

# Watershed Model Schematic

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



### Legend

<u>Hyd. Origin</u>	<u>Description</u>
1	SCS Runoff Pre 1
2	SCS Runoff Pre 2
3	SCS Runoff Pre 3
4	SCS Runoff Pre 1 LOD
5	SCS Runoff Pre 2 LOD
6	SCS Runoff Pre 3 LOD

# Hydrograph Return Period Recap

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

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	1.906	2.785	-----	-----	5.635	-----	-----	11.50	Pre 1
2	SCS Runoff	-----	7.937	11.42	-----	-----	22.70	-----	-----	45.33	Pre 2
3	SCS Runoff	-----	2.215	2.747	-----	-----	4.285	-----	-----	7.122	Pre 3
4	SCS Runoff	-----	0.094	0.188	-----	-----	0.528	-----	-----	1.301	Pre 1 LOD
5	SCS Runoff	-----	2.294	3.178	-----	-----	5.951	-----	-----	11.30	Pre 2 LOD
6	SCS Runoff	-----	1.621	1.967	-----	-----	2.974	-----	-----	4.853	Pre 3 LOD

# Hydrograph Summary Report

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

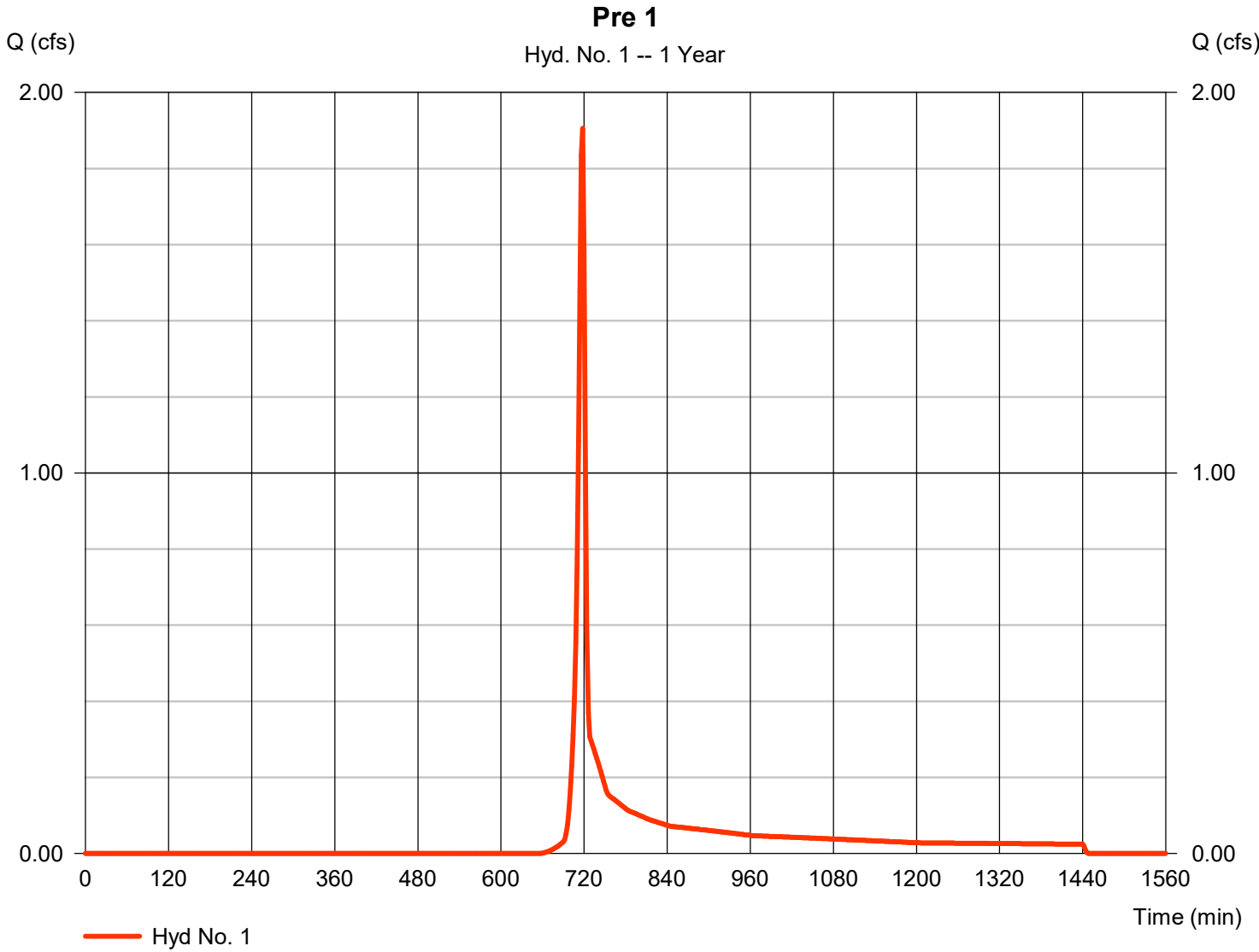
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.906	2	718	3,827	-----	-----	-----	Pre 1
2	SCS Runoff	7.937	2	720	18,281	-----	-----	-----	Pre 2
3	SCS Runoff	2.215	2	718	5,354	-----	-----	-----	Pre 3
4	SCS Runoff	0.094	2	718	240	-----	-----	-----	Pre 1 LOD
5	SCS Runoff	2.294	2	720	5,249	-----	-----	-----	Pre 2 LOD
6	SCS Runoff	1.621	2	718	4,224	-----	-----	-----	Pre 3 LOD
Pre Hydro.gpw					Return Period: 1 Year			Wednesday, 05 / 3 / 2023	

# Hydrograph Report

## Hyd. No. 1

Pre 1

Hydrograph type	= SCS Runoff	Peak discharge	= 1.906 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 3,827 cuft
Drainage area	= 1.180 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



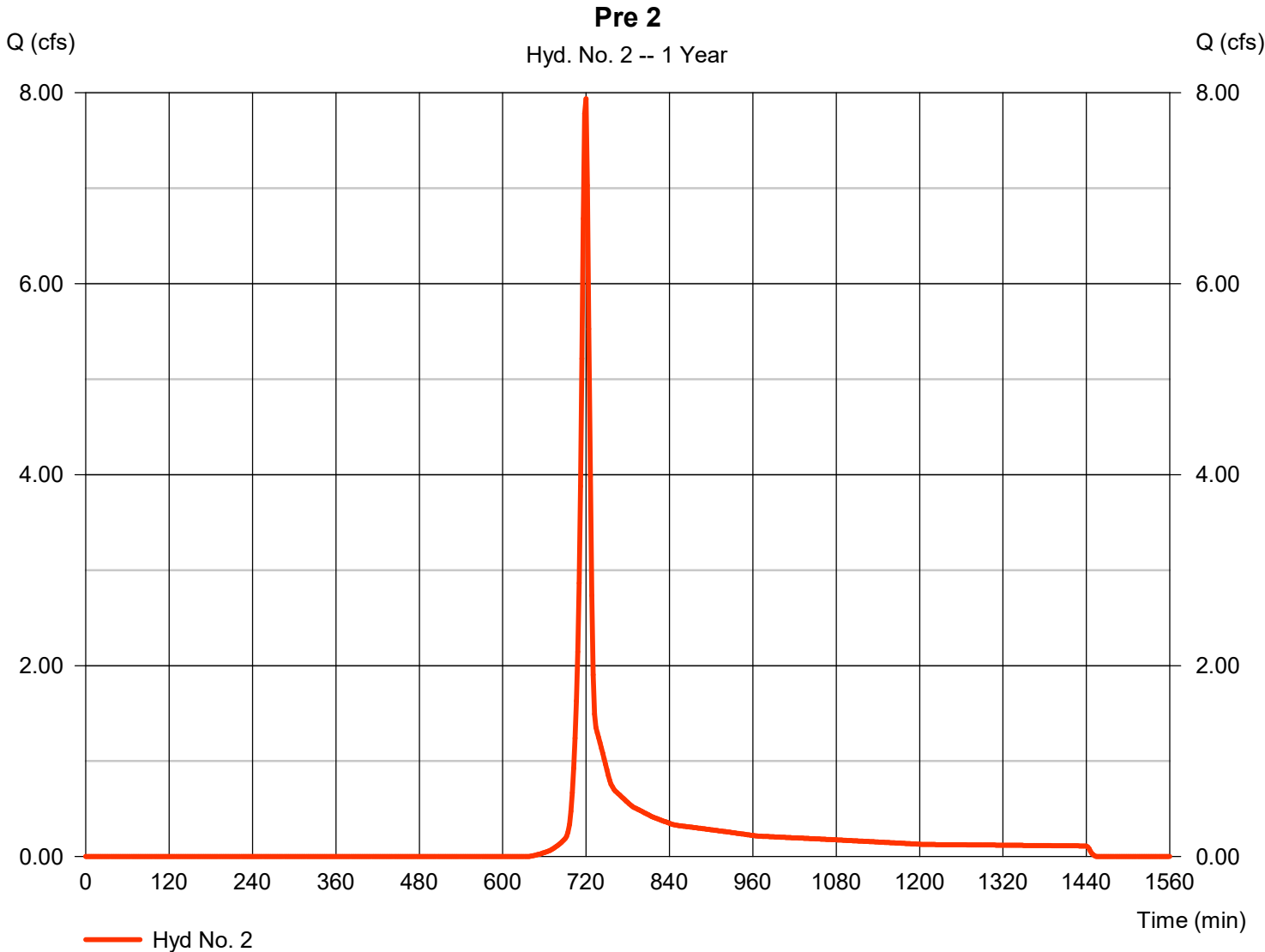
# Hydrograph Report

## Hyd. No. 2

Pre 2

Hydrograph type	= SCS Runoff	Peak discharge	= 7.937 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 18,281 cuft
Drainage area	= 4.740 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(2.860 x 61) + (1.880 x 98)] / 4.740



# TR55 Tc Worksheet

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

## Hyd. No. 2

Pre 2

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
<b>Sheet Flow</b>							
Manning's n-value	= 0.150		0.013		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.71		0.00		0.00		
Land slope (%)	= 8.00		0.00		0.00		
<b>Travel Time (min)</b>	<b>= 5.23</b>	<b>+</b>	<b>0.00</b>	<b>+</b>	<b>0.00</b>	<b>=</b>	<b>5.23</b>
<b>Shallow Concentrated Flow</b>							
Flow length (ft)	= 21.00		0.00		0.00		
Watercourse slope (%)	= 1.00		0.00		0.00		
Surface description	= Paved		Unpaved		Paved		
Average velocity (ft/s)	=2.03		0.00		0.00		
<b>Travel Time (min)</b>	<b>= 0.17</b>	<b>+</b>	<b>0.00</b>	<b>+</b>	<b>0.00</b>	<b>=</b>	<b>0.17</b>
<b>Channel Flow</b>							
X sectional flow area (sqft)	= 1.23		1.00		0.00		
Wetted perimeter (ft)	= 3.93		6.20		0.00		
Channel slope (%)	= 2.00		7.00		0.00		
Manning's n-value	= 0.013		0.013		0.015		
Velocity (ft/s)	=7.44		8.93		0.00		
Flow length (ft)	{{0}}441.0		110.0		0.0		
<b>Travel Time (min)</b>	<b>= 0.99</b>	<b>+</b>	<b>0.21</b>	<b>+</b>	<b>0.00</b>	<b>=</b>	<b>1.19</b>
<b>Total Travel Time, Tc .....</b>							<b>6.60 min</b>

# Hydrograph Report

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

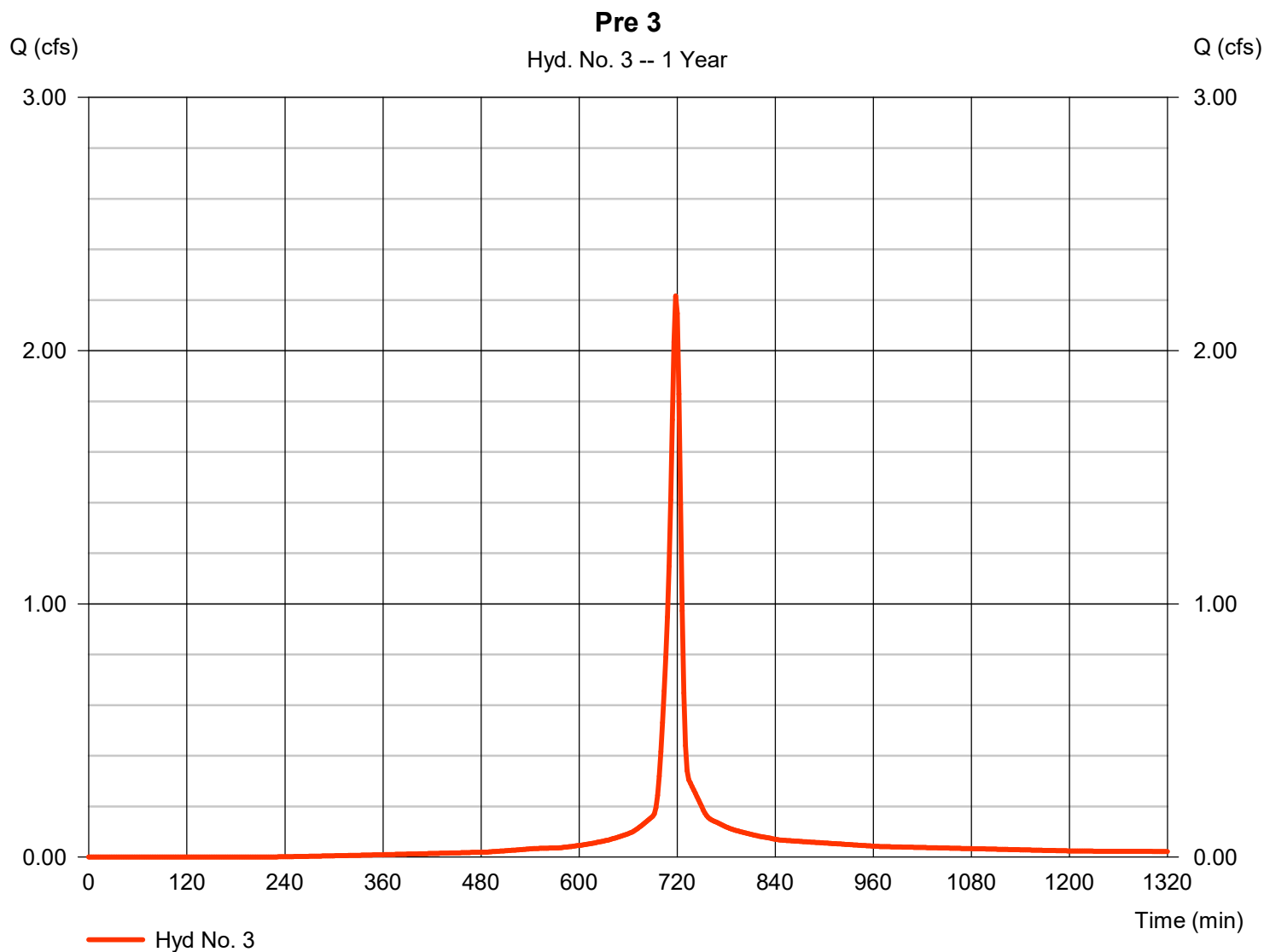
Wednesday, 05 / 3 / 2023

## Hyd. No. 3

Pre 3

Hydrograph type	= SCS Runoff	Peak discharge	= 2.215 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 5,354 cuft
Drainage area	= 0.610 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.80 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) =  $[(0.540 \times 98) + (0.070 \times 61)] / 0.610$



# TR55 Tc Worksheet

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

## Hyd. No. 3

Pre 3

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
<b>Sheet Flow</b>				
Manning's n-value	= 0.150	0.013	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.71	0.00	0.00	
Land slope (%)	= 7.00	0.00	0.00	
<b>Travel Time (min)</b>	<b>= 5.51</b>	<b>+</b> <b>0.00</b>	<b>+</b> <b>0.00</b>	<b>= 5.51</b>
<b>Shallow Concentrated Flow</b>				
Flow length (ft)	= 45.00	36.00	0.00	
Watercourse slope (%)	= 1.50	1.00	0.00	
Surface description	= Paved	Unpaved	Paved	
Average velocity (ft/s)	=2.49	1.61	0.00	
<b>Travel Time (min)</b>	<b>= 0.30</b>	<b>+</b> <b>0.37</b>	<b>+</b> <b>0.00</b>	<b>= 0.67</b>
<b>Channel Flow</b>				
X sectional flow area (sqft)	= 1.23	0.79	6.50	
Wetted perimeter (ft)	= 3.93	3.14	23.00	
Channel slope (%)	= 1.50	0.10	1.50	
Manning's n-value	= 0.015	0.015	0.026	
Velocity (ft/s)	=5.59	1.25	3.01	
Flow length (ft)	{{0}}115.0	20.0	360.0	
<b>Travel Time (min)</b>	<b>= 0.34</b>	<b>+</b> <b>0.27</b>	<b>+</b> <b>1.99</b>	<b>= 2.60</b>
<b>Total Travel Time, Tc .....</b>				<b>8.80 min</b>

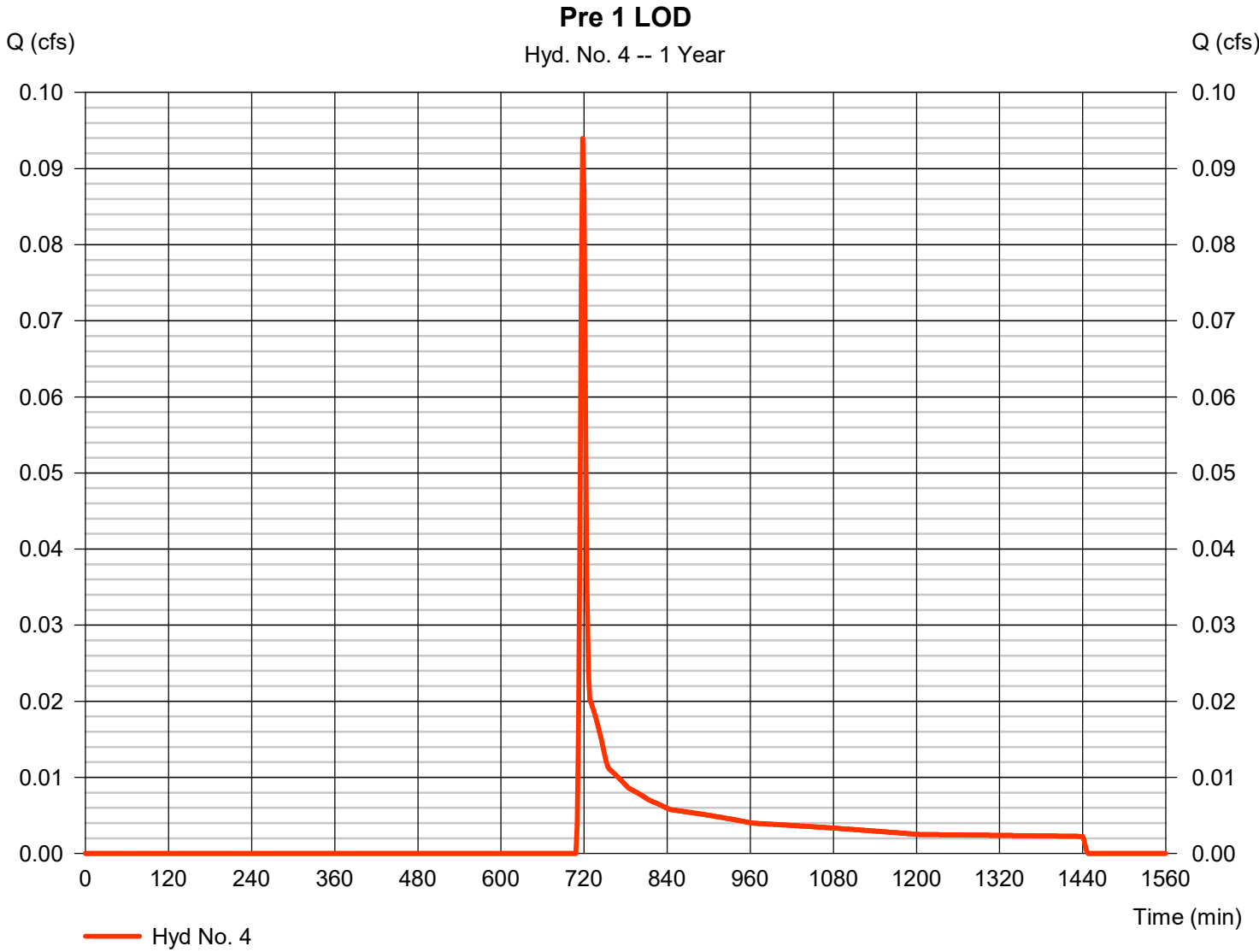


# Hydrograph Report

## Hyd. No. 4

Pre 1 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 0.094 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 240 cuft
Drainage area	= 0.180 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Report

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

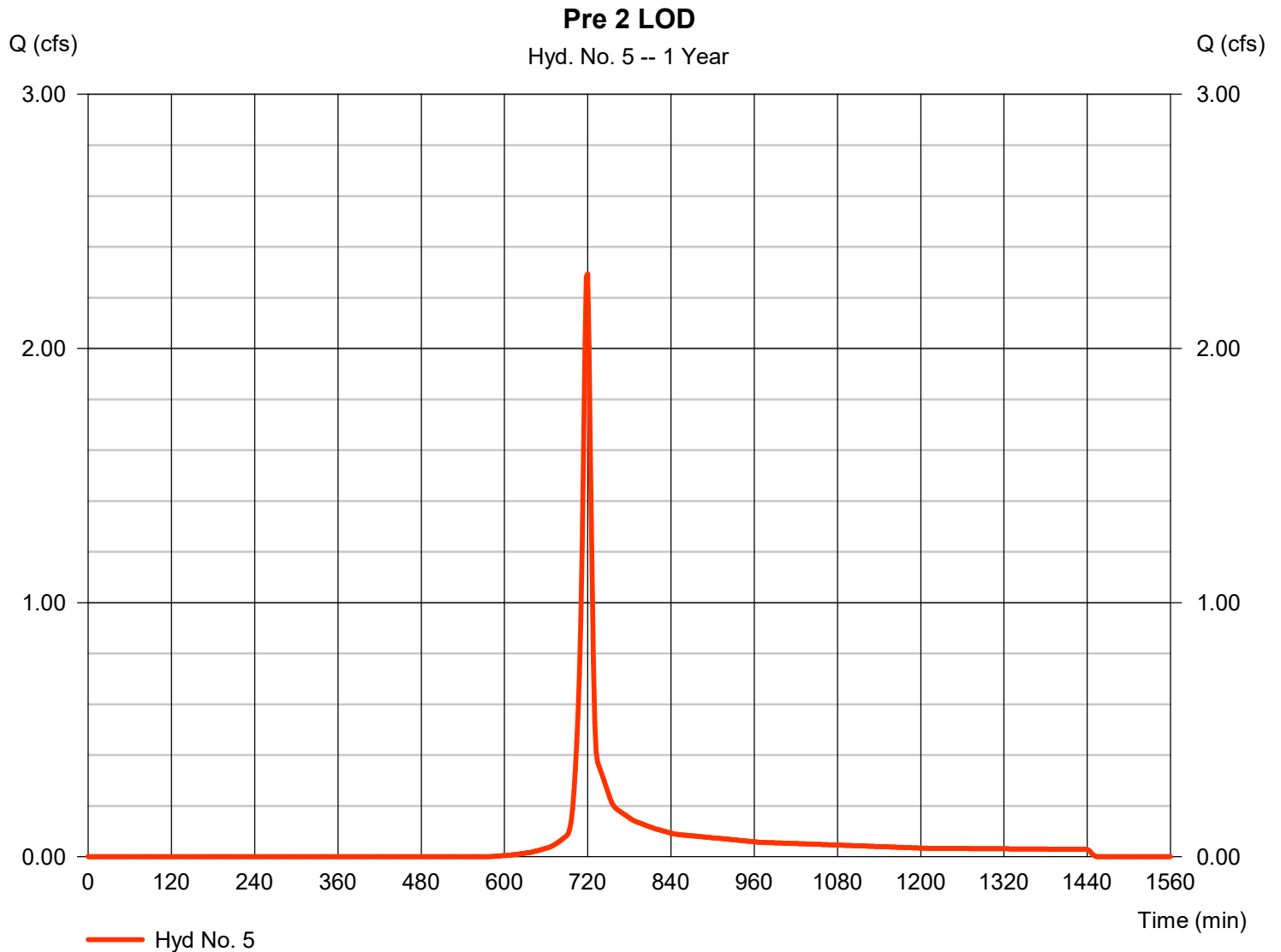
Wednesday, 05 / 3 / 2023

## Hyd. No. 5

Pre 2 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 2.294 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 5,249 cuft
Drainage area	= 1.110 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.560 x 98) + (0.550 x 61)] / 1.110



# TR55 Tc Worksheet

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

## Hyd. No. 5

Pre 2 LOD

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
<b>Sheet Flow</b>				
Manning's n-value	= 0.150	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.71	3.71	0.00	
Land slope (%)	= 8.00	0.00	0.00	
<b>Travel Time (min)</b>	<b>= 5.22</b>	<b>+ 0.00</b>	<b>+ 0.00</b>	<b>= 5.22</b>
<b>Shallow Concentrated Flow</b>				
Flow length (ft)	= 21.00	0.00	0.00	
Watercourse slope (%)	= 1.00	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	=2.03	0.00	0.00	
<b>Travel Time (min)</b>	<b>= 0.17</b>	<b>+ 0.00</b>	<b>+ 0.00</b>	<b>= 0.17</b>
<b>Channel Flow</b>				
X sectional flow area (sqft)	= 1.23	1.00	0.00	
Wetted perimeter (ft)	= 3.93	6.20	0.00	
Channel slope (%)	= 2.00	7.00	0.00	
Manning's n-value	= 0.013	0.013	0.015	
Velocity (ft/s)	=7.44	8.93	0.00	
Flow length (ft)	{{0}}441.0	110.0	0.0	
<b>Travel Time (min)</b>	<b>= 0.99</b>	<b>+ 0.21</b>	<b>+ 0.00</b>	<b>= 1.19</b>
<b>Total Travel Time, Tc .....</b>				<b>6.60 min</b>

# Hydrograph Report

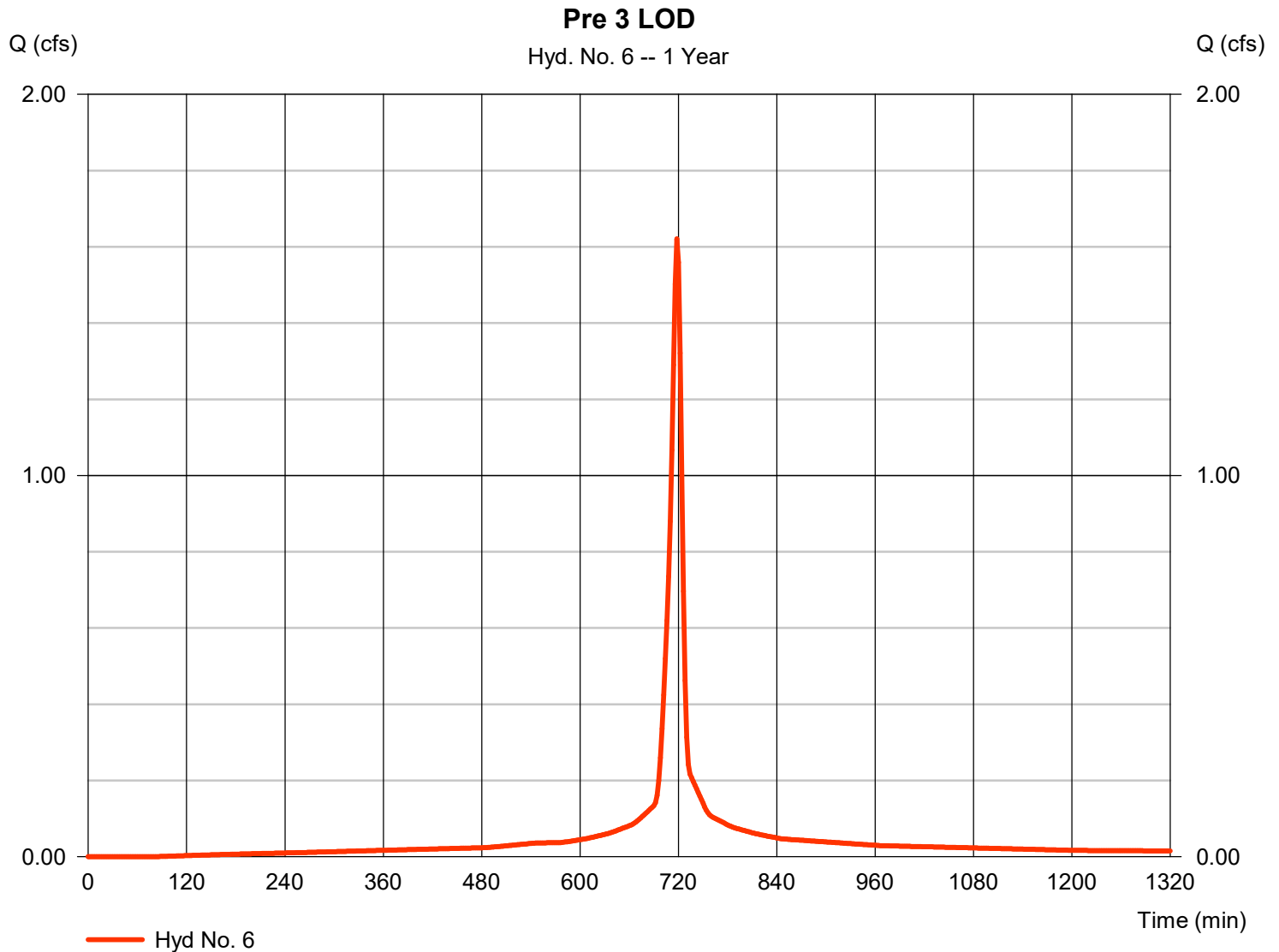
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Wednesday, 05 / 3 / 2023

## Hyd. No. 6

Pre 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 1.621 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 4,224 cuft
Drainage area	= 0.410 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.20 min
Total precip.	= 3.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# TR55 Tc Worksheet

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

## Hyd. No. 6

Pre 3 LOD

<u>Description</u>	<u>A</u>		<u>B</u>		<u>C</u>		<u>Totals</u>
<b>Sheet Flow</b>							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 95.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.71		0.00		0.00		
Land slope (%)	= 4.00		0.00		0.00		
<b>Travel Time (min)</b>	<b>= 6.62</b>	<b>+</b>	<b>0.00</b>	<b>+</b>	<b>0.00</b>	<b>=</b>	<b>6.62</b>
<b>Shallow Concentrated Flow</b>							
Flow length (ft)	= 0.00		0.00		0.00		
Watercourse slope (%)	= 0.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	=0.00		0.00		0.00		
<b>Travel Time (min)</b>	<b>= 0.00</b>	<b>+</b>	<b>0.00</b>	<b>+</b>	<b>0.00</b>	<b>=</b>	<b>0.00</b>
<b>Channel Flow</b>							
X sectional flow area (sqft)	= 1.23		0.79		6.50		
Wetted perimeter (ft)	= 3.93		3.14		23.00		
Channel slope (%)	= 1.50		0.10		1.50		
Manning's n-value	= 0.015		0.015		0.026		
Velocity (ft/s)	=5.59		1.25		3.01		
Flow length (ft)	{{0}}115.0		20.0		360.0		
<b>Travel Time (min)</b>	<b>= 0.34</b>	<b>+</b>	<b>0.27</b>	<b>+</b>	<b>1.99</b>	<b>=</b>	<b>2.60</b>
<b>Total Travel Time, Tc .....</b>							<b>9.20 min</b>

# Hydrograph Summary Report

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

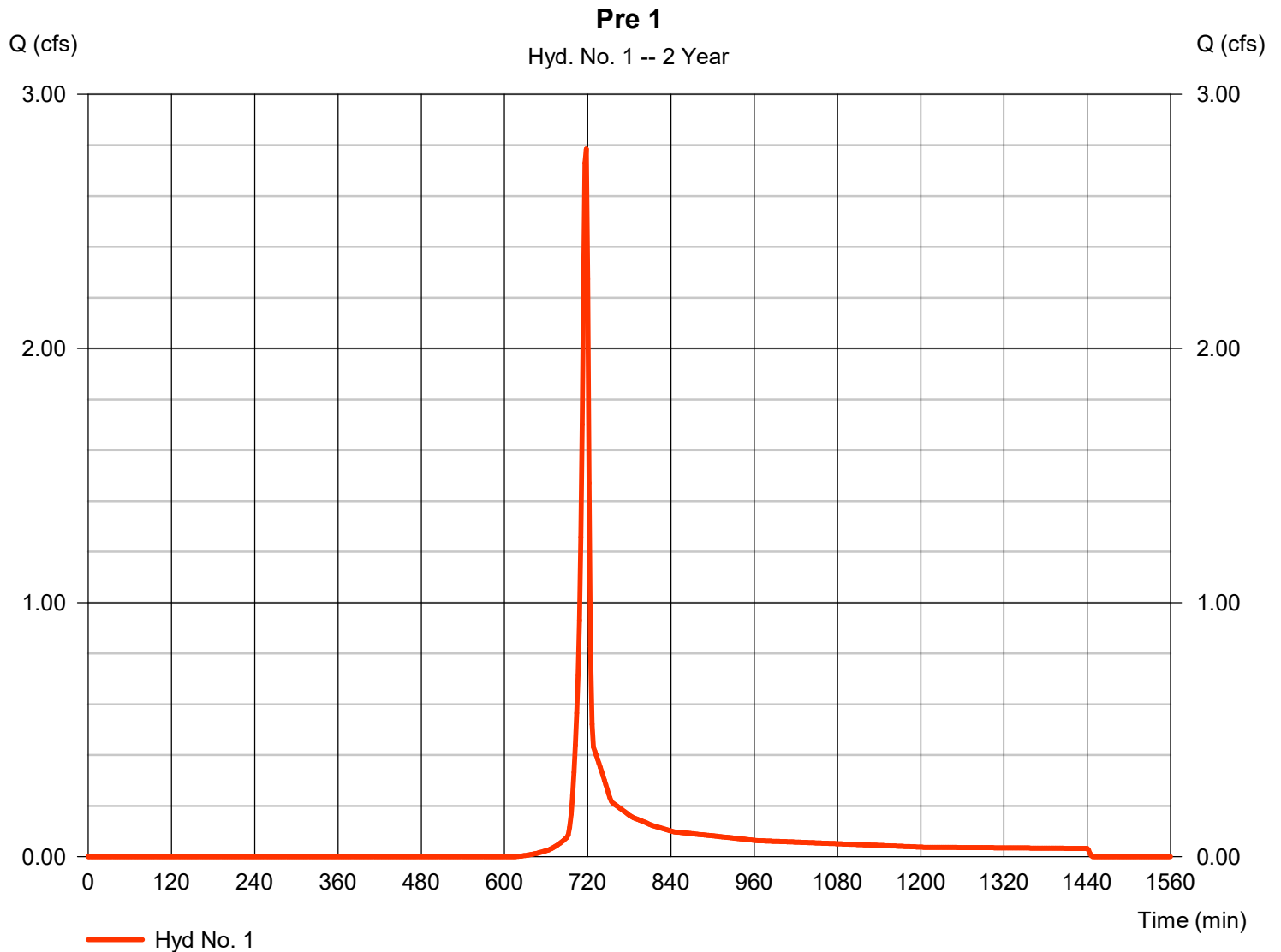
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.785	2	718	5,569	-----	-----	-----	Pre 1
2	SCS Runoff	11.42	2	720	26,146	-----	-----	-----	Pre 2
3	SCS Runoff	2.747	2	718	6,733	-----	-----	-----	Pre 3
4	SCS Runoff	0.188	2	718	410	-----	-----	-----	Pre 1 LOD
5	SCS Runoff	3.178	2	718	7,271	-----	-----	-----	Pre 2 LOD
6	SCS Runoff	1.967	2	718	5,173	-----	-----	-----	Pre 3 LOD
Pre Hydro.gpw					Return Period: 2 Year			Wednesday, 05 / 3 / 2023	

# Hydrograph Report

## Hyd. No. 1

Pre 1

Hydrograph type	= SCS Runoff	Peak discharge	= 2.785 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 5,569 cuft
Drainage area	= 1.180 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Report

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

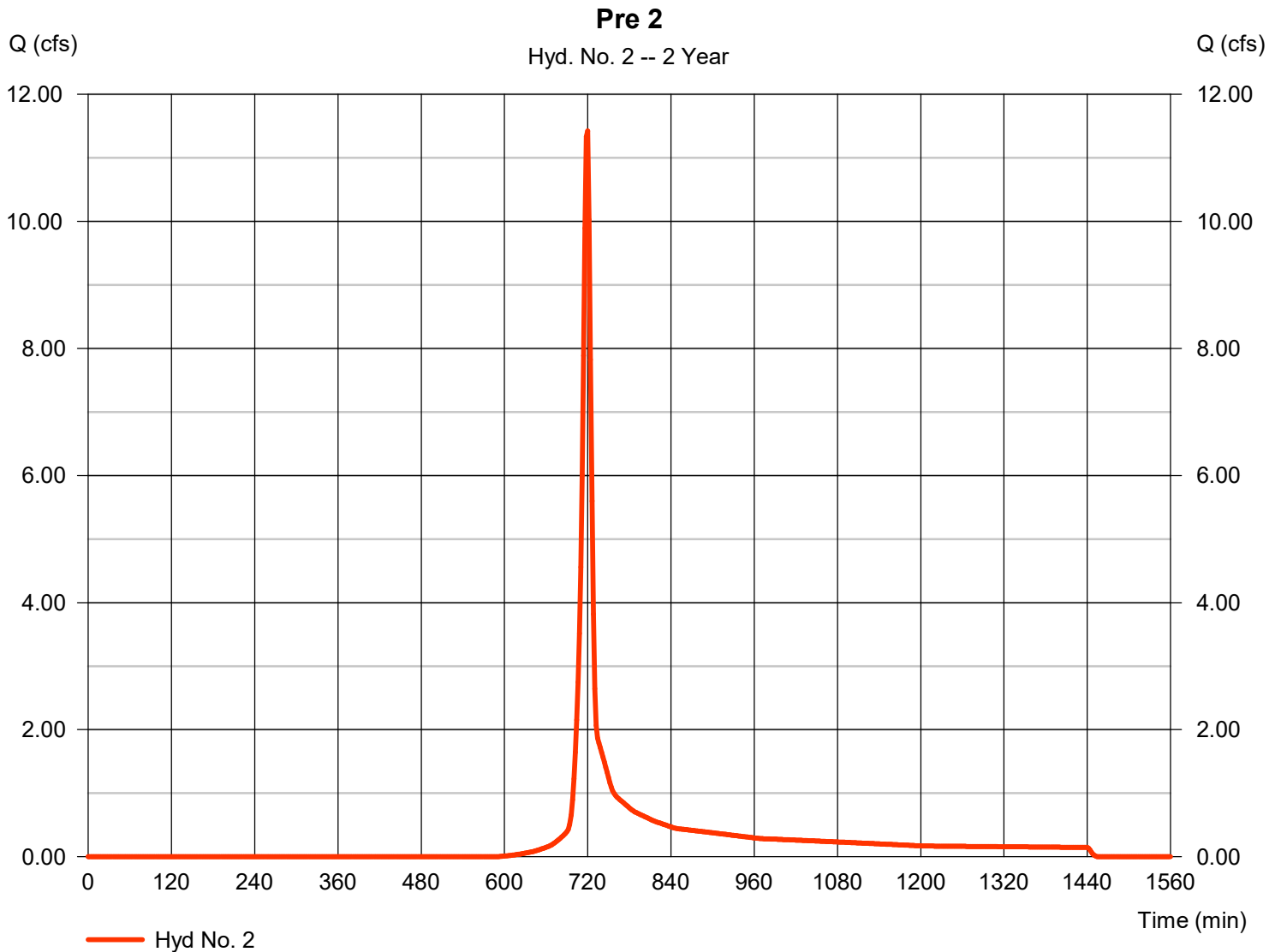
Wednesday, 05 / 3 / 2023

## Hyd. No. 2

Pre 2

Hydrograph type	= SCS Runoff	Peak discharge	= 11.42 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 26,146 cuft
Drainage area	= 4.740 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(2.860 x 61) + (1.880 x 98)] / 4.740





# Hydrograph Report

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

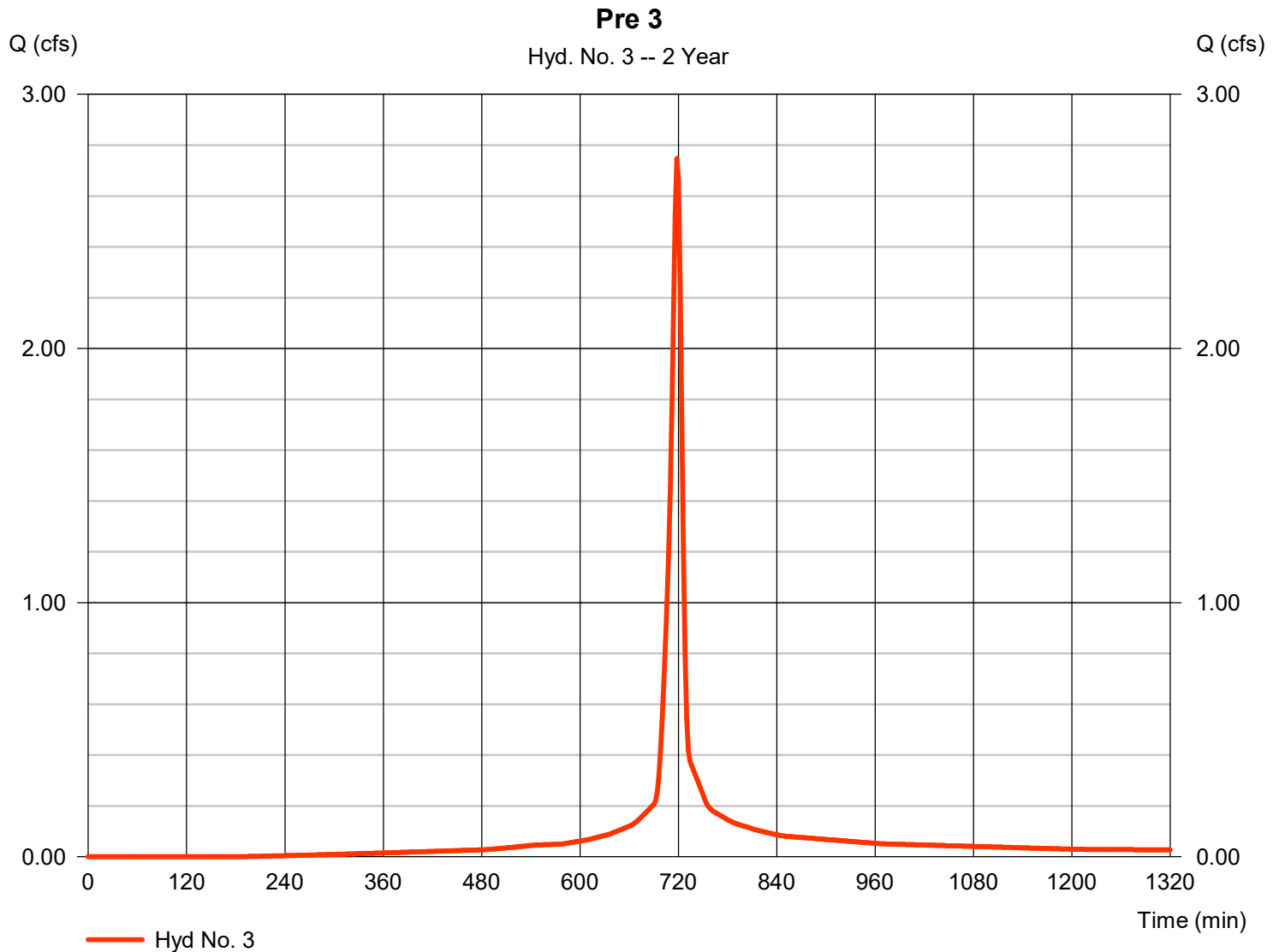
Wednesday, 05 / 3 / 2023

## Hyd. No. 3

Pre 3

Hydrograph type	= SCS Runoff	Peak discharge	= 2.747 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 6,733 cuft
Drainage area	= 0.610 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.80 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.540 x 98) + (0.070 x 61)] / 0.610



# Hydrograph Report

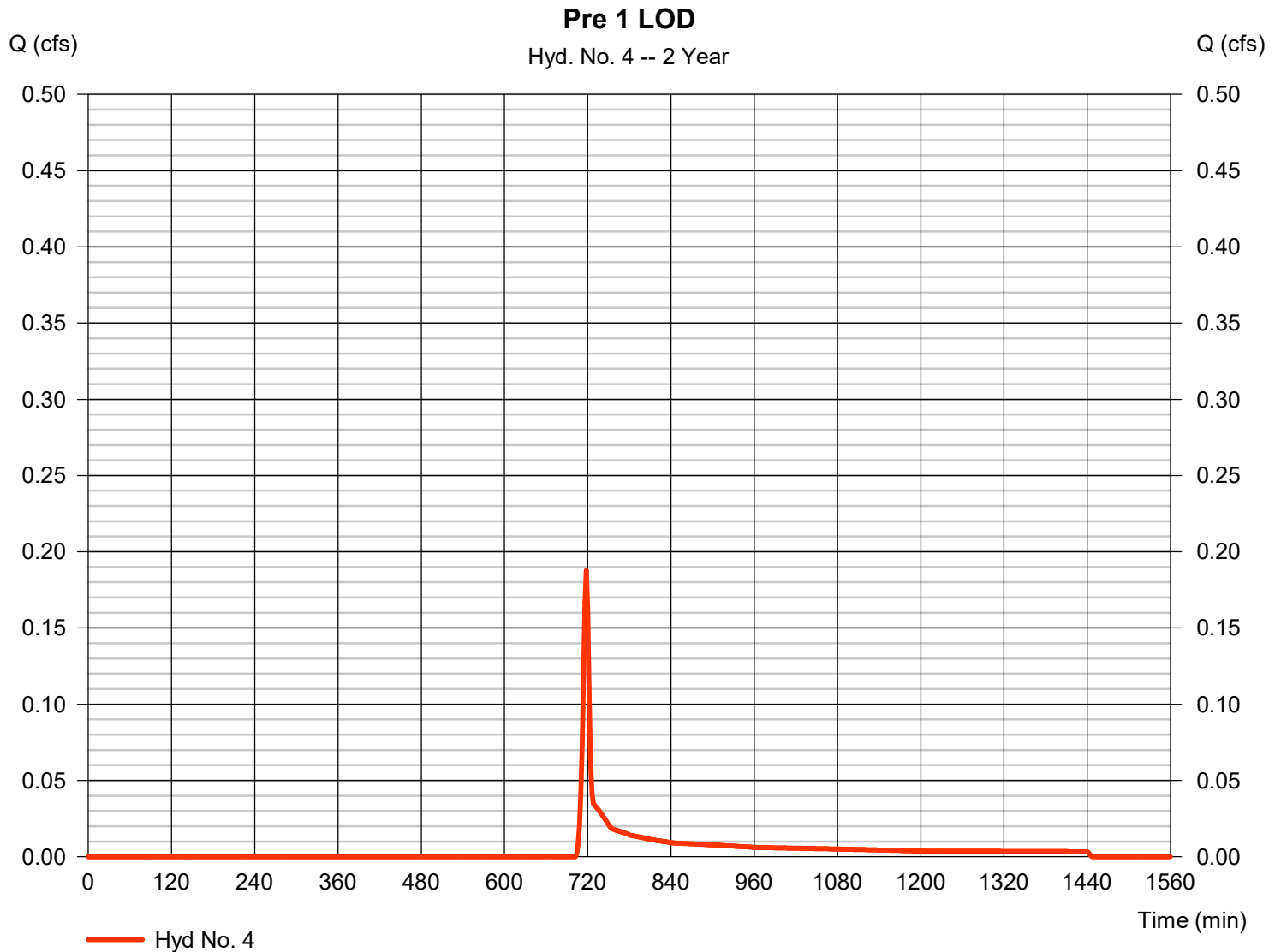
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Wednesday, 05 / 3 / 2023

## Hyd. No. 4

Pre 1 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 0.188 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 410 cuft
Drainage area	= 0.180 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



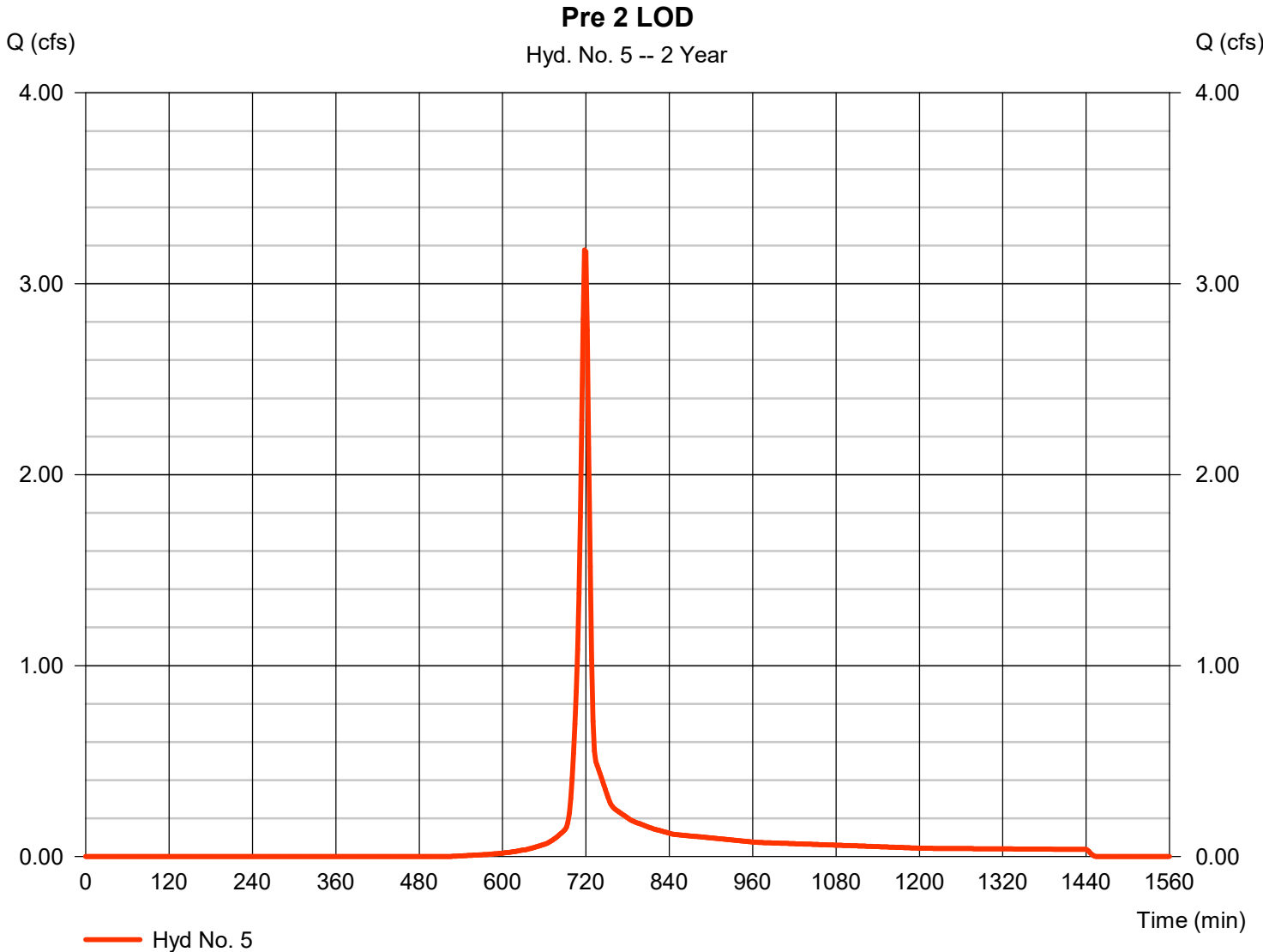
# Hydrograph Report

## Hyd. No. 5

Pre 2 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 3.178 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 7,271 cuft
Drainage area	= 1.110 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.560 x 98) + (0.550 x 61)] / 1.110

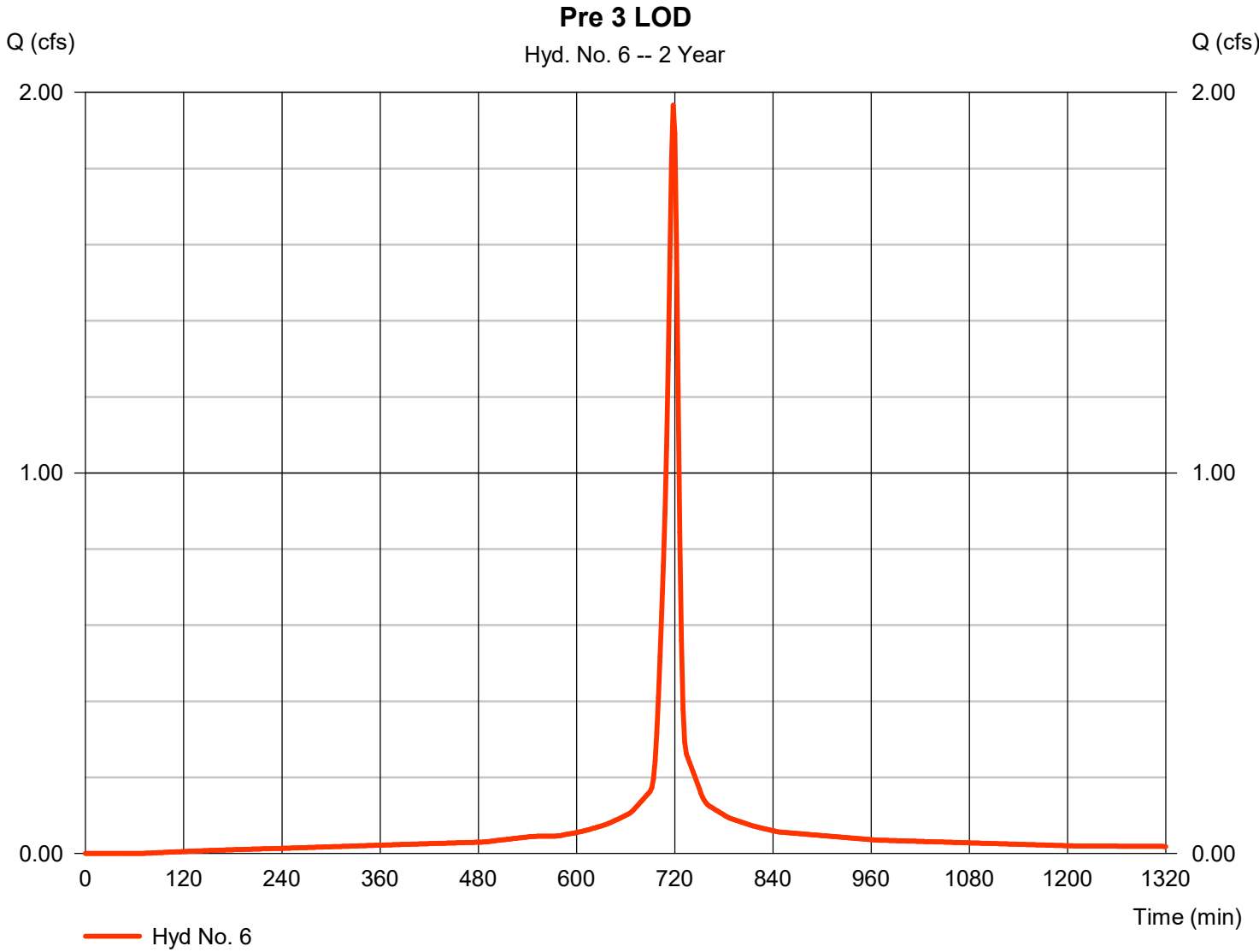


# Hydrograph Report

## Hyd. No. 6

Pre 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 1.967 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 5,173 cuft
Drainage area	= 0.410 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.20 min
Total precip.	= 3.71 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	5.635	2	716	11,385	-----	-----	-----	Pre 1	
2	SCS Runoff	22.70	2	718	51,975	-----	-----	-----	Pre 2	
3	SCS Runoff	4.285	2	718	10,808	-----	-----	-----	Pre 3	
4	SCS Runoff	0.528	2	718	1,060	-----	-----	-----	Pre 1 LOD	
5	SCS Runoff	5.951	2	718	13,718	-----	-----	-----	Pre 2 LOD	
6	SCS Runoff	2.974	2	718	7,951	-----	-----	-----	Pre 3 LOD	
Pre Hydro.gpw					Return Period: 10 Year			Wednesday, 05 / 3 / 2023		

# Hydrograph Report

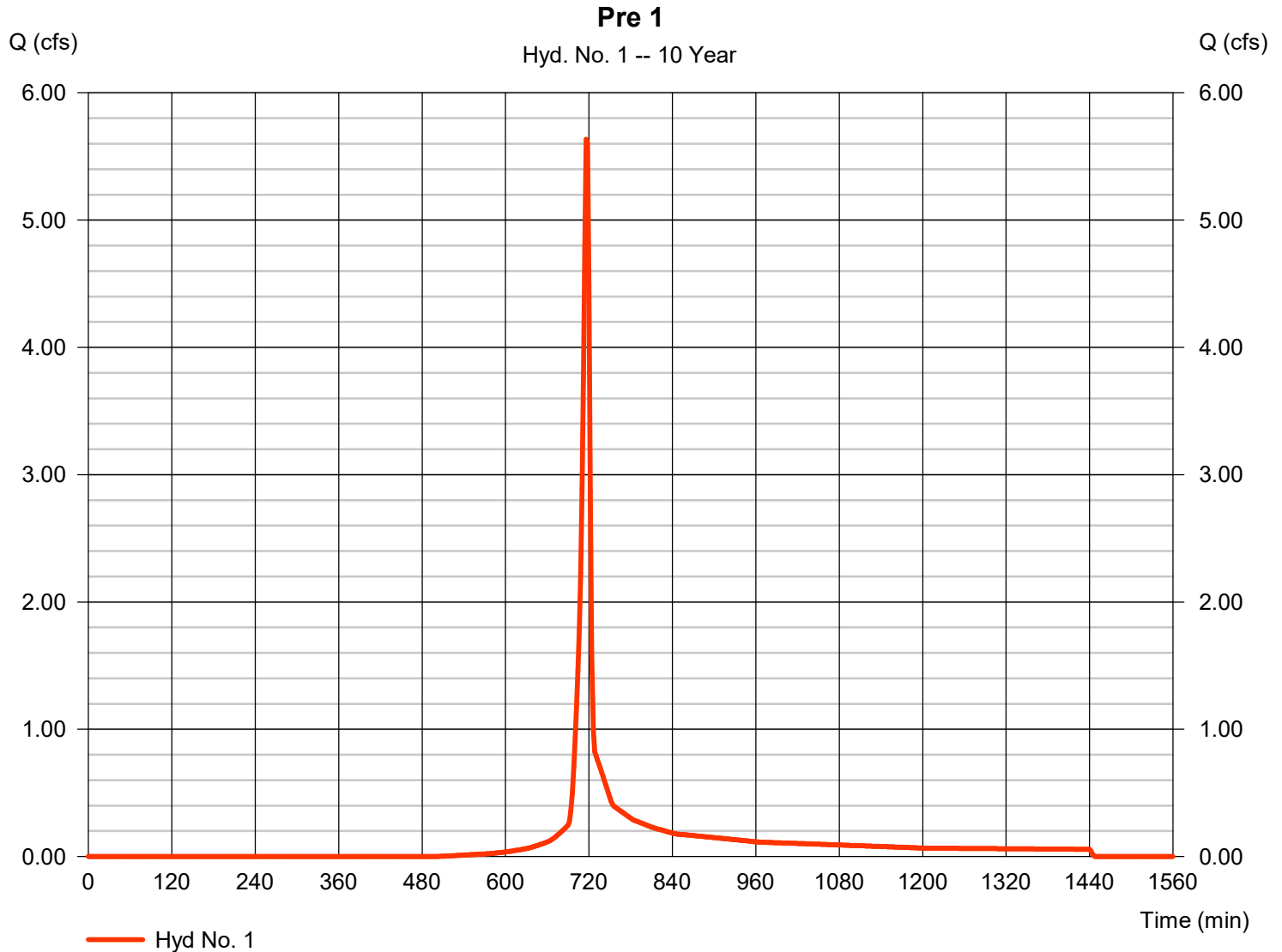
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Wednesday, 05 / 3 / 2023

## Hyd. No. 1

Pre 1

Hydrograph type	= SCS Runoff	Peak discharge	= 5.635 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 11,385 cuft
Drainage area	= 1.180 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Report

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

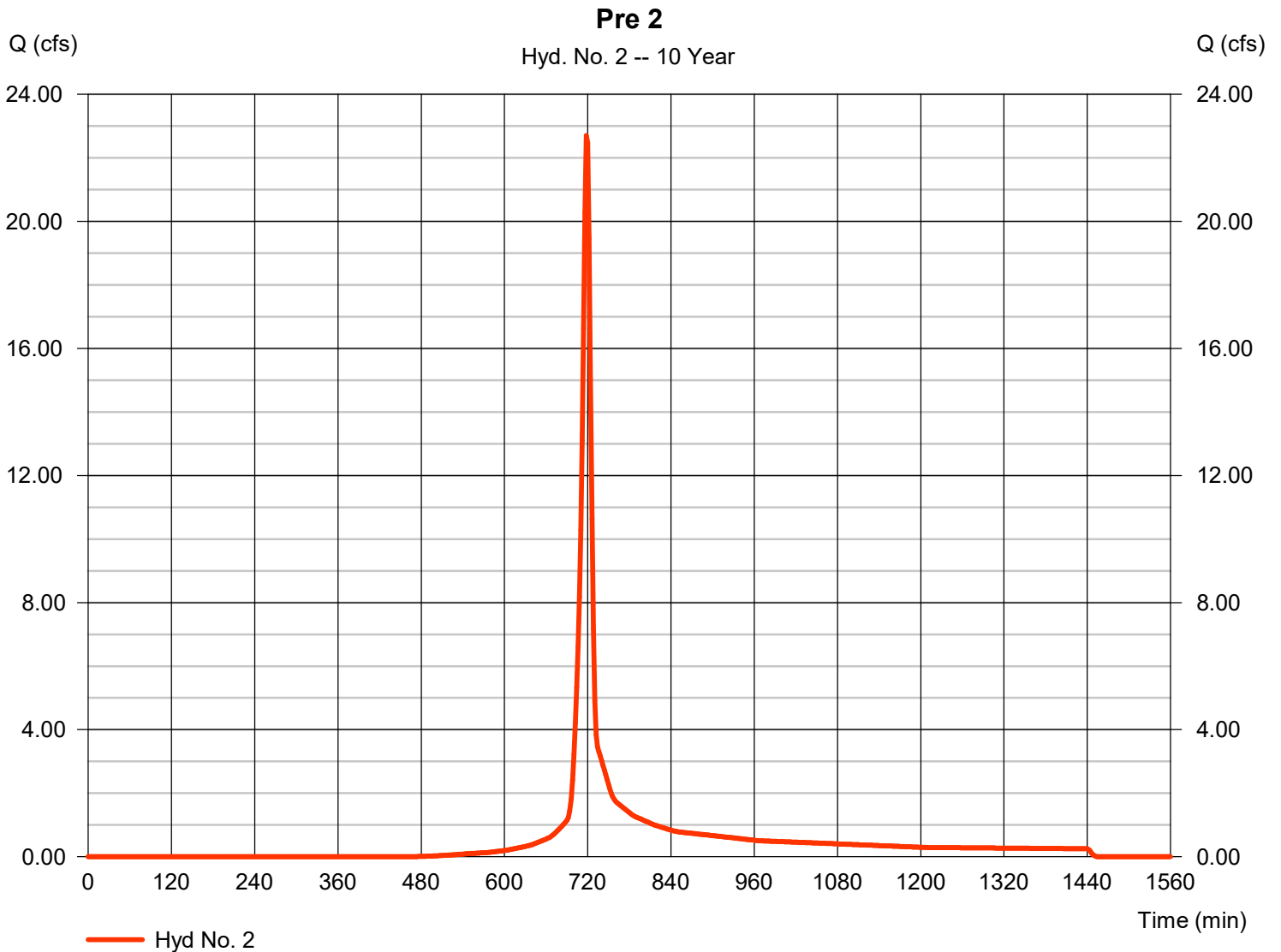
Wednesday, 05 / 3 / 2023

## Hyd. No. 2

Pre 2

Hydrograph type	= SCS Runoff	Peak discharge	= 22.70 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 51,975 cuft
Drainage area	= 4.740 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(2.860 x 61) + (1.880 x 98)] / 4.740



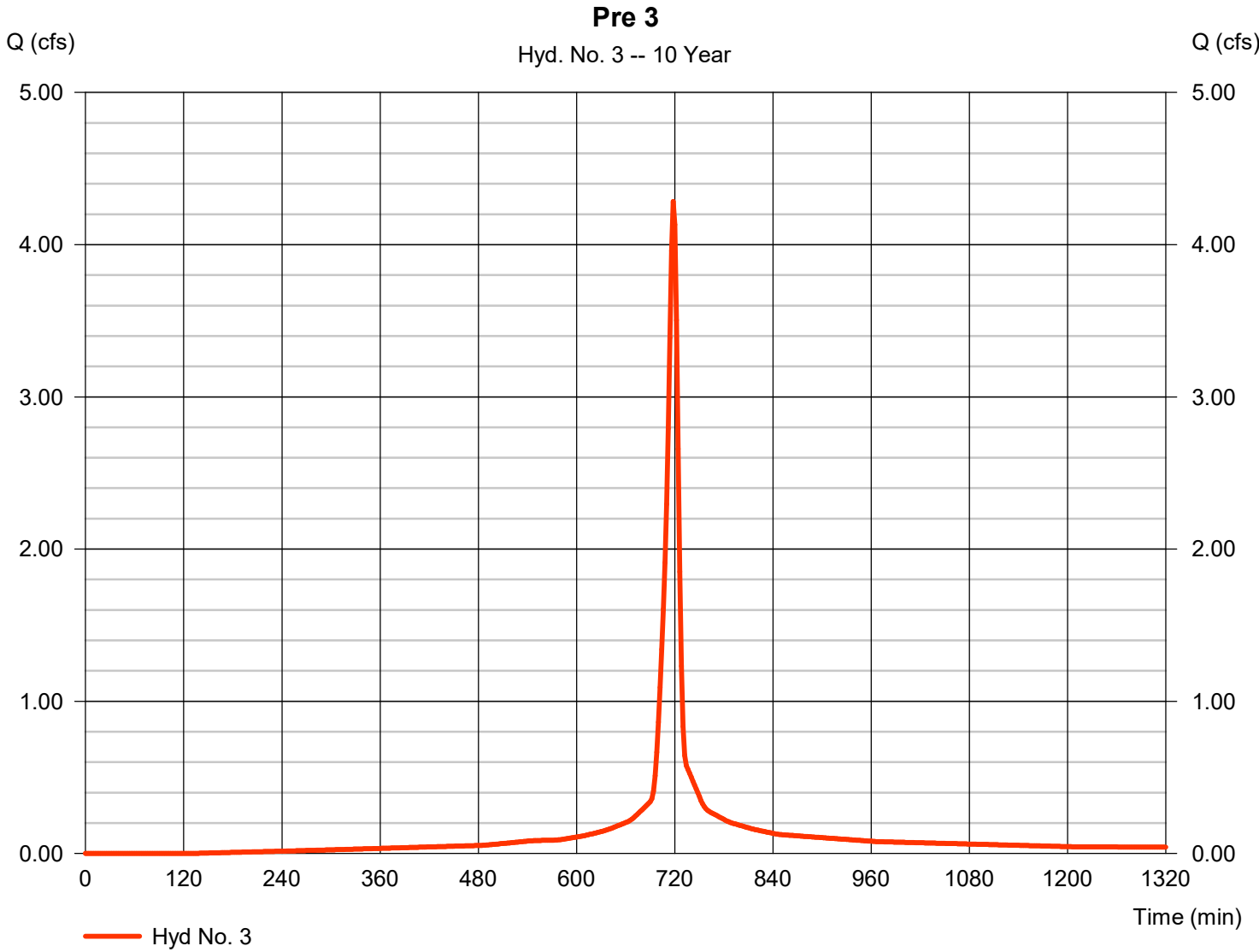
# Hydrograph Report

## Hyd. No. 3

Pre 3

Hydrograph type	= SCS Runoff	Peak discharge	= 4.285 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 10,808 cuft
Drainage area	= 0.610 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.80 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.540 x 98) + (0.070 x 61)] / 0.610





# Hydrograph Report

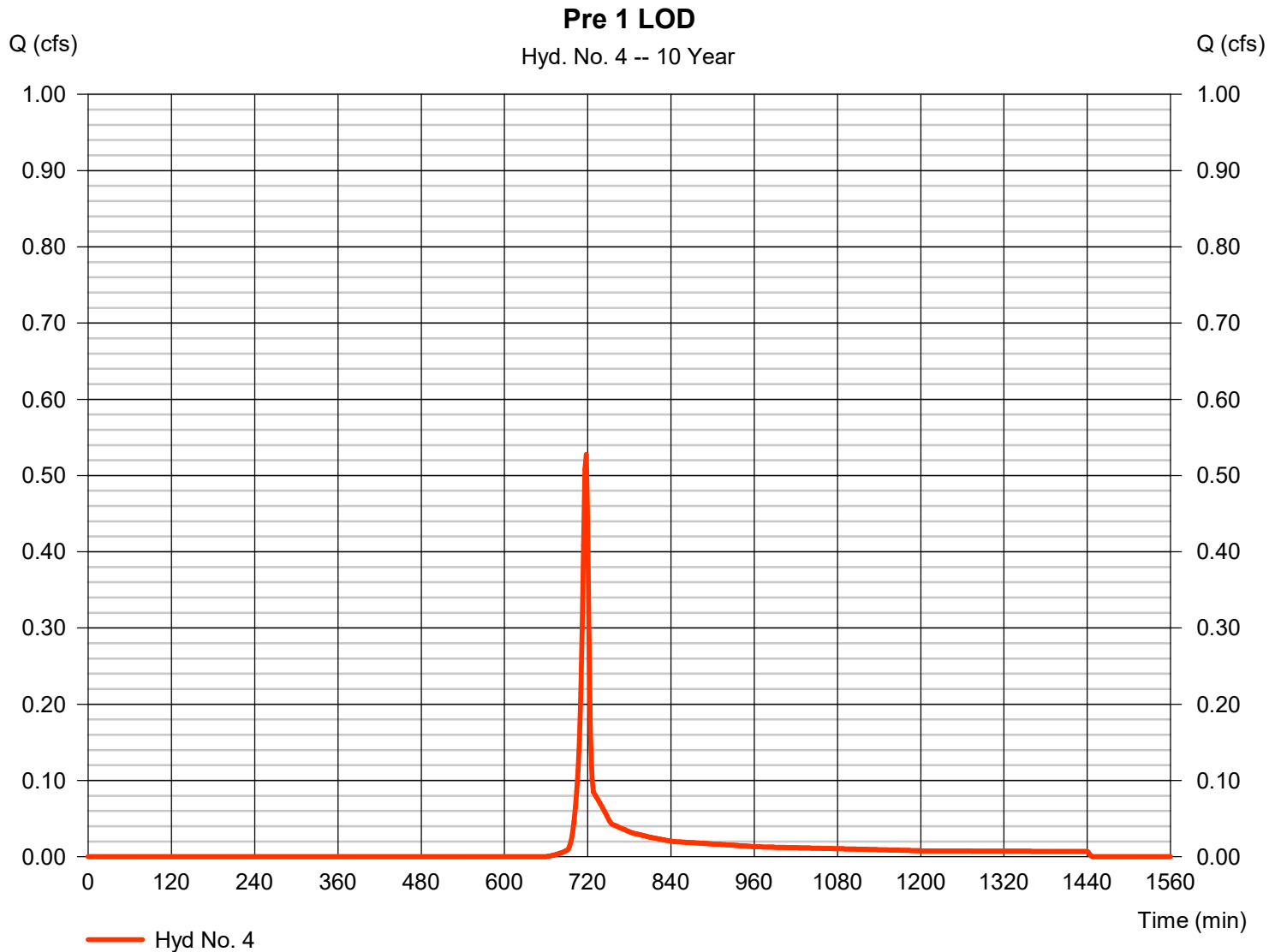
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Wednesday, 05 / 3 / 2023

## Hyd. No. 4

Pre 1 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 0.528 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,060 cuft
Drainage area	= 0.180 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Report

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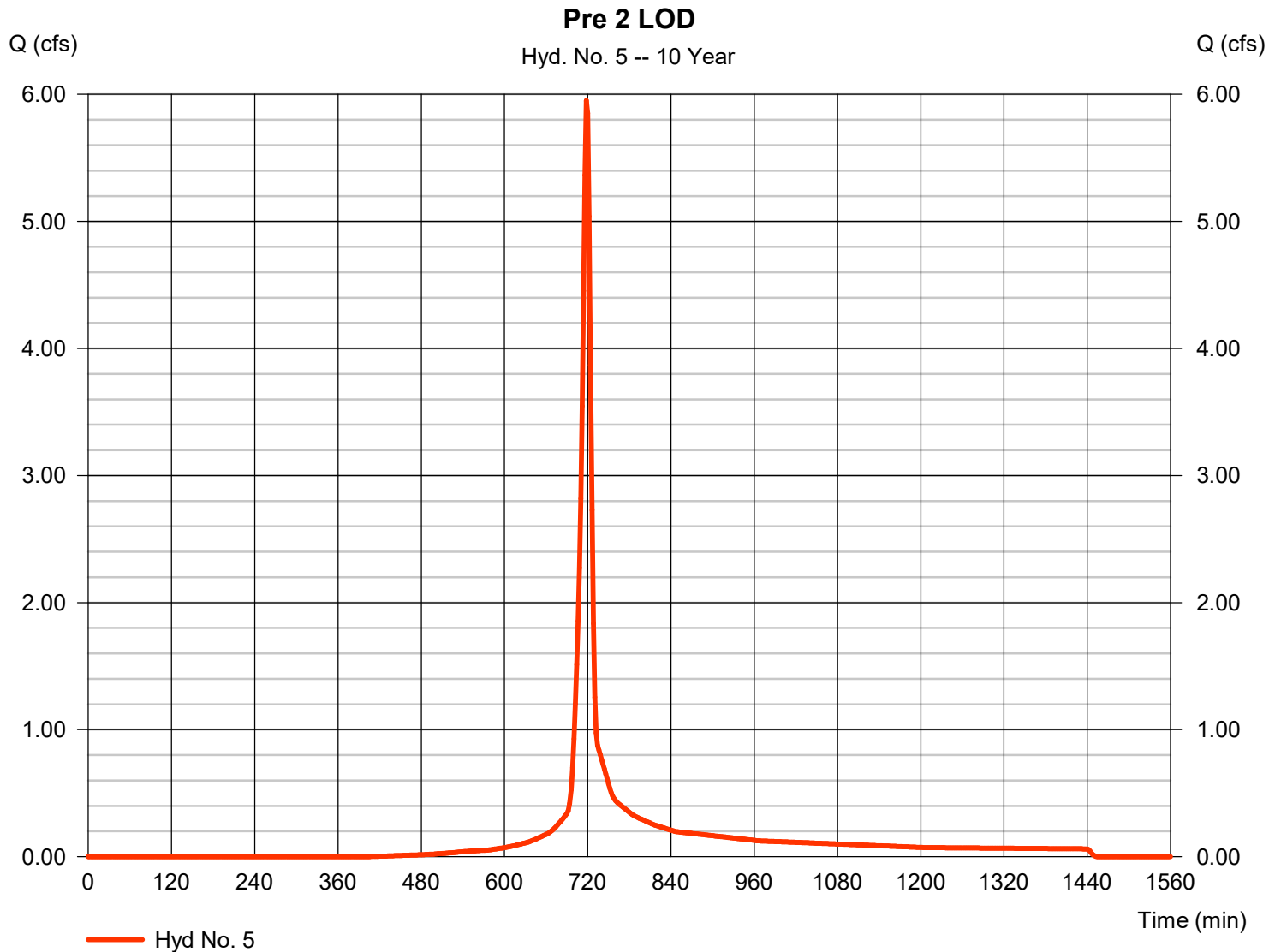
Wednesday, 05 / 3 / 2023

## Hyd. No. 5

Pre 2 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 5.951 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 13,718 cuft
Drainage area	= 1.110 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.560 x 98) + (0.550 x 61)] / 1.110



# Hydrograph Report

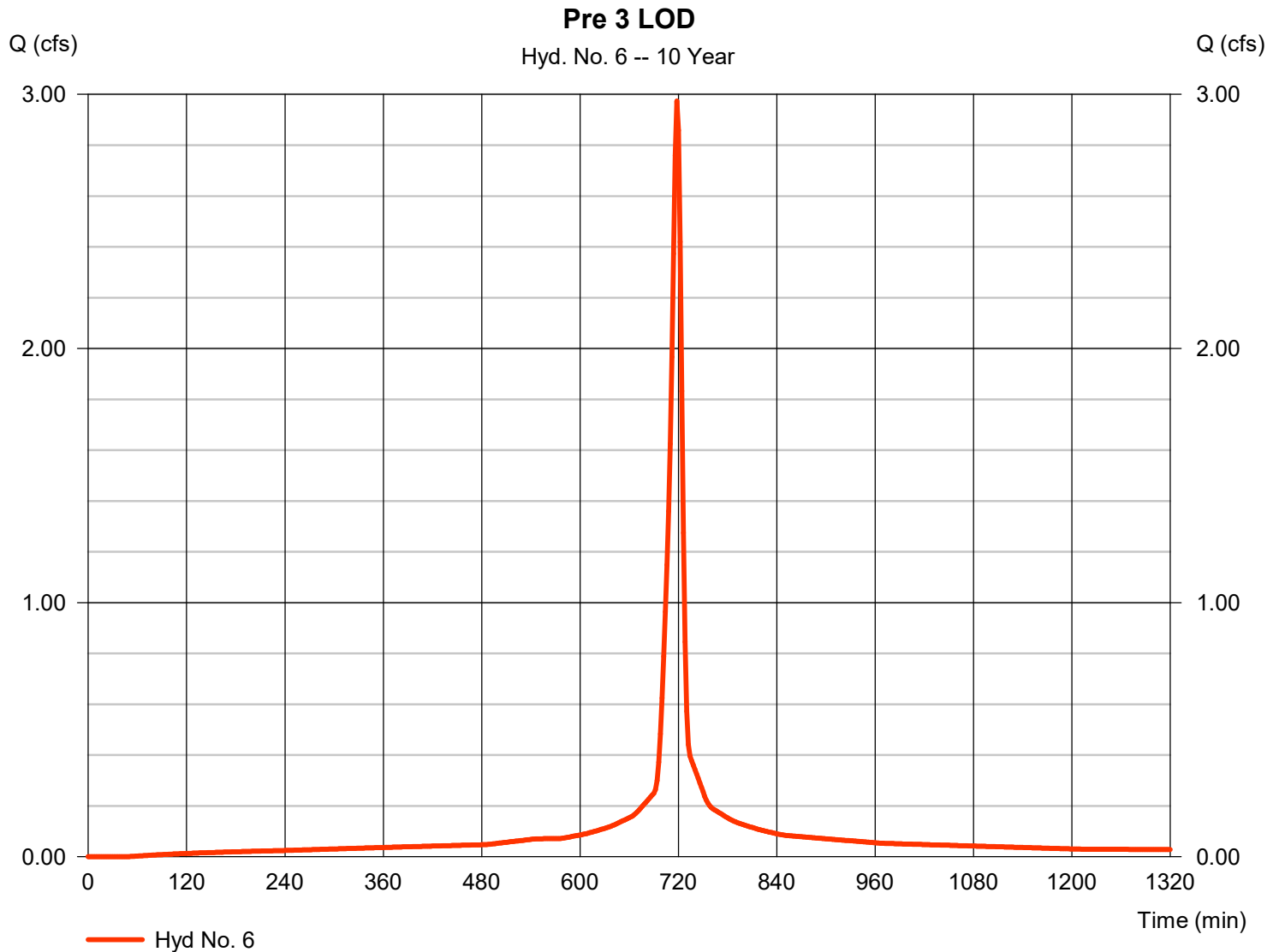
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Wednesday, 05 / 3 / 2023

## Hyd. No. 6

Pre 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 2.974 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 7,951 cuft
Drainage area	= 0.410 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.20 min
Total precip.	= 5.58 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



# Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	11.50	2	716	23,700	----	----	----	Pre 1	
2	SCS Runoff	45.33	2	718	105,814	----	----	----	Pre 2	
3	SCS Runoff	7.122	2	718	18,504	----	----	----	Pre 3	
4	SCS Runoff	1.301	2	718	2,626	----	----	----	Pre 1 LOD	
5	SCS Runoff	11.30	2	718	26,771	----	----	----	Pre 2 LOD	
6	SCS Runoff	4.853	2	718	13,156	----	----	----	Pre 3 LOD	
Pre Hydro.gpw					Return Period: 100 Year			Wednesday, 05 / 3 / 2023		

# Hydrograph Report

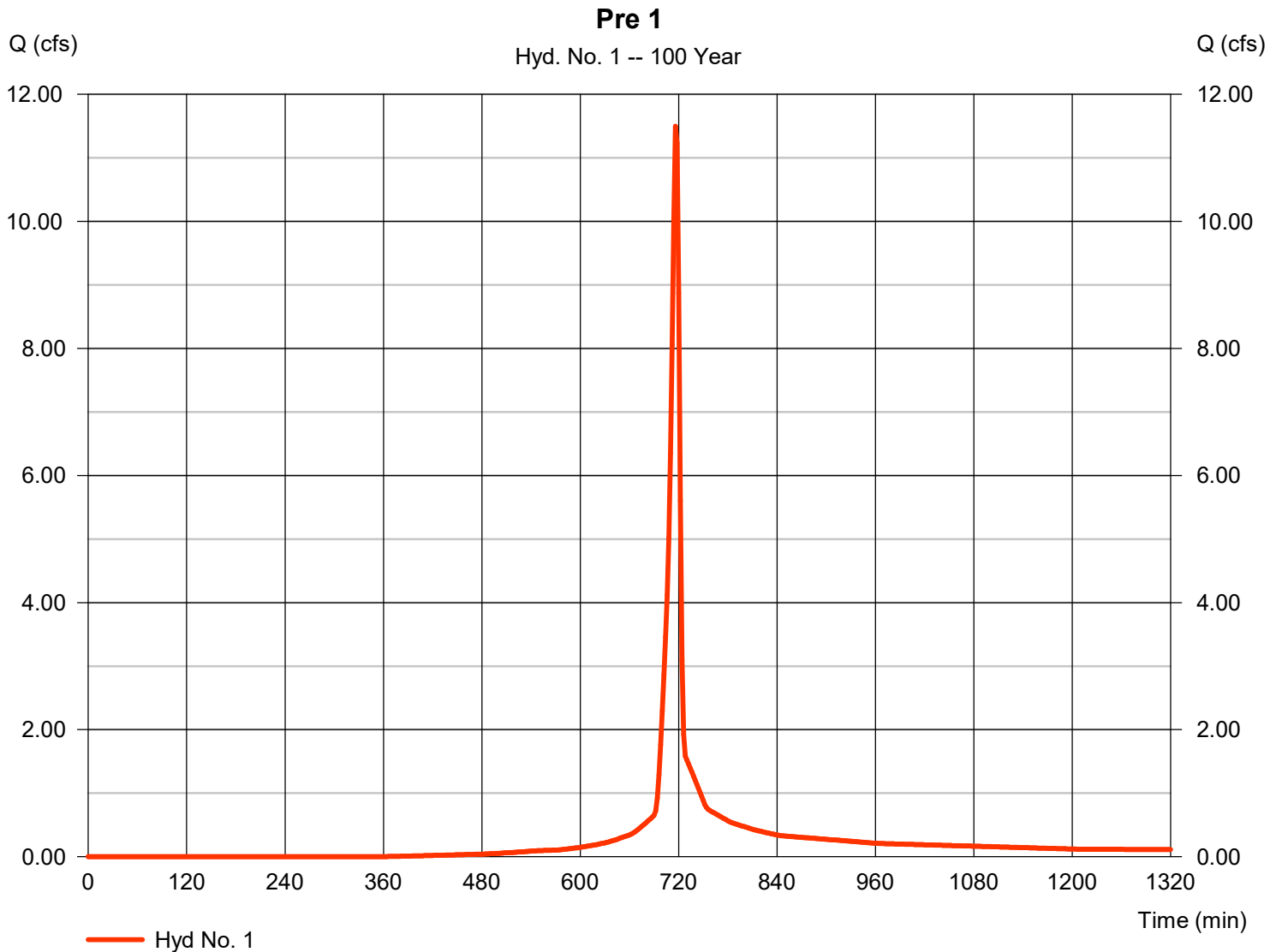
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Wednesday, 05 / 3 / 2023

## Hyd. No. 1

Pre 1

Hydrograph type	= SCS Runoff	Peak discharge	= 11.50 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 23,700 cuft
Drainage area	= 1.180 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



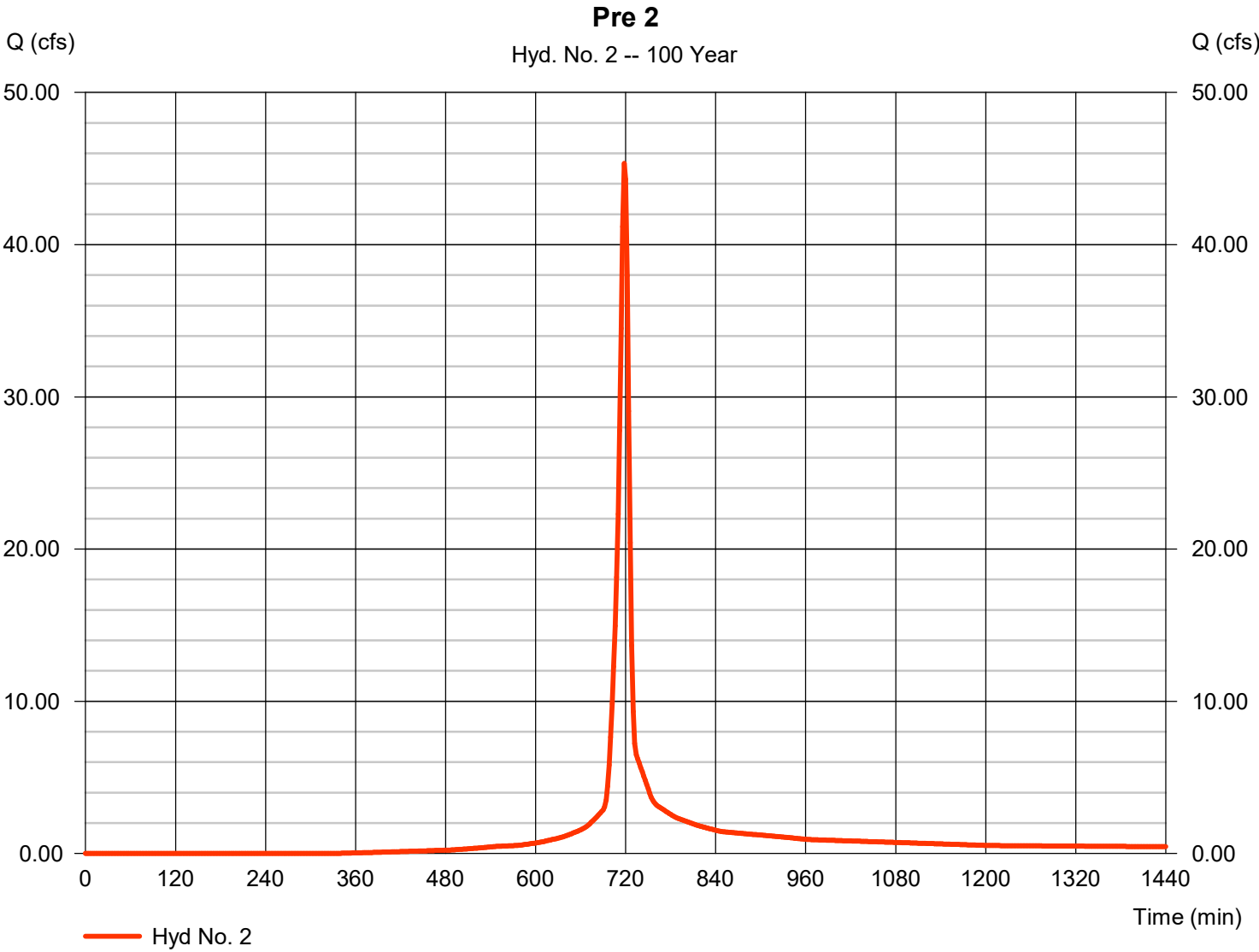
# Hydrograph Report

## Hyd. No. 2

Pre 2

Hydrograph type	= SCS Runoff	Peak discharge	= 45.33 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 105,814 cuft
Drainage area	= 4.740 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(2.860 x 61) + (1.880 x 98)] / 4.740



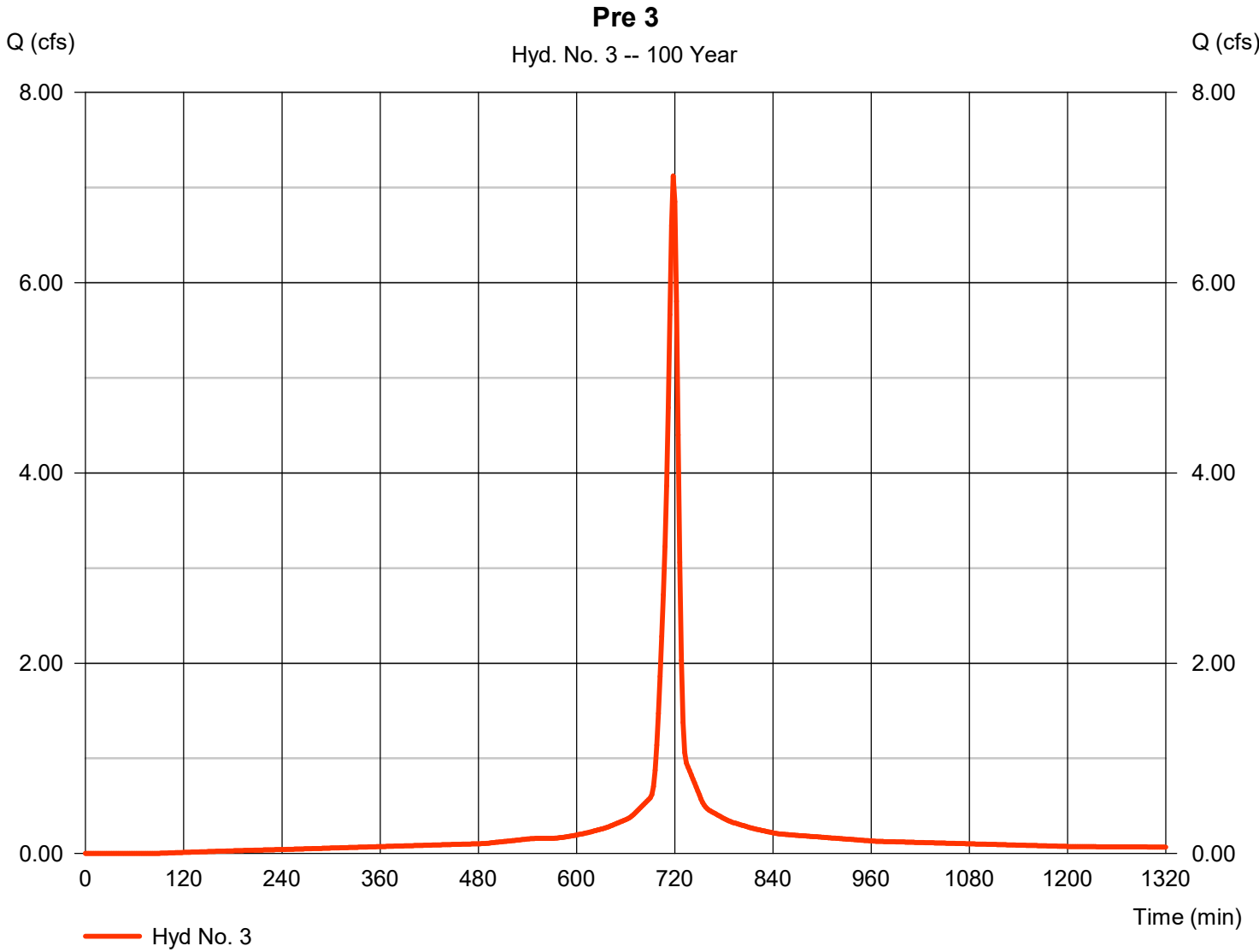
# Hydrograph Report

## Hyd. No. 3

Pre 3

Hydrograph type	= SCS Runoff	Peak discharge	= 7.122 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 18,504 cuft
Drainage area	= 0.610 ac	Curve number	= 94*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.80 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.540 x 98) + (0.070 x 61)] / 0.610



# Hydrograph Report

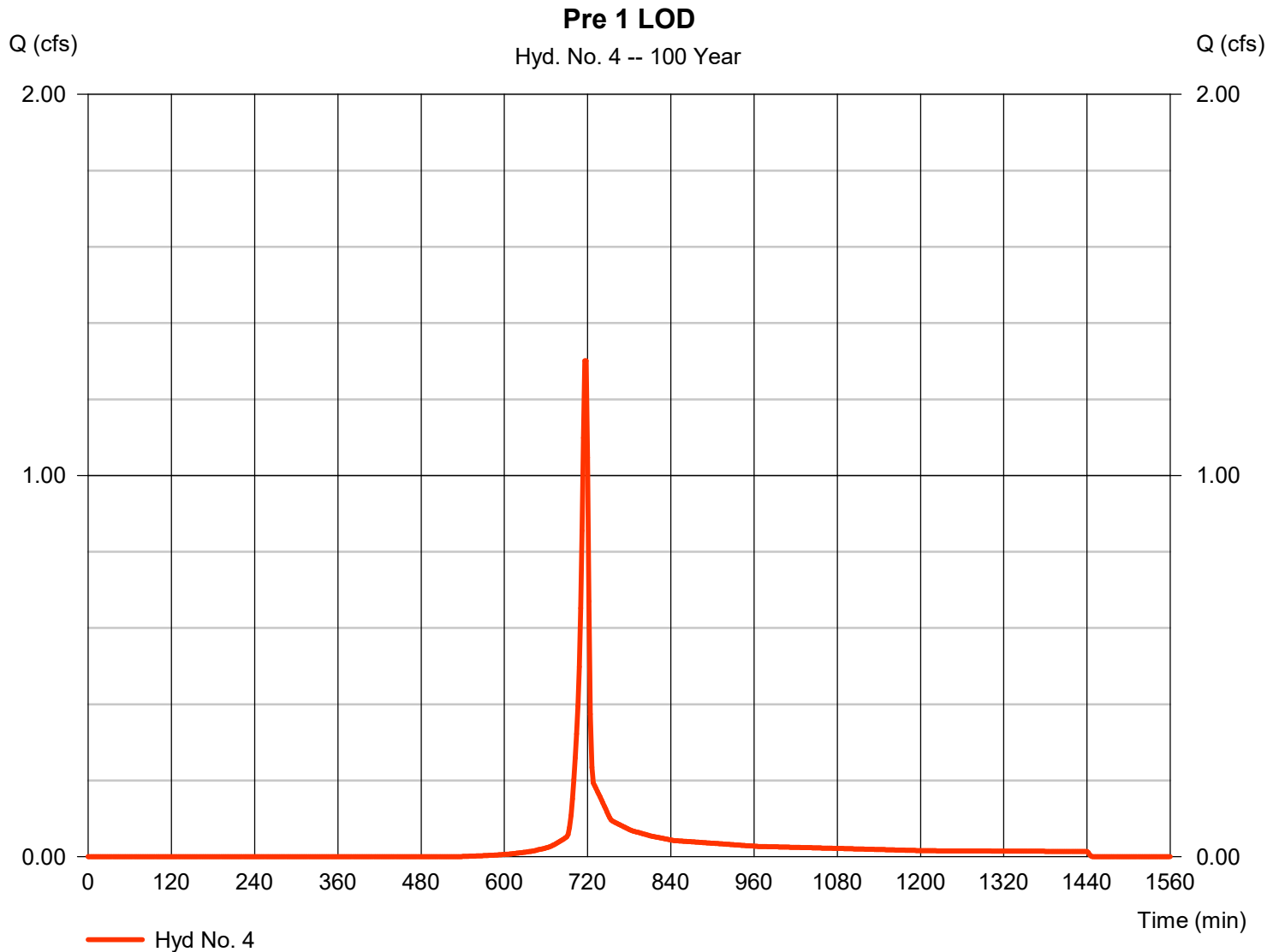
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Wednesday, 05 / 3 / 2023

## Hyd. No. 4

Pre 1 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 1.301 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,626 cuft
Drainage area	= 0.180 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484





# Hydrograph Report

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

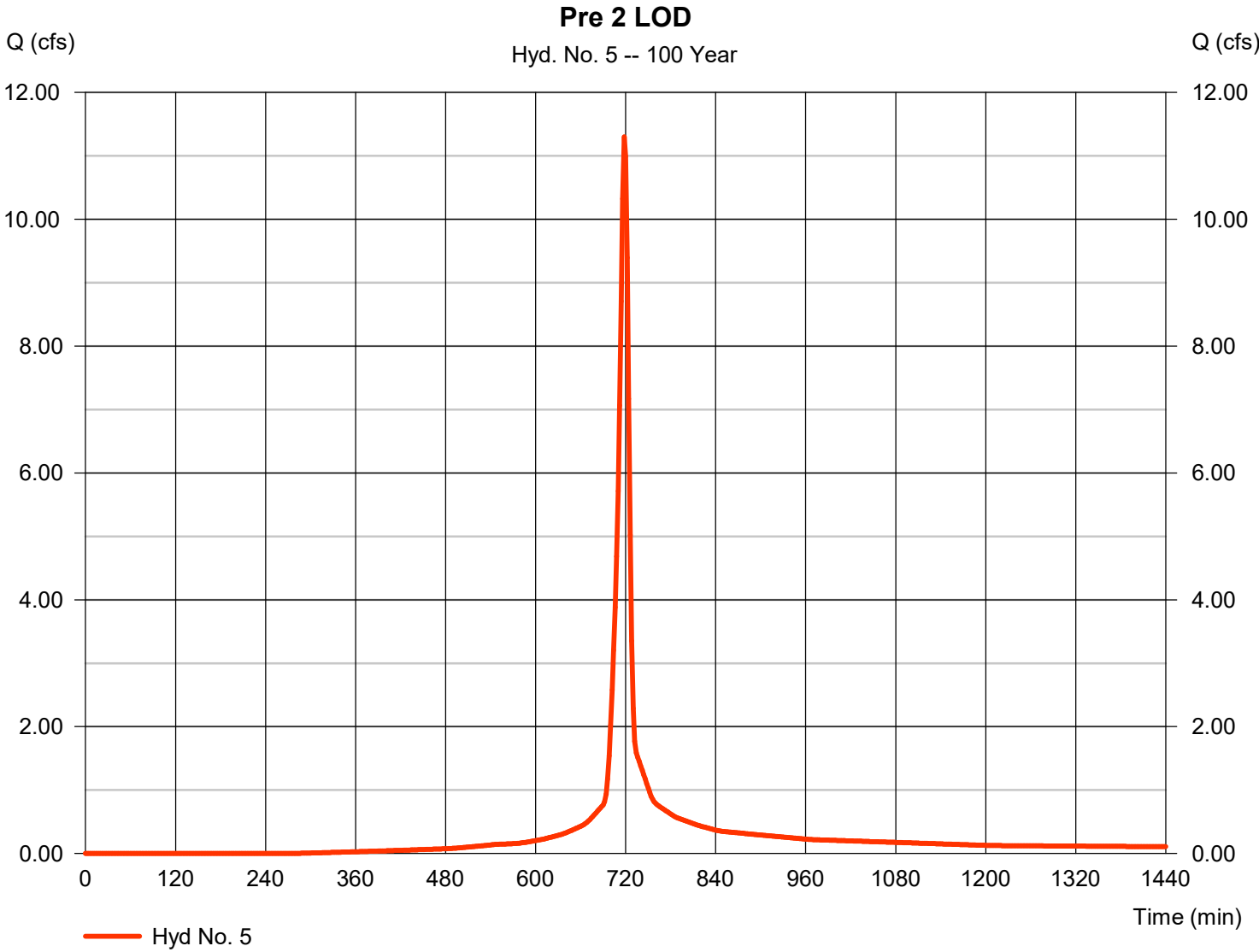
Wednesday, 05 / 3 / 2023

## Hyd. No. 5

Pre 2 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 11.30 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 26,771 cuft
Drainage area	= 1.110 ac	Curve number	= 80*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 6.60 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

\* Composite (Area/CN) = [(0.560 x 98) + (0.550 x 61)] / 1.110

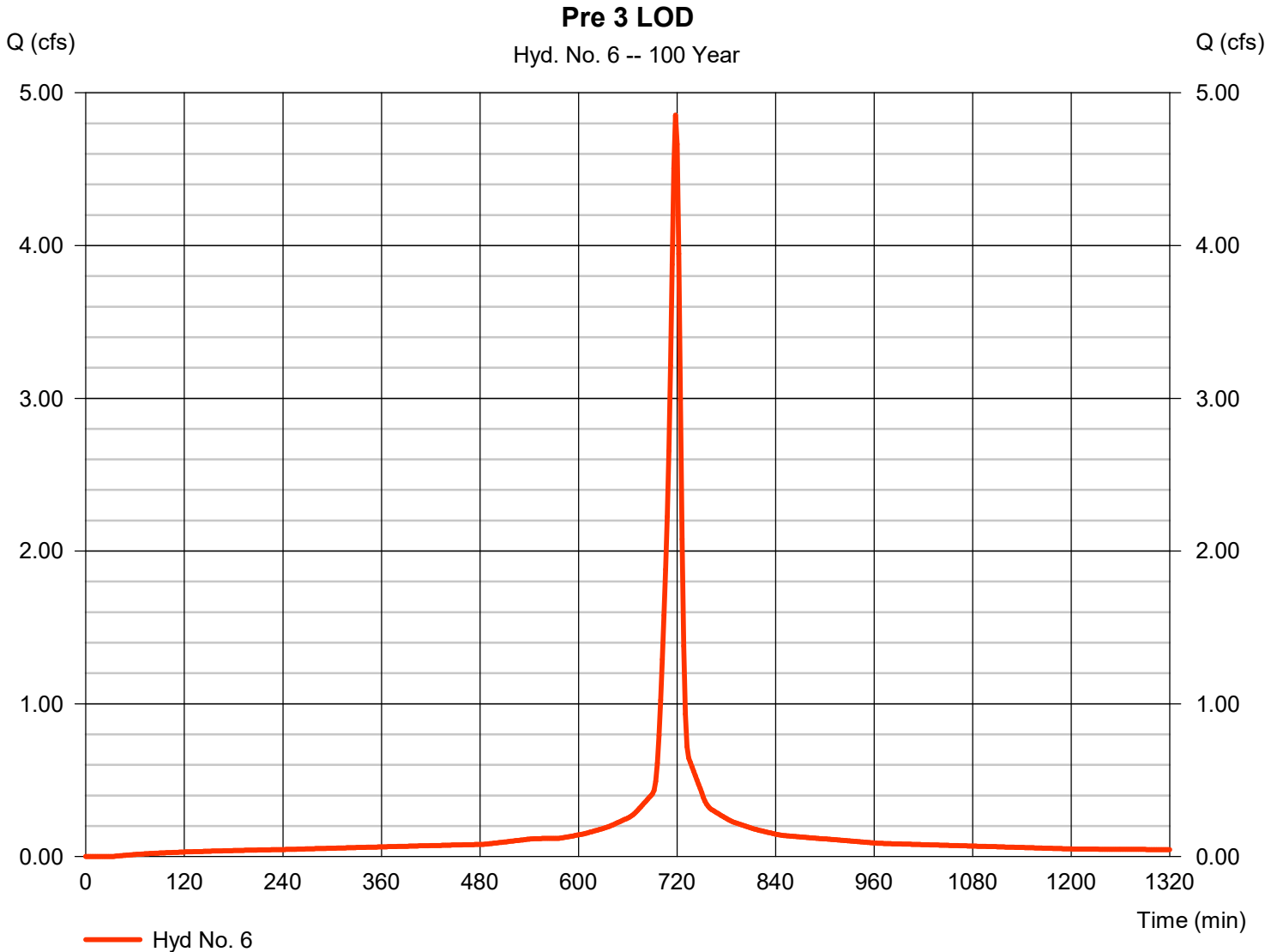


# Hydrograph Report

## Hyd. No. 6

Pre 3 LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 4.853 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 13,156 cuft
Drainage area	= 0.410 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.20 min
Total precip.	= 9.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



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