Preliminary Stormwater Management Calculations for

Logan's Walk

(FOR REZONING/ANNEXATION CONCEPTUAL PLANNING ONLY)

PROJECT LOCATION
Old Concord Road
City of Smyrna, Georgia

OWNER/DEVELOPER
CS Realty Group, LLC
3020 Roswell Road
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Marietta, GA 30062

February 28, 2018

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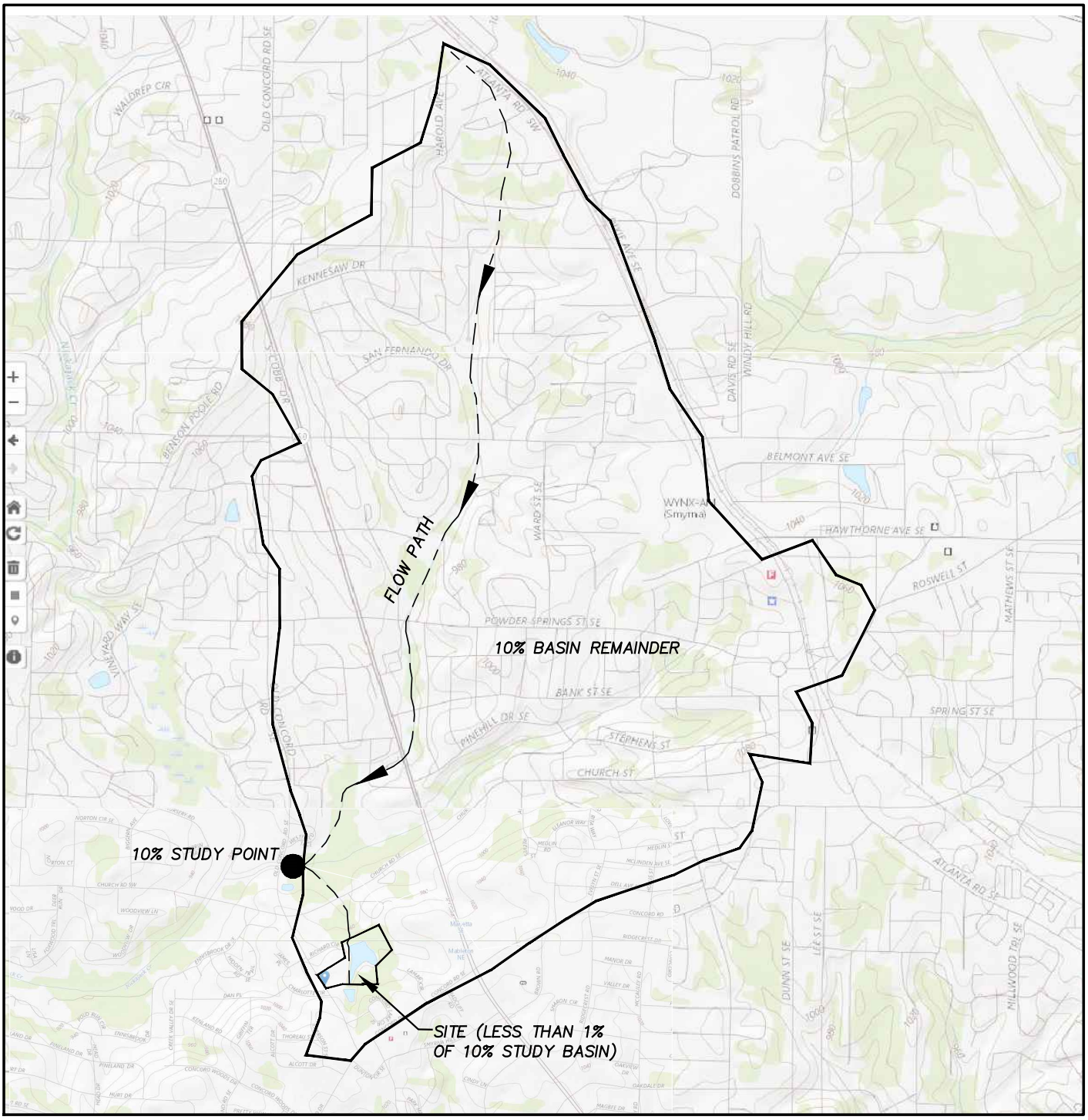
DCD Project #CSR003



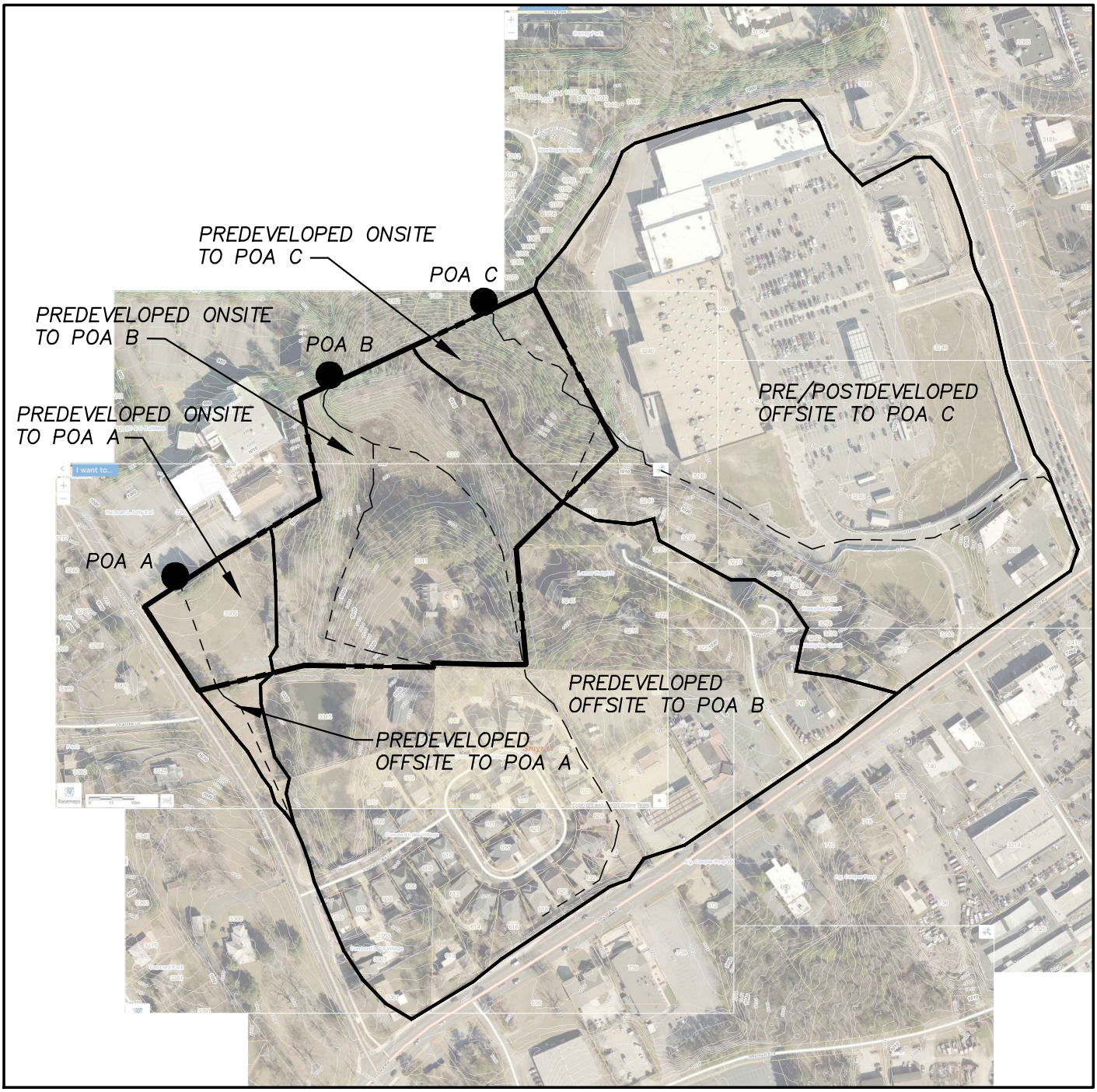
DRAINAGE BASIN CHART:

	AREA (AC)	Cn	Tc (MIN)
SITE	11.32	–	–
PRE/POSTDEVELOPED 10% BASIN REMAINDER	1640.00	72	46
TOTAL 10% BASIN	1651.32	–	–

NORTH

NOT TO SCALE

10% STUDY BASIN



DRAINAGE BASIN CHART:

	AREA (AC)	Cn	Tc (MIN)
PREDEVELOPED ONSITE TO POA A	1.52	55	5
PREDEVELOPED OFFSITE TO POA A	0.49	72	5
PREDEVELOPED ONSITE TO POA B	7.53	55	5
PREDEVELOPED OFFSITE TO POA B	18.43	72	10
PREDEVELOPED ONSITE TO POA C	2.27	55	5
PRE/POSTDEVELOPED OFFSITE TO POA C	22.95	72	5

NORTH

NOT TO SCALE

PREDEVELOPED BASINS

PEAK FLOW RATE SUMMARY

Note: Peak flow rates and maximum ponding elevations shown here are taken directly from hydrograph models.

Point of Analysis A

Storm Frequency (yrs)	Existing PFR (cfs)	Postdeveloped PFR (cfs)	PFR Reduction
1	1.35	0.73	45.69%
2	2.08	0.96	53.98%
5	3.51	1.35	61.48%
10	4.90	1.72	64.97%
25	7.03	2.25	67.99%
50	8.84	2.69	69.59%
100	10.78	3.14	70.83%

Point of Analysis B

Storm Frequency (yrs)	Predeveloped PFR (cfs)	Postdeveloped PFR (cfs)	PFR Reduction	Max Ponding Elevation (ft)
1	32.14	17.15	46.64%	997.24
2	43.23	22.78	47.31%	997.77
5	63.28	33.49	47.08%	998.44
10	82.41	56.52	31.42%	999.28
25	110.76	95.51	13.77%	1000.28
50	134.35	124.72	7.17%	1000.94
100	159.21	155.29	2.46%	1001.54

Point of Analysis C

Storm Frequency (yrs)	Predeveloped PFR (cfs)	Postdeveloped PFR (cfs)	PFR Reduction
1	44.07	44.40	-0.75%
2	57.59	57.80	-0.36%
5	81.56	81.46	0.12%
10	103.70	103.26	0.42%
25	136.05	135.07	0.72%
50	162.66	161.18	0.91%
100	190.47	188.42	1.08%

DRY EXTENDED DETENTION POND SUMMARY

Project name: Logan's Walk
Pond description: Dry ED Pond - Concept Only
Date: 2/28/2018

Onsite area draining to pond (acres):	5.70
Onsite impervious area draining to pond (acres):	2.45
Overall area draining to pond (acres):	15.89
Overall curve number draining to pond (Cn):	74
Shared WQV for channel protection storage (%):	0

The GSWMM (3.4.1) recommends a maximum depth of 10 feet for dry ponds and a maximum drainage basin of 75 acres. There is no permanent pool.

Pond Storage

Stage (ft)	Elevation (ft)	Surface Area (sf)	Incremental Storage (cf)	Cumulative Storage (cf)
0.00	992.00	1,000	0	0
2.00	994.00	4,063	5,063	5,063
4.00	996.00	5,472	9,535	14,598
6.00	998.00	7,699	13,171	27,769
8.00	1000.00	9,437	17,136	44,905
10.00	1002.00	11,233	20,670	65,575
12.00	1004.00	13,091	24,324	89,899

Water Quality Design	Required	Proposed	Compliant?
WQ elevation (ft):	995.28	996.00	Yes
WQ volume (cf):	10,846	14,598	Yes
WQ surface area (sf):	2,483	5,472	Yes
WQ orifice invert elevation (ft):	992.00	992.00	Yes
WQ orifice diameter (in):	2.54	2.50	Yes
Channel Protection Design			
CP begin routing elevation (ft):	996.00	996.00	Yes
1-year ponding elevation (ft):	(n/a)	997.24	Yes
CP elevation (ft):	997.24	997.50	Yes
CP storage + water quality volume (cf):	22,247	24,075	Yes
CP orifice invert elevation (ft):	996.00	996.00	Yes
CP orifice diameter (in):	4.65	4.50	Yes
Pond Parameters			
Forebay volume (cf):	1,085	2,000	Yes
100-year ponding elevation (ft):	(n/a)	1001.54	Yes
Freeboard (ft):	1.00	2.46	Yes

STAGE STORAGE SUMMARY

Pond description: Dry ED Pond - Concept Only

Stage (ft)	Elevation (ft)	Surface Area (sf)	Storage Volume (cf)	Comments
0.00	**992.00**	**1,000**	**0**	2.5" WQ orifice at 992.00, bottom of pond
0.40	992.40	1,613	523	
0.80	992.80	2,225	1,290	
1.20	993.20	2,838	2,303	
1.60	993.60	3,450	3,560	
2.00	**994.00**	**4,063**	**5,063**	
2.40	994.40	4,345	6,745	
2.80	994.80	4,627	8,539	
3.20	995.20	4,908	10,446	
3.60	995.60	5,190	12,466	
4.00	**996.00**	**5,472**	**14,598**	4.5" CP orifice at 996.00
4.40	996.40	5,917	16,876	
4.80	996.80	6,363	19,332	
5.20	997.20	6,808	21,966	
5.60	997.60	7,254	24,778	3' detention weir at 997.50
6.00	**998.00**	**7,699**	**27,769**	
6.40	998.40	8,047	30,918	
6.80	998.80	8,394	34,206	
7.20	999.20	8,742	37,633	
7.60	999.60	9,089	41,200	
8.00	**1000.00**	**9,437**	**44,905**	
8.40	1000.40	9,796	48,752	
8.80	1000.80	10,155	52,742	
9.20	1001.20	10,515	56,876	
9.60	1001.60	10,874	61,154	100-yr ponding limit at 1001.54
10.00	**1002.00**	**11,233**	**65,575**	
10.40	1002.40	11,605	70,143	Emergency overflow weir at 1002.50
10.80	1002.80	11,976	74,859	
11.20	1003.20	12,348	79,723	
11.60	1003.60	12,719	84,737	
12.00	**1004.00**	**13,091**	**89,899**	Top of pond, top of wall at 1004.00

WATER QUALITY CALCULATIONS

Pond description: Dry ED Pond - Concept Only

Water Quality Storage Volume (GSWMM 2.1.7)

Onsite impervious area draining to pond (Ai):	2.45	acres
Onsite area draining to pond (At):	5.70	acres
Volumetric runoff coefficient (Rv):	0.437	
Rv = 0.050 + (0.009) (Ai / At)		
Required water quality volume (WQv):	10,846	cf
WQv = (1.2/12) (Rv) (At)		
Required forebay volume (FBv):	1,085	cf
FBv = (WQv) (10%)		
Required water quality surface area (Aw):	2,483	sf
Aw = (1%) (At)		

Water Quality Orifice Sizing (using maximum head and maximum discharge method, GSWMM 2.3.3.2)

Proposed WQ orifice invert elevation:	992.00	ft
Proposed WQ storage elevation:	996.00	ft
Drawdown duration:	24	hours
Discharge coefficient (C):	0.6	
Gravitational acceleration (g):	32.2	ft/s/s
Maximum orifice flow discharge (Qmax):	0.338	cfs
Qmax = (2) (ED storage / drawdown duration)		
Maximum hydraulic head (H):	4.00	ft
H = WQ storage elev - WQ orifice ie		
Maximum orifice cross-sectional area (A):	0.0351	sf
A = Qmax / [C √ (2gH)]		
Maximum orifice diameter (D):	2.54	in
D = √ (4A / π)		

**Alternatively, when using the average head and average discharge method (GSWMM 2.3.3.3), the maximum orifice diameter (D) becomes 2.13 inches.*

Water Quality Summary	Required		Proposed		Compliant?
WQ elevation:	995.28	ft	996.00	ft	Yes
WQ volume:	10,846	cf	14,598	cf	Yes
WQ surface area:	2,483	sf	5,472	sf	Yes
WQ orifice invert elevation:	992.00	ft	992.00	ft	Yes
WQ forebay storage volume:	1,085	cf	2,000	cf	Yes
WQ orifice diameter:	2.54	in	2.50	in	Yes

CHANNEL PROTECTION CALCULATIONS

Pond description: Dry ED Pond - Concept Only

Assumed Channel Protection Storage Volume (for orifice sizing only)

Overall area draining to pond (At):	15.89	acres
Overall curve number for drainage basin (Cn):	74	
Accumulated rainfall for a 1-yr storm event (P):	3.36	in
Potential maximum soil retention (S):	3.51	in
S = 1000/Cn - 10		
Accumulated direct runoff (Qa):	1.14	in
Qa = (P - 0.2S)^2 / (P + 0.8S)		
Required channel protection volume (CPv):	66,004	cf*
CPv = (Qa) (At)		

**Actual channel protection storage volume may be based on 1-year routed storm results.*

Channel Protection Orifice Sizing (using maximum head and maximum discharge method, GSWMM 2.3.3.2)

Proposed WQ elevation:	996.00	ft
Shared percentage of WQ volume for CP storage:	0	%
Required WQ volume:	10,846	cf
Shared WQ volume:	0	cf
Additional CP volume needed:	66,004	cf
Proposed WQ volume:	14,598	cf
Combined volume needed for WQ and CP:	80,602	cf
Combined elevation needed for WQ and CP:	1003.27	ft
Drawdown duration:	24	hours
Discharge coefficient (C):	0.6	
Gravitational acceleration (g):	32.2	ft/s/s
Maximum orifice flow discharge (Qmax):	1.528	cfs
Qmax = (2) (CPv above orifice / drawdown)		
Maximum hydraulic head (H):	7.27	ft
H = CP storage elev - orifice invert elev		
Maximum orifice cross-sectional area (A):	0.1177	sf
A = Qmax / [C √ (2gH)]		
Maximum orifice diameter (D):	4.65	in**
D = √ (4A / π)		

***Alternatively, when using the average head and average discharge method (GSWMM 2.3.3.3), the maximum orifice diameter (D) becomes 3.91 inches.*

Channel Protection Summary	Required		Proposed		Compliant?
CP begin routing elevation:	996.00	ft	996.00	ft	Yes
CP max elevation based on routed 1-yr ponding:	(n/a)	ft	997.24	ft	Yes
CP actual elevation:	997.24	ft	997.50	ft	Yes
CP storage + water quality volume:	22,247	cf	24,075	cf	Yes
CP orifice invert elevation:	996.00	ft	996.00	ft	Yes
CP orifice diameter:	4.65	in	4.50	in	Yes

DRAINAGE BASIN SUMMARY

Individual Drainage Basins

Basin	Description	Area (ac)	Curve Number	Time of Concentration (min)
1	Predeveloped Onsite to POA A	1.52	55	4
2	Predeveloped Offsite to POA A	0.49	72	5
3	Predeveloped Onsite to POA B	7.53	55	5
4	Predeveloped Offsite to POA B	18.43	72	10
5	Predeveloped Onsite to POA C	2.27	55	5
6	Pre/Postdeveloped Offsite to POA C	22.95	72	4
7	Pre/Post 10% Basin Remainder	1640.00	72	46
8	Postdeveloped Onsite Bypass to POA A	0.41	71	4
9	Postdeveloped Onsite to Pond	5.70	77	4
10	Postdeveloped Onsite Bypass to POA B	3.66	61	4
11	Postdeveloped Offsite East to Pond	9.70	72	8
12	Postdeveloped Offsite South to Pond	0.49	72	5
13	Postdeveloped Offsite Bypass to POA B	8.73	72	10
14	Postdeveloped Onsite Bypass to POA C	1.55	59	3
15				

Combined Drainage Basins

Description	Combined Acreage	Overall Cn	Overall Tc (min)	Contributing Basins (mark with "X"): 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Predeveloped Onsite	11.32	55	5	X		X		X										
Postdeveloped Onsite	11.32	69	4								X	X	X				X	
Predeveloped 10% Basin																		
Postdeveloped 10% Basin																		
Total to Pond	15.89	74	8									X		X	X			

DRAINAGE BASIN CALCULATIONS

Reference Table: Suface Types for Times of Concentration Calculations

A - Sheet flow over pavement or hard soil (n=0.01)	F - Shallow flow in paved channel (n=0.01)
B - Sheet flow over cultivated or soft soil (n=0.06)	G - Shallow flow in unpaved channel (n=0.03)
C - Sheet flow over pasture or lawns (n=0.15)	H - Open flow in ephemeral waterway (n=0.06)
D - Sheet flow over light underbrush (n=0.40)	I - Open flow in perinneal waterway (n=0.04)
E - Sheet flow over dense underbrush (n=0.80)	J - Open flow in pipe or culvert (n=0.01)

User Input: Basin Desciption, Curve Numbers, Times of Concentration

Basin #1 Description: Predeveloped Onsite to POA A

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	4	B	4.0	0.51	195	3.3
Landscaped	61		2	142	6	G	4.2	3.32	43	0.7
Wooded Upland	55	1.52	3							
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	55	1.52		242	10				238	4.0

Basin #2 Description: Predeveloped Offsite to POA A

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	8	B	8.0	0.68	148	2.5
Landscaped	61		2	502	22	G	4.4	3.38	149	2.5
Wooded Upland	55		3							
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	0.49	6							
Agriculture District	65		7							
Basin Total	72	0.49		602	30				297	4.9

Basin #3 Description: Predeveloped Onsite to POA B

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	16	C	16.0	0.43	233	3.9
Landscaped	61		2	143	16	G	11.2	5.40	27	0.4
Wooded Upland	55	7.53	3	655	14	I	2.1	10.06	65	1.1
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	55	7.53		898	46				325	5.4

Basin #4 Description: Predeveloped Offsite to POA B

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	6	B	6.0	0.60	166	2.8
Landscaped	61		2	1,345	56	G	4.2	3.29	409	6.8
Wooded Upland	55		3	194	4	I	2.1	9.88	20	0.3
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	18.43	6							
Agriculture District	65		7							
Basin Total	72	18.43		1,639	66				594	9.9

Basin #5 Description: Predeveloped Onsite to POA C

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	11	C	11.0	0.37	271	4.5
Landscaped	61		2	105	18	G	17.1	6.68	16	0.3
Wooded Upland	55	2.27	3	393	18	I	4.6	14.73	27	0.4
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	55	2.27		598	47				313	5.2

Basin #6 Description: Pre/Postdeveloped Offsite to POA C

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	8	B	8.0	0.68	148	2.5
Landscaped	61		2	1,021	40	J	3.9	23.22	44	0.7
Wooded Upland	55		3	123	12	G	9.8	5.04	24	0.4
(Other, if needed)	0		4	393	18	I	4.6	14.73	27	0.4
Commercial District	92		5							
Residential District	72	22.95	6							
Agriculture District	65		7							
Basin Total	72	22.95		1,637	78				243	4.0

Basin #7 Description: Pre/Post 10% Basin Remainder

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	5	D	5.0	0.12	814	13.6
Landscaped	61		2	4,290	25	J	0.6	8.96	479	8.0
Wooded Upland	55		3	8,443	60	I	0.7	5.80	1,455	24.3
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	1640.00	6							
Agriculture District	65		7							
Basin Total	72	1640.00		12,833	90				2,748	45.8

Basin #8 Description: Postdeveloped Onsite Bypass to POA A

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98	0.12	1	100	5	B	5.0	0.56	178	3.0
Landscaped	61	0.22	2	133	5	G	3.8	3.13	43	0.7
Wooded Upland	55	0.07	3							
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	71	0.41		233	10				221	3.7

Basin #9 Description: Postdeveloped Onsite to Pond

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98	2.45	1	100	4	B	4.0	0.51	195	3.3
Landscaped	61	3.25	2	106	6	G	5.7	3.84	28	0.5
Wooded Upland	55		3	709	16	J	2.3	17.63	40	0.7
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	77	5.70		915	26				263	4.4

Basin #10 Description: Postdeveloped Onsite Bypass to POA B

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98	0.25	1	100	10	B	10.0	0.74	135	2.3
Landscaped	61	1.91	2	43	20	G	46.5	11.00	4	0.1
Wooded Upland	55	1.50	3	100	2	J	2.0	16.59	6	0.1
(Other, if needed)	0		4	655	14	I	2.1	10.06	65	1.1
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	61	3.66		898	46				210	3.5

Basin #11 Description: Postdeveloped Offsite East to Pond

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	4	B	4.0	0.51	195	3.3
Landscaped	61		2	900	48	G	5.3	3.73	242	4.0
Wooded Upland	55		3	207	2	J	1.0	11.53	18	0.3
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	9.70	6							
Agriculture District	65		7							
Basin Total	72	9.70		1,207	54				455	7.6

Basin #12 Description: Postdeveloped Offsite South to Pond

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	10	B	10.0	0.74	135	2.3
Landscaped	61		2	397	12	G	3.0	2.80	142	2.4
Wooded Upland	55		3	709	16	J	2.3	17.63	40	0.7
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	0.49	6							
Agriculture District	65		7							
Basin Total	72	0.49		1,206	38				317	5.3

Basin #13 Description: Postdeveloped Offsite Bypass to POA B

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1	100	6	B	6.0	0.60	166	2.8
Landscaped	61		2	1,345	56	G	4.2	3.29	409	6.8
Wooded Upland	55		3	194	4	I	2.1	9.88	20	0.3
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72	8.73	6							
Agriculture District	65		7							
Basin Total	72	8.73		1,639	66				594	9.9

Basin #14 Description: Postdeveloped Onsite Bypass to POA C

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98	0.11	1	100	11	B	11.0	0.77	130	2.2
Landscaped	61	0.34	2	105	18	G	17.1	6.68	16	0.3
Wooded Upland	55	1.10	3	393	18	I	4.6	14.73	27	0.4
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total	59	1.55		598	47				173	2.9

Basin #15 Description:

Ground Cover	Cn	Area (ac)	Segment Leg	Length (ft)	Δ Elev (ft)	Surface Type	Slope (%)	Velocity (ft/s)	Tc (sec)	Tc (min)
Impervious	98		1							
Landscaped	61		2							
Wooded Upland	55		3							
(Other, if needed)	0		4							
Commercial District	92		5							
Residential District	72		6							
Agriculture District	65		7							
Basin Total										

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool
Version 2.2

General Information

Name of Developer:	CS Realty Group	**Date Submitted:**	2/28/2018
Development Name:	Logan's Walk	**Permit Number:**	
Site Location / Address:	Old Concord Road	**Developer Contact:**	Keith Cannon
	Smyrna, GA	**Phone Number:**	
		Name of Engineer(s):	Dovetail Civil Design, Inc.
Development Type:	Medium Density Residential	**Maintenance Responsibility:**	HOA

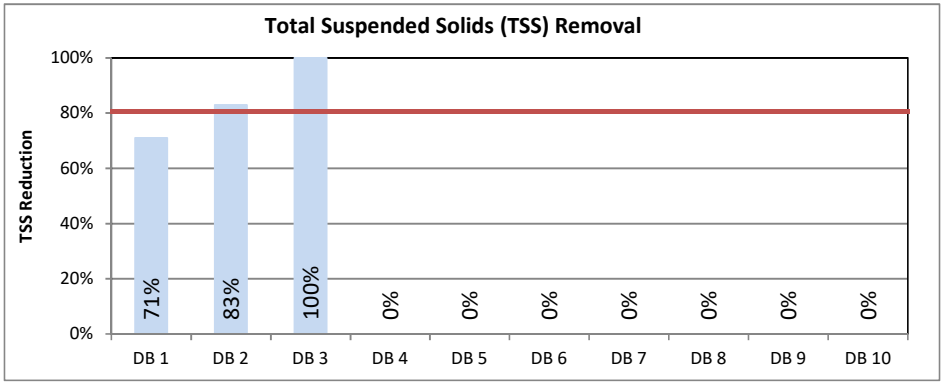
Site Summary

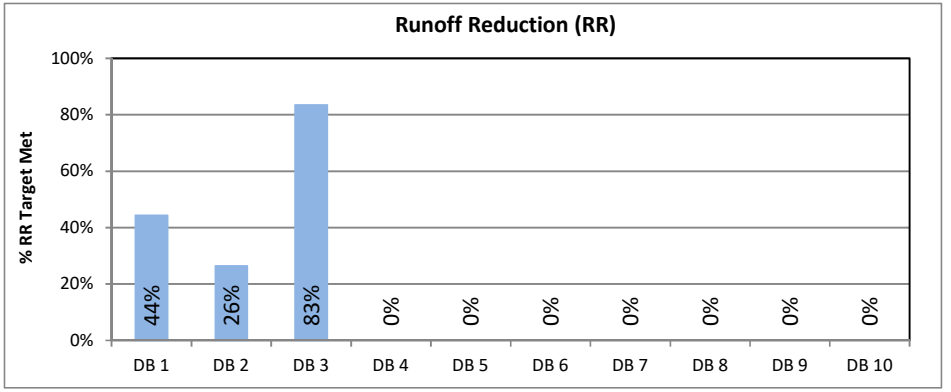
Total Pre-Development Area (ac):	**11.32**
Total Post-Development Area (ac):	**11.30**
Total Treated Area (ac):	**5.95**
Total Untreated Area (ac):	**5.35**

		I (ac)	P (ac)	CA (ac)
Onsite to POA A	**DB 1**	0.12	0.29	0.00
Onsite to POA B	**DB 2**	2.70	5.14	1.50
Onsite to POA C	**DB 3**	0.11	0.44	1.00
Drainage Basin 4	**DB 4**	0.00	0.00	0.00
Drainage Basin 5	**DB 5**	0.00	0.00	0.00
Drainage Basin 6	**DB 6**	0.00	0.00	0.00
Drainage Basin 7	**DB 7**	0.00	0.00	0.00
Drainage Basin 8	**DB 8**	0.00	0.00	0.00
Drainage Basin 9	**DB 9**	0.00	0.00	0.00
Drainage Basin 10	**DB 10**	0.00	0.00	0.00
	TOTAL	**2.93**	**5.87**	**2.50**

I = Impervious Area, P = Pervious Area, CA = Conservation Area

Target Runoff Reduction Volume Achieved?	**No**
Target TSS Removal Achieved?	**Yes**
Total Target Runoff Reduction Volume (cf)	11,425
Runoff Reduction Volume Achieved (cf)	3,269
Total Target Water Quality Volume (cf)	11,425
% TSS Removal Achieved	83%





Official Use Only

Tracking #:		**Conditions of Approval:**	
Reviewed By:			
Date Approved:			

A RECORDED CONSERVATION EASEMENT OR SIMILAR FORM OF PROTECTION IS REQUIRED FOR THIS PROJECT

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA A

data input cells
calculation cells
constant values

Site Data

Indicate Pre-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG* A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Woods - Good Condition		30	1.52	55		70		77	1.52	100%
Open space - Good condition (grass cover > 75%)		39		61		74		80	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		1.52		0.00		0.00		1.52	100%

*HSG = hydrologic soil group

Impervious (ac)	0.00
Weighted CN	55
Potential Max Soil Retention, S_{pre} (in)	8.18

Indicate Post-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Impervious		98	0.12	98		98		98	0.12	29%
Pasture, grassland, or range - continuous forage for grazing - Good Condition		39	0.22	61		74		80	0.22	54%
Woods - Good Condition		30	0.07	55		70		77	0.07	17%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		0.41		0.00		0.00		0.41	100%

Impervious (ac)	0.12
Rv	0.31
Weighted CN	71
Potential Max Soil Retention, S_{post} (in)	4.12

Conservation Area Credits

Scenario 1: Natural Conservation Area **See the GSMM Volume 2, Section 2.3.3.3 for more information.*

☐ Check the box if a portion of the post-developed area is protected by a conservation easement or equivalent form of protection.

Area (ac) of development protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 1 box above is checked

Scenario 2: Site Reforestation/Revegetation **See the GSMM Volume 2, Section 4.22 for more information.*

☐ Check the box if a portion of the post-developed area employs site reforestation/revegetation and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development reforested/revegetated and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 2 box above is checked

Scenario 3: Soil Restoration **See the GSMM Volume 2, Section 4.23 for more information.*

☐ Check the box if a portion of the post-developed area employs soil restoration and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development with restored soils and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 3 box above is checked

Scenario 4: Site Reforestation/Revegetation & Soil Restoration **See the GSMM Volume 2, Section 4.22 and 4.23 for more information.*

☐ Check the box if the same portion of the post-developed area employs site reforestation/revegetation and soil restoration, and is protected by a conservation easement or equivalent form of protection.

Area (ac) with restored soils in a reforested & revegetated area and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 4 box above is checked

Total Conservation Area Credit (acres) **0.00**

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA A

data input cells
calculation cells
constant values

Water Quality Goals

Target Runoff Reduction Storm (in)	1.20
Total Site Area for Water Quality Volume (acres)	0.41
Target Runoff Reduction Volume (cf)	560
Target Water Quality Volume (cf)	560

Select BMPs for Runoff Reduction and Water Quality

		Area Draining to Each BMP			Storage Volume Provided by BMP (cf)	RR Conveyance Volume Provided by BMP (cf)	Down-stream BMP	Runoff Reduction Calculations						WQ Calculations	
		On-site Pervious Area (acres)	On-site Impervious Area (acres)	Offsite Area (acres)				RR Volume from Direct Drainage (cf)	RR Volume from Upstream Practices (cf)	Total RR Volume Received by BMP (cf)	Runoff Reduction %	RR Achieved (cf)	Remaining RR Volume (cf)	WQ$_v$ from Direct Drainage (cf)	Effective TSS Removal %
BMP 1	Downspout Disconnect (A & B hydrologic soils)		0.12			497		497	0	497	50%	248	248	497	80%
BMP 2	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 3	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 4	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 5	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 6	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 7	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 8	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 9	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 10	Select a BMP…							0	0	0	N/A	0	0	0	N/A
	TOTAL	0.00	0.12	0.00				497				248		497	
	UNTREATED AREA (acres)	0.29	0.00												

Target Runoff Reduction Volume (cf)	560
Target Achieved?	No
Remaining Runoff Reduction Volume (cf)	311

Target Water Quality Volume (cf)	560
% TSS Removal Achieved	71%
Target Achieved?	No
Remaining TSS Removal %	9%

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA A

data input cells
calculation cells
constant values

Channel and Flood Protection Calculations

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Target Rainfall Event (in)	3.36	3.80	6.07	7.53

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Pre-Development Runoff Volume (in)	0.30	0.45	1.56	2.47
Post Development Runoff Volume (in) with no BMPs	0.97	1.25	2.94	4.15
Post-Development Runoff Volume (in) with BMPs	0.80	1.08	2.77	3.99
Adjusted CN	**68**	**68**	**69**	**69**

*See Stormwater Management Standards to Determine Detention Requirements.

Comments

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA B

data input cells
calculation cells
constant values

Site Data

Indicate Pre-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG* A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Woods - Good Condition		30	7.53	55		70		77	7.53	100%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		7.53		0.00		0.00		7.53	100%

*HSG = hydrologic soil group

Impervious (ac)	0.00
Weighted CN	55
Potential Max Soil Retention, S_{pre} (in)	8.18

Indicate Post-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Impervious		98	2.70	98		98		98	2.70	29%
Pasture, grassland, or range - continuous forage for grazing - Good Condition		39	5.14	61		74		80	5.14	55%
Woods - Good Condition		30	1.50	55		70		77	1.50	16%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		9.34		0.00		0.00		9.34	100%

Impervious (ac)	2.70
Rv	0.31
Weighted CN	71
Potential Max Soil Retention, S_{post} (in)	4.14

Conservation Area Credits

Scenario 1: Natural Conservation Area **See the GSMM Volume 2, Section 2.3.3.3 for more information.*

☑ Check the box if a portion of the post-developed area is protected by a conservation easement or equivalent form of protection.

1.5 Area (ac) of development protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 1 box above is checked

Scenario 2: Site Reforestation/Revegetation **See the GSMM Volume 2, Section 4.22 for more information.*

☐ Check the box if a portion of the post-developed area employs site reforestation/revegetation and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development reforested/revegetated and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 2 box above is checked

Scenario 3: Soil Restoration **See the GSMM Volume 2, Section 4.23 for more information.*

☐ Check the box if a portion of the post-developed area employs soil restoration and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development with restored soils and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 3 box above is checked

Scenario 4: Site Reforestation/Revegetation & Soil Restoration **See the GSMM Volume 2, Section 4.22 and 4.23 for more information.*

☐ Check the box if the same portion of the post-developed area employs site reforestation/revegetation and soil restoration, and is protected by a conservation easement or equivalent form of protection.

Area (ac) with restored soils in a reforested & revegetated area and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 4 box above is checked

Total Conservation Area Credit (acres) **1.50**

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA B

data input cells
calculation cells
constant values

Water Quality Goals

Target Runoff Reduction Storm (in)	1.20
Total Site Area for Water Quality Volume (acres)	7.84
Target Runoff Reduction Volume (cf)	10,593
Target Water Quality Volume (cf)	10,593

Select BMPs for Runoff Reduction and Water Quality

		Area Draining to Each BMP			Storage Volume Provided by BMP (cf)	RR Conveyance Volume Provided by BMP (cf)	Down-stream BMP	Runoff Reduction Calculations						WQ Calculations	
		On-site Pervious Area (acres)	On-site Impervious Area (acres)	Offsite Area (acres)				RR Volume from Direct Drainage (cf)	RR Volume from Upstream Practices (cf)	Total RR Volume Received by BMP (cf)	Runoff Reduction %	RR Achieved (cf)	Remaining RR Volume (cf)	WQ$_v$ from Direct Drainage (cf)	Effective TSS Removal %
BMP 1	Downspout Disconnect (A & B hydrologic soils)		0.25			1,035		1,035	0	1,035	50%	517	517	1,035	80%
BMP 2	Downspout Disconnect (A & B hydrologic soils)		1.10			4,552	BMP 3	4,552	0	4,552	50%	2,276	2,276	4,552	80%
BMP 3	Dry Detention Basin	3.02	1.35	10.11	8,000			6,244	2,276	8,520	0%	0	8,520	6,244	60%
BMP 4	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 5	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 6	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 7	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 8	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 9	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 10	Select a BMP…							0	0	0	N/A	0	0	0	N/A
	TOTAL	3.02	2.70	10.11				11,831				2,793		11,831	
	UNTREATED AREA (acres)	3.62	0.00												

Target Runoff Reduction Volume (cf)	10,593
Target Achieved?	No
Remaining Runoff Reduction Volume (cf)	7,799

Target Water Quality Volume (cf)	10,593
% TSS Removal Achieved	83%
Target Achieved?	Yes!
Remaining TSS Removal %	0%

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA B

data input cells
calculation cells
constant values

Channel and Flood Protection Calculations

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Target Rainfall Event (in)	3.36	3.80	6.07	7.53

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Pre-Development Runoff Volume (in)	0.30	0.45	1.56	2.47
Post Development Runoff Volume (in) with no BMPs	0.96	1.24	2.93	4.14
Post-Development Runoff Volume (in) with BMPs	0.88	1.16	2.85	4.06
Adjusted CN	**69**	**69**	**70**	**70**

*See Stormwater Management Standards to Determine Detention Requirements.

Comments

A RECORDED CONSERVATION EASEMENT OR SIMILAR FORM OF PROTECTION IS REQUIRED FOR THIS PROJECT

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA C

data input cells
calculation cells
constant values

Site Data

Indicate Pre-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG* A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Woods - Good Condition		30	2.27	55		70		77	2.27	100%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		2.27		0.00		0.00		2.27	100%

*HSG = hydrologic soil group

Impervious (ac)	0.00
Weighted CN	55
Potential Max Soil Retention, S_{pre} (in)	8.18

Indicate Post-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Impervious		98	0.11	98		98		98	0.11	7%
Open space - Good condition (grass cover > 75%)		39	0.34	61		74		80	0.34	22%
Woods - Good Condition		30	1.10	55		70		77	1.10	71%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		1.55		0.00		0.00		1.55	100%

Impervious (ac)	0.11
Rv	0.11
Weighted CN	59
Potential Max Soil Retention, S_{post} (in)	6.84

Conservation Area Credits

Scenario 1: Natural Conservation Area **See the GSMM Volume 2, Section 2.3.3.3 for more information.*

☑ Check the box if a portion of the post-developed area is protected by a conservation easement or equivalent form of protection.

1 Area (ac) of development protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 1 box above is checked

Scenario 2: Site Reforestation/Revegetation **See the GSMM Volume 2, Section 4.22 for more information.*

☐ Check the box if a portion of the post-developed area employs site reforestation/revegetation and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development reforested/revegetated and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 2 box above is checked

Scenario 3: Soil Restoration **See the GSMM Volume 2, Section 4.23 for more information.*

☐ Check the box if a portion of the post-developed area employs soil restoration and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development with restored soils and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 3 box above is checked

Scenario 4: Site Reforestation/Revegetation & Soil Restoration **See the GSMM Volume 2, Section 4.22 and 4.23 for more information.*

☐ Check the box if the same portion of the post-developed area employs site reforestation/revegetation and soil restoration, and is protected by a conservation easement or equivalent form of protection.

Area (ac) with restored soils in a reforested & revegetated area and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 4 box above is checked

Total Conservation Area Credit (acres) **1.00**

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA C

data input cells
calculation cells
constant values

Water Quality Goals

Target Runoff Reduction Storm (in)	1.20
Total Site Area for Water Quality Volume (acres)	0.55
Target Runoff Reduction Volume (cf)	273
Target Water Quality Volume (cf)	273

Select BMPs for Runoff Reduction and Water Quality

		Area Draining to Each BMP			Storage Volume Provided by BMP (cf)	RR Conveyance Volume Provided by BMP (cf)	Down-stream BMP	Runoff Reduction Calculations						WQ Calculations	
		On-site Pervious Area (acres)	On-site Impervious Area (acres)	Offsite Area (acres)				RR Volume from Direct Drainage (cf)	RR Volume from Upstream Practices (cf)	Total RR Volume Received by BMP (cf)	Runoff Reduction %	RR Achieved (cf)	Remaining RR Volume (cf)	WQ$_v$ from Direct Drainage (cf)	Effective TSS Removal %
BMP 1	Downspout Disconnect (A & B hydrologic soils)		0.11			455		455	0	455	50%	228	228	455	80%
BMP 2	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 3	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 4	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 5	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 6	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 7	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 8	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 9	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 10	Select a BMP…							0	0	0	N/A	0	0	0	N/A
	TOTAL	0.00	0.11	0.00				455				228		455	
	UNTREATED AREA (acres)	1.44	0.00												

Target Runoff Reduction Volume (cf)	273
Target Achieved?	No
Remaining Runoff Reduction Volume (cf)	45

Target Water Quality Volume (cf)	273
% TSS Removal Achieved	100%
Target Achieved?	Yes!
Remaining TSS Removal %	0%

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Logan's Walk
Drainage Basin Name: Onsite to POA C

data input cells
calculation cells
constant values

Channel and Flood Protection Calculations

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Target Rainfall Event (in)	3.36	3.80	6.07	7.53

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Pre-Development Runoff Volume (in)	0.30	0.45	1.56	2.47
Post Development Runoff Volume (in) with no BMPs	0.45	0.64	1.91	2.92
Post-Development Runoff Volume (in) with BMPs	0.41	0.60	1.87	2.88
Adjusted CN	**58**	**58**	**59**	**59**

*See Stormwater Management Standards to Determine Detention Requirements.

Comments

A RECORDED CONSERVATION EASEMENT OR SIMILAR FORM OF PROTECTION IS REQUIRED FOR THIS PROJECT

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

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	------	0.472	0.918	-------	1.832	2.774	4.256	5.541	6.936	Pre Onsite to POA A
2	SCS Runoff	------	0.928	1.202	-------	1.683	2.126	2.769	3.296	3.845	Pre Offsite to POA A
3	Combine	1, 2	1.346	2.075	-------	3.507	4.899	7.025	8.837	10.78	Pre Total to POA A
4	SCS Runoff	------	2.339	4.549	-------	9.075	13.74	21.08	27.45	34.36	Pre Onsite to POA B
5	SCS Runoff	------	29.80	38.72	-------	54.43	68.89	90.21	107.76	126.08	Pre Offsite to POA B
6	Combine	4, 5	32.14	43.23	-------	63.28	82.41	110.76	134.35	159.21	Pre Total to POA B
7	SCS Runoff	------	0.705	1.371	-------	2.736	4.142	6.355	8.275	10.36	Pre Onsite to POA C
8	SCS Runoff	------	43.48	56.29	-------	78.84	99.55	129.70	154.39	180.11	Pre/Post Offsite to POA C
9	Combine	7, 8	44.07	57.59	-------	81.56	103.70	136.05	162.66	190.47	Pre Total to POA C
11	SCS Runoff	------	0.731	0.955	-------	1.351	1.716	2.249	2.687	3.144	Post Onsite Bypass/Total to POA A
12	SCS Runoff	------	14.10	17.60	-------	23.63	29.06	36.85	43.19	49.78	Post Onsite to Pond
13	SCS Runoff	------	16.52	21.40	-------	30.00	37.90	49.48	59.05	69.04	Post Offsite East to Pond
14	SCS Runoff	------	0.928	1.202	-------	1.683	2.126	2.769	3.296	3.845	Post Offsite South to Pond
15	Combine	12, 13, 14	31.26	39.94	-------	55.13	69.00	89.10	105.50	122.54	Post Total to Pond
16	Reservoir	15	0.917	2.479	-------	10.25	25.01	47.69	64.97	82.64	Pond
17	SCS Runoff	------	2.876	4.338	-------	7.132	9.828	13.92	17.39	21.09	Post Onsite Bypass to POA B
18	SCS Runoff	------	14.12	18.34	-------	25.78	32.63	42.73	51.04	59.72	Post Offsite Bypass to POA B
19	Combine	16, 17, 18	17.15	22.78	-------	33.49	56.52	95.51	124.72	155.29	Post Total to POA B
20	SCS Runoff	------	0.954	1.522	-------	2.625	3.711	5.374	6.793	8.316	Post Onsite Bypass to POA C
21	Combine	8, 20	44.40	57.80	-------	81.46	103.26	135.07	161.18	188.42	Post Total to POA C

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

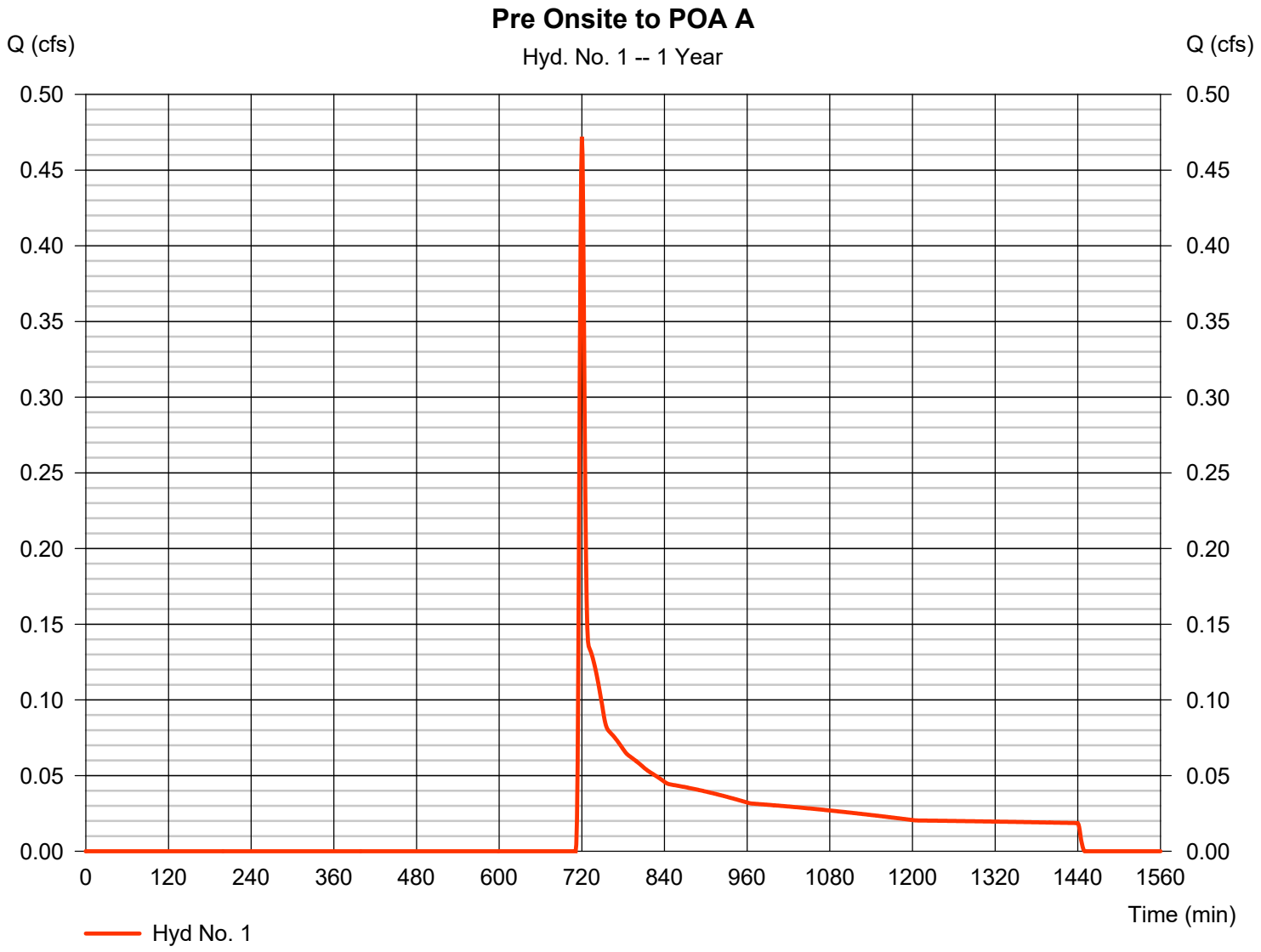
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.472	1	720	1,706	------	------	------	Pre Onsite to POA A
2	SCS Runoff	0.928	1	718	1,890	------	------	------	Pre Offsite to POA A
3	Combine	1.346	1	719	3,597	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	2.339	1	720	8,454	------	------	------	Pre Onsite to POA B
5	SCS Runoff	29.80	1	720	68,935	------	------	------	Pre Offsite to POA B
6	Combine	32.14	1	720	77,389	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	0.705	1	720	2,548	------	------	------	Pre Onsite to POA C
8	SCS Runoff	43.48	1	718	88,524	------	------	------	Pre/Post Offsite to POA C
9	Combine	44.07	1	718	91,073	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	0.731	1	718	1,498	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	14.10	1	718	28,323	------	------	------	Post Onsite to Pond
13	SCS Runoff	16.52	1	719	35,375	------	------	------	Post Offsite East to Pond
14	SCS Runoff	0.928	1	718	1,890	------	------	------	Post Offsite South to Pond
15	Combine	31.26	1	718	65,588	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	0.917	1	925	56,522	15	997.24	38,401	Pond
17	SCS Runoff	2.876	1	719	7,003	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	14.12	1	720	32,653	------	------	------	Post Offsite Bypass to POA B
19	Combine	17.15	1	720	96,178	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	0.954	1	719	2,525	------	------	------	Post Onsite Bypass to POA C
21	Combine	44.40	1	718	91,049	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.472 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 1,706 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.36 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

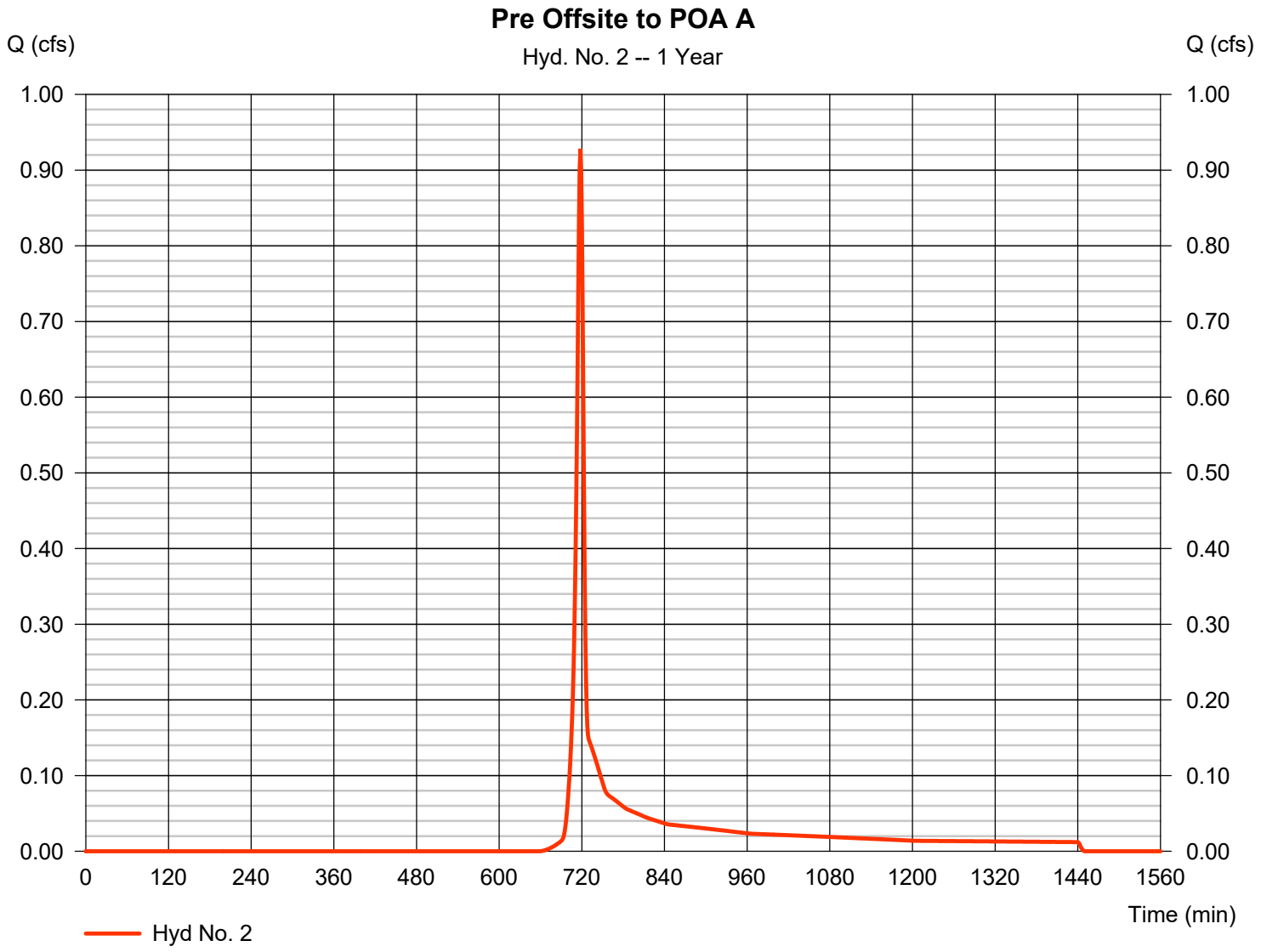


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.928 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 1,890 cuft
Drainage area	= 0.490 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.36 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

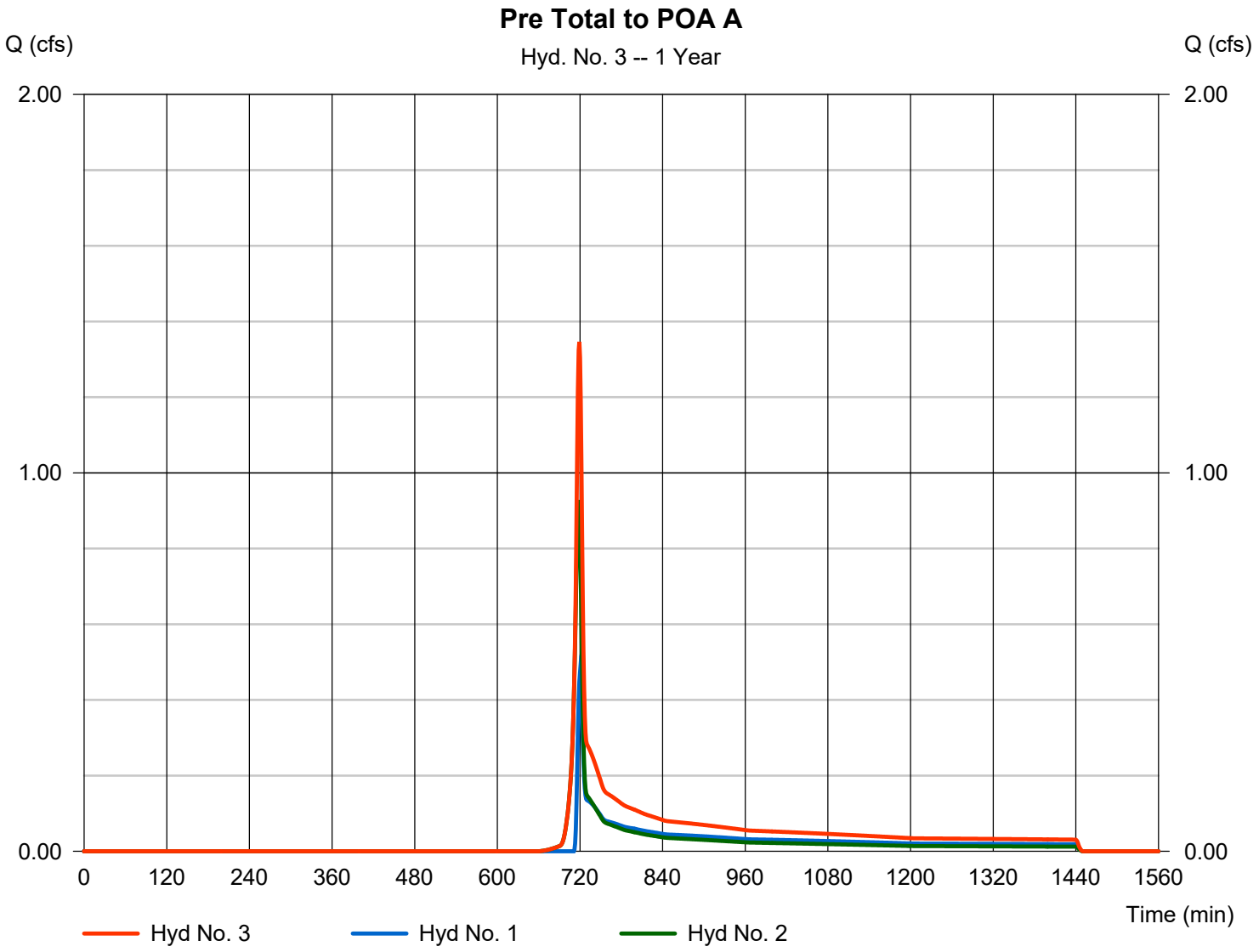


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 1.346 cfs
Storm frequency	= 1 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 3,597 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

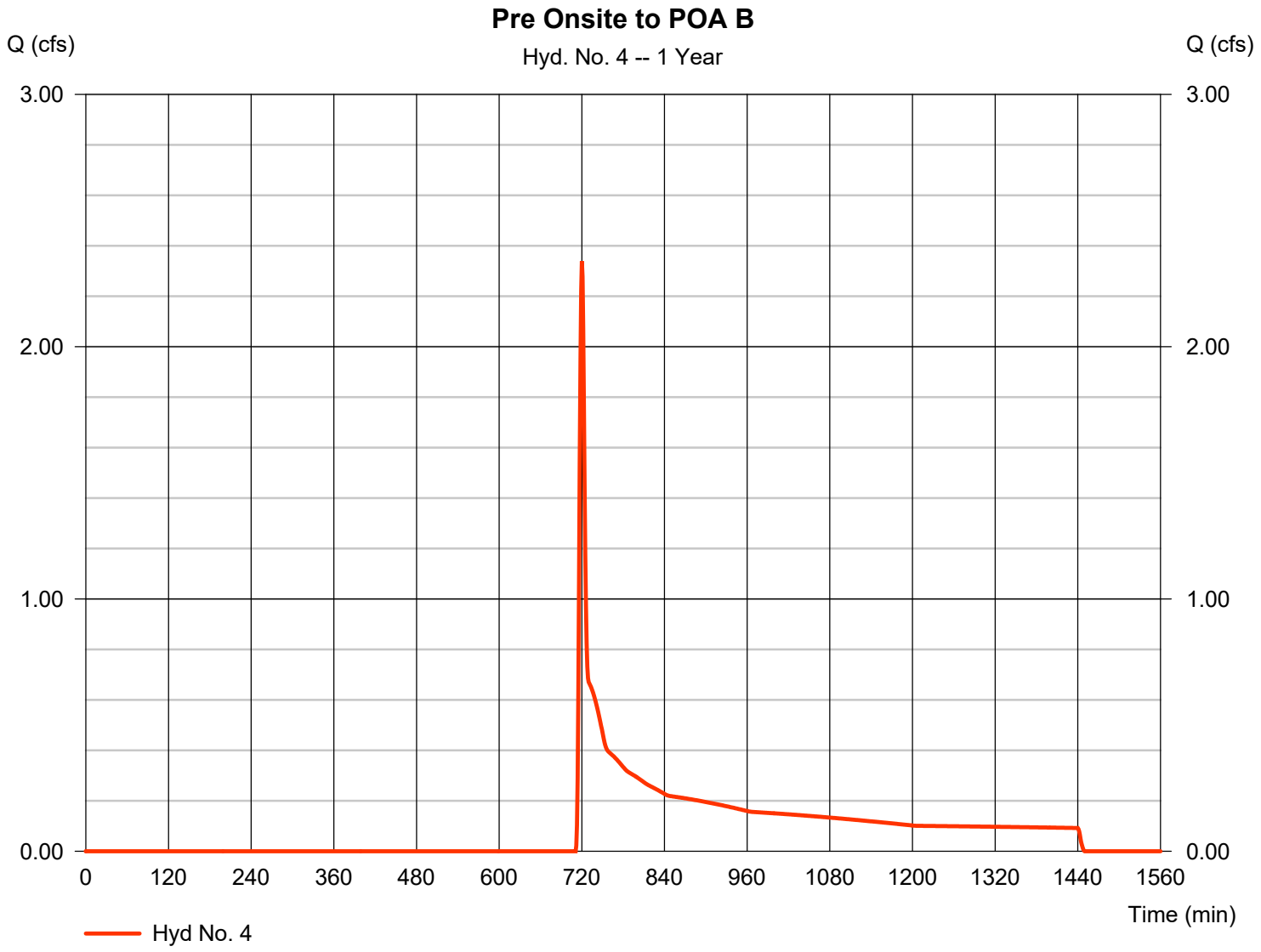


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.339 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	1 min	Hyd. volume	=	8,454 cuft
Drainage area	=	7.530 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

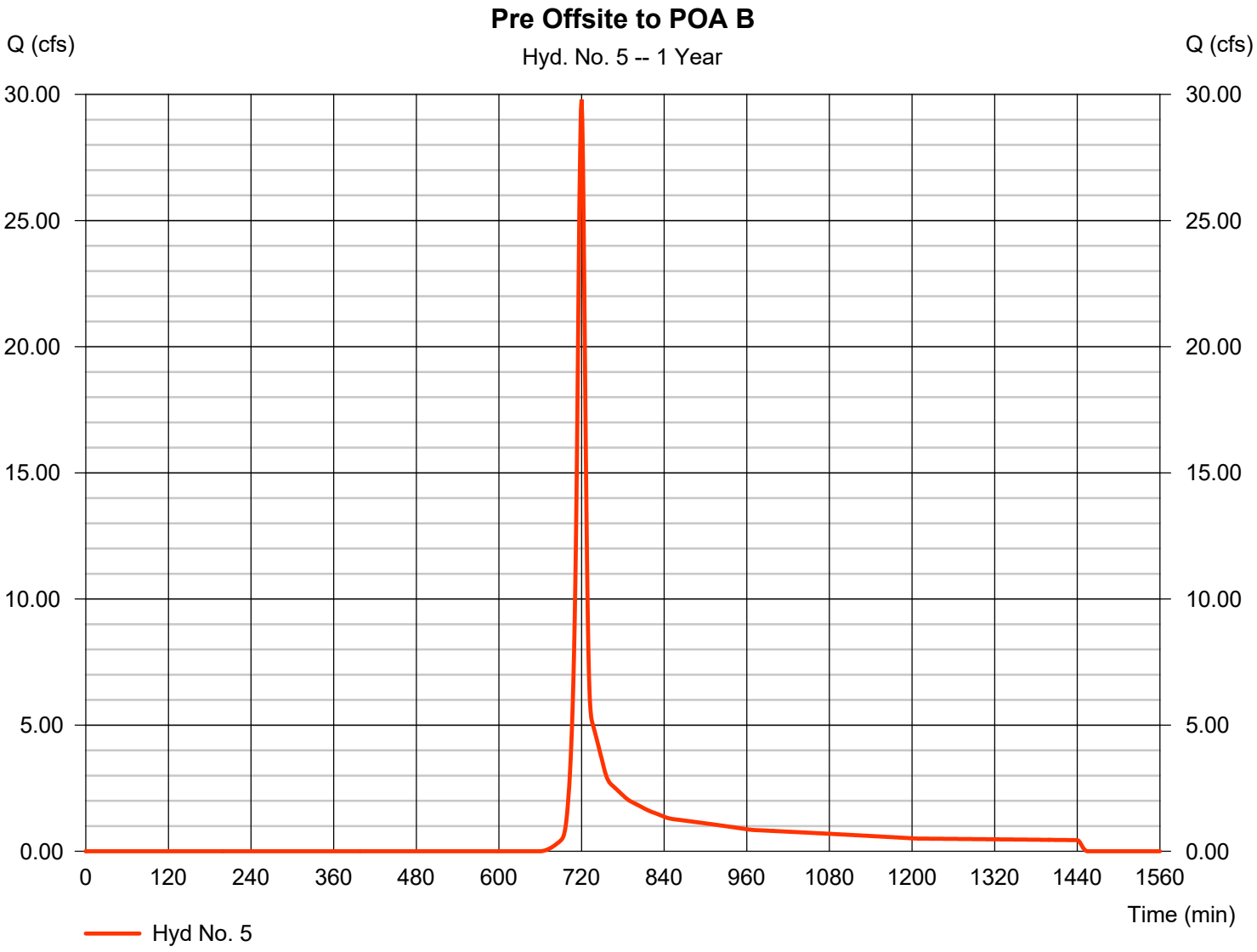


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	29.80 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	1 min	Hyd. volume	=	68,935 cuft
Drainage area	=	18.430 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

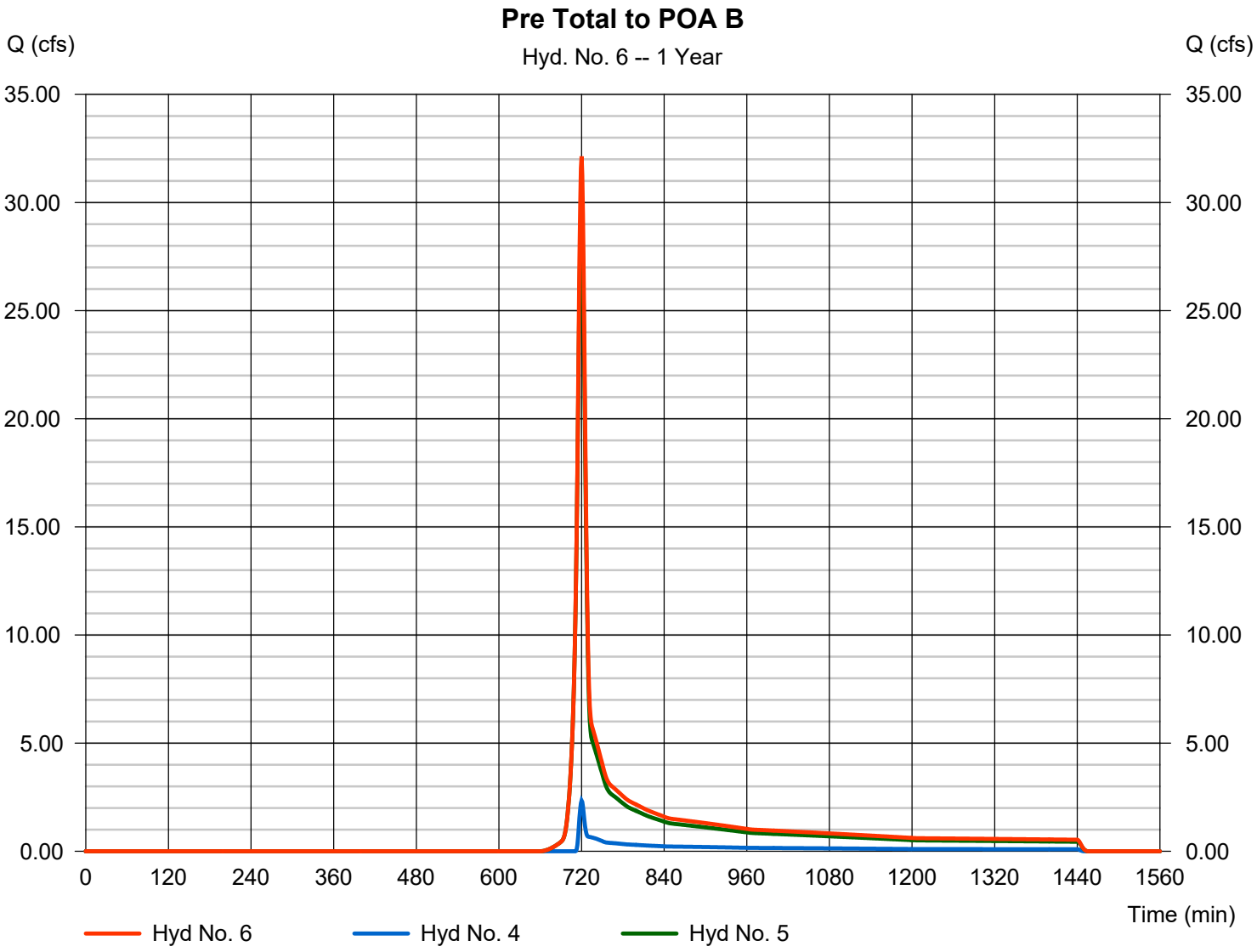


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 32.14 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 77,389 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

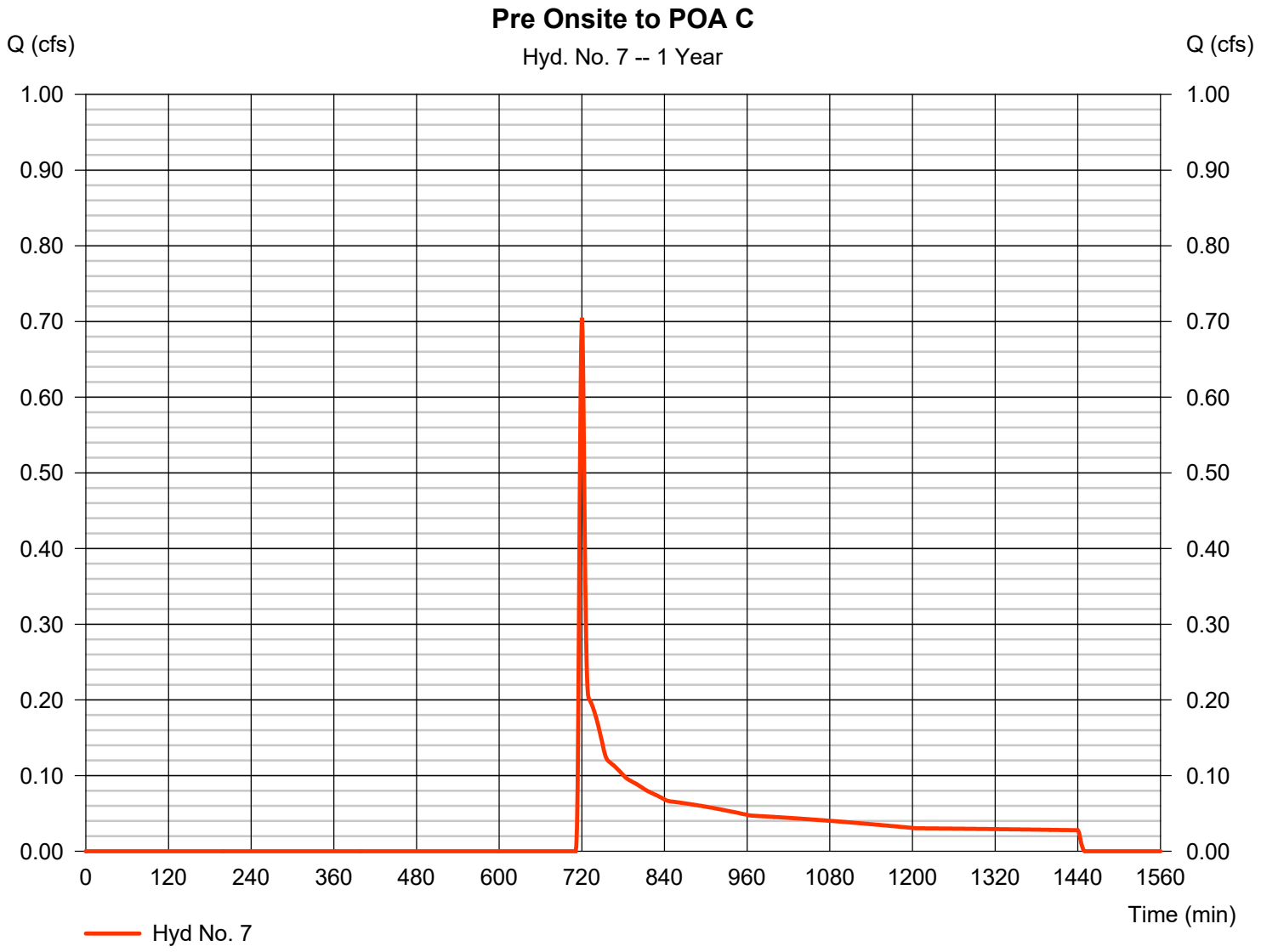


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.705 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 2,548 cuft
Drainage area	= 2.270 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.36 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

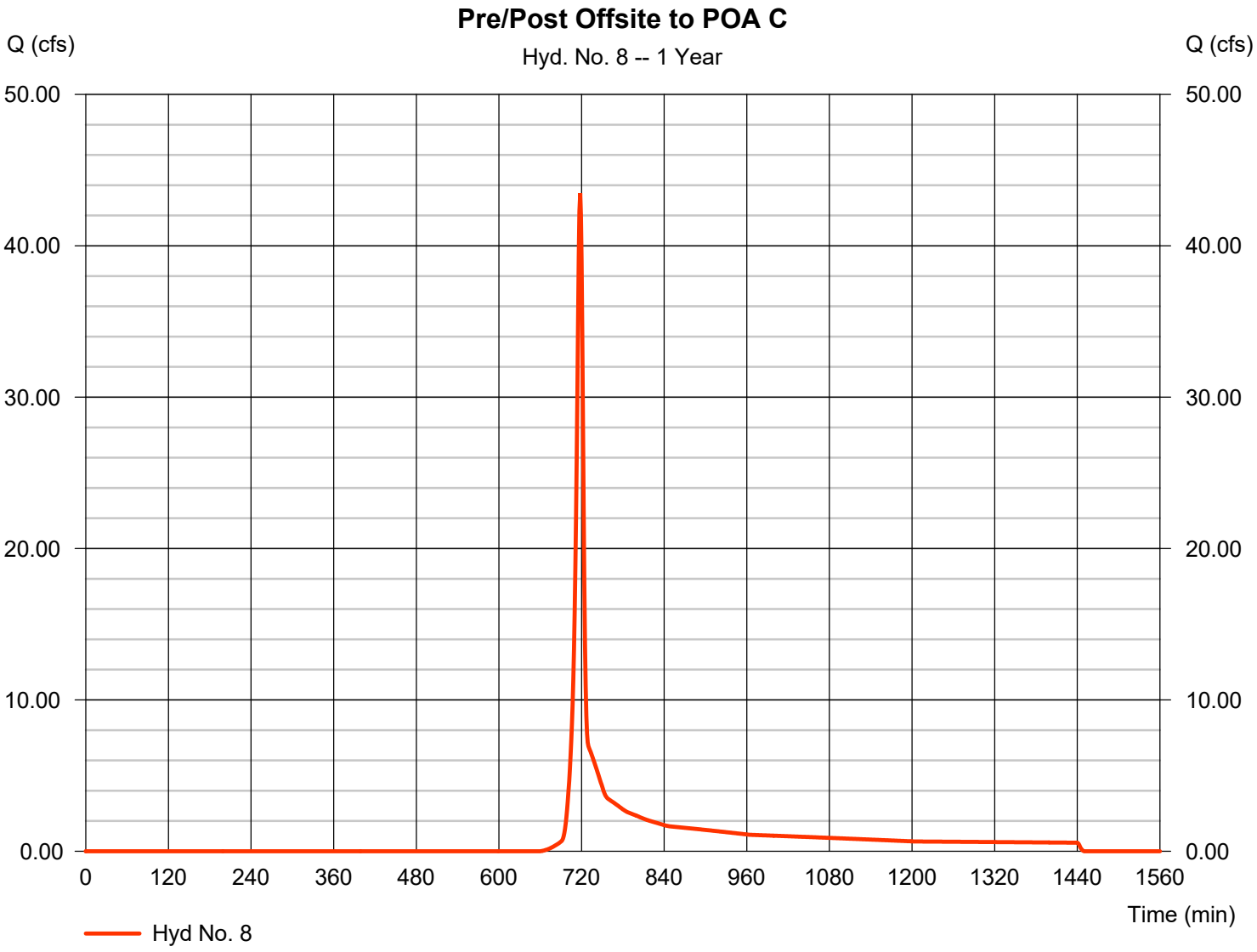


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	43.48 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	88,524 cuft
Drainage area	=	22.950 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

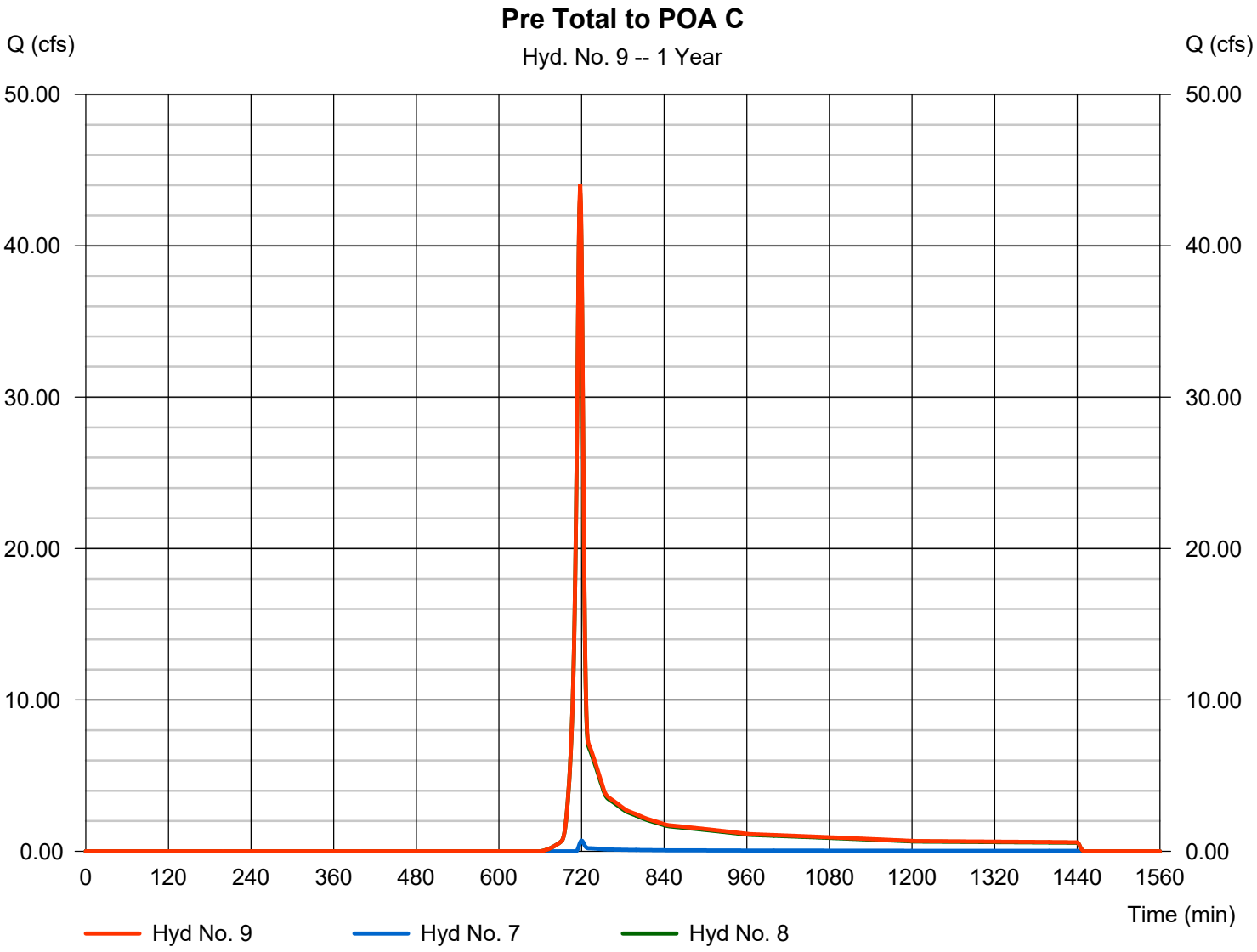


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 44.07 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 91,073 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

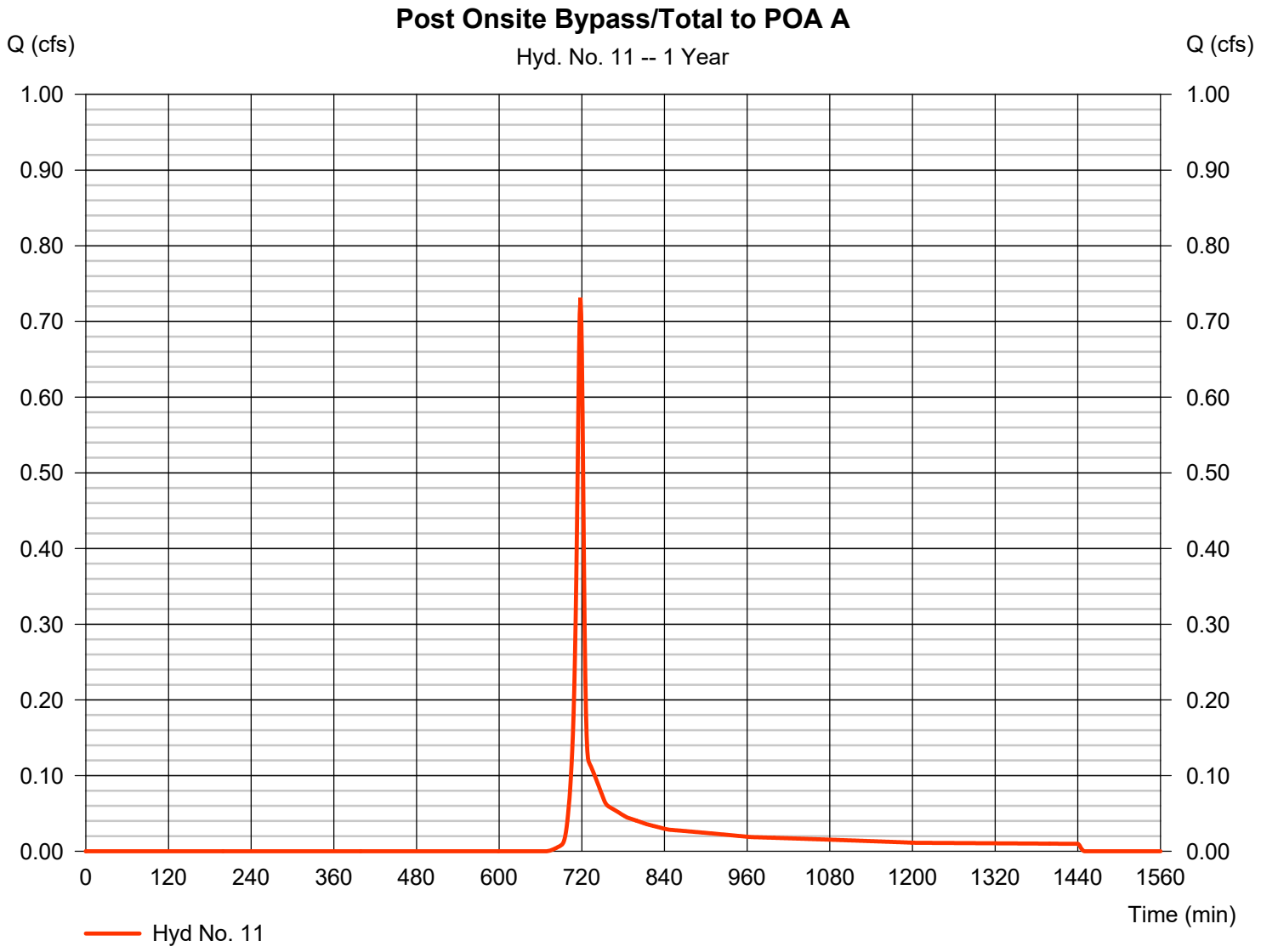


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.731 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 1,498 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.36 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

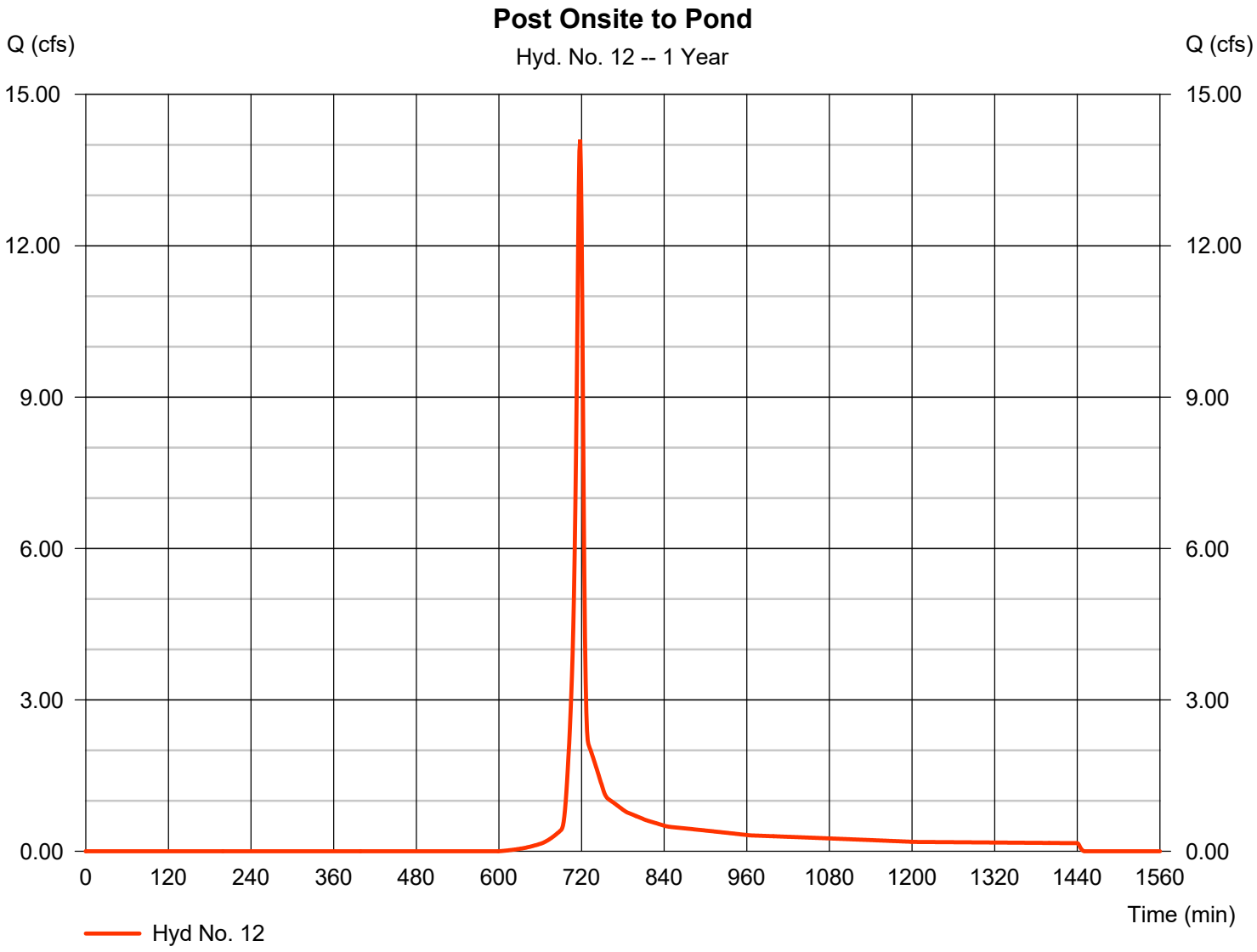


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.10 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	28,323 cuft
Drainage area	=	5.700 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

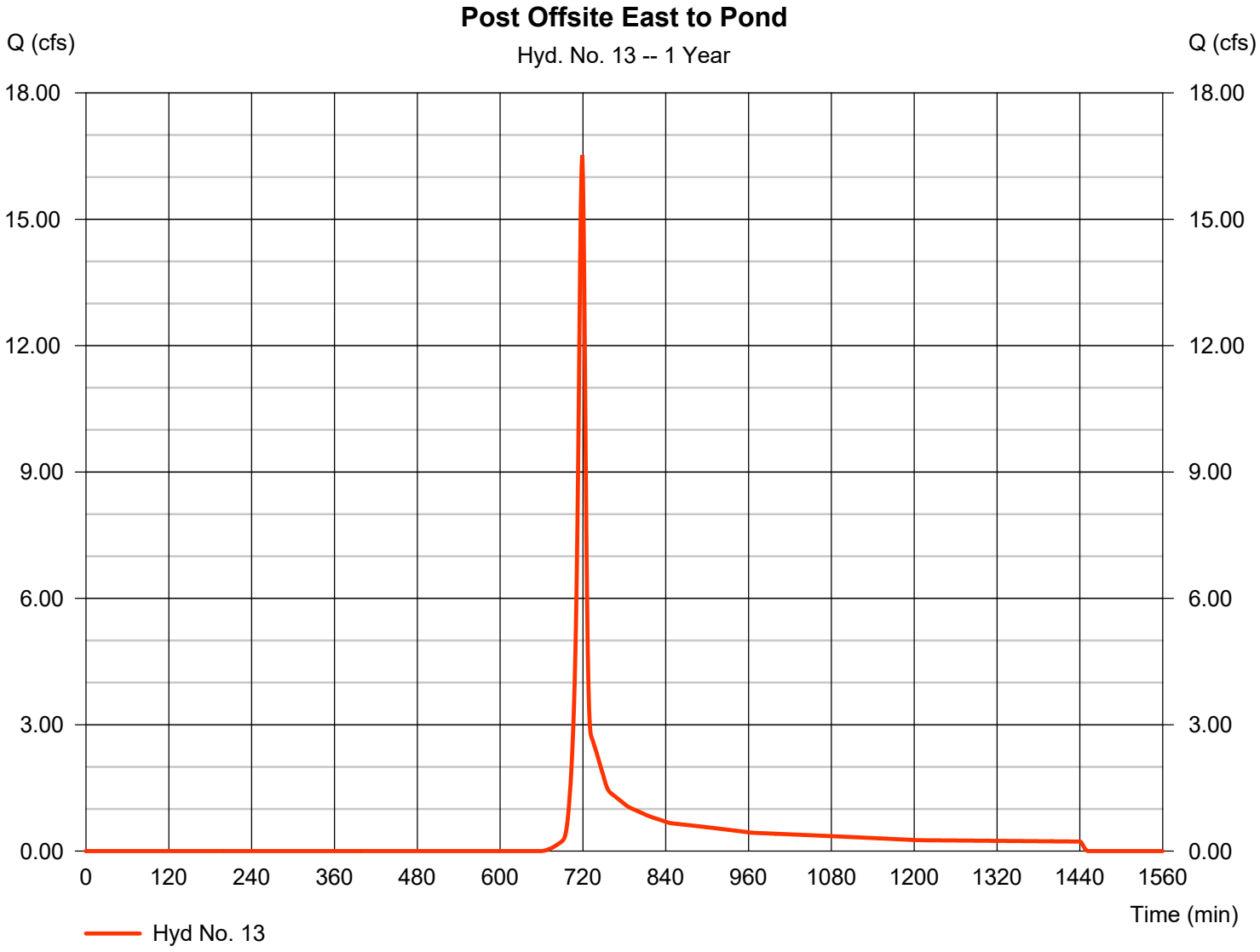


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.52 cfs
Storm frequency	=	1 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	35,375 cuft
Drainage area	=	9.700 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

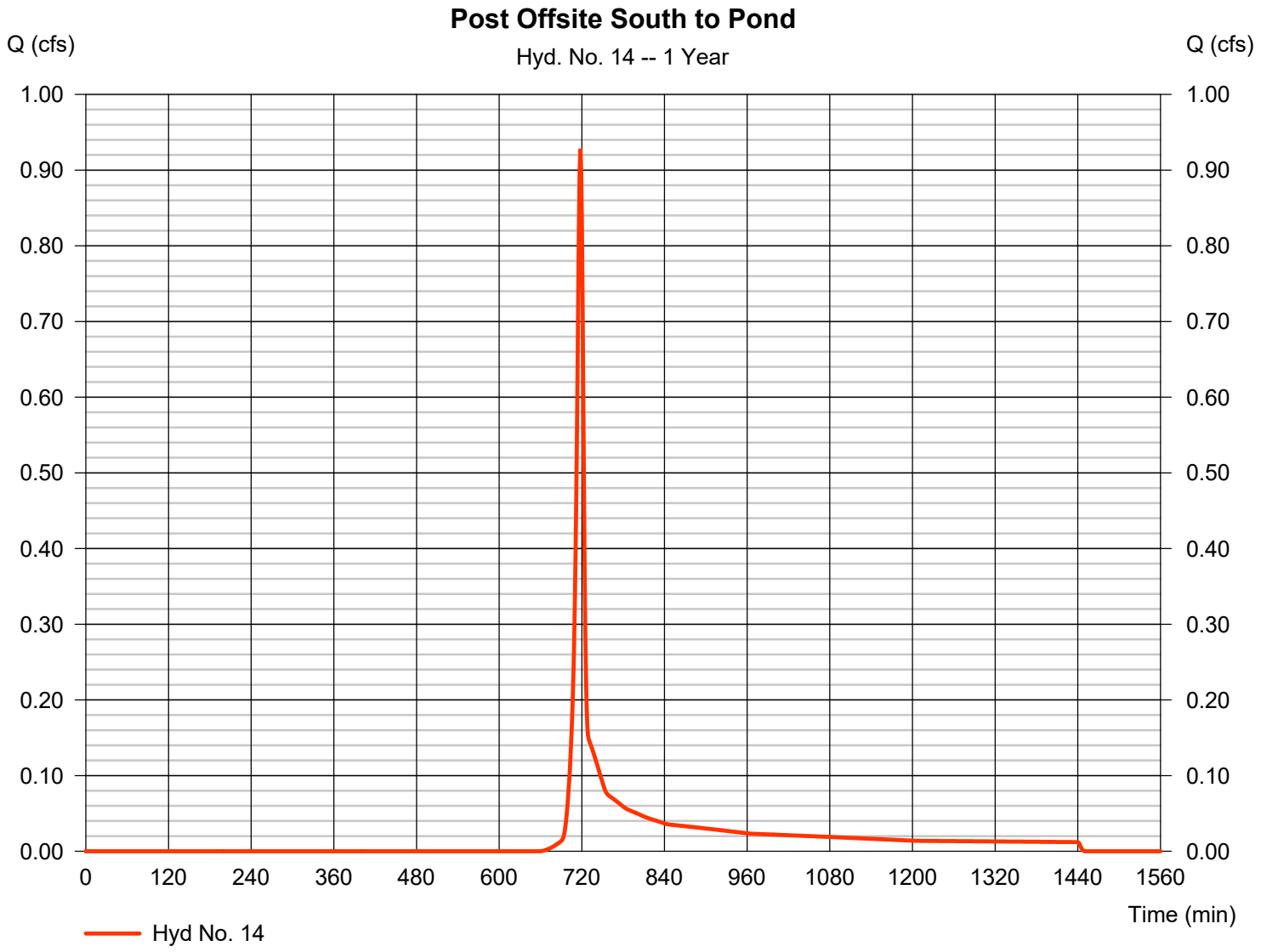


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.928 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	1,890 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

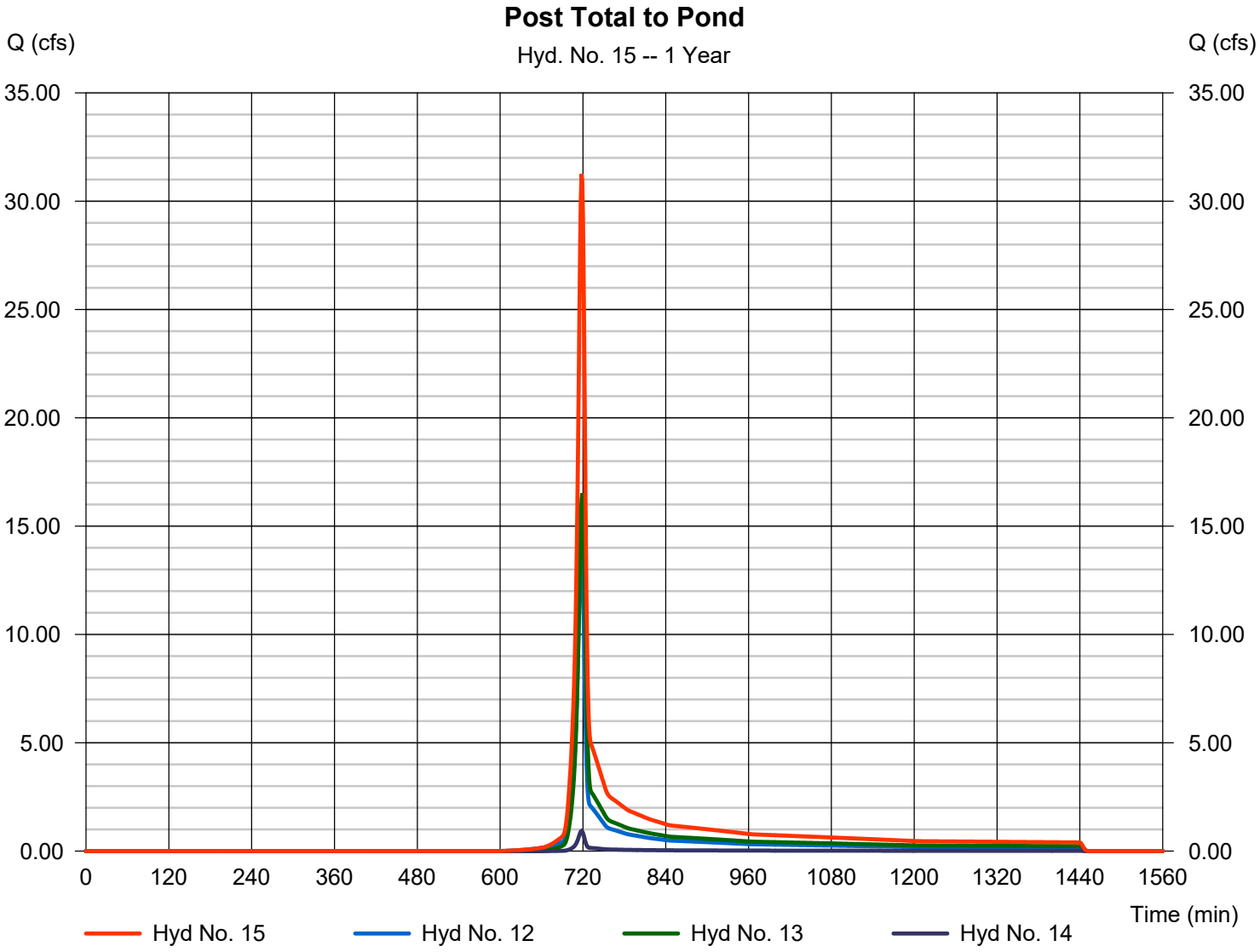


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 31.26 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 65,588 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



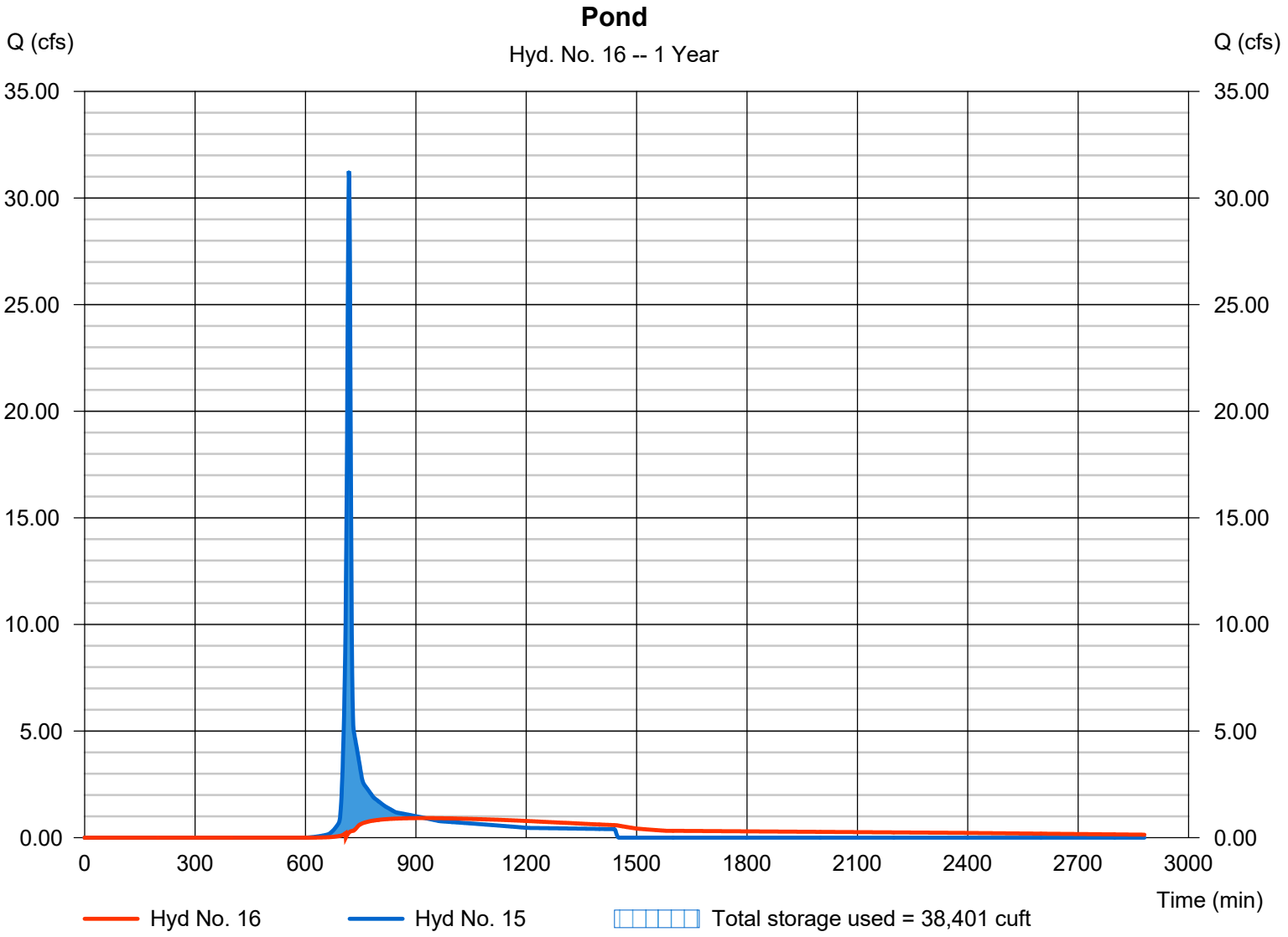
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	=	Reservoir	Peak discharge	=	0.917 cfs
Storm frequency	=	1 yrs	Time to peak	=	925 min
Time interval	=	1 min	Hyd. volume	=	56,522 cuft
Inflow hyd. No.	=	15 - Post Total to Pond	Max. Elevation	=	997.24 ft
Reservoir name	=	Pond	Max. Storage	=	38,401 cuft

Storage Indication method used.



Pond No. 1 - Pond

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 992.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	992.00	1,000	0	0
2.00	992.00	4,063	5,063	5,063
4.00	994.00	5,472	9,535	14,598
6.00	996.00	7,699	13,171	27,769
8.00	998.00	9,437	17,136	44,905
10.00	1000.00	11,233	20,670	65,575
12.00	1002.00	13,091	24,324	89,899

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 2.50	4.50	Inactive	0.00
Span (in)	= 2.50	4.50	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 992.00	996.00	997.50	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 1.00	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	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.00	8.00	0.00	0.00
Crest El. (ft)	= 997.50	1002.50	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	Rect	---	---
Multi-Stage	= No	No	No	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).

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	992.00	0.00	0.00	0.00	---	0.00	0.00	---	---	---	---	0.000
0.20	506	992.20	0.05 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.051
0.40	1,013	992.40	0.09 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.089
0.60	1,519	992.60	0.12 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.116
0.80	2,025	992.80	0.14 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.137
1.00	2,532	993.00	0.16 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.155
1.20	3,038	993.20	0.17 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.172
1.40	3,544	993.40	0.19 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.187
1.60	4,050	993.60	0.20 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.201
1.80	4,557	993.80	0.21 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.214
2.00	5,063	992.00	0.00	0.00	0.00	---	0.00	0.00	---	---	---	---	0.000
2.20	6,017	992.20	0.05 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.051
2.40	6,970	992.40	0.09 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.089
2.60	7,924	992.60	0.12 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.116
2.80	8,877	992.80	0.14 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.137
3.00	9,831	993.00	0.16 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.155
3.20	10,784	993.20	0.17 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.172
3.40	11,738	993.40	0.19 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.187
3.60	12,691	993.60	0.20 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.201
3.80	13,645	993.80	0.21 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.214
4.00	14,598	994.00	0.23 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.226
4.20	15,915	994.20	0.24 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.238
4.40	17,232	994.40	0.25 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.249
4.60	18,549	994.60	0.26 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.259
4.80	19,866	994.80	0.27 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.269
5.00	21,183	995.00	0.28 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.279
5.20	22,501	995.20	0.29 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.289
5.40	23,818	995.40	0.30 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.298
5.60	25,135	995.60	0.31 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.307
5.80	26,452	995.80	0.32 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.316
6.00	27,769	996.00	0.32 ic	0.00	0.00	---	0.00	0.00	---	---	---	---	0.324
6.20	29,483	996.20	0.33 ic	0.09 ic	0.00	---	0.00	0.00	---	---	---	---	0.423
6.40	31,196	996.40	0.34 ic	0.25 ic	0.00	---	0.00	0.00	---	---	---	---	0.585
6.60	32,910	996.60	0.35 ic	0.34 ic	0.00	---	0.00	0.00	---	---	---	---	0.690
6.80	34,623	996.80	0.36 ic	0.42 ic	0.00	---	0.00	0.00	---	---	---	---	0.772
7.00	36,337	997.00	0.36 ic	0.48 ic	0.00	---	0.00	0.00	---	---	---	---	0.842

Continues on next page...

Pond

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
7.20	38,051	997.20	0.37 ic	0.54 ic	0.00	---	0.00	0.00	---	---	---	---	0.906
7.40	39,764	997.40	0.38 ic	0.59 ic	0.00	---	0.00	0.00	---	---	---	---	0.963
7.60	41,478	997.60	0.38 ic	0.63 ic	0.00	---	0.32	0.00	---	---	---	---	1.333
7.80	43,191	997.80	0.39 ic	0.68 ic	0.00	---	1.64	0.00	---	---	---	---	2.709
8.00	44,905	998.00	0.40 ic	0.72 ic	0.00	---	3.53	0.00	---	---	---	---	4.646
8.20	46,972	998.20	0.41 ic	0.75 ic	0.00	---	5.85	0.00	---	---	---	---	7.010
8.40	49,039	998.40	0.41 ic	0.79 ic	0.00	---	8.53	0.00	---	---	---	---	9.733
8.60	51,106	998.60	0.42 ic	0.83 ic	0.00	---	11.53	0.00	---	---	---	---	12.77
8.80	53,173	998.80	0.42 ic	0.86 ic	0.00	---	14.81	0.00	---	---	---	---	16.09
9.00	55,240	999.00	0.43 ic	0.89 ic	0.00	---	18.35	0.00	---	---	---	---	19.68
9.20	57,307	999.20	0.44 ic	0.92 ic	0.00	---	22.14	0.00	---	---	---	---	23.50
9.40	59,374	999.40	0.44 ic	0.95 ic	0.00	---	26.17	0.00	---	---	---	---	27.56
9.60	61,441	999.60	0.45 ic	0.98 ic	0.00	---	30.40	0.00	---	---	---	---	31.84
9.80	63,508	999.80	0.46 ic	1.01 ic	0.00	---	34.85	0.00	---	---	---	---	36.31
10.00	65,575	1000.00	0.46 ic	1.04 ic	0.00	---	39.49	0.00	---	---	---	---	40.99
10.20	68,007	1000.20	0.47 ic	1.07 ic	0.00	---	44.32	0.00	---	---	---	---	45.85
10.40	70,440	1000.40	0.47 ic	1.09 ic	0.00	---	49.34	0.00	---	---	---	---	50.90
10.60	72,872	1000.60	0.48 ic	1.12 ic	0.00	---	54.53	0.00	---	---	---	---	56.12
10.80	75,305	1000.80	0.48 ic	1.14 ic	0.00	---	59.89	0.00	---	---	---	---	61.51
11.00	77,737	1001.00	0.49 ic	1.17 ic	0.00	---	65.42	0.00	---	---	---	---	67.07
11.20	80,169	1001.20	0.49 ic	1.19 ic	0.00	---	71.10	0.00	---	---	---	---	72.79
11.40	82,602	1001.40	0.50 ic	1.21 ic	0.00	---	76.94	0.00	---	---	---	---	78.66
11.60	85,034	1001.60	0.51 ic	1.24 ic	0.00	---	82.94	0.00	---	---	---	---	84.68
11.80	87,467	1001.80	0.51 ic	1.26 ic	0.00	---	89.08	0.00	---	---	---	---	90.85
12.00	89,899	1002.00	0.52 ic	1.28 ic	0.00	---	95.36	0.00	---	---	---	---	97.16

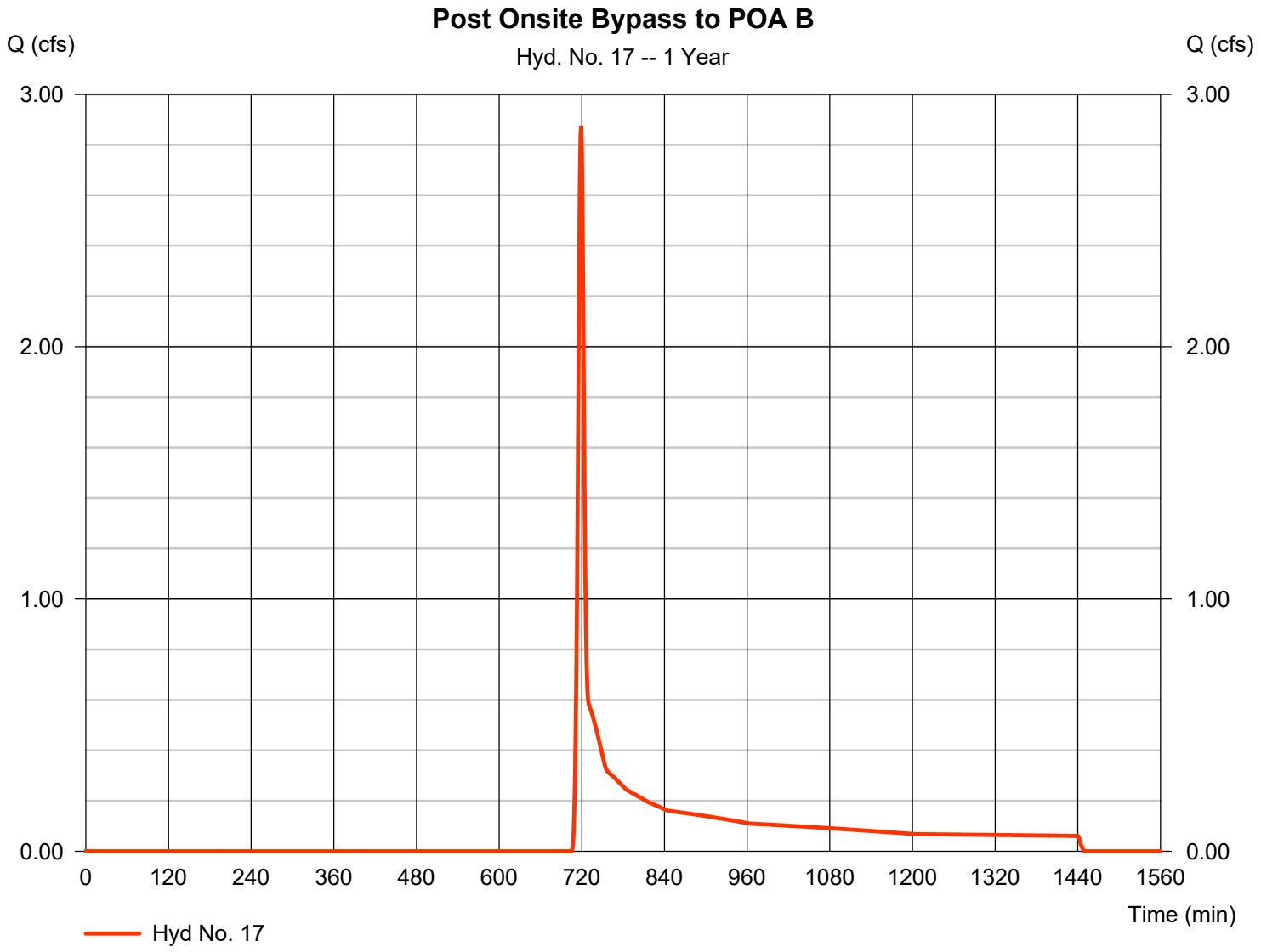
...End

Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.876 cfs
Storm frequency	=	1 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	7,003 cuft
Drainage area	=	3.660 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

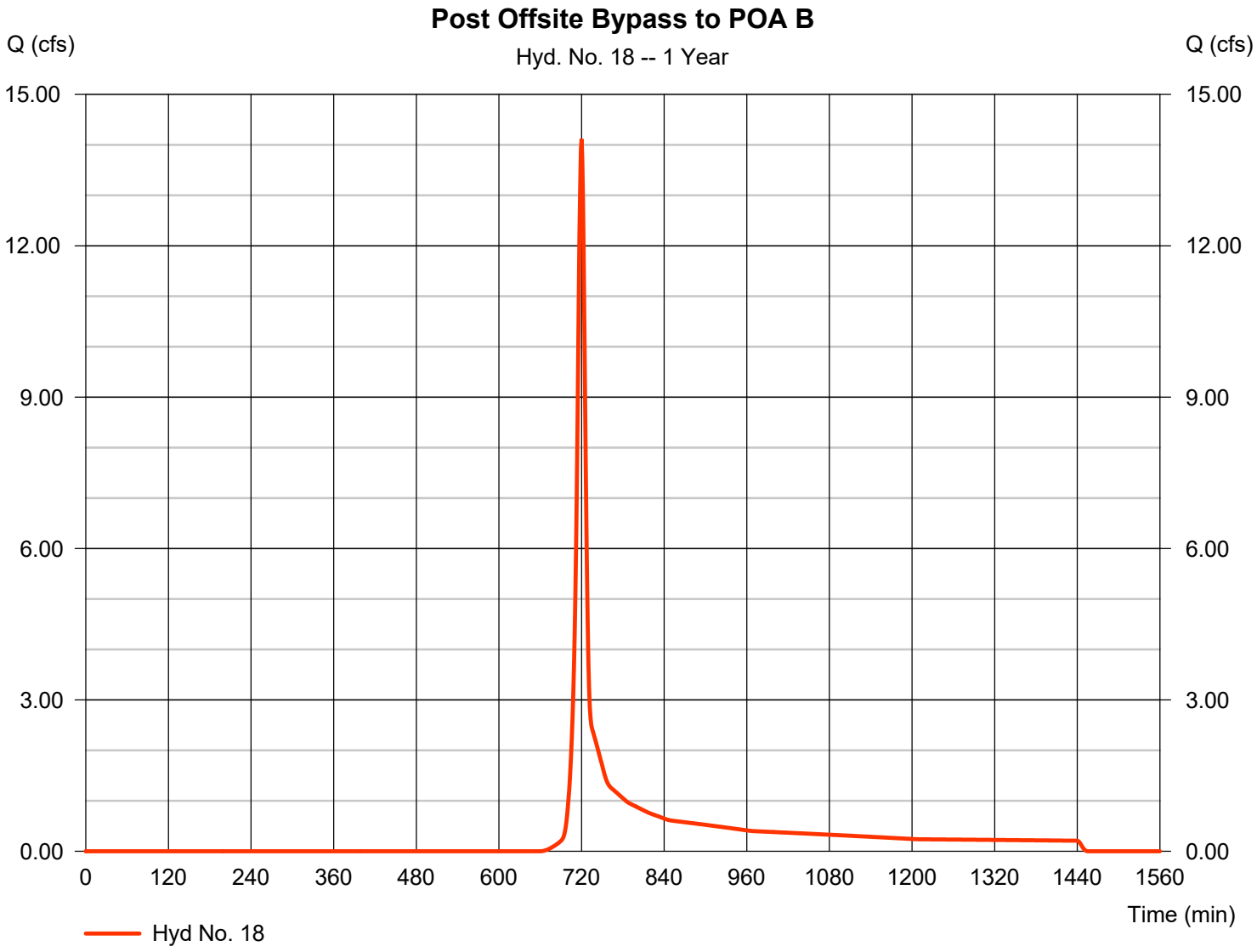


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.12 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	1 min	Hyd. volume	=	32,653 cuft
Drainage area	=	8.730 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.36 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

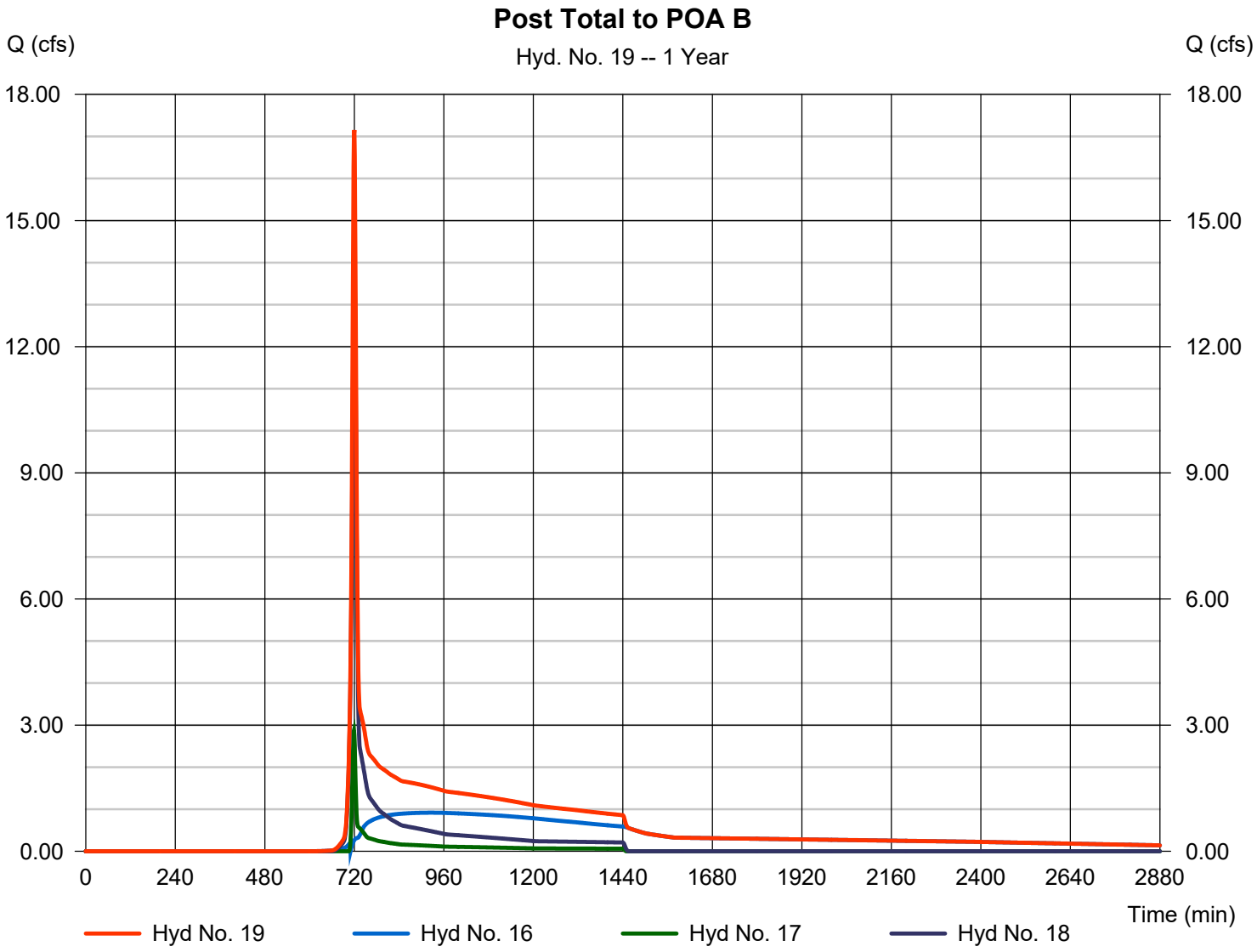


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	= Combine	Peak discharge	= 17.15 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 96,178 cuft
Inflow hyds.	= 16, 17, 18	Contrib. drain. area	= 12.390 ac

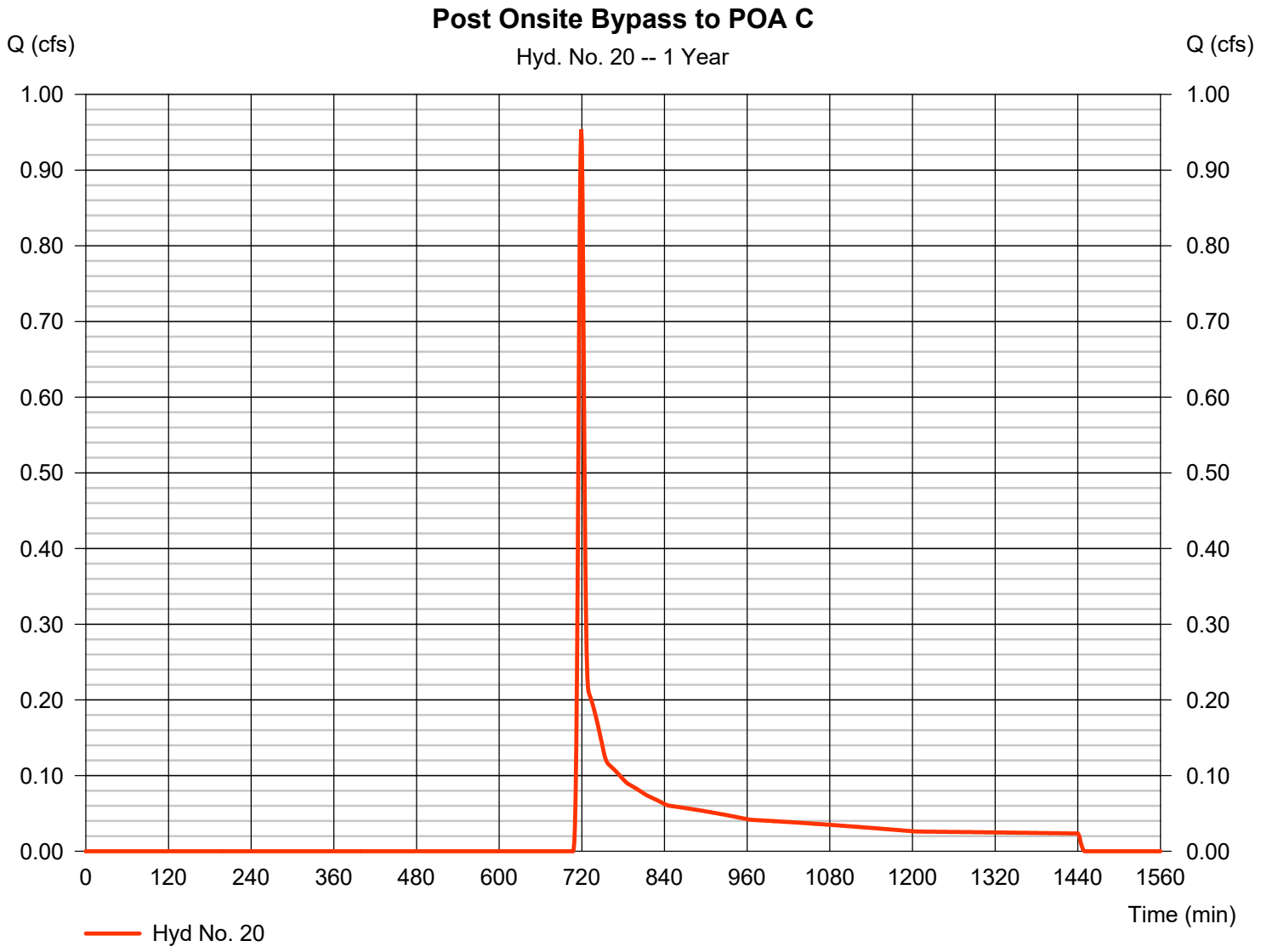


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.954 cfs
Storm frequency	= 1 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 2,525 cuft
Drainage area	= 1.550 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.36 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

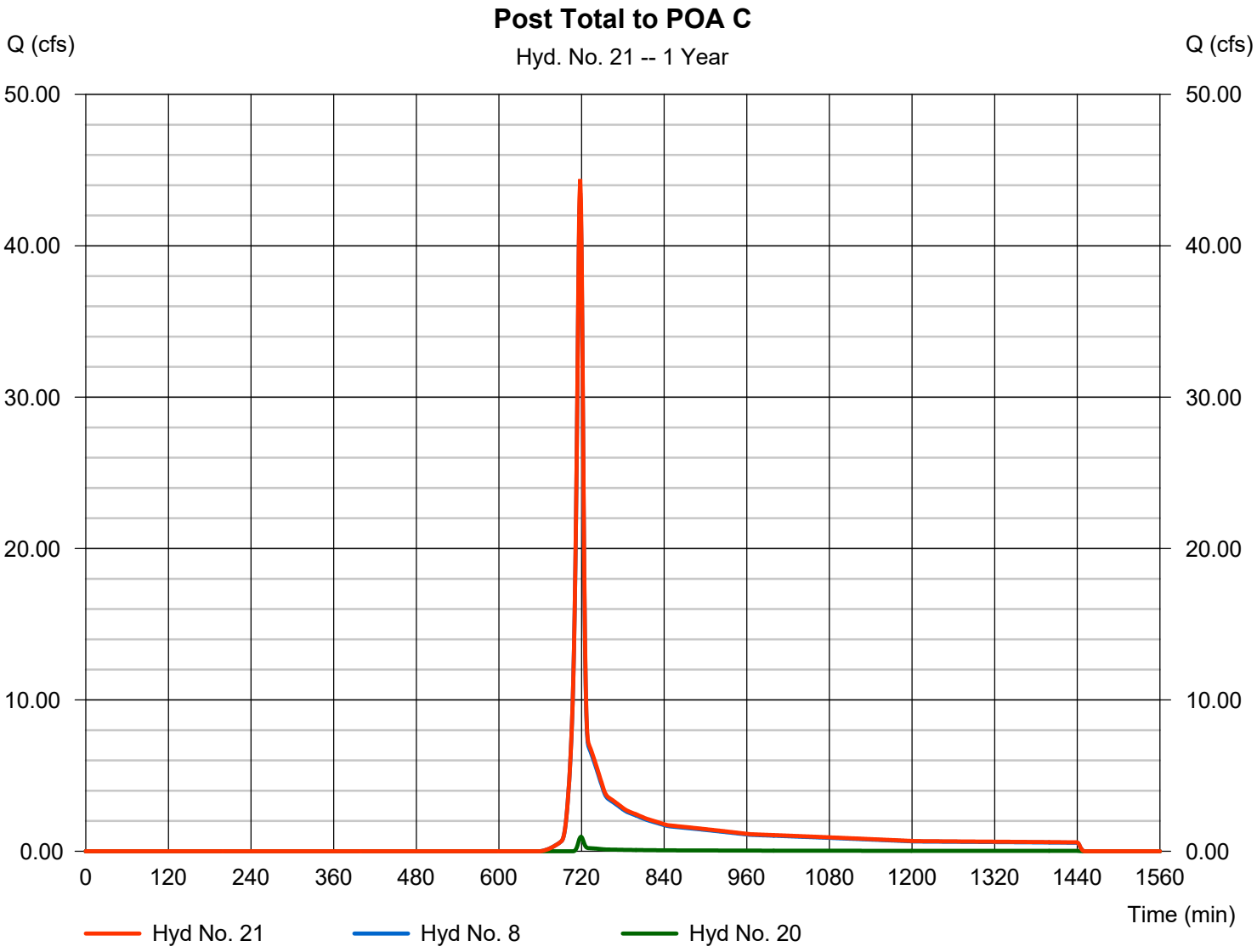


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 44.40 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 91,049 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

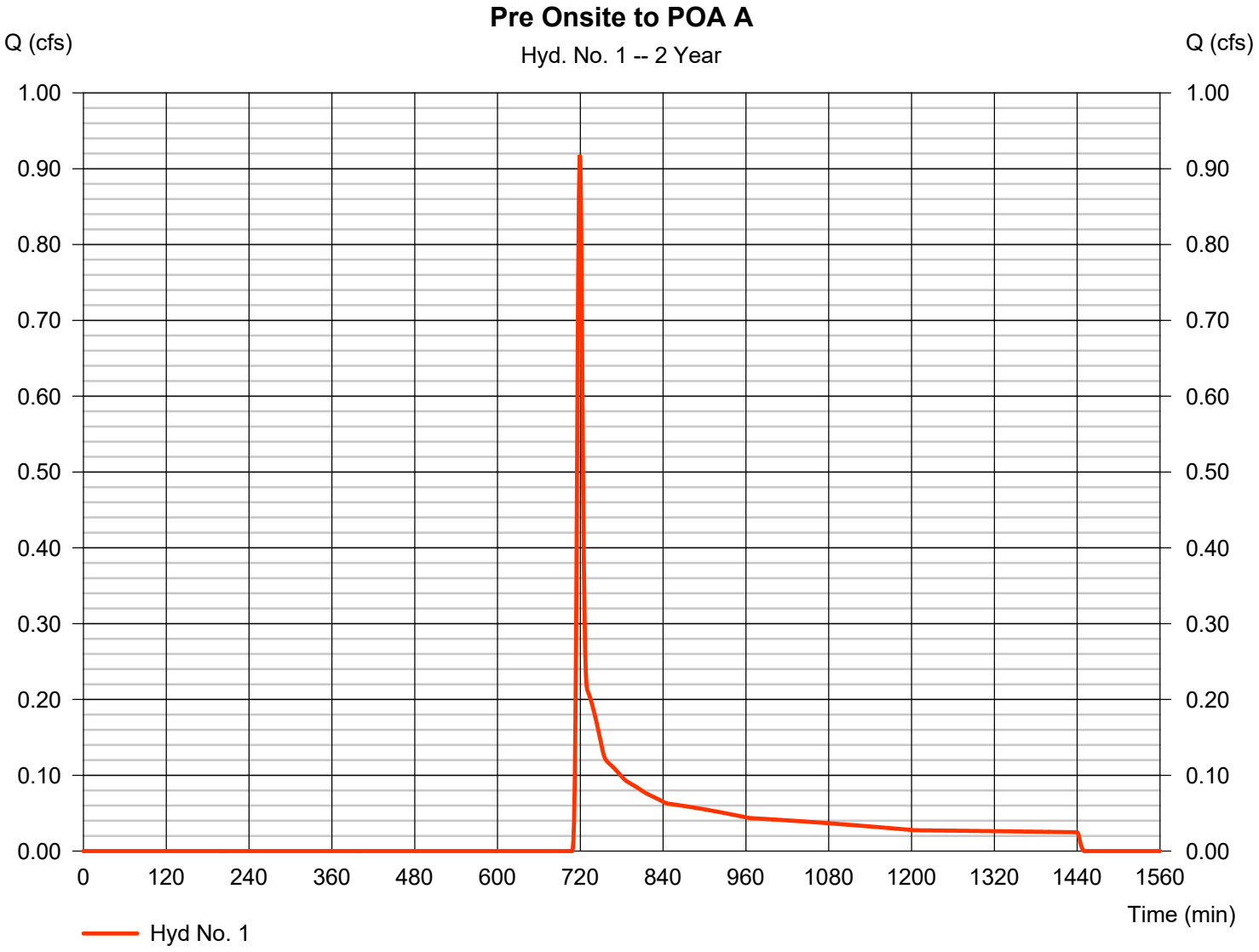
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.918	1	719	2,575	------	------	------	Pre Onsite to POA A
2	SCS Runoff	1.202	1	718	2,424	------	------	------	Pre Offsite to POA A
3	Combine	2.075	1	719	4,999	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	4.549	1	719	12,755	------	------	------	Pre Onsite to POA B
5	SCS Runoff	38.72	1	720	88,417	------	------	------	Pre Offsite to POA B
6	Combine	43.23	1	720	101,172	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	1.371	1	719	3,845	------	------	------	Pre Onsite to POA C
8	SCS Runoff	56.29	1	718	113,542	------	------	------	Pre/Post Offsite to POA C
9	Combine	57.59	1	718	117,388	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	0.955	1	718	1,932	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	17.60	1	718	35,358	------	------	------	Post Onsite to Pond
13	SCS Runoff	21.40	1	719	45,372	------	------	------	Post Offsite East to Pond
14	SCS Runoff	1.202	1	718	2,424	------	------	------	Post Offsite South to Pond
15	Combine	39.94	1	718	83,154	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	2.479	1	779	73,597	15	997.77	42,904	Pond
17	SCS Runoff	4.338	1	718	9,770	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	18.34	1	720	41,882	------	------	------	Post Offsite Bypass to POA B
19	Combine	22.78	1	719	125,248	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	1.522	1	719	3,601	------	------	------	Post Onsite Bypass to POA C
21	Combine	57.80	1	718	117,144	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.918 cfs
Storm frequency	= 2 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 2,575 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

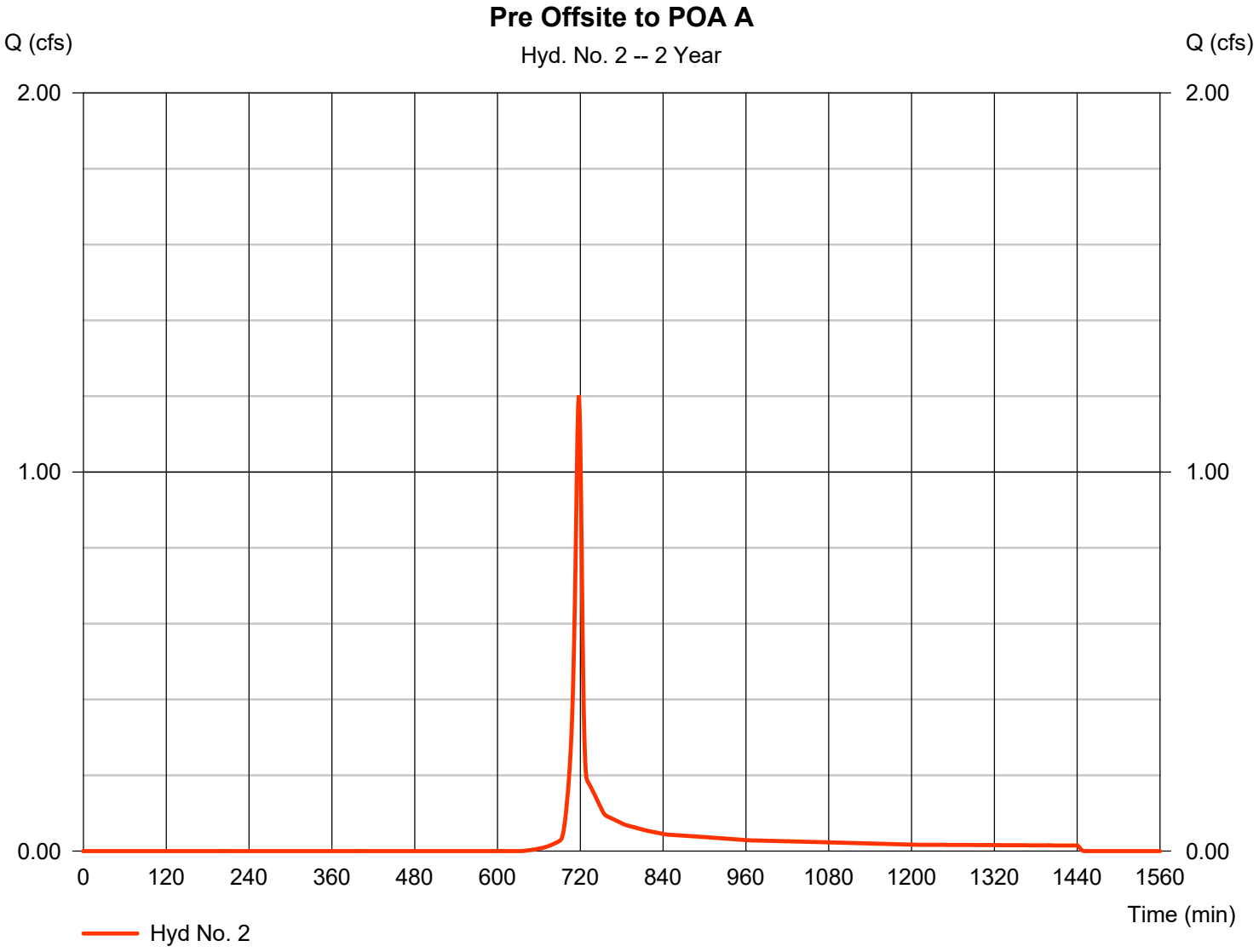


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.202 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 2,424 cuft
Drainage area	= 0.490 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

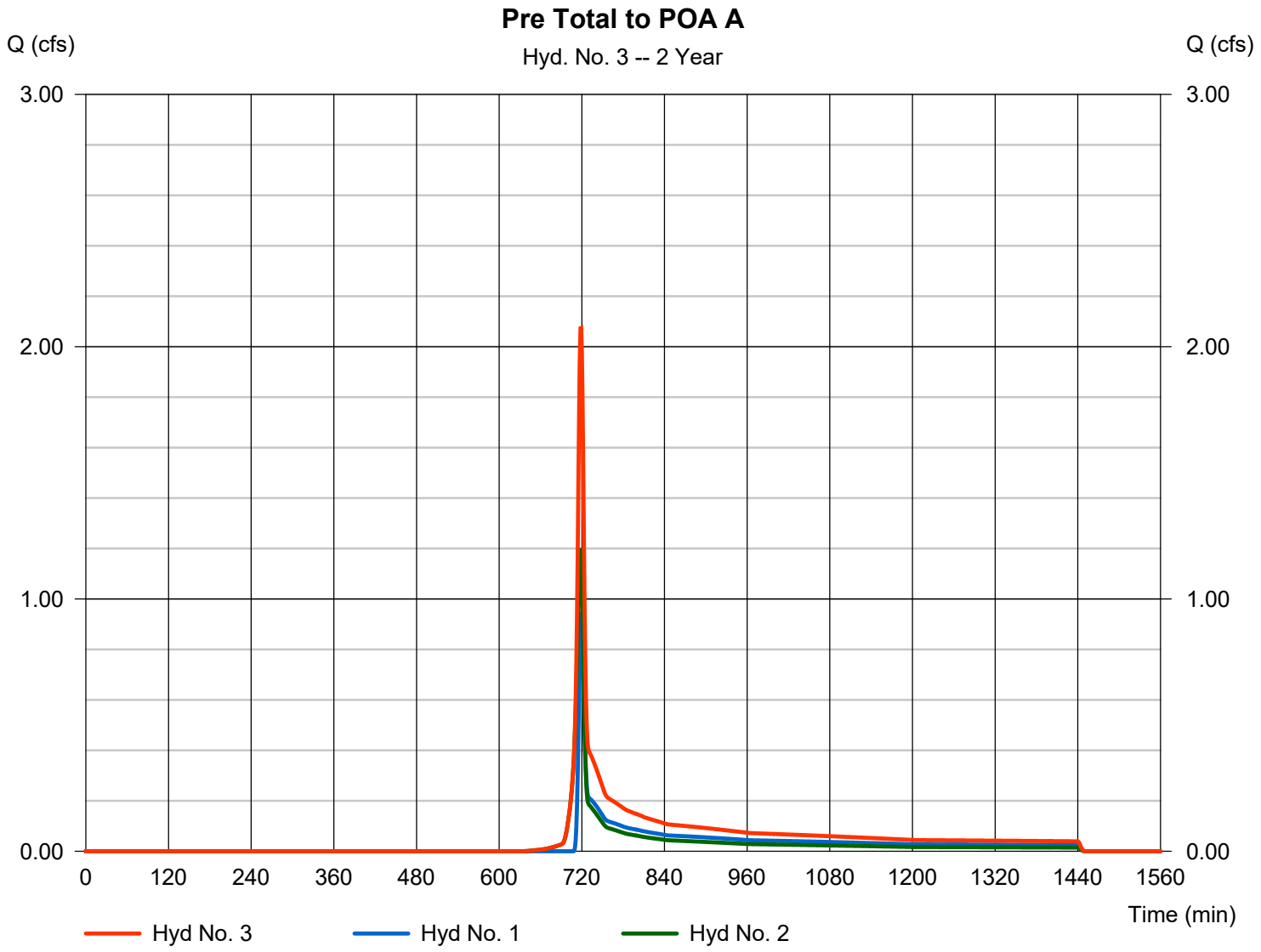


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 2.075 cfs
Storm frequency	= 2 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 4,999 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

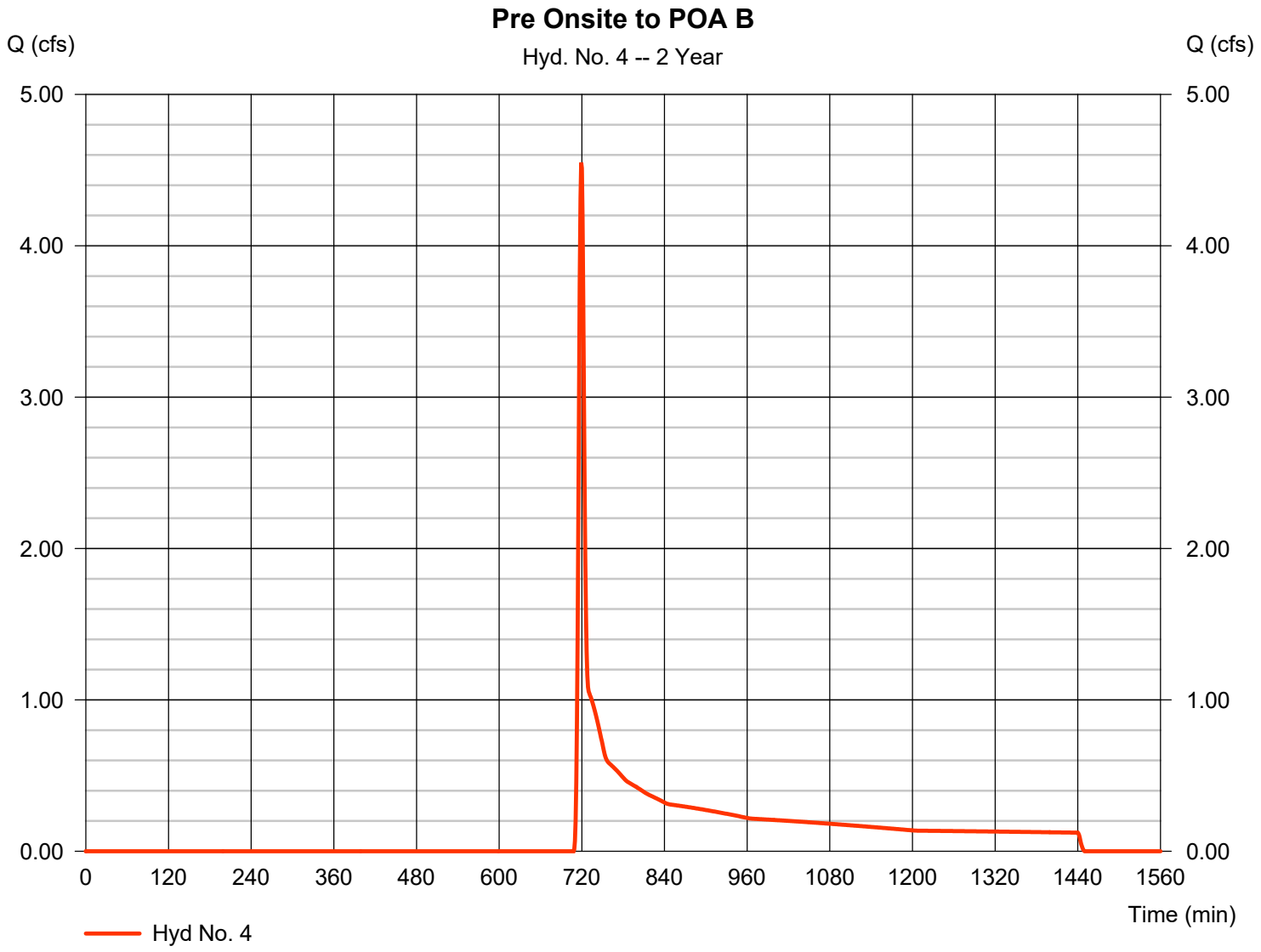


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 4.549 cfs
Storm frequency	= 2 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 12,755 cuft
Drainage area	= 7.530 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

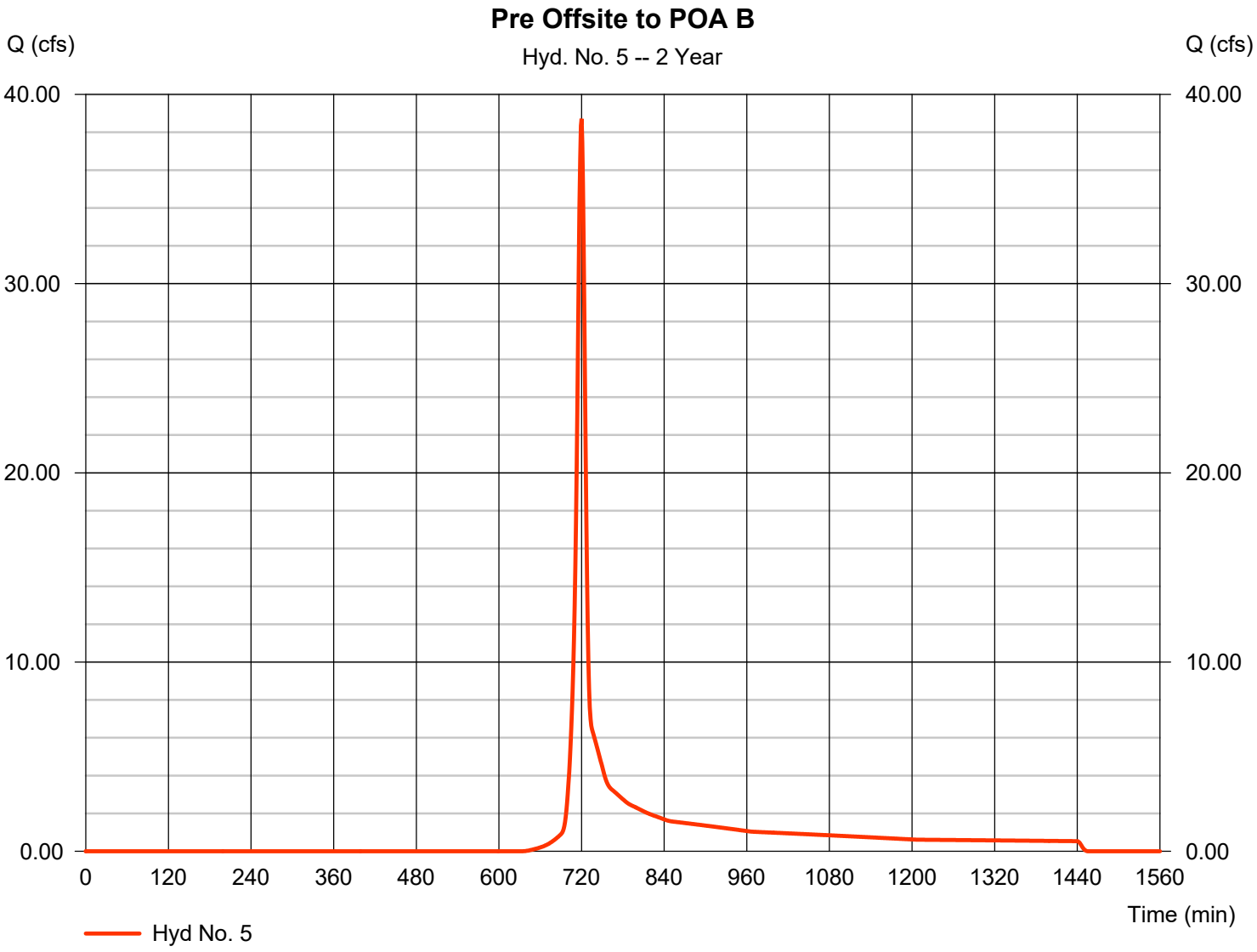


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	38.72 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	1 min	Hyd. volume	=	88,417 cuft
Drainage area	=	18.430 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.80 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

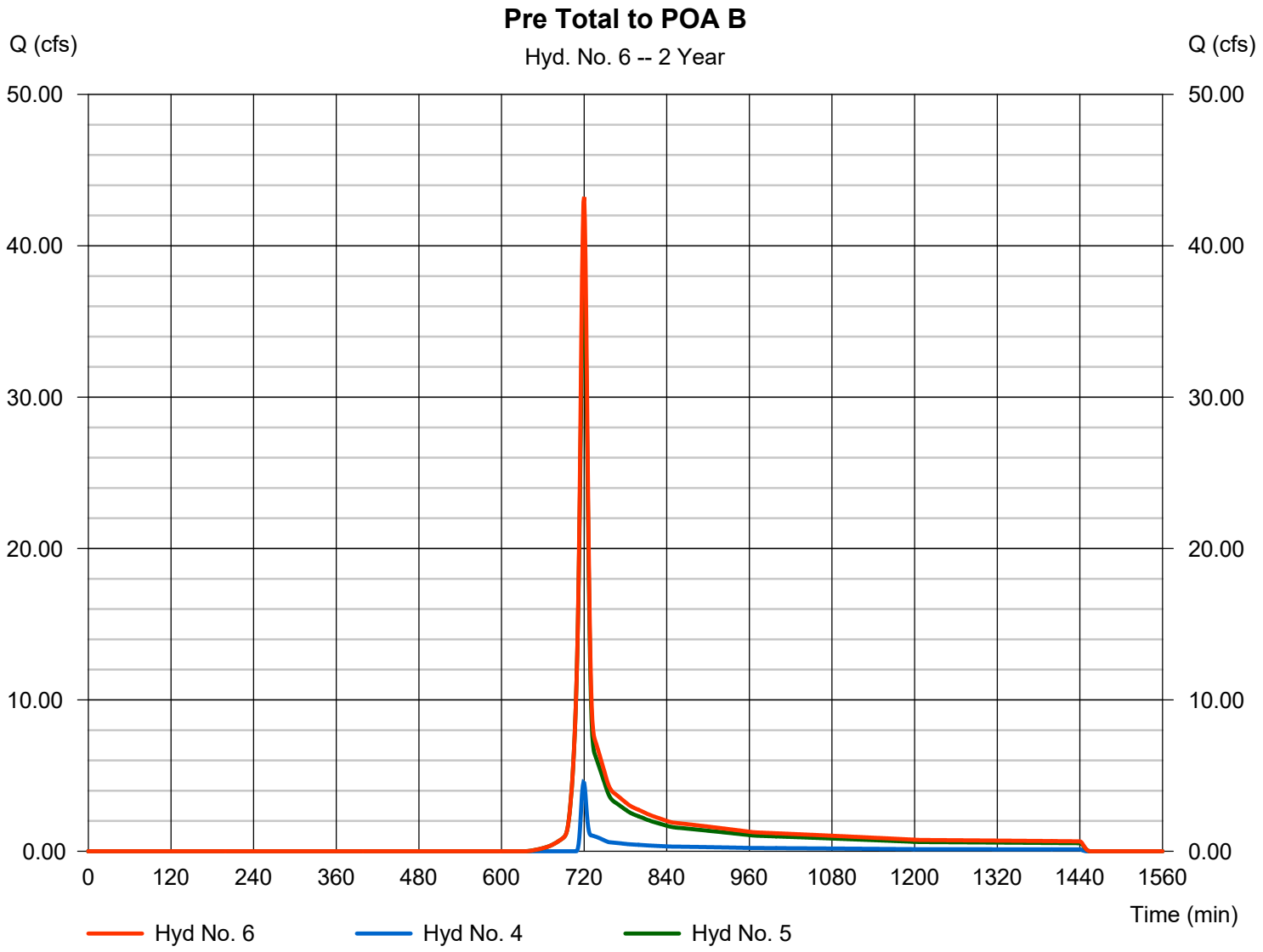


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 43.23 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 101,172 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

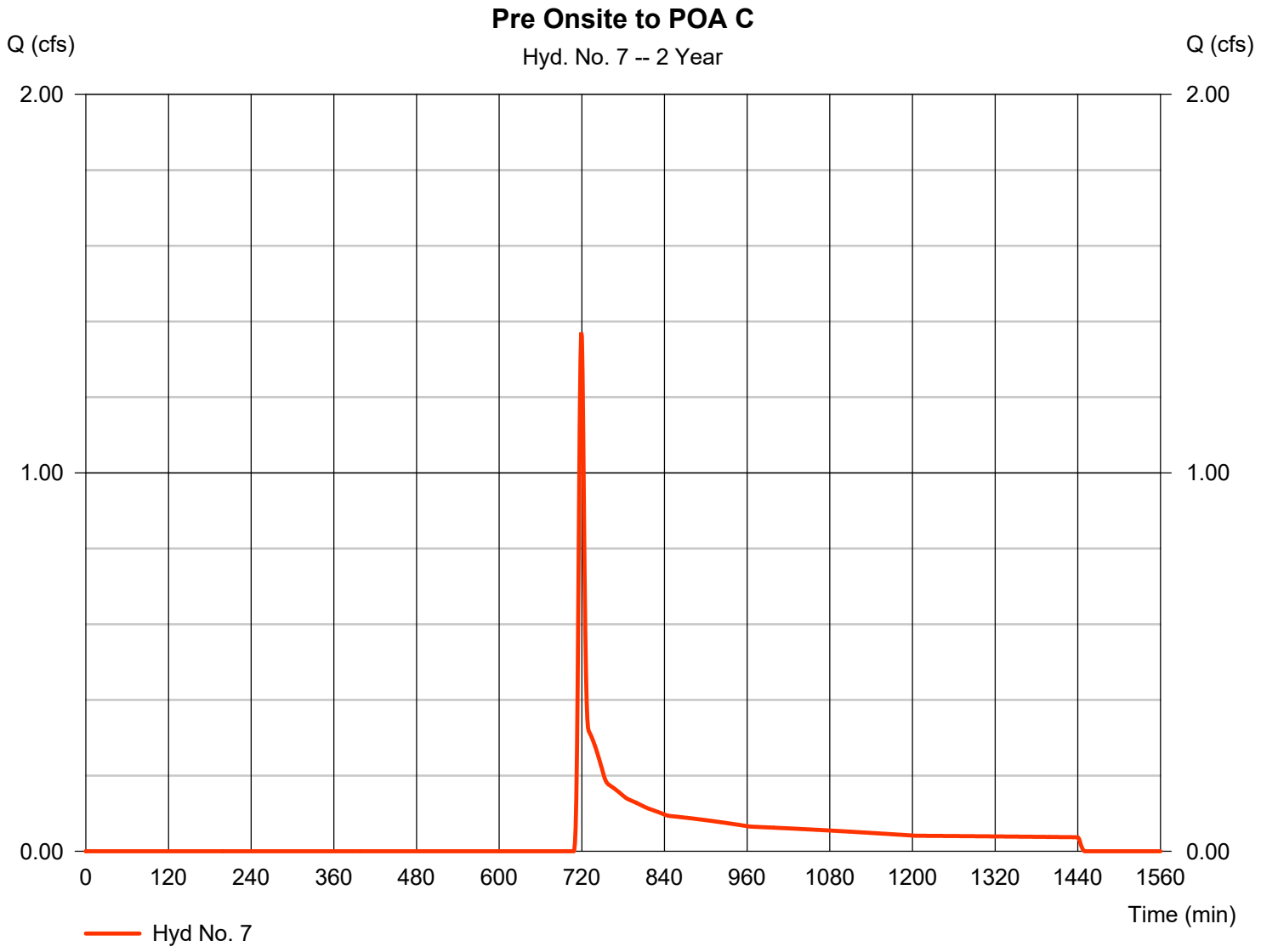


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 1.371 cfs
Storm frequency	= 2 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 3,845 cuft
Drainage area	= 2.270 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

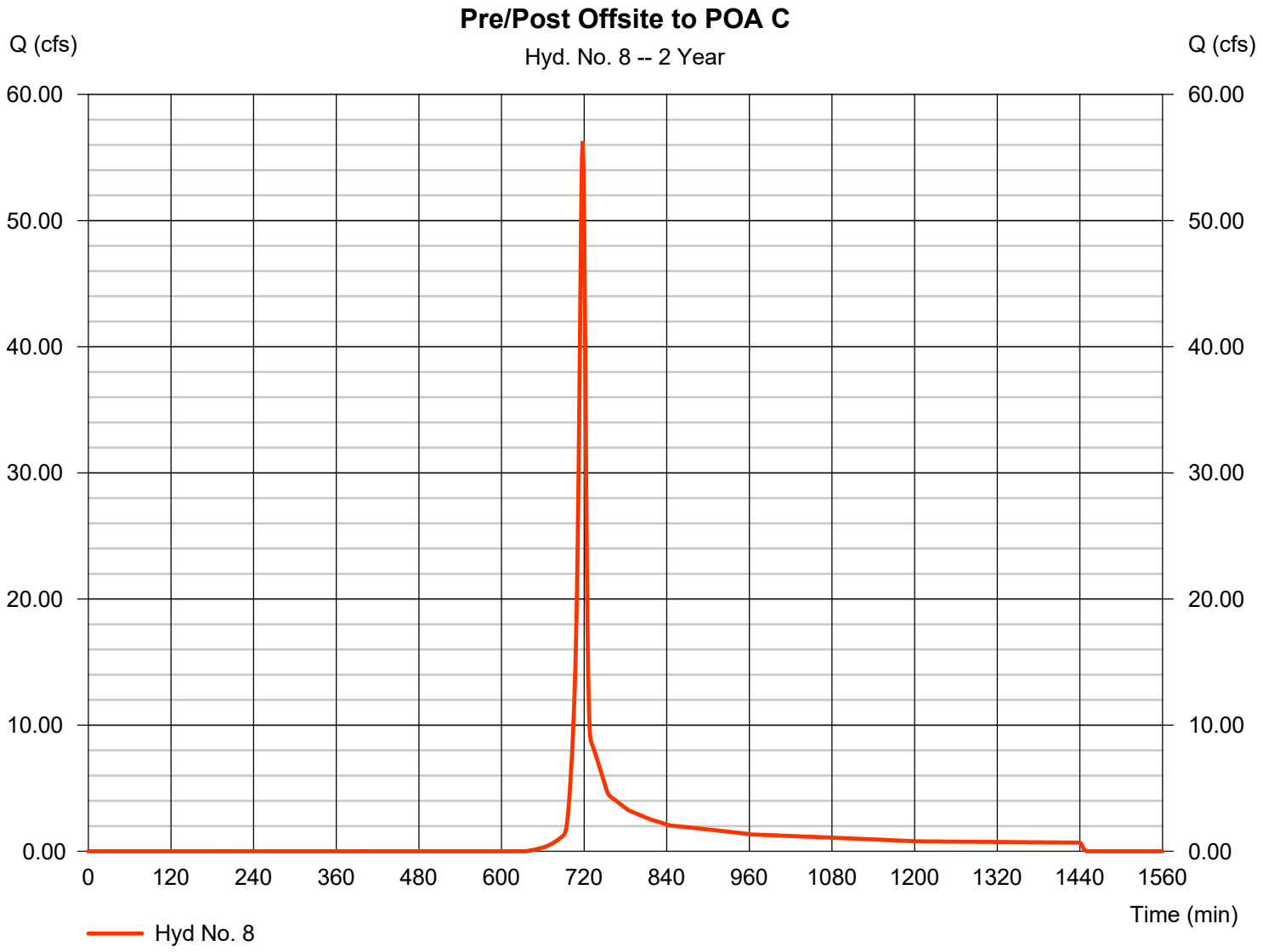


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	56.29 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	113,542 cuft
Drainage area	=	22.950 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.80 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

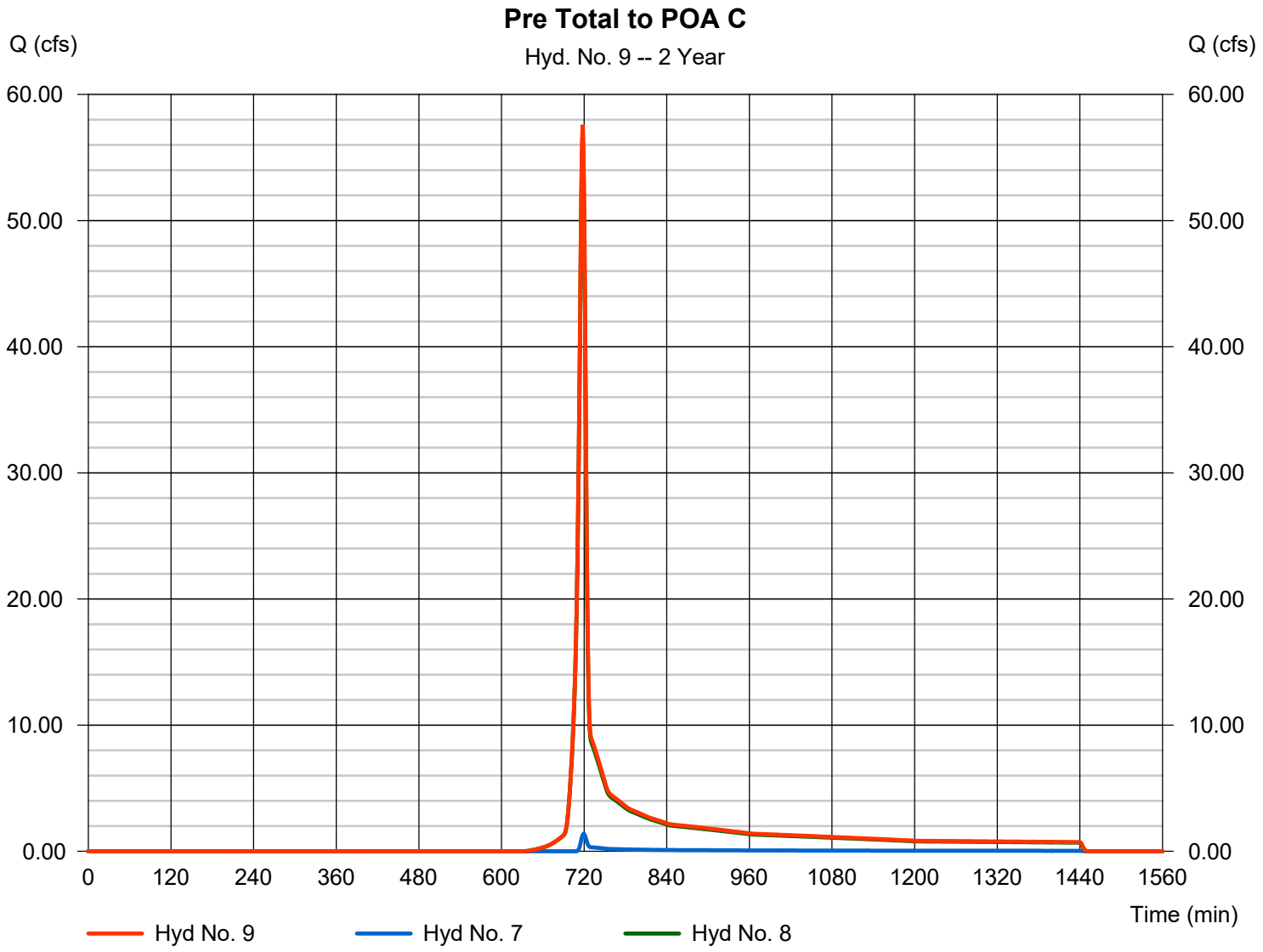


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 57.59 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 117,388 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

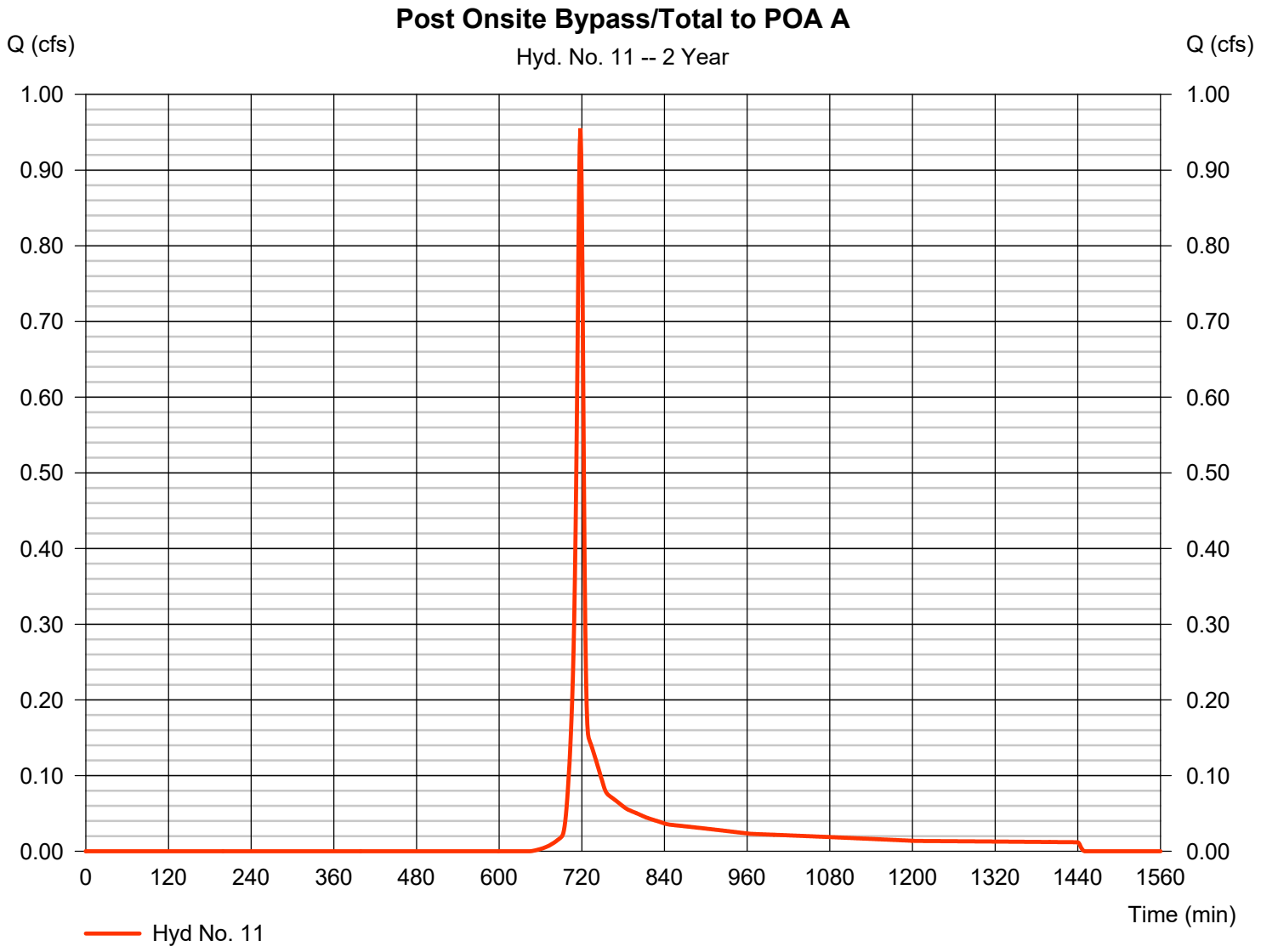


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.955 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 1,932 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

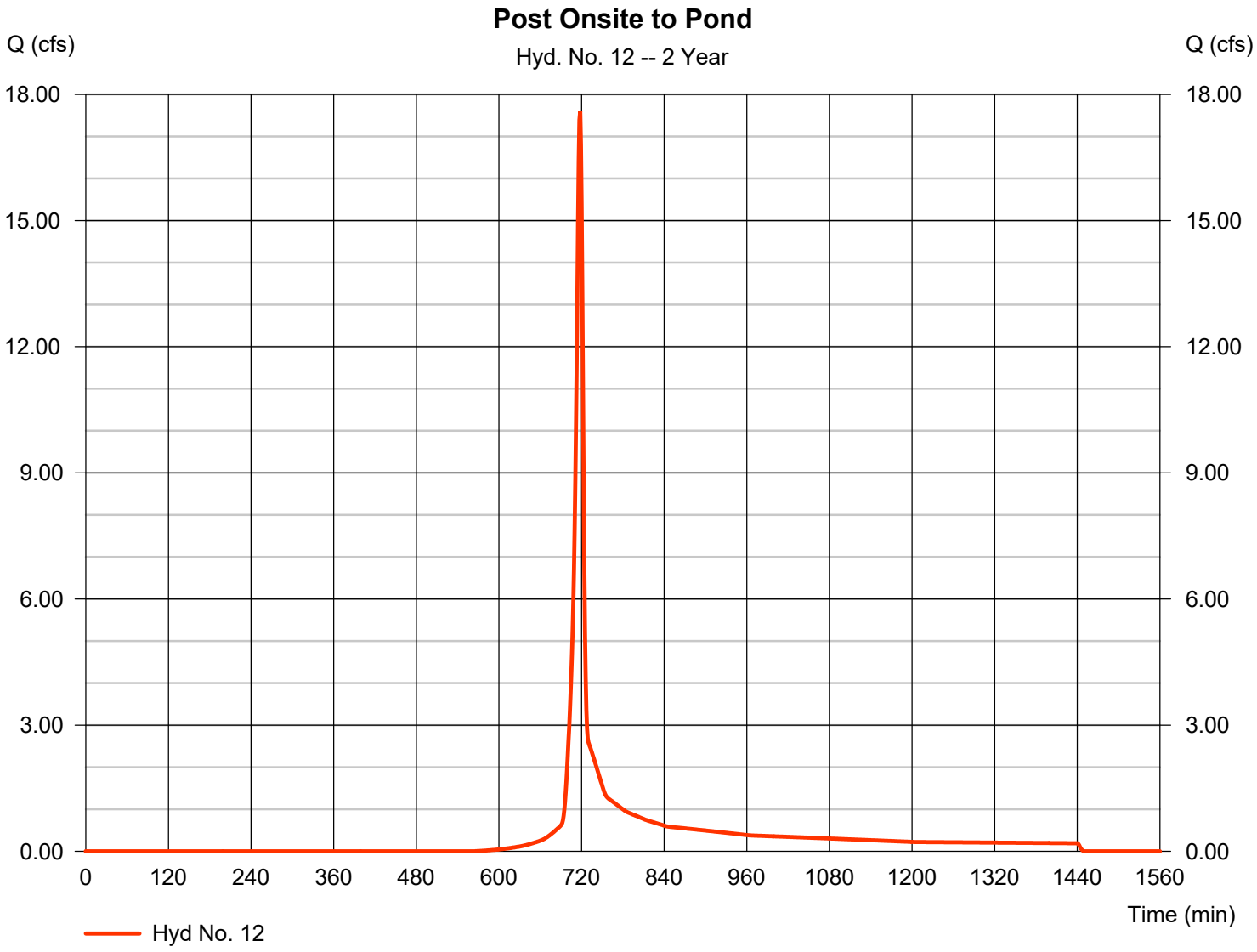


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	= SCS Runoff	Peak discharge	= 17.60 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 35,358 cuft
Drainage area	= 5.700 ac	Curve number	= 77
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

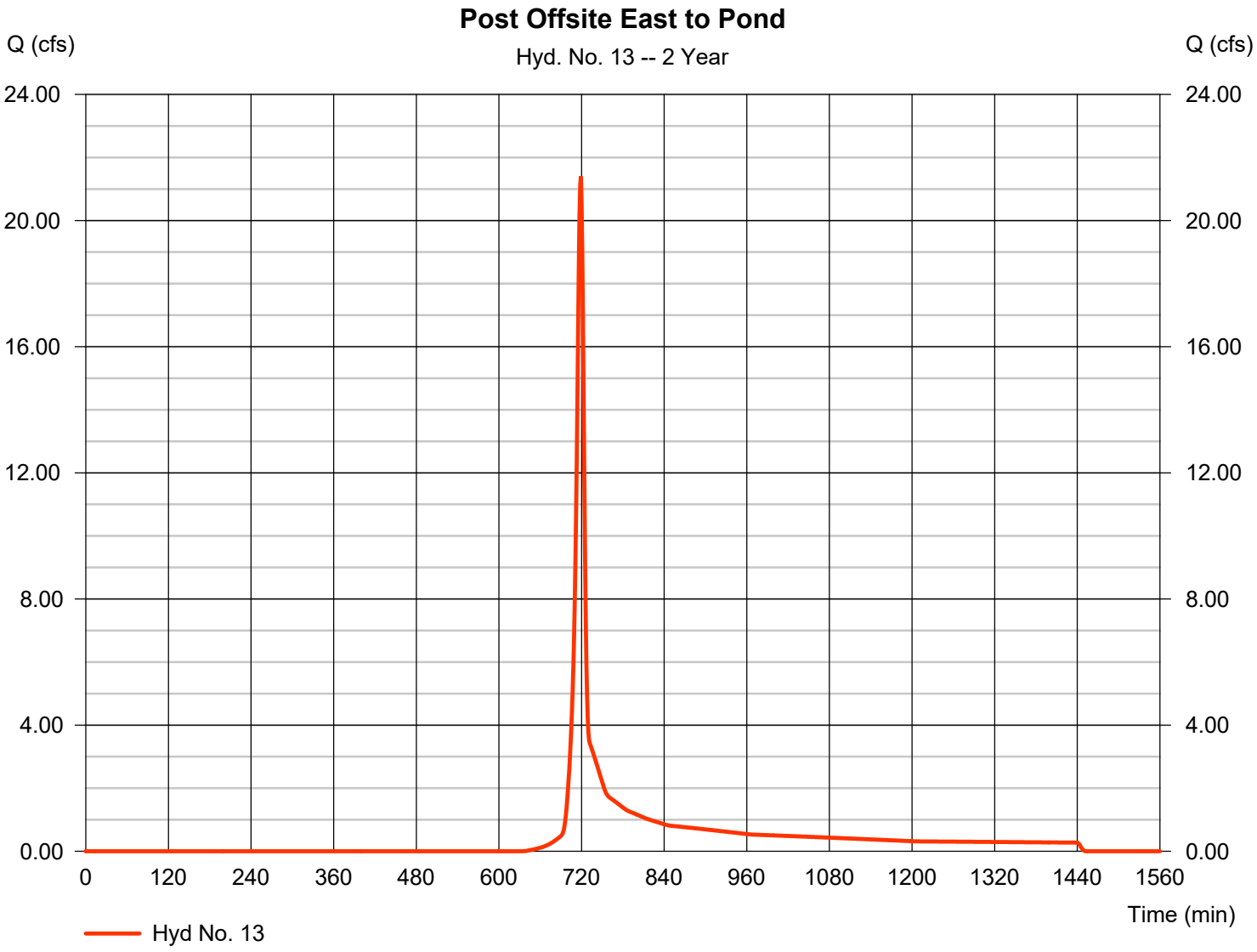


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	21.40 cfs
Storm frequency	=	2 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	45,372 cuft
Drainage area	=	9.700 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	3.80 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

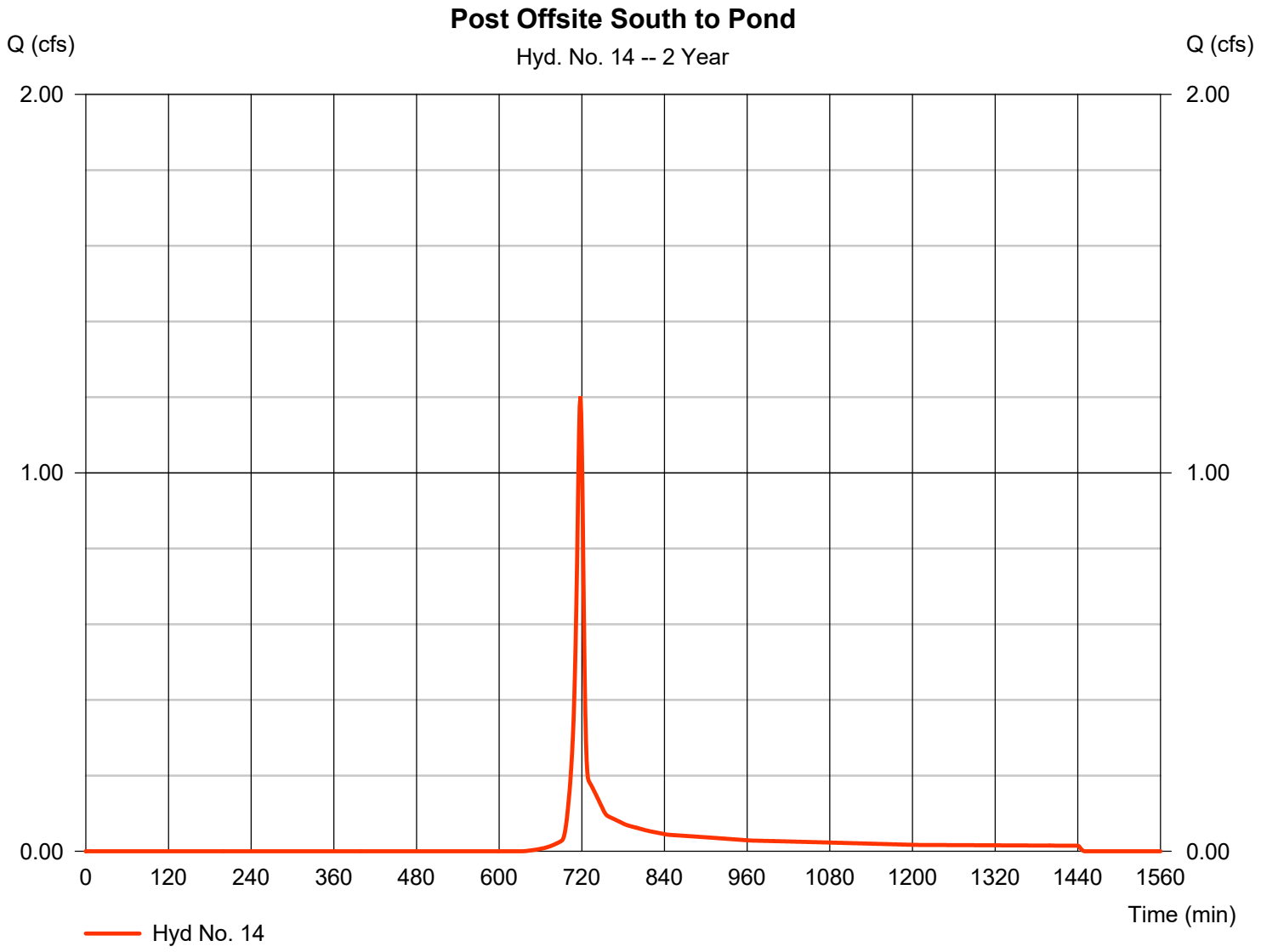


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.202 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	2,424 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.80 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

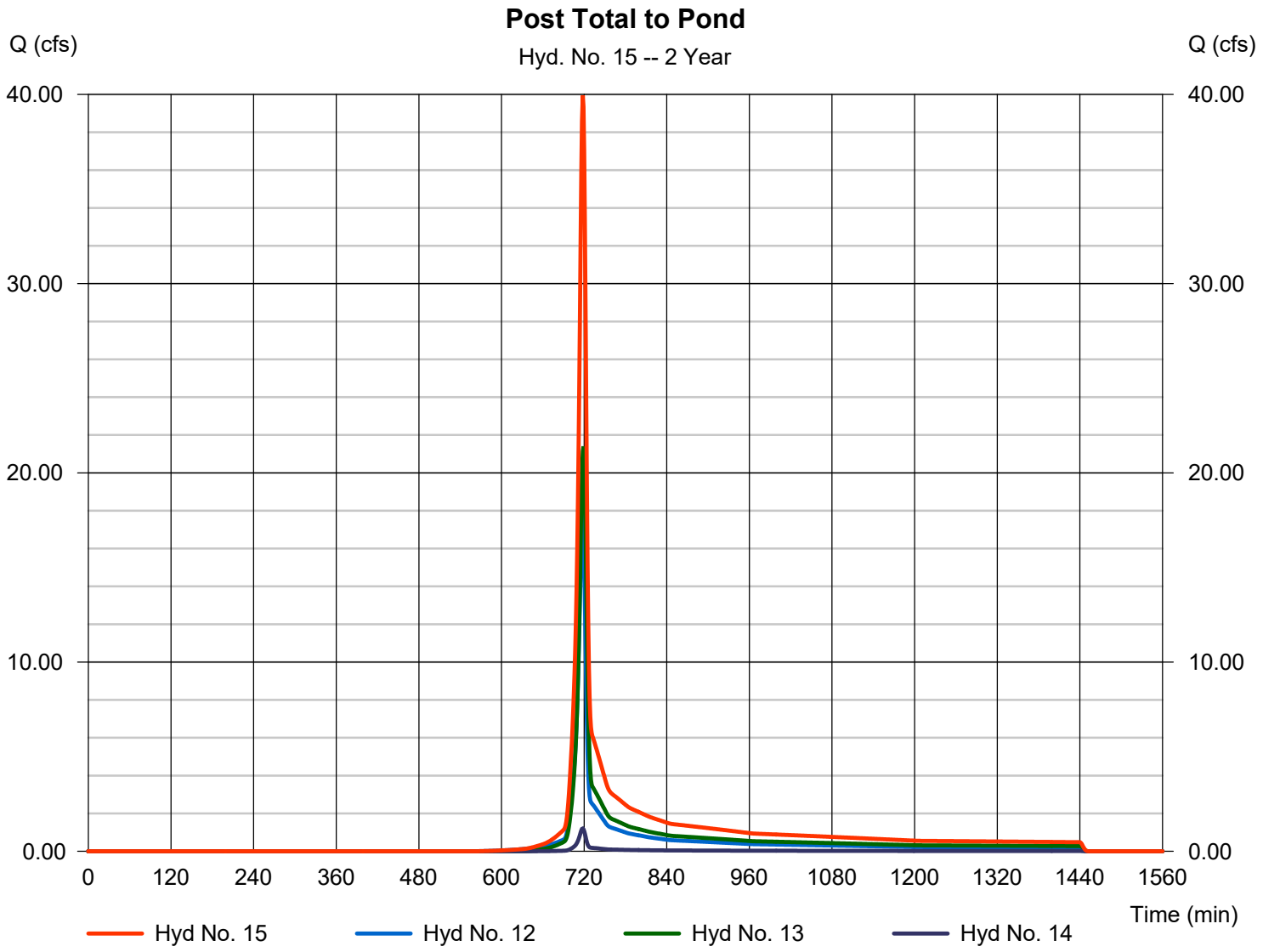


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 39.94 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 83,154 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



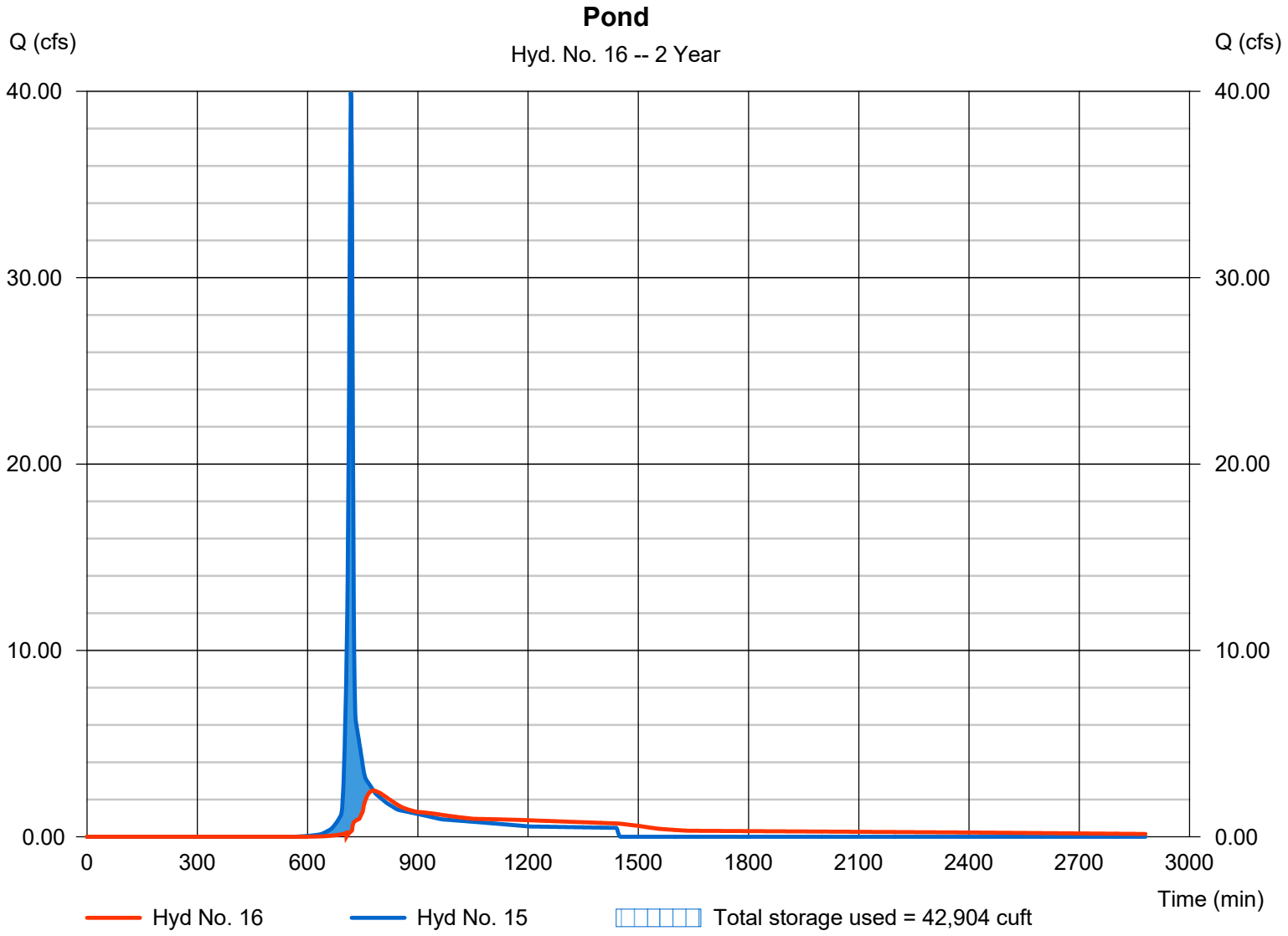
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	= Reservoir	Peak discharge	= 2.479 cfs
Storm frequency	= 2 yrs	Time to peak	= 779 min
Time interval	= 1 min	Hyd. volume	= 73,597 cuft
Inflow hyd. No.	= 15 - Post Total to Pond	Max. Elevation	= 997.77 ft
Reservoir name	= Pond	Max. Storage	= 42,904 cuft

Storage Indication method used.

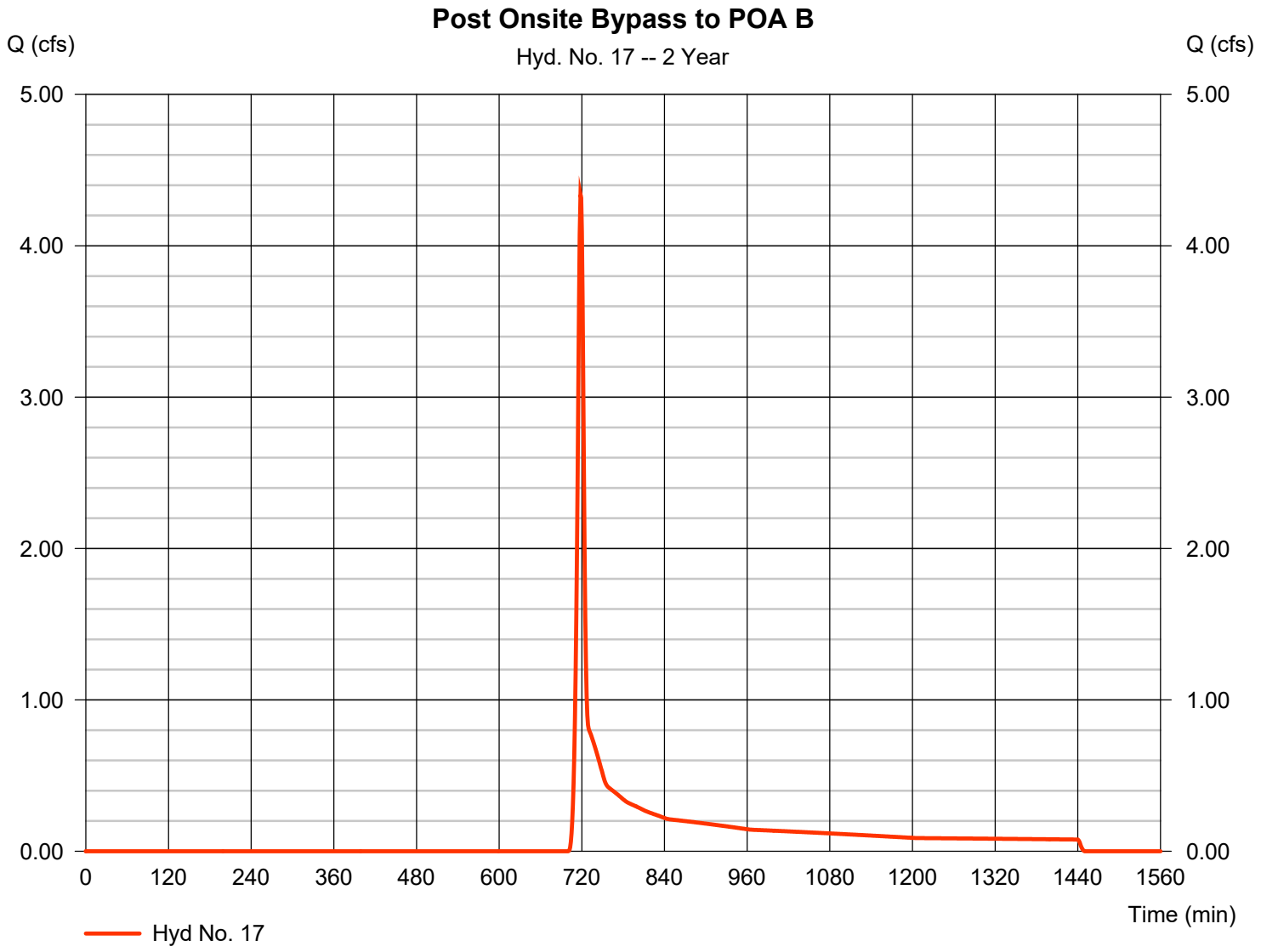


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 4.338 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 9,770 cuft
Drainage area	= 3.660 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

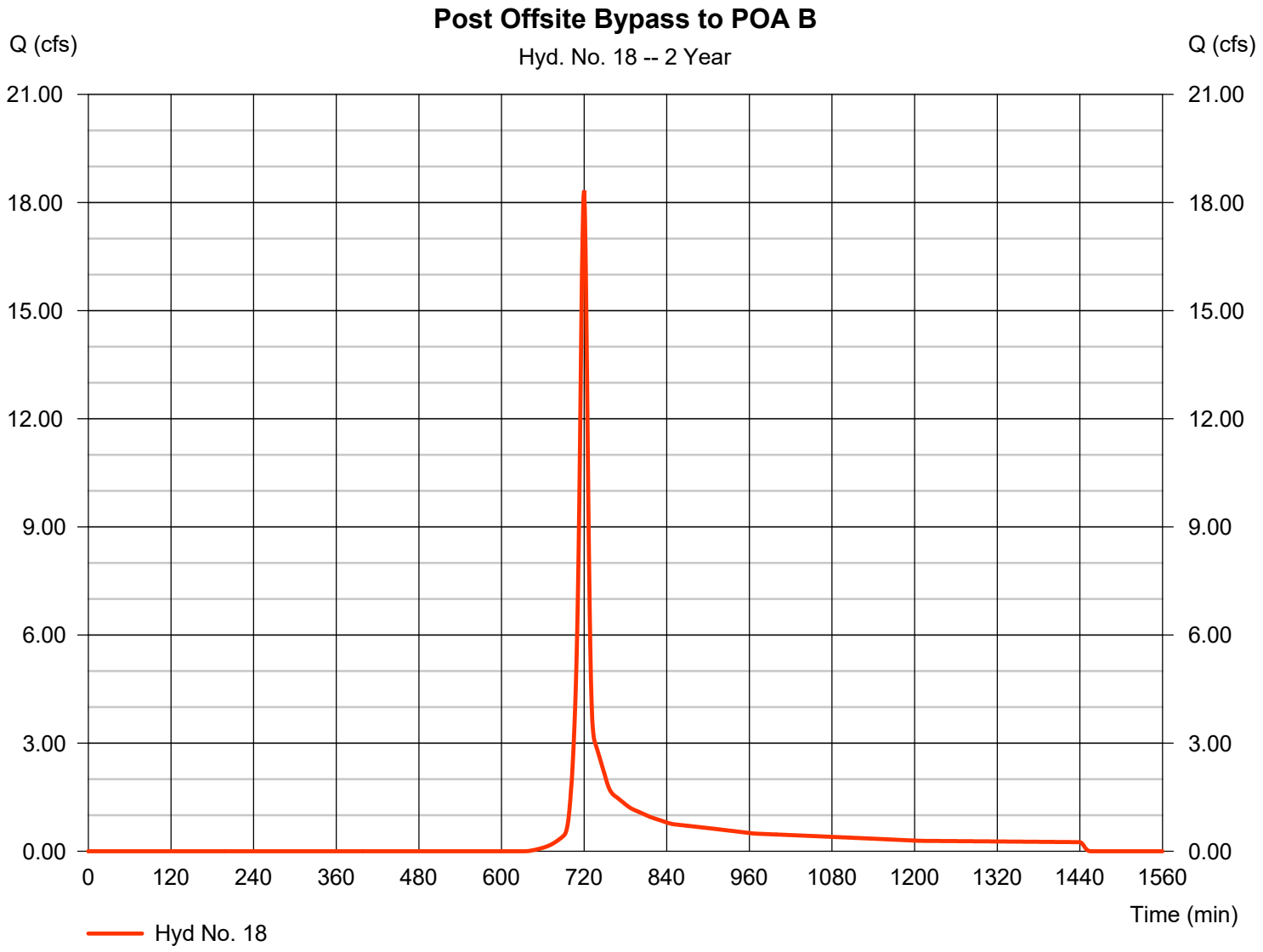


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 18.34 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 41,882 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.80 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

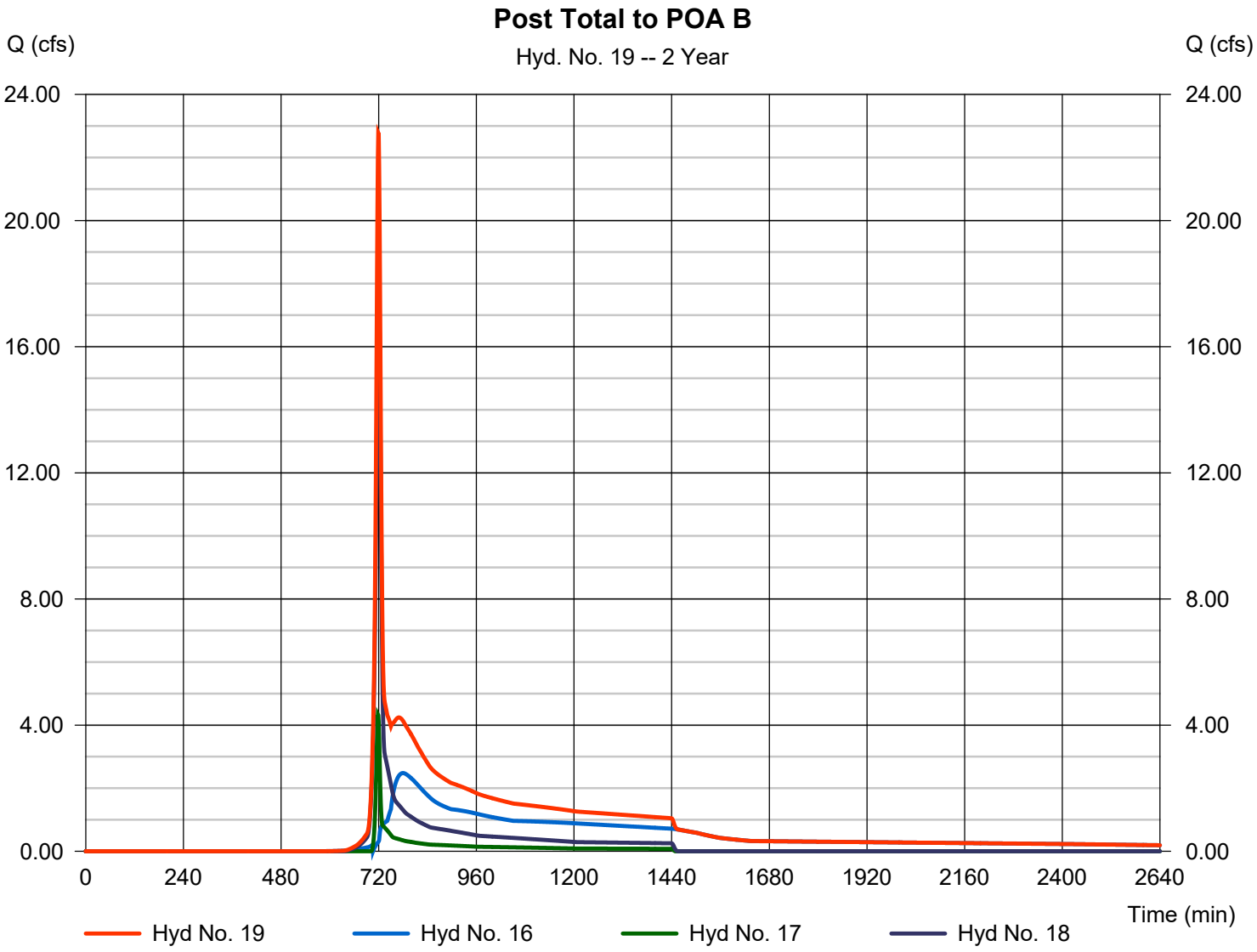


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	= Combine	Peak discharge	= 22.78 cfs
Storm frequency	= 2 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 125,248 cuft
Inflow hyds.	= 16, 17, 18	Contrib. drain. area	= 12.390 ac

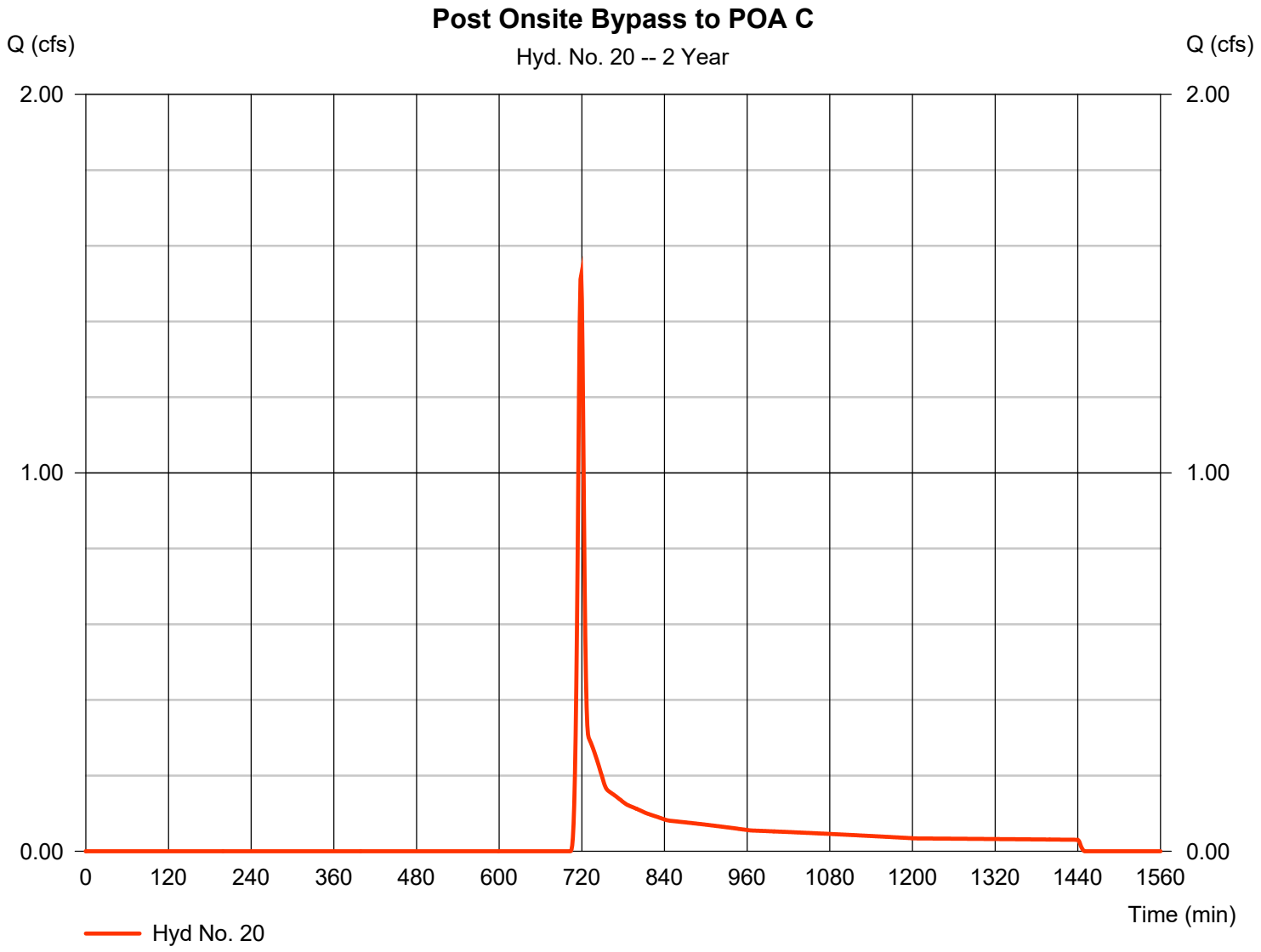


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.522 cfs
Storm frequency	=	2 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	3,601 cuft
Drainage area	=	1.550 ac	Curve number	=	59
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.80 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

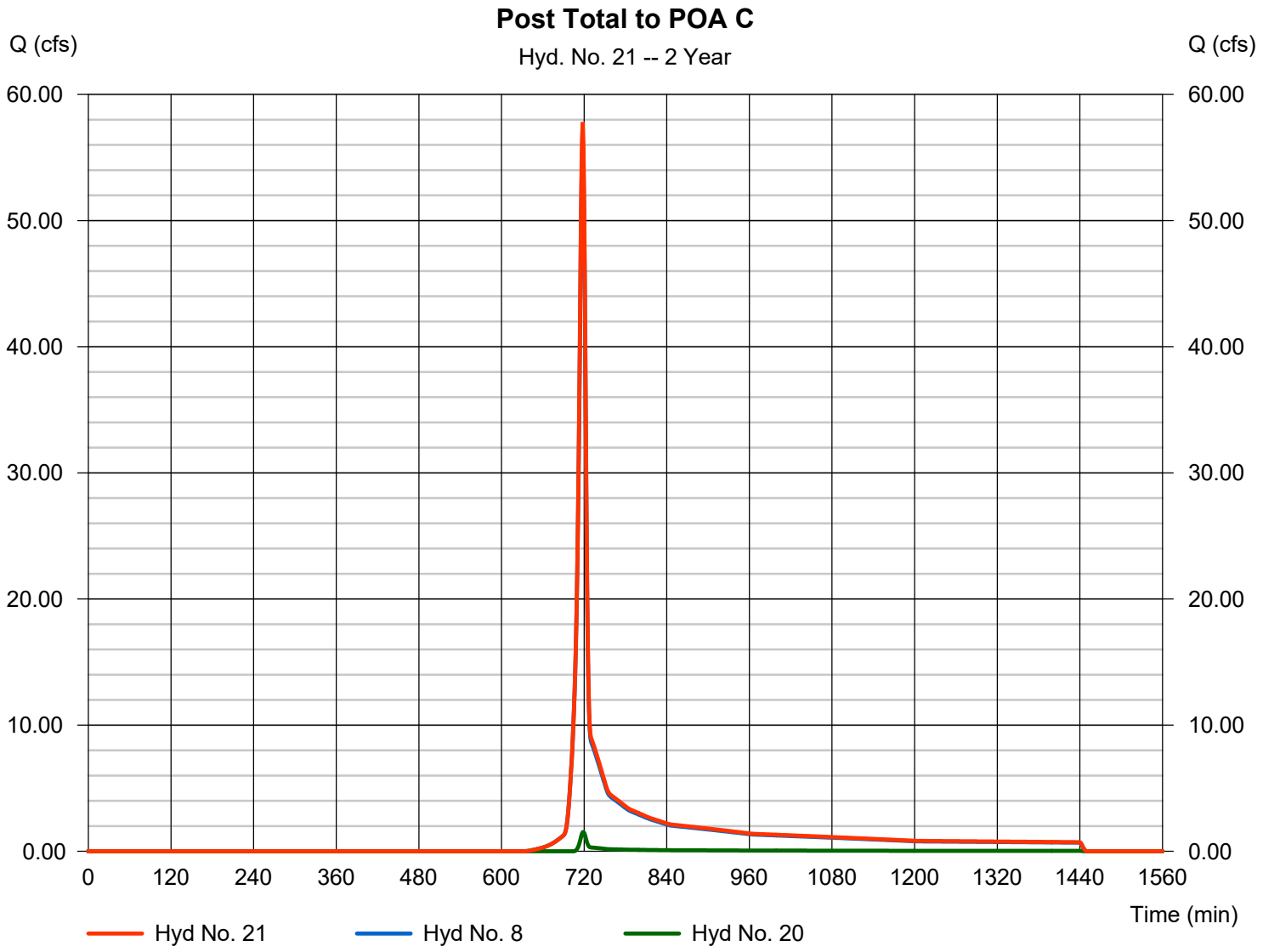


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 57.80 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 117,144 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

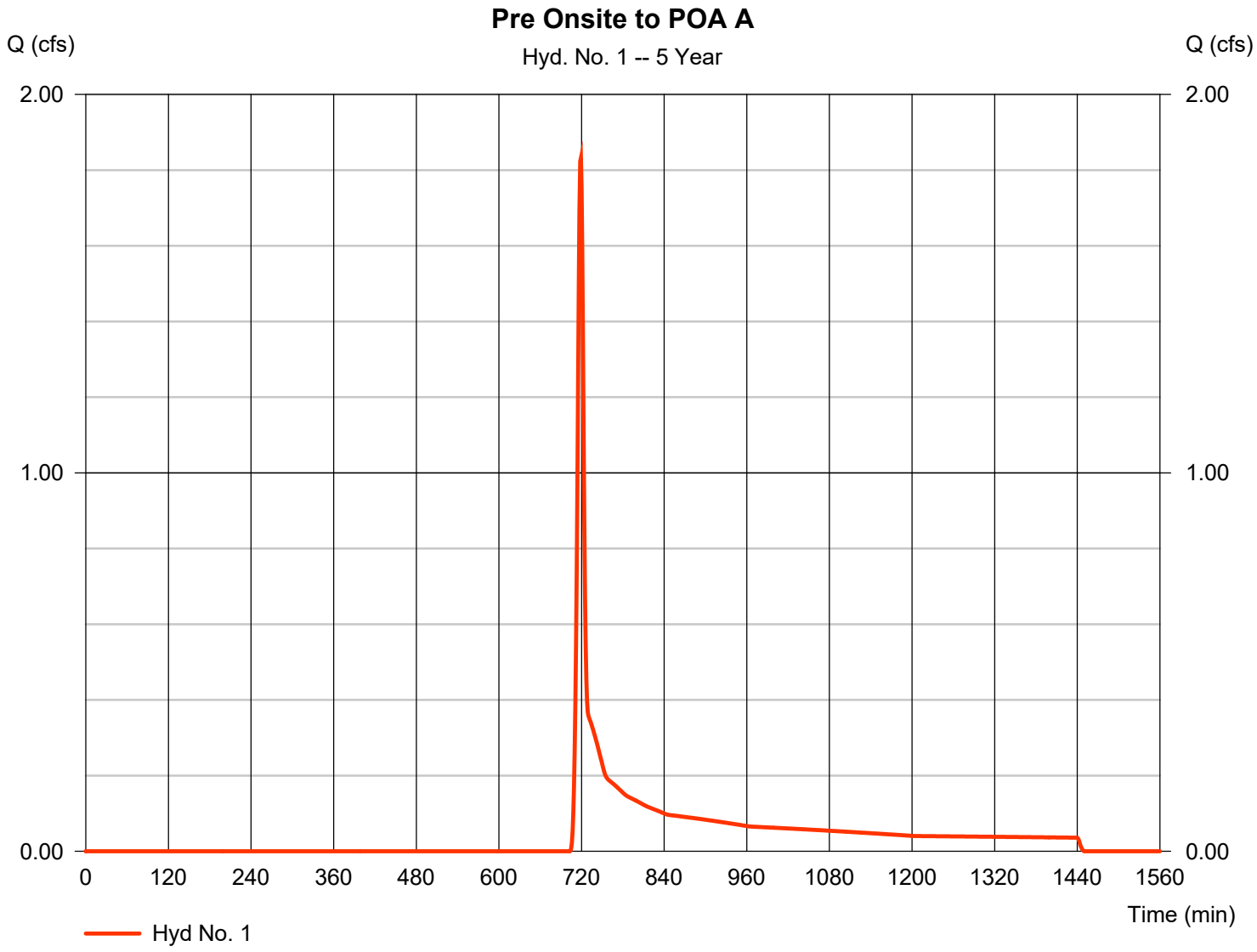
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.832	1	719	4,302	------	------	------	Pre Onsite to POA A
2	SCS Runoff	1.683	1	718	3,380	------	------	------	Pre Offsite to POA A
3	Combine	3.507	1	718	7,681	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	9.075	1	719	21,310	------	------	------	Pre Onsite to POA B
5	SCS Runoff	54.43	1	720	123,269	------	------	------	Pre Offsite to POA B
6	Combine	63.28	1	719	144,578	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	2.736	1	719	6,424	------	------	------	Pre Onsite to POA C
8	SCS Runoff	78.84	1	718	158,297	------	------	------	Pre/Post Offsite to POA C
9	Combine	81.56	1	718	164,721	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	1.351	1	718	2,714	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	23.63	1	718	47,689	------	------	------	Post Onsite to Pond
13	SCS Runoff	30.00	1	719	63,256	------	------	------	Post Offsite East to Pond
14	SCS Runoff	1.683	1	718	3,380	------	------	------	Post Offsite South to Pond
15	Combine	55.13	1	718	114,326	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	10.25	1	728	104,245	15	998.44	49,390	Pond
17	SCS Runoff	7.132	1	718	15,017	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	25.78	1	720	58,390	------	------	------	Post Offsite Bypass to POA B
19	Combine	33.49	1	719	177,653	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	2.625	1	718	5,671	------	------	------	Post Onsite Bypass to POA C
21	Combine	81.46	1	718	163,968	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.832 cfs
Storm frequency	= 5 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 4,302 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

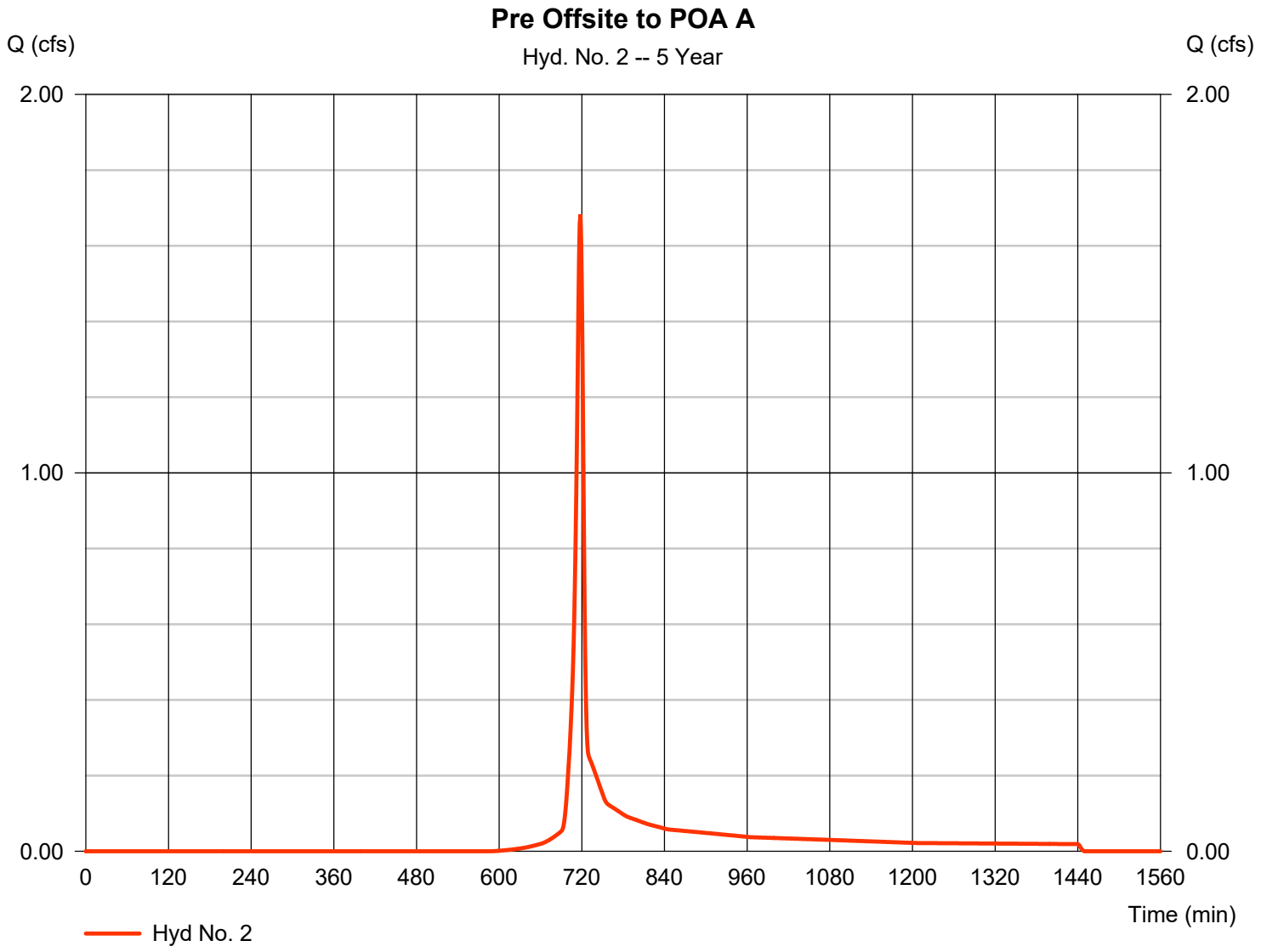


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.683 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 3,380 cuft
Drainage area	= 0.490 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

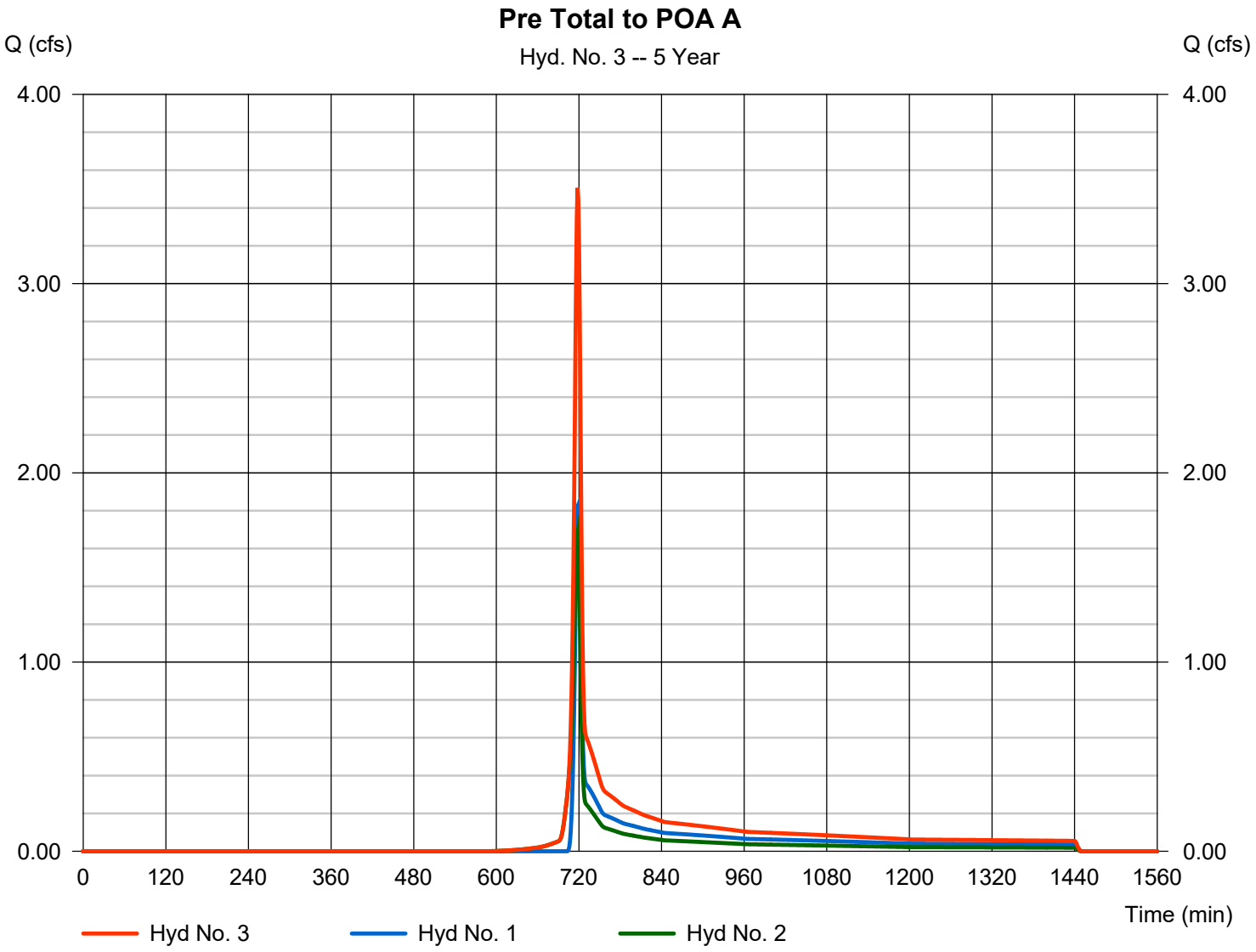


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 3.507 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 7,681 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

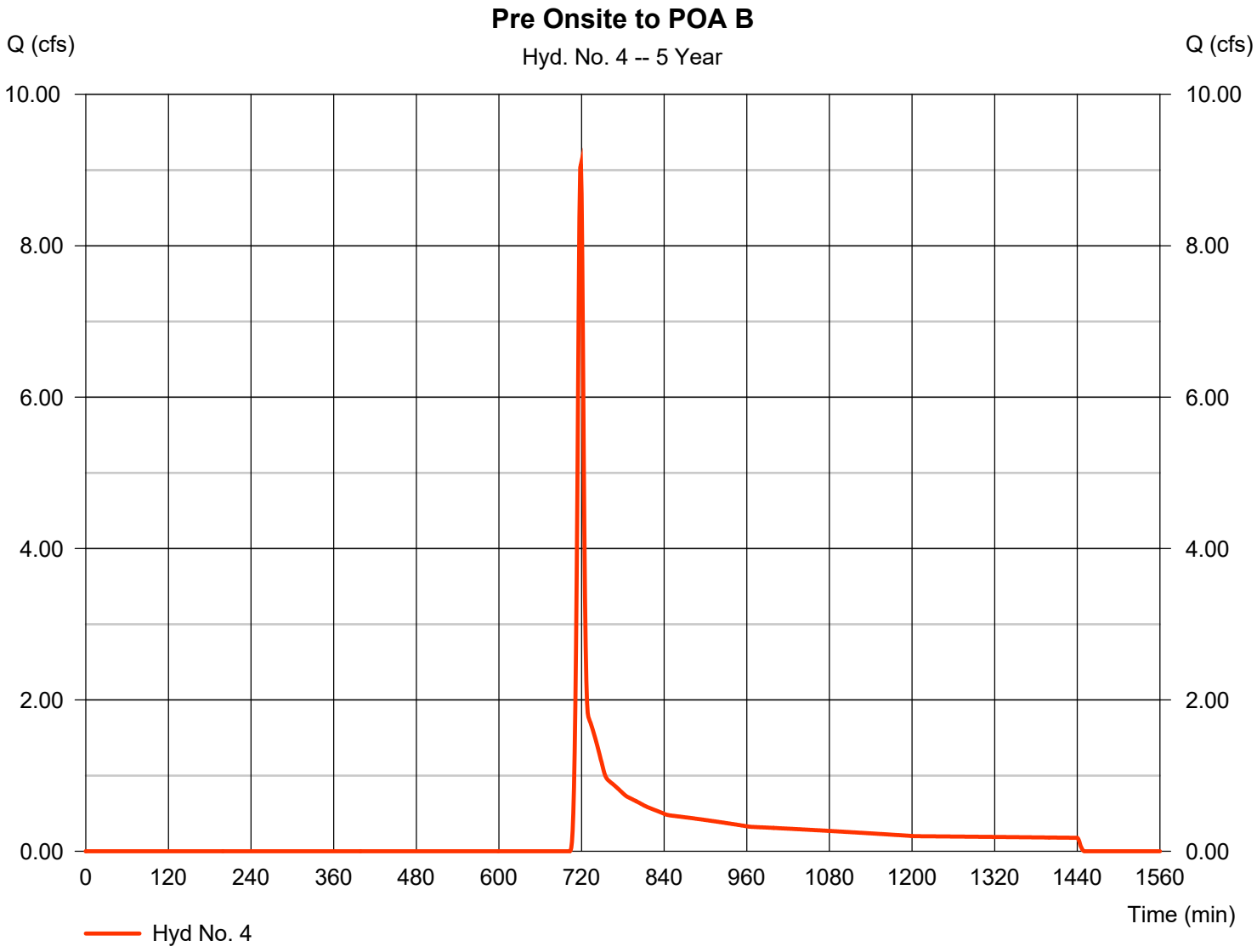


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 9.075 cfs
Storm frequency	= 5 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 21,310 cuft
Drainage area	= 7.530 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

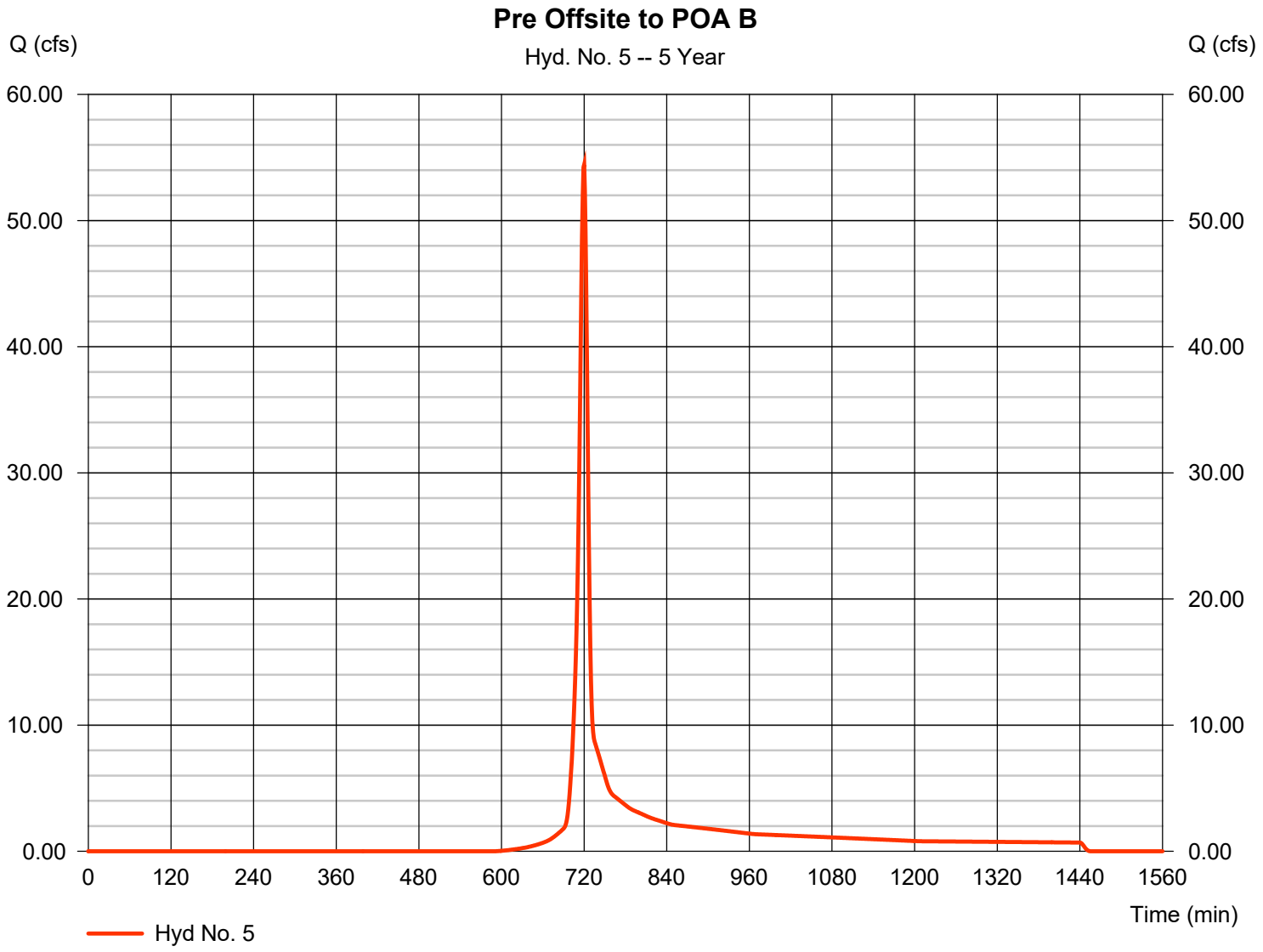


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	54.43 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	1 min	Hyd. volume	=	123,269 cuft
Drainage area	=	18.430 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	4.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

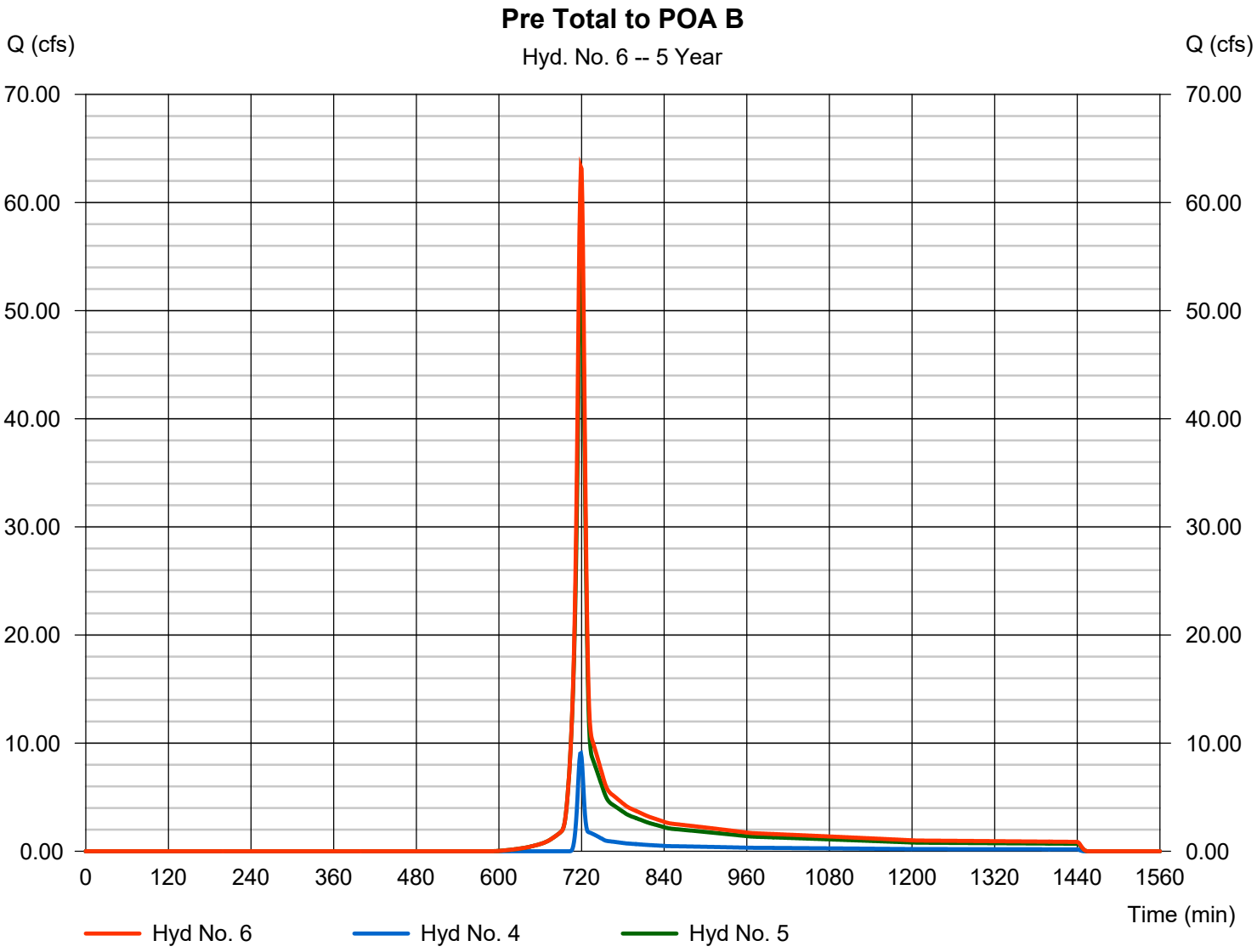


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 63.28 cfs
Storm frequency	= 5 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 144,578 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

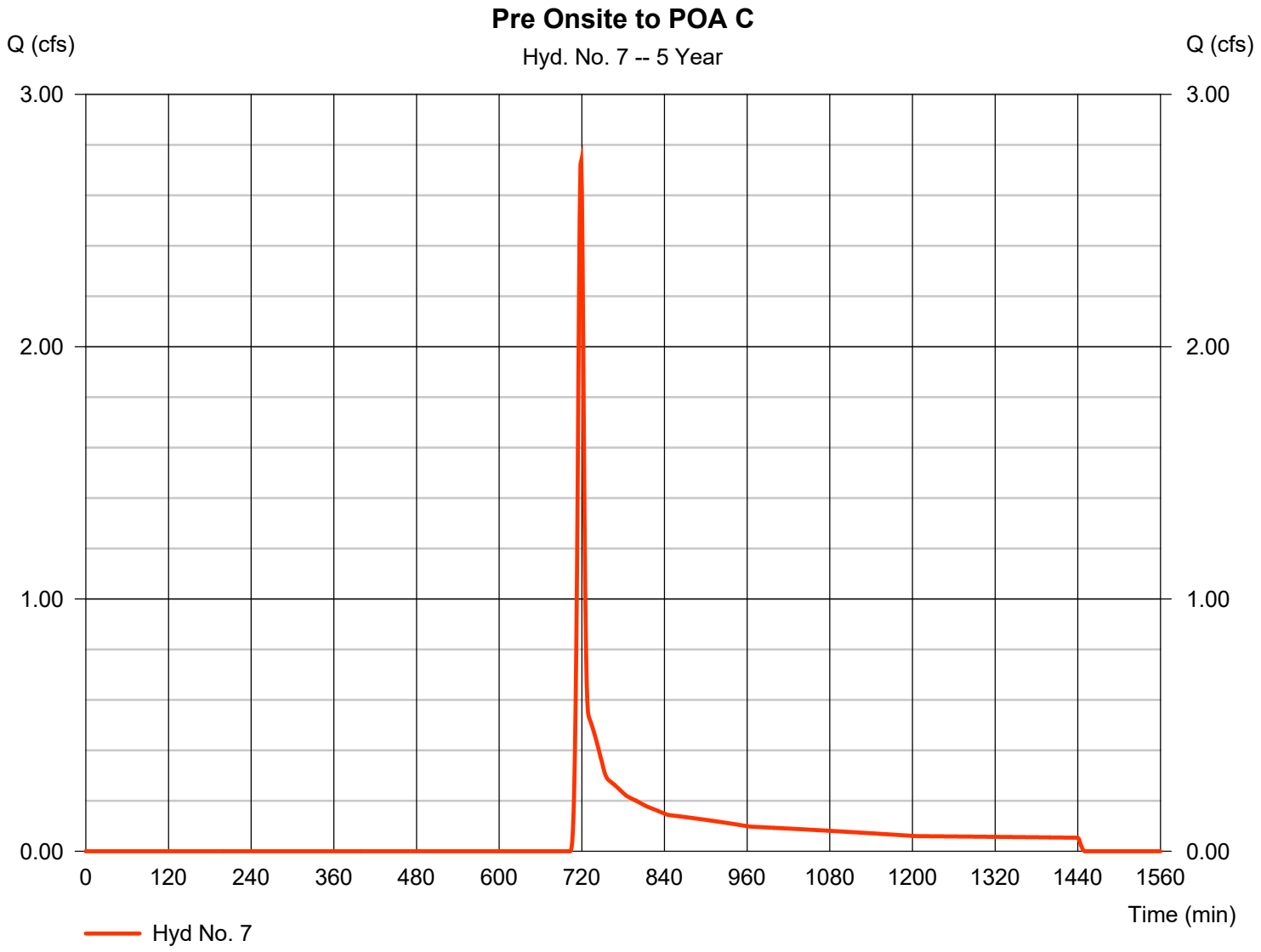


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.736 cfs
Storm frequency	=	5 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	6,424 cuft
Drainage area	=	2.270 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

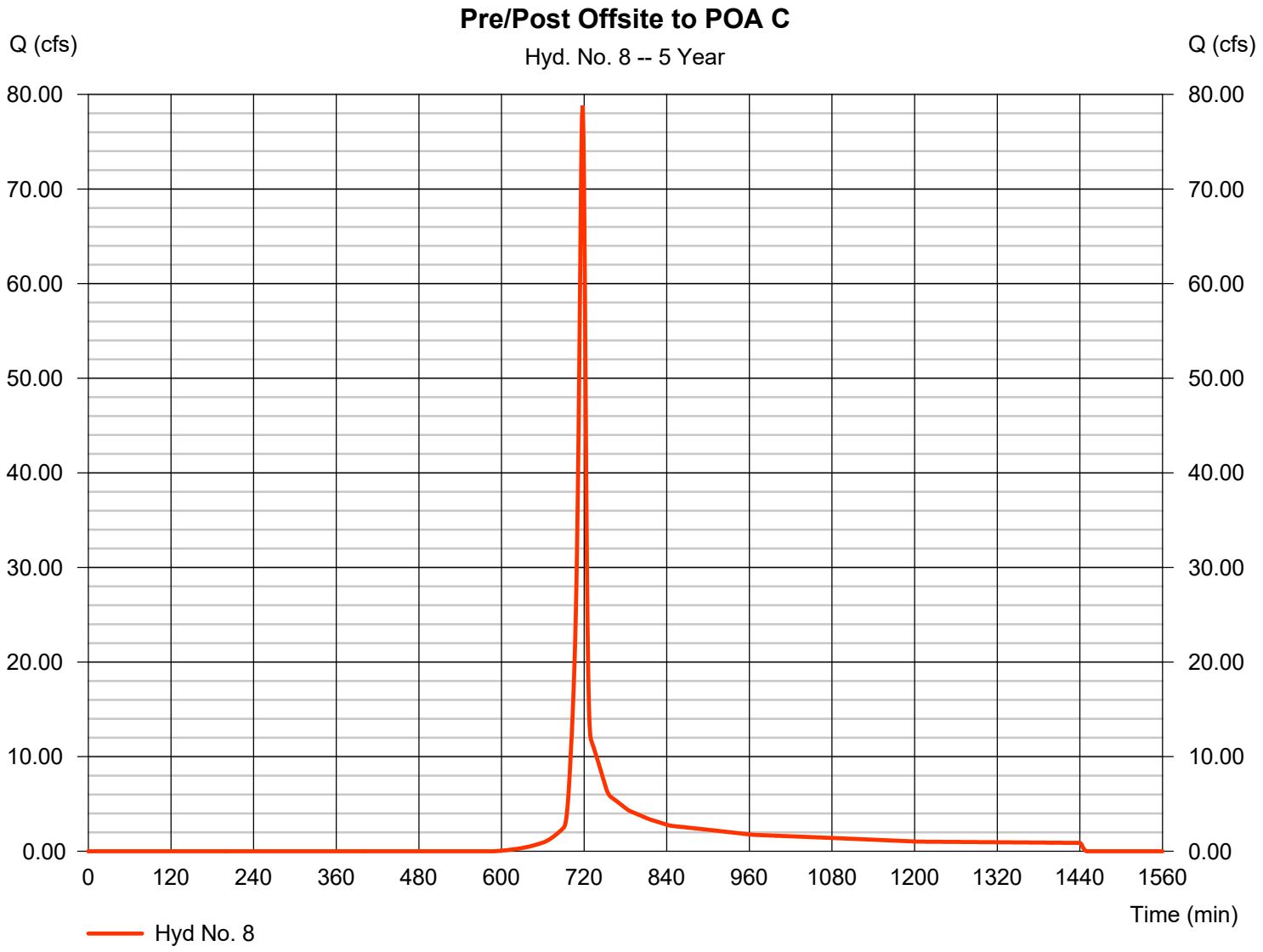


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 78.84 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 158,297 cuft
Drainage area	= 22.950 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

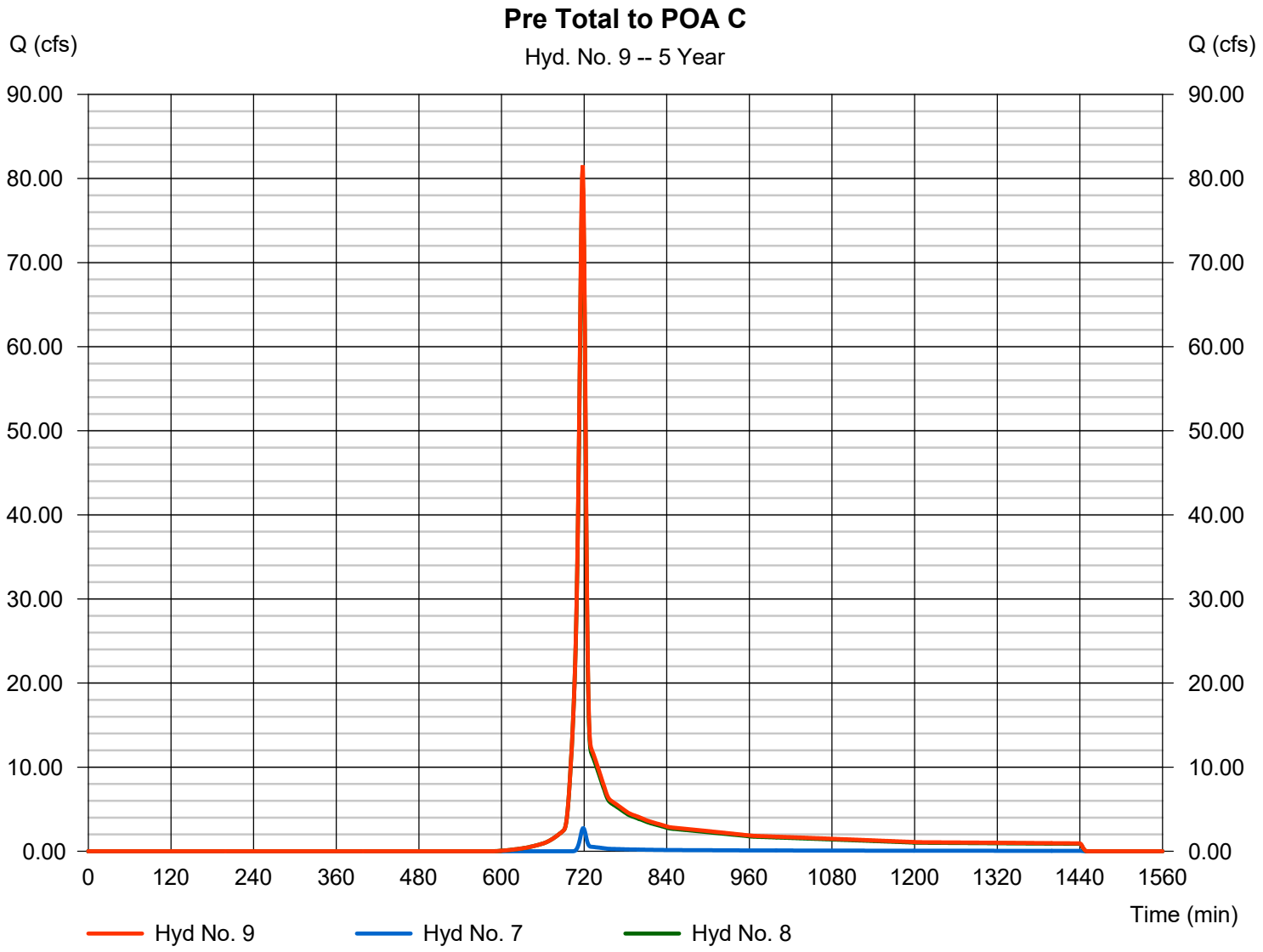


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 81.56 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 164,721 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

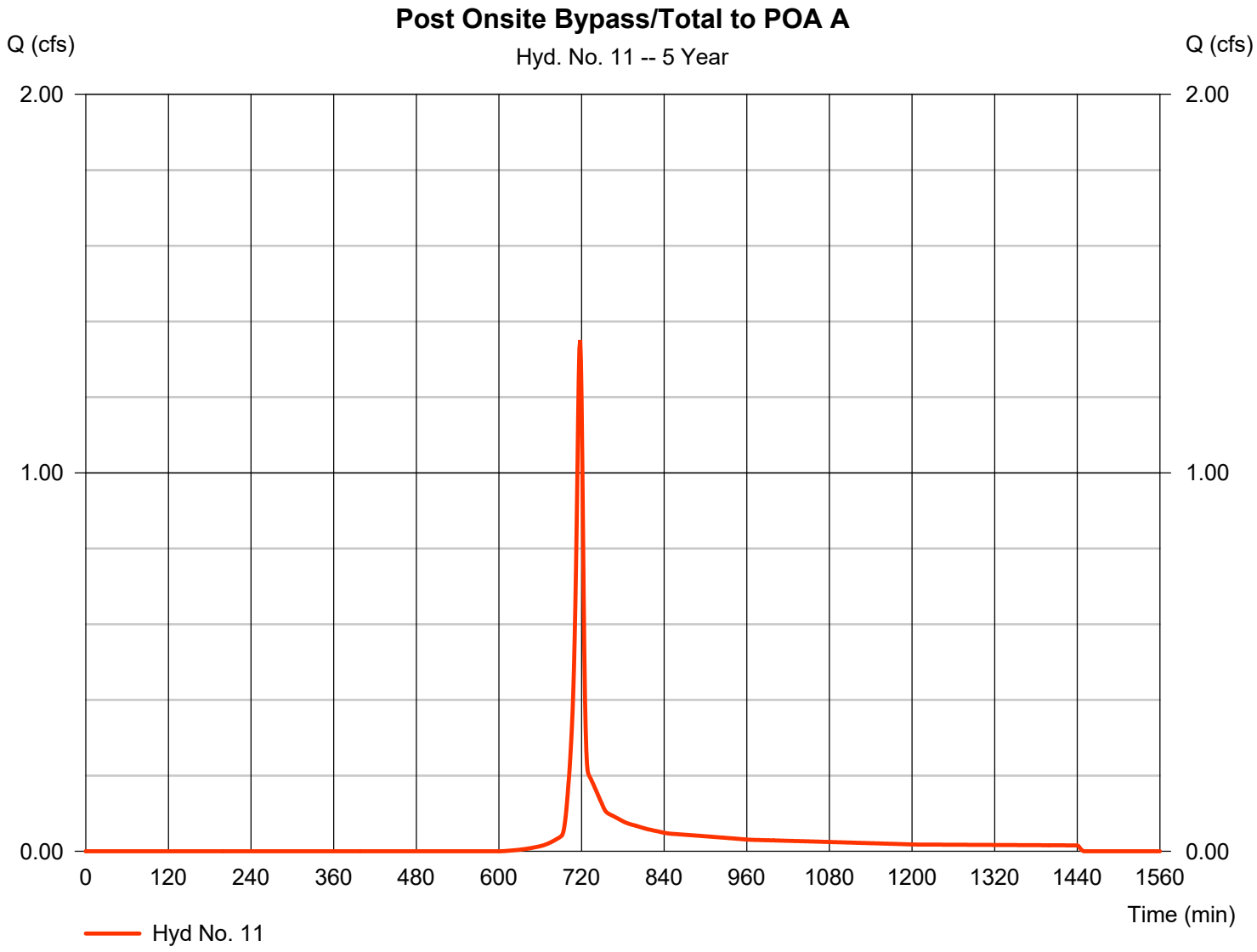


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.351 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 2,714 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

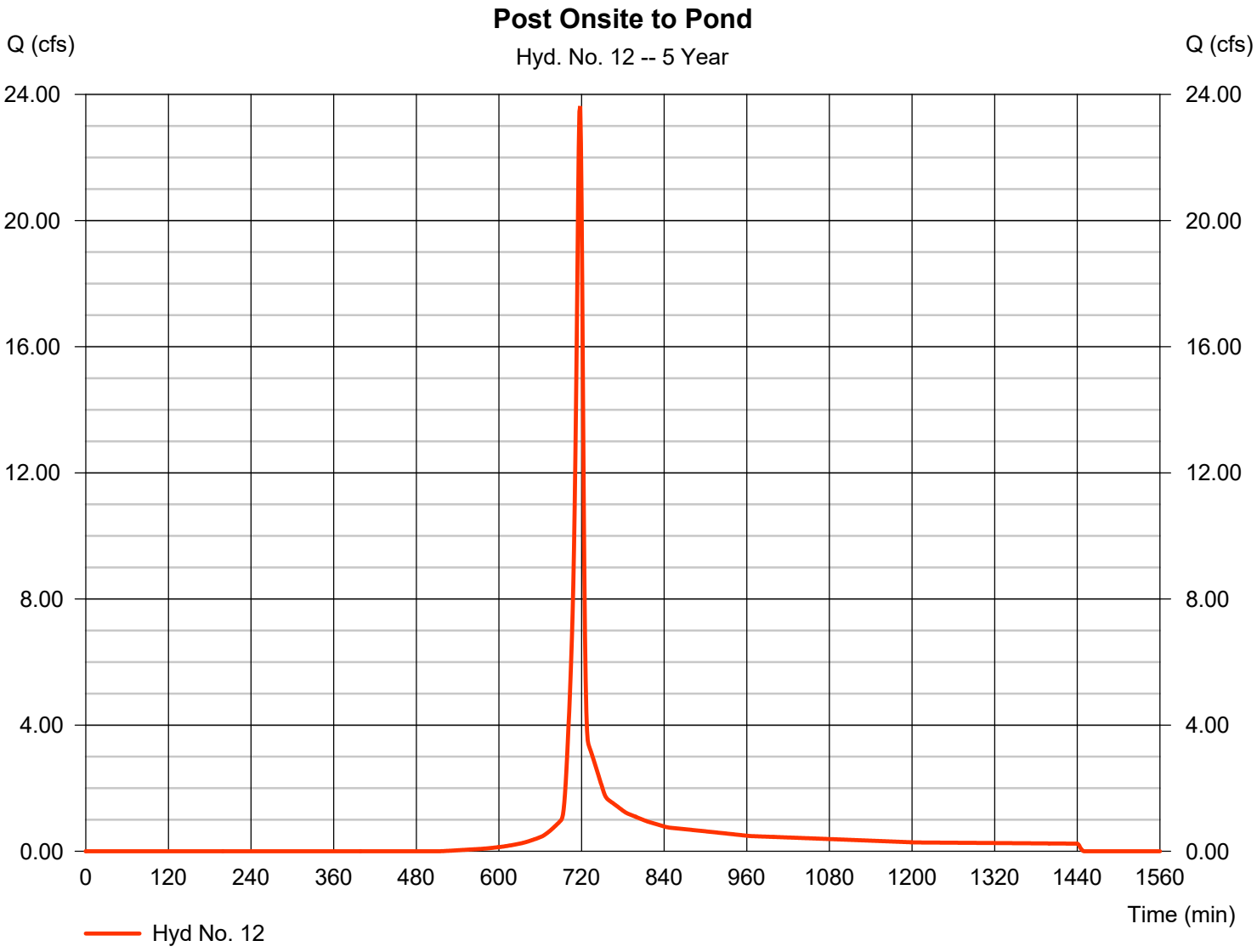


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	23.63 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	47,689 cuft
Drainage area	=	5.700 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

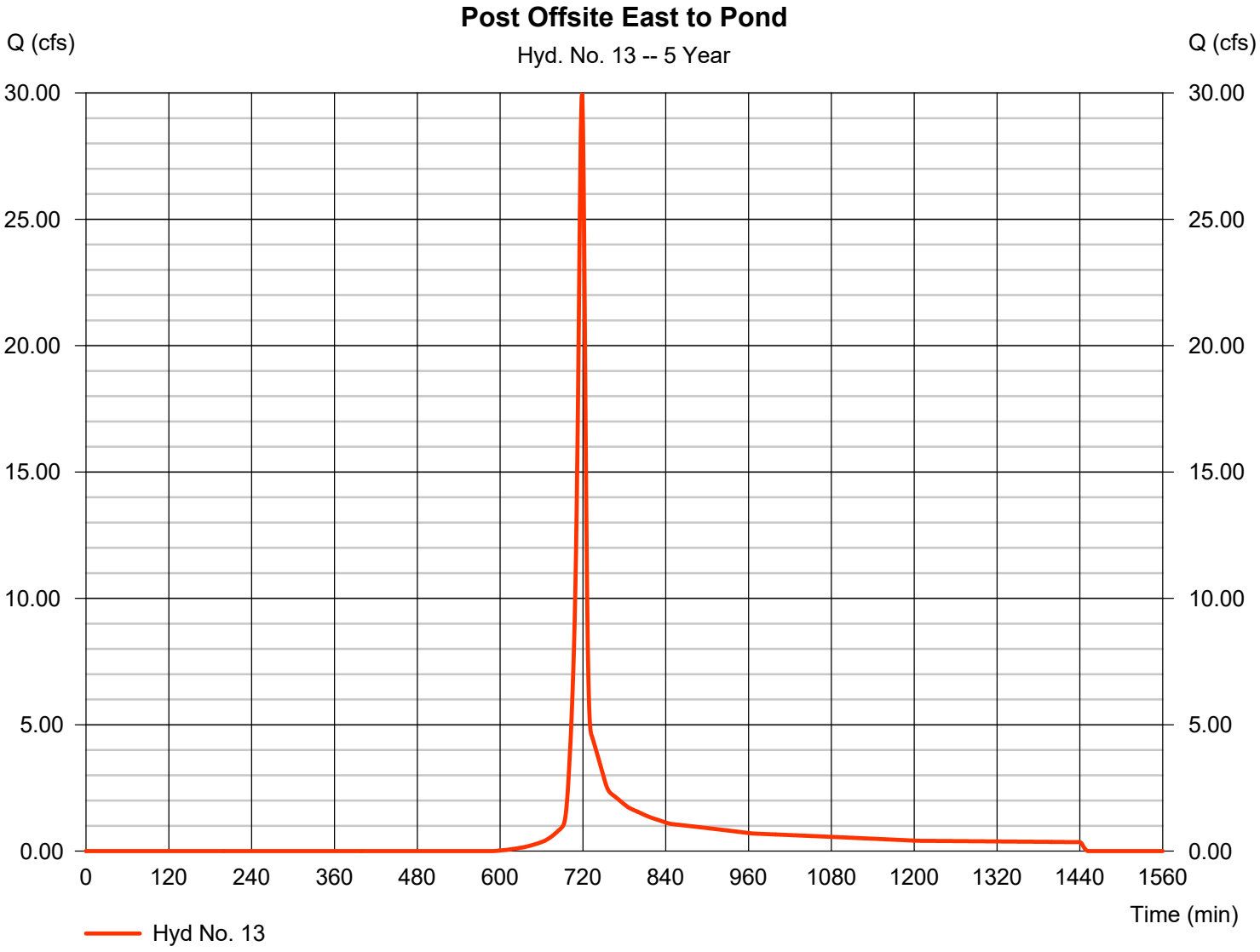


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	30.00 cfs
Storm frequency	=	5 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	63,256 cuft
Drainage area	=	9.700 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	4.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

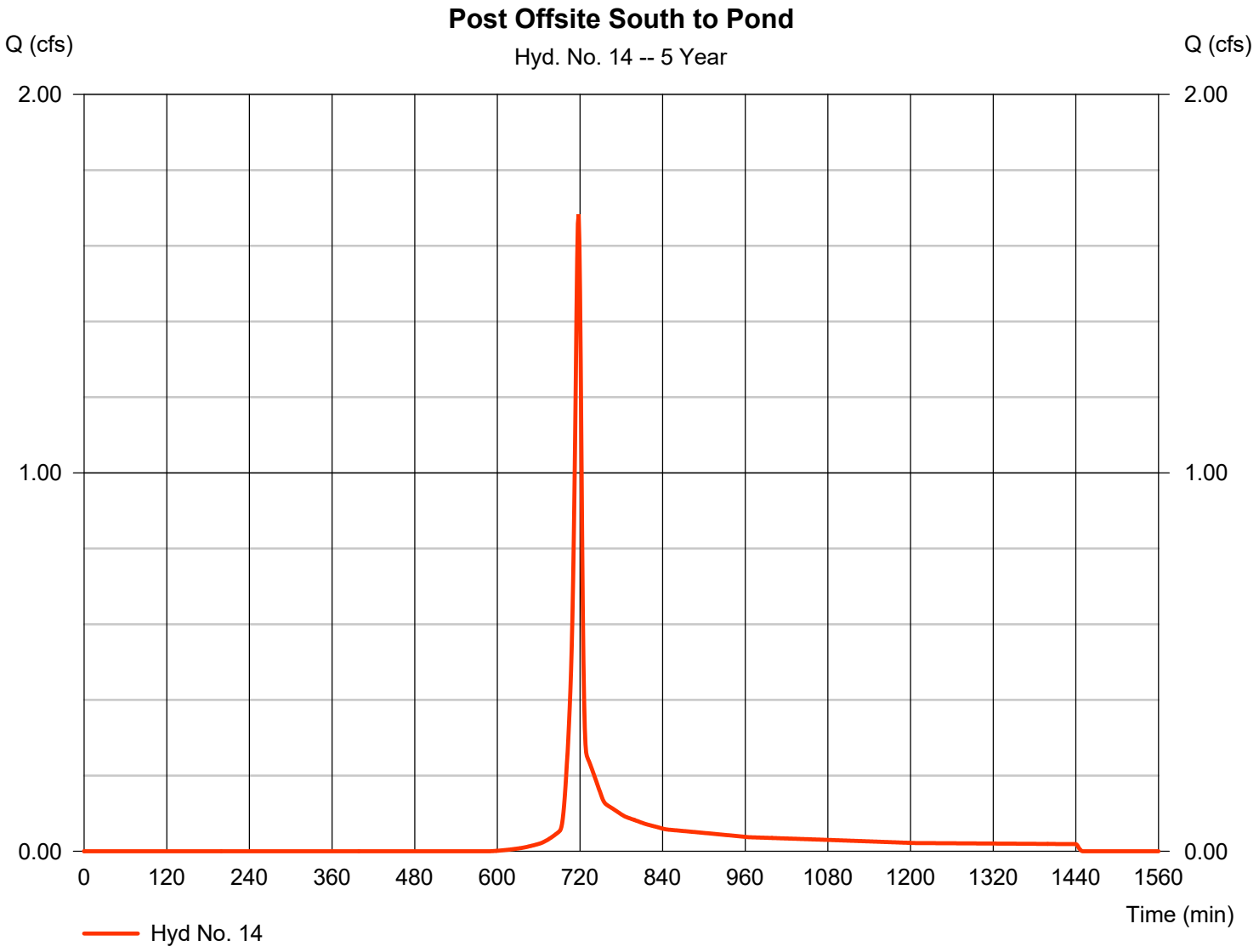


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.683 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	3,380 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

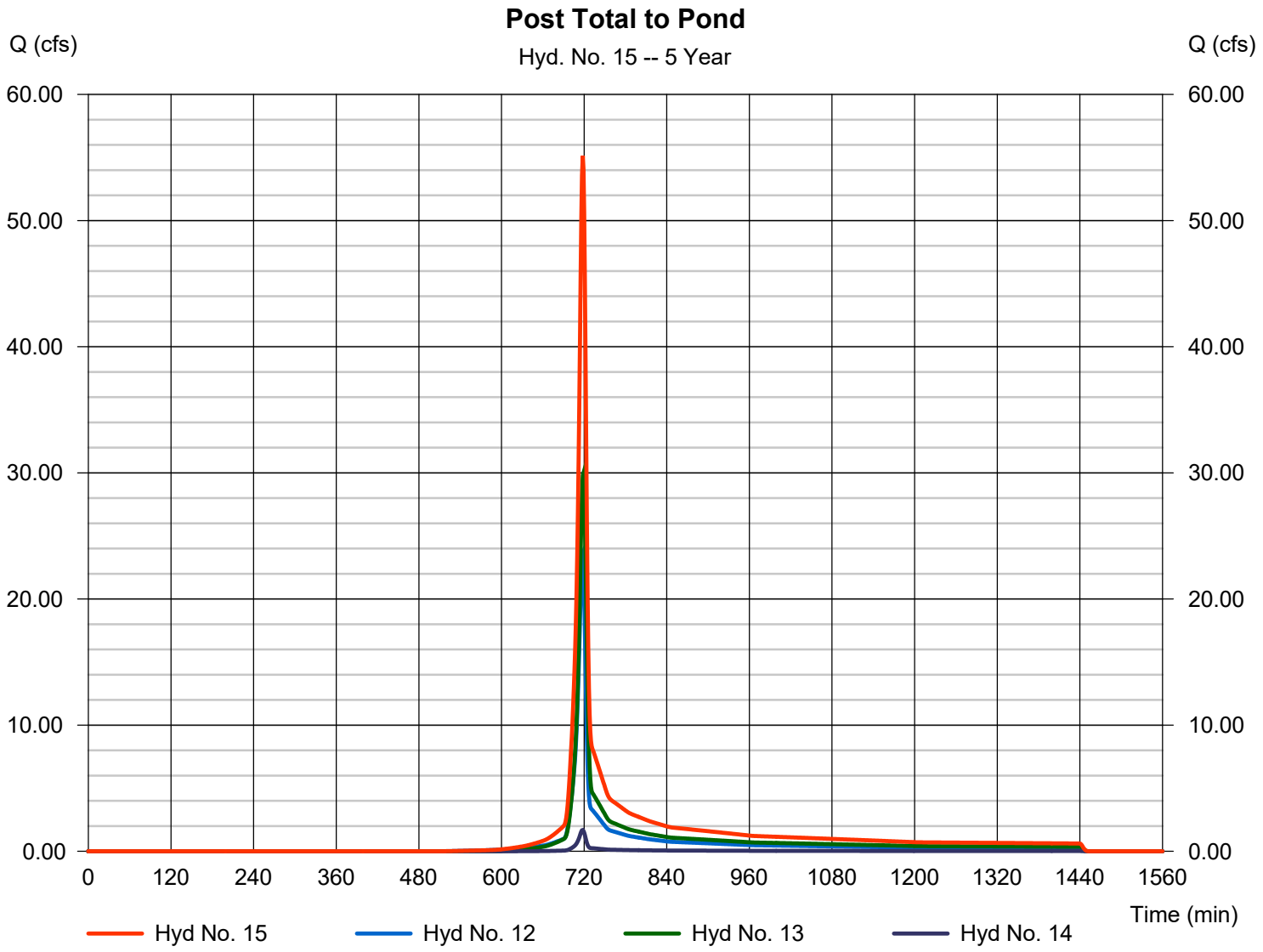


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 55.13 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 114,326 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



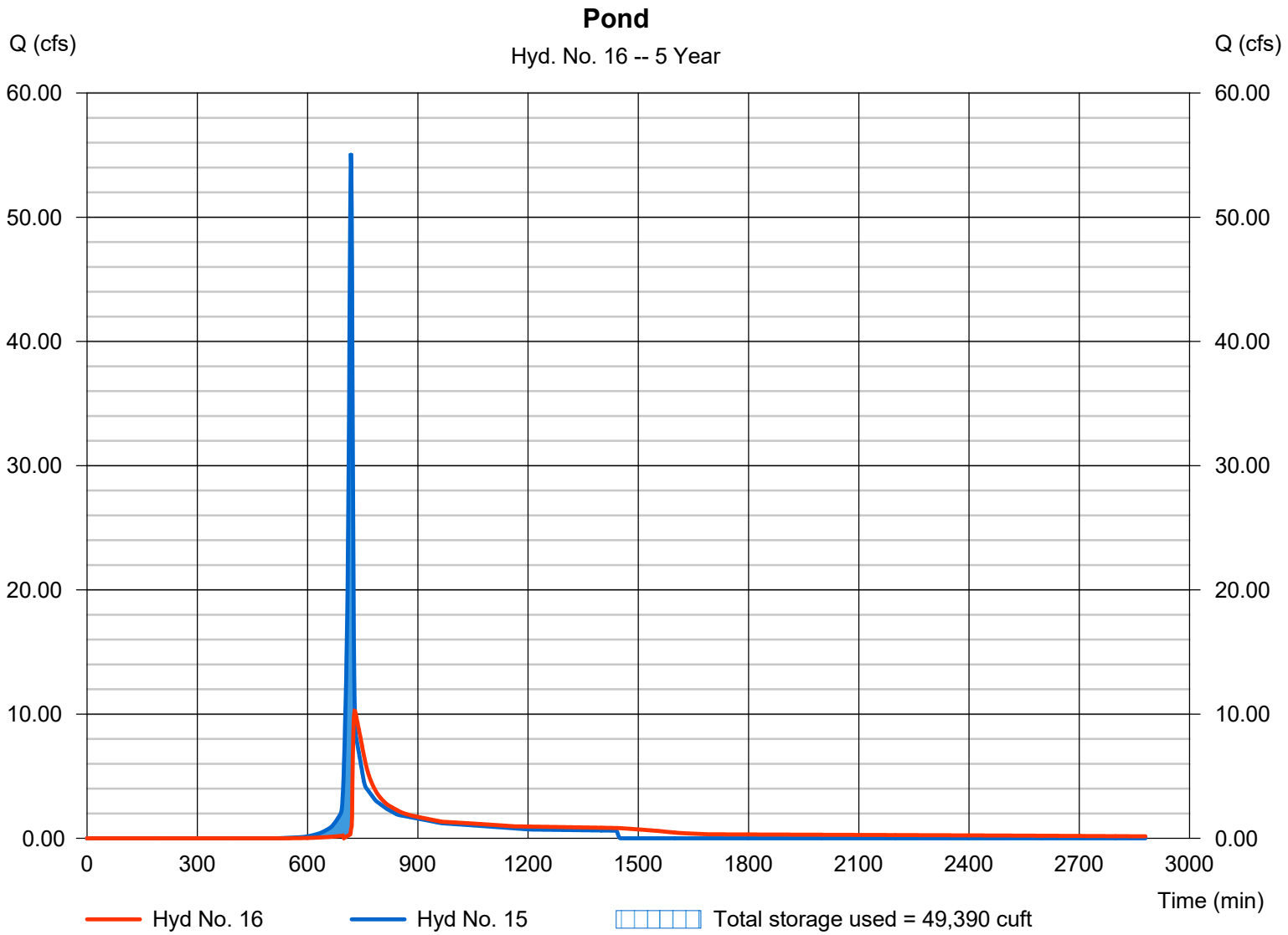
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	=	Reservoir	Peak discharge	=	10.25 cfs
Storm frequency	=	5 yrs	Time to peak	=	728 min
Time interval	=	1 min	Hyd. volume	=	104,245 cuft
Inflow hyd. No.	=	15 - Post Total to Pond	Max. Elevation	=	998.44 ft
Reservoir name	=	Pond	Max. Storage	=	49,390 cuft

Storage Indication method used.

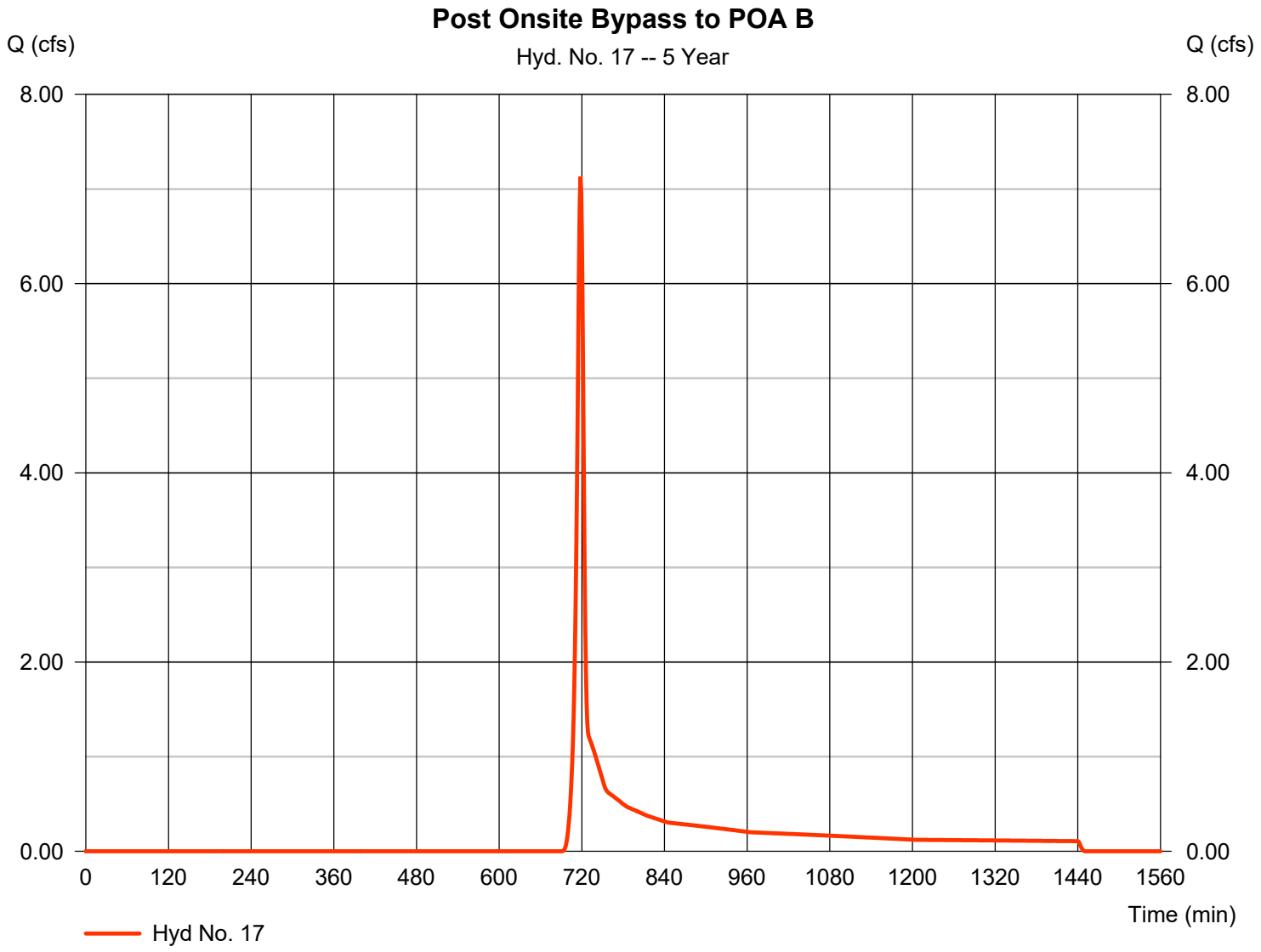


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 7.132 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 15,017 cuft
Drainage area	= 3.660 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

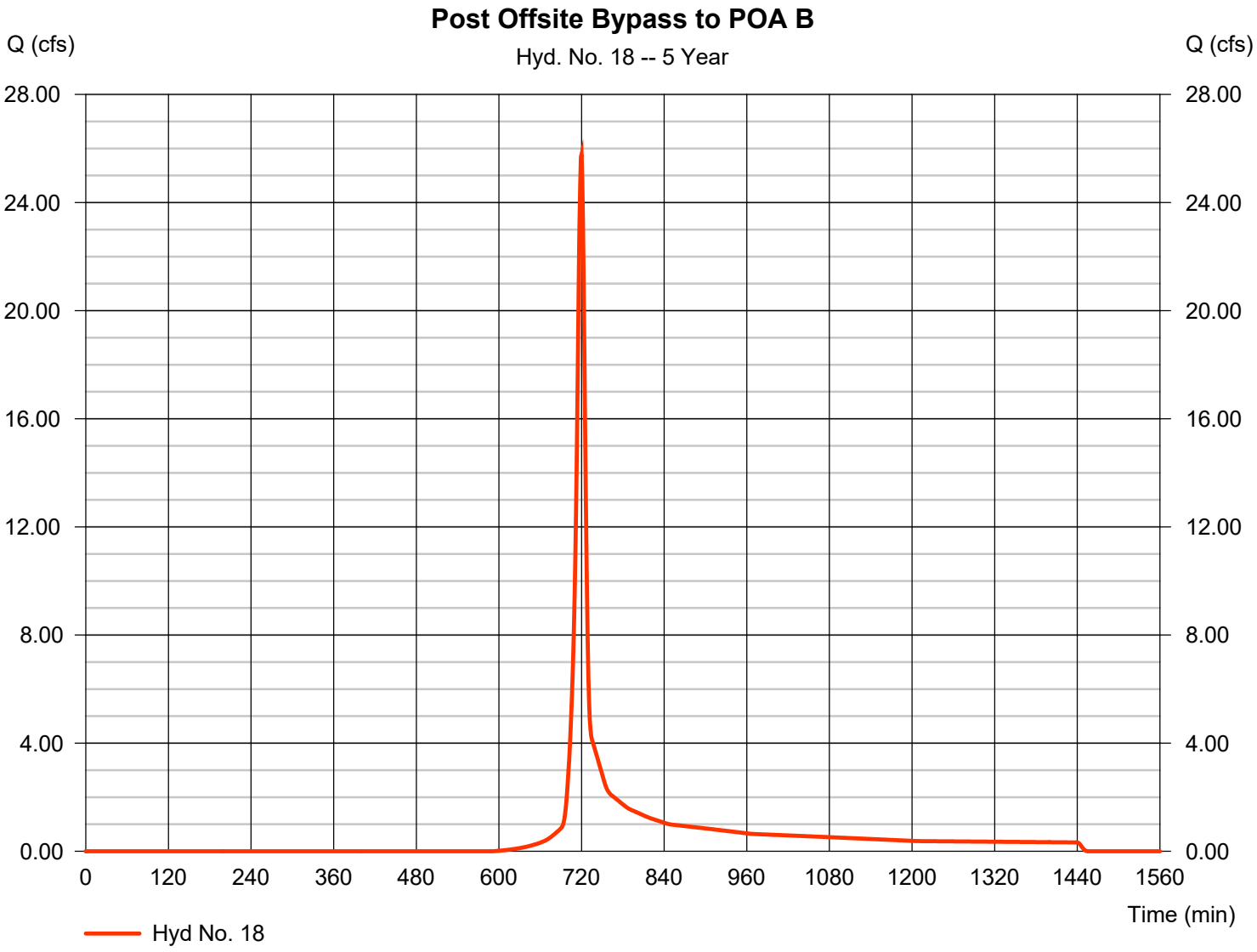


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 25.78 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 58,390 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

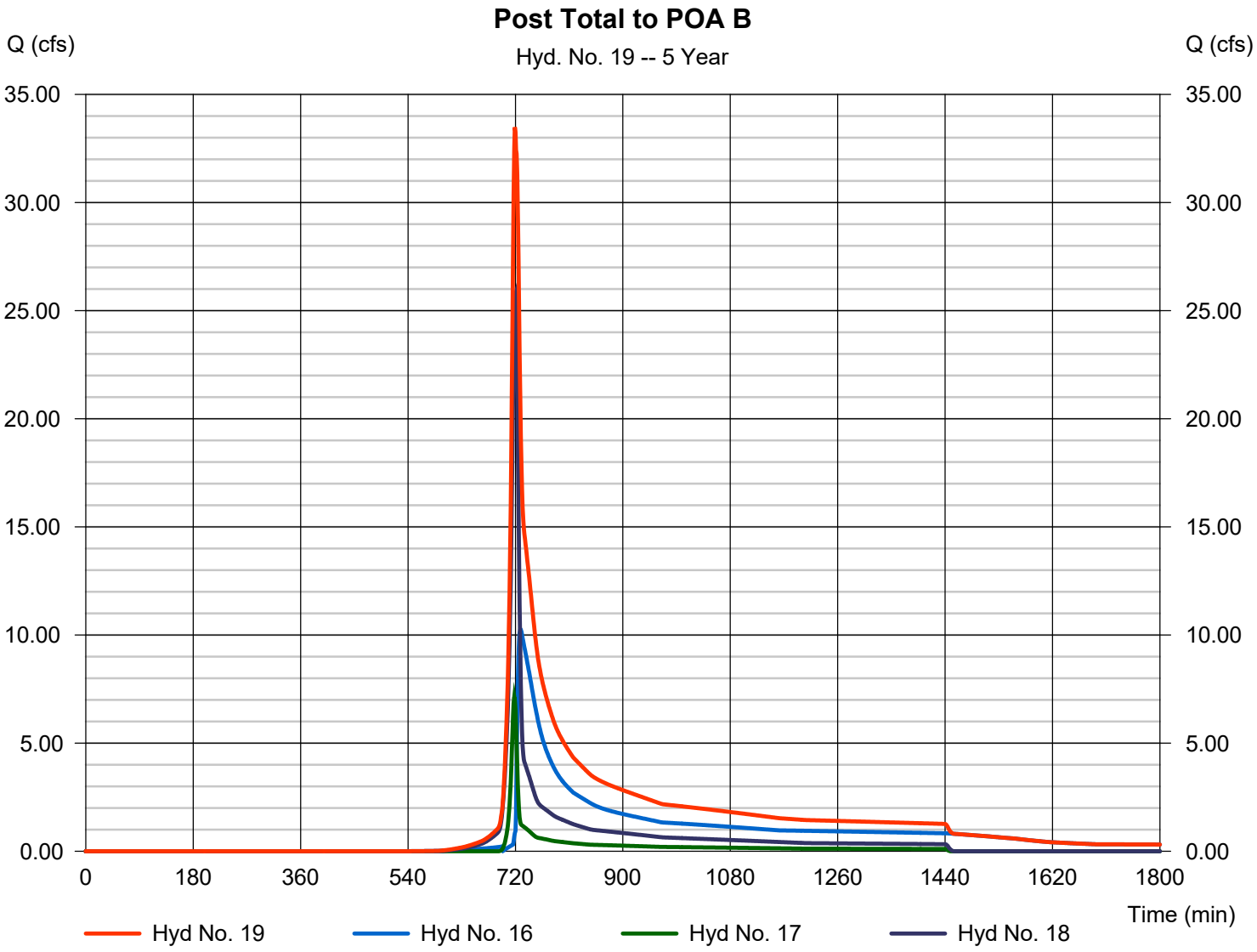


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	= Combine	Peak discharge	= 33.49 cfs
Storm frequency	= 5 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 177,653 cuft
Inflow hyds.	= 16, 17, 18	Contrib. drain. area	= 12.390 ac

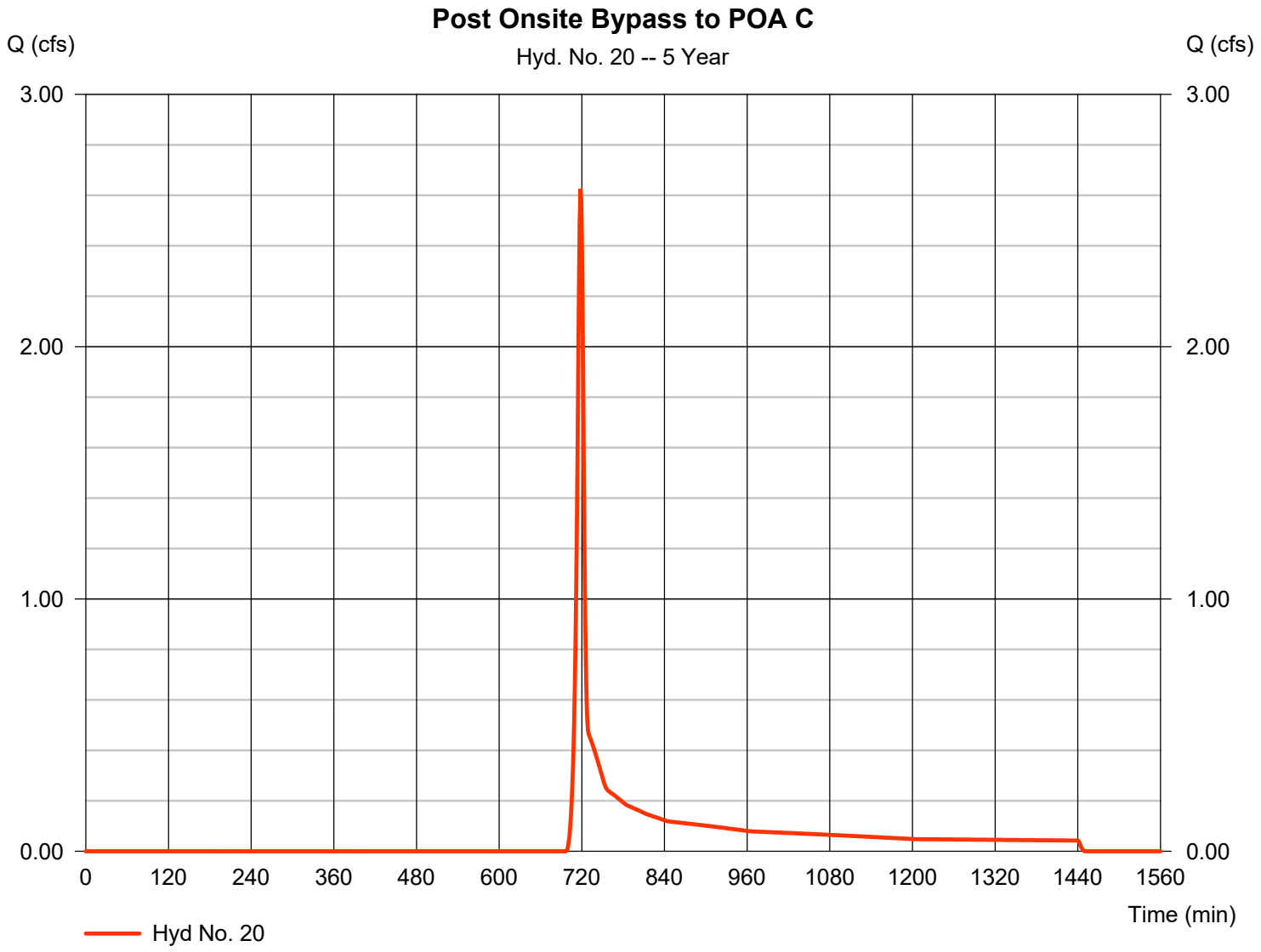


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 2.625 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 5,671 cuft
Drainage area	= 1.550 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

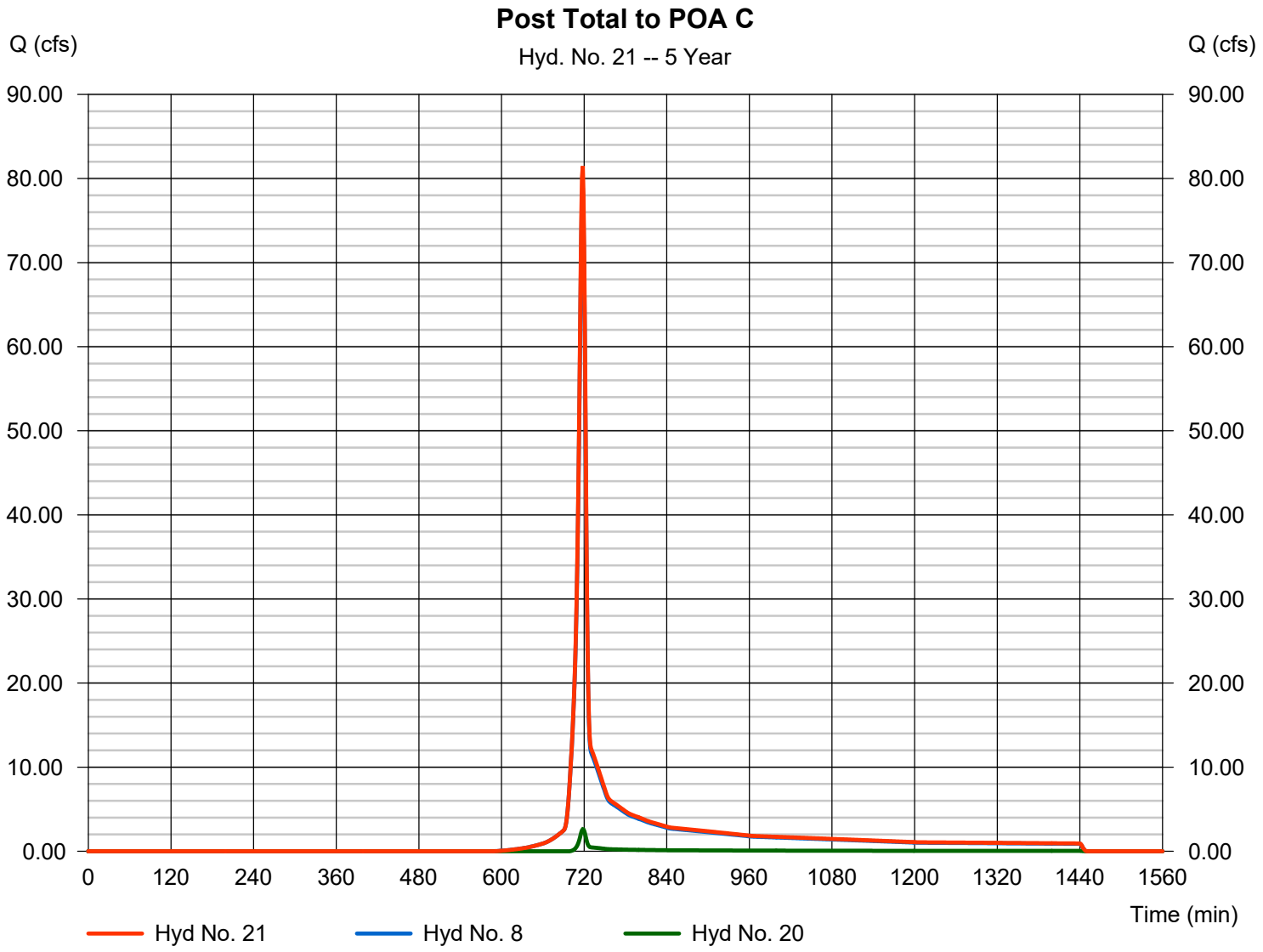


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 81.46 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 163,968 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

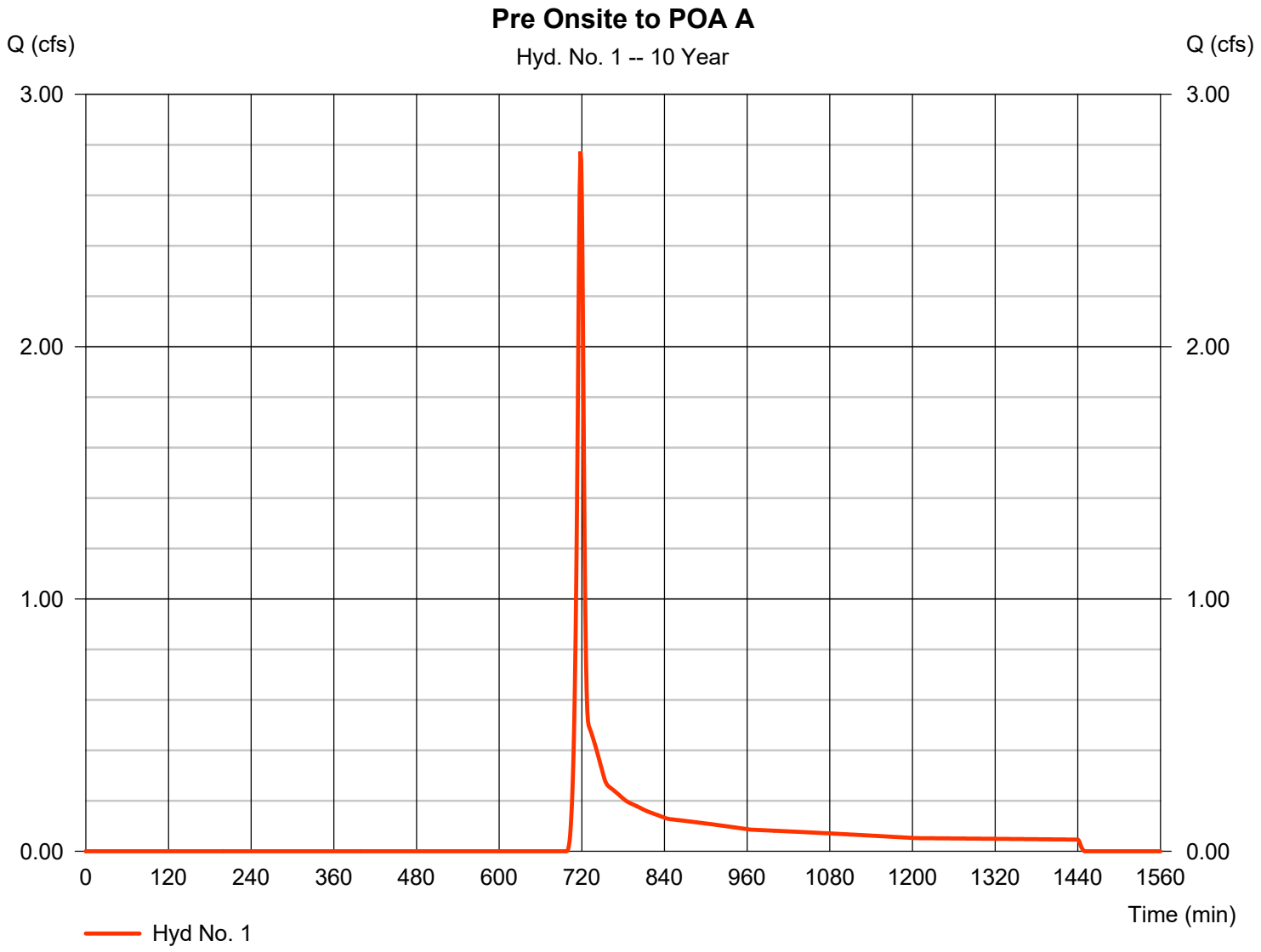
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.774	1	718	6,064	------	------	------	Pre Onsite to POA A
2	SCS Runoff	2.126	1	718	4,273	------	------	------	Pre Offsite to POA A
3	Combine	4.899	1	718	10,337	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	13.74	1	718	30,042	------	------	------	Pre Onsite to POA B
5	SCS Runoff	68.89	1	720	155,852	------	------	------	Pre Offsite to POA B
6	Combine	82.41	1	719	185,895	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	4.142	1	718	9,057	------	------	------	Pre Onsite to POA C
8	SCS Runoff	99.55	1	718	200,140	------	------	------	Pre/Post Offsite to POA C
9	Combine	103.70	1	718	209,196	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	1.716	1	718	3,447	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	29.06	1	718	59,016	------	------	------	Post Onsite to Pond
13	SCS Runoff	37.90	1	719	79,977	------	------	------	Post Offsite East to Pond
14	SCS Runoff	2.126	1	718	4,273	------	------	------	Post Offsite South to Pond
15	Combine	69.00	1	718	143,266	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	25.01	1	725	132,825	15	999.28	58,076	Pond
17	SCS Runoff	9.828	1	718	20,172	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	32.63	1	720	73,825	------	------	------	Post Offsite Bypass to POA B
19	Combine	56.52	1	722	226,822	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	3.711	1	718	7,728	------	------	------	Post Onsite Bypass to POA C
21	Combine	103.26	1	718	207,868	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.774 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	6,064 cuft
Drainage area	=	1.520 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

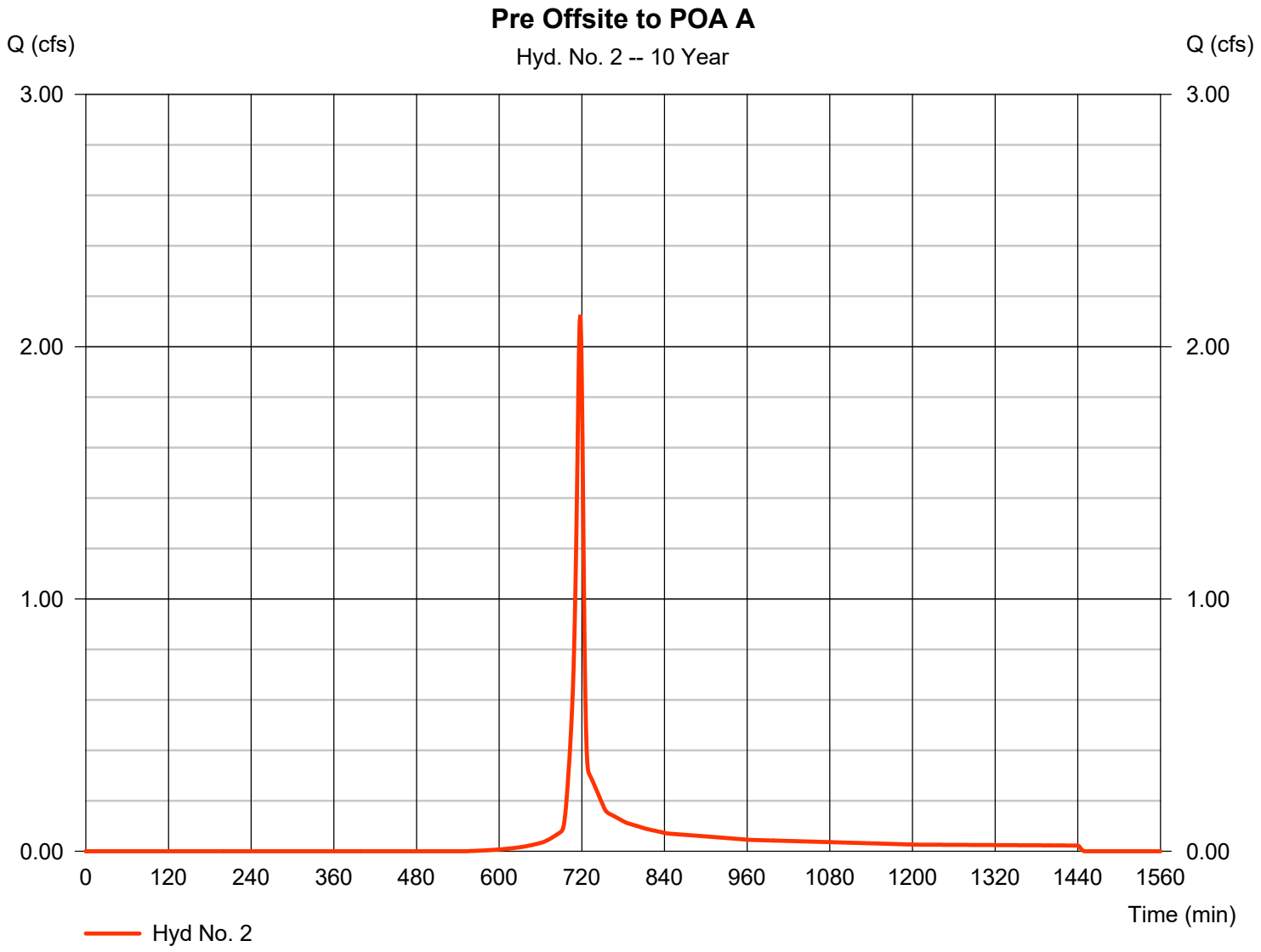


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.126 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	4,273 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

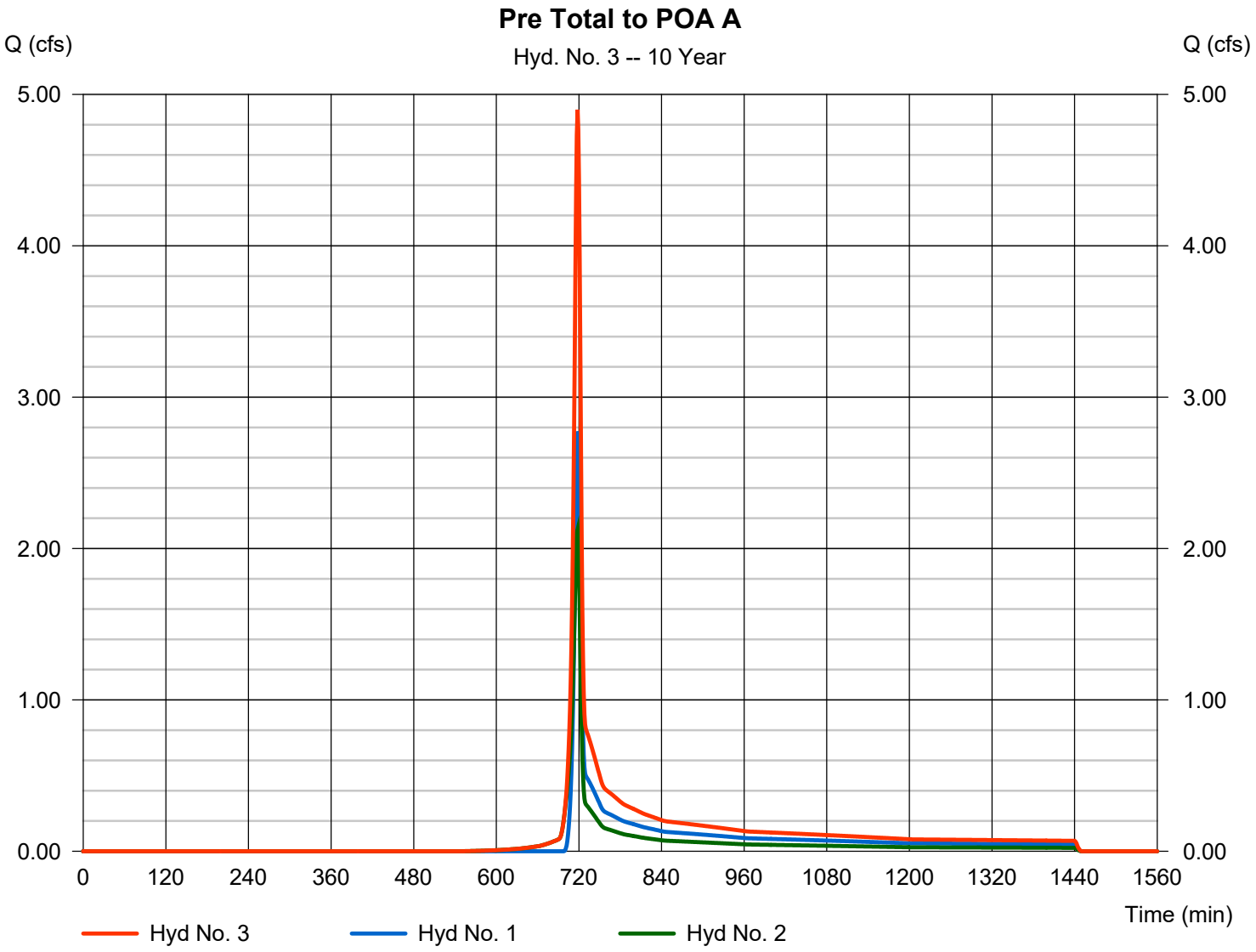


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 4.899 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 10,337 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

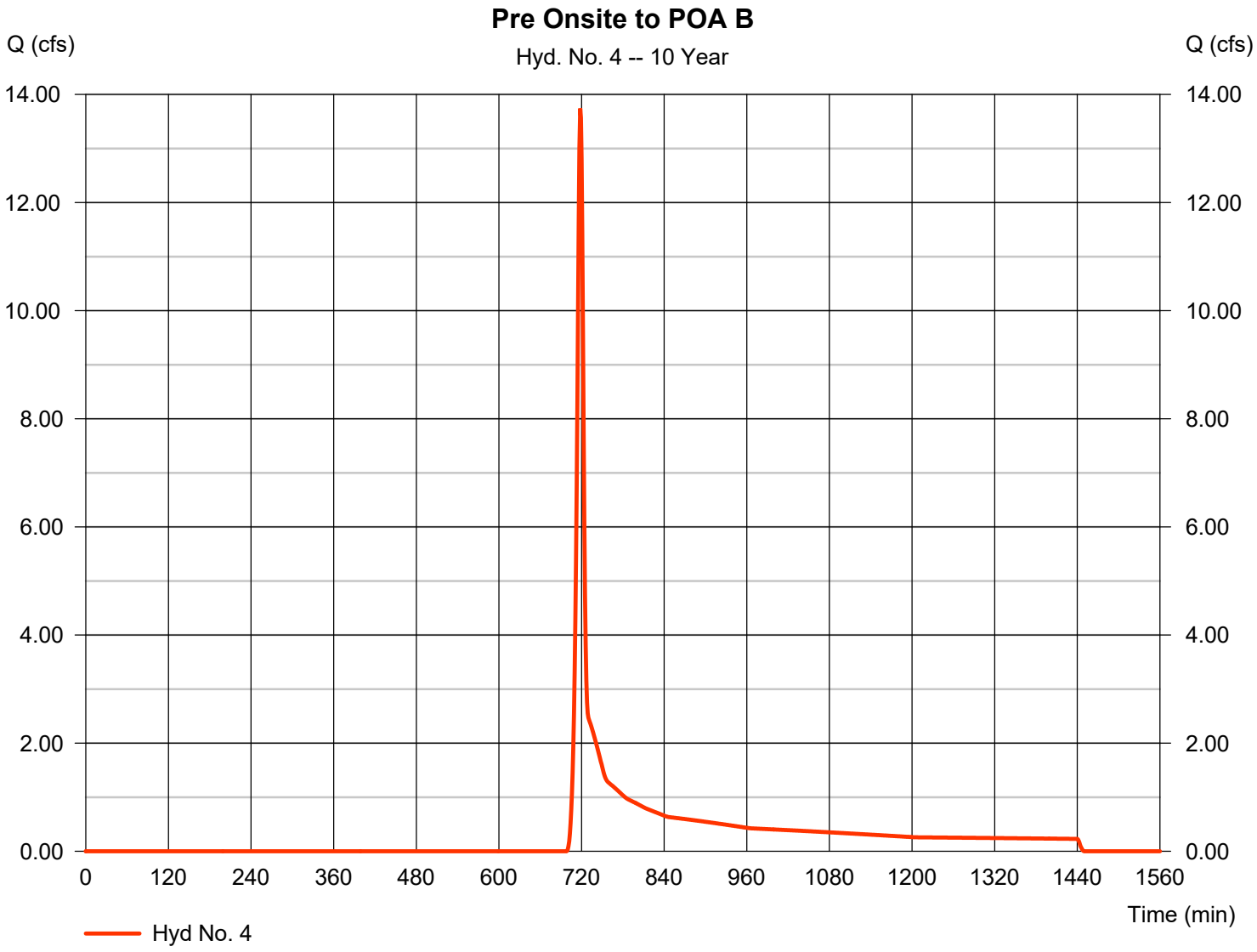


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 13.74 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 30,042 cuft
Drainage area	= 7.530 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

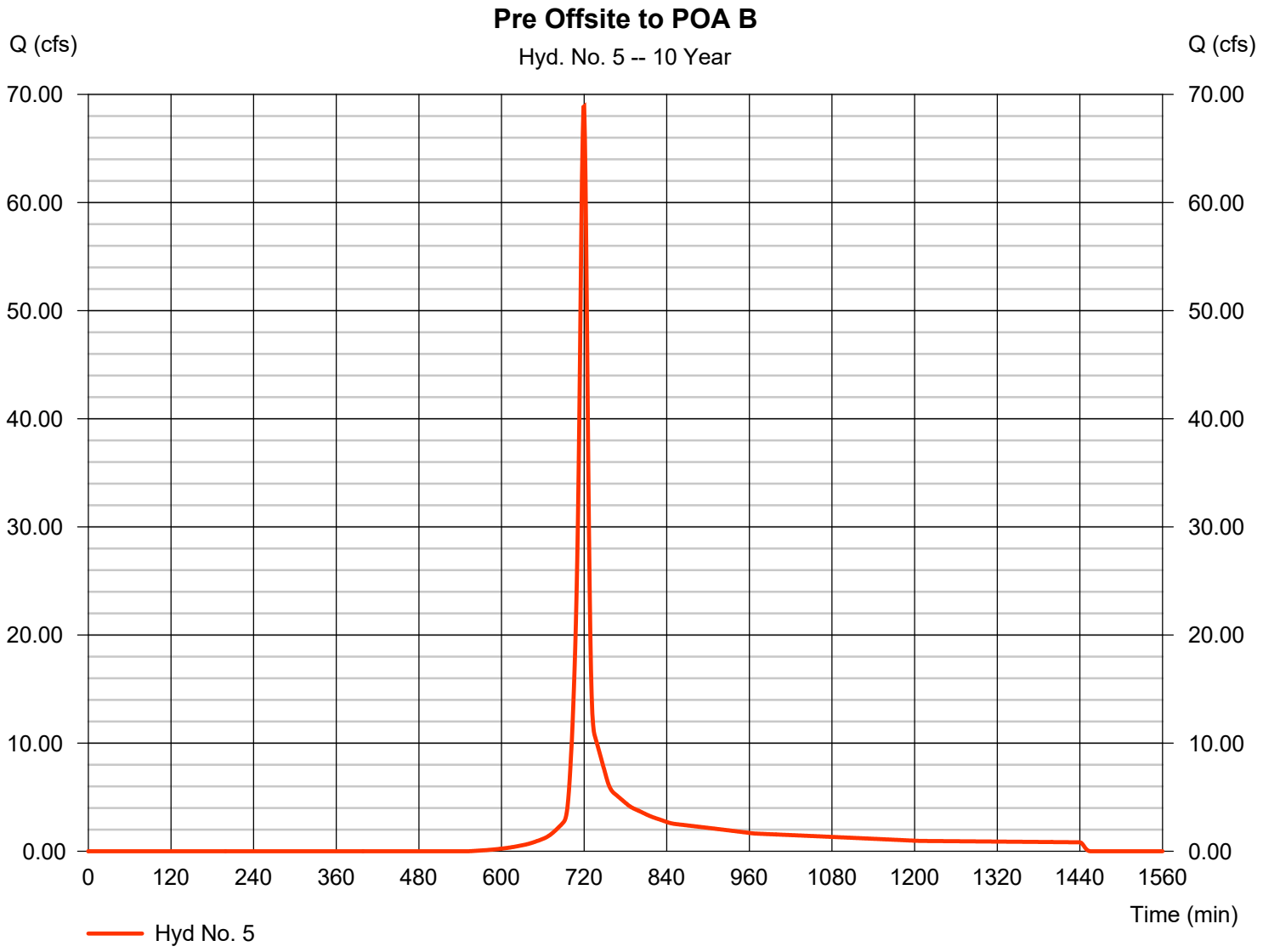


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 68.89 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 155,852 cuft
Drainage area	= 18.430 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

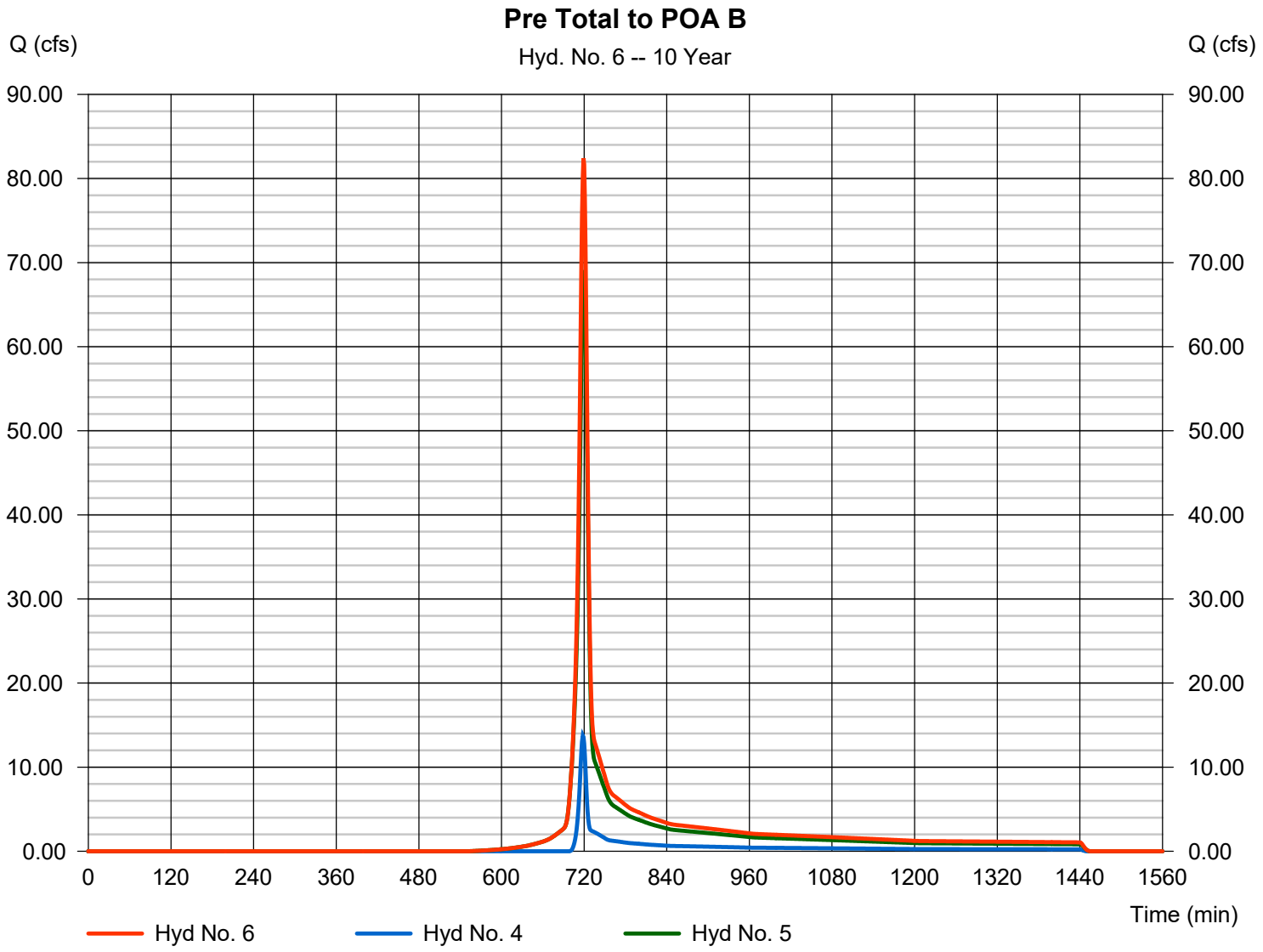


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 82.41 cfs
Storm frequency	= 10 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 185,895 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

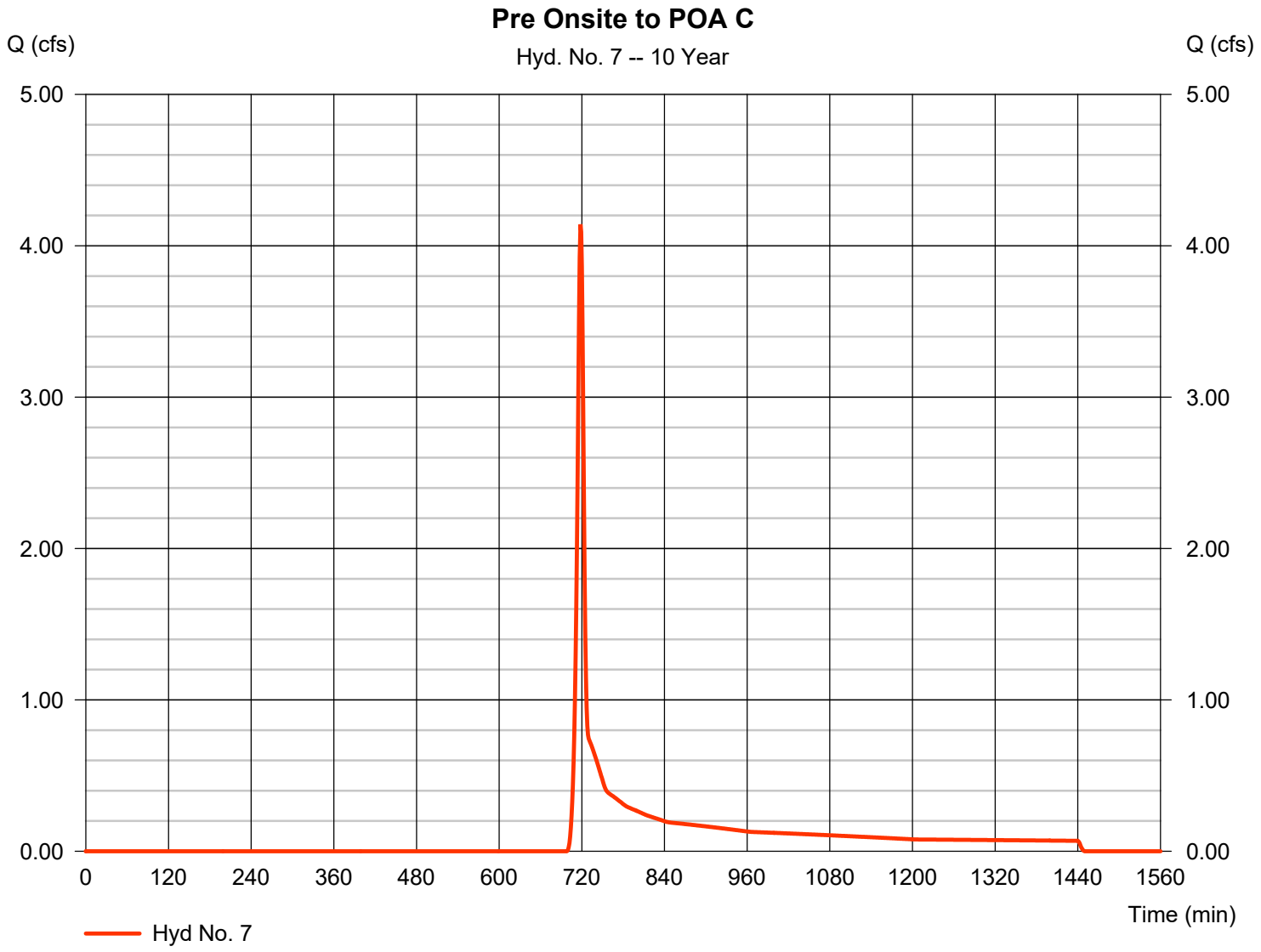


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.142 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	9,057 cuft
Drainage area	=	2.270 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

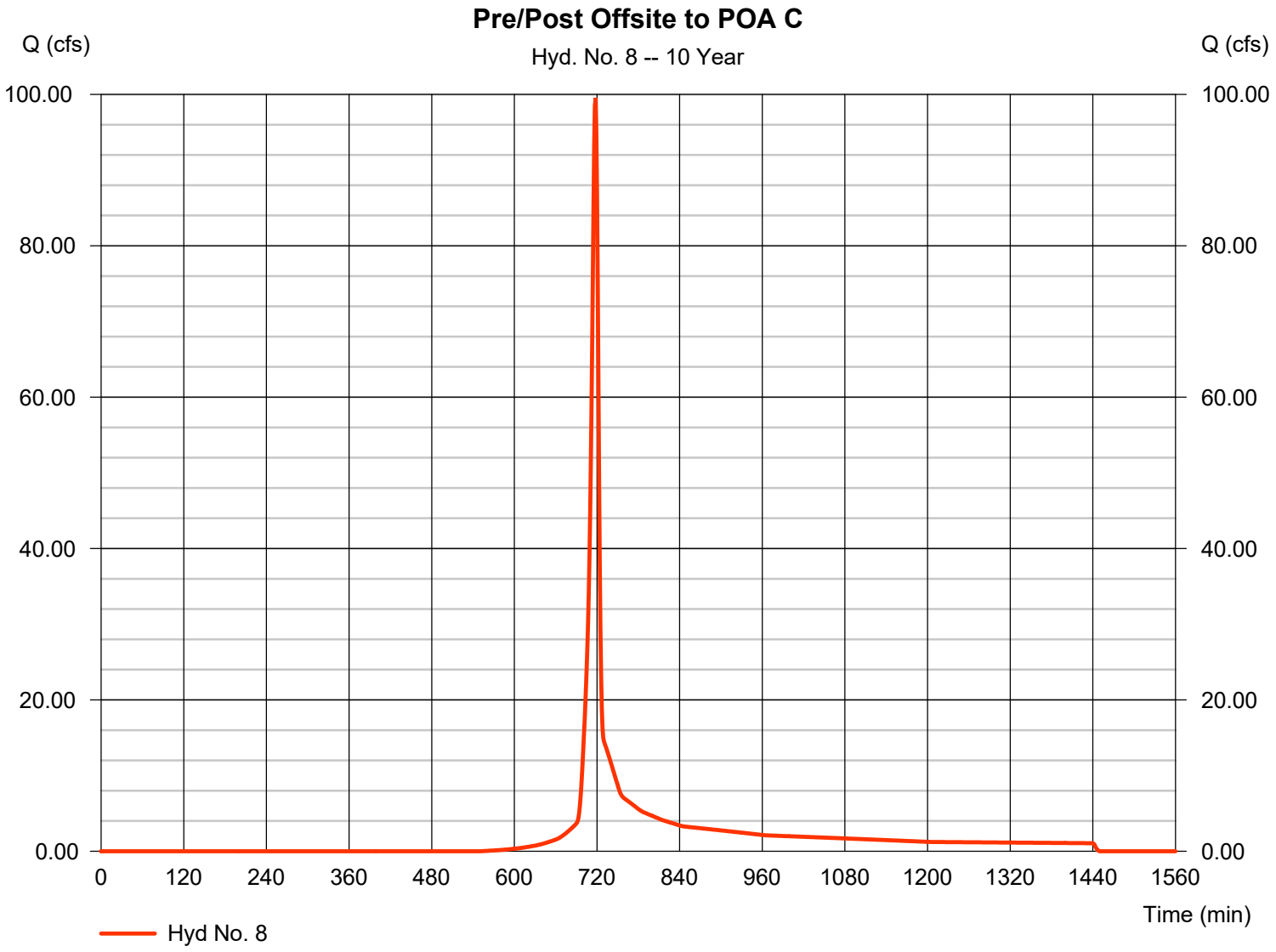


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	99.55 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	200,140 cuft
Drainage area	=	22.950 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

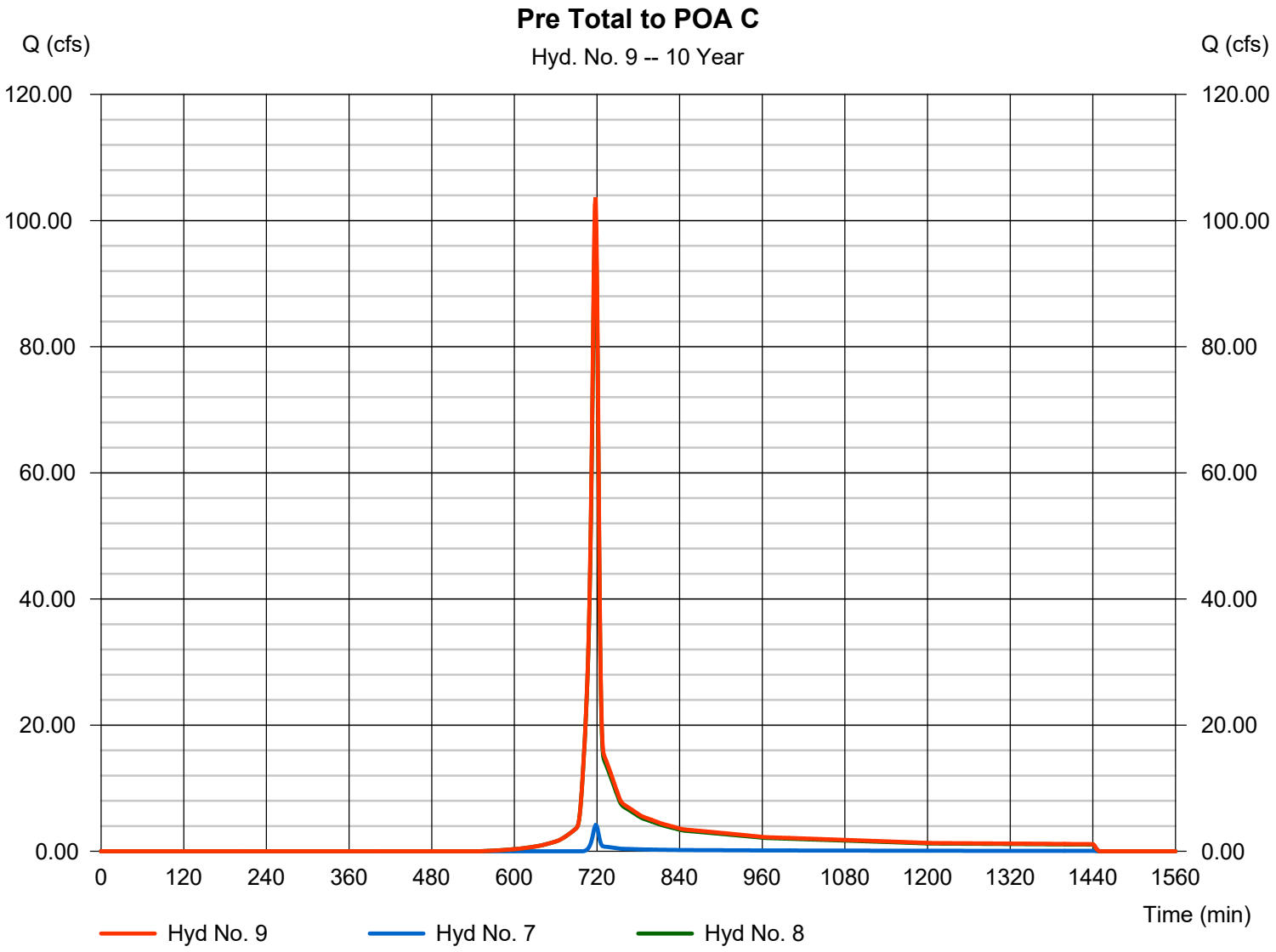


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 103.70 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 209,196 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

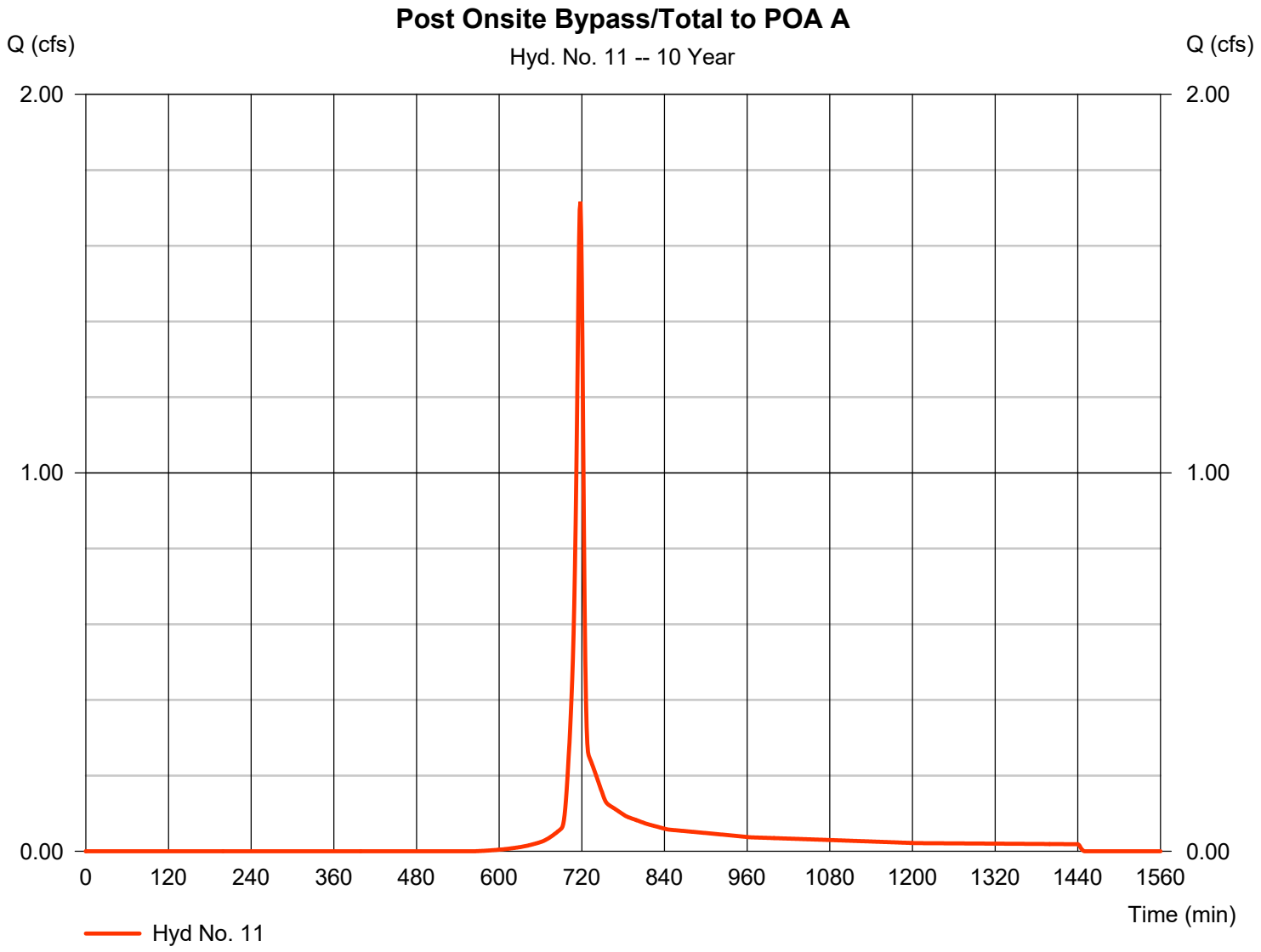


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.716 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	3,447 cuft
Drainage area	=	0.410 ac	Curve number	=	71
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

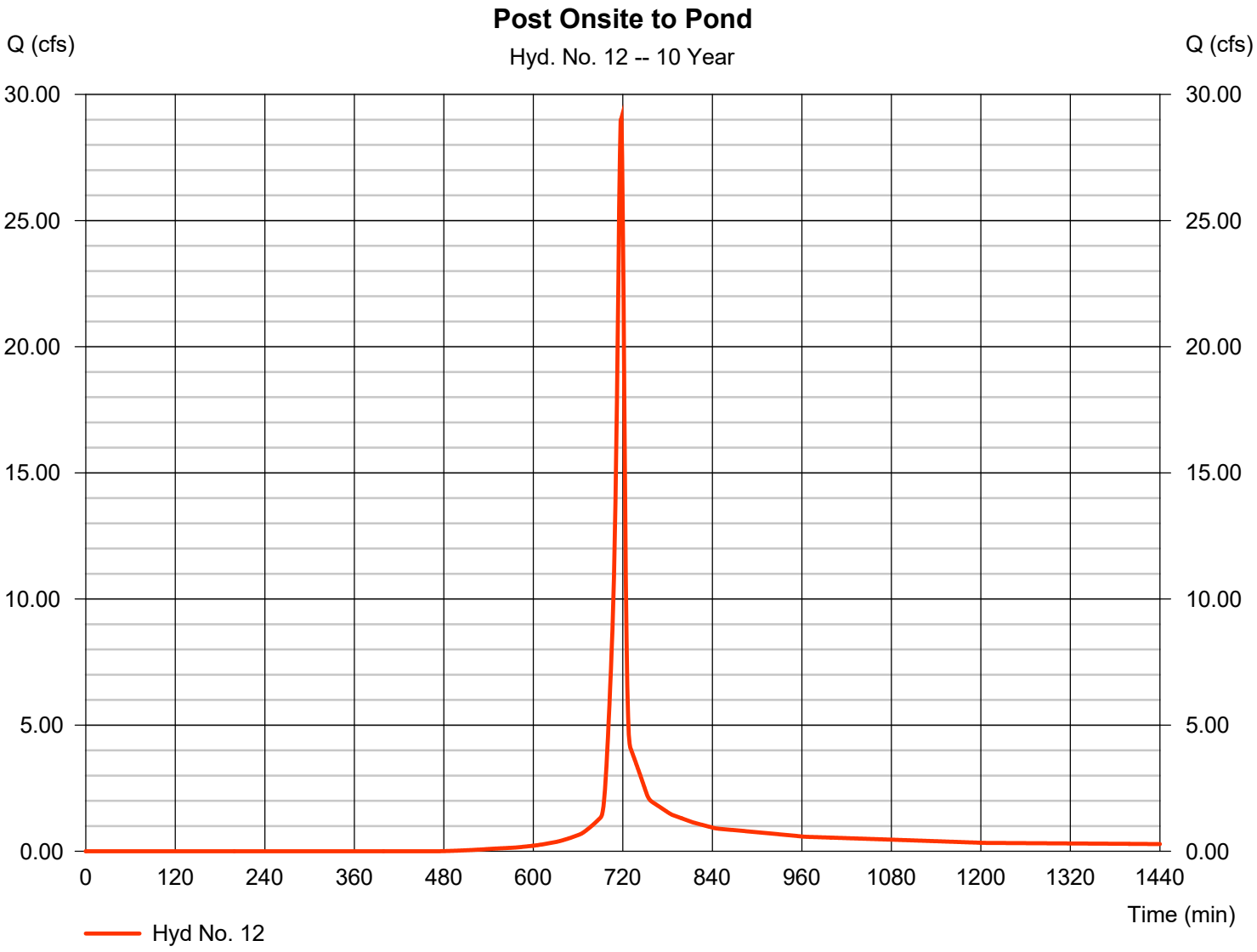


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	29.06 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	59,016 cuft
Drainage area	=	5.700 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

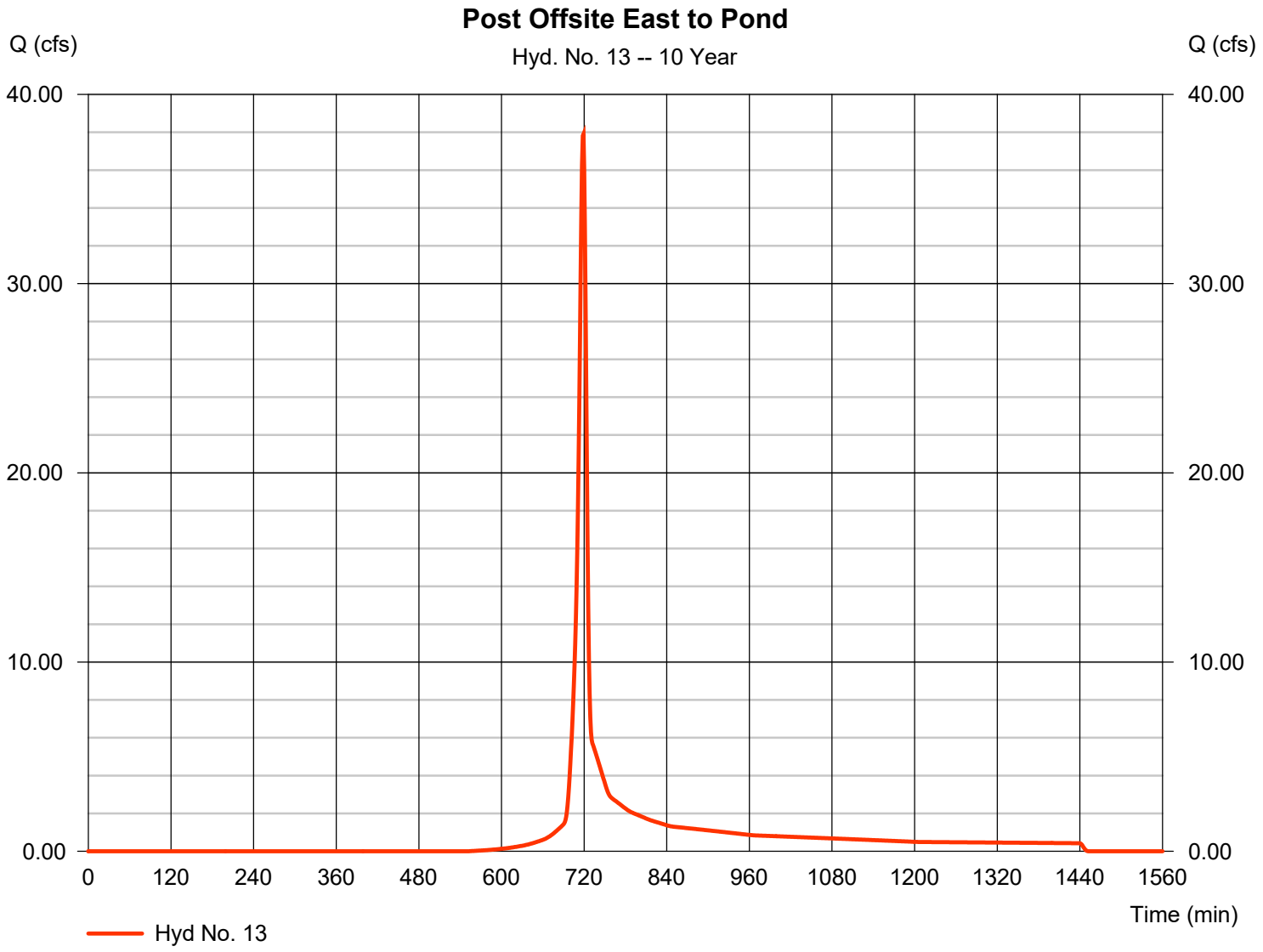


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	= SCS Runoff	Peak discharge	= 37.90 cfs
Storm frequency	= 10 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 79,977 cuft
Drainage area	= 9.700 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

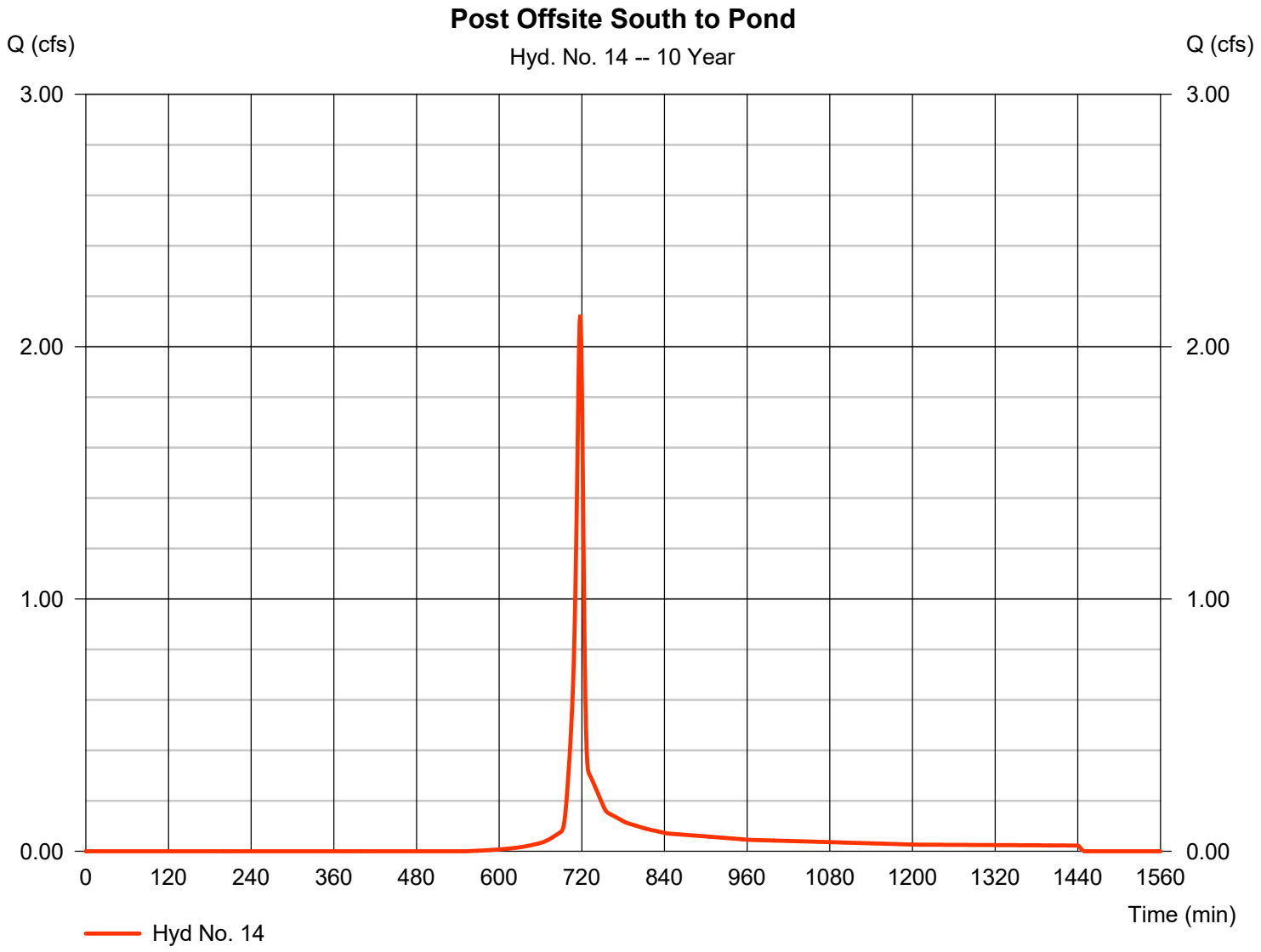


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.126 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	4,273 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

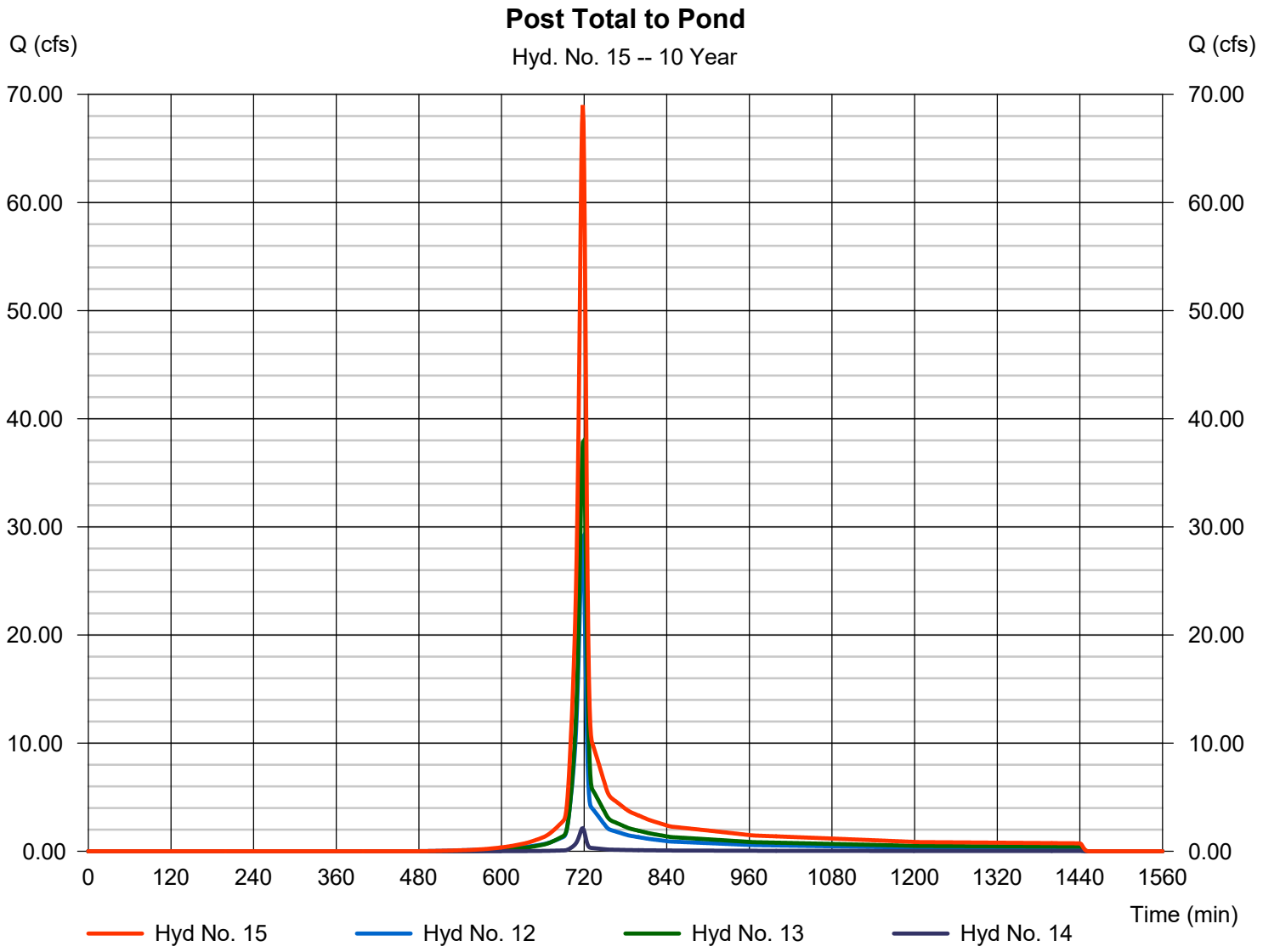


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 69.00 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 143,266 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



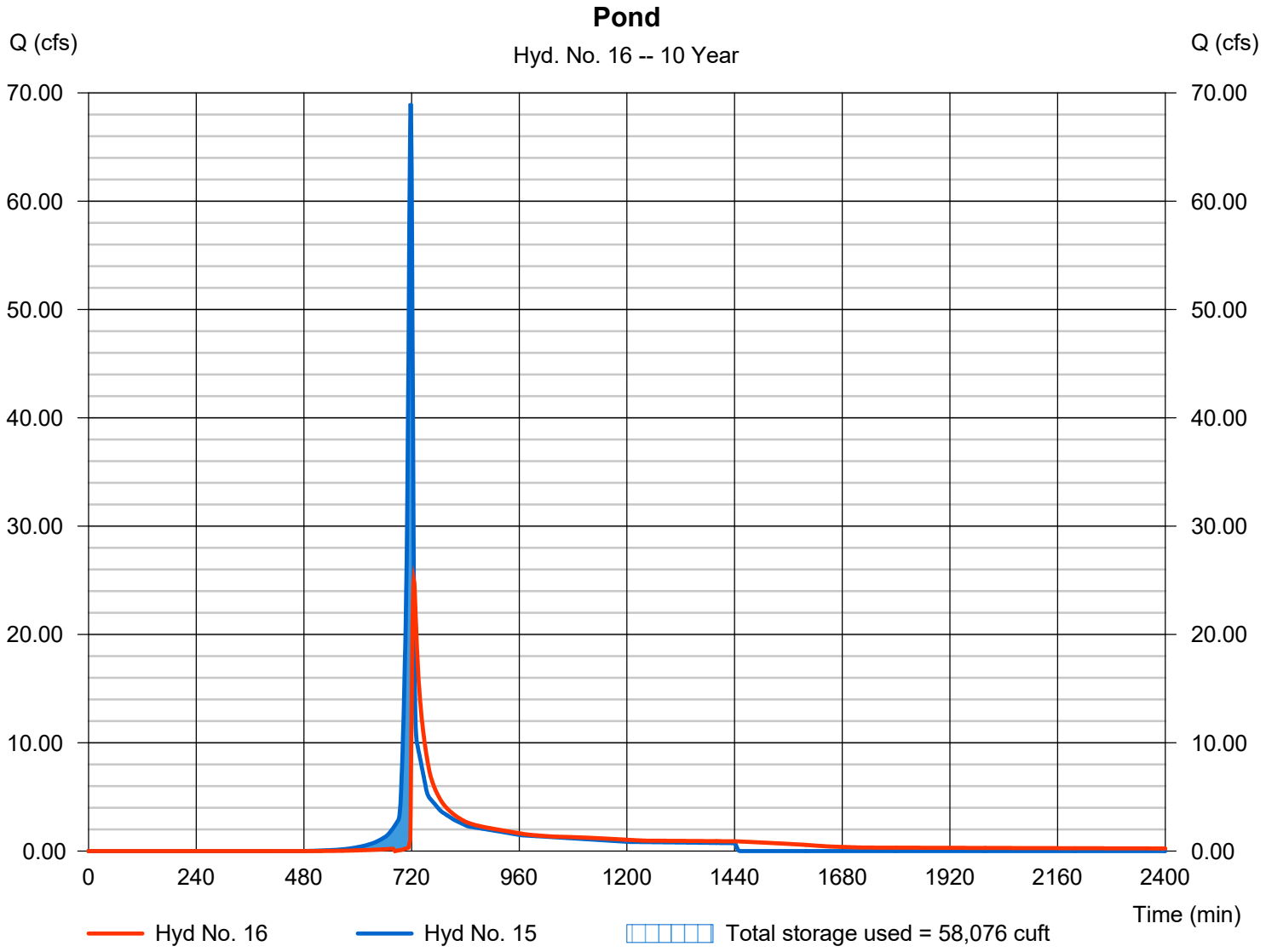
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	= Reservoir	Peak discharge	= 25.01 cfs
Storm frequency	= 10 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 132,825 cuft
Inflow hyd. No.	= 15 - Post Total to Pond	Max. Elevation	= 999.28 ft
Reservoir name	= Pond	Max. Storage	= 58,076 cuft

Storage Indication method used.

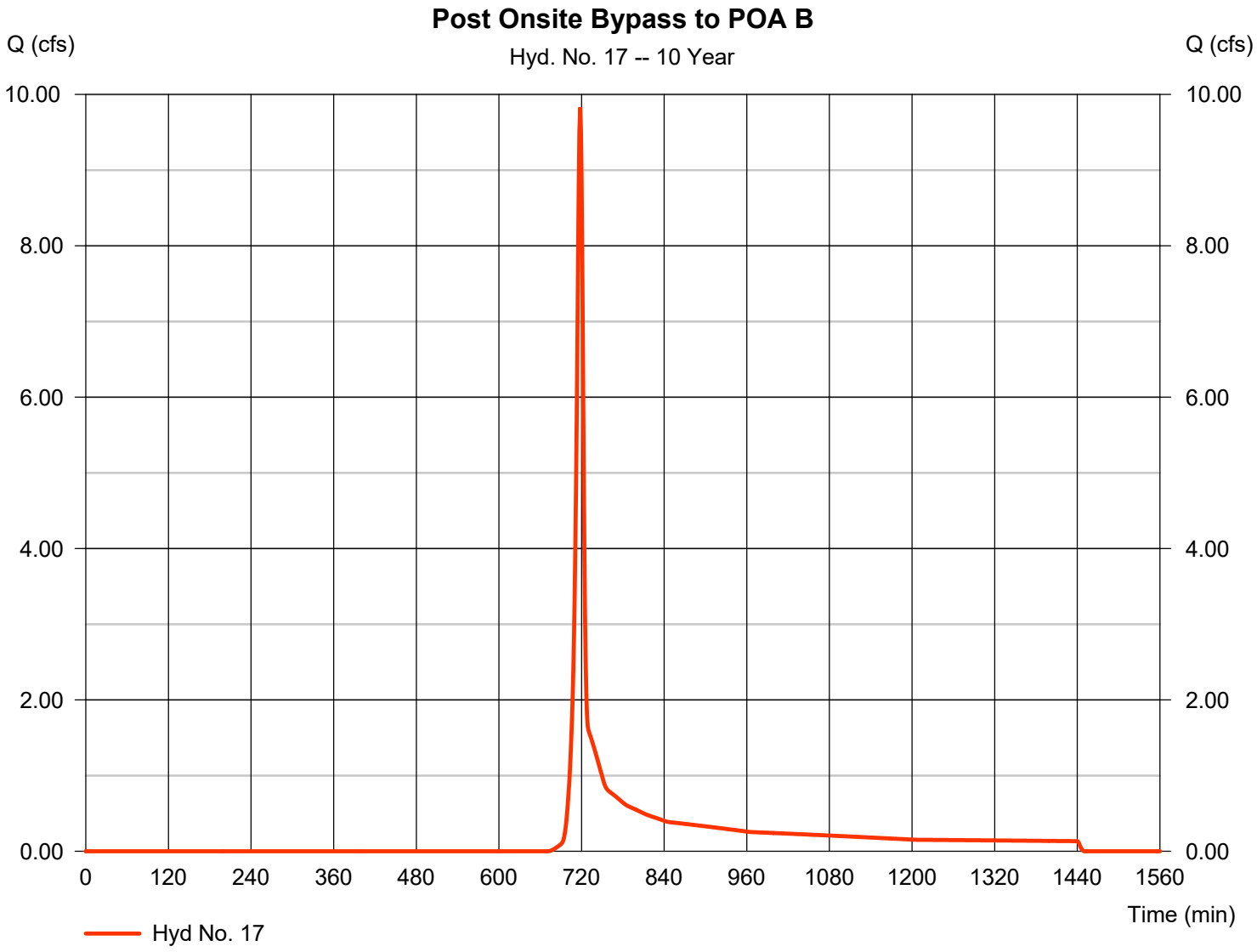


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.828 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	20,172 cuft
Drainage area	=	3.660 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

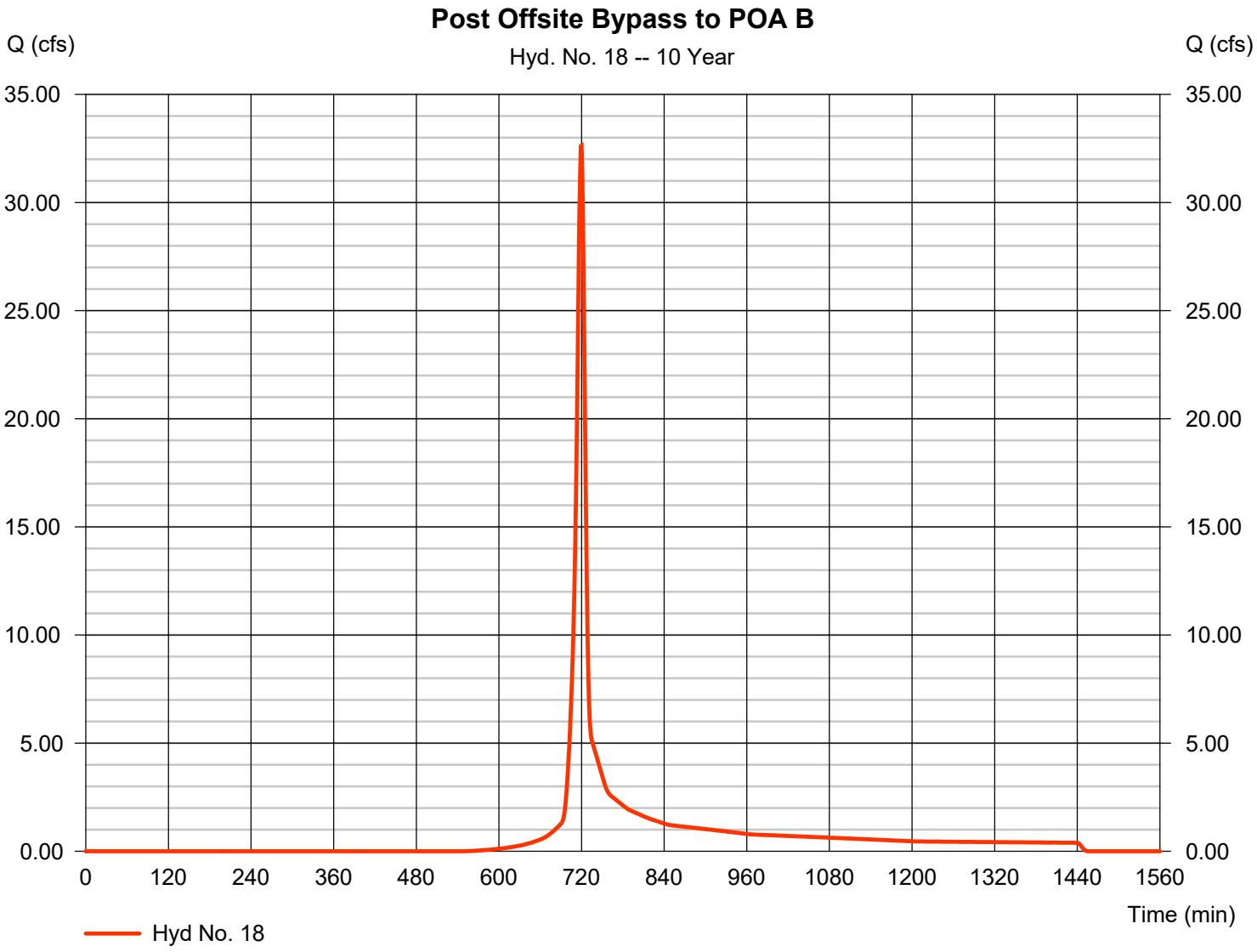


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 32.63 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 73,825 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

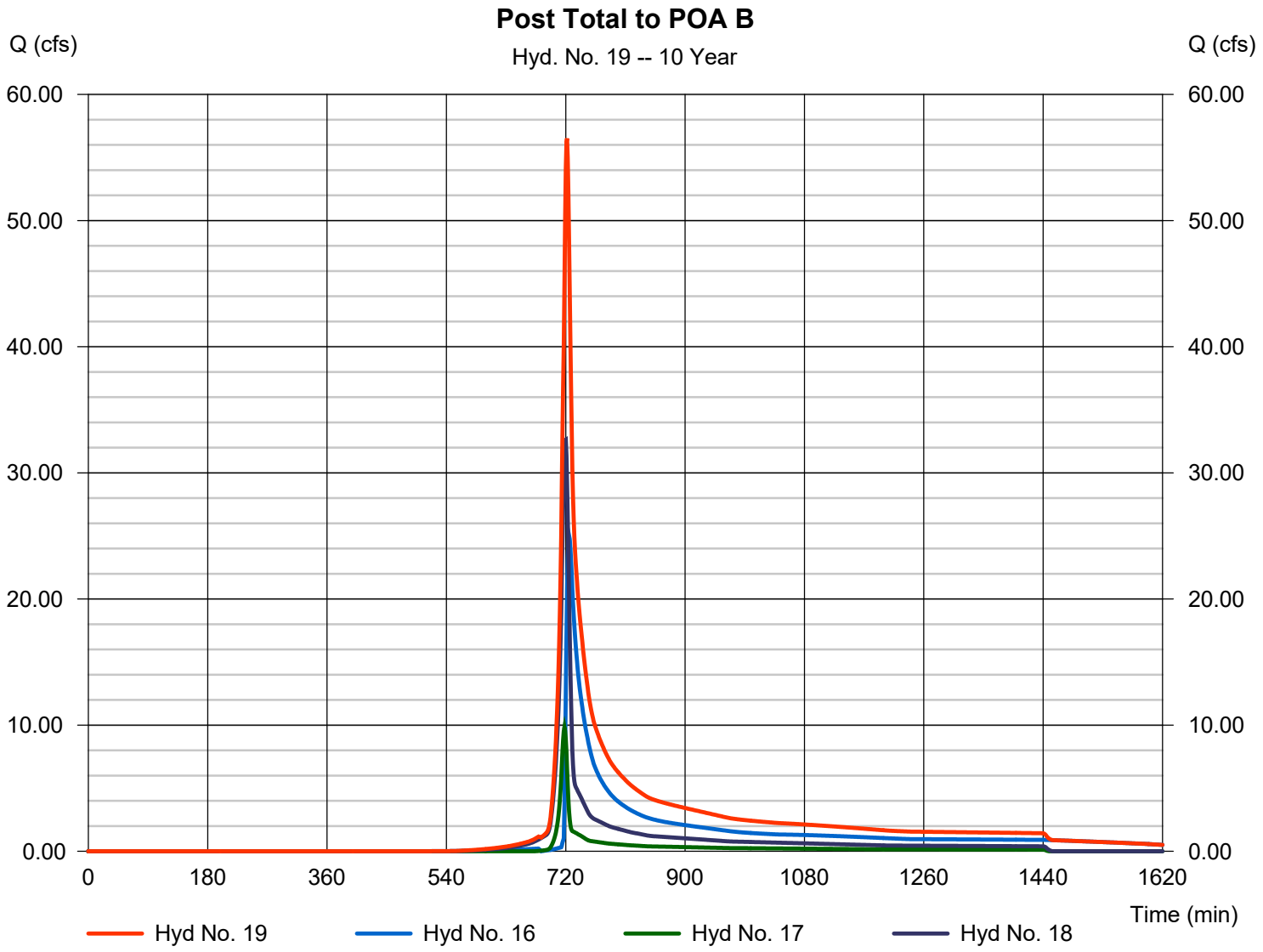


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	=	Combine	Peak discharge	=	56.52 cfs
Storm frequency	=	10 yrs	Time to peak	=	722 min
Time interval	=	1 min	Hyd. volume	=	226,822 cuft
Inflow hyds.	=	16, 17, 18	Contrib. drain. area	=	12.390 ac

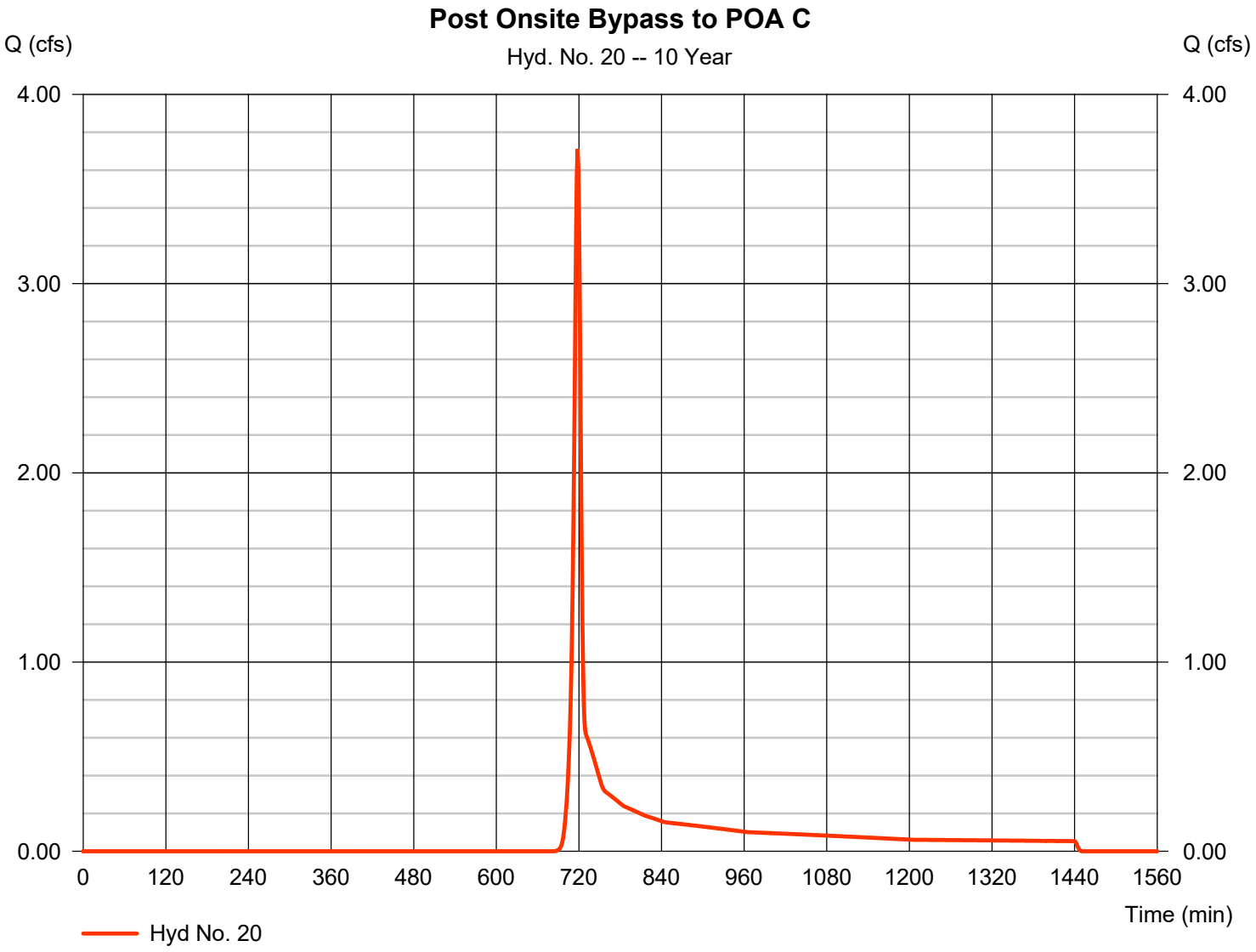


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.711 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	7,728 cuft
Drainage area	=	1.550 ac	Curve number	=	59
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.17 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

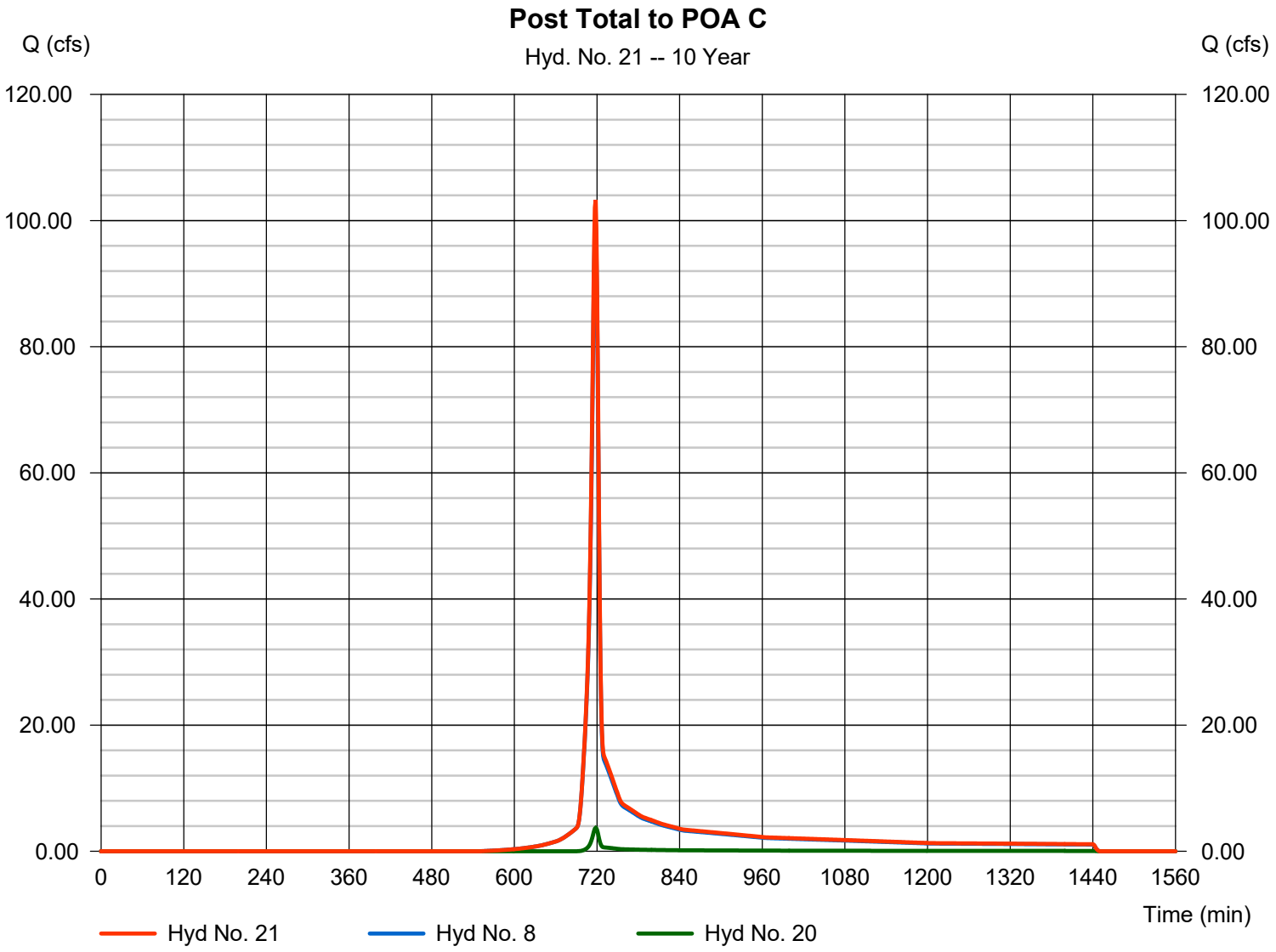


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 103.26 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 207,868 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

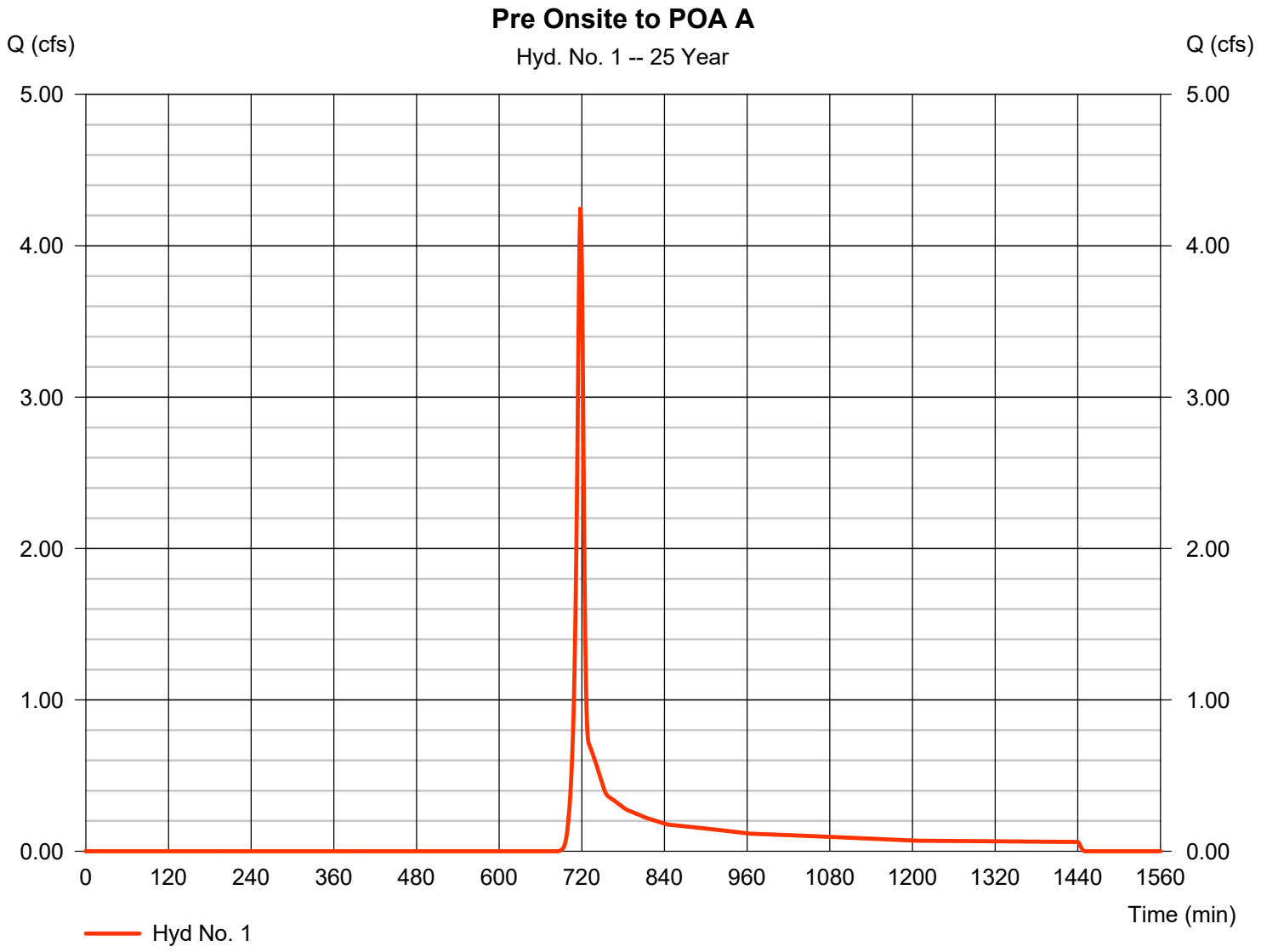
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.256	1	718	8,866	------	------	------	Pre Onsite to POA A
2	SCS Runoff	2.769	1	718	5,596	------	------	------	Pre Offsite to POA A
3	Combine	7.025	1	718	14,462	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	21.08	1	718	43,922	------	------	------	Pre Onsite to POA B
5	SCS Runoff	90.21	1	719	204,086	------	------	------	Pre Offsite to POA B
6	Combine	110.76	1	719	248,008	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	6.355	1	718	13,241	------	------	------	Pre Onsite to POA C
8	SCS Runoff	129.70	1	718	262,080	------	------	------	Pre/Post Offsite to POA C
9	Combine	136.05	1	718	275,321	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	2.249	1	718	4,536	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	36.85	1	718	75,541	------	------	------	Post Onsite to Pond
13	SCS Runoff	49.48	1	718	104,728	------	------	------	Post Offsite East to Pond
14	SCS Runoff	2.769	1	718	5,596	------	------	------	Post Offsite South to Pond
15	Combine	89.10	1	718	185,865	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	47.69	1	723	175,097	15	1000.28	68,892	Pond
17	SCS Runoff	13.92	1	718	28,121	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	42.73	1	719	96,672	------	------	------	Post Offsite Bypass to POA B
19	Combine	95.51	1	721	299,890	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	5.374	1	718	10,929	------	------	------	Post Onsite Bypass to POA C
21	Combine	135.07	1	718	273,009	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 4.256 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 8,866 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

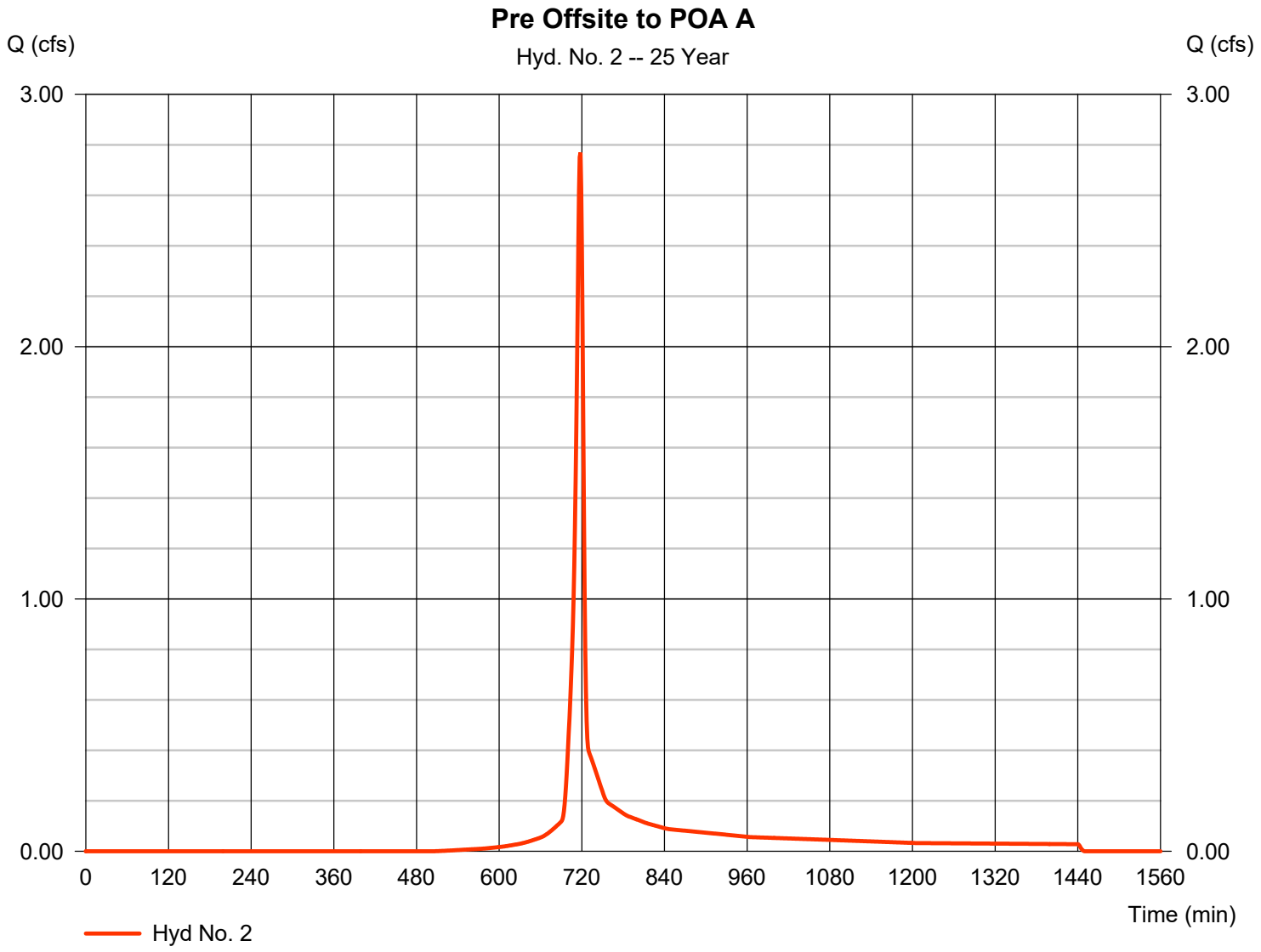


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.769 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 5,596 cuft
Drainage area	= 0.490 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

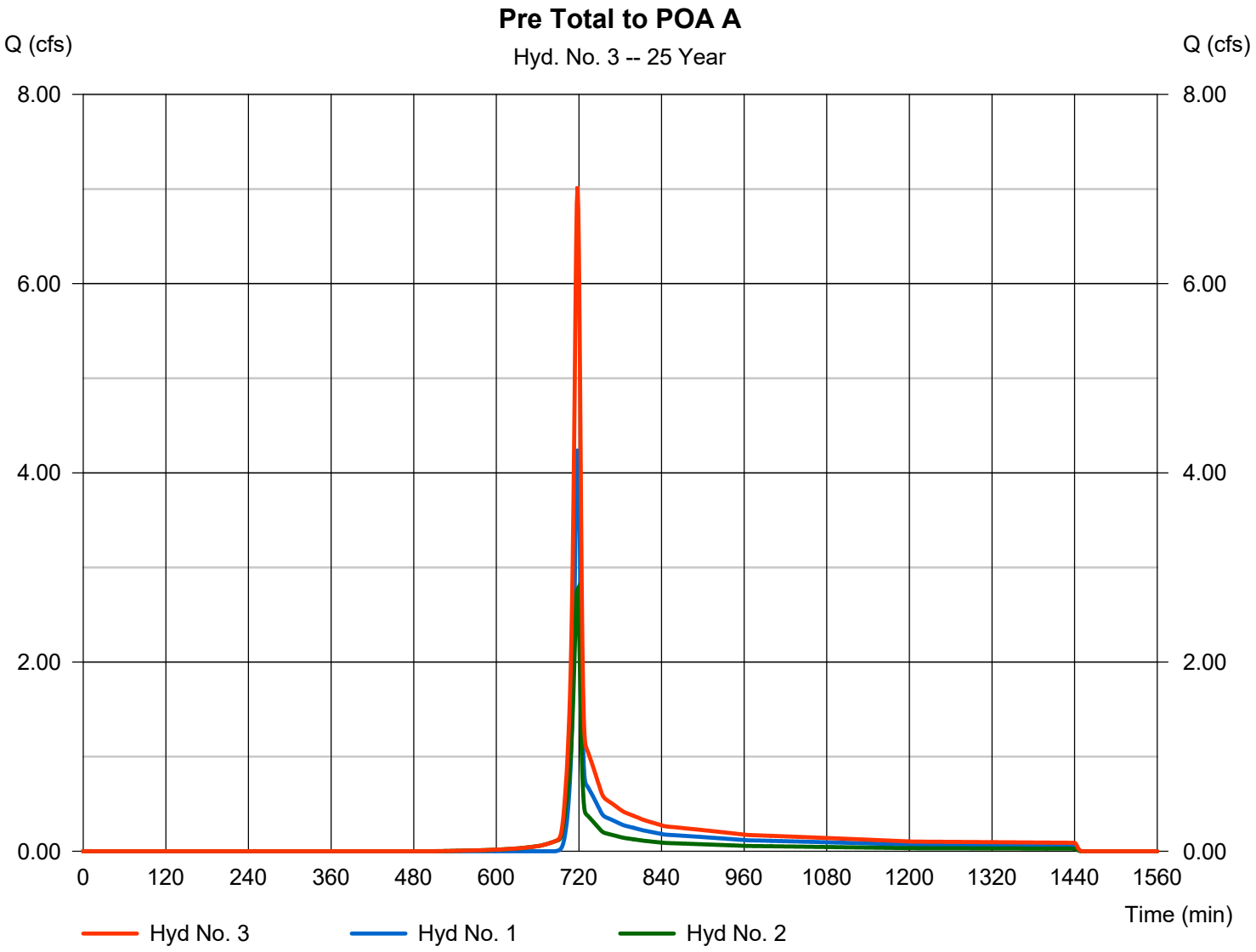


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 7.025 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 14,462 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

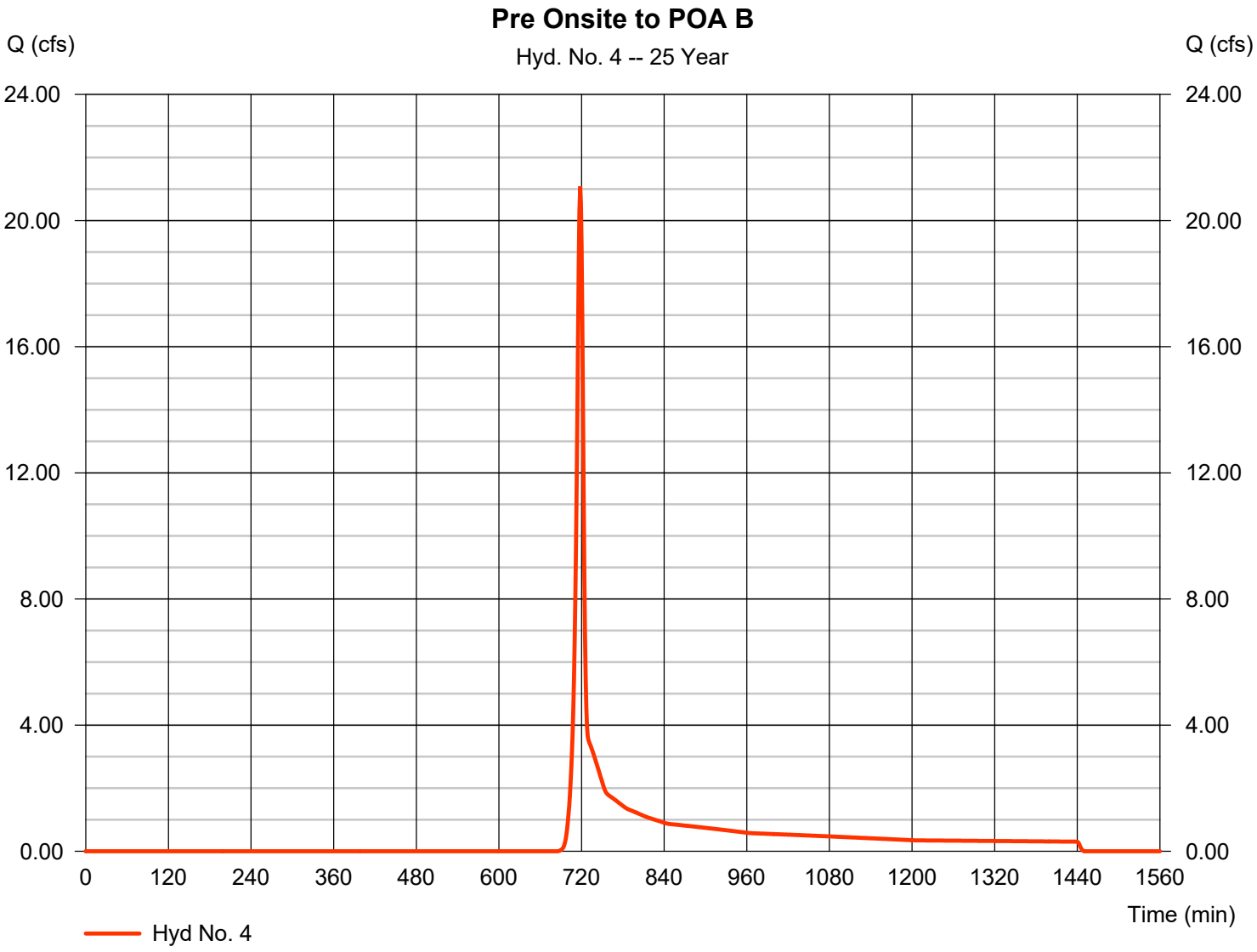


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 21.08 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 43,922 cuft
Drainage area	= 7.530 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

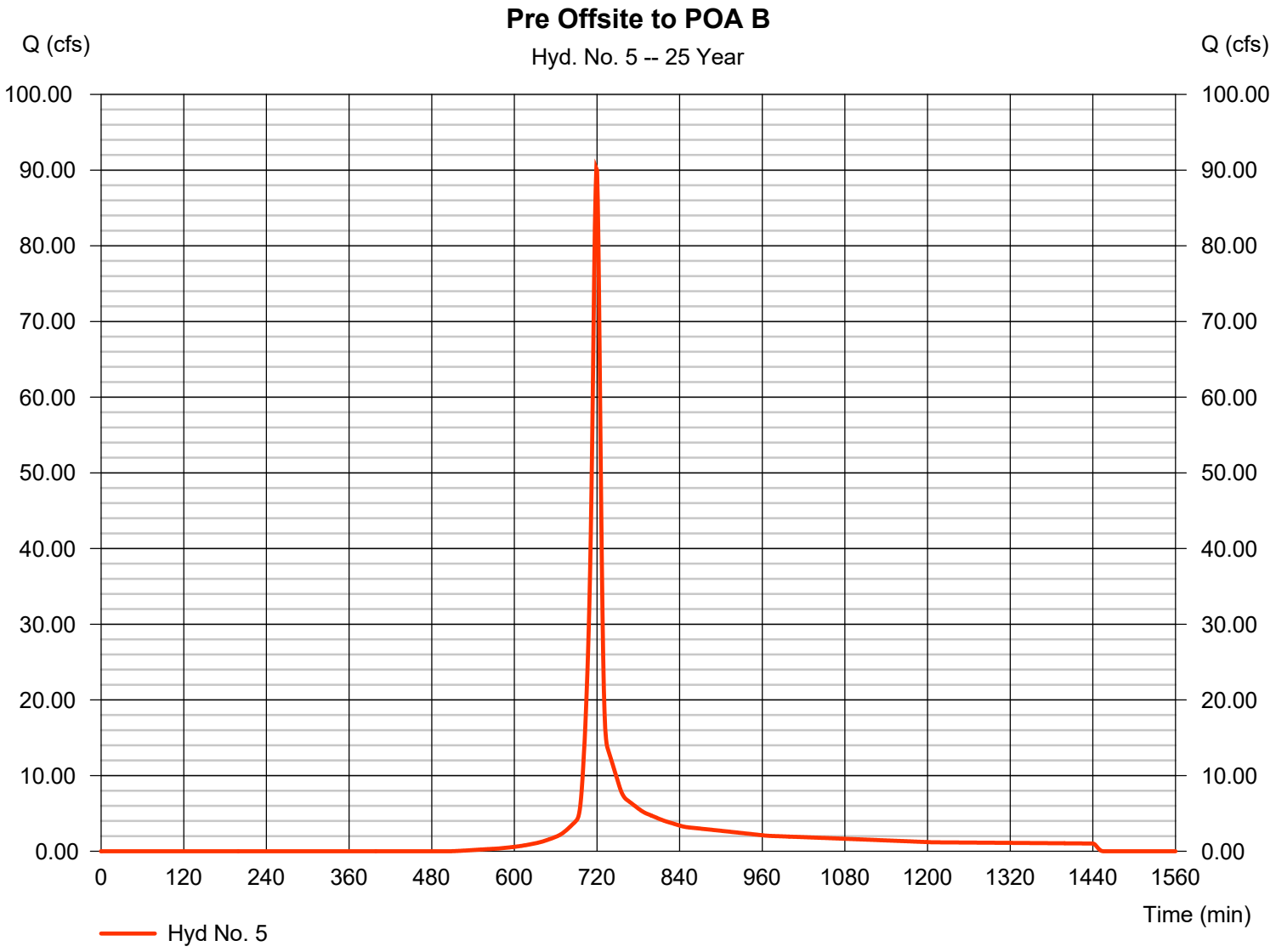


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 90.21 cfs
Storm frequency	= 25 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 204,086 cuft
Drainage area	= 18.430 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

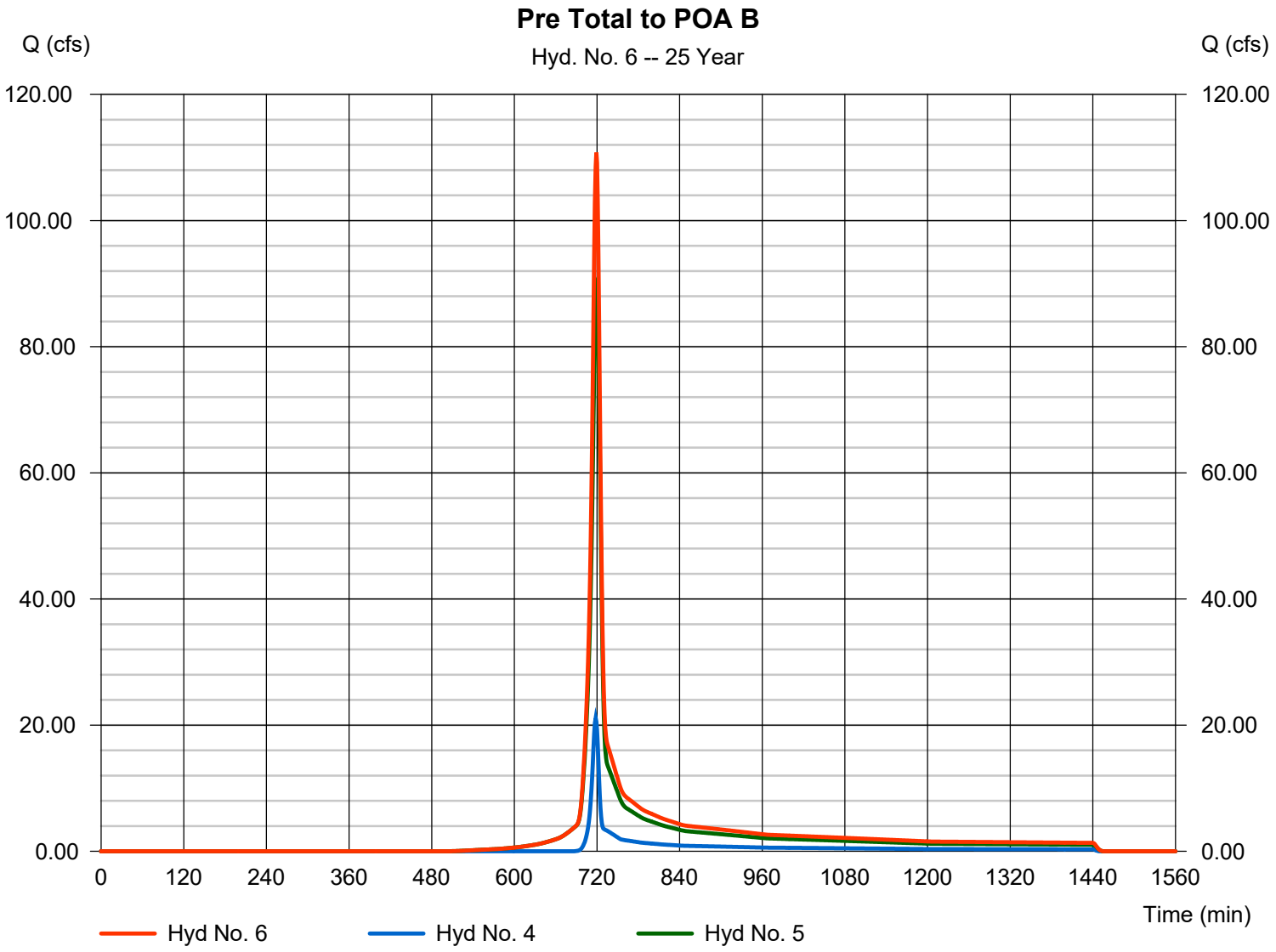


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 110.76 cfs
Storm frequency	= 25 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 248,008 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

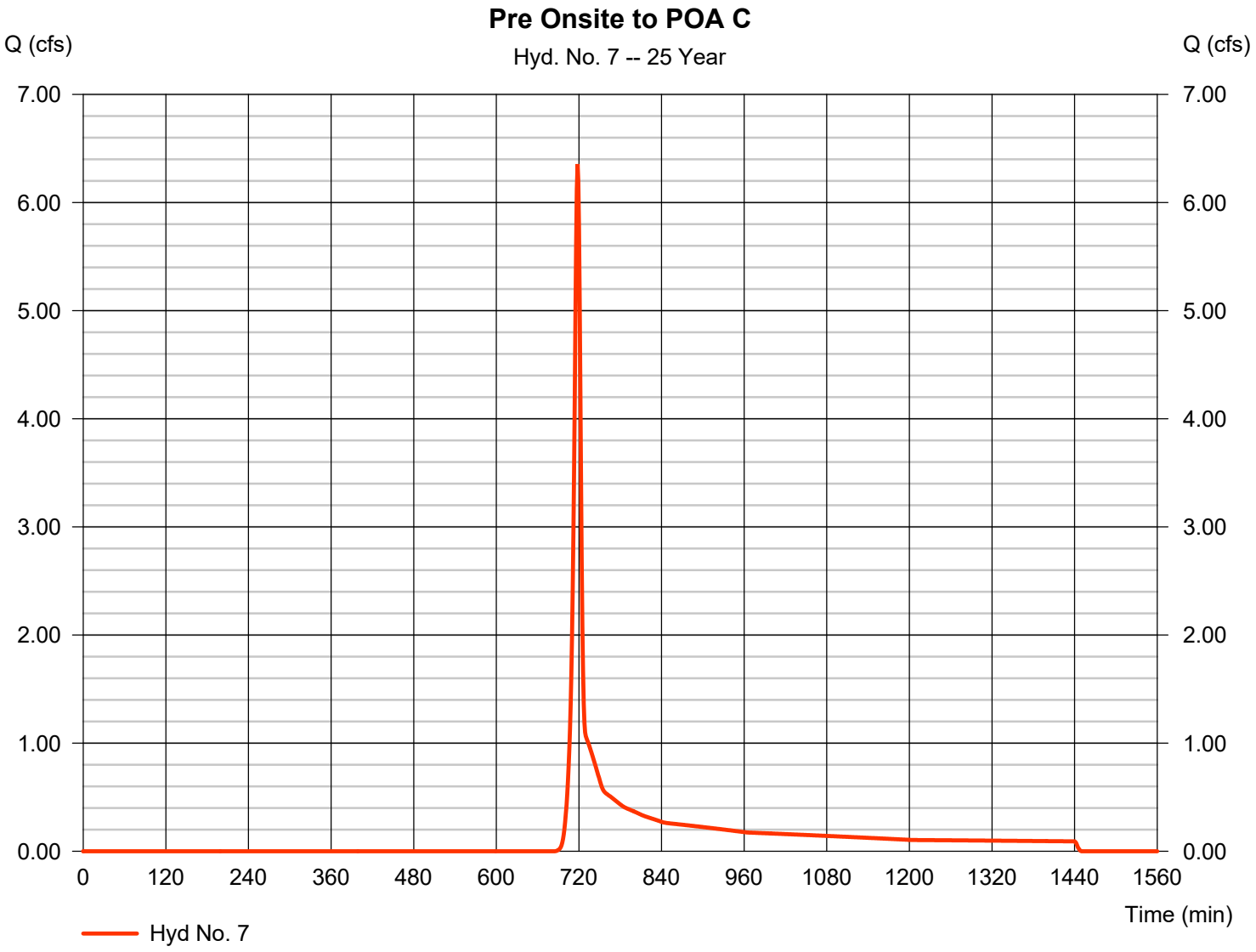


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.355 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	13,241 cuft
Drainage area	=	2.270 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.07 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

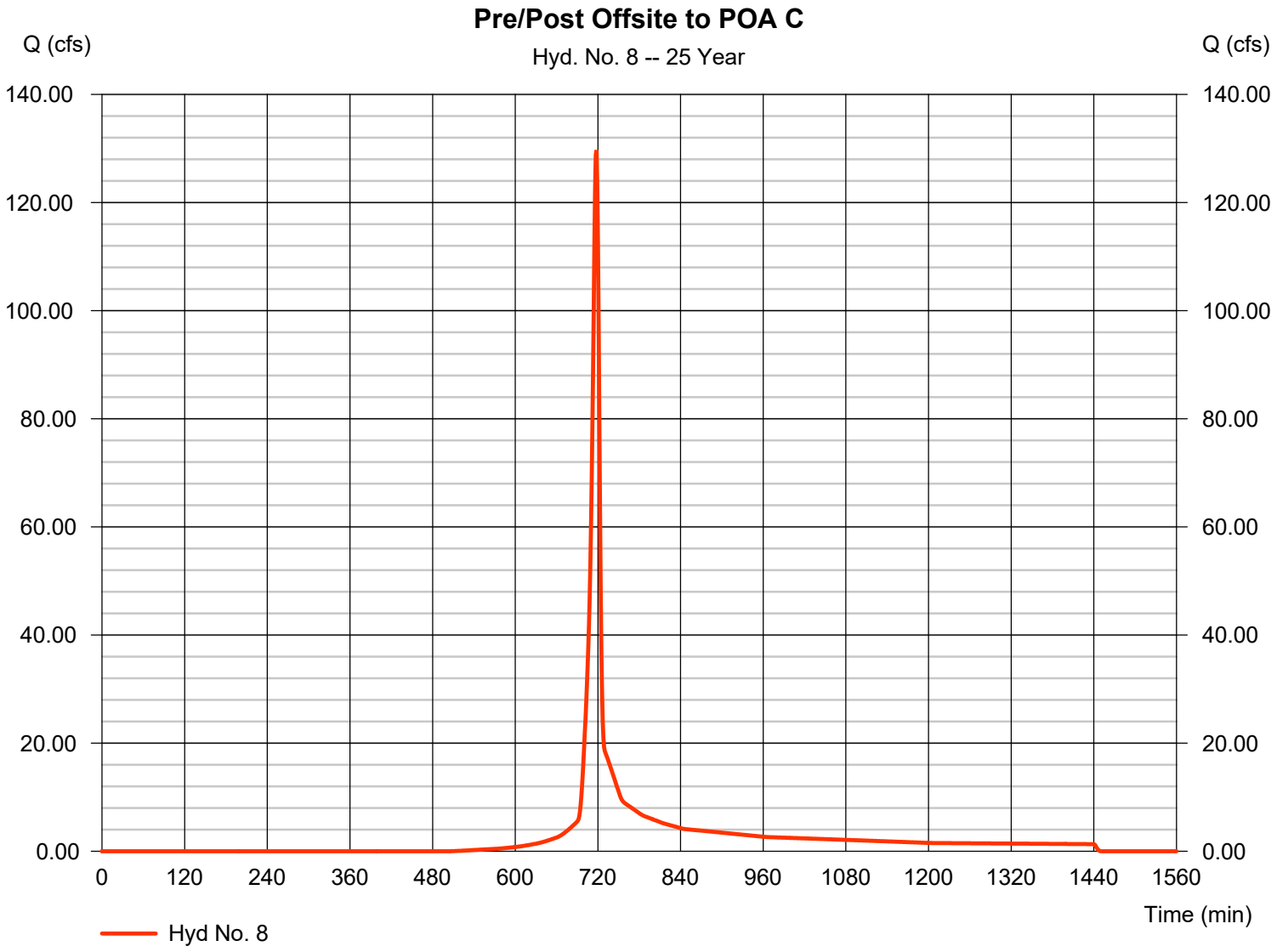


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	129.70 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	262,080 cuft
Drainage area	=	22.950 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.07 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

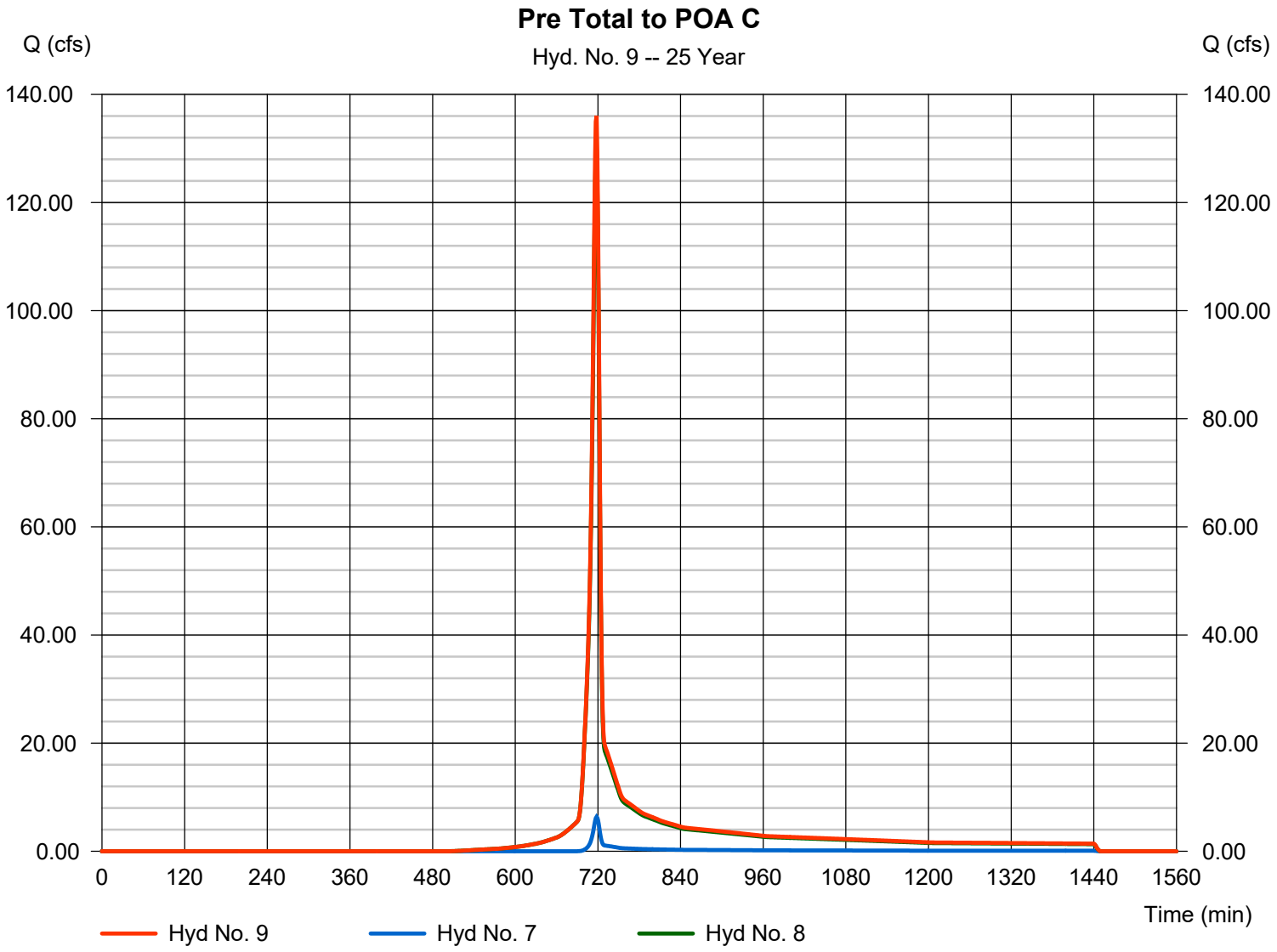


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 136.05 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 275,321 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

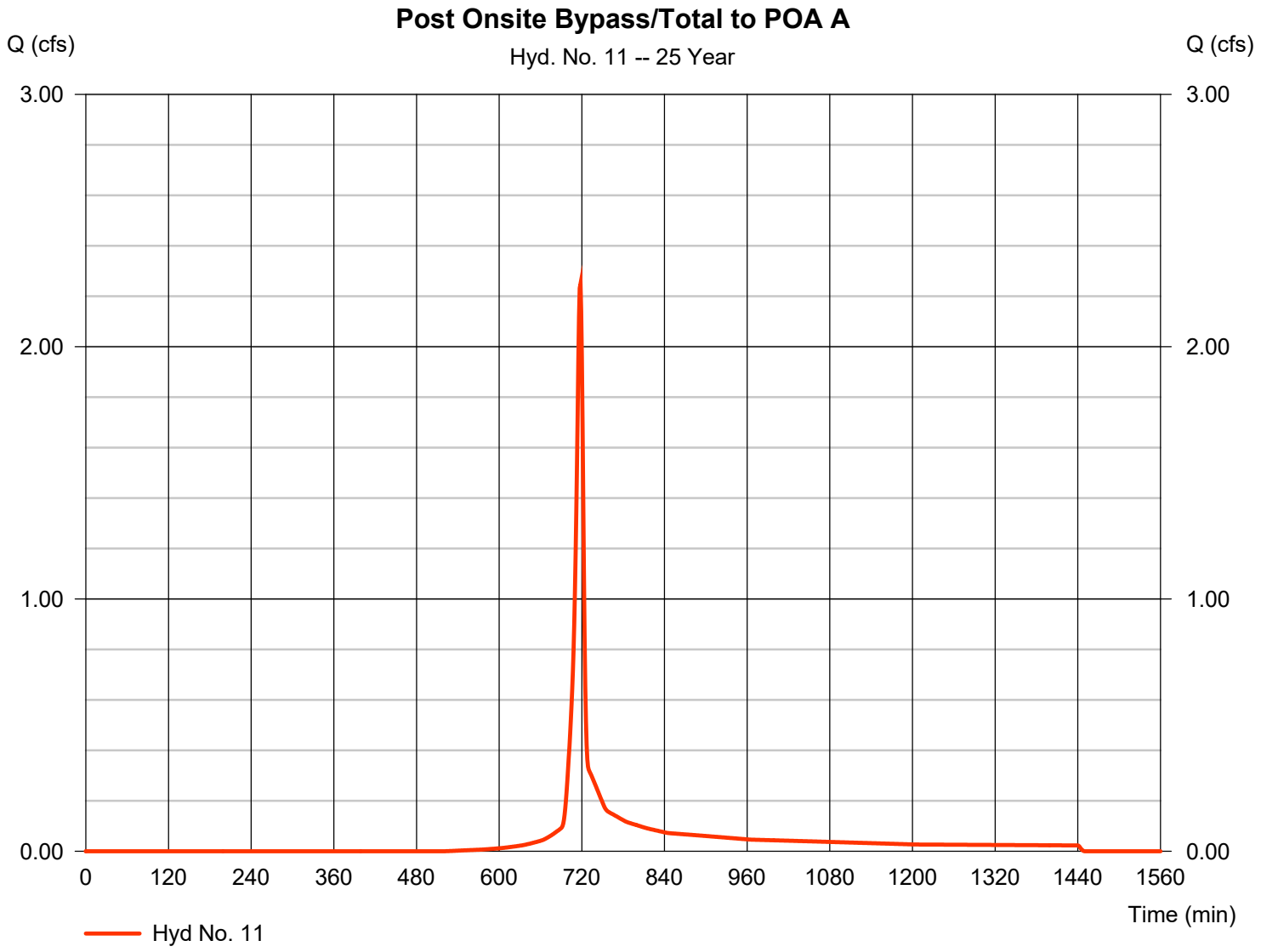


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.249 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 4,536 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

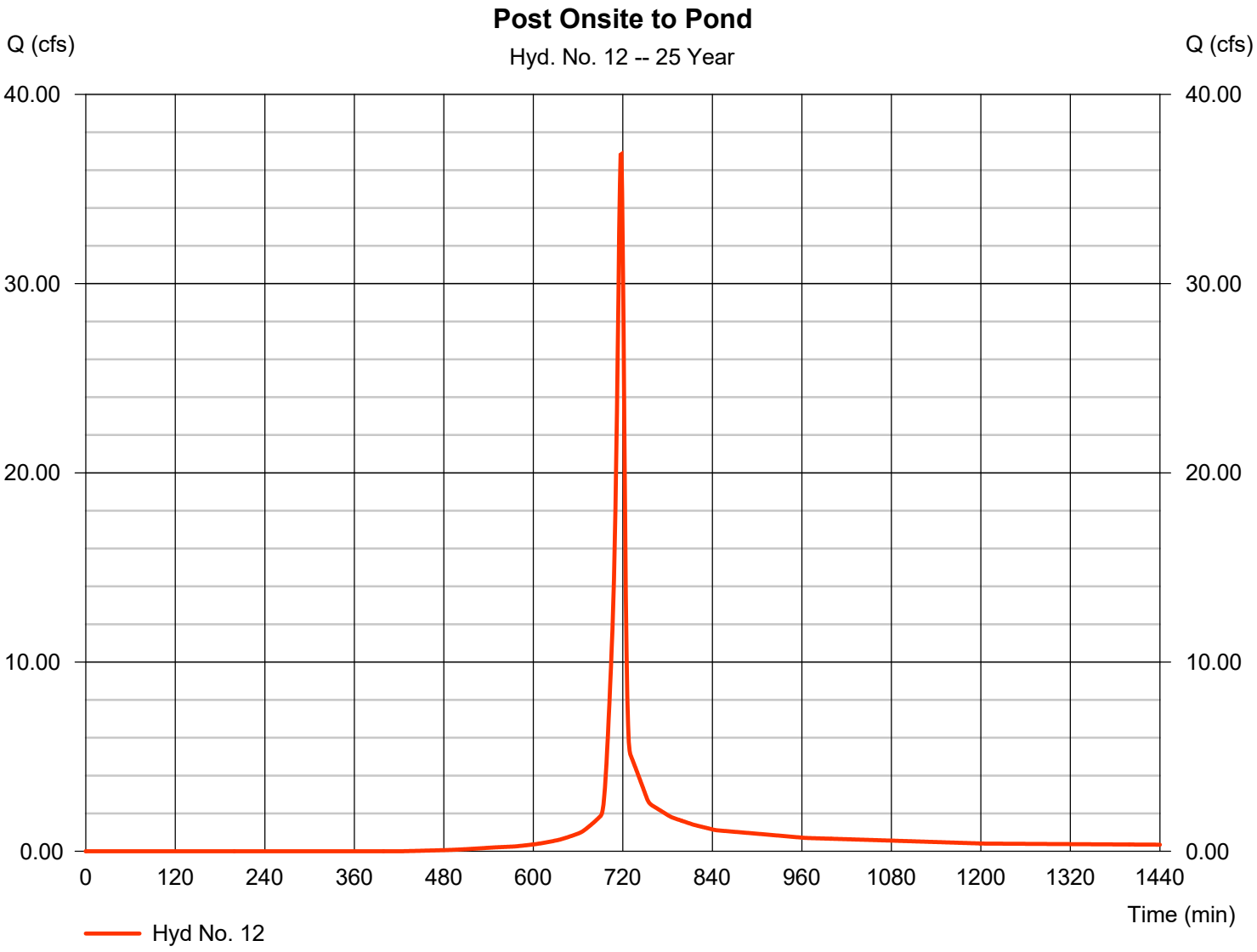


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	36.85 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	75,541 cuft
Drainage area	=	5.700 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.07 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

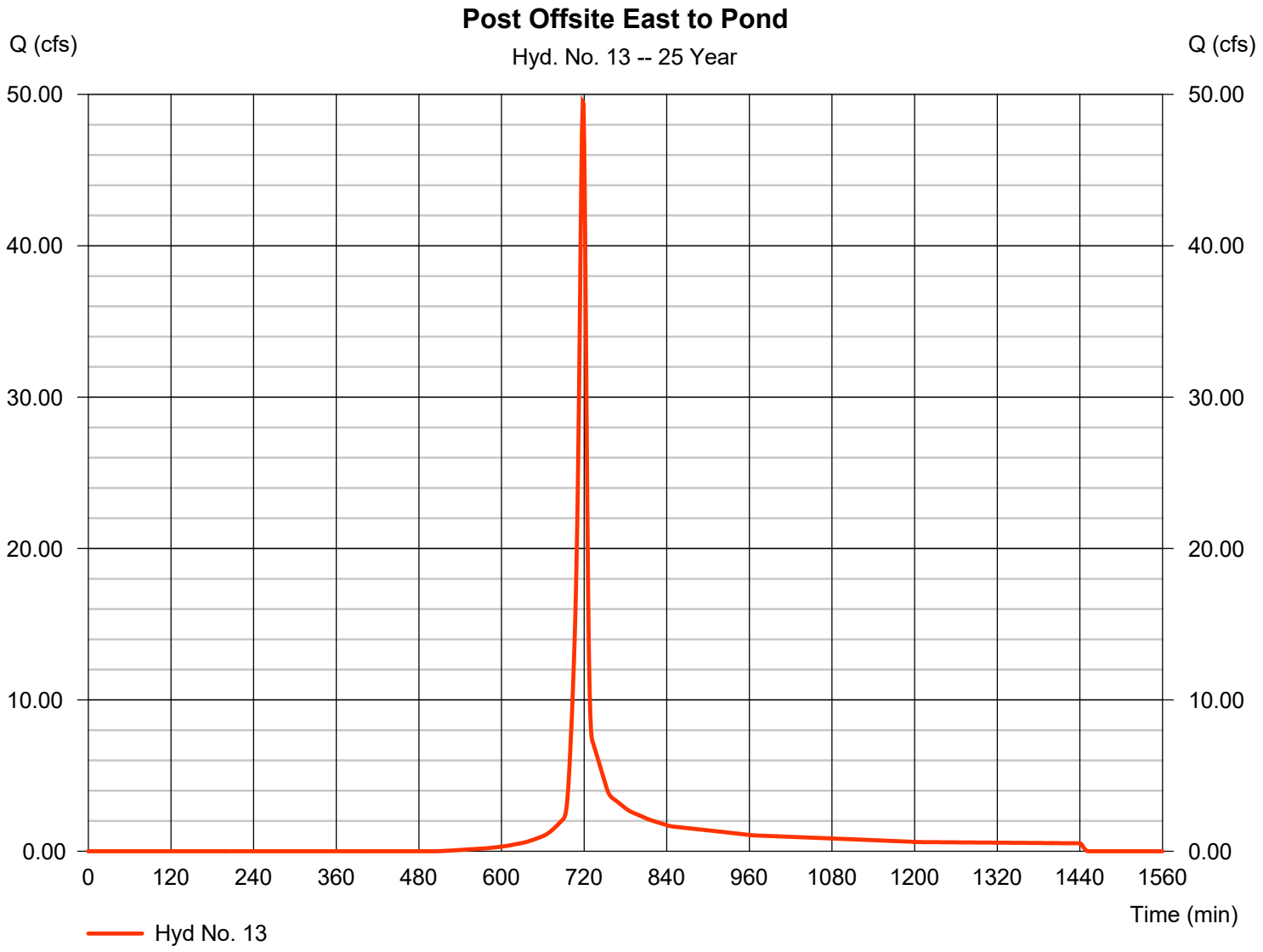


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	= SCS Runoff	Peak discharge	= 49.48 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 104,728 cuft
Drainage area	= 9.700 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

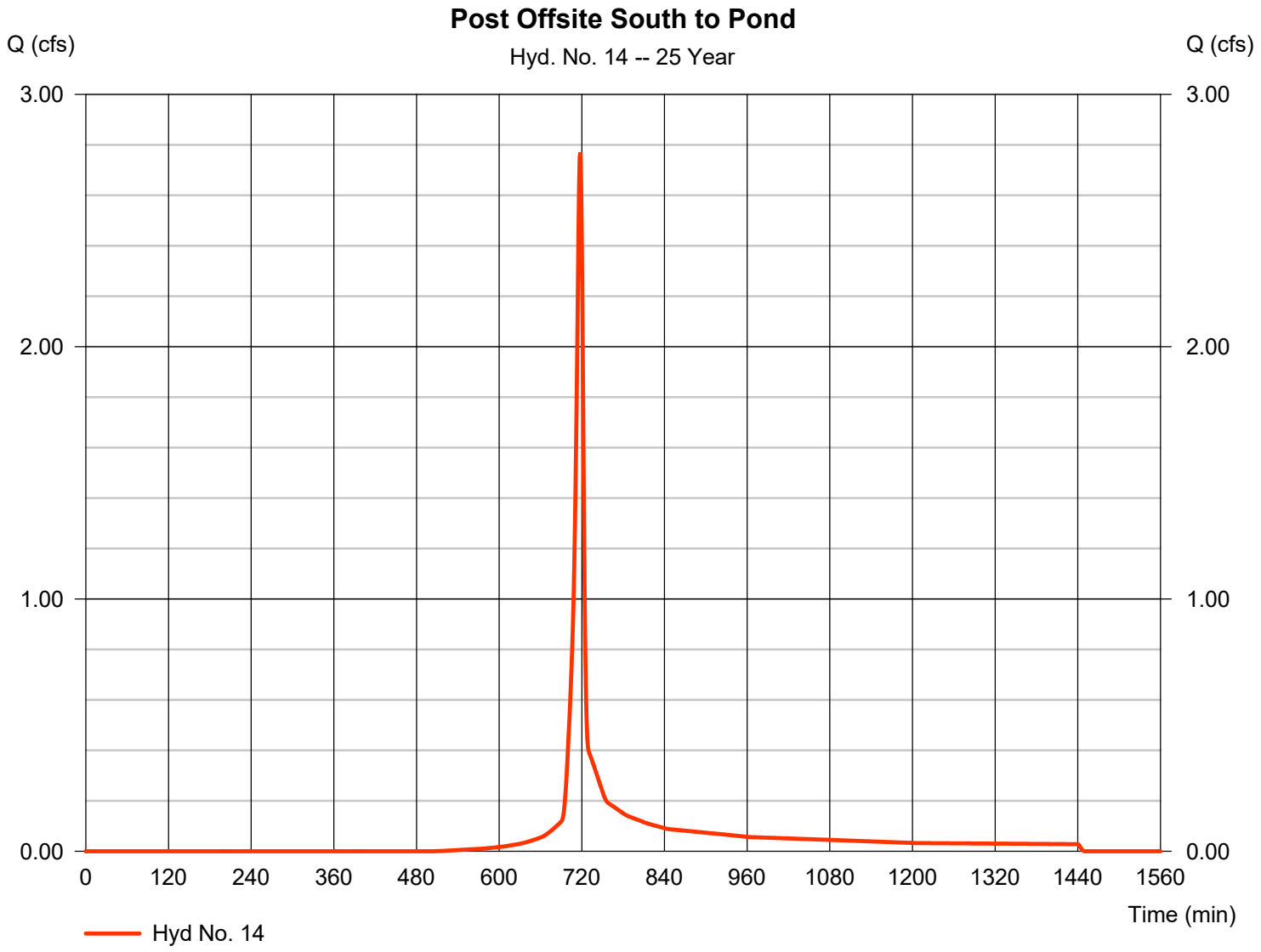


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.769 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	5,596 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.07 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

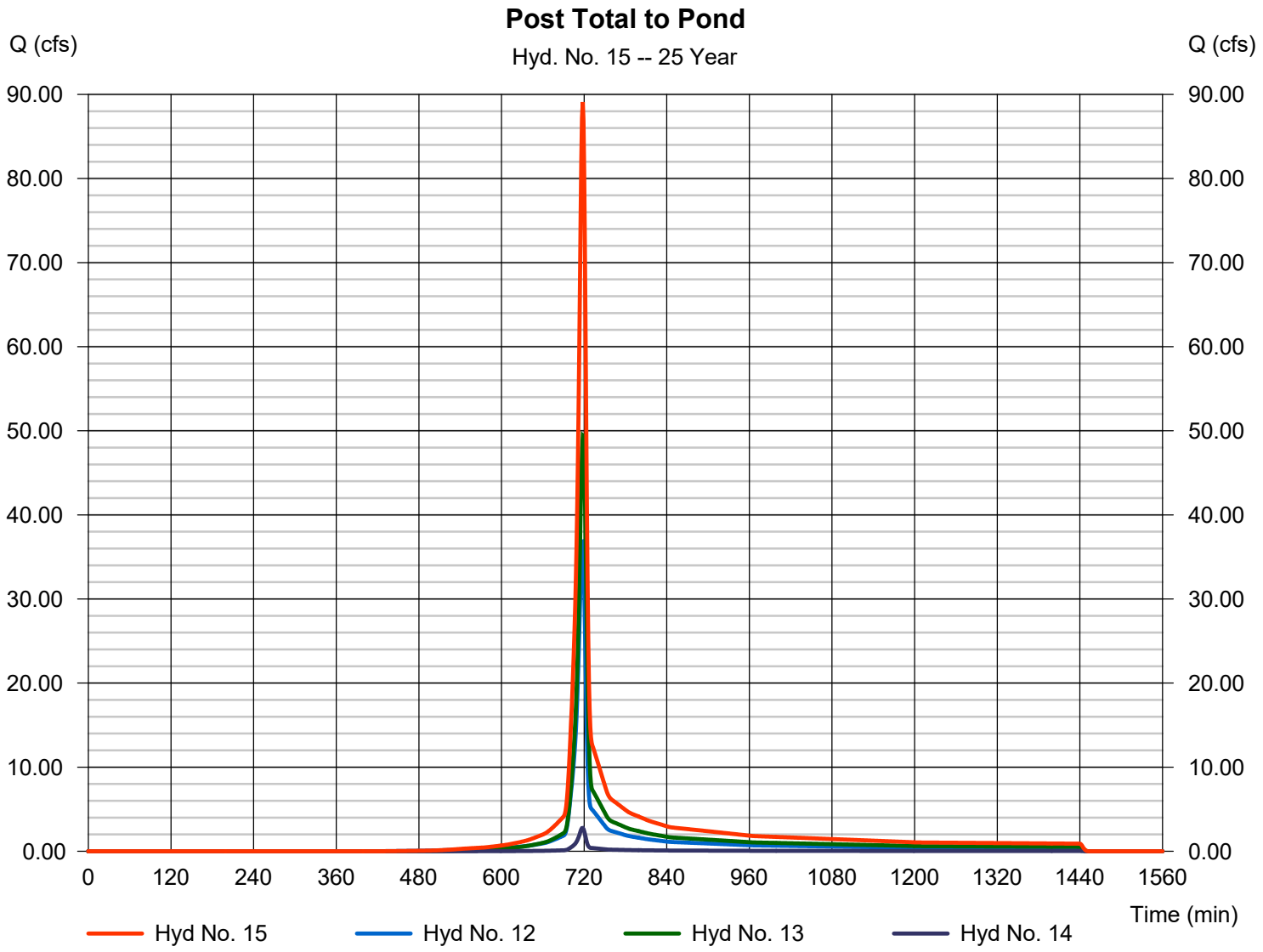


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 89.10 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 185,865 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



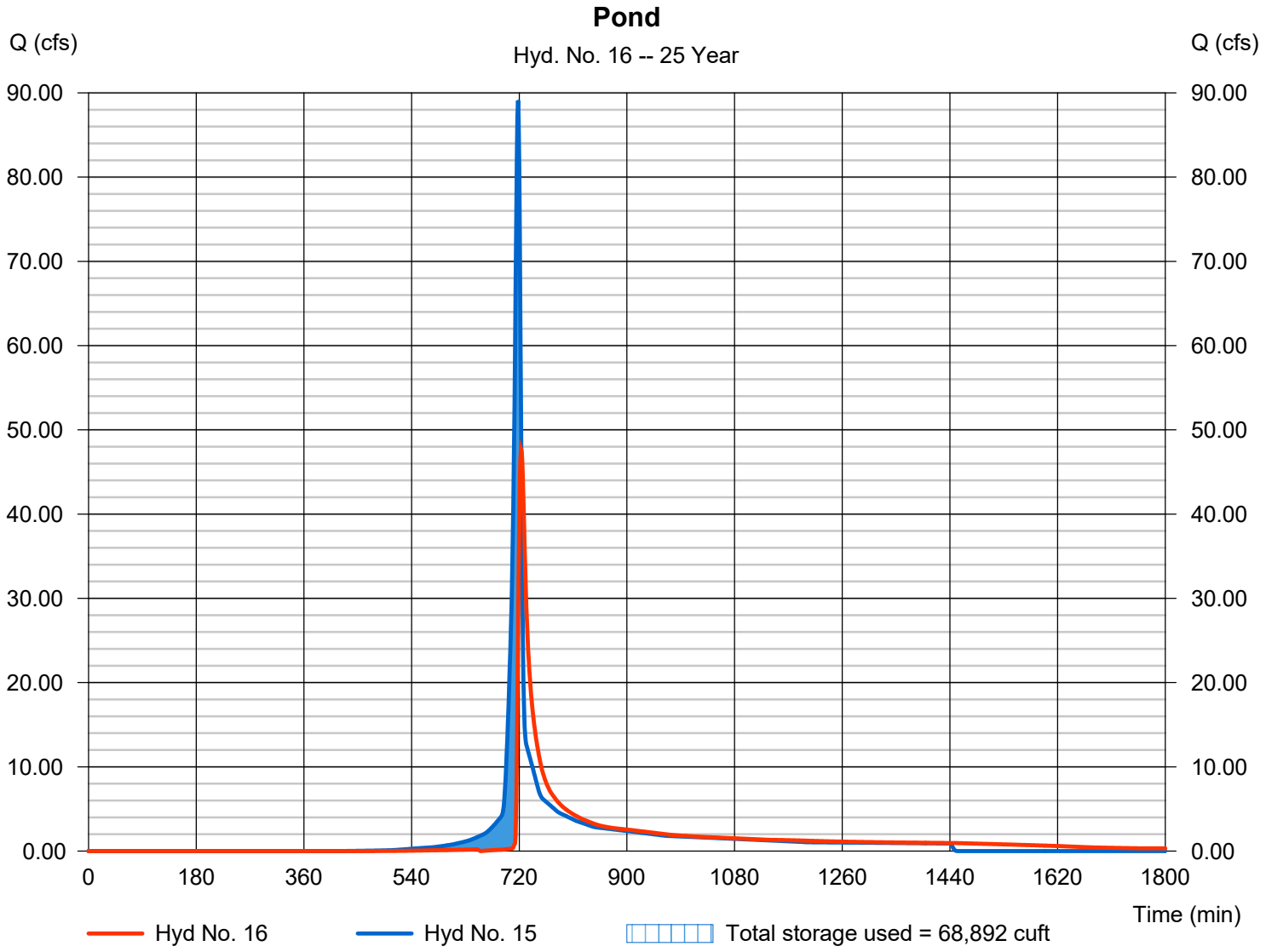
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	=	Reservoir	Peak discharge	=	47.69 cfs
Storm frequency	=	25 yrs	Time to peak	=	723 min
Time interval	=	1 min	Hyd. volume	=	175,097 cuft
Inflow hyd. No.	=	15 - Post Total to Pond	Max. Elevation	=	1000.28 ft
Reservoir name	=	Pond	Max. Storage	=	68,892 cuft

Storage Indication method used.

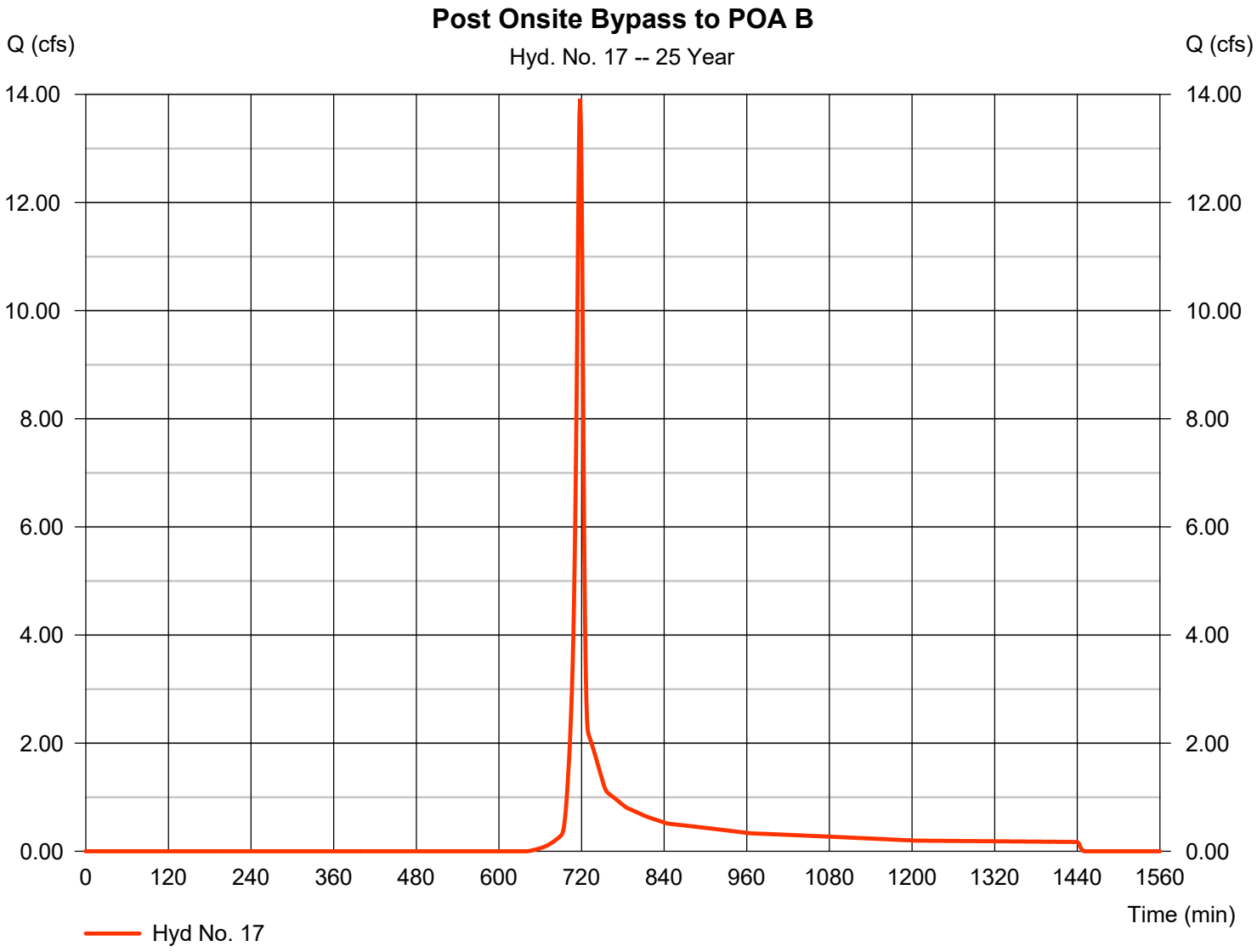


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 13.92 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 28,121 cuft
Drainage area	= 3.660 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

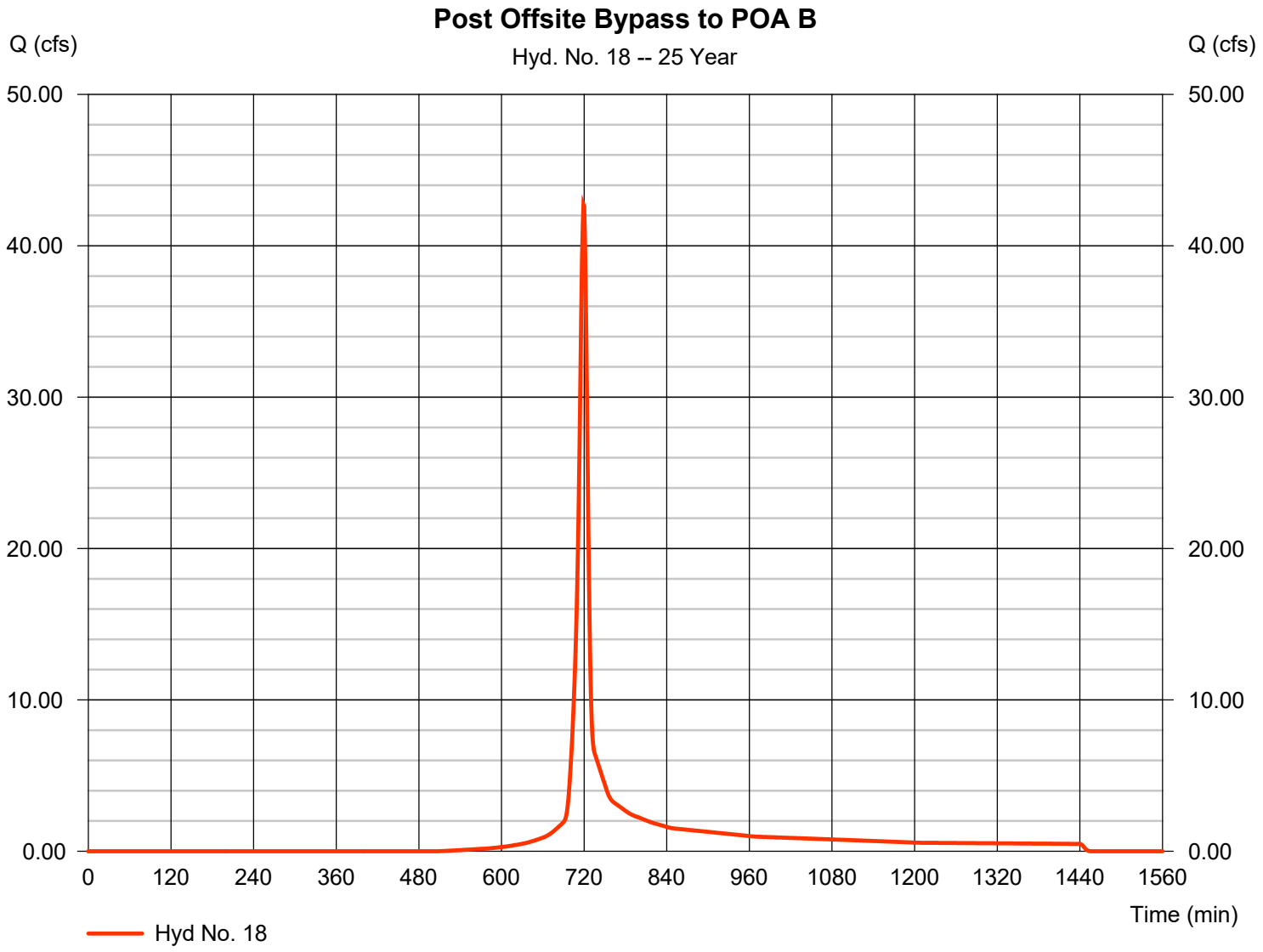


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 42.73 cfs
Storm frequency	= 25 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 96,672 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

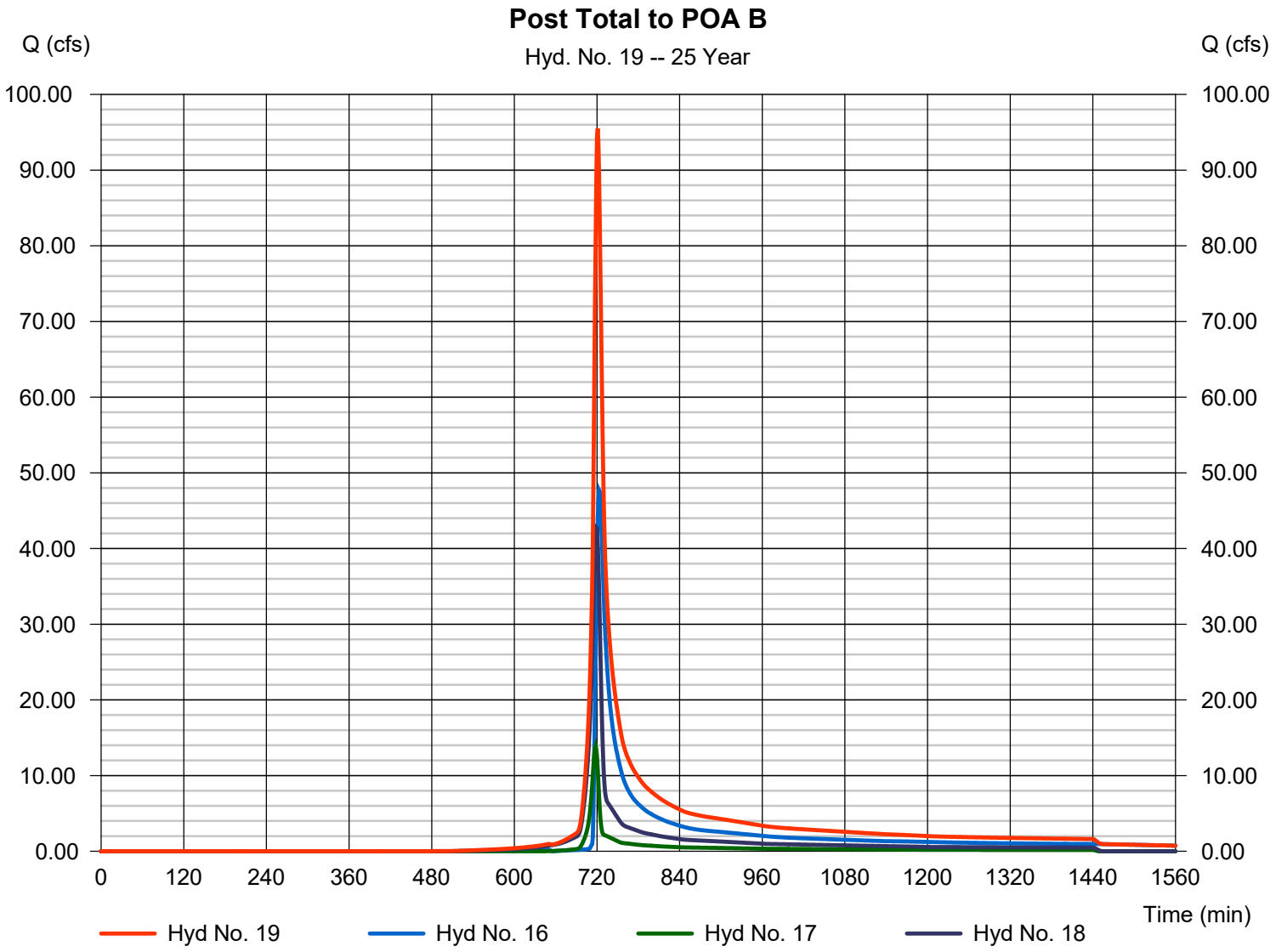


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	=	Combine	Peak discharge	=	95.51 cfs
Storm frequency	=	25 yrs	Time to peak	=	721 min
Time interval	=	1 min	Hyd. volume	=	299,890 cuft
Inflow hyds.	=	16, 17, 18	Contrib. drain. area	=	12.390 ac

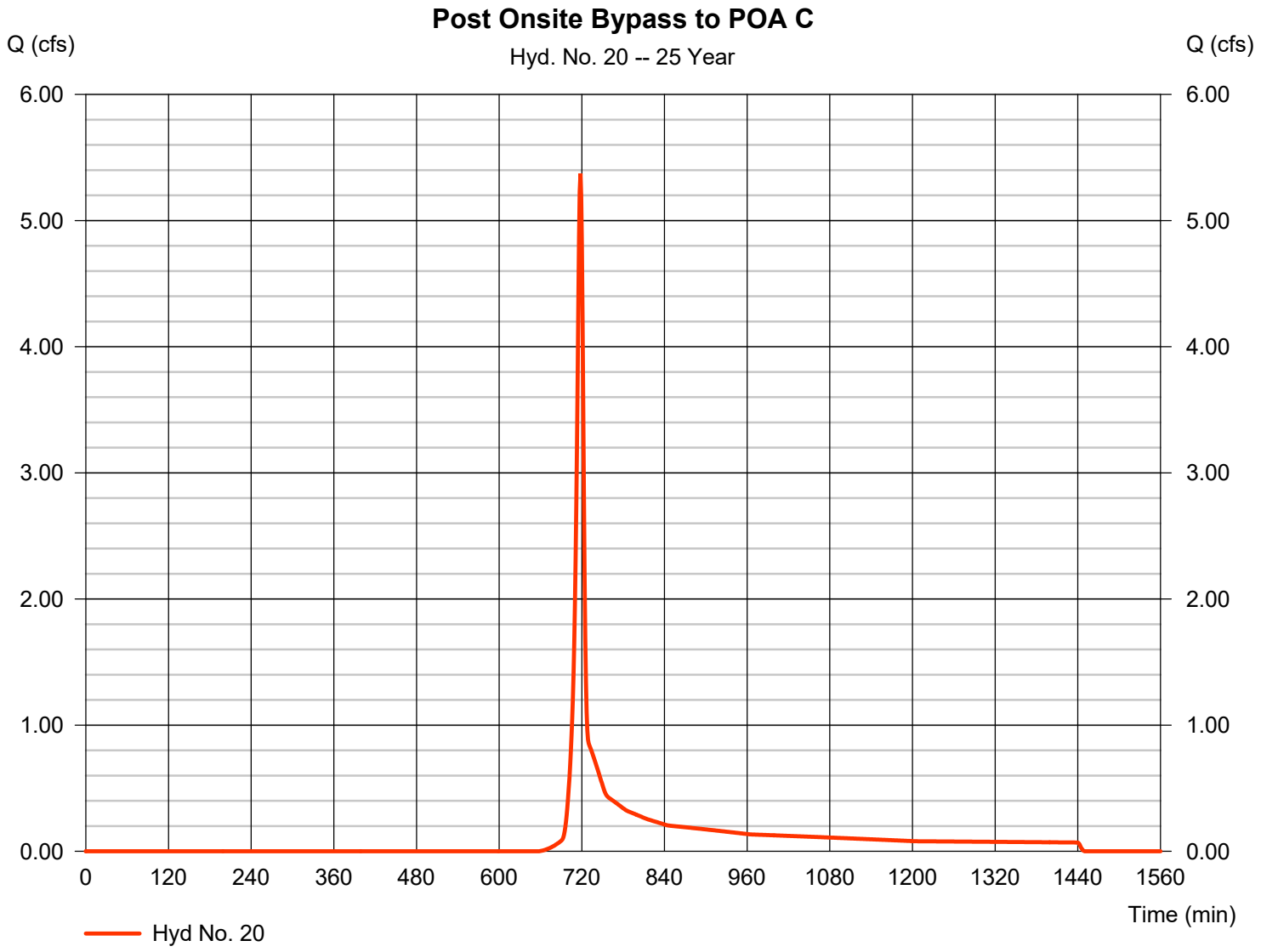


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 5.374 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 10,929 cuft
Drainage area	= 1.550 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

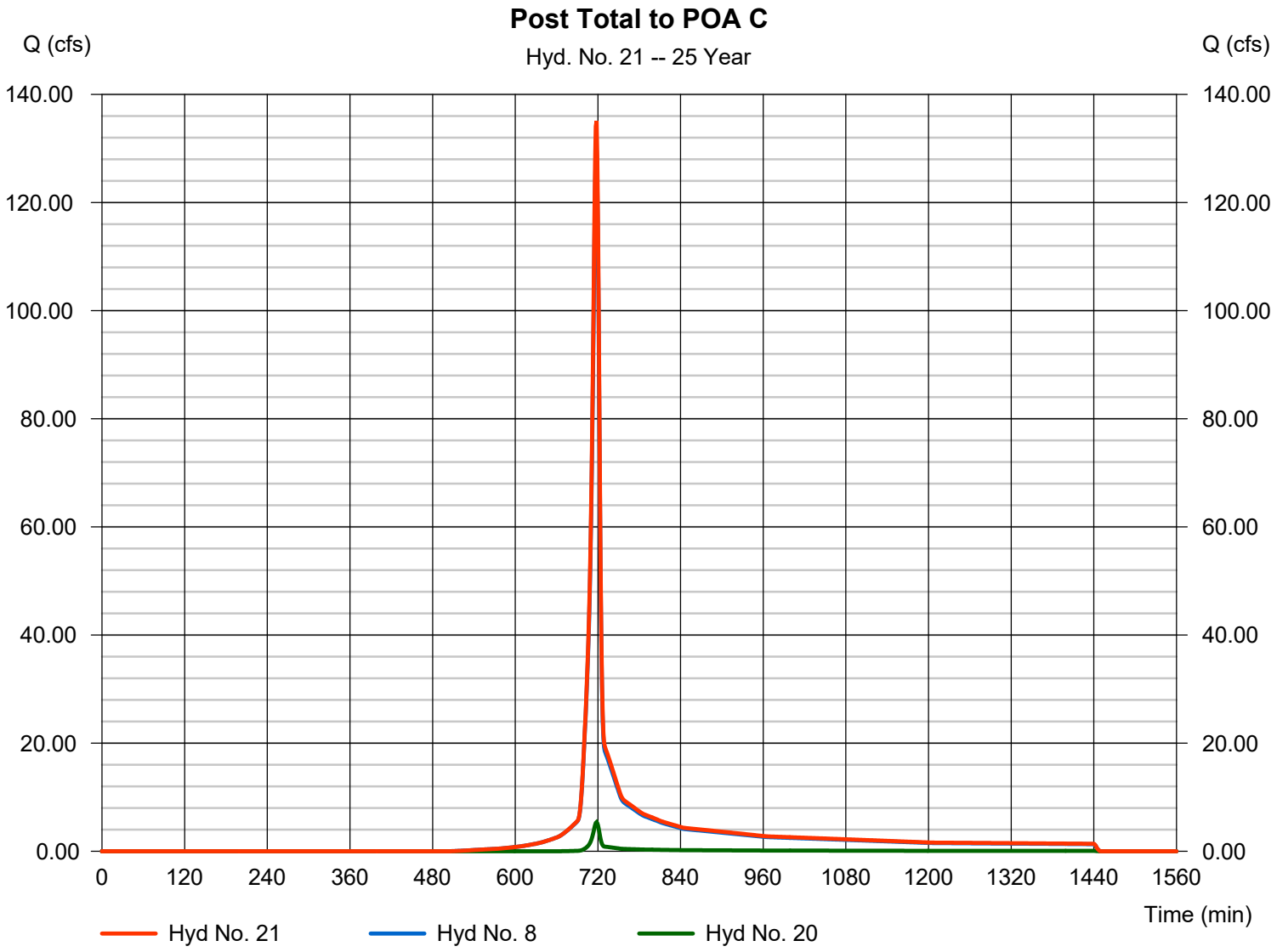


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 135.07 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 273,009 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

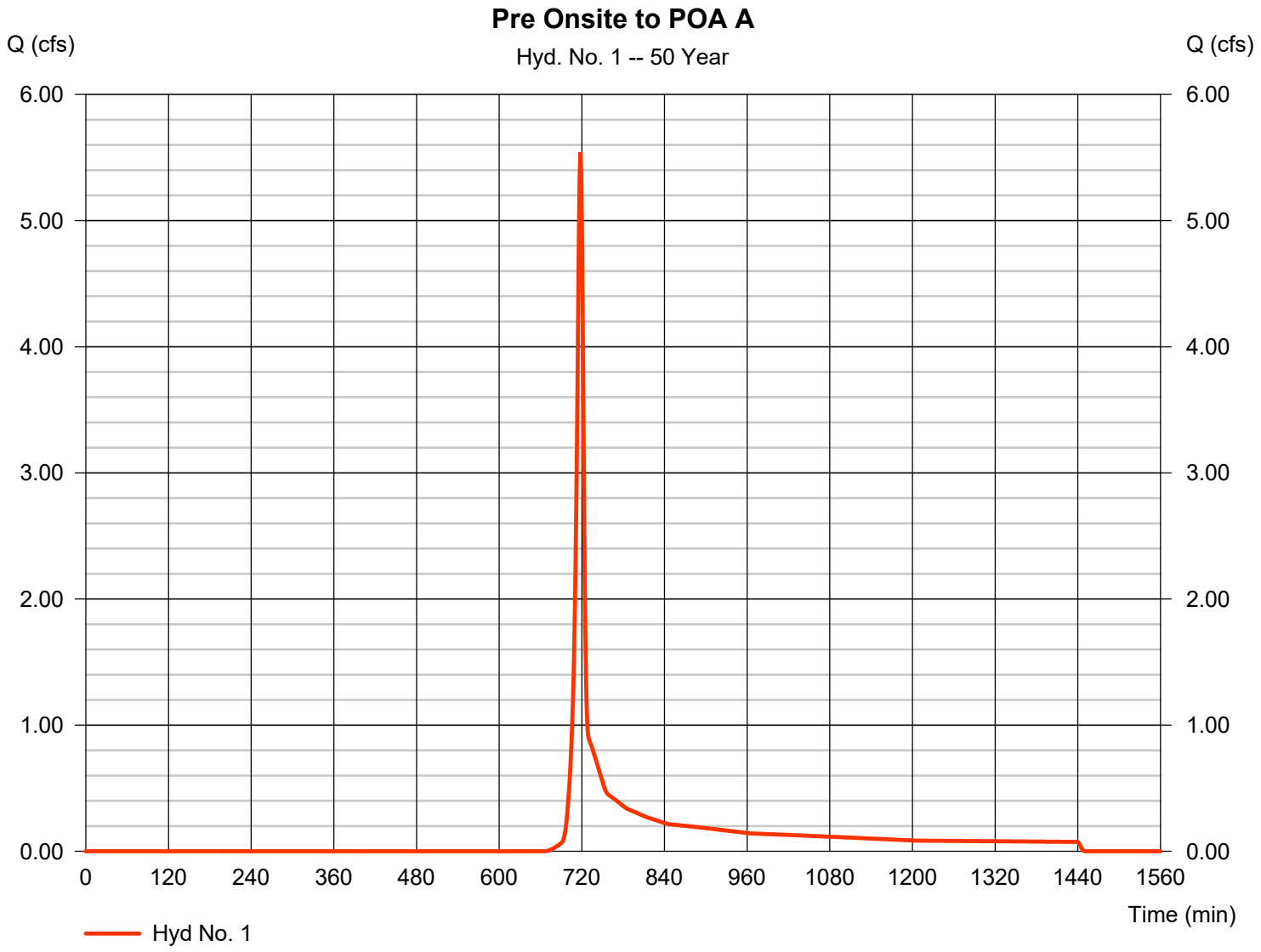
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.541	1	718	11,333	------	------	------	Pre Onsite to POA A
2	SCS Runoff	3.296	1	718	6,697	------	------	------	Pre Offsite to POA A
3	Combine	8.837	1	718	18,029	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	27.45	1	718	56,142	------	------	------	Pre Onsite to POA B
5	SCS Runoff	107.76	1	719	244,241	------	------	------	Pre Offsite to POA B
6	Combine	134.35	1	719	300,382	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	8.275	1	718	16,925	------	------	------	Pre Onsite to POA C
8	SCS Runoff	154.39	1	718	313,646	------	------	------	Pre/Post Offsite to POA C
9	Combine	162.66	1	718	330,570	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	2.687	1	718	5,445	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	43.19	1	717	89,139	------	------	------	Post Onsite to Pond
13	SCS Runoff	59.05	1	718	125,334	------	------	------	Post Offsite East to Pond
14	SCS Runoff	3.296	1	718	6,697	------	------	------	Post Offsite South to Pond
15	Combine	105.50	1	718	221,170	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	64.97	1	723	210,291	15	1000.94	76,818	Pond
17	SCS Runoff	17.39	1	718	34,958	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	51.04	1	719	115,693	------	------	------	Post Offsite Bypass to POA B
19	Combine	124.72	1	720	360,942	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	6.793	1	718	13,702	------	------	------	Post Onsite Bypass to POA C
21	Combine	161.18	1	718	327,348	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 5.541 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 11,333 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

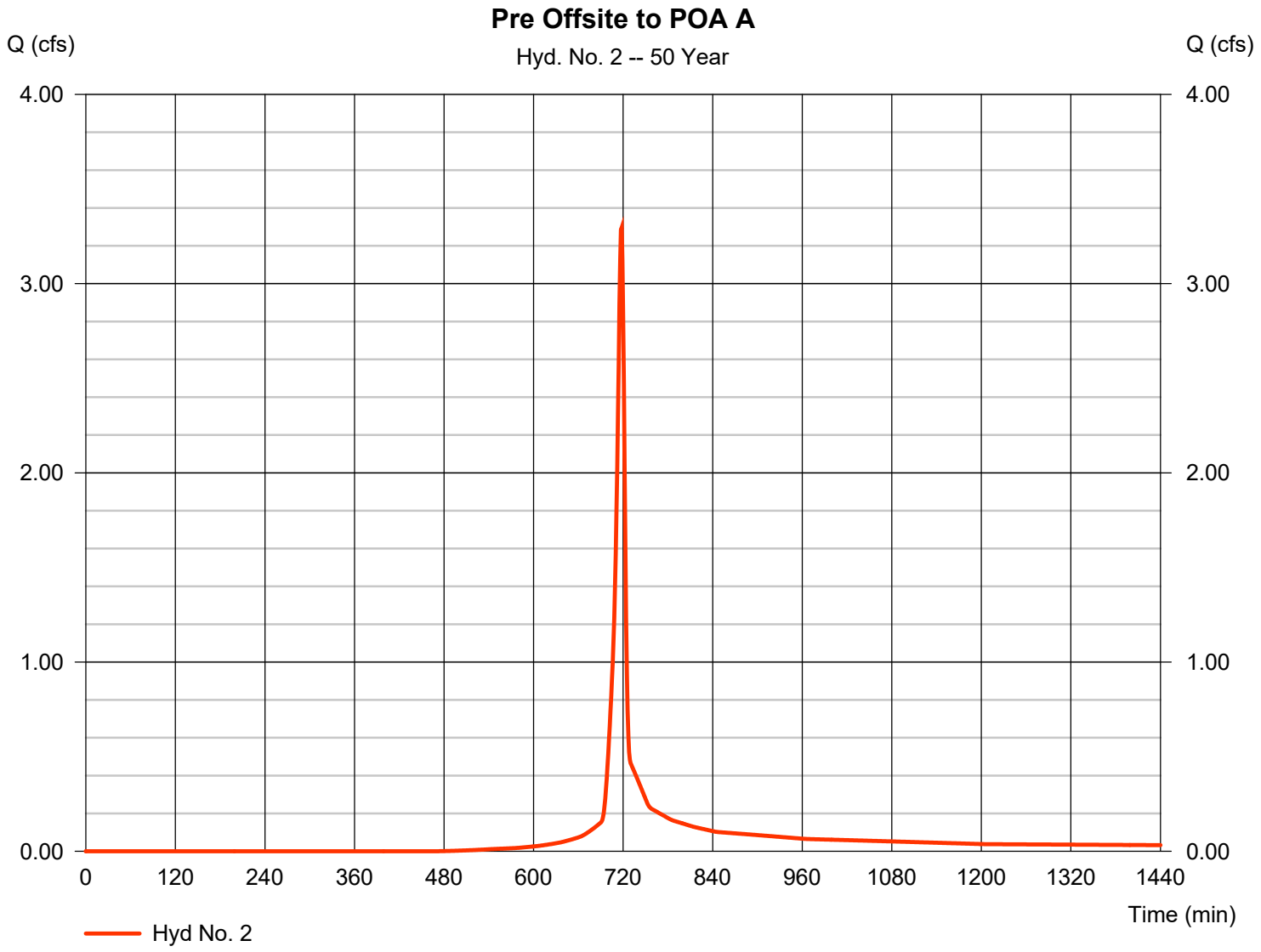


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.296 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	6,697 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.79 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

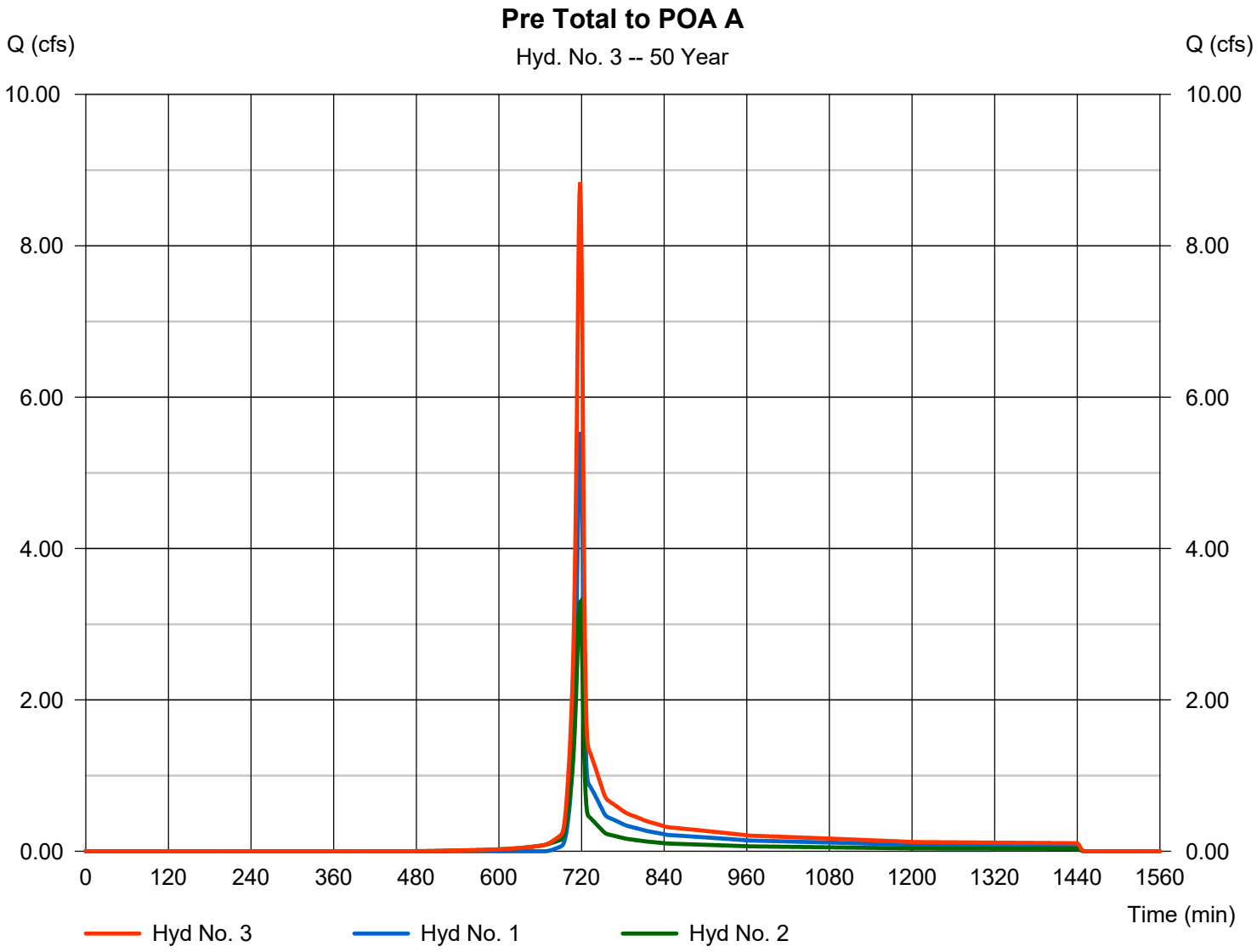


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	=	Combine	Peak discharge	=	8.837 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	18,029 cuft
Inflow hyds.	=	1, 2	Contrib. drain. area	=	2.010 ac

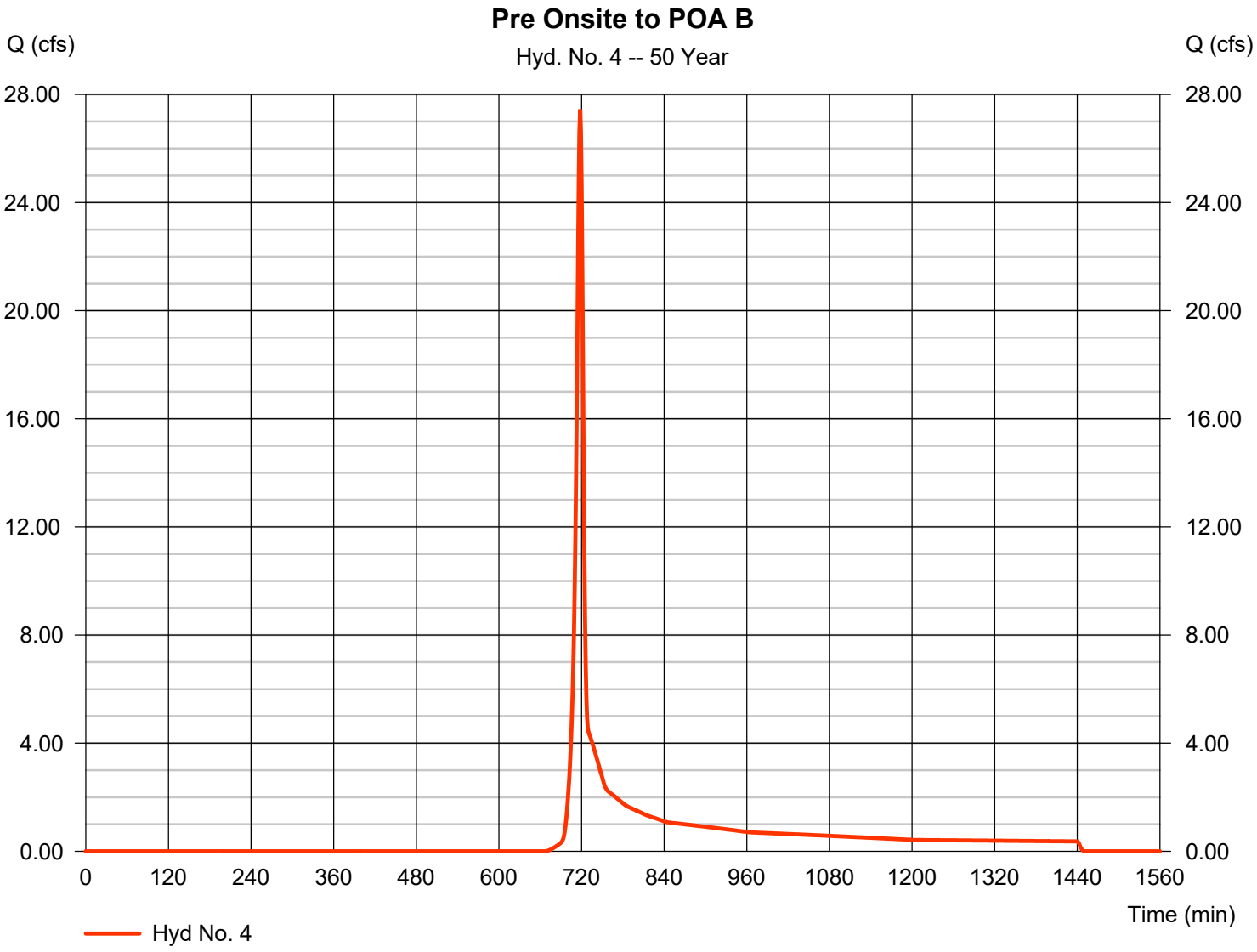


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	27.45 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	56,142 cuft
Drainage area	=	7.530 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.79 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

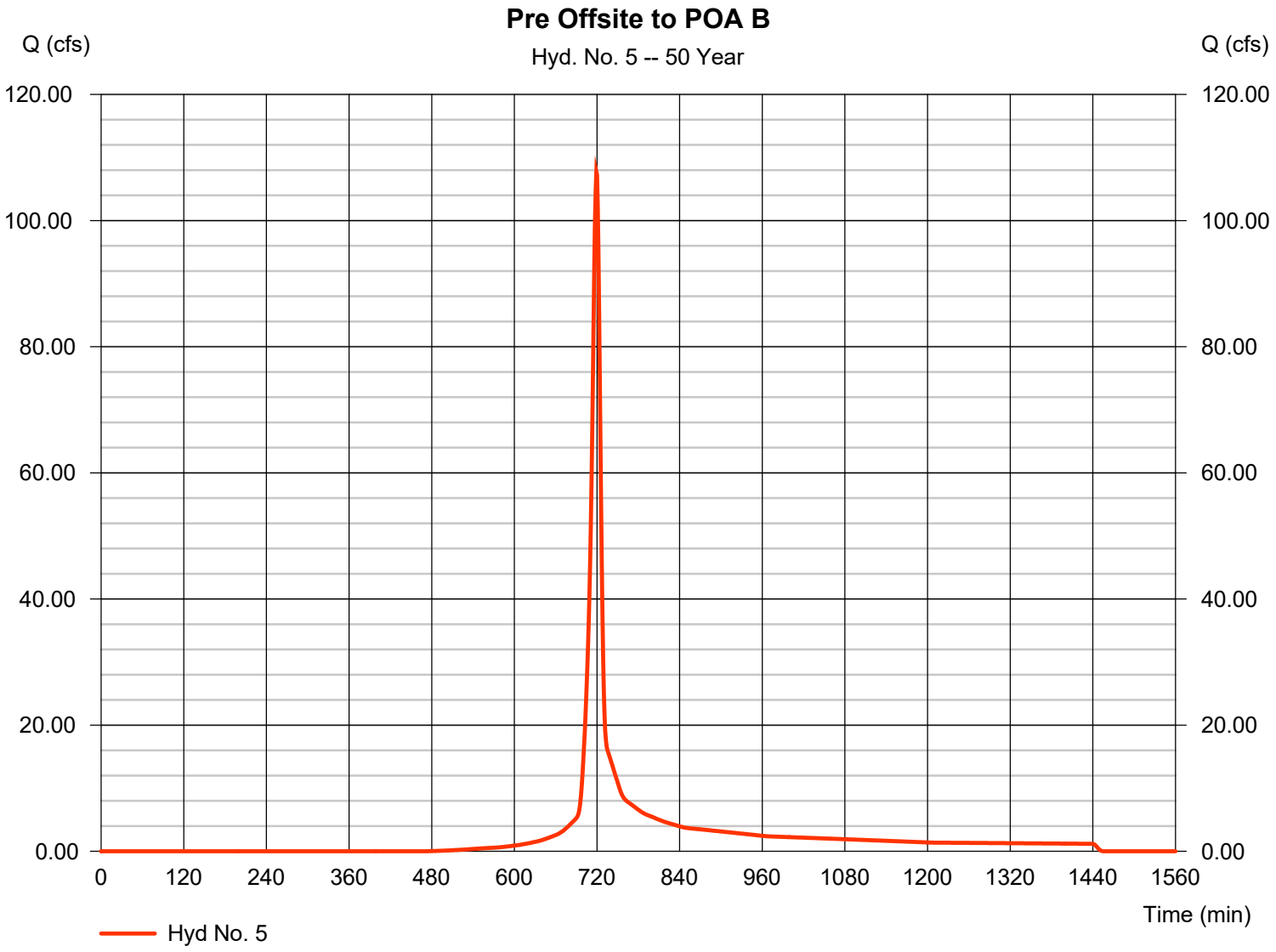


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	107.76 cfs
Storm frequency	=	50 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	244,241 cuft
Drainage area	=	18.430 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	6.79 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

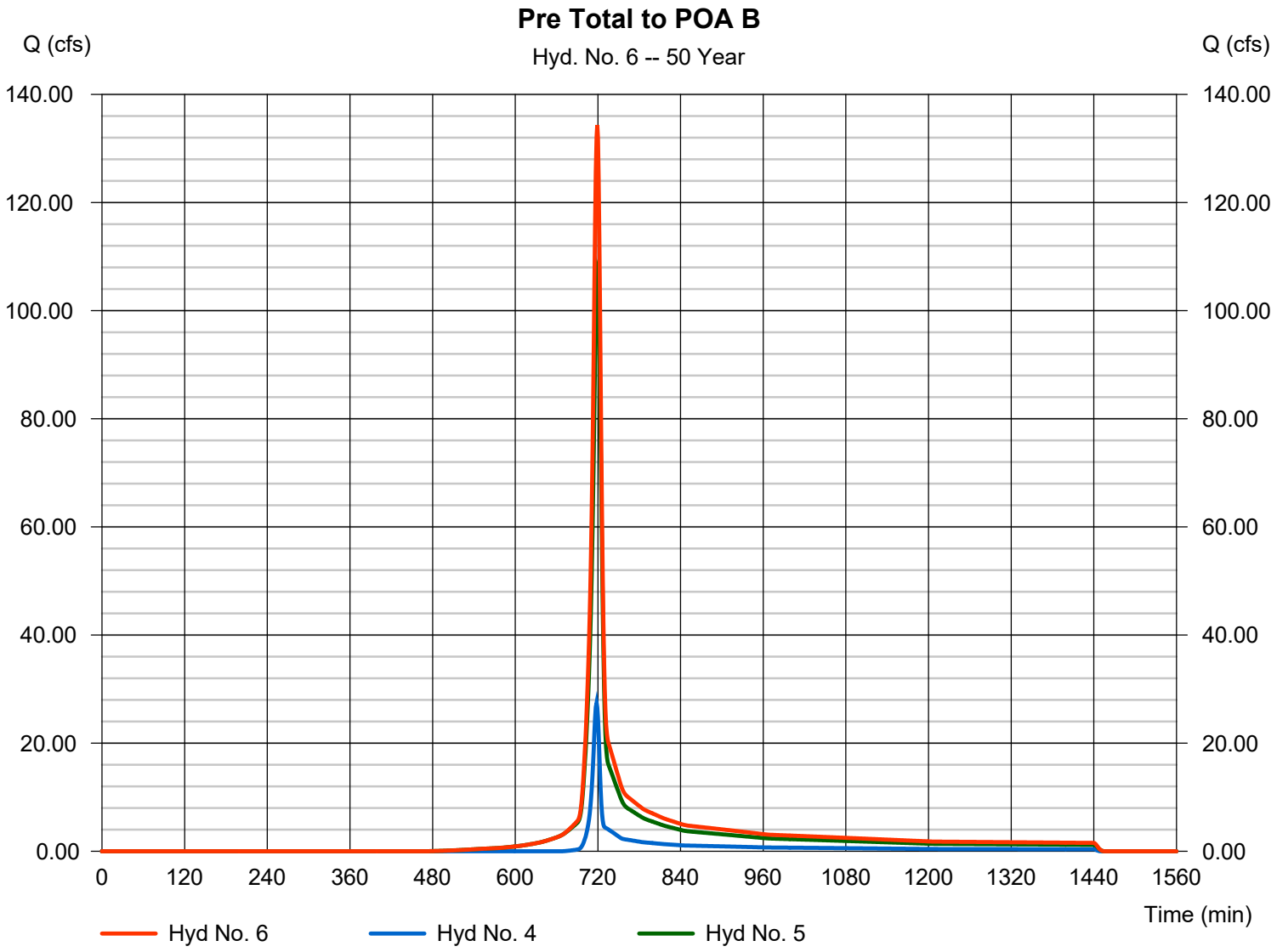


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 134.35 cfs
Storm frequency	= 50 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 300,382 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

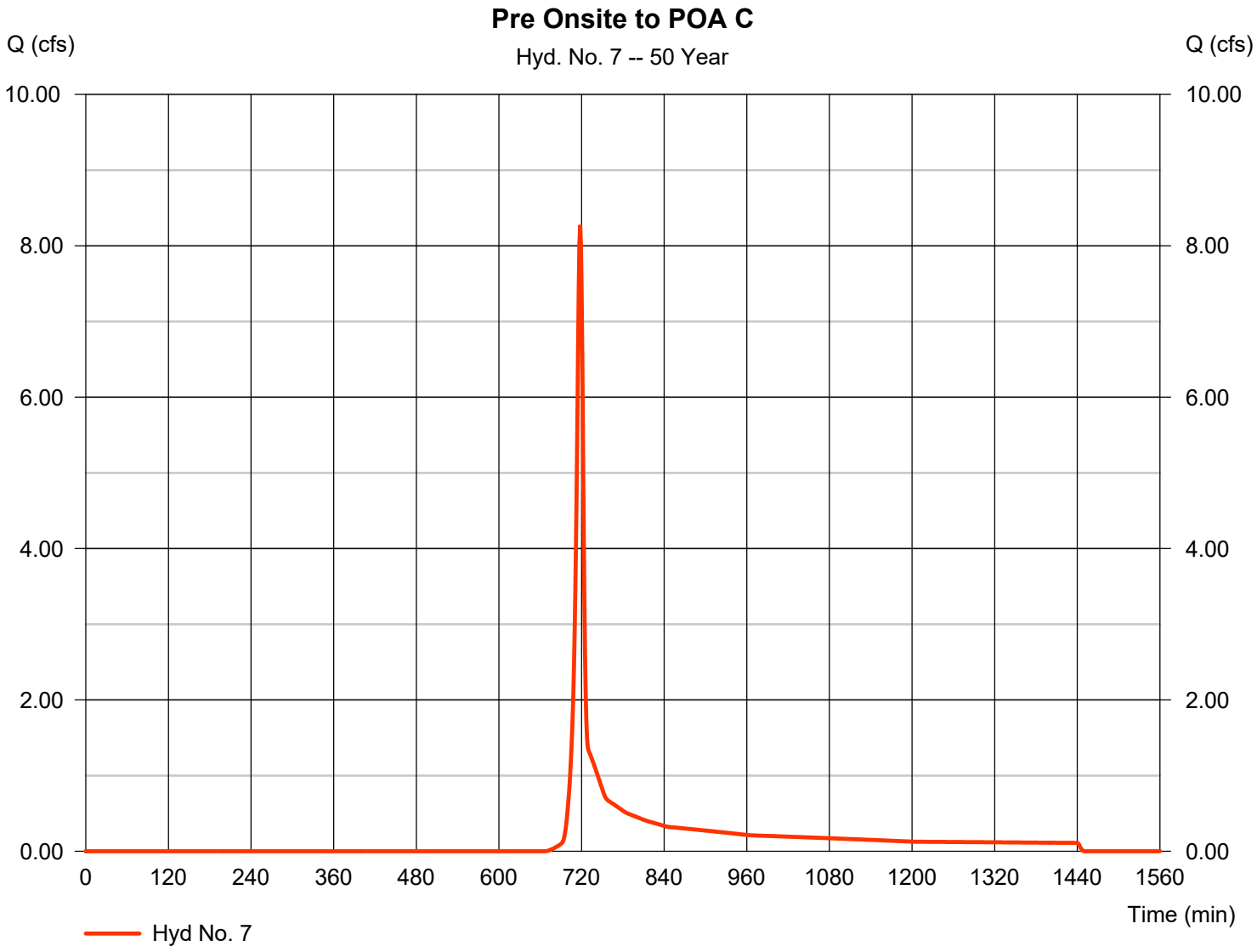


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 8.275 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 16,925 cuft
Drainage area	= 2.270 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

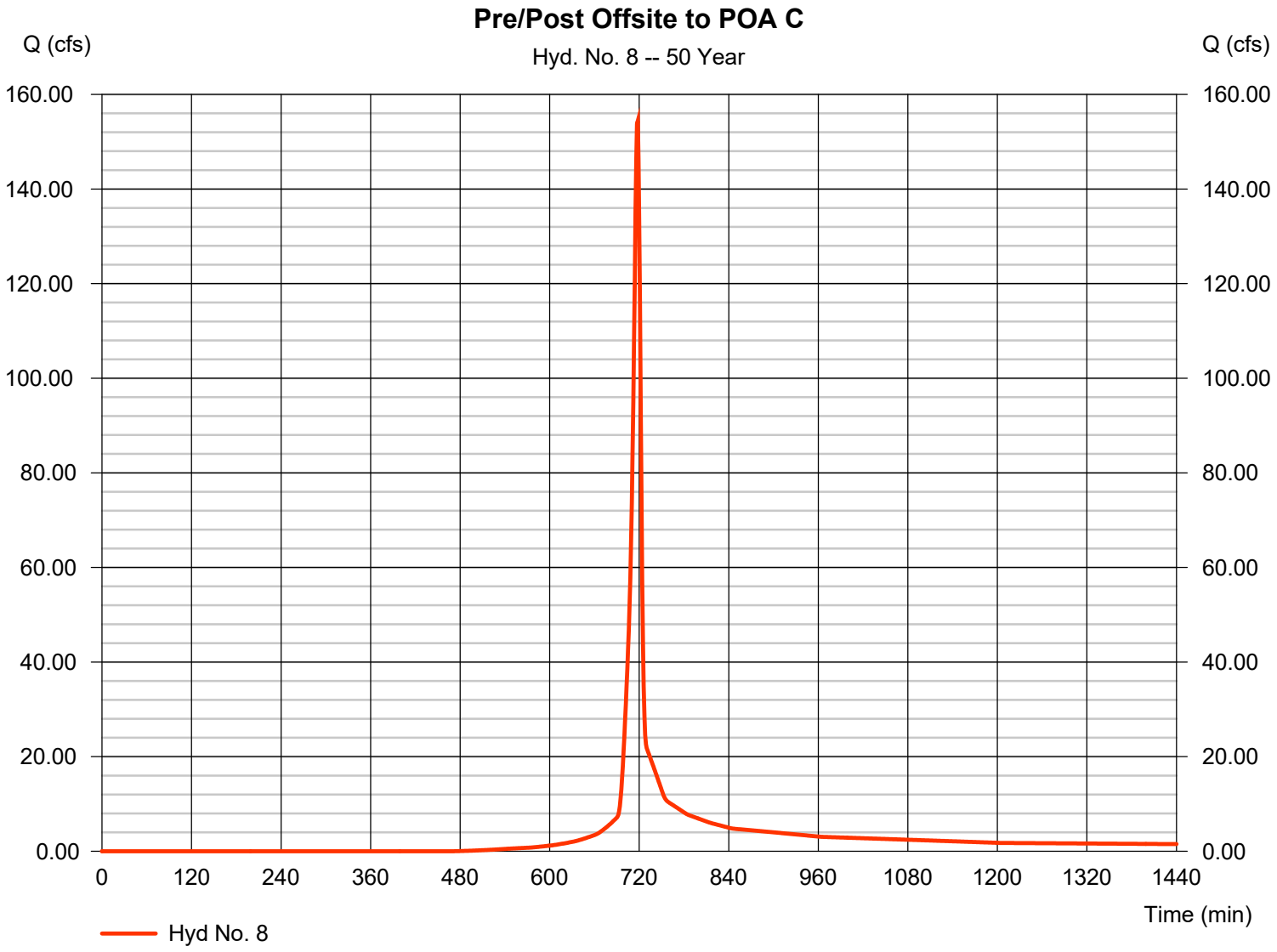


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 154.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 313,646 cuft
Drainage area	= 22.950 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

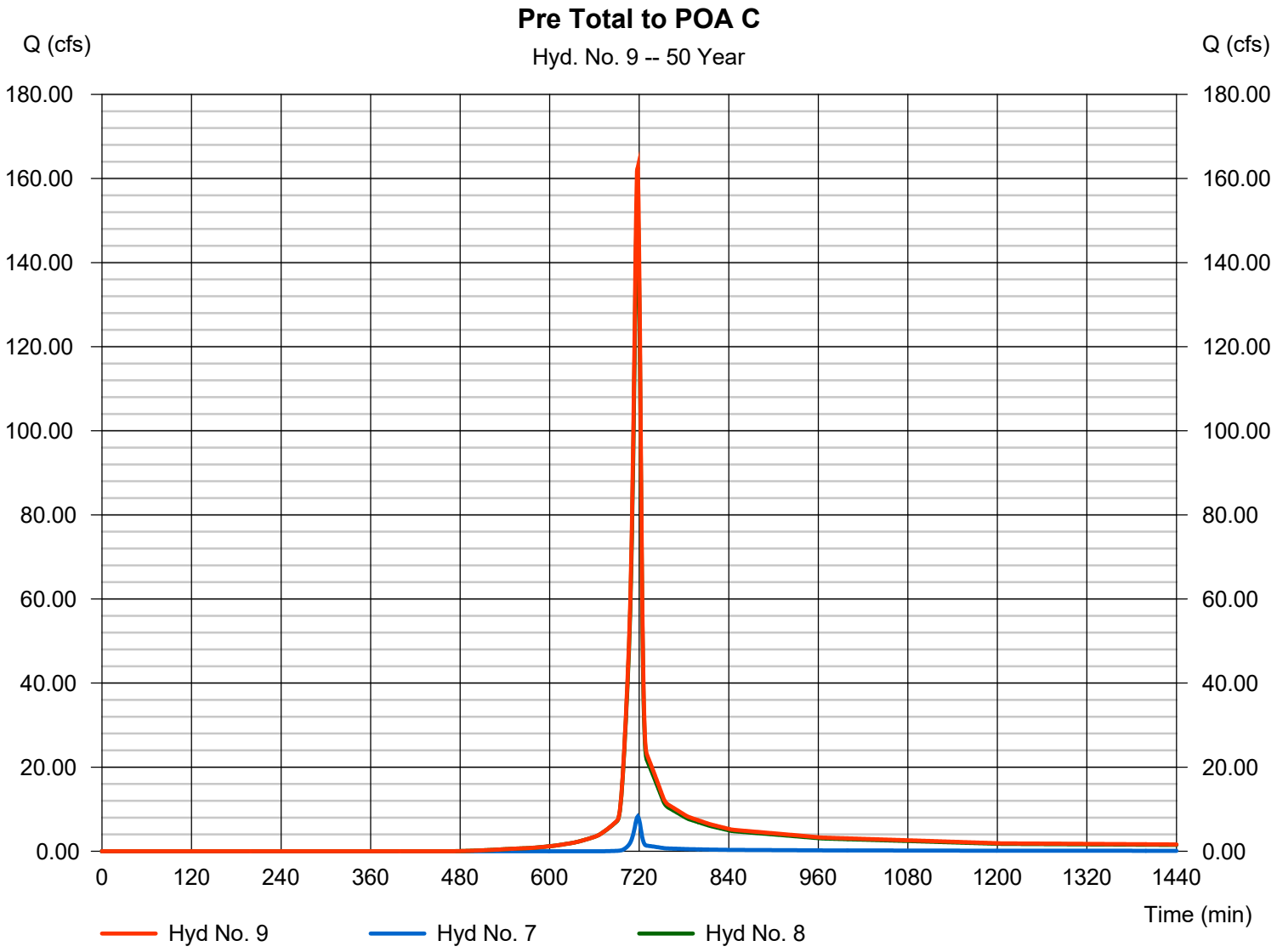


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 162.66 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 330,570 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

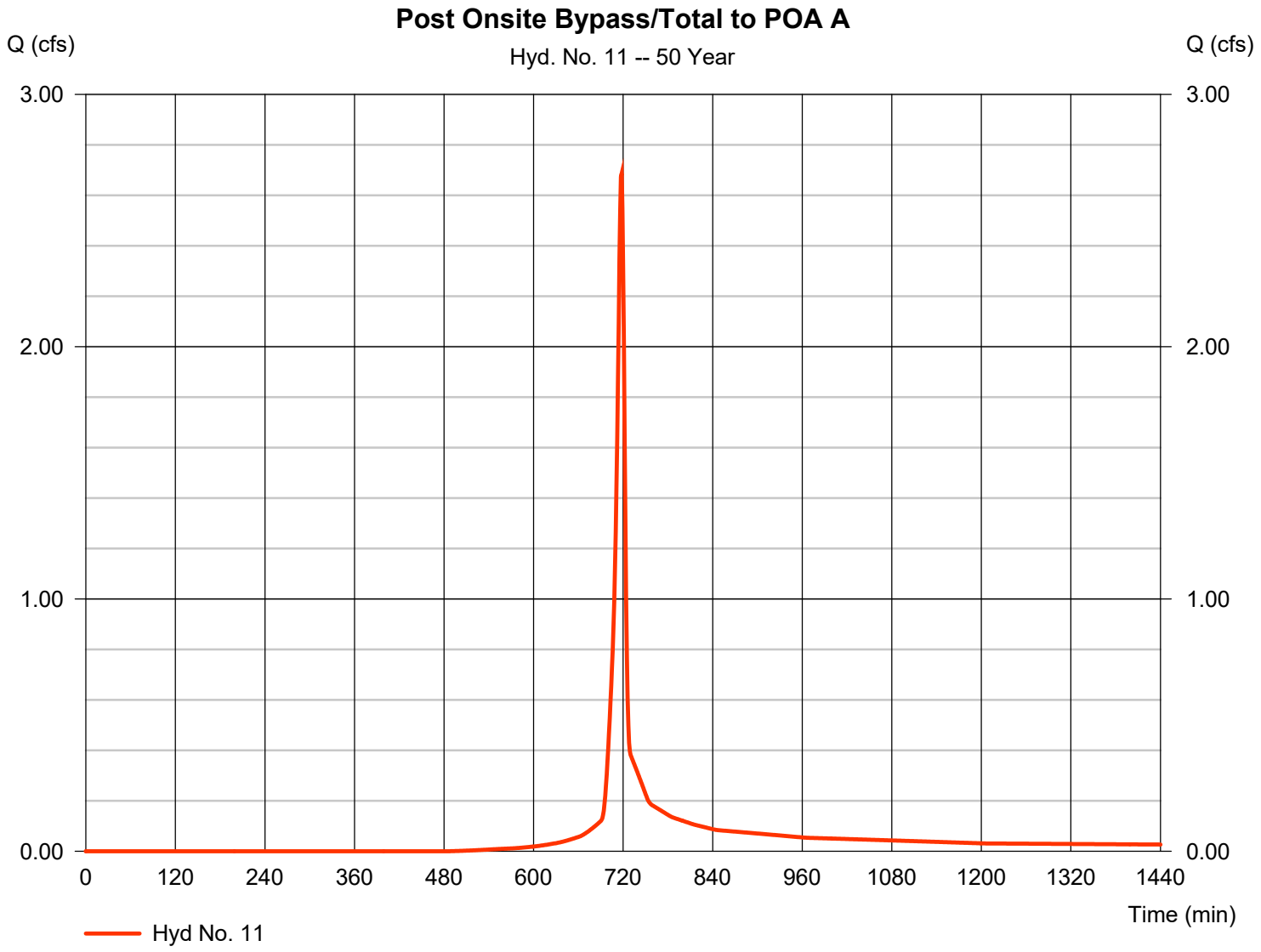


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.687 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 5,445 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

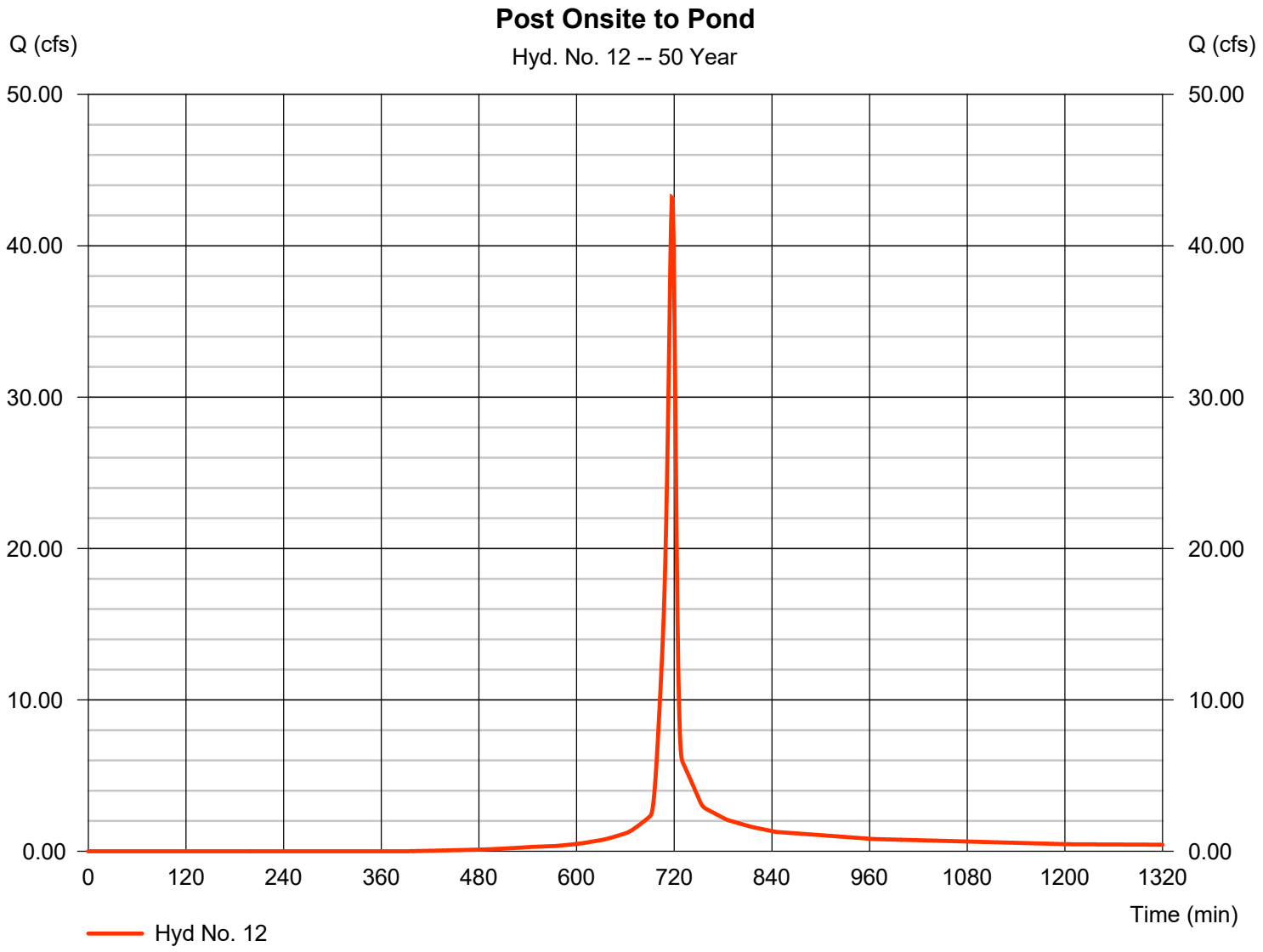


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	= SCS Runoff	Peak discharge	= 43.19 cfs
Storm frequency	= 50 yrs	Time to peak	= 717 min
Time interval	= 1 min	Hyd. volume	= 89,139 cuft
Drainage area	= 5.700 ac	Curve number	= 77
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

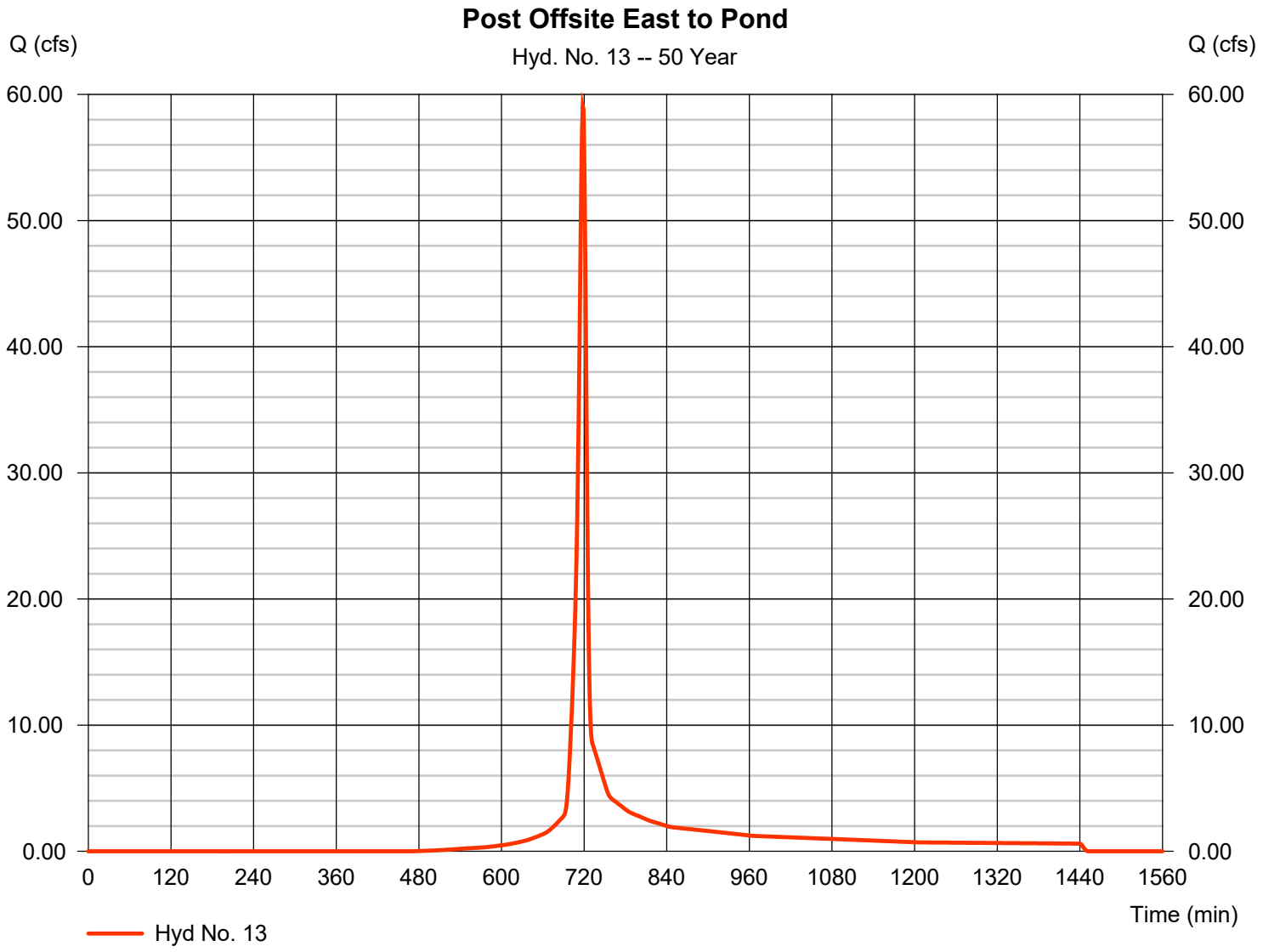


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	59.05 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	125,334 cuft
Drainage area	=	9.700 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	6.79 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

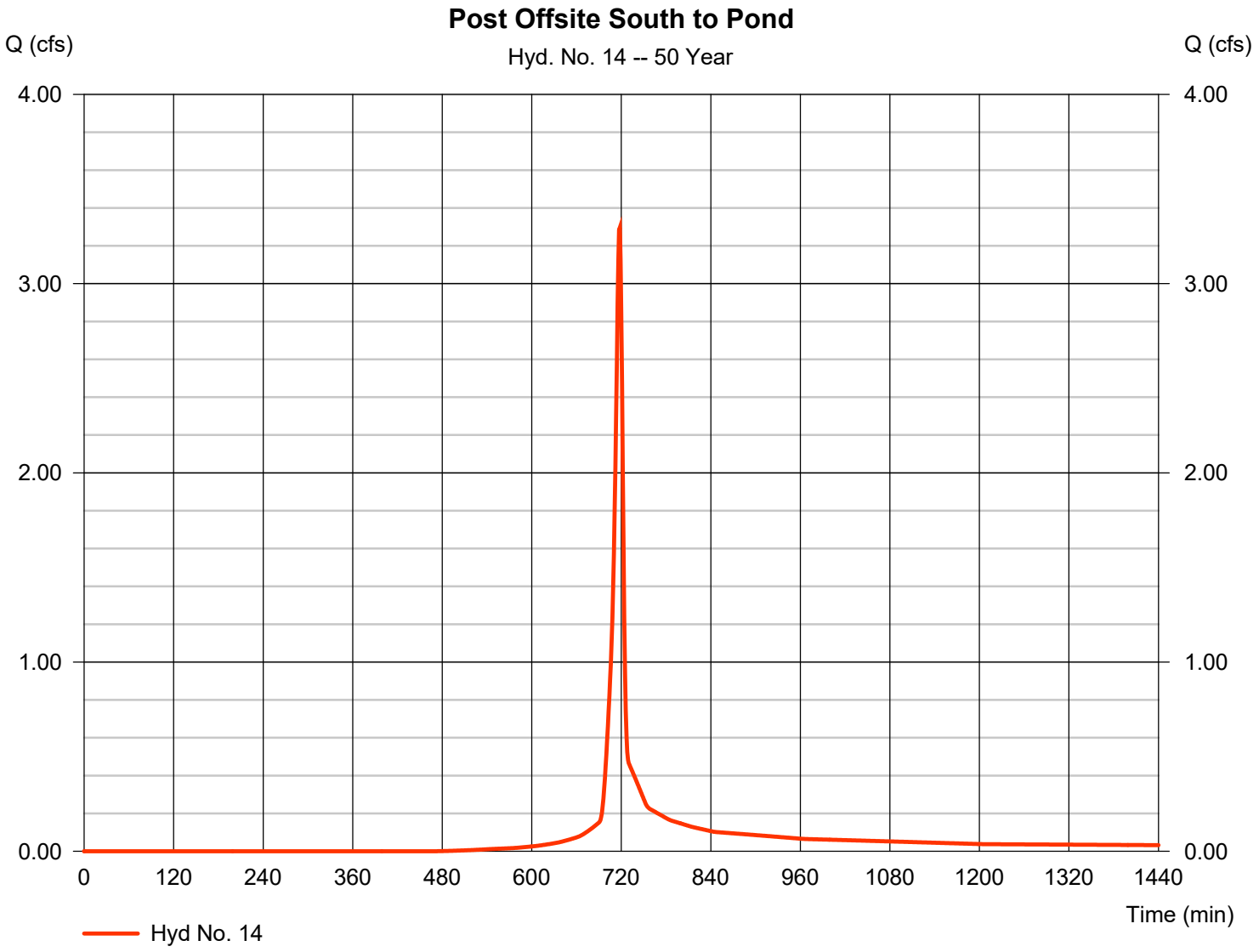


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.296 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	6,697 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.79 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

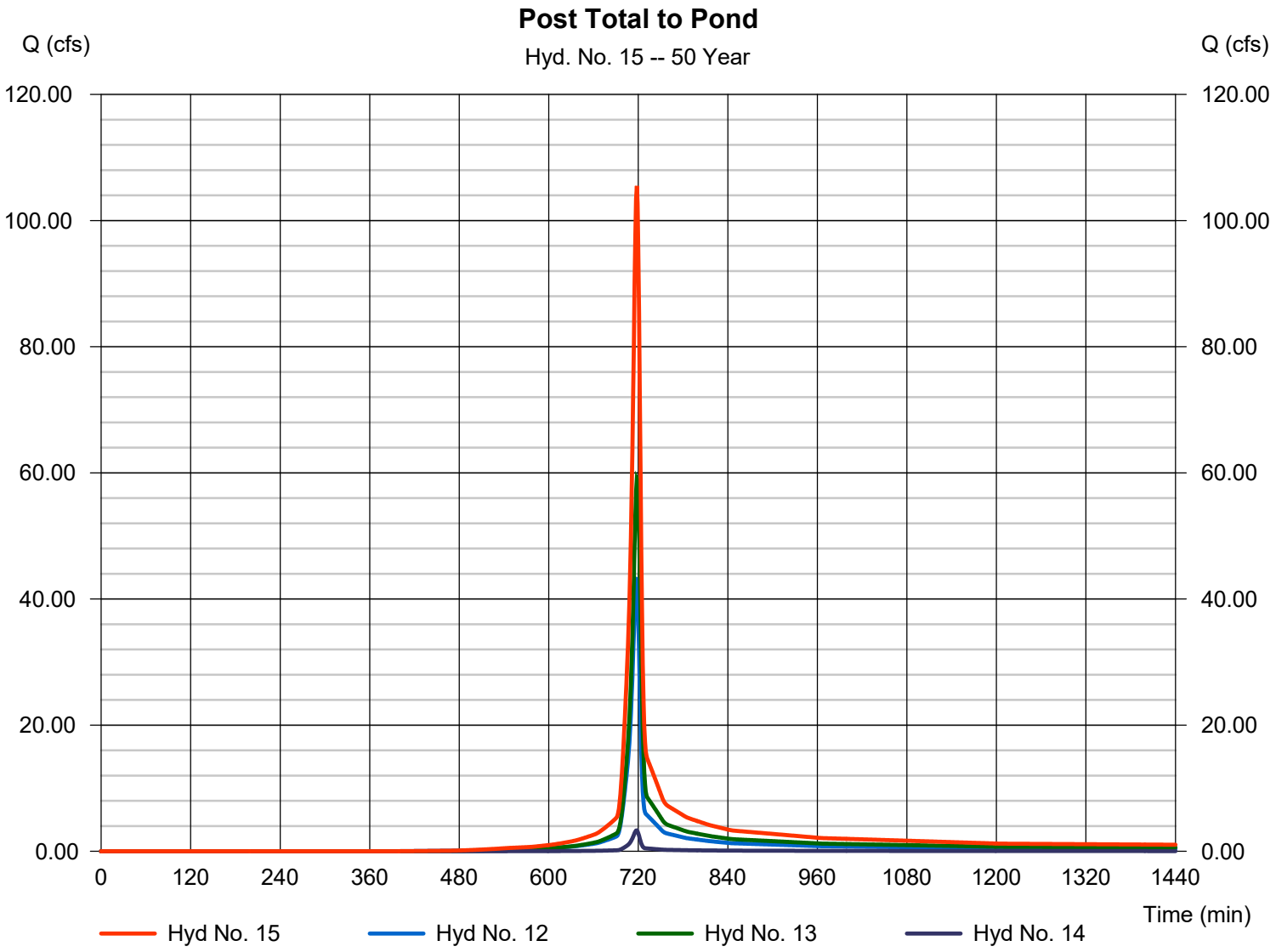


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	= Combine	Peak discharge	= 105.50 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 221,170 cuft
Inflow hyds.	= 12, 13, 14	Contrib. drain. area	= 15.890 ac



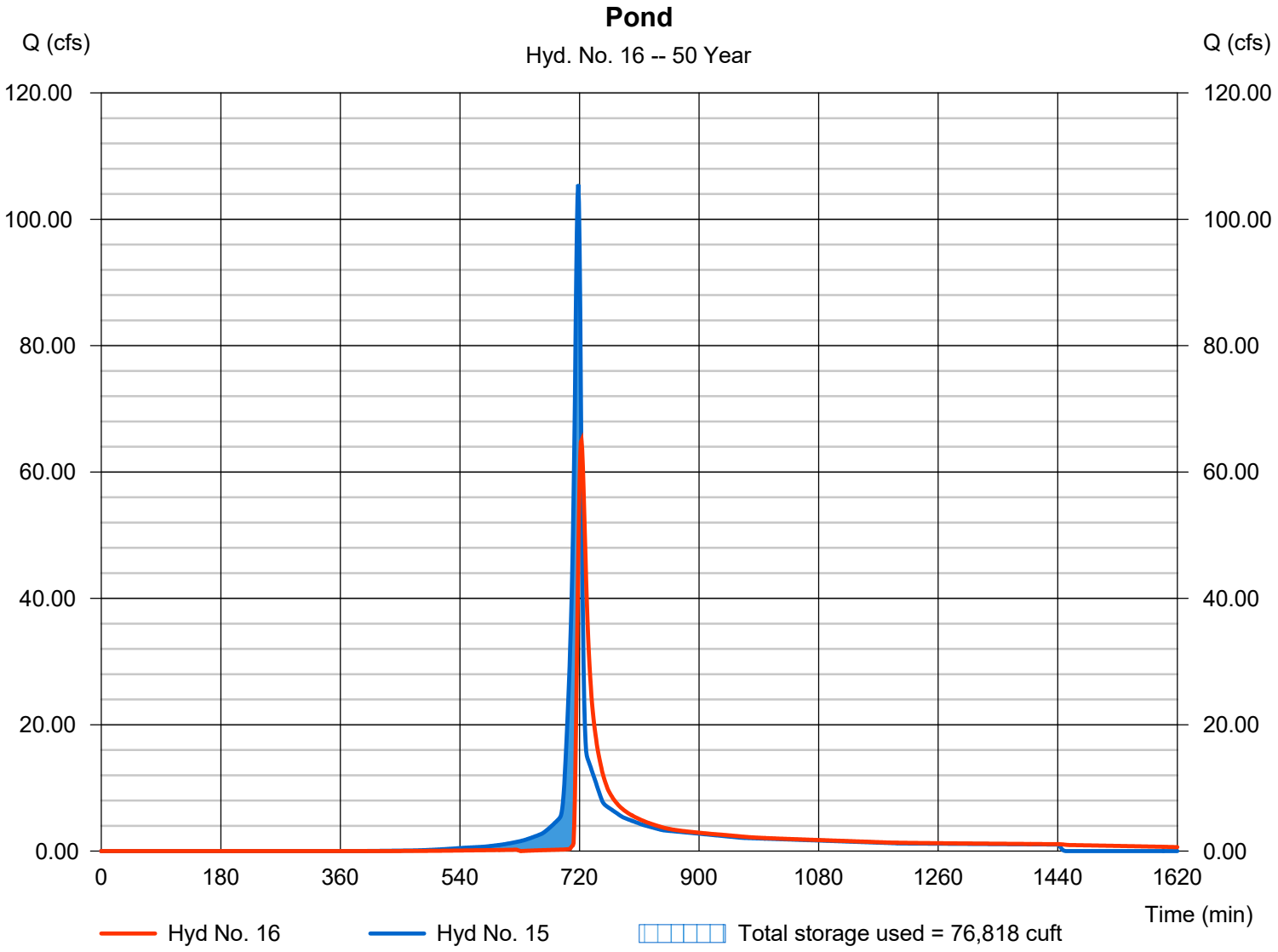
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	=	Reservoir	Peak discharge	=	64.97 cfs
Storm frequency	=	50 yrs	Time to peak	=	723 min
Time interval	=	1 min	Hyd. volume	=	210,291 cuft
Inflow hyd. No.	=	15 - Post Total to Pond	Max. Elevation	=	1000.94 ft
Reservoir name	=	Pond	Max. Storage	=	76,818 cuft

Storage Indication method used.

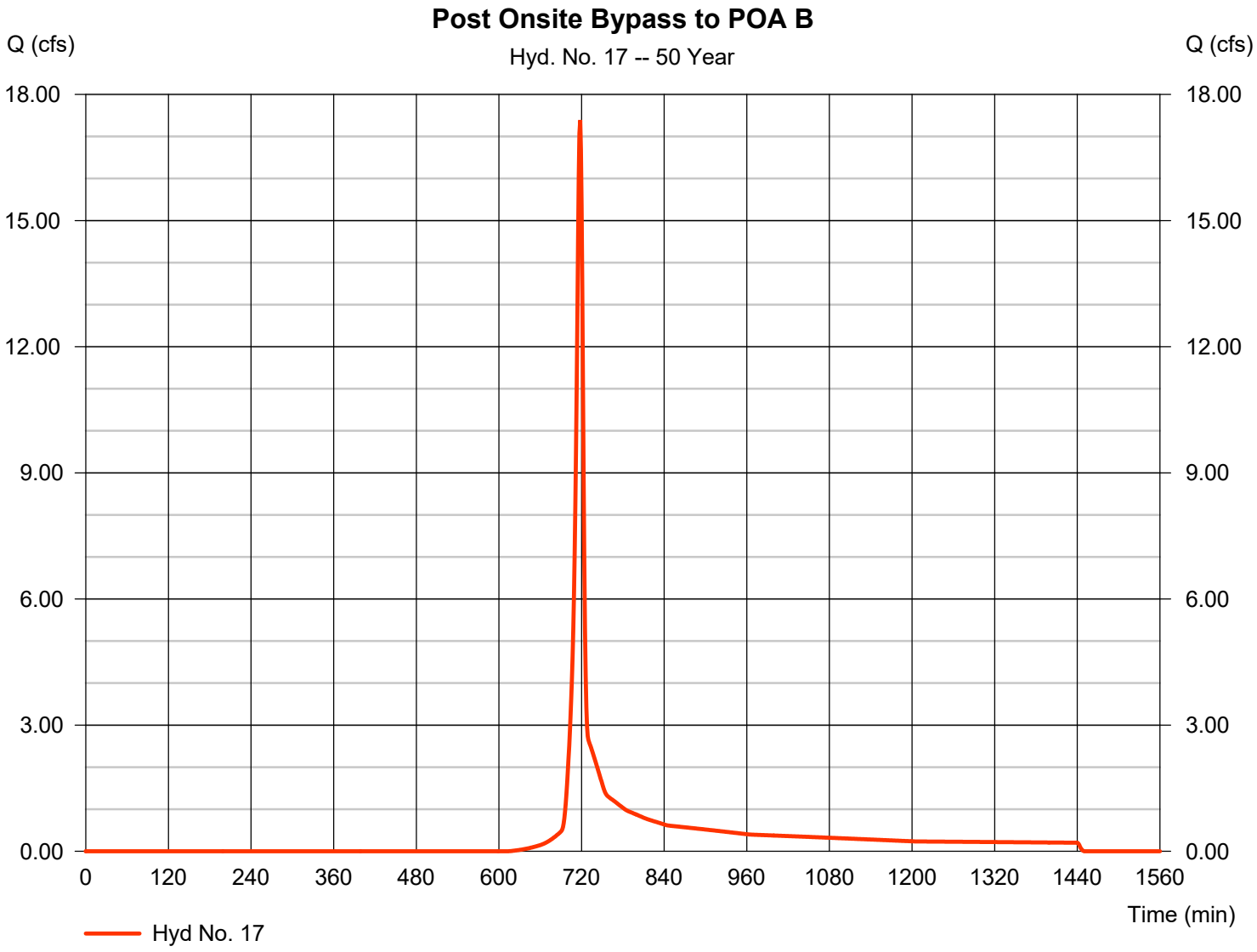


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 17.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 34,958 cuft
Drainage area	= 3.660 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

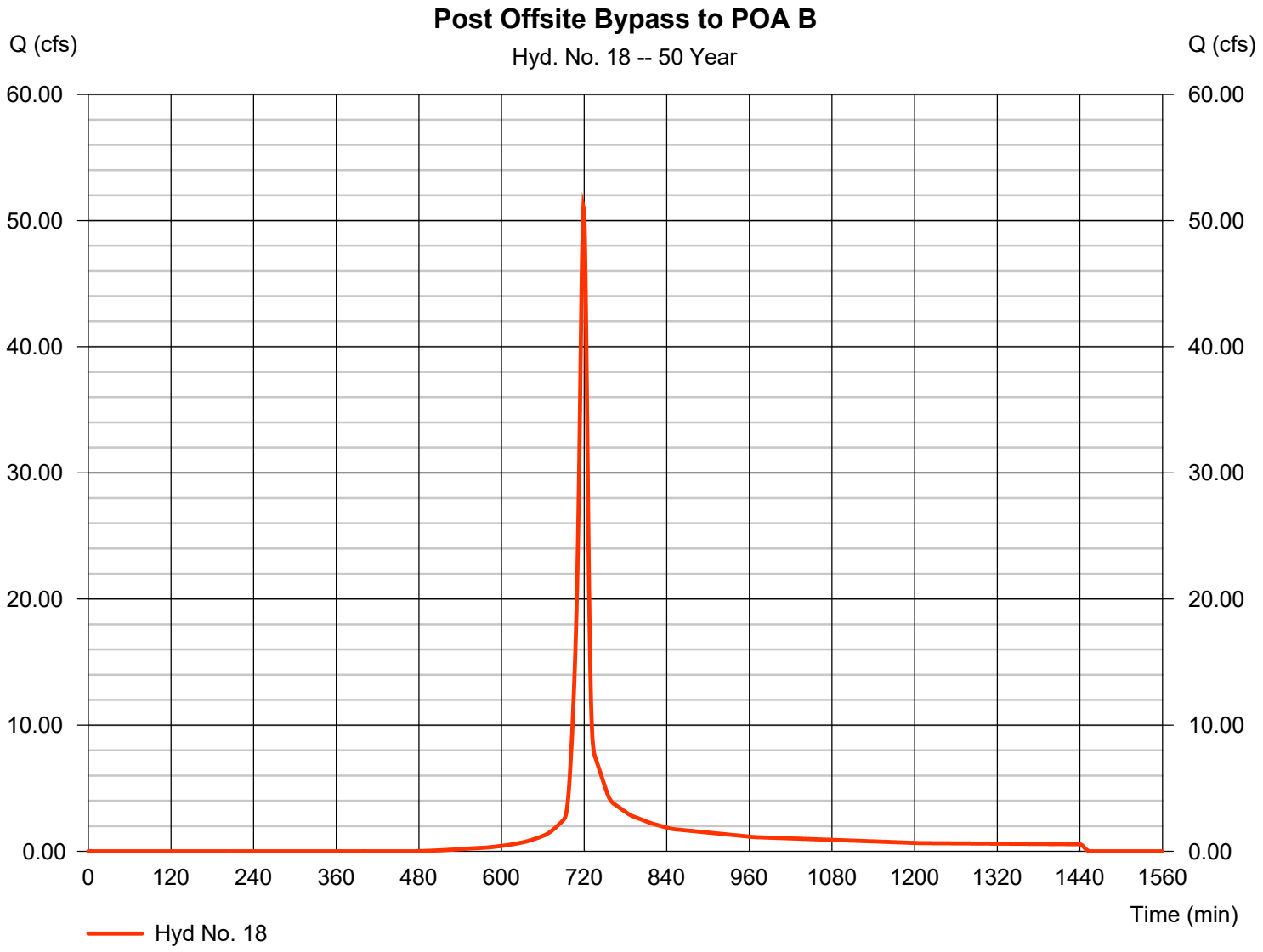


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 51.04 cfs
Storm frequency	= 50 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 115,693 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

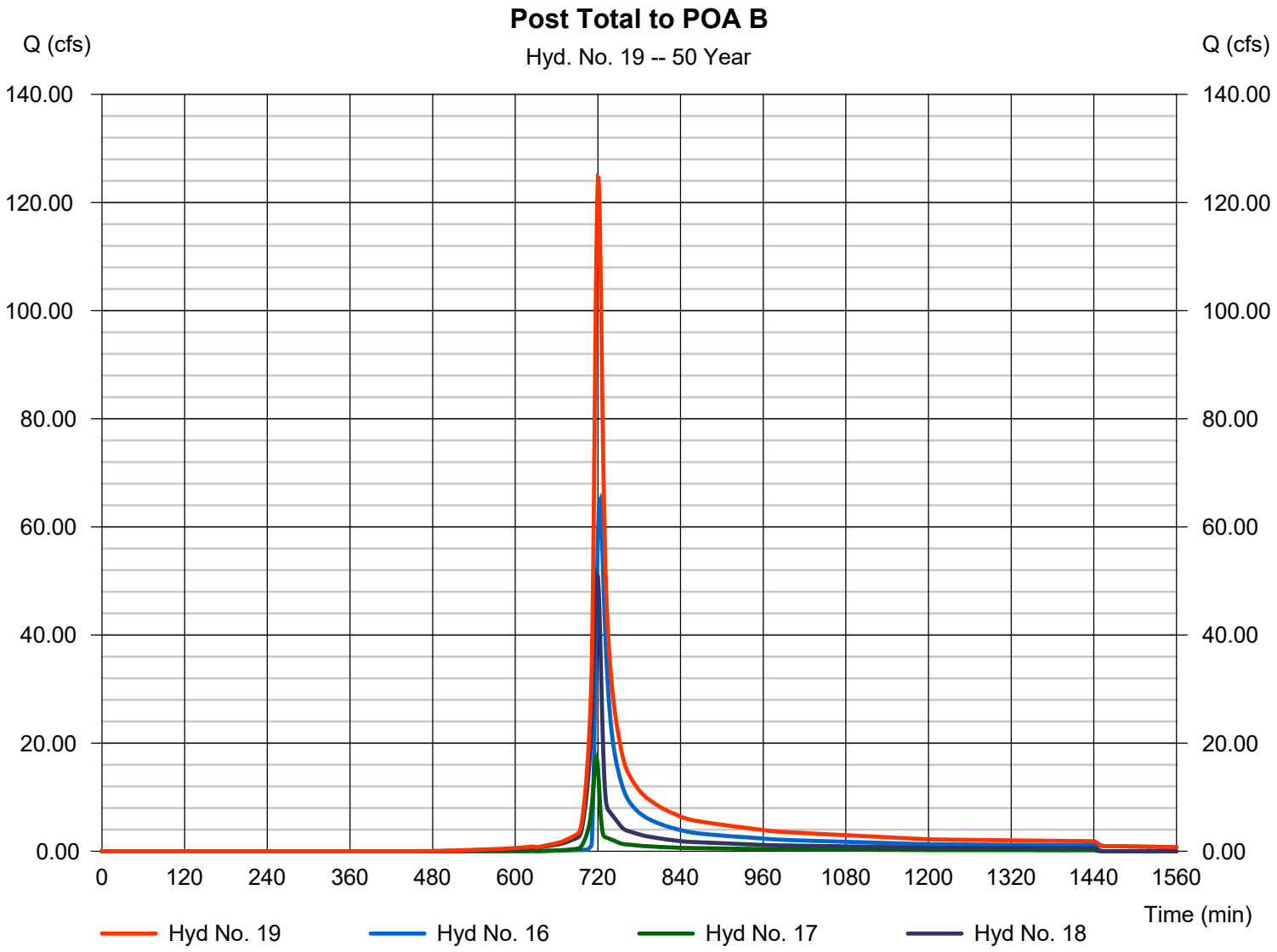


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	= Combine	Peak discharge	= 124.72 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 360,942 cuft
Inflow hyds.	= 16, 17, 18	Contrib. drain. area	= 12.390 ac

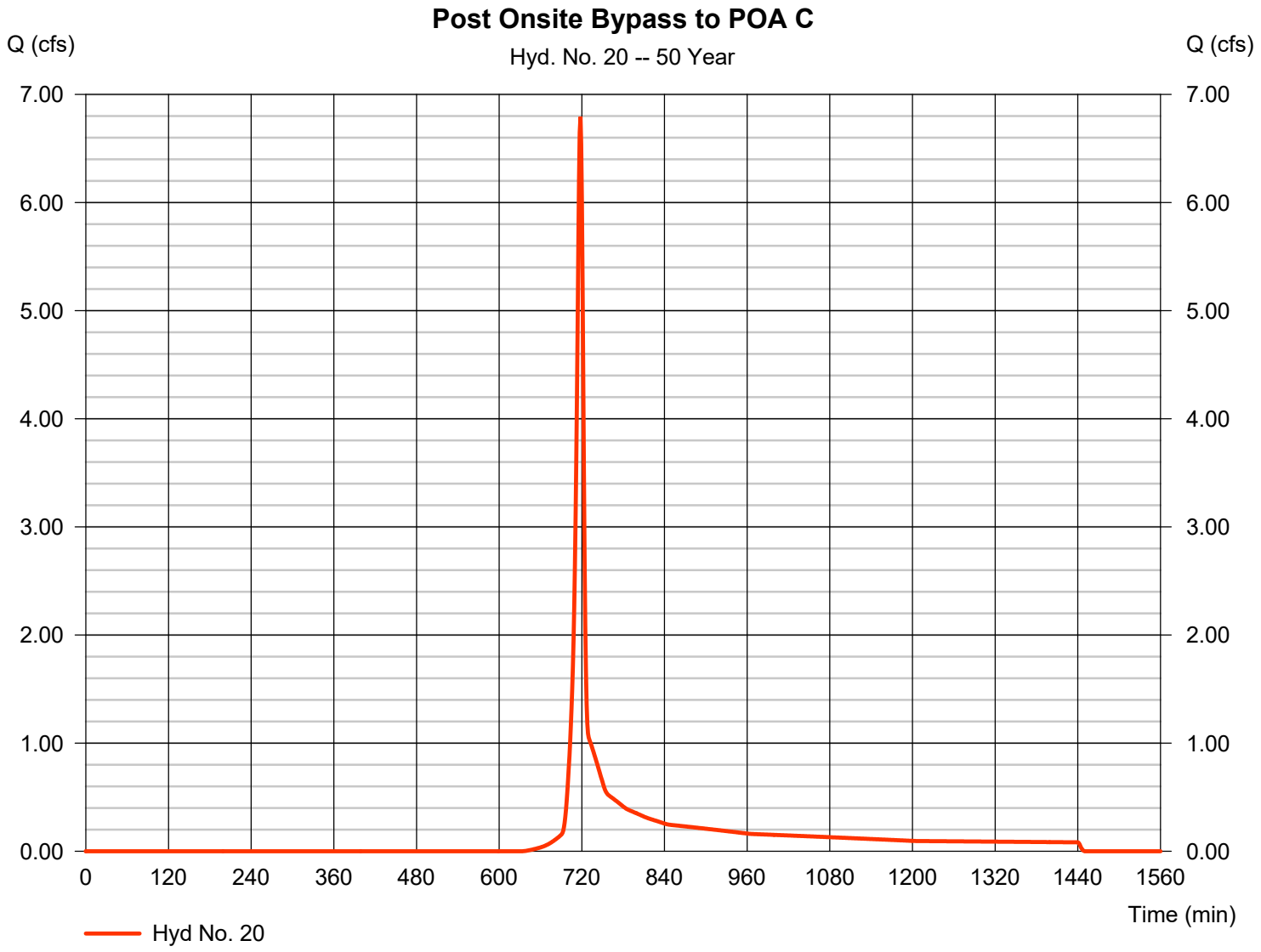


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 6.793 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 13,702 cuft
Drainage area	= 1.550 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.79 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

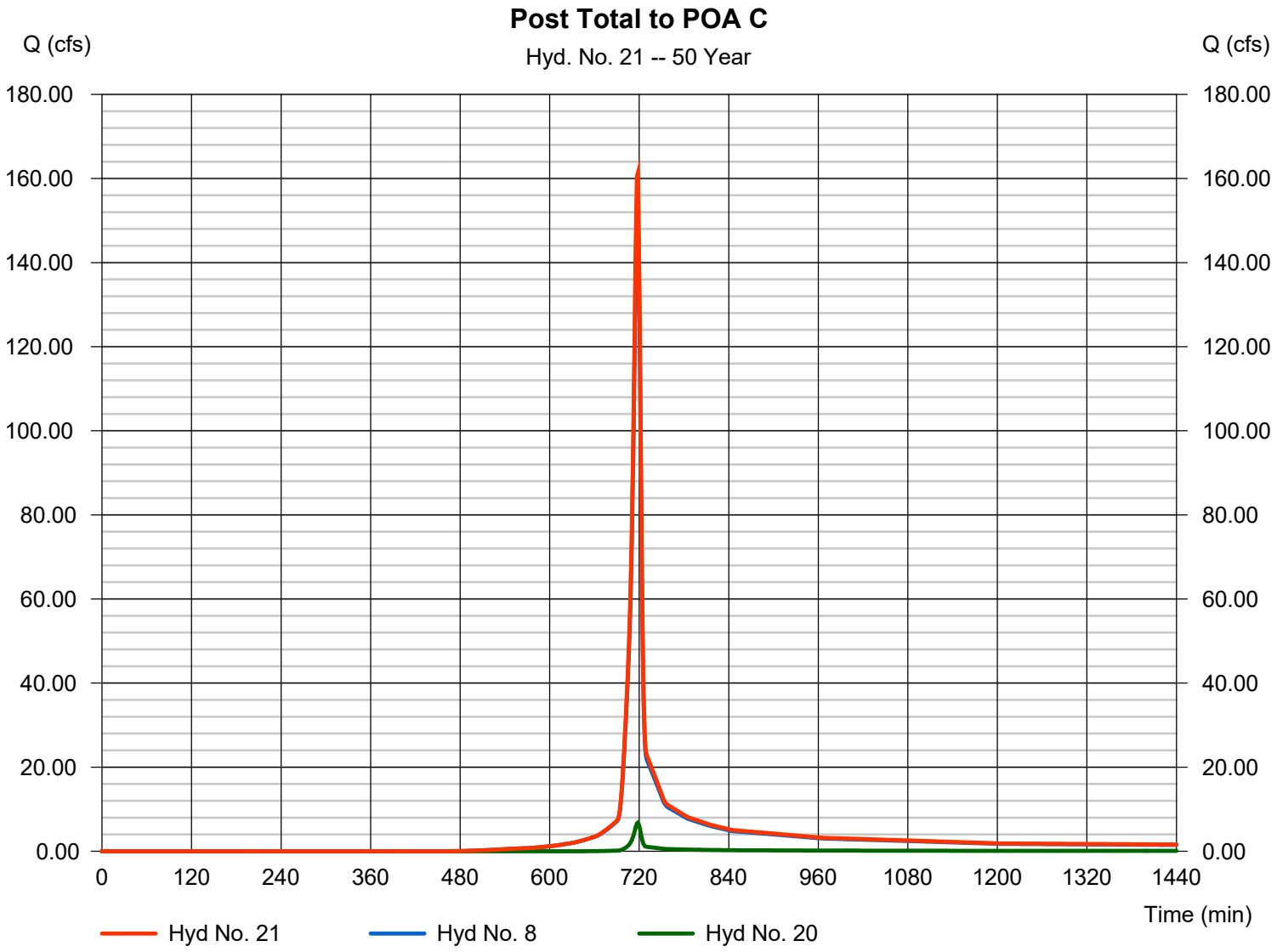


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 161.18 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 327,348 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

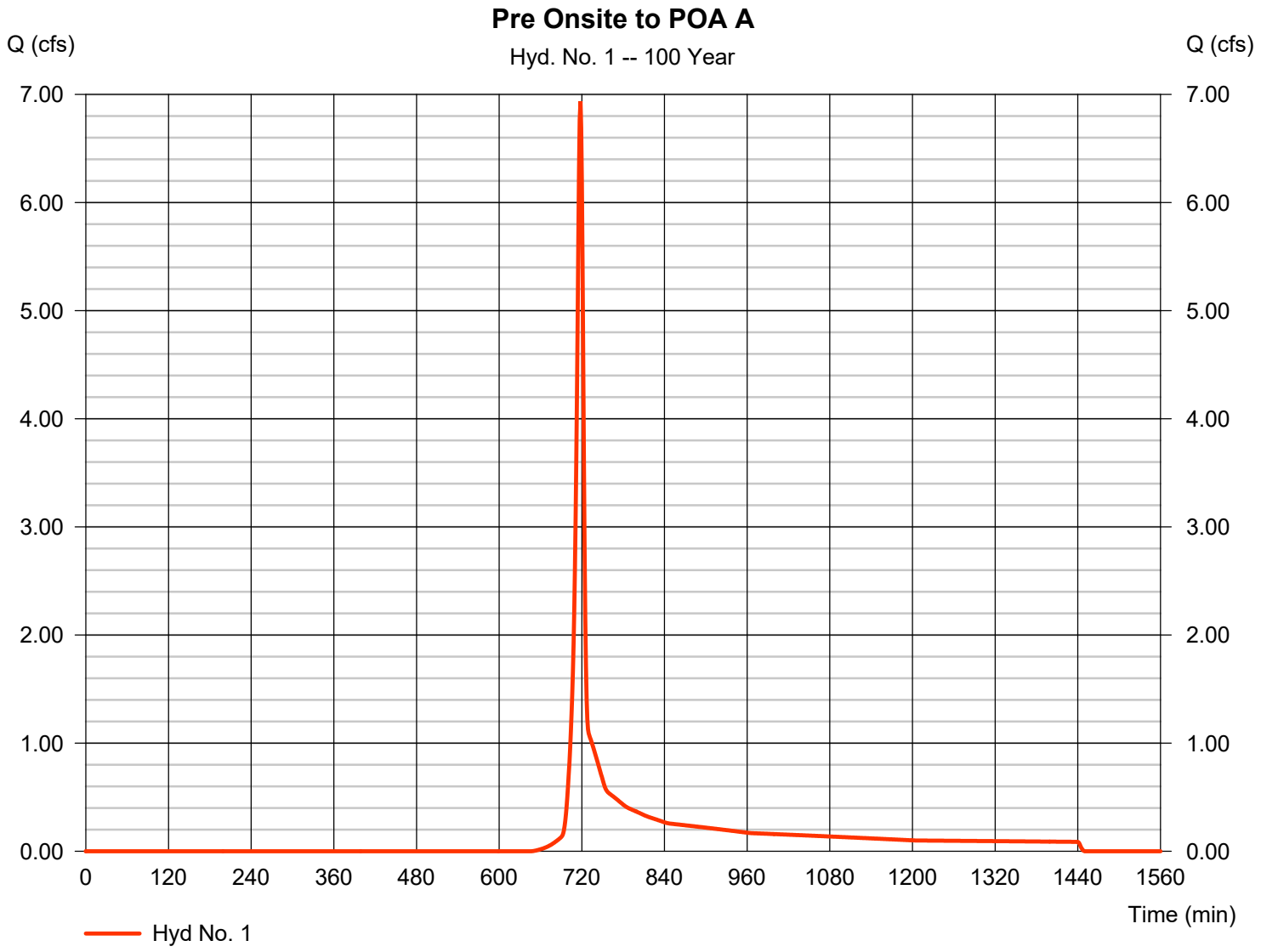
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.936	1	718	14,042	------	------	------	Pre Onsite to POA A
2	SCS Runoff	3.845	1	718	7,859	------	------	------	Pre Offsite to POA A
3	Combine	10.78	1	718	21,901	1, 2	------	------	Pre Total to POA A
4	SCS Runoff	34.36	1	718	69,562	------	------	------	Pre Onsite to POA B
5	SCS Runoff	126.08	1	719	286,641	------	------	------	Pre Offsite to POA B
6	Combine	159.21	1	719	356,203	4, 5	------	------	Pre Total to POA B
7	SCS Runoff	10.36	1	718	20,970	------	------	------	Pre Onsite to POA C
8	SCS Runoff	180.11	1	718	368,094	------	------	------	Pre/Post Offsite to POA C
9	Combine	190.47	1	718	389,065	7, 8	------	------	Pre Total to POA C
11	SCS Runoff	3.144	1	718	6,406	------	------	------	Post Onsite Bypass/Total to POA A
12	SCS Runoff	49.78	1	717	103,381	------	------	------	Post Onsite to Pond
13	SCS Runoff	69.04	1	718	147,092	------	------	------	Post Offsite East to Pond
14	SCS Runoff	3.845	1	718	7,859	------	------	------	Post Offsite South to Pond
15	Combine	122.54	1	718	258,333	12, 13, 14	------	------	Post Total to Pond
16	Reservoir	82.64	1	722	247,359	15	1001.54	84,208	Pond
17	SCS Runoff	21.09	1	718	42,343	------	------	------	Post Onsite Bypass to POA B
18	SCS Runoff	59.72	1	719	135,777	------	------	------	Post Offsite Bypass to POA B
19	Combine	155.29	1	720	425,479	16, 17, 18	------	------	Post Total to POA B
20	SCS Runoff	8.316	1	718	16,713	------	------	------	Post Onsite Bypass to POA C
21	Combine	188.42	1	718	384,807	8, 20	------	------	Post Total to POA C

Hydrograph Report

Hyd. No. 1

Pre Onsite to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 6.936 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 14,042 cuft
Drainage area	= 1.520 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

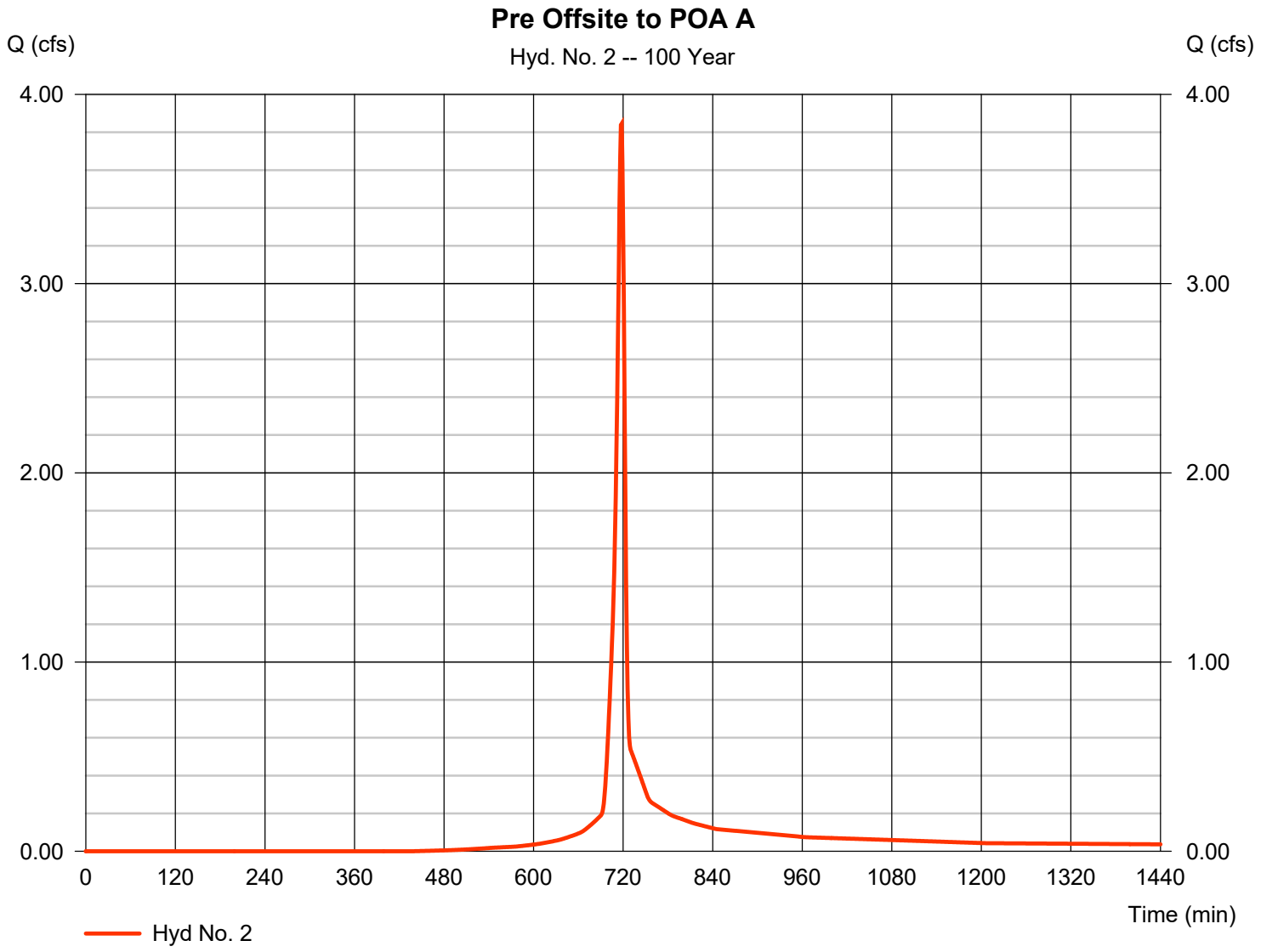


Hydrograph Report

Hyd. No. 2

Pre Offsite to POA A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.845 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	7,859 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

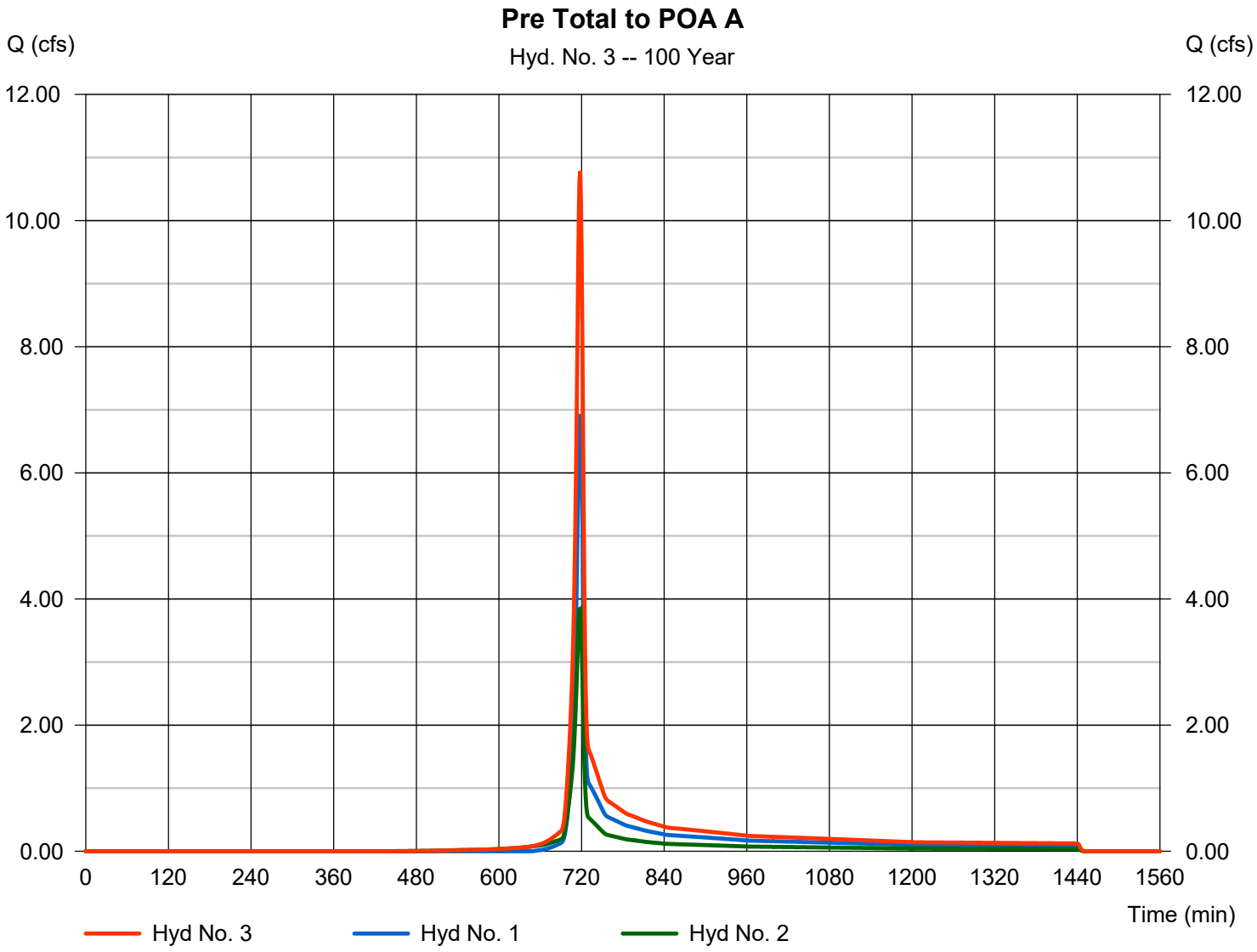


Hydrograph Report

Hyd. No. 3

Pre Total to POA A

Hydrograph type	= Combine	Peak discharge	= 10.78 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 21,901 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 2.010 ac

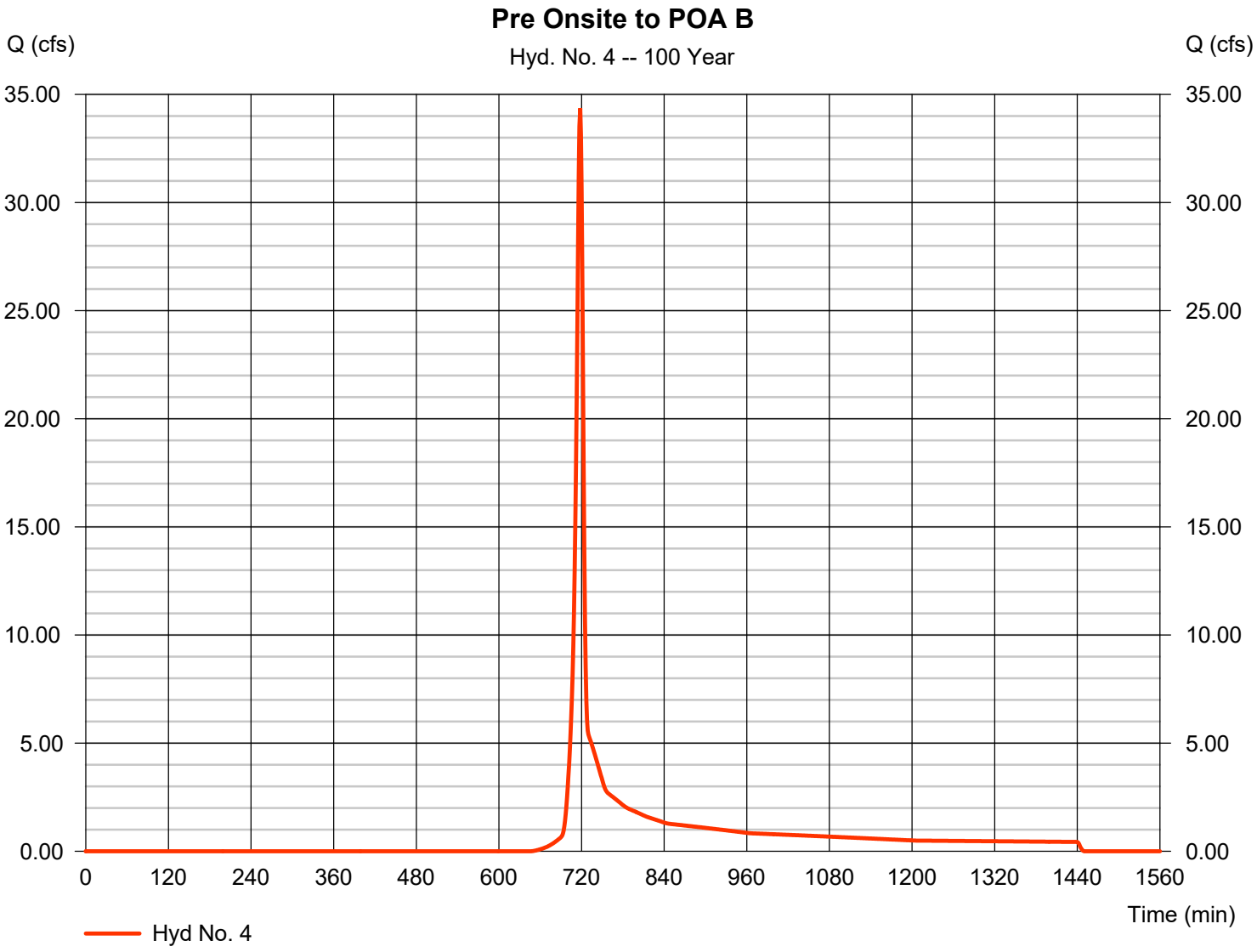


Hydrograph Report

Hyd. No. 4

Pre Onsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	34.36 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	69,562 cuft
Drainage area	=	7.530 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

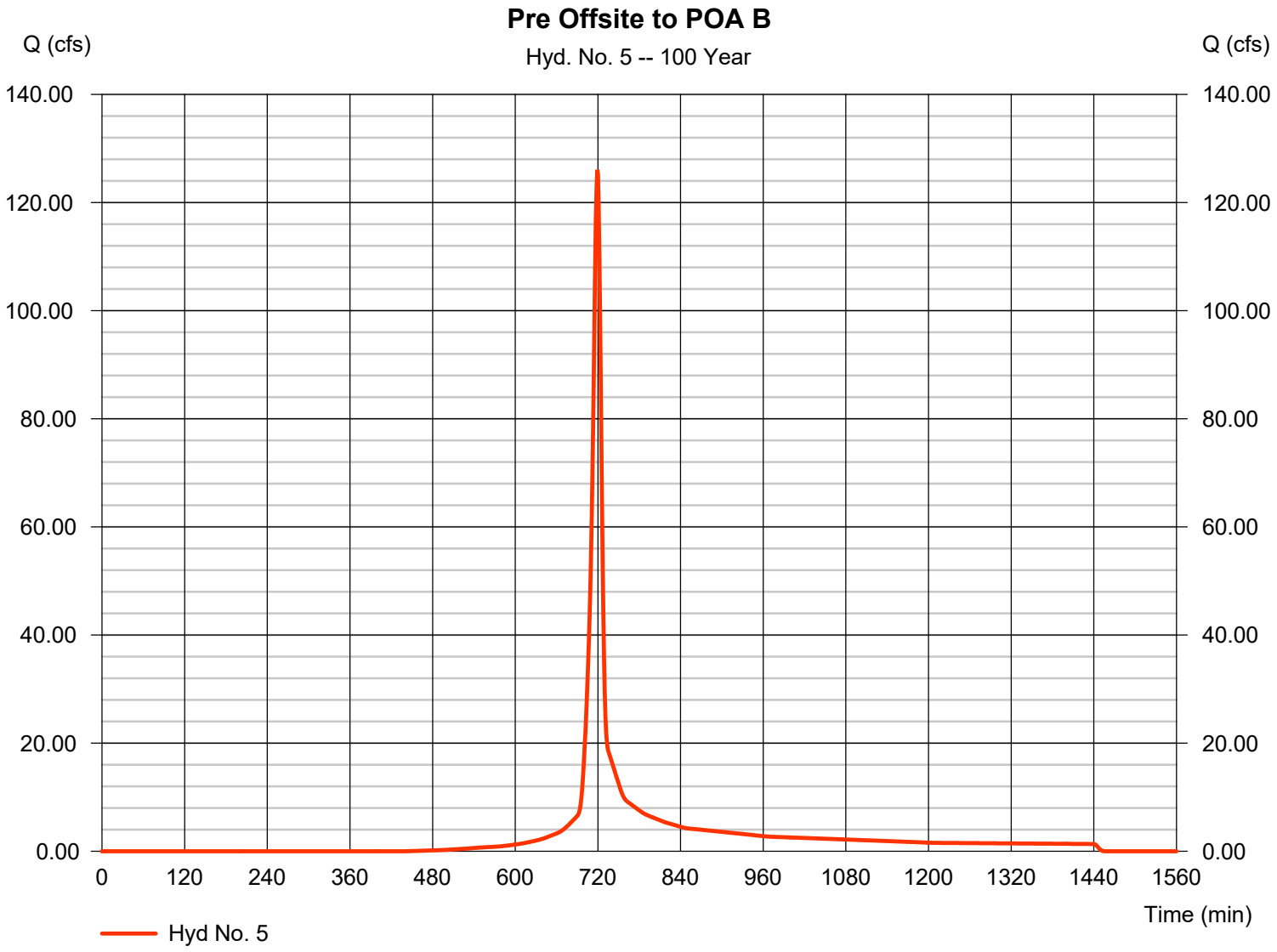


Hydrograph Report

Hyd. No. 5

Pre Offsite to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	126.08 cfs
Storm frequency	=	100 yrs	Time to peak	=	719 min
Time interval	=	1 min	Hyd. volume	=	286,641 cuft
Drainage area	=	18.430 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

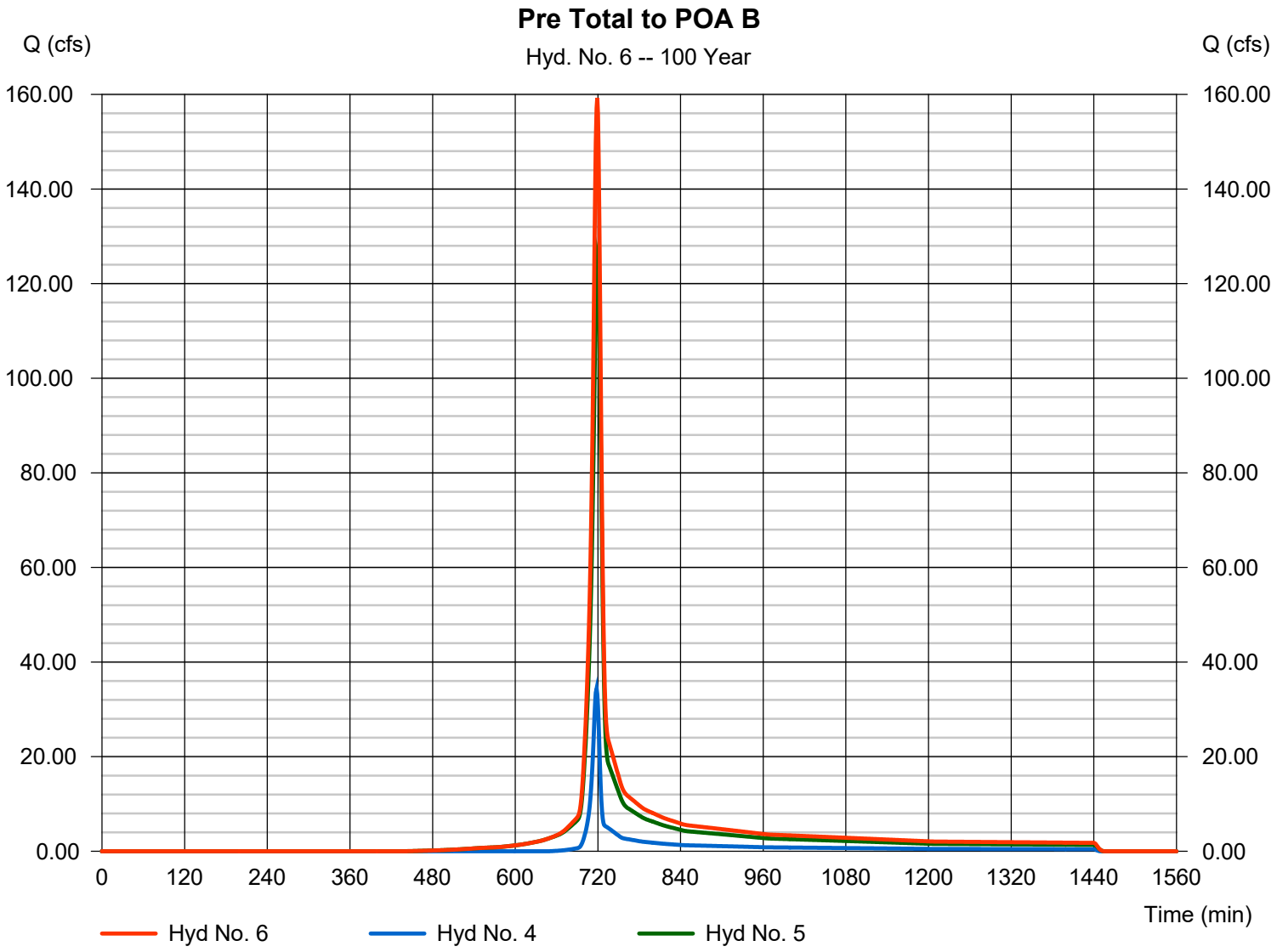


Hydrograph Report

Hyd. No. 6

Pre Total to POA B

Hydrograph type	= Combine	Peak discharge	= 159.21 cfs
Storm frequency	= 100 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 356,203 cuft
Inflow hyds.	= 4, 5	Contrib. drain. area	= 25.960 ac

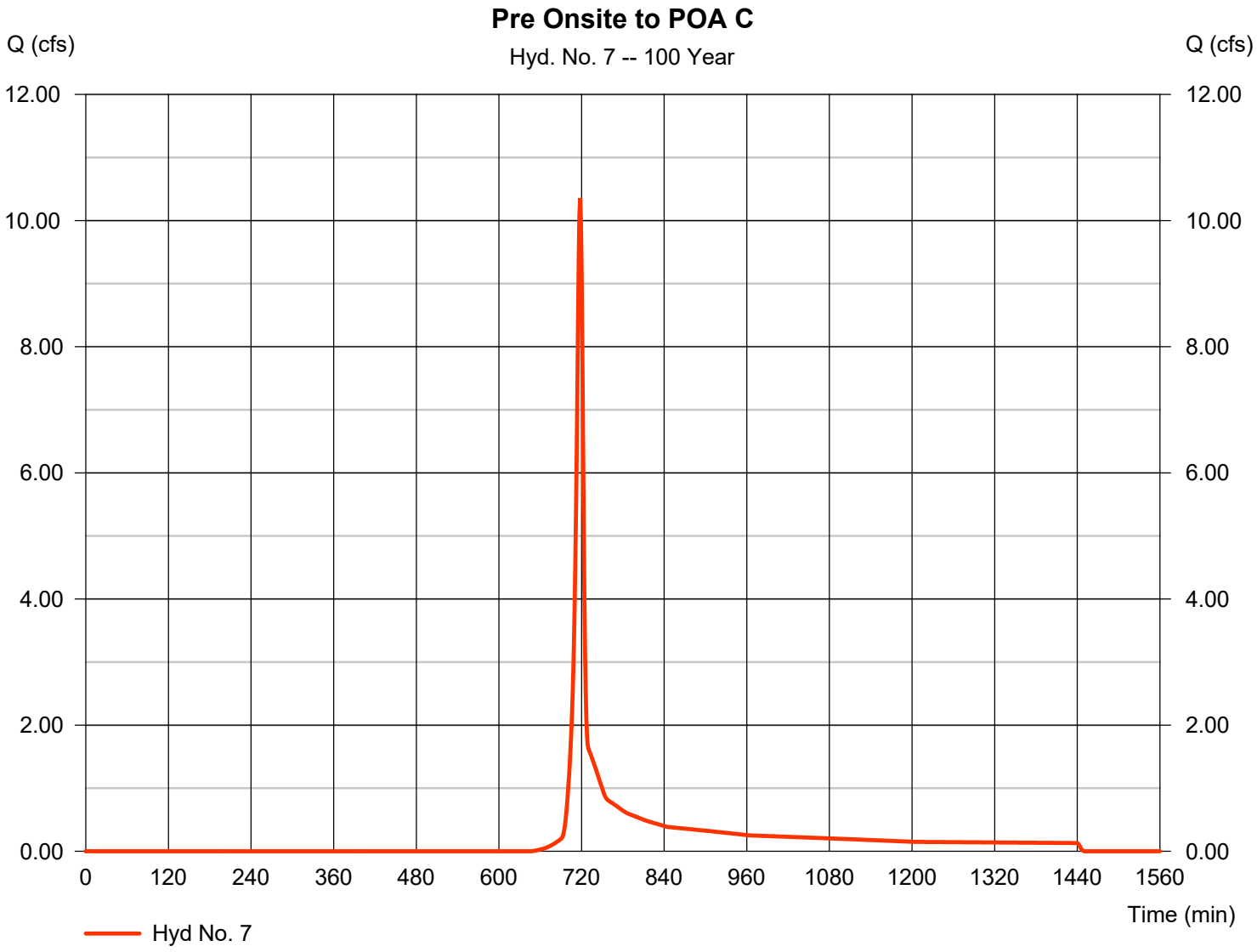


Hydrograph Report

Hyd. No. 7

Pre Onsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.36 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	20,970 cuft
Drainage area	=	2.270 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

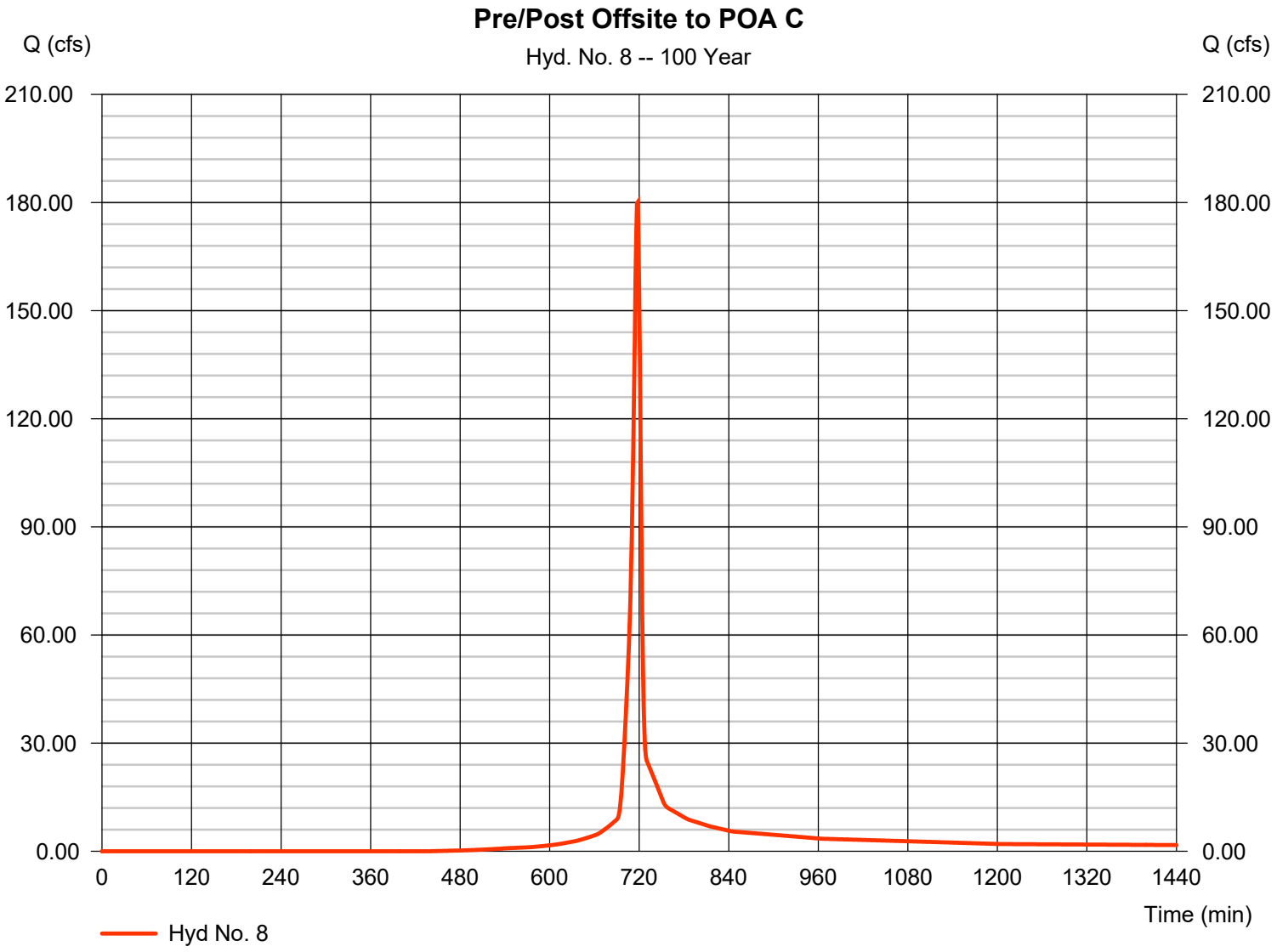


Hydrograph Report

Hyd. No. 8

Pre/Post Offsite to POA C

Hydrograph type	=	SCS Runoff	Peak discharge	=	180.11 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	368,094 cuft
Drainage area	=	22.950 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

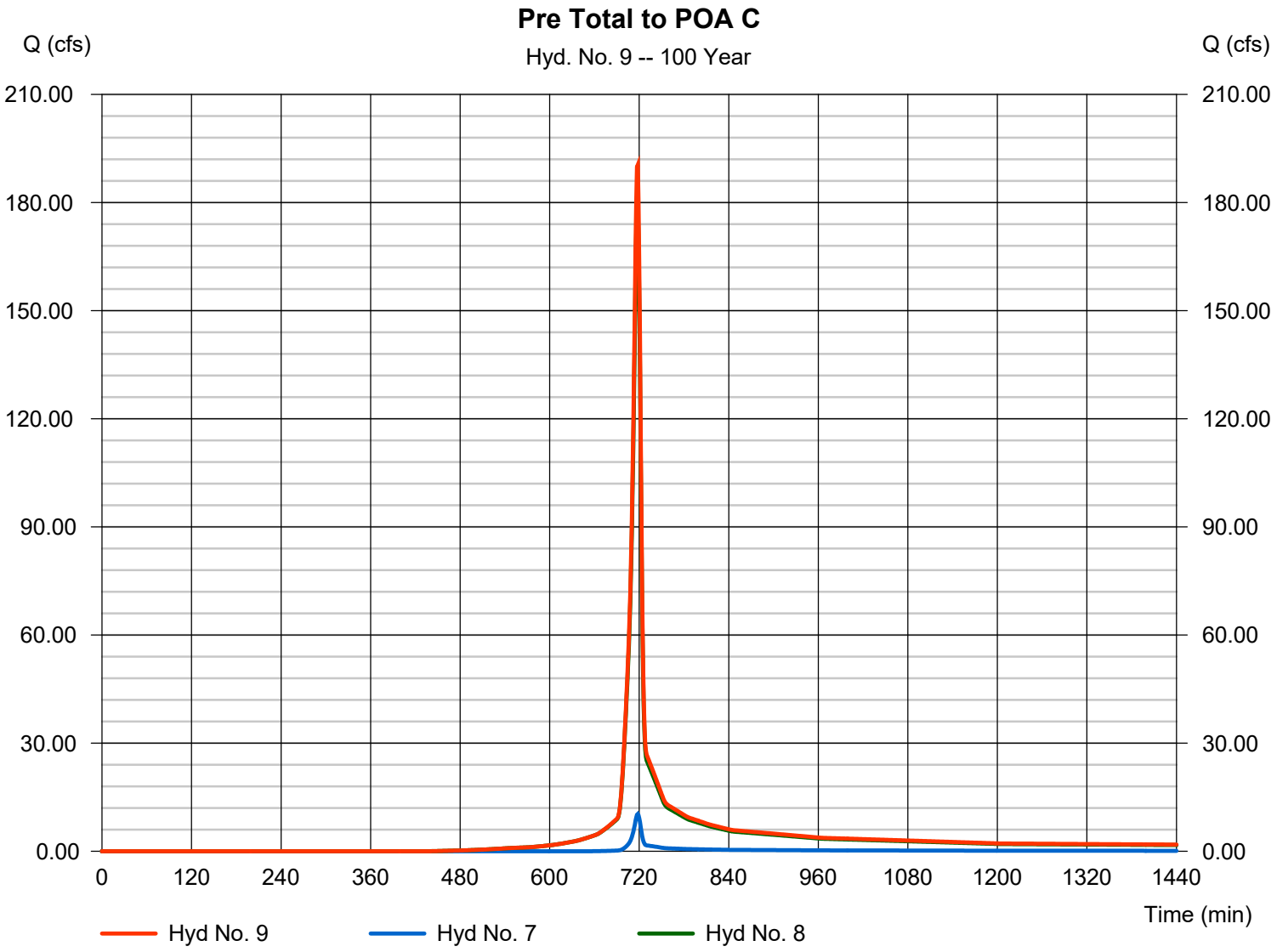


Hydrograph Report

Hyd. No. 9

Pre Total to POA C

Hydrograph type	= Combine	Peak discharge	= 190.47 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 389,065 cuft
Inflow hyds.	= 7, 8	Contrib. drain. area	= 25.220 ac

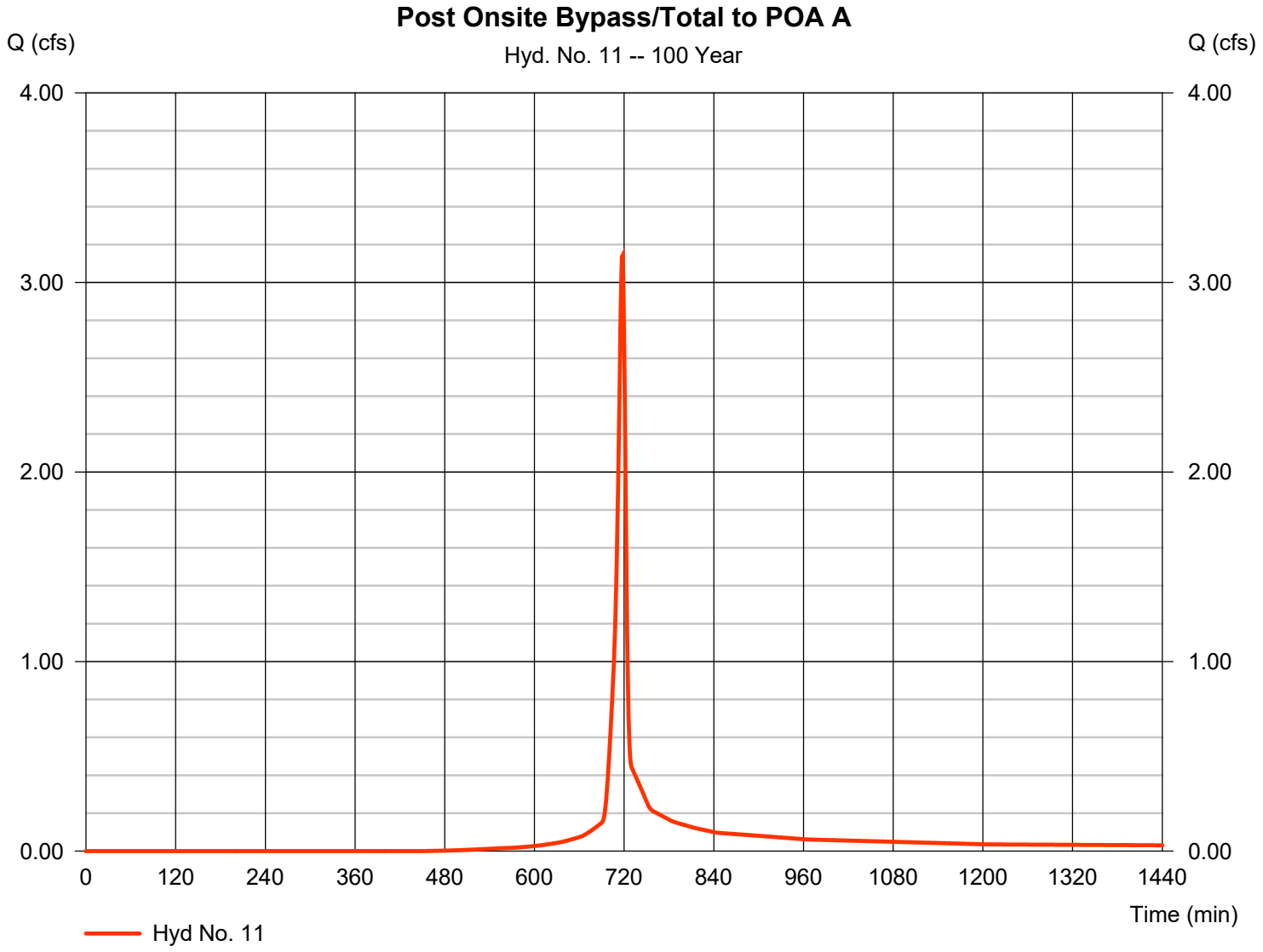


Hydrograph Report

Hyd. No. 11

Post Onsite Bypass/Total to POA A

Hydrograph type	= SCS Runoff	Peak discharge	= 3.144 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 6,406 cuft
Drainage area	= 0.410 ac	Curve number	= 71
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

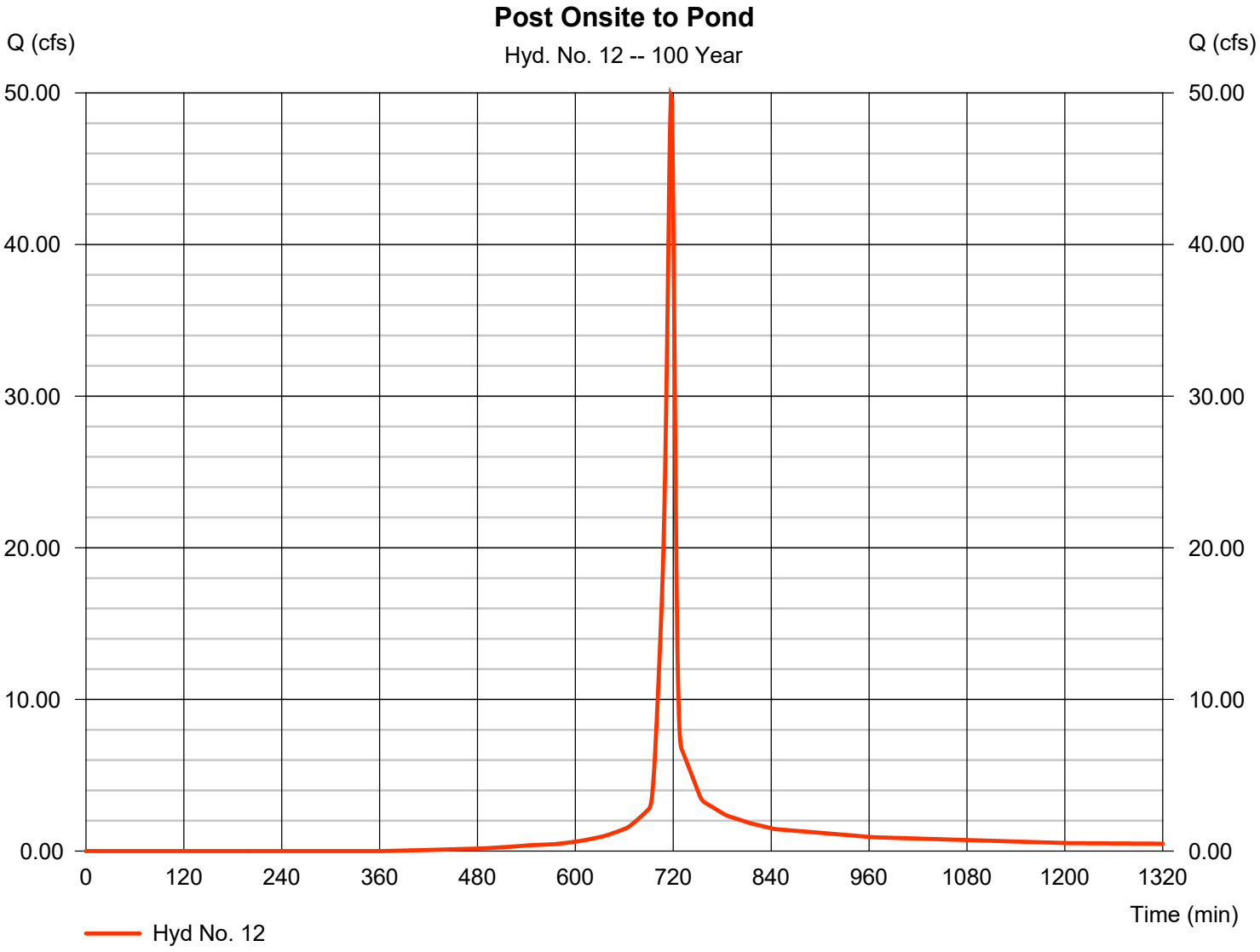


Hydrograph Report

Hyd. No. 12

Post Onsite to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	49.78 cfs
Storm frequency	=	100 yrs	Time to peak	=	717 min
Time interval	=	1 min	Hyd. volume	=	103,381 cuft
Drainage area	=	5.700 ac	Curve number	=	77
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

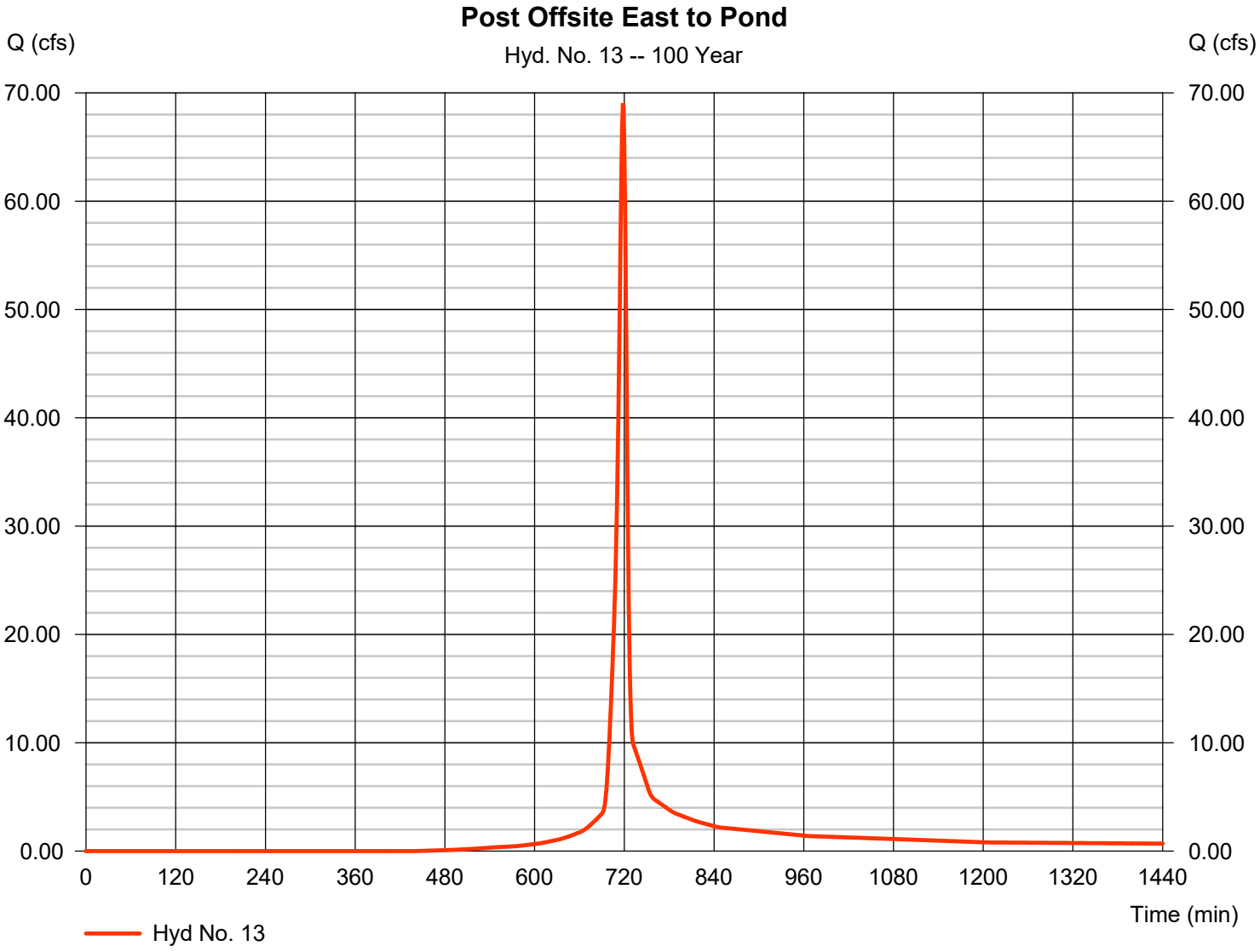


Hydrograph Report

Hyd. No. 13

Post Offsite East to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	69.04 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	147,092 cuft
Drainage area	=	9.700 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

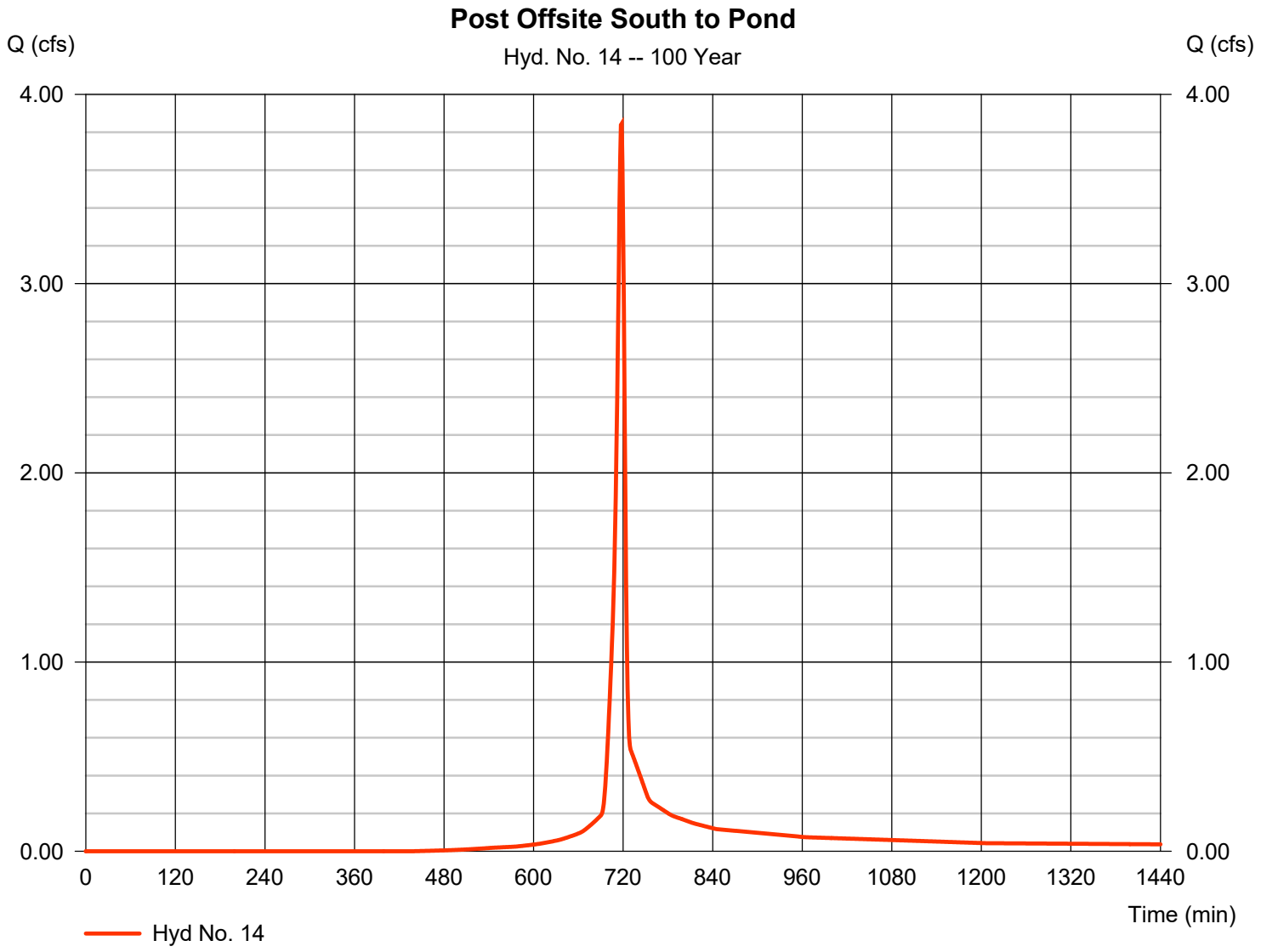


Hydrograph Report

Hyd. No. 14

Post Offsite South to Pond

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.845 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	7,859 cuft
Drainage area	=	0.490 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

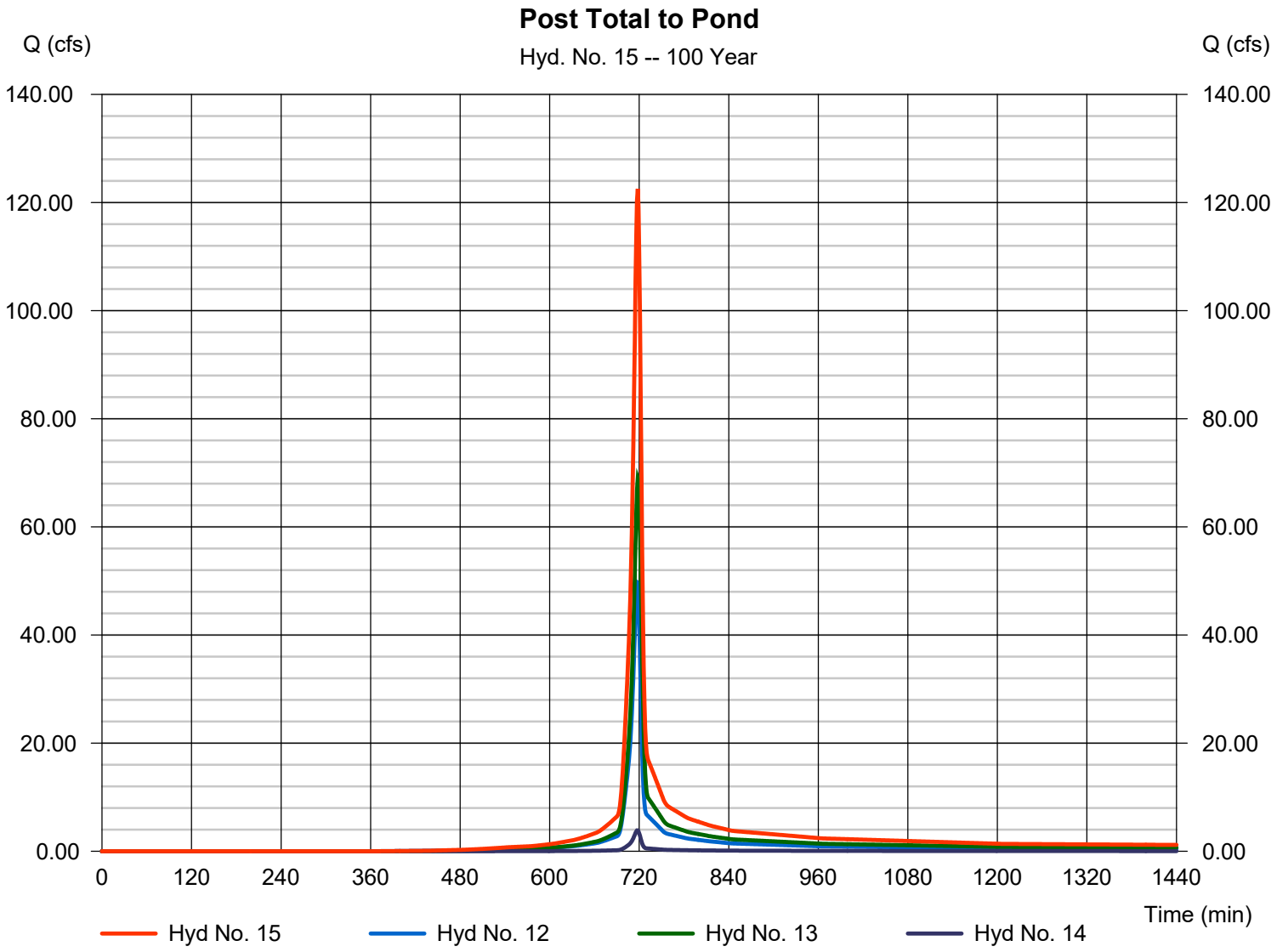


Hydrograph Report

Hyd. No. 15

Post Total to Pond

Hydrograph type	=	Combine	Peak discharge	=	122.54 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	258,333 cuft
Inflow hyds.	=	12, 13, 14	Contrib. drain. area	=	15.890 ac



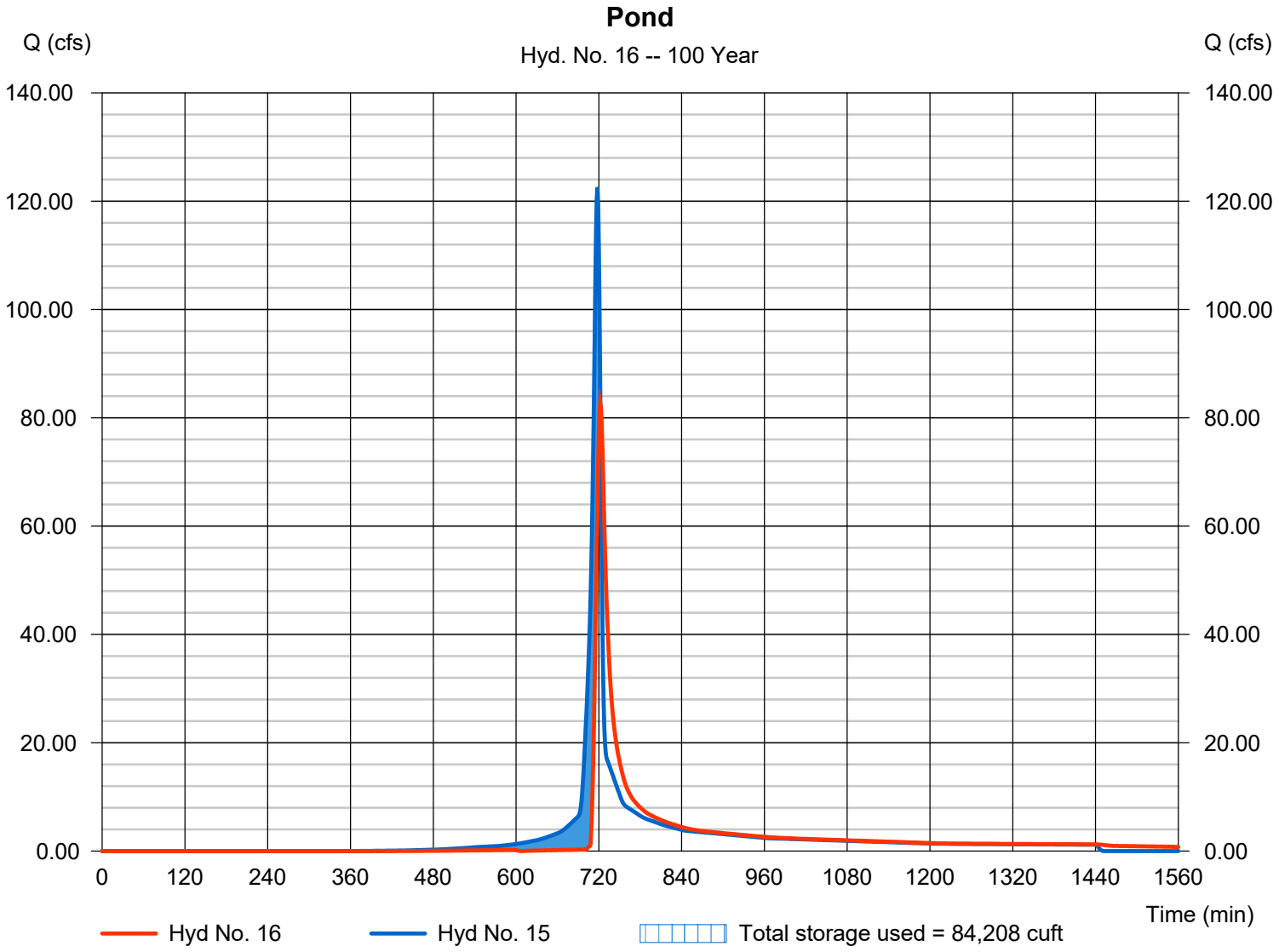
Hydrograph Report

Hyd. No. 16

Pond

Hydrograph type	=	Reservoir	Peak discharge	=	82.64 cfs
Storm frequency	=	100 yrs	Time to peak	=	722 min
Time interval	=	1 min	Hyd. volume	=	247,359 cuft
Inflow hyd. No.	=	15 - Post Total to Pond	Max. Elevation	=	1001.54 ft
Reservoir name	=	Pond	Max. Storage	=	84,208 cuft

Storage Indication method used.

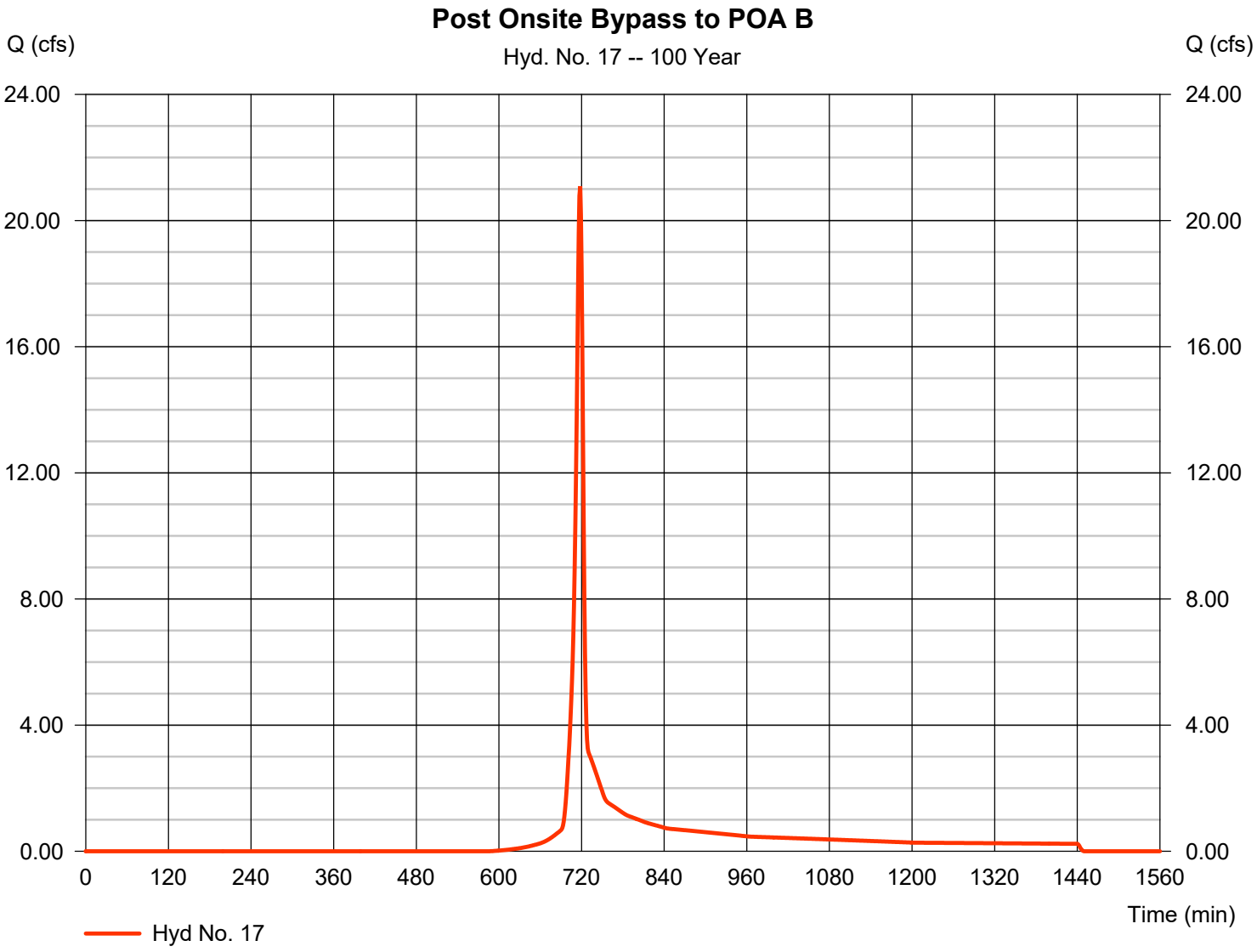


Hydrograph Report

Hyd. No. 17

Post Onsite Bypass to POA B

Hydrograph type	=	SCS Runoff	Peak discharge	=	21.09 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	1 min	Hyd. volume	=	42,343 cuft
Drainage area	=	3.660 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

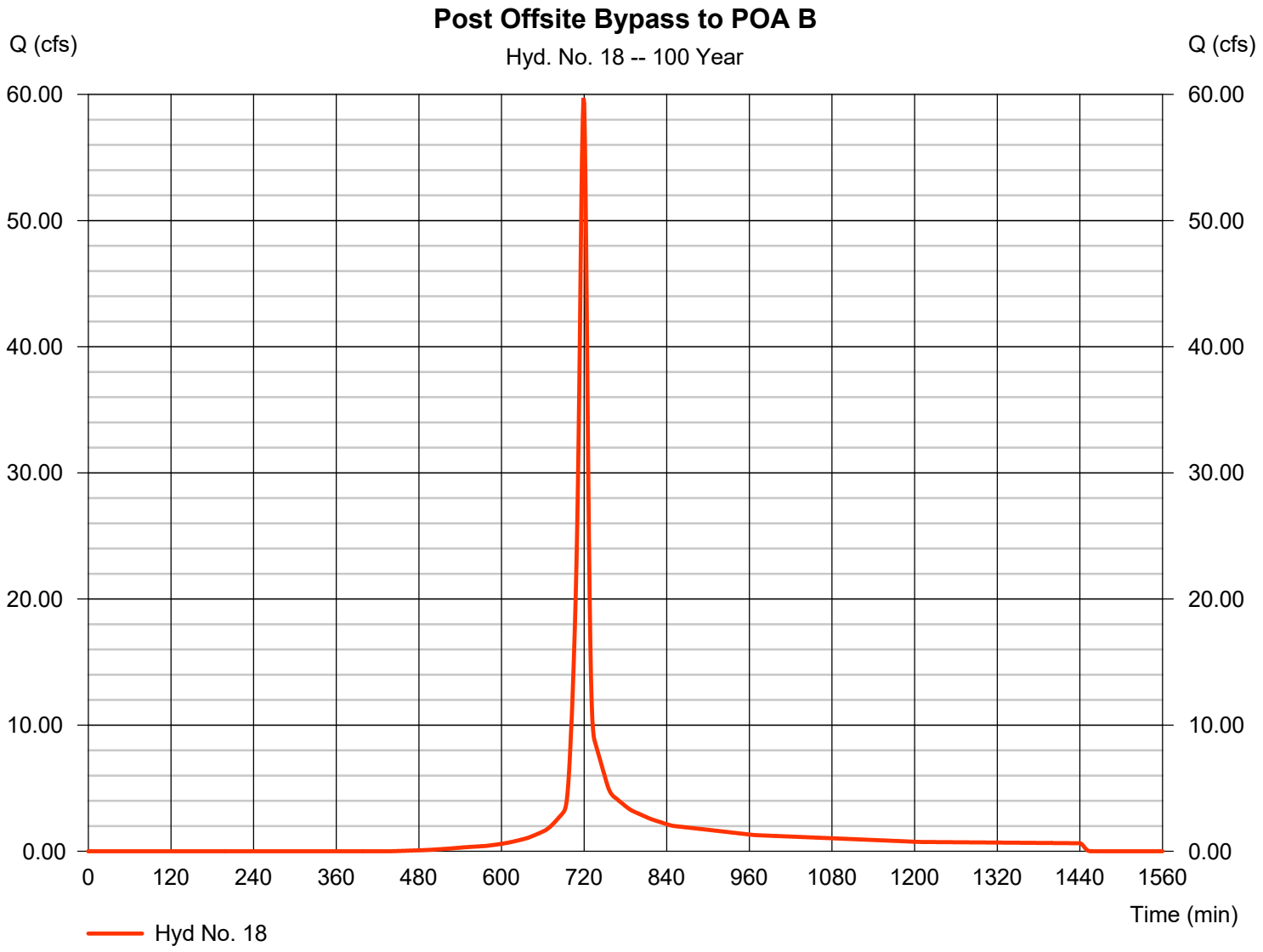


Hydrograph Report

Hyd. No. 18

Post Offsite Bypass to POA B

Hydrograph type	= SCS Runoff	Peak discharge	= 59.72 cfs
Storm frequency	= 100 yrs	Time to peak	= 719 min
Time interval	= 1 min	Hyd. volume	= 135,777 cuft
Drainage area	= 8.730 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

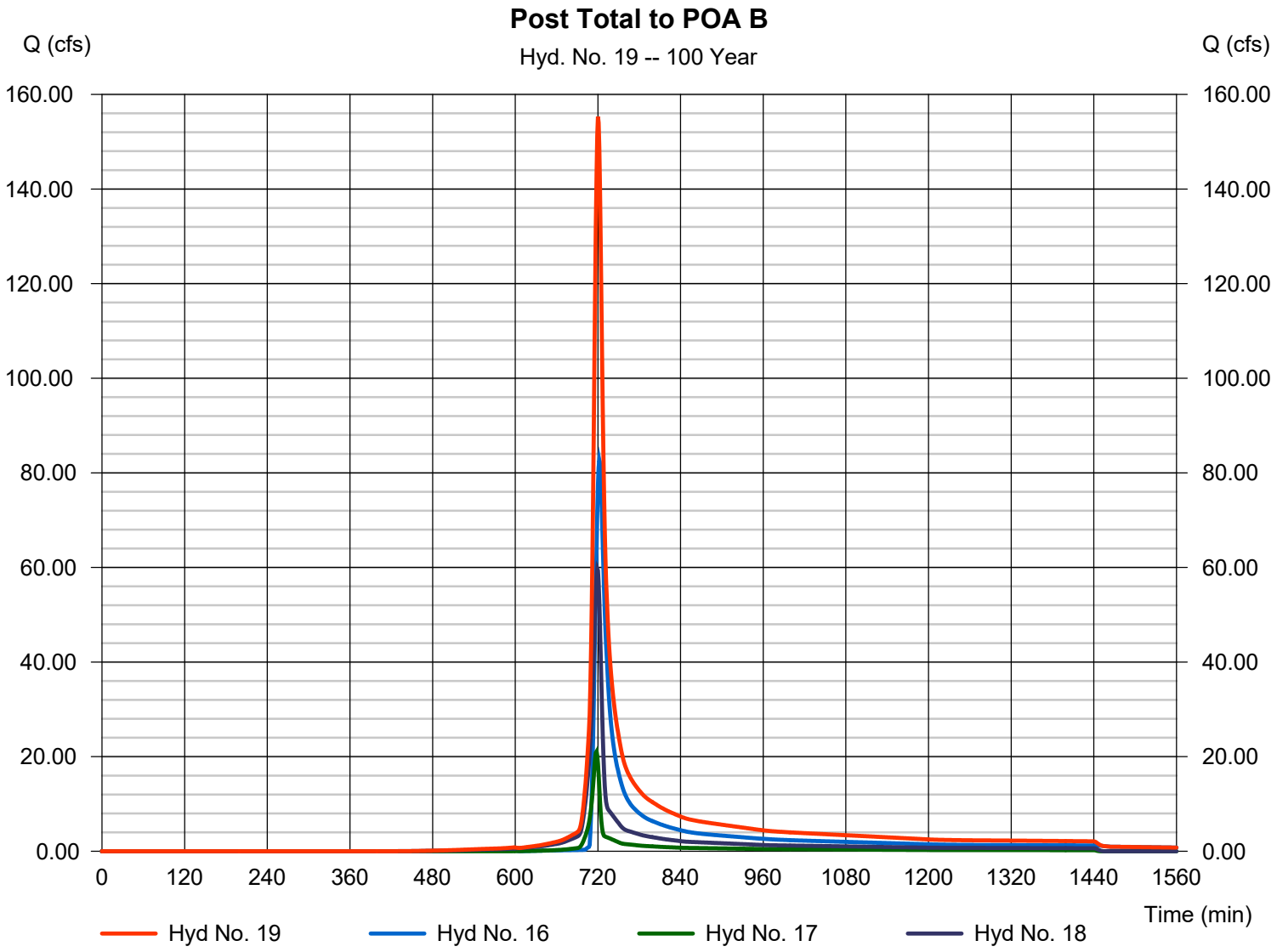


Hydrograph Report

Hyd. No. 19

Post Total to POA B

Hydrograph type	= Combine	Peak discharge	= 155.29 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 425,479 cuft
Inflow hyds.	= 16, 17, 18	Contrib. drain. area	= 12.390 ac

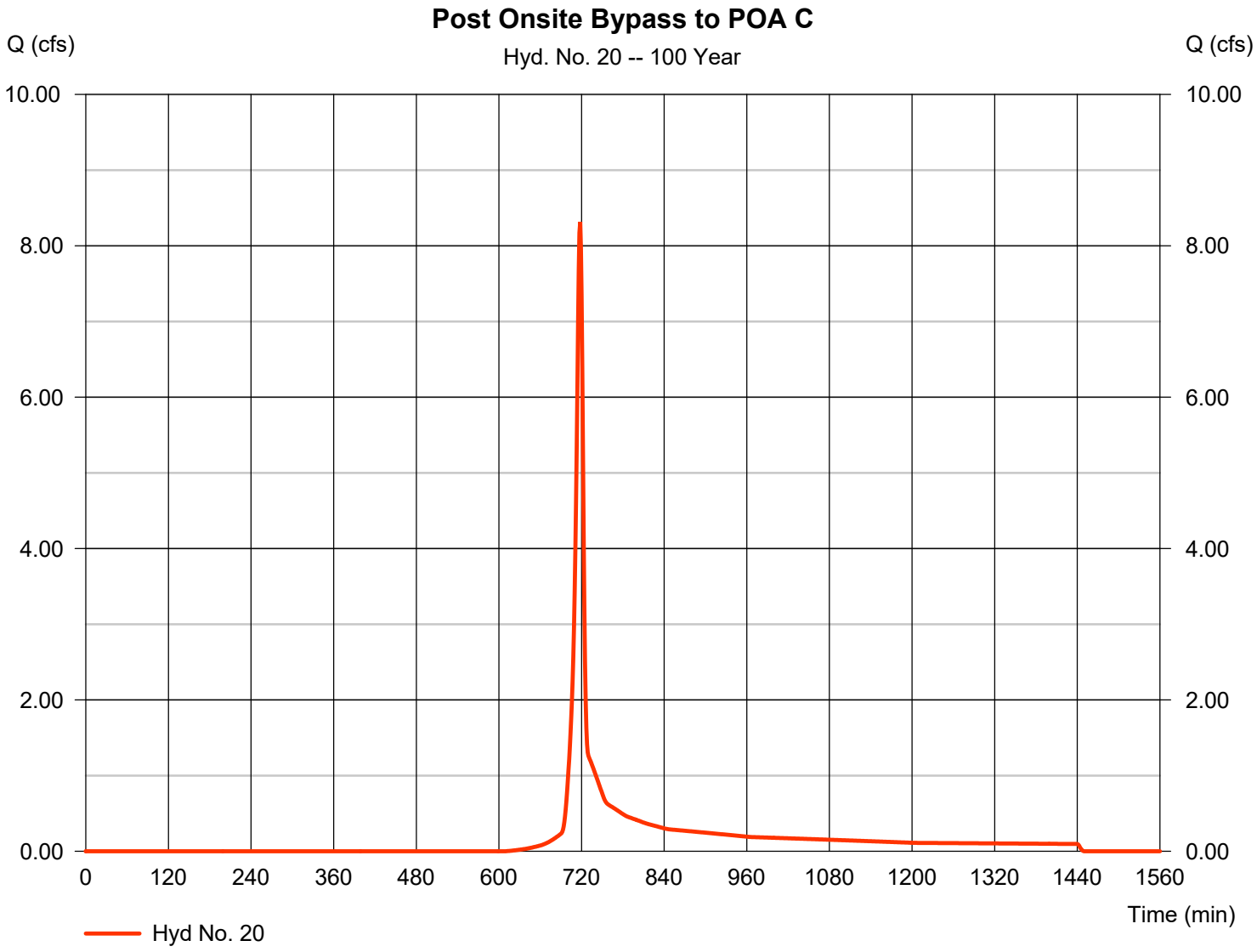


Hydrograph Report

Hyd. No. 20

Post Onsite Bypass to POA C

Hydrograph type	= SCS Runoff	Peak discharge	= 8.316 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 16,713 cuft
Drainage area	= 1.550 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.53 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

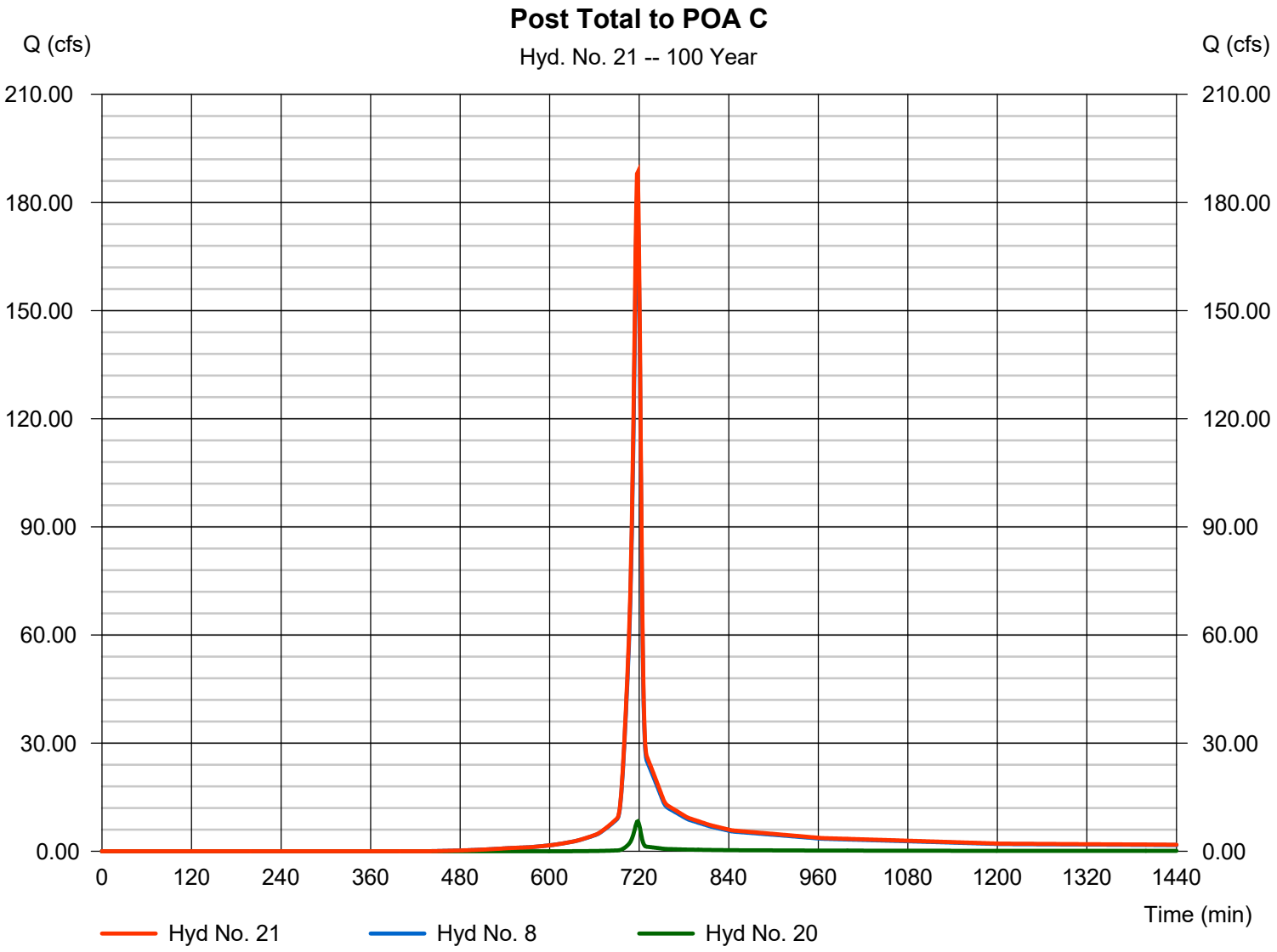


Hydrograph Report

Hyd. No. 21

Post Total to POA C

Hydrograph type	= Combine	Peak discharge	= 188.42 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 384,807 cuft
Inflow hyds.	= 8, 20	Contrib. drain. area	= 24.500 ac



Hydraflow Table of Contents \\KANSAS\Active\CSR003 - Old Concord Road\Hydro\CSR003 hydro 2-28-18.gpw

5 - Year

10 - Year

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