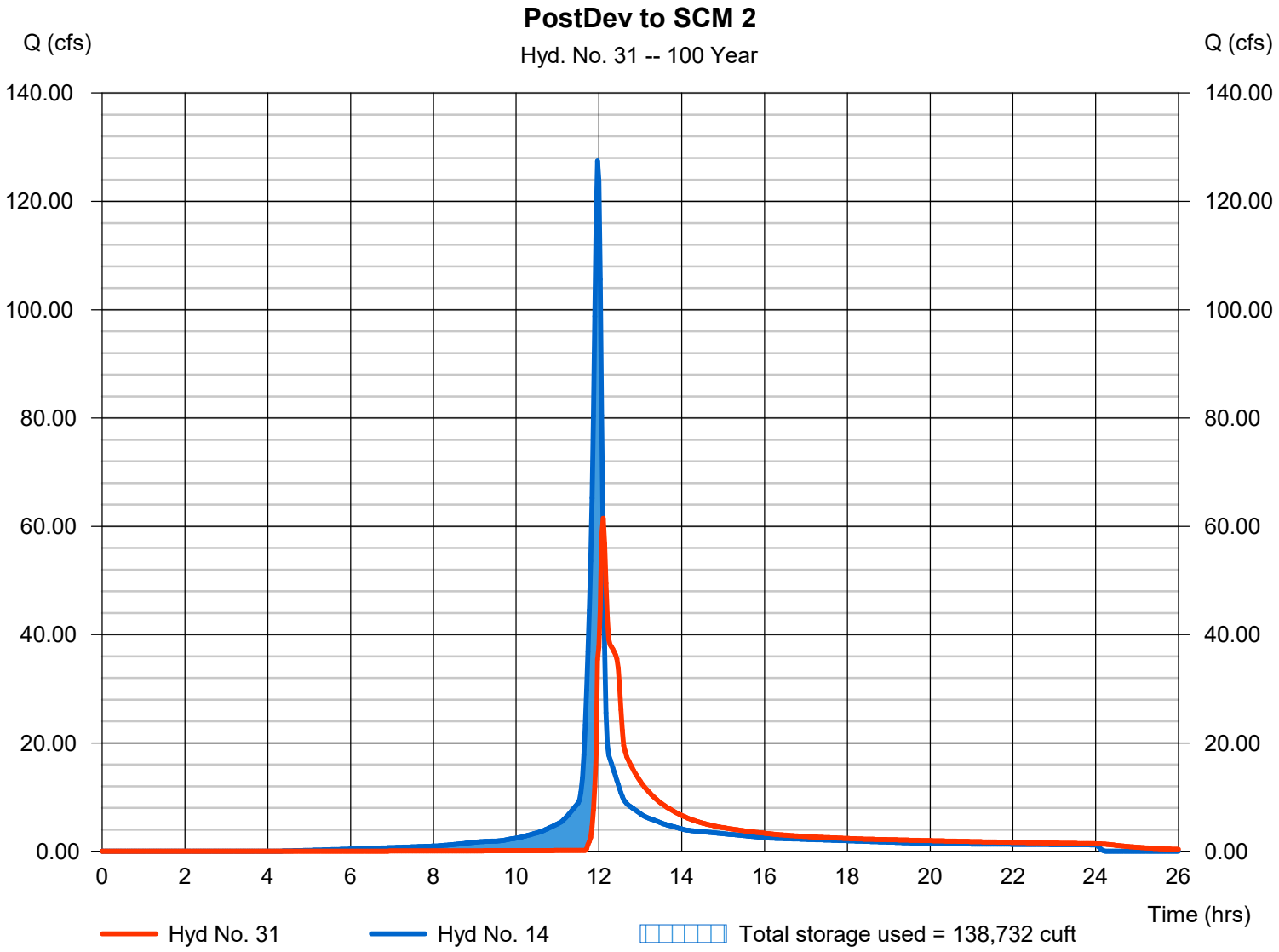
Hydrograph Report

Hyd. No. 31

PostDev to SCM 2

Hydrograph type	= Reservoir	Peak discharge	= 61.50 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 288,947 cuft
Inflow hyd. No.	= 14 - PostDev to SCM 2	Max. Elevation	= 358.98 ft
Reservoir name	= SCM 2	Max. Storage	= 138,732 cuft

Storage Indication method used.



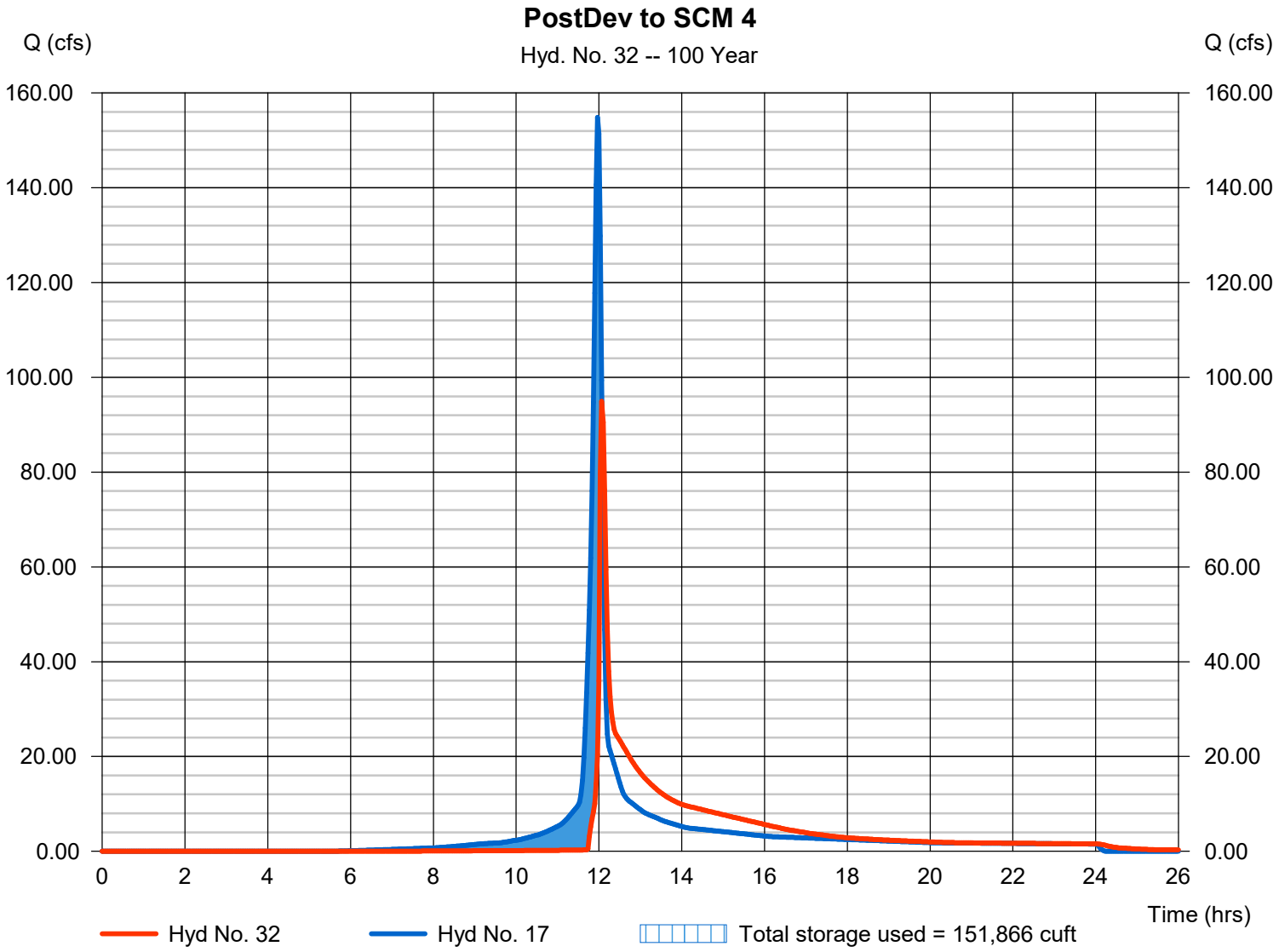
Hydrograph Report

Hyd. No. 32

PostDev to SCM 4

Hydrograph type	=	Reservoir	Peak discharge	=	94.93 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	356,875 cuft
Inflow hyd. No.	=	17 - PostDev to SCM 4	Max. Elevation	=	369.39 ft
Reservoir name	=	SCM 4	Max. Storage	=	151,866 cuft

Storage Indication method used.



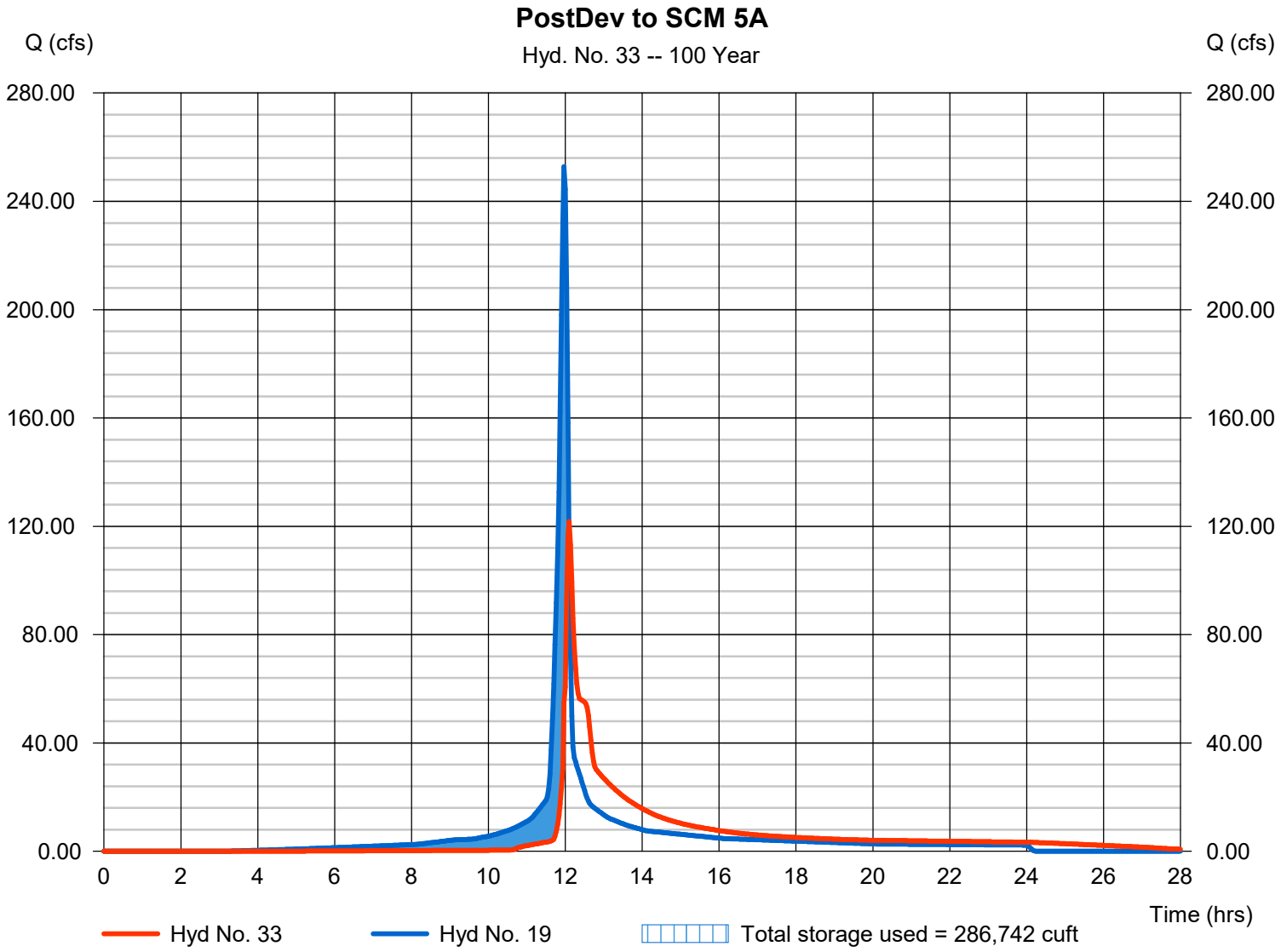
Hydrograph Report

Hyd. No. 33

PostDev to SCM 5A

Hydrograph type	=	Reservoir	Peak discharge	=	121.76 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	616,422 cuft
Inflow hyd. No.	=	19 - PostDev to SCM 5A	Max. Elevation	=	321.98 ft
Reservoir name	=	SCM 5A	Max. Storage	=	286,742 cuft

Storage Indication method used.



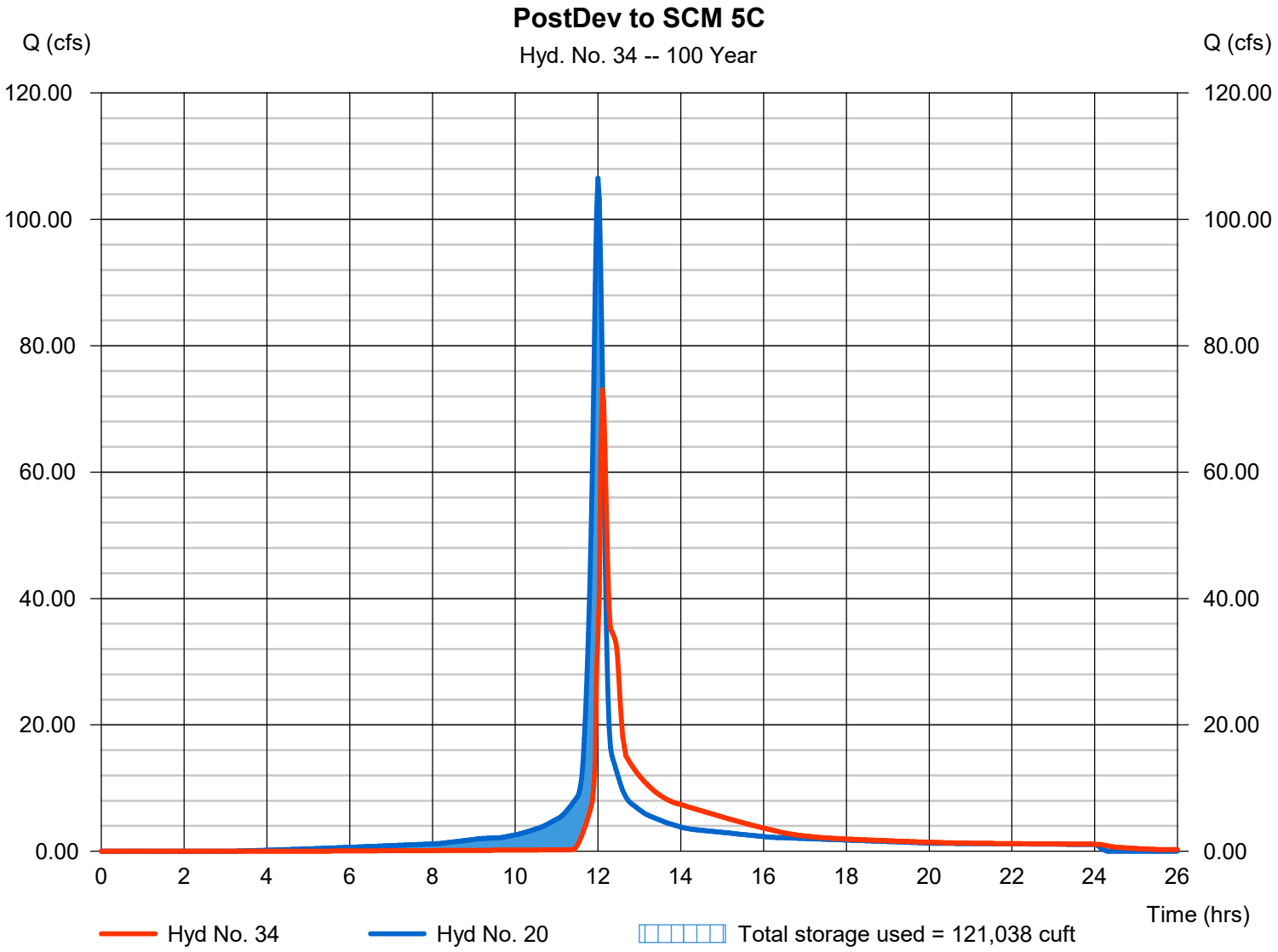
Hydrograph Report

Hyd. No. 34

PostDev to SCM 5C

Hydrograph type	=	Reservoir	Peak discharge	=	73.05 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	289,941 cuft
Inflow hyd. No.	=	20 - PostDev to SCM 5C	Max. Elevation	=	297.99 ft
Reservoir name	=	SCM 5C	Max. Storage	=	121,038 cuft

Storage Indication method used.



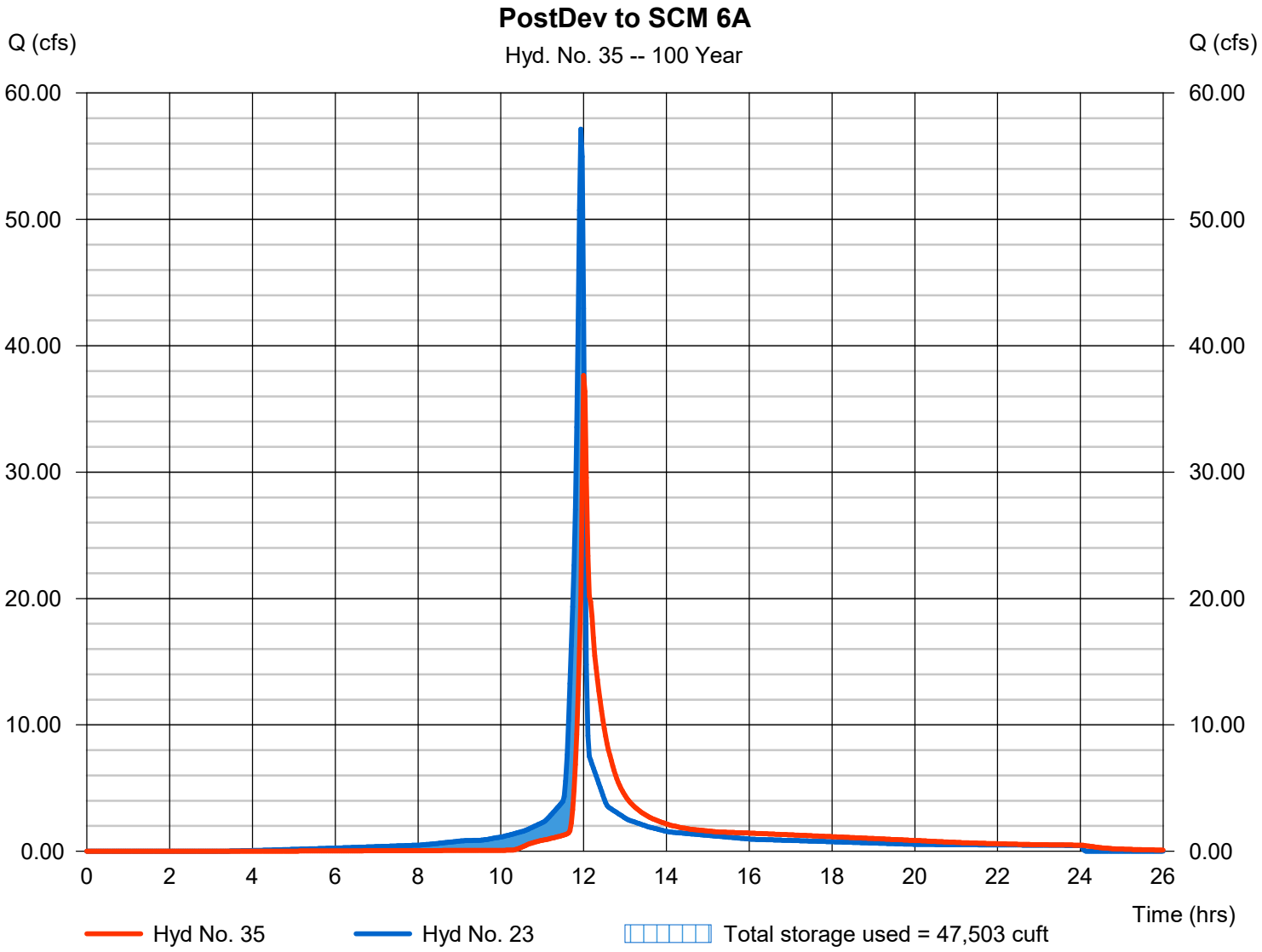
Hydrograph Report

Hyd. No. 35

PostDev to SCM 6A

Hydrograph type	=	Reservoir	Peak discharge	=	37.64 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	124,232 cuft
Inflow hyd. No.	=	23 - PostDev to SCM 6A	Max. Elevation	=	282.96 ft
Reservoir name	=	SCM 6A	Max. Storage	=	47,503 cuft

Storage Indication method used.



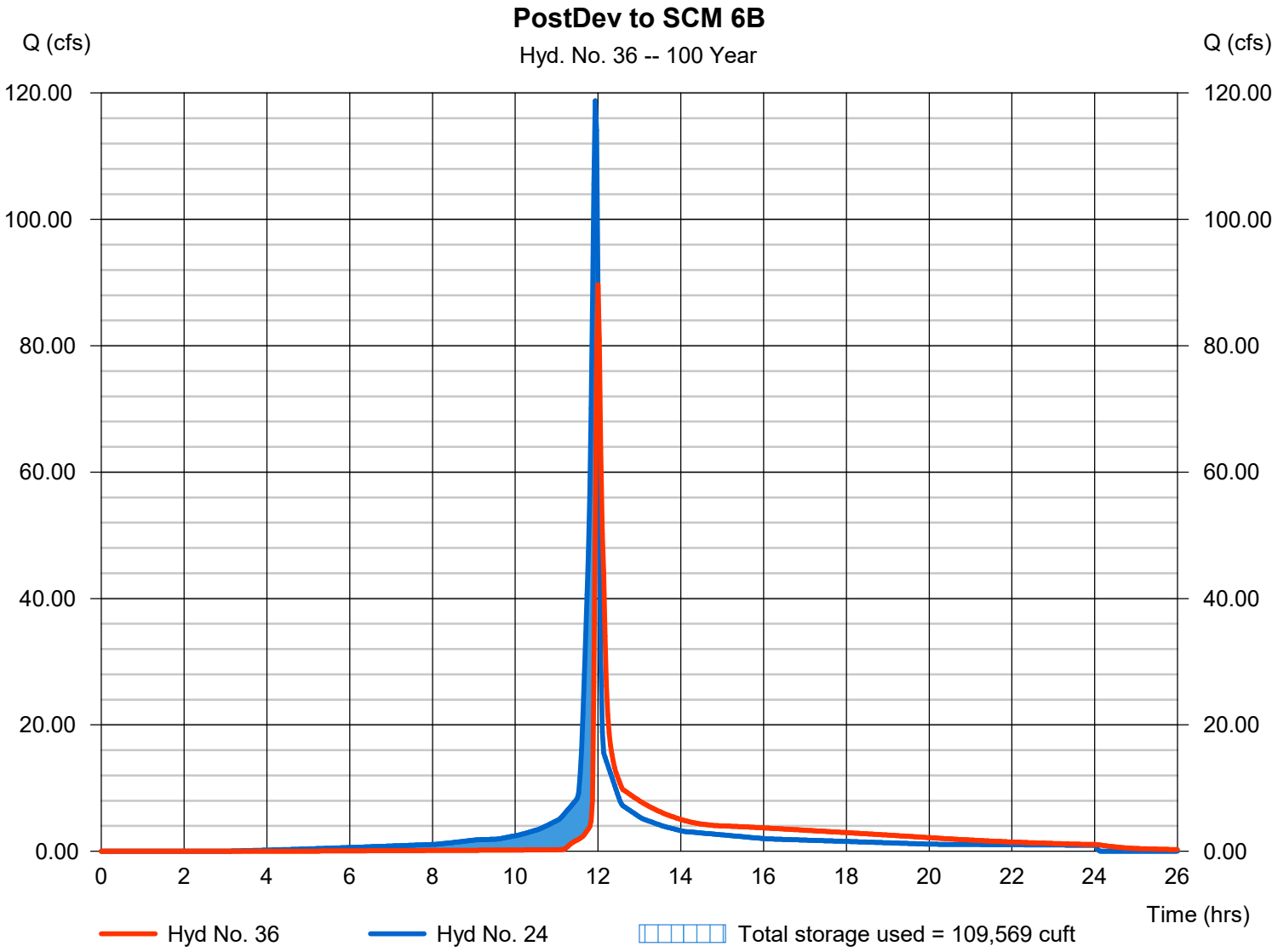
Hydrograph Report

Hyd. No. 36

PostDev to SCM 6B

Hydrograph type	=	Reservoir	Peak discharge	=	89.65 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	259,436 cuft
Inflow hyd. No.	=	24 - PostDev to SCM 6B	Max. Elevation	=	295.90 ft
Reservoir name	=	SCM 6B	Max. Storage	=	109,569 cuft

Storage Indication method used.



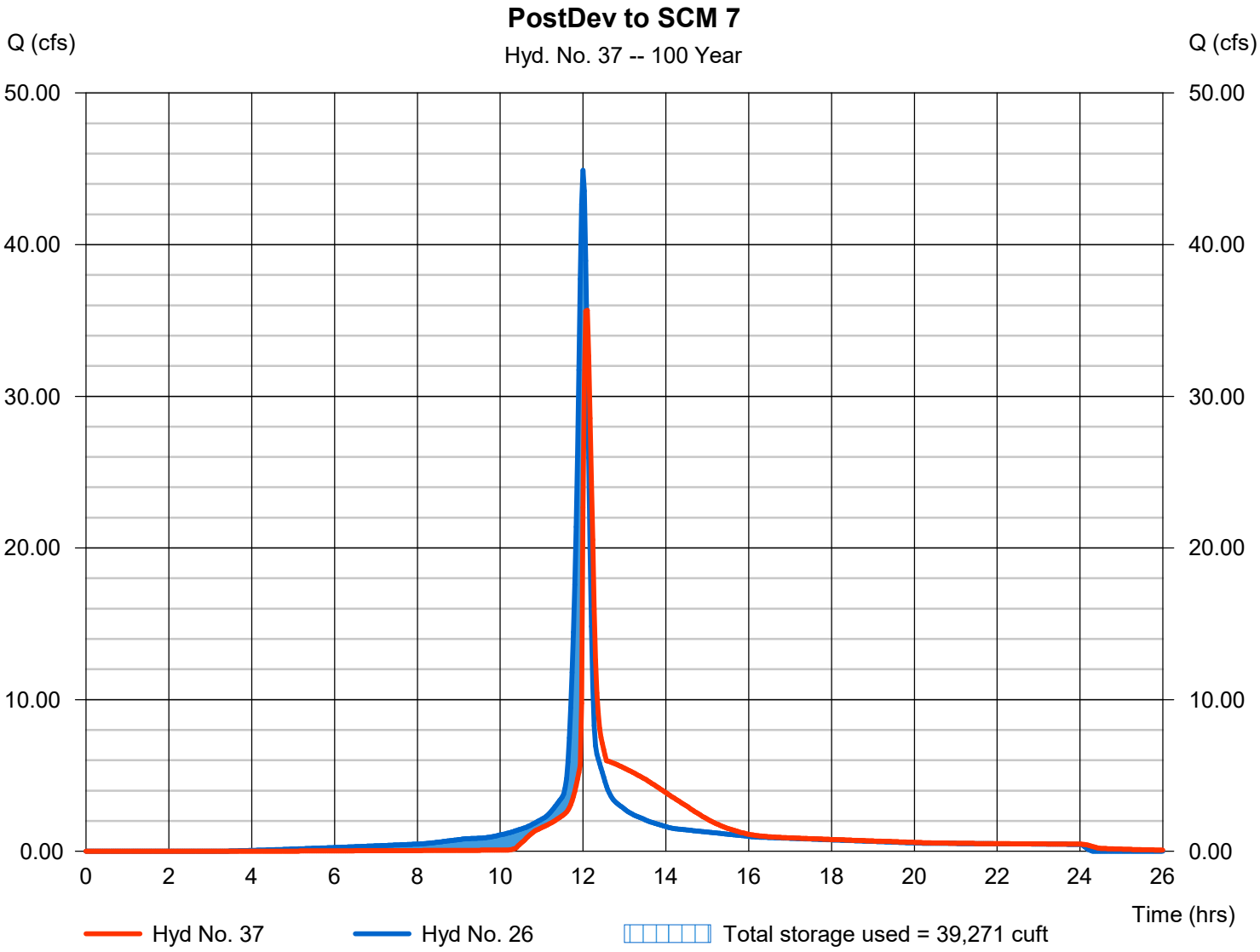
Hydrograph Report

Hyd. No. 37

PostDev to SCM 7

Hydrograph type	=	Reservoir	Peak discharge	=	35.68 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	122,837 cuft
Inflow hyd. No.	=	26 - PostDev to SCM 7	Max. Elevation	=	327.79 ft
Reservoir name	=	SCM 7	Max. Storage	=	39,271 cuft

Storage Indication method used.

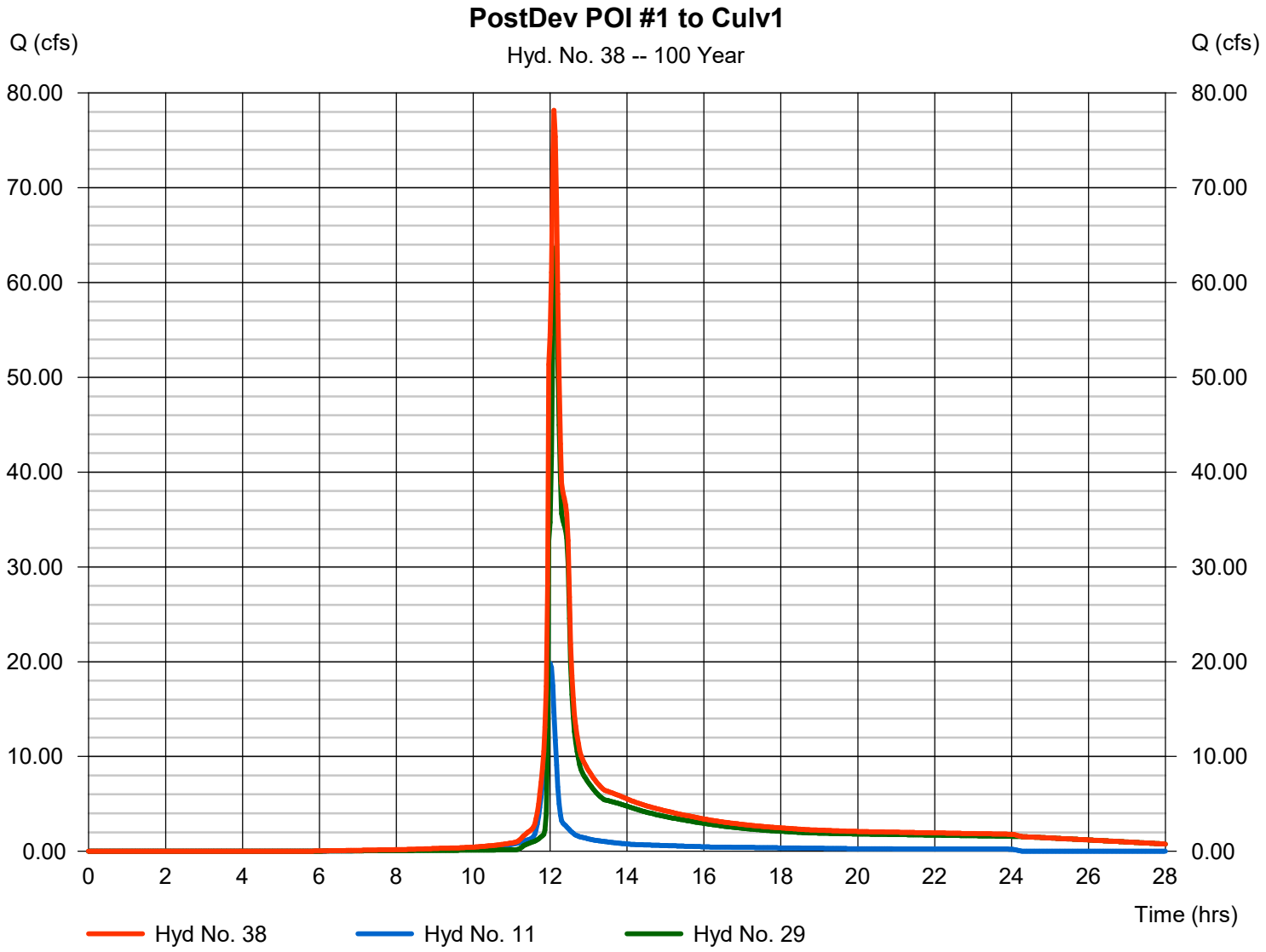


Hydrograph Report

Hyd. No. 38

PostDev POI #1 to Culv1

Hydrograph type	= Combine	Peak discharge	= 78.18 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 311,125 cuft
Inflow hyds.	= 11, 29	Contrib. drain. area	= 2.720 ac

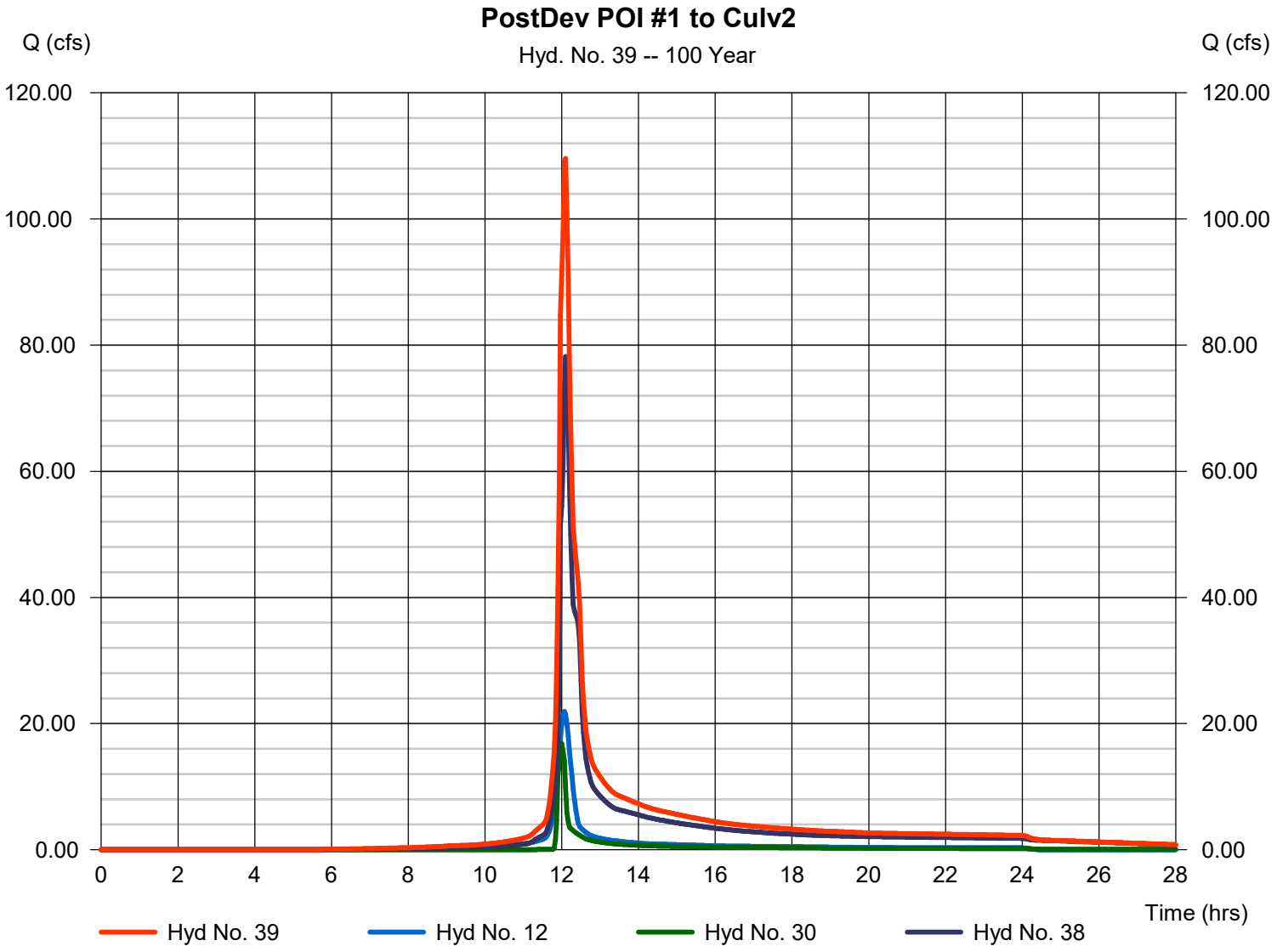


Hydrograph Report

Hyd. No. 39

PostDev POI #1 to Culv2

Hydrograph type	=	Combine	Peak discharge	=	109.58 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	423,208 cuft
Inflow hyds.	=	12, 30, 38	Contrib. drain. area	=	3.640 ac

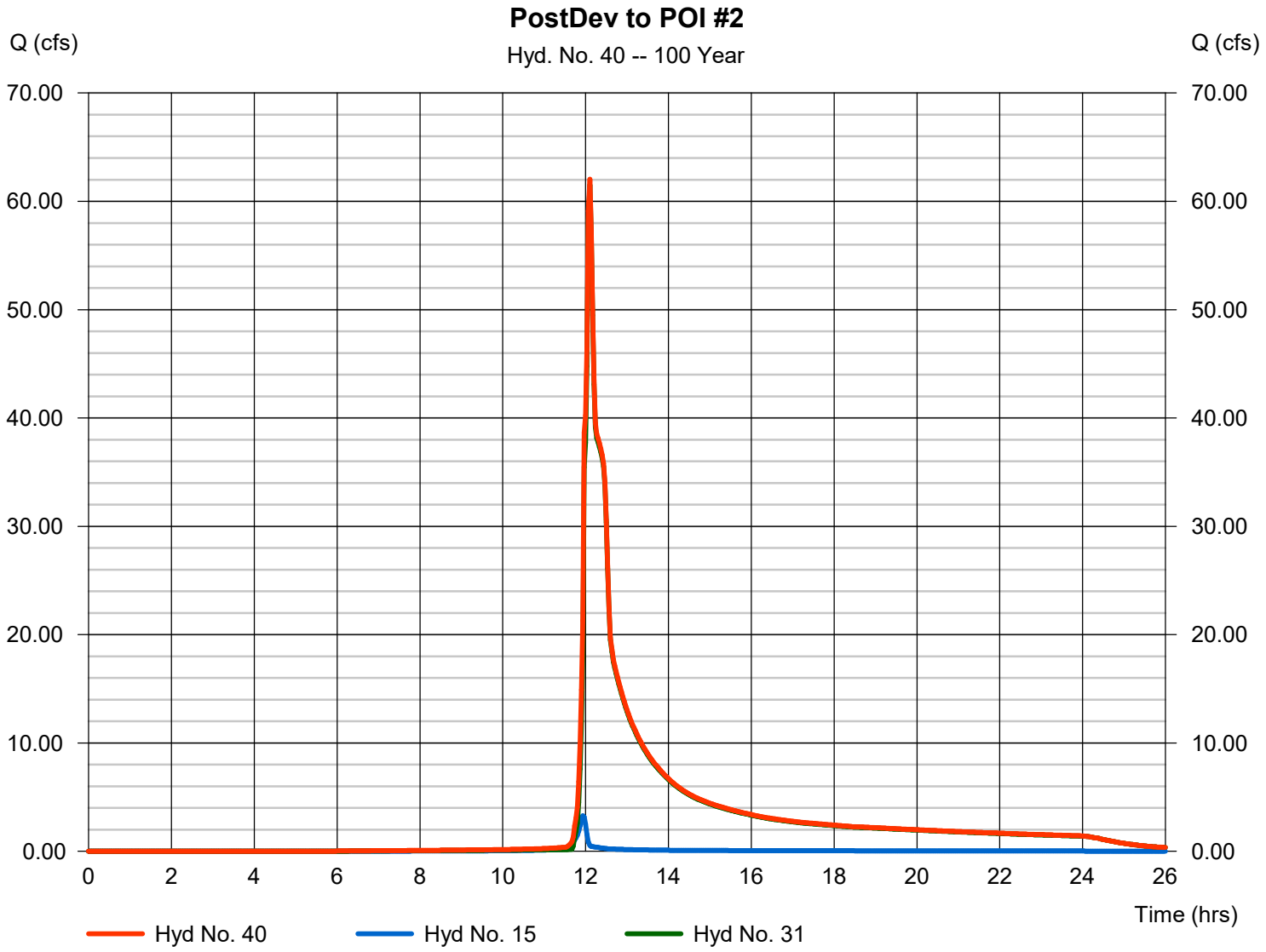


Hydrograph Report

Hyd. No. 40

PostDev to POI #2

Hydrograph type	= Combine	Peak discharge	= 62.04 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 295,860 cuft
Inflow hyds.	= 15, 31	Contrib. drain. area	= 0.370 ac

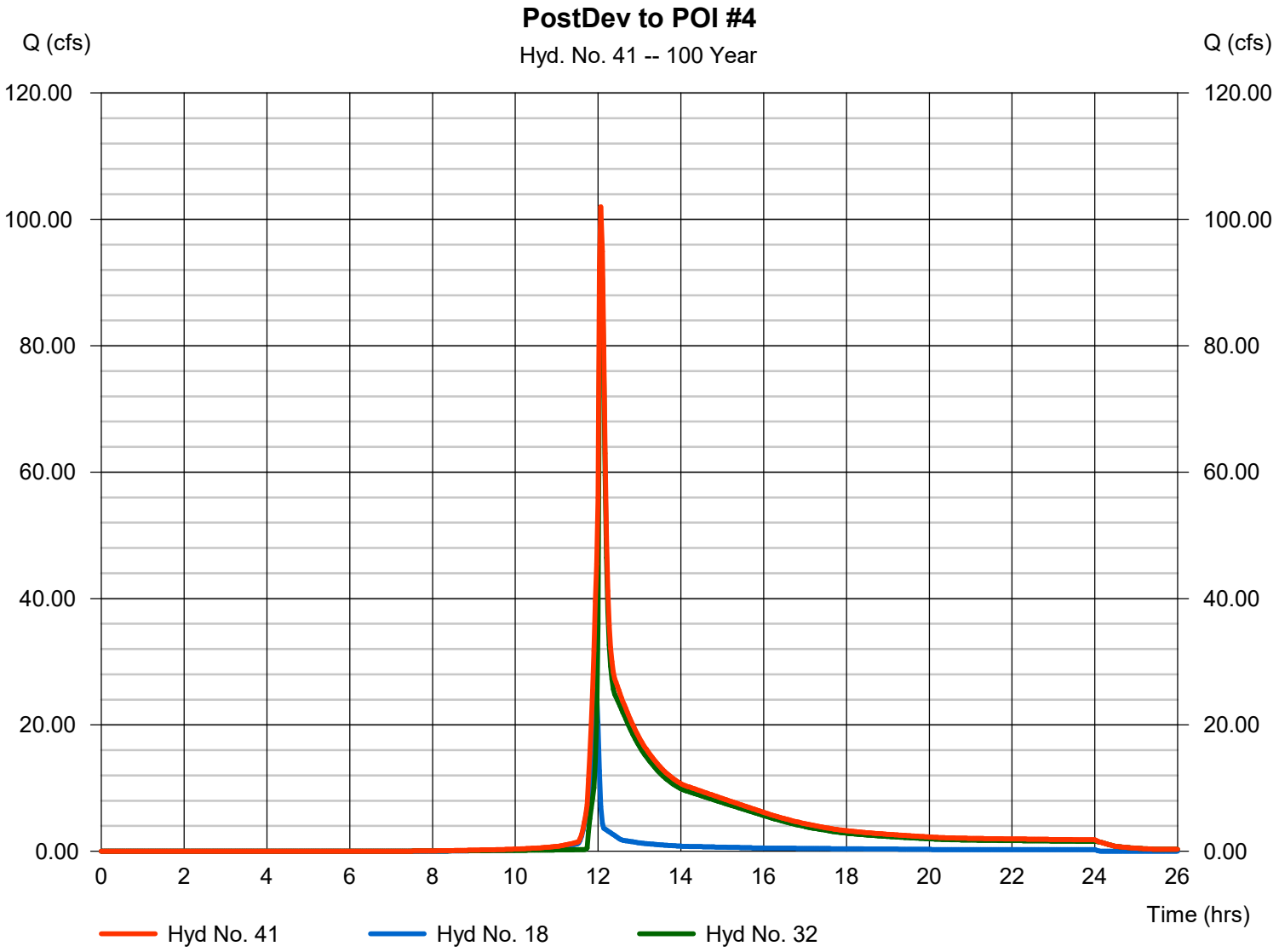


Hydrograph Report

Hyd. No. 41

PostDev to POI #4

Hydrograph type	=	Combine	Peak discharge	=	102.00 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	408,053 cuft
Inflow hyds.	=	18, 32	Contrib. drain. area	=	3.670 ac

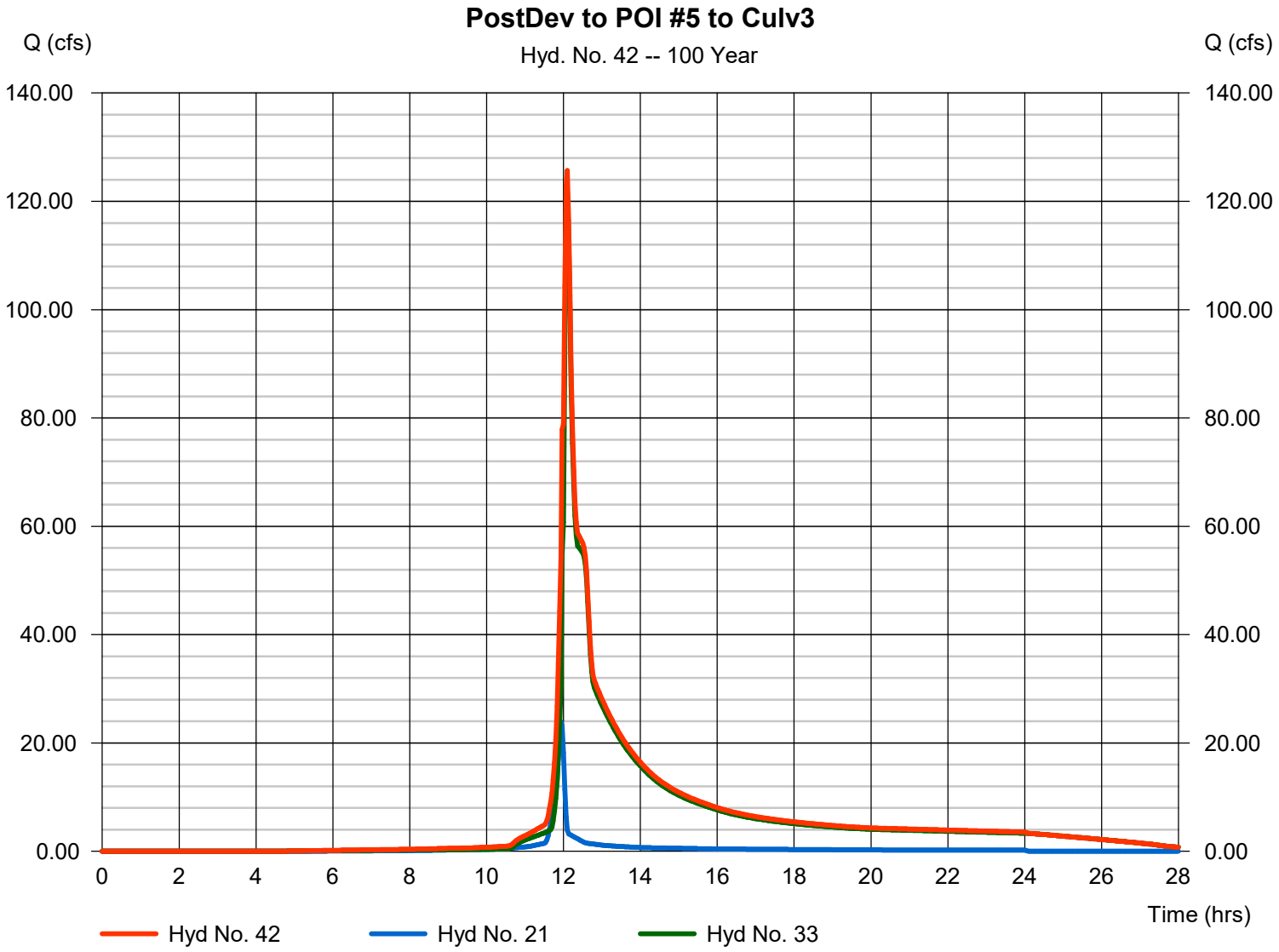


Hydrograph Report

Hyd. No. 42

PostDev to POI #5 to Culv3

Hydrograph type	= Combine	Peak discharge	= 125.67 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 666,419 cuft
Inflow hyds.	= 21, 33	Contrib. drain. area	= 2.710 ac

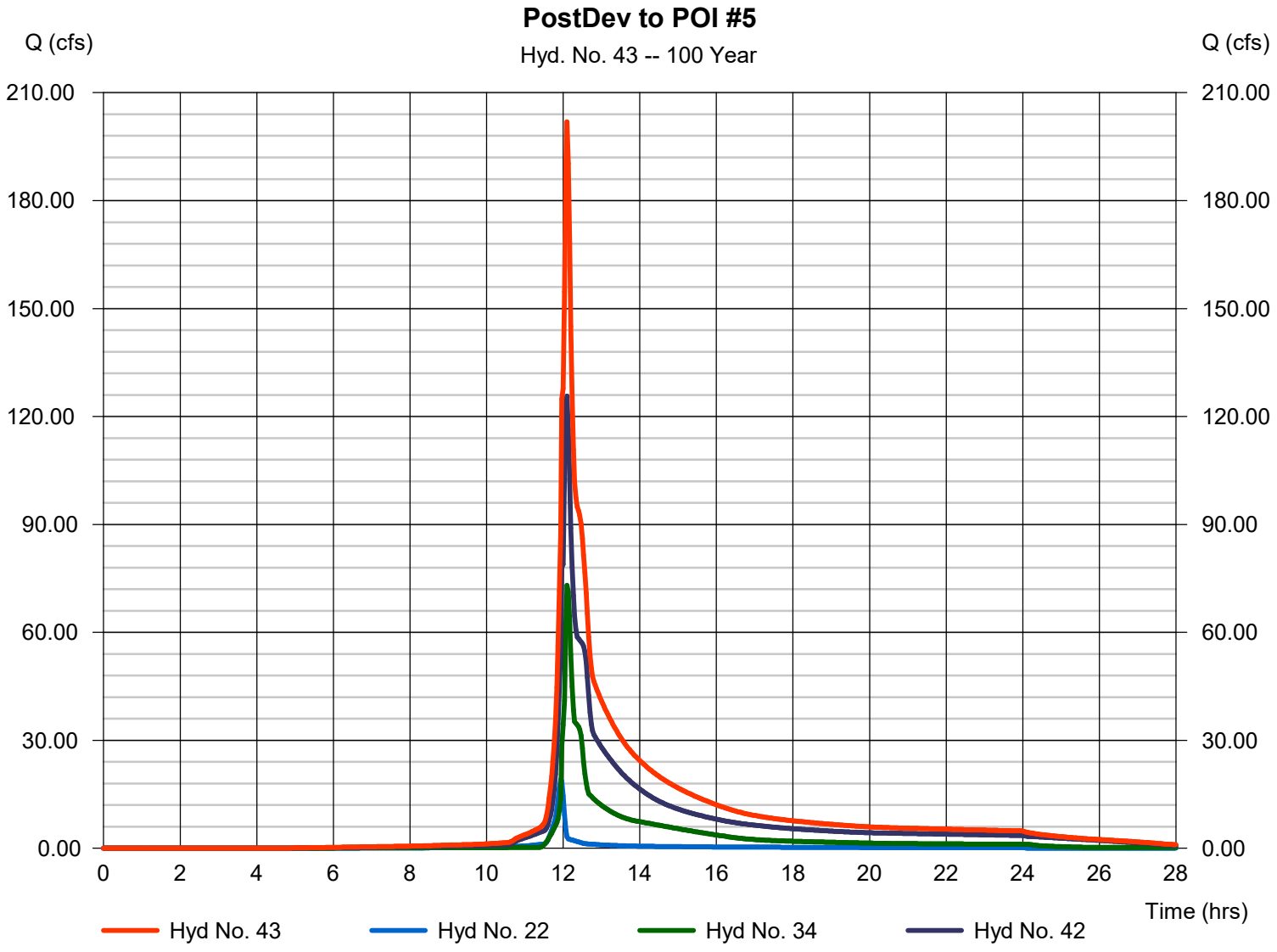


Hydrograph Report

Hyd. No. 43

PostDev to POI #5

Hydrograph type	= Combine	Peak discharge	= 201.87 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 996,419 cuft
Inflow hyds.	= 22, 34, 42	Contrib. drain. area	= 2.190 ac

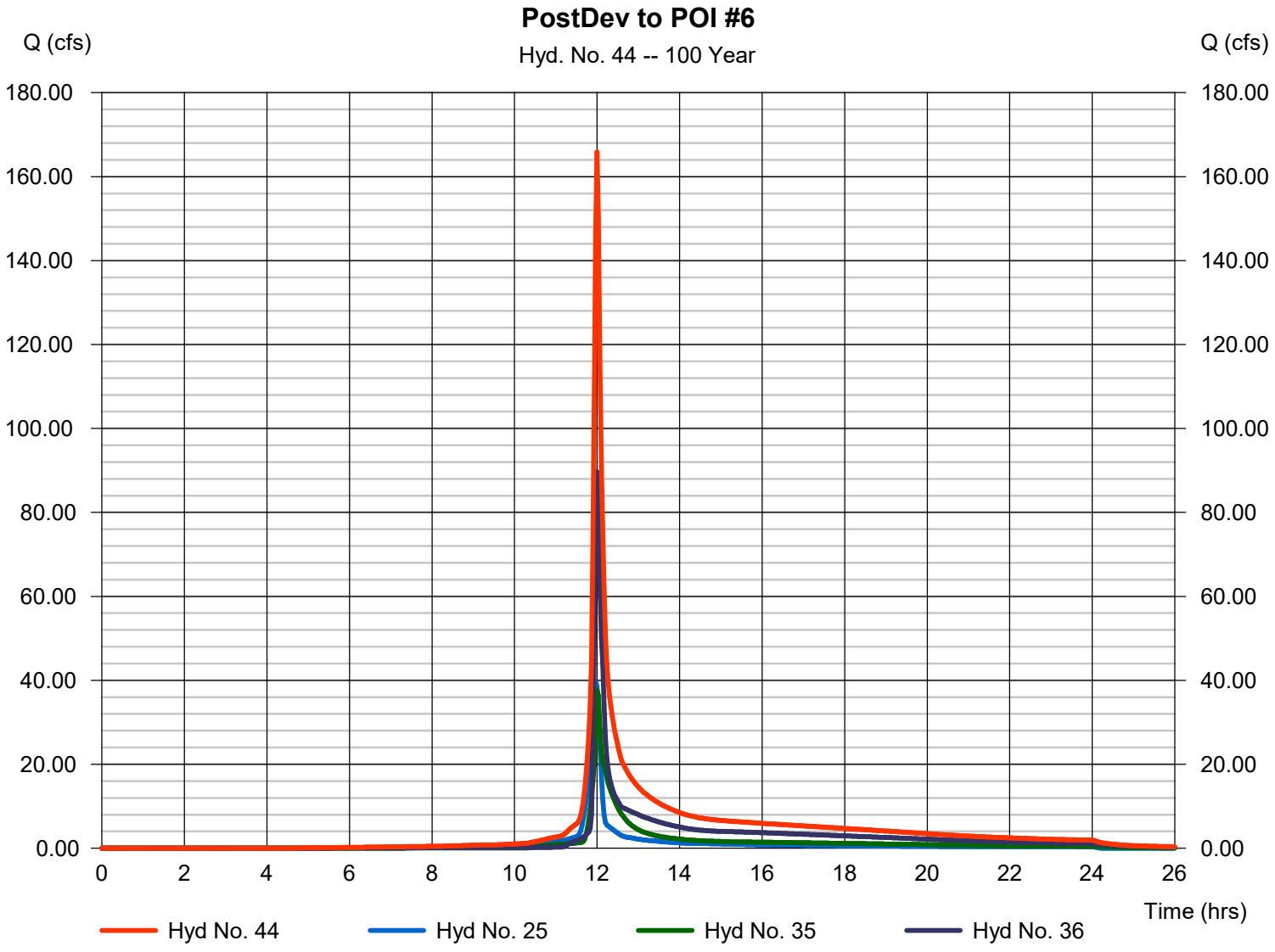


Hydrograph Report

Hyd. No. 44

PostDev to POI #6

Hydrograph type	= Combine	Peak discharge	= 165.85 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 478,033 cuft
Inflow hyds.	= 25, 35, 36	Contrib. drain. area	= 4.590 ac

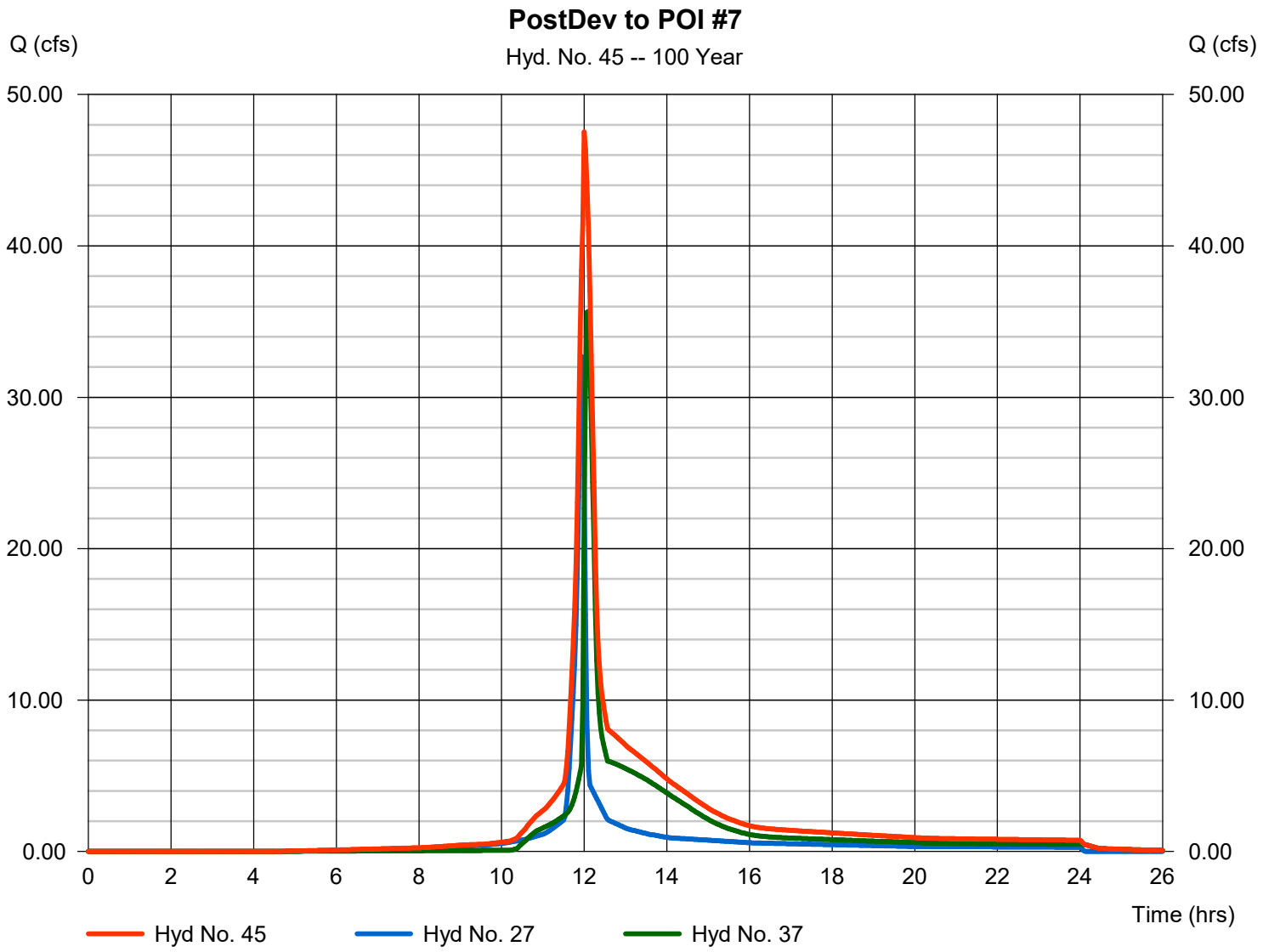


Hydrograph Report

Hyd. No. 45

PostDev to POI #7

Hydrograph type	= Combine	Peak discharge	= 47.53 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 191,848 cuft
Inflow hyds.	= 27, 37	Contrib. drain. area	= 3.640 ac

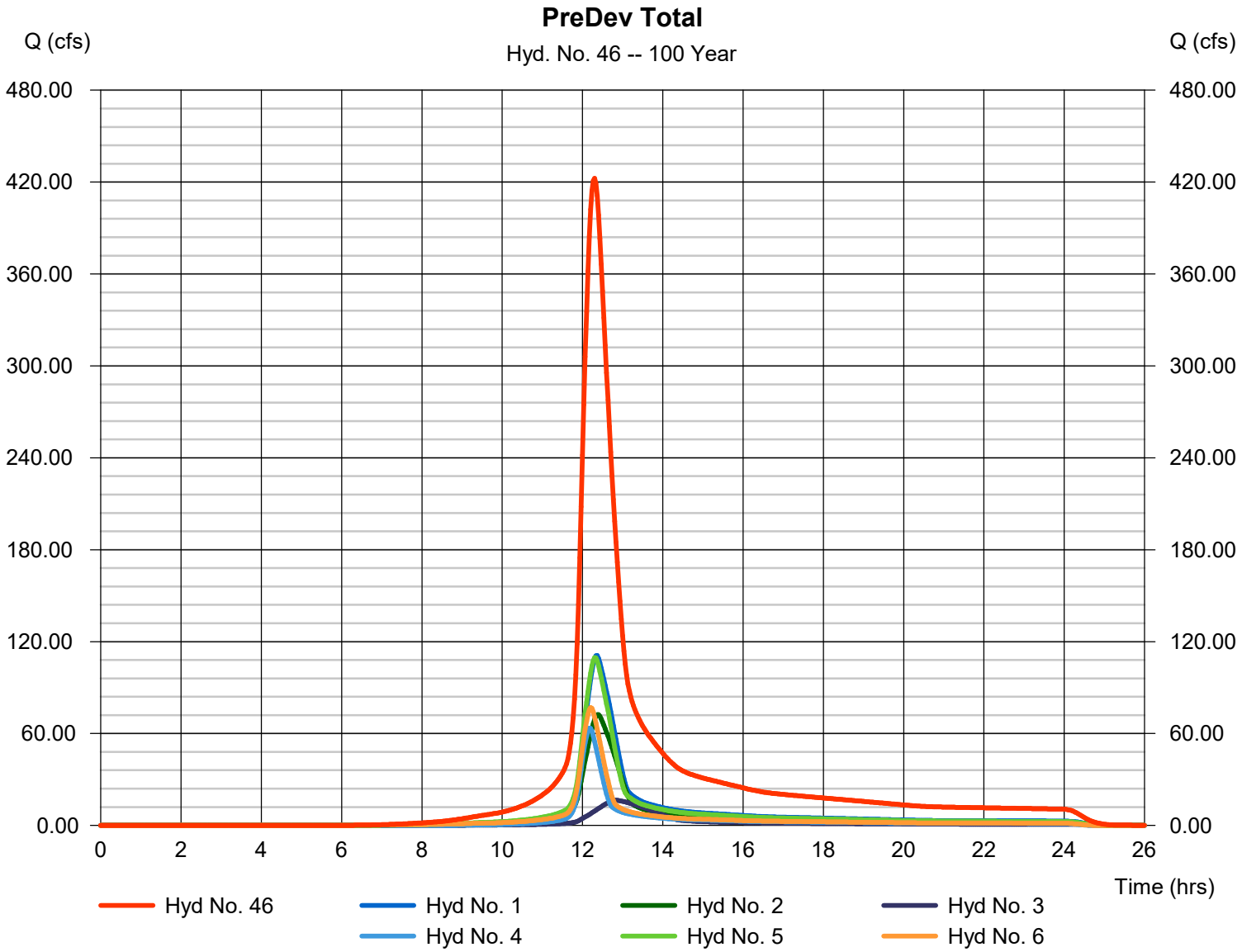


Hydrograph Report

Hyd. No. 46

PreDev Total

Hydrograph type	= Combine	Peak discharge	= 422.44 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 2,305,636 cuft
Inflow hyds.	= 1, 2, 3, 4, 5, 6	Contrib. drain. area	= 139.020 ac

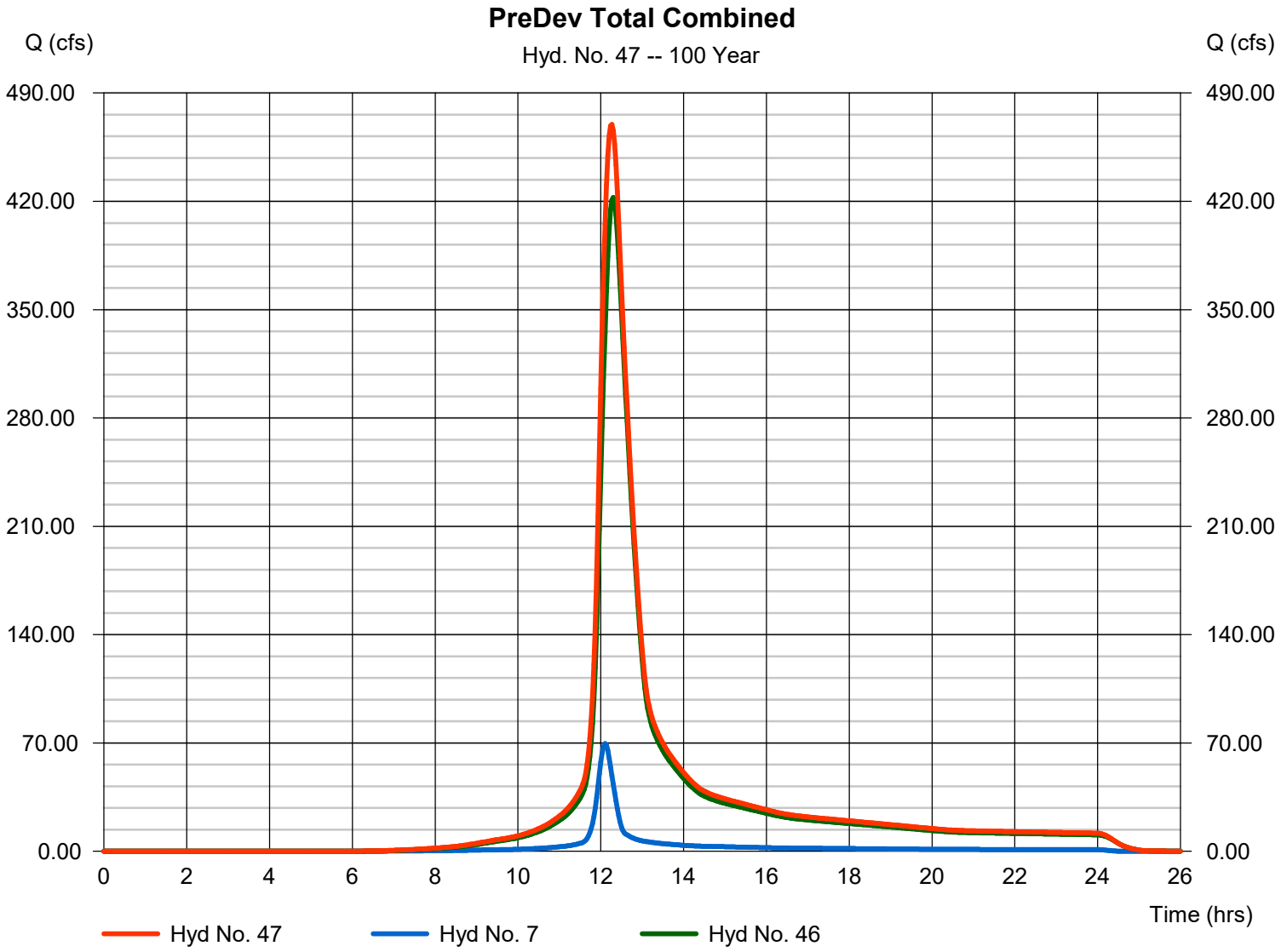


Hydrograph Report

Hyd. No. 47

PreDev Total Combined

Hydrograph type	= Combine	Peak discharge	= 469.74 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 2,546,395 cuft
Inflow hyds.	= 7, 46	Contrib. drain. area	= 13.250 ac



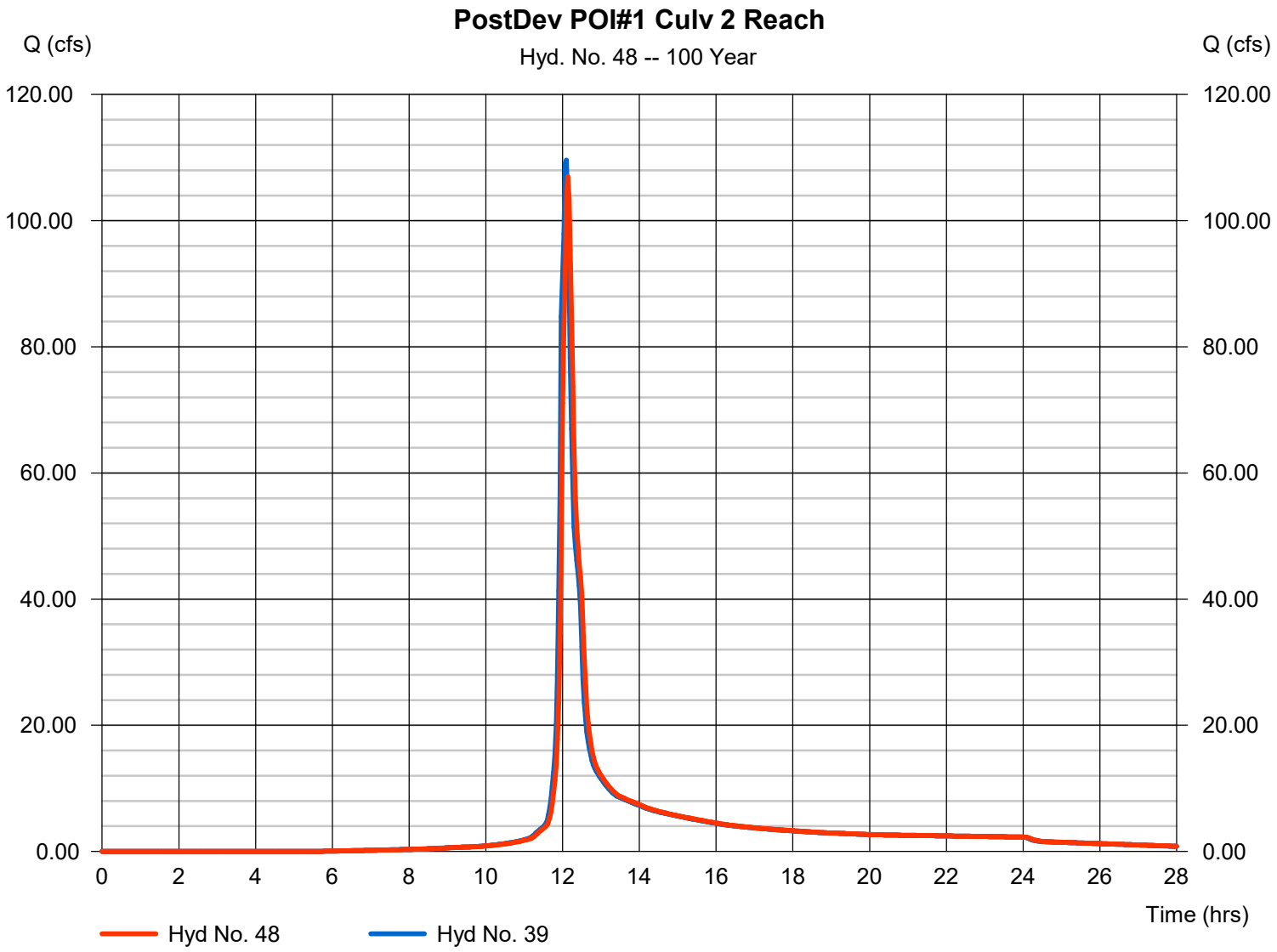
Hydrograph Report

Hyd. No. 48

PostDev POI#1 Culv 2 Reach

Hydrograph type	= Reach	Peak discharge	= 106.99 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 423,196 cuft
Inflow hyd. No.	= 39 - PostDev POI #1 to Culv2	Section type	= Trapezoidal
Reach length	= 992.0 ft	Channel slope	= 1.2 %
Manning's n	= 0.040	Bottom width	= 5.0 ft
Side slope	= 1.0:1	Max. depth	= 3.5 ft
Rating curve x	= 1.418	Rating curve m	= 1.427
Ave. velocity	= 5.20 ft/s	Routing coeff.	= 0.6198

Modified Att-Kin routing method used.

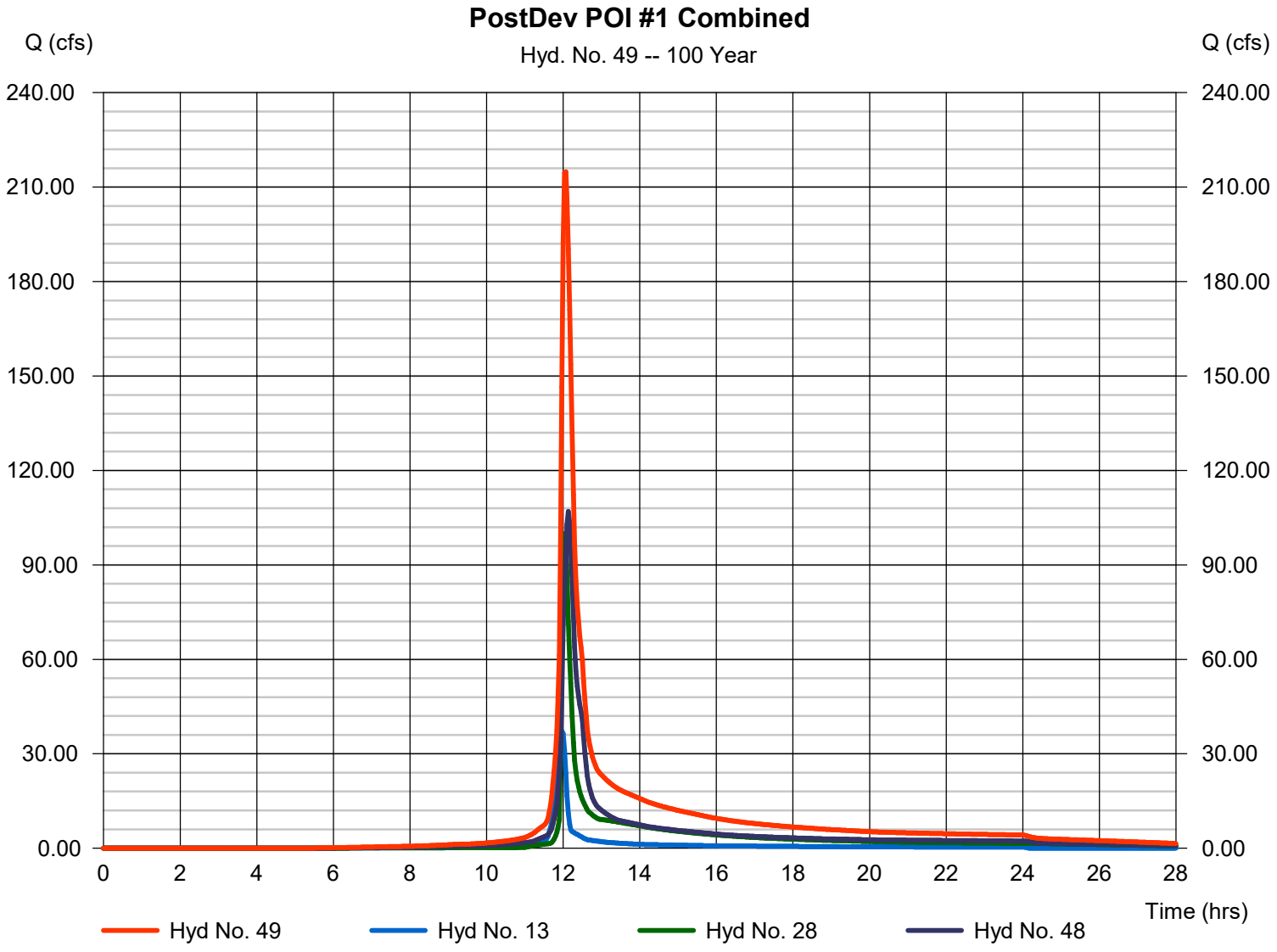


Hydrograph Report

Hyd. No. 49

PostDev POI #1 Combined

Hydrograph type	= Combine	Peak discharge	= 214.84 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 832,246 cuft
Inflow hyds.	= 13, 28, 48	Contrib. drain. area	= 4.520 ac

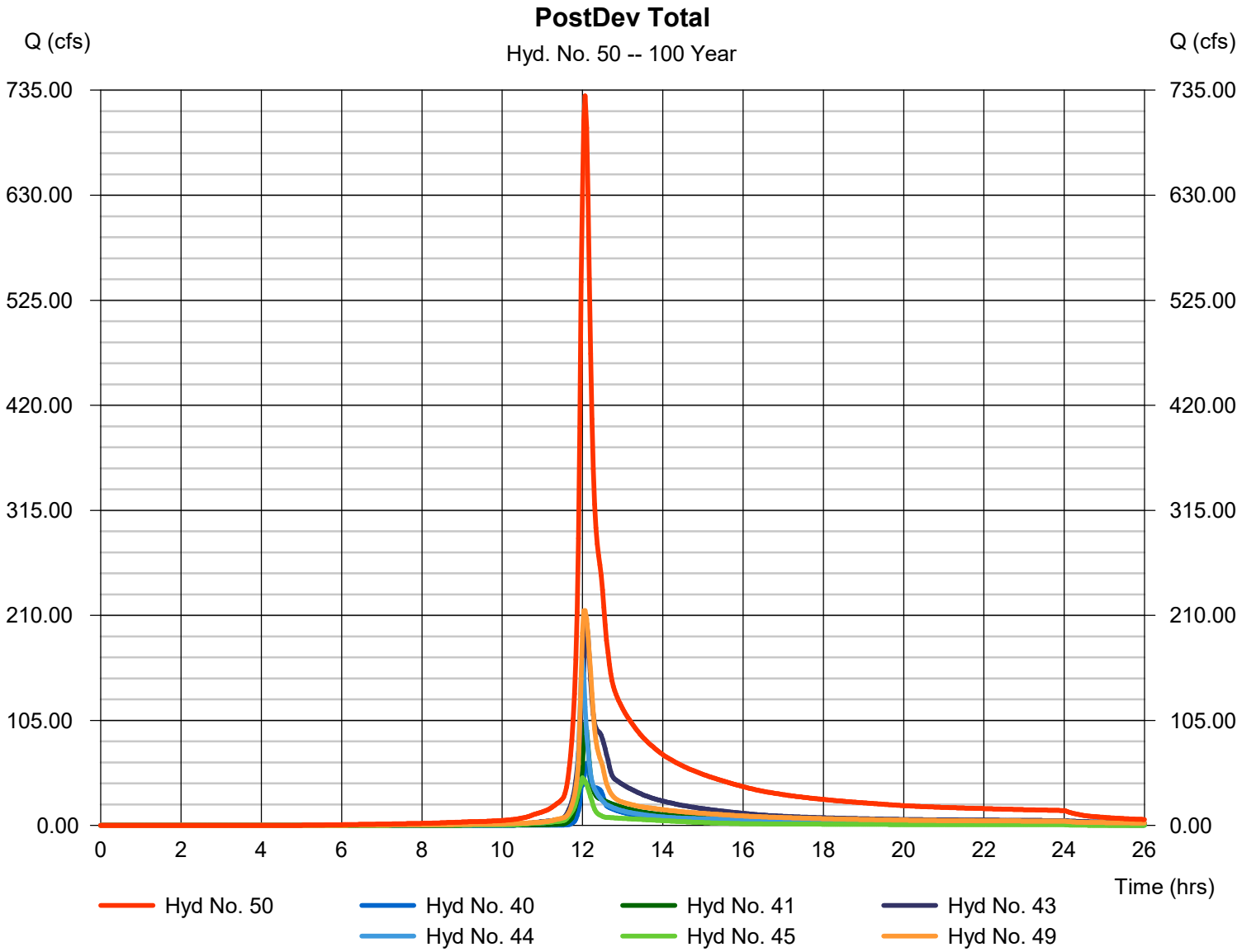


Hydrograph Report

Hyd. No. 50

PostDev Total

Hydrograph type	= Combine	Peak discharge	= 729.39 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 3,202,459 cuft
Inflow hyds.	= 40, 41, 43, 44, 45, 49	Contrib. drain. area	= 0.000 ac

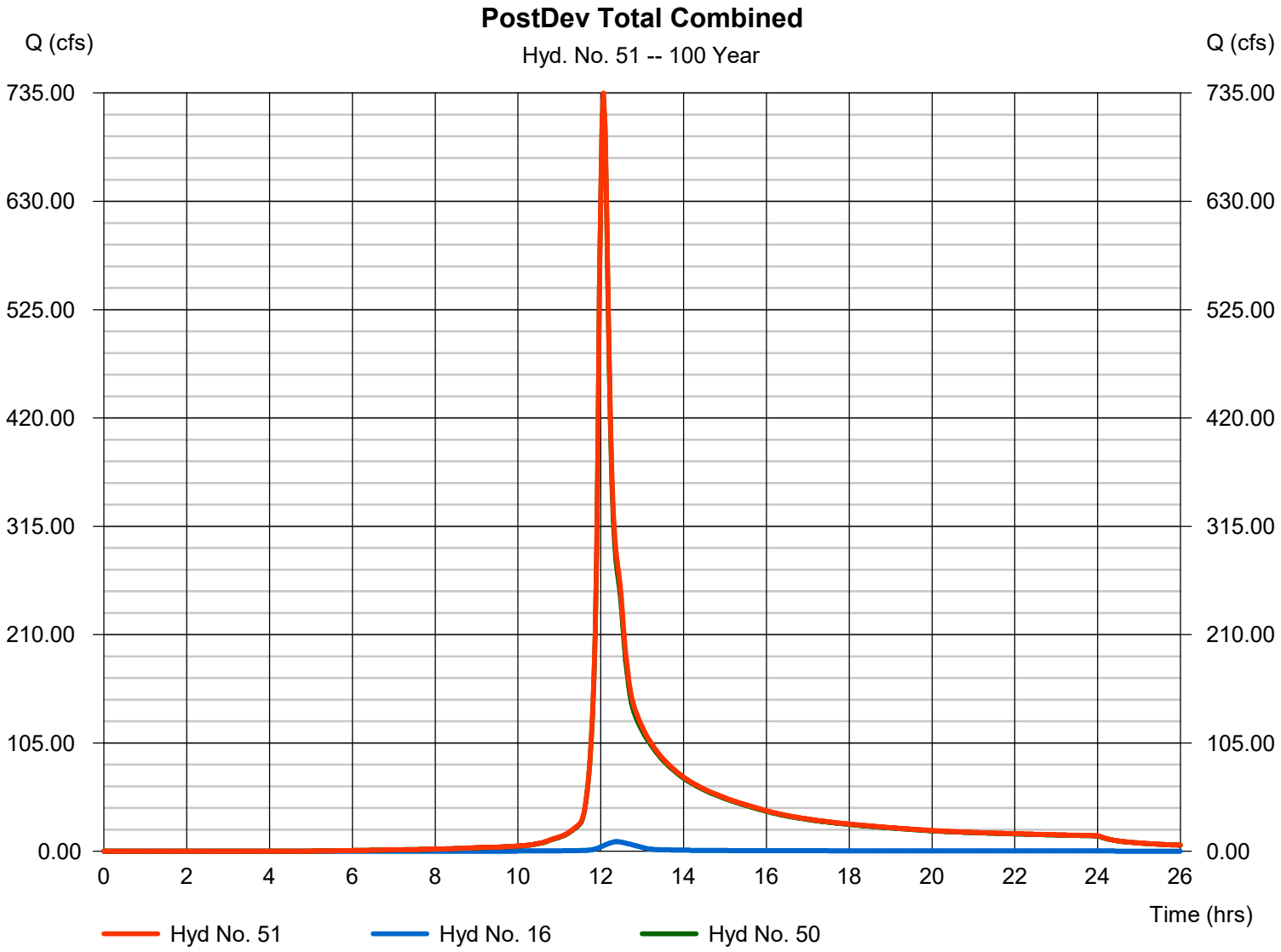


Hydrograph Report

Hyd. No. 51

PostDev Total Combined

Hydrograph type	= Combine	Peak discharge	= 734.81 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 3,255,249 cuft
Inflow hyds.	= 16, 50	Contrib. drain. area	= 3.240 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	59.7930	12.4000	0.8801	--------
2	71.2172	12.9000	0.8806	--------
3	0.0000	0.0000	0.0000	--------
5	70.2128	12.7000	0.8337	--------
10	71.9967	12.5000	0.8049	--------
25	68.6940	12.4000	0.7601	--------
50	57.7473	10.2000	0.6988	--------
100	60.1673	11.6000	0.6833	--------

File name: Merritt IDF Intensities.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.84	3.88	3.25	2.80	2.47	2.21	2.00	1.83	1.69	1.57	1.47	1.38
2	5.61	4.52	3.80	3.28	2.90	2.60	2.36	2.16	2.00	1.86	1.74	1.63
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.40	5.20	4.40	3.83	3.41	3.07	2.80	2.58	2.39	2.23	2.09	1.97
10	7.19	5.87	5.00	4.37	3.89	3.52	3.22	2.97	2.76	2.58	2.43	2.29
25	7.83	6.46	5.55	4.88	4.38	3.98	3.66	3.39	3.16	2.97	2.80	2.65
50	8.62	7.07	6.06	5.34	4.80	4.37	4.03	3.74	3.50	3.30	3.12	2.96
100	8.82	7.37	6.39	5.68	5.14	4.71	4.36	4.07	3.82	3.60	3.41	3.25

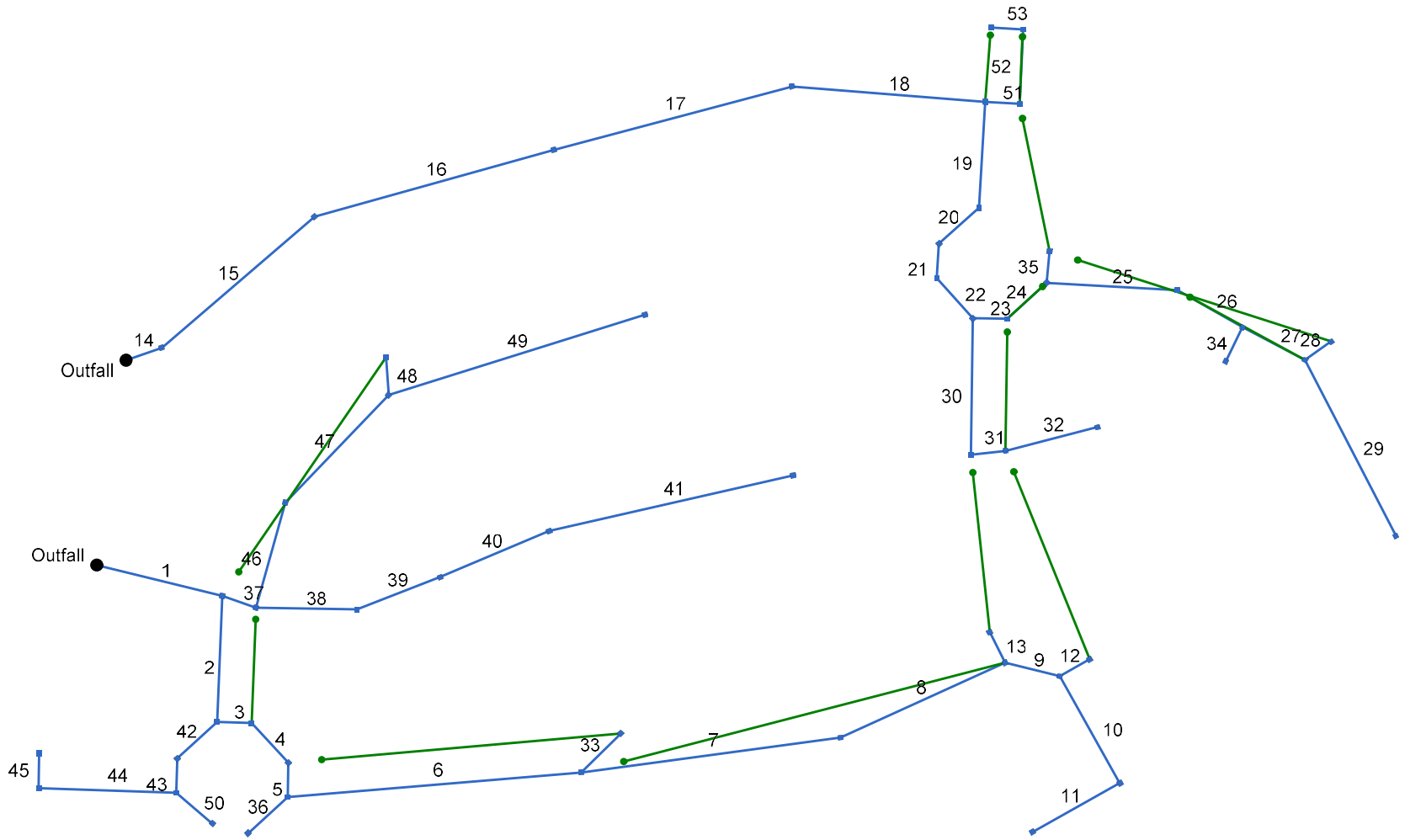
Tc = time in minutes. Values may exceed 60.

Z:\Jobs\23-0004 Merrit Property BRD\Calculations\Storm Analysis\Data-Resources\Merritt Precipitation SCS depth.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.86	3.46	0.00	4.35	5.06	6.03	6.81	7.61
SCS 6-Hr	2.05	2.44	0.00	2.98	3.54	4.22	4.85	5.47
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

HydraFlow Storm Sewers Calculations

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: SCM 1A Storm Network.stm	Number of lines: 53	Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	104.799	13.820	Comb	0.00	0.36	0.60	10.0	346.50	6.87	353.70	30	Cir	0.013	2.12	359.93	Pipe - (71)
2	1	102.646	78.603	Comb	0.00	0.06	0.60	10.0	354.20	0.54	354.75	24	Cir	0.013	1.68	361.97	Pipe - (77)
3	2	28.000	-90.230	Comb	0.00	0.05	0.60	10.0	355.25	0.54	355.40	24	Cir	0.013	1.13	361.97	Pipe - (115)
4	3	43.841	45.001	Comb	0.00	0.39	0.60	10.0	355.60	3.76	357.25	24	Cir	0.013	1.11	363.81	Pipe - (76)
5	4	28.006	43.837	Comb	0.00	0.39	0.60	10.0	357.45	0.54	357.60	24	Cir	0.013	1.71	363.82	Pipe - (75)
6	5	238.741	-95.835	Comb	0.00	0.72	0.60	10.0	357.80	2.18	363.00	18	Cir	0.013	1.03	371.19	Pipe - (101)
7	6	211.860	-2.905	MH	0.00	0.00	0.00	10.0	363.25	3.16	369.95	15	Cir	0.013	0.34	377.80	Pipe - (590)
8	7	146.606	-16.815	Comb	0.00	0.03	0.60	10.0	370.15	1.84	372.85	15	Cir	0.013	1.50	380.34	Pipe - (589)
9	8	45.582	38.390	Comb	0.00	0.07	0.60	10.0	373.05	4.50	375.10	15	Cir	0.013	1.65	383.02	Pipe - (588)
10	9	99.530	46.930	Comb	0.00	0.14	0.60	10.0	375.30	6.33	381.60	15	Cir	0.013	1.50	388.02	Pipe - (652)
11	10	81.500	89.712	DrGrt	0.00	0.25	0.60	10.0	381.80	6.00	386.69	15	Cir	0.013	1.00	391.42	Pipe - (651)
12	9	28.000	-43.358	Comb	0.00	0.21	0.60	10.0	375.30	1.00	375.58	15	Cir	0.013	1.00	383.02	Pipe - (587)
13	8	28.000	-91.856	Comb	0.00	0.01	0.60	10.0	373.05	1.00	373.33	15	Cir	0.013	1.00	380.27	Pipe - (592)
14	End	30.559	-19.488	DrGrt	0.00	0.21	0.60	10.0	346.50	6.87	348.60	30	Cir	0.013	0.63	357.59	Pipe - (444)
15	14	163.303	-21.267	DrGrt	0.00	0.48	0.60	10.0	348.70	0.85	350.09	30	Cir	0.013	0.72	357.89	Pipe - (443)
16	15	201.556	25.100	DrGrt	0.00	0.25	0.60	10.0	350.19	0.50	351.20	30	Cir	0.013	0.50	361.22	Pipe - (442)
17	16	199.856	0.657	DrGrt	0.00	0.36	0.60	10.0	351.30	0.50	352.30	30	Cir	0.013	0.58	361.43	Pipe - (441)
18	17	156.736	19.586	Comb	0.00	0.10	0.60	10.0	352.52	0.50	353.30	30	Cir	0.013	1.50	362.39	Pipe - (440)
19	18	86.389	88.640	Comb	0.00	0.05	0.60	10.0	353.50	4.40	357.30	24	Cir	0.013	1.13	365.23	Pipe - (447)
20	19	43.841	45.000	Comb	0.00	0.03	0.60	10.0	357.50	2.97	358.80	24	Cir	0.013	1.13	366.95	Pipe - (446)
21	20	28.000	-45.000	Comb	0.00	0.06	0.60	10.0	359.00	0.50	359.14	24	Cir	0.013	1.13	367.13	Pipe - (453)
22	21	43.841	-45.000	Comb	0.00	0.15	0.60	10.0	359.35	0.57	359.60	24	Cir	0.013	1.62	367.86	Pipe - (452)
23	22	28.018	-47.046	Comb	0.00	0.08	0.60	10.0	360.10	0.50	360.24	18	Cir	0.013	1.11	367.66	Pipe - (24)

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
24	23	43.139	-43.893	Comb	0.00	0.13	0.60	10.0	360.44	0.60	360.70	18	Cir	0.013	1.61	367.09	Pipe - (15)
25	24	106.050	45.939	Comb	0.00	0.08	0.60	10.0	360.90	0.50	361.43	18	Cir	0.013	0.75	368.26	Pipe - (14)
26	25	60.787	26.463	MH	0.00	0.00	0.00	10.0	361.65	1.07	362.30	15	Cir	0.013	1.00	370.19	Pipe - (11) (1)
27	26	57.233	-1.964	Comb	0.00	0.18	0.60	10.0	362.50	4.89	365.30	15	Cir	0.013	1.41	372.92	Pipe - (11)
28	27	26.000	-63.106	Comb	0.00	0.22	0.60	10.0	365.50	8.04	367.59	15	Cir	0.013	1.00	372.97	Pipe - (67)
29	27	161.000	35.067	Comb	0.00	0.16	0.60	10.0	365.50	5.99	375.15	15	Cir	0.013	1.00	383.13	Pipe - (489)
30	22	111.287	42.545	Comb	0.00	0.21	0.60	10.0	359.80	3.86	364.10	24	Cir	0.013	1.50	373.40	Pipe - (451)
31	30	28.000	-97.237	Comb	0.00	0.18	0.60	10.0	364.30	0.50	364.44	24	Cir	0.013	0.50	373.13	Pipe - (445)
32	31	77.032	-8.187	DrGrt	0.00	1.57	0.60	10.0	365.19	0.51	365.58	18	Cir	0.013	1.00	367.52	Pipe - (476)
33	6	45.226	-39.872	Comb	0.00	0.46	0.60	10.0	363.25	1.99	364.15	15	Cir	0.013	1.00	372.31	Pipe - (103)
34	26	31.121	85.999	DrGrt	0.00	0.14	0.60	10.0	362.50	2.99	363.43	15	Cir	0.013	1.00	368.68	Pipe - (477)
35	24	26.015	-41.858	Comb	0.00	0.25	0.60	10.0	360.95	0.50	361.08	15	Cir	0.013	1.00	366.92	Pipe - (68)
36	5	43.126	46.030	Comb	0.00	0.09	0.60	10.0	357.85	1.60	358.54	15	Cir	0.013	1.00	364.25	Pipe - (690)
37	1	28.983	5.756	Comb	0.00	0.26	0.60	10.0	354.20	0.52	354.35	30	Cir	0.013	1.50	359.93	Pipe - (70)
38	37	81.813	-18.633	DrGrt	0.00	0.22	0.60	10.0	354.55	0.73	355.15	24	Cir	0.013	0.65	362.05	Pipe - (510)
39	38	72.154	-22.294	DrGrt	0.00	0.35	0.60	10.0	355.65	0.69	356.15	18	Cir	0.013	0.50	359.76	Pipe - (509)
40	39	96.135	-1.660	DrGrt	0.00	1.21	0.60	10.0	356.35	0.68	357.00	18	Cir	0.013	0.50	360.90	Pipe - (508)
41	40	202.630	10.144	DrGrt	0.00	0.49	0.60	10.0	357.25	2.27	361.84	15	Cir	0.013	1.00	366.70	Pipe - (507)
42	2	43.841	44.771	Comb	0.00	0.05	0.60	10.0	355.50	0.50	355.72	15	Cir	0.013	1.14	363.43	Pipe - (105)
43	42	28.003	-45.813	Comb	0.00	0.06	0.60	10.0	355.95	0.50	356.09	15	Cir	0.013	1.82	363.51	Pipe - (116)
44	43	111.664	90.556	Comb	0.00	0.09	0.60	10.0	356.29	0.50	356.85	15	Cir	0.013	1.50	362.60	Pipe - (104)
45	44	28.509	88.780	Comb	0.00	0.07	0.60	10.0	356.85	0.49	356.99	15	Cir	0.013	1.00	362.46	Pipe - (79)
46	37	88.766	-94.067	Comb	0.00	0.21	0.60	10.0	355.10	0.62	355.65	18	Cir	0.013	0.79	360.54	Pipe - (69)

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
47	46	121.131	28.141	Comb	0.00	0.80	0.60	10.0	355.75	0.62	356.50	18	Cir	0.013	1.21	362.14	Pipe - (61)
48	47	30.909	-46.977	Comb	0.00	0.45	0.60	10.0	356.70	0.49	356.85	15	Cir	0.013	1.00	362.43	Pipe - (72)
49	47	217.760	28.893	Comb	0.00	0.26	0.60	10.0	356.60	0.96	358.70	15	Cir	0.013	1.00	364.92	Pipe - (536)
50	43	38.578	-50.663	Comb	0.00	0.14	0.60	10.0	356.29	1.01	356.68	15	Cir	0.013	1.00	364.15	Pipe - (689)
51	18	28.000	-1.360	Comb	0.00	0.15	0.60	10.0	354.33	0.61	354.50	18	Cir	0.013	1.50	362.28	Pipe - (439)
52	51	60.544	-90.674	Comb	0.00	0.09	0.60	10.0	354.70	0.66	355.10	18	Cir	0.013	1.50	361.72	Pipe - (583)
53	52	26.000	-89.364	Comb	0.00	0.10	0.60	10.0	355.35	0.58	355.50	15	Cir	0.013	1.00	361.72	Pipe - (582)

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	CB 101	Combination	359.93	Rect	4.00	4.00	30	Cir	353.70	24 30	Cir Cir	354.20 354.20
2	CB 102	Combination	361.97	Rect	4.00	4.00	24	Cir	354.75	24 15	Cir Cir	355.25 355.50
3	CB 106	Combination	361.97	Rect	4.00	4.00	24	Cir	355.40	24	Cir	355.60
4	CB 107	Combination	363.81	Rect	4.00	4.00	24	Cir	357.25	24	Cir	357.45
5	CB 108	Combination	363.82	Rect	4.00	4.00	24	Cir	357.60	18 15	Cir Cir	357.80 357.85
6	CB 109	Combination	371.19	Rect	4.00	4.00	18	Cir	363.00	15 15	Cir Cir	363.25 363.25
7	JB 110	Manhole	377.80	Rect	4.00	4.00	15	Cir	369.95	15	Cir	370.15
8	CB 111	Combination	380.34	Rect	4.00	4.00	15	Cir	372.85	15 15	Cir Cir	373.05 373.05
9	CB 112	Combination	383.02	Rect	4.00	4.00	15	Cir	375.10	15 15	Cir Cir	375.30 375.30
10	CB 112B	Combination	388.02	Rect	4.00	4.00	15	Cir	381.60	15	Cir	381.80
11	YI 112C	DropGrate	391.42	Rect	4.00	4.00	15	Cir	386.69			
12	CB 112A	Combination	383.02	Rect	4.00	4.00	15	Cir	375.58			
13	CB 111A	Combination	380.27	Rect	4.00	4.00	15	Cir	373.33			
14	YI 121	DropGrate	357.59	Rect	4.00	4.00	30	Cir	348.60	30	Cir	348.70
15	YI 122	DropGrate	357.89	Rect	4.00	4.00	30	Cir	350.09	30	Cir	350.19
16	YI 123	DropGrate	361.22	Rect	4.00	4.00	30	Cir	351.20	30	Cir	351.30
17	YI 124	DropGrate	361.43	Rect	4.00	4.00	30	Cir	352.30	30	Cir	352.52
18	CB 125	Combination	362.39	Rect	4.00	4.00	30	Cir	353.30	24 18	Cir Cir	353.50 354.33
19	CB 126	Combination	365.23	Rect	4.00	4.00	24	Cir	357.30	24	Cir	357.50

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
20	CB 127	Combination	366.95	Rect	4.00	4.00	24	Cir	358.80	24	Cir	359.00
21	CB 128	Combination	367.13	Rect	4.00	4.00	24	Cir	359.14	24	Cir	359.35
22	CB 129	Combination	367.86	Rect	4.00	4.00	24	Cir	359.60	18 24	Cir Cir	360.10 359.80
23	CB 130	Combination	367.66	Rect	4.00	4.00	18	Cir	360.24	18	Cir	360.44
24	CB 131	Combination	367.09	Rect	4.00	4.00	18	Cir	360.70	18 15	Cir Cir	360.90 360.95
25	CB 132	Combination	368.26	Rect	4.00	4.00	18	Cir	361.43	15	Cir	361.65
26	JB 133	Manhole	370.19	Rect	4.00	4.00	15	Cir	362.30	15 15	Cir Cir	362.50 362.50
27	CB 134	Combination	372.92	Rect	4.00	4.00	15	Cir	365.30	15 15	Cir Cir	365.50 365.50
28	CB 134A	Combination	372.97	Rect	4.00	4.00	15	Cir	367.59			
29	CB 135	Combination	383.13	Rect	4.00	4.00	15	Cir	375.15			
30	CB 136	Combination	373.40	Rect	4.00	4.00	24	Cir	364.10	24	Cir	364.30
31	CB 136A	Combination	373.13	Rect	4.00	4.00	24	Cir	364.44	18	Cir	365.19
32	YI 136B	DropGrate	367.52	Rect	4.00	4.00	18	Cir	365.58			
33	CB 109A	Combination	372.31	Rect	4.00	4.00	15	Cir	364.15			
34	YI 133A	DropGrate	368.68	Rect	4.00	4.00	15	Cir	363.43			
35	CB 131A	Combination	366.92	Rect	4.00	4.00	15	Cir	361.08			
36	CB 108A	Combination	364.25	Rect	4.00	4.00	15	Cir	358.54			
37	CB 113	Combination	359.93	Rect	4.00	4.00	30	Cir	354.35	24 18	Cir Cir	354.55 355.10
38	YI 113A	DropGrate	362.05	Rect	4.00	4.00	24	Cir	355.15	18	Cir	355.65
39	YI 113B	DropGrate	359.76	Rect	4.00	4.00	18	Cir	356.15	18	Cir	356.35

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
40	YI 113C	DropGrate	360.90	Rect	4.00	4.00	18	Cir	357.00	15	Cir	357.25
41	YI 113D	DropGrate	366.70	Rect	4.00	4.00	15	Cir	361.84			
42	CB 103	Combination	363.43	Rect	4.00	4.00	15	Cir	355.72	15	Cir	355.95
43	CB 104	Combination	363.51	Rect	4.00	4.00	15	Cir	356.09	15 15	Cir Cir	356.29 356.29
44	CB 105	Combination	362.60	Rect	4.00	4.00	15	Cir	356.85	15	Cir	356.85
45	CB 105A	Combination	362.46	Rect	4.00	4.00	15	Cir	356.99			
46	CB 114	Combination	360.54	Rect	4.00	4.00	18	Cir	355.65	18	Cir	355.75
47	CB 115	Combination	362.14	Rect	4.00	4.00	18	Cir	356.50	15 15	Cir Cir	356.70 356.60
48	CB 115A	Combination	362.43	Rect	4.00	4.00	15	Cir	356.85			
49	CB 116	Combination	364.92	Rect	4.00	4.00	15	Cir	358.70			
50	CB 104A	Combination	364.15	Rect	4.00	4.00	15	Cir	356.68			
51	CB 125A	Combination	362.28	Rect	4.00	4.00	18	Cir	354.50	18	Cir	354.70
52	CB 137	Combination	361.72	Rect	4.00	4.00	18	Cir	355.10	15	Cir	355.35
53	CB 138	Combination	361.72	Rect	4.00	4.00	15	Cir	355.50			

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Pipe - (71)	24.59	30	Cir	104.799	346.50	353.70	6.870	352.64	355.39	n/a	355.39 j	End	Combination
2	Pipe - (77)	10.32	24	Cir	102.646	354.20	354.75	0.536	355.39	355.90	n/a	355.90	1	Combination
3	Pipe - (115)	8.87	24	Cir	28.000	355.25	355.40	0.536	356.29	356.46	0.48	356.46	2	Combination
4	Pipe - (76)	8.74	24	Cir	43.841	355.60	357.25	3.764	356.46	358.30	n/a	358.30	3	Combination
5	Pipe - (75)	7.53	24	Cir	28.006	357.45	357.60	0.536	358.40	358.57	n/a	358.57	4	Combination
6	Pipe - (101)	6.14	18	Cir	238.741	357.80	363.00	2.178	358.57	363.96	n/a	363.96	5	Combination
7	Pipe - (590)	2.38	15	Cir	211.860	363.25	369.95	3.162	363.96	370.57	n/a	370.57 j	6	Manhole
8	Pipe - (589)	2.42	15	Cir	146.606	370.15	372.85	1.842	370.60	373.47	n/a	373.47	7	Combination
9	Pipe - (588)	2.29	15	Cir	45.582	373.05	375.10	4.497	373.47	375.70	n/a	375.70	8	Combination
10	Pipe - (652)	1.36	15	Cir	99.530	375.30	381.60	6.330	375.70	382.06	0.26	382.06	9	Combination
11	Pipe - (651)	0.88	15	Cir	81.500	381.80	386.69	6.000	382.06	387.06	n/a	387.06	10	DropGrate
12	Pipe - (587)	0.74	15	Cir	28.000	375.30	375.58	1.000	375.70	375.92	n/a	375.92 j	9	Combination
13	Pipe - (592)	0.04	15	Cir	28.000	373.05	373.33	1.000	373.47	373.40	n/a	373.40	8	Combination
14	Pipe - (444)	15.14	30	Cir	30.559	346.50	348.60	6.872	352.64*	352.68*	0.09	352.77	End	DropGrate
15	Pipe - (443)	14.91	30	Cir	163.303	348.70	350.09	0.851	352.77*	352.99*	0.10	353.09	14	DropGrate
16	Pipe - (442)	13.93	30	Cir	201.556	350.19	351.20	0.501	353.09	353.29	0.08	353.37	15	DropGrate
17	Pipe - (441)	13.48	30	Cir	199.856	351.30	352.30	0.500	353.37	353.53	0.28	353.53	16	DropGrate
18	Pipe - (440)	12.53	30	Cir	156.736	352.52	353.30	0.498	353.67	354.49	n/a	354.49	17	Combination
19	Pipe - (447)	11.20	24	Cir	86.389	353.50	357.30	4.399	354.49	358.50	n/a	358.50	18	Combination
20	Pipe - (446)	11.08	24	Cir	43.841	357.50	358.80	2.965	358.50	359.99	0.57	359.99	19	Combination
21	Pipe - (453)	11.02	24	Cir	28.000	359.00	359.14	0.500	360.22	360.36	0.53	360.89	20	Combination
22	Pipe - (452)	10.87	24	Cir	43.841	359.35	359.60	0.570	360.89	360.78	n/a	360.78	21	Combination
23	Pipe - (24)	4.04	18	Cir	28.018	360.10	360.24	0.500	360.89	361.03	0.32	361.35	22	Combination
24	Pipe - (15)	3.81	18	Cir	43.139	360.44	360.70	0.603	361.35	361.45	0.47	361.45	23	Combination

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
25	Pipe - (14)	2.60	18	Cir	106.050	360.90	361.43	0.500	361.51	362.04	0.17	362.21	24	Combination
26	Pipe - (11) (1)	2.35	15	Cir	60.787	361.65	362.30	1.069	362.21	362.91	n/a	362.91	25	Manhole
27	Pipe - (11)	1.89	15	Cir	57.233	362.50	365.30	4.892	362.91	365.85	0.29	365.85	26	Combination
28	Pipe - (67)	0.78	15	Cir	26.000	365.50	367.59	8.038	365.85	367.93	n/a	367.93 j	27	Combination
29	Pipe - (489)	0.56	15	Cir	161.000	365.50	375.15	5.994	365.85	375.44	n/a	375.44 j	27	Combination
30	Pipe - (451)	6.80	24	Cir	111.287	359.80	364.10	3.864	360.78	365.02	n/a	365.02 j	22	Combination
31	Pipe - (445)	6.11	24	Cir	28.000	364.30	364.44	0.500	365.16	365.31	0.17	365.31	30	Combination
32	Pipe - (476)	5.53	18	Cir	77.032	365.19	365.58	0.506	366.15	366.54	0.33	366.87	31	DropGrate
33	Pipe - (103)	1.62	15	Cir	45.226	363.25	364.15	1.990	363.96	364.65	n/a	364.65 j	6	Combination
34	Pipe - (477)	0.49	15	Cir	31.121	362.50	363.43	2.988	362.91	363.70	n/a	363.70 j	26	DropGrate
35	Pipe - (68)	0.88	15	Cir	26.015	360.95	361.08	0.500	361.45	361.47	0.11	361.58	24	Combination
36	Pipe - (690)	0.32	15	Cir	43.126	357.85	358.54	1.600	358.57	358.76	n/a	358.76 j	5	Combination
37	Pipe - (70)	13.78	30	Cir	28.983	354.20	354.35	0.518	355.40	355.60	0.74	355.60	1	Combination
38	Pipe - (510)	7.57	24	Cir	81.813	354.55	355.15	0.733	355.60	356.13	n/a	356.13 j	37	DropGrate
39	Pipe - (509)	6.89	18	Cir	72.154	355.65	356.15	0.693	356.65	357.17	n/a	357.17	38	DropGrate
40	Pipe - (508)	5.76	18	Cir	96.135	356.35	357.00	0.676	357.25	357.93	n/a	357.93	39	DropGrate
41	Pipe - (507)	1.73	15	Cir	202.630	357.25	361.84	2.265	357.93	362.36	n/a	362.36 j	40	DropGrate
42	Pipe - (105)	1.37	15	Cir	43.841	355.50	355.72	0.502	355.97	356.19	0.19	356.38	2	Combination
43	Pipe - (116)	1.21	15	Cir	28.003	355.95	356.09	0.500	356.39	356.53	0.28	356.81	42	Combination
44	Pipe - (104)	0.56	15	Cir	111.664	356.29	356.85	0.502	356.81	357.14	n/a	357.14 j	43	Combination
45	Pipe - (79)	0.25	15	Cir	28.509	356.85	356.99	0.491	357.14	357.19	0.06	357.25	44	Combination
46	Pipe - (69)	5.63	18	Cir	88.766	355.10	355.65	0.620	356.01	356.56	n/a	356.56	37	Combination
47	Pipe - (61)	5.01	18	Cir	121.131	355.75	356.50	0.619	356.59	357.36	0.43	357.36	46	Combination
48	Pipe - (72)	1.59	15	Cir	30.909	356.70	356.85	0.485	357.36	357.39	0.15	357.54	47	Combination

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
49	Pipe - (536)	0.92	15	Cir	217.760	356.60	358.70	0.964	357.36	359.08	n/a	359.08 j	47	Combination
50	Pipe - (689)	0.49	15	Cir	38.578	356.29	356.68	1.011	356.81	356.95	n/a	356.95 j	43	Combination
51	Pipe - (439)	1.17	18	Cir	28.000	354.33	354.50	0.607	354.71	354.90	0.22	354.90	18	Combination
52	Pipe - (583)	0.67	18	Cir	60.544	354.70	355.10	0.661	354.98	355.40	0.16	355.40	51	Combination
53	Pipe - (582)	0.35	15	Cir	26.000	355.35	355.50	0.577	355.58	355.73	n/a	355.73	52	Combination

Project File: SCM 1A Storm Network.stm

Number of lines: 53

Run Date: 8/4/2025

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	CB 101	1.25	0.37	1.62	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.23	7.30	0.23	7.30	0.0	Off
2	CB 102	0.21	0.00	0.21	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.11	1.88	0.00	0.00	0.0	1
3	CB 106	0.18	0.45	0.58	0.04	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.16	4.25	0.06	1.01	0.0	37
4	CB 107	1.37	0.39	1.31	0.45	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.23	7.38	0.15	3.39	0.0	3
5	CB 108	1.37	0.83	2.20	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.26	9.17	0.26	9.17	0.0	Off
6	CB 109	2.54	0.00	1.71	0.83	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.25	8.71	0.18	5.02	0.0	5
7	JB 110	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.060	0.020	0.013	0.00	0.00	0.00	0.00	0.0	Off
8	CB 111	0.11	0.00	0.11	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.09	1.45	0.00	0.00	0.0	6
9	CB 112	0.25	0.00	0.25	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.040	2.00	0.060	0.020	0.013	0.09	1.53	0.00	0.00	0.0	8
10	CB 112B	0.49	0.00	0.49	0.00	Comb	4.0	1.50	0.00	3.00	2.50	0.040	2.00	0.060	0.020	0.013	0.12	1.99	0.00	0.00	0.0	9
11	YI 112C	0.88	0.00	0.88	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.09	11.42	0.09	11.42	0.0	Off
12	CB 112A	0.74	0.00	0.67	0.07	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.72	0.07	1.22	0.0	31
13	CB 111A	0.04	0.00	0.04	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.06	0.96	0.00	0.00	0.0	30
14	YI 121	0.74	0.00	0.74	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.08	10.44	0.08	10.44	0.0	Off
15	YI 122	1.69	0.00	1.69	0.00	DrGrt	0.0	0.00	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.14	16.28	0.14	16.28	0.0	Off
16	YI 123	0.88	0.00	0.88	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.09	11.42	0.09	11.42	0.0	15
17	YI 124	1.27	0.00	1.27	0.00	DrGrt	0.0	0.00	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.11	13.88	0.11	13.88	0.0	Off
18	CB 125	0.35	0.00	0.35	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.14	2.80	0.02	0.34	0.0	53
19	CB 126	0.18	0.00	0.18	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.040	2.00	0.060	0.020	0.013	0.08	1.35	0.00	0.00	0.0	18
20	CB 127	0.11	0.00	0.11	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.09	1.45	0.00	0.00	0.0	19
21	CB 128	0.21	0.02	0.23	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.12	2.10	0.12	2.10	0.0	Off
22	CB 129	0.53	0.00	0.51	0.02	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.16	3.81	0.05	0.81	0.0	21
23	CB 130	0.28	0.06	0.34	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.13	2.71	0.02	0.29	0.0	24

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	CB 131	0.46	0.00	0.46	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.75	0.14	2.75	0.0	Off
25	CB 132	0.28	0.05	0.33	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.13	2.65	0.02	0.27	0.0	24
26	JB 133	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.060	0.020	0.013	0.00	0.00	0.00	0.00	0.0	Off
27	CB 134	0.63	0.03	0.61	0.05	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.41	0.07	1.09	0.0	25
28	CB 134A	0.78	0.00	0.70	0.08	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.18	4.84	0.08	1.29	0.0	35
29	CB 135	0.56	0.00	0.54	0.03	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.16	3.98	0.05	0.89	0.0	27
30	CB 136	0.73	0.00	0.66	0.06	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.66	0.07	1.20	0.0	Off
31	CB 136A	0.63	0.07	0.64	0.06	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.57	0.07	1.16	0.0	23
32	YI 136B	5.53	0.00	5.53	0.00	DrGrt	0.0	0.00	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.30	32.89	0.30	32.89	0.0	Off
33	CB 109A	1.62	0.00	1.24	0.39	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.22	7.10	0.14	3.02	0.0	4
34	YI 133A	0.49	0.00	0.49	0.00	DrGrt	0.0	0.00	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.06	8.56	0.06	8.56	0.0	Off
35	CB 131A	0.88	0.08	0.83	0.13	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.19	5.45	0.09	1.57	0.0	51
36	CB 108A	0.32	0.00	0.32	0.00	Comb	4.0	3.00	7.50	3.00	2.50	Sag	2.00	0.050	0.020	0.013	0.11	2.63	0.11	2.63	0.0	Off
37	CB 113	0.92	0.34	1.26	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.20	6.01	0.20	6.01	0.0	Off
38	YI 113A	0.78	0.00	0.54	0.24	DrGrt	0.0	0.00	0.00	3.00	2.50	0.010	2.00	0.020	0.020	0.013	0.09	11.10	0.09	11.10	0.0	37
39	YI 113B	1.24	2.84	4.09	0.00	DrGrt	0.0	1.50	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.25	27.33	0.25	27.33	0.0	Off
40	YI 113C	4.26	0.75	2.17	2.84	DrGrt	0.0	0.00	0.00	3.00	2.50	0.010	2.00	0.020	0.020	0.013	0.19	21.10	0.19	21.10	0.0	39
41	YI 113D	1.73	0.00	0.98	0.75	DrGrt	0.0	0.00	0.00	3.00	2.50	0.010	2.00	0.020	0.020	0.013	0.12	14.10	0.12	14.10	0.0	40
42	CB 103	0.18	0.00	0.18	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.11	1.75	0.00	0.00	0.0	2
43	CB 104	0.21	0.00	0.21	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.12	1.96	0.12	1.96	0.0	Off
44	CB 105	0.32	0.00	0.32	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.13	2.54	0.01	0.23	0.0	Off
45	CB 105A	0.25	0.00	0.25	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.12	1.99	0.00	0.00	0.0	Off
46	CB 114	0.74	0.00	0.67	0.07	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.72	0.07	1.22	0.0	37

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
47	CB 115	2.82	0.12	1.90	1.04	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.27	9.29	0.19	5.69	0.0	Off
48	CB 115A	1.59	0.00	1.22	0.37	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.22	7.03	0.14	2.91	0.0	1
49	CB 116	0.92	0.00	0.80	0.12	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.19	5.32	0.09	1.51	0.0	47
50	CB 104A	0.49	0.00	0.49	0.00	Comb	4.0	3.00	7.50	3.00	2.50	Sag	2.00	0.050	0.020	0.013	0.13	3.26	0.13	3.26	0.0	Off
51	CB 125A	0.53	0.13	0.61	0.05	Comb	6.0	1.50	0.00	3.00	2.50	0.010	2.00	0.060	0.020	0.013	0.17	4.40	0.06	1.08	0.0	52
52	CB 137	0.32	0.05	0.37	0.00	Comb	4.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.75	0.14	2.75	0.0	Off
53	CB 138	0.35	0.00	0.35	0.00	Comb	4.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.75	0.14	2.75	0.0	Off

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	30	24.59	346.50	352.64	2.50	3.53	5.01	0.39	353.03	0.360	104.799	353.70	355.39 j	1.69**	3.53	6.97	0.76	356.14	0.565	0.462	n/a	2.12	n/a
2	24	10.32	354.20	355.39	1.19	1.87	5.31	0.47	355.86	0.000	102.646	354.75	355.90	1.15**	1.87	5.52	0.47	356.37	0.000	0.000	n/a	1.68	n/a
3	24	8.87	355.25	356.29	1.04*	1.66	5.36	0.43	356.72	0.000	28.000	355.40	356.46	1.06**	1.69	5.24	0.43	356.89	0.000	0.000	n/a	1.13	0.48
4	24	8.74	355.60	356.46	0.86	1.29	6.75	0.42	356.88	0.000	43.841	357.25	358.30	1.05**	1.68	5.21	0.42	358.73	0.000	0.000	n/a	1.11	n/a
5	24	7.53	357.45	358.40	0.95*	1.46	5.14	0.38	358.78	0.000	28.006	357.60	358.57	0.97**	1.52	4.95	0.38	358.96	0.000	0.000	n/a	1.71	n/a
6	18	6.14	357.80	358.57	0.77	0.92	6.66	0.41	358.99	0.000	238.741	363.00	363.96	0.96**	1.19	5.16	0.41	364.37	0.000	0.000	n/a	1.03	n/a
7	15	2.38	363.25	363.96	0.71	0.60	3.33	0.24	364.20	0.000	211.860	369.95	370.57 j	0.62**	0.60	3.95	0.24	370.81	0.000	0.000	n/a	0.34	n/a
8	15	2.42	370.15	370.60	0.45*	0.40	6.10	0.24	370.84	0.000	146.606	372.85	373.47	0.62**	0.61	3.97	0.24	373.72	0.000	0.000	n/a	1.50	n/a
9	15	2.29	373.05	373.47	0.42	0.36	6.30	0.24	373.71	0.000	45.582	375.10	375.70	0.60**	0.59	3.90	0.24	375.94	0.000	0.000	n/a	1.65	n/a
10	15	1.36	375.30	375.70	0.40	0.34	3.94	0.17	375.88	0.000	99.530	381.60	382.06	0.46**	0.41	3.31	0.17	382.23	0.000	0.000	n/a	1.50	0.26
11	15	0.88	381.80	382.06	0.26	0.18	4.77	0.13	382.19	0.000	81.500	386.69	387.06	0.37**	0.30	2.92	0.13	387.19	0.000	0.000	n/a	1.00	n/a
12	15	0.74	375.30	375.70	0.40	0.27	2.15	0.12	375.83	0.000	28.000	375.58	375.92 j	0.34**	0.27	2.78	0.12	376.04	0.000	0.000	n/a	1.00	0.12
13	15	0.04	373.05	373.47	0.42	0.03	0.10	0.02	373.50	0.000	28.000	373.33	373.40	0.07**	0.03	1.25	0.02	373.43	0.000	0.000	n/a	1.00	n/a
14	30	15.14	346.50	352.64	2.50	4.91	3.08	0.15	352.79	0.136	30.559	348.60	352.68	2.50	4.91	3.08	0.15	352.83	0.136	0.136	0.042	0.63	0.09
15	30	14.91	348.70	352.77	2.50	4.91	3.04	0.14	352.92	0.132	163.303	350.09	352.99	2.50	4.91	3.04	0.14	353.13	0.132	0.132	0.216	0.72	0.10
16	30	13.93	350.19	353.09	2.50	4.91	2.84	0.13	353.22	0.115	201.556	351.20	353.29	2.09	4.39	3.18	0.16	353.45	0.111	0.113	0.229	0.50	0.08
17	30	13.48	351.30	353.37	2.07	2.41	3.10	0.48	353.86	0.000	199.856	352.30	353.53	1.23**	2.41	5.58	0.48	354.02	0.000	0.000	n/a	0.58	0.28
18	30	12.53	352.52	353.67	1.15*	2.21	5.68	0.46	354.13	0.000	156.736	353.30	354.49	1.19**	2.30	5.45	0.46	354.95	0.000	0.000	n/a	1.50	n/a
19	24	11.20	353.50	354.49	0.99	1.55	7.25	0.50	354.99	0.000	86.389	357.30	358.50	1.20**	1.97	5.69	0.50	359.00	0.000	0.000	n/a	1.13	n/a
20	24	11.08	357.50	358.50	1.00	1.57	7.06	0.50	359.00	0.000	43.841	358.80	359.99	1.19**	1.95	5.67	0.50	360.49	0.000	0.000	n/a	1.13	0.57
21	24	11.02	359.00	360.22	1.22*	2.01	5.49	0.47	360.69	0.500	28.000	359.14	360.36	1.22	2.00	5.50	0.47	360.83	0.502	0.501	0.140	1.13	0.53
22	24	10.87	359.35	360.89	1.54	1.93	4.19	0.49	361.38	0.000	43.841	359.60	360.78	1.18**	1.93	5.63	0.49	361.27	0.000	0.000	n/a	1.62	n/a

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
23	18	4.04	360.10	360.89	0.79*	0.94	4.29	0.29	361.18	0.500	28.018	360.24	361.03	0.79	0.94	4.30	0.29	361.32	0.503	0.501	0.140	1.11	0.32
24	18	3.81	360.44	361.35	0.91	0.88	3.41	0.29	361.64	0.000	43.139	360.70	361.45	0.75**	0.88	4.34	0.29	361.74	0.000	0.000	n/a	1.61	0.47
25	18	2.60	360.90	361.51	0.61*	0.68	3.83	0.23	361.74	0.499	106.050	361.43	362.04	0.61**	0.68	3.81	0.23	362.27	0.495	0.497	0.527	0.75	0.17
26	15	2.35	361.65	362.21	0.56	0.54	4.37	0.24	362.45	0.000	60.787	362.30	362.91	0.61**	0.60	3.93	0.24	363.15	0.000	0.000	n/a	1.00	n/a
27	15	1.89	362.50	362.91	0.41	0.35	5.36	0.21	363.12	0.000	57.233	365.30	365.85	0.55**	0.52	3.67	0.21	366.06	0.000	0.000	n/a	1.41	0.29
28	15	0.78	365.50	365.85	0.35	0.27	2.79	0.12	365.97	0.000	26.000	367.59	367.93 j	0.34**	0.27	2.82	0.12	368.06	0.000	0.000	n/a	1.00	0.12
29	15	0.56	365.50	365.85	0.35	0.22	2.03	0.10	365.95	0.000	161.000	375.15	375.44 j	0.29**	0.22	2.58	0.10	375.55	0.000	0.000	n/a	1.00	0.10
30	24	6.80	359.80	360.78	0.98	1.42	4.44	0.36	361.14	0.000	111.287	364.10	365.02 j	0.92**	1.42	4.79	0.36	365.38	0.000	0.000	n/a	1.50	0.54
31	24	6.11	364.30	365.16	0.86*	1.29	4.75	0.33	365.49	0.000	28.000	364.44	365.31	0.87**	1.32	4.63	0.33	365.65	0.000	0.000	n/a	0.50	0.17
32	18	5.53	365.19	366.15	0.96*	1.20	4.63	0.33	366.48	0.506	77.032	365.58	366.54	0.96	1.20	4.63	0.33	366.87	0.506	0.506	0.390	1.00	0.33
33	15	1.62	363.25	363.96	0.71	0.46	2.27	0.19	364.15	0.000	45.226	364.15	364.65 j	0.50**	0.46	3.49	0.19	364.84	0.000	0.000	n/a	1.00	0.19
34	15	0.49	362.50	362.91	0.41	0.20	1.40	0.10	363.01	0.000	31.121	363.43	363.70 j	0.27**	0.20	2.49	0.10	363.80	0.000	0.000	n/a	1.00	0.10
35	15	0.88	360.95	361.45	0.50	0.45	1.95	0.06	361.50	0.170	26.015	361.08	361.47	0.39	0.32	2.71	0.11	361.58	0.425	0.297	0.077	1.00	0.11
36	15	0.32	357.85	358.57	0.72	0.14	0.43	0.08	358.65	0.000	43.126	358.54	358.76 j	0.22**	0.14	2.21	0.08	358.83	0.000	0.000	n/a	1.00	0.08
37	30	13.78	354.20	355.40	1.20*	2.33	5.91	0.49	355.89	0.000	28.983	354.35	355.60	1.25**	2.45	5.62	0.49	356.09	0.000	0.000	n/a	1.50	0.74
38	24	7.57	354.55	355.60	1.05	1.53	4.54	0.38	355.98	0.000	81.813	355.15	356.13 j	0.98**	1.53	4.96	0.38	356.51	0.000	0.000	n/a	0.65	n/a
39	18	6.89	355.65	356.65	1.00*	1.26	5.48	0.46	357.11	0.000	72.154	356.15	357.17	1.02**	1.27	5.41	0.46	357.62	0.000	0.000	n/a	0.50	n/a
40	18	5.76	356.35	357.25	0.90*	1.10	5.23	0.39	357.64	0.000	96.135	357.00	357.93	0.93**	1.14	5.03	0.39	358.32	0.000	0.000	n/a	0.50	n/a
41	15	1.73	357.25	357.93	0.68	0.48	2.55	0.20	358.12	0.000	202.630	361.84	362.36 j	0.52**	0.48	3.56	0.20	362.56	0.000	0.000	n/a	1.00	0.20
42	15	1.37	355.50	355.97	0.47*	0.41	3.26	0.17	356.13	0.501	43.841	355.72	356.19	0.47**	0.42	3.27	0.17	356.35	0.505	0.503	0.221	1.14	0.19
43	15	1.21	355.95	356.39	0.44*	0.38	3.14	0.15	356.54	0.499	28.003	356.09	356.53	0.44**	0.39	3.14	0.15	356.68	0.500	0.499	0.140	1.82	0.28
44	15	0.56	356.29	356.81	0.52	0.22	1.16	0.02	356.83	0.057	111.664	356.85	357.14 j	0.29**	0.22	2.57	0.10	357.24	0.530	0.294	n/a	1.50	n/a

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Hydraulic Grade Line Computations

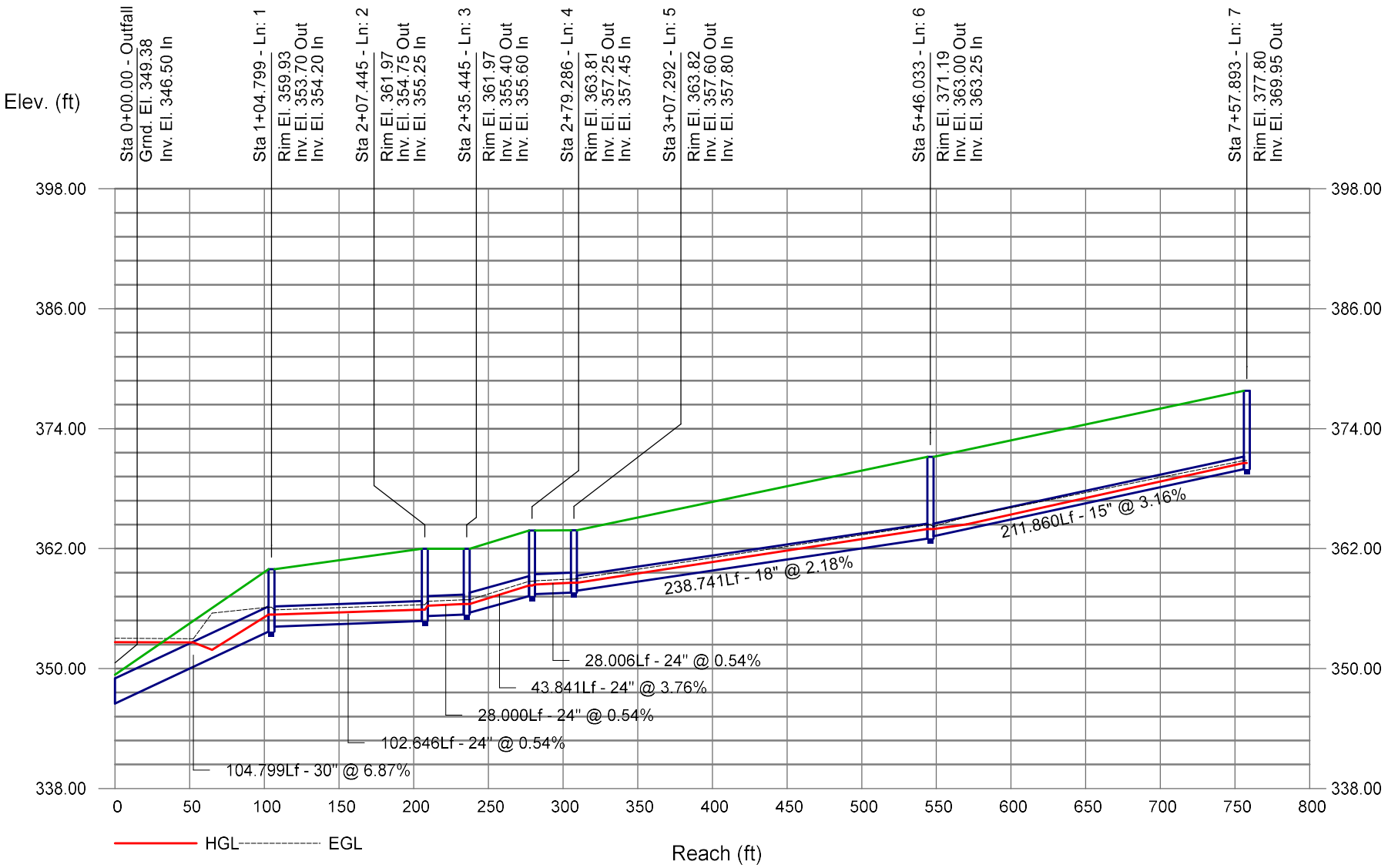
Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
45	15	0.25	356.85	357.14	0.29	0.12	1.14	0.02	357.16	0.104	28.509	356.99	357.19	0.20**	0.12	2.00	0.06	357.25	0.511	0.307	0.088	1.00	0.06
46	18	5.63	355.10	356.01	0.91*	1.12	5.03	0.39	356.40	0.000	88.766	355.65	356.56	0.91**	1.13	4.99	0.39	356.95	0.000	0.000	n/a	0.79	n/a
47	18	5.01	355.75	356.59	0.84*	1.02	4.90	0.35	356.95	0.000	121.131	356.50	357.36	0.86**	1.05	4.78	0.35	357.72	0.000	0.000	n/a	1.21	0.43
48	15	1.59	356.70	357.36	0.66	0.66	2.41	0.09	357.45	0.201	30.909	356.85	357.39	0.54	0.51	3.11	0.15	357.54	0.397	0.299	0.092	1.00	0.15
49	15	0.92	356.60	357.36	0.76	0.31	1.17	0.14	357.50	0.000	217.760	358.70	359.08 j	0.38**	0.31	2.95	0.14	359.21	0.000	0.000	n/a	1.00	0.14
50	15	0.49	356.29	356.81	0.52	0.20	1.02	0.10	356.91	0.000	38.578	356.68	356.95 j	0.27**	0.20	2.49	0.10	357.05	0.000	0.000	n/a	1.00	0.10
51	18	1.17	354.33	354.71	0.38*	0.36	3.28	0.14	354.86	0.000	28.000	354.50	354.90	0.40**	0.38	3.05	0.14	355.05	0.000	0.000	n/a	1.50	0.22
52	18	0.67	354.70	354.98	0.28*	0.23	2.87	0.11	355.09	0.000	60.544	355.10	355.40	0.30**	0.25	2.61	0.11	355.51	0.000	0.000	n/a	1.50	0.16
53	15	0.35	355.35	355.58	0.23*	0.15	2.32	0.08	355.66	0.000	26.000	355.50	355.73	0.23**	0.16	2.27	0.08	355.81	0.000	0.000	n/a	1.00	n/a

Project File: SCM 1A Storm Network.stm | Number of lines: 53 | Run Date: 8/4/2025

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

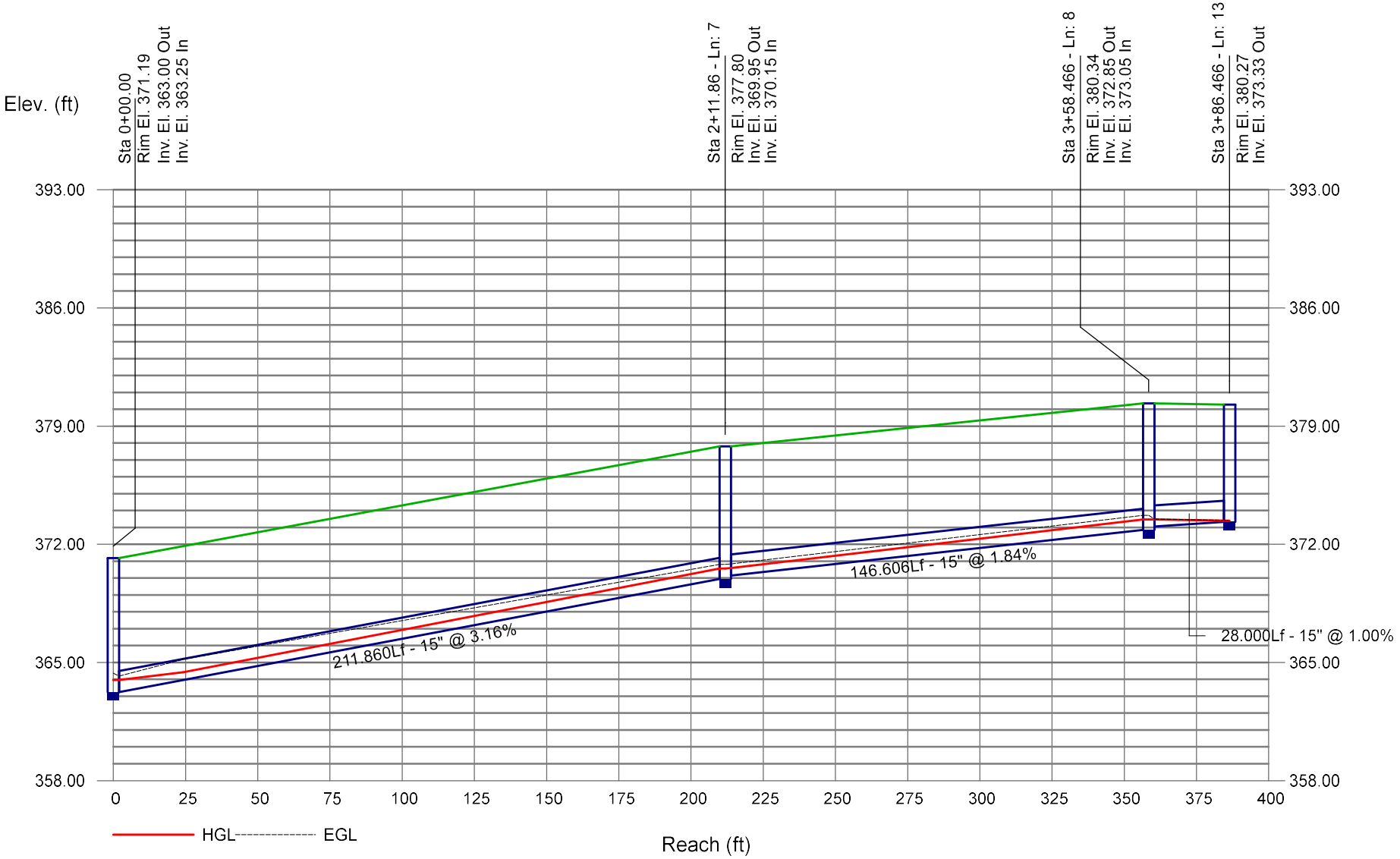
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



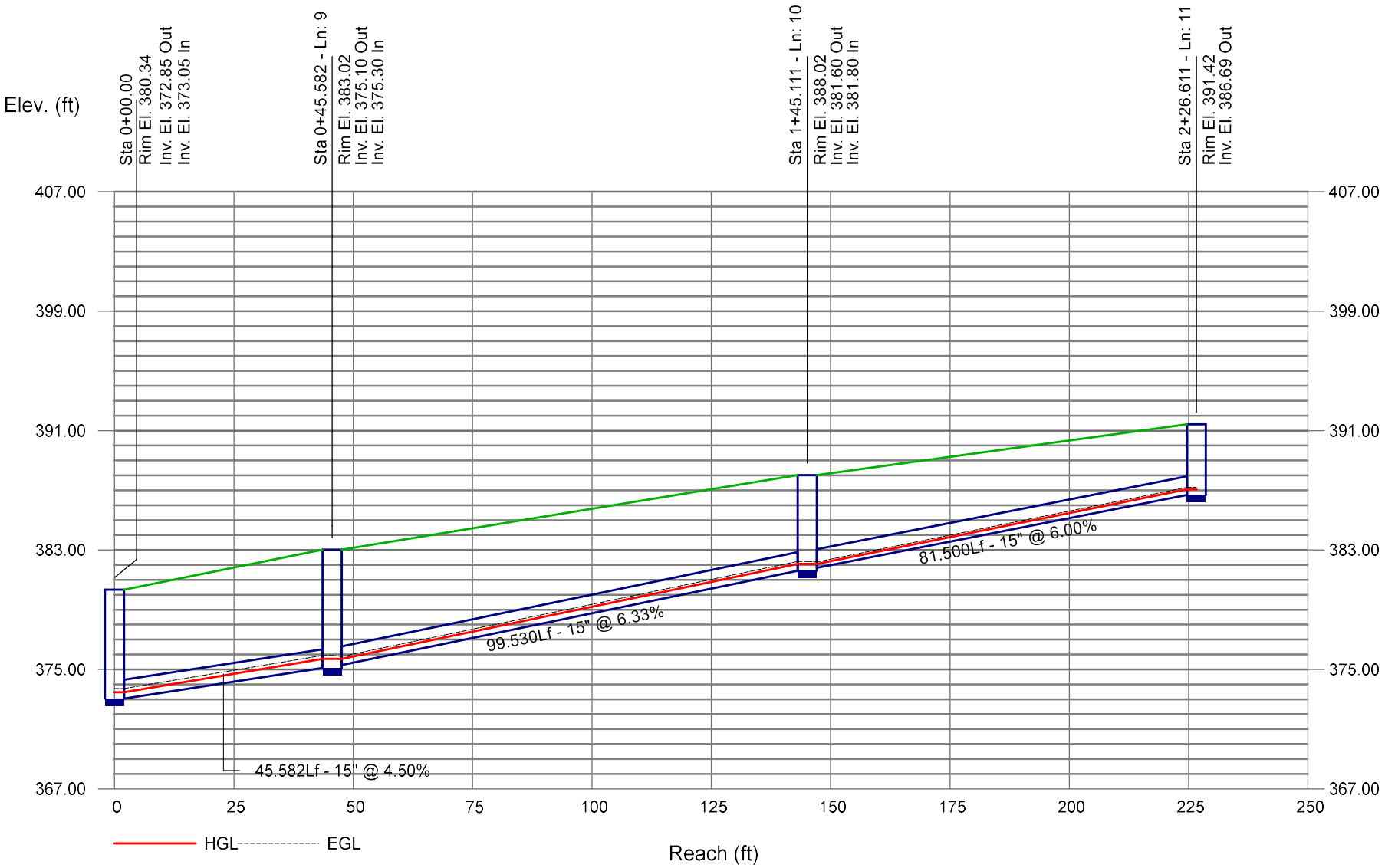
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



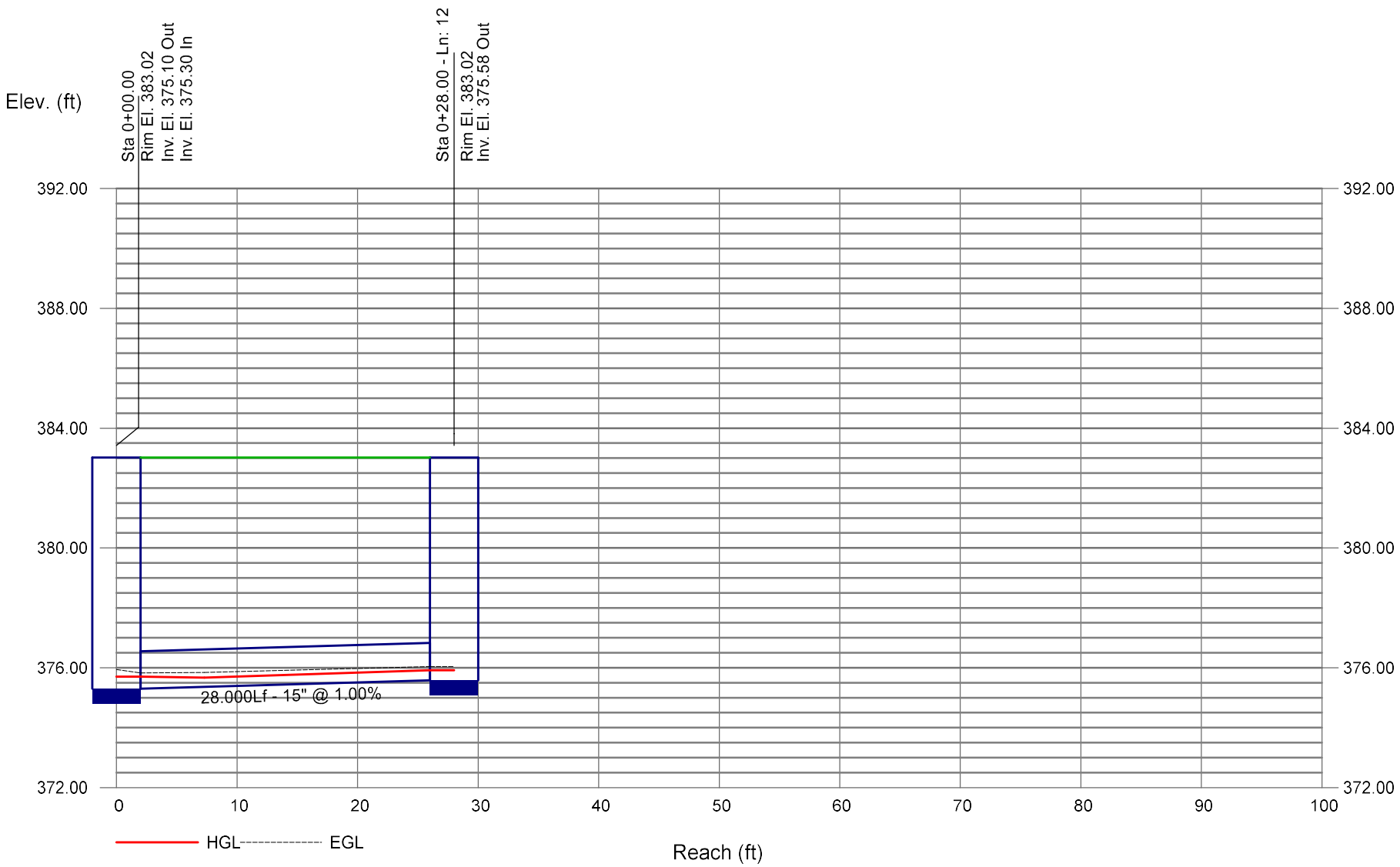
Storm Sewer Profile

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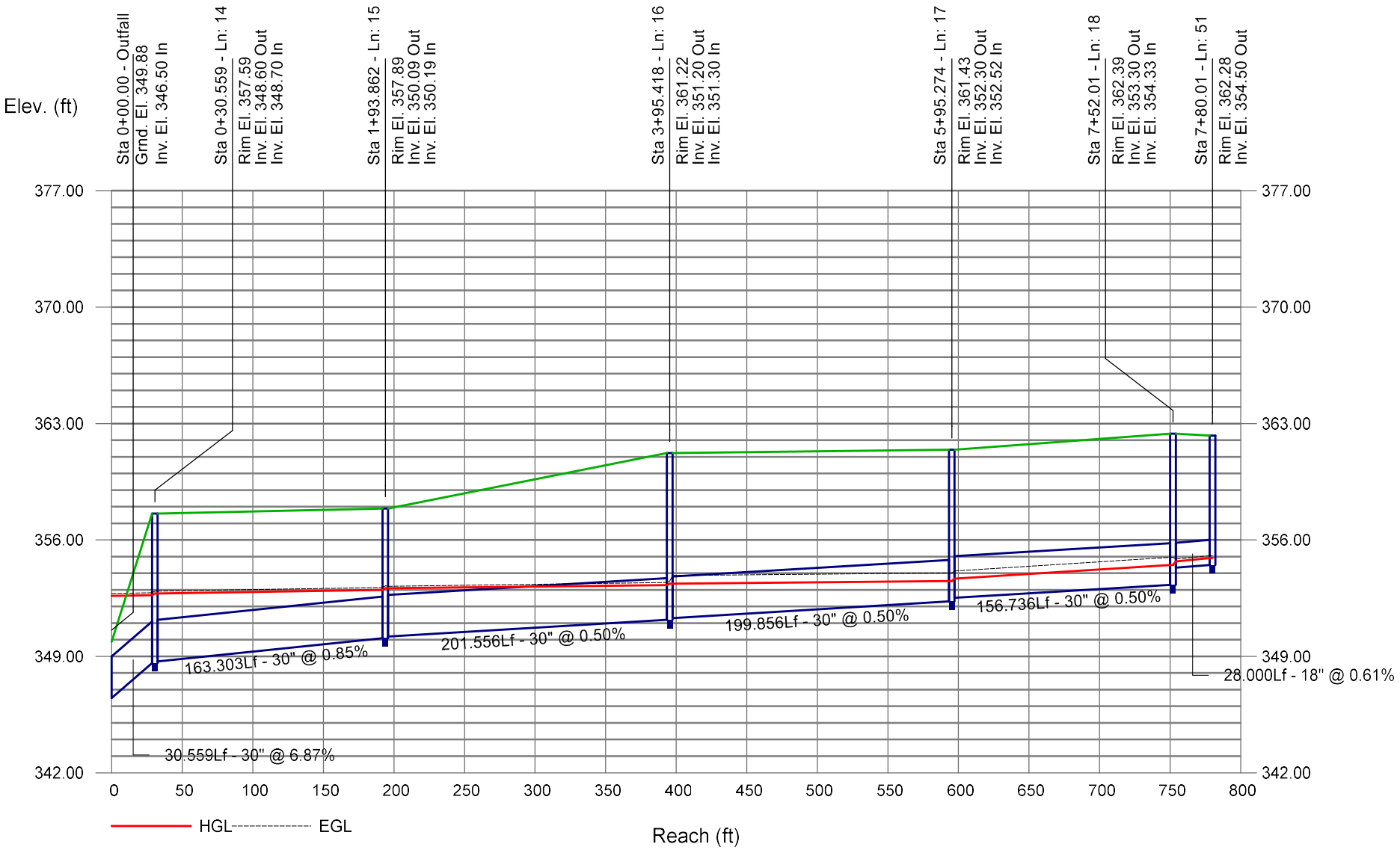
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



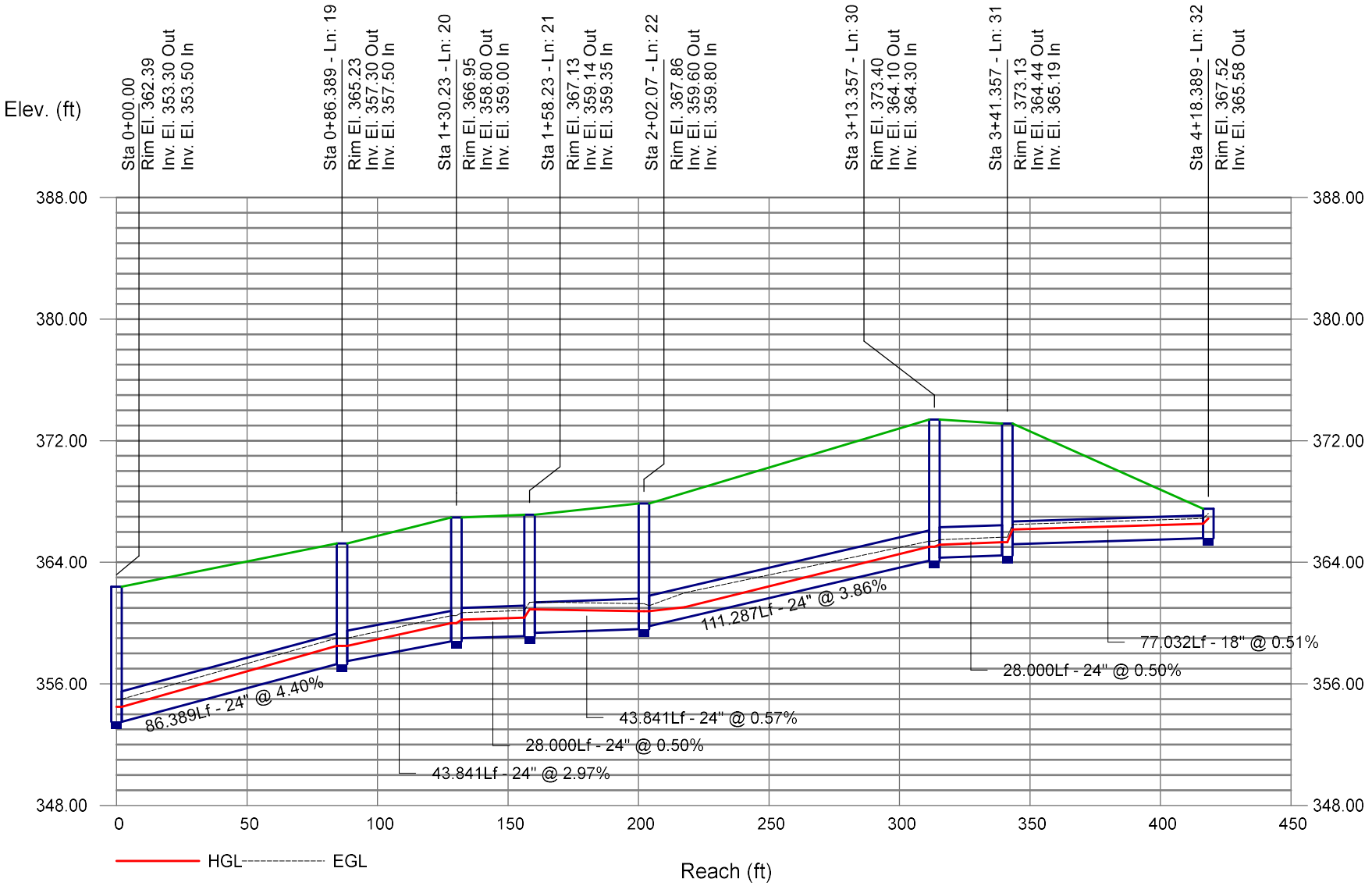
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



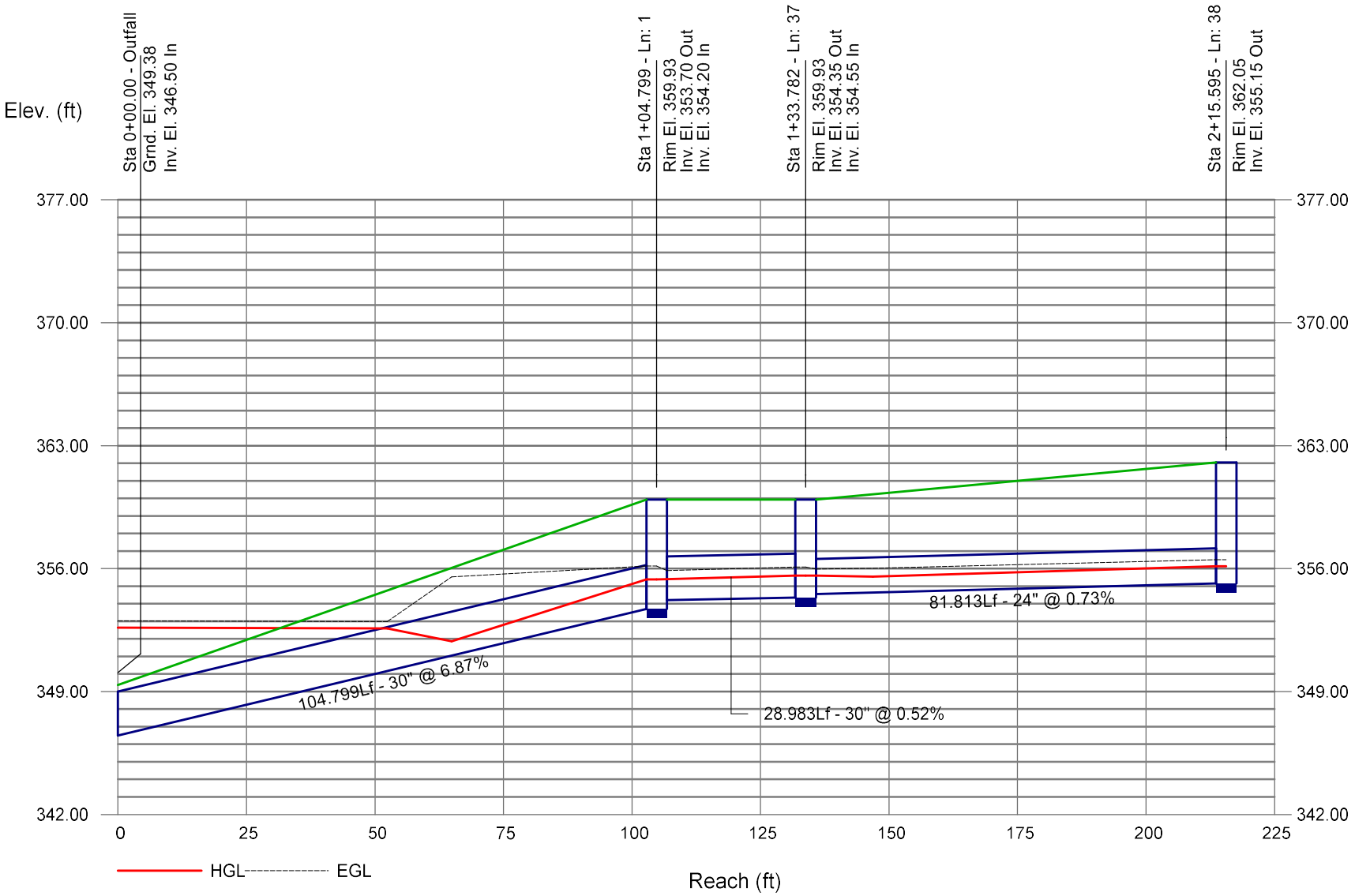
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



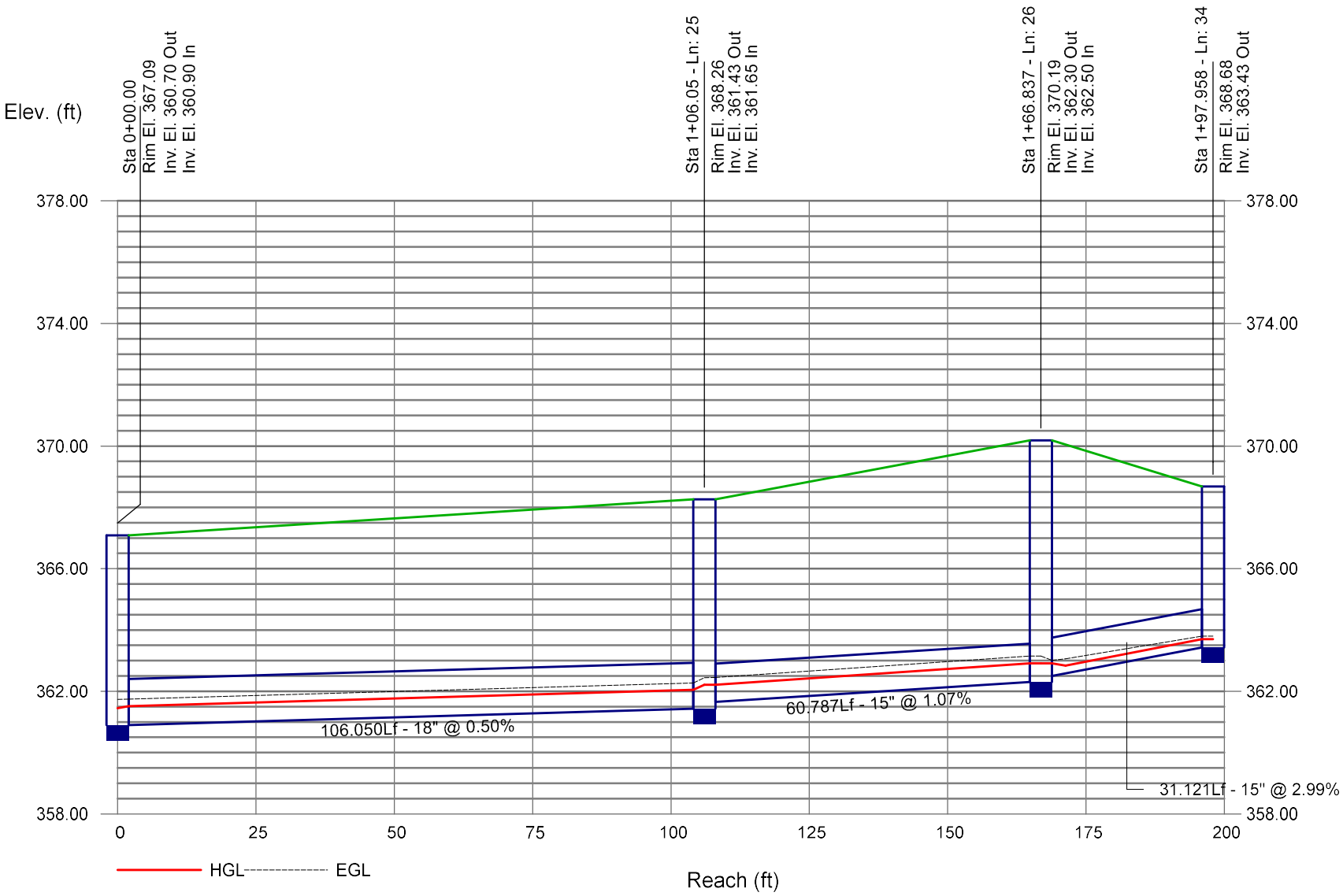
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



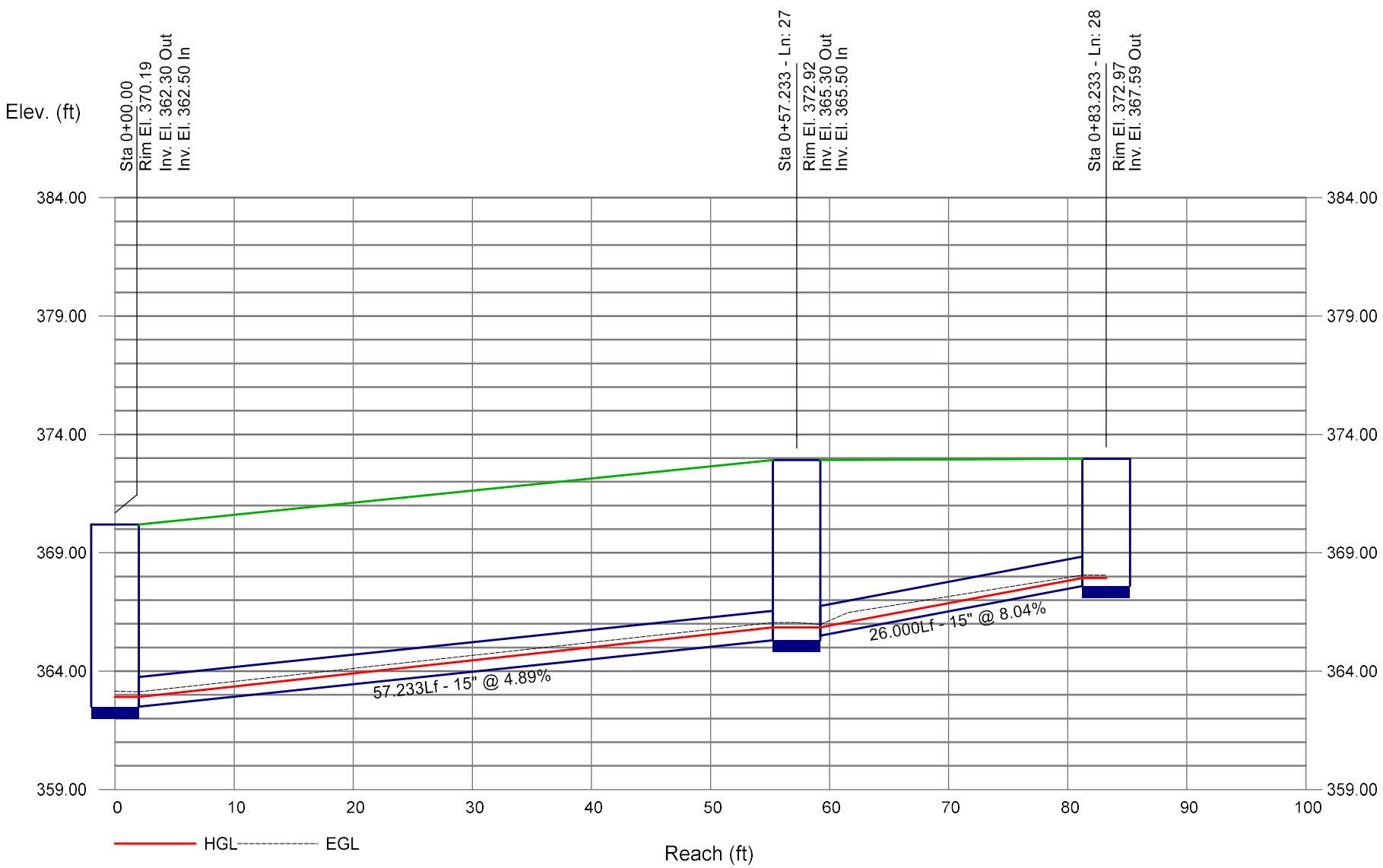
Storm Sewer Profile

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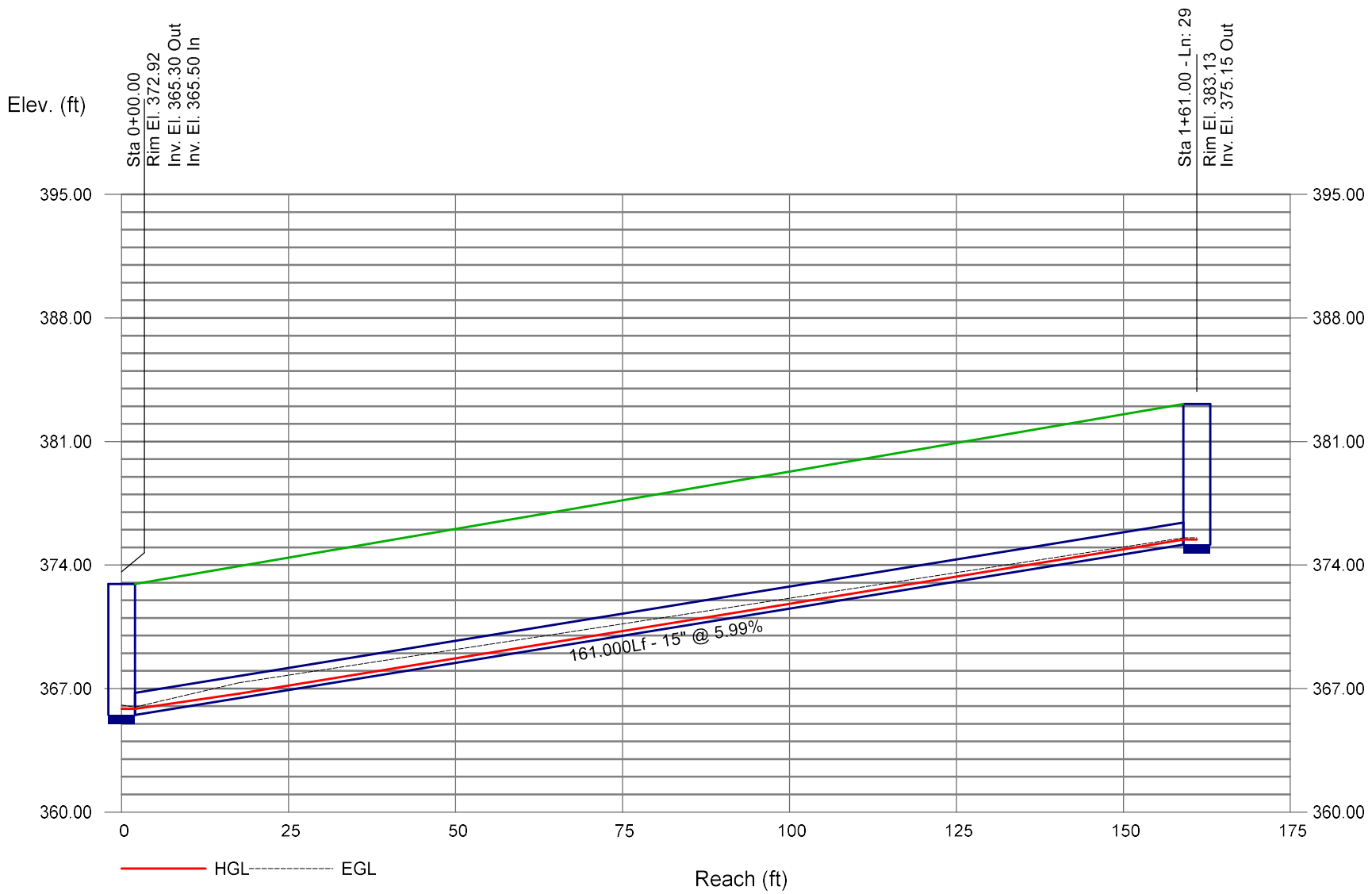
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



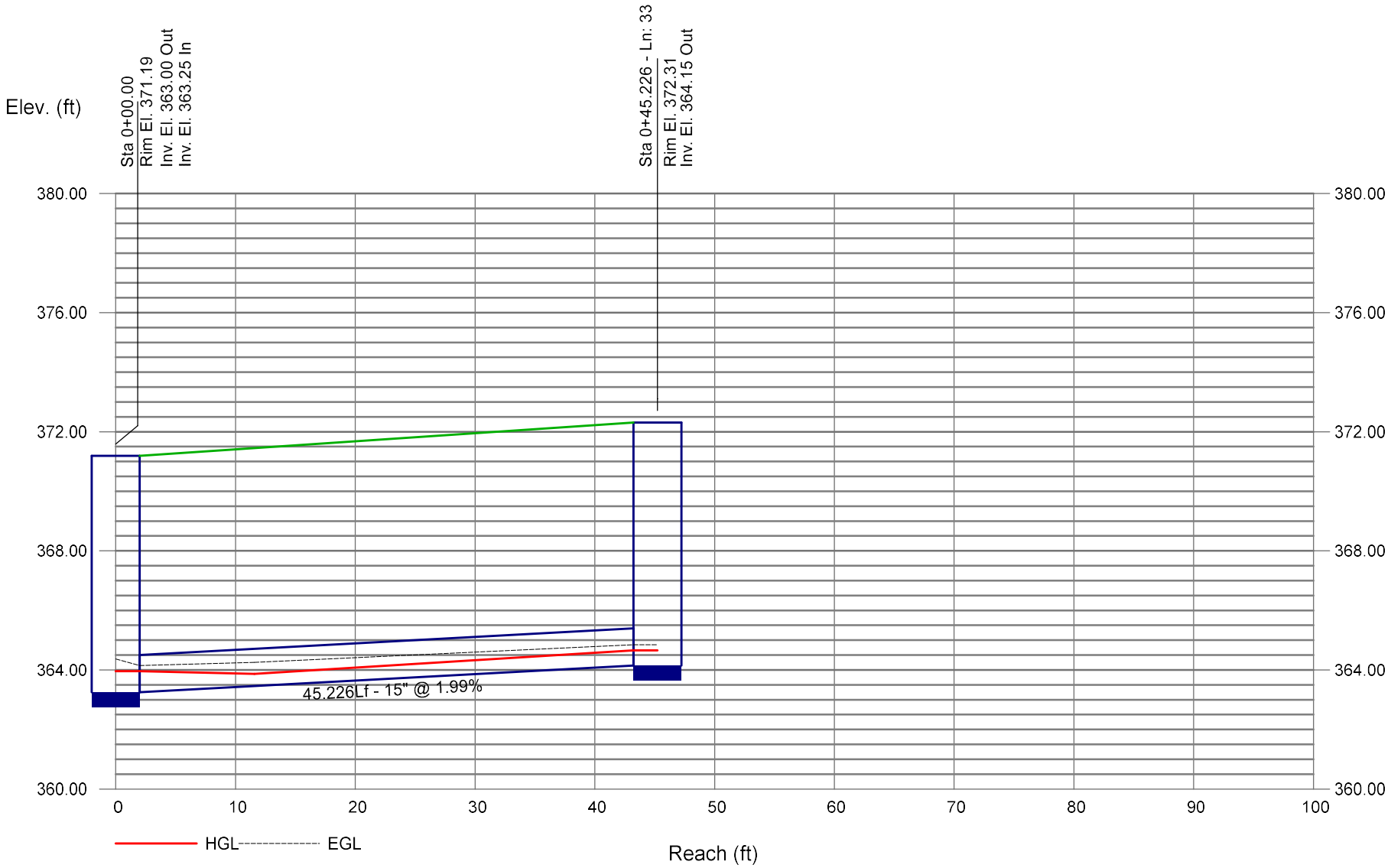
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



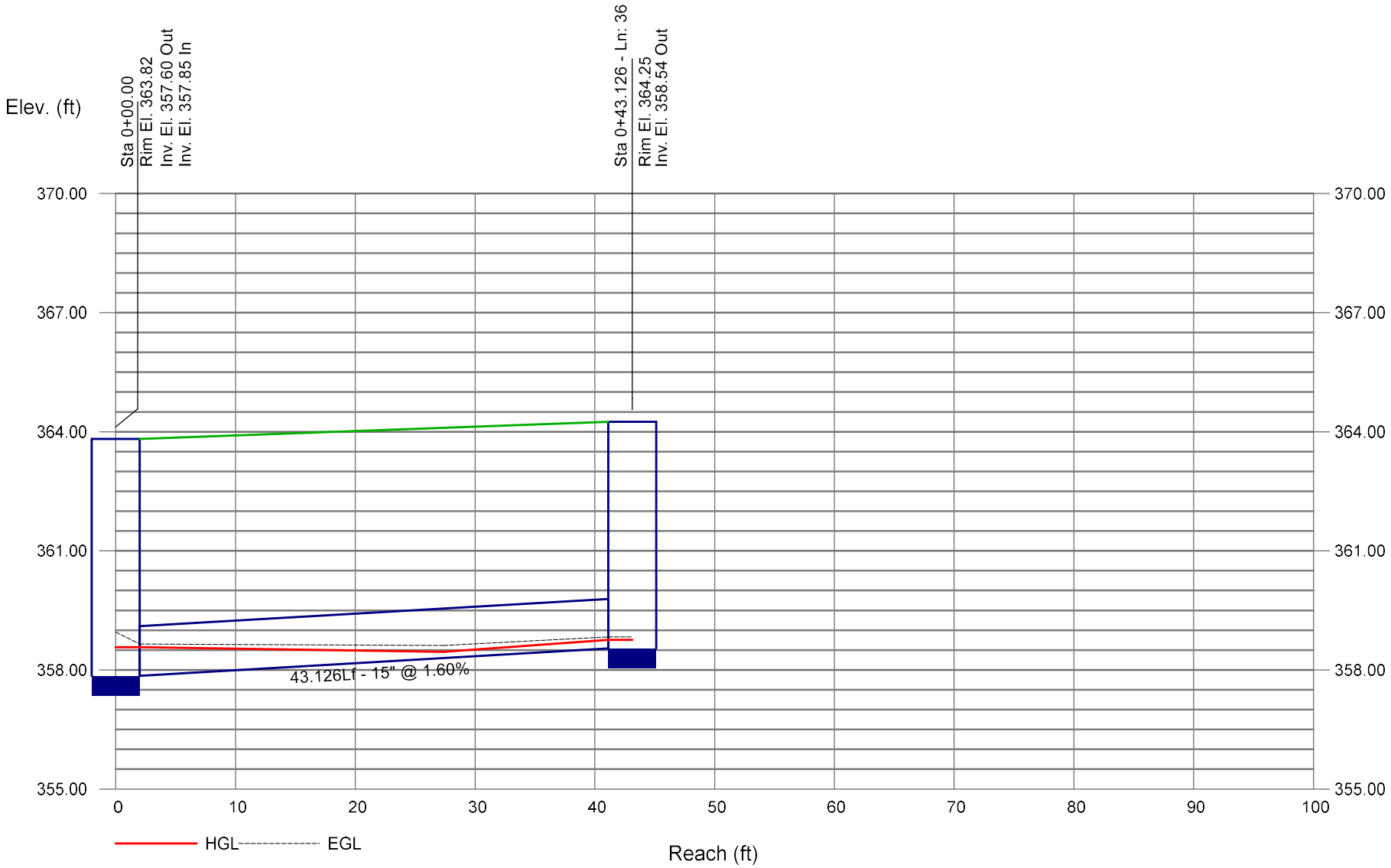
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



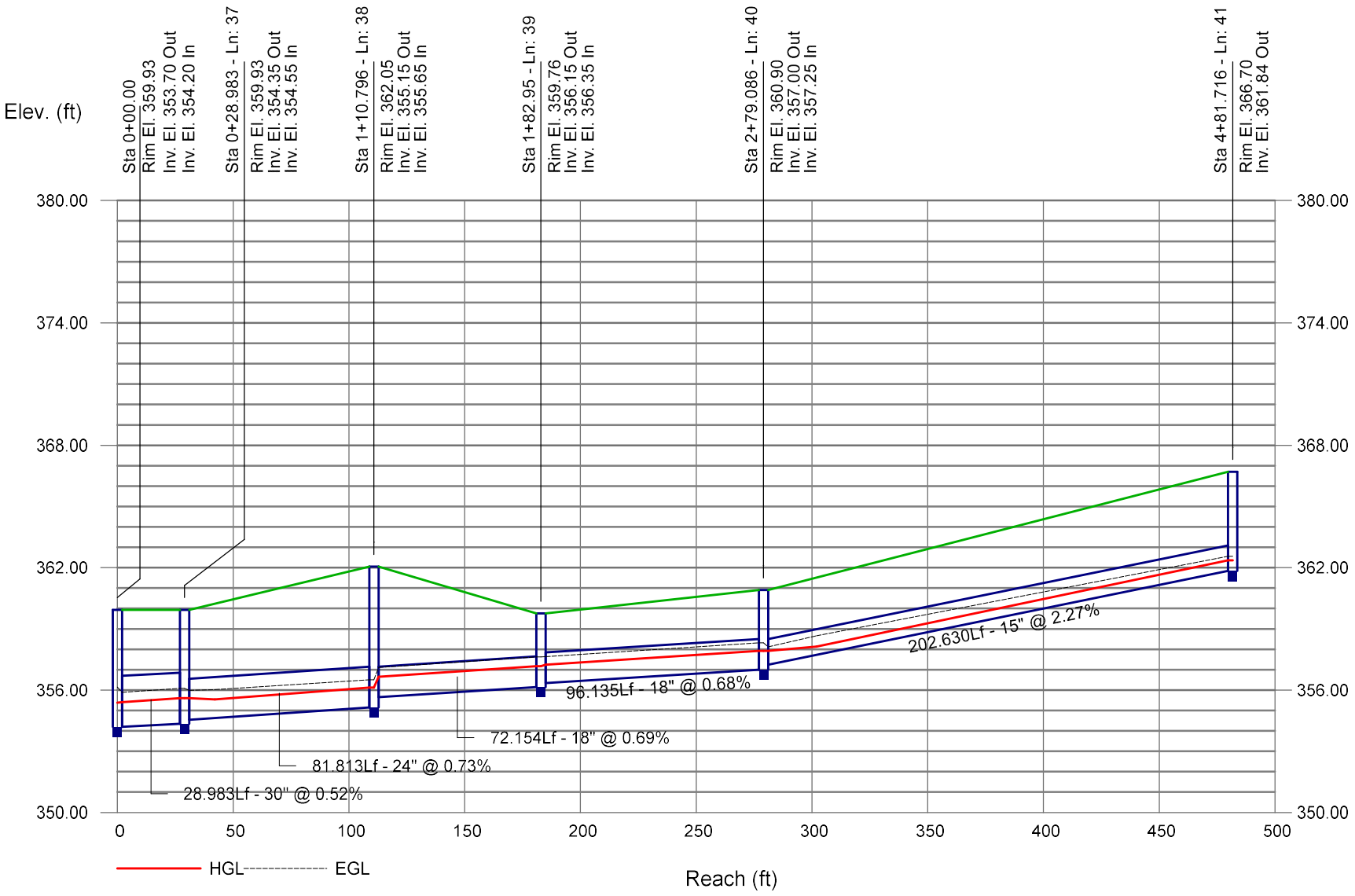
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



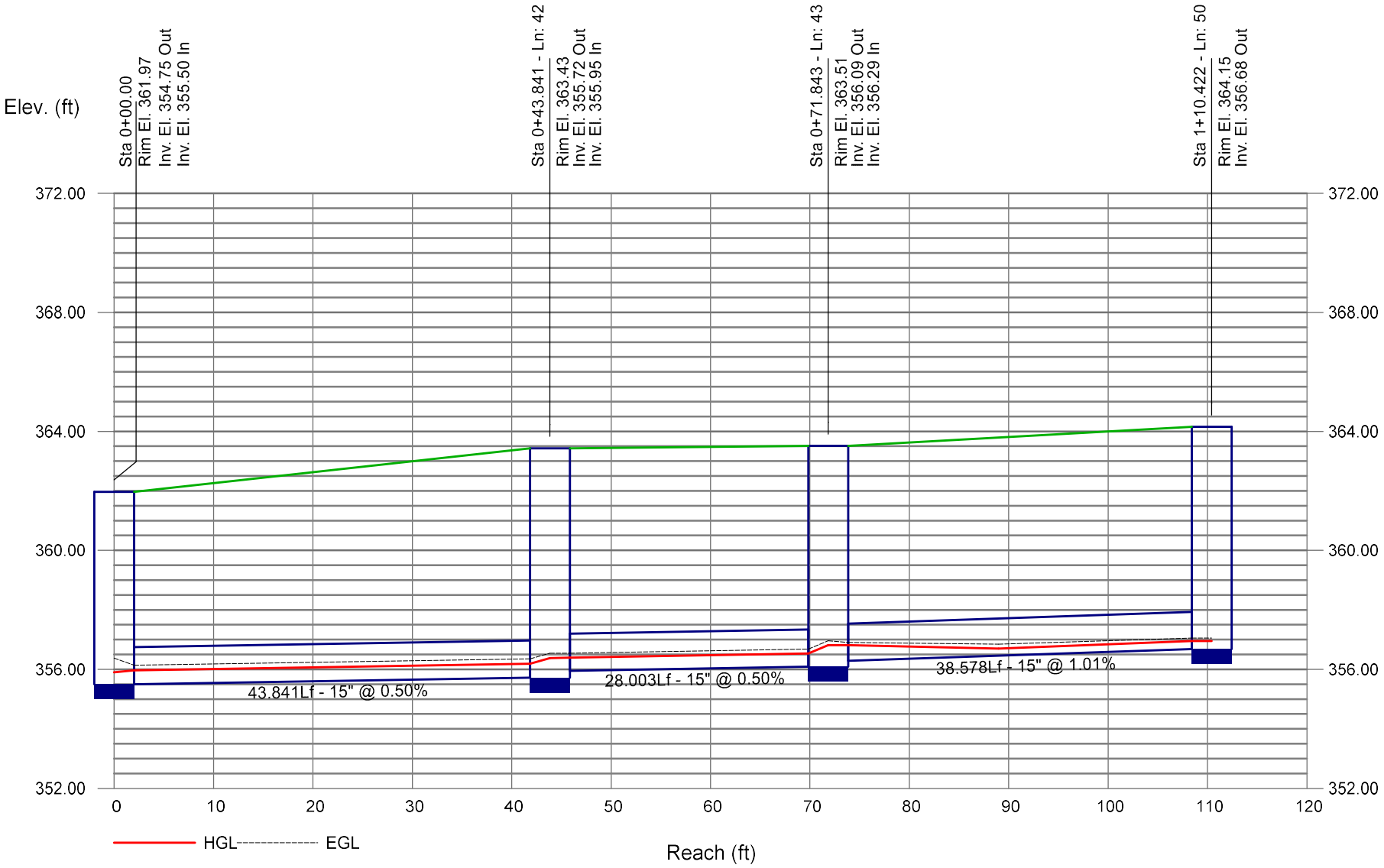
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



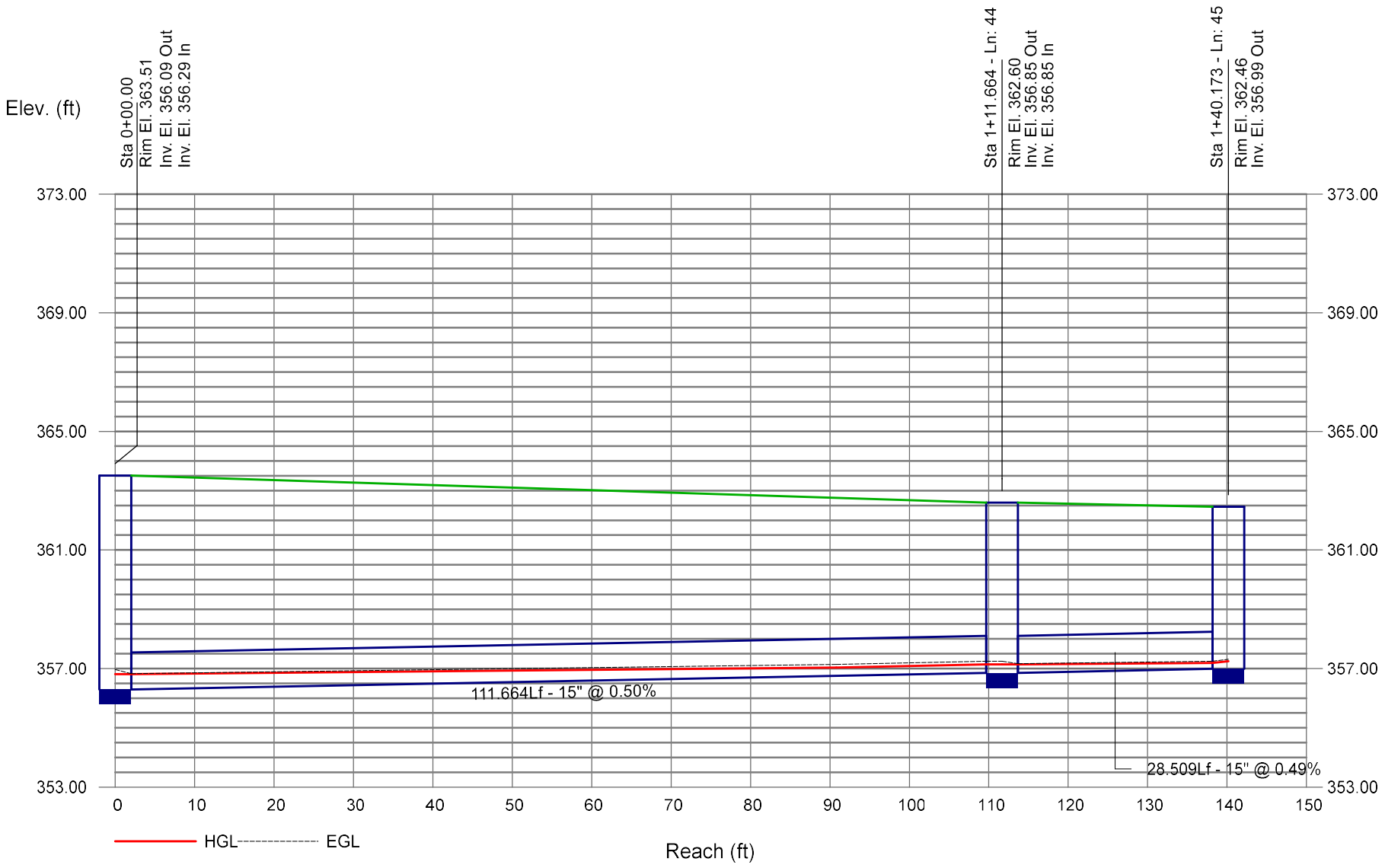
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



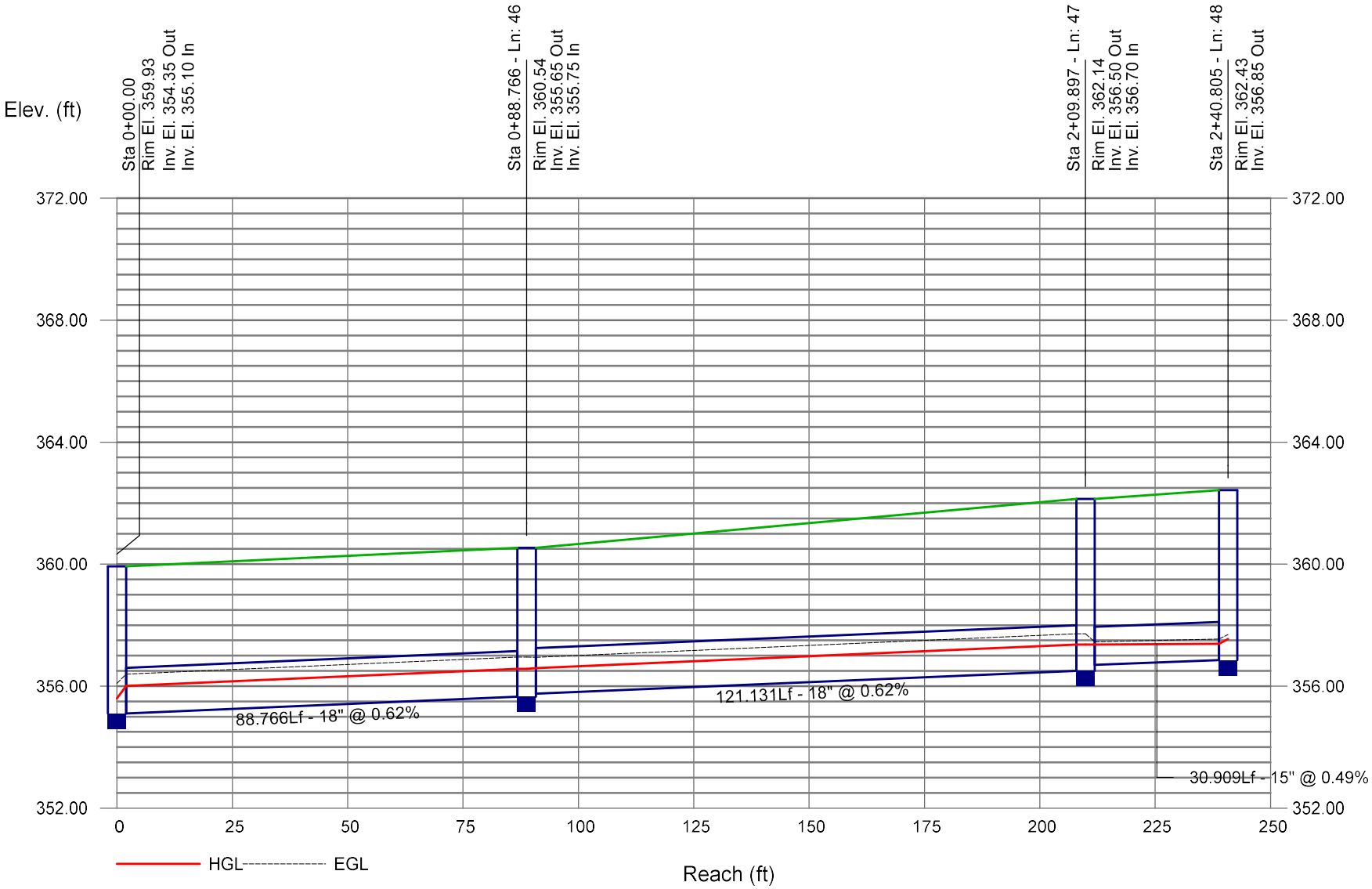
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



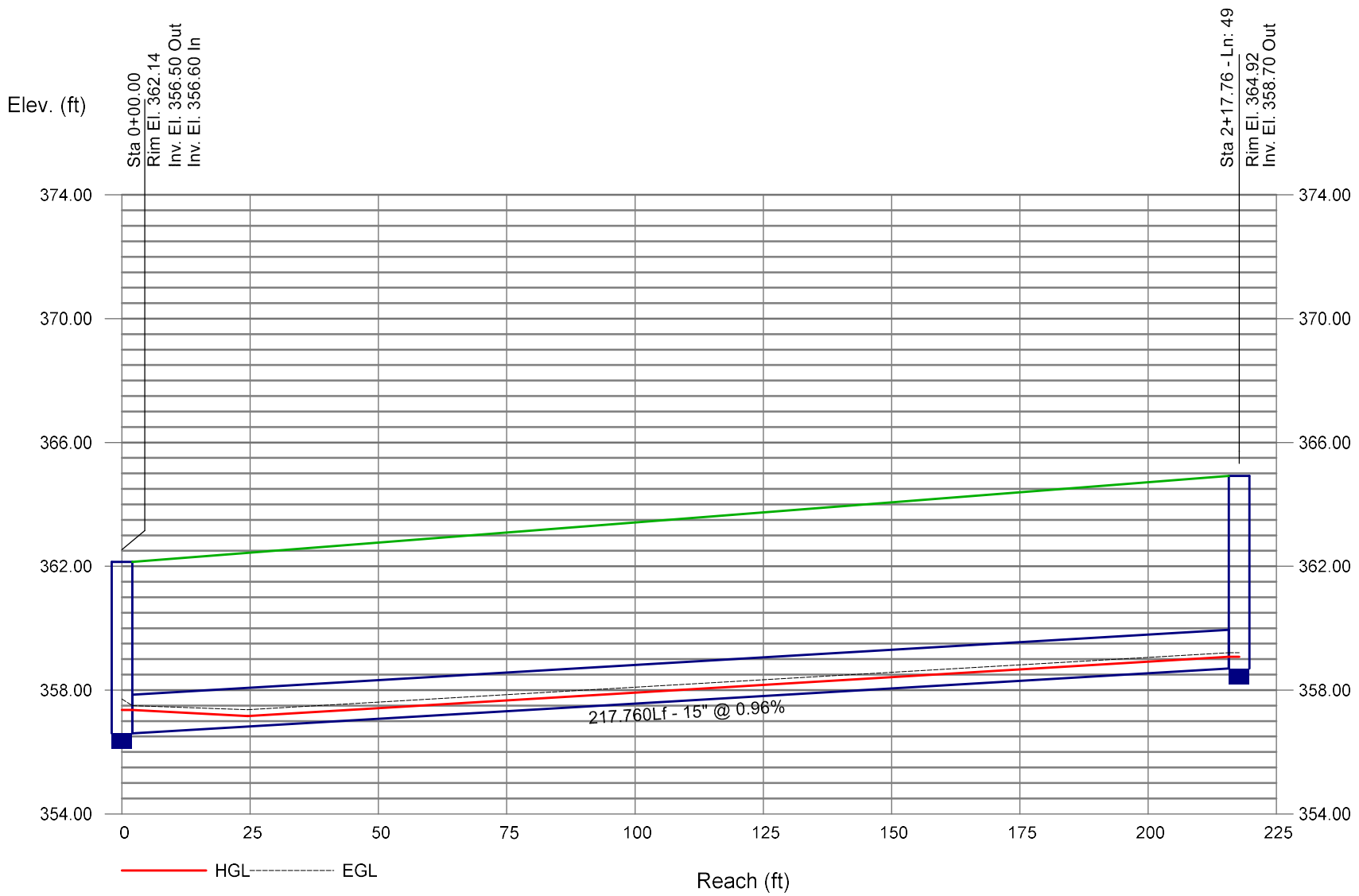
Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm

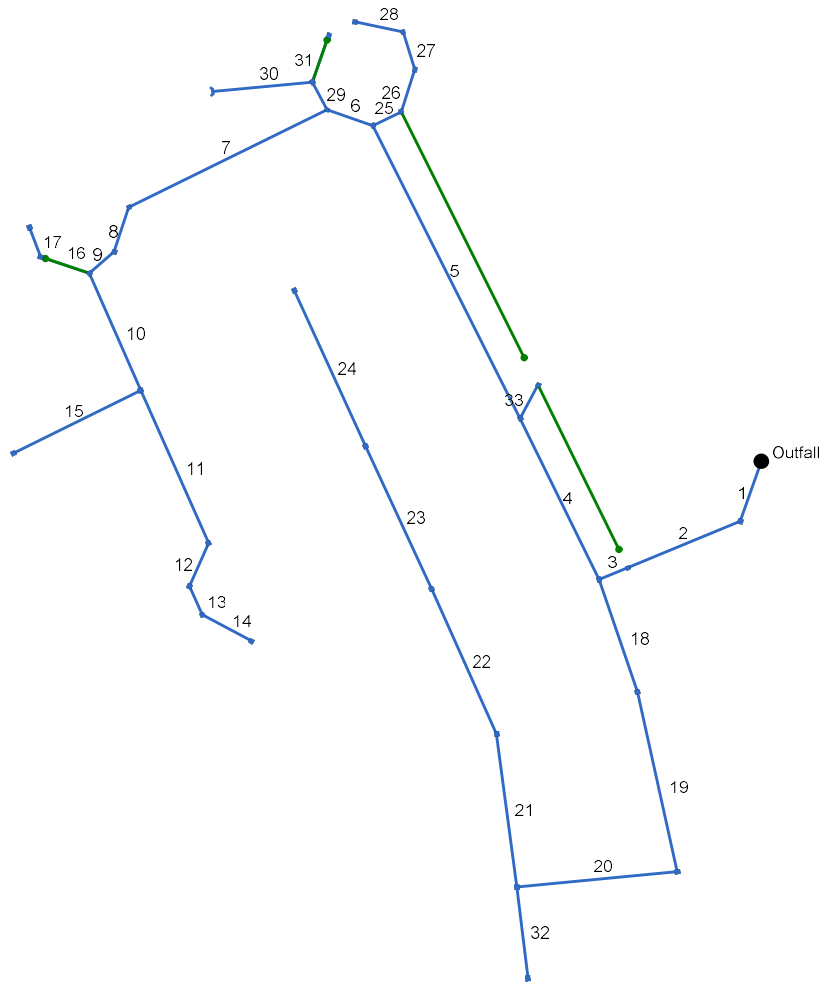


Storm Sewer Profile

Proj. file: SCM 1A Storm Network.stm



Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: SCM 1B Storm Network.stm	Number of lines: 33	Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	56.876	109.419	DrGrt	0.00	0.08	0.60	10.0	375.50	0.49	375.78	42	Cir	0.013	1.17	383.11	Pipe - (402)
2	1	108.264	48.008	Comb	0.00	0.44	0.60	10.0	375.90	0.50	376.44	42	Cir	0.013	0.50	386.35	Pipe - (401)
3	2	27.685	0.267	Comb	0.00	0.53	0.60	10.0	376.55	0.51	376.69	42	Cir	0.013	1.50	386.12	Pipe - (400)
4	3	160.199	86.300	Comb	0.00	0.60	0.60	10.0	376.90	0.84	378.25	36	Cir	0.013	1.26	387.46	Pipe - (398)
5	4	292.665	-0.578	Comb	0.00	0.02	0.60	10.0	378.35	0.80	380.70	30	Cir	0.013	1.50	389.80	Pipe - (397)
6	5	43.286	-44.139	Comb	0.00	0.19	0.60	10.0	380.90	0.58	381.15	30	Cir	0.013	1.63	390.04	Pipe - (185)
7	6	196.769	-45.581	Comb	0.00	0.06	0.60	10.0	381.65	0.69	383.00	24	Cir	0.013	1.13	391.67	Pipe - (198)
8	7	41.948	-45.324	Comb	0.00	0.38	0.60	10.0	383.10	0.50	383.31	24	Cir	0.013	0.85	392.29	Pipe - (197)
9	8	29.270	30.927	Comb	0.00	0.22	0.60	10.0	383.41	0.51	383.56	24	Cir	0.013	1.98	392.38	Pipe - (199)
10	9	114.437	-72.992	Comb	0.00	0.15	0.60	10.0	384.05	1.00	385.20	18	Cir	0.013	1.50	393.33	Pipe - (196)
11	10	149.122	-0.126	Comb	0.00	0.06	0.60	10.0	385.45	1.01	386.95	15	Cir	0.013	1.16	394.48	Pipe - (194)
12	11	42.068	47.408	Comb	0.00	0.05	0.60	10.0	387.05	0.50	387.26	15	Cir	0.013	1.17	394.74	Pipe - (193)
13	12	28.000	-47.644	Comb	0.00	0.15	0.60	10.0	387.36	0.50	387.50	15	Cir	0.013	0.99	394.96	Pipe - (526)
14	13	50.224	-37.536	Comb	0.00	0.11	0.60	10.0	387.60	0.50	387.85	15	Cir	0.013	1.00	395.26	Pipe - (527)
15	10	126.742	87.317	DrGrt	0.00	1.09	0.60	10.0	385.45	0.50	386.08	15	Cir	0.013	1.00	388.72	Pipe - (691)
16	9	45.621	59.076	Comb	0.00	0.13	0.60	10.0	384.05	0.55	384.30	18	Cir	0.013	1.22	392.24	Pipe - (428)
17	16	28.355	51.210	Comb	0.00	0.15	0.60	10.0	384.50	0.49	384.64	18	Cir	0.013	1.00	391.80	Pipe - (427)
18	3	105.990	-86.519	Comb	0.00	0.18	0.60	10.0	376.90	0.75	377.70	36	Cir	0.013	0.50	387.12	Pipe - (208)
19	18	164.842	6.435	MH	0.00	0.00	0.60	10.0	377.80	0.50	378.62	30	Cir	0.013	1.00	387.27	Pipe - (597)
20	19	143.185	96.958	DrGrt	0.00	0.16	0.60	10.0	378.75	0.52	379.50	30	Cir	0.013	1.50	385.09	Pipe - (596)
21	20	138.266	87.802	DrGrt	0.00	0.77	0.60	10.0	380.00	0.51	380.70	24	Cir	0.013	0.50	384.91	Pipe - (601)
22	21	141.574	-16.470	DrGrt	0.00	0.64	0.60	10.0	381.20	0.50	381.91	18	Cir	0.013	0.50	384.85	Pipe - (600)
23	22	140.673	-0.572	DrGrt	0.00	0.60	0.60	10.0	382.16	0.50	382.86	15	Cir	0.013	0.50	385.85	Pipe - (599)

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
24	23	153.175	0.183	DrGrt	0.00	0.61	0.60	10.0	382.96	0.50	383.73	15	Cir	0.013	1.00	387.21	Pipe - (598)
25	5	28.000	90.133	Comb	0.00	0.03	0.60	10.0	381.95	0.50	382.09	15	Cir	0.013	1.14	389.80	Pipe - (396)
26	25	39.908	-45.826	Comb	0.00	0.02	0.60	10.0	382.19	0.50	382.39	15	Cir	0.013	0.94	388.01	Pipe - (430)
27	26	34.848	-35.110	Comb	0.00	0.04	0.60	10.0	382.49	0.50	382.66	15	Cir	0.013	1.34	387.49	Pipe - (429)
28	27	44.136	-60.527	Comb	0.00	0.02	0.60	10.0	382.76	0.50	382.98	15	Cir	0.013	1.00	389.26	Pipe - (431)
29	6	28.043	42.691	Comb	0.00	0.19	0.60	10.0	382.40	0.53	382.55	15	Cir	0.013	1.74	389.83	Pipe - (184)
30	29	88.937	-67.359	Hdwl	0.00	0.29	0.60	10.0	382.75	3.75	386.09	15	Cir	0.013	1.00	387.61	Pipe - (190)
31	29	44.388	47.309	Comb	0.00	0.02	0.60	10.0	382.75	0.99	383.19	15	Cir	0.013	1.00	389.48	Pipe - (183)
32	20	82.242	-91.237	DrGrt	0.00	0.66	0.60	10.0	380.75	0.50	381.16	15	Cir	0.013	1.00	382.91	Pipe - (218)
33	4	34.000	53.997	Comb	0.00	0.24	0.60	10.0	379.50	2.03	380.19	18	Cir	0.013	1.00	387.62	Pipe - (399)

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Date: 8/4/2025

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	YI 141	DropGrate	383.11	Rect	4.00	4.00	42	Cir	375.78	42	Cir	375.90
2	CB 142	Combination	386.35	Rect	4.00	4.00	42	Cir	376.44	42	Cir	376.55
3	CB 143	Combination	386.12	Rect	4.00	4.00	42	Cir	376.69	36 36	Cir Cir	376.90 376.90
4	CB 144	Combination	387.46	Rect	4.00	4.00	36	Cir	378.25	30 18	Cir Cir	378.35 379.50
5	CB 145	Combination	389.80	Rect	4.00	4.00	30	Cir	380.70	30 15	Cir Cir	380.90 381.95
6	CB 146	Combination	390.04	Rect	4.00	4.00	30	Cir	381.15	24 15	Cir Cir	381.65 382.40
7	CB 148	Combination	391.67	Rect	4.00	4.00	24	Cir	383.00	24	Cir	383.10
8	CB 149	Combination	392.29	Rect	4.00	4.00	24	Cir	383.31	24	Cir	383.41
9	CB 150	Combination	392.38	Rect	4.00	4.00	24	Cir	383.56	18 18	Cir Cir	384.05 384.05
10	CB 151	Combination	393.33	Rect	4.00	4.00	18	Cir	385.20	15 15	Cir Cir	385.45 385.45
11	CB 152	Combination	394.48	Rect	4.00	4.00	15	Cir	386.95	15	Cir	387.05
12	CB 153	Combination	394.74	Rect	4.00	4.00	15	Cir	387.26	15	Cir	387.36
13	CB 154	Combination	394.96	Rect	4.00	4.00	15	Cir	387.50	15	Cir	387.60
14	CB 154A	Combination	395.26	Rect	4.00	4.00	15	Cir	387.85			
15	YI 151A	DropGrate	388.72	Rect	4.00	4.00	15	Cir	386.08			
16	CB 150A	Combination	392.24	Rect	4.00	4.00	18	Cir	384.30	18	Cir	384.50
17	CB 150B	Combination	391.80	Rect	4.00	4.00	18	Cir	384.64			
18	CB 143A	Combination	387.12	Rect	4.00	4.00	36	Cir	377.70	30	Cir	377.80
19	JB-147	Manhole	387.27	Rect	4.00	4.00	30	Cir	378.62	30	Cir	378.75
20	YI 158A	DropGrate	385.09	Rect	4.00	4.00	30	Cir	379.50	24 15	Cir Cir	380.00 380.75

Project File: SCM 1B Storm Network.stm | Number of Structures: 33 | Run Date: 8/4/2025

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
21	YI 158	DropGrate	384.91	Rect	4.00	4.00	24	Cir	380.70	18	Cir	381.20
22	YI 157	DropGrate	384.85	Rect	4.00	4.00	18	Cir	381.91	15	Cir	382.16
23	YI 156	DropGrate	385.85	Rect	4.00	4.00	15	Cir	382.86	15	Cir	382.96
24	YI 155	DropGrate	387.21	Rect	4.00	4.00	15	Cir	383.73			
25	CB 145A	Combination	389.80	Rect	4.00	4.00	15	Cir	382.09	15	Cir	382.19
26	CB 145B	Combination	388.01	Rect	4.00	4.00	15	Cir	382.39	15	Cir	382.49
27	CB 145C	Combination	387.49	Rect	4.00	4.00	15	Cir	382.66	15	Cir	382.76
28	CB 145D	Combination	389.26	Rect	4.00	4.00	15	Cir	382.98			
29	CB 146A	Combination	389.83	Rect	4.00	4.00	15	Cir	382.55	15 15	Cir Cir	382.75 382.75
30	FES 146C	OpenHeadwall	387.61	n/a	n/a	n/a	15	Cir	386.09			
31	CB 146B	Combination	389.48	Rect	4.00	4.00	15	Cir	383.19			
32	YI 159	DropGrate	382.91	Rect	4.00	4.00	15	Cir	381.16			
33	CB 144A	Combination	387.62	Rect	4.00	4.00	18	Cir	380.19			

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Pipe - (402)	25.27	42	Cir	56.876	375.50	375.78	0.492	380.76*	380.80*	0.13	380.92	End	DropGrate
2	Pipe - (401)	25.52	42	Cir	108.264	375.90	376.44	0.499	380.92*	380.99*	0.05	381.05	1	Combination
3	Pipe - (400)	24.37	42	Cir	27.685	376.55	376.69	0.506	381.05*	381.06*	0.15	381.21	2	Combination
4	Pipe - (398)	12.81	36	Cir	160.199	376.90	378.25	0.843	381.21	381.25	0.06	381.31	3	Combination
5	Pipe - (397)	10.68	30	Cir	292.665	378.35	380.70	0.803	381.31	381.79	n/a	381.79 j	4	Combination
6	Pipe - (185)	10.31	30	Cir	43.286	380.90	381.15	0.578	381.89	382.22	n/a	382.22	5	Combination
7	Pipe - (198)	8.27	24	Cir	196.769	381.65	383.00	0.686	382.58	384.02	0.46	384.02	6	Combination
8	Pipe - (197)	8.11	24	Cir	41.948	383.10	383.31	0.501	384.11	384.32	0.34	384.32	7	Combination
9	Pipe - (199)	6.90	24	Cir	29.270	383.41	383.56	0.512	384.32	384.49	0.71	384.49	8	Combination
10	Pipe - (196)	5.32	18	Cir	114.437	384.05	385.20	1.005	384.81	386.09	0.56	386.09	9	Combination
11	Pipe - (194)	1.26	15	Cir	149.122	385.45	386.95	1.006	386.09	387.39	n/a	387.39 j	10	Combination
12	Pipe - (193)	1.07	15	Cir	42.068	387.05	387.26	0.499	387.46	387.67	0.17	387.84	11	Combination
13	Pipe - (526)	0.90	15	Cir	28.000	387.36	387.50	0.500	387.84	387.87	0.13	388.01	12	Combination
14	Pipe - (527)	0.39	15	Cir	50.224	387.60	387.85	0.498	388.01	388.09	0.08	388.18	13	Combination
15	Pipe - (691)	3.84	15	Cir	126.742	385.45	386.08	0.497	386.33	386.96	0.27	387.23	10	DropGrate
16	Pipe - (428)	0.98	18	Cir	45.621	384.05	384.30	0.548	384.49	384.67	0.16	384.67	9	Combination
17	Pipe - (427)	0.53	18	Cir	28.355	384.50	384.64	0.494	384.77	384.91	n/a	385.00 j	16	Combination
18	Pipe - (208)	10.94	36	Cir	105.990	376.90	377.70	0.755	381.21*	381.24*	0.02	381.26	3	Combination
19	Pipe - (597)	10.80	30	Cir	164.842	377.80	378.62	0.497	381.26*	381.37*	0.08	381.45	18	Manhole
20	Pipe - (596)	11.14	30	Cir	143.185	378.75	379.50	0.524	381.45	381.53	0.16	381.69	19	DropGrate
21	Pipe - (601)	8.64	24	Cir	138.266	380.00	380.70	0.506	381.69	381.75	n/a	381.75	20	DropGrate
22	Pipe - (600)	6.20	18	Cir	141.574	381.20	381.91	0.501	382.25	382.96	0.17	383.13	21	DropGrate
23	Pipe - (599)	4.14	15	Cir	140.673	382.16	382.86	0.498	383.13	383.79	0.14	383.93	22	DropGrate
24	Pipe - (598)	2.15	15	Cir	153.175	382.96	383.73	0.503	383.93	384.32	0.22	384.54	23	DropGrate

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
25	Pipe - (396)	0.37	15	Cir	28.000	381.95	382.09	0.500	382.19	382.33	n/a	382.42 j	5	Combination
26	Pipe - (430)	0.27	15	Cir	39.908	382.19	382.39	0.500	382.42	382.59	n/a	382.66 j	25	Combination
27	Pipe - (429)	0.20	15	Cir	34.848	382.49	382.66	0.500	382.67	382.84	n/a	382.92 j	26	Combination
28	Pipe - (431)	0.07	15	Cir	44.136	382.76	382.98	0.500	382.92	383.08	0.03	383.12	27	Combination
29	Pipe - (184)	1.70	15	Cir	28.043	382.40	382.55	0.535	382.92	383.07	0.34	383.41	6	Combination
30	Pipe - (190)	1.02	15	Cir	88.937	382.75	386.09	3.752	383.41	386.48	n/a	386.48 j	29	OpenHeadwall
31	Pipe - (183)	0.07	15	Cir	44.388	382.75	383.19	0.991	383.41	383.29	n/a	383.29	29	Combination
32	Pipe - (218)	2.33	15	Cir	82.242	380.75	381.16	0.499	381.69	381.82	0.19	382.02	20	DropGrate
33	Pipe - (399)	0.85	18	Cir	34.000	379.50	380.19	2.029	381.31	381.32	0.01	381.32	4	Combination

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	YI 141	0.28	0.00	0.28	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.04	6.67	0.04	6.67	0.0	Off
2	CB 142	1.55	0.06	1.61	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.23	7.25	0.23	7.25	0.0	Off
3	CB 143	1.87	0.54	2.41	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.28	9.79	0.28	9.79	0.0	Off
4	CB 144	2.11	0.00	1.59	0.52	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.22	6.83	0.14	2.90	0.0	3
5	CB 145	0.08	0.00	0.08	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.07	1.15	0.00	0.00	0.0	Off
6	CB 146	0.67	0.00	0.67	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.15	3.61	0.15	3.61	0.0	Off
7	CB 148	0.21	0.20	0.41	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.13	2.35	0.01	0.15	0.0	6
8	CB 149	1.34	0.00	1.14	0.20	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.19	5.42	0.10	1.62	0.0	7
9	CB 150	0.78	0.00	0.73	0.04	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.16	3.91	0.05	0.90	0.0	16
10	CB 151	0.53	0.00	0.52	0.01	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.14	2.95	0.03	0.43	0.0	Off
11	CB 152	0.21	0.00	0.21	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.10	1.65	0.00	0.00	0.0	10
12	CB 153	0.18	0.00	0.18	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.09	1.54	0.00	0.00	0.0	11
13	CB 154	0.53	0.00	0.53	0.00	Comb	4.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.93	0.14	2.93	0.0	Off
14	CB 154A	0.39	0.00	0.39	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.75	0.14	2.75	0.0	Off
15	YI 151A	3.84	0.00	3.84	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.24	26.32	0.24	26.32	0.0	Off
16	CB 150A	0.46	0.04	0.50	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.14	2.79	0.14	2.79	0.0	Off
17	CB 150B	0.53	0.00	0.52	0.01	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.14	2.94	0.03	0.42	0.0	Off
18	CB 143A	0.63	0.00	0.62	0.02	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.15	3.39	0.04	0.65	0.0	3
19	JB-147	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.060	0.020	0.013	0.00	0.00	0.00	0.00	0.0	Off
20	YI 158A	0.56	0.00	0.56	0.00	DrGrt	0.0	0.00	4.00	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.07	9.12	0.07	9.12	0.0	Off
21	YI 158	2.71	0.00	2.71	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.19	21.39	0.19	21.39	0.0	Off
22	YI 157	2.26	0.00	2.26	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.17	19.20	0.17	19.20	0.0	Off
23	YI 156	2.11	0.00	2.11	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.16	18.50	0.16	18.50	0.0	Off

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	YI 155	2.15	0.00	2.15	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.16	18.67	0.16	18.67	0.0	Off
25	CB 145A	0.11	0.00	0.11	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.08	1.27	0.00	0.00	0.0	33
26	CB 145B	0.07	0.00	0.07	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.07	1.09	0.00	0.00	0.0	Off
27	CB 145C	0.14	0.00	0.14	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.08	1.40	0.00	0.00	0.0	Off
28	CB 145D	0.07	0.00	0.07	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.07	1.09	0.00	0.00	0.0	Off
29	CB 146A	0.67	0.00	0.65	0.02	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.15	3.53	0.04	0.71	0.0	31
30	FES 146C	1.02	0.00	1.02	0.00	Hdwl	0.0	1.50	4.00	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.00	0.00	0.00	0.00	0.0	Off
31	CB 146B	0.07	0.02	0.09	0.00	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.07	1.21	0.00	0.00	0.0	Off
32	YI 159	2.33	0.00	2.33	0.00	DrGrt	0.0	0.00	7.50	3.00	2.50	Sag	2.00	0.020	0.020	0.013	0.17	19.55	0.17	19.55	0.0	Off
33	CB 144A	0.85	0.00	0.79	0.06	Comb	6.0	1.50	0.00	3.00	2.50	0.020	2.00	0.060	0.020	0.013	0.16	4.14	0.06	1.01	0.0	2

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	42	25.27	375.50	380.76	3.50	9.62	2.63	0.11	380.87	0.063	56.876	375.78	380.80	3.50	9.62	2.63	0.11	380.90	0.063	0.063	0.036	1.17	0.13
2	42	25.52	375.90	380.92	3.50	9.62	2.65	0.11	381.03	0.064	108.264	376.44	380.99	3.50	9.62	2.65	0.11	381.10	0.064	0.064	0.070	0.50	0.05
3	42	24.37	376.55	381.05	3.50	9.62	2.53	0.10	381.15	0.059	27.685	376.69	381.06	3.50	9.62	2.53	0.10	381.16	0.059	0.059	0.016	1.50	0.15
4	36	12.81	376.90	381.21	3.00	7.07	1.81	0.05	381.26	0.037	160.199	378.25	381.25	3.00	7.07	1.81	0.05	381.30	0.037	0.037	0.059	1.26	0.06
5	30	10.68	378.35	381.31	2.50	2.06	2.18	0.07	381.39	0.068	292.665	380.70	381.79 j	1.09**	2.06	5.18	0.42	382.21	0.434	0.251	n/a	1.50	n/a
6	30	10.31	380.90	381.89	0.99*	1.81	5.69	0.41	382.30	0.000	43.286	381.15	382.22	1.07**	2.01	5.12	0.41	382.63	0.000	0.000	n/a	1.63	n/a
7	24	8.27	381.65	382.58	0.93*	1.43	5.77	0.41	382.99	0.000	196.769	383.00	384.02	1.02**	1.62	5.11	0.41	384.43	0.000	0.000	n/a	1.13	0.46
8	24	8.11	383.10	384.11	1.01*	1.59	5.11	0.40	384.51	0.000	41.948	383.31	384.32	1.01**	1.60	5.08	0.40	384.72	0.000	0.000	n/a	0.85	0.34
9	24	6.90	383.41	384.32	0.91	1.40	4.94	0.36	384.68	0.000	29.270	383.56	384.49	0.93**	1.43	4.82	0.36	384.85	0.000	0.000	n/a	1.98	0.71
10	18	5.32	384.05	384.81	0.76*	0.89	5.97	0.37	385.18	0.000	114.437	385.20	386.09	0.89**	1.09	4.89	0.37	386.46	0.000	0.000	n/a	1.50	0.56
11	15	1.26	385.45	386.09	0.64	0.39	2.00	0.16	386.25	0.000	149.122	386.95	387.39 j	0.44**	0.39	3.24	0.16	387.56	0.000	0.000	n/a	1.16	0.19
12	15	1.07	387.05	387.46	0.41*	0.35	3.03	0.14	387.60	0.498	42.068	387.26	387.67	0.41**	0.35	3.03	0.14	387.81	0.496	0.497	0.209	1.17	0.17
13	15	0.90	387.36	387.84	0.48	0.31	2.08	0.07	387.91	0.201	28.000	387.50	387.87	0.37**	0.31	2.91	0.13	388.01	0.508	0.355	0.099	0.99	0.13
14	15	0.39	387.60	388.01	0.41	0.17	1.12	0.02	388.02	0.070	50.224	387.85	388.09	0.24**	0.17	2.30	0.08	388.18	0.520	0.295	0.148	1.00	0.08
15	15	3.84	385.45	386.33	0.88*	0.92	4.16	0.27	386.60	0.497	126.742	386.08	386.96	0.88	0.92	4.16	0.27	387.23	0.497	0.497	0.630	1.00	0.27
16	18	0.98	384.05	384.49	0.44	0.34	2.26	0.13	384.62	0.000	45.621	384.30	384.67	0.37**	0.34	2.90	0.13	384.80	0.000	0.000	n/a	1.22	0.16
17	18	0.53	384.50	384.77	0.27*	0.22	2.42	0.09	384.86	0.493	28.355	384.64	384.91 j	0.27**	0.22	2.42	0.09	385.00	0.493	0.493	0.140	1.00	0.09
18	36	10.94	376.90	381.21	3.00	7.07	1.55	0.04	381.25	0.027	105.990	377.70	381.24	3.00	7.07	1.55	0.04	381.28	0.027	0.027	0.029	0.50	0.02
19	30	10.80	377.80	381.26	2.50	4.91	2.20	0.08	381.33	0.069	164.842	378.62	381.37	2.50	4.91	2.20	0.08	381.45	0.069	0.069	0.114	1.00	0.08
20	30	11.14	378.75	381.45	2.50	4.91	2.27	0.08	381.53	0.074	143.185	379.50	381.53	2.03	4.27	2.61	0.11	381.64	0.075	0.074	0.107	1.50	0.16
21	24	8.64	380.00	381.69	1.69	1.67	3.05	0.42	382.11	0.000	138.266	380.70	381.75	1.05**	1.67	5.19	0.42	382.17	0.000	0.000	n/a	0.50	n/a
22	18	6.20	381.20	382.25	1.05*	1.32	4.71	0.34	382.59	0.501	141.574	381.91	382.96	1.05	1.32	4.71	0.35	383.30	0.502	0.502	0.710	0.50	0.17

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

Hydraulic Grade Line Computations

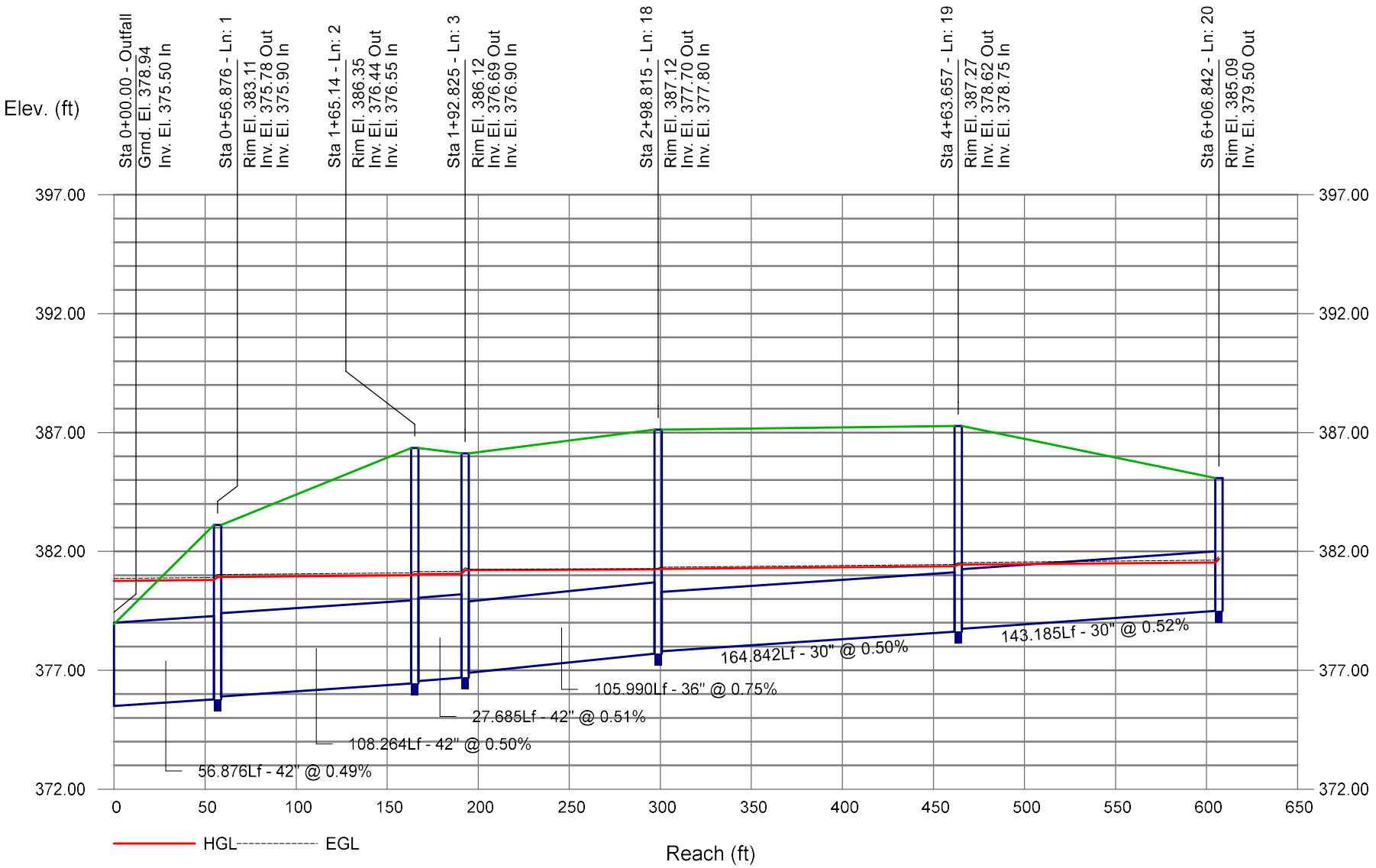
Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
23	15	4.14	382.16	383.13	0.97	1.02	4.05	0.26	383.38	0.458	140.673	382.86	383.79	0.93	0.97	4.25	0.28	384.07	0.509	0.483	0.680	0.50	0.14
24	15	2.15	382.96	383.93	0.97	0.56	2.11	0.07	384.00	0.125	153.175	383.73	384.32	0.59**	0.57	3.79	0.22	384.54	0.548	0.336	0.515	1.00	0.22
25	15	0.37	381.95	382.19	0.24*	0.16	2.23	0.08	382.27	0.499	28.000	382.09	382.33 j	0.24**	0.16	2.23	0.08	382.41	0.499	0.499	0.140	1.14	0.09
26	15	0.27	382.19	382.42	0.23	0.13	1.76	0.05	382.47	0.330	39.908	382.39	382.59 j	0.20**	0.13	2.08	0.07	382.66	0.532	0.431	0.172	0.94	0.06
27	15	0.20	382.49	382.67	0.18*	0.10	1.87	0.05	382.72	0.497	34.848	382.66	382.84 j	0.18**	0.11	1.86	0.05	382.90	0.493	0.495	0.172	1.34	0.07
28	15	0.07	382.76	382.92	0.16	0.05	0.79	0.01	382.93	0.106	44.136	382.98	383.08	0.10**	0.05	1.45	0.03	383.12	0.604	0.355	0.157	1.00	0.03
29	15	1.70	382.40	382.92	0.52*	0.48	3.53	0.19	383.11	0.535	28.043	382.55	383.07	0.52**	0.48	3.52	0.19	383.26	0.529	0.532	0.149	1.74	0.34
30	15	1.02	382.75	383.41	0.66	0.33	1.56	0.14	383.55	0.000	88.937	386.09	386.48 j	0.40**	0.33	3.04	0.14	386.63	0.000	0.000	n/a	1.00	0.14
31	15	0.07	382.75	383.41	0.66	0.05	0.11	0.03	383.44	0.000	44.388	383.19	383.29	0.10**	0.05	1.49	0.03	383.33	0.000	0.000	n/a	1.00	n/a
32	15	2.33	380.75	381.69	0.94	0.99	2.35	0.09	381.77	0.156	82.242	381.16	381.82	0.66	0.66	3.52	0.19	382.02	0.427	0.292	0.240	1.00	0.19
33	18	0.85	379.50	381.31	1.50	1.77	0.48	0.00	381.32	0.006	34.000	380.19	381.32	1.13	1.42	0.59	0.01	381.32	0.008	0.007	0.002	1.00	0.01

Project File: SCM 1B Storm Network.stm | Number of lines: 33 | Run Date: 8/4/2025

Notes: * Normal depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

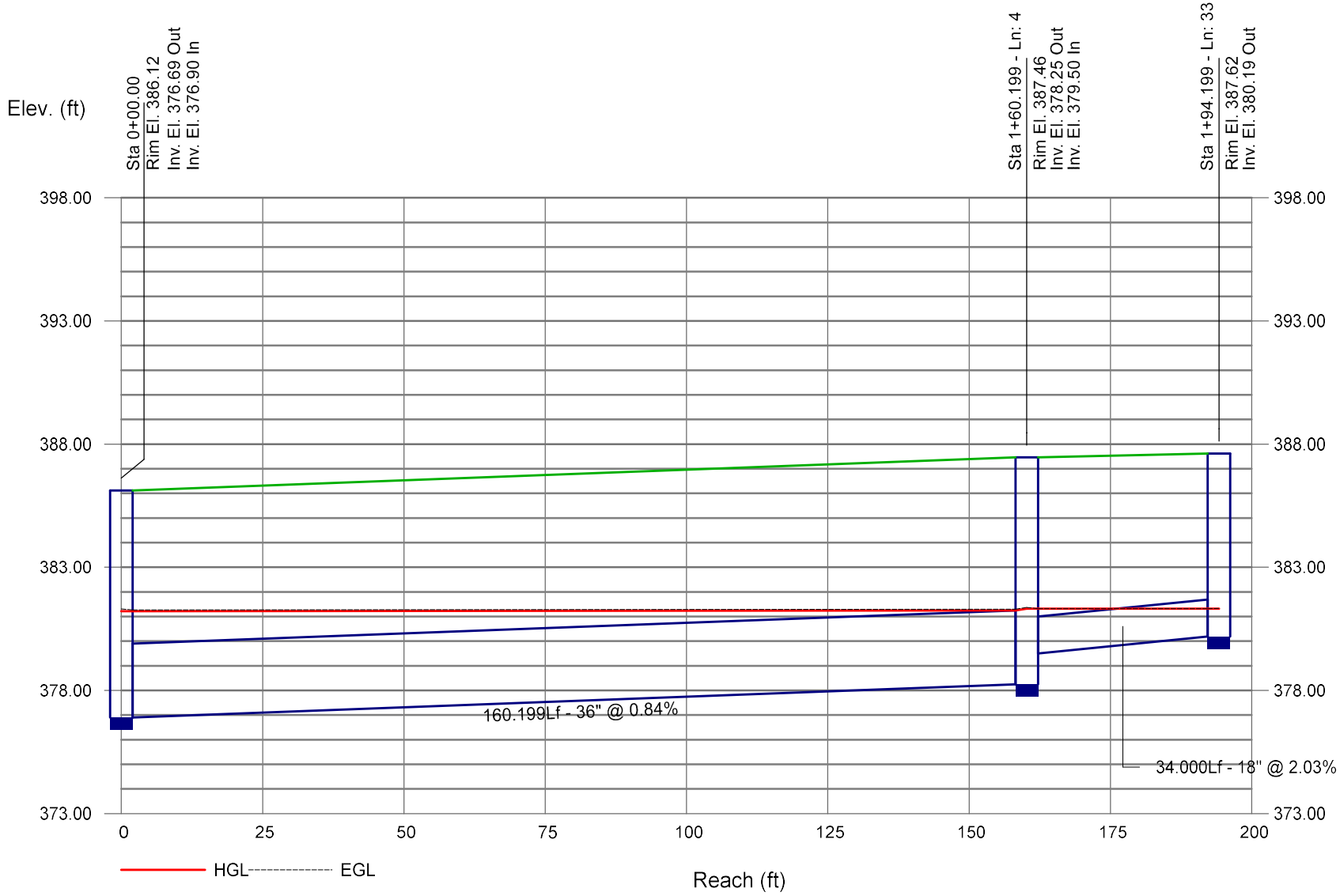
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



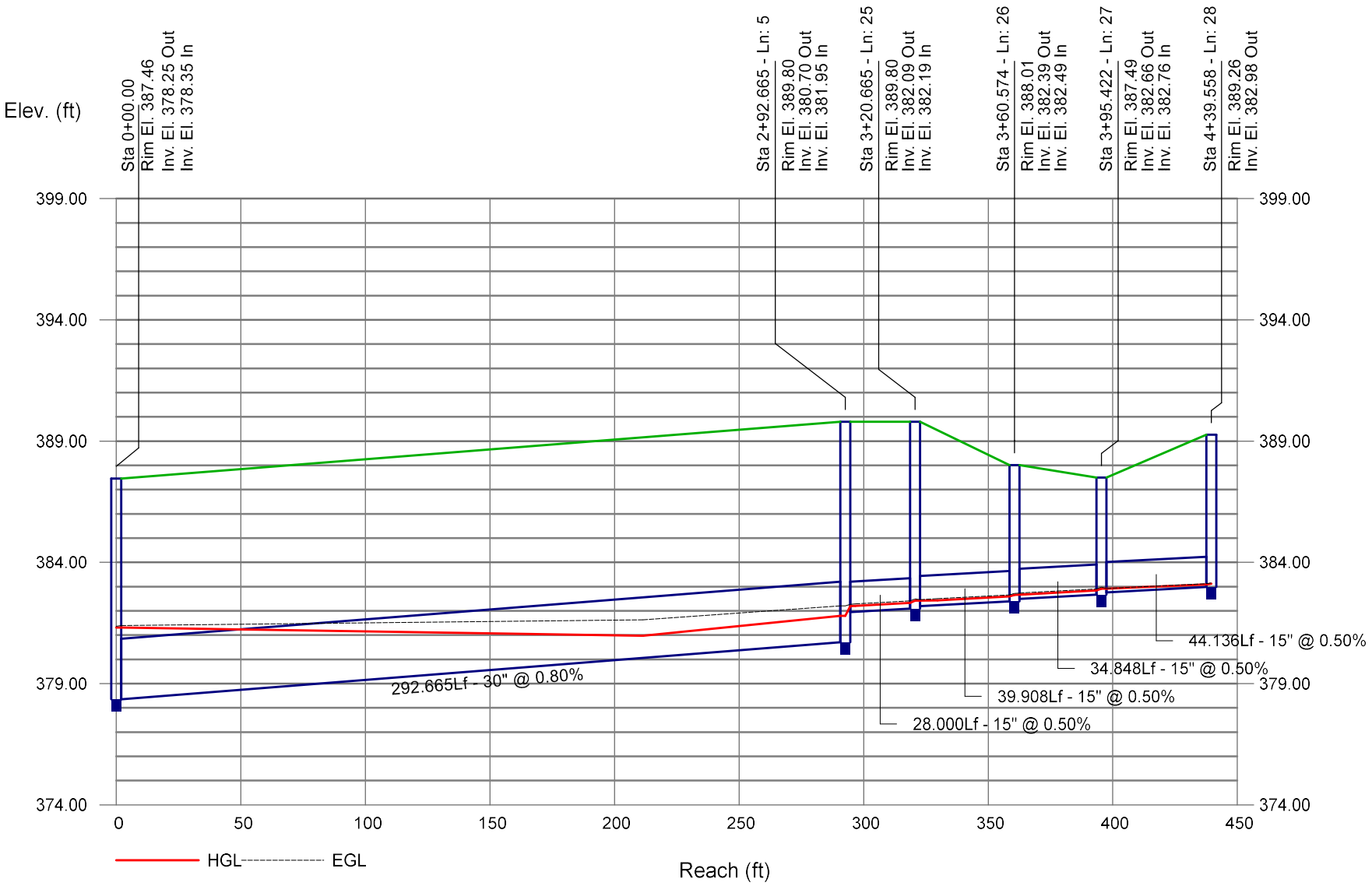
Storm Sewer Profile

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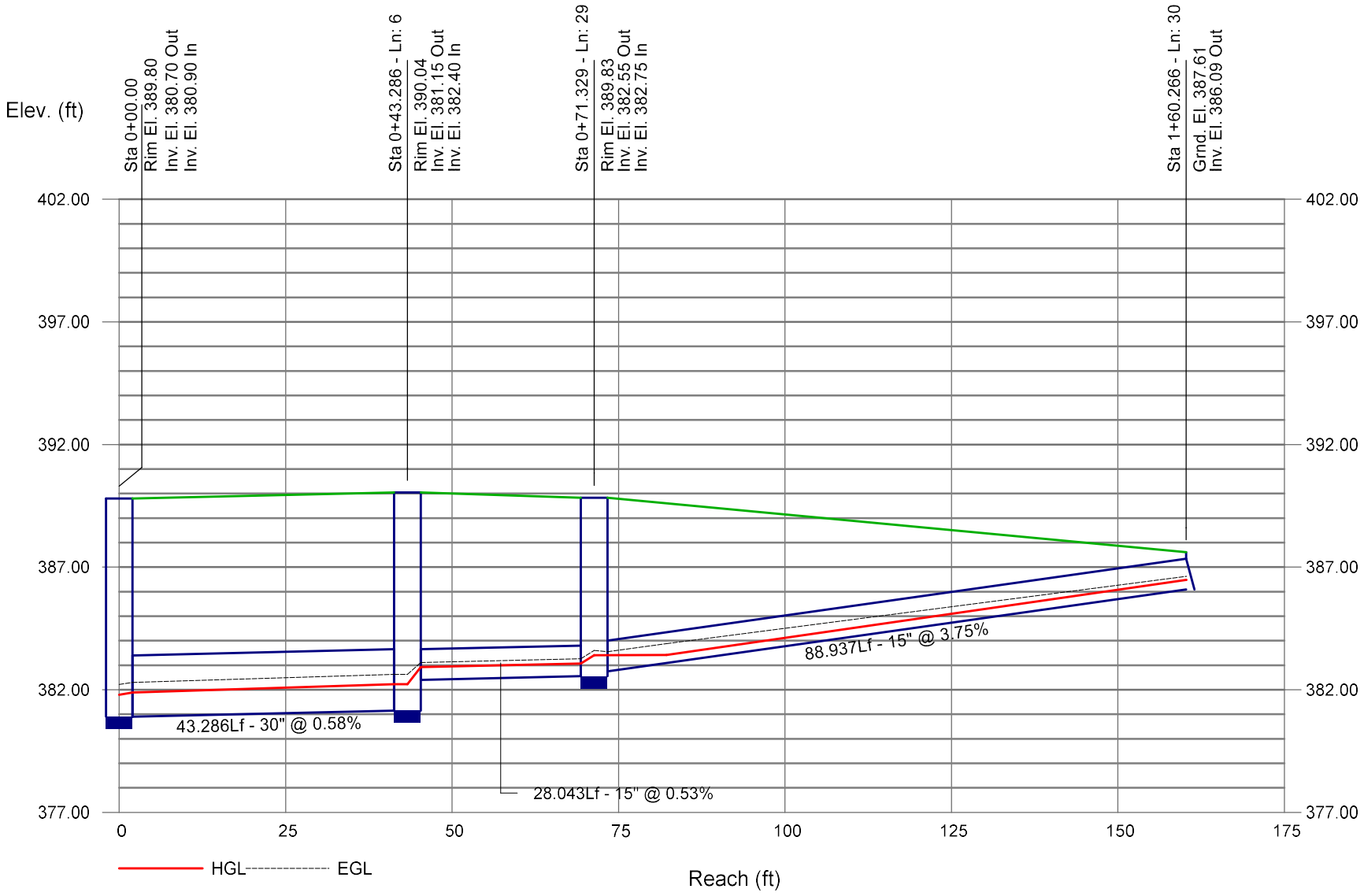
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



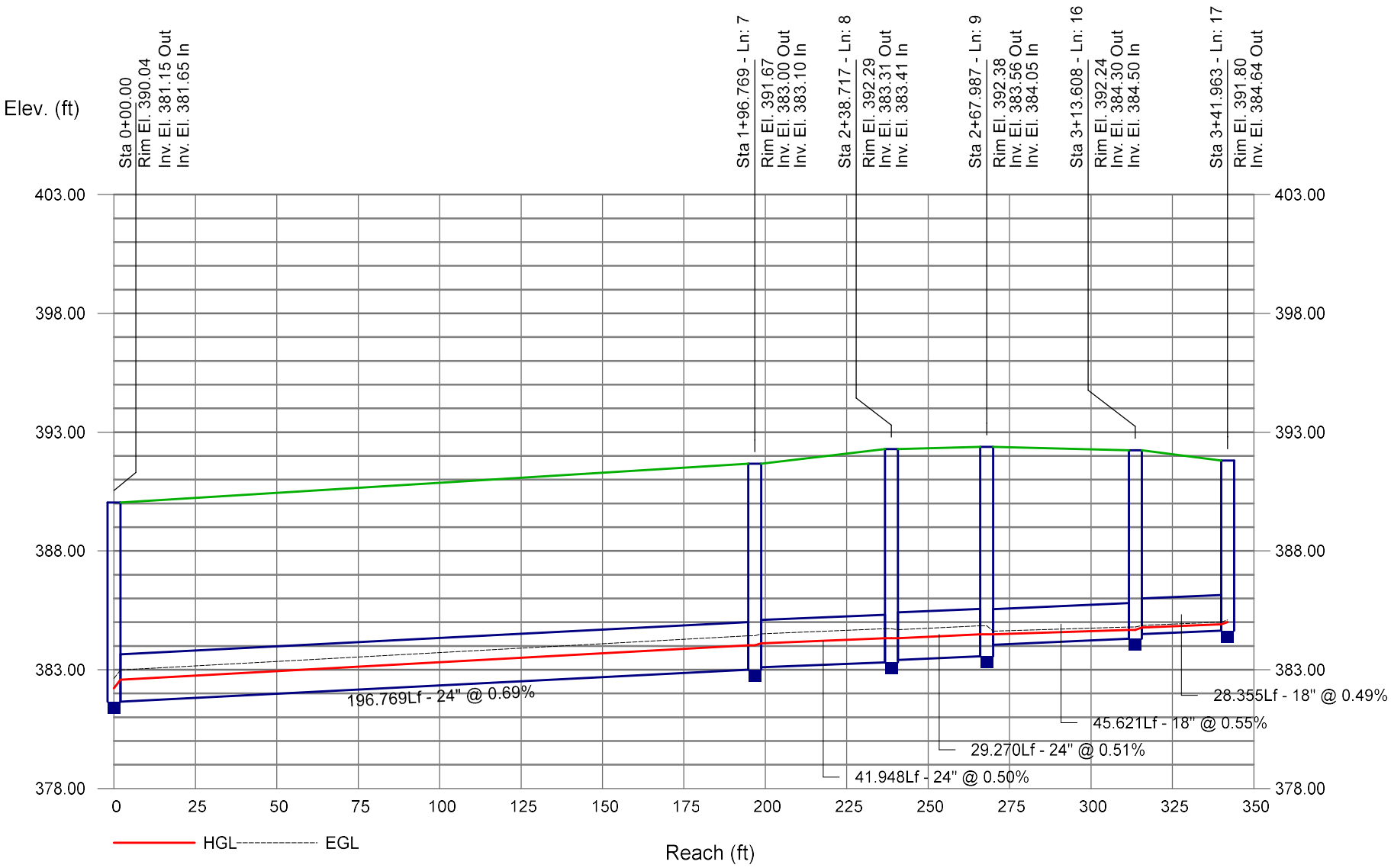
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



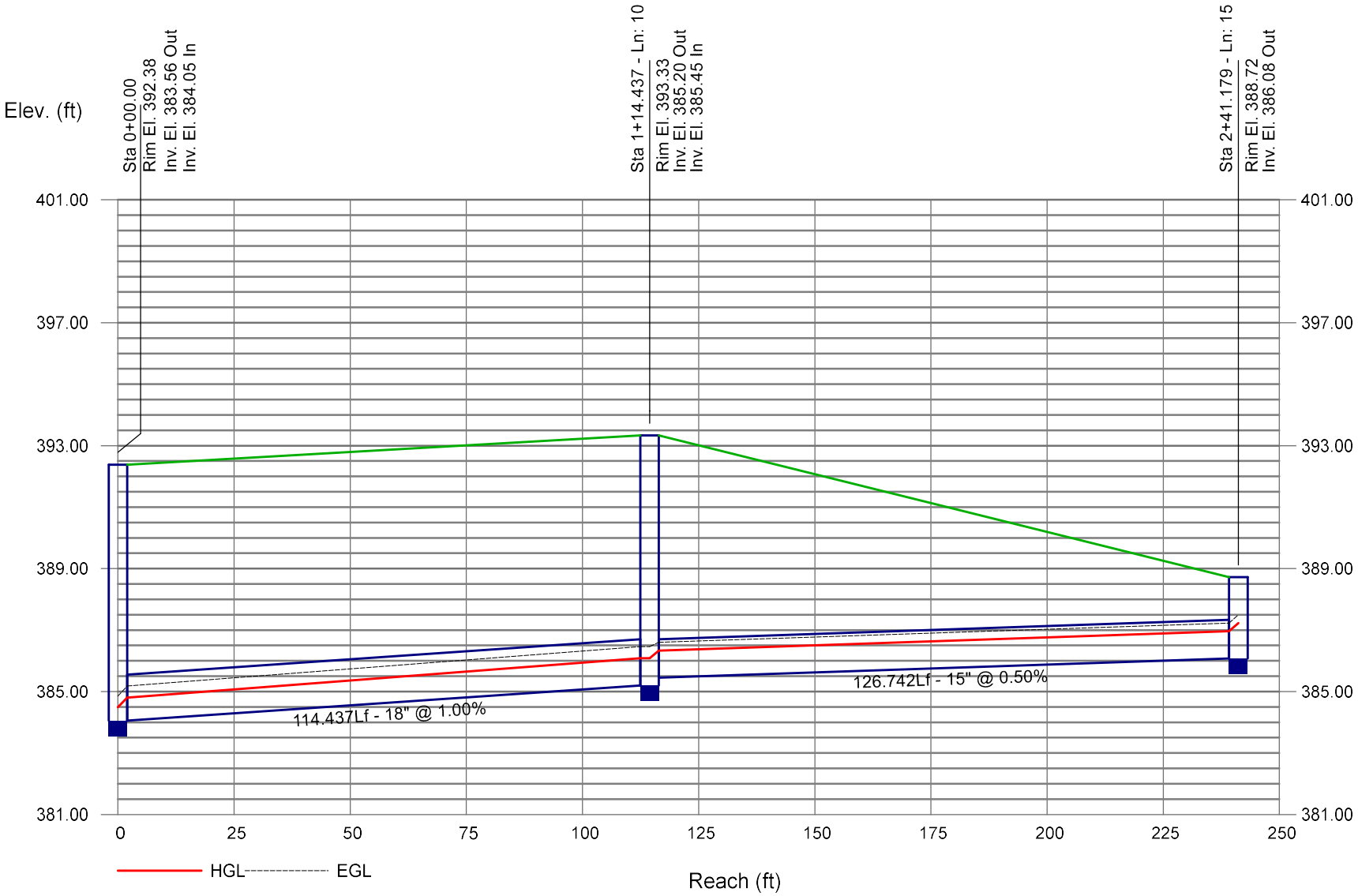
Storm Sewer Profile

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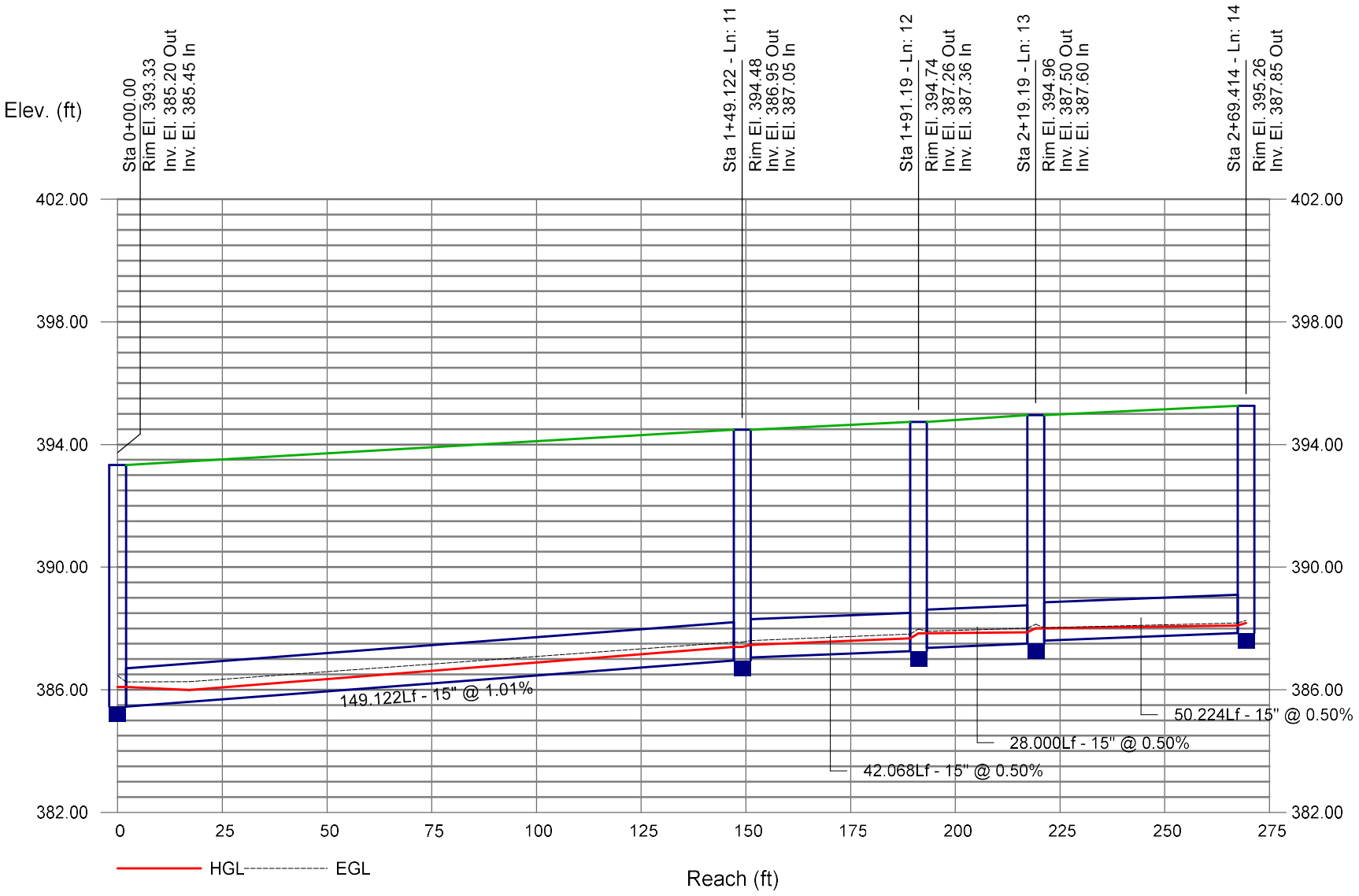
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



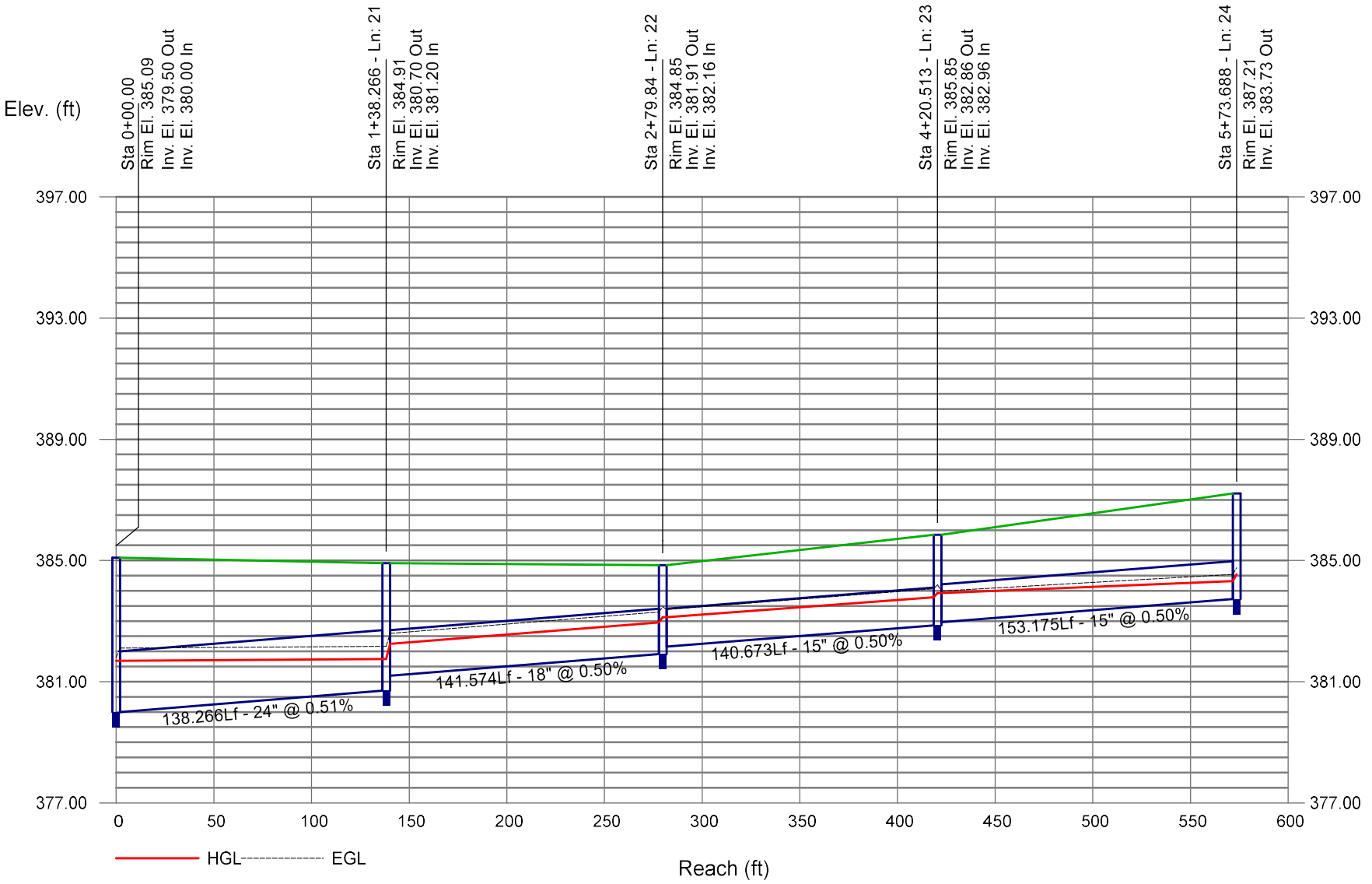
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



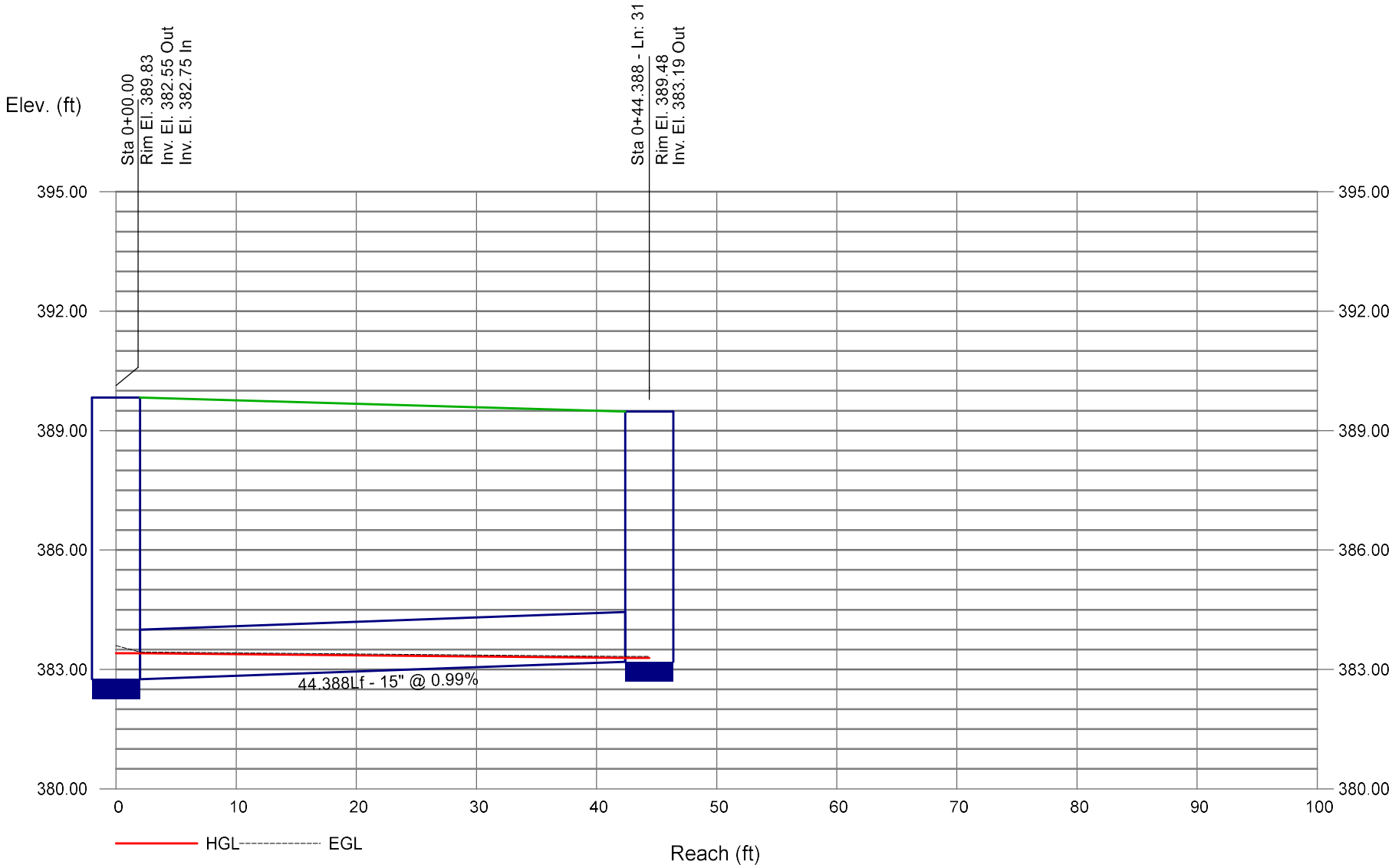
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



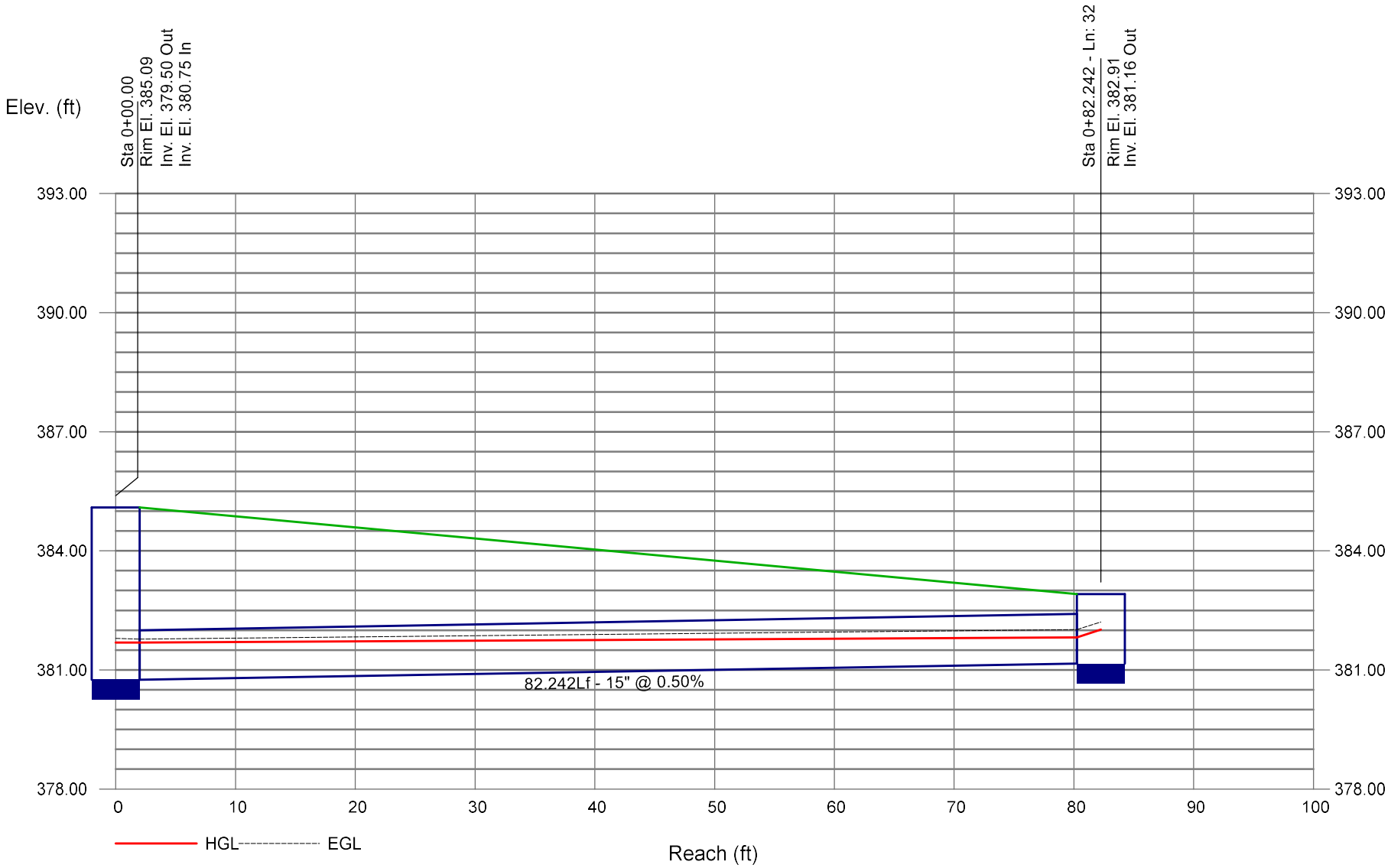
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



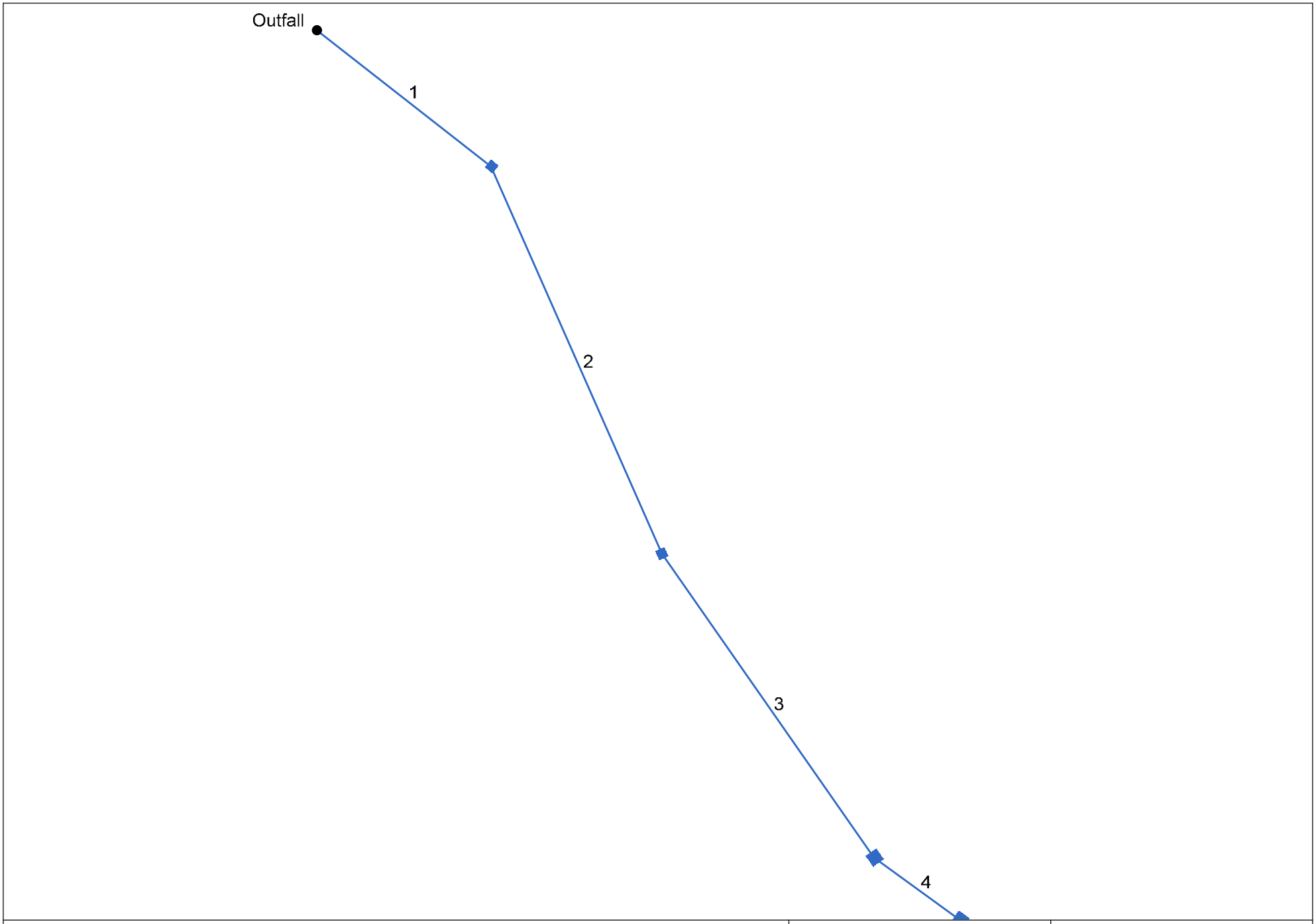
Storm Sewer Profile

Proj. file: SCM 1B Storm Network.stm



Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan

SCM 1C 10-YEAR



Project File: SCM 1C Storm Network.stm	Number of lines: 4	Date: 4/11/2025

Storm Sewer Inventory Report

SCM 1C 10-YEAR

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	70.981	38.145	DrGrt	0.00	0.39	0.60	10.0	358.50	6.68	363.24	15	Cir	0.013	0.79	371.16	Pipe - (570)
2	1	136.000	28.168	DrGrt	0.00	0.16	0.60	10.0	363.50	5.51	371.00	15	Cir	0.013	0.50	378.82	Pipe - (569)
3	2	119.127	-11.154	Comb	0.00	0.33	0.60	10.0	371.20	0.92	372.30	15	Cir	0.013	0.57	380.11	Pipe - (568)
4	3	34.000	-19.075	Comb	0.00	0.34	0.60	10.0	372.56	1.00	372.90	15	Cir	0.013	1.00	380.85	Pipe - (567)

Project File: SCM 1C Storm Network.stm

Number of lines: 4

Date: 4/11/2025

Structure Report

SCM 1C 10-YEAR

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	YI 161	DropGrate	371.16	Rect	3.00	3.00	15	Cir	363.24	15	Cir	363.50
2	YI 162	DropGrate	378.82	Rect	3.00	3.00	15	Cir	371.00	15	Cir	371.20
3	CB 163	Combination	380.11	Rect	4.00	4.00	15	Cir	372.30	15	Cir	372.56
4	CB 164	Combination	380.85	Rect	4.00	4.00	15	Cir	372.90			

Project File: SCM 1C Storm Network.stm | Number of Structures: 4 | Run Date: 4/11/2025

Storm Sewer Summary Report

SCM 1C 10-YEAR

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Pipe - (570)	4.14	15	Cir	70.981	358.50	363.24	6.678	359.75	364.06	n/a	364.06 j	End	DropGrate
2	Pipe - (569)	2.86	15	Cir	136.000	363.50	371.00	5.515	364.06	371.68	0.14	371.68	1	DropGrate
3	Pipe - (568)	2.35	15	Cir	119.127	371.20	372.30	0.923	371.73	372.91	0.14	372.91	2	Combination
4	Pipe - (567)	1.20	15	Cir	34.000	372.56	372.90	1.000	372.92	373.33	n/a	373.33	3	Combination

Project File: SCM 1C Storm Network.stm

Number of lines: 4

Run Date: 4/11/2025

NOTES: Return period = 10 Yrs. ; j - Line contains hyd. jump.

Inlet Report

SCM 1C 10-YEAR

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	YI 161	1.37	0.00	1.37	0.00	DrGrt	0.0	0.00	4.00	2.00	2.00	Sag	2.00	0.020	0.020	0.013	0.15	16.84	0.15	16.84	0.0	Off
2	YI 162	0.56	0.00	0.56	0.00	DrGrt	0.0	0.00	4.00	2.00	2.00	Sag	2.00	0.020	0.020	0.013	0.08	10.19	0.08	10.19	0.0	Off
3	CB 163	1.16	0.00	1.16	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.19	5.65	0.19	5.65	0.0	Off
4	CB 164	1.20	0.00	1.20	0.00	Comb	6.0	3.00	7.50	3.00	2.50	Sag	2.00	0.060	0.020	0.013	0.20	5.78	0.20	5.78	0.0	Off

Project File: SCM 1C Storm Network.stm | Number of lines: 4 | Run Date: 4/11/2025

NOTES: Inlet N-Values = 0.016; Intensity = 72.00 / (Inlet time + 12.50) ^ 0.80; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

Hydraulic Grade Line Computations

SCM 1C 10-YEAR

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	15	4.14	358.50	359.75	1.25	0.86	3.37	0.18	359.93	0.411	70.981	363.24	364.06 j	0.82**	0.86	4.83	0.36	364.43	0.692	0.552	n/a	0.79	n/a
2	15	2.86	363.50	364.06	0.56	0.54	5.34	0.27	364.34	0.000	136.000	371.00	371.68	0.68**	0.68	4.20	0.27	371.95	0.000	0.000	n/a	0.50	0.14
3	15	2.35	371.20	371.73	0.53*	0.50	4.70	0.24	371.97	0.000	119.127	372.30	372.91	0.61**	0.60	3.93	0.24	373.15	0.000	0.000	n/a	0.57	0.14
4	15	1.20	372.56	372.92	0.36*	0.30	4.02	0.16	373.08	0.000	34.000	372.90	373.33	0.43**	0.38	3.19	0.16	373.49	0.000	0.000	n/a	1.00	n/a

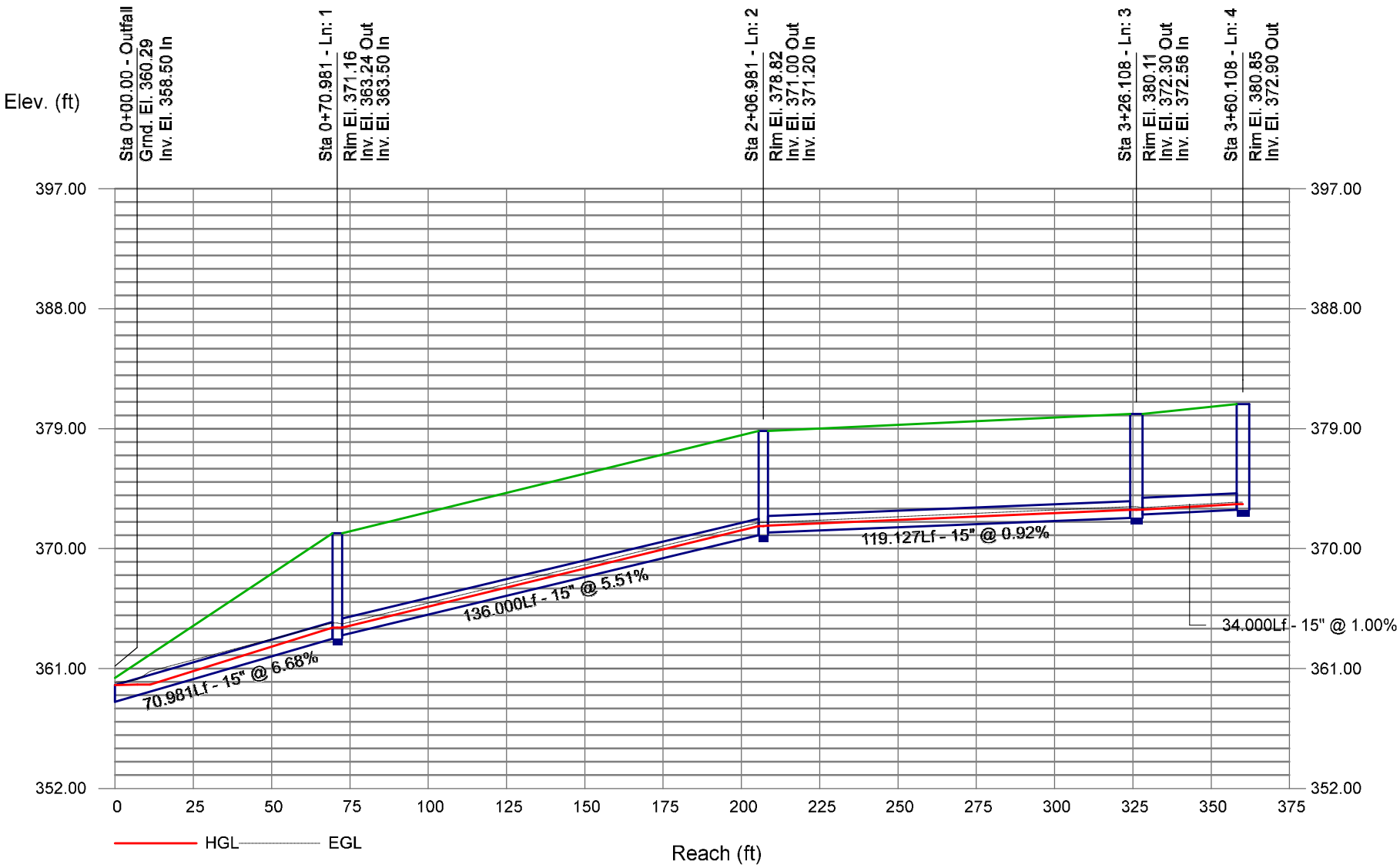
Project File: SCM 1C Storm Network.stm | Number of lines: 4 | Run Date: 4/11/2025

Notes: * depth assumed; ** Critical depth.; j-Line contains hyd. jump ; c = cir e = ellip b = box

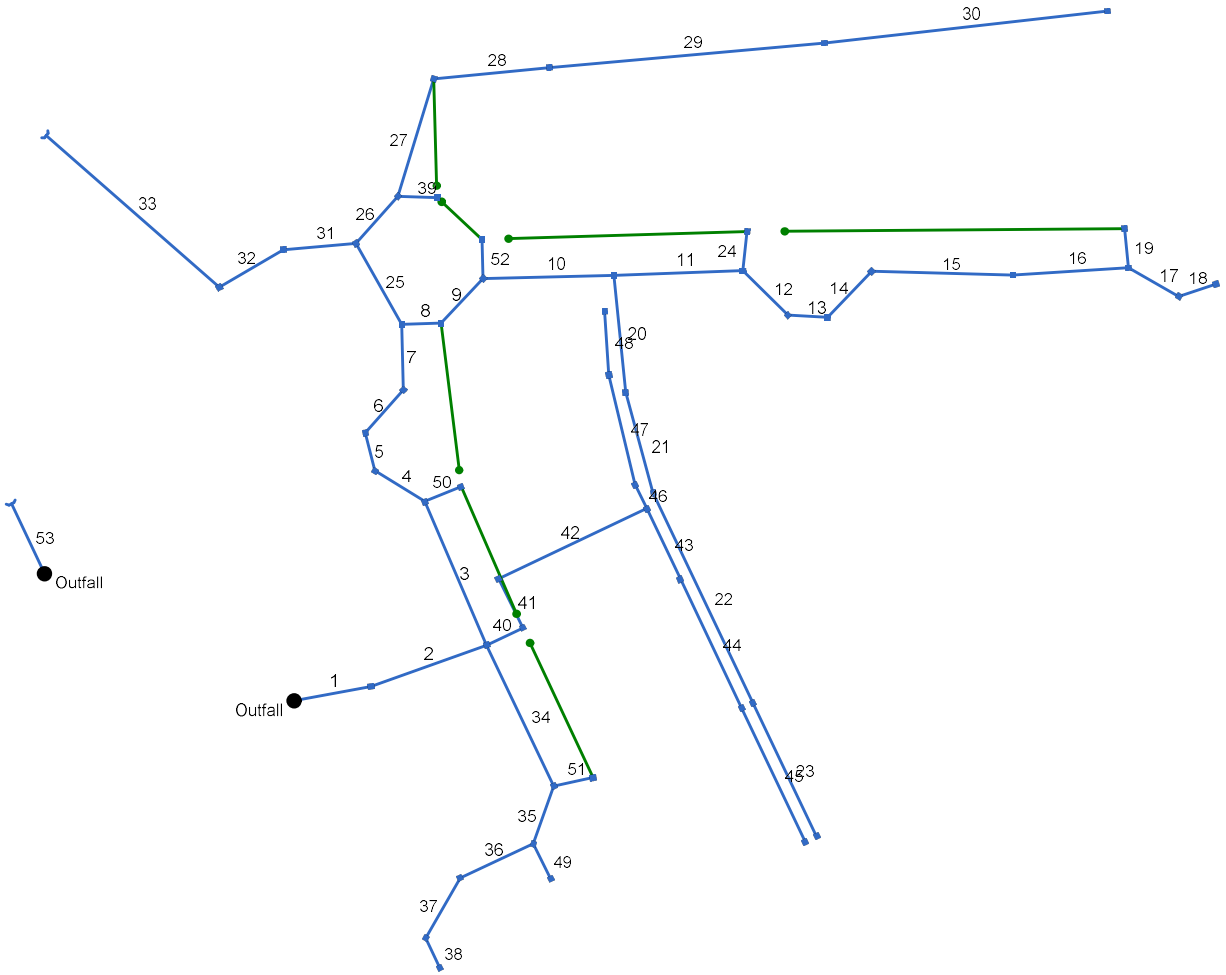
Storm Sewer Profile

SCM 1C 10-YEAR PROFILE 1-4

Proj. file: SCM 1C Storm Network.stm



Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: SCM 2 Storm Network.stm	Number of lines: 53	Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	55.641	-10.592	DrGrt	0.00	0.55	0.60	10.0	351.50	4.49	354.00	36	Cir	0.013	0.50	359.42	Pipe - (137)
2	1	87.767	-9.149	Comb	0.00	0.22	0.60	10.0	354.10	0.51	354.55	36	Cir	0.013	3.15	362.55	Pipe - (135)
3	2	112.122	-93.473	Comb	0.00	0.07	0.60	10.0	354.75	0.50	355.31	36	Cir	0.013	1.50	363.48	Pipe - (131)
4	3	41.788	-35.084	Comb	0.00	0.49	0.60	10.0	355.50	0.50	355.71	36	Cir	0.013	1.11	363.98	Pipe - (172)
5	4	28.013	44.313	Comb	0.00	0.29	0.60	10.0	355.81	0.50	355.95	36	Cir	0.013	1.28	363.99	Pipe - (171)
6	5	41.080	55.403	Comb	0.00	0.05	0.60	10.0	356.05	0.51	356.26	36	Cir	0.013	1.09	364.44	Pipe - (123)
7	6	46.931	-42.881	Comb	0.00	0.11	0.60	10.0	356.36	0.49	356.59	36	Cir	0.013	1.77	364.74	Pipe - (520)
8	7	28.000	89.726	Comb	0.00	0.06	0.60	10.0	357.10	0.50	357.24	24	Cir	0.013	1.13	364.74	Pipe - (521)
9	8	43.841	-45.000	Comb	0.00	0.08	0.60	10.0	357.34	0.50	357.56	24	Cir	0.013	1.69	365.56	Pipe - (122)
10	9	93.175	45.308	Comb	0.00	0.18	0.60	10.0	358.06	3.58	361.40	18	Cir	0.013	1.50	369.86	Pipe - (157) (1)
11	10	92.149	-0.611	Comb	0.00	0.06	0.60	10.0	361.50	5.97	367.00	18	Cir	0.013	1.49	375.02	Pipe - (157)
12	11	45.242	46.792	Comb	0.00	0.26	0.60	10.0	367.20	3.54	368.80	18	Cir	0.013	1.07	377.33	Pipe - (160)
13	12	28.241	-41.708	Comb	0.00	0.29	0.60	10.0	369.00	1.06	369.30	18	Cir	0.013	1.19	377.80	Pipe - (162)
14	13	45.687	-49.362	Comb	0.00	0.06	0.60	10.0	369.40	6.13	372.20	18	Cir	0.013	1.17	380.34	Pipe - (168)
15	14	100.604	47.950	Comb	0.00	0.04	0.60	10.0	372.45	5.22	377.70	15	Cir	0.013	0.50	385.71	Pipe - (156)
16	15	82.671	-5.332	Comb	0.00	0.05	0.60	10.0	377.80	3.87	381.00	15	Cir	0.013	1.50	388.96	Pipe - (143)
17	16	41.477	33.551	Comb	0.00	0.15	0.60	10.0	381.20	2.41	382.20	15	Cir	0.013	1.18	390.18	Pipe - (138)
18	17	28.000	-48.574	Comb	0.00	0.22	0.60	10.0	382.30	1.00	382.58	15	Cir	0.013	1.00	390.18	Pipe - (158)
19	16	28.132	-92.136	Comb	0.00	0.11	0.60	10.0	381.20	0.50	381.34	15	Cir	0.013	1.00	388.99	Pipe - (167)
20	10	84.227	85.677	DrGrt	0.00	0.04	0.60	10.0	361.65	9.02	369.25	15	Cir	0.013	0.50	376.84	Pipe - (631)
21	20	74.539	-9.548	DrGrt	0.00	0.34	0.60	10.0	369.35	1.01	370.10	15	Cir	0.013	0.50	376.49	Pipe - (630)
22	21	166.311	-10.004	DrGrt	0.00	0.24	0.60	10.0	370.20	0.96	371.80	15	Cir	0.013	0.50	378.16	Pipe - (628)
23	22	106.063	0.031	DrGrt	0.00	0.25	0.60	10.0	371.90	0.60	372.54	15	Cir	0.013	1.00	376.49	Pipe - (706)

Project File: SCM 2 Storm Network.stm | Number of lines: 53 | Date: 8/4/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
24	11	28.251	-81.849	Comb	0.00	0.28	0.60	10.0	367.25	0.50	367.39	15	Cir	0.013	1.00	375.23	Pipe - (161)
25	7	66.604	-27.920	Comb	0.00	0.14	0.60	10.0	357.60	0.50	357.93	30	Cir	0.013	2.09	365.30	Pipe - (524)
26	25	45.065	70.943	Comb	0.00	0.04	0.60	10.0	358.15	0.51	358.38	24	Cir	0.013	1.21	365.58	Pipe - (522)
27	26	87.915	-24.725	Comb	0.00	0.04	0.60	10.0	358.58	0.50	359.02	24	Cir	0.013	1.41	365.35	Pipe - (238)
28	27	82.566	67.583	DrGrt	0.00	0.86	0.60	10.0	359.20	0.97	360.00	18	Cir	0.013	0.50	364.22	Pipe - (237)
29	28	197.312	0.434	DrGrt	0.00	0.59	0.60	10.0	360.20	2.58	365.30	18	Cir	0.013	0.50	371.55	Pipe - (216)
30	29	203.129	-1.314	DrGrt	0.00	0.82	0.60	10.0	365.40	3.01	371.51	18	Cir	0.013	1.00	376.52	Pipe - (217)
31	25	51.995	-65.768	MH	0.00	0.00	0.00	0.0	358.18	0.50	358.44	18	Cir	0.013	0.48	365.42	Pipe - (696) (1)
32	31	52.903	-25.160	MH	0.00	0.00	0.00	0.0	358.55	0.51	358.82	18	Cir	0.013	0.96	365.62	Pipe - (696)
33	32	164.382	71.654	Hdwl	0.00	1.00	0.60	10.0	359.07	0.50	359.89	15	Cir	0.013	1.00	361.14	Pipe - (695)
34	2	111.705	84.397	Comb	0.00	0.08	0.60	10.0	355.05	0.50	355.61	24	Cir	0.013	1.47	363.57	Pipe - (180)
35	34	43.844	45.036	Comb	0.00	0.15	0.60	10.0	356.36	0.55	356.60	15	Cir	0.013	1.15	364.75	Pipe - (178)
36	35	57.443	44.868	Comb	0.00	0.13	0.60	10.0	356.80	1.91	357.90	15	Cir	0.013	0.94	365.63	Pipe - (177)
37	36	49.489	-34.827	MH	0.00	0.00	0.00	0.0	358.10	1.01	358.60	15	Cir	0.013	0.85	366.43	Pipe - (658)
38	37	23.641	-55.037	DrGrt	0.00	0.12	0.60	10.0	358.70	11.21	361.35	15	Cir	0.013	1.00	365.00	Pipe - (657)
39	26	28.058	50.378	Comb	0.00	0.05	0.60	10.0	358.63	0.50	358.77	18	Cir	0.013	1.00	365.59	Pipe - (523)
40	2	28.538	-5.713	Comb	0.00	0.29	0.60	10.0	355.80	0.49	355.94	30	Cir	0.013	1.50	362.65	Pipe - (132) (1)
41	40	39.389	-90.519	MH	0.00	0.69	0.60	10.0	356.05	0.63	356.30	24	Cir	0.013	1.00	362.75	Pipe - (132)
42	41	116.936	90.528	MH	0.00	0.23	0.60	10.0	356.40	0.51	357.00	18	Cir	0.013	1.00	362.27	Pipe - (682)
43	42	56.289	89.981	DrGrt	0.00	0.25	0.60	10.0	357.20	0.71	357.60	15	Cir	0.013	0.50	361.89	Pipe - (683)
44	43	101.921	0.181	DrGrt	0.00	0.20	0.60	10.0	357.70	0.59	358.30	15	Cir	0.013	0.50	362.74	Pipe - (698)
45	44	106.000	0.011	DrGrt	0.00	0.15	0.60	10.0	358.40	2.15	360.68	15	Cir	0.013	1.00	365.12	Pipe - (697)
46	42	19.124	-89.826	DrGrt	0.00	0.10	0.60	10.0	357.20	1.05	357.40	15	Cir	0.013	0.50	361.93	Pipe - (681)

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
47	46	80.726	11.799	DrGrt	0.00	0.13	0.60	10.0	357.50	0.93	358.25	15	Cir	0.013	0.50	363.59	Pipe - (680)
48	47	45.513	9.831	DrGrt	0.00	0.09	0.60	10.0	358.35	3.47	359.93	15	Cir	0.013	1.00	364.84	Pipe - (679)
49	35	28.005	-46.494	Comb	0.00	0.32	0.60	10.0	356.80	1.00	357.08	15	Cir	0.013	1.00	364.78	Pipe - (556)
50	3	28.141	90.903	Comb	0.00	0.17	0.60	10.0	356.55	0.50	356.69	15	Cir	0.013	1.00	363.49	Pipe - (173)
51	34	28.755	-76.802	Comb	0.00	0.12	0.60	10.0	356.36	0.49	356.50	15	Cir	0.013	1.00	363.70	Pipe - (179)
52	9	28.020	-45.030	Comb	0.00	0.25	0.60	10.0	358.31	0.50	358.45	15	Cir	0.013	1.00	365.65	209A
53	End	55.276	-115.126	Hdwl	0.00	0.55	0.60	10.0	354.31	8.85	359.20	18	Cir	0.013	1.00	360.99	Pipe - (581)

Project File: SCM 2 Storm Network.stm | Number of lines: 53 | Date: 8/4/2025

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	YI 201	DropGrate	359.42	Rect	4.00	4.00	36	Cir	354.00	36	Cir	354.10
2	CB 202	Combination	362.55	Rect	4.00	4.00	36	Cir	354.55	36 24 30	Cir Cir Cir	354.75 355.05 355.80
3	CB 203	Combination	363.48	Rect	4.00	4.00	36	Cir	355.31	36 15	Cir Cir	355.50 356.55
4	CB 204	Combination	363.98	Rect	4.00	4.00	36	Cir	355.71	36	Cir	355.81
5	CB 205	Combination	363.99	Rect	4.00	4.00	36	Cir	355.95	36	Cir	356.05
6	CB 206	Combination	364.44	Rect	4.00	4.00	36	Cir	356.26	36	Cir	356.36
7	CB 207	Combination	364.74	Rect	4.00	4.00	36	Cir	356.59	24 30	Cir Cir	357.10 357.60
8	CB 208	Combination	364.74	Rect	4.00	4.00	24	Cir	357.24	24	Cir	357.34
9	CB 209	Combination	365.56	Rect	4.00	4.00	24	Cir	357.56	18 15	Cir Cir	358.06 358.31
10	CB 210	Combination	369.86	Rect	4.00	4.00	18	Cir	361.40	18 15	Cir Cir	361.50 361.65
11	CB 211	Combination	375.02	Rect	4.00	4.00	18	Cir	367.00	18 15	Cir Cir	367.20 367.25
12	CB 212	Combination	377.33	Rect	4.00	4.00	18	Cir	368.80	18	Cir	369.00
13	CB 213	Combination	377.80	Rect	4.00	4.00	18	Cir	369.30	18	Cir	369.40
14	CB 214	Combination	380.34	Rect	4.00	4.00	18	Cir	372.20	15	Cir	372.45
15	CB 215	Combination	385.71	Rect	4.00	4.00	15	Cir	377.70	15	Cir	377.80
16	CB 216	Combination	388.96	Rect	4.00	4.00	15	Cir	381.00	15 15	Cir Cir	381.20 381.20
17	CB 217	Combination	390.18	Rect	4.00	4.00	15	Cir	382.20	15	Cir	382.30
18	CB 217A	Combination	390.18	Rect	4.00	4.00	15	Cir	382.58			
19	CB 216A	Combination	388.99	Rect	4.00	4.00	15	Cir	381.34			