Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.22

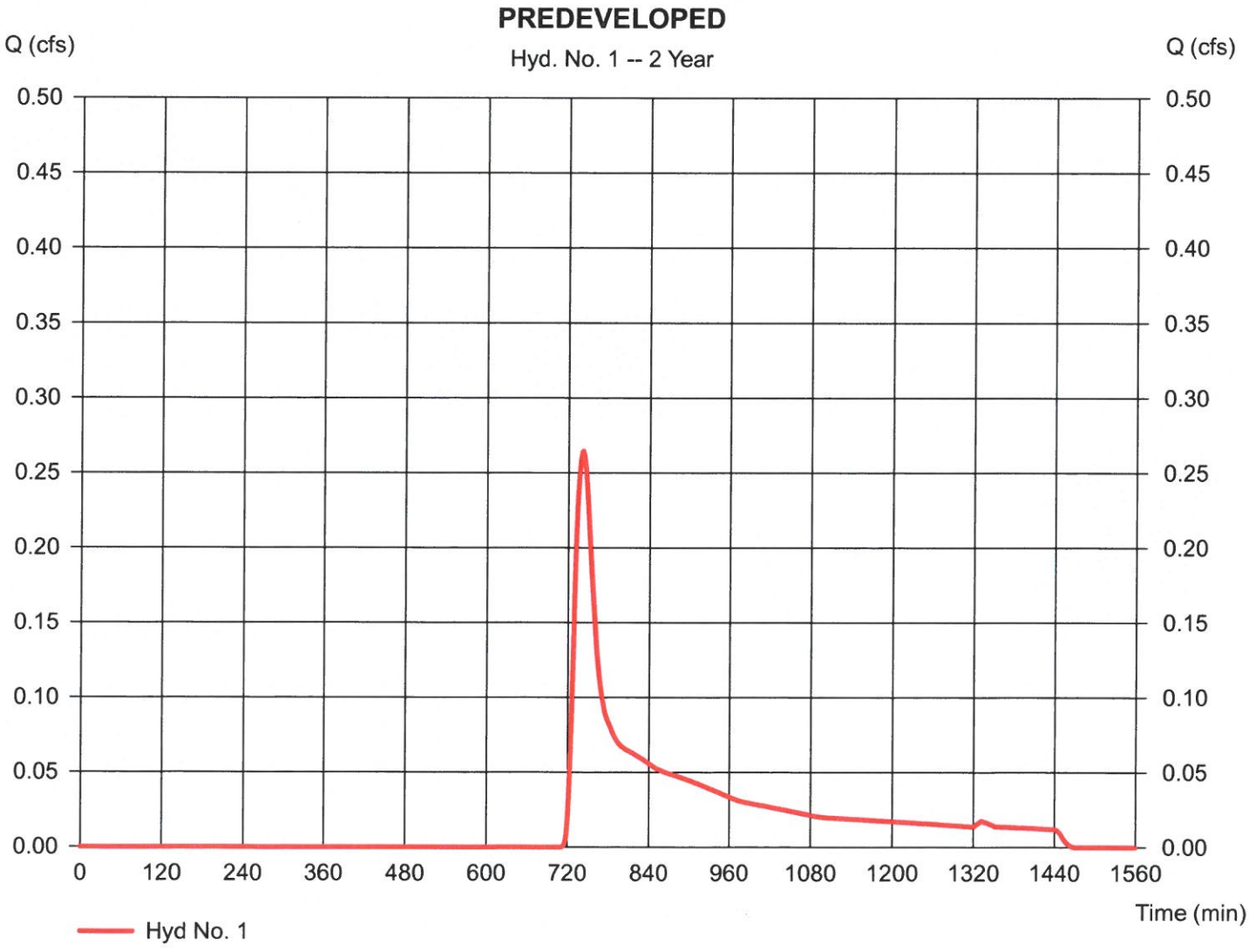
Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SCS Runoff	-------	-------	0.265	-------	0.637	0.998	1.427	1.774	2.166	PREDEVELOPED
2	SCS Runoff	-------	-------	2.368	-------	3.191	3.835	4.519	5.030	5.581	DEVELOPED
3	Reservoir	2	-------	0.264	-------	0.615	1.052	1.394	1.598	1.795	DETENTION BASIN

Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 0.265 cfs
Storm frequency	= 2 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 1,686 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 3.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



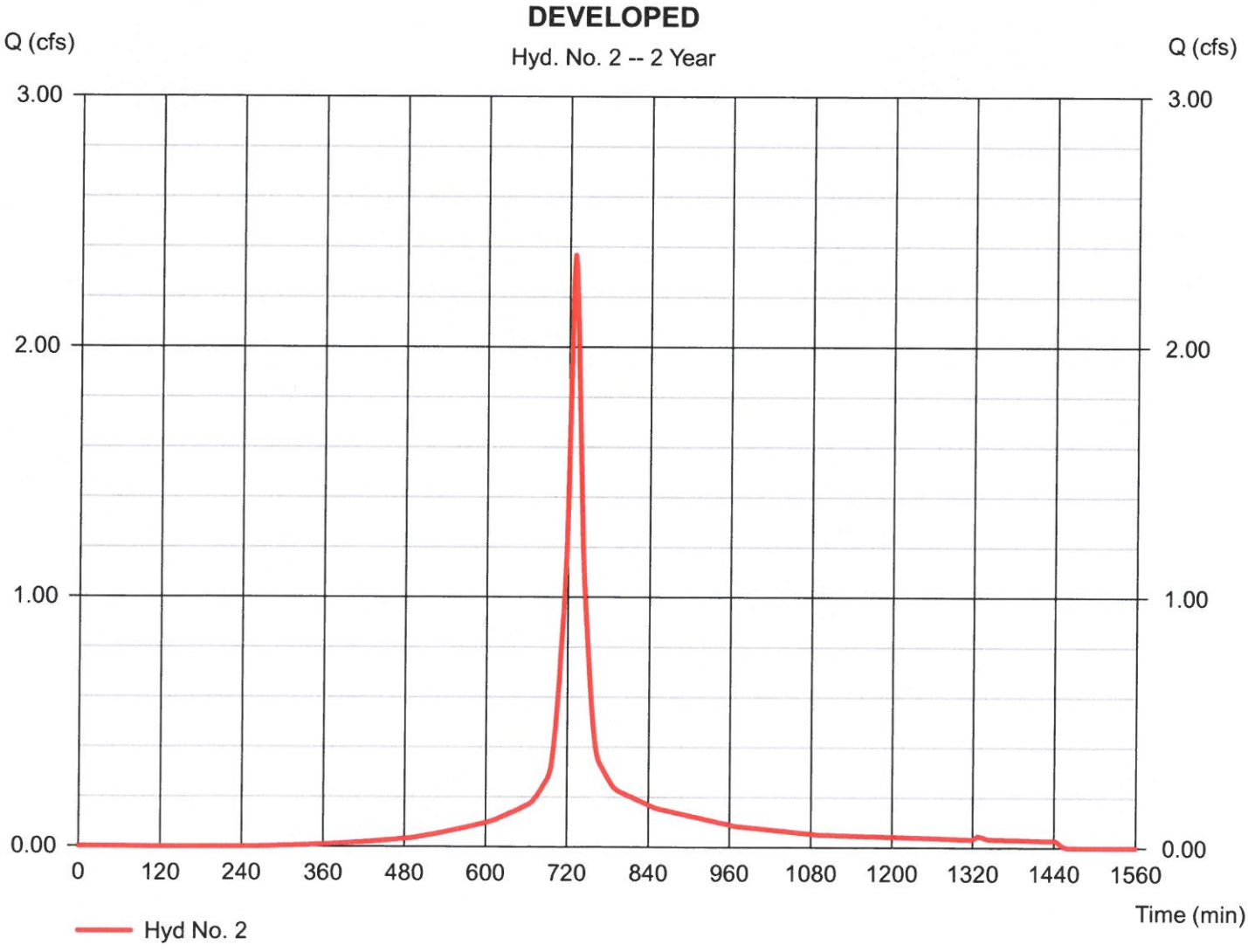
Hydrograph Report

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 2.368 cfs
Storm frequency	= 2 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 9,336 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



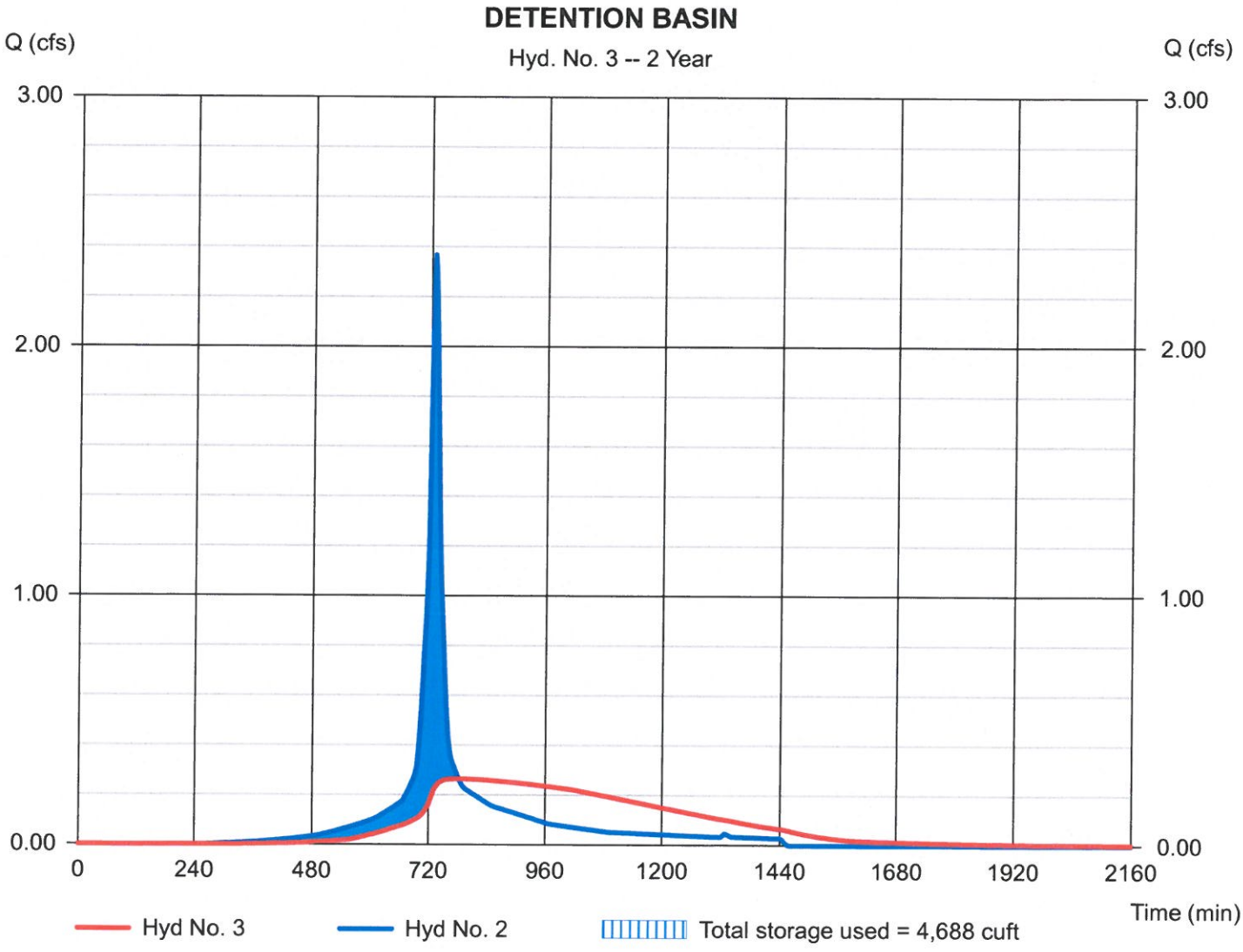
Hydrograph Report

Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 0.264 cfs
Storm frequency	= 2 yrs	Time to peak	= 782 min
Time interval	= 2 min	Hyd. volume	= 9,320 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 653.38 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 4,688 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs by Intelisolve v9.22 — Monday, Mar 30, 2020

Pond No. 1 - ROOF DENTENTION POND JAN 31 2020

Pond Data

Contours - User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 652.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	652.00	2,500	0	0
1.00	653.00	3,700	3,100	3,100
2.00	654.00	4,750	4,225	7,325
3.00	655.00	5,600	5,175	12,500
3.50	655.50	6,800	3,100	15,600

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	3.00	8.00	Inactive
Span (in)	= 15.00	3.00	8.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 650.75	652.00	653.40	0.00
Length (ft)	= 20.00	1.00	1.00	0.00
Slope (%)	= 2.10	0.00	0.00	n/a
N-Value	= .010	.010	.010	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.93	6.00	Inactive	Inactive
Crest El. (ft)	= 654.50	654.50	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Riser	Broad	---	---
Multi-Stage	= Yes	Yes	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

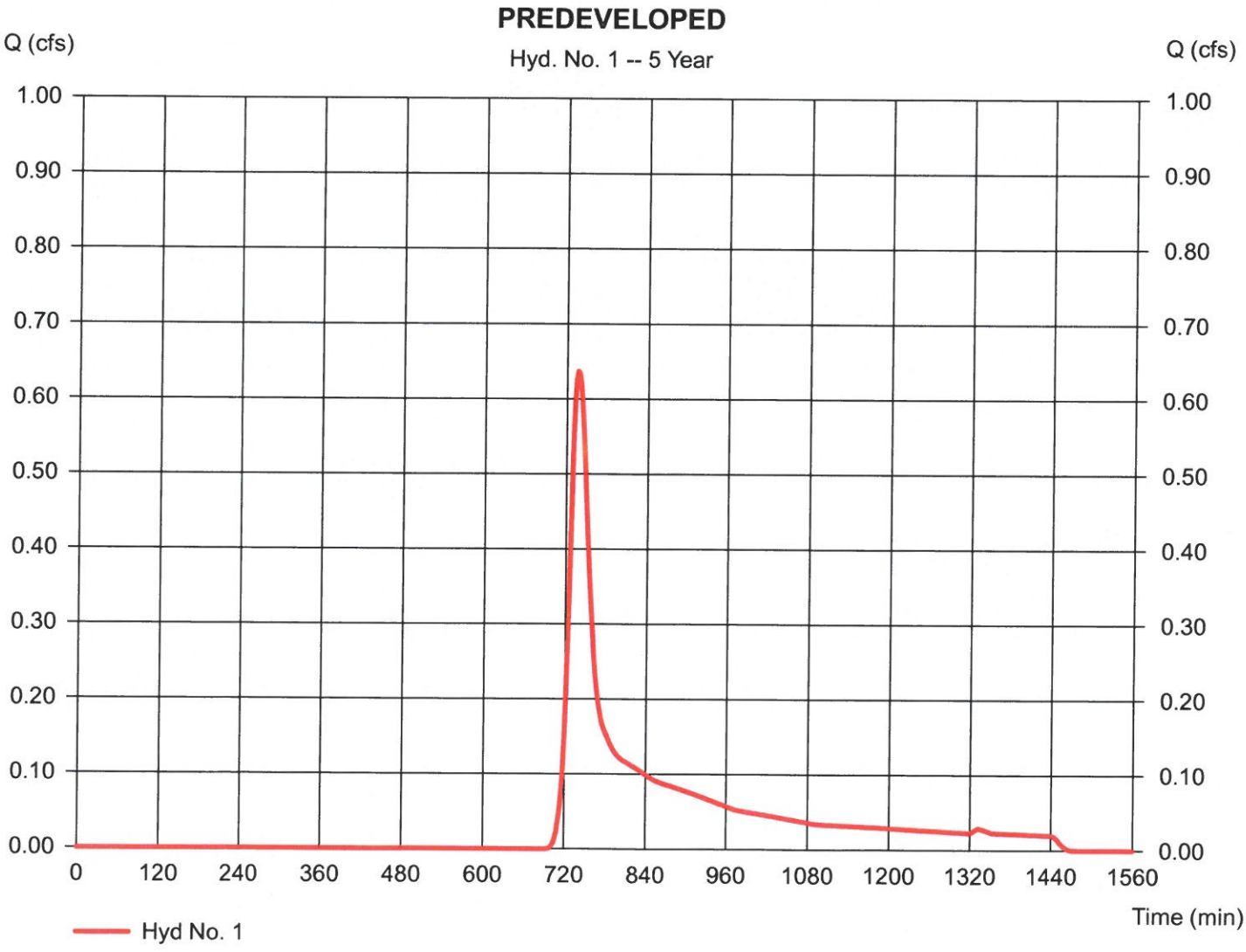
Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	652.00	0.00	0.00	0.00	---	0.00	0.00	---	---	---	---	0.000
1.00	3,100	653.00	4.67 ic	0.22 ic	0.00	---	0.00	0.00	---	---	---	---	0.221
2.00	7,325	654.00	4.67 ic	0.32 ic	0.88 ic	---	0.00	0.00	---	---	---	---	1.199
3.00	12,500	655.00	10.68 ic	0.14 ic	1.01 ic	---	4.35 s	5.18 s	---	---	---	---	10.68
3.50	15,600	655.50	11.91 ic	0.06 ic	0.42 ic	---	5.21 s	6.21 s	---	---	---	---	11.90

Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 0.637 cfs
Storm frequency	= 5 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 3,326 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 4.20 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



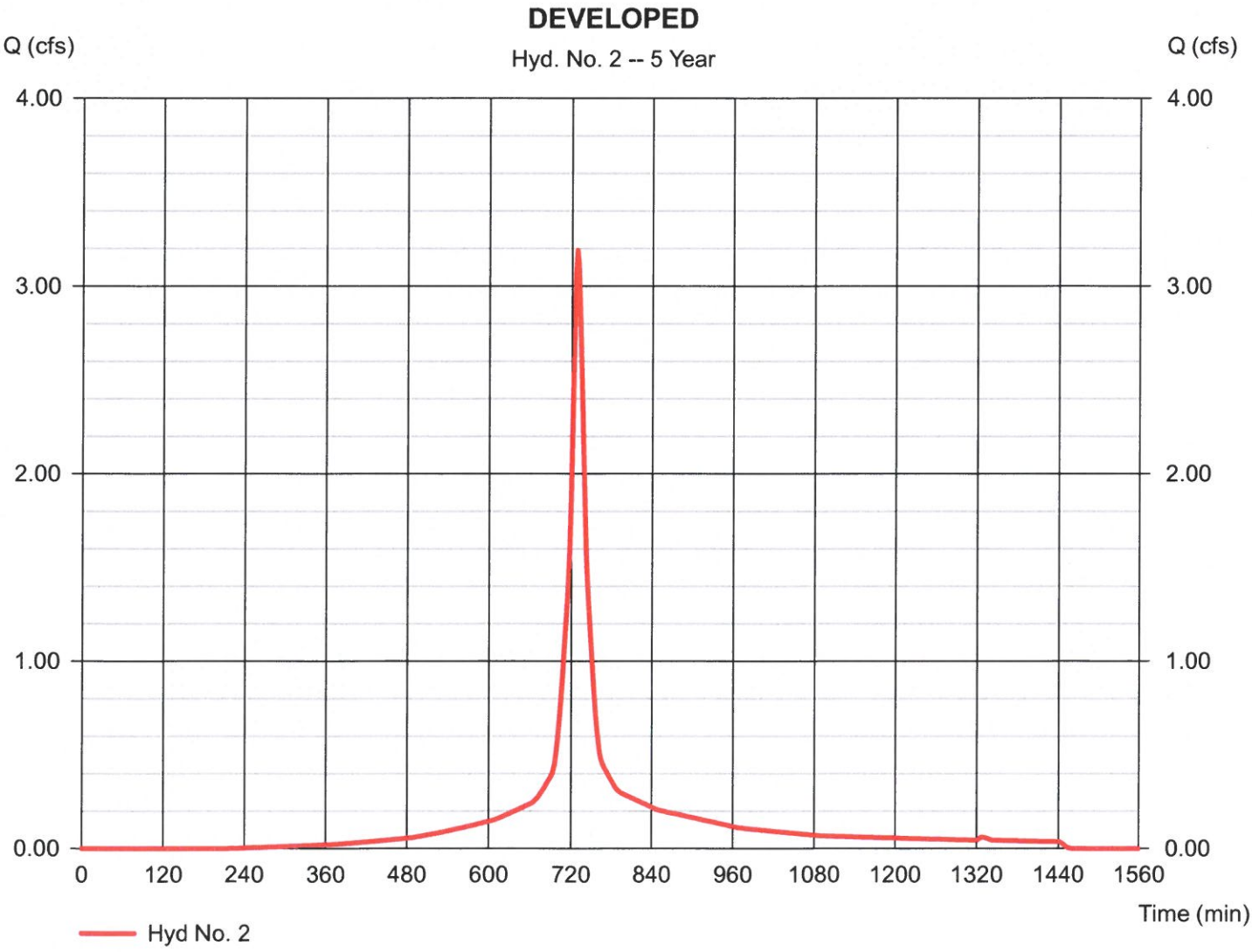
Hydrograph Report

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 3.191 cfs
Storm frequency	= 5 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 12,783 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.20 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



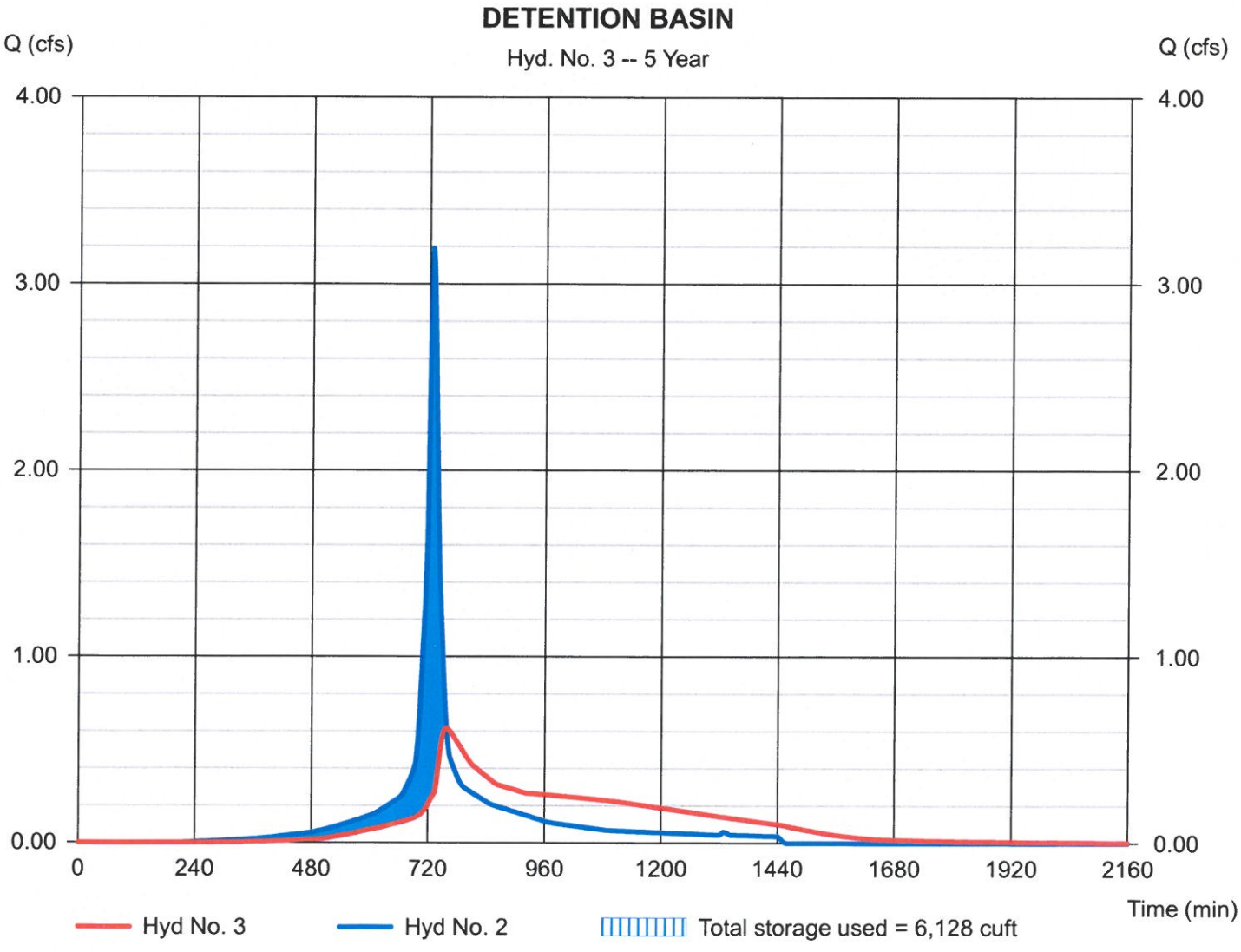
Hydrograph Report

Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 0.615 cfs
Storm frequency	= 5 yrs	Time to peak	= 758 min
Time interval	= 2 min	Hyd. volume	= 12,768 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 653.72 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 6,128 cuft

Storage Indication method used.

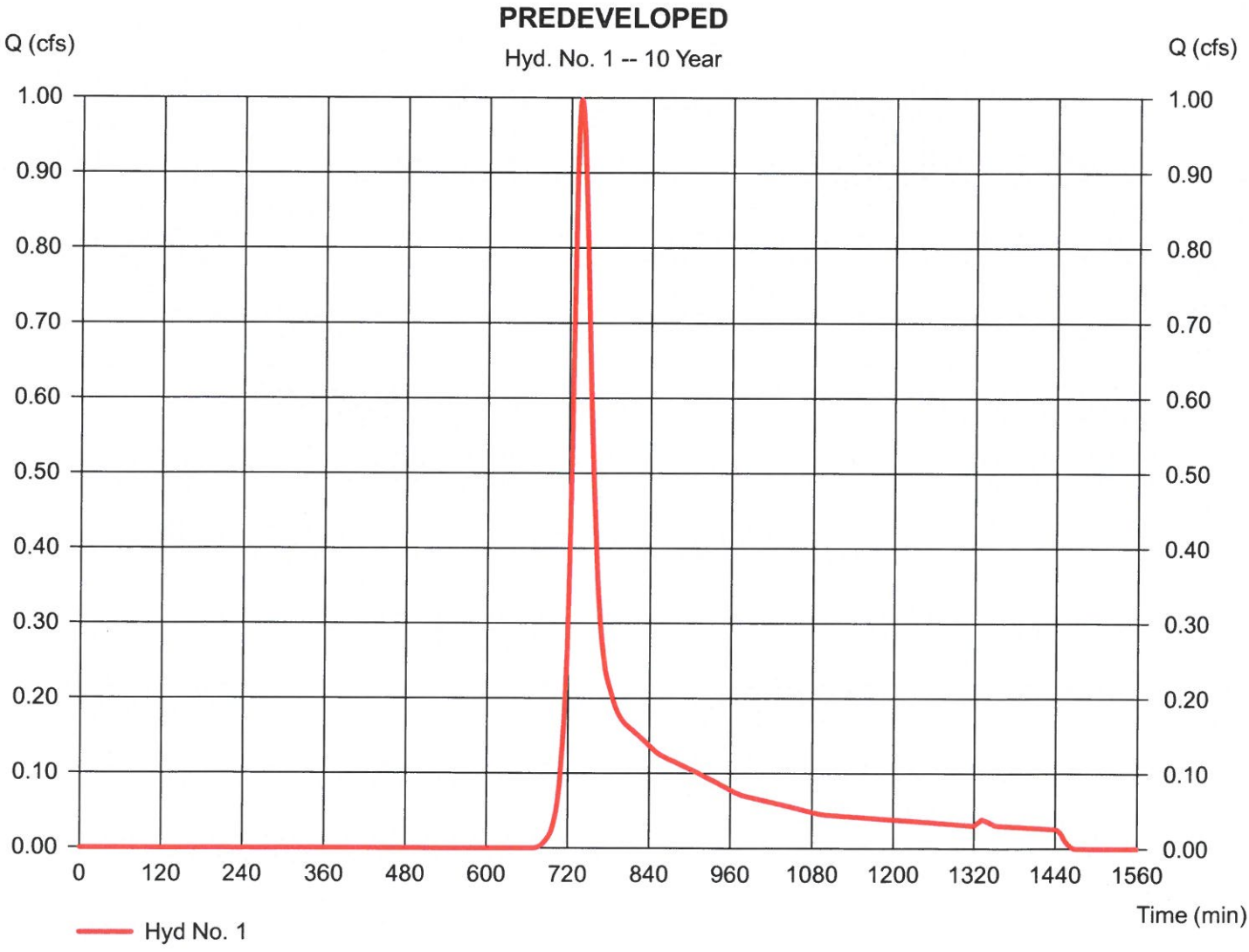


Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 0.998 cfs
Storm frequency	= 10 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 4,861 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 4.95 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



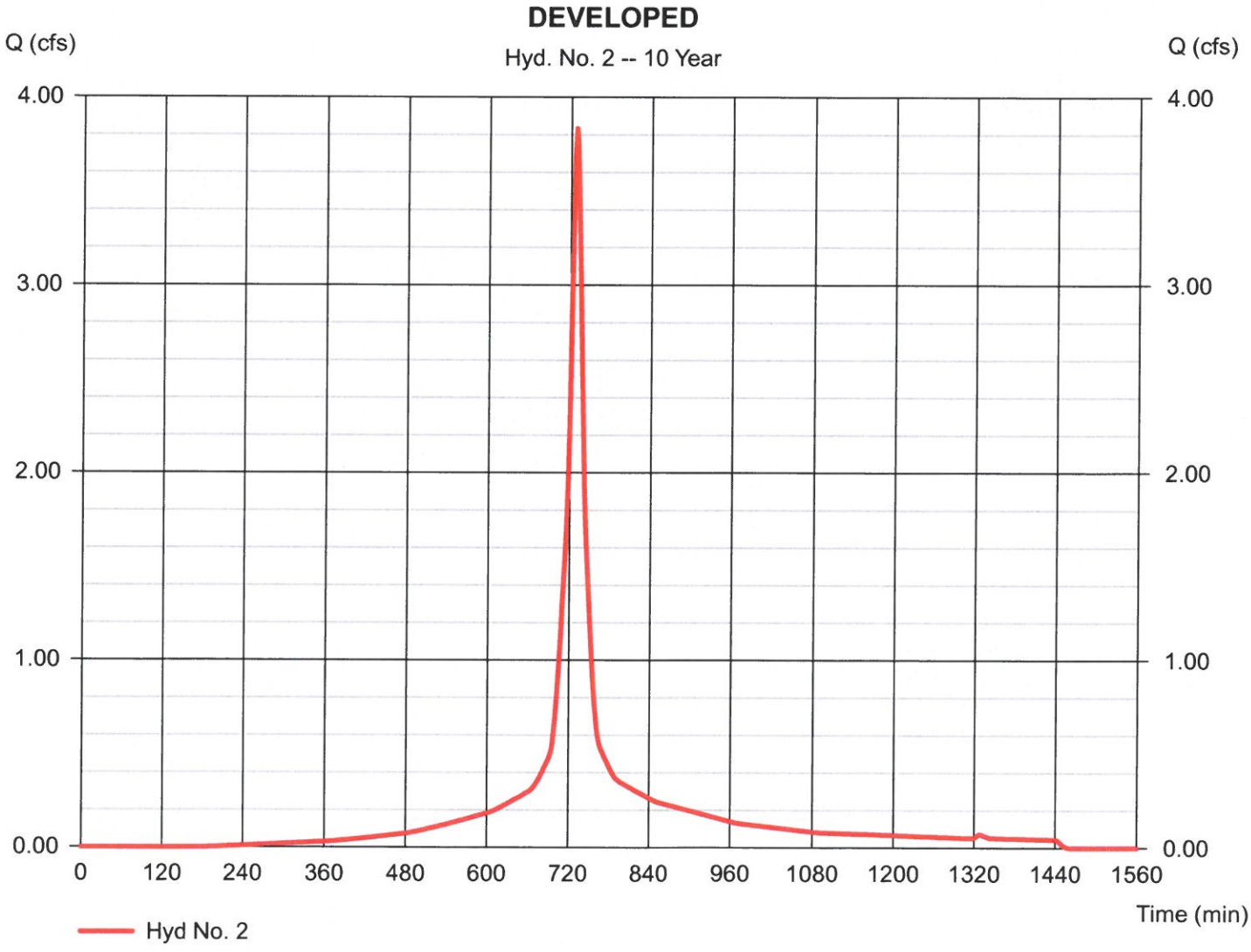
Hydrograph Report

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 3.835 cfs
Storm frequency	= 10 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 15,531 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.95 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



Hydrograph Report

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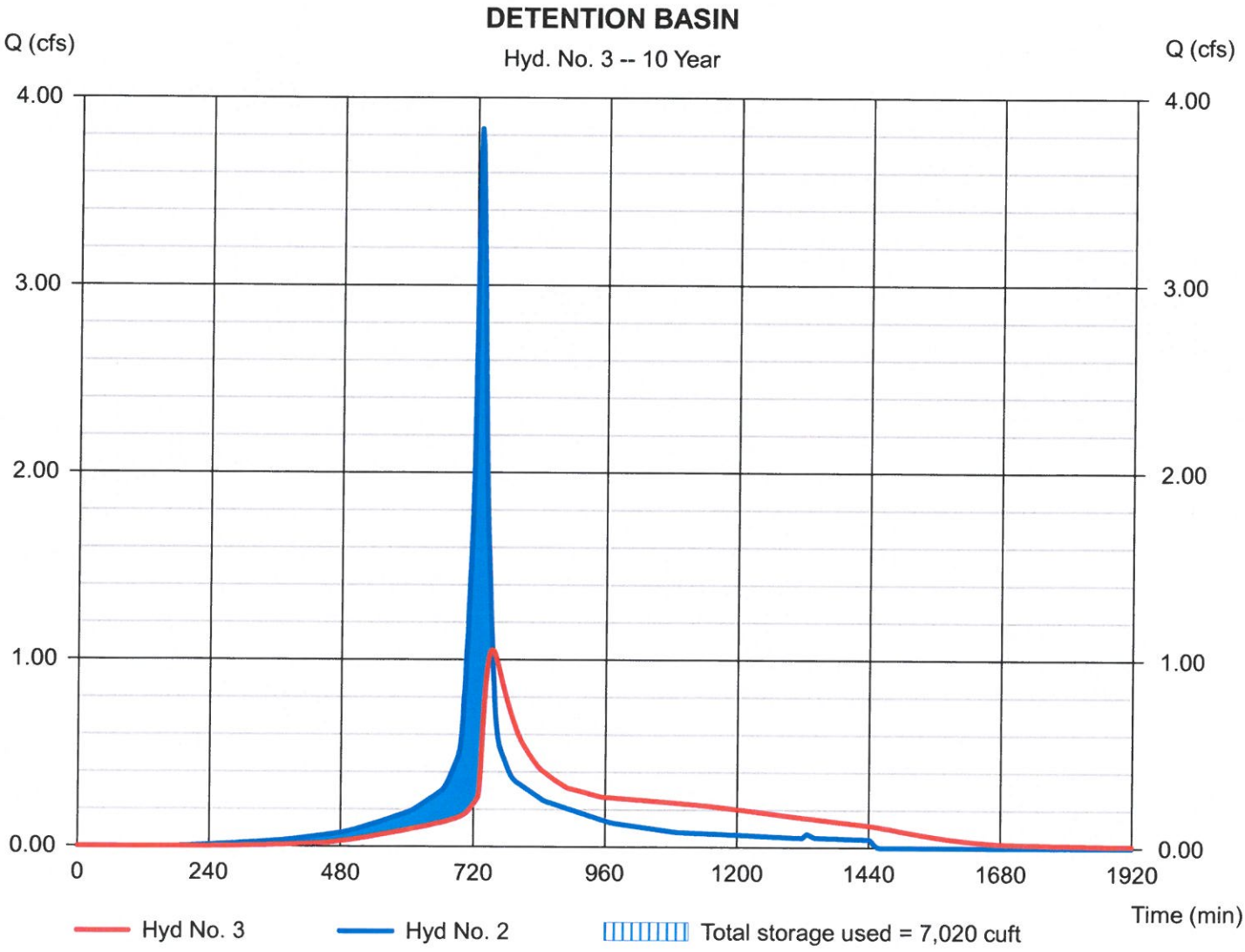
Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 1.052 cfs
Storm frequency	= 10 yrs	Time to peak	= 752 min
Time interval	= 2 min	Hyd. volume	= 15,515 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 653.93 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 7,020 cuft

Storage Indication method used.

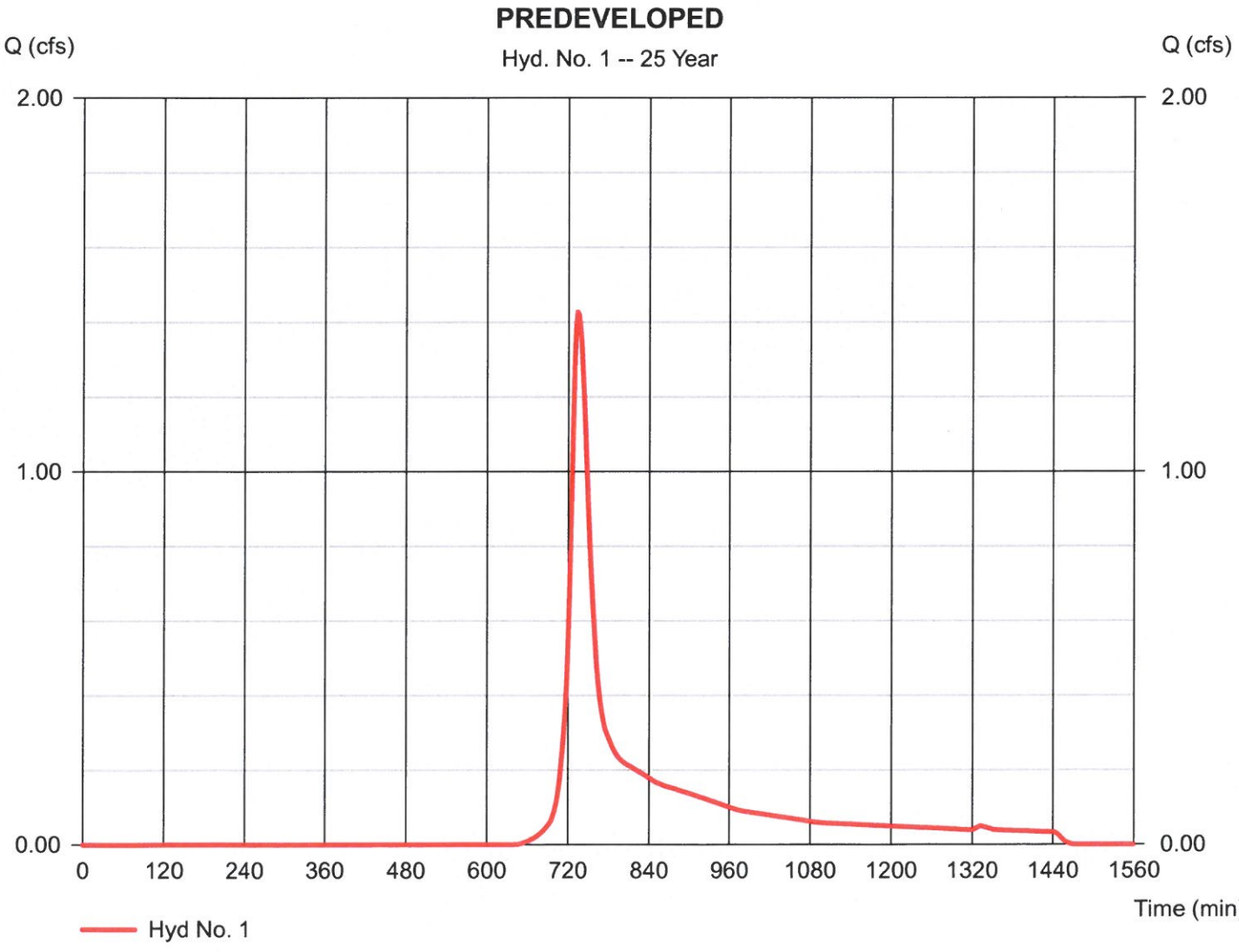


Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 1.427 cfs
Storm frequency	= 25 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 6,680 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 5.75 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



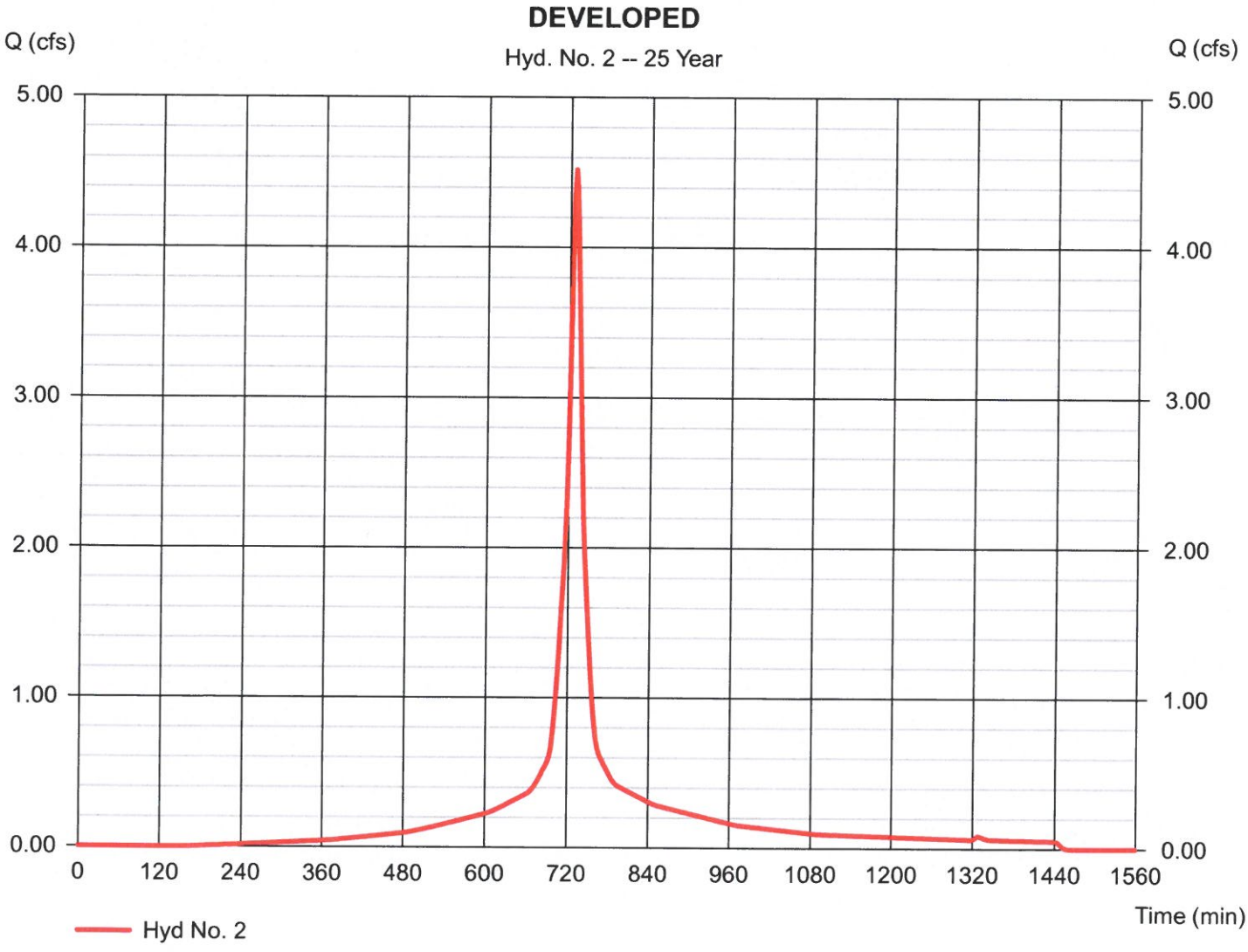
Hydrograph Report

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 4.519 cfs
Storm frequency	= 25 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 18,477 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.75 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



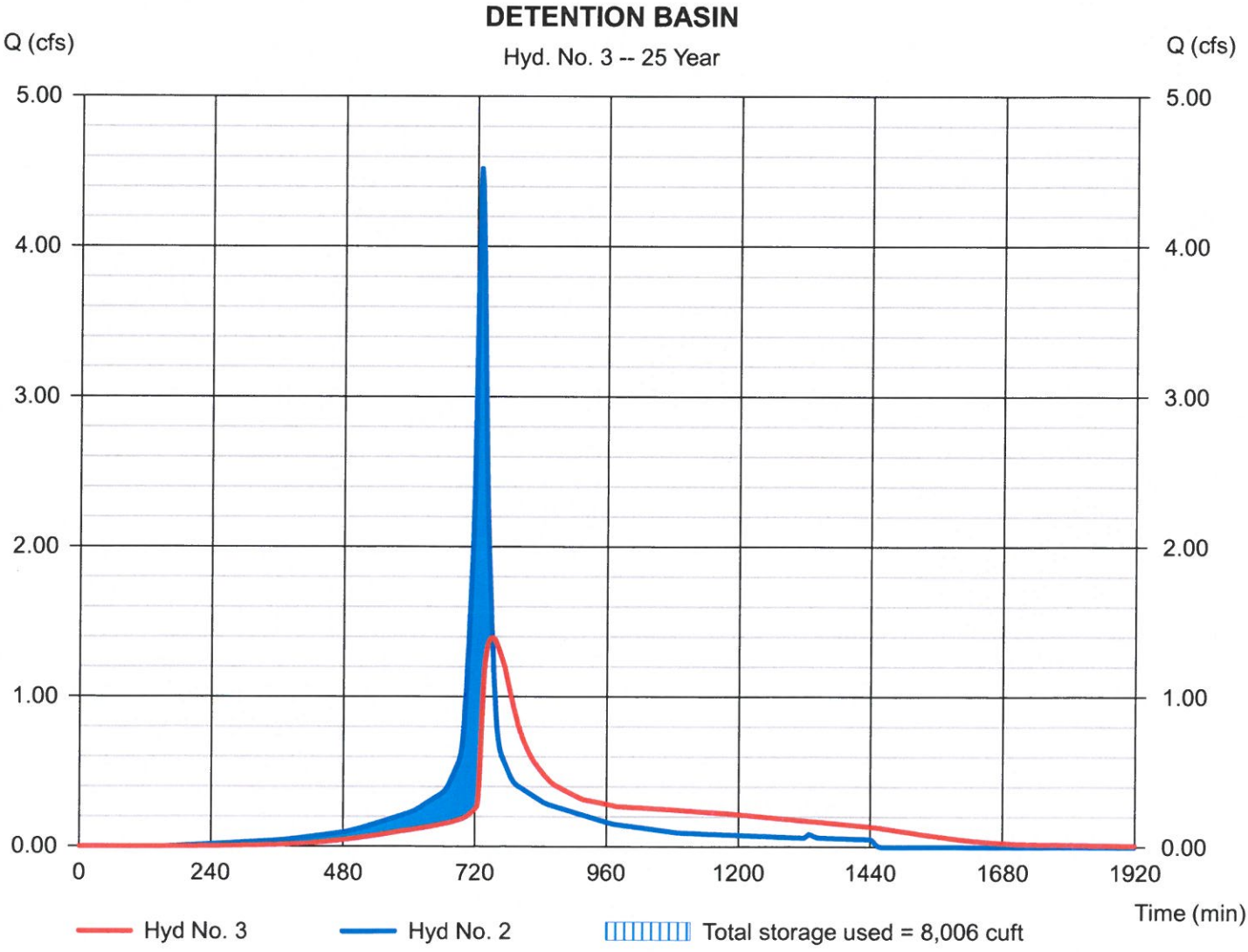
Hydrograph Report

Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 1.394 cfs
Storm frequency	= 25 yrs	Time to peak	= 750 min
Time interval	= 2 min	Hyd. volume	= 18,462 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 654.13 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 8,006 cuft

Storage Indication method used.

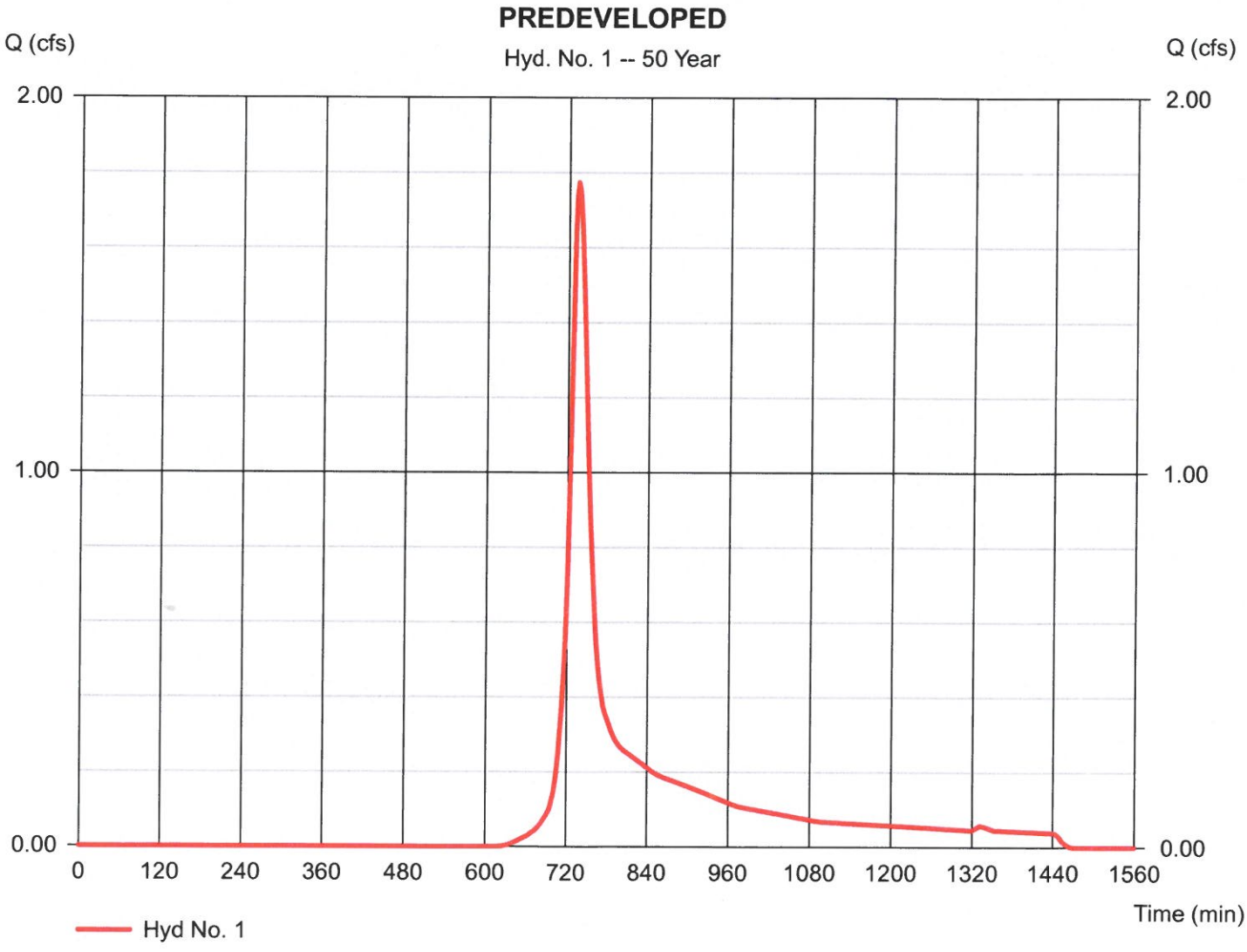


Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 1.774 cfs
Storm frequency	= 50 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 8,143 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 6.35 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



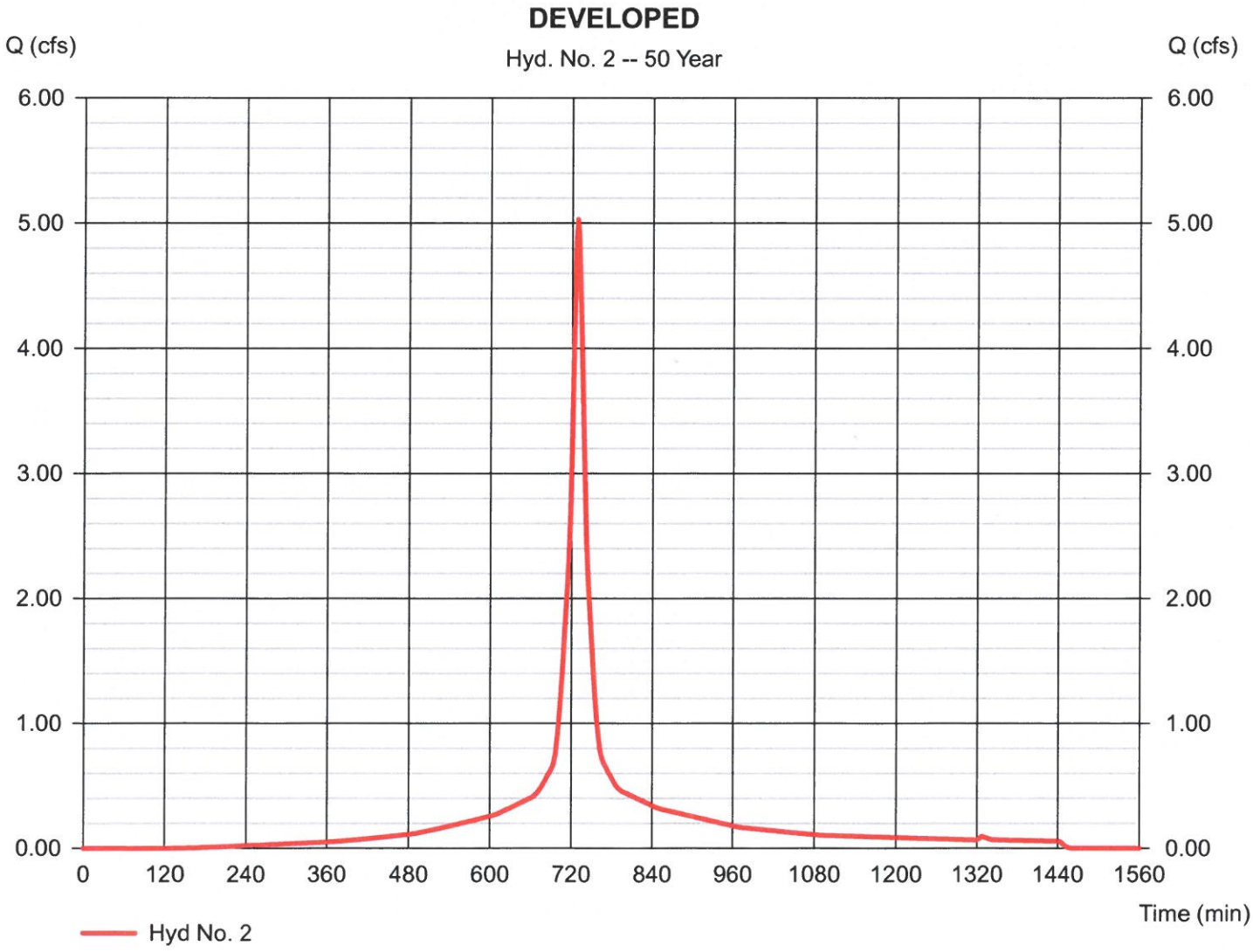
Hydrograph Report

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 5.030 cfs
Storm frequency	= 50 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 20,695 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.35 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



Hydrograph Report

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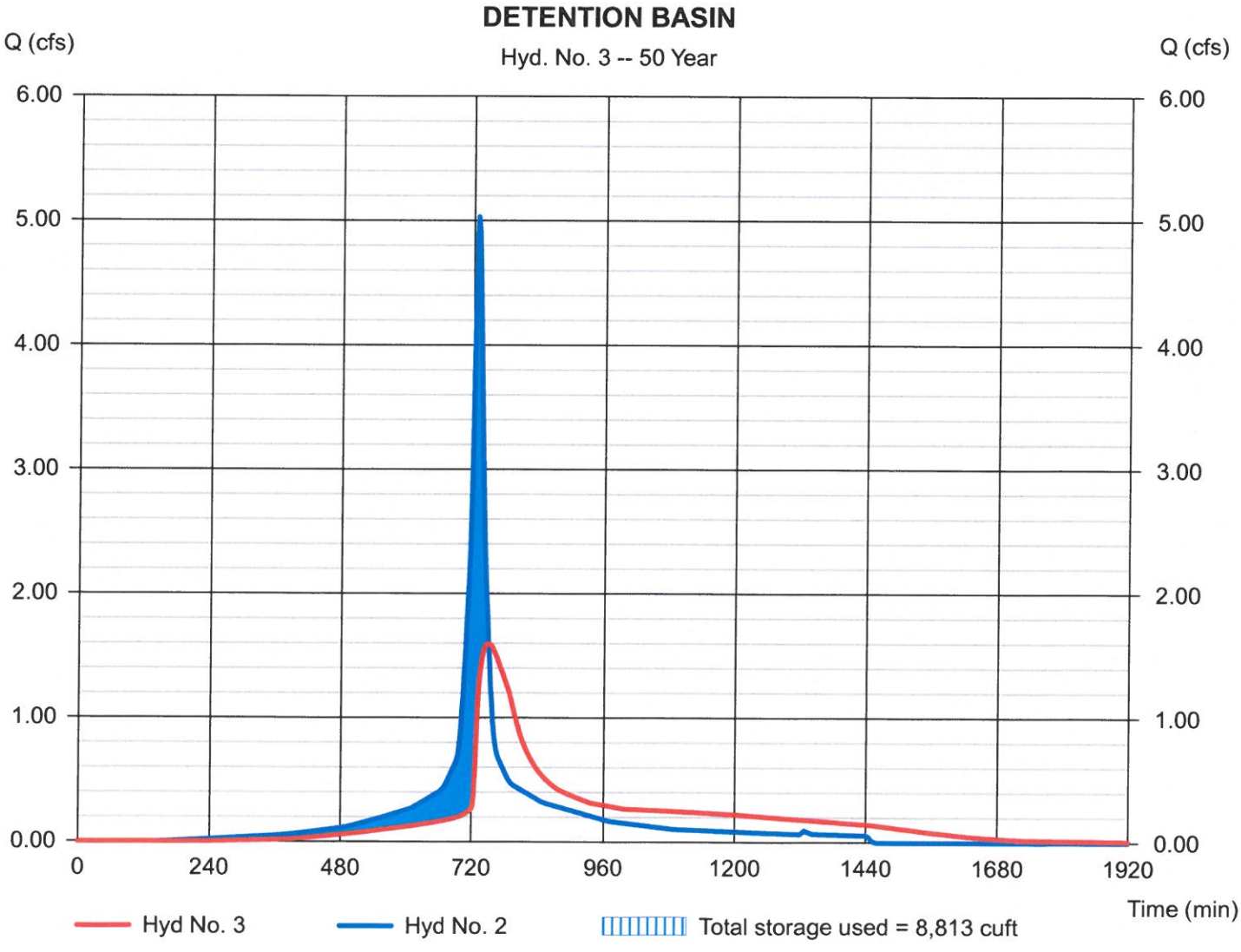
Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 1.598 cfs
Storm frequency	= 50 yrs	Time to peak	= 750 min
Time interval	= 2 min	Hyd. volume	= 20,679 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 654.29 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 8,813 cuft

Storage Indication method used.

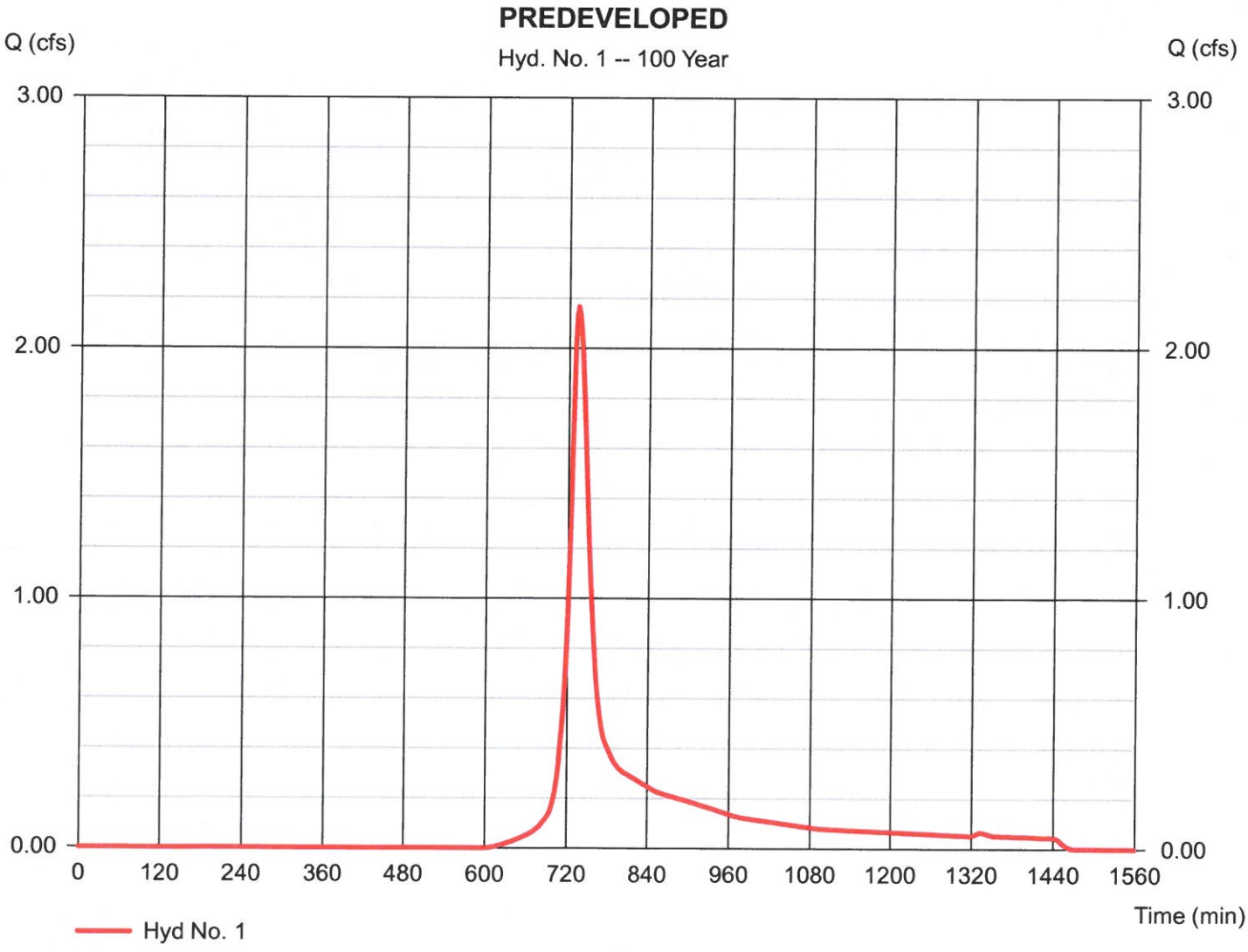


Hydrograph Report

Hyd. No. 1

PREDEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 2.166 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 9,808 cuft
Drainage area	= 1.000 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 17.00 min
Total precip.	= 7.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.22

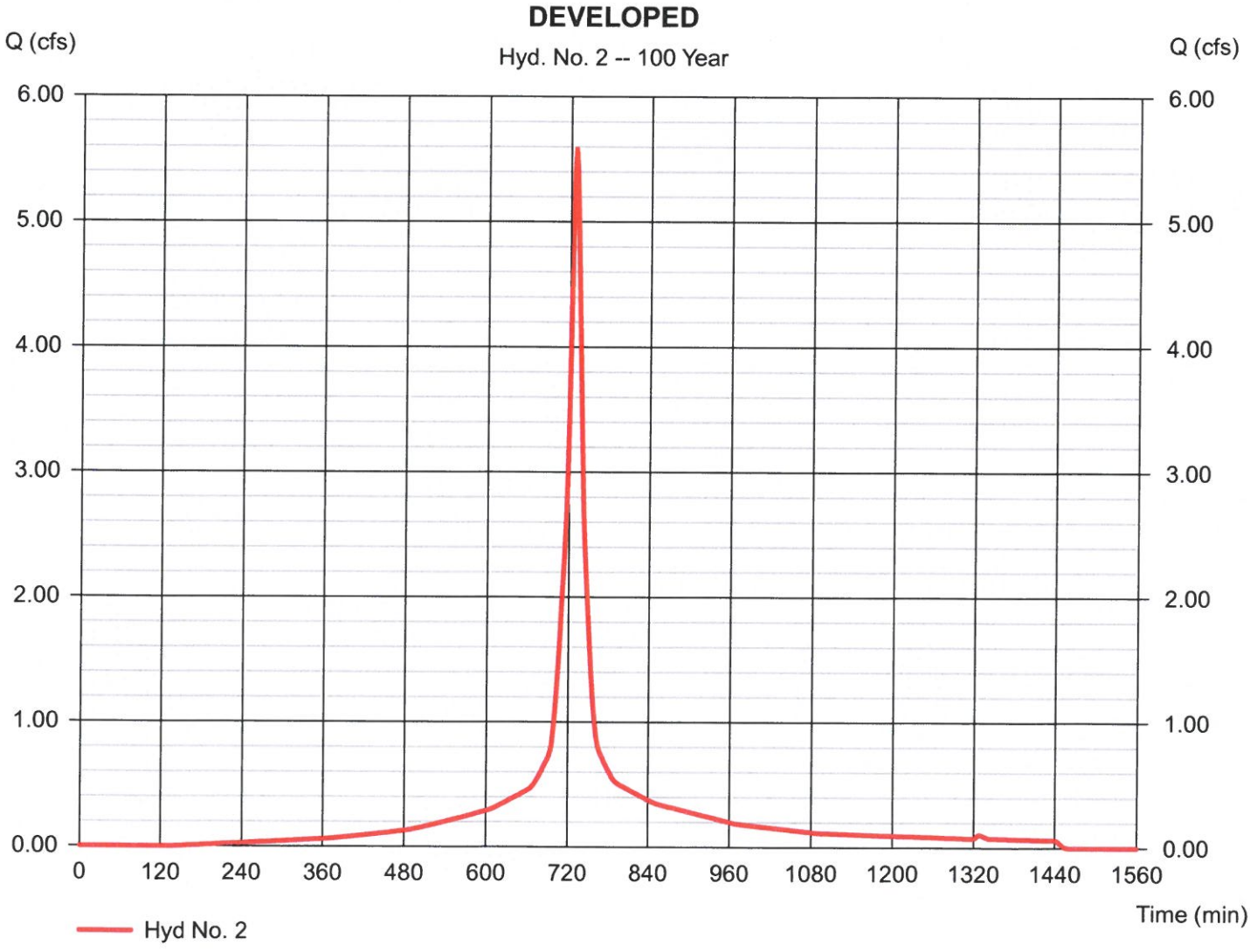
Monday, Mar 30, 2020

Hyd. No. 2

DEVELOPED

Hydrograph type	= SCS Runoff	Peak discharge	= 5.581 cfs
Storm frequency	= 100 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 23,102 cuft
Drainage area	= 1.000 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

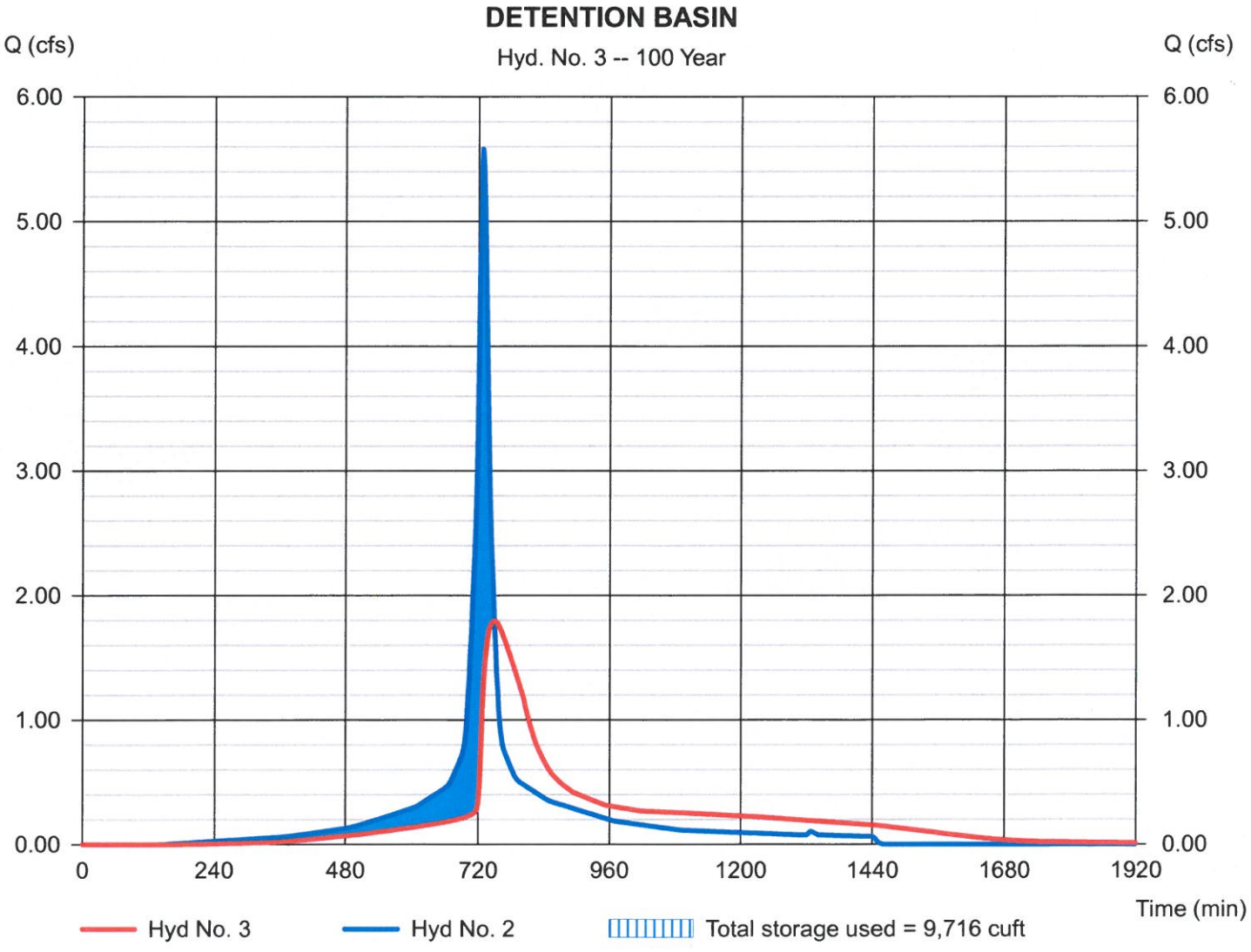
* Composite (Area/CN) = [(0.180 x 69) + (0.820 x 98)] / 1.000



Hydrograph Report

Hyd. No. 3

DETENTION BASIN

Hydrograph type	= Reservoir	Peak discharge	= 1.795 cfs
Storm frequency	= 100 yrs	Time to peak	= 750 min
Time interval	= 2 min	Hyd. volume	= 23,086 cuft
Inflow hyd. No.	= 2 - DEVELOPED	Max. Elevation	= 654.46 ft
Reservoir name	= ROOF DENTENTION POND JAN 31 2020	Max. Storage	= 9,716 cuft

Storage Indication method used.