

2nd Review 4-11-2022
Approved as

STORMWATER MANAGEMENT REPORT
For
Fayette County Animal Control Shelter

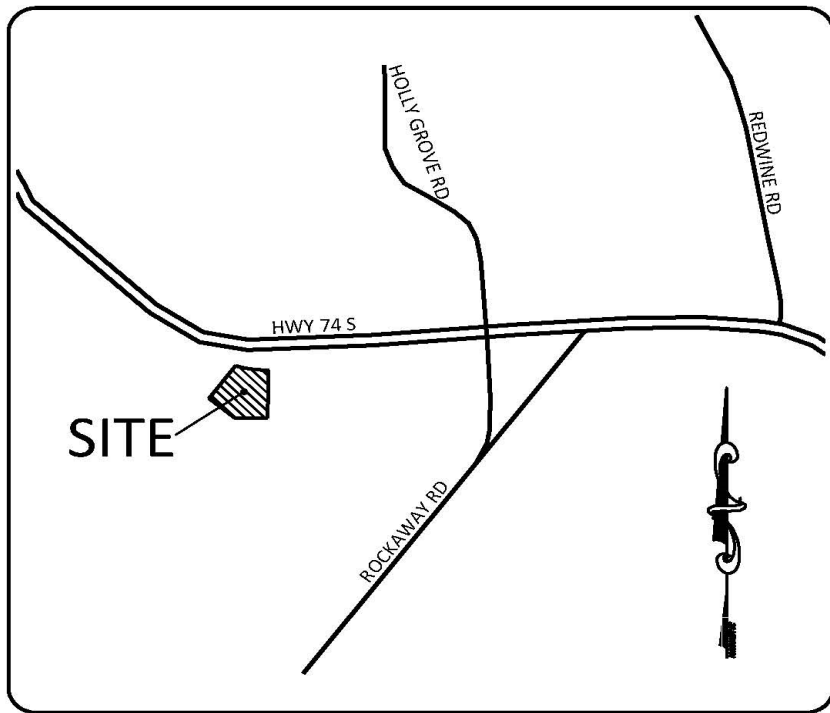
Peachtree City, Georgia
30269
(770)305-5320
August 16, 2021
Revised 3-9-22



Note:
CONSTRUCTION PLAN ACCEPTANCE IS BASED ON A CURSORY REVIEW BY PEACHTREE CITY STAFF. ACCEPTANCE OF THIS DOCUMENT (I.E. PLATS, ARCHITECTURAL PLANS, SITE DEVELOPMENT CONSTRUCTION PLANS, HYDROLOGY REPORTS, VARIOUS STUDIES OR SUBMITTALS) DOES NOT RELIEVE THE OWNER/DEVELOPER AND THEIR ENGINEERS AND/OR ARCHITECTS FROM LIABILITY OR RESPONSIBILITY FOR DESIGN DEFECTS, OR FOR COMPLYING WITH ALL ORDINANCES OF THE CITY OF PEACHTREE CITY, AND ANY STATE AND FEDERAL REGULATIONS THAT APPLY.
PEACHTREE CITY ENGINEERING DEPARTMENT PEACHTREE CITY
PLANS TO GROW

CSI

Civil Solutions, Inc ~ 750 Belmont Road, Athens Georgia 30605 ~ (706)255-2443



LOCATION MAP
N.T.S.



NOAA Atlas 14, Volume 9, Version 2
Location name: Peachtree City, Georgia, USA*
Latitude: 33.3407°, Longitude: -84.5409°
Elevation: 756.51 ft**



* source: ESRI Maps
 ** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

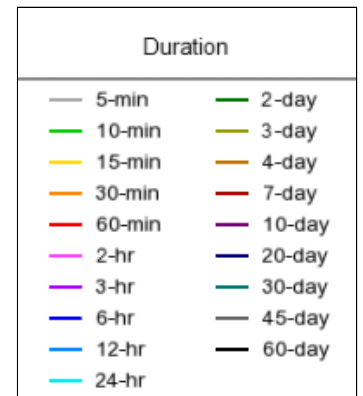
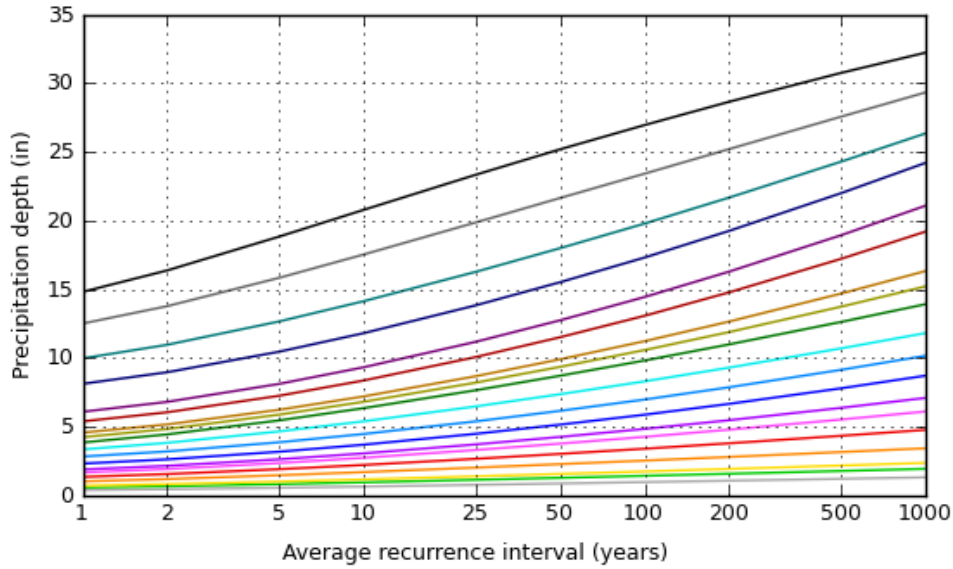
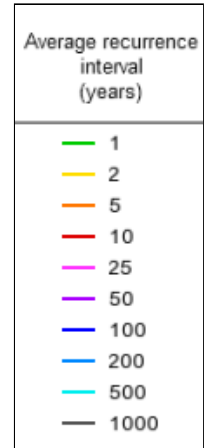
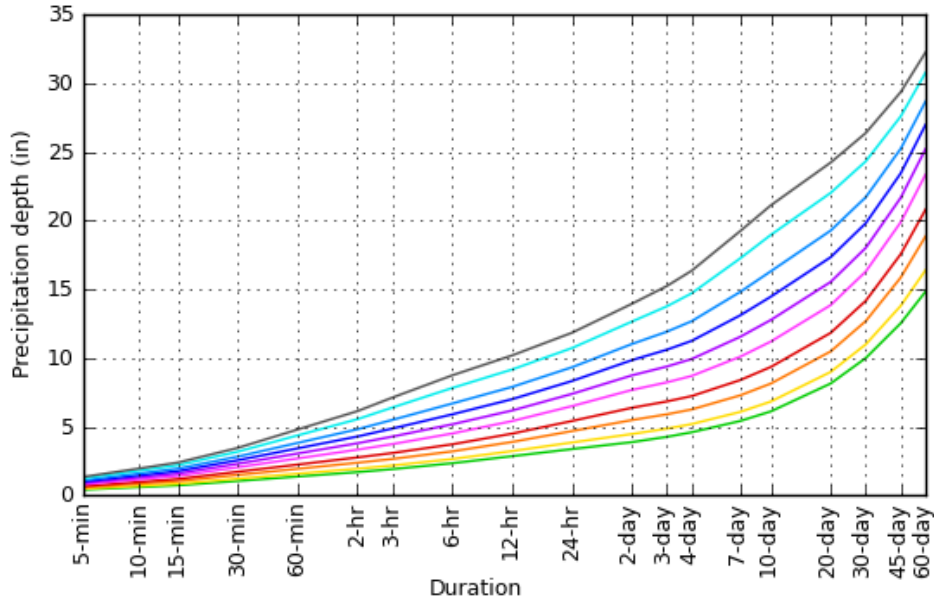
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.407 (0.333-0.501)	0.470 (0.384-0.579)	0.576 (0.469-0.710)	0.665 (0.539-0.823)	0.790 (0.621-1.00)	0.888 (0.684-1.14)	0.988 (0.737-1.29)	1.09 (0.783-1.45)	1.23 (0.852-1.66)	1.34 (0.904-1.83)
10-min	0.596 (0.488-0.734)	0.689 (0.563-0.848)	0.843 (0.687-1.04)	0.973 (0.789-1.20)	1.16 (0.910-1.47)	1.30 (1.00-1.66)	1.45 (1.08-1.88)	1.60 (1.15-2.12)	1.80 (1.25-2.44)	1.96 (1.32-2.68)
15-min	0.727 (0.595-0.895)	0.840 (0.687-1.03)	1.03 (0.838-1.27)	1.19 (0.962-1.47)	1.41 (1.11-1.79)	1.59 (1.22-2.03)	1.76 (1.32-2.30)	1.95 (1.40-2.58)	2.19 (1.52-2.97)	2.39 (1.61-3.26)
30-min	1.04 (0.854-1.28)	1.21 (0.989-1.49)	1.49 (1.21-1.83)	1.72 (1.39-2.13)	2.04 (1.61-2.59)	2.30 (1.77-2.94)	2.56 (1.91-3.33)	2.82 (2.03-3.74)	3.18 (2.20-4.30)	3.45 (2.33-4.72)
60-min	1.37 (1.12-1.68)	1.58 (1.29-1.94)	1.93 (1.57-2.38)	2.24 (1.81-2.77)	2.68 (2.12-3.42)	3.04 (2.35-3.91)	3.42 (2.56-4.47)	3.81 (2.75-5.08)	4.36 (3.03-5.92)	4.79 (3.24-6.55)
2-hr	1.69 (1.39-2.06)	1.94 (1.60-2.37)	2.37 (1.95-2.90)	2.76 (2.25-3.38)	3.32 (2.65-4.21)	3.79 (2.95-4.84)	4.28 (3.23-5.56)	4.81 (3.49-6.36)	5.54 (3.88-7.47)	6.13 (4.18-8.32)
3-hr	1.91 (1.58-2.32)	2.17 (1.80-2.64)	2.65 (2.18-3.22)	3.08 (2.53-3.76)	3.73 (3.00-4.72)	4.28 (3.35-5.44)	4.86 (3.69-6.30)	5.49 (4.02-7.25)	6.39 (4.51-8.60)	7.12 (4.88-9.61)
6-hr	2.34 (1.95-2.81)	2.64 (2.20-3.18)	3.20 (2.66-3.86)	3.71 (3.07-4.49)	4.50 (3.65-5.66)	5.17 (4.09-6.54)	5.89 (4.52-7.58)	6.68 (4.93-8.76)	7.81 (5.56-10.4)	8.73 (6.04-11.7)
12-hr	2.85 (2.39-3.40)	3.22 (2.70-3.84)	3.89 (3.25-4.64)	4.49 (3.74-5.39)	5.40 (4.41-6.72)	6.17 (4.92-7.73)	7.00 (5.40-8.91)	7.89 (5.87-10.2)	9.16 (6.57-12.1)	10.2 (7.10-13.5)
24-hr	3.37 (2.85-3.98)	3.85 (3.25-4.55)	4.67 (3.94-5.54)	5.41 (4.54-6.43)	6.49 (5.32-7.97)	7.38 (5.91-9.13)	8.32 (6.46-10.5)	9.32 (6.98-12.0)	10.7 (7.75-14.0)	11.8 (8.33-15.6)
2-day	3.87 (3.30-4.53)	4.46 (3.80-5.23)	5.48 (4.65-6.43)	6.37 (5.39-7.50)	7.67 (6.33-9.32)	8.73 (7.04-10.7)	9.84 (7.70-12.3)	11.0 (8.31-14.0)	12.6 (9.21-16.4)	13.9 (9.89-18.2)
3-day	4.26 (3.65-4.96)	4.85 (4.15-5.66)	5.90 (5.03-6.89)	6.83 (5.80-8.01)	8.22 (6.83-9.97)	9.37 (7.61-11.5)	10.6 (8.35-13.2)	11.9 (9.04-15.1)	13.8 (10.1-17.8)	15.2 (10.9-19.8)
4-day	4.59 (3.95-5.33)	5.19 (4.45-6.02)	6.25 (5.35-7.28)	7.22 (6.16-8.43)	8.69 (7.26-10.5)	9.92 (8.10-12.1)	11.2 (8.90-14.0)	12.7 (9.67-16.0)	14.7 (10.8-19.0)	16.3 (11.7-21.2)
7-day	5.41 (4.68-6.23)	6.07 (5.25-7.00)	7.27 (6.27-8.40)	8.38 (7.19-9.72)	10.1 (8.49-12.1)	11.5 (9.48-14.0)	13.1 (10.4-16.2)	14.8 (11.4-18.6)	17.2 (12.8-22.1)	19.2 (13.9-24.8)
10-day	6.11 (5.31-7.00)	6.83 (5.93-7.83)	8.13 (7.04-9.35)	9.34 (8.05-10.8)	11.2 (9.47-13.4)	12.8 (10.5-15.4)	14.5 (11.6-17.8)	16.3 (12.6-20.4)	19.0 (14.1-24.2)	21.1 (15.3-27.1)
20-day	8.14 (7.13-9.25)	8.98 (7.86-10.2)	10.5 (9.14-11.9)	11.8 (10.3-13.5)	13.8 (11.8-16.4)	15.5 (12.9-18.5)	17.3 (14.0-21.0)	19.3 (15.0-23.9)	22.0 (16.5-27.8)	24.2 (17.7-30.8)
30-day	9.99 (8.79-11.3)	11.0 (9.65-12.4)	12.7 (11.1-14.4)	14.2 (12.3-16.1)	16.3 (13.9-19.0)	18.0 (15.0-21.3)	19.8 (16.0-23.8)	21.7 (16.9-26.6)	24.3 (18.3-30.5)	26.4 (19.4-33.4)
45-day	12.5 (11.1-14.1)	13.8 (12.2-15.5)	15.8 (14.0-17.9)	17.5 (15.4-19.8)	19.9 (16.9-22.9)	21.7 (18.1-25.3)	23.4 (19.0-27.9)	25.2 (19.7-30.7)	27.6 (20.9-34.3)	29.3 (21.7-37.0)
60-day	14.8 (13.2-16.6)	16.4 (14.5-18.4)	18.8 (16.7-21.2)	20.8 (18.3-23.4)	23.3 (19.9-26.7)	25.2 (21.1-29.2)	27.0 (21.9-31.8)	28.7 (22.5-34.6)	30.8 (23.3-38.0)	32.2 (23.9-40.5)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves
 Latitude: 33.3407°, Longitude: -84.5409°



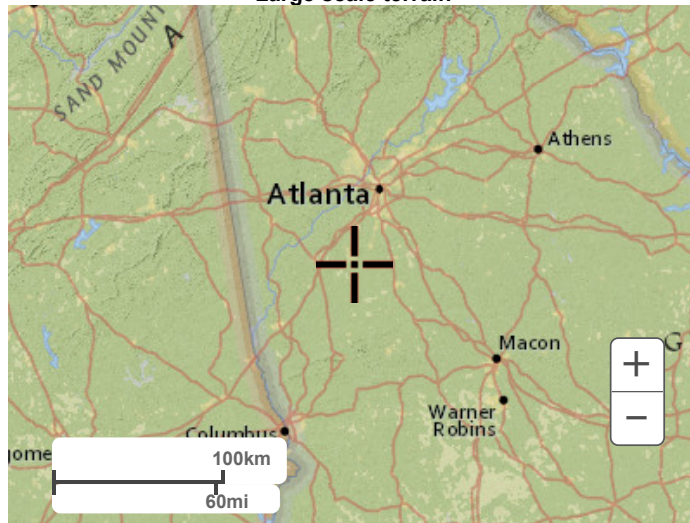
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Maps & aerials

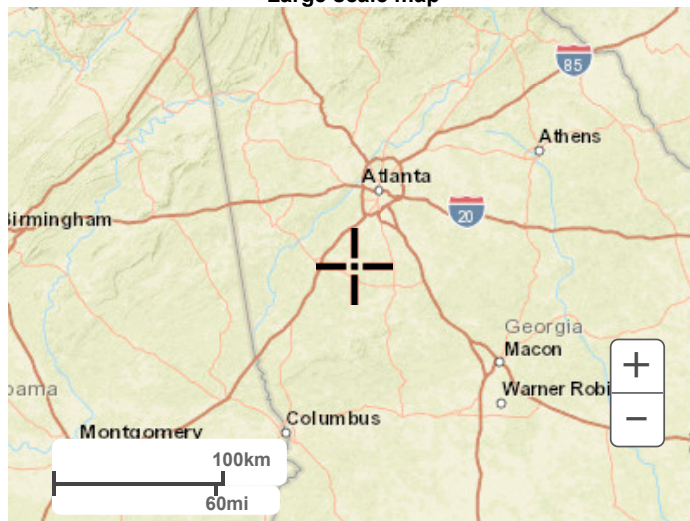
Small scale terrain



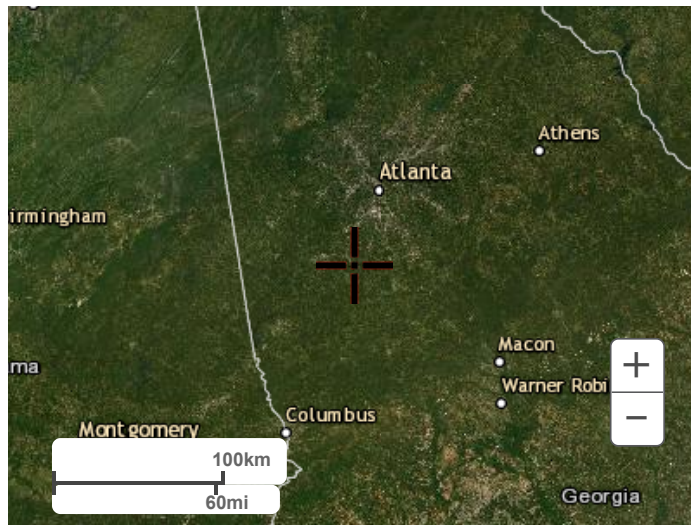
Large scale terrain



Large scale map



Large scale aerial



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1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

NARRATIVE:

The project site is located at 100 Aviation Blvd in Peachtree City Georgia (Tax Parcel 0609 035). The site is adjacent to Hwy 74 to the north, City of Peachtree City property to the east and WASA property to the south and west. The overall parcel is 4.70 acres. The proposed use of the site will be for a new 6000 sf animal control shelter and will include underground utilities, a paved parking lot and storm water management facilities. The current condition of the site is pasture land with gently sloping terrain. The project will consist of grading activities, asphalt paving, underground utilities installation, and the installation of stormwater facilities to control stormwater flows and pollutants. Stormwater draining through an existing 18" concrete culvert located northwest of the driveway entrance will be picked up by a junction box and routed to an existing rip-rap lined swale northwest of the site. This water will be diverted around the site and discharged into the floodplain. Stormwater on the site will be picked up by parking lot inlets which will also collect rooftop water by means of downspout collectors and all onsite water will then be piped or sheet flow into the proposed bio-retention pond located southeast of the parking lot. This bio-retention pond has been designed with no underdrain and will allow for runoff reduction and water quality.

There are state waters located on or within 200 feet of the site. Runoff from the site enters into Flat Creek at a point approximately 12.5 miles north of the site where the headwaters of Flat Creek begins. The total basin is 15,650 acres. The total disturbed area of the site is 1.27 acres and contains only 0.61 acres of impervious area. The pre-developed $C_n = 61$ and the post-developed $C_n = 66$. The total site acreage of 4.70 acres amounts to just 0.03% of the entire basin (making the discharge point the 10% point) and thus means the development of the site will have very little to no impact on the overall basin. At the end of this report are hydrographs and a return period recap assuming a detention pond is installed. As will be shown, installing a detention pond will only exacerbate flooding due to the timing of the detention pond release. With this in mind, detention would not be warranted.

***Note:** The existing condition of the site was determined by a site visit by the design engineer as well as consultation of various maps including the national wetlands maps, FEMA flood maps, USGS topographic maps and soils maps. Additionally, the site was studied for soil structure by Greencastle Engineering, Inc.

Per FEMA Flood Map Panel 13013C0134E, dated September 26, 2008, a portion of the property is located within a flood zone.

This report will explain how the design of this project effectively implements stormwater management to address the impacts of the new development.

Pre-Developed Basin: 4.70 AC:

0.00 ac @ CN=98 (Impervious),
4.70 ac @ CN=61 (Pasture),
0.00 ac @ CN=55 (Wooded)
Composite CN=61

Post-Developed Basin: 4.70 AC:

0.61 ac @ CN=98 (Impervious),
4.09 ac @ CN=61 (Pasture),
0.00 ac @ CN=55 (Wooded)
Composite CN=66

Hydrograph Return Period Recap

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	-----	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Offsite Basin
2	SCS Runoff	-----	2.00	3.27	-----	5.81	8.37	12.45	16.04	20.02	Pre-Dev Onsite Basin
3	SCS Runoff	-----	3.43	4.97	-----	7.88	10.74	15.20	19.15	23.46	Post-Dev Onsite Basin
5	Combine	1, 2,	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Pre-Dev Total @ 10% Point
6	Combine	1, 3,	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Post-Dev Total @ 10% Point

WATER QUALITY:

Required water quality volume calculation (Bio-Retention Pond):

Required WQv:	$[1.2(R_v)(A)] / 12$, $R_v = 0.05 + 0.009(I) = 0.05 + 0.009(74.4) = 0.72$ $I = \text{percent of impervious cover}(\%) = 74.4\%$ $A = \text{total drainage area} = 0.82 \text{ ac}$ $WQv = 1.2(0.72)(0.82 \times 43,560) / 12 = 2572 \text{ cf}$
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Required planting soil filter bed area (Bio-Retention Pond):

Required surface area: $WQv = PV + (VES)(N)$,	Where, $PV = \text{Ponding Volume} = 9 \text{ in } (0.75 \text{ ft})$ $VES = \text{Volume of Engineered Soils} = 30 \text{ in } (2.5 \text{ ft})$ $N = \text{Porosity of Engineered Soils} = 0.25$ $2572 = (\text{Surface Area} \times 0.75) + (\text{Surface Area} \times 2.5 \times 0.25)$ $2572 = \text{Surface Area} \times 1.375$; Surface Area = 1870 sf Proposed Surface Area = 2086 sf
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Required pre-treatment volume calculation (Bio-Retention Pond):

Required Pretreatment Volume:	Volume = 10% of Water Quality Volume = $(0.10)(1876 \text{ cf}) = 187.6 \text{ cf}$ Volume Provided = $100' \text{ L} \times 2' \text{ W} \times 2' \text{ D} (0.40) = 160 \text{ cf}$
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CONCLUSION:

The use of these Better Site Design Practices have allowed more storage of stormwater flows on site, lowered stormwater peak flows, provided a reduction in erosion runoff velocities, provided infiltration of a portion of the runoff volume, and increased the capture and treatment of the stormwater pollutants.

Georgia Stormwater Management Manual

Stormwater Quality Site Development Review Tool

Version 2.2

General Information

Name of Developer:	Fayette County	Date Submitted:	3/8/2022
Development Name:	Animal Control Shelter	Permit Number:	
Site Location / Address:	Joel Cowan Parkway	Developer Contact:	Matt Bergen
	Peachtree City	Phone Number:	770-305-5320
		Name of Engineer(s):	Civil Solutions, Inc.
Development Type:	Commercial/Retail	Maintenance Responsibility:	Property Owner

Site Summary

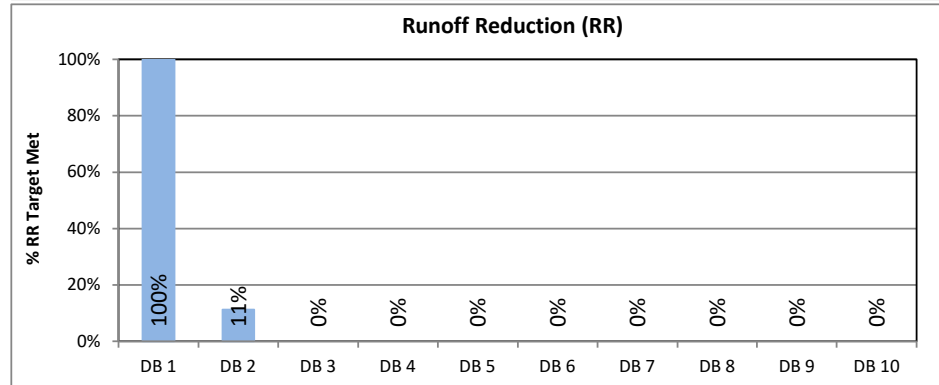
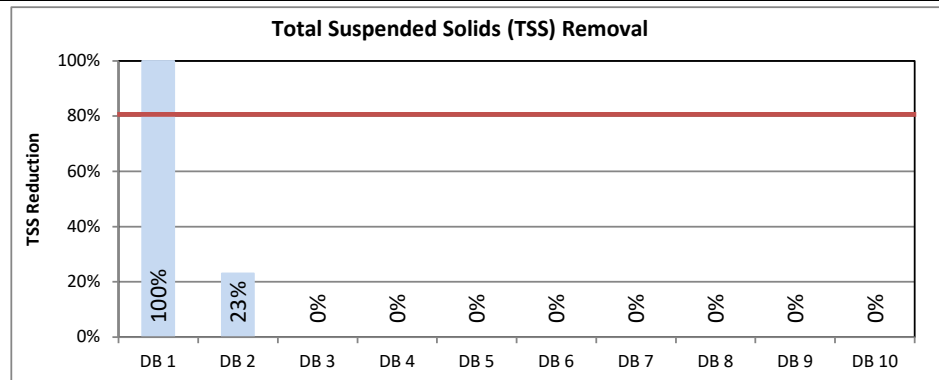
Total Pre-Development Area (ac): **4.70**
 Total Post-Development Area (ac): **4.70**
 Total Treated Area (ac): **0.90**
 Total Untreated Area (ac): **3.80**

		I (ac)	P (ac)	CA (ac)
Basin To Pond	DB 1	0.53	0.29	0.00
Drainage Basin 2	DB 2	0.08	2.36	1.44
Drainage Basin 3	DB 3	0.00	0.00	0.00
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		0.61	2.65	1.44

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)	2,488
Runoff Reduction Volume Achieved (cf)	1,949
Total Target Water Quality Volume (cf)	2,985
% TSS Removal Achieved	81%



Official Use Only

Tracking #: _____
 Reviewed By: _____
 Date Approved: _____

Conditions of Approval: _____

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: **Animal Control Shelter**
 Drainage Basin Name: **Basin To Pond**

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
Pasture, grassland, or range - continuous forage for grazing - Good Condition		39	0.82	61		74		80	0.82	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		0.82		0.00		0.00		0.82	100%

*HSG = hydrologic soil group

Impervious (ac) 0.00
 Weighted CN 61
 Potential Max Soil Retention, S_{pre} (in) 6.39

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	0.53	98		98		98	0.53	65%
Open space - Good condition (grass cover > 75%)		39	0.29	61		74		80	0.29	35%
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		0.82		0.00		0.00		0.82	100%

Impervious (ac) 0.53
 Rv 0.63
 Weighted CN 85
 Potential Max Soil Retention, S_{post} (in) 1.78

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: **Animal Control Shelter**
 Drainage Basin Name: **Basin To Pond**

data input cells
 calculation cells
 constant values

Water Quality Goals

Target Runoff Reduction Storm (in) **1.00** Total Site Area for Water Quality Volume (acres) **0.82**
 Target Runoff Reduction Volume (cf) **1,880**
 Target Water Quality Volume (cf) **2,256**

Select BMPs for Runoff Reduction and Water Quality

	Area Draining to Each BMP	Runoff Reduction Calculations										WQ Calculations			
		On-site Pervious Area (acres)	On-site Impervious Area (acres)	Offsite Area (acres)	Storage Volume Provided by BMP (cf)	RR Conveyance Volume Provided by BMP (cf)	Down-stream BMP	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	Bioretention Basin (w/o underdrain)	0.29	0.53		11,800			1,880	0	1,880	100%	1,880	0	2,256	100%
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		0.29	0.53	0.00				1,880				1,880		2,256	
UNTREATED AREA (acres)		0.00	0.00												

Target Runoff Reduction Volume (cf)	1,880
Target Achieved?	Yes!
Remaining Runoff Reduction Volume (cf)	0

Target Water Quality Volume (cf)	2,256
% TSS Removal Achieved	100%
Target Achieved?	Yes!
Remaining TSS Removal %	0%

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)	0.00	0.00	0.00	0.00

	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)	0.00	0.00	0.00	0.00
Post Development Runoff Volume (in) with no BMPs	0.00	0.00	0.00	0.00
Post-Development Runoff Volume (in) with BMPs	0.00	0.00	0.00	0.00

Georgia Stormwater Management Manual

Stormwater Quality Site Development Review Tool, v2.2

Development Name:

Drainage Basin Name:

data input cells
 calculation cells
 constant values

Adjusted CN

*See Stormwater Management Standards to Determine Detention Requirements.

Comments

Georgia Stormwater Management Manual

Stormwater Quality Site Development Review Tool, v2.2

Development Name: **Animal Control Shelter**
 Drainage Basin Name: **Bypass Basin**

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
Open space - Good condition (grass cover > 75%)		39	3.88	61		74		80	3.88	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		3.88		0.00		0.00		3.88	100%

*HSG = hydrologic soil group

Impervious (ac)	0.00
Weighted CN	61
Potential Max Soil Retention, S _{pre} (in)	6.39

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	0.08	98		98		98	0.08	2%
Pasture, grassland, or range - continuous forage for grazing - Good Condition		39	3.80	61		74		80	3.80	98%
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		3.88		0.00		0.00		3.88	100%

Impervious (ac)	0.08
Rv	0.07
Weighted CN	62
Potential Max Soil Retention, S _{post} (in)	6.19

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.

1.44 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) **1.44**

Georgia Stormwater Management Manual

Stormwater Quality Site Development Review Tool, v2.2

Development Name:
 Drainage Basin Name:

data input cells
 calculation cells
 constant values

Water Quality Goals

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

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, from Direct Drainage (cf)	Effective TSS Removal %
BMP 1	Grass Channel (A & B hydrologic soils)		0.08			276		276	0	276	25%	69	207	331	50%
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	0.08	0.00				276				69		331	
UNTREATED AREA (acres)		3.80	0.00												

Target Runoff Reduction Volume (cf)	607
Target Achieved?	No
Remaining Runoff Reduction Volume (cf)	538

Target Water Quality Volume (cf)	729
% TSS Removal Achieved	23%
Target Achieved?	No
Remaining TSS Removal %	57%

Channel and Flood Protection Calculations

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

1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm

Georgia Stormwater Management Manual

Stormwater Quality Site Development Review Tool, v2.2

Development Name:

Drainage Basin Name:

data input cells
 calculation cells
 constant values

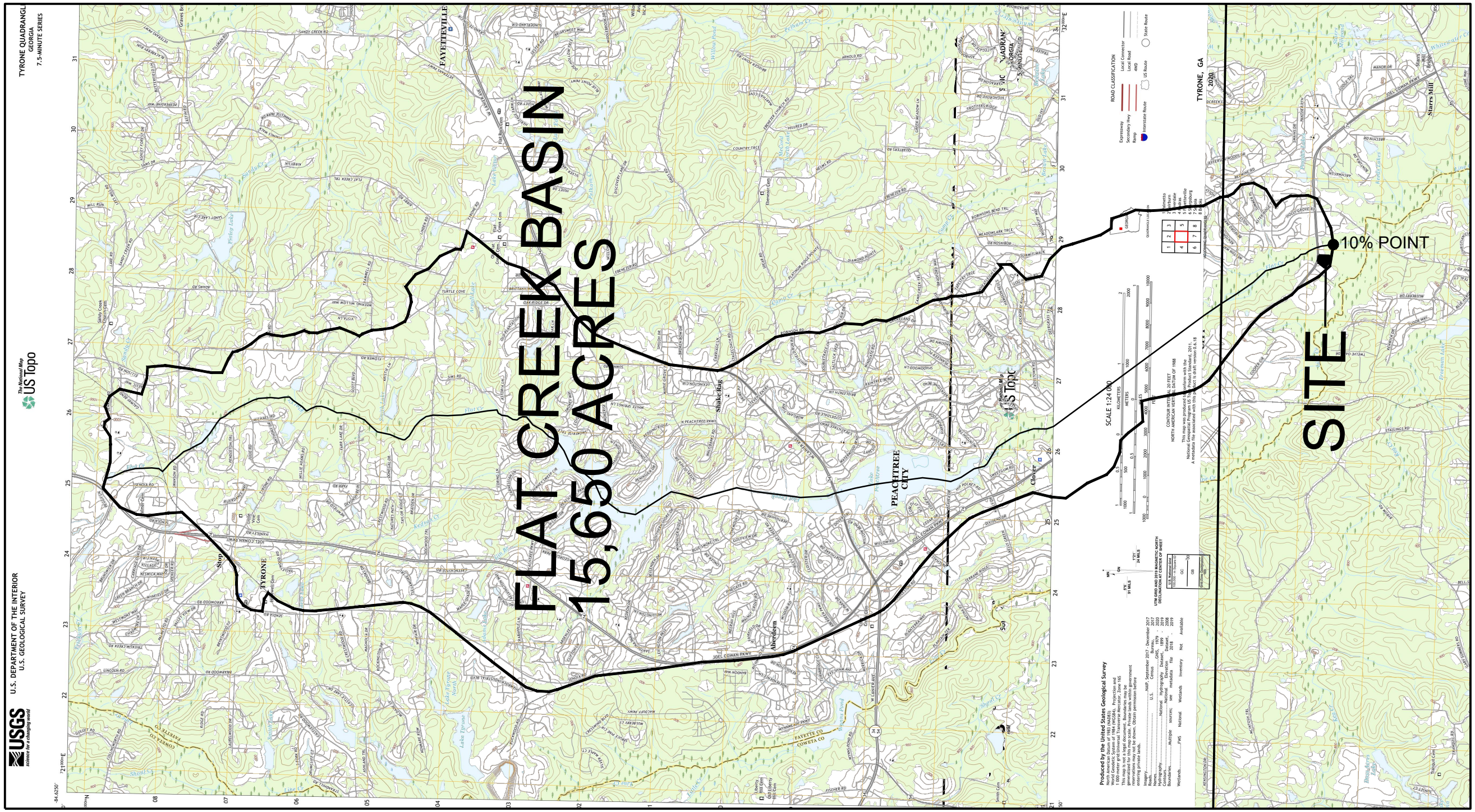
Pre-Development Runoff Volume (in)	0.00	0.00	0.00	0.00
Post Development Runoff Volume (in) with no BMPs	0.00	0.00	0.00	0.00
Post-Development Runoff Volume (in) with BMPs	0.00	0.00	0.00	0.00
Adjusted CN	0	0	0	0

*See Stormwater Management Standards to Determine Detention Requirements.

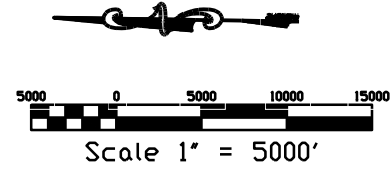
Comments

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

BASINS



USGS U.S. DEPARTMENT OF THE INTERIOR U.S. GEOLOGICAL SURVEY
 The National Map US Topo
 TYRONE QUADRANGLE GEORGIA 7.5-MINUTE SERIES



REVISIONS	DATE

DATE
08/16/21
SHEET
1 of 1

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LL/DISTRICT	COUNTY	CITY
33/6	FAYETTE	PEACHTREE CITY

FLAT CREEK BASIN FOR:
FAYETTE COUNTY GEORGIA
ANIMAL CONTROL SHELTER
 PEACHTREE CITY, GEORGIA

OWNER & DEVELOPER
 FAYETTE COUNTY GEORGIA
 140 STONEWALL AVE WEST
 FAYETTEVILLE, GA 30214
 (770)305-5421

CIVIL SOLUTIONS, INC.
 ENGINEERS ~ PLANNERS
 750 BELMONT ROAD
 ATHENS, GA 30605
 OFFICE 706-265-2445

10% POINT

SITE

Produced by the United States Geological Survey
 Woodcock system of 1984 (10024). Projection and
 datum are as shown. Boundaries may be
 approximate. This map is not to be used for
 purposes for which it was not designed. No
 warranty is made by the U.S. Government.

Scale 1:24,000
 METERS
 0 1000 2000 3000 4000 5000
 FEET
 0 1000 2000 3000 4000 5000

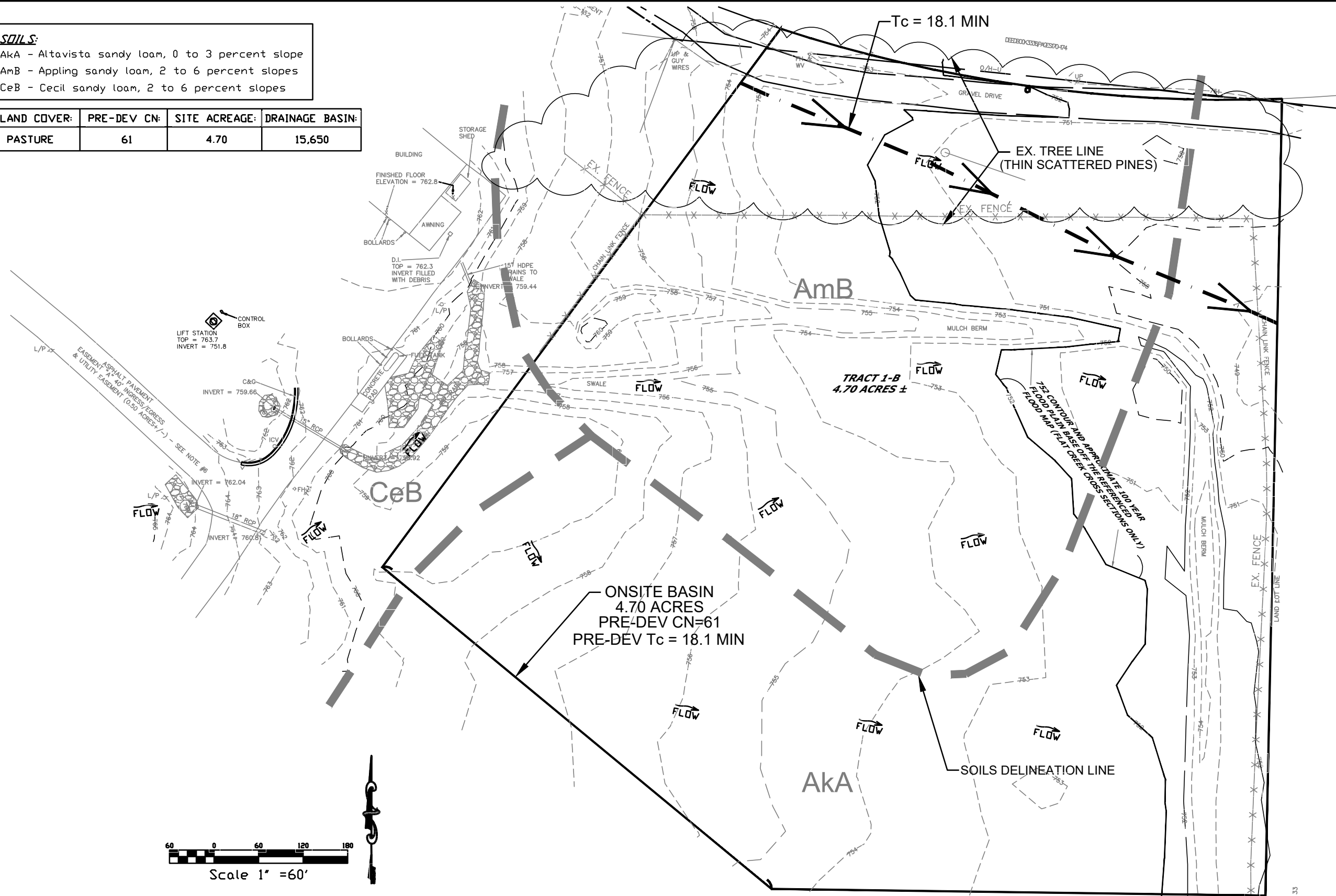
ROAD CLASSIFICATION
 Expressway
 Interstate Route
 US Route
 Local Connector
 State Road
 State Route

UTM GRID MAP BY MATHEMATICAL SCIENCE
 SECTION 18N T17N R18E
 UTM GRID MAP BY MATHEMATICAL SCIENCE
 SECTION 18N T17N R18E

Legend:
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15 16
 17 18 19 20 21 22 23 24
 25 26 27 28 29 30 31 32

SOILS:
 AkA - Altavista sandy loam, 0 to 3 percent slope
 AmB - Appling sandy loam, 2 to 6 percent slopes
 CeB - Cecil sandy loam, 2 to 6 percent slopes

LAND COVER:	PRE-DEV CN:	SITE ACREAGE:	DRAINAGE BASIN:
PASTURE	61	4.70	15,650



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OWNER & DEVELOPER
 FAYETTE COUNTY GEORGIA
 140 STONEWALL AVE WEST
 FAYETTEVILLE, GA 30214
 (770)305-5421

EXISTING CONDITIONS MAP FOR:
FAYETTE COUNTY
ANIMAL CONTROL SHELTER
 PEACHTREE CITY, GEORGIA

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LL/DISTRICT	COUNTY	CITY
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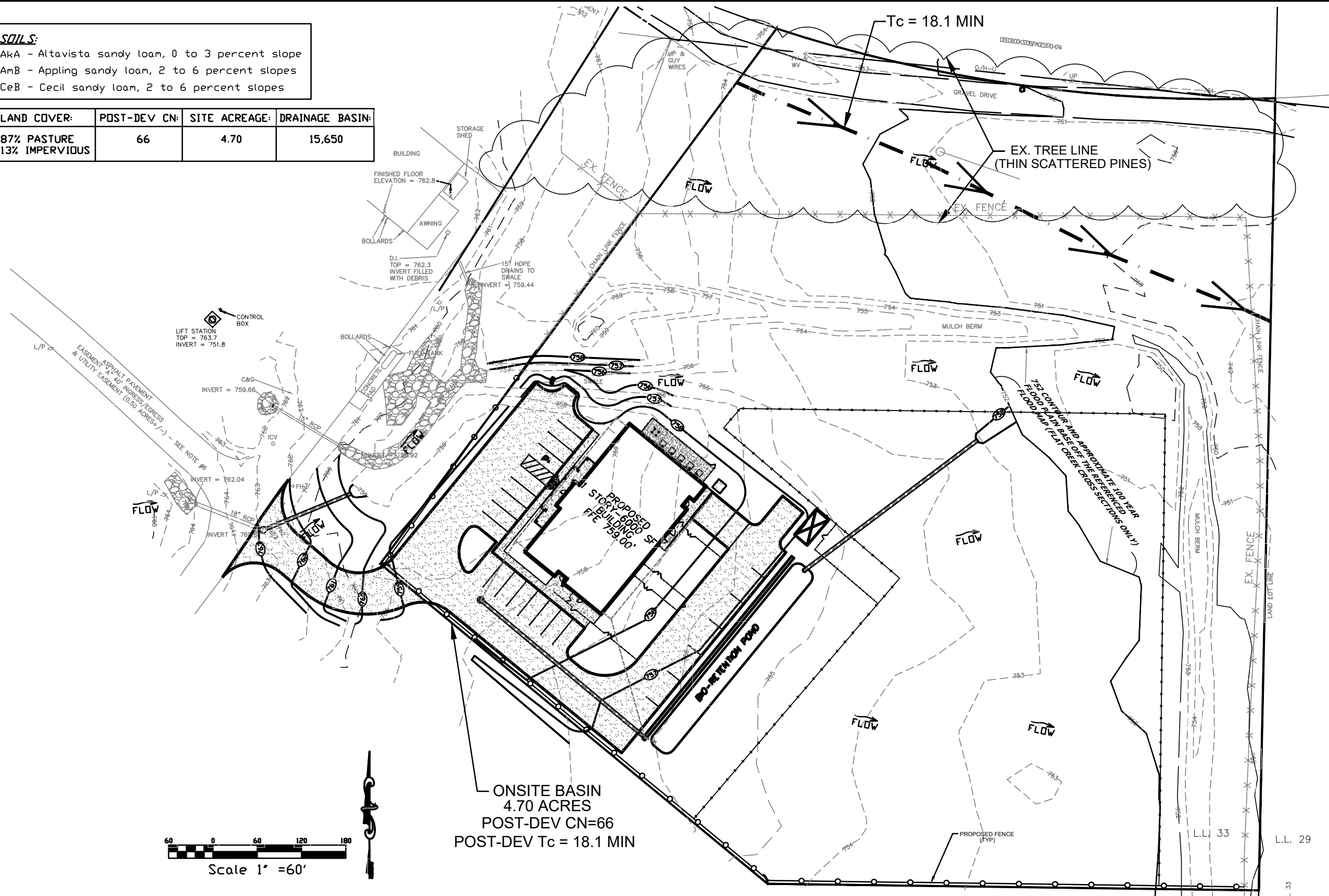
REVISIONS	DATE

DATE: 08/16/21
 SHEET: 1 of 1



SOILS:
 AkA - Altavista sandy loam, 0 to 3 percent slope
 AmB - Appling sandy loam, 2 to 6 percent slopes
 CeB - Cecil sandy loam, 2 to 6 percent slopes

LAND COVER:	POST-DEV CN:	SITE ACREAGE:	DRAINAGE BASIN:
87% PASTURE 13% IMPERVIOUS	66	4.70	15.650



ONSITE BASIN
 4.70 ACRES
 POST-DEV CN=66
 POST-DEV Tc = 18.1 MIN



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 FAYETTEVILLE, GA 30214
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POST-DEV CONDITIONS MAP FOR:
FAYETTE COUNTY
ANIMAL CONTROL SHELTER
 PEACHTREE CITY, GEORGIA

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LL/DISTRICT	COUNTY	CITY
33/6	FAYETTE	PEACHTREE CITY



REVISIONS	DATE

DATE
08/16/21

SHEET
1 of 1

CONTROL BOX
 LIFT STATION
 TOP = 763.7
 INVERT = 751.8

C&G
 INVERT = 759.66

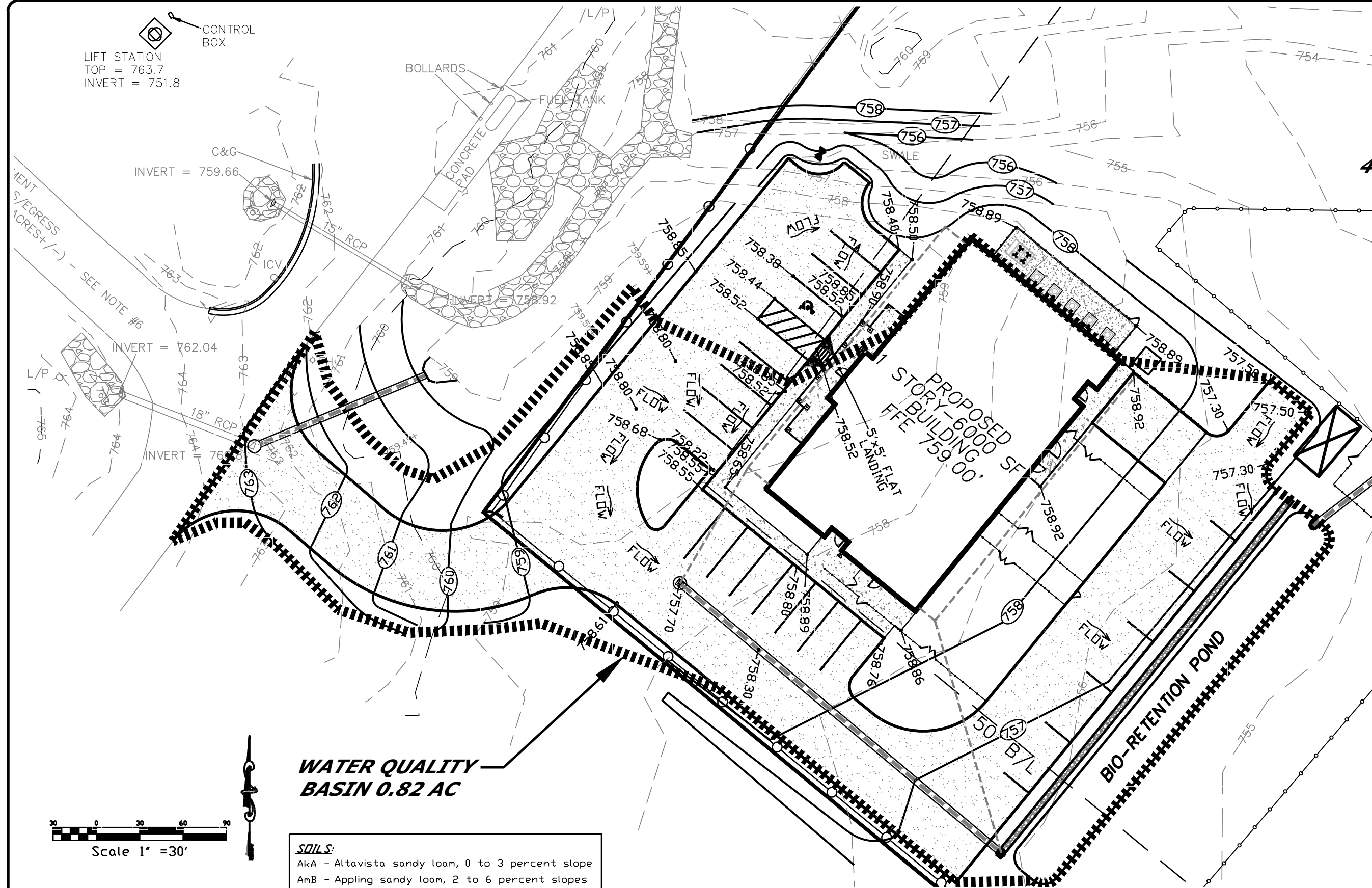
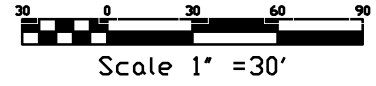
INVERT = 762.04

INVERT

WATER QUALITY BASIN 0.82 AC

SOILS:
 Aka - Altavista sandy loam, 0 to 3 percent slope
 AmB - Appling sandy loam, 2 to 6 percent slopes
 CeB - Cecil sandy loam, 2 to 6 percent slopes

LAND COVER:	POST-DEV CN:	SITE ACREAGE:	DRAINAGE BASIN:
87% PASTURE 13% IMPERVIOUS	66	4.70	15,650



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 ATHENS, GA 30605
 OFFICE 706-265-2443

OWNER & DEVELOPER
 FAYETTE COUNTY GEORGIA
 140 STONEWALL AVE WEST
 FAYETTEVILLE, GA 30214
 (770)305-5421

WATER QUALITY BASIN FOR:
FAYETTE COUNTY
ANIMAL CONTROL SHELTER
 PEACHTREE CITY, GEORGIA

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LL/DISTRICT	COUNTY	CITY
33/6	FAYETTE	PEACHTREE CITY



REVISIONS	DATE

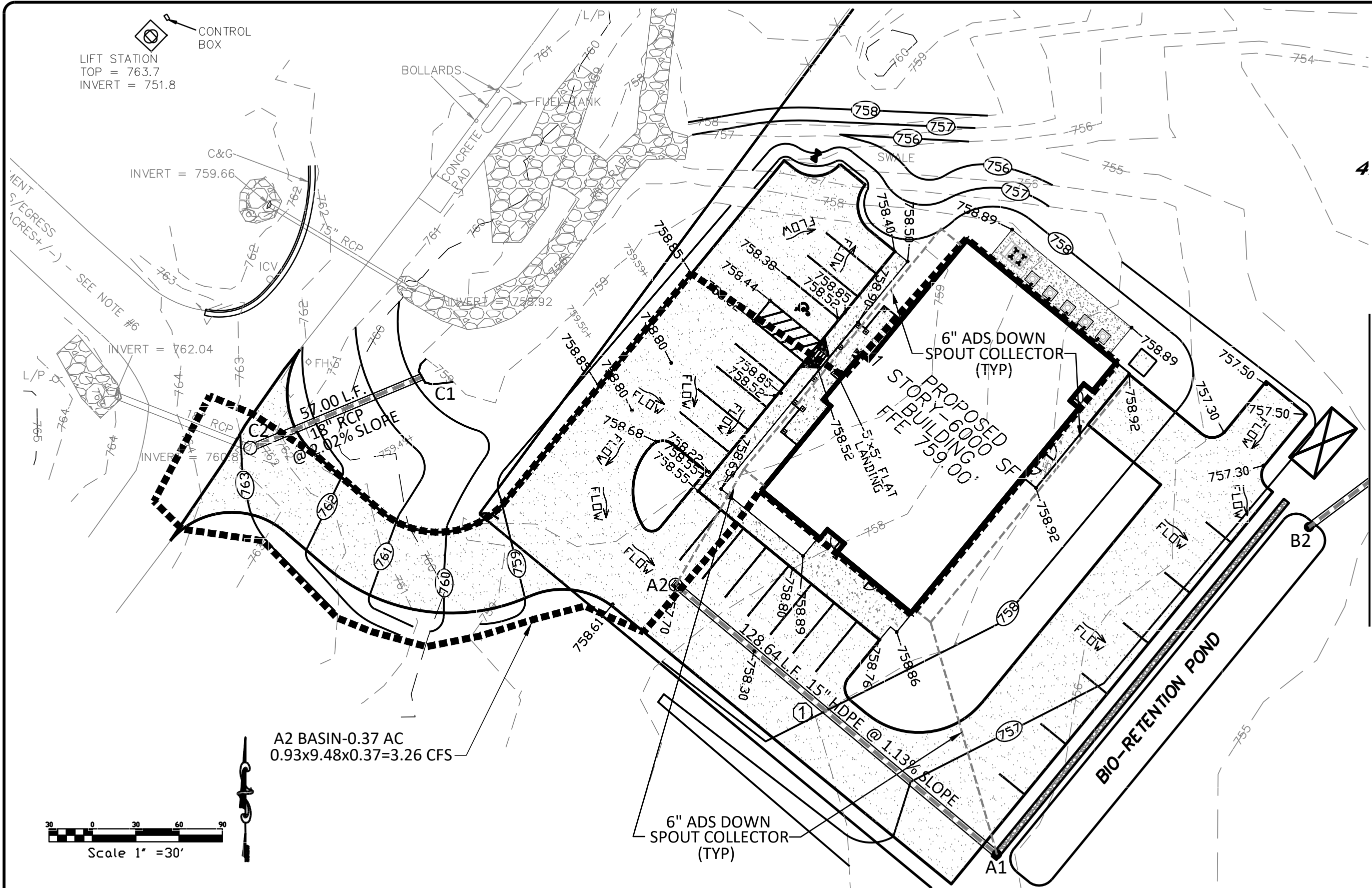
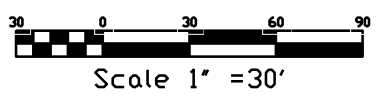
DATE
08/16/21
 SHEET
1 of 1

CONTROL BOX
 LIFT STATION
 TOP = 763.7
 INVERT = 751.8

C&G
 INVERT = 759.66

INVERT = 762.04

A2 BASIN-0.37 AC
 0.93x9.48x0.37=3.26 CFS



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 750 BELMONT ROAD
 ATHENS, GA 30605
 OFFICE 706-255-2443

DANIEL A. DEVLIN
 FAYETTE COUNTY GEORGIA
 140 STONEWALL AVE WEST
 FAYETTEVILLE, GA 30214
 (770)305-6421

STORM DRAIN INLET BASINS FOR:
 FAYETTE COUNTY
 ANIMAL CONTROL SHELTER
 PEACHTREE CITY, GEORGIA

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33/6	FAYETTE	PEACHTREE CITY

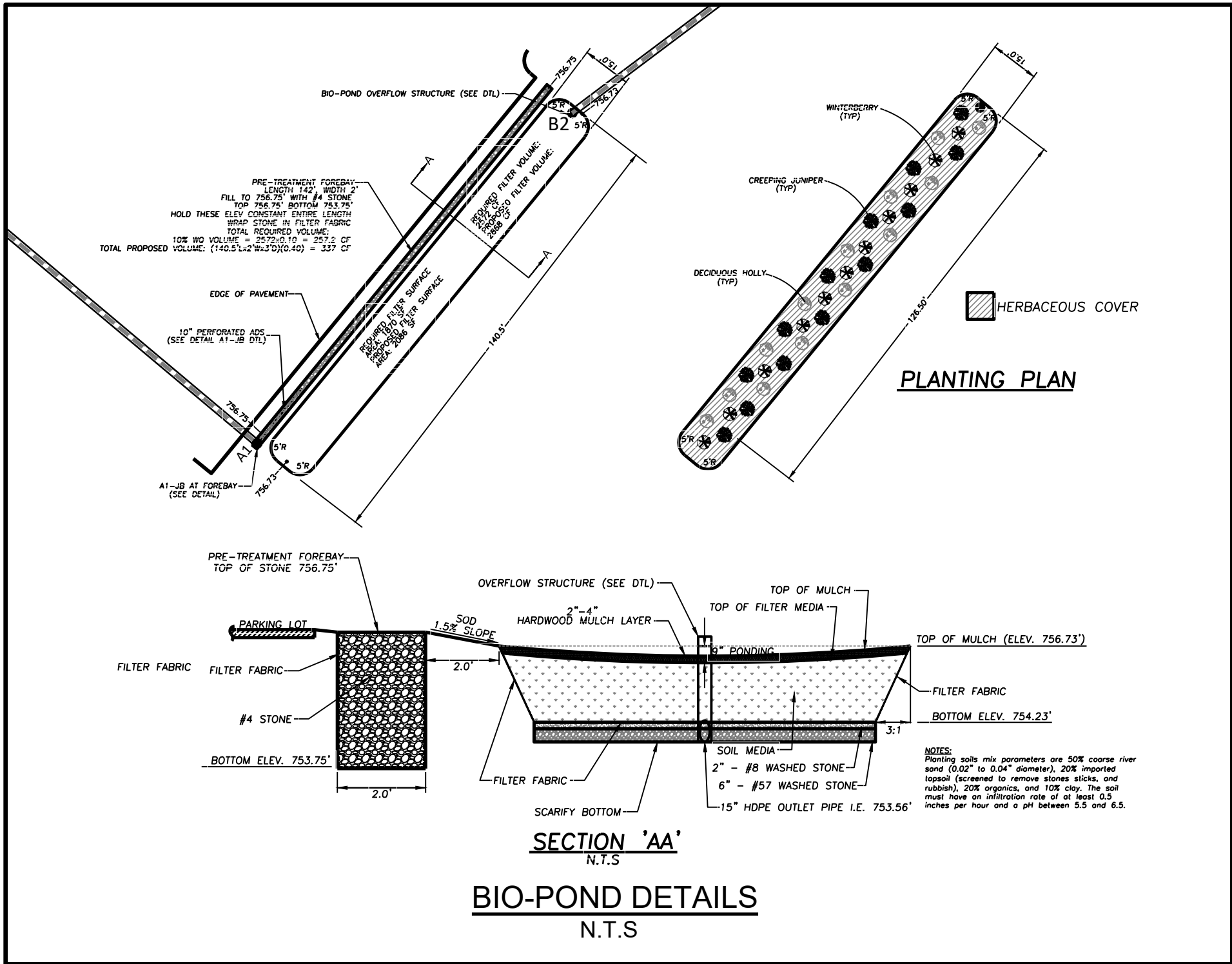


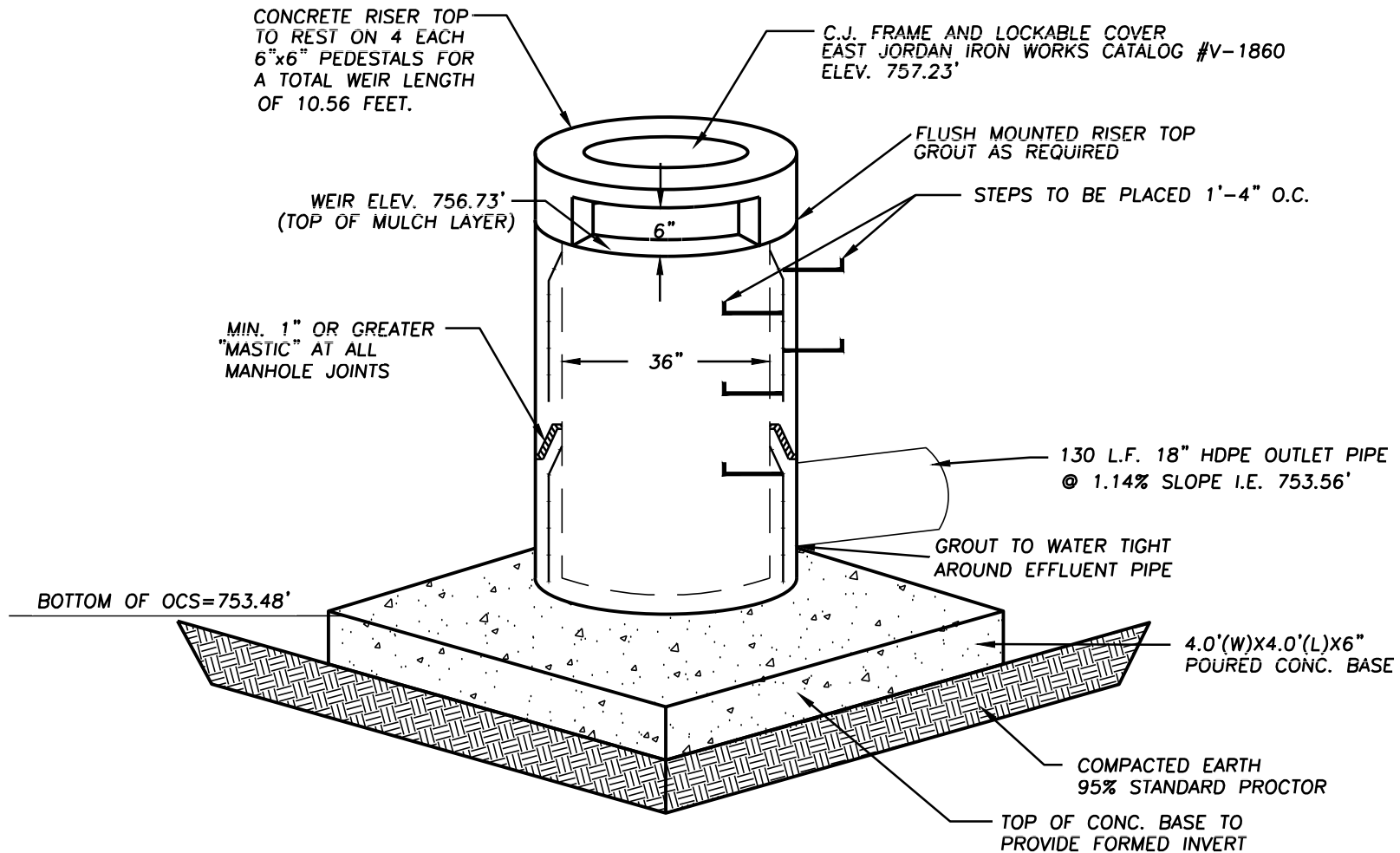
REVISIONS	DATE

DATE
08/16/21

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1 of 1

DETAILS



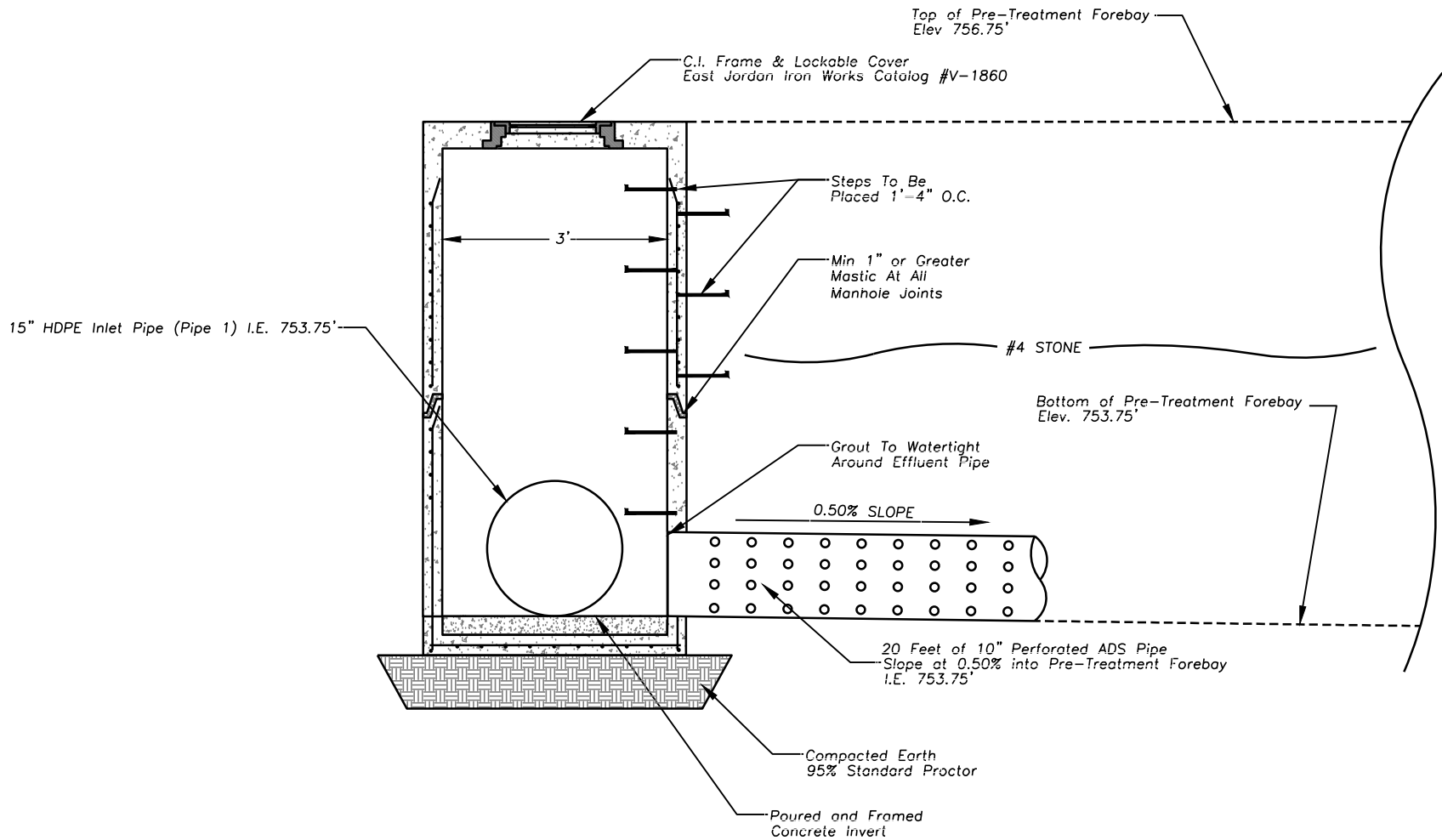


NOTES:

1. DO NOT ORIENT STEPS DIRECTLY OVER INFLUENT OR EFFLUENT OPENINGS.
2. STEPS MUST BE ORIENTED ON THE SAME SIDE OF THE STRUCTURE.
3. ALL INVERTS AND INLET SIZES TO BE CONSTRUCTED PER APPROVED PLANS.
4. ALL INVERTS AND INLET ELEVATIONS TO BE CONSTRUCTED PER APPROVED PLANS.

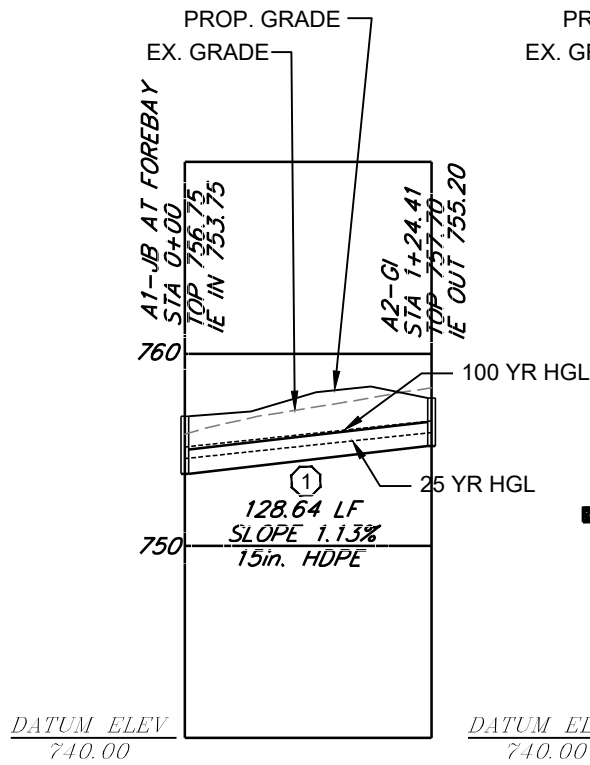
B2 - 36" Ø BIO-POND OVERFLOW STRUCTURE DETAIL

NTS



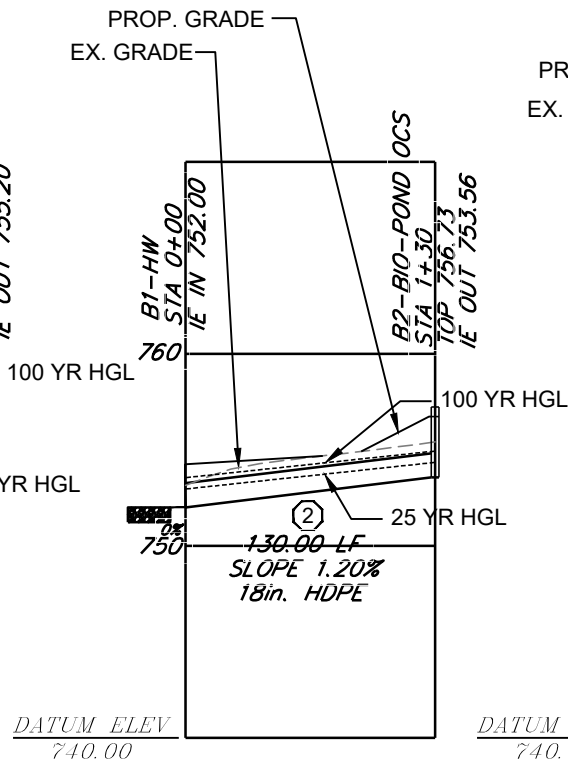
A1 JUNCTION BOX AT FOREBAY DETAIL

N.T.S.



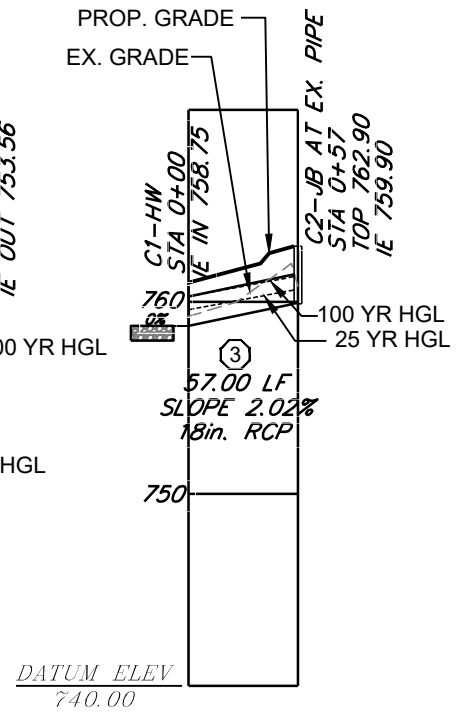
STORM A1-A2

SCALES: HORIZONTAL: 1"=100'
 VERTICAL: 1"=10'



STORM B1-B2

SCALES: HORIZONTAL: 1"=100'
 VERTICAL: 1"=10'



STORM C1-C2

SCALES: HORIZONTAL: 1"=100'
 VERTICAL: 1"=10'

HYDROGRAPHS

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

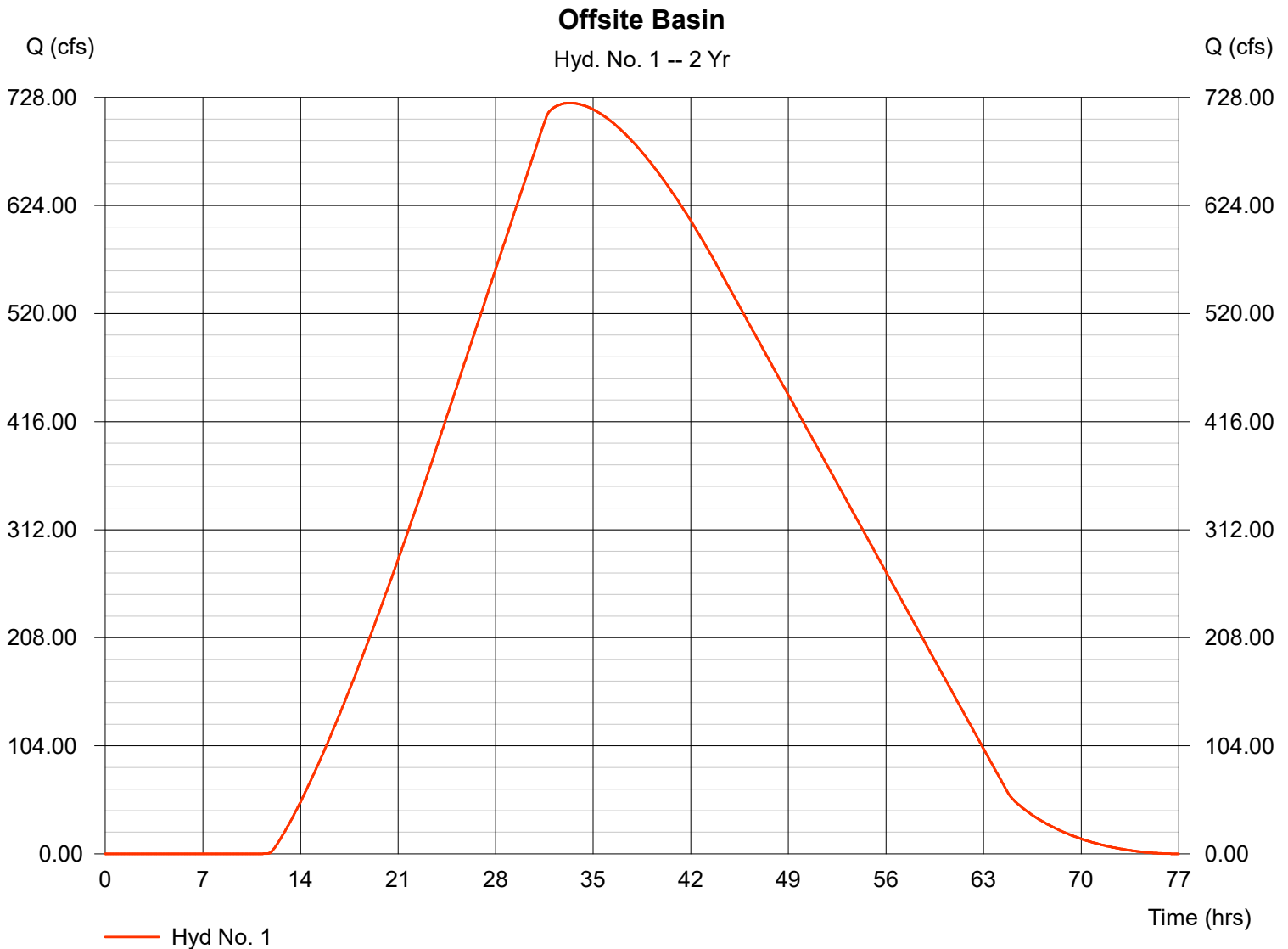
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 722.66 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 76,979,180 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

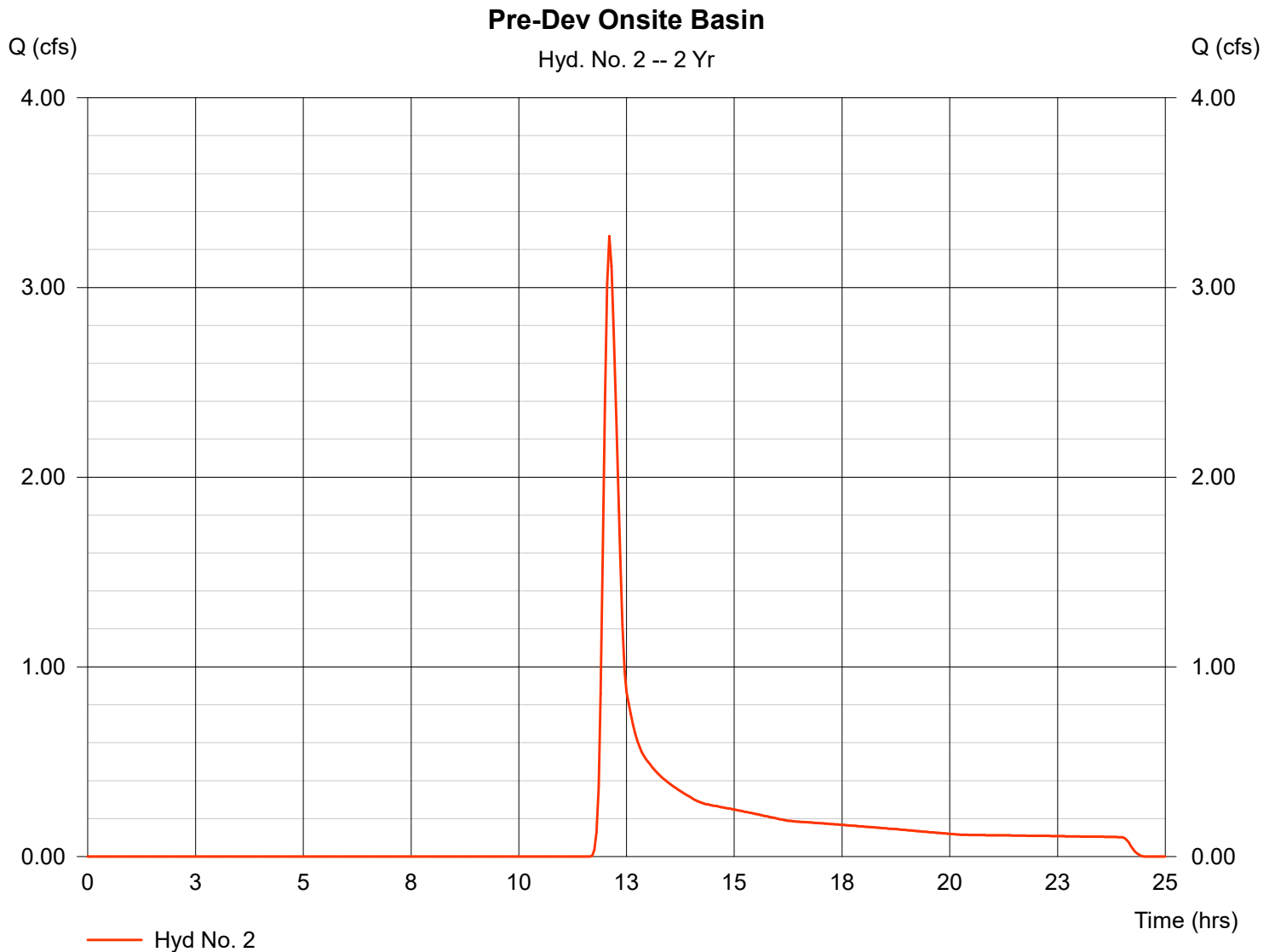
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 3.27 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 12,975 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

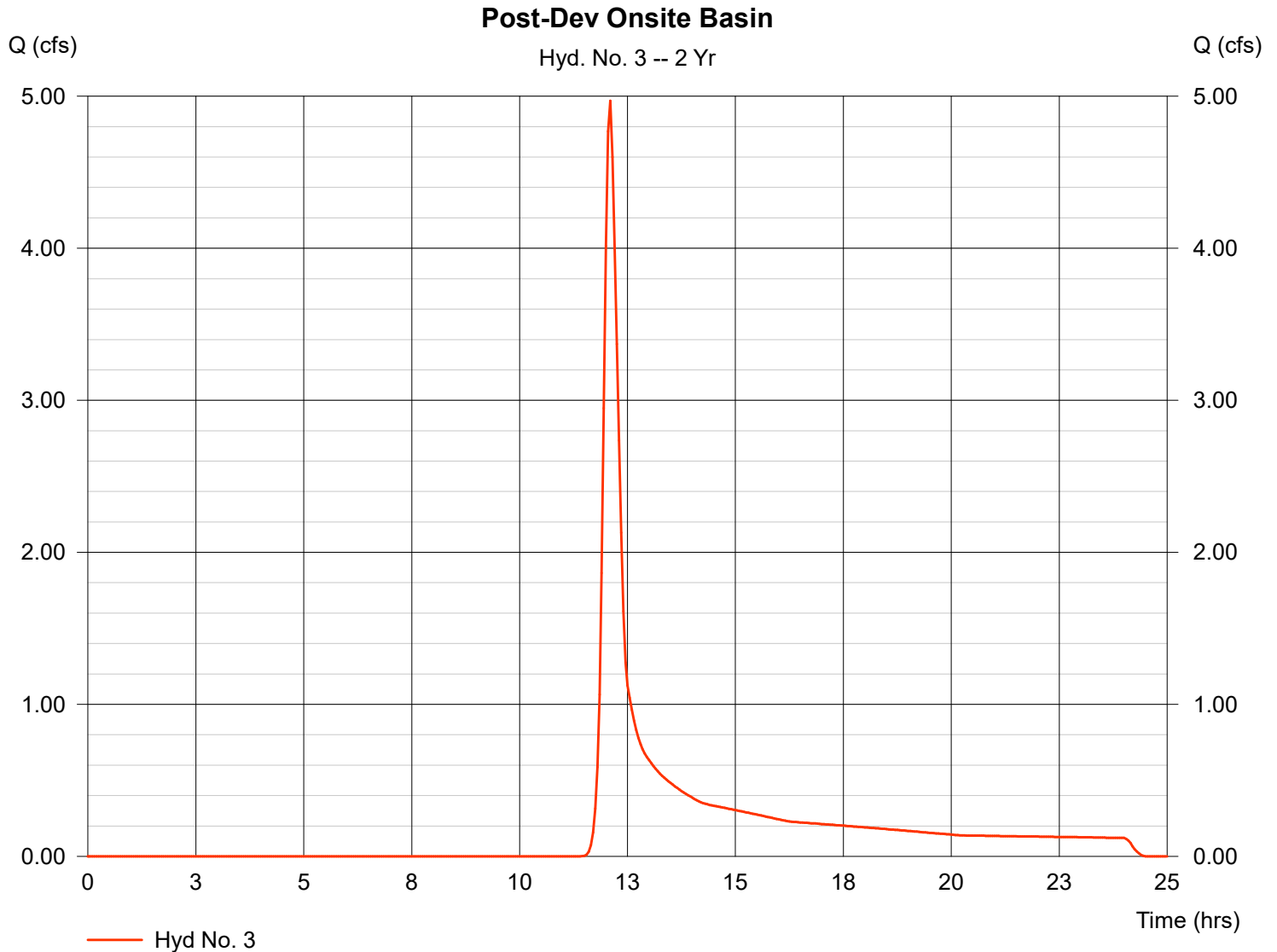
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 4.97 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 17,549 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

Hyd. No. 5

Pre-Dev Total @ 10% Point

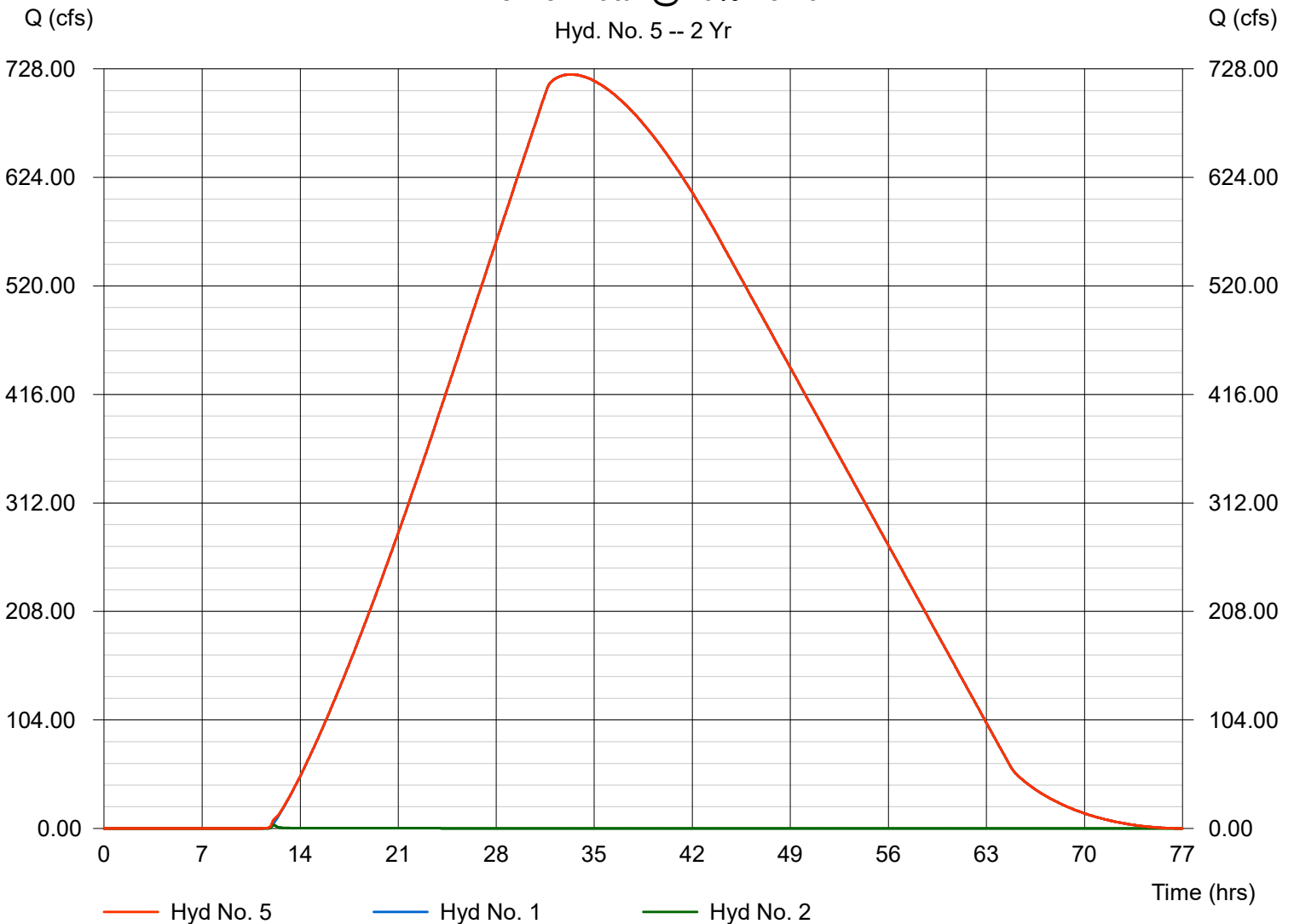
Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 1, 2

Peak discharge = 722.66 cfs
Time interval = 3 min

Hydrograph Volume = 76,992,160 cuft

Pre-Dev Total @ 10% Point

Hyd. No. 5 -- 2 Yr



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

Hyd. No. 6

Post-Dev Total @ 10% Point

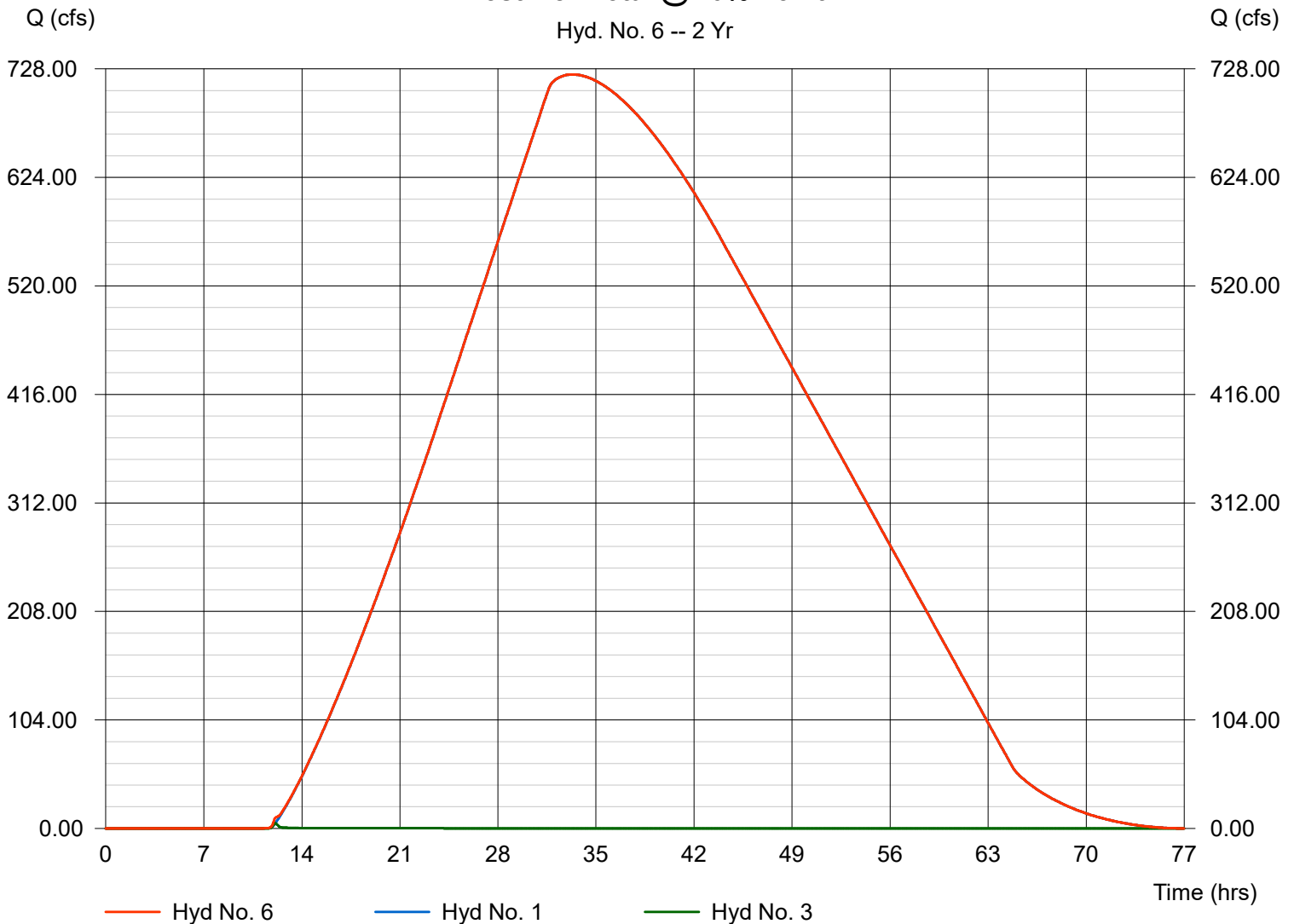
Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 1, 3

Peak discharge = 722.66 cfs
Time interval = 3 min

Hydrograph Volume = 76,996,740 cuft

Post-Dev Total @ 10% Point

Hyd. No. 6 -- 2 Yr



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:22 PM

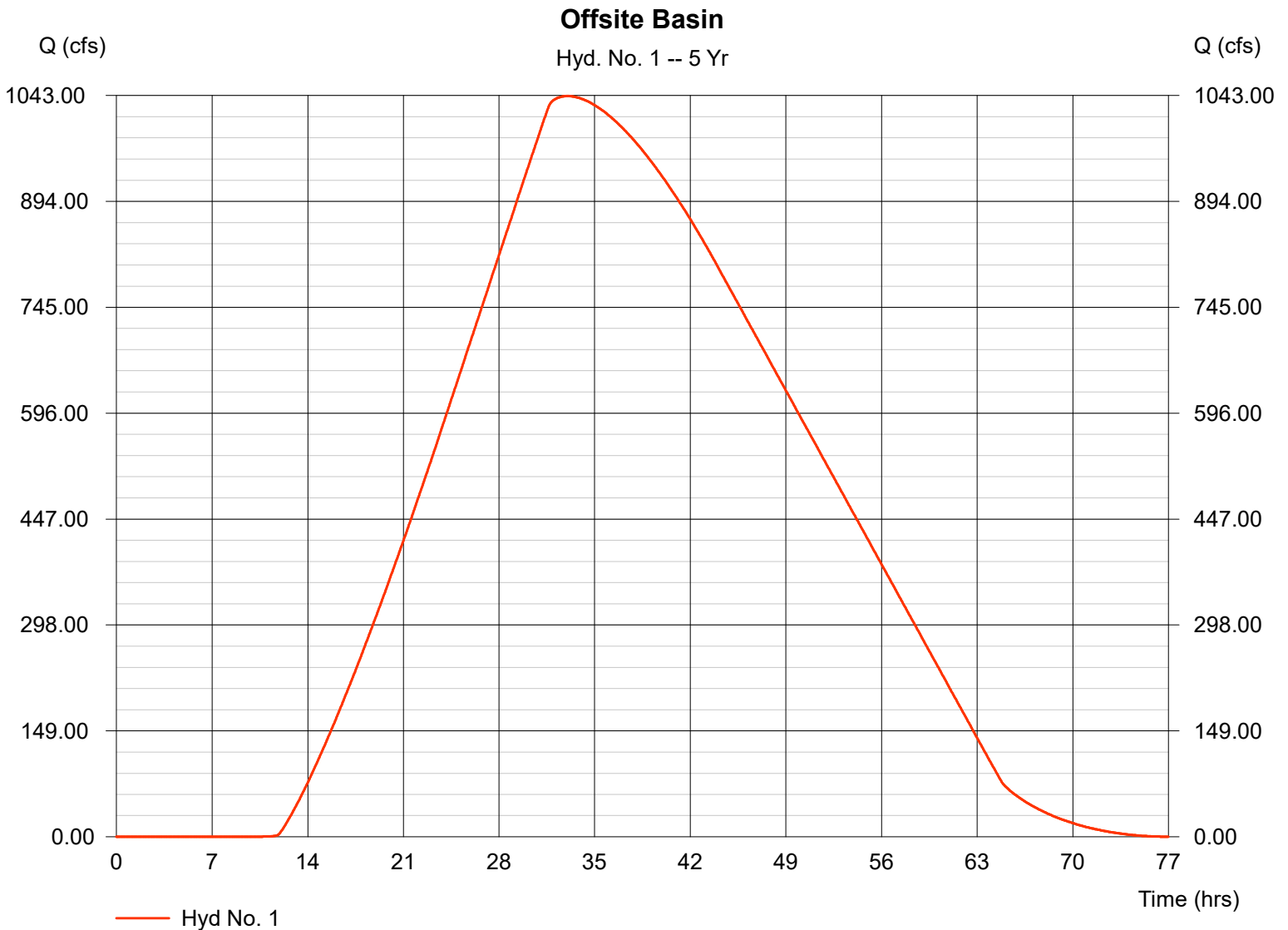
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 1042.23 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 110,535,300 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

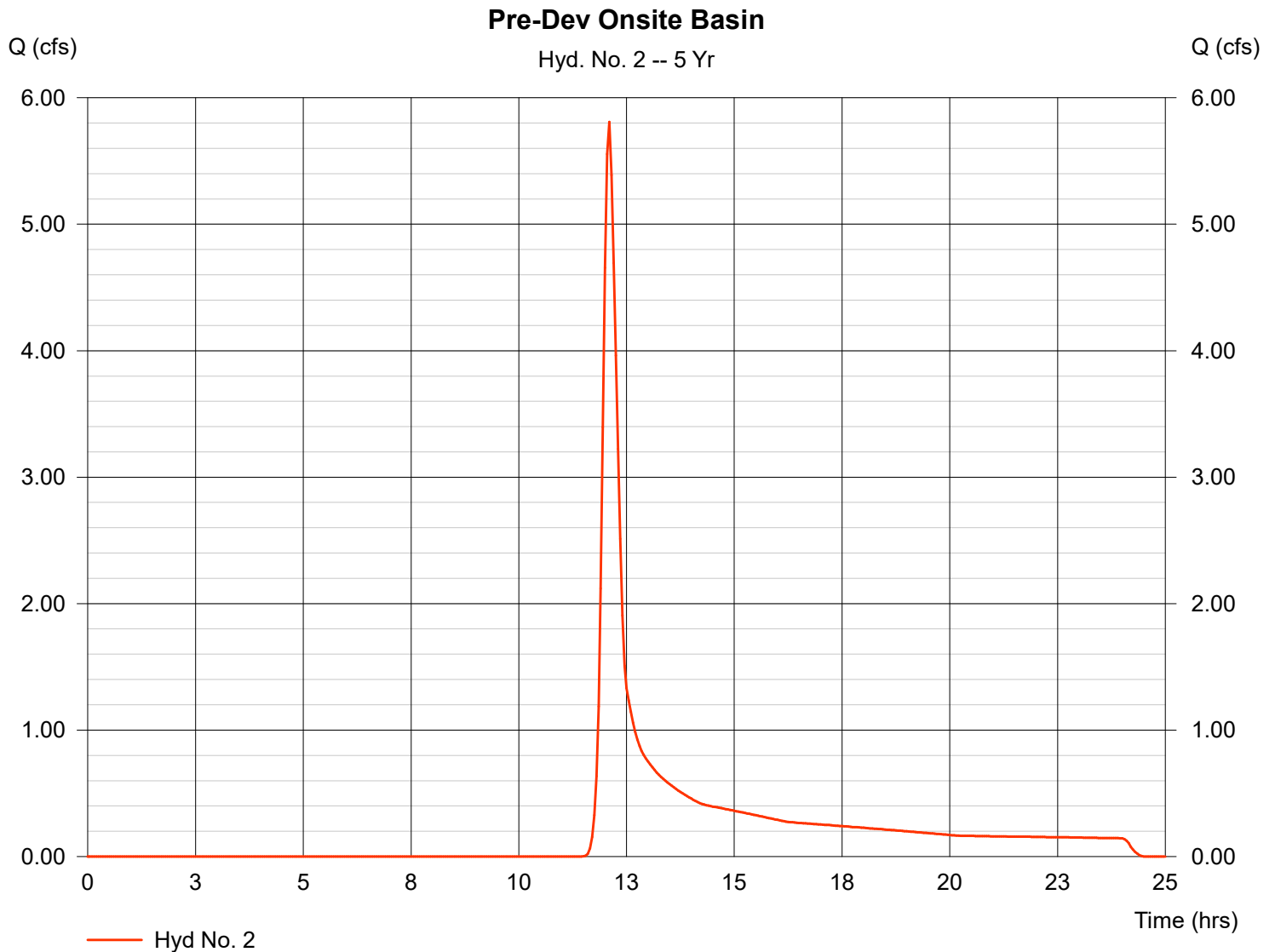
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 5.81 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 20,680 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

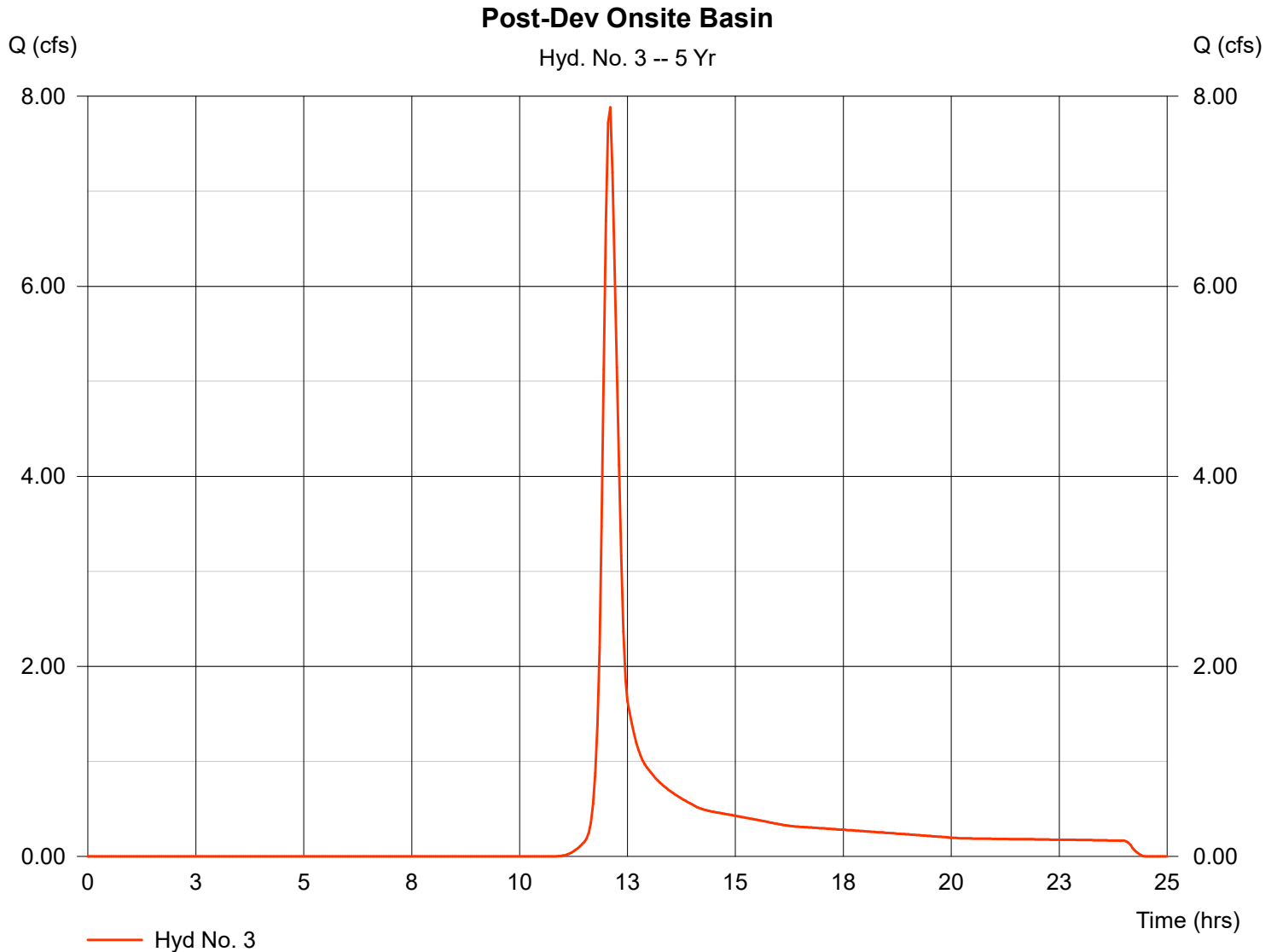
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 7.88 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 26,512 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

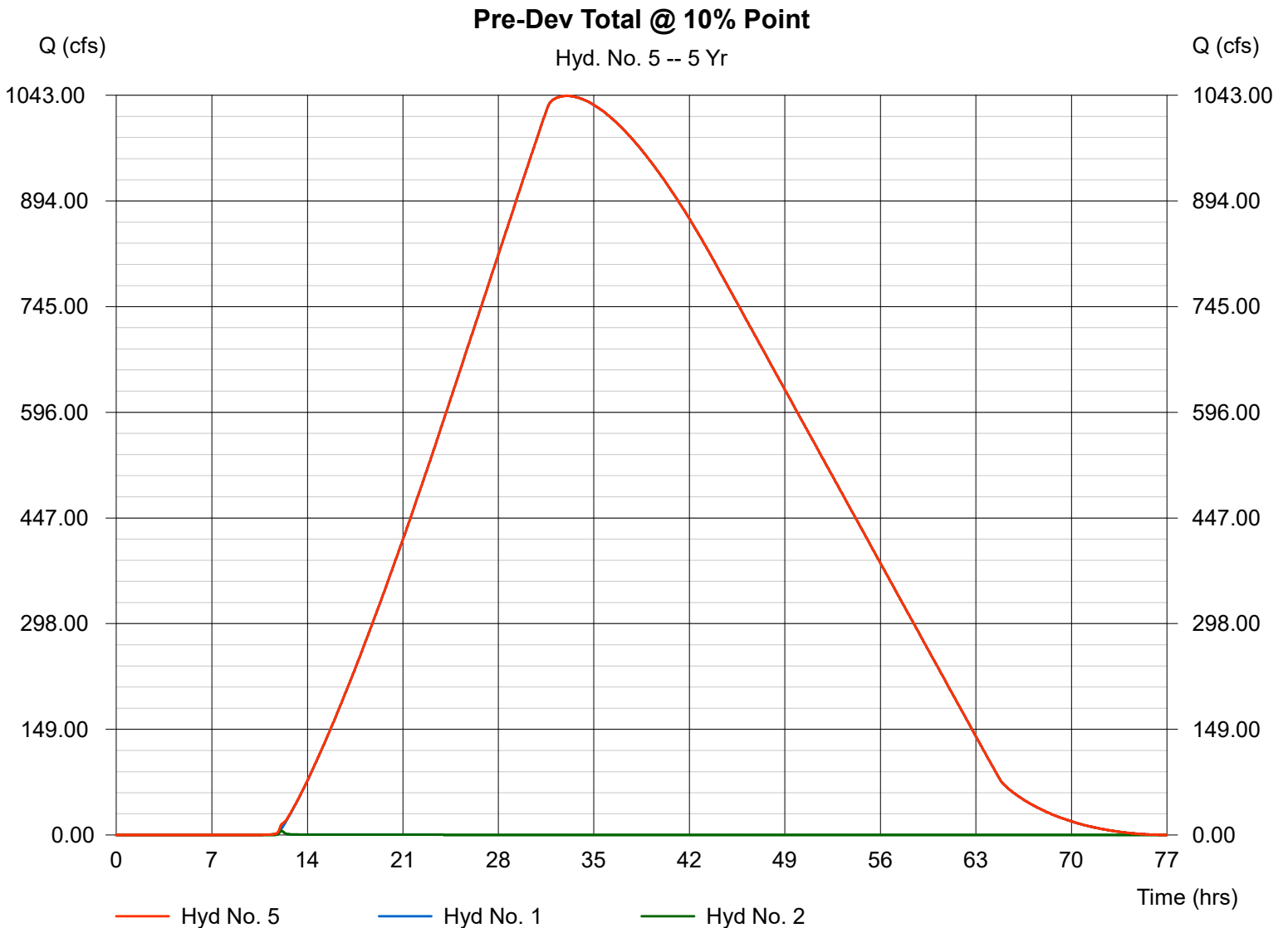
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 5 yrs
Inflow hyds. = 1, 2

Peak discharge = 1042.23 cfs
Time interval = 3 min

Hydrograph Volume = 110,555,900 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

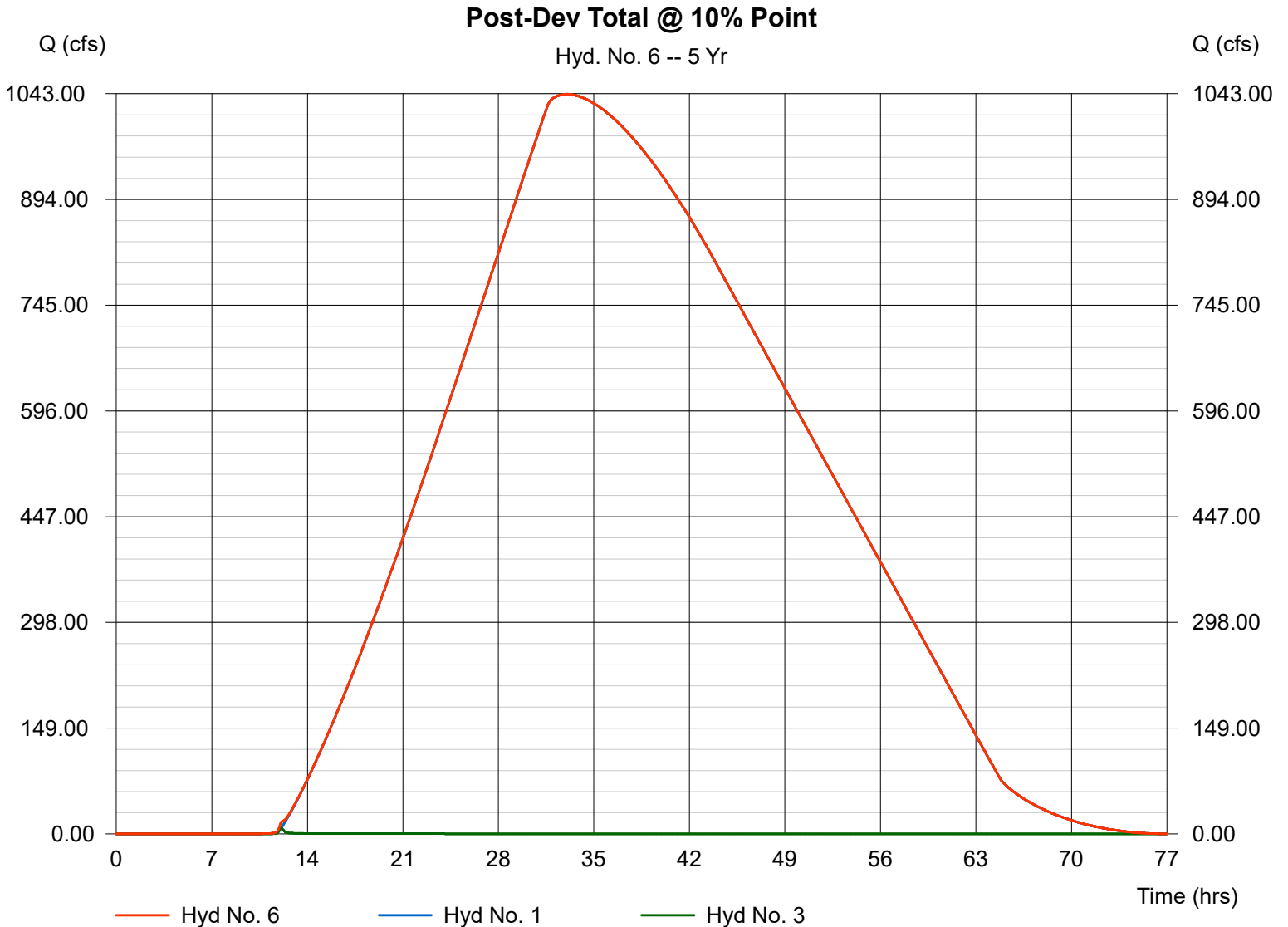
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 5 yrs
Inflow hyds. = 1, 3

Peak discharge = 1042.23 cfs
Time interval = 3 min

Hydrograph Volume = 110,561,800 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

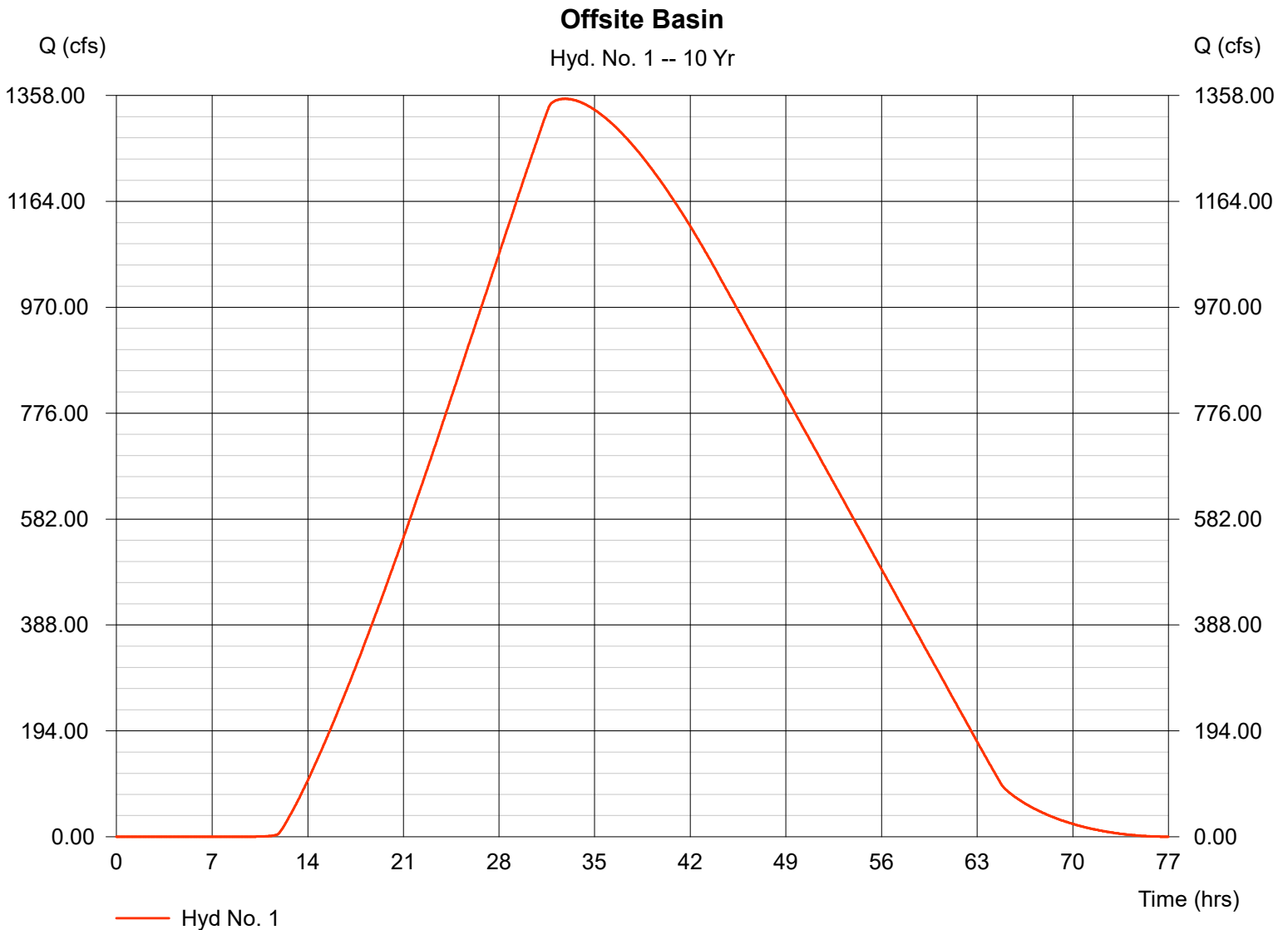
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 1351.98 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 142,965,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

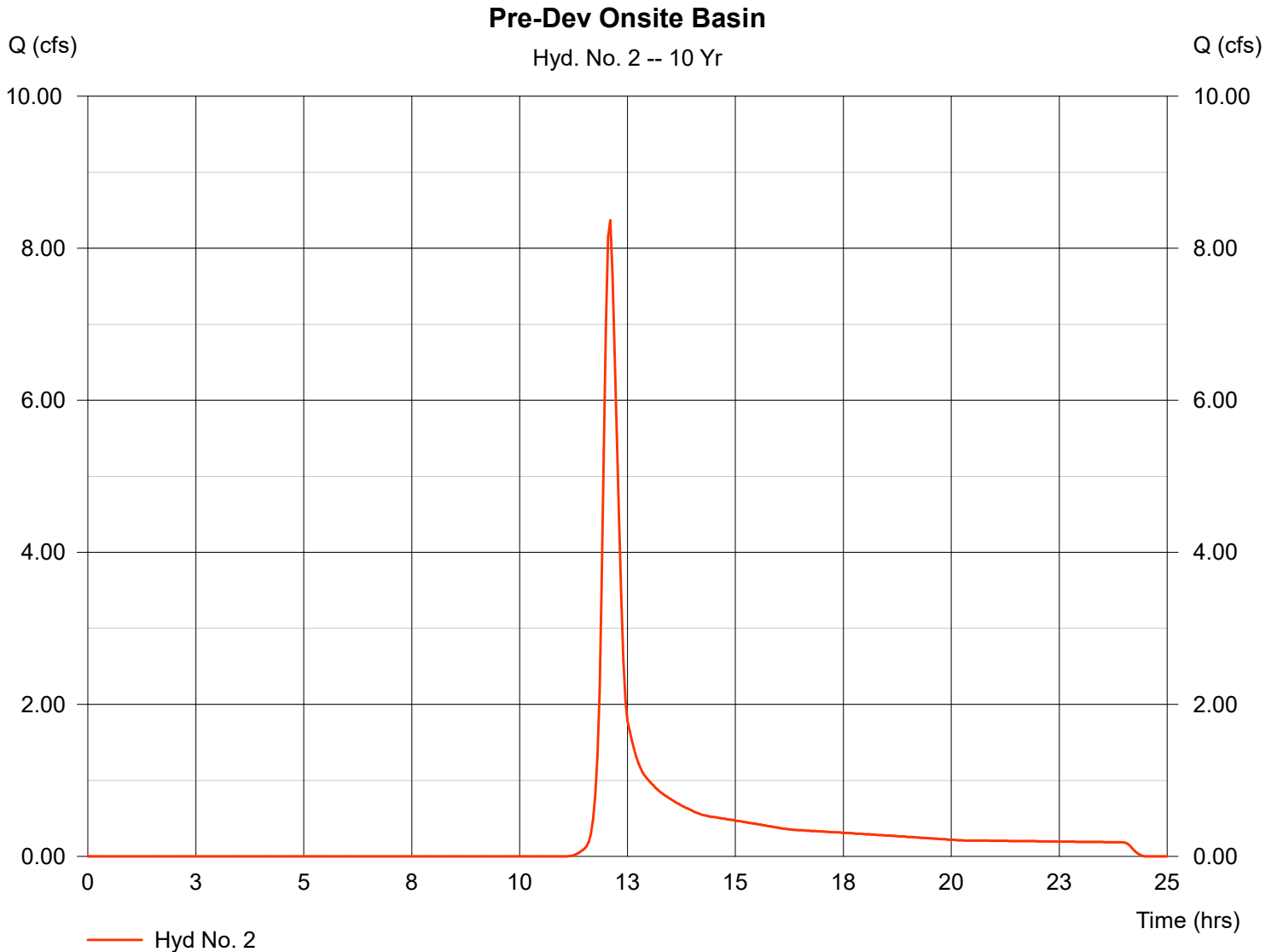
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 8.37 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 28,532 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

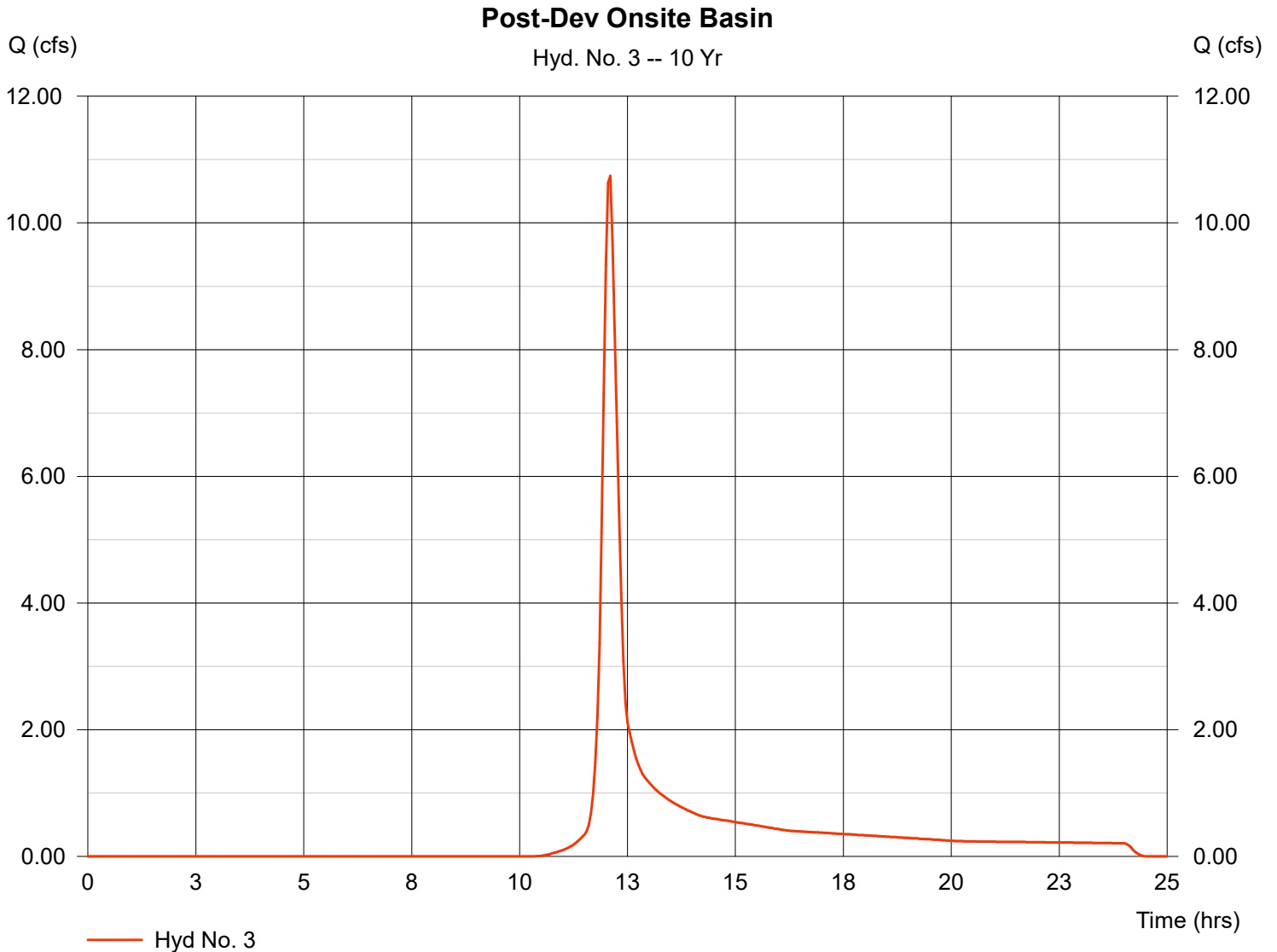
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 10.74 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 35,408 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

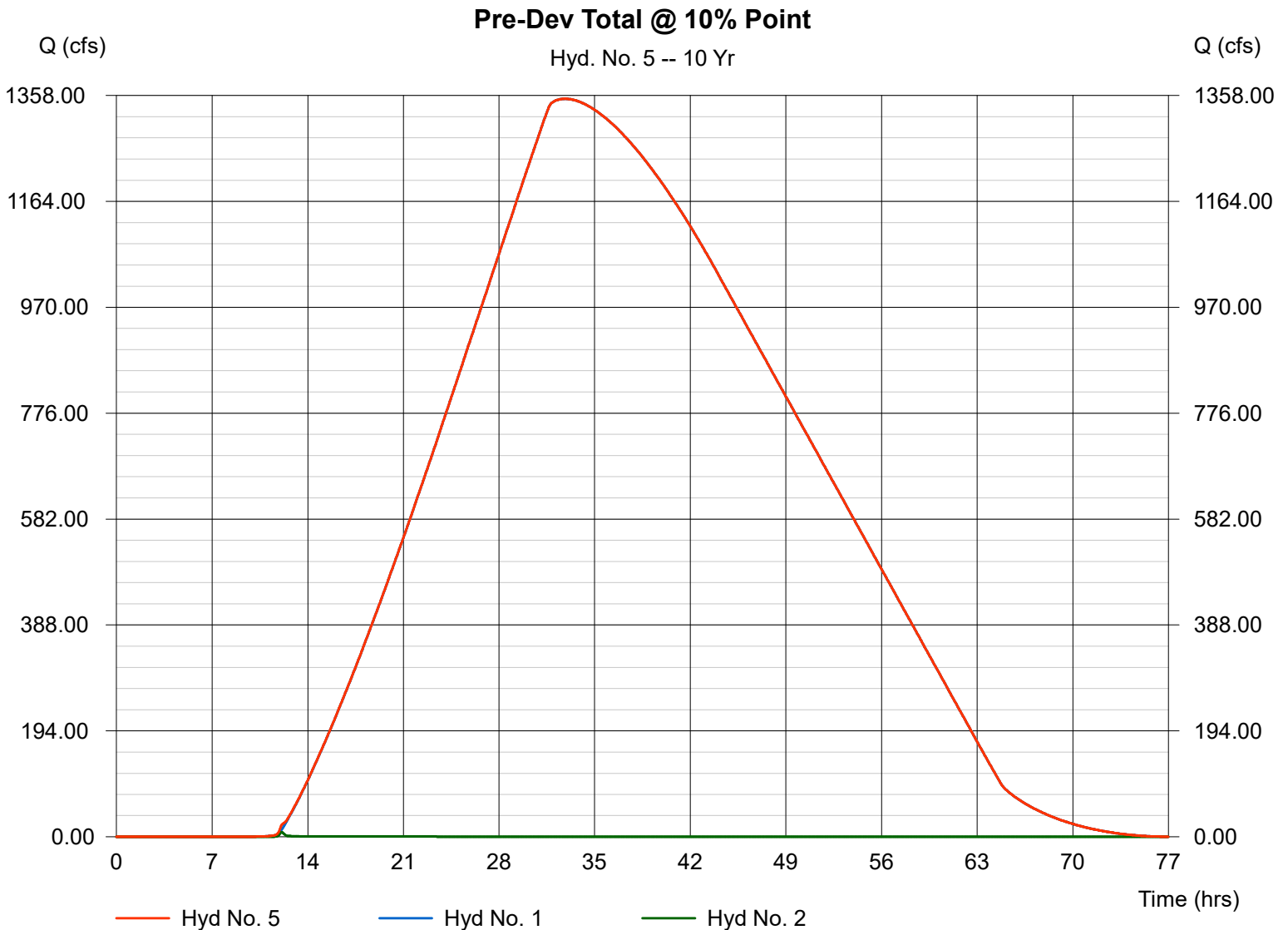
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 1, 2

Peak discharge = 1351.98 cfs
Time interval = 3 min

Hydrograph Volume = 142,993,500 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:23 PM

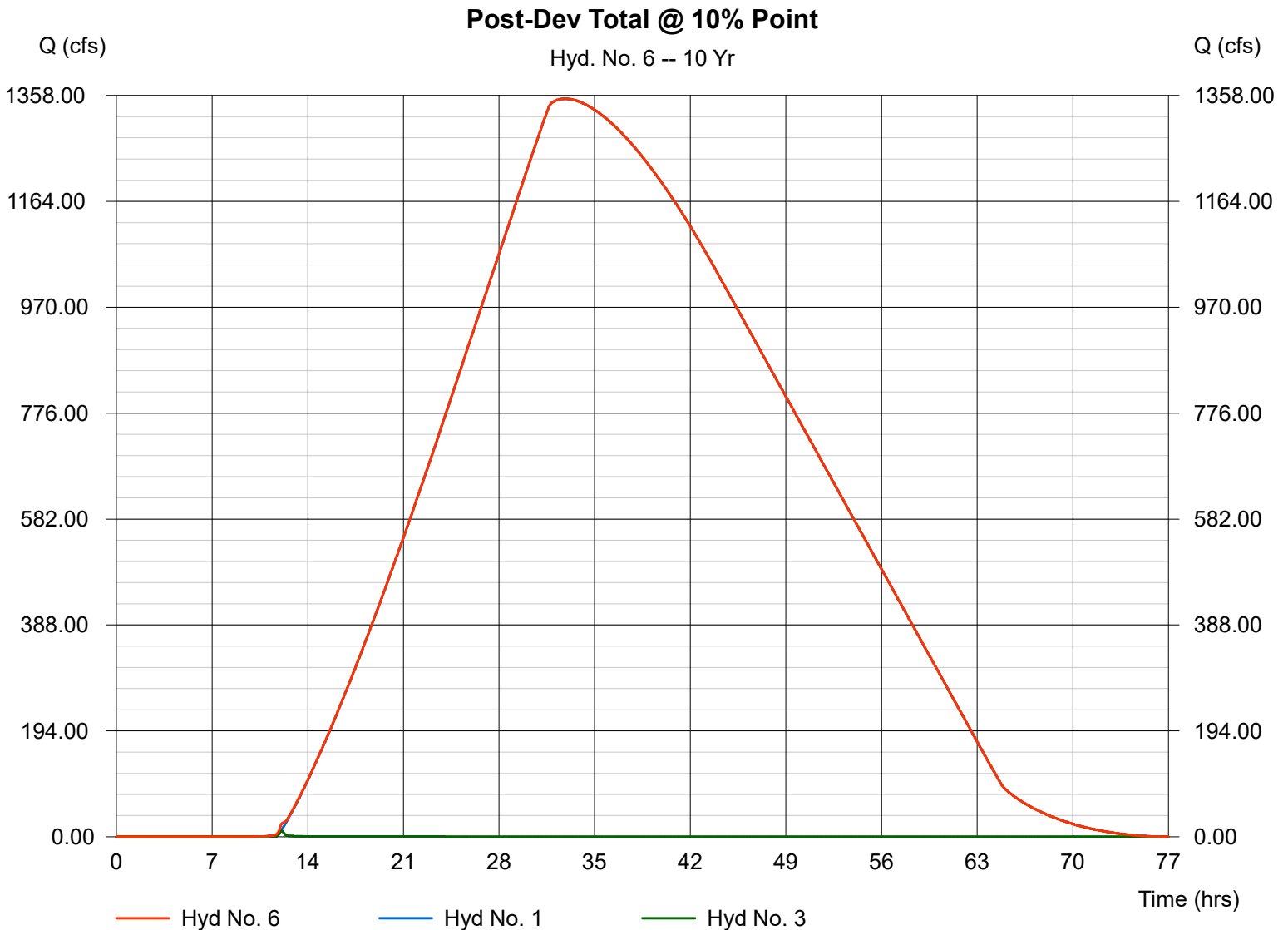
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 1, 3

Peak discharge = 1351.98 cfs
Time interval = 3 min

Hydrograph Volume = 143,000,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

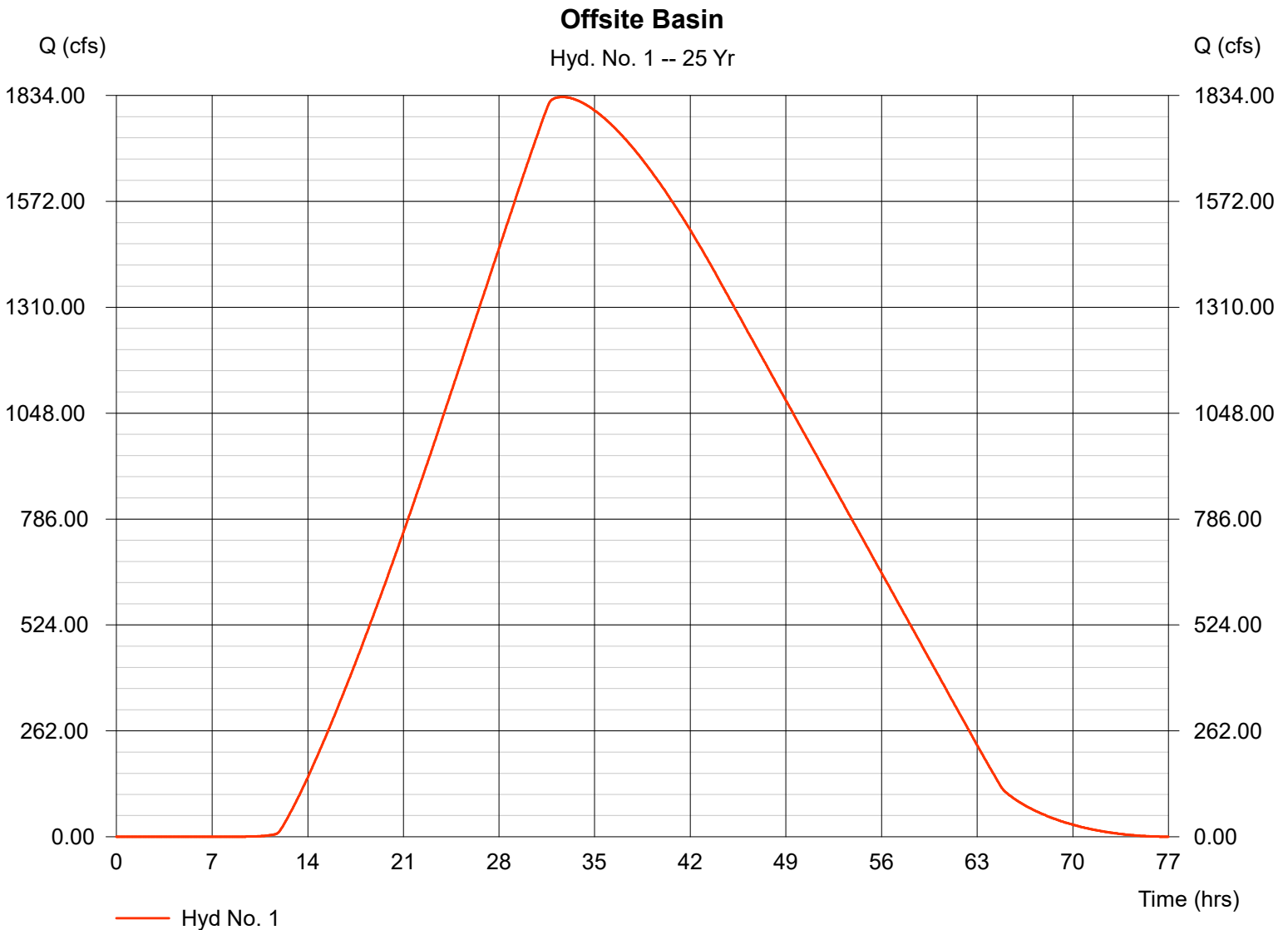
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 1830.42 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 192,946,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

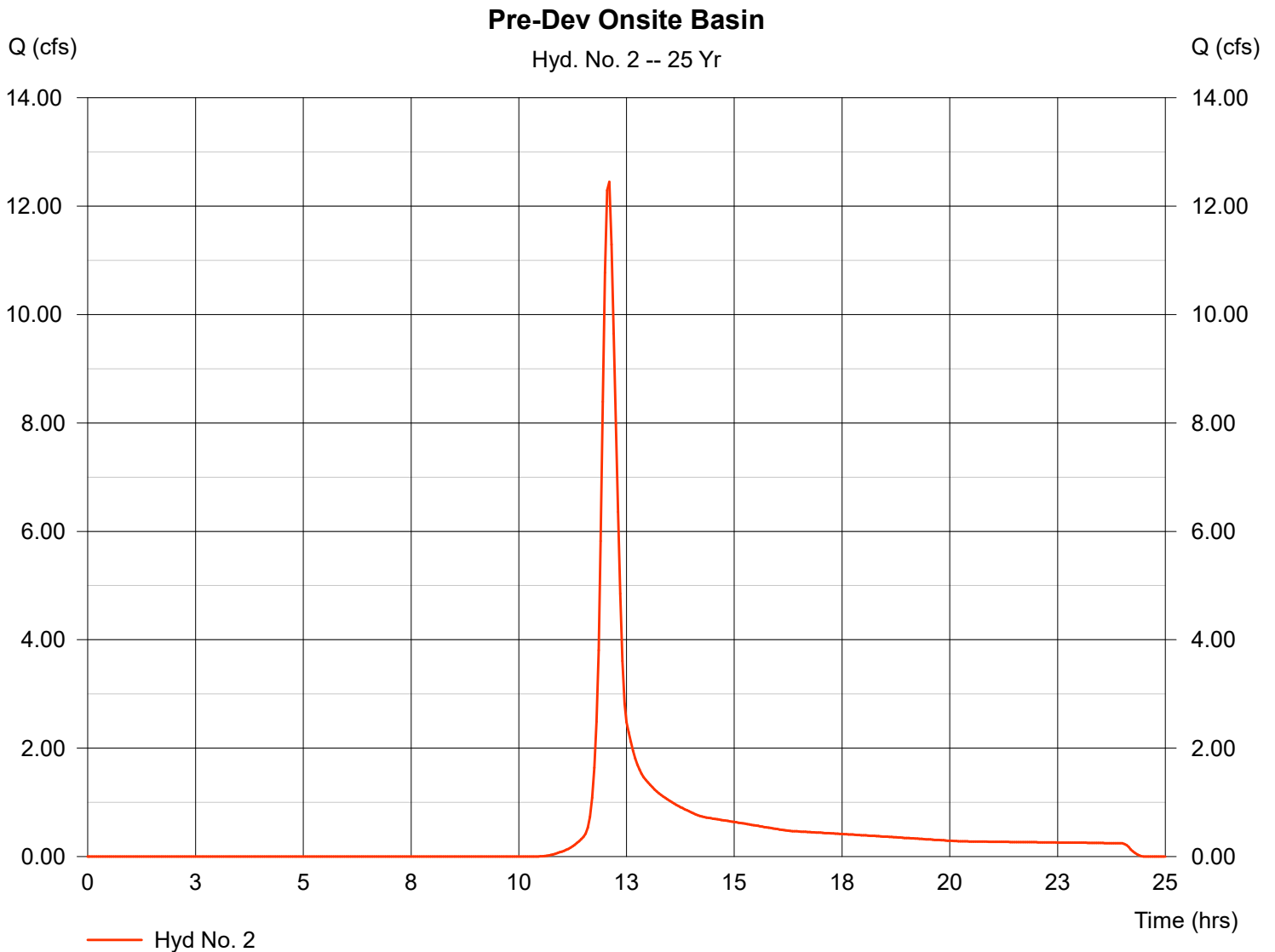
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 12.45 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 41,174 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

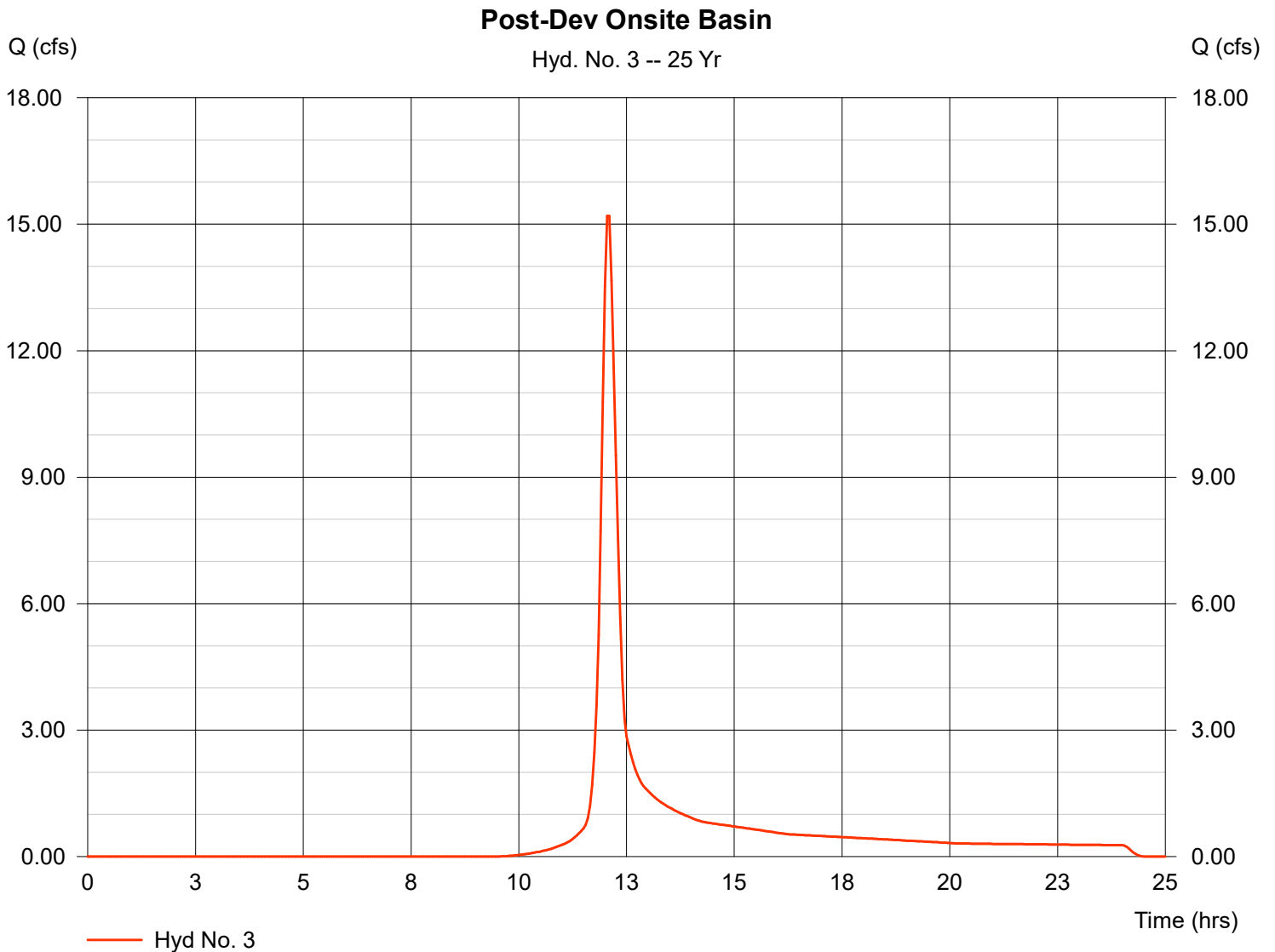
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 15.20 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 49,424 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

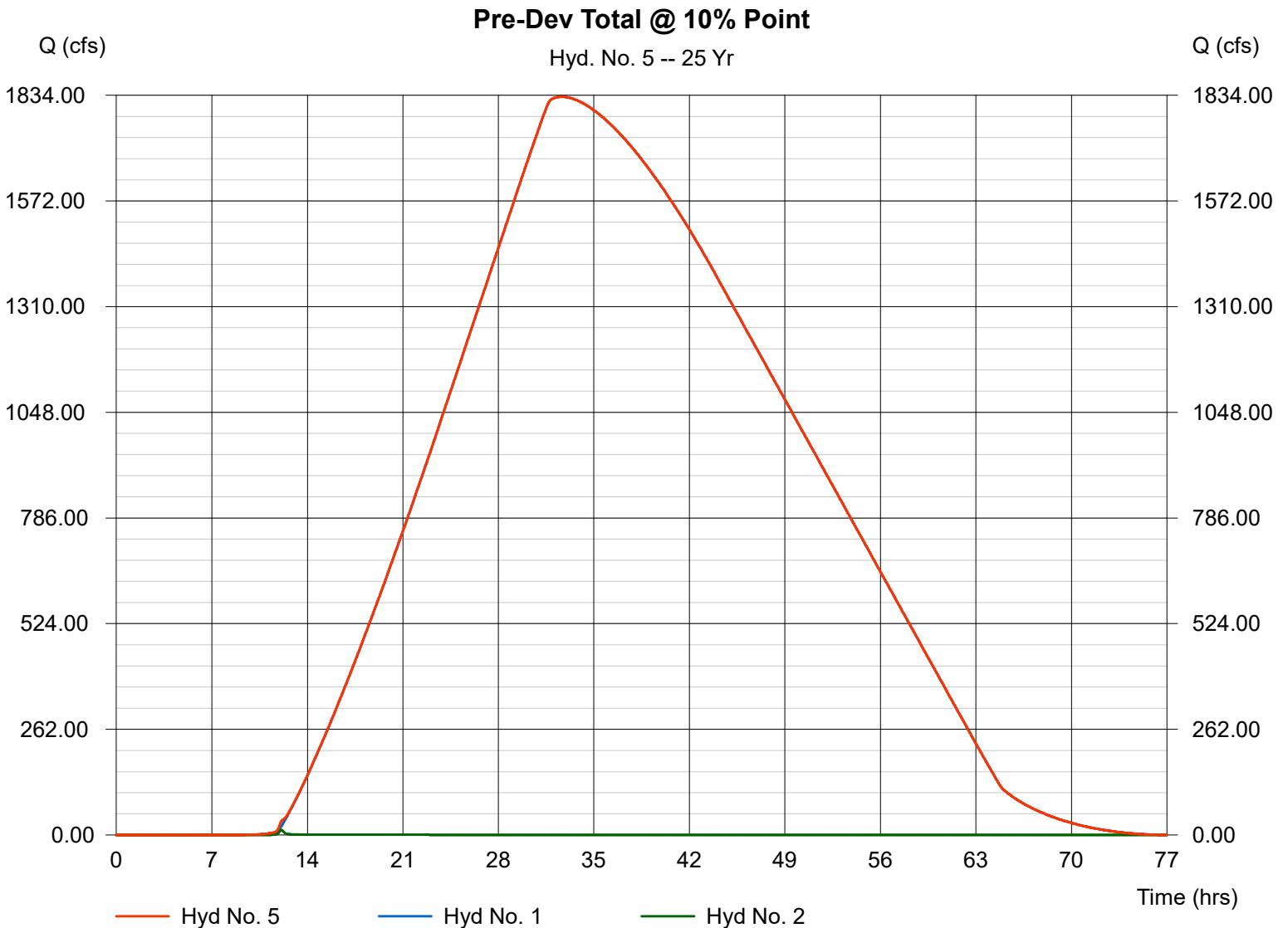
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 1, 2

Peak discharge = 1830.42 cfs
Time interval = 3 min

Hydrograph Volume = 192,987,200 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

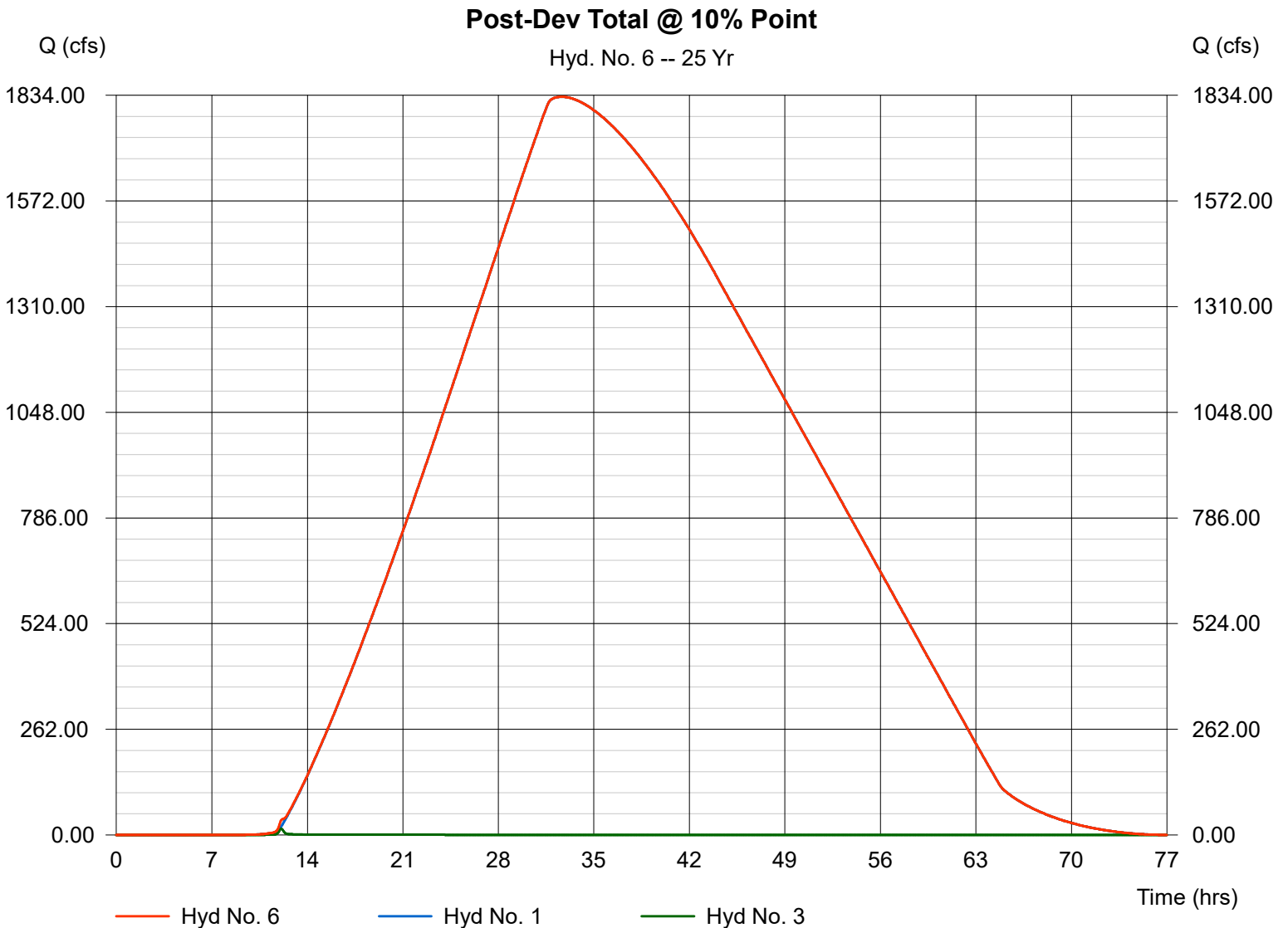
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 1, 3

Peak discharge = 1830.42 cfs
Time interval = 3 min

Hydrograph Volume = 192,995,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

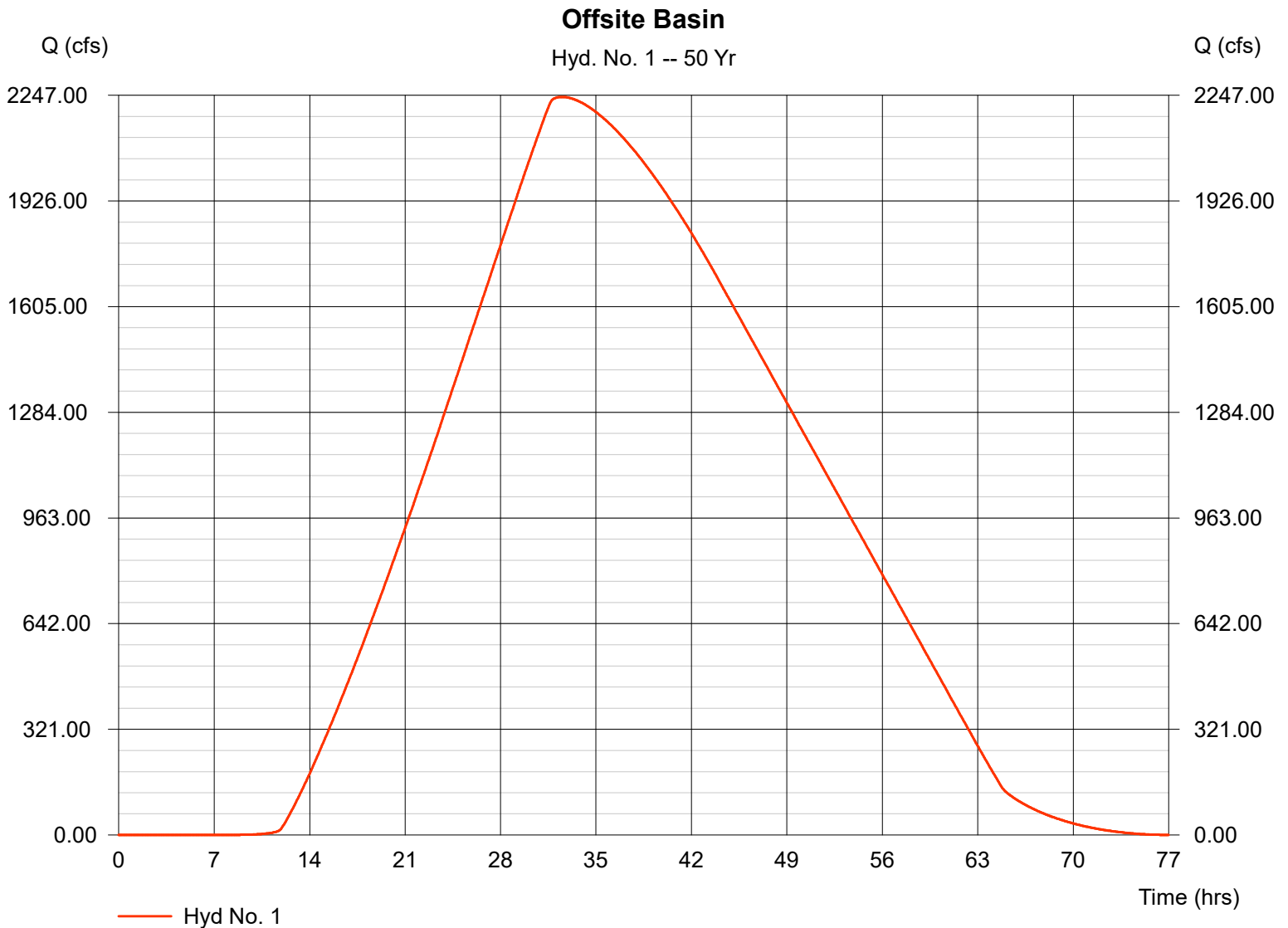
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 2242.08 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 235,888,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

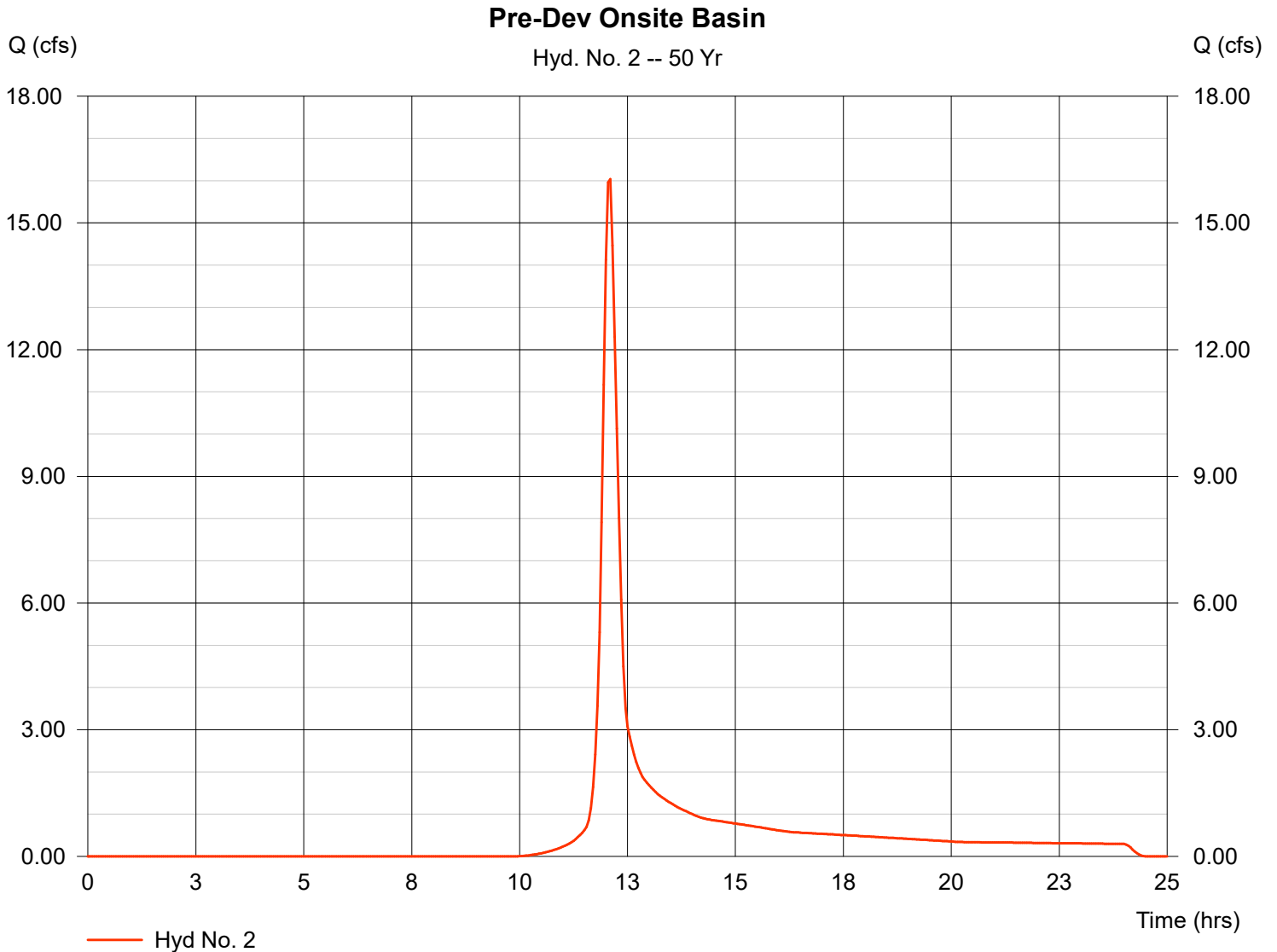
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 16.04 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 52,419 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

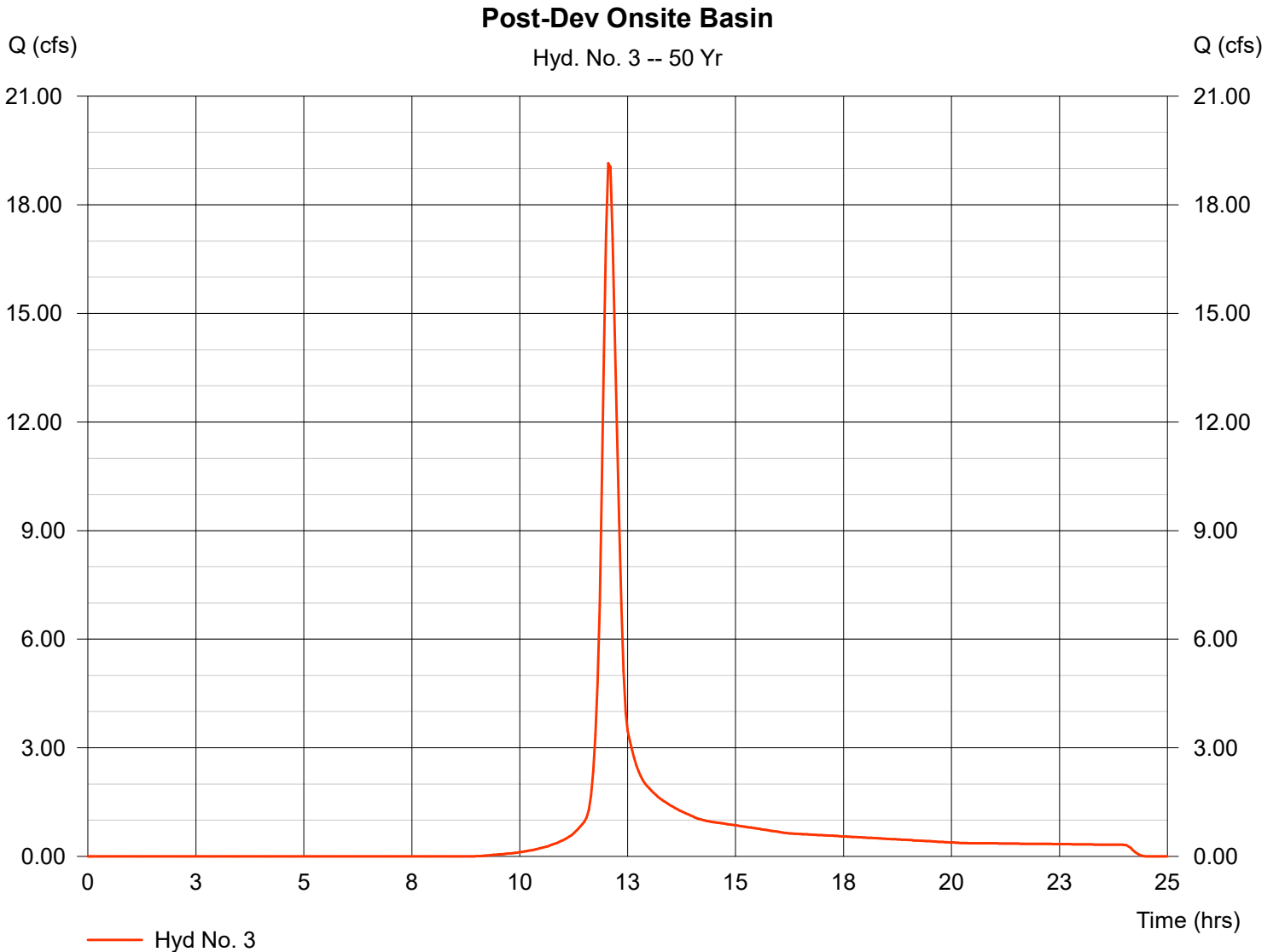
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 19.15 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 61,678 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

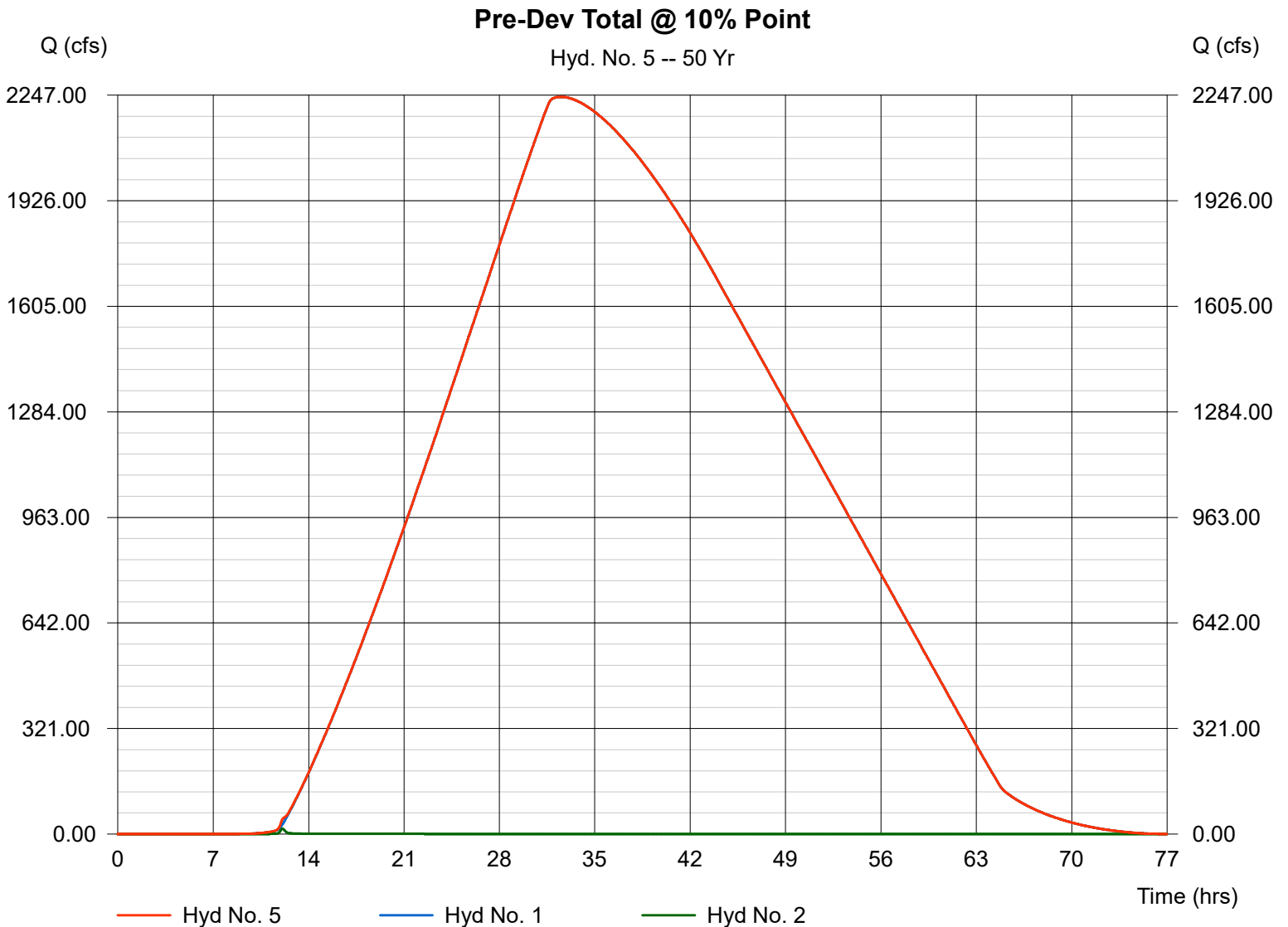
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 50 yrs
Inflow hyds. = 1, 2

Peak discharge = 2242.08 cfs
Time interval = 3 min

Hydrograph Volume = 235,940,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

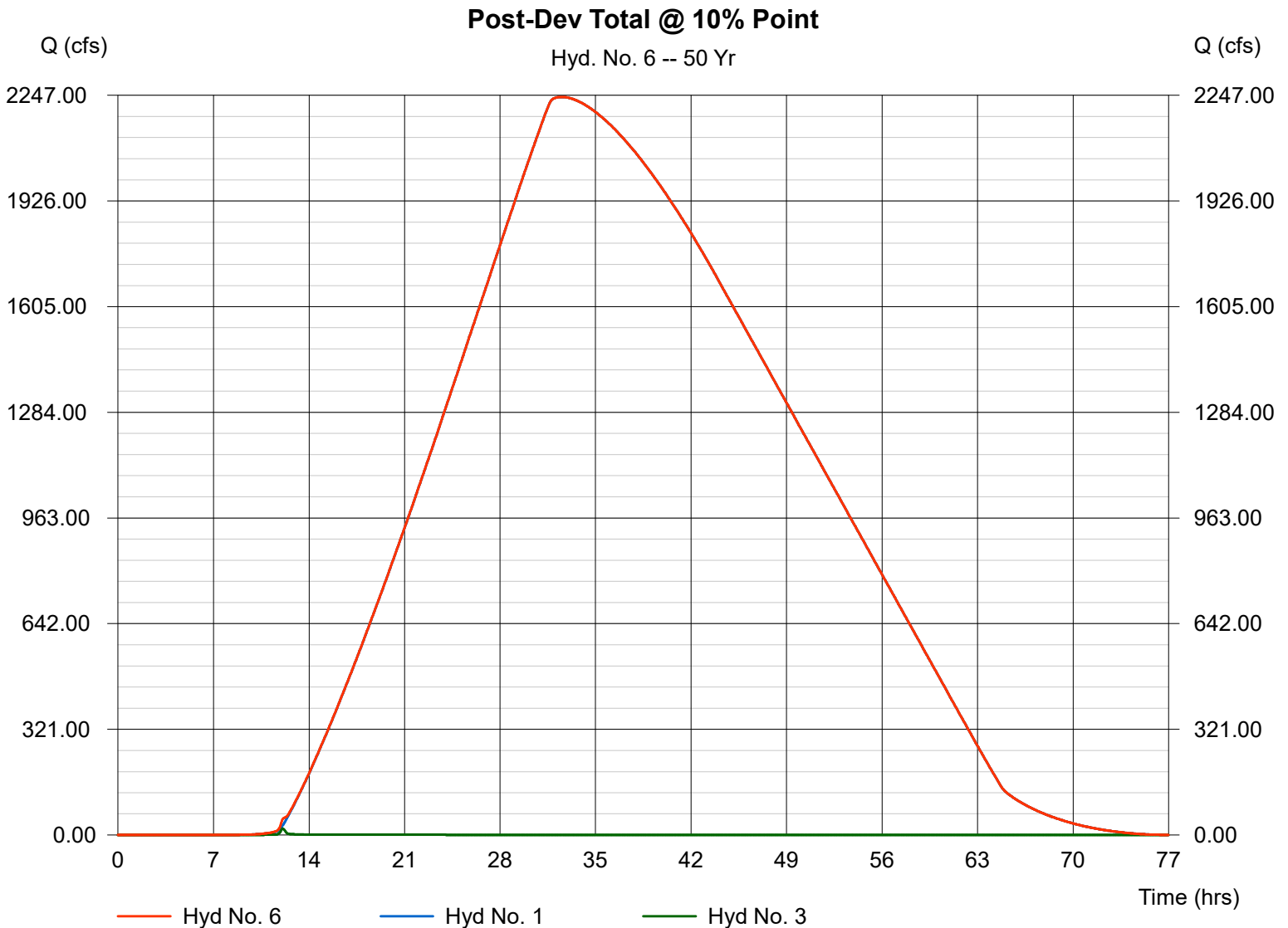
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 50 yrs
Inflow hyds. = 1, 3

Peak discharge = 2242.08 cfs
Time interval = 3 min

Hydrograph Volume = 235,949,600 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

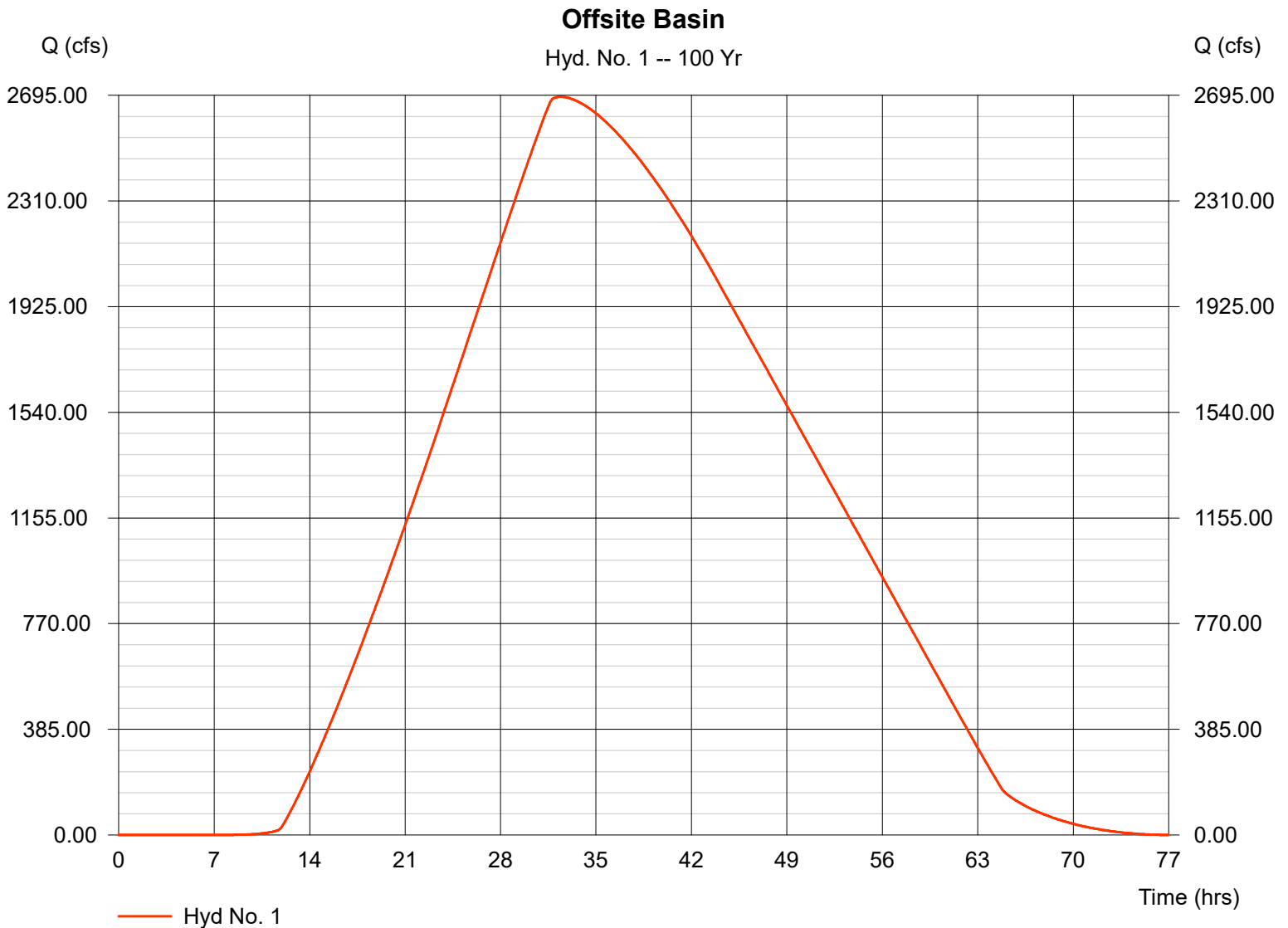
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 2689.52 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.44 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 282,525,200 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:24 PM

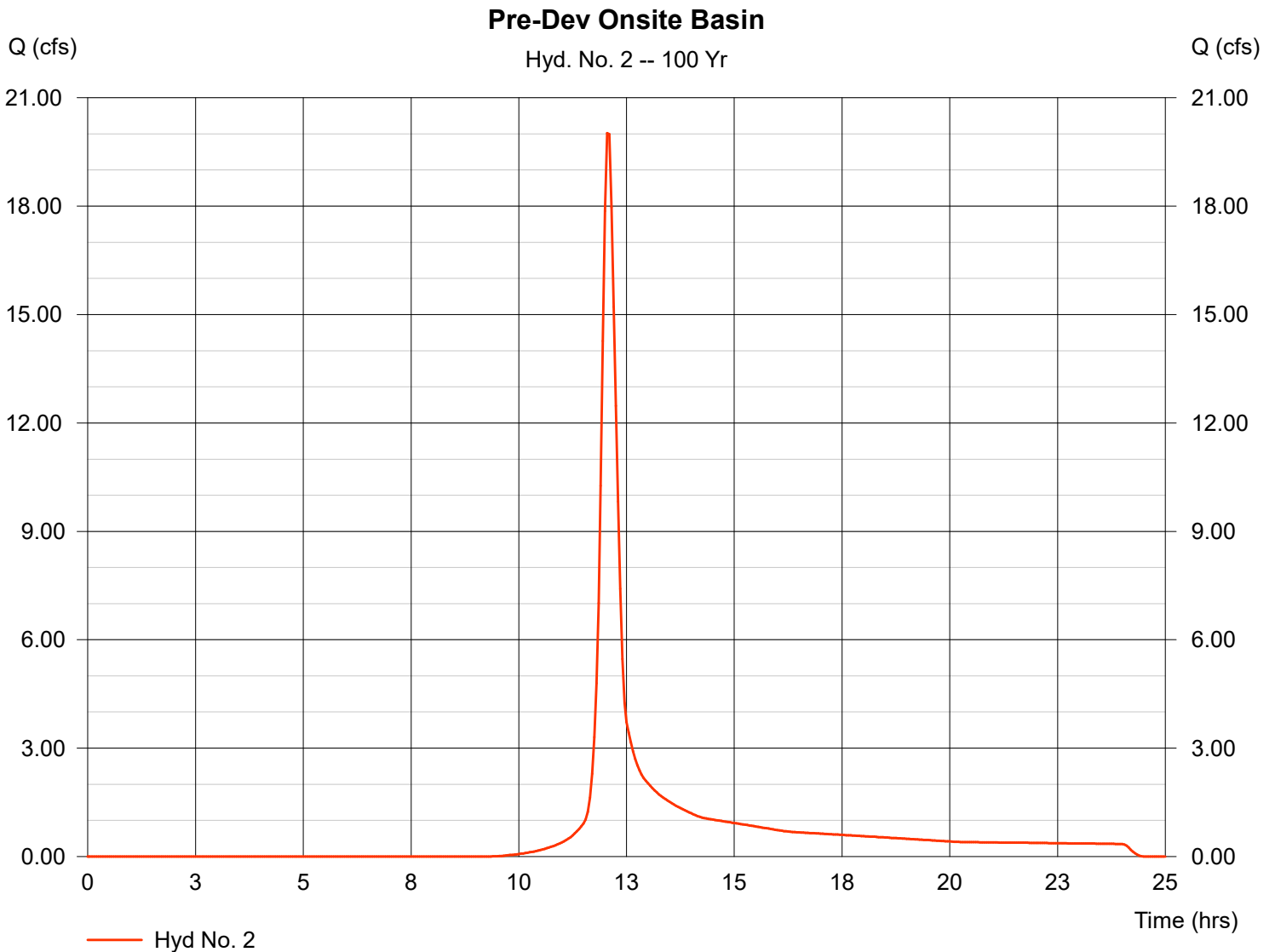
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 20.02 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 64,930 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:25 PM

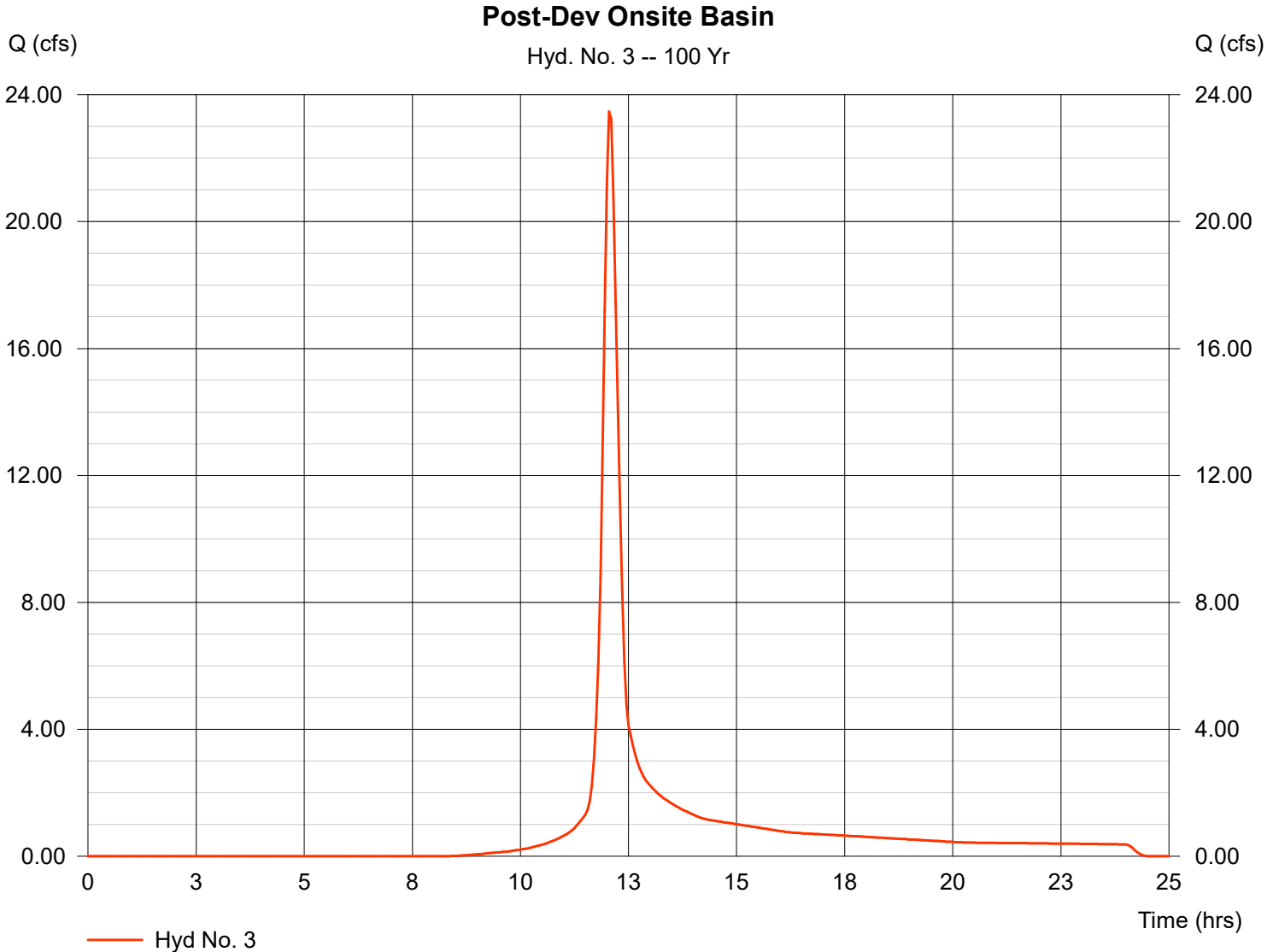
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 23.46 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 75,149 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:25 PM

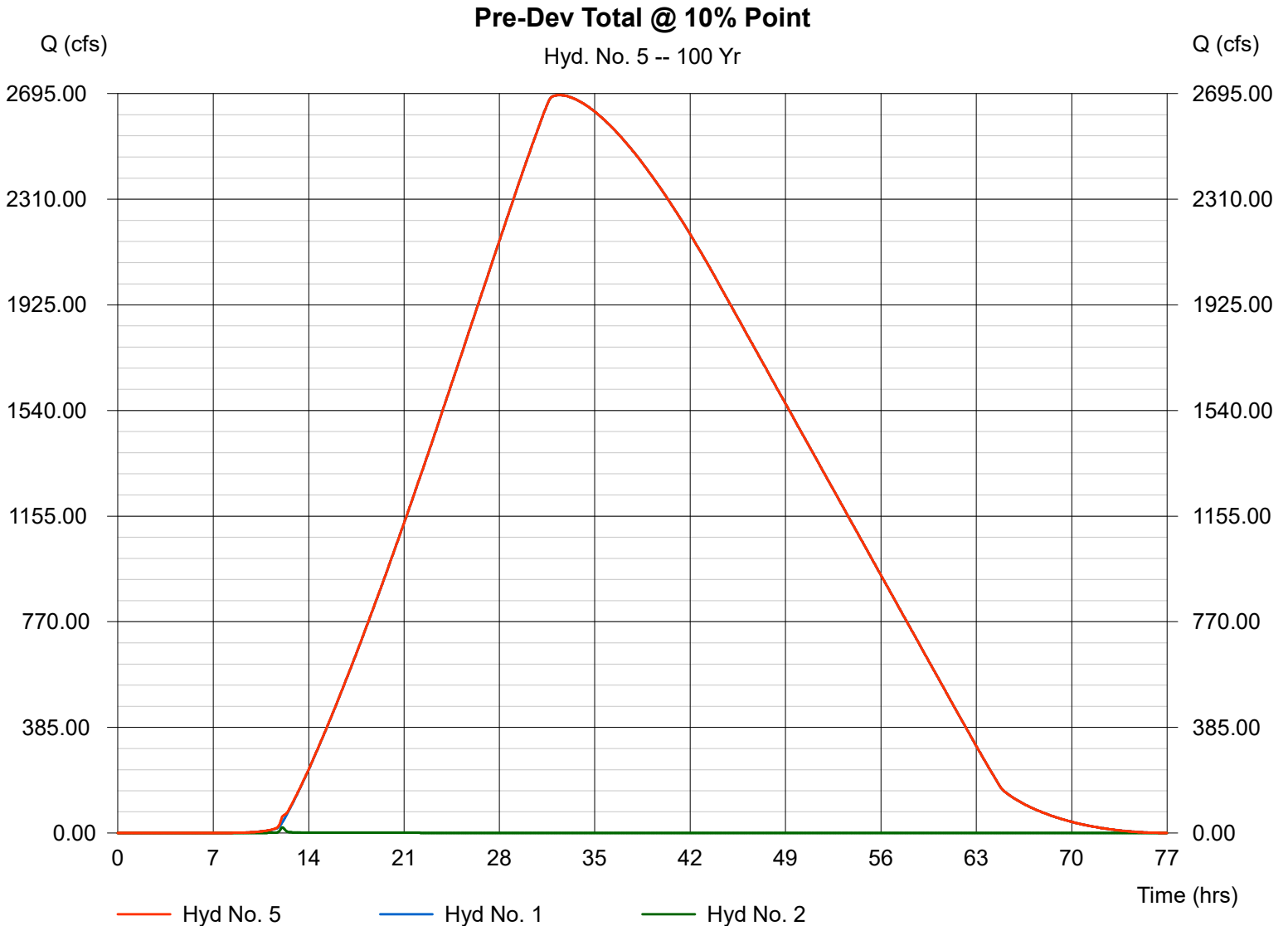
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 100 yrs
Inflow hyds. = 1, 2

Peak discharge = 2689.52 cfs
Time interval = 3 min

Hydrograph Volume = 282,590,100 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Friday, Mar 11 2022, 12:25 PM

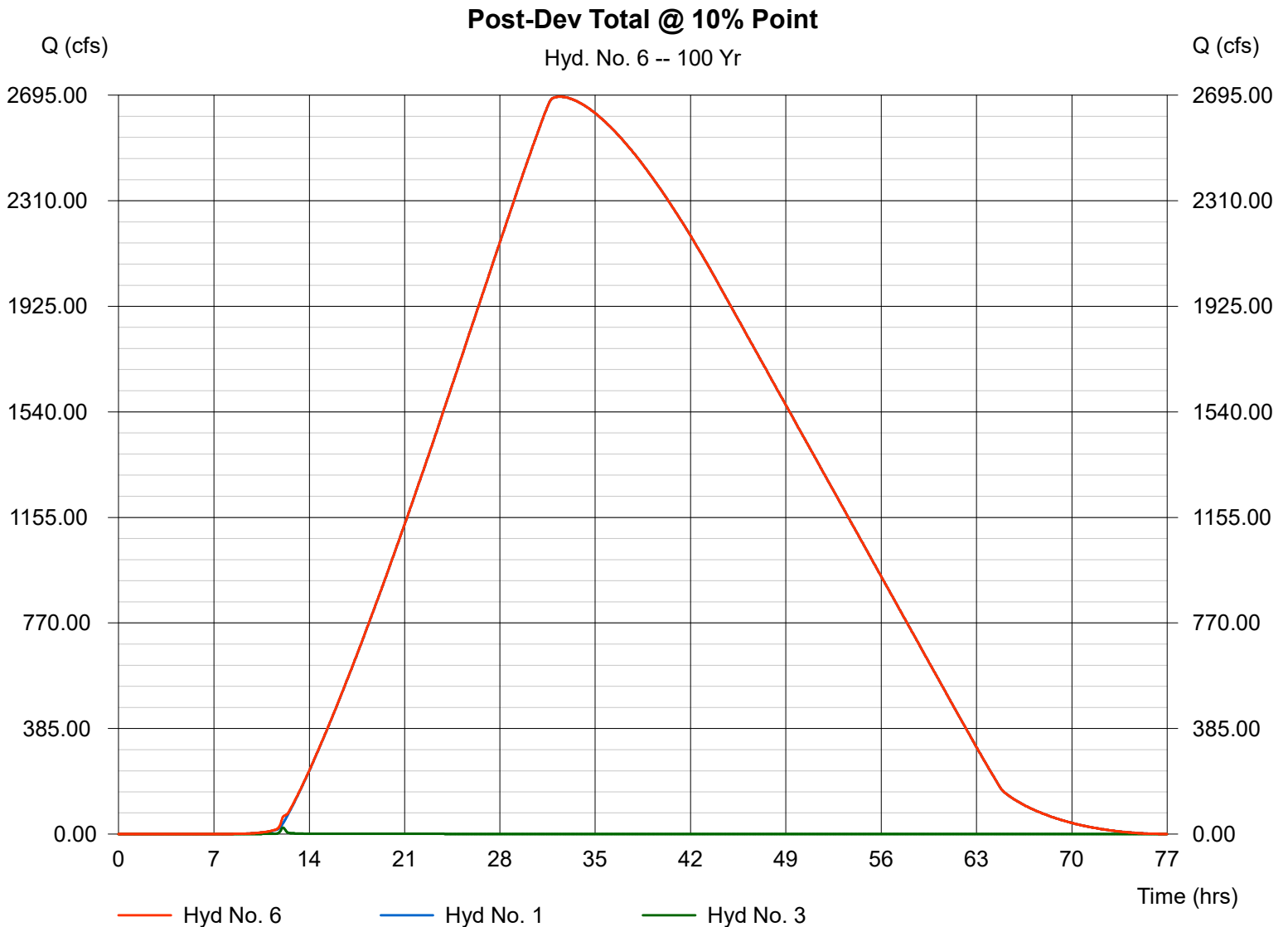
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 100 yrs
Inflow hyds. = 1, 3

Peak discharge = 2689.52 cfs
Time interval = 3 min

Hydrograph Volume = 282,600,300 cuft



**HYDROGRAPHS
WITH
DETENTION**

Hydrograph Return Period Recap

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	-----	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Offsite Basin
2	SCS Runoff	-----	2.00	3.27	-----	5.81	8.37	12.45	16.04	20.02	Pre-Dev Onsite Basin
3	SCS Runoff	-----	3.43	4.97	-----	7.88	10.74	15.20	19.15	23.46	Post-Dev Onsite Basin
5	Combine	1, 2,	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Pre-Dev Total @ 10% Point
6	Combine	1, 3,	550.76	722.66	-----	1042.23	1351.98	1830.42	2242.08	2689.52	Post-Dev Total @ 10% Point
8	Reservoir	3	0.14	0.17	-----	0.45	1.94	9.90	15.98	21.98	Post-Dev Basin Routed
9	Combine	1, 8	550.85	722.79	-----	1042.40	1352.15	1830.59	2242.25	2689.70	Post-Dev @ 10% Point With Detention

Pond Report

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:46 AM

Pond No. 1 - Det Pond

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	754.00	3,500	0	0
2.00	756.00	4,000	7,500	7,500
4.00	758.00	4,500	8,500	16,000
6.00	760.00	5,000	9,500	25,500

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 24.00	2.00	0.00	0.00
Span (in)	= 24.00	2.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 753.50	754.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	0.00
N-Value	= .013	.013	.000	.000
Orif. Coeff.	= 0.60	0.60	0.00	0.00
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 10.56	0.00	0.00	0.00
Crest El. (ft)	= 758.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Riser	---	---	---
Multi-Stage	= Yes	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0	754.00	0.00	0.00	---	---	0.00	---	---	---	---	0.00
0.20	750	754.20	1.50	0.04	---	---	0.00	---	---	---	---	0.04
0.40	1,500	754.40	1.50	0.06	---	---	0.00	---	---	---	---	0.06
0.60	2,250	754.60	1.50	0.08	---	---	0.00	---	---	---	---	0.08
0.80	3,000	754.80	1.50	0.09	---	---	0.00	---	---	---	---	0.09
1.00	3,750	755.00	1.50	0.10	---	---	0.00	---	---	---	---	0.10
1.20	4,500	755.20	1.50	0.11	---	---	0.00	---	---	---	---	0.11
1.40	5,250	755.40	1.50	0.12	---	---	0.00	---	---	---	---	0.12
1.60	6,000	755.60	1.50	0.13	---	---	0.00	---	---	---	---	0.13
1.80	6,750	755.80	1.50	0.14	---	---	0.00	---	---	---	---	0.14
2.00	7,500	756.00	1.50	0.15	---	---	0.00	---	---	---	---	0.15
2.20	8,350	756.20	1.50	0.15	---	---	0.00	---	---	---	---	0.15
2.40	9,200	756.40	1.50	0.16	---	---	0.00	---	---	---	---	0.16
2.60	10,050	756.60	1.50	0.17	---	---	0.00	---	---	---	---	0.17
2.80	10,900	756.80	1.50	0.17	---	---	0.00	---	---	---	---	0.17
3.00	11,750	757.00	1.50	0.18	---	---	0.00	---	---	---	---	0.18
3.20	12,600	757.20	1.50	0.19	---	---	0.00	---	---	---	---	0.19
3.40	13,450	757.40	1.50	0.19	---	---	0.00	---	---	---	---	0.19
3.60	14,300	757.60	1.50	0.20	---	---	0.00	---	---	---	---	0.20
3.80	15,150	757.80	1.50	0.20	---	---	0.00	---	---	---	---	0.20
4.00	16,000	758.00	1.50	0.21	---	---	0.00	---	---	---	---	0.21
4.20	16,950	758.20	3.39	0.21	---	---	3.15	---	---	---	---	3.35
4.40	17,900	758.40	9.13	0.20	---	---	8.90	---	---	---	---	9.09
4.60	18,850	758.60	16.52	0.17	---	---	16.34	---	---	---	---	16.52
4.80	19,800	758.80	25.29	0.13	---	---	25.16	---	---	---	---	25.29
5.00	20,750	759.00	30.17	0.08	---	---	30.10	---	---	---	---	30.17
5.20	21,700	759.20	31.65	0.06	---	---	31.59	---	---	---	---	31.65
5.40	22,650	759.40	32.67	0.05	---	---	32.61	---	---	---	---	32.66
5.60	23,600	759.60	33.36	0.05	---	---	33.30	---	---	---	---	33.35
5.80	24,550	759.80	34.02	0.05	---	---	33.97	---	---	---	---	34.02
6.00	25,500	760.00	34.68	0.05	---	---	34.62	---	---	---	---	34.67

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

Hyd. No. 9

Post-Dev @ 10% Point With Detention

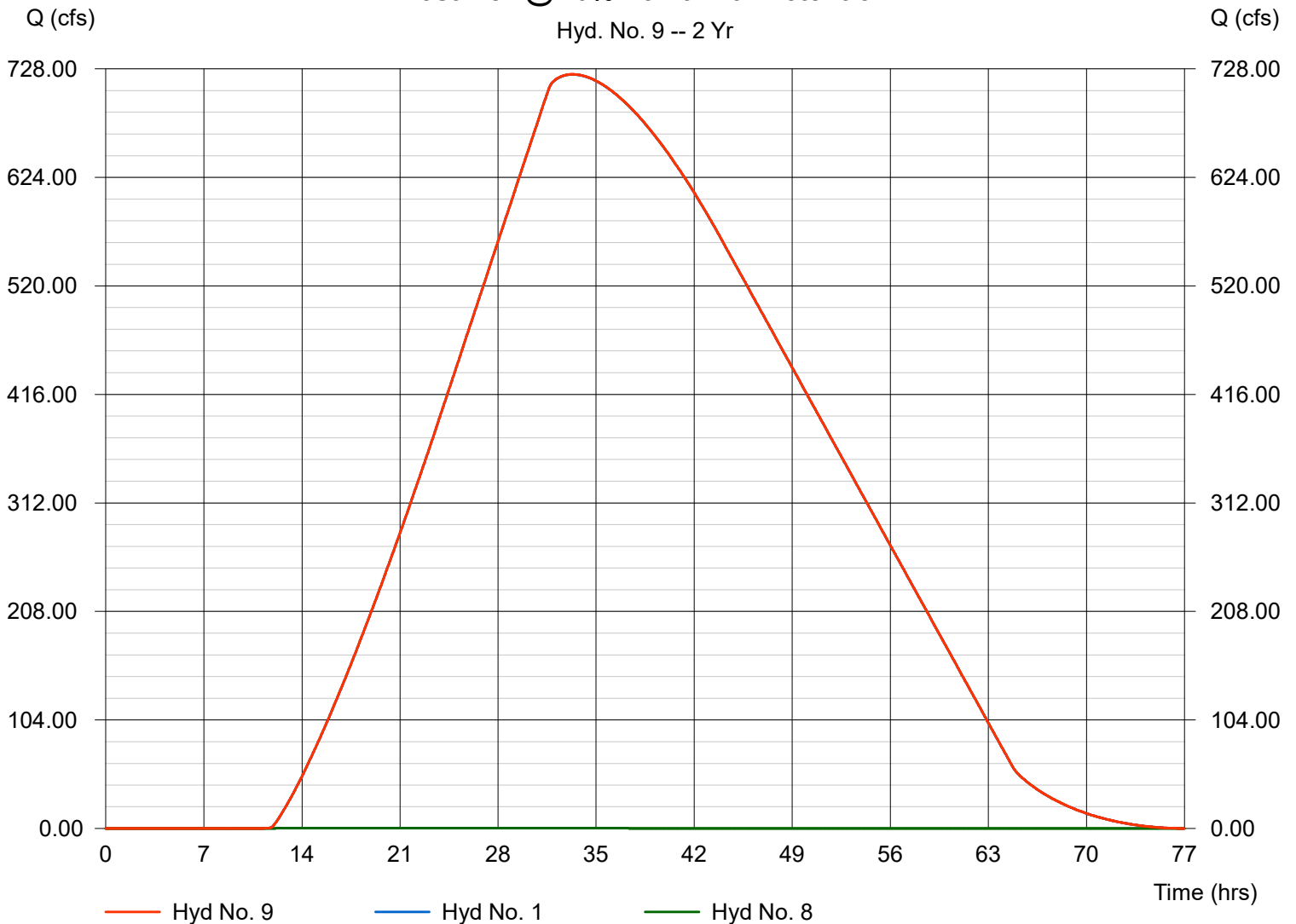
Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 1, 8

Peak discharge = 722.79 cfs
Time interval = 3 min

Hydrograph Volume = 76,996,750 cuft

Post-Dev @ 10% Point With Detention

Hyd. No. 9 -- 2 Yr



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

Hyd. No. 8

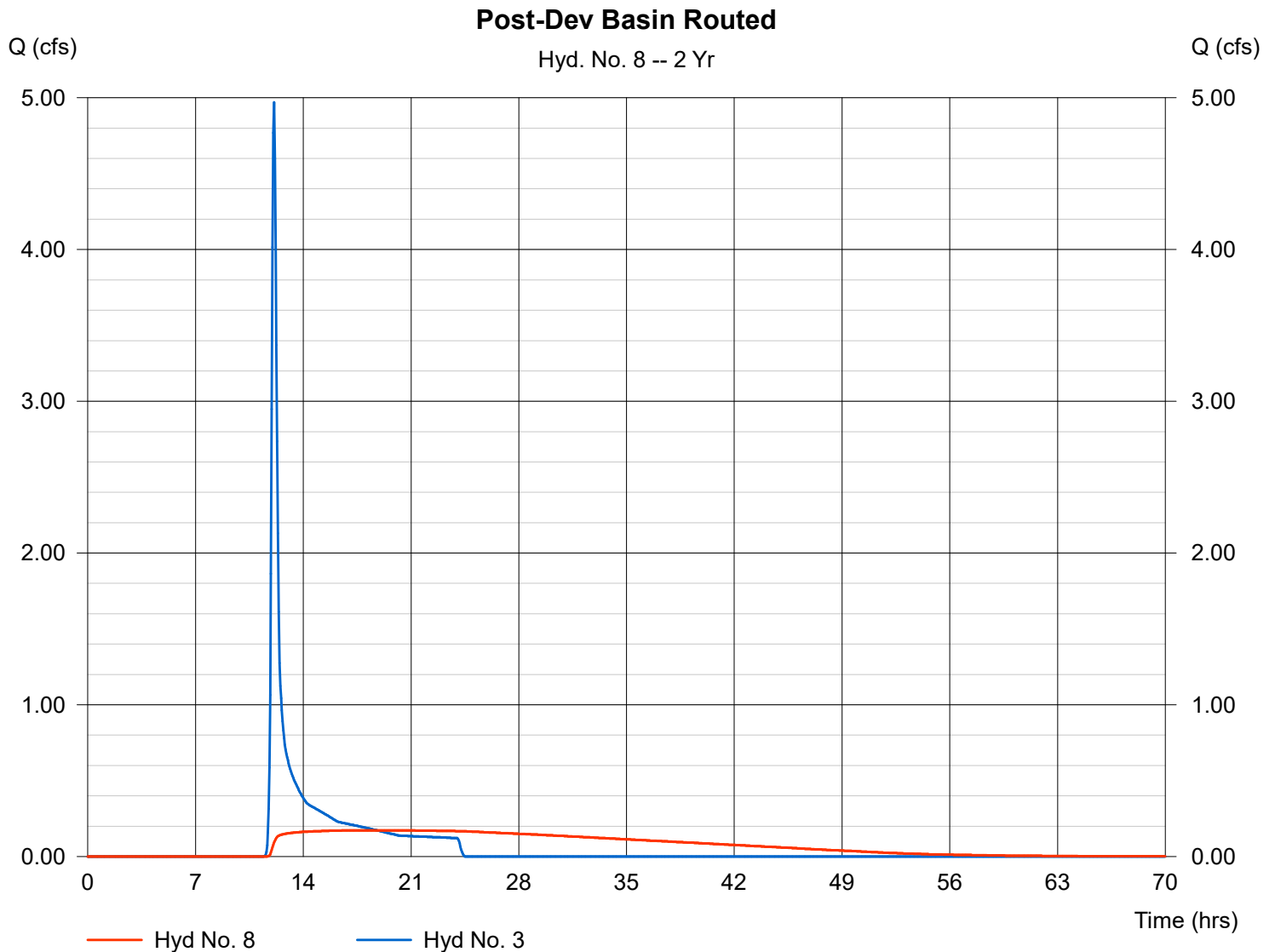
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 0.17 cfs
Time interval = 3 min
Max. Elevation = 756.80 ft
Max. Storage = 10,882 cuft

Storage Indication method used.

Hydrograph Volume = 17,528 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

Hyd. No. 6

Post-Dev Total @ 10% Point

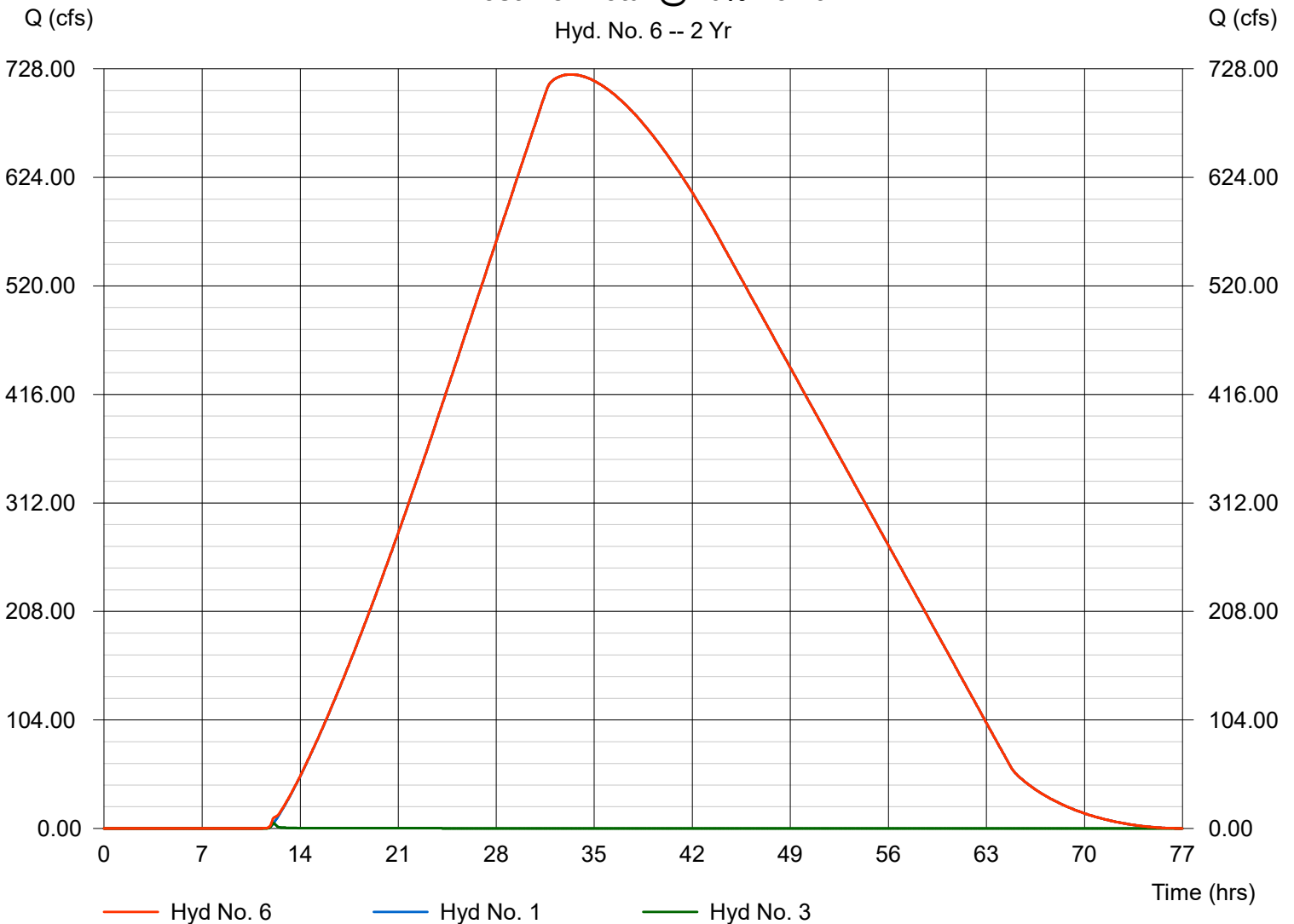
Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 1, 3

Peak discharge = 722.66 cfs
Time interval = 3 min

Hydrograph Volume = 76,996,740 cuft

Post-Dev Total @ 10% Point

Hyd. No. 6 -- 2 Yr



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

Hyd. No. 5

Pre-Dev Total @ 10% Point

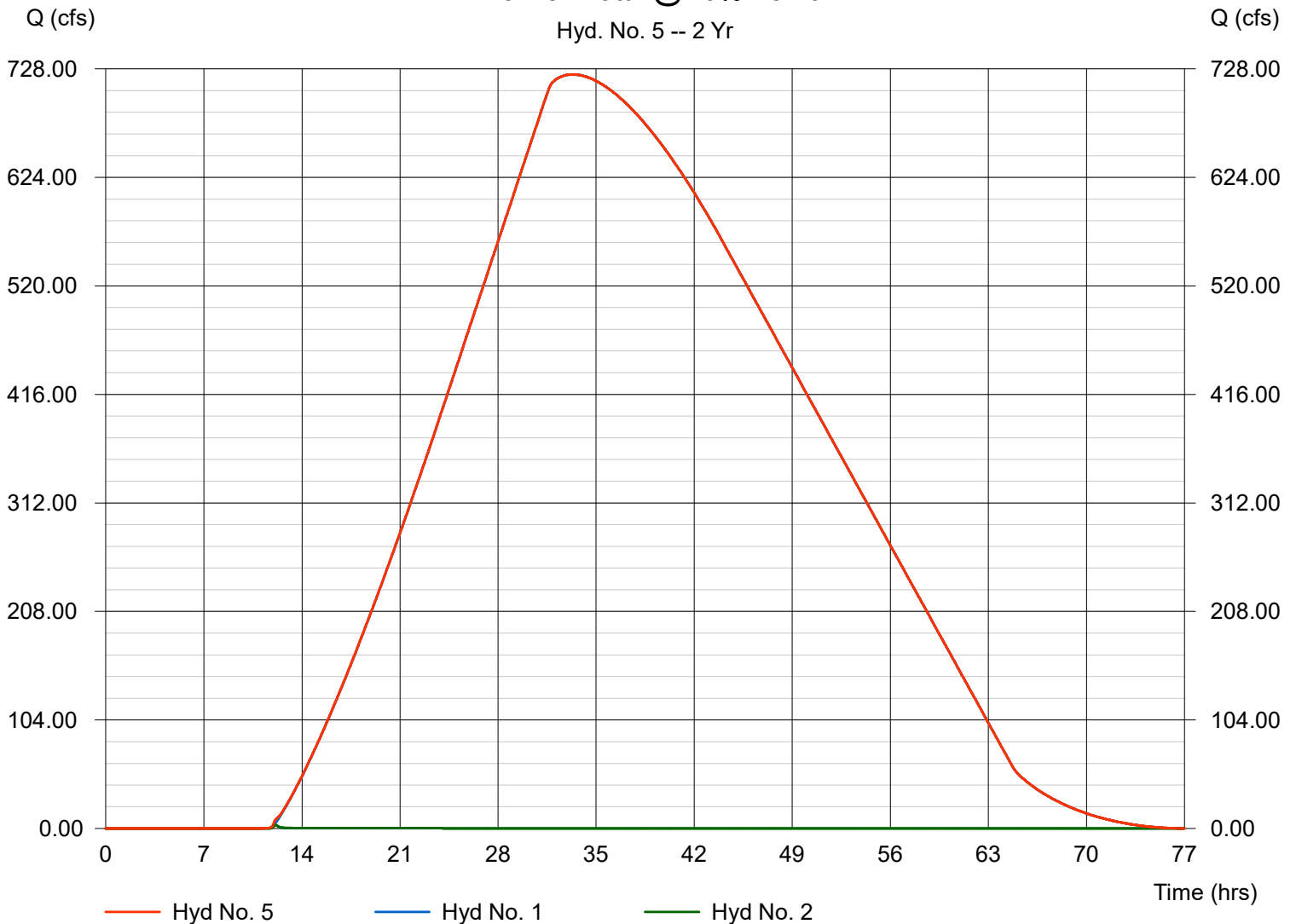
Hydrograph type = Combine
Storm frequency = 2 yrs
Inflow hyds. = 1, 2

Peak discharge = 722.66 cfs
Time interval = 3 min

Hydrograph Volume = 76,992,160 cuft

Pre-Dev Total @ 10% Point

Hyd. No. 5 -- 2 Yr



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

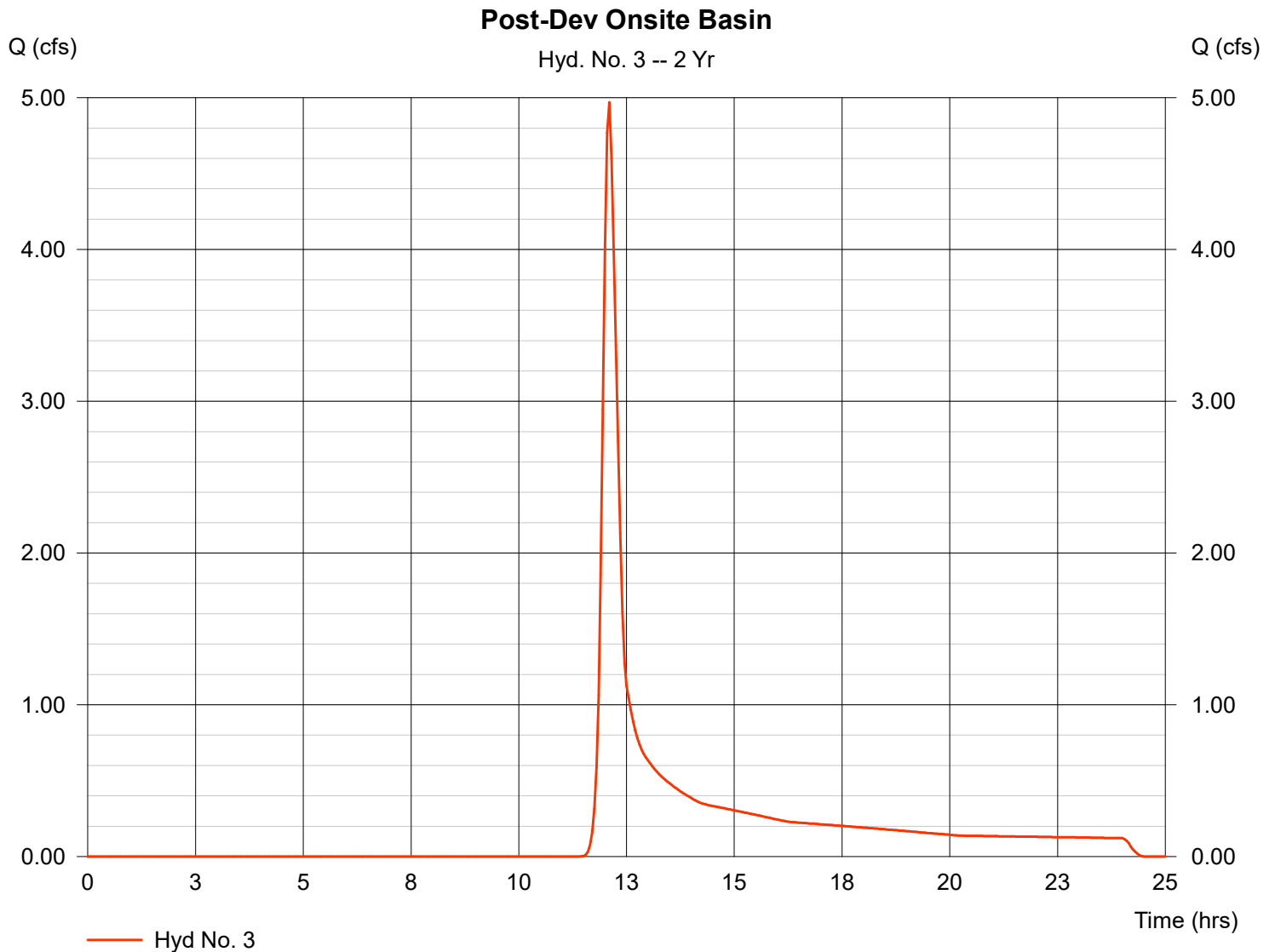
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 4.97 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 17,549 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

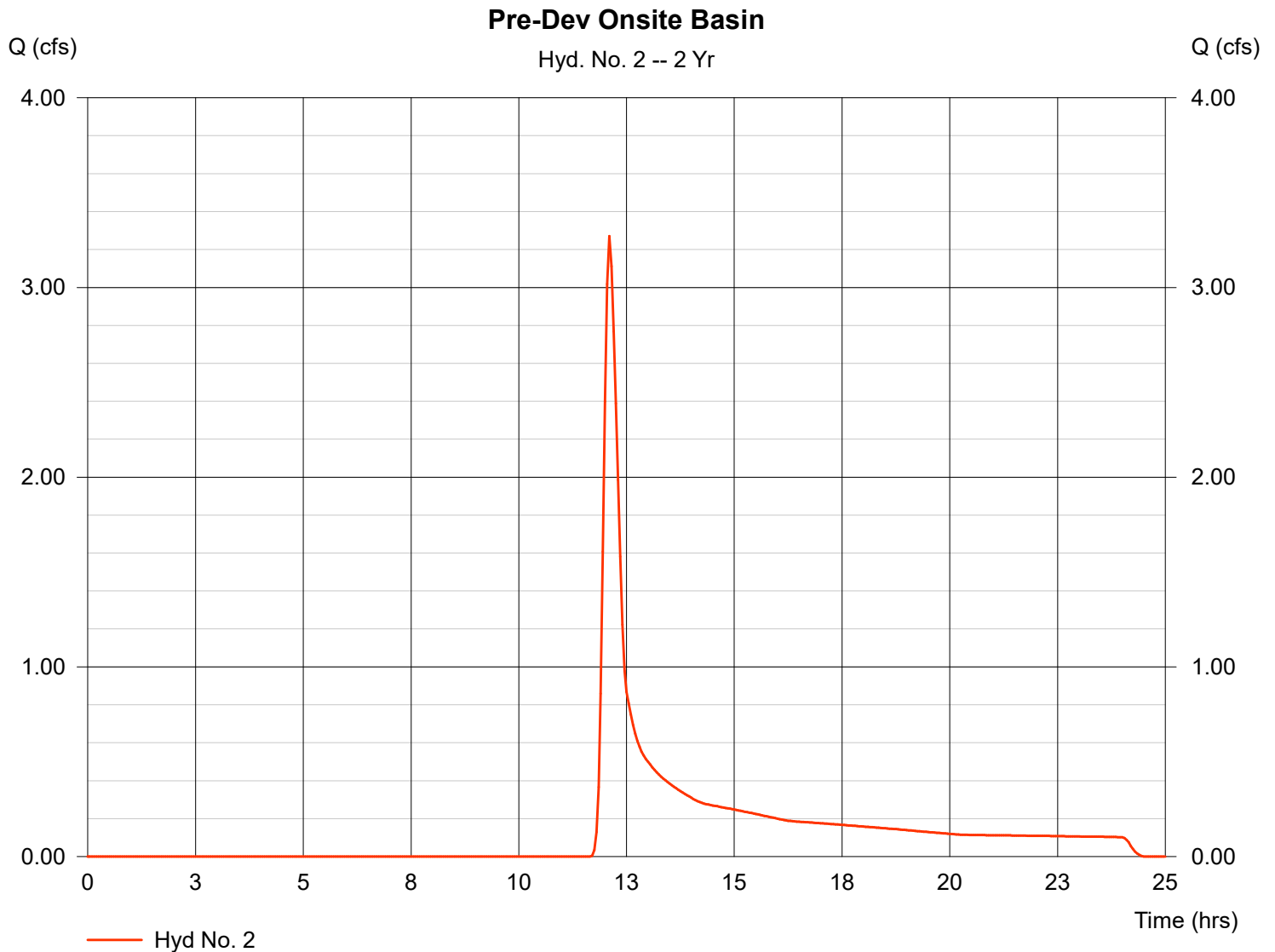
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 3.27 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 12,975 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:32 AM

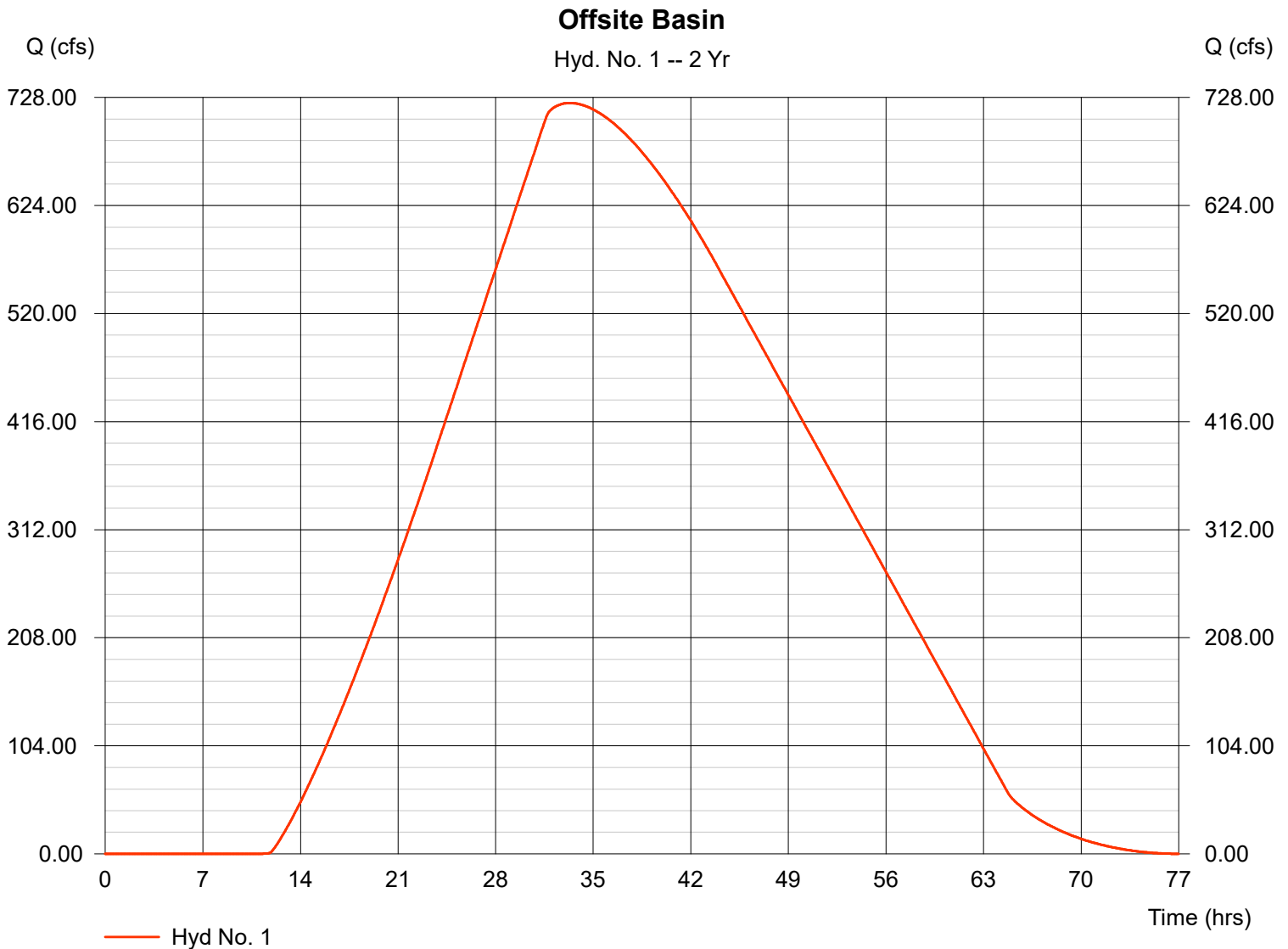
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 2 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 3.85 in
Storm duration = 24 hrs

Peak discharge = 722.66 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 76,979,180 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

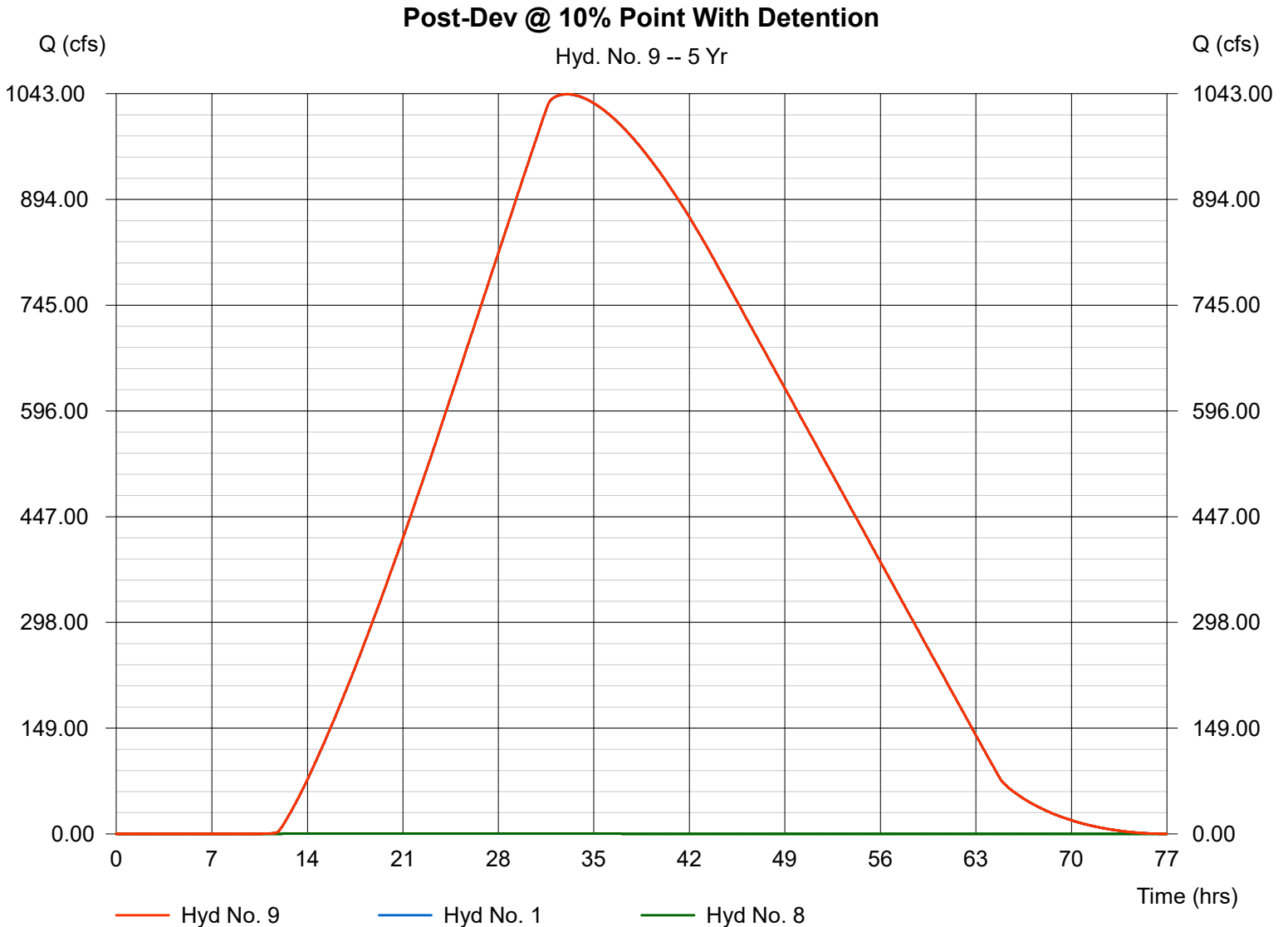
Hyd. No. 9

Post-Dev @ 10% Point With Detention

Hydrograph type = Combine
Storm frequency = 5 yrs
Inflow hyds. = 1, 8

Peak discharge = 1042.40 cfs
Time interval = 3 min

Hydrograph Volume = 110,561,700 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

Hyd. No. 8

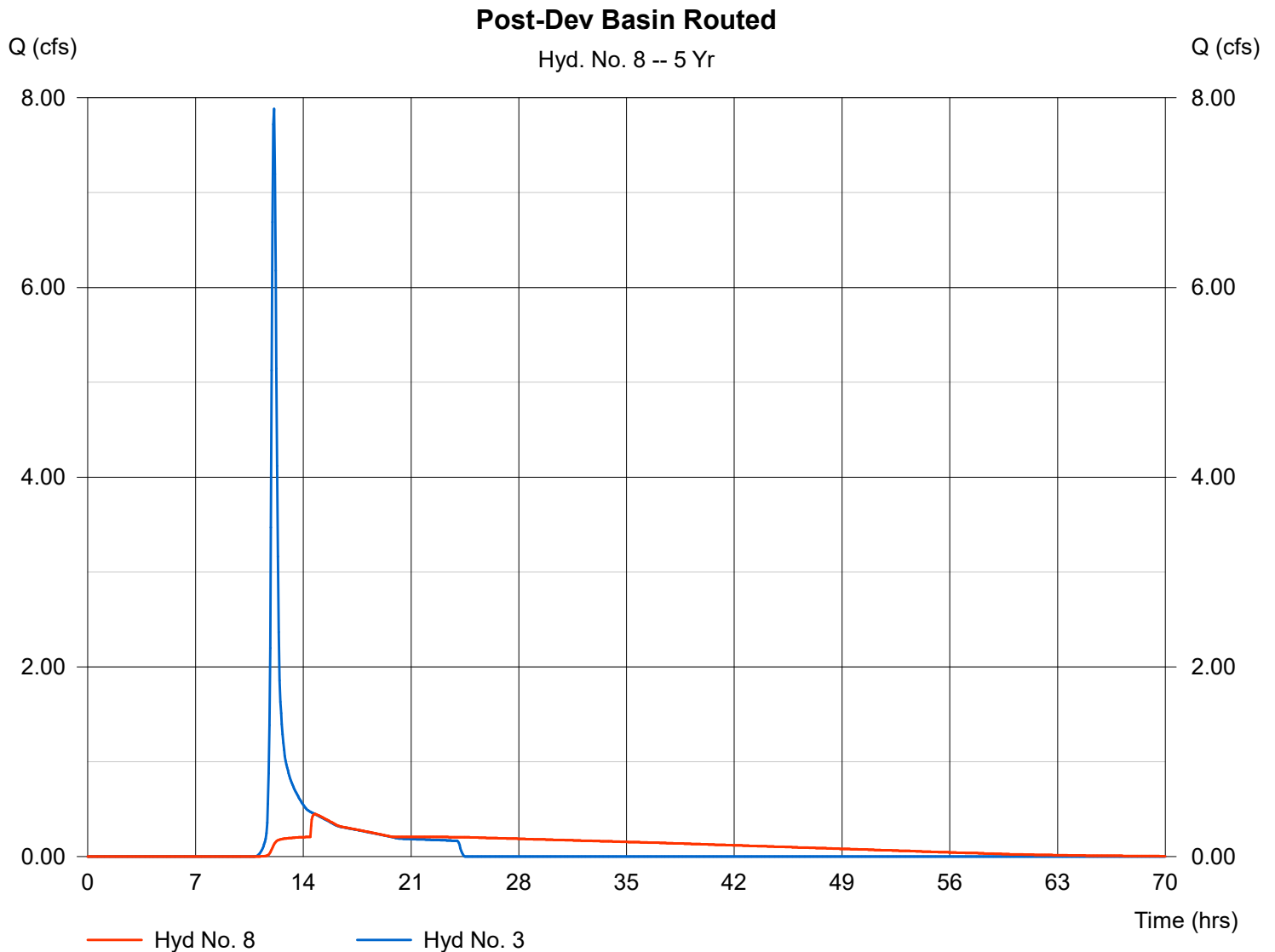
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 5 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 0.45 cfs
Time interval = 3 min
Max. Elevation = 758.02 ft
Max. Storage = 16,073 cuft

Storage Indication method used.

Hydrograph Volume = 26,491 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

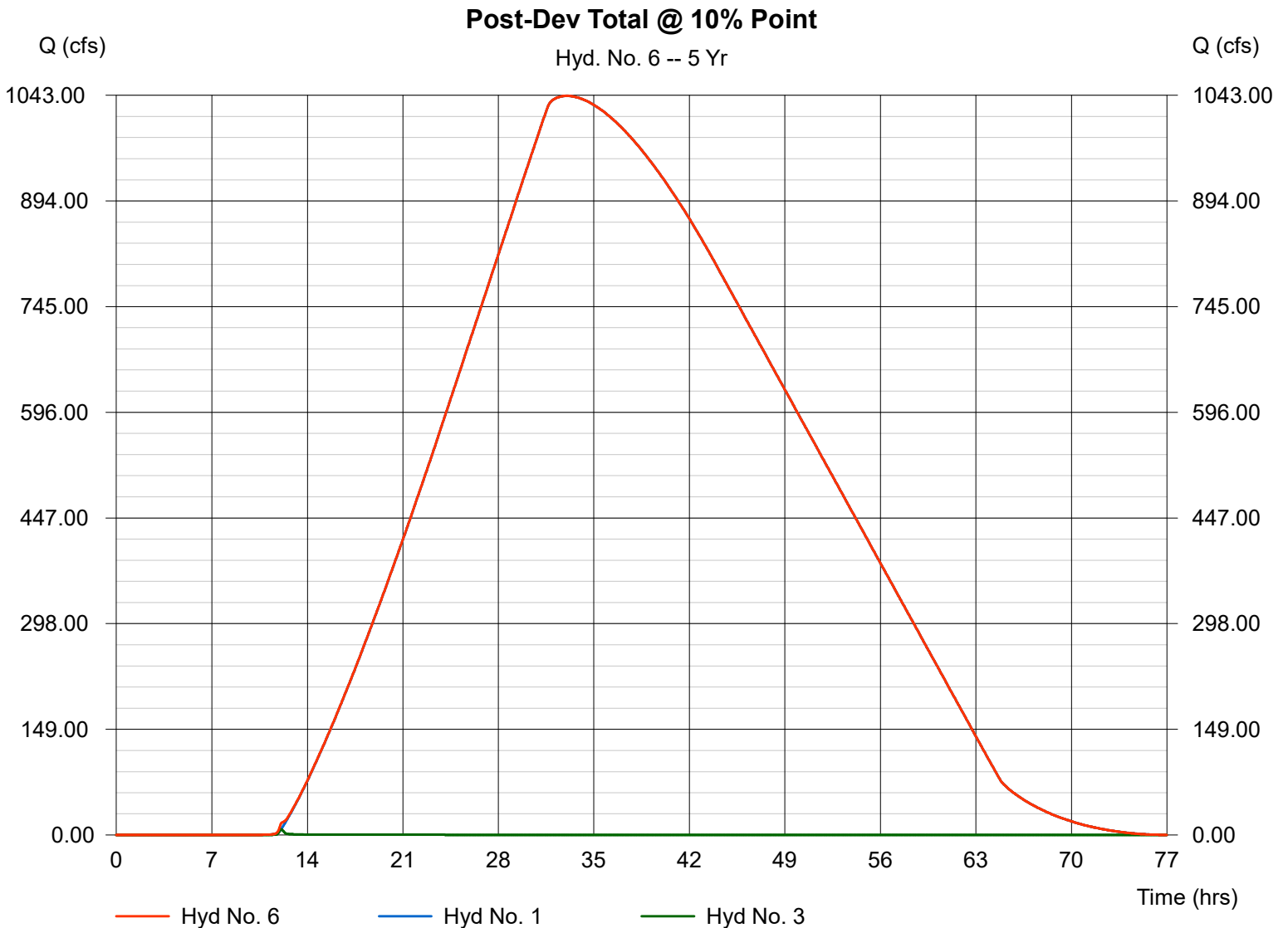
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 5 yrs
Inflow hyds. = 1, 3

Peak discharge = 1042.23 cfs
Time interval = 3 min

Hydrograph Volume = 110,561,800 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

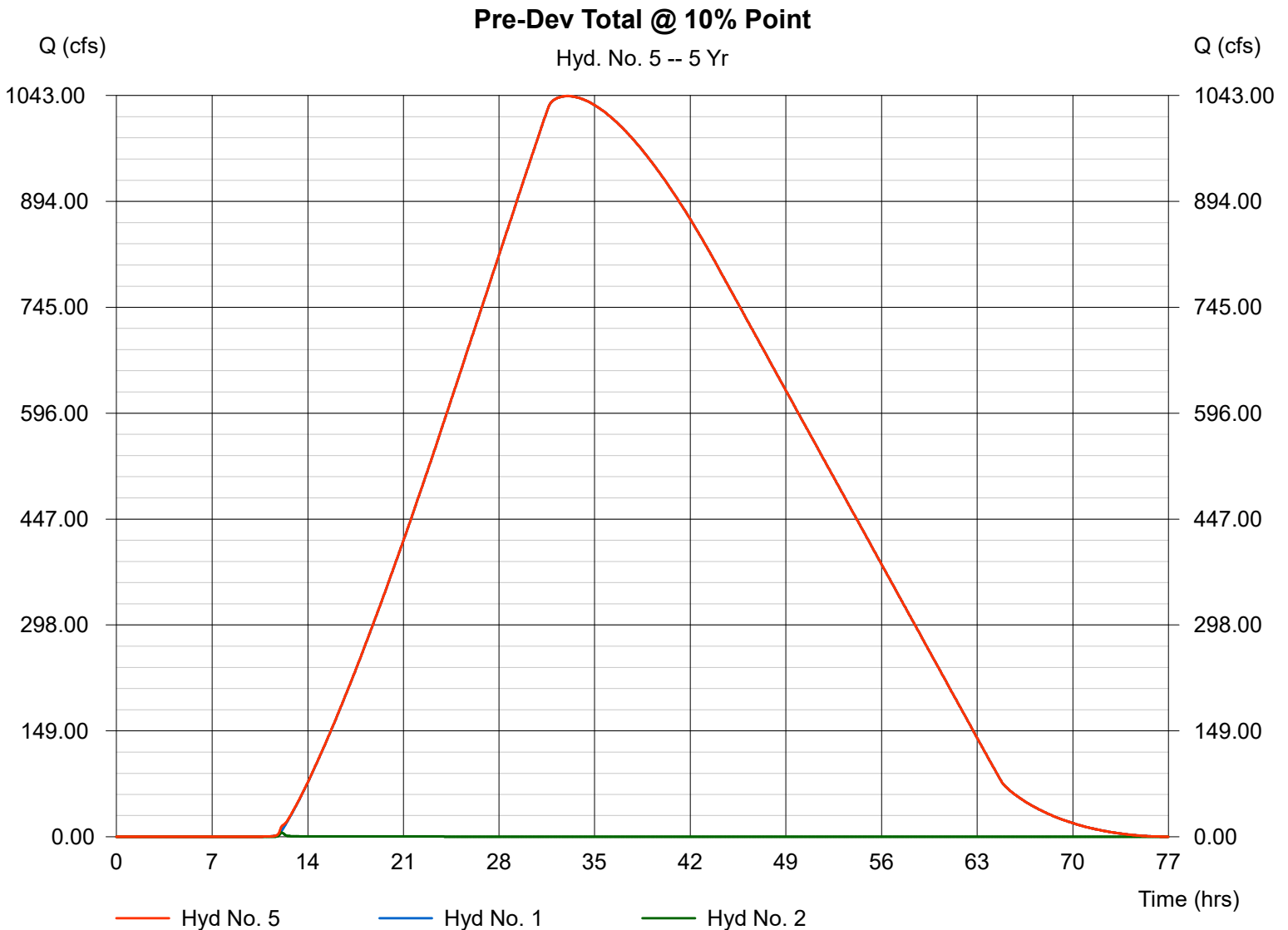
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 5 yrs
Inflow hyds. = 1, 2

Peak discharge = 1042.23 cfs
Time interval = 3 min

Hydrograph Volume = 110,555,900 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

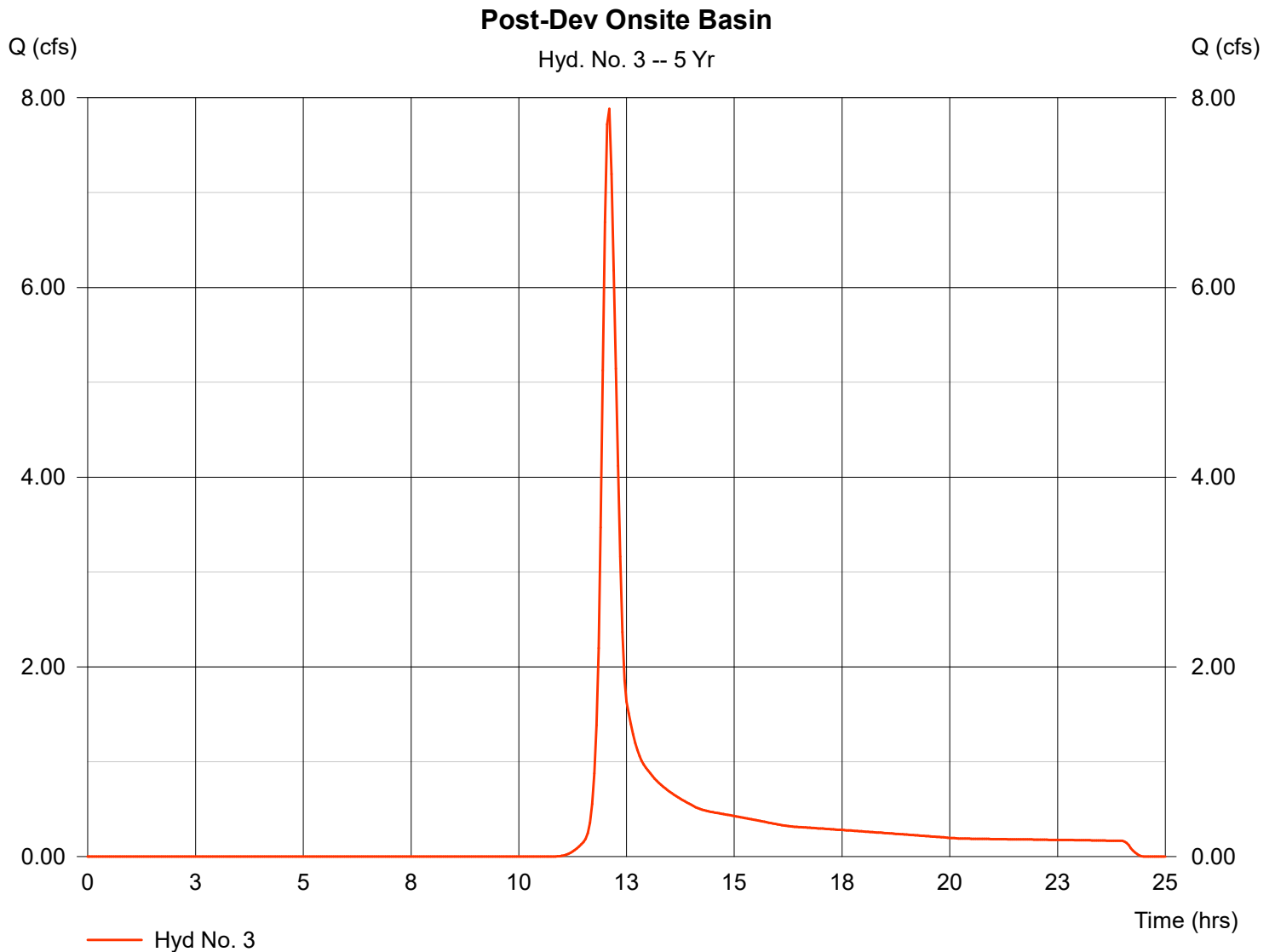
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 7.88 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 26,512 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

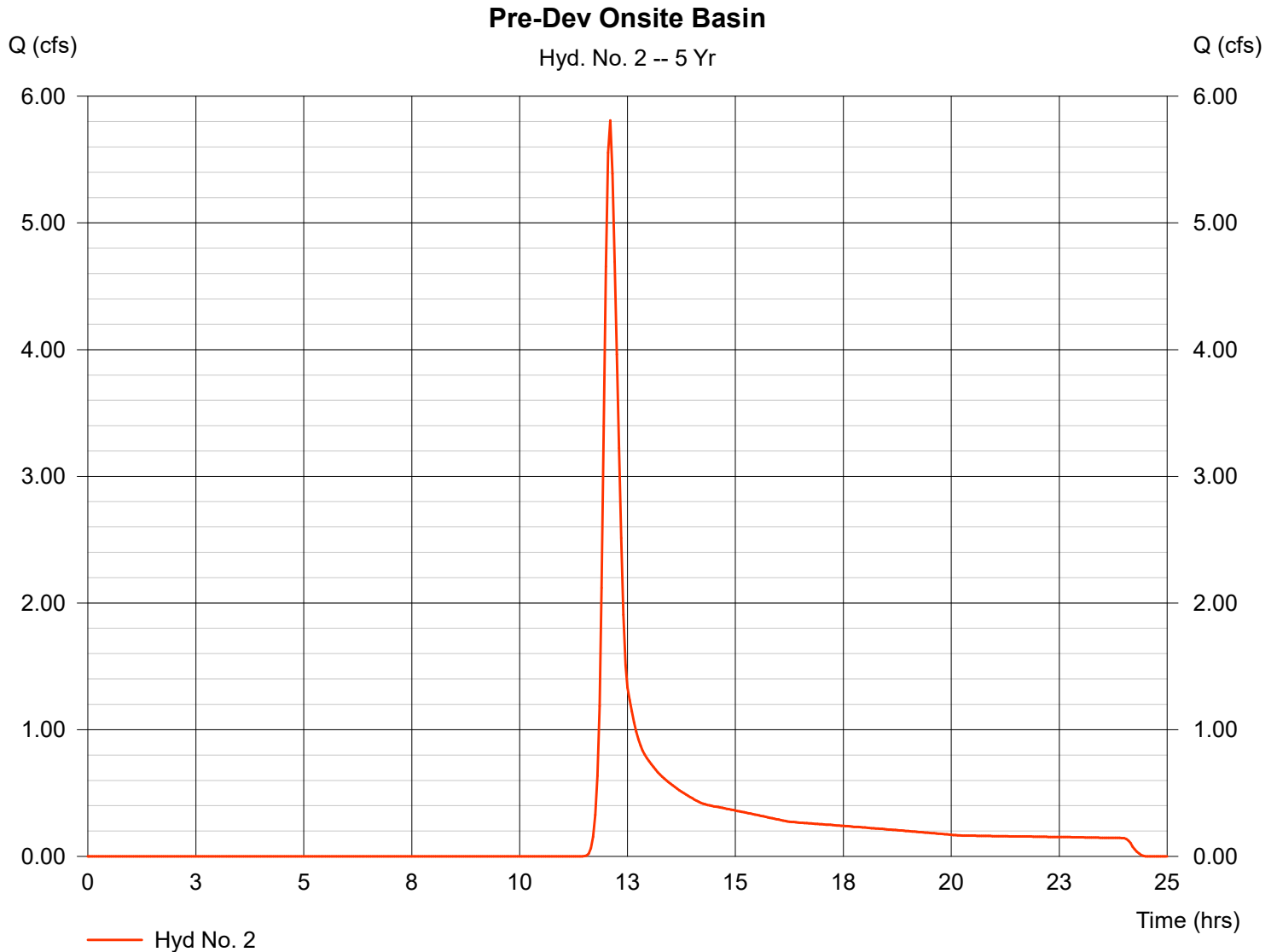
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 5.81 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 20,680 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

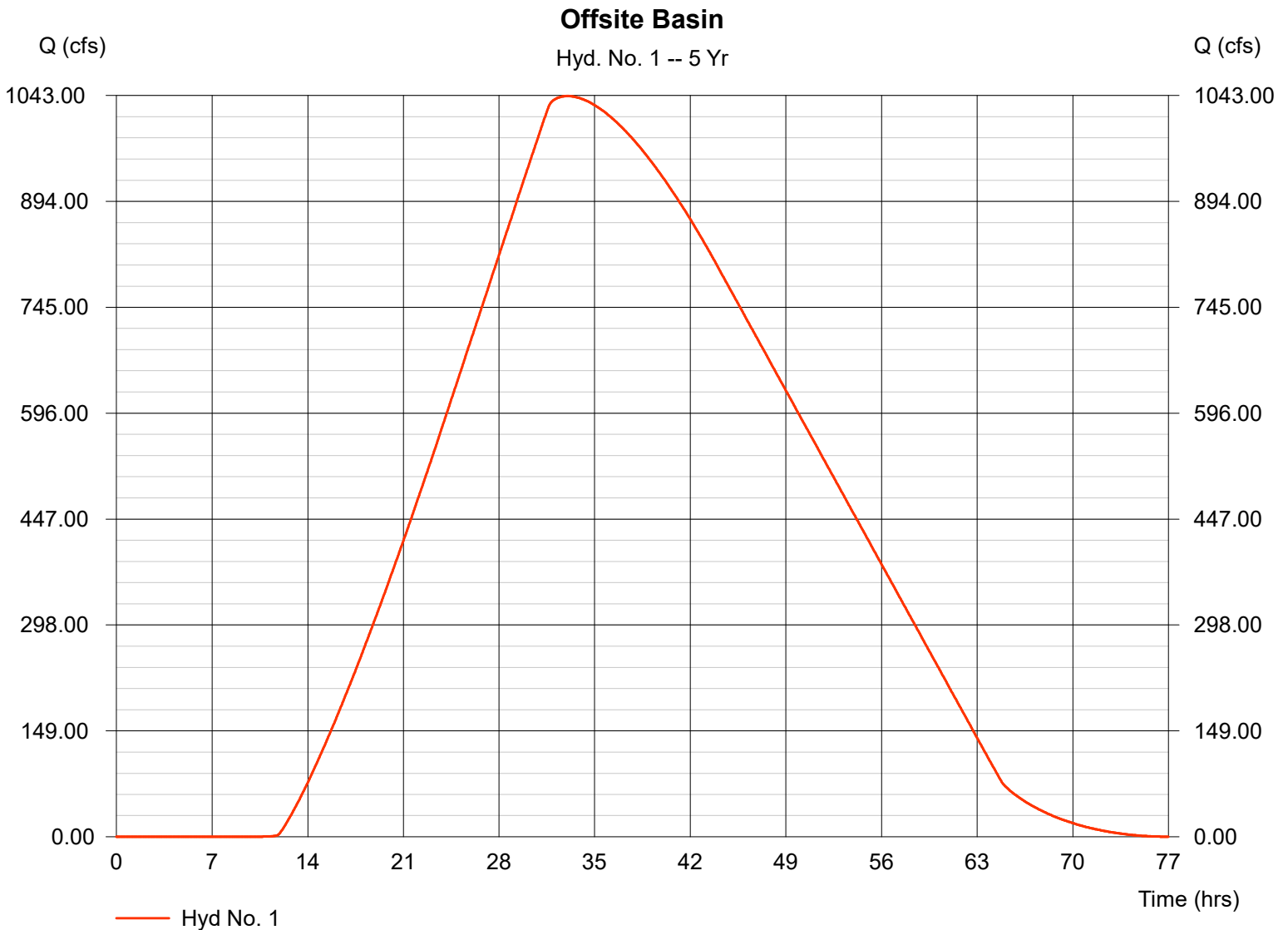
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 4.67 in
Storm duration = 24 hrs

Peak discharge = 1042.23 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 110,535,300 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

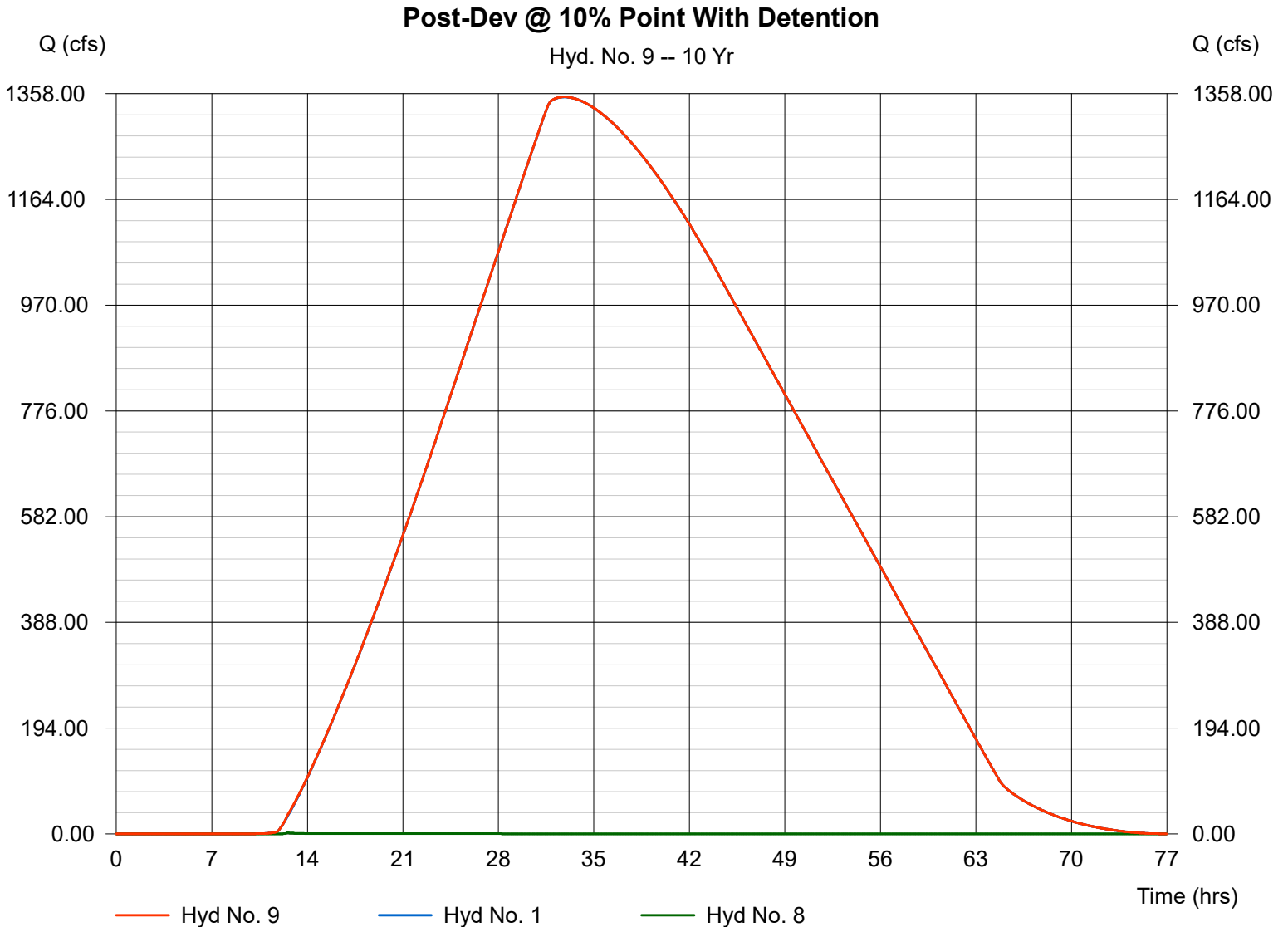
Hyd. No. 9

Post-Dev @ 10% Point With Detention

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 1, 8

Peak discharge = 1352.15 cfs
Time interval = 3 min

Hydrograph Volume = 143,000,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

Hyd. No. 8

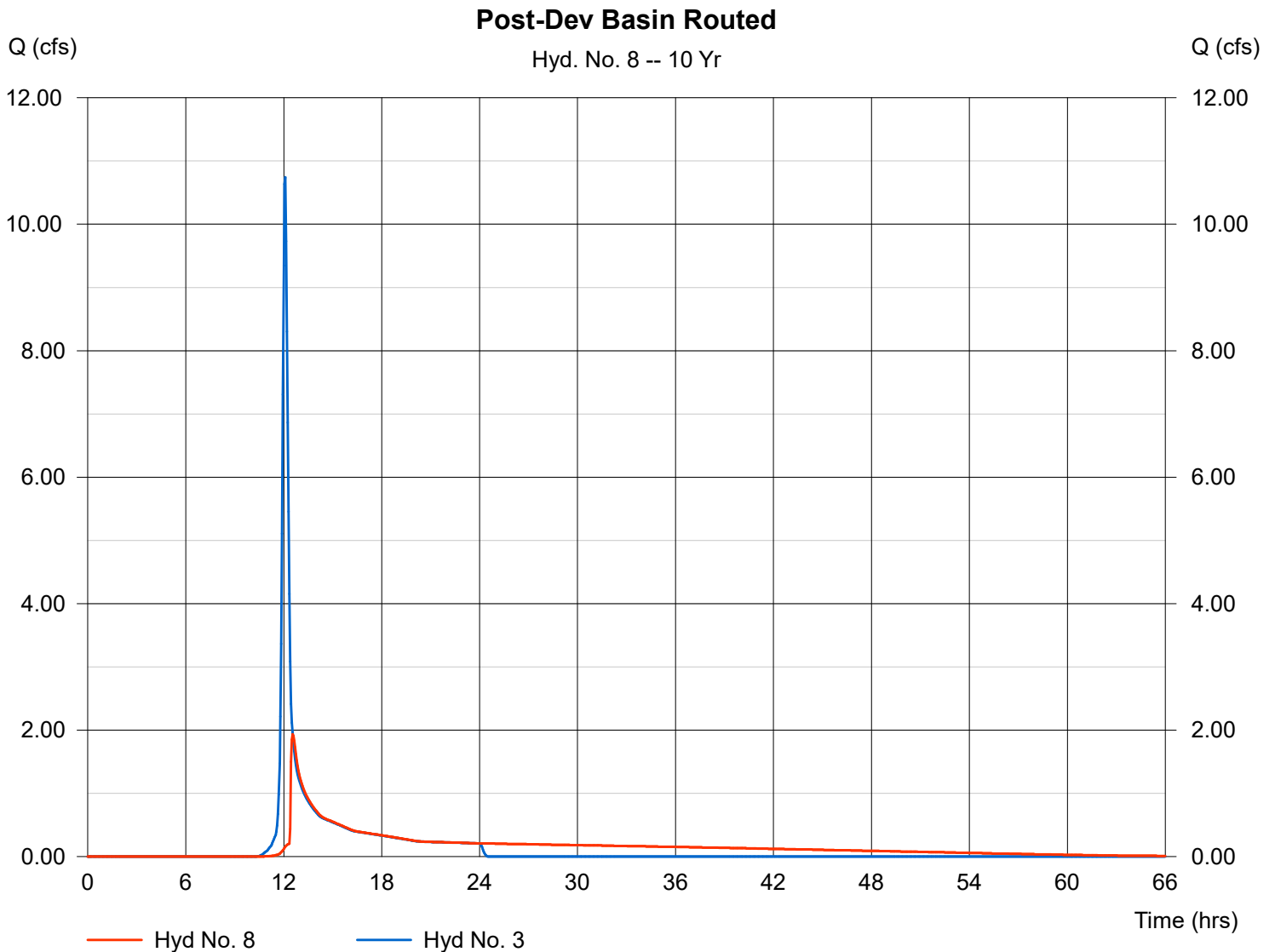
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 10 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 1.94 cfs
Time interval = 3 min
Max. Elevation = 758.11 ft
Max. Storage = 16,522 cuft

Storage Indication method used.

Hydrograph Volume = 35,388 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

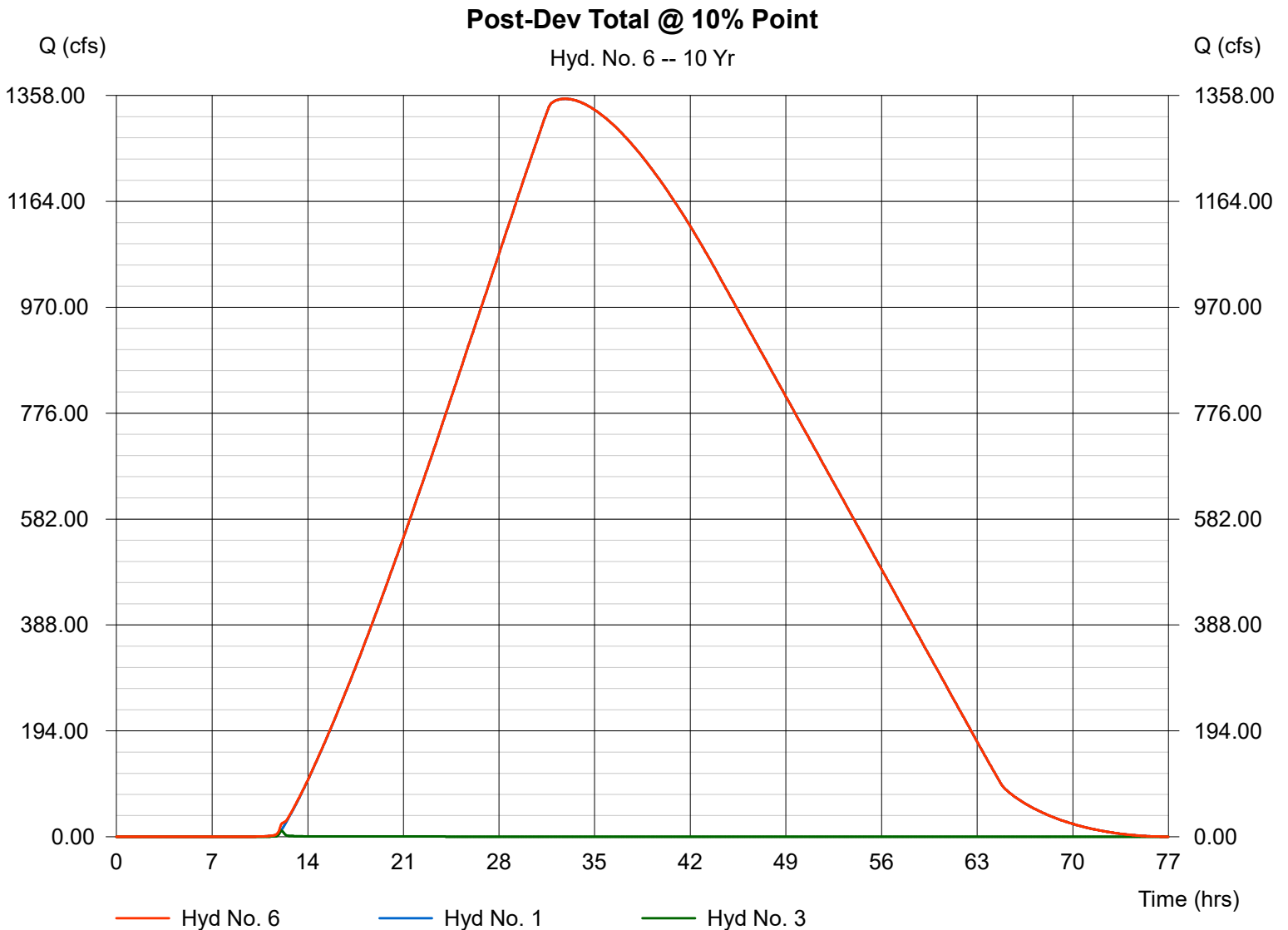
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 1, 3

Peak discharge = 1351.98 cfs
Time interval = 3 min

Hydrograph Volume = 143,000,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

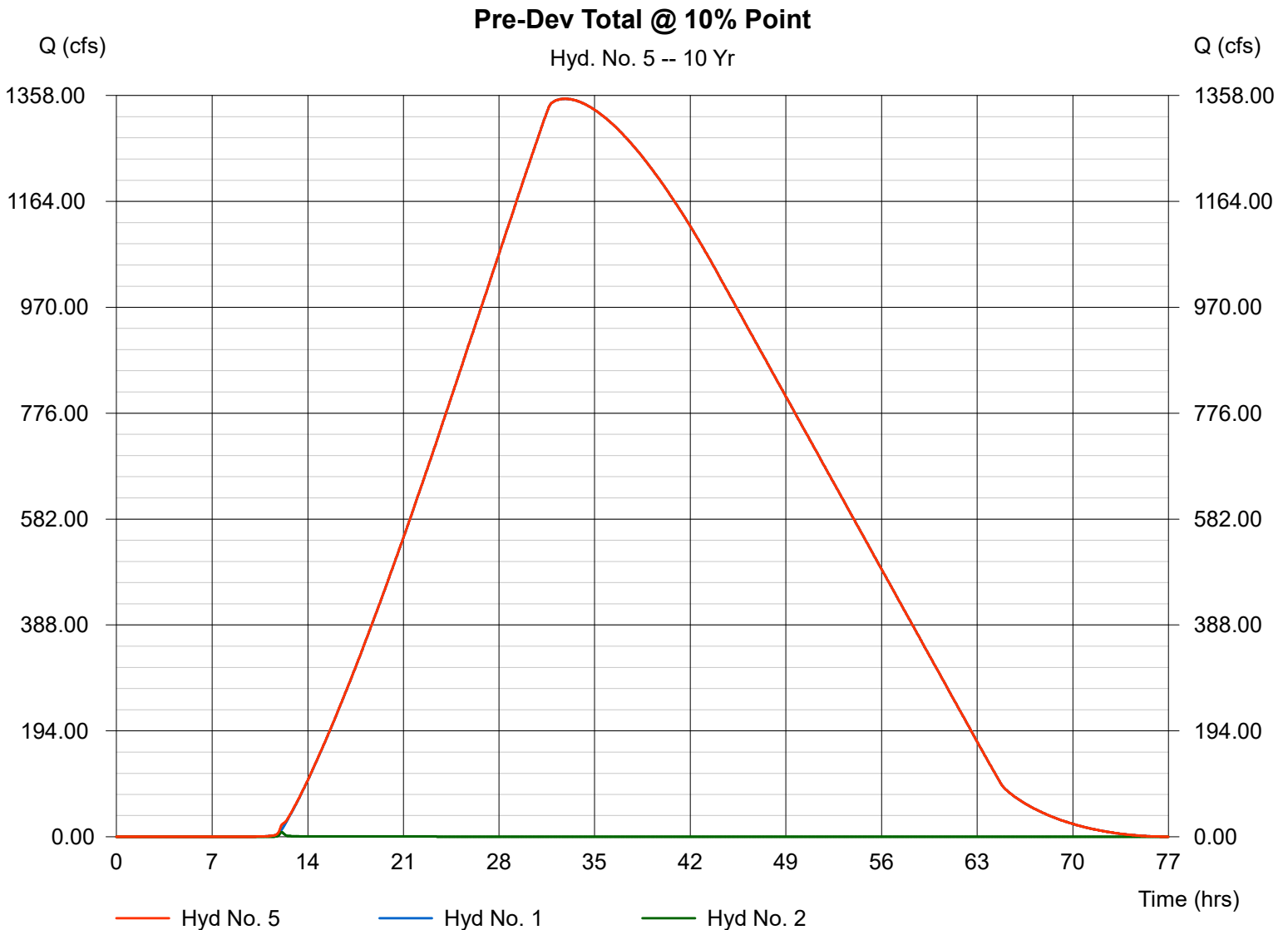
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 10 yrs
Inflow hyds. = 1, 2

Peak discharge = 1351.98 cfs
Time interval = 3 min

Hydrograph Volume = 142,993,500 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

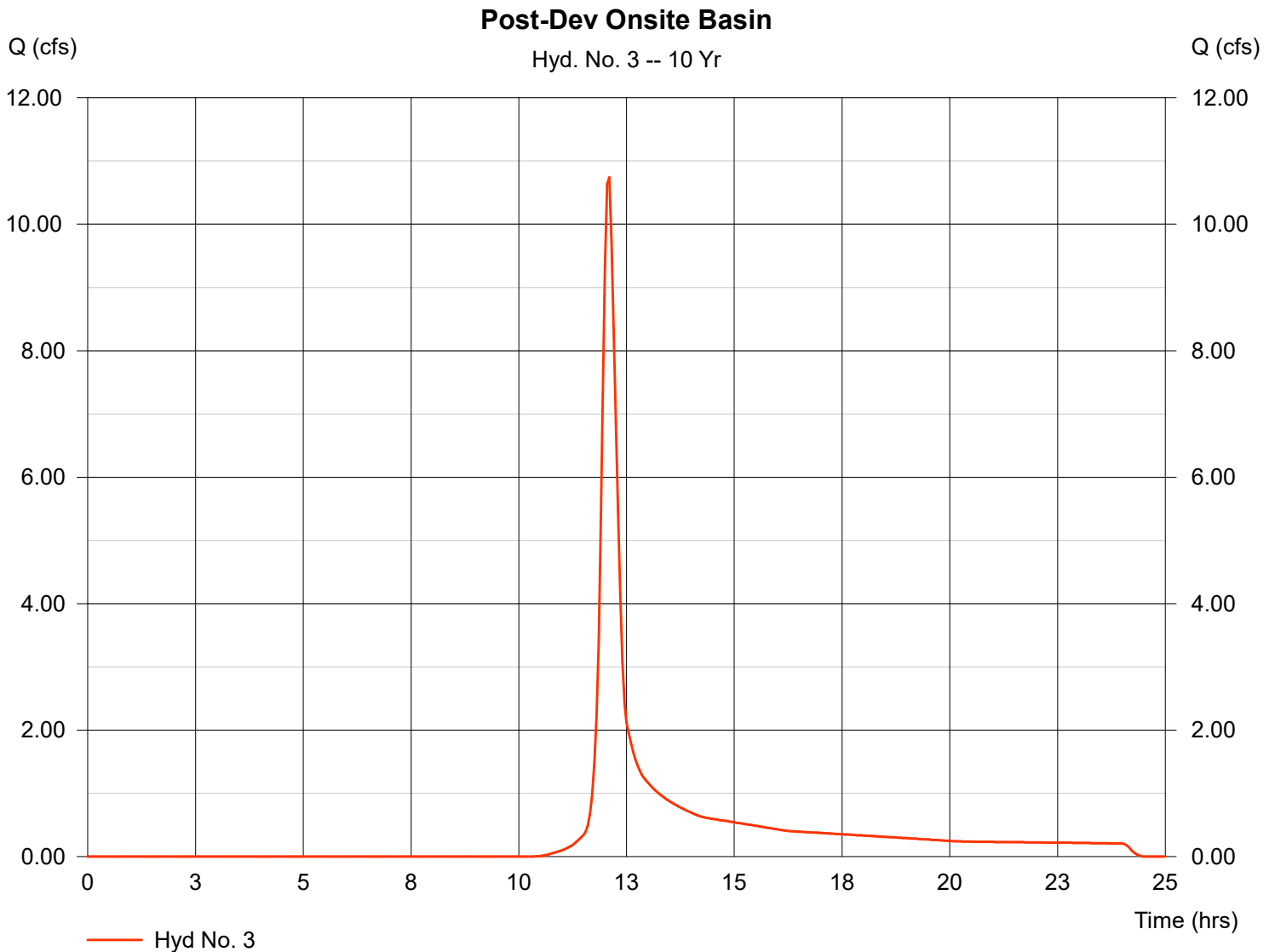
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 10.74 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 35,408 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

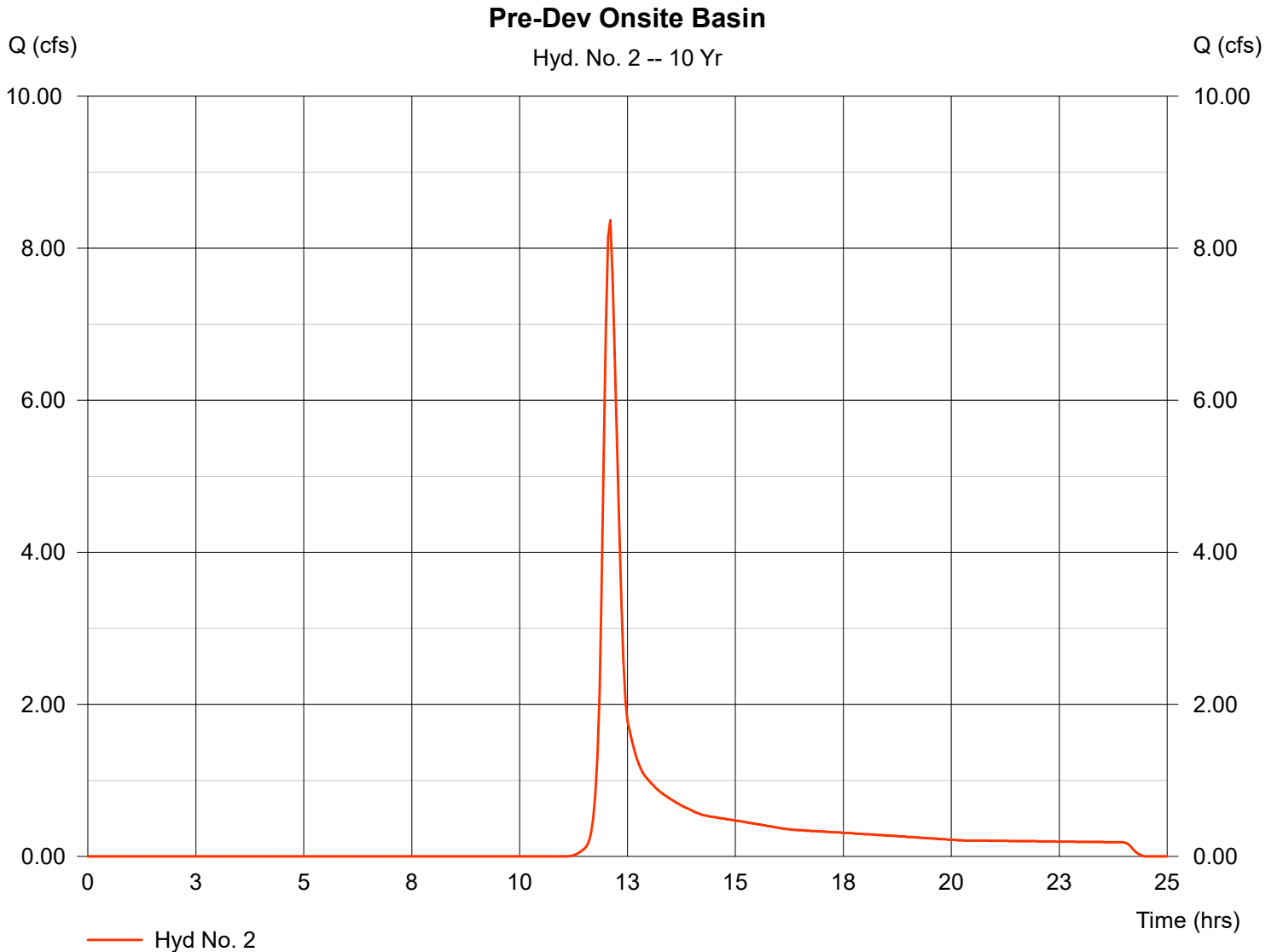
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 8.37 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 28,532 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:33 AM

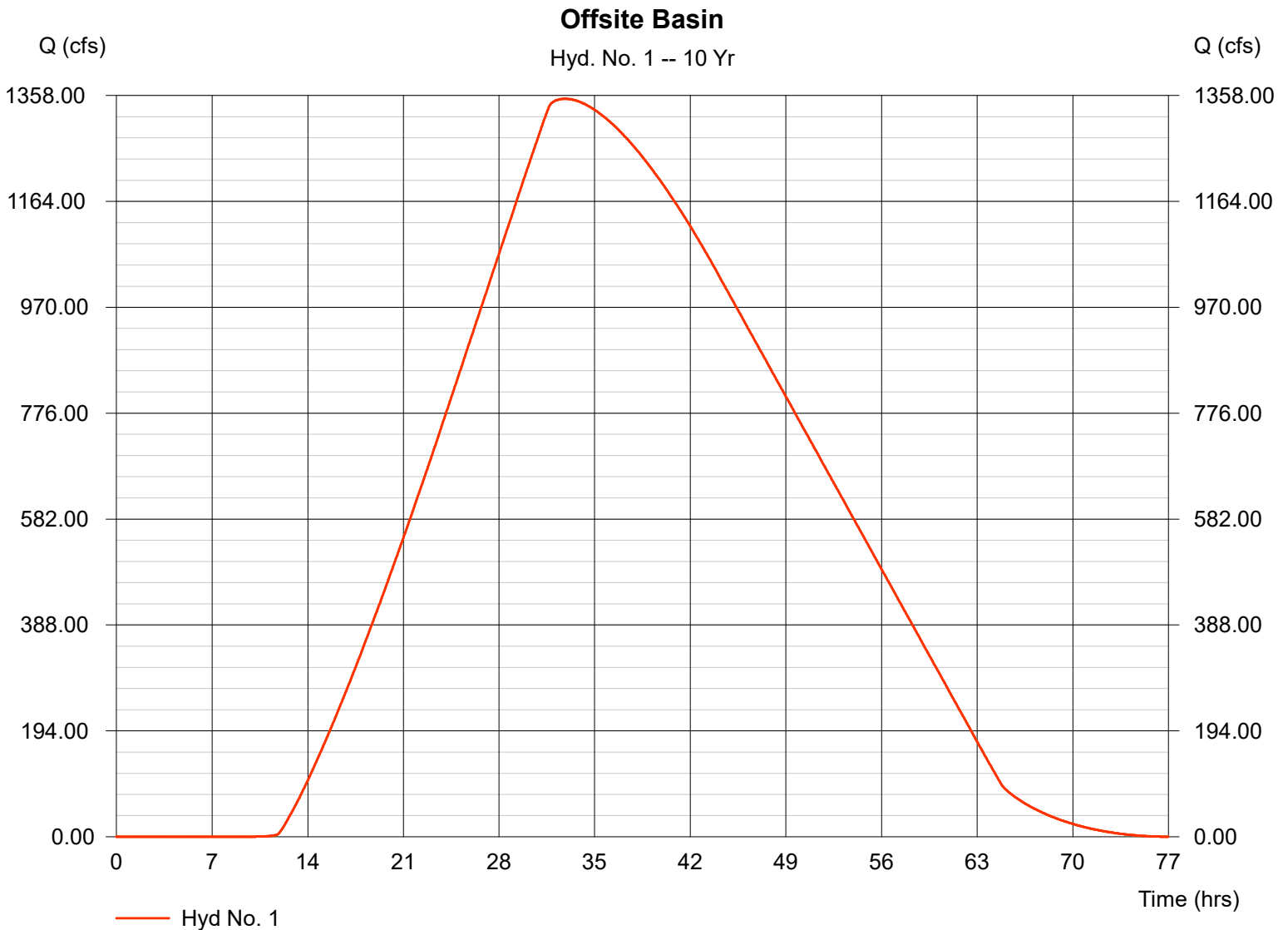
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 5.41 in
Storm duration = 24 hrs

Peak discharge = 1351.98 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 142,965,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

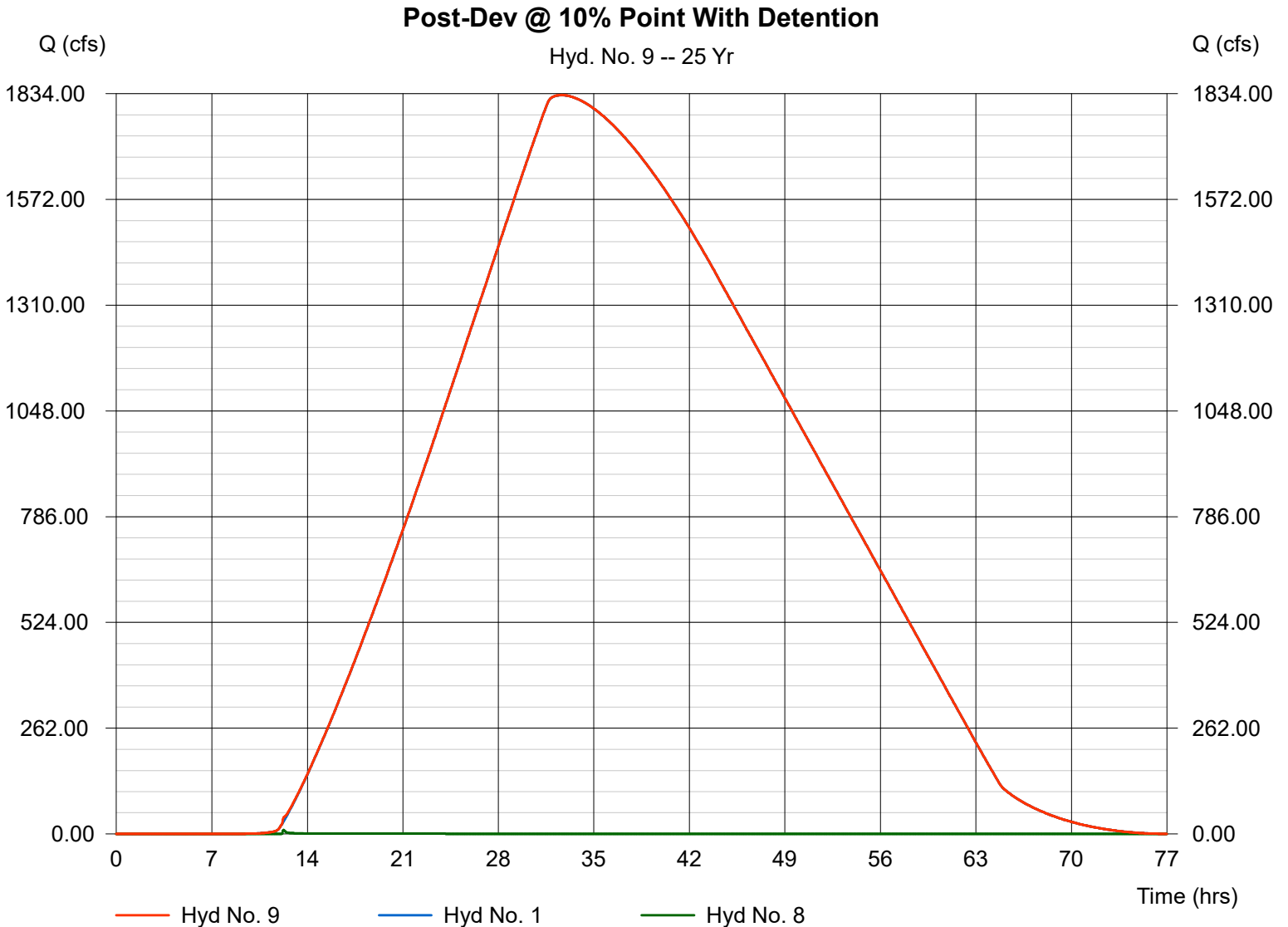
Hyd. No. 9

Post-Dev @ 10% Point With Detention

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 1, 8

Peak discharge = 1830.59 cfs
Time interval = 3 min

Hydrograph Volume = 192,995,200 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

Hyd. No. 8

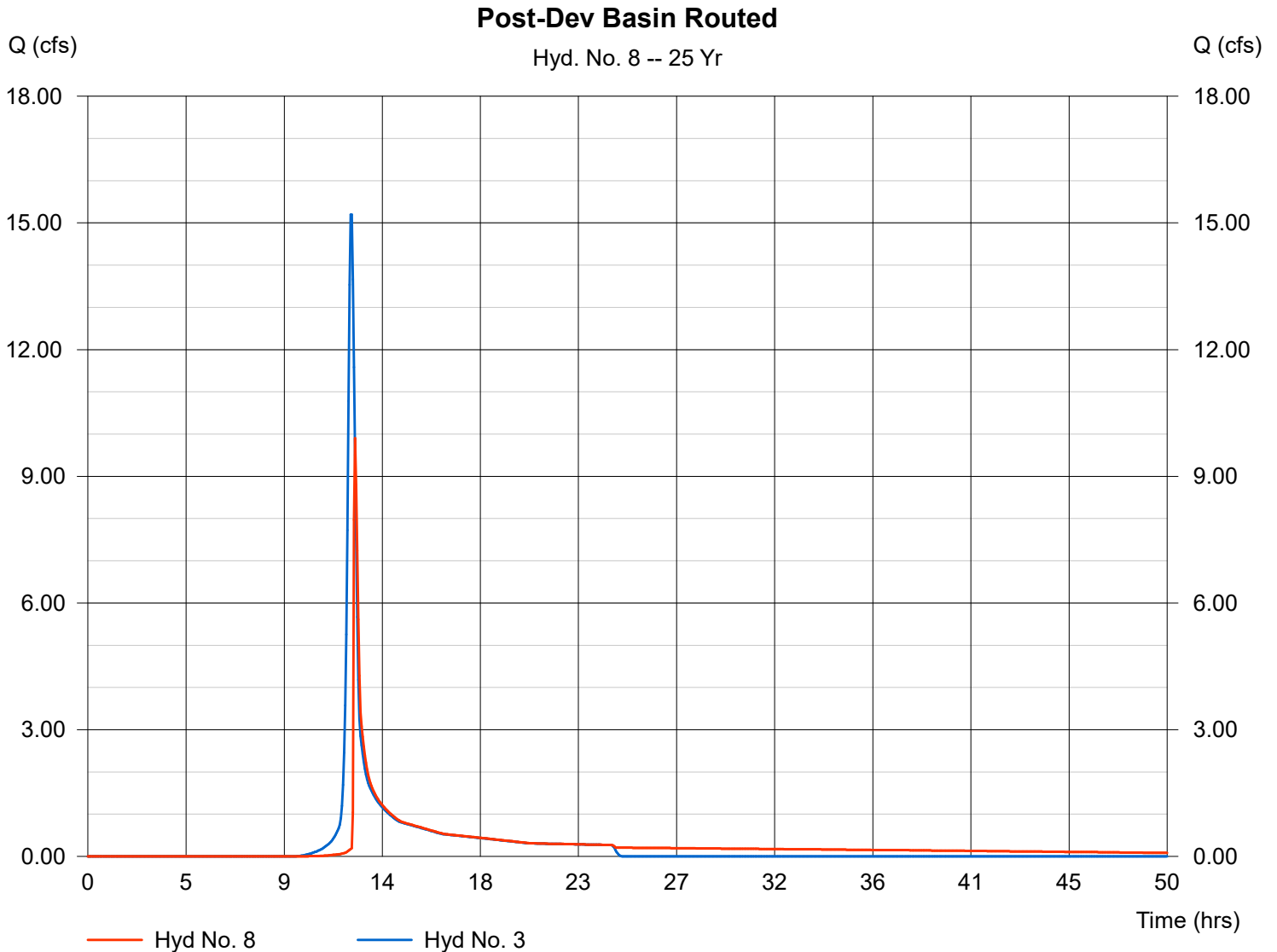
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 25 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 9.90 cfs
Time interval = 3 min
Max. Elevation = 758.42 ft
Max. Storage = 18,004 cuft

Storage Indication method used.

Hydrograph Volume = 49,403 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

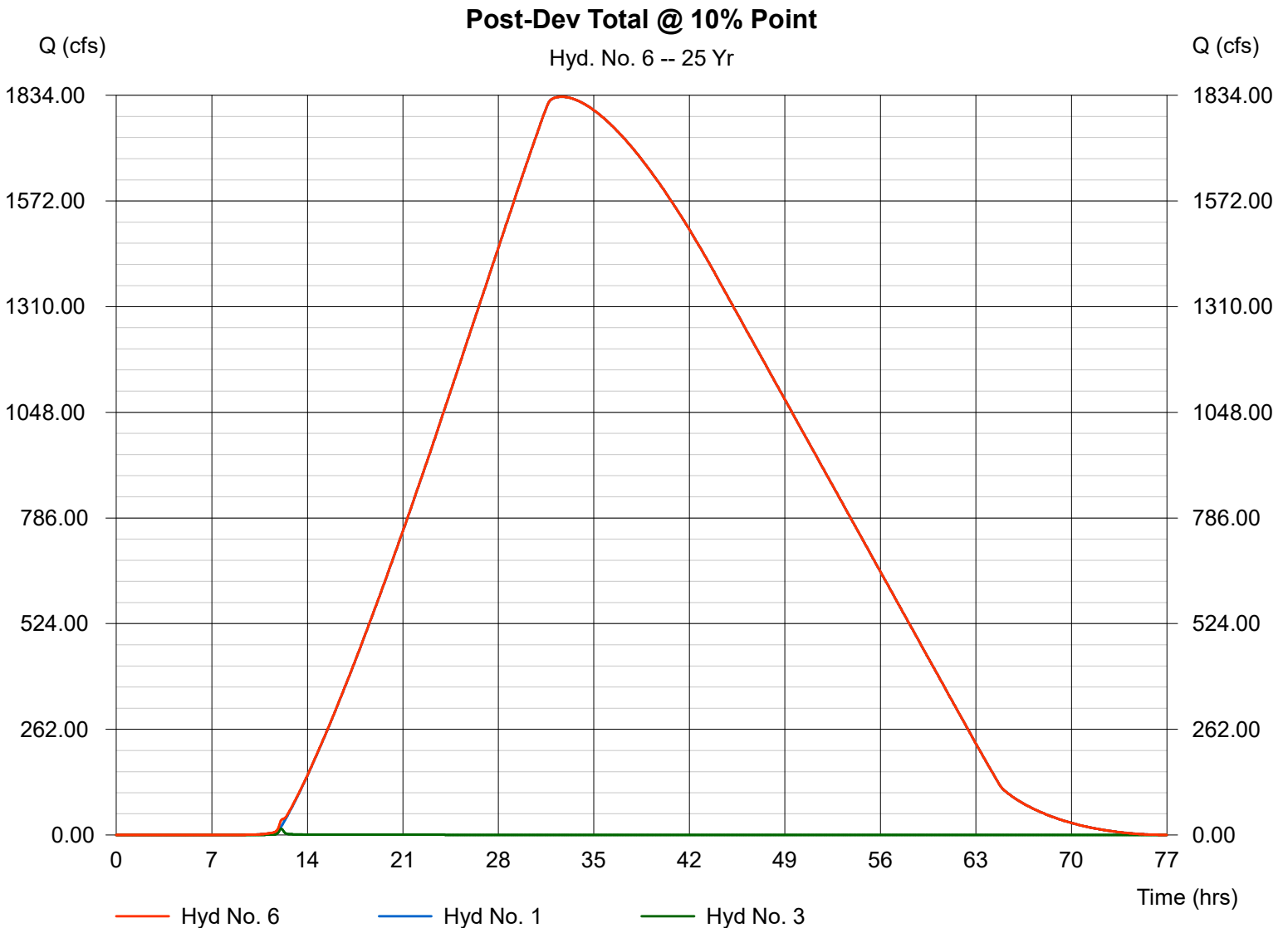
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 1, 3

Peak discharge = 1830.42 cfs
Time interval = 3 min

Hydrograph Volume = 192,995,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

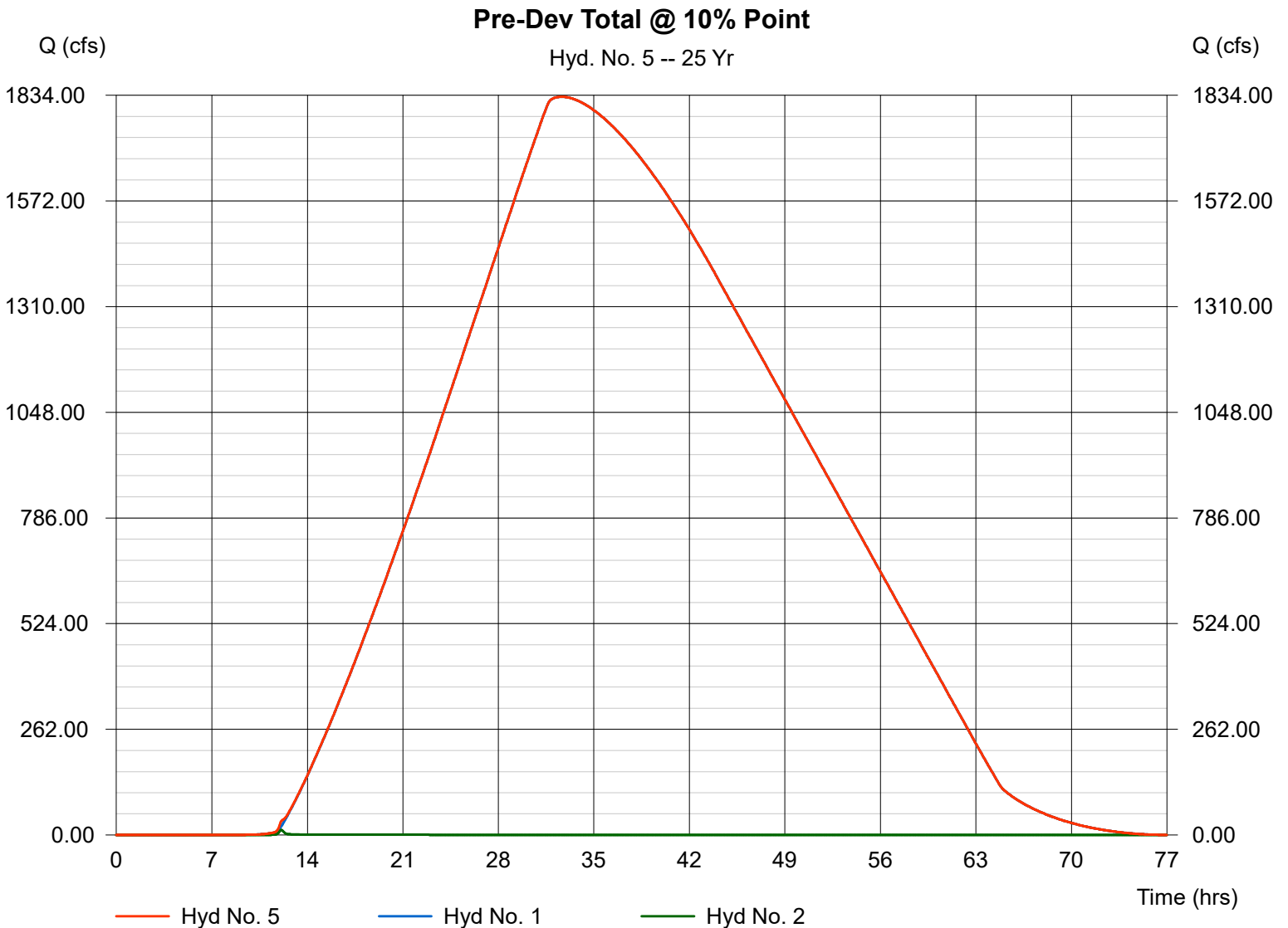
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 25 yrs
Inflow hyds. = 1, 2

Peak discharge = 1830.42 cfs
Time interval = 3 min

Hydrograph Volume = 192,987,200 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

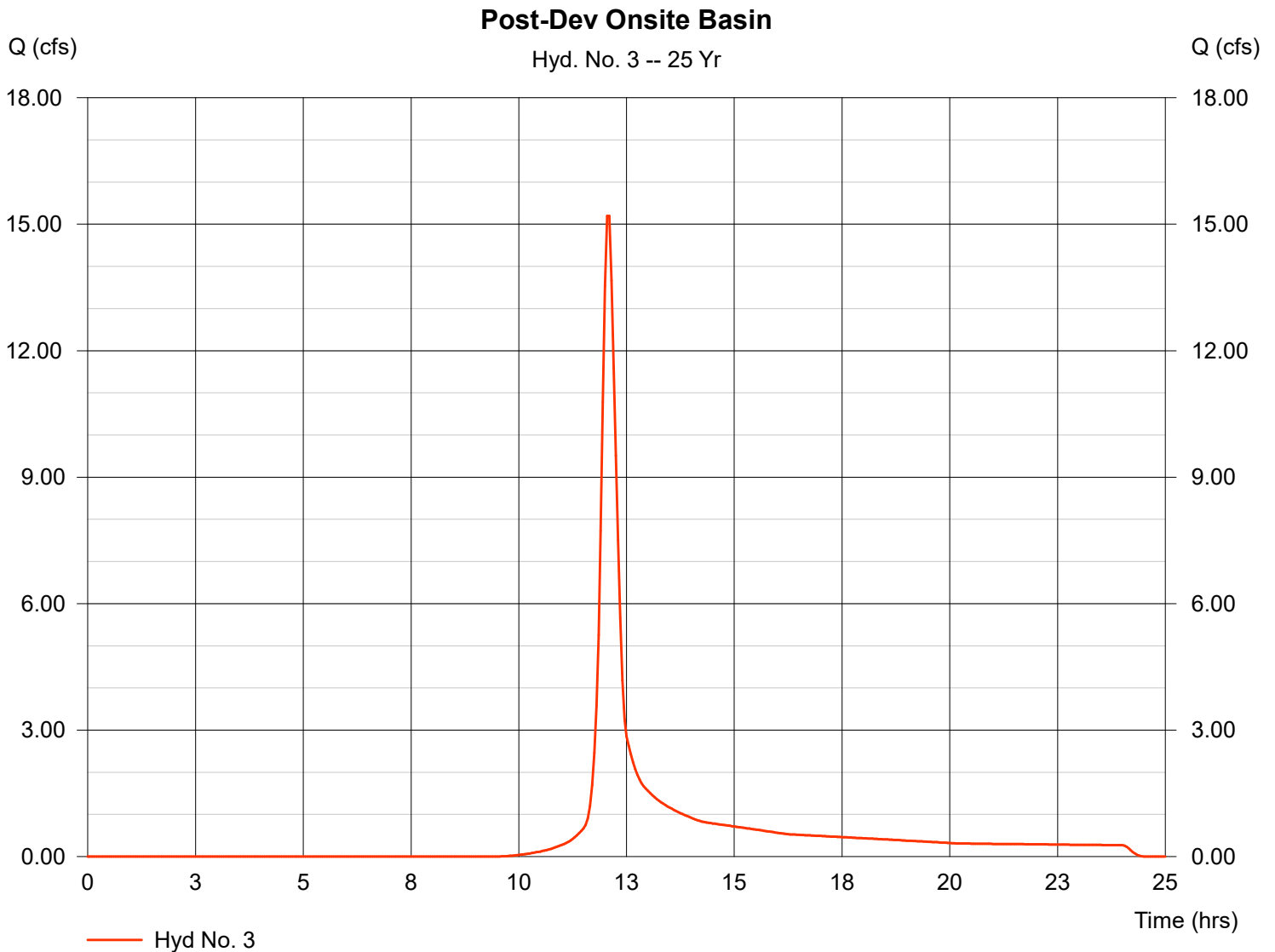
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 15.20 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 49,424 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

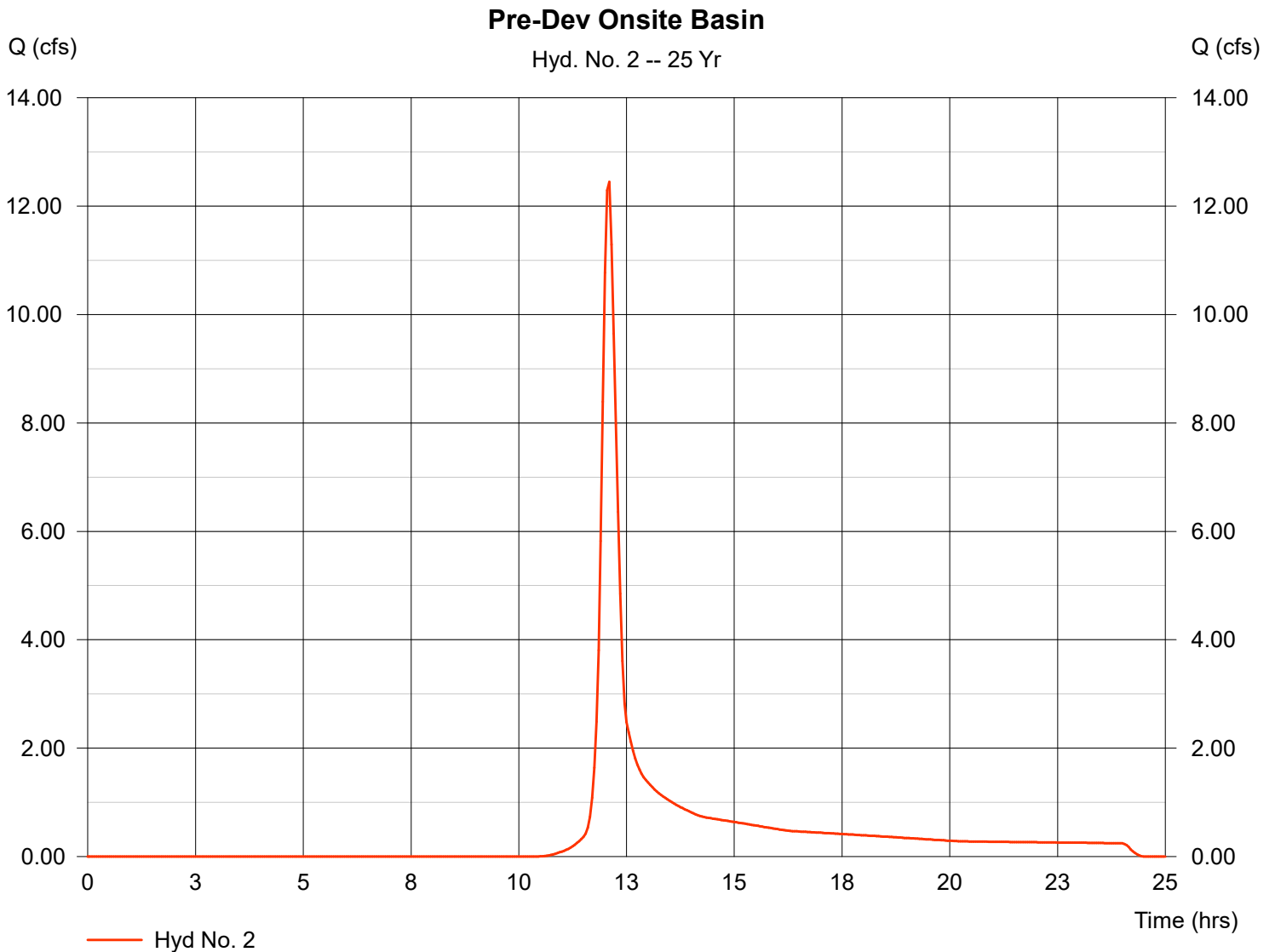
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 12.45 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 41,174 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:34 AM

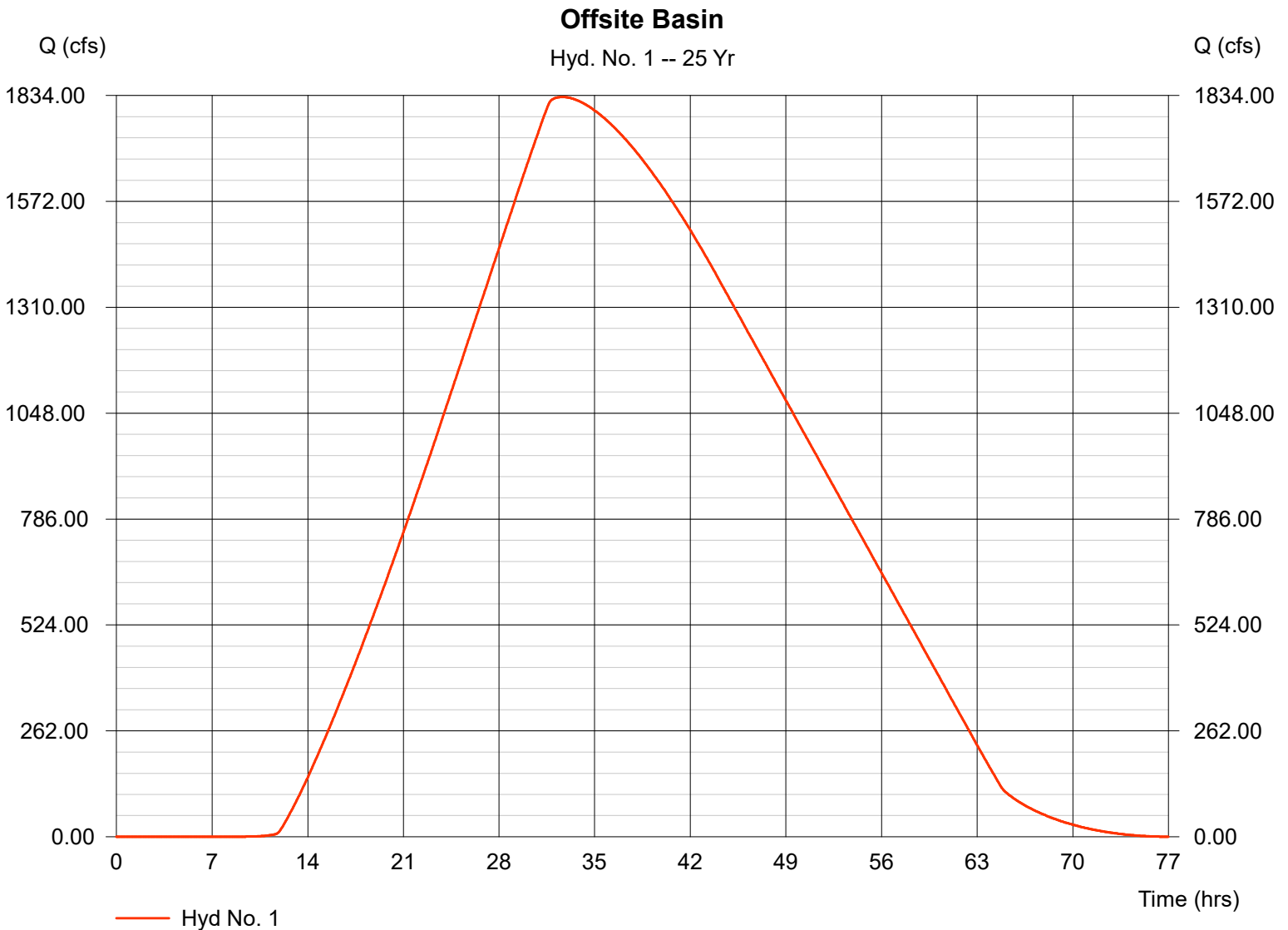
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 6.49 in
Storm duration = 24 hrs

Peak discharge = 1830.42 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 192,946,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

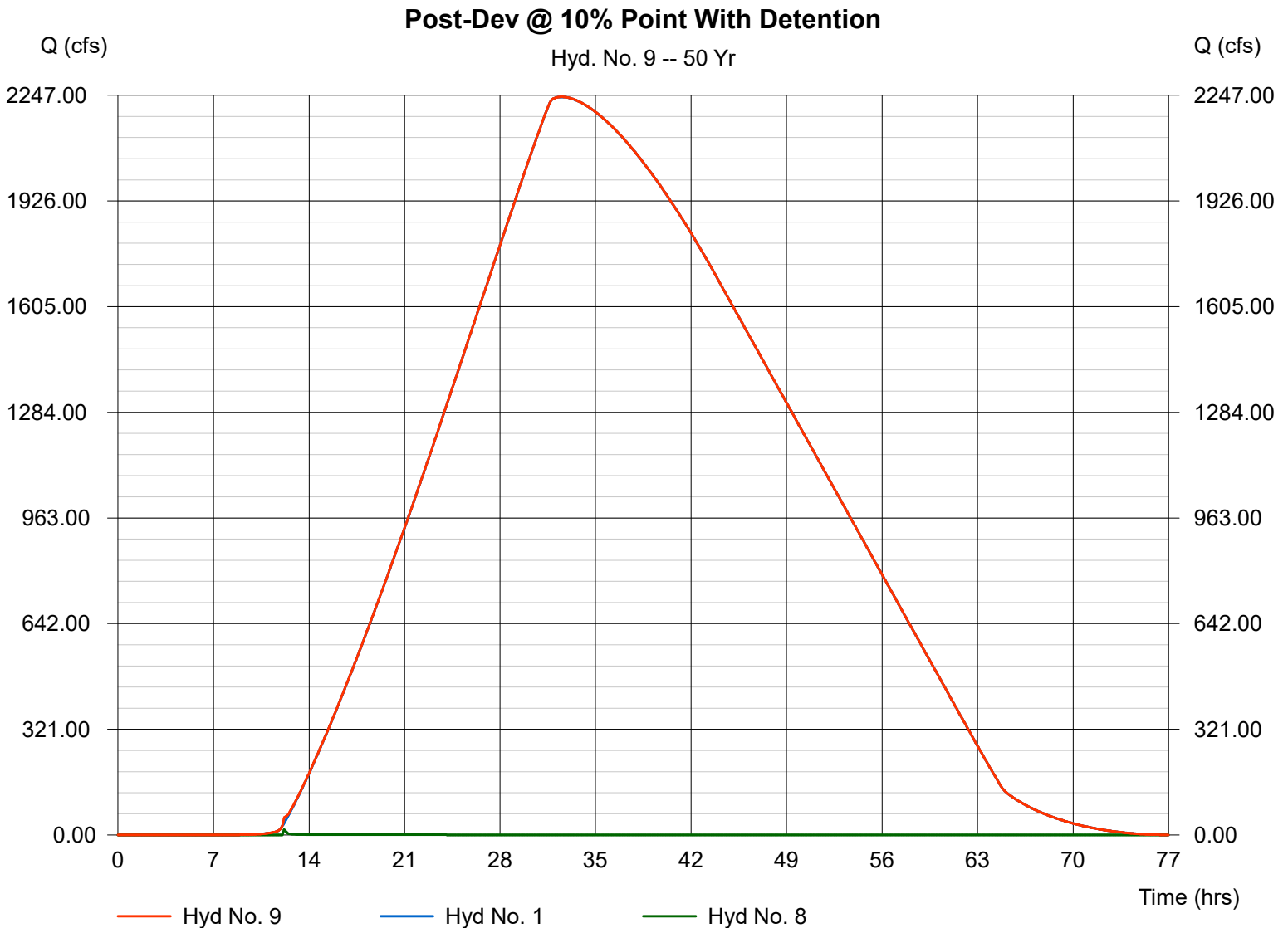
Hyd. No. 9

Post-Dev @ 10% Point With Detention

Hydrograph type = Combine
Storm frequency = 50 yrs
Inflow hyds. = 1, 8

Peak discharge = 2242.25 cfs
Time interval = 3 min

Hydrograph Volume = 235,949,800 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

Hyd. No. 8

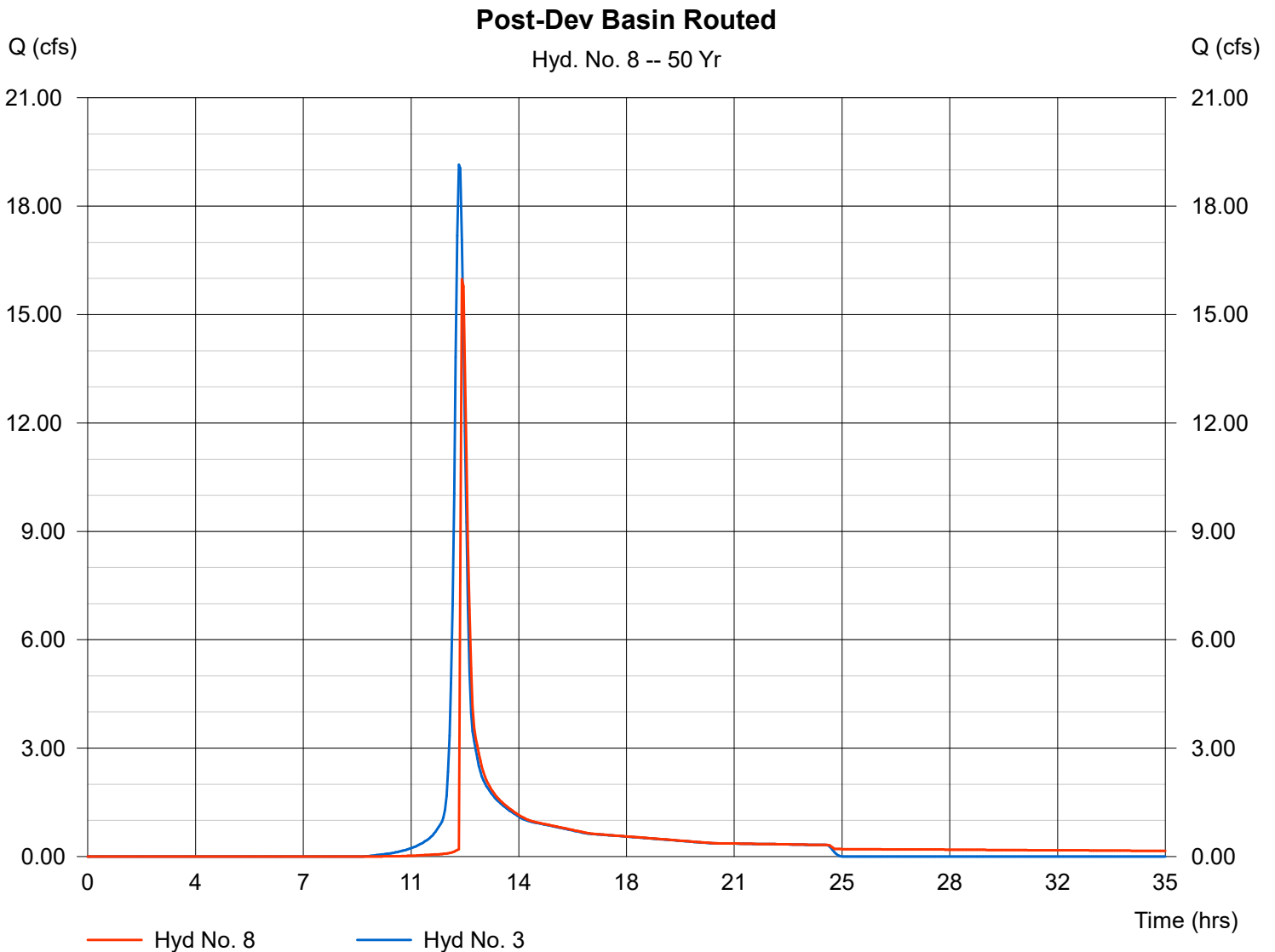
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 50 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 15.98 cfs
Time interval = 3 min
Max. Elevation = 758.59 ft
Max. Storage = 18,781 cuft

Storage Indication method used.

Hydrograph Volume = 61,657 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

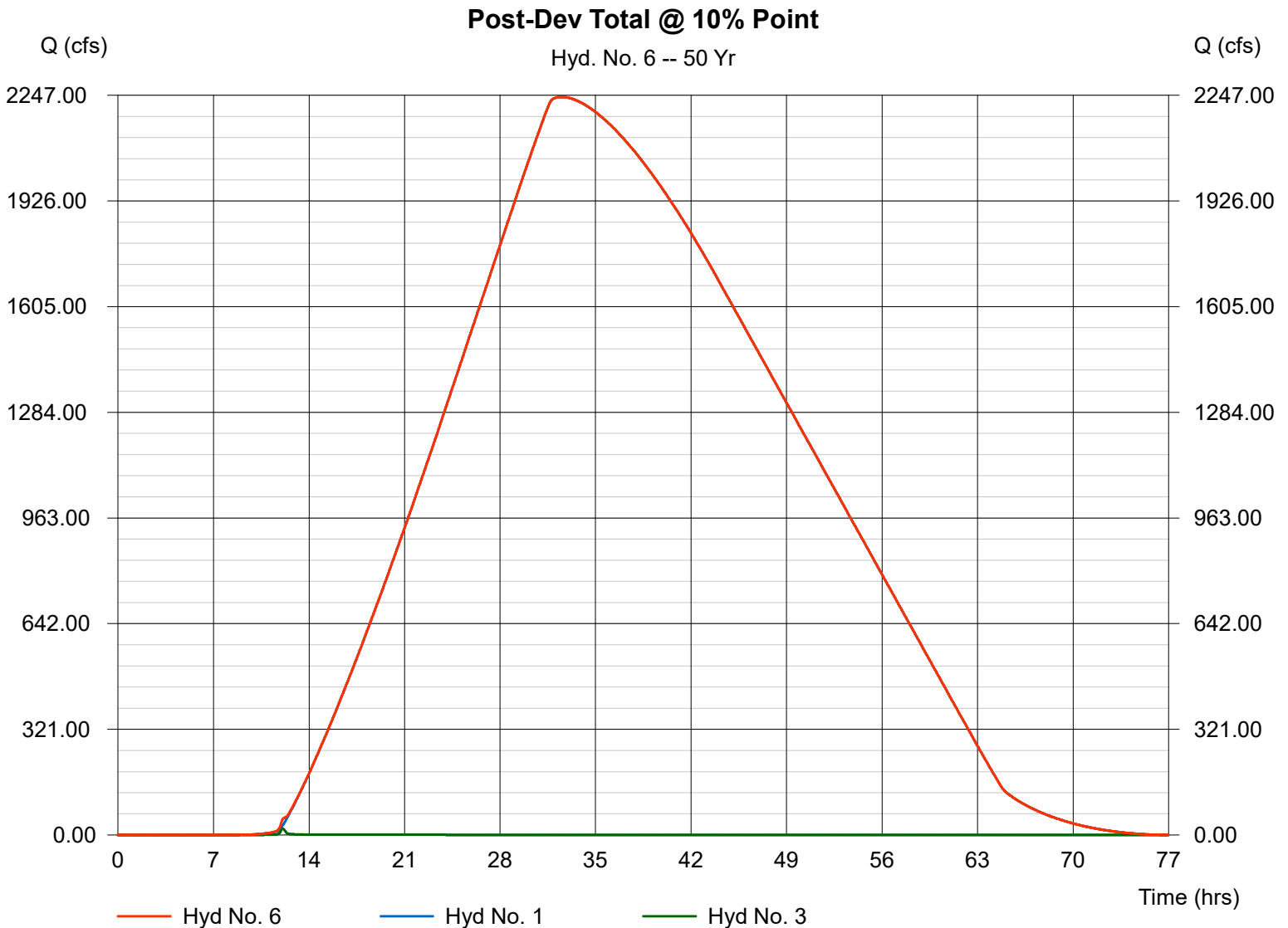
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 50 yrs
Inflow hyds. = 1, 3

Peak discharge = 2242.08 cfs
Time interval = 3 min

Hydrograph Volume = 235,949,600 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

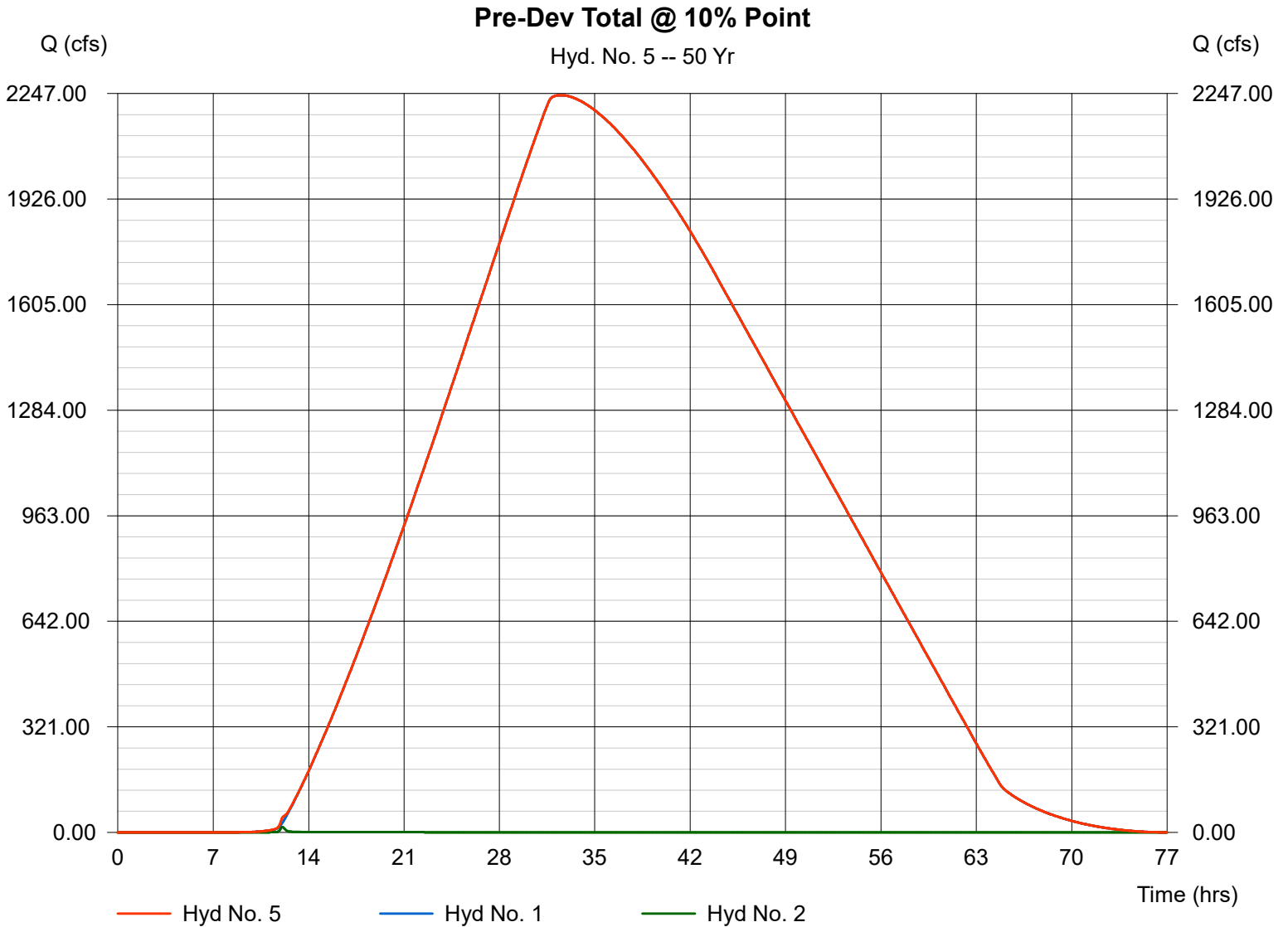
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 50 yrs
Inflow hyds. = 1, 2

Peak discharge = 2242.08 cfs
Time interval = 3 min

Hydrograph Volume = 235,940,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

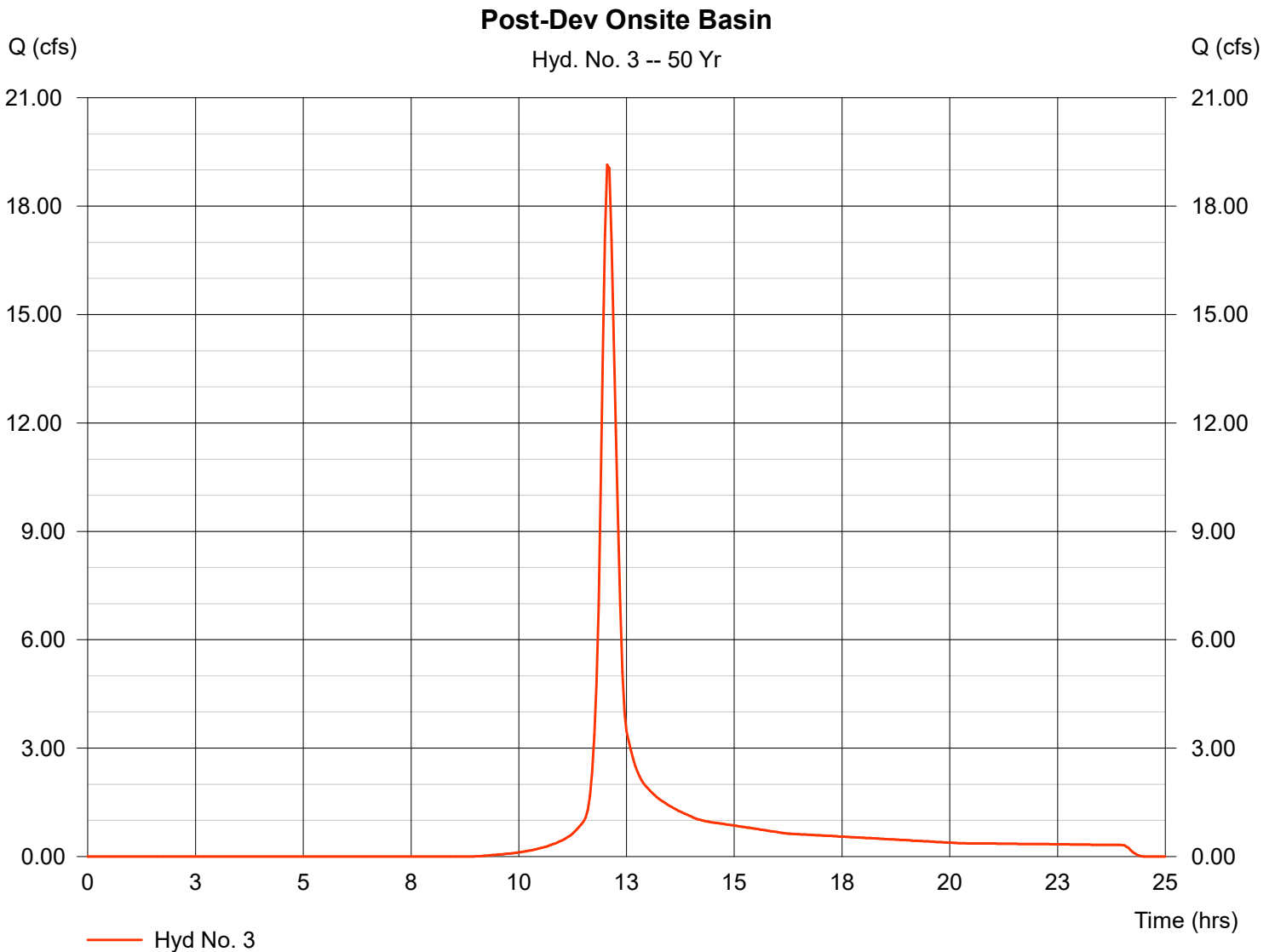
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 19.15 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 61,678 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

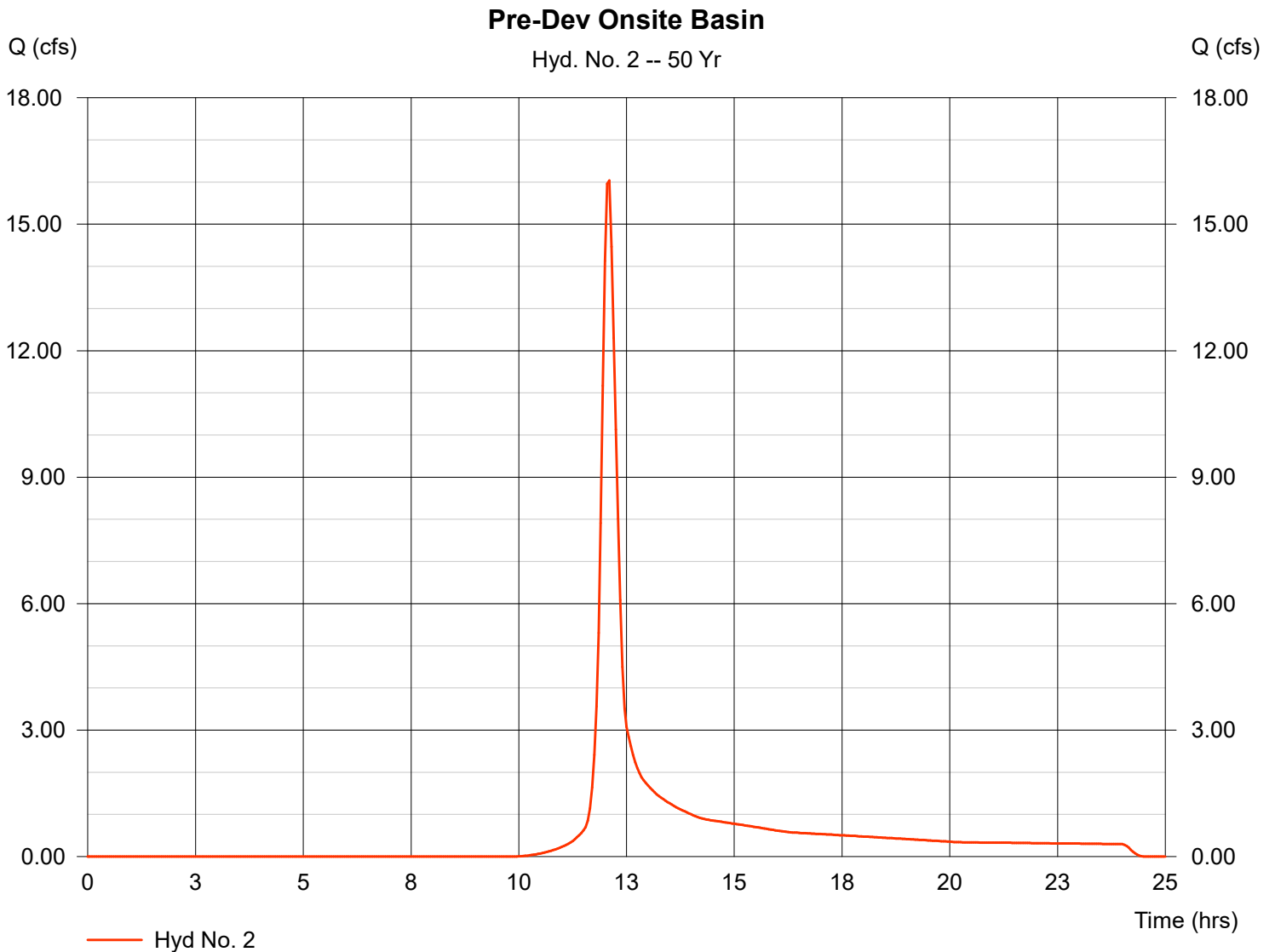
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 16.04 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 52,419 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

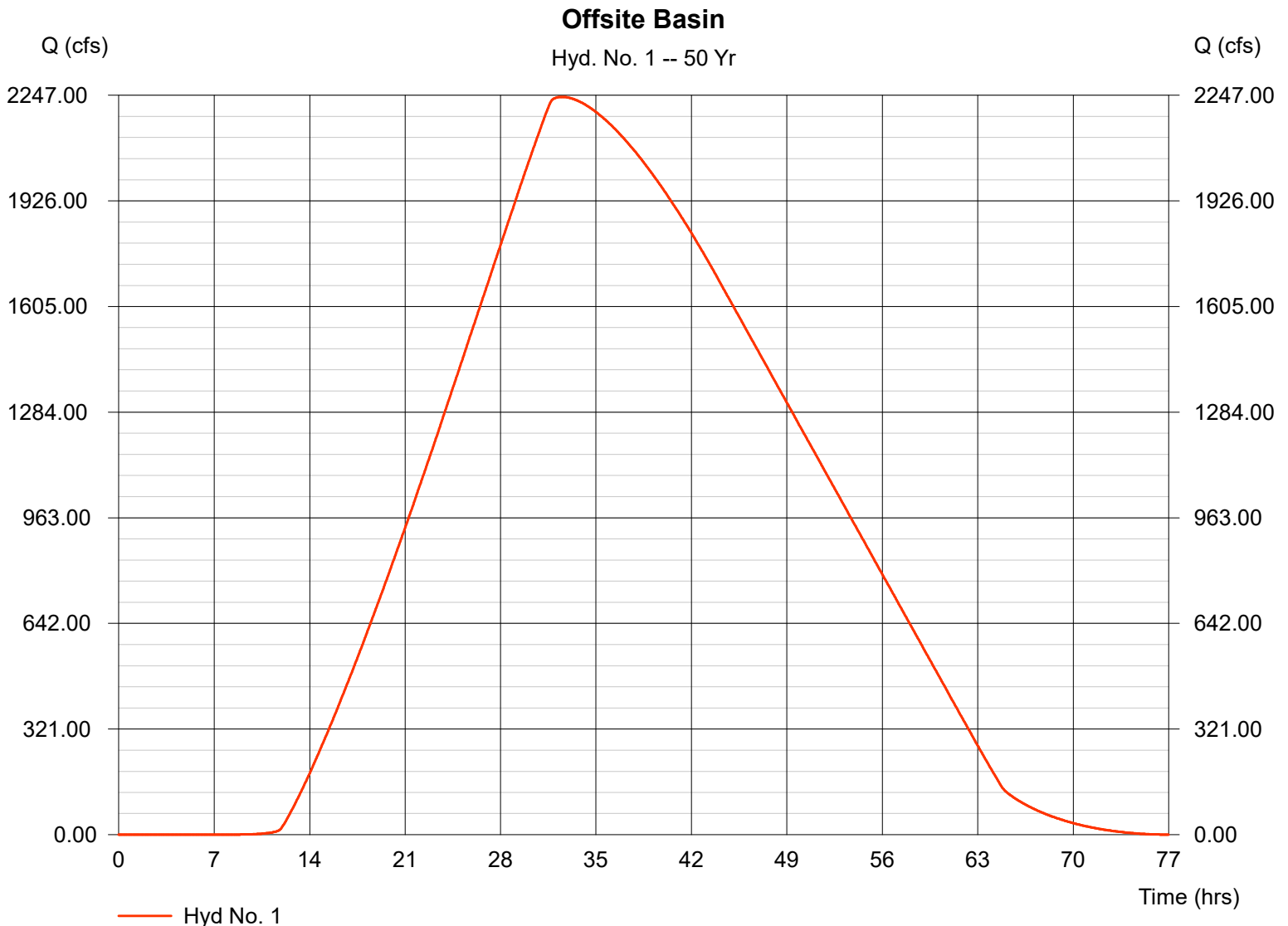
Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 50 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 7.38 in
Storm duration = 24 hrs

Peak discharge = 2242.08 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 235,888,000 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:36 AM

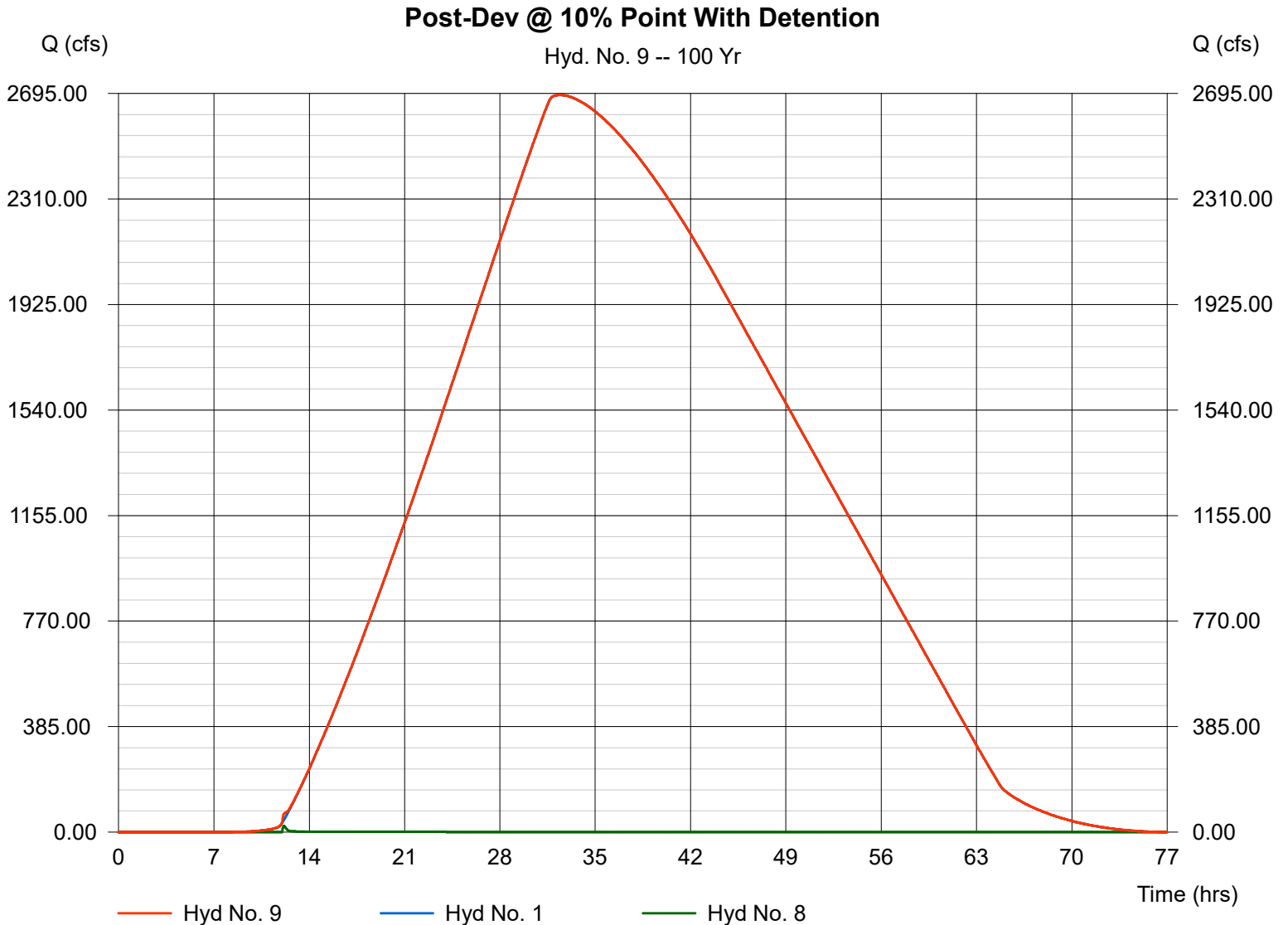
Hyd. No. 9

Post-Dev @ 10% Point With Detention

Hydrograph type = Combine
Storm frequency = 100 yrs
Inflow hyds. = 1, 8

Peak discharge = 2689.70 cfs
Time interval = 3 min

Hydrograph Volume = 282,600,400 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

Hyd. No. 8

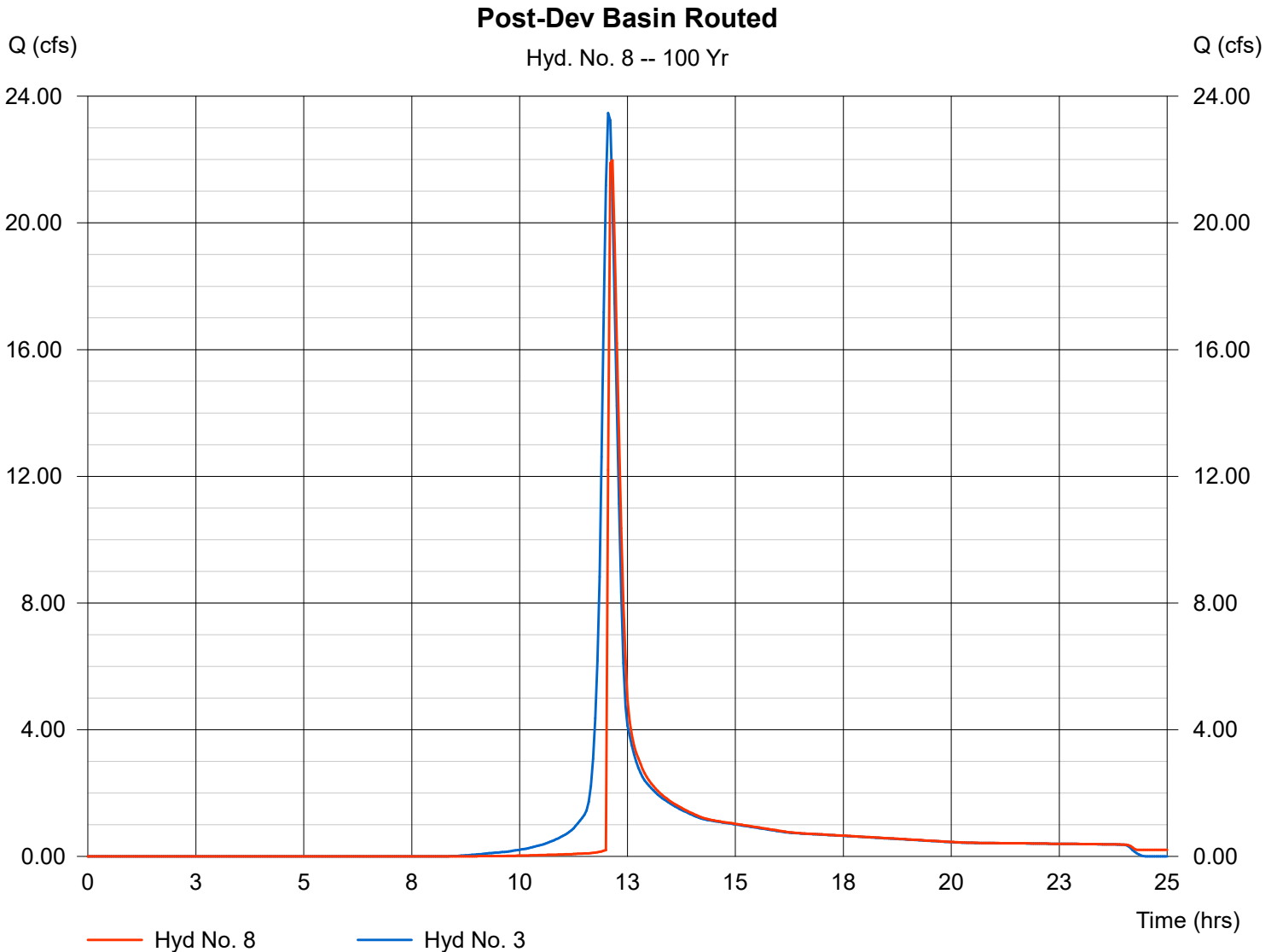
Post-Dev Basin Routed

Hydrograph type = Reservoir
Storm frequency = 100 yrs
Inflow hyd. No. = 3
Reservoir name = Det Pond

Peak discharge = 21.98 cfs
Time interval = 3 min
Max. Elevation = 758.72 ft
Max. Storage = 19,441 cuft

Storage Indication method used.

Hydrograph Volume = 75,128 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

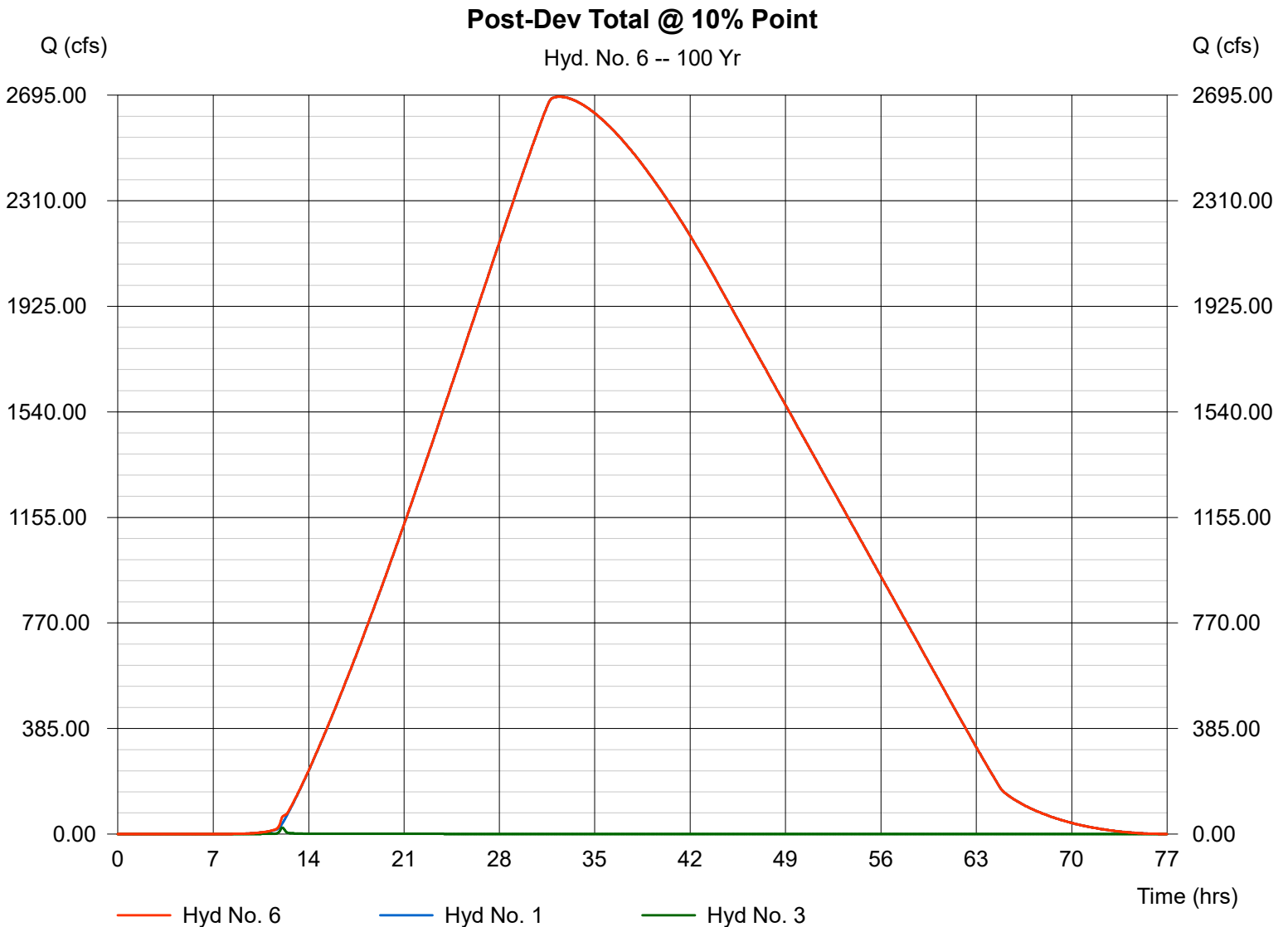
Hyd. No. 6

Post-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 100 yrs
Inflow hyds. = 1, 3

Peak discharge = 2689.52 cfs
Time interval = 3 min

Hydrograph Volume = 282,600,300 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

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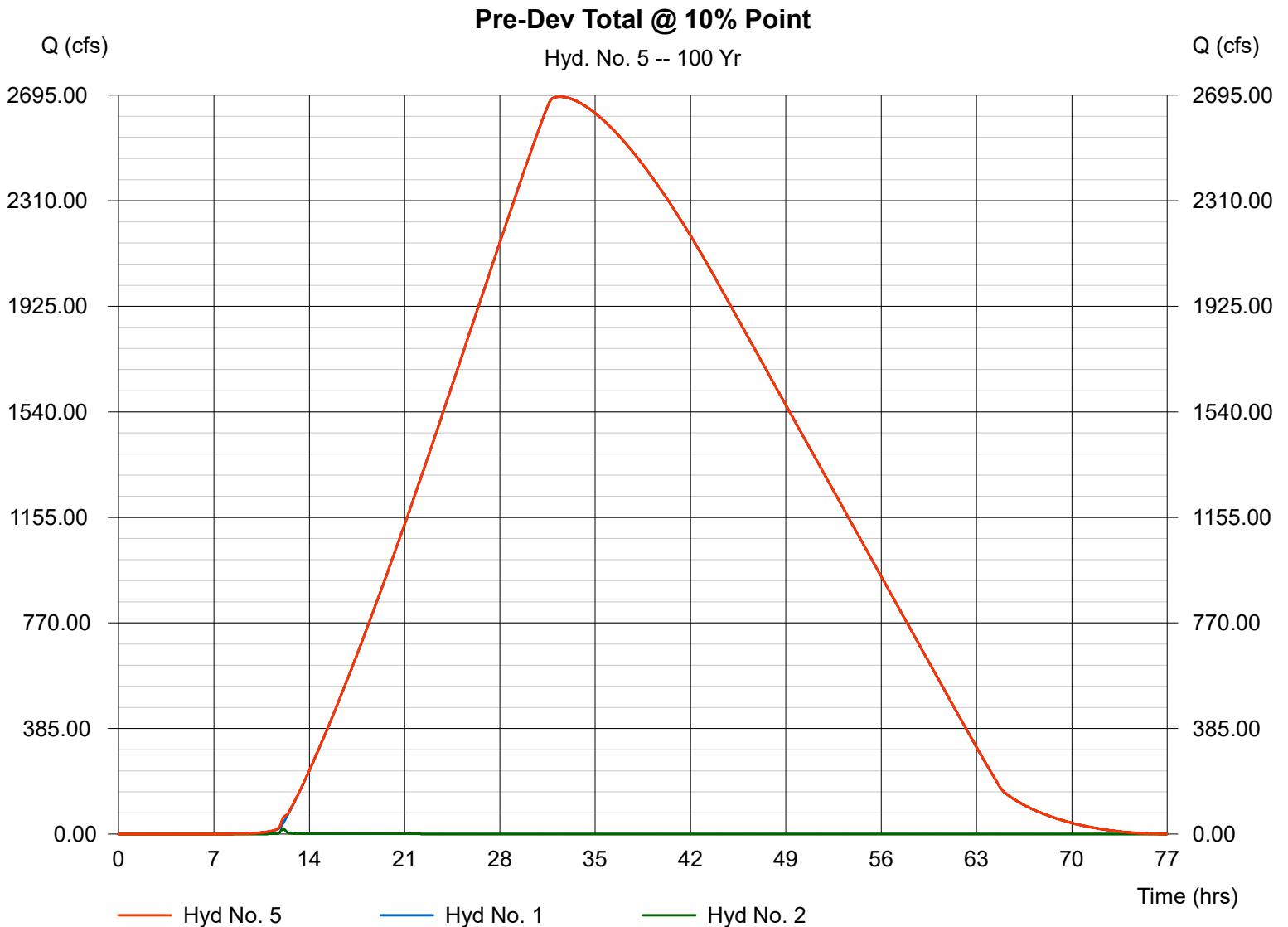
Hyd. No. 5

Pre-Dev Total @ 10% Point

Hydrograph type = Combine
Storm frequency = 100 yrs
Inflow hyds. = 1, 2

Peak discharge = 2689.52 cfs
Time interval = 3 min

Hydrograph Volume = 282,590,100 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

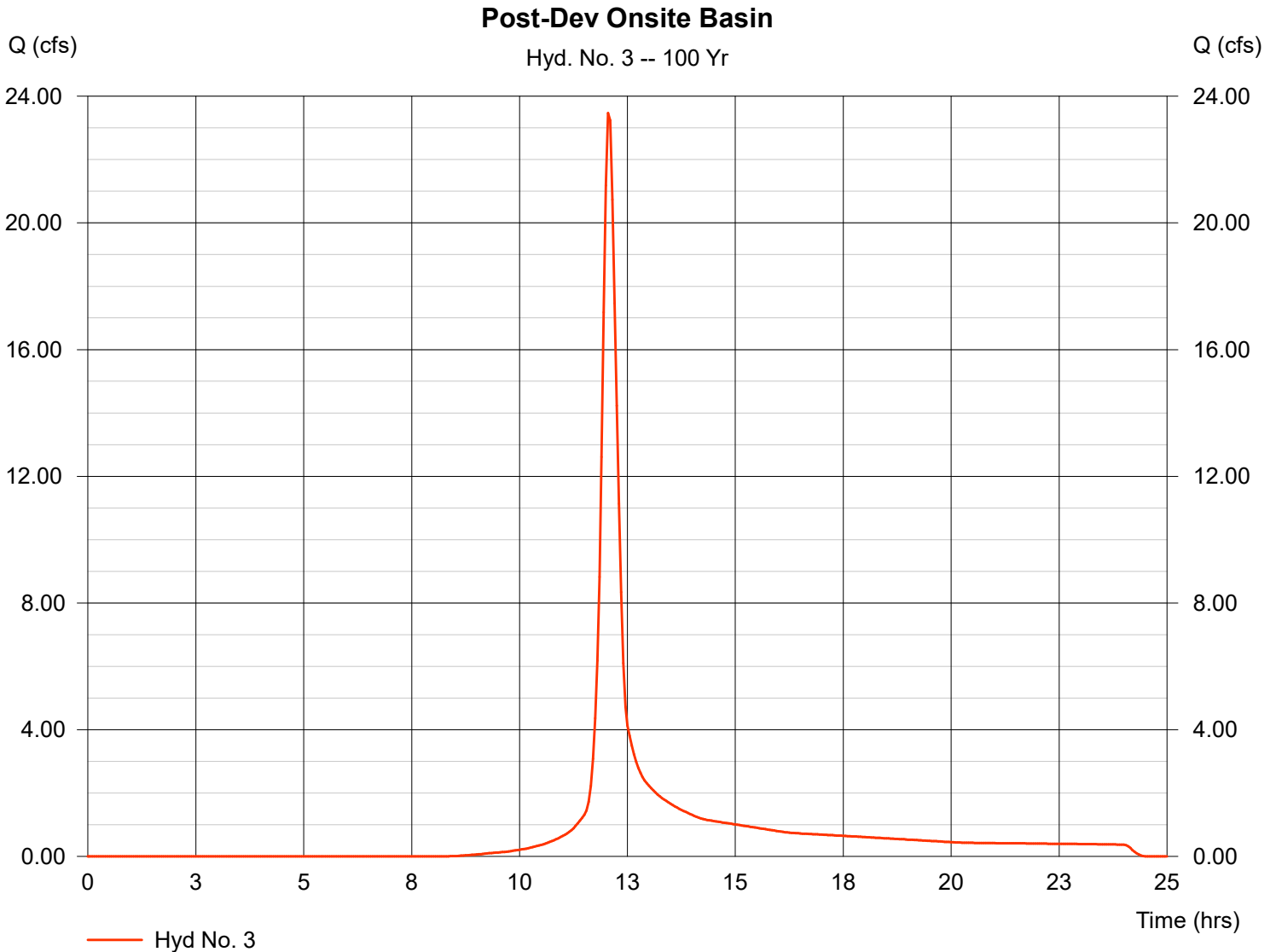
Hyd. No. 3

Post-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 23.46 cfs
Time interval = 3 min
Curve number = 66
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 75,149 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

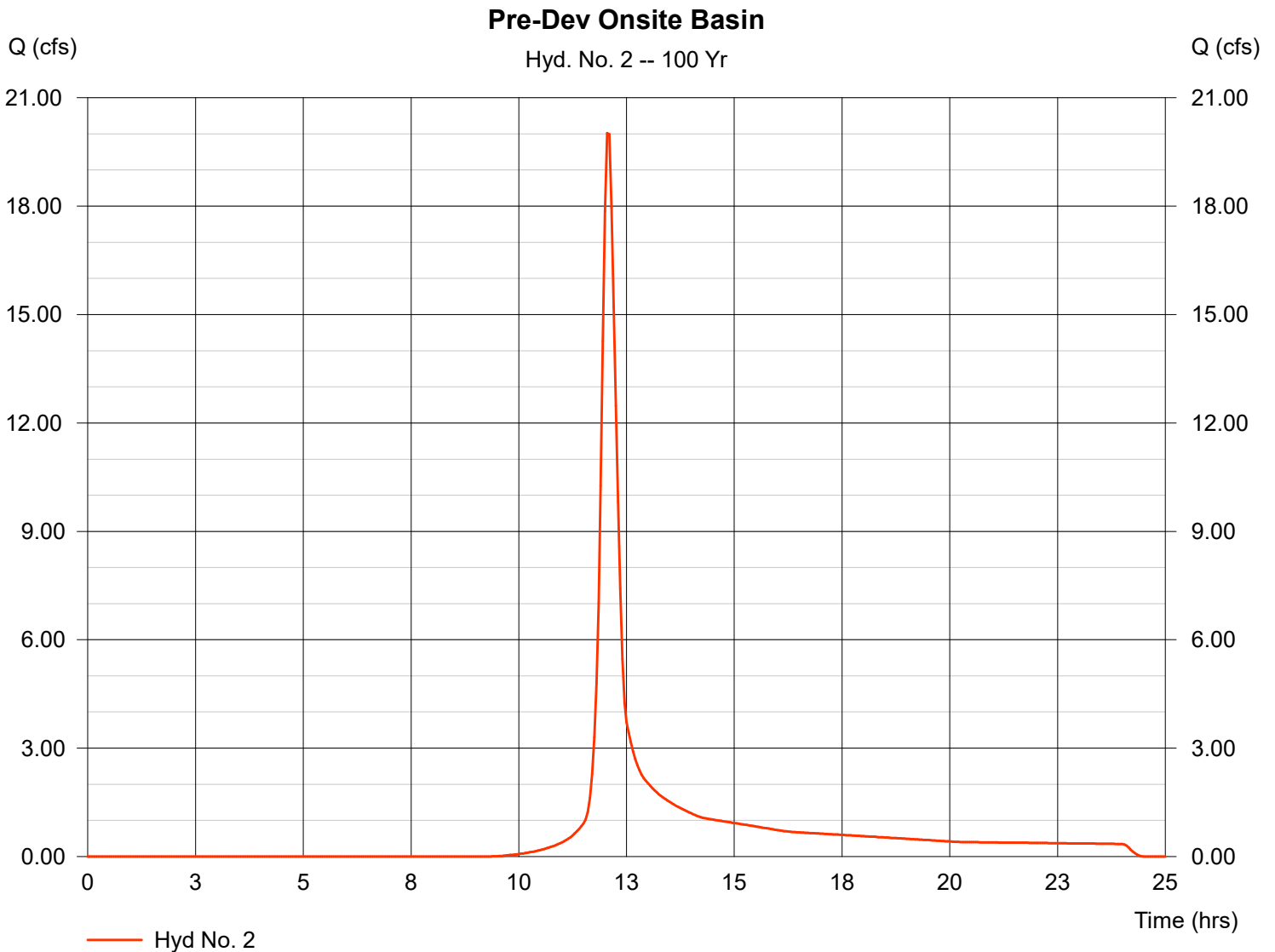
Hyd. No. 2

Pre-Dev Onsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 4.700 ac
Basin Slope = 0.0 %
Tc method = TR55
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 20.02 cfs
Time interval = 3 min
Curve number = 61
Hydraulic length = 0 ft
Time of conc. (Tc) = 18.10 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 64,930 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Wednesday, Apr 6 2022, 9:35 AM

Hyd. No. 1

Offsite Basin

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 15645.000 ac
Basin Slope = 0.3 %
Tc method = LAG
Total precip. = 8.32 in
Storm duration = 24 hrs

Peak discharge = 2689.52 cfs
Time interval = 3 min
Curve number = 72
Hydraulic length = 65913 ft
Time of conc. (Tc) = 2028.40 min
Distribution = Type II
Shape factor = 484

Hydrograph Volume = 282,525,200 cuft

