Hydrographs Peak Flowrate Summary (cfs)
Existing vs. Proposed

Storm Event	2yr		10yr		25yr		50yr		100yr	
	Exist	**Prop**	**Exist**	**Prop**	**Exist**	**Prop**	**Exist**	**Prop**	**Exist**	**Prop**
Analysis Point A	7.0	5.1	11.6	8.5	14.4	12.3	16.5	15.9	18.7	18.3
DET 110 W.S. Elev. (ft) Top Elev. of Stone Above Chambers = 621.5	-	620.0	-	621.2	-	621.5	-	621.5	-	621.5

Analysis Point	**Description**
A	Drainage in Pembroke Road (Rt. 37)

Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Monday, 09 / 20 / 2021

Pond No. 1 - UG 110

Pond Data

UG Chambers -Invert elev. = 618.50 ft, Rise x Span = 2.50 x 4.25 ft, Barrel Len = 7.12 ft, No. Barrels = 41, Slope = 0.00%, Headers = No
Encasement -Invert elev. = 618.00 ft, Width = 4.25 ft, Height = 3.50 ft, Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	618.00	n/a	0	0
0.35	618.35	n/a	174	174
0.70	618.70	n/a	323	496
1.05	619.05	n/a	434	931
1.40	619.40	n/a	434	1,365
1.75	619.75	n/a	434	1,799
2.10	620.10	n/a	434	2,234
2.45	620.45	n/a	434	2,668
2.80	620.80	n/a	434	3,102
3.15	621.15	n/a	323	3,425
3.50	621.50	n/a	174	3,599

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	0.00	0.00	0.00
Span (in)	= 15.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 618.00	0.00	0.00	0.00
Length (ft)	= 19.00	0.00	0.00	0.00
Slope (%)	= 1.05	0.00	0.00	n/a
N-Value	= .012	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.00	0.00	0.00	0.00
Crest El. (ft)	= 621.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= Yes	No	No	No

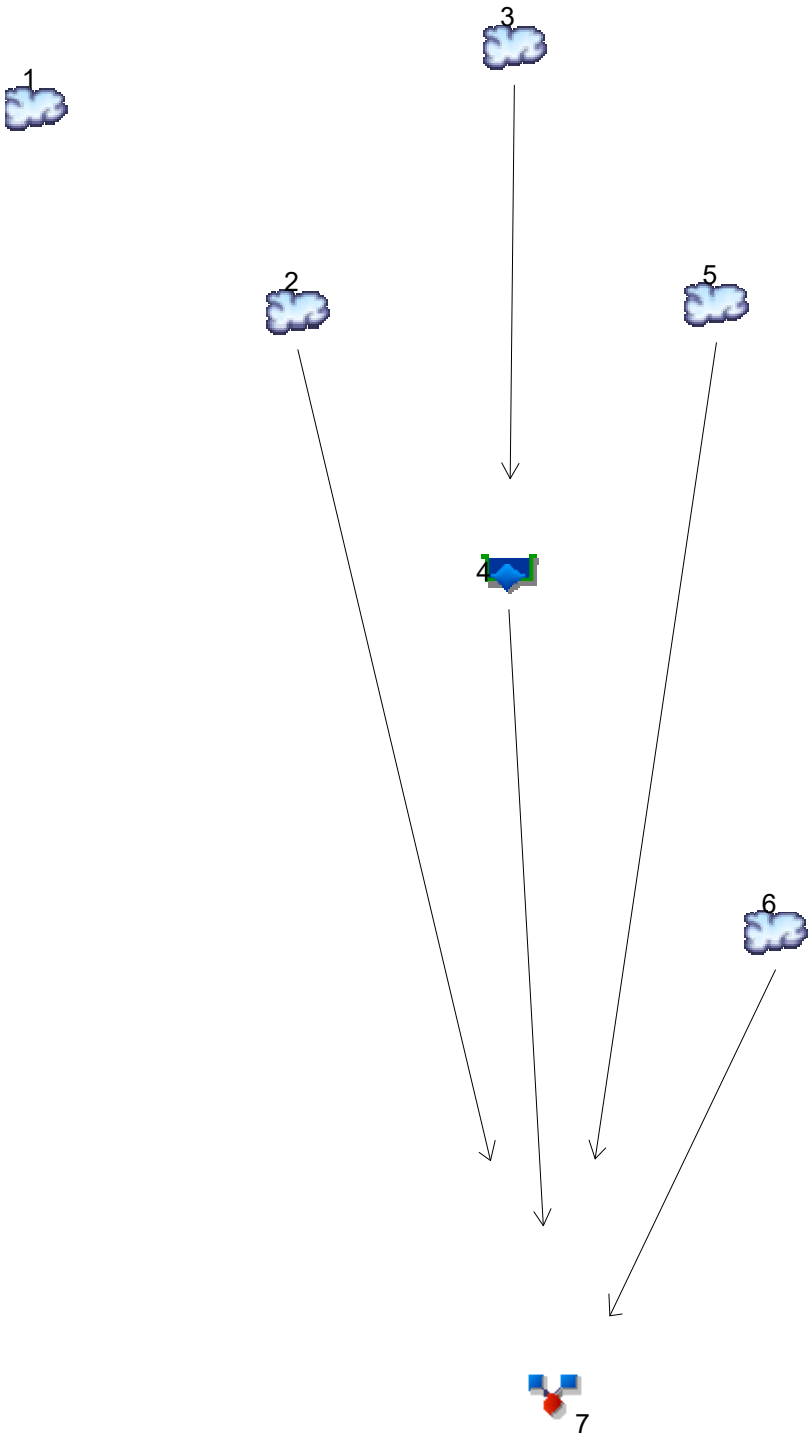
Exfil.(in/hr) = 6.000 (by Wet area)
TW Elev. (ft) = 0.00

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	618.00	0.00	---	---	---	0.00	---	---	---	0.000	---	0.000
0.35	174	618.35	0.00	---	---	---	0.00	---	---	---	0.201	---	0.201
0.70	496	618.70	0.00	---	---	---	0.00	---	---	---	0.229	---	0.229
1.05	931	619.05	0.00	---	---	---	0.00	---	---	---	0.257	---	0.257
1.40	1,365	619.40	0.00	---	---	---	0.00	---	---	---	0.286	---	0.286
1.75	1,799	619.75	0.00	---	---	---	0.00	---	---	---	0.314	---	0.314
2.10	2,234	620.10	0.00	---	---	---	0.00	---	---	---	0.343	---	0.343
2.45	2,668	620.45	0.00	---	---	---	0.00	---	---	---	0.371	---	0.371
2.80	3,102	620.80	0.00	---	---	---	0.00	---	---	---	0.399	---	0.399
3.15	3,425	621.15	0.77 ic	---	---	---	0.77	---	---	---	0.428	---	1.202
3.50	3,599	621.50	4.71 oc	---	---	---	4.71	---	---	---	0.456	---	5.165

Watershed Model Schematic



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	------	-------	7.039	-------	-------	11.59	14.41	16.48	18.72	EXWS-10 / A
2	SCS Runoff	------	-------	2.915	-------	-------	4.863	6.065	6.949	7.907	PRWS-10
3	SCS Runoff	------	-------	1.808	-------	-------	2.911	3.593	4.096	4.642	PRWS-11
4	Reservoir	3	-------	0.000	-------	-------	0.573	2.593	4.162	0.000	DET 110
5	SCS Runoff	------	-------	1.429	-------	-------	2.416	3.025	3.474	3.959	PRWS-12
6	SCS Runoff	------	-------	0.715	-------	-------	1.208	1.513	1.737	1.979	PRWS-13
7	Combine	2, 4, 5, 6	-------	5.059	-------	-------	8.487	10.60	12.16	13.85	POA / A

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

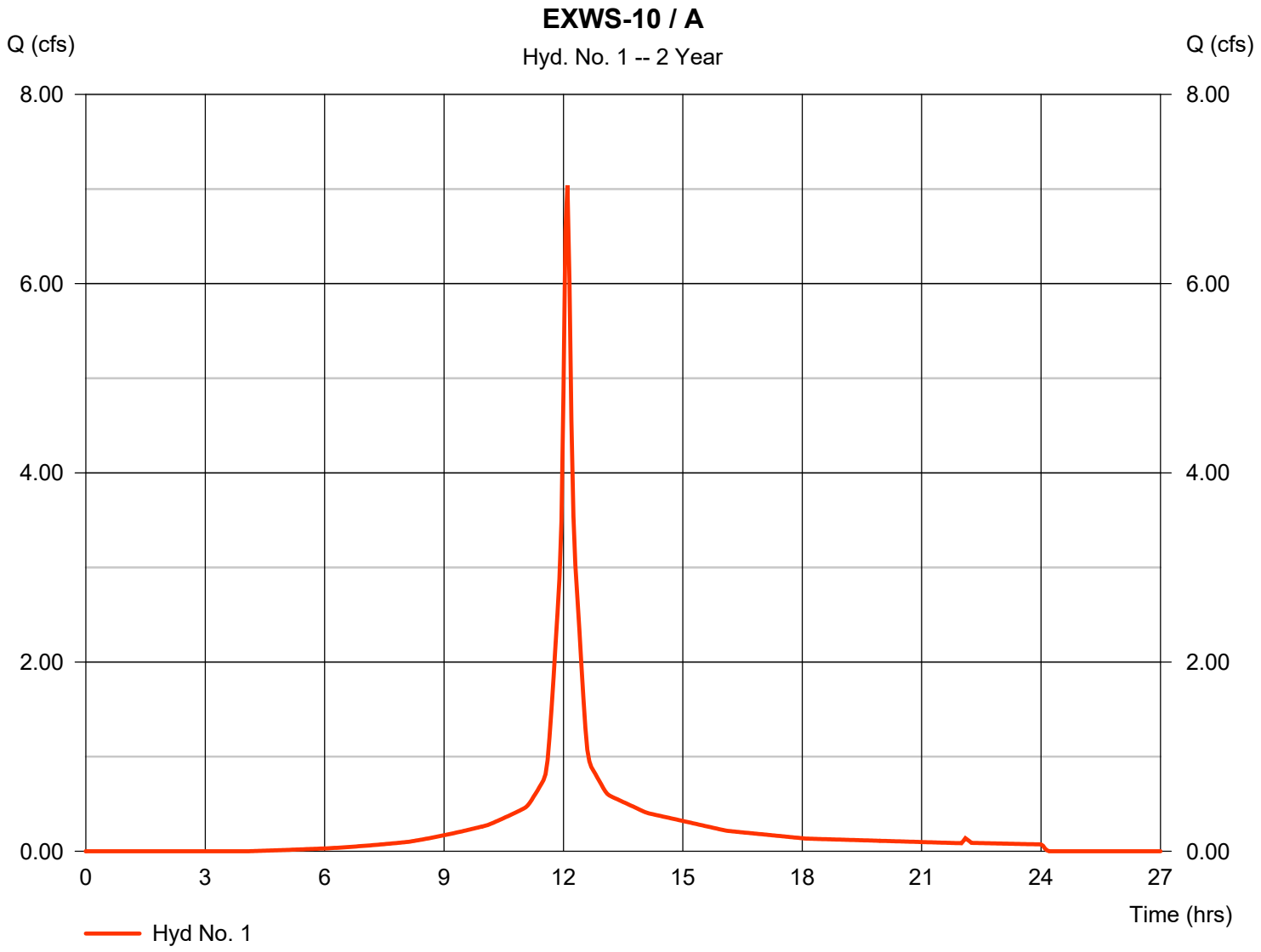
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.039	3	726	24,463	------	------	------	EXWS-10 / A
2	SCS Runoff	2.915	3	726	10,033	------	------	------	PRWS-10
3	SCS Runoff	1.808	3	726	6,444	------	------	------	PRWS-11
4	Reservoir	0.000	3	831	0	3	619.90	1,987	DET 110
5	SCS Runoff	1.429	3	726	4,879	------	------	------	PRWS-12
6	SCS Runoff	0.715	3	726	2,439	------	------	------	PRWS-13
7	Combine	5.059	3	726	17,351	2, 4, 5, 6	------	------	POA / A

Hydrograph Report

Hyd. No. 1

EXWS-10 / A

Hydrograph type	= SCS Runoff	Peak discharge	= 7.039 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 24,463 cuft
Drainage area	= 2.610 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.52 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

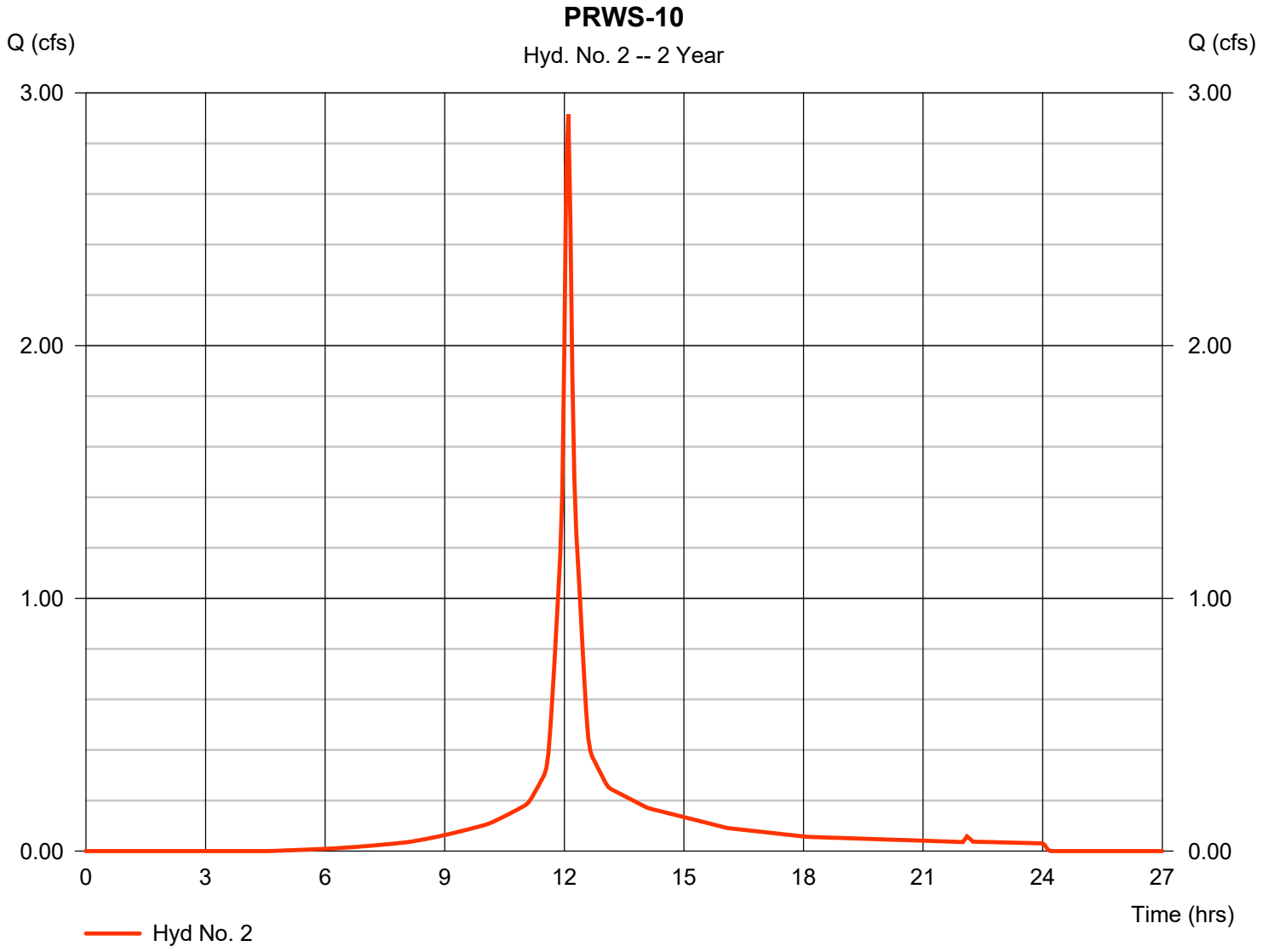


Hydrograph Report

Hyd. No. 2

PRWS-10

Hydrograph type	= SCS Runoff	Peak discharge	= 2.915 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 10,033 cuft
Drainage area	= 1.110 ac	Curve number	= 92
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.52 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

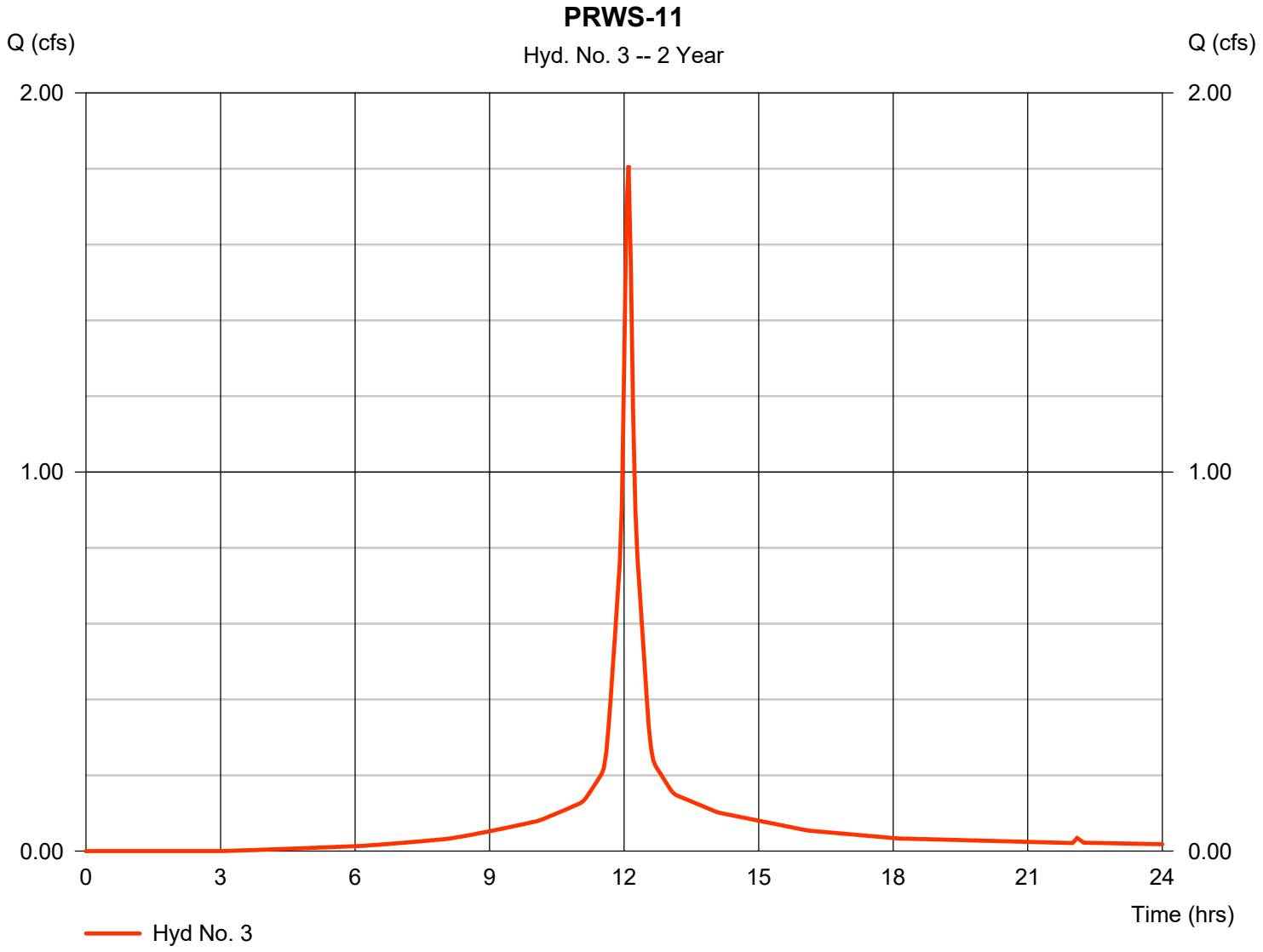


Hydrograph Report

Hyd. No. 3

PRWS-11

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.808 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	6,444 cuft
Drainage area	=	0.640 ac	Curve number	=	95
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.52 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

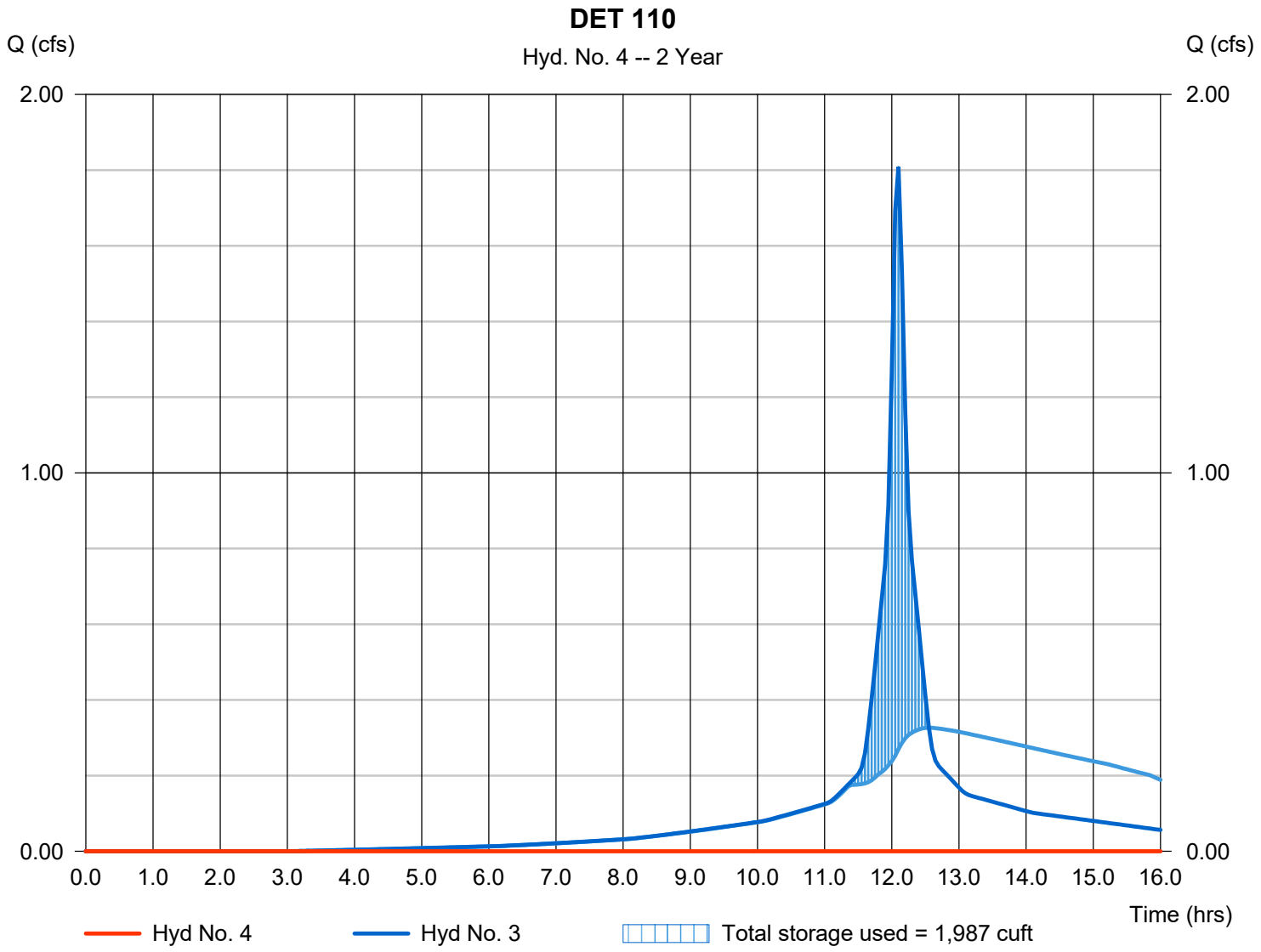
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Monday, 09 / 20 / 2021

Hyd. No. 4

DET 110

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	2 yrs	Time to peak	=	13.85 hrs
Time interval	=	3 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	3 - PRWS-11	Max. Elevation	=	619.90 ft
Reservoir name	=	UG 110	Max. Storage	=	1,987 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

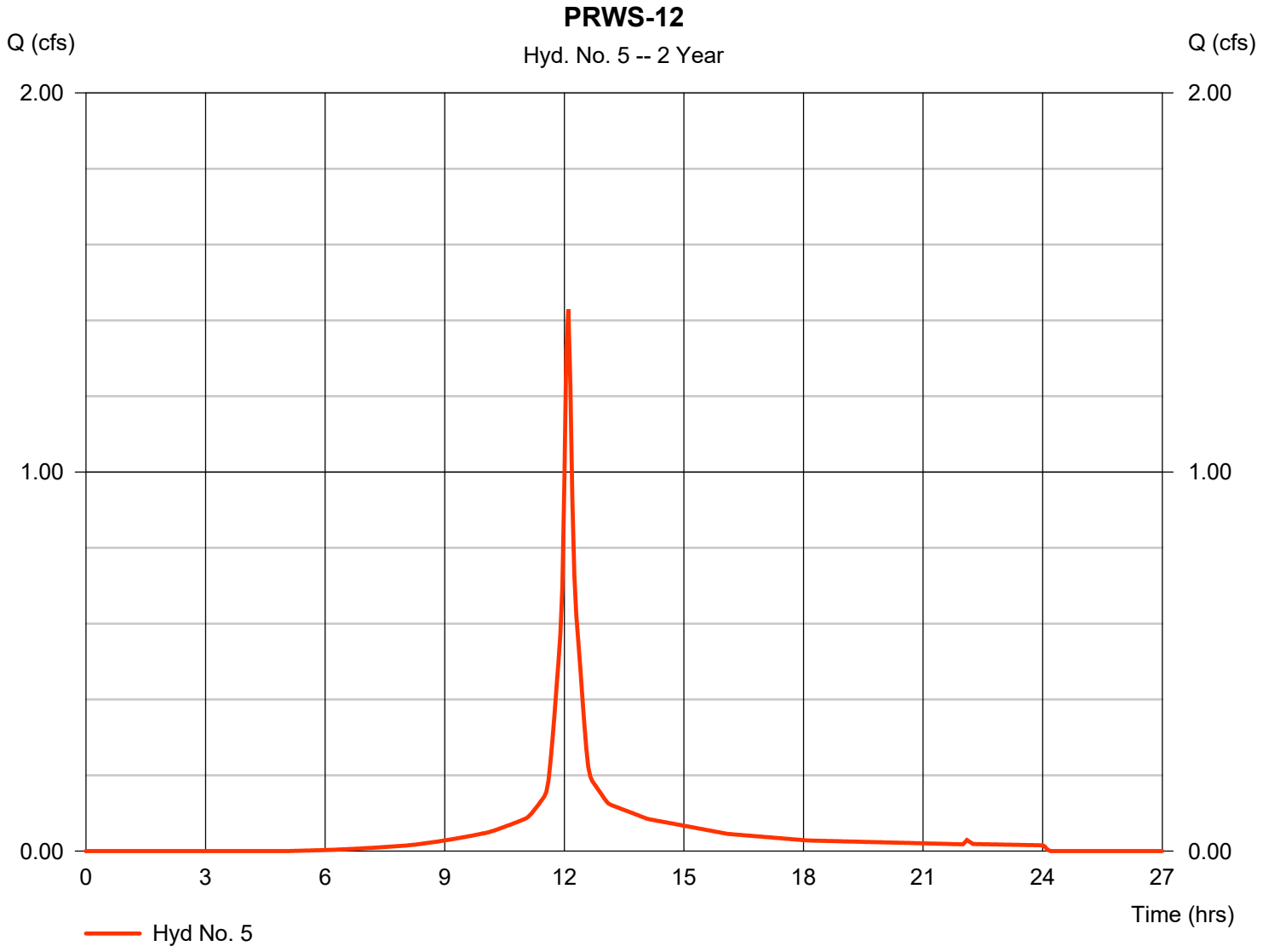


Hydrograph Report

Hyd. No. 5

PRWS-12

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.429 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	4,879 cuft
Drainage area	=	0.560 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.52 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

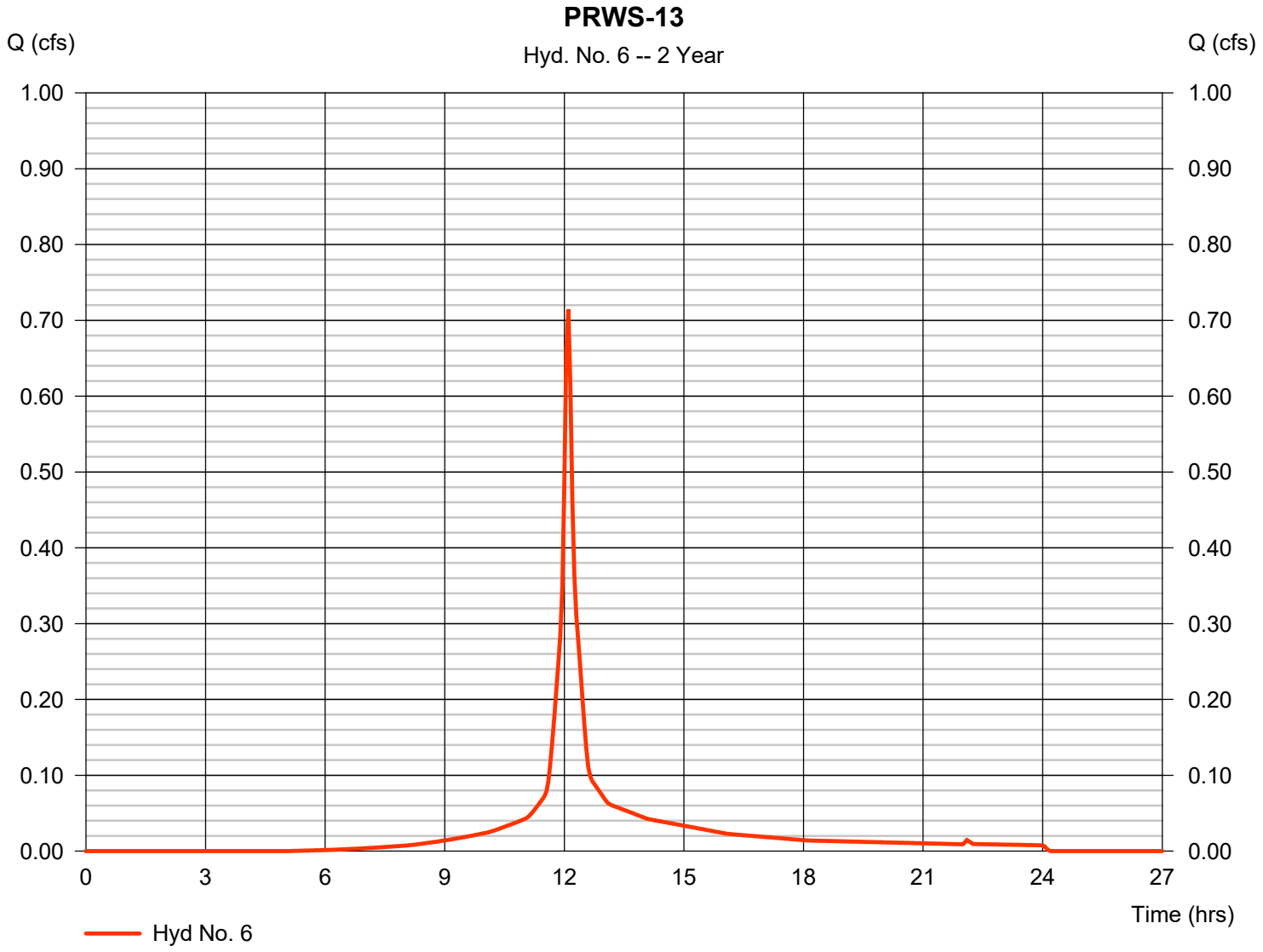


Hydrograph Report

Hyd. No. 6

PRWS-13

Hydrograph type	= SCS Runoff	Peak discharge	= 0.715 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 2,439 cuft
Drainage area	= 0.280 ac	Curve number	= 91
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.52 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

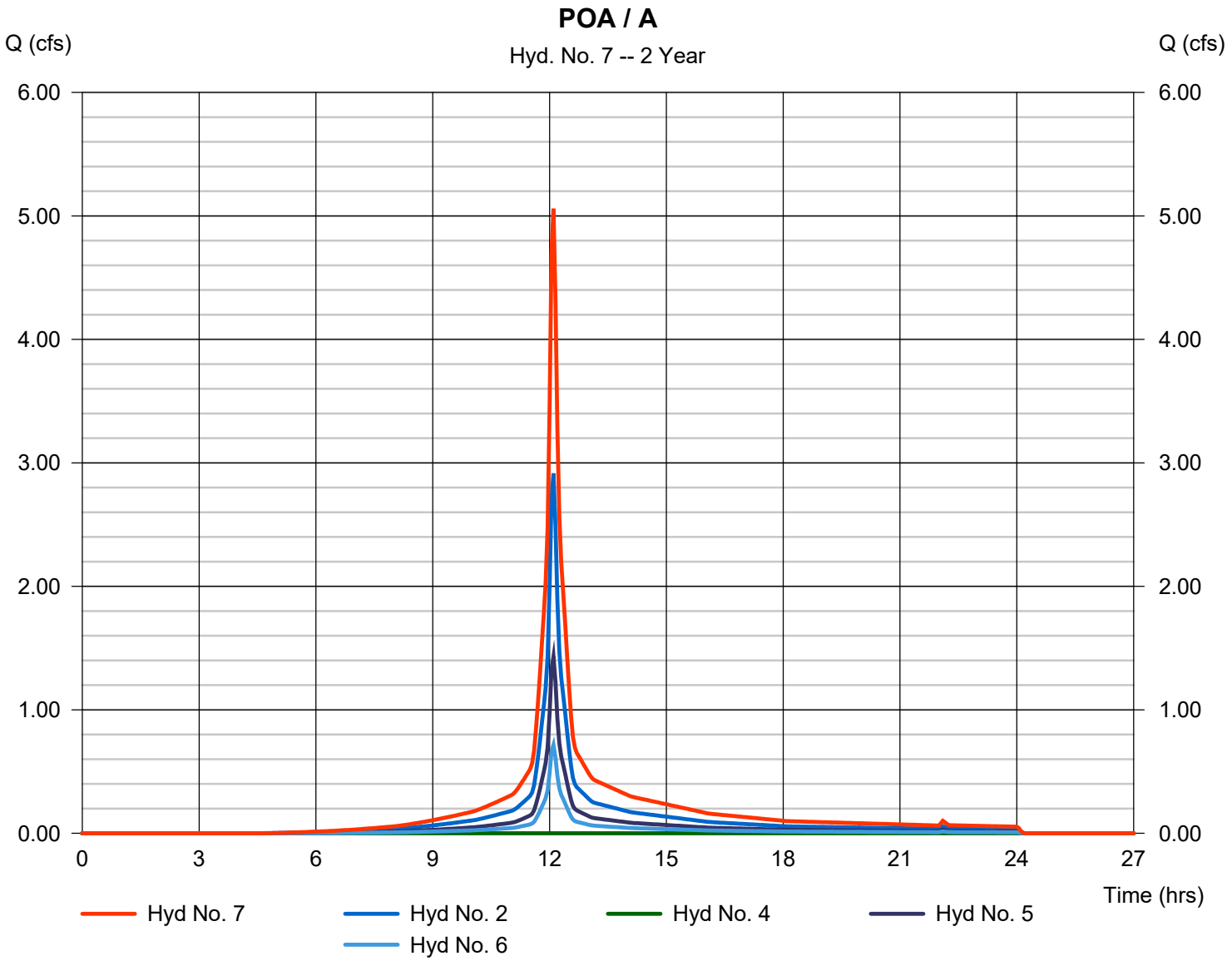


Hydrograph Report

Hyd. No. 7

POA / A

Hydrograph type	=	Combine	Peak discharge	=	5.059 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	17,351 cuft
Inflow hyds.	=	2, 4, 5, 6	Contrib. drain. area	=	1.950 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

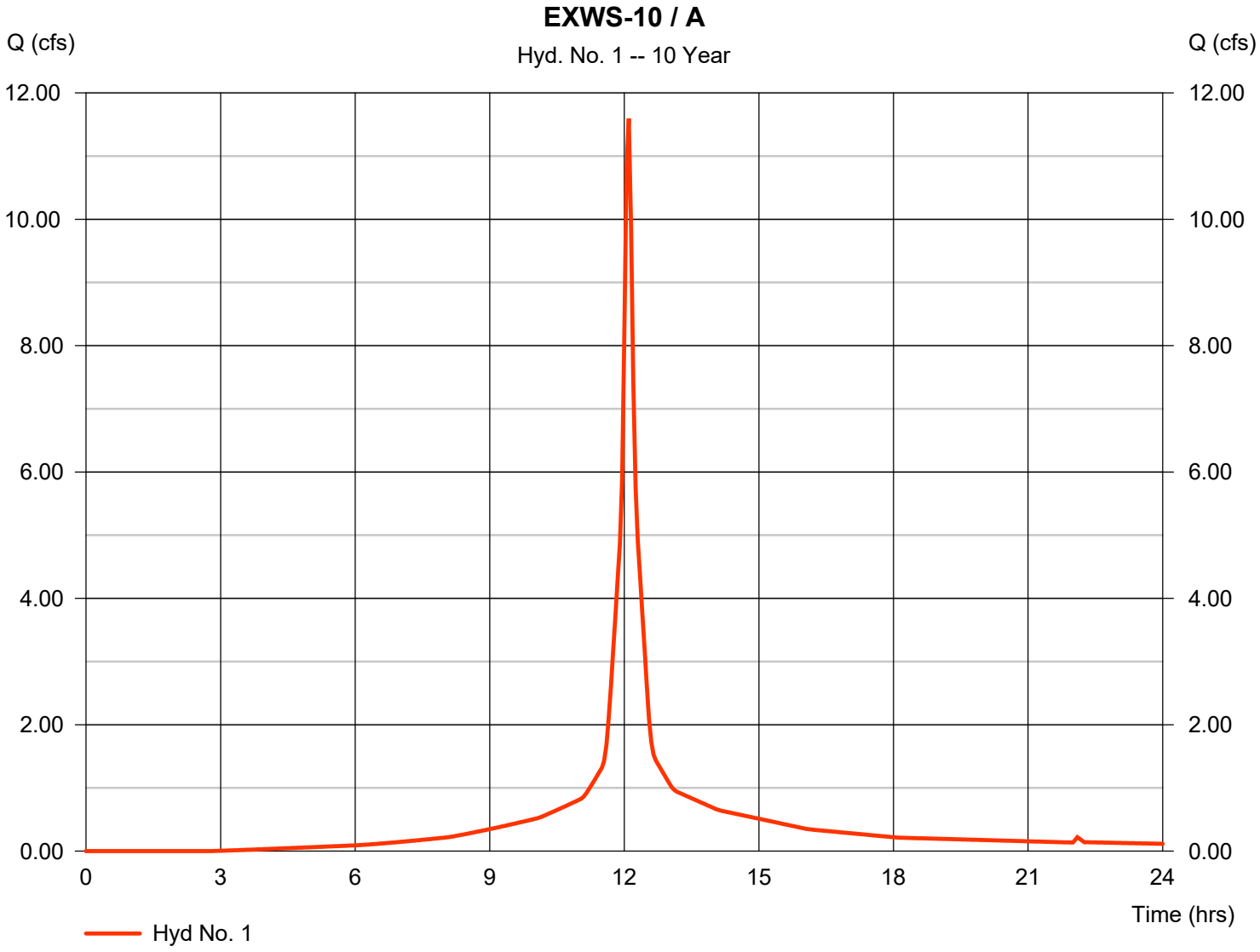
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	11.59	3	726	41,566	------	------	------	EXWS-10 / A
2	SCS Runoff	4.863	3	726	17,258	------	------	------	PRWS-10
3	SCS Runoff	2.911	3	726	10,684	------	------	------	PRWS-11
4	Reservoir	0.573	3	744	429	3	621.13	3,400	DET 110
5	SCS Runoff	2.416	3	726	8,498	------	------	------	PRWS-12
6	SCS Runoff	1.208	3	726	4,249	------	------	------	PRWS-13
7	Combine	8.487	3	726	30,005	2, 4, 5, 6	------	------	POA / A

Hydrograph Report

Hyd. No. 1

EXWS-10 / A

Hydrograph type	= SCS Runoff	Peak discharge	= 11.59 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 41,566 cuft
Drainage area	= 2.610 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.49 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

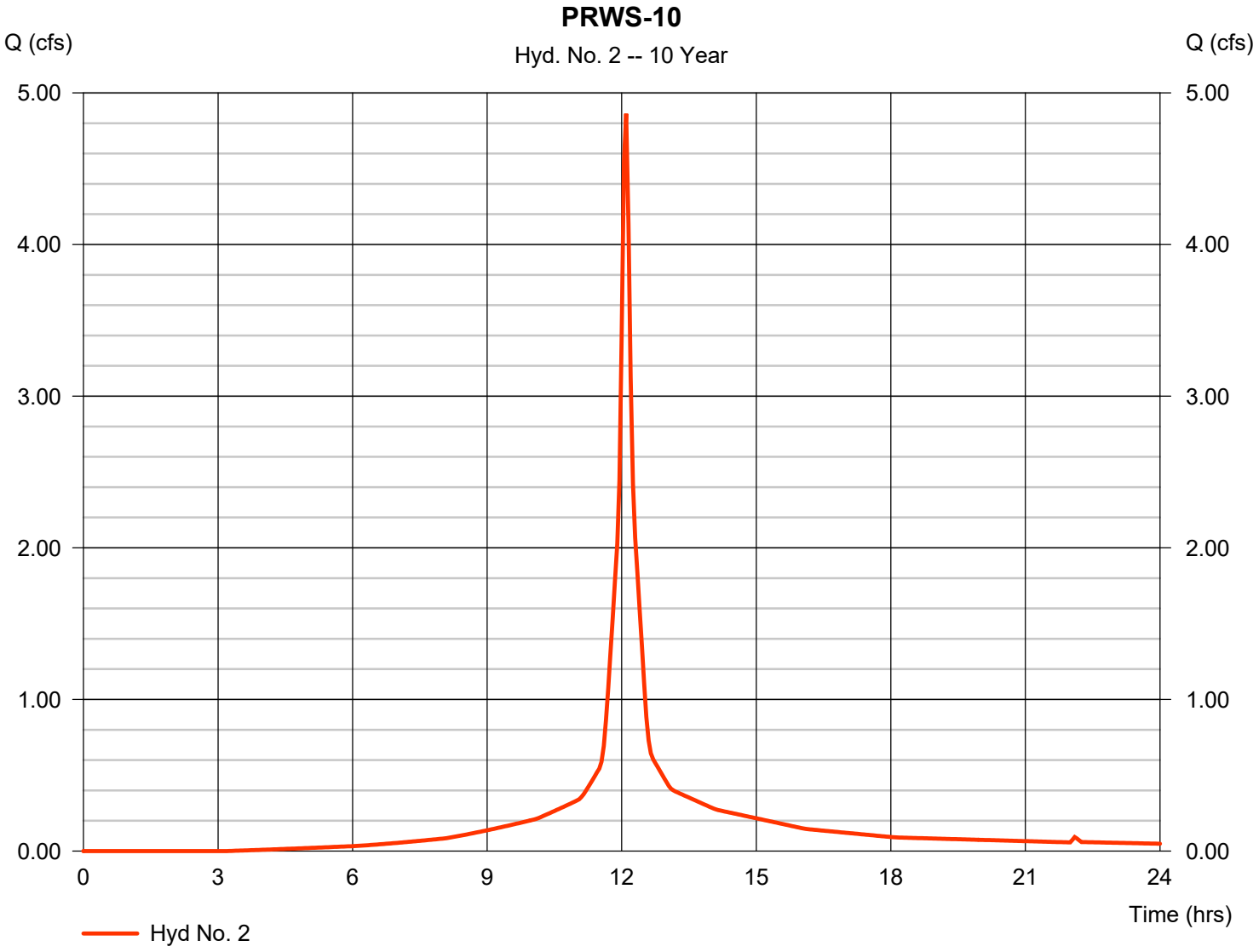


Hydrograph Report

Hyd. No. 2

PRWS-10

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.863 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	17,258 cuft
Drainage area	=	1.110 ac	Curve number	=	92
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.49 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

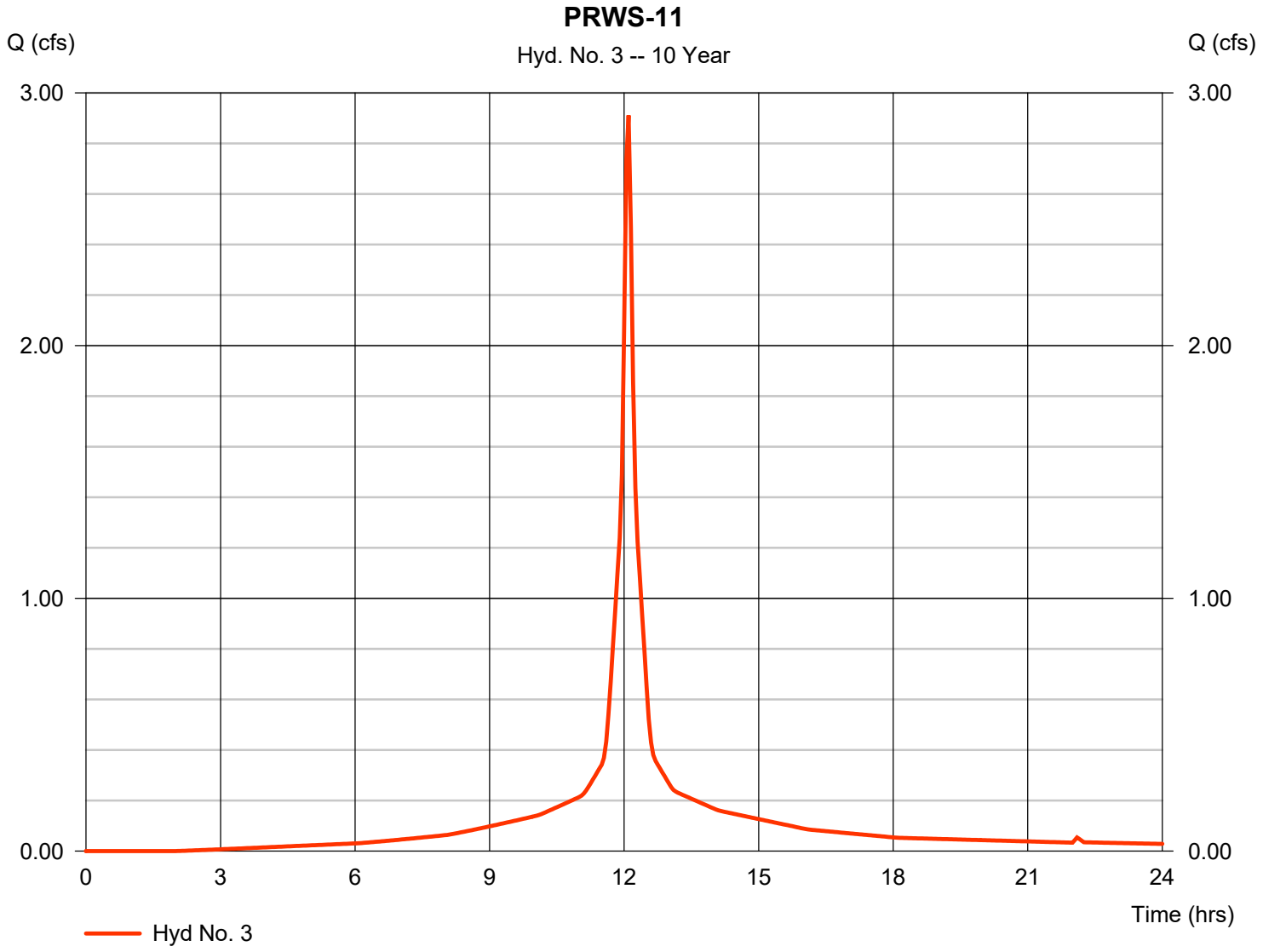


Hydrograph Report

Hyd. No. 3

PRWS-11

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.911 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	10,684 cuft
Drainage area	=	0.640 ac	Curve number	=	95
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.49 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



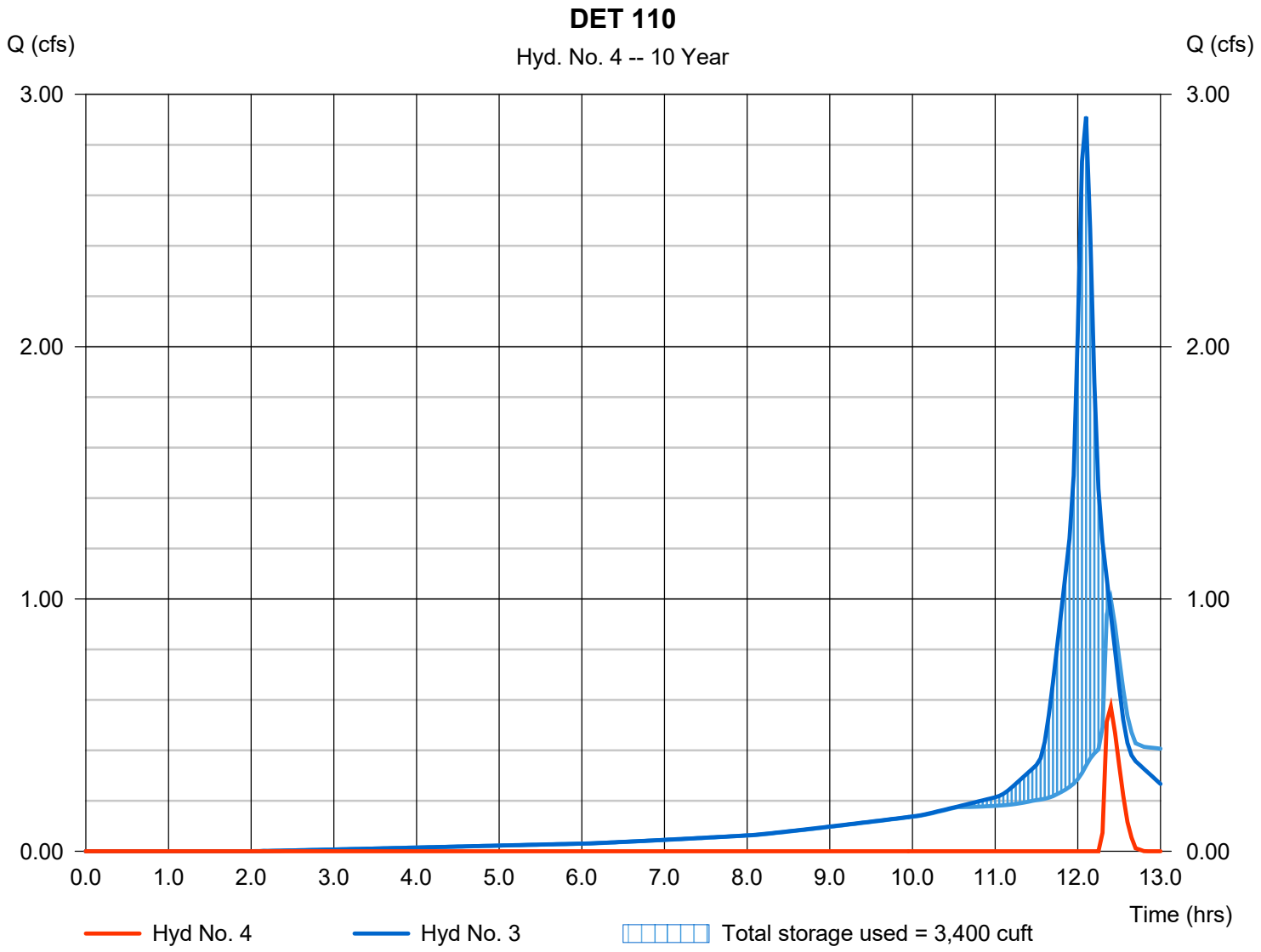
Hydrograph Report

Hyd. No. 4

DET 110

Hydrograph type	=	Reservoir	Peak discharge	=	0.573 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.40 hrs
Time interval	=	3 min	Hyd. volume	=	429 cuft
Inflow hyd. No.	=	3 - PRWS-11	Max. Elevation	=	621.13 ft
Reservoir name	=	UG 110	Max. Storage	=	3,400 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

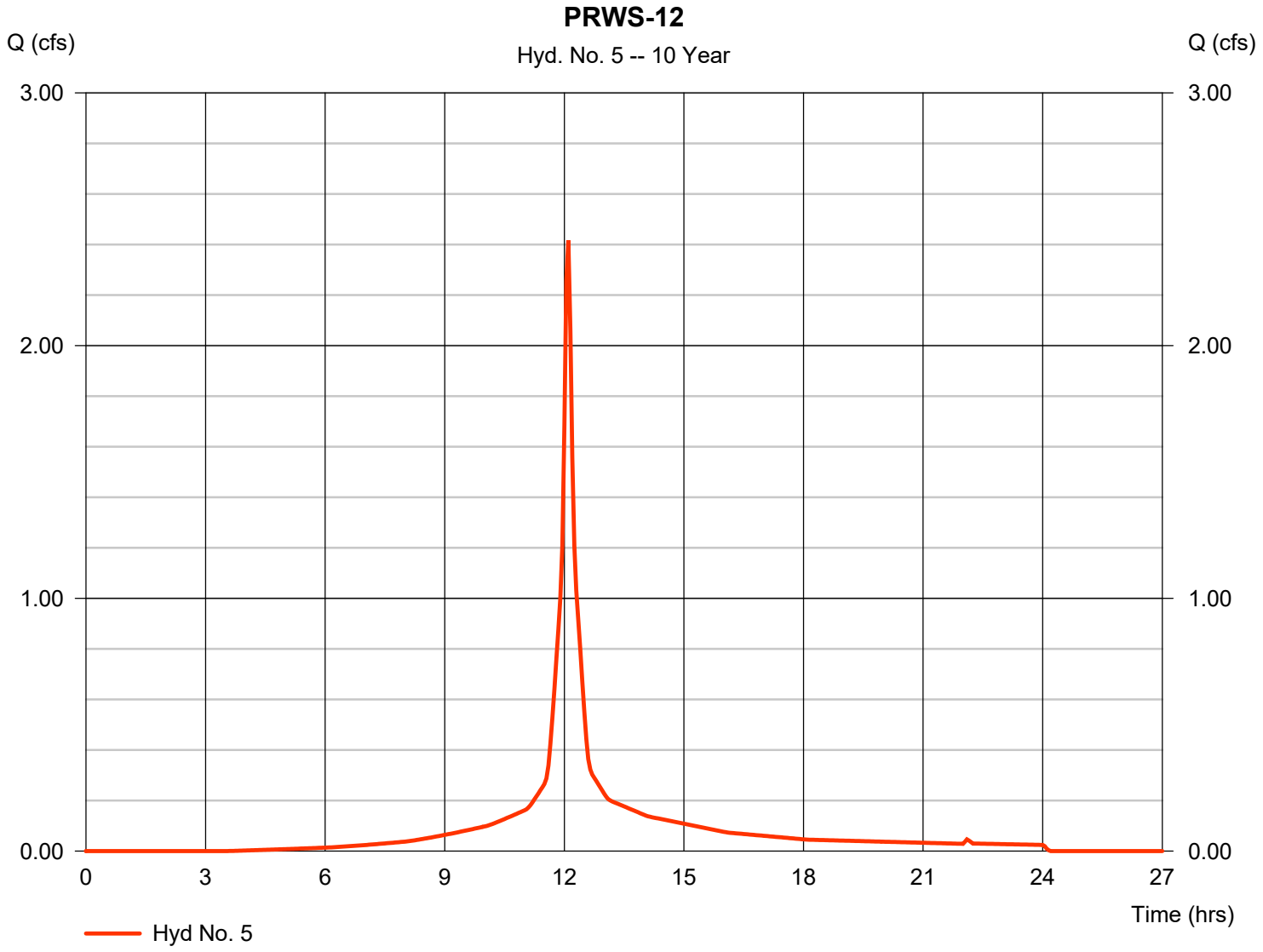


Hydrograph Report

Hyd. No. 5

PRWS-12

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.416 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	8,498 cuft
Drainage area	=	0.560 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.49 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

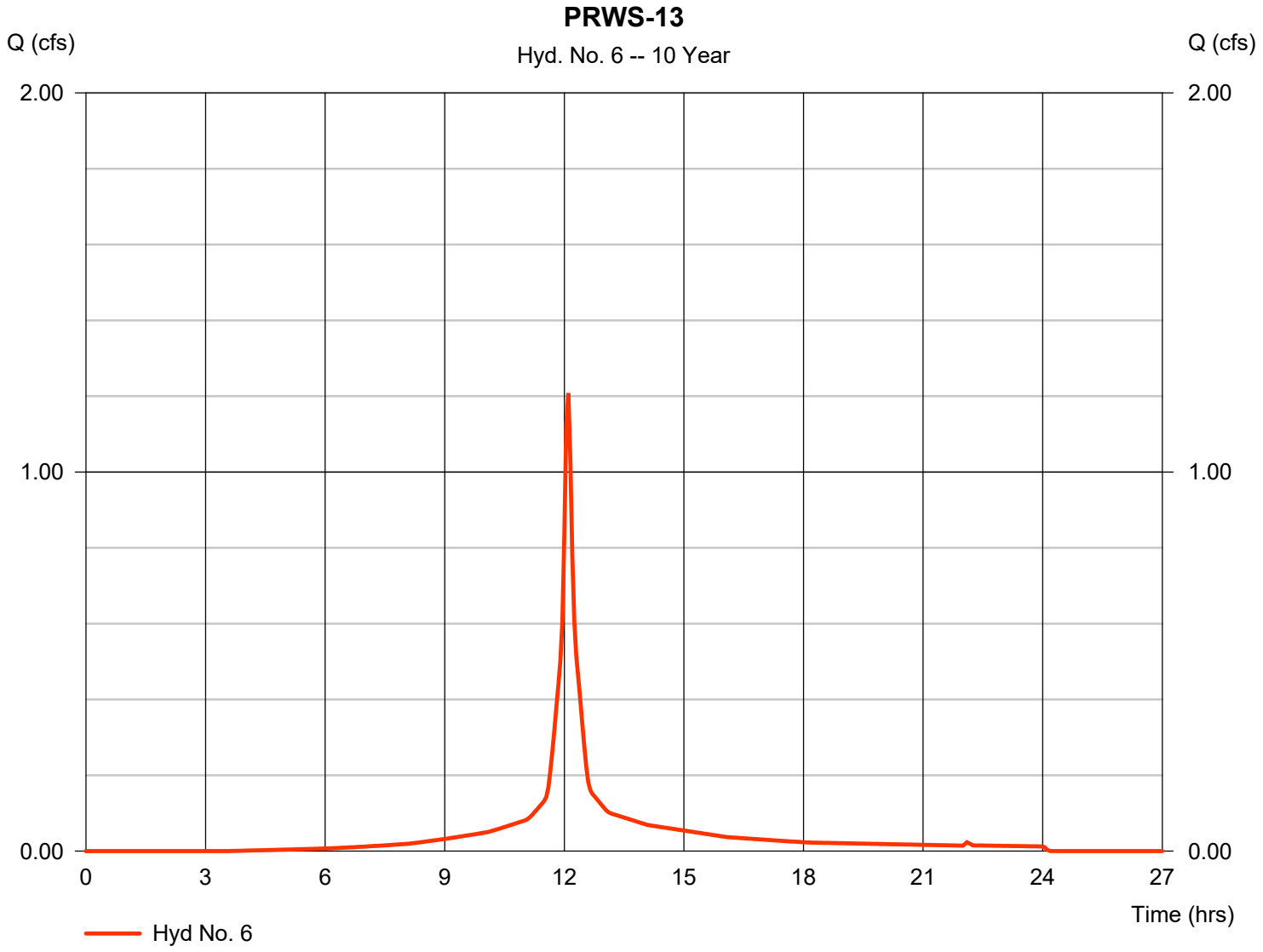


Hydrograph Report

Hyd. No. 6

PRWS-13

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.208 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	4,249 cuft
Drainage area	=	0.280 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.49 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

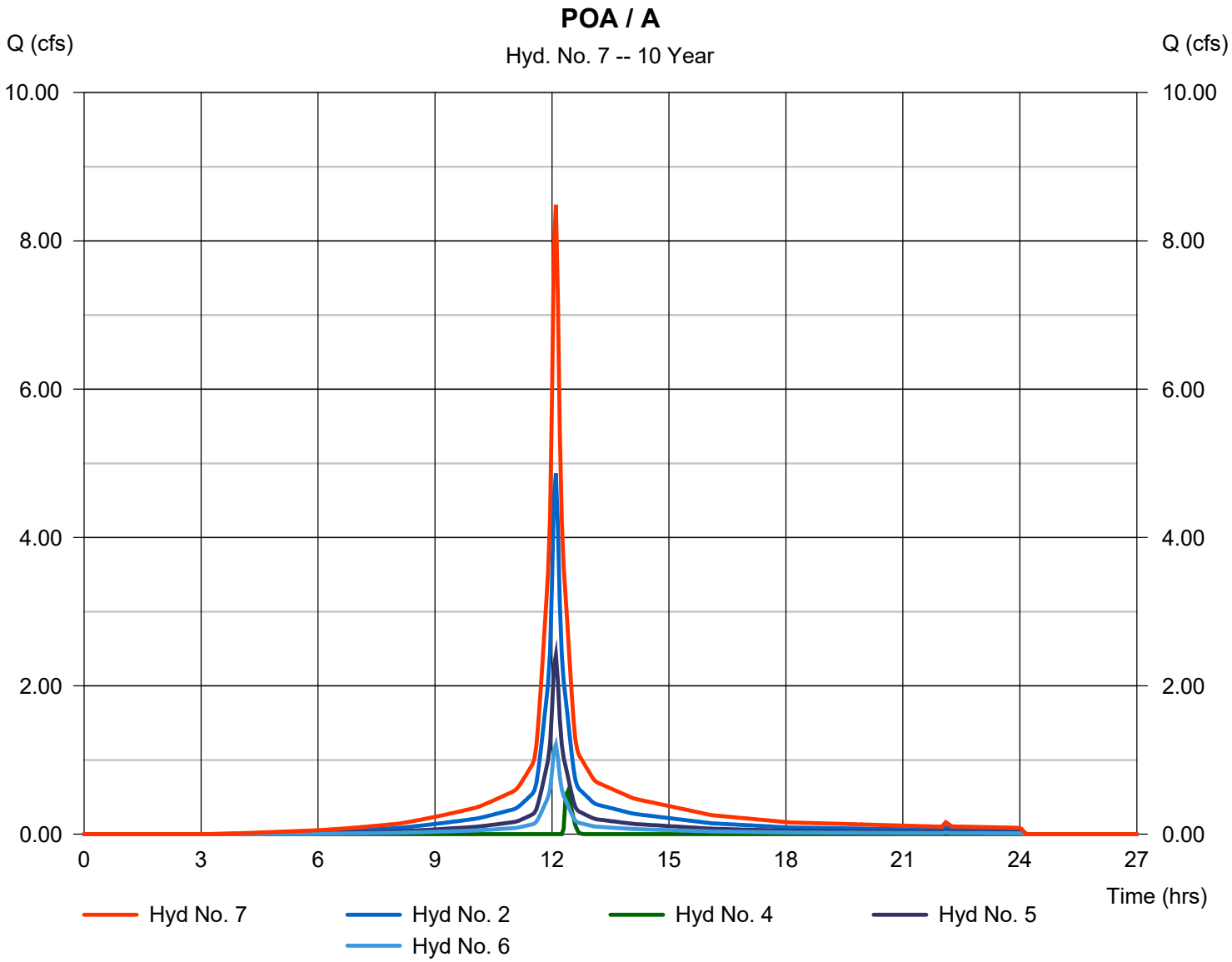


Hydrograph Report

Hyd. No. 7

POA / A

Hydrograph type	=	Combine	Peak discharge	=	8.487 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	30,005 cuft
Inflow hyds.	=	2, 4, 5, 6	Contrib. drain. area	=	1.950 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

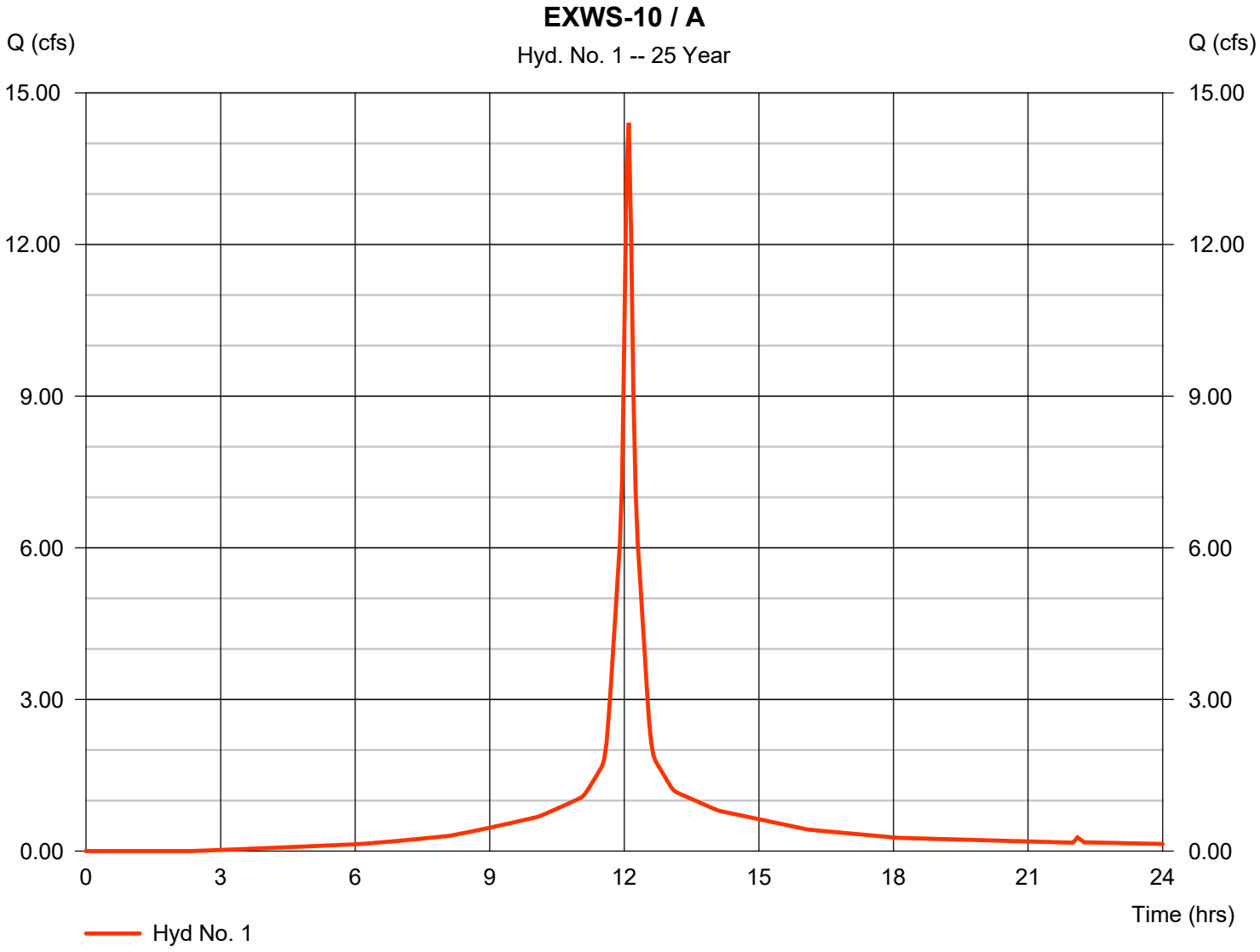
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.41	3	726	52,353	------	------	------	EXWS-10 / A
2	SCS Runoff	6.065	3	726	21,828	------	------	------	PRWS-10
3	SCS Runoff	3.593	3	726	13,345	------	------	------	PRWS-11
4	Reservoir	2.593	3	732	1,696	3	621.47	3,517	DET 110
5	SCS Runoff	3.025	3	726	10,793	------	------	------	PRWS-12
6	SCS Runoff	1.513	3	726	5,397	------	------	------	PRWS-13
7	Combine	10.60	3	726	38,018	2, 4, 5, 6	------	------	POA / A

Hydrograph Report

Hyd. No. 1

EXWS-10 / A

Hydrograph type	= SCS Runoff	Peak discharge	= 14.41 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 52,353 cuft
Drainage area	= 2.610 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

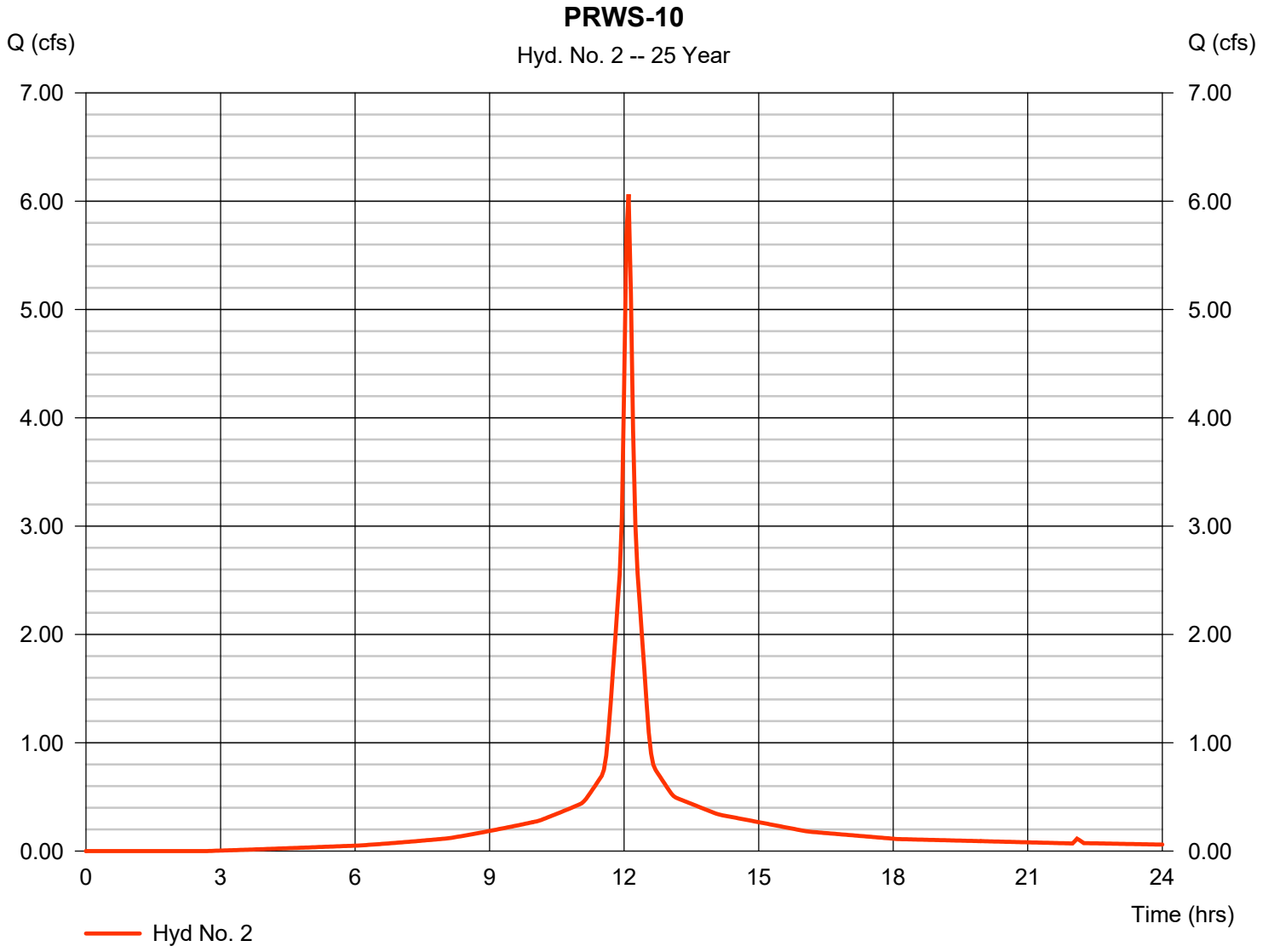


Hydrograph Report

Hyd. No. 2

PRWS-10

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.065 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	21,828 cuft
Drainage area	=	1.110 ac	Curve number	=	92
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.72 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

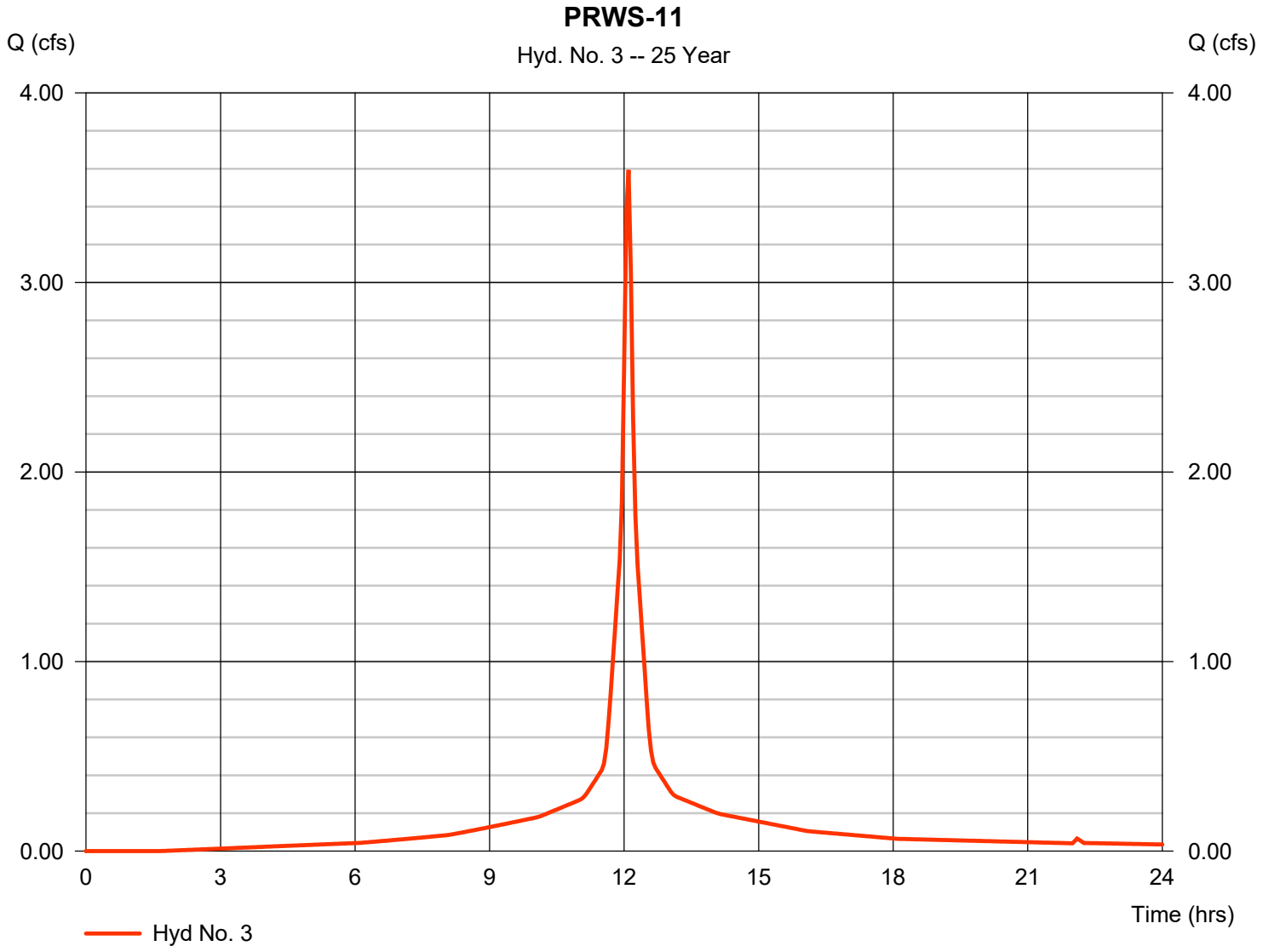


Hydrograph Report

Hyd. No. 3

PRWS-11

Hydrograph type	= SCS Runoff	Peak discharge	= 3.593 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 13,345 cuft
Drainage area	= 0.640 ac	Curve number	= 95
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



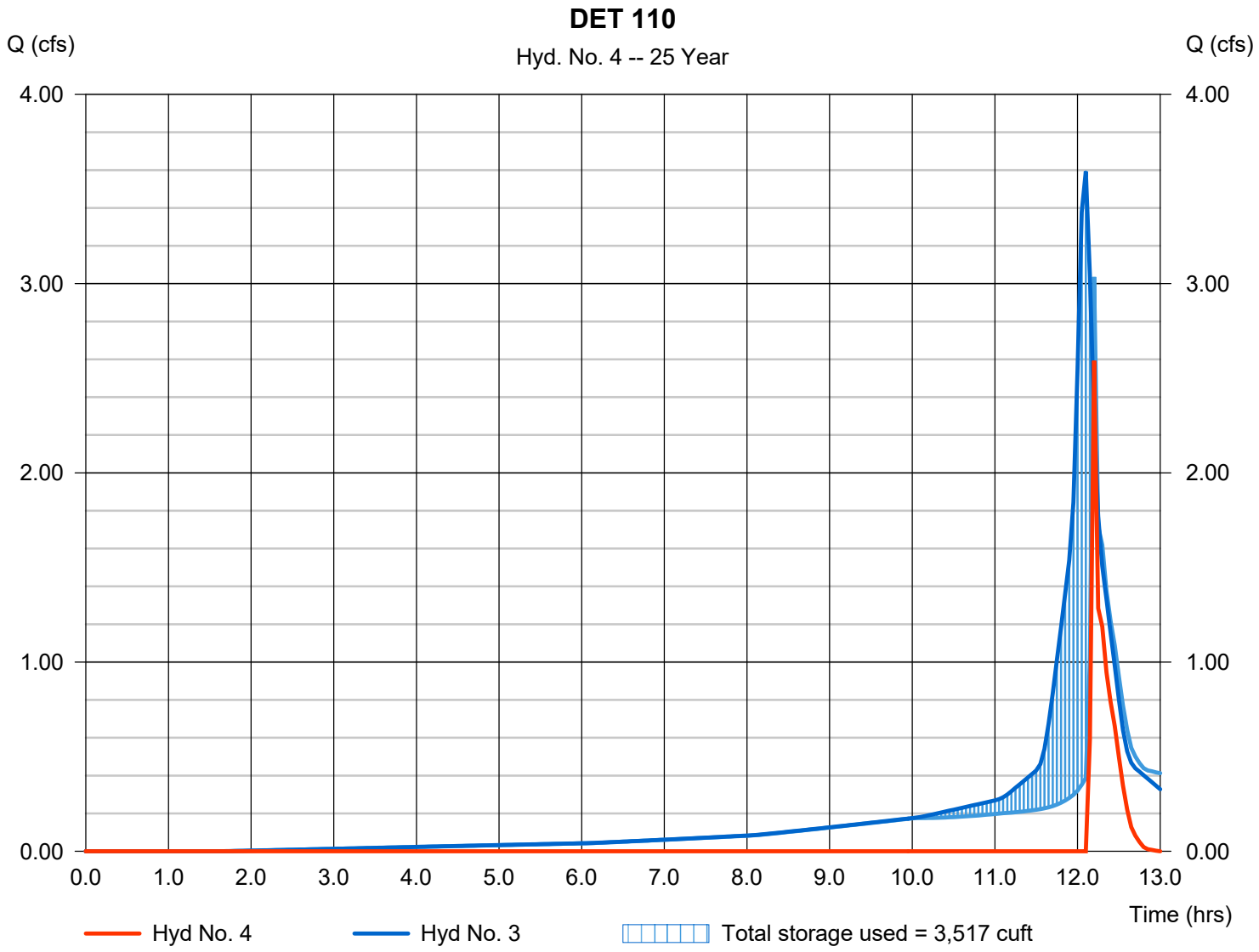
Hydrograph Report

Hyd. No. 4

DET 110

Hydrograph type	=	Reservoir	Peak discharge	=	2.593 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.20 hrs
Time interval	=	3 min	Hyd. volume	=	1,696 cuft
Inflow hyd. No.	=	3 - PRWS-11	Max. Elevation	=	621.47 ft
Reservoir name	=	UG 110	Max. Storage	=	3,517 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

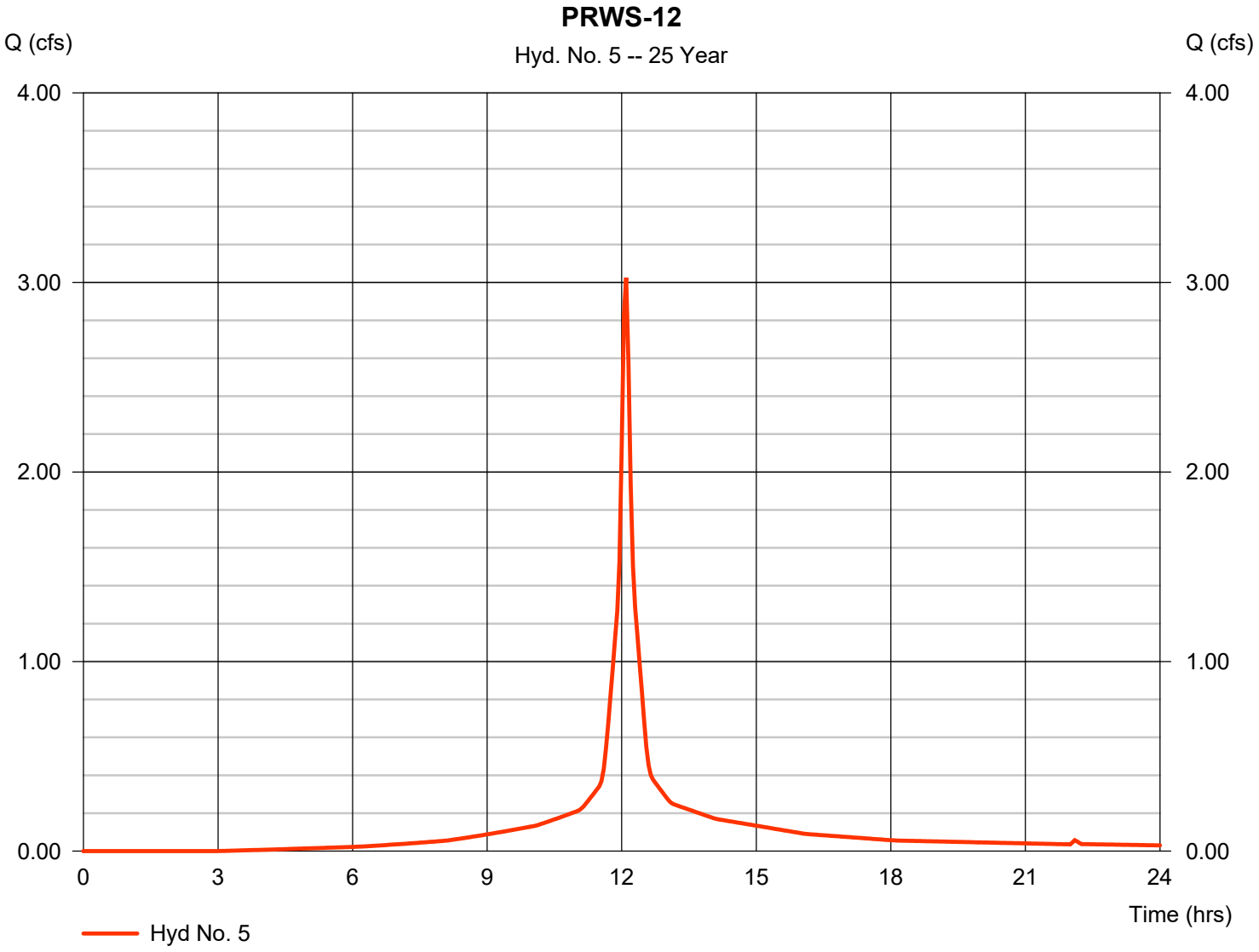


Hydrograph Report

Hyd. No. 5

PRWS-12

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.025 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	10,793 cuft
Drainage area	=	0.560 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.72 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

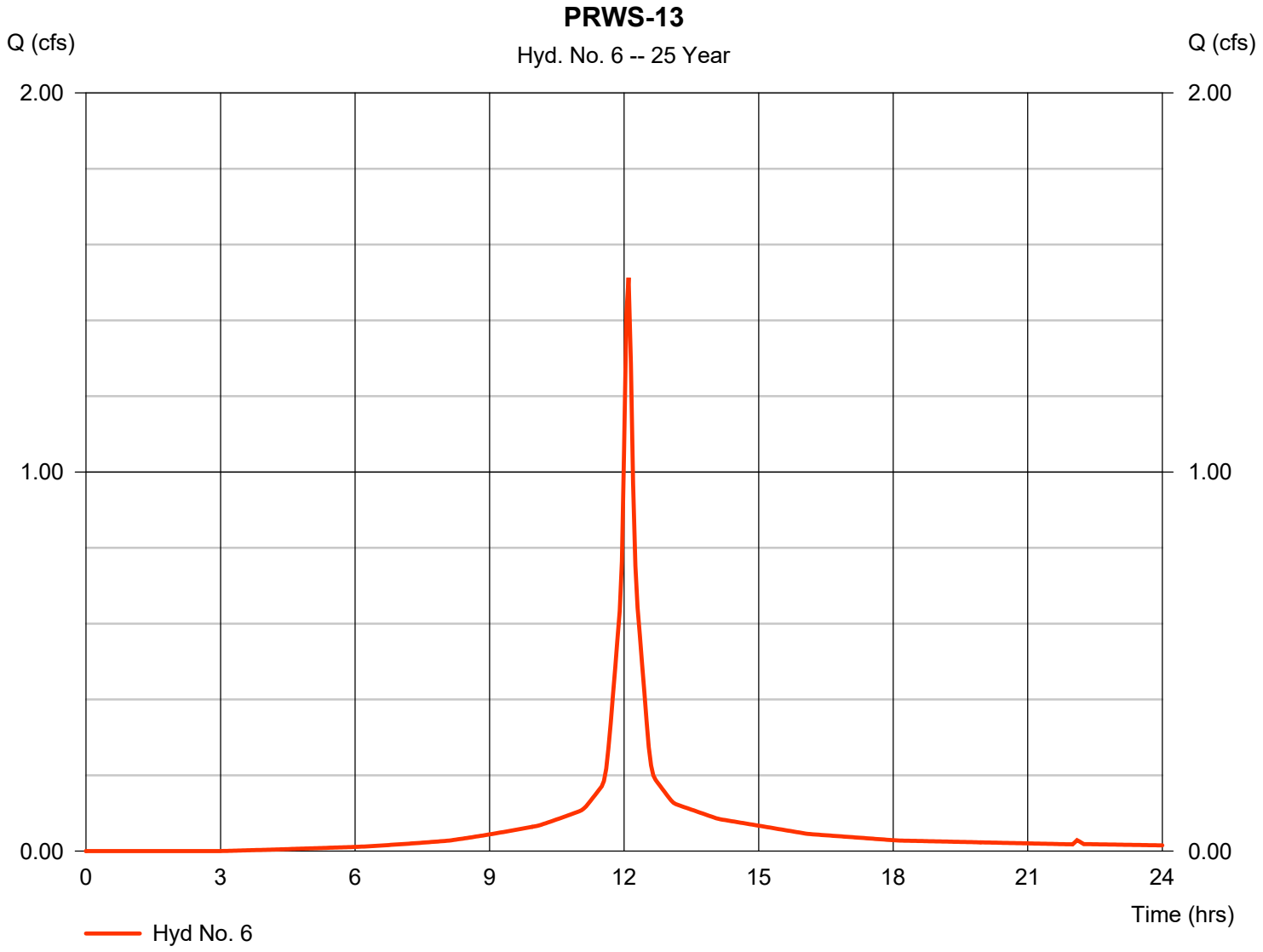


Hydrograph Report

Hyd. No. 6

PRWS-13

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.513 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	5,397 cuft
Drainage area	=	0.280 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.72 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

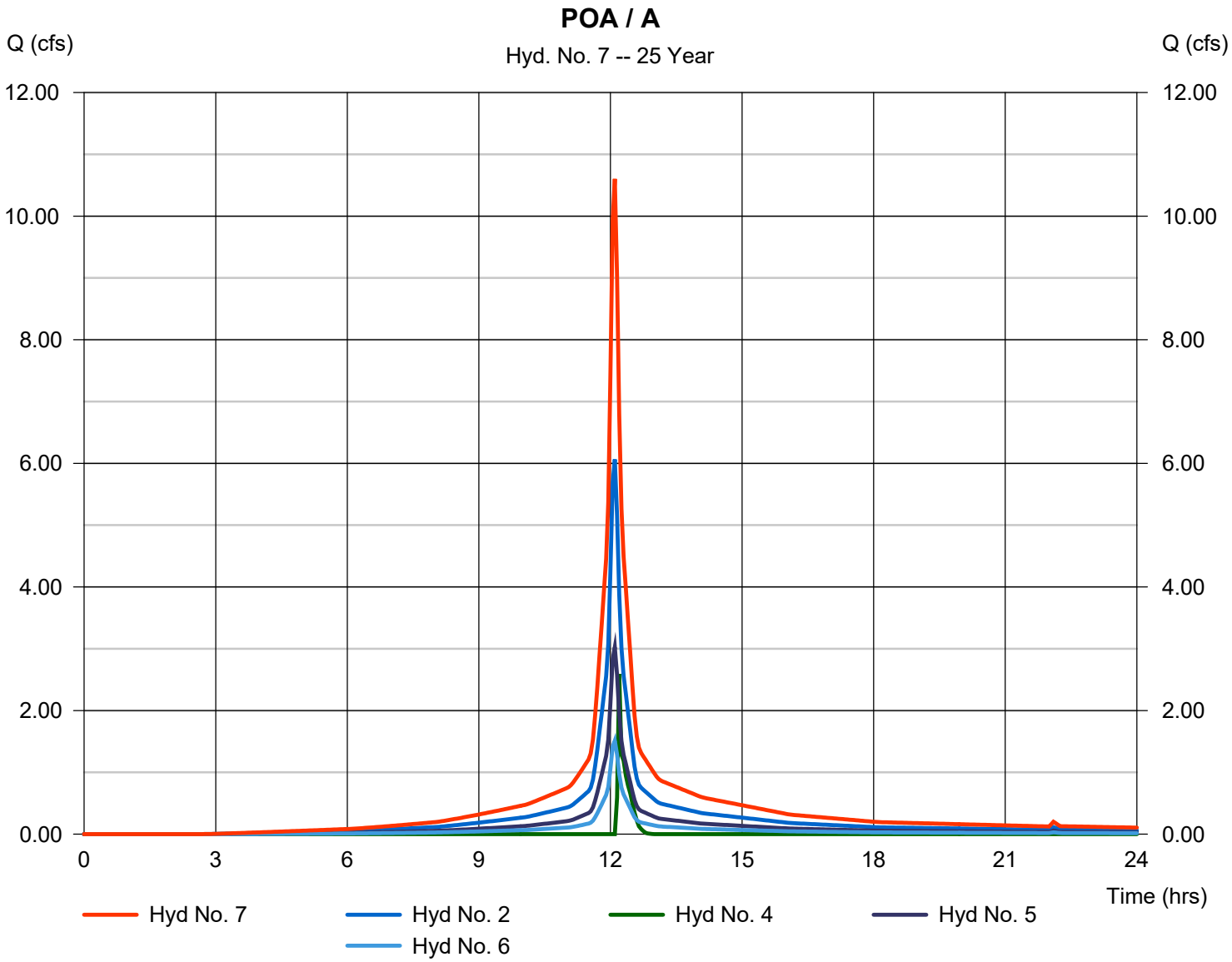


Hydrograph Report

Hyd. No. 7

POA / A

Hydrograph type	=	Combine	Peak discharge	=	10.60 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	38,018 cuft
Inflow hyds.	=	2, 4, 5, 6	Contrib. drain. area	=	1.950 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

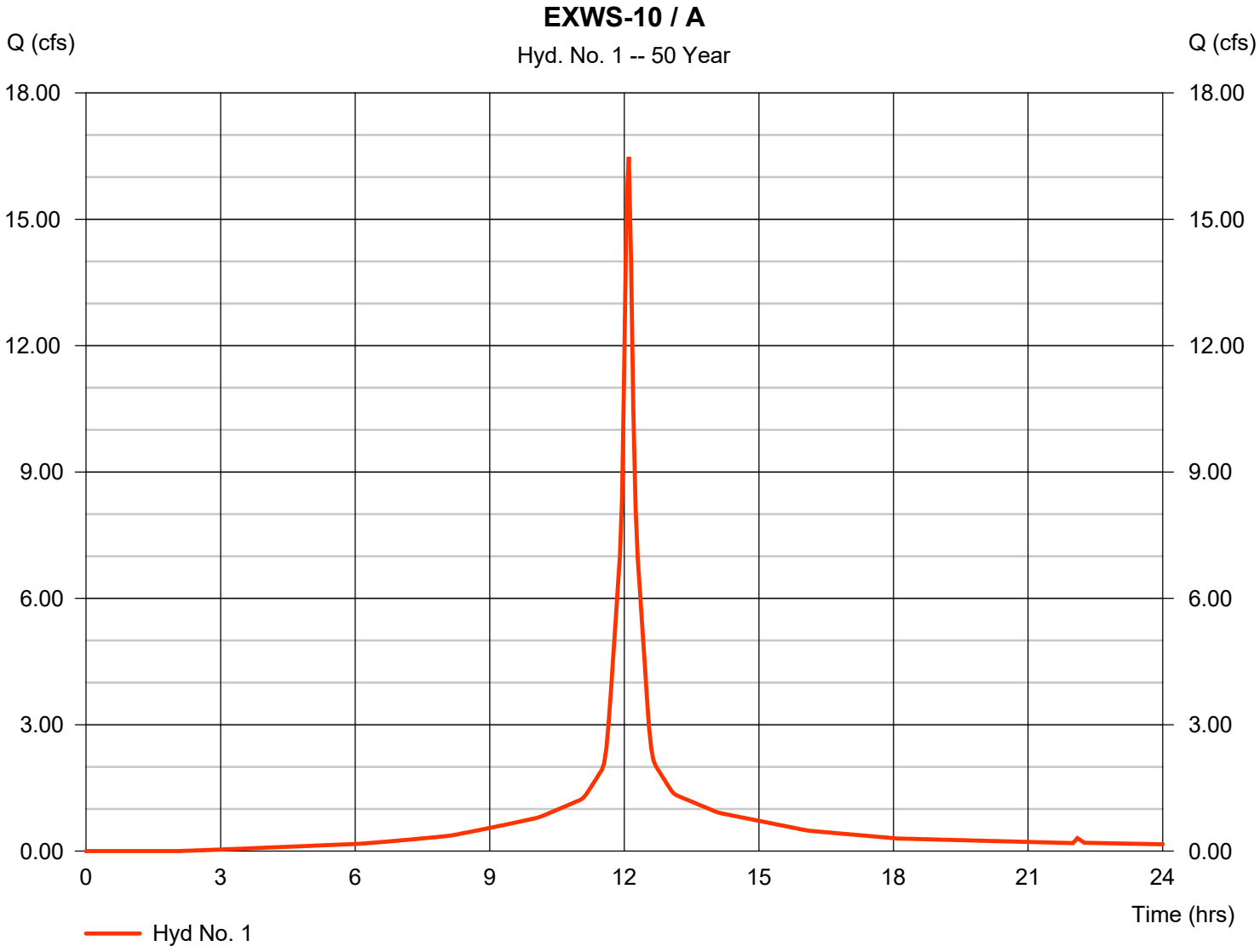
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	16.48	3	726	60,359	------	------	------	EXWS-10 / A
2	SCS Runoff	6.949	3	726	25,223	------	------	------	PRWS-10
3	SCS Runoff	4.096	3	726	15,317	------	------	------	PRWS-11
4	Reservoir	4.162	3	729	2,704	3	621.50	3,579	DET 110
5	SCS Runoff	3.474	3	726	12,500	------	------	------	PRWS-12
6	SCS Runoff	1.737	3	726	6,250	------	------	------	PRWS-13
7	Combine	12.16	3	726	43,974	2, 4, 5, 6	------	------	POA / A

Hydrograph Report

Hyd. No. 1

EXWS-10 / A

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.48 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	60,359 cuft
Drainage area	=	2.610 ac	Curve number	=	93
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.63 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

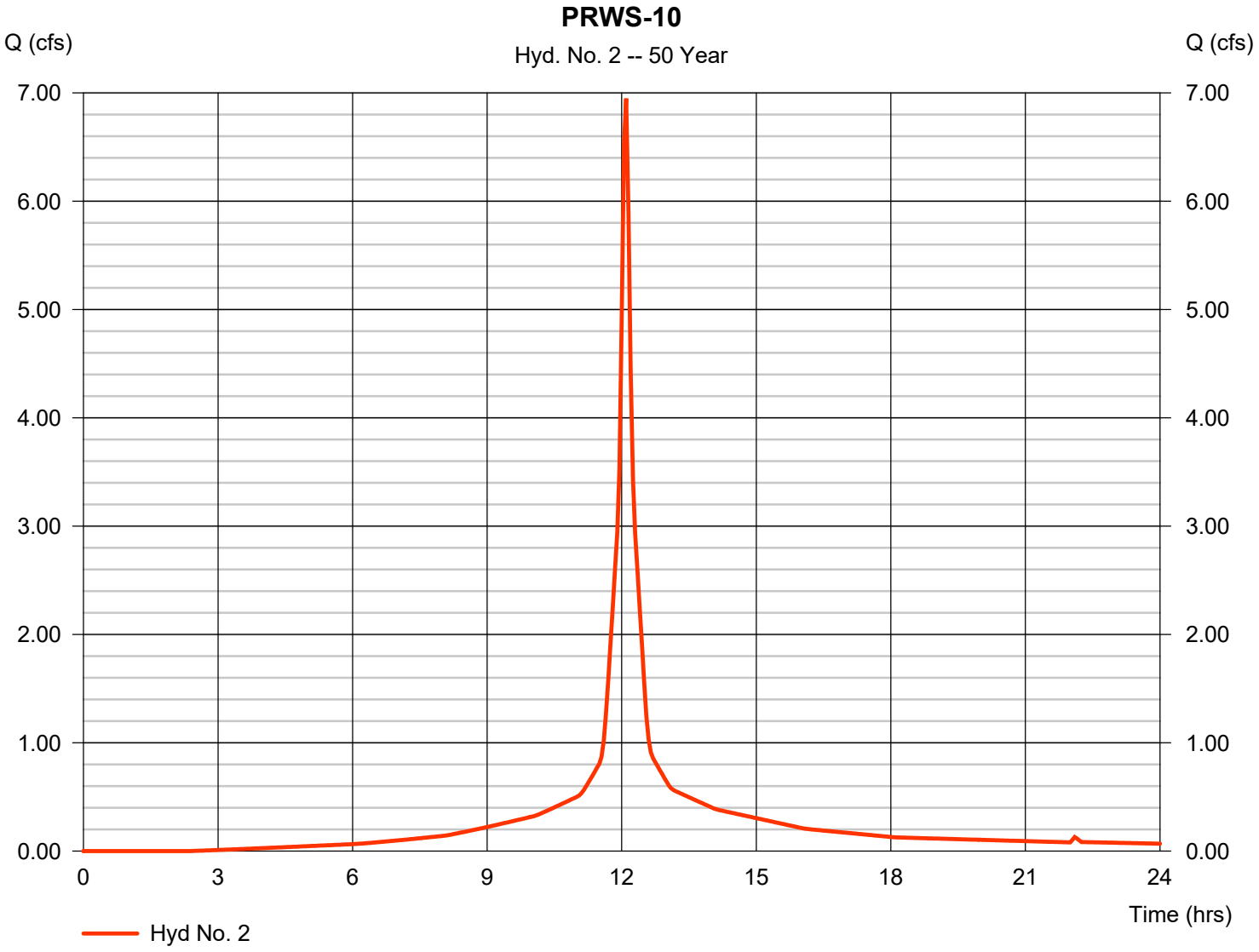


Hydrograph Report

Hyd. No. 2

PRWS-10

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.949 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	25,223 cuft
Drainage area	=	1.110 ac	Curve number	=	92
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.63 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

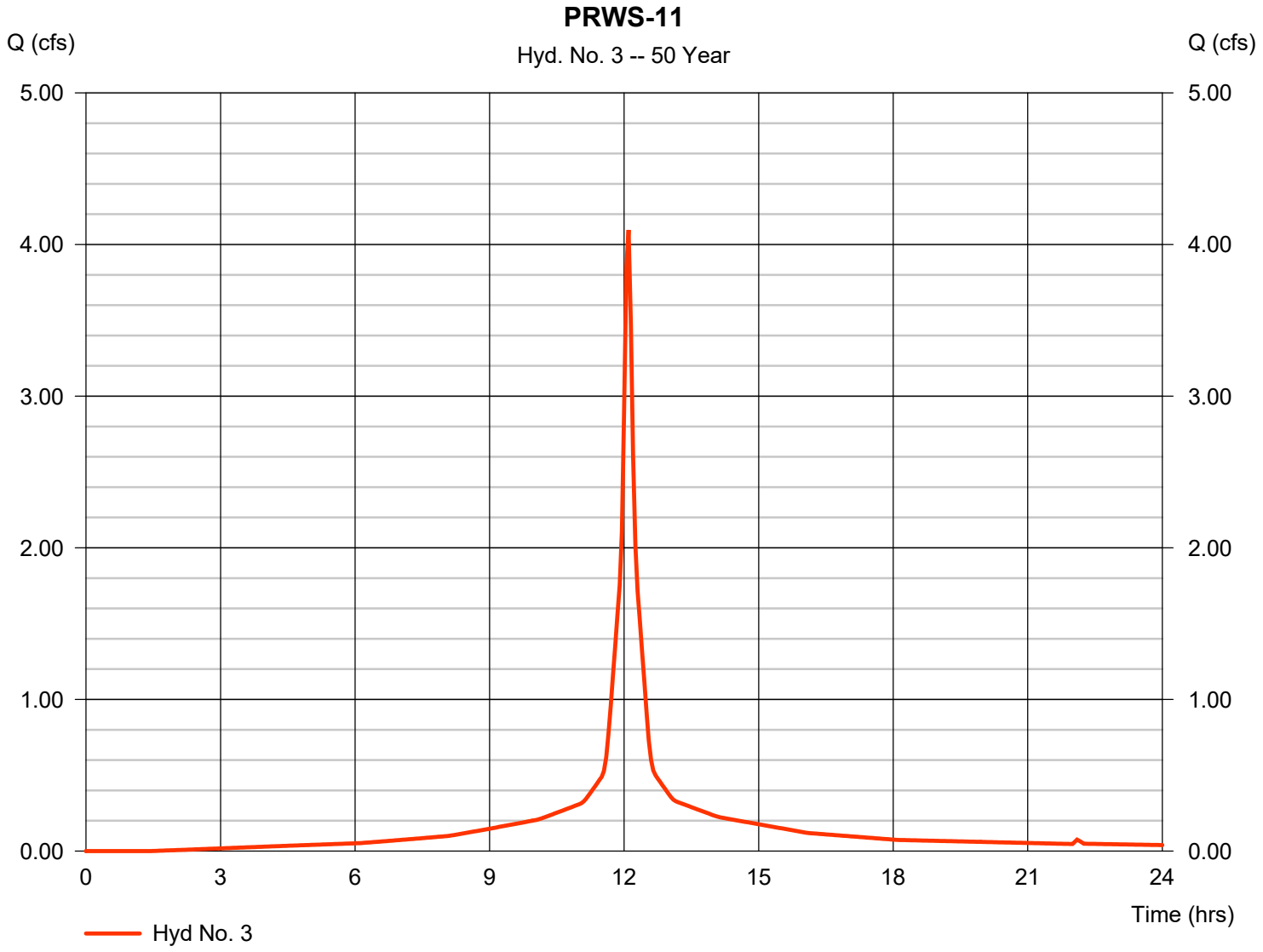


Hydrograph Report

Hyd. No. 3

PRWS-11

Hydrograph type	= SCS Runoff	Peak discharge	= 4.096 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 15,317 cuft
Drainage area	= 0.640 ac	Curve number	= 95
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.63 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



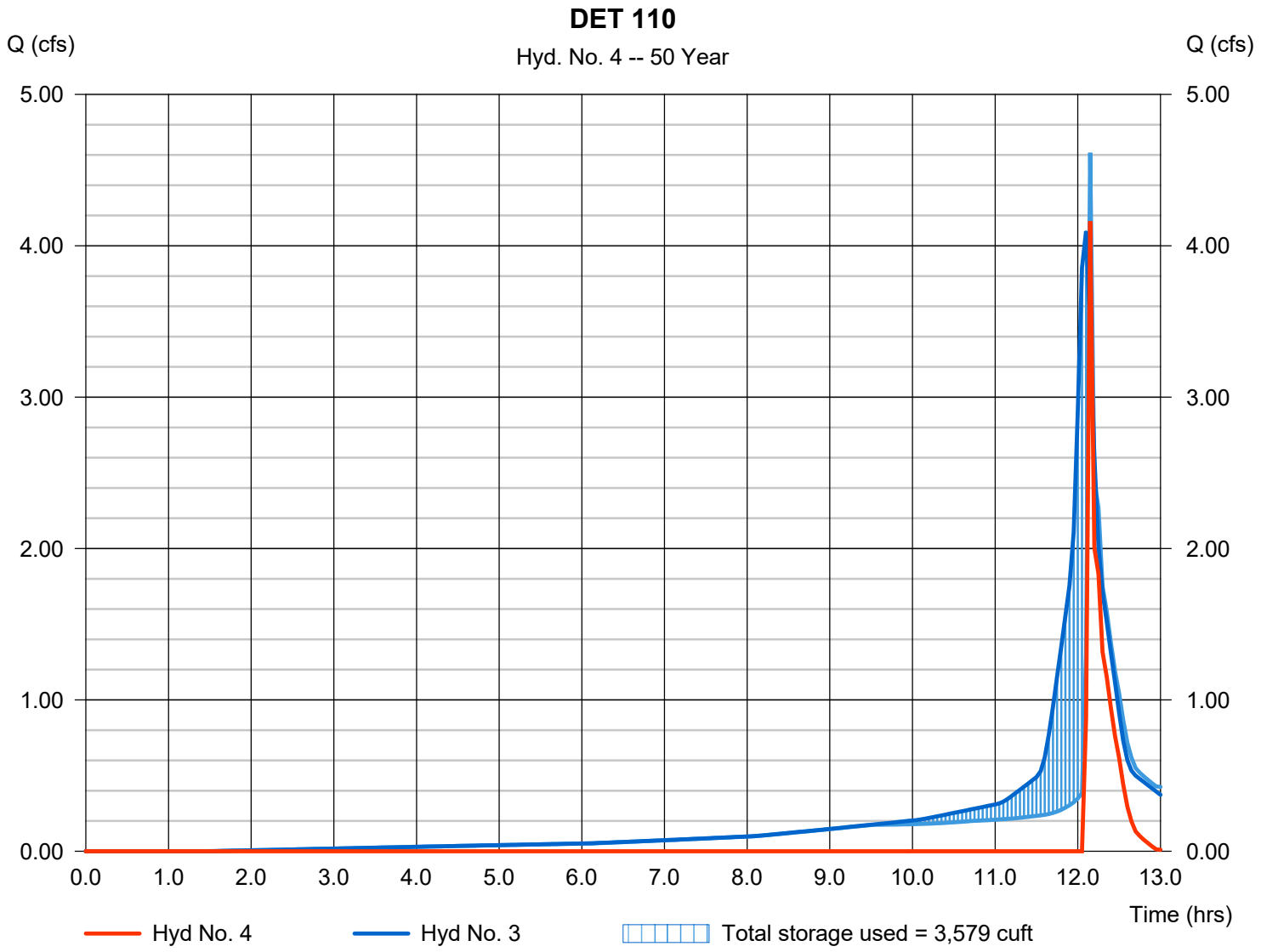
Hydrograph Report

Hyd. No. 4

DET 110

Hydrograph type	=	Reservoir	Peak discharge	=	4.162 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.15 hrs
Time interval	=	3 min	Hyd. volume	=	2,704 cuft
Inflow hyd. No.	=	3 - PRWS-11	Max. Elevation	=	621.50 ft
Reservoir name	=	UG 110	Max. Storage	=	3,579 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

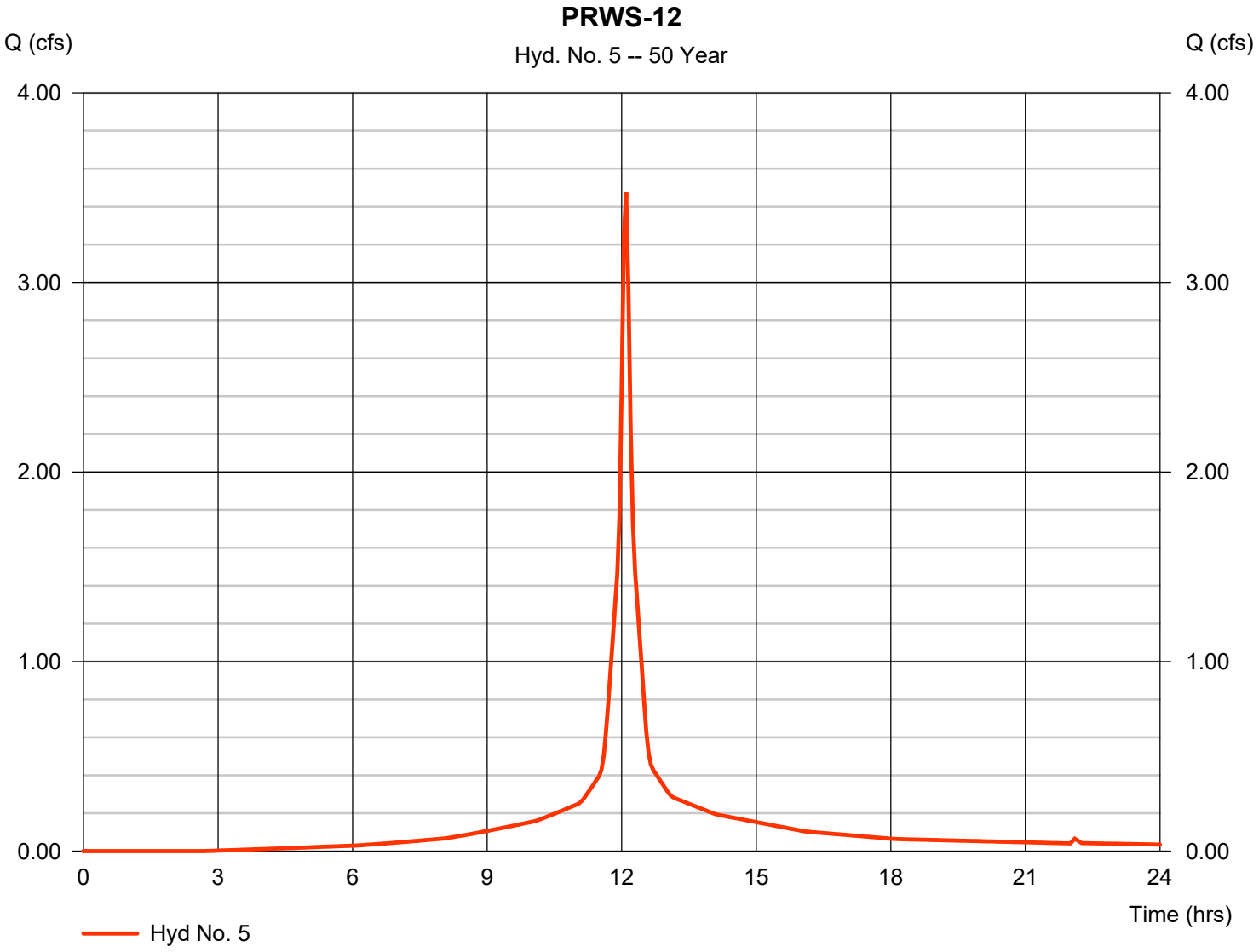


Hydrograph Report

Hyd. No. 5

PRWS-12

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.474 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	12,500 cuft
Drainage area	=	0.560 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.63 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

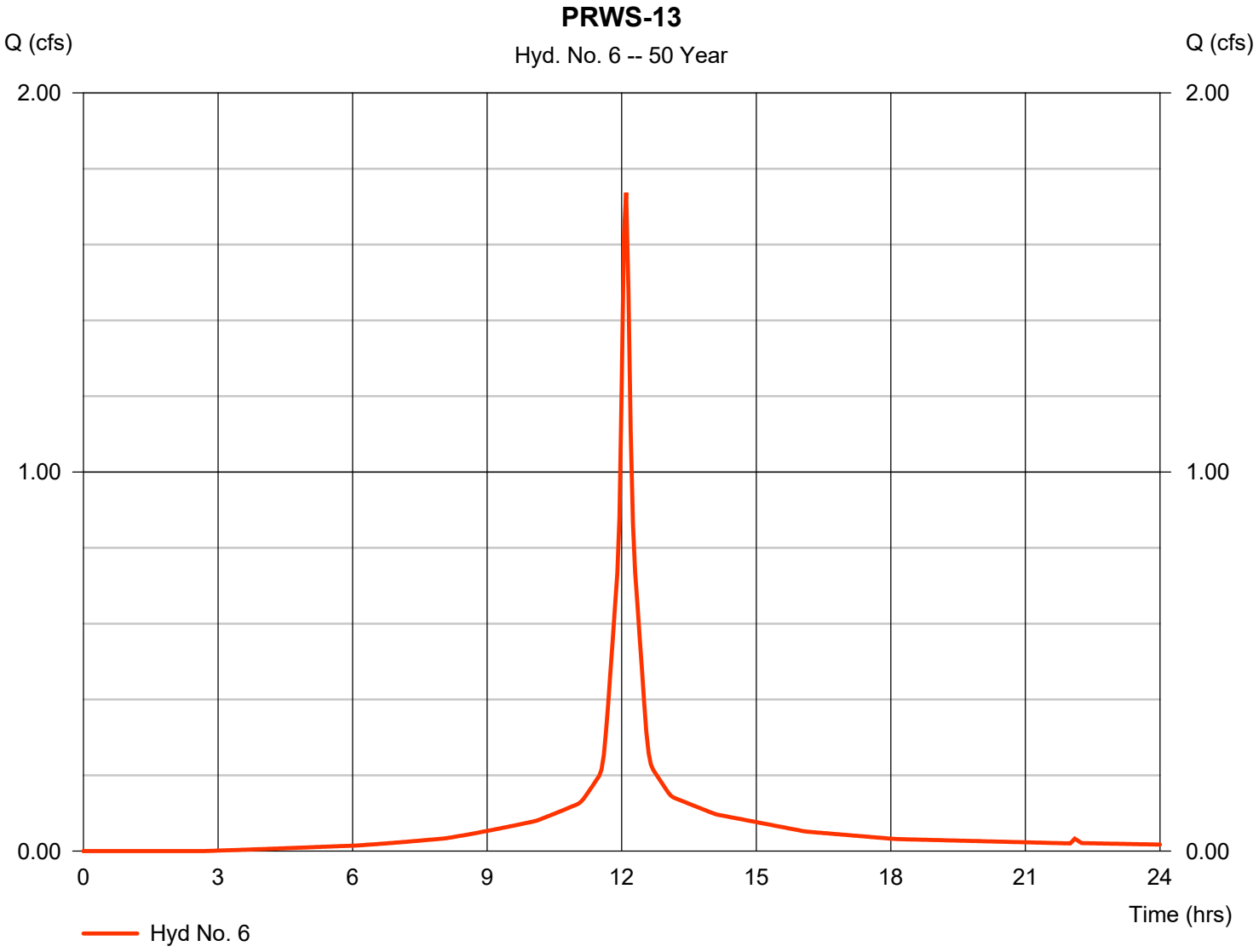


Hydrograph Report

Hyd. No. 6

PRWS-13

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.737 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	6,250 cuft
Drainage area	=	0.280 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.63 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

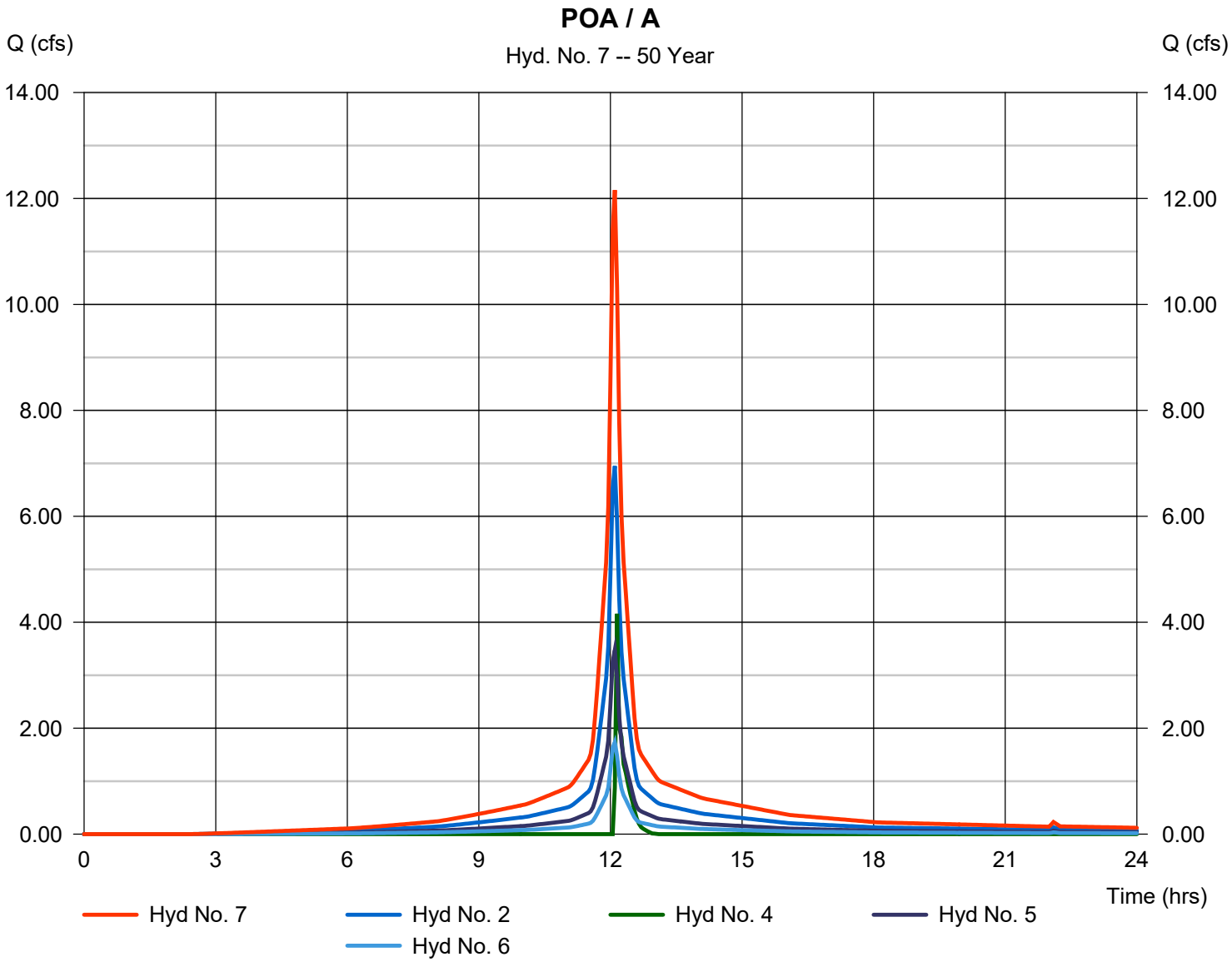


Hydrograph Report

Hyd. No. 7

POA / A

Hydrograph type	=	Combine	Peak discharge	=	12.16 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	43,974 cuft
Inflow hyds.	=	2, 4, 5, 6	Contrib. drain. area	=	1.950 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

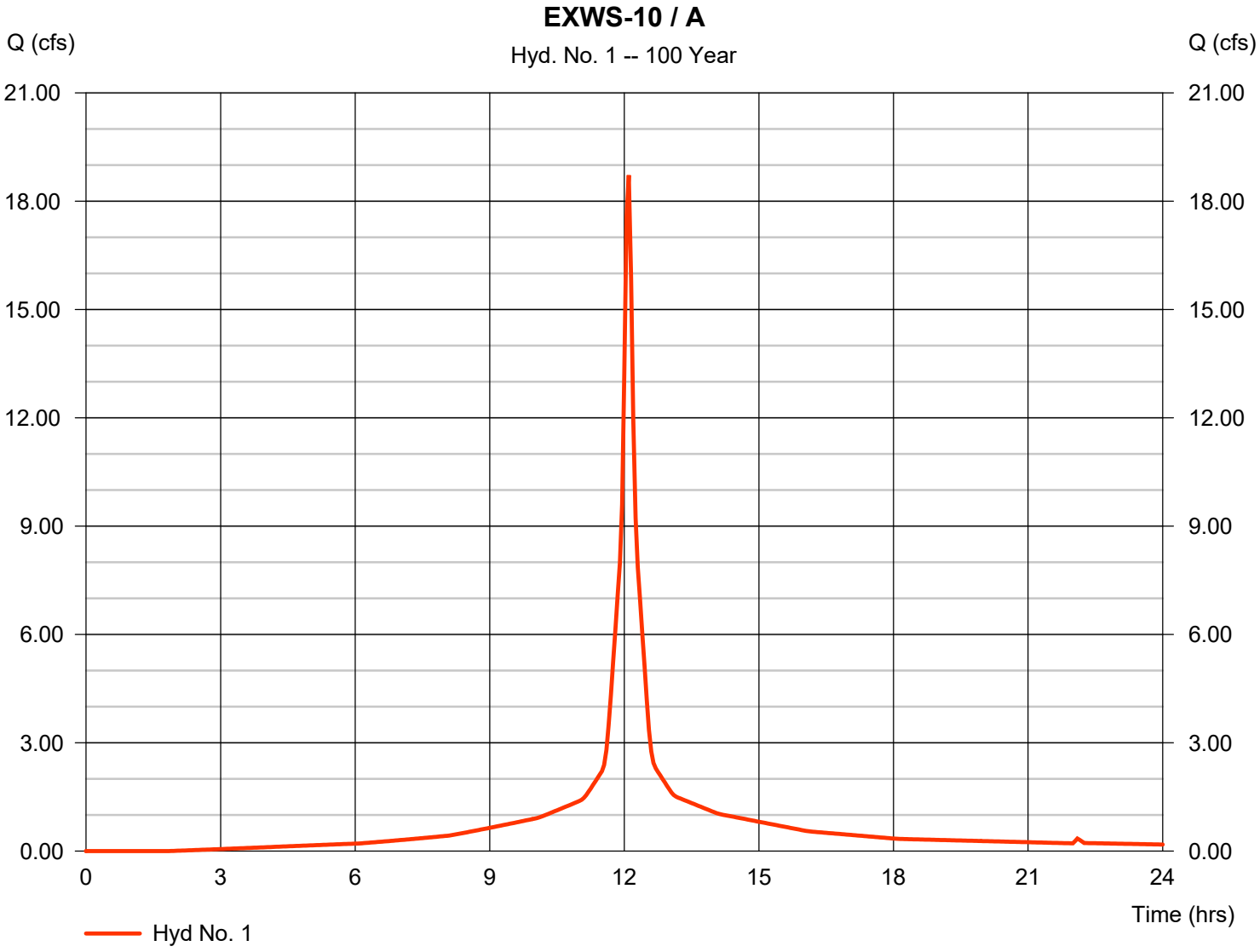
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	18.72	3	726	69,087	------	------	------	EXWS-10 / A
2	SCS Runoff	7.907	3	726	28,927	------	------	------	PRWS-10
3	SCS Runoff	4.642	3	726	17,465	------	------	------	PRWS-11
4	Reservoir	0.000	3	n/a	0	3	0.00	0.000	DET 110
5	SCS Runoff	3.959	3	726	14,364	------	------	------	PRWS-12
6	SCS Runoff	1.979	3	726	7,182	------	------	------	PRWS-13
7	Combine	13.85	3	726	50,472	2, 4, 5, 6	------	------	POA / A

Hydrograph Report

Hyd. No. 1

EXWS-10 / A

Hydrograph type	= SCS Runoff	Peak discharge	= 18.72 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 69,087 cuft
Drainage area	= 2.610 ac	Curve number	= 93
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 8.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

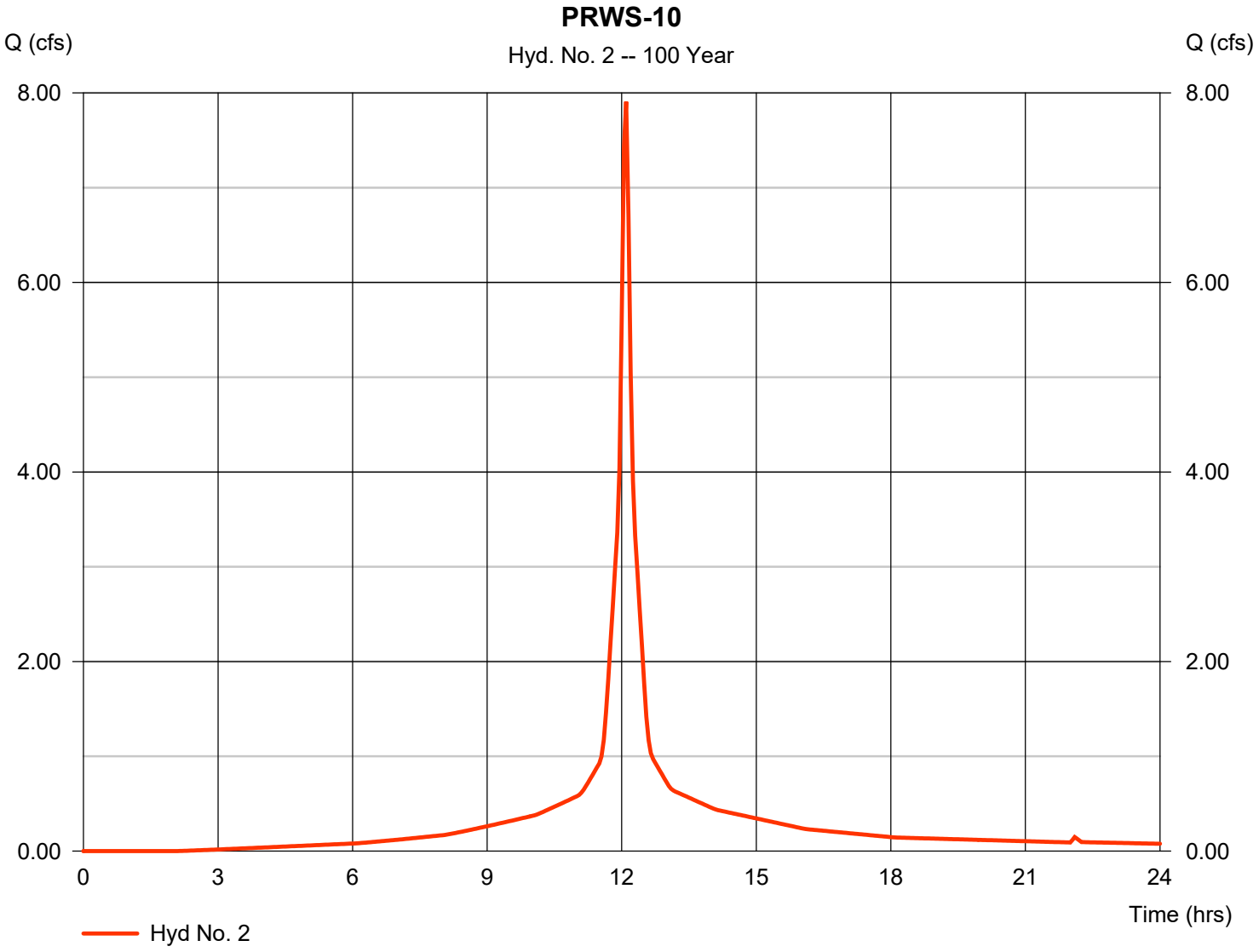


Hydrograph Report

Hyd. No. 2

PRWS-10

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.907 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	28,927 cuft
Drainage area	=	1.110 ac	Curve number	=	92
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.62 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

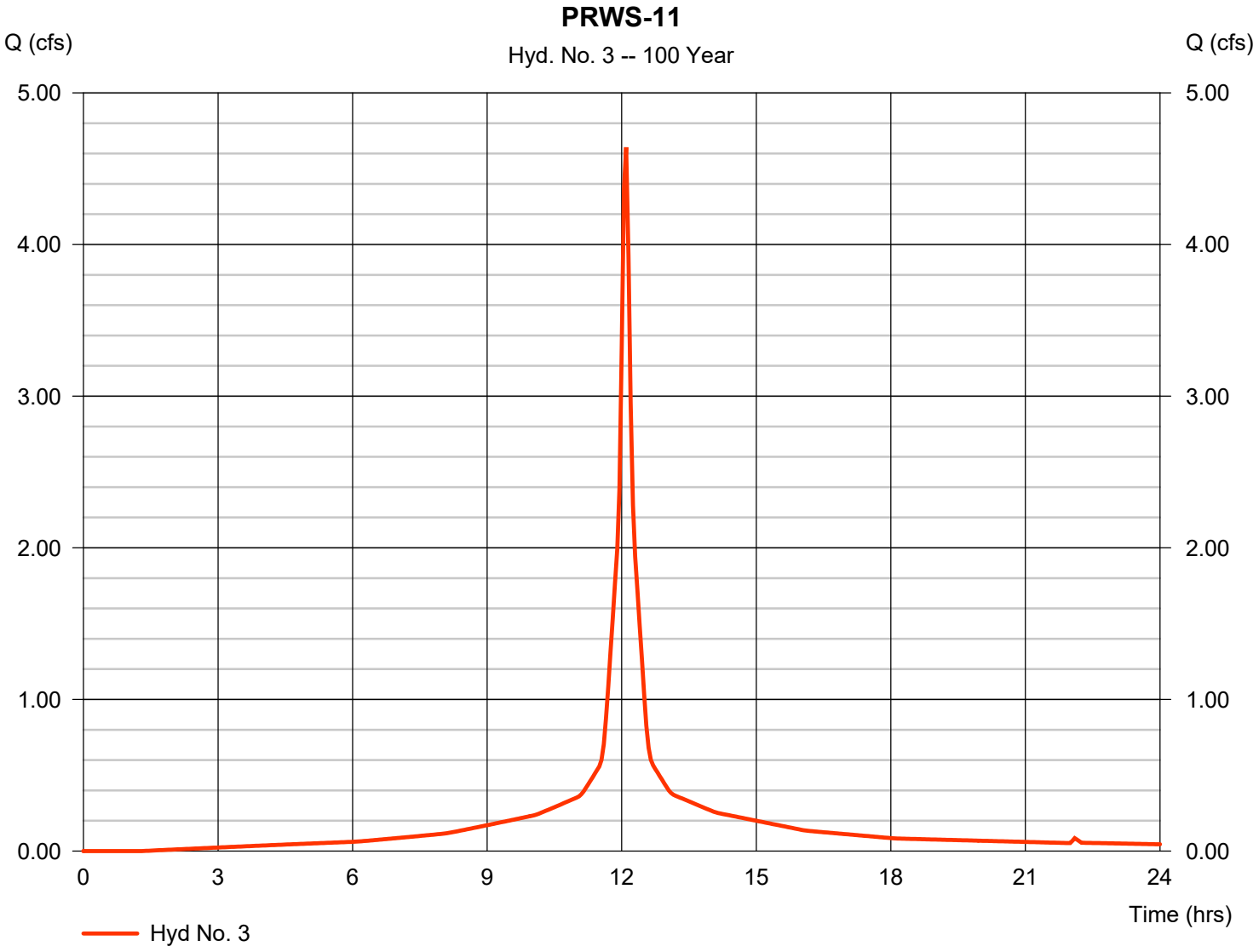


Hydrograph Report

Hyd. No. 3

PRWS-11

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.642 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	17,465 cuft
Drainage area	=	0.640 ac	Curve number	=	95
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.62 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



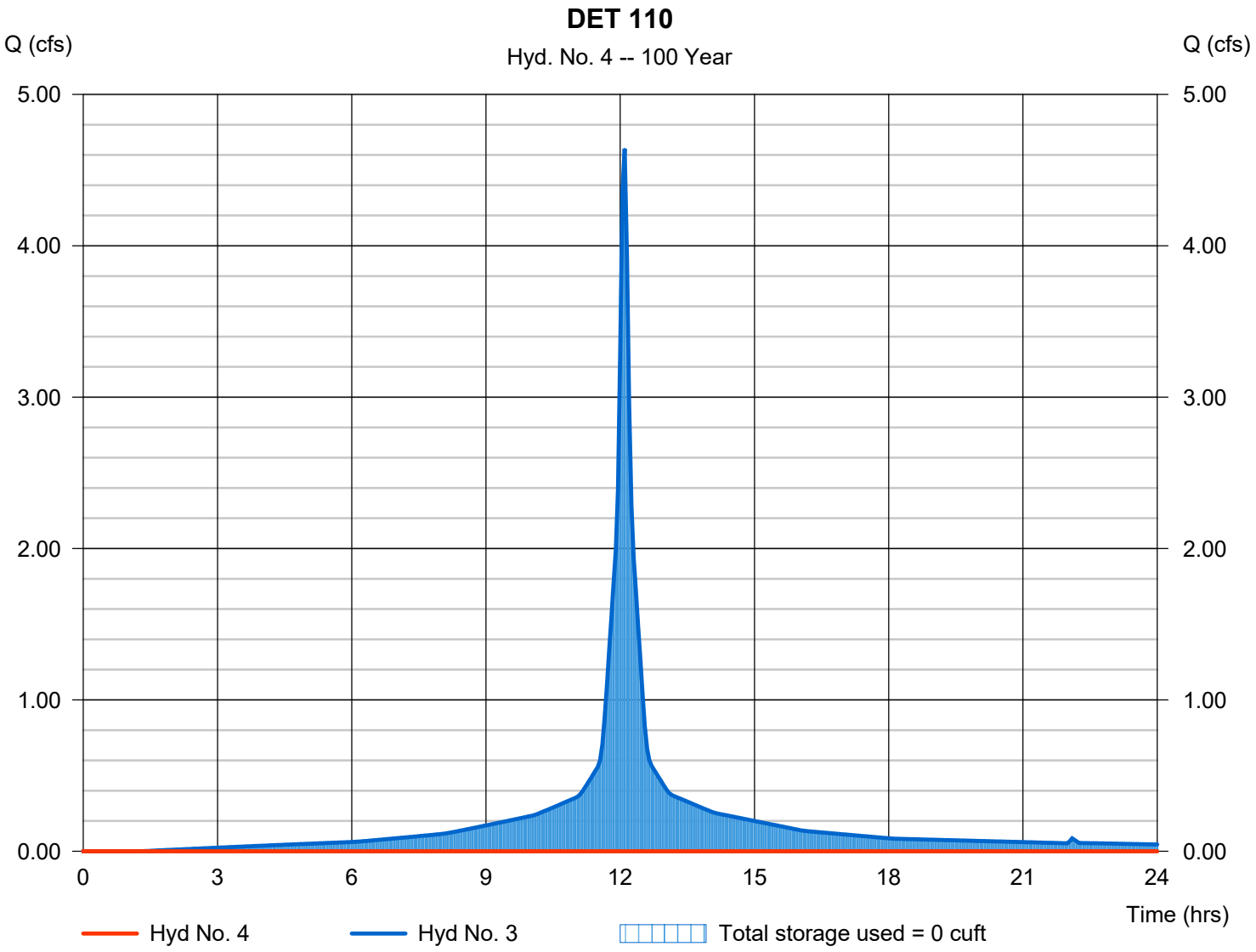
Hydrograph Report

Hyd. No. 4

DET 110

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	100 yrs	Time to peak	=	n/a
Time interval	=	3 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	3 - PRWS-11	Max. Elevation	=	0.00 ft
Reservoir name	=	UG 110	Max. Storage	=	0 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

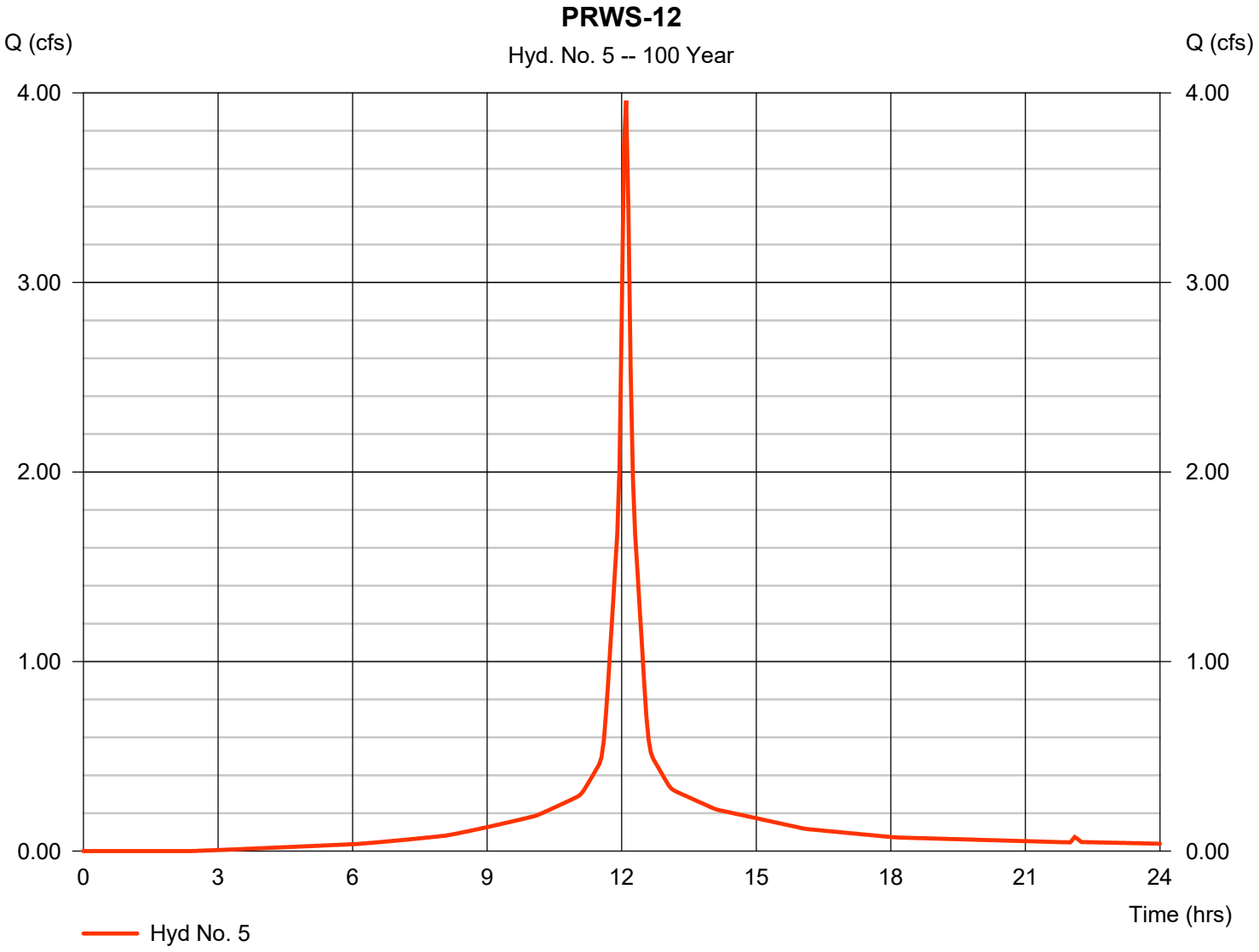


Hydrograph Report

Hyd. No. 5

PRWS-12

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.959 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	14,364 cuft
Drainage area	=	0.560 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.62 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

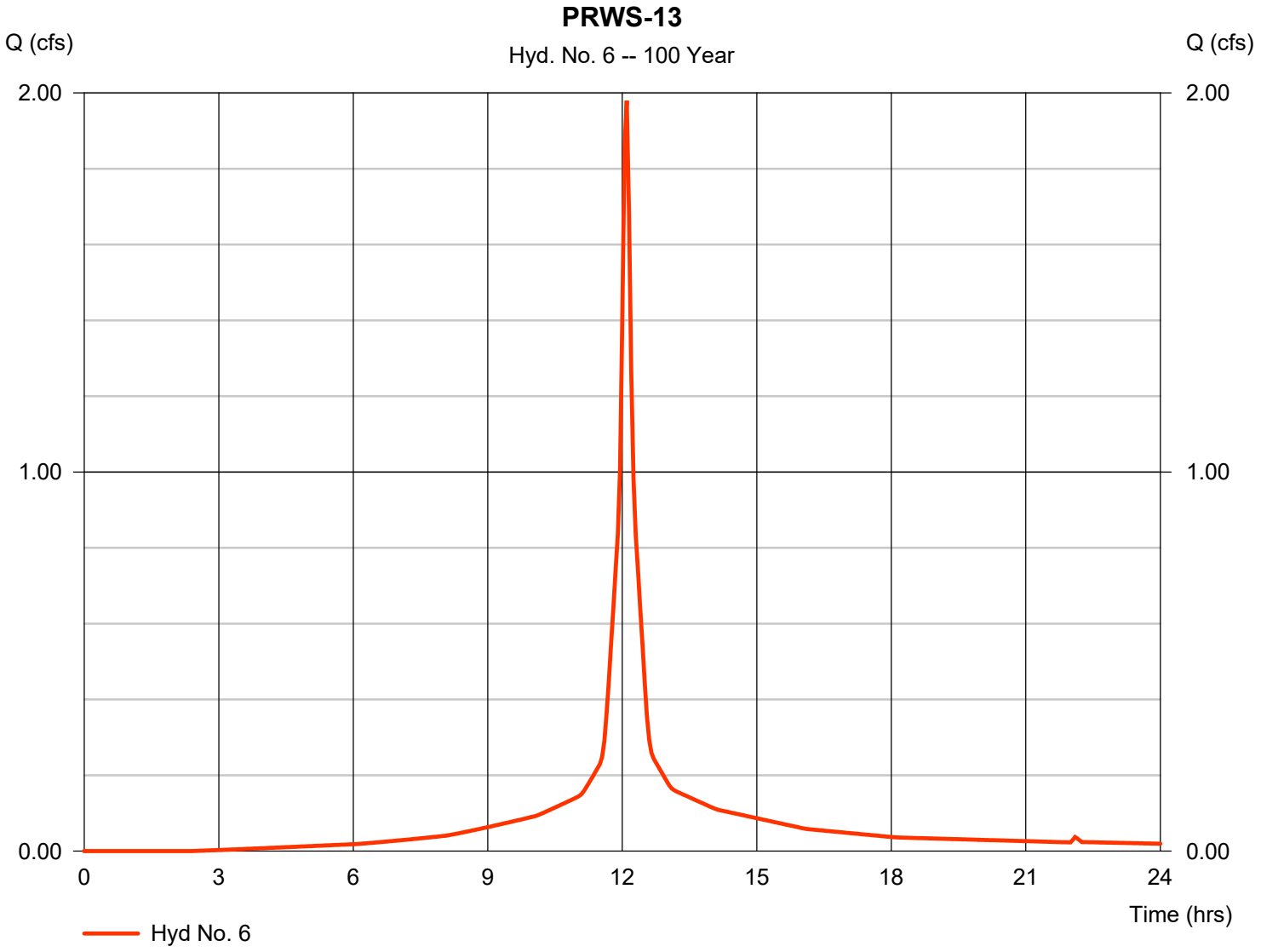


Hydrograph Report

Hyd. No. 6

PRWS-13

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.979 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	3 min	Hyd. volume	=	7,182 cuft
Drainage area	=	0.280 ac	Curve number	=	91
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.62 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

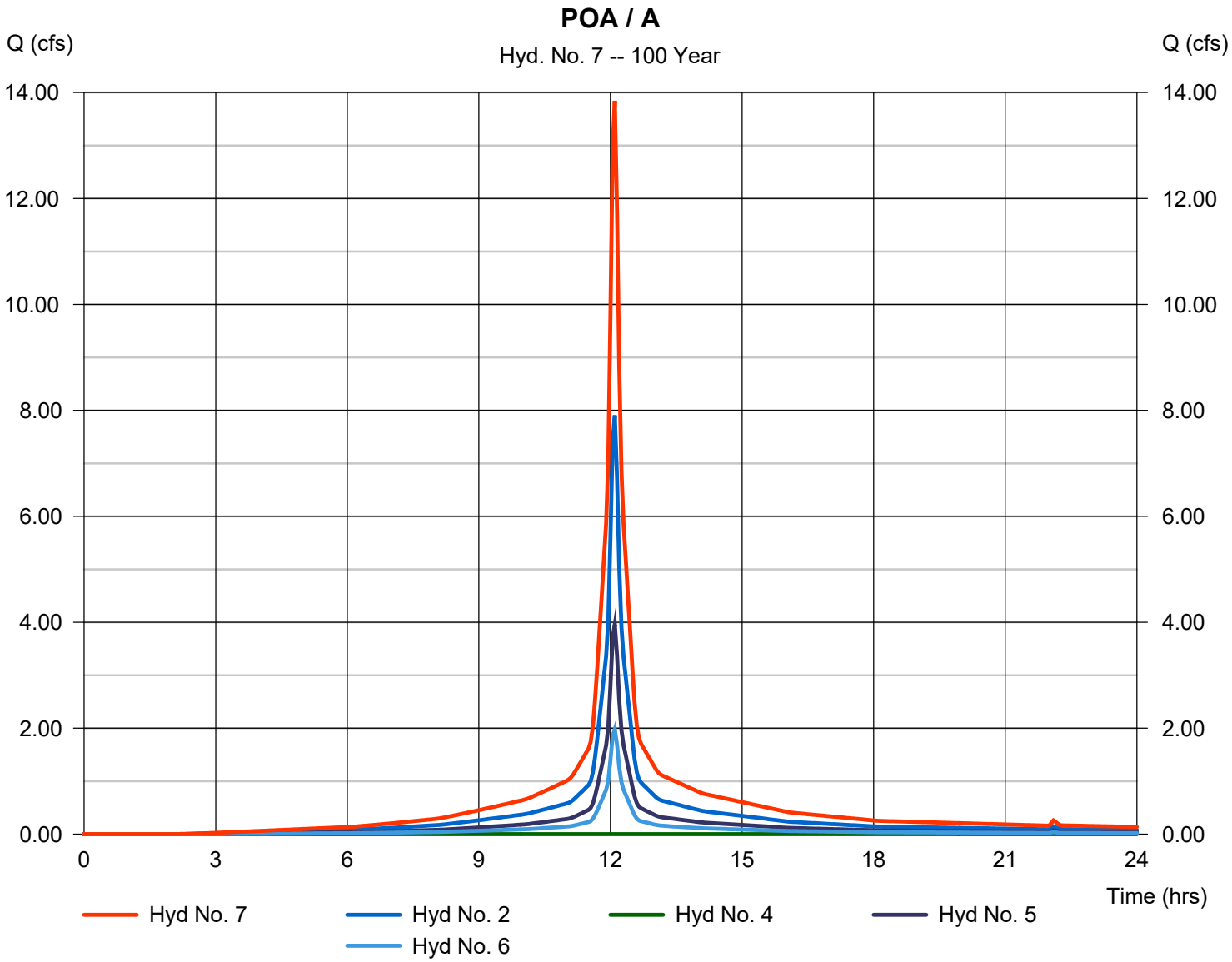


Hydrograph Report

Hyd. No. 7

POA / A

Hydrograph type	= Combine	Peak discharge	= 13.85 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 3 min	Hyd. volume	= 50,472 cuft
Inflow hyds.	= 2, 4, 5, 6	Contrib. drain. area	= 1.950 ac



BRUSH HILL ROAD (RT. 39)

PEMBROKE ROAD (RT. 37)

T.G.=619.70
INV.=612.9(NW)

Δ=64°47'47"
R=50.00'
L=56.55'
CB=N64°51'52"E
CH=53.58'

Conc.

PCPC

Planter

Swale

PEM

Brick Sidewalk

Plaza Sign

S75°03'14"E
379.74'

12" Apple

Rock

CCB
T.G.=628.05
INV.=622.9(W)
RECESSED(S)

15" RCP

CCB
T.G.=628.03
INV.=623.7(N)

Planter

30" PPT Maple

Mail Boston Conc. Pad

WS 10

LAND OF:
NEW FAIRFIELD
SHOPPING CENTER
AREA
109,246 S.F.
2.508 ACRES

Bit. Parking Lot

SAN MH
T.F.=626.16

SAN MH
T.F.=626.51
SEIZED

CLCB
T.G.=625.07
INV.=622.0(E)
INV.=622.0(S)

CLCB
T.G.=625.27
INV.=622.5(W)

12" SLCPP

Sign o
Wood

N/F
Hicks, LLC

134.65'

S14°56'5

Row of Mailboxes

S17°18"E
2.34'

S65°16'59"E
50.3'

N24°04'07"W
67.28'

N19°37'36"W
67.28'

N16°01'27"W
69.00'

N28°02'15"W
10.48'

Drive Thru Canopy

SAN MH
T.F.=626.99

SAN MH
T.F.=626.90

SAN MH
T.F.=626.92

Bit. Parking Lot

Bit. NYS Parking Lot

CLCB
T.G.=625.13
INV.=621.7(SE)
INV.=621.8(W)

Bit. Parking Lot

CLCB
T.G.=623.48
INV.=620.[illegible](W)

Grease Trap

Septic System MH'S

15" CMP

Bit.

N58°58'26"W
25.44'

S76°12'34"W
416.10'

15" CMP

18" CMP

CLCB
T.G.=618.52
INV.=616.2(E)
INV.=616.2(NW)
INV.=616.3(W)

YD
T.F.=618.24

CLCB
T.G.=618.79
INV.=615.9(SE)

CLCB
T.G.=618.93
INV.=616.1(E)
INV.=616.1(NW)

YD
T.F.=618.44

CLCB
T.G.=619.29
INV.=616.3(SE)

N/F
Town of Danbury
"Marjorie Reservoir"

N/F
Town of New Fairfield

Gravel

Gravel

Gravel

Marjorie Lake

0' 20' 40'
0 1/2" 1"
SCALE 1" = 40'H

LEGEND

	WATERSHED BOUNDARY
WS 10	WATERSHED LABEL
110	DETENTION BASIN LABEL
A	ANALYSIS POINT LABEL

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

REVISIONS

WATERSHED MAP - EXISTING CONDITIONS

NEW FAIRFIELD SHOPPING CENTER
PROPOSED SITE IMPROVEMENTS
1 BRUSH HILL ROAD
NEW FAIRFIELD, CONNECTICUT

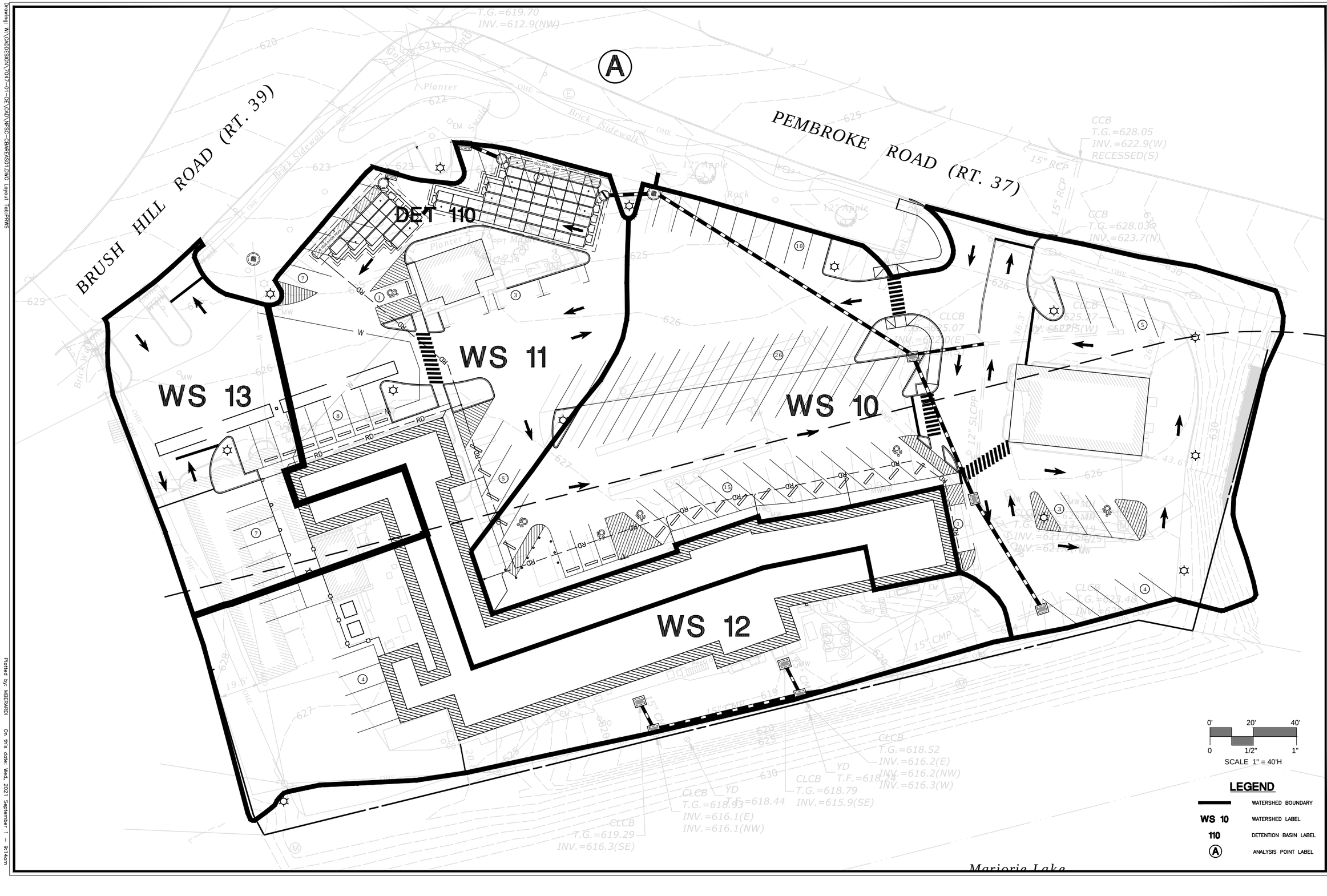
MCB	MCB	TR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'

DATE: SEPTEMBER 1, 2021

PROJECT NO.: 7047-01

SHEET NO.: EXWS



SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

REVISIONS

WATERSHED MAP - PROPOSED CONDITIONS

NEW FAIRFIELD SHOPPING CENTER
PROPOSED SITE IMPROVEMENTS
1 BRUSH HILL ROAD
NEW FAIRFIELD, CONNECTICUT

MCB	MCB	TR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'
DATE: SEPTEMBER 1, 2021
PROJECT NO.: 7047-01
SHEET NO.: PRWS