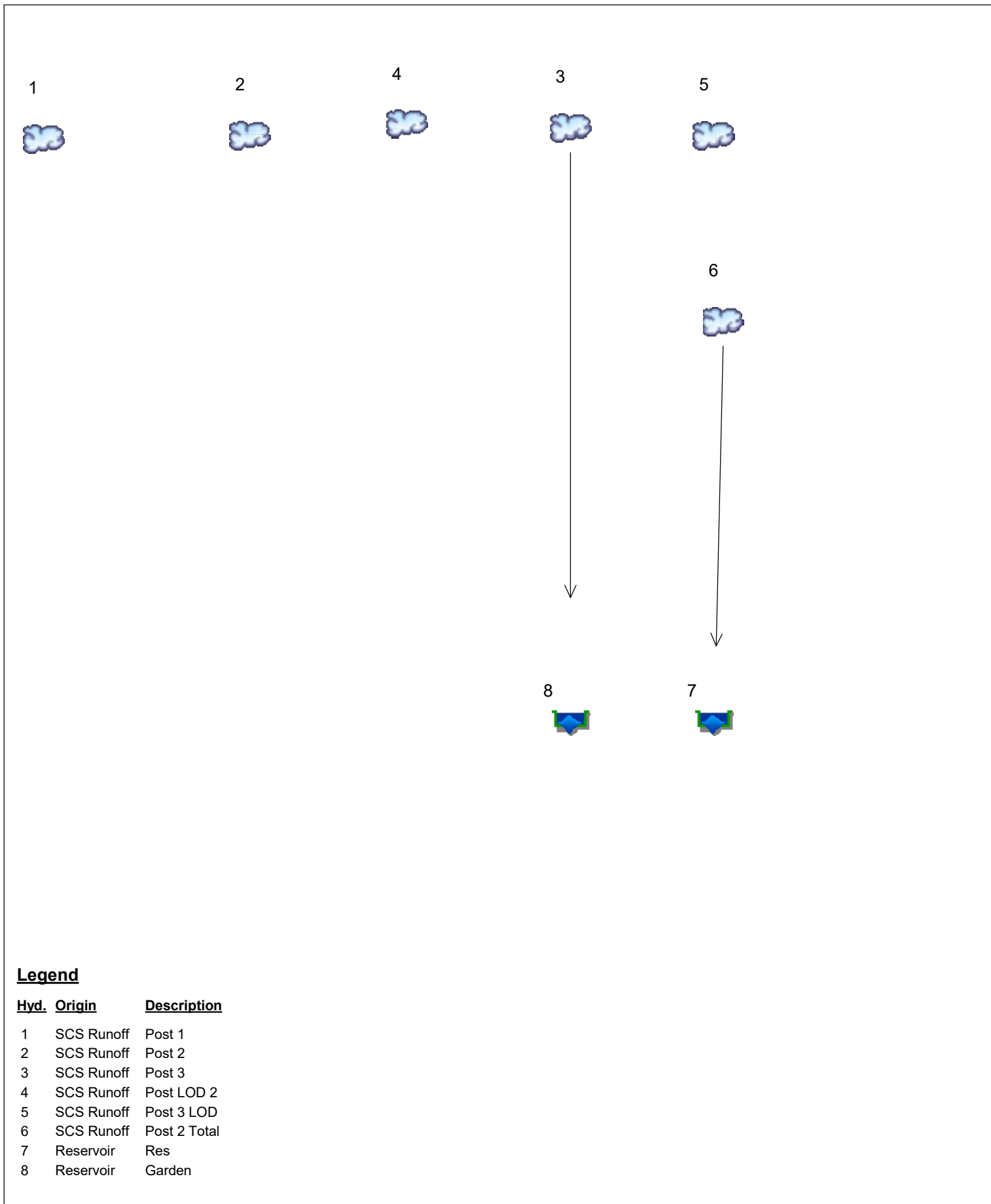


Watershed Model Schematic

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



Legend

<u>Hyd.</u>	<u>Origin</u>	<u>Description</u>
1	SCS Runoff	Post 1
2	SCS Runoff	Post 2
3	SCS Runoff	Post 3
4	SCS Runoff	Post LOD 2
5	SCS Runoff	Post 3 LOD
6	SCS Runoff	Post 2 Total
7	Reservoir	Res
8	Reservoir	Garden

Hydrograph Return Period Recap

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

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	----	0.000	1.008	----	----	3.519	----	----	0.000	Post 1
2	SCS Runoff	----	5.446	7.598	----	----	14.46	----	----	0.000	Post 2
3	SCS Runoff	----	3.485	4.864	----	----	9.155	----	----	0.000	Post 3
4	SCS Runoff	----	4.266	2.823	----	----	6.206	----	----	0.000	Post LOD 2
5	SCS Runoff	----	3.567	2.167	----	----	5.506	----	----	0.000	Post 3 LOD
6	SCS Runoff	----	9.931	13.40	----	----	23.89	----	----	0.000	Post 2 Total
7	Reservoir	6	5.667	10.17	----	----	22.55	----	----	0.000	Res
8	Reservoir	3	0.354	1.034	----	----	3.565	----	----	0.000	Garden

Hydrograph Summary Report

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

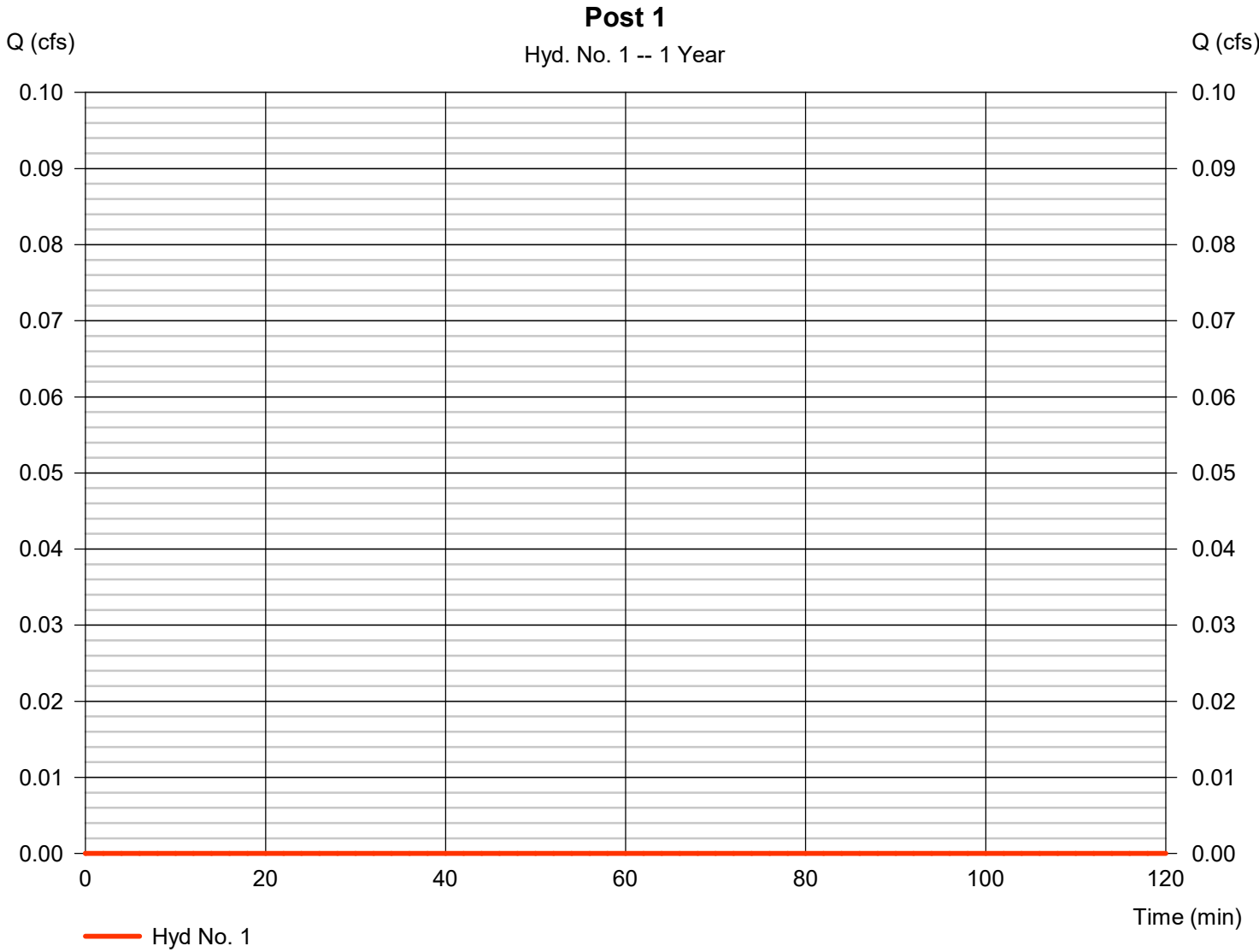
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 1	
2	SCS Runoff	5.446	2	720	12,467	----	----	----	Post 2	
3	SCS Runoff	3.485	2	722	9,119	----	----	----	Post 3	
4	SCS Runoff	4.266	2	716	9,084	----	----	----	Post LOD 2	
5	SCS Runoff	3.567	2	716	7,296	----	----	----	Post 3 LOD	
6	SCS Runoff	9.931	2	716	20,052	----	----	----	Post 2 Total	
7	Reservoir	5.667	2	722	20,052	6	692.28	2,983	Res	
8	Reservoir	0.354	2	760	8,991	3	700.73	4,493	Garden	
Post Hydro.gpw					Return Period: 1 Year			Wednesday, 05 / 3 / 2023		

Hydrograph Report

Hyd. No. 1

Post 1

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 1.000 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

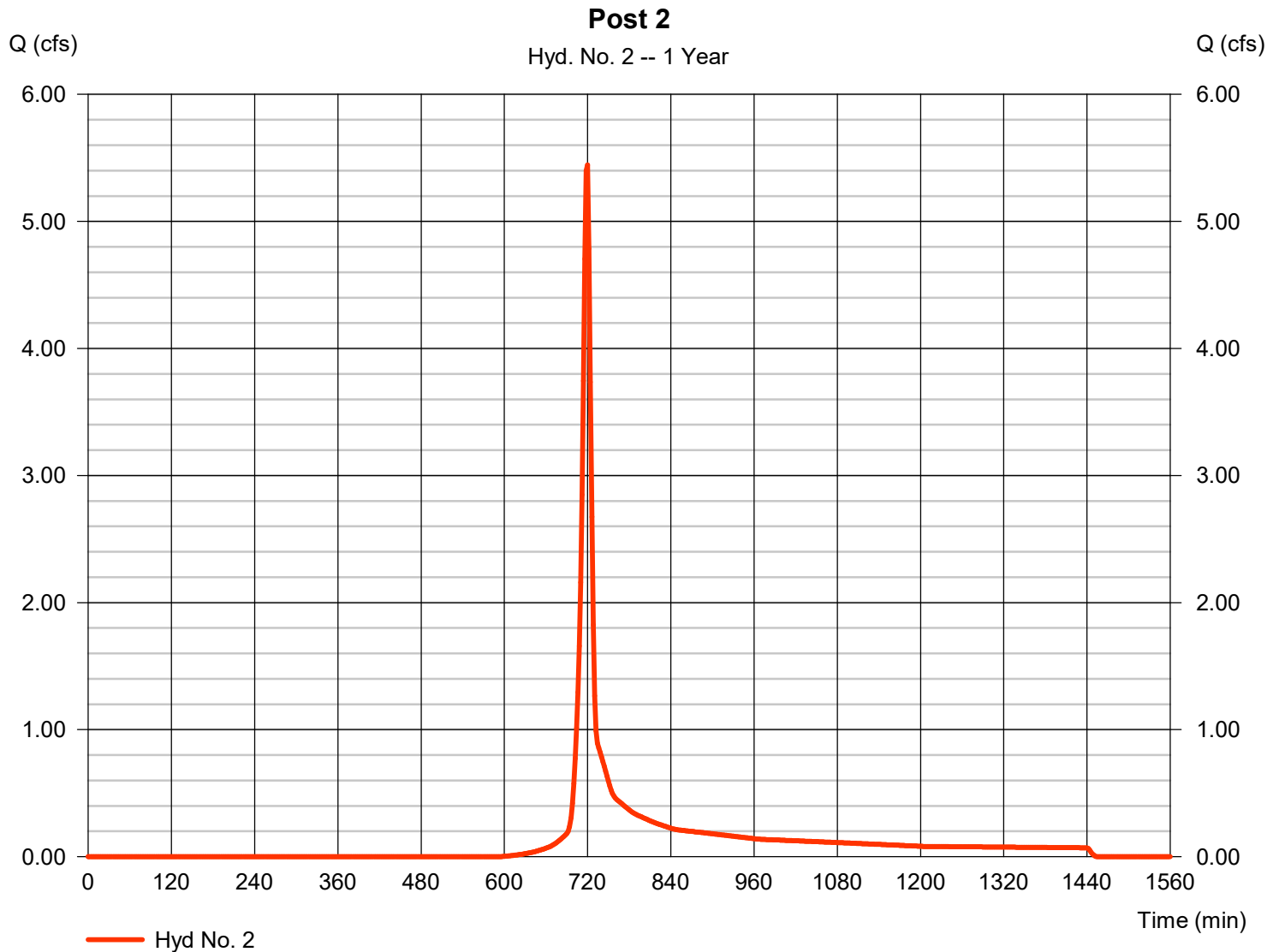
Wednesday, 05 / 3 / 2023

Hyd. No. 2

Post 2

Hydrograph type	= SCS Runoff	Peak discharge	= 5.446 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 12,467 cuft
Drainage area	= 2.770 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.60 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.420 x 61) + (1.350 x 98)] / 2.770



TR55 Tc Worksheet

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

Hyd. No. 2

Post 2

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.150	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.20	0.00	0.00	
Land slope (%)	= 8.00	0.00	0.00	
Travel Time (min)	= 6.79	+ 0.00	+ 0.00	= 6.79
Shallow Concentrated Flow				
Flow length (ft)	= 85.00	0.00	0.00	
Watercourse slope (%)	= 4.00	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=3.23	0.00	0.00	
Travel Time (min)	= 0.44	+ 0.00	+ 0.00	= 0.44
Channel Flow				
X sectional flow area (sqft)	= 1.23	0.00	0.00	
Wetted perimeter (ft)	= 3.93	0.00	0.00	
Channel slope (%)	= 2.00	0.00	0.00	
Manning's n-value	= 0.013	0.015	0.015	
Velocity (ft/s)	=7.44	0.00	0.00	
Flow length (ft)	618.0	0.0	0.0	
Travel Time (min)	= 1.38	+ 0.00	+ 0.00	= 1.38
Total Travel Time, Tc				8.60 min

Hydrograph Report

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

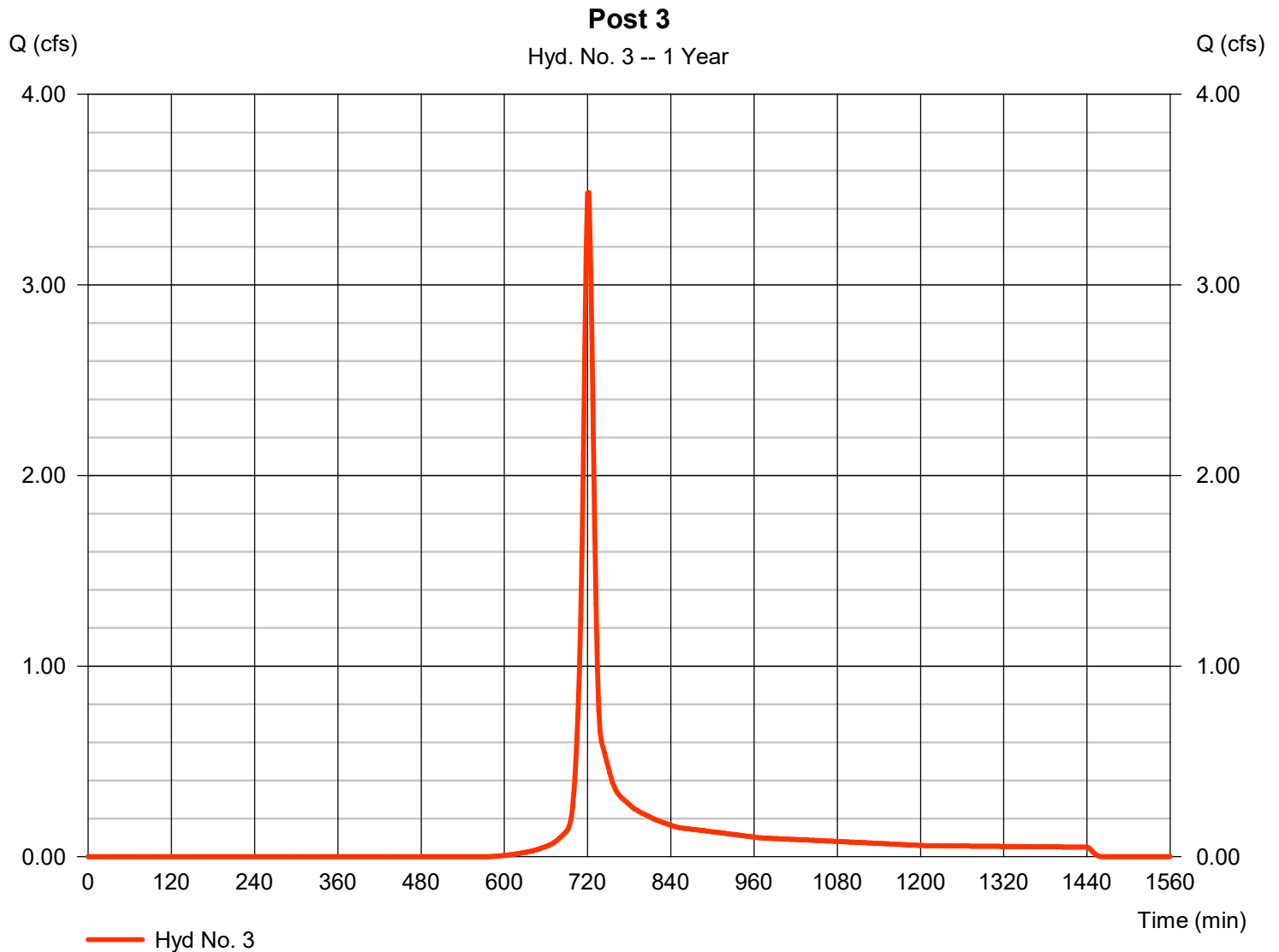
Wednesday, 05 / 3 / 2023

Hyd. No. 3

Post 3

Hydrograph type	= SCS Runoff	Peak discharge	= 3.485 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 9,119 cuft
Drainage area	= 1.870 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.20 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.980 x 98) + (0.890 x 61)] / 1.870



TR55 Tc Worksheet

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

Hyd. No. 3

Post 3

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
Sheet Flow							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 2.20		0.00		0.00		
Land slope (%)	= 7.00		0.00		0.00		
Travel Time (min)	= 7.16	+	0.00	+	0.00	=	7.16
Shallow Concentrated Flow							
Flow length (ft)	= 150.00		0.00		0.00		
Watercourse slope (%)	= 5.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=4.55		0.00		0.00		
Travel Time (min)	= 0.55	+	0.00	+	0.00	=	0.55
Channel Flow							
X sectional flow area (sqft)	= 1.23		0.79		6.50		
Wetted perimeter (ft)	= 3.93		3.14		12.00		
Channel slope (%)	= 1.50		0.10		1.50		
Manning's n-value	= 0.015		0.015		0.026		
Velocity (ft/s)	=5.59		1.25		4.65		
Flow length (ft)	{{0}}307.0		20.0		360.0		
Travel Time (min)	= 0.92	+	0.27	+	1.29	=	2.47
Total Travel Time, Tc							10.20 min

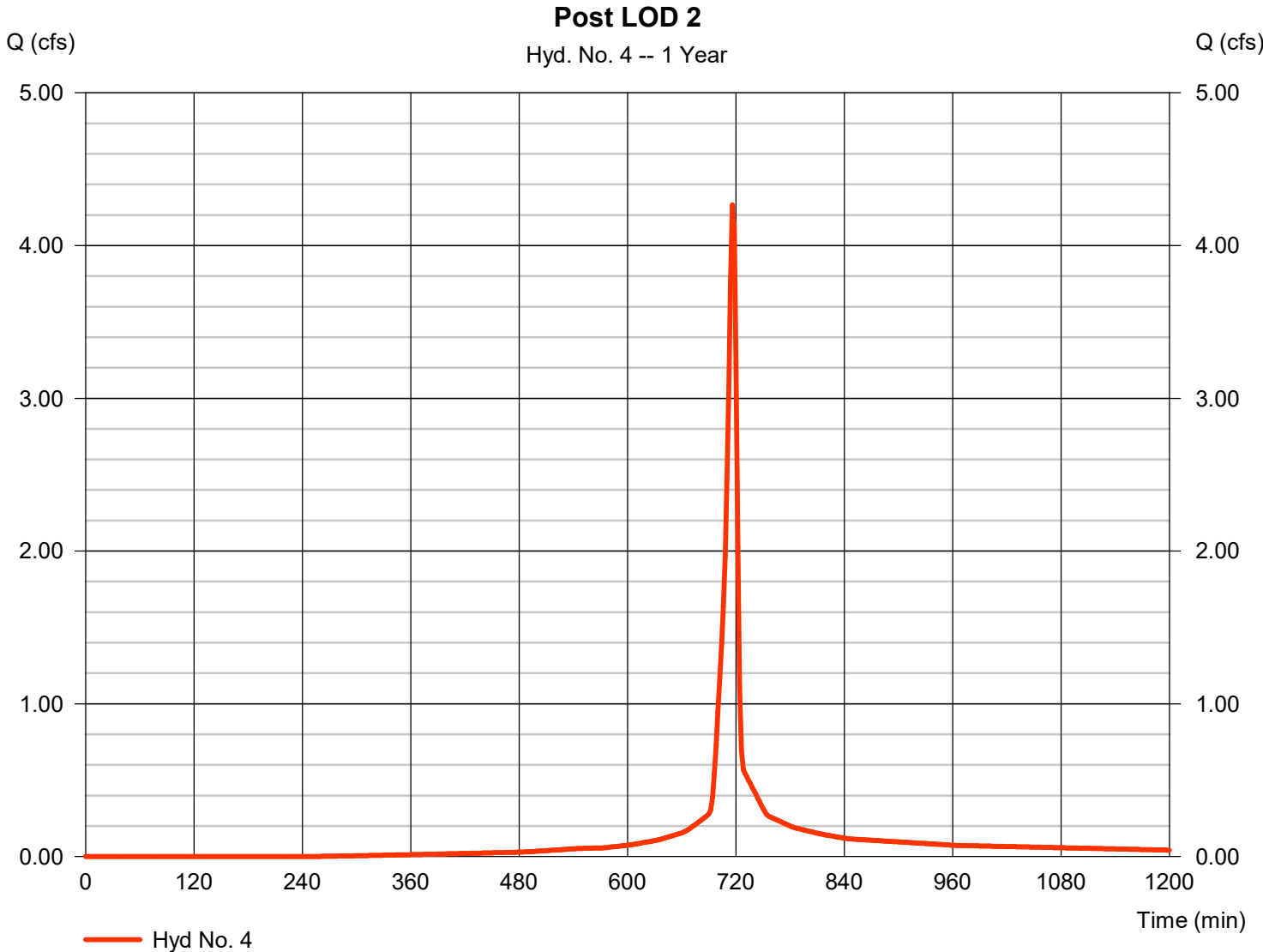
Hydrograph Report

Hyd. No. 4

Post LOD 2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.266 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 9,084 cuft
Drainage area	= 1.150 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.170 x 61) + (0.980 x 98)] / 1.150



TR55 Tc Worksheet

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

Hyd. No. 4

Post LOD 2

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
Sheet Flow							
Manning's n-value	= 0.011		0.150		0.011		
Flow length (ft)	= 83.0		17.0		0.0		
Two-year 24-hr precip. (in)	= 2.20		2.20		0.00		
Land slope (%)	= 7.00		3.50		0.00		
Travel Time (min)	= 0.76	+	2.29	+	0.00	=	3.05
Shallow Concentrated Flow							
Flow length (ft)	= 103.00		0.00		0.00		
Watercourse slope (%)	= 2.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=2.87		0.00		0.00		
Travel Time (min)	= 0.60	+	0.00	+	0.00	=	0.60
Channel Flow							
X sectional flow area (sqft)	= 1.23		0.00		0.00		
Wetted perimeter (ft)	= 3.93		0.00		0.00		
Channel slope (%)	= 2.00		0.00		0.00		
Manning's n-value	= 0.013		0.015		0.015		
Velocity (ft/s)	=7.44		0.00		0.00		
Flow length (ft)	{{0}}618.0		0.0		0.0		
Travel Time (min)	= 1.38	+	0.00	+	0.00	=	1.38
Total Travel Time, Tc							5.00 min

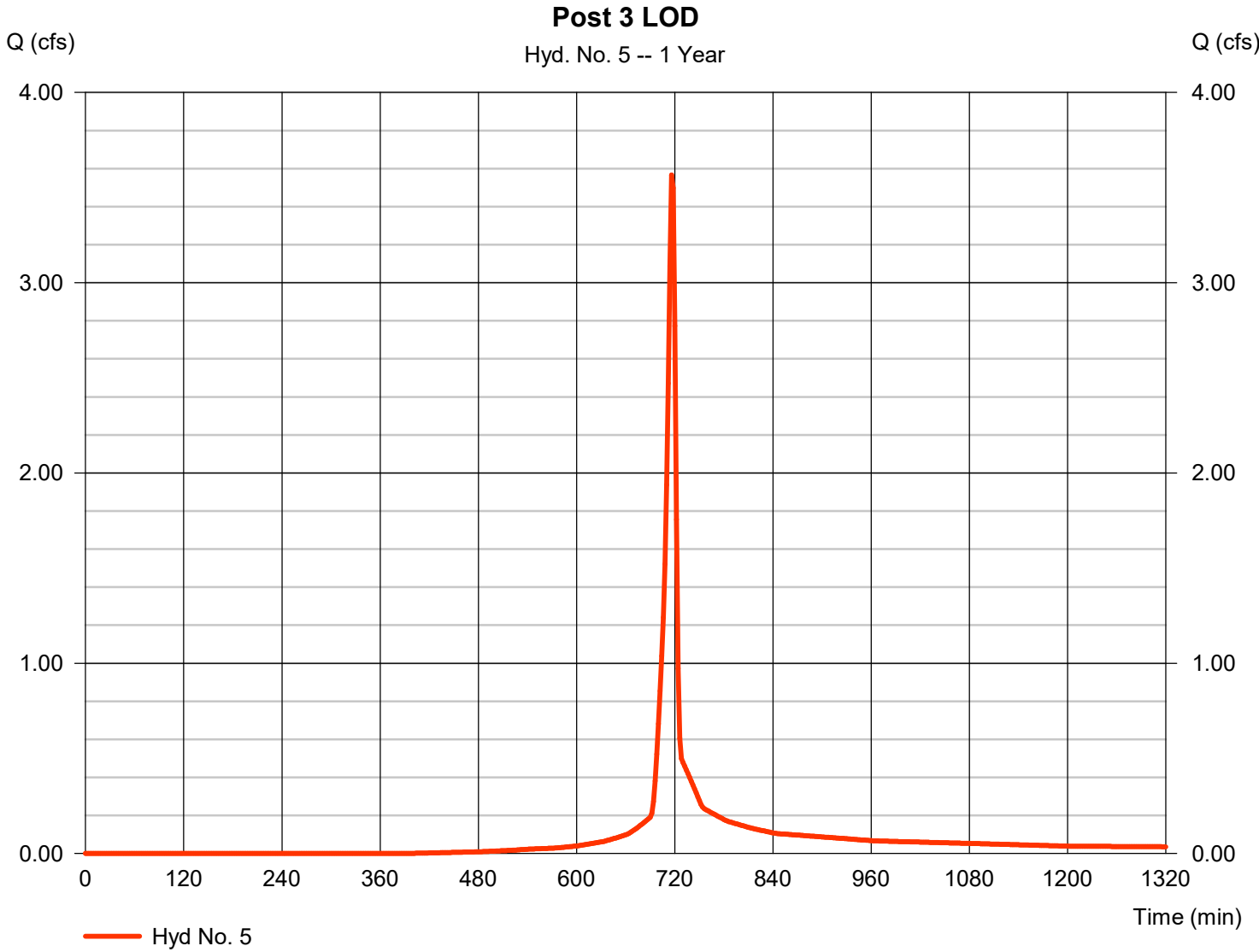
Hydrograph Report

Hyd. No. 5

Post 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 3.567 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 7,296 cuft
Drainage area	= 1.140 ac	Curve number	= 88*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.10 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.830 x 98) + (0.310 x 61)] / 1.140



TR55 Tc Worksheet

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

Hyd. No. 5

Post 3 LOD

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
Sheet Flow							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 24.0		74.0		0.0		
Two-year 24-hr precip. (in)	= 2.20		2.20		0.00		
Land slope (%)	= 8.00		4.00		0.00		
Travel Time (min)	= 2.17	+	0.87	+	0.00	=	3.04
Shallow Concentrated Flow							
Flow length (ft)	= 150.00		0.00		0.00		
Watercourse slope (%)	= 5.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=4.55		0.00		0.00		
Travel Time (min)	= 0.55	+	0.00	+	0.00	=	0.55
Channel Flow							
X sectional flow area (sqft)	= 1.23		0.79		6.50		
Wetted perimeter (ft)	= 3.93		3.14		12.00		
Channel slope (%)	= 1.50		0.10		1.50		
Manning's n-value	= 0.015		0.015		0.026		
Velocity (ft/s)	=5.59		1.25		4.65		
Flow length (ft)	{{0}}307.0		20.0		360.0		
Travel Time (min)	= 0.92	+	0.27	+	1.29	=	2.47
Total Travel Time, Tc							6.10 min

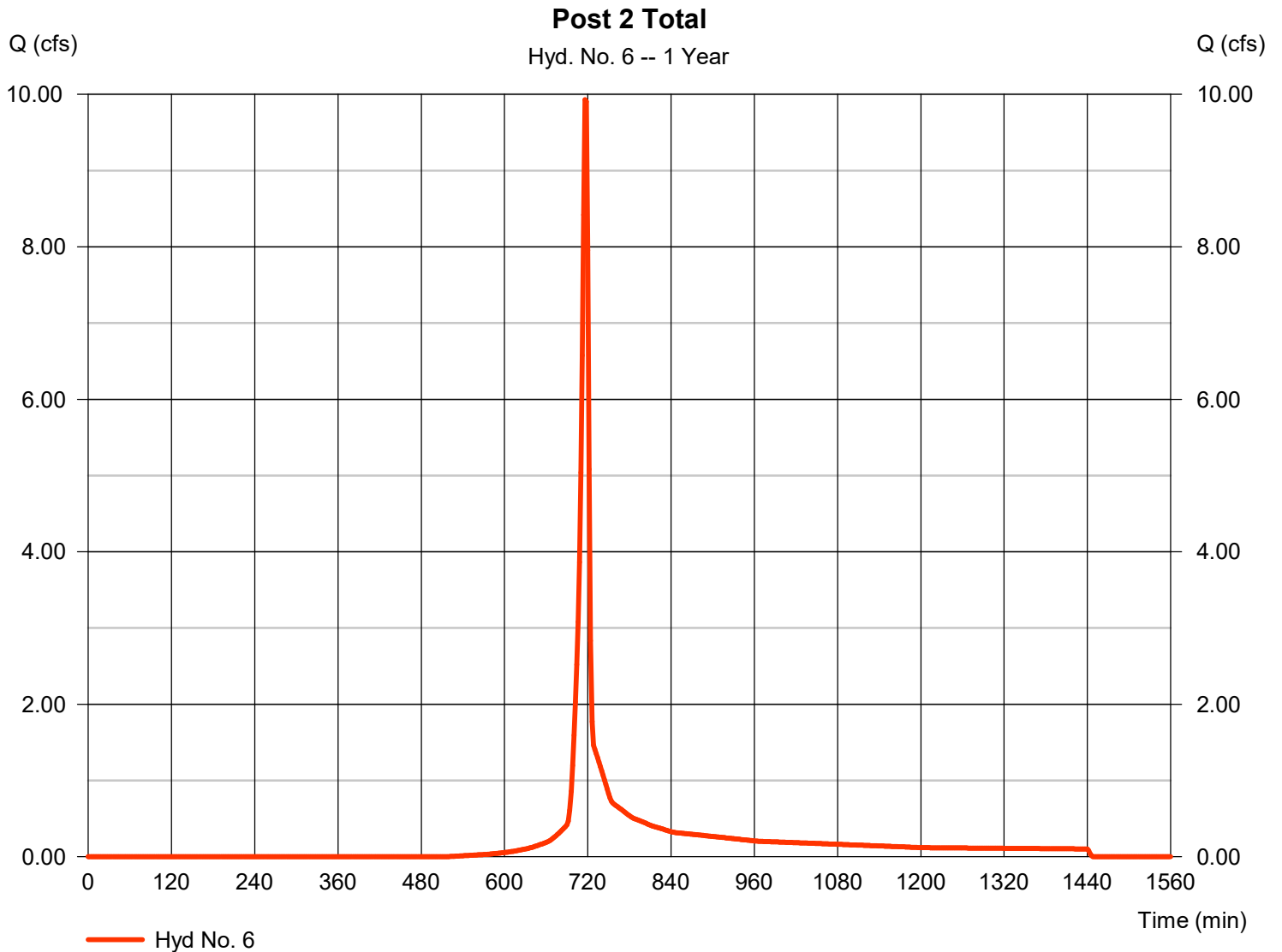
Hydrograph Report

Hyd. No. 6

Post 2 Total

Hydrograph type	= SCS Runoff	Peak discharge	= 9.931 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 20,052 cuft
Drainage area	= 3.920 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.40 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.590 x 61) + (2.330 x 98)] / 3.920



TR55 Tc Worksheet

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

Hyd. No. 6

Post 2 Total

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
Sheet Flow							
Manning's n-value	= 0.130		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.71		3.71		0.00		
Land slope (%)	= 8.00		0.00		0.00		
Travel Time (min)	= 4.66	+	0.00	+	0.00	=	4.66
Shallow Concentrated Flow							
Flow length (ft)	= 85.00		0.00		0.00		
Watercourse slope (%)	= 4.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=4.07		0.00		0.00		
Travel Time (min)	= 0.35	+	0.00	+	0.00	=	0.35
Channel Flow							
X sectional flow area (sqft)	= 1.23		0.00		0.00		
Wetted perimeter (ft)	= 3.93		0.00		0.00		
Channel slope (%)	= 2.00		0.00		0.00		
Manning's n-value	= 0.013		0.015		0.015		
Velocity (ft/s)	=7.44		0.00		0.00		
Flow length (ft)	{{0}}618.0		0.0		0.0		
Travel Time (min)	= 1.38	+	0.00	+	0.00	=	1.38
Total Travel Time, Tc							6.40 min

Hydrograph Report

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

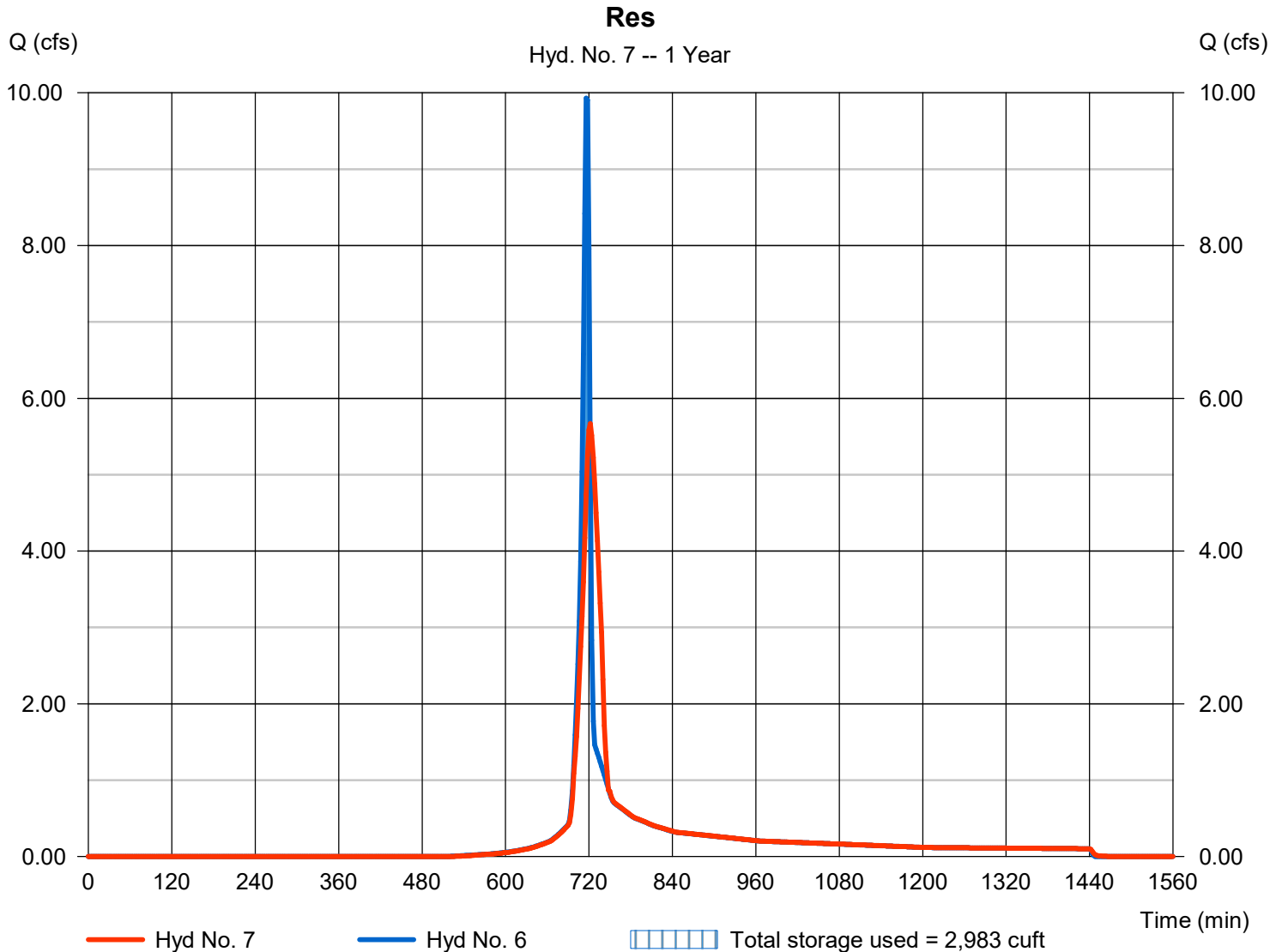
Wednesday, 05 / 3 / 2023

Hyd. No. 7

Res

Hydrograph type	= Reservoir	Peak discharge	= 5.667 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 20,052 cuft
Inflow hyd. No.	= 6 - Post 2 Total	Max. Elevation	= 692.28 ft
Reservoir name	= Underground Retention	Max. Storage	= 2,983 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - Underground Retention

Pond Data

UG Chambers -Invert elev. = 689.00 ft, Rise x Span = 5.00 x 5.00 ft, Barrel Len = 300.00 ft, No. Barrels = 1, Slope = 0.50%, Headers = No

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	689.00	n/a	0	0
0.65	689.65	n/a	75	75
1.30	690.30	n/a	363	438
1.95	690.95	n/a	685	1,123
2.60	691.60	n/a	875	1,998
3.25	692.25	n/a	949	2,947
3.90	692.90	n/a	948	3,895
4.55	693.55	n/a	874	4,769
5.20	694.20	n/a	685	5,454
5.85	694.85	n/a	362	5,817
6.50	695.50	n/a	75	5,892

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	12.00	18.00	0.00
Span (in)	= 24.00	12.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 689.00	689.00	692.35	0.00
Length (ft)	= 190.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.50	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)	= 12.56	1.00	0.00	0.00
Crest El. (ft)	= 697.00	694.55	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	Yes	No	No
Exfil.(in/hr)	= 0.000 (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	689.00	0.00	0.00	0.00	---	0.00	0.00	---	---	---	---	0.000
0.06	8	689.07	0.01 ic	0.01 ic	0.00	---	0.00	0.00	---	---	---	---	0.015
0.13	15	689.13	0.06 ic	0.06 ic	0.00	---	0.00	0.00	---	---	---	---	0.056
0.19	23	689.20	0.13 ic	0.13 ic	0.00	---	0.00	0.00	---	---	---	---	0.127
0.26	30	689.26	0.22 ic	0.22 ic	0.00	---	0.00	0.00	---	---	---	---	0.223
0.32	38	689.33	0.35 ic	0.34 ic	0.00	---	0.00	0.00	---	---	---	---	0.337
0.39	45	689.39	0.48 ic	0.47 ic	0.00	---	0.00	0.00	---	---	---	---	0.473
0.46	53	689.46	0.64 ic	0.64 ic	0.00	---	0.00	0.00	---	---	---	---	0.636
0.52	60	689.52	0.80 ic	0.80 ic	0.00	---	0.00	0.00	---	---	---	---	0.796
0.58	68	689.59	1.00 ic	0.99 ic	0.00	---	0.00	0.00	---	---	---	---	0.992
0.65	75	689.65	1.20 ic	1.20 ic	0.00	---	0.00	0.00	---	---	---	---	1.200
0.71	111	689.72	1.41 ic	1.41 ic	0.00	---	0.00	0.00	---	---	---	---	1.412
0.78	148	689.78	1.64 ic	1.62 ic	0.00	---	0.00	0.00	---	---	---	---	1.621
0.85	184	689.84	1.83 ic	1.83 ic	0.00	---	0.00	0.00	---	---	---	---	1.832
0.91	220	689.91	2.08 ic	2.05 ic	0.00	---	0.00	0.00	---	---	---	---	2.054
0.98	257	689.97	2.28 ic	2.25 ic	0.00	---	0.00	0.00	---	---	---	---	2.247
1.04	293	690.04	2.39 ic	2.39 ic	0.00	---	0.00	0.00	---	---	---	---	2.393
1.11	329	690.10	2.59 ic	2.52 ic	0.00	---	0.00	0.00	---	---	---	---	2.519
1.17	366	690.17	2.70 ic	2.66 ic	0.00	---	0.00	0.00	---	---	---	---	2.657
1.24	402	690.23	2.81 ic	2.79 ic	0.00	---	0.00	0.00	---	---	---	---	2.789
1.30	438	690.30	2.92 ic	2.91 ic	0.00	---	0.00	0.00	---	---	---	---	2.914
1.37	507	690.36	3.03 ic	3.03 ic	0.00	---	0.00	0.00	---	---	---	---	3.034
1.43	575	690.43	3.15 ic	3.15 ic	0.00	---	0.00	0.00	---	---	---	---	3.150
1.50	644	690.49	3.27 ic	3.26 ic	0.00	---	0.00	0.00	---	---	---	---	3.261
1.56	712	690.56	3.39 ic	3.37 ic	0.00	---	0.00	0.00	---	---	---	---	3.368
1.63	781	690.63	3.52 ic	3.47 ic	0.00	---	0.00	0.00	---	---	---	---	3.472
1.69	849	690.69	3.64 ic	3.57 ic	0.00	---	0.00	0.00	---	---	---	---	3.573
1.75	918	690.76	3.67 ic	3.67 ic	0.00	---	0.00	0.00	---	---	---	---	3.674
1.82	986	690.82	3.78 ic	3.78 ic	0.00	---	0.00	0.00	---	---	---	---	3.784
1.88	1,055	690.89	3.90 ic	3.89 ic	0.00	---	0.00	0.00	---	---	---	---	3.887
1.95	1,123	690.95	4.03 ic	3.98 ic	0.00	---	0.00	0.00	---	---	---	---	3.977
2.02	1,211	691.02	4.07 ic	4.07 ic	0.00	---	0.00	0.00	---	---	---	---	4.068

Continues on next page...

Underground Retention

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
2.08	1,298	691.08	4.17 ic	4.17 ic	0.00	---	0.00	0.00	---	---	---	---	4.174
2.14	1,386	691.15	4.30 ic	4.26 ic	0.00	---	0.00	0.00	---	---	---	---	4.262
2.21	1,473	691.21	4.44 ic	4.34 ic	0.00	---	0.00	0.00	---	---	---	---	4.344
2.28	1,561	691.28	4.45 ic	4.45 ic	0.00	---	0.00	0.00	---	---	---	---	4.447
2.34	1,648	691.34	4.58 ic	4.53 ic	0.00	---	0.00	0.00	---	---	---	---	4.528
2.40	1,736	691.41	4.61 ic	4.61 ic	0.00	---	0.00	0.00	---	---	---	---	4.612
2.47	1,823	691.47	4.72 ic	4.71 ic	0.00	---	0.00	0.00	---	---	---	---	4.705
2.54	1,911	691.53	4.87 ic	4.78 ic	0.00	---	0.00	0.00	---	---	---	---	4.780
2.60	1,998	691.60	4.87 ic	4.87 ic	0.00	---	0.00	0.00	---	---	---	---	4.873
2.66	2,093	691.66	5.01 ic	4.95 ic	0.00	---	0.00	0.00	---	---	---	---	4.948
2.73	2,188	691.73	5.03 ic	5.03 ic	0.00	---	0.00	0.00	---	---	---	---	5.030
2.80	2,283	691.79	5.16 ic	5.11 ic	0.00	---	0.00	0.00	---	---	---	---	5.110
2.86	2,377	691.86	5.19 ic	5.19 ic	0.00	---	0.00	0.00	---	---	---	---	5.186
2.92	2,472	691.92	5.31 ic	5.27 ic	0.00	---	0.00	0.00	---	---	---	---	5.267
2.99	2,567	691.99	5.34 ic	5.34 ic	0.00	---	0.00	0.00	---	---	---	---	5.339
3.06	2,662	692.05	5.46 ic	5.42 ic	0.00	---	0.00	0.00	---	---	---	---	5.420
3.12	2,757	692.12	5.49 ic	5.49 ic	0.00	---	0.00	0.00	---	---	---	---	5.489
3.18	2,852	692.18	5.61 ic	5.57 ic	0.00	---	0.00	0.00	---	---	---	---	5.569
3.25	2,947	692.25	5.64 ic	5.64 ic	0.00	---	0.00	0.00	---	---	---	---	5.637
3.32	3,042	692.32	5.76 ic	5.71 ic	0.00	---	0.00	0.00	---	---	---	---	5.714
3.38	3,136	692.38	5.91 ic	5.78 ic	0.04 ic	---	0.00	0.00	---	---	---	---	5.811
3.44	3,231	692.45	6.06 ic	5.84 ic	0.20 ic	---	0.00	0.00	---	---	---	---	6.035
3.51	3,326	692.51	6.37 ic	5.88 ic	0.44 ic	---	0.00	0.00	---	---	---	---	6.313
3.58	3,421	692.58	6.69 ic	5.92 ic	0.73 ic	---	0.00	0.00	---	---	---	---	6.645
3.64	3,516	692.64	7.02 ic	5.95 ic	1.06 ic	---	0.00	0.00	---	---	---	---	7.017
3.70	3,610	692.71	7.48 ic	5.98 ic	1.44 ic	---	0.00	0.00	---	---	---	---	7.422
3.77	3,705	692.77	7.96 ic	6.00 ic	1.85 ic	---	0.00	0.00	---	---	---	---	7.858
3.84	3,800	692.84	8.33 ic	6.03 ic	2.30 ic	---	0.00	0.00	---	---	---	---	8.328
3.90	3,895	692.90	8.91 ic	6.05 ic	2.78 ic	---	0.00	0.00	---	---	---	---	8.829
3.96	3,982	692.97	9.38 ic	6.08 ic	3.28 ic	---	0.00	0.00	---	---	---	---	9.361
4.03	4,070	693.03	10.00 ic	6.09 ic	3.82 ic	---	0.00	0.00	---	---	---	---	9.904
4.09	4,157	693.09	10.48 ic	6.10 ic	4.38 ic	---	0.00	0.00	---	---	---	---	10.48
4.16	4,245	693.16	11.16 ic	6.11 ic	4.96 ic	---	0.00	0.00	---	---	---	---	11.07
4.22	4,332	693.22	11.70 ic	6.12 ic	5.57 ic	---	0.00	0.00	---	---	---	---	11.70
4.29	4,420	693.29	12.33 ic	6.13 ic	6.21 ic	---	0.00	0.00	---	---	---	---	12.33
4.36	4,507	693.35	12.99 ic	6.13 ic	6.86 ic	---	0.00	0.00	---	---	---	---	12.99
4.42	4,594	693.42	13.66 ic	6.12 ic	7.54 ic	---	0.00	0.00	---	---	---	---	13.66
4.49	4,682	693.48	14.33 ic	6.10 ic	8.23 ic	---	0.00	0.00	---	---	---	---	14.33
4.55	4,769	693.55	15.02 ic	6.06 ic	8.95 ic	---	0.00	0.00	---	---	---	---	15.02
4.61	4,838	693.61	15.71 ic	6.02 ic	9.69 ic	---	0.00	0.00	---	---	---	---	15.71
4.68	4,906	693.68	16.42 ic	5.98 ic	10.44 ic	---	0.00	0.00	---	---	---	---	16.42
4.74	4,975	693.74	17.15 ic	5.93 ic	11.22 ic	---	0.00	0.00	---	---	---	---	17.15
4.81	5,043	693.81	17.89 ic	5.87 ic	12.01 ic	---	0.00	0.00	---	---	---	---	17.88
4.88	5,112	693.88	18.54 ic	5.82 ic	12.72 ic	---	0.00	0.00	---	---	---	---	18.54
4.94	5,180	693.94	19.04 ic	5.80 ic	13.24 ic	---	0.00	0.00	---	---	---	---	19.04
5.01	5,249	694.01	19.52 ic	5.78 ic	13.74 ic	---	0.00	0.00	---	---	---	---	19.52
5.07	5,317	694.07	19.99 ic	5.76 ic	14.23 ic	---	0.00	0.00	---	---	---	---	19.99
5.14	5,386	694.14	20.44 ic	5.74 ic	14.70 ic	---	0.00	0.00	---	---	---	---	20.44
5.20	5,454	694.20	20.88 ic	5.73 ic	15.15 ic	---	0.00	0.00	---	---	---	---	20.88
5.26	5,491	694.27	21.30 ic	5.71 ic	15.59 ic	---	0.00	0.00	---	---	---	---	21.30
5.33	5,527	694.33	21.72 ic	5.70 ic	16.02 ic	---	0.00	0.00	---	---	---	---	21.72
5.39	5,563	694.40	22.12 ic	5.68 ic	16.44 ic	---	0.00	0.00	---	---	---	---	22.12
5.46	5,599	694.46	22.51 ic	5.67 ic	16.85 ic	---	0.00	0.00	---	---	---	---	22.51
5.53	5,636	694.53	22.90 ic	5.65 ic	17.24 ic	---	0.00	0.00	---	---	---	---	22.89
5.59	5,672	694.59	23.28 oc	5.62 ic	17.63 ic	---	0.00	0.03	---	---	---	---	23.28
5.66	5,708	694.66	23.69 oc	5.56 ic	18.01 ic	---	0.00	0.11	---	---	---	---	23.69
5.72	5,744	694.72	24.11 oc	5.49 ic	18.39 ic	---	0.00	0.23	---	---	---	---	24.11
5.79	5,780	694.78	24.54 oc	5.41 ic	18.75 ic	---	0.00	0.38	---	---	---	---	24.54
5.85	5,817	694.85	24.98 oc	5.32 ic	19.11 ic	---	0.00	0.55	---	---	---	---	24.98
5.91	5,824	694.91	25.42 oc	5.22 ic	19.46 ic	---	0.00	0.73	---	---	---	---	25.42
5.98	5,832	694.98	25.79 oc	5.16 ic	19.70 ic	---	0.00	0.94	---	---	---	---	25.79
6.05	5,839	695.04	26.00 oc	5.15 ic	19.69 ic	---	0.00	1.16	---	---	---	---	26.00
6.11	5,847	695.11	26.22 oc	5.15 ic	19.67 ic	---	0.00	1.40	---	---	---	---	26.22
6.18	5,854	695.17	26.44 oc	5.14 ic	19.65 ic	---	0.00	1.65	---	---	---	---	26.44
6.24	5,862	695.24	26.66 oc	5.13 ic	19.61 ic	---	0.00	1.91	---	---	---	---	26.66
6.31	5,869	695.30	26.88 oc	5.12 ic	19.57 ic	---	0.00	2.18	---	---	---	---	26.88
6.37	5,877	695.37	27.11 oc	5.11 ic	19.53 ic	---	0.00	2.47	---	---	---	---	27.11
6.44	5,884	695.43	27.34 oc	5.10 ic	19.47 ic	---	0.00	2.77	---	---	---	---	27.34
6.50	5,892	695.50	27.57 oc	5.08 ic	19.41 ic	---	0.00	3.08	---	---	---	---	27.57

...End

Hydrograph Report

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

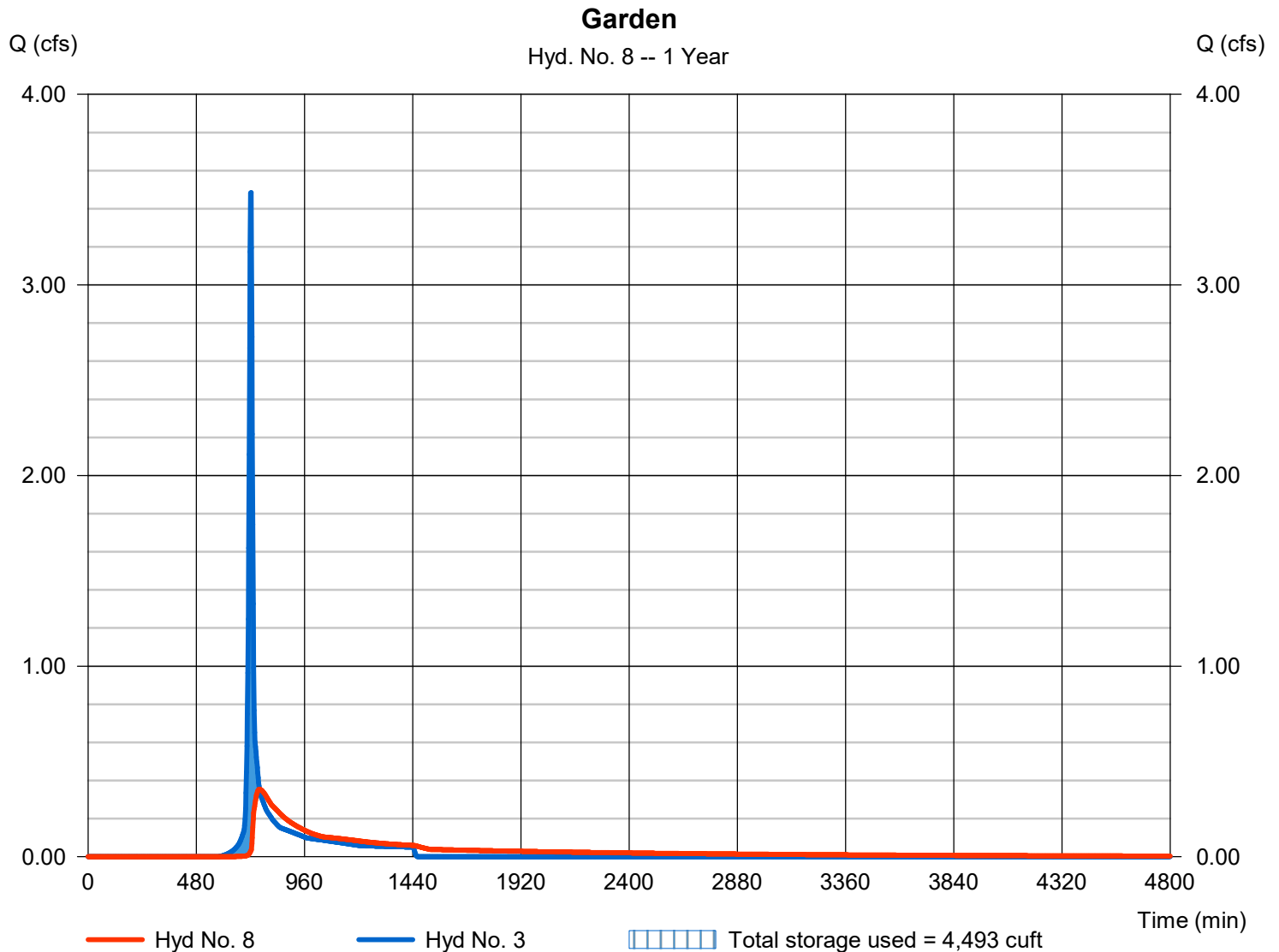
Wednesday, 05 / 3 / 2023

Hyd. No. 8

Garden

Hydrograph type	= Reservoir	Peak discharge	= 0.354 cfs
Storm frequency	= 1 yrs	Time to peak	= 760 min
Time interval	= 2 min	Hyd. volume	= 8,991 cuft
Inflow hyd. No.	= 3 - Post 3	Max. Elevation	= 700.73 ft
Reservoir name	= Garden	Max. Storage	= 4,493 cuft

Storage Indication method used. Outflow includes exfiltration.



Pond Report

Pond No. 2 - Garden

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 700.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	700.00	5,695	0	0
1.00	701.00	6,635	6,158	6,158
2.00	702.00	7,729	7,174	13,333
3.00	703.00	9,004	8,358	21,690

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	18.00	0.00	0.00
Span (in)	= 12.00	18.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 698.35	700.50	0.00	0.00
Length (ft)	= 300.00	0.00	0.00	0.00
Slope (%)	= 0.50	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)	= 12.56	0.00	0.00	0.00
Crest El. (ft)	= 703.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.500 (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).

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	700.00	0.00	0.00	---	---	0.00	---	---	---	0.000	---	0.000
0.10	616	700.10	2.81 oc	0.00	---	---	0.00	---	---	---	0.008	---	0.008
0.20	1,232	700.20	2.81 oc	0.00	---	---	0.00	---	---	---	0.015	---	0.015
0.30	1,848	700.30	2.81 oc	0.00	---	---	0.00	---	---	---	0.023	---	0.023
0.40	2,463	700.40	2.81 oc	0.00	---	---	0.00	---	---	---	0.031	---	0.031
0.50	3,079	700.50	2.81 oc	0.00	---	---	0.00	---	---	---	0.038	---	0.038
0.60	3,695	700.60	2.81 oc	0.06 ic	---	---	0.00	---	---	---	0.046	---	0.104
0.70	4,311	700.70	2.81 oc	0.22 ic	---	---	0.00	---	---	---	0.054	---	0.272
0.80	4,927	700.80	2.81 oc	0.49 ic	---	---	0.00	---	---	---	0.061	---	0.551
0.90	5,543	700.90	2.81 oc	0.84 ic	---	---	0.00	---	---	---	0.069	---	0.911
1.00	6,158	701.00	2.81 oc	1.27 ic	---	---	0.00	---	---	---	0.077	---	1.342
1.10	6,876	701.10	2.81 oc	1.78 ic	---	---	0.00	---	---	---	0.078	---	1.856
1.20	7,593	701.20	2.81 oc	2.32 ic	---	---	0.00	---	---	---	0.079	---	2.395
1.30	8,311	701.30	2.96 oc	2.96 ic	---	---	0.00	---	---	---	0.081	---	3.040
1.40	9,028	701.40	3.40 oc	3.40 ic	---	---	0.00	---	---	---	0.082	---	3.483
1.50	9,746	701.50	3.49 oc	3.49 ic	---	---	0.00	---	---	---	0.083	---	3.576
1.60	10,463	701.60	3.57 oc	3.57 ic	---	---	0.00	---	---	---	0.084	---	3.655
1.70	11,180	701.70	3.64 oc	3.64 ic	---	---	0.00	---	---	---	0.086	---	3.725
1.80	11,898	701.80	3.70 oc	3.70 ic	---	---	0.00	---	---	---	0.087	---	3.790
1.90	12,615	701.90	3.76 oc	3.76 ic	---	---	0.00	---	---	---	0.088	---	3.848
2.00	13,333	702.00	3.81 oc	3.81 ic	---	---	0.00	---	---	---	0.089	---	3.901
2.10	14,168	702.10	3.86 oc	3.86 ic	---	---	0.00	---	---	---	0.091	---	3.948
2.20	15,004	702.20	3.90 oc	3.90 ic	---	---	0.00	---	---	---	0.092	---	3.994
2.30	15,840	702.30	3.95 oc	3.95 ic	---	---	0.00	---	---	---	0.094	---	4.041
2.40	16,676	702.40	3.99 oc	3.99 ic	---	---	0.00	---	---	---	0.095	---	4.086
2.50	17,512	702.50	4.03 oc	4.03 ic	---	---	0.00	---	---	---	0.097	---	4.131
2.60	18,347	702.60	4.08 oc	4.08 ic	---	---	0.00	---	---	---	0.098	---	4.176
2.70	19,183	702.70	4.12 oc	4.12 ic	---	---	0.00	---	---	---	0.100	---	4.221
2.80	20,019	702.80	4.16 oc	4.16 ic	---	---	0.00	---	---	---	0.101	---	4.263
2.90	20,855	702.90	4.20 oc	4.20 ic	---	---	0.00	---	---	---	0.103	---	4.307
3.00	21,690	703.00	4.25 oc	4.25 ic	---	---	0.00	---	---	---	0.104	---	4.350

Hydrograph Summary Report

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

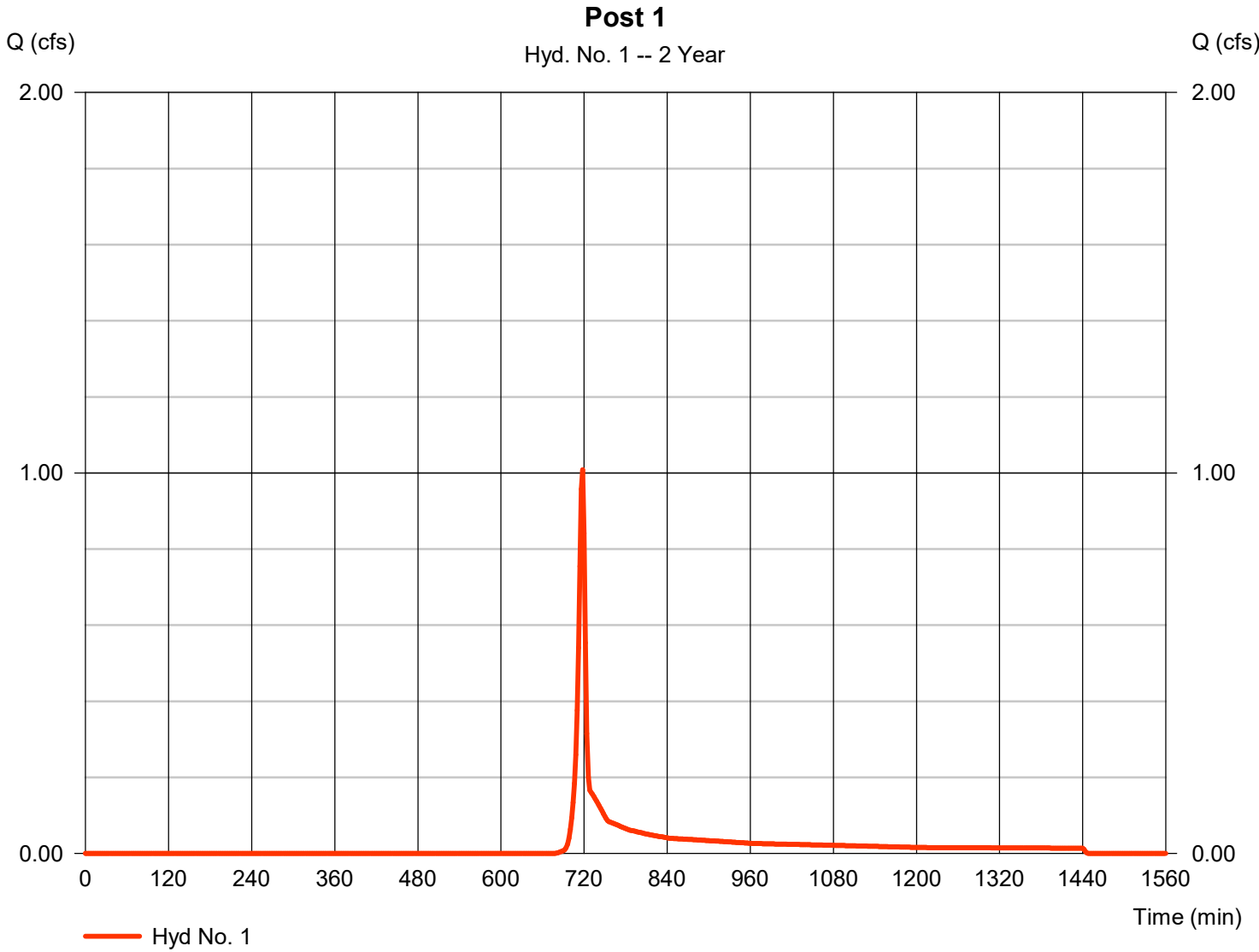
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	1.008	2	718	2,044	-----	-----	-----	Post 1	
2	SCS Runoff	7.598	2	718	17,403	-----	-----	-----	Post 2	
3	SCS Runoff	4.864	2	720	12,632	-----	-----	-----	Post 3	
4	SCS Runoff	2.823	2	716	5,866	-----	-----	-----	Post LOD 2	
5	SCS Runoff	2.167	2	716	4,379	-----	-----	-----	Post 3 LOD	
6	SCS Runoff	13.40	2	716	27,168	-----	-----	-----	Post 2 Total	
7	Reservoir	10.17	2	720	27,167	6	693.06	4,111	Res	
8	Reservoir	1.034	2	736	12,500	3	700.93	5,718	Garden	
Post Hydro.gpw					Return Period: 2 Year			Wednesday, 05 / 3 / 2023		

Hydrograph Report

Hyd. No. 1

Post 1

Hydrograph type	= SCS Runoff	Peak discharge	= 1.008 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,044 cuft
Drainage area	= 1.000 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

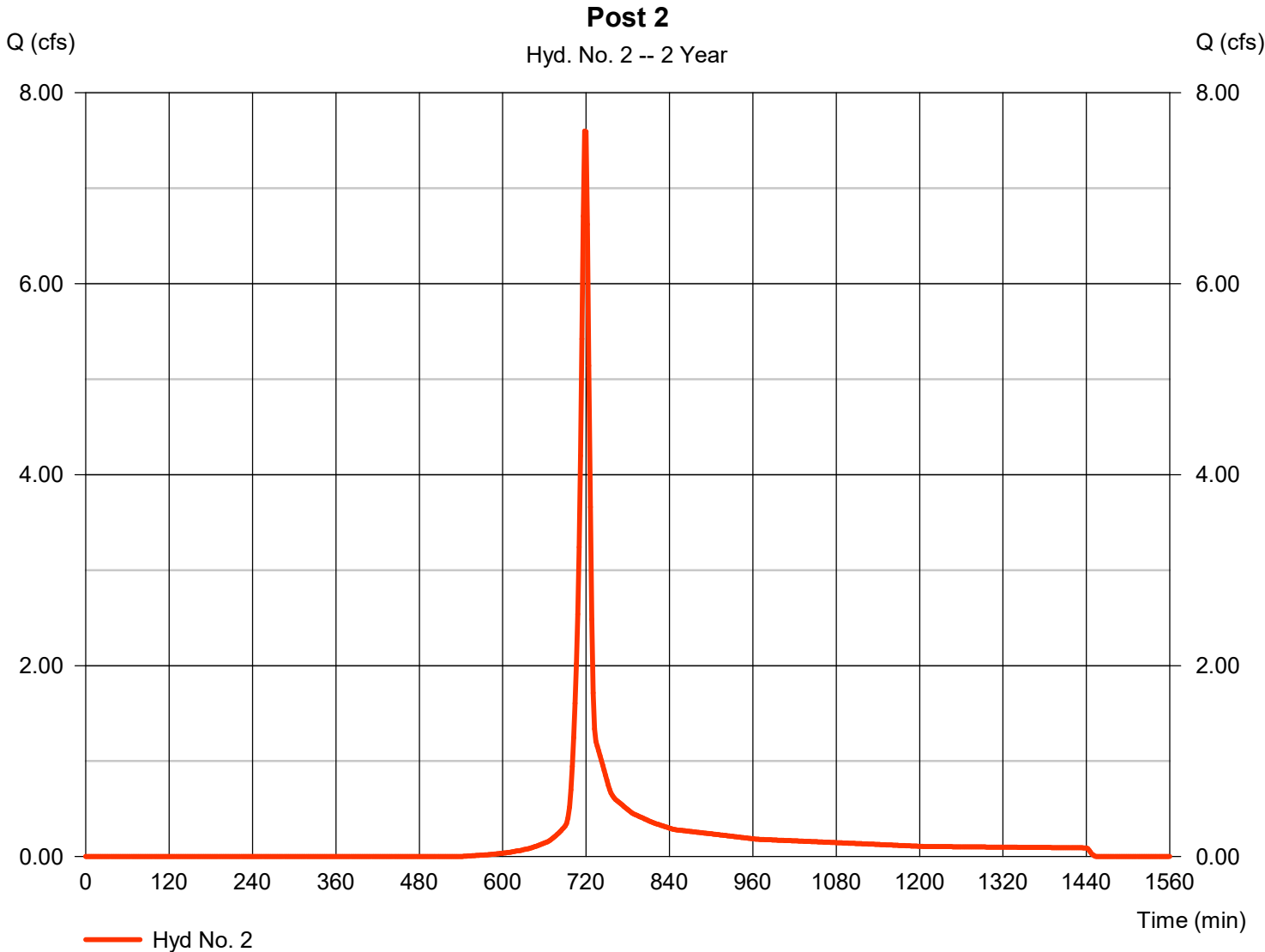
Wednesday, 05 / 3 / 2023

Hyd. No. 2

Post 2

Hydrograph type	= SCS Runoff	Peak discharge	= 7.598 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 17,403 cuft
Drainage area	= 2.770 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.60 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.420 x 61) + (1.350 x 98)] / 2.770



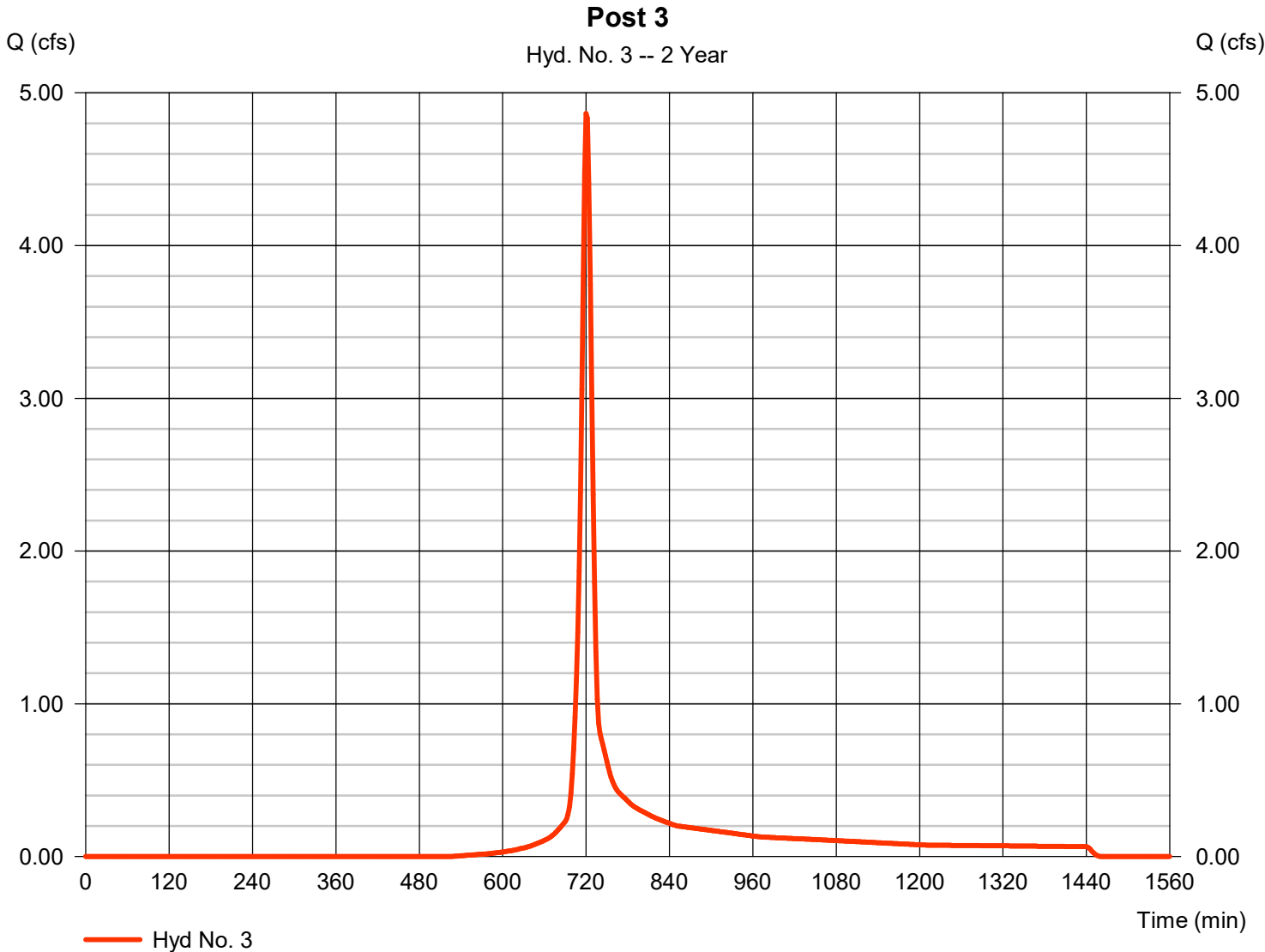
Hydrograph Report

Hyd. No. 3

Post 3

Hydrograph type	= SCS Runoff	Peak discharge	= 4.864 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 12,632 cuft
Drainage area	= 1.870 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.20 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.980 x 98) + (0.890 x 61)] / 1.870



Hydrograph Report

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

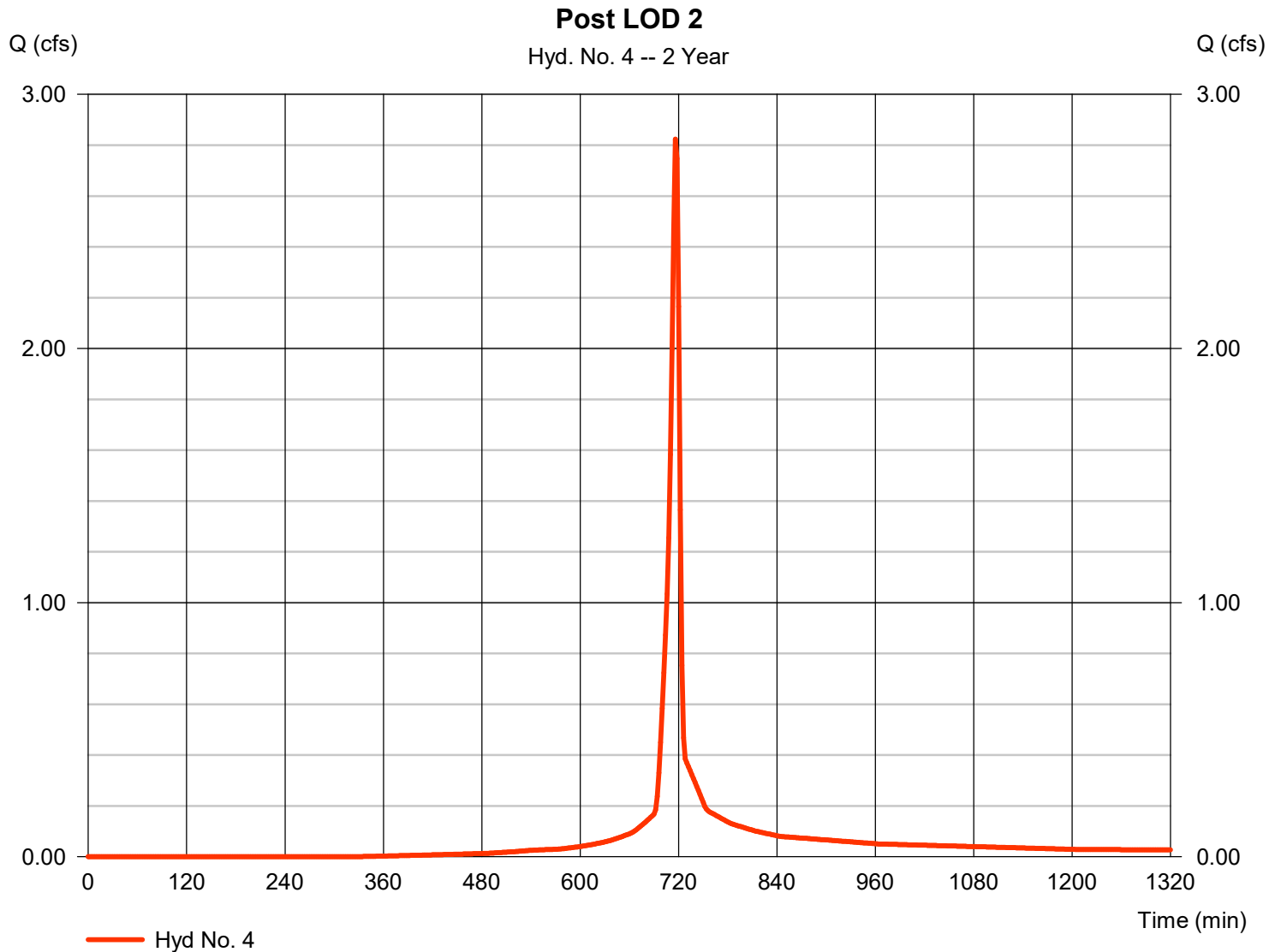
Wednesday, 05 / 3 / 2023

Hyd. No. 4

Post LOD 2

Hydrograph type	= SCS Runoff	Peak discharge	= 2.823 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,866 cuft
Drainage area	= 1.150 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.170 x 61) + (0.980 x 98)] / 1.150



Hydrograph Report

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

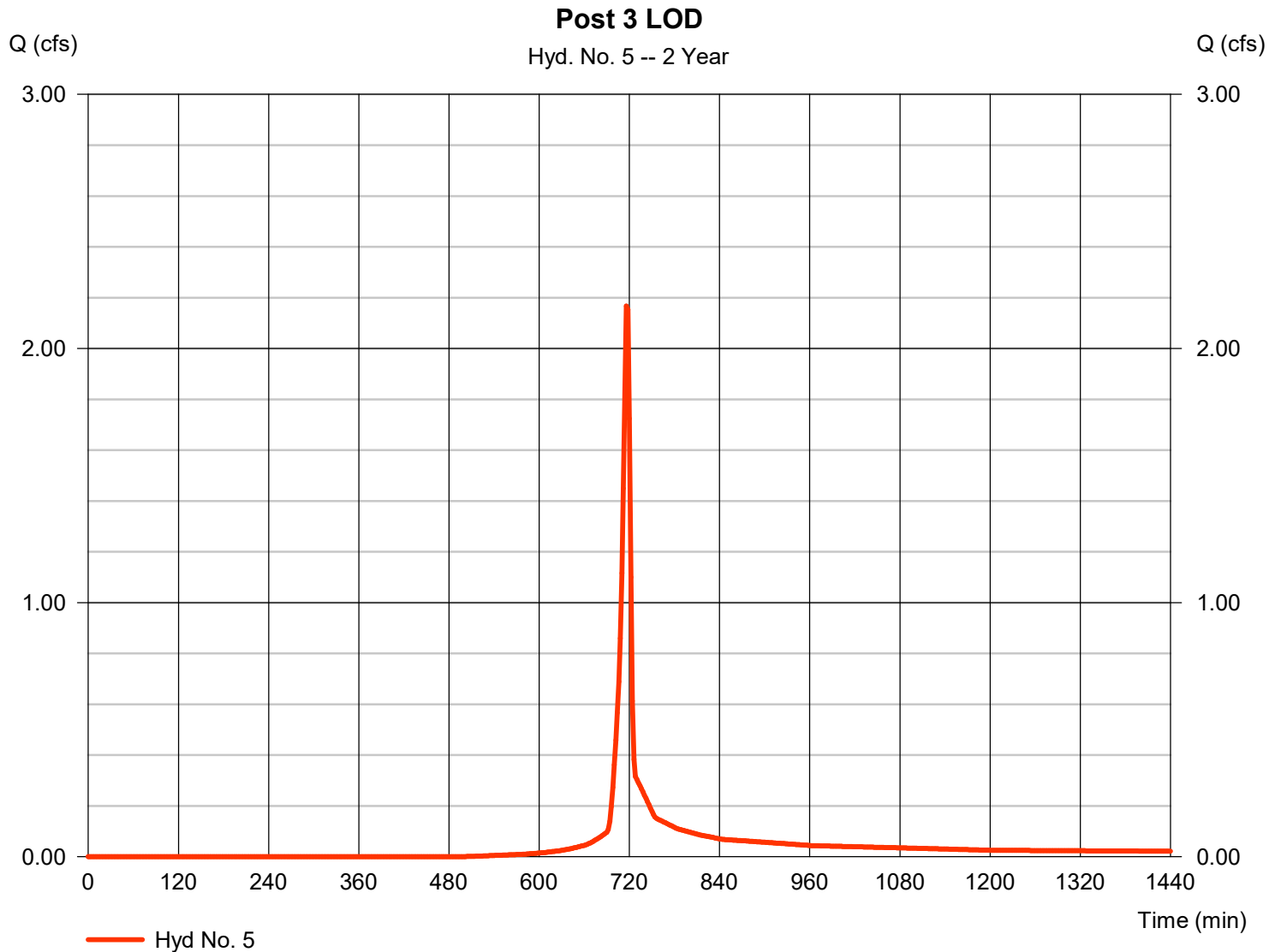
Wednesday, 05 / 3 / 2023

Hyd. No. 5

Post 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 2.167 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,379 cuft
Drainage area	= 1.140 ac	Curve number	= 88*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.10 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.830 x 98) + (0.310 x 61)] / 1.140



Hydrograph Report

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

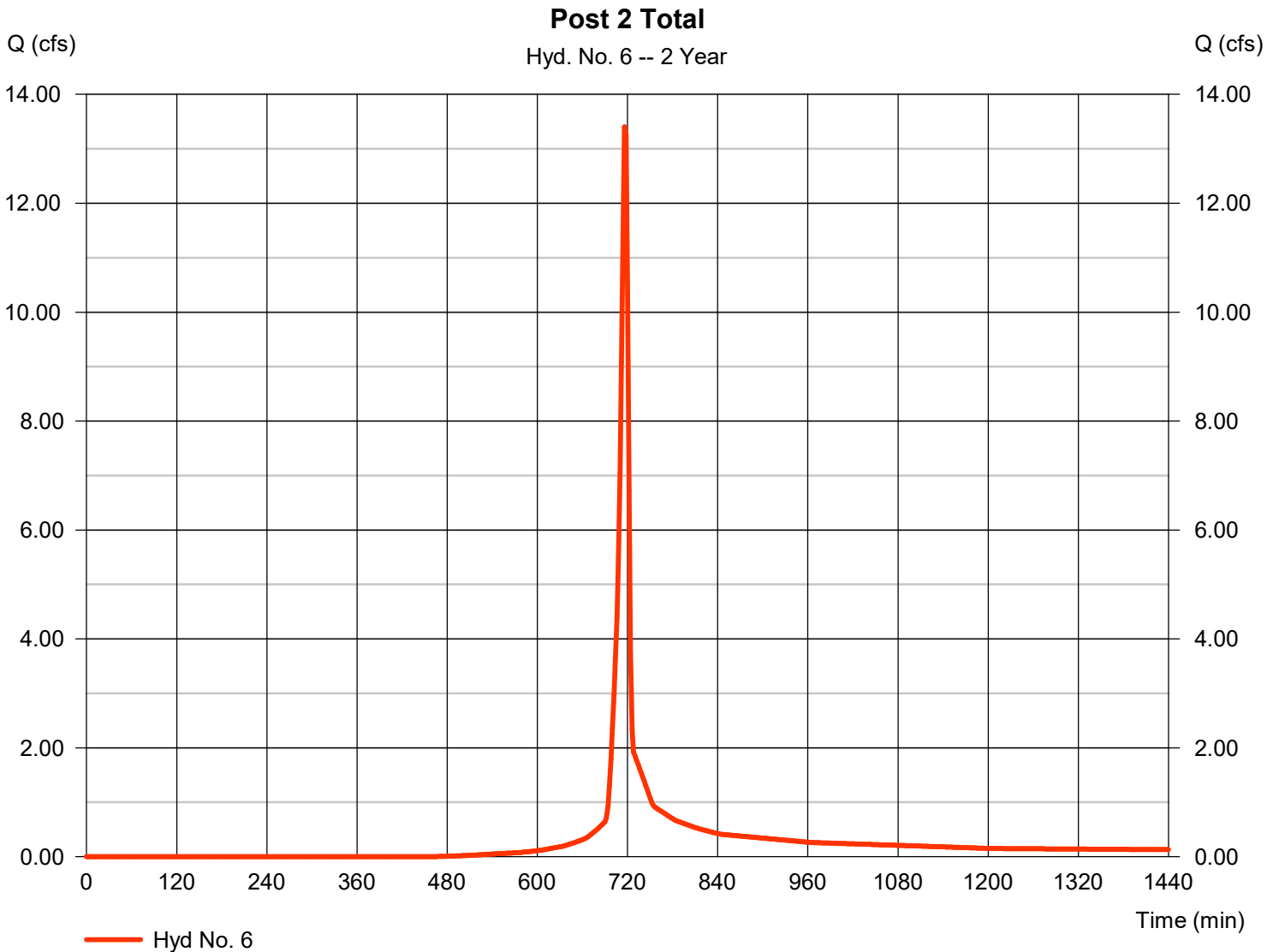
Wednesday, 05 / 3 / 2023

Hyd. No. 6

Post 2 Total

Hydrograph type	= SCS Runoff	Peak discharge	= 13.40 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 27,168 cuft
Drainage area	= 3.920 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.40 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.590 x 61) + (2.330 x 98)] / 3.920



Hydrograph Report

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

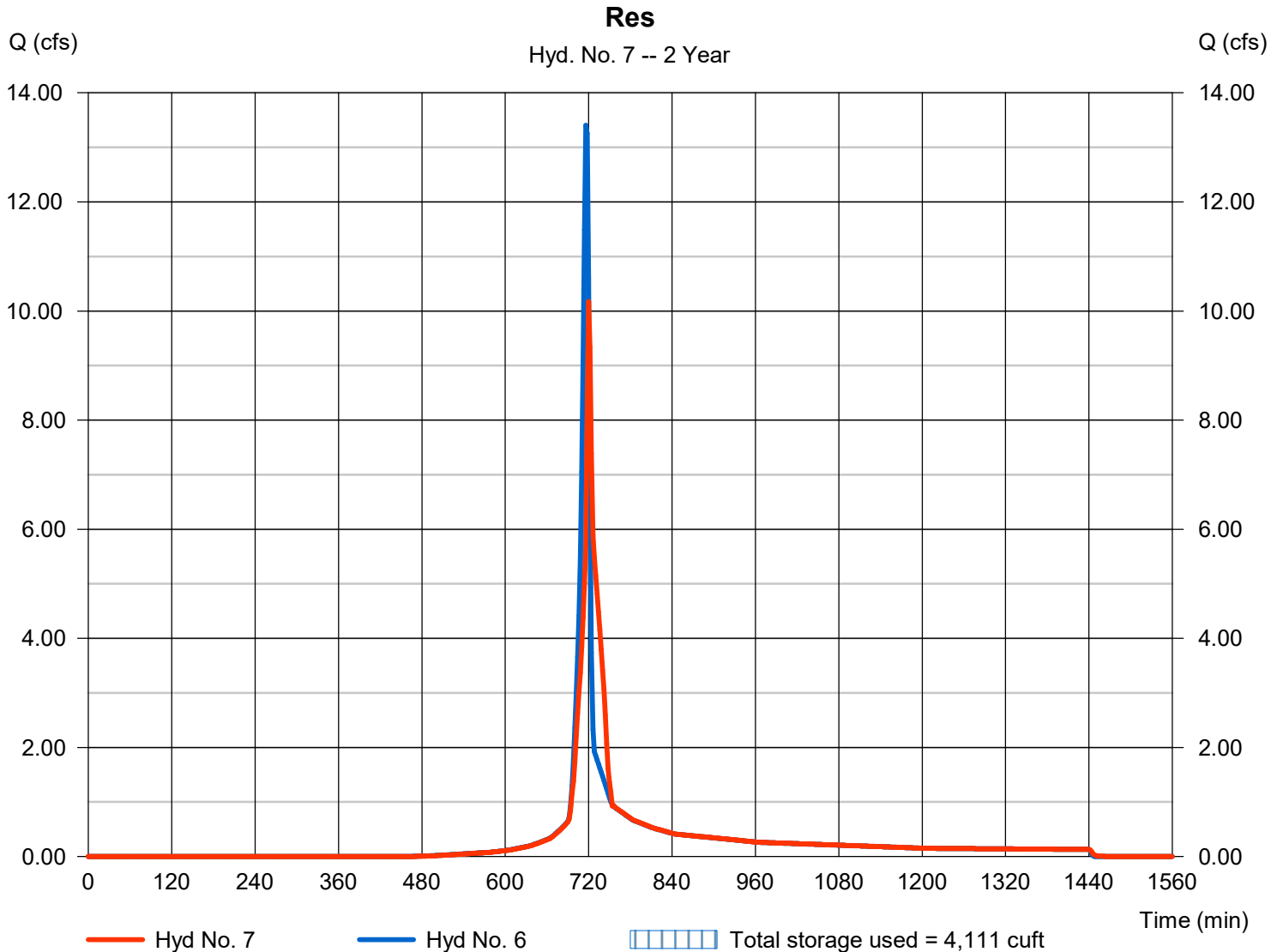
Wednesday, 05 / 3 / 2023

Hyd. No. 7

Res

Hydrograph type	= Reservoir	Peak discharge	= 10.17 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 27,167 cuft
Inflow hyd. No.	= 6 - Post 2 Total	Max. Elevation	= 693.06 ft
Reservoir name	= Underground Retention	Max. Storage	= 4,111 cuft

Storage Indication method used.



Hydrograph Report

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

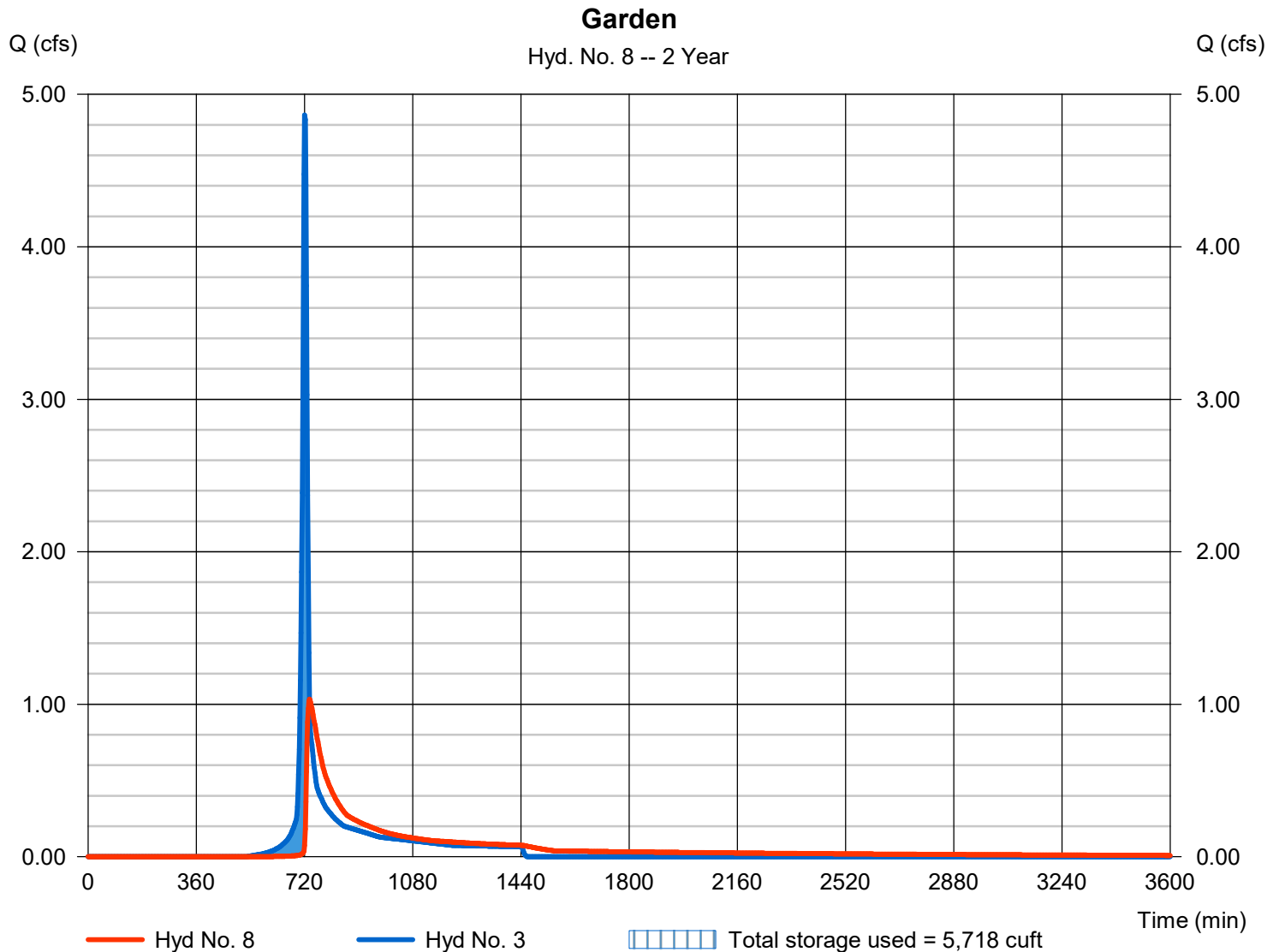
Wednesday, 05 / 3 / 2023

Hyd. No. 8

Garden

Hydrograph type	= Reservoir	Peak discharge	= 1.034 cfs
Storm frequency	= 2 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 12,500 cuft
Inflow hyd. No.	= 3 - Post 3	Max. Elevation	= 700.93 ft
Reservoir name	= Garden	Max. Storage	= 5,718 cuft

Storage Indication method used. Outflow includes exfiltration.



Hydrograph Summary Report

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

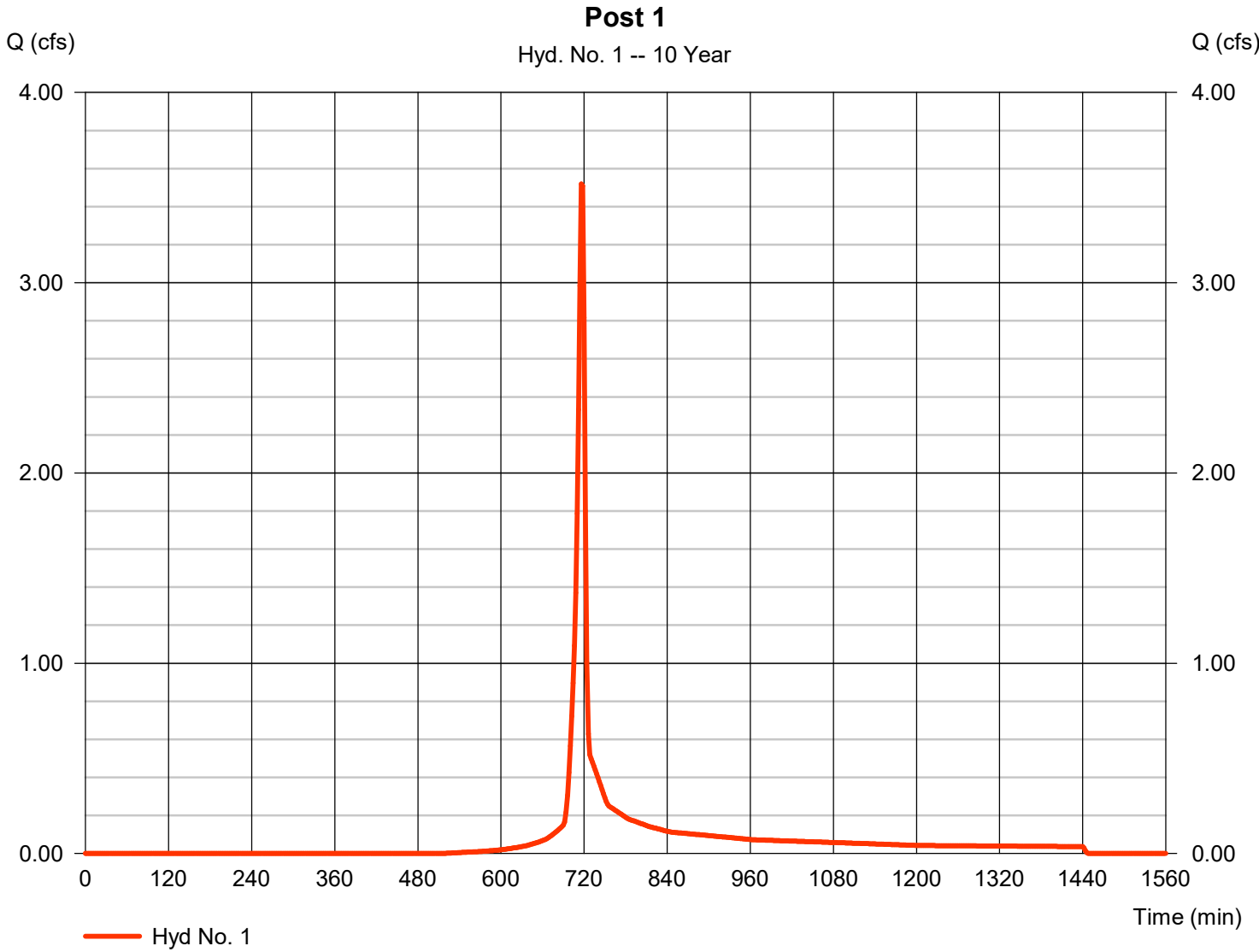
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	3.519	2	716	7,106	----	----	----	Post 1	
2	SCS Runoff	14.46	2	718	33,252	----	----	----	Post 2	
3	SCS Runoff	9.155	2	720	23,833	----	----	----	Post 3	
4	SCS Runoff	6.206	2	716	13,555	----	----	----	Post LOD 2	
5	SCS Runoff	5.506	2	716	11,490	----	----	----	Post 3 LOD	
6	SCS Runoff	23.89	2	716	49,403	----	----	----	Post 2 Total	
7	Reservoir	22.55	2	718	49,403	6	694.47	5,603	Res	
8	Reservoir	3.565	2	732	23,695	3	701.49	9,661	Garden	
Post Hydro.gpw					Return Period: 10 Year			Wednesday, 05 / 3 / 2023		

Hydrograph Report

Hyd. No. 1

Post 1

Hydrograph type	= SCS Runoff	Peak discharge	= 3.519 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 7,106 cuft
Drainage area	= 1.000 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

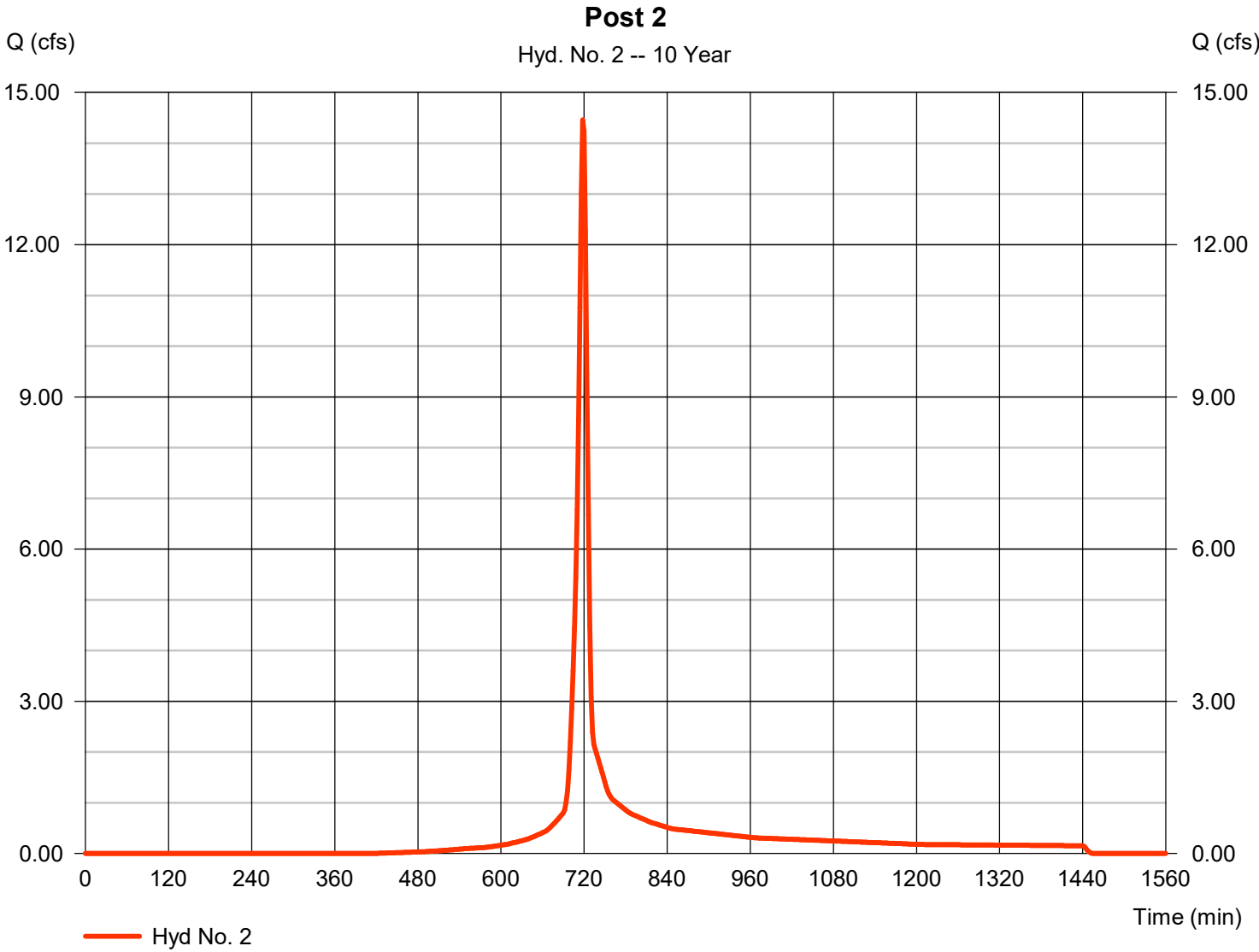
Wednesday, 05 / 3 / 2023

Hyd. No. 2

Post 2

Hydrograph type	= SCS Runoff	Peak discharge	= 14.46 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 33,252 cuft
Drainage area	= 2.770 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.60 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.420 x 61) + (1.350 x 98)] / 2.770



Hydrograph Report

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

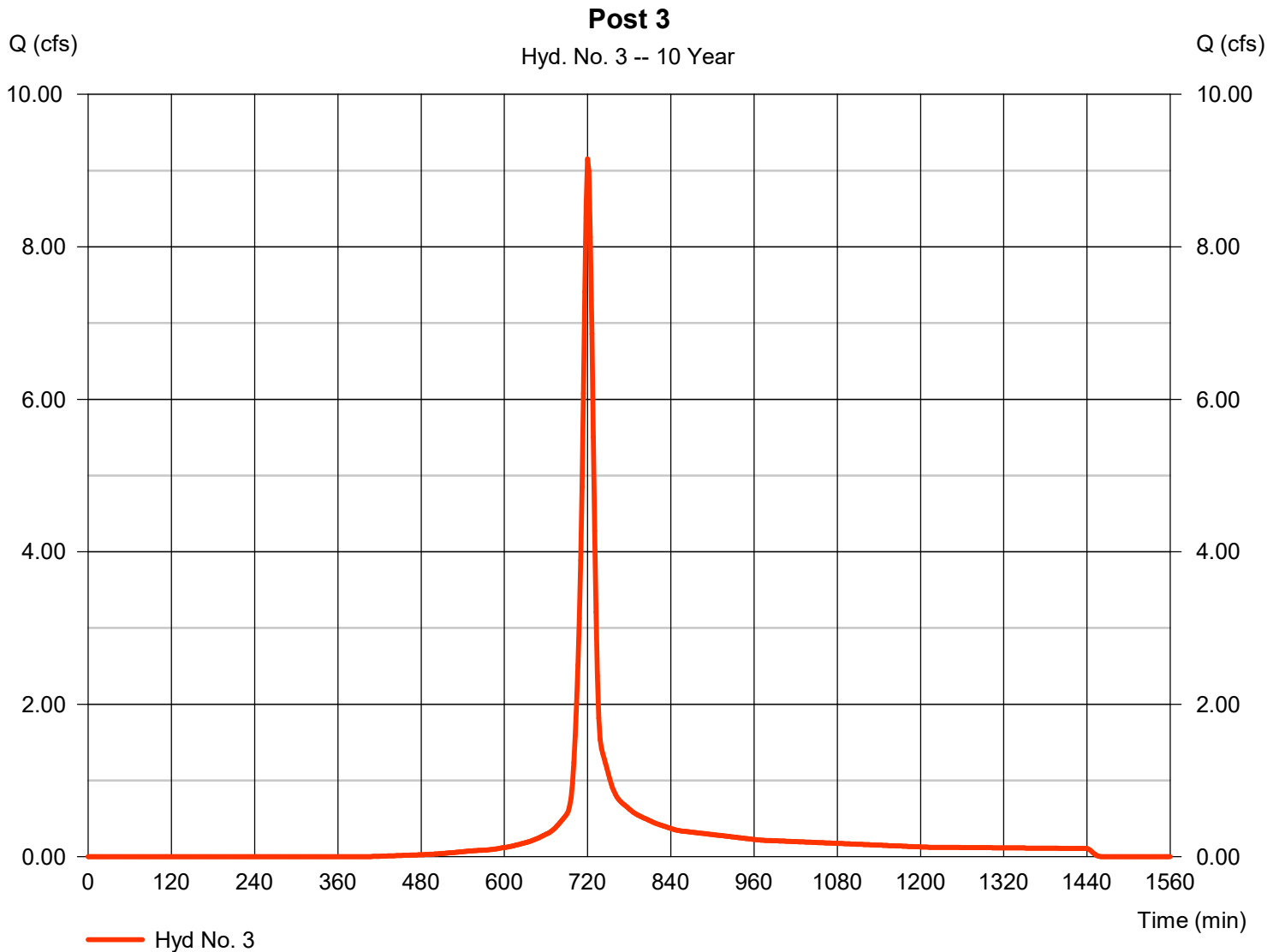
Wednesday, 05 / 3 / 2023

Hyd. No. 3

Post 3

Hydrograph type	= SCS Runoff	Peak discharge	= 9.155 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 23,833 cuft
Drainage area	= 1.870 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.20 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.980 x 98) + (0.890 x 61)] / 1.870



Hydrograph Report

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

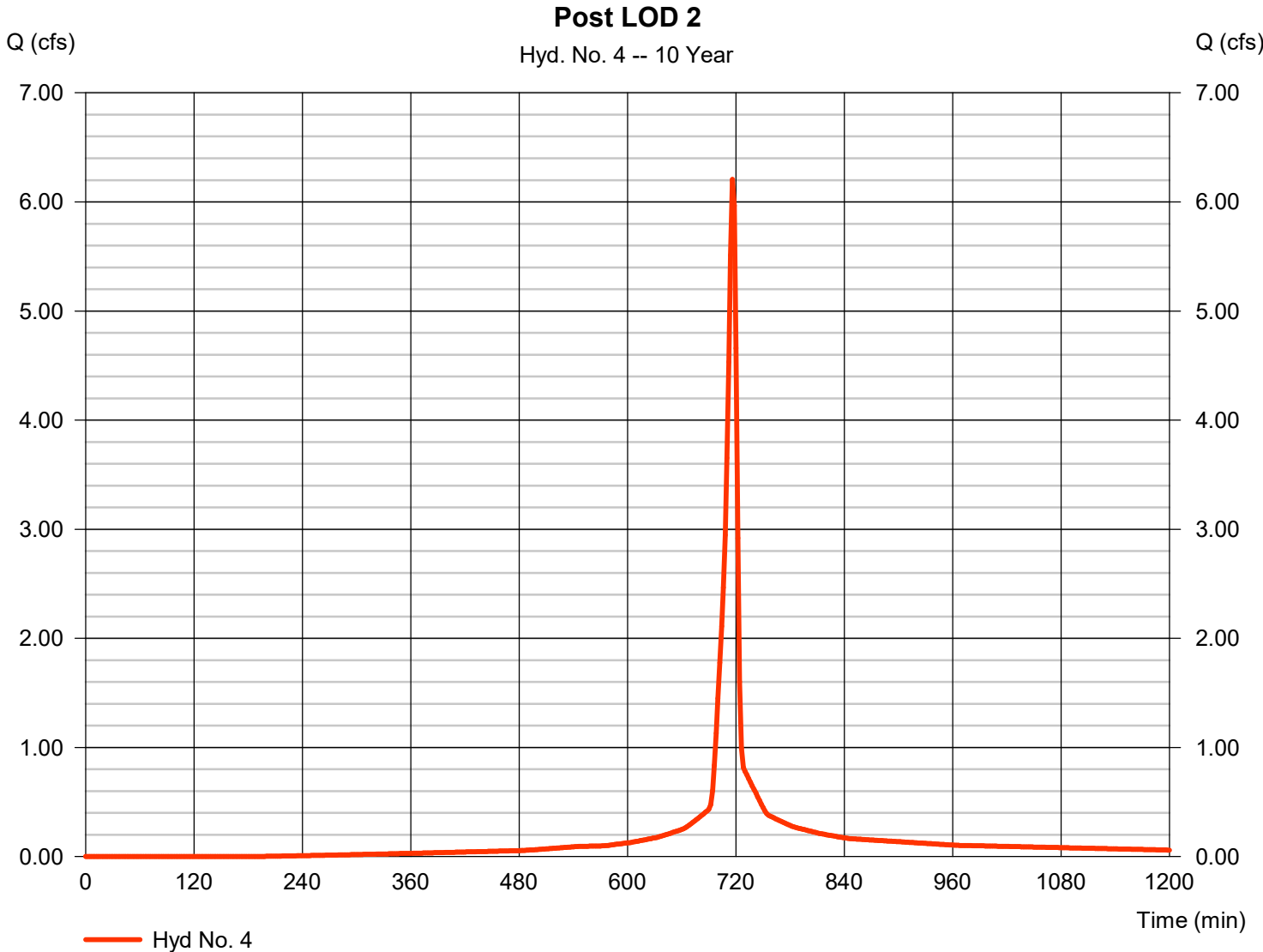
Wednesday, 05 / 3 / 2023

Hyd. No. 4

Post LOD 2

Hydrograph type	= SCS Runoff	Peak discharge	= 6.206 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 13,555 cuft
Drainage area	= 1.150 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.170 x 61) + (0.980 x 98)] / 1.150



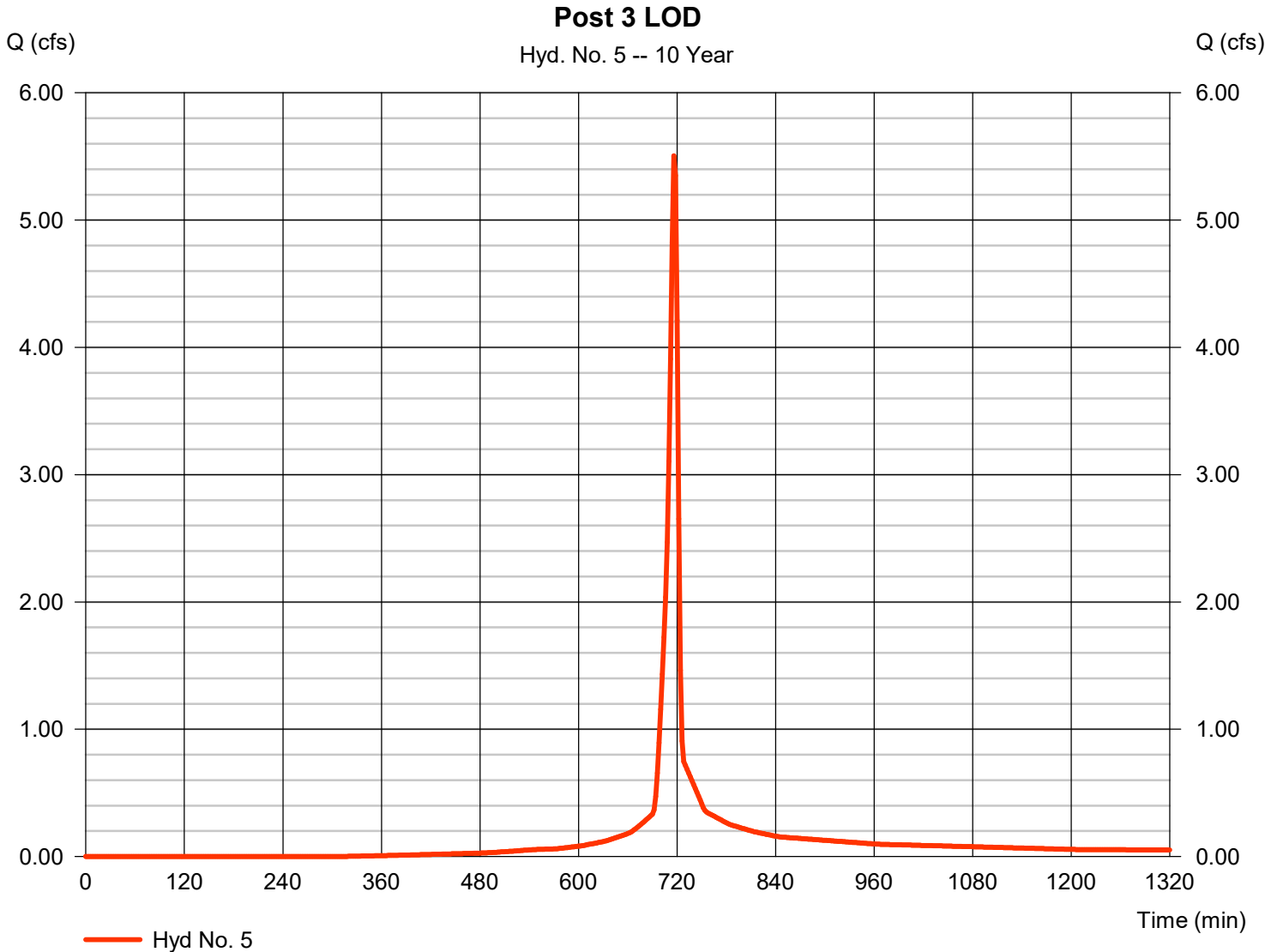
Hydrograph Report

Hyd. No. 5

Post 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 5.506 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 11,490 cuft
Drainage area	= 1.140 ac	Curve number	= 88*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.10 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.830 x 98) + (0.310 x 61)] / 1.140



Hydrograph Report

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

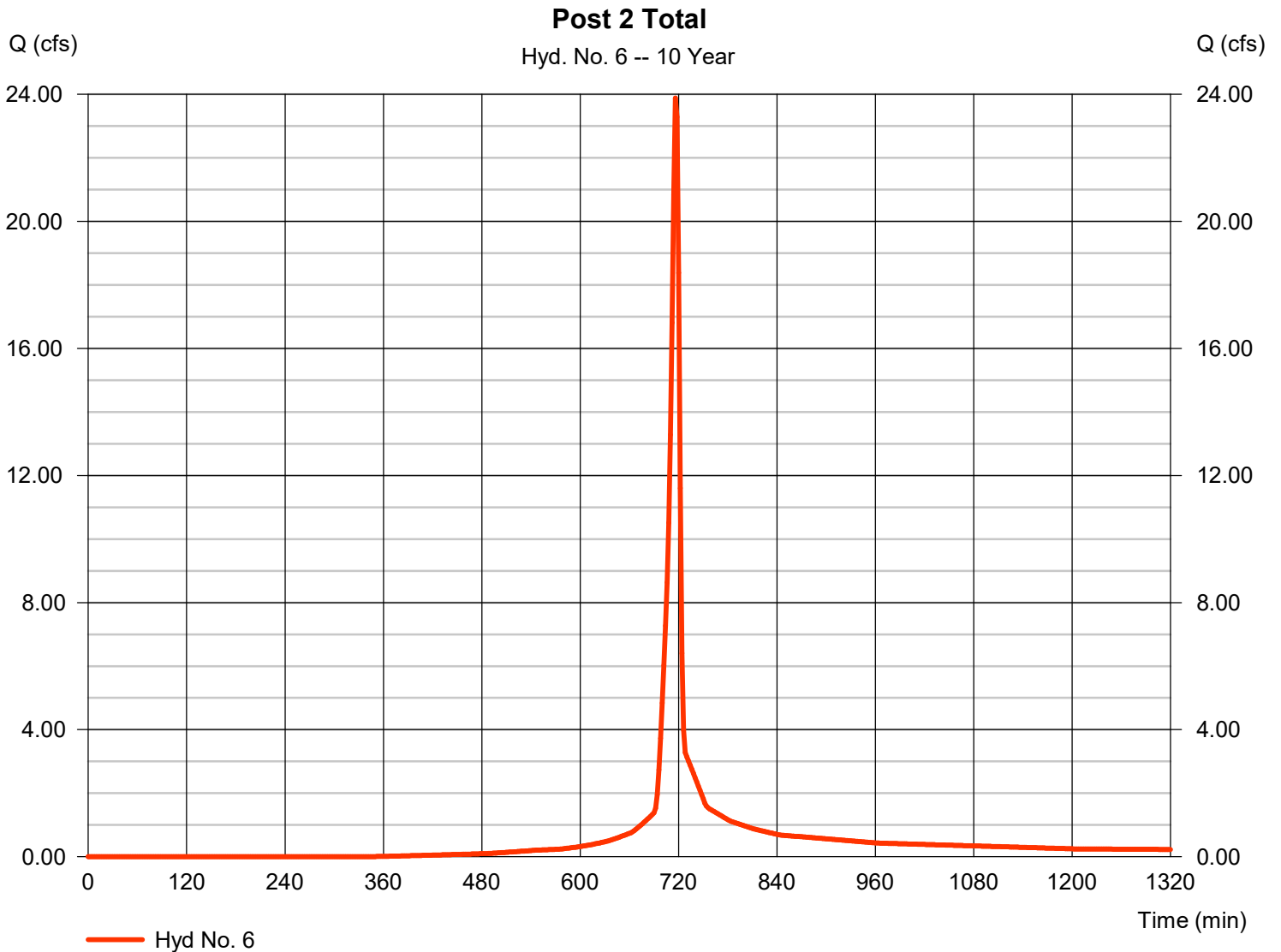
Wednesday, 05 / 3 / 2023

Hyd. No. 6

Post 2 Total

Hydrograph type	= SCS Runoff	Peak discharge	= 23.89 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 49,403 cuft
Drainage area	= 3.920 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.40 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.590 x 61) + (2.330 x 98)] / 3.920



Hydrograph Report

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

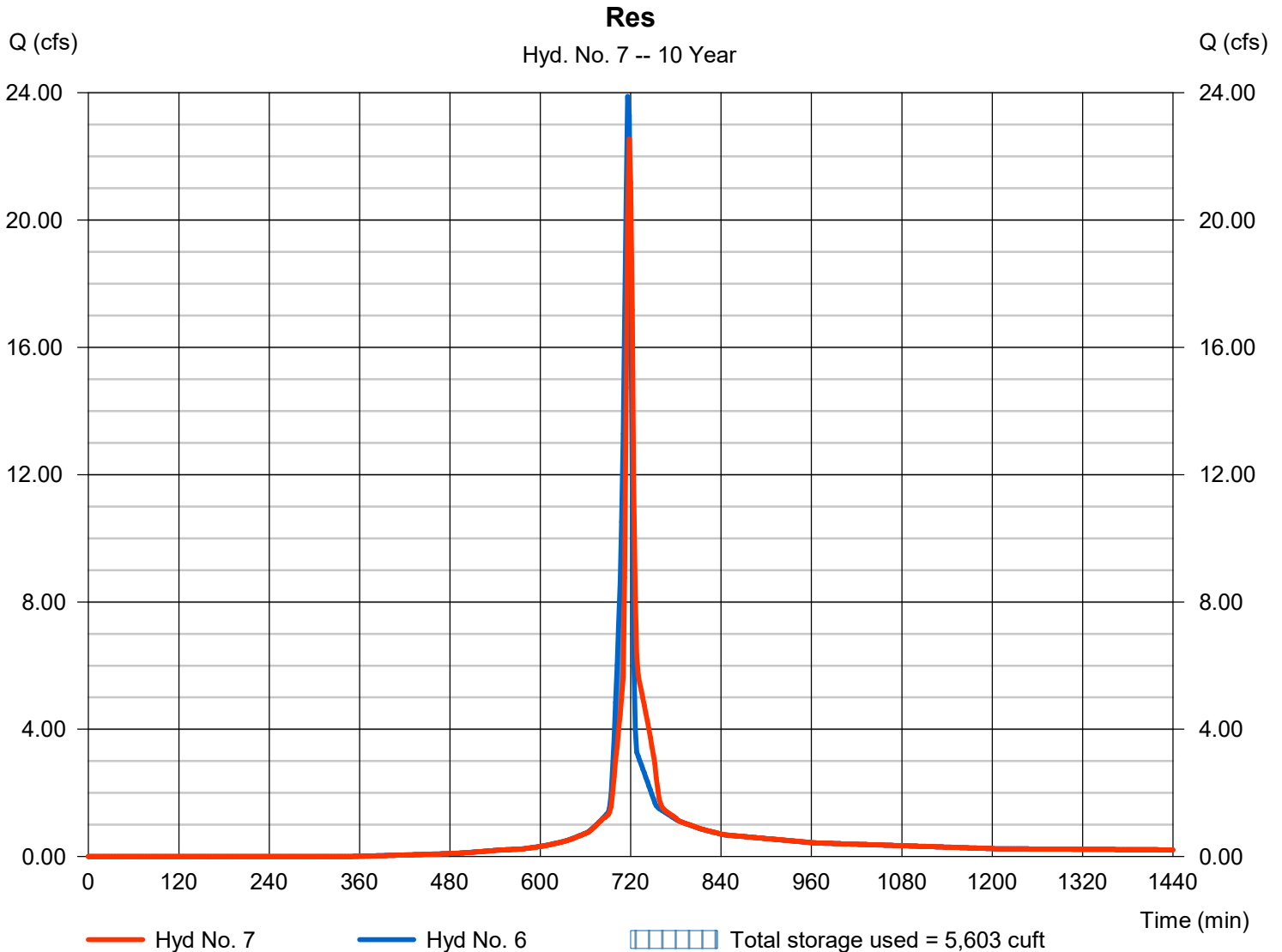
Wednesday, 05 / 3 / 2023

Hyd. No. 7

Res

Hydrograph type	= Reservoir	Peak discharge	= 22.55 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 49,403 cuft
Inflow hyd. No.	= 6 - Post 2 Total	Max. Elevation	= 694.47 ft
Reservoir name	= Underground Retention	Max. Storage	= 5,603 cuft

Storage Indication method used.



Hydrograph Report

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

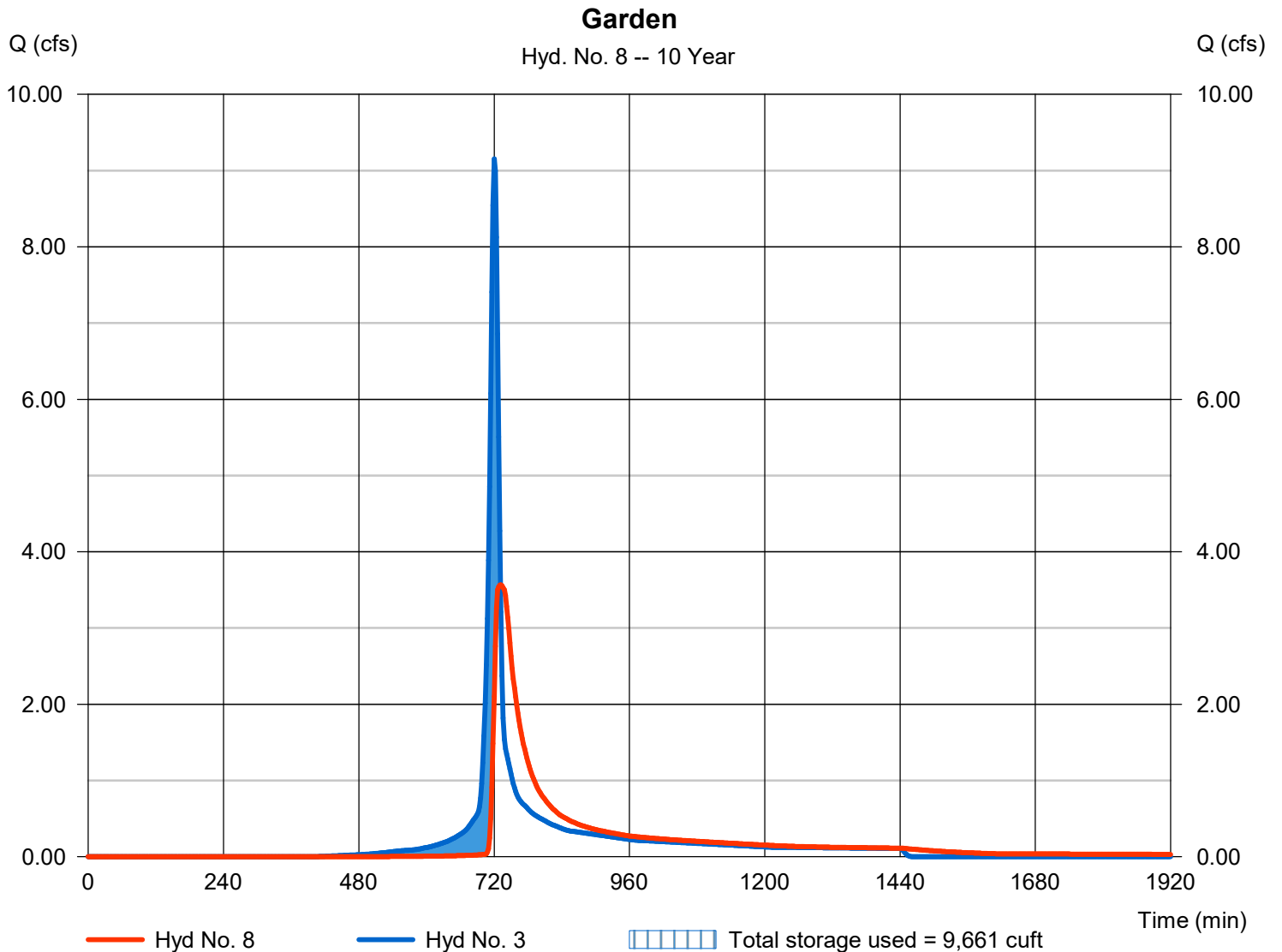
Wednesday, 05 / 3 / 2023

Hyd. No. 8

Garden

Hydrograph type	= Reservoir	Peak discharge	= 3.565 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 23,695 cuft
Inflow hyd. No.	= 3 - Post 3	Max. Elevation	= 701.49 ft
Reservoir name	= Garden	Max. Storage	= 9,661 cuft

Storage Indication method used. Outflow includes exfiltration.



Hydrograph Summary Report

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

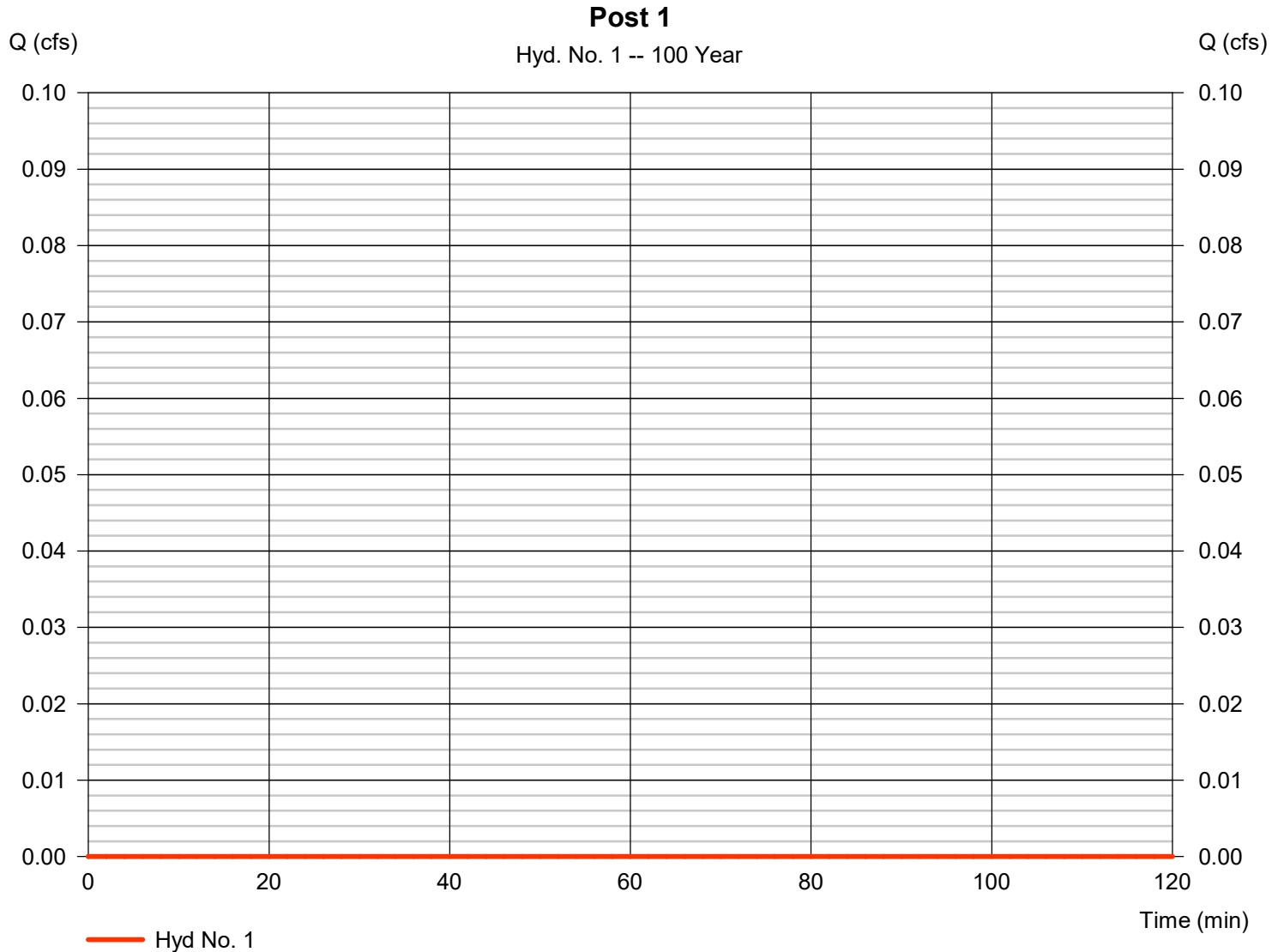
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 1	
2	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 2	
3	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 3	
4	SCS Runoff	0.000	2	n/a	0	----	----	----	Post LOD 2	
5	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 3 LOD	
6	SCS Runoff	0.000	2	n/a	0	----	----	----	Post 2 Total	
7	Reservoir	0.000	2	n/a	0	6	689.00	0.000	Res	
8	Reservoir	0.000	2	n/a	0	3	700.00	0.000	Garden	
Post Hydro.gpw					Return Period: 100 Year			Wednesday, 05 / 3 / 2023		

Hydrograph Report

Hyd. No. 1

Post 1

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 1.000 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

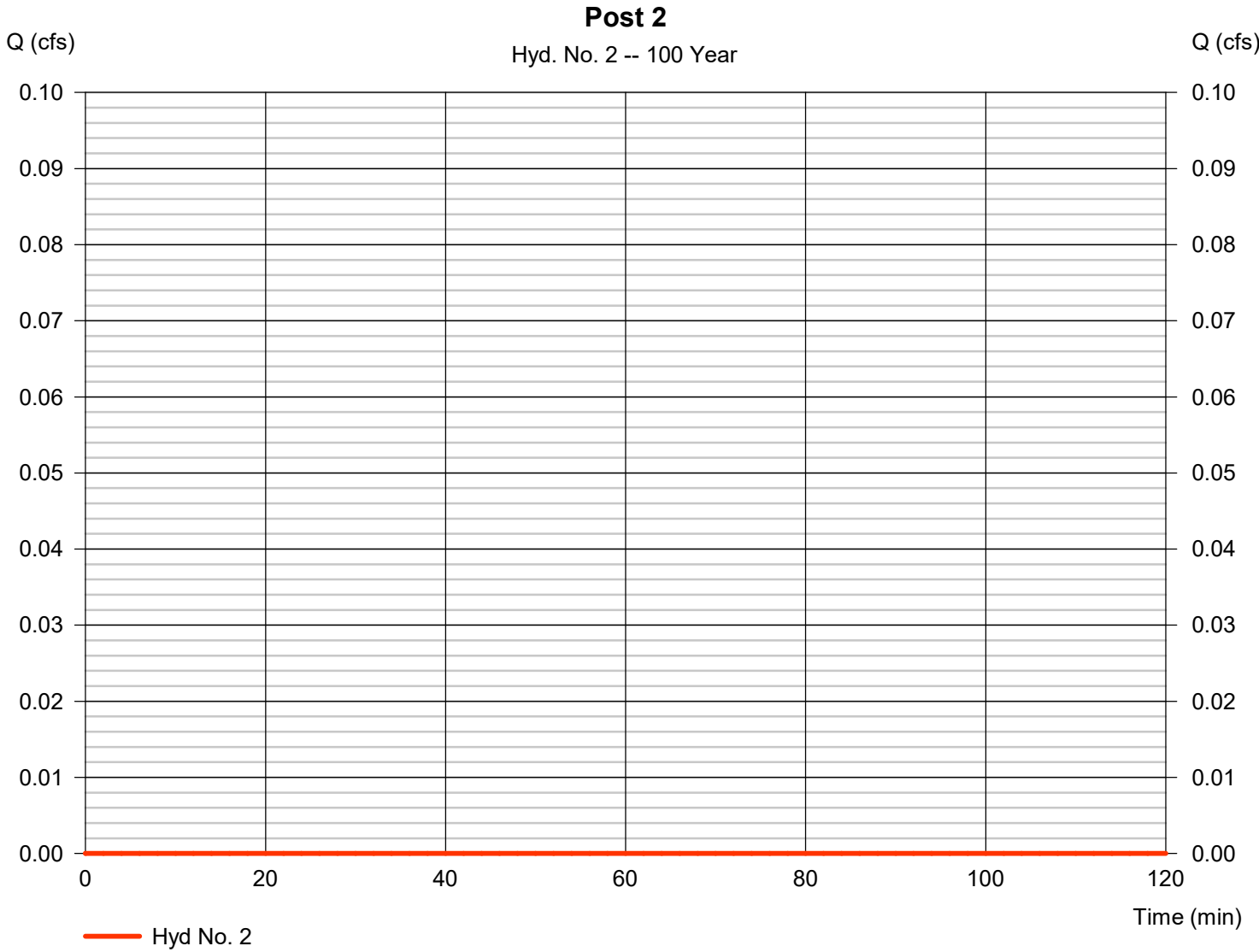
Wednesday, 05 / 3 / 2023

Hyd. No. 2

Post 2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 2.770 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.60 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.420 x 61) + (1.350 x 98)] / 2.770



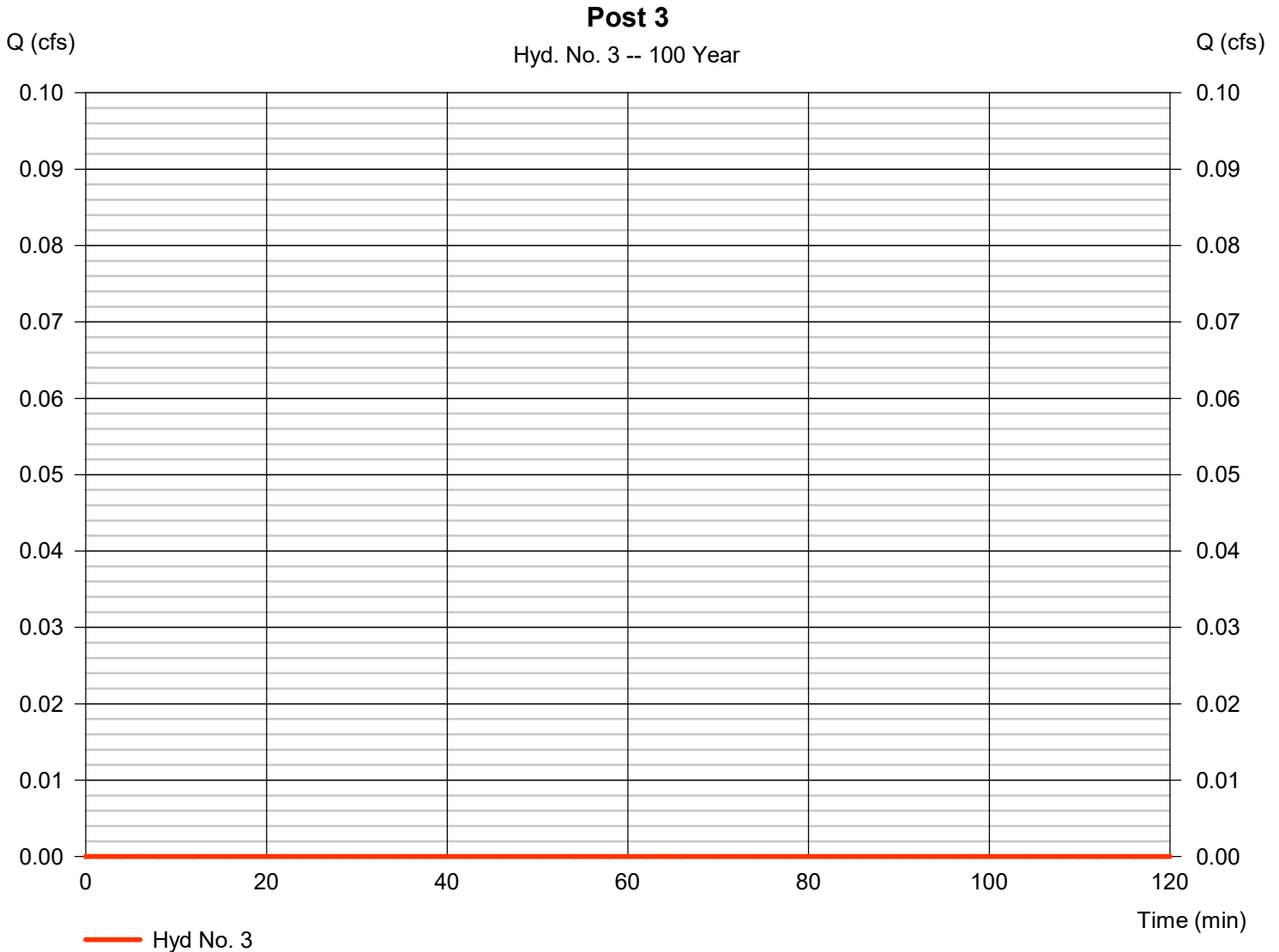
Hydrograph Report

Hyd. No. 3

Post 3

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 1.870 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.20 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.980 x 98) + (0.890 x 61)] / 1.870



Hydrograph Report

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

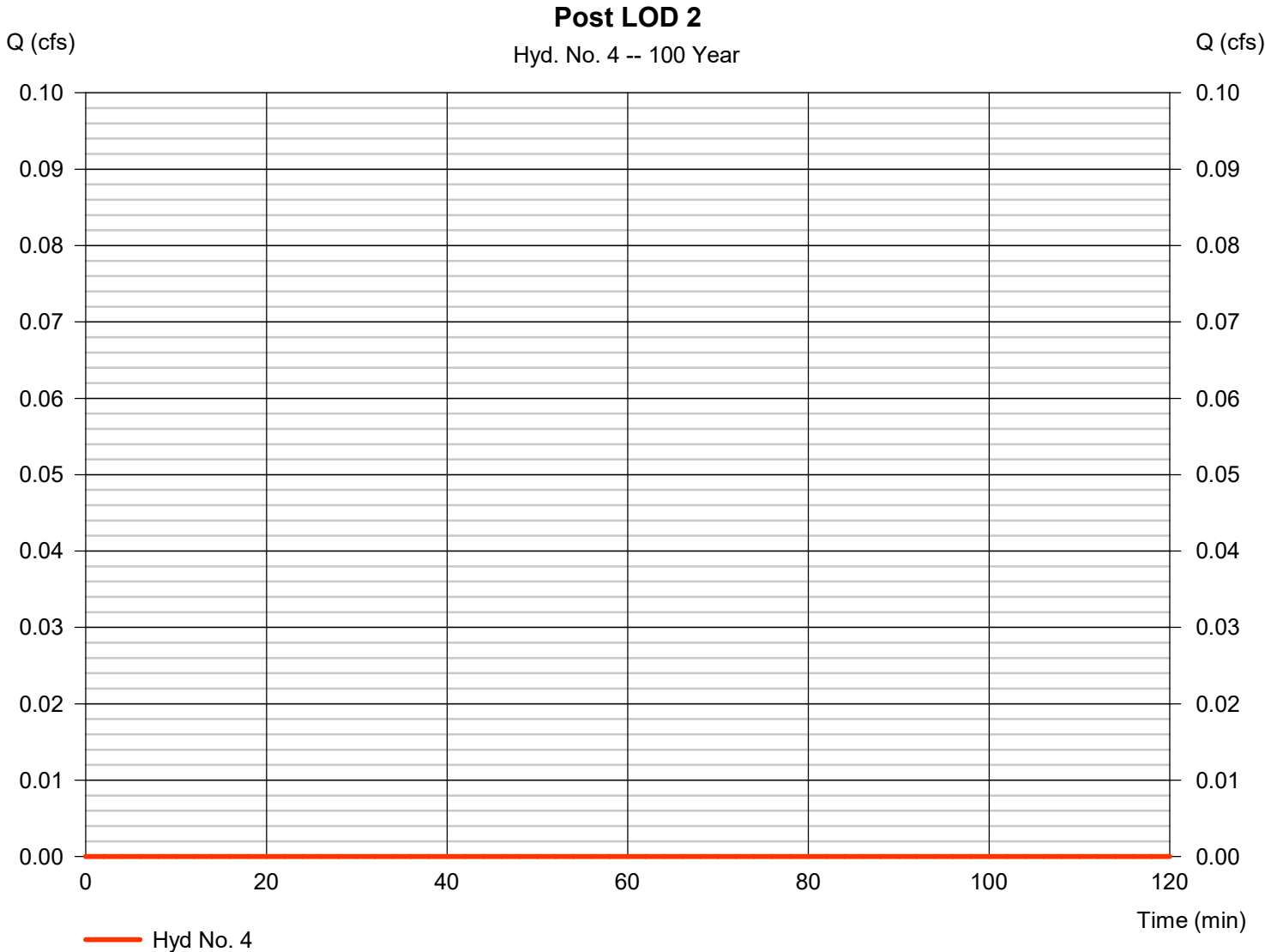
Wednesday, 05 / 3 / 2023

Hyd. No. 4

Post LOD 2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 1.150 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.170 x 61) + (0.980 x 98)] / 1.150



Hydrograph Report

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

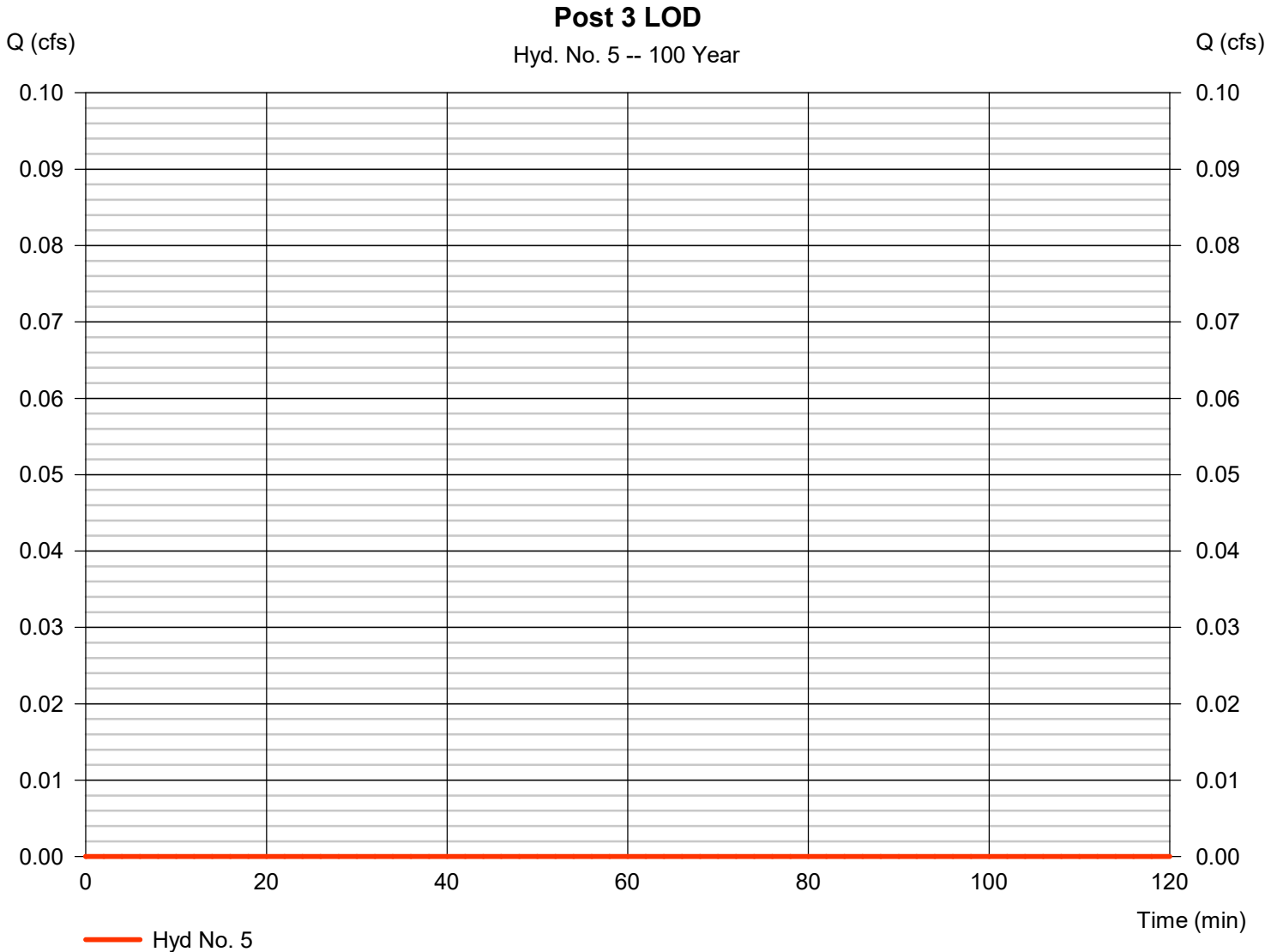
Wednesday, 05 / 3 / 2023

Hyd. No. 5

Post 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 1.140 ac	Curve number	= 88*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.10 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.830 x 98) + (0.310 x 61)] / 1.140



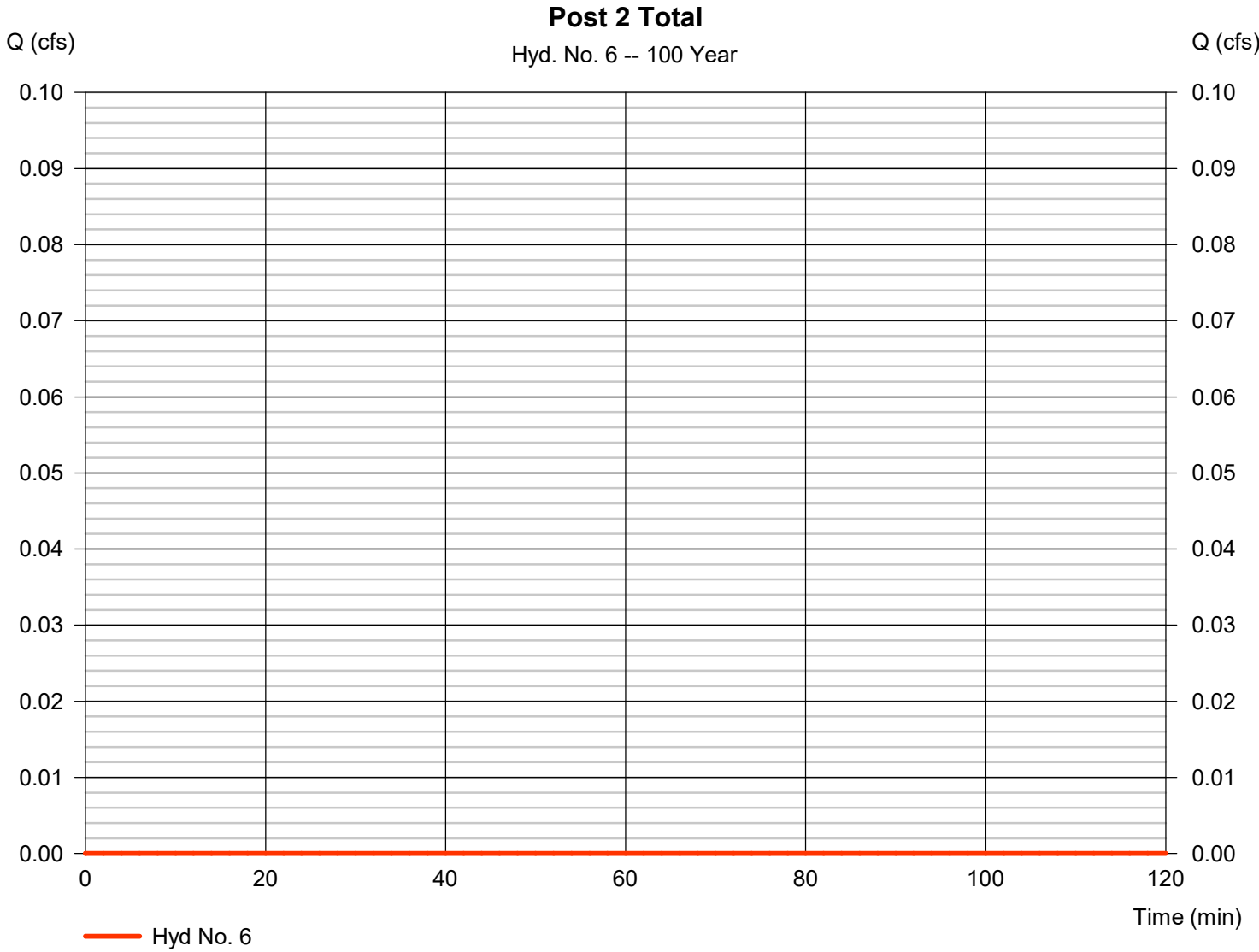
Hydrograph Report

Hyd. No. 6

Post 2 Total

Hydrograph type	= SCS Runoff	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Drainage area	= 3.920 ac	Curve number	= 83*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.40 min
Total precip.	= 7.95 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.590 x 61) + (2.330 x 98)] / 3.920



Hydrograph Report

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

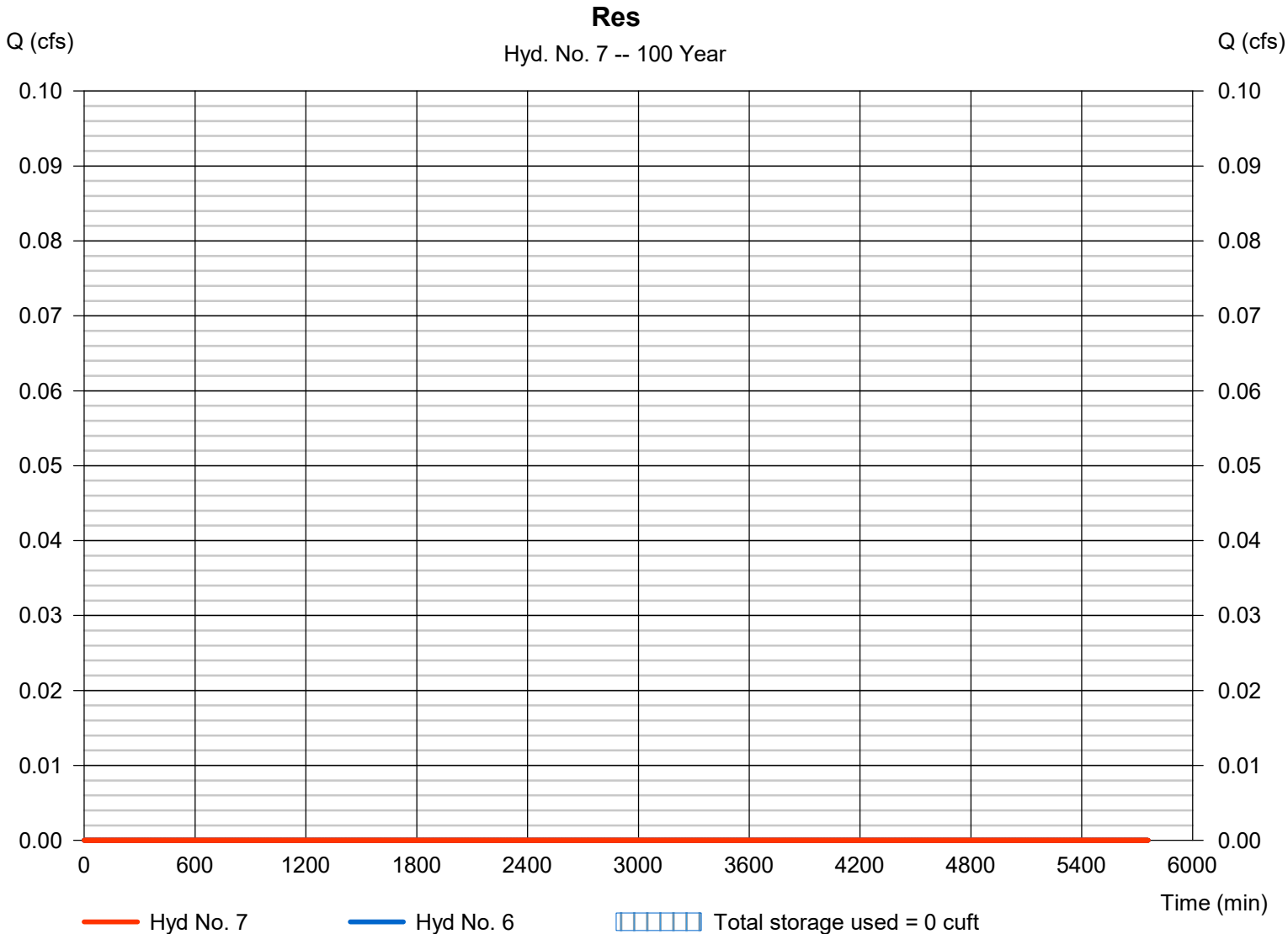
Wednesday, 05 / 3 / 2023

Hyd. No. 7

Res

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 6 - Post 2 Total	Max. Elevation	= 689.00 ft
Reservoir name	= Underground Retention	Max. Storage	= 0 cuft

Storage Indication method used.



Hydrograph Report

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

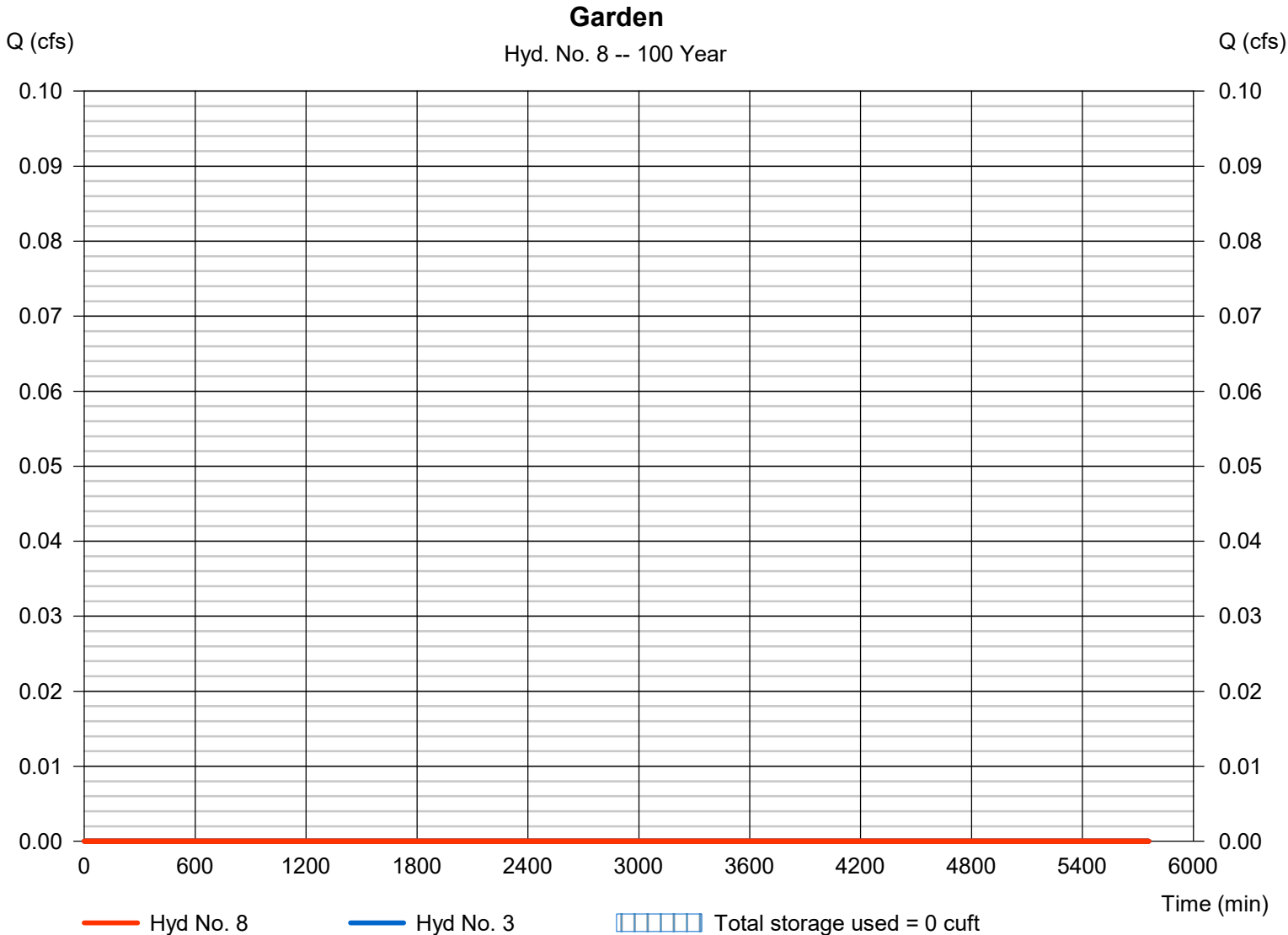
Wednesday, 05 / 3 / 2023

Hyd. No. 8

Garden

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 3 - Post 3	Max. Elevation	= 700.00 ft
Reservoir name	= Garden	Max. Storage	= 0 cuft

Storage Indication method used. Outflow includes exfiltration.



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