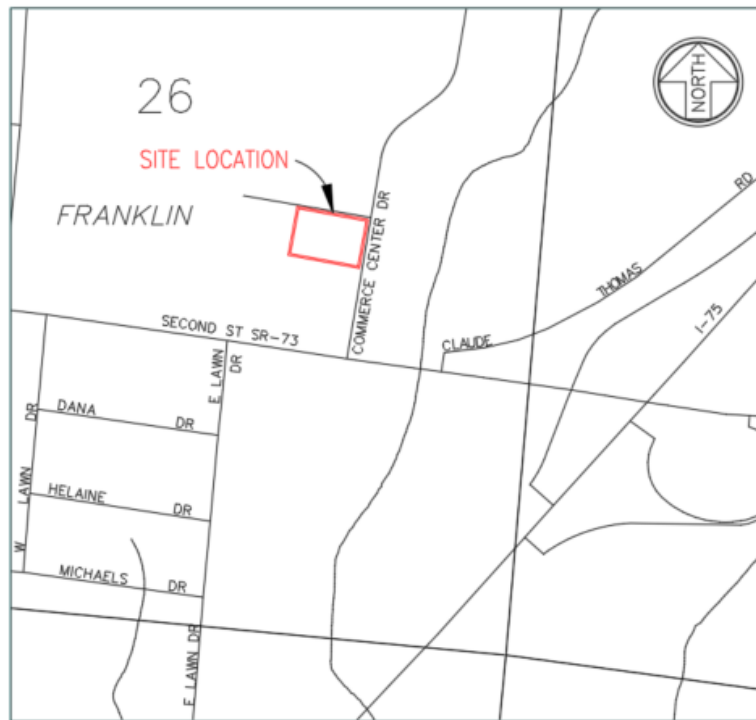


Detention Pond and Storm Report Lee's Famous Recipe Franklin

Located at
Section 26, Town 2, Range 5N MRs.
City of Franklin, Warren County, Ohio

For: The Ideal Company Inc.

Date: 06/18/2025



VICINITY MAP

Prepared By:

Brumbaugh Engineering & Surveying, LLC
2270 South Miami Street
West Milton, Ohio 45383
Ph 937-698-3000

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Lee's Famous Recipe Franklin

Storm Water Detention Calculations Summary

City of Franklin, Warren County

Overview:

This report covers the design of the proposed detention basin to handle the increase of runoff from existing to developed conditions for the Lee's Famous Recipe Franklin site.

Site Description:

The Lee's Famous Recipe Franklin project is comprised of a 1.63 acre site which will contain a proposed commercial building and parking lot. In its pre-developed state, the site is an open space with grass cover in fair condition. In its post-developed state, the site will contain a proposed commercial building, parking lot and grass. The detention pond will be designed for the 5-year critical storm event to detain the increase of runoff produced by the increase in impervious surface area.

Hydrologic Methodologies:

The hydrologic methodology used for the design was the Soil Conservation Service (SCS) TR-55 Method. All supporting calculations can be seen on the attached computer printouts generated on USDA Win TR-55 and Civil3D Hydrographs.

Calculations Summary:

Below is a summary of the storm water detention calculations. Please refer to the attached computer printouts for additional details.

Hydrologic Soil Group C was used for these calculations. A soil map from the USDA Web Soil Survey website has been included in this report.

The proposed detention basin will adequately handle the increase in stormwater runoff from the added impervious area.

Total Drainage Area = 1.06 acres. The area of the site not routed to the detention pond will drain as it did under its pre-developed conditions.

Time of Concentration (Tc)

- Existing conditions = 10 minutes
- Developed conditions = 10 minutes

Runoff Coefficient (CN)

- Existing = 79 (Grass, Hydrologic Soil Group C, Fair Condition)
- Developed = 85 (User Defined – 0.58 Acres Grass, Hydrologic Soil Group C, Fair Condition; 0.48 Acres Paved Parking Lots, Roofs, Driveways)

Pre-developed Peak Flow Rate		Developed Peak Flow Rate	
Storm Event	Peak Flow (cfs)	Storm Event	Peak Flow (cfs)
1 Year	1.24	1 Year	1.80
2 Year	1.67	2 Year	2.30
5 Year	2.36	5 Year	3.08
10 Year	2.97	10 Year	3.75
25 Year	3.86	25 Year	4.68
50 Year	4.38	50 Year	5.22
100 Year	4.90	100 Year	5.76

Critical Storm: The critical storm event was calculated to be the 5-Year critical storm. Therefore, the runoff from the 5-year storm under developed conditions shall be held back to the runoff from the 1-year storm event in the pre-developed state. The runoff for the 10, 25, 50 and 100-year storm events on the developed site shall be equal or less than the runoff from their respective storms for the pre-developed site.

The detention basin has a storage volume of 7,900 ft³ and a top of pond elevation of 808.50 and a 20' spillway elevation of 808.10.

Detention Outlet Structure:

The detention basin will have a 2-2B outlet structure. The catch basin will have a 4" diameter orifice at an invert elevation of 805.10. The rim of the 2-2B catch basin has an elevation of 808.10. The outlet structure will discharge through a proposed 12" pipe at an elevation of 805.10.

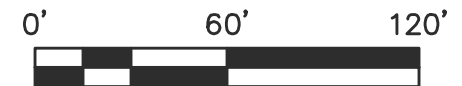
The table below shows the summary of the detention basin.

Storm Event	Peak Inflow (cfs)	Peak Outflow (cfs)	Storage Provided (ft ³)	Max. Elevation of Pond (ft)
1 Year	1.24	0.41	1,526	806.39
2 Year	1.67	0.46	2,074	806.64
5 Year	2.36	0.52	2,962	807.01
10 Year	2.97	0.57	3,756	807.28
25 Year	3.86	0.62	4,943	807.67
50 Year	4.38	0.65	5,653	807.89
100 Year	4.90	0.67	6,382	808.09

PRE- DEVELOPED CONDITIONS MAP

DRAINAGE AREAS

<u>Description</u>	<u>Hydrologic Soil Group</u>	<u>Acres</u>	<u>CN</u>
Open Space; Grass cover (fair)	C	1.05	79



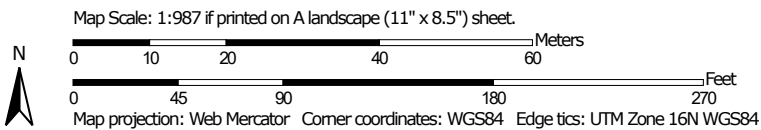
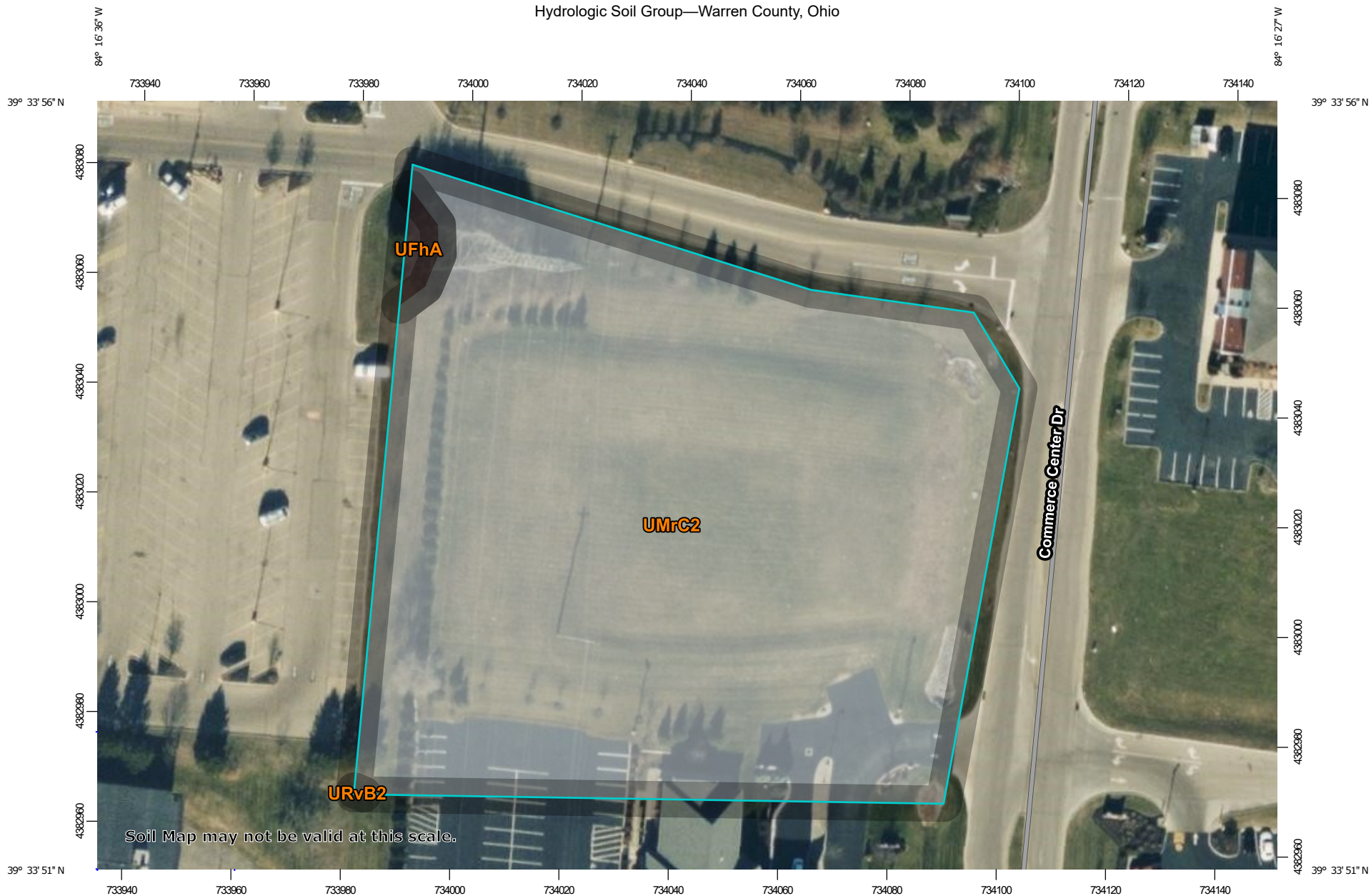
POST- DEVELOPED CONDITIONS MAP

DRAINAGE AREAS

<u>Description</u>	<u>Hydrologic Soil Group</u>	<u>Acres</u>	<u>CN</u>
Open Space; Grass cover (good)	C	0.61	79
Paved Parking Lots, Roofs, Driveways	C	0.44	98
		1.05	84



Hydrologic Soil Group—Warren County, Ohio



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Warren County, Ohio
 Survey Area Data: Version 23, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 28, 2019—Dec 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
UFhA	Urban land-Fincastle, Southern Ohio Till Plain, complex, 0 to 2 percent slopes	B/D	0.0	0.8%
UMrC2	Urban land-Miamian-Russell complex, 6 to 12 percent slopes, eroded		2.7	99.2%
URvB2	Urban land-Russell-Miamian complex, 2 to 6 percent slopes, moderately eroded	C	0.0	0.0%
Totals for Area of Interest			2.8	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

WinTR-55 Current Data Description

--- Identification Data ---

User: GWG Date: 4/24/2025
 Project: 108.25 Units: English
 SubTitle: Lee's Original Recipe Franklin Areal Units: Acres
 State: Ohio
 County: Warren
 Filename: T:\BES_2025\108.25_Lee's Famous Recipe_Franklin\Eng\STORM\108 Ex.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Existing		Outlet	1.05	79	.105

Total area: 1.05 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.9	3.5	4.0	4.7	5.1	5.5	2.5

Storm Data Source: Warren County, OH (NRCS)
 Rainfall Distribution Type: Type II
 Dimensionless Unit Hydrograph: <standard>

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.9	3.5	4.0	4.7	5.1	5.5	2.5

Storm Data Source: Warren County, OH (NRCS)
 Rainfall Distribution Type: Type II
 Dimensionless Unit Hydrograph: <standard>

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Existing	1.05	0.105	79	Outlet	
Total Area: 1.05 (ac)					

=====

GWG 108.25
Lee's Original Recipe Franklin
Warren County, Ohio

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Existing							
SHEET	100	0.0981	0.150				0.091
SHALLOW	225	0.0717	0.050				0.014
Time of Concentration							.105
=====							

=====

GWG 108.25
Lee's Original Recipe Franklin
Warren County, Ohio

Sub-Area Land Use and Curve Number Details

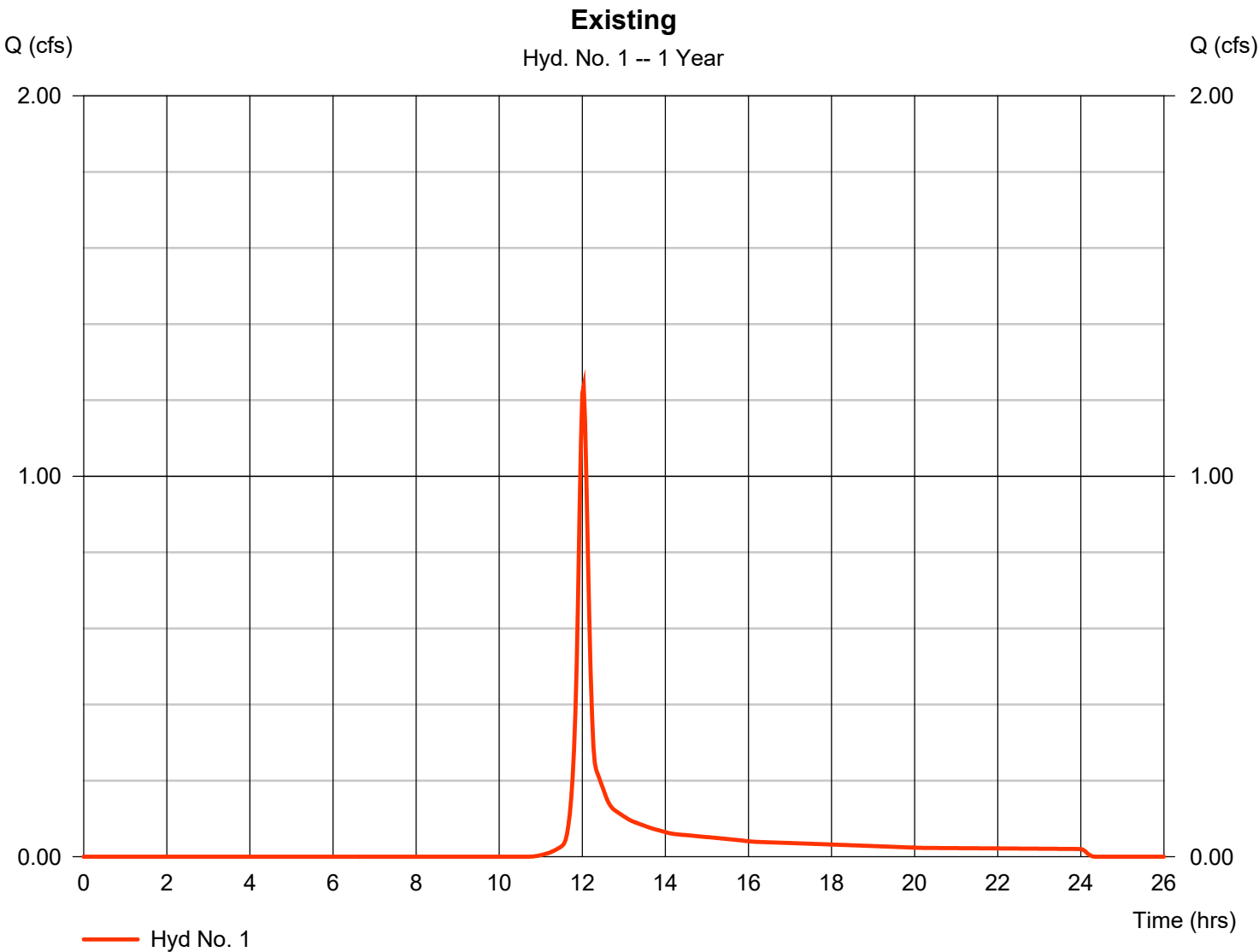
Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Existing	Open space; grass cover 50% to 75% (fair)	C	1.05	79
Total Area / Weighted Curve Number			1.05	79
				==

=====

Hyd. No. 1

Existing

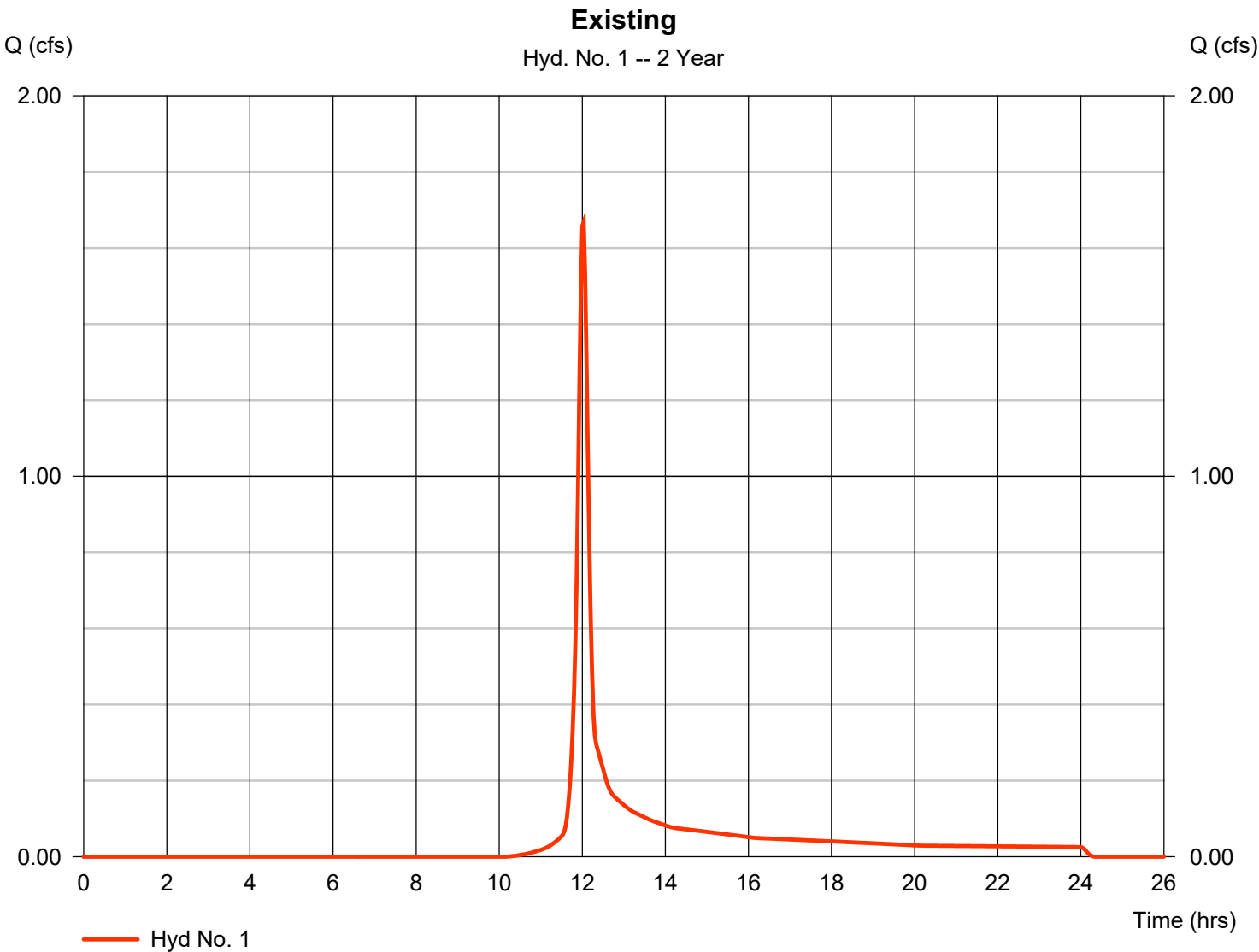
Hydrograph type	=	SCS Runoff	Peak discharge	=	1.236 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.03 hrs
Time interval	=	2 min	Hyd. volume	=	3,292 cuft
Drainage area	=	1.050 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	2.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 1

Existing

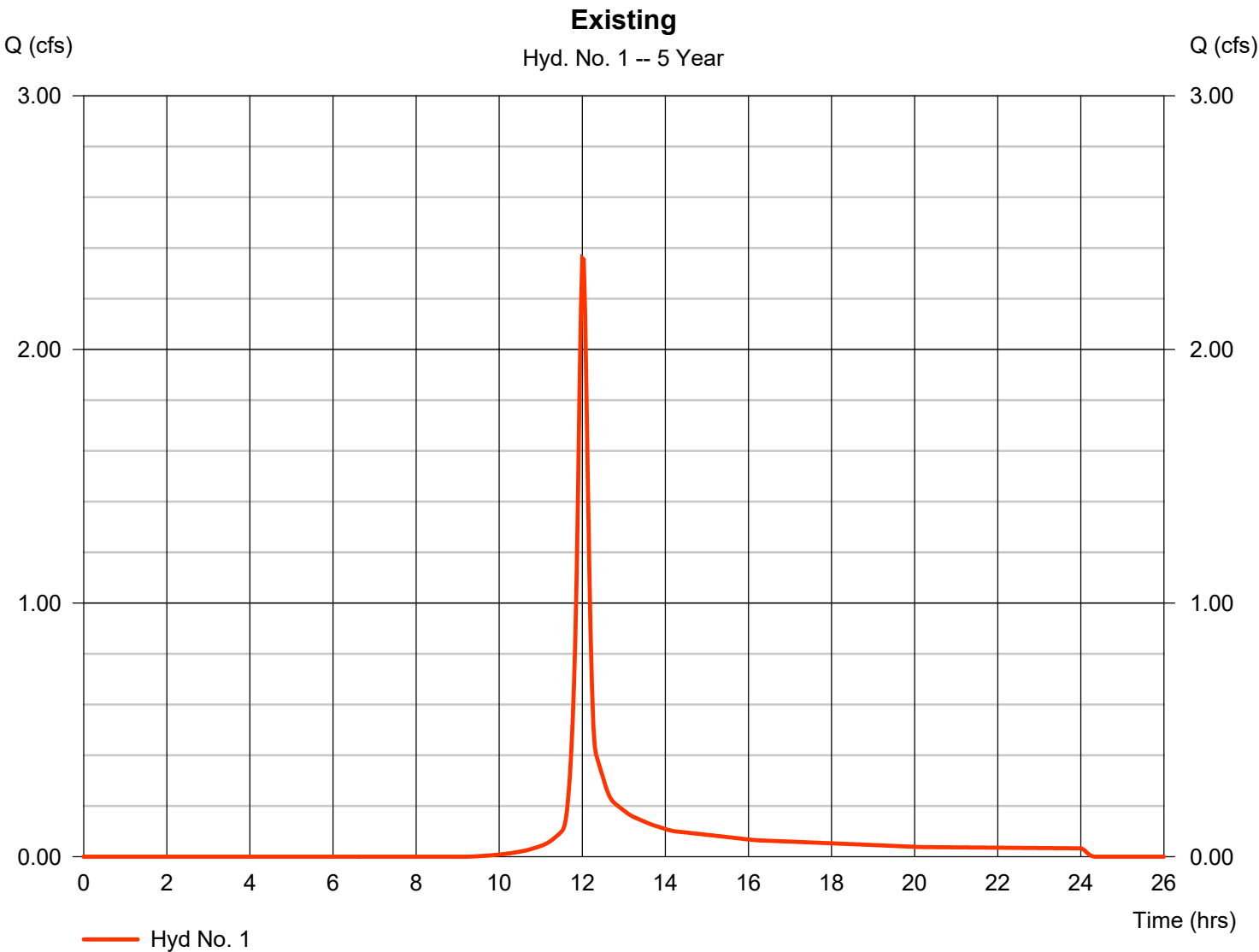
Hydrograph type	= SCS Runoff	Peak discharge	= 1.668 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 4,386 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.90 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 1

Existing

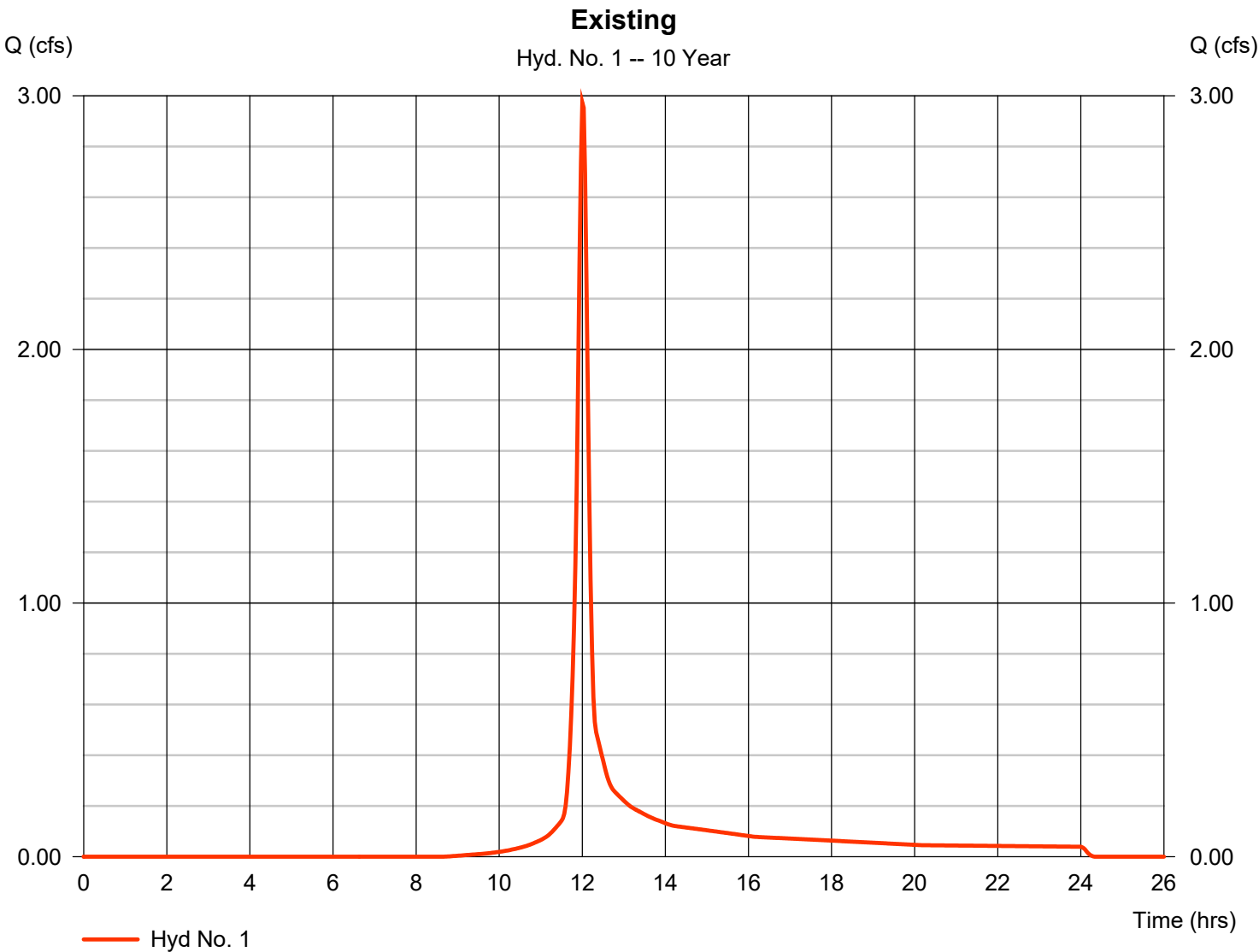
Hydrograph type	= SCS Runoff	Peak discharge	= 2.360 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 6,155 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 1

Existing

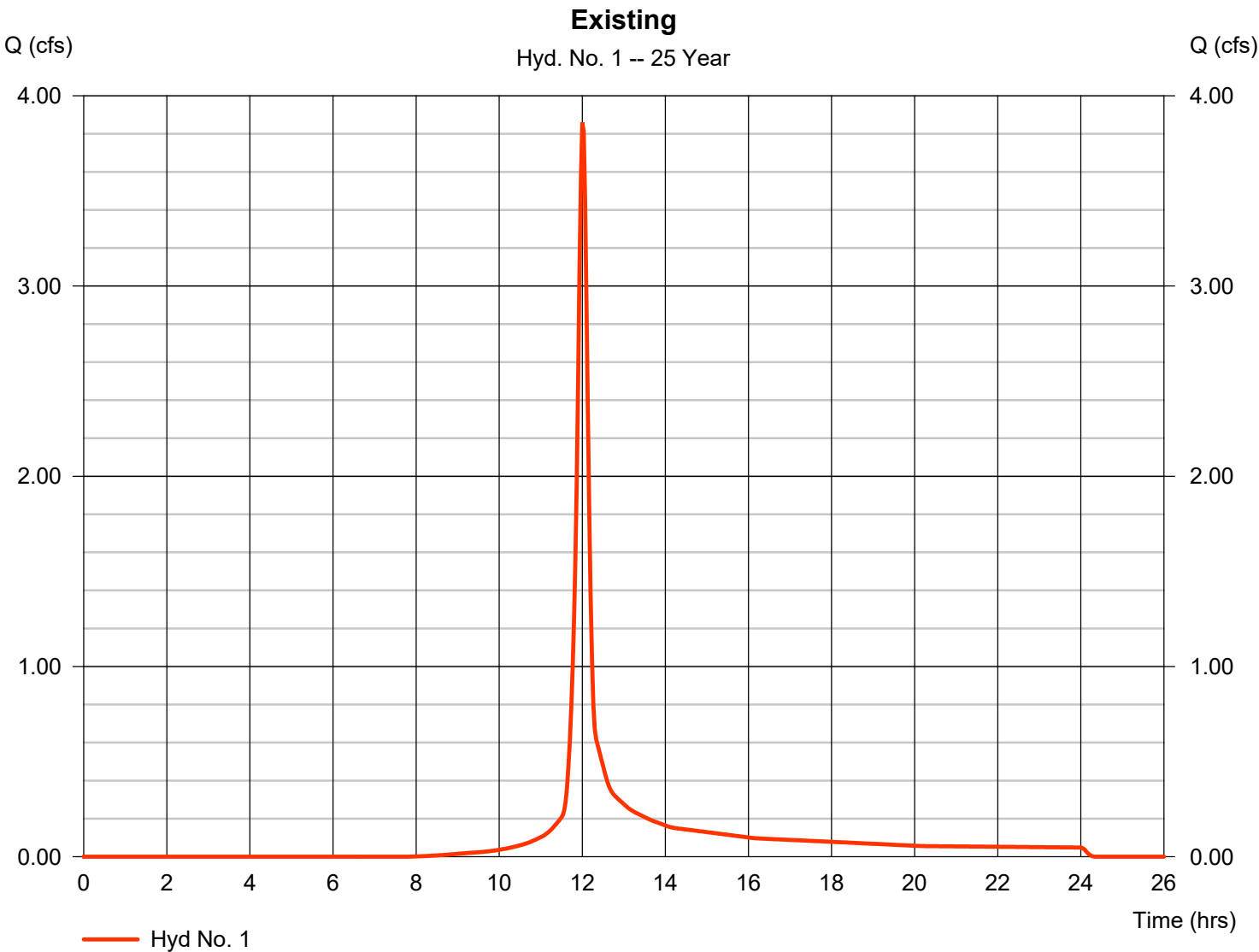
Hydrograph type	= SCS Runoff	Peak discharge	= 2.973 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 7,718 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.00 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 1

Existing

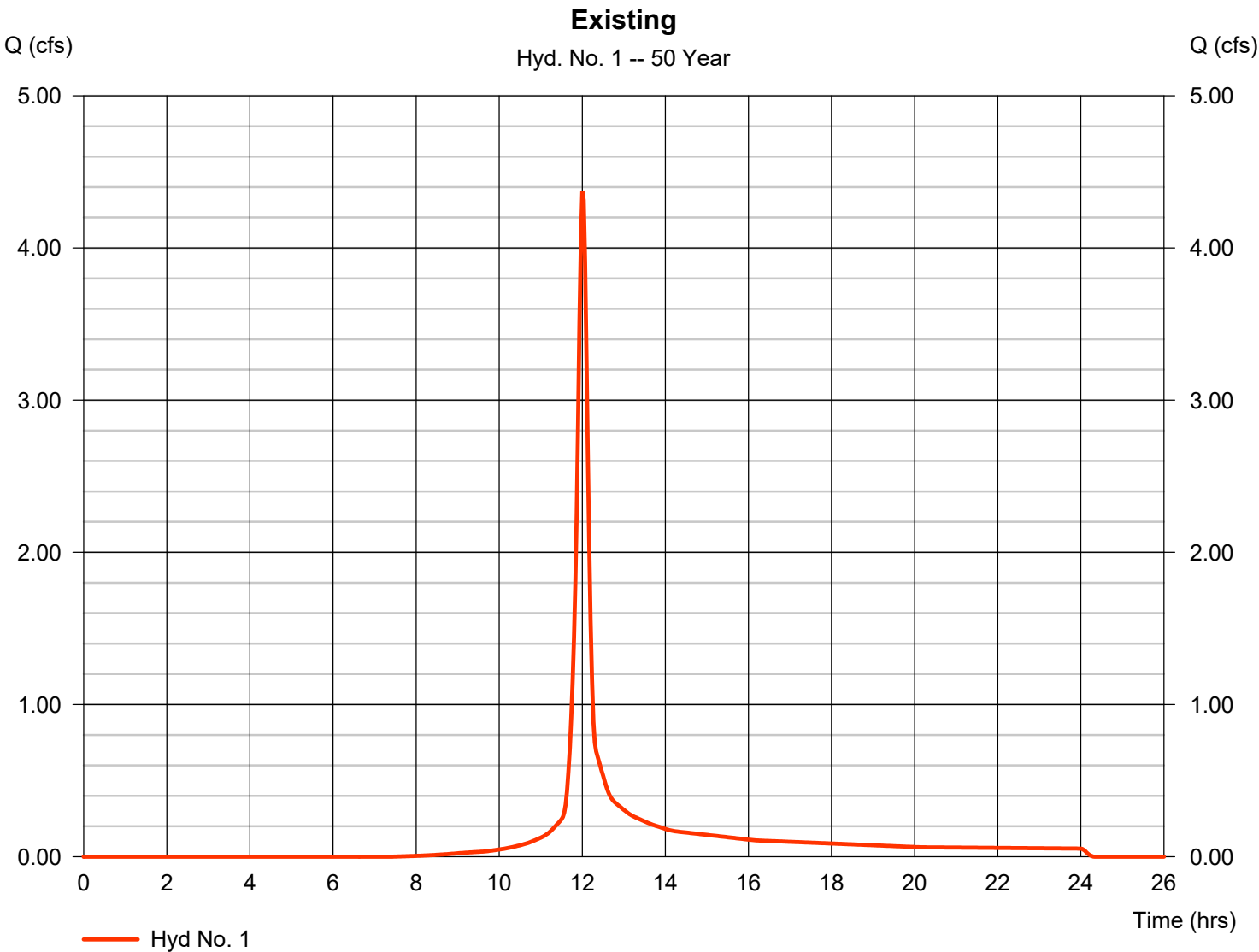
Hydrograph type	= SCS Runoff	Peak discharge	= 3.859 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 10,004 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 1

Existing

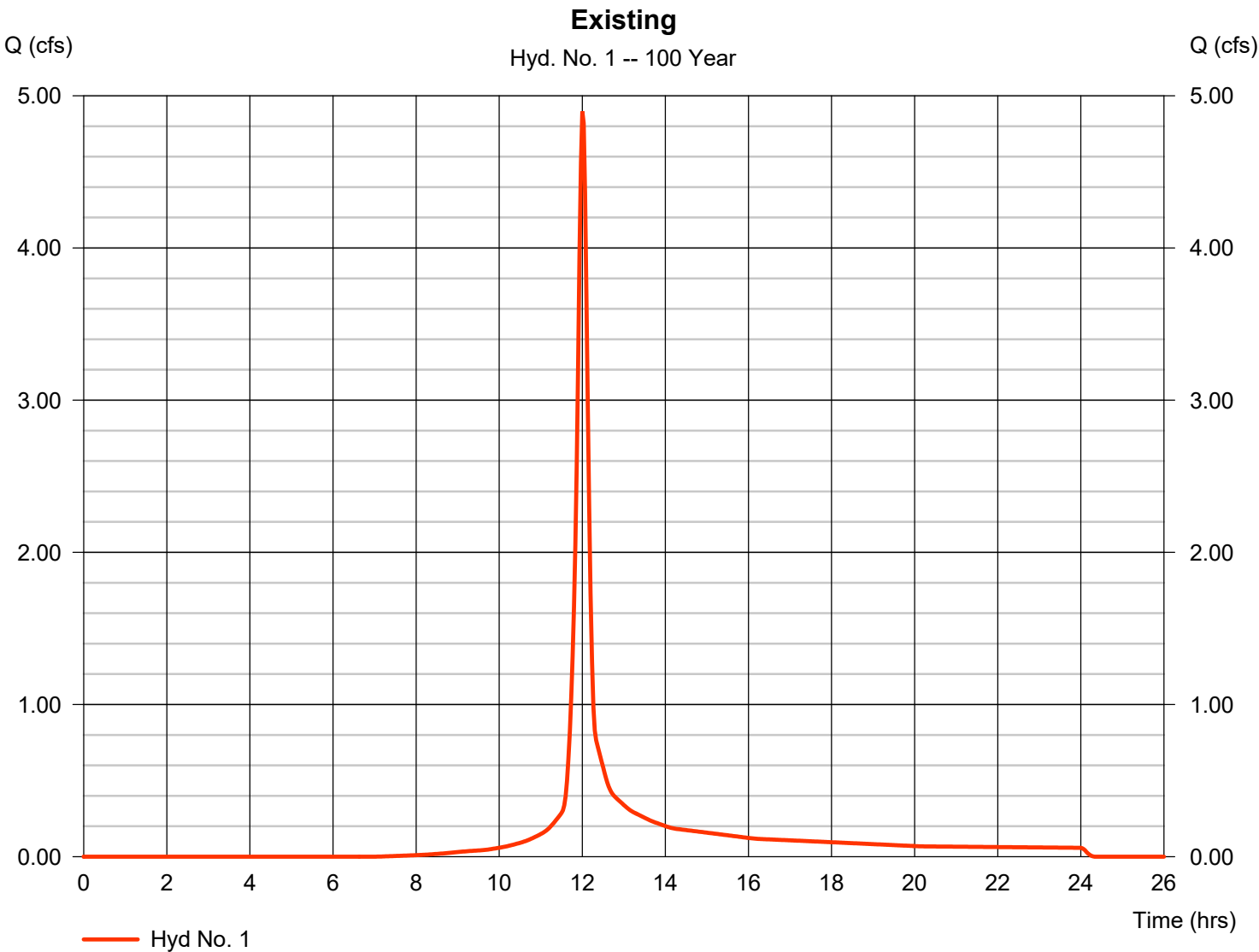
Hydrograph type	= SCS Runoff	Peak discharge	= 4.375 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 11,351 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.10 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 1

Existing

Hydrograph type	= SCS Runoff	Peak discharge	= 4.897 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 12,722 cuft
Drainage area	= 1.050 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



WinTR-55 Current Data Description

--- Identification Data ---

User: GWG Date: 6/17/2025
 Project: 108.25 Units: English
 SubTitle: Lee's Original Recipe Franklin Areal Units: Acres
 State: Ohio
 County: Warren
 Filename: T:\BES_2025\108.25_Lee's Famous Recipe_Franklin\Eng\STORM\108 Prop.w55

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Proposed	Pond Drainage	Outlet	1.06	85	0.1

Total area: 1.06 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.9	3.5	4.0	4.7	5.1	5.5	2.5

Storm Data Source: Warren County, OH (NRCS)
 Rainfall Distribution Type: Type II
 Dimensionless Unit Hydrograph: <standard>

=====

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.9	3.5	4.0	4.7	5.1	5.5	2.5

Storm Data Source: Warren County, OH (NRCS)
 Rainfall Distribution Type: Type II
 Dimensionless Unit Hydrograph: <standard>

=====

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period						
	2-Yr (cfs)	5-Yr (cfs)	10-Yr (cfs)	25-Yr (cfs)	50-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)

SUBAREAS							
Proposed	2.46	3.30	4.00	5.01	5.58	6.16	1.93
REACHES							
OUTLET	2.46	3.30	4.00	5.01	5.58	6.16	1.93

=====

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period						
	2-Yr (cfs) (hr)	5-Yr (cfs) (hr)	10-Yr (cfs) (hr)	25-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)	1-Yr (cfs) (hr)

SUBAREAS							
Proposed	2.46 11.93	3.30 11.94	4.00 11.93	5.01 11.93	5.58 11.93	6.16 11.93	1.93 11.94
REACHES							
OUTLET	2.46	3.30	4.00	5.01	5.58	6.16	1.93

=====

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description

Proposed	1.06	0.100	85	Outlet	Pond Drainage
Total Area: 1.06 (ac)					

=====

GWG 108.25
 Lee's Original Recipe Franklin
 Warren County, Ohio

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Proposed SHEET	100	0.1000	0.011				0.011
					Time of Concentration		0.1
							=====

GWG

108.25
Lee's Original Recipe Franklin
Warren County, Ohio

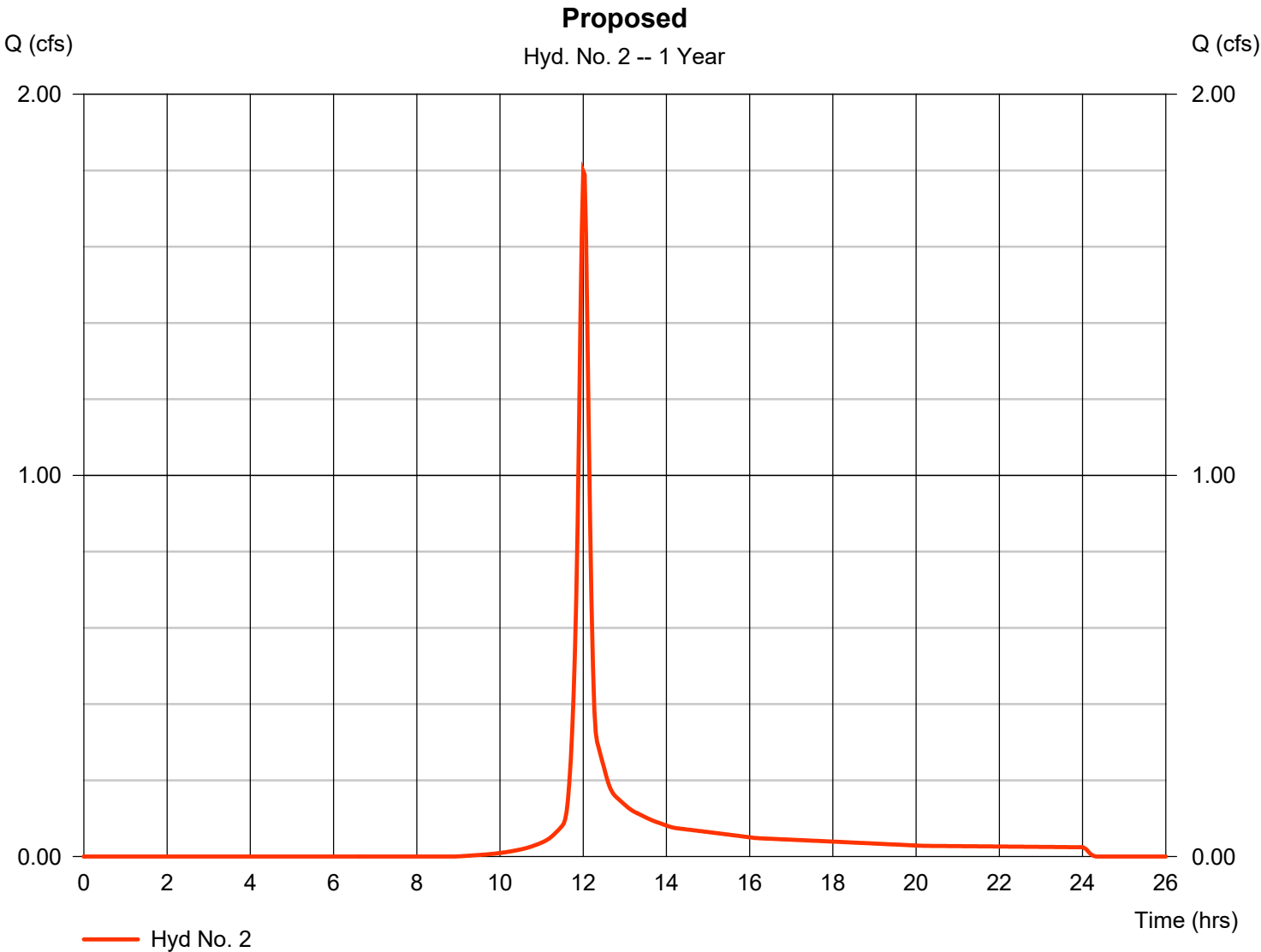
Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Proposed	Open space; grass cover > 75%	(good) C	.58	74
	Paved parking lots, roofs, driveways	C	.48	98
	Total Area / Weighted Curve Number		1.06	85
			=====	==

Hyd. No. 2

Proposed

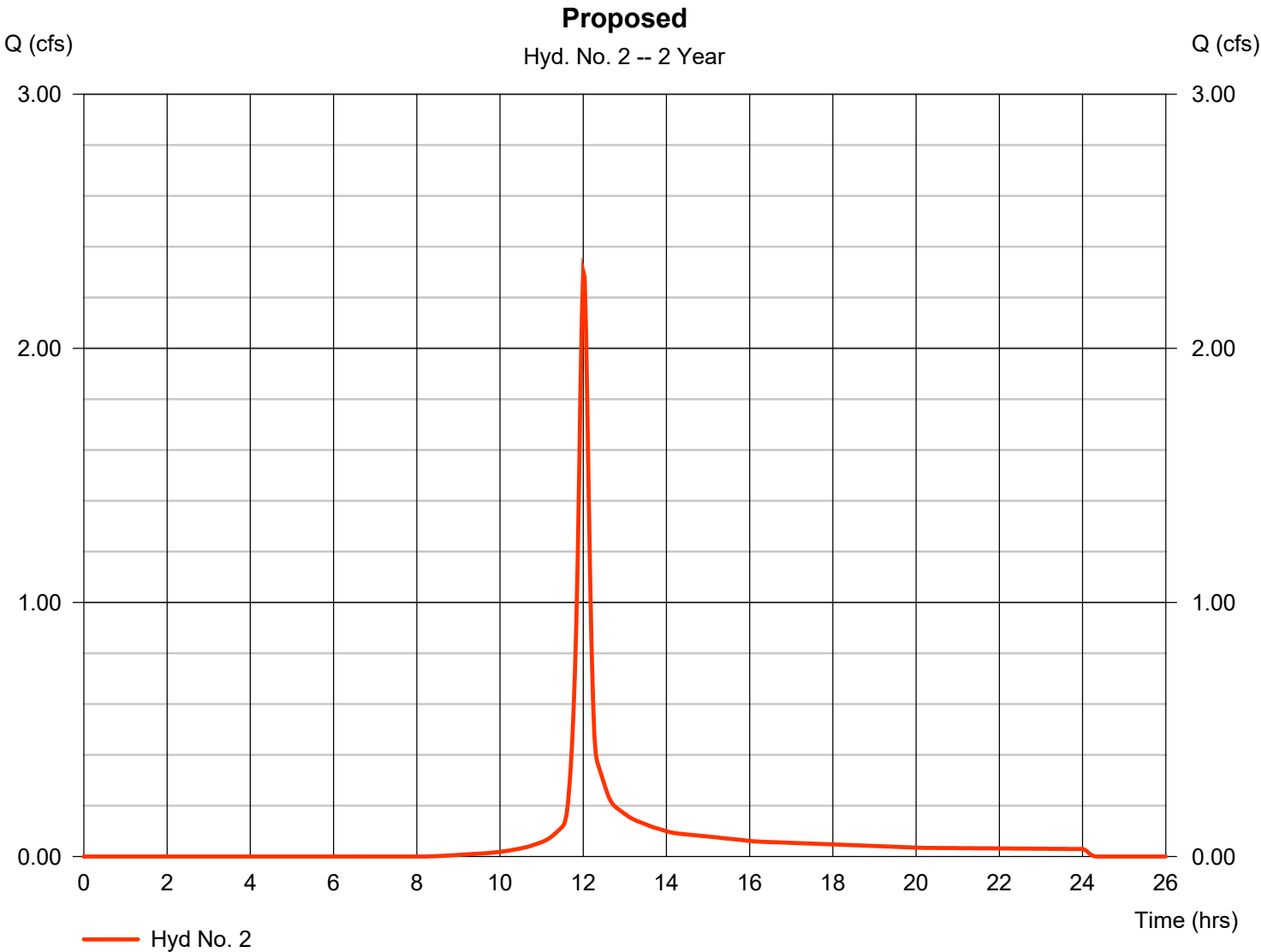
Hydrograph type	= SCS Runoff	Peak discharge	= 1.798 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 4,676 cuft
Drainage area	= 1.060 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 2

Proposed

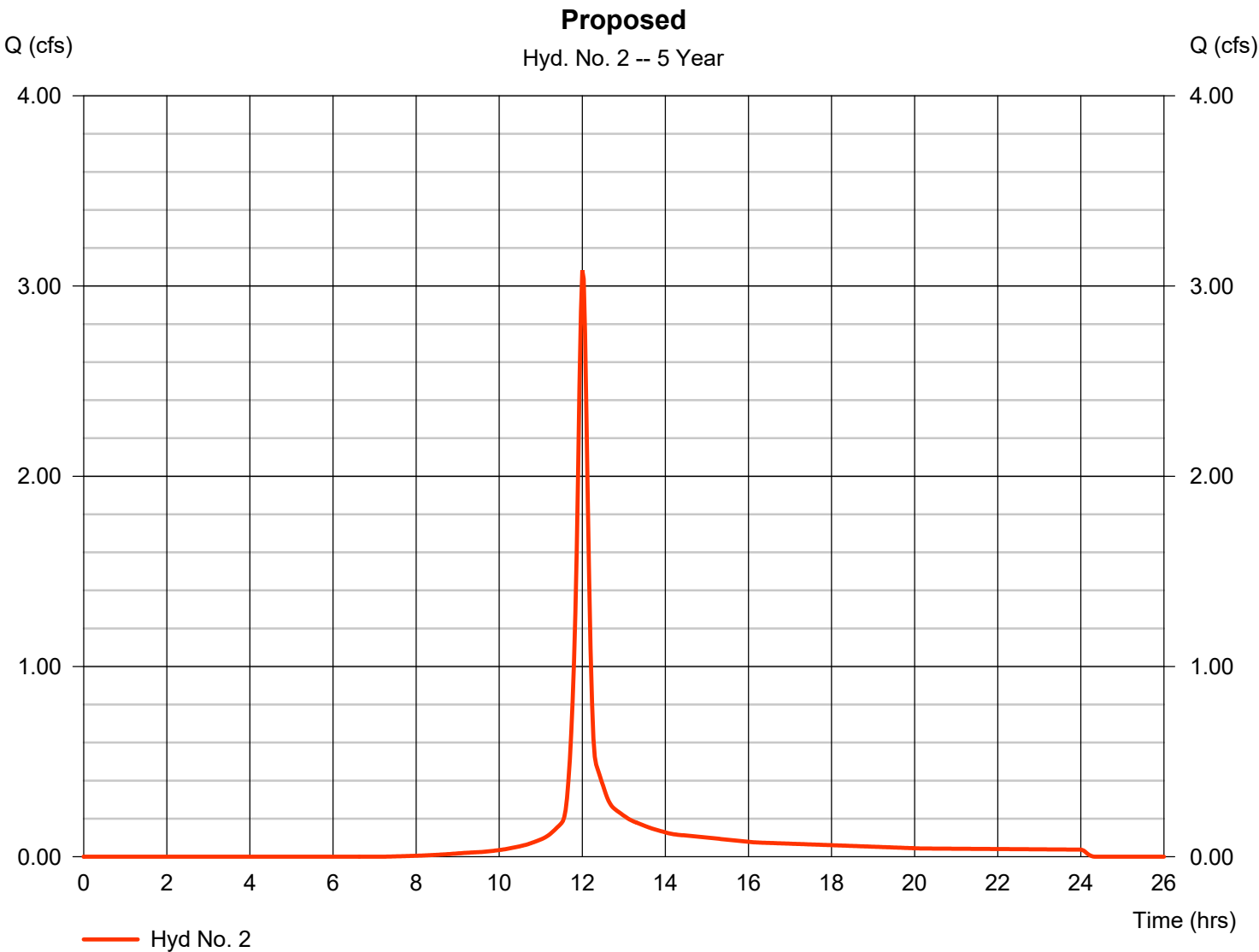
Hydrograph type	=	SCS Runoff	Peak discharge	=	2.303 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	5,970 cuft
Drainage area	=	1.060 ac	Curve number	=	85
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	2.90 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 2

Proposed

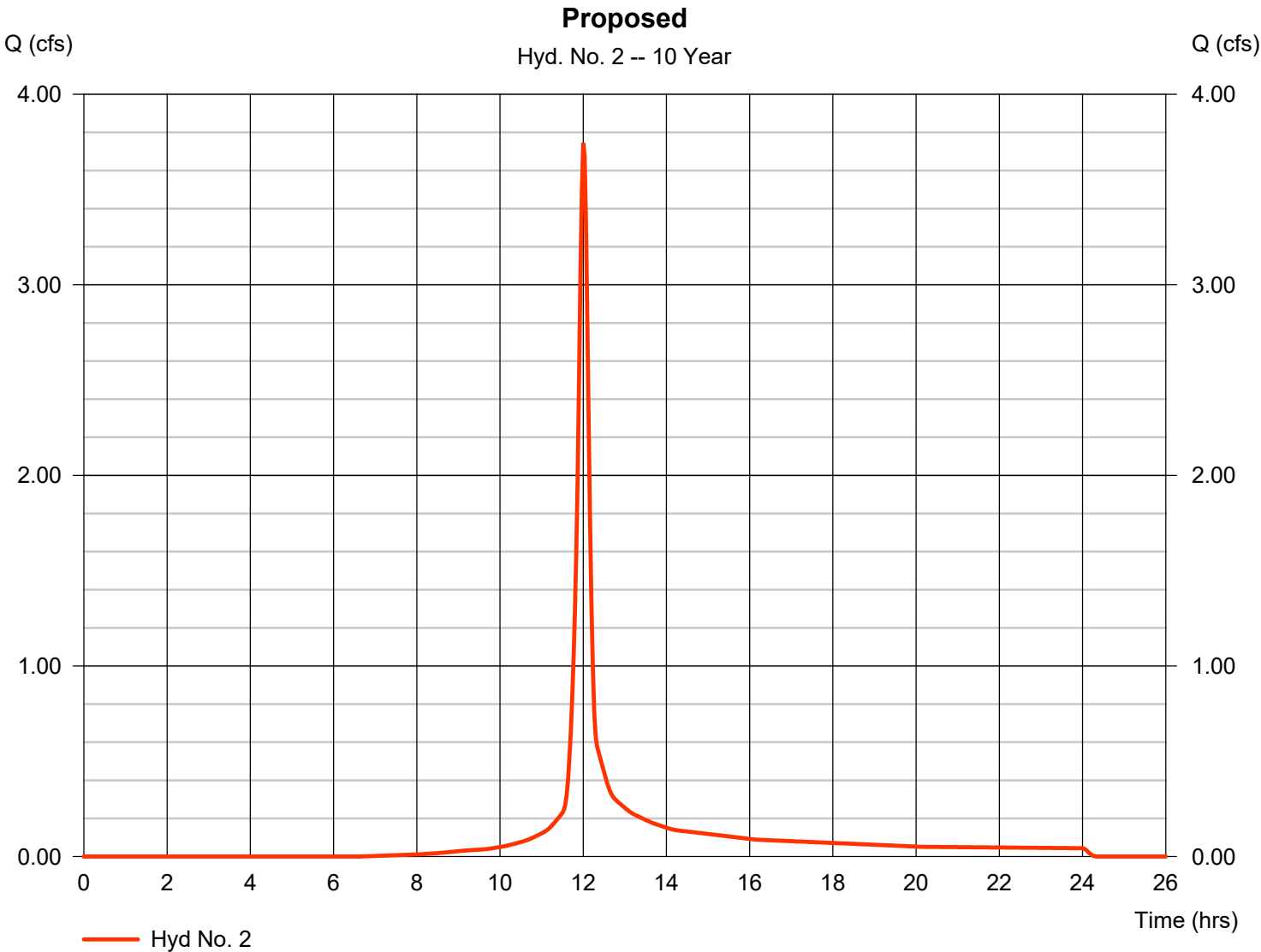
Hydrograph type	=	SCS Runoff	Peak discharge	=	3.082 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	8,001 cuft
Drainage area	=	1.060 ac	Curve number	=	85
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	3.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 2

Proposed

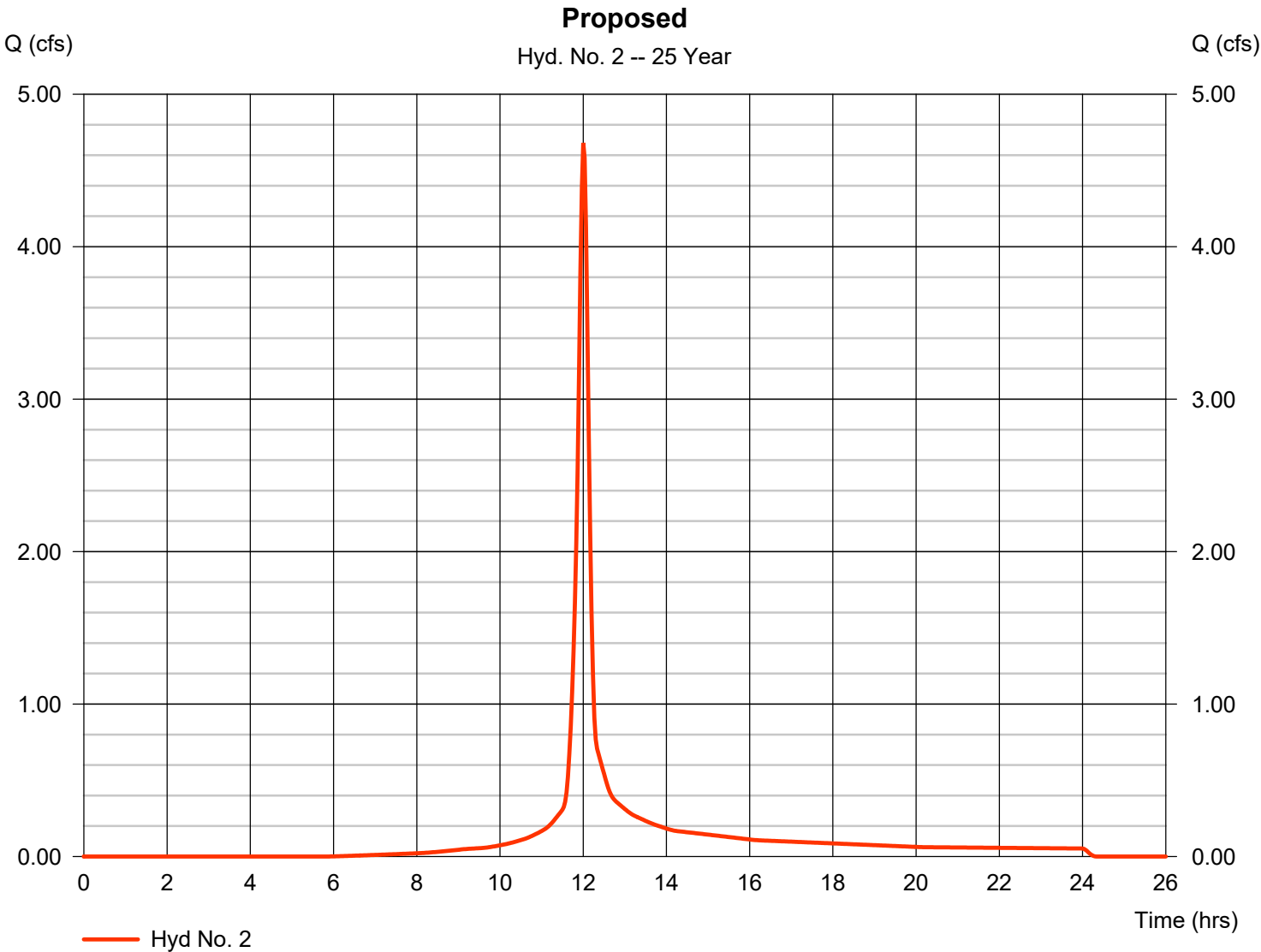
Hydrograph type	= SCS Runoff	Peak discharge	= 3.745 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 9,753 cuft
Drainage area	= 1.060 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.00 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hyd. No. 2

Proposed

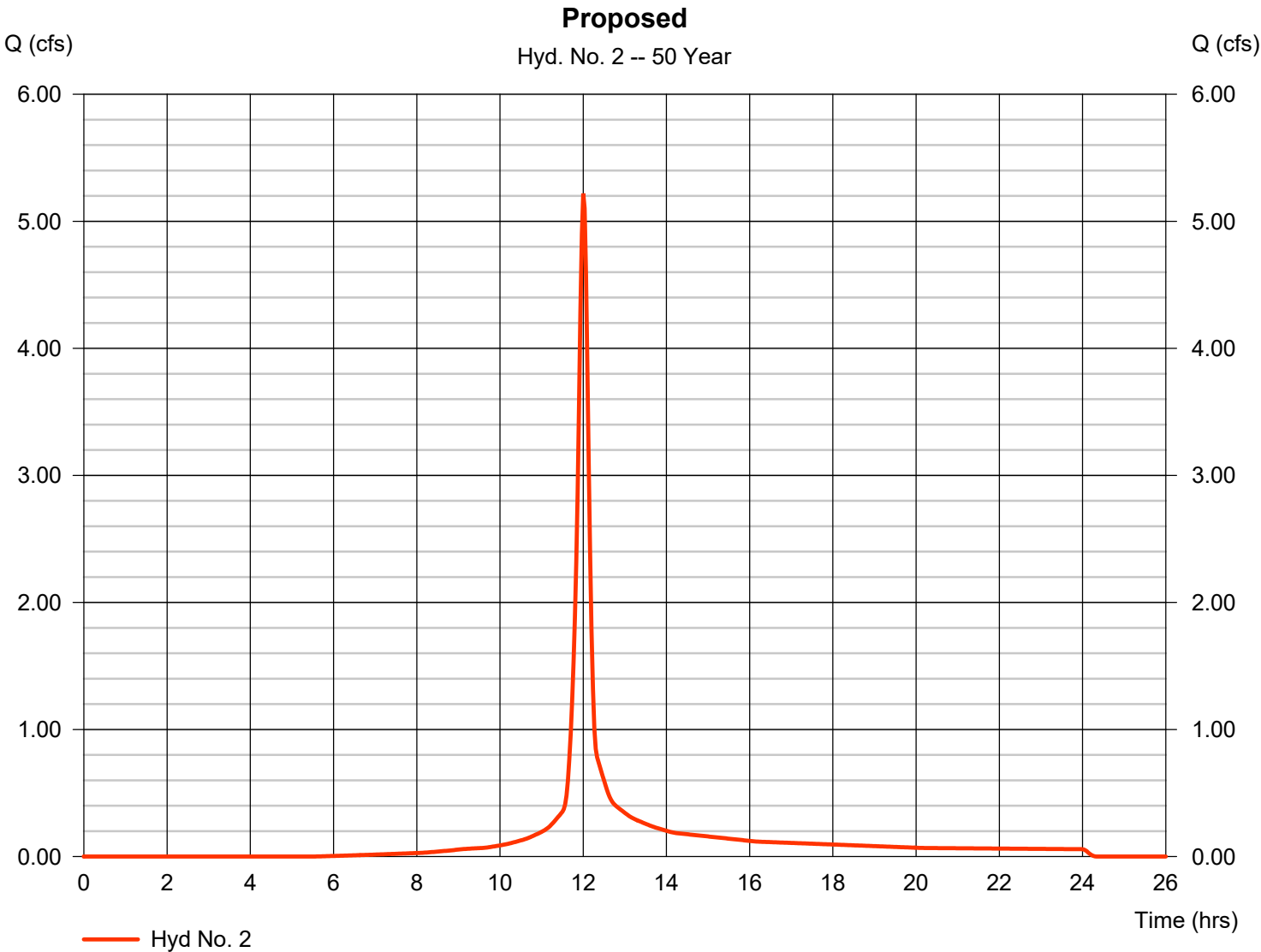
Hydrograph type	=	SCS Runoff	Peak discharge	=	4.681 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	12,269 cuft
Drainage area	=	1.060 ac	Curve number	=	85
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 2

Proposed

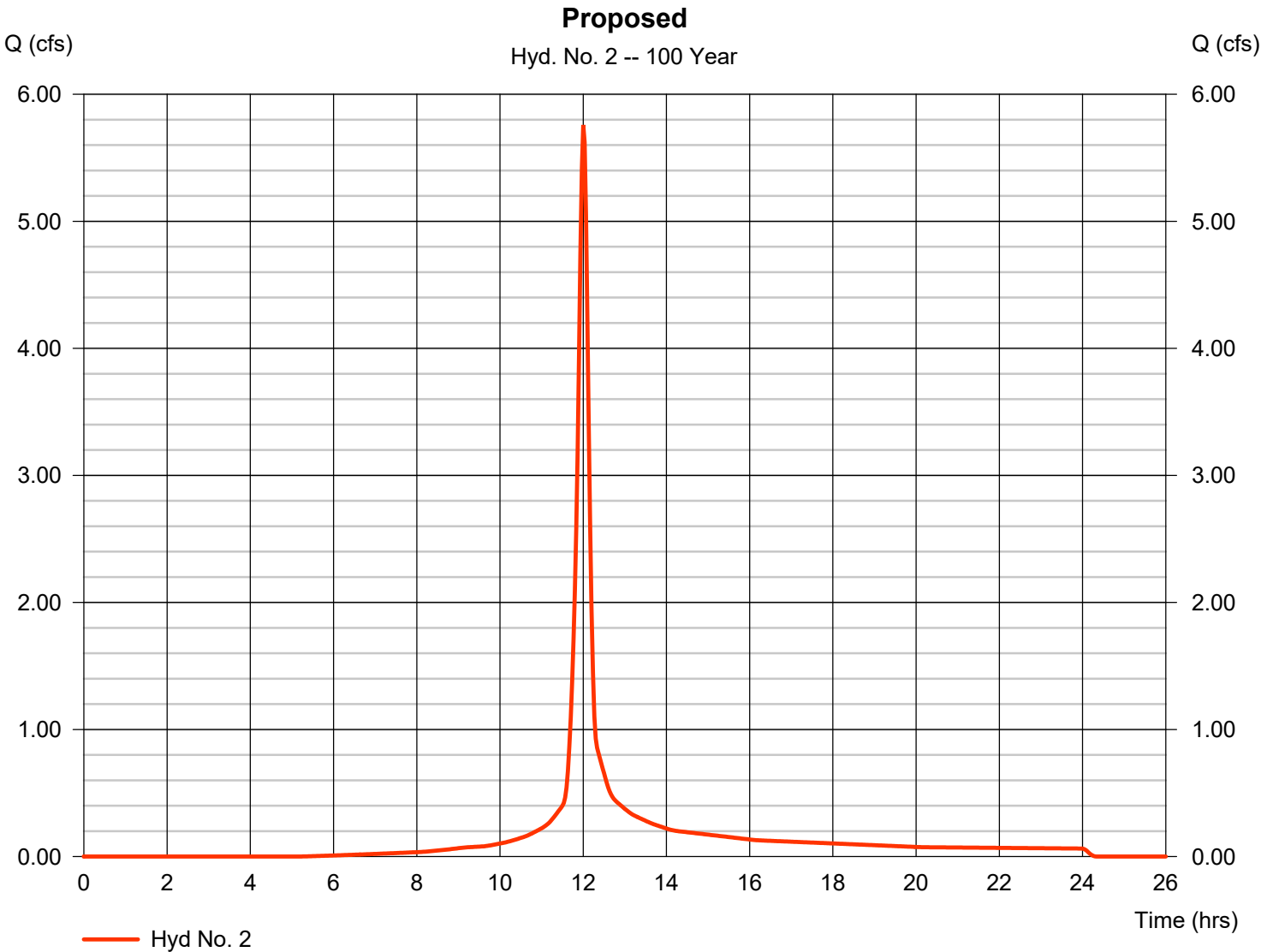
Hydrograph type	=	SCS Runoff	Peak discharge	=	5.219 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.00 hrs
Time interval	=	2 min	Hyd. volume	=	13,732 cuft
Drainage area	=	1.060 ac	Curve number	=	85
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	10.00 min
Total precip.	=	5.10 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hyd. No. 2

Proposed

Hydrograph type	= SCS Runoff	Peak discharge	= 5.758 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.00 hrs
Time interval	= 2 min	Hyd. volume	= 15,209 cuft
Drainage area	= 1.060 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 5.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Critical Storm Calculation

The Design was based on the Critical Storm Event for the proposed drainage area which was calculated as follows using the hydraulic volume calculated for the one-year storm event using Civil 3-D Hydrographs:

$$\frac{\text{Post 1 Year} - \text{Pre 1 Year}}{\text{Pre 1 Year}} \Rightarrow \frac{4,676 \text{ ft}^3 - 3,292 \text{ ft}^3}{3,292 \text{ ft}^3} \Rightarrow 42\% \Rightarrow 5 \text{ Year Critical Storm}$$

30

Tuesday, 06 / 17 / 2025

[illegible]

Pond Report

Pond No. 1 - POND

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	805.10	n/a	0	0
0.40	805.50	n/a	128	128
0.90	806.00	n/a	648	775
1.40	806.50	n/a	966	1,741
1.90	807.00	n/a	1,204	2,945
2.40	807.50	n/a	1,428	4,373
2.90	808.00	n/a	1,659	6,032
3.40	808.50	n/a	1,868	7,900

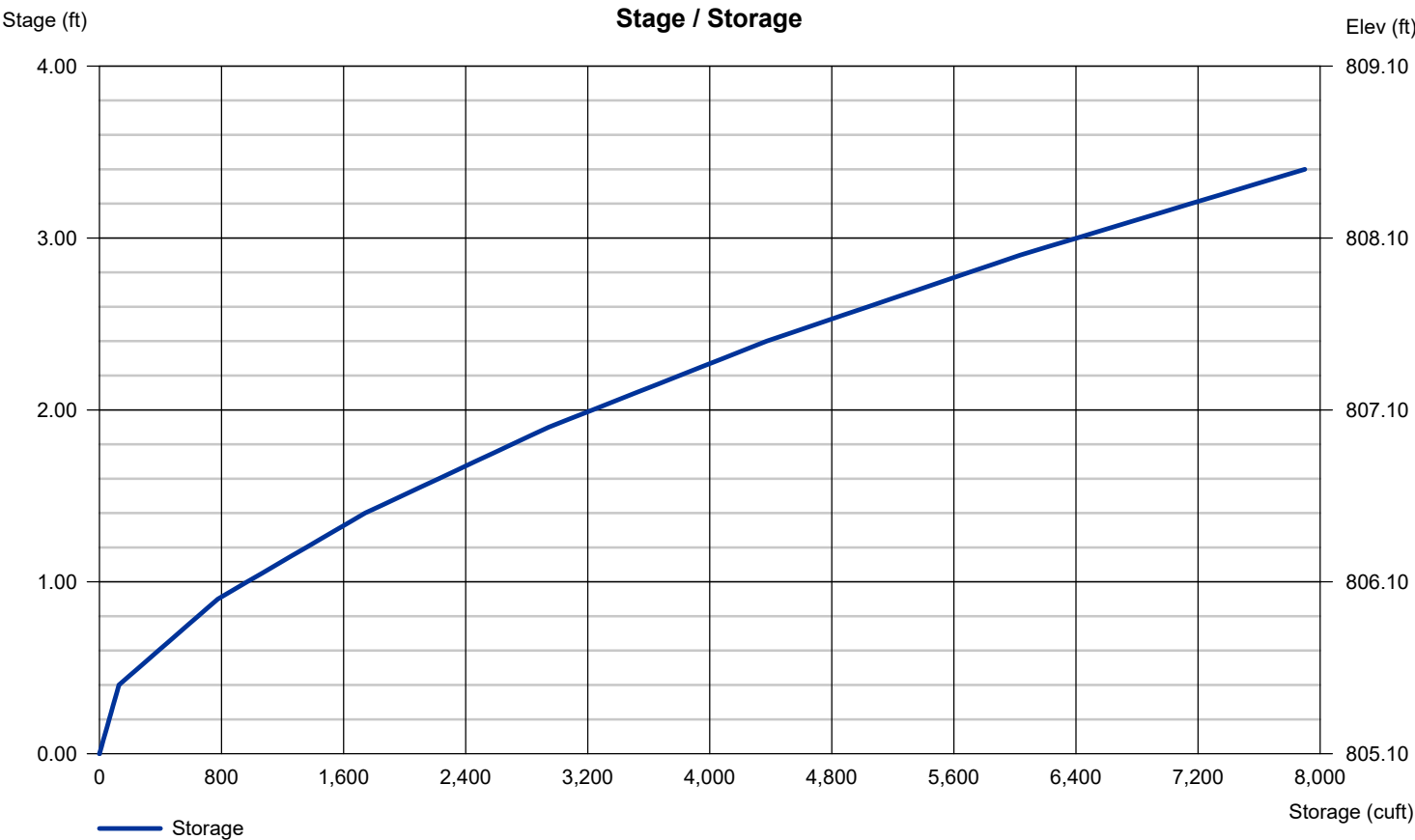
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	4.00	0.00	0.00
Span (in)	= 12.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 805.10	805.10	0.00	0.00
Length (ft)	= 22.00	0.00	0.00	0.00
Slope (%)	= 2.00	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	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

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



Pond Report

Pond No. 1 - POND

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	805.10	n/a	0	0
0.40	805.50	n/a	128	128
0.90	806.00	n/a	648	775
1.40	806.50	n/a	966	1,741
1.90	807.00	n/a	1,204	2,945
2.40	807.50	n/a	1,428	4,373
2.90	808.00	n/a	1,659	6,032
3.40	808.50	n/a	1,868	7,900

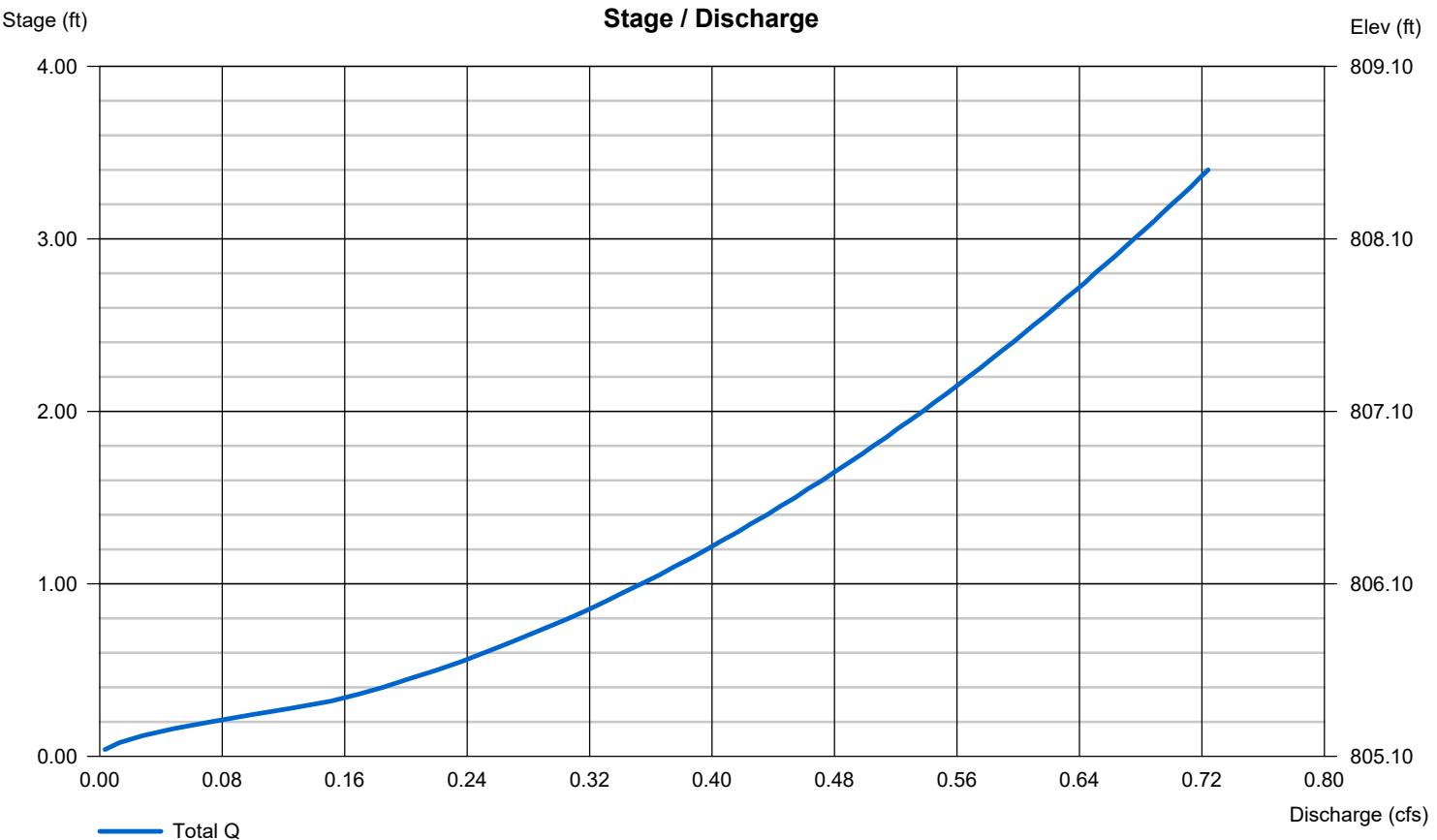
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	4.00	0.00	0.00
Span (in)	= 12.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 805.10	805.10	0.00	0.00
Length (ft)	= 22.00	0.00	0.00	0.00
Slope (%)	= 2.00	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	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

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

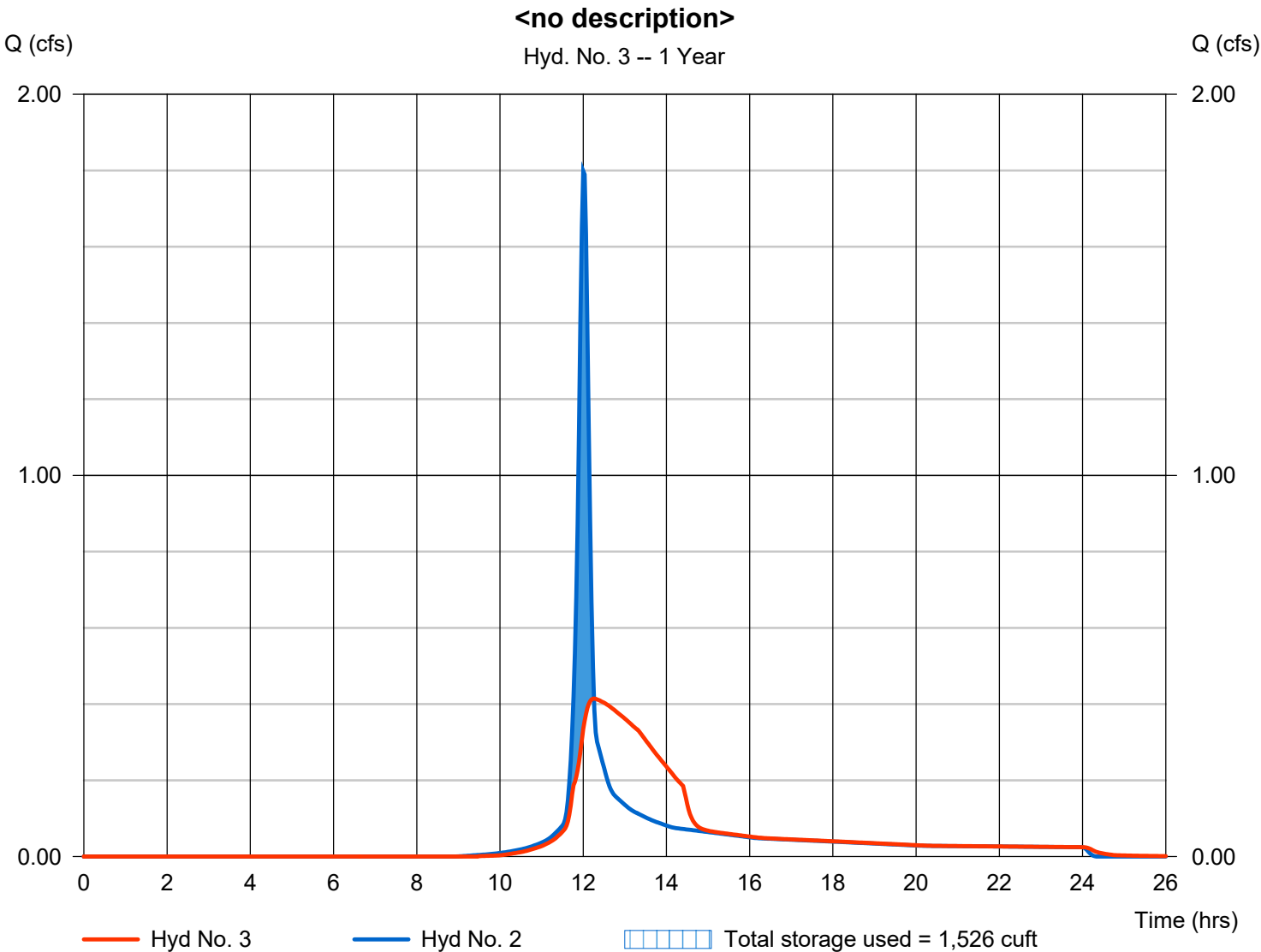


Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.414 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 4,673 cuft
Inflow hyd. No.	= 2 - Proposed	Max. Elevation	= 806.39 ft
Reservoir name	= POND	Max. Storage	= 1,526 cuft

Storage Indication method used.

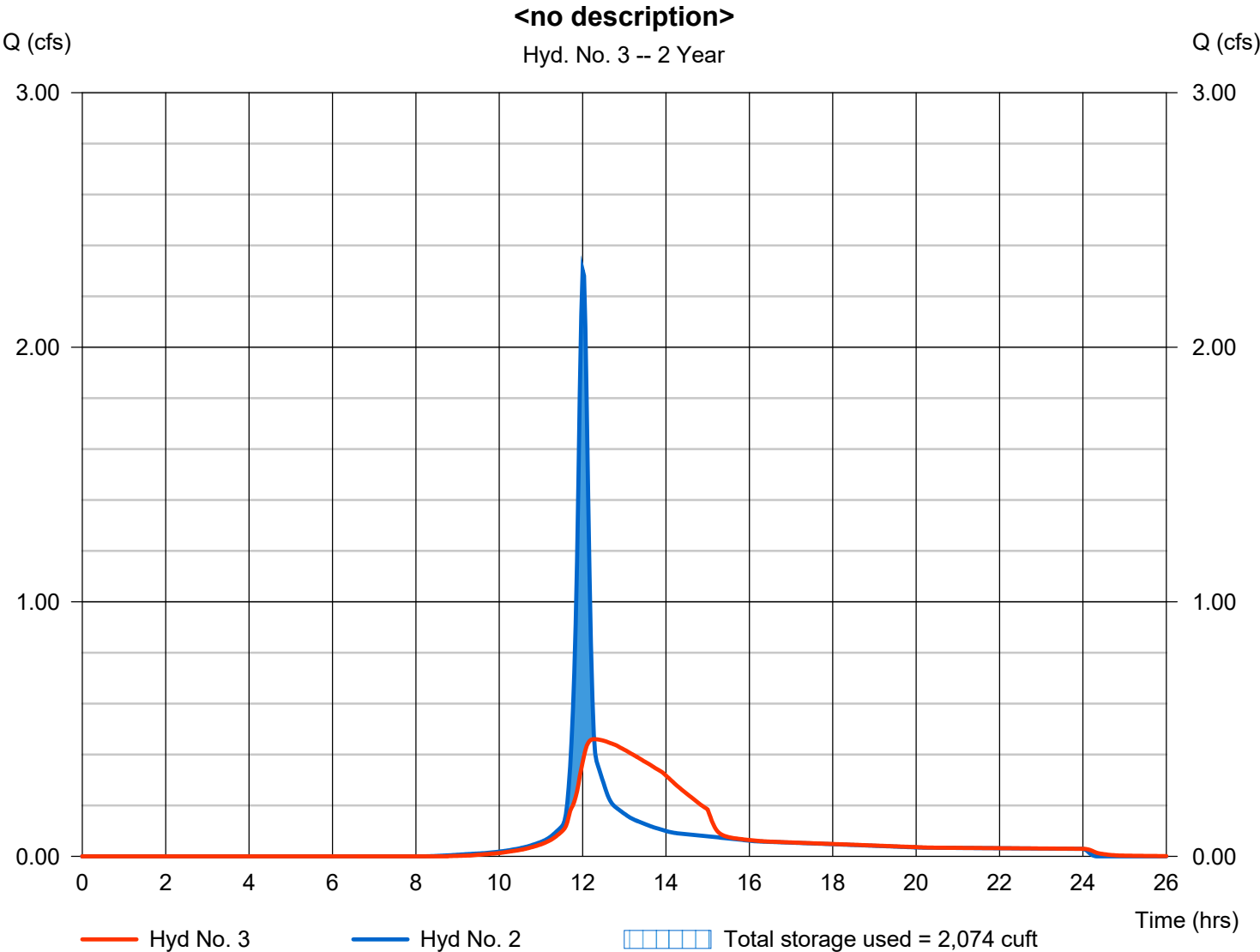


Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.461 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 5,967 cuft
Inflow hyd. No.	= 2 - Proposed	Max. Elevation	= 806.64 ft
Reservoir name	= POND	Max. Storage	= 2,074 cuft

Storage Indication method used.



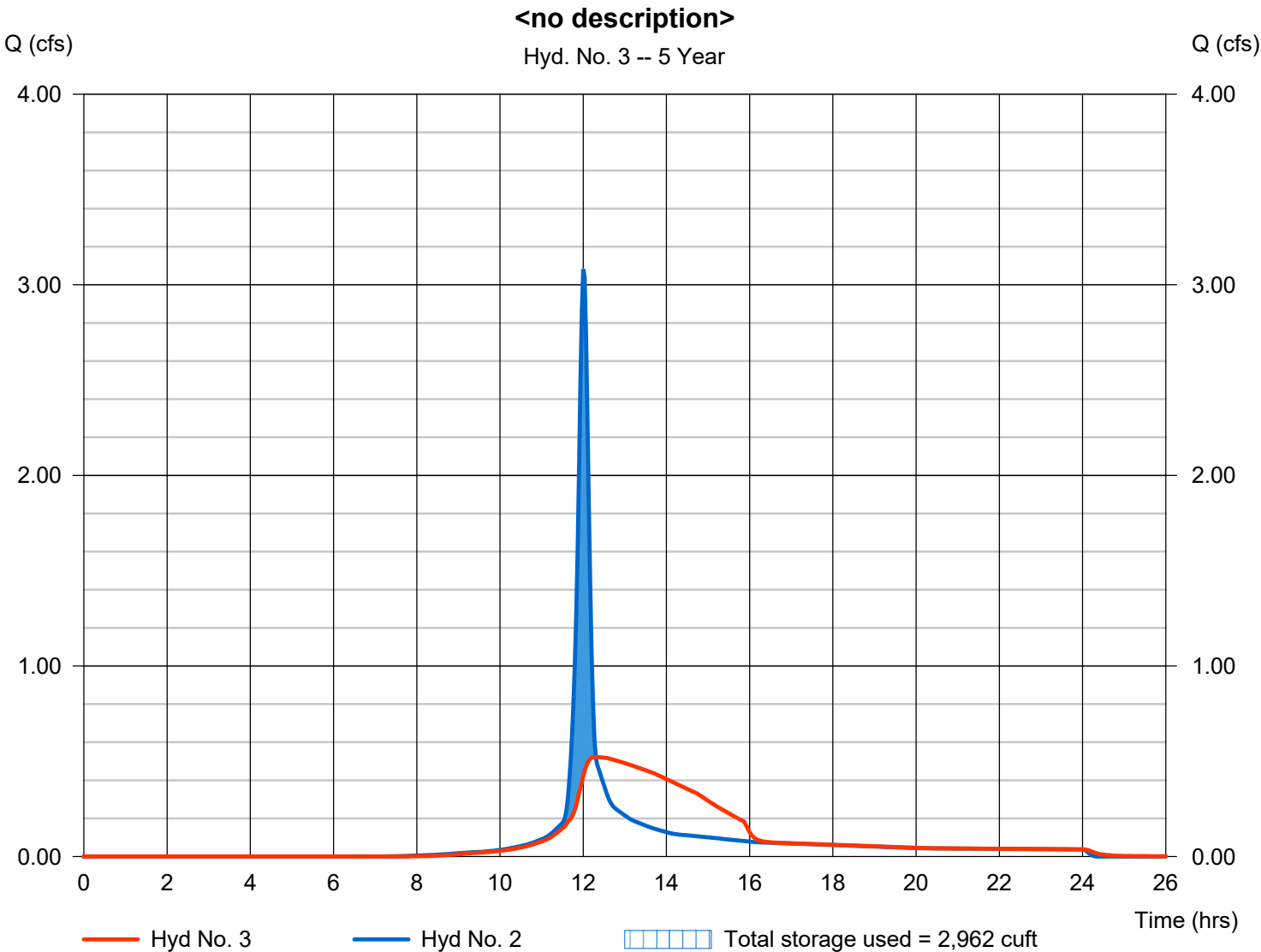
Hyd. No. 3

<no description>

Hydrograph type = Reservoir
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyd. No. = 2 - Proposed
Reservoir name = POND

Peak discharge = 0.522 cfs
Time to peak = 12.30 hrs
Hyd. volume = 7,997 cuft
Max. Elevation = 807.01 ft
Max. Storage = 2,962 cuft

Storage Indication method used.



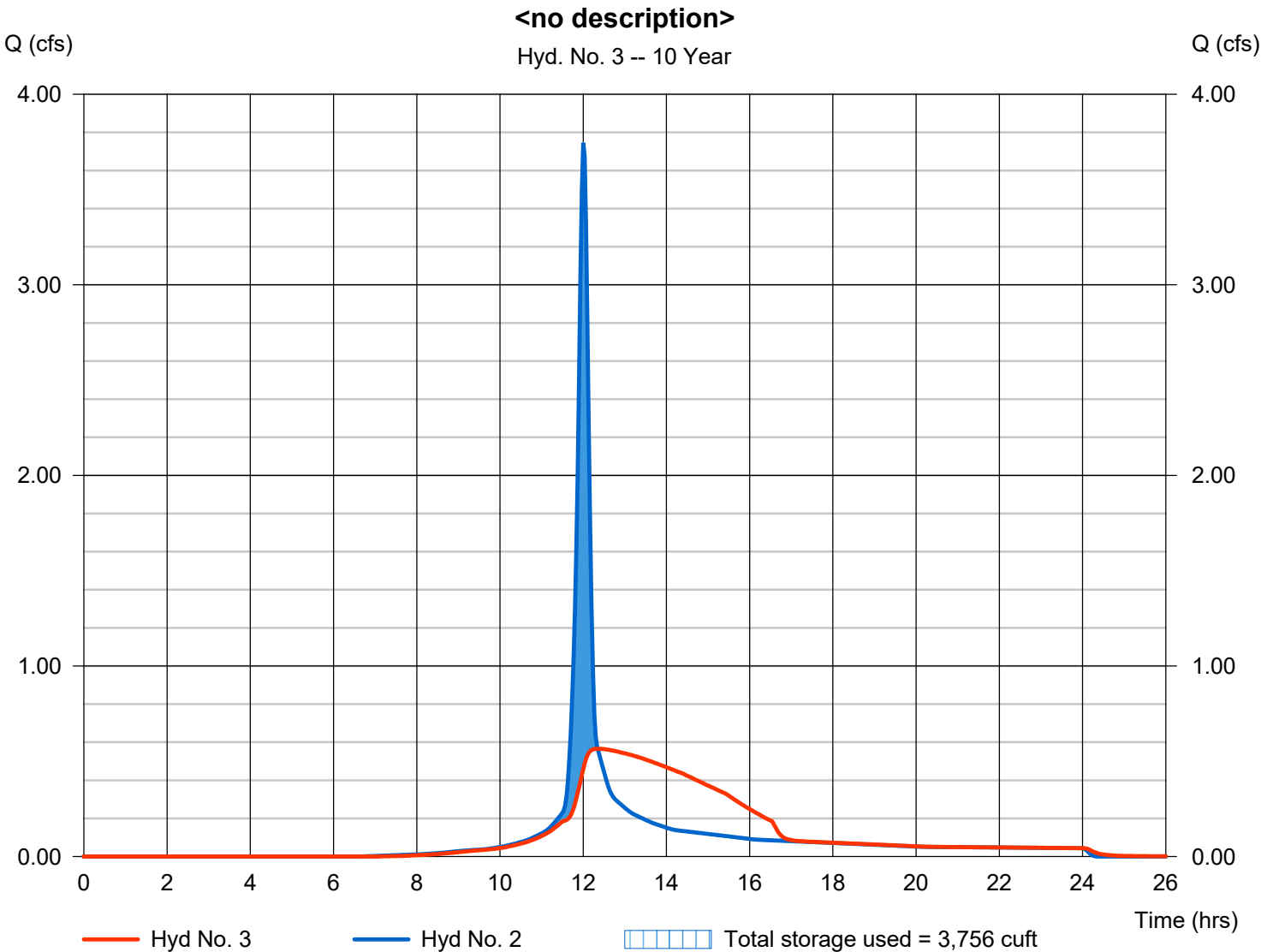
Hyd. No. 3

<no description>

Hydrograph type = Reservoir
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyd. No. = 2 - Proposed
Reservoir name = POND

Peak discharge = 0.565 cfs
Time to peak = 12.33 hrs
Hyd. volume = 9,749 cuft
Max. Elevation = 807.28 ft
Max. Storage = 3,756 cuft

Storage Indication method used.

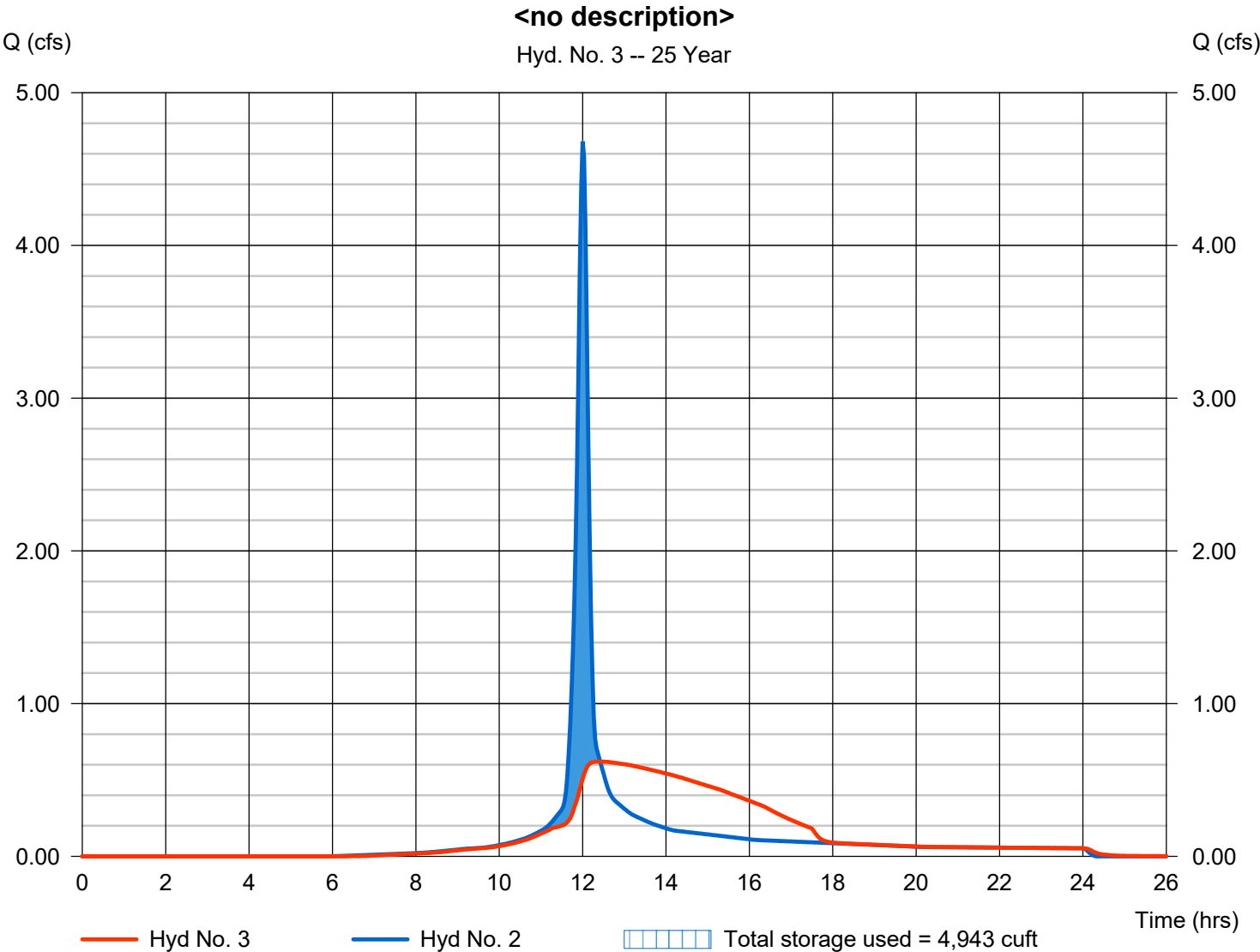


Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.620 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.43 hrs
Time interval	= 2 min	Hyd. volume	= 12,265 cuft
Inflow hyd. No.	= 2 - Proposed	Max. Elevation	= 807.67 ft
Reservoir name	= POND	Max. Storage	= 4,943 cuft

Storage Indication method used.



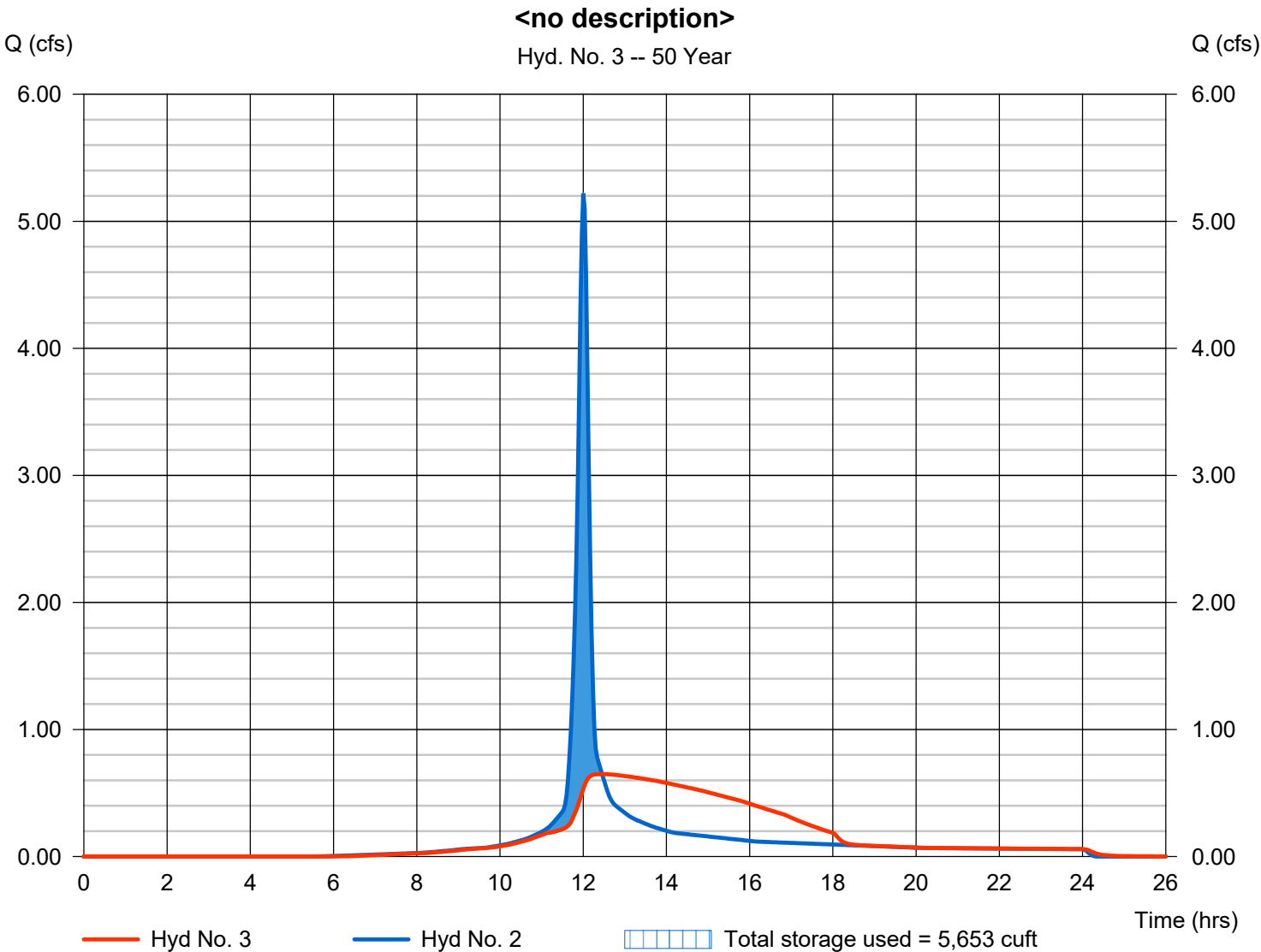
Hyd. No. 3

<no description>

Hydrograph type = Reservoir
Storm frequency = 50 yrs
Time interval = 2 min
Inflow hyd. No. = 2 - Proposed
Reservoir name = POND

Peak discharge = 0.648 cfs
Time to peak = 12.47 hrs
Hyd. volume = 13,728 cuft
Max. Elevation = 807.89 ft
Max. Storage = 5,653 cuft

Storage Indication method used.

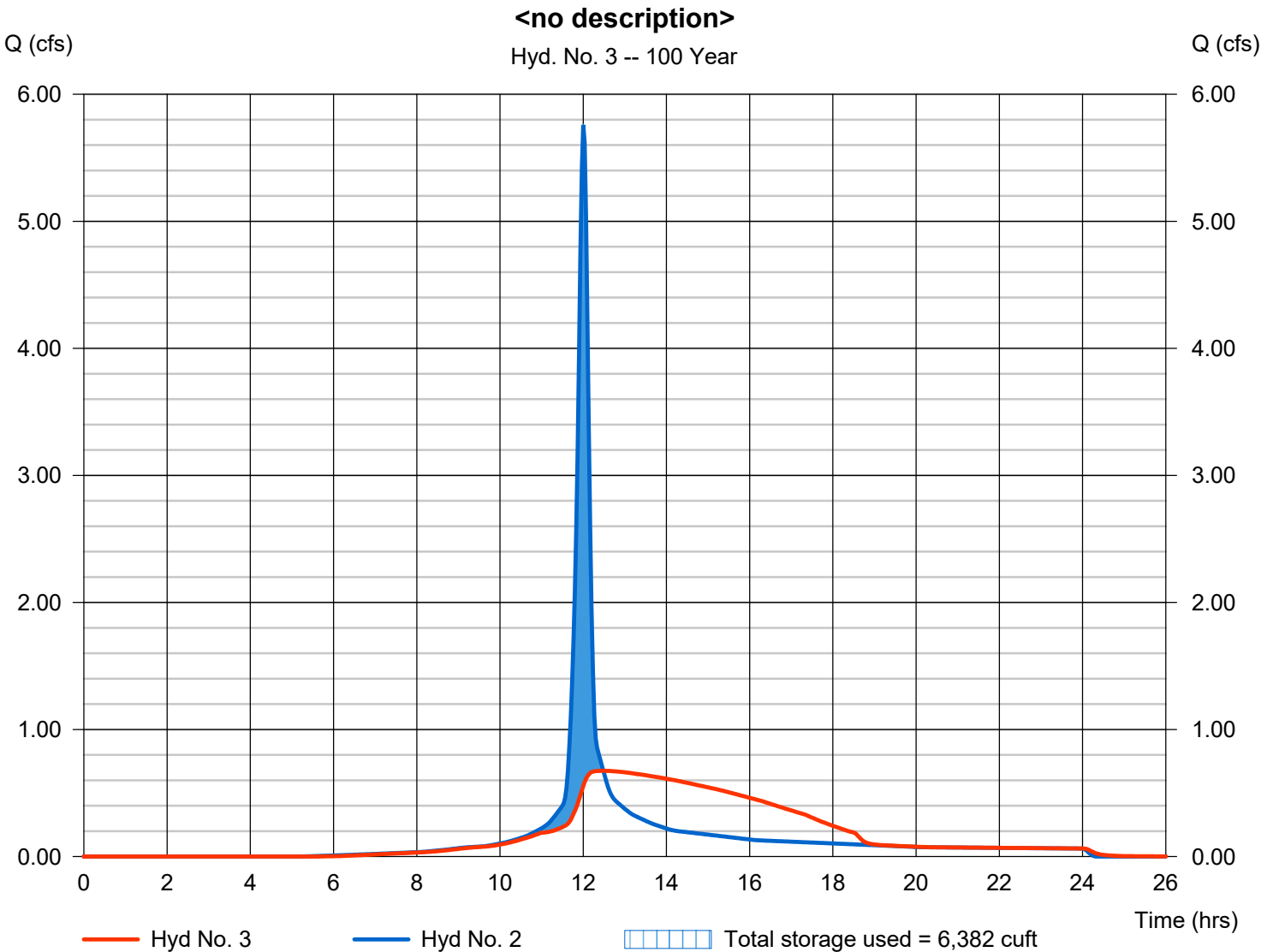


Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.675 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.50 hrs
Time interval	= 2 min	Hyd. volume	= 15,205 cuft
Inflow hyd. No.	= 2 - Proposed	Max. Elevation	= 808.09 ft
Reservoir name	= POND	Max. Storage	= 6,382 cuft

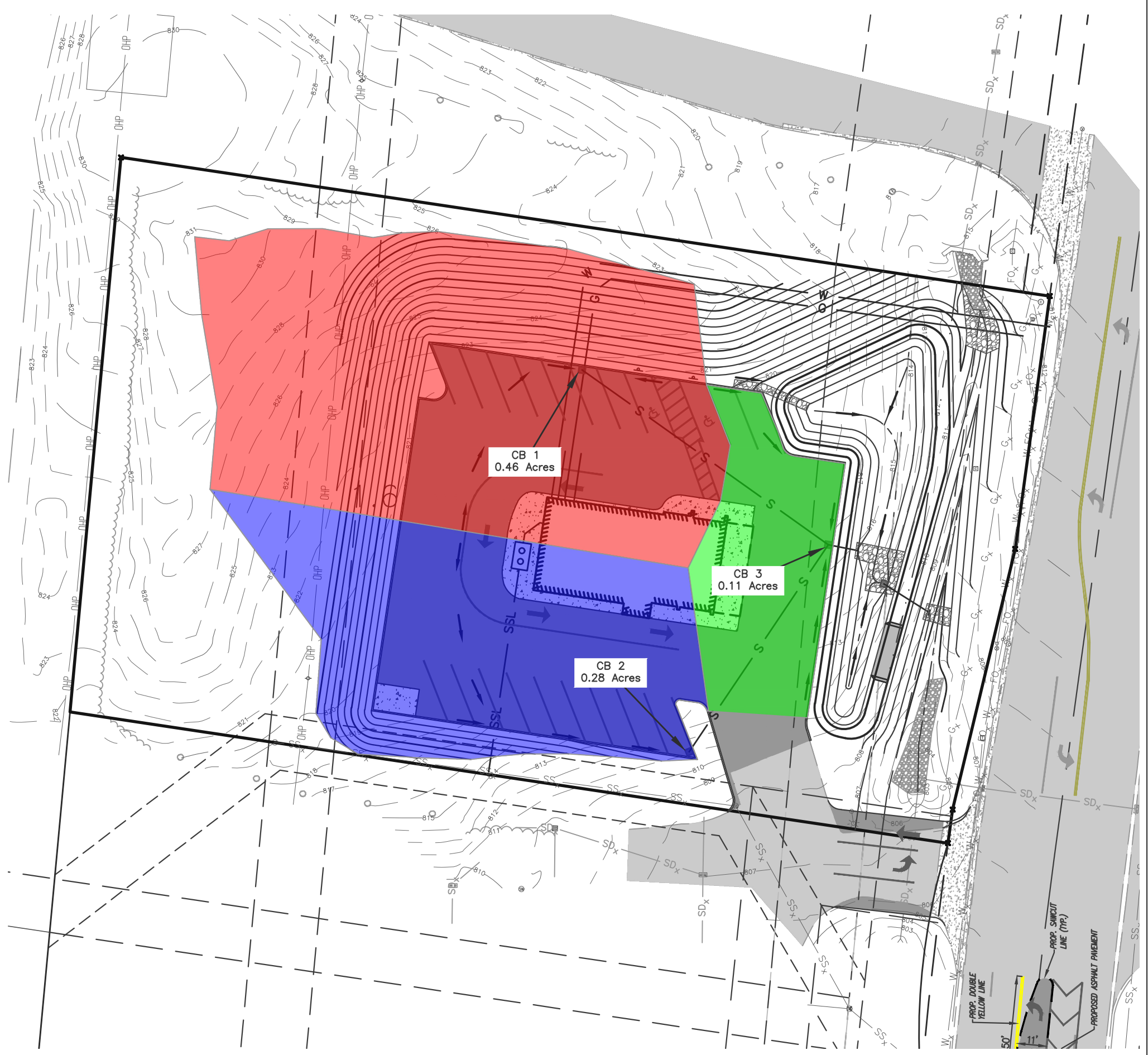
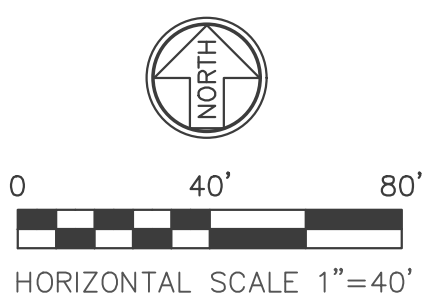
Storage Indication method used.



DRAINAGE AREA MAP

LEE'S FAMOUS RECIPE FRANKLIN

06/18/2025



Brumbaugh Engineering & Surveying, LLC
2270 South Miami Street
West Milton, OH 45383
Ph 937-698-3000, Fax 937-698-3928

Job: Lee's Famous Recipe Franklin
 Storm Pipe Design

Des: GWG

ckd: JJB

Based on Warren Co. 5yr. Storm

Location Description	Area Trib (Ac)	Accum (Ac)	C	Equiv. Area (Ac)	Total EqArea (Ac)	Tc (min.)	Rain Int (in.)	Req. Q (cfs)	Pipe Diam. (in.)	Slope (%)	Vel. full (f/s)	Q Cap. (cfs)	Vel. Act (f/s)	Len (ft)	Time Flow (min.)
Prop. CB 1 to															
Prop. HW 1															
CB 1	0.46	0.46	0.60	0.28	0.28	10.0	4.82	1.3	12	0.25	2.5	1.9	2.7	113'	0.7
CB 3	0.11	0.85	0.90	0.10	0.57	10.7	4.69	2.7	12	0.60	3.8	3.0	4.2	11'	0.0
HW 1						10.7									
Prop. CB 2 to															
Prop. CB 3															
CB 2	0.28	0.28	0.70	0.20	0.20	10.0	4.82	0.9	12	0.25	2.5	1.9	2.7	93'	0.6
CB 3						10.6									

* As-Built Slope

Hydraulic Grade shown in [blue](#).

