

Lake Country Lutheran

Campus Drive & Willow Drive
Village of Hartland,
Waukesha County, Wisconsin

Preliminary

Storm Water Management Plan

Prepared For:
Neumann Developments, Inc.

Prepared By:



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Submittal Date:
April 8, 2020

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Introduction

Lake Country Lutheran is a proposed residential development located between Campus Drive and Willow Drive, east of Lake Country Lutheran High School. The proposed development is comprised of 47 single-family condominium buildings situated along a private road system that connects to the public drive and Campus Drive and a private cul-de-sac that also connects to the public drive. Six multi-family buildings (134-units total) and associated drives, parking, garages, sidewalks and amenity areas are located south of the public drive. The development is laid out to reduce impact to the existing woodlands to the largest extent practicable. The primary objective of the storm water management plan for the Lake Country Lutheran development is to follow existing drainage patterns and keep the site internally drained while managing development runoff and providing water quality control prior to discharging to existing kettles, per Village and WDNR requirements.

Owner

The owner and responsible entity for the storm water management practices is:

Neumann Developments, Inc.
N27W24025 Paul Court, Suite 100
Pewaukee, WI 53072
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Property Description

The 53.4-acre property is identified as tax key HAV0423981, described as being part of the SW ¼ & SE ¼ of Section 34, Town 8 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin.

Design Requirements

The following design standards have been used to develop the storm water management plan for Lake Country Lutheran.

- Wisconsin Department of Natural Resources (WDNR) Technical Standards, NR 151 and NR 216.
- Village of Hartland Municipal Code Chapter 76 & Erosion Control and Stormwater Management Requirements

The proposed development is located on an internally drained site which produces no discharge (except in the extreme 100-year FROZEN condition). The proposed stormwater management plan will continue as an internally drained site and reduce FROZEN 100-year runoff rates, as compared to the existing site.

Analysis Overview

Existing and post development storm water runoff conditions for Lake Country Lutheran have been analyzed for: runoff volume, peak volume, discharge, detention area storage capacity required, outlet structures and storm sewer system requirements. The software package used for modeling and analysis was Hydraflow© Hydrographs 2019 by Autodesk Inc. Hydraflow uses NRCS methods to generate runoff and pond routing hydrographs. Hydraflow’s capabilities include: modeling simple or complex

drainage basins, combining hydrographs to determine runoff and storage requirements, analyzing interconnected detention basins and detention basin and outlet structure sizing.

The computer model analyzed the one, two, ten, and one hundred-year, FROZEN one hundred-year storm events. NRCS MSE3 rainfall distribution is used. The necessary hydrographs were generated to determine the storm water runoff rates, depths and volumes for pre and post development conditions. This information is used to calculate detention basin size and outlet requirements.

Run-off curve numbers for the onsite and off-site areas were determined using the requirements outlined in the NRCS TR-55 Manual. The existing soils on the site are Type B: Casco-Rodman Complex (CrD, CrE), Hochheim Loam (HmB2, HmC2, HmD2), Hochheim Soils (HoD3), Dodge Silt Loam (DdB) and Juneau silt loam (JuA). Please refer to the attached soils map for additional information.

The post development analysis runoff curve numbers are assigned based on TR-55 standards, and by calculating composite curve numbers per TR-55 standards, as applicable.

The rainfall depths for the 24-hour duration storm are:

Rainfall Depths for 24-Hour Storm Duration			
(NOAA Atlas 14 - Oconomowoc)			
1 year	2 year	10 year	100 year
2.40 inches	2.70 inches	3.81 inches	6.18 inches

The following describes the curve numbers assigned for composite calculations:

Curve Numbers:	Impervious Area (Rooftop, Pavement, Sidewalk, Etc.),	CN = 98
	Open Space: Type “B” Soil,	CN = 61
	Woods: Type “B” Soil,	CN = 60
	Cropland: Type “B” Soil,	CN = 70

Existing Site Description & Drainage Summary

Description

The subject site is primarily woodlands with an asphalt trail running east west through the center of the site, connecting Campus Drive and Willow Drive. The site also contains a walking trail meandering throughout the site. As such, the storm water analysis modeled the existing areas as woods and open space with some impervious area accounting for the existing asphalt trail and offsite impervious run on from the single-family lots along Willow Drive, Gail Court and Hickory Court. An existing infiltration basin is located in the northwest corner of the development site, which overtops and spills into the subject site during the FROZEN 100-year storm event.

Existing Drainage Areas

The site is broken down into fifteen (15) drainage areas based on the kettles located throughout the site, as illustrated on the Existing Drainage Map and generally described as:

E-1: Comprised of 15.48 acres, drainage area E-1 receives runoff from onsite woodland and trail area and offsite cropland and residential area. E-1 drains directly to Kettle 1.

- E-2:** Drainage area E-2 is located southwest of drainage area E-1 and receives runoff from onsite woodland area and the existing asphalt trail, 5.43 acres. This drainage area overland flows to Kettle 2.
- E-3:** Onsite woodland and existing asphalt trail makes up the 1.59 acre drainage area that is E-3. E-3 overland flows to Kettle 3.
- E-4:** This small drainage area, 0.36 acres, is in the west central portion of the site and comprised of onsite woodland area. This area overland flows to Kettle 4 prior to discharging to E-2.
- E-5:** Drainage area E-5 is located in the central portion of the site south of the asphalt trail and made up of 6.99 acres of onsite woodland, open space and asphalt trail. Runoff overland flows to Kettle 5 prior to discharging through a 15” RCP culvert to Kettle 3.
- E-6:** This 2.77 acre drainage area is located along the western limits of the property and is primarily onsite woodland area that overland flows to Kettle 6.
- E-10:** Comprised of 1.92 acres of onsite woodland area and offsite rear-yard run-on, this drainage area overland flows to Kettle 10.
- E-11:** This small 0.73 acre onsite drainage area is comprised of primarily woodland area that drains to Kettle 11.
- E-12:** Drainage area E-12 is located along the northern portion of the Willow Drive connection and consists of 2.90 acres of onsite woodland area and asphalt trail, as well as offsite roadway & residential run-on. This area is tributary to Kettle 12, which also receives outflow from Kettle 13.
- E-13:** Located along the southern portion of the Willow Drive connection, drainage area is comprised of 1.01 acres of onsite woodland area and offsite rear yard run-on, that drains to Kettle 13 prior to discharging through two 24” RCP culverts to Kettle 12.
- E-14:** Drainage area E-14, 7.32 acres, consist of onsite woodland area and the northern portion of the S.T.H. 16 R.O.W. that drains to Kettle 14 via ditch and overland flow.
- E-15:** Drainage area E-15 is located to the east of the subject property and comprised of 0.88 acres of offsite rear yard and woodland area that overland flows to Kettle 15, discharging toward the proposed development site in the FROZEN 100-year condition.
- E-16:** Located in the southwest corner of the site, drainage area E-16 consists of 1.62 acres of onsite woodland area that drains to Kettle 16.
- E-17:** Drainage area E-17 consists of 4.29 acres of onsite open space, woodland area and walking trail. This drainage area is located in the southwest corner of the site and overland flows to Kettle 17.
- E-20:** In the northwest corner of the subject site, drainage area E-20 is comprised of 4.81 acres of onsite woodland area, walking trail and some open space. This area receives runoff via overland flow and discharge from the Existing Infiltration Basin in the 100-year FROZEN condition

The following table provides a detailed breakdown of the land use characteristics of each area, refer to the existing drainage map provided in Appendix 2:

Pre-Developed Condition							
Lot Coverage	E-1 (acres)	E-2 (acres)	E-3 (acres)	E-4 (acres)	E-5 (acres)	E-6 (acres)	E-10 (acres)
Open Space "B" (CN=61)	2.10	0.71	0.42	0.08	2.04	0.12	0.44
Woods "B" (CN=60)	11.67	4.62	1.06	0.28	4.95	2.65	1.30
Cropland "B" (CN=70)	0.91	0.00	0.00	0.00	0.00	0.00	0.00
Impervious (CN=98)	0.80	0.10	0.11	0.00	0.00	0.00	0.18
Sub-Total (ac)	15.48	5.43	1.59	0.36	6.99	2.77	1.92
<i>Composite CN</i>	63	61	63	60	60	60	64

Pre-Developed Condition								
Lot Coverage	E-11 (acres)	E-12 (acres)	E-13 (acres)	E-14 (acres)	E-15 (acres)	E-16 (acres)	E-17 (acres)	E-20 (acres)
Open Space "B" (CN=61)	0.12	0.89	0.18	2.93	0.29	0.09	1.08	0.42
Woods "B" (CN=60)	0.61	1.40	0.73	3.81	0.48	1.53	3.21	4.39
Cropland "B" (CN=70)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Impervious (CN=98)	0.00	0.61	0.10	0.58	0.10	0.00	0.00	0.00
Sub-Total (ac)	0.73	2.90	1.01	7.32	0.88	1.62	4.29	4.81
<i>Composite CN</i>	60	68	64	63	65	60	60	60

Post-Development Site Description & Drainage Summary

Description

The proposed Lake Country Lutheran development is a 47 single-family condominium unit residential subdivision along a private street system to the north and to the south are six multi-family buildings (totaling 138 units) and associated drives, parking, garages, sidewalks and amenity areas. The layout of the condominium units, multifamily building and streets was intentional and designed to maximize the amount of wooded area that can be preserved through this development. The development areas drain to proposed basins for the primary means of storm water management and water quality prior to discharging to the existing kettles.

Proposed Drainage Areas

The post-development site is divided in to ten (10) proposed drainage areas (and three (3) existing drainage areas), as illustrated on the Proposed Drainage Map and generally described as:

P-1: Comprised of 12.52 acres, drainage area P-1 receives runoff from onsite rear-yard drainage, woodland and trail areas and offsite cropland and residential area. Pond 20 discharges to drainage area P-1. P-1 drains directly to existing Kettle 1

P-2: Drainage area P-2 consists of 2.04 acres of condominium rear yard runoff, condo amenity area and woodland areas. The runoff overland flows to existing Kettle 2.

P-3: 0.75 acres, this small drainage area receives runoff from condo rear-yard runoff, woodland area and Pond 5 discharge, and flows to existing Kettle 3.

P-5: Drainage area P-5 accounts for 11.57 acres of multi-family area runoff, which drains to Pond 5 via storm sewer, curb and gutter, swales and overland flow.

P-10: P-10, 1.82 acres, encompasses the existing drainage area E-10 except in the proposed condition a small portion of rear yard runoff is included and overland flows to existing Kettle 10.

P-11: The eastern single-family condo cul-de-sac makes up the 3.18 acre drainage area, P-11. Runoff is comprised of roof, driveway, yard, road and open space and is tributary to Pond 11 via swales, overland flow, curb & gutter and storm sewer. Kettle 2 overtops to drainage area P-11 in the proposed condition.

P-12: P-12 is comprised of single-family condo rear yard runoff, existing asphalt trail and offsite roadway & residential area. This 2.91 acre drainage area also receives discharge from Kettle 13 and is managed by existing Kettle 12.

P-16: Drainage area P-16 is located along the southern property line. Multifamily sidewalk, open space and woodland area comprises this 1.56 acre drainage area tributary, via overland flow, to existing Kettle 16.

P-17: P-17, 3.54 acres, is located in the southwest corner of the site and receives runoff from multifamily garage roof, woodland area and open space; discharging via overland flow to proposed Kettle 17. Kettle 17 storage area is slightly altered by associated grading with the multifamily development, however the remainder of the kettle remains unchanged.

P-20: Drainage area P-20 is located in the northwest corner of the development and consists of 9.85 acres of single-family condominium runoff. Discharge drains to Pond 20 via overland flow, swales, curb & gutter and storm sewer. The existing infiltration basin discharges to drainage area P-20 in the FROZEN 100-year condition.

The following table describes the lot coverage breakdown for each drainage area which was used to develop the composite curve numbers:

Lot Coverage	Post-Developed Condition									
	P-1	P-2	P-3	P-5	P-10	P-11	P-12	P-16	P-17	P-20
	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)
Roof (CN=98)	0.11	0.19	0.07	2.31	0.04	0.63	0.15	0.00	0.06	2.39
Driveway (CN=98)	0.00	0.00	0.00	2.56	0.00	0.43	0.00	0.00	0.00	1.27
Street (CN=98)	0.00	0.00	0.00	0.40	0.00	0.33	0.00	0.00	0.00	1.13
Sidewalk/Patio (CN=98)	0.02	0.15	0.01	0.63	0.01	0.10	0.09	0.04	0.00	0.61
Wet Pond (CN=98)	0.00	0.00	0.00	0.25	0.00	0.08	0.00	0.00	0.00	0.12
Open Space "B" (CN=61)	1.60	0.52	0.22	4.63	0.55	1.06	1.58	0.42	1.36	3.94
Woodland "B" (CN=60)	9.08	1.19	0.44	0.79	1.05	0.55	0.55	1.11	2.12	0.40
Cropland "B" (CN=70)	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Impervious (CN=98)	0.80	0.00	0.00	0.00	0.18	0.00	0.55	0.00	0.00	0.00
Sub-Total (ac)	12.52	2.04	0.75	11.57	1.82	3.18	2.91	1.56	3.54	9.85
<i>Composite CN</i>	64	66	65	81	65	79	71	61	61	82

Descriptions & Summaries of Storm Water Practices

Pond 5 Summary

Pond 5 is a large basin located south of the public drive. It receives runoff from drainage area P-5 via storm sewer, curb & gutter, grass swales and overland flow. This basin discharges through a riser structure to Kettle 3.

The outfall structure is a 4'x4' rectangular RCP riser with a 45-degree V-notch weir with the crest at the bottom of the pond, and a 36" diameter outfall pipe. The emergency overflow spillway is in the southwest corner of the pond and overflows over the public drive in the FROZEN 100-year condition.

The following describes this basin:

- “Top” of Berm = 986.0
- Overflow = 985.6
- N.W.L. = 981.0
- Bottom = 976.0
- Top of Riser Structure = 984.25
- 45-degree V-notch weir = 981.0
- 100-yr FROZEN = 985.74
- 100-yr = 984.94

- 10-yr = 983.69
- 2-yr = 982.80
- 1-yr = 982.53

Pond 11 Summary

This wet pond is located near the center of the development, northwest of the single-family condominium development. Inflow to this pond is primarily from drainage area P-11 with some discharge from Kettle 2 in large storm events. Pond 11 discharges via a riser structure to Kettle 1. The outfall structure is a 4' diameter RCP riser with a 4" low flow orifice at the normal water level of the pond, and a 24" diameter outfall pipe. The emergency overflow spillway is on the northern side of the pond and overflows to Kettle 1.

The following describes this wet pond:

- Top of Berm = 969.0
- Overflow = 968.0
- N.W.L. = 964.0
- Bottom = 959.0
- Top of Riser Structure = 966.90
- 4" low flow orifice = 964.0
- 100-yr FROZEN = 968.61
- 100-yr = 967.45
- 10-yr = 966.89
- 2-yr = 965.62
- 1-yr = 965.28

Pond 20 Summary

Pond 20 is located in the northern portion of the site. Pond 20 receives discharge from drainage area P-20, and the existing infiltration basin during the frozen 100-year storm event. This basin discharges through a riser structure to Kettle 1.

The outfall structure is a 4'x4' rectangular RCP riser with a 45-degree V-notch weir with the crest set at the wet pond normal water level, and a 36" diameter outfall pipe. The emergency overflow route is in the southeast corner of the basin and directed towards Kettle 1.

The following describes this basin:

- Top of Berm = 994.25
- Overflow = 993.25
- N.W.L. = 989.0
- Bottom = 984.0
- Top of Riser Structure = 1005.0
- 100-yr FROZEN = 993.78
- 100-yr = 993.22
- 10-yr = 992.23
- 2-yr = 991.25
- 1-yr = 990.96

Kettle Peak Water Elevations

The table below summarizes the storm water peak elevations for the kettles throughout the site.

		Storm Event	Existing	Proposed			Storm Event	Existing	Proposed
Kettle 1	Spillway- 975 Bottom- 944	1-yr	945.85	948.87	Kettle 11	Spillway- 980.5 Bottom- 979	1-yr	979.19	N/A
		2-yr	946.47	949.79			2-yr	979.30	
		10-yr	948.74	952.83			10-yr	979.87	
		100-yr	953.25	960.24			100-yr	980.51	
		FROZEN	964.03	967.90			FROZEN	980.84	
Kettle 2	Spillway- 973.7 Bottom- 966	1-yr	967.37	968.42	Kettle 12	Spillway- 963 Bottom- 956	1-yr	957.13	957.24
		2-yr	967.76	969.71			2-yr	957.32	957.47
		10-yr	969.17	973.01			10-yr	958.16	958.30
		100-yr	973.89	974.59			100-yr	960.40	960.49
		FROZEN	975.56	975.82			FROZEN	965.08	965.00
Kettle 3	Spillway- 976 Bottom- 972	1-yr	973.18	976.06	Kettle 13	Spillway- 966 Bottom- 959.4	1-yr	959.60	959.60
		2-yr	973.70	976.14			2-yr	959.66	959.66
		10-yr	975.62	976.34			10-yr	959.84	959.84
		100-yr	976.29	976.97			100-yr	960.14	960.14
		FROZEN	976.79	977.30			FROZEN	963.41	963.27
Kettle 4	Spillway- 1008.5 Bottom- 1007	1-yr	1007.10	N/A	Kettle 14	Spillway- 961.3 Bottom- 955	1-yr	956.18	956.18
		2-yr	1007.15				2-yr	956.61	956.61
		10-yr	1007.44				10-yr	958.24	958.24
		100-yr	1008.13				100-yr	961.49	961.48
		FROZEN	1008.66				FROZEN	963.41	963.27
Kettle 5	Spillway- 985.1 Bottom- 982.5	1-yr	982.85	N/A	Kettle 15	Spillway- 972.5 Bottom- 970	1-yr	970.34	970.35
		2-yr	982.99				2-yr	970.50	970.51
		10-yr	983.28				10-yr	971.12	971.14
		100-yr	984.22				100-yr	972.15	972.18
		FROZEN	985.82				FROZEN	972.77	972.77
Kettle 6	Spillway- 1012.7 Bottom- 1011	1-yr	1011.09	N/A	Kettle 16	Spillway- 1007 Bottom- 1005	1-yr	1005.13	1005.15
		2-yr	1011.14				2-yr	1005.21	1005.23
		10-yr	1011.39				10-yr	1005.59	1005.65
		100-yr	1012.10				100-yr	1007.15	1007.14
		FROZEN	1012.96				FROZEN	1008.04	1008.02
Kettle 10	Spillway- 964.5 Bottom- 953	1-yr	955.31	955.03	Kettle 17	Spillway- 1012 Bottom- 1011	1-yr	1011.19	1011.19
		2-yr	955.80	955.34			2-yr	1011.29	1011.29
		10-yr	959.87	956.45			10-yr	1011.83	1011.82
		100-yr	960.89	958.29			100-yr	1012.19	1012.17
		FROZEN	965.08	965.00			FROZEN	1012.87	1012.84
Kettle 20	Spillway- 995.5 Bottom- 992	1-yr	992.17	N/A	Kettle 20	Spillway- 995.5 Bottom- 992	1-yr	992.17	N/A
		2-yr	992.26				2-yr	992.26	
		10-yr	992.75				10-yr	992.75	
		100-yr	993.60				100-yr	993.60	
		FROZEN	995.21				FROZEN	995.21	

Water Quality (Total Suspended Solids Reduction) & Infiltration

WinSLAMM © Version 10.4.1 is utilized to calculate the total suspended solids (TSS) loadings for the drainage areas and reductions produced by the storm water facilities to ensure adequate water quality is achieved prior to discharging to existing kettles.

The development will provide infiltration where soil and subsurface conditions permit, per WDNR and Village code requirements. Primary infiltration practices may be located within proposed Pond 5 and Pond 20. Additional geotechnical investigation is being completed as part of the construction plan development will determine if infiltration is possible in storm water areas.

Frozen Ground (CN=98) 100-year

The proposed storm water model has been analyzed to view the extreme scenario of a 100-year storm event during frozen ground conditions. To portray the frozen ground, each drainage area was assigned a runoff curve number of 98, equal to the impervious runoff curve number. The overflow spillway and berm elevations of the proposed storm water practices are designed to carry the frozen ground 100-year overflow in a manner that protects the development. Please note Kettles 10 & 12, which connect to the rear yards along Hickory Court are improved in the proposed 100-year FROZEN condition and the proposed development area 100-year FROZEN runoff remains on-site. Refer to Appendix 4 for the proposed 100-year frozen ground Hydraflow modeling.

Conclusion

The storm water management plan for this proposed development remains internally drained and meets Village and WDNR requirements; the results described above are supported by the calculations provided in the attachments. A storm water maintenance agreement will be created and executed for this development to ensure that the storm water practices and drainage measures function as intended in perpetuity.

APPENDIX 1

Soils Map & Geotechnical Report

Waukesha County GIS Map

Legend

- Parcels (Click for details)
 - Plats (Click for details)
 - Retired Parcels (Click for details)
 - Retired Plats (Click for details)
 - Soils
 - Municipal Boundary_2K
 - FacilitySites_2K_Labels
 - Lots_2K
 - Lot
 - Outlot
 - SimultaneousConveyance_2K
 - Assessor Plat
 - CSM
 - Condominium
 - Subdivision
 - Cartoline_2K
 - <all other values>
 - EA-Easement_Line
 - PL-DA
 - PL-Extended_Tie_line
 - PL-Meander_Line
 - PL-Note
 - PL-Tie
 - PL-Tie_Line
 - Road Centerlines_2K
 - Railroad_2K
 - TaxParcel_2K
 - Waterbodies_2K_Labels
 - Waterlines_2K_Labels



Notes



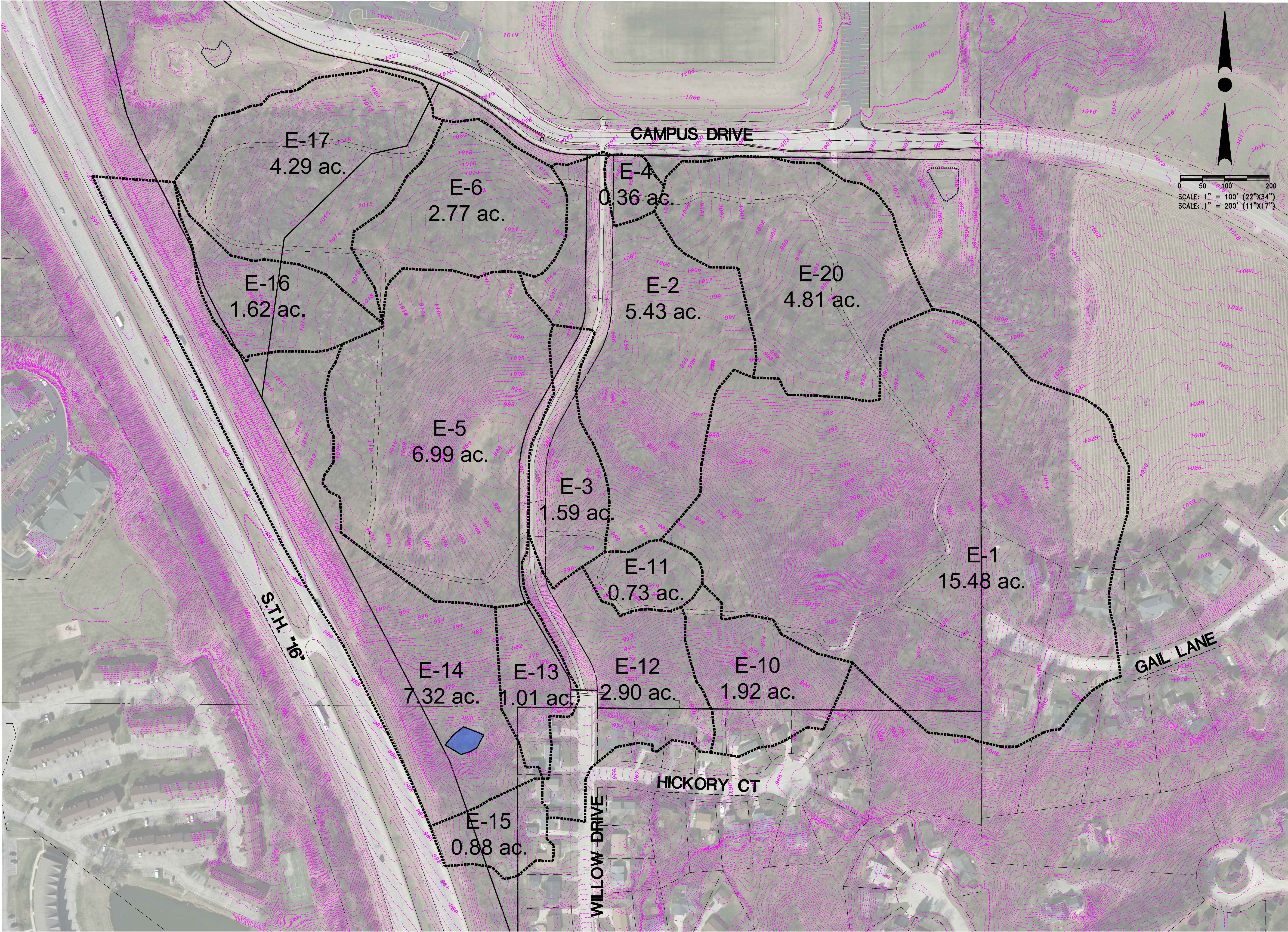
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APPENDIX 2

Existing Drainage Area Map
&
Proposed Drainage Area Map

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PROJECT:
"EAST 50 ACRES" RESIDENTIAL DEVELOPMENT
 LAKE COUNTRY LUTHERAN LAND
 VILLAGE OF HARTLAND, WISCONSIN
 BY: NEUMANN DEVELOPMENTS, INC.
 N27W24025 PAUL COURT, SUITE 100
 PEWAUKEE, WI 53072

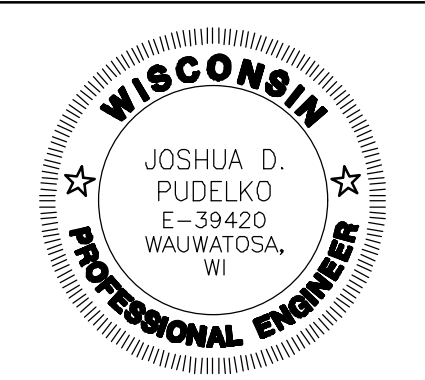
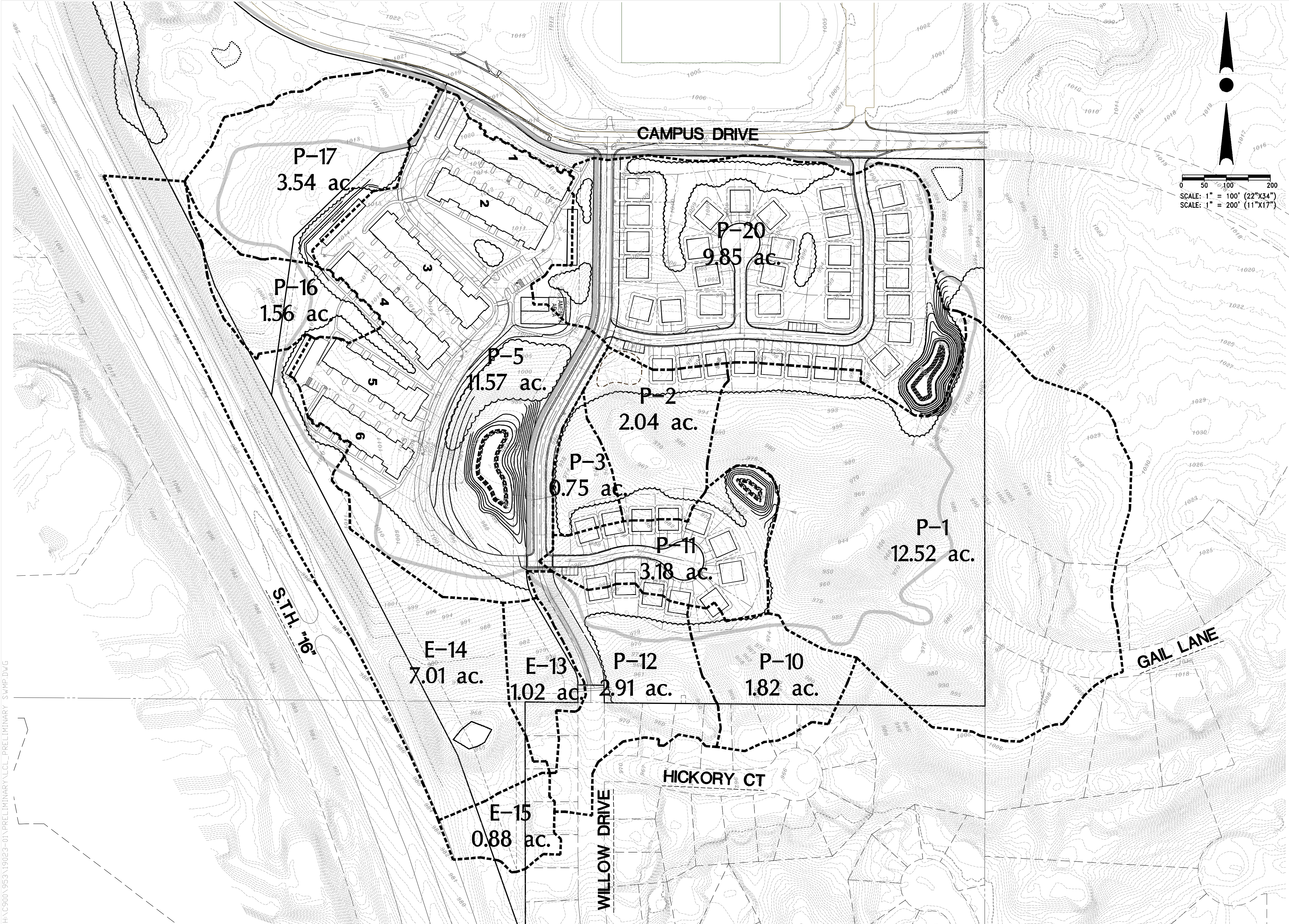
REVISION HISTORY	
DATE	DESCRIPTION
03/08/20	PLAN COMMISSION

DATE:
 MARCH 8, 2020

JOB NUMBER:
 19023-953

DESCRIPTION:
 EXISTING
 DRAINAGE
 AREA MAP

SHEET
E-DA



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EMAIL: info@trioeng.com

PROJECT:
"EAST 50 ACRES" RESIDENTIAL DEVELOPMENT
LAKE COUNTRY LUTHERAN LAND
VILLAGE OF HARTLAND, WISCONSIN
BY: NEUMANN DEVELOPMENTS, INC.
N27W24025 PAUL COURT, SUITE 100
PEWAUKEE, WI 53072

REVISION HISTORY	
DATE	DESCRIPTION
03/08/20	PLAN COMMISSION

DATE:
MARCH 8, 2020

JOB NUMBER:
19023-953

DESCRIPTION:
PROPOSED
DRAINAGE
AREA MAP

SHEET

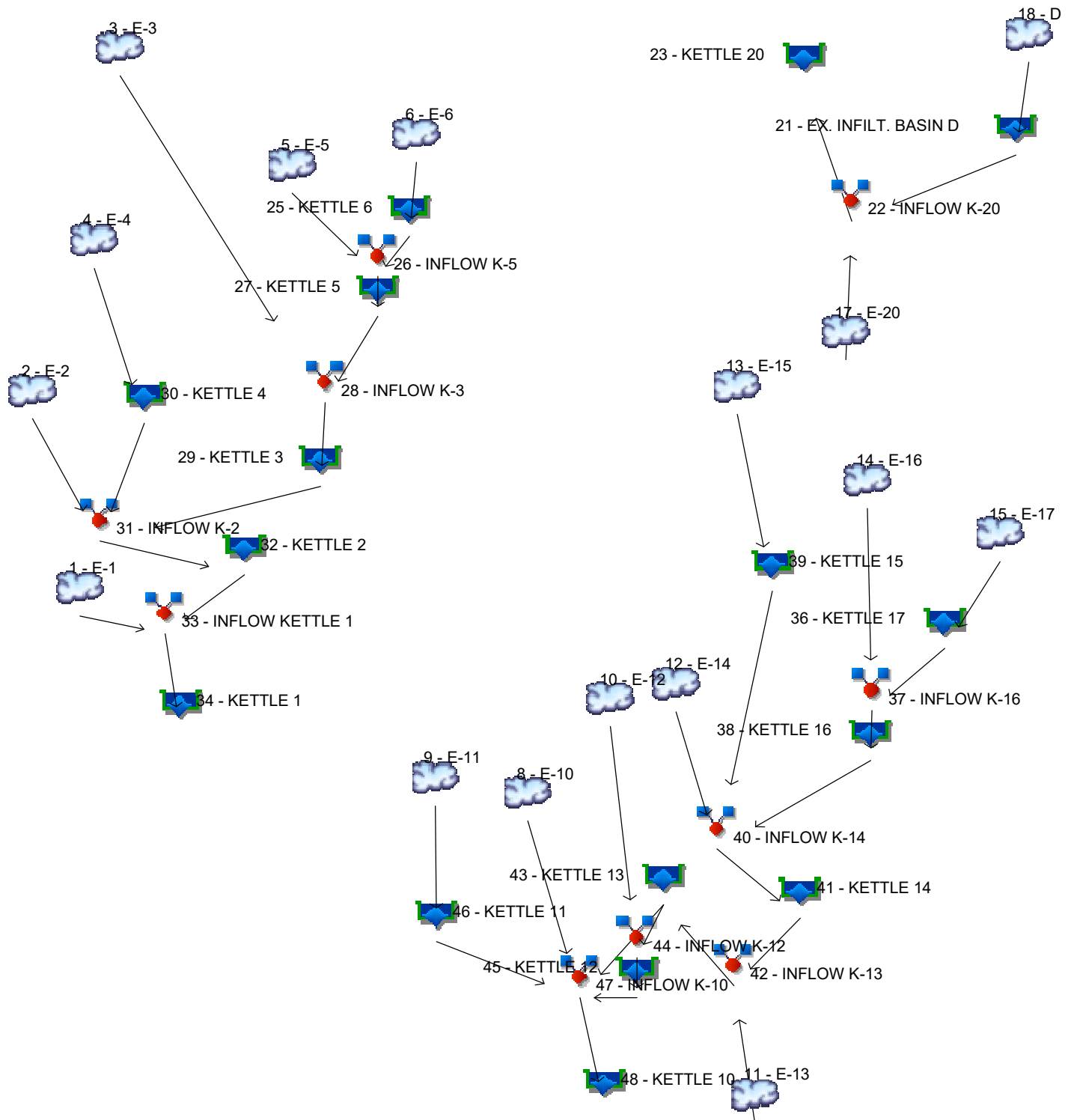
P-DA

APPENDIX 3

Hydraflow Modeling

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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	----	2.322	3.834	-----	-----	12.04	-----	-----	39.37	E-1
2	SCS Runoff	----	0.700	1.197	-----	-----	4.386	-----	-----	15.97	E-2
3	SCS Runoff	----	0.328	0.565	-----	-----	1.885	-----	-----	6.413	E-3
4	SCS Runoff	----	0.057	0.114	-----	-----	0.514	-----	-----	2.047	E-4
5	SCS Runoff	----	0.715	1.276	-----	-----	4.757	-----	-----	17.82	E-5
6	SCS Runoff	----	0.334	0.623	-----	-----	2.461	-----	-----	9.601	E-6
8	SCS Runoff	----	0.461	0.785	-----	-----	2.485	-----	-----	8.125	E-10
9	SCS Runoff	----	0.106	0.207	-----	-----	0.863	-----	-----	3.469	E-11
10	SCS Runoff	----	1.249	1.842	-----	-----	5.116	-----	-----	14.53	E-12
11	SCS Runoff	----	0.302	0.527	-----	-----	1.765	-----	-----	5.768	E-13
12	SCS Runoff	----	1.098	1.813	-----	-----	5.693	-----	-----	18.62	E-14
13	SCS Runoff	----	0.364	0.623	-----	-----	2.035	-----	-----	6.307	E-15
14	SCS Runoff	----	0.207	0.398	-----	-----	1.617	-----	-----	6.406	E-16
15	SCS Runoff	----	0.548	1.054	-----	-----	4.282	-----	-----	16.97	E-17
17	SCS Runoff	----	0.492	0.878	-----	-----	3.275	-----	-----	12.27	E-20
18	SCS Runoff	----	2.736	3.951	-----	-----	9.710	-----	-----	26.01	D
21	Reservoir	18	0.000	0.000	-----	-----	0.000	-----	-----	0.000	EX. INFILT. BASIN D
22	Combine	17, 21	0.492	0.878	-----	-----	3.275	-----	-----	12.27	INFLOW K-20
23	Reservoir	22	0.000	0.000	-----	-----	0.000	-----	-----	0.000	KETTLE 20
25	Reservoir	6	0.000	0.000	-----	-----	0.000	-----	-----	0.000	KETTLE 6
26	Combine	5, 25	0.715	1.276	-----	-----	4.757	-----	-----	17.82	INFLOW K-5
27	Reservoir	26	0.383	0.787	-----	-----	2.084	-----	-----	5.970	KETTLE 5
28	Combine	3, 27	0.499	0.990	-----	-----	2.714	-----	-----	8.870	INFLOW K-3
29	Reservoir	28	0.000	0.000	-----	-----	0.000	-----	-----	6.123	KETTLE 3
30	Reservoir	4	0.000	0.000	-----	-----	0.000	-----	-----	0.000	KETTLE 4
31	Combine	2, 29, 30	0.700	1.197	-----	-----	4.386	-----	-----	15.97	INFLOW K-2
32	Reservoir	31	0.000	0.000	-----	-----	0.000	-----	-----	1.238	KETTLE 2
33	Combine	1, 32	2.322	3.834	-----	-----	12.04	-----	-----	39.37	INFLOW KETTLE 1
34	Reservoir	33	0.000	0.000	-----	-----	0.000	-----	-----	0.000	KETTLE 1
36	Reservoir	15	0.000	0.000	-----	-----	0.000	-----	-----	3.197	KETTLE 17
37	Combine	14, 36	0.207	0.398	-----	-----	1.617	-----	-----	6.406	INFLOW K-16
Proj. file: EXISTING_LCL_Stormwater Model_2020-04-08.gpw										Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.322	2	176	11,634	-----	-----	-----	E-1
2	SCS Runoff	0.700	2	170	3,248	-----	-----	-----	E-2
3	SCS Runoff	0.328	2	160	1,207	-----	-----	-----	E-3
4	SCS Runoff	0.057	2	154	192	-----	-----	-----	E-4
5	SCS Runoff	0.715	2	176	3,723	-----	-----	-----	E-5
6	SCS Runoff	0.334	2	164	1,476	-----	-----	-----	E-6
8	SCS Runoff	0.461	2	160	1,616	-----	-----	-----	E-10
9	SCS Runoff	0.106	2	156	406	-----	-----	-----	E-11
10	SCS Runoff	1.249	2	158	3,630	-----	-----	-----	E-12
11	SCS Runoff	0.302	2	154	877	-----	-----	-----	E-13
12	SCS Runoff	1.098	2	176	5,502	-----	-----	-----	E-14
13	SCS Runoff	0.364	2	150	828	-----	-----	-----	E-15
14	SCS Runoff	0.207	2	160	842	-----	-----	-----	E-16
15	SCS Runoff	0.548	2	160	2,229	-----	-----	-----	E-17
17	SCS Runoff	0.492	2	176	2,564	-----	-----	-----	E-20
18	SCS Runoff	2.736	2	170	11,041	-----	-----	-----	D
21	Reservoir	0.000	2	256	0	18	989.98	4,108	EX. INFILT. BASIN D
22	Combine	0.492	2	176	2,564	17, 21	-----	-----	INFLOW K-20
23	Reservoir	0.000	2	246	0	22	992.17	2,410	KETTLE 20
25	Reservoir	0.000	2	242	0	6	1011.09	1,404	KETTLE 6
26	Combine	0.715	2	176	3,723	5, 25	-----	-----	INFLOW K-5
27	Reservoir	0.383	2	208	2,956	26	982.85	1,223	KETTLE 5
28	Combine	0.499	2	204	4,163	3, 27	-----	-----	INFLOW K-3
29	Reservoir	0.000	2	1136	0	28	973.18	3,805	KETTLE 3
30	Reservoir	0.000	2	210	0	4	1007.10	183	KETTLE 4
31	Combine	0.700	2	170	3,248	2, 29, 30	-----	-----	INFLOW K-2
32	Reservoir	0.000	2	1884	0	31	967.37	3,067	KETTLE 2
33	Combine	2.322	2	176	11,634	1, 32	-----	-----	INFLOW KETTLE 1
34	Reservoir	0.000	2	3226	0	33	945.85	11,233	KETTLE 1
36	Reservoir	0.000	2	254	0	15	1011.19	2,081	KETTLE 17
37	Combine	0.207	2	160	842	14, 36	-----	-----	INFLOW K-16
EXISTING_LCL_Stormwater Model_2020-04-06					Regim Period: 1 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	298	0	37	1005.13	805	KETTLE 16
39	Reservoir	0.000	2	430	0	13	970.34	790	KETTLE 15
40	Combine	1.098	2	176	5,502	12, 38, 39	-----	-----	INFLOW K-14
41	Reservoir	0.000	2	1004	0	40	956.18	5,247	KETTLE 14
42	Combine	0.302	2	154	877	11, 41	-----	-----	INFLOW K-13
43	Reservoir	0.195	2	164	771	42	959.60	198	KETTLE 13
44	Combine	1.394	2	160	4,401	10, 43	-----	-----	INFLOW K-12
45	Reservoir	0.000	2	172	0	44	957.13	4,049	KETTLE 12
46	Reservoir	0.000	2	218	0	9	979.19	384	KETTLE 11
47	Combine	0.645	2	162	2,387	8, 43, 45, 46	-----	-----	INFLOW K-10
48	Reservoir	0.000	2	220	0	47	955.31	2,268	KETTLE 10
EXISTING_LCL_Stormwater Model_2020-04-08.gpw					Regime Period: 1 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 1

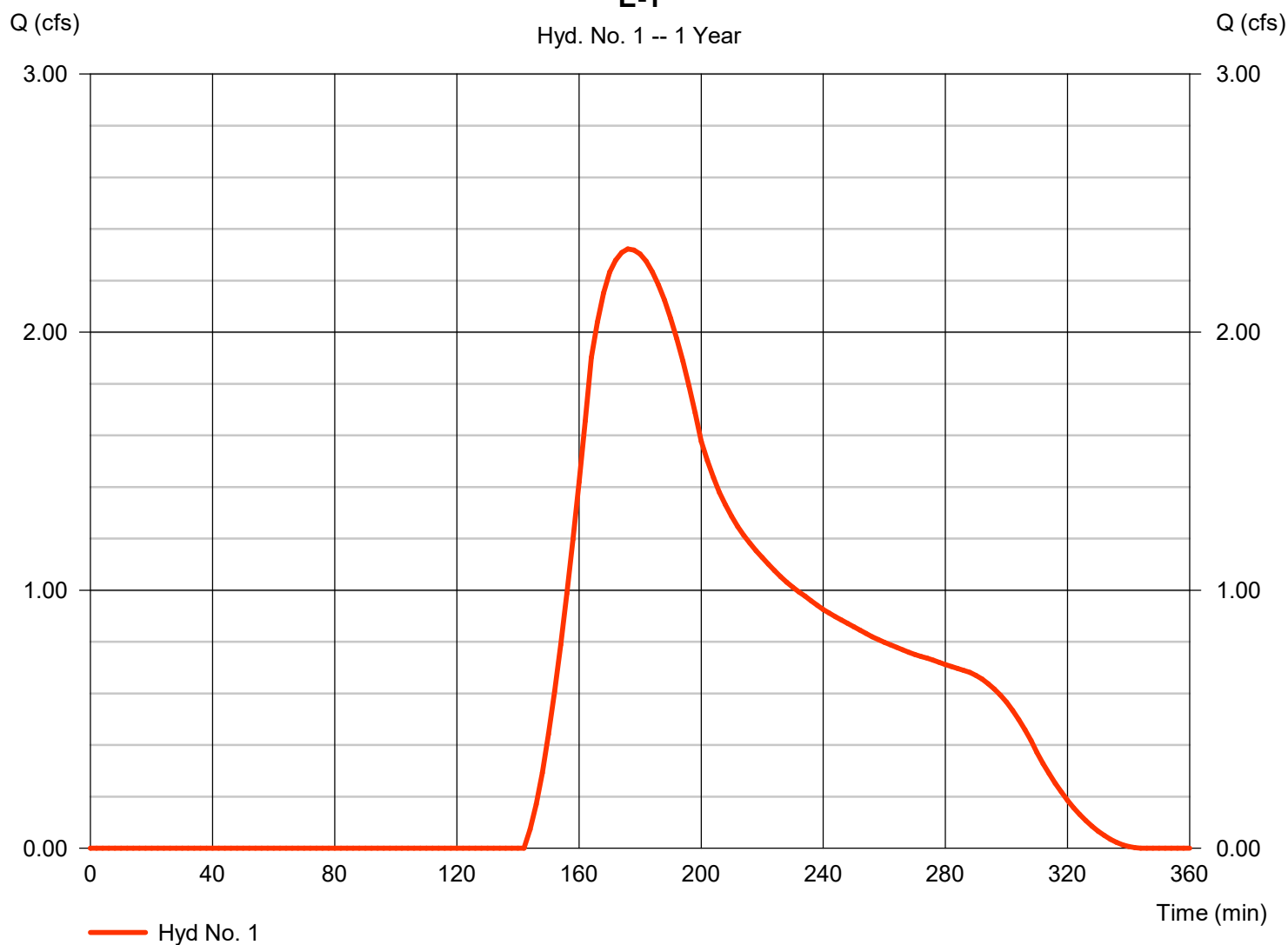
E-1

Hydrograph type	= SCS Runoff	Peak discharge	= 2.322 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 11,634 cuft
Drainage area	= 15.479 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 15.479$

E-1

Hyd. No. 1 -- 1 Year



Precipitation Report

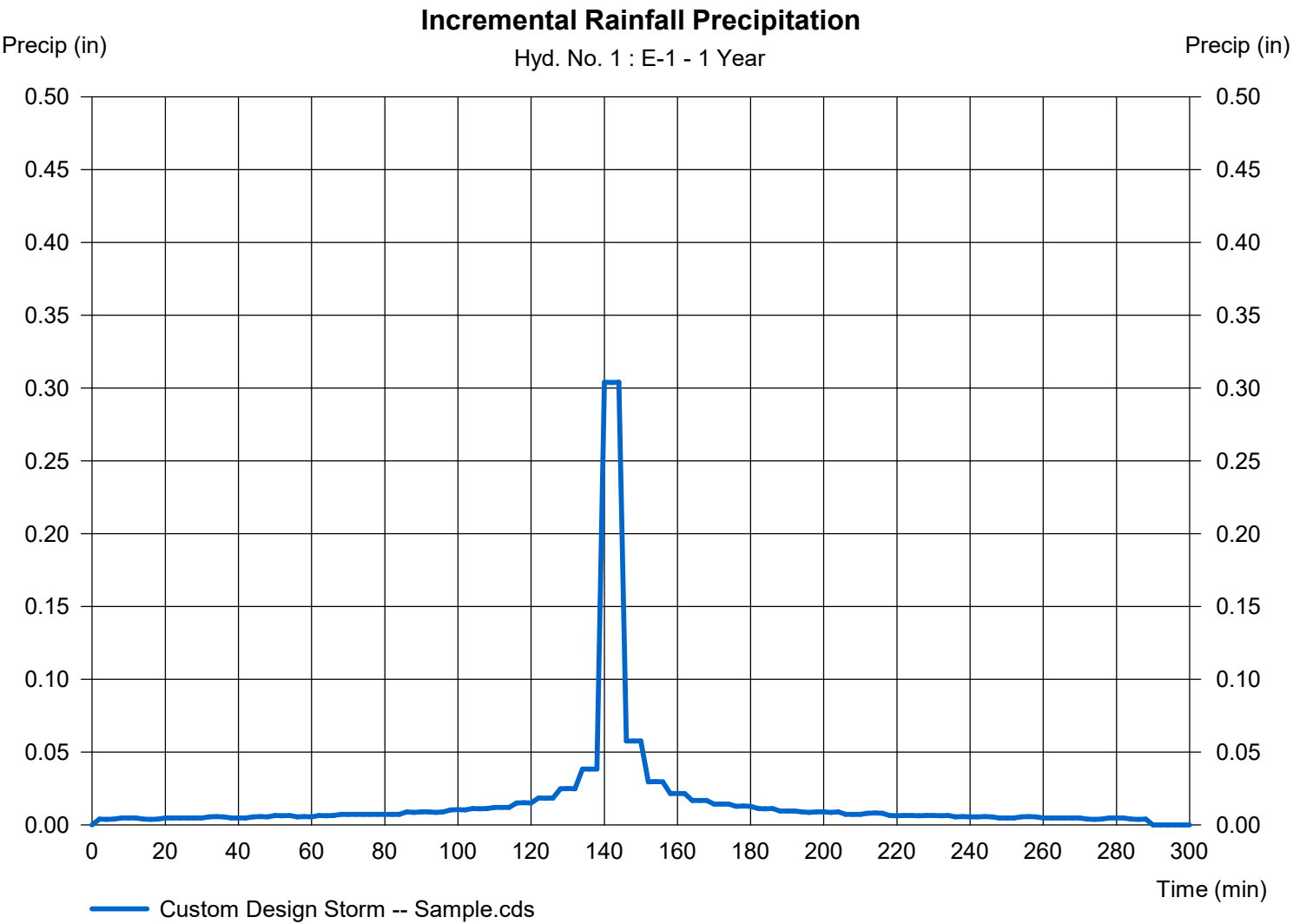
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 1

E-1

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 2

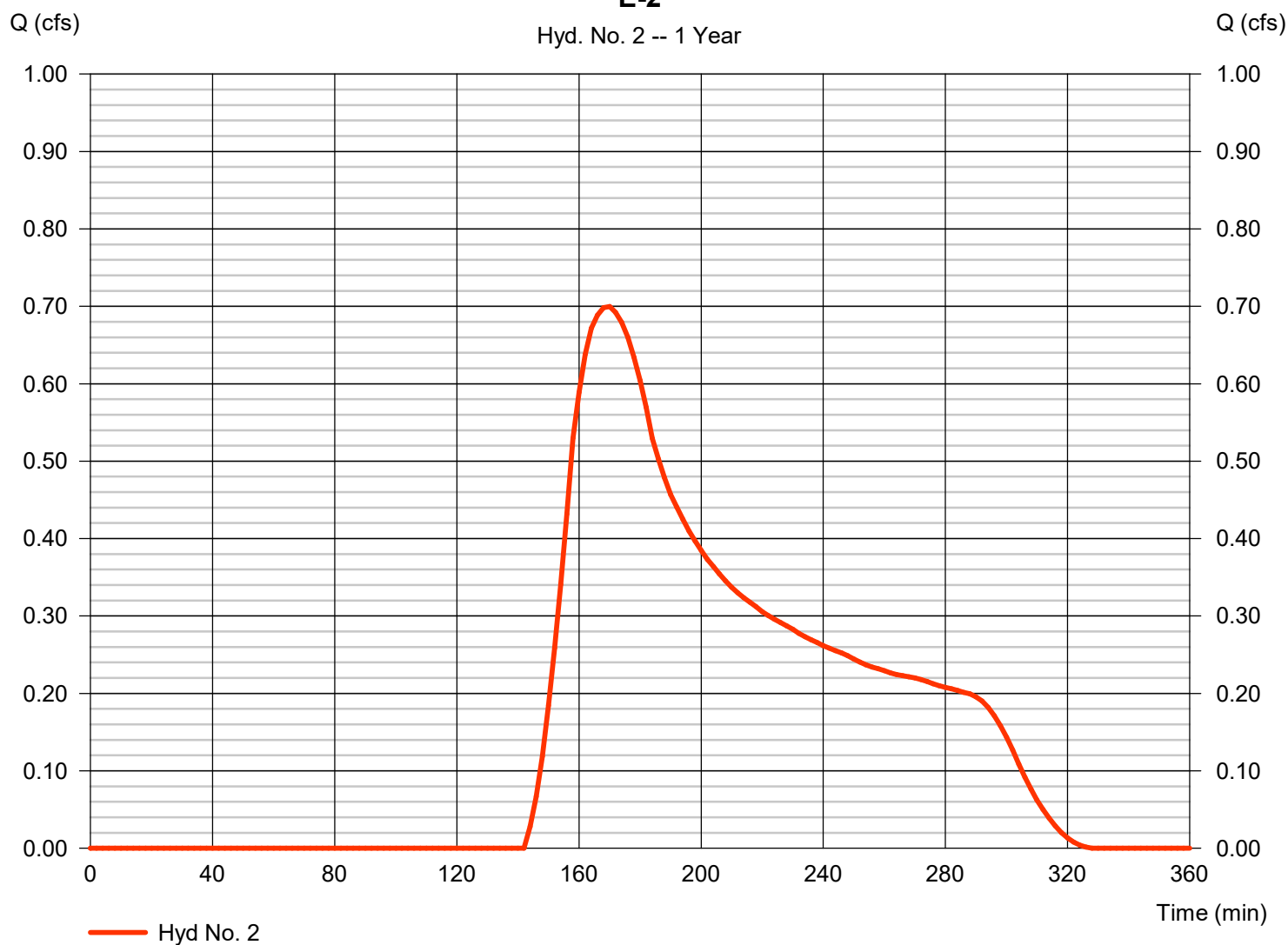
E-2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.700 cfs
Storm frequency	= 1 yrs	Time to peak	= 170 min
Time interval	= 2 min	Hyd. volume	= 3,248 cuft
Drainage area	= 5.433 ac	Curve number	= 61*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 5.433$

E-2

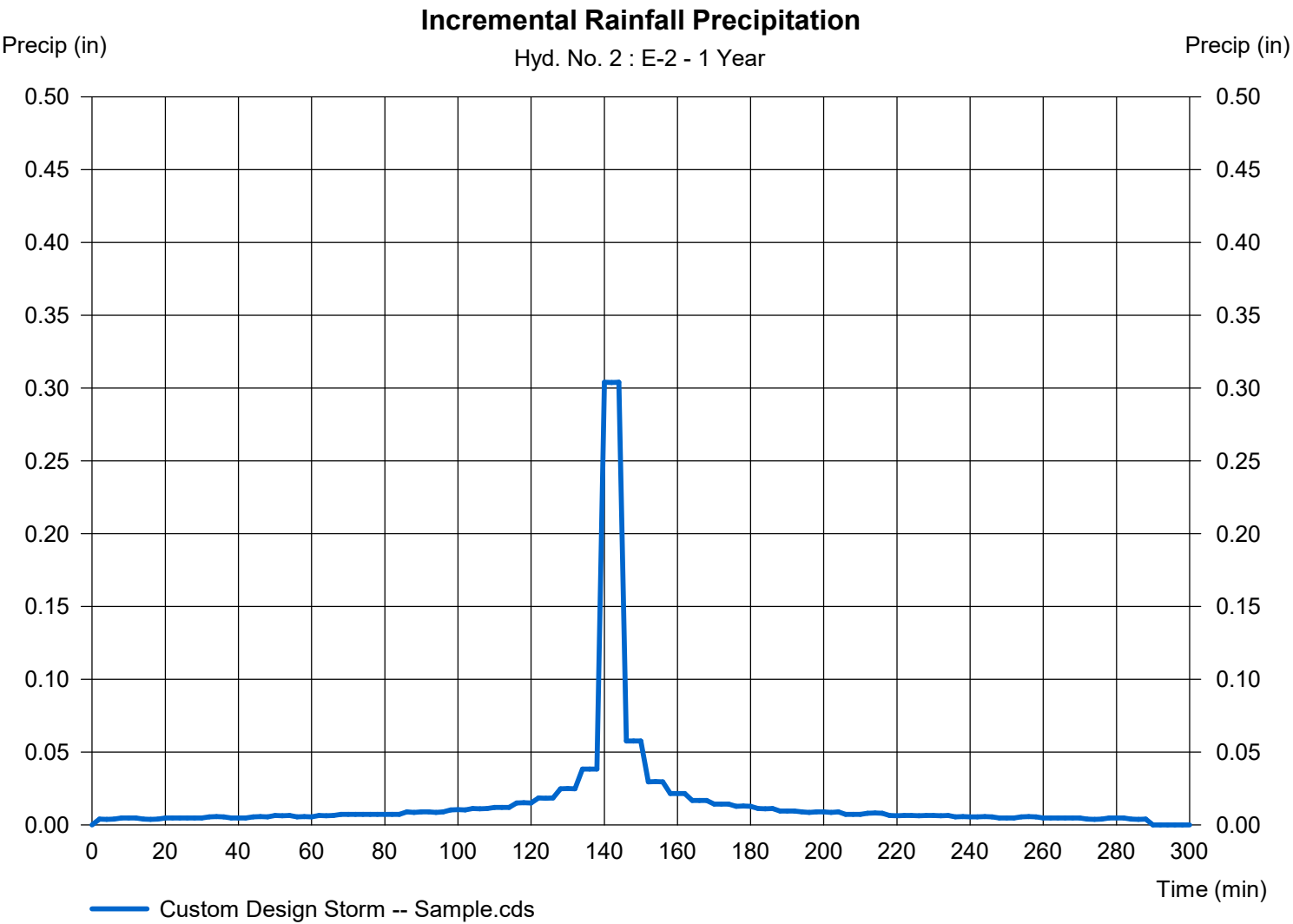
Hyd. No. 2 -- 1 Year



Precipitation Report

Hyd. No. 2

E-2			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

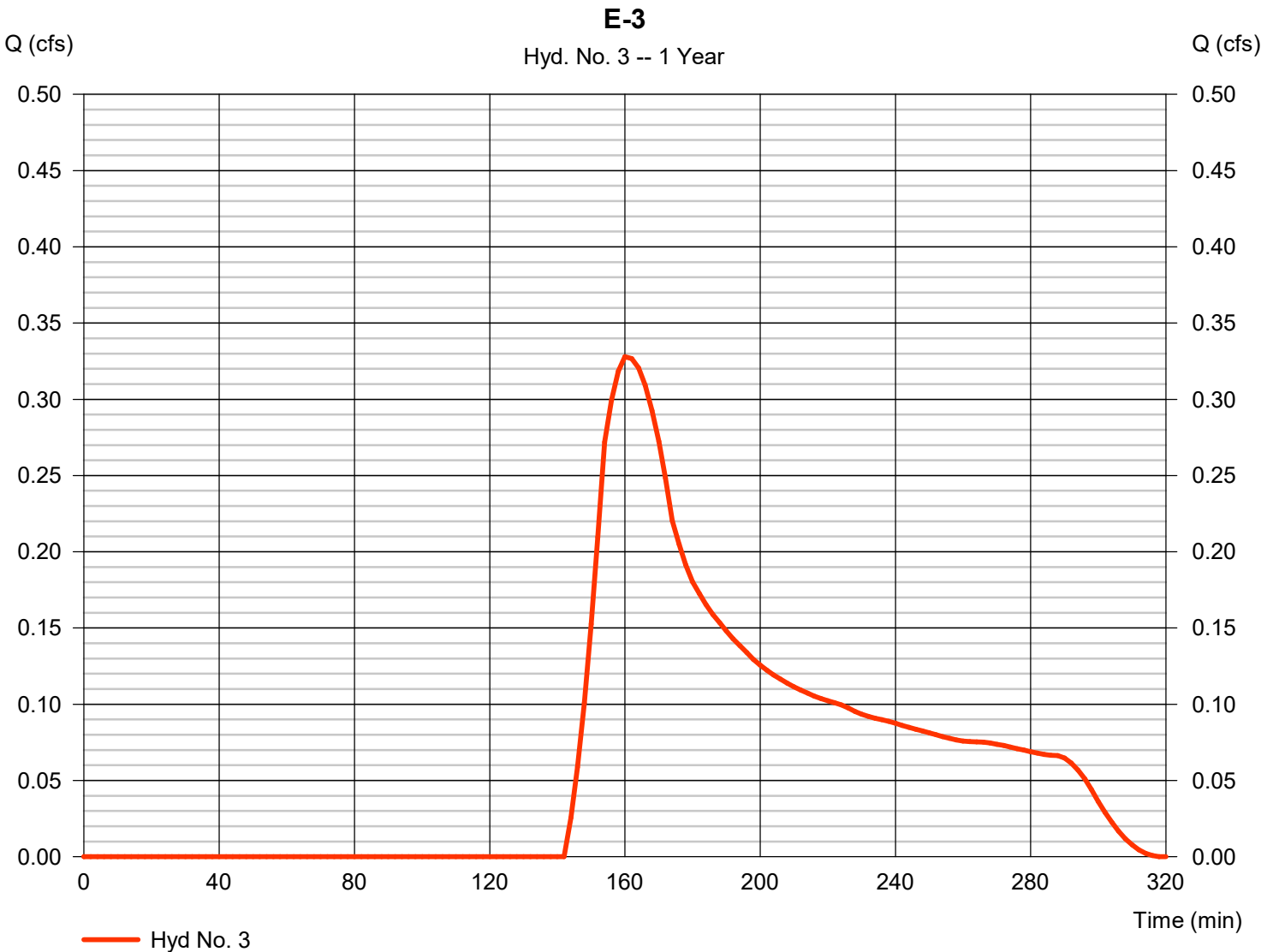
Tuesday, 04 / 7 / 2020

Hyd. No. 3

E-3

Hydrograph type	= SCS Runoff	Peak discharge	= 0.328 cfs
Storm frequency	= 1 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 1,207 cuft
Drainage area	= 1.588 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = [(0.050 x 98) + (1.390 x 60)] / 1.588



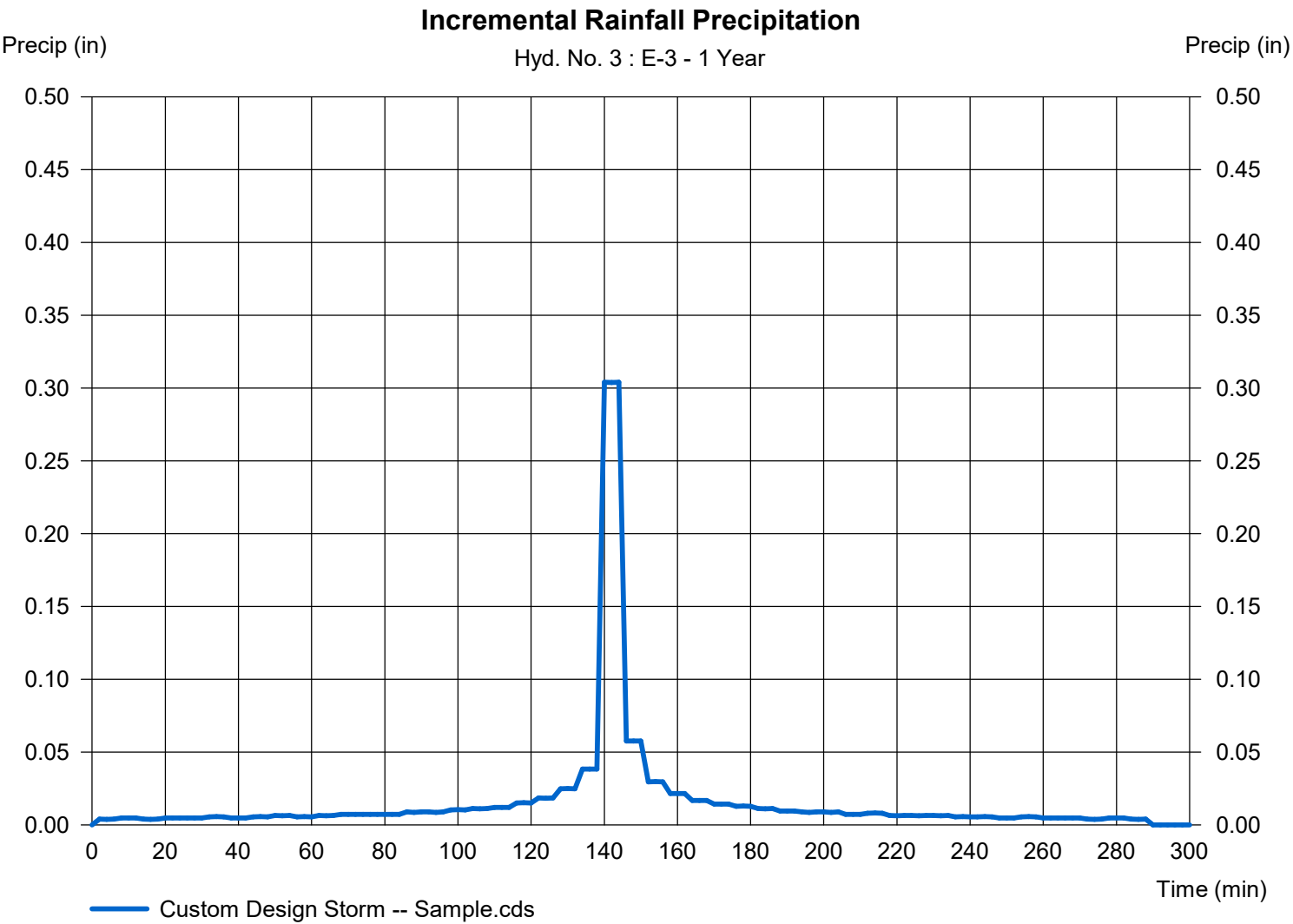
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 3

E-3			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

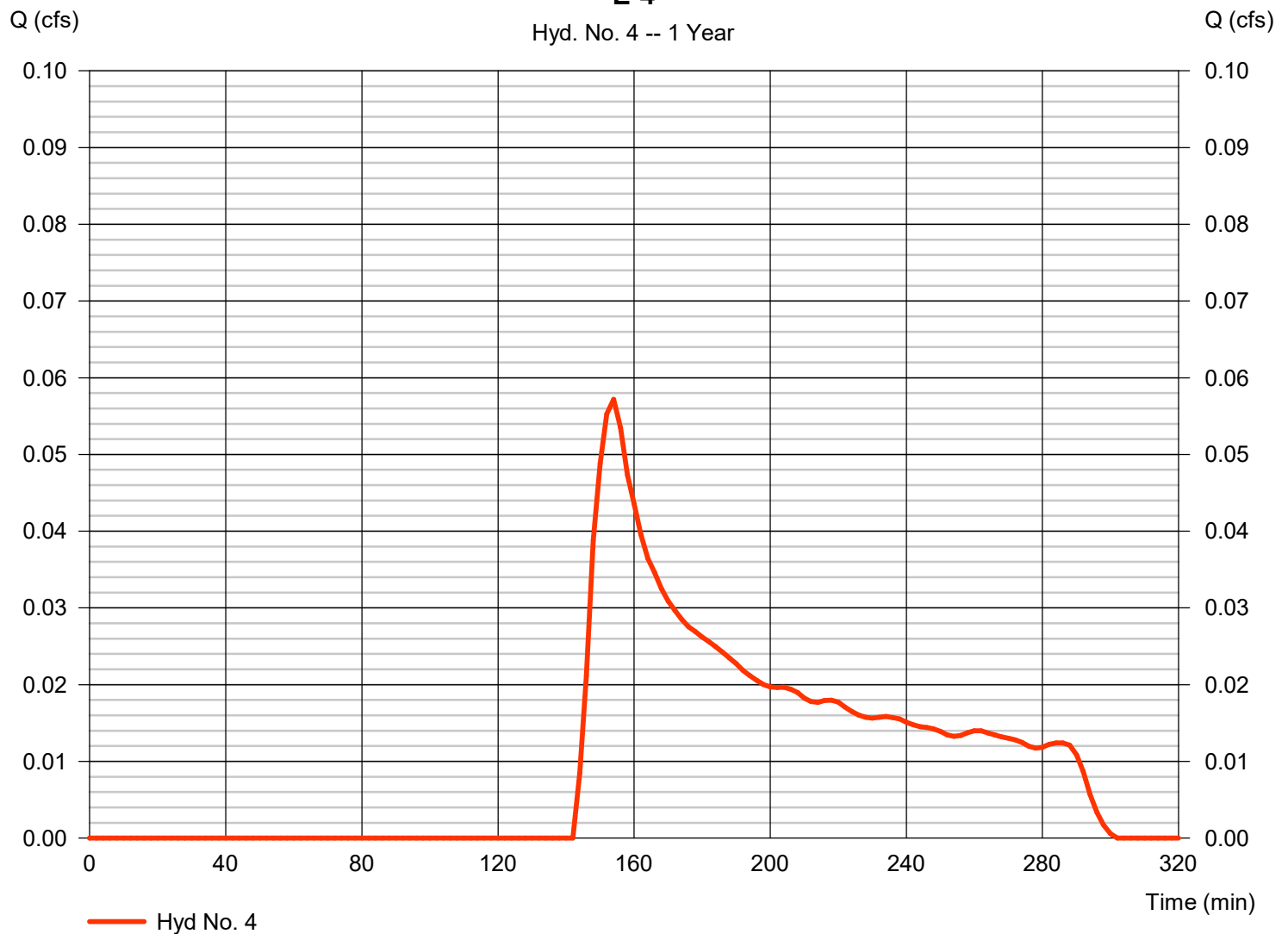
Hyd. No. 4

E-4

Hydrograph type	= SCS Runoff	Peak discharge	= 0.057 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 192 cuft
Drainage area	= 0.361 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-4

Hyd. No. 4 -- 1 Year



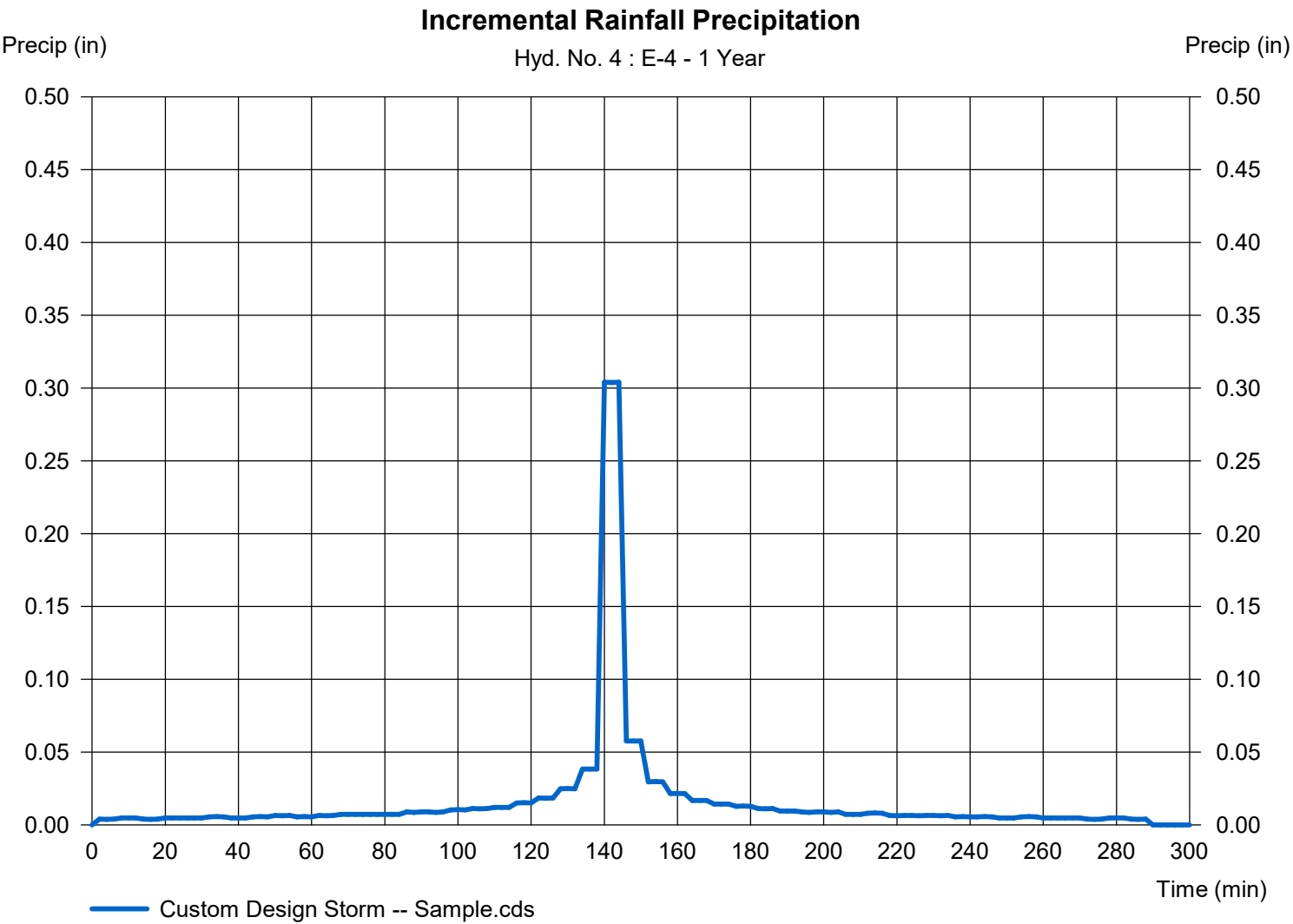
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 4

E-4			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 5

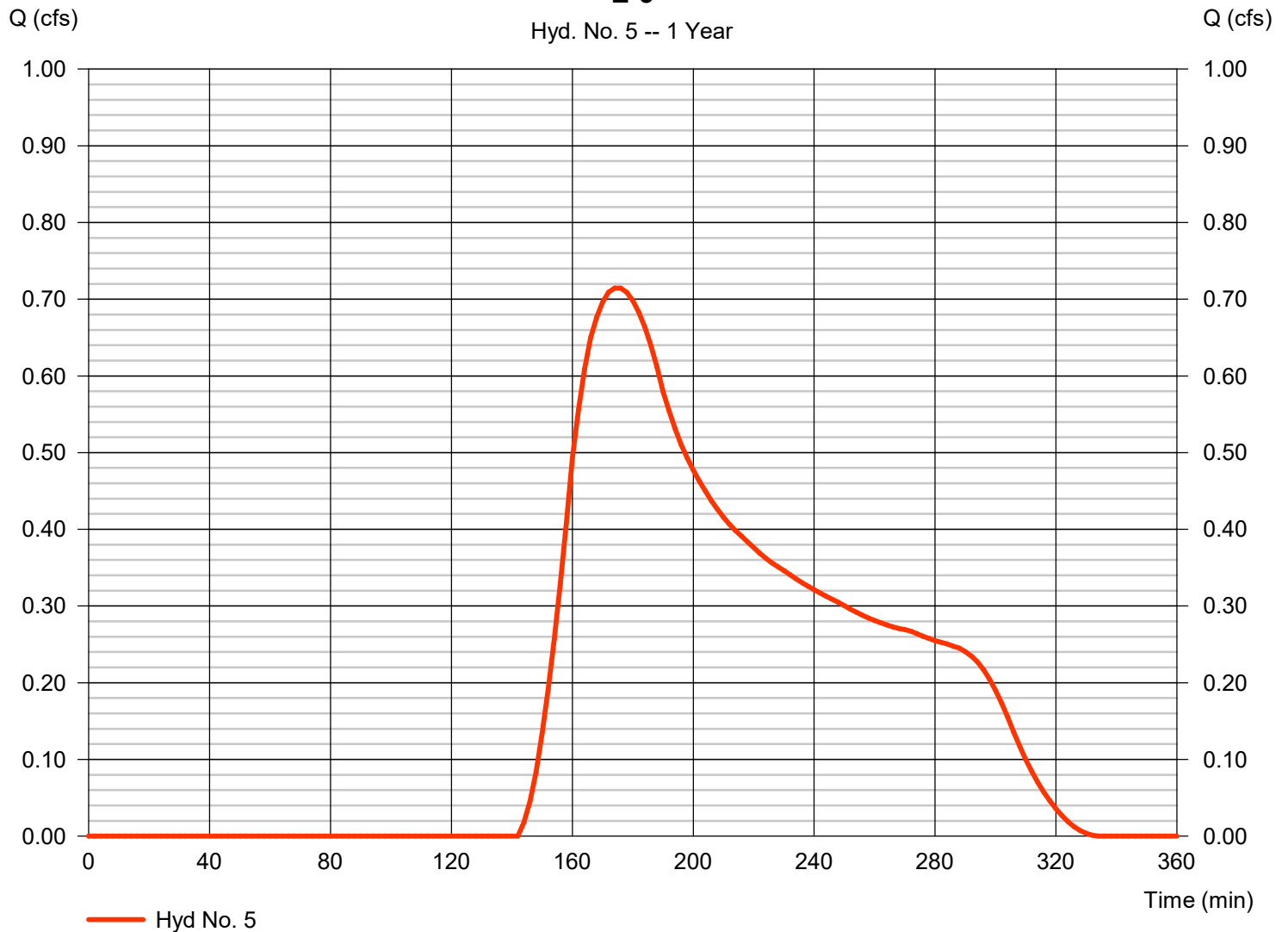
E-5

Hydrograph type	= SCS Runoff	Peak discharge	= 0.715 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 3,723 cuft
Drainage area	= 6.987 ac	Curve number	= 60*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 27.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 6.987$

E-5

Hyd. No. 5 -- 1 Year



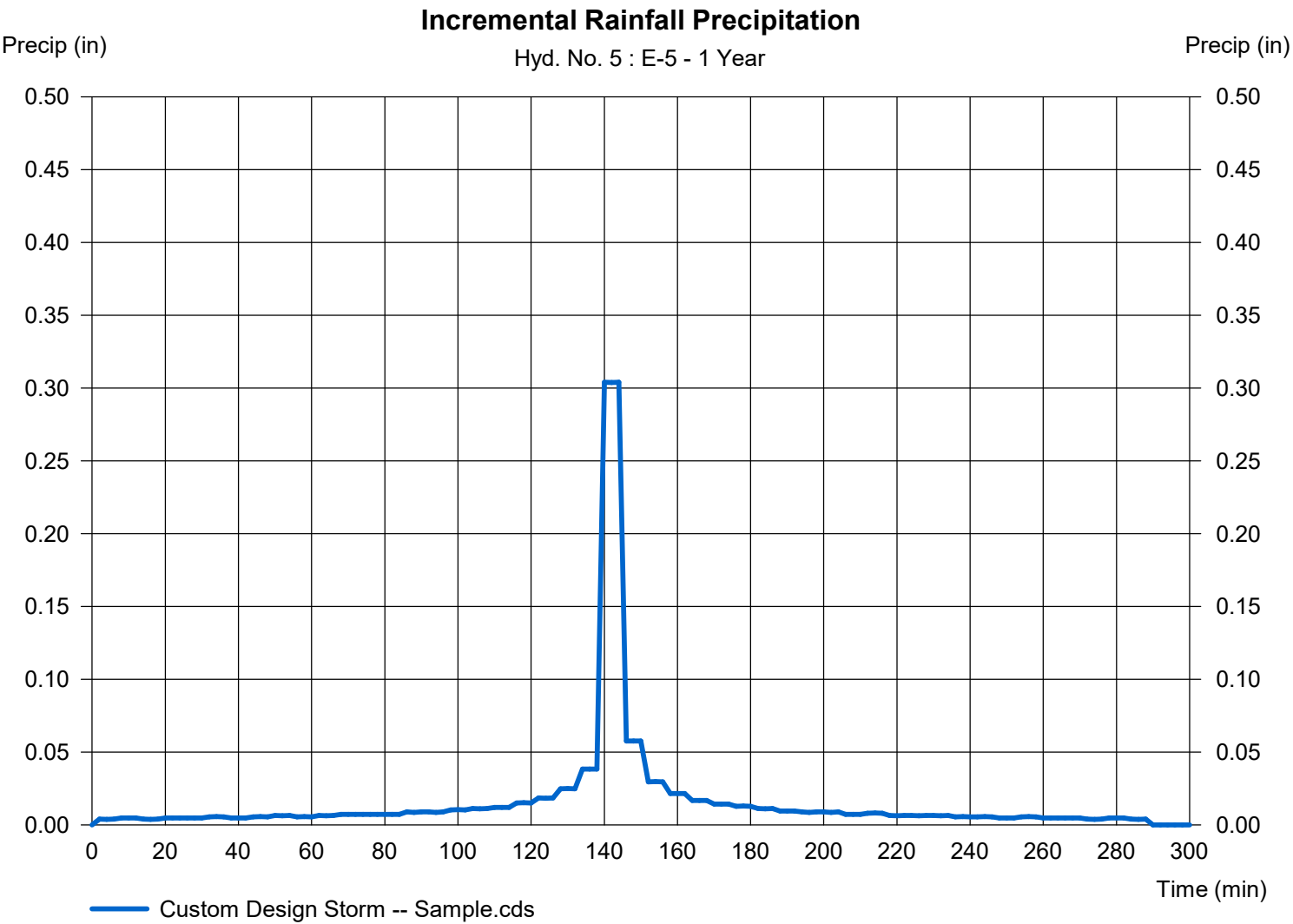
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 5

E-5			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

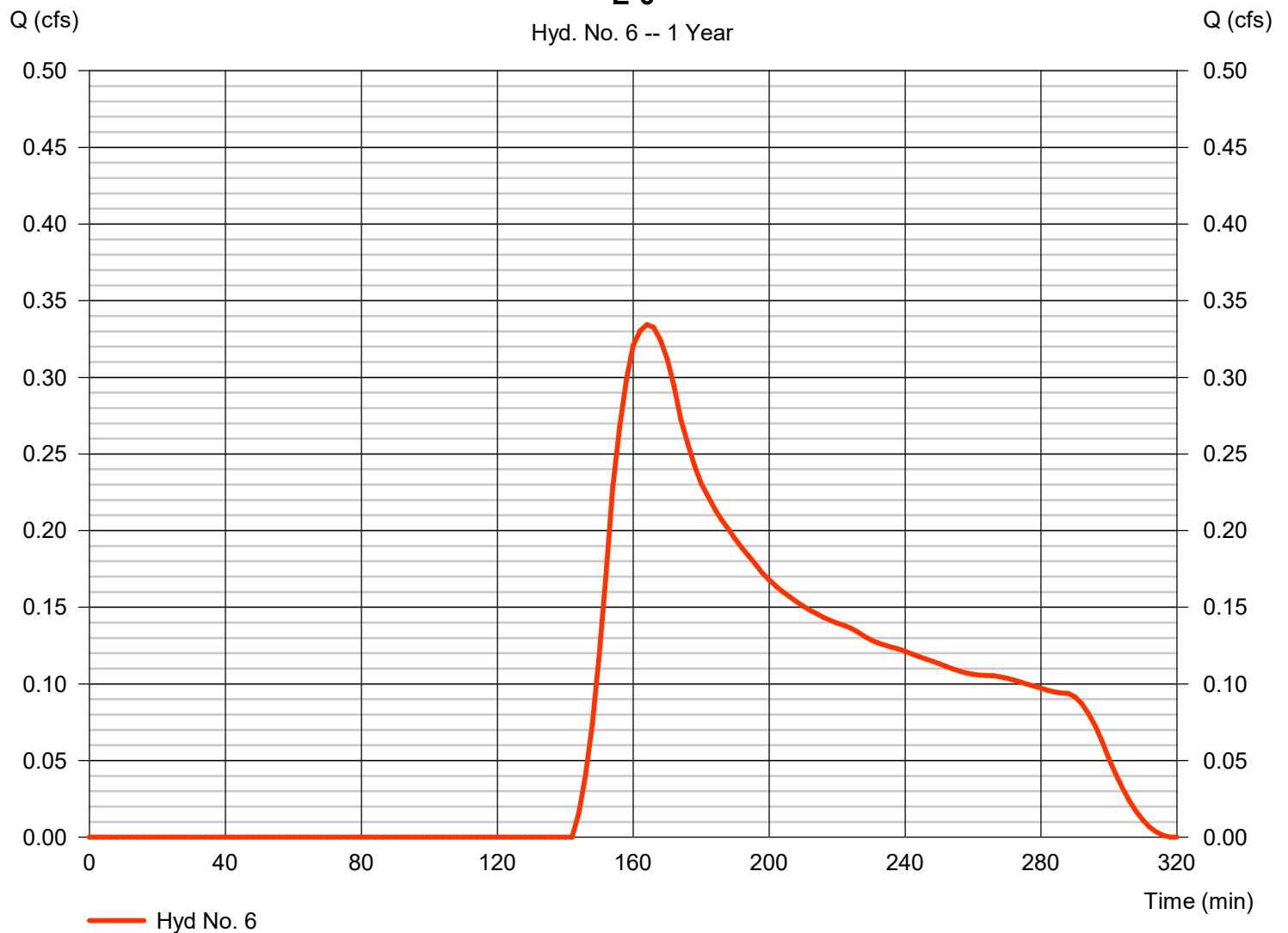
Hyd. No. 6

E-6

Hydrograph type	= SCS Runoff	Peak discharge	= 0.334 cfs
Storm frequency	= 1 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 1,476 cuft
Drainage area	= 2.769 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-6

Hyd. No. 6 -- 1 Year



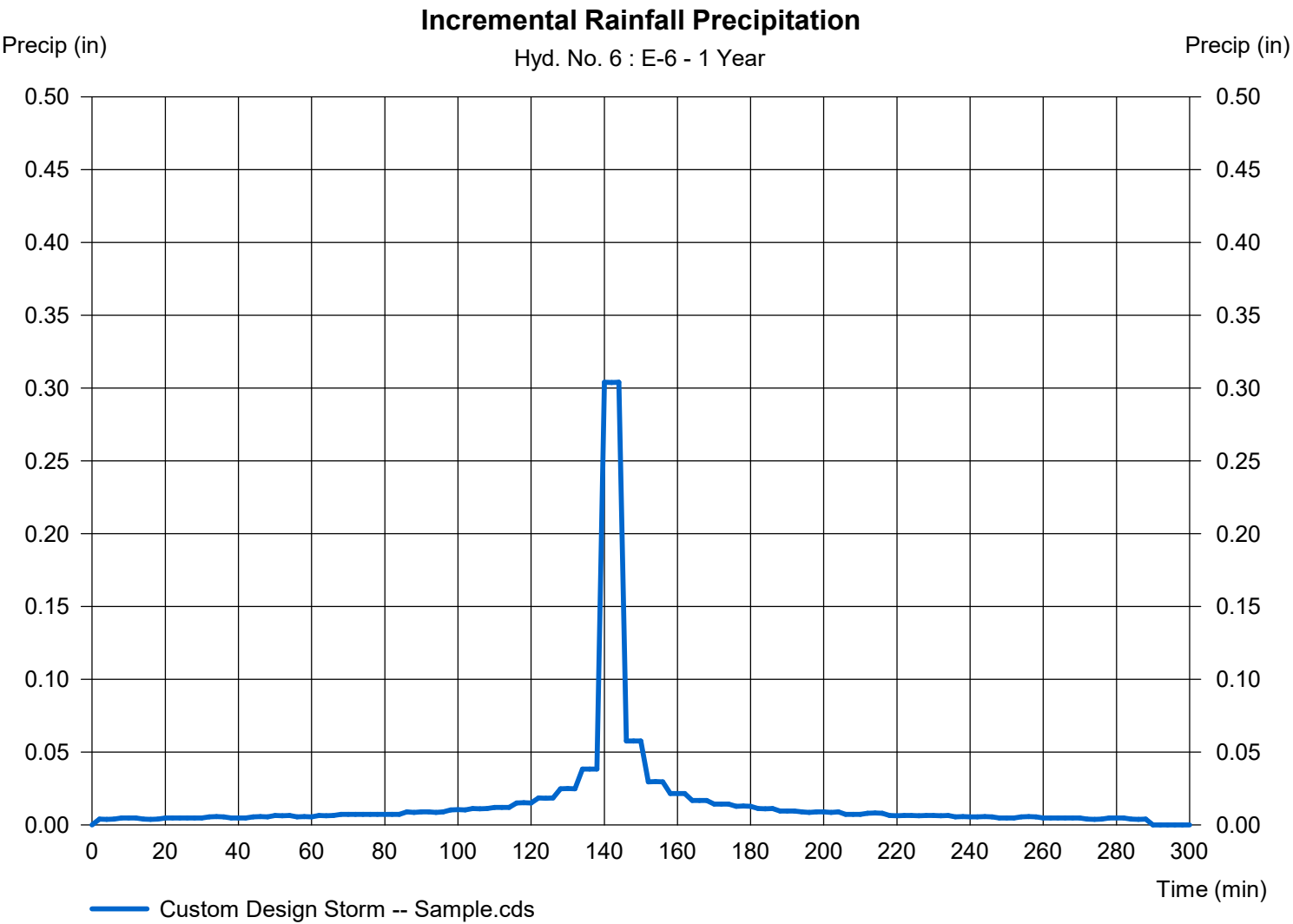
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 6

E-6			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

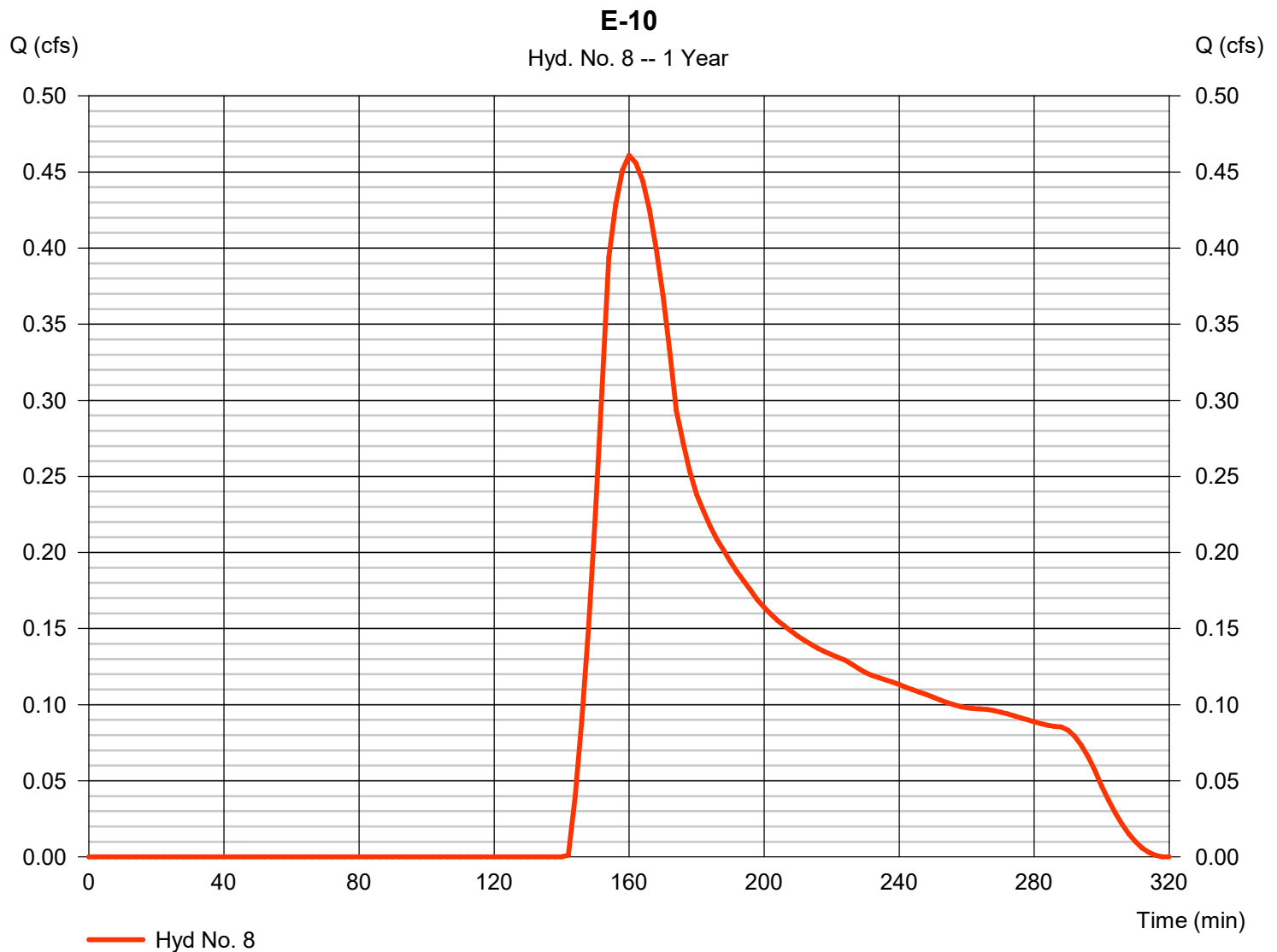
Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Hydrograph type	= SCS Runoff	Peak discharge	= 0.461 cfs
Storm frequency	= 1 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 1,616 cuft
Drainage area	= 1.920 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.920$



Precipitation Report

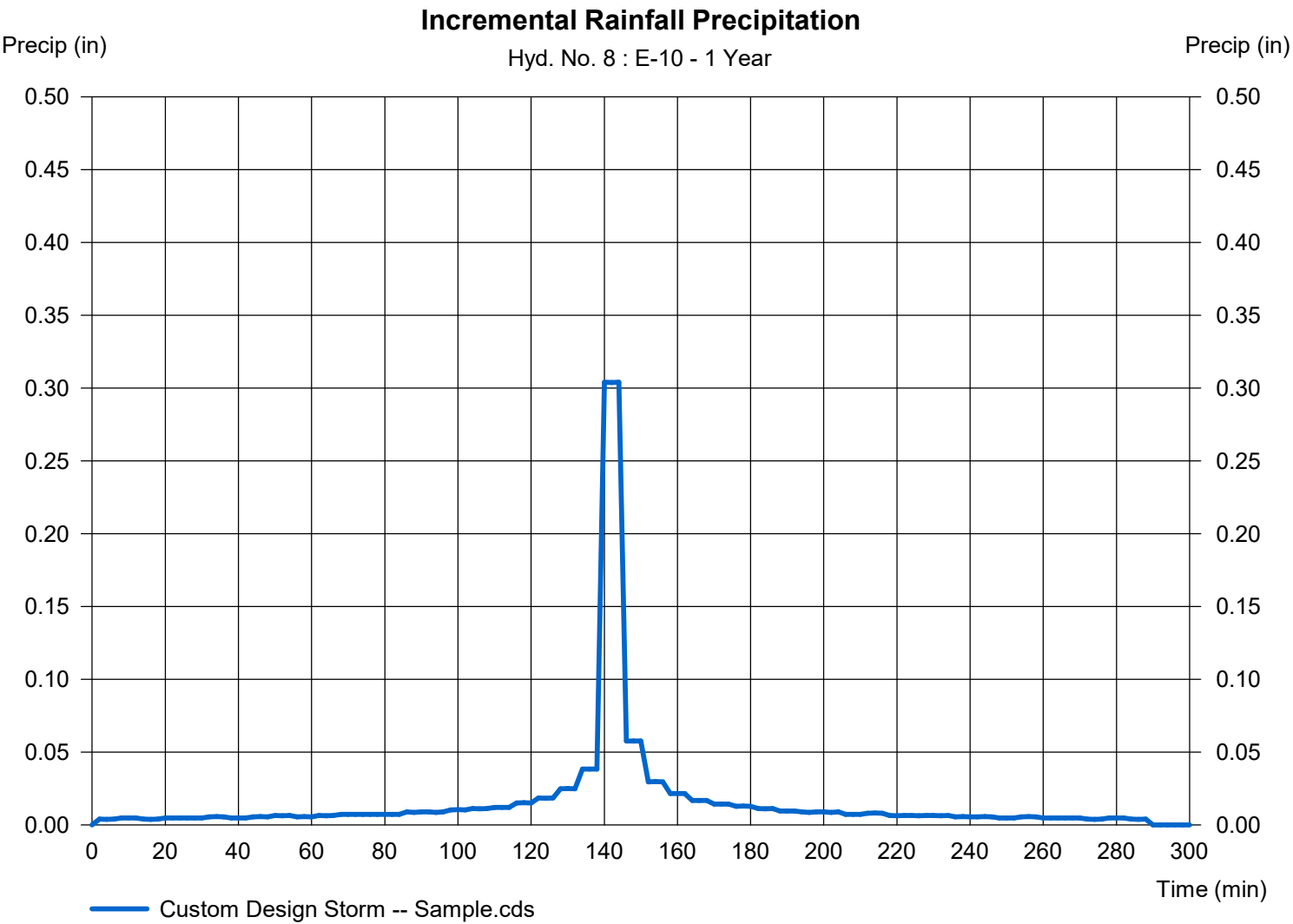
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

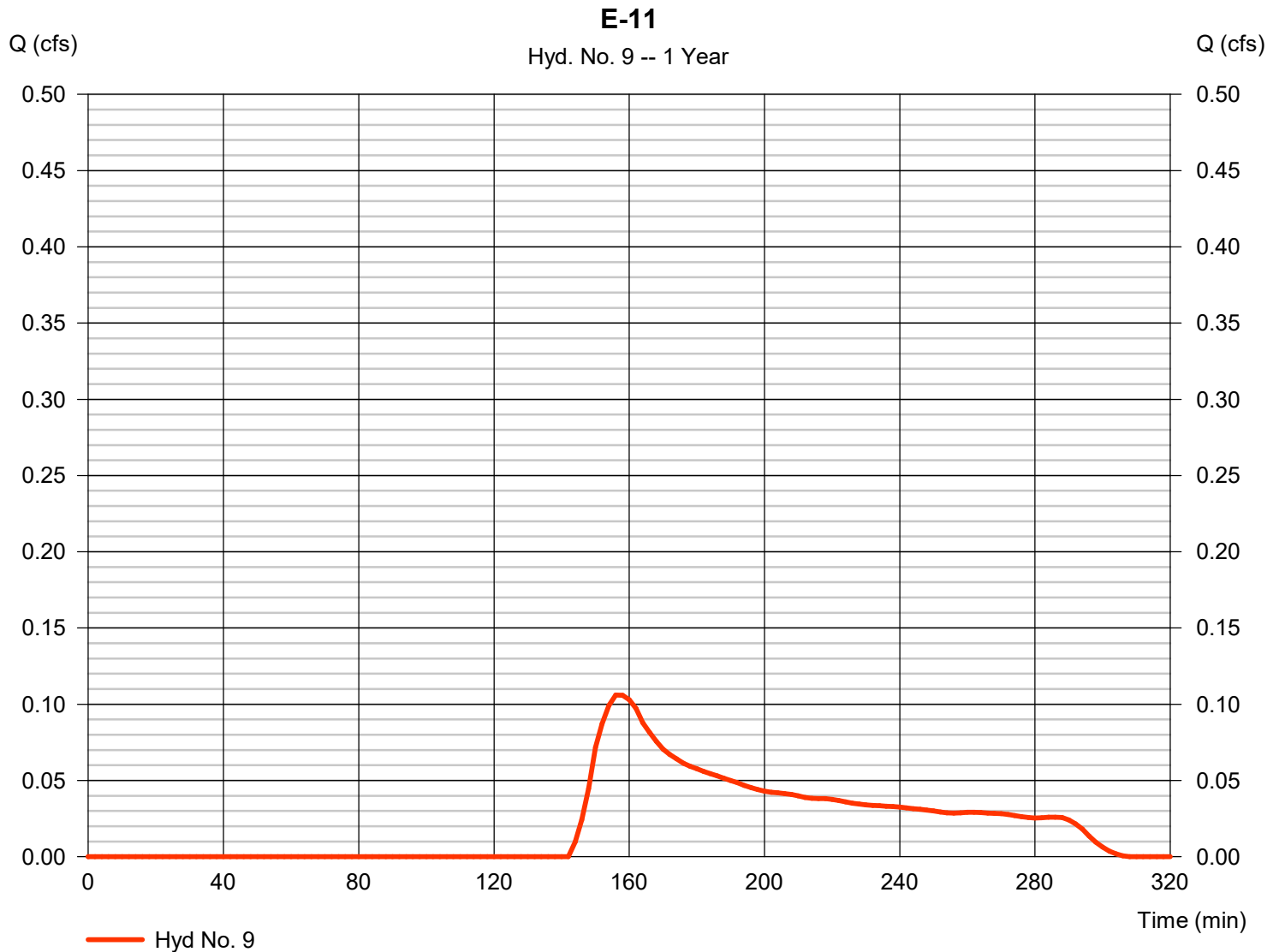
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Hydrograph type	= SCS Runoff	Peak discharge	= 0.106 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 406 cuft
Drainage area	= 0.739 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

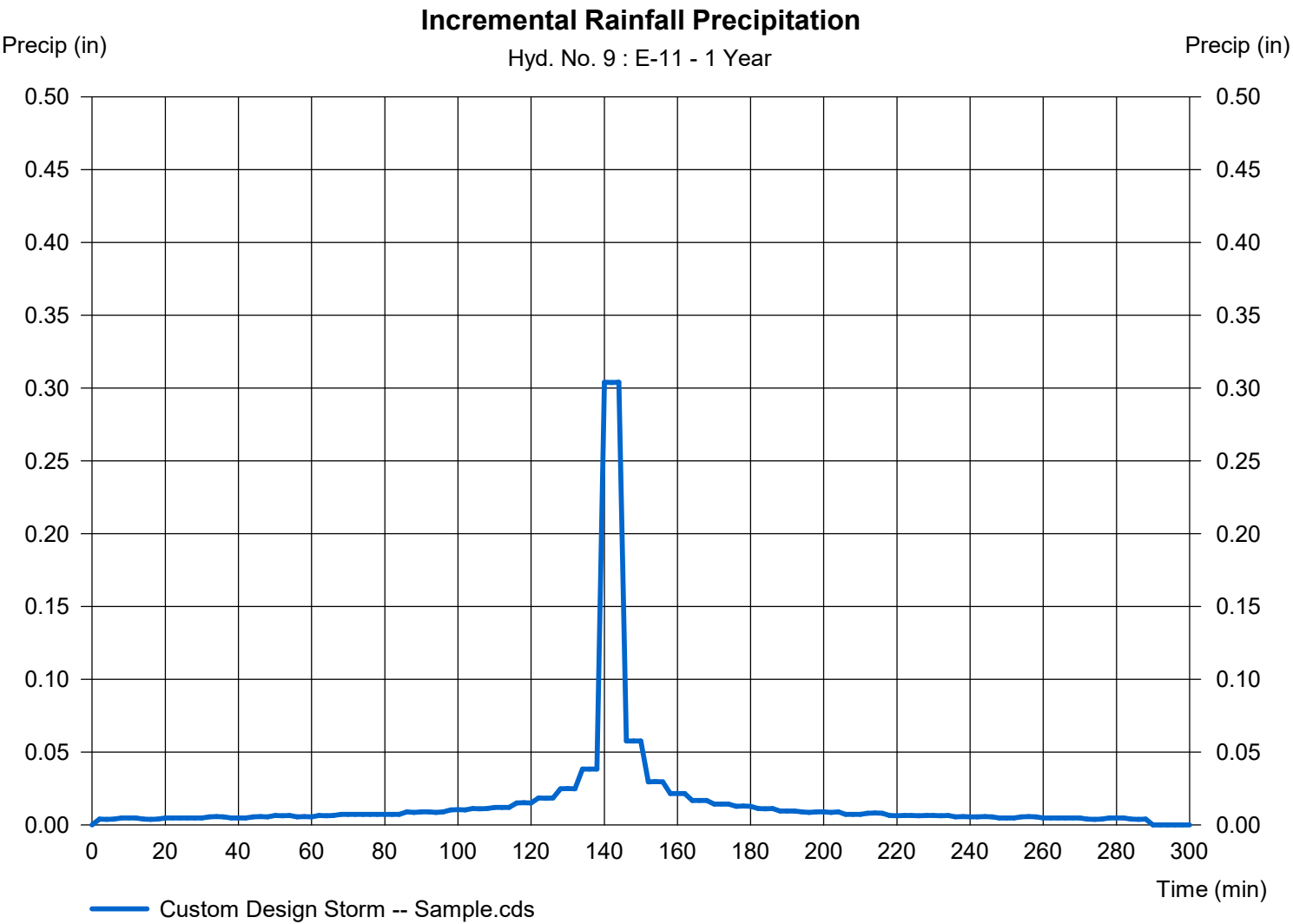
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

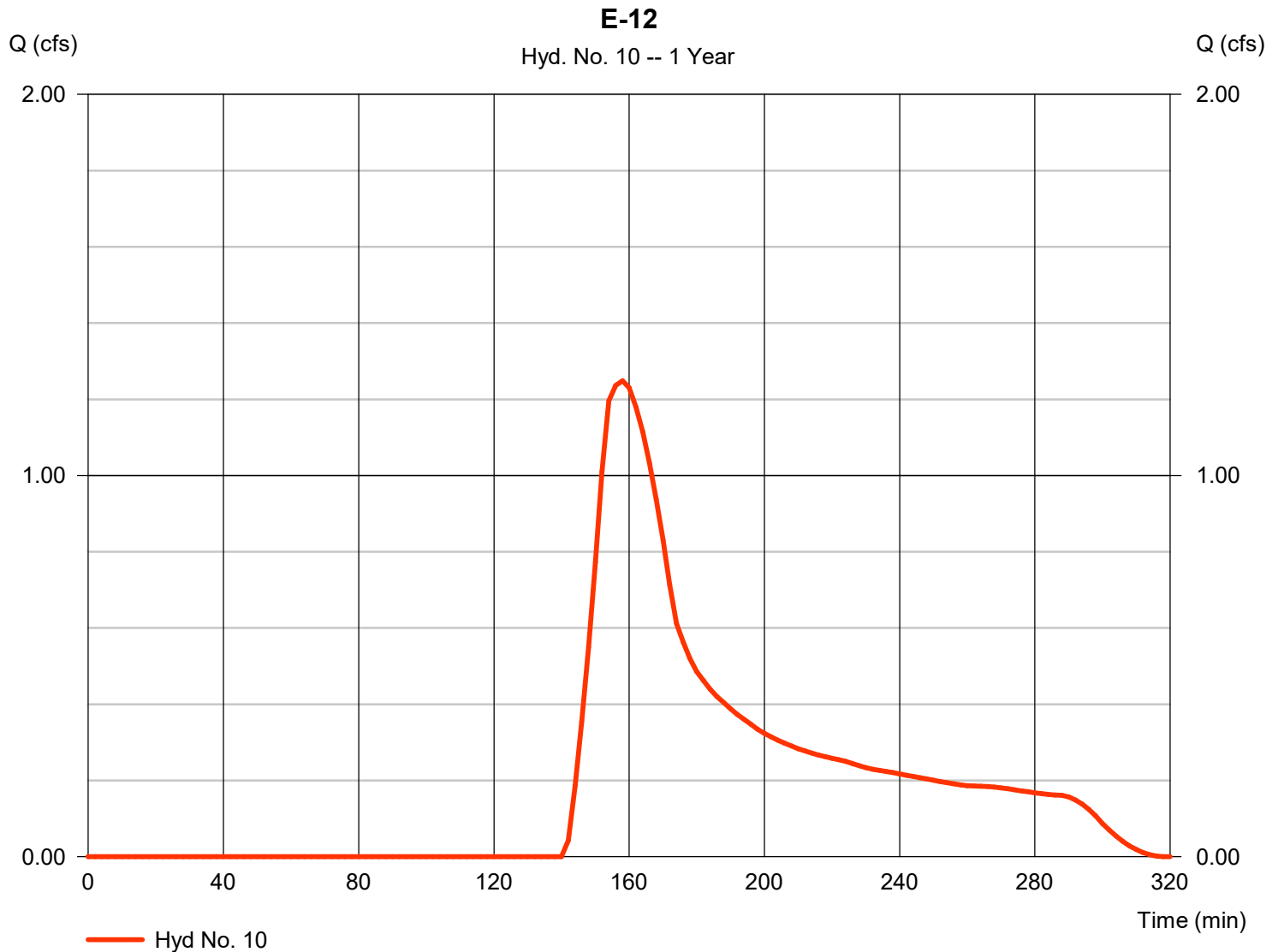
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-12

Hydrograph type	= SCS Runoff	Peak discharge	= 1.249 cfs
Storm frequency	= 1 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 3,630 cuft
Drainage area	= 2.900 ac	Curve number	= 68*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.900$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

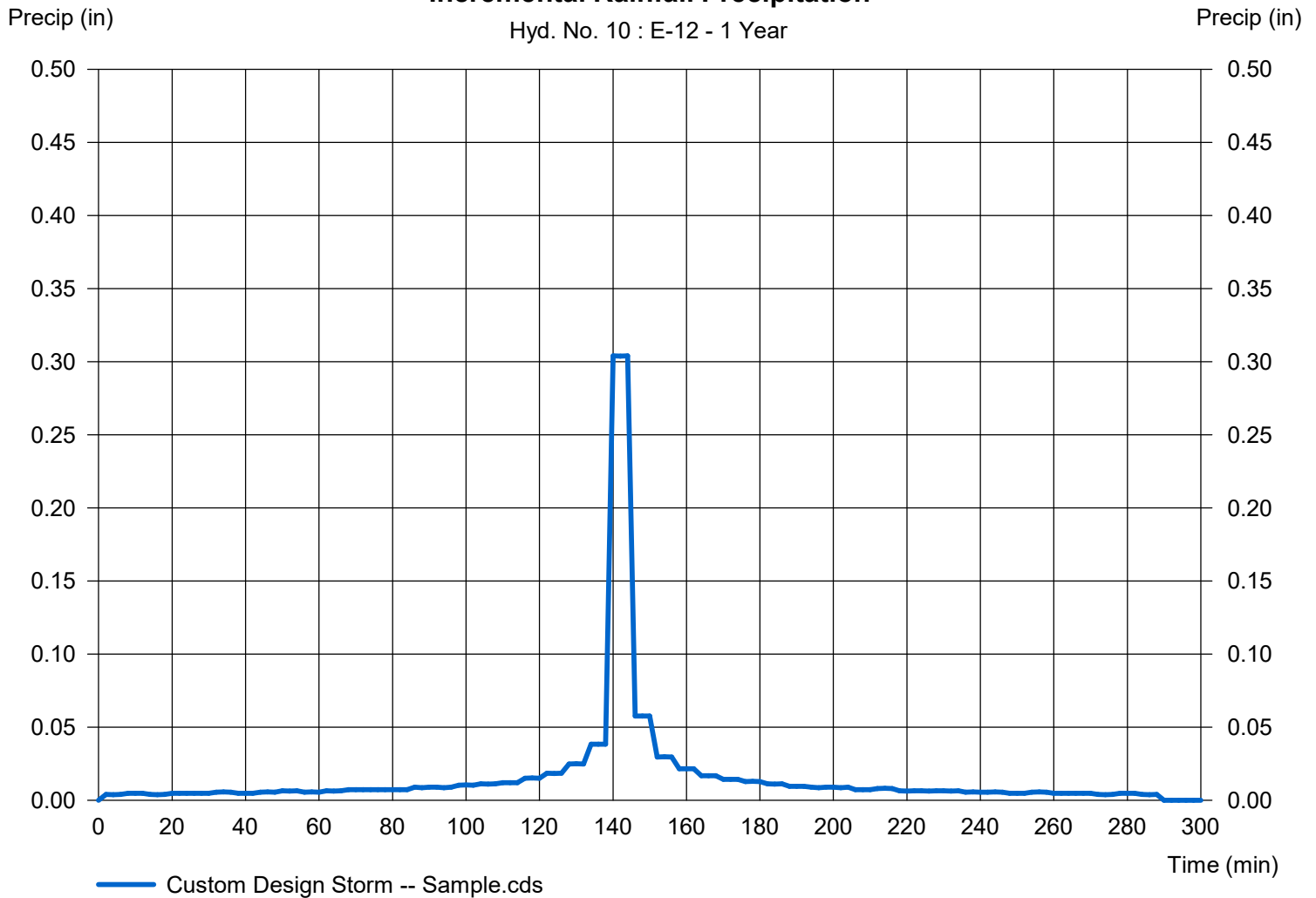
Hyd. No. 10

E-12

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-12 - 1 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

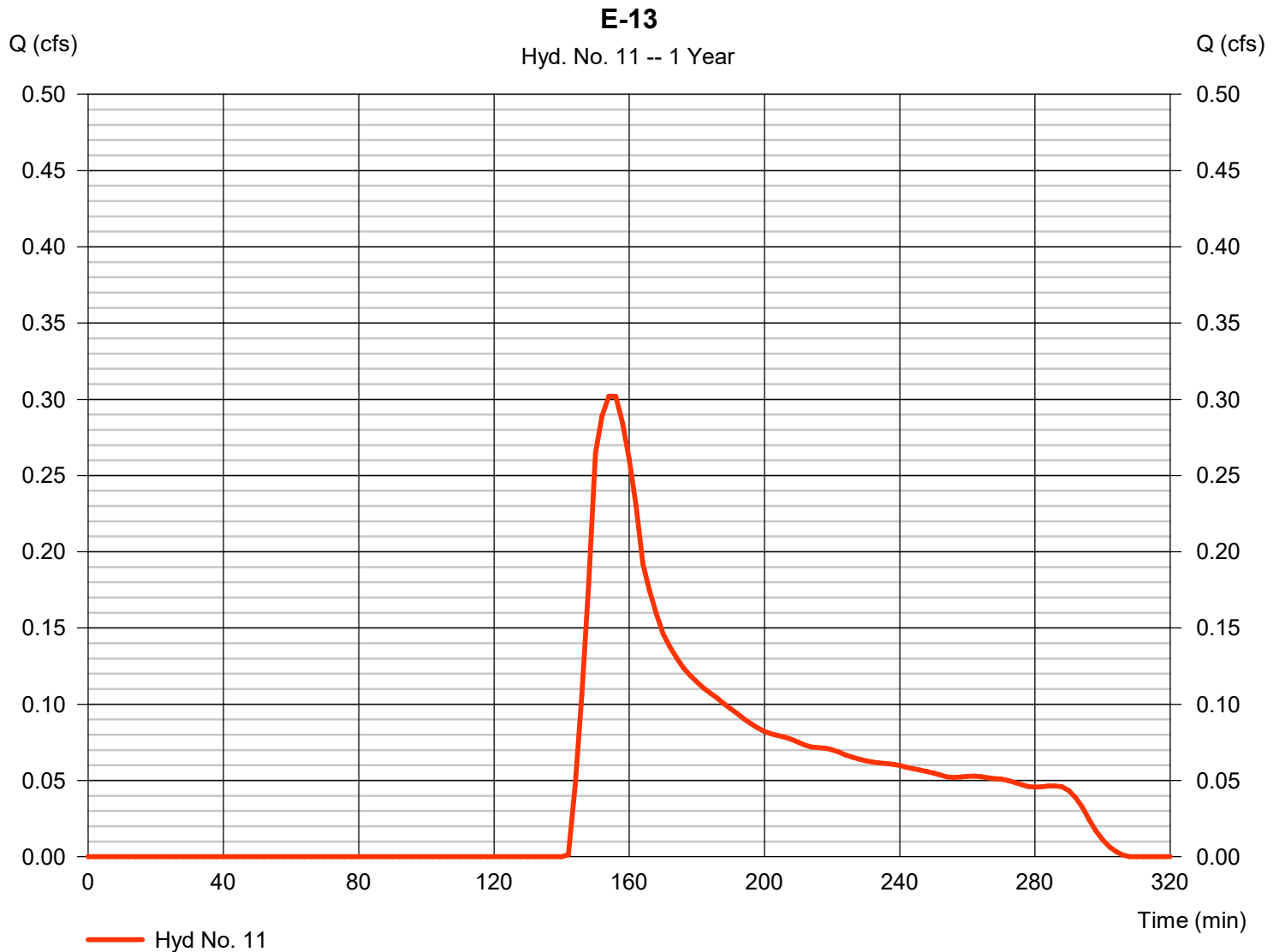
Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 0.302 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 877 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

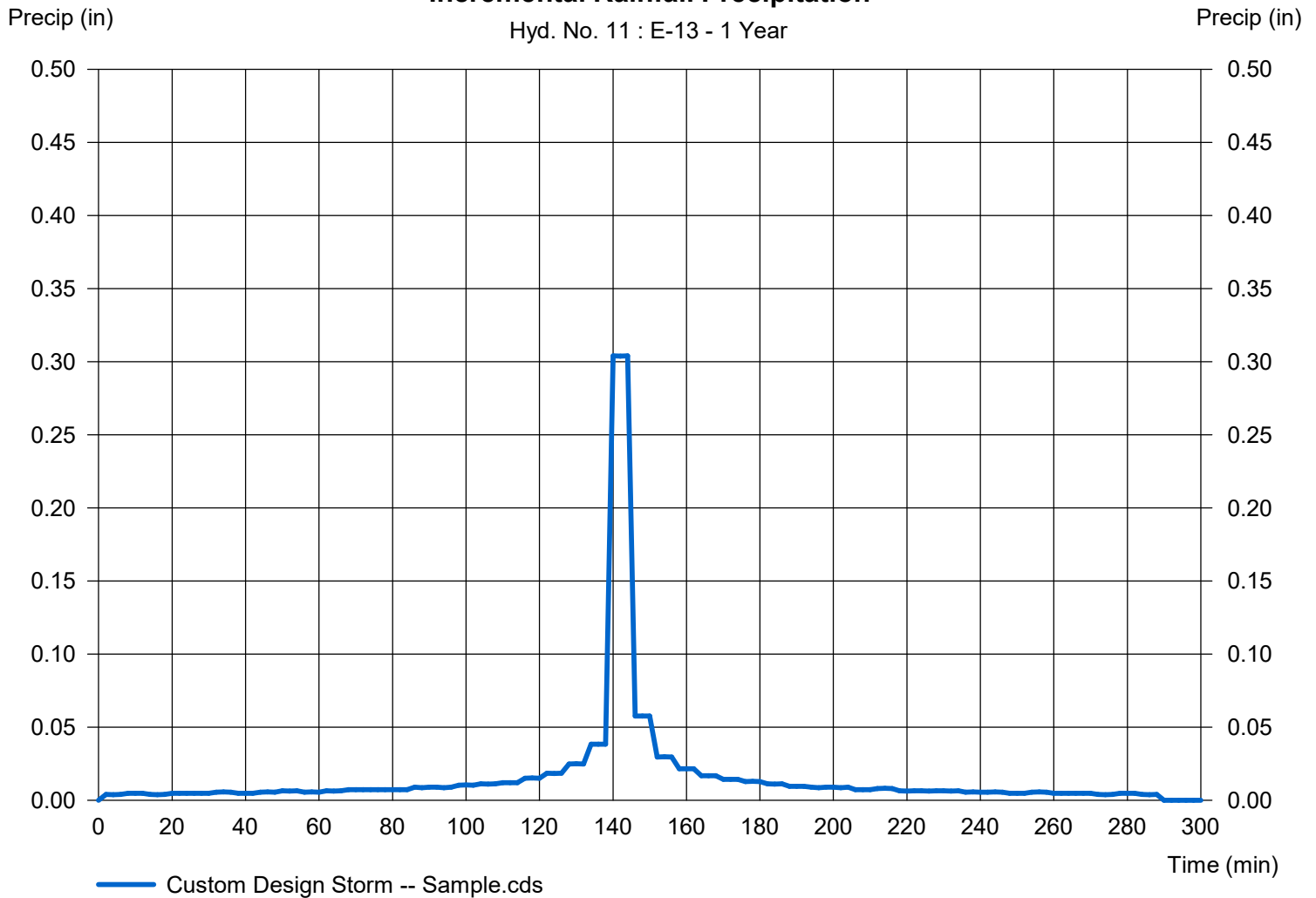
Hyd. No. 11

E-13

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-13 - 1 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

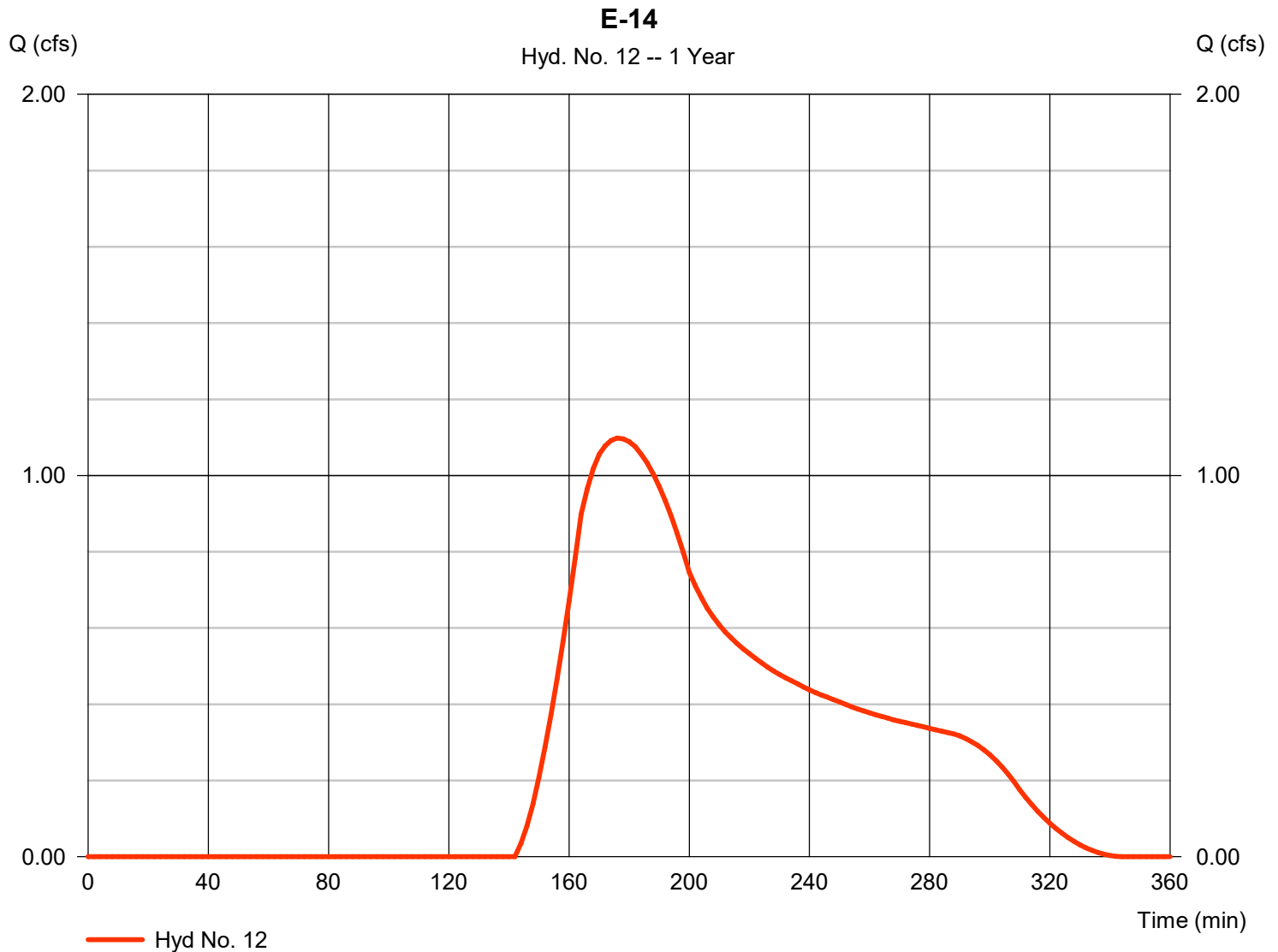
Tuesday, 04 / 7 / 2020

Hyd. No. 12

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 1.098 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 5,502 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

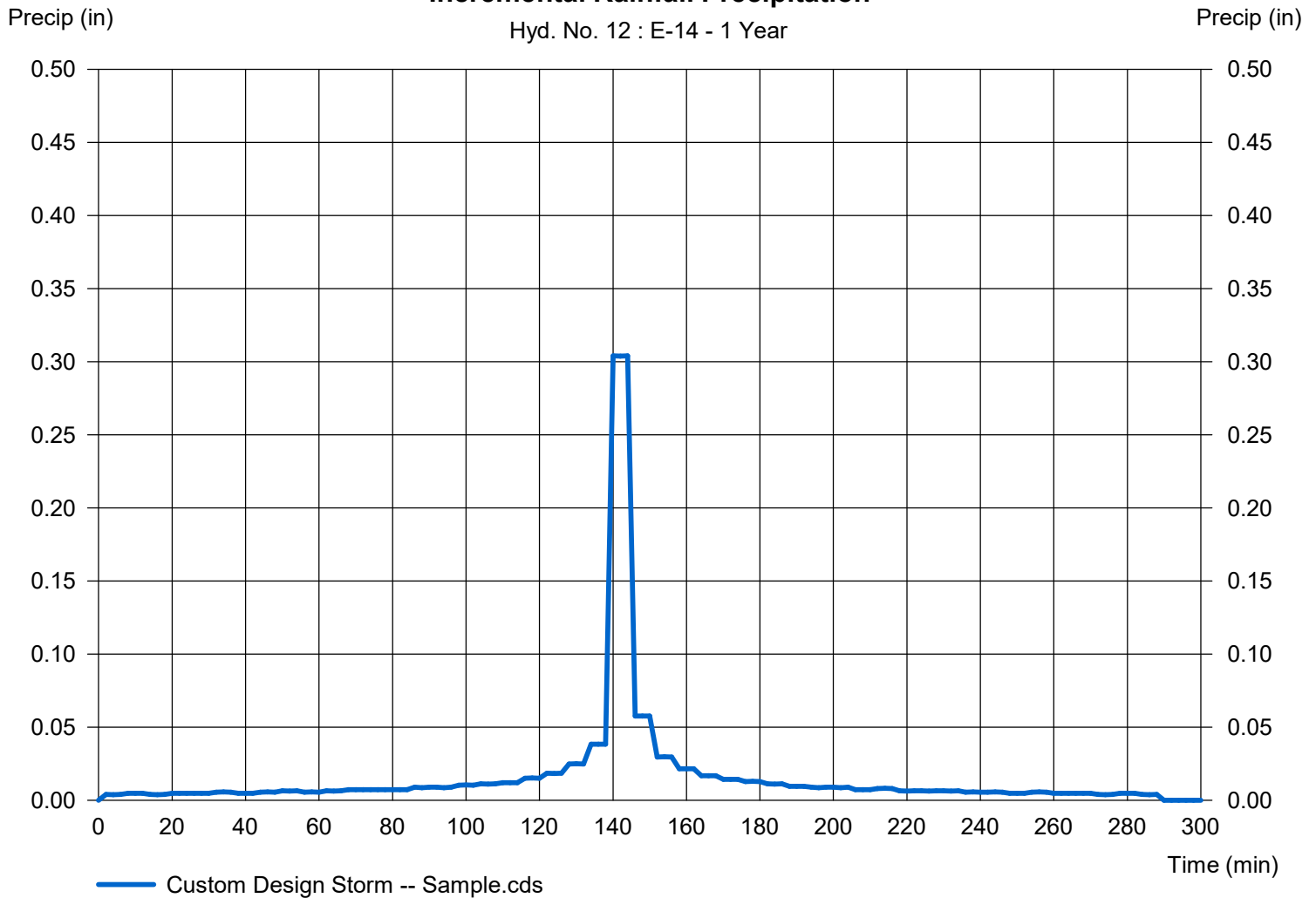
Hyd. No. 12

E-14

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : E-14 - 1 Year



Hydrograph Report

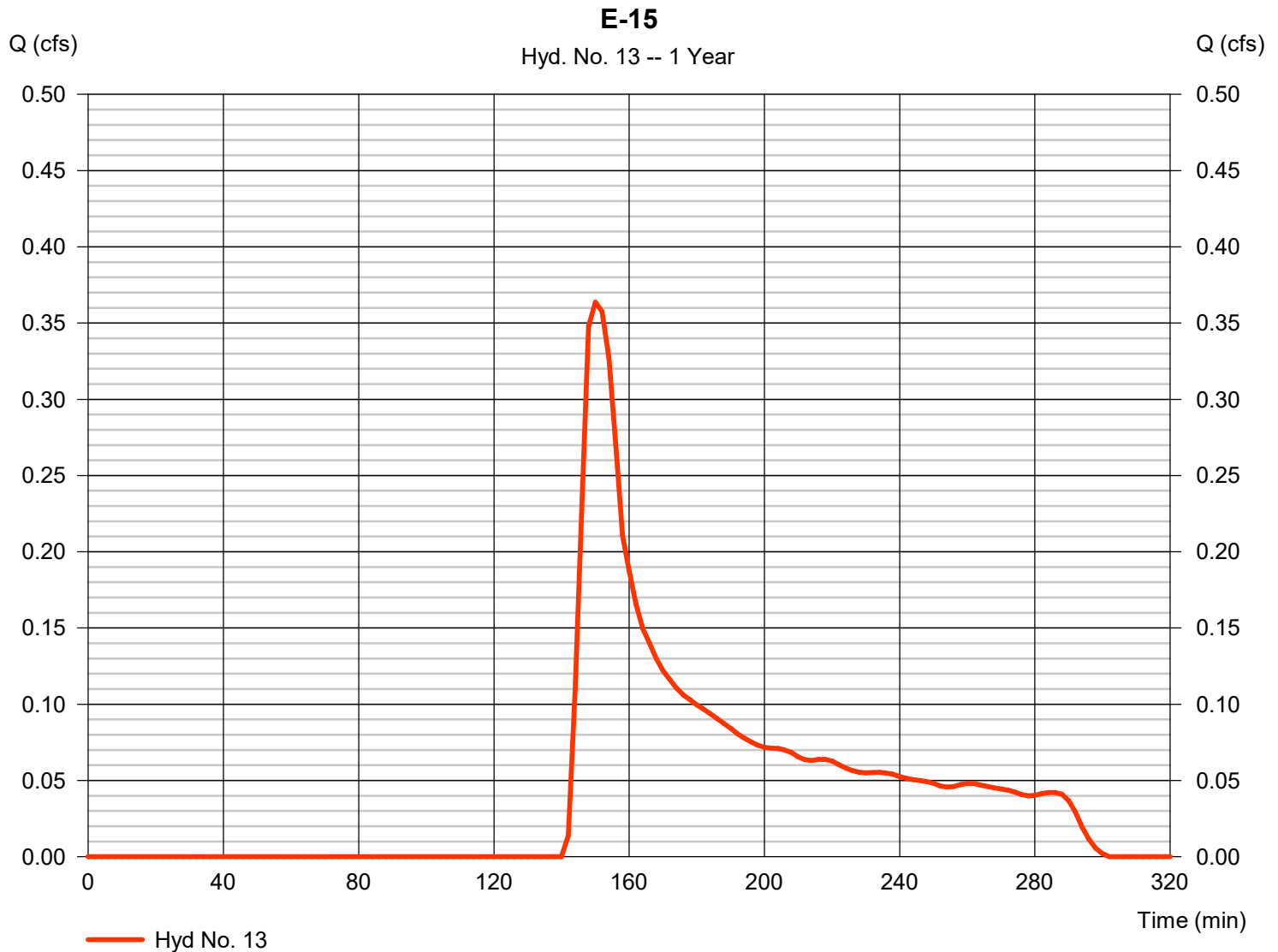
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 0.364 cfs
Storm frequency	= 1 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 828 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

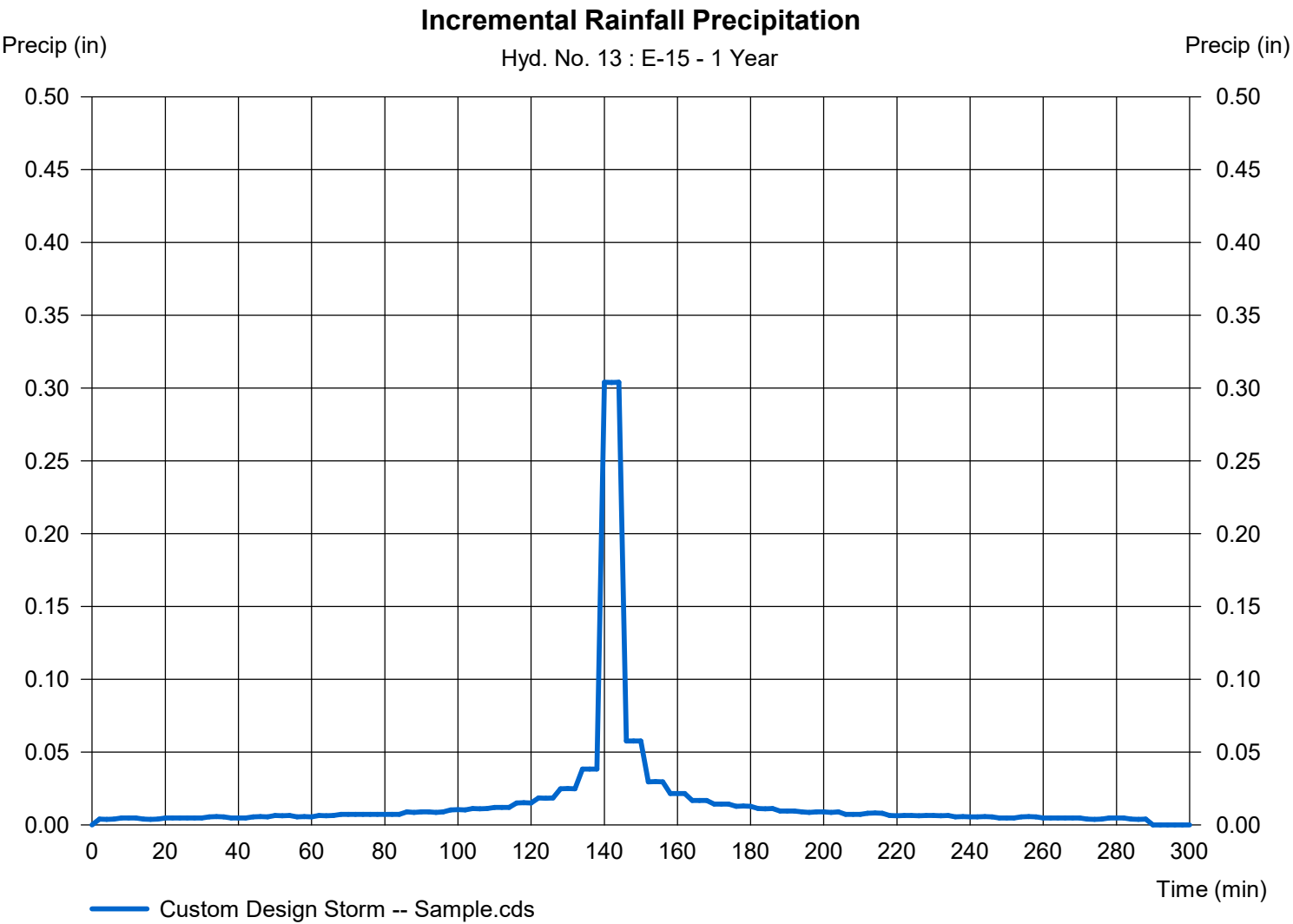
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

E-15

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

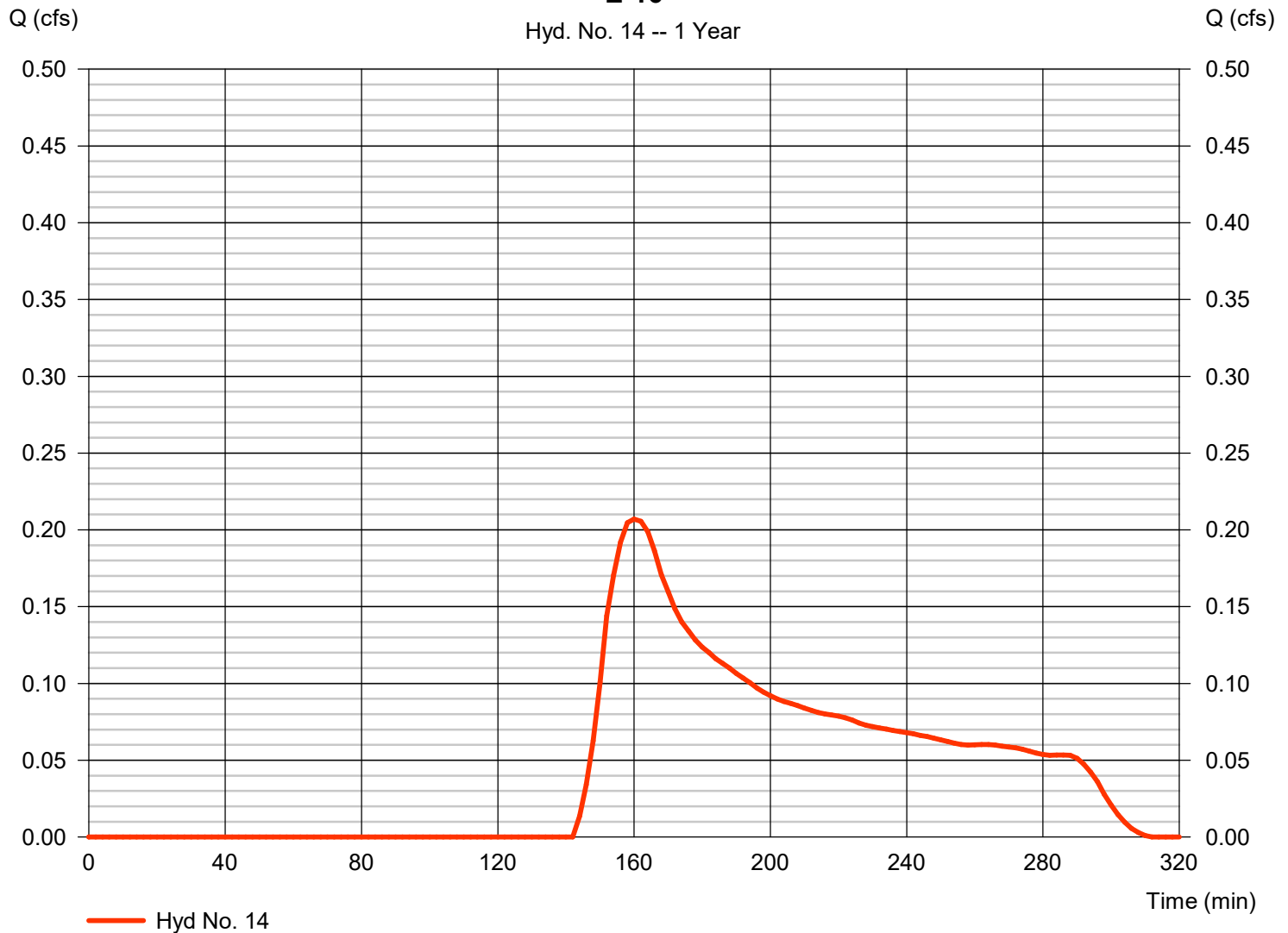
Hyd. No. 14

E-16

Hydrograph type	= SCS Runoff	Peak discharge	= 0.207 cfs
Storm frequency	= 1 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 842 cuft
Drainage area	= 1.620 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-16

Hyd. No. 14 -- 1 Year



Precipitation Report

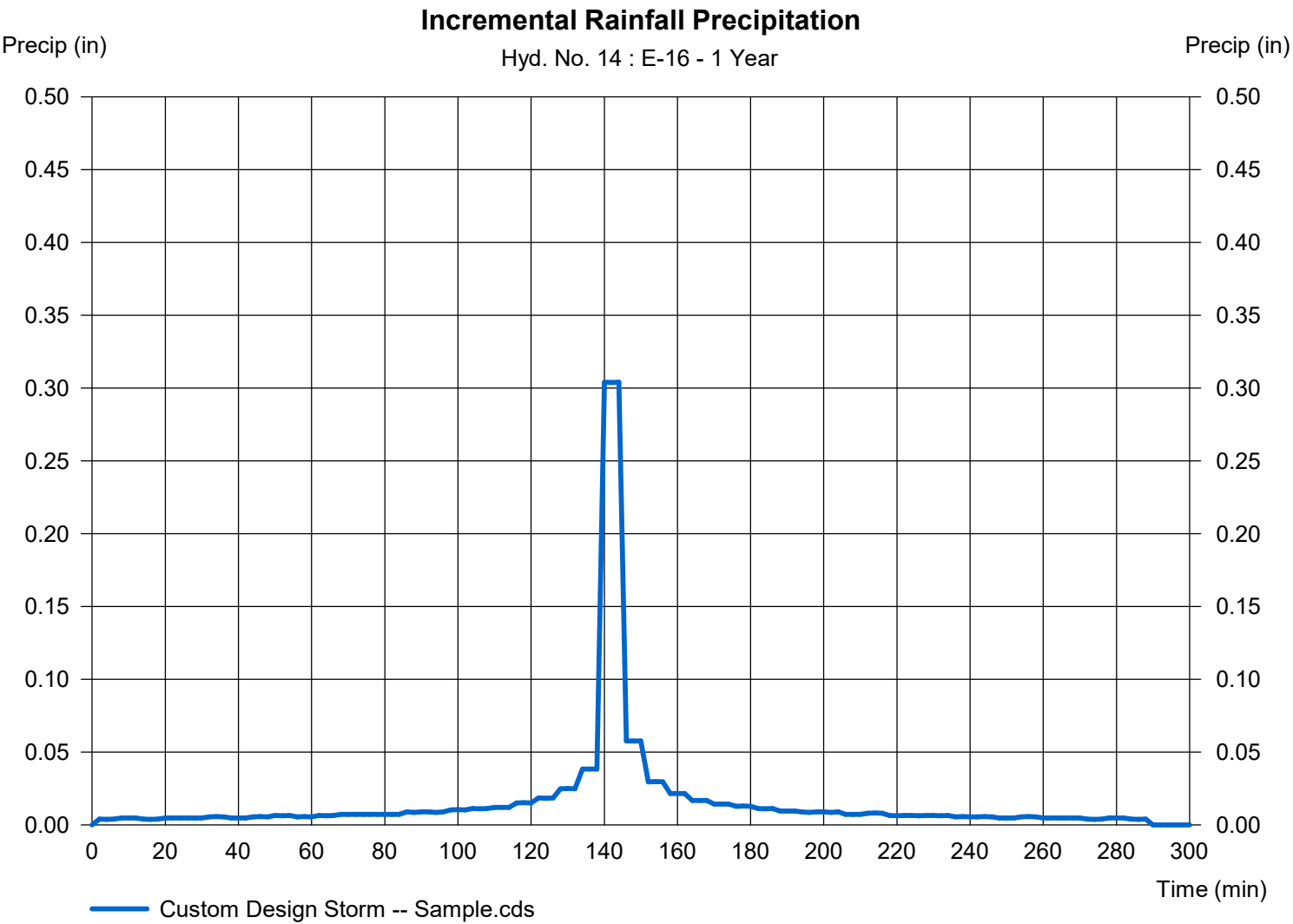
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 14

E-16

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

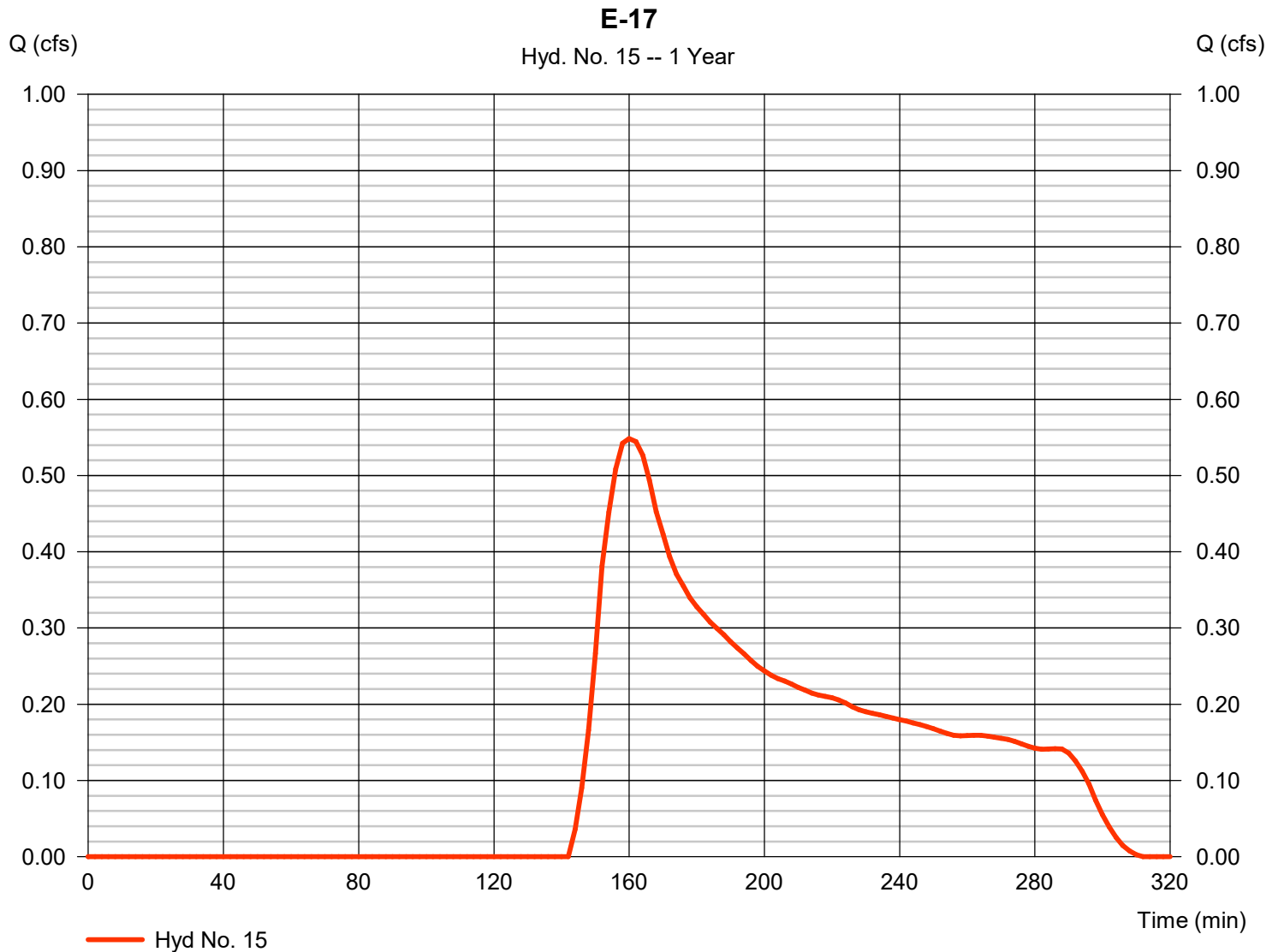
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

E-17

Hydrograph type	= SCS Runoff	Peak discharge	= 0.548 cfs
Storm frequency	= 1 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 2,229 cuft
Drainage area	= 4.291 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

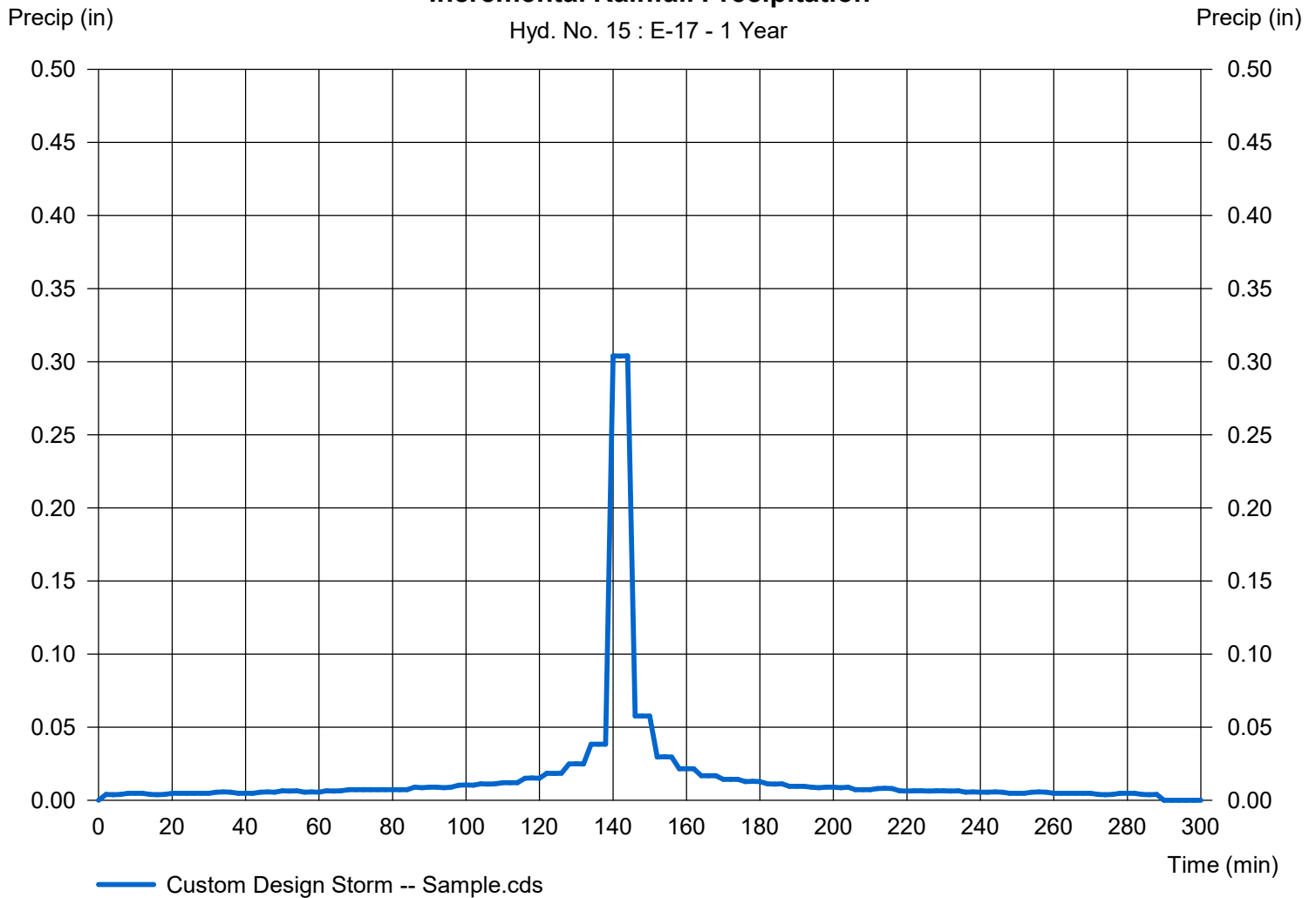
Hyd. No. 15

E-17

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : E-17 - 1 Year



Hydrograph Report

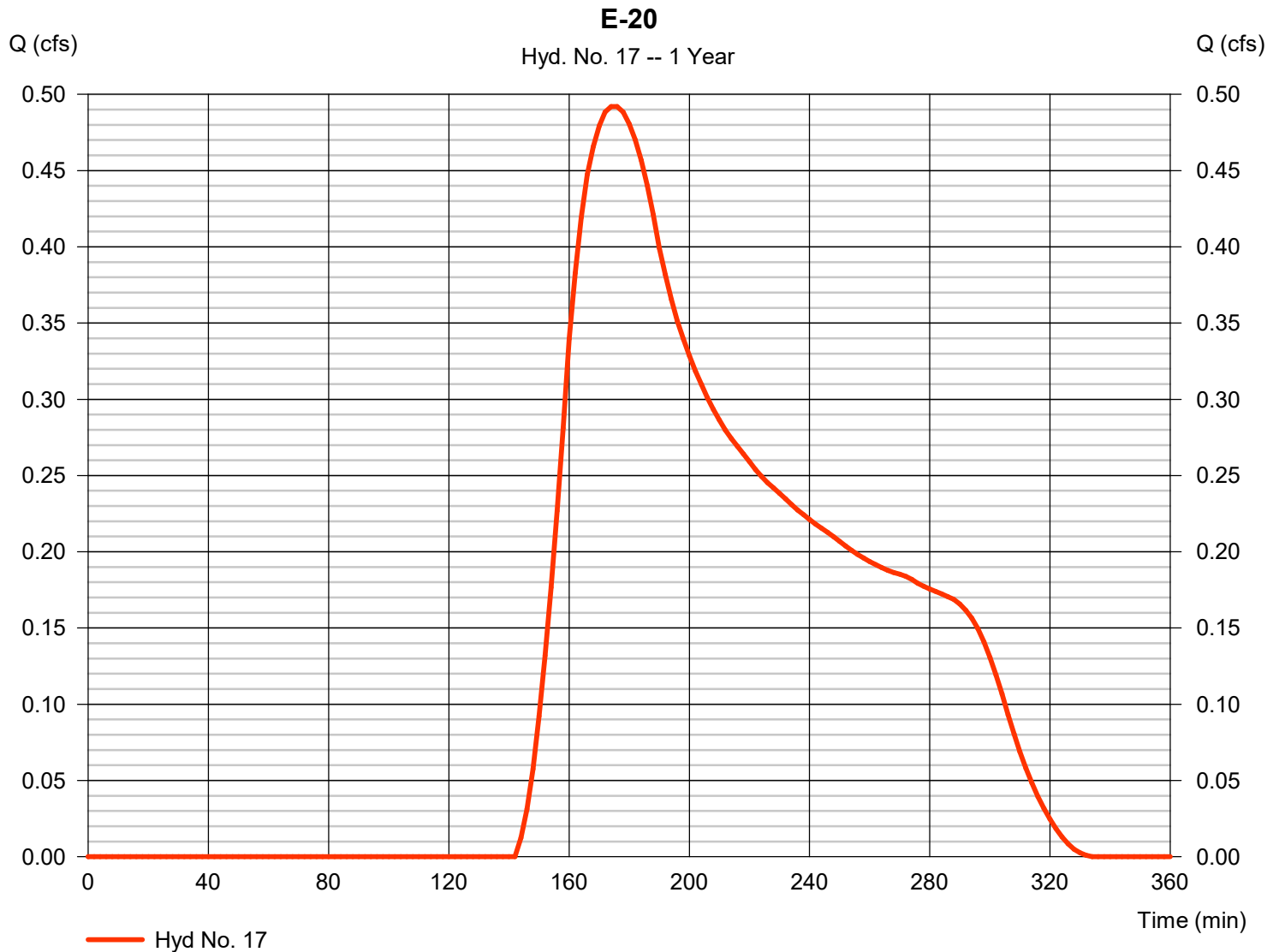
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 17

E-20

Hydrograph type	= SCS Runoff	Peak discharge	= 0.492 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 2,564 cuft
Drainage area	= 4.811 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

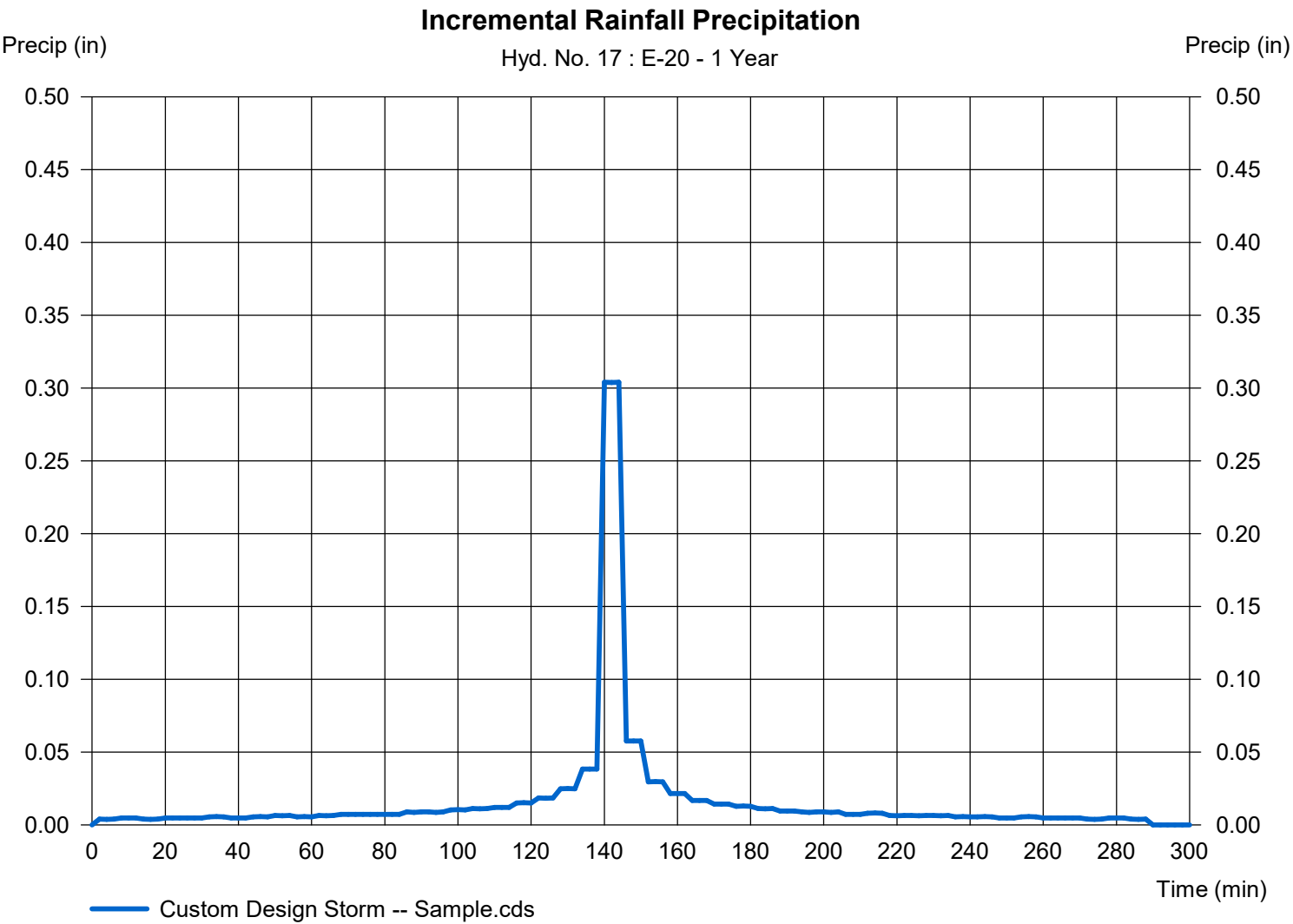
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 17

E-20

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

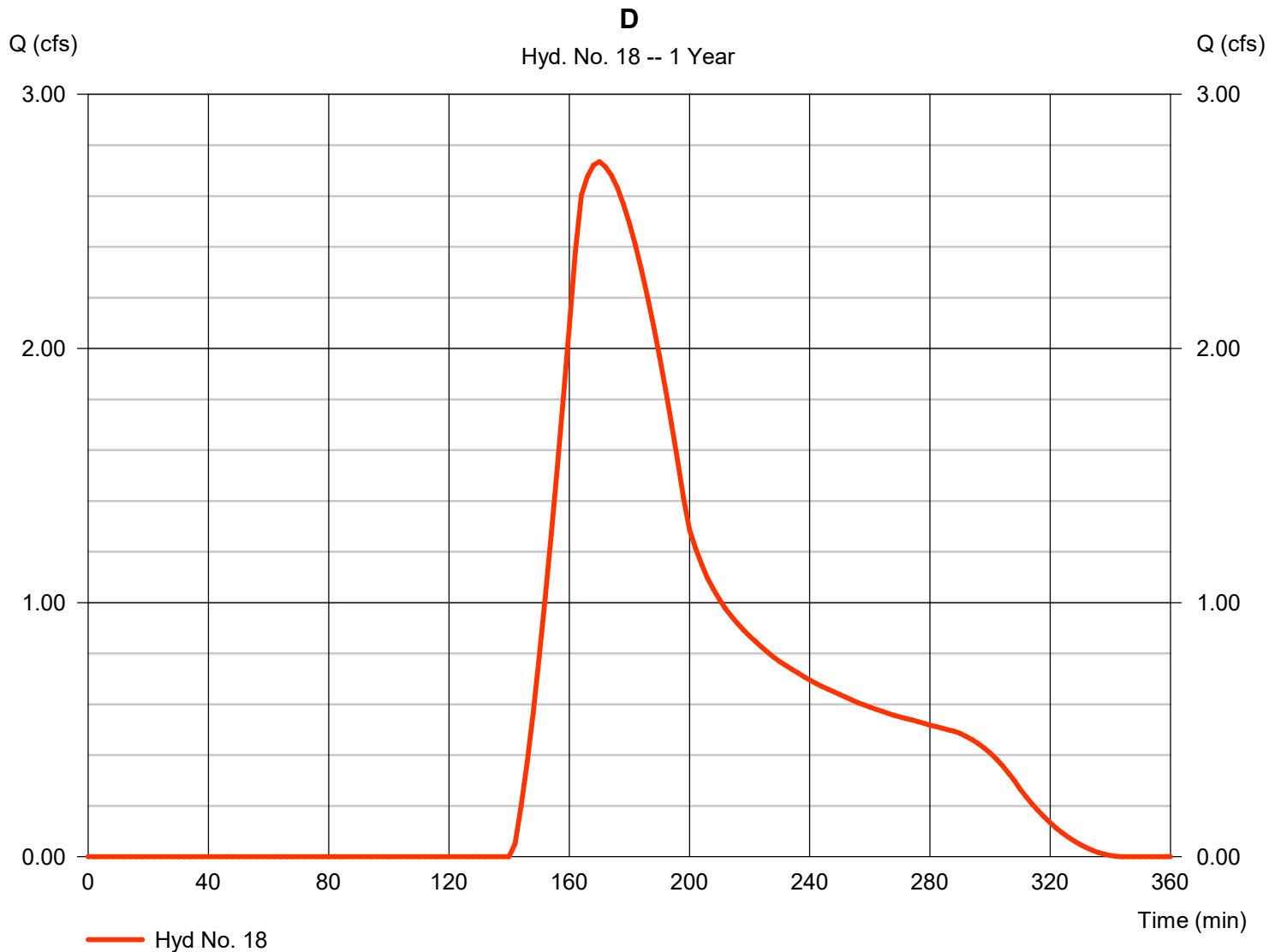
Tuesday, 04 / 7 / 2020

Hyd. No. 18

D

Hydrograph type	= SCS Runoff	Peak discharge	= 2.736 cfs
Storm frequency	= 1 yrs	Time to peak	= 170 min
Time interval	= 2 min	Hyd. volume	= 11,041 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

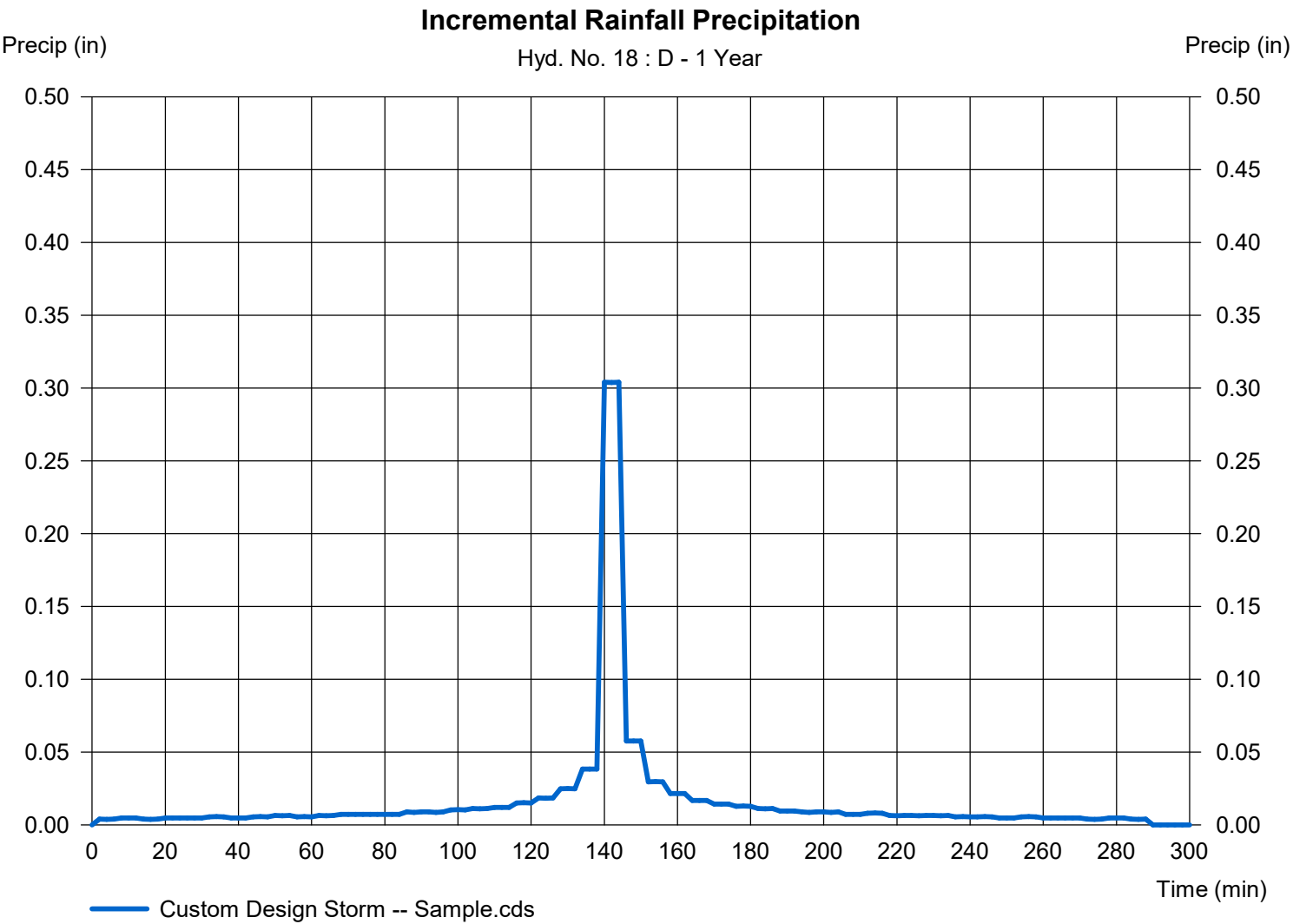
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 18

D

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

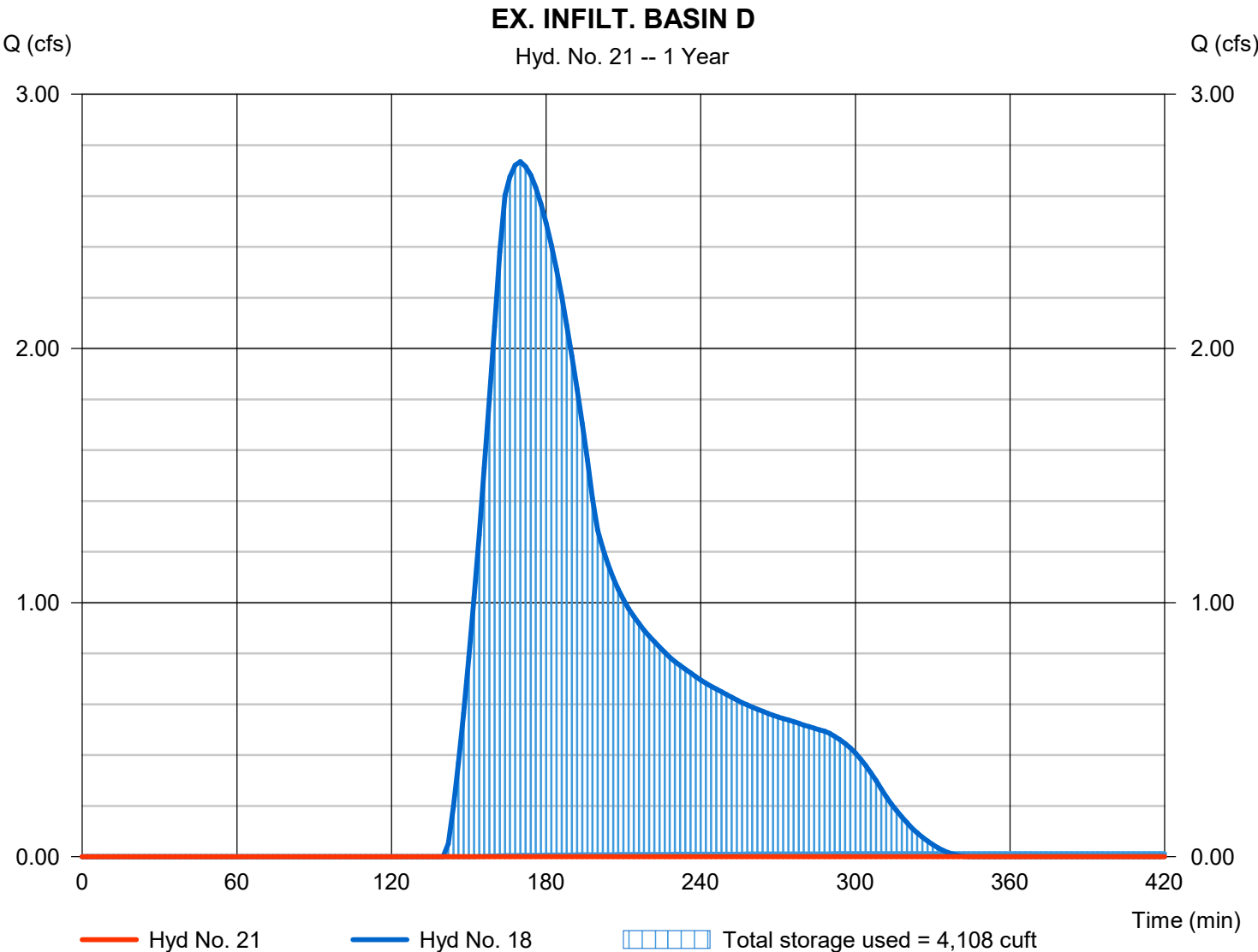
Tuesday, 04 / 7 / 2020

Hyd. No. 21

EX. INFILT. BASIN D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 256 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 18 - D	Max. Elevation	= 989.98 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 4,108 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

39

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 19 - EXISTING INFILTRATION BASIN D

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 989.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	989.00	600	0	0
1.00	990.00	9,570	4,188	4,188
2.00	991.00	11,810	10,669	14,858
3.00	992.00	14,165	12,968	27,826
4.00	993.00	16,675	15,401	43,227
5.00	994.00	19,650	18,140	61,368
6.00	995.00	25,080	22,308	83,675

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 994.65	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 6.000 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	989.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	419	989.10	---	---	---	---	0.00	---	---	---	0.133	---	0.133
0.20	838	989.20	---	---	---	---	0.00	---	---	---	0.266	---	0.266
0.30	1,256	989.30	---	---	---	---	0.00	---	---	---	0.399	---	0.399
0.40	1,675	989.40	---	---	---	---	0.00	---	---	---	0.532	---	0.532
0.50	2,094	989.50	---	---	---	---	0.00	---	---	---	0.665	---	0.665
0.60	2,513	989.60	---	---	---	---	0.00	---	---	---	0.797	---	0.797
0.70	2,932	989.70	---	---	---	---	0.00	---	---	---	0.930	---	0.930
0.80	3,351	989.80	---	---	---	---	0.00	---	---	---	1.063	---	1.063
0.90	3,769	989.90	---	---	---	---	0.00	---	---	---	1.196	---	1.196
1.00	4,188	990.00	---	---	---	---	0.00	---	---	---	1.329	---	1.329
1.10	5,255	990.10	---	---	---	---	0.00	---	---	---	1.360	---	1.360
1.20	6,322	990.20	---	---	---	---	0.00	---	---	---	1.391	---	1.391
1.30	7,389	990.30	---	---	---	---	0.00	---	---	---	1.422	---	1.422
1.40	8,456	990.40	---	---	---	---	0.00	---	---	---	1.454	---	1.454
1.50	9,523	990.50	---	---	---	---	0.00	---	---	---	1.485	---	1.485
1.60	10,590	990.60	---	---	---	---	0.00	---	---	---	1.516	---	1.516
1.70	11,657	990.70	---	---	---	---	0.00	---	---	---	1.547	---	1.547
1.80	12,724	990.80	---	---	---	---	0.00	---	---	---	1.578	---	1.578
1.90	13,791	990.90	---	---	---	---	0.00	---	---	---	1.609	---	1.609
2.00	14,858	991.00	---	---	---	---	0.00	---	---	---	1.640	---	1.640
2.10	16,154	991.10	---	---	---	---	0.00	---	---	---	1.673	---	1.673
2.20	17,451	991.20	---	---	---	---	0.00	---	---	---	1.706	---	1.706
2.30	18,748	991.30	---	---	---	---	0.00	---	---	---	1.738	---	1.738
2.40	20,045	991.40	---	---	---	---	0.00	---	---	---	1.771	---	1.771
2.50	21,342	991.50	---	---	---	---	0.00	---	---	---	1.804	---	1.804
2.60	22,639	991.60	---	---	---	---	0.00	---	---	---	1.837	---	1.837
2.70	23,936	991.70	---	---	---	---	0.00	---	---	---	1.869	---	1.869
2.80	25,232	991.80	---	---	---	---	0.00	---	---	---	1.902	---	1.902
2.90	26,529	991.90	---	---	---	---	0.00	---	---	---	1.935	---	1.935
3.00	27,826	992.00	---	---	---	---	0.00	---	---	---	1.967	---	1.967
3.10	29,366	992.10	---	---	---	---	0.00	---	---	---	2.002	---	2.002
3.20	30,906	992.20	---	---	---	---	0.00	---	---	---	2.037	---	2.037
3.30	32,446	992.30	---	---	---	---	0.00	---	---	---	2.072	---	2.072
3.40	33,987	992.40	---	---	---	---	0.00	---	---	---	2.107	---	2.107
3.50	35,527	992.50	---	---	---	---	0.00	---	---	---	2.142	---	2.142

Continues on next page...

EXISTING INFILTRATION BASIN D

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.60	37,067	992.60	---	---	---	---	0.00	---	---	---	2.177	---	2.177
3.70	38,607	992.70	---	---	---	---	0.00	---	---	---	2.211	---	2.211
3.80	40,147	992.80	---	---	---	---	0.00	---	---	---	2.246	---	2.246
3.90	41,687	992.90	---	---	---	---	0.00	---	---	---	2.281	---	2.281
4.00	43,227	993.00	---	---	---	---	0.00	---	---	---	2.316	---	2.316
4.10	45,041	993.10	---	---	---	---	0.00	---	---	---	2.357	---	2.357
4.20	46,856	993.20	---	---	---	---	0.00	---	---	---	2.399	---	2.399
4.30	48,670	993.30	---	---	---	---	0.00	---	---	---	2.440	---	2.440
4.40	50,484	993.40	---	---	---	---	0.00	---	---	---	2.481	---	2.481
4.50	52,298	993.50	---	---	---	---	0.00	---	---	---	2.523	---	2.523
4.60	54,112	993.60	---	---	---	---	0.00	---	---	---	2.564	---	2.564
4.70	55,926	993.70	---	---	---	---	0.00	---	---	---	2.605	---	2.605
4.80	57,740	993.80	---	---	---	---	0.00	---	---	---	2.647	---	2.647
4.90	59,554	993.90	---	---	---	---	0.00	---	---	---	2.688	---	2.688
5.00	61,368	994.00	---	---	---	---	0.00	---	---	---	2.729	---	2.729
5.10	63,599	994.10	---	---	---	---	0.00	---	---	---	2.805	---	2.805
5.20	65,829	994.20	---	---	---	---	0.00	---	---	---	2.880	---	2.880
5.30	68,060	994.30	---	---	---	---	0.00	---	---	---	2.955	---	2.955
5.40	70,291	994.40	---	---	---	---	0.00	---	---	---	3.031	---	3.031
5.50	72,522	994.50	---	---	---	---	0.00	---	---	---	3.106	---	3.106
5.60	74,752	994.60	---	---	---	---	0.00	---	---	---	3.182	---	3.182
5.70	76,983	994.70	---	---	---	---	0.43	---	---	---	3.257	---	3.691
5.80	79,214	994.80	---	---	---	---	2.26	---	---	---	3.332	---	5.593
5.90	81,445	994.90	---	---	---	---	4.87	---	---	---	3.408	---	8.276
6.00	83,675	995.00	---	---	---	---	8.07	---	---	---	3.483	---	11.56

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

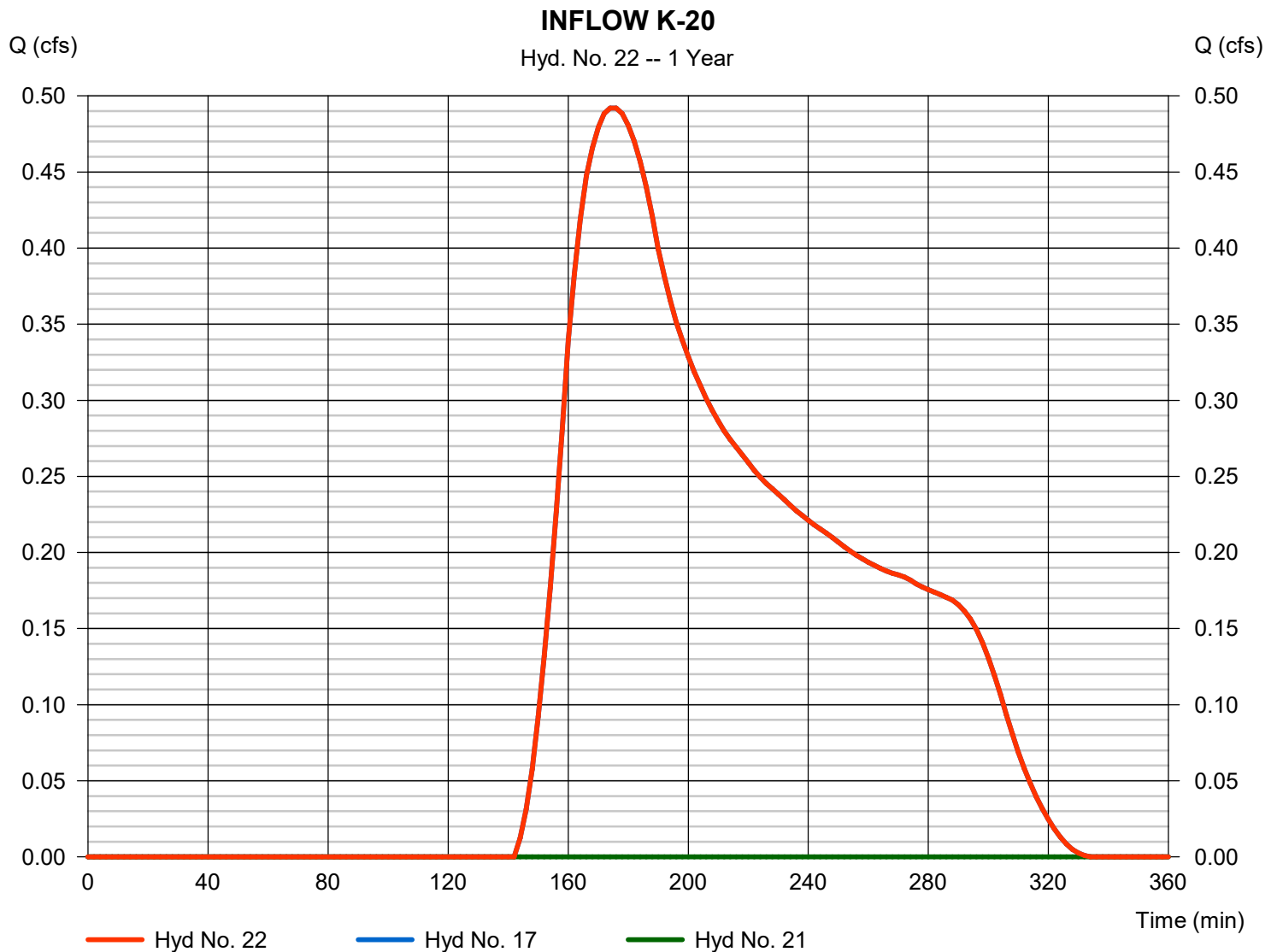
Tuesday, 04 / 7 / 2020

Hyd. No. 22

INFLOW K-20

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 17, 21

Peak discharge = 0.492 cfs
Time to peak = 176 min
Hyd. volume = 2,564 cuft
Contrib. drain. area = 4.811 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

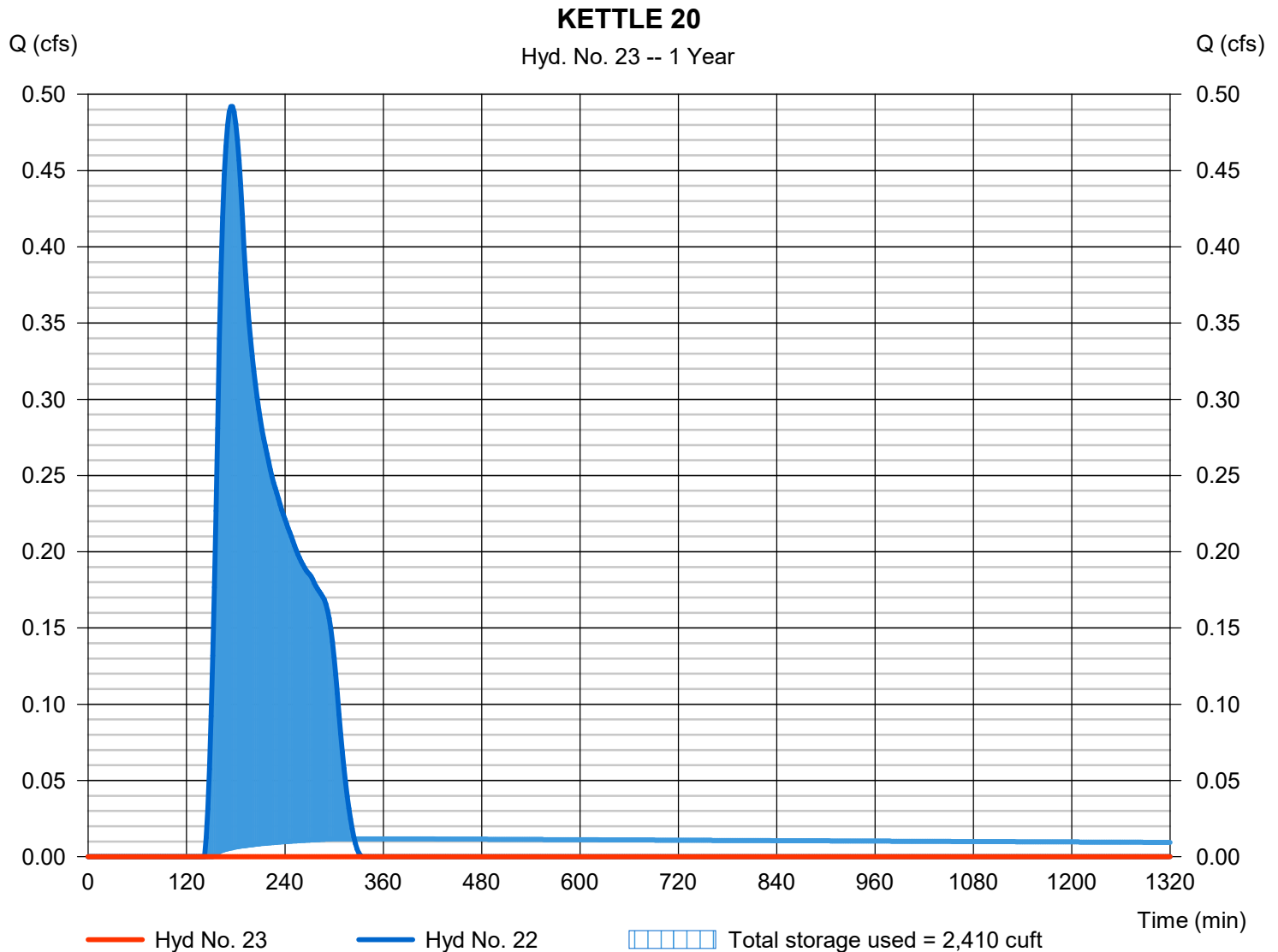
Tuesday, 04 / 7 / 2020

Hyd. No. 23

KETTLE 20

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 246 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 22 - INFLOW K-20	Max. Elevation	= 992.17 ft
Reservoir name	= K-20	Max. Storage	= 2,410 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 20 - K-20

Pond Data

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

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	992.00	6,330	0	0
1.00	993.00	24,655	14,491	14,491
2.00	994.00	40,640	32,313	46,804
3.00	995.00	55,600	47,920	94,724

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 0.00	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	992.00	---	---	---	---	---	---	---	---	0.000	---	0.000
0.10	1,449	992.10	---	---	---	---	---	---	---	---	0.014	---	0.014
0.20	2,898	992.20	---	---	---	---	---	---	---	---	0.027	---	0.027
0.30	4,347	992.30	---	---	---	---	---	---	---	---	0.041	---	0.041
0.40	5,796	992.40	---	---	---	---	---	---	---	---	0.055	---	0.055
0.50	7,246	992.50	---	---	---	---	---	---	---	---	0.068	---	0.068
0.60	8,695	992.60	---	---	---	---	---	---	---	---	0.082	---	0.082
0.70	10,144	992.70	---	---	---	---	---	---	---	---	0.096	---	0.096
0.80	11,593	992.80	---	---	---	---	---	---	---	---	0.110	---	0.110
0.90	13,042	992.90	---	---	---	---	---	---	---	---	0.123	---	0.123
1.00	14,491	993.00	---	---	---	---	---	---	---	---	0.137	---	0.137
1.10	17,722	993.10	---	---	---	---	---	---	---	---	0.146	---	0.146
1.20	20,954	993.20	---	---	---	---	---	---	---	---	0.155	---	0.155
1.30	24,185	993.30	---	---	---	---	---	---	---	---	0.164	---	0.164
1.40	27,416	993.40	---	---	---	---	---	---	---	---	0.172	---	0.172
1.50	30,648	993.50	---	---	---	---	---	---	---	---	0.181	---	0.181
1.60	33,879	993.60	---	---	---	---	---	---	---	---	0.190	---	0.190
1.70	37,110	993.70	---	---	---	---	---	---	---	---	0.199	---	0.199
1.80	40,342	993.80	---	---	---	---	---	---	---	---	0.208	---	0.208
1.90	43,573	993.90	---	---	---	---	---	---	---	---	0.217	---	0.217
2.00	46,804	994.00	---	---	---	---	---	---	---	---	0.226	---	0.226
2.10	51,596	994.10	---	---	---	---	---	---	---	---	0.234	---	0.234
2.20	56,388	994.20	---	---	---	---	---	---	---	---	0.242	---	0.242
2.30	61,180	994.30	---	---	---	---	---	---	---	---	0.251	---	0.251
2.40	65,972	994.40	---	---	---	---	---	---	---	---	0.259	---	0.259
2.50	70,764	994.50	---	---	---	---	---	---	---	---	0.267	---	0.267
2.60	75,556	994.60	---	---	---	---	---	---	---	---	0.276	---	0.276
2.70	80,348	994.70	---	---	---	---	---	---	---	---	0.284	---	0.284
2.80	85,140	994.80	---	---	---	---	---	---	---	---	0.292	---	0.292
2.90	89,932	994.90	---	---	---	---	---	---	---	---	0.301	---	0.301
3.00	94,724	995.00	---	---	---	---	---	---	---	---	0.309	---	0.309

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

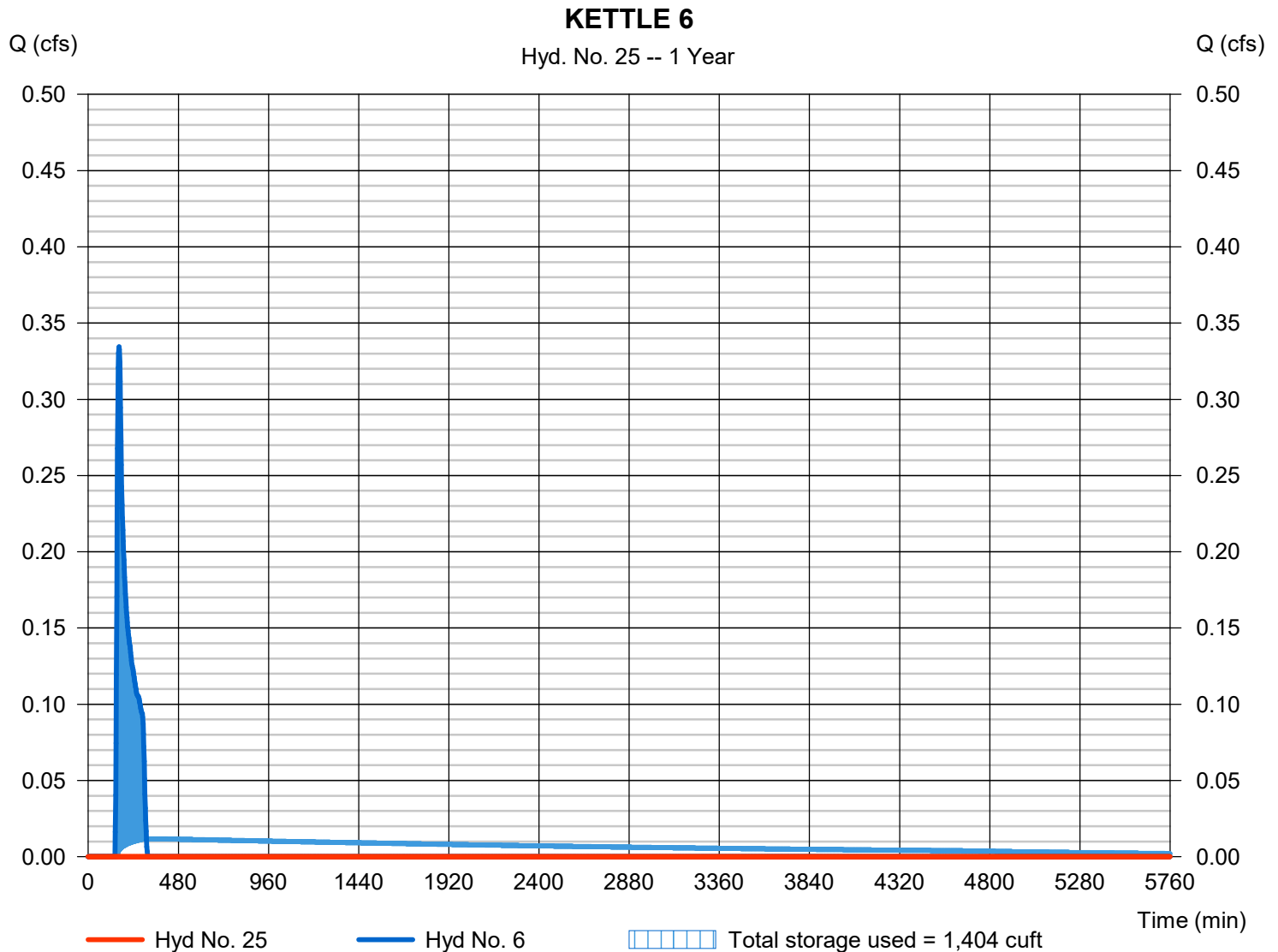
Tuesday, 04 / 7 / 2020

Hyd. No. 25

KETTLE 6

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 242 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 6 - E-6	Max. Elevation	= 1011.09 ft
Reservoir name	= K-6	Max. Storage	= 1,404 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

45

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 6 - K-6

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 1011.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1011.00	9,905	0	0
1.00	1012.00	23,150	16,064	16,064
2.00	1013.00	40,730	31,526	47,590

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 8.00	0.00	0.00	0.00
Crest El. (ft)	= 1012.70	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1011.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	1,606	1011.10	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.20	3,213	1011.20	---	---	---	---	0.00	---	---	---	0.026	---	0.026
0.30	4,819	1011.30	---	---	---	---	0.00	---	---	---	0.039	---	0.039
0.40	6,426	1011.40	---	---	---	---	0.00	---	---	---	0.051	---	0.051
0.50	8,032	1011.50	---	---	---	---	0.00	---	---	---	0.064	---	0.064
0.60	9,639	1011.60	---	---	---	---	0.00	---	---	---	0.077	---	0.077
0.70	11,245	1011.70	---	---	---	---	0.00	---	---	---	0.090	---	0.090
0.80	12,851	1011.80	---	---	---	---	0.00	---	---	---	0.103	---	0.103
0.90	14,458	1011.90	---	---	---	---	0.00	---	---	---	0.116	---	0.116
1.00	16,064	1012.00	---	---	---	---	0.00	---	---	---	0.129	---	0.129
1.10	19,217	1012.10	---	---	---	---	0.00	---	---	---	0.138	---	0.138
1.20	22,369	1012.20	---	---	---	---	0.00	---	---	---	0.148	---	0.148
1.30	25,522	1012.30	---	---	---	---	0.00	---	---	---	0.158	---	0.158
1.40	28,675	1012.40	---	---	---	---	0.00	---	---	---	0.168	---	0.168
1.50	31,827	1012.50	---	---	---	---	0.00	---	---	---	0.177	---	0.177
1.60	34,980	1012.60	---	---	---	---	0.00	---	---	---	0.187	---	0.187
1.70	38,132	1012.70	---	---	---	---	0.00	---	---	---	0.197	---	0.197
1.80	41,285	1012.80	---	---	---	---	0.66	---	---	---	0.207	---	0.862
1.90	44,437	1012.90	---	---	---	---	1.86	---	---	---	0.217	---	2.074
2.00	47,590	1013.00	---	---	---	---	3.42	---	---	---	0.226	---	3.644

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

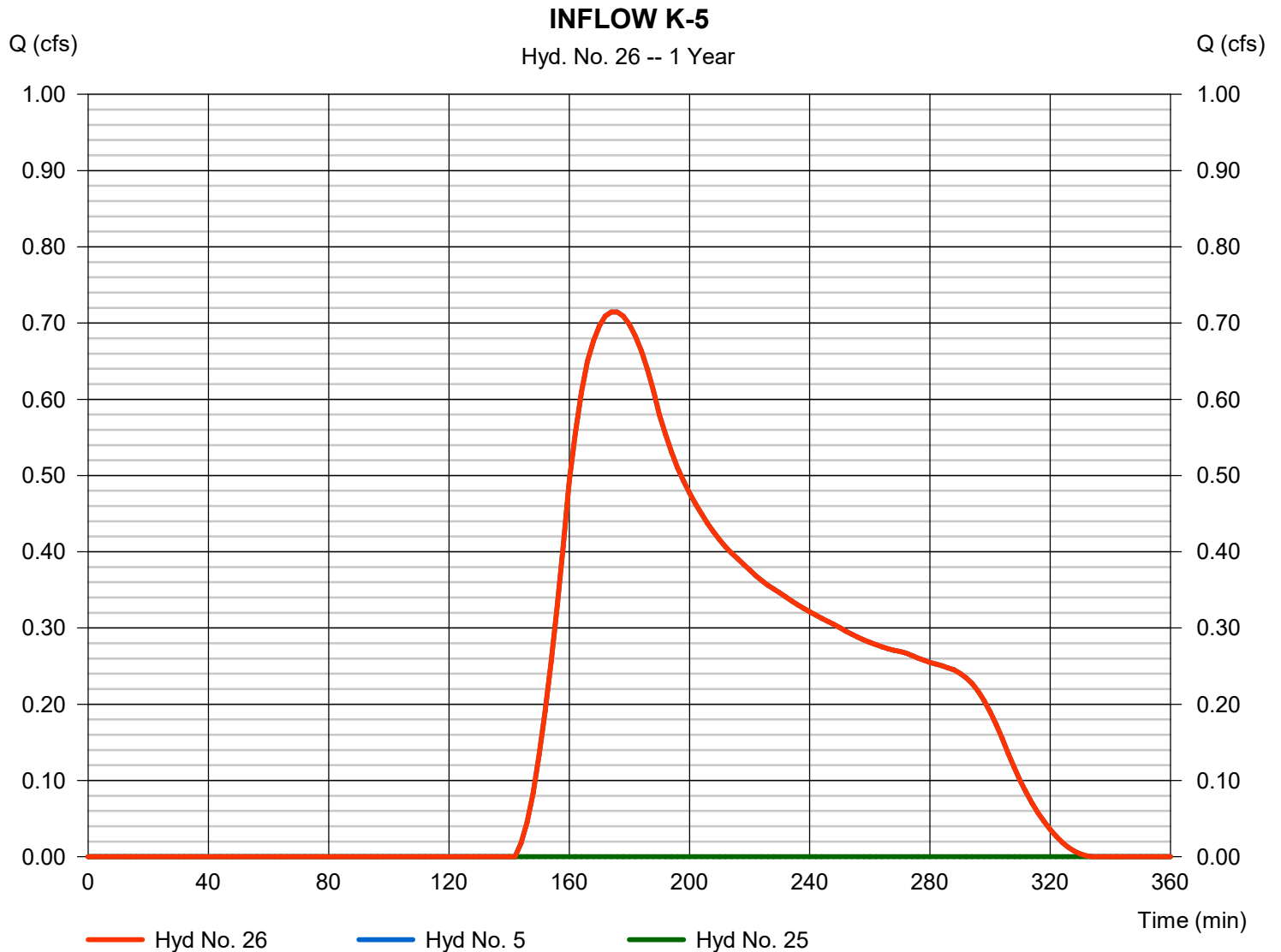
Tuesday, 04 / 7 / 2020

Hyd. No. 26

INFLOW K-5

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 5, 25

Peak discharge = 0.715 cfs
Time to peak = 176 min
Hyd. volume = 3,723 cuft
Contrib. drain. area = 6.987 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

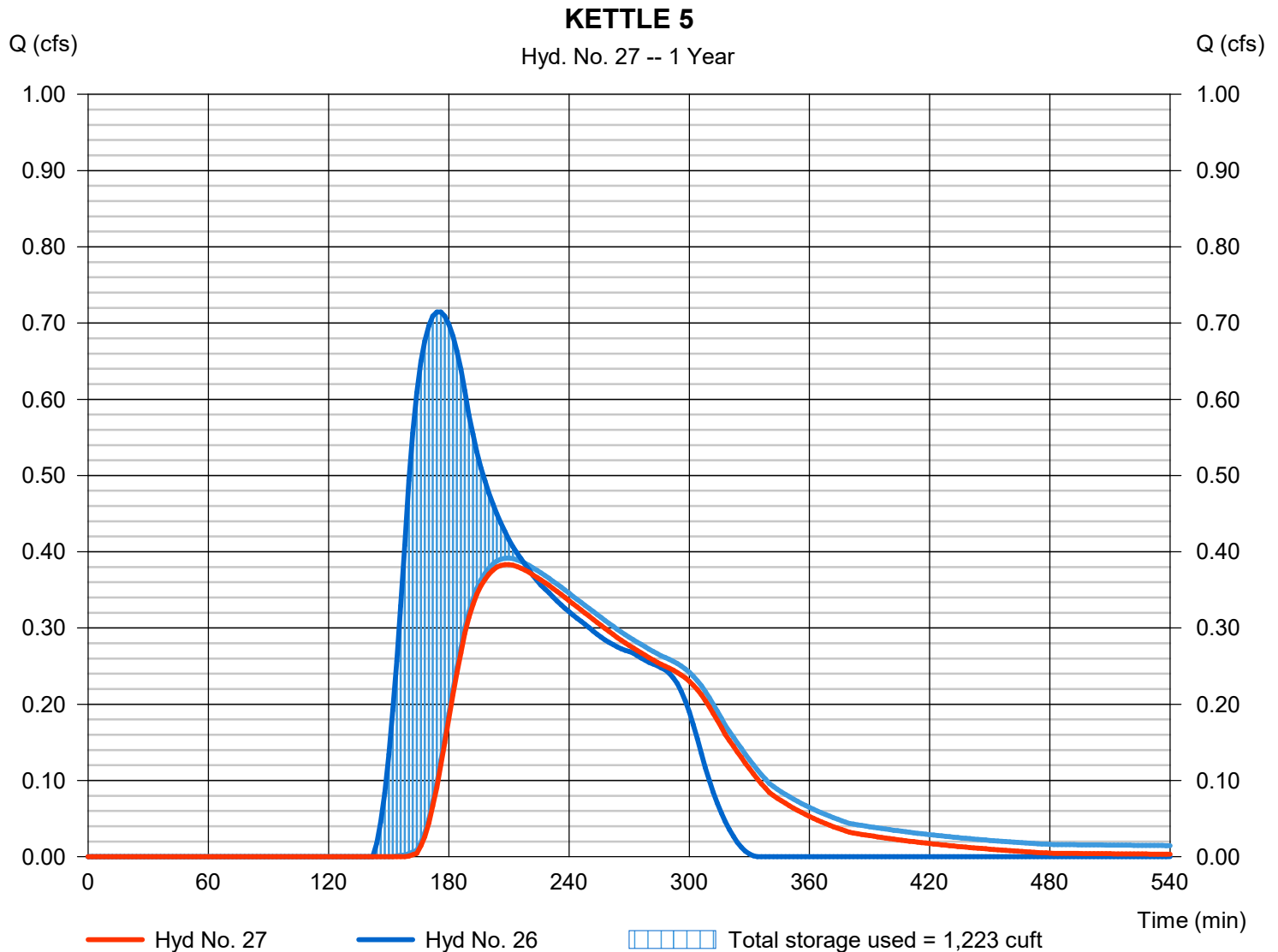
Tuesday, 04 / 7 / 2020

Hyd. No. 27

KETTLE 5

Hydrograph type	= Reservoir	Peak discharge	= 0.383 cfs
Storm frequency	= 1 yrs	Time to peak	= 208 min
Time interval	= 2 min	Hyd. volume	= 2,956 cuft
Inflow hyd. No.	= 26 - INFLOW K-5	Max. Elevation	= 982.85 ft
Reservoir name	= K-5	Max. Storage	= 1,223 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 5 - K-5

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 982.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	982.50	50	0	0
0.50	983.00	9,605	1,724	1,724
1.50	984.00	21,410	15,117	16,841
2.50	985.00	33,125	27,053	43,894
3.50	986.00	40,805	36,895	80,789

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	0.00	0.00	0.00
Span (in)	= 15.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 982.57	0.00	0.00	0.00
Length (ft)	= 48.40	0.00	0.00	0.00
Slope (%)	= 3.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 10.00	0.00	0.00	0.00
Crest El. (ft)	= 985.10	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	982.50	0.00	---	---	---	0.00	---	---	---	0.000	---	0.000
0.05	172	982.55	0.00	---	---	---	0.00	---	---	---	0.005	---	0.005
0.10	345	982.60	0.00 ic	---	---	---	0.00	---	---	---	0.011	---	0.015
0.15	517	982.65	0.03 ic	---	---	---	0.00	---	---	---	0.016	---	0.048
0.20	690	982.70	0.08 ic	---	---	---	0.00	---	---	---	0.021	---	0.104
0.25	862	982.75	0.16 ic	---	---	---	0.00	---	---	---	0.027	---	0.184
0.30	1,035	982.80	0.25 ic	---	---	---	0.00	---	---	---	0.032	---	0.286
0.35	1,207	982.85	0.37 ic	---	---	---	0.00	---	---	---	0.037	---	0.408
0.40	1,380	982.90	0.51 ic	---	---	---	0.00	---	---	---	0.043	---	0.549
0.45	1,552	982.95	0.66 ic	---	---	---	0.00	---	---	---	0.048	---	0.711
0.50	1,724	983.00	0.83 ic	---	---	---	0.00	---	---	---	0.053	---	0.888
0.60	3,236	983.10	1.23 ic	---	---	---	0.00	---	---	---	0.060	---	1.288
0.70	4,748	983.20	1.68 ic	---	---	---	0.00	---	---	---	0.066	---	1.744
0.80	6,260	983.30	2.17 ic	---	---	---	0.00	---	---	---	0.073	---	2.240
0.90	7,771	983.40	2.68 ic	---	---	---	0.00	---	---	---	0.080	---	2.764
1.00	9,283	983.50	3.22 ic	---	---	---	0.00	---	---	---	0.086	---	3.302
1.10	10,795	983.60	3.74 ic	---	---	---	0.00	---	---	---	0.093	---	3.831
1.20	12,306	983.70	4.22 ic	---	---	---	0.00	---	---	---	0.099	---	4.323
1.30	13,818	983.80	4.62 ic	---	---	---	0.00	---	---	---	0.106	---	4.723
1.40	15,330	983.90	4.96 ic	---	---	---	0.00	---	---	---	0.112	---	5.072
1.50	16,841	984.00	5.30 ic	---	---	---	0.00	---	---	---	0.119	---	5.420
1.60	19,547	984.10	5.62 ic	---	---	---	0.00	---	---	---	0.125	---	5.746
1.70	22,252	984.20	5.92 ic	---	---	---	0.00	---	---	---	0.132	---	6.055
1.80	24,957	984.30	6.21 ic	---	---	---	0.00	---	---	---	0.138	---	6.349
1.90	27,662	984.40	6.49 ic	---	---	---	0.00	---	---	---	0.145	---	6.630
2.00	30,368	984.50	6.75 ic	---	---	---	0.00	---	---	---	0.151	---	6.900
2.10	33,073	984.60	7.00 ic	---	---	---	0.00	---	---	---	0.158	---	7.161
2.20	35,778	984.70	7.25 ic	---	---	---	0.00	---	---	---	0.165	---	7.412
2.30	38,483	984.80	7.48 ic	---	---	---	0.00	---	---	---	0.171	---	7.655
2.40	41,189	984.90	7.71 ic	---	---	---	0.00	---	---	---	0.178	---	7.892
2.50	43,894	985.00	7.94 ic	---	---	---	0.00	---	---	---	0.184	---	8.122
2.60	47,583	985.10	8.15 ic	---	---	---	0.00	---	---	---	0.188	---	8.343
2.70	51,273	985.20	8.37 ic	---	---	---	0.82	---	---	---	0.193	---	9.380
2.80	54,962	985.30	8.57 ic	---	---	---	2.32	---	---	---	0.197	---	11.09
2.90	58,652	985.40	8.77 ic	---	---	---	4.27	---	---	---	0.201	---	13.24
3.00	62,341	985.50	8.97 ic	---	---	---	6.58	---	---	---	0.205	---	15.75
3.10	66,031	985.60	9.16 ic	---	---	---	9.19	---	---	---	0.210	---	18.56
3.20	69,720	985.70	9.35 ic	---	---	---	12.08	---	---	---	0.214	---	21.64

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K-5

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.30	73,410	985.80	9.54 ic	---	---	---	15.22	---	---	---	0.218	---	24.98
3.40	77,099	985.90	9.72 ic	---	---	---	18.60	---	---	---	0.222	---	28.54
3.50	80,789	986.00	9.89 ic	---	---	---	22.20	---	---	---	0.227	---	32.32

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

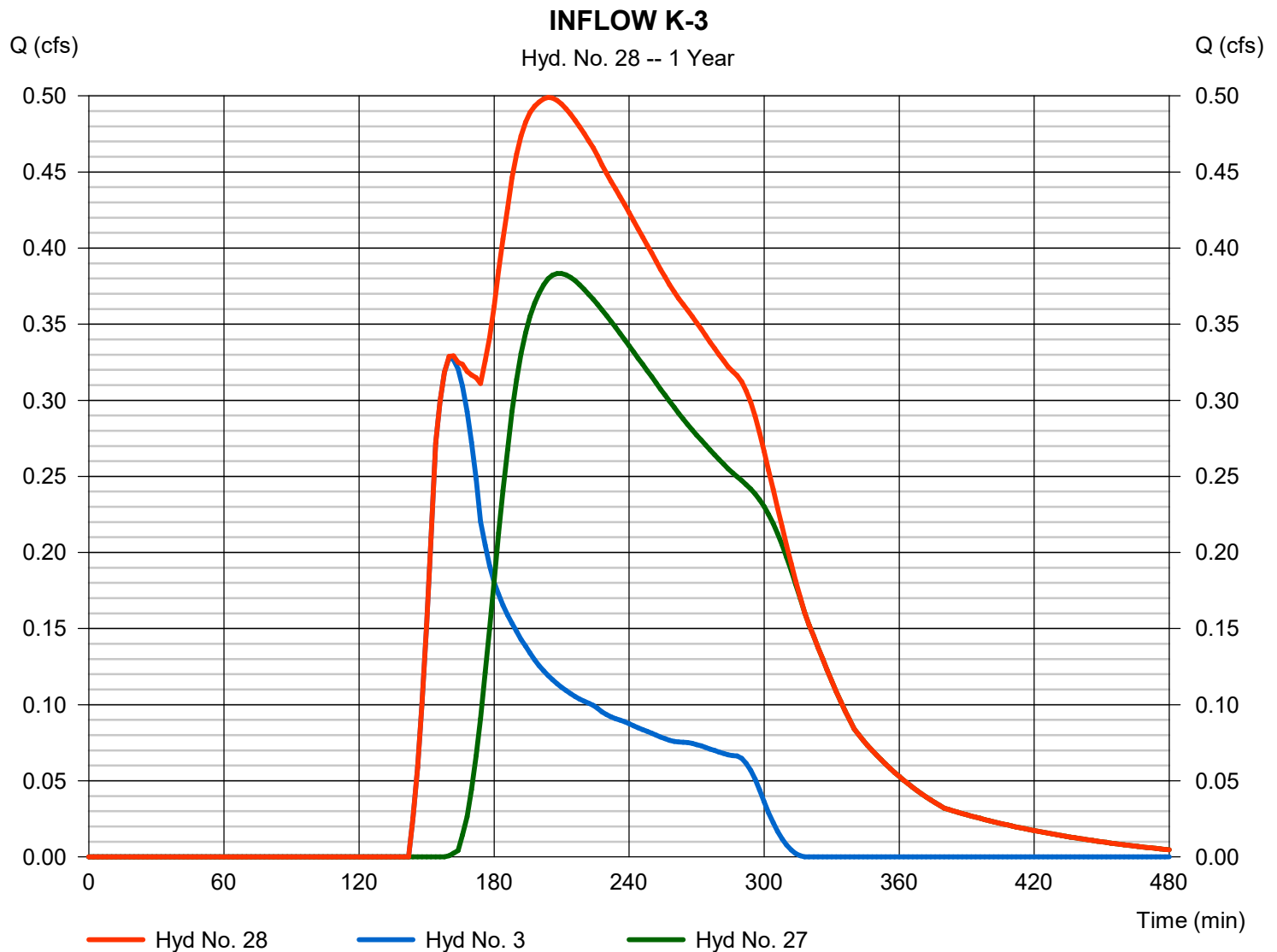
Tuesday, 04 / 7 / 2020

Hyd. No. 28

INFLOW K-3

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 3, 27

Peak discharge = 0.499 cfs
Time to peak = 204 min
Hyd. volume = 4,163 cuft
Contrib. drain. area = 1.588 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

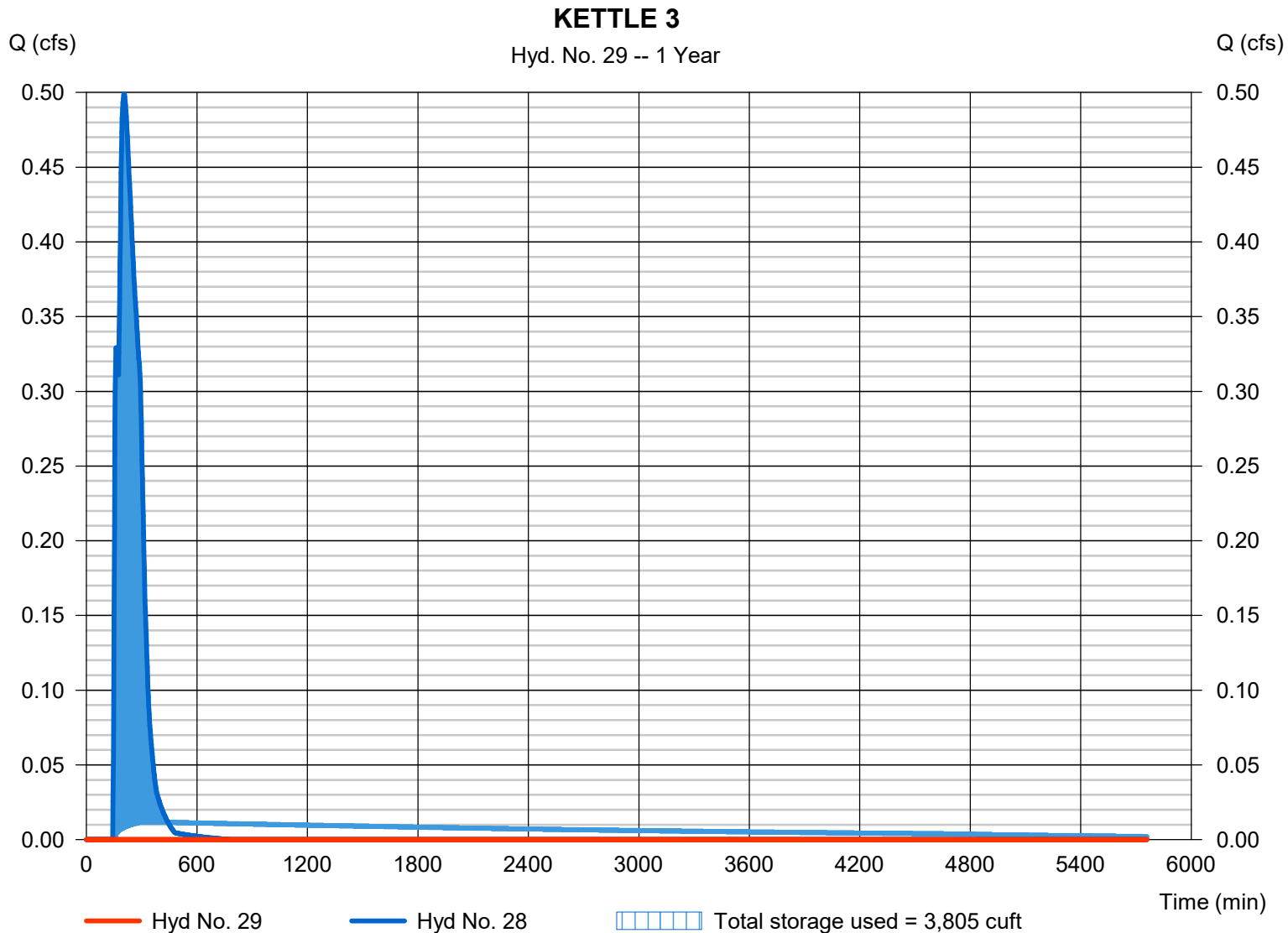
Tuesday, 04 / 7 / 2020

Hyd. No. 29

KETTLE 3

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 1136 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 28 - INFLOW K-3	Max. Elevation	= 973.18 ft
Reservoir name	= K-3	Max. Storage	= 3,805 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 3 - K-3

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 972.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	972.00	1,920	0	0
1.00	973.00	4,020	2,906	2,906
2.00	974.00	5,770	4,868	7,774
3.00	975.00	7,510	6,620	14,394
4.00	976.00	9,385	8,429	22,824
5.00	977.00	11,750	10,544	33,368
6.00	978.00	14,245	12,976	46,344

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 976.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	972.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	291	972.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	581	972.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	872	972.30	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.40	1,162	972.40	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.50	1,453	972.50	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.60	1,743	972.60	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.70	2,034	972.70	---	---	---	---	0.00	---	---	---	0.016	---	0.016
0.80	2,325	972.80	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.90	2,615	972.90	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.00	2,906	973.00	---	---	---	---	0.00	---	---	---	0.022	---	0.022
1.10	3,393	973.10	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.20	3,879	973.20	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.30	4,366	973.30	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.40	4,853	973.40	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.50	5,340	973.50	---	---	---	---	0.00	---	---	---	0.027	---	0.027
1.60	5,827	973.60	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.70	6,314	973.70	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.80	6,800	973.80	---	---	---	---	0.00	---	---	---	0.030	---	0.030
1.90	7,287	973.90	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.00	7,774	974.00	---	---	---	---	0.00	---	---	---	0.032	---	0.032
2.10	8,436	974.10	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.20	9,098	974.20	---	---	---	---	0.00	---	---	---	0.034	---	0.034
2.30	9,760	974.30	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.40	10,422	974.40	---	---	---	---	0.00	---	---	---	0.036	---	0.036
2.50	11,084	974.50	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.60	11,746	974.60	---	---	---	---	0.00	---	---	---	0.038	---	0.038
2.70	12,408	974.70	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.80	13,070	974.80	---	---	---	---	0.00	---	---	---	0.040	---	0.040
2.90	13,732	974.90	---	---	---	---	0.00	---	---	---	0.041	---	0.041
3.00	14,394	975.00	---	---	---	---	0.00	---	---	---	0.042	---	0.042
3.10	15,237	975.10	---	---	---	---	0.00	---	---	---	0.043	---	0.043
3.20	16,080	975.20	---	---	---	---	0.00	---	---	---	0.044	---	0.044
3.30	16,923	975.30	---	---	---	---	0.00	---	---	---	0.045	---	0.045
3.40	17,766	975.40	---	---	---	---	0.00	---	---	---	0.046	---	0.046
3.50	18,609	975.50	---	---	---	---	0.00	---	---	---	0.047	---	0.047

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K-3

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.60	19,452	975.60	---	---	---	---	0.00	---	---	---	0.048	---	0.048
3.70	20,295	975.70	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.80	21,138	975.80	---	---	---	---	0.00	---	---	---	0.050	---	0.050
3.90	21,981	975.90	---	---	---	---	0.00	---	---	---	0.051	---	0.051
4.00	22,824	976.00	---	---	---	---	0.00	---	---	---	0.052	---	0.052
4.10	23,878	976.10	---	---	---	---	1.23	---	---	---	0.053	---	1.286
4.20	24,932	976.20	---	---	---	---	3.49	---	---	---	0.055	---	3.542
4.30	25,987	976.30	---	---	---	---	6.41	---	---	---	0.056	---	6.462
4.40	27,041	976.40	---	---	---	---	9.86	---	---	---	0.057	---	9.920
4.50	28,096	976.50	---	---	---	---	13.78	---	---	---	0.059	---	13.84
4.60	29,150	976.60	---	---	---	---	18.12	---	---	---	0.060	---	18.18
4.70	30,205	976.70	---	---	---	---	22.83	---	---	---	0.061	---	22.89
4.80	31,259	976.80	---	---	---	---	27.90	---	---	---	0.063	---	27.96
4.90	32,313	976.90	---	---	---	---	33.29	---	---	---	0.064	---	33.35
5.00	33,368	977.00	---	---	---	---	39.00	---	---	---	0.065	---	39.07
5.10	34,665	977.10	---	---	---	---	44.99	---	---	---	0.067	---	45.06
5.20	35,963	977.20	---	---	---	---	51.26	---	---	---	0.068	---	51.33
5.30	37,261	977.30	---	---	---	---	57.80	---	---	---	0.069	---	57.87
5.40	38,558	977.40	---	---	---	---	64.60	---	---	---	0.071	---	64.67
5.50	39,856	977.50	---	---	---	---	71.64	---	---	---	0.072	---	71.71
5.60	41,154	977.60	---	---	---	---	78.92	---	---	---	0.074	---	78.99
5.70	42,451	977.70	---	---	---	---	86.43	---	---	---	0.075	---	86.51
5.80	43,749	977.80	---	---	---	---	94.17	---	---	---	0.076	---	94.24
5.90	45,046	977.90	---	---	---	---	102.12	---	---	---	0.078	---	102.20
6.00	46,344	978.00	---	---	---	---	110.31	---	---	---	0.079	---	110.39

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

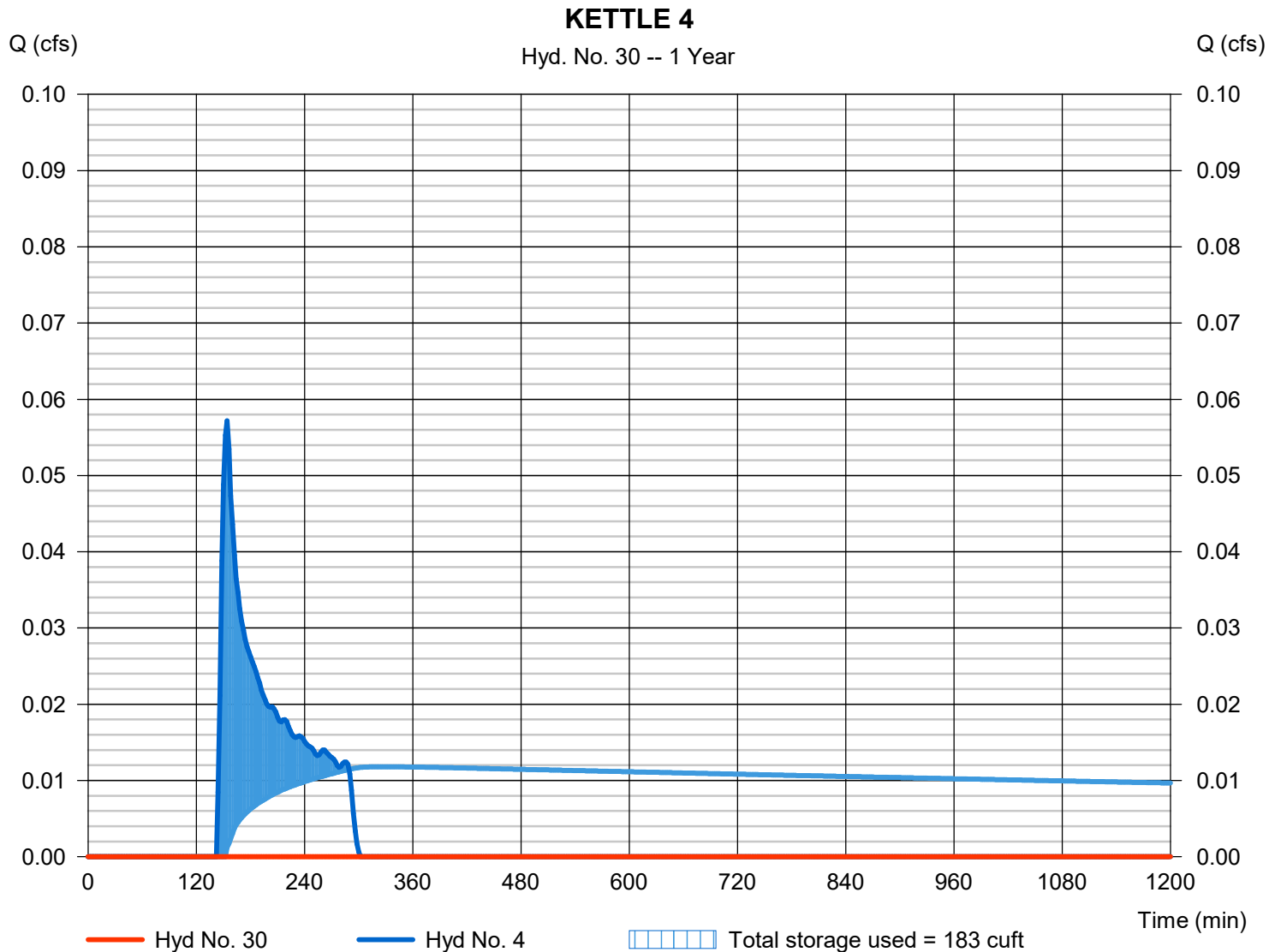
Hyd. No. 30

KETTLE 4

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - E-4
 Reservoir name = K-4

Peak discharge = 0.000 cfs
 Time to peak = 210 min
 Hyd. volume = 0 cuft
 Max. Elevation = 1007.10 ft
 Max. Storage = 183 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 4 - K-4

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 1007.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1007.00	750	0	0
1.00	1008.00	3,220	1,841	1,841
2.00	1009.00	7,100	5,033	6,874

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 10.00	0.00	0.00	0.00
Crest El. (ft)	= 1008.50	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1007.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	184	1007.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	368	1007.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	552	1007.30	---	---	---	---	0.00	---	---	---	0.005	---	0.005
0.40	736	1007.40	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.50	921	1007.50	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.60	1,105	1007.60	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.70	1,289	1007.70	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.80	1,473	1007.80	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.90	1,657	1007.90	---	---	---	---	0.00	---	---	---	0.016	---	0.016
1.00	1,841	1008.00	---	---	---	---	0.00	---	---	---	0.018	---	0.018
1.10	2,344	1008.10	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.20	2,848	1008.20	---	---	---	---	0.00	---	---	---	0.022	---	0.022
1.30	3,351	1008.30	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.40	3,854	1008.40	---	---	---	---	0.00	---	---	---	0.027	---	0.027
1.50	4,358	1008.50	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.60	4,861	1008.60	---	---	---	---	0.82	---	---	---	0.031	---	0.851
1.70	5,364	1008.70	---	---	---	---	2.32	---	---	---	0.033	---	2.356
1.80	5,868	1008.80	---	---	---	---	4.27	---	---	---	0.035	---	4.303
1.90	6,371	1008.90	---	---	---	---	6.57	---	---	---	0.037	---	6.609
2.00	6,874	1009.00	---	---	---	---	9.19	---	---	---	0.039	---	9.232

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

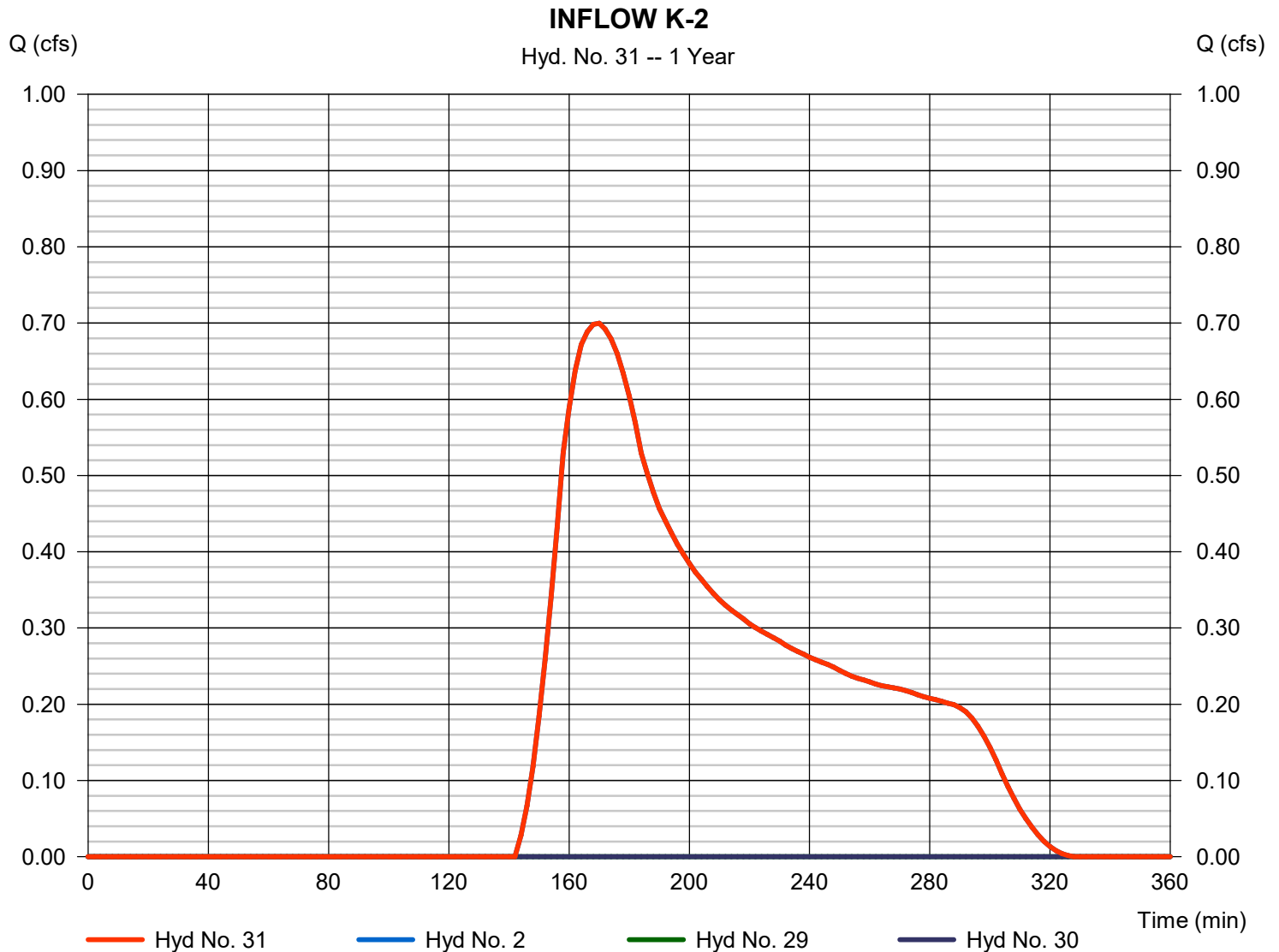
Tuesday, 04 / 7 / 2020

Hyd. No. 31

INFLOW K-2

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 2, 29, 30

Peak discharge = 0.700 cfs
 Time to peak = 170 min
 Hyd. volume = 3,248 cuft
 Contrib. drain. area = 5.433 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

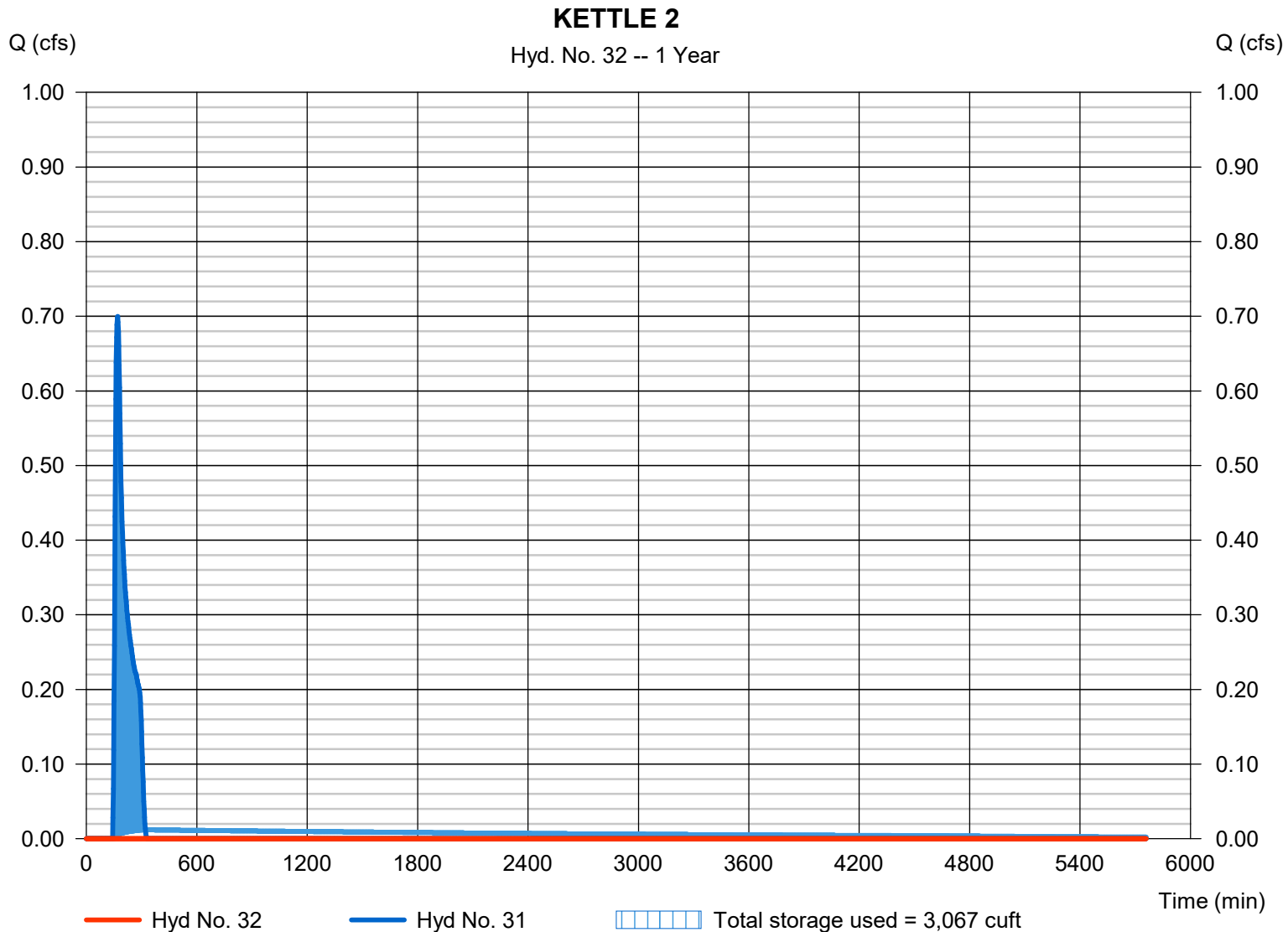
Tuesday, 04 / 7 / 2020

Hyd. No. 32

KETTLE 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 1884 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 31 - INFLOW K-2	Max. Elevation	= 967.37 ft
Reservoir name	= K-2	Max. Storage	= 3,067 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

58

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 2 - K-2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 966.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	966.00	285	0	0
1.00	967.00	3,190	1,476	1,476
2.00	968.00	5,410	4,251	5,727
3.00	969.00	7,210	6,288	12,015
4.00	970.00	9,215	8,191	20,206
5.00	971.00	11,370	10,273	30,479
6.00	972.00	13,630	12,482	42,960
7.00	973.00	16,420	15,002	57,962
8.00	974.00	19,360	17,868	75,830
9.00	975.00	22,600	20,957	96,787

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.00	0.00	0.00	0.00
Crest El. (ft)	= 973.70	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	966.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	148	966.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	295	966.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	443	966.30	---	---	---	---	0.00	---	---	---	0.005	---	0.005
0.40	590	966.40	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.50	738	966.50	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.60	886	966.60	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.70	1,033	966.70	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.80	1,181	966.80	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.90	1,328	966.90	---	---	---	---	0.00	---	---	---	0.016	---	0.016
1.00	1,476	967.00	---	---	---	---	0.00	---	---	---	0.018	---	0.018
1.10	1,901	967.10	---	---	---	---	0.00	---	---	---	0.019	---	0.019
1.20	2,326	967.20	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.30	2,751	967.30	---	---	---	---	0.00	---	---	---	0.021	---	0.021
1.40	3,176	967.40	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.50	3,602	967.50	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.60	4,027	967.60	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.70	4,452	967.70	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.80	4,877	967.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.90	5,302	967.90	---	---	---	---	0.00	---	---	---	0.029	---	0.029
2.00	5,727	968.00	---	---	---	---	0.00	---	---	---	0.030	---	0.030
2.10	6,356	968.10	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.20	6,985	968.20	---	---	---	---	0.00	---	---	---	0.032	---	0.032
2.30	7,613	968.30	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.40	8,242	968.40	---	---	---	---	0.00	---	---	---	0.034	---	0.034
2.50	8,871	968.50	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.60	9,500	968.60	---	---	---	---	0.00	---	---	---	0.036	---	0.036
2.70	10,129	968.70	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.80	10,757	968.80	---	---	---	---	0.00	---	---	---	0.038	---	0.038
2.90	11,386	968.90	---	---	---	---	0.00	---	---	---	0.039	---	0.039
3.00	12,015	969.00	---	---	---	---	0.00	---	---	---	0.040	---	0.040
3.10	12,834	969.10	---	---	---	---	0.00	---	---	---	0.041	---	0.041
3.20	13,653	969.20	---	---	---	---	0.00	---	---	---	0.042	---	0.042

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K-2

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.30	14,472	969.30	---	---	---	---	0.00	---	---	---	0.043	---	0.043
3.40	15,291	969.40	---	---	---	---	0.00	---	---	---	0.045	---	0.045
3.50	16,110	969.50	---	---	---	---	0.00	---	---	---	0.046	---	0.046
3.60	16,930	969.60	---	---	---	---	0.00	---	---	---	0.047	---	0.047
3.70	17,749	969.70	---	---	---	---	0.00	---	---	---	0.048	---	0.048
3.80	18,568	969.80	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.90	19,387	969.90	---	---	---	---	0.00	---	---	---	0.050	---	0.050
4.00	20,206	970.00	---	---	---	---	0.00	---	---	---	0.051	---	0.051
4.10	21,233	970.10	---	---	---	---	0.00	---	---	---	0.052	---	0.052
4.20	22,261	970.20	---	---	---	---	0.00	---	---	---	0.054	---	0.054
4.30	23,288	970.30	---	---	---	---	0.00	---	---	---	0.055	---	0.055
4.40	24,315	970.40	---	---	---	---	0.00	---	---	---	0.056	---	0.056
4.50	25,342	970.50	---	---	---	---	0.00	---	---	---	0.057	---	0.057
4.60	26,370	970.60	---	---	---	---	0.00	---	---	---	0.058	---	0.058
4.70	27,397	970.70	---	---	---	---	0.00	---	---	---	0.060	---	0.060
4.80	28,424	970.80	---	---	---	---	0.00	---	---	---	0.061	---	0.061
4.90	29,451	970.90	---	---	---	---	0.00	---	---	---	0.062	---	0.062
5.00	30,479	971.00	---	---	---	---	0.00	---	---	---	0.063	---	0.063
5.10	31,727	971.10	---	---	---	---	0.00	---	---	---	0.064	---	0.064
5.20	32,975	971.20	---	---	---	---	0.00	---	---	---	0.066	---	0.066
5.30	34,223	971.30	---	---	---	---	0.00	---	---	---	0.067	---	0.067
5.40	35,471	971.40	---	---	---	---	0.00	---	---	---	0.068	---	0.068
5.50	36,720	971.50	---	---	---	---	0.00	---	---	---	0.069	---	0.069
5.60	37,968	971.60	---	---	---	---	0.00	---	---	---	0.071	---	0.071
5.70	39,216	971.70	---	---	---	---	0.00	---	---	---	0.072	---	0.072
5.80	40,464	971.80	---	---	---	---	0.00	---	---	---	0.073	---	0.073
5.90	41,712	971.90	---	---	---	---	0.00	---	---	---	0.074	---	0.074
6.00	42,960	972.00	---	---	---	---	0.00	---	---	---	0.076	---	0.076
6.10	44,461	972.10	---	---	---	---	0.00	---	---	---	0.077	---	0.077
6.20	45,961	972.20	---	---	---	---	0.00	---	---	---	0.079	---	0.079
6.30	47,461	972.30	---	---	---	---	0.00	---	---	---	0.080	---	0.080
6.40	48,961	972.40	---	---	---	---	0.00	---	---	---	0.082	---	0.082
6.50	50,461	972.50	---	---	---	---	0.00	---	---	---	0.083	---	0.083
6.60	51,962	972.60	---	---	---	---	0.00	---	---	---	0.085	---	0.085
6.70	53,462	972.70	---	---	---	---	0.00	---	---	---	0.087	---	0.087
6.80	54,962	972.80	---	---	---	---	0.00	---	---	---	0.088	---	0.088
6.90	56,462	972.90	---	---	---	---	0.00	---	---	---	0.090	---	0.090
7.00	57,962	973.00	---	---	---	---	0.00	---	---	---	0.091	---	0.091
7.10	59,749	973.10	---	---	---	---	0.00	---	---	---	0.093	---	0.093
7.20	61,536	973.20	---	---	---	---	0.00	---	---	---	0.094	---	0.094
7.30	63,323	973.30	---	---	---	---	0.00	---	---	---	0.096	---	0.096
7.40	65,109	973.40	---	---	---	---	0.00	---	---	---	0.098	---	0.098
7.50	66,896	973.50	---	---	---	---	0.00	---	---	---	0.099	---	0.099
7.60	68,683	973.60	---	---	---	---	0.00	---	---	---	0.101	---	0.101
7.70	70,470	973.70	---	---	---	---	0.00	---	---	---	0.103	---	0.103
7.80	72,257	973.80	---	---	---	---	0.41	---	---	---	0.104	---	0.514
7.90	74,044	973.90	---	---	---	---	1.16	---	---	---	0.106	---	1.267
8.00	75,830	974.00	---	---	---	---	2.14	---	---	---	0.108	---	2.244
8.10	77,926	974.10	---	---	---	---	3.29	---	---	---	0.109	---	3.398
8.20	80,022	974.20	---	---	---	---	4.60	---	---	---	0.111	---	4.707
8.30	82,117	974.30	---	---	---	---	6.04	---	---	---	0.113	---	6.154
8.40	84,213	974.40	---	---	---	---	7.61	---	---	---	0.115	---	7.727
8.50	86,309	974.50	---	---	---	---	9.30	---	---	---	0.117	---	9.416
8.60	88,405	974.60	---	---	---	---	11.10	---	---	---	0.118	---	11.22
8.70	90,500	974.70	---	---	---	---	13.00	---	---	---	0.120	---	13.12
8.80	92,596	974.80	---	---	---	---	14.99	---	---	---	0.122	---	15.12
8.90	94,692	974.90	---	---	---	---	17.08	---	---	---	0.124	---	17.21
9.00	96,787	975.00	---	---	---	---	19.27	---	---	---	0.126	---	19.39

...End

Hydrograph Report

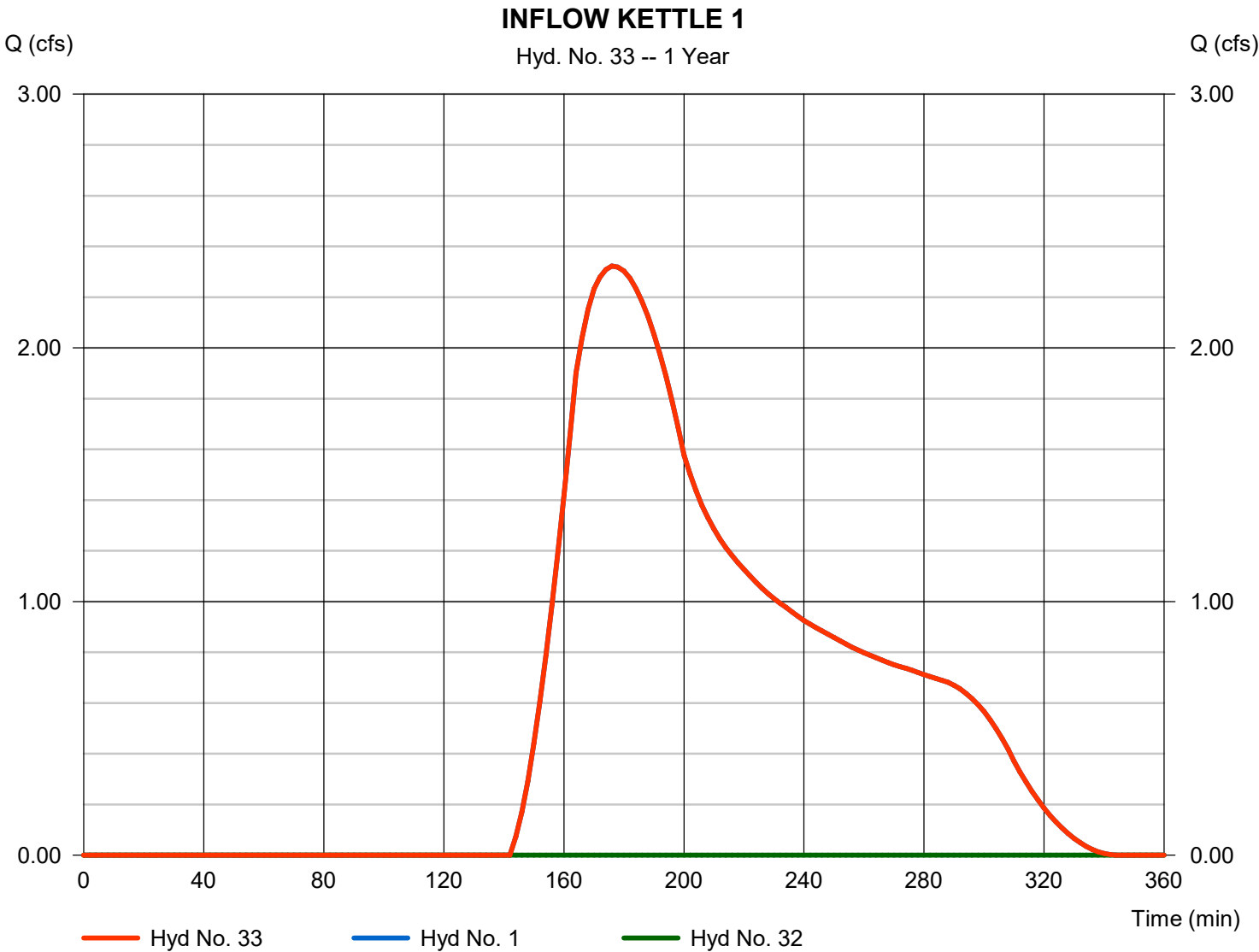
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 33

INFLOW KETTLE 1

Hydrograph type	= Combine	Peak discharge	= 2.322 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 11,634 cuft
Inflow hyds.	= 1, 32	Contrib. drain. area	= 15.479 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

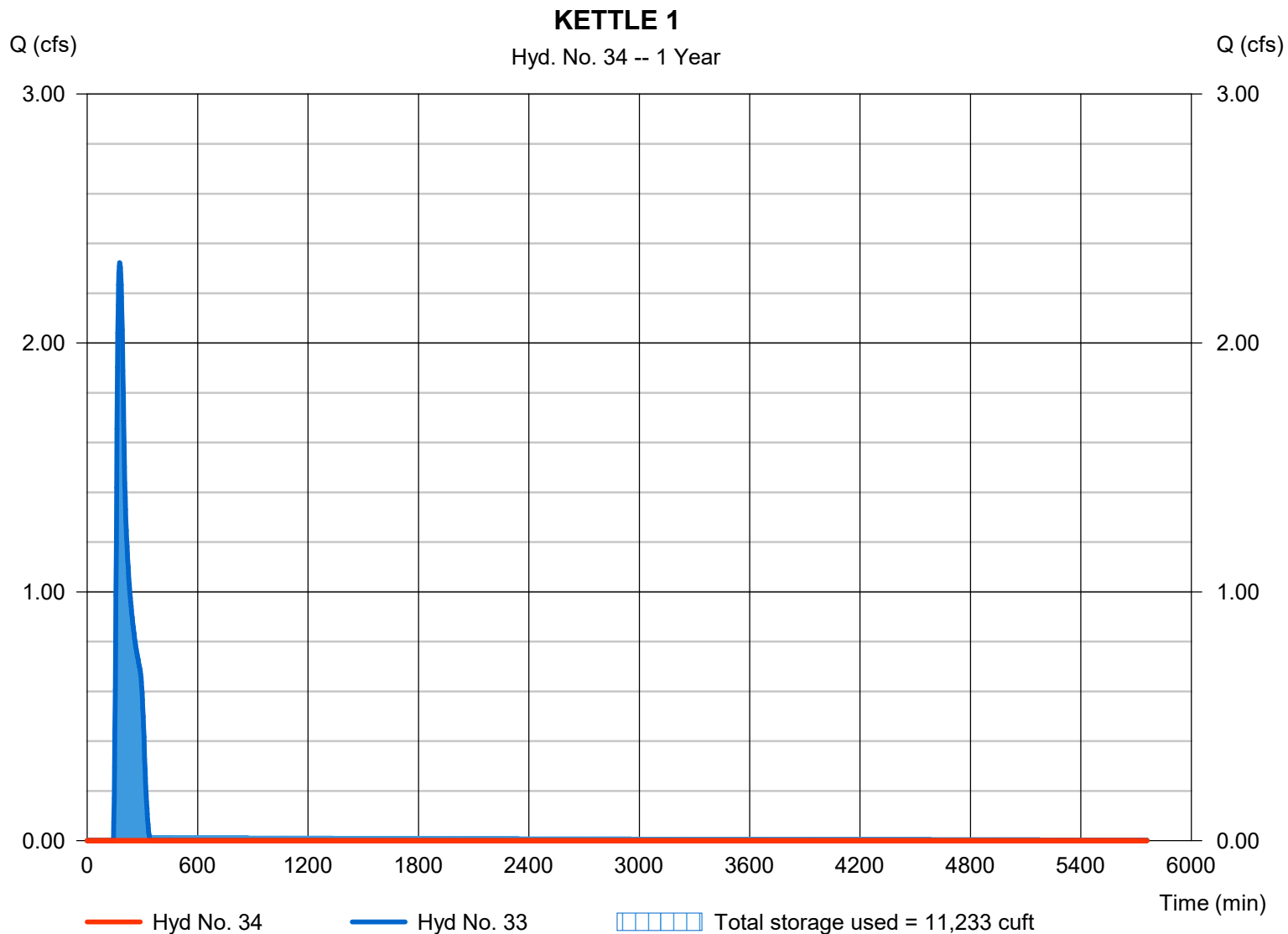
Tuesday, 04 / 7 / 2020

Hyd. No. 34

KETTLE 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 3226 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 33 - INFLOW KETTLE 1	Max. Elevation	= 945.85 ft
Reservoir name	= K-1	Max. Storage	= 11,233 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

62

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 1 - K-1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 944.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	944.00	3,750	0	0
1.00	945.00	6,195	4,921	4,921
2.00	946.00	8,685	7,404	12,325
3.00	947.00	10,780	9,713	22,038
4.00	948.00	13,055	11,898	33,936
5.00	949.00	15,305	14,164	48,100
6.00	950.00	17,415	16,347	64,447
7.00	951.00	19,655	18,522	82,969
8.00	952.00	21,865	20,748	103,717
9.00	953.00	24,185	23,013	126,730
10.00	954.00	26,545	25,353	152,083
11.00	955.00	28,985	27,753	179,837
12.00	956.00	31,540	30,251	210,087
13.00	957.00	34,135	32,826	242,913
14.00	958.00	36,900	35,505	278,418
15.00	959.00	39,930	38,401	316,819
16.00	960.00	43,170	41,535	358,354
17.00	961.00	46,620	44,880	403,234
18.00	962.00	50,260	48,424	451,657
19.00	963.00	54,345	52,284	503,941
20.00	964.00	58,275	56,293	560,234

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 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)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	944.00	---	---	---	---	---	---	---	---	0.000	---	0.000
0.10	492	944.10	---	---	---	---	---	---	---	---	0.003	---	0.003
0.20	984	944.20	---	---	---	---	---	---	---	---	0.007	---	0.007
0.30	1,476	944.30	---	---	---	---	---	---	---	---	0.010	---	0.010
0.40	1,968	944.40	---	---	---	---	---	---	---	---	0.014	---	0.014
0.50	2,461	944.50	---	---	---	---	---	---	---	---	0.017	---	0.017
0.60	2,953	944.60	---	---	---	---	---	---	---	---	0.021	---	0.021
0.70	3,445	944.70	---	---	---	---	---	---	---	---	0.024	---	0.024
0.80	3,937	944.80	---	---	---	---	---	---	---	---	0.028	---	0.028
0.90	4,429	944.90	---	---	---	---	---	---	---	---	0.031	---	0.031
1.00	4,921	945.00	---	---	---	---	---	---	---	---	0.034	---	0.034
1.10	5,662	945.10	---	---	---	---	---	---	---	---	0.036	---	0.036
1.20	6,402	945.20	---	---	---	---	---	---	---	---	0.037	---	0.037
1.30	7,142	945.30	---	---	---	---	---	---	---	---	0.039	---	0.039
1.40	7,883	945.40	---	---	---	---	---	---	---	---	0.040	---	0.040
1.50	8,623	945.50	---	---	---	---	---	---	---	---	0.041	---	0.041
1.60	9,364	945.60	---	---	---	---	---	---	---	---	0.043	---	0.043
1.70	10,104	945.70	---	---	---	---	---	---	---	---	0.044	---	0.044
1.80	10,845	945.80	---	---	---	---	---	---	---	---	0.045	---	0.045
1.90	11,585	945.90	---	---	---	---	---	---	---	---	0.047	---	0.047
2.00	12,325	946.00	---	---	---	---	---	---	---	---	0.048	---	0.048
2.10	13,297	946.10	---	---	---	---	---	---	---	---	0.049	---	0.049

Continues on next page...

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
2.20	14,268	946.20	---	---	---	---	---	---	---	---	0.051	---	0.051
2.30	15,239	946.30	---	---	---	---	---	---	---	---	0.052	---	0.052
2.40	16,211	946.40	---	---	---	---	---	---	---	---	0.053	---	0.053
2.50	17,182	946.50	---	---	---	---	---	---	---	---	0.054	---	0.054
2.60	18,153	946.60	---	---	---	---	---	---	---	---	0.055	---	0.055
2.70	19,124	946.70	---	---	---	---	---	---	---	---	0.056	---	0.056
2.80	20,096	946.80	---	---	---	---	---	---	---	---	0.058	---	0.058
2.90	21,067	946.90	---	---	---	---	---	---	---	---	0.059	---	0.059
3.00	22,038	947.00	---	---	---	---	---	---	---	---	0.060	---	0.060
3.10	23,228	947.10	---	---	---	---	---	---	---	---	0.061	---	0.061
3.20	24,418	947.20	---	---	---	---	---	---	---	---	0.062	---	0.062
3.30	25,608	947.30	---	---	---	---	---	---	---	---	0.064	---	0.064
3.40	26,797	947.40	---	---	---	---	---	---	---	---	0.065	---	0.065
3.50	27,987	947.50	---	---	---	---	---	---	---	---	0.066	---	0.066
3.60	29,177	947.60	---	---	---	---	---	---	---	---	0.067	---	0.067
3.70	30,367	947.70	---	---	---	---	---	---	---	---	0.069	---	0.069
3.80	31,557	947.80	---	---	---	---	---	---	---	---	0.070	---	0.070
3.90	32,746	947.90	---	---	---	---	---	---	---	---	0.071	---	0.071
4.00	33,936	948.00	---	---	---	---	---	---	---	---	0.073	---	0.073
4.10	35,353	948.10	---	---	---	---	---	---	---	---	0.074	---	0.074
4.20	36,769	948.20	---	---	---	---	---	---	---	---	0.075	---	0.075
4.30	38,185	948.30	---	---	---	---	---	---	---	---	0.076	---	0.076
4.40	39,602	948.40	---	---	---	---	---	---	---	---	0.078	---	0.078
4.50	41,018	948.50	---	---	---	---	---	---	---	---	0.079	---	0.079
4.60	42,434	948.60	---	---	---	---	---	---	---	---	0.080	---	0.080
4.70	43,851	948.70	---	---	---	---	---	---	---	---	0.081	---	0.081
4.80	45,267	948.80	---	---	---	---	---	---	---	---	0.083	---	0.083
4.90	46,684	948.90	---	---	---	---	---	---	---	---	0.084	---	0.084
5.00	48,100	949.00	---	---	---	---	---	---	---	---	0.085	---	0.085
5.10	49,735	949.10	---	---	---	---	---	---	---	---	0.086	---	0.086
5.20	51,369	949.20	---	---	---	---	---	---	---	---	0.087	---	0.087
5.30	53,004	949.30	---	---	---	---	---	---	---	---	0.089	---	0.089
5.40	54,639	949.40	---	---	---	---	---	---	---	---	0.090	---	0.090
5.50	56,273	949.50	---	---	---	---	---	---	---	---	0.091	---	0.091
5.60	57,908	949.60	---	---	---	---	---	---	---	---	0.092	---	0.092
5.70	59,543	949.70	---	---	---	---	---	---	---	---	0.093	---	0.093
5.80	61,178	949.80	---	---	---	---	---	---	---	---	0.094	---	0.094
5.90	62,812	949.90	---	---	---	---	---	---	---	---	0.096	---	0.096
6.00	64,447	950.00	---	---	---	---	---	---	---	---	0.097	---	0.097
6.10	66,299	950.10	---	---	---	---	---	---	---	---	0.098	---	0.098
6.20	68,151	950.20	---	---	---	---	---	---	---	---	0.099	---	0.099
6.30	70,004	950.30	---	---	---	---	---	---	---	---	0.100	---	0.100
6.40	71,856	950.40	---	---	---	---	---	---	---	---	0.102	---	0.102
6.50	73,708	950.50	---	---	---	---	---	---	---	---	0.103	---	0.103
6.60	75,560	950.60	---	---	---	---	---	---	---	---	0.104	---	0.104
6.70	77,412	950.70	---	---	---	---	---	---	---	---	0.105	---	0.105
6.80	79,264	950.80	---	---	---	---	---	---	---	---	0.107	---	0.107
6.90	81,117	950.90	---	---	---	---	---	---	---	---	0.108	---	0.108
7.00	82,969	951.00	---	---	---	---	---	---	---	---	0.109	---	0.109
7.10	85,044	951.10	---	---	---	---	---	---	---	---	0.110	---	0.110
7.20	87,118	951.20	---	---	---	---	---	---	---	---	0.112	---	0.112
7.30	89,193	951.30	---	---	---	---	---	---	---	---	0.113	---	0.113
7.40	91,268	951.40	---	---	---	---	---	---	---	---	0.114	---	0.114
7.50	93,343	951.50	---	---	---	---	---	---	---	---	0.115	---	0.115
7.60	95,418	951.60	---	---	---	---	---	---	---	---	0.117	---	0.117
7.70	97,493	951.70	---	---	---	---	---	---	---	---	0.118	---	0.118
7.80	99,567	951.80	---	---	---	---	---	---	---	---	0.119	---	0.119
7.90	101,642	951.90	---	---	---	---	---	---	---	---	0.120	---	0.120
8.00	103,717	952.00	---	---	---	---	---	---	---	---	0.121	---	0.121
8.10	106,018	952.10	---	---	---	---	---	---	---	---	0.123	---	0.123
8.20	108,320	952.20	---	---	---	---	---	---	---	---	0.124	---	0.124
8.30	110,621	952.30	---	---	---	---	---	---	---	---	0.125	---	0.125
8.40	112,922	952.40	---	---	---	---	---	---	---	---	0.127	---	0.127
8.50	115,223	952.50	---	---	---	---	---	---	---	---	0.128	---	0.128
8.60	117,525	952.60	---	---	---	---	---	---	---	---	0.129	---	0.129
8.70	119,826	952.70	---	---	---	---	---	---	---	---	0.130	---	0.130
8.80	122,127	952.80	---	---	---	---	---	---	---	---	0.132	---	0.132
8.90	124,429	952.90	---	---	---	---	---	---	---	---	0.133	---	0.133
9.00	126,730	953.00	---	---	---	---	---	---	---	---	0.134	---	0.134
9.10	129,265	953.10	---	---	---	---	---	---	---	---	0.136	---	0.136
9.20	131,801	953.20	---	---	---	---	---	---	---	---	0.137	---	0.137
9.30	134,336	953.30	---	---	---	---	---	---	---	---	0.138	---	0.138

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
9.40	136,871	953.40	---	---	---	---	---	---	---	---	0.140	---	0.140
9.50	139,407	953.50	---	---	---	---	---	---	---	---	0.141	---	0.141
9.60	141,942	953.60	---	---	---	---	---	---	---	---	0.142	---	0.142
9.70	144,477	953.70	---	---	---	---	---	---	---	---	0.144	---	0.144
9.80	147,013	953.80	---	---	---	---	---	---	---	---	0.145	---	0.145
9.90	149,548	953.90	---	---	---	---	---	---	---	---	0.146	---	0.146
10.00	152,083	954.00	---	---	---	---	---	---	---	---	0.147	---	0.147
10.10	154,859	954.10	---	---	---	---	---	---	---	---	0.149	---	0.149
10.20	157,634	954.20	---	---	---	---	---	---	---	---	0.150	---	0.150
10.30	160,409	954.30	---	---	---	---	---	---	---	---	0.152	---	0.152
10.40	163,185	954.40	---	---	---	---	---	---	---	---	0.153	---	0.153
10.50	165,960	954.50	---	---	---	---	---	---	---	---	0.154	---	0.154
10.60	168,735	954.60	---	---	---	---	---	---	---	---	0.156	---	0.156
10.70	171,511	954.70	---	---	---	---	---	---	---	---	0.157	---	0.157
10.80	174,286	954.80	---	---	---	---	---	---	---	---	0.158	---	0.158
10.90	177,061	954.90	---	---	---	---	---	---	---	---	0.160	---	0.160
11.00	179,837	955.00	---	---	---	---	---	---	---	---	0.161	---	0.161
11.10	182,862	955.10	---	---	---	---	---	---	---	---	0.162	---	0.162
11.20	185,887	955.20	---	---	---	---	---	---	---	---	0.164	---	0.164
11.30	188,912	955.30	---	---	---	---	---	---	---	---	0.165	---	0.165
11.40	191,937	955.40	---	---	---	---	---	---	---	---	0.167	---	0.167
11.50	194,962	955.50	---	---	---	---	---	---	---	---	0.168	---	0.168
11.60	197,987	955.60	---	---	---	---	---	---	---	---	0.170	---	0.170
11.70	201,012	955.70	---	---	---	---	---	---	---	---	0.171	---	0.171
11.80	204,037	955.80	---	---	---	---	---	---	---	---	0.172	---	0.172
11.90	207,062	955.90	---	---	---	---	---	---	---	---	0.174	---	0.174
12.00	210,087	956.00	---	---	---	---	---	---	---	---	0.175	---	0.175
12.10	213,370	956.10	---	---	---	---	---	---	---	---	0.177	---	0.177
12.20	216,652	956.20	---	---	---	---	---	---	---	---	0.178	---	0.178
12.30	219,935	956.30	---	---	---	---	---	---	---	---	0.180	---	0.180
12.40	223,217	956.40	---	---	---	---	---	---	---	---	0.181	---	0.181
12.50	226,500	956.50	---	---	---	---	---	---	---	---	0.182	---	0.182
12.60	229,782	956.60	---	---	---	---	---	---	---	---	0.184	---	0.184
12.70	233,065	956.70	---	---	---	---	---	---	---	---	0.185	---	0.185
12.80	236,348	956.80	---	---	---	---	---	---	---	---	0.187	---	0.187
12.90	239,630	956.90	---	---	---	---	---	---	---	---	0.188	---	0.188
13.00	242,913	957.00	---	---	---	---	---	---	---	---	0.190	---	0.190
13.10	246,463	957.10	---	---	---	---	---	---	---	---	0.191	---	0.191
13.20	250,014	957.20	---	---	---	---	---	---	---	---	0.193	---	0.193
13.30	253,564	957.30	---	---	---	---	---	---	---	---	0.194	---	0.194
13.40	257,115	957.40	---	---	---	---	---	---	---	---	0.196	---	0.196
13.50	260,665	957.50	---	---	---	---	---	---	---	---	0.197	---	0.197
13.60	264,216	957.60	---	---	---	---	---	---	---	---	0.199	---	0.199
13.70	267,766	957.70	---	---	---	---	---	---	---	---	0.200	---	0.200
13.80	271,317	957.80	---	---	---	---	---	---	---	---	0.202	---	0.202
13.90	274,867	957.90	---	---	---	---	---	---	---	---	0.203	---	0.203
14.00	278,418	958.00	---	---	---	---	---	---	---	---	0.205	---	0.205
14.10	282,258	958.10	---	---	---	---	---	---	---	---	0.207	---	0.207
14.20	286,098	958.20	---	---	---	---	---	---	---	---	0.208	---	0.208
14.30	289,938	958.30	---	---	---	---	---	---	---	---	0.210	---	0.210
14.40	293,778	958.40	---	---	---	---	---	---	---	---	0.212	---	0.212
14.50	297,618	958.50	---	---	---	---	---	---	---	---	0.213	---	0.213
14.60	301,458	958.60	---	---	---	---	---	---	---	---	0.215	---	0.215
14.70	305,299	958.70	---	---	---	---	---	---	---	---	0.217	---	0.217
14.80	309,139	958.80	---	---	---	---	---	---	---	---	0.218	---	0.218
14.90	312,979	958.90	---	---	---	---	---	---	---	---	0.220	---	0.220
15.00	316,819	959.00	---	---	---	---	---	---	---	---	0.222	---	0.222
15.10	320,972	959.10	---	---	---	---	---	---	---	---	0.224	---	0.224
15.20	325,126	959.20	---	---	---	---	---	---	---	---	0.225	---	0.225
15.30	329,279	959.30	---	---	---	---	---	---	---	---	0.227	---	0.227
15.40	333,433	959.40	---	---	---	---	---	---	---	---	0.229	---	0.229
15.50	337,587	959.50	---	---	---	---	---	---	---	---	0.231	---	0.231
15.60	341,740	959.60	---	---	---	---	---	---	---	---	0.233	---	0.233
15.70	345,894	959.70	---	---	---	---	---	---	---	---	0.234	---	0.234
15.80	350,047	959.80	---	---	---	---	---	---	---	---	0.236	---	0.236
15.90	354,201	959.90	---	---	---	---	---	---	---	---	0.238	---	0.238
16.00	358,354	960.00	---	---	---	---	---	---	---	---	0.240	---	0.240
16.10	362,842	960.10	---	---	---	---	---	---	---	---	0.242	---	0.242
16.20	367,330	960.20	---	---	---	---	---	---	---	---	0.244	---	0.244
16.30	371,818	960.30	---	---	---	---	---	---	---	---	0.246	---	0.246
16.40	376,306	960.40	---	---	---	---	---	---	---	---	0.247	---	0.247
16.50	380,794	960.50	---	---	---	---	---	---	---	---	0.249	---	0.249

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K-1

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
16.60	385,282	960.60	---	---	---	---	---	---	---	---	0.251	---	0.251
16.70	389,770	960.70	---	---	---	---	---	---	---	---	0.253	---	0.253
16.80	394,258	960.80	---	---	---	---	---	---	---	---	0.255	---	0.255
16.90	398,746	960.90	---	---	---	---	---	---	---	---	0.257	---	0.257
17.00	403,234	961.00	---	---	---	---	---	---	---	---	0.259	---	0.259
17.10	408,076	961.10	---	---	---	---	---	---	---	---	0.261	---	0.261
17.20	412,918	961.20	---	---	---	---	---	---	---	---	0.263	---	0.263
17.30	417,761	961.30	---	---	---	---	---	---	---	---	0.265	---	0.265
17.40	422,603	961.40	---	---	---	---	---	---	---	---	0.267	---	0.267
17.50	427,446	961.50	---	---	---	---	---	---	---	---	0.269	---	0.269
17.60	432,288	961.60	---	---	---	---	---	---	---	---	0.271	---	0.271
17.70	437,130	961.70	---	---	---	---	---	---	---	---	0.273	---	0.273
17.80	441,973	961.80	---	---	---	---	---	---	---	---	0.275	---	0.275
17.90	446,815	961.90	---	---	---	---	---	---	---	---	0.277	---	0.277
18.00	451,657	962.00	---	---	---	---	---	---	---	---	0.279	---	0.279
18.10	456,886	962.10	---	---	---	---	---	---	---	---	0.281	---	0.281
18.20	462,114	962.20	---	---	---	---	---	---	---	---	0.284	---	0.284
18.30	467,343	962.30	---	---	---	---	---	---	---	---	0.286	---	0.286
18.40	472,571	962.40	---	---	---	---	---	---	---	---	0.288	---	0.288
18.50	477,799	962.50	---	---	---	---	---	---	---	---	0.291	---	0.291
18.60	483,028	962.60	---	---	---	---	---	---	---	---	0.293	---	0.293
18.70	488,256	962.70	---	---	---	---	---	---	---	---	0.295	---	0.295
18.80	493,485	962.80	---	---	---	---	---	---	---	---	0.297	---	0.297
18.90	498,713	962.90	---	---	---	---	---	---	---	---	0.300	---	0.300
19.00	503,941	963.00	---	---	---	---	---	---	---	---	0.302	---	0.302
19.10	509,571	963.10	---	---	---	---	---	---	---	---	0.304	---	0.304
19.20	515,200	963.20	---	---	---	---	---	---	---	---	0.306	---	0.306
19.30	520,829	963.30	---	---	---	---	---	---	---	---	0.308	---	0.308
19.40	526,458	963.40	---	---	---	---	---	---	---	---	0.311	---	0.311
19.50	532,088	963.50	---	---	---	---	---	---	---	---	0.313	---	0.313
19.60	537,717	963.60	---	---	---	---	---	---	---	---	0.315	---	0.315
19.70	543,346	963.70	---	---	---	---	---	---	---	---	0.317	---	0.317
19.80	548,976	963.80	---	---	---	---	---	---	---	---	0.319	---	0.319
19.90	554,605	963.90	---	---	---	---	---	---	---	---	0.322	---	0.322
20.00	560,234	964.00	---	---	---	---	---	---	---	---	0.324	---	0.324

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

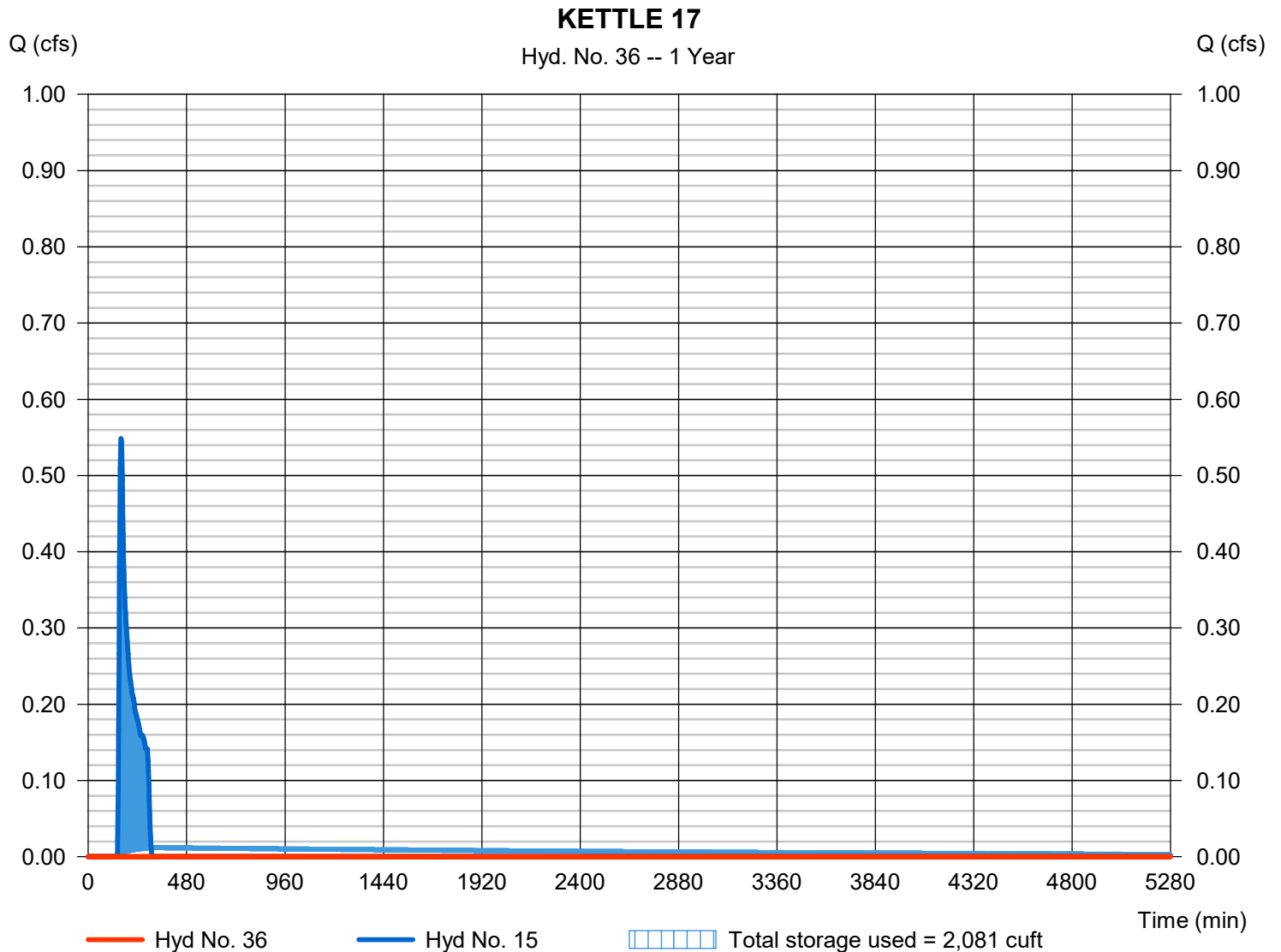
Hyd. No. 36

KETTLE 17

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 15 - E-17
 Reservoir name = K-17

Peak discharge = 0.000 cfs
 Time to peak = 254 min
 Hyd. volume = 0 cuft
 Max. Elevation = 1011.19 ft
 Max. Storage = 2,081 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 17 - K-17

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 1011.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1011.00	2,770	0	0
1.00	1012.00	22,770	11,160	11,160
2.00	1013.00	38,840	30,447	41,606

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 1012.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1011.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	1,116	1011.10	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.20	2,232	1011.20	---	---	---	---	0.00	---	---	---	0.025	---	0.025
0.30	3,348	1011.30	---	---	---	---	0.00	---	---	---	0.038	---	0.038
0.40	4,464	1011.40	---	---	---	---	0.00	---	---	---	0.051	---	0.051
0.50	5,580	1011.50	---	---	---	---	0.00	---	---	---	0.063	---	0.063
0.60	6,696	1011.60	---	---	---	---	0.00	---	---	---	0.076	---	0.076
0.70	7,812	1011.70	---	---	---	---	0.00	---	---	---	0.089	---	0.089
0.80	8,928	1011.80	---	---	---	---	0.00	---	---	---	0.101	---	0.101
0.90	10,044	1011.90	---	---	---	---	0.00	---	---	---	0.114	---	0.114
1.00	11,160	1012.00	---	---	---	---	0.00	---	---	---	0.126	---	0.126
1.10	14,204	1012.10	---	---	---	---	1.23	---	---	---	0.135	---	1.368
1.20	17,249	1012.20	---	---	---	---	3.49	---	---	---	0.144	---	3.631
1.30	20,293	1012.30	---	---	---	---	6.41	---	---	---	0.153	---	6.559
1.40	23,338	1012.40	---	---	---	---	9.86	---	---	---	0.162	---	10.02
1.50	26,383	1012.50	---	---	---	---	13.78	---	---	---	0.171	---	13.95
1.60	29,427	1012.60	---	---	---	---	18.12	---	---	---	0.180	---	18.30
1.70	32,472	1012.70	---	---	---	---	22.83	---	---	---	0.189	---	23.02
1.80	35,517	1012.80	---	---	---	---	27.90	---	---	---	0.198	---	28.09
1.90	38,561	1012.90	---	---	---	---	33.29	---	---	---	0.207	---	33.49
2.00	41,606	1013.00	---	---	---	---	39.00	---	---	---	0.216	---	39.22

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

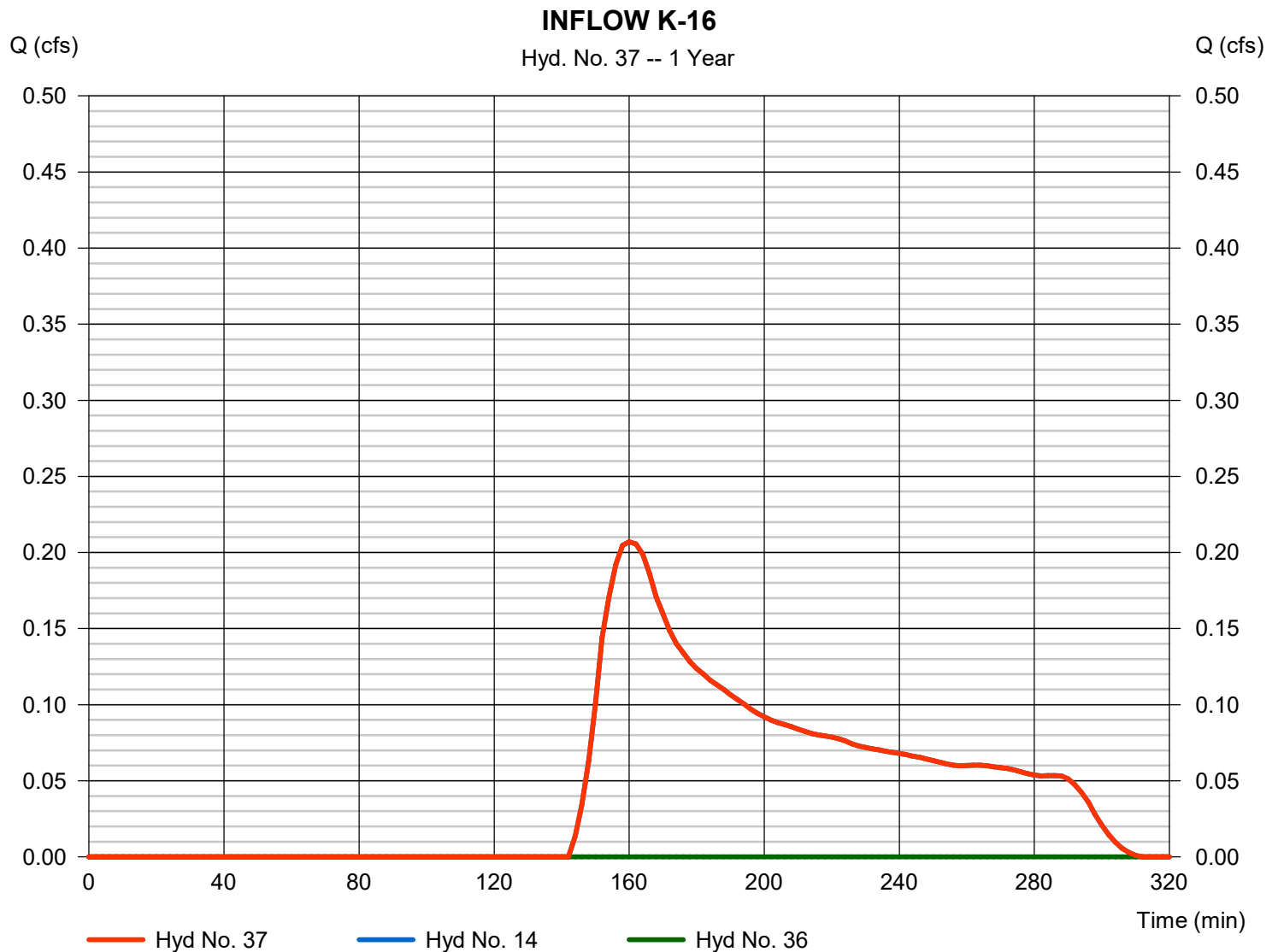
Tuesday, 04 / 7 / 2020

Hyd. No. 37

INFLOW K-16

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 14, 36

Peak discharge = 0.207 cfs
 Time to peak = 160 min
 Hyd. volume = 842 cuft
 Contrib. drain. area = 1.620 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

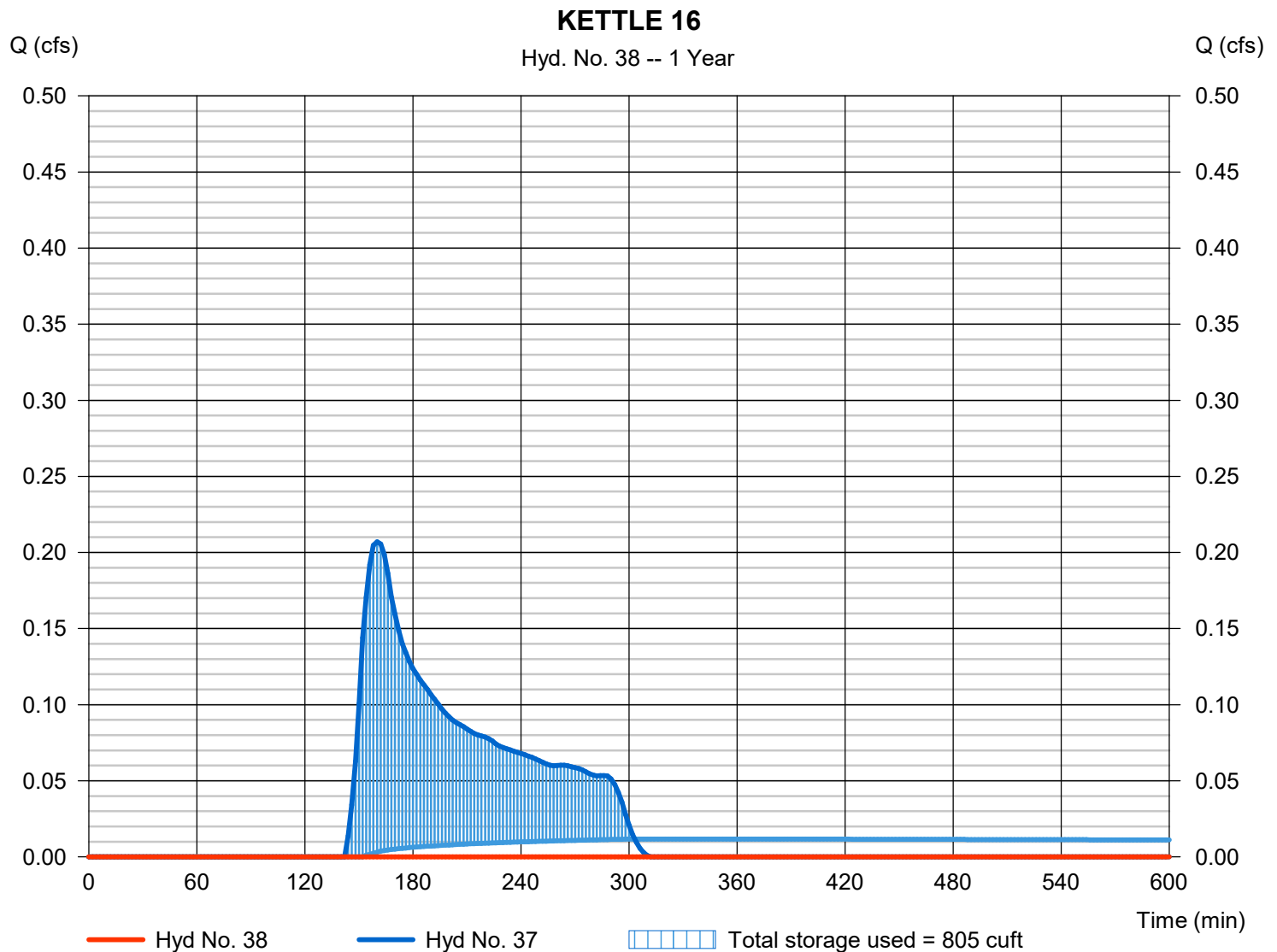
Tuesday, 04 / 7 / 2020

Hyd. No. 38

KETTLE 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 298 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - INFLOW K-16	Max. Elevation	= 1005.13 ft
Reservoir name	= K-16	Max. Storage	= 805 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 16 - K-16

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 1005.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1005.00	4,400	0	0
1.00	1006.00	8,010	6,115	6,115
2.00	1007.00	10,625	9,286	15,401
3.00	1008.00	13,320	11,946	27,347
4.00	1009.00	15,820	14,551	41,897

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 1007.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1005.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	611	1005.10	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.20	1,223	1005.20	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.30	1,834	1005.30	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.40	2,446	1005.40	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.50	3,057	1005.50	---	---	---	---	0.00	---	---	---	0.022	---	0.022
0.60	3,669	1005.60	---	---	---	---	0.00	---	---	---	0.027	---	0.027
0.70	4,280	1005.70	---	---	---	---	0.00	---	---	---	0.031	---	0.031
0.80	4,892	1005.80	---	---	---	---	0.00	---	---	---	0.036	---	0.036
0.90	5,503	1005.90	---	---	---	---	0.00	---	---	---	0.040	---	0.040
1.00	6,115	1006.00	---	---	---	---	0.00	---	---	---	0.044	---	0.044
1.10	7,044	1006.10	---	---	---	---	0.00	---	---	---	0.046	---	0.046
1.20	7,972	1006.20	---	---	---	---	0.00	---	---	---	0.047	---	0.047
1.30	8,901	1006.30	---	---	---	---	0.00	---	---	---	0.049	---	0.049
1.40	9,829	1006.40	---	---	---	---	0.00	---	---	---	0.050	---	0.050
1.50	10,758	1006.50	---	---	---	---	0.00	---	---	---	0.052	---	0.052
1.60	11,686	1006.60	---	---	---	---	0.00	---	---	---	0.053	---	0.053
1.70	12,615	1006.70	---	---	---	---	0.00	---	---	---	0.055	---	0.055
1.80	13,544	1006.80	---	---	---	---	0.00	---	---	---	0.056	---	0.056
1.90	14,472	1006.90	---	---	---	---	0.00	---	---	---	0.058	---	0.058
2.00	15,401	1007.00	---	---	---	---	0.00	---	---	---	0.059	---	0.059
2.10	16,595	1007.10	---	---	---	---	1.23	---	---	---	0.061	---	1.293
2.20	17,790	1007.20	---	---	---	---	3.49	---	---	---	0.062	---	3.549
2.30	18,985	1007.30	---	---	---	---	6.41	---	---	---	0.064	---	6.470
2.40	20,179	1007.40	---	---	---	---	9.86	---	---	---	0.065	---	9.928
2.50	21,374	1007.50	---	---	---	---	13.78	---	---	---	0.067	---	13.85
2.60	22,568	1007.60	---	---	---	---	18.12	---	---	---	0.068	---	18.19
2.70	23,763	1007.70	---	---	---	---	22.83	---	---	---	0.070	---	22.90
2.80	24,958	1007.80	---	---	---	---	27.90	---	---	---	0.071	---	27.97
2.90	26,152	1007.90	---	---	---	---	33.29	---	---	---	0.073	---	33.36
3.00	27,347	1008.00	---	---	---	---	39.00	---	---	---	0.074	---	39.07
3.10	28,802	1008.10	---	---	---	---	44.99	---	---	---	0.075	---	45.07
3.20	30,257	1008.20	---	---	---	---	51.26	---	---	---	0.077	---	51.34
3.30	31,712	1008.30	---	---	---	---	57.80	---	---	---	0.078	---	57.88
3.40	33,167	1008.40	---	---	---	---	64.60	---	---	---	0.080	---	64.68
3.50	34,622	1008.50	---	---	---	---	71.64	---	---	---	0.081	---	71.72
3.60	36,077	1008.60	---	---	---	---	78.92	---	---	---	0.082	---	79.00
3.70	37,532	1008.70	---	---	---	---	86.43	---	---	---	0.084	---	86.52

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.80	38,987	1008.80	---	---	---	---	94.17	---	---	---	0.085	---	94.25
3.90	40,442	1008.90	---	---	---	---	102.12	---	---	---	0.086	---	102.21
4.00	41,897	1009.00	---	---	---	---	110.31	---	---	---	0.088	---	110.40

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

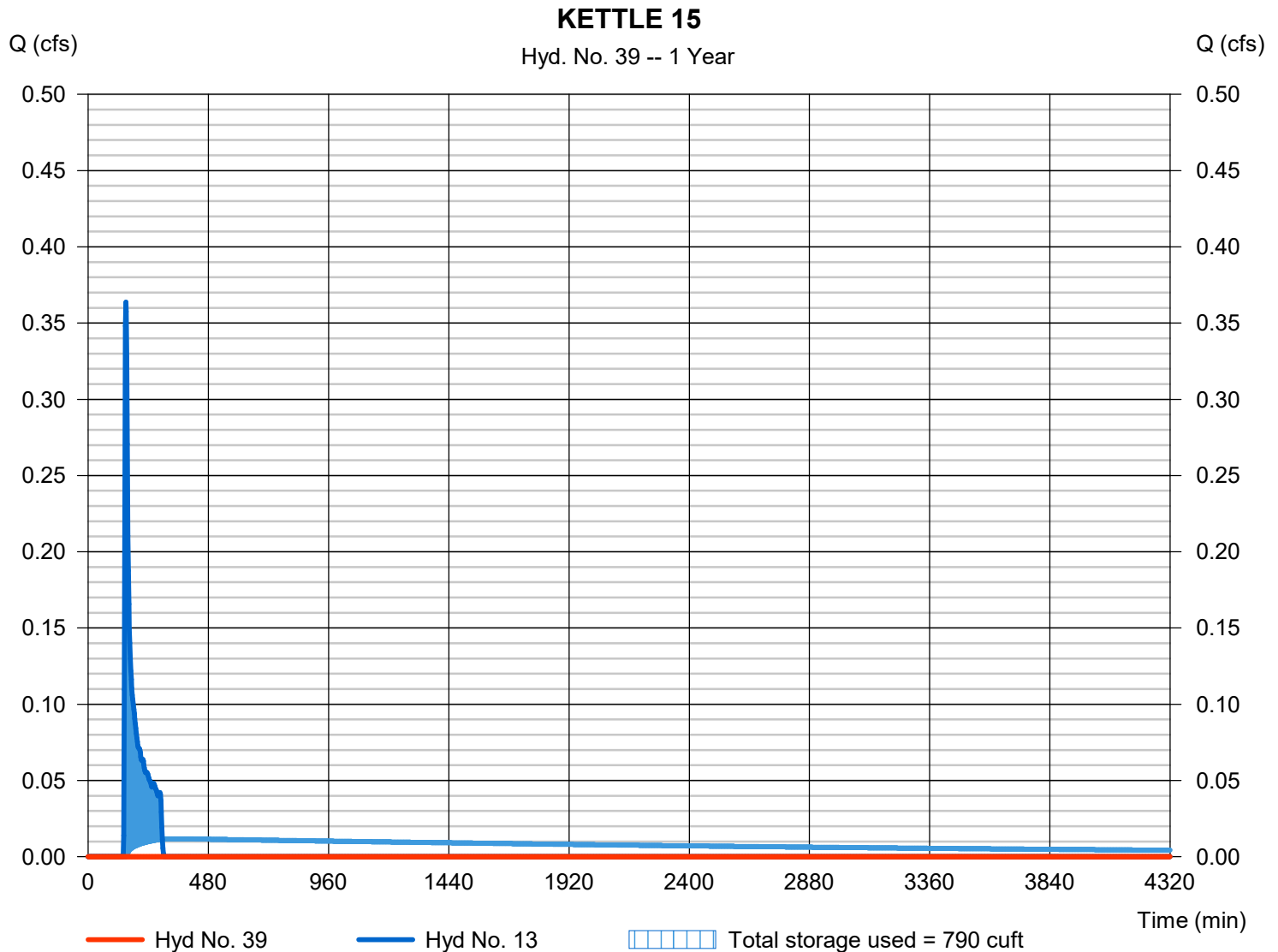
Hyd. No. 39

KETTLE 15

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 13 - E-15
 Reservoir name = K-15

Peak discharge = 0.000 cfs
 Time to peak = 430 min
 Hyd. volume = 0 cuft
 Max. Elevation = 970.34 ft
 Max. Storage = 790 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 15 - K-15

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 970.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	970.00	1,620	0	0
1.00	971.00	3,050	2,297	2,297
2.00	972.00	5,595	4,258	6,556
3.00	973.00	9,120	7,285	13,841

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 972.50	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	970.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	230	970.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	459	970.20	---	---	---	---	0.00	---	---	---	0.003	---	0.003
0.30	689	970.30	---	---	---	---	0.00	---	---	---	0.005	---	0.005
0.40	919	970.40	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.50	1,149	970.50	---	---	---	---	0.00	---	---	---	0.008	---	0.008
0.60	1,378	970.60	---	---	---	---	0.00	---	---	---	0.010	---	0.010
0.70	1,608	970.70	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.80	1,838	970.80	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.90	2,068	970.90	---	---	---	---	0.00	---	---	---	0.015	---	0.015
1.00	2,297	971.00	---	---	---	---	0.00	---	---	---	0.017	---	0.017
1.10	2,723	971.10	---	---	---	---	0.00	---	---	---	0.018	---	0.018
1.20	3,149	971.20	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.30	3,575	971.30	---	---	---	---	0.00	---	---	---	0.021	---	0.021
1.40	4,001	971.40	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.50	4,426	971.50	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.60	4,852	971.60	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.70	5,278	971.70	---	---	---	---	0.00	---	---	---	0.027	---	0.027
1.80	5,704	971.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.90	6,130	971.90	---	---	---	---	0.00	---	---	---	0.030	---	0.030
2.00	6,556	972.00	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.10	7,284	972.10	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.20	8,013	972.20	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.30	8,741	972.30	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.40	9,470	972.40	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.50	10,198	972.50	---	---	---	---	0.00	---	---	---	0.041	---	0.041
2.60	10,927	972.60	---	---	---	---	1.23	---	---	---	0.043	---	1.273
2.70	11,655	972.70	---	---	---	---	3.48	---	---	---	0.045	---	3.529
2.80	12,384	972.80	---	---	---	---	6.40	---	---	---	0.047	---	6.449
2.90	13,112	972.90	---	---	---	---	9.86	---	---	---	0.049	---	9.907
3.00	13,841	973.00	---	---	---	---	13.79	---	---	---	0.051	---	13.84

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

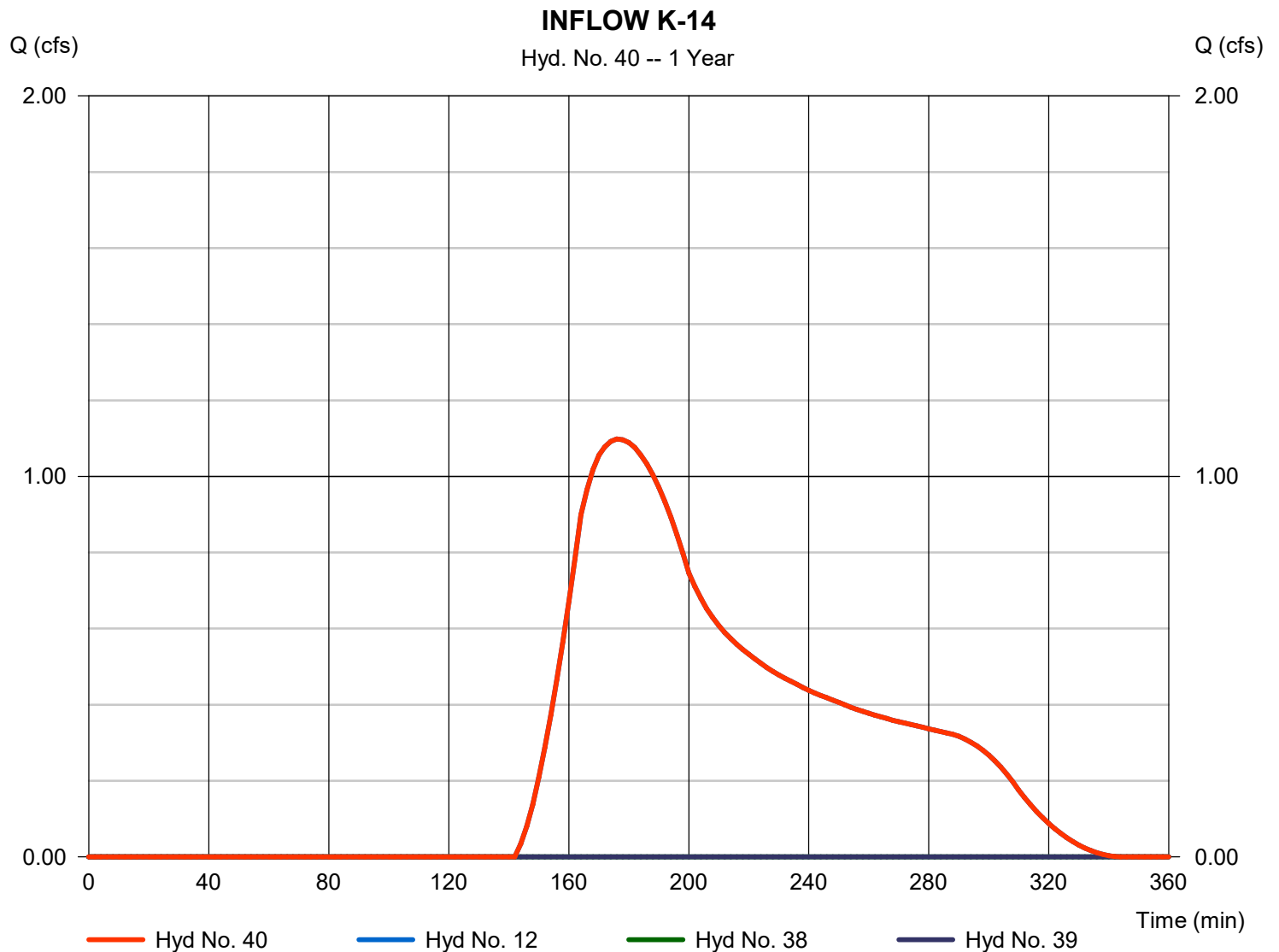
Tuesday, 04 / 7 / 2020

Hyd. No. 40

INFLOW K-14

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 12, 38, 39

Peak discharge = 1.098 cfs
Time to peak = 176 min
Hyd. volume = 5,502 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

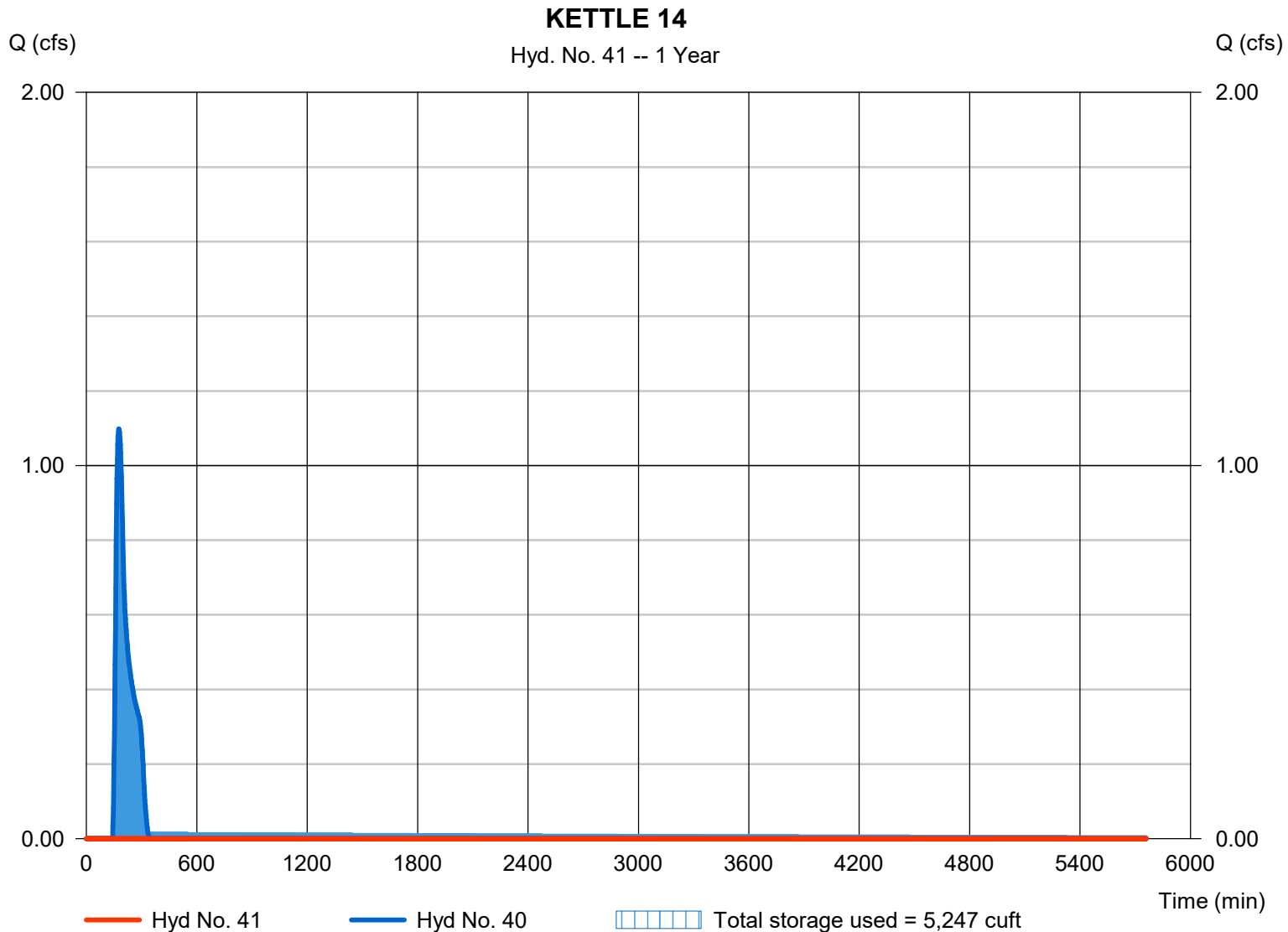
Tuesday, 04 / 7 / 2020

Hyd. No. 41

KETTLE 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 1004 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 40 - INFLOW K-14	Max. Elevation	= 956.18 ft
Reservoir name	= K-14	Max. Storage	= 5,247 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

76

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 14 - K-14

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 955.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	955.00	3,070	0	0
1.00	956.00	5,250	4,111	4,111
2.00	957.00	7,260	6,227	10,338
3.00	958.00	9,090	8,157	18,495
4.00	959.00	10,725	9,895	28,391
5.00	960.00	12,545	11,622	40,013
6.00	961.00	14,795	13,653	53,666
7.00	962.00	17,570	16,161	69,827

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 961.30	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	955.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	411	955.10	---	---	---	---	0.00	---	---	---	0.003	---	0.003
0.20	822	955.20	---	---	---	---	0.00	---	---	---	0.006	---	0.006
0.30	1,233	955.30	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.40	1,644	955.40	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.50	2,056	955.50	---	---	---	---	0.00	---	---	---	0.015	---	0.015
0.60	2,467	955.60	---	---	---	---	0.00	---	---	---	0.017	---	0.017
0.70	2,878	955.70	---	---	---	---	0.00	---	---	---	0.020	---	0.020
0.80	3,289	955.80	---	---	---	---	0.00	---	---	---	0.023	---	0.023
0.90	3,700	955.90	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.00	4,111	956.00	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.10	4,734	956.10	---	---	---	---	0.00	---	---	---	0.030	---	0.030
1.20	5,357	956.20	---	---	---	---	0.00	---	---	---	0.031	---	0.031
1.30	5,979	956.30	---	---	---	---	0.00	---	---	---	0.033	---	0.033
1.40	6,602	956.40	---	---	---	---	0.00	---	---	---	0.034	---	0.034
1.50	7,225	956.50	---	---	---	---	0.00	---	---	---	0.035	---	0.035
1.60	7,848	956.60	---	---	---	---	0.00	---	---	---	0.036	---	0.036
1.70	8,470	956.70	---	---	---	---	0.00	---	---	---	0.037	---	0.037
1.80	9,093	956.80	---	---	---	---	0.00	---	---	---	0.038	---	0.038
1.90	9,716	956.90	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.00	10,338	957.00	---	---	---	---	0.00	---	---	---	0.040	---	0.040
2.10	11,154	957.10	---	---	---	---	0.00	---	---	---	0.041	---	0.041
2.20	11,970	957.20	---	---	---	---	0.00	---	---	---	0.042	---	0.042
2.30	12,786	957.30	---	---	---	---	0.00	---	---	---	0.043	---	0.043
2.40	13,601	957.40	---	---	---	---	0.00	---	---	---	0.044	---	0.044
2.50	14,417	957.50	---	---	---	---	0.00	---	---	---	0.045	---	0.045
2.60	15,233	957.60	---	---	---	---	0.00	---	---	---	0.046	---	0.046
2.70	16,048	957.70	---	---	---	---	0.00	---	---	---	0.047	---	0.047
2.80	16,864	957.80	---	---	---	---	0.00	---	---	---	0.048	---	0.048
2.90	17,680	957.90	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.00	18,495	958.00	---	---	---	---	0.00	---	---	---	0.050	---	0.050
3.10	19,485	958.10	---	---	---	---	0.00	---	---	---	0.051	---	0.051
3.20	20,475	958.20	---	---	---	---	0.00	---	---	---	0.052	---	0.052
3.30	21,464	958.30	---	---	---	---	0.00	---	---	---	0.053	---	0.053
3.40	22,454	958.40	---	---	---	---	0.00	---	---	---	0.054	---	0.054

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K-14

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.50	23,443	958.50	---	---	---	---	0.00	---	---	---	0.055	---	0.055
3.60	24,433	958.60	---	---	---	---	0.00	---	---	---	0.056	---	0.056
3.70	25,422	958.70	---	---	---	---	0.00	---	---	---	0.057	---	0.057
3.80	26,412	958.80	---	---	---	---	0.00	---	---	---	0.058	---	0.058
3.90	27,401	958.90	---	---	---	---	0.00	---	---	---	0.059	---	0.059
4.00	28,391	959.00	---	---	---	---	0.00	---	---	---	0.060	---	0.060
4.10	29,553	959.10	---	---	---	---	0.00	---	---	---	0.061	---	0.061
4.20	30,715	959.20	---	---	---	---	0.00	---	---	---	0.062	---	0.062
4.30	31,877	959.30	---	---	---	---	0.00	---	---	---	0.063	---	0.063
4.40	33,040	959.40	---	---	---	---	0.00	---	---	---	0.064	---	0.064
4.50	34,202	959.50	---	---	---	---	0.00	---	---	---	0.065	---	0.065
4.60	35,364	959.60	---	---	---	---	0.00	---	---	---	0.066	---	0.066
4.70	36,526	959.70	---	---	---	---	0.00	---	---	---	0.067	---	0.067
4.80	37,688	959.80	---	---	---	---	0.00	---	---	---	0.068	---	0.068
4.90	38,851	959.90	---	---	---	---	0.00	---	---	---	0.069	---	0.069
5.00	40,013	960.00	---	---	---	---	0.00	---	---	---	0.070	---	0.070
5.10	41,378	960.10	---	---	---	---	0.00	---	---	---	0.071	---	0.071
5.20	42,743	960.20	---	---	---	---	0.00	---	---	---	0.072	---	0.072
5.30	44,109	960.30	---	---	---	---	0.00	---	---	---	0.073	---	0.073
5.40	45,474	960.40	---	---	---	---	0.00	---	---	---	0.075	---	0.075
5.50	46,839	960.50	---	---	---	---	0.00	---	---	---	0.076	---	0.076
5.60	48,205	960.60	---	---	---	---	0.00	---	---	---	0.077	---	0.077
5.70	49,570	960.70	---	---	---	---	0.00	---	---	---	0.078	---	0.078
5.80	50,935	960.80	---	---	---	---	0.00	---	---	---	0.080	---	0.080
5.90	52,301	960.90	---	---	---	---	0.00	---	---	---	0.081	---	0.081
6.00	53,666	961.00	---	---	---	---	0.00	---	---	---	0.082	---	0.082
6.10	55,282	961.10	---	---	---	---	0.00	---	---	---	0.084	---	0.084
6.20	56,898	961.20	---	---	---	---	0.00	---	---	---	0.085	---	0.085
6.30	58,514	961.30	---	---	---	---	0.00	---	---	---	0.087	---	0.087
6.40	60,130	961.40	---	---	---	---	1.23	---	---	---	0.088	---	1.320
6.50	61,746	961.50	---	---	---	---	3.49	---	---	---	0.090	---	3.575
6.60	63,362	961.60	---	---	---	---	6.40	---	---	---	0.091	---	6.495
6.70	64,979	961.70	---	---	---	---	9.86	---	---	---	0.093	---	9.953
6.80	66,595	961.80	---	---	---	---	13.78	---	---	---	0.095	---	13.88
6.90	68,211	961.90	---	---	---	---	18.12	---	---	---	0.096	---	18.21
7.00	69,827	962.00	---	---	---	---	22.84	---	---	---	0.098	---	22.94

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

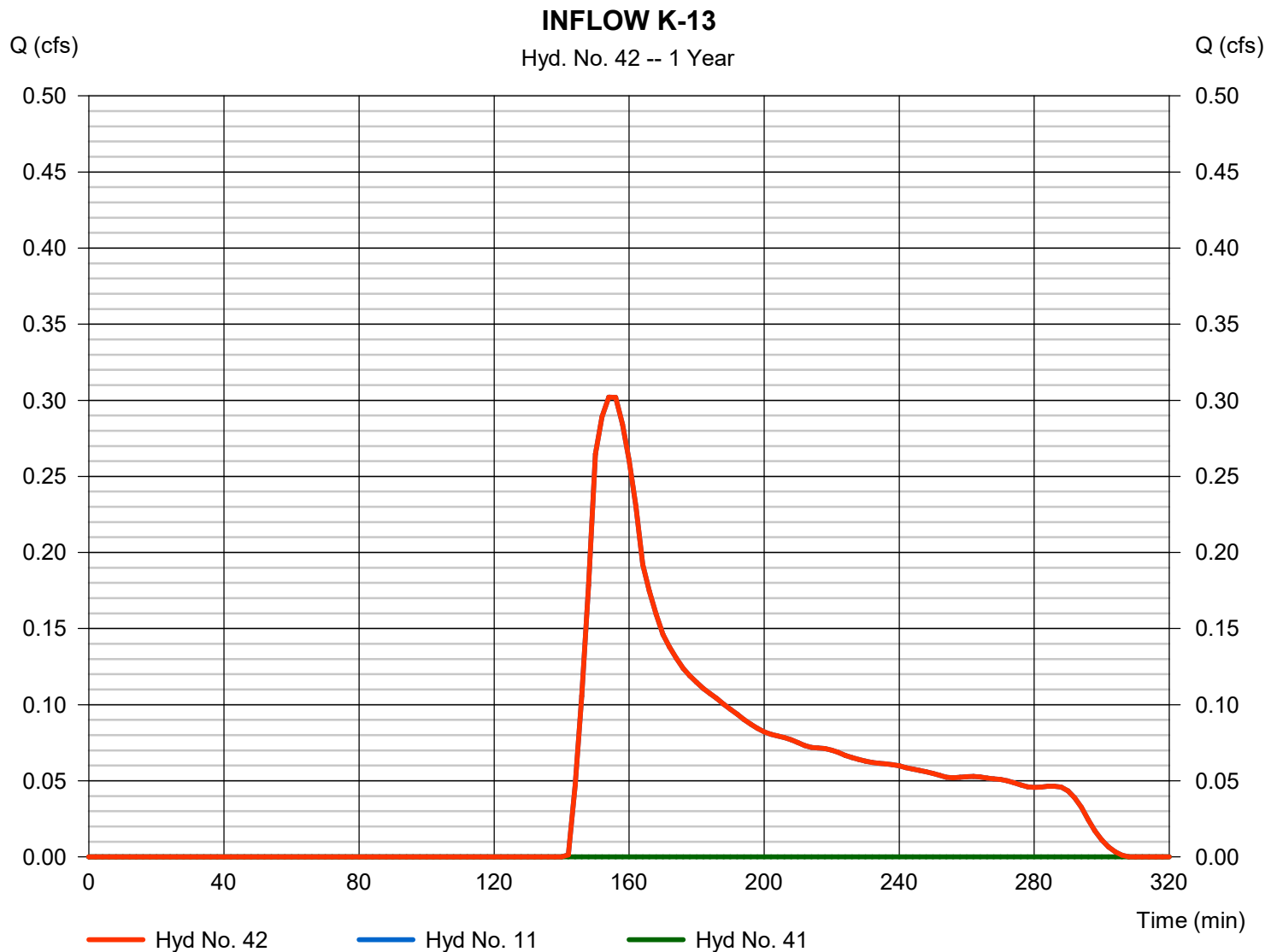
Tuesday, 04 / 7 / 2020

Hyd. No. 42

INFLOW K-13

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 11, 41

Peak discharge = 0.302 cfs
Time to peak = 154 min
Hyd. volume = 877 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

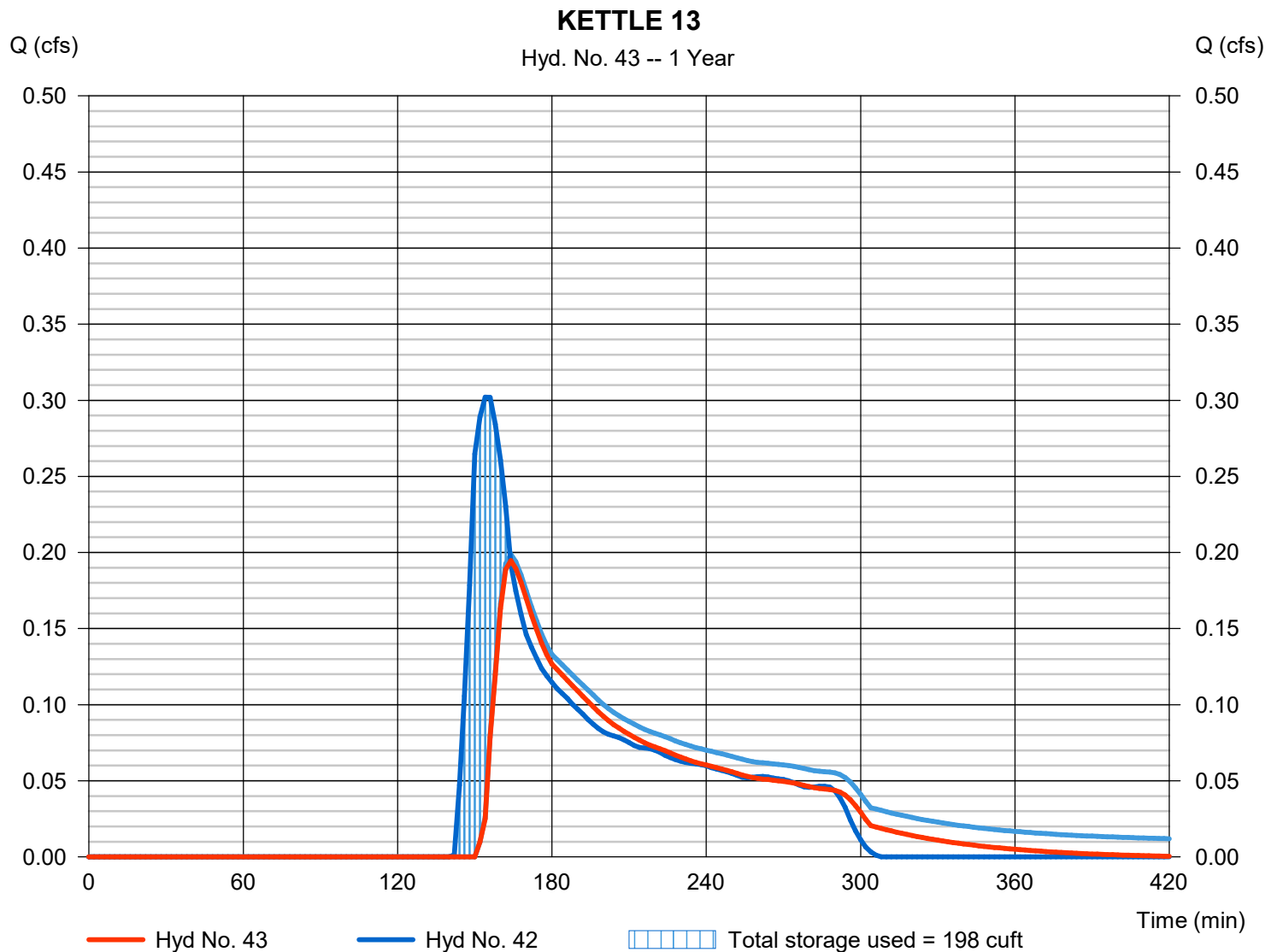
Tuesday, 04 / 7 / 2020

Hyd. No. 43

KETTLE 13

Hydrograph type	= Reservoir	Peak discharge	= 0.195 cfs
Storm frequency	= 1 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 771 cuft
Inflow hyd. No.	= 42 - INFLOW K-13	Max. Elevation	= 959.60 ft
Reservoir name	= K-13	Max. Storage	= 198 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 13 - K-13

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 959.40 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	959.40	50	0	0
0.60	960.00	2,560	593	593
1.60	961.00	4,110	3,304	3,898
2.60	962.00	5,850	4,954	8,852
3.60	963.00	7,130	6,479	15,330
4.60	964.00	8,425	7,768	23,098
5.60	965.00	9,765	9,086	32,184
6.60	966.00	11,570	10,654	42,838

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 2	0	0	0
Invert El. (ft)	= 959.48	0.00	0.00	0.00
Length (ft)	= 92.55	0.00	0.00	0.00
Slope (%)	= 0.55	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 966.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	959.40	0.00	---	---	---	0.00	---	---	---	0.000	---	0.000
0.06	59	959.46	0.00	---	---	---	0.00	---	---	---	0.001	---	0.001
0.12	119	959.52	0.02 ic	---	---	---	0.00	---	---	---	0.003	---	0.023
0.18	178	959.58	0.13 ic	---	---	---	0.00	---	---	---	0.004	---	0.132
0.24	237	959.64	0.32 ic	---	---	---	0.00	---	---	---	0.006	---	0.329
0.30	297	959.70	0.60 ic	---	---	---	0.00	---	---	---	0.007	---	0.610
0.36	356	959.76	0.97 ic	---	---	---	0.00	---	---	---	0.009	---	0.976
0.42	415	959.82	1.41 ic	---	---	---	0.00	---	---	---	0.010	---	1.422
0.48	475	959.88	1.93 ic	---	---	---	0.00	---	---	---	0.011	---	1.944
0.54	534	959.94	2.52 ic	---	---	---	0.00	---	---	---	0.013	---	2.535
0.60	593	960.00	3.20 ic	---	---	---	0.00	---	---	---	0.014	---	3.210
0.70	924	960.10	4.45 ic	---	---	---	0.00	---	---	---	0.015	---	4.465
0.80	1,254	960.20	5.89 ic	---	---	---	0.00	---	---	---	0.016	---	5.910
0.90	1,585	960.30	7.48 ic	---	---	---	0.00	---	---	---	0.017	---	7.499
1.00	1,915	960.40	9.21 ic	---	---	---	0.00	---	---	---	0.018	---	9.232
1.10	2,246	960.50	11.08 ic	---	---	---	0.00	---	---	---	0.019	---	11.10
1.20	2,576	960.60	13.01 oc	---	---	---	0.00	---	---	---	0.019	---	13.03
1.30	2,906	960.70	14.61 oc	---	---	---	0.00	---	---	---	0.020	---	14.63
1.40	3,237	960.80	16.15 oc	---	---	---	0.00	---	---	---	0.021	---	16.17
1.50	3,567	960.90	17.62 oc	---	---	---	0.00	---	---	---	0.022	---	17.64
1.60	3,898	961.00	19.01 oc	---	---	---	0.00	---	---	---	0.023	---	19.03
1.70	4,393	961.10	20.25 oc	---	---	---	0.00	---	---	---	0.024	---	20.27
1.80	4,889	961.20	21.32 oc	---	---	---	0.00	---	---	---	0.025	---	21.34
1.90	5,384	961.30	22.14 oc	---	---	---	0.00	---	---	---	0.026	---	22.17
2.00	5,879	961.40	22.60 oc	---	---	---	0.00	---	---	---	0.027	---	22.62
2.10	6,375	961.50	22.56 oc	---	---	---	0.00	---	---	---	0.028	---	22.59
2.20	6,870	961.60	24.61 oc	---	---	---	0.00	---	---	---	0.029	---	24.63
2.30	7,365	961.70	26.49 oc	---	---	---	0.00	---	---	---	0.030	---	26.52
2.40	7,861	961.80	28.25 oc	---	---	---	0.00	---	---	---	0.031	---	28.28
2.50	8,356	961.90	29.90 oc	---	---	---	0.00	---	---	---	0.032	---	29.93
2.60	8,852	962.00	31.47 oc	---	---	---	0.00	---	---	---	0.032	---	31.51
2.70	9,500	962.10	32.97 oc	---	---	---	0.00	---	---	---	0.033	---	33.00
2.80	10,147	962.20	34.40 oc	---	---	---	0.00	---	---	---	0.034	---	34.43
2.90	10,795	962.30	35.77 oc	---	---	---	0.00	---	---	---	0.035	---	35.80
3.00	11,443	962.40	37.09 oc	---	---	---	0.00	---	---	---	0.035	---	37.12

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.10	12,091	962.50	38.36 oc	---	---	---	0.00	---	---	---	0.036	---	38.40
3.20	12,739	962.60	39.60 oc	---	---	---	0.00	---	---	---	0.037	---	39.64
3.30	13,387	962.70	40.79 oc	---	---	---	0.00	---	---	---	0.037	---	40.83
3.40	14,035	962.80	41.96 oc	---	---	---	0.00	---	---	---	0.038	---	42.00
3.50	14,683	962.90	43.09 oc	---	---	---	0.00	---	---	---	0.039	---	43.13
3.60	15,330	963.00	44.19 oc	---	---	---	0.00	---	---	---	0.040	---	44.23
3.70	16,107	963.10	45.27 oc	---	---	---	0.00	---	---	---	0.040	---	45.31
3.80	16,884	963.20	46.32 oc	---	---	---	0.00	---	---	---	0.041	---	46.36
3.90	17,661	963.30	47.35 oc	---	---	---	0.00	---	---	---	0.042	---	47.39
4.00	18,438	963.40	48.35 oc	---	---	---	0.00	---	---	---	0.042	---	48.40
4.10	19,214	963.50	49.34 oc	---	---	---	0.00	---	---	---	0.043	---	49.38
4.20	19,991	963.60	50.31 oc	---	---	---	0.00	---	---	---	0.044	---	50.35
4.30	20,768	963.70	51.25 oc	---	---	---	0.00	---	---	---	0.045	---	51.30
4.40	21,545	963.80	52.18 oc	---	---	---	0.00	---	---	---	0.045	---	52.23
4.50	22,321	963.90	53.10 oc	---	---	---	0.00	---	---	---	0.046	---	53.14
4.60	23,098	964.00	54.00 oc	---	---	---	0.00	---	---	---	0.047	---	54.04
4.70	24,007	964.10	54.88 oc	---	---	---	0.00	---	---	---	0.048	---	54.93
4.80	24,915	964.20	55.75 oc	---	---	---	0.00	---	---	---	0.048	---	55.80
4.90	25,824	964.30	56.61 oc	---	---	---	0.00	---	---	---	0.049	---	56.66
5.00	26,733	964.40	57.45 oc	---	---	---	0.00	---	---	---	0.050	---	57.50
5.10	27,641	964.50	58.28 oc	---	---	---	0.00	---	---	---	0.051	---	58.33
5.20	28,550	964.60	59.10 oc	---	---	---	0.00	---	---	---	0.051	---	59.16
5.30	29,458	964.70	59.91 oc	---	---	---	0.00	---	---	---	0.052	---	59.96
5.40	30,367	964.80	60.71 oc	---	---	---	0.00	---	---	---	0.053	---	60.76
5.50	31,275	964.90	61.50 oc	---	---	---	0.00	---	---	---	0.054	---	61.55
5.60	32,184	965.00	62.28 oc	---	---	---	0.00	---	---	---	0.054	---	62.33
5.70	33,249	965.10	63.04 oc	---	---	---	0.00	---	---	---	0.055	---	63.10
5.80	34,315	965.20	63.80 oc	---	---	---	0.00	---	---	---	0.056	---	63.86
5.90	35,380	965.30	64.55 oc	---	---	---	0.00	---	---	---	0.057	---	64.61
6.00	36,446	965.40	65.29 oc	---	---	---	0.00	---	---	---	0.058	---	65.35
6.10	37,511	965.50	66.03 oc	---	---	---	0.00	---	---	---	0.059	---	66.09
6.20	38,576	965.60	66.75 oc	---	---	---	0.00	---	---	---	0.060	---	66.81
6.30	39,642	965.70	67.47 oc	---	---	---	0.00	---	---	---	0.061	---	67.53
6.40	40,707	965.80	68.18 oc	---	---	---	0.00	---	---	---	0.062	---	68.24
6.50	41,772	965.90	68.88 oc	---	---	---	0.00	---	---	---	0.063	---	68.94
6.60	42,838	966.00	69.58 oc	---	---	---	0.00	---	---	---	0.064	---	69.64

...End

Hydrograph Report

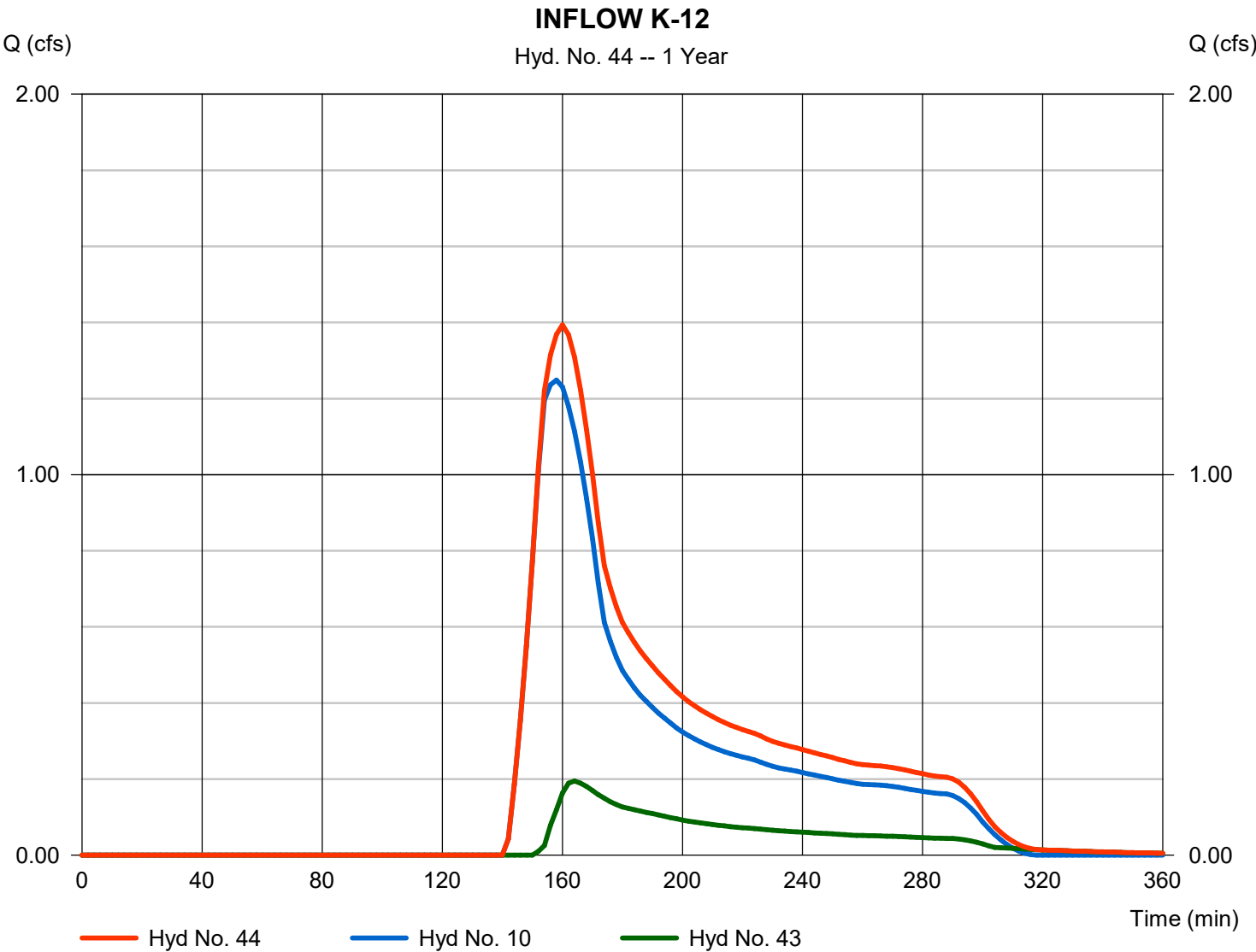
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 44

INFLOW K-12

Hydrograph type	= Combine	Peak discharge	= 1.394 cfs
Storm frequency	= 1 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 4,401 cuft
Inflow hyds.	= 10, 43	Contrib. drain. area	= 2.900 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

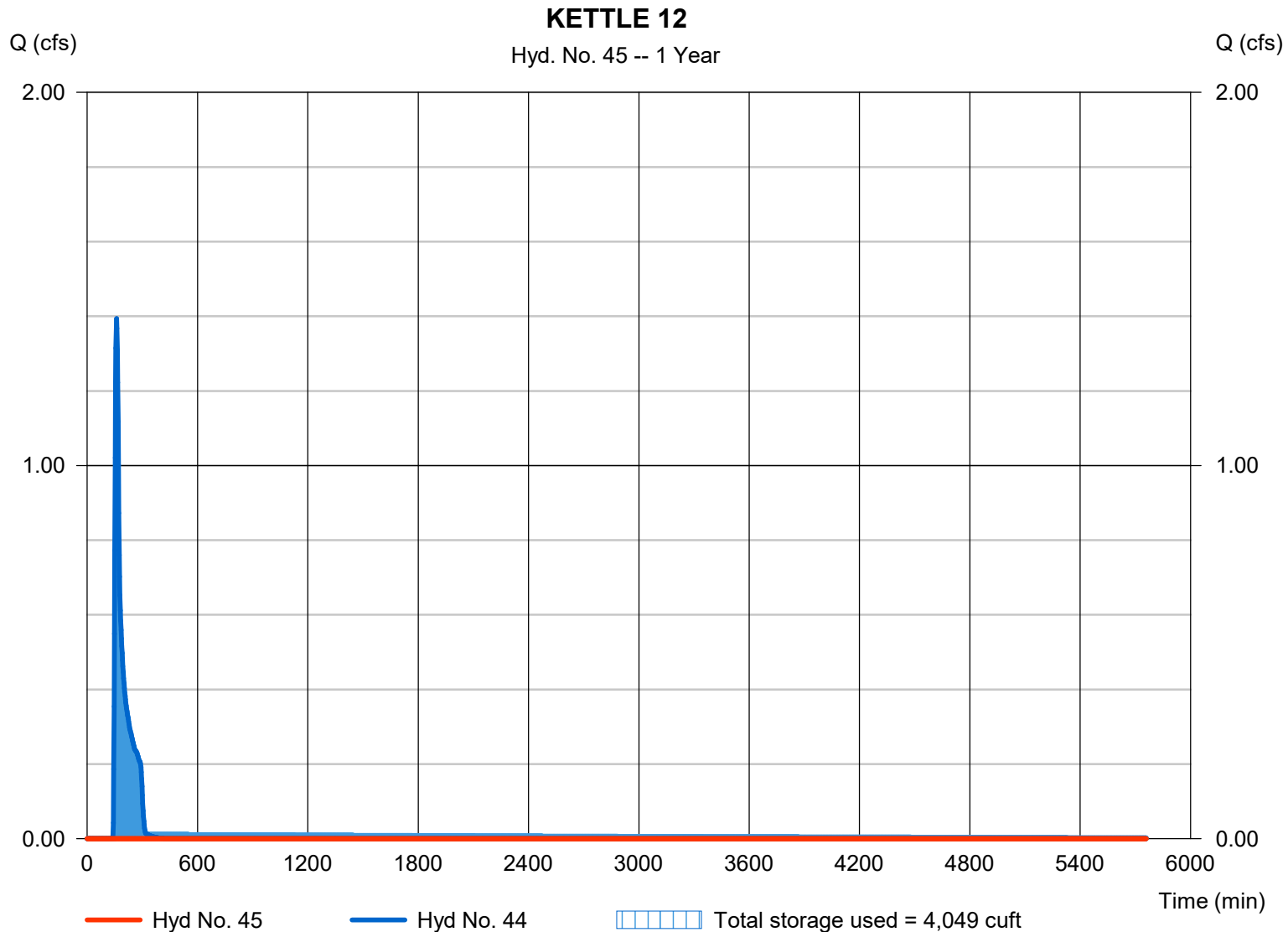
Tuesday, 04 / 7 / 2020

Hyd. No. 45

KETTLE 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 172 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 44 - INFLOW K-12	Max. Elevation	= 957.13 ft
Reservoir name	= K-12	Max. Storage	= 4,049 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

84

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 12 - K-12

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 956.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	956.00	495	0	0
1.00	957.00	6,410	2,895	2,895
2.00	958.00	11,490	8,826	11,722
3.00	959.00	15,695	13,537	25,258
4.00	960.00	18,580	17,116	42,374
5.00	961.00	21,310	19,927	62,301
6.00	962.00	23,950	22,615	84,916
7.00	963.00	26,775	25,347	110,263
8.00	964.00	30,155	28,445	138,708
9.00	965.00	34,835	32,464	171,172
10.00	966.00	37,955	36,380	207,552

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 963.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	956.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	290	956.10	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.20	579	956.20	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.30	869	956.30	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.40	1,158	956.40	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.50	1,448	956.50	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.60	1,737	956.60	---	---	---	---	0.00	---	---	---	0.021	---	0.021
0.70	2,027	956.70	---	---	---	---	0.00	---	---	---	0.025	---	0.025
0.80	2,316	956.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
0.90	2,606	956.90	---	---	---	---	0.00	---	---	---	0.032	---	0.032
1.00	2,895	957.00	---	---	---	---	0.00	---	---	---	0.036	---	0.036
1.10	3,778	957.10	---	---	---	---	0.00	---	---	---	0.038	---	0.038
1.20	4,660	957.20	---	---	---	---	0.00	---	---	---	0.041	---	0.041
1.30	5,543	957.30	---	---	---	---	0.00	---	---	---	0.044	---	0.044
1.40	6,426	957.40	---	---	---	---	0.00	---	---	---	0.047	---	0.047
1.50	7,308	957.50	---	---	---	---	0.00	---	---	---	0.050	---	0.050
1.60	8,191	957.60	---	---	---	---	0.00	---	---	---	0.053	---	0.053
1.70	9,074	957.70	---	---	---	---	0.00	---	---	---	0.055	---	0.055
1.80	9,956	957.80	---	---	---	---	0.00	---	---	---	0.058	---	0.058
1.90	10,839	957.90	---	---	---	---	0.00	---	---	---	0.061	---	0.061
2.00	11,722	958.00	---	---	---	---	0.00	---	---	---	0.064	---	0.064
2.10	13,075	958.10	---	---	---	---	0.00	---	---	---	0.066	---	0.066
2.20	14,429	958.20	---	---	---	---	0.00	---	---	---	0.069	---	0.069
2.30	15,783	958.30	---	---	---	---	0.00	---	---	---	0.071	---	0.071
2.40	17,136	958.40	---	---	---	---	0.00	---	---	---	0.073	---	0.073
2.50	18,490	958.50	---	---	---	---	0.00	---	---	---	0.076	---	0.076
2.60	19,844	958.60	---	---	---	---	0.00	---	---	---	0.078	---	0.078
2.70	21,197	958.70	---	---	---	---	0.00	---	---	---	0.080	---	0.080
2.80	22,551	958.80	---	---	---	---	0.00	---	---	---	0.083	---	0.083
2.90	23,905	958.90	---	---	---	---	0.00	---	---	---	0.085	---	0.085
3.00	25,258	959.00	---	---	---	---	0.00	---	---	---	0.087	---	0.087
3.10	26,970	959.10	---	---	---	---	0.00	---	---	---	0.089	---	0.089

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.20	28,681	959.20	---	---	---	---	0.00	---	---	---	0.090	---	0.090
3.30	30,393	959.30	---	---	---	---	0.00	---	---	---	0.092	---	0.092
3.40	32,104	959.40	---	---	---	---	0.00	---	---	---	0.094	---	0.094
3.50	33,816	959.50	---	---	---	---	0.00	---	---	---	0.095	---	0.095
3.60	35,528	959.60	---	---	---	---	0.00	---	---	---	0.097	---	0.097
3.70	37,239	959.70	---	---	---	---	0.00	---	---	---	0.098	---	0.098
3.80	38,951	959.80	---	---	---	---	0.00	---	---	---	0.100	---	0.100
3.90	40,662	959.90	---	---	---	---	0.00	---	---	---	0.102	---	0.102
4.00	42,374	960.00	---	---	---	---	0.00	---	---	---	0.103	---	0.103
4.10	44,366	960.10	---	---	---	---	0.00	---	---	---	0.105	---	0.105
4.20	46,359	960.20	---	---	---	---	0.00	---	---	---	0.106	---	0.106
4.30	48,352	960.30	---	---	---	---	0.00	---	---	---	0.108	---	0.108
4.40	50,345	960.40	---	---	---	---	0.00	---	---	---	0.109	---	0.109
4.50	52,337	960.50	---	---	---	---	0.00	---	---	---	0.111	---	0.111
4.60	54,330	960.60	---	---	---	---	0.00	---	---	---	0.112	---	0.112
4.70	56,323	960.70	---	---	---	---	0.00	---	---	---	0.114	---	0.114
4.80	58,316	960.80	---	---	---	---	0.00	---	---	---	0.115	---	0.115
4.90	60,308	960.90	---	---	---	---	0.00	---	---	---	0.117	---	0.117
5.00	62,301	961.00	---	---	---	---	0.00	---	---	---	0.118	---	0.118
5.10	64,563	961.10	---	---	---	---	0.00	---	---	---	0.120	---	0.120
5.20	66,824	961.20	---	---	---	---	0.00	---	---	---	0.121	---	0.121
5.30	69,086	961.30	---	---	---	---	0.00	---	---	---	0.123	---	0.123
5.40	71,347	961.40	---	---	---	---	0.00	---	---	---	0.124	---	0.124
5.50	73,609	961.50	---	---	---	---	0.00	---	---	---	0.126	---	0.126
5.60	75,870	961.60	---	---	---	---	0.00	---	---	---	0.127	---	0.127
5.70	78,132	961.70	---	---	---	---	0.00	---	---	---	0.129	---	0.129
5.80	80,393	961.80	---	---	---	---	0.00	---	---	---	0.130	---	0.130
5.90	82,655	961.90	---	---	---	---	0.00	---	---	---	0.132	---	0.132
6.00	84,916	962.00	---	---	---	---	0.00	---	---	---	0.133	---	0.133
6.10	87,451	962.10	---	---	---	---	0.00	---	---	---	0.135	---	0.135
6.20	89,985	962.20	---	---	---	---	0.00	---	---	---	0.136	---	0.136
6.30	92,520	962.30	---	---	---	---	0.00	---	---	---	0.138	---	0.138
6.40	95,055	962.40	---	---	---	---	0.00	---	---	---	0.139	---	0.139
6.50	97,589	962.50	---	---	---	---	0.00	---	---	---	0.141	---	0.141
6.60	100,124	962.60	---	---	---	---	0.00	---	---	---	0.142	---	0.142
6.70	102,659	962.70	---	---	---	---	0.00	---	---	---	0.144	---	0.144
6.80	105,194	962.80	---	---	---	---	0.00	---	---	---	0.146	---	0.146
6.90	107,728	962.90	---	---	---	---	0.00	---	---	---	0.147	---	0.147
7.00	110,263	963.00	---	---	---	---	0.00	---	---	---	0.149	---	0.149
7.10	113,107	963.10	---	---	---	---	1.23	---	---	---	0.151	---	1.383
7.20	115,952	963.20	---	---	---	---	3.49	---	---	---	0.153	---	3.639
7.30	118,797	963.30	---	---	---	---	6.41	---	---	---	0.154	---	6.560
7.40	121,641	963.40	---	---	---	---	9.86	---	---	---	0.156	---	10.02
7.50	124,486	963.50	---	---	---	---	13.78	---	---	---	0.158	---	13.94
7.60	127,330	963.60	---	---	---	---	18.12	---	---	---	0.160	---	18.28
7.70	130,175	963.70	---	---	---	---	22.83	---	---	---	0.162	---	22.99
7.80	133,019	963.80	---	---	---	---	27.90	---	---	---	0.164	---	28.06
7.90	135,864	963.90	---	---	---	---	33.29	---	---	---	0.166	---	33.45
8.00	138,708	964.00	---	---	---	---	39.00	---	---	---	0.168	---	39.17
8.10	141,955	964.10	---	---	---	---	44.99	---	---	---	0.170	---	45.16
8.20	145,201	964.20	---	---	---	---	51.26	---	---	---	0.173	---	51.44
8.30	148,447	964.30	---	---	---	---	57.80	---	---	---	0.175	---	57.98
8.40	151,694	964.40	---	---	---	---	64.60	---	---	---	0.178	---	64.77
8.50	154,940	964.50	---	---	---	---	71.64	---	---	---	0.181	---	71.82
8.60	158,187	964.60	---	---	---	---	78.92	---	---	---	0.183	---	79.10
8.70	161,433	964.70	---	---	---	---	86.43	---	---	---	0.186	---	86.62
8.80	164,679	964.80	---	---	---	---	94.17	---	---	---	0.188	---	94.36
8.90	167,926	964.90	---	---	---	---	102.12	---	---	---	0.191	---	102.31
9.00	171,172	965.00	---	---	---	---	110.31	---	---	---	0.194	---	110.50
9.10	174,810	965.10	---	---	---	---	118.68	---	---	---	0.195	---	118.88
9.20	178,448	965.20	---	---	---	---	127.26	---	---	---	0.197	---	127.45
9.30	182,086	965.30	---	---	---	---	136.03	---	---	---	0.199	---	136.23
9.40	185,724	965.40	---	---	---	---	145.00	---	---	---	0.200	---	145.20
9.50	189,362	965.50	---	---	---	---	154.15	---	---	---	0.202	---	154.35
9.60	193,000	965.60	---	---	---	---	163.49	---	---	---	0.204	---	163.69
9.70	196,638	965.70	---	---	---	---	173.01	---	---	---	0.206	---	173.21
9.80	200,276	965.80	---	---	---	---	182.71	---	---	---	0.207	---	182.91
9.90	203,914	965.90	---	---	---	---	192.58	---	---	---	0.209	---	192.79
10.00	207,552	966.00	---	---	---	---	202.65	---	---	---	0.211	---	202.86

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

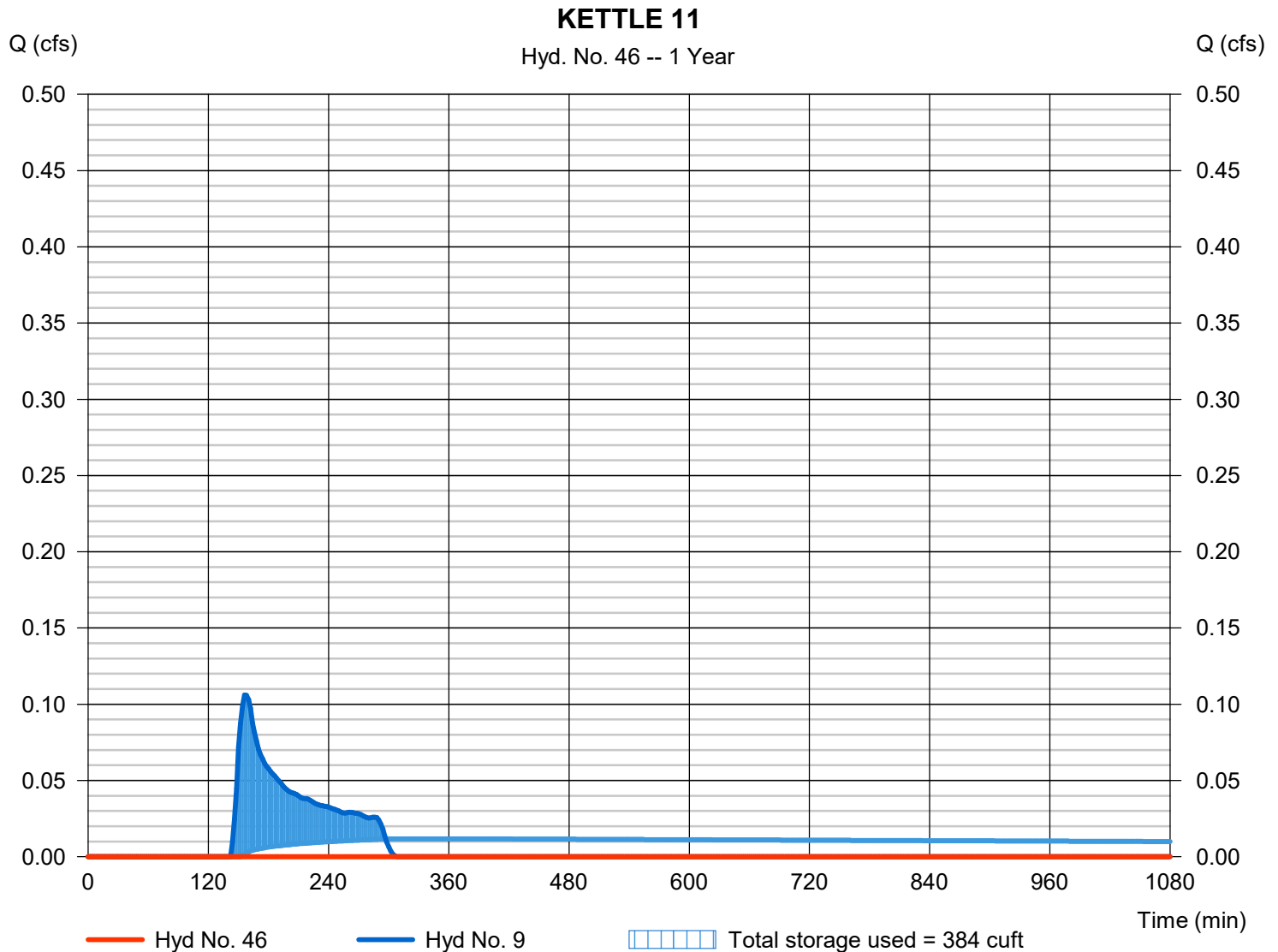
Hyd. No. 46

KETTLE 11

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 9 - E-11
 Reservoir name = K-11

Peak discharge = 0.000 cfs
 Time to peak = 218 min
 Hyd. volume = 0 cuft
 Max. Elevation = 979.19 ft
 Max. Storage = 384 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

87

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 11 - K-11

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 979.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	979.00	805	0	0
1.00	980.00	3,445	1,972	1,972
2.00	981.00	9,295	6,132	8,104

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 980.50	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	979.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	197	979.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	394	979.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	591	979.30	---	---	---	---	0.00	---	---	---	0.006	---	0.006
0.40	789	979.40	---	---	---	---	0.00	---	---	---	0.008	---	0.008
0.50	986	979.50	---	---	---	---	0.00	---	---	---	0.010	---	0.010
0.60	1,183	979.60	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.70	1,380	979.70	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.80	1,577	979.80	---	---	---	---	0.00	---	---	---	0.015	---	0.015
0.90	1,774	979.90	---	---	---	---	0.00	---	---	---	0.017	---	0.017
1.00	1,972	980.00	---	---	---	---	0.00	---	---	---	0.019	---	0.019
1.10	2,585	980.10	---	---	---	---	0.00	---	---	---	0.022	---	0.022
1.20	3,198	980.20	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.30	3,811	980.30	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.40	4,424	980.40	---	---	---	---	0.00	---	---	---	0.032	---	0.032
1.50	5,038	980.50	---	---	---	---	0.00	---	---	---	0.035	---	0.035
1.60	5,651	980.60	---	---	---	---	1.23	---	---	---	0.039	---	1.269
1.70	6,264	980.70	---	---	---	---	3.48	---	---	---	0.042	---	3.526
1.80	6,877	980.80	---	---	---	---	6.40	---	---	---	0.045	---	6.447
1.90	7,491	980.90	---	---	---	---	9.86	---	---	---	0.048	---	9.907
2.00	8,104	981.00	---	---	---	---	13.79	---	---	---	0.052	---	13.84

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

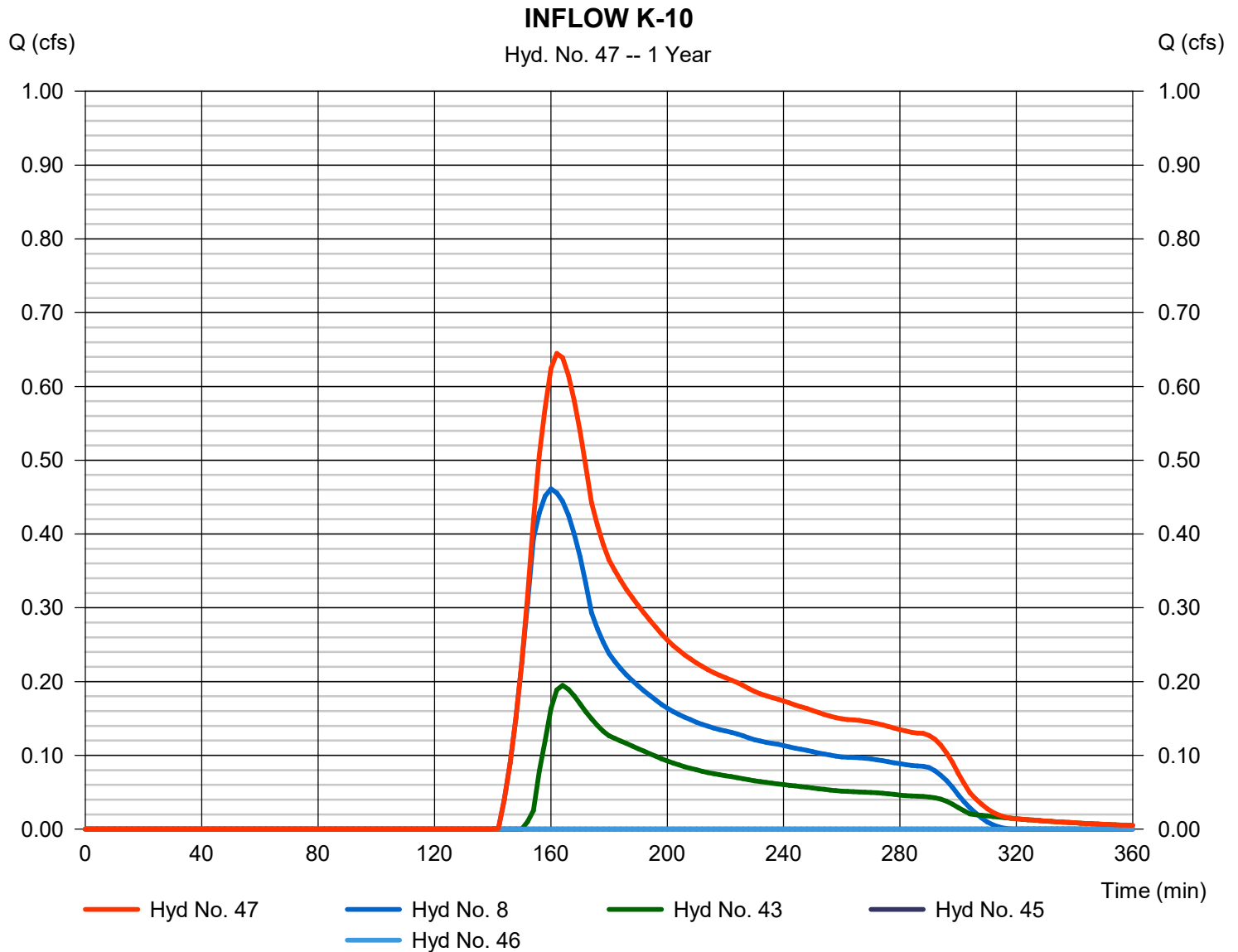
Tuesday, 04 / 7 / 2020

Hyd. No. 47

INFLOW K-10

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 8, 43, 45, 46

Peak discharge = 0.645 cfs
 Time to peak = 162 min
 Hyd. volume = 2,387 cuft
 Contrib. drain. area = 1.920 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

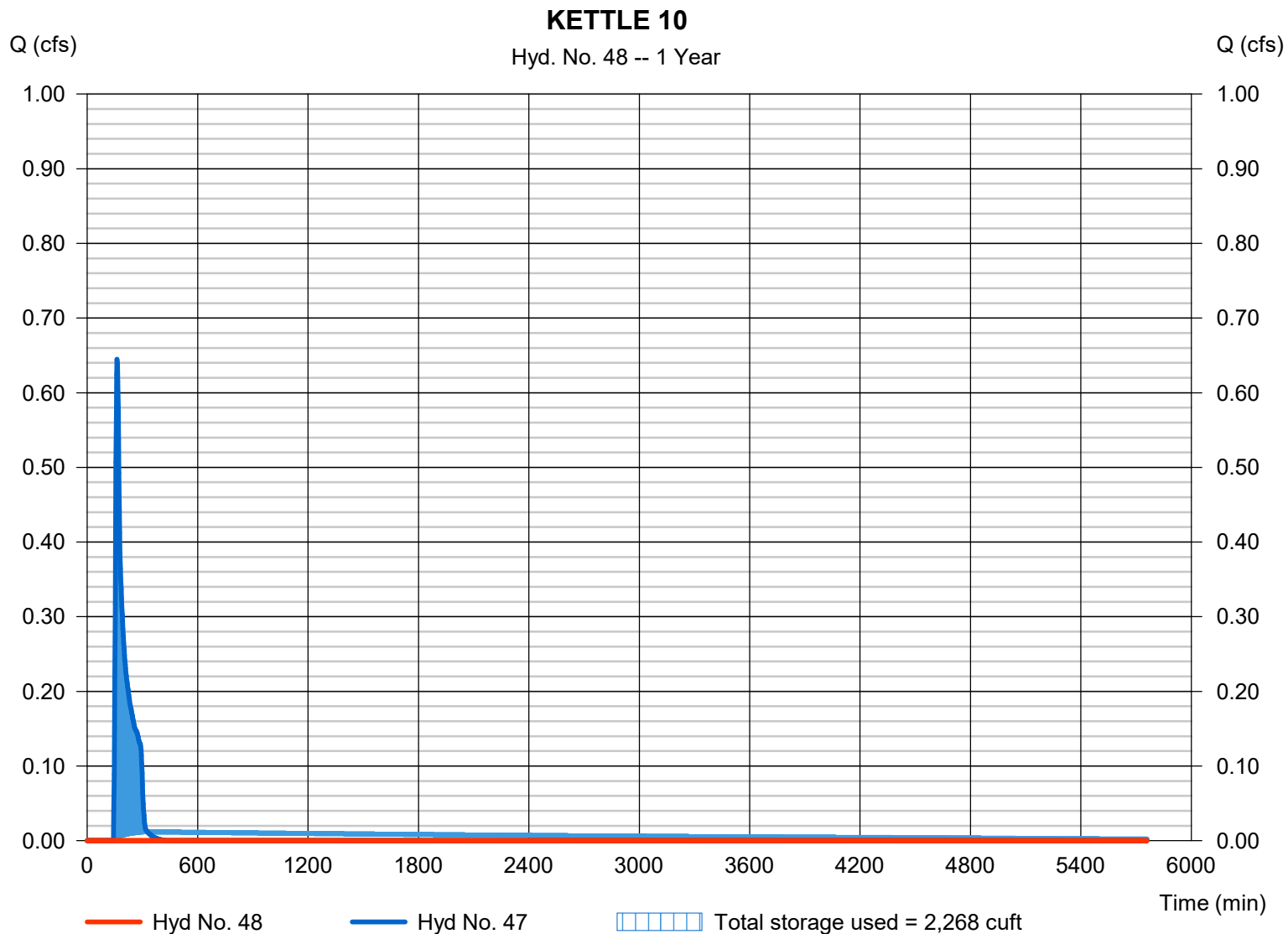
Tuesday, 04 / 7 / 2020

Hyd. No. 48

KETTLE 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 220 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 47 - INFLOW K-10	Max. Elevation	= 955.31 ft
Reservoir name	= K-10	Max. Storage	= 2,268 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 10 - K-10

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 953.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	953.00	170	0	0
1.00	954.00	700	405	405
2.00	955.00	1,590	1,115	1,520
3.00	956.00	3,290	2,389	3,909
4.00	957.00	4,855	4,047	7,955
5.00	958.00	6,405	5,612	13,567
6.00	959.00	8,045	7,209	20,776
7.00	960.00	9,695	8,856	29,632
8.00	961.00	11,530	10,598	40,230
9.00	962.00	13,595	12,547	52,777
10.00	963.00	15,870	14,716	67,494
11.00	964.00	19,025	17,422	84,916

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 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)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	953.00	---	---	---	---	---	---	---	---	0.000	---	0.000
0.10	40	953.10	---	---	---	---	---	---	---	---	0.000	---	0.000
0.20	81	953.20	---	---	---	---	---	---	---	---	0.001	---	0.001
0.30	121	953.30	---	---	---	---	---	---	---	---	0.001	---	0.001
0.40	162	953.40	---	---	---	---	---	---	---	---	0.002	---	0.002
0.50	202	953.50	---	---	---	---	---	---	---	---	0.002	---	0.002
0.60	243	953.60	---	---	---	---	---	---	---	---	0.002	---	0.002
0.70	283	953.70	---	---	---	---	---	---	---	---	0.003	---	0.003
0.80	324	953.80	---	---	---	---	---	---	---	---	0.003	---	0.003
0.90	364	953.90	---	---	---	---	---	---	---	---	0.003	---	0.003
1.00	405	954.00	---	---	---	---	---	---	---	---	0.004	---	0.004
1.10	516	954.10	---	---	---	---	---	---	---	---	0.004	---	0.004
1.20	628	954.20	---	---	---	---	---	---	---	---	0.005	---	0.005
1.30	739	954.30	---	---	---	---	---	---	---	---	0.005	---	0.005
1.40	851	954.40	---	---	---	---	---	---	---	---	0.006	---	0.006
1.50	962	954.50	---	---	---	---	---	---	---	---	0.006	---	0.006
1.60	1,074	954.60	---	---	---	---	---	---	---	---	0.007	---	0.007
1.70	1,185	954.70	---	---	---	---	---	---	---	---	0.007	---	0.007
1.80	1,297	954.80	---	---	---	---	---	---	---	---	0.008	---	0.008
1.90	1,408	954.90	---	---	---	---	---	---	---	---	0.008	---	0.008
2.00	1,520	955.00	---	---	---	---	---	---	---	---	0.009	---	0.009
2.10	1,759	955.10	---	---	---	---	---	---	---	---	0.010	---	0.010
2.20	1,998	955.20	---	---	---	---	---	---	---	---	0.011	---	0.011
2.30	2,236	955.30	---	---	---	---	---	---	---	---	0.012	---	0.012
2.40	2,475	955.40	---	---	---	---	---	---	---	---	0.013	---	0.013
2.50	2,714	955.50	---	---	---	---	---	---	---	---	0.014	---	0.014
2.60	2,953	955.60	---	---	---	---	---	---	---	---	0.014	---	0.014
2.70	3,192	955.70	---	---	---	---	---	---	---	---	0.015	---	0.015
2.80	3,431	955.80	---	---	---	---	---	---	---	---	0.016	---	0.016
2.90	3,670	955.90	---	---	---	---	---	---	---	---	0.017	---	0.017
3.00	3,909	956.00	---	---	---	---	---	---	---	---	0.018	---	0.018

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.10	4,313	956.10	---	---	---	---	---	---	---	---	0.019	---	0.019
3.20	4,718	956.20	---	---	---	---	---	---	---	---	0.020	---	0.020
3.30	5,123	956.30	---	---	---	---	---	---	---	---	0.021	---	0.021
3.40	5,527	956.40	---	---	---	---	---	---	---	---	0.022	---	0.022
3.50	5,932	956.50	---	---	---	---	---	---	---	---	0.023	---	0.023
3.60	6,337	956.60	---	---	---	---	---	---	---	---	0.023	---	0.023
3.70	6,741	956.70	---	---	---	---	---	---	---	---	0.024	---	0.024
3.80	7,146	956.80	---	---	---	---	---	---	---	---	0.025	---	0.025
3.90	7,551	956.90	---	---	---	---	---	---	---	---	0.026	---	0.026
4.00	7,955	957.00	---	---	---	---	---	---	---	---	0.027	---	0.027
4.10	8,517	957.10	---	---	---	---	---	---	---	---	0.028	---	0.028
4.20	9,078	957.20	---	---	---	---	---	---	---	---	0.029	---	0.029
4.30	9,639	957.30	---	---	---	---	---	---	---	---	0.030	---	0.030
4.40	10,200	957.40	---	---	---	---	---	---	---	---	0.030	---	0.030
4.50	10,761	957.50	---	---	---	---	---	---	---	---	0.031	---	0.031
4.60	11,322	957.60	---	---	---	---	---	---	---	---	0.032	---	0.032
4.70	11,884	957.70	---	---	---	---	---	---	---	---	0.033	---	0.033
4.80	12,445	957.80	---	---	---	---	---	---	---	---	0.034	---	0.034
4.90	13,006	957.90	---	---	---	---	---	---	---	---	0.035	---	0.035
5.00	13,567	958.00	---	---	---	---	---	---	---	---	0.036	---	0.036
5.10	14,288	958.10	---	---	---	---	---	---	---	---	0.036	---	0.036
5.20	15,009	958.20	---	---	---	---	---	---	---	---	0.037	---	0.037
5.30	15,730	958.30	---	---	---	---	---	---	---	---	0.038	---	0.038
5.40	16,451	958.40	---	---	---	---	---	---	---	---	0.039	---	0.039
5.50	17,171	958.50	---	---	---	---	---	---	---	---	0.040	---	0.040
5.60	17,892	958.60	---	---	---	---	---	---	---	---	0.041	---	0.041
5.70	18,613	958.70	---	---	---	---	---	---	---	---	0.042	---	0.042
5.80	19,334	958.80	---	---	---	---	---	---	---	---	0.043	---	0.043
5.90	20,055	958.90	---	---	---	---	---	---	---	---	0.044	---	0.044
6.00	20,776	959.00	---	---	---	---	---	---	---	---	0.045	---	0.045
6.10	21,661	959.10	---	---	---	---	---	---	---	---	0.046	---	0.046
6.20	22,547	959.20	---	---	---	---	---	---	---	---	0.047	---	0.047
6.30	23,433	959.30	---	---	---	---	---	---	---	---	0.047	---	0.047
6.40	24,318	959.40	---	---	---	---	---	---	---	---	0.048	---	0.048
6.50	25,204	959.50	---	---	---	---	---	---	---	---	0.049	---	0.049
6.60	26,090	959.60	---	---	---	---	---	---	---	---	0.050	---	0.050
6.70	26,975	959.70	---	---	---	---	---	---	---	---	0.051	---	0.051
6.80	27,861	959.80	---	---	---	---	---	---	---	---	0.052	---	0.052
6.90	28,746	959.90	---	---	---	---	---	---	---	---	0.053	---	0.053
7.00	29,632	960.00	---	---	---	---	---	---	---	---	0.054	---	0.054
7.10	30,692	960.10	---	---	---	---	---	---	---	---	0.055	---	0.055
7.20	31,752	960.20	---	---	---	---	---	---	---	---	0.056	---	0.056
7.30	32,812	960.30	---	---	---	---	---	---	---	---	0.057	---	0.057
7.40	33,871	960.40	---	---	---	---	---	---	---	---	0.058	---	0.058
7.50	34,931	960.50	---	---	---	---	---	---	---	---	0.059	---	0.059
7.60	35,991	960.60	---	---	---	---	---	---	---	---	0.060	---	0.060
7.70	37,051	960.70	---	---	---	---	---	---	---	---	0.061	---	0.061
7.80	38,111	960.80	---	---	---	---	---	---	---	---	0.062	---	0.062
7.90	39,170	960.90	---	---	---	---	---	---	---	---	0.063	---	0.063
8.00	40,230	961.00	---	---	---	---	---	---	---	---	0.064	---	0.064
8.10	41,485	961.10	---	---	---	---	---	---	---	---	0.065	---	0.065
8.20	42,740	961.20	---	---	---	---	---	---	---	---	0.066	---	0.066
8.30	43,994	961.30	---	---	---	---	---	---	---	---	0.067	---	0.067
8.40	45,249	961.40	---	---	---	---	---	---	---	---	0.069	---	0.069
8.50	46,504	961.50	---	---	---	---	---	---	---	---	0.070	---	0.070
8.60	47,758	961.60	---	---	---	---	---	---	---	---	0.071	---	0.071
8.70	49,013	961.70	---	---	---	---	---	---	---	---	0.072	---	0.072
8.80	50,268	961.80	---	---	---	---	---	---	---	---	0.073	---	0.073
8.90	51,523	961.90	---	---	---	---	---	---	---	---	0.074	---	0.074
9.00	52,777	962.00	---	---	---	---	---	---	---	---	0.076	---	0.076
9.10	54,249	962.10	---	---	---	---	---	---	---	---	0.077	---	0.077
9.20	55,721	962.20	---	---	---	---	---	---	---	---	0.078	---	0.078
9.30	57,192	962.30	---	---	---	---	---	---	---	---	0.079	---	0.079
9.40	58,664	962.40	---	---	---	---	---	---	---	---	0.081	---	0.081
9.50	60,135	962.50	---	---	---	---	---	---	---	---	0.082	---	0.082
9.60	61,607	962.60	---	---	---	---	---	---	---	---	0.083	---	0.083
9.70	63,079	962.70	---	---	---	---	---	---	---	---	0.084	---	0.084
9.80	64,550	962.80	---	---	---	---	---	---	---	---	0.086	---	0.086
9.90	66,022	962.90	---	---	---	---	---	---	---	---	0.087	---	0.087
10.00	67,494	963.00	---	---	---	---	---	---	---	---	0.088	---	0.088
10.10	69,236	963.10	---	---	---	---	---	---	---	---	0.090	---	0.090
10.20	70,978	963.20	---	---	---	---	---	---	---	---	0.092	---	0.092

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
10.30	72,720	963.30	---	---	---	---	---	---	---	---	0.093	---	0.093
10.40	74,462	963.40	---	---	---	---	---	---	---	---	0.095	---	0.095
10.50	76,205	963.50	---	---	---	---	---	---	---	---	0.097	---	0.097
10.60	77,947	963.60	---	---	---	---	---	---	---	---	0.099	---	0.099
10.70	79,689	963.70	---	---	---	---	---	---	---	---	0.100	---	0.100
10.80	81,431	963.80	---	---	---	---	---	---	---	---	0.102	---	0.102
10.90	83,173	963.90	---	---	---	---	---	---	---	---	0.104	---	0.104
11.00	84,916	964.00	---	---	---	---	---	---	---	---	0.106	---	0.106

...End

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	3.834	2	174	17,426	-----	-----	-----	E-1
2	SCS Runoff	1.197	2	166	4,934	-----	-----	-----	E-2
3	SCS Runoff	0.565	2	160	1,808	-----	-----	-----	E-3
4	SCS Runoff	0.114	2	152	302	-----	-----	-----	E-4
5	SCS Runoff	1.276	2	170	5,848	-----	-----	-----	E-5
6	SCS Runoff	0.623	2	160	2,318	-----	-----	-----	E-6
8	SCS Runoff	0.785	2	158	2,401	-----	-----	-----	E-10
9	SCS Runoff	0.207	2	156	638	-----	-----	-----	E-11
10	SCS Runoff	1.842	2	156	4,978	-----	-----	-----	E-12
11	SCS Runoff	0.527	2	152	1,302	-----	-----	-----	E-13
12	SCS Runoff	1.813	2	174	8,241	-----	-----	-----	E-14
13	SCS Runoff	0.623	2	148	1,200	-----	-----	-----	E-15
14	SCS Runoff	0.398	2	158	1,322	-----	-----	-----	E-16
15	SCS Runoff	1.054	2	158	3,502	-----	-----	-----	E-17
17	SCS Runoff	0.878	2	170	4,027	-----	-----	-----	E-20
18	SCS Runoff	3.951	2	168	15,058	-----	-----	-----	D
21	Reservoir	0.000	2	322	0	18	990.20	6,315	EX. INFILT. BASIN D
22	Combine	0.878	2	170	4,027	17, 21	-----	-----	INFLOW K-20
23	Reservoir	0.000	2	228	0	22	992.26	3,775	KETTLE 20
25	Reservoir	0.000	2	296	0	6	1011.14	2,199	KETTLE 6
26	Combine	1.276	2	170	5,848	5, 25	-----	-----	INFLOW K-5
27	Reservoir	0.787	2	192	4,981	26	982.99	1,676	KETTLE 5
28	Combine	0.990	2	190	6,789	3, 27	-----	-----	INFLOW K-3
29	Reservoir	0.000	2	3472	0	28	973.70	6,334	KETTLE 3
30	Reservoir	0.000	2	244	0	4	1007.15	285	KETTLE 4
31	Combine	1.197	2	166	4,934	2, 29, 30	-----	-----	INFLOW K-2
32	Reservoir	0.000	2	2998	0	31	967.76	4,709	KETTLE 2
33	Combine	3.834	2	174	17,426	1, 32	-----	-----	INFLOW KETTLE 1
34	Reservoir	0.000	2	172	0	33	946.47	16,934	KETTLE 1
36	Reservoir	0.000	2	304	0	15	1011.29	3,258	KETTLE 17
37	Combine	0.398	2	158	1,322	14, 36	-----	-----	INFLOW K-16
EXISTING_LCL_Stormwater Model_2020-04-06					Reg. Period: 2 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	250	0	37	1005.21	1,262	KETTLE 16
39	Reservoir	0.000	2	172	0	13	970.50	1,143	KETTLE 15
40	Combine	1.813	2	174	8,241	12, 38, 39	-----	-----	INFLOW K-14
41	Reservoir	0.000	2	2302	0	40	956.61	7,921	KETTLE 14
42	Combine	0.527	2	152	1,302	11, 41	-----	-----	INFLOW K-13
43	Reservoir	0.411	2	160	1,191	42	959.66	256	KETTLE 13
44	Combine	2.238	2	158	6,170	10, 43	-----	-----	INFLOW K-12
45	Reservoir	0.000	2	230	0	44	957.32	5,756	KETTLE 12
46	Reservoir	0.000	2	306	0	9	979.30	600	KETTLE 11
47	Combine	1.190	2	160	3,592	8, 43, 45, 46	-----	-----	INFLOW K-10
48	Reservoir	0.000	2	290	0	47	955.80	3,433	KETTLE 10
EXISTING_LCL_Stormwater Model_2020-04-08.dwg					Regain Period: 2 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 1

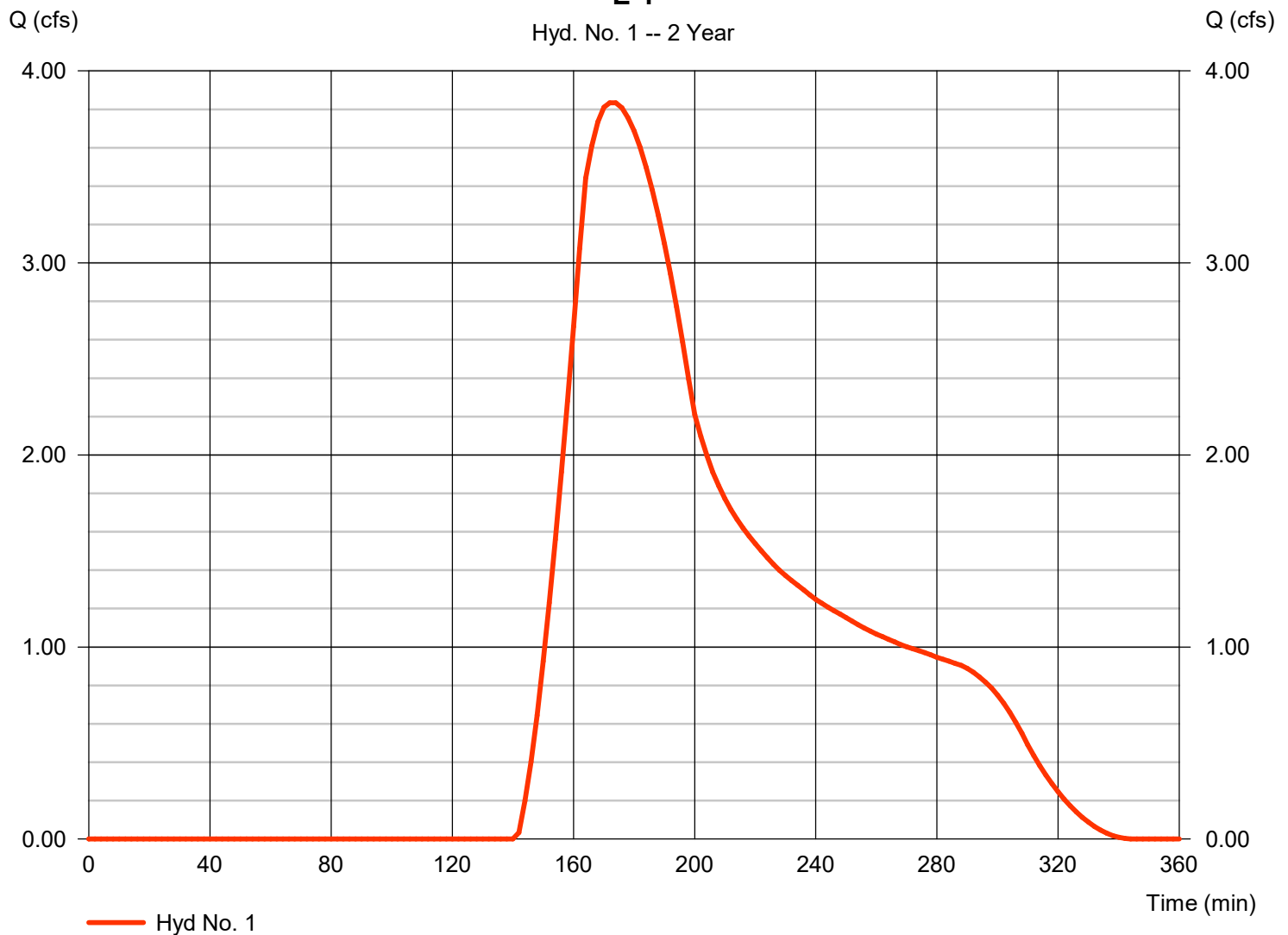
E-1

Hydrograph type	= SCS Runoff	Peak discharge	= 3.834 cfs
Storm frequency	= 2 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 17,426 cuft
Drainage area	= 15.479 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 15.479$

E-1

Hyd. No. 1 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

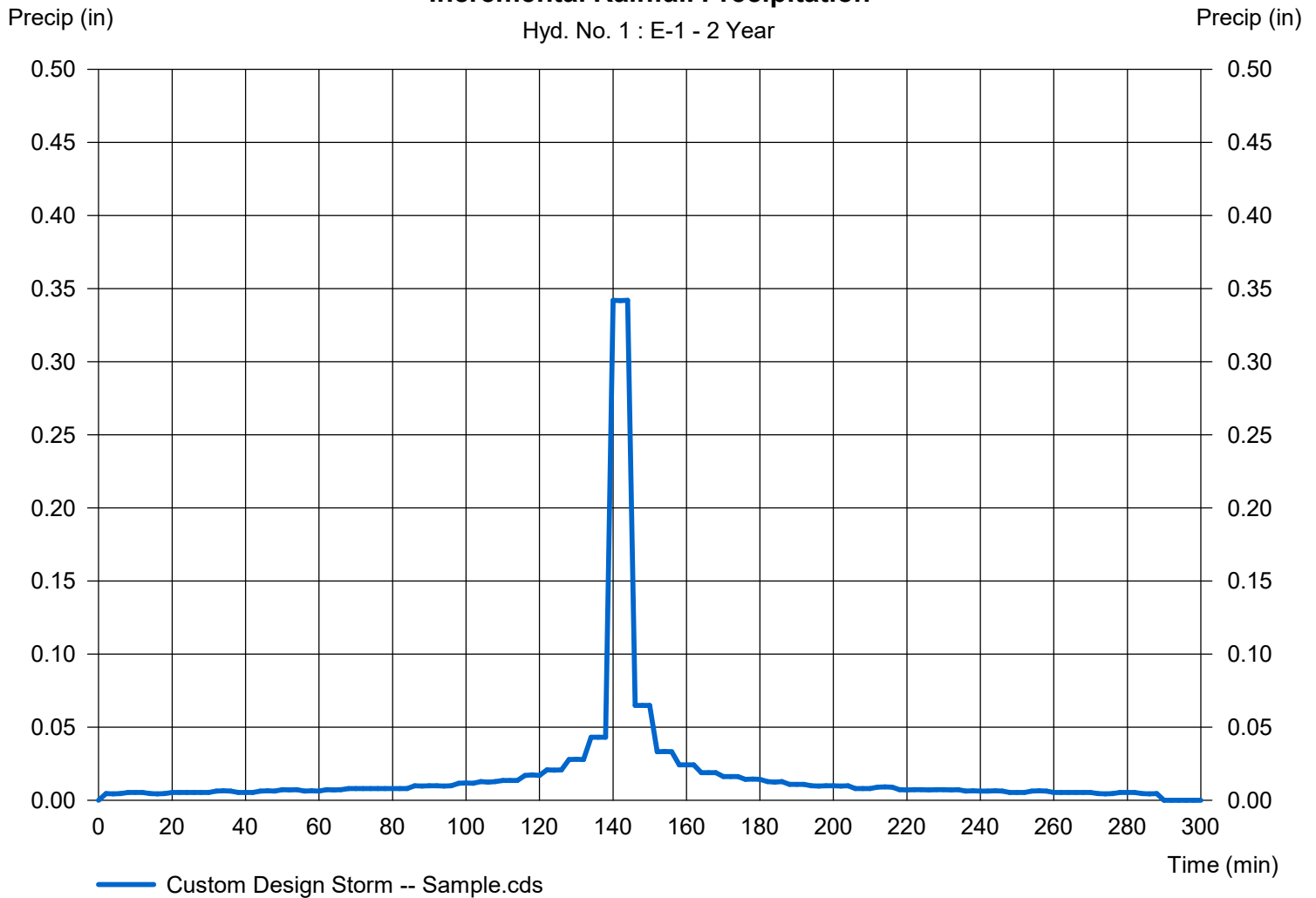
Hyd. No. 1

E-1

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : E-1 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

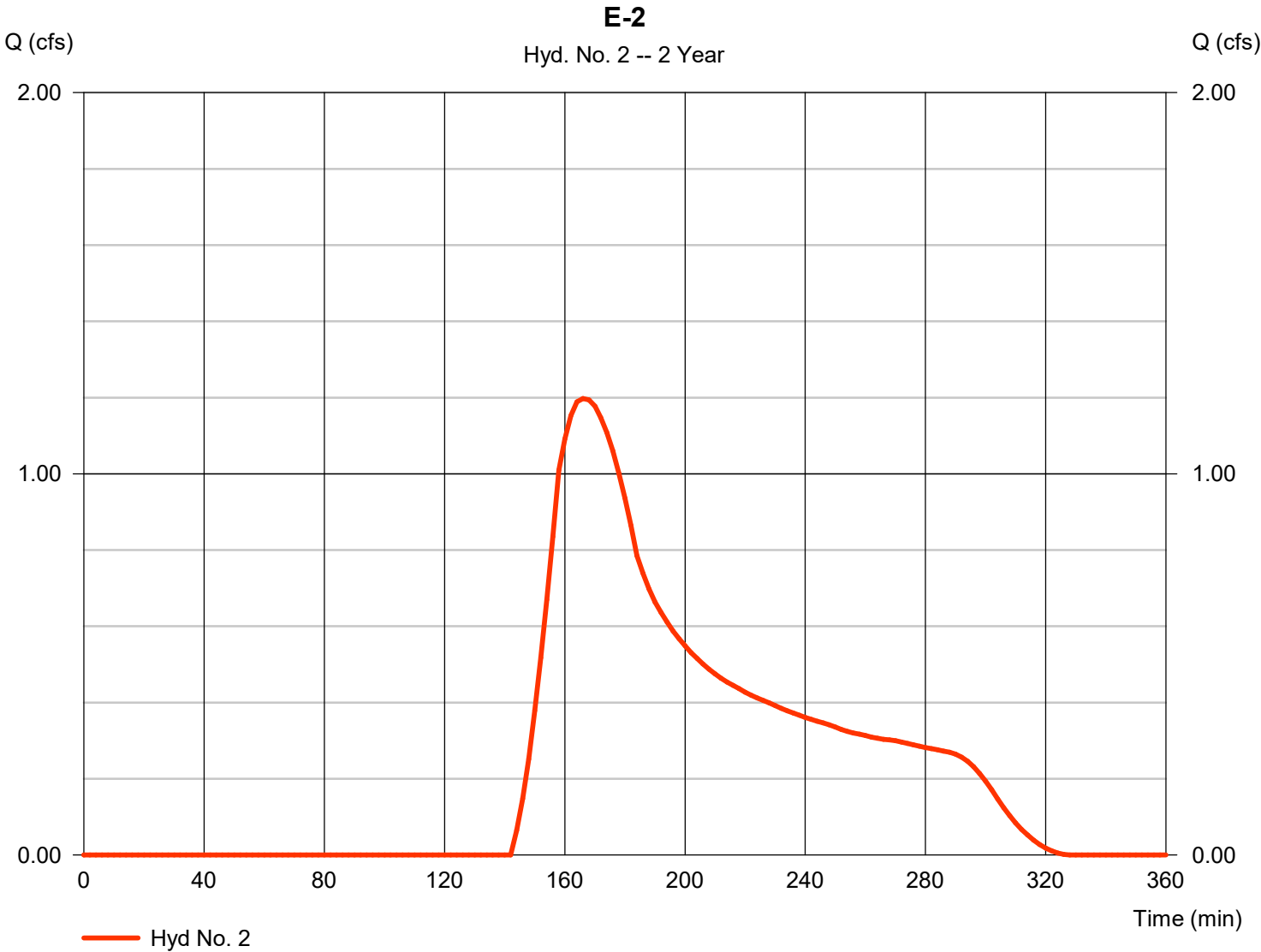
Tuesday, 04 / 7 / 2020

Hyd. No. 2

E-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.197 cfs
Storm frequency	=	2 yrs	Time to peak	=	166 min
Time interval	=	2 min	Hyd. volume	=	4,934 cuft
Drainage area	=	5.433 ac	Curve number	=	61*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	25.00 min
Total precip.	=	2.70 in	Distribution	=	Custom
Storm duration	=	Sample.cds	Shape factor	=	484

* Composite (Area/CN) = [(0.120 x 98) + (5.290 x 60)] / 5.433



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

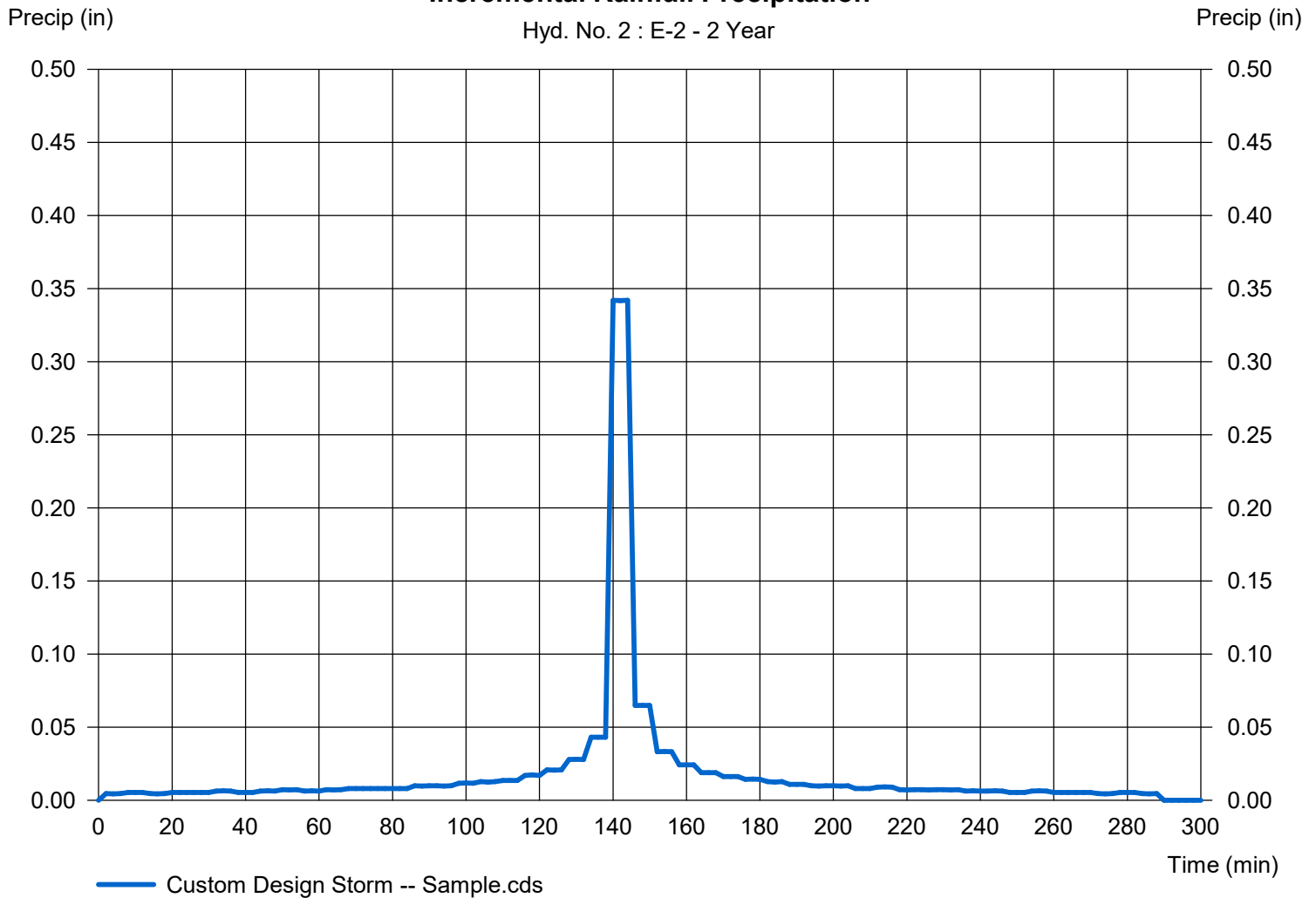
Hyd. No. 2

E-2

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : E-2 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 3

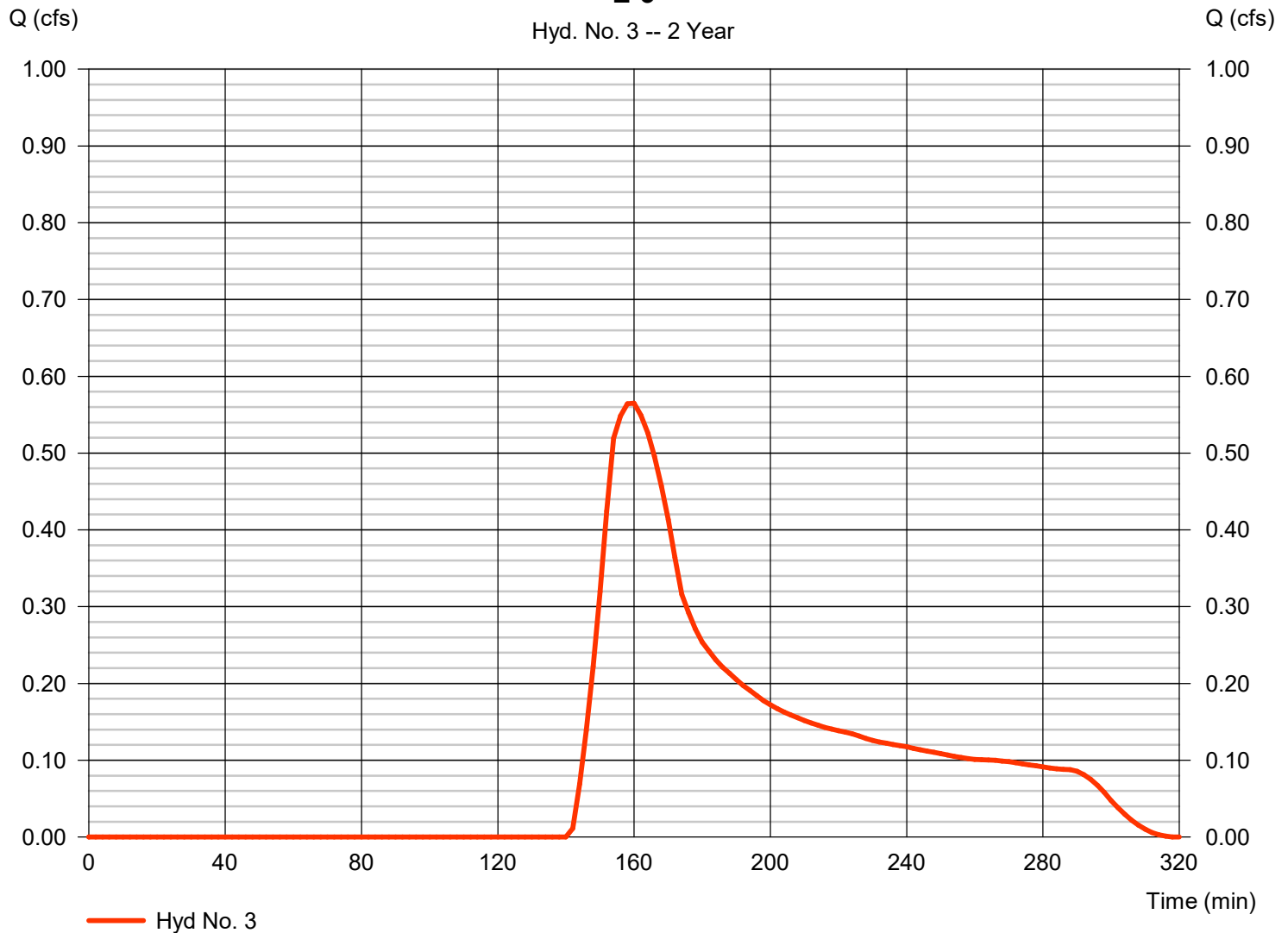
E-3

Hydrograph type	= SCS Runoff	Peak discharge	= 0.565 cfs
Storm frequency	= 2 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 1,808 cuft
Drainage area	= 1.588 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 1.588$

E-3

Hyd. No. 3 -- 2 Year



Precipitation Report

100

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

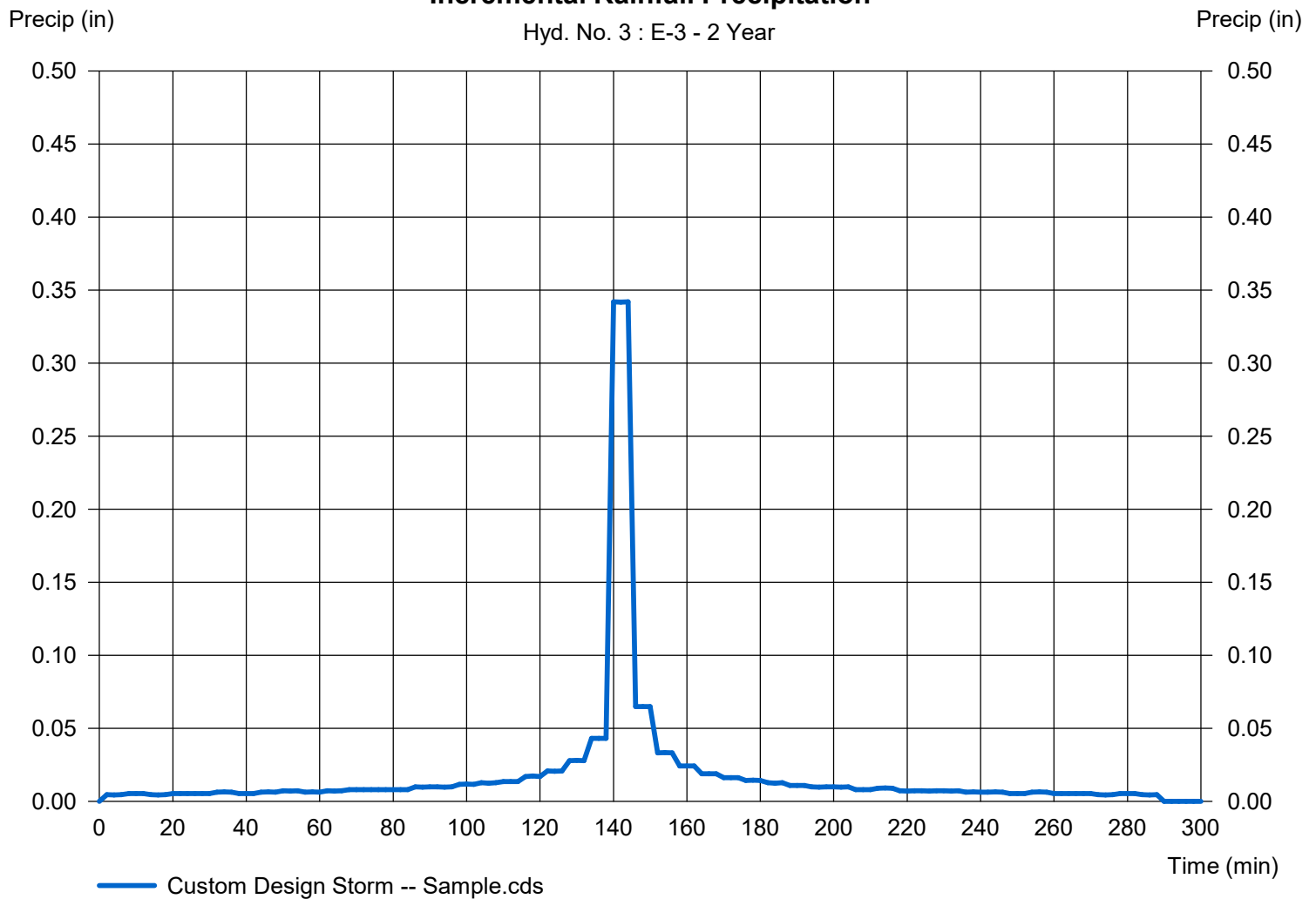
Hyd. No. 3

E-3

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : E-3 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

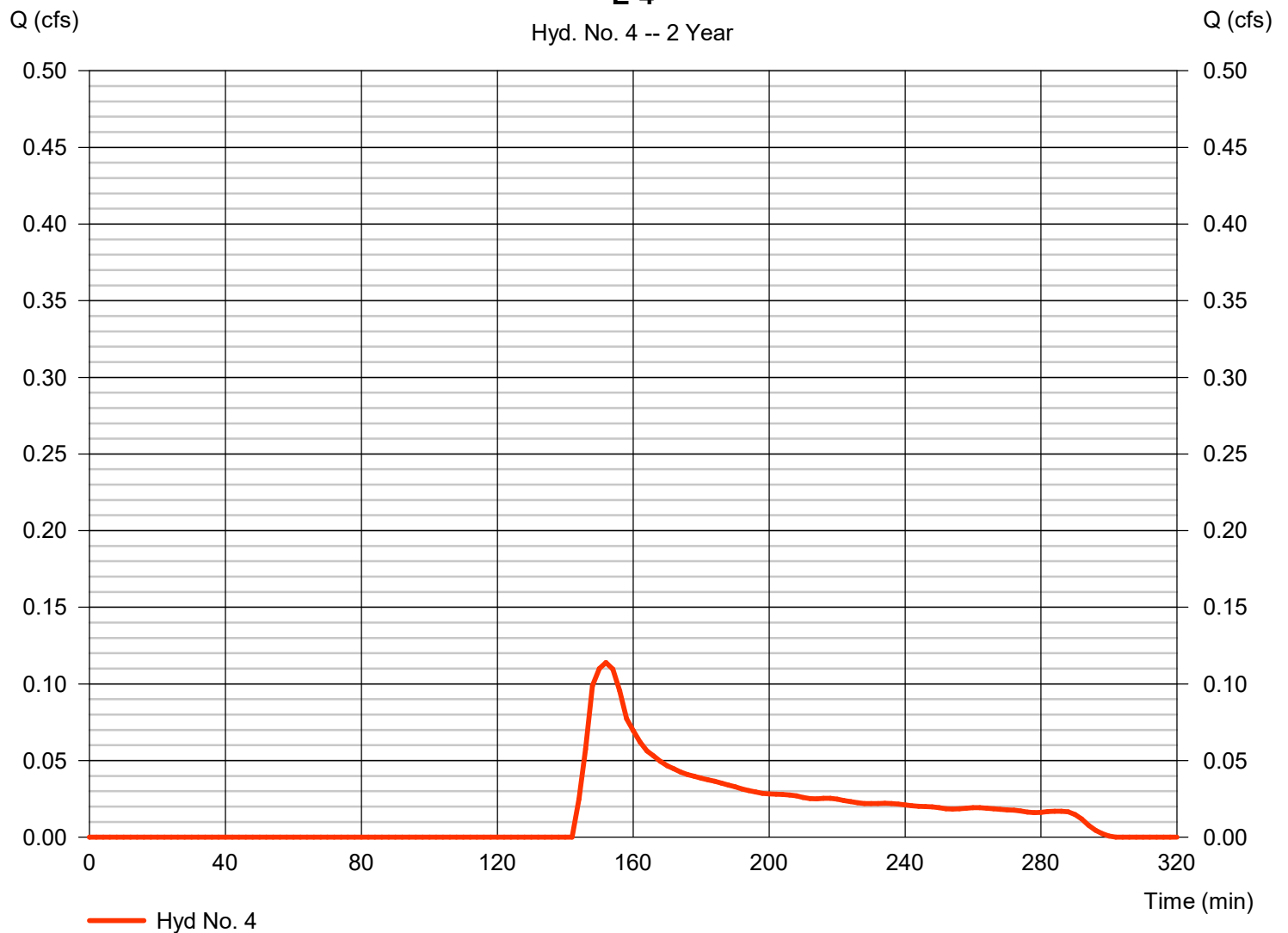
Hyd. No. 4

E-4

Hydrograph type	= SCS Runoff	Peak discharge	= 0.114 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 302 cuft
Drainage area	= 0.361 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-4

Hyd. No. 4 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

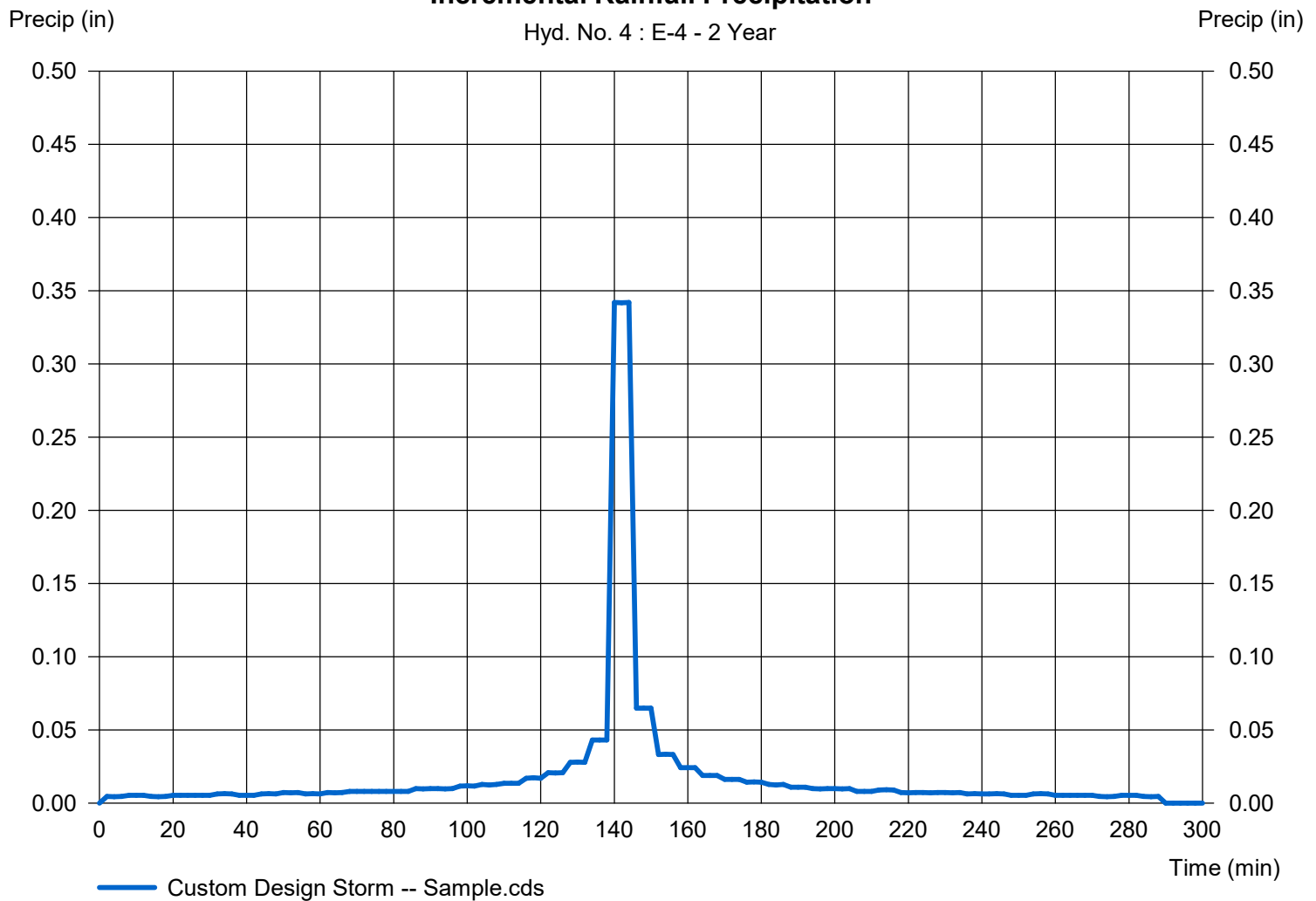
Hyd. No. 4

E-4

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : E-4 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

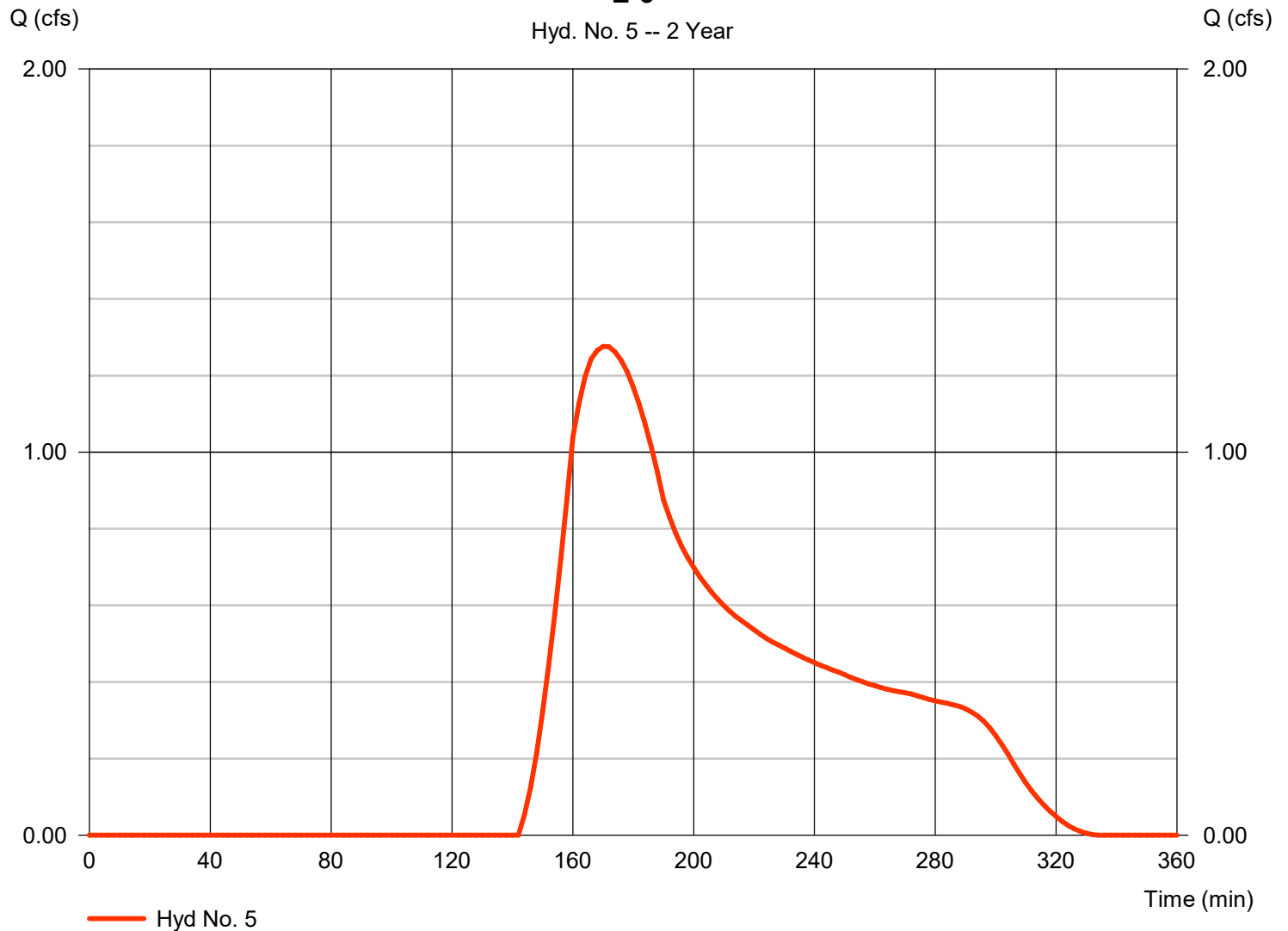
Hyd. No. 5

E-5

Hydrograph type	= SCS Runoff	Peak discharge	= 1.276 cfs
Storm frequency	= 2 yrs	Time to peak	= 170 min
Time interval	= 2 min	Hyd. volume	= 5,848 cuft
Drainage area	= 6.987 ac	Curve number	= 60*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 27.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 6.987$

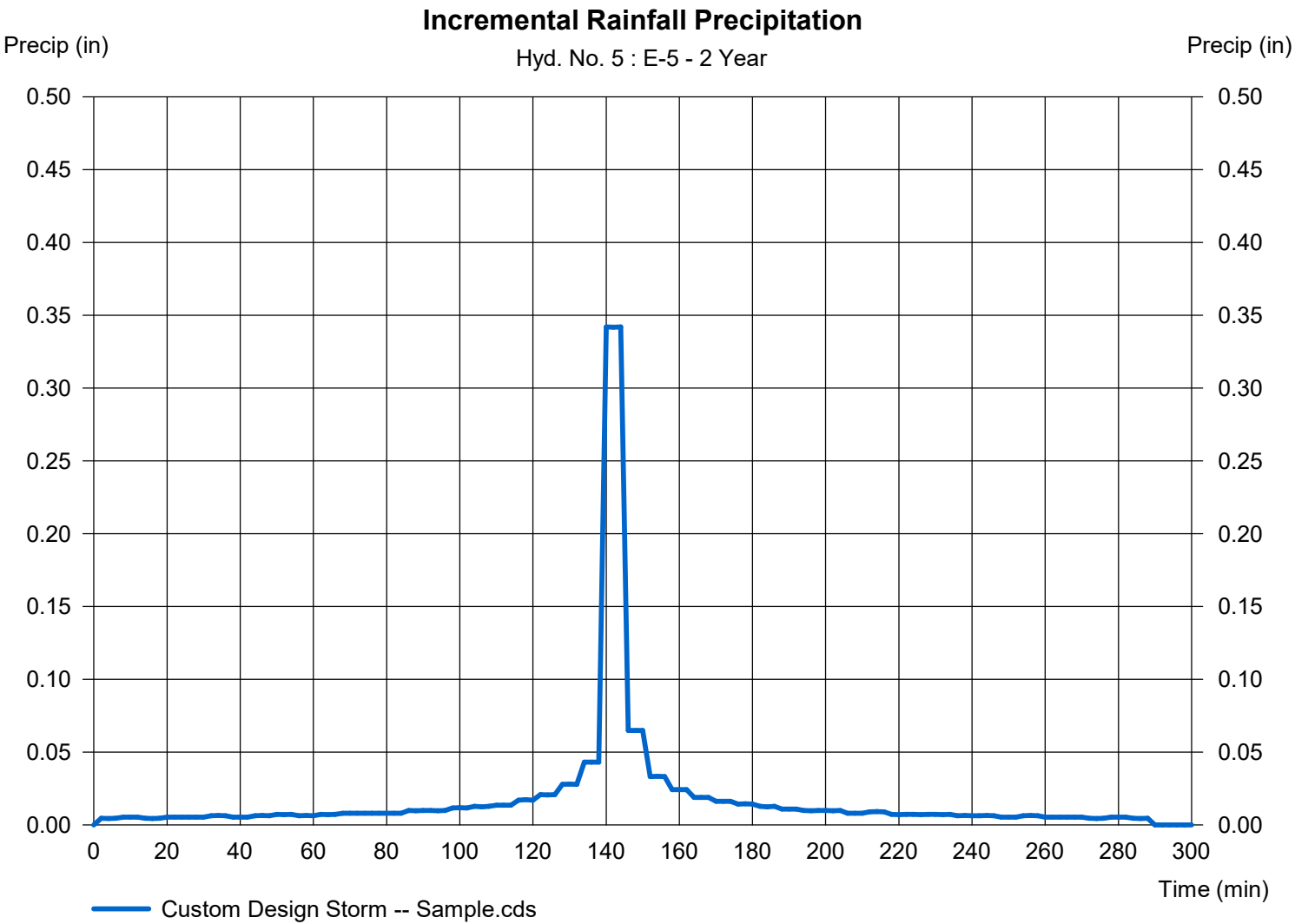
E-5



Precipitation Report

Hyd. No. 5

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

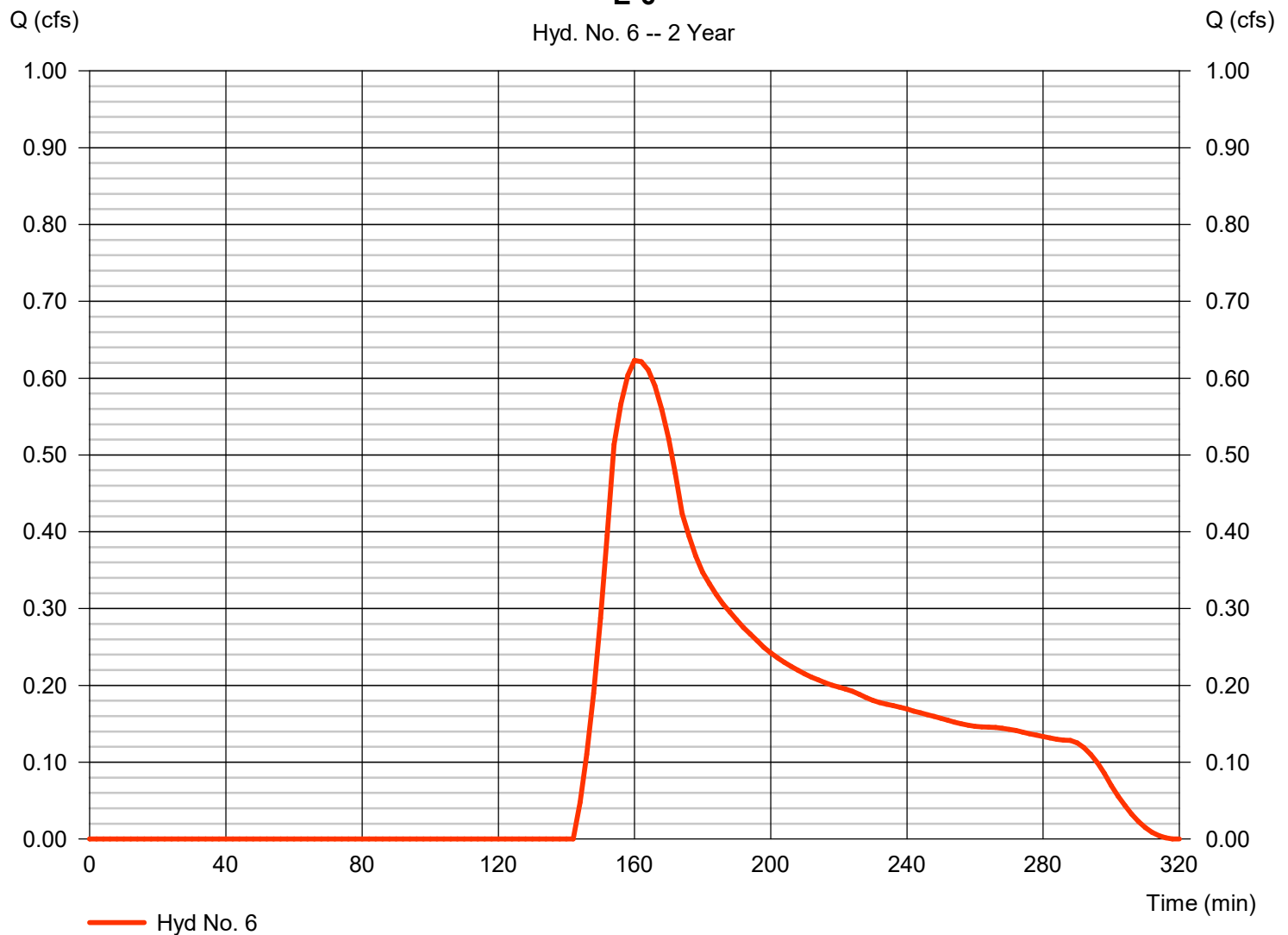
Hyd. No. 6

E-6

Hydrograph type	= SCS Runoff	Peak discharge	= 0.623 cfs
Storm frequency	= 2 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 2,318 cuft
Drainage area	= 2.769 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-6

Hyd. No. 6 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

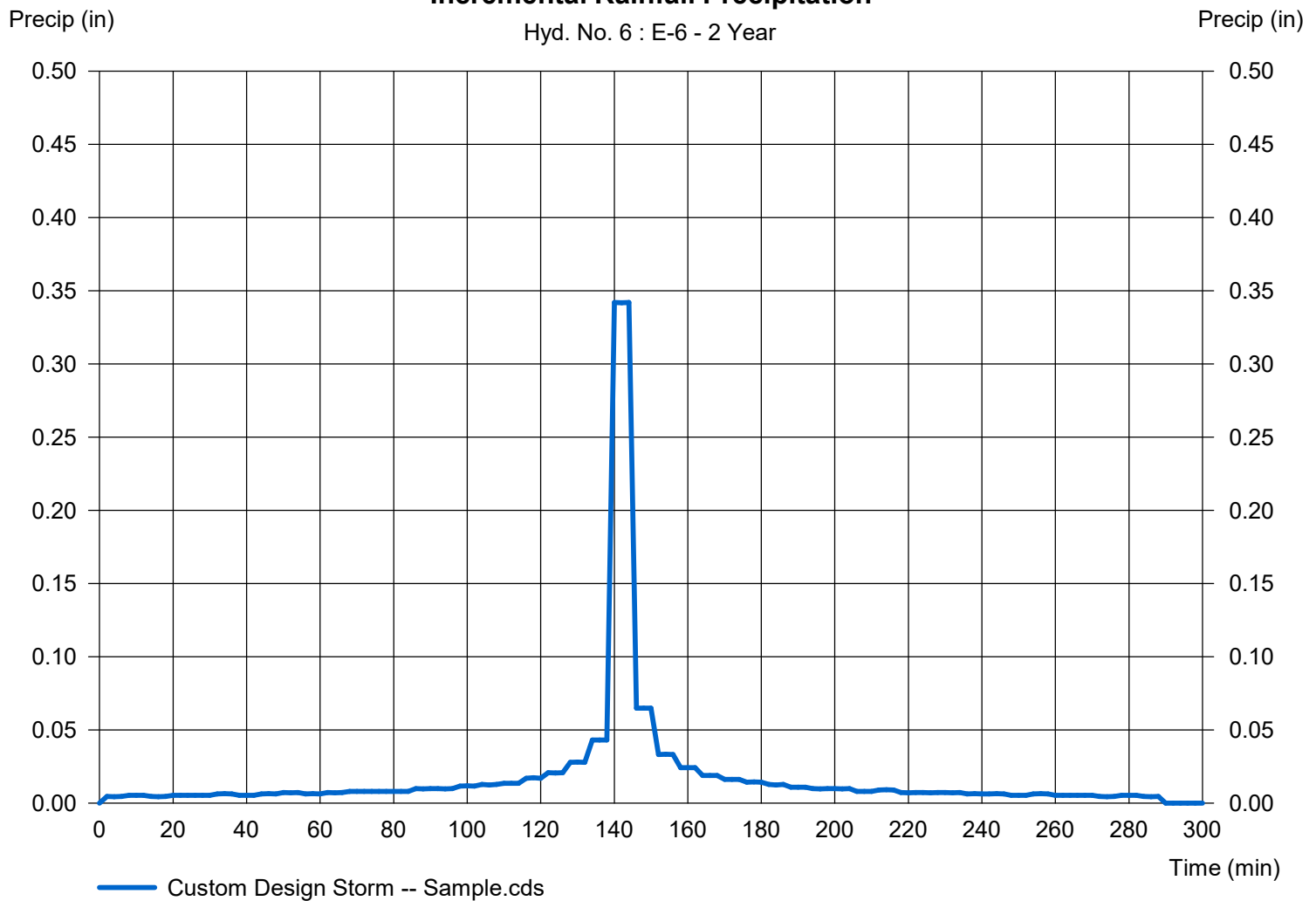
Hyd. No. 6

E-6

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : E-6 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

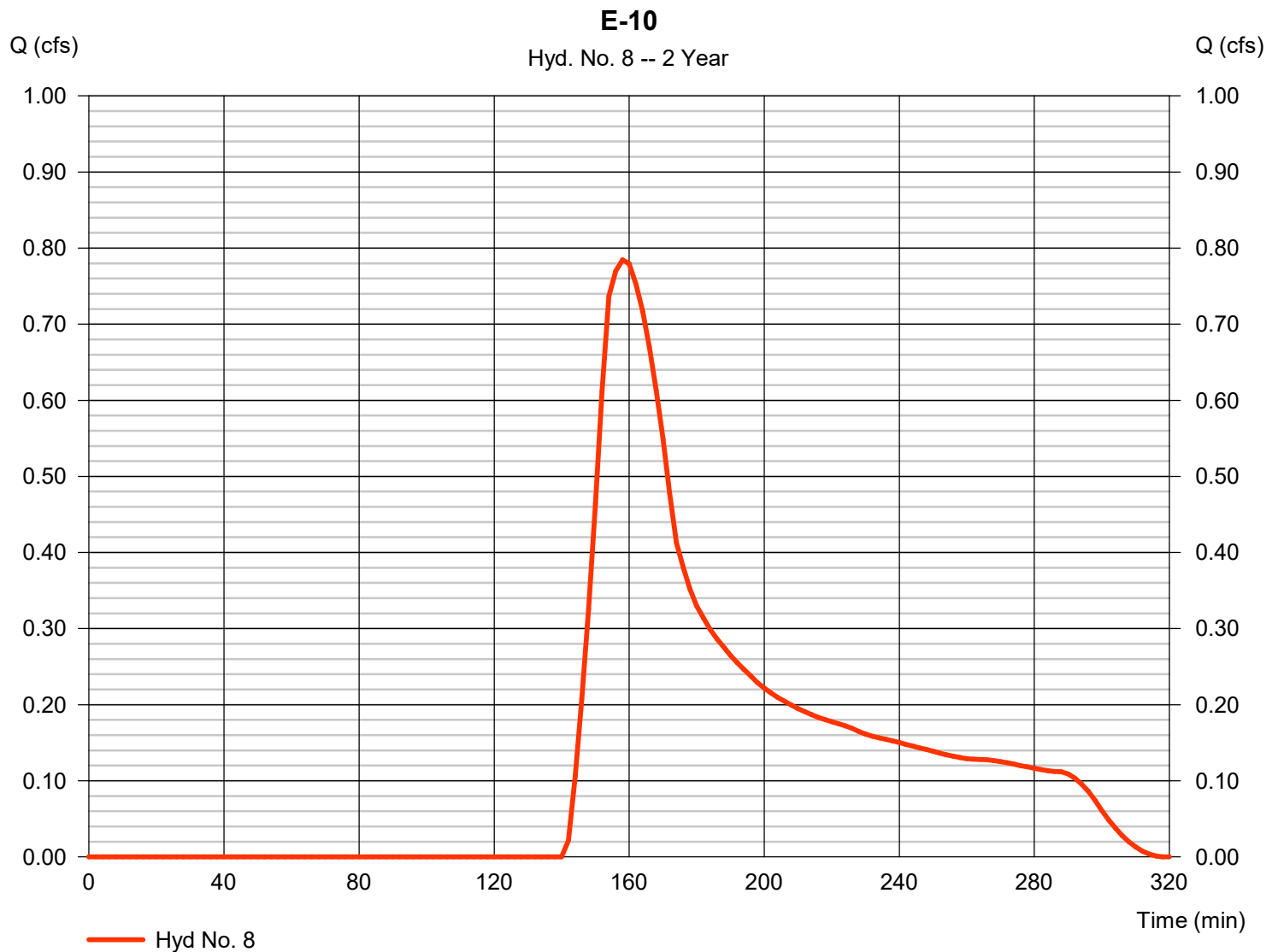
Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Hydrograph type	= SCS Runoff	Peak discharge	= 0.785 cfs
Storm frequency	= 2 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 2,401 cuft
Drainage area	= 1.920 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.920$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

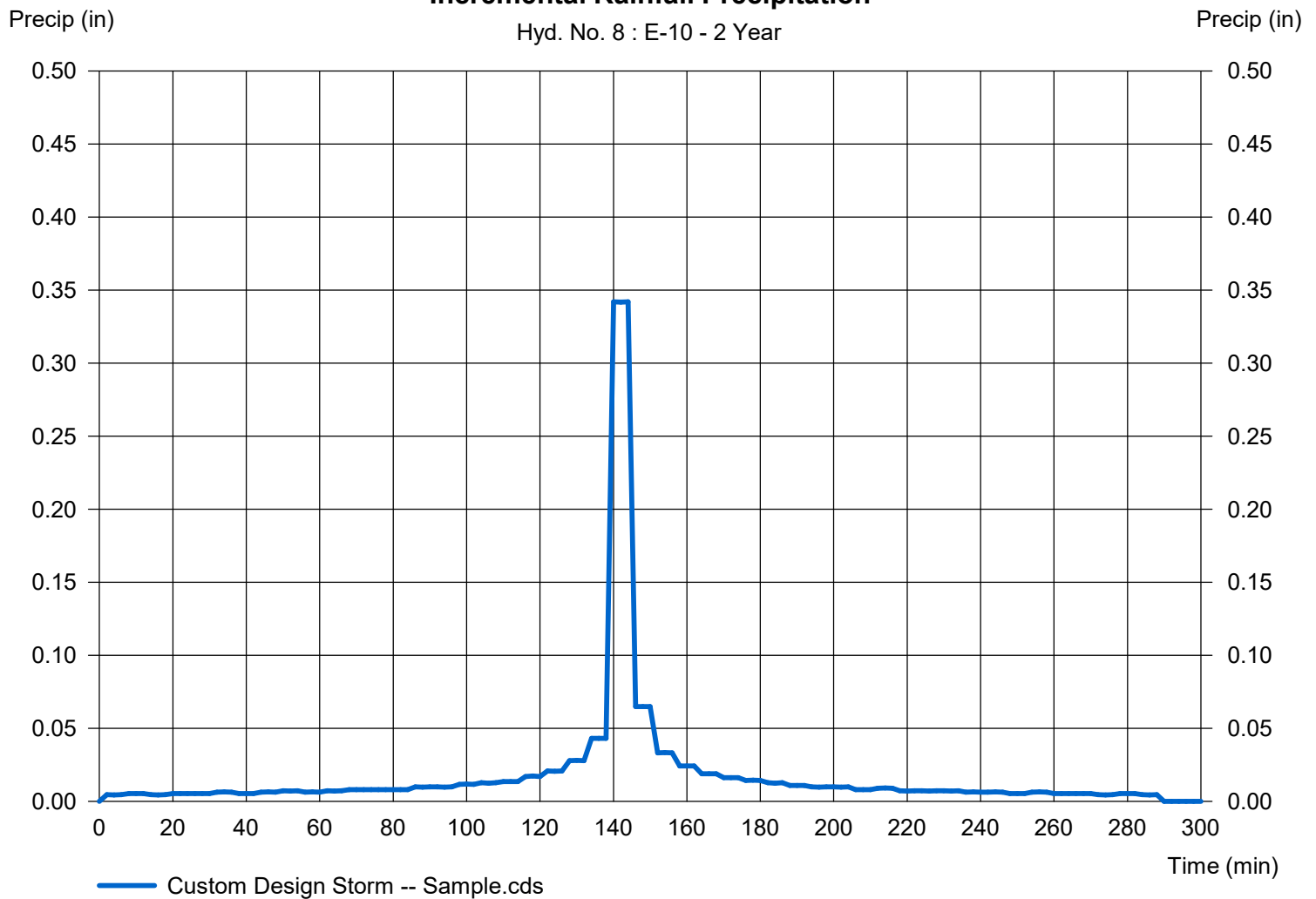
Hyd. No. 8

E-10

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : E-10 - 2 Year



Hydrograph Report

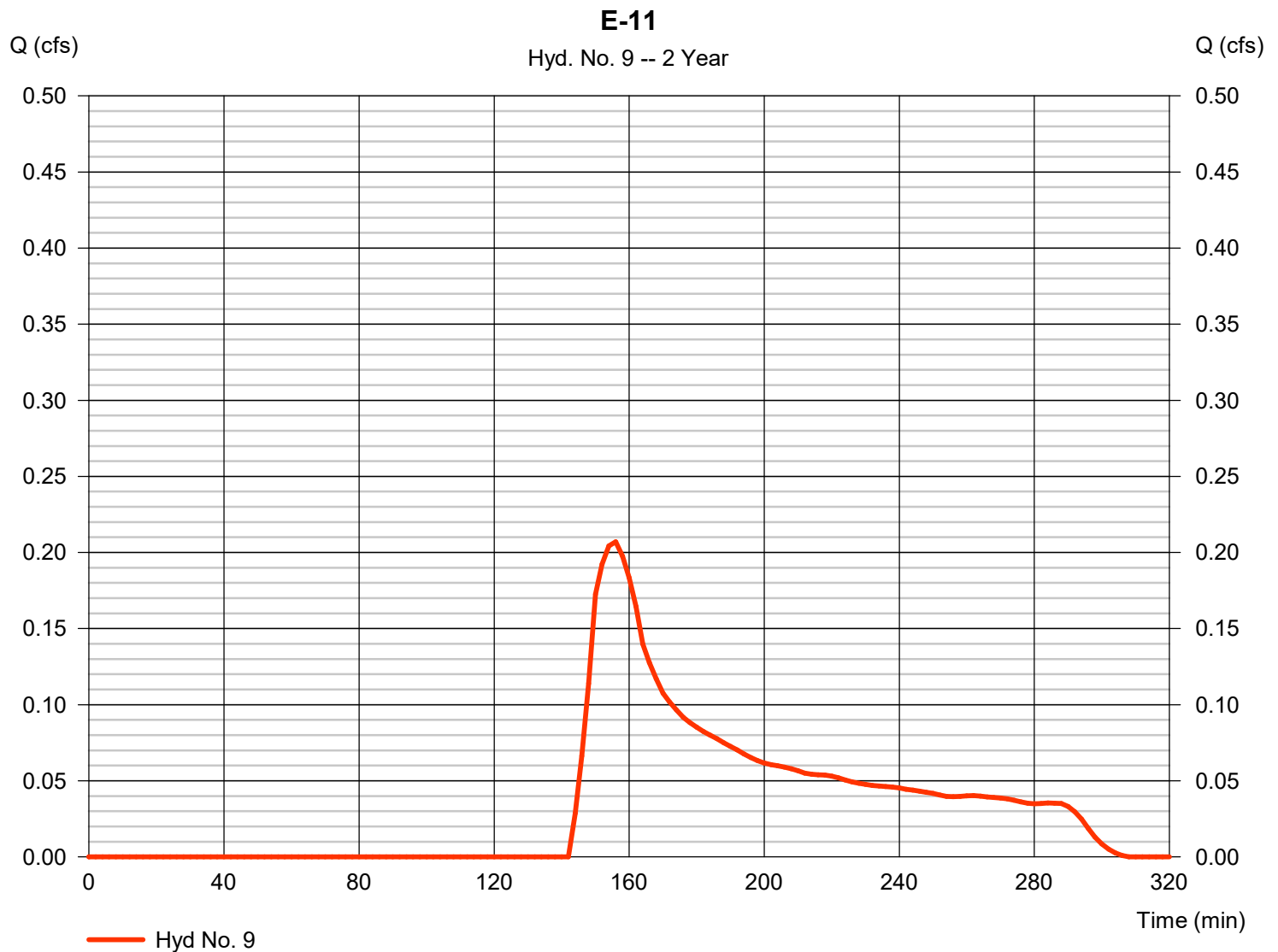
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Hydrograph type	= SCS Runoff	Peak discharge	= 0.207 cfs
Storm frequency	= 2 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 638 cuft
Drainage area	= 0.739 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

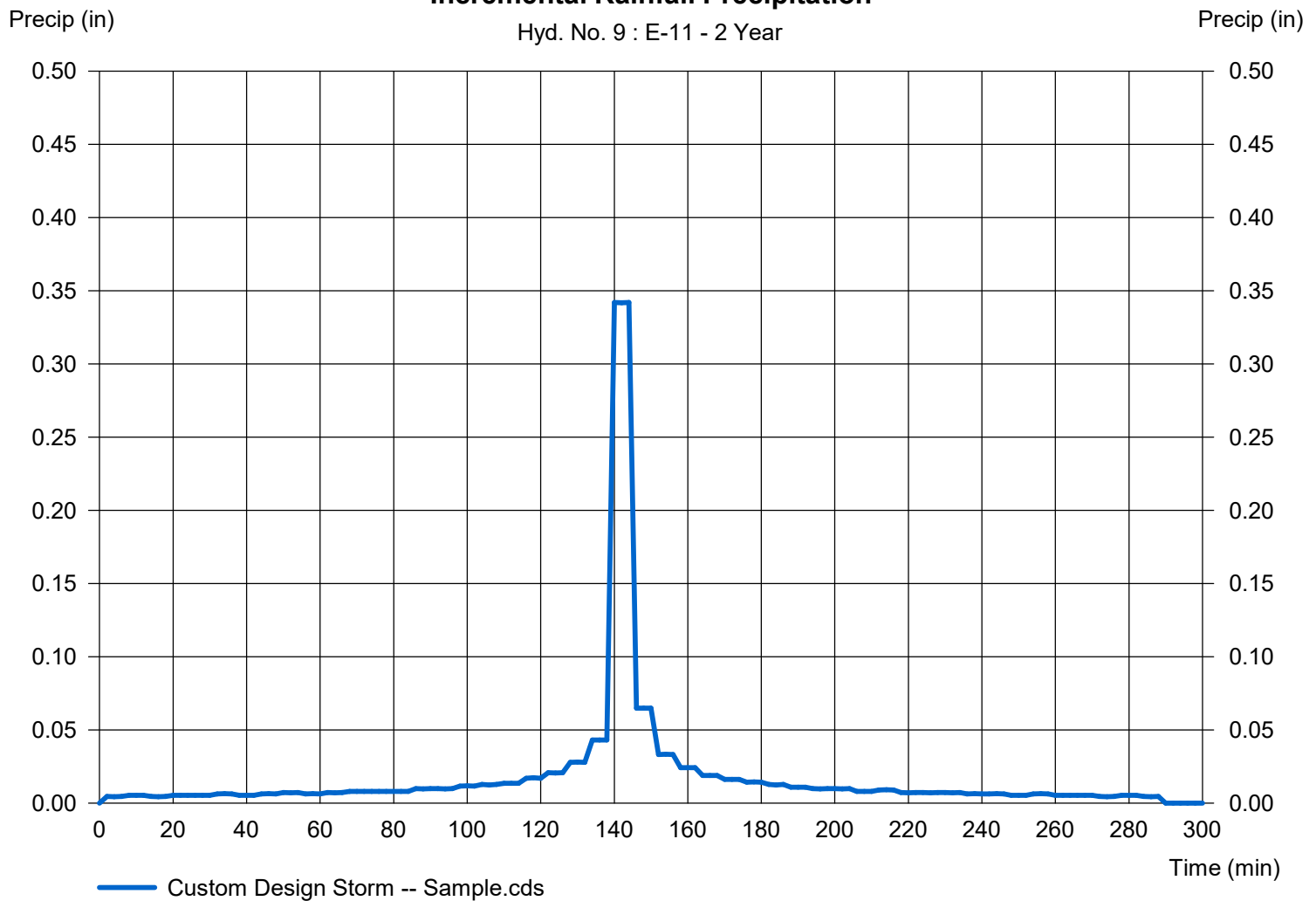
Hyd. No. 9

E-11

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 9 : E-11 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

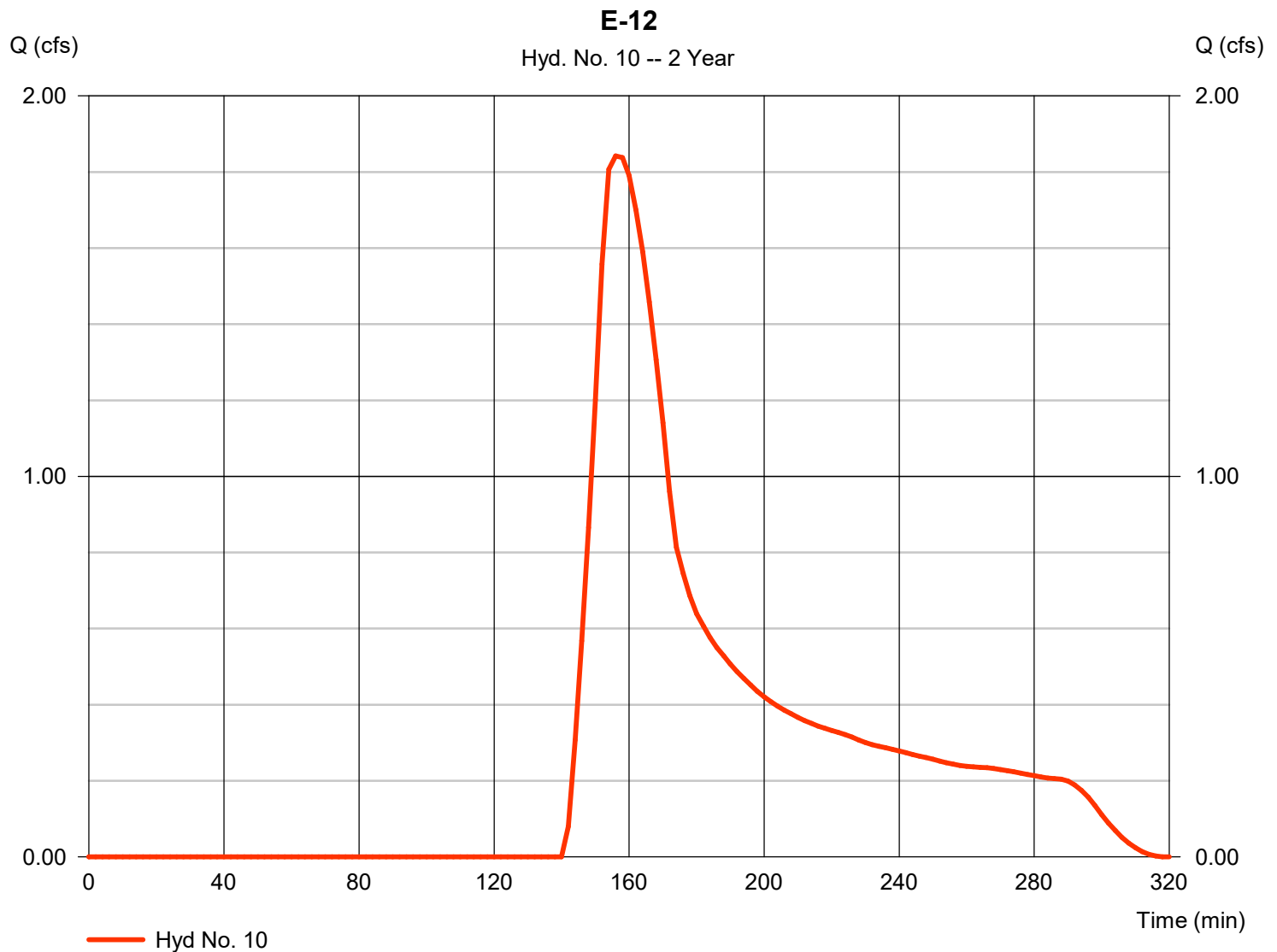
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-12

Hydrograph type	= SCS Runoff	Peak discharge	= 1.842 cfs
Storm frequency	= 2 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 4,978 cuft
Drainage area	= 2.900 ac	Curve number	= 68*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.900$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

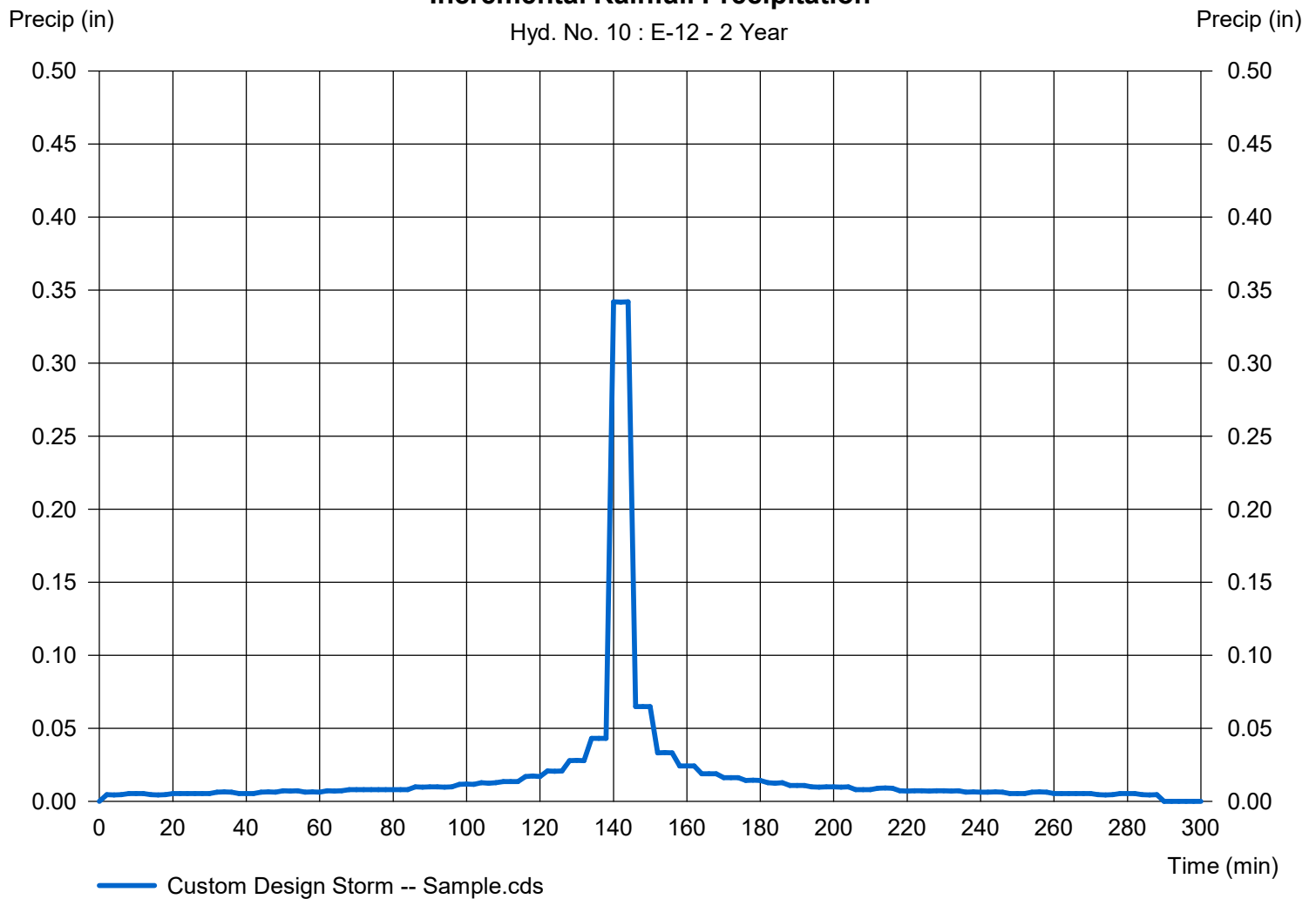
Hyd. No. 10

E-12

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-12 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 11

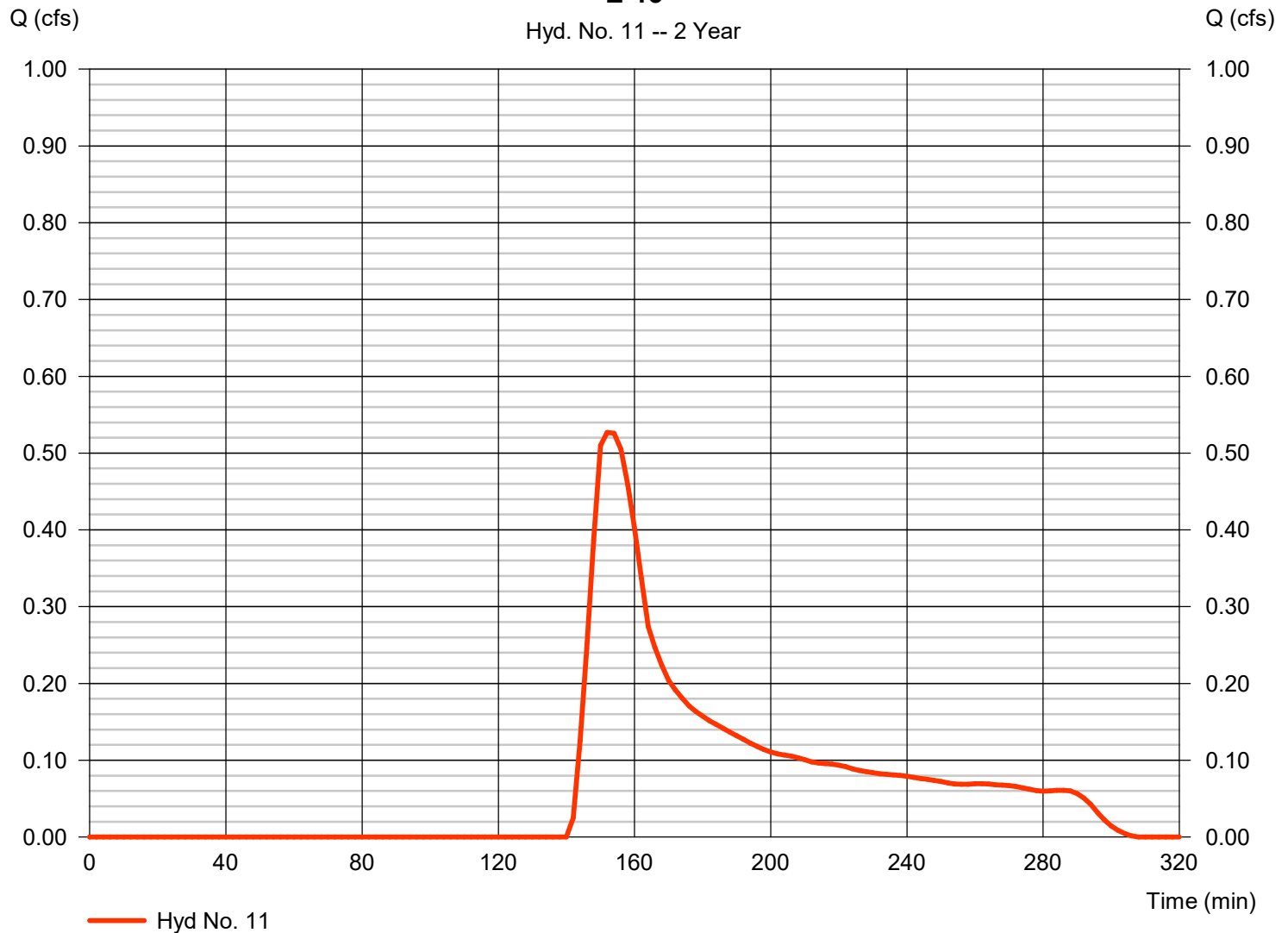
E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 0.527 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 1,302 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$

E-13

Hyd. No. 11 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

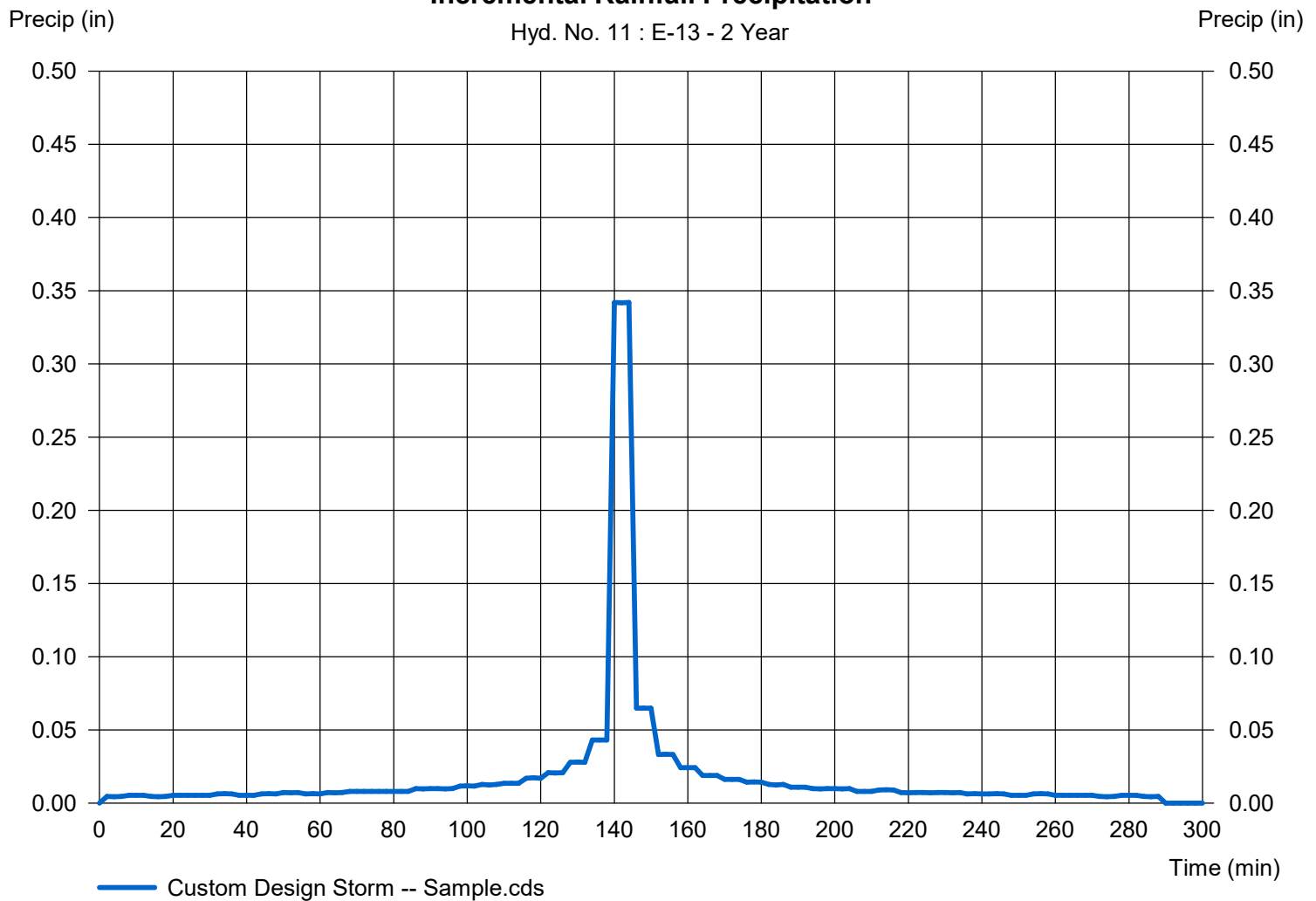
Hyd. No. 11

E-13

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-13 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

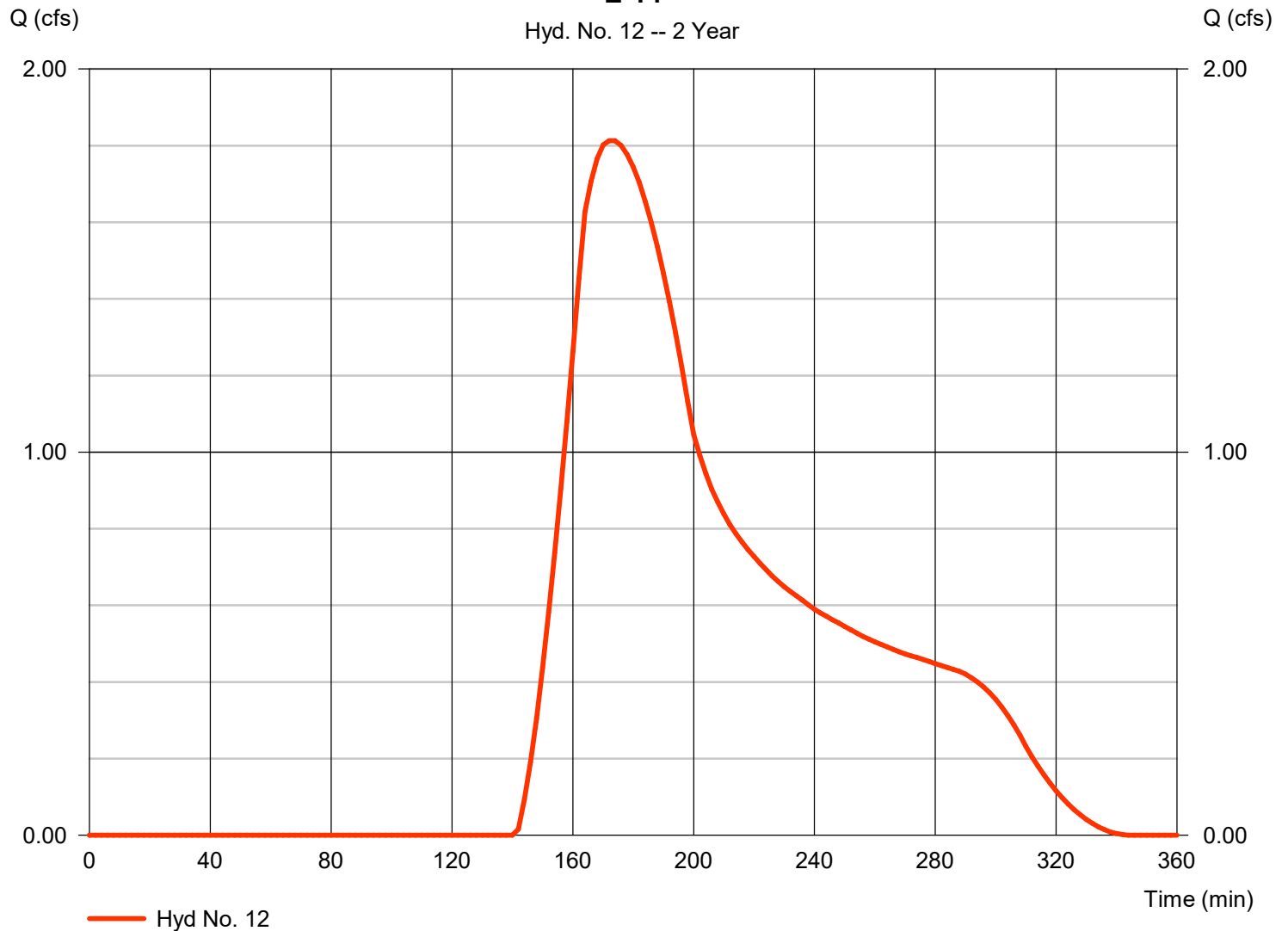
Hyd. No. 12

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 1.813 cfs
Storm frequency	= 2 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 8,241 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$

E-14



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

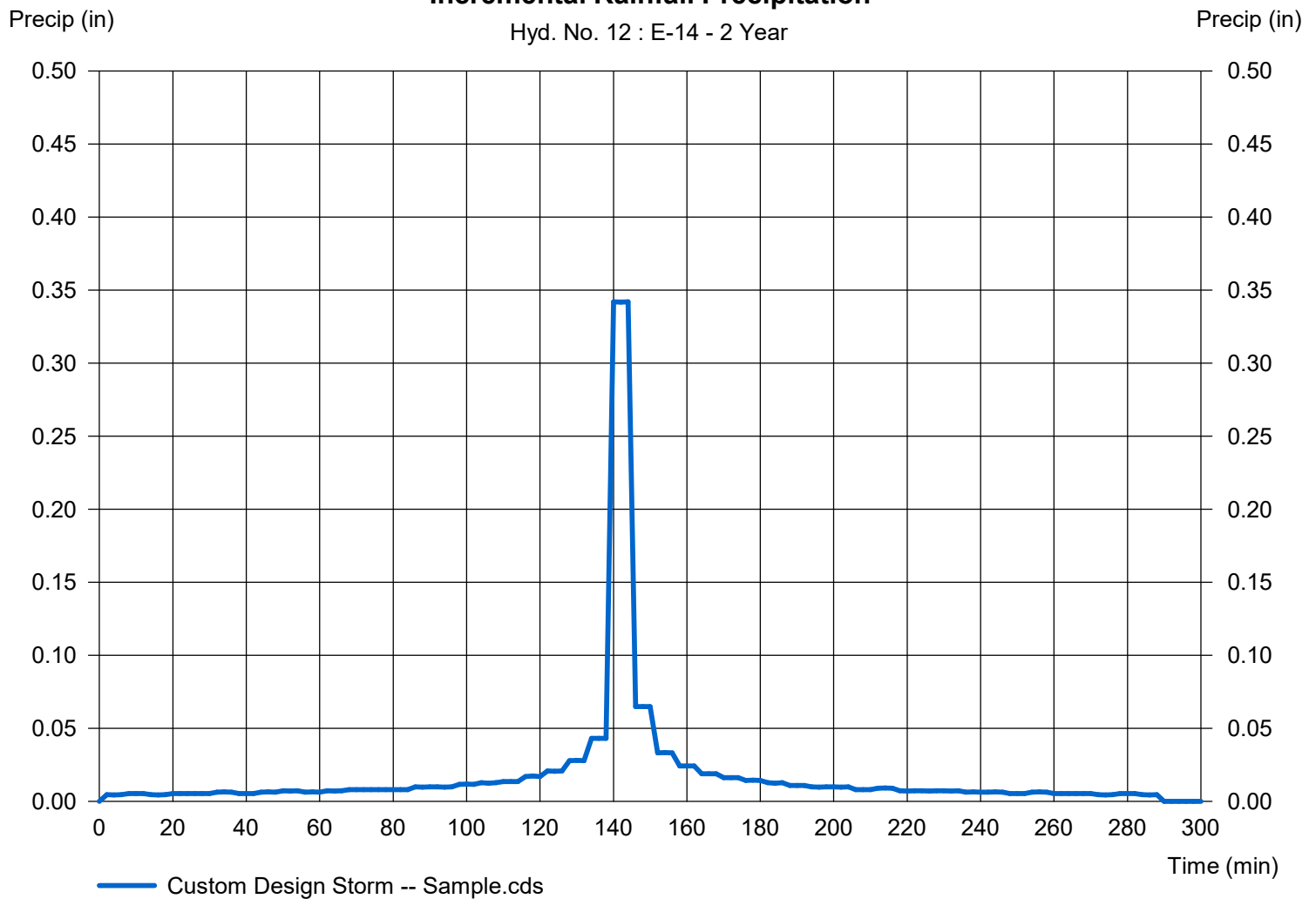
Hyd. No. 12

E-14

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : E-14 - 2 Year



Hydrograph Report

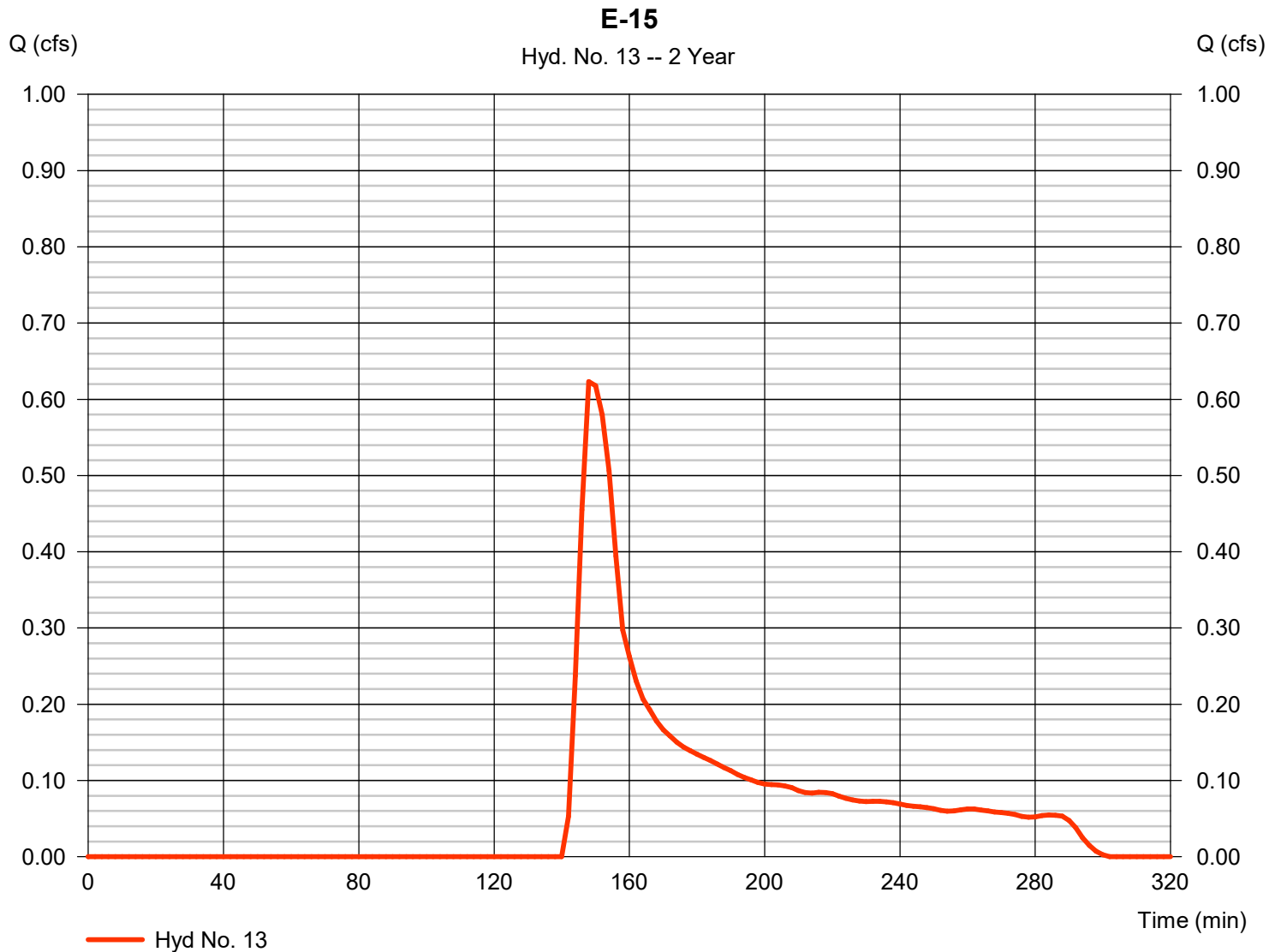
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 0.623 cfs
Storm frequency	= 2 yrs	Time to peak	= 148 min
Time interval	= 2 min	Hyd. volume	= 1,200 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

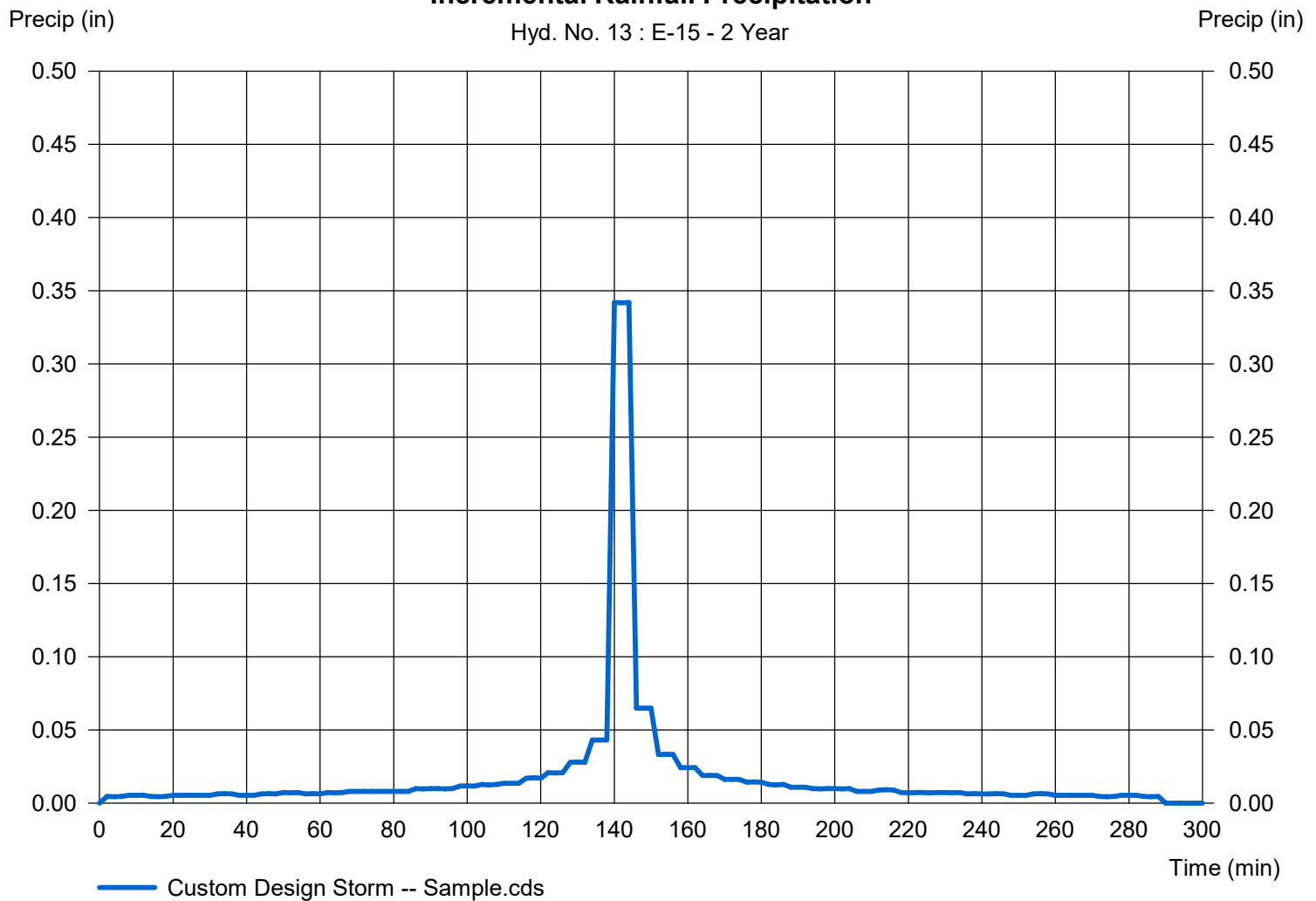
Hyd. No. 13

E-15

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : E-15 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

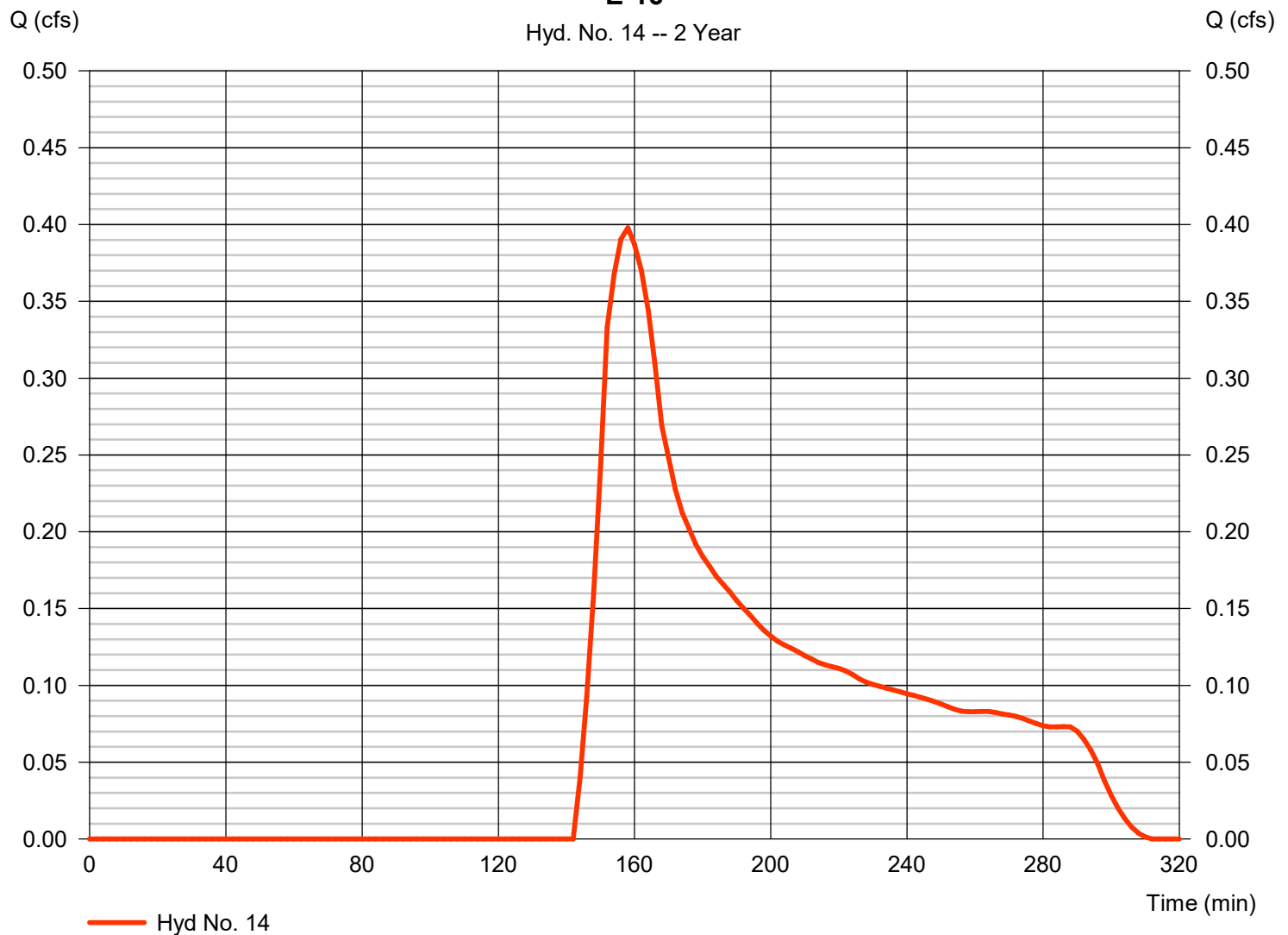
Hyd. No. 14

E-16

Hydrograph type	= SCS Runoff	Peak discharge	= 0.398 cfs
Storm frequency	= 2 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 1,322 cuft
Drainage area	= 1.620 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-16

Hyd. No. 14 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

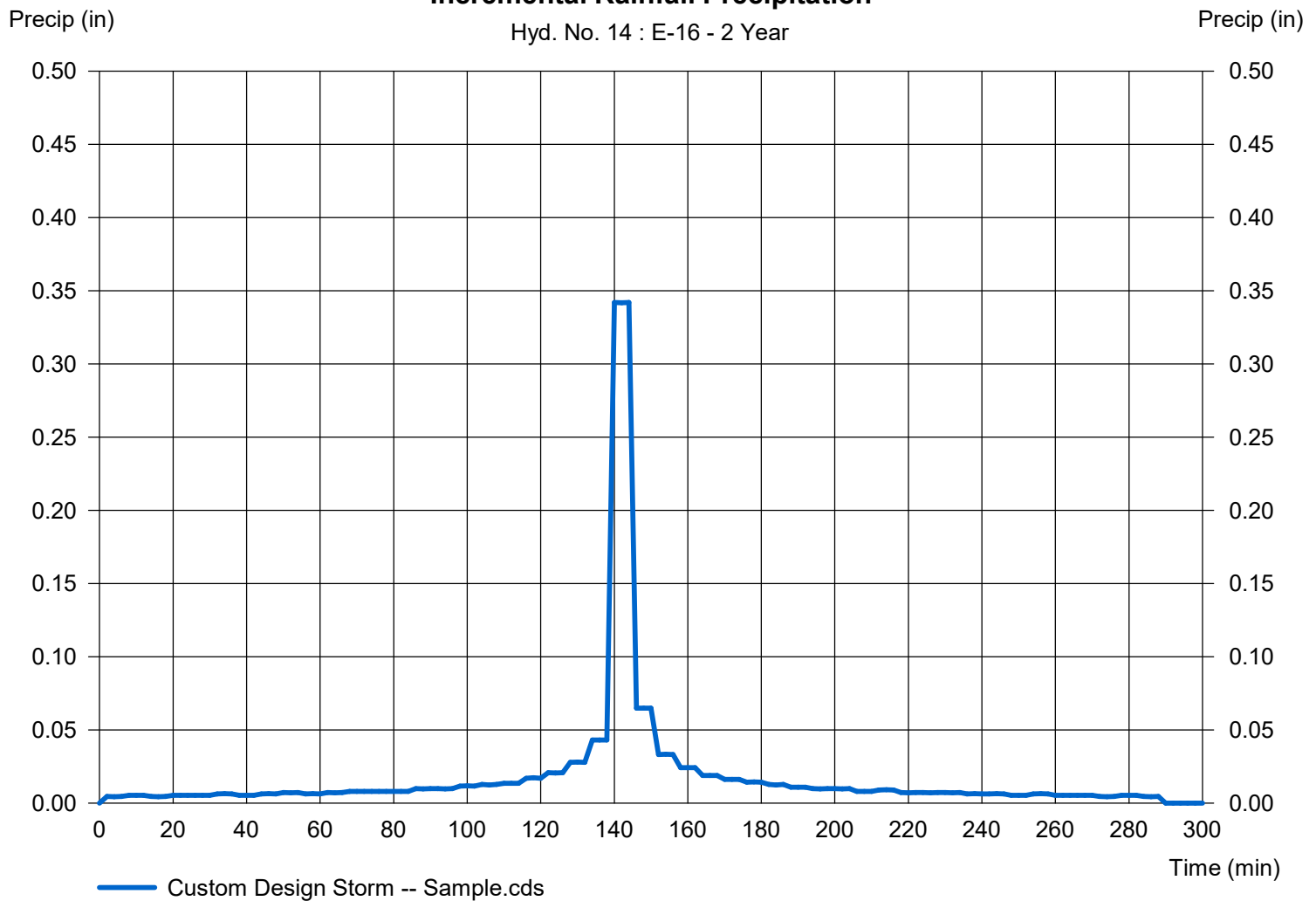
Hyd. No. 14

E-16

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 14 : E-16 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

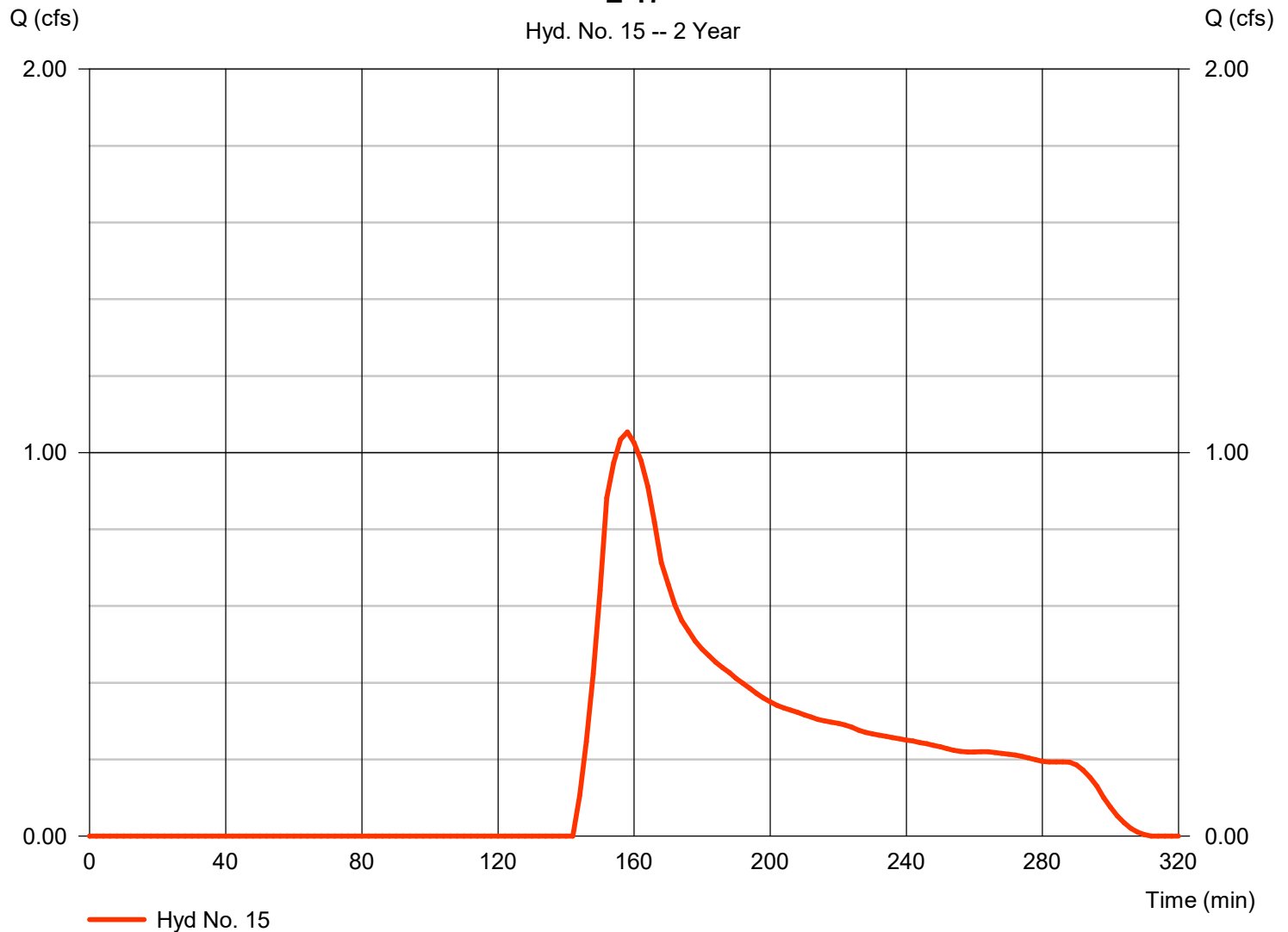
Tuesday, 04 / 7 / 2020

Hyd. No. 15

E-17

Hydrograph type	= SCS Runoff	Peak discharge	= 1.054 cfs
Storm frequency	= 2 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 3,502 cuft
Drainage area	= 4.291 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-17



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

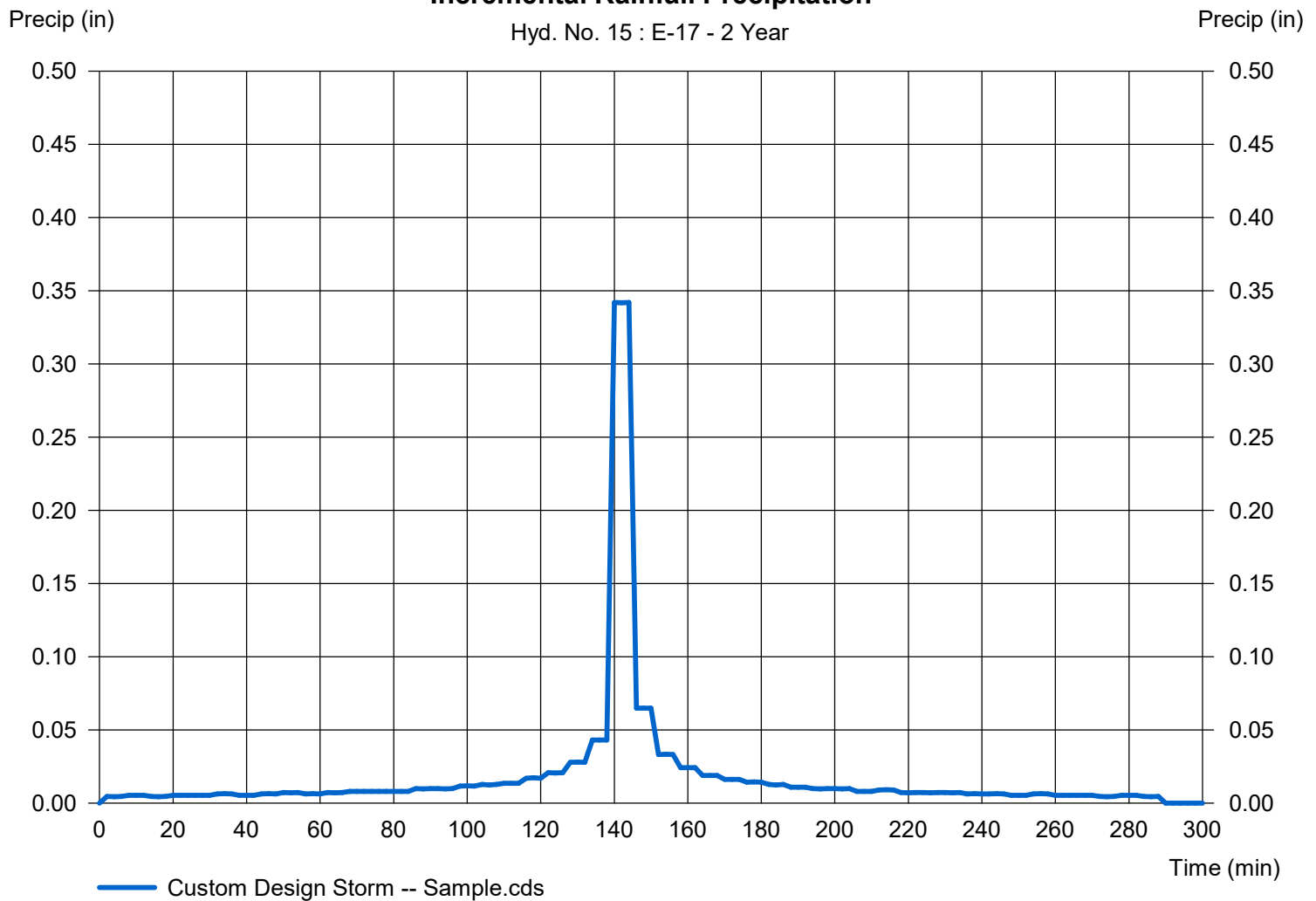
Hyd. No. 15

E-17

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : E-17 - 2 Year



Hydrograph Report

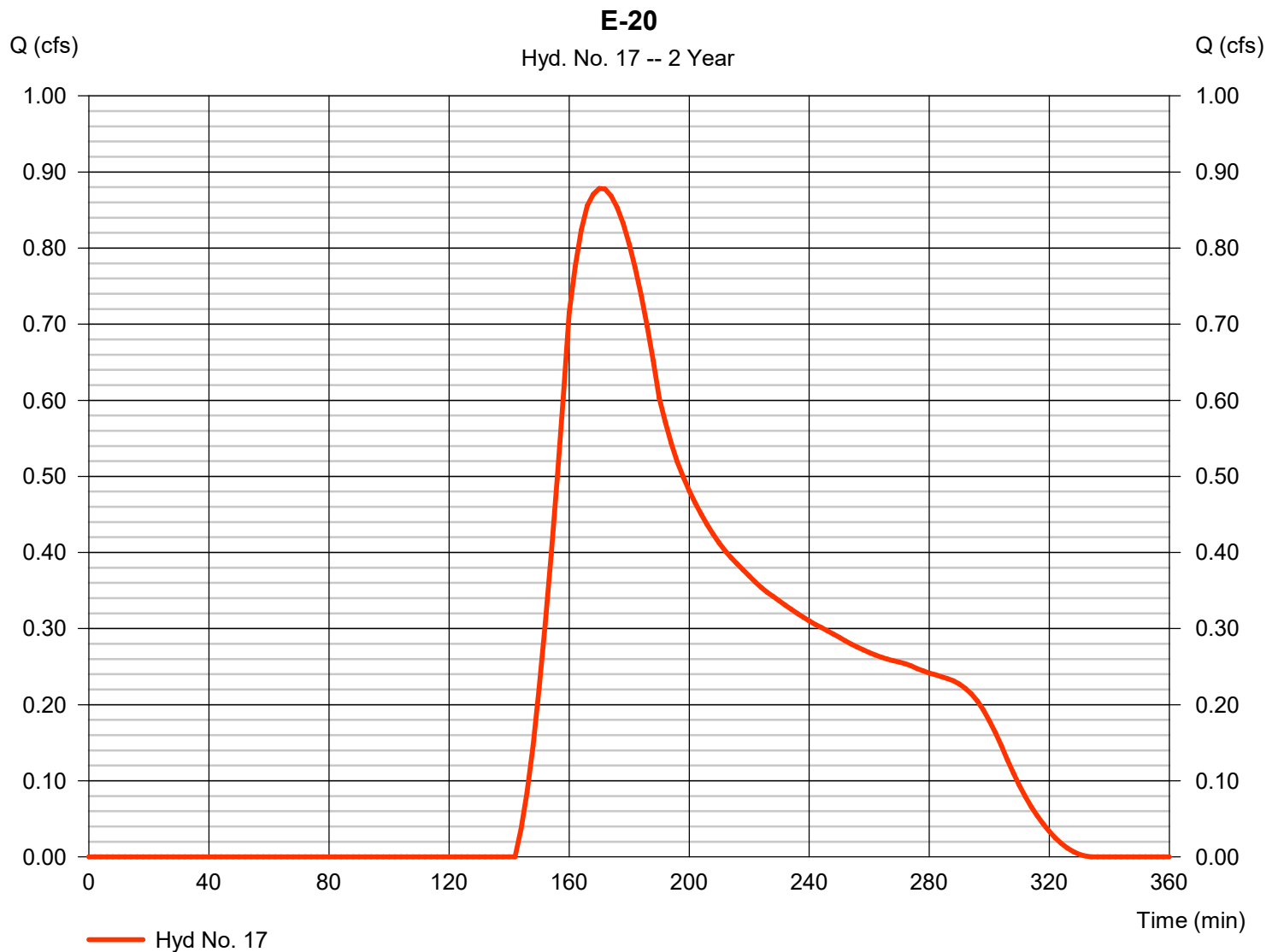
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 17

E-20

Hydrograph type	= SCS Runoff	Peak discharge	= 0.878 cfs
Storm frequency	= 2 yrs	Time to peak	= 170 min
Time interval	= 2 min	Hyd. volume	= 4,027 cuft
Drainage area	= 4.811 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

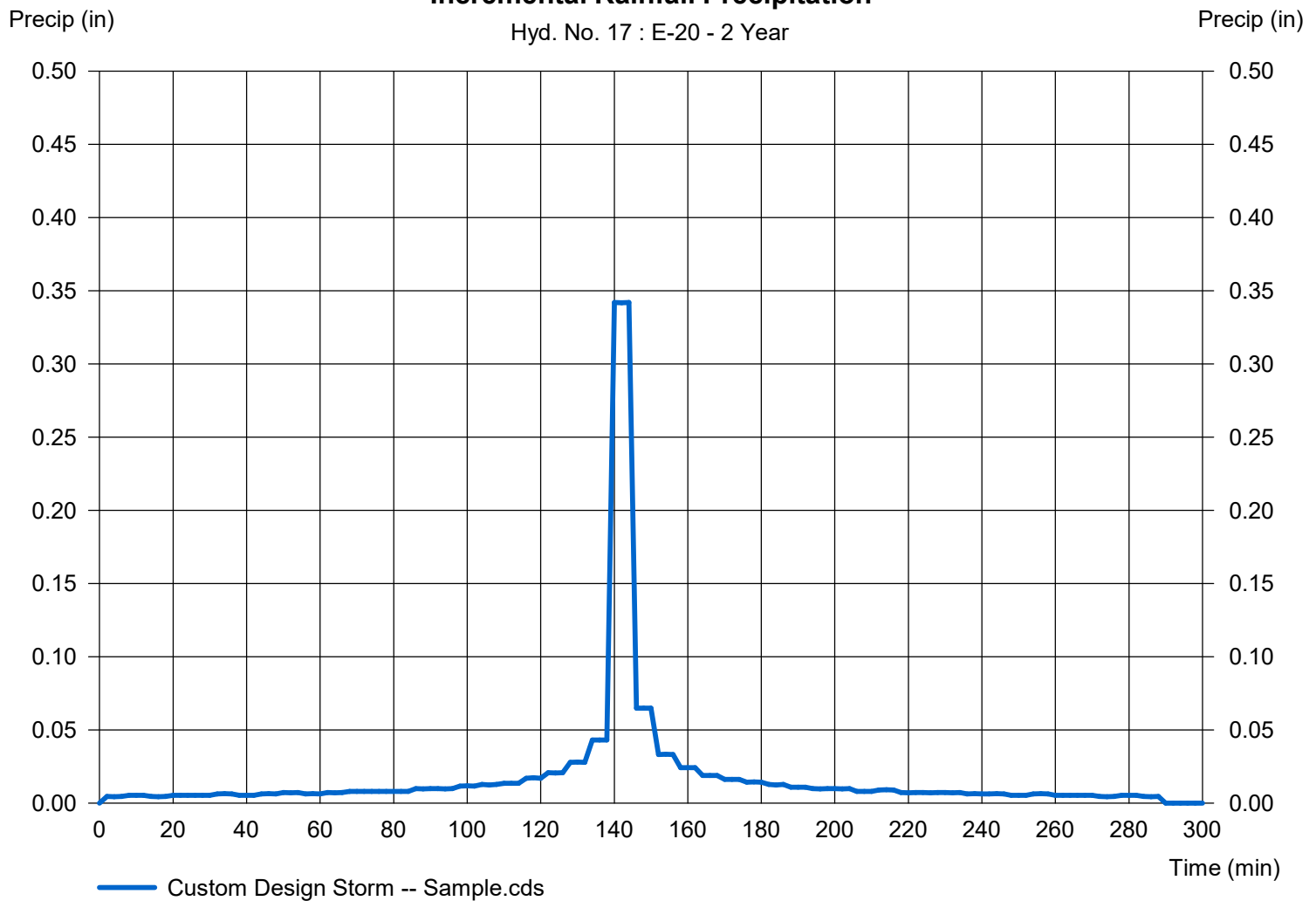
Hyd. No. 17

E-20

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 17 : E-20 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

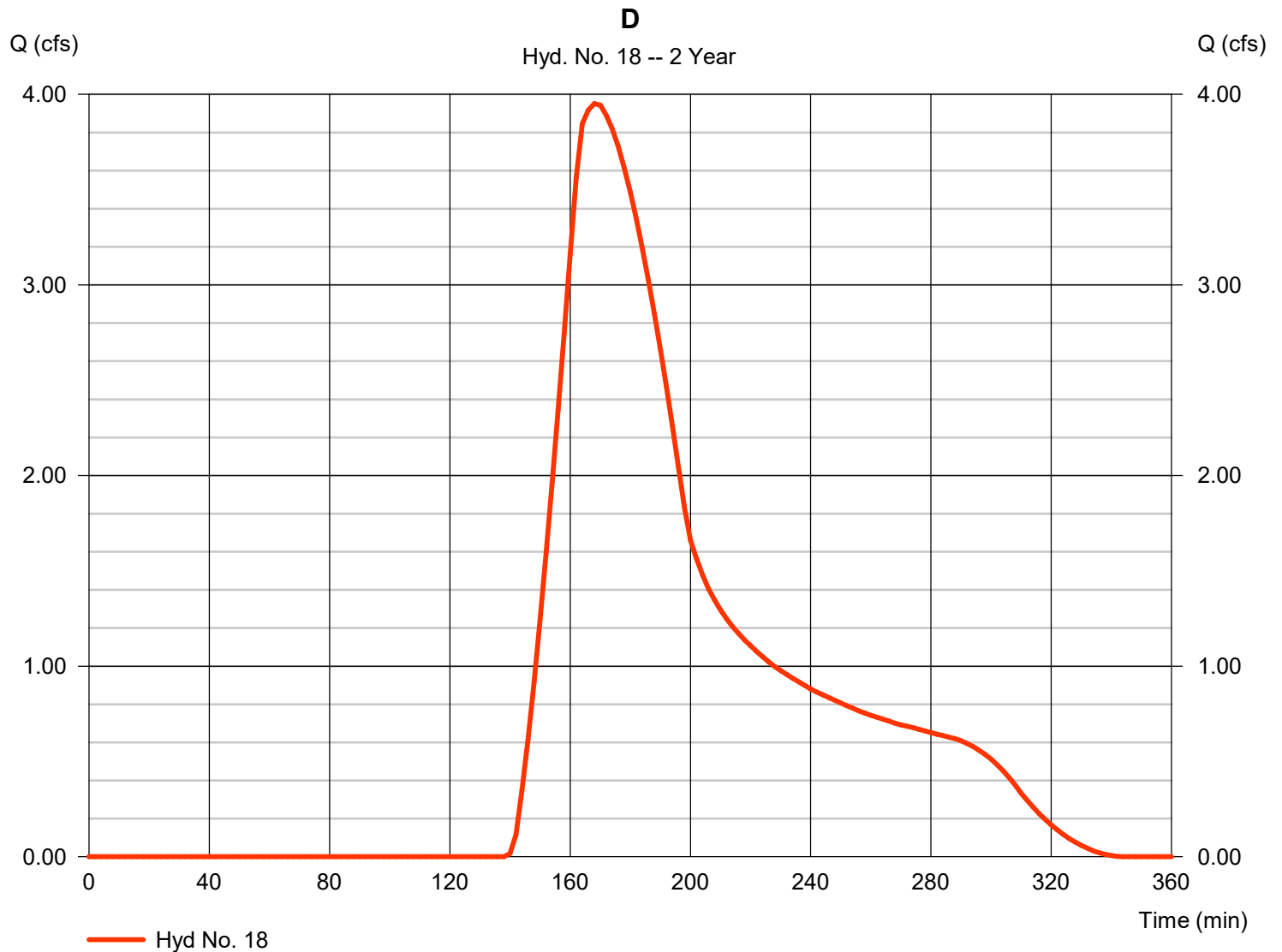
Tuesday, 04 / 7 / 2020

Hyd. No. 18

D

Hydrograph type	= SCS Runoff	Peak discharge	= 3.951 cfs
Storm frequency	= 2 yrs	Time to peak	= 168 min
Time interval	= 2 min	Hyd. volume	= 15,058 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$

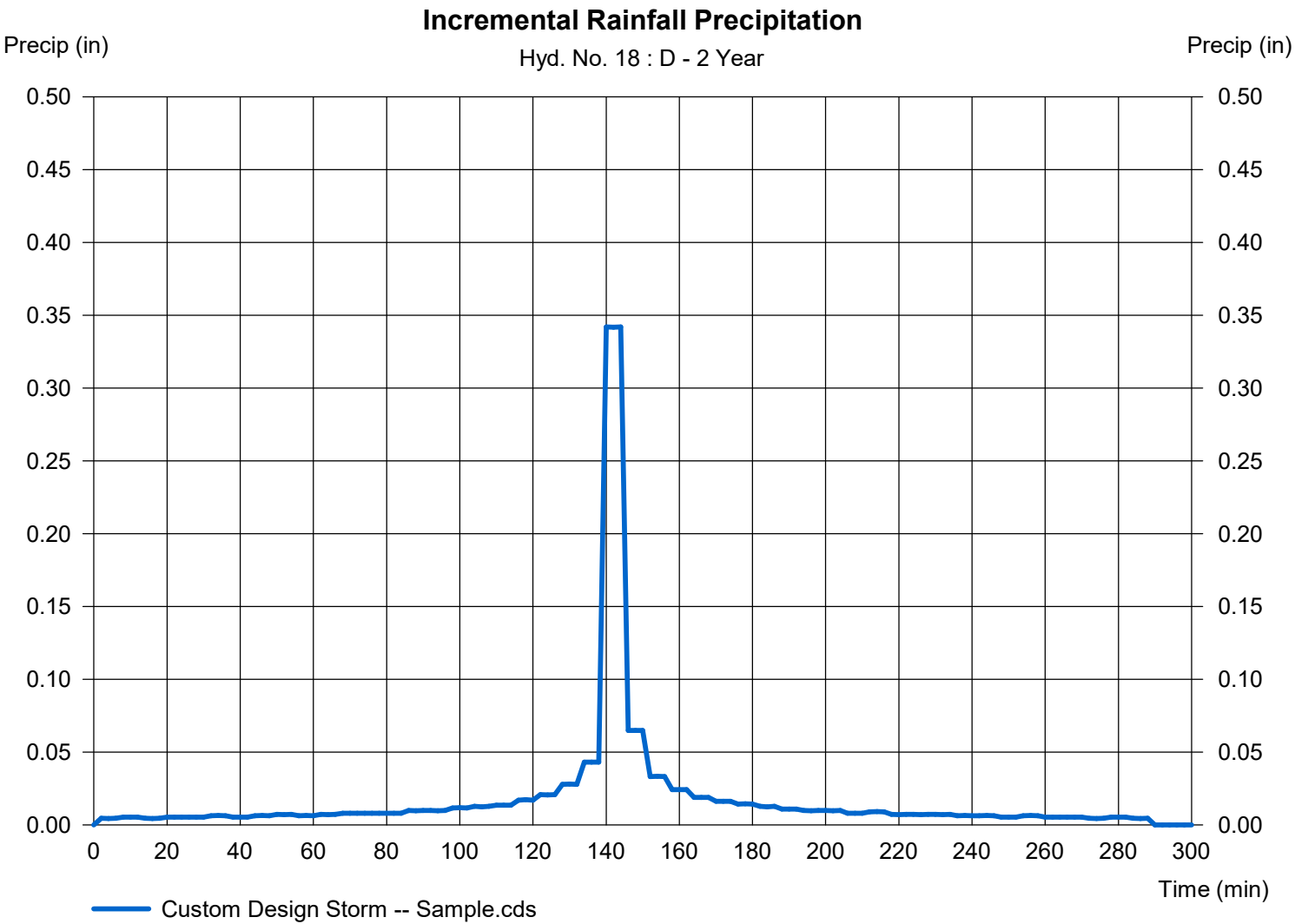


Precipitation Report

Hyd. No. 18

D

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

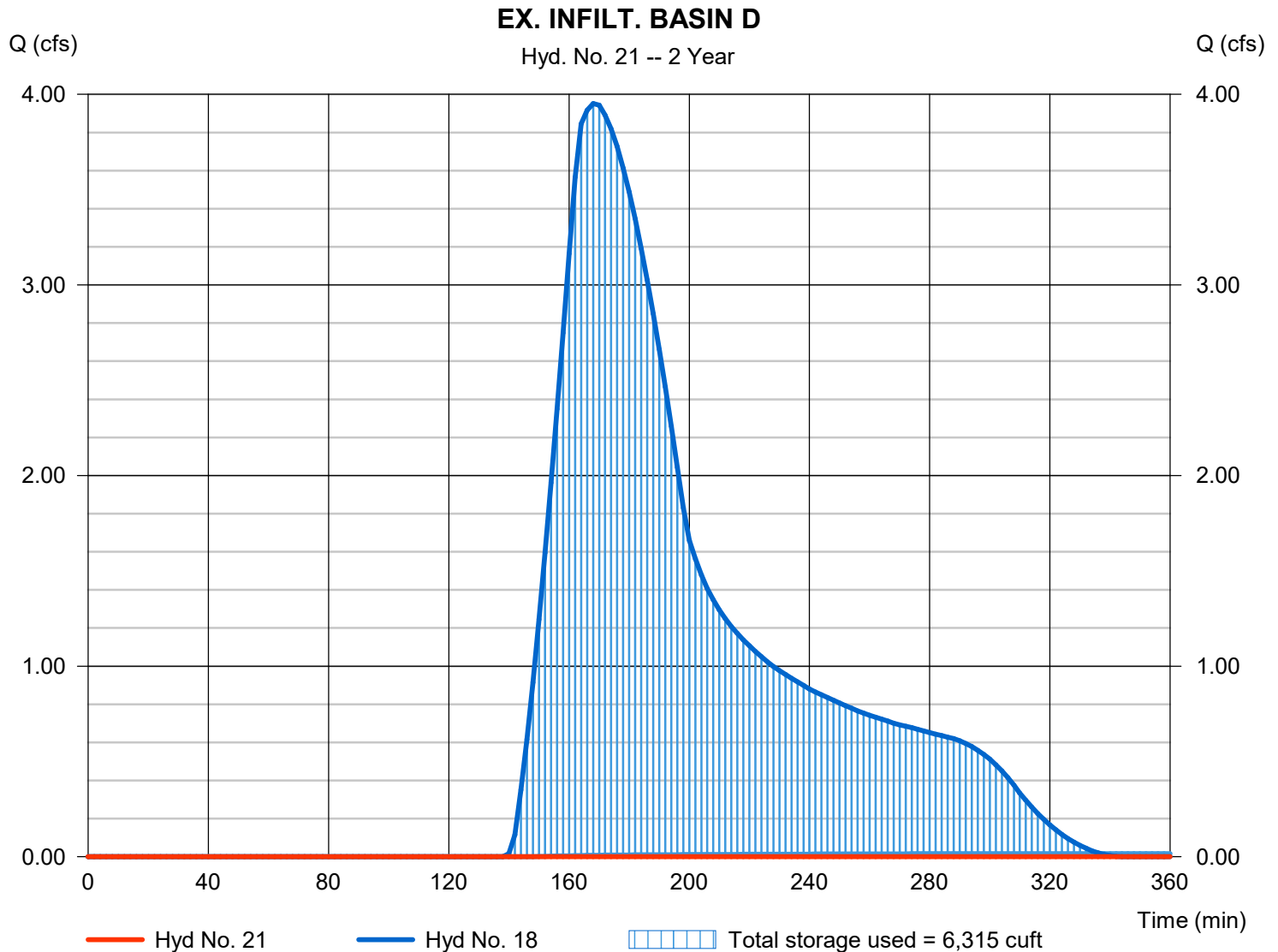
Tuesday, 04 / 7 / 2020

Hyd. No. 21

EX. INFILT. BASIN D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 322 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 18 - D	Max. Elevation	= 990.20 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 6,315 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

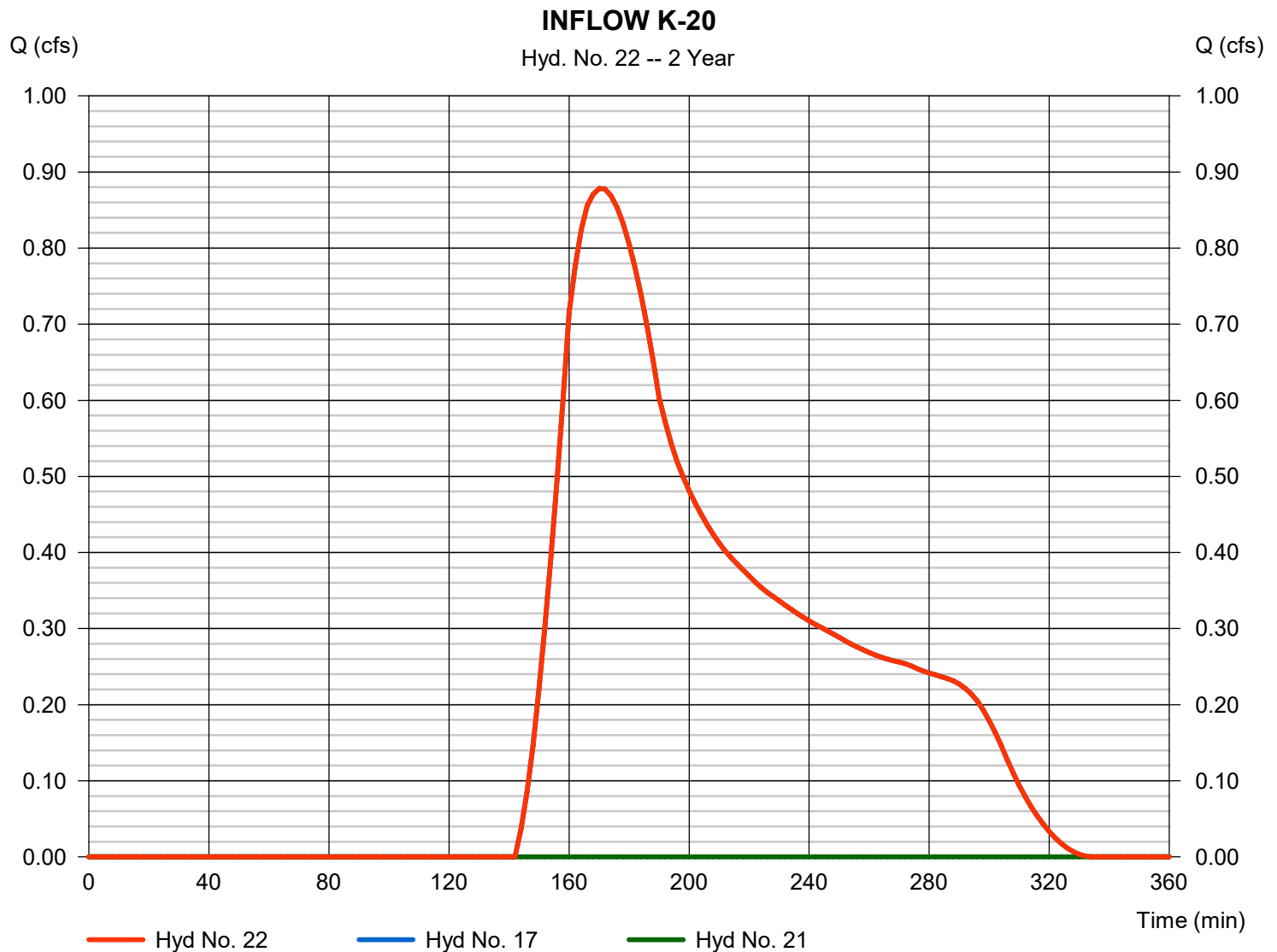
Tuesday, 04 / 7 / 2020

Hyd. No. 22

INFLOW K-20

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 17, 21

Peak discharge = 0.878 cfs
Time to peak = 170 min
Hyd. volume = 4,027 cuft
Contrib. drain. area = 4.811 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

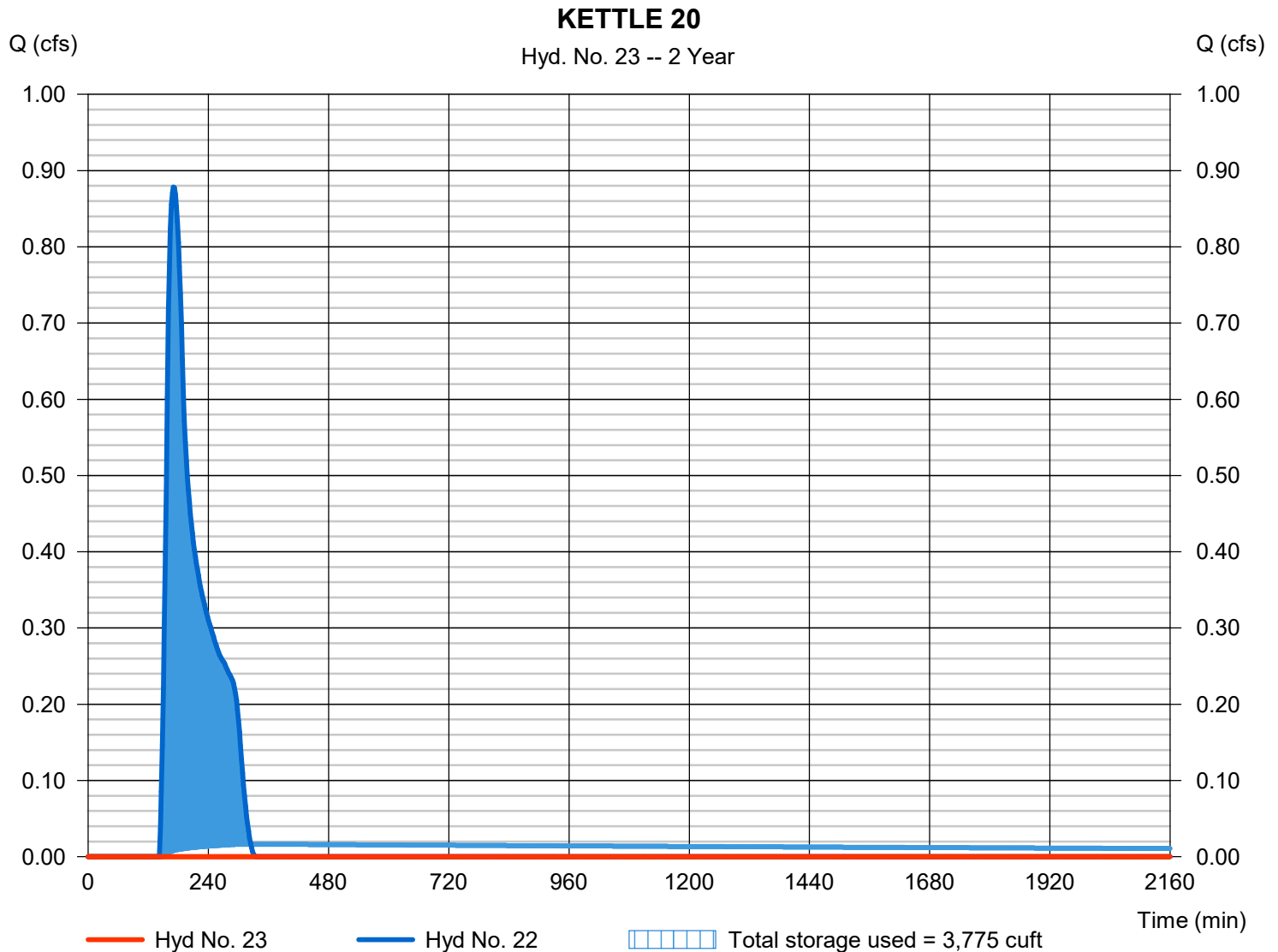
Tuesday, 04 / 7 / 2020

Hyd. No. 23

KETTLE 20

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 228 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 22 - INFLOW K-20	Max. Elevation	= 992.26 ft
Reservoir name	= K-20	Max. Storage	= 3,775 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

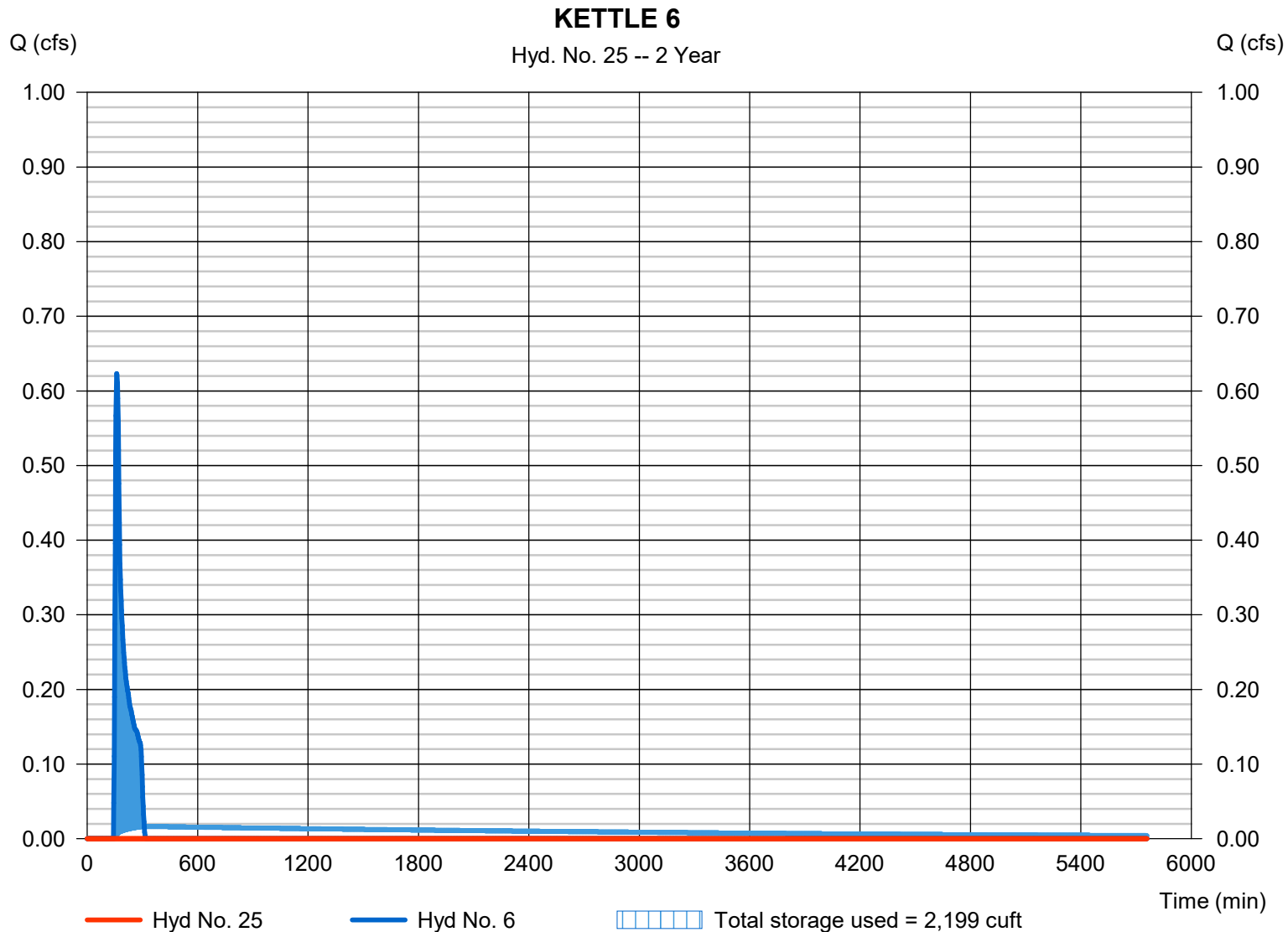
Tuesday, 04 / 7 / 2020

Hyd. No. 25

KETTLE 6

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 296 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 6 - E-6	Max. Elevation	= 1011.14 ft
Reservoir name	= K-6	Max. Storage	= 2,199 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

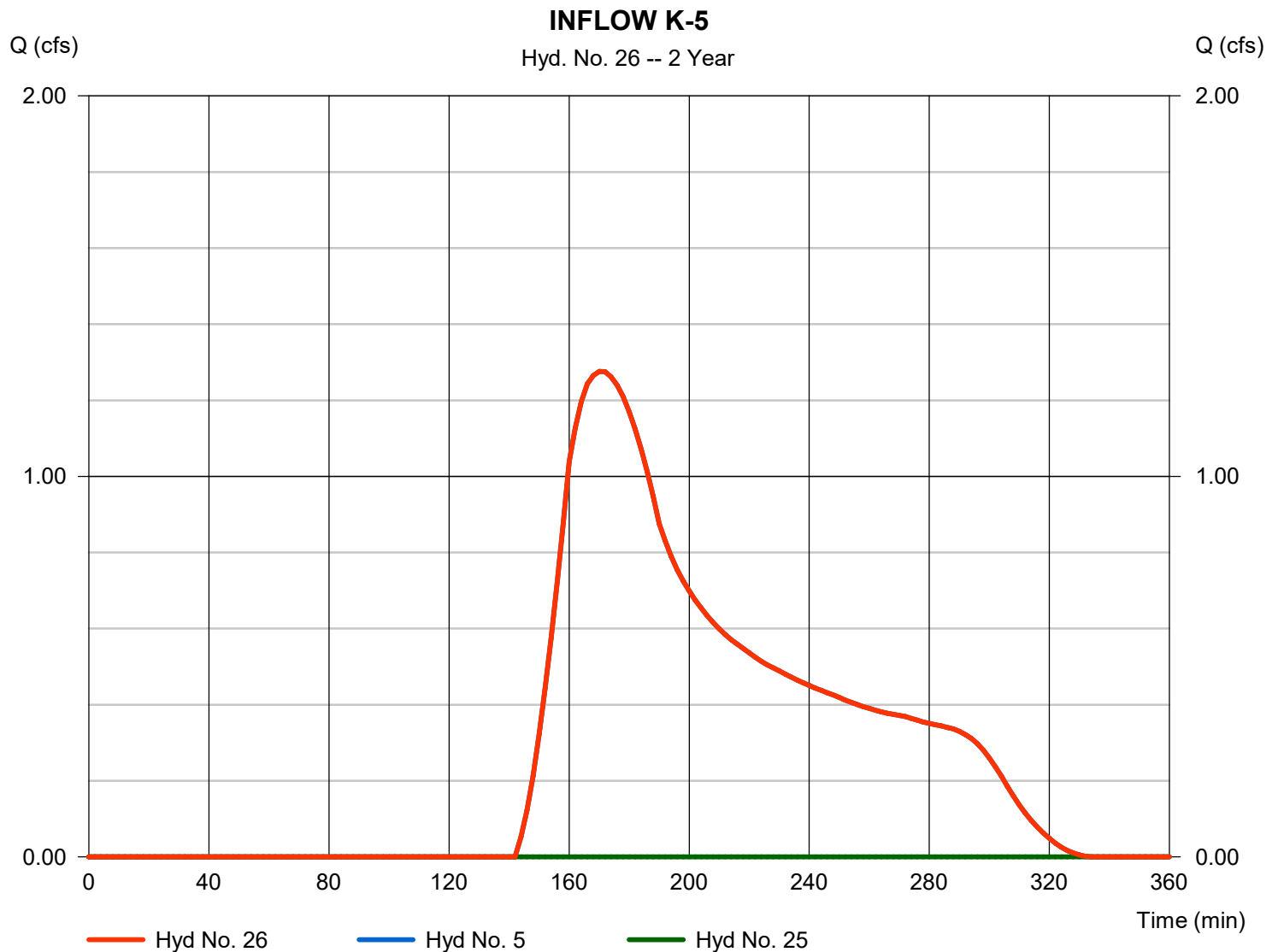
Tuesday, 04 / 7 / 2020

Hyd. No. 26

INFLOW K-5

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 5, 25

Peak discharge = 1.276 cfs
Time to peak = 170 min
Hyd. volume = 5,848 cuft
Contrib. drain. area = 6.987 ac



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

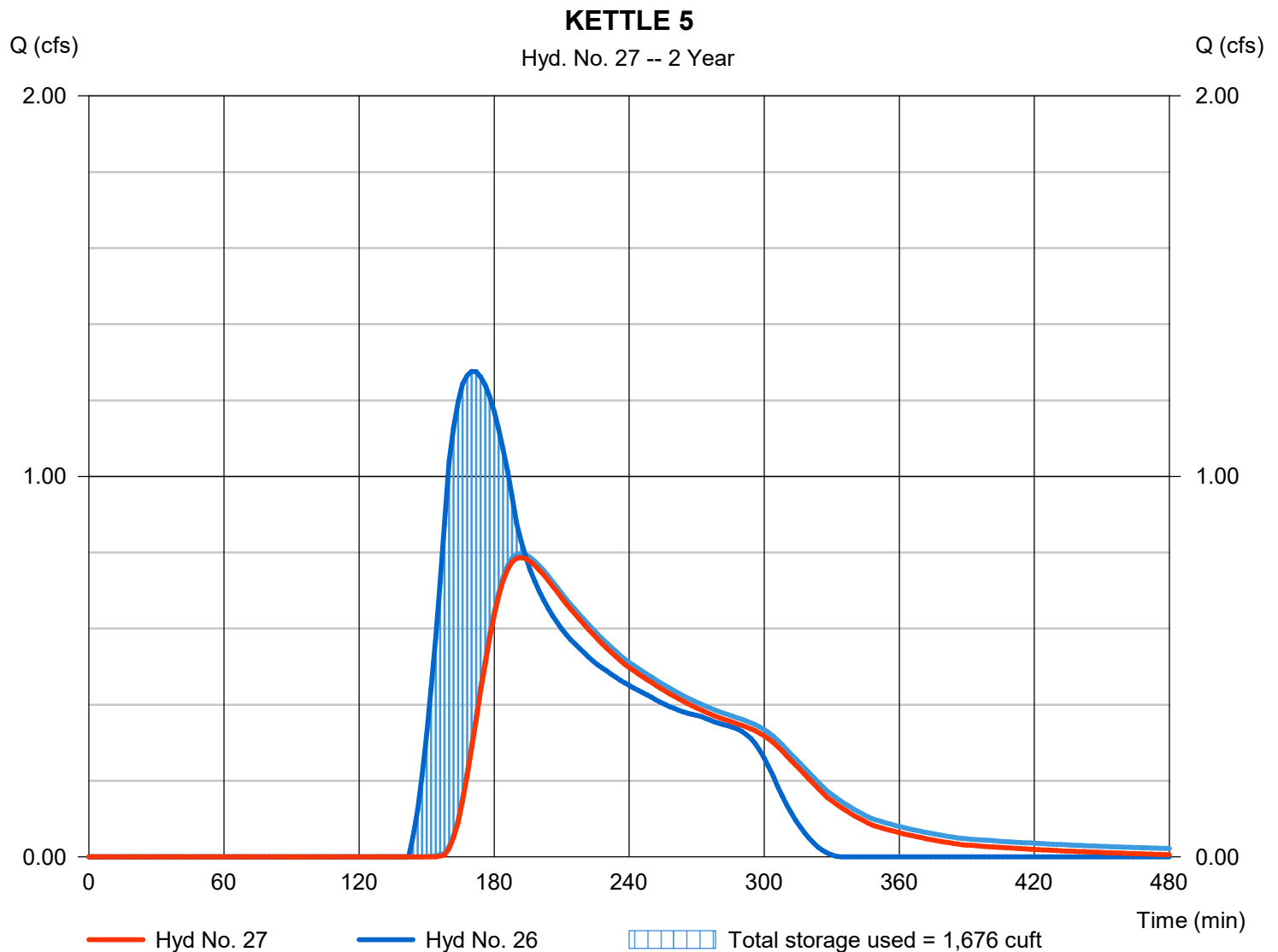
Tuesday, 04 / 7 / 2020

Hyd. No. 27

KETTLE 5

Hydrograph type	= Reservoir	Peak discharge	= 0.787 cfs
Storm frequency	= 2 yrs	Time to peak	= 192 min
Time interval	= 2 min	Hyd. volume	= 4,981 cuft
Inflow hyd. No.	= 26 - INFLOW K-5	Max. Elevation	= 982.99 ft
Reservoir name	= K-5	Max. Storage	= 1,676 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

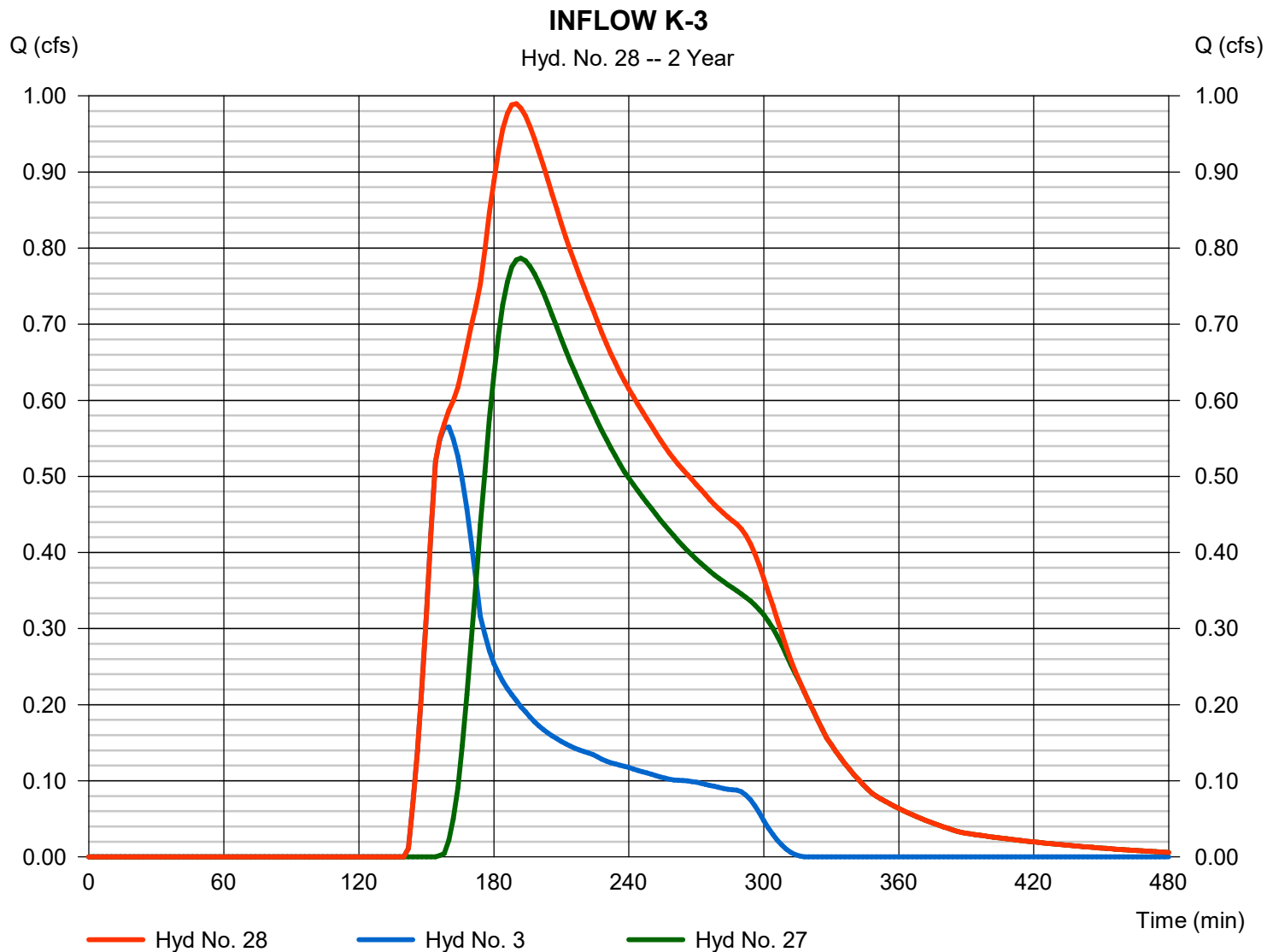
Tuesday, 04 / 7 / 2020

Hyd. No. 28

INFLOW K-3

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 3, 27

Peak discharge = 0.990 cfs
Time to peak = 190 min
Hyd. volume = 6,789 cuft
Contrib. drain. area = 1.588 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

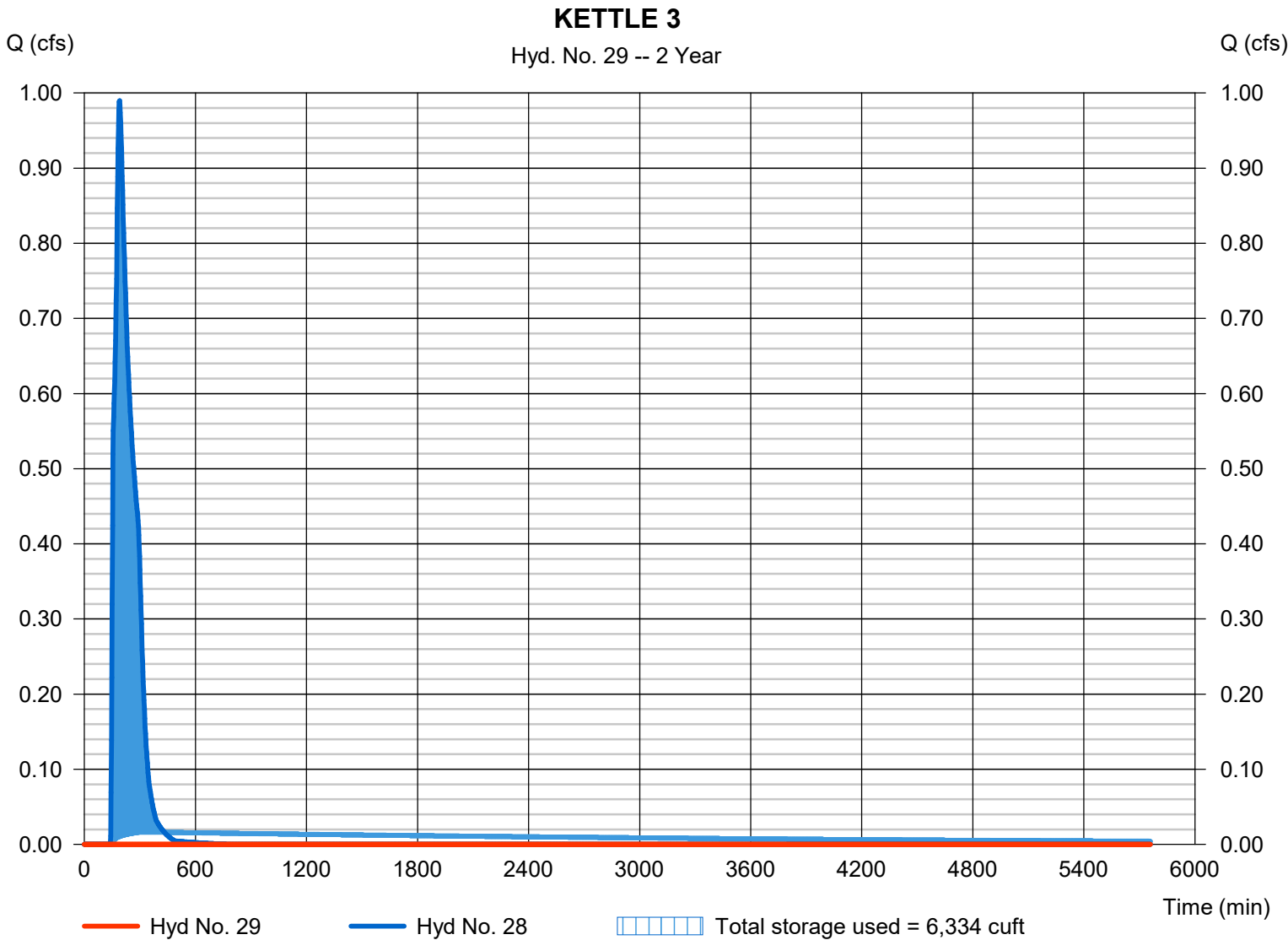
Tuesday, 04 / 7 / 2020

Hyd. No. 29

KETTLE 3

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 3472 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 28 - INFLOW K-3	Max. Elevation	= 973.70 ft
Reservoir name	= K-3	Max. Storage	= 6,334 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

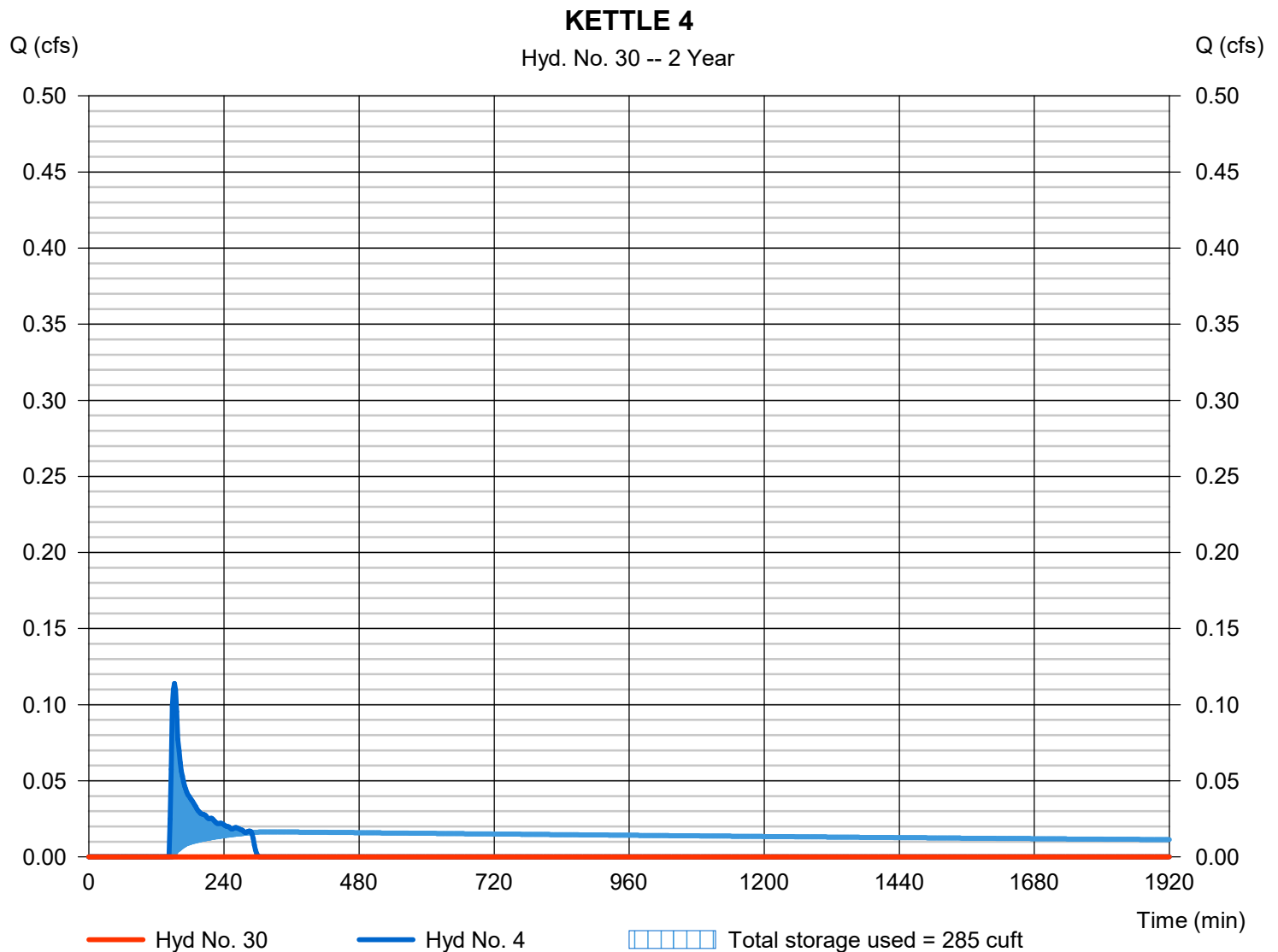
Hyd. No. 30

KETTLE 4

Hydrograph type = Reservoir
 Storm frequency = 2 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - E-4
 Reservoir name = K-4

Peak discharge = 0.000 cfs
 Time to peak = 244 min
 Hyd. volume = 0 cuft
 Max. Elevation = 1007.15 ft
 Max. Storage = 285 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

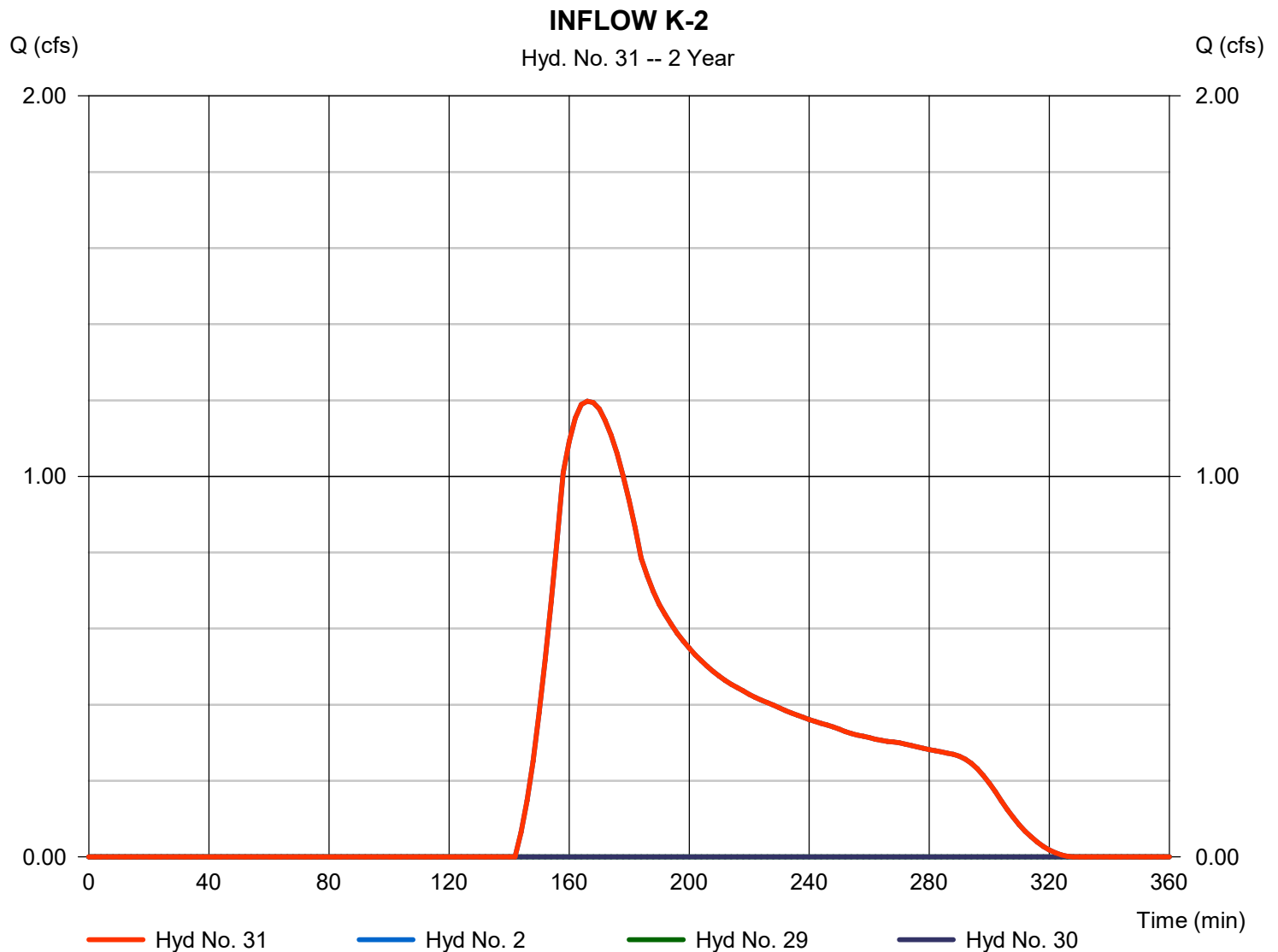
Tuesday, 04 / 7 / 2020

Hyd. No. 31

INFLOW K-2

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 2, 29, 30

Peak discharge = 1.197 cfs
Time to peak = 166 min
Hyd. volume = 4,934 cuft
Contrib. drain. area = 5.433 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

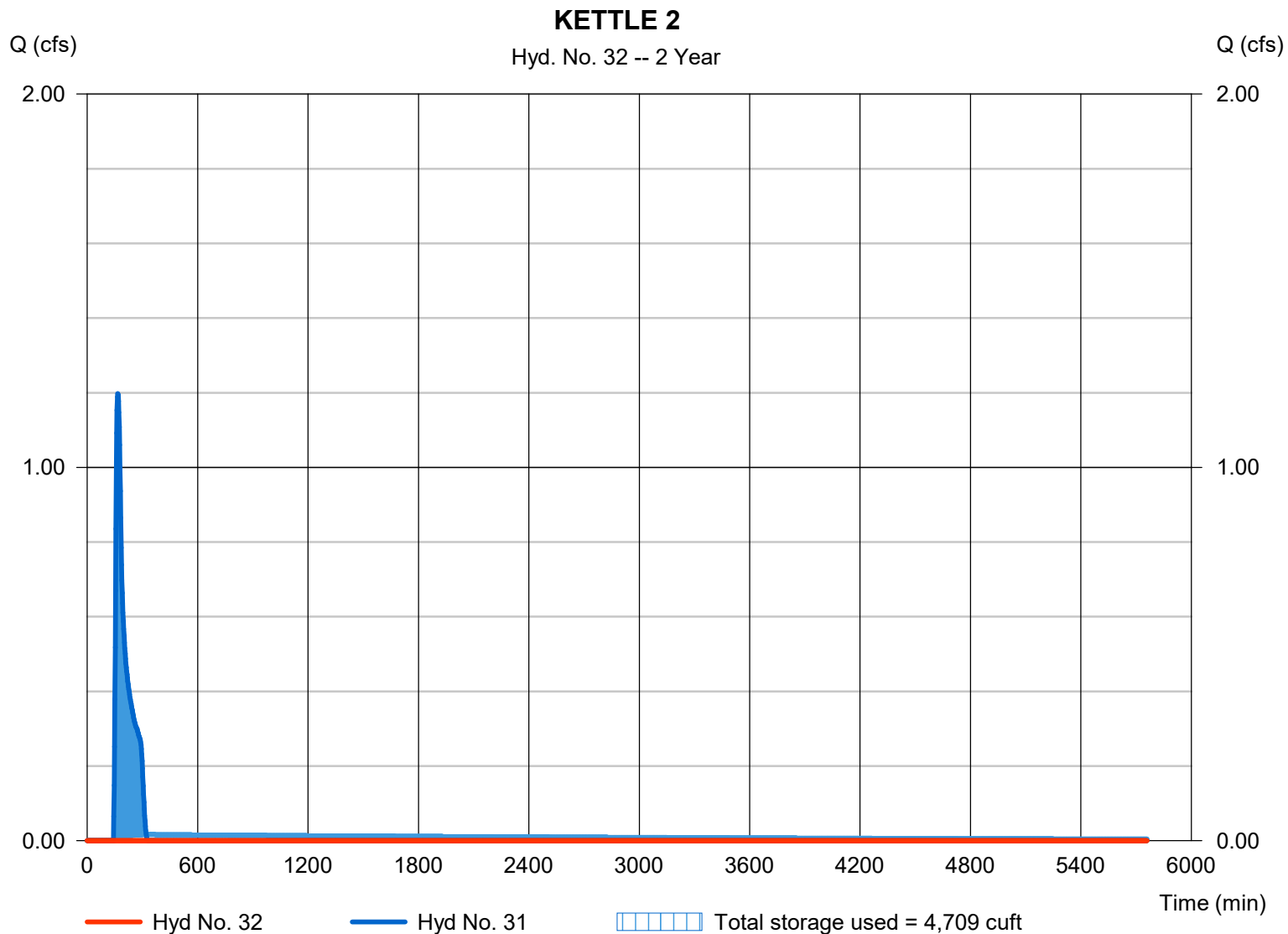
Tuesday, 04 / 7 / 2020

Hyd. No. 32

KETTLE 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 2998 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 31 - INFLOW K-2	Max. Elevation	= 967.76 ft
Reservoir name	= K-2	Max. Storage	= 4,709 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

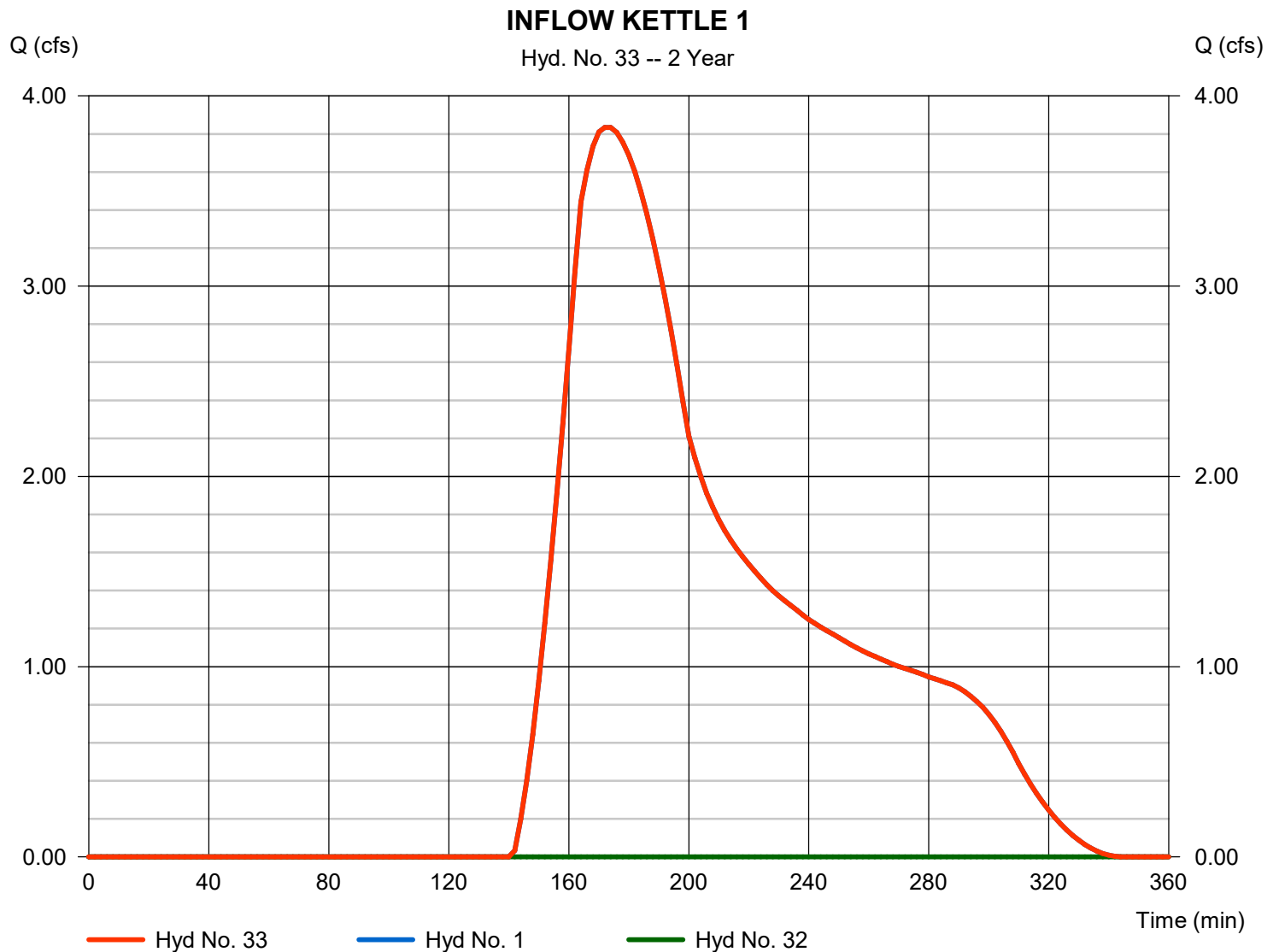
Tuesday, 04 / 7 / 2020

Hyd. No. 33

INFLOW KETTLE 1

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 1, 32

Peak discharge = 3.834 cfs
Time to peak = 174 min
Hyd. volume = 17,426 cuft
Contrib. drain. area = 15.479 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

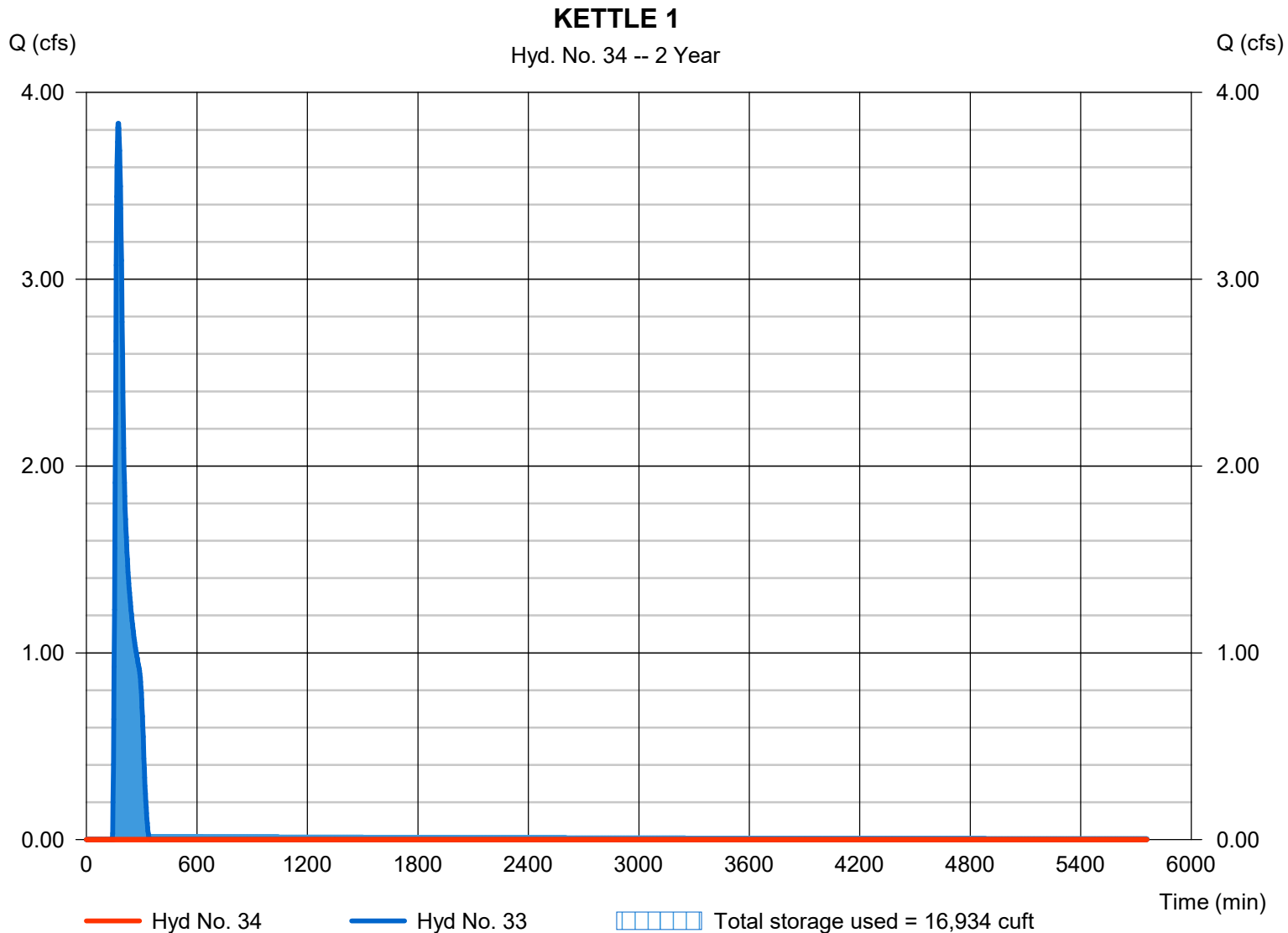
Tuesday, 04 / 7 / 2020

Hyd. No. 34

KETTLE 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 172 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 33 - INFLOW KETTLE 1	Max. Elevation	= 946.47 ft
Reservoir name	= K-1	Max. Storage	= 16,934 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

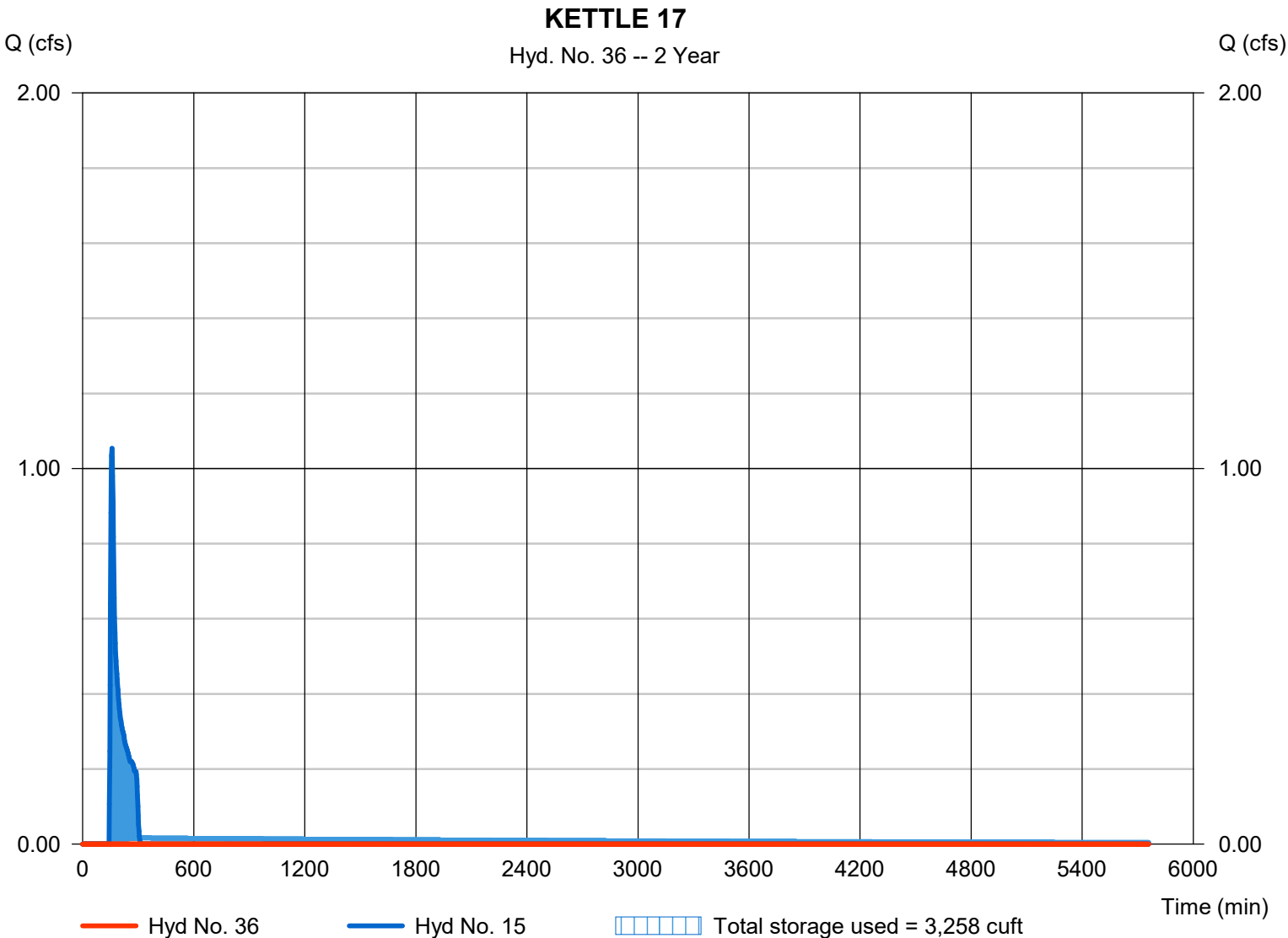
Tuesday, 04 / 7 / 2020

Hyd. No. 36

KETTLE 17

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 304 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 15 - E-17	Max. Elevation	= 1011.29 ft
Reservoir name	= K-17	Max. Storage	= 3,258 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

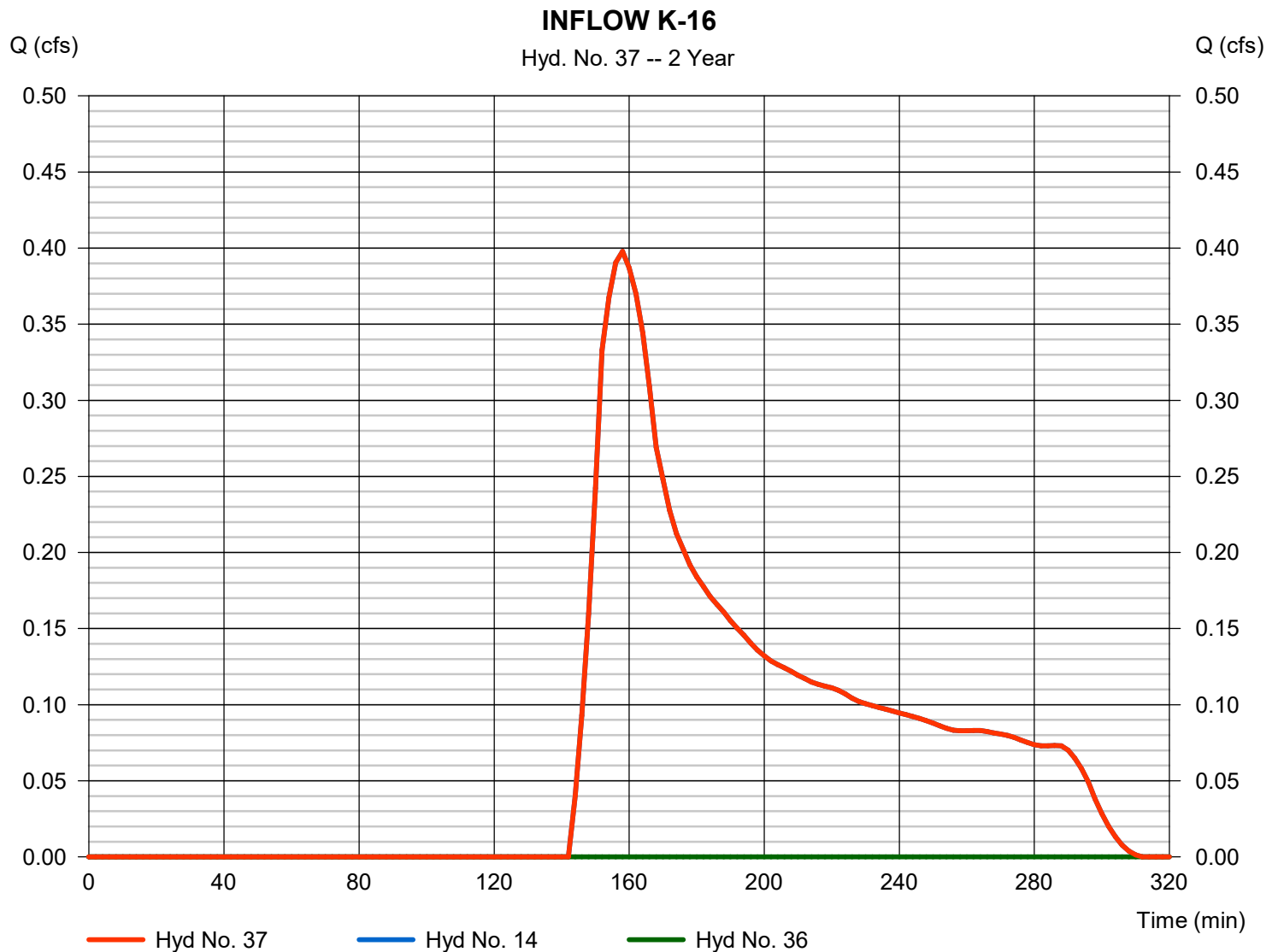
Tuesday, 04 / 7 / 2020

Hyd. No. 37

INFLOW K-16

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 14, 36

Peak discharge = 0.398 cfs
Time to peak = 158 min
Hyd. volume = 1,322 cuft
Contrib. drain. area = 1.620 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

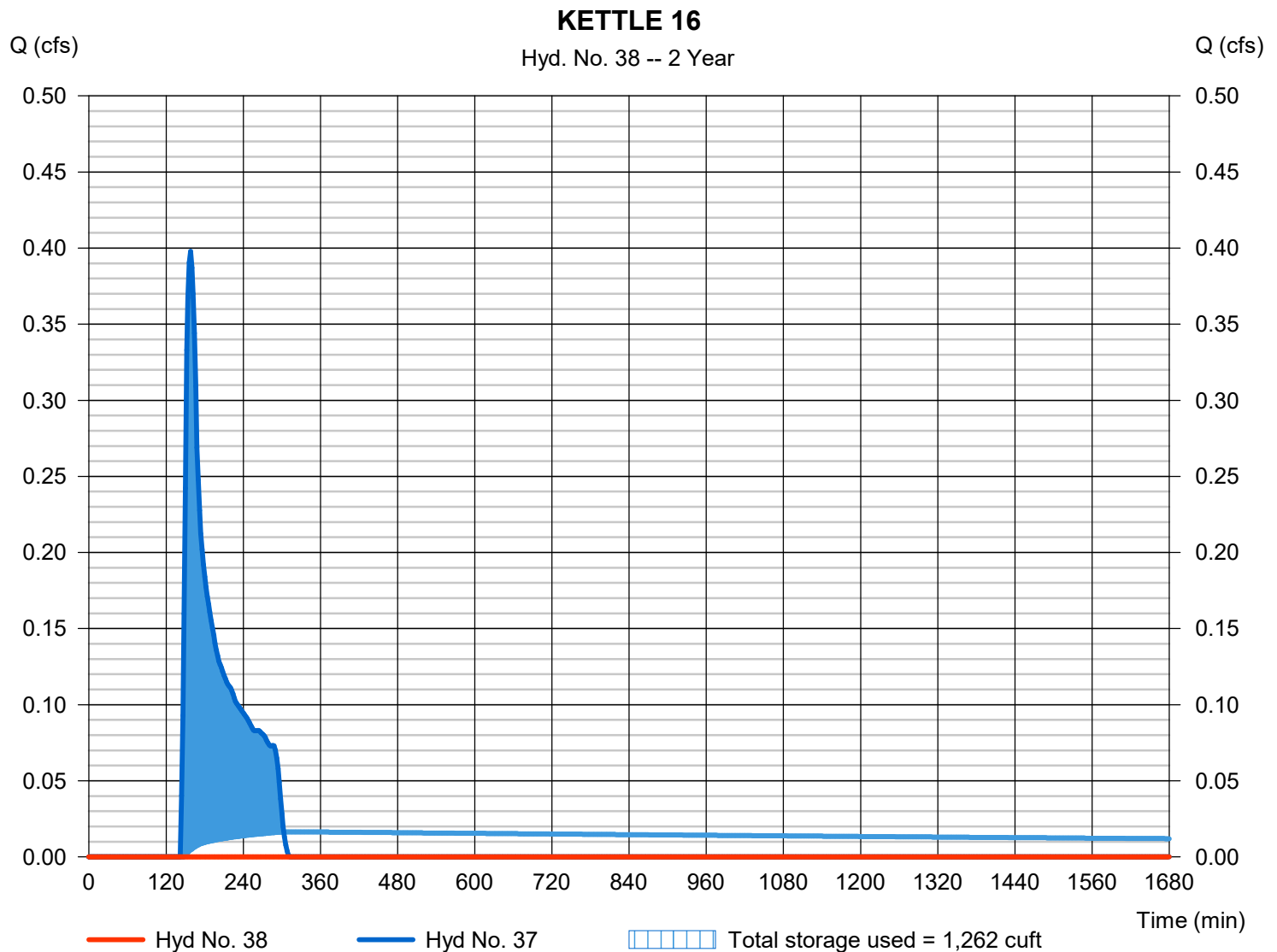
Tuesday, 04 / 7 / 2020

Hyd. No. 38

KETTLE 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 250 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - INFLOW K-16	Max. Elevation	= 1005.21 ft
Reservoir name	= K-16	Max. Storage	= 1,262 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

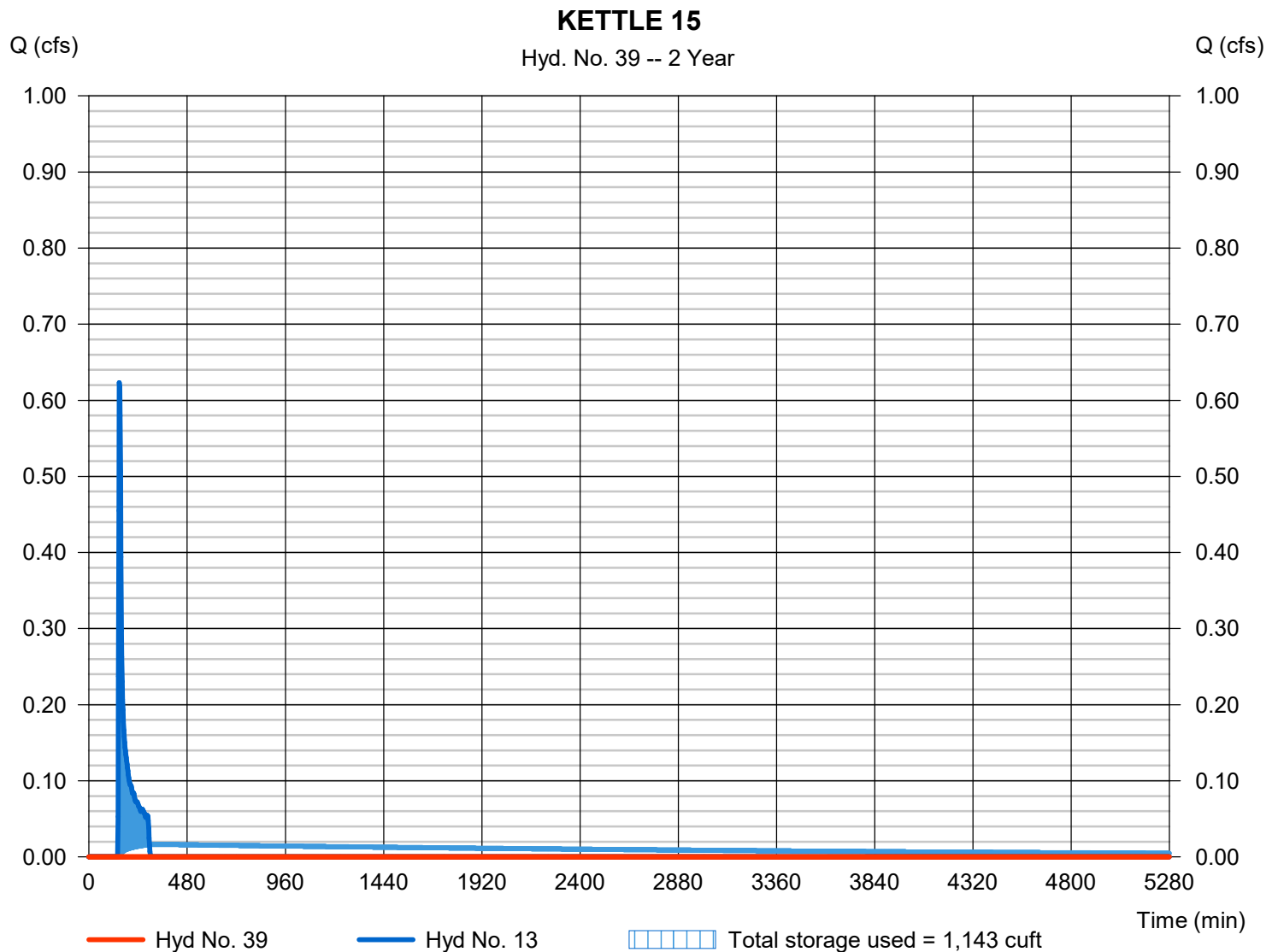
Hyd. No. 39

KETTLE 15

Hydrograph type = Reservoir
 Storm frequency = 2 yrs
 Time interval = 2 min
 Inflow hyd. No. = 13 - E-15
 Reservoir name = K-15

Peak discharge = 0.000 cfs
 Time to peak = 172 min
 Hyd. volume = 0 cuft
 Max. Elevation = 970.50 ft
 Max. Storage = 1,143 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

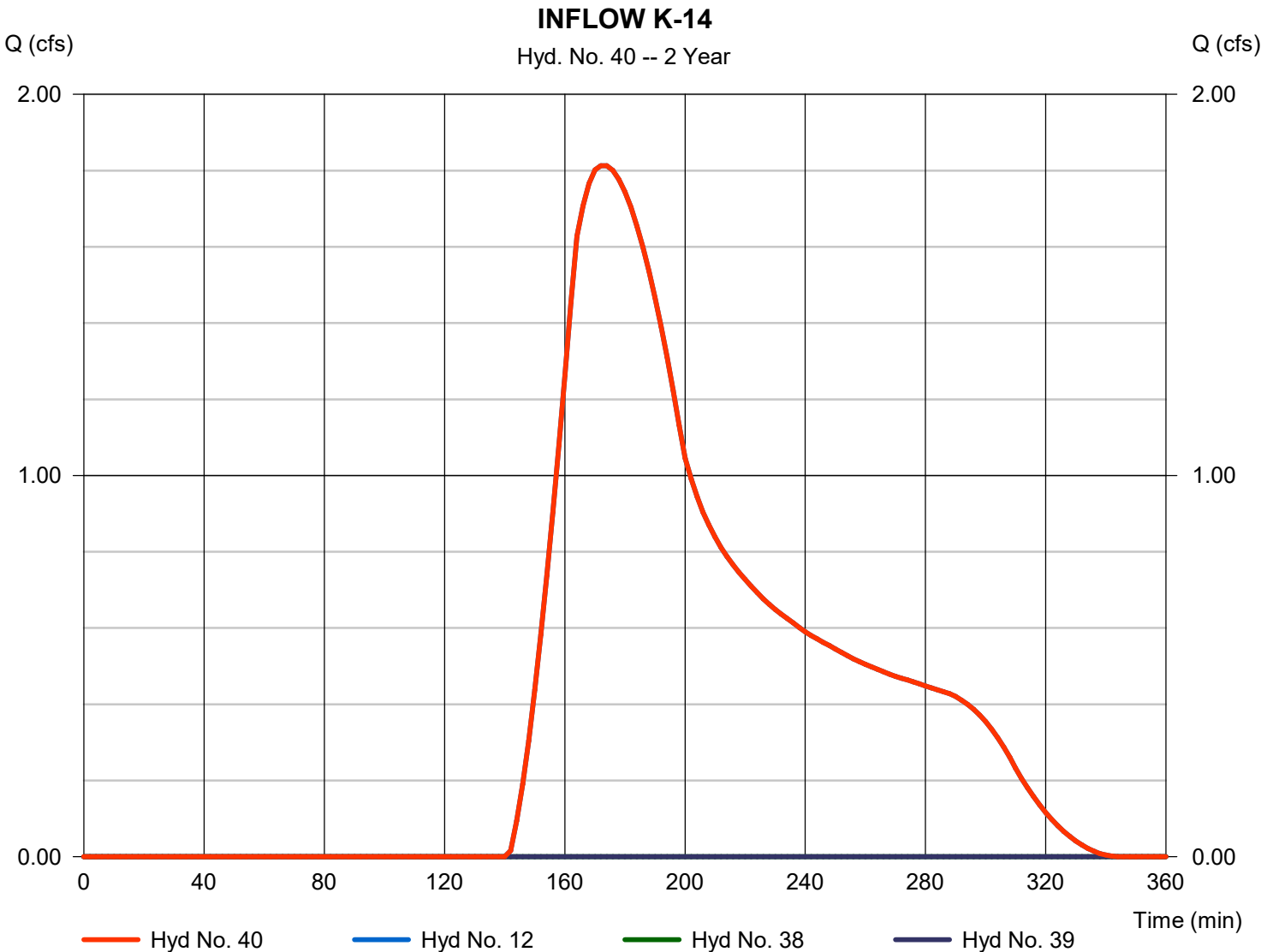
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 40

INFLOW K-14

Hydrograph type	= Combine	Peak discharge	= 1.813 cfs
Storm frequency	= 2 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 8,241 cuft
Inflow hyds.	= 12, 38, 39	Contrib. drain. area	= 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

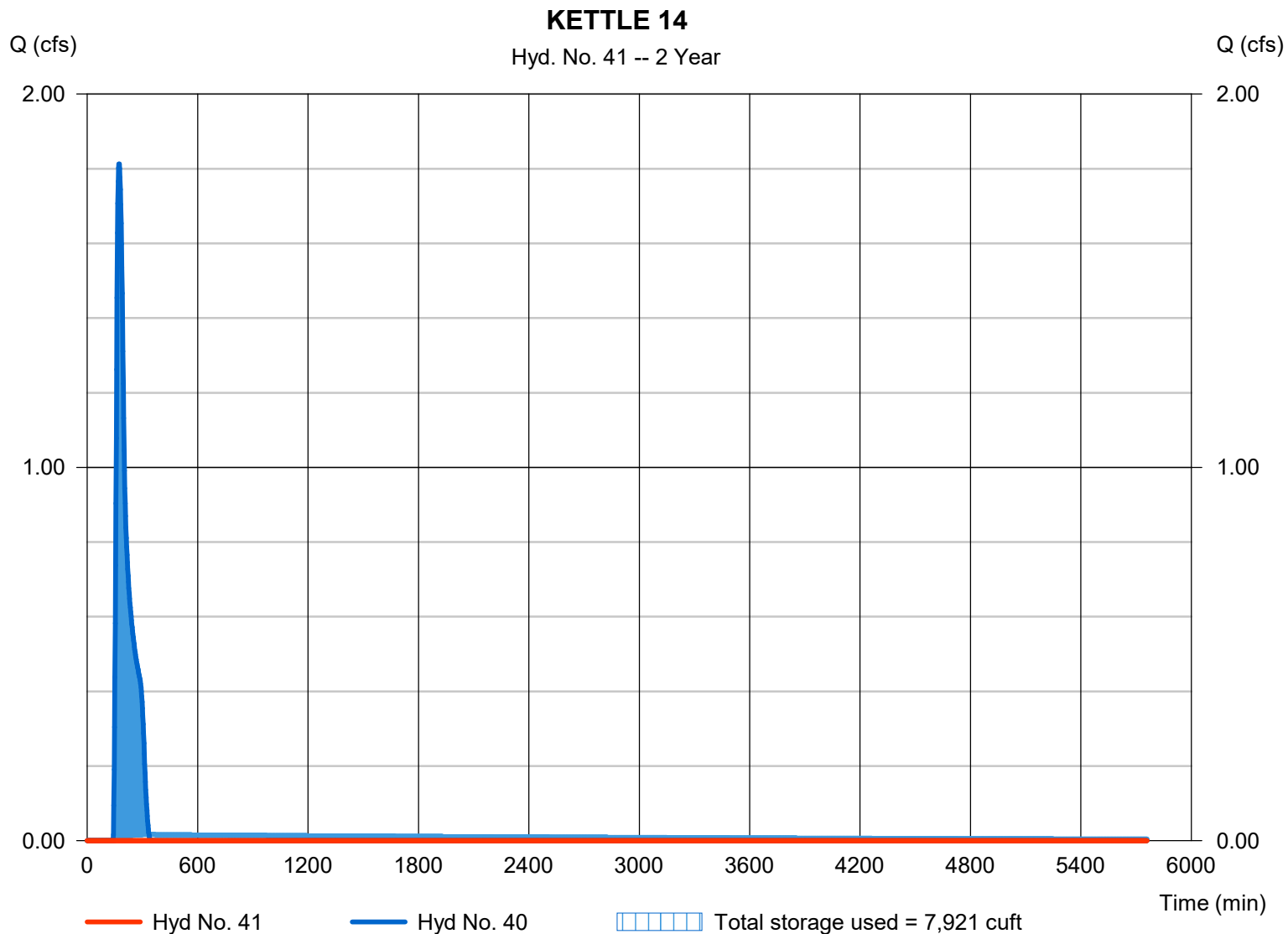
Tuesday, 04 / 7 / 2020

Hyd. No. 41

KETTLE 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 2302 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 40 - INFLOW K-14	Max. Elevation	= 956.61 ft
Reservoir name	= K-14	Max. Storage	= 7,921 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

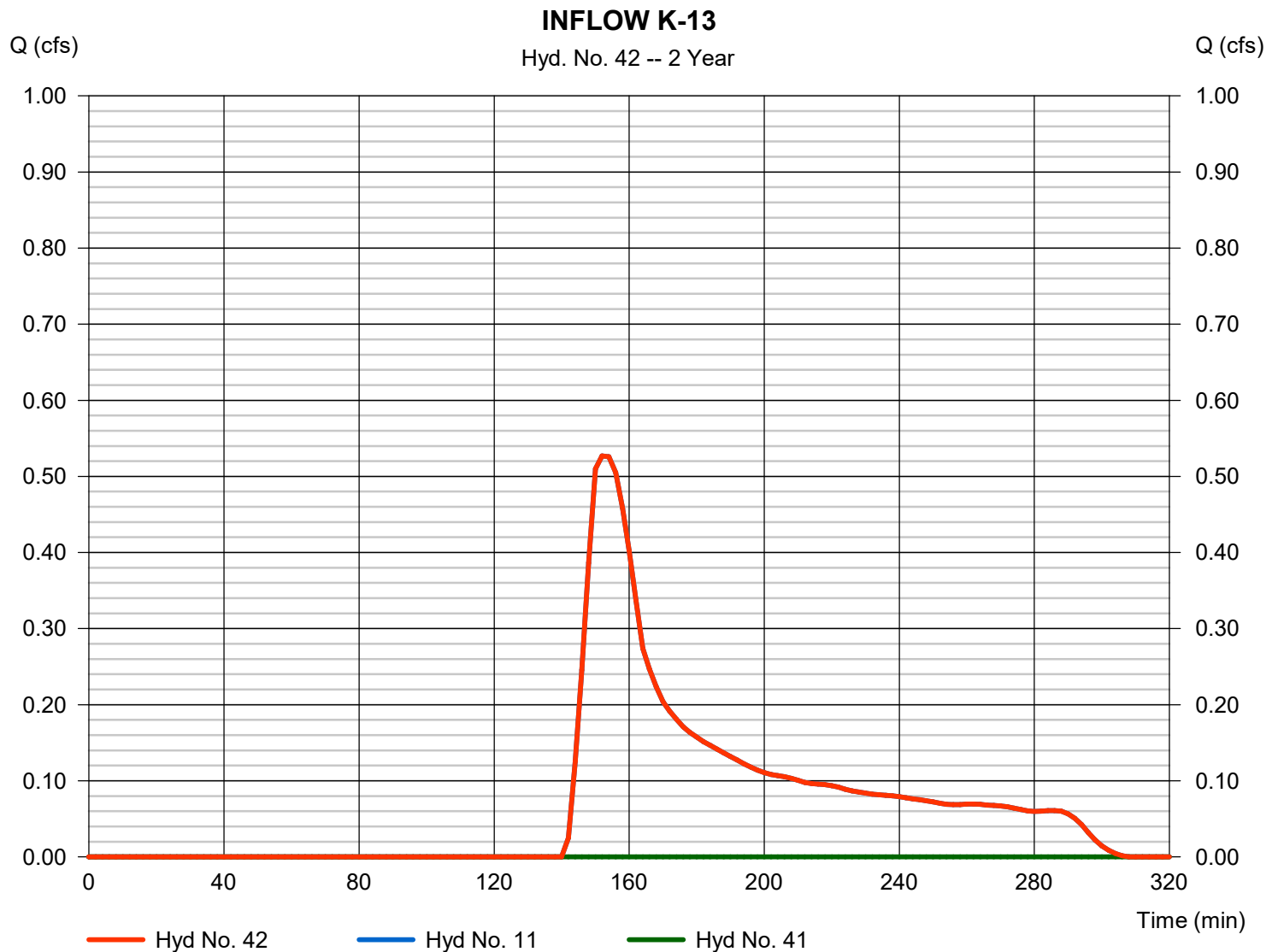
Tuesday, 04 / 7 / 2020

Hyd. No. 42

INFLOW K-13

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 11, 41

Peak discharge = 0.527 cfs
Time to peak = 152 min
Hyd. volume = 1,302 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

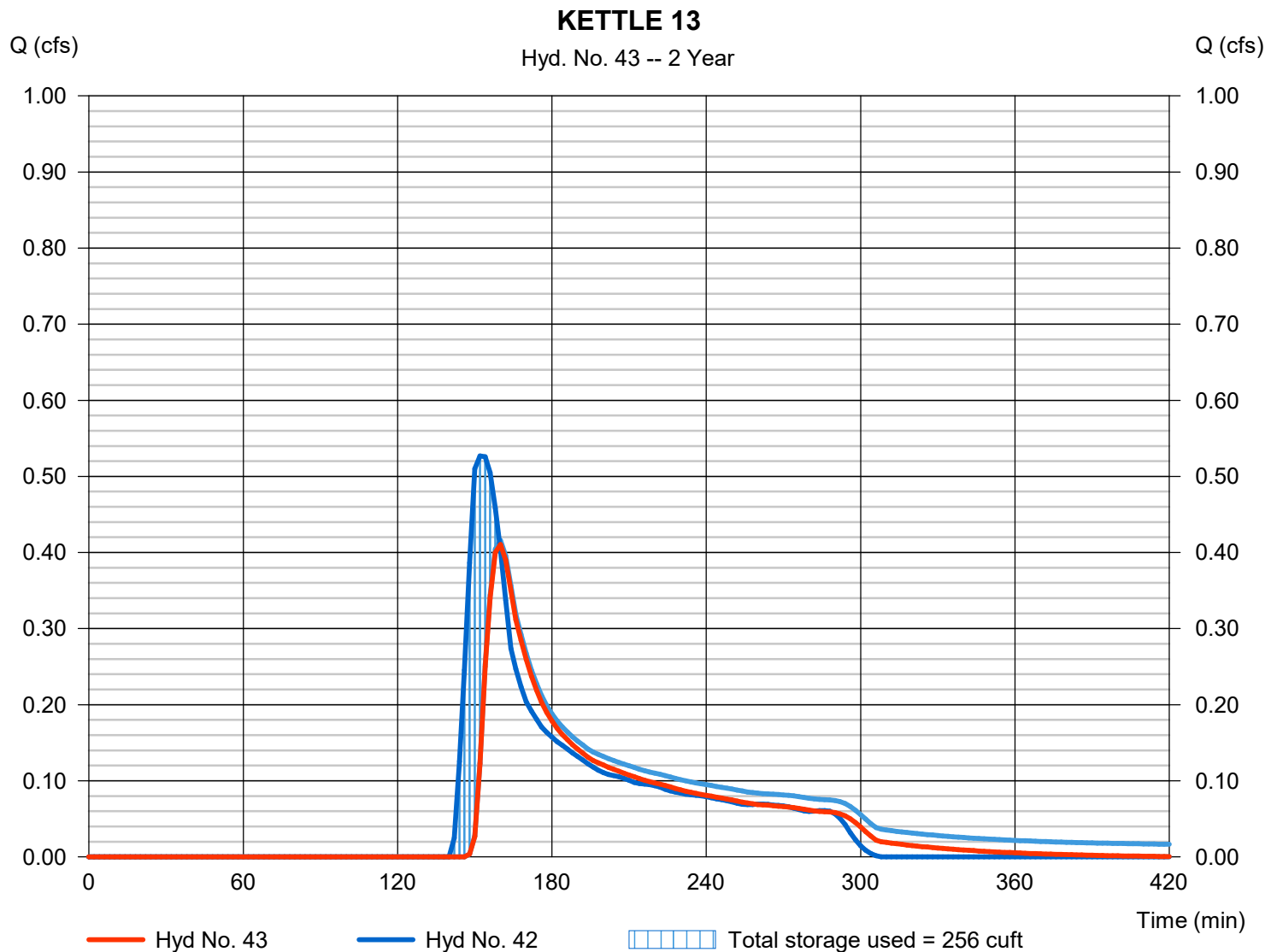
Tuesday, 04 / 7 / 2020

Hyd. No. 43

KETTLE 13

Hydrograph type	= Reservoir	Peak discharge	= 0.411 cfs
Storm frequency	= 2 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 1,191 cuft
Inflow hyd. No.	= 42 - INFLOW K-13	Max. Elevation	= 959.66 ft
Reservoir name	= K-13	Max. Storage	= 256 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

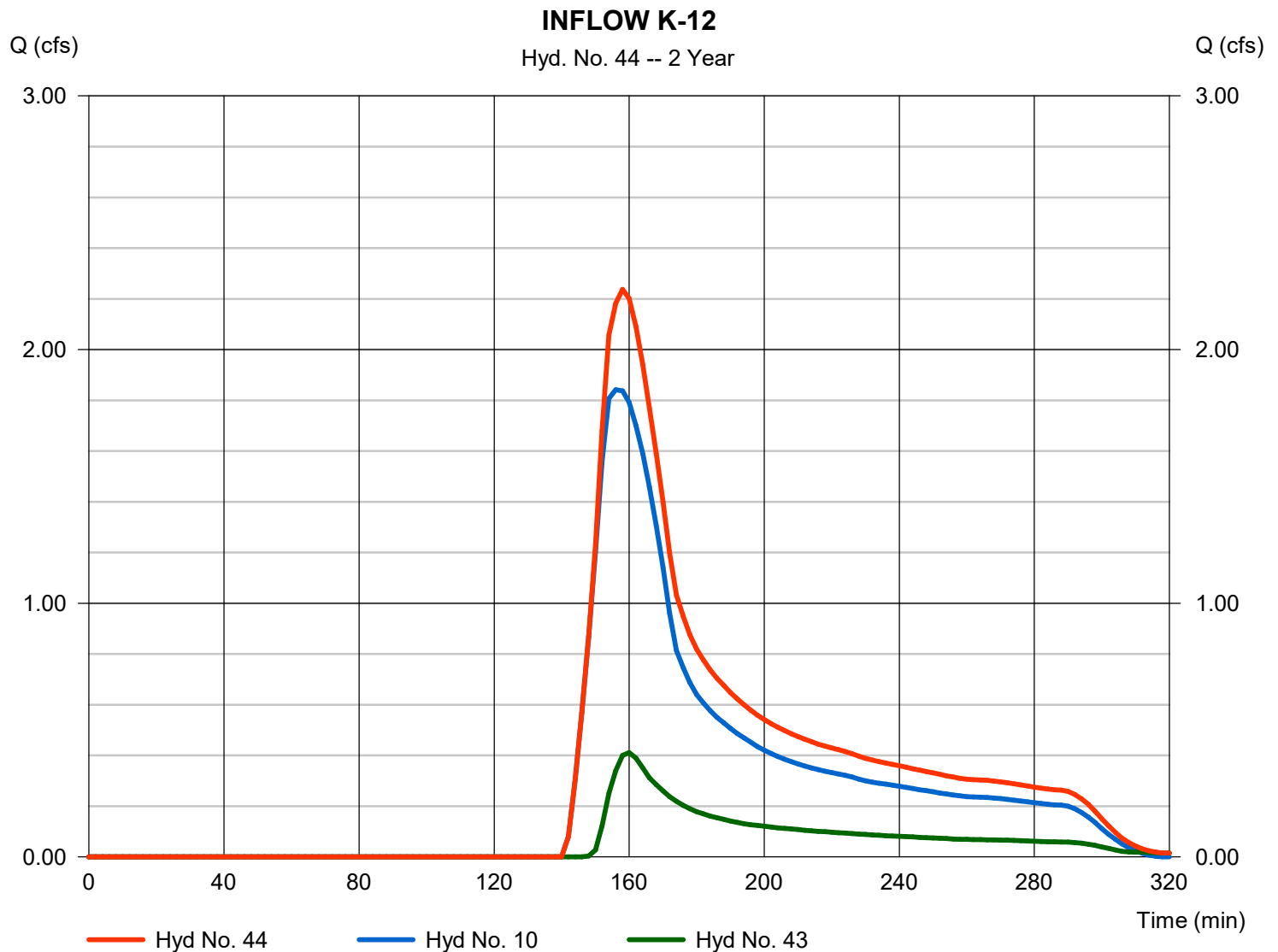
Tuesday, 04 / 7 / 2020

Hyd. No. 44

INFLOW K-12

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 10, 43

Peak discharge = 2.238 cfs
Time to peak = 158 min
Hyd. volume = 6,170 cuft
Contrib. drain. area = 2.900 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

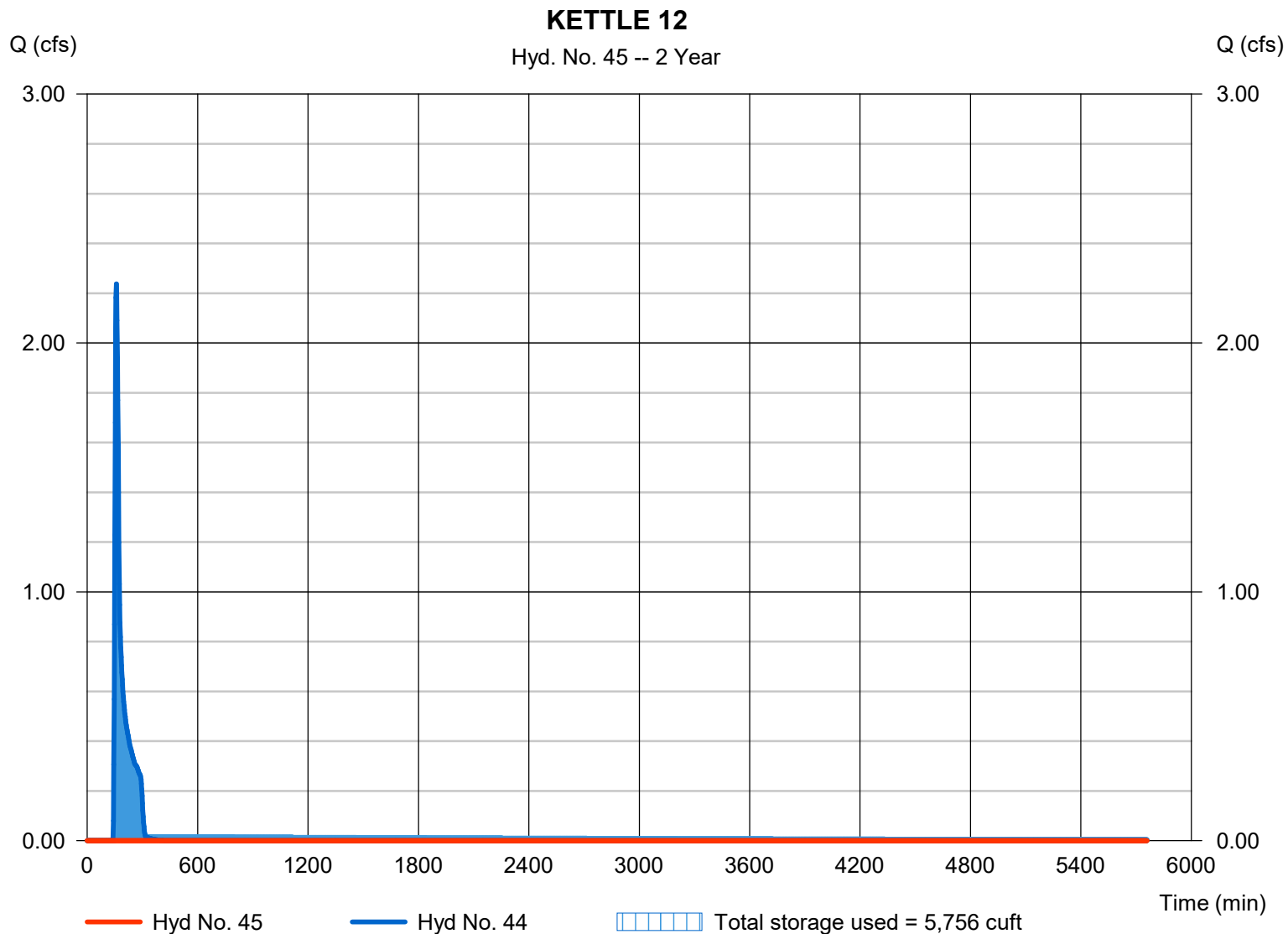
Tuesday, 04 / 7 / 2020

Hyd. No. 45

KETTLE 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 230 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 44 - INFLOW K-12	Max. Elevation	= 957.32 ft
Reservoir name	= K-12	Max. Storage	= 5,756 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

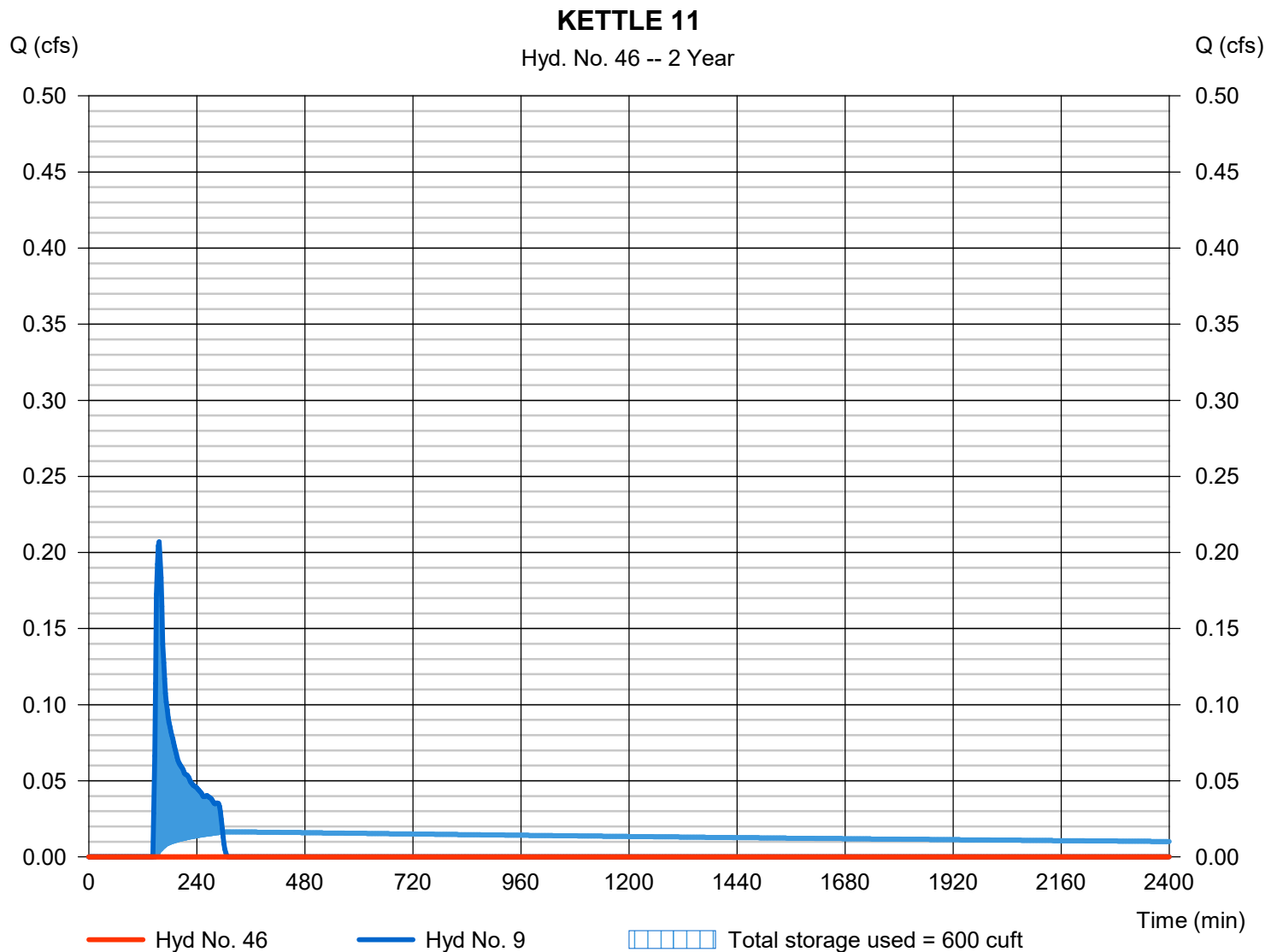
Hyd. No. 46

KETTLE 11

Hydrograph type = Reservoir
 Storm frequency = 2 yrs
 Time interval = 2 min
 Inflow hyd. No. = 9 - E-11
 Reservoir name = K-11

Peak discharge = 0.000 cfs
 Time to peak = 306 min
 Hyd. volume = 0 cuft
 Max. Elevation = 979.30 ft
 Max. Storage = 600 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

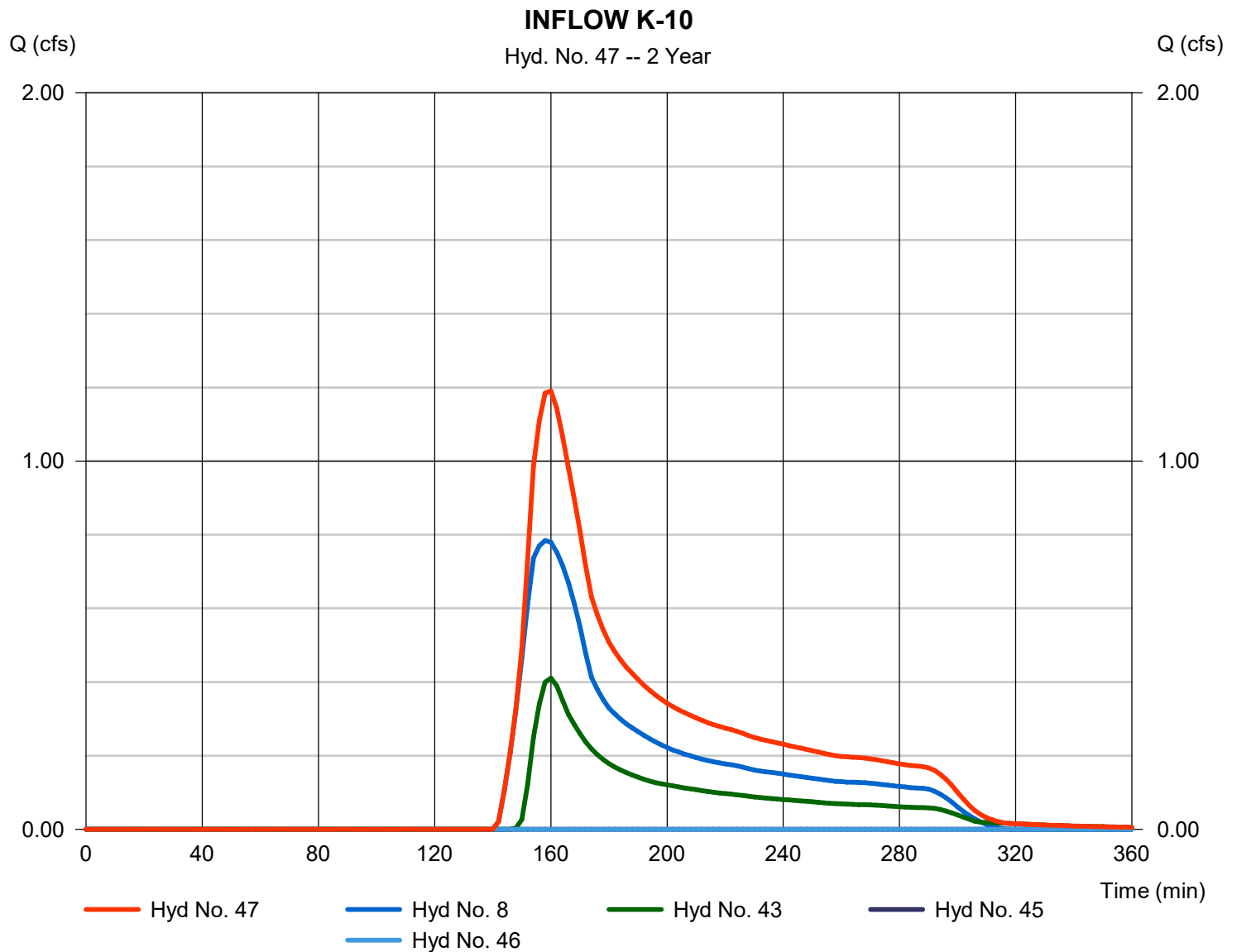
Tuesday, 04 / 7 / 2020

Hyd. No. 47

INFLOW K-10

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 8, 43, 45, 46

Peak discharge = 1.190 cfs
Time to peak = 160 min
Hyd. volume = 3,592 cuft
Contrib. drain. area = 1.920 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

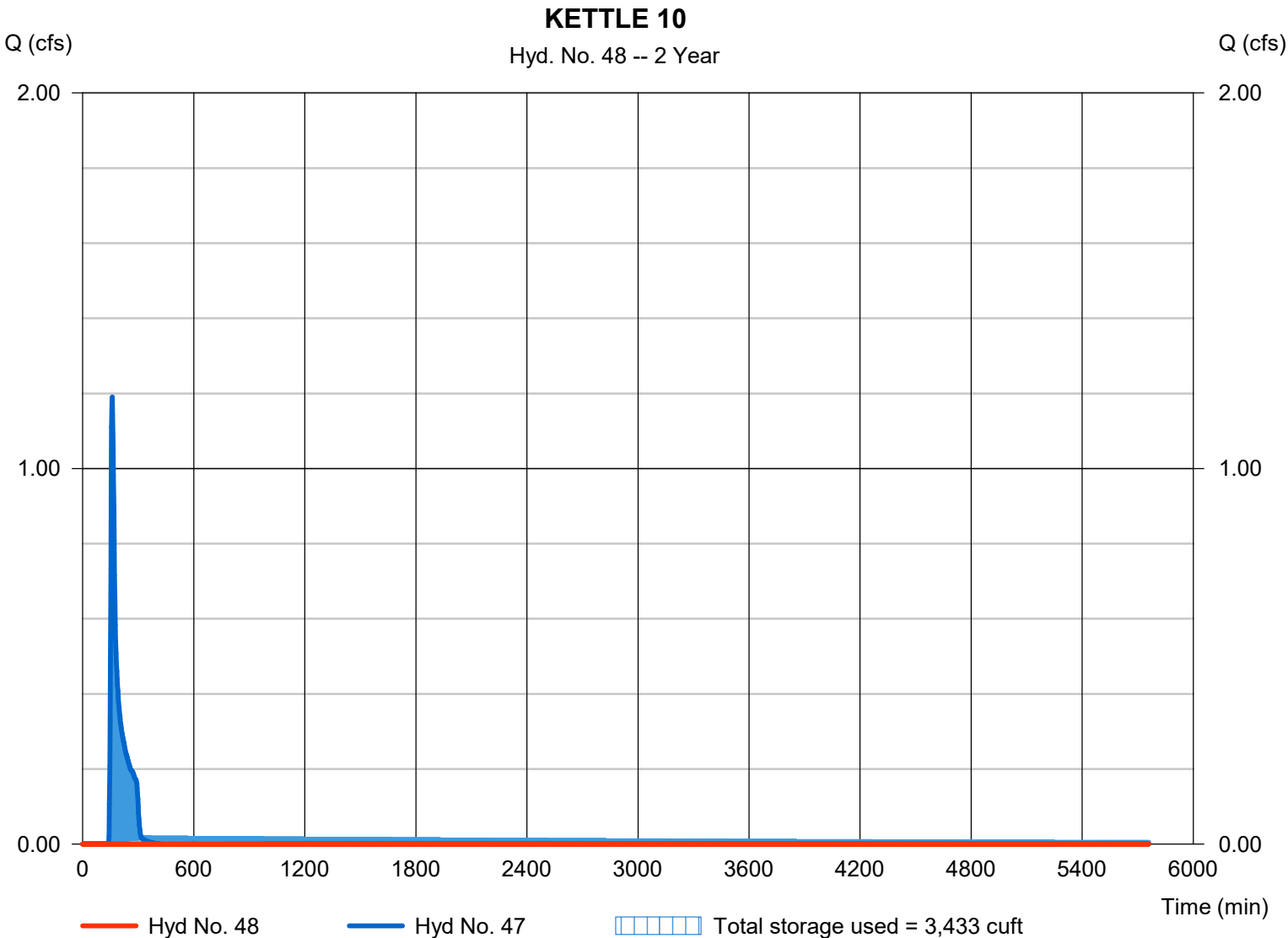
Tuesday, 04 / 7 / 2020

Hyd. No. 48

KETTLE 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 290 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 47 - INFLOW K-10	Max. Elevation	= 955.80 ft
Reservoir name	= K-10	Max. Storage	= 3,433 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	12.04	2	168	45,256	-----	-----	-----	E-1
2	SCS Runoff	4.386	2	162	13,812	-----	-----	-----	E-2
3	SCS Runoff	1.885	2	156	4,696	-----	-----	-----	E-3
4	SCS Runoff	0.514	2	148	869	-----	-----	-----	E-4
5	SCS Runoff	4.757	2	164	16,824	-----	-----	-----	E-5
6	SCS Runoff	2.461	2	156	6,668	-----	-----	-----	E-6
8	SCS Runoff	2.485	2	154	6,044	-----	-----	-----	E-10
9	SCS Runoff	0.863	2	152	1,835	-----	-----	-----	E-11
10	SCS Runoff	5.116	2	154	11,437	-----	-----	-----	E-12
11	SCS Runoff	1.765	2	150	3,279	-----	-----	-----	E-13
12	SCS Runoff	5.693	2	168	21,401	-----	-----	-----	E-14
13	SCS Runoff	2.035	2	148	2,939	-----	-----	-----	E-15
14	SCS Runoff	1.617	2	154	3,803	-----	-----	-----	E-16
15	SCS Runoff	4.282	2	154	10,074	-----	-----	-----	E-17
17	SCS Runoff	3.275	2	164	11,585	-----	-----	-----	E-20
18	SCS Runoff	9.710	2	166	32,854	-----	-----	-----	D
21	Reservoir	0.000	2	470	0	18	991.32	18,980	EX. INFILT. BASIN D
22	Combine	3.275	2	164	11,585	17, 21	-----	-----	INFLOW K-20
23	Reservoir	0.000	2	212	0	22	992.75	10,805	KETTLE 20
25	Reservoir	0.000	2	198	0	6	1011.39	6,298	KETTLE 6
26	Combine	4.757	2	164	16,824	5, 25	-----	-----	INFLOW K-5
27	Reservoir	2.084	2	190	15,656	26	983.28	6,004	KETTLE 5
28	Combine	2.714	2	162	20,352	3, 27	-----	-----	INFLOW K-3
29	Reservoir	0.000	2	n/a	0	28	975.62	19,597	KETTLE 3
30	Reservoir	0.000	2	182	0	4	1007.44	814	KETTLE 4
31	Combine	4.386	2	162	13,812	2, 29, 30	-----	-----	INFLOW K-2
32	Reservoir	0.000	2	3520	0	31	969.17	13,438	KETTLE 2
33	Combine	12.04	2	168	45,256	1, 32	-----	-----	INFLOW KETTLE 1
34	Reservoir	0.000	2	n/a	0	33	948.74	44,477	KETTLE 1
36	Reservoir	0.000	2	202	0	15	1011.83	9,313	KETTLE 17
37	Combine	1.617	2	154	3,803	14, 36	-----	-----	INFLOW K-16
EXISTING_LCL_Stormwater Model_2020-04-06					Regim Period: 10 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	192	0	37	1005.59	3,614	KETTLE 16
39	Reservoir	0.000	2	382	0	13	971.12	2,795	KETTLE 15
40	Combine	5.693	2	168	21,401	12, 38, 39	-----	-----	INFLOW K-14
41	Reservoir	0.000	2	n/a	0	40	958.24	20,898	KETTLE 14
42	Combine	1.765	2	150	3,279	11, 41	-----	-----	INFLOW K-13
43	Reservoir	1.610	2	154	3,153	42	959.84	438	KETTLE 13
44	Combine	6.726	2	154	14,590	10, 43	-----	-----	INFLOW K-12
45	Reservoir	0.000	2	1938	0	44	958.16	13,954	KETTLE 12
46	Reservoir	0.000	2	224	0	9	979.87	1,716	KETTLE 11
47	Combine	4.095	2	154	9,197	8, 43, 45, 46	-----	-----	INFLOW K-10
48	Reservoir	0.000	2	162	0	47	957.17	8,913	KETTLE 10
EXISTING_LCL_Stormwater Model_2020-04-08.gpw					Regim Period: 10 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

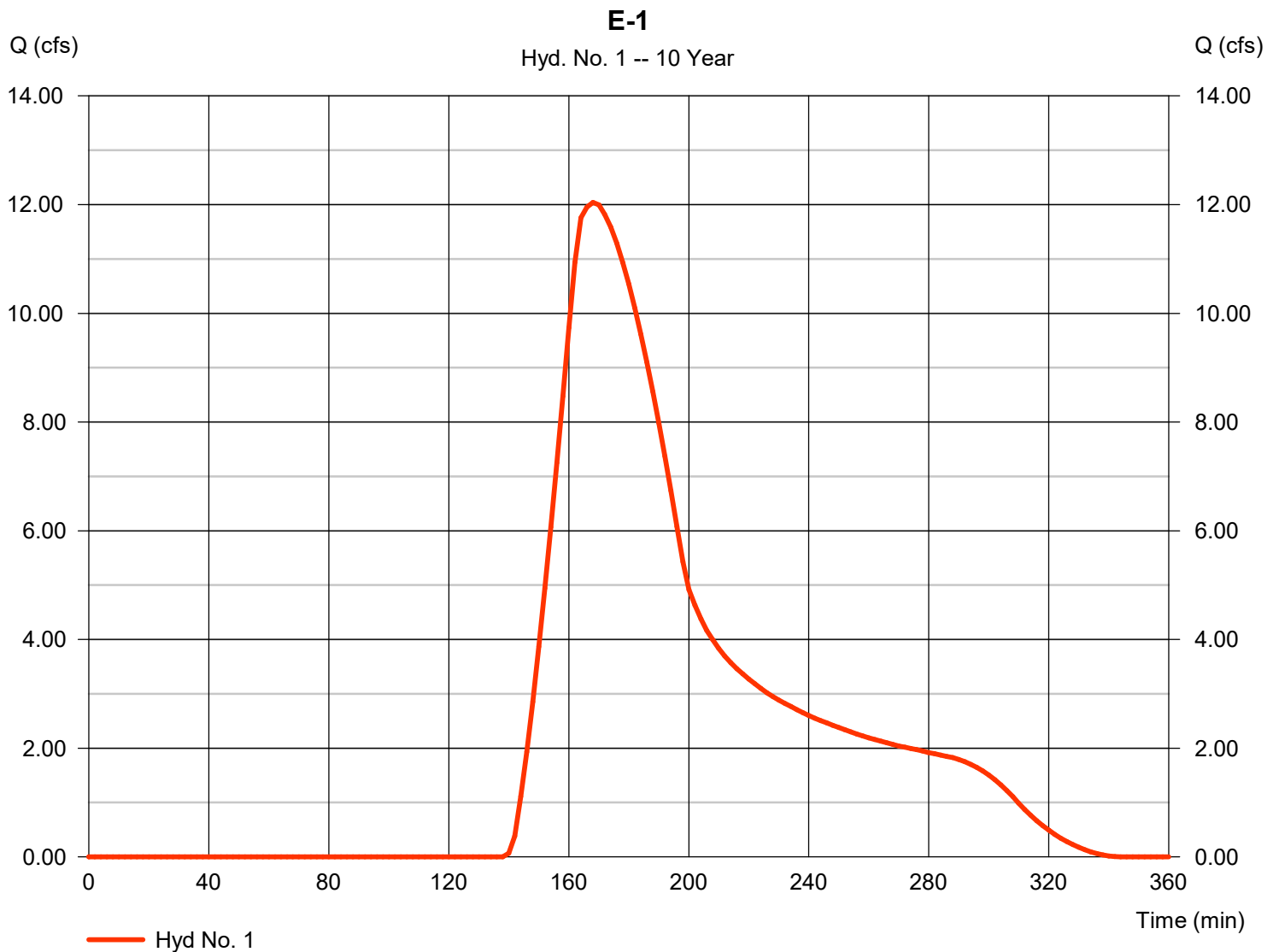
Tuesday, 04 / 7 / 2020

Hyd. No. 1

E-1

Hydrograph type	= SCS Runoff	Peak discharge	= 12.04 cfs
Storm frequency	= 10 yrs	Time to peak	= 168 min
Time interval	= 2 min	Hyd. volume	= 45,256 cuft
Drainage area	= 15.479 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 15.479$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

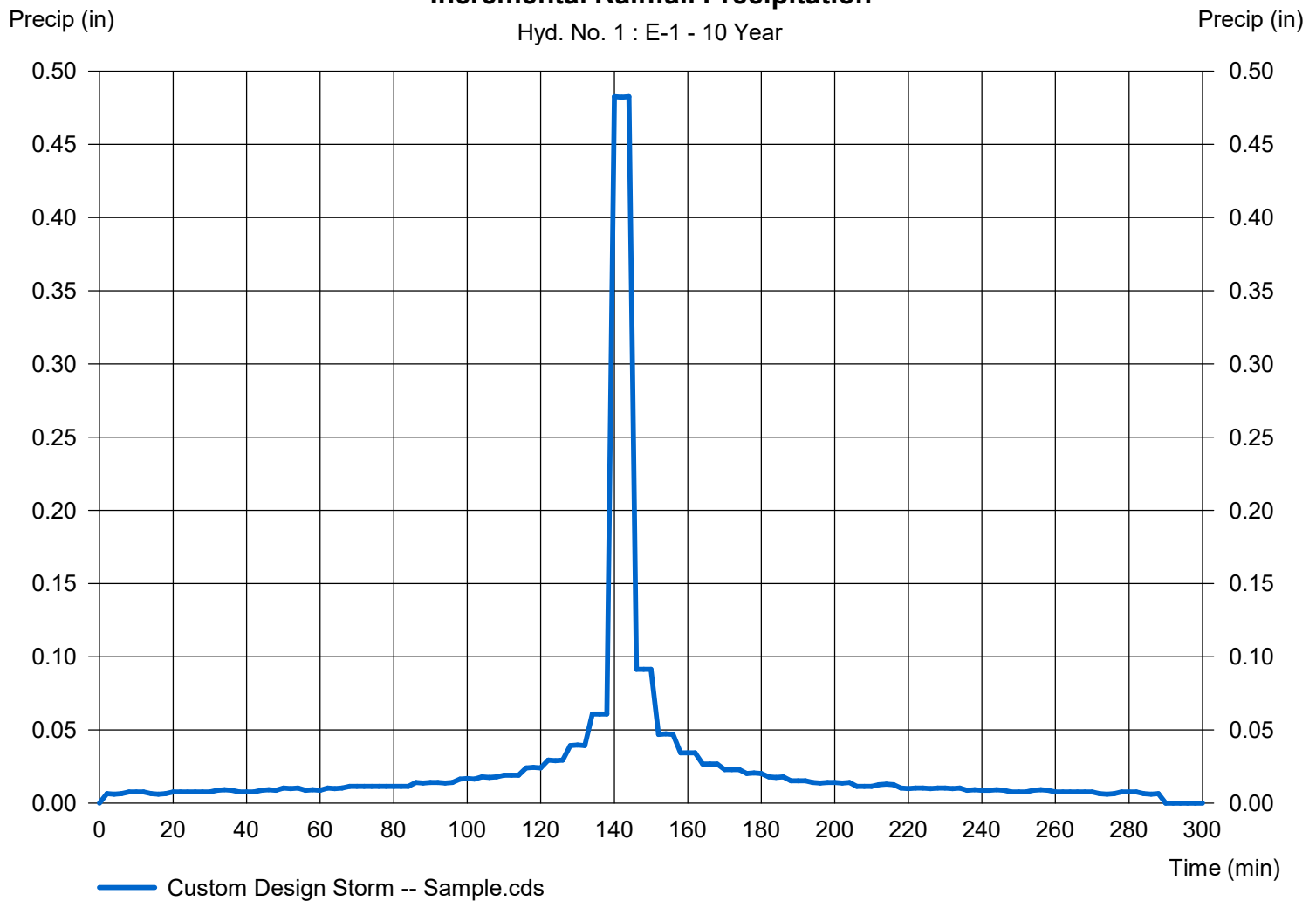
Hyd. No. 1

E-1

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : E-1 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

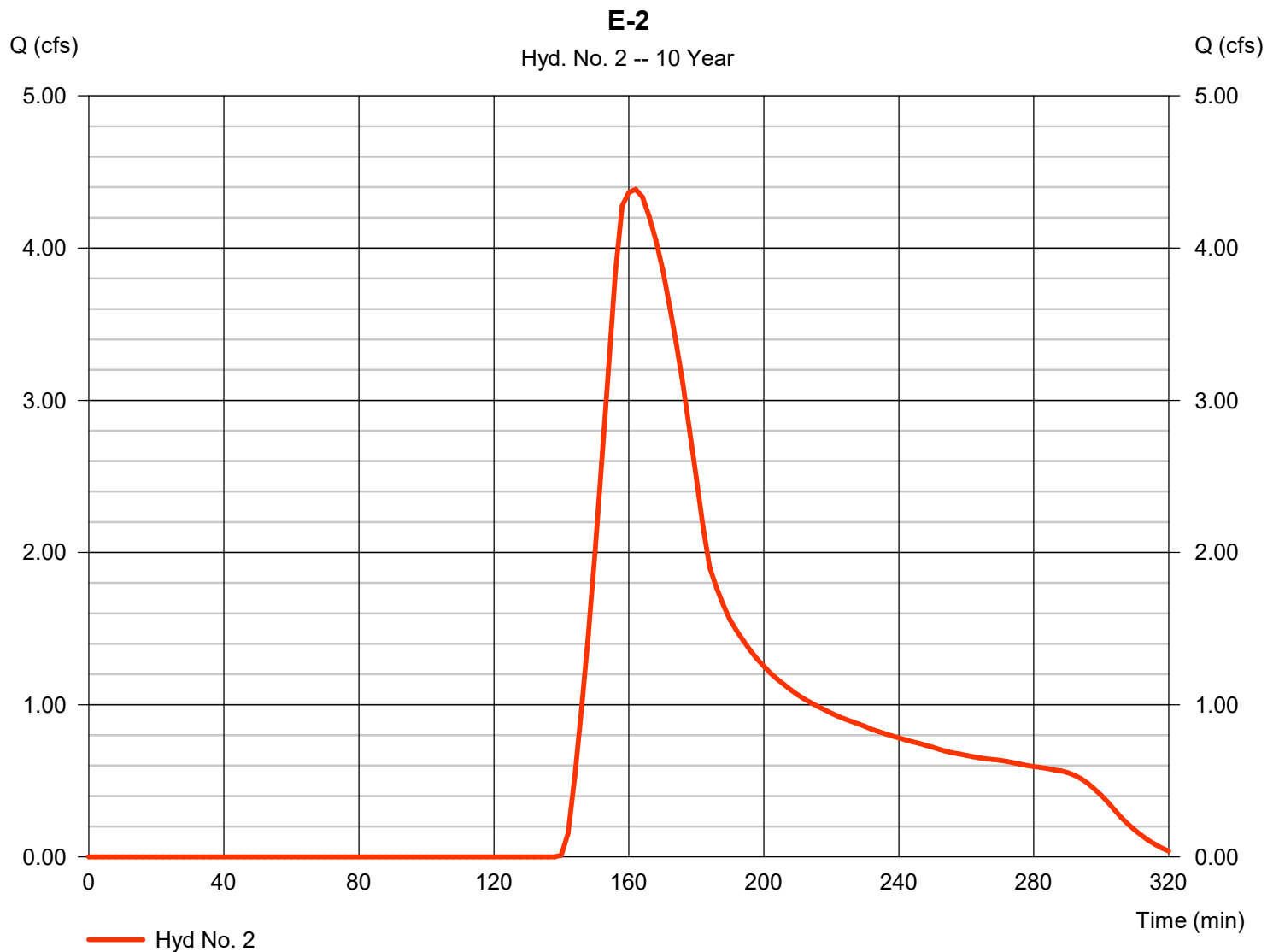
Tuesday, 04 / 7 / 2020

Hyd. No. 2

E-2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.386 cfs
Storm frequency	= 10 yrs	Time to peak	= 162 min
Time interval	= 2 min	Hyd. volume	= 13,812 cuft
Drainage area	= 5.433 ac	Curve number	= 61*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 5.433$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

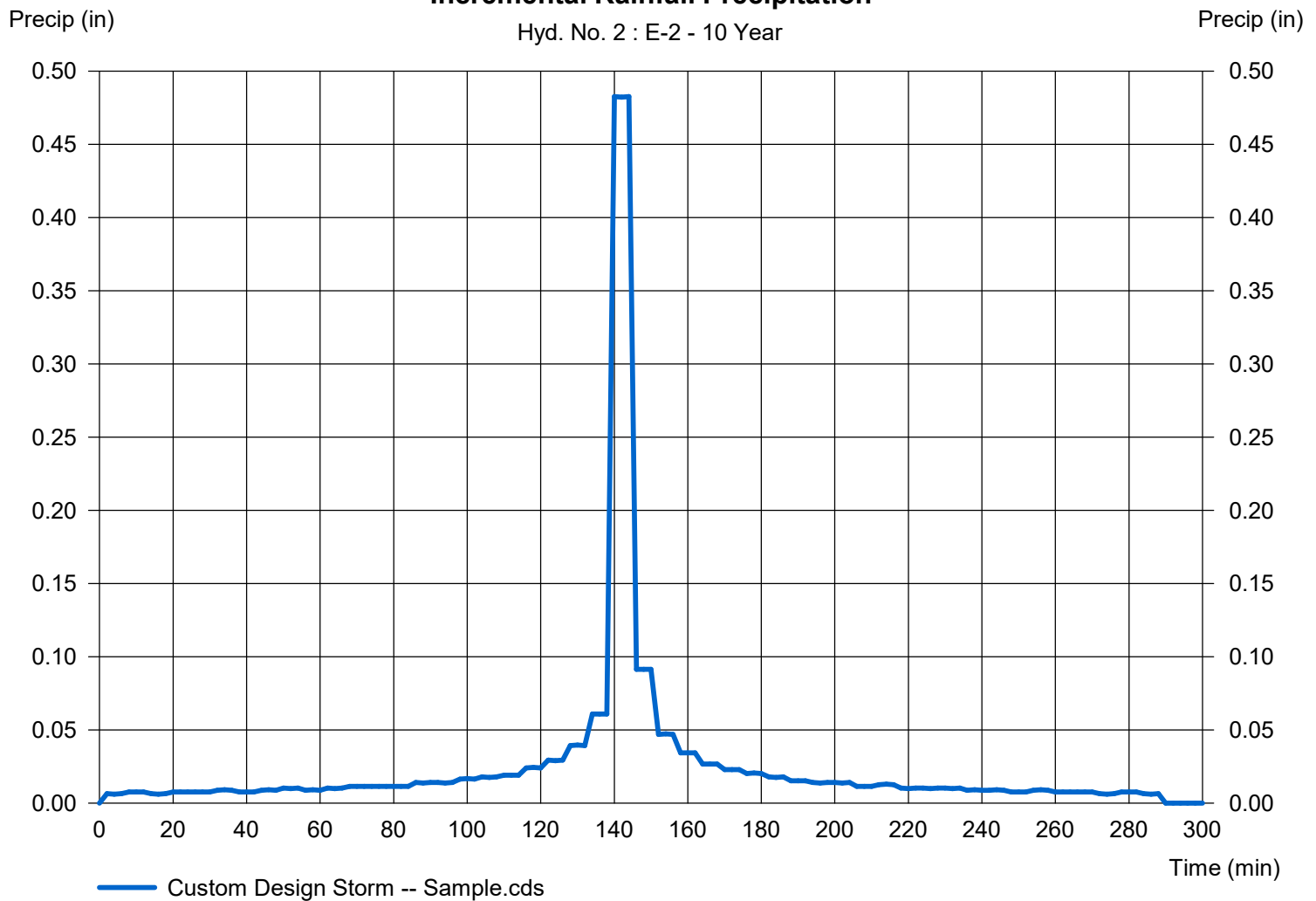
Hyd. No. 2

E-2

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : E-2 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

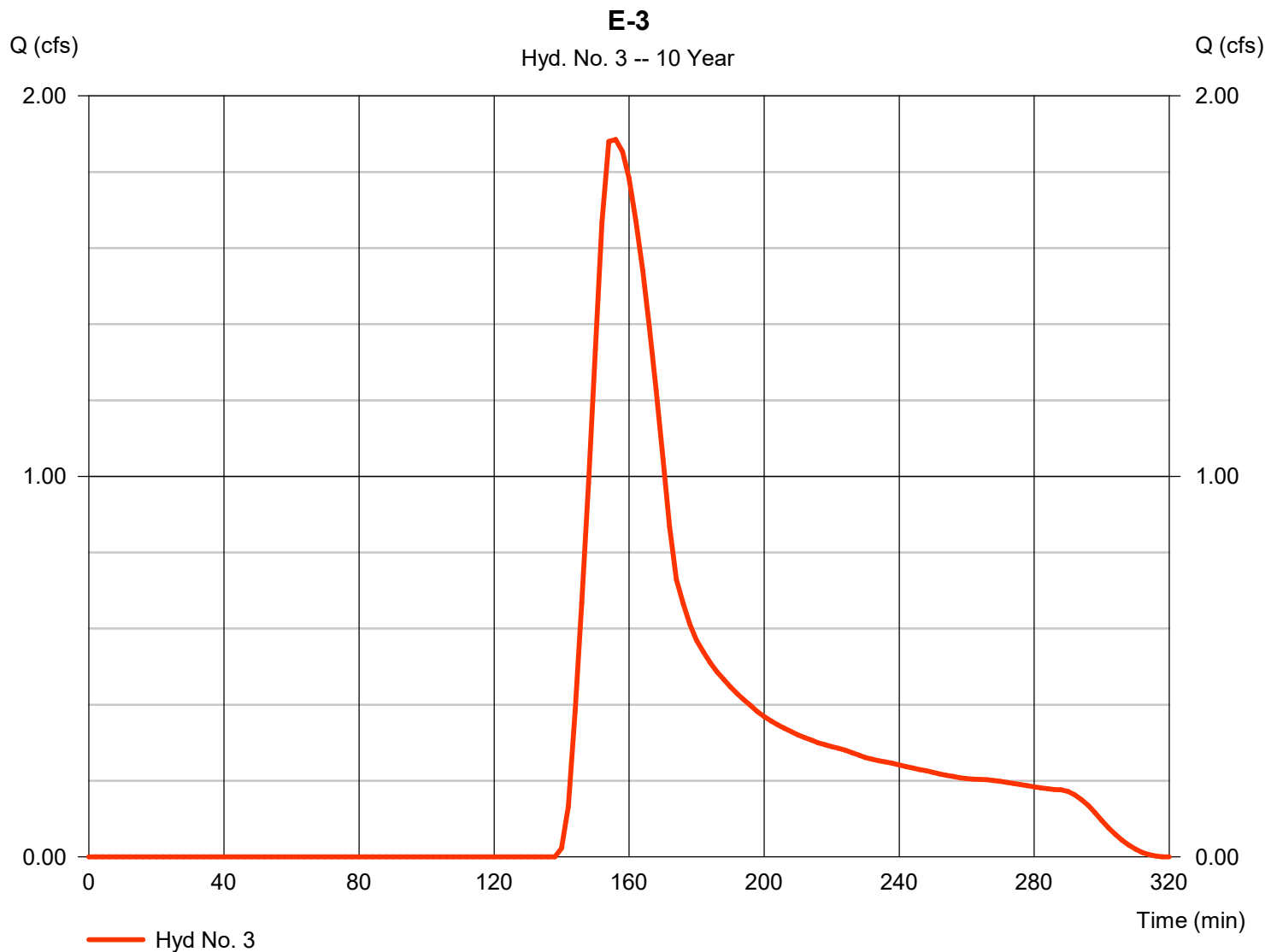
Tuesday, 04 / 7 / 2020

Hyd. No. 3

E-3

Hydrograph type	= SCS Runoff	Peak discharge	= 1.885 cfs
Storm frequency	= 10 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 4,696 cuft
Drainage area	= 1.588 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 1.588$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

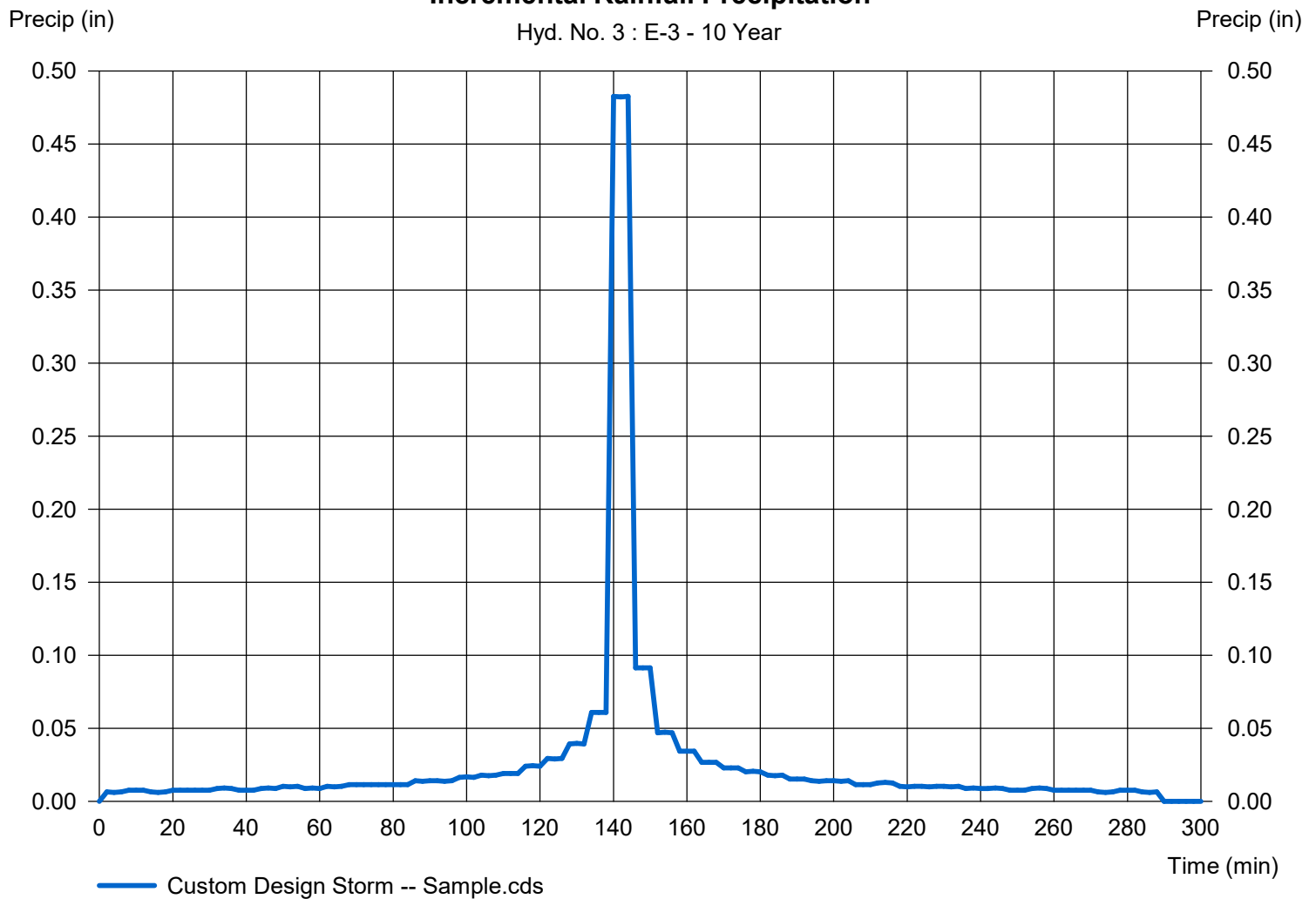
Hyd. No. 3

E-3

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : E-3 - 10 Year



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

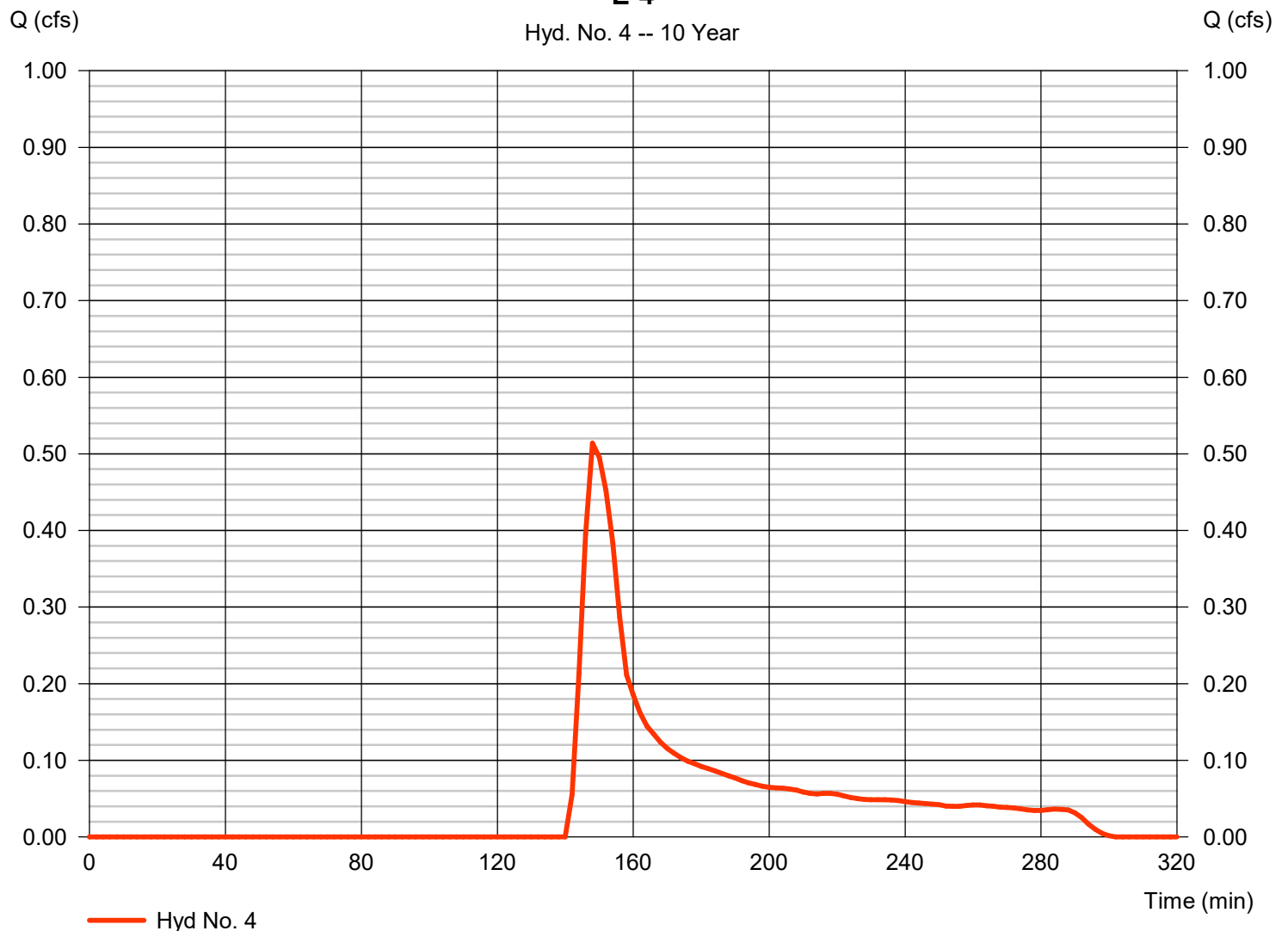
Tuesday, 04 / 7 / 2020

Hyd. No. 4

E-4

Hydrograph type	= SCS Runoff	Peak discharge	= 0.514 cfs
Storm frequency	= 10 yrs	Time to peak	= 148 min
Time interval	= 2 min	Hyd. volume	= 869 cuft
Drainage area	= 0.361 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-4



Precipitation Report

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Tuesday, 04 / 7 / 2020

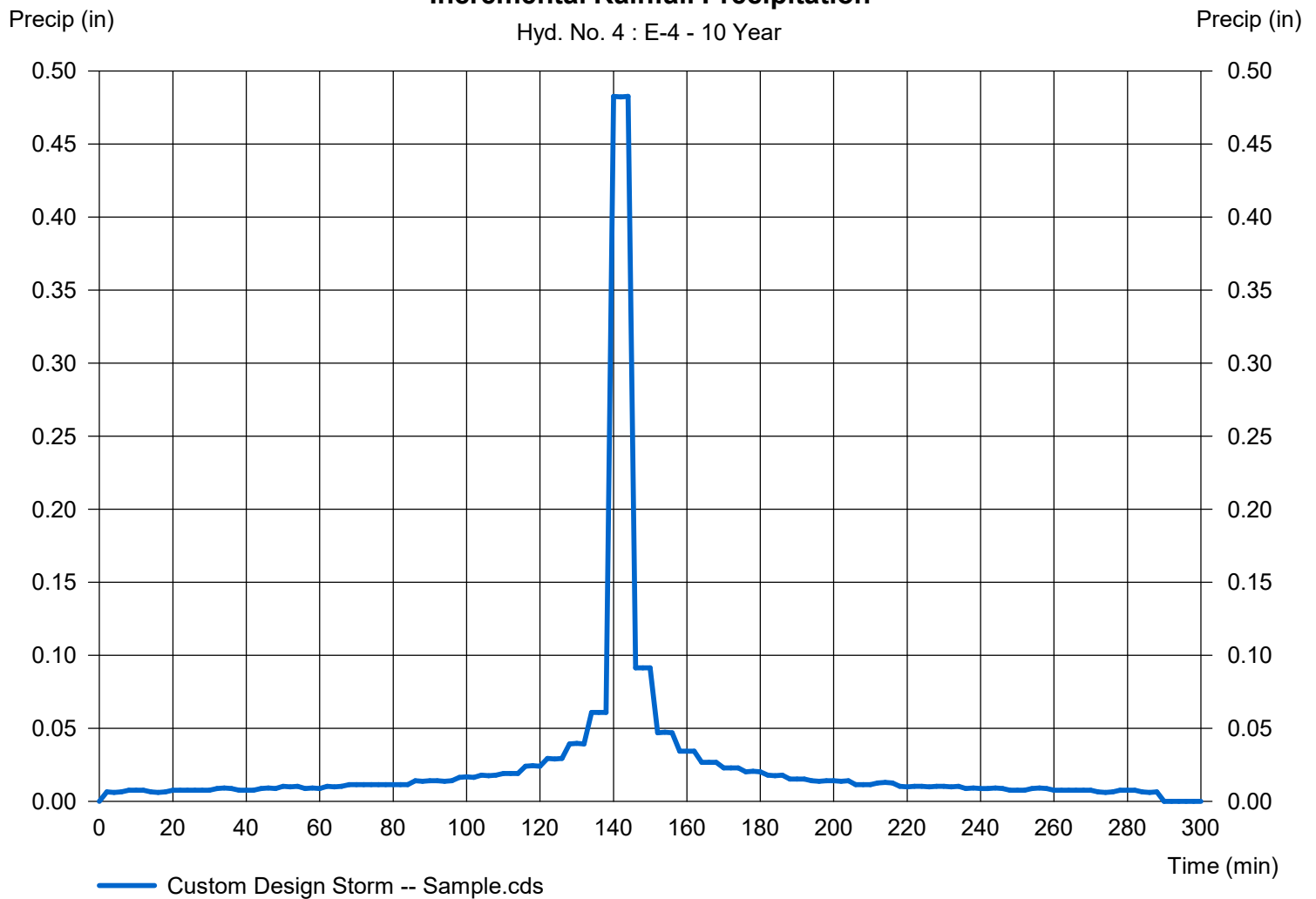
Hyd. No. 4

E-4

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : E-4 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

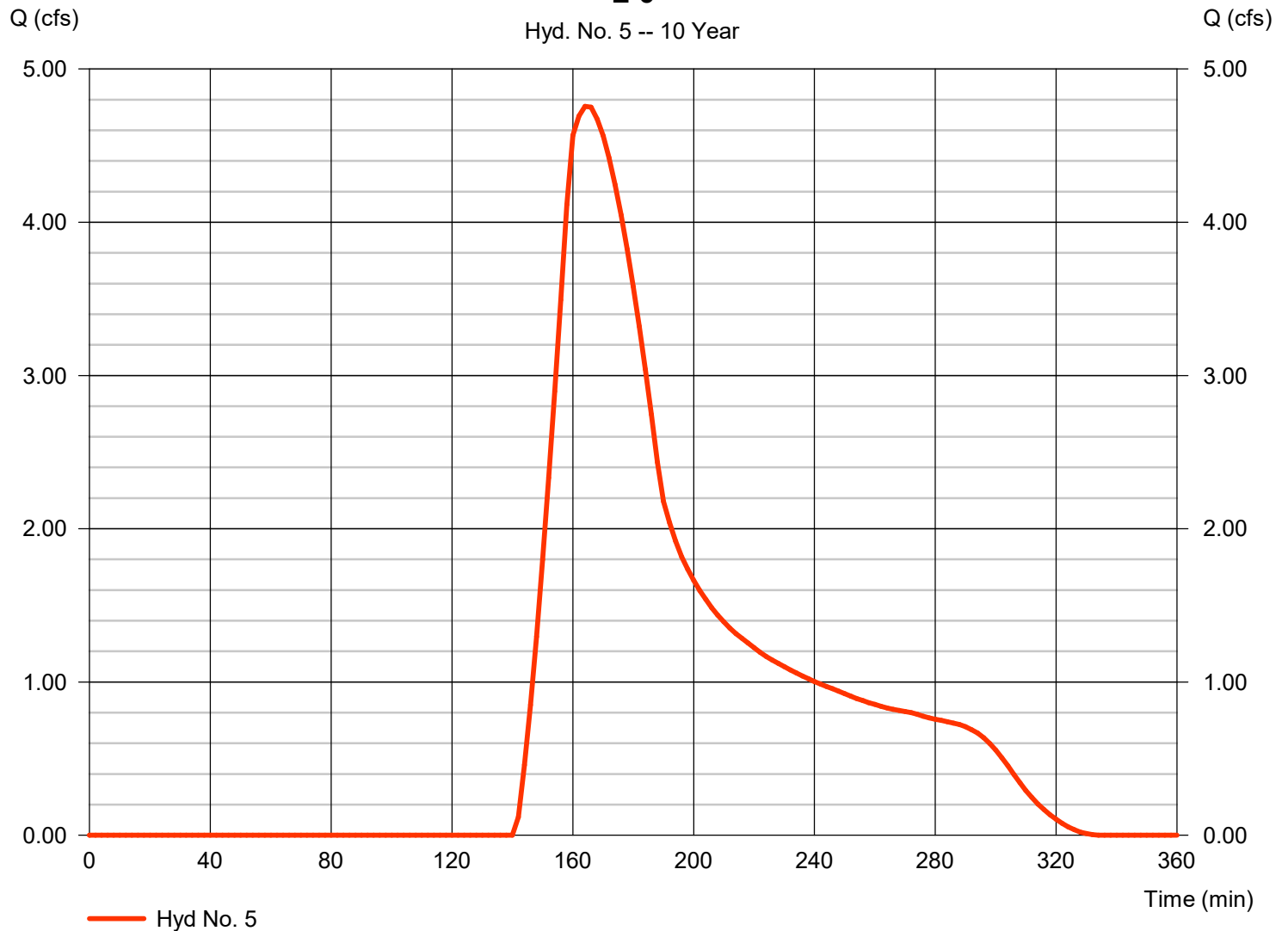
Hyd. No. 5

E-5

Hydrograph type	= SCS Runoff	Peak discharge	= 4.757 cfs
Storm frequency	= 10 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 16,824 cuft
Drainage area	= 6.987 ac	Curve number	= 60*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 27.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 6.987$

E-5



Precipitation Report

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Tuesday, 04 / 7 / 2020

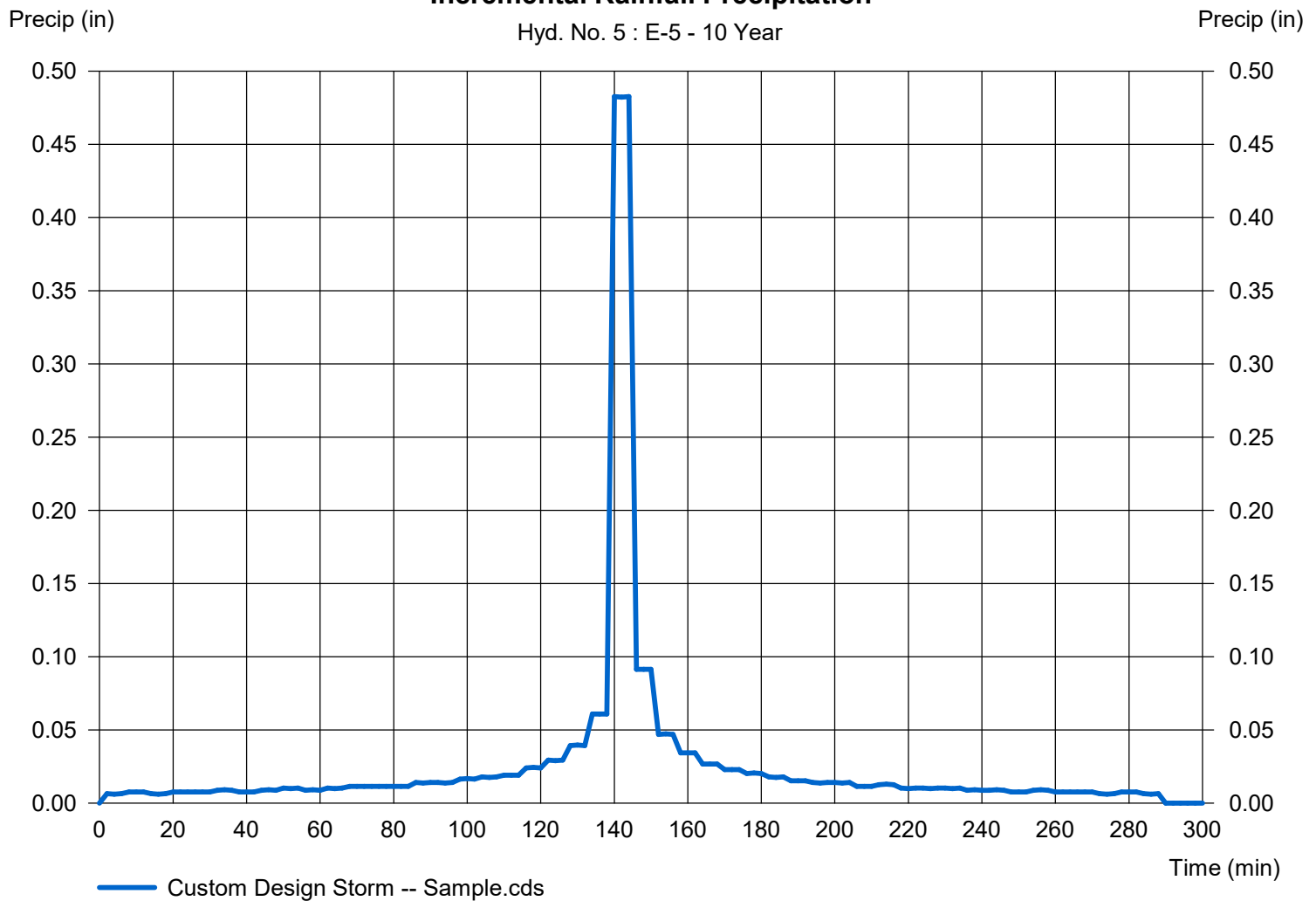
Hyd. No. 5

E-5

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 5 : E-5 - 10 Year



Hydrograph Report

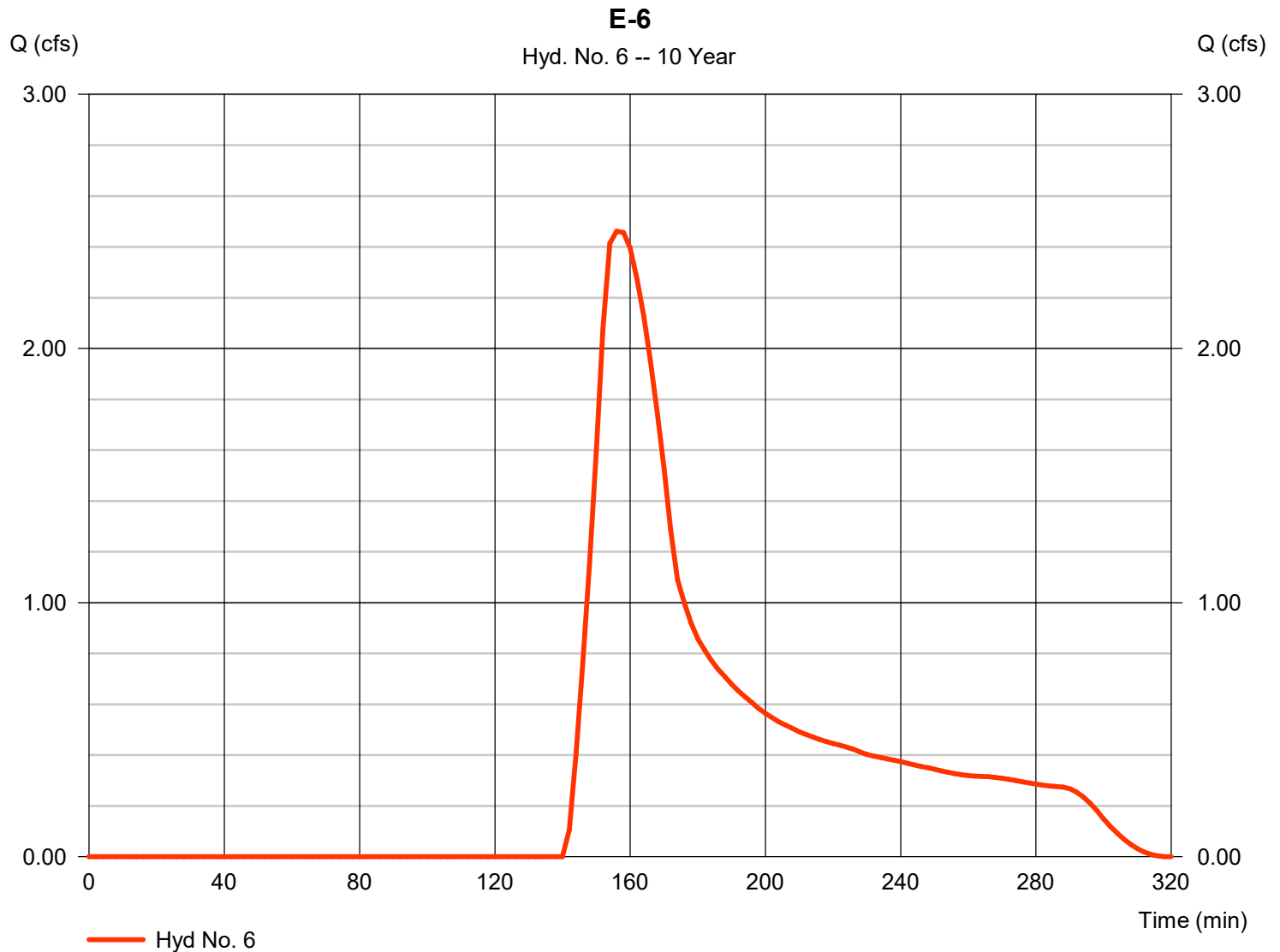
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 6

E-6

Hydrograph type	= SCS Runoff	Peak discharge	= 2.461 cfs
Storm frequency	= 10 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 6,668 cuft
Drainage area	= 2.769 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

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Tuesday, 04 / 7 / 2020

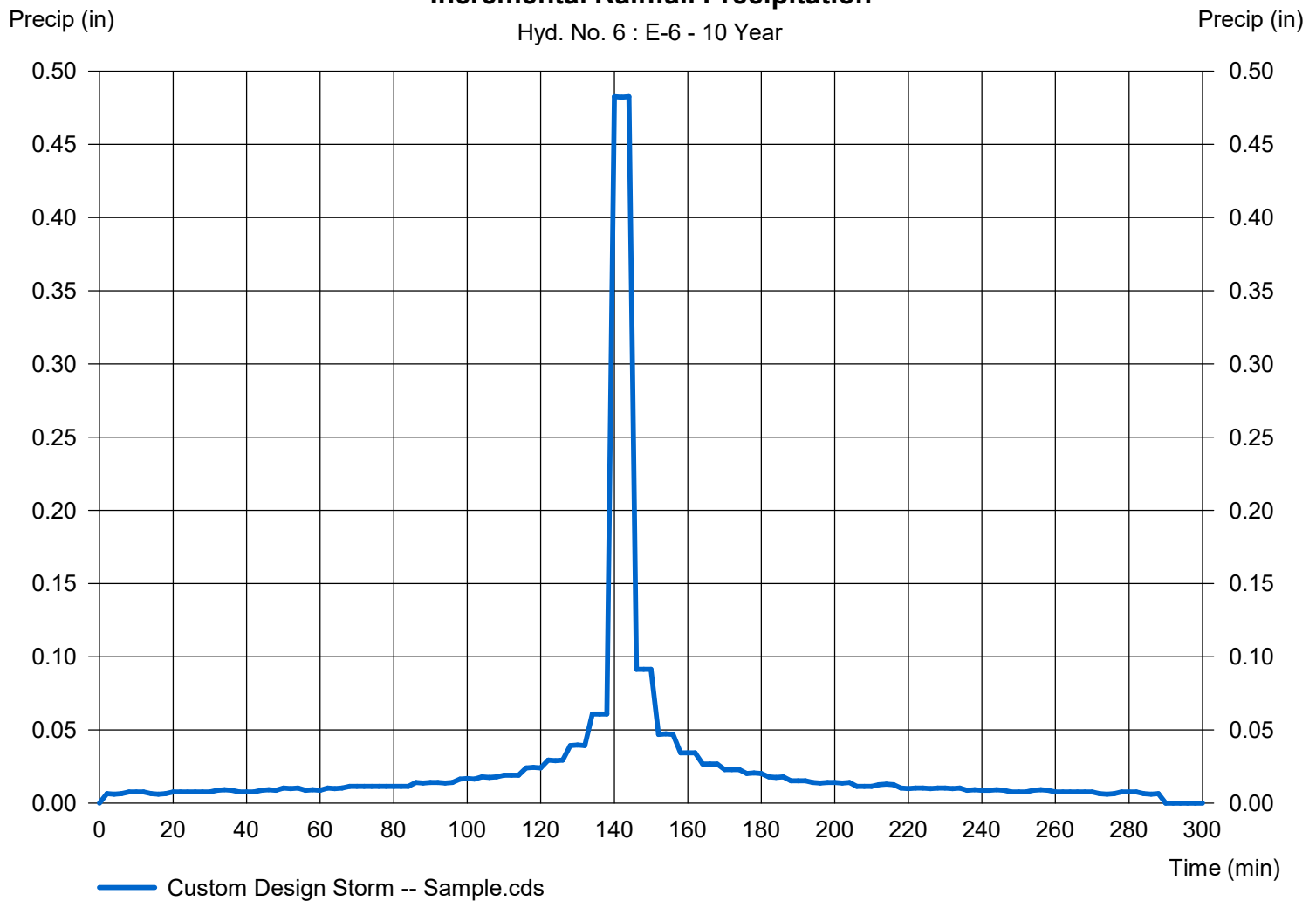
Hyd. No. 6

E-6

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : E-6 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

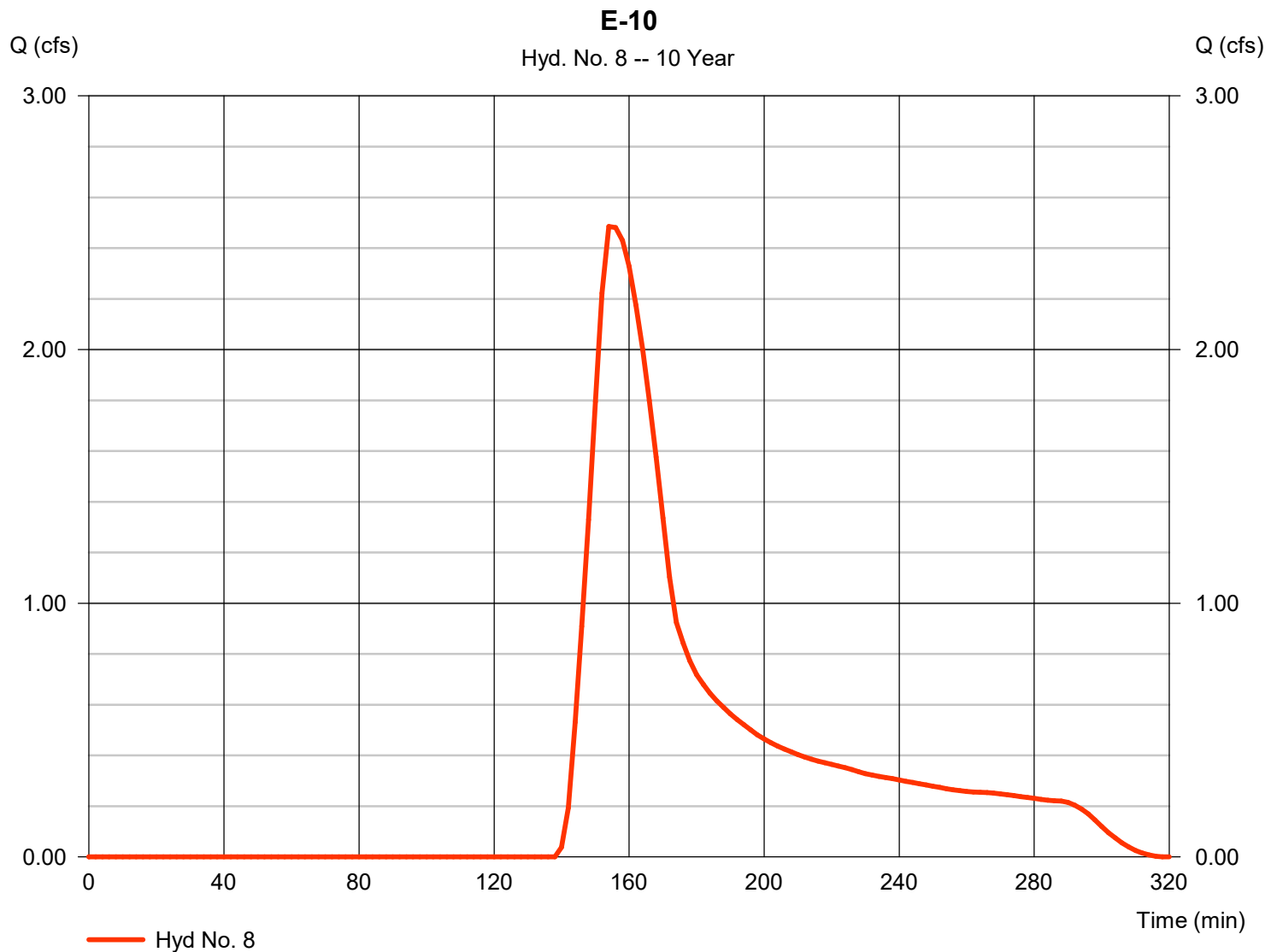
Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Hydrograph type	= SCS Runoff	Peak discharge	= 2.485 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 6,044 cuft
Drainage area	= 1.920 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.920$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

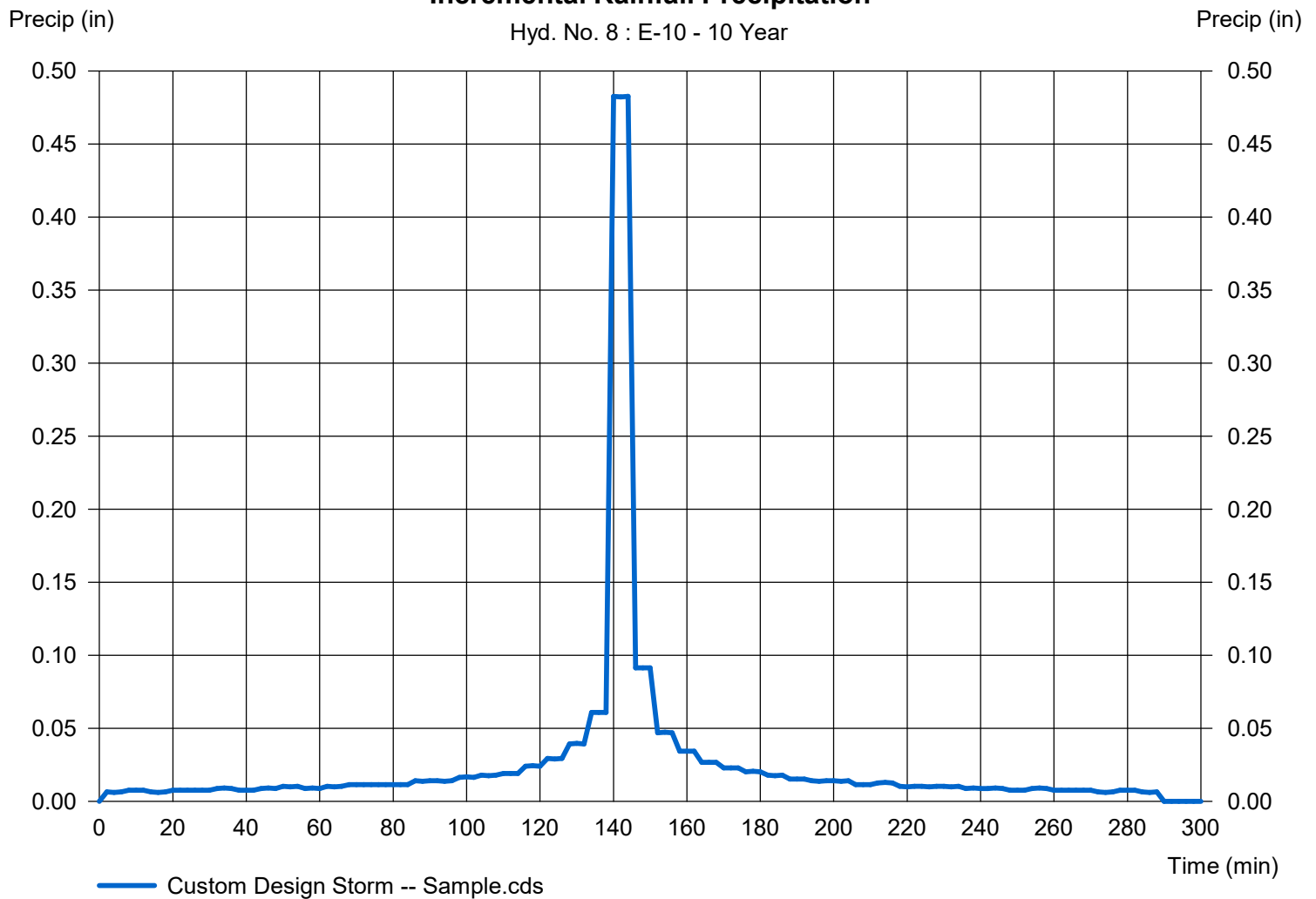
Hyd. No. 8

E-10

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : E-10 - 10 Year



Hydrograph Report

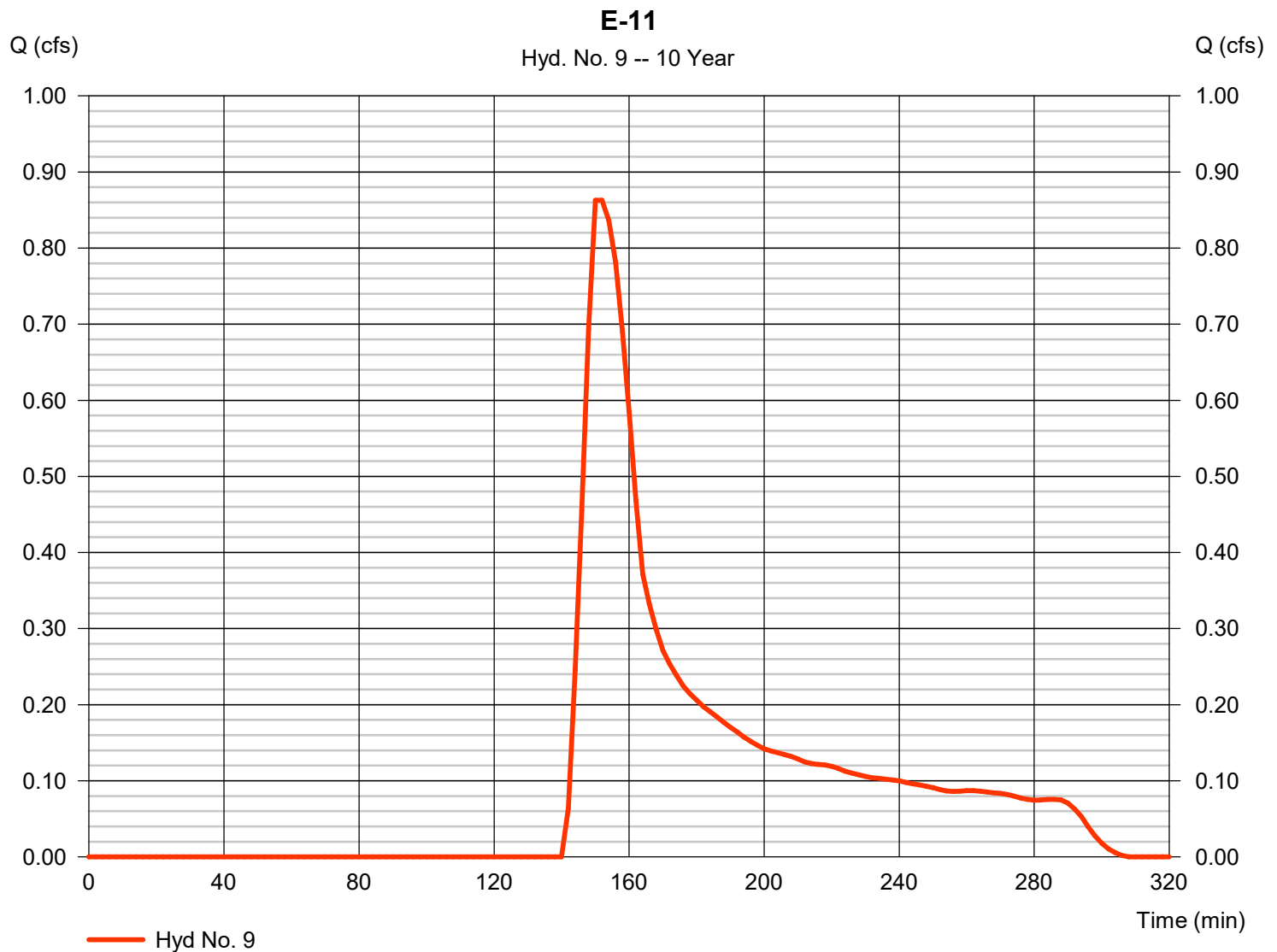
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Hydrograph type	= SCS Runoff	Peak discharge	= 0.863 cfs
Storm frequency	= 10 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 1,835 cuft
Drainage area	= 0.739 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

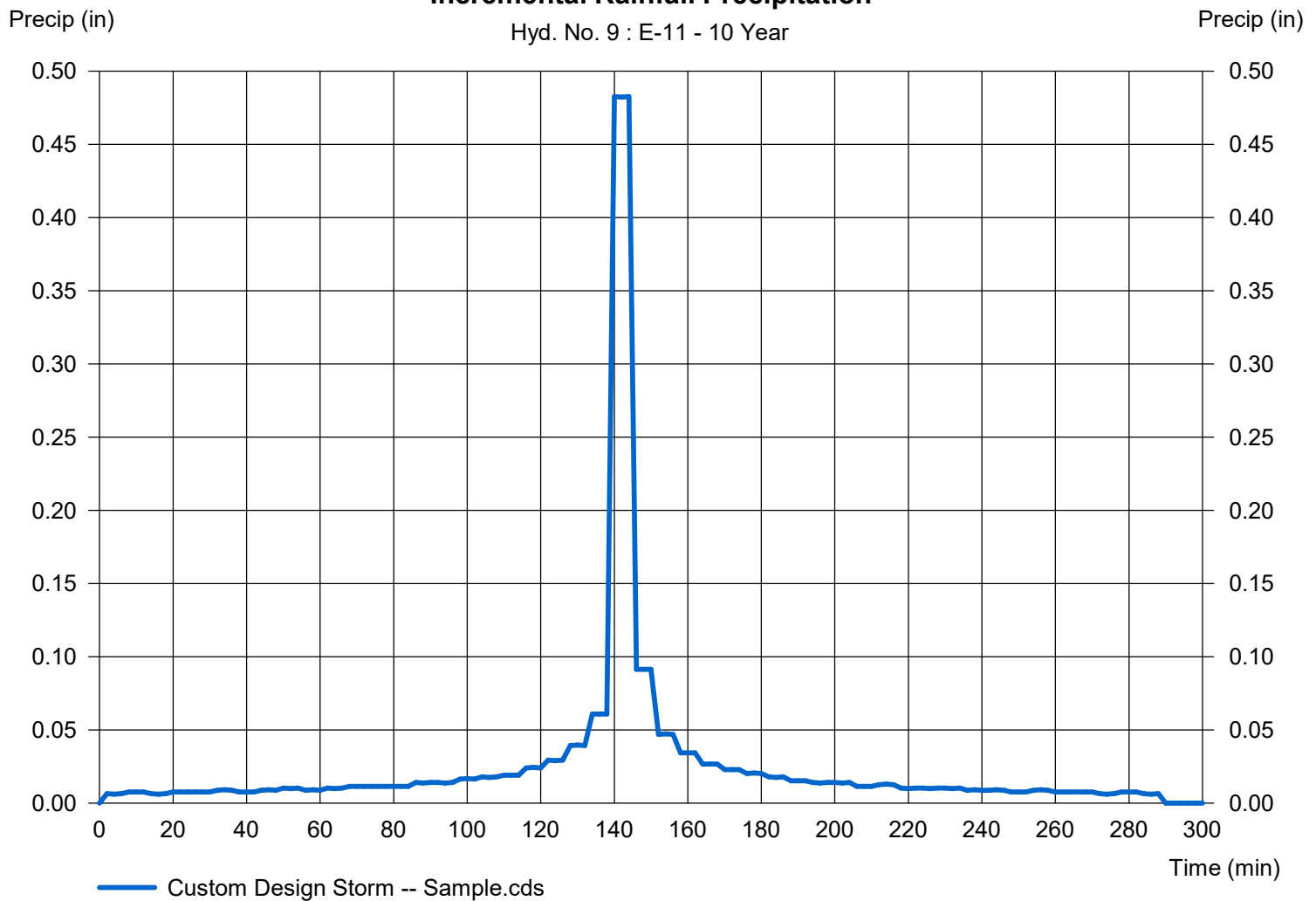
Hyd. No. 9

E-11

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 9 : E-11 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

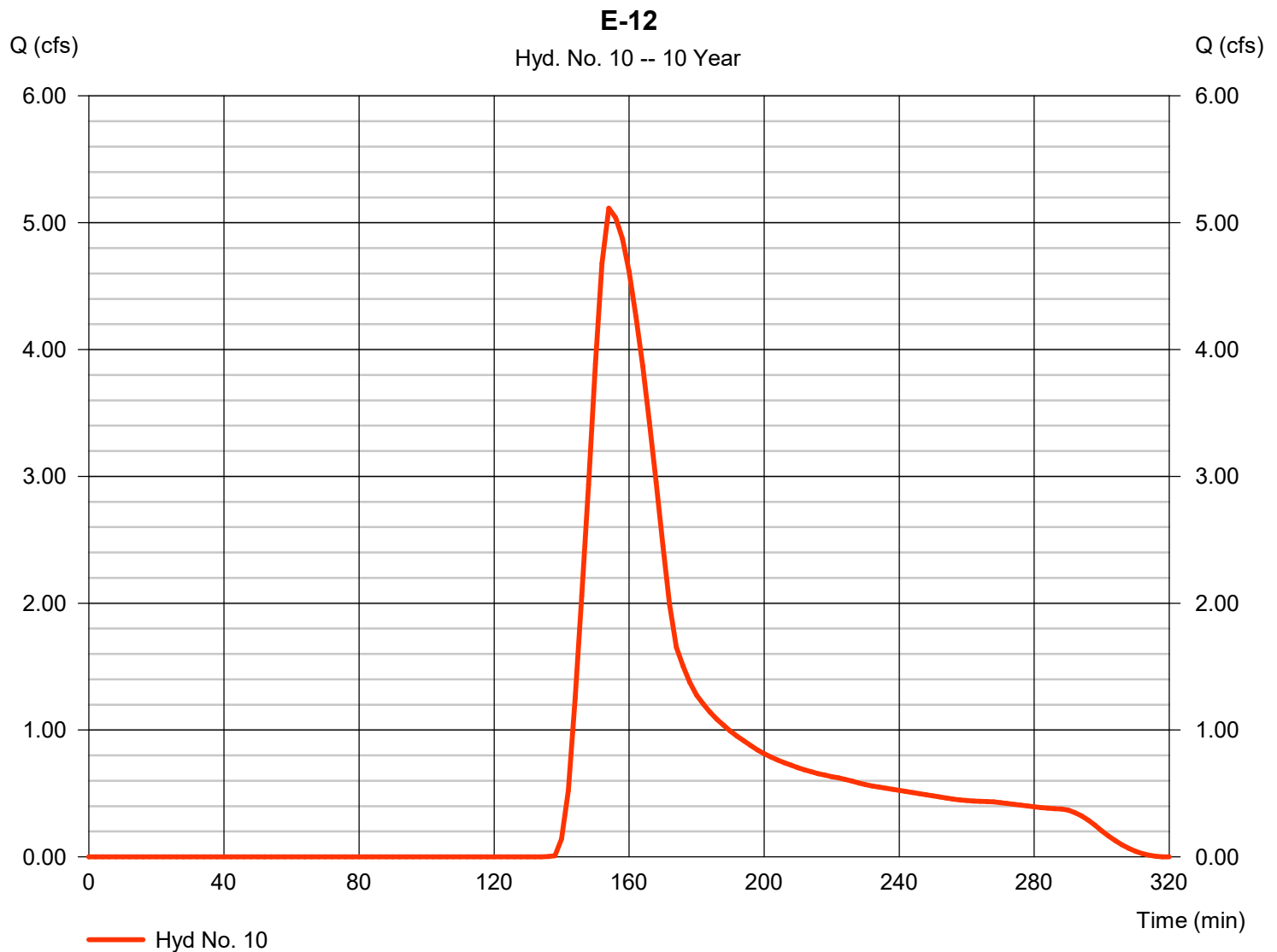
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-12

Hydrograph type	= SCS Runoff	Peak discharge	= 5.116 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 11,437 cuft
Drainage area	= 2.900 ac	Curve number	= 68*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.900$



Precipitation Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

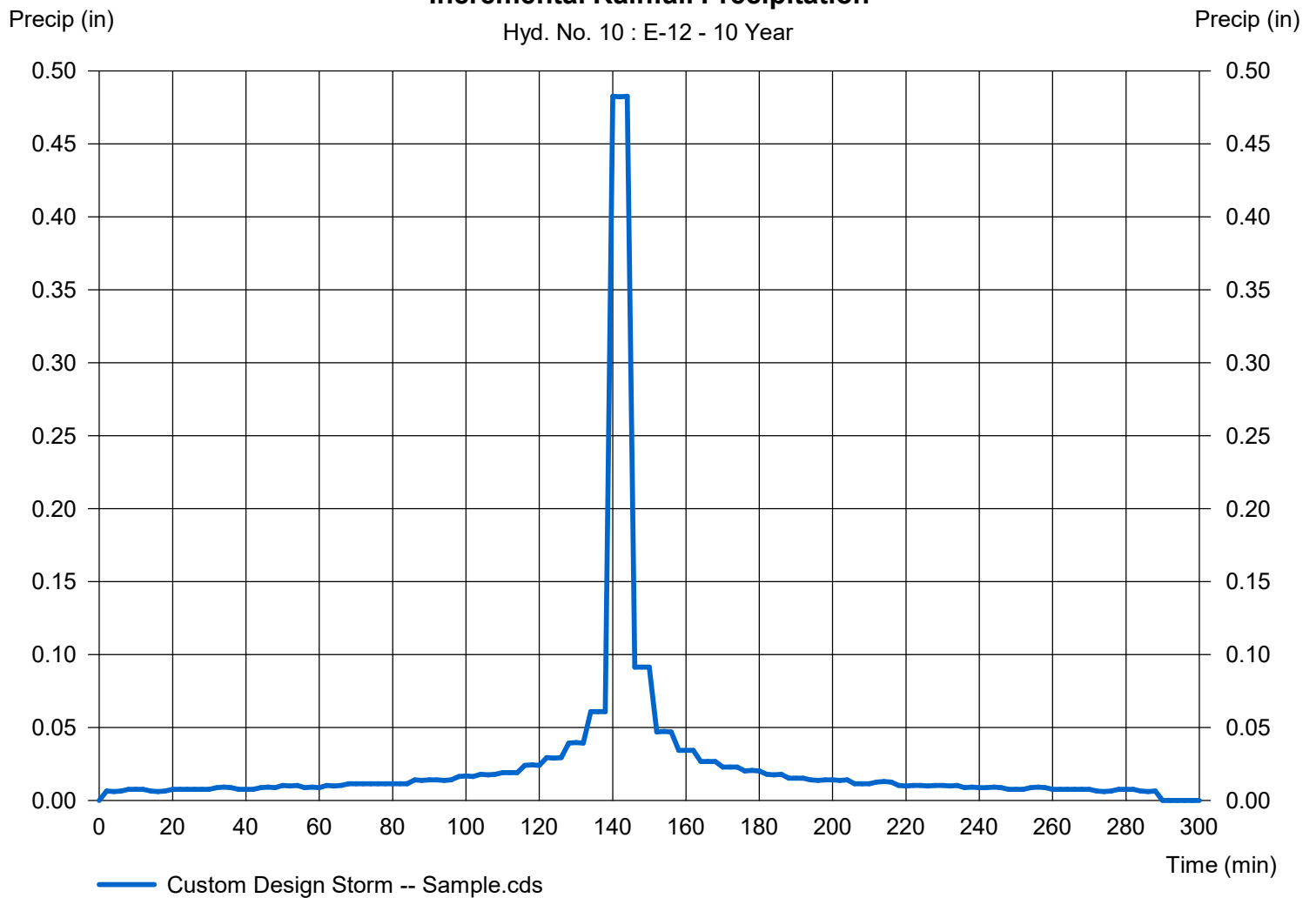
Hyd. No. 10

E-12

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-12 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

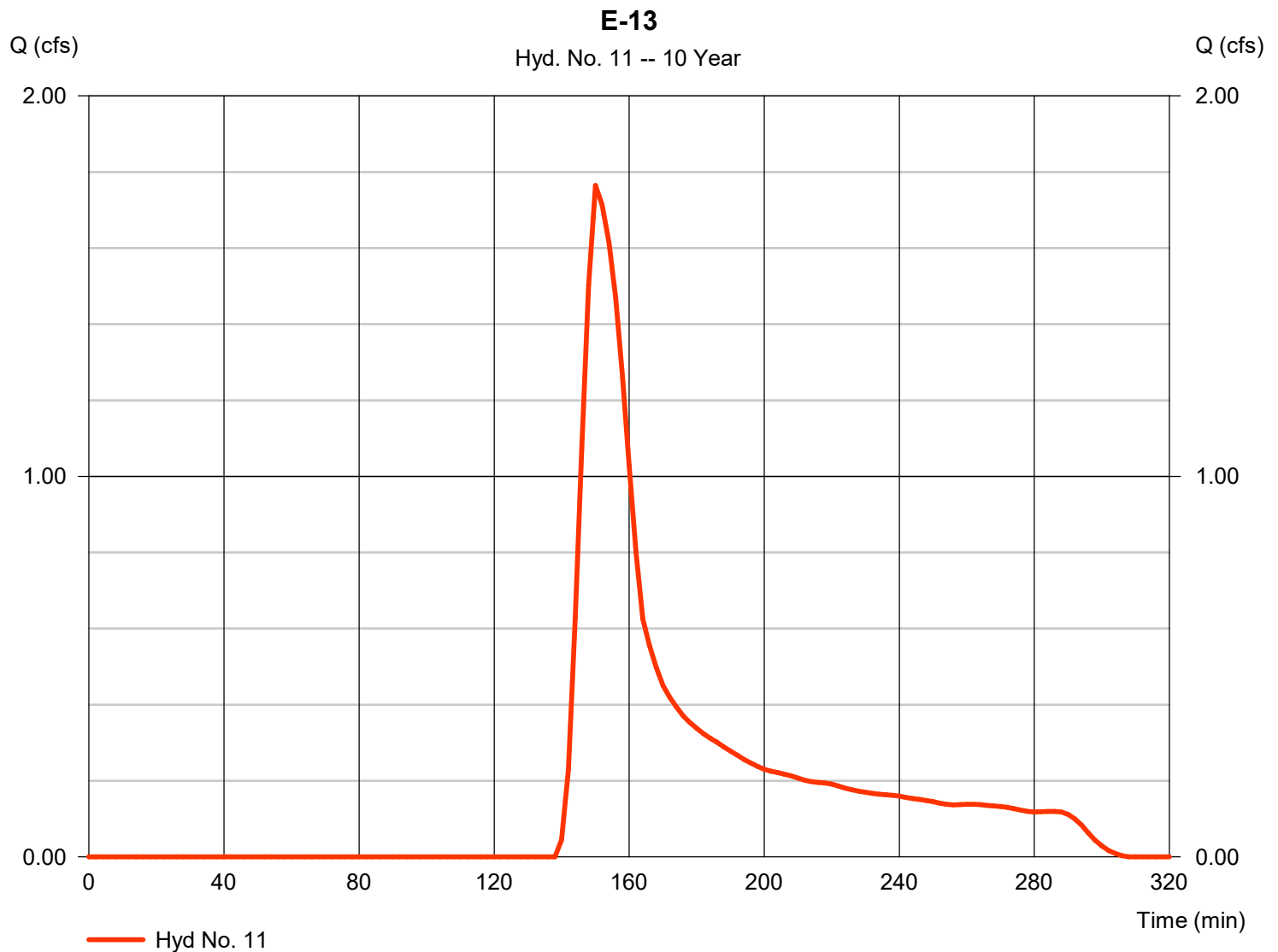
Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 1.765 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 3,279 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

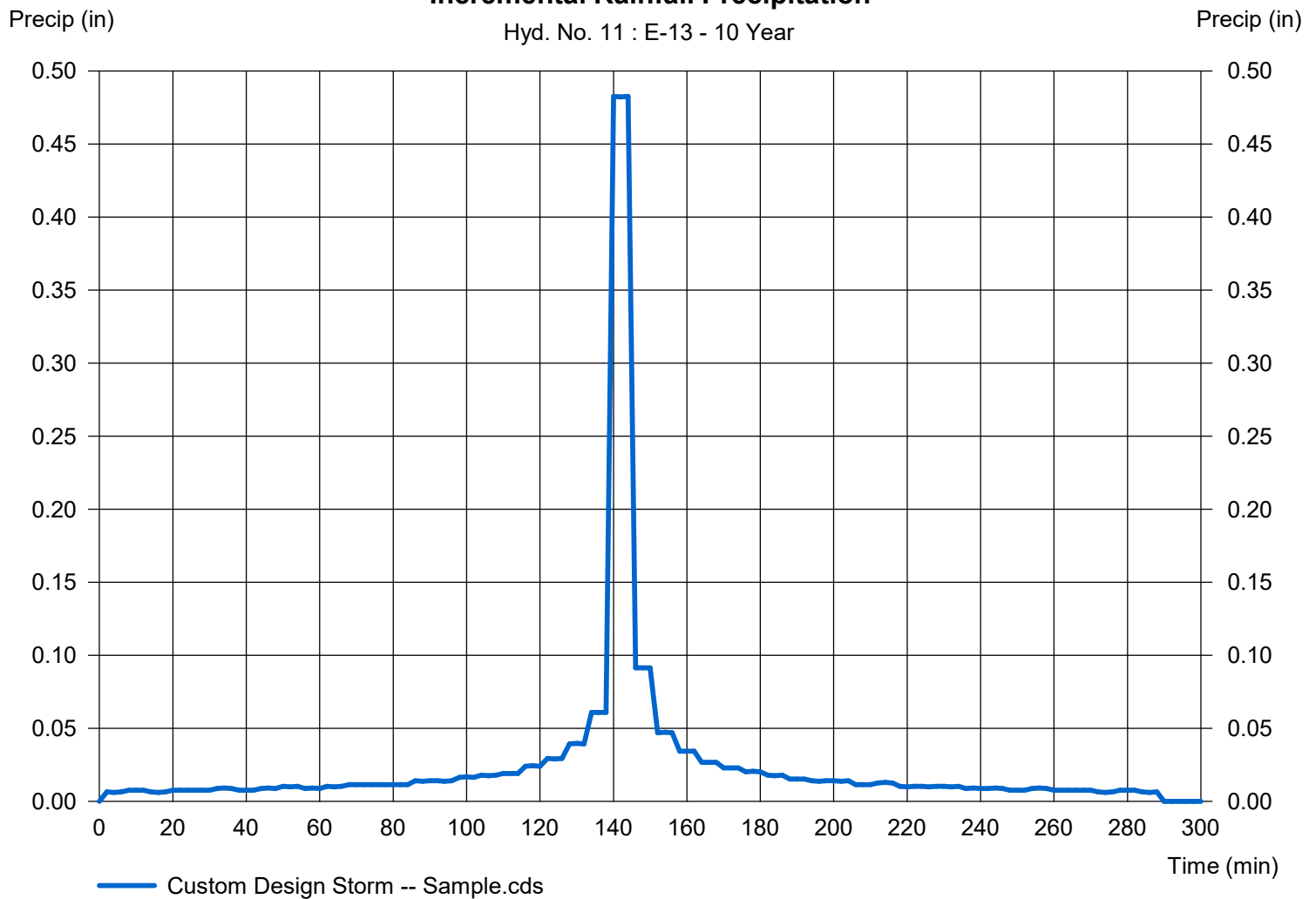
Hyd. No. 11

E-13

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-13 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

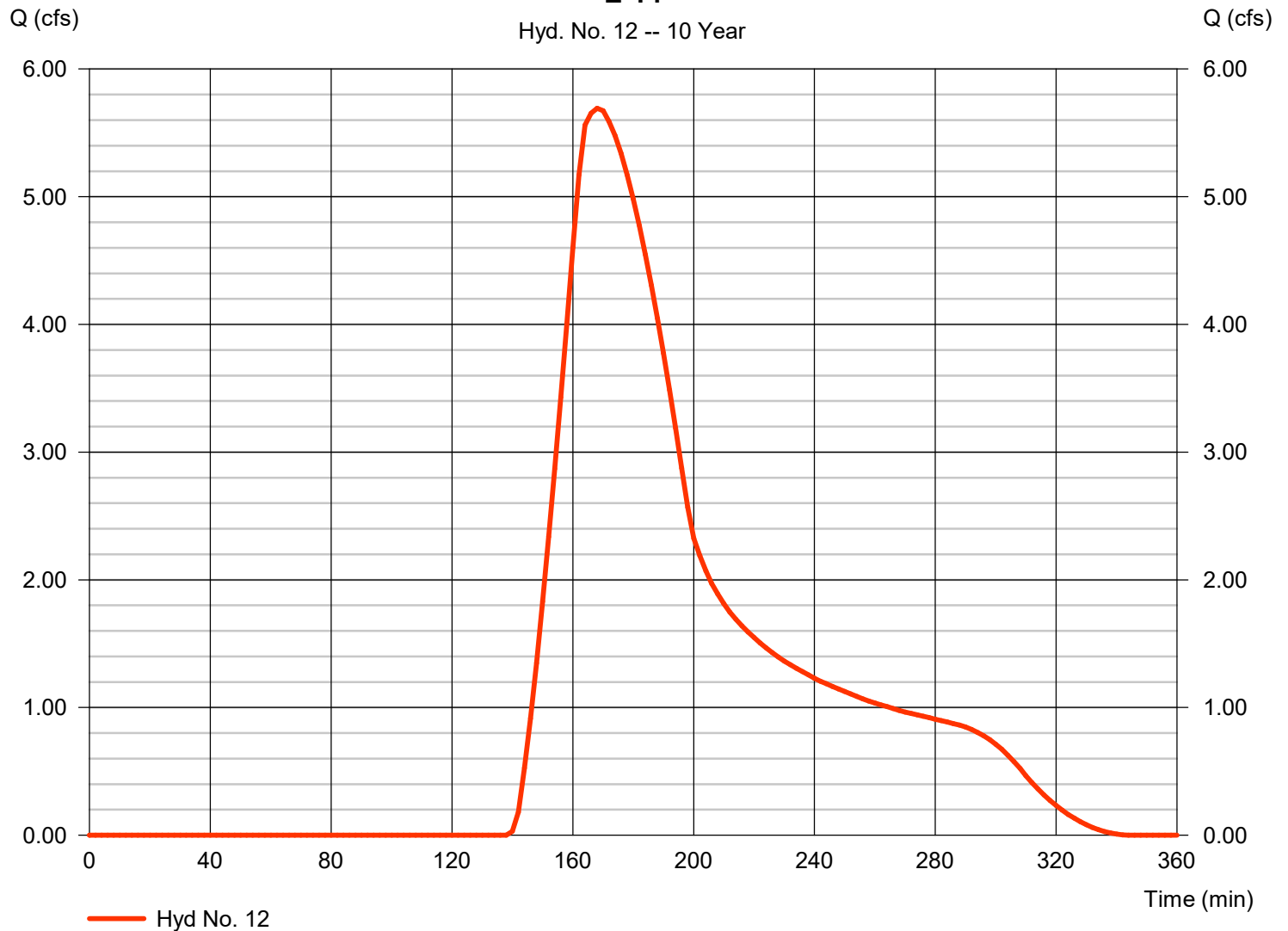
Hyd. No. 12

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 5.693 cfs
Storm frequency	= 10 yrs	Time to peak	= 168 min
Time interval	= 2 min	Hyd. volume	= 21,401 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$

E-14



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

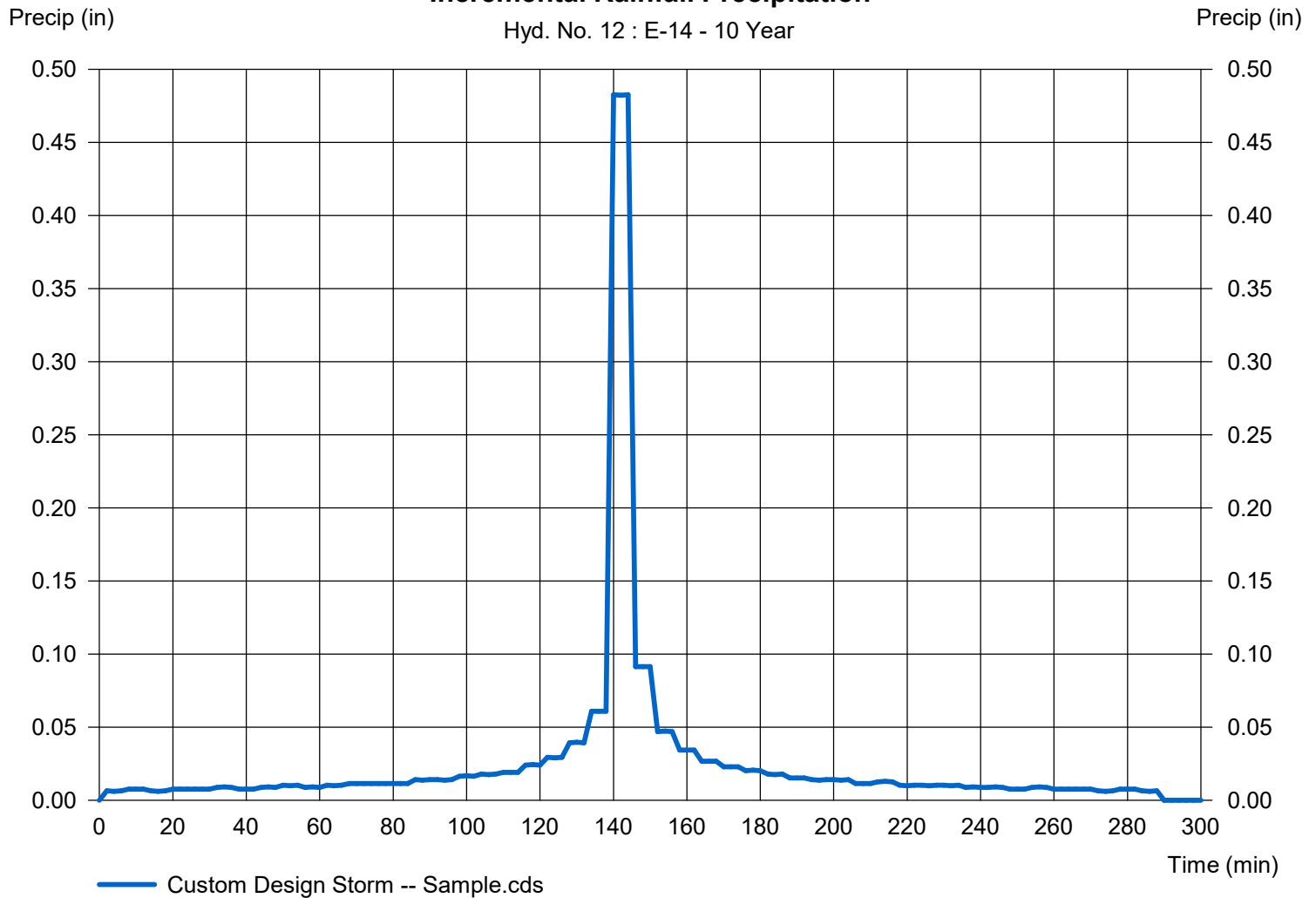
Hyd. No. 12

E-14

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : E-14 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

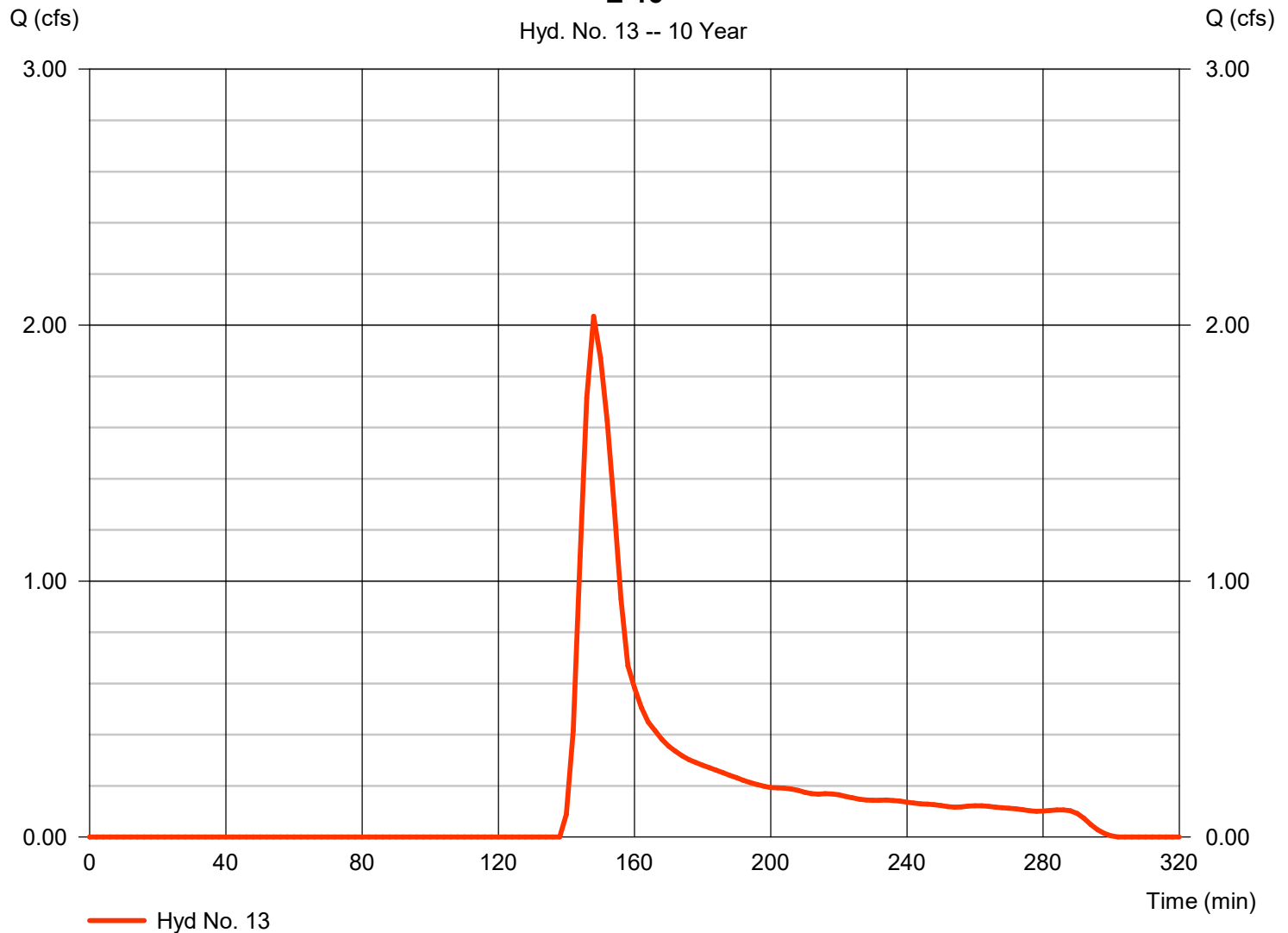
Tuesday, 04 / 7 / 2020

Hyd. No. 13

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 2.035 cfs
Storm frequency	= 10 yrs	Time to peak	= 148 min
Time interval	= 2 min	Hyd. volume	= 2,939 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-15



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

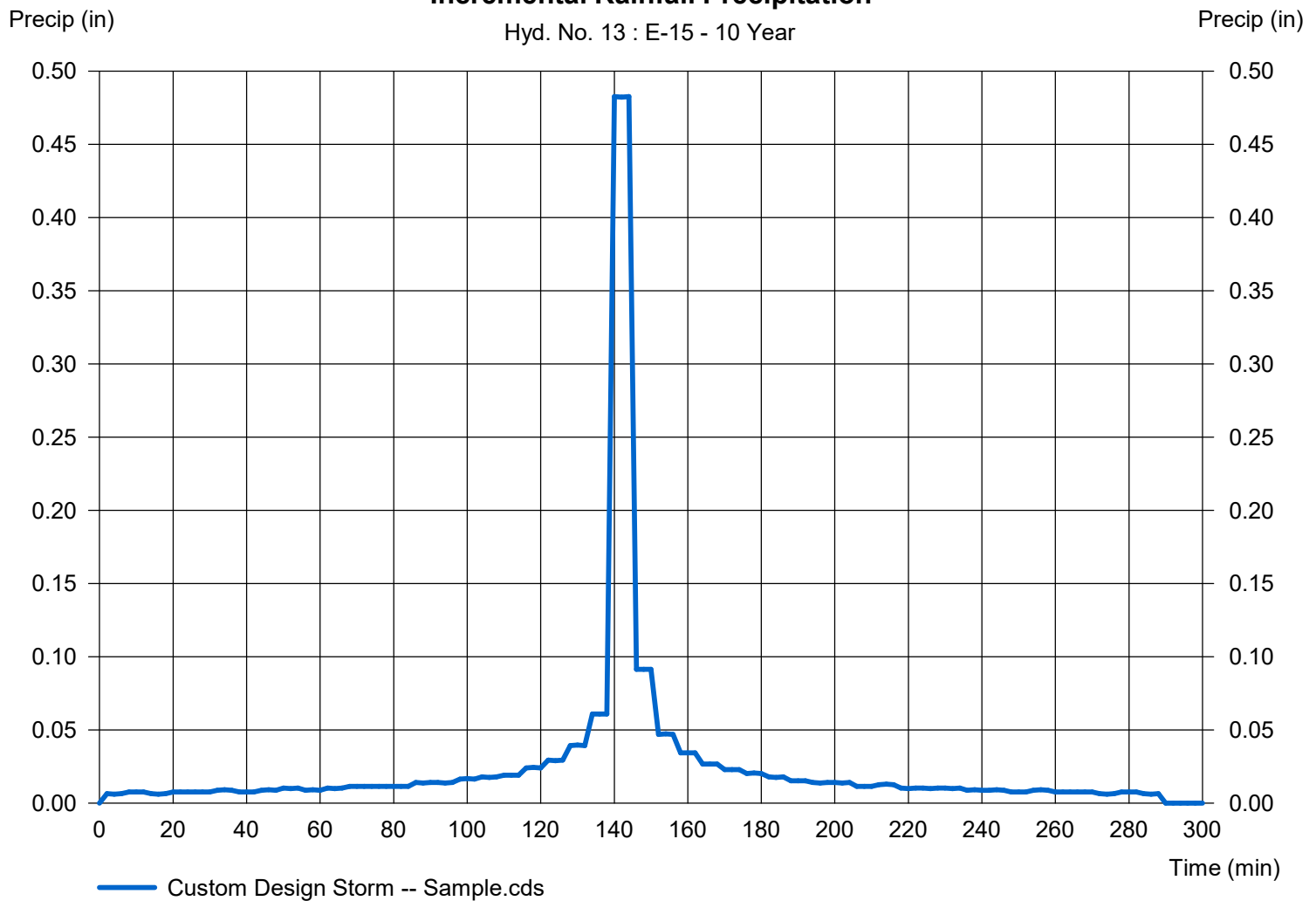
Hyd. No. 13

E-15

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : E-15 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

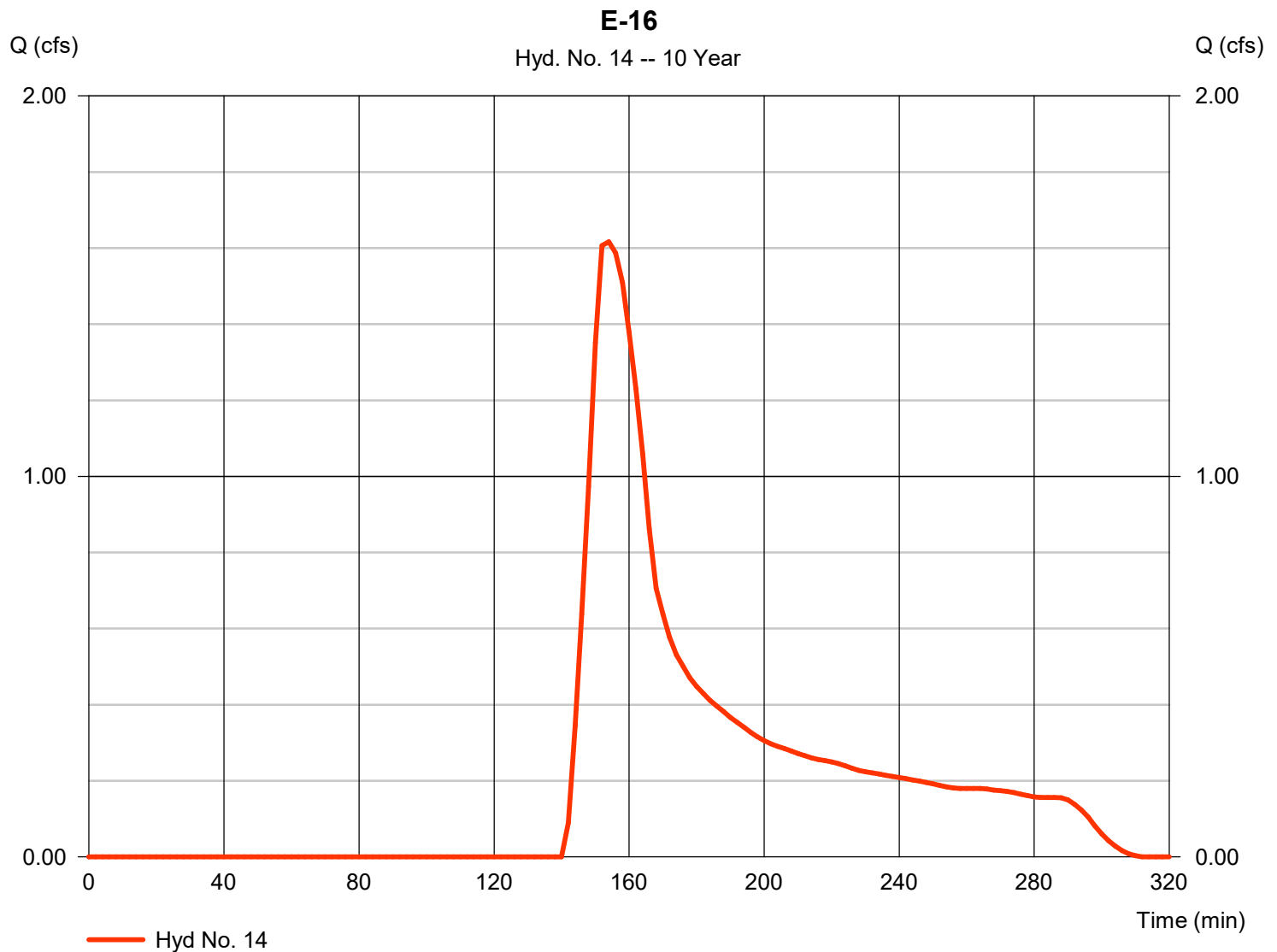
Tuesday, 04 / 7 / 2020

Hyd. No. 14

E-16

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 2 min
 Drainage area = 1.620 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 3.81 in
 Storm duration = Sample.cds

Peak discharge = 1.617 cfs
 Time to peak = 154 min
 Hyd. volume = 3,803 cuft
 Curve number = 60
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 15.00 min
 Distribution = Custom
 Shape factor = 484



Precipitation Report

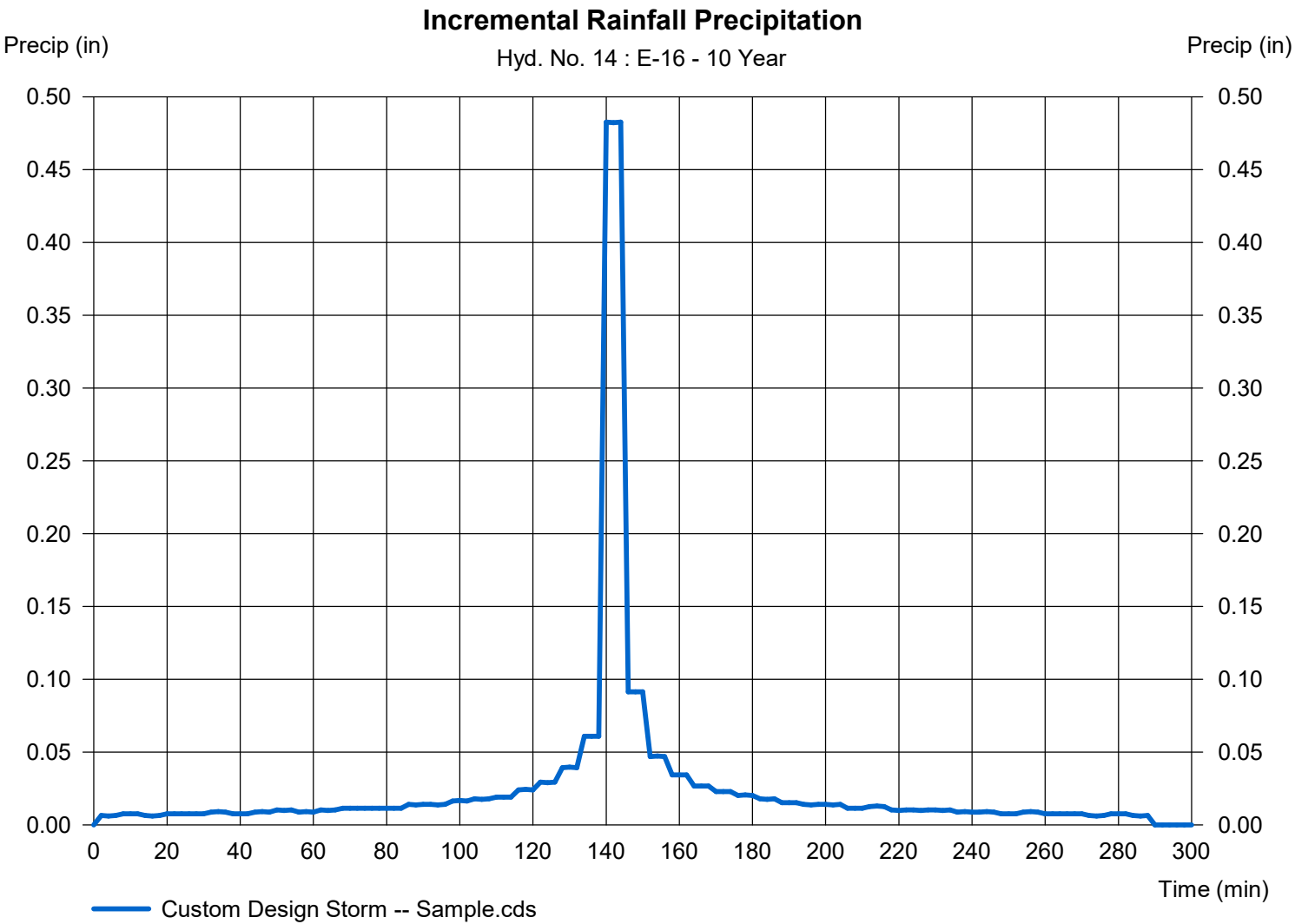
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 14

E-16

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

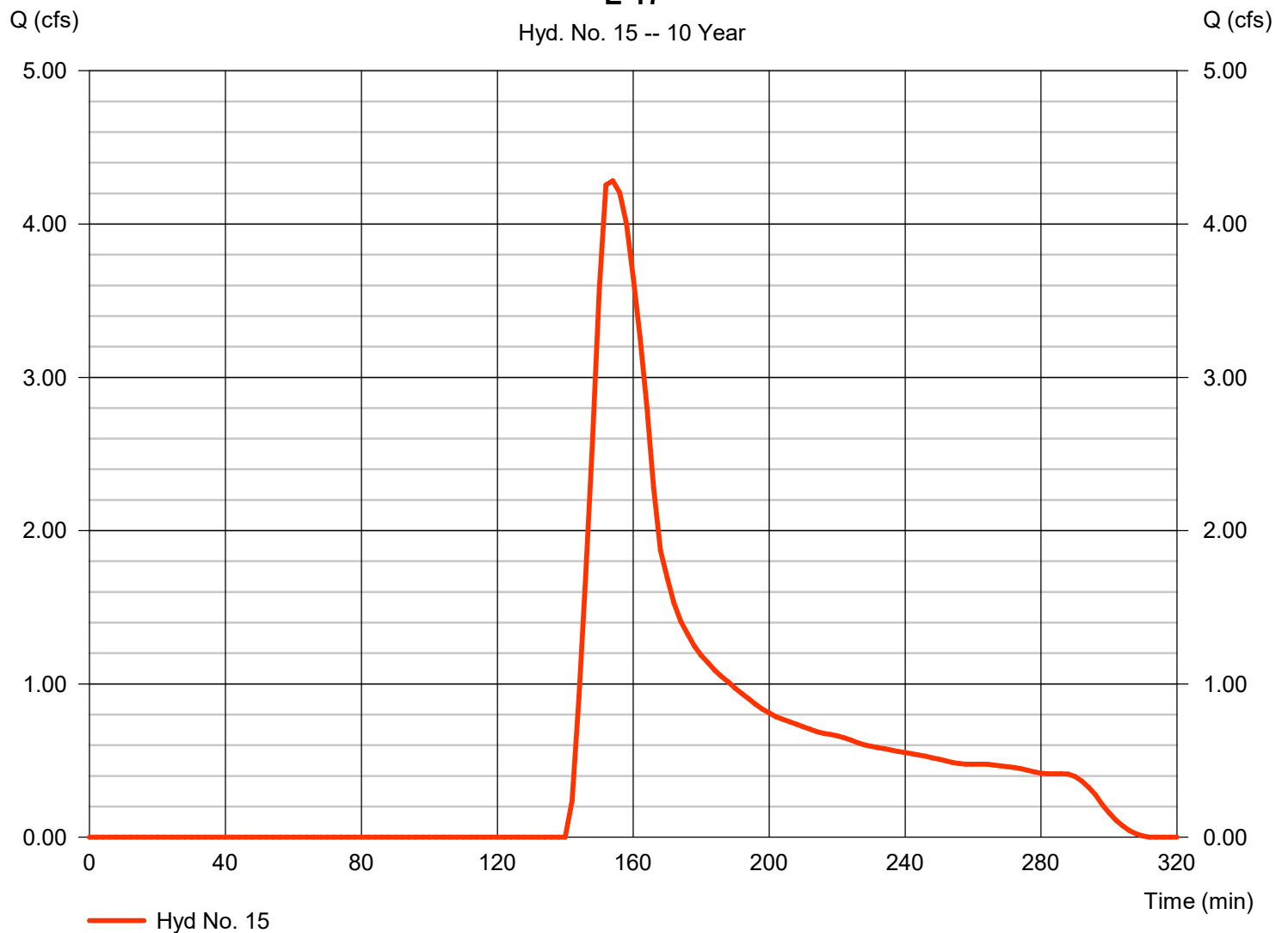
Tuesday, 04 / 7 / 2020

Hyd. No. 15

E-17

Hydrograph type	= SCS Runoff	Peak discharge	= 4.282 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 10,074 cuft
Drainage area	= 4.291 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-17



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

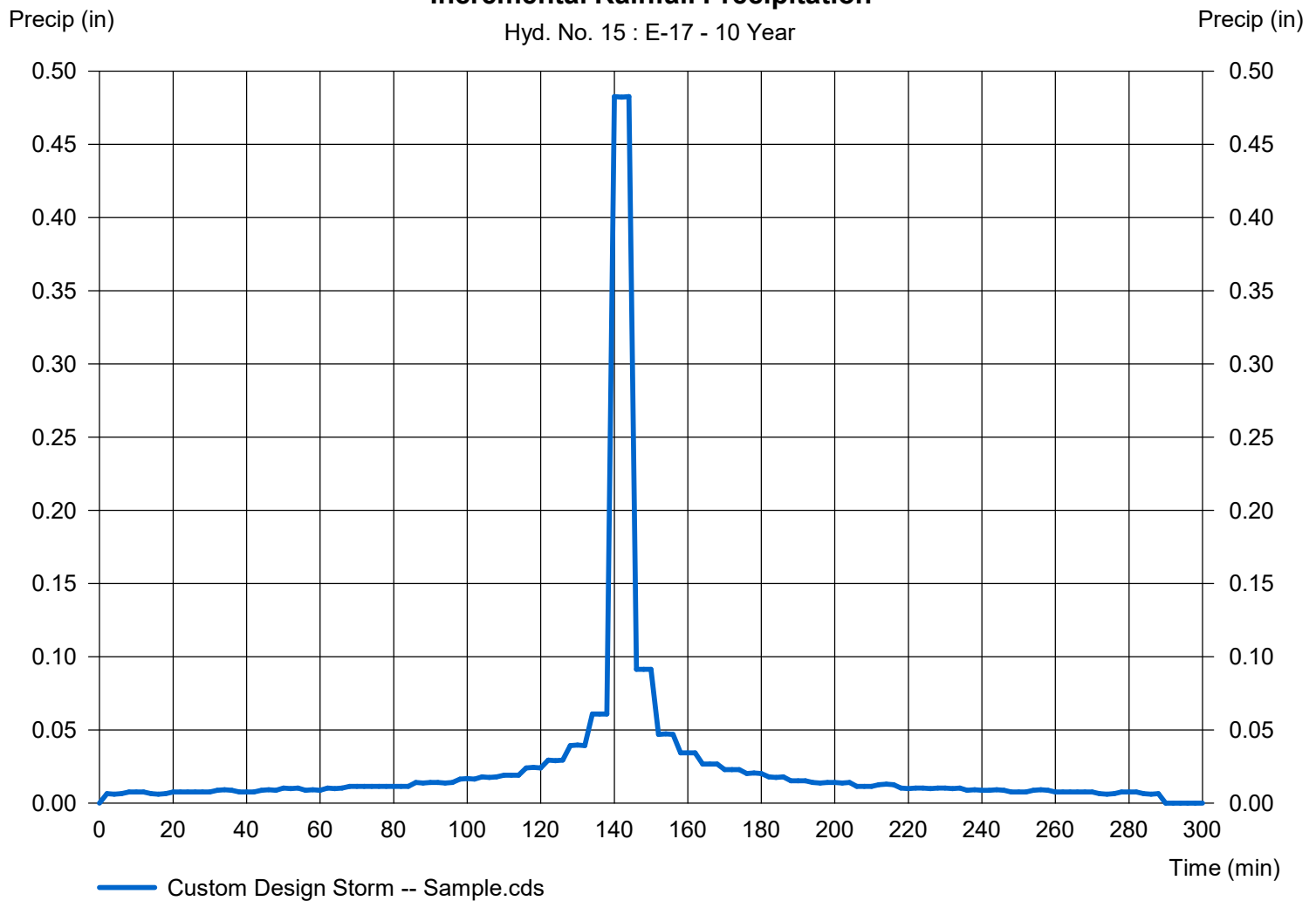
Hyd. No. 15

E-17

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : E-17 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

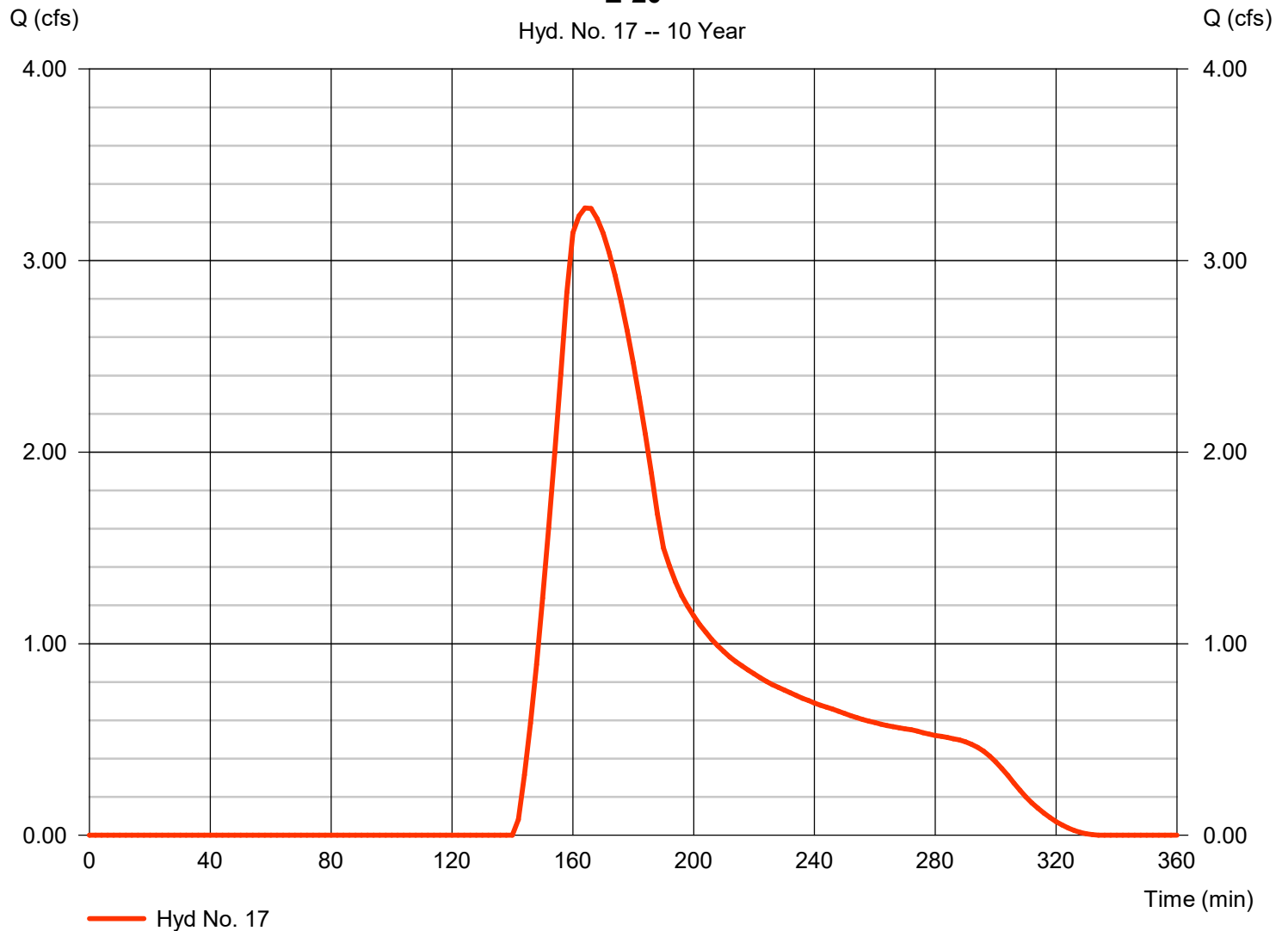
Tuesday, 04 / 7 / 2020

Hyd. No. 17

E-20

Hydrograph type	= SCS Runoff	Peak discharge	= 3.275 cfs
Storm frequency	= 10 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 11,585 cuft
Drainage area	= 4.811 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-20



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

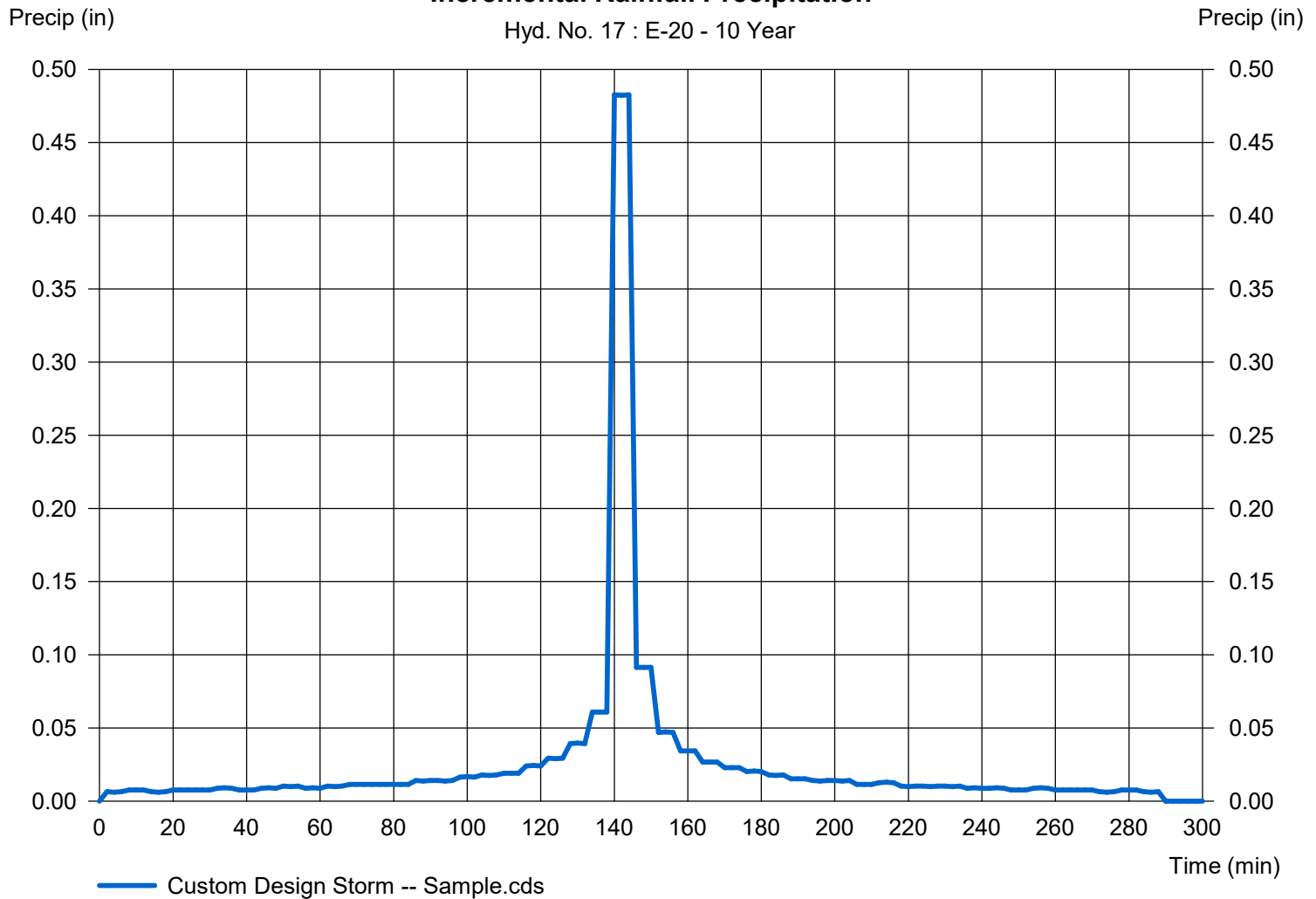
Hyd. No. 17

E-20

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 17 : E-20 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

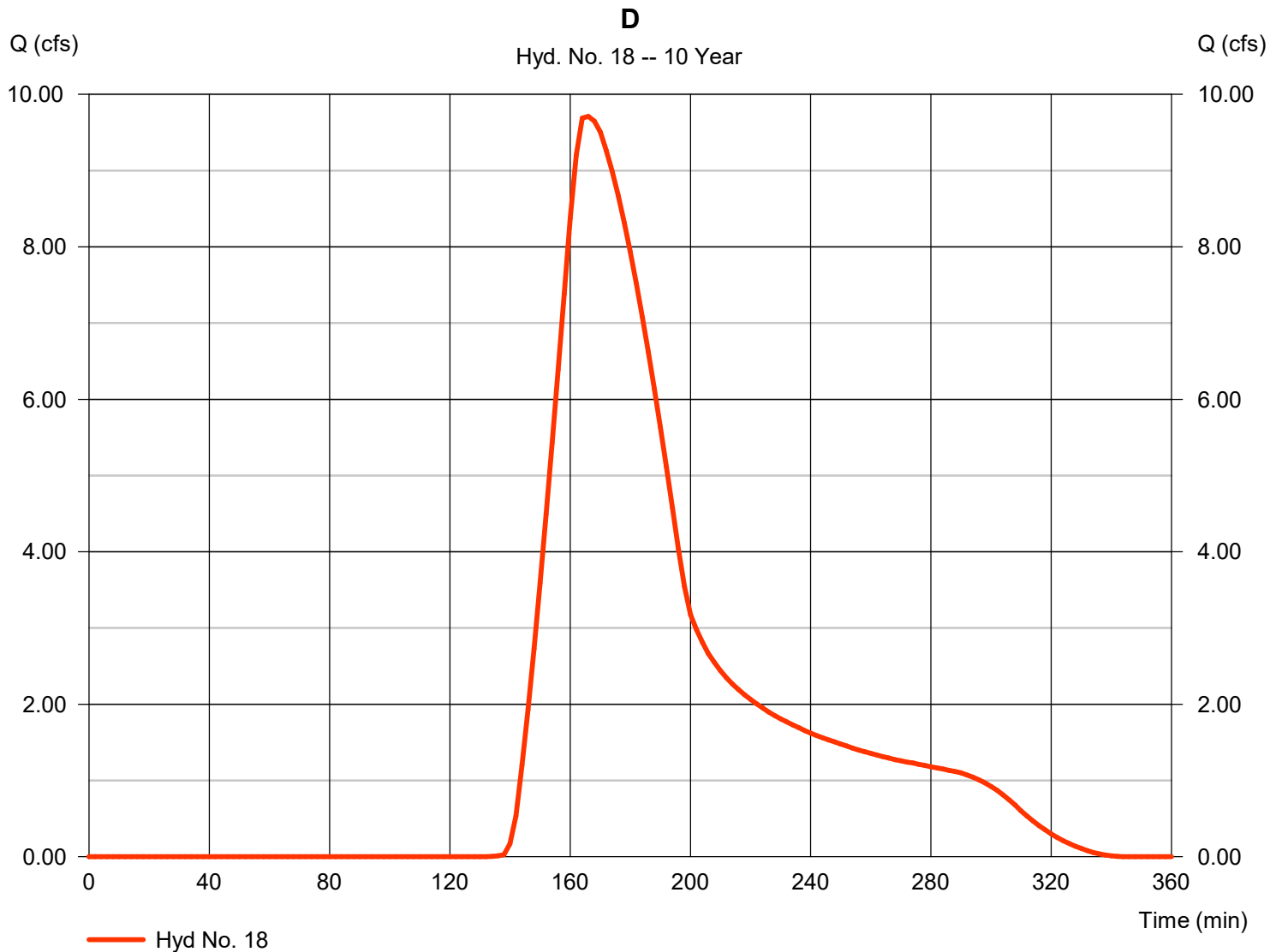
Tuesday, 04 / 7 / 2020

Hyd. No. 18

D

Hydrograph type	= SCS Runoff	Peak discharge	= 9.710 cfs
Storm frequency	= 10 yrs	Time to peak	= 166 min
Time interval	= 2 min	Hyd. volume	= 32,854 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

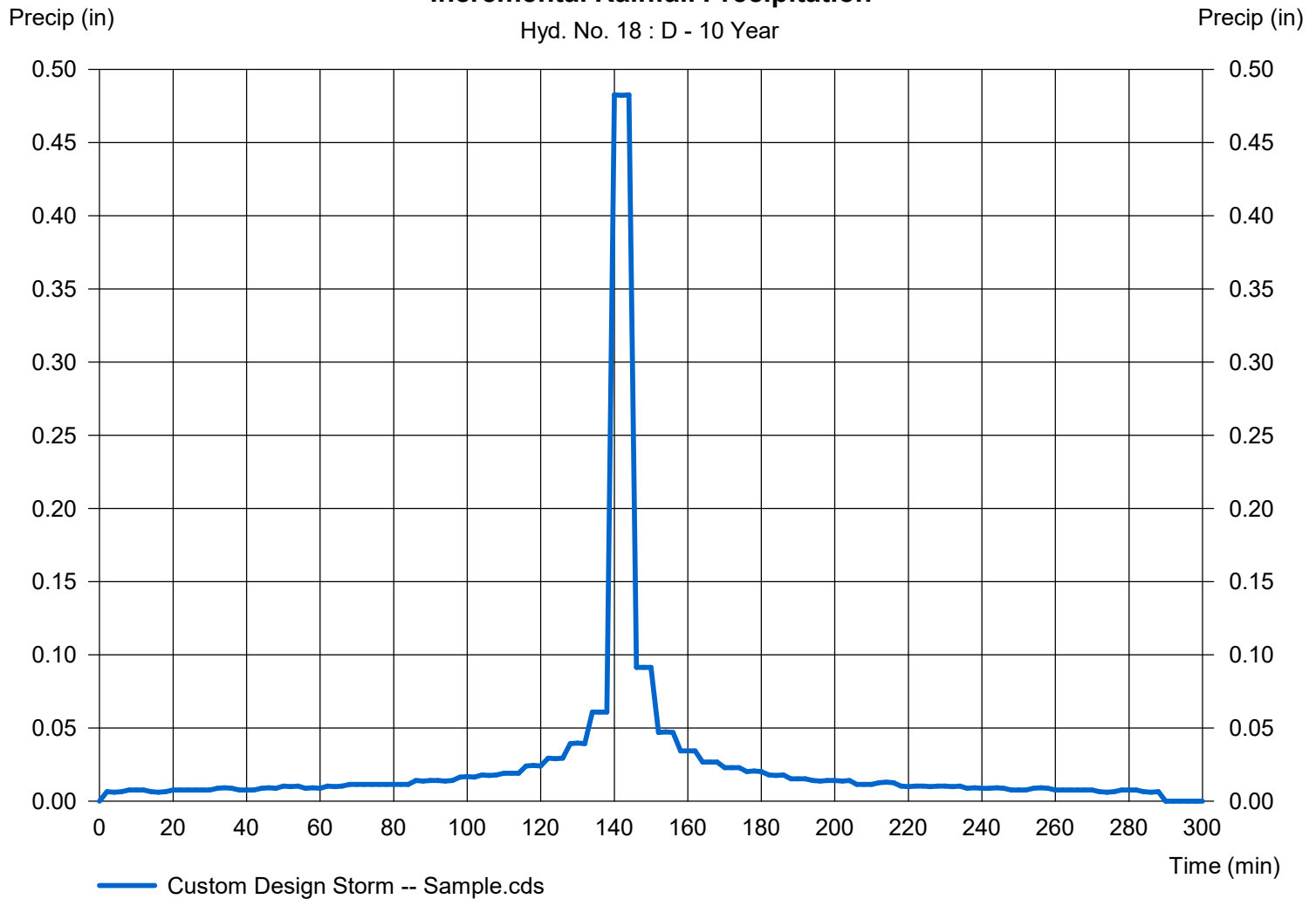
Hyd. No. 18

D

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 18 : D - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

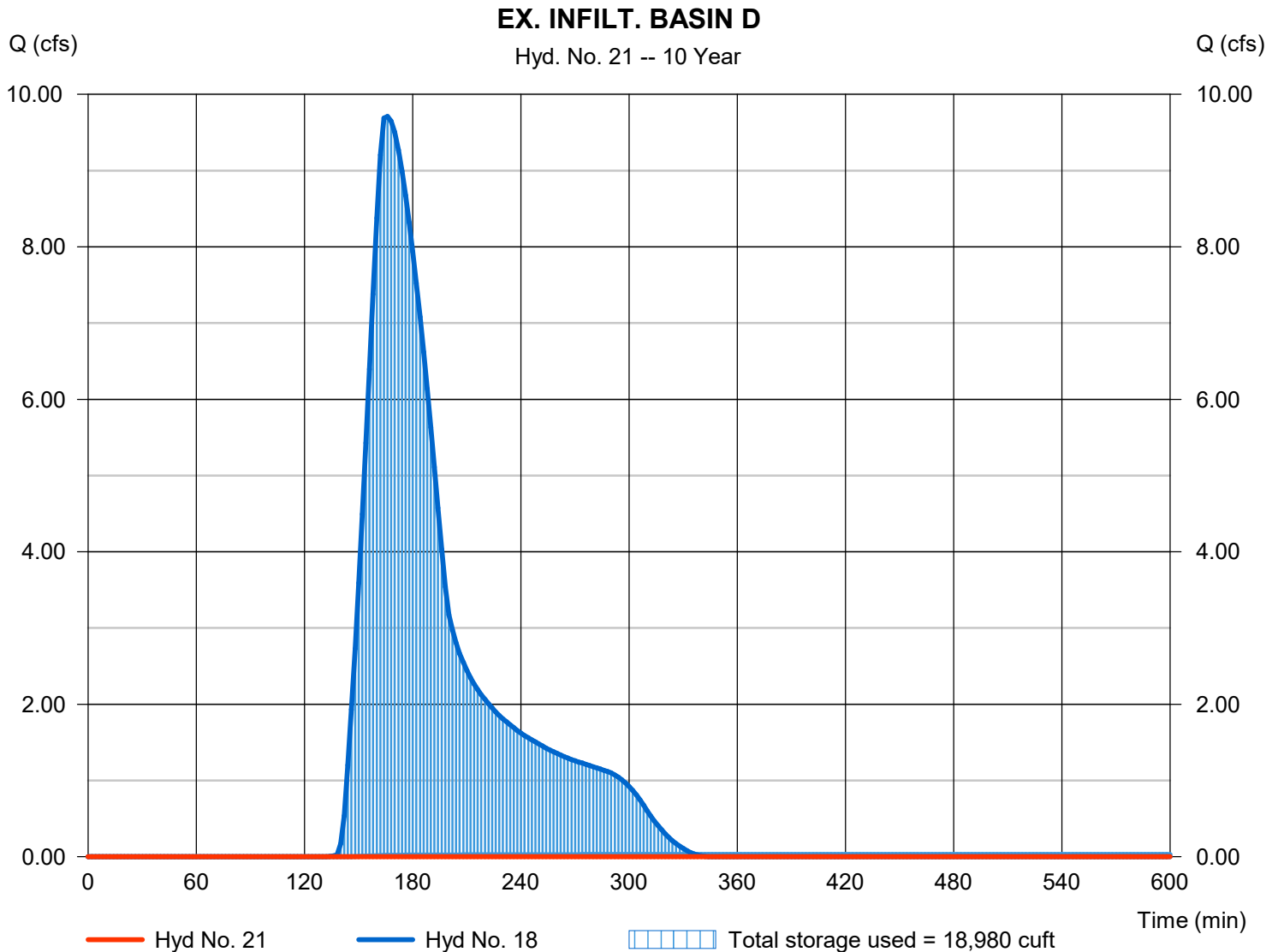
Tuesday, 04 / 7 / 2020

Hyd. No. 21

EX. INFILT. BASIN D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 470 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 18 - D	Max. Elevation	= 991.32 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 18,980 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

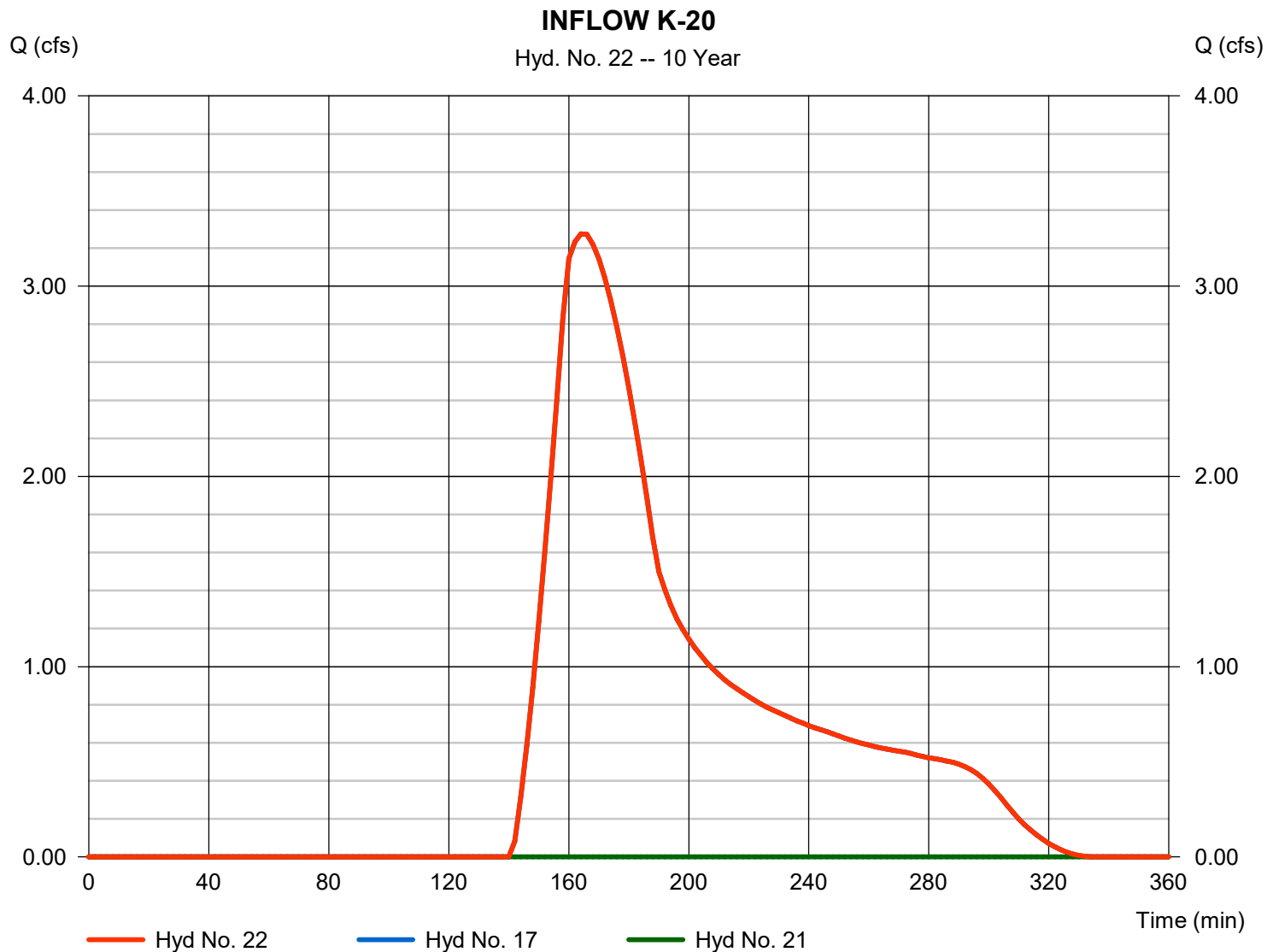
Tuesday, 04 / 7 / 2020

Hyd. No. 22

INFLOW K-20

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 17, 21

Peak discharge = 3.275 cfs
Time to peak = 164 min
Hyd. volume = 11,585 cuft
Contrib. drain. area = 4.811 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

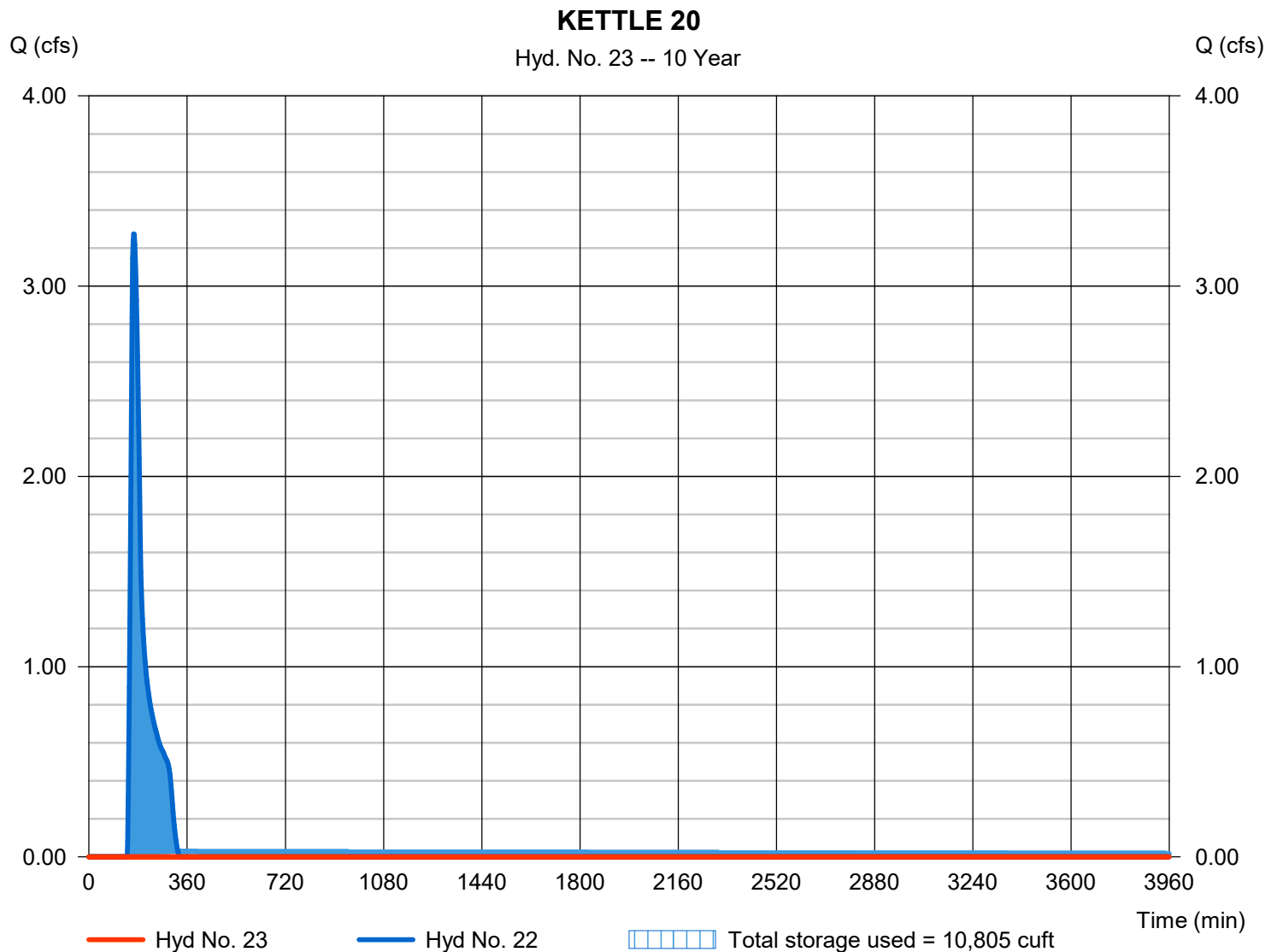
Tuesday, 04 / 7 / 2020

Hyd. No. 23

KETTLE 20

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 212 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 22 - INFLOW K-20	Max. Elevation	= 992.75 ft
Reservoir name	= K-20	Max. Storage	= 10,805 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

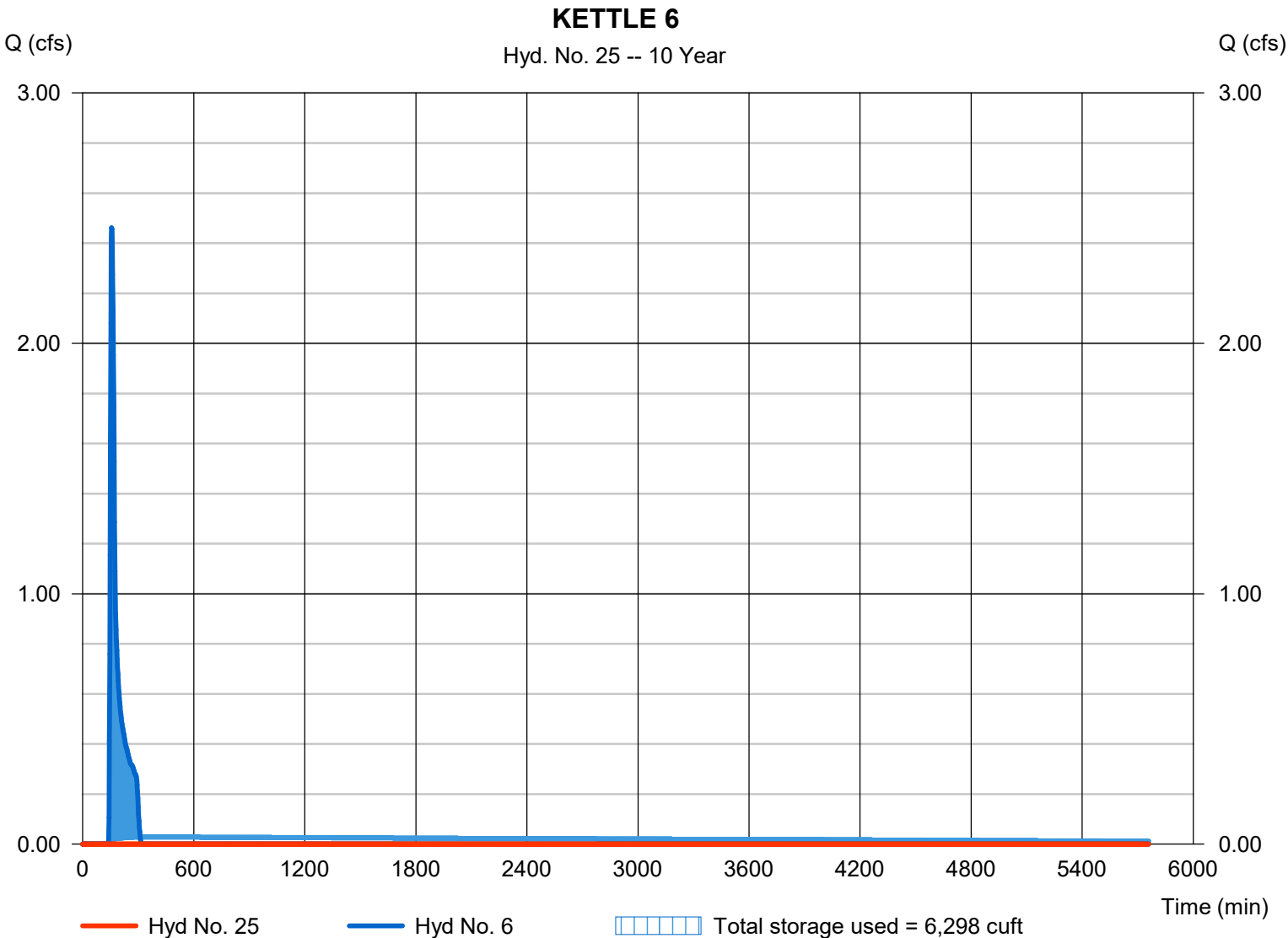
Tuesday, 04 / 7 / 2020

Hyd. No. 25

KETTLE 6

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 198 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 6 - E-6	Max. Elevation	= 1011.39 ft
Reservoir name	= K-6	Max. Storage	= 6,298 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

191

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

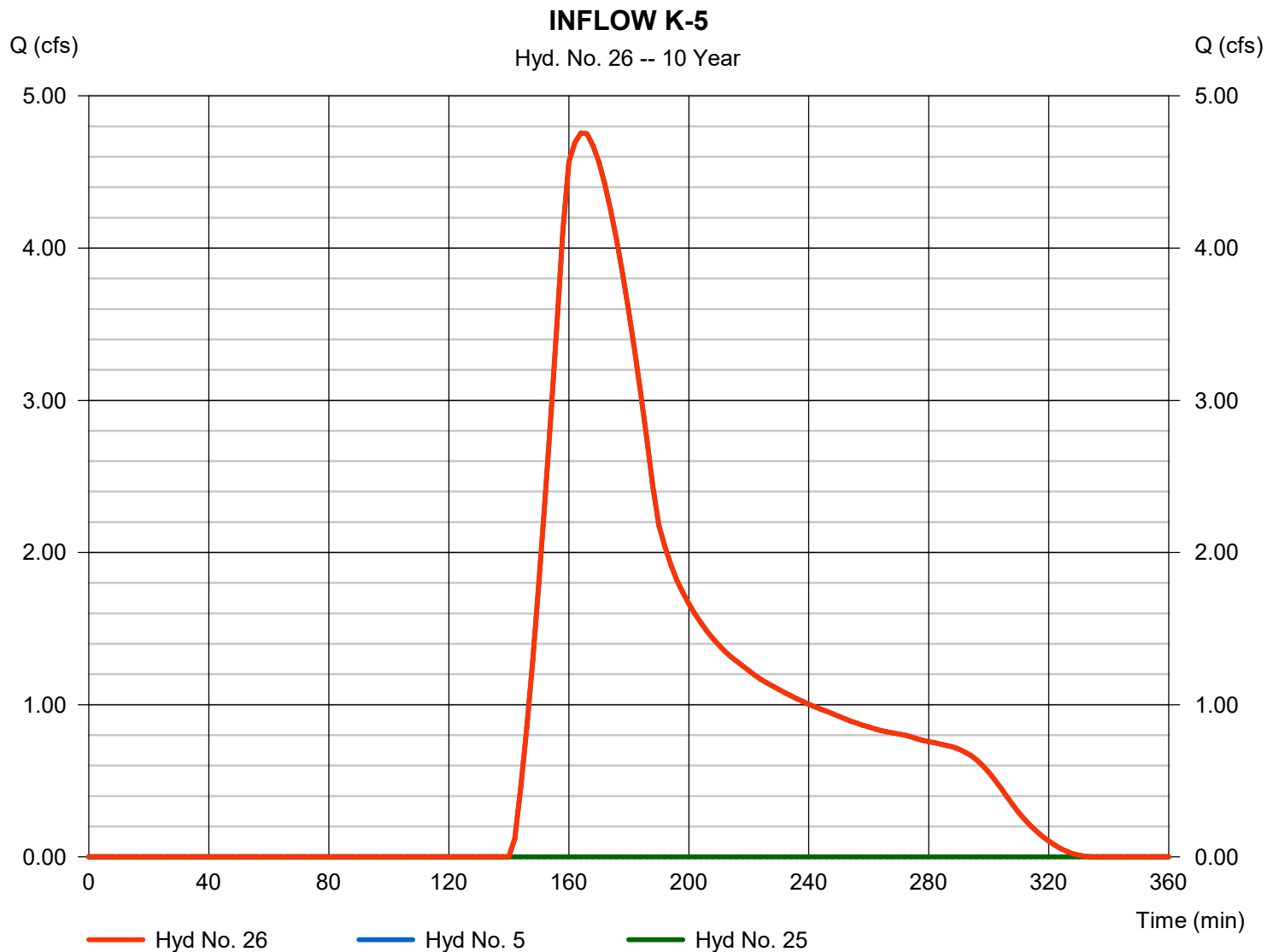
Tuesday, 04 / 7 / 2020

Hyd. No. 26

INFLOW K-5

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 5, 25

Peak discharge = 4.757 cfs
Time to peak = 164 min
Hyd. volume = 16,824 cuft
Contrib. drain. area = 6.987 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

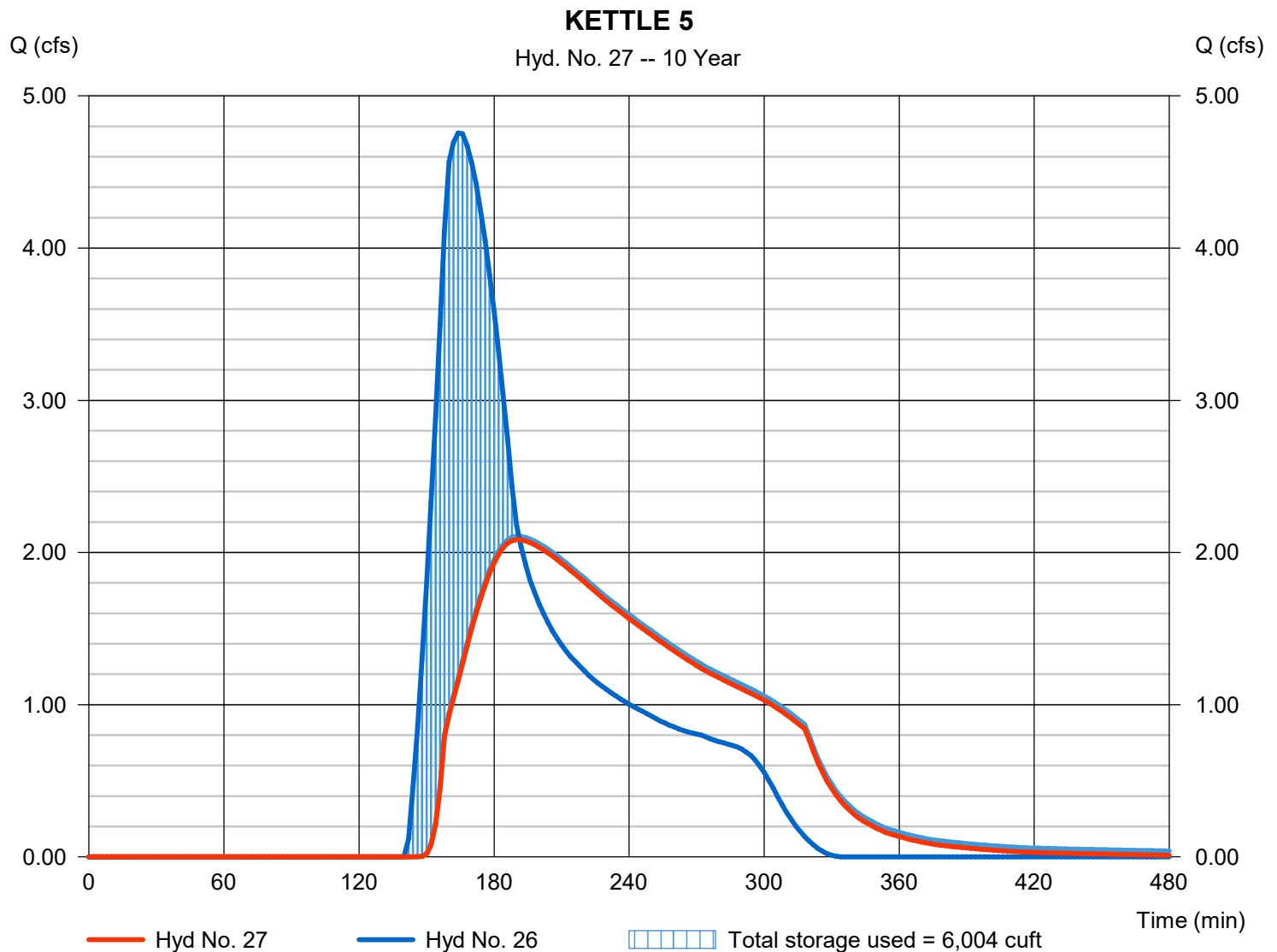
Tuesday, 04 / 7 / 2020

Hyd. No. 27

KETTLE 5

Hydrograph type	= Reservoir	Peak discharge	= 2.084 cfs
Storm frequency	= 10 yrs	Time to peak	= 190 min
Time interval	= 2 min	Hyd. volume	= 15,656 cuft
Inflow hyd. No.	= 26 - INFLOW K-5	Max. Elevation	= 983.28 ft
Reservoir name	= K-5	Max. Storage	= 6,004 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

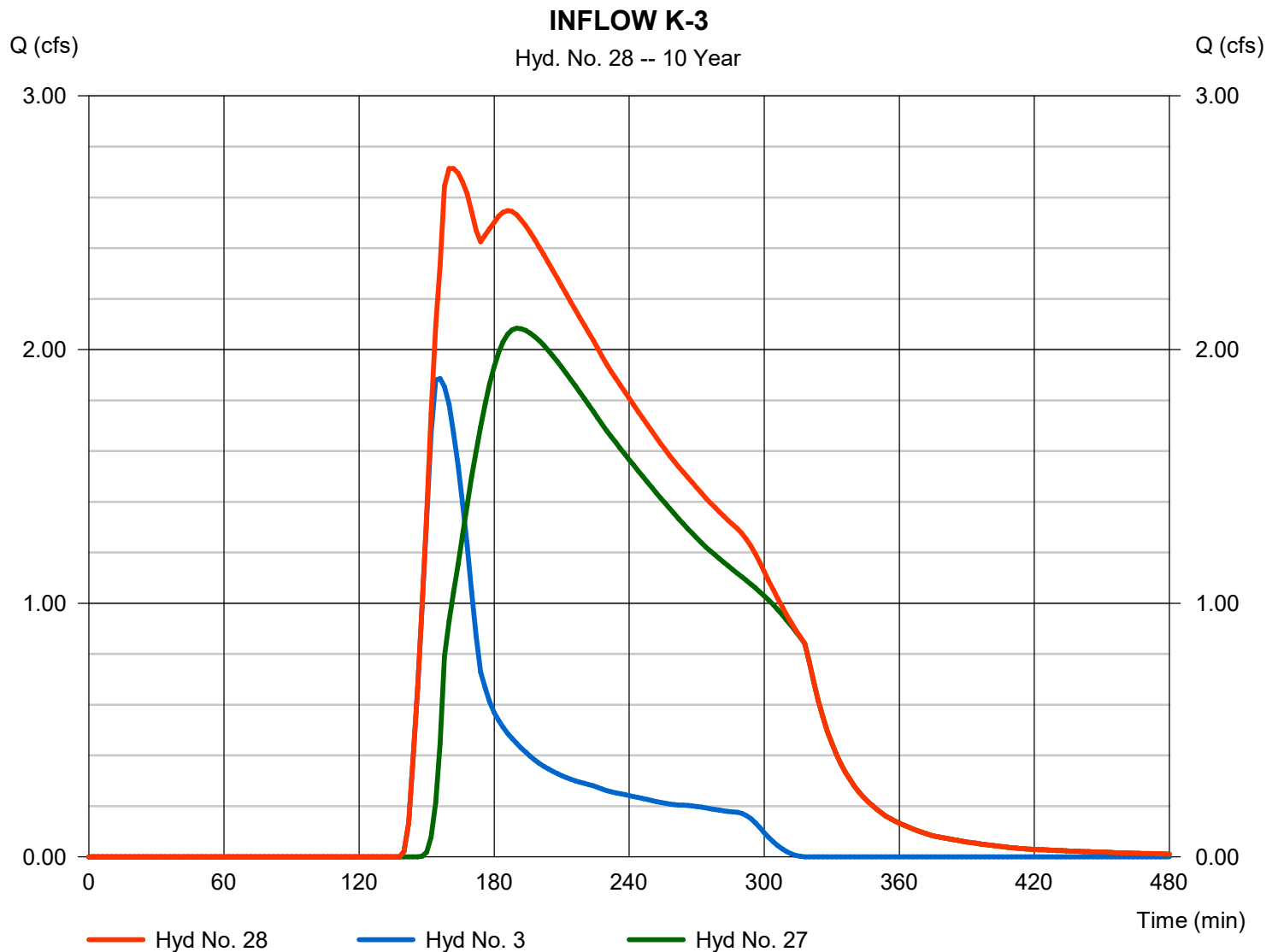
Tuesday, 04 / 7 / 2020

Hyd. No. 28

INFLOW K-3

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 3, 27

Peak discharge = 2.714 cfs
Time to peak = 162 min
Hyd. volume = 20,352 cuft
Contrib. drain. area = 1.588 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

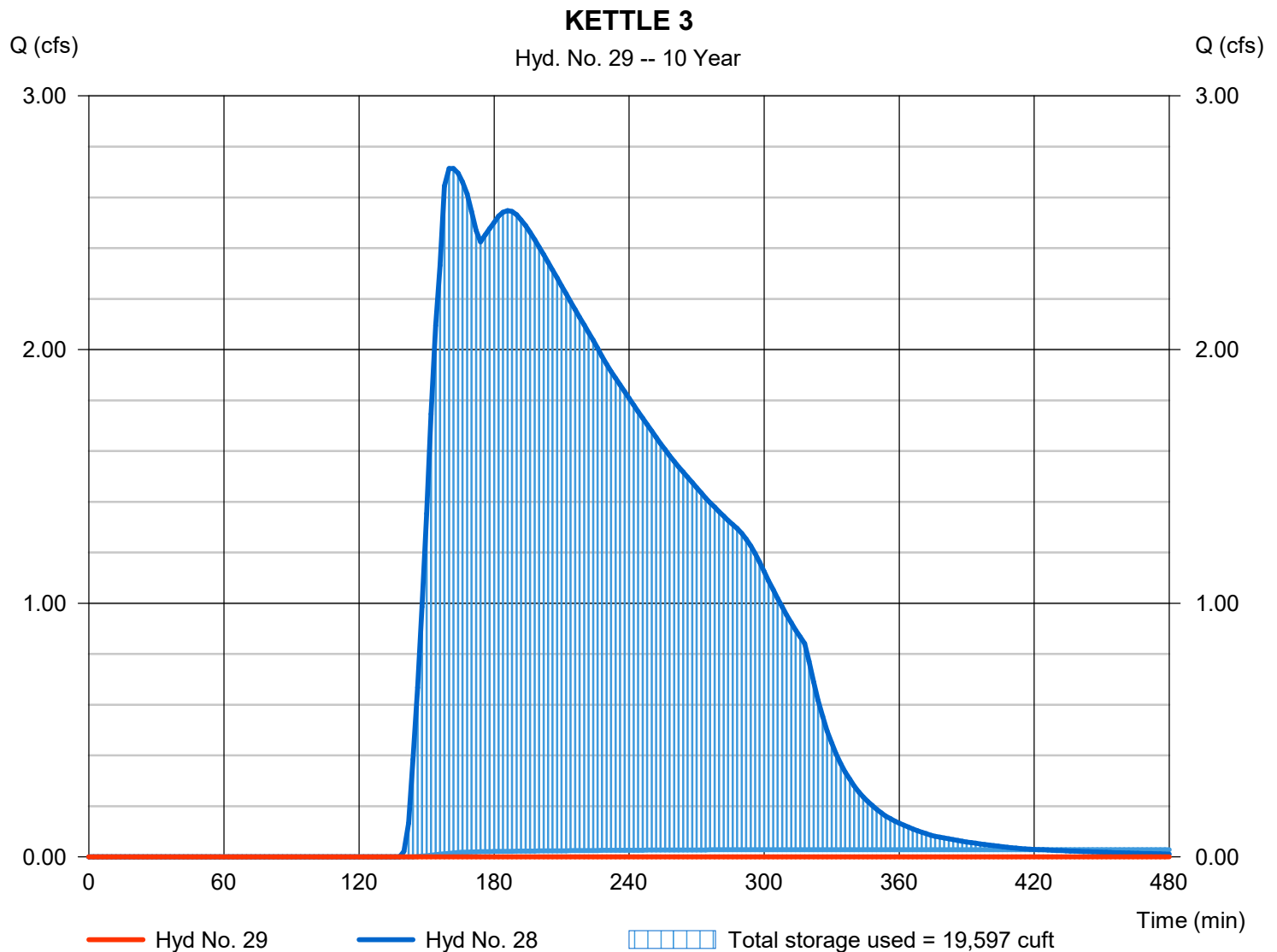
Tuesday, 04 / 7 / 2020

Hyd. No. 29

KETTLE 3

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 28 - INFLOW K-3	Max. Elevation	= 975.62 ft
Reservoir name	= K-3	Max. Storage	= 19,597 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

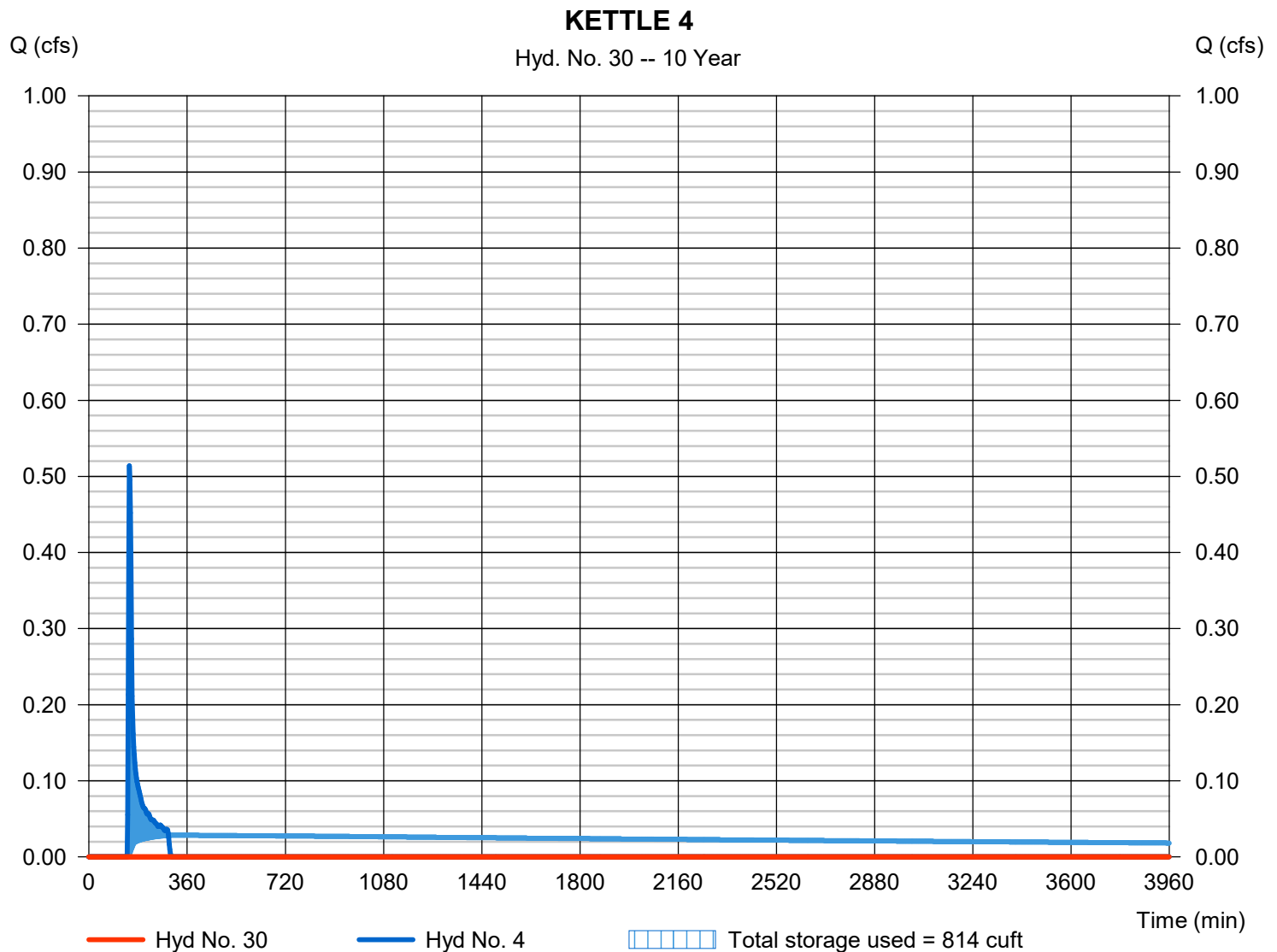
Tuesday, 04 / 7 / 2020

Hyd. No. 30

KETTLE 4

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 182 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 4 - E-4	Max. Elevation	= 1007.44 ft
Reservoir name	= K-4	Max. Storage	= 814 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

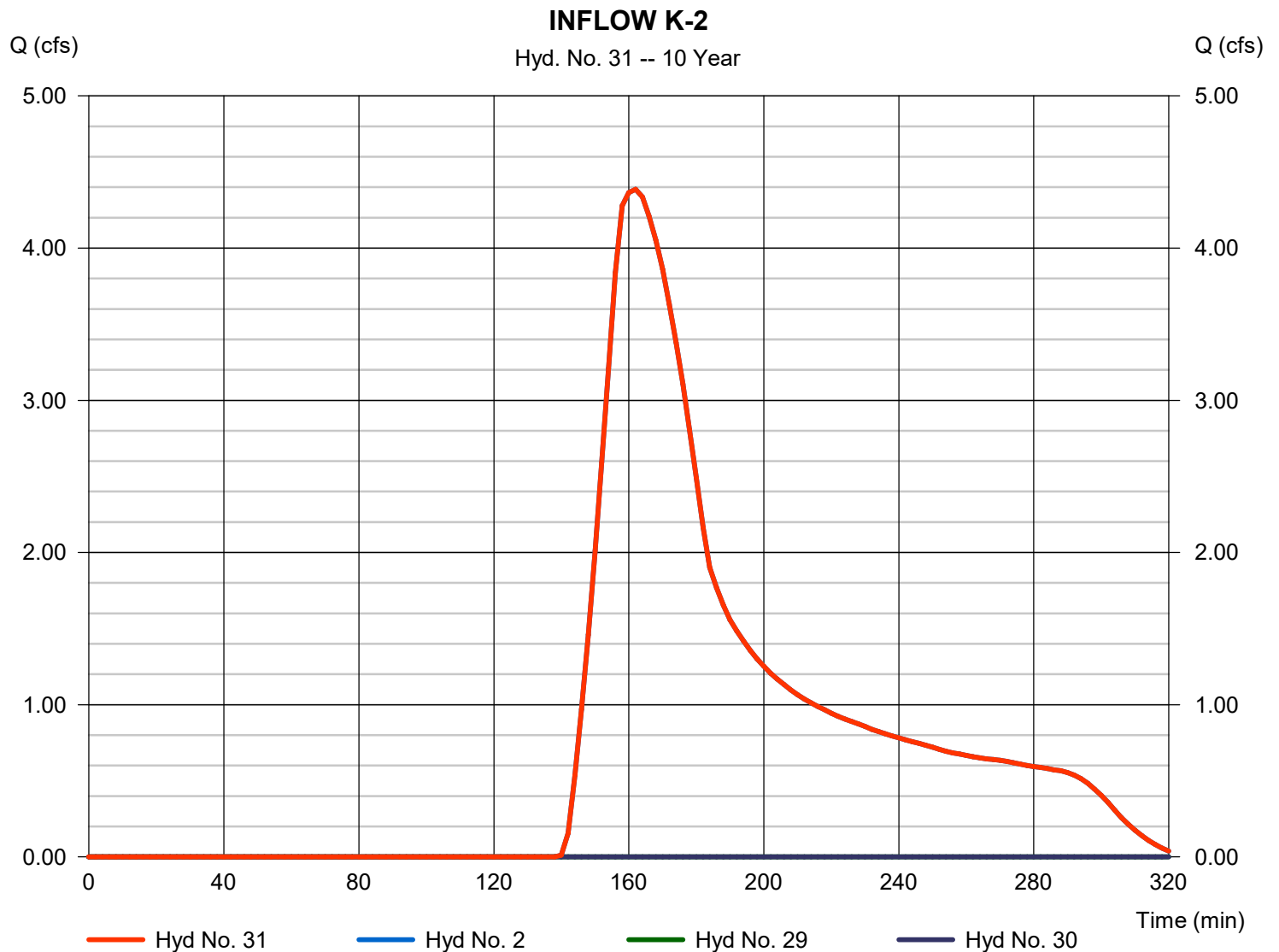
Tuesday, 04 / 7 / 2020

Hyd. No. 31

INFLOW K-2

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 2, 29, 30

Peak discharge = 4.386 cfs
Time to peak = 162 min
Hyd. volume = 13,812 cuft
Contrib. drain. area = 5.433 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

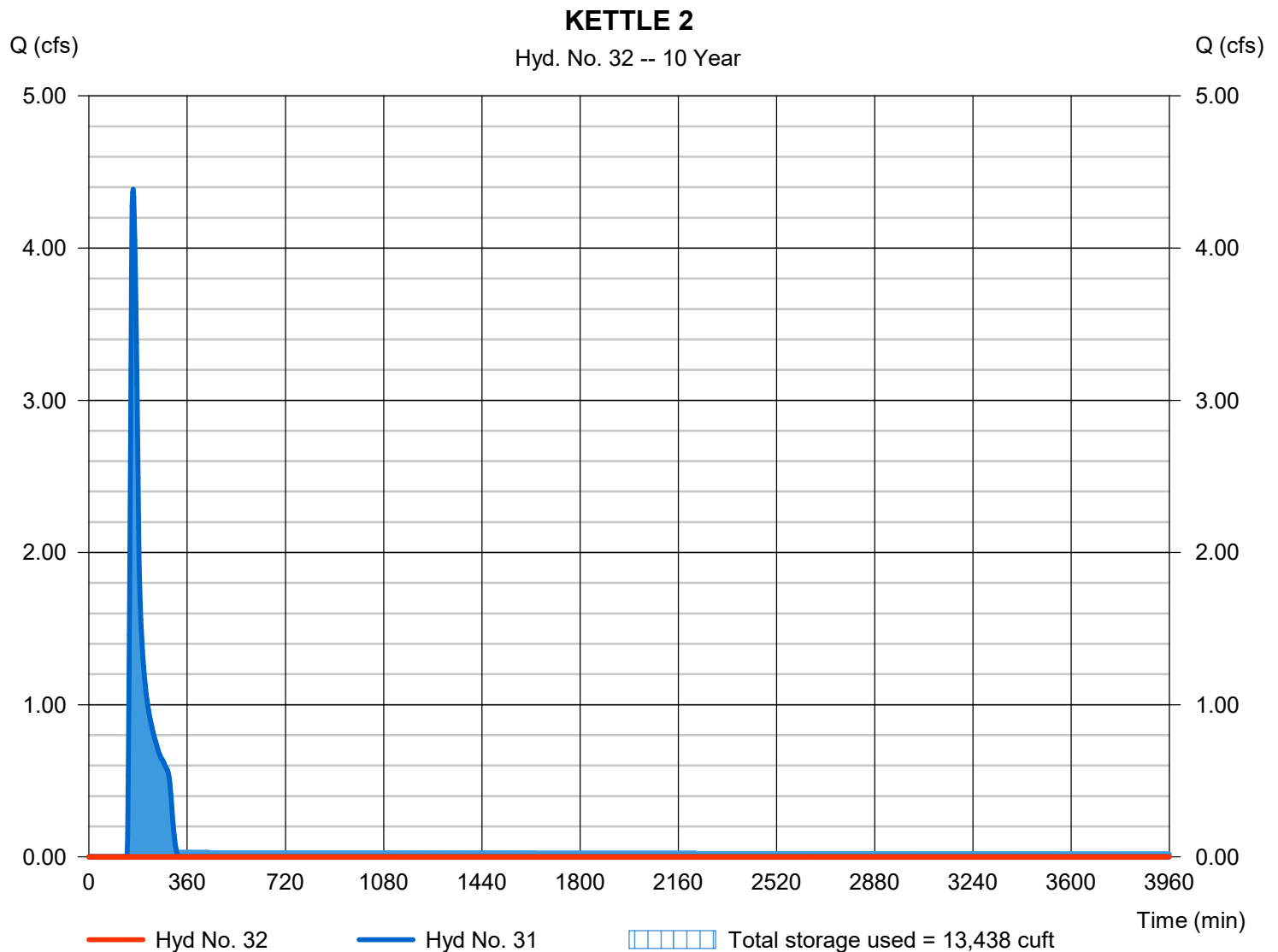
Tuesday, 04 / 7 / 2020

Hyd. No. 32

KETTLE 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 3520 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 31 - INFLOW K-2	Max. Elevation	= 969.17 ft
Reservoir name	= K-2	Max. Storage	= 13,438 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

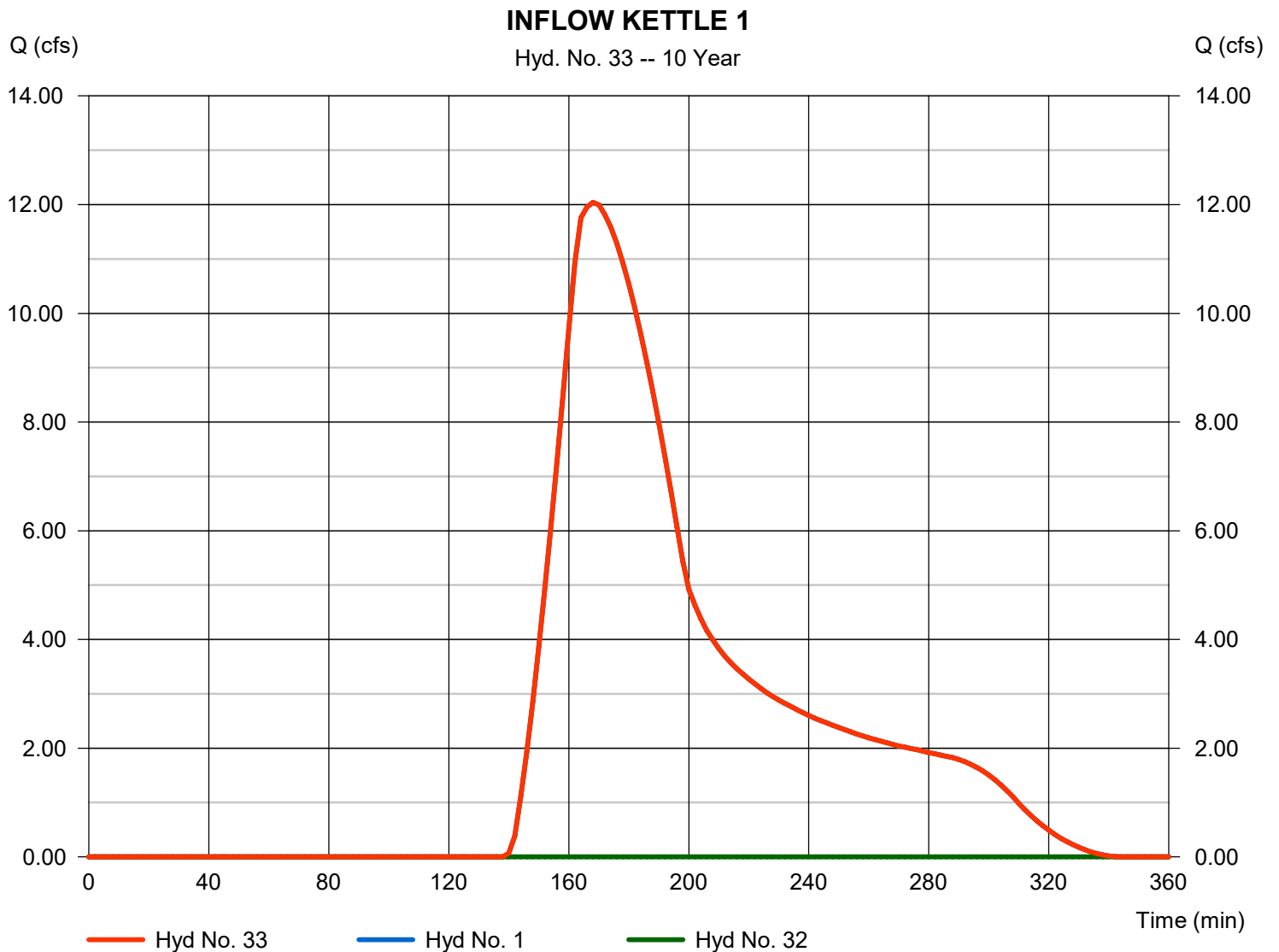
Tuesday, 04 / 7 / 2020

Hyd. No. 33

INFLOW KETTLE 1

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 1, 32

Peak discharge = 12.04 cfs
Time to peak = 168 min
Hyd. volume = 45,256 cuft
Contrib. drain. area = 15.479 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

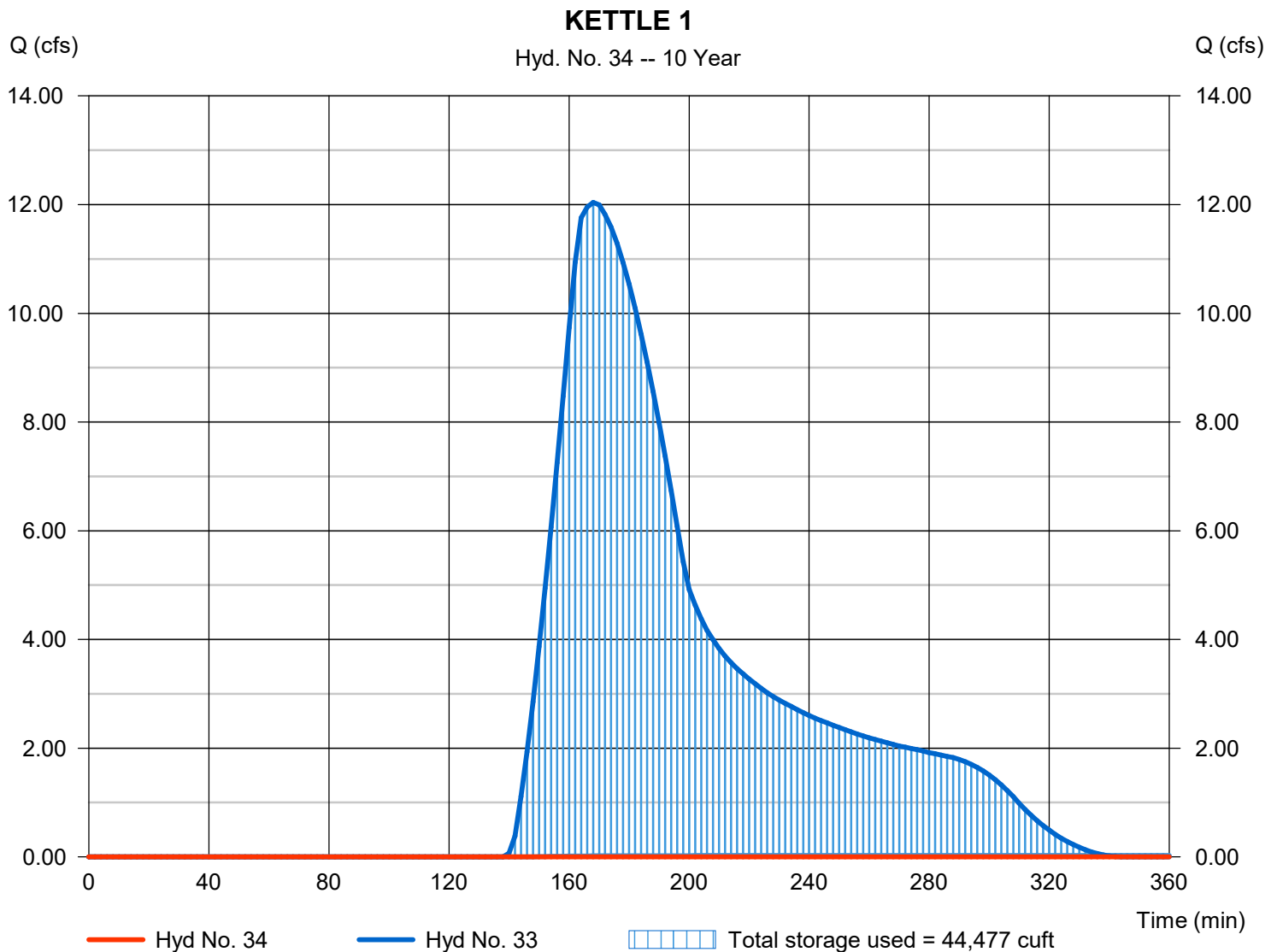
Tuesday, 04 / 7 / 2020

Hyd. No. 34

KETTLE 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 33 - INFLOW KETTLE 1	Max. Elevation	= 948.74 ft
Reservoir name	= K-1	Max. Storage	= 44,477 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

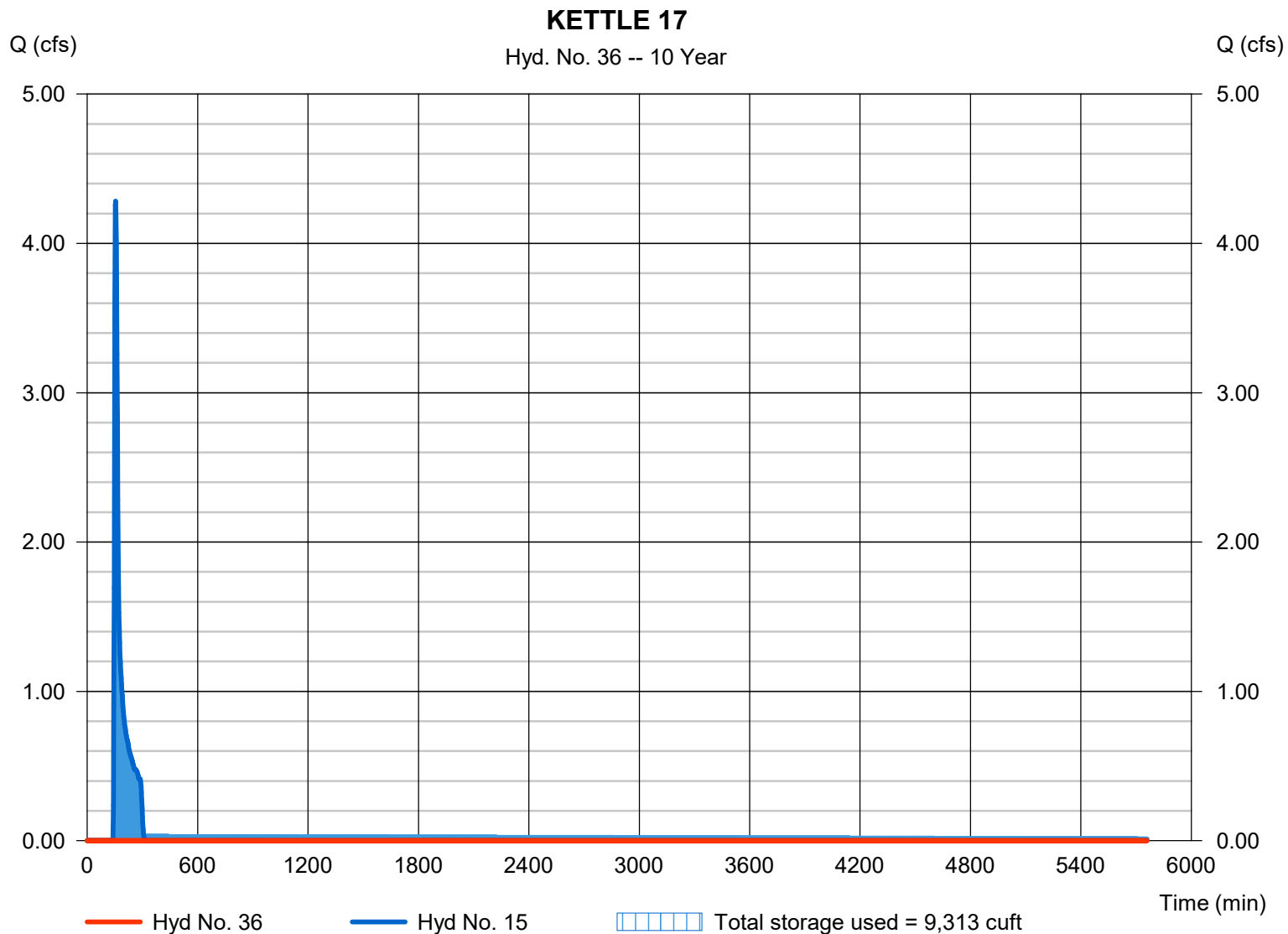
Hyd. No. 36

KETTLE 17

Hydrograph type = Reservoir
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyd. No. = 15 - E-17
 Reservoir name = K-17

Peak discharge = 0.000 cfs
 Time to peak = 202 min
 Hyd. volume = 0 cuft
 Max. Elevation = 1011.83 ft
 Max. Storage = 9,313 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

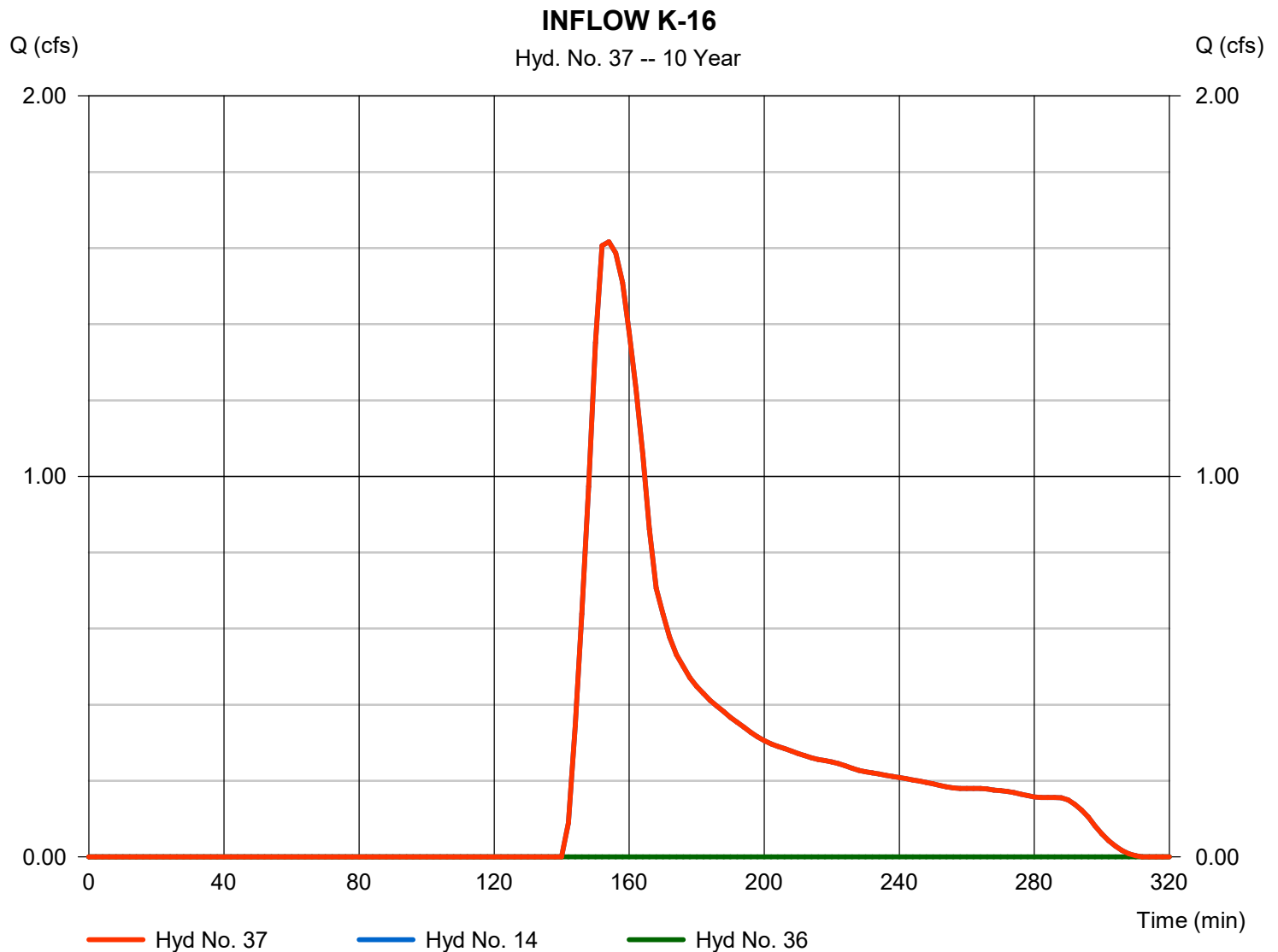
Tuesday, 04 / 7 / 2020

Hyd. No. 37

INFLOW K-16

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 14, 36

Peak discharge = 1.617 cfs
Time to peak = 154 min
Hyd. volume = 3,803 cuft
Contrib. drain. area = 1.620 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

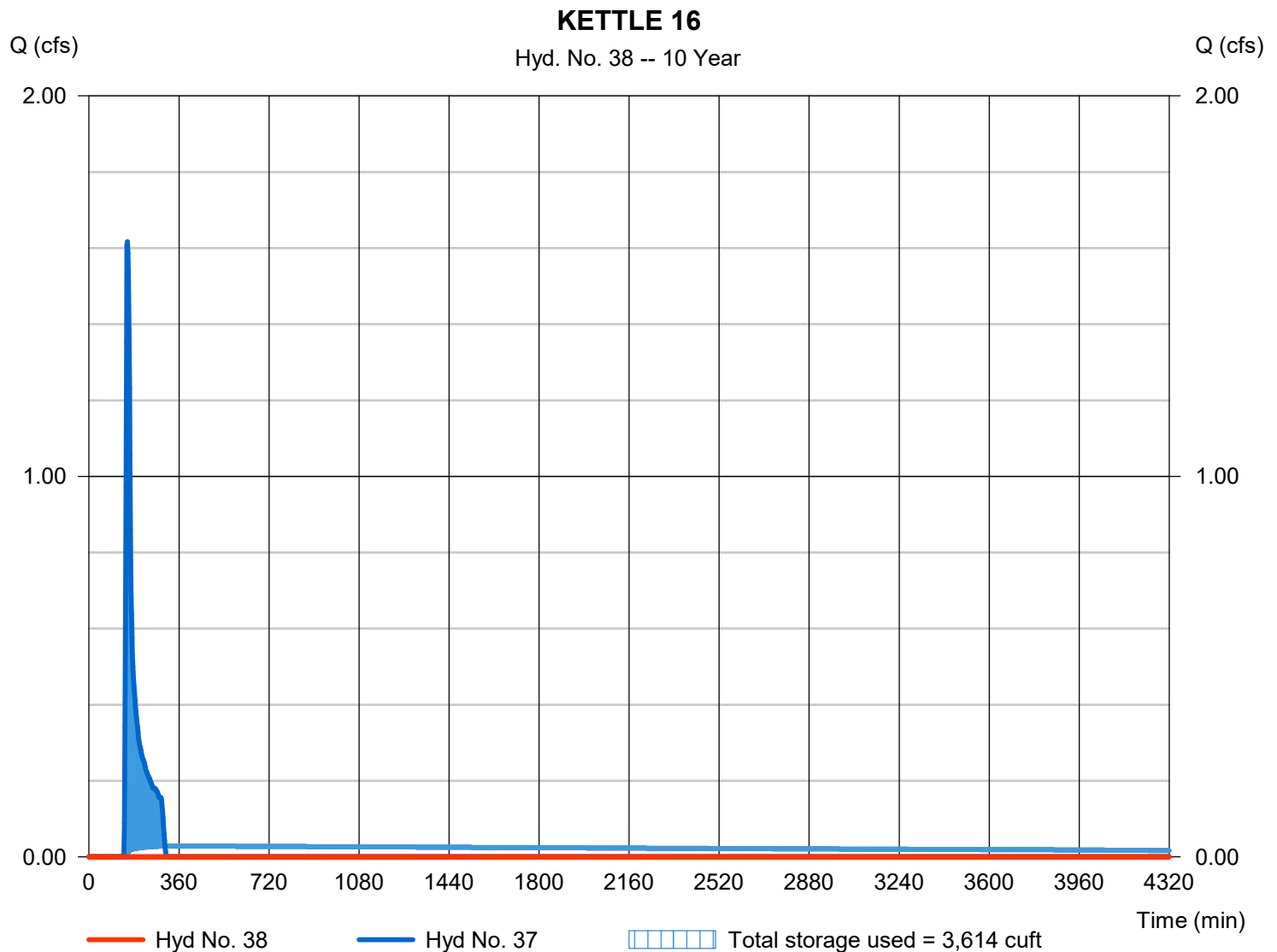
Tuesday, 04 / 7 / 2020

Hyd. No. 38

KETTLE 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 192 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - INFLOW K-16	Max. Elevation	= 1005.59 ft
Reservoir name	= K-16	Max. Storage	= 3,614 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

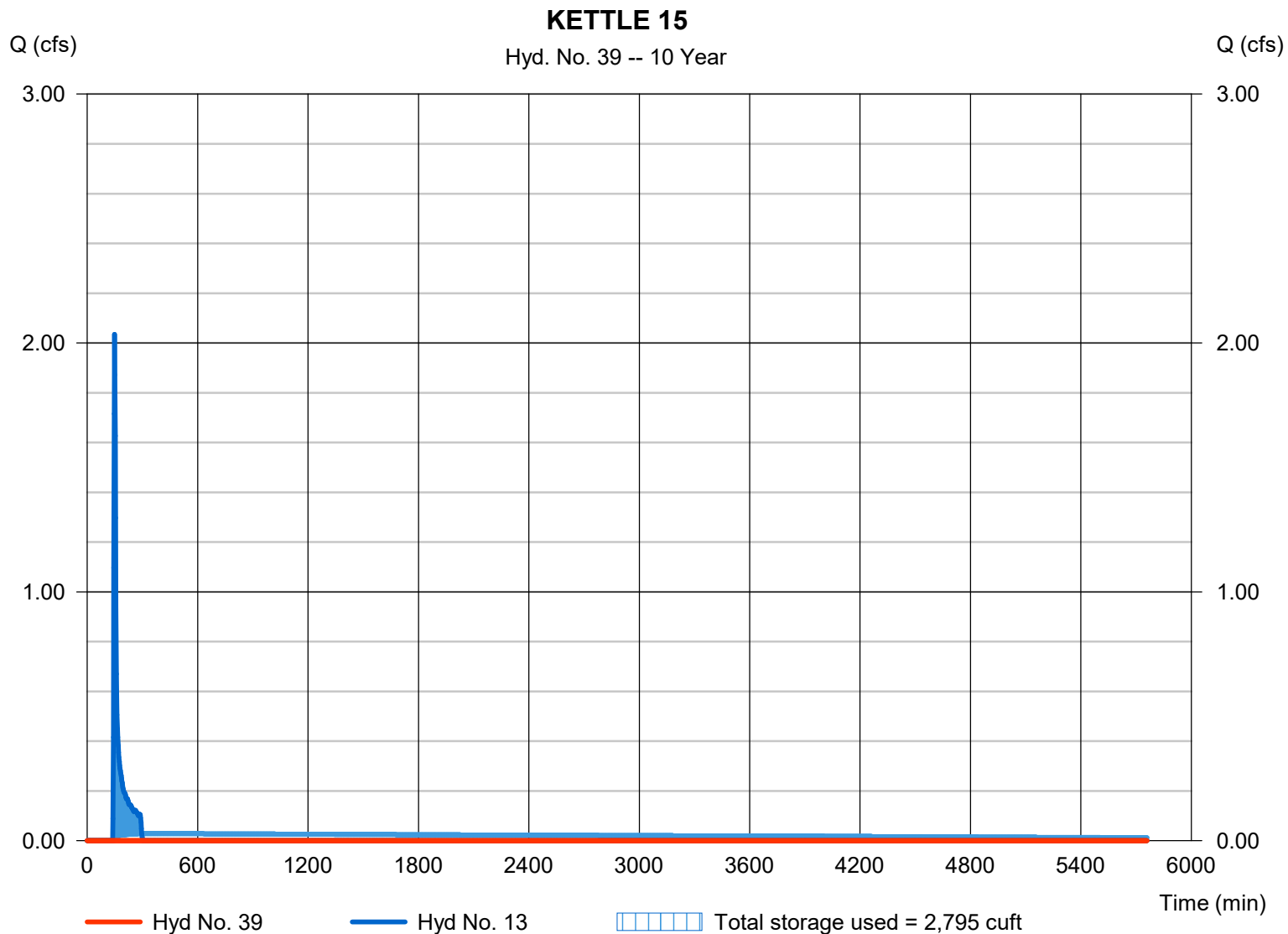
Tuesday, 04 / 7 / 2020

Hyd. No. 39

KETTLE 15

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 382 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 13 - E-15	Max. Elevation	= 971.12 ft
Reservoir name	= K-15	Max. Storage	= 2,795 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

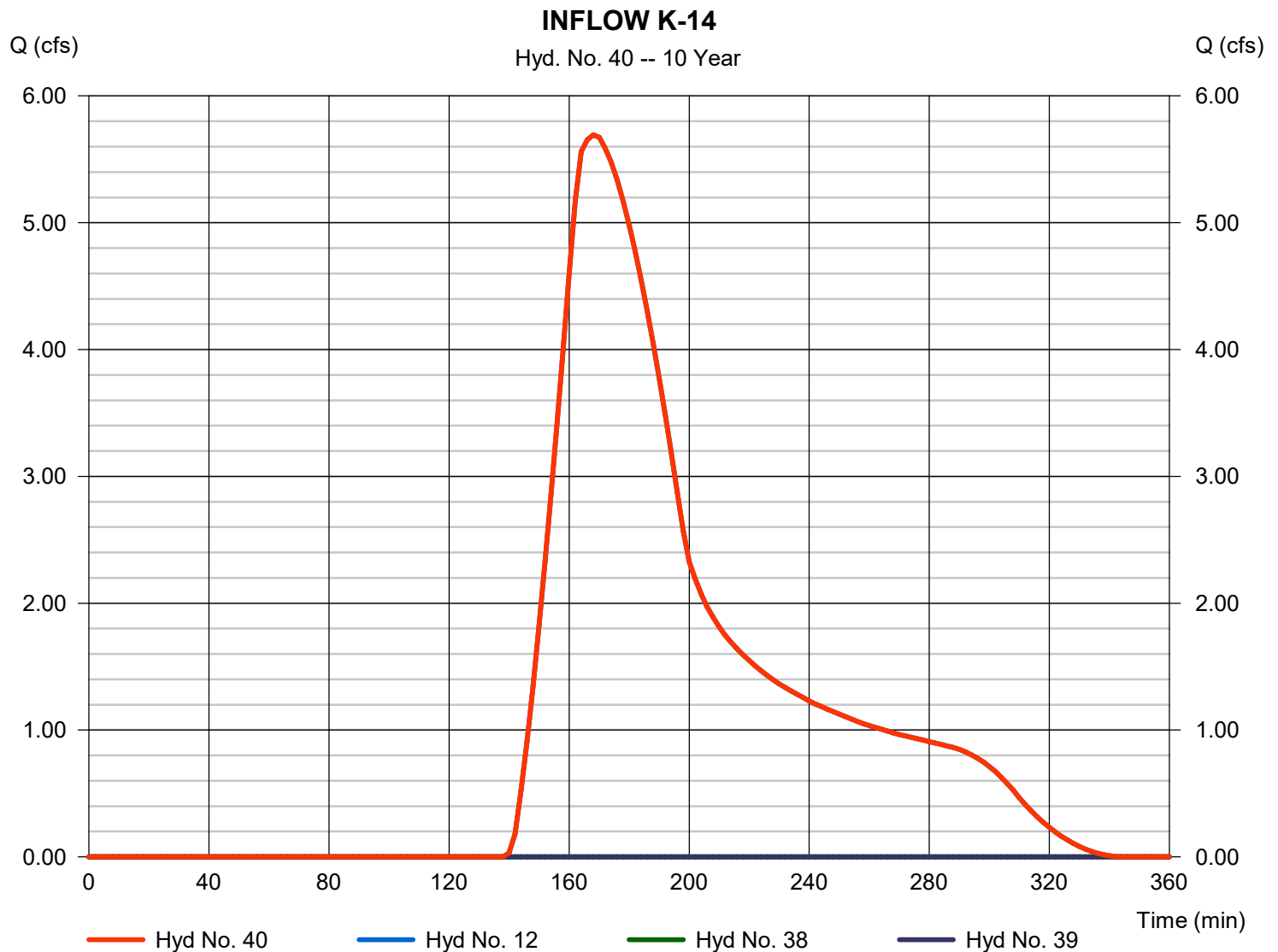
Tuesday, 04 / 7 / 2020

Hyd. No. 40

INFLOW K-14

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 12, 38, 39

Peak discharge = 5.693 cfs
Time to peak = 168 min
Hyd. volume = 21,401 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

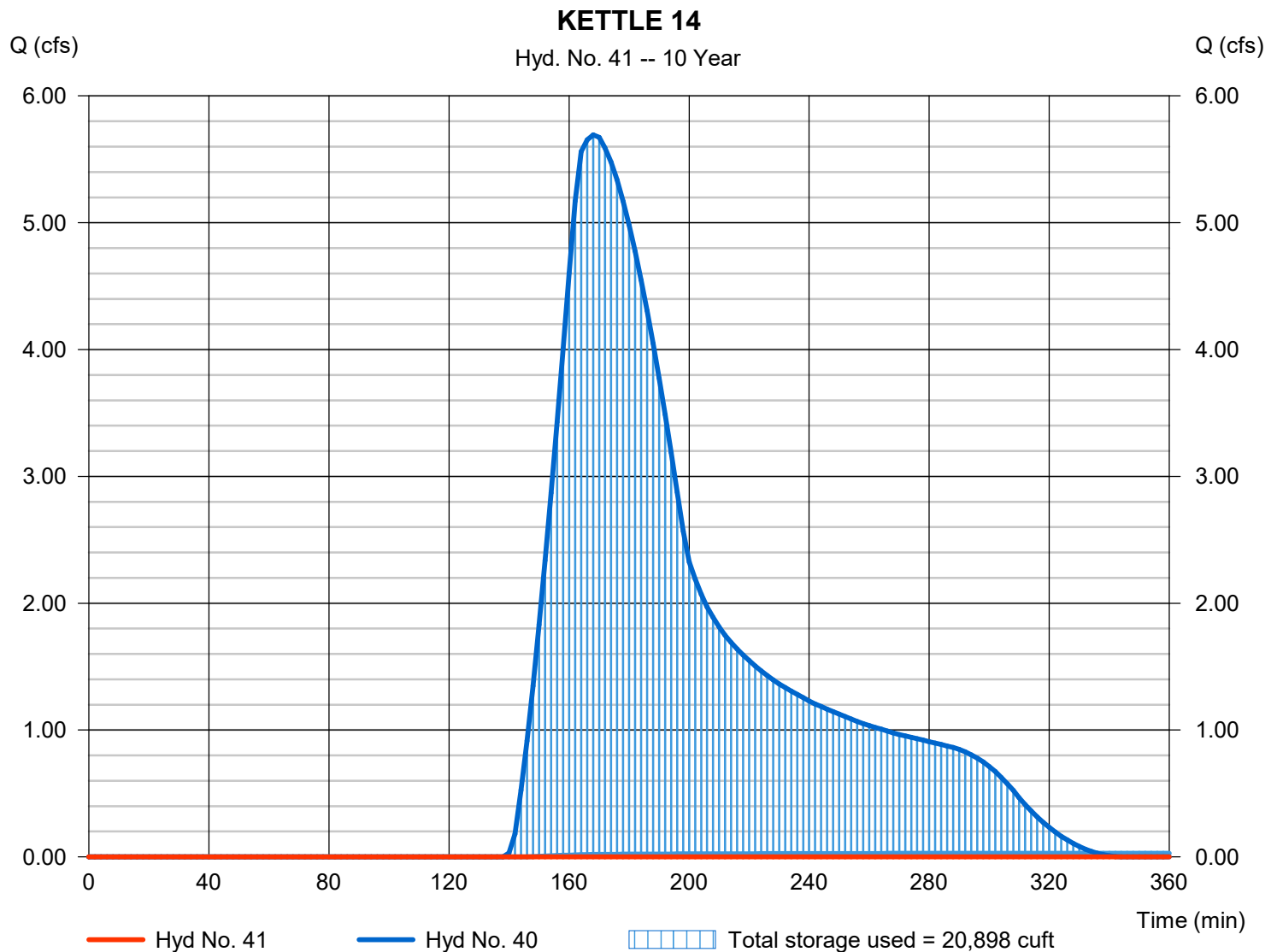
Tuesday, 04 / 7 / 2020

Hyd. No. 41

KETTLE 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 40 - INFLOW K-14	Max. Elevation	= 958.24 ft
Reservoir name	= K-14	Max. Storage	= 20,898 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

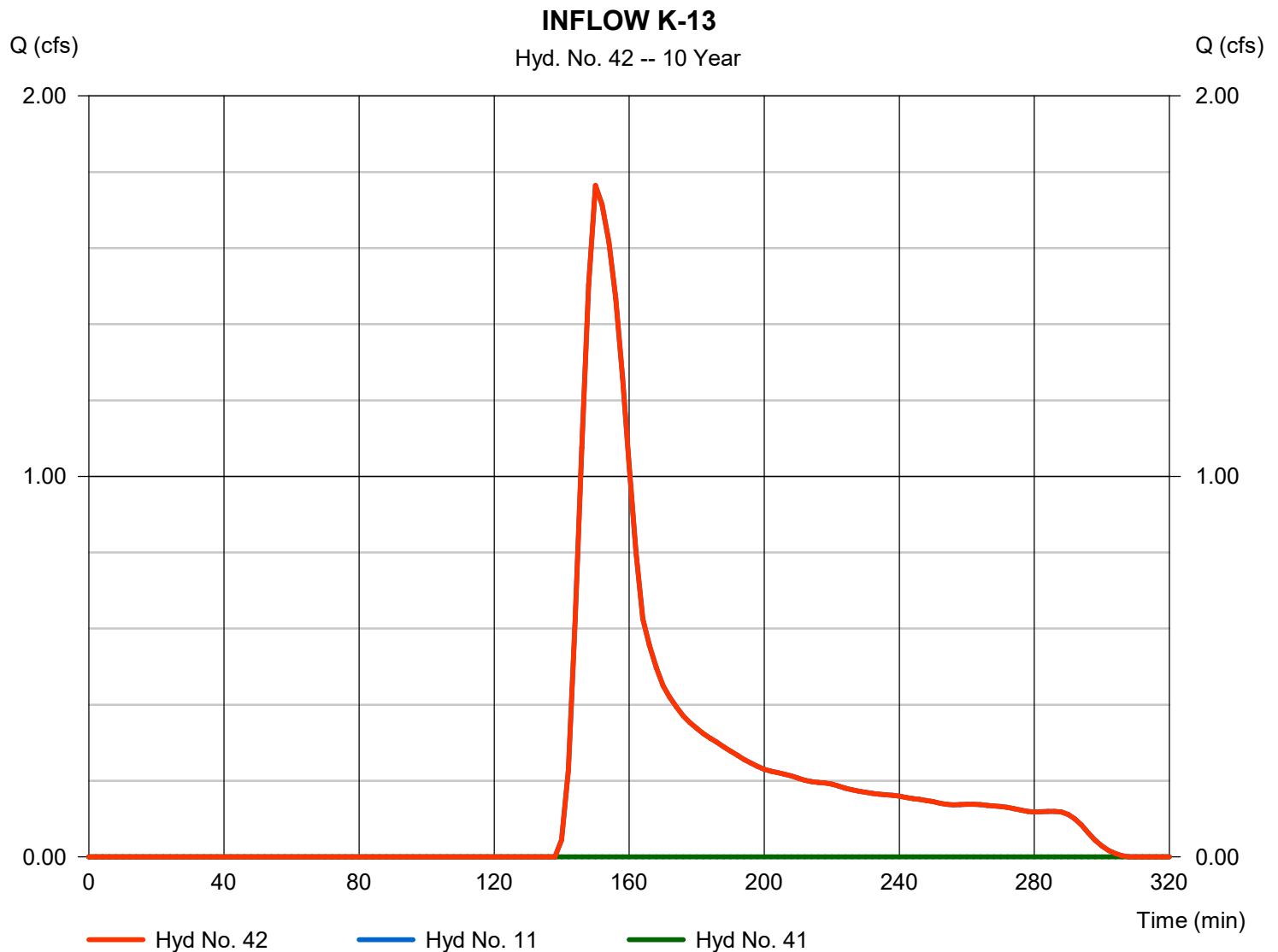
Tuesday, 04 / 7 / 2020

Hyd. No. 42

INFLOW K-13

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 11, 41

Peak discharge = 1.765 cfs
Time to peak = 150 min
Hyd. volume = 3,279 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

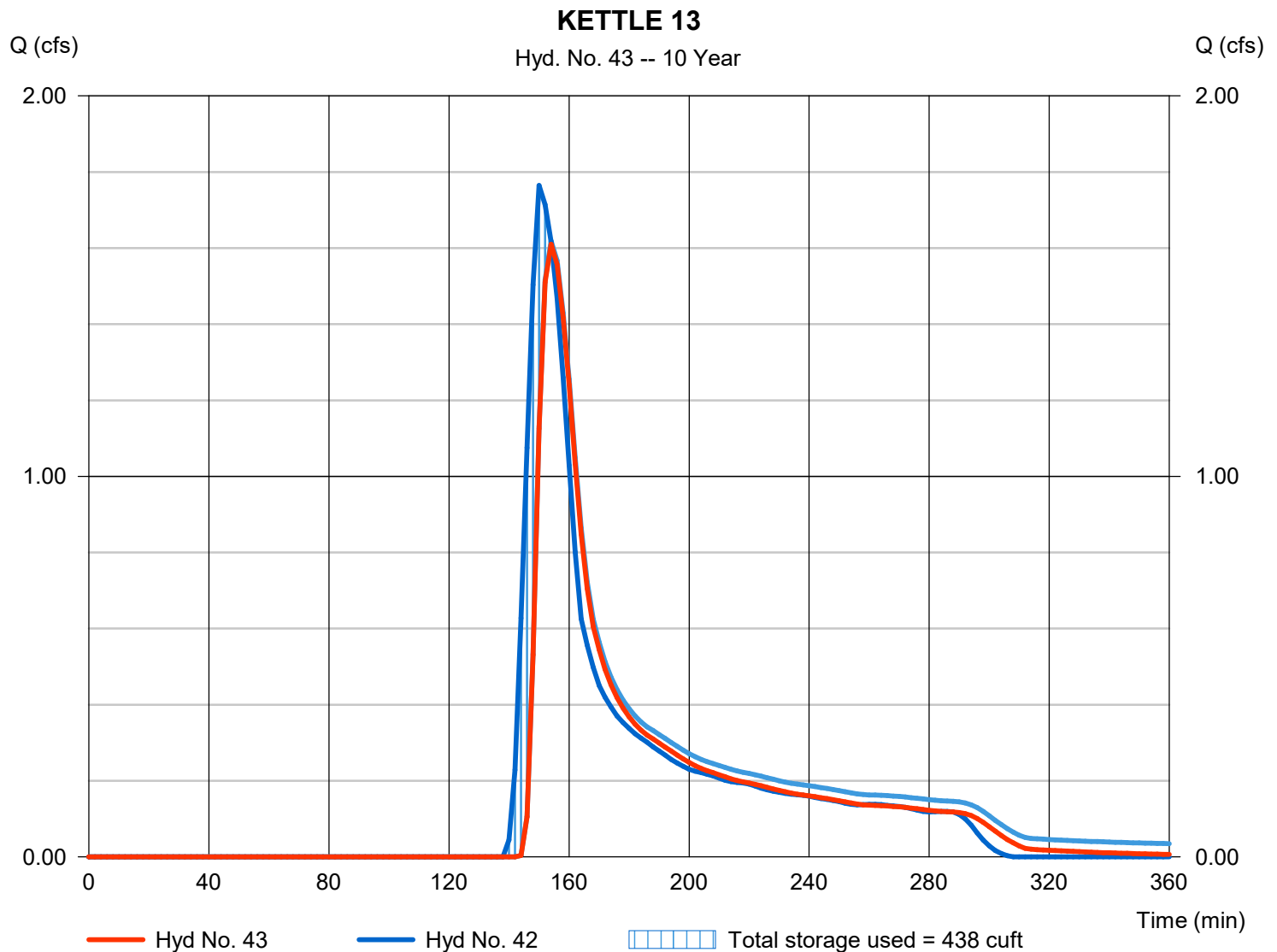
Tuesday, 04 / 7 / 2020

Hyd. No. 43

KETTLE 13

Hydrograph type	= Reservoir	Peak discharge	= 1.610 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 3,153 cuft
Inflow hyd. No.	= 42 - INFLOW K-13	Max. Elevation	= 959.84 ft
Reservoir name	= K-13	Max. Storage	= 438 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

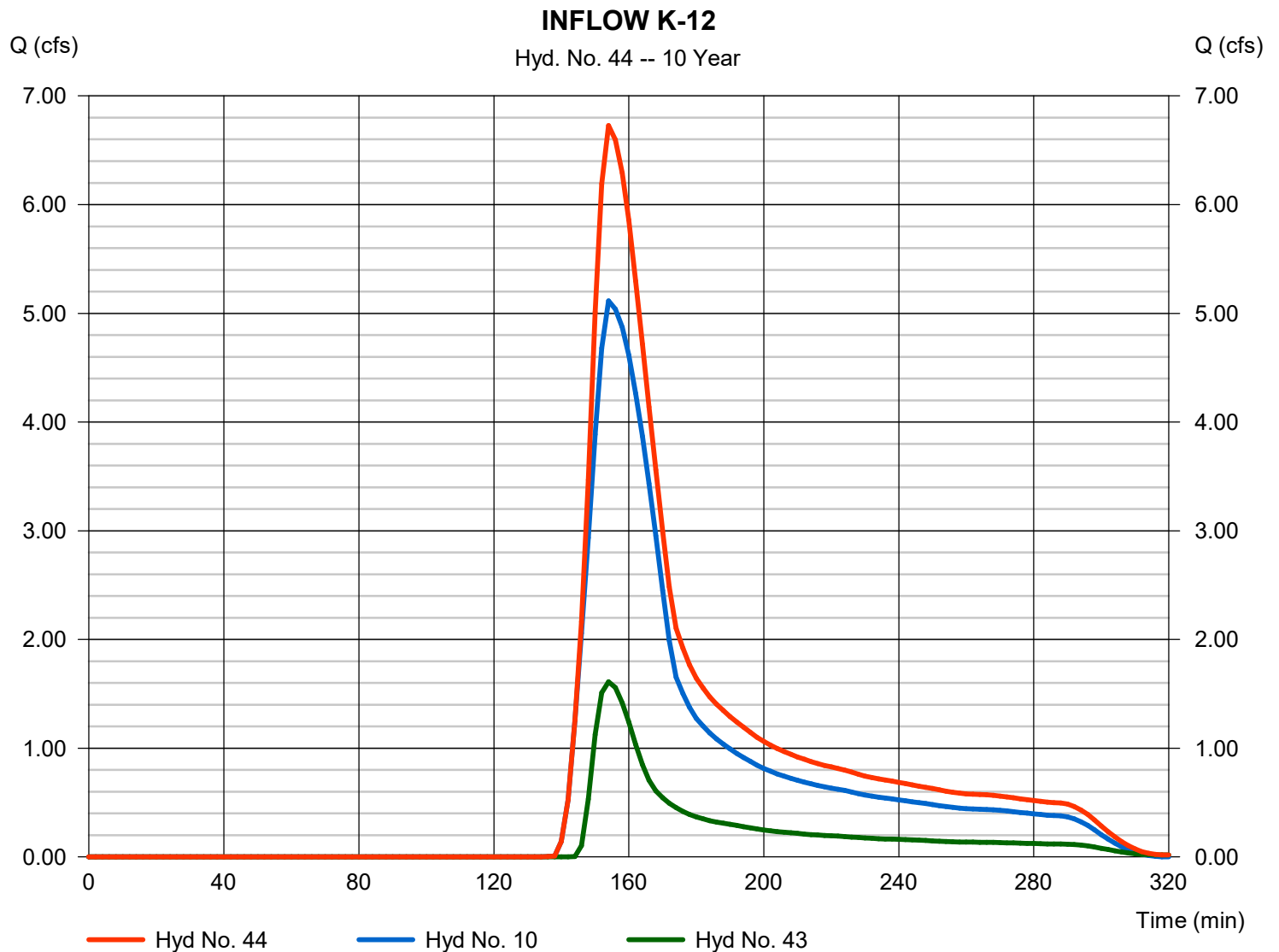
Tuesday, 04 / 7 / 2020

Hyd. No. 44

INFLOW K-12

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 10, 43

Peak discharge = 6.726 cfs
Time to peak = 154 min
Hyd. volume = 14,590 cuft
Contrib. drain. area = 2.900 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

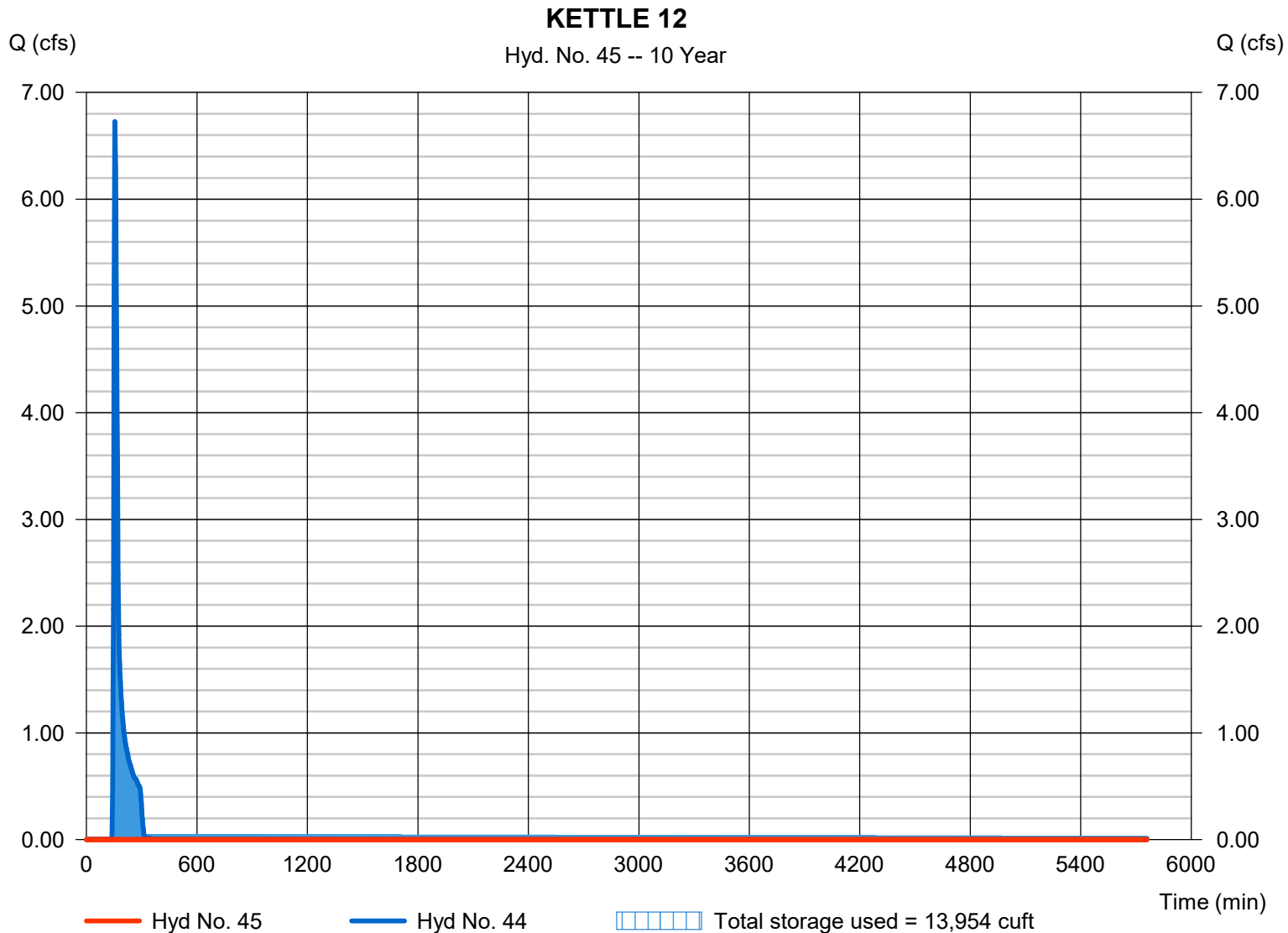
Tuesday, 04 / 7 / 2020

Hyd. No. 45

KETTLE 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 1938 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 44 - INFLOW K-12	Max. Elevation	= 958.16 ft
Reservoir name	= K-12	Max. Storage	= 13,954 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

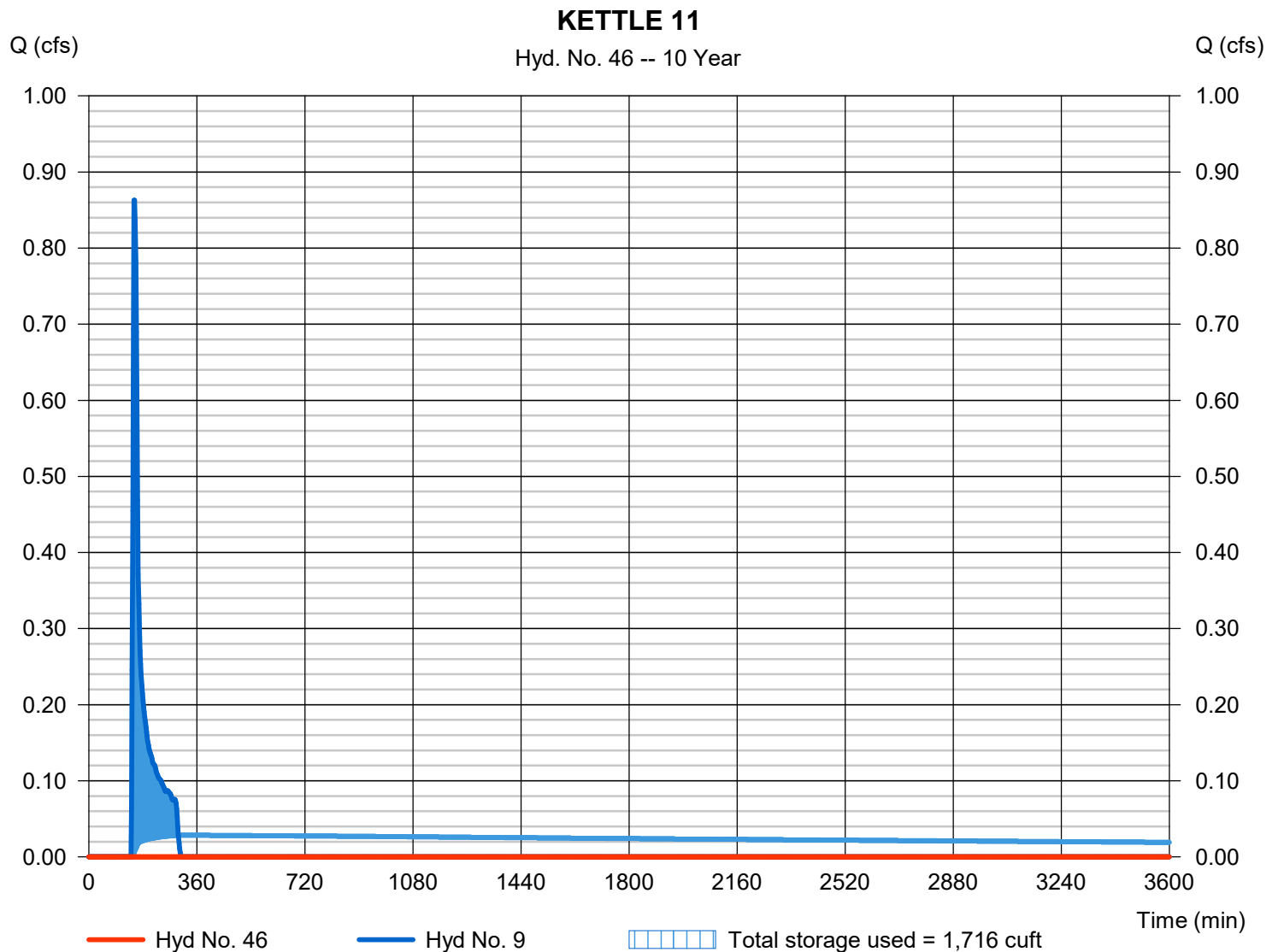
Tuesday, 04 / 7 / 2020

Hyd. No. 46

KETTLE 11

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 224 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 9 - E-11	Max. Elevation	= 979.87 ft
Reservoir name	= K-11	Max. Storage	= 1,716 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

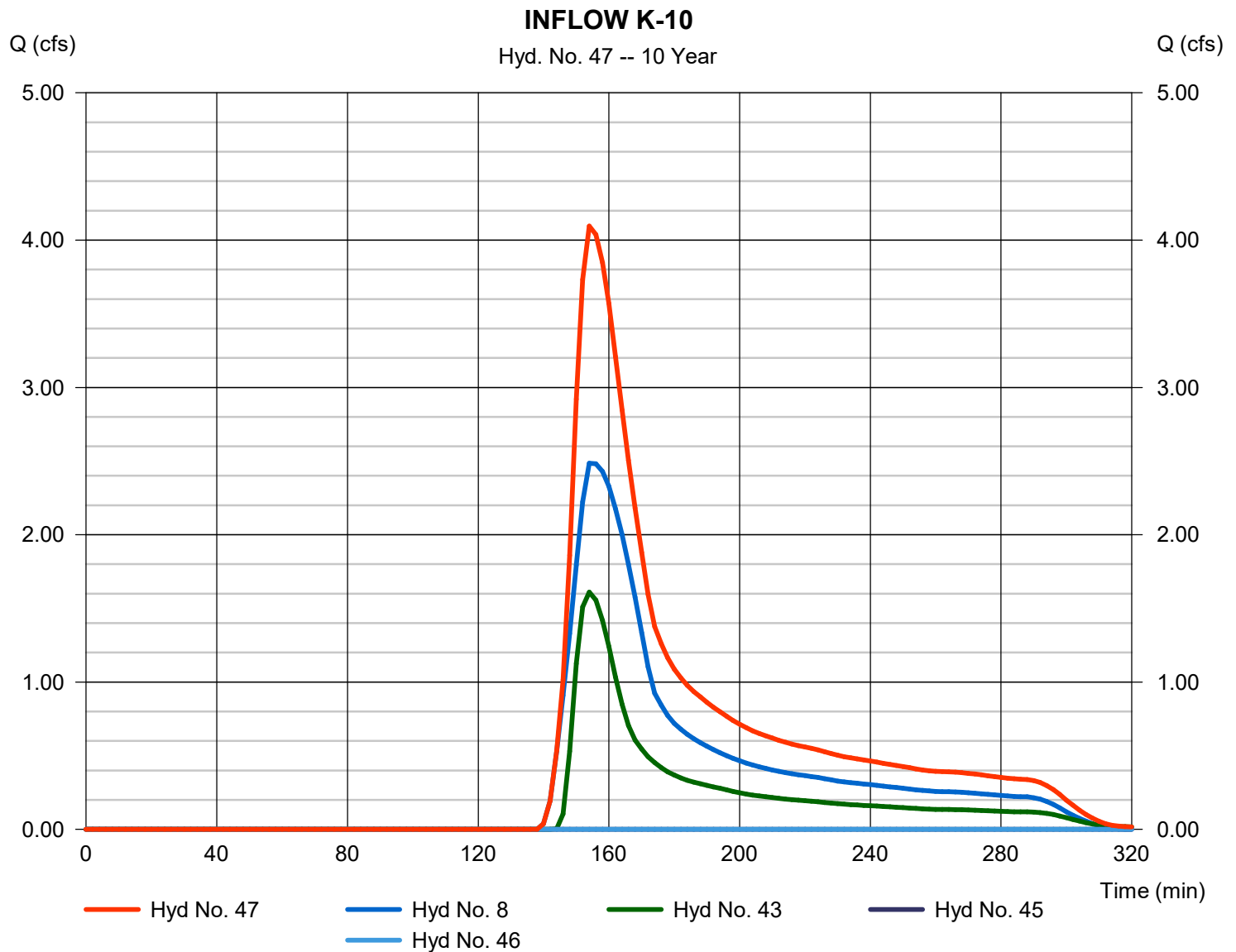
Tuesday, 04 / 7 / 2020

Hyd. No. 47

INFLOW K-10

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyds. = 8, 43, 45, 46

Peak discharge = 4.095 cfs
 Time to peak = 154 min
 Hyd. volume = 9,197 cuft
 Contrib. drain. area = 1.920 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

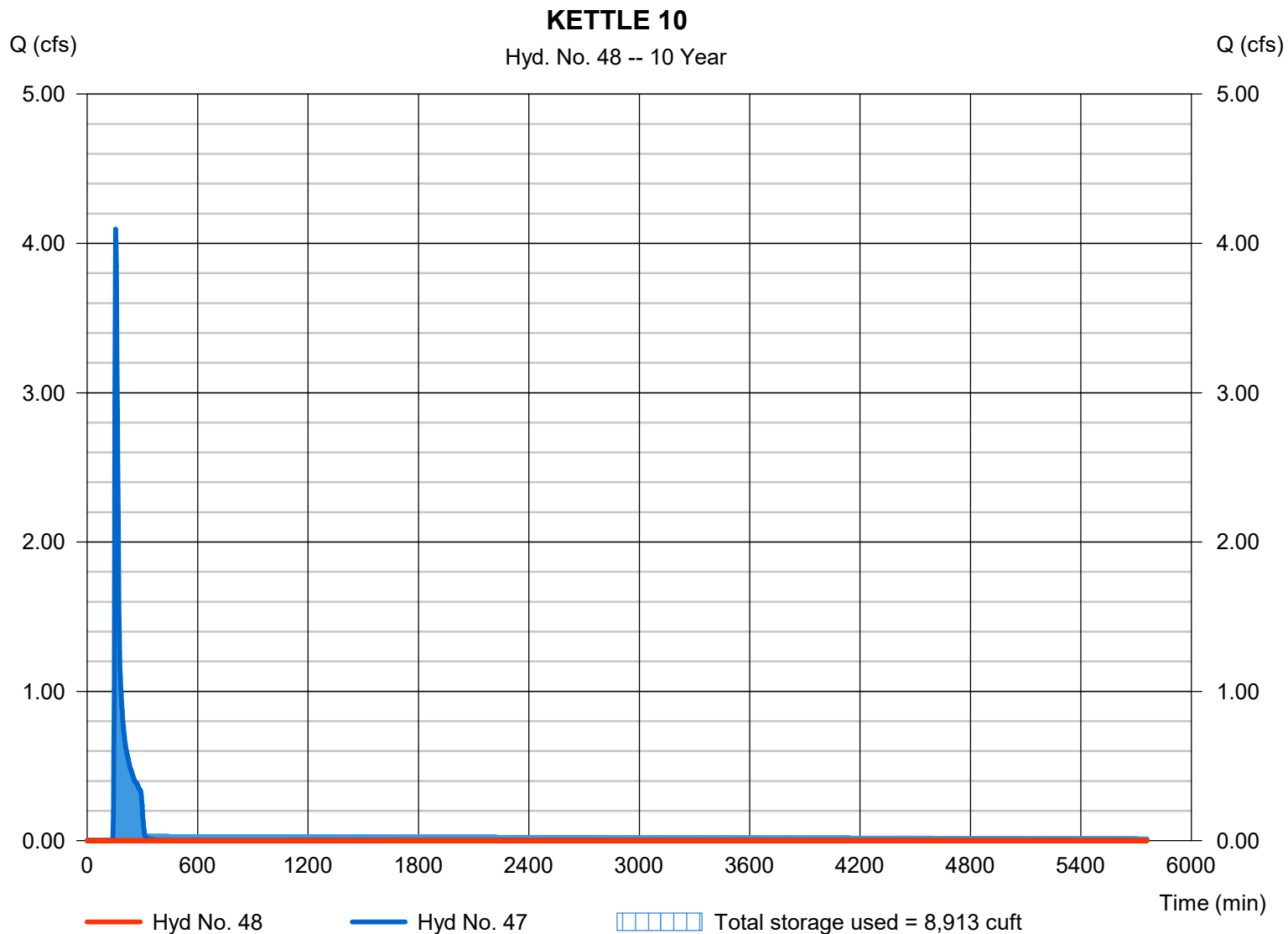
Tuesday, 04 / 7 / 2020

Hyd. No. 48

KETTLE 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 162 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 47 - INFLOW K-10	Max. Elevation	= 957.17 ft
Reservoir name	= K-10	Max. Storage	= 8,913 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	39.37	2	164	127,937	-----	-----	-----	E-1
2	SCS Runoff	15.97	2	158	41,290	-----	-----	-----	E-2
3	SCS Runoff	6.413	2	154	13,276	-----	-----	-----	E-3
4	SCS Runoff	2.047	2	148	2,674	-----	-----	-----	E-4
5	SCS Runoff	17.82	2	160	51,746	-----	-----	-----	E-5
6	SCS Runoff	9.601	2	154	20,507	-----	-----	-----	E-6
8	SCS Runoff	8.125	2	154	16,675	-----	-----	-----	E-10
9	SCS Runoff	3.469	2	150	5,644	-----	-----	-----	E-11
10	SCS Runoff	14.53	2	154	29,052	-----	-----	-----	E-12
11	SCS Runoff	5.768	2	150	9,046	-----	-----	-----	E-13
12	SCS Runoff	18.62	2	164	60,501	-----	-----	-----	E-14
13	SCS Runoff	6.307	2	148	7,932	-----	-----	-----	E-15
14	SCS Runoff	6.406	2	152	11,698	-----	-----	-----	E-16
15	SCS Runoff	16.97	2	152	30,985	-----	-----	-----	E-17
17	SCS Runoff	12.27	2	160	35,631	-----	-----	-----	E-20
18	SCS Runoff	26.01	2	164	80,424	-----	-----	-----	D
21	Reservoir	0.000	2	778	0	18	993.77	57,198	EX. INFILT. BASIN D
22	Combine	12.27	2	160	35,631	17, 21	-----	-----	INFLOW K-20
23	Reservoir	0.000	2	2492	0	22	993.60	33,910	KETTLE 20
25	Reservoir	0.000	2	894	0	6	1012.10	19,353	KETTLE 6
26	Combine	17.82	2	160	51,746	5, 25	-----	-----	INFLOW K-5
27	Reservoir	5.970	2	188	49,936	26	984.22	22,694	KETTLE 5
28	Combine	8.870	2	162	63,212	3, 27	-----	-----	INFLOW K-3
29	Reservoir	6.123	2	222	39,279	28	976.29	25,885	KETTLE 3
30	Reservoir	0.000	2	210	0	4	1008.13	2,506	KETTLE 4
31	Combine	15.97	2	158	80,569	2, 29, 30	-----	-----	INFLOW K-2
32	Reservoir	1.238	2	350	7,868	31	973.91	74,186	KETTLE 2
33	Combine	39.37	2	164	135,805	1, 32	-----	-----	INFLOW KETTLE 1
34	Reservoir	0.000	2	242	0	33	953.25	133,036	KETTLE 1
36	Reservoir	3.197	2	176	17,905	15	1012.19	16,857	KETTLE 17
37	Combine	6.406	2	152	29,603	14, 36	-----	-----	INFLOW K-16
EXISTING_LCL_Stormwater Model_2020-04-06					Return Period: 100 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	2.408	2	224	13,358	37	1007.15	17,218	KETTLE 16
39	Reservoir	0.000	2	242	0	13	972.15	7,653	KETTLE 15
40	Combine	18.62	2	164	73,859	12, 38, 39	-----	-----	INFLOW K-14
41	Reservoir	3.301	2	286	14,090	40	961.49	61,614	KETTLE 14
42	Combine	5.768	2	150	23,136	11, 41	-----	-----	INFLOW K-13
43	Reservoir	4.971	2	154	22,916	42	960.14	1,043	KETTLE 13
44	Combine	19.50	2	154	51,968	10, 43	-----	-----	INFLOW K-12
45	Reservoir	0.000	2	136	0	44	960.40	50,378	KETTLE 12
46	Reservoir	0.137	2	288	295	9	980.51	5,106	KETTLE 11
47	Combine	13.10	2	154	39,886	8, 43, 45, 46	-----	-----	INFLOW K-10
48	Reservoir	0.000	2	178	0	47	960.89	39,021	KETTLE 10
EXISTING_LCL_Stormwater Model_2020-04-08.dwg					Return Period: 100 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

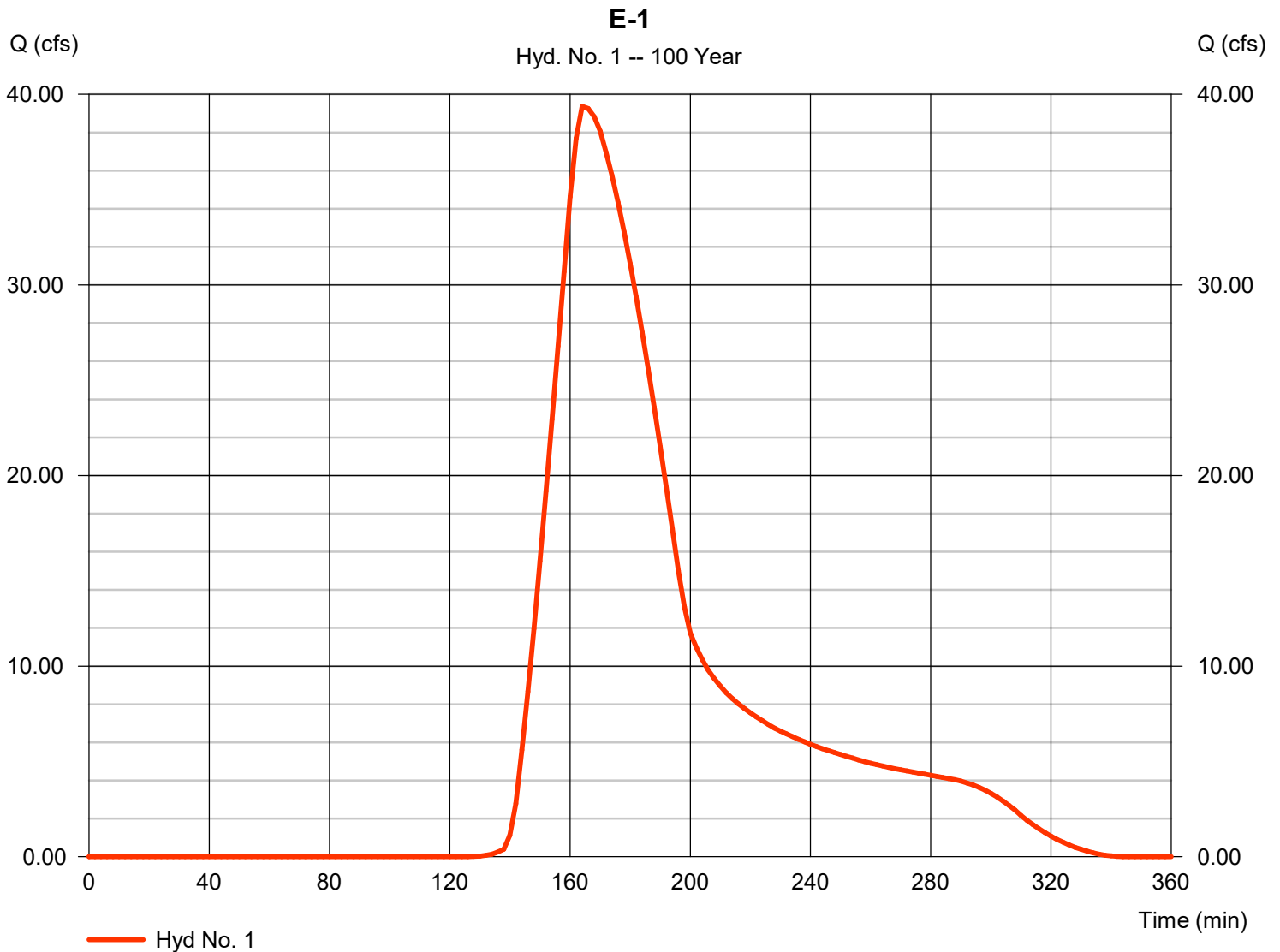
Tuesday, 04 / 7 / 2020

Hyd. No. 1

E-1

Hydrograph type	= SCS Runoff	Peak discharge	= 39.37 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 127,937 cuft
Drainage area	= 15.479 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 15.479$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

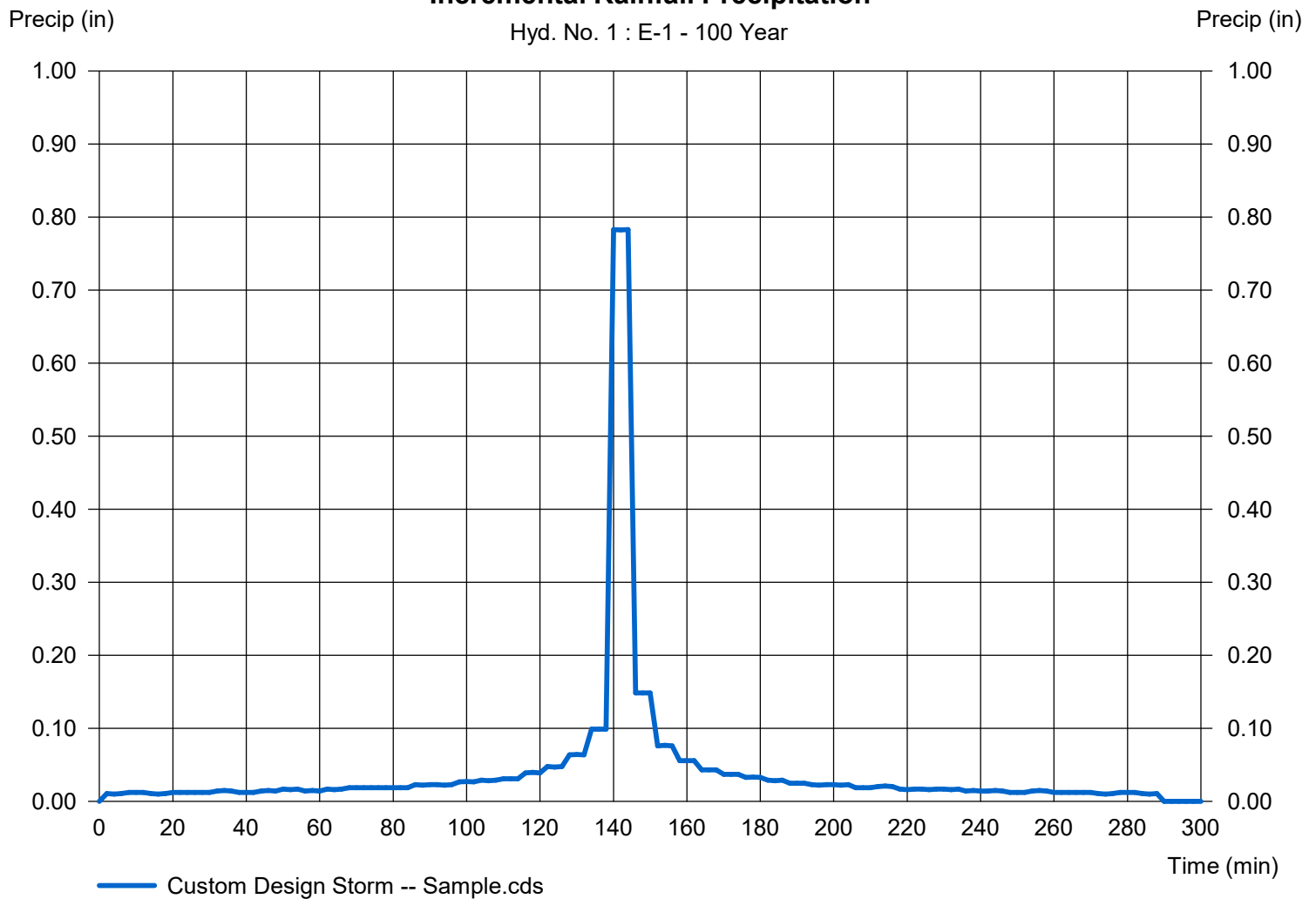
Hyd. No. 1

E-1

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : E-1 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

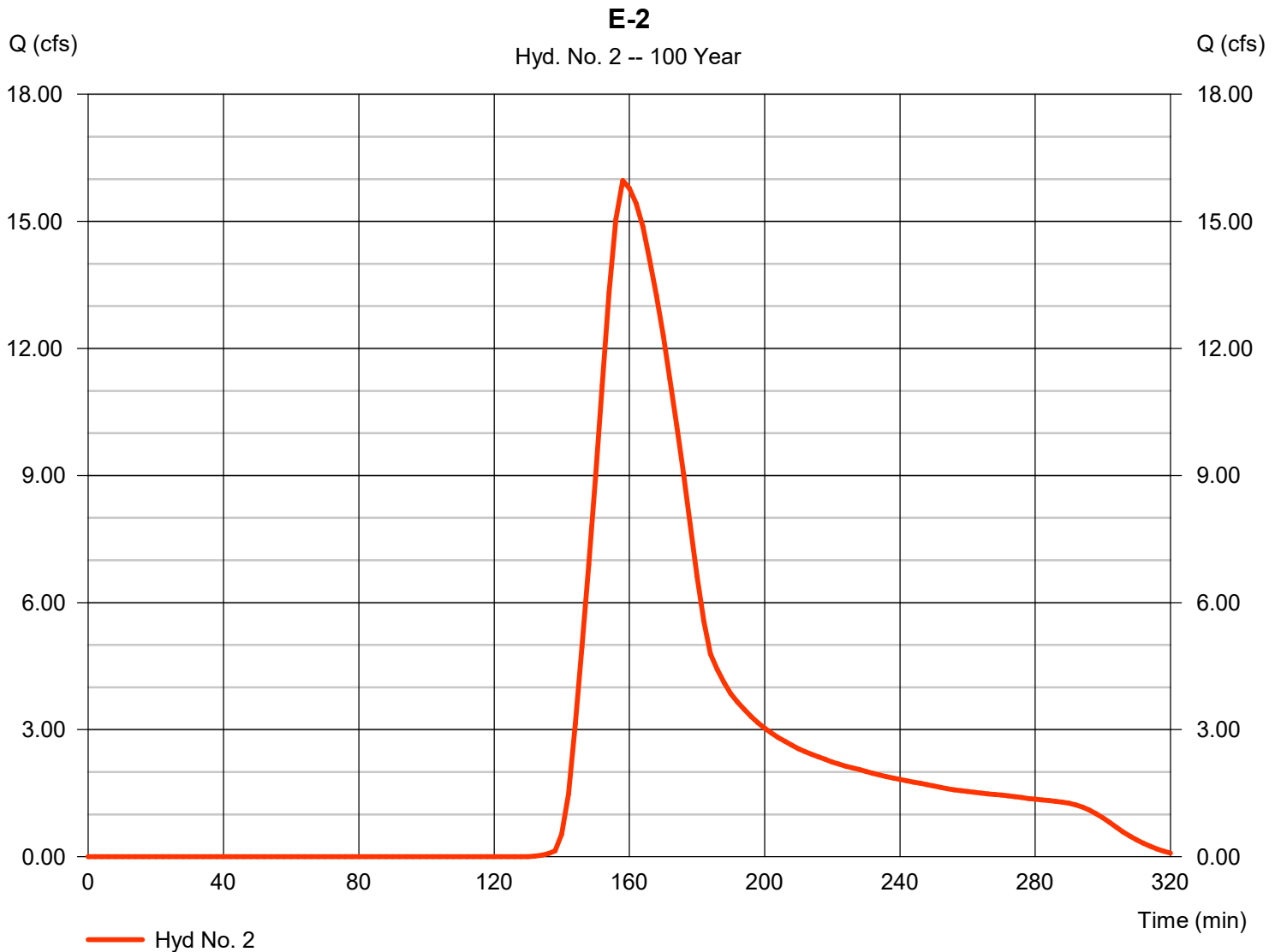
Tuesday, 04 / 7 / 2020

Hyd. No. 2

E-2

Hydrograph type	= SCS Runoff	Peak discharge	= 15.97 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 41,290 cuft
Drainage area	= 5.433 ac	Curve number	= 61*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 5.433$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

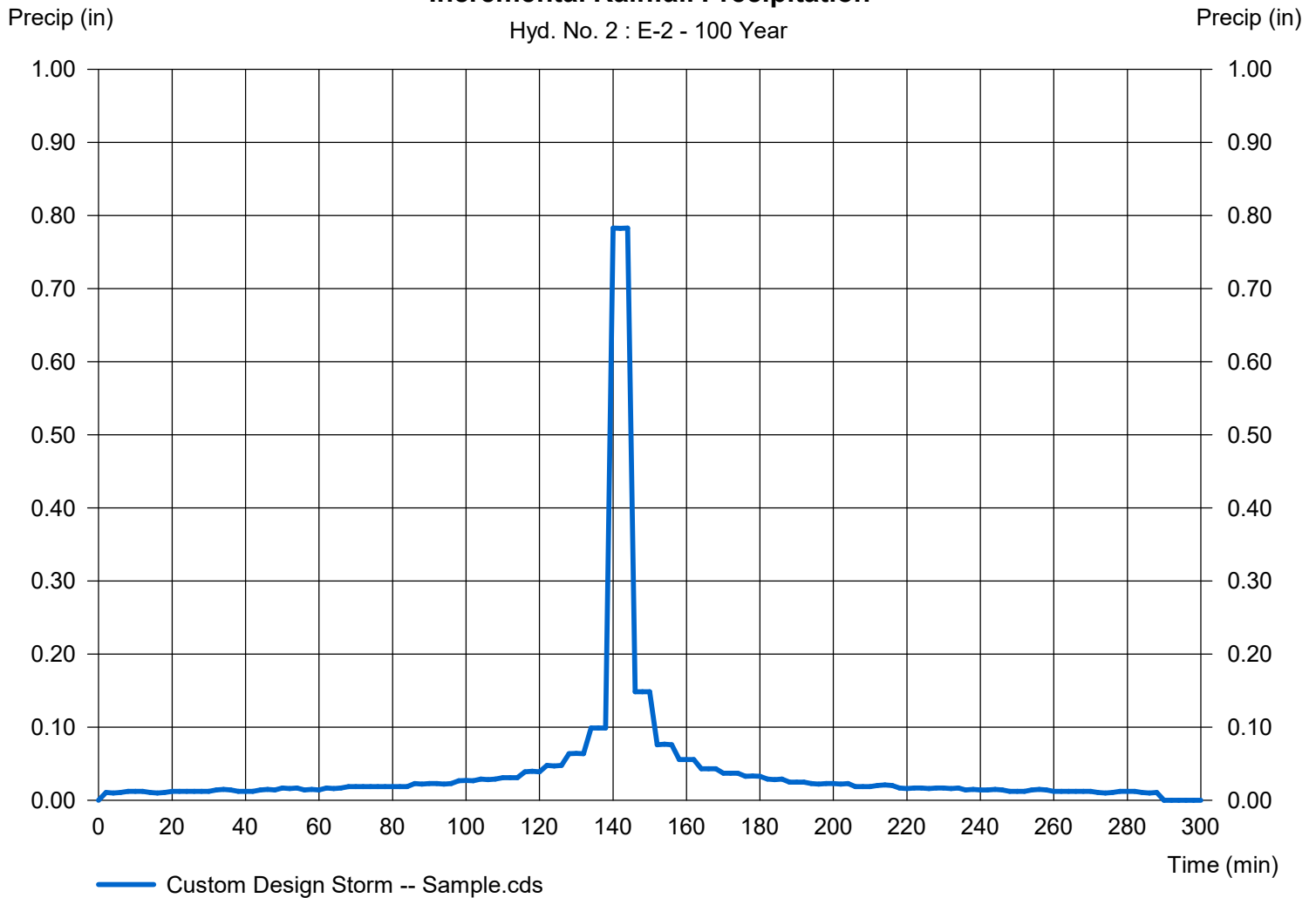
Hyd. No. 2

E-2

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : E-2 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

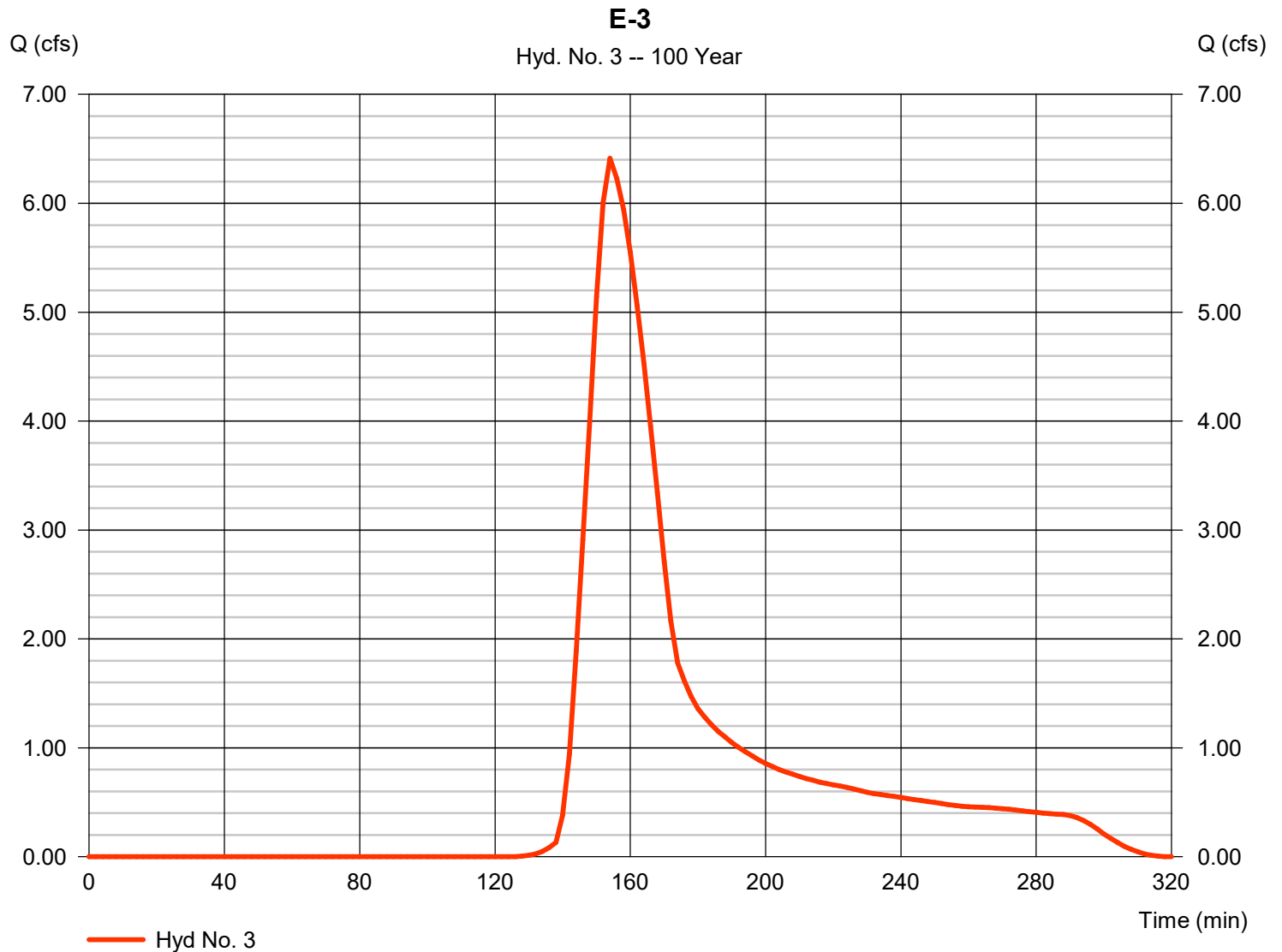
Tuesday, 04 / 7 / 2020

Hyd. No. 3

E-3

Hydrograph type	= SCS Runoff	Peak discharge	= 6.413 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 13,276 cuft
Drainage area	= 1.588 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 1.588$



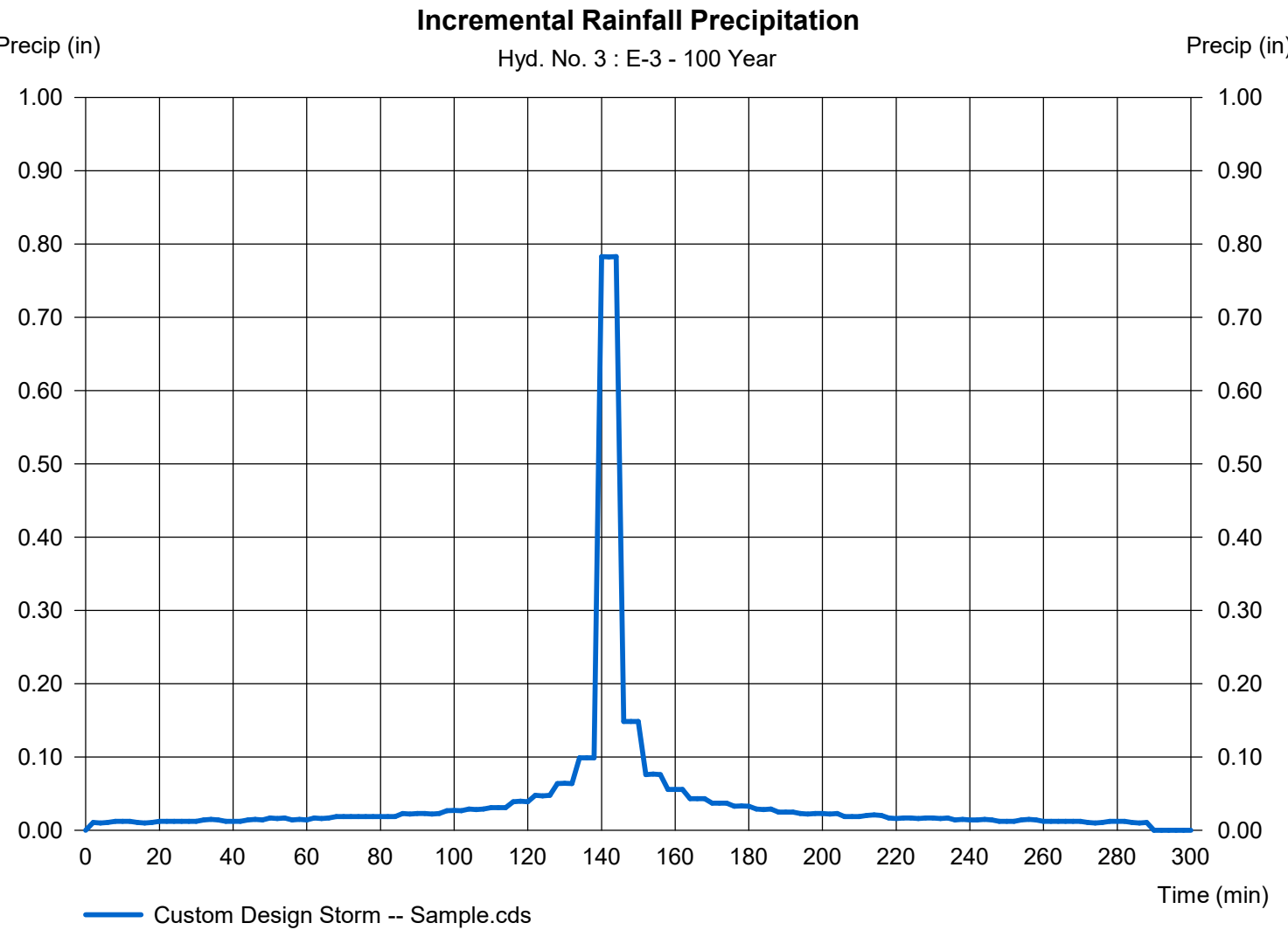
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 3

E-3			
Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

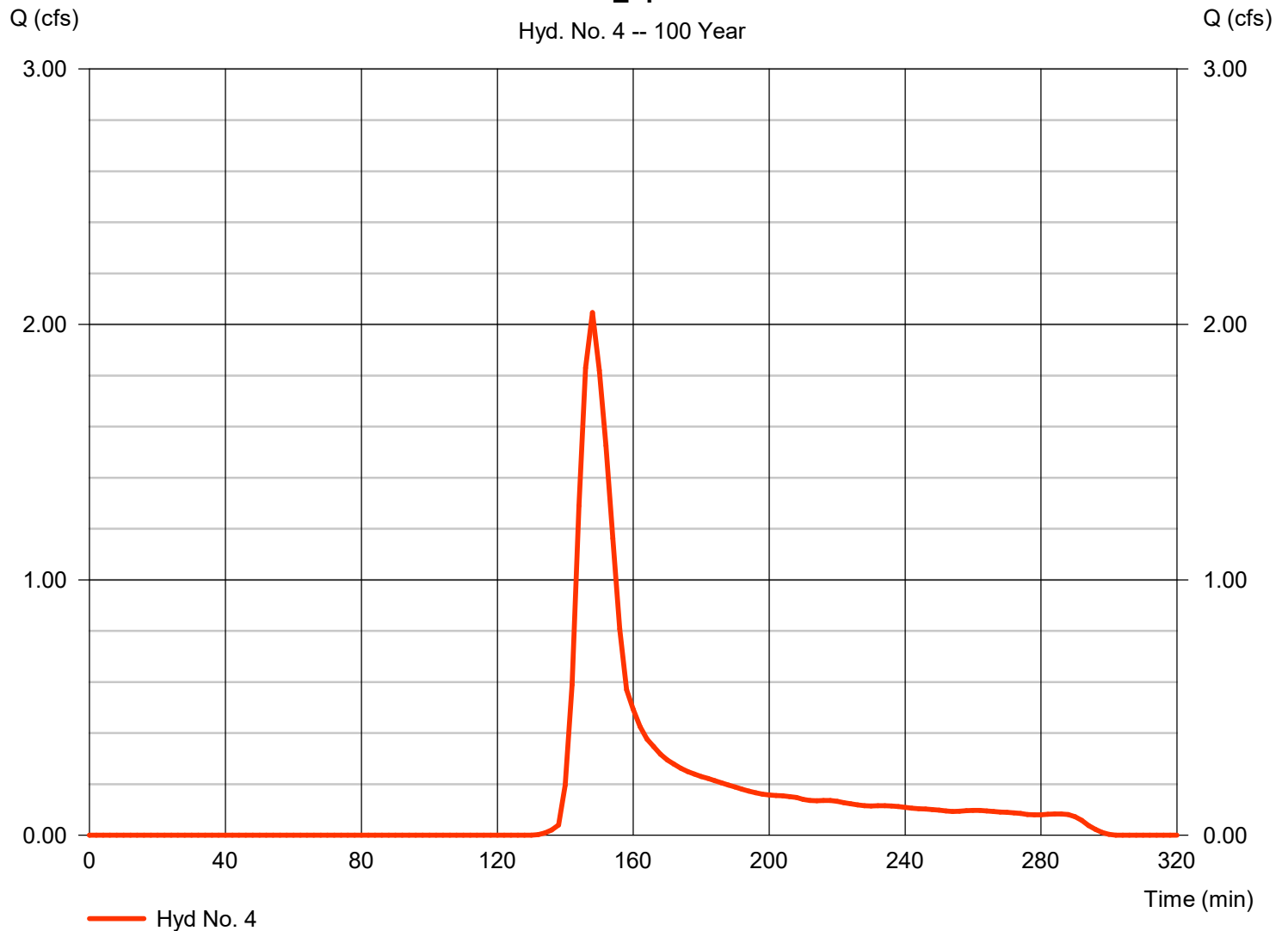
Tuesday, 04 / 7 / 2020

Hyd. No. 4

E-4

Hydrograph type	= SCS Runoff	Peak discharge	= 2.047 cfs
Storm frequency	= 100 yrs	Time to peak	= 148 min
Time interval	= 2 min	Hyd. volume	= 2,674 cuft
Drainage area	= 0.361 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-4



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

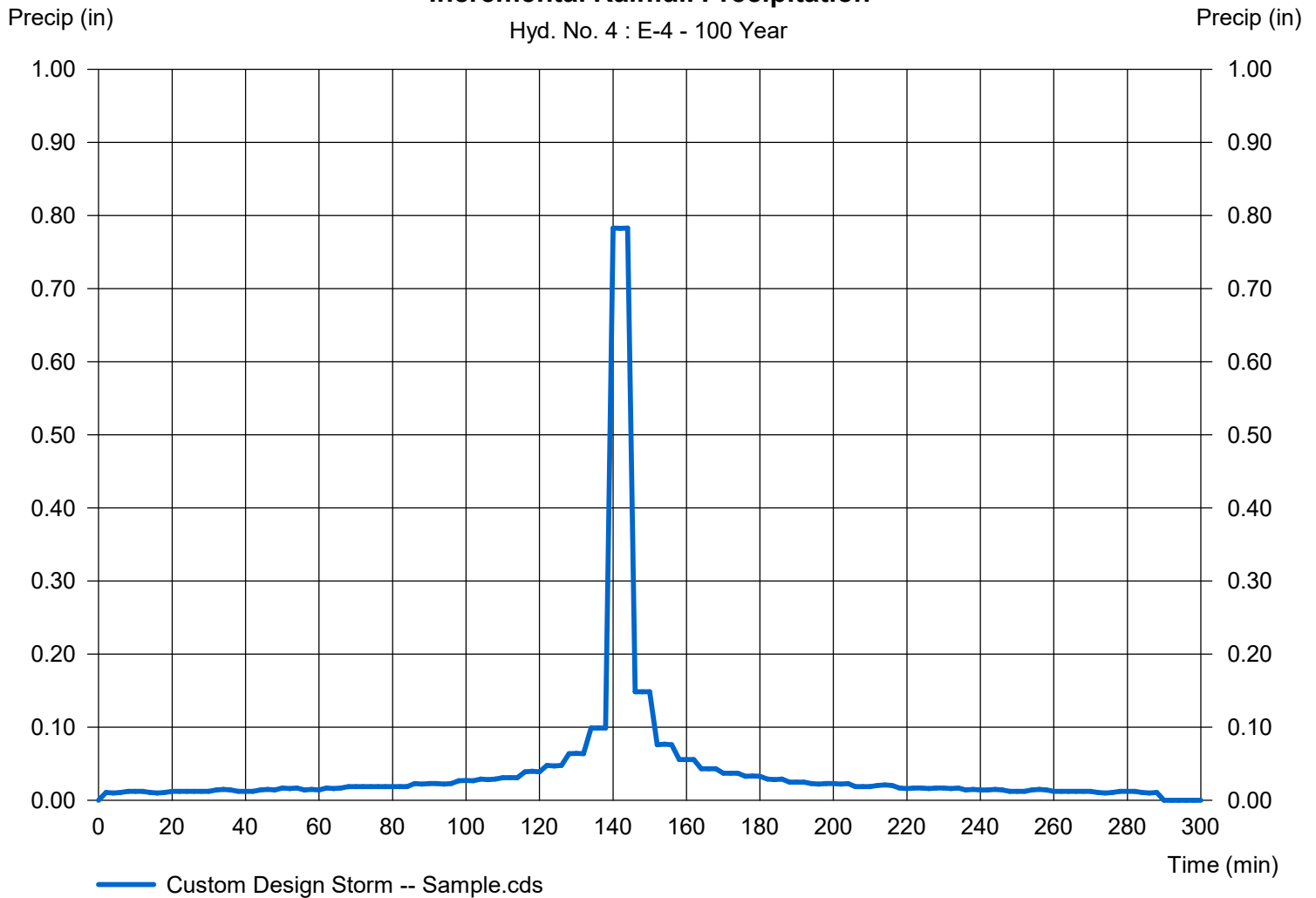
Hyd. No. 4

E-4

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : E-4 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

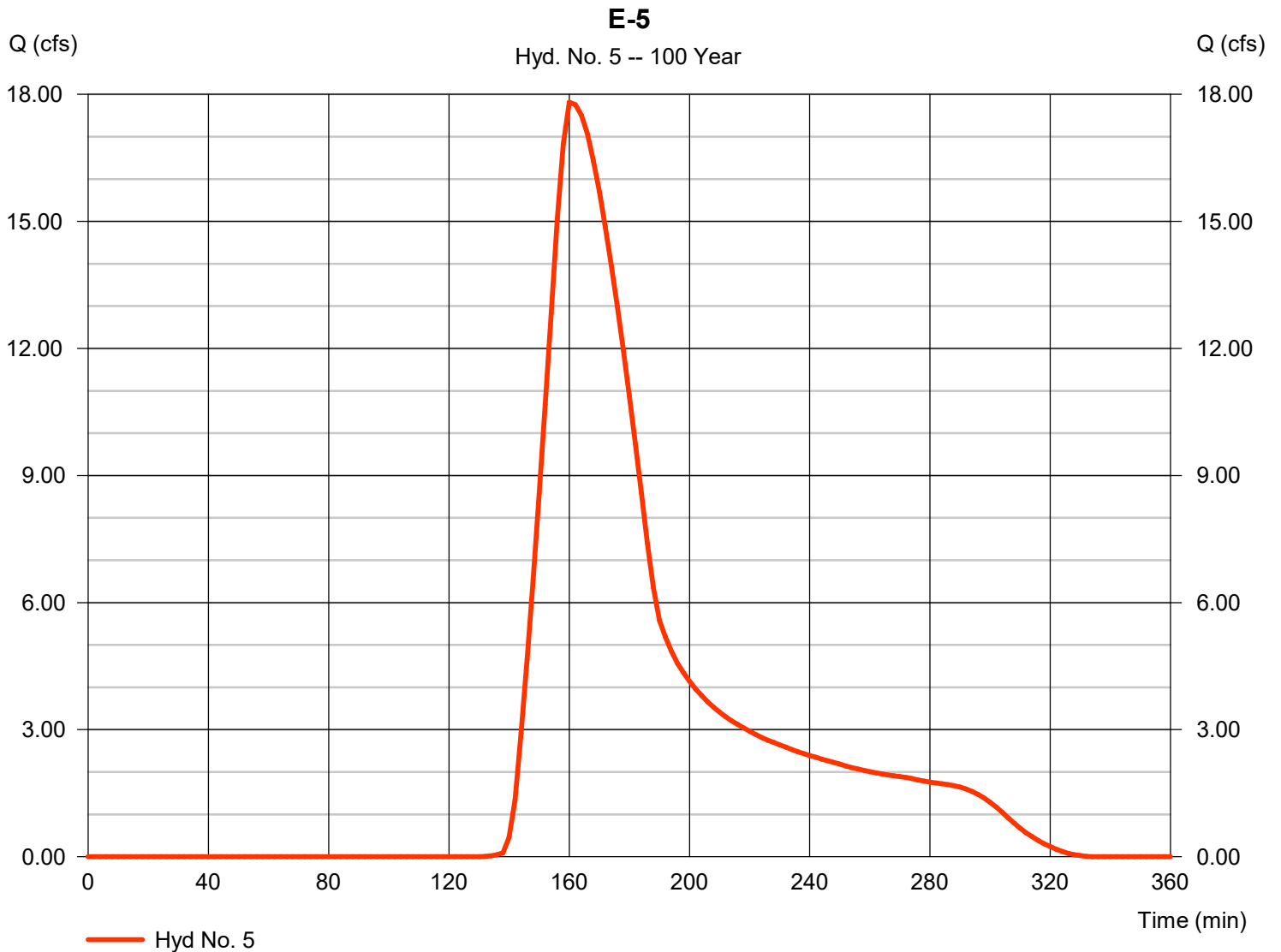
Tuesday, 04 / 7 / 2020

Hyd. No. 5

E-5

Hydrograph type	= SCS Runoff	Peak discharge	= 17.82 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 51,746 cuft
Drainage area	= 6.987 ac	Curve number	= 60*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 27.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 6.987$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

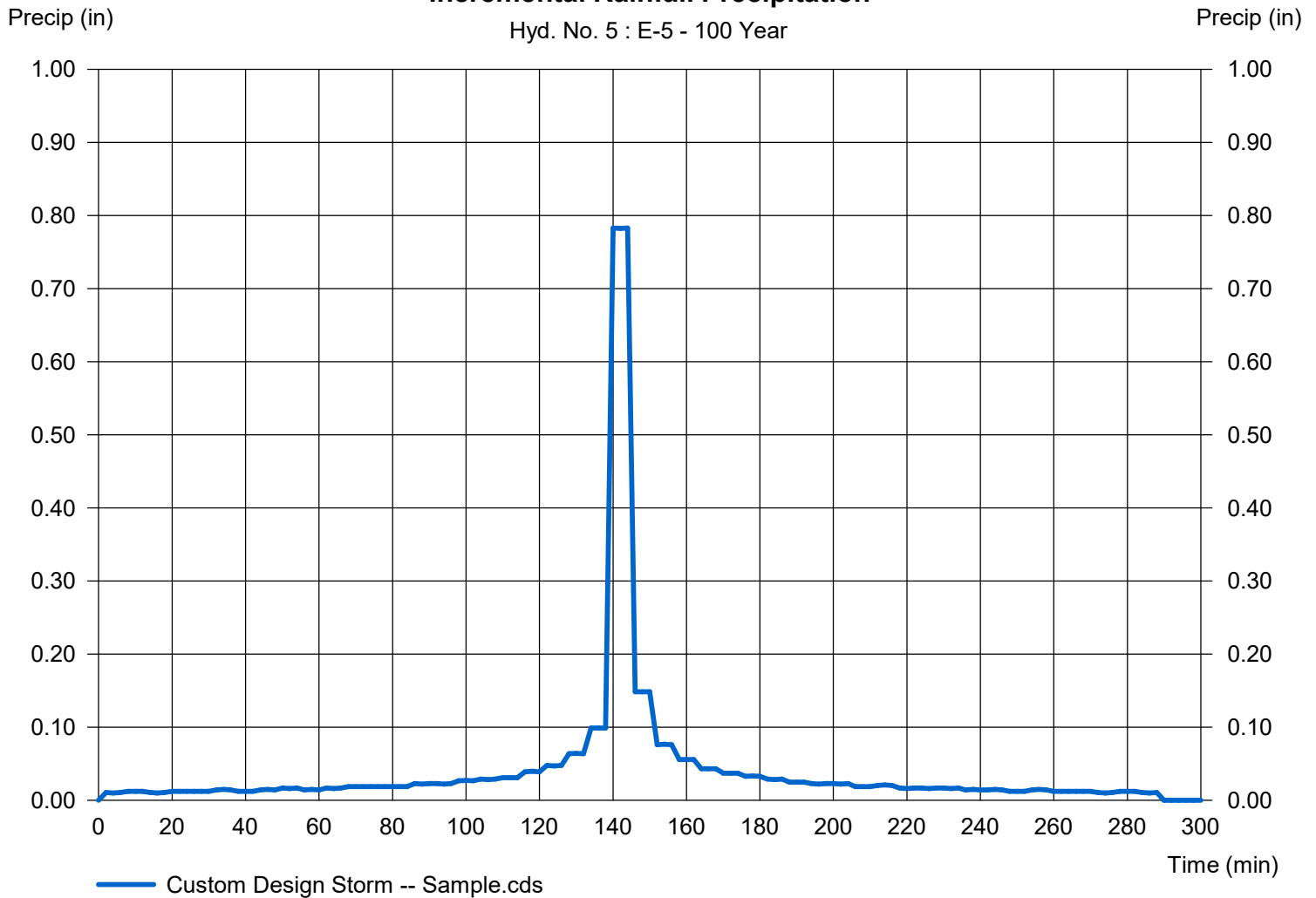
Hyd. No. 5

E-5

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 5 : E-5 - 100 Year



Hydrograph Report

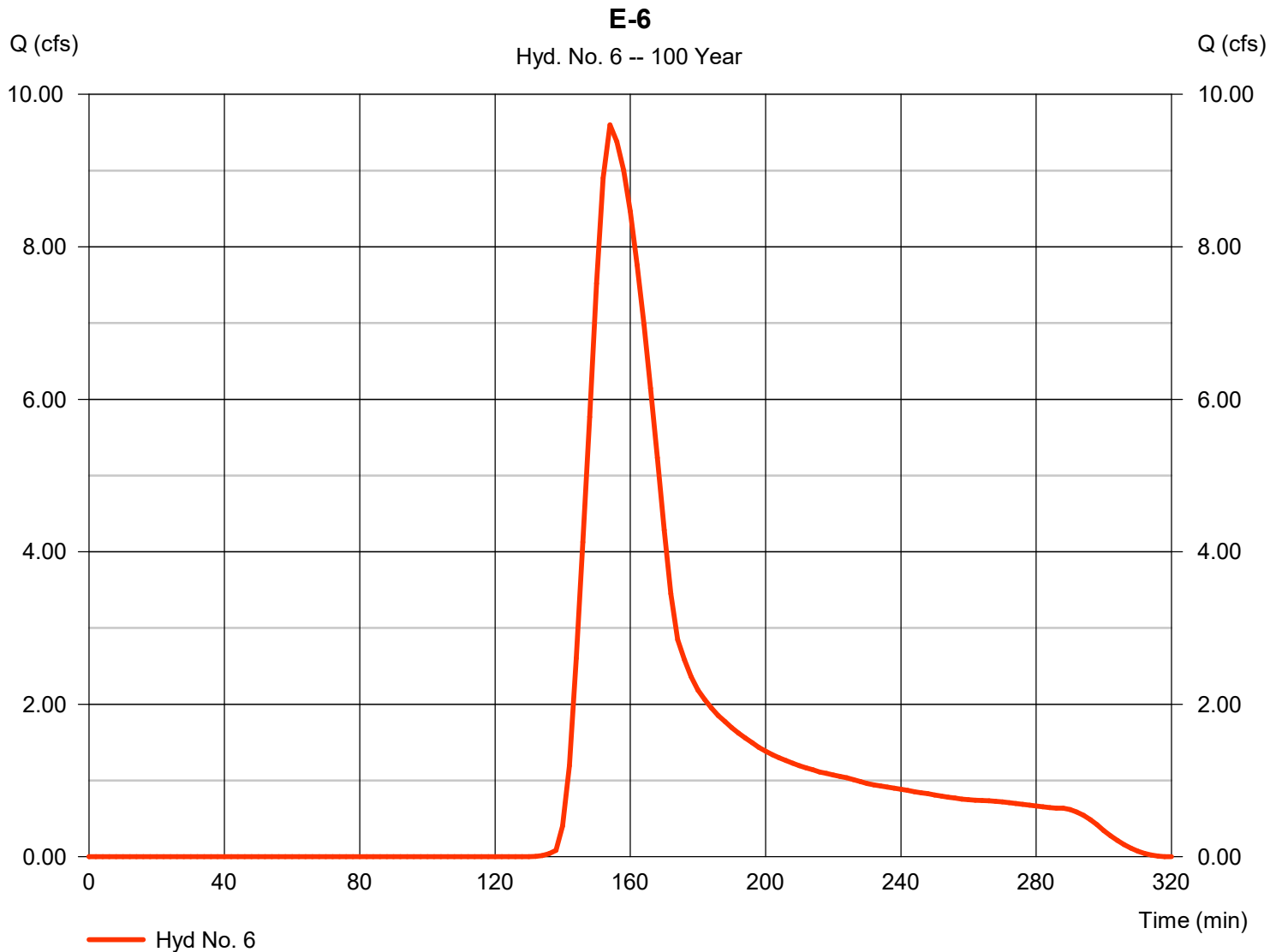
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 6

E-6

Hydrograph type	= SCS Runoff	Peak discharge	= 9.601 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 20,507 cuft
Drainage area	= 2.769 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

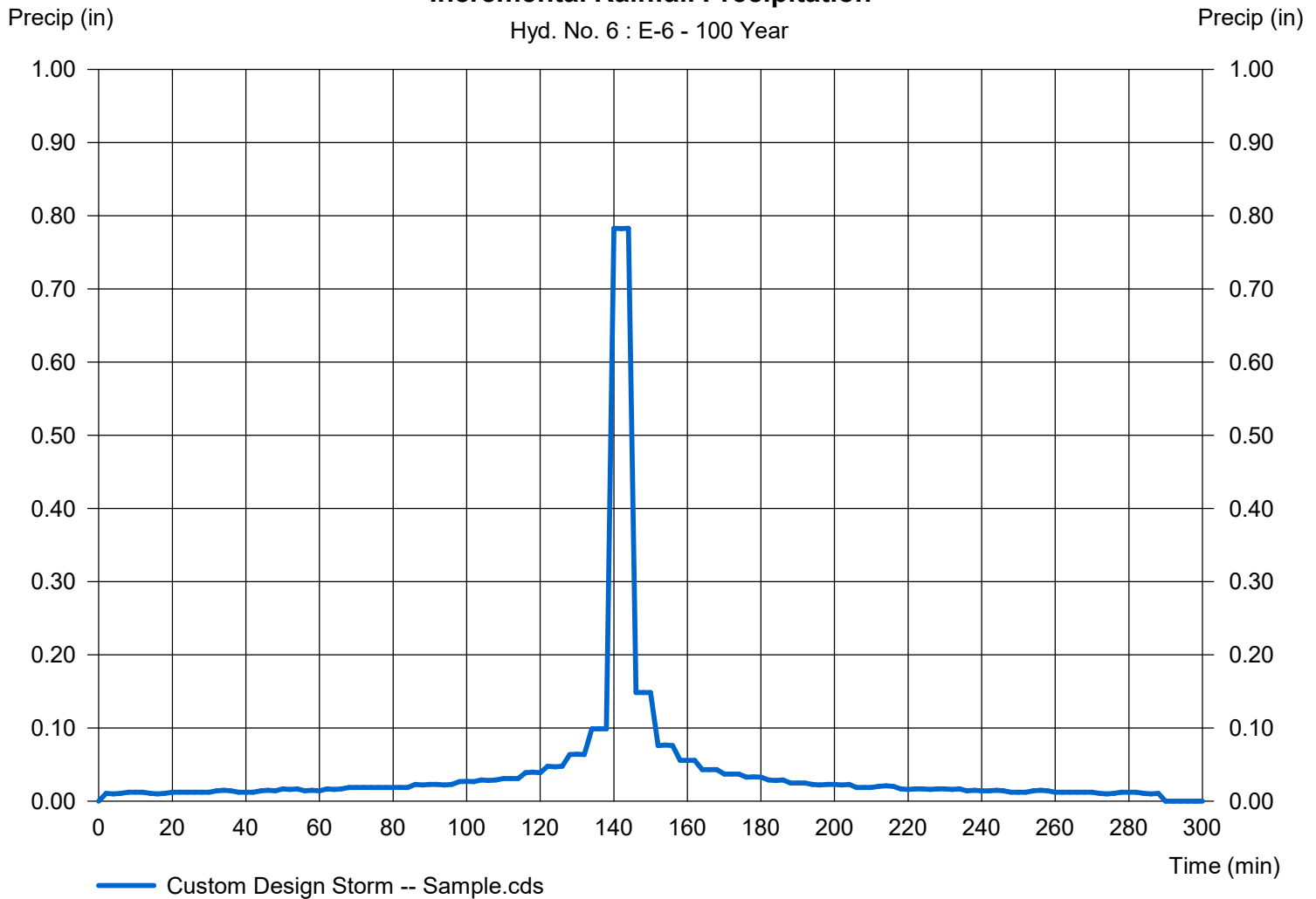
Hyd. No. 6

E-6

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : E-6 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

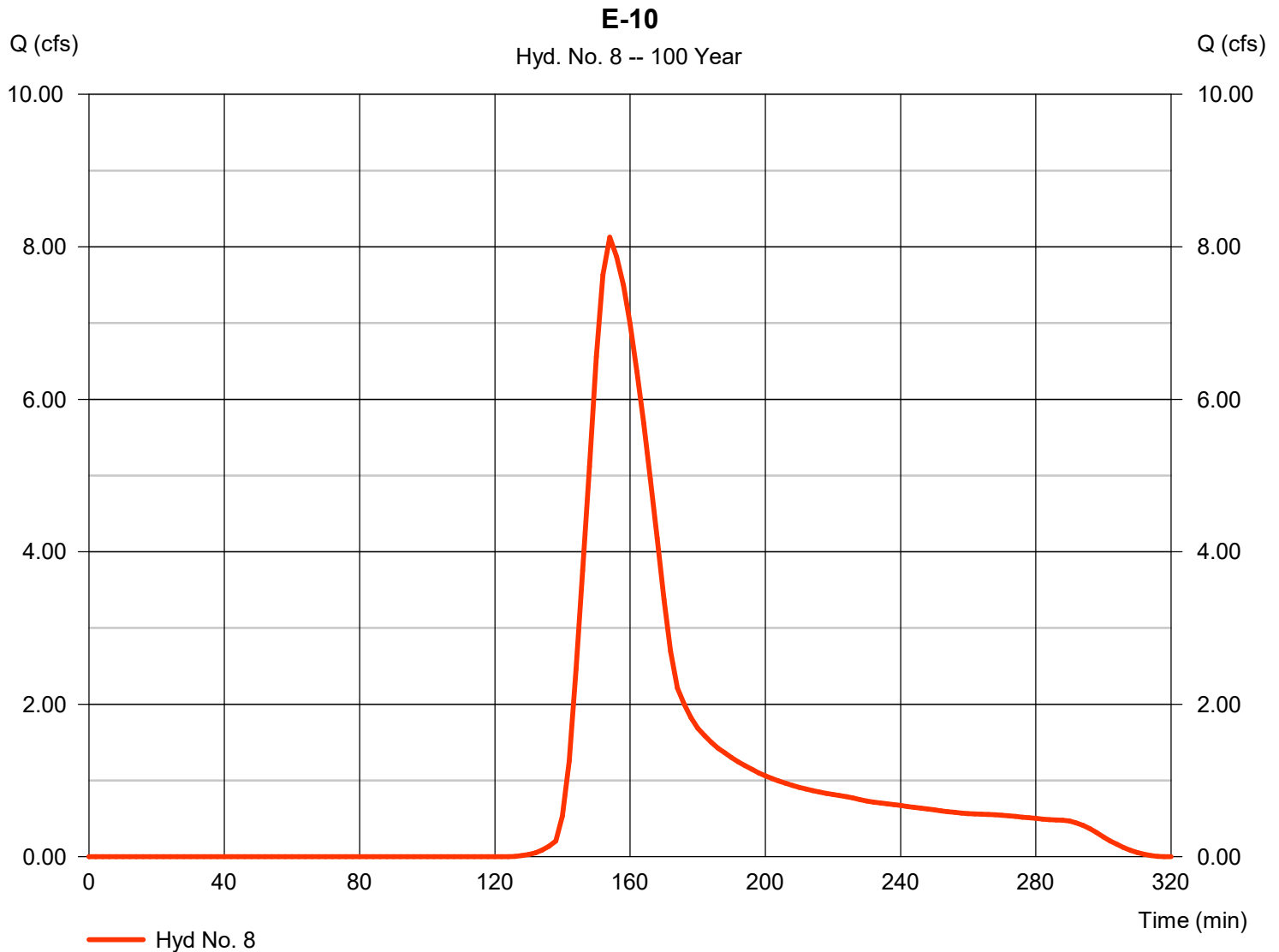
Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Hydrograph type	= SCS Runoff	Peak discharge	= 8.125 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 16,675 cuft
Drainage area	= 1.920 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.920$



Precipitation Report

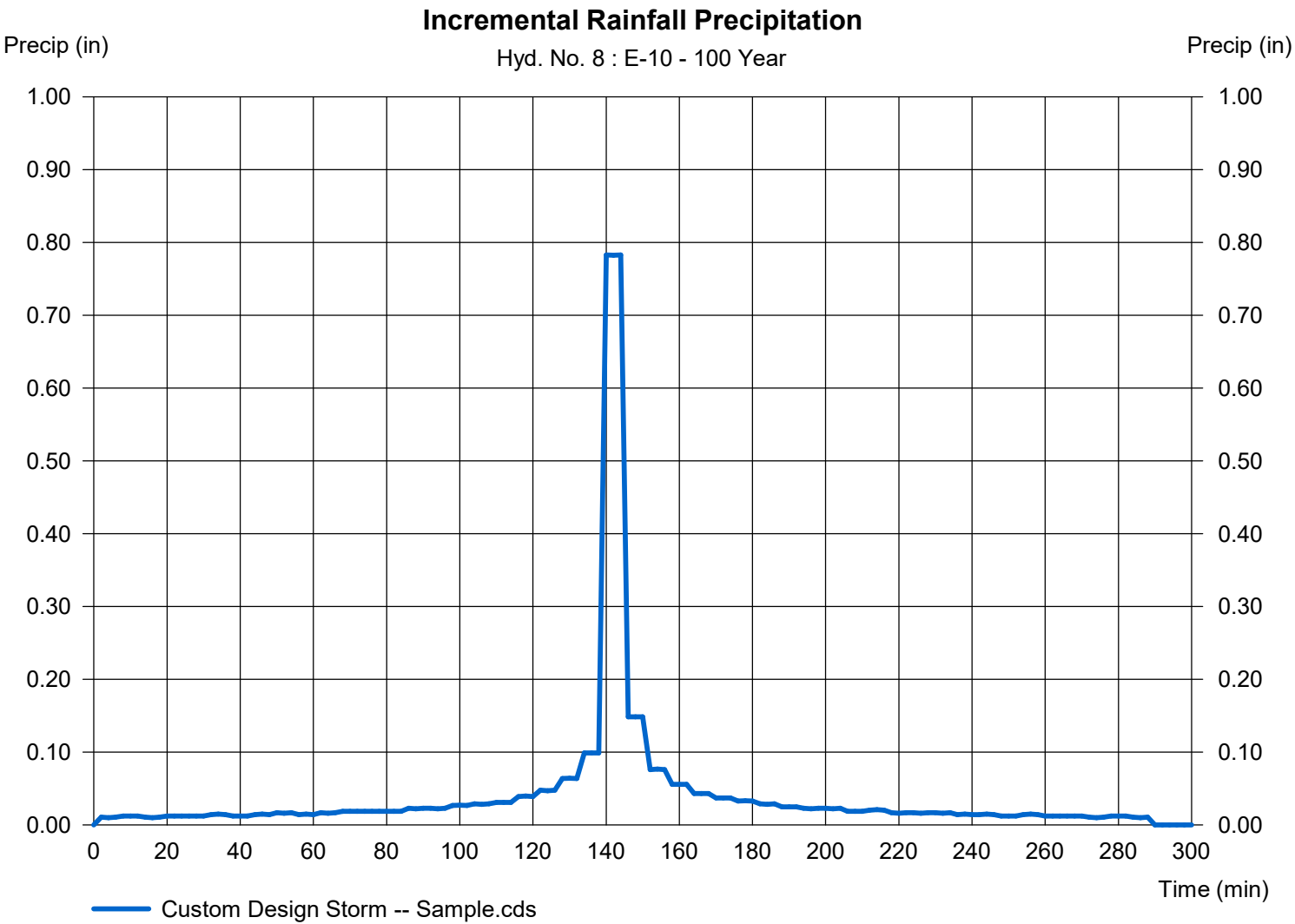
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 8

E-10

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

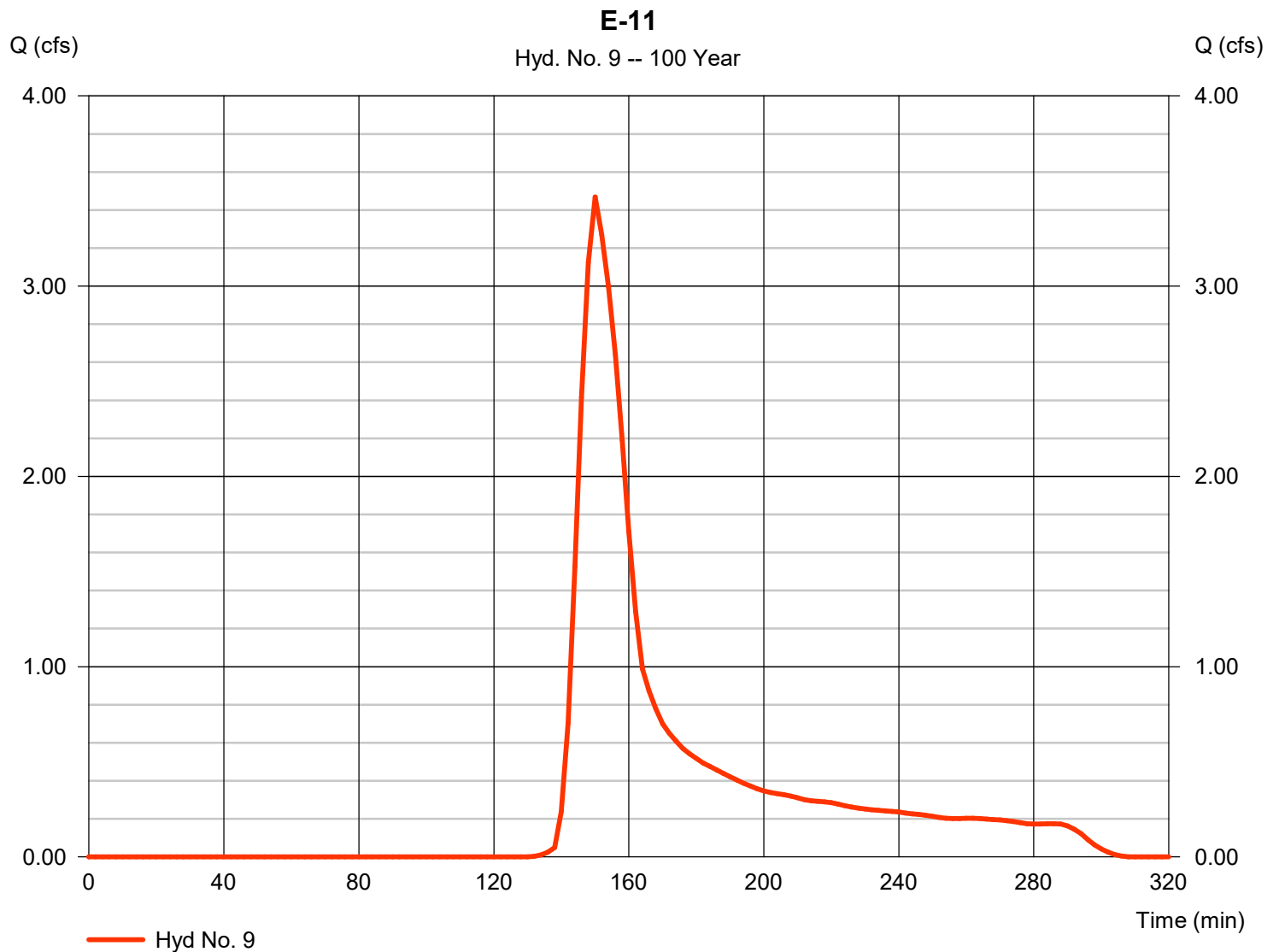
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Hydrograph type	= SCS Runoff	Peak discharge	= 3.469 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 5,644 cuft
Drainage area	= 0.739 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

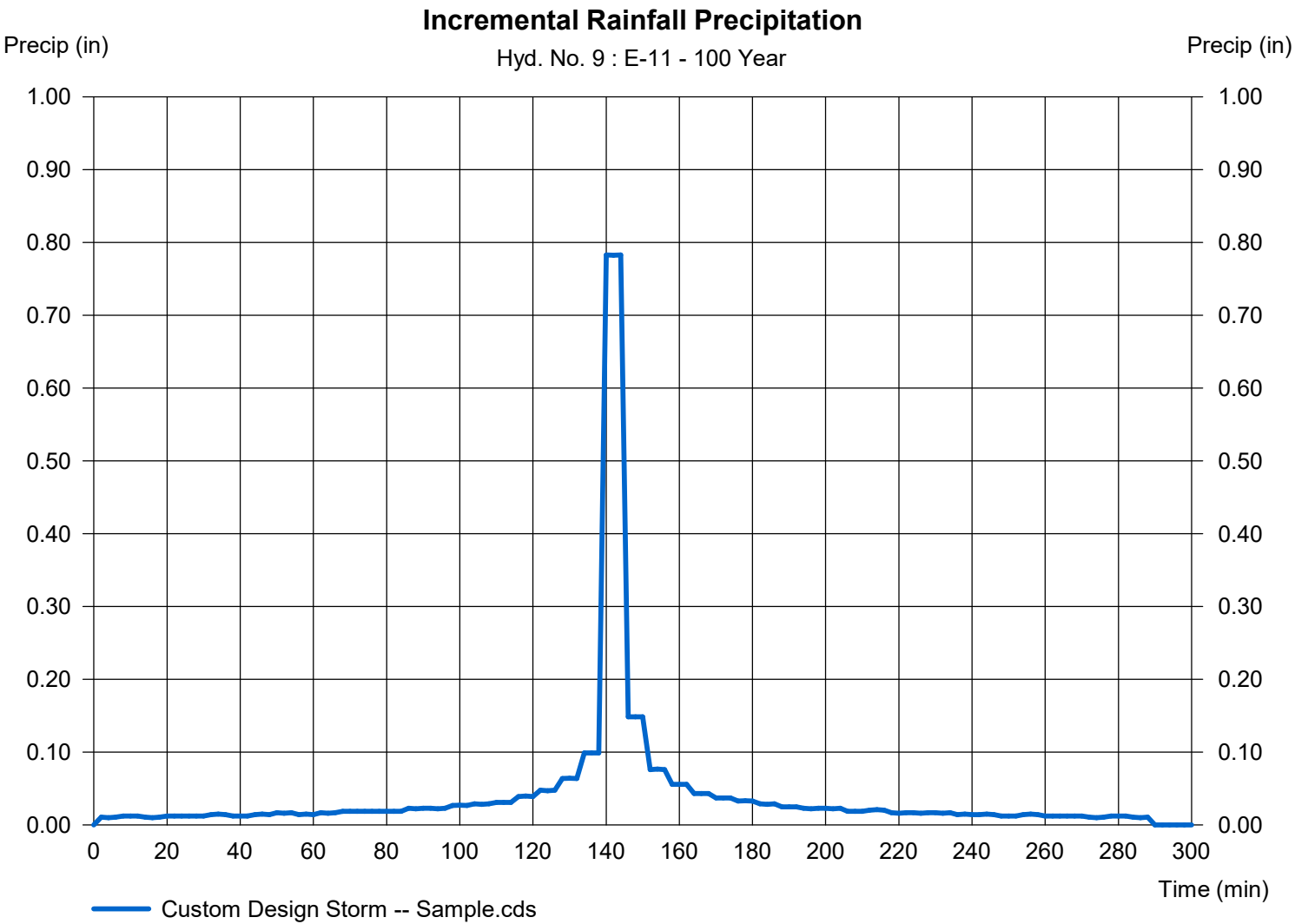
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-11

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

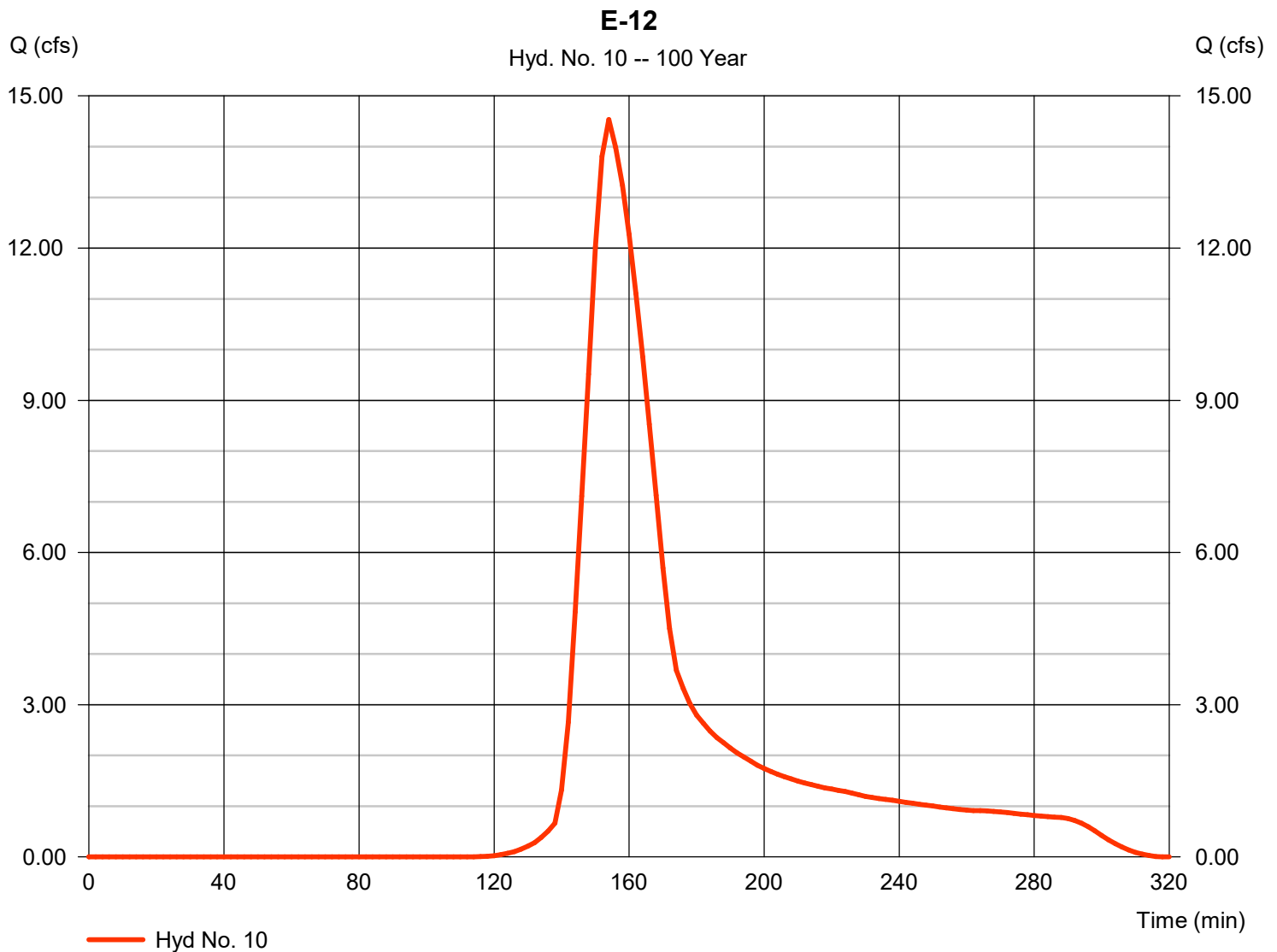
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-12

Hydrograph type	= SCS Runoff	Peak discharge	= 14.53 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 29,052 cuft
Drainage area	= 2.900 ac	Curve number	= 68*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.900$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

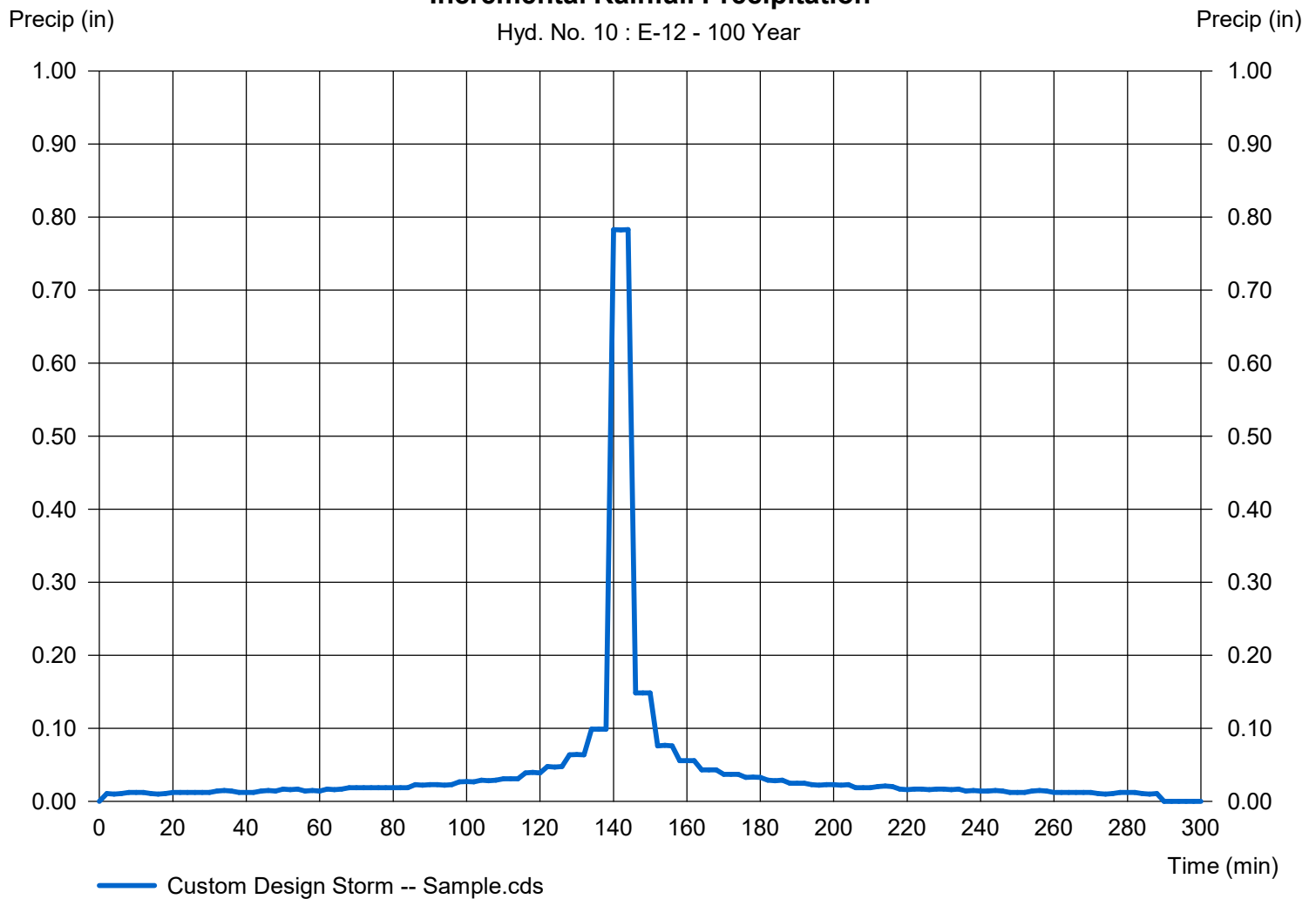
Hyd. No. 10

E-12

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-12 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

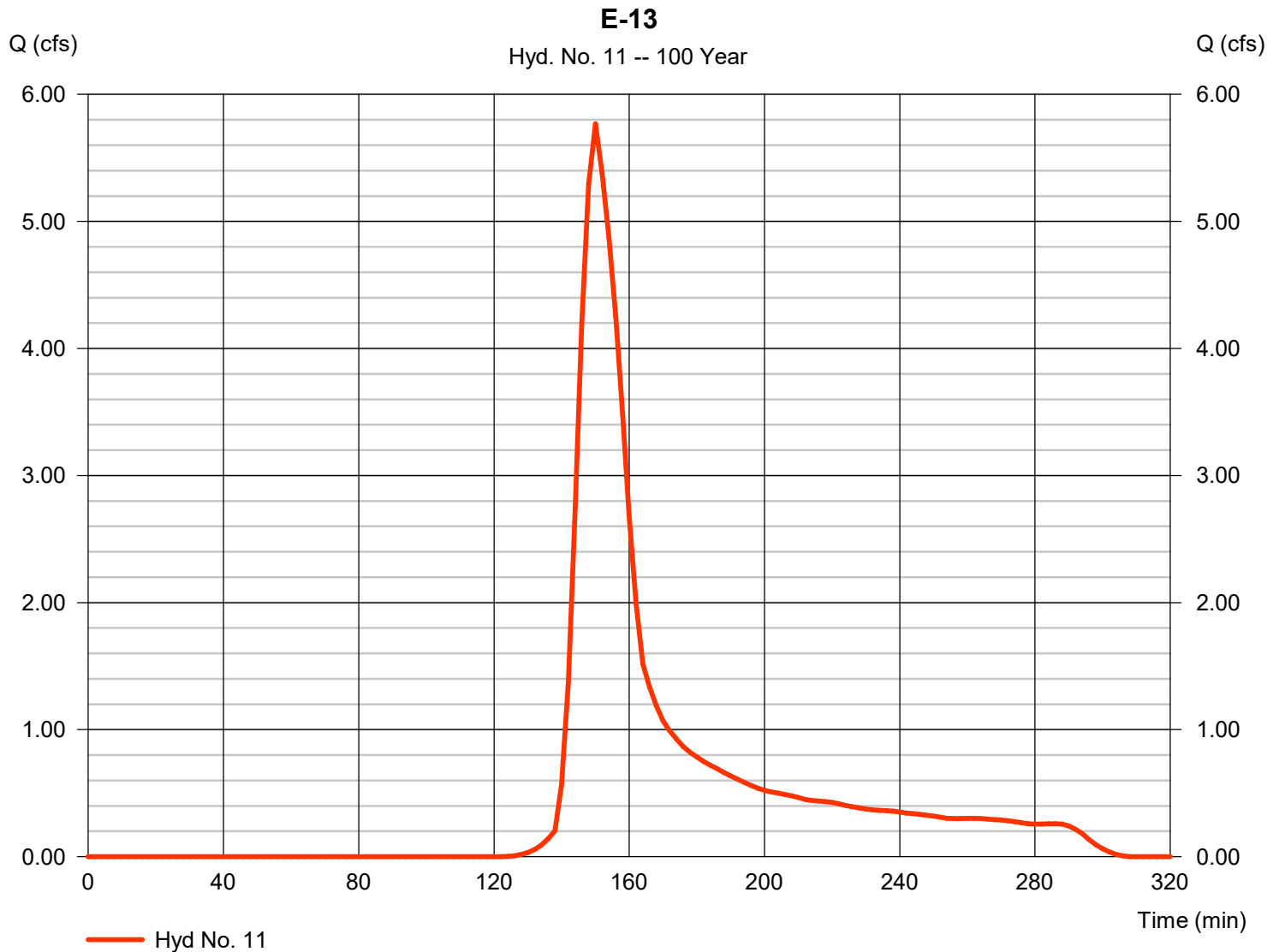
Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 5.768 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 9,046 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

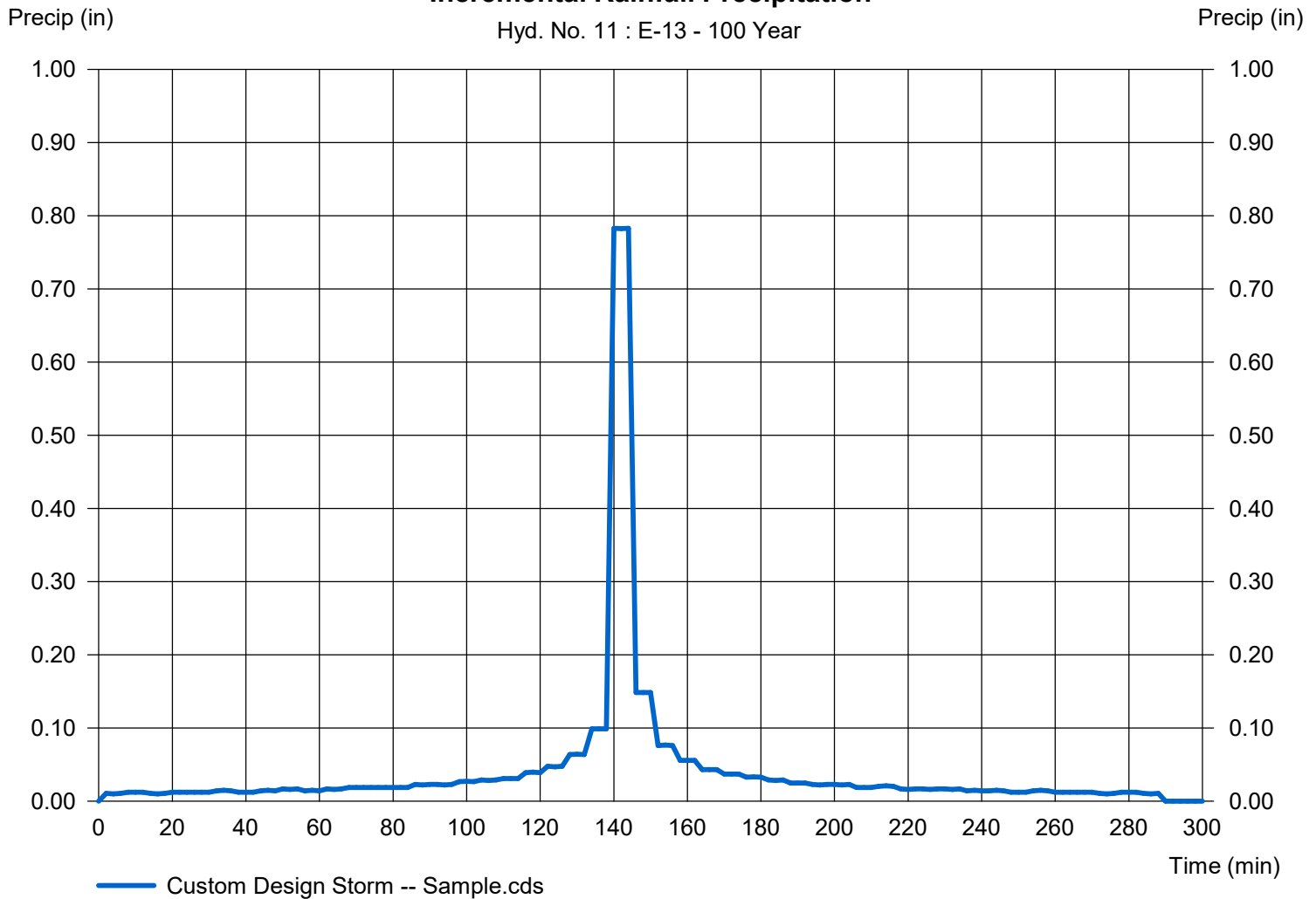
Hyd. No. 11

E-13

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-13 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

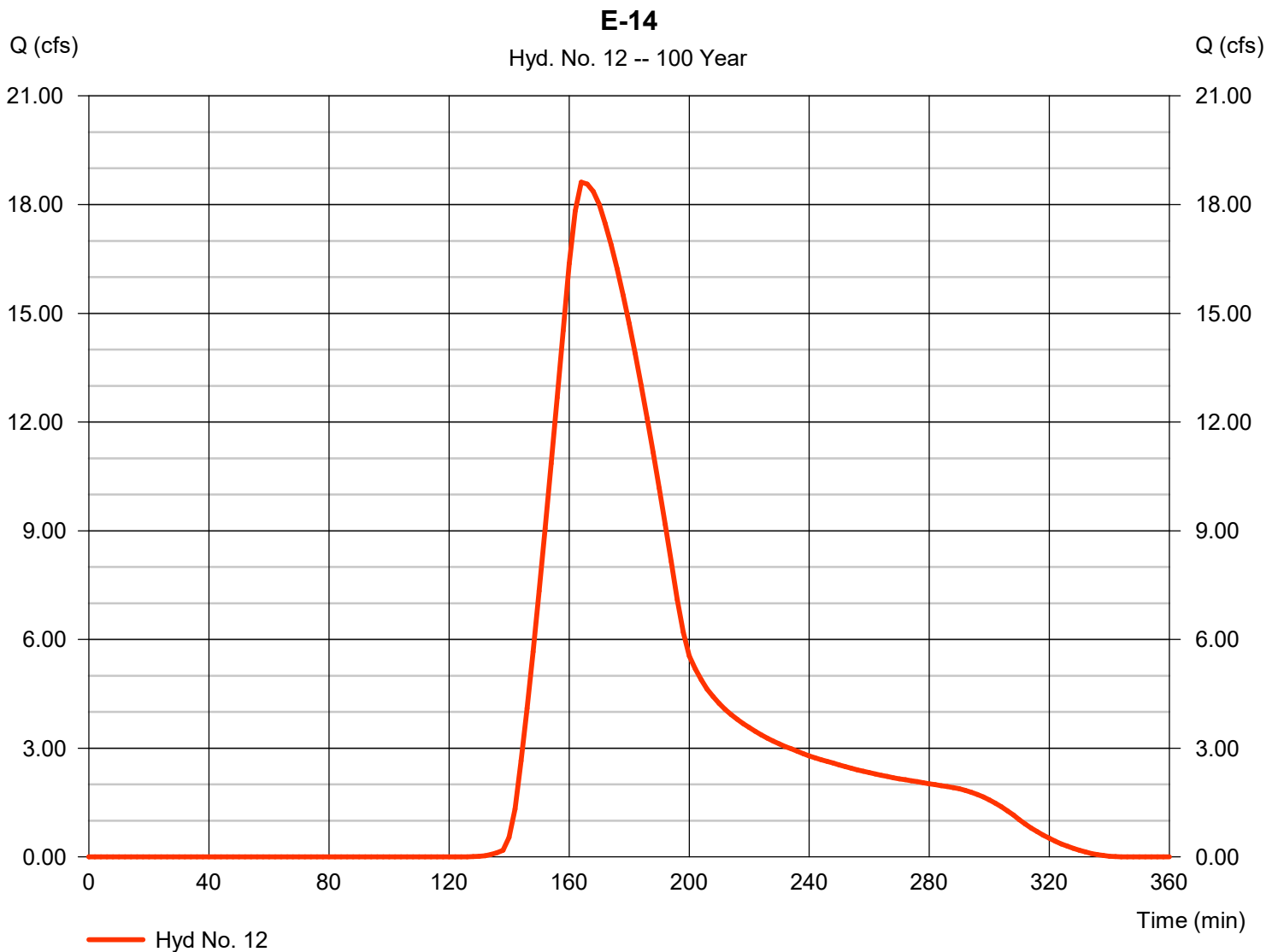
Tuesday, 04 / 7 / 2020

Hyd. No. 12

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 18.62 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 60,501 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

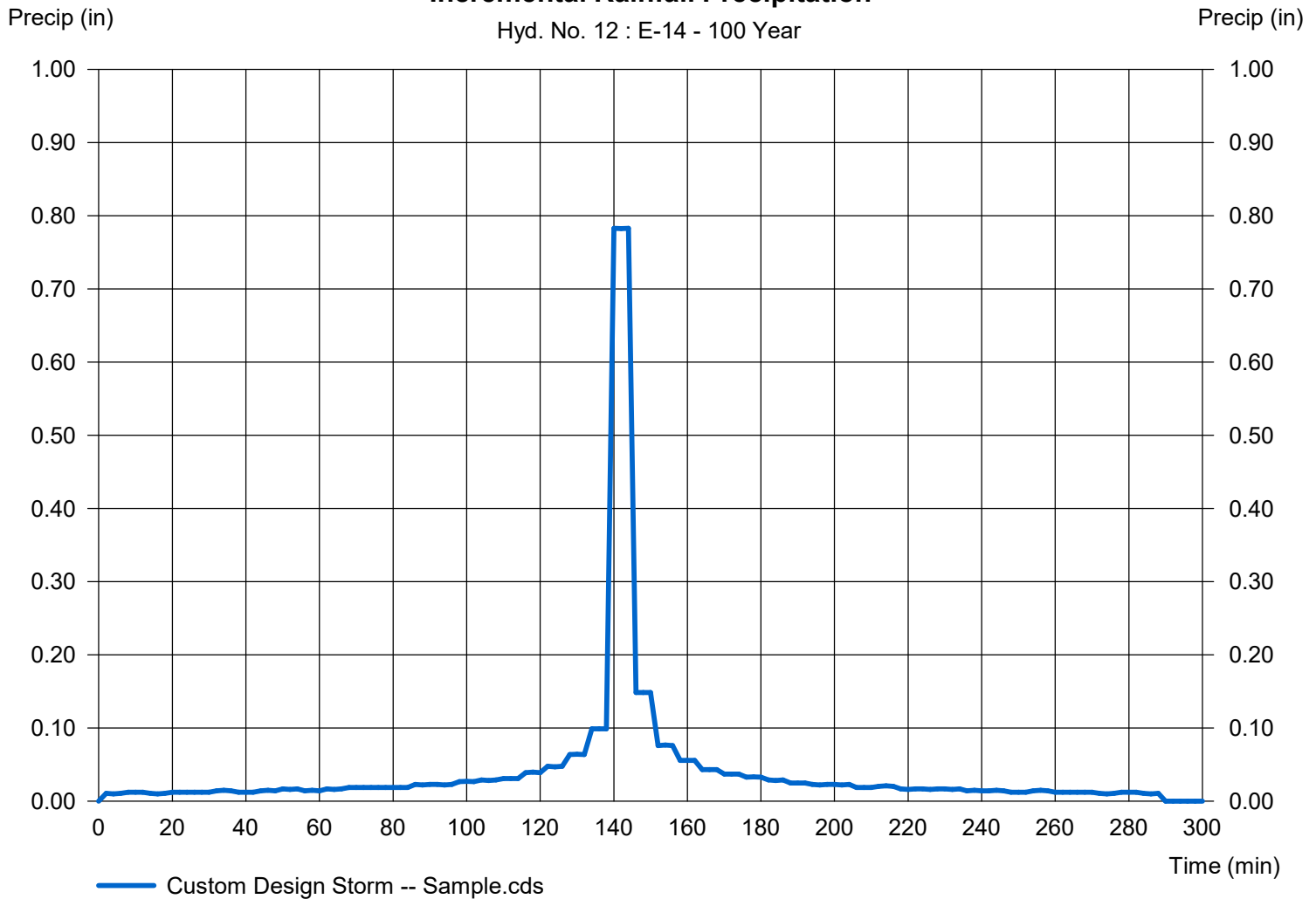
Hyd. No. 12

E-14

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : E-14 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

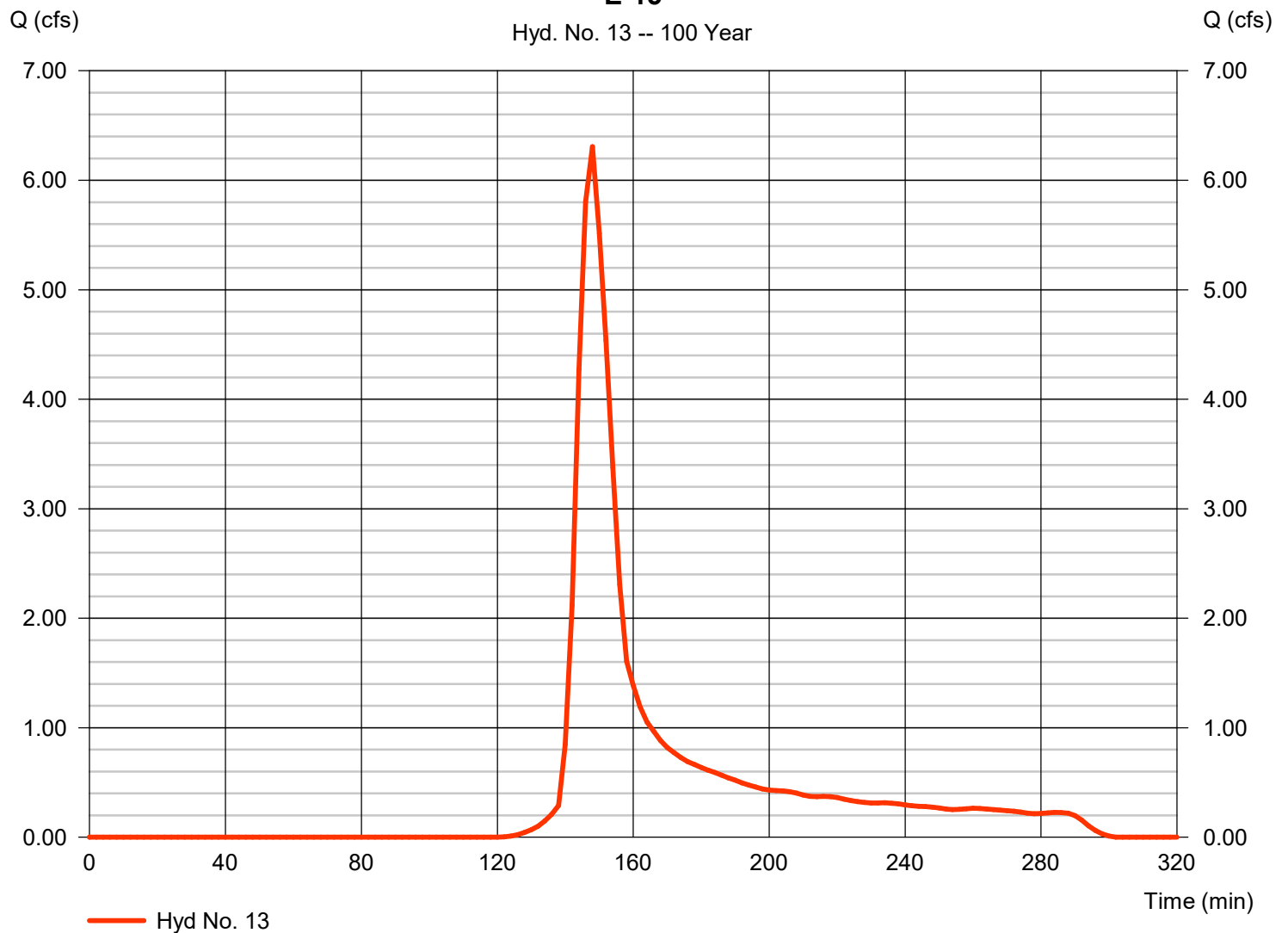
Tuesday, 04 / 7 / 2020

Hyd. No. 13

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 6.307 cfs
Storm frequency	= 100 yrs	Time to peak	= 148 min
Time interval	= 2 min	Hyd. volume	= 7,932 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-15



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

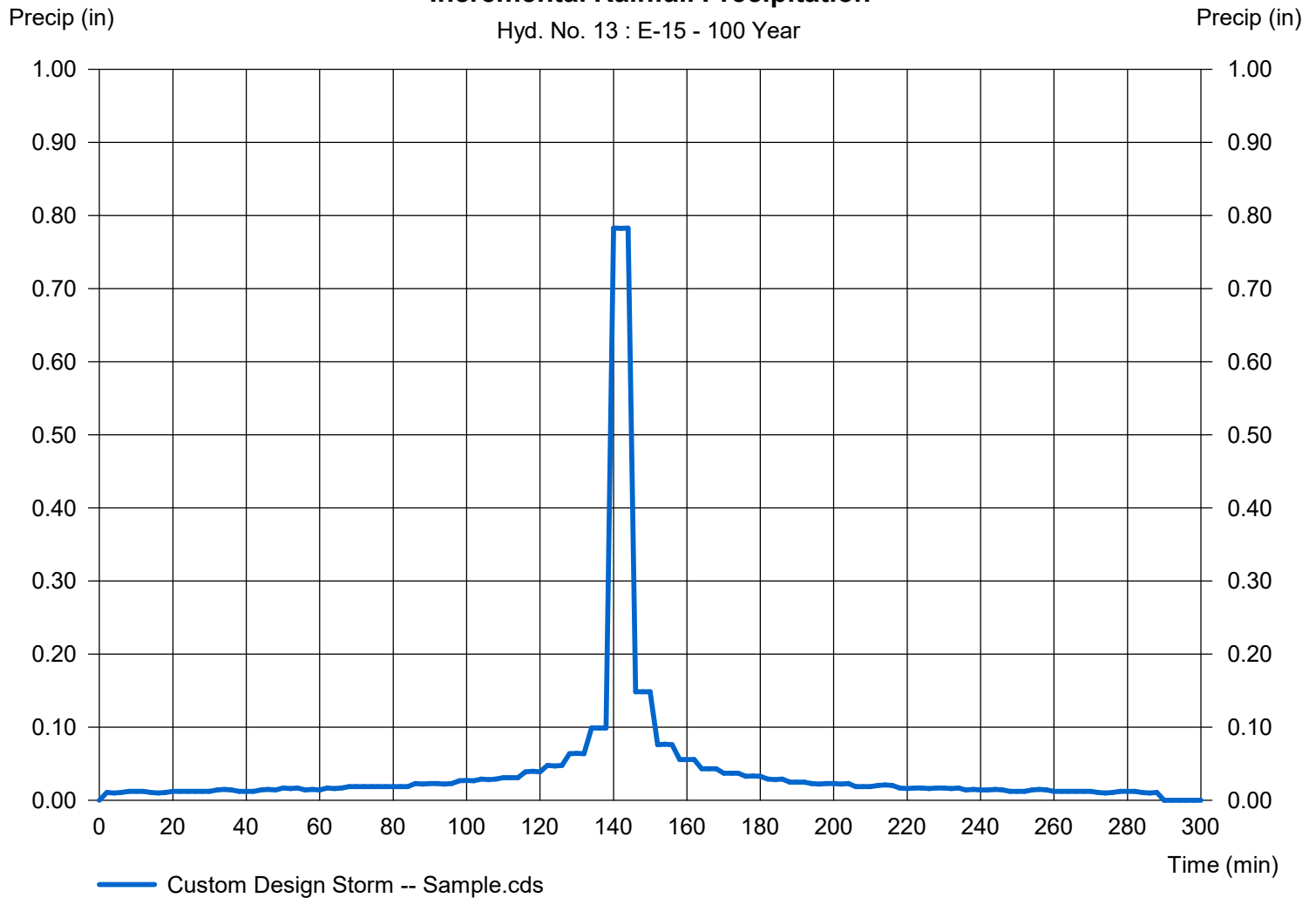
Hyd. No. 13

E-15

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : E-15 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

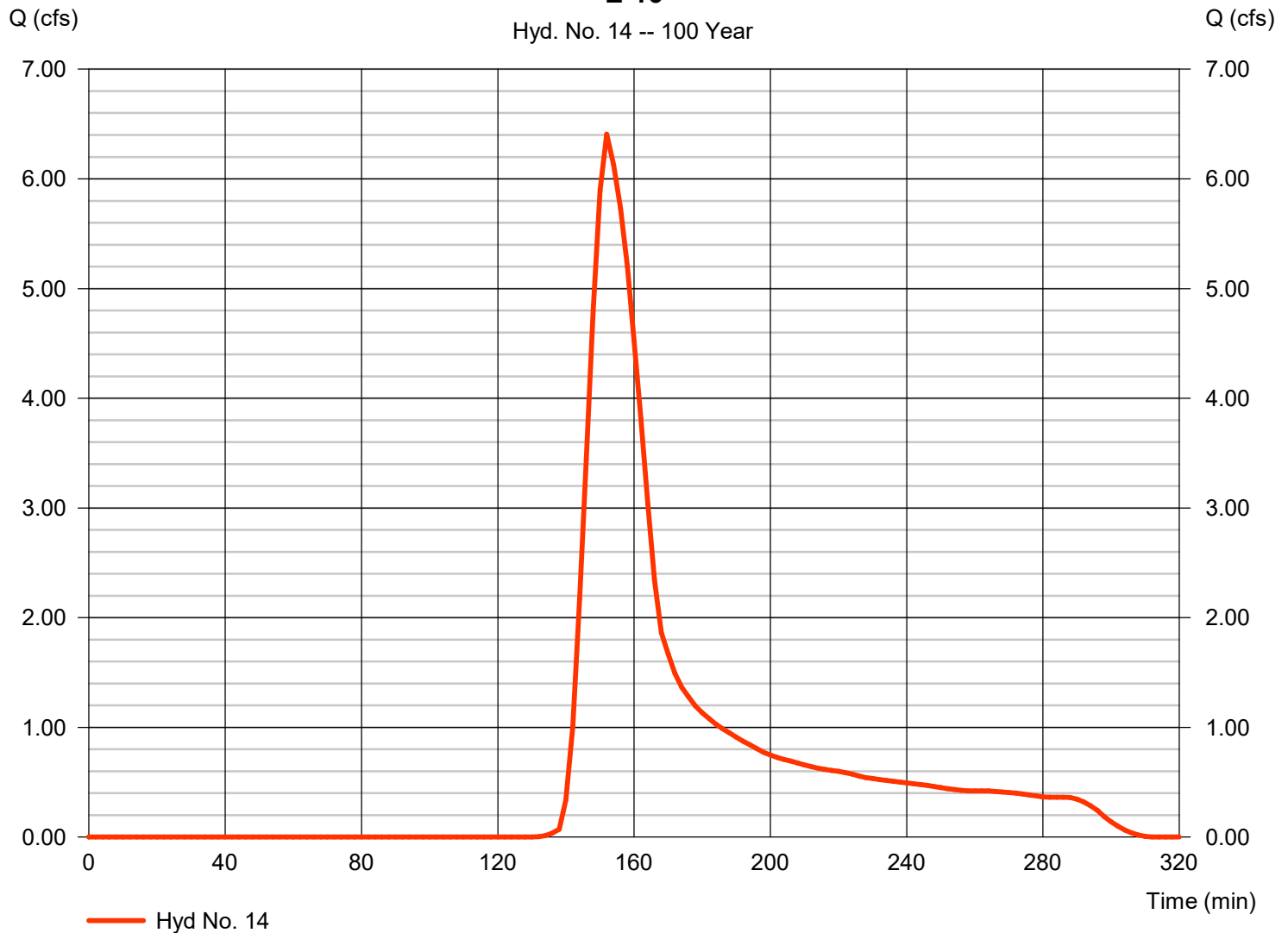
Tuesday, 04 / 7 / 2020

Hyd. No. 14

E-16

Hydrograph type	= SCS Runoff	Peak discharge	= 6.406 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 11,698 cuft
Drainage area	= 1.620 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-16



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

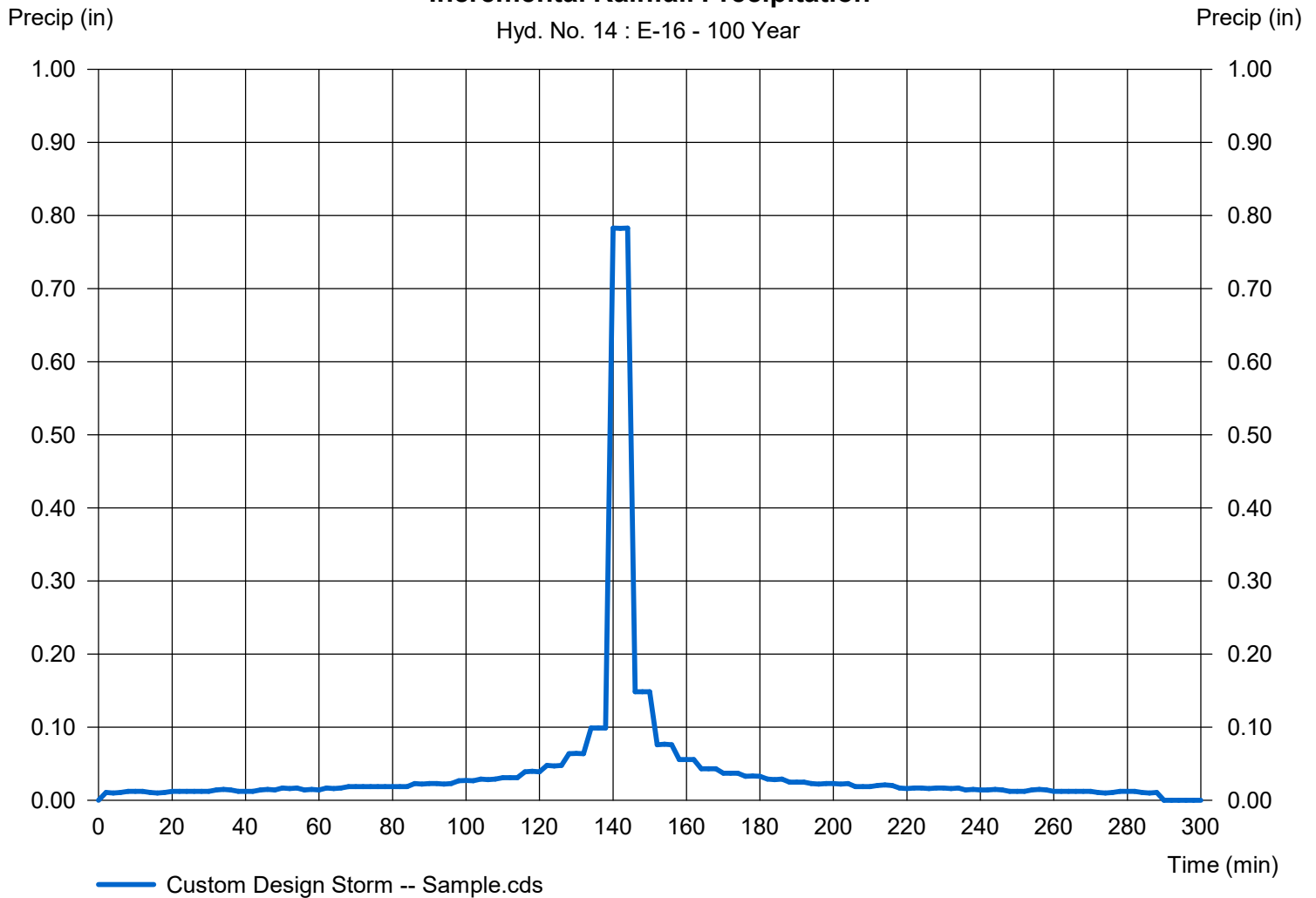
Hyd. No. 14

E-16

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 14 : E-16 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

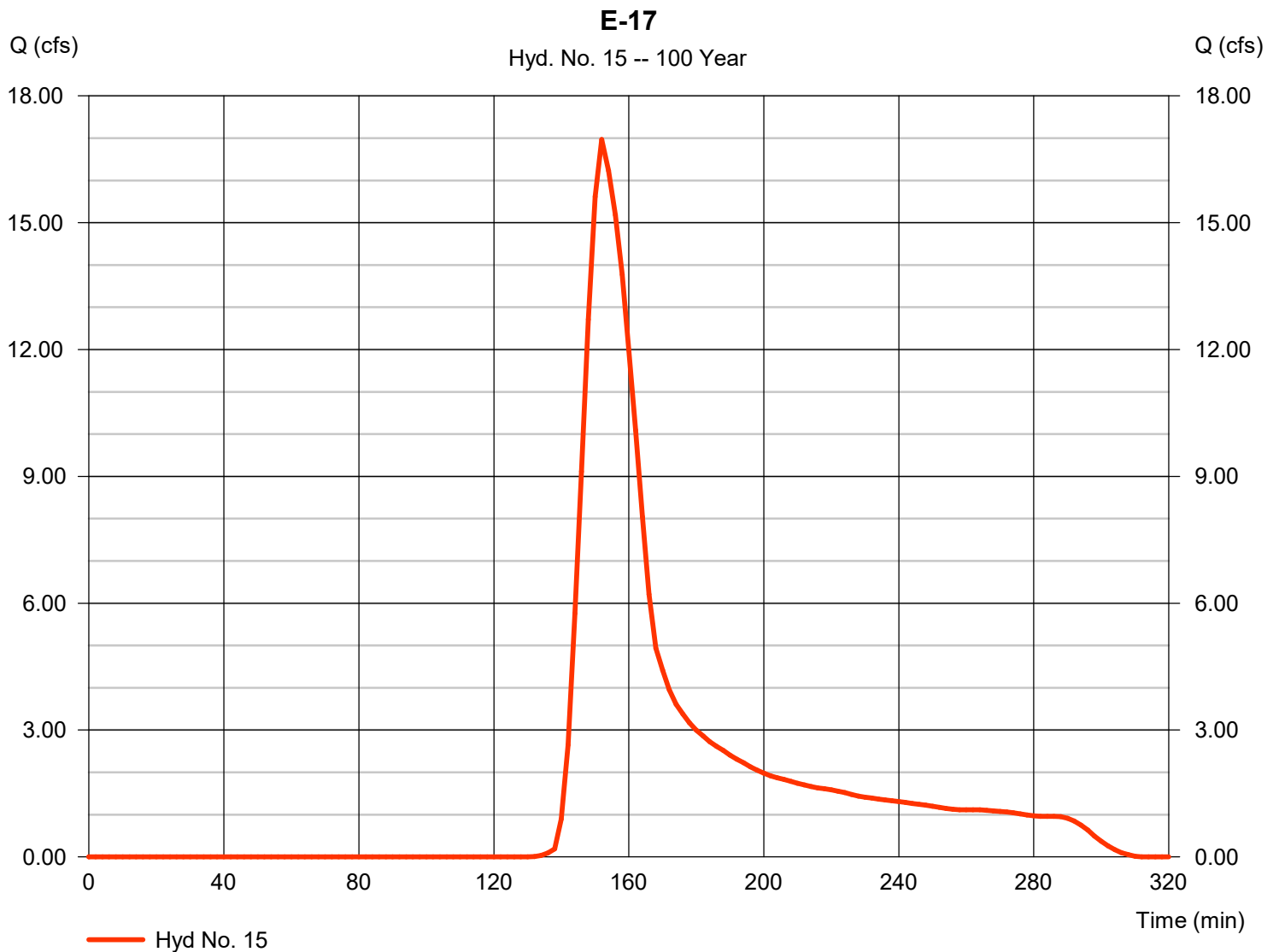
Tuesday, 04 / 7 / 2020

Hyd. No. 15

E-17

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Time interval = 2 min
Drainage area = 4.291 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 6.18 in
Storm duration = Sample.cds

Peak discharge = 16.97 cfs
Time to peak = 152 min
Hyd. volume = 30,985 cuft
Curve number = 60
Hydraulic length = 0 ft
Time of conc. (Tc) = 15.00 min
Distribution = Custom
Shape factor = 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

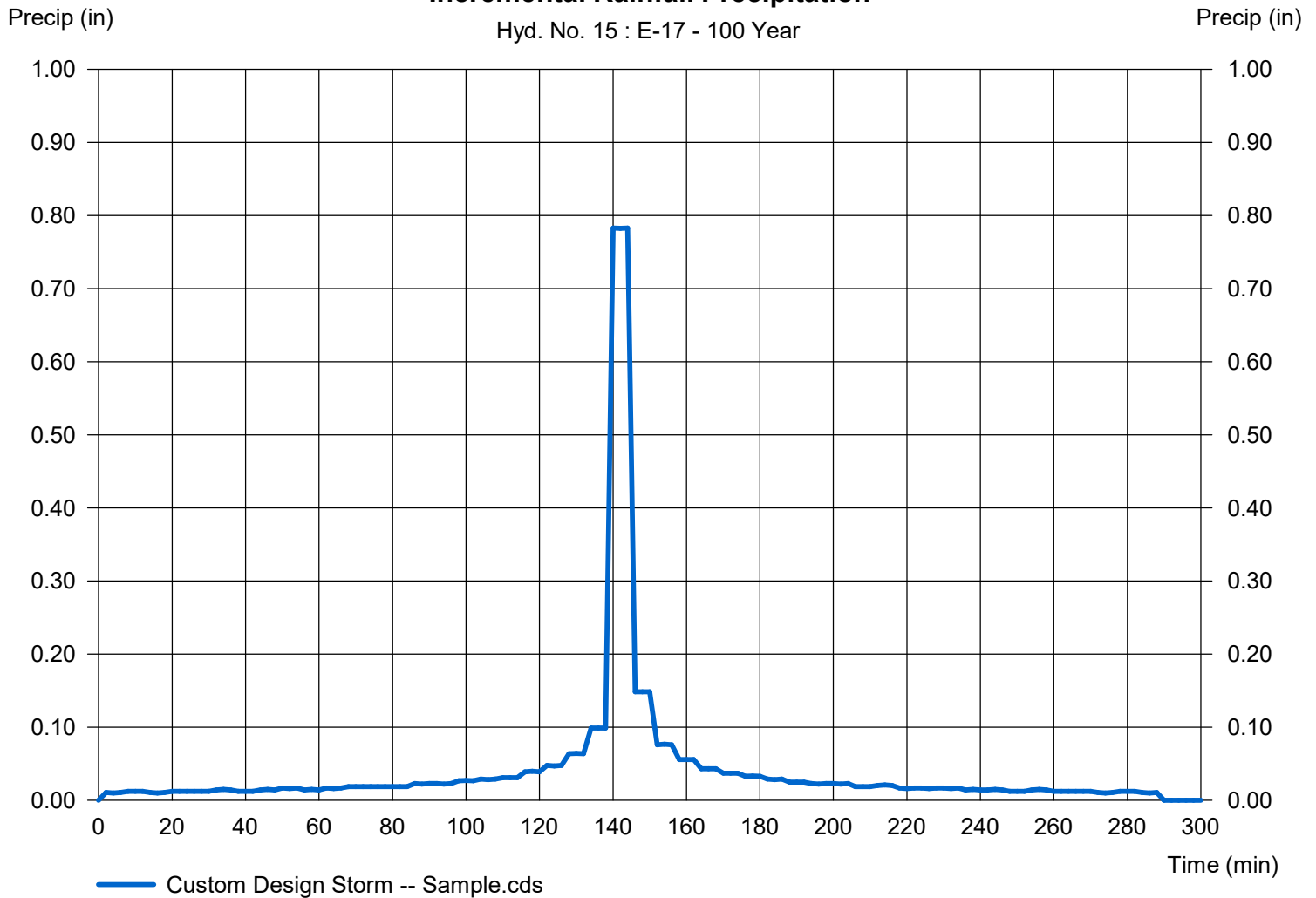
Hyd. No. 15

E-17

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : E-17 - 100 Year



Hydrograph Report

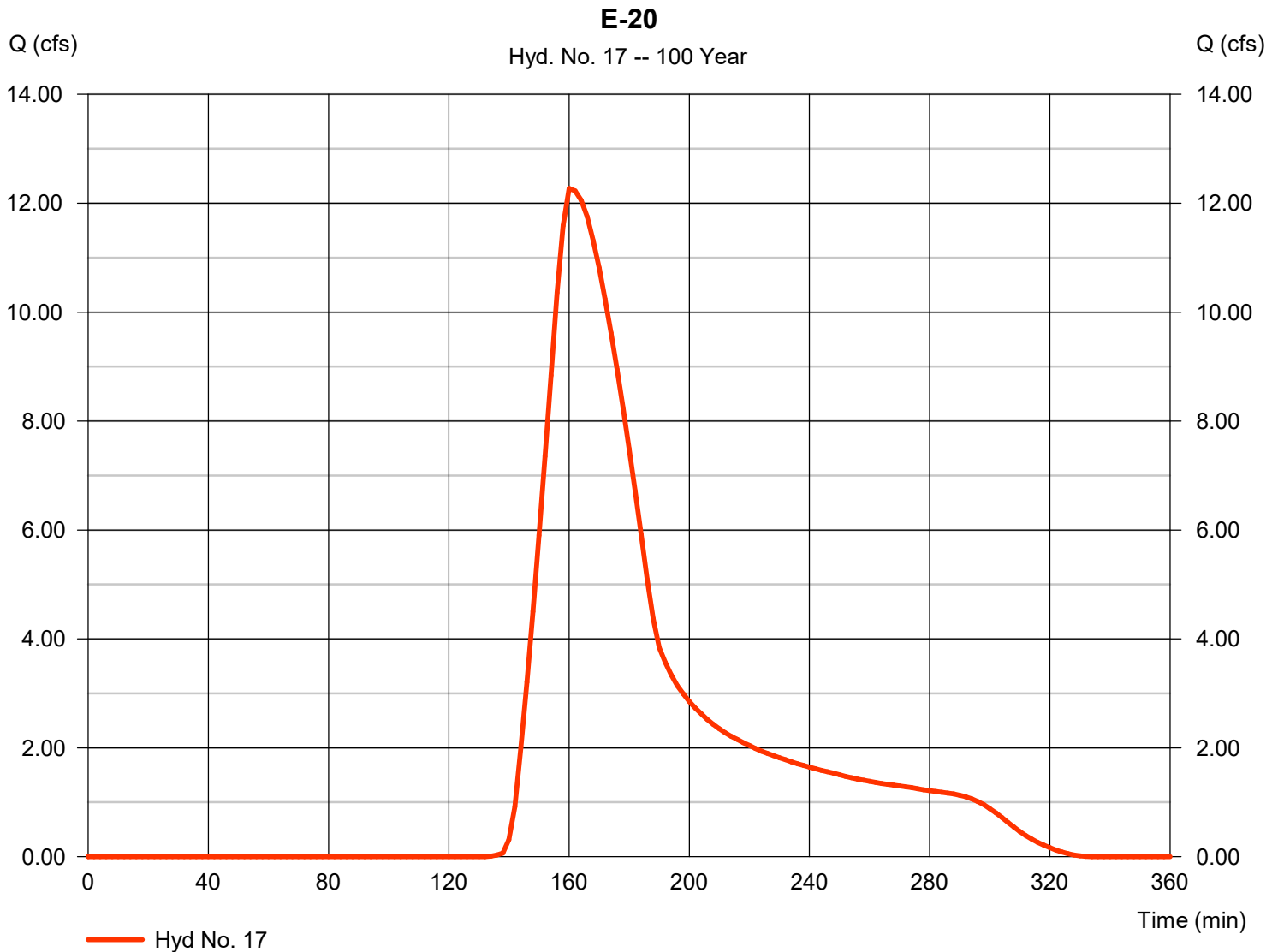
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 17

E-20

Hydrograph type	= SCS Runoff	Peak discharge	= 12.27 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 35,631 cuft
Drainage area	= 4.811 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

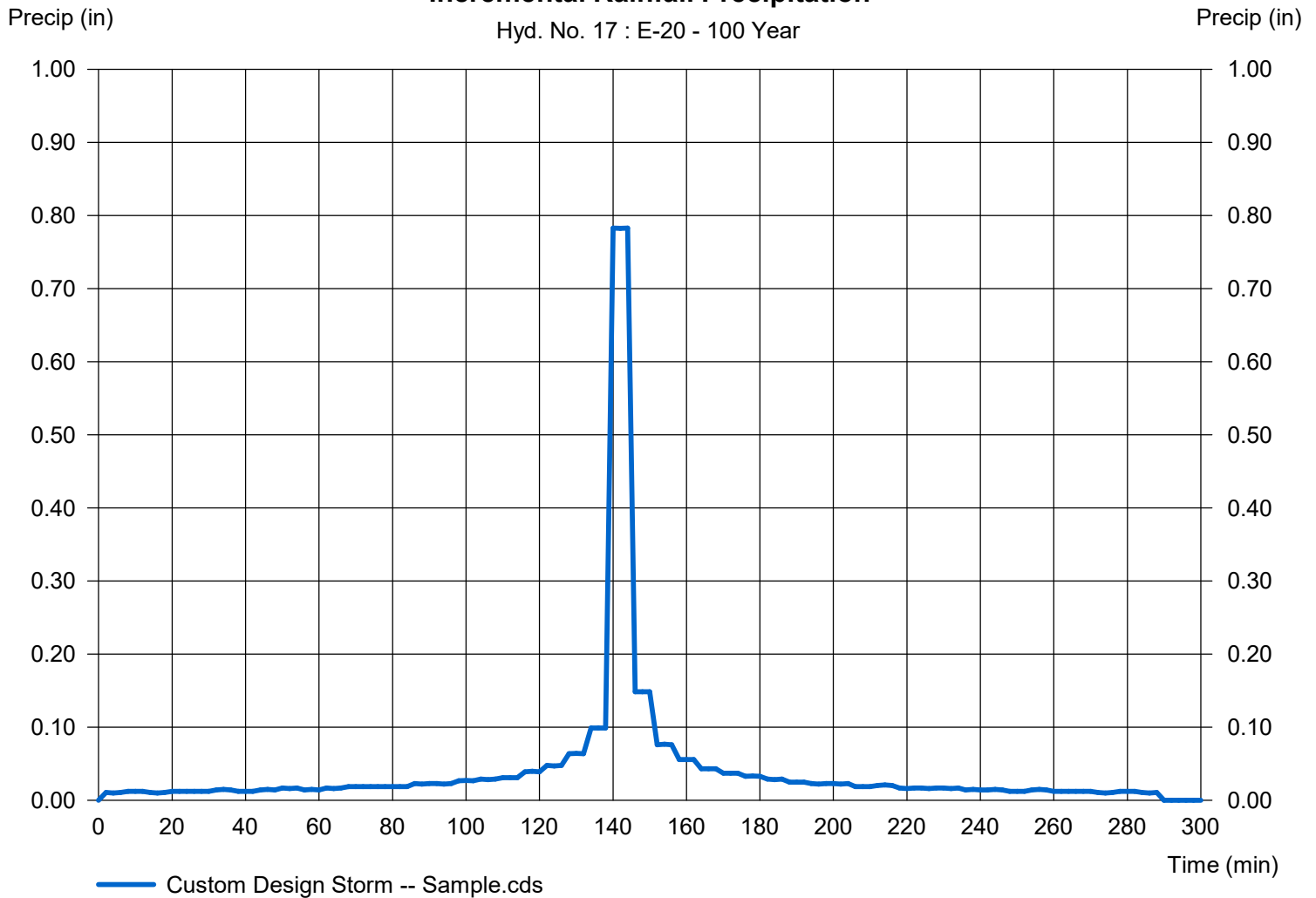
Hyd. No. 17

E-20

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 17 : E-20 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

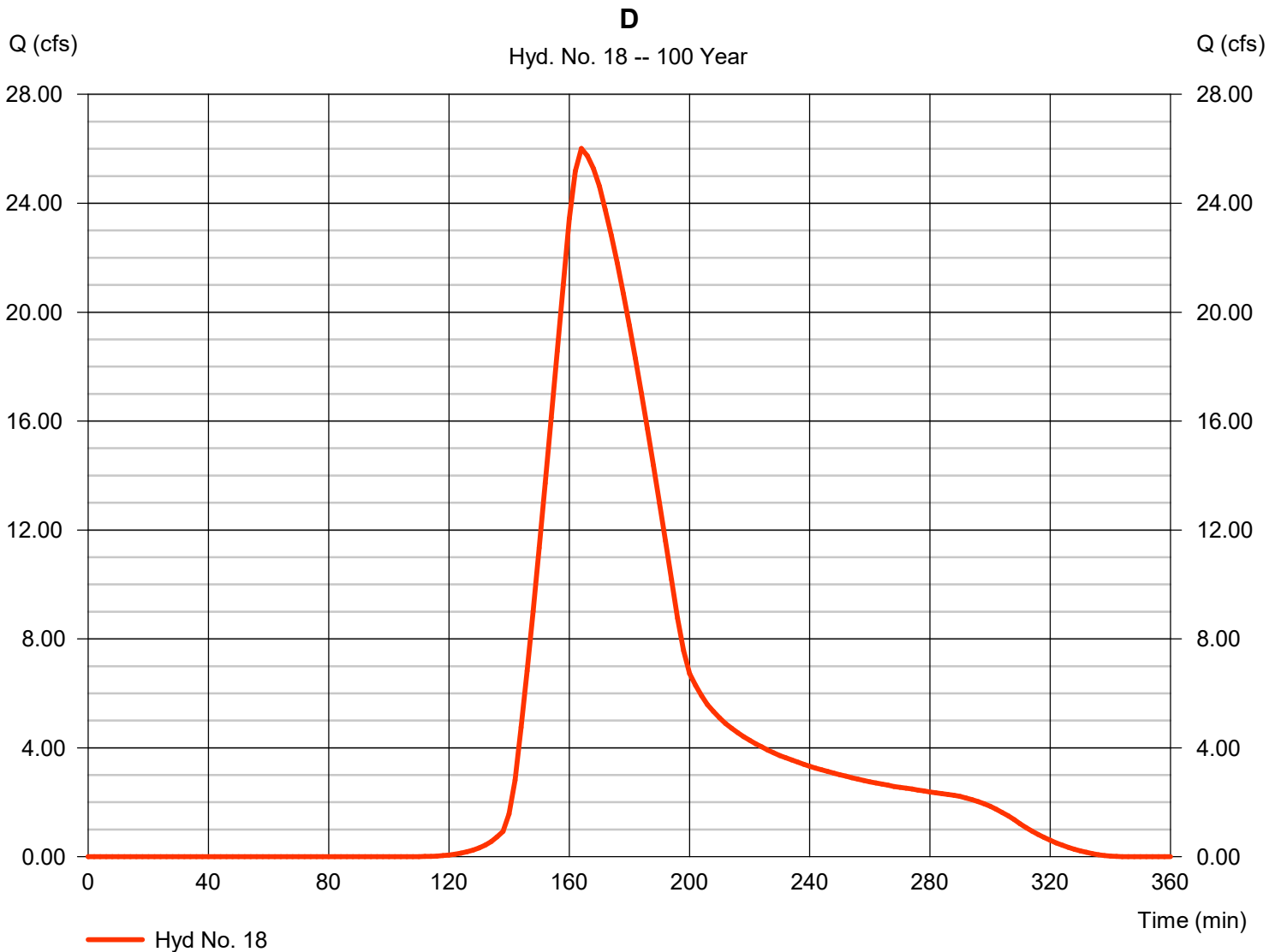
Tuesday, 04 / 7 / 2020

Hyd. No. 18

D

Hydrograph type	= SCS Runoff	Peak discharge	= 26.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 80,424 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

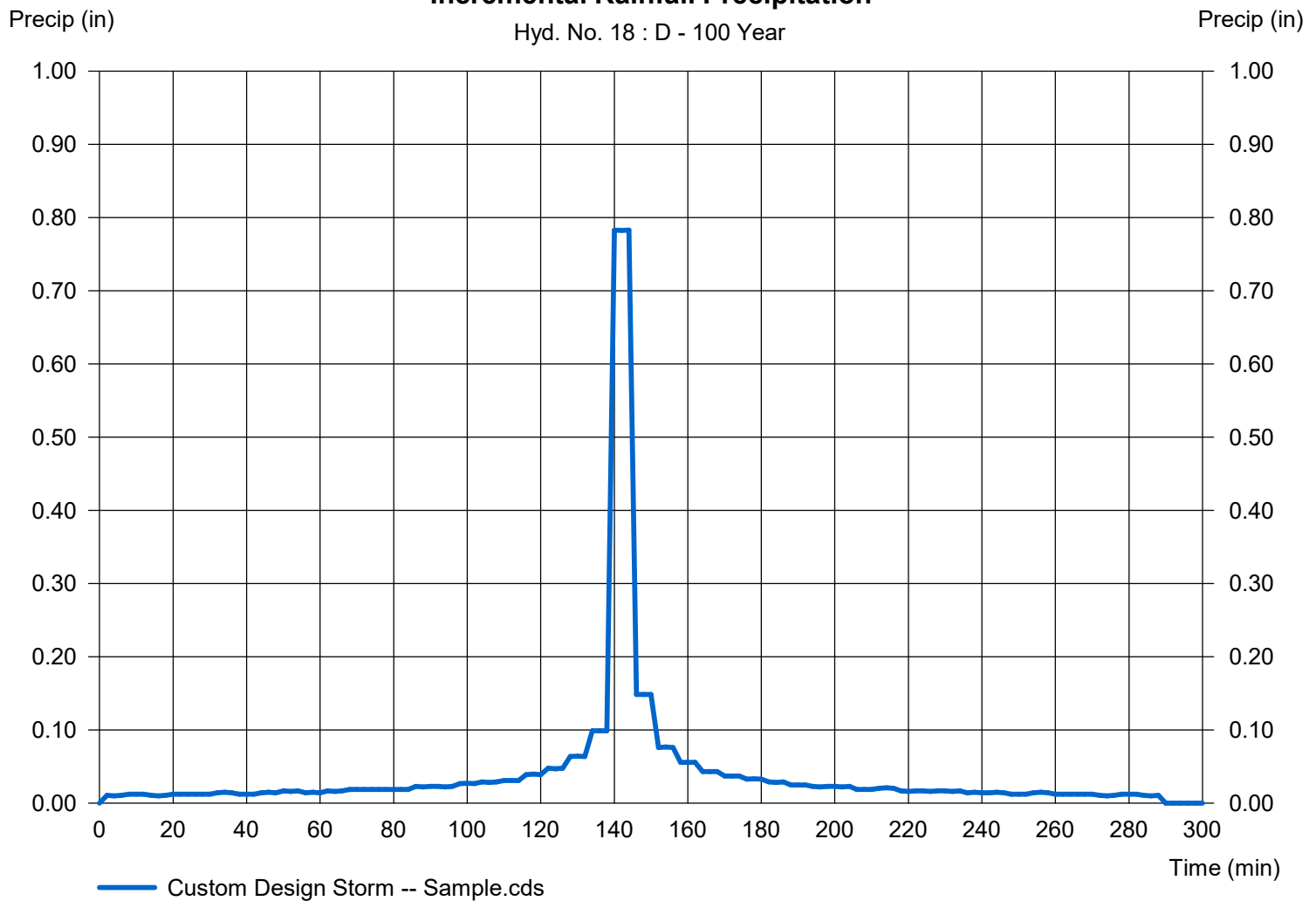
Hyd. No. 18

D

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 18 : D - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

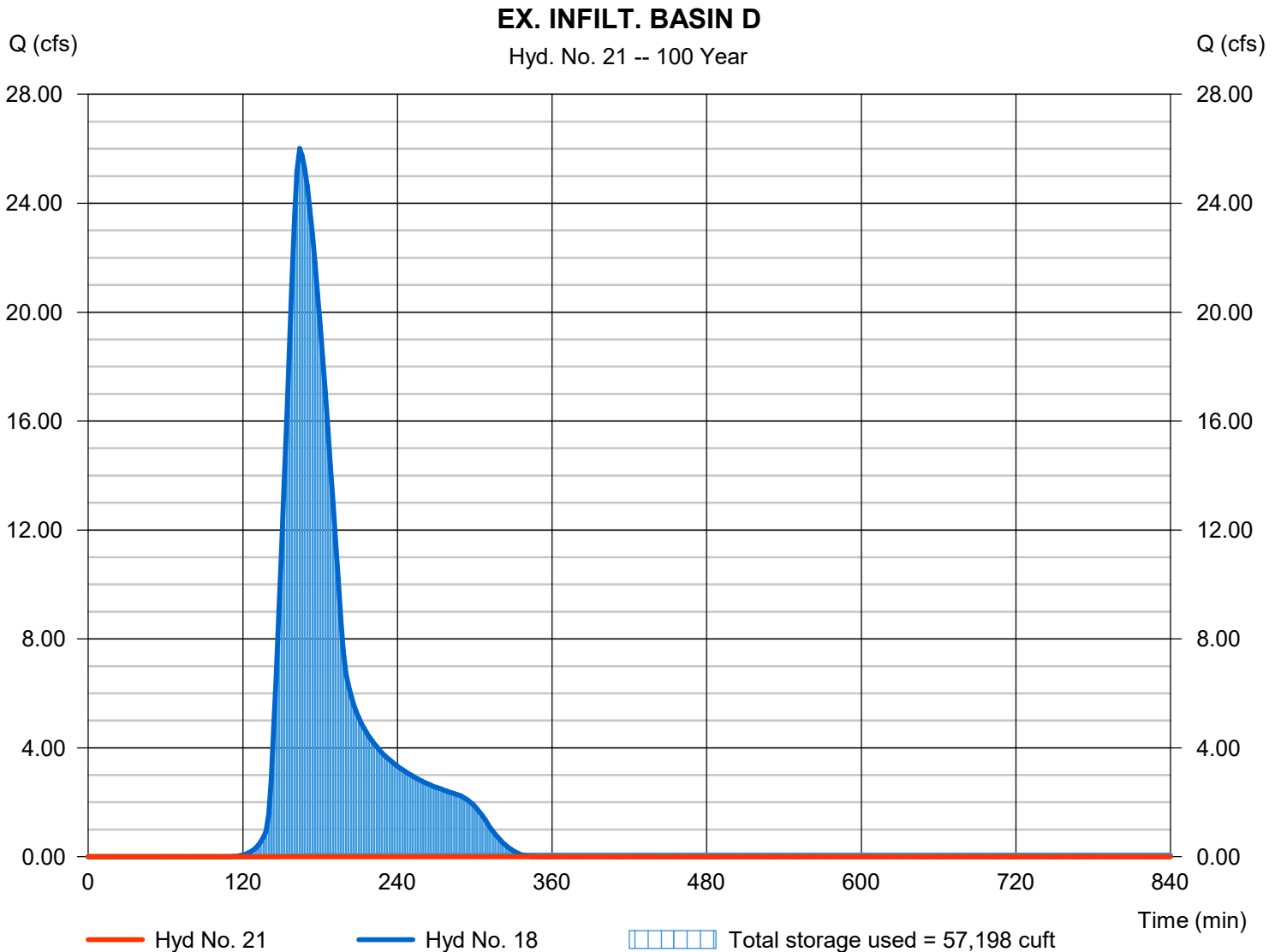
Tuesday, 04 / 7 / 2020

Hyd. No. 21

EX. INFILT. BASIN D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 778 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 18 - D	Max. Elevation	= 993.77 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 57,198 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

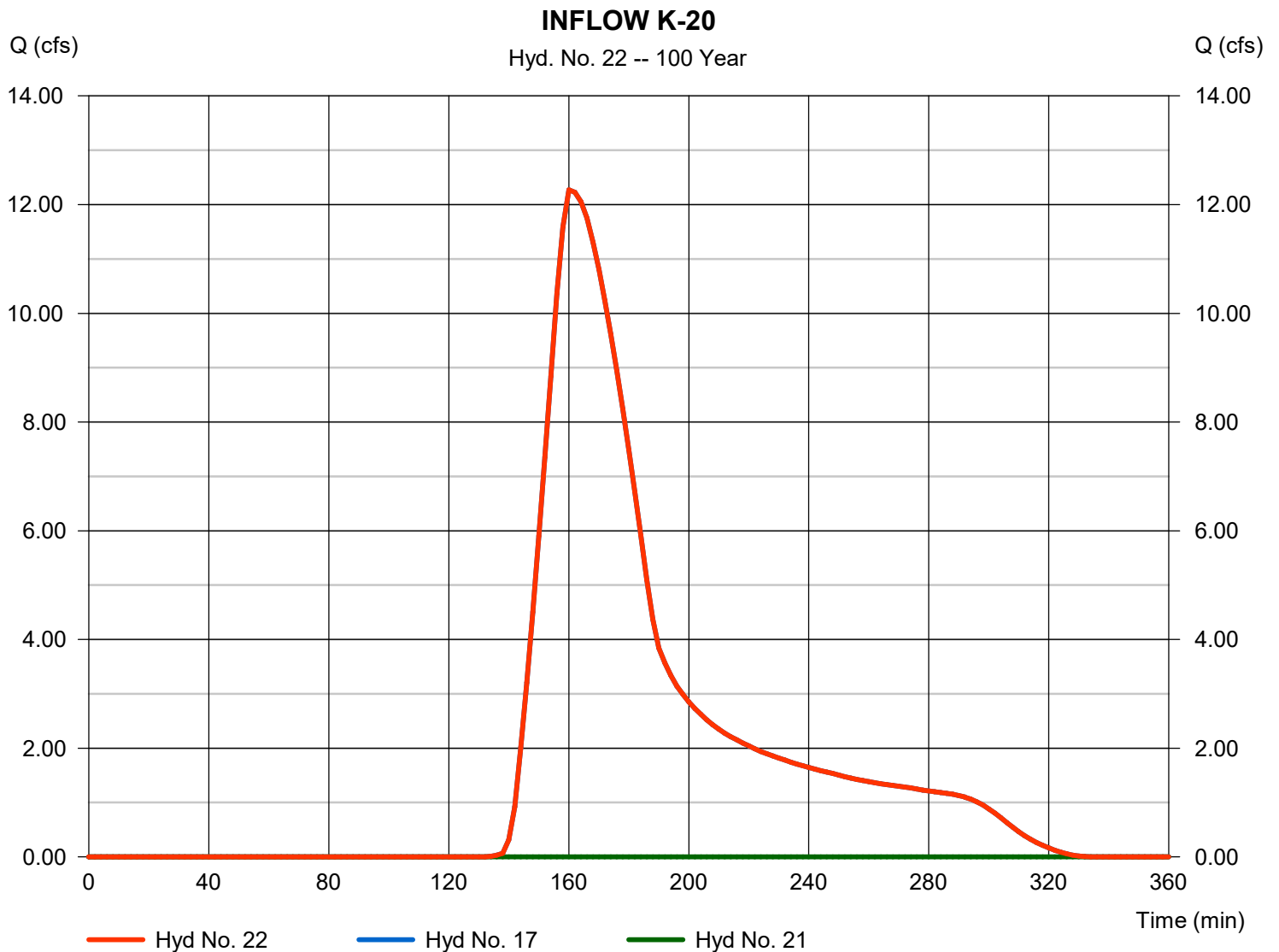
Tuesday, 04 / 7 / 2020

Hyd. No. 22

INFLOW K-20

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 17, 21

Peak discharge = 12.27 cfs
Time to peak = 160 min
Hyd. volume = 35,631 cuft
Contrib. drain. area = 4.811 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

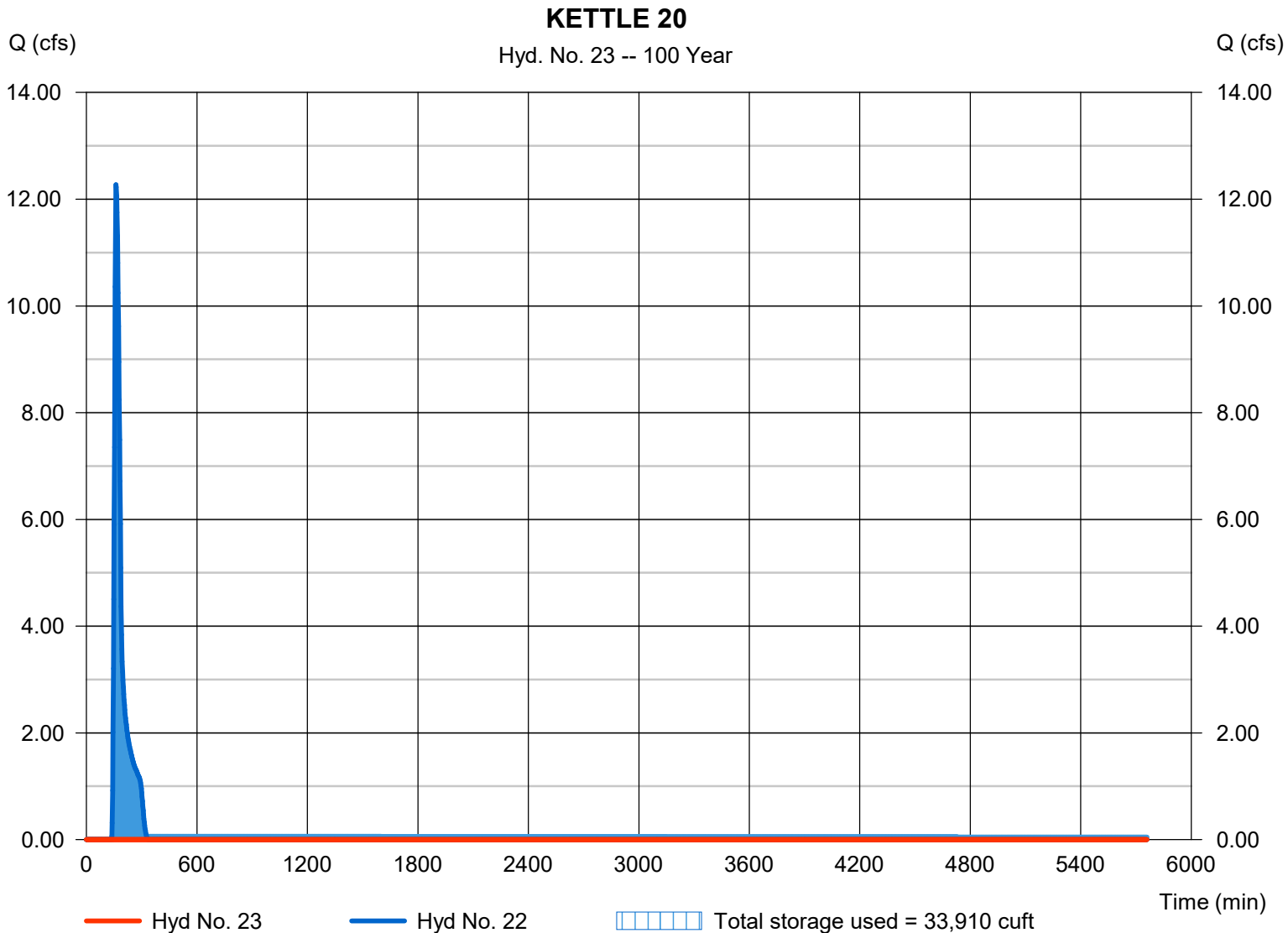
Tuesday, 04 / 7 / 2020

Hyd. No. 23

KETTLE 20

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 2492 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 22 - INFLOW K-20	Max. Elevation	= 993.60 ft
Reservoir name	= K-20	Max. Storage	= 33,910 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

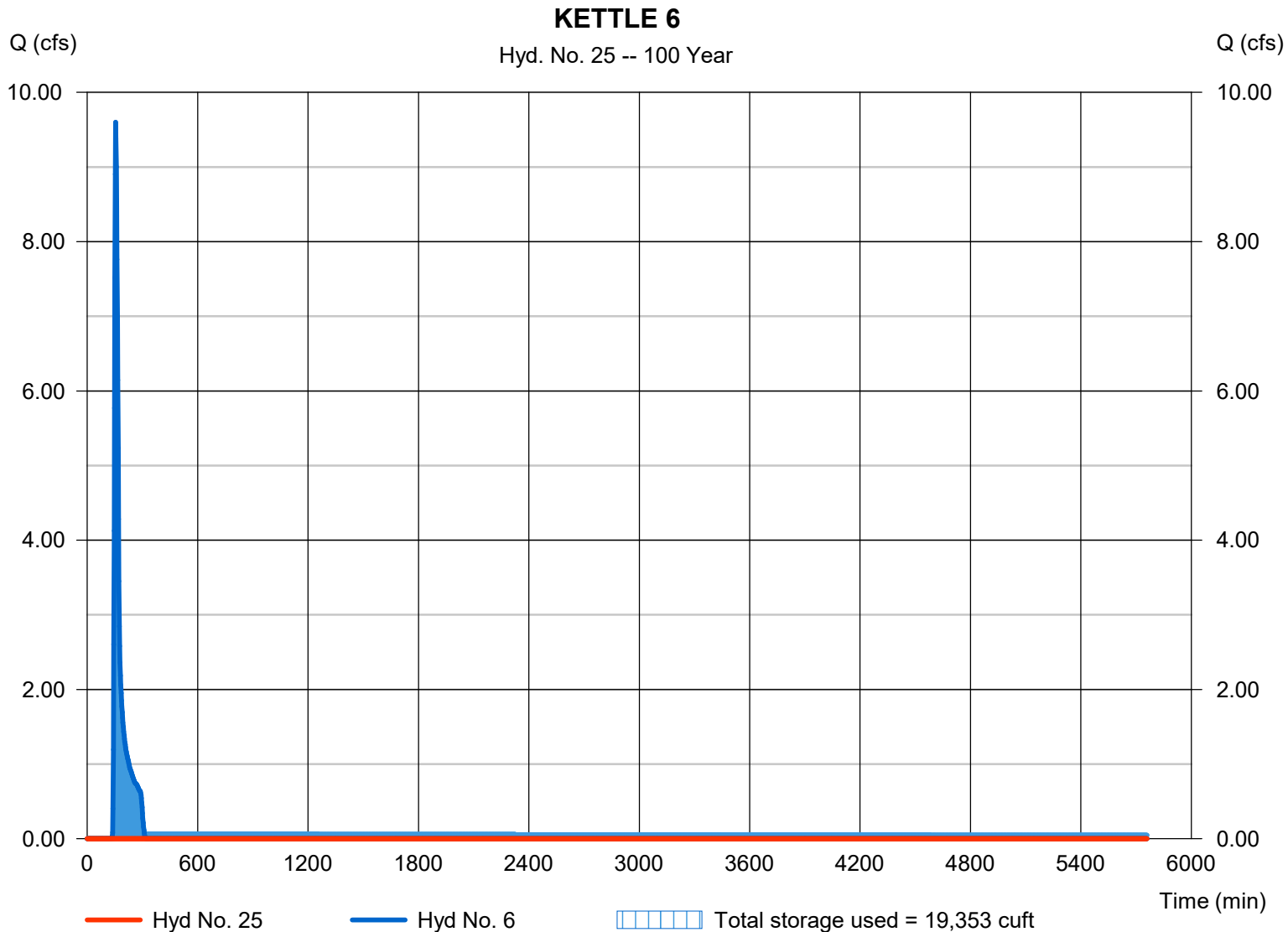
Tuesday, 04 / 7 / 2020

Hyd. No. 25

KETTLE 6

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 894 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 6 - E-6	Max. Elevation	= 1012.10 ft
Reservoir name	= K-6	Max. Storage	= 19,353 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

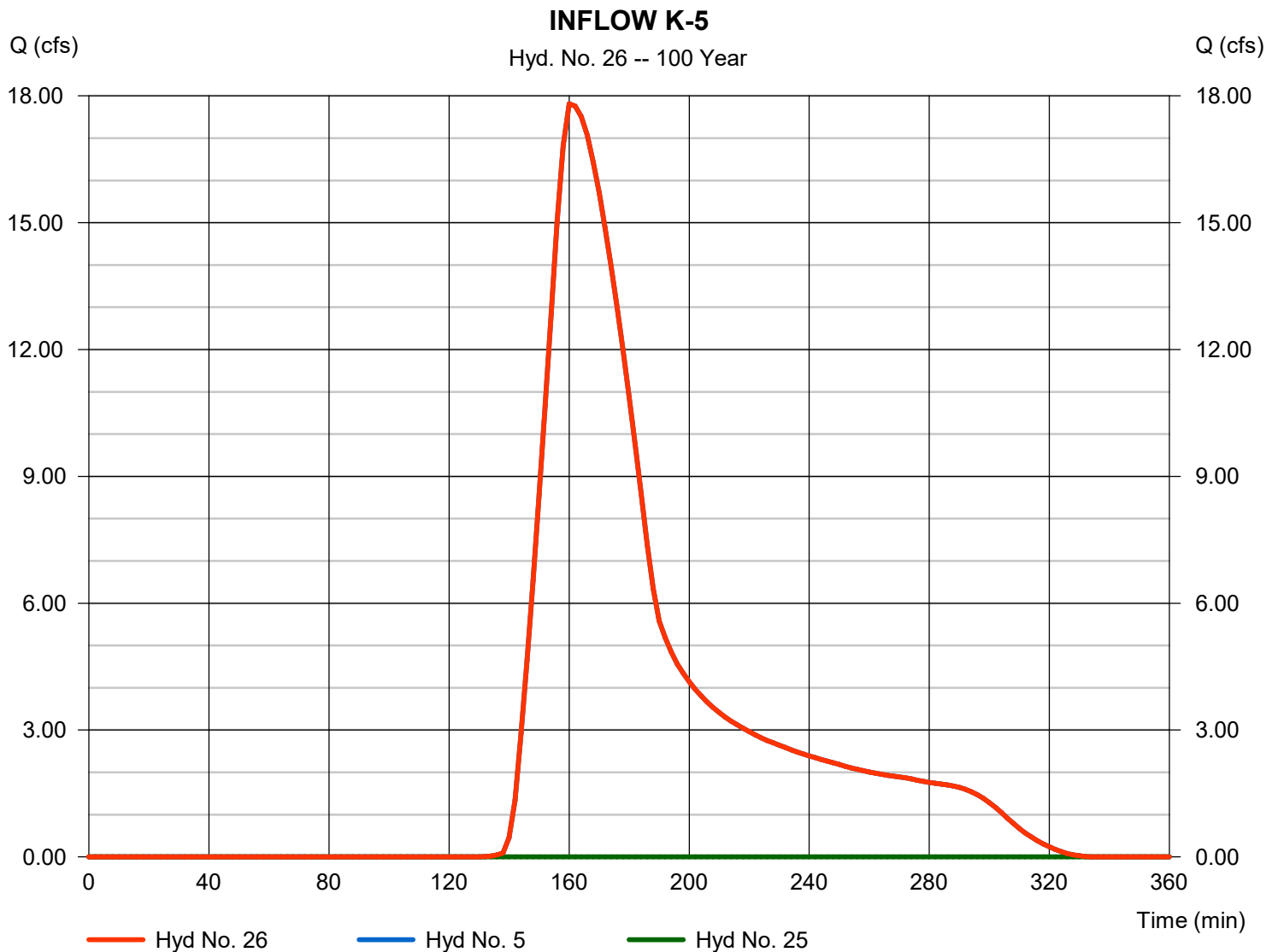
Tuesday, 04 / 7 / 2020

Hyd. No. 26

INFLOW K-5

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 5, 25

Peak discharge = 17.82 cfs
Time to peak = 160 min
Hyd. volume = 51,746 cuft
Contrib. drain. area = 6.987 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

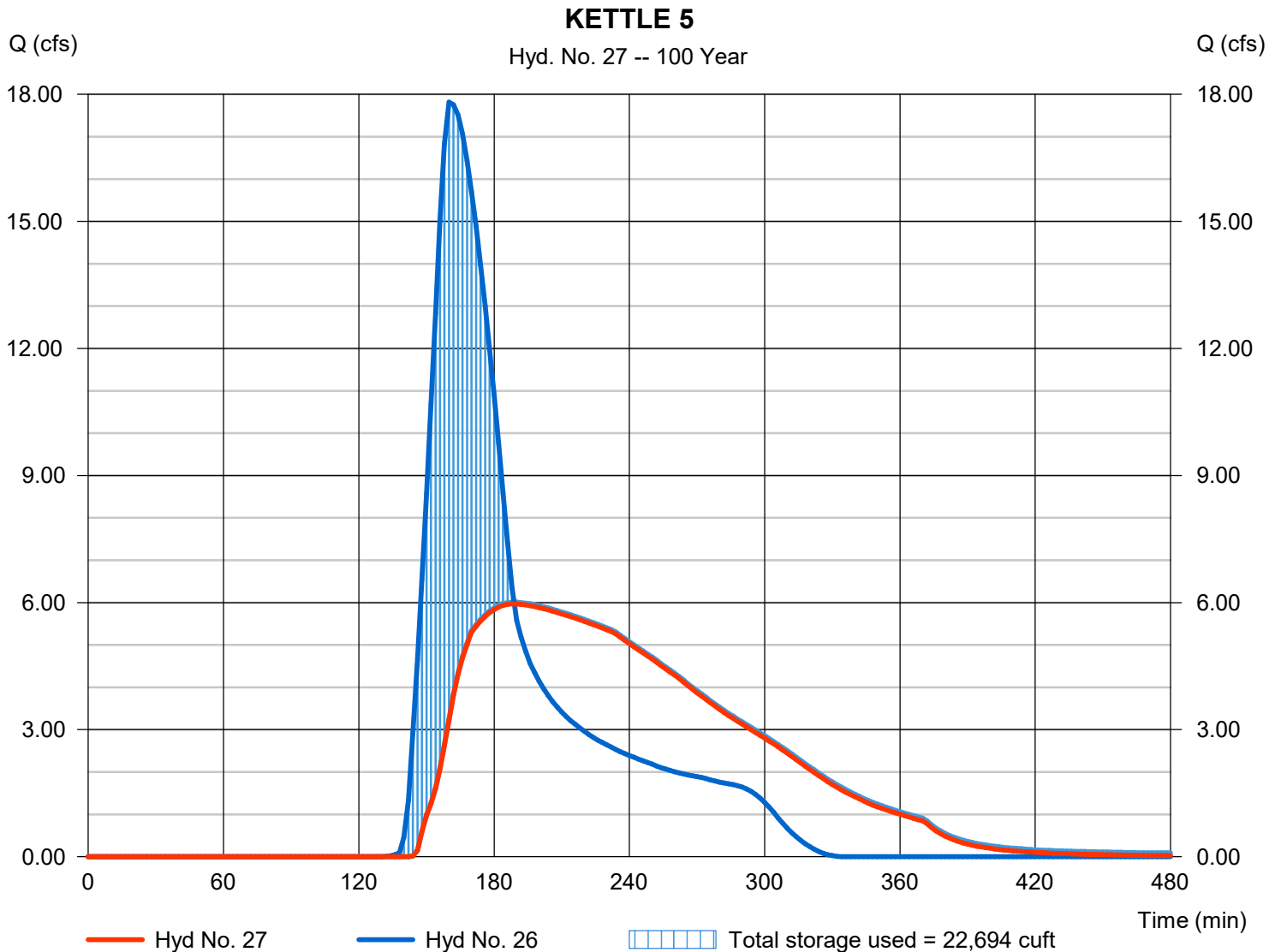
Tuesday, 04 / 7 / 2020

Hyd. No. 27

KETTLE 5

Hydrograph type	= Reservoir	Peak discharge	= 5.970 cfs
Storm frequency	= 100 yrs	Time to peak	= 188 min
Time interval	= 2 min	Hyd. volume	= 49,936 cuft
Inflow hyd. No.	= 26 - INFLOW K-5	Max. Elevation	= 984.22 ft
Reservoir name	= K-5	Max. Storage	= 22,694 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

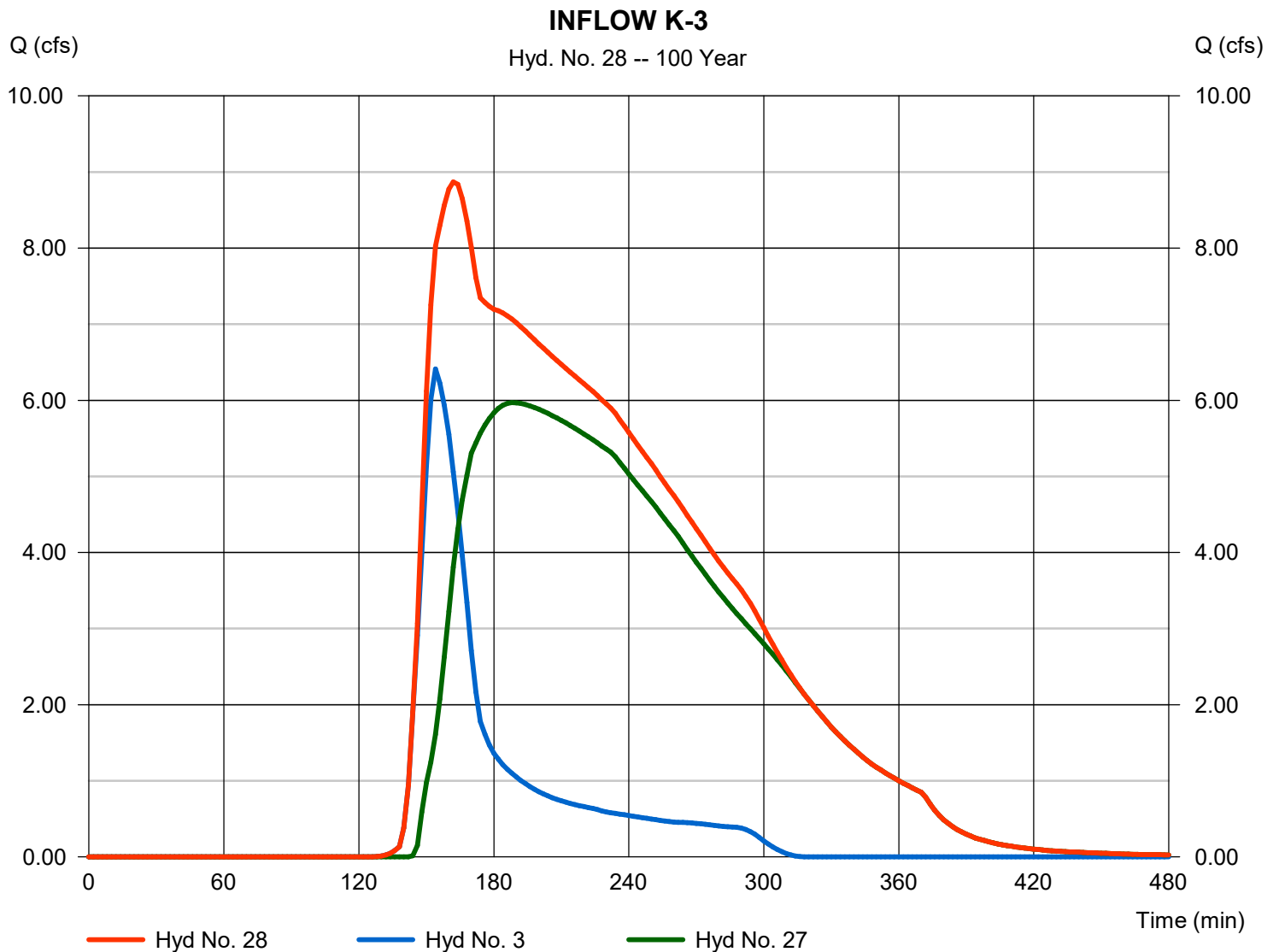
Tuesday, 04 / 7 / 2020

Hyd. No. 28

INFLOW K-3

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 3, 27

Peak discharge = 8.870 cfs
Time to peak = 162 min
Hyd. volume = 63,212 cuft
Contrib. drain. area = 1.588 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

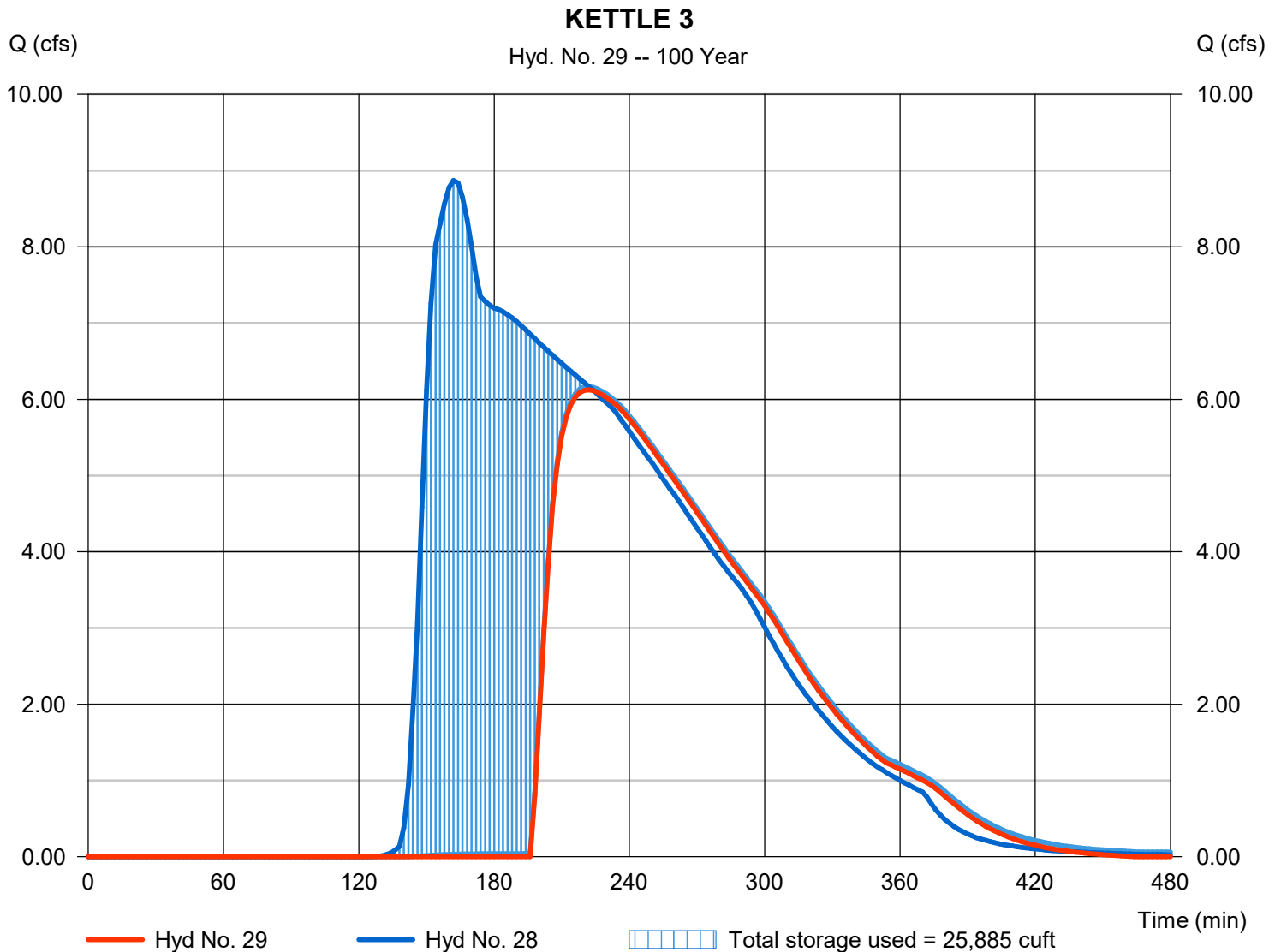
Tuesday, 04 / 7 / 2020

Hyd. No. 29

KETTLE 3

Hydrograph type	= Reservoir	Peak discharge	= 6.123 cfs
Storm frequency	= 100 yrs	Time to peak	= 222 min
Time interval	= 2 min	Hyd. volume	= 39,279 cuft
Inflow hyd. No.	= 28 - INFLOW K-3	Max. Elevation	= 976.29 ft
Reservoir name	= K-3	Max. Storage	= 25,885 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

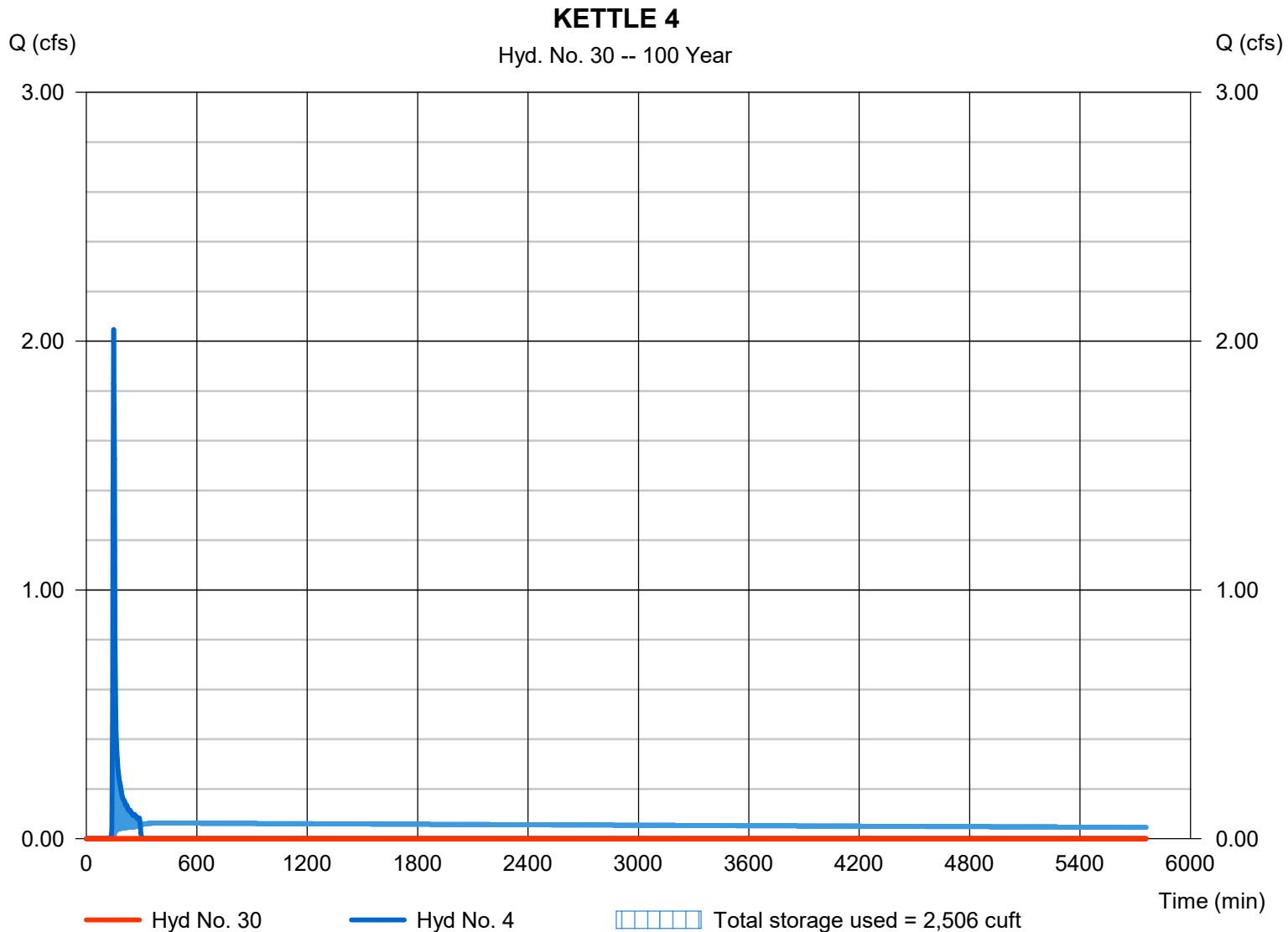
Tuesday, 04 / 7 / 2020

Hyd. No. 30

KETTLE 4

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 210 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 4 - E-4	Max. Elevation	= 1008.13 ft
Reservoir name	= K-4	Max. Storage	= 2,506 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

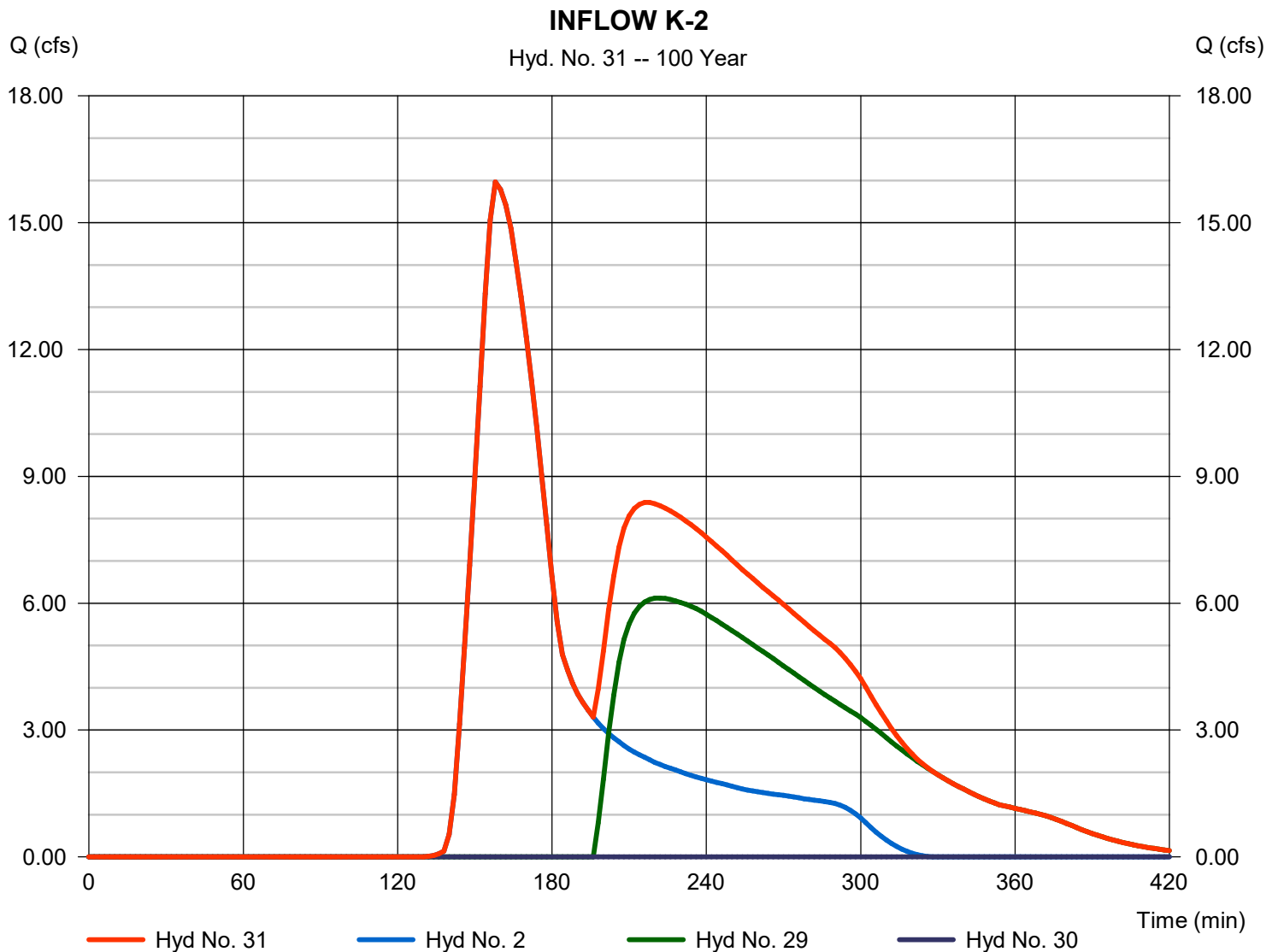
Tuesday, 04 / 7 / 2020

Hyd. No. 31

INFLOW K-2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 2, 29, 30

Peak discharge = 15.97 cfs
Time to peak = 158 min
Hyd. volume = 80,569 cuft
Contrib. drain. area = 5.433 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

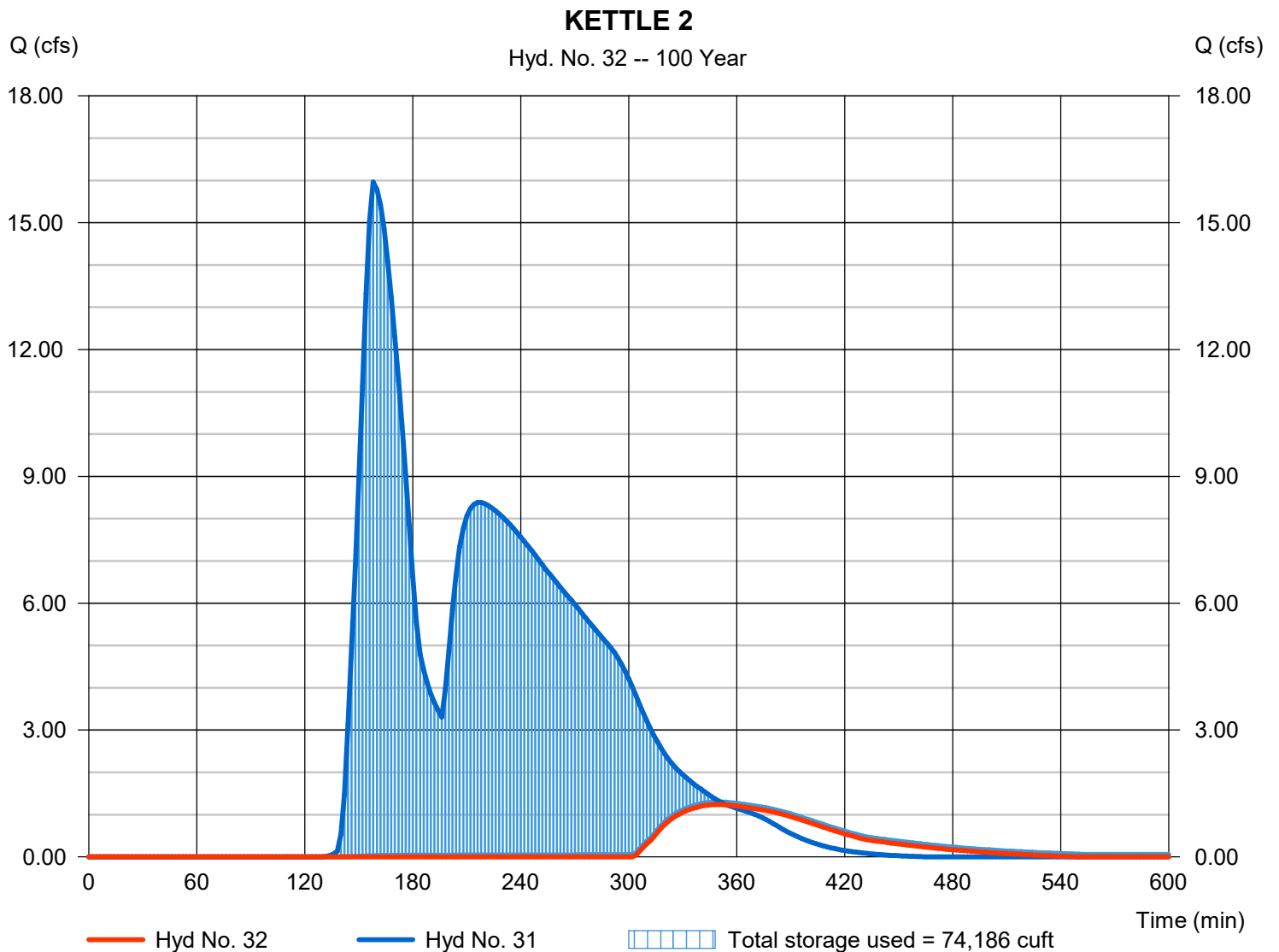
Tuesday, 04 / 7 / 2020

Hyd. No. 32

KETTLE 2

Hydrograph type	= Reservoir	Peak discharge	= 1.238 cfs
Storm frequency	= 100 yrs	Time to peak	= 350 min
Time interval	= 2 min	Hyd. volume	= 7,868 cuft
Inflow hyd. No.	= 31 - INFLOW K-2	Max. Elevation	= 973.91 ft
Reservoir name	= K-2	Max. Storage	= 74,186 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

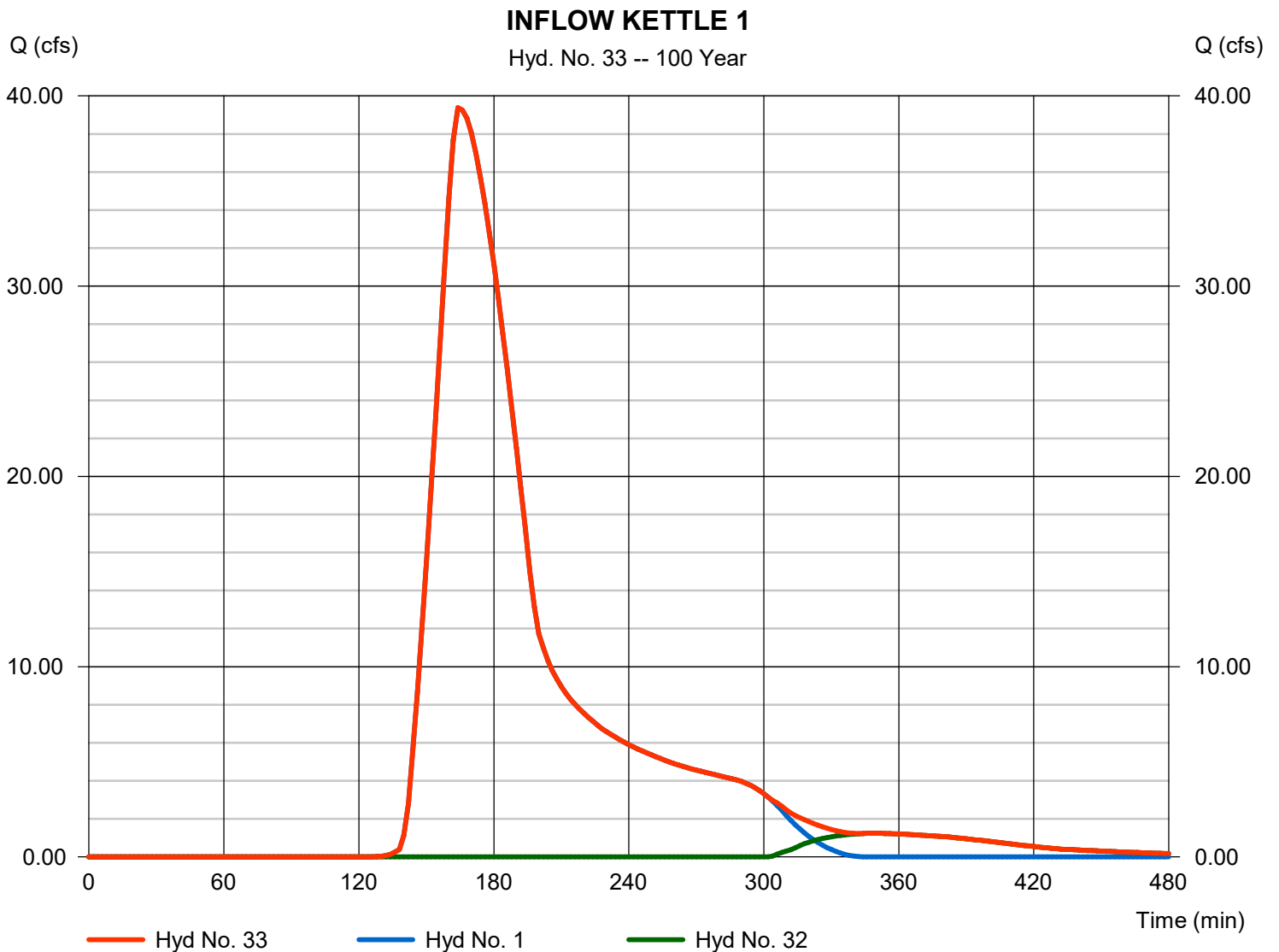
Tuesday, 04 / 7 / 2020

Hyd. No. 33

INFLOW KETTLE 1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 1, 32

Peak discharge = 39.37 cfs
Time to peak = 164 min
Hyd. volume = 135,805 cuft
Contrib. drain. area = 15.479 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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Hyd. No. 34

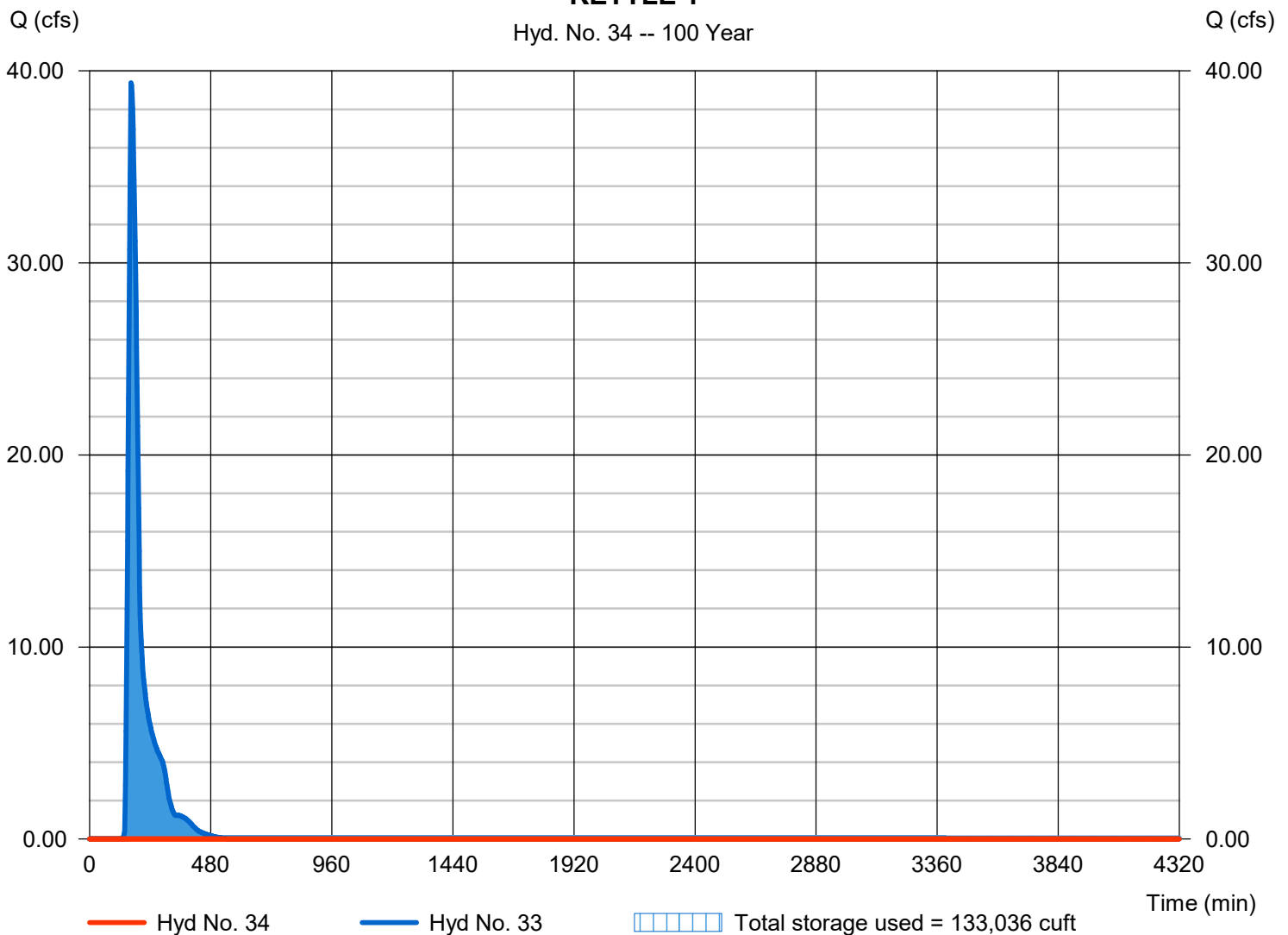
KETTLE 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 242 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 33 - INFLOW KETTLE 1	Max. Elevation	= 953.25 ft
Reservoir name	= K-1	Max. Storage	= 133,036 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

KETTLE 1

Hyd. No. 34 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

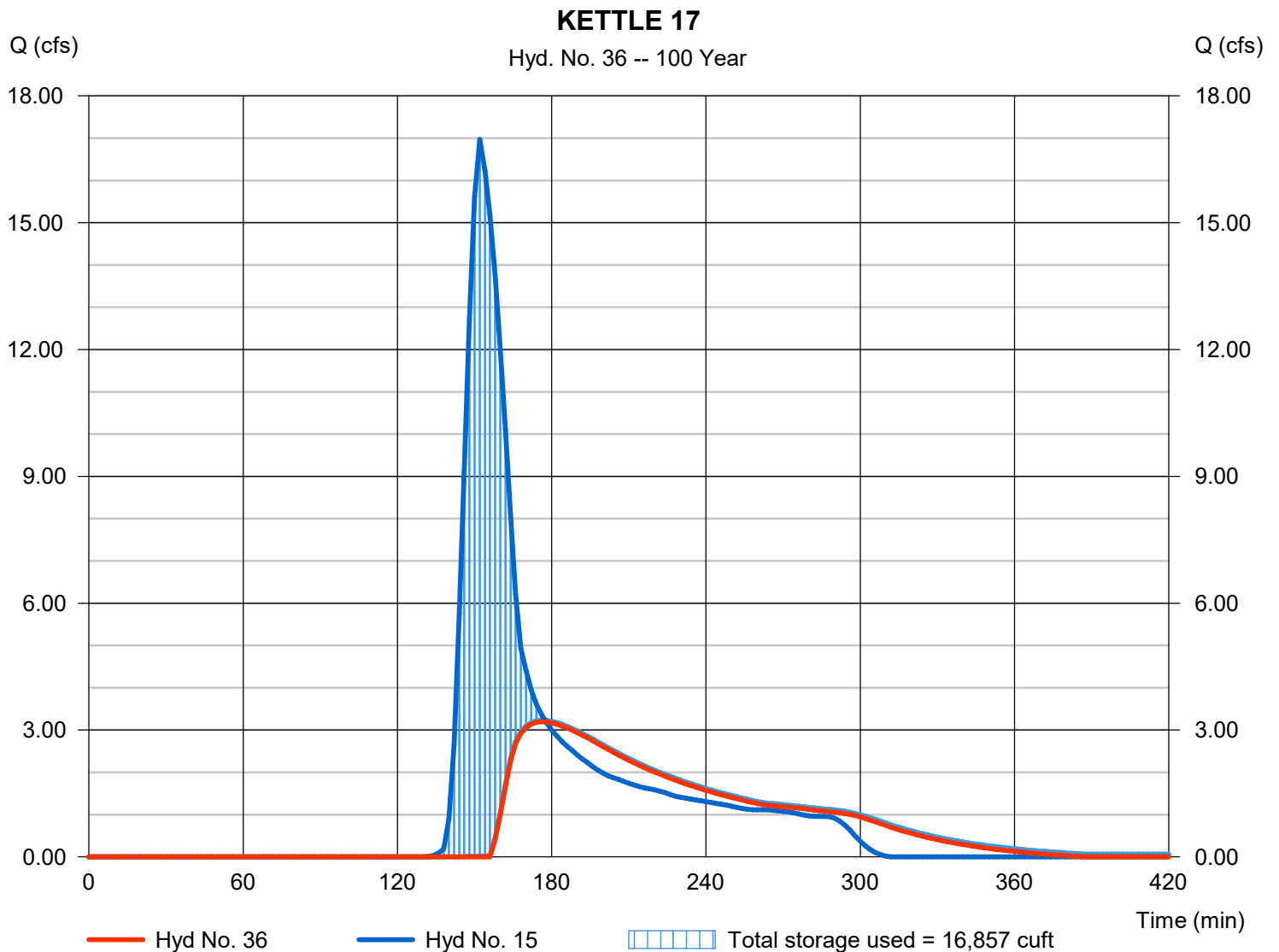
Tuesday, 04 / 7 / 2020

Hyd. No. 36

KETTLE 17

Hydrograph type	= Reservoir	Peak discharge	= 3.197 cfs
Storm frequency	= 100 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 17,905 cuft
Inflow hyd. No.	= 15 - E-17	Max. Elevation	= 1012.19 ft
Reservoir name	= K-17	Max. Storage	= 16,857 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

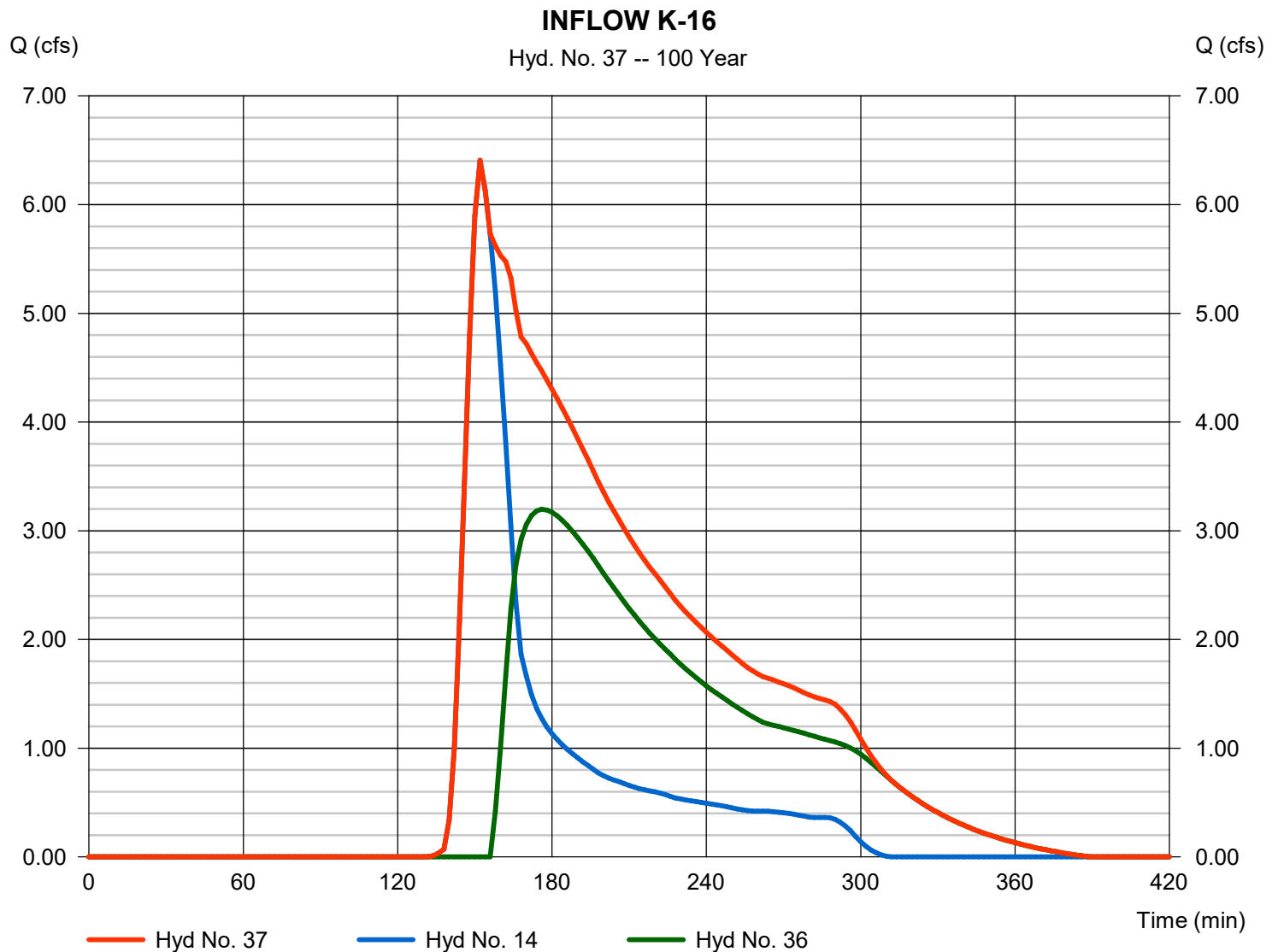
Tuesday, 04 / 7 / 2020

Hyd. No. 37

INFLOW K-16

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 14, 36

Peak discharge = 6.406 cfs
Time to peak = 152 min
Hyd. volume = 29,603 cuft
Contrib. drain. area = 1.620 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

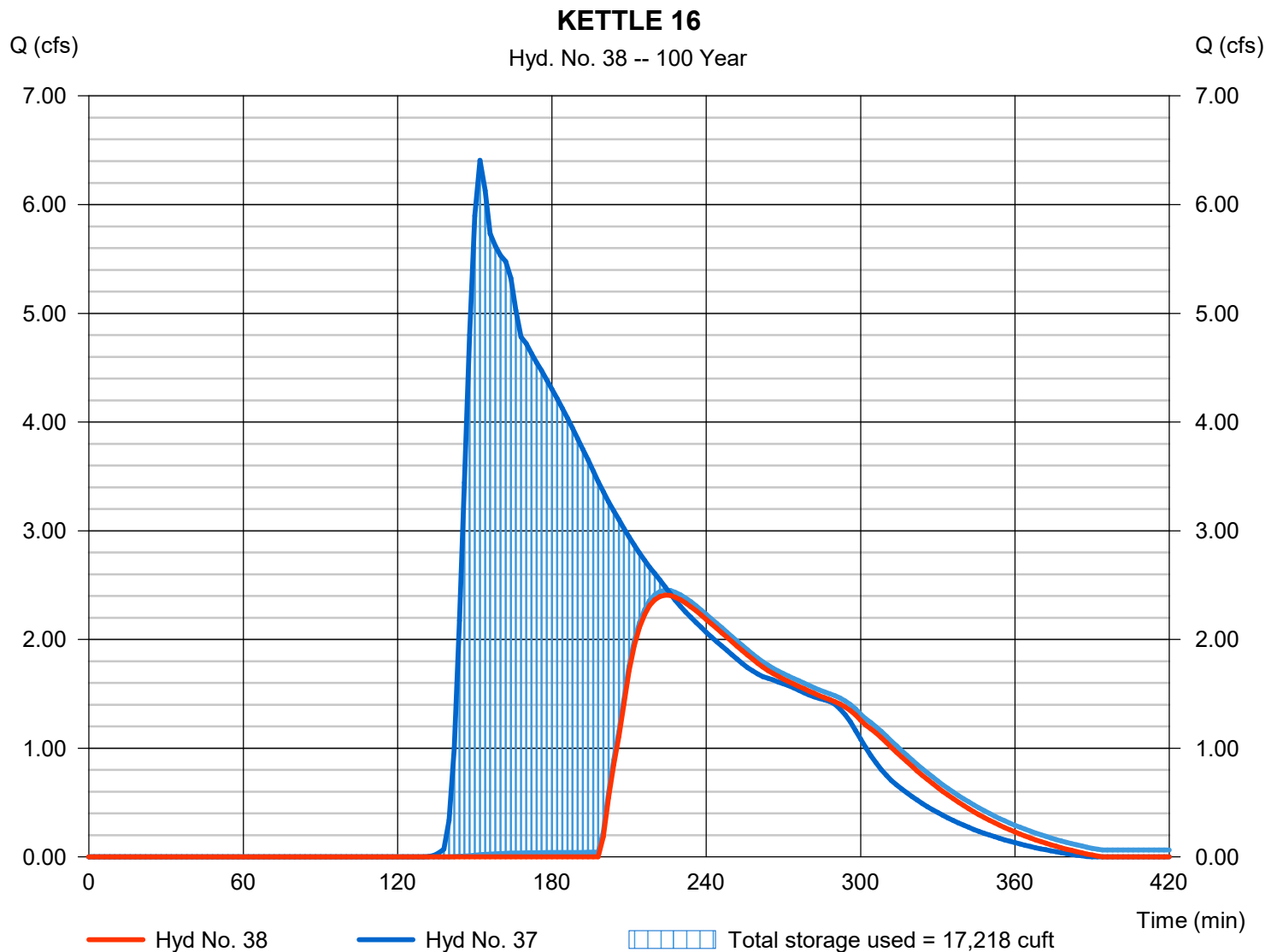
Tuesday, 04 / 7 / 2020

Hyd. No. 38

KETTLE 16

Hydrograph type	= Reservoir	Peak discharge	= 2.408 cfs
Storm frequency	= 100 yrs	Time to peak	= 224 min
Time interval	= 2 min	Hyd. volume	= 13,358 cuft
Inflow hyd. No.	= 37 - INFLOW K-16	Max. Elevation	= 1007.15 ft
Reservoir name	= K-16	Max. Storage	= 17,218 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

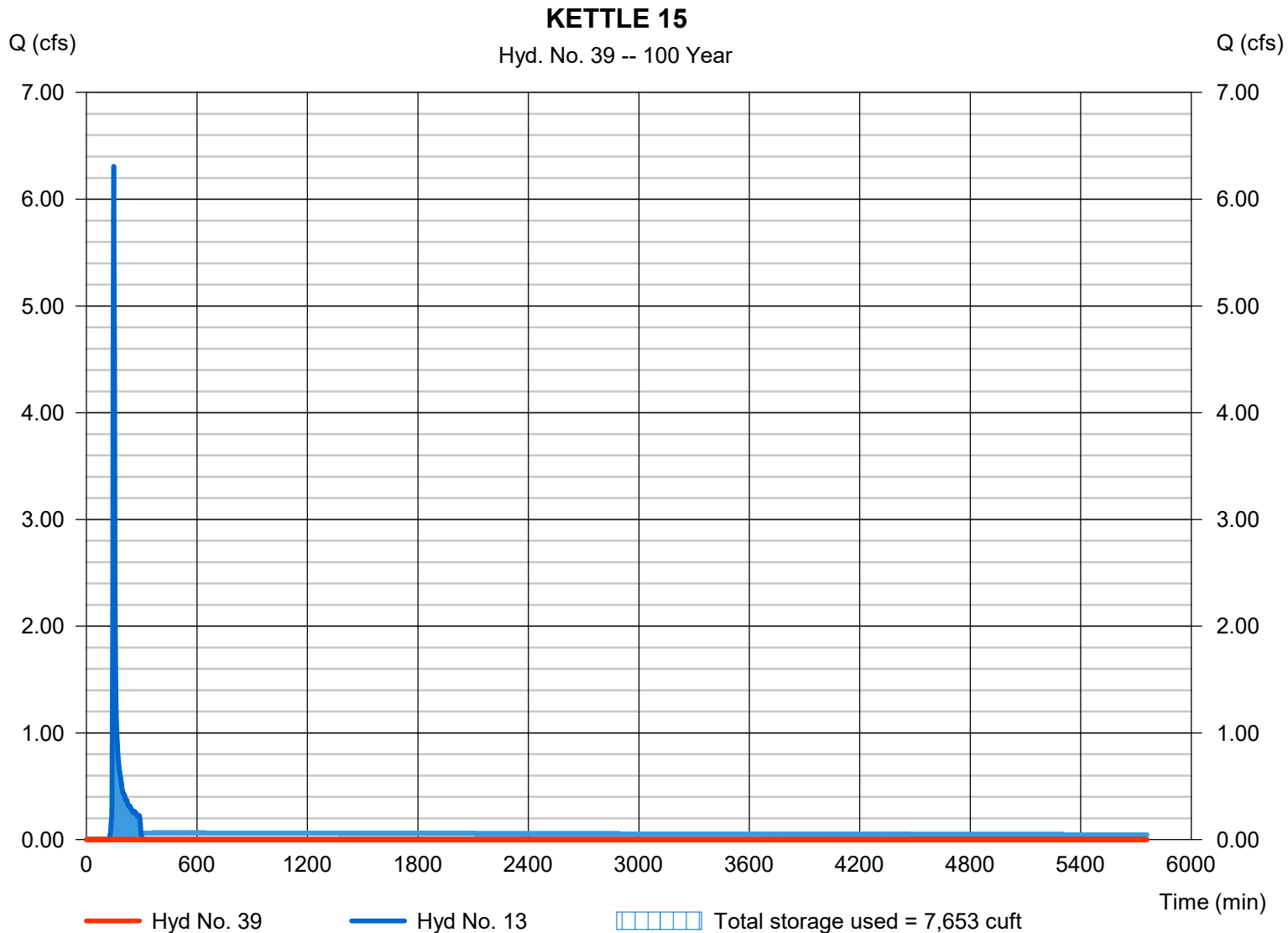
Tuesday, 04 / 7 / 2020

Hyd. No. 39

KETTLE 15

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 242 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 13 - E-15	Max. Elevation	= 972.15 ft
Reservoir name	= K-15	Max. Storage	= 7,653 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

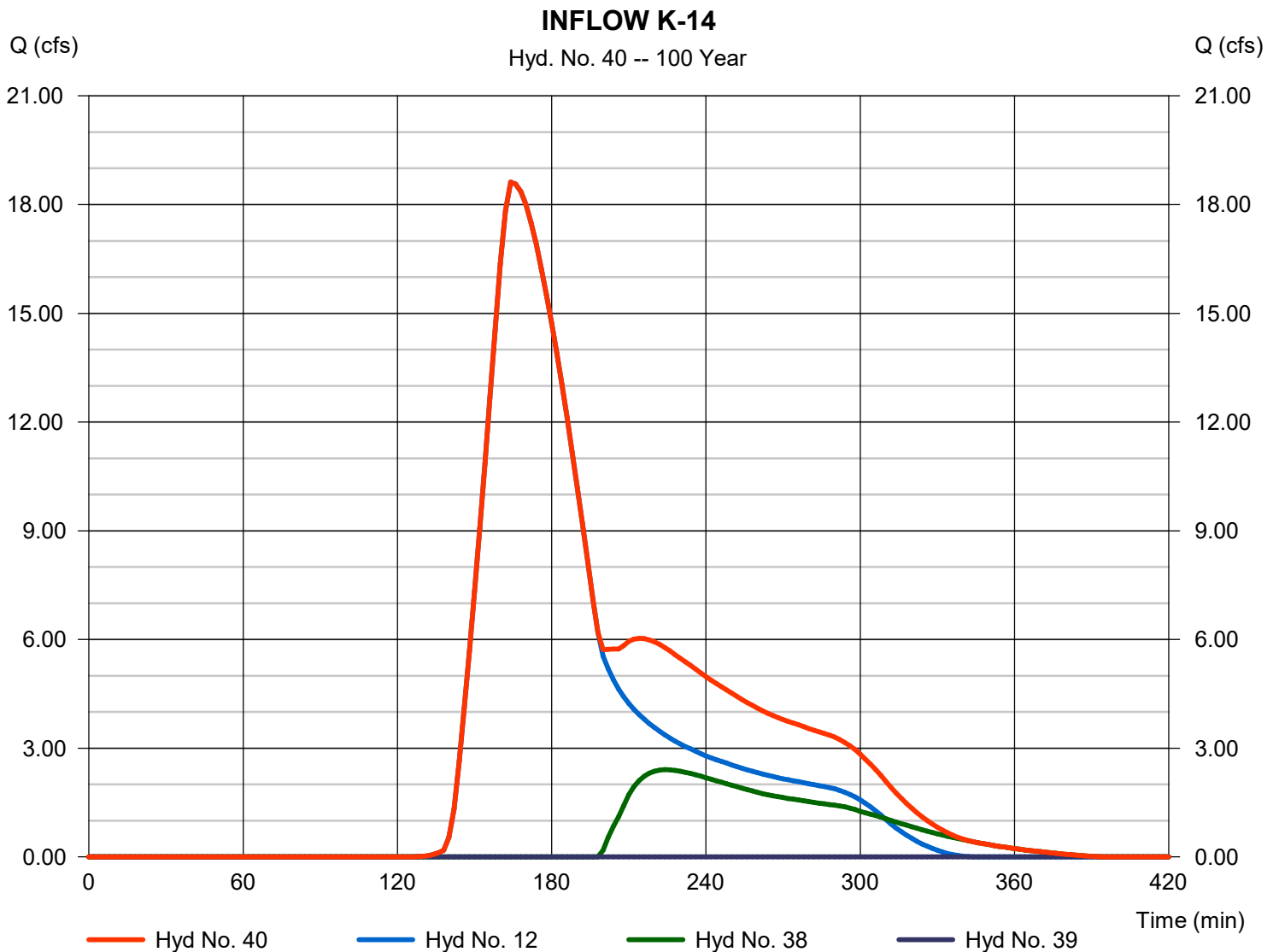
Tuesday, 04 / 7 / 2020

Hyd. No. 40

INFLOW K-14

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 12, 38, 39

Peak discharge = 18.62 cfs
Time to peak = 164 min
Hyd. volume = 73,859 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 41

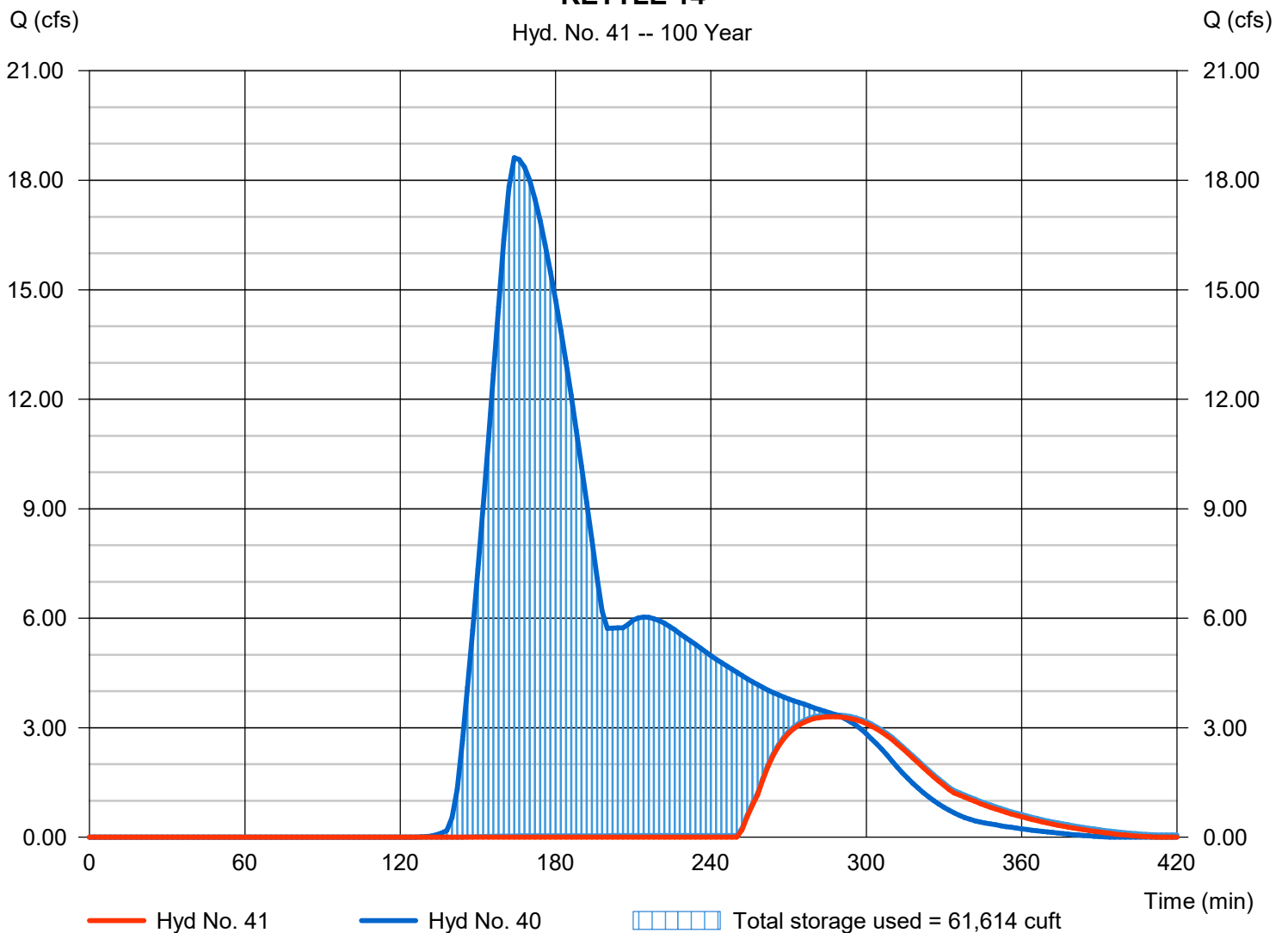
KETTLE 14

Hydrograph type	= Reservoir	Peak discharge	= 3.301 cfs
Storm frequency	= 100 yrs	Time to peak	= 286 min
Time interval	= 2 min	Hyd. volume	= 14,090 cuft
Inflow hyd. No.	= 40 - INFLOW K-14	Max. Elevation	= 961.49 ft
Reservoir name	= K-14	Max. Storage	= 61,614 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

KETTLE 14

Hyd. No. 41 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

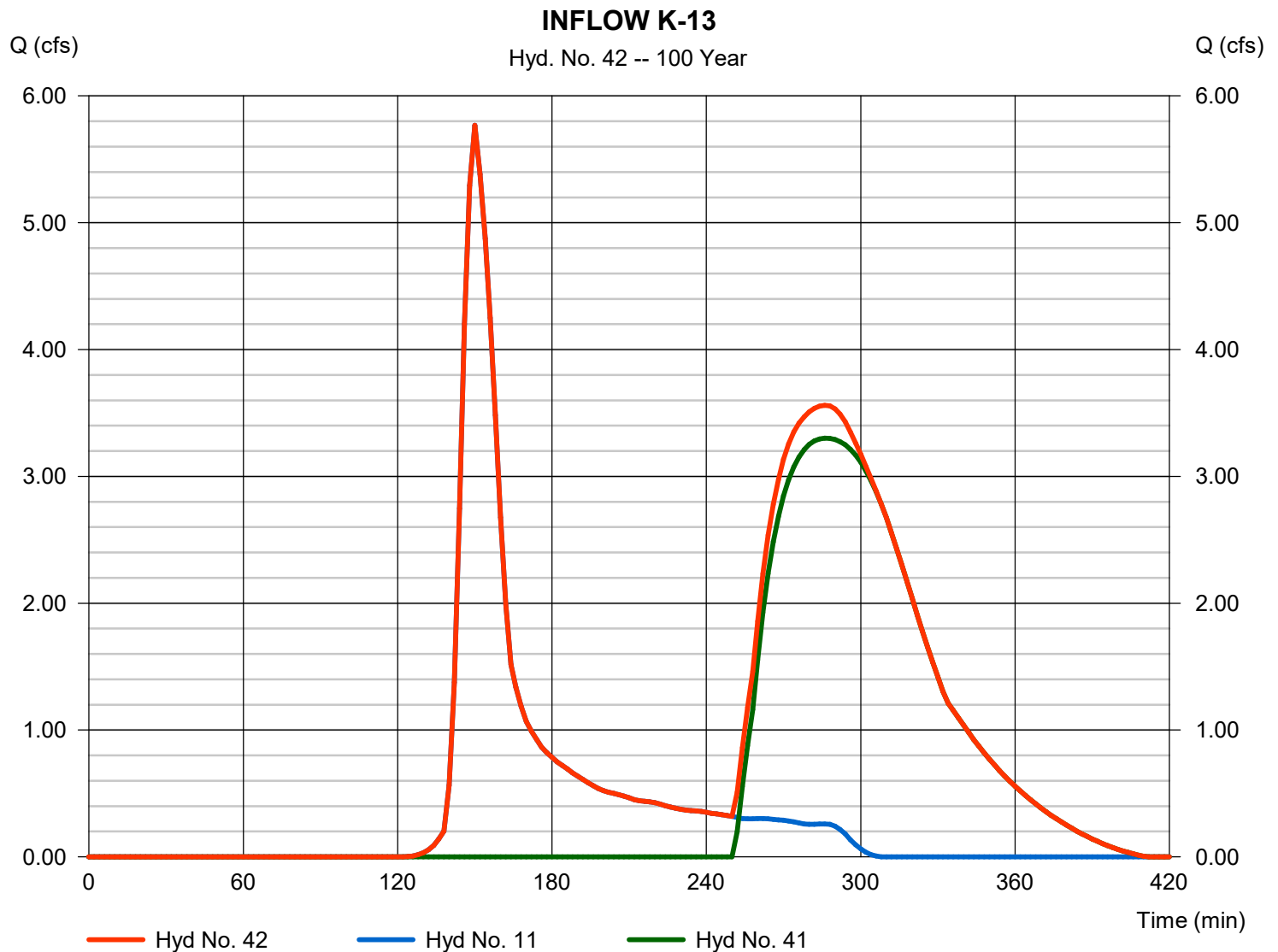
Tuesday, 04 / 7 / 2020

Hyd. No. 42

INFLOW K-13

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 11, 41

Peak discharge = 5.768 cfs
Time to peak = 150 min
Hyd. volume = 23,136 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

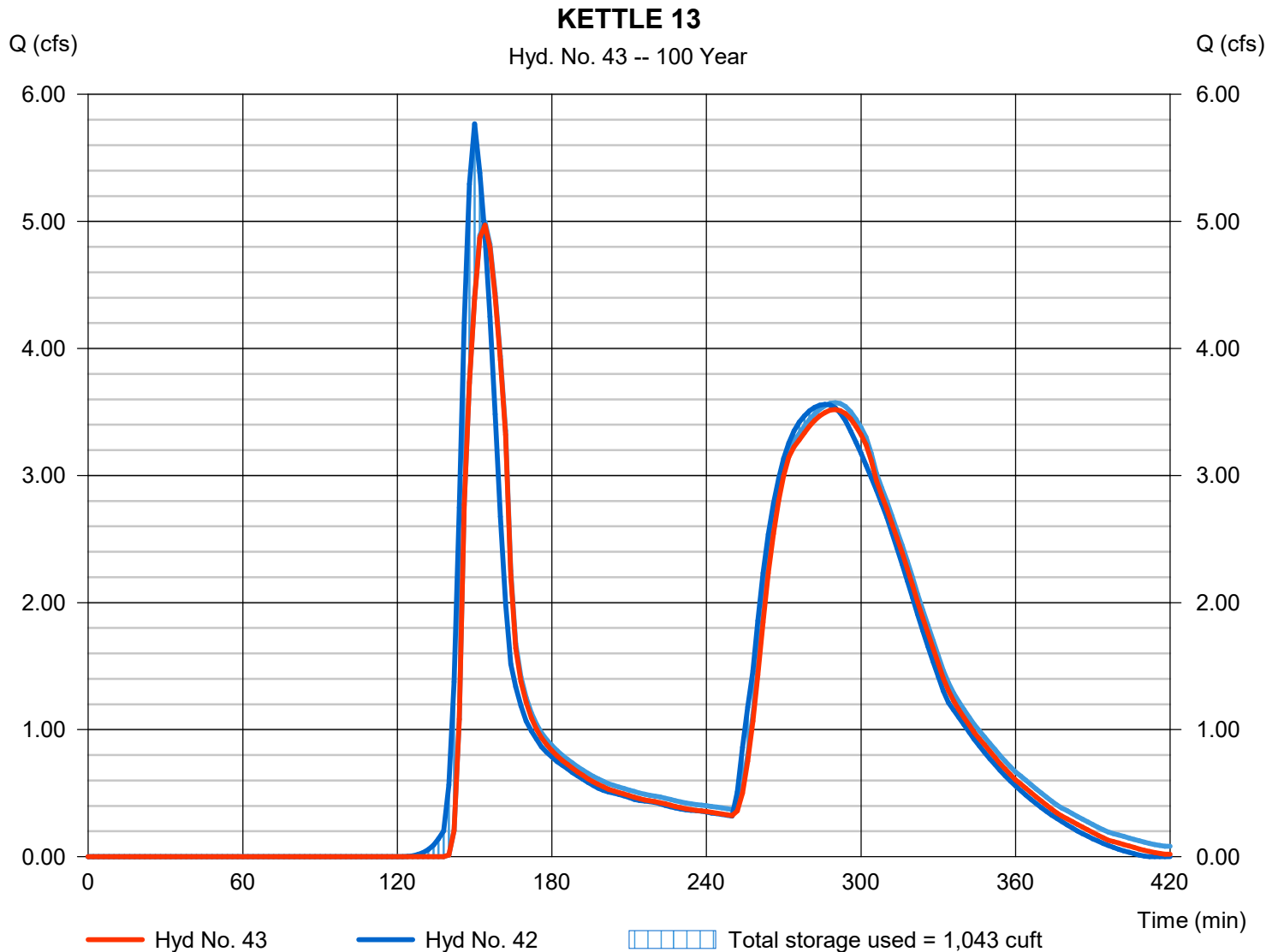
Tuesday, 04 / 7 / 2020

Hyd. No. 43

KETTLE 13

Hydrograph type	= Reservoir	Peak discharge	= 4.971 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 22,916 cuft
Inflow hyd. No.	= 42 - INFLOW K-13	Max. Elevation	= 960.14 ft
Reservoir name	= K-13	Max. Storage	= 1,043 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

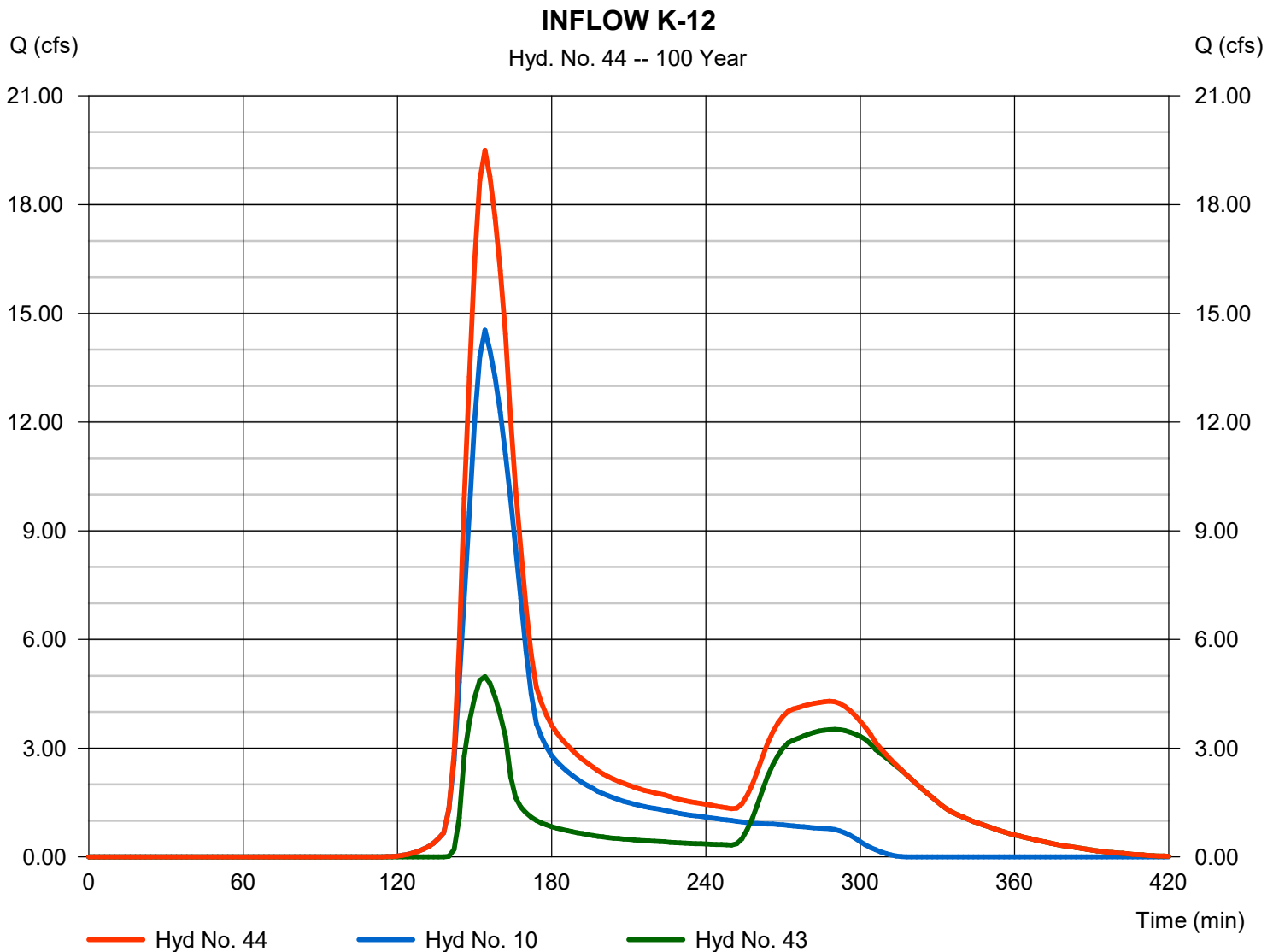
Tuesday, 04 / 7 / 2020

Hyd. No. 44

INFLOW K-12

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 10, 43

Peak discharge = 19.50 cfs
Time to peak = 154 min
Hyd. volume = 51,968 cuft
Contrib. drain. area = 2.900 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 45

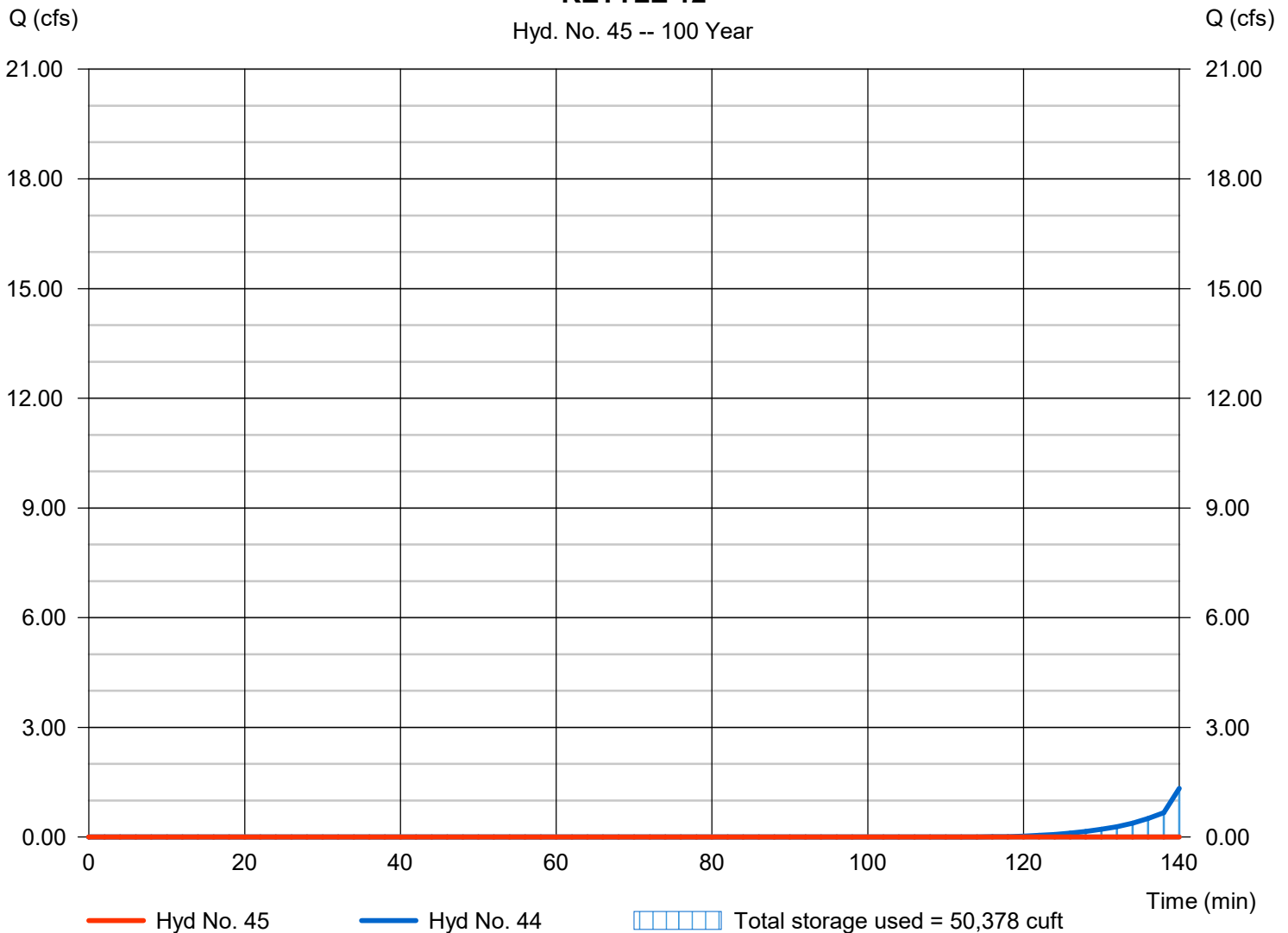
KETTLE 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 136 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 44 - INFLOW K-12	Max. Elevation	= 960.40 ft
Reservoir name	= K-12	Max. Storage	= 50,378 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

KETTLE 12

Hyd. No. 45 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

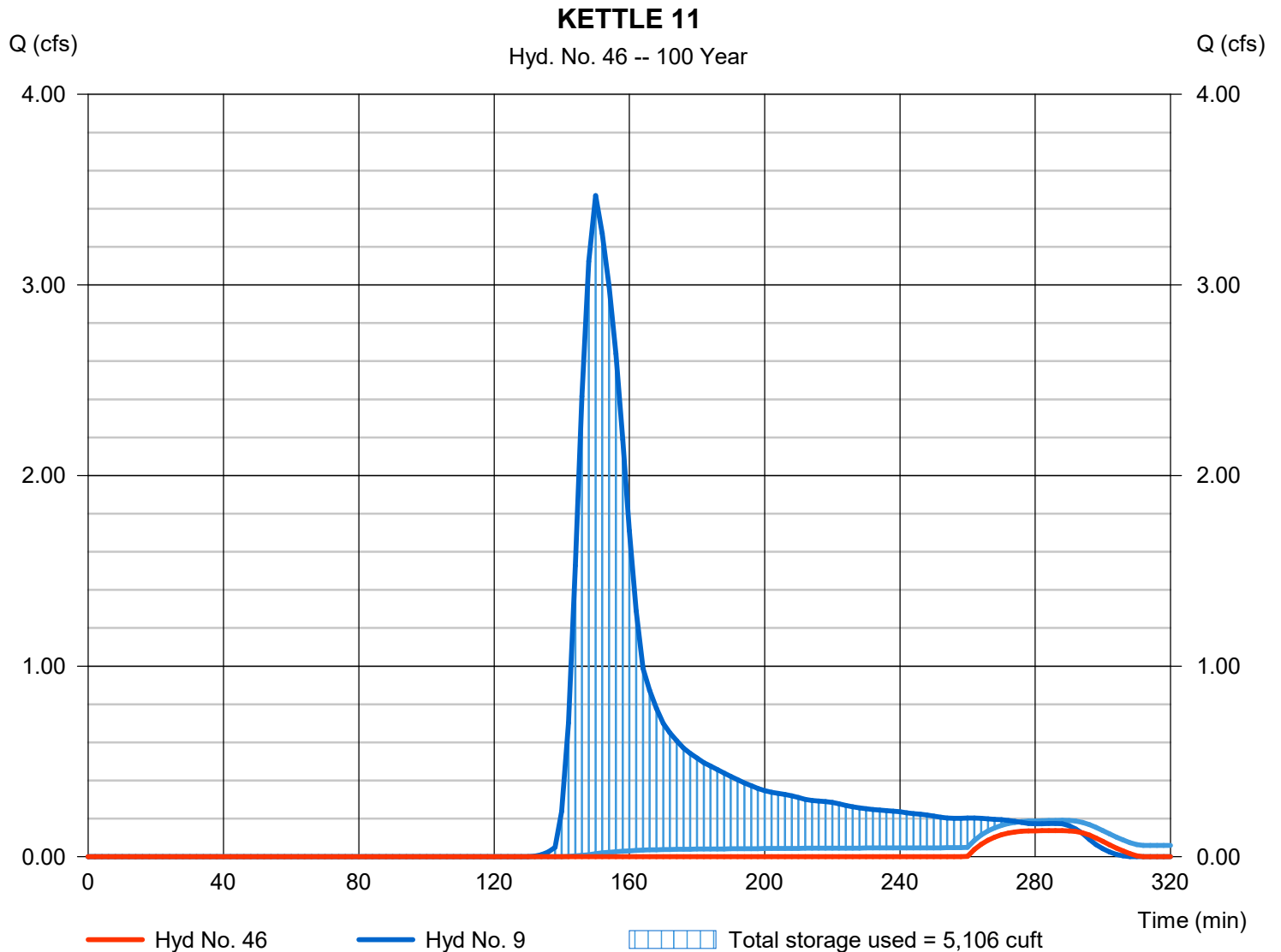
Hyd. No. 46

KETTLE 11

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 9 - E-11
 Reservoir name = K-11

Peak discharge = 0.137 cfs
 Time to peak = 288 min
 Hyd. volume = 295 cuft
 Max. Elevation = 980.51 ft
 Max. Storage = 5,106 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

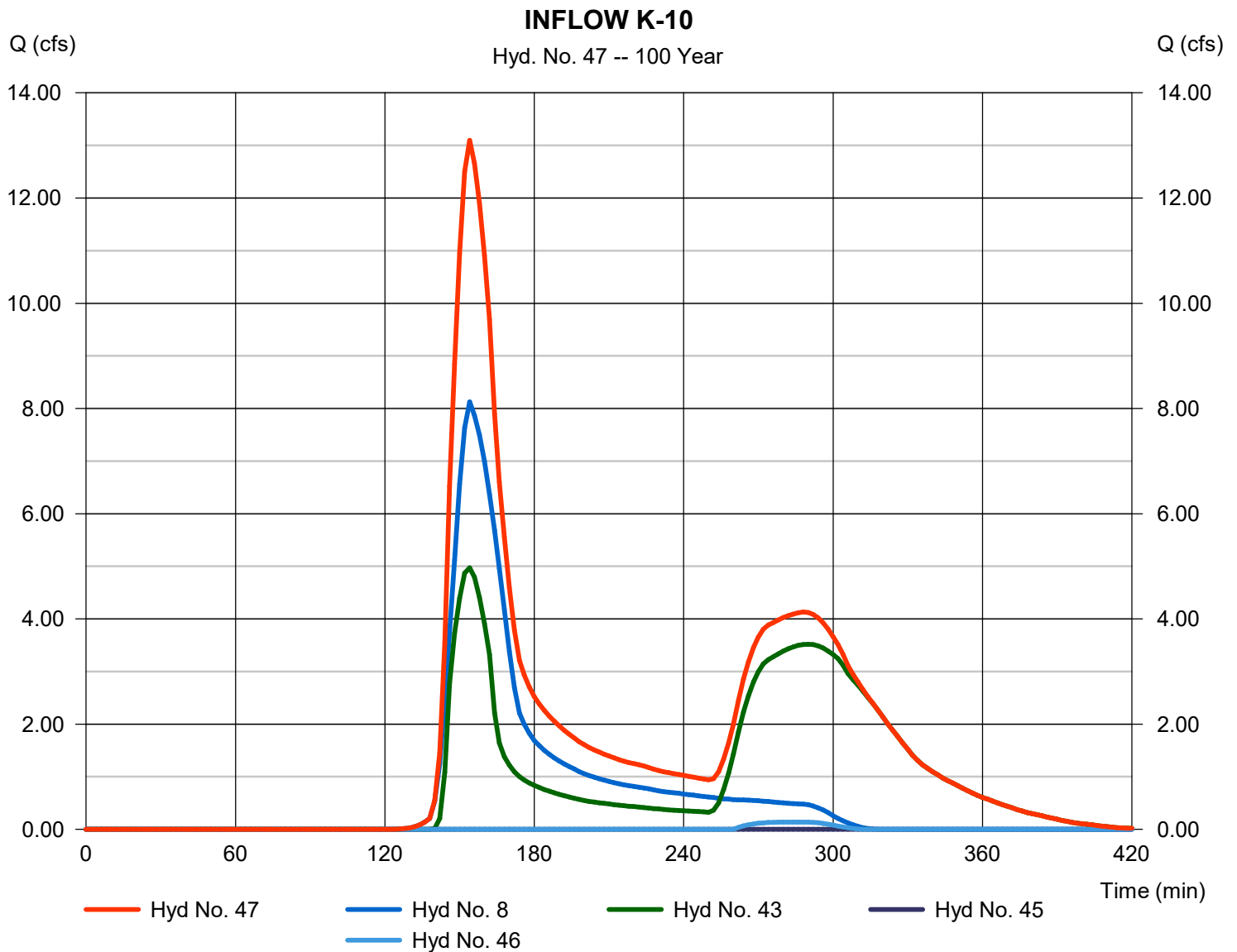
Tuesday, 04 / 7 / 2020

Hyd. No. 47

INFLOW K-10

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 8, 43, 45, 46

Peak discharge = 13.10 cfs
 Time to peak = 154 min
 Hyd. volume = 39,886 cuft
 Contrib. drain. area = 1.920 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

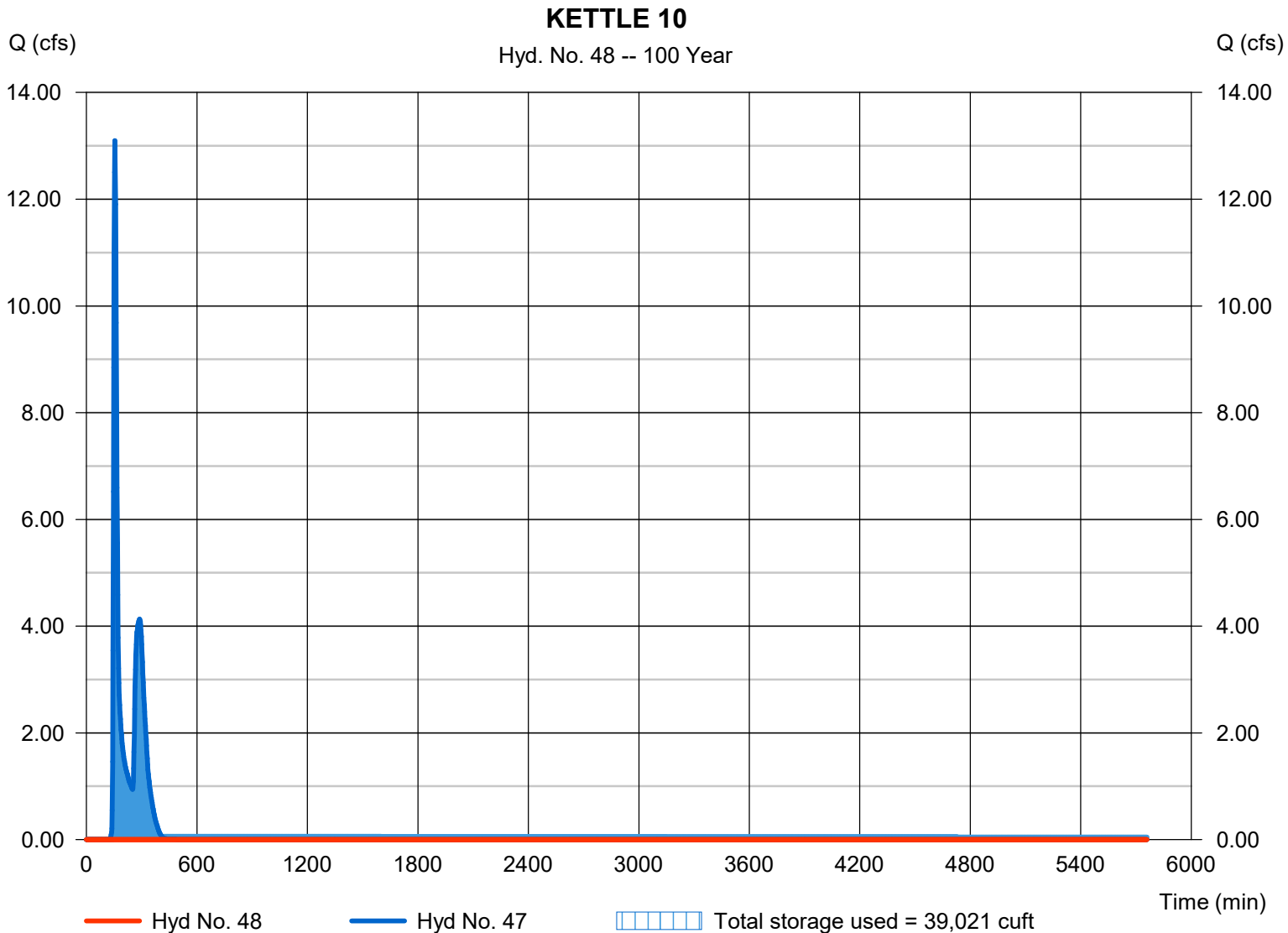
Tuesday, 04 / 7 / 2020

Hyd. No. 48

KETTLE 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 178 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 47 - INFLOW K-10	Max. Elevation	= 960.89 ft
Reservoir name	= K-10	Max. Storage	= 39,021 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	23.1093	5.4000	0.7350	-----
2	27.1508	5.3000	0.7291	-----
3	0.0000	0.0000	0.0000	-----
5	32.7162	5.1000	0.7139	-----
10	35.3863	4.7000	0.6939	-----
25	34.7551	3.5000	0.6449	-----
50	35.5592	3.0000	0.6213	-----
100	33.9204	2.1000	0.5842	-----

File name: OCONOMOWOC ATLAS 14 IDF.IDF

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.13	3.10	2.52	2.14	1.88	1.68	1.52	1.40	1.30	1.21	1.13	1.07
2	4.96	3.72	3.02	2.58	2.26	2.02	1.83	1.68	1.56	1.46	1.37	1.29
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.28	4.71	3.84	3.28	2.88	2.58	2.35	2.16	2.00	1.87	1.76	1.66
10	7.31	5.48	4.47	3.82	3.36	3.02	2.75	2.53	2.35	2.20	2.07	1.96
25	8.74	6.49	5.29	4.54	4.01	3.61	3.30	3.05	2.84	2.67	2.52	2.39
50	9.77	7.22	5.90	5.07	4.49	4.05	3.71	3.44	3.21	3.02	2.85	2.71
100	10.79	7.90	6.46	5.56	4.93	4.47	4.11	3.82	3.57	3.37	3.19	3.04

T_c = time in minutes. Values may exceed 60.

Desktop\LAKE COUNTRY LUTHER (1)\284-Storm Water Management Plan\OCONOMOWOC ATLAS 14 PRECIP.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCS 6-Hr	1.75	2.05	0.00	2.59	3.09	3.85	4.48	5.17
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	2.40	2.70	0.00	3.31	3.81	4.71	5.44	6.18

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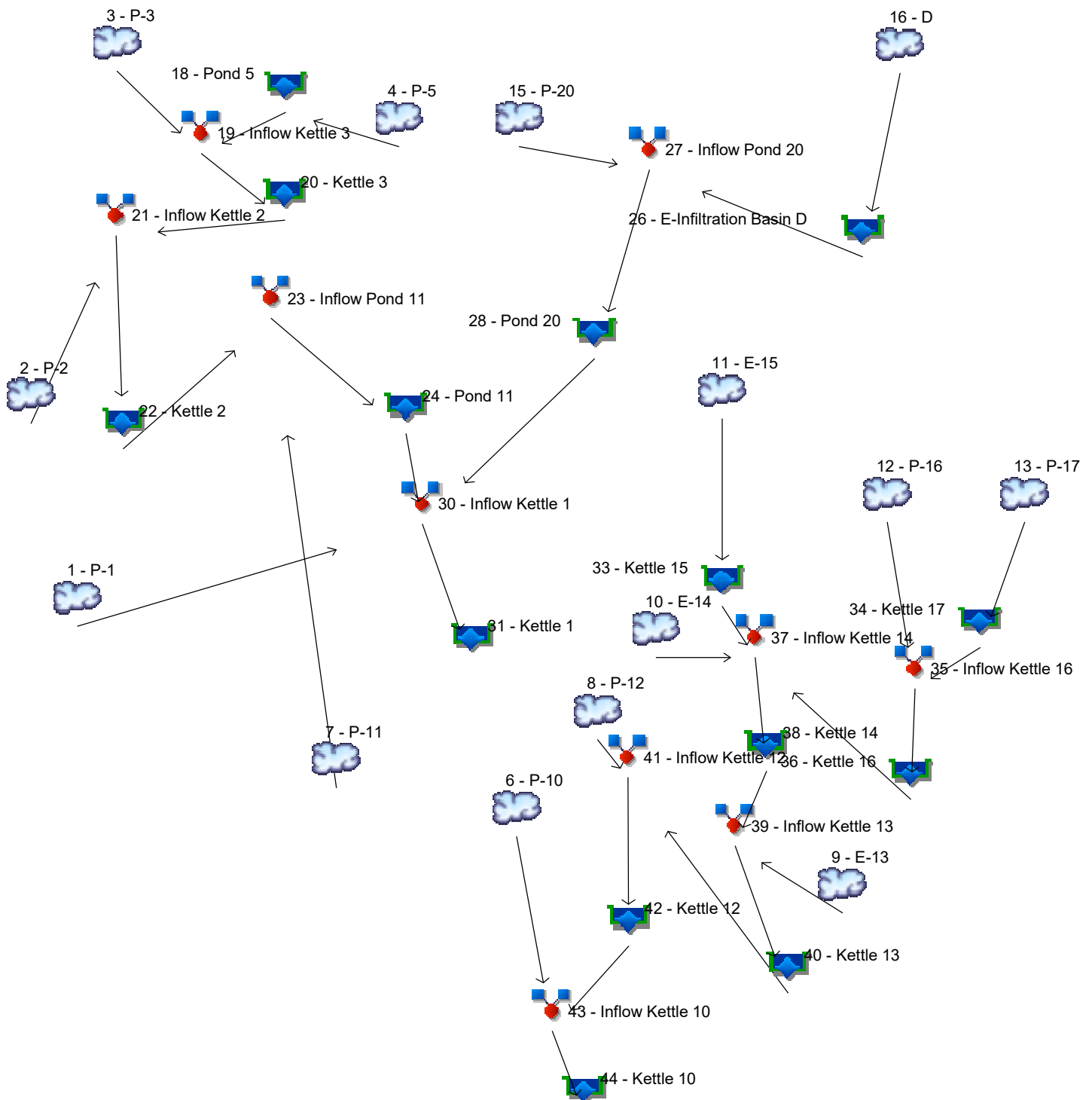
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Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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	-----	2.548	4.285	-----	-----	13.20	-----	-----	42.61	P-1
2	SCS Runoff	-----	0.859	1.376	-----	-----	4.200	-----	-----	12.70	P-2
3	SCS Runoff	-----	0.269	0.448	-----	-----	1.426	-----	-----	4.476	P-3
4	SCS Runoff	-----	14.13	18.05	-----	-----	33.90	-----	-----	70.95	P-5
6	SCS Runoff	-----	0.568	0.933	-----	-----	2.921	-----	-----	9.157	P-10
7	SCS Runoff	-----	4.717	6.140	-----	-----	11.96	-----	-----	25.81	P-11
8	SCS Runoff	-----	1.738	2.542	-----	-----	6.271	-----	-----	16.31	P-12
9	SCS Runoff	-----	0.302	0.527	-----	-----	1.765	-----	-----	5.768	E-13
10	SCS Runoff	-----	1.098	1.813	-----	-----	5.693	-----	-----	18.62	E-14
11	SCS Runoff	-----	0.316	0.526	-----	-----	1.673	-----	-----	5.252	E-15
12	SCS Runoff	-----	0.282	0.504	-----	-----	2.029	-----	-----	7.716	P-16
13	SCS Runoff	-----	0.640	1.144	-----	-----	4.605	-----	-----	17.51	P-17
15	SCS Runoff	-----	12.95	16.39	-----	-----	30.14	-----	-----	61.96	P-20
16	SCS Runoff	-----	2.736	3.951	-----	-----	9.710	-----	-----	26.01	D
18	Reservoir	4	2.740	4.081	-----	-----	10.53	-----	-----	39.45	Pond 5
19	Combine	3, 18	2.809	4.188	-----	-----	10.78	-----	-----	40.15	Inflow Kettle 3
20	Reservoir	19	0.765	2.037	-----	-----	7.793	-----	-----	37.03	Kettle 3
21	Combine	2, 20	0.859	2.081	-----	-----	8.219	-----	-----	38.69	Inflow Kettle 2
22	Reservoir	21	0.000	0.000	-----	-----	0.000	-----	-----	10.99	Kettle 2
23	Combine	7, 22	4.717	6.140	-----	-----	11.96	-----	-----	25.81	Inflow Pond 11
24	Reservoir	23	0.424	0.486	-----	-----	0.673	-----	-----	16.95	Pond 11
26	Reservoir	16	0.000	0.000	-----	-----	0.000	-----	-----	0.000	E-Infiltration Basin D
27	Combine	15, 26	12.95	16.39	-----	-----	30.14	-----	-----	61.96	Inflow Pond 20
28	Reservoir	27	4.982	6.991	-----	-----	16.40	-----	-----	48.59	Pond 20
30	Combine	1, 24, 28,	7.442	10.77	-----	-----	27.41	-----	-----	102.74	Inflow Kettle 1
31	Reservoir	30	0.000	0.000	-----	-----	0.000	-----	-----	0.000	Kettle 1
33	Reservoir	11	0.000	0.000	-----	-----	0.000	-----	-----	0.000	Kettle 15
34	Reservoir	13	0.000	0.000	-----	-----	0.000	-----	-----	2.913	Kettle 17
35	Combine	12, 34	0.282	0.504	-----	-----	2.029	-----	-----	7.716	Inflow Kettle 16
36	Reservoir	35	0.000	0.000	-----	-----	0.000	-----	-----	2.178	Kettle 16
37	Combine	10, 33, 36	1.098	1.813	-----	-----	5.693	-----	-----	18.62	Inflow Kettle 14

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.548	2	166	10,376	-----	-----	-----	P-1
2	SCS Runoff	0.859	2	154	2,194	-----	-----	-----	P-2
3	SCS Runoff	0.269	2	154	728	-----	-----	-----	P-3
4	SCS Runoff	14.13	2	158	36,042	-----	-----	-----	P-5
6	SCS Runoff	0.568	2	156	1,670	-----	-----	-----	P-10
7	SCS Runoff	4.717	2	152	8,679	-----	-----	-----	P-11
8	SCS Runoff	1.738	2	156	4,620	-----	-----	-----	P-12
9	SCS Runoff	0.302	2	154	877	-----	-----	-----	E-13
10	SCS Runoff	1.098	2	176	5,502	-----	-----	-----	E-14
11	SCS Runoff	0.316	2	154	854	-----	-----	-----	E-15
12	SCS Runoff	0.282	2	156	977	-----	-----	-----	P-16
13	SCS Runoff	0.640	2	156	2,217	-----	-----	-----	P-17
15	SCS Runoff	12.95	2	158	32,565	-----	-----	-----	P-20
16	SCS Runoff	2.736	2	170	11,041	-----	-----	-----	D
18	Reservoir	2.740	2	198	35,057	4	982.53	21,225	Pond 5
19	Combine	2.809	2	196	35,785	3, 18	-----	-----	Inflow Kettle 3
20	Reservoir	0.765	2	376	7,499	19	976.06	23,477	Kettle 3
21	Combine	0.859	2	154	9,693	2, 20	-----	-----	Inflow Kettle 2
22	Reservoir	0.000	2	458	0	21	968.42	8,346	Kettle 2
23	Combine	4.717	2	152	8,679	7, 22	-----	-----	Inflow Pond 11
24	Reservoir	0.424	2	224	8,661	23	965.28	5,468	Pond 11
26	Reservoir	0.000	2	256	0	16	989.98	4,108	E-Infiltration Basin D
27	Combine	12.95	2	158	32,565	15, 26	-----	-----	Inflow Pond 20
28	Reservoir	4.982	2	180	32,237	27	990.96	15,742	Pond 20
30	Combine	7.442	2	178	51,273	1, 24, 28,	-----	-----	Inflow Kettle 1
31	Reservoir	0.000	2	156	0	30	948.87	46,326	Kettle 1
33	Reservoir	0.000	2	226	0	11	970.35	814	Kettle 15
34	Reservoir	0.000	2	264	0	13	1011.19	2,070	Kettle 17
35	Combine	0.282	2	156	977	12, 34	-----	-----	Inflow Kettle 16
36	Reservoir	0.000	2	244	0	35	1005.15	934	Kettle 16
37	Combine	1.098	2	176	5,502	10, 33, 36	-----	-----	Inflow Kettle 14
PROPOSED_LCL_Stormwater Model_2020-04-08					Re-supply Period: 1 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	1004	0	37	956.18	5,247	Kettle 14
39	Combine	0.302	2	154	877	9, 38	-----	-----	Inflow Kettle 13
40	Reservoir	0.195	2	164	771	39	959.60	198	Kettle 13
41	Combine	1.849	2	158	5,391	8, 40	-----	-----	Inflow Kettle 12
42	Reservoir	0.000	2	520	0	41	957.24	5,001	Kettle 12
43	Combine	0.568	2	156	1,670	6, 42	-----	-----	Inflow Kettle 10
44	Reservoir	0.000	2	292	0	43	955.03	1,603	Kettle 10
PROPOSED_LCL_Stormwater Model_2020-04-06					Run Period: 1 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

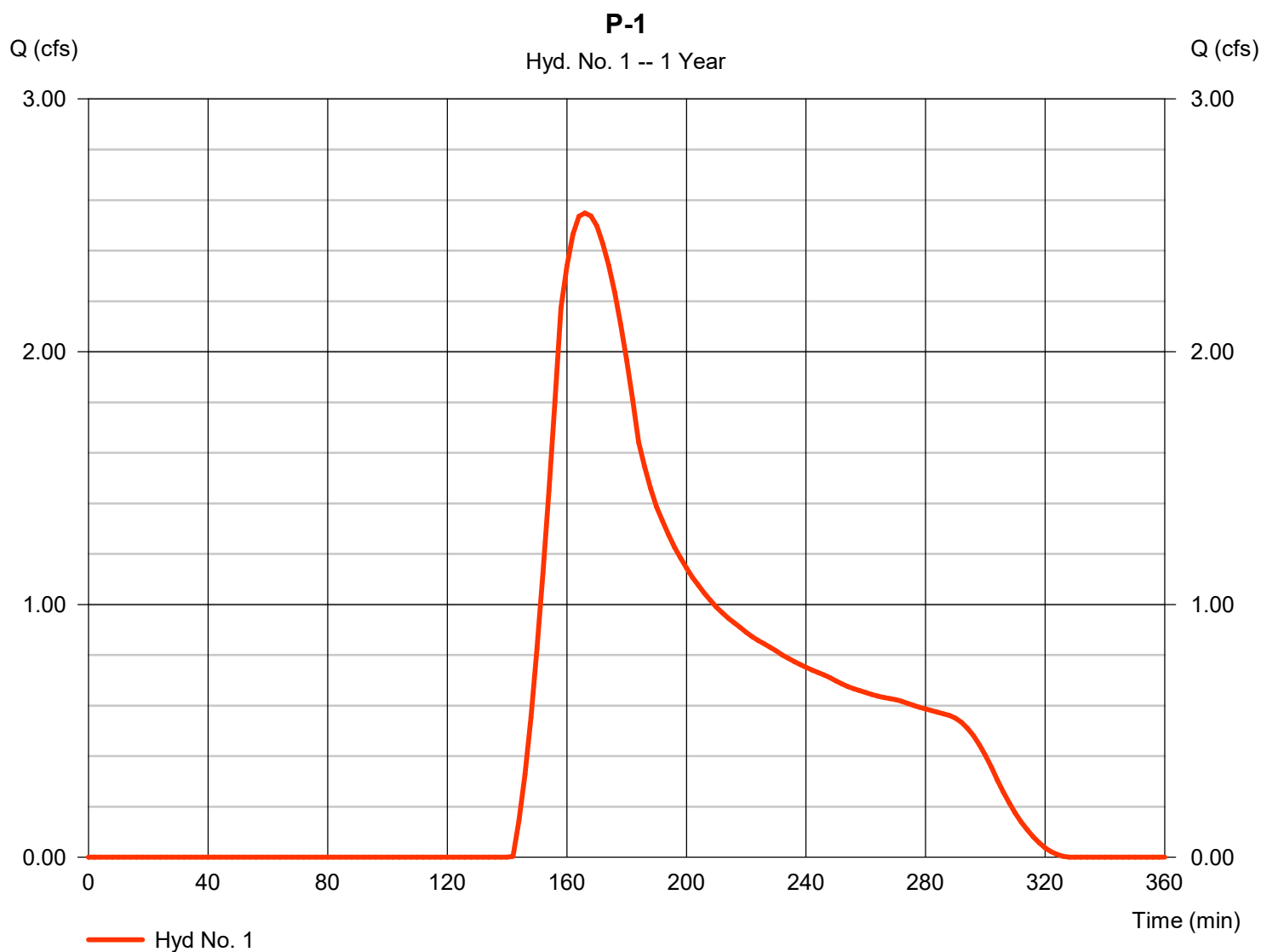
Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Hydrograph type	= SCS Runoff	Peak discharge	= 2.548 cfs
Storm frequency	= 1 yrs	Time to peak	= 166 min
Time interval	= 2 min	Hyd. volume	= 10,376 cuft
Drainage area	= 12.520 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 12.520$

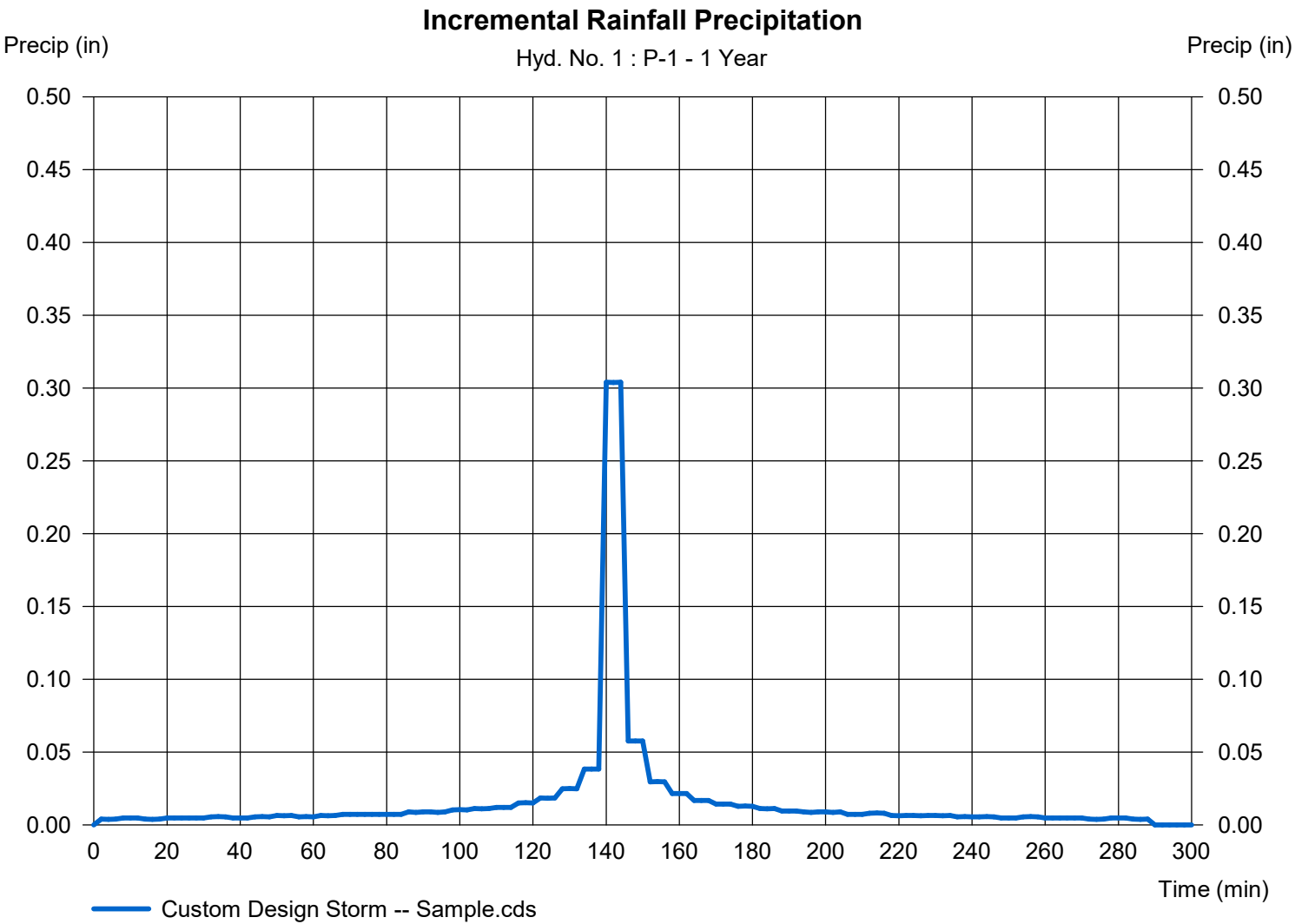


Precipitation Report

Hyd. No. 1

P-1

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

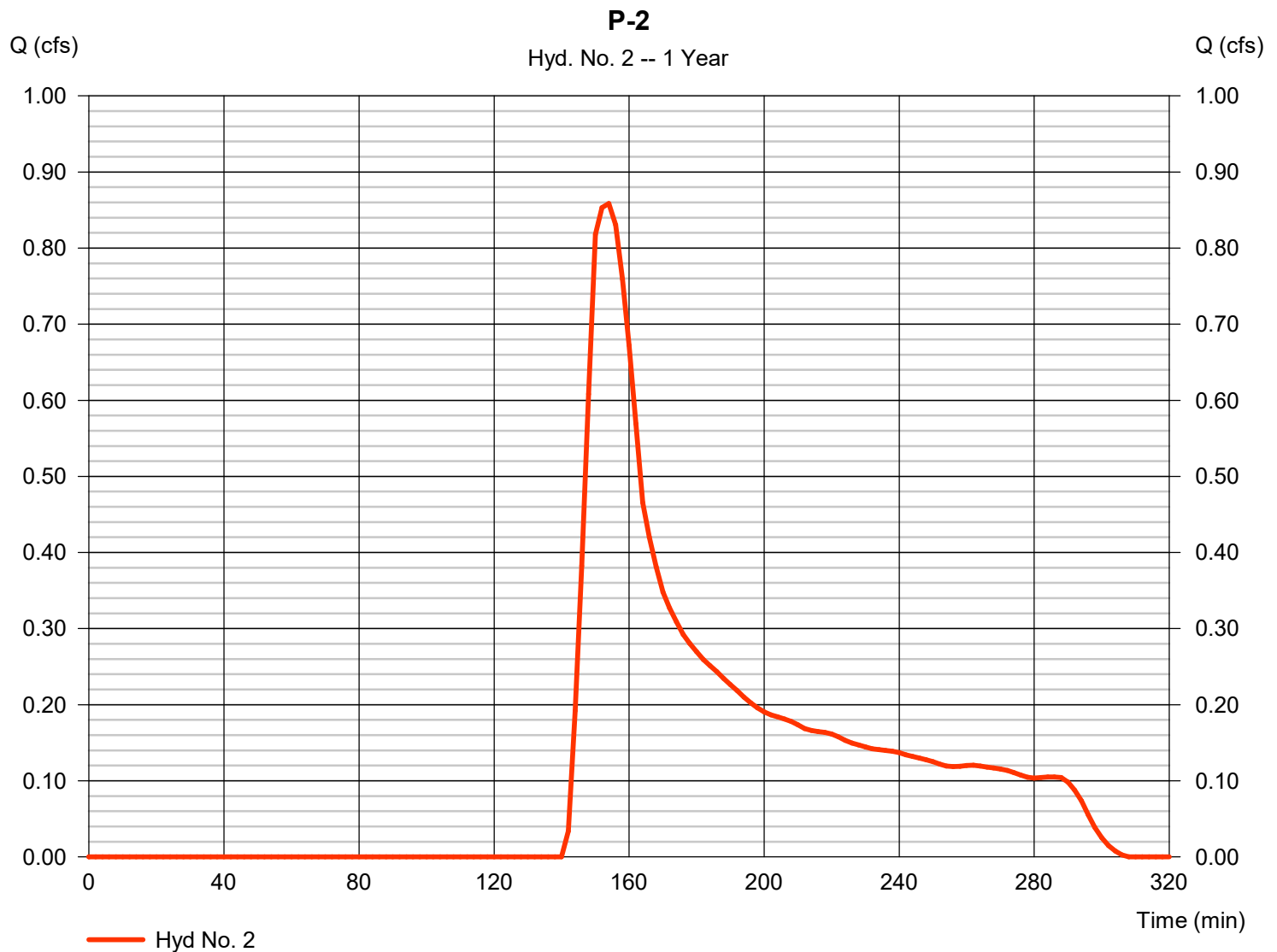
Tuesday, 04 / 7 / 2020

Hyd. No. 2

P-2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.859 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 2,194 cuft
Drainage area	= 2.040 ac	Curve number	= 66*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

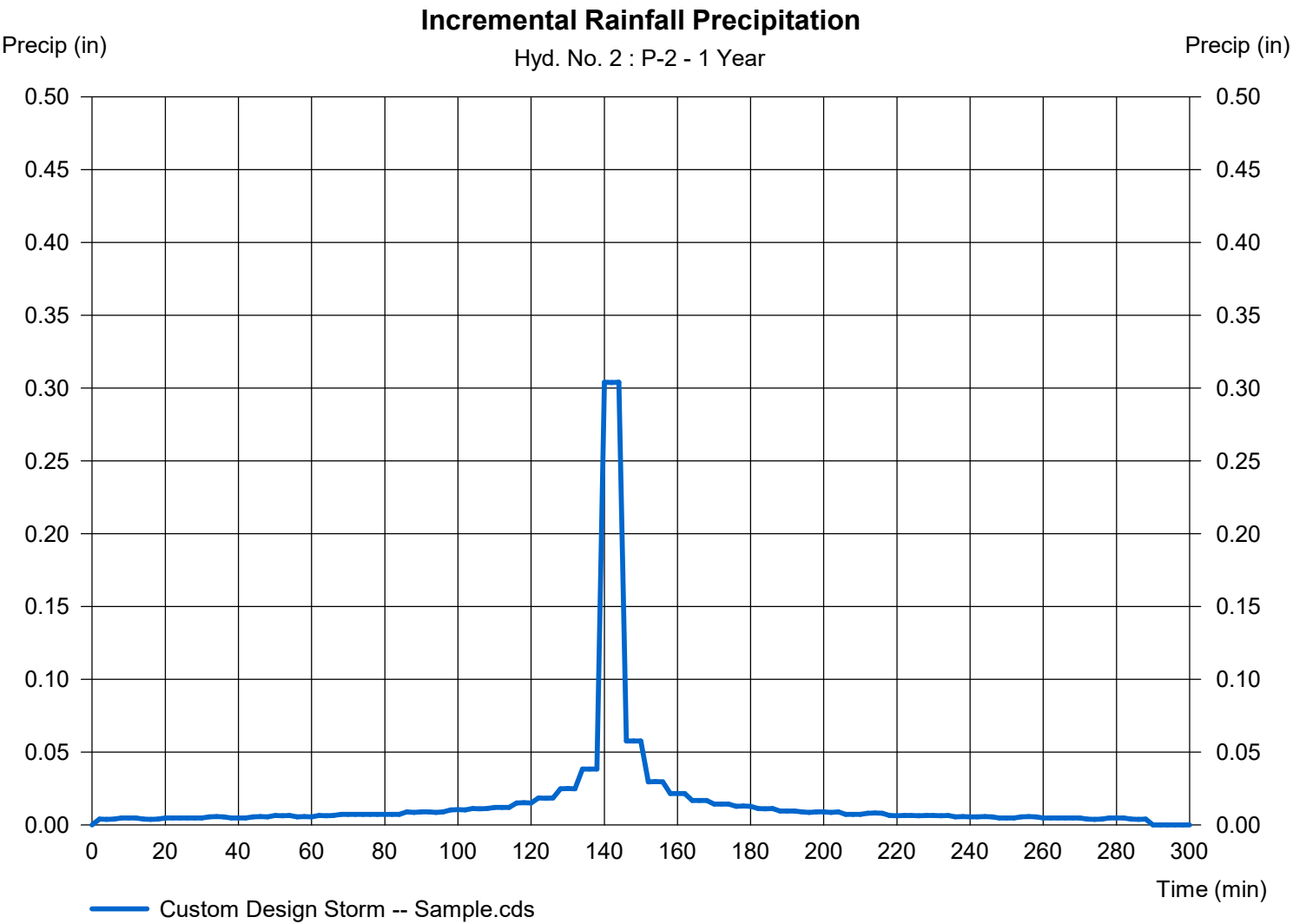
* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 2.040$



Precipitation Report

Hyd. No. 2

P-2			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

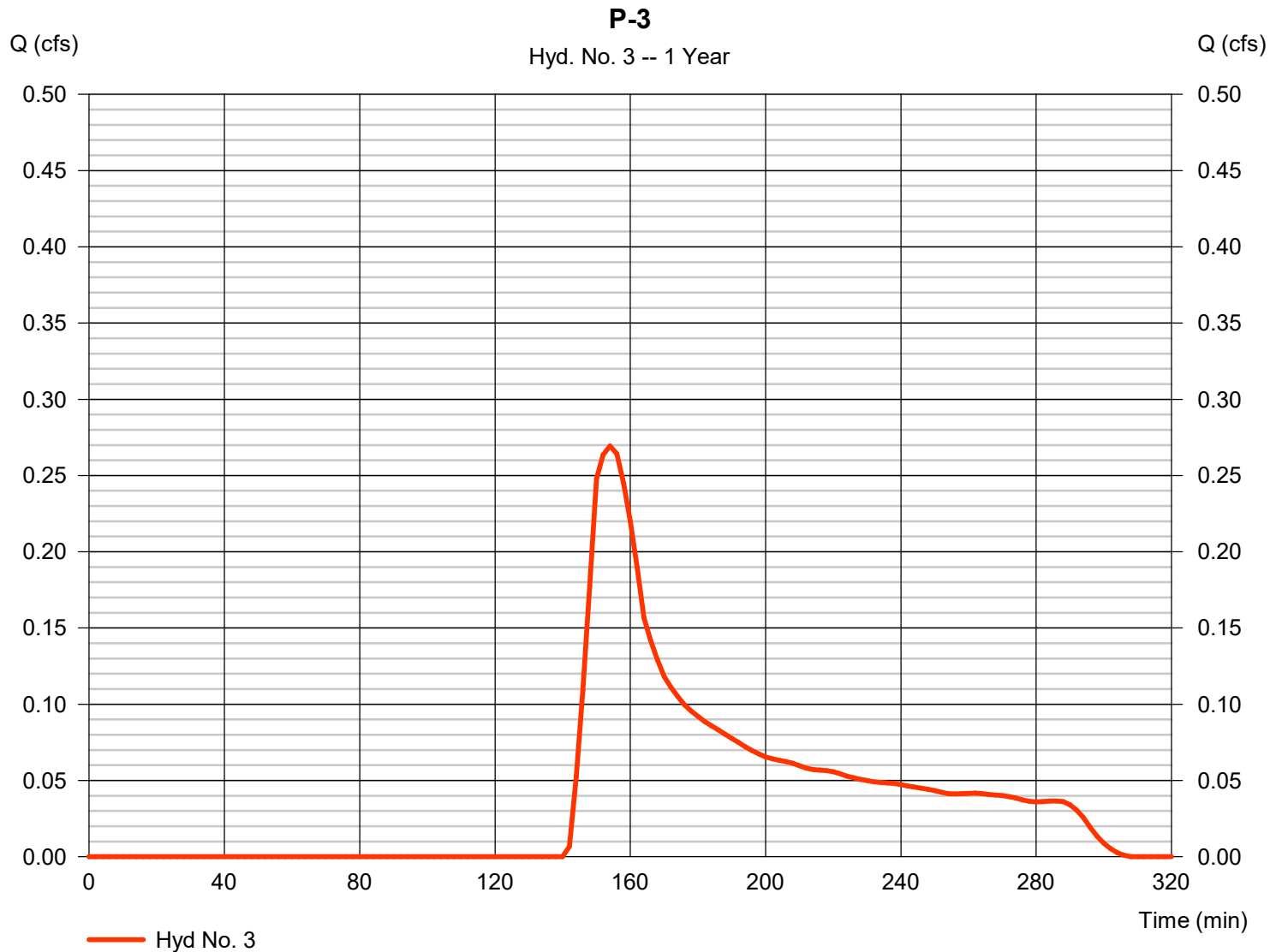
Tuesday, 04 / 7 / 2020

Hyd. No. 3

P-3

Hydrograph type	= SCS Runoff	Peak discharge	= 0.269 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 728 cuft
Drainage area	= 0.750 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 0.750$



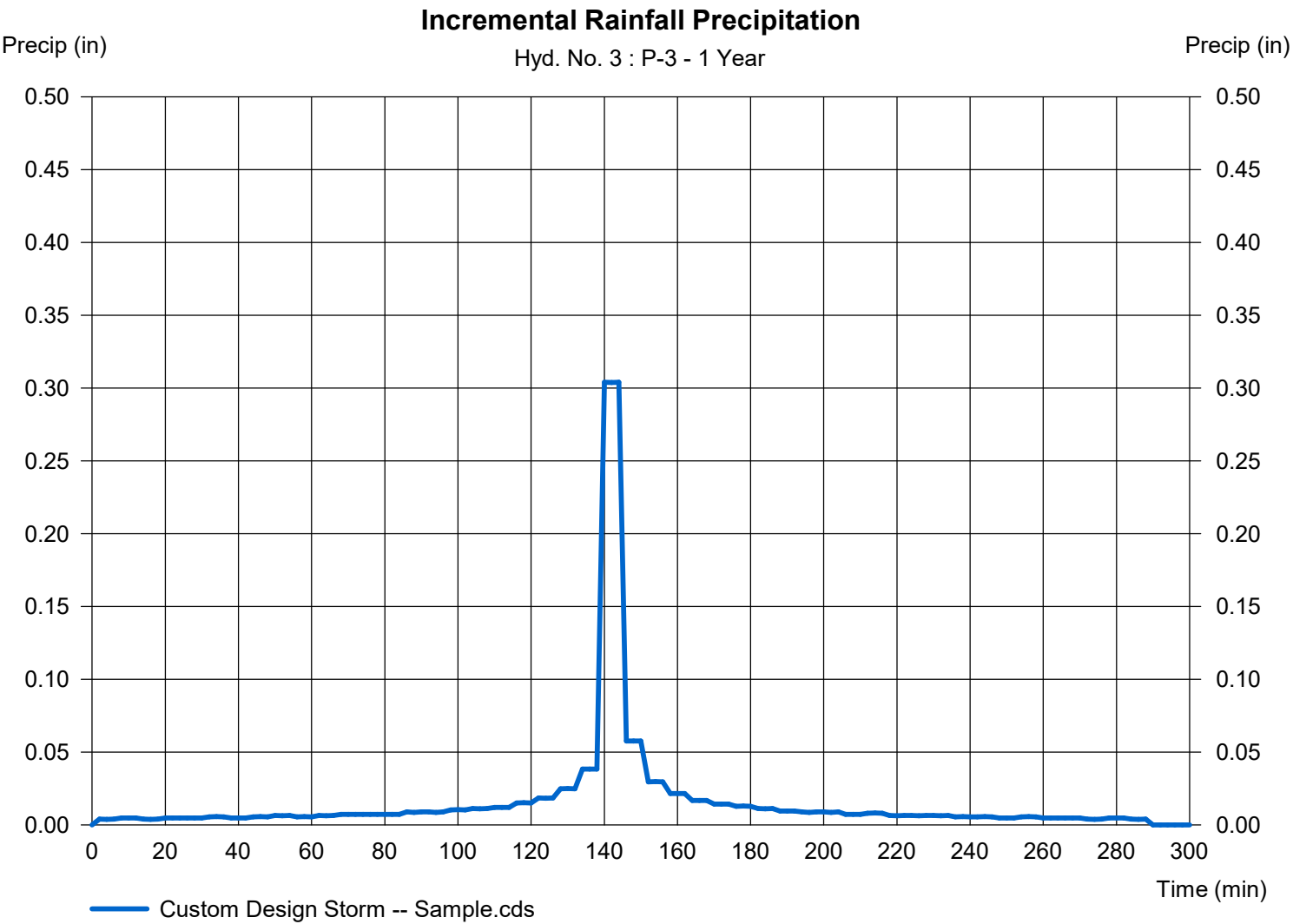
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 3

P-3			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

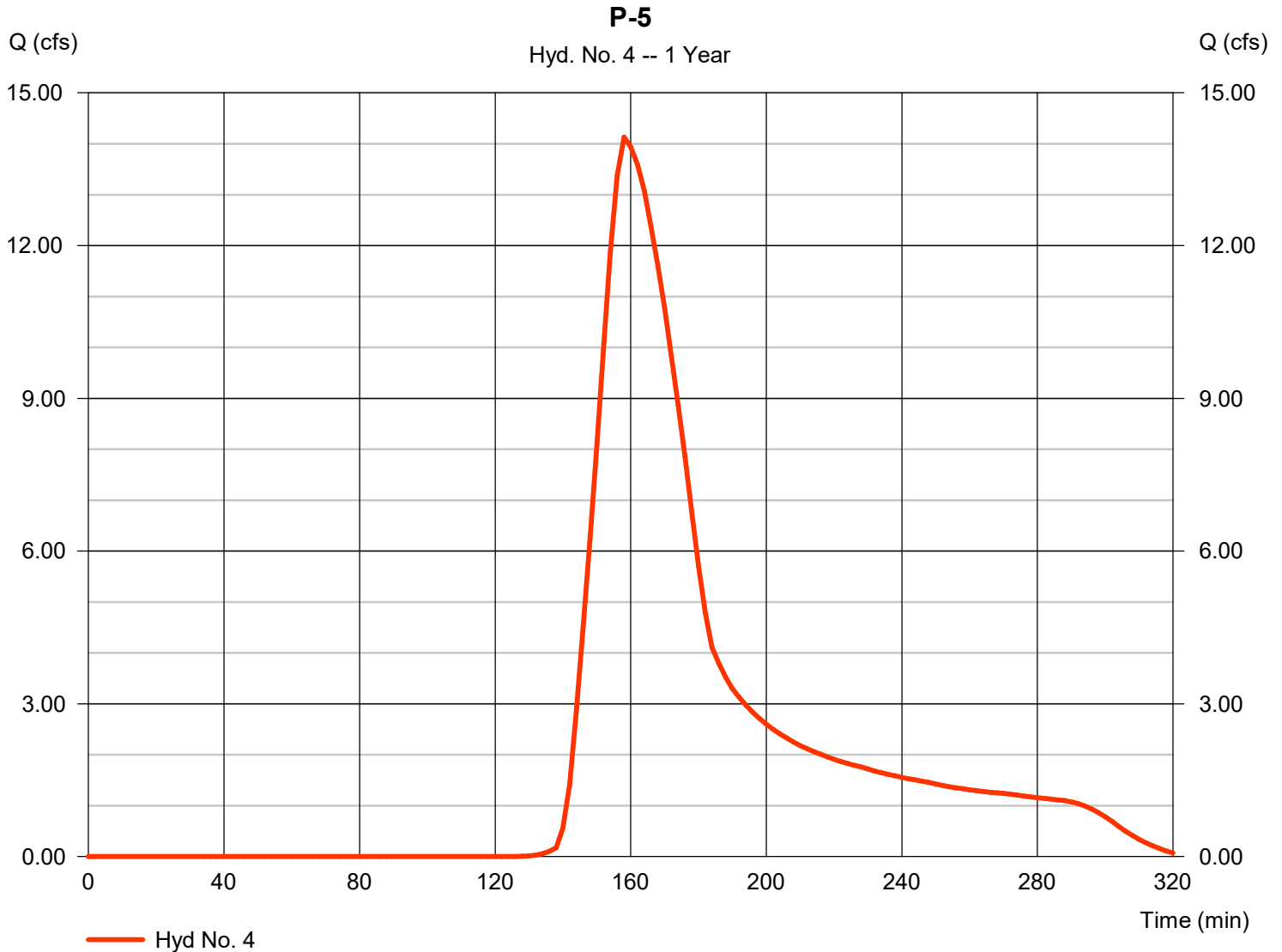
Tuesday, 04 / 7 / 2020

Hyd. No. 4

P-5

Hydrograph type	= SCS Runoff	Peak discharge	= 14.13 cfs
Storm frequency	= 1 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 36,042 cuft
Drainage area	= 11.570 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 11.570$



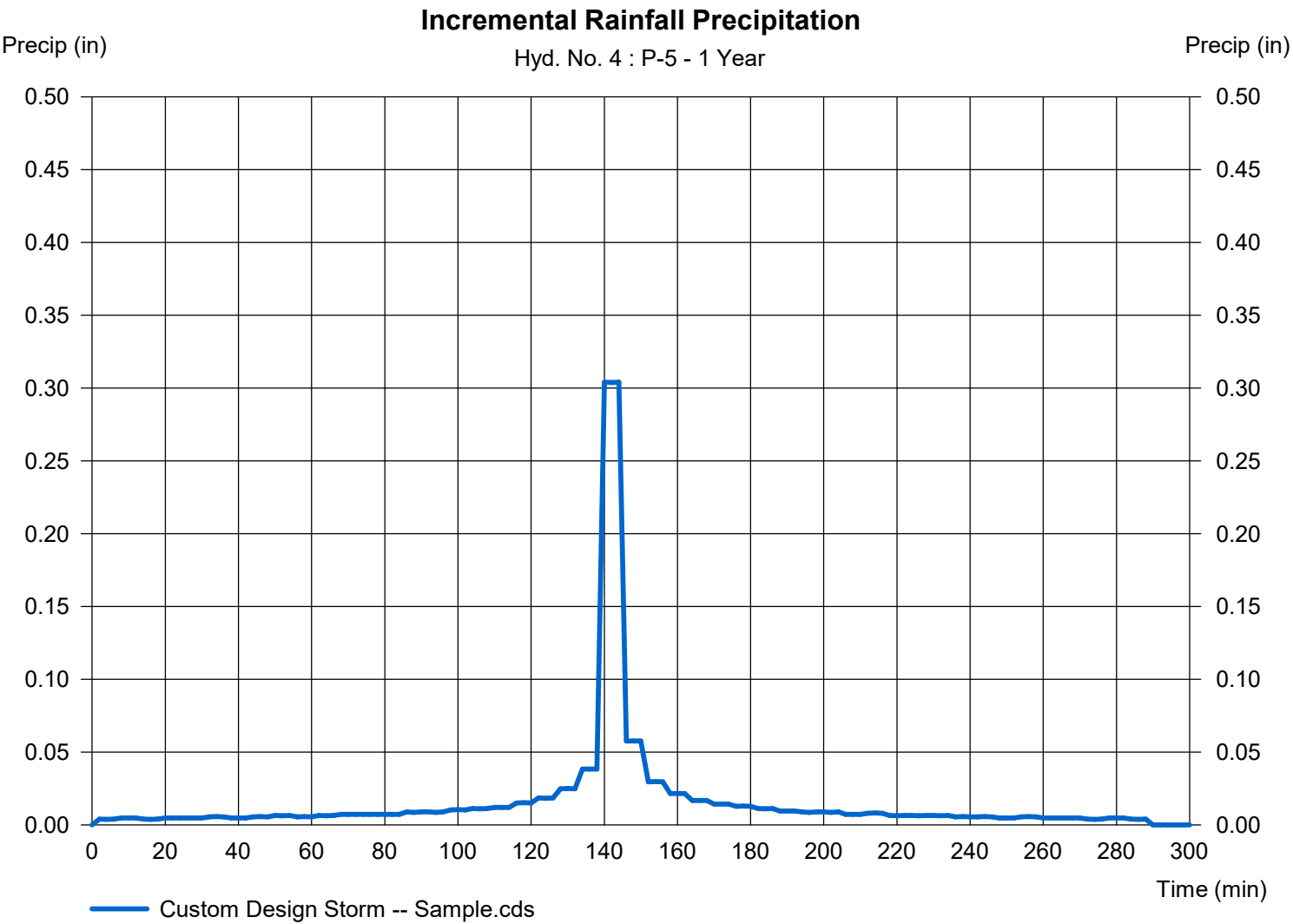
Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 4

P-5			
Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

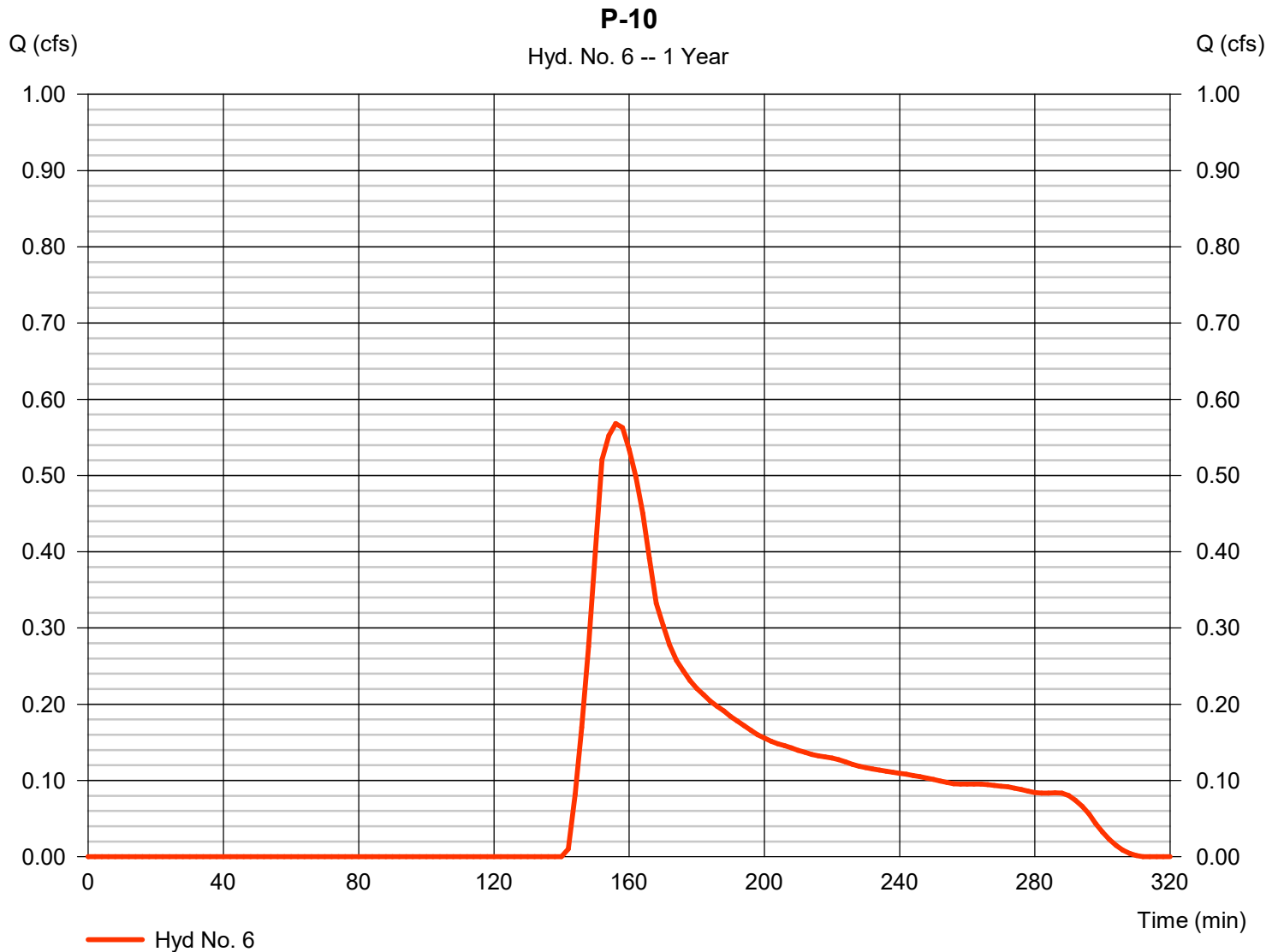
Tuesday, 04 / 7 / 2020

Hyd. No. 6

P-10

Hydrograph type	= SCS Runoff	Peak discharge	= 0.568 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 1,670 cuft
Drainage area	= 1.820 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.820$

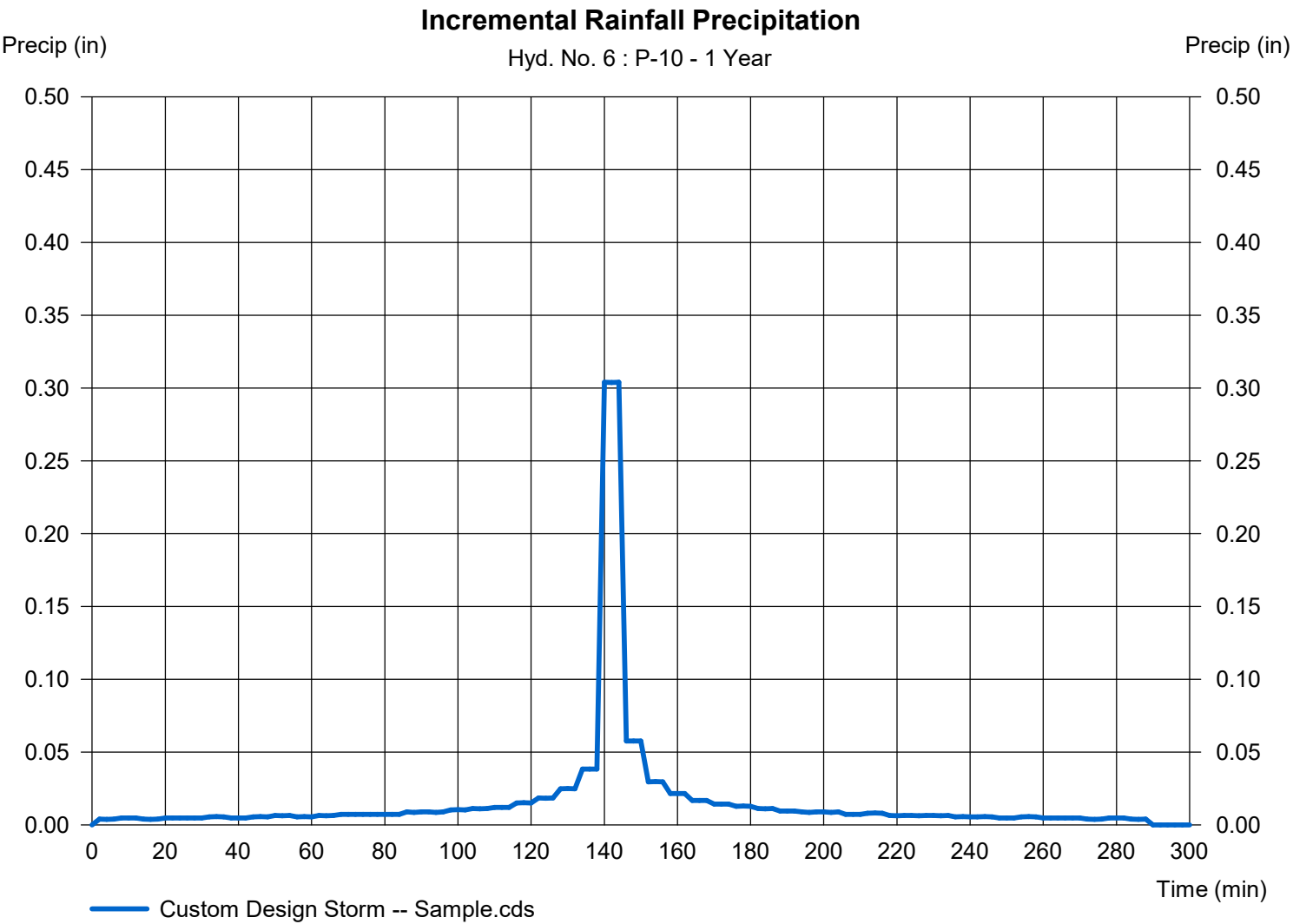


Precipitation Report

Hyd. No. 6

P-10

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

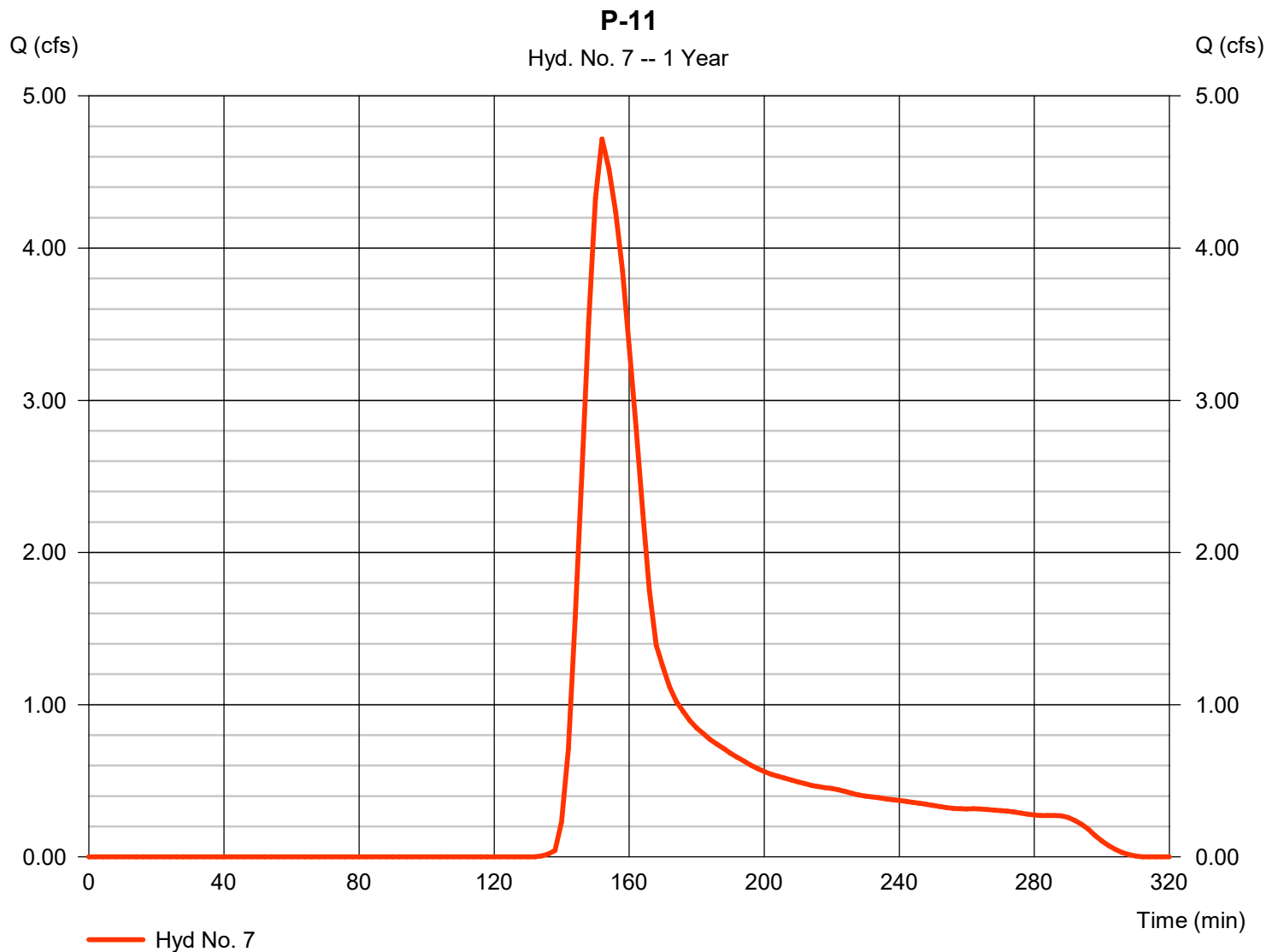
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Hydrograph type	= SCS Runoff	Peak discharge	= 4.717 cfs
Storm frequency	= 1 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 8,679 cuft
Drainage area	= 3.180 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

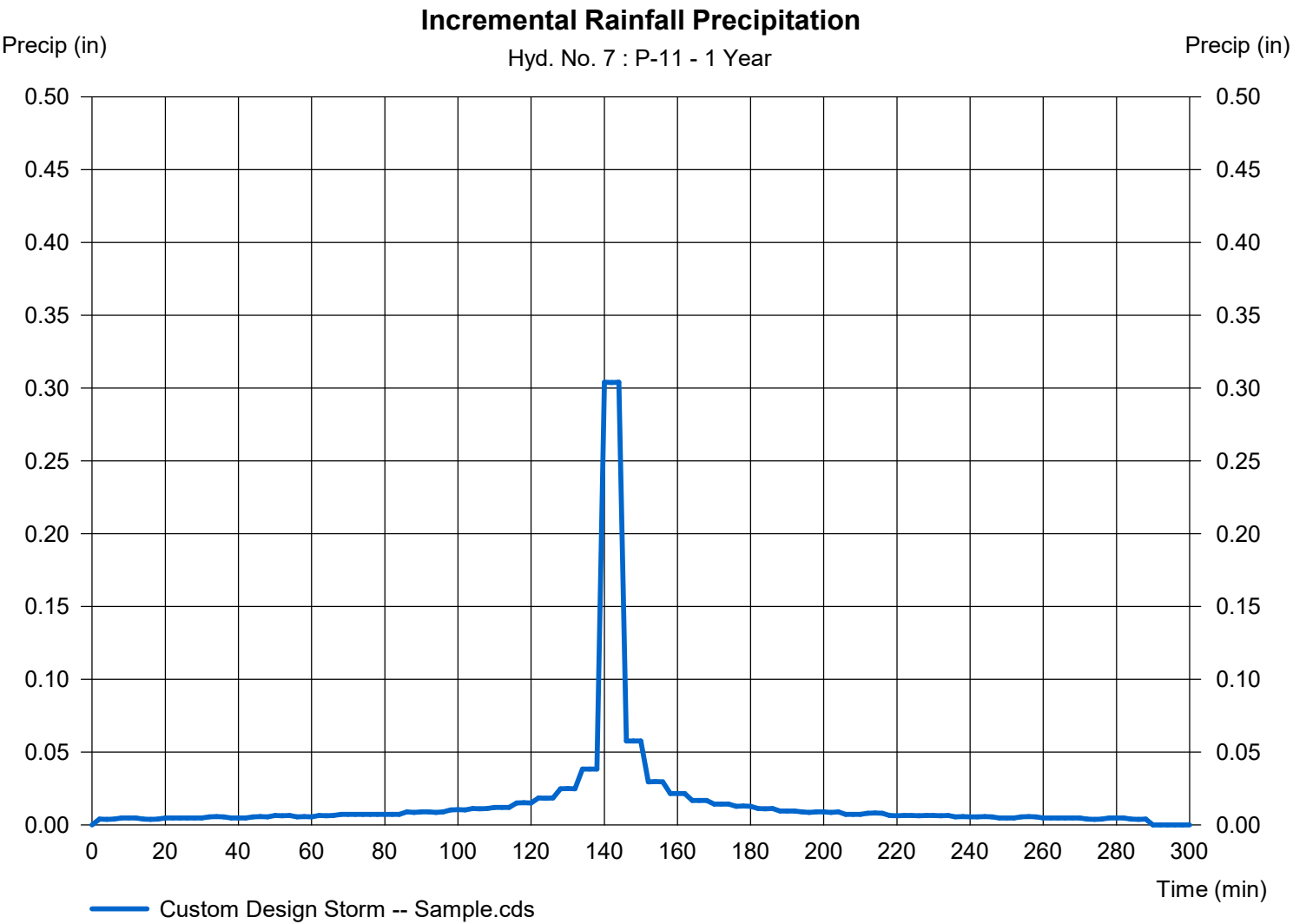


Precipitation Report

Hyd. No. 7

P-11

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

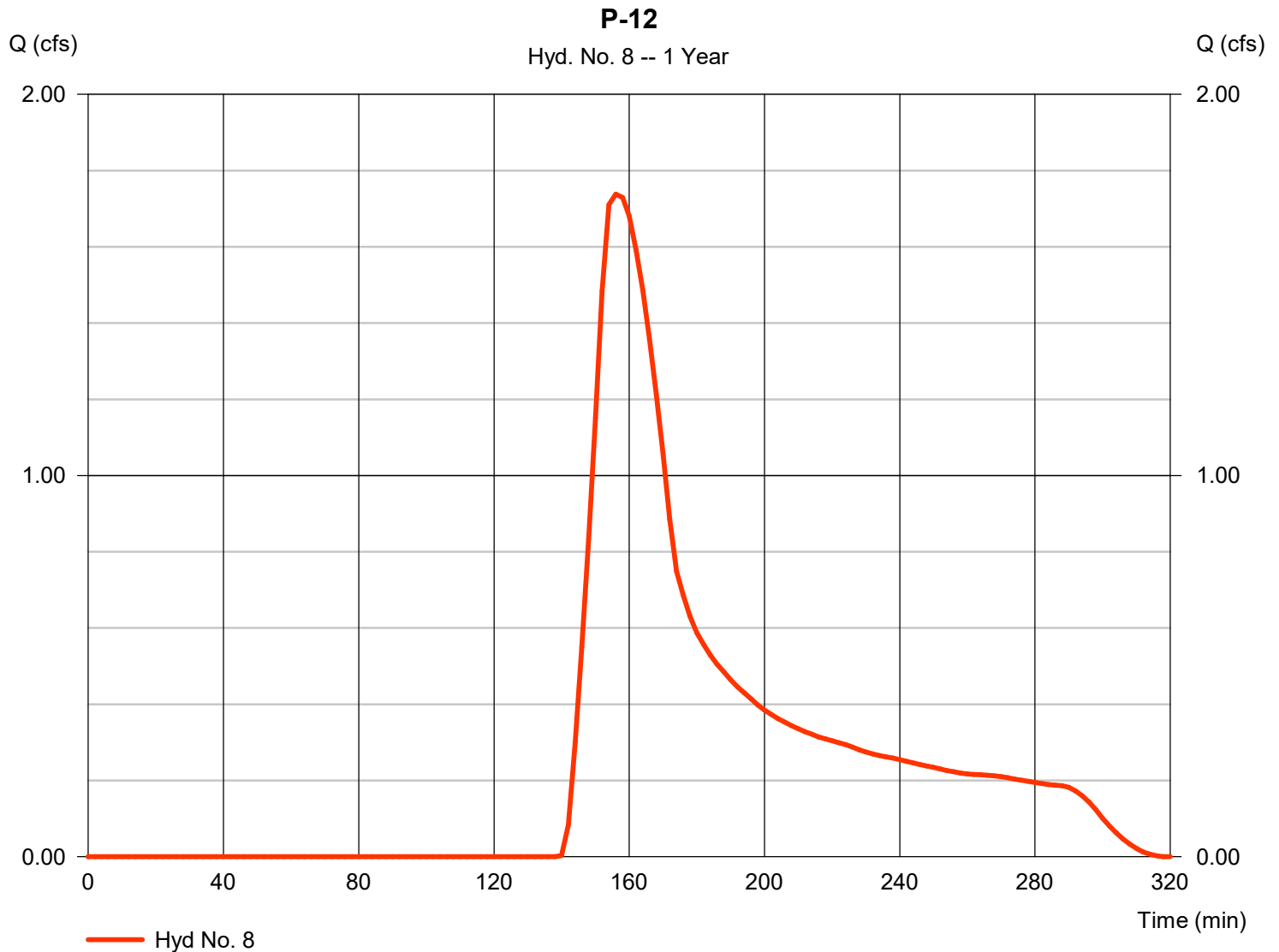
Tuesday, 04 / 7 / 2020

Hyd. No. 8

P-12

Hydrograph type	= SCS Runoff	Peak discharge	= 1.738 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 4,620 cuft
Drainage area	= 2.910 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.910$



Precipitation Report

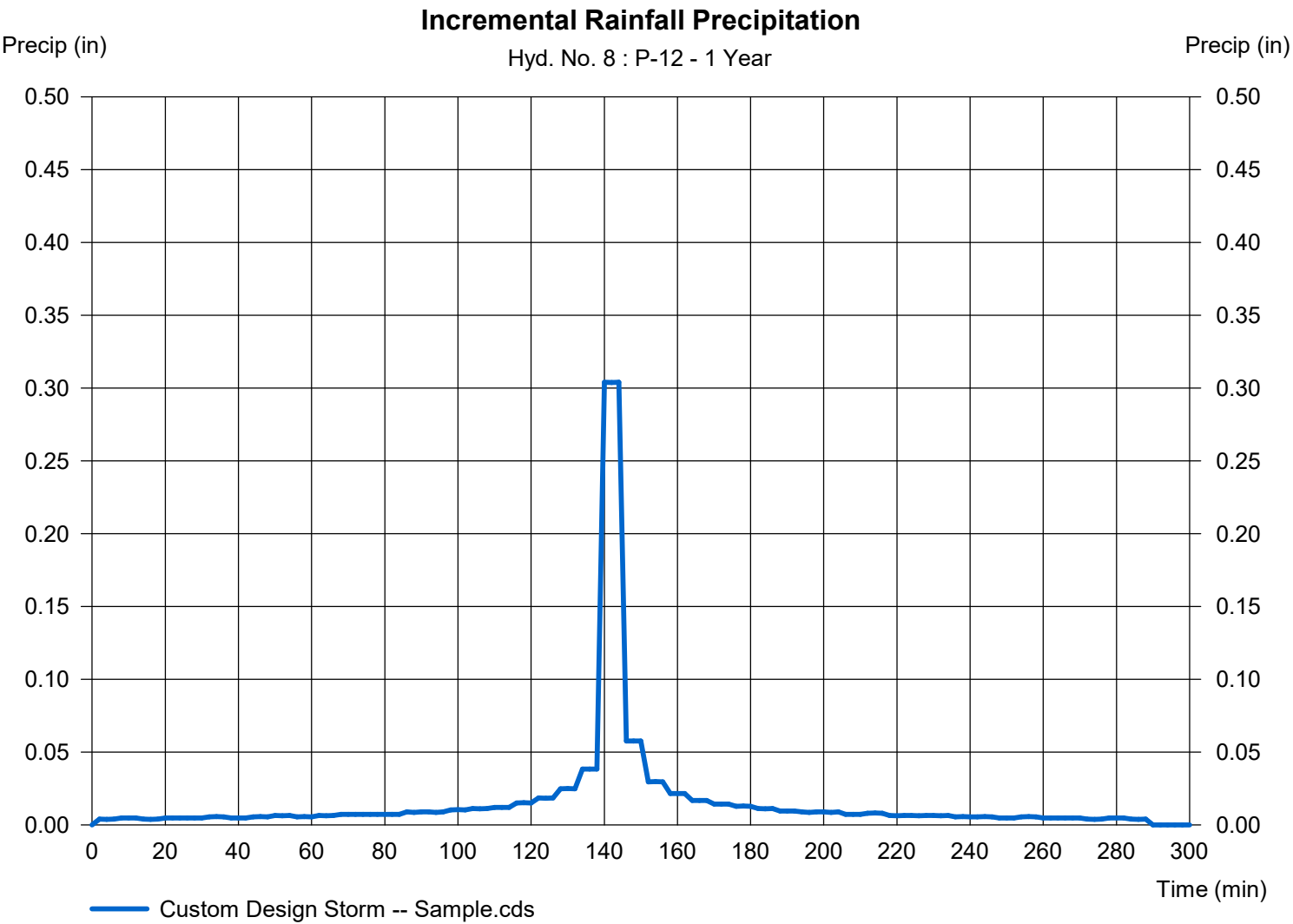
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 8

P-12

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

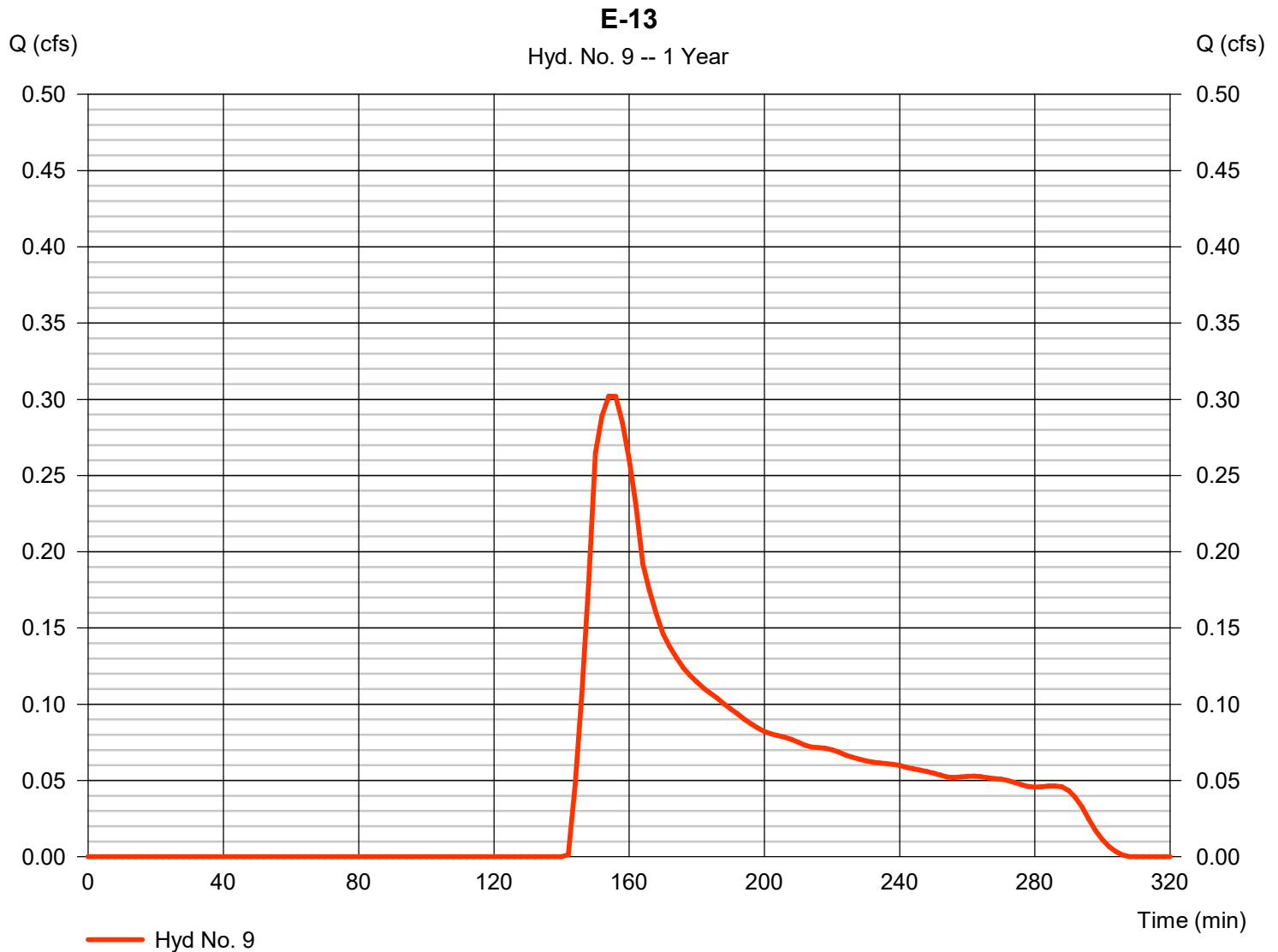
Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 0.302 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 877 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$



Precipitation Report

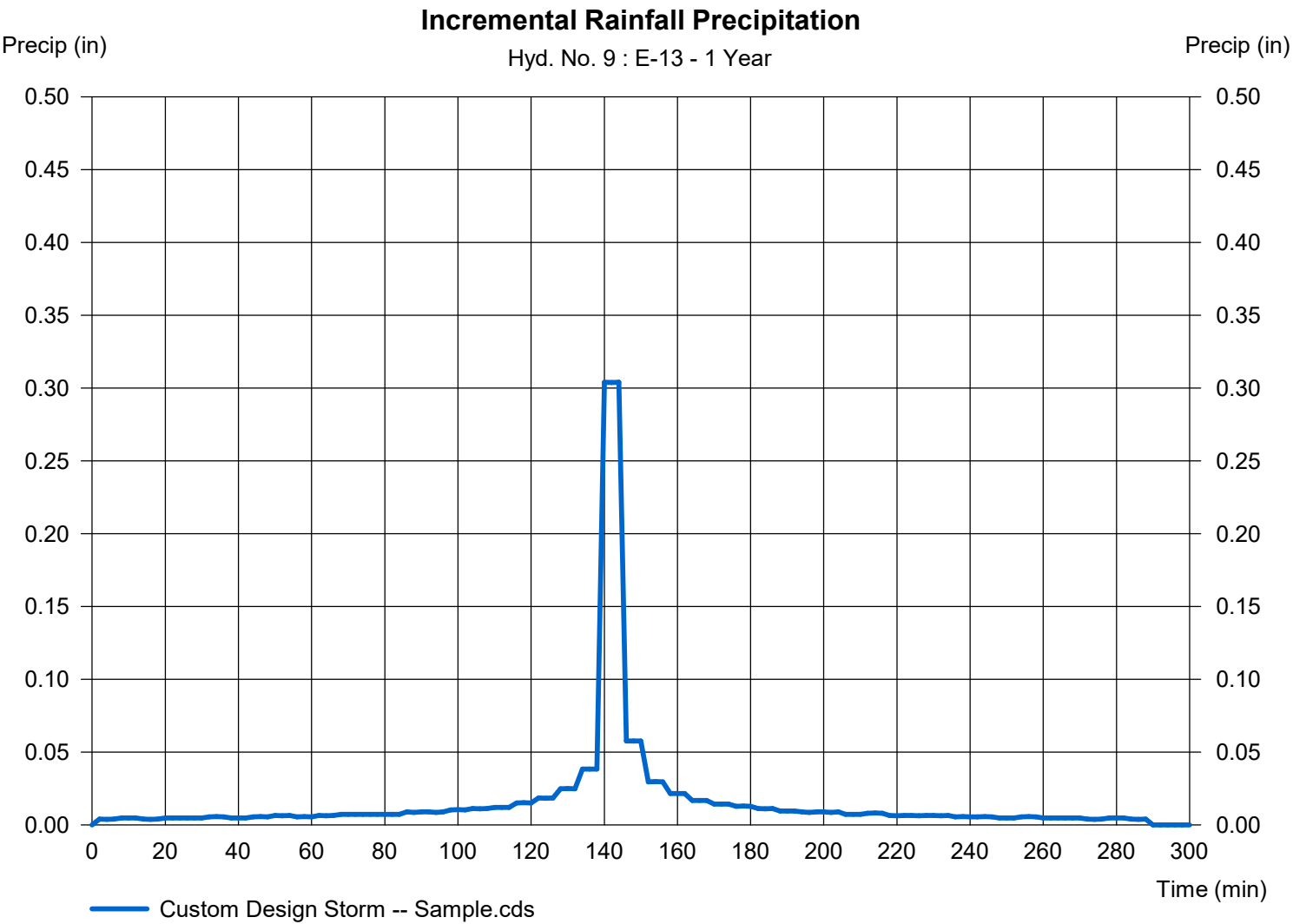
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-13

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

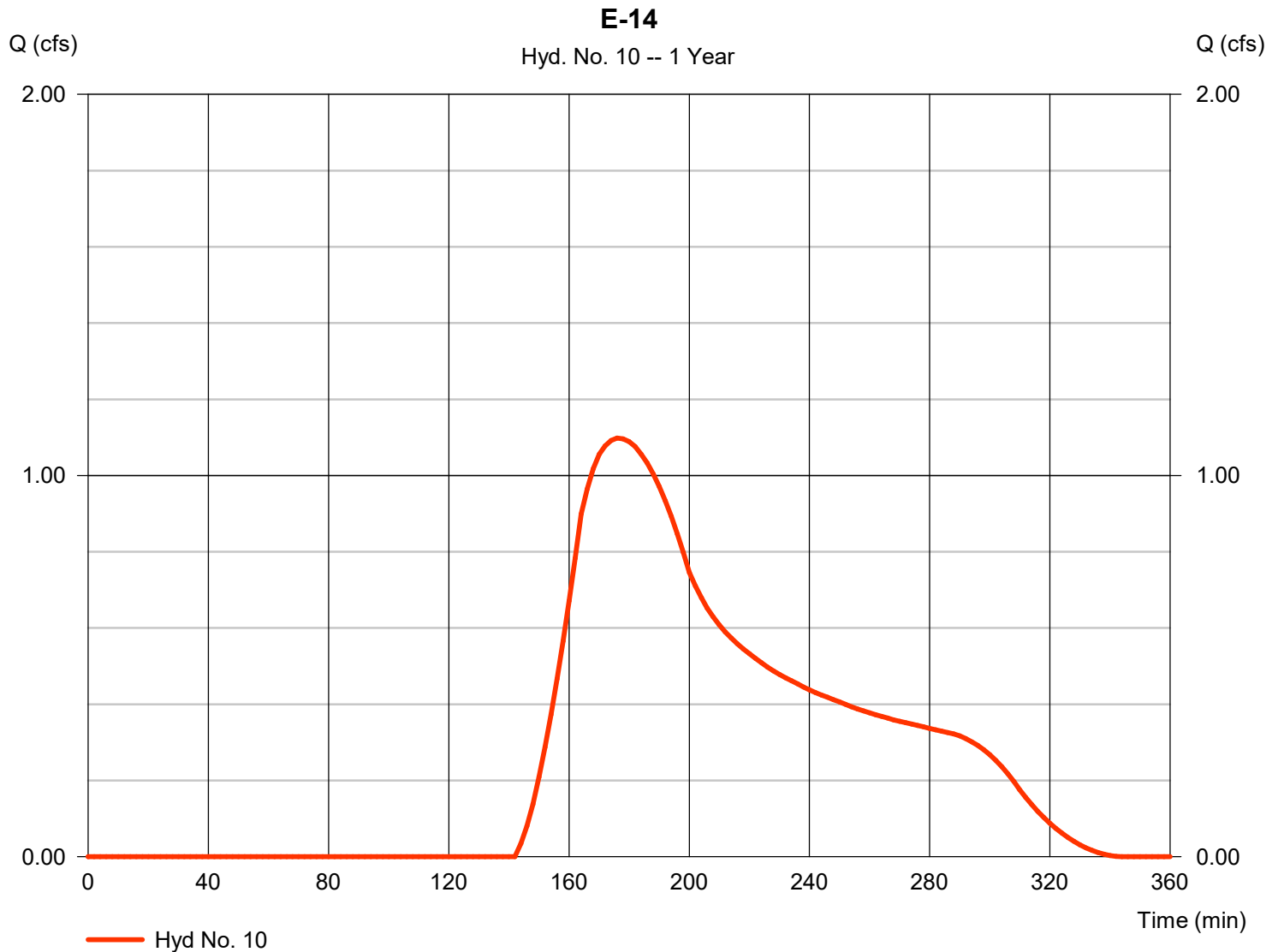
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 1.098 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 5,502 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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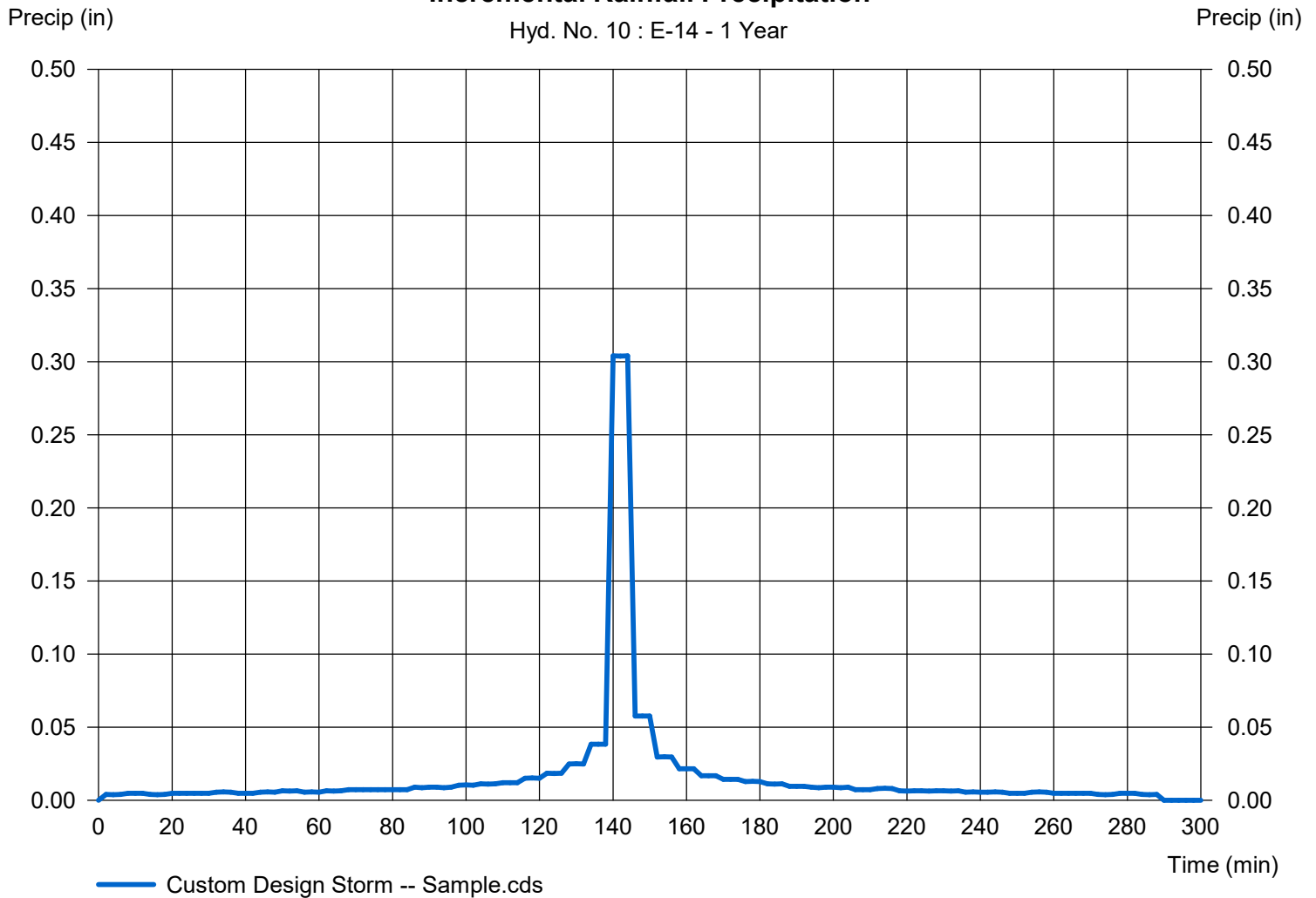
Hyd. No. 10

E-14

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-14 - 1 Year



Hydrograph Report

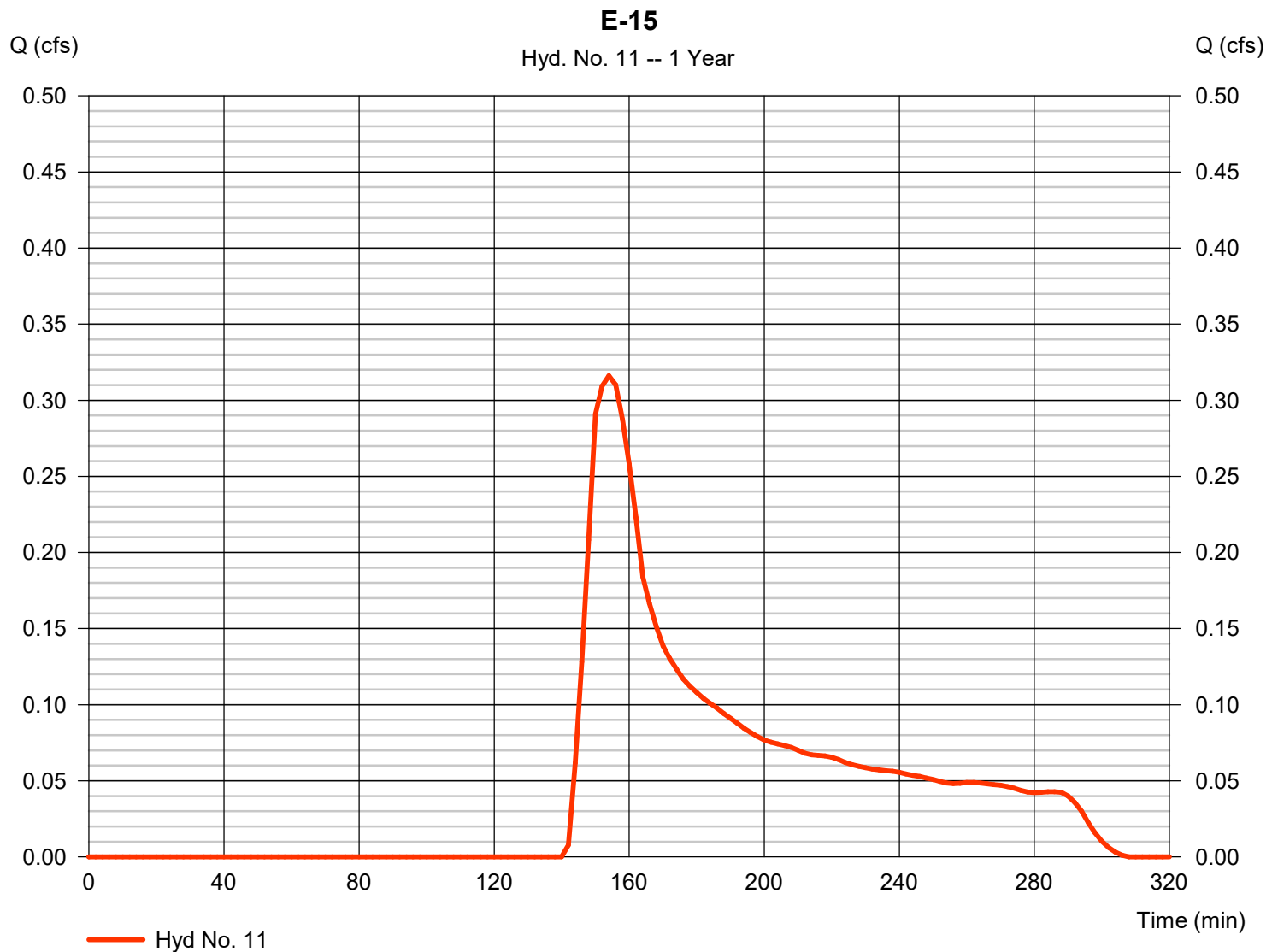
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 0.316 cfs
Storm frequency	= 1 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 854 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

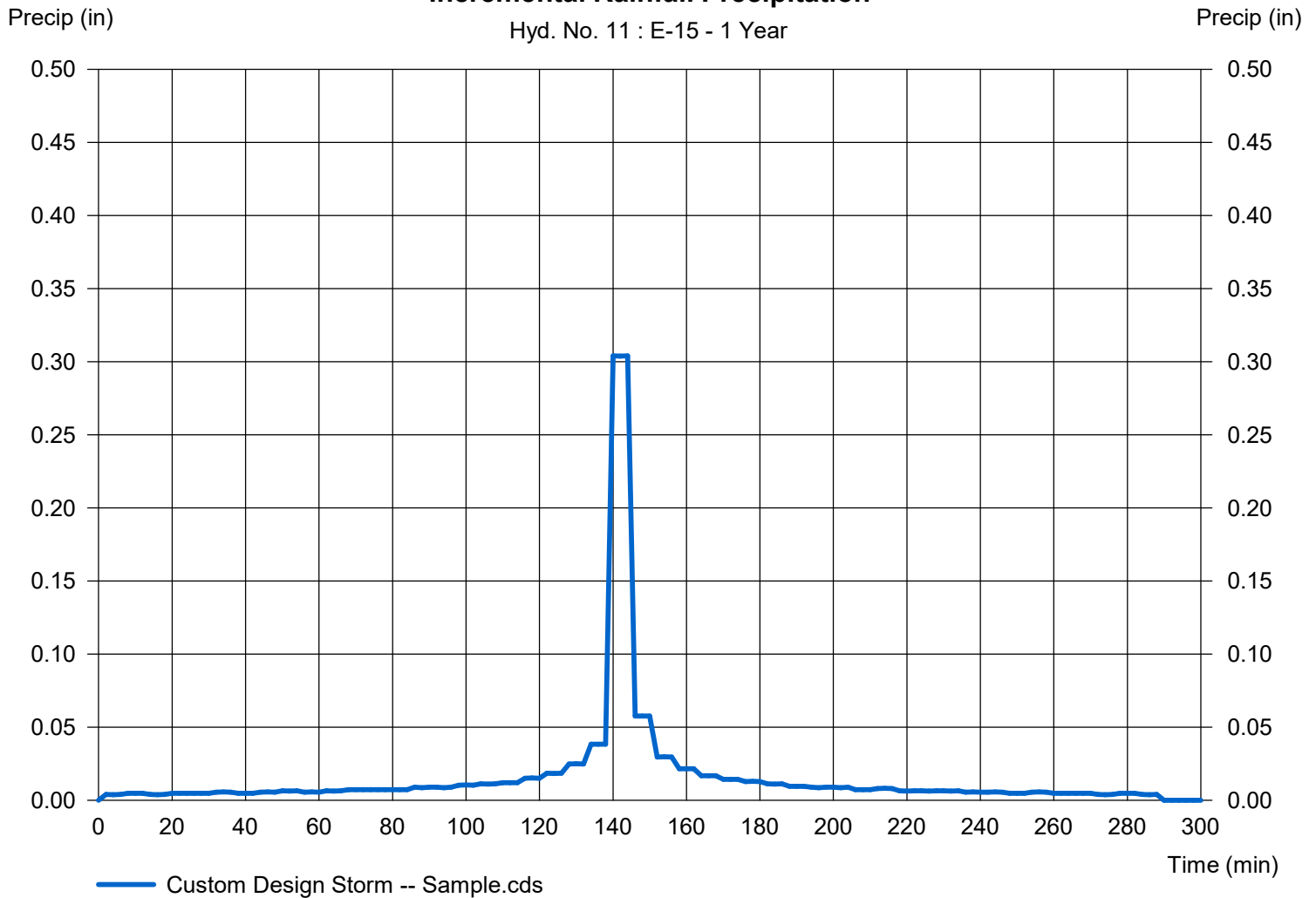
Hyd. No. 11

E-15

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-15 - 1 Year



Hydrograph Report

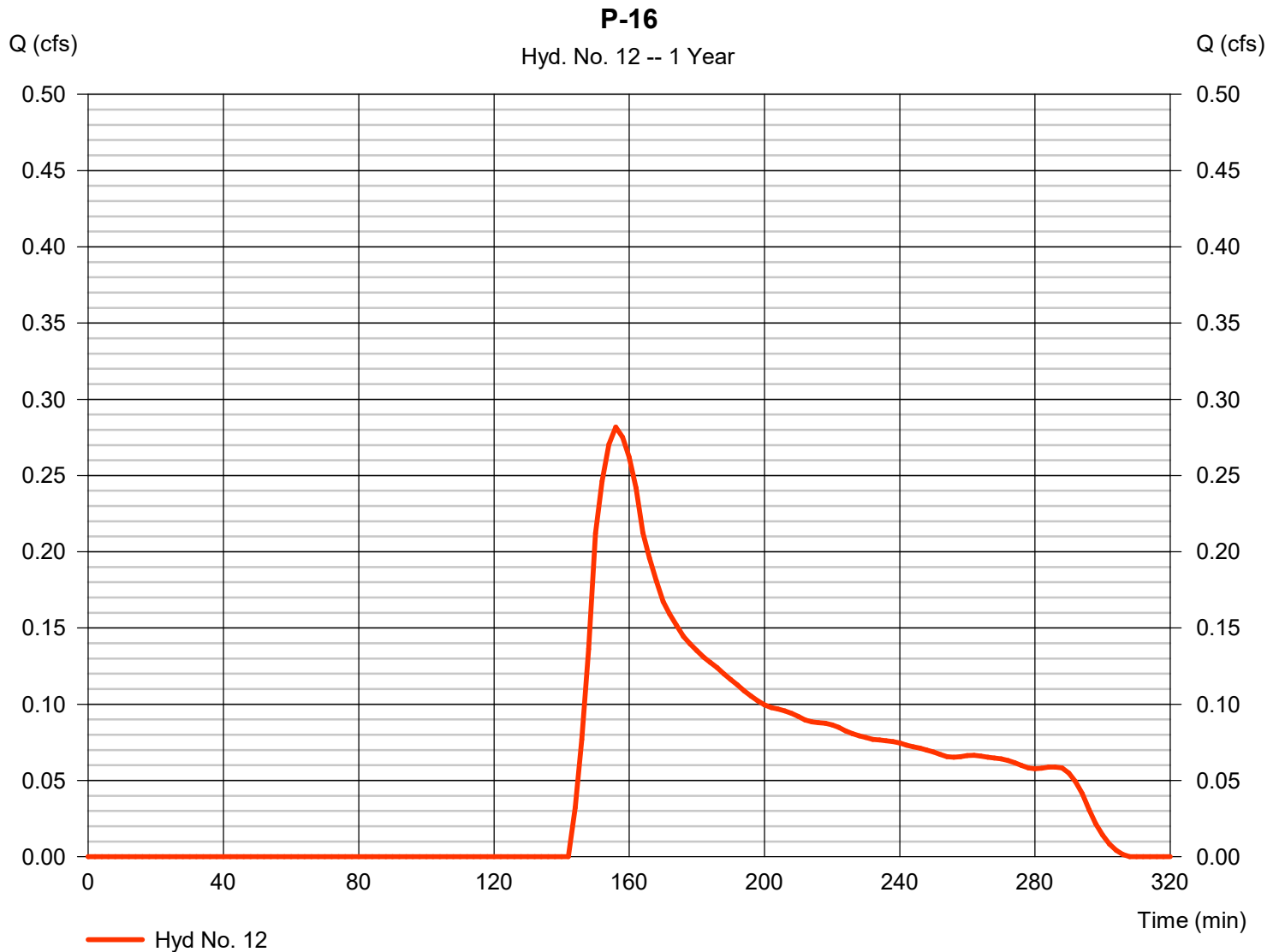
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 12

P-16

Hydrograph type	= SCS Runoff	Peak discharge	= 0.282 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 977 cuft
Drainage area	= 1.560 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

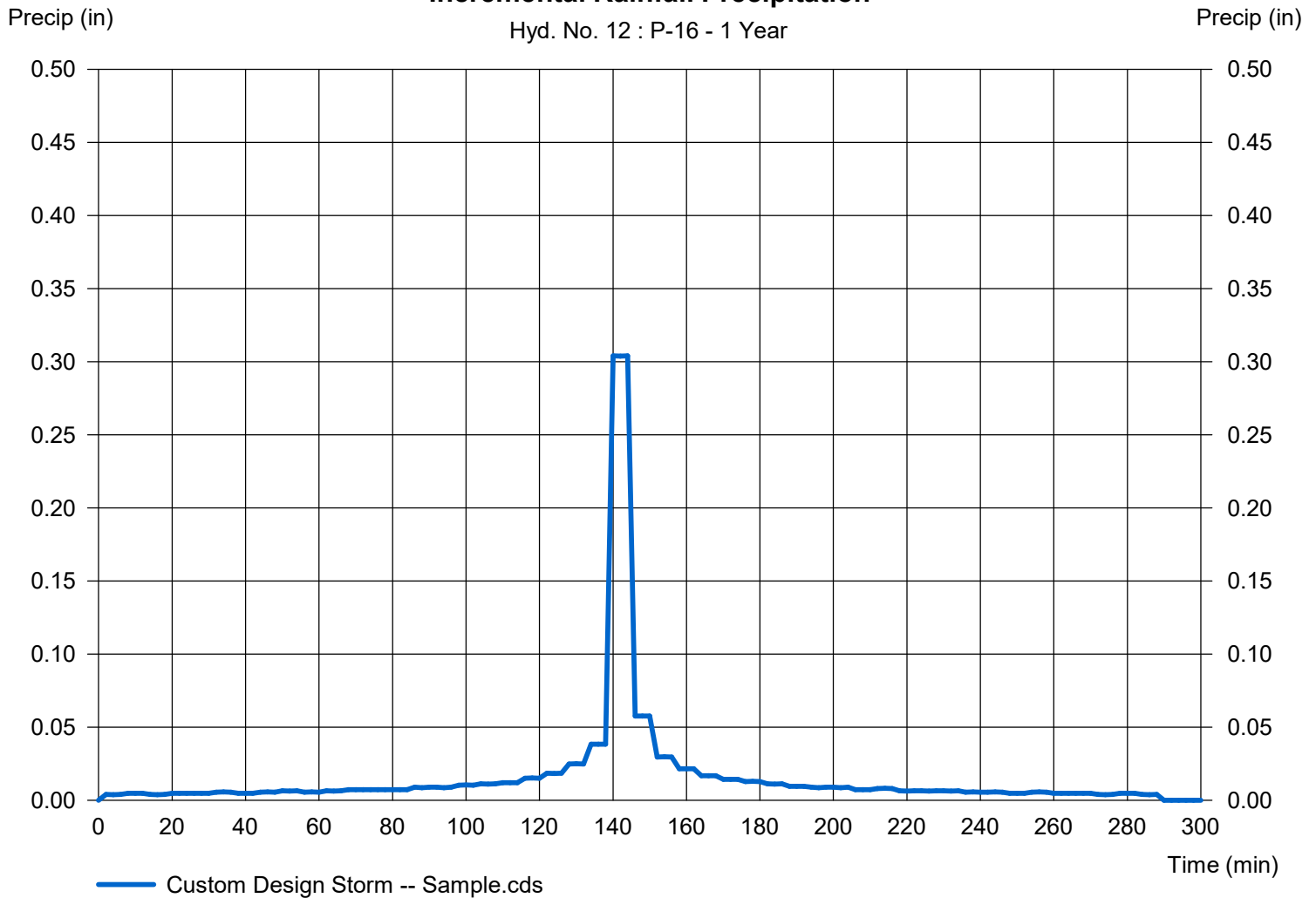
Hyd. No. 12

P-16

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : P-16 - 1 Year



Hydrograph Report

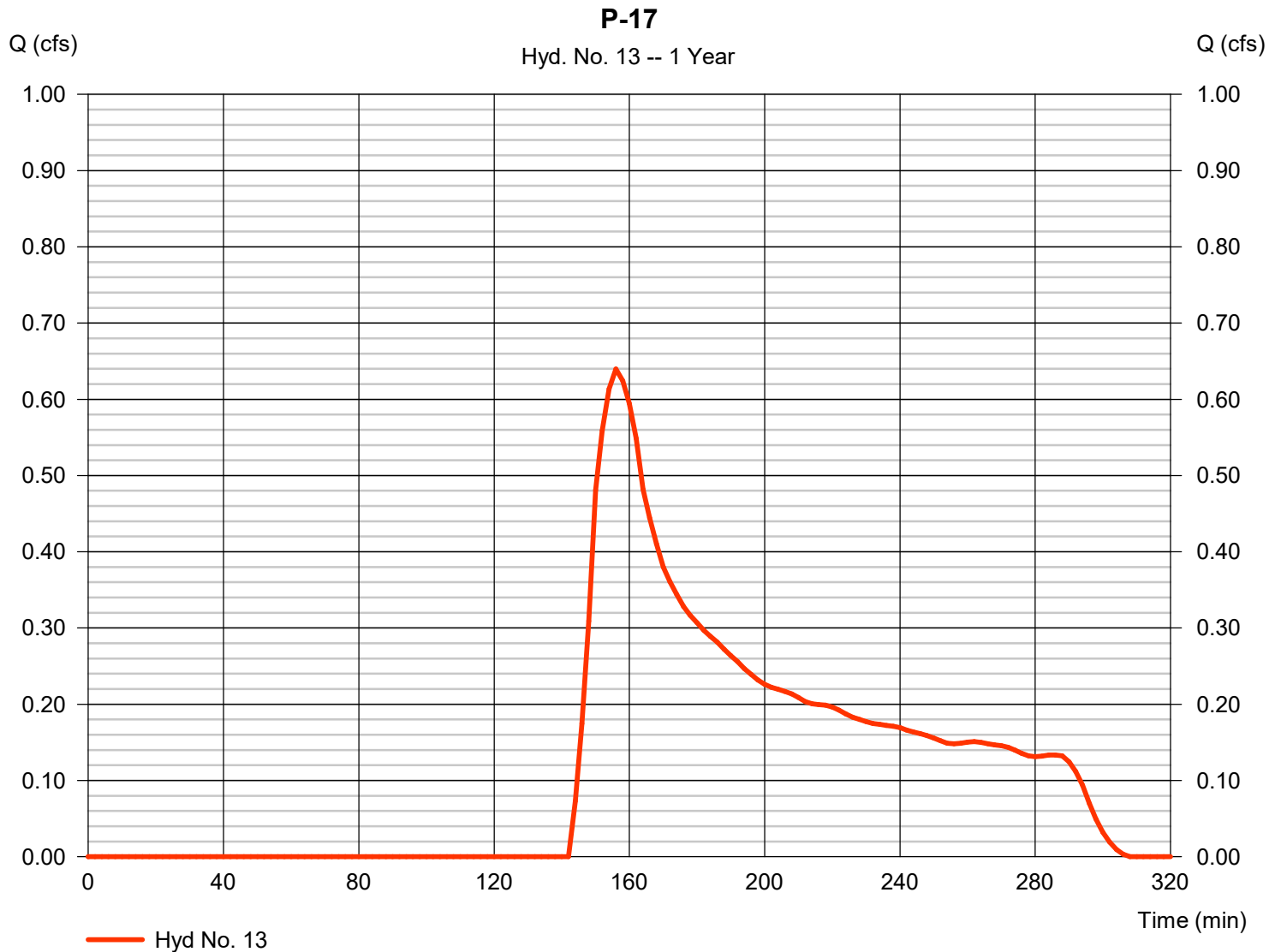
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

P-17

Hydrograph type	= SCS Runoff	Peak discharge	= 0.640 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 2,217 cuft
Drainage area	= 3.540 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

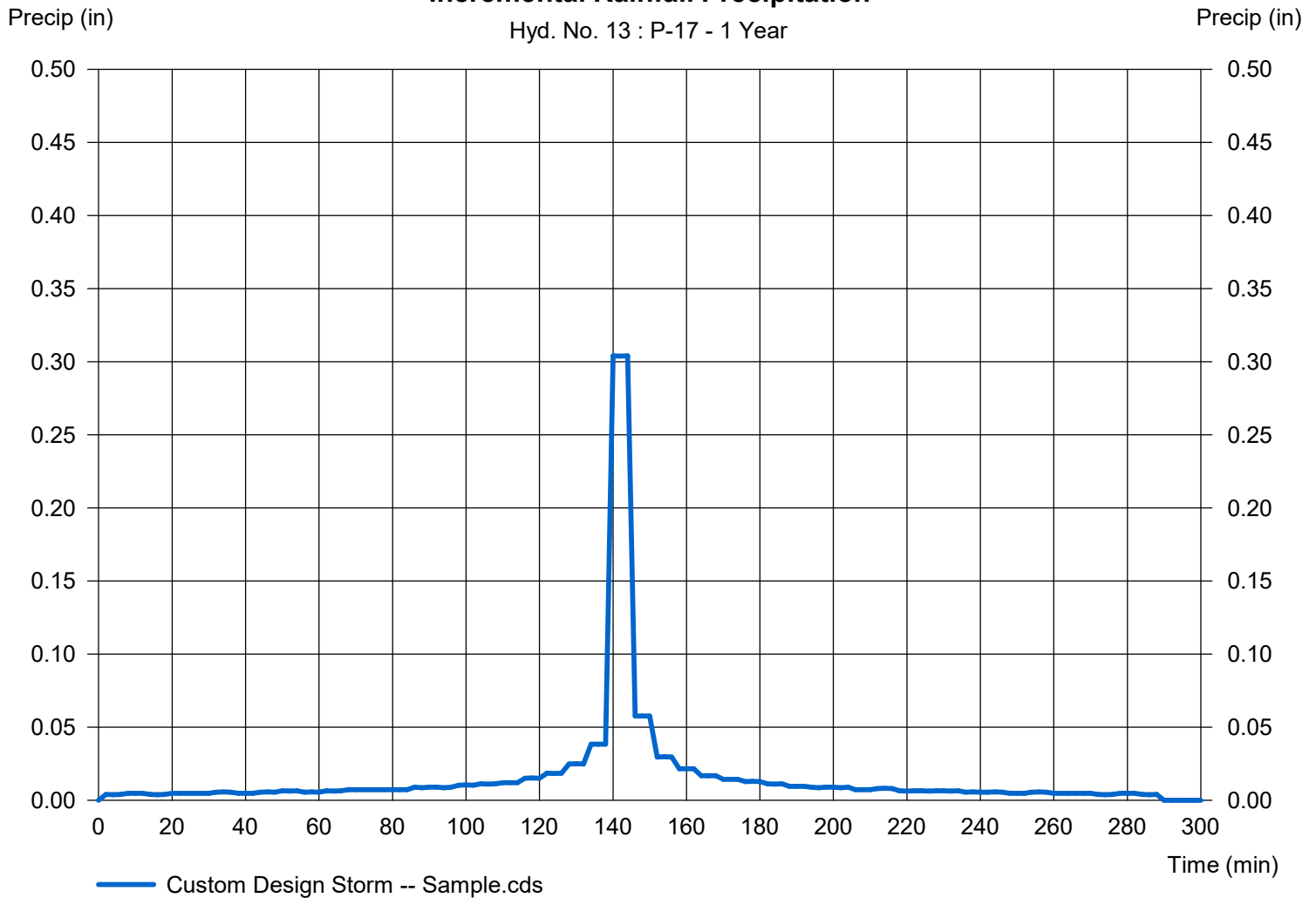
Hyd. No. 13

P-17

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : P-17 - 1 Year



Hydrograph Report

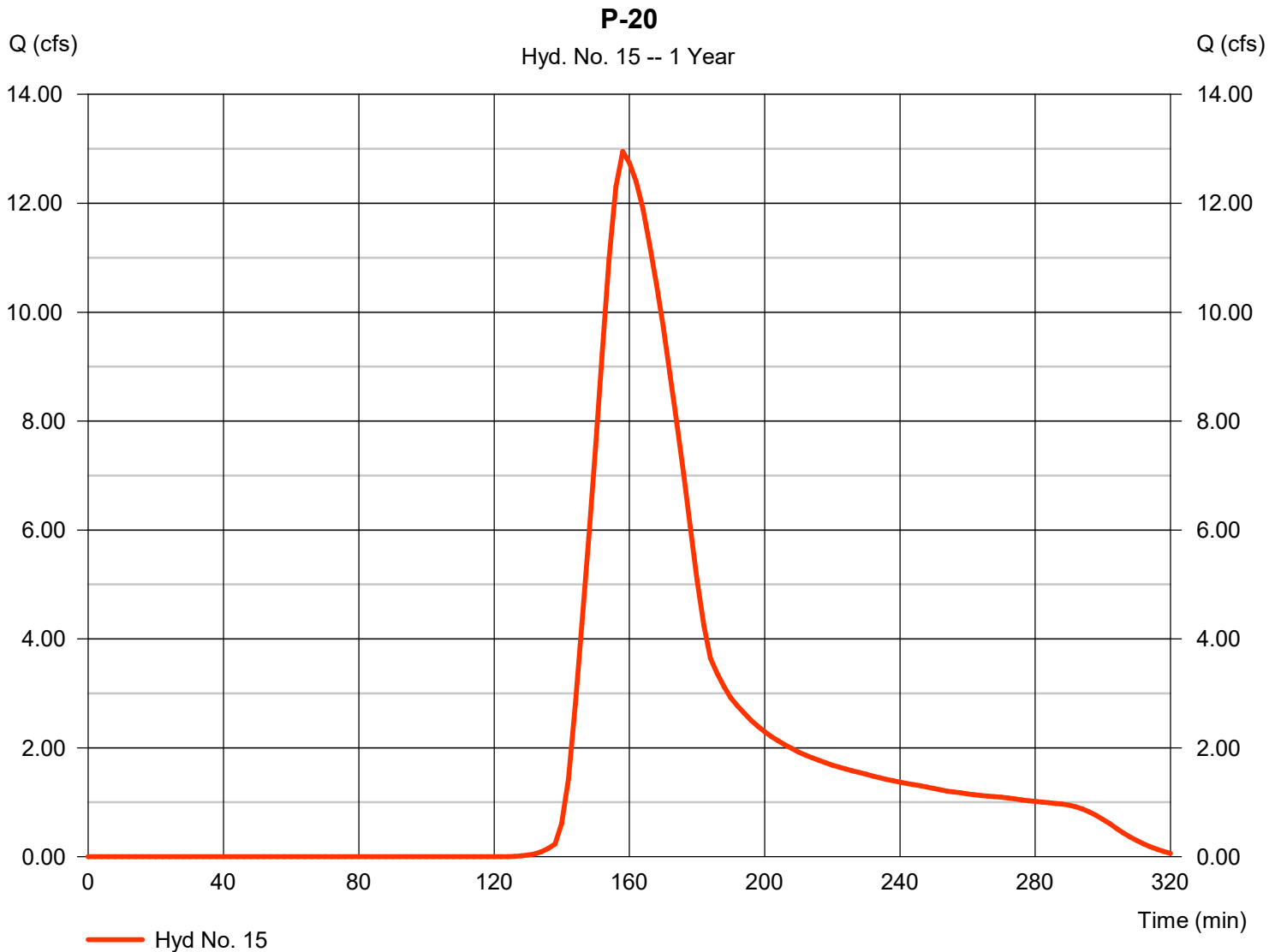
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

P-20

Hydrograph type	= SCS Runoff	Peak discharge	= 12.95 cfs
Storm frequency	= 1 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 32,565 cuft
Drainage area	= 9.850 ac	Curve number	= 82
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

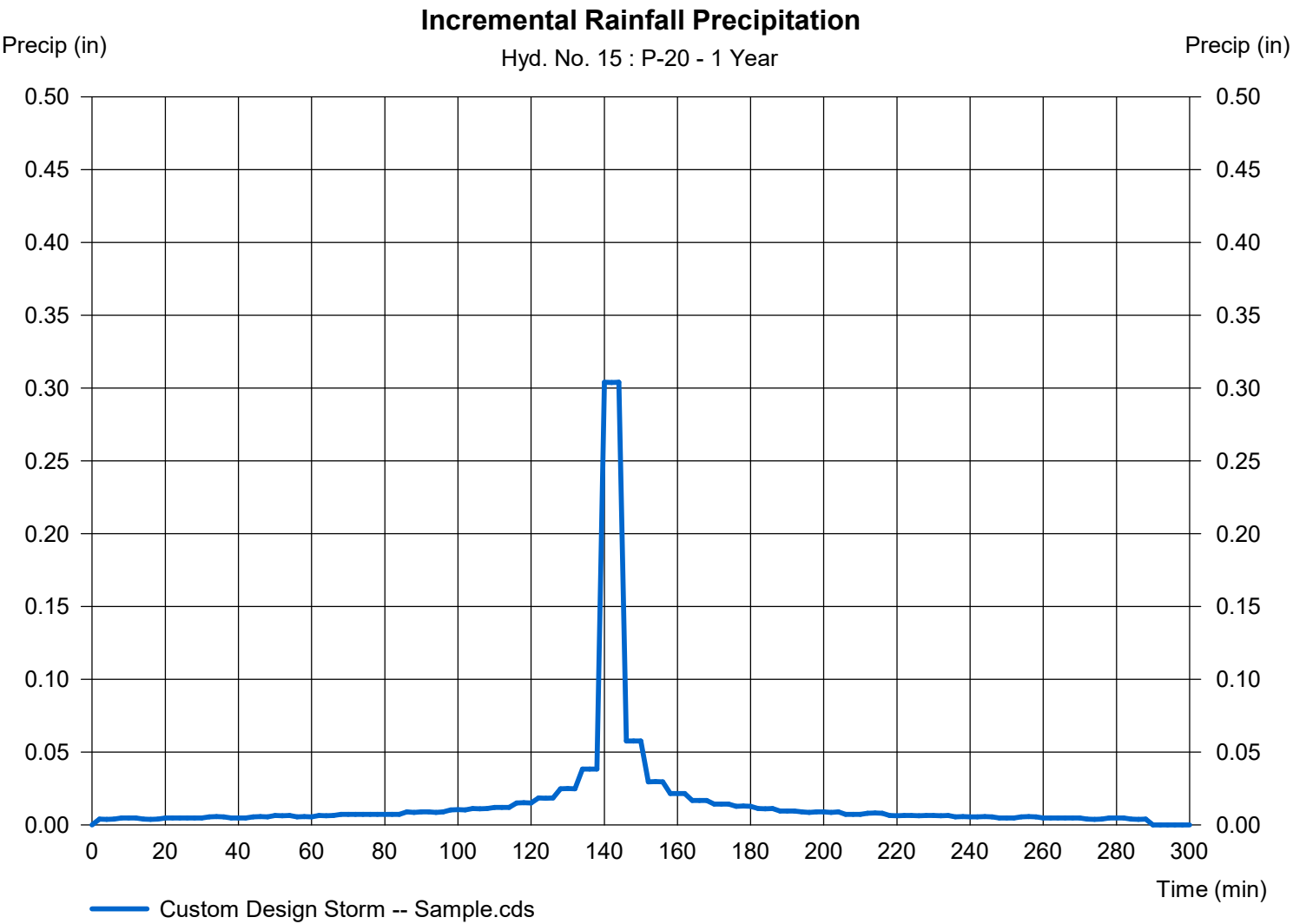
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

P-20

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

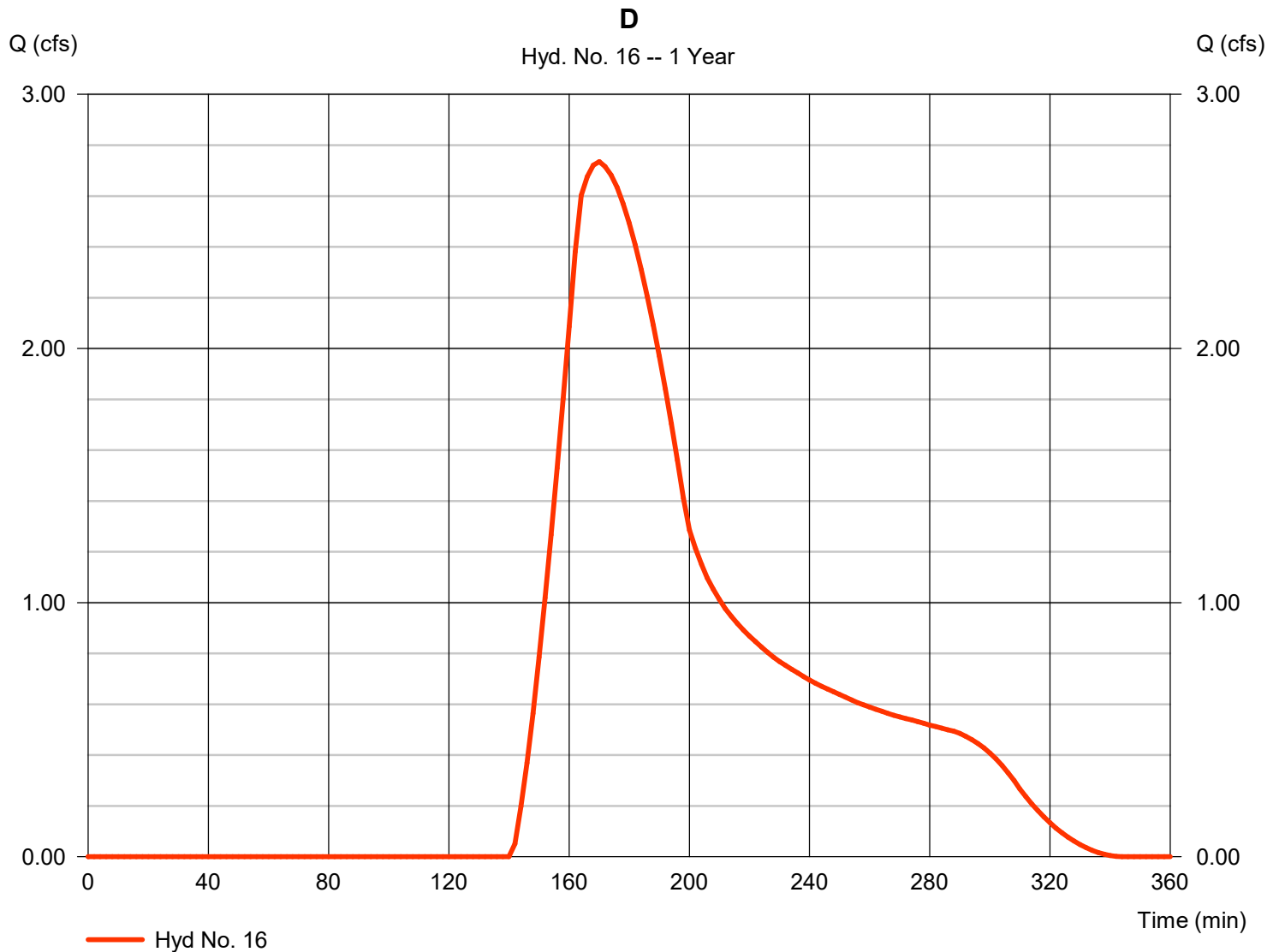
Tuesday, 04 / 7 / 2020

Hyd. No. 16

D

Hydrograph type	= SCS Runoff	Peak discharge	= 2.736 cfs
Storm frequency	= 1 yrs	Time to peak	= 170 min
Time interval	= 2 min	Hyd. volume	= 11,041 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 2.40 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

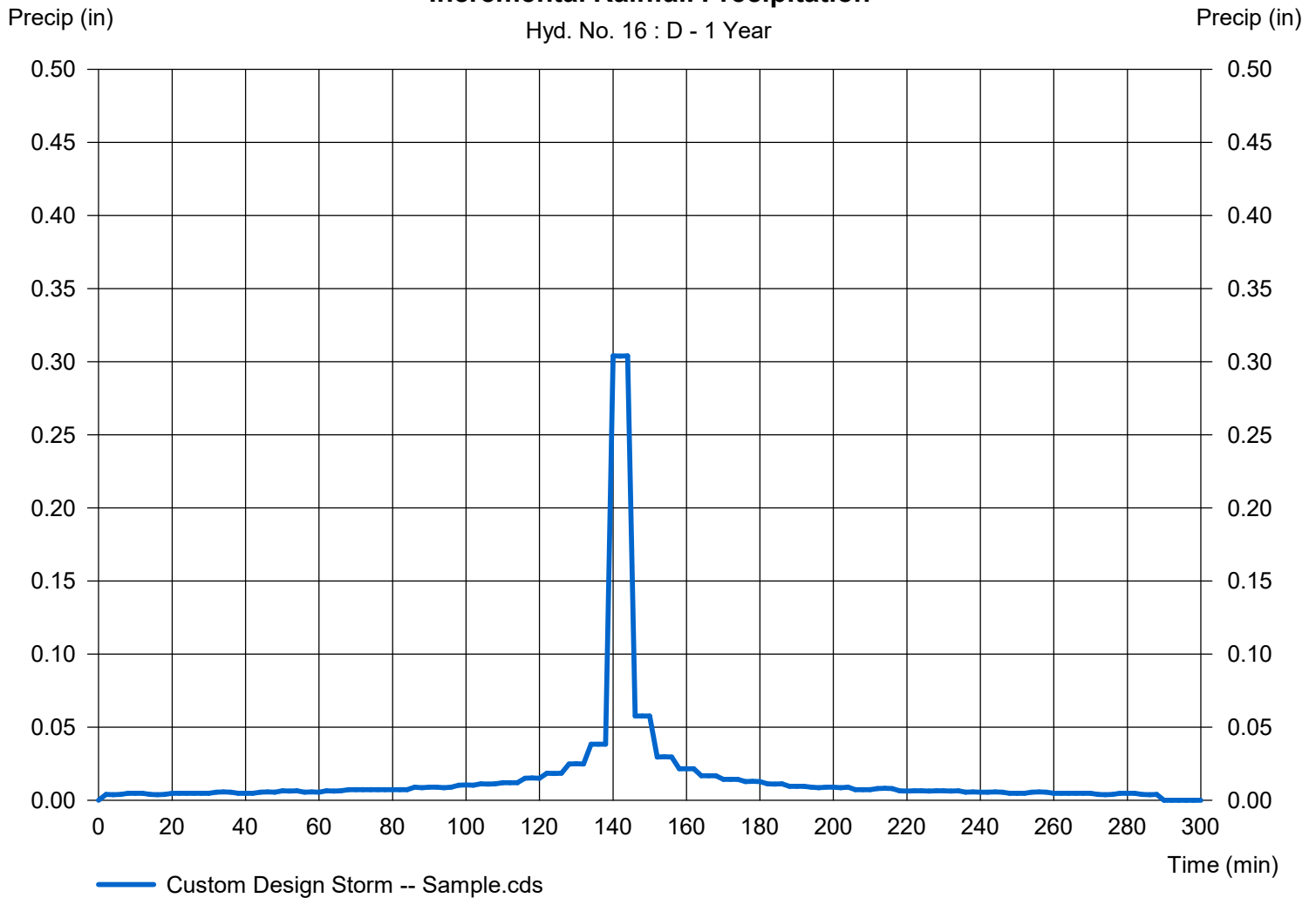
Hyd. No. 16

D

Storm Frequency	= 1 yrs	Time interval	= 2 min
Total precip.	= 2.4000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 16 : D - 1 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 18

Pond 5

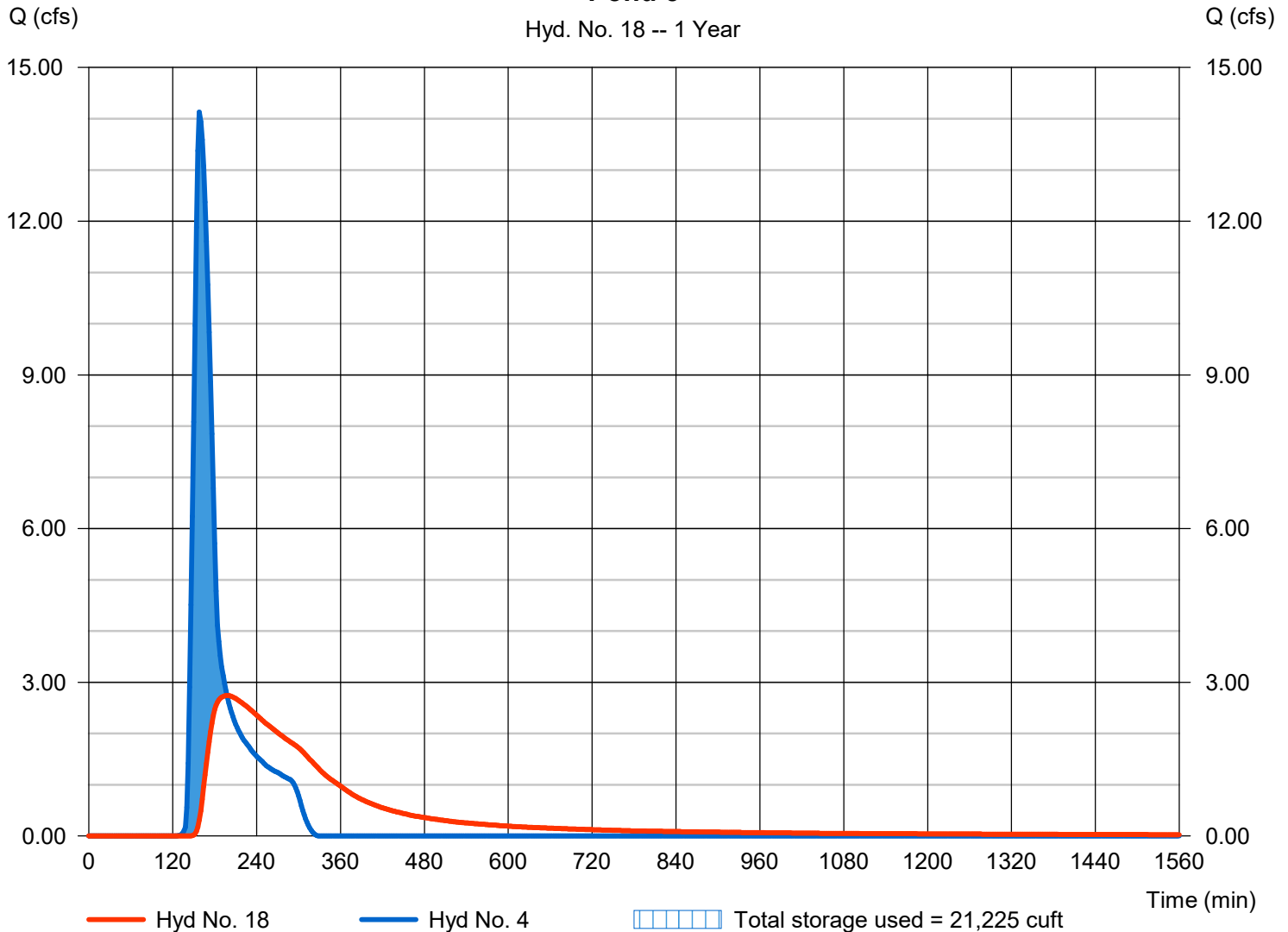
Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - P-5
 Reservoir name = Pond 5

Peak discharge = 2.740 cfs
 Time to peak = 198 min
 Hyd. volume = 35,057 cuft
 Max. Elevation = 982.53 ft
 Max. Storage = 21,225 cuft

Storage Indication method used.

Pond 5

Hyd. No. 18 -- 1 Year



Pond Report

35

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 22 - Pond 5

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 981.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	981.00	10,930	0	0
1.00	982.00	14,250	12,552	12,552
2.00	983.00	18,550	16,351	28,903
3.00	984.00	24,000	21,214	50,118
4.00	985.00	28,950	26,434	76,551
5.00	986.00	33,500	31,194	107,746

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	0.00	0.00	0.00
Span (in)	= 36.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 981.00	0.00	0.00	0.00
Length (ft)	= 75.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 16.00	0.00	0.00	10.00
Crest El. (ft)	= 984.25	981.00	0.00	985.60
Weir Coeff.	= 3.33	1.05	3.33	3.33
Weir Type	= 1	45 degV	---	Broad
Multi-Stage	= Yes	Yes	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).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	981.00	0.00	---	---	---	0.00	---	---	0.00	---	---	0.000
0.10	1,255	981.10	0.00 ic	---	---	---	0.00	0.00 s	---	0.00	---	---	0.003
0.20	2,510	981.20	0.02 ic	---	---	---	0.00	0.02 s	---	0.00	---	---	0.018
0.30	3,766	981.30	0.05 ic	---	---	---	0.00	0.05 s	---	0.00	---	---	0.049
0.40	5,021	981.40	0.10 ic	---	---	---	0.00	0.10 s	---	0.00	---	---	0.100
0.50	6,276	981.50	0.18 ic	---	---	---	0.00	0.17 s	---	0.00	---	---	0.174
0.60	7,531	981.60	0.29 ic	---	---	---	0.00	0.27 s	---	0.00	---	---	0.273
0.70	8,786	981.70	0.41 ic	---	---	---	0.00	0.40 s	---	0.00	---	---	0.400
0.80	10,042	981.80	0.56 ic	---	---	---	0.00	0.56 s	---	0.00	---	---	0.556
0.90	11,297	981.90	0.74 ic	---	---	---	0.00	0.74 s	---	0.00	---	---	0.742
1.00	12,552	982.00	0.96 ic	---	---	---	0.00	0.96 s	---	0.00	---	---	0.963
1.10	14,187	982.10	1.22 ic	---	---	---	0.00	1.22 s	---	0.00	---	---	1.218
1.20	15,822	982.20	1.53 ic	---	---	---	0.00	1.51 s	---	0.00	---	---	1.507
1.30	17,457	982.30	1.89 ic	---	---	---	0.00	1.83 s	---	0.00	---	---	1.831
1.40	19,093	982.40	2.19 ic	---	---	---	0.00	2.19 s	---	0.00	---	---	2.193
1.50	20,728	982.50	2.61 ic	---	---	---	0.00	2.61 s	---	0.00	---	---	2.607
1.60	22,363	982.60	3.11 ic	---	---	---	0.00	3.05 s	---	0.00	---	---	3.046
1.70	23,998	982.70	3.53 ic	---	---	---	0.00	3.53 s	---	0.00	---	---	3.528
1.80	25,633	982.80	4.09 ic	---	---	---	0.00	4.07 s	---	0.00	---	---	4.068
1.90	27,268	982.90	4.76 ic	---	---	---	0.00	4.63 s	---	0.00	---	---	4.630
2.00	28,903	983.00	5.26 ic	---	---	---	0.00	5.26 s	---	0.00	---	---	5.257
2.10	31,025	983.10	5.93 oc	---	---	---	0.00	5.92 s	---	0.00	---	---	5.916
2.20	33,146	983.20	6.60 oc	---	---	---	0.00	6.60 s	---	0.00	---	---	6.603
2.30	35,268	983.30	7.55 oc	---	---	---	0.00	7.31 s	---	0.00	---	---	7.306
2.40	37,389	983.40	8.28 oc	---	---	---	0.00	8.08 s	---	0.00	---	---	8.083
2.50	39,511	983.50	9.03 oc	---	---	---	0.00	8.91 s	---	0.00	---	---	8.905
2.60	41,632	983.60	9.80 oc	---	---	---	0.00	9.77 s	---	0.00	---	---	9.773
2.70	43,753	983.70	10.84 oc	---	---	---	0.00	10.63 s	---	0.00	---	---	10.63
2.80	45,875	983.80	11.63 oc	---	---	---	0.00	11.59 s	---	0.00	---	---	11.59
2.90	47,996	983.90	12.69 oc	---	---	---	0.00	12.52 s	---	0.00	---	---	12.52
3.00	50,118	984.00	13.75 oc	---	---	---	0.00	13.51 s	---	0.00	---	---	13.51
3.10	52,761	984.10	14.53 oc	---	---	---	0.00	14.53 s	---	0.00	---	---	14.53
3.20	55,405	984.20	15.81 oc	---	---	---	0.00	15.59 s	---	0.00	---	---	15.59
3.30	58,048	984.30	17.28 oc	---	---	---	0.59	16.52 s	---	0.00	---	---	17.11
3.40	60,691	984.40	19.91 oc	---	---	---	3.09	16.82 s	---	0.00	---	---	19.91
3.50	63,335	984.50	23.04 oc	---	---	---	6.66	16.39 s	---	0.00	---	---	23.04
3.60	65,978	984.60	25.57 oc	---	---	---	11.03	14.54 s	---	0.00	---	---	25.57

Continues on next page...

Pond 5

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.70	68,621	984.70	30.64 oc	---	---	---	16.07	14.56 s	---	0.00	---	---	30.63
3.80	71,265	984.80	34.92 oc	---	---	---	20.50 s	14.42 s	---	0.00	---	---	34.92
3.90	73,908	984.90	38.35 oc	---	---	---	23.99 s	14.36 s	---	0.00	---	---	38.35
4.00	76,551	985.00	41.31 oc	---	---	---	27.01 s	14.29 s	---	0.00	---	---	41.30
4.10	79,671	985.10	43.91 oc	---	---	---	29.66 s	14.24 s	---	0.00	---	---	43.90
4.20	82,790	985.20	46.24 oc	---	---	---	32.03 s	14.20 s	---	0.00	---	---	46.23
4.30	85,910	985.30	48.37 oc	---	---	---	34.18 s	14.18 s	---	0.00	---	---	48.36
4.40	89,029	985.40	50.34 oc	---	---	---	36.15 s	14.18 s	---	0.00	---	---	50.33
4.50	92,149	985.50	52.17 oc	---	---	---	37.97 s	14.20 s	---	0.00	---	---	52.17
4.60	95,268	985.60	53.90 oc	---	---	---	39.66 s	14.23 s	---	0.00	---	---	53.90
4.70	98,387	985.70	55.54 oc	---	---	---	41.25 s	14.29 s	---	1.05	---	---	56.58
4.80	101,507	985.80	57.11 oc	---	---	---	42.74 s	14.35 s	---	2.97	---	---	60.07
4.90	104,626	985.90	58.61 oc	---	---	---	44.16 s	14.44 s	---	5.47	---	---	64.06
5.00	107,746	986.00	60.06 oc	---	---	---	45.51 s	14.53 s	---	8.43	---	---	68.46

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

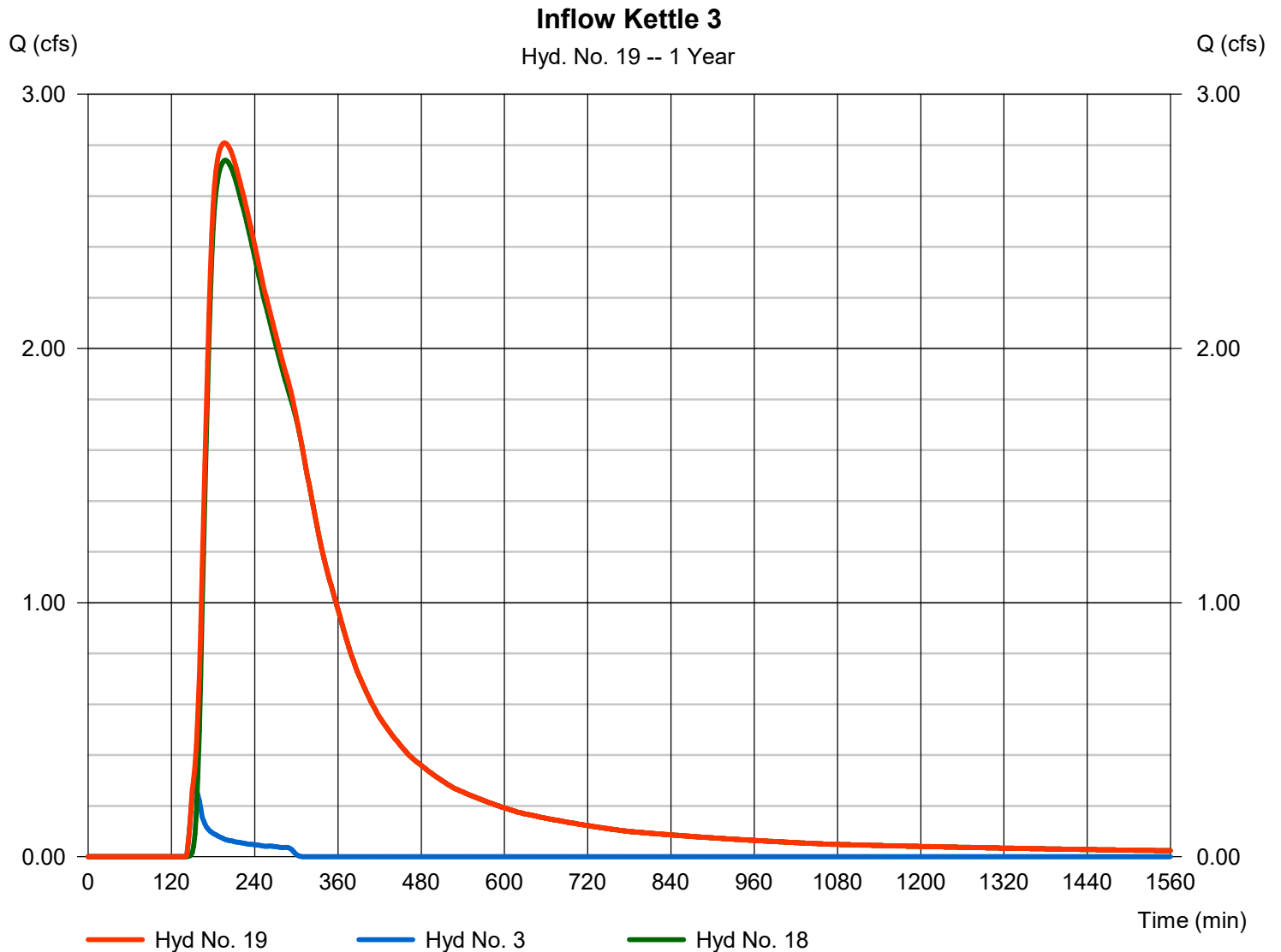
Tuesday, 04 / 7 / 2020

Hyd. No. 19

Inflow Kettle 3

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 3, 18

Peak discharge = 2.809 cfs
Time to peak = 196 min
Hyd. volume = 35,785 cuft
Contrib. drain. area = 0.750 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

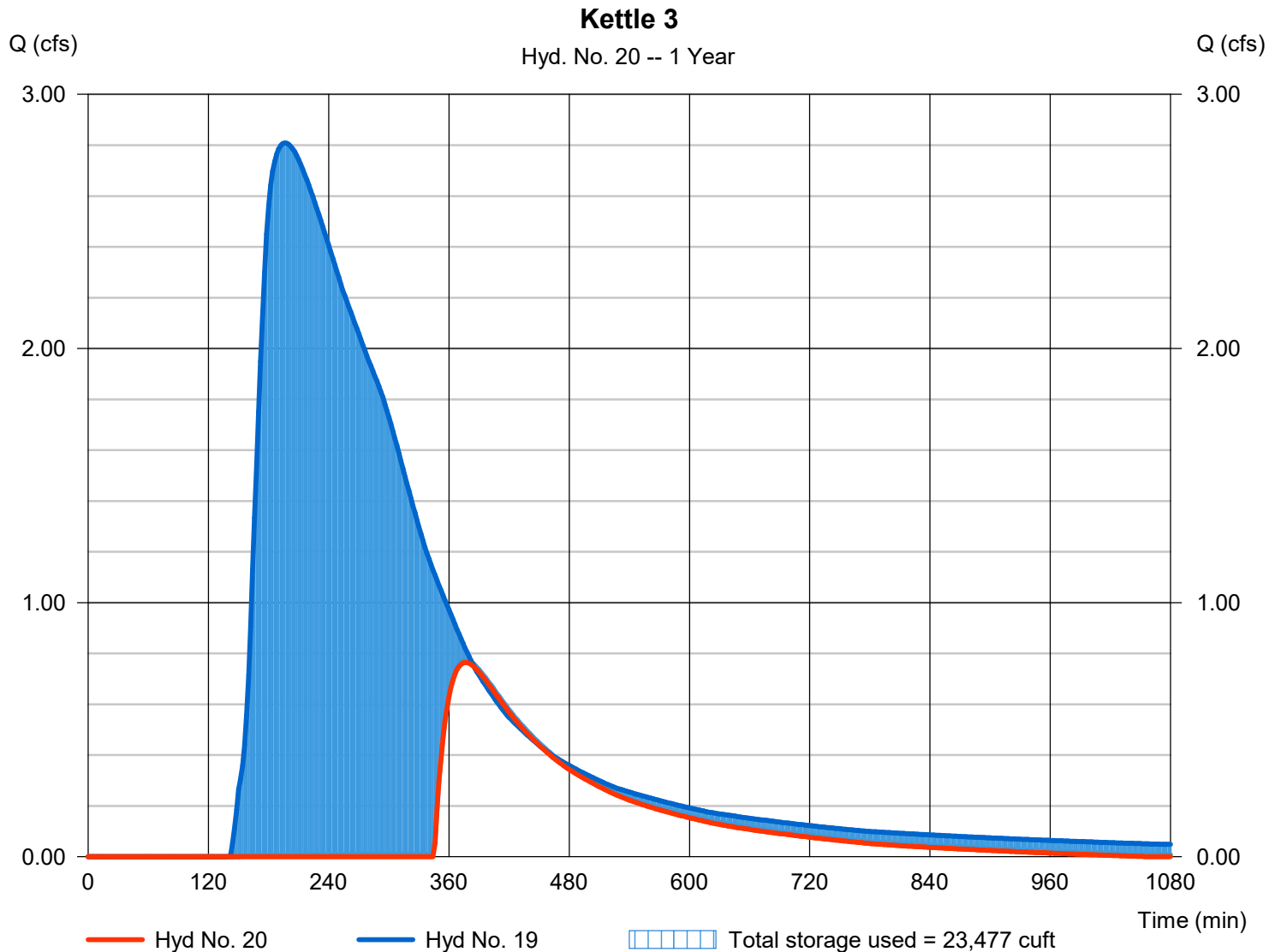
Tuesday, 04 / 7 / 2020

Hyd. No. 20

Kettle 3

Hydrograph type	= Reservoir	Peak discharge	= 0.765 cfs
Storm frequency	= 1 yrs	Time to peak	= 376 min
Time interval	= 2 min	Hyd. volume	= 7,499 cuft
Inflow hyd. No.	= 19 - Inflow Kettle 3	Max. Elevation	= 976.06 ft
Reservoir name	= K-3	Max. Storage	= 23,477 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 3 - K-3

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 972.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	972.00	1,920	0	0
1.00	973.00	4,020	2,906	2,906
2.00	974.00	5,770	4,868	7,774
3.00	975.00	7,510	6,620	14,394
4.00	976.00	9,385	8,429	22,824
5.00	977.00	11,750	10,544	33,368
6.00	978.00	14,245	12,976	46,344

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 976.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	972.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	291	972.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	581	972.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	872	972.30	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.40	1,162	972.40	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.50	1,453	972.50	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.60	1,743	972.60	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.70	2,034	972.70	---	---	---	---	0.00	---	---	---	0.016	---	0.016
0.80	2,325	972.80	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.90	2,615	972.90	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.00	2,906	973.00	---	---	---	---	0.00	---	---	---	0.022	---	0.022
1.10	3,393	973.10	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.20	3,879	973.20	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.30	4,366	973.30	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.40	4,853	973.40	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.50	5,340	973.50	---	---	---	---	0.00	---	---	---	0.027	---	0.027
1.60	5,827	973.60	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.70	6,314	973.70	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.80	6,800	973.80	---	---	---	---	0.00	---	---	---	0.030	---	0.030
1.90	7,287	973.90	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.00	7,774	974.00	---	---	---	---	0.00	---	---	---	0.032	---	0.032
2.10	8,436	974.10	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.20	9,098	974.20	---	---	---	---	0.00	---	---	---	0.034	---	0.034
2.30	9,760	974.30	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.40	10,422	974.40	---	---	---	---	0.00	---	---	---	0.036	---	0.036
2.50	11,084	974.50	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.60	11,746	974.60	---	---	---	---	0.00	---	---	---	0.038	---	0.038
2.70	12,408	974.70	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.80	13,070	974.80	---	---	---	---	0.00	---	---	---	0.040	---	0.040
2.90	13,732	974.90	---	---	---	---	0.00	---	---	---	0.041	---	0.041
3.00	14,394	975.00	---	---	---	---	0.00	---	---	---	0.042	---	0.042
3.10	15,237	975.10	---	---	---	---	0.00	---	---	---	0.043	---	0.043
3.20	16,080	975.20	---	---	---	---	0.00	---	---	---	0.044	---	0.044
3.30	16,923	975.30	---	---	---	---	0.00	---	---	---	0.045	---	0.045
3.40	17,766	975.40	---	---	---	---	0.00	---	---	---	0.046	---	0.046
3.50	18,609	975.50	---	---	---	---	0.00	---	---	---	0.047	---	0.047

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K-3

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.60	19,452	975.60	---	---	---	---	0.00	---	---	---	0.048	---	0.048
3.70	20,295	975.70	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.80	21,138	975.80	---	---	---	---	0.00	---	---	---	0.050	---	0.050
3.90	21,981	975.90	---	---	---	---	0.00	---	---	---	0.051	---	0.051
4.00	22,824	976.00	---	---	---	---	0.00	---	---	---	0.052	---	0.052
4.10	23,878	976.10	---	---	---	---	1.23	---	---	---	0.053	---	1.286
4.20	24,932	976.20	---	---	---	---	3.49	---	---	---	0.055	---	3.542
4.30	25,987	976.30	---	---	---	---	6.41	---	---	---	0.056	---	6.462
4.40	27,041	976.40	---	---	---	---	9.86	---	---	---	0.057	---	9.920
4.50	28,096	976.50	---	---	---	---	13.78	---	---	---	0.059	---	13.84
4.60	29,150	976.60	---	---	---	---	18.12	---	---	---	0.060	---	18.18
4.70	30,205	976.70	---	---	---	---	22.83	---	---	---	0.061	---	22.89
4.80	31,259	976.80	---	---	---	---	27.90	---	---	---	0.063	---	27.96
4.90	32,313	976.90	---	---	---	---	33.29	---	---	---	0.064	---	33.35
5.00	33,368	977.00	---	---	---	---	39.00	---	---	---	0.065	---	39.07
5.10	34,665	977.10	---	---	---	---	44.99	---	---	---	0.067	---	45.06
5.20	35,963	977.20	---	---	---	---	51.26	---	---	---	0.068	---	51.33
5.30	37,261	977.30	---	---	---	---	57.80	---	---	---	0.069	---	57.87
5.40	38,558	977.40	---	---	---	---	64.60	---	---	---	0.071	---	64.67
5.50	39,856	977.50	---	---	---	---	71.64	---	---	---	0.072	---	71.71
5.60	41,154	977.60	---	---	---	---	78.92	---	---	---	0.074	---	78.99
5.70	42,451	977.70	---	---	---	---	86.43	---	---	---	0.075	---	86.51
5.80	43,749	977.80	---	---	---	---	94.17	---	---	---	0.076	---	94.24
5.90	45,046	977.90	---	---	---	---	102.12	---	---	---	0.078	---	102.20
6.00	46,344	978.00	---	---	---	---	110.31	---	---	---	0.079	---	110.39

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

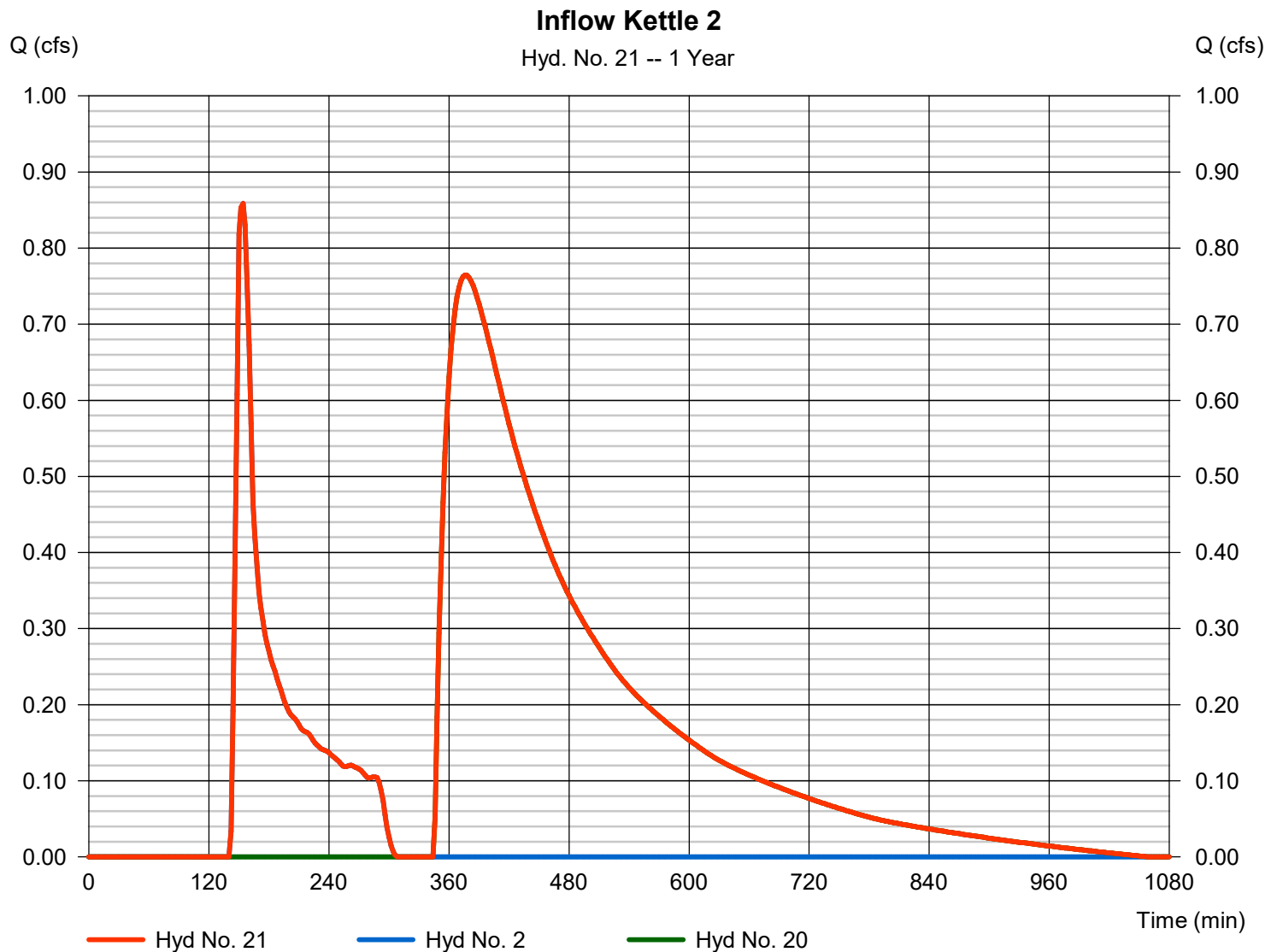
Tuesday, 04 / 7 / 2020

Hyd. No. 21

Inflow Kettle 2

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 2, 20

Peak discharge = 0.859 cfs
 Time to peak = 154 min
 Hyd. volume = 9,693 cuft
 Contrib. drain. area = 2.040 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

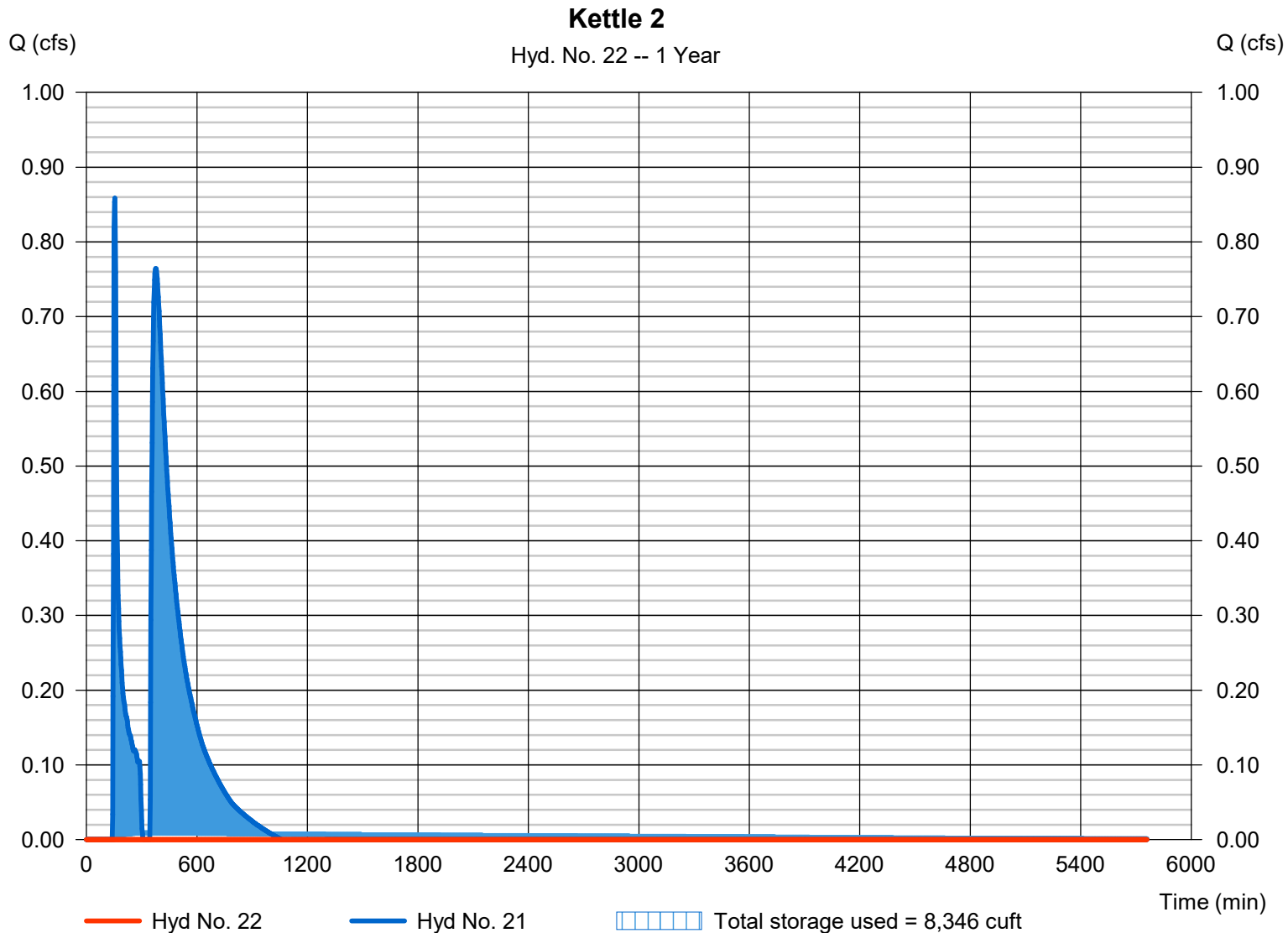
Tuesday, 04 / 7 / 2020

Hyd. No. 22

Kettle 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 458 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 21 - Inflow Kettle 2	Max. Elevation	= 968.42 ft
Reservoir name	= K-2	Max. Storage	= 8,346 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 2 - K-2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 966.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	966.00	285	0	0
1.00	967.00	3,190	1,476	1,476
2.00	968.00	5,410	4,251	5,727
3.00	969.00	7,210	6,288	12,015
4.00	970.00	9,215	8,191	20,206
5.00	971.00	11,370	10,273	30,479
6.00	972.00	13,630	12,482	42,960
7.00	973.00	16,420	15,002	57,962
8.00	974.00	19,360	17,868	75,830
9.00	975.00	22,600	20,957	96,787

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.00	0.00	0.00	0.00
Crest El. (ft)	= 973.70	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	966.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	148	966.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	295	966.20	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.30	443	966.30	---	---	---	---	0.00	---	---	---	0.005	---	0.005
0.40	590	966.40	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.50	738	966.50	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.60	886	966.60	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.70	1,033	966.70	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.80	1,181	966.80	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.90	1,328	966.90	---	---	---	---	0.00	---	---	---	0.016	---	0.016
1.00	1,476	967.00	---	---	---	---	0.00	---	---	---	0.018	---	0.018
1.10	1,901	967.10	---	---	---	---	0.00	---	---	---	0.019	---	0.019
1.20	2,326	967.20	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.30	2,751	967.30	---	---	---	---	0.00	---	---	---	0.021	---	0.021
1.40	3,176	967.40	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.50	3,602	967.50	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.60	4,027	967.60	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.70	4,452	967.70	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.80	4,877	967.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.90	5,302	967.90	---	---	---	---	0.00	---	---	---	0.029	---	0.029
2.00	5,727	968.00	---	---	---	---	0.00	---	---	---	0.030	---	0.030
2.10	6,356	968.10	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.20	6,985	968.20	---	---	---	---	0.00	---	---	---	0.032	---	0.032
2.30	7,613	968.30	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.40	8,242	968.40	---	---	---	---	0.00	---	---	---	0.034	---	0.034
2.50	8,871	968.50	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.60	9,500	968.60	---	---	---	---	0.00	---	---	---	0.036	---	0.036
2.70	10,129	968.70	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.80	10,757	968.80	---	---	---	---	0.00	---	---	---	0.038	---	0.038
2.90	11,386	968.90	---	---	---	---	0.00	---	---	---	0.039	---	0.039
3.00	12,015	969.00	---	---	---	---	0.00	---	---	---	0.040	---	0.040
3.10	12,834	969.10	---	---	---	---	0.00	---	---	---	0.041	---	0.041
3.20	13,653	969.20	---	---	---	---	0.00	---	---	---	0.042	---	0.042

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K-2

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.30	14,472	969.30	---	---	---	---	0.00	---	---	---	0.043	---	0.043
3.40	15,291	969.40	---	---	---	---	0.00	---	---	---	0.045	---	0.045
3.50	16,110	969.50	---	---	---	---	0.00	---	---	---	0.046	---	0.046
3.60	16,930	969.60	---	---	---	---	0.00	---	---	---	0.047	---	0.047
3.70	17,749	969.70	---	---	---	---	0.00	---	---	---	0.048	---	0.048
3.80	18,568	969.80	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.90	19,387	969.90	---	---	---	---	0.00	---	---	---	0.050	---	0.050
4.00	20,206	970.00	---	---	---	---	0.00	---	---	---	0.051	---	0.051
4.10	21,233	970.10	---	---	---	---	0.00	---	---	---	0.052	---	0.052
4.20	22,261	970.20	---	---	---	---	0.00	---	---	---	0.054	---	0.054
4.30	23,288	970.30	---	---	---	---	0.00	---	---	---	0.055	---	0.055
4.40	24,315	970.40	---	---	---	---	0.00	---	---	---	0.056	---	0.056
4.50	25,342	970.50	---	---	---	---	0.00	---	---	---	0.057	---	0.057
4.60	26,370	970.60	---	---	---	---	0.00	---	---	---	0.058	---	0.058
4.70	27,397	970.70	---	---	---	---	0.00	---	---	---	0.060	---	0.060
4.80	28,424	970.80	---	---	---	---	0.00	---	---	---	0.061	---	0.061
4.90	29,451	970.90	---	---	---	---	0.00	---	---	---	0.062	---	0.062
5.00	30,479	971.00	---	---	---	---	0.00	---	---	---	0.063	---	0.063
5.10	31,727	971.10	---	---	---	---	0.00	---	---	---	0.064	---	0.064
5.20	32,975	971.20	---	---	---	---	0.00	---	---	---	0.066	---	0.066
5.30	34,223	971.30	---	---	---	---	0.00	---	---	---	0.067	---	0.067
5.40	35,471	971.40	---	---	---	---	0.00	---	---	---	0.068	---	0.068
5.50	36,720	971.50	---	---	---	---	0.00	---	---	---	0.069	---	0.069
5.60	37,968	971.60	---	---	---	---	0.00	---	---	---	0.071	---	0.071
5.70	39,216	971.70	---	---	---	---	0.00	---	---	---	0.072	---	0.072
5.80	40,464	971.80	---	---	---	---	0.00	---	---	---	0.073	---	0.073
5.90	41,712	971.90	---	---	---	---	0.00	---	---	---	0.074	---	0.074
6.00	42,960	972.00	---	---	---	---	0.00	---	---	---	0.076	---	0.076
6.10	44,461	972.10	---	---	---	---	0.00	---	---	---	0.077	---	0.077
6.20	45,961	972.20	---	---	---	---	0.00	---	---	---	0.079	---	0.079
6.30	47,461	972.30	---	---	---	---	0.00	---	---	---	0.080	---	0.080
6.40	48,961	972.40	---	---	---	---	0.00	---	---	---	0.082	---	0.082
6.50	50,461	972.50	---	---	---	---	0.00	---	---	---	0.083	---	0.083
6.60	51,962	972.60	---	---	---	---	0.00	---	---	---	0.085	---	0.085
6.70	53,462	972.70	---	---	---	---	0.00	---	---	---	0.087	---	0.087
6.80	54,962	972.80	---	---	---	---	0.00	---	---	---	0.088	---	0.088
6.90	56,462	972.90	---	---	---	---	0.00	---	---	---	0.090	---	0.090
7.00	57,962	973.00	---	---	---	---	0.00	---	---	---	0.091	---	0.091
7.10	59,749	973.10	---	---	---	---	0.00	---	---	---	0.093	---	0.093
7.20	61,536	973.20	---	---	---	---	0.00	---	---	---	0.094	---	0.094
7.30	63,323	973.30	---	---	---	---	0.00	---	---	---	0.096	---	0.096
7.40	65,109	973.40	---	---	---	---	0.00	---	---	---	0.098	---	0.098
7.50	66,896	973.50	---	---	---	---	0.00	---	---	---	0.099	---	0.099
7.60	68,683	973.60	---	---	---	---	0.00	---	---	---	0.101	---	0.101
7.70	70,470	973.70	---	---	---	---	0.00	---	---	---	0.103	---	0.103
7.80	72,257	973.80	---	---	---	---	0.41	---	---	---	0.104	---	0.514
7.90	74,044	973.90	---	---	---	---	1.16	---	---	---	0.106	---	1.267
8.00	75,830	974.00	---	---	---	---	2.14	---	---	---	0.108	---	2.244
8.10	77,926	974.10	---	---	---	---	3.29	---	---	---	0.109	---	3.398
8.20	80,022	974.20	---	---	---	---	4.60	---	---	---	0.111	---	4.707
8.30	82,117	974.30	---	---	---	---	6.04	---	---	---	0.113	---	6.154
8.40	84,213	974.40	---	---	---	---	7.61	---	---	---	0.115	---	7.727
8.50	86,309	974.50	---	---	---	---	9.30	---	---	---	0.117	---	9.416
8.60	88,405	974.60	---	---	---	---	11.10	---	---	---	0.118	---	11.22
8.70	90,500	974.70	---	---	---	---	13.00	---	---	---	0.120	---	13.12
8.80	92,596	974.80	---	---	---	---	14.99	---	---	---	0.122	---	15.12
8.90	94,692	974.90	---	---	---	---	17.08	---	---	---	0.124	---	17.21
9.00	96,787	975.00	---	---	---	---	19.27	---	---	---	0.126	---	19.39

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

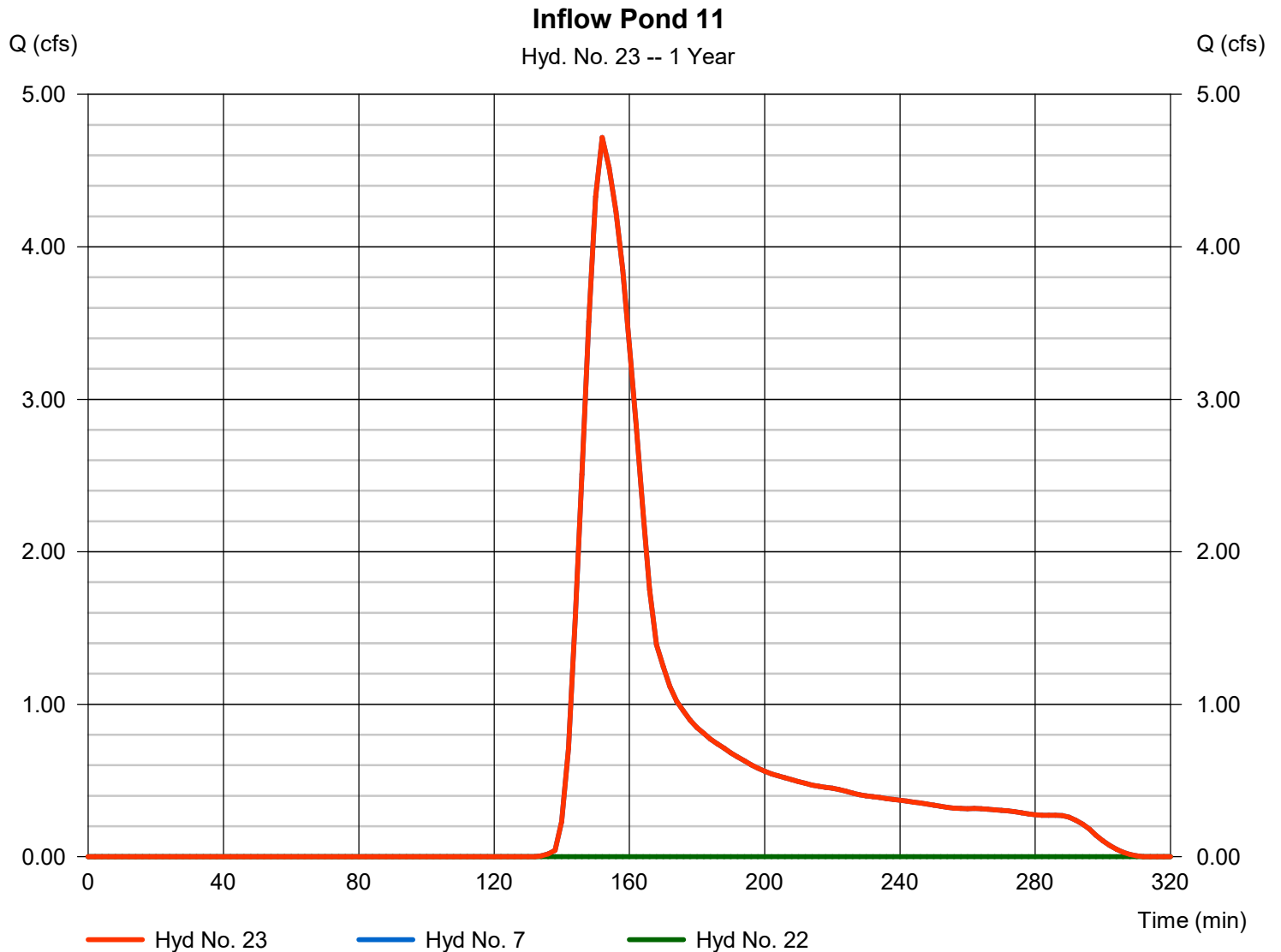
Tuesday, 04 / 7 / 2020

Hyd. No. 23

Inflow Pond 11

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 7, 22

Peak discharge = 4.717 cfs
Time to peak = 152 min
Hyd. volume = 8,679 cuft
Contrib. drain. area = 3.180 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

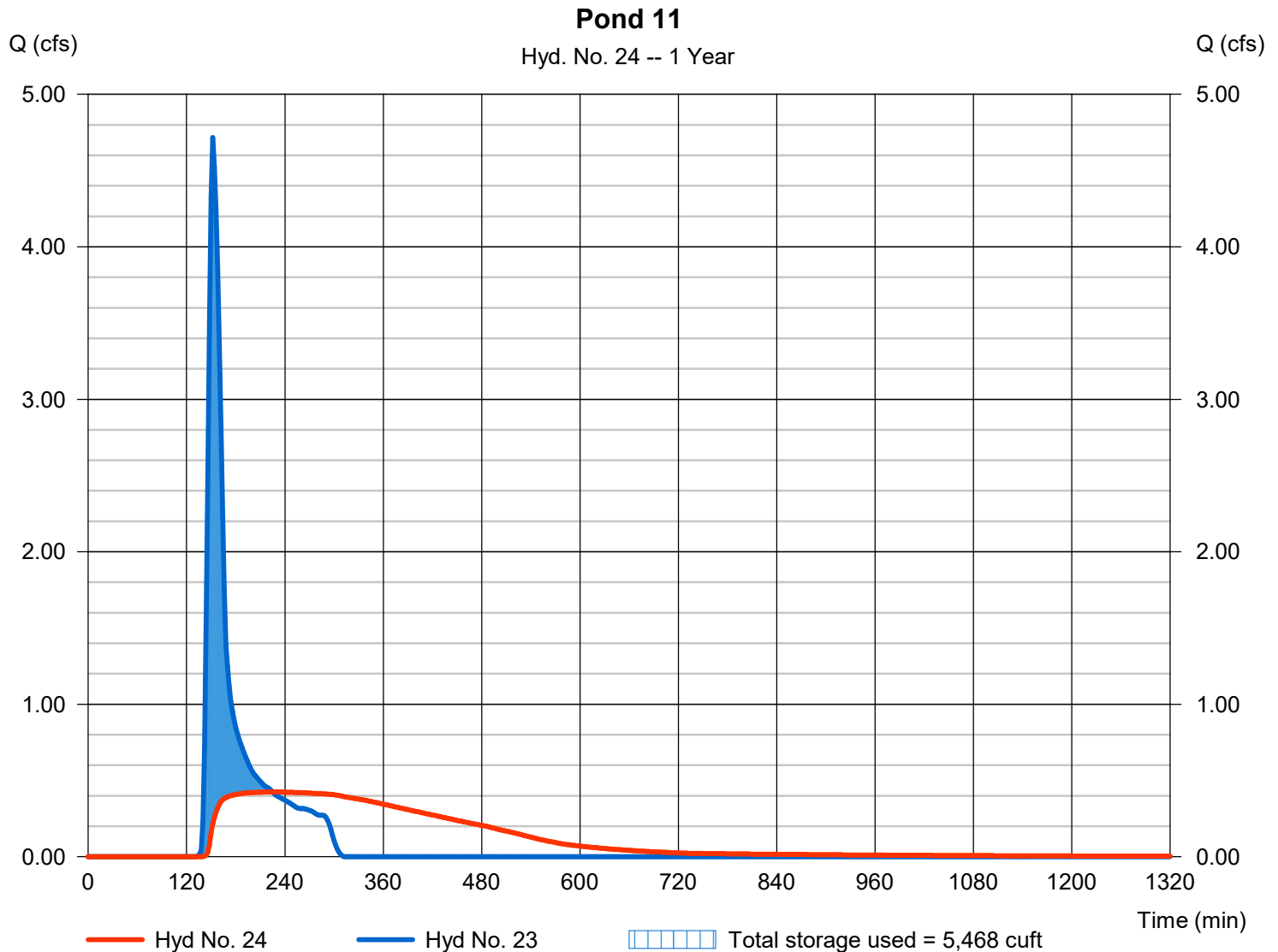
Tuesday, 04 / 7 / 2020

Hyd. No. 24

Pond 11

Hydrograph type	= Reservoir	Peak discharge	= 0.424 cfs
Storm frequency	= 1 yrs	Time to peak	= 224 min
Time interval	= 2 min	Hyd. volume	= 8,661 cuft
Inflow hyd. No.	= 23 - Inflow Pond 11	Max. Elevation	= 965.28 ft
Reservoir name	= Pond 11	Max. Storage	= 5,468 cuft

Storage Indication method used.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 23 - Pond 11

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 964.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	964.00	3,560	0	0
1.00	965.00	4,560	4,049	4,049
2.00	966.00	5,660	5,100	9,149
3.00	967.00	6,895	6,267	15,416
4.00	968.00	8,290	7,581	22,997
5.00	969.00	10,205	9,230	32,227

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	0.00	0.00
Span (in)	= 24.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 964.00	964.00	0.00	0.00
Length (ft)	= 60.00	0.50	0.00	0.00
Slope (%)	= 0.50	0.50	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)	= 12.56	0.00	0.00	10.00
Crest El. (ft)	= 966.90	0.00	0.00	968.00
Weir Coeff.	= 3.33	3.33	3.33	2.60
Weir Type	= 1	---	---	Broad
Multi-Stage	= Yes	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).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	964.00	0.00	0.00	---	---	0.00	---	---	0.00	---	---	0.000
0.10	405	964.10	0.02 ic	0.02 ic	---	---	0.00	---	---	0.00	---	---	0.022
0.20	810	964.20	0.08 ic	0.08 ic	---	---	0.00	---	---	0.00	---	---	0.080
0.30	1,215	964.30	0.15 ic	0.15 ic	---	---	0.00	---	---	0.00	---	---	0.152
0.40	1,620	964.40	0.20 ic	0.20 ic	---	---	0.00	---	---	0.00	---	---	0.200
0.50	2,025	964.50	0.24 ic	0.23 ic	---	---	0.00	---	---	0.00	---	---	0.233
0.60	2,430	964.60	0.27 ic	0.27 ic	---	---	0.00	---	---	0.00	---	---	0.266
0.70	2,835	964.70	0.29 ic	0.29 ic	---	---	0.00	---	---	0.00	---	---	0.294
0.80	3,239	964.80	0.32 ic	0.32 ic	---	---	0.00	---	---	0.00	---	---	0.320
0.90	3,644	964.90	0.35 ic	0.34 ic	---	---	0.00	---	---	0.00	---	---	0.344
1.00	4,049	965.00	0.38 ic	0.37 ic	---	---	0.00	---	---	0.00	---	---	0.366
1.10	4,559	965.10	0.41 ic	0.39 ic	---	---	0.00	---	---	0.00	---	---	0.387
1.20	5,069	965.20	0.41 ic	0.41 ic	---	---	0.00	---	---	0.00	---	---	0.409
1.30	5,579	965.30	0.44 ic	0.43 ic	---	---	0.00	---	---	0.00	---	---	0.428
1.40	6,089	965.40	0.45 ic	0.45 ic	---	---	0.00	---	---	0.00	---	---	0.447
1.50	6,599	965.50	0.48 ic	0.47 ic	---	---	0.00	---	---	0.00	---	---	0.466
1.60	7,109	965.60	0.48 ic	0.48 ic	---	---	0.00	---	---	0.00	---	---	0.483
1.70	7,619	965.70	0.52 ic	0.50 ic	---	---	0.00	---	---	0.00	---	---	0.500
1.80	8,129	965.80	0.52 ic	0.52 ic	---	---	0.00	---	---	0.00	---	---	0.517
1.90	8,639	965.90	0.56 ic	0.53 ic	---	---	0.00	---	---	0.00	---	---	0.533
2.00	9,149	966.00	0.56 ic	0.55 ic	---	---	0.00	---	---	0.00	---	---	0.549
2.10	9,776	966.10	0.56 ic	0.56 ic	---	---	0.00	---	---	0.00	---	---	0.563
2.20	10,402	966.20	0.60 ic	0.58 ic	---	---	0.00	---	---	0.00	---	---	0.578
2.30	11,029	966.30	0.60 ic	0.59 ic	---	---	0.00	---	---	0.00	---	---	0.594
2.40	11,656	966.40	0.61 ic	0.61 ic	---	---	0.00	---	---	0.00	---	---	0.607
2.50	12,282	966.50	0.64 ic	0.62 ic	---	---	0.00	---	---	0.00	---	---	0.621
2.60	12,909	966.60	0.64 ic	0.64 ic	---	---	0.00	---	---	0.00	---	---	0.635
2.70	13,536	966.70	0.65 ic	0.65 ic	---	---	0.00	---	---	0.00	---	---	0.648
2.80	14,162	966.80	0.69 ic	0.66 ic	---	---	0.00	---	---	0.00	---	---	0.661
2.90	14,789	966.90	0.69 ic	0.67 ic	---	---	0.00	---	---	0.00	---	---	0.674
3.00	15,416	967.00	1.99 ic	0.65 ic	---	---	1.32	---	---	0.00	---	---	1.976
3.10	16,174	967.10	4.41 oc	0.62 ic	---	---	3.74	---	---	0.00	---	---	4.355
3.20	16,932	967.20	7.45 oc	0.56 ic	---	---	6.87	---	---	0.00	---	---	7.429
3.30	17,690	967.30	11.03 oc	0.45 ic	---	---	10.58	---	---	0.00	---	---	11.03
3.40	18,448	967.40	15.18 oc	0.40 ic	---	---	14.78	---	---	0.00	---	---	15.18
3.50	19,206	967.50	19.21 oc	0.30 ic	---	---	18.91 s	---	---	0.00	---	---	19.21
3.60	19,964	967.60	20.97 oc	0.25 ic	---	---	20.72 s	---	---	0.00	---	---	20.96

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Pond 11

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.70	20,722	967.70	22.20 oc	0.22 ic	---	---	21.99 s	---	---	0.00	---	---	22.20
3.80	21,480	967.80	23.20 oc	0.19 ic	---	---	23.00 s	---	---	0.00	---	---	23.19
3.90	22,239	967.90	24.05 oc	0.17 ic	---	---	23.87 s	---	---	0.00	---	---	24.04
4.00	22,997	968.00	24.80 oc	0.15 ic	---	---	24.65 s	---	---	0.00	---	---	24.80
4.10	23,920	968.10	25.49 oc	0.14 ic	---	---	25.35 s	---	---	0.82	---	---	26.31
4.20	24,843	968.20	26.14 oc	0.13 ic	---	---	26.01 s	---	---	2.33	---	---	28.46
4.30	25,766	968.30	26.75 oc	0.12 ic	---	---	26.62 s	---	---	4.27	---	---	31.01
4.40	26,689	968.40	27.33 oc	0.11 ic	---	---	27.21 s	---	---	6.58	---	---	33.90
4.50	27,612	968.50	27.89 oc	0.10 ic	---	---	27.77 s	---	---	9.19	---	---	37.06
4.60	28,535	968.60	28.42 oc	0.10 ic	---	---	28.33 s	---	---	12.08	---	---	40.50
4.70	29,458	968.70	28.91 ic	0.09 ic	---	---	28.81 s	---	---	15.22	---	---	44.13
4.80	30,381	968.80	29.32 ic	0.09 ic	---	---	29.22 s	---	---	18.60	---	---	47.90
4.90	31,304	968.90	29.73 ic	0.08 ic	---	---	29.63 s	---	---	22.19	---	---	51.90
5.00	32,227	969.00	30.12 ic	0.08 ic	---	---	30.02 s	---	---	26.00	---	---	56.10

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

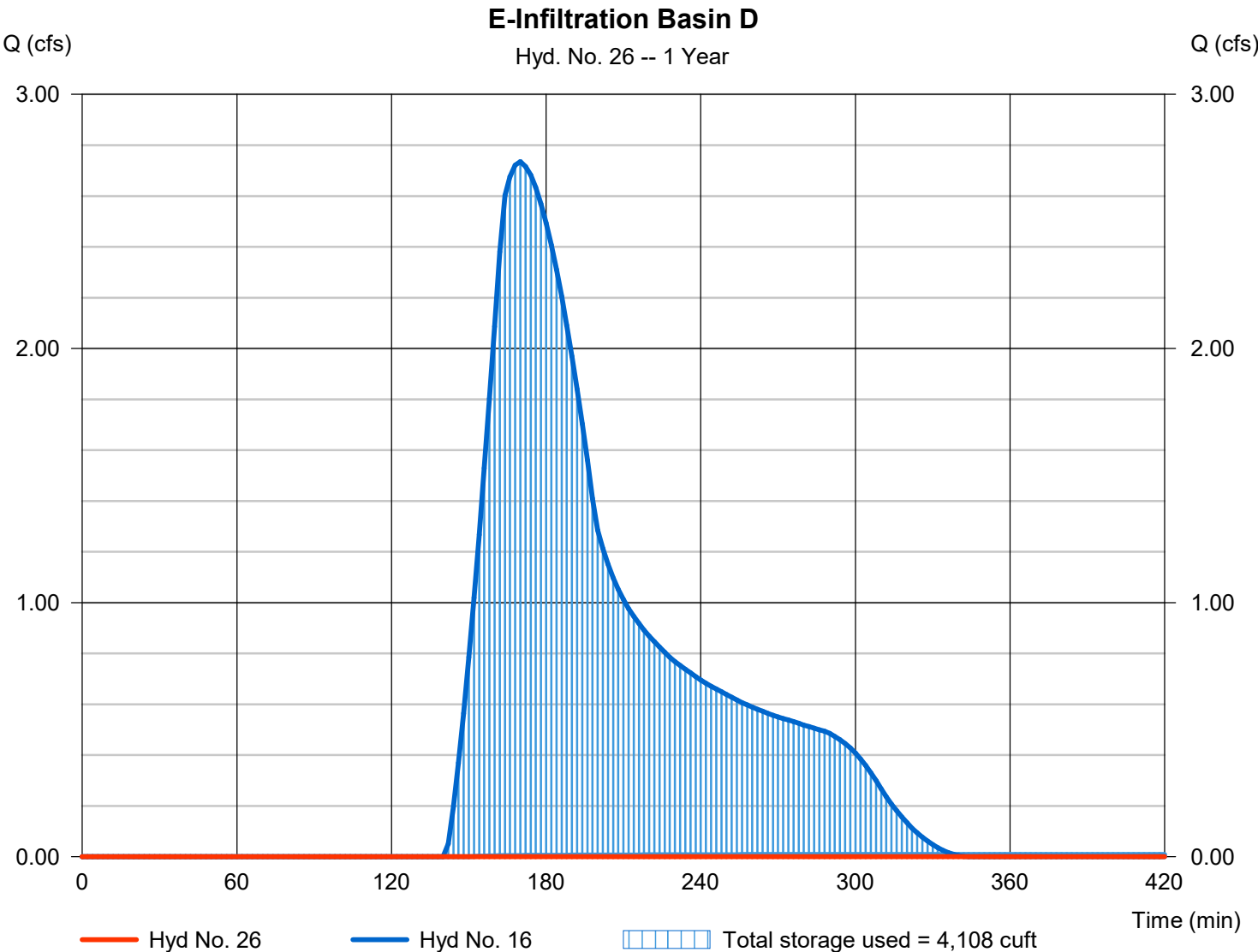
Tuesday, 04 / 7 / 2020

Hyd. No. 26

E-Infiltration Basin D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 256 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 16 - D	Max. Elevation	= 989.98 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 4,108 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 19 - EXISTING INFILTRATION BASIN D

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 989.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	989.00	600	0	0
1.00	990.00	9,570	4,188	4,188
2.00	991.00	11,810	10,669	14,858
3.00	992.00	14,165	12,968	27,826
4.00	993.00	16,675	15,401	43,227
5.00	994.00	19,650	18,140	61,368
6.00	995.00	25,080	22,308	83,675

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 994.65	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 6.000 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	989.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	419	989.10	---	---	---	---	0.00	---	---	---	0.133	---	0.133
0.20	838	989.20	---	---	---	---	0.00	---	---	---	0.266	---	0.266
0.30	1,256	989.30	---	---	---	---	0.00	---	---	---	0.399	---	0.399
0.40	1,675	989.40	---	---	---	---	0.00	---	---	---	0.532	---	0.532
0.50	2,094	989.50	---	---	---	---	0.00	---	---	---	0.665	---	0.665
0.60	2,513	989.60	---	---	---	---	0.00	---	---	---	0.797	---	0.797
0.70	2,932	989.70	---	---	---	---	0.00	---	---	---	0.930	---	0.930
0.80	3,351	989.80	---	---	---	---	0.00	---	---	---	1.063	---	1.063
0.90	3,769	989.90	---	---	---	---	0.00	---	---	---	1.196	---	1.196
1.00	4,188	990.00	---	---	---	---	0.00	---	---	---	1.329	---	1.329
1.10	5,255	990.10	---	---	---	---	0.00	---	---	---	1.360	---	1.360
1.20	6,322	990.20	---	---	---	---	0.00	---	---	---	1.391	---	1.391
1.30	7,389	990.30	---	---	---	---	0.00	---	---	---	1.422	---	1.422
1.40	8,456	990.40	---	---	---	---	0.00	---	---	---	1.454	---	1.454
1.50	9,523	990.50	---	---	---	---	0.00	---	---	---	1.485	---	1.485
1.60	10,590	990.60	---	---	---	---	0.00	---	---	---	1.516	---	1.516
1.70	11,657	990.70	---	---	---	---	0.00	---	---	---	1.547	---	1.547
1.80	12,724	990.80	---	---	---	---	0.00	---	---	---	1.578	---	1.578
1.90	13,791	990.90	---	---	---	---	0.00	---	---	---	1.609	---	1.609
2.00	14,858	991.00	---	---	---	---	0.00	---	---	---	1.640	---	1.640
2.10	16,154	991.10	---	---	---	---	0.00	---	---	---	1.673	---	1.673
2.20	17,451	991.20	---	---	---	---	0.00	---	---	---	1.706	---	1.706
2.30	18,748	991.30	---	---	---	---	0.00	---	---	---	1.738	---	1.738
2.40	20,045	991.40	---	---	---	---	0.00	---	---	---	1.771	---	1.771
2.50	21,342	991.50	---	---	---	---	0.00	---	---	---	1.804	---	1.804
2.60	22,639	991.60	---	---	---	---	0.00	---	---	---	1.837	---	1.837
2.70	23,936	991.70	---	---	---	---	0.00	---	---	---	1.869	---	1.869
2.80	25,232	991.80	---	---	---	---	0.00	---	---	---	1.902	---	1.902
2.90	26,529	991.90	---	---	---	---	0.00	---	---	---	1.935	---	1.935
3.00	27,826	992.00	---	---	---	---	0.00	---	---	---	1.967	---	1.967
3.10	29,366	992.10	---	---	---	---	0.00	---	---	---	2.002	---	2.002
3.20	30,906	992.20	---	---	---	---	0.00	---	---	---	2.037	---	2.037
3.30	32,446	992.30	---	---	---	---	0.00	---	---	---	2.072	---	2.072
3.40	33,987	992.40	---	---	---	---	0.00	---	---	---	2.107	---	2.107
3.50	35,527	992.50	---	---	---	---	0.00	---	---	---	2.142	---	2.142

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EXISTING INFILTRATION BASIN D

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.60	37,067	992.60	---	---	---	---	0.00	---	---	---	2.177	---	2.177
3.70	38,607	992.70	---	---	---	---	0.00	---	---	---	2.211	---	2.211
3.80	40,147	992.80	---	---	---	---	0.00	---	---	---	2.246	---	2.246
3.90	41,687	992.90	---	---	---	---	0.00	---	---	---	2.281	---	2.281
4.00	43,227	993.00	---	---	---	---	0.00	---	---	---	2.316	---	2.316
4.10	45,041	993.10	---	---	---	---	0.00	---	---	---	2.357	---	2.357
4.20	46,856	993.20	---	---	---	---	0.00	---	---	---	2.399	---	2.399
4.30	48,670	993.30	---	---	---	---	0.00	---	---	---	2.440	---	2.440
4.40	50,484	993.40	---	---	---	---	0.00	---	---	---	2.481	---	2.481
4.50	52,298	993.50	---	---	---	---	0.00	---	---	---	2.523	---	2.523
4.60	54,112	993.60	---	---	---	---	0.00	---	---	---	2.564	---	2.564
4.70	55,926	993.70	---	---	---	---	0.00	---	---	---	2.605	---	2.605
4.80	57,740	993.80	---	---	---	---	0.00	---	---	---	2.647	---	2.647
4.90	59,554	993.90	---	---	---	---	0.00	---	---	---	2.688	---	2.688
5.00	61,368	994.00	---	---	---	---	0.00	---	---	---	2.729	---	2.729
5.10	63,599	994.10	---	---	---	---	0.00	---	---	---	2.805	---	2.805
5.20	65,829	994.20	---	---	---	---	0.00	---	---	---	2.880	---	2.880
5.30	68,060	994.30	---	---	---	---	0.00	---	---	---	2.955	---	2.955
5.40	70,291	994.40	---	---	---	---	0.00	---	---	---	3.031	---	3.031
5.50	72,522	994.50	---	---	---	---	0.00	---	---	---	3.106	---	3.106
5.60	74,752	994.60	---	---	---	---	0.00	---	---	---	3.182	---	3.182
5.70	76,983	994.70	---	---	---	---	0.43	---	---	---	3.257	---	3.691
5.80	79,214	994.80	---	---	---	---	2.26	---	---	---	3.332	---	5.593
5.90	81,445	994.90	---	---	---	---	4.87	---	---	---	3.408	---	8.276
6.00	83,675	995.00	---	---	---	---	8.07	---	---	---	3.483	---	11.56

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

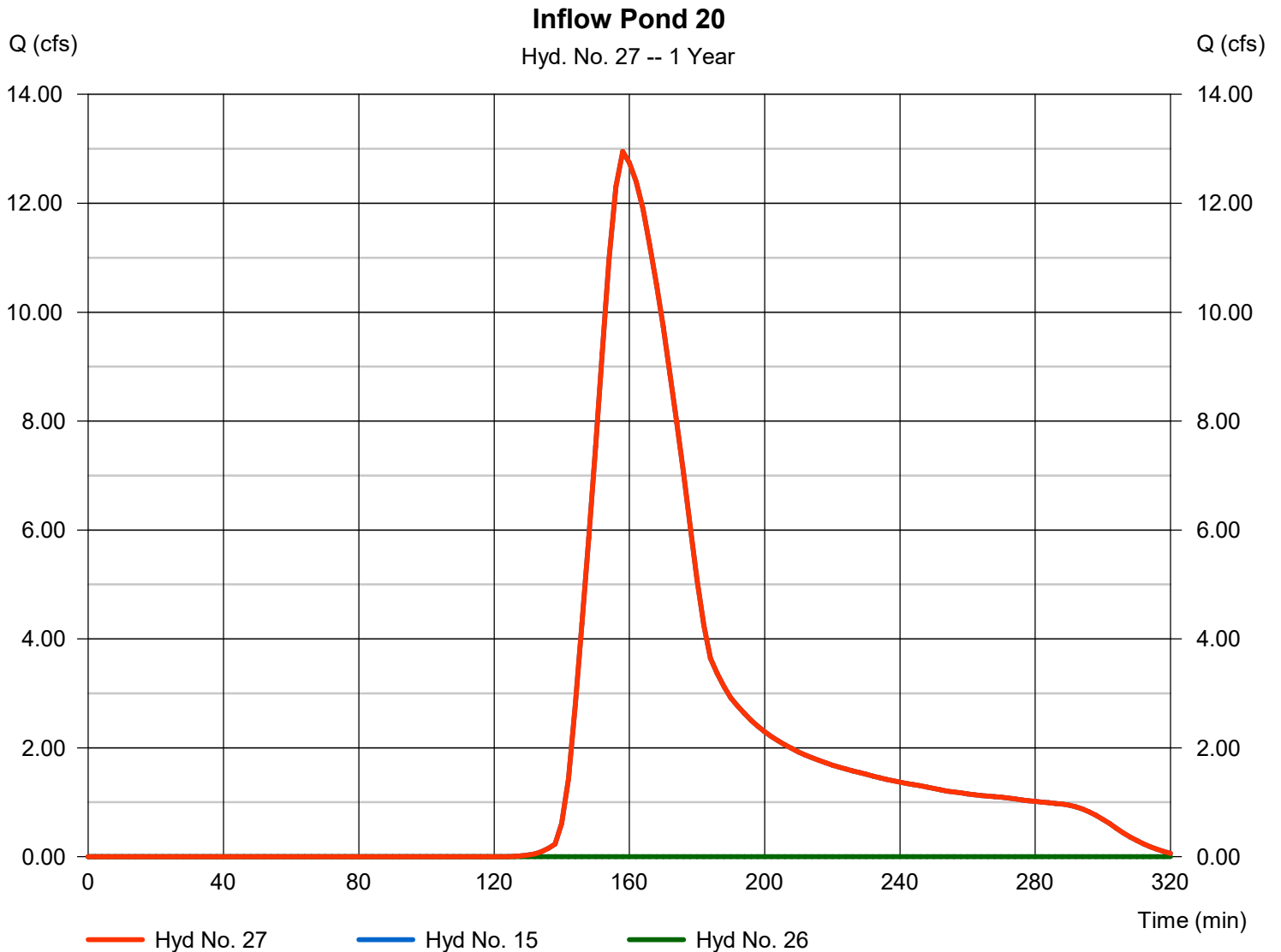
Tuesday, 04 / 7 / 2020

Hyd. No. 27

Inflow Pond 20

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 15, 26

Peak discharge = 12.95 cfs
 Time to peak = 158 min
 Hyd. volume = 32,565 cuft
 Contrib. drain. area = 9.850 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

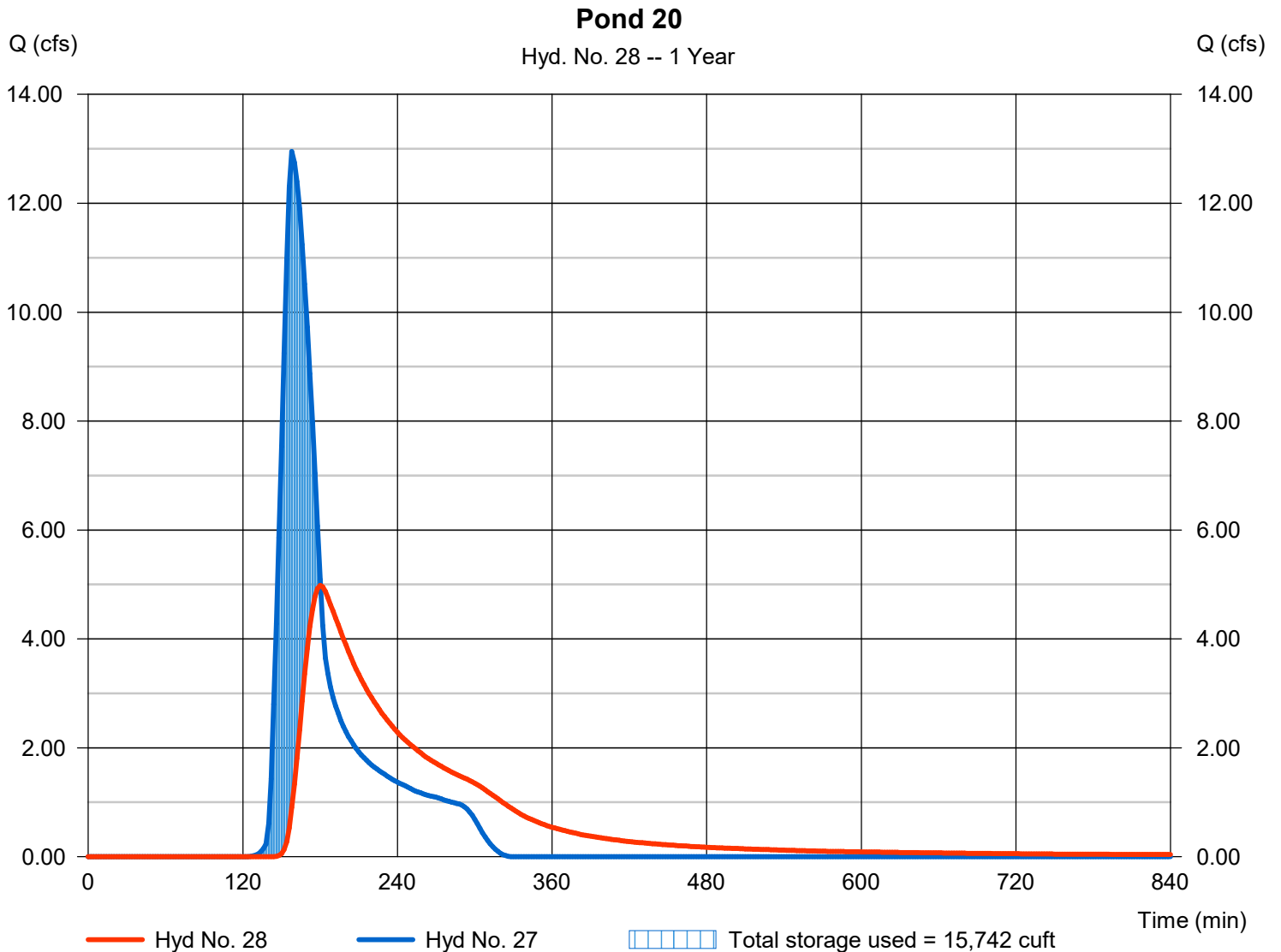
Tuesday, 04 / 7 / 2020

Hyd. No. 28

Pond 20

Hydrograph type	= Reservoir	Peak discharge	= 4.982 cfs
Storm frequency	= 1 yrs	Time to peak	= 180 min
Time interval	= 2 min	Hyd. volume	= 32,237 cuft
Inflow hyd. No.	= 27 - Inflow Pond 20	Max. Elevation	= 990.96 ft
Reservoir name	= Pond 20	Max. Storage	= 15,742 cuft

Storage Indication method used.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 24 - Pond 20

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 989.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	989.00	7,075	0	0
1.00	990.00	7,860	7,463	7,463
2.00	991.00	9,485	8,659	16,122
3.00	992.00	11,475	10,463	26,585
4.00	993.00	13,730	12,584	39,170
5.00	994.00	16,310	15,000	54,170
5.25	994.25	16,880	4,148	58,318

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	0.00	0.00	0.00
Span (in)	= 36.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 989.00	0.00	0.00	0.00
Length (ft)	= 60.00	0.00	0.00	0.00
Slope (%)	= 0.75	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 16.00	0.00	0.00	10.00
Crest El. (ft)	= 992.25	989.00	0.00	993.25
Weir Coeff.	= 3.33	1.05	3.33	2.60
Weir Type	= 1	45 degV	---	Broad
Multi-Stage	= Yes	Yes	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).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	989.00	0.00	---	---	---	0.00	---	---	0.00	---	---	0.000
0.10	746	989.10	0.00 ic	---	---	---	0.00	0.00 s	---	0.00	---	---	0.003
0.20	1,493	989.20	0.02 ic	---	---	---	0.00	0.02 s	---	0.00	---	---	0.018
0.30	2,239	989.30	0.05 ic	---	---	---	0.00	0.05 s	---	0.00	---	---	0.049
0.40	2,985	989.40	0.10 ic	---	---	---	0.00	0.10 s	---	0.00	---	---	0.100
0.50	3,732	989.50	0.18 ic	---	---	---	0.00	0.17 s	---	0.00	---	---	0.174
0.60	4,478	989.60	0.29 ic	---	---	---	0.00	0.27 s	---	0.00	---	---	0.273
0.70	5,224	989.70	0.41 ic	---	---	---	0.00	0.40 s	---	0.00	---	---	0.400
0.80	5,971	989.80	0.56 ic	---	---	---	0.00	0.56 s	---	0.00	---	---	0.556
0.90	6,717	989.90	0.74 ic	---	---	---	0.00	0.74 s	---	0.00	---	---	0.742
1.00	7,463	990.00	0.96 ic	---	---	---	0.00	0.96 s	---	0.00	---	---	0.963
1.10	8,329	990.10	1.22 ic	---	---	---	0.00	1.22 s	---	0.00	---	---	1.218
1.20	9,195	990.20	1.53 ic	---	---	---	0.00	1.51 s	---	0.00	---	---	1.507
1.30	10,061	990.30	1.89 ic	---	---	---	0.00	1.83 s	---	0.00	---	---	1.831
1.40	10,927	990.40	2.19 ic	---	---	---	0.00	2.19 s	---	0.00	---	---	2.193
1.50	11,793	990.50	2.61 ic	---	---	---	0.00	2.61 s	---	0.00	---	---	2.607
1.60	12,659	990.60	3.11 ic	---	---	---	0.00	3.05 s	---	0.00	---	---	3.047
1.70	13,525	990.70	3.53 ic	---	---	---	0.00	3.53 s	---	0.00	---	---	3.528
1.80	14,390	990.80	4.09 ic	---	---	---	0.00	4.07 s	---	0.00	---	---	4.068
1.90	15,256	990.90	4.76 ic	---	---	---	0.00	4.63 s	---	0.00	---	---	4.630
2.00	16,122	991.00	5.26 ic	---	---	---	0.00	5.26 s	---	0.00	---	---	5.257
2.10	17,169	991.10	6.01 ic	---	---	---	0.00	5.92 s	---	0.00	---	---	5.916
2.20	18,215	991.20	6.62 ic	---	---	---	0.00	6.62 s	---	0.00	---	---	6.616
2.30	19,261	991.30	7.43 ic	---	---	---	0.00	7.39 s	---	0.00	---	---	7.385
2.40	20,308	991.40	8.36 ic	---	---	---	0.00	8.17 s	---	0.00	---	---	8.171
2.50	21,354	991.50	9.04 ic	---	---	---	0.00	9.04 s	---	0.00	---	---	9.036
2.60	22,400	991.60	10.04 ic	---	---	---	0.00	9.93 s	---	0.00	---	---	9.929
2.70	23,446	991.70	11.06 oc	---	---	---	0.00	10.86 s	---	0.00	---	---	10.86
2.80	24,493	991.80	11.93 oc	---	---	---	0.00	11.83 s	---	0.00	---	---	11.83
2.90	25,539	991.90	12.81 oc	---	---	---	0.00	12.81 s	---	0.00	---	---	12.81
3.00	26,585	992.00	13.99 oc	---	---	---	0.00	13.86 s	---	0.00	---	---	13.86
3.10	27,844	992.10	15.16 oc	---	---	---	0.00	14.91 s	---	0.00	---	---	14.91
3.20	29,102	992.20	16.03 oc	---	---	---	0.00	16.03 s	---	0.00	---	---	16.03
3.30	30,361	992.30	17.74 oc	---	---	---	0.59	17.05 s	---	0.00	---	---	17.64
3.40	31,619	992.40	20.66 oc	---	---	---	3.09	17.56 s	---	0.00	---	---	20.66
3.50	32,878	992.50	24.12 oc	---	---	---	6.66	17.46 s	---	0.00	---	---	24.12

Continues on next page...

Pond 20

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.60	34,136	992.60	27.33 oc	---	---	---	11.03	16.30 s	---	0.00	---	---	27.33
3.70	35,394	992.70	31.45 oc	---	---	---	16.07	15.37 s	---	0.00	---	---	31.45
3.80	36,653	992.80	36.30 oc	---	---	---	21.15 s	15.15 s	---	0.00	---	---	36.30
3.90	37,911	992.90	40.00 oc	---	---	---	24.93 s	15.06 s	---	0.00	---	---	40.00
4.00	39,170	993.00	43.14 oc	---	---	---	28.15 s	14.98 s	---	0.00	---	---	43.14
4.10	40,670	993.10	45.88 oc	---	---	---	30.96 s	14.92 s	---	0.00	---	---	45.88
4.20	42,170	993.20	48.33 oc	---	---	---	33.46 s	14.87 s	---	0.00	---	---	48.33
4.30	43,670	993.30	50.55 oc	---	---	---	35.70 s	14.84 s	---	0.29	---	---	50.83
4.40	45,170	993.40	52.59 oc	---	---	---	37.75 s	14.83 s	---	1.51	---	---	54.08
4.50	46,670	993.50	54.48 oc	---	---	---	39.64 s	14.84 s	---	3.25	---	---	57.73
4.60	48,170	993.60	56.27 oc	---	---	---	41.39 s	14.87 s	---	5.38	---	---	61.64
4.70	49,670	993.70	57.95 oc	---	---	---	43.03 s	14.91 s	---	7.84	---	---	65.79
4.80	51,170	993.80	59.56 oc	---	---	---	44.57 s	14.98 s	---	10.60	---	---	70.15
4.90	52,670	993.90	61.10 oc	---	---	---	46.03 s	15.05 s	---	13.62	---	---	74.70
5.00	54,170	994.00	62.58 oc	---	---	---	47.42 s	15.15 s	---	16.89	---	---	79.45
5.03	54,585	994.03	62.94 oc	---	---	---	47.76 s	15.17 s	---	17.74	---	---	80.68
5.05	54,999	994.05	63.26 ic	---	---	---	48.06 s	15.19 s	---	18.60	---	---	81.85
5.07	55,414	994.08	63.51 ic	---	---	---	48.31 s	15.19 s	---	19.49	---	---	82.99
5.10	55,829	994.10	63.76 ic	---	---	---	48.56 s	15.19 s	---	20.38	---	---	84.13
5.13	56,244	994.13	64.01 ic	---	---	---	48.81 s	15.20 s	---	21.29	---	---	85.29
5.15	56,659	994.15	64.26 ic	---	---	---	49.04 s	15.20 s	---	22.20	---	---	86.44
5.18	57,073	994.18	64.50 ic	---	---	---	49.28 s	15.21 s	---	23.14	---	---	87.62
5.20	57,488	994.20	64.75 ic	---	---	---	49.51 s	15.21 s	---	24.08	---	---	88.80
5.23	57,903	994.23	64.99 ic	---	---	---	49.76 s	15.22 s	---	25.04	---	---	90.02
5.25	58,318	994.25	65.22 ic	---	---	---	49.97 s	15.23 s	---	26.00	---	---	91.20

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

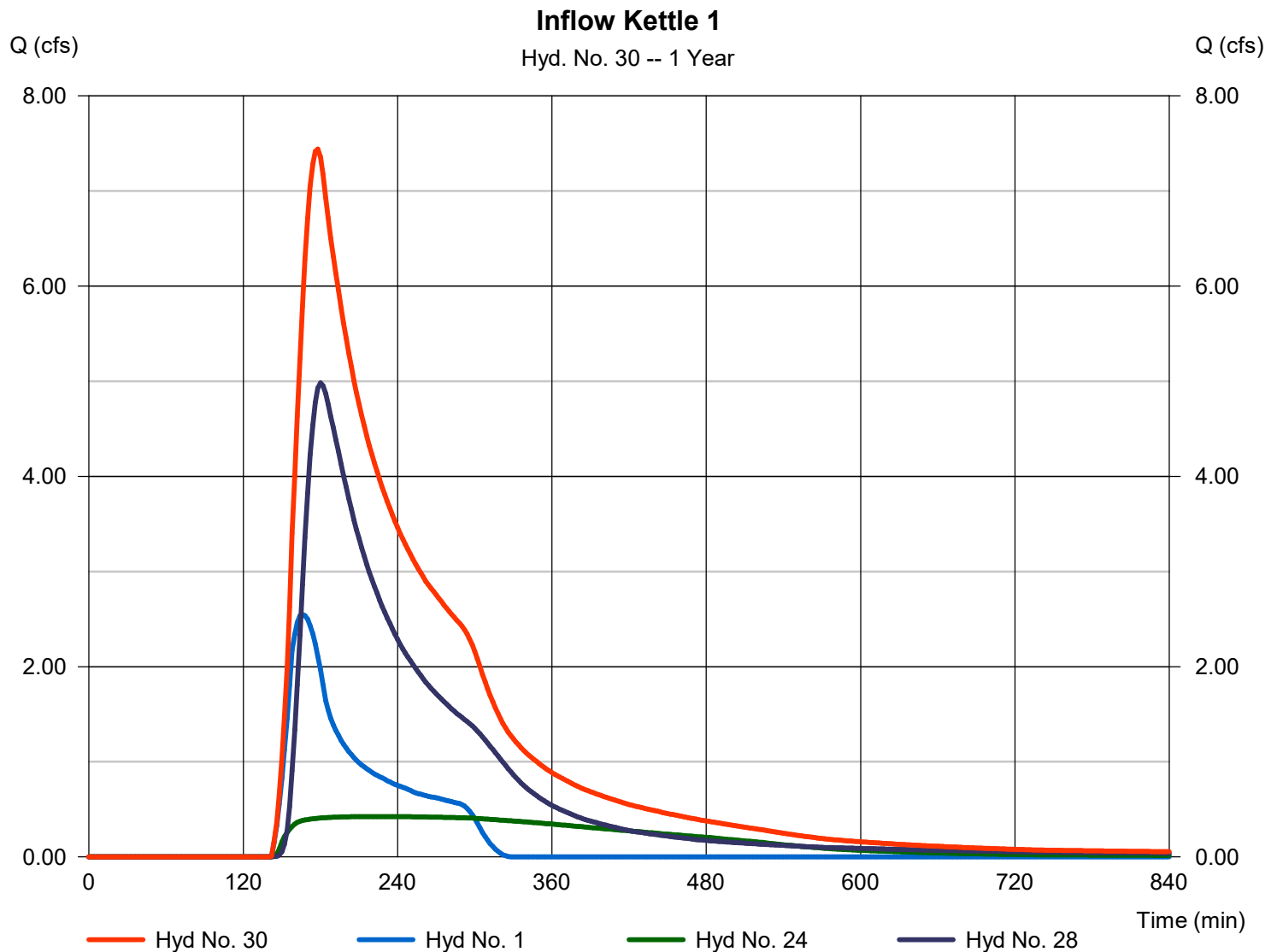
Tuesday, 04 / 7 / 2020

Hyd. No. 30

Inflow Kettle 1

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 1, 24, 28

Peak discharge = 7.442 cfs
 Time to peak = 178 min
 Hyd. volume = 51,273 cuft
 Contrib. drain. area = 12.520 ac



Hydrograph Report

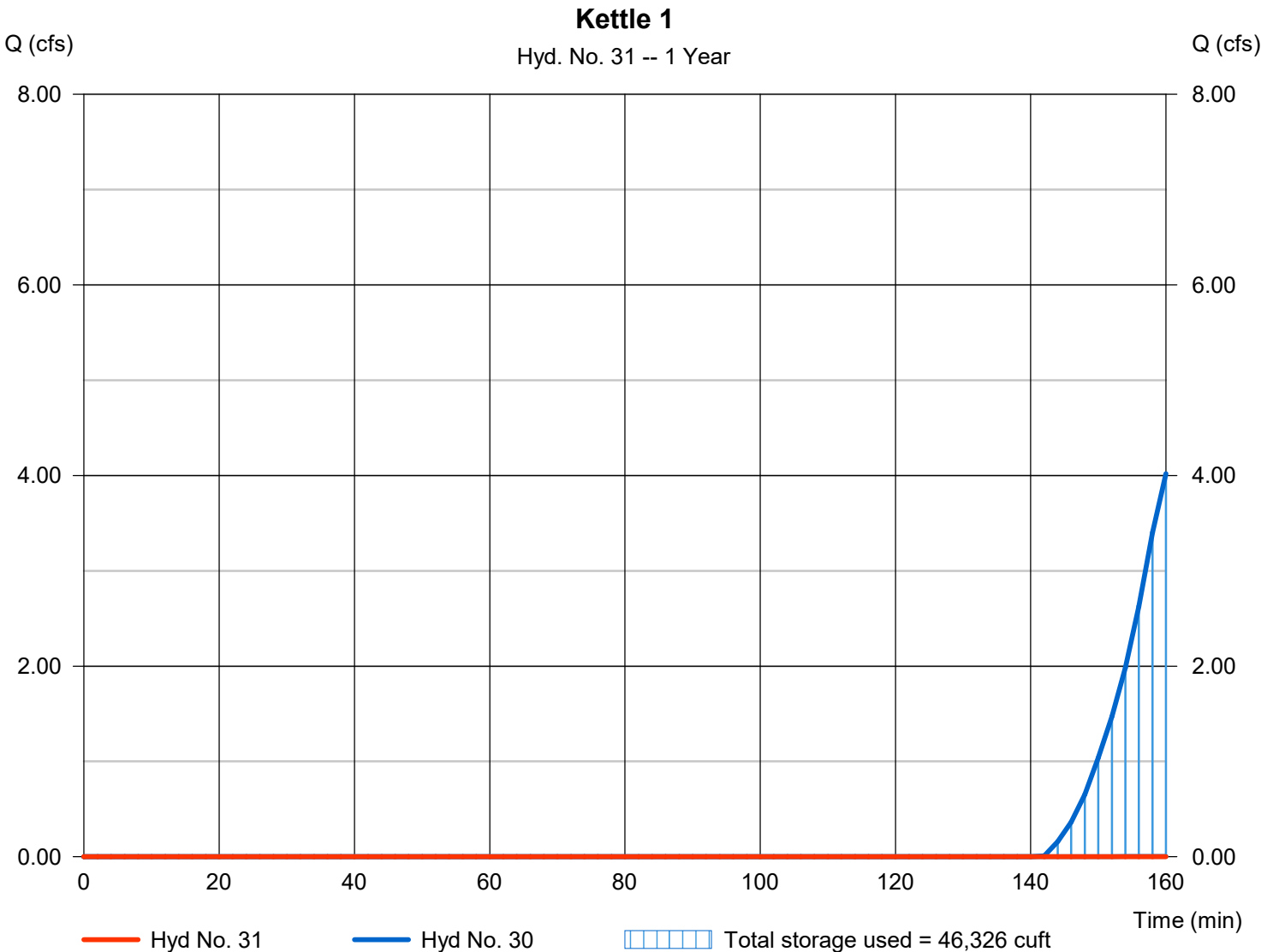
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020
Tuesday, 04 / 7 / 2020

Hyd. No. 31

Kettle 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 30 - Inflow Kettle 1	Max. Elevation	= 948.87 ft
Reservoir name	= K-1	Max. Storage	= 46,326 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 1 - K-1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 944.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	944.00	3,750	0	0
1.00	945.00	6,195	4,921	4,921
2.00	946.00	8,685	7,404	12,325
3.00	947.00	10,780	9,713	22,038
4.00	948.00	13,055	11,898	33,936
5.00	949.00	15,305	14,164	48,100
6.00	950.00	17,415	16,347	64,447
7.00	951.00	19,655	18,522	82,969
8.00	952.00	21,865	20,748	103,717
9.00	953.00	24,185	23,013	126,730
10.00	954.00	26,545	25,353	152,083
11.00	955.00	28,985	27,753	179,837
12.00	956.00	31,540	30,251	210,087
13.00	957.00	34,135	32,826	242,913
14.00	958.00	36,900	35,505	278,418
15.00	959.00	39,930	38,401	316,819
16.00	960.00	43,170	41,535	358,354
17.00	961.00	46,620	44,880	403,234
18.00	962.00	50,260	48,424	451,657
19.00	963.00	54,345	52,284	503,941
20.00	964.00	58,275	56,293	560,234

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 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)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	944.00	---	---	---	---	---	---	---	---	0.000	---	0.000
0.10	492	944.10	---	---	---	---	---	---	---	---	0.003	---	0.003
0.20	984	944.20	---	---	---	---	---	---	---	---	0.007	---	0.007
0.30	1,476	944.30	---	---	---	---	---	---	---	---	0.010	---	0.010
0.40	1,968	944.40	---	---	---	---	---	---	---	---	0.014	---	0.014
0.50	2,461	944.50	---	---	---	---	---	---	---	---	0.017	---	0.017
0.60	2,953	944.60	---	---	---	---	---	---	---	---	0.021	---	0.021
0.70	3,445	944.70	---	---	---	---	---	---	---	---	0.024	---	0.024
0.80	3,937	944.80	---	---	---	---	---	---	---	---	0.028	---	0.028
0.90	4,429	944.90	---	---	---	---	---	---	---	---	0.031	---	0.031
1.00	4,921	945.00	---	---	---	---	---	---	---	---	0.034	---	0.034
1.10	5,662	945.10	---	---	---	---	---	---	---	---	0.036	---	0.036
1.20	6,402	945.20	---	---	---	---	---	---	---	---	0.037	---	0.037
1.30	7,142	945.30	---	---	---	---	---	---	---	---	0.039	---	0.039
1.40	7,883	945.40	---	---	---	---	---	---	---	---	0.040	---	0.040
1.50	8,623	945.50	---	---	---	---	---	---	---	---	0.041	---	0.041
1.60	9,364	945.60	---	---	---	---	---	---	---	---	0.043	---	0.043
1.70	10,104	945.70	---	---	---	---	---	---	---	---	0.044	---	0.044
1.80	10,845	945.80	---	---	---	---	---	---	---	---	0.045	---	0.045
1.90	11,585	945.90	---	---	---	---	---	---	---	---	0.047	---	0.047
2.00	12,325	946.00	---	---	---	---	---	---	---	---	0.048	---	0.048
2.10	13,297	946.10	---	---	---	---	---	---	---	---	0.049	---	0.049

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
2.20	14,268	946.20	---	---	---	---	---	---	---	---	0.051	---	0.051
2.30	15,239	946.30	---	---	---	---	---	---	---	---	0.052	---	0.052
2.40	16,211	946.40	---	---	---	---	---	---	---	---	0.053	---	0.053
2.50	17,182	946.50	---	---	---	---	---	---	---	---	0.054	---	0.054
2.60	18,153	946.60	---	---	---	---	---	---	---	---	0.055	---	0.055
2.70	19,124	946.70	---	---	---	---	---	---	---	---	0.056	---	0.056
2.80	20,096	946.80	---	---	---	---	---	---	---	---	0.058	---	0.058
2.90	21,067	946.90	---	---	---	---	---	---	---	---	0.059	---	0.059
3.00	22,038	947.00	---	---	---	---	---	---	---	---	0.060	---	0.060
3.10	23,228	947.10	---	---	---	---	---	---	---	---	0.061	---	0.061
3.20	24,418	947.20	---	---	---	---	---	---	---	---	0.062	---	0.062
3.30	25,608	947.30	---	---	---	---	---	---	---	---	0.064	---	0.064
3.40	26,797	947.40	---	---	---	---	---	---	---	---	0.065	---	0.065
3.50	27,987	947.50	---	---	---	---	---	---	---	---	0.066	---	0.066
3.60	29,177	947.60	---	---	---	---	---	---	---	---	0.067	---	0.067
3.70	30,367	947.70	---	---	---	---	---	---	---	---	0.069	---	0.069
3.80	31,557	947.80	---	---	---	---	---	---	---	---	0.070	---	0.070
3.90	32,746	947.90	---	---	---	---	---	---	---	---	0.071	---	0.071
4.00	33,936	948.00	---	---	---	---	---	---	---	---	0.073	---	0.073
4.10	35,353	948.10	---	---	---	---	---	---	---	---	0.074	---	0.074
4.20	36,769	948.20	---	---	---	---	---	---	---	---	0.075	---	0.075
4.30	38,185	948.30	---	---	---	---	---	---	---	---	0.076	---	0.076
4.40	39,602	948.40	---	---	---	---	---	---	---	---	0.078	---	0.078
4.50	41,018	948.50	---	---	---	---	---	---	---	---	0.079	---	0.079
4.60	42,434	948.60	---	---	---	---	---	---	---	---	0.080	---	0.080
4.70	43,851	948.70	---	---	---	---	---	---	---	---	0.081	---	0.081
4.80	45,267	948.80	---	---	---	---	---	---	---	---	0.083	---	0.083
4.90	46,684	948.90	---	---	---	---	---	---	---	---	0.084	---	0.084
5.00	48,100	949.00	---	---	---	---	---	---	---	---	0.085	---	0.085
5.10	49,735	949.10	---	---	---	---	---	---	---	---	0.086	---	0.086
5.20	51,369	949.20	---	---	---	---	---	---	---	---	0.087	---	0.087
5.30	53,004	949.30	---	---	---	---	---	---	---	---	0.089	---	0.089
5.40	54,639	949.40	---	---	---	---	---	---	---	---	0.090	---	0.090
5.50	56,273	949.50	---	---	---	---	---	---	---	---	0.091	---	0.091
5.60	57,908	949.60	---	---	---	---	---	---	---	---	0.092	---	0.092
5.70	59,543	949.70	---	---	---	---	---	---	---	---	0.093	---	0.093
5.80	61,178	949.80	---	---	---	---	---	---	---	---	0.094	---	0.094
5.90	62,812	949.90	---	---	---	---	---	---	---	---	0.096	---	0.096
6.00	64,447	950.00	---	---	---	---	---	---	---	---	0.097	---	0.097
6.10	66,299	950.10	---	---	---	---	---	---	---	---	0.098	---	0.098
6.20	68,151	950.20	---	---	---	---	---	---	---	---	0.099	---	0.099
6.30	70,004	950.30	---	---	---	---	---	---	---	---	0.100	---	0.100
6.40	71,856	950.40	---	---	---	---	---	---	---	---	0.102	---	0.102
6.50	73,708	950.50	---	---	---	---	---	---	---	---	0.103	---	0.103
6.60	75,560	950.60	---	---	---	---	---	---	---	---	0.104	---	0.104
6.70	77,412	950.70	---	---	---	---	---	---	---	---	0.105	---	0.105
6.80	79,264	950.80	---	---	---	---	---	---	---	---	0.107	---	0.107
6.90	81,117	950.90	---	---	---	---	---	---	---	---	0.108	---	0.108
7.00	82,969	951.00	---	---	---	---	---	---	---	---	0.109	---	0.109
7.10	85,044	951.10	---	---	---	---	---	---	---	---	0.110	---	0.110
7.20	87,118	951.20	---	---	---	---	---	---	---	---	0.112	---	0.112
7.30	89,193	951.30	---	---	---	---	---	---	---	---	0.113	---	0.113
7.40	91,268	951.40	---	---	---	---	---	---	---	---	0.114	---	0.114
7.50	93,343	951.50	---	---	---	---	---	---	---	---	0.115	---	0.115
7.60	95,418	951.60	---	---	---	---	---	---	---	---	0.117	---	0.117
7.70	97,493	951.70	---	---	---	---	---	---	---	---	0.118	---	0.118
7.80	99,567	951.80	---	---	---	---	---	---	---	---	0.119	---	0.119
7.90	101,642	951.90	---	---	---	---	---	---	---	---	0.120	---	0.120
8.00	103,717	952.00	---	---	---	---	---	---	---	---	0.121	---	0.121
8.10	106,018	952.10	---	---	---	---	---	---	---	---	0.123	---	0.123
8.20	108,320	952.20	---	---	---	---	---	---	---	---	0.124	---	0.124
8.30	110,621	952.30	---	---	---	---	---	---	---	---	0.125	---	0.125
8.40	112,922	952.40	---	---	---	---	---	---	---	---	0.127	---	0.127
8.50	115,223	952.50	---	---	---	---	---	---	---	---	0.128	---	0.128
8.60	117,525	952.60	---	---	---	---	---	---	---	---	0.129	---	0.129
8.70	119,826	952.70	---	---	---	---	---	---	---	---	0.130	---	0.130
8.80	122,127	952.80	---	---	---	---	---	---	---	---	0.132	---	0.132
8.90	124,429	952.90	---	---	---	---	---	---	---	---	0.133	---	0.133
9.00	126,730	953.00	---	---	---	---	---	---	---	---	0.134	---	0.134
9.10	129,265	953.10	---	---	---	---	---	---	---	---	0.136	---	0.136
9.20	131,801	953.20	---	---	---	---	---	---	---	---	0.137	---	0.137
9.30	134,336	953.30	---	---	---	---	---	---	---	---	0.138	---	0.138

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
9.40	136,871	953.40	---	---	---	---	---	---	---	---	0.140	---	0.140
9.50	139,407	953.50	---	---	---	---	---	---	---	---	0.141	---	0.141
9.60	141,942	953.60	---	---	---	---	---	---	---	---	0.142	---	0.142
9.70	144,477	953.70	---	---	---	---	---	---	---	---	0.144	---	0.144
9.80	147,013	953.80	---	---	---	---	---	---	---	---	0.145	---	0.145
9.90	149,548	953.90	---	---	---	---	---	---	---	---	0.146	---	0.146
10.00	152,083	954.00	---	---	---	---	---	---	---	---	0.147	---	0.147
10.10	154,859	954.10	---	---	---	---	---	---	---	---	0.149	---	0.149
10.20	157,634	954.20	---	---	---	---	---	---	---	---	0.150	---	0.150
10.30	160,409	954.30	---	---	---	---	---	---	---	---	0.152	---	0.152
10.40	163,185	954.40	---	---	---	---	---	---	---	---	0.153	---	0.153
10.50	165,960	954.50	---	---	---	---	---	---	---	---	0.154	---	0.154
10.60	168,735	954.60	---	---	---	---	---	---	---	---	0.156	---	0.156
10.70	171,511	954.70	---	---	---	---	---	---	---	---	0.157	---	0.157
10.80	174,286	954.80	---	---	---	---	---	---	---	---	0.158	---	0.158
10.90	177,061	954.90	---	---	---	---	---	---	---	---	0.160	---	0.160
11.00	179,837	955.00	---	---	---	---	---	---	---	---	0.161	---	0.161
11.10	182,862	955.10	---	---	---	---	---	---	---	---	0.162	---	0.162
11.20	185,887	955.20	---	---	---	---	---	---	---	---	0.164	---	0.164
11.30	188,912	955.30	---	---	---	---	---	---	---	---	0.165	---	0.165
11.40	191,937	955.40	---	---	---	---	---	---	---	---	0.167	---	0.167
11.50	194,962	955.50	---	---	---	---	---	---	---	---	0.168	---	0.168
11.60	197,987	955.60	---	---	---	---	---	---	---	---	0.170	---	0.170
11.70	201,012	955.70	---	---	---	---	---	---	---	---	0.171	---	0.171
11.80	204,037	955.80	---	---	---	---	---	---	---	---	0.172	---	0.172
11.90	207,062	955.90	---	---	---	---	---	---	---	---	0.174	---	0.174
12.00	210,087	956.00	---	---	---	---	---	---	---	---	0.175	---	0.175
12.10	213,370	956.10	---	---	---	---	---	---	---	---	0.177	---	0.177
12.20	216,652	956.20	---	---	---	---	---	---	---	---	0.178	---	0.178
12.30	219,935	956.30	---	---	---	---	---	---	---	---	0.180	---	0.180
12.40	223,217	956.40	---	---	---	---	---	---	---	---	0.181	---	0.181
12.50	226,500	956.50	---	---	---	---	---	---	---	---	0.182	---	0.182
12.60	229,782	956.60	---	---	---	---	---	---	---	---	0.184	---	0.184
12.70	233,065	956.70	---	---	---	---	---	---	---	---	0.185	---	0.185
12.80	236,348	956.80	---	---	---	---	---	---	---	---	0.187	---	0.187
12.90	239,630	956.90	---	---	---	---	---	---	---	---	0.188	---	0.188
13.00	242,913	957.00	---	---	---	---	---	---	---	---	0.190	---	0.190
13.10	246,463	957.10	---	---	---	---	---	---	---	---	0.191	---	0.191
13.20	250,014	957.20	---	---	---	---	---	---	---	---	0.193	---	0.193
13.30	253,564	957.30	---	---	---	---	---	---	---	---	0.194	---	0.194
13.40	257,115	957.40	---	---	---	---	---	---	---	---	0.196	---	0.196
13.50	260,665	957.50	---	---	---	---	---	---	---	---	0.197	---	0.197
13.60	264,216	957.60	---	---	---	---	---	---	---	---	0.199	---	0.199
13.70	267,766	957.70	---	---	---	---	---	---	---	---	0.200	---	0.200
13.80	271,317	957.80	---	---	---	---	---	---	---	---	0.202	---	0.202
13.90	274,867	957.90	---	---	---	---	---	---	---	---	0.203	---	0.203
14.00	278,418	958.00	---	---	---	---	---	---	---	---	0.205	---	0.205
14.10	282,258	958.10	---	---	---	---	---	---	---	---	0.207	---	0.207
14.20	286,098	958.20	---	---	---	---	---	---	---	---	0.208	---	0.208
14.30	289,938	958.30	---	---	---	---	---	---	---	---	0.210	---	0.210
14.40	293,778	958.40	---	---	---	---	---	---	---	---	0.212	---	0.212
14.50	297,618	958.50	---	---	---	---	---	---	---	---	0.213	---	0.213
14.60	301,458	958.60	---	---	---	---	---	---	---	---	0.215	---	0.215
14.70	305,299	958.70	---	---	---	---	---	---	---	---	0.217	---	0.217
14.80	309,139	958.80	---	---	---	---	---	---	---	---	0.218	---	0.218
14.90	312,979	958.90	---	---	---	---	---	---	---	---	0.220	---	0.220
15.00	316,819	959.00	---	---	---	---	---	---	---	---	0.222	---	0.222
15.10	320,972	959.10	---	---	---	---	---	---	---	---	0.224	---	0.224
15.20	325,126	959.20	---	---	---	---	---	---	---	---	0.225	---	0.225
15.30	329,279	959.30	---	---	---	---	---	---	---	---	0.227	---	0.227
15.40	333,433	959.40	---	---	---	---	---	---	---	---	0.229	---	0.229
15.50	337,587	959.50	---	---	---	---	---	---	---	---	0.231	---	0.231
15.60	341,740	959.60	---	---	---	---	---	---	---	---	0.233	---	0.233
15.70	345,894	959.70	---	---	---	---	---	---	---	---	0.234	---	0.234
15.80	350,047	959.80	---	---	---	---	---	---	---	---	0.236	---	0.236
15.90	354,201	959.90	---	---	---	---	---	---	---	---	0.238	---	0.238
16.00	358,354	960.00	---	---	---	---	---	---	---	---	0.240	---	0.240
16.10	362,842	960.10	---	---	---	---	---	---	---	---	0.242	---	0.242
16.20	367,330	960.20	---	---	---	---	---	---	---	---	0.244	---	0.244
16.30	371,818	960.30	---	---	---	---	---	---	---	---	0.246	---	0.246
16.40	376,306	960.40	---	---	---	---	---	---	---	---	0.247	---	0.247
16.50	380,794	960.50	---	---	---	---	---	---	---	---	0.249	---	0.249

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
16.60	385,282	960.60	---	---	---	---	---	---	---	---	0.251	---	0.251
16.70	389,770	960.70	---	---	---	---	---	---	---	---	0.253	---	0.253
16.80	394,258	960.80	---	---	---	---	---	---	---	---	0.255	---	0.255
16.90	398,746	960.90	---	---	---	---	---	---	---	---	0.257	---	0.257
17.00	403,234	961.00	---	---	---	---	---	---	---	---	0.259	---	0.259
17.10	408,076	961.10	---	---	---	---	---	---	---	---	0.261	---	0.261
17.20	412,918	961.20	---	---	---	---	---	---	---	---	0.263	---	0.263
17.30	417,761	961.30	---	---	---	---	---	---	---	---	0.265	---	0.265
17.40	422,603	961.40	---	---	---	---	---	---	---	---	0.267	---	0.267
17.50	427,446	961.50	---	---	---	---	---	---	---	---	0.269	---	0.269
17.60	432,288	961.60	---	---	---	---	---	---	---	---	0.271	---	0.271
17.70	437,130	961.70	---	---	---	---	---	---	---	---	0.273	---	0.273
17.80	441,973	961.80	---	---	---	---	---	---	---	---	0.275	---	0.275
17.90	446,815	961.90	---	---	---	---	---	---	---	---	0.277	---	0.277
18.00	451,657	962.00	---	---	---	---	---	---	---	---	0.279	---	0.279
18.10	456,886	962.10	---	---	---	---	---	---	---	---	0.281	---	0.281
18.20	462,114	962.20	---	---	---	---	---	---	---	---	0.284	---	0.284
18.30	467,343	962.30	---	---	---	---	---	---	---	---	0.286	---	0.286
18.40	472,571	962.40	---	---	---	---	---	---	---	---	0.288	---	0.288
18.50	477,799	962.50	---	---	---	---	---	---	---	---	0.291	---	0.291
18.60	483,028	962.60	---	---	---	---	---	---	---	---	0.293	---	0.293
18.70	488,256	962.70	---	---	---	---	---	---	---	---	0.295	---	0.295
18.80	493,485	962.80	---	---	---	---	---	---	---	---	0.297	---	0.297
18.90	498,713	962.90	---	---	---	---	---	---	---	---	0.300	---	0.300
19.00	503,941	963.00	---	---	---	---	---	---	---	---	0.302	---	0.302
19.10	509,571	963.10	---	---	---	---	---	---	---	---	0.304	---	0.304
19.20	515,200	963.20	---	---	---	---	---	---	---	---	0.306	---	0.306
19.30	520,829	963.30	---	---	---	---	---	---	---	---	0.308	---	0.308
19.40	526,458	963.40	---	---	---	---	---	---	---	---	0.311	---	0.311
19.50	532,088	963.50	---	---	---	---	---	---	---	---	0.313	---	0.313
19.60	537,717	963.60	---	---	---	---	---	---	---	---	0.315	---	0.315
19.70	543,346	963.70	---	---	---	---	---	---	---	---	0.317	---	0.317
19.80	548,976	963.80	---	---	---	---	---	---	---	---	0.319	---	0.319
19.90	554,605	963.90	---	---	---	---	---	---	---	---	0.322	---	0.322
20.00	560,234	964.00	---	---	---	---	---	---	---	---	0.324	---	0.324

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

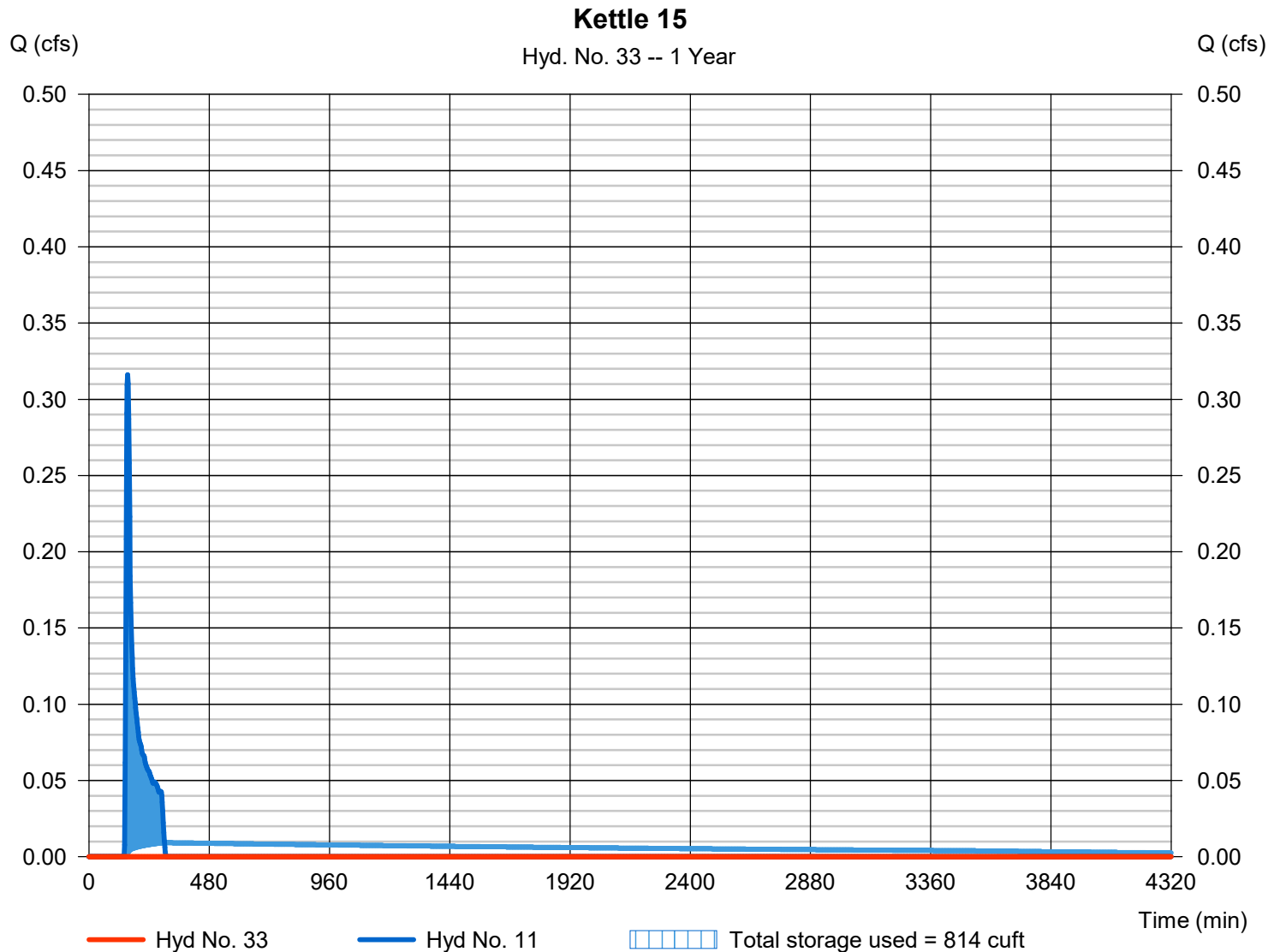
Hyd. No. 33

Kettle 15

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 11 - E-15
 Reservoir name = K-15

Peak discharge = 0.000 cfs
 Time to peak = 226 min
 Hyd. volume = 0 cuft
 Max. Elevation = 970.35 ft
 Max. Storage = 814 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 15 - K-15

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 970.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	970.00	1,620	0	0
1.00	971.00	3,050	2,297	2,297
2.00	972.00	5,595	4,258	6,556
3.00	973.00	9,120	7,285	13,841

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 972.50	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	970.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	230	970.10	---	---	---	---	0.00	---	---	---	0.002	---	0.002
0.20	459	970.20	---	---	---	---	0.00	---	---	---	0.003	---	0.003
0.30	689	970.30	---	---	---	---	0.00	---	---	---	0.005	---	0.005
0.40	919	970.40	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.50	1,149	970.50	---	---	---	---	0.00	---	---	---	0.008	---	0.008
0.60	1,378	970.60	---	---	---	---	0.00	---	---	---	0.010	---	0.010
0.70	1,608	970.70	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.80	1,838	970.80	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.90	2,068	970.90	---	---	---	---	0.00	---	---	---	0.015	---	0.015
1.00	2,297	971.00	---	---	---	---	0.00	---	---	---	0.017	---	0.017
1.10	2,723	971.10	---	---	---	---	0.00	---	---	---	0.018	---	0.018
1.20	3,149	971.20	---	---	---	---	0.00	---	---	---	0.020	---	0.020
1.30	3,575	971.30	---	---	---	---	0.00	---	---	---	0.021	---	0.021
1.40	4,001	971.40	---	---	---	---	0.00	---	---	---	0.023	---	0.023
1.50	4,426	971.50	---	---	---	---	0.00	---	---	---	0.024	---	0.024
1.60	4,852	971.60	---	---	---	---	0.00	---	---	---	0.025	---	0.025
1.70	5,278	971.70	---	---	---	---	0.00	---	---	---	0.027	---	0.027
1.80	5,704	971.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
1.90	6,130	971.90	---	---	---	---	0.00	---	---	---	0.030	---	0.030
2.00	6,556	972.00	---	---	---	---	0.00	---	---	---	0.031	---	0.031
2.10	7,284	972.10	---	---	---	---	0.00	---	---	---	0.033	---	0.033
2.20	8,013	972.20	---	---	---	---	0.00	---	---	---	0.035	---	0.035
2.30	8,741	972.30	---	---	---	---	0.00	---	---	---	0.037	---	0.037
2.40	9,470	972.40	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.50	10,198	972.50	---	---	---	---	0.00	---	---	---	0.041	---	0.041
2.60	10,927	972.60	---	---	---	---	1.23	---	---	---	0.043	---	1.273
2.70	11,655	972.70	---	---	---	---	3.48	---	---	---	0.045	---	3.529
2.80	12,384	972.80	---	---	---	---	6.40	---	---	---	0.047	---	6.449
2.90	13,112	972.90	---	---	---	---	9.86	---	---	---	0.049	---	9.907
3.00	13,841	973.00	---	---	---	---	13.79	---	---	---	0.051	---	13.84

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

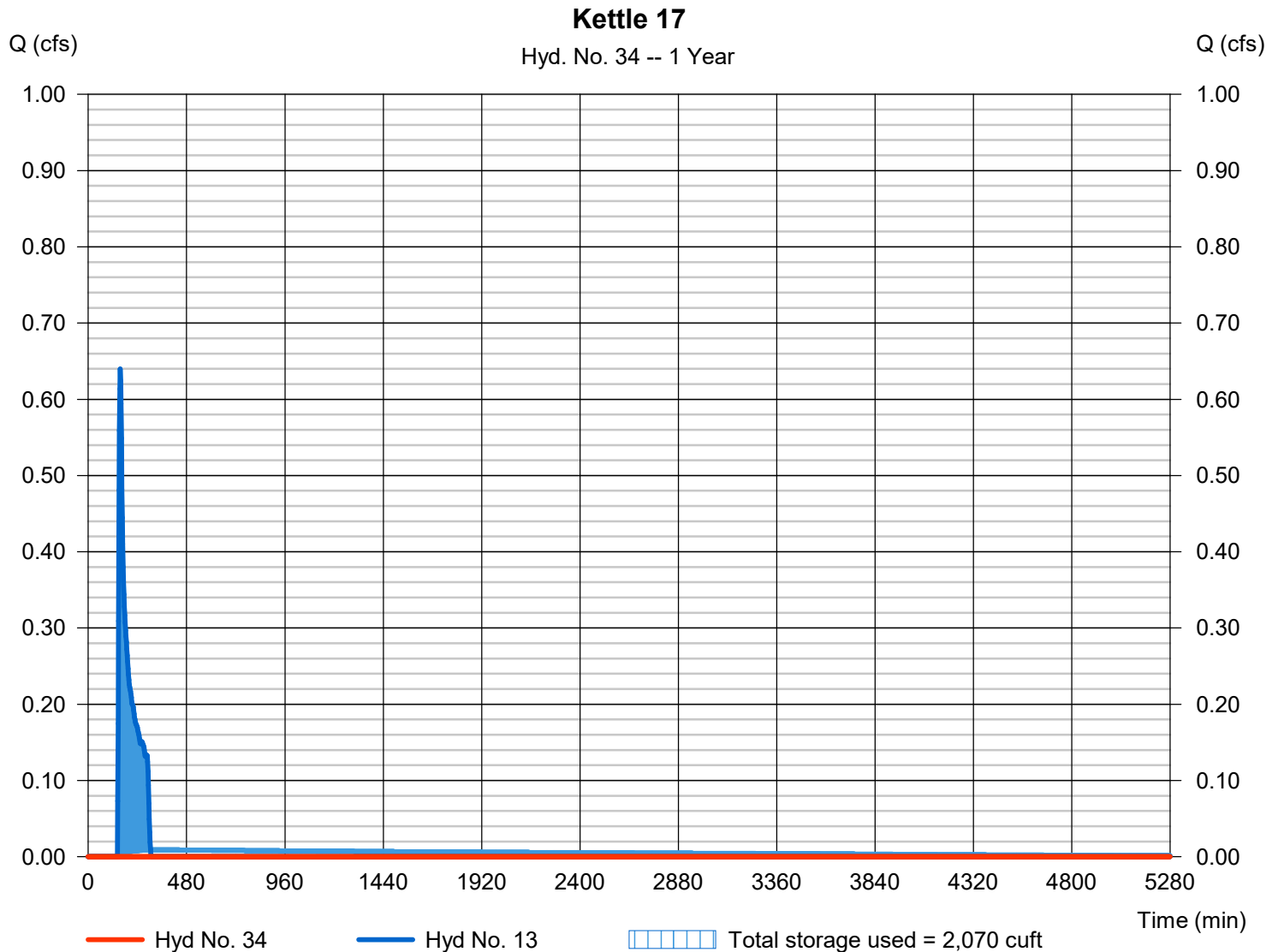
Hyd. No. 34

Kettle 17

Hydrograph type = Reservoir
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyd. No. = 13 - P-17
 Reservoir name = P-K-17

Peak discharge = 0.000 cfs
 Time to peak = 264 min
 Hyd. volume = 0 cuft
 Max. Elevation = 1011.19 ft
 Max. Storage = 2,070 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 18 - P-K-17

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 1011.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1011.00	2,770	0	0
1.00	1012.00	21,485	10,655	10,655
2.00	1013.00	33,950	27,478	38,134

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 1012.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1011.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	1,066	1011.10	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.20	2,131	1011.20	---	---	---	---	0.00	---	---	---	0.024	---	0.024
0.30	3,197	1011.30	---	---	---	---	0.00	---	---	---	0.036	---	0.036
0.40	4,262	1011.40	---	---	---	---	0.00	---	---	---	0.048	---	0.048
0.50	5,328	1011.50	---	---	---	---	0.00	---	---	---	0.060	---	0.060
0.60	6,393	1011.60	---	---	---	---	0.00	---	---	---	0.072	---	0.072
0.70	7,459	1011.70	---	---	---	---	0.00	---	---	---	0.084	---	0.084
0.80	8,524	1011.80	---	---	---	---	0.00	---	---	---	0.095	---	0.095
0.90	9,590	1011.90	---	---	---	---	0.00	---	---	---	0.107	---	0.107
1.00	10,655	1012.00	---	---	---	---	0.00	---	---	---	0.119	---	0.119
1.10	13,403	1012.10	---	---	---	---	1.23	---	---	---	0.126	---	1.359
1.20	16,151	1012.20	---	---	---	---	3.49	---	---	---	0.133	---	3.620
1.30	18,899	1012.30	---	---	---	---	6.41	---	---	---	0.140	---	6.546
1.40	21,647	1012.40	---	---	---	---	9.86	---	---	---	0.147	---	10.01
1.50	24,395	1012.50	---	---	---	---	13.78	---	---	---	0.154	---	13.94
1.60	27,142	1012.60	---	---	---	---	18.12	---	---	---	0.161	---	18.28
1.70	29,890	1012.70	---	---	---	---	22.83	---	---	---	0.168	---	23.00
1.80	32,638	1012.80	---	---	---	---	27.90	---	---	---	0.175	---	28.07
1.90	35,386	1012.90	---	---	---	---	33.29	---	---	---	0.182	---	33.47
2.00	38,134	1013.00	---	---	---	---	39.00	---	---	---	0.189	---	39.19

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

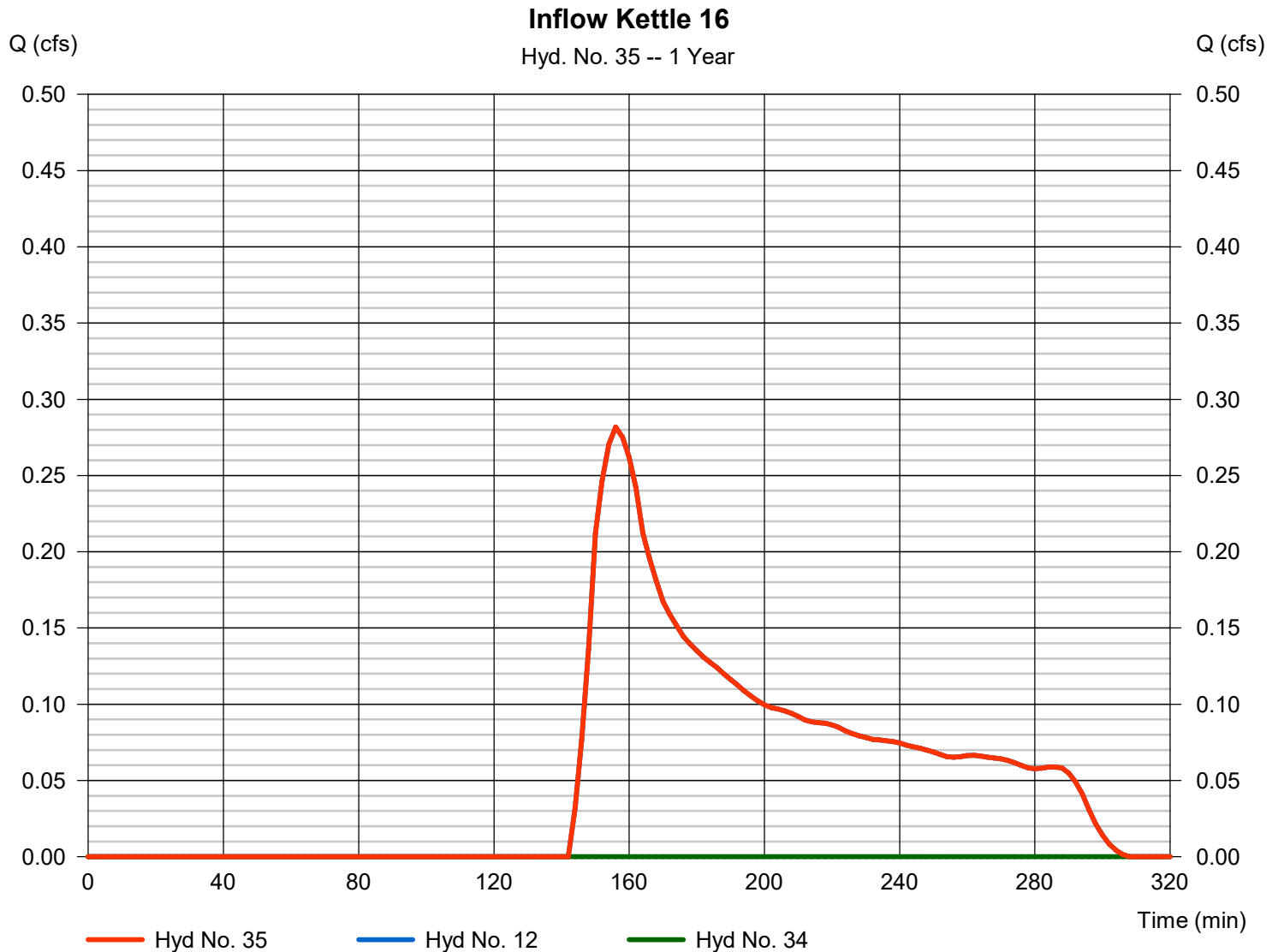
Tuesday, 04 / 7 / 2020

Hyd. No. 35

Inflow Kettle 16

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 12, 34

Peak discharge = 0.282 cfs
 Time to peak = 156 min
 Hyd. volume = 977 cuft
 Contrib. drain. area = 1.560 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

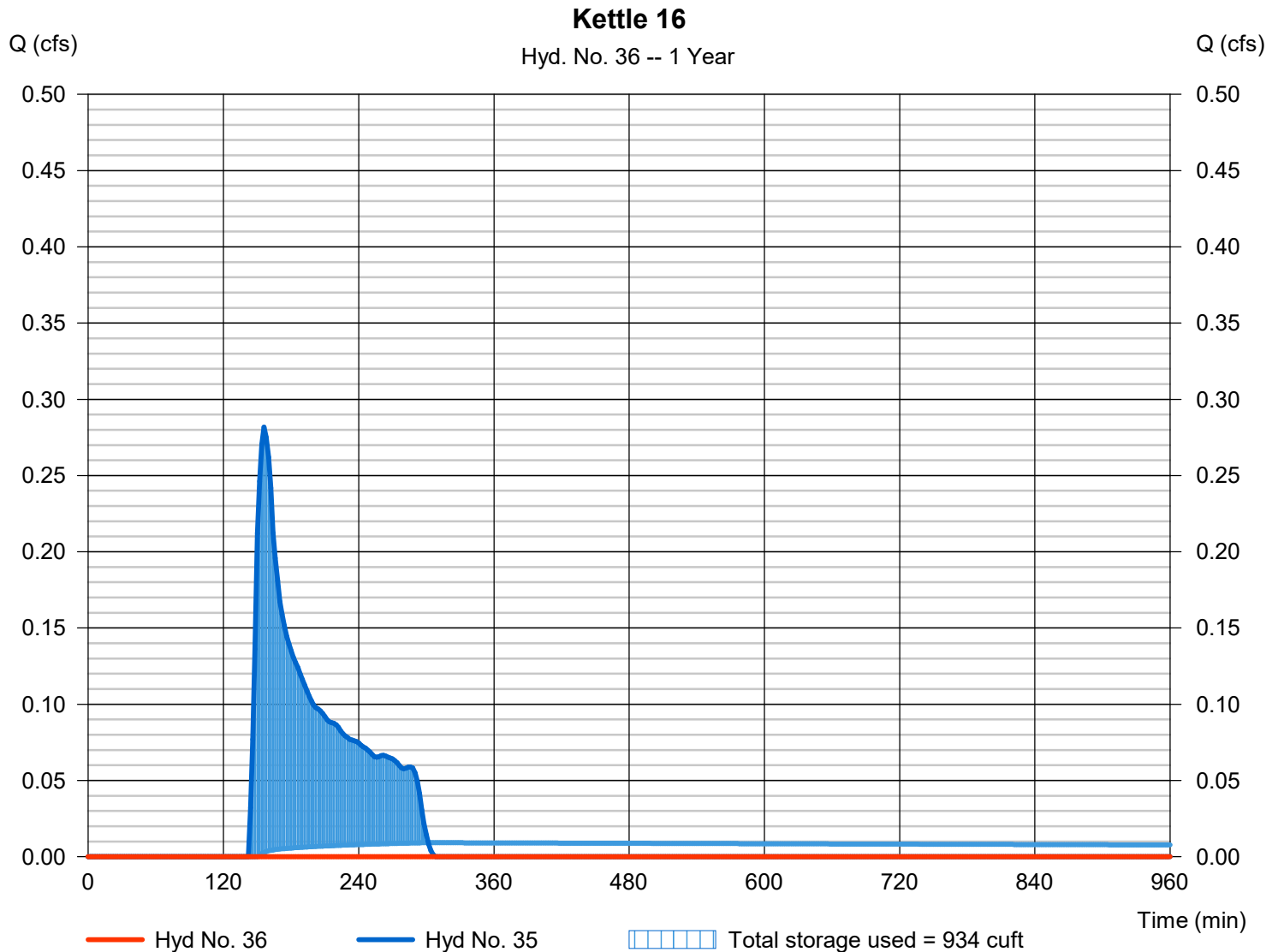
Tuesday, 04 / 7 / 2020

Hyd. No. 36

Kettle 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 244 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 35 - Inflow Kettle 16	Max. Elevation	= 1005.15 ft
Reservoir name	= K-16	Max. Storage	= 934 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 16 - K-16

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 1005.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1005.00	4,400	0	0
1.00	1006.00	8,010	6,115	6,115
2.00	1007.00	10,625	9,286	15,401
3.00	1008.00	13,320	11,946	27,347
4.00	1009.00	15,820	14,551	41,897

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 1007.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1005.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	611	1005.10	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.20	1,223	1005.20	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.30	1,834	1005.30	---	---	---	---	0.00	---	---	---	0.013	---	0.013
0.40	2,446	1005.40	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.50	3,057	1005.50	---	---	---	---	0.00	---	---	---	0.022	---	0.022
0.60	3,669	1005.60	---	---	---	---	0.00	---	---	---	0.027	---	0.027
0.70	4,280	1005.70	---	---	---	---	0.00	---	---	---	0.031	---	0.031
0.80	4,892	1005.80	---	---	---	---	0.00	---	---	---	0.036	---	0.036
0.90	5,503	1005.90	---	---	---	---	0.00	---	---	---	0.040	---	0.040
1.00	6,115	1006.00	---	---	---	---	0.00	---	---	---	0.044	---	0.044
1.10	7,044	1006.10	---	---	---	---	0.00	---	---	---	0.046	---	0.046
1.20	7,972	1006.20	---	---	---	---	0.00	---	---	---	0.047	---	0.047
1.30	8,901	1006.30	---	---	---	---	0.00	---	---	---	0.049	---	0.049
1.40	9,829	1006.40	---	---	---	---	0.00	---	---	---	0.050	---	0.050
1.50	10,758	1006.50	---	---	---	---	0.00	---	---	---	0.052	---	0.052
1.60	11,686	1006.60	---	---	---	---	0.00	---	---	---	0.053	---	0.053
1.70	12,615	1006.70	---	---	---	---	0.00	---	---	---	0.055	---	0.055
1.80	13,544	1006.80	---	---	---	---	0.00	---	---	---	0.056	---	0.056
1.90	14,472	1006.90	---	---	---	---	0.00	---	---	---	0.058	---	0.058
2.00	15,401	1007.00	---	---	---	---	0.00	---	---	---	0.059	---	0.059
2.10	16,595	1007.10	---	---	---	---	1.23	---	---	---	0.061	---	1.293
2.20	17,790	1007.20	---	---	---	---	3.49	---	---	---	0.062	---	3.549
2.30	18,985	1007.30	---	---	---	---	6.41	---	---	---	0.064	---	6.470
2.40	20,179	1007.40	---	---	---	---	9.86	---	---	---	0.065	---	9.928
2.50	21,374	1007.50	---	---	---	---	13.78	---	---	---	0.067	---	13.85
2.60	22,568	1007.60	---	---	---	---	18.12	---	---	---	0.068	---	18.19
2.70	23,763	1007.70	---	---	---	---	22.83	---	---	---	0.070	---	22.90
2.80	24,958	1007.80	---	---	---	---	27.90	---	---	---	0.071	---	27.97
2.90	26,152	1007.90	---	---	---	---	33.29	---	---	---	0.073	---	33.36
3.00	27,347	1008.00	---	---	---	---	39.00	---	---	---	0.074	---	39.07
3.10	28,802	1008.10	---	---	---	---	44.99	---	---	---	0.075	---	45.07
3.20	30,257	1008.20	---	---	---	---	51.26	---	---	---	0.077	---	51.34
3.30	31,712	1008.30	---	---	---	---	57.80	---	---	---	0.078	---	57.88
3.40	33,167	1008.40	---	---	---	---	64.60	---	---	---	0.080	---	64.68
3.50	34,622	1008.50	---	---	---	---	71.64	---	---	---	0.081	---	71.72
3.60	36,077	1008.60	---	---	---	---	78.92	---	---	---	0.082	---	79.00
3.70	37,532	1008.70	---	---	---	---	86.43	---	---	---	0.084	---	86.52

Continues on next page...

K-16

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.80	38,987	1008.80	---	---	---	---	94.17	---	---	---	0.085	---	94.25
3.90	40,442	1008.90	---	---	---	---	102.12	---	---	---	0.086	---	102.21
4.00	41,897	1009.00	---	---	---	---	110.31	---	---	---	0.088	---	110.40

...End

Hydrograph Report

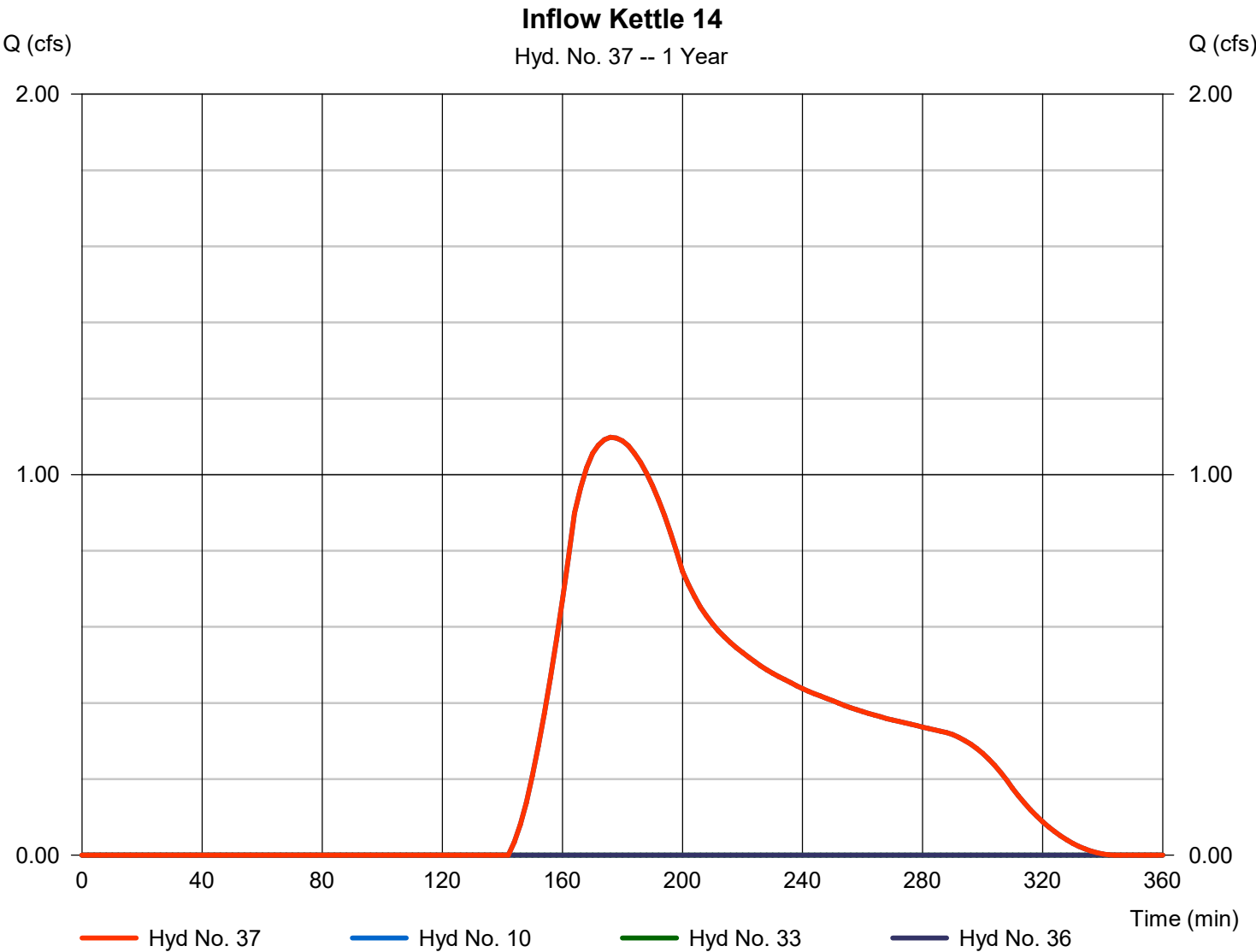
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 37

Inflow Kettle 14

Hydrograph type	= Combine	Peak discharge	= 1.098 cfs
Storm frequency	= 1 yrs	Time to peak	= 176 min
Time interval	= 2 min	Hyd. volume	= 5,502 cuft
Inflow hyds.	= 10, 33, 36	Contrib. drain. area	= 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

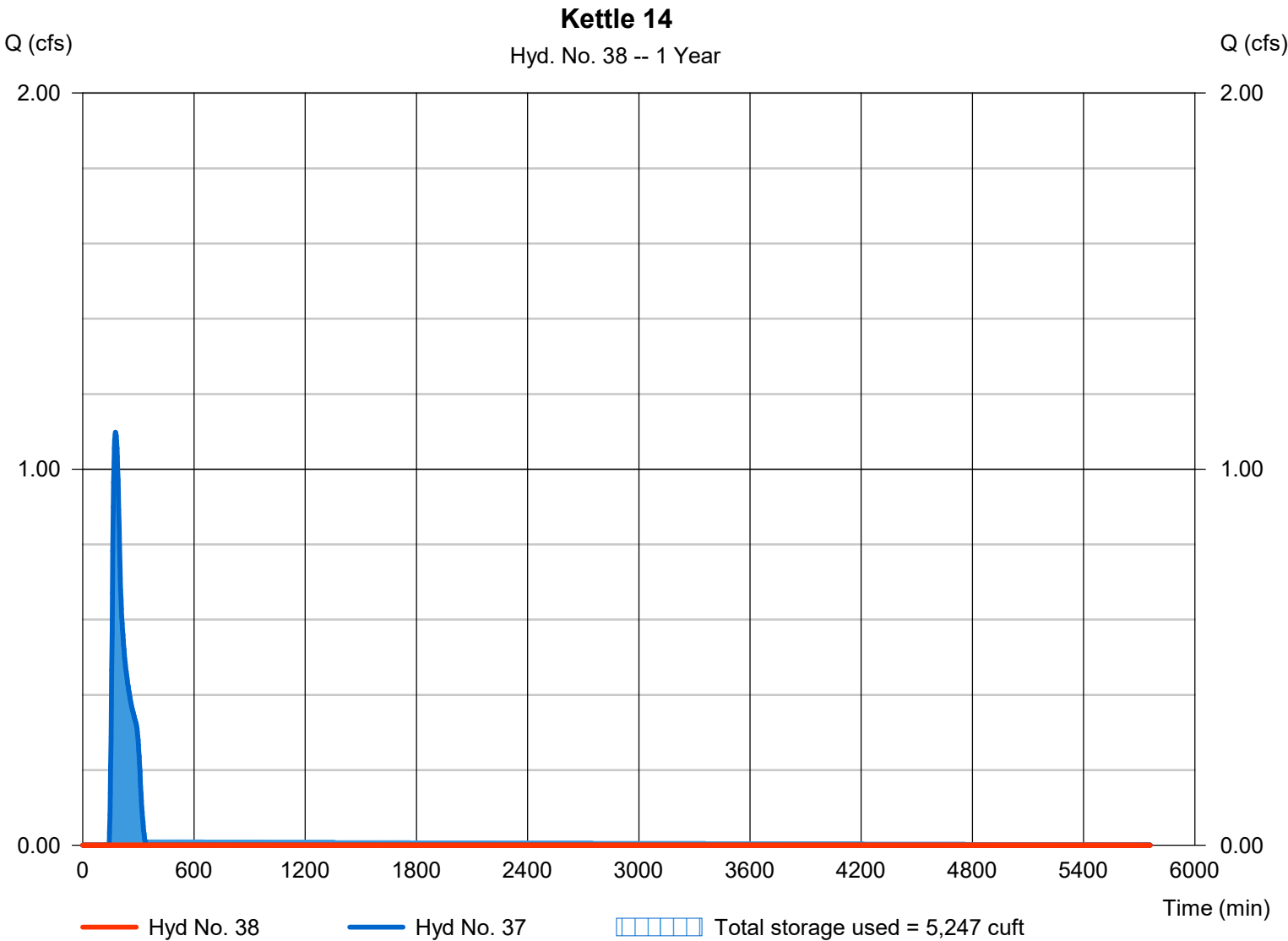
Tuesday, 04 / 7 / 2020

Hyd. No. 38

Kettle 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 1004 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - Inflow Kettle 14	Max. Elevation	= 956.18 ft
Reservoir name	= K-14	Max. Storage	= 5,247 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 14 - K-14

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 955.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	955.00	3,070	0	0
1.00	956.00	5,250	4,111	4,111
2.00	957.00	7,260	6,227	10,338
3.00	958.00	9,090	8,157	18,495
4.00	959.00	10,725	9,895	28,391
5.00	960.00	12,545	11,622	40,013
6.00	961.00	14,795	13,653	53,666
7.00	962.00	17,570	16,161	69,827

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 961.30	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	955.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	411	955.10	---	---	---	---	0.00	---	---	---	0.003	---	0.003
0.20	822	955.20	---	---	---	---	0.00	---	---	---	0.006	---	0.006
0.30	1,233	955.30	---	---	---	---	0.00	---	---	---	0.009	---	0.009
0.40	1,644	955.40	---	---	---	---	0.00	---	---	---	0.012	---	0.012
0.50	2,056	955.50	---	---	---	---	0.00	---	---	---	0.015	---	0.015
0.60	2,467	955.60	---	---	---	---	0.00	---	---	---	0.017	---	0.017
0.70	2,878	955.70	---	---	---	---	0.00	---	---	---	0.020	---	0.020
0.80	3,289	955.80	---	---	---	---	0.00	---	---	---	0.023	---	0.023
0.90	3,700	955.90	---	---	---	---	0.00	---	---	---	0.026	---	0.026
1.00	4,111	956.00	---	---	---	---	0.00	---	---	---	0.029	---	0.029
1.10	4,734	956.10	---	---	---	---	0.00	---	---	---	0.030	---	0.030
1.20	5,357	956.20	---	---	---	---	0.00	---	---	---	0.031	---	0.031
1.30	5,979	956.30	---	---	---	---	0.00	---	---	---	0.033	---	0.033
1.40	6,602	956.40	---	---	---	---	0.00	---	---	---	0.034	---	0.034
1.50	7,225	956.50	---	---	---	---	0.00	---	---	---	0.035	---	0.035
1.60	7,848	956.60	---	---	---	---	0.00	---	---	---	0.036	---	0.036
1.70	8,470	956.70	---	---	---	---	0.00	---	---	---	0.037	---	0.037
1.80	9,093	956.80	---	---	---	---	0.00	---	---	---	0.038	---	0.038
1.90	9,716	956.90	---	---	---	---	0.00	---	---	---	0.039	---	0.039
2.00	10,338	957.00	---	---	---	---	0.00	---	---	---	0.040	---	0.040
2.10	11,154	957.10	---	---	---	---	0.00	---	---	---	0.041	---	0.041
2.20	11,970	957.20	---	---	---	---	0.00	---	---	---	0.042	---	0.042
2.30	12,786	957.30	---	---	---	---	0.00	---	---	---	0.043	---	0.043
2.40	13,601	957.40	---	---	---	---	0.00	---	---	---	0.044	---	0.044
2.50	14,417	957.50	---	---	---	---	0.00	---	---	---	0.045	---	0.045
2.60	15,233	957.60	---	---	---	---	0.00	---	---	---	0.046	---	0.046
2.70	16,048	957.70	---	---	---	---	0.00	---	---	---	0.047	---	0.047
2.80	16,864	957.80	---	---	---	---	0.00	---	---	---	0.048	---	0.048
2.90	17,680	957.90	---	---	---	---	0.00	---	---	---	0.049	---	0.049
3.00	18,495	958.00	---	---	---	---	0.00	---	---	---	0.050	---	0.050
3.10	19,485	958.10	---	---	---	---	0.00	---	---	---	0.051	---	0.051
3.20	20,475	958.20	---	---	---	---	0.00	---	---	---	0.052	---	0.052
3.30	21,464	958.30	---	---	---	---	0.00	---	---	---	0.053	---	0.053
3.40	22,454	958.40	---	---	---	---	0.00	---	---	---	0.054	---	0.054

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K-14

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.50	23,443	958.50	---	---	---	---	0.00	---	---	---	0.055	---	0.055
3.60	24,433	958.60	---	---	---	---	0.00	---	---	---	0.056	---	0.056
3.70	25,422	958.70	---	---	---	---	0.00	---	---	---	0.057	---	0.057
3.80	26,412	958.80	---	---	---	---	0.00	---	---	---	0.058	---	0.058
3.90	27,401	958.90	---	---	---	---	0.00	---	---	---	0.059	---	0.059
4.00	28,391	959.00	---	---	---	---	0.00	---	---	---	0.060	---	0.060
4.10	29,553	959.10	---	---	---	---	0.00	---	---	---	0.061	---	0.061
4.20	30,715	959.20	---	---	---	---	0.00	---	---	---	0.062	---	0.062
4.30	31,877	959.30	---	---	---	---	0.00	---	---	---	0.063	---	0.063
4.40	33,040	959.40	---	---	---	---	0.00	---	---	---	0.064	---	0.064
4.50	34,202	959.50	---	---	---	---	0.00	---	---	---	0.065	---	0.065
4.60	35,364	959.60	---	---	---	---	0.00	---	---	---	0.066	---	0.066
4.70	36,526	959.70	---	---	---	---	0.00	---	---	---	0.067	---	0.067
4.80	37,688	959.80	---	---	---	---	0.00	---	---	---	0.068	---	0.068
4.90	38,851	959.90	---	---	---	---	0.00	---	---	---	0.069	---	0.069
5.00	40,013	960.00	---	---	---	---	0.00	---	---	---	0.070	---	0.070
5.10	41,378	960.10	---	---	---	---	0.00	---	---	---	0.071	---	0.071
5.20	42,743	960.20	---	---	---	---	0.00	---	---	---	0.072	---	0.072
5.30	44,109	960.30	---	---	---	---	0.00	---	---	---	0.073	---	0.073
5.40	45,474	960.40	---	---	---	---	0.00	---	---	---	0.075	---	0.075
5.50	46,839	960.50	---	---	---	---	0.00	---	---	---	0.076	---	0.076
5.60	48,205	960.60	---	---	---	---	0.00	---	---	---	0.077	---	0.077
5.70	49,570	960.70	---	---	---	---	0.00	---	---	---	0.078	---	0.078
5.80	50,935	960.80	---	---	---	---	0.00	---	---	---	0.080	---	0.080
5.90	52,301	960.90	---	---	---	---	0.00	---	---	---	0.081	---	0.081
6.00	53,666	961.00	---	---	---	---	0.00	---	---	---	0.082	---	0.082
6.10	55,282	961.10	---	---	---	---	0.00	---	---	---	0.084	---	0.084
6.20	56,898	961.20	---	---	---	---	0.00	---	---	---	0.085	---	0.085
6.30	58,514	961.30	---	---	---	---	0.00	---	---	---	0.087	---	0.087
6.40	60,130	961.40	---	---	---	---	1.23	---	---	---	0.088	---	1.320
6.50	61,746	961.50	---	---	---	---	3.49	---	---	---	0.090	---	3.575
6.60	63,362	961.60	---	---	---	---	6.40	---	---	---	0.091	---	6.495
6.70	64,979	961.70	---	---	---	---	9.86	---	---	---	0.093	---	9.953
6.80	66,595	961.80	---	---	---	---	13.78	---	---	---	0.095	---	13.88
6.90	68,211	961.90	---	---	---	---	18.12	---	---	---	0.096	---	18.21
7.00	69,827	962.00	---	---	---	---	22.84	---	---	---	0.098	---	22.94

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

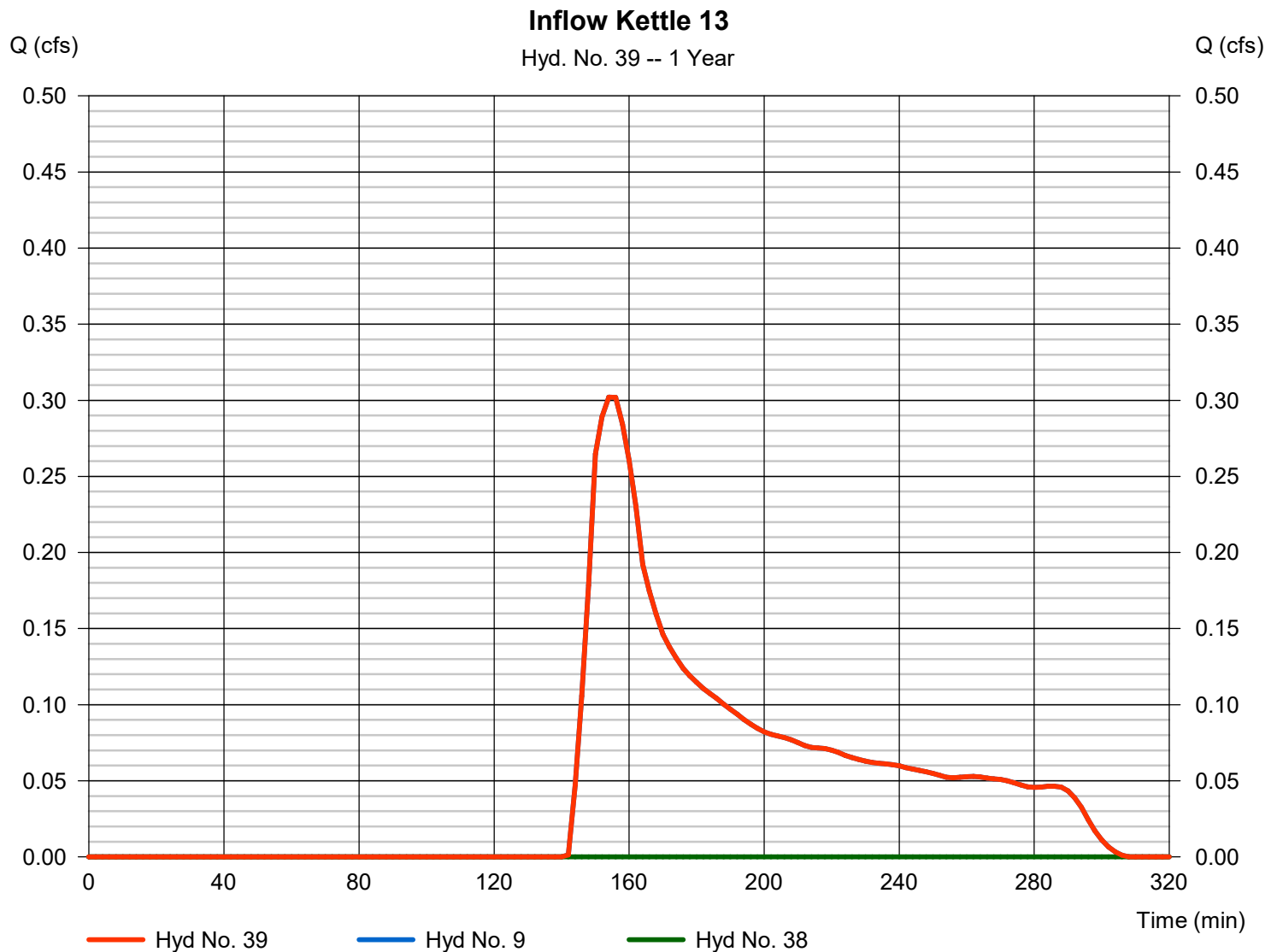
Tuesday, 04 / 7 / 2020

Hyd. No. 39

Inflow Kettle 13

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 9, 38

Peak discharge = 0.302 cfs
Time to peak = 154 min
Hyd. volume = 877 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

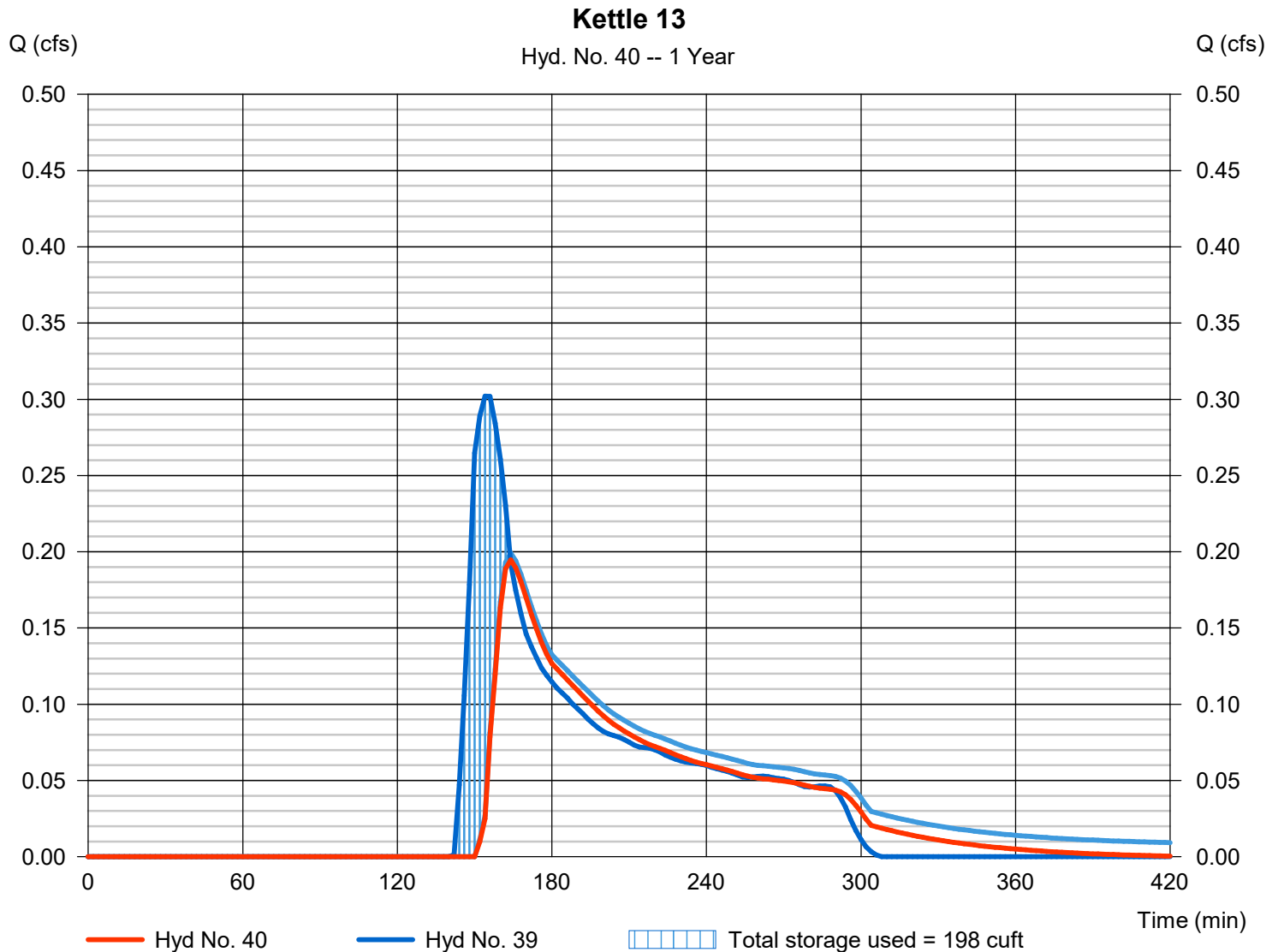
Tuesday, 04 / 7 / 2020

Hyd. No. 40

Kettle 13

Hydrograph type	= Reservoir	Peak discharge	= 0.195 cfs
Storm frequency	= 1 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 771 cuft
Inflow hyd. No.	= 39 - Inflow Kettle 13	Max. Elevation	= 959.60 ft
Reservoir name	= K-13	Max. Storage	= 198 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 13 - K-13

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 959.40 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	959.40	50	0	0
0.60	960.00	2,560	593	593
1.60	961.00	4,110	3,304	3,898
2.60	962.00	5,850	4,954	8,852
3.60	963.00	7,130	6,479	15,330
4.60	964.00	8,425	7,768	23,098
5.60	965.00	9,765	9,086	32,184
6.60	966.00	11,570	10,654	42,838

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 2	0	0	0
Invert El. (ft)	= 959.48	0.00	0.00	0.00
Length (ft)	= 92.55	0.00	0.00	0.00
Slope (%)	= 0.55	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 966.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	959.40	0.00	---	---	---	0.00	---	---	---	0.000	---	0.000
0.06	59	959.46	0.00	---	---	---	0.00	---	---	---	0.001	---	0.001
0.12	119	959.52	0.02 ic	---	---	---	0.00	---	---	---	0.003	---	0.023
0.18	178	959.58	0.13 ic	---	---	---	0.00	---	---	---	0.004	---	0.132
0.24	237	959.64	0.32 ic	---	---	---	0.00	---	---	---	0.006	---	0.329
0.30	297	959.70	0.60 ic	---	---	---	0.00	---	---	---	0.007	---	0.610
0.36	356	959.76	0.97 ic	---	---	---	0.00	---	---	---	0.009	---	0.976
0.42	415	959.82	1.41 ic	---	---	---	0.00	---	---	---	0.010	---	1.422
0.48	475	959.88	1.93 ic	---	---	---	0.00	---	---	---	0.011	---	1.944
0.54	534	959.94	2.52 ic	---	---	---	0.00	---	---	---	0.013	---	2.535
0.60	593	960.00	3.20 ic	---	---	---	0.00	---	---	---	0.014	---	3.210
0.70	924	960.10	4.45 ic	---	---	---	0.00	---	---	---	0.015	---	4.465
0.80	1,254	960.20	5.89 ic	---	---	---	0.00	---	---	---	0.016	---	5.910
0.90	1,585	960.30	7.48 ic	---	---	---	0.00	---	---	---	0.017	---	7.499
1.00	1,915	960.40	9.21 ic	---	---	---	0.00	---	---	---	0.018	---	9.232
1.10	2,246	960.50	11.08 ic	---	---	---	0.00	---	---	---	0.019	---	11.10
1.20	2,576	960.60	13.01 oc	---	---	---	0.00	---	---	---	0.019	---	13.03
1.30	2,906	960.70	14.61 oc	---	---	---	0.00	---	---	---	0.020	---	14.63
1.40	3,237	960.80	16.15 oc	---	---	---	0.00	---	---	---	0.021	---	16.17
1.50	3,567	960.90	17.62 oc	---	---	---	0.00	---	---	---	0.022	---	17.64
1.60	3,898	961.00	19.01 oc	---	---	---	0.00	---	---	---	0.023	---	19.03
1.70	4,393	961.10	20.25 oc	---	---	---	0.00	---	---	---	0.024	---	20.27
1.80	4,889	961.20	21.32 oc	---	---	---	0.00	---	---	---	0.025	---	21.34
1.90	5,384	961.30	22.14 oc	---	---	---	0.00	---	---	---	0.026	---	22.17
2.00	5,879	961.40	22.60 oc	---	---	---	0.00	---	---	---	0.027	---	22.62
2.10	6,375	961.50	22.56 oc	---	---	---	0.00	---	---	---	0.028	---	22.59
2.20	6,870	961.60	24.61 oc	---	---	---	0.00	---	---	---	0.029	---	24.63
2.30	7,365	961.70	26.49 oc	---	---	---	0.00	---	---	---	0.030	---	26.52
2.40	7,861	961.80	28.25 oc	---	---	---	0.00	---	---	---	0.031	---	28.28
2.50	8,356	961.90	29.90 oc	---	---	---	0.00	---	---	---	0.032	---	29.93
2.60	8,852	962.00	31.47 oc	---	---	---	0.00	---	---	---	0.032	---	31.51
2.70	9,500	962.10	32.97 oc	---	---	---	0.00	---	---	---	0.033	---	33.00
2.80	10,147	962.20	34.40 oc	---	---	---	0.00	---	---	---	0.034	---	34.43
2.90	10,795	962.30	35.77 oc	---	---	---	0.00	---	---	---	0.035	---	35.80
3.00	11,443	962.40	37.09 oc	---	---	---	0.00	---	---	---	0.035	---	37.12

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.10	12,091	962.50	38.36 oc	---	---	---	0.00	---	---	---	0.036	---	38.40
3.20	12,739	962.60	39.60 oc	---	---	---	0.00	---	---	---	0.037	---	39.64
3.30	13,387	962.70	40.79 oc	---	---	---	0.00	---	---	---	0.037	---	40.83
3.40	14,035	962.80	41.96 oc	---	---	---	0.00	---	---	---	0.038	---	42.00
3.50	14,683	962.90	43.09 oc	---	---	---	0.00	---	---	---	0.039	---	43.13
3.60	15,330	963.00	44.19 oc	---	---	---	0.00	---	---	---	0.040	---	44.23
3.70	16,107	963.10	45.27 oc	---	---	---	0.00	---	---	---	0.040	---	45.31
3.80	16,884	963.20	46.32 oc	---	---	---	0.00	---	---	---	0.041	---	46.36
3.90	17,661	963.30	47.35 oc	---	---	---	0.00	---	---	---	0.042	---	47.39
4.00	18,438	963.40	48.35 oc	---	---	---	0.00	---	---	---	0.042	---	48.40
4.10	19,214	963.50	49.34 oc	---	---	---	0.00	---	---	---	0.043	---	49.38
4.20	19,991	963.60	50.31 oc	---	---	---	0.00	---	---	---	0.044	---	50.35
4.30	20,768	963.70	51.25 oc	---	---	---	0.00	---	---	---	0.045	---	51.30
4.40	21,545	963.80	52.18 oc	---	---	---	0.00	---	---	---	0.045	---	52.23
4.50	22,321	963.90	53.10 oc	---	---	---	0.00	---	---	---	0.046	---	53.14
4.60	23,098	964.00	54.00 oc	---	---	---	0.00	---	---	---	0.047	---	54.04
4.70	24,007	964.10	54.88 oc	---	---	---	0.00	---	---	---	0.048	---	54.93
4.80	24,915	964.20	55.75 oc	---	---	---	0.00	---	---	---	0.048	---	55.80
4.90	25,824	964.30	56.61 oc	---	---	---	0.00	---	---	---	0.049	---	56.66
5.00	26,733	964.40	57.45 oc	---	---	---	0.00	---	---	---	0.050	---	57.50
5.10	27,641	964.50	58.28 oc	---	---	---	0.00	---	---	---	0.051	---	58.33
5.20	28,550	964.60	59.10 oc	---	---	---	0.00	---	---	---	0.051	---	59.16
5.30	29,458	964.70	59.91 oc	---	---	---	0.00	---	---	---	0.052	---	59.96
5.40	30,367	964.80	60.71 oc	---	---	---	0.00	---	---	---	0.053	---	60.76
5.50	31,275	964.90	61.50 oc	---	---	---	0.00	---	---	---	0.054	---	61.55
5.60	32,184	965.00	62.28 oc	---	---	---	0.00	---	---	---	0.054	---	62.33
5.70	33,249	965.10	63.04 oc	---	---	---	0.00	---	---	---	0.055	---	63.10
5.80	34,315	965.20	63.80 oc	---	---	---	0.00	---	---	---	0.056	---	63.86
5.90	35,380	965.30	64.55 oc	---	---	---	0.00	---	---	---	0.057	---	64.61
6.00	36,446	965.40	65.29 oc	---	---	---	0.00	---	---	---	0.058	---	65.35
6.10	37,511	965.50	66.03 oc	---	---	---	0.00	---	---	---	0.059	---	66.09
6.20	38,576	965.60	66.75 oc	---	---	---	0.00	---	---	---	0.060	---	66.81
6.30	39,642	965.70	67.47 oc	---	---	---	0.00	---	---	---	0.061	---	67.53
6.40	40,707	965.80	68.18 oc	---	---	---	0.00	---	---	---	0.062	---	68.24
6.50	41,772	965.90	68.88 oc	---	---	---	0.00	---	---	---	0.063	---	68.94
6.60	42,838	966.00	69.58 oc	---	---	---	0.00	---	---	---	0.064	---	69.64

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

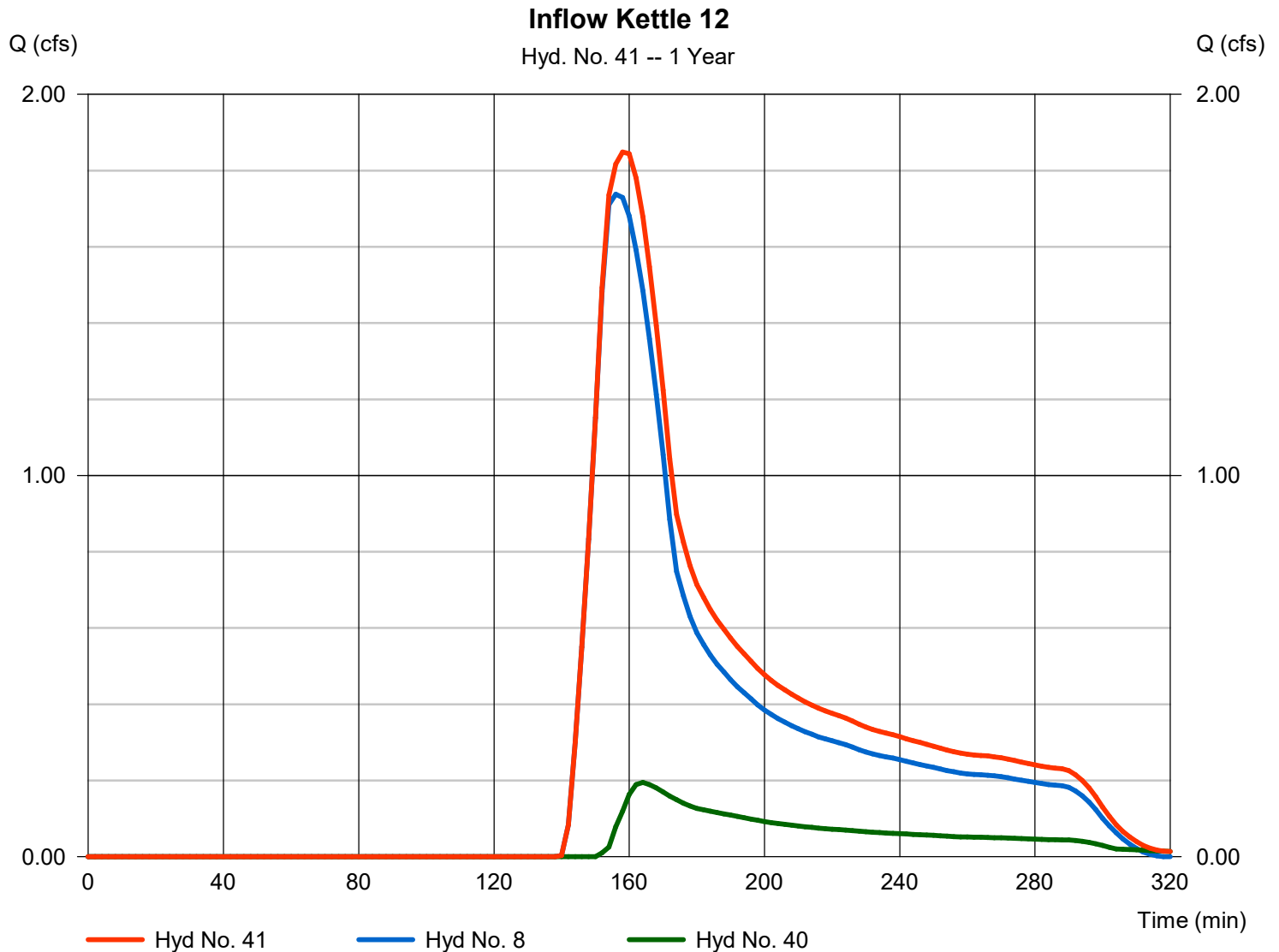
Tuesday, 04 / 7 / 2020

Hyd. No. 41

Inflow Kettle 12

Hydrograph type = Combine
Storm frequency = 1 yrs
Time interval = 2 min
Inflow hyds. = 8, 40

Peak discharge = 1.849 cfs
Time to peak = 158 min
Hyd. volume = 5,391 cuft
Contrib. drain. area = 2.910 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

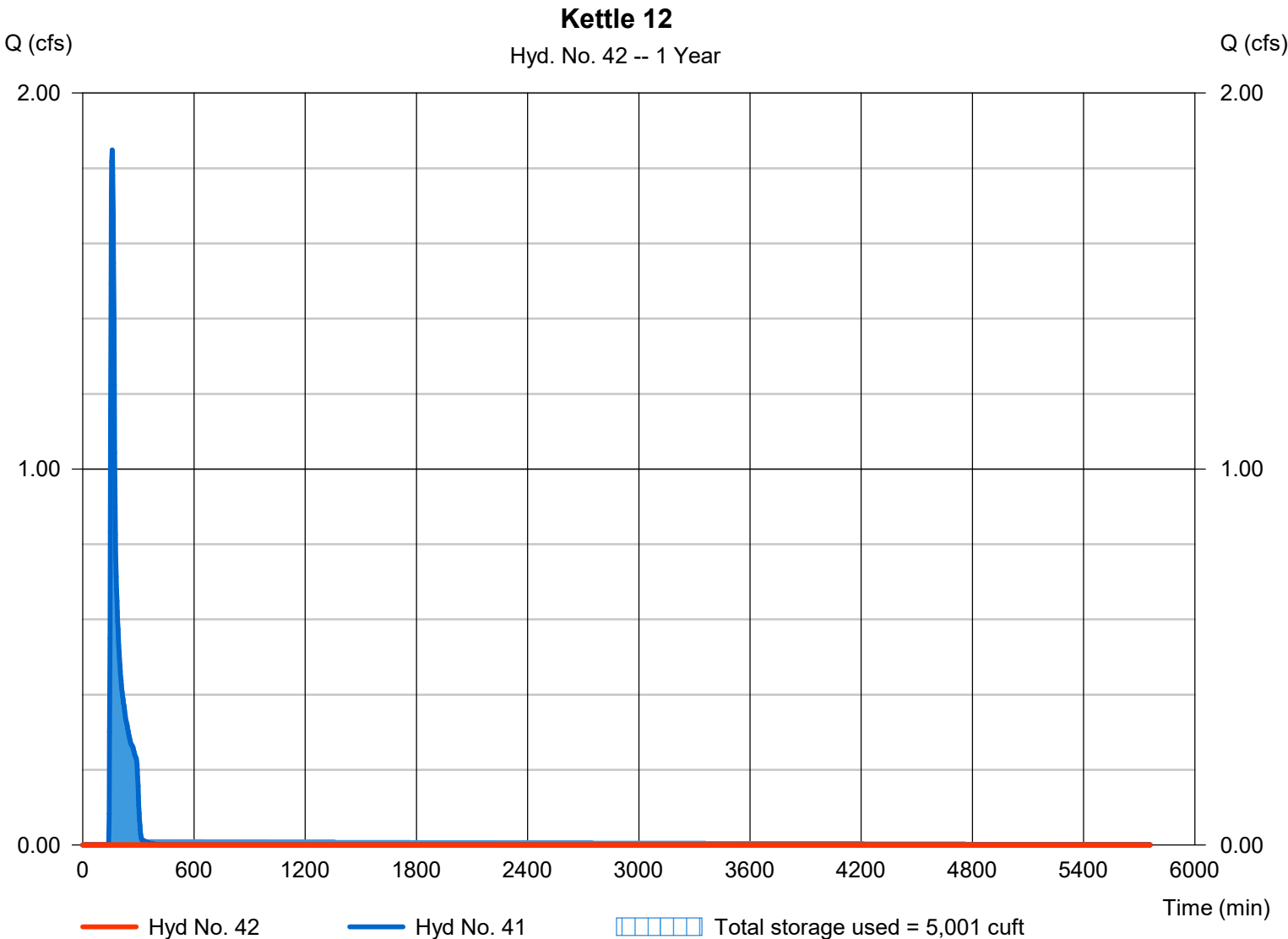
Tuesday, 04 / 7 / 2020

Hyd. No. 42

Kettle 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 520 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 41 - Inflow Kettle 12	Max. Elevation	= 957.24 ft
Reservoir name	= K-12	Max. Storage	= 5,001 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond Report

80

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Pond No. 12 - K-12

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 956.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	956.00	495	0	0
1.00	957.00	6,410	2,895	2,895
2.00	958.00	11,490	8,826	11,722
3.00	959.00	15,695	13,537	25,258
4.00	960.00	18,580	17,116	42,374
5.00	961.00	21,310	19,927	62,301
6.00	962.00	23,950	22,615	84,916
7.00	963.00	26,775	25,347	110,263
8.00	964.00	30,155	28,445	138,708
9.00	965.00	34,835	32,464	171,172
10.00	966.00	37,955	36,380	207,552

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 15.00	0.00	0.00	0.00
Crest El. (ft)	= 963.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	956.00	---	---	---	---	0.00	---	---	---	0.000	---	0.000
0.10	290	956.10	---	---	---	---	0.00	---	---	---	0.004	---	0.004
0.20	579	956.20	---	---	---	---	0.00	---	---	---	0.007	---	0.007
0.30	869	956.30	---	---	---	---	0.00	---	---	---	0.011	---	0.011
0.40	1,158	956.40	---	---	---	---	0.00	---	---	---	0.014	---	0.014
0.50	1,448	956.50	---	---	---	---	0.00	---	---	---	0.018	---	0.018
0.60	1,737	956.60	---	---	---	---	0.00	---	---	---	0.021	---	0.021
0.70	2,027	956.70	---	---	---	---	0.00	---	---	---	0.025	---	0.025
0.80	2,316	956.80	---	---	---	---	0.00	---	---	---	0.028	---	0.028
0.90	2,606	956.90	---	---	---	---	0.00	---	---	---	0.032	---	0.032
1.00	2,895	957.00	---	---	---	---	0.00	---	---	---	0.036	---	0.036
1.10	3,778	957.10	---	---	---	---	0.00	---	---	---	0.038	---	0.038
1.20	4,660	957.20	---	---	---	---	0.00	---	---	---	0.041	---	0.041
1.30	5,543	957.30	---	---	---	---	0.00	---	---	---	0.044	---	0.044
1.40	6,426	957.40	---	---	---	---	0.00	---	---	---	0.047	---	0.047
1.50	7,308	957.50	---	---	---	---	0.00	---	---	---	0.050	---	0.050
1.60	8,191	957.60	---	---	---	---	0.00	---	---	---	0.053	---	0.053
1.70	9,074	957.70	---	---	---	---	0.00	---	---	---	0.055	---	0.055
1.80	9,956	957.80	---	---	---	---	0.00	---	---	---	0.058	---	0.058
1.90	10,839	957.90	---	---	---	---	0.00	---	---	---	0.061	---	0.061
2.00	11,722	958.00	---	---	---	---	0.00	---	---	---	0.064	---	0.064
2.10	13,075	958.10	---	---	---	---	0.00	---	---	---	0.066	---	0.066
2.20	14,429	958.20	---	---	---	---	0.00	---	---	---	0.069	---	0.069
2.30	15,783	958.30	---	---	---	---	0.00	---	---	---	0.071	---	0.071
2.40	17,136	958.40	---	---	---	---	0.00	---	---	---	0.073	---	0.073
2.50	18,490	958.50	---	---	---	---	0.00	---	---	---	0.076	---	0.076
2.60	19,844	958.60	---	---	---	---	0.00	---	---	---	0.078	---	0.078
2.70	21,197	958.70	---	---	---	---	0.00	---	---	---	0.080	---	0.080
2.80	22,551	958.80	---	---	---	---	0.00	---	---	---	0.083	---	0.083
2.90	23,905	958.90	---	---	---	---	0.00	---	---	---	0.085	---	0.085
3.00	25,258	959.00	---	---	---	---	0.00	---	---	---	0.087	---	0.087
3.10	26,970	959.10	---	---	---	---	0.00	---	---	---	0.089	---	0.089

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K-12

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.20	28,681	959.20	---	---	---	---	0.00	---	---	---	0.090	---	0.090
3.30	30,393	959.30	---	---	---	---	0.00	---	---	---	0.092	---	0.092
3.40	32,104	959.40	---	---	---	---	0.00	---	---	---	0.094	---	0.094
3.50	33,816	959.50	---	---	---	---	0.00	---	---	---	0.095	---	0.095
3.60	35,528	959.60	---	---	---	---	0.00	---	---	---	0.097	---	0.097
3.70	37,239	959.70	---	---	---	---	0.00	---	---	---	0.098	---	0.098
3.80	38,951	959.80	---	---	---	---	0.00	---	---	---	0.100	---	0.100
3.90	40,662	959.90	---	---	---	---	0.00	---	---	---	0.102	---	0.102
4.00	42,374	960.00	---	---	---	---	0.00	---	---	---	0.103	---	0.103
4.10	44,366	960.10	---	---	---	---	0.00	---	---	---	0.105	---	0.105
4.20	46,359	960.20	---	---	---	---	0.00	---	---	---	0.106	---	0.106
4.30	48,352	960.30	---	---	---	---	0.00	---	---	---	0.108	---	0.108
4.40	50,345	960.40	---	---	---	---	0.00	---	---	---	0.109	---	0.109
4.50	52,337	960.50	---	---	---	---	0.00	---	---	---	0.111	---	0.111
4.60	54,330	960.60	---	---	---	---	0.00	---	---	---	0.112	---	0.112
4.70	56,323	960.70	---	---	---	---	0.00	---	---	---	0.114	---	0.114
4.80	58,316	960.80	---	---	---	---	0.00	---	---	---	0.115	---	0.115
4.90	60,308	960.90	---	---	---	---	0.00	---	---	---	0.117	---	0.117
5.00	62,301	961.00	---	---	---	---	0.00	---	---	---	0.118	---	0.118
5.10	64,563	961.10	---	---	---	---	0.00	---	---	---	0.120	---	0.120
5.20	66,824	961.20	---	---	---	---	0.00	---	---	---	0.121	---	0.121
5.30	69,086	961.30	---	---	---	---	0.00	---	---	---	0.123	---	0.123
5.40	71,347	961.40	---	---	---	---	0.00	---	---	---	0.124	---	0.124
5.50	73,609	961.50	---	---	---	---	0.00	---	---	---	0.126	---	0.126
5.60	75,870	961.60	---	---	---	---	0.00	---	---	---	0.127	---	0.127
5.70	78,132	961.70	---	---	---	---	0.00	---	---	---	0.129	---	0.129
5.80	80,393	961.80	---	---	---	---	0.00	---	---	---	0.130	---	0.130
5.90	82,655	961.90	---	---	---	---	0.00	---	---	---	0.132	---	0.132
6.00	84,916	962.00	---	---	---	---	0.00	---	---	---	0.133	---	0.133
6.10	87,451	962.10	---	---	---	---	0.00	---	---	---	0.135	---	0.135
6.20	89,985	962.20	---	---	---	---	0.00	---	---	---	0.136	---	0.136
6.30	92,520	962.30	---	---	---	---	0.00	---	---	---	0.138	---	0.138
6.40	95,055	962.40	---	---	---	---	0.00	---	---	---	0.139	---	0.139
6.50	97,589	962.50	---	---	---	---	0.00	---	---	---	0.141	---	0.141
6.60	100,124	962.60	---	---	---	---	0.00	---	---	---	0.142	---	0.142
6.70	102,659	962.70	---	---	---	---	0.00	---	---	---	0.144	---	0.144
6.80	105,194	962.80	---	---	---	---	0.00	---	---	---	0.146	---	0.146
6.90	107,728	962.90	---	---	---	---	0.00	---	---	---	0.147	---	0.147
7.00	110,263	963.00	---	---	---	---	0.00	---	---	---	0.149	---	0.149
7.10	113,107	963.10	---	---	---	---	1.23	---	---	---	0.151	---	1.383
7.20	115,952	963.20	---	---	---	---	3.49	---	---	---	0.153	---	3.639
7.30	118,797	963.30	---	---	---	---	6.41	---	---	---	0.154	---	6.560
7.40	121,641	963.40	---	---	---	---	9.86	---	---	---	0.156	---	10.02
7.50	124,486	963.50	---	---	---	---	13.78	---	---	---	0.158	---	13.94
7.60	127,330	963.60	---	---	---	---	18.12	---	---	---	0.160	---	18.28
7.70	130,175	963.70	---	---	---	---	22.83	---	---	---	0.162	---	22.99
7.80	133,019	963.80	---	---	---	---	27.90	---	---	---	0.164	---	28.06
7.90	135,864	963.90	---	---	---	---	33.29	---	---	---	0.166	---	33.45
8.00	138,708	964.00	---	---	---	---	39.00	---	---	---	0.168	---	39.17
8.10	141,955	964.10	---	---	---	---	44.99	---	---	---	0.170	---	45.16
8.20	145,201	964.20	---	---	---	---	51.26	---	---	---	0.173	---	51.44
8.30	148,447	964.30	---	---	---	---	57.80	---	---	---	0.175	---	57.98
8.40	151,694	964.40	---	---	---	---	64.60	---	---	---	0.178	---	64.77
8.50	154,940	964.50	---	---	---	---	71.64	---	---	---	0.181	---	71.82
8.60	158,187	964.60	---	---	---	---	78.92	---	---	---	0.183	---	79.10
8.70	161,433	964.70	---	---	---	---	86.43	---	---	---	0.186	---	86.62
8.80	164,679	964.80	---	---	---	---	94.17	---	---	---	0.188	---	94.36
8.90	167,926	964.90	---	---	---	---	102.12	---	---	---	0.191	---	102.31
9.00	171,172	965.00	---	---	---	---	110.31	---	---	---	0.194	---	110.50
9.10	174,810	965.10	---	---	---	---	118.68	---	---	---	0.195	---	118.88
9.20	178,448	965.20	---	---	---	---	127.26	---	---	---	0.197	---	127.45
9.30	182,086	965.30	---	---	---	---	136.03	---	---	---	0.199	---	136.23
9.40	185,724	965.40	---	---	---	---	145.00	---	---	---	0.200	---	145.20
9.50	189,362	965.50	---	---	---	---	154.15	---	---	---	0.202	---	154.35
9.60	193,000	965.60	---	---	---	---	163.49	---	---	---	0.204	---	163.69
9.70	196,638	965.70	---	---	---	---	173.01	---	---	---	0.206	---	173.21
9.80	200,276	965.80	---	---	---	---	182.71	---	---	---	0.207	---	182.91
9.90	203,914	965.90	---	---	---	---	192.58	---	---	---	0.209	---	192.79
10.00	207,552	966.00	---	---	---	---	202.65	---	---	---	0.211	---	202.86

...End

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

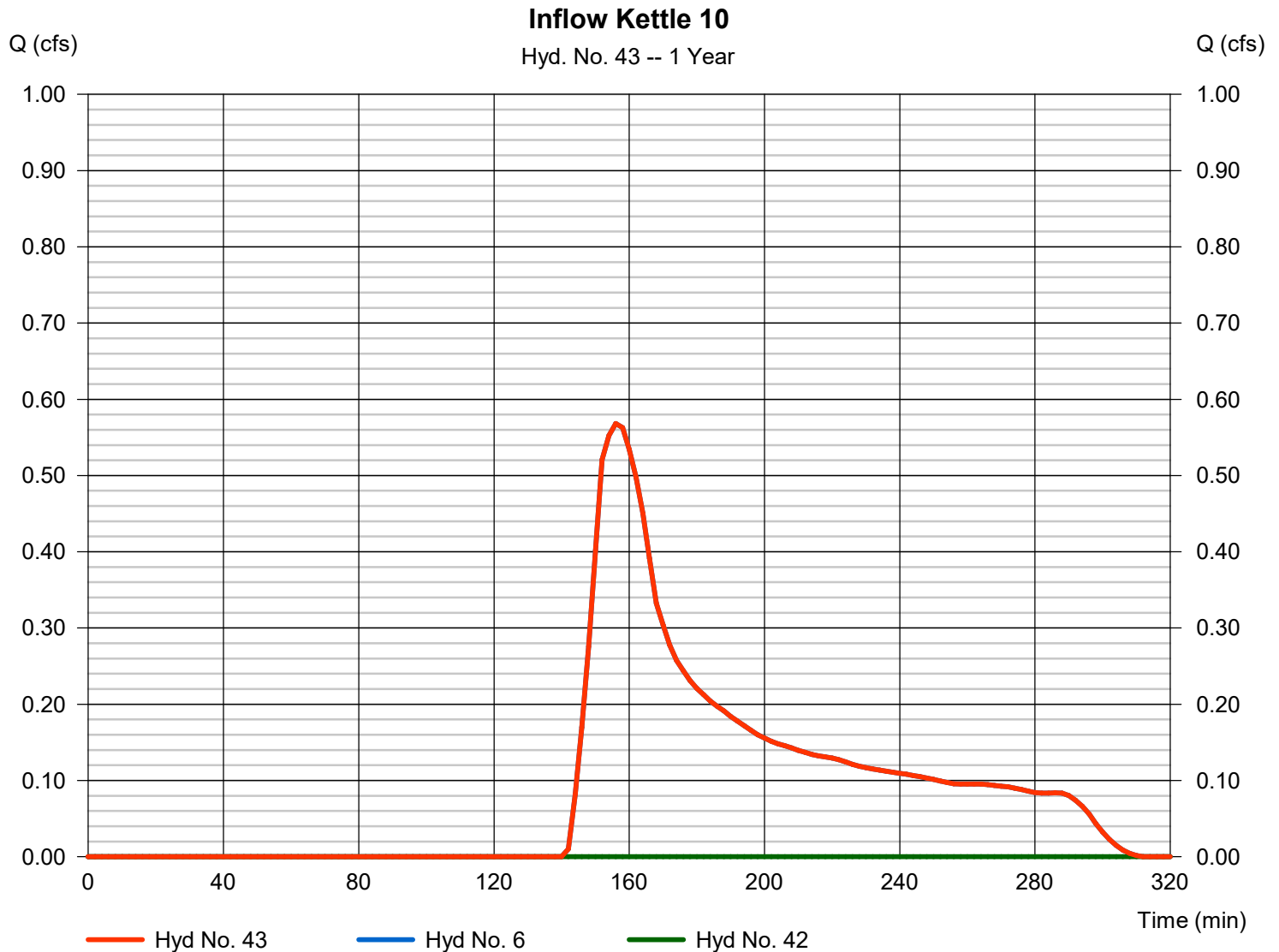
Tuesday, 04 / 7 / 2020

Hyd. No. 43

Inflow Kettle 10

Hydrograph type = Combine
 Storm frequency = 1 yrs
 Time interval = 2 min
 Inflow hyds. = 6, 42

Peak discharge = 0.568 cfs
 Time to peak = 156 min
 Hyd. volume = 1,670 cuft
 Contrib. drain. area = 1.820 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

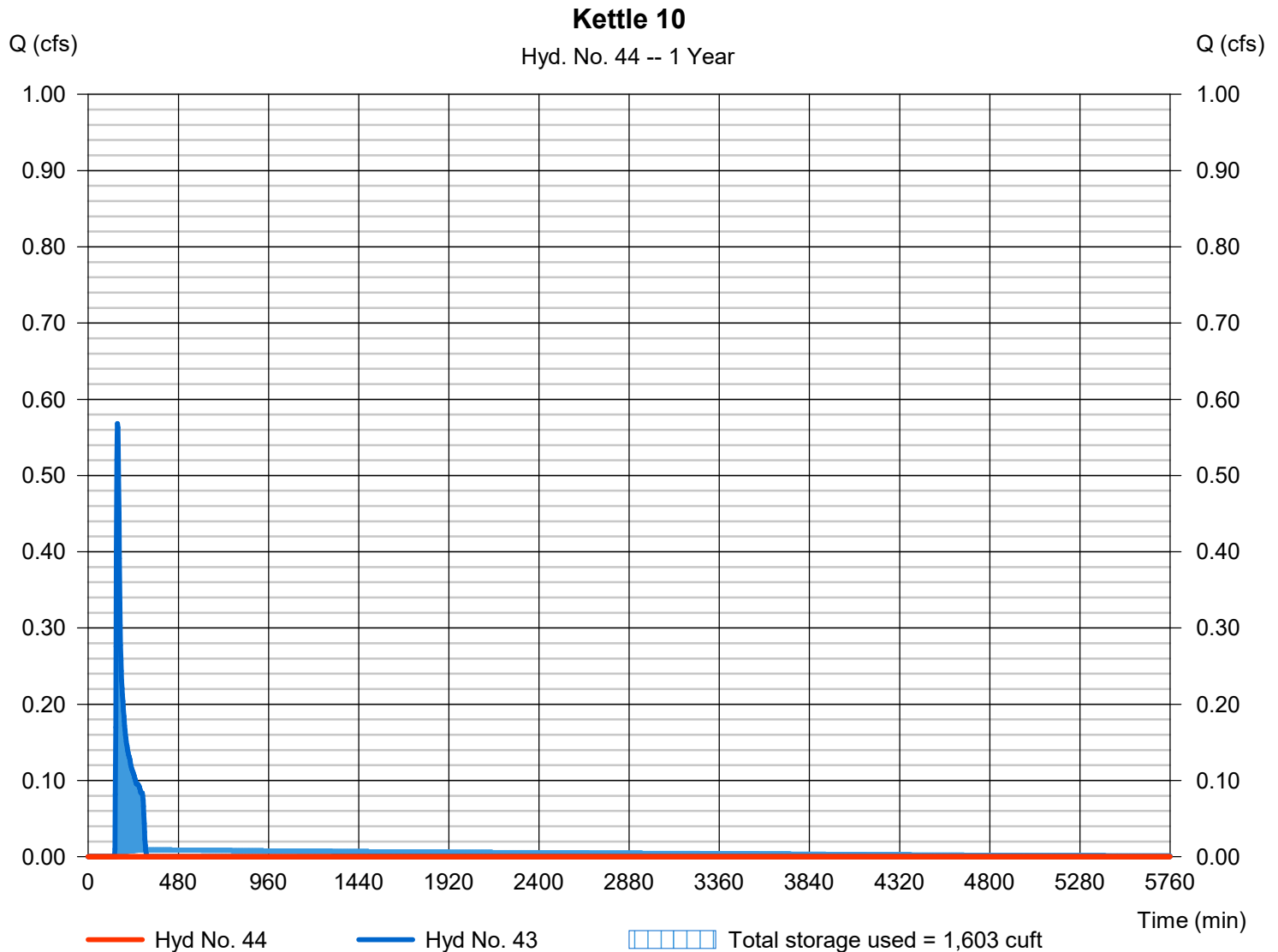
Tuesday, 04 / 7 / 2020

Hyd. No. 44

Kettle 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 1 yrs	Time to peak	= 292 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 43 - Inflow Kettle 10	Max. Elevation	= 955.03 ft
Reservoir name	= K-10	Max. Storage	= 1,603 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Pond No. 10 - K-10

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 953.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	953.00	170	0	0
1.00	954.00	700	405	405
2.00	955.00	1,590	1,115	1,520
3.00	956.00	3,290	2,389	3,909
4.00	957.00	4,855	4,047	7,955
5.00	958.00	6,405	5,612	13,567
6.00	959.00	8,045	7,209	20,776
7.00	960.00	9,695	8,856	29,632
8.00	961.00	11,530	10,598	40,230
9.00	962.00	13,595	12,547	52,777
10.00	963.00	15,870	14,716	67,494
11.00	964.00	19,025	17,422	84,916

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 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)	= 0.240 (by Contour)			
TW Elev. (ft)	= 0.00			

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	953.00	---	---	---	---	---	---	---	---	0.000	---	0.000
0.10	40	953.10	---	---	---	---	---	---	---	---	0.000	---	0.000
0.20	81	953.20	---	---	---	---	---	---	---	---	0.001	---	0.001
0.30	121	953.30	---	---	---	---	---	---	---	---	0.001	---	0.001
0.40	162	953.40	---	---	---	---	---	---	---	---	0.002	---	0.002
0.50	202	953.50	---	---	---	---	---	---	---	---	0.002	---	0.002
0.60	243	953.60	---	---	---	---	---	---	---	---	0.002	---	0.002
0.70	283	953.70	---	---	---	---	---	---	---	---	0.003	---	0.003
0.80	324	953.80	---	---	---	---	---	---	---	---	0.003	---	0.003
0.90	364	953.90	---	---	---	---	---	---	---	---	0.003	---	0.003
1.00	405	954.00	---	---	---	---	---	---	---	---	0.004	---	0.004
1.10	516	954.10	---	---	---	---	---	---	---	---	0.004	---	0.004
1.20	628	954.20	---	---	---	---	---	---	---	---	0.005	---	0.005
1.30	739	954.30	---	---	---	---	---	---	---	---	0.005	---	0.005
1.40	851	954.40	---	---	---	---	---	---	---	---	0.006	---	0.006
1.50	962	954.50	---	---	---	---	---	---	---	---	0.006	---	0.006
1.60	1,074	954.60	---	---	---	---	---	---	---	---	0.007	---	0.007
1.70	1,185	954.70	---	---	---	---	---	---	---	---	0.007	---	0.007
1.80	1,297	954.80	---	---	---	---	---	---	---	---	0.008	---	0.008
1.90	1,408	954.90	---	---	---	---	---	---	---	---	0.008	---	0.008
2.00	1,520	955.00	---	---	---	---	---	---	---	---	0.009	---	0.009
2.10	1,759	955.10	---	---	---	---	---	---	---	---	0.010	---	0.010
2.20	1,998	955.20	---	---	---	---	---	---	---	---	0.011	---	0.011
2.30	2,236	955.30	---	---	---	---	---	---	---	---	0.012	---	0.012
2.40	2,475	955.40	---	---	---	---	---	---	---	---	0.013	---	0.013
2.50	2,714	955.50	---	---	---	---	---	---	---	---	0.014	---	0.014
2.60	2,953	955.60	---	---	---	---	---	---	---	---	0.014	---	0.014
2.70	3,192	955.70	---	---	---	---	---	---	---	---	0.015	---	0.015
2.80	3,431	955.80	---	---	---	---	---	---	---	---	0.016	---	0.016
2.90	3,670	955.90	---	---	---	---	---	---	---	---	0.017	---	0.017
3.00	3,909	956.00	---	---	---	---	---	---	---	---	0.018	---	0.018

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.10	4,313	956.10	---	---	---	---	---	---	---	---	0.019	---	0.019
3.20	4,718	956.20	---	---	---	---	---	---	---	---	0.020	---	0.020
3.30	5,123	956.30	---	---	---	---	---	---	---	---	0.021	---	0.021
3.40	5,527	956.40	---	---	---	---	---	---	---	---	0.022	---	0.022
3.50	5,932	956.50	---	---	---	---	---	---	---	---	0.023	---	0.023
3.60	6,337	956.60	---	---	---	---	---	---	---	---	0.023	---	0.023
3.70	6,741	956.70	---	---	---	---	---	---	---	---	0.024	---	0.024
3.80	7,146	956.80	---	---	---	---	---	---	---	---	0.025	---	0.025
3.90	7,551	956.90	---	---	---	---	---	---	---	---	0.026	---	0.026
4.00	7,955	957.00	---	---	---	---	---	---	---	---	0.027	---	0.027
4.10	8,517	957.10	---	---	---	---	---	---	---	---	0.028	---	0.028
4.20	9,078	957.20	---	---	---	---	---	---	---	---	0.029	---	0.029
4.30	9,639	957.30	---	---	---	---	---	---	---	---	0.030	---	0.030
4.40	10,200	957.40	---	---	---	---	---	---	---	---	0.030	---	0.030
4.50	10,761	957.50	---	---	---	---	---	---	---	---	0.031	---	0.031
4.60	11,322	957.60	---	---	---	---	---	---	---	---	0.032	---	0.032
4.70	11,884	957.70	---	---	---	---	---	---	---	---	0.033	---	0.033
4.80	12,445	957.80	---	---	---	---	---	---	---	---	0.034	---	0.034
4.90	13,006	957.90	---	---	---	---	---	---	---	---	0.035	---	0.035
5.00	13,567	958.00	---	---	---	---	---	---	---	---	0.036	---	0.036
5.10	14,288	958.10	---	---	---	---	---	---	---	---	0.036	---	0.036
5.20	15,009	958.20	---	---	---	---	---	---	---	---	0.037	---	0.037
5.30	15,730	958.30	---	---	---	---	---	---	---	---	0.038	---	0.038
5.40	16,451	958.40	---	---	---	---	---	---	---	---	0.039	---	0.039
5.50	17,171	958.50	---	---	---	---	---	---	---	---	0.040	---	0.040
5.60	17,892	958.60	---	---	---	---	---	---	---	---	0.041	---	0.041
5.70	18,613	958.70	---	---	---	---	---	---	---	---	0.042	---	0.042
5.80	19,334	958.80	---	---	---	---	---	---	---	---	0.043	---	0.043
5.90	20,055	958.90	---	---	---	---	---	---	---	---	0.044	---	0.044
6.00	20,776	959.00	---	---	---	---	---	---	---	---	0.045	---	0.045
6.10	21,661	959.10	---	---	---	---	---	---	---	---	0.046	---	0.046
6.20	22,547	959.20	---	---	---	---	---	---	---	---	0.047	---	0.047
6.30	23,433	959.30	---	---	---	---	---	---	---	---	0.047	---	0.047
6.40	24,318	959.40	---	---	---	---	---	---	---	---	0.048	---	0.048
6.50	25,204	959.50	---	---	---	---	---	---	---	---	0.049	---	0.049
6.60	26,090	959.60	---	---	---	---	---	---	---	---	0.050	---	0.050
6.70	26,975	959.70	---	---	---	---	---	---	---	---	0.051	---	0.051
6.80	27,861	959.80	---	---	---	---	---	---	---	---	0.052	---	0.052
6.90	28,746	959.90	---	---	---	---	---	---	---	---	0.053	---	0.053
7.00	29,632	960.00	---	---	---	---	---	---	---	---	0.054	---	0.054
7.10	30,692	960.10	---	---	---	---	---	---	---	---	0.055	---	0.055
7.20	31,752	960.20	---	---	---	---	---	---	---	---	0.056	---	0.056
7.30	32,812	960.30	---	---	---	---	---	---	---	---	0.057	---	0.057
7.40	33,871	960.40	---	---	---	---	---	---	---	---	0.058	---	0.058
7.50	34,931	960.50	---	---	---	---	---	---	---	---	0.059	---	0.059
7.60	35,991	960.60	---	---	---	---	---	---	---	---	0.060	---	0.060
7.70	37,051	960.70	---	---	---	---	---	---	---	---	0.061	---	0.061
7.80	38,111	960.80	---	---	---	---	---	---	---	---	0.062	---	0.062
7.90	39,170	960.90	---	---	---	---	---	---	---	---	0.063	---	0.063
8.00	40,230	961.00	---	---	---	---	---	---	---	---	0.064	---	0.064
8.10	41,485	961.10	---	---	---	---	---	---	---	---	0.065	---	0.065
8.20	42,740	961.20	---	---	---	---	---	---	---	---	0.066	---	0.066
8.30	43,994	961.30	---	---	---	---	---	---	---	---	0.067	---	0.067
8.40	45,249	961.40	---	---	---	---	---	---	---	---	0.069	---	0.069
8.50	46,504	961.50	---	---	---	---	---	---	---	---	0.070	---	0.070
8.60	47,758	961.60	---	---	---	---	---	---	---	---	0.071	---	0.071
8.70	49,013	961.70	---	---	---	---	---	---	---	---	0.072	---	0.072
8.80	50,268	961.80	---	---	---	---	---	---	---	---	0.073	---	0.073
8.90	51,523	961.90	---	---	---	---	---	---	---	---	0.074	---	0.074
9.00	52,777	962.00	---	---	---	---	---	---	---	---	0.076	---	0.076
9.10	54,249	962.10	---	---	---	---	---	---	---	---	0.077	---	0.077
9.20	55,721	962.20	---	---	---	---	---	---	---	---	0.078	---	0.078
9.30	57,192	962.30	---	---	---	---	---	---	---	---	0.079	---	0.079
9.40	58,664	962.40	---	---	---	---	---	---	---	---	0.081	---	0.081
9.50	60,135	962.50	---	---	---	---	---	---	---	---	0.082	---	0.082
9.60	61,607	962.60	---	---	---	---	---	---	---	---	0.083	---	0.083
9.70	63,079	962.70	---	---	---	---	---	---	---	---	0.084	---	0.084
9.80	64,550	962.80	---	---	---	---	---	---	---	---	0.086	---	0.086
9.90	66,022	962.90	---	---	---	---	---	---	---	---	0.087	---	0.087
10.00	67,494	963.00	---	---	---	---	---	---	---	---	0.088	---	0.088
10.10	69,236	963.10	---	---	---	---	---	---	---	---	0.090	---	0.090
10.20	70,978	963.20	---	---	---	---	---	---	---	---	0.092	---	0.092

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Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
10.30	72,720	963.30	---	---	---	---	---	---	---	---	0.093	---	0.093
10.40	74,462	963.40	---	---	---	---	---	---	---	---	0.095	---	0.095
10.50	76,205	963.50	---	---	---	---	---	---	---	---	0.097	---	0.097
10.60	77,947	963.60	---	---	---	---	---	---	---	---	0.099	---	0.099
10.70	79,689	963.70	---	---	---	---	---	---	---	---	0.100	---	0.100
10.80	81,431	963.80	---	---	---	---	---	---	---	---	0.102	---	0.102
10.90	83,173	963.90	---	---	---	---	---	---	---	---	0.104	---	0.104
11.00	84,916	964.00	---	---	---	---	---	---	---	---	0.106	---	0.106

...End

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.285	2	164	15,411	-----	-----	-----	P-1
2	SCS Runoff	1.376	2	152	3,113	-----	-----	-----	P-2
3	SCS Runoff	0.448	2	152	1,055	-----	-----	-----	P-3
4	SCS Runoff	18.05	2	158	44,958	-----	-----	-----	P-5
6	SCS Runoff	0.933	2	154	2,420	-----	-----	-----	P-10
7	SCS Runoff	6.140	2	152	10,964	-----	-----	-----	P-11
8	SCS Runoff	2.542	2	156	6,270	-----	-----	-----	P-12
9	SCS Runoff	0.527	2	152	1,302	-----	-----	-----	E-13
10	SCS Runoff	1.813	2	174	8,241	-----	-----	-----	E-14
11	SCS Runoff	0.526	2	152	1,238	-----	-----	-----	E-15
12	SCS Runoff	0.504	2	156	1,484	-----	-----	-----	P-16
13	SCS Runoff	1.144	2	156	3,368	-----	-----	-----	P-17
15	SCS Runoff	16.39	2	158	40,378	-----	-----	-----	P-20
16	SCS Runoff	3.951	2	168	15,058	-----	-----	-----	D
18	Reservoir	4.081	2	190	43,971	4	982.80	25,673	Pond 5
19	Combine	4.188	2	188	45,026	3, 18	-----	-----	Inflow Kettle 3
20	Reservoir	2.037	2	300	16,626	19	976.14	24,254	Kettle 3
21	Combine	2.081	2	296	19,739	2, 20	-----	-----	Inflow Kettle 2
22	Reservoir	0.000	2	5750	0	21	969.71	17,863	Kettle 2
23	Combine	6.140	2	152	10,964	7, 22	-----	-----	Inflow Pond 11
24	Reservoir	0.486	2	228	10,945	23	965.62	7,191	Pond 11
26	Reservoir	0.000	2	322	0	16	990.20	6,315	E-Infiltration Basin D
27	Combine	16.39	2	158	40,378	15, 26	-----	-----	Inflow Pond 20
28	Reservoir	6.991	2	178	40,048	27	991.25	18,724	Pond 20
30	Combine	10.77	2	174	66,404	1, 24, 28,	-----	-----	Inflow Kettle 1
31	Reservoir	0.000	2	n/a	0	30	949.79	60,946	Kettle 1
33	Reservoir	0.000	2	286	0	11	970.51	1,178	Kettle 15
34	Reservoir	0.000	2	262	0	13	1011.29	3,136	Kettle 17
35	Combine	0.504	2	156	1,484	12, 34	-----	-----	Inflow Kettle 16
36	Reservoir	0.000	2	220	0	35	1005.23	1,416	Kettle 16
37	Combine	1.813	2	174	8,241	10, 33, 36	-----	-----	Inflow Kettle 14
PROPOSED_LCL_Stormwater Model_2020-04-08					Re-supply Period: 2 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	2302	0	37	956.61	7,921	Kettle 14
39	Combine	0.527	2	152	1,302	9, 38	-----	-----	Inflow Kettle 13
40	Reservoir	0.411	2	160	1,191	39	959.66	256	Kettle 13
41	Combine	2.895	2	158	7,461	8, 40	-----	-----	Inflow Kettle 12
42	Reservoir	0.000	2	1212	0	41	957.47	7,008	Kettle 12
43	Combine	0.933	2	154	2,420	6, 42	-----	-----	Inflow Kettle 10
44	Reservoir	0.000	2	208	0	43	955.34	2,330	Kettle 10
PROPOSED_LCL_Stormwater Model_2020-04-08					Recess Period: 2 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

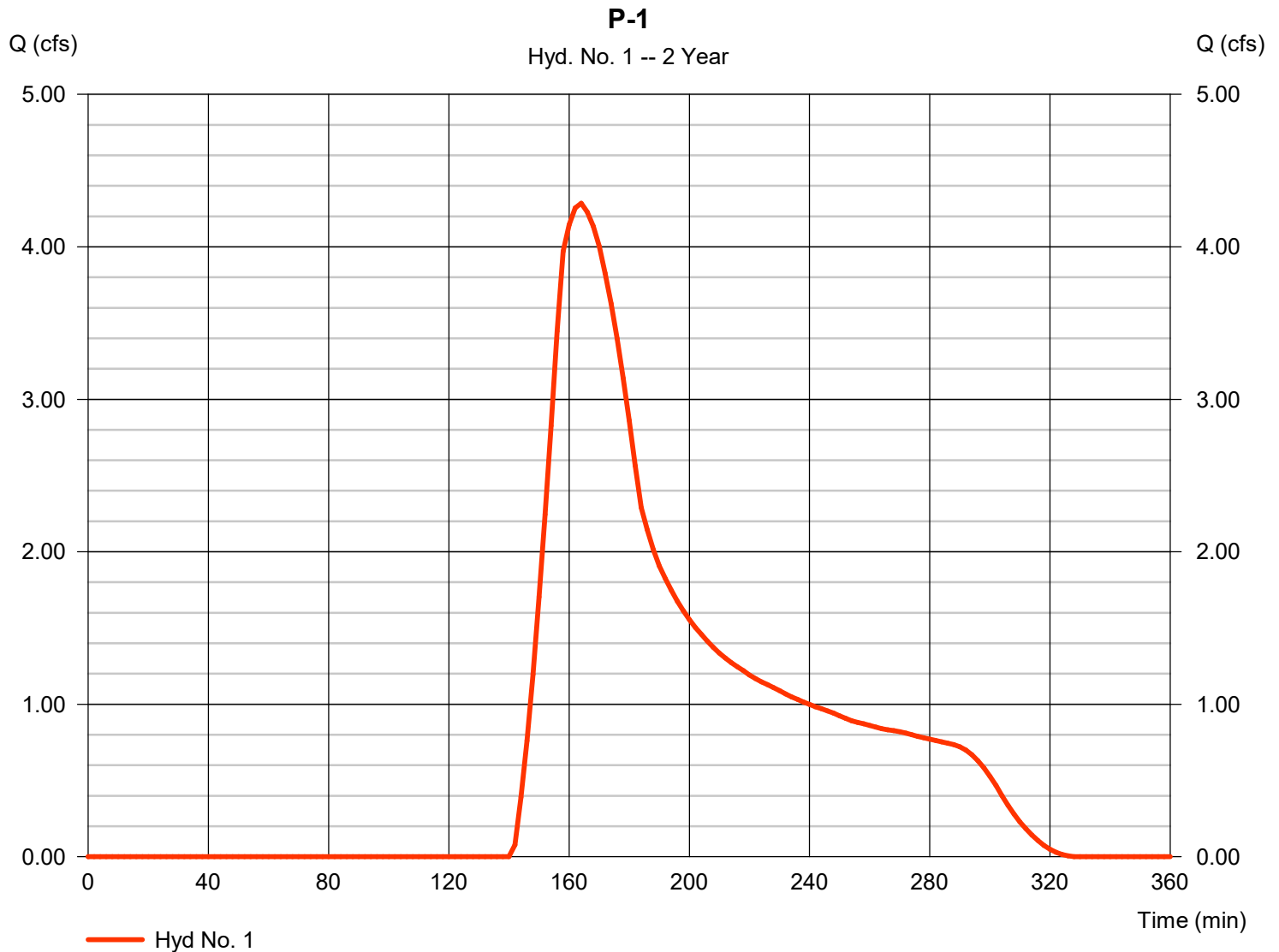
Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Hydrograph type	= SCS Runoff	Peak discharge	= 4.285 cfs
Storm frequency	= 2 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 15,411 cuft
Drainage area	= 12.520 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 12.520$



Precipitation Report

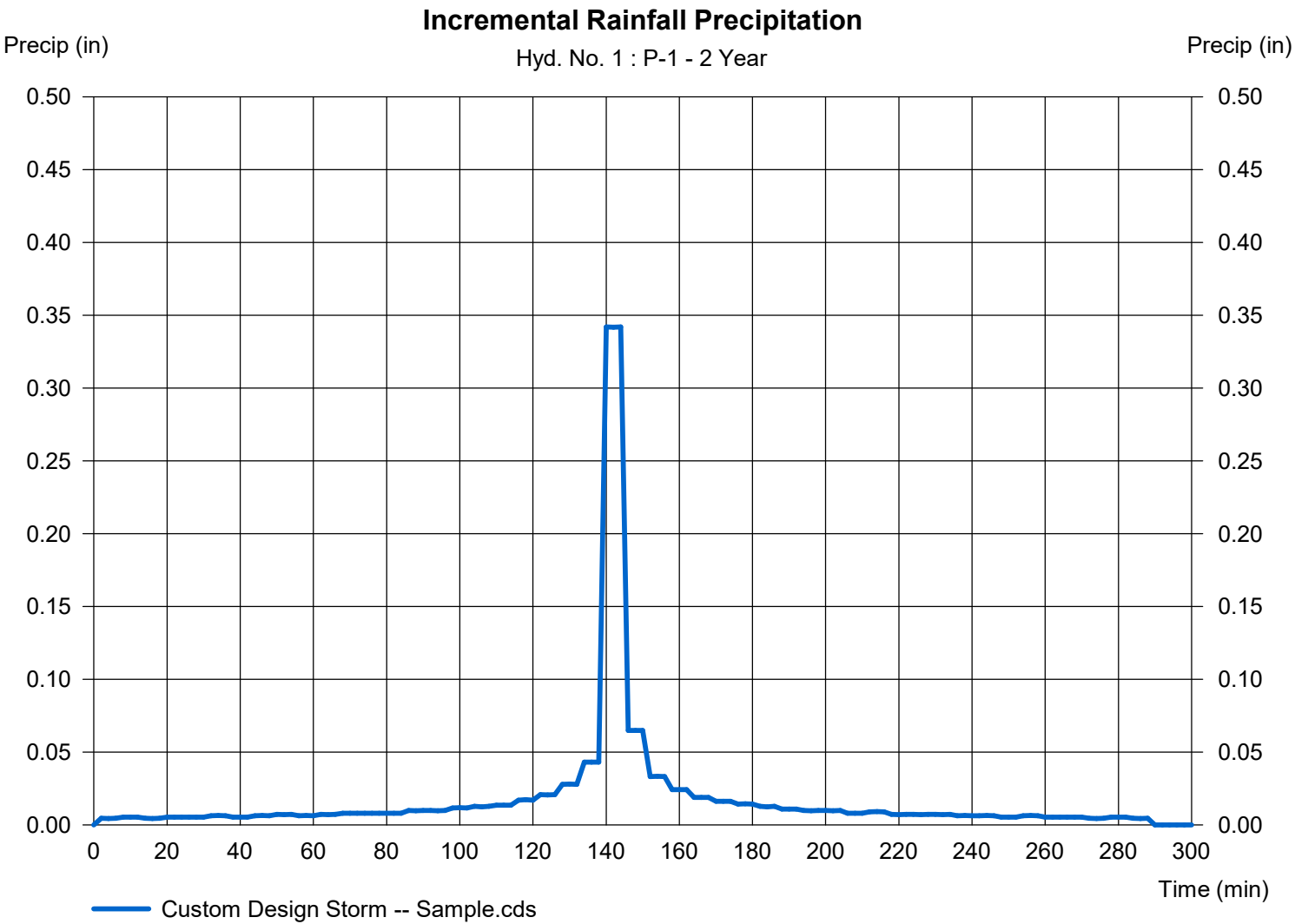
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 2

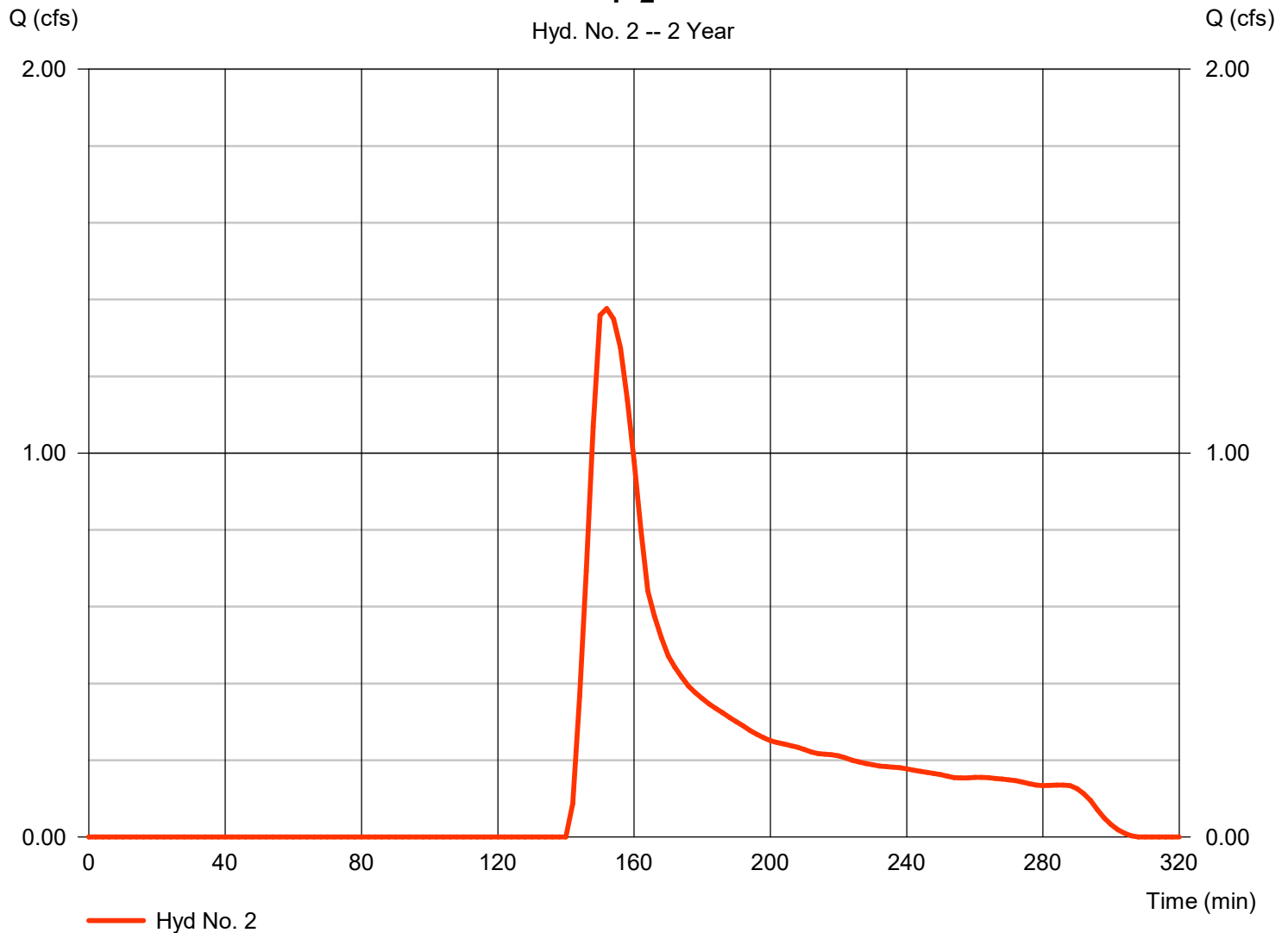
P-2

Hydrograph type	= SCS Runoff	Peak discharge	= 1.376 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 3,113 cuft
Drainage area	= 2.040 ac	Curve number	= 66*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 2.040$

P-2

Hyd. No. 2 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

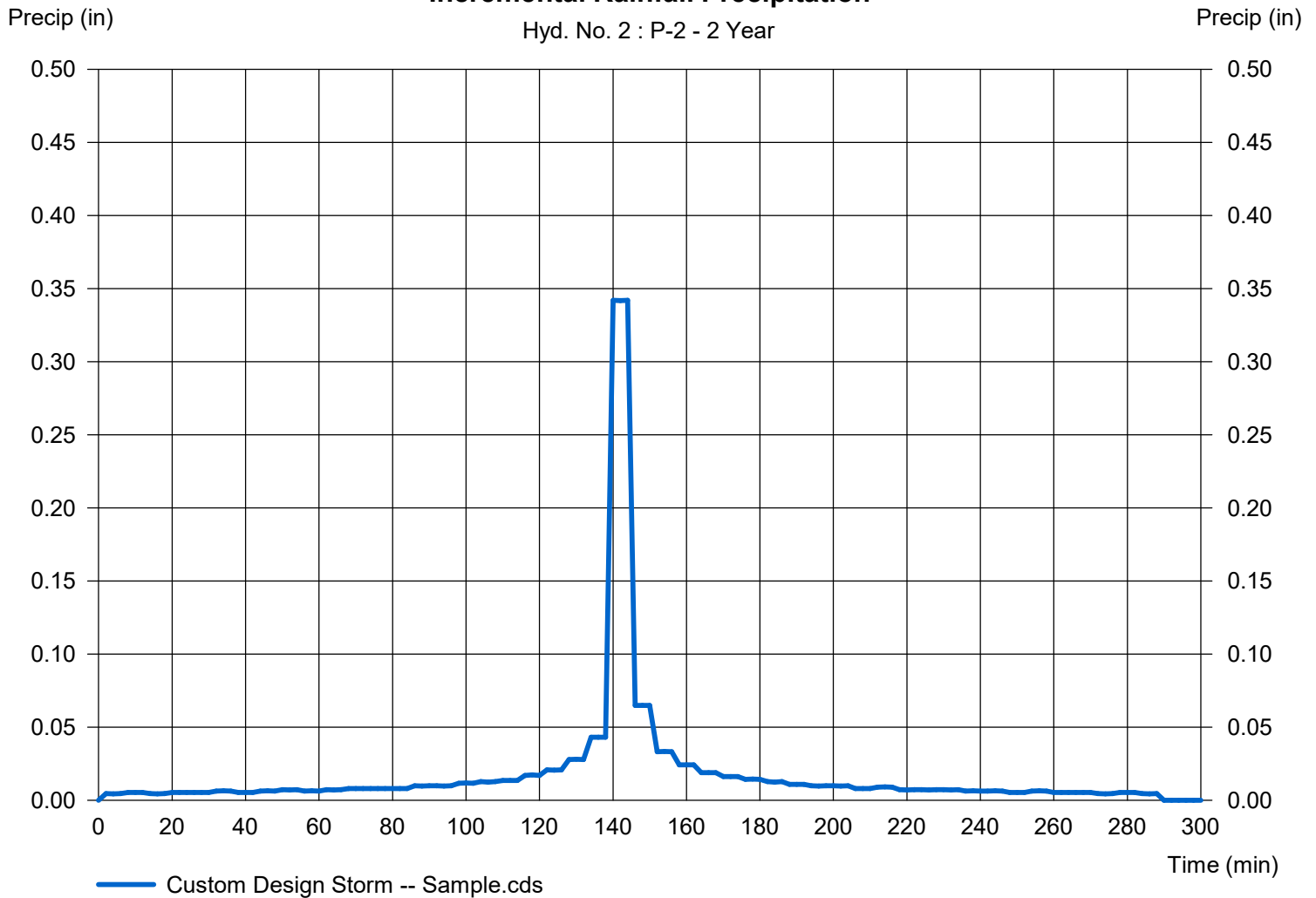
Hyd. No. 2

P-2

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : P-2 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

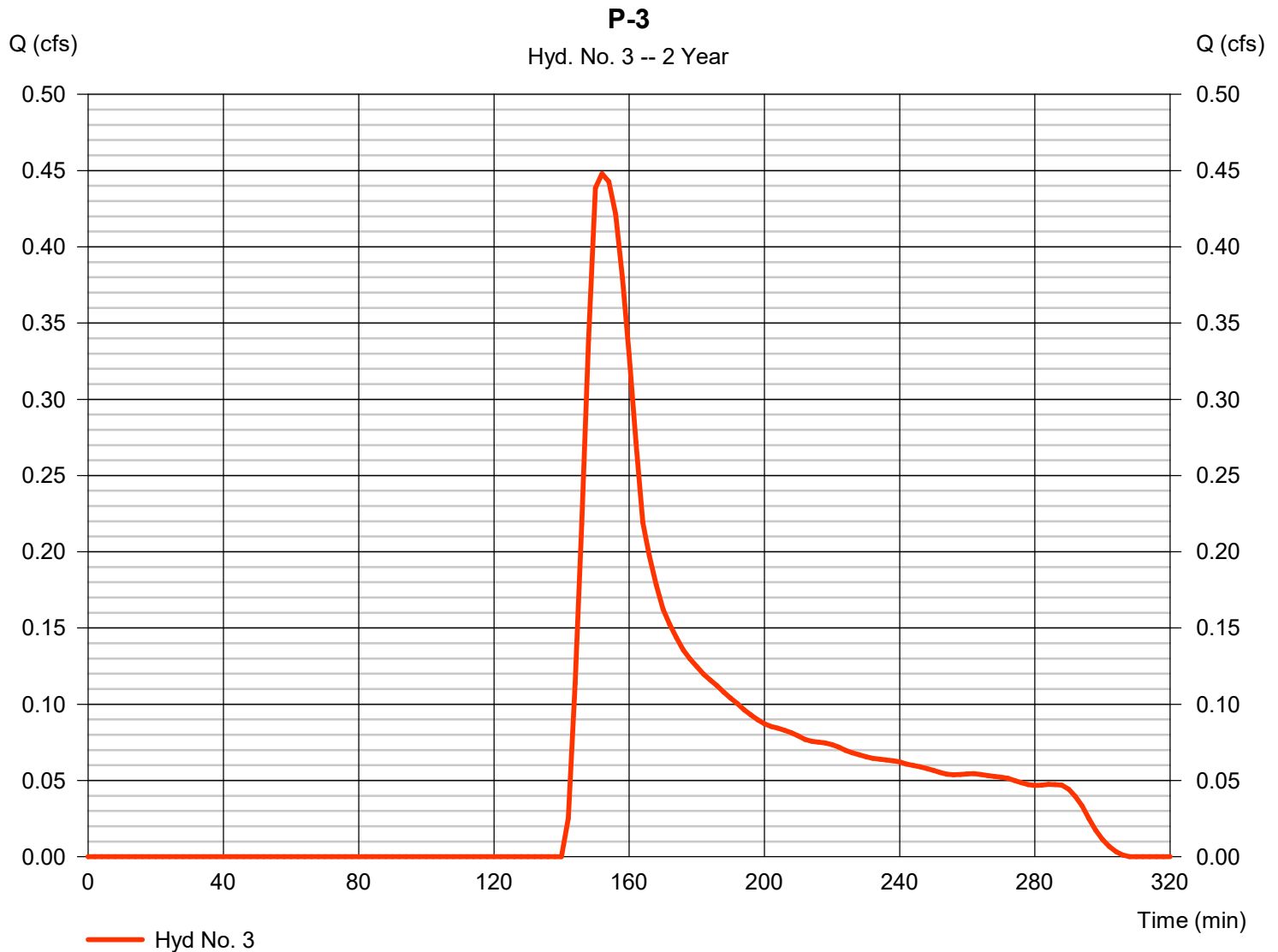
Tuesday, 04 / 7 / 2020

Hyd. No. 3

P-3

Hydrograph type	= SCS Runoff	Peak discharge	= 0.448 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 1,055 cuft
Drainage area	= 0.750 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 0.750$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

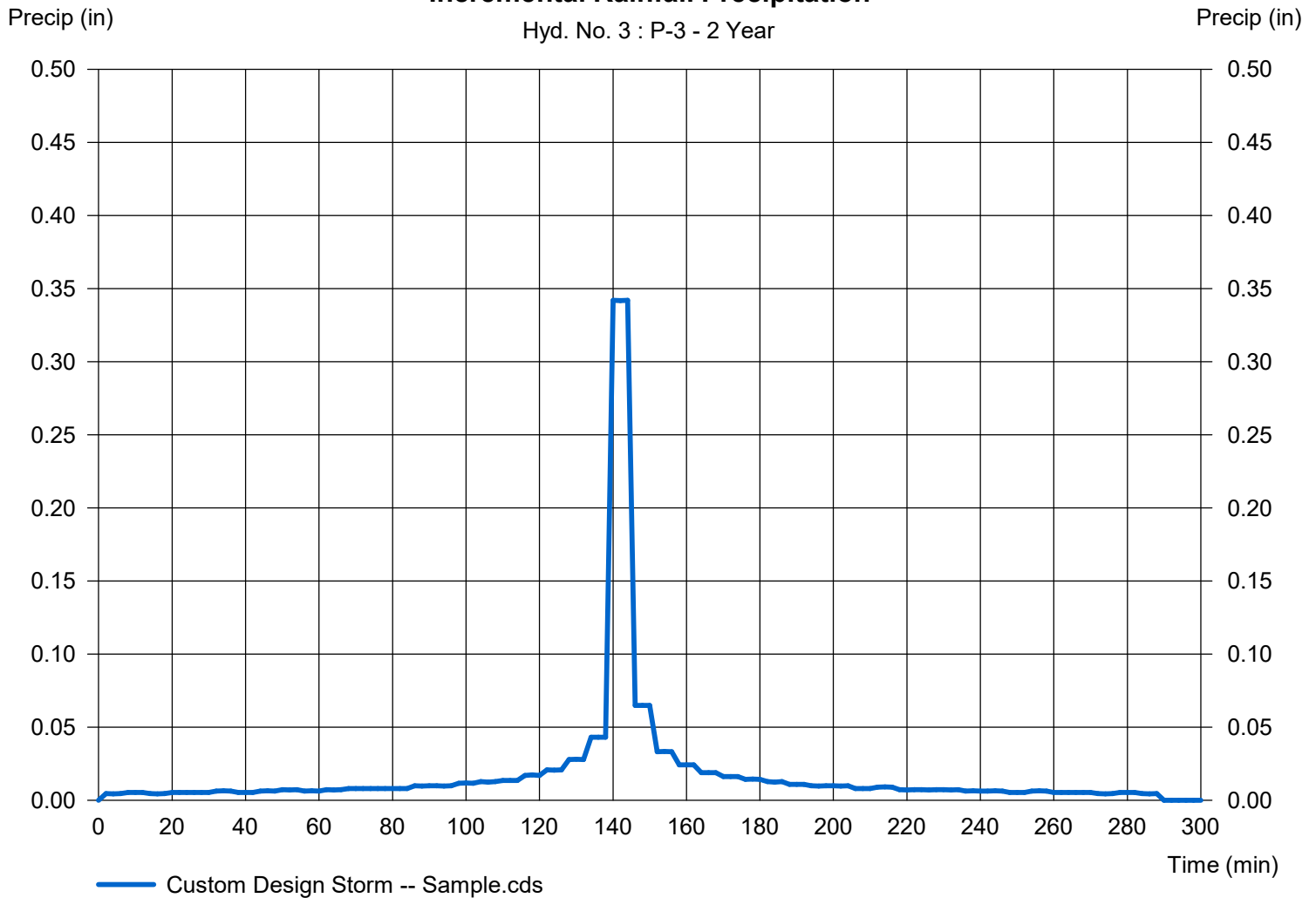
Hyd. No. 3

P-3

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : P-3 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

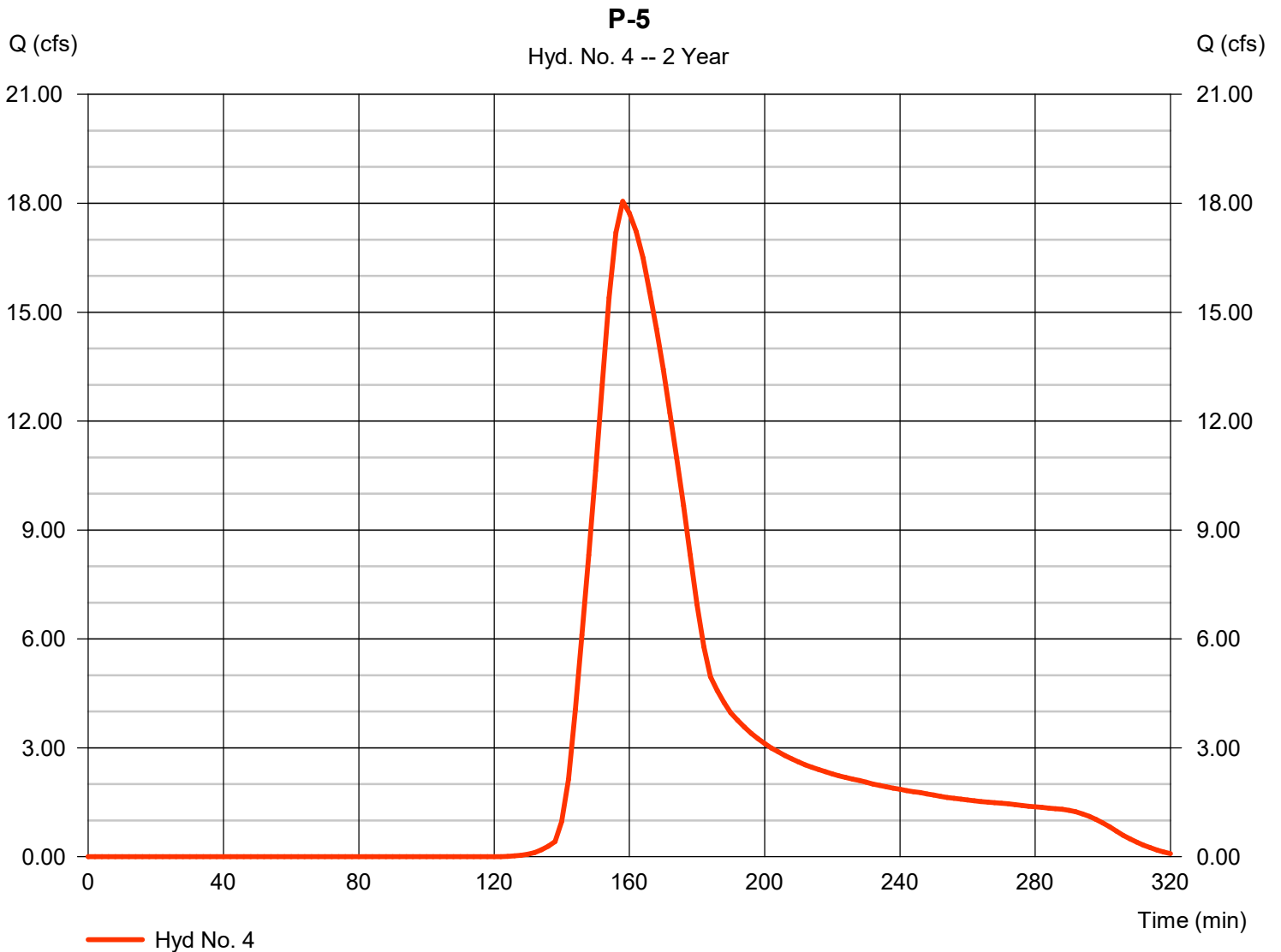
Tuesday, 04 / 7 / 2020

Hyd. No. 4

P-5

Hydrograph type	= SCS Runoff	Peak discharge	= 18.05 cfs
Storm frequency	= 2 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 44,958 cuft
Drainage area	= 11.570 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 11.570$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

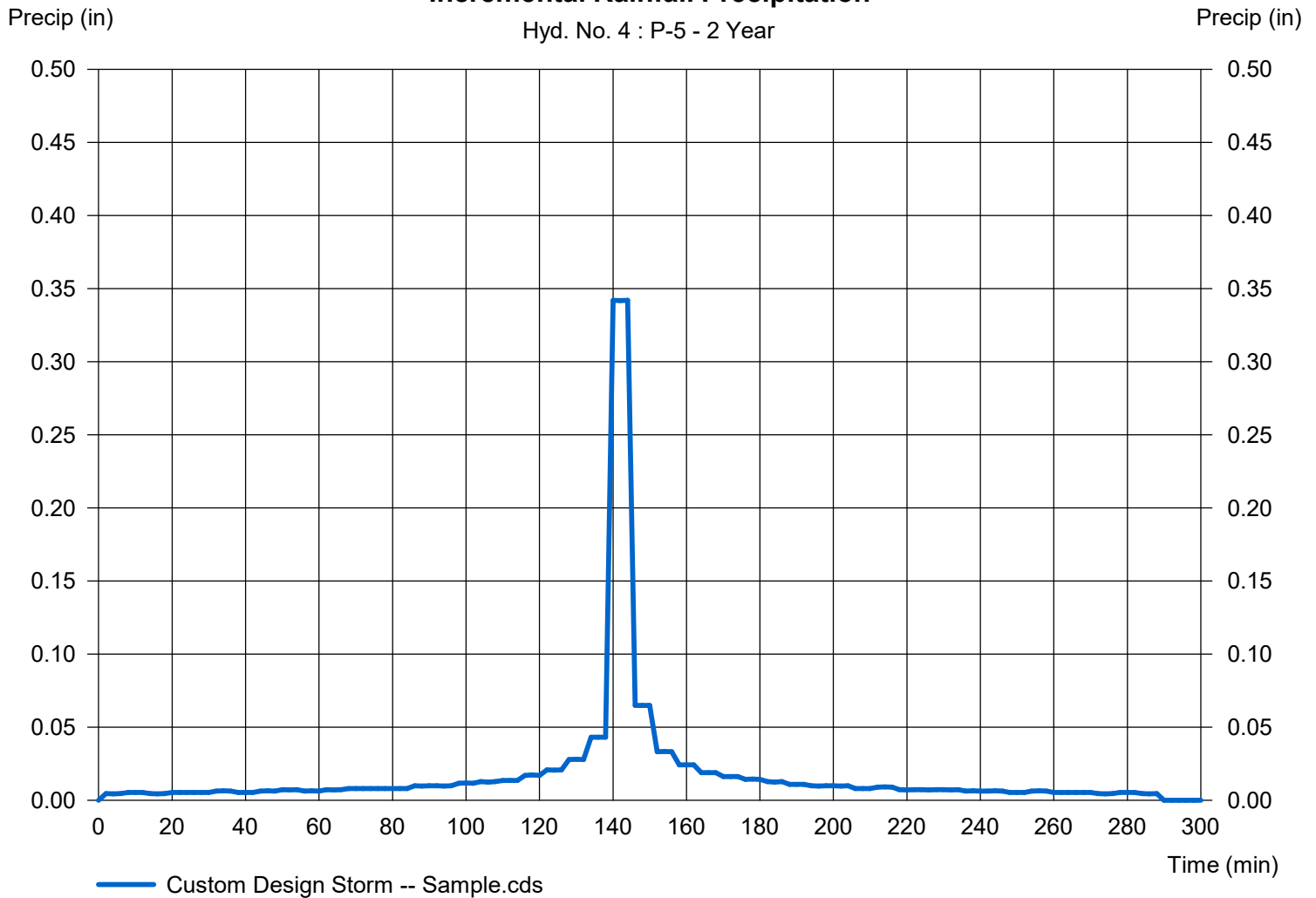
Hyd. No. 4

P-5

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : P-5 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

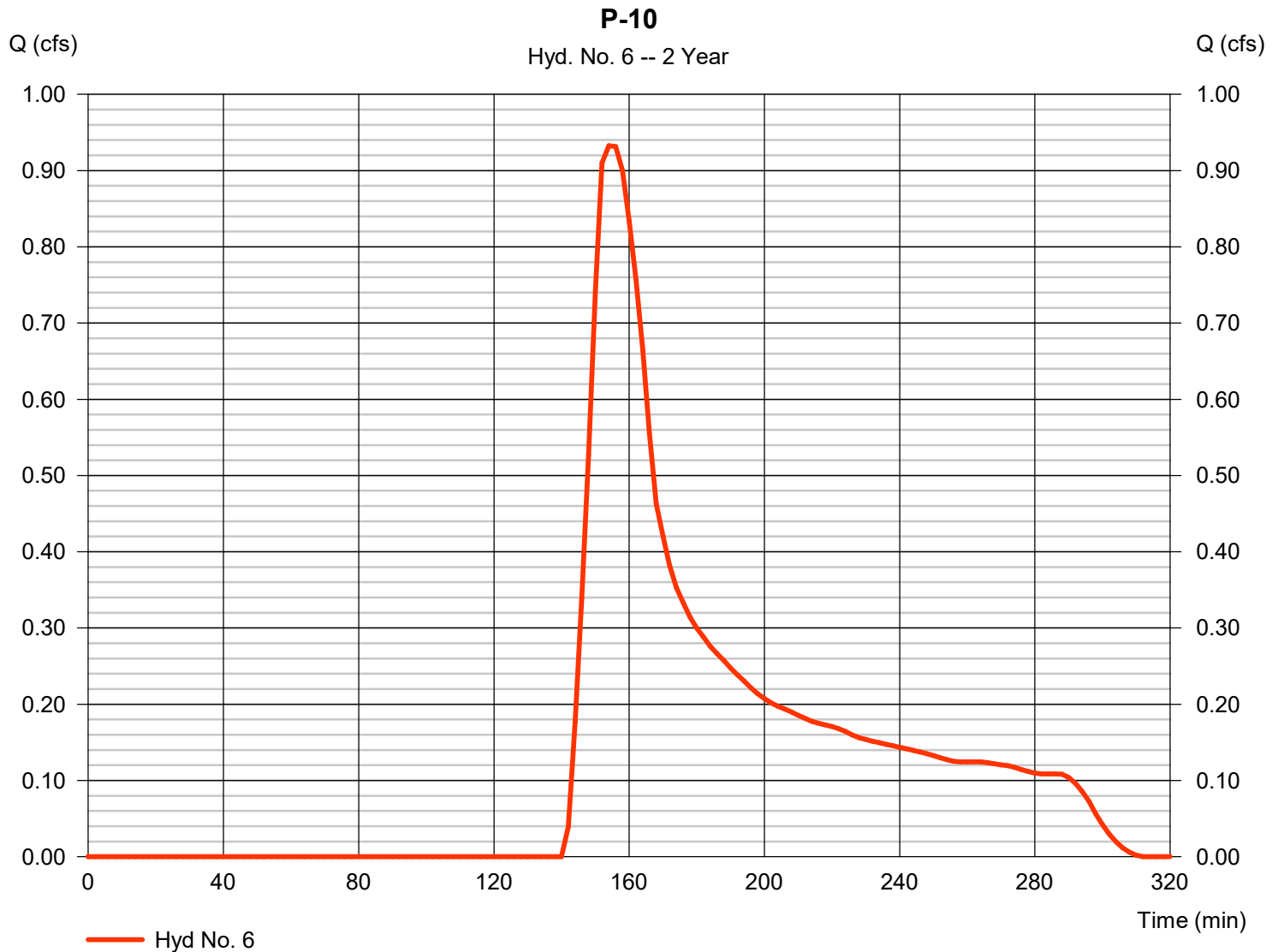
Tuesday, 04 / 7 / 2020

Hyd. No. 6

P-10

Hydrograph type	= SCS Runoff	Peak discharge	= 0.933 cfs
Storm frequency	= 2 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 2,420 cuft
Drainage area	= 1.820 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.820$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

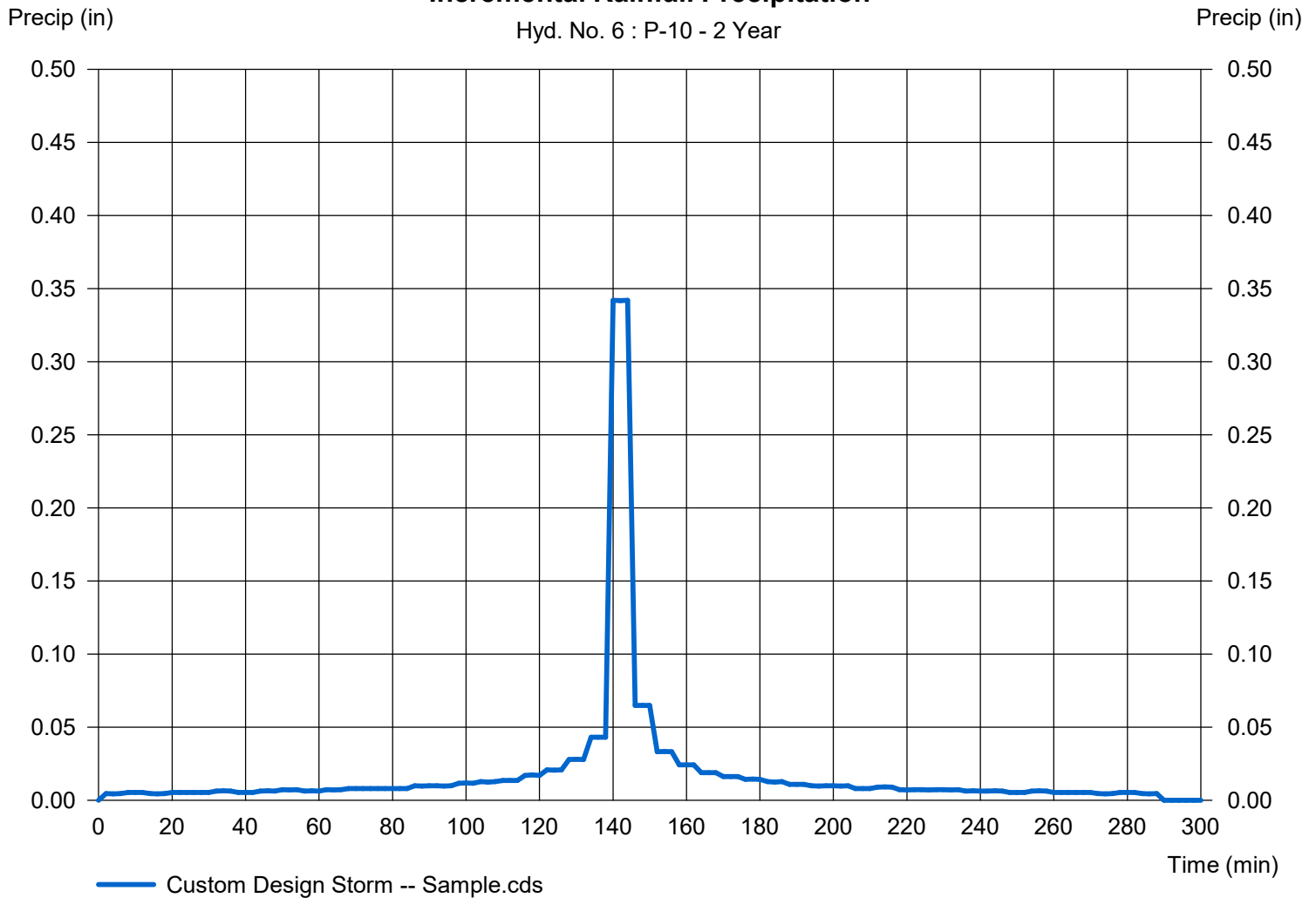
Hyd. No. 6

P-10

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : P-10 - 2 Year



Hydrograph Report

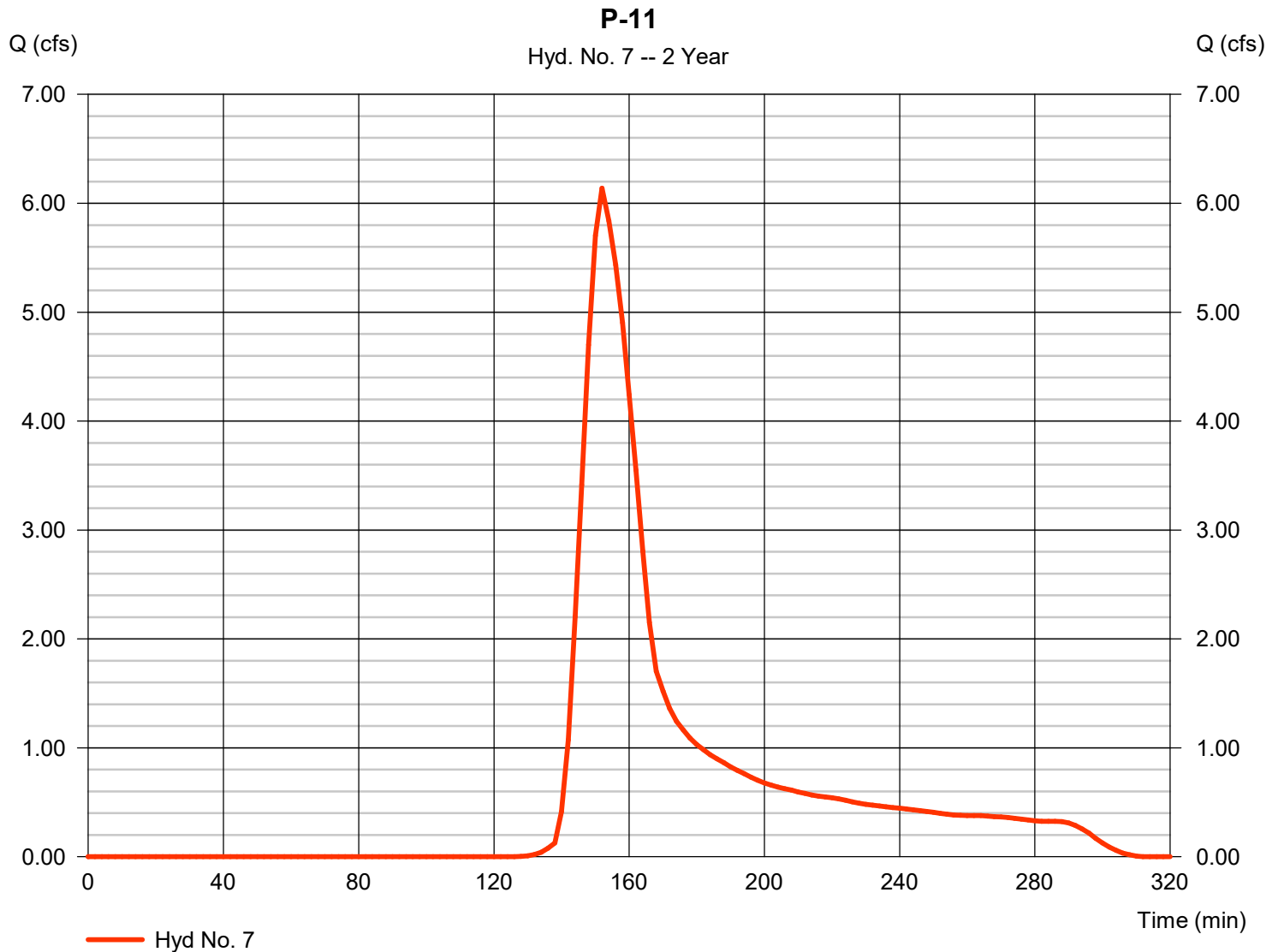
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Hydrograph type	= SCS Runoff	Peak discharge	= 6.140 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 10,964 cuft
Drainage area	= 3.180 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

100

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

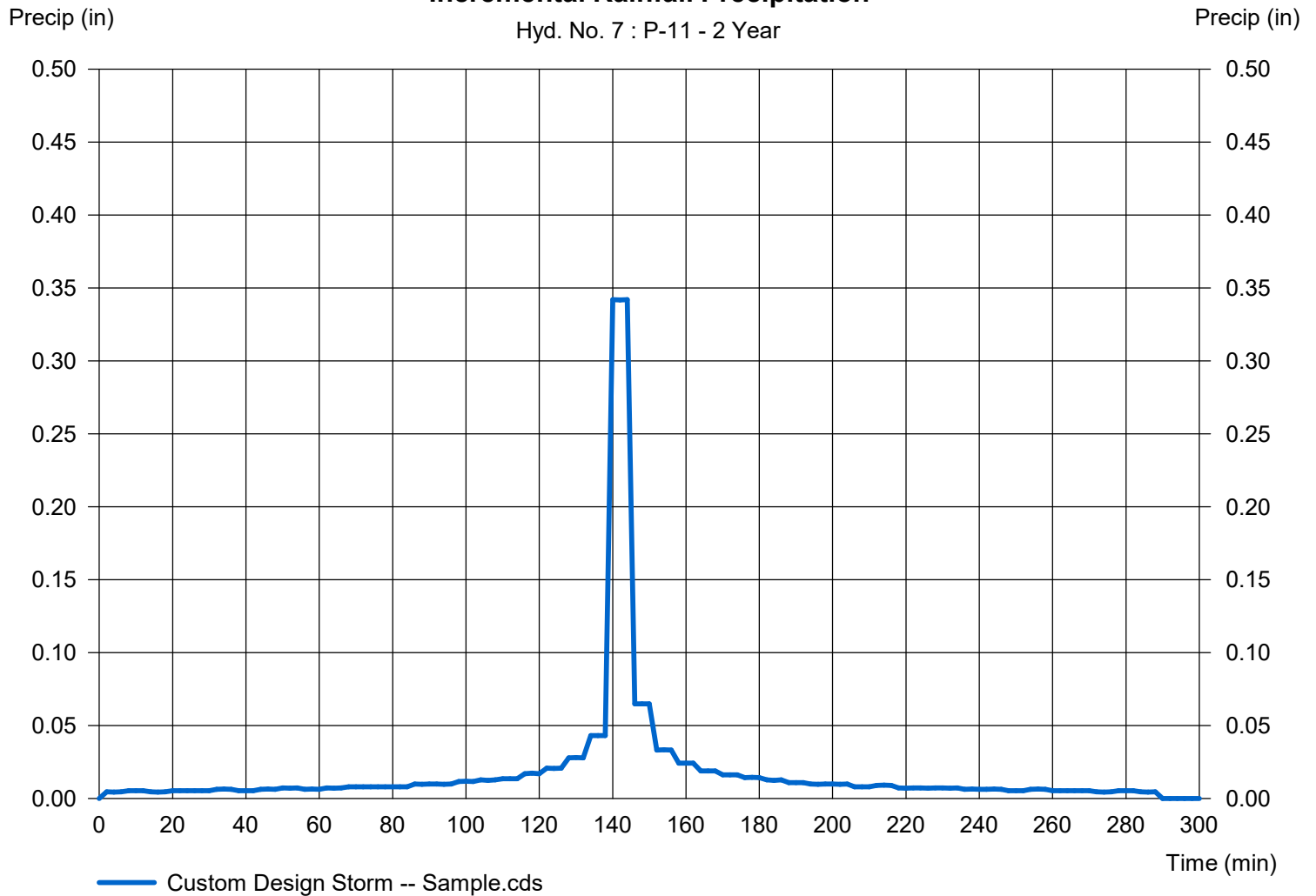
Hyd. No. 7

P-11

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 7 : P-11 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

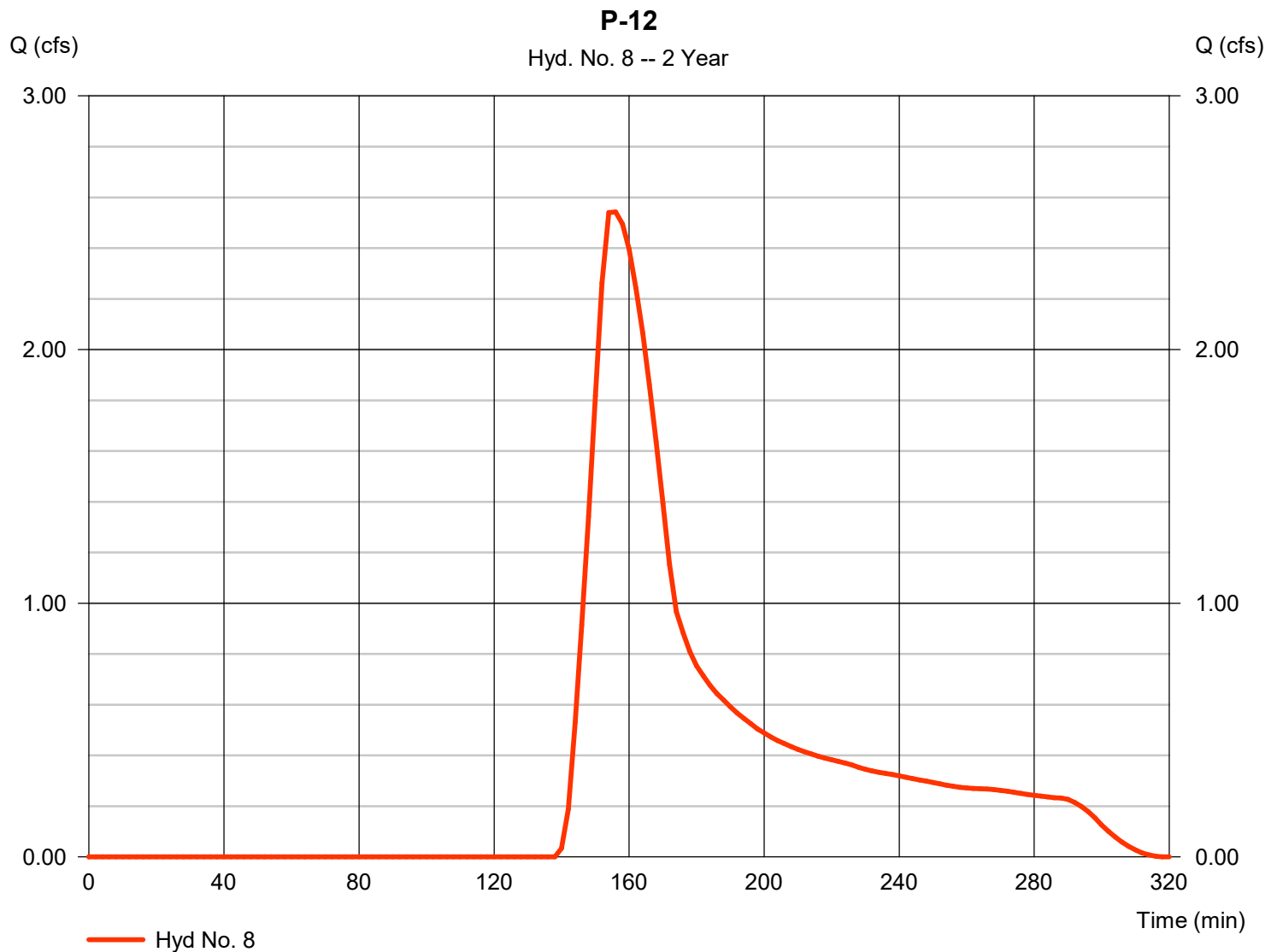
Tuesday, 04 / 7 / 2020

Hyd. No. 8

P-12

Hydrograph type	= SCS Runoff	Peak discharge	= 2.542 cfs
Storm frequency	= 2 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 6,270 cuft
Drainage area	= 2.910 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.910$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

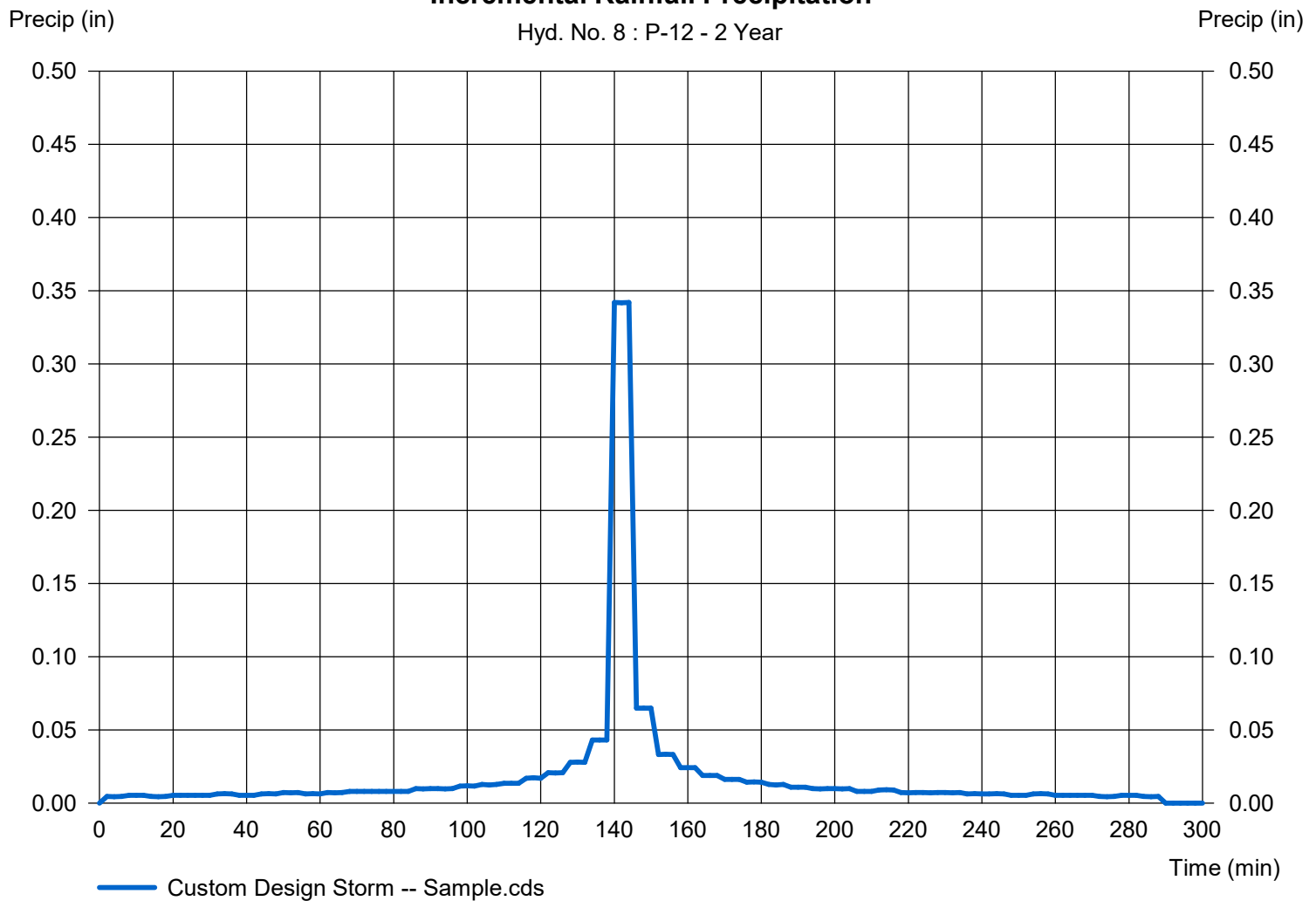
Hyd. No. 8

P-12

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : P-12 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

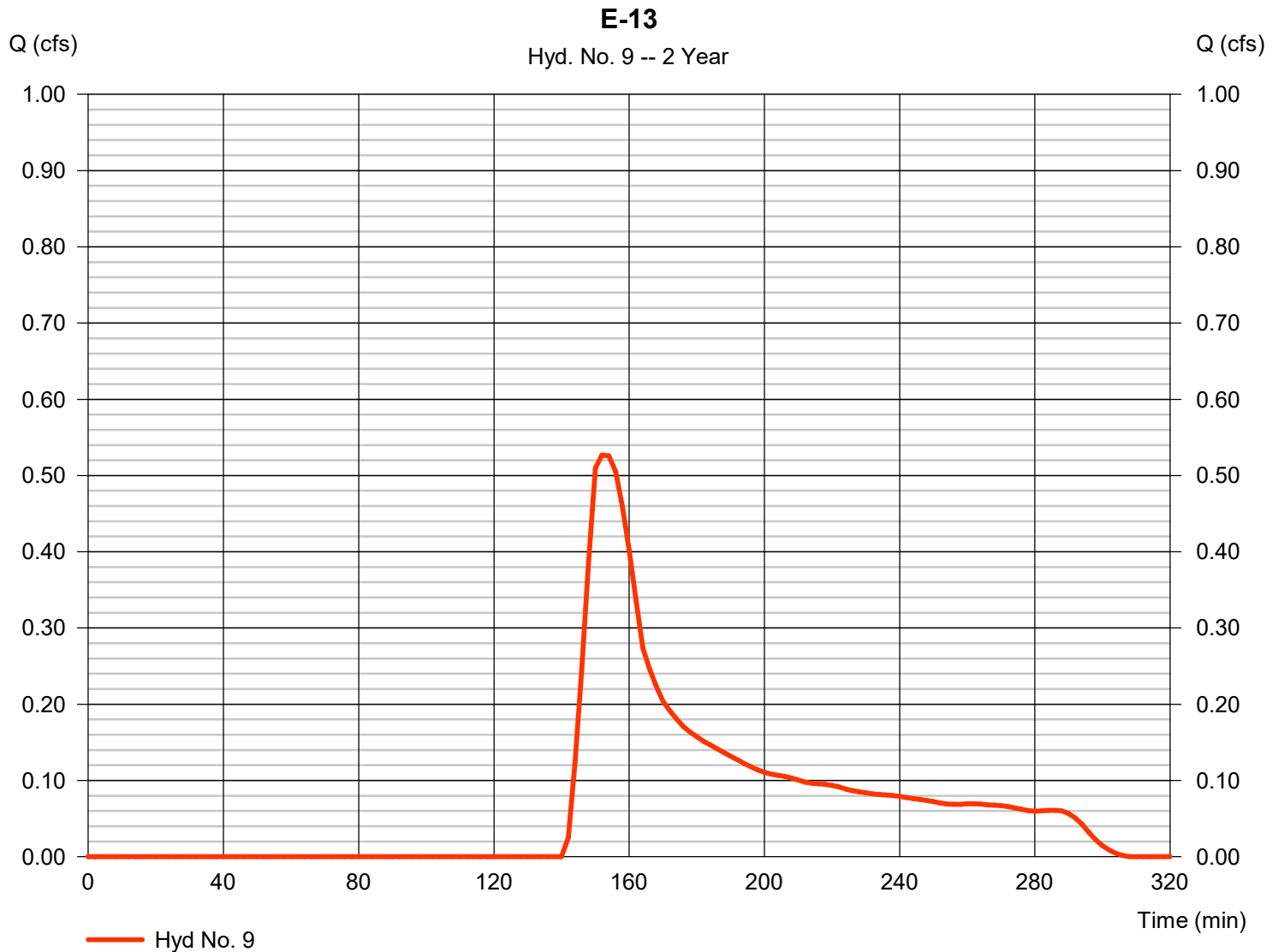
Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 0.527 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 1,302 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$

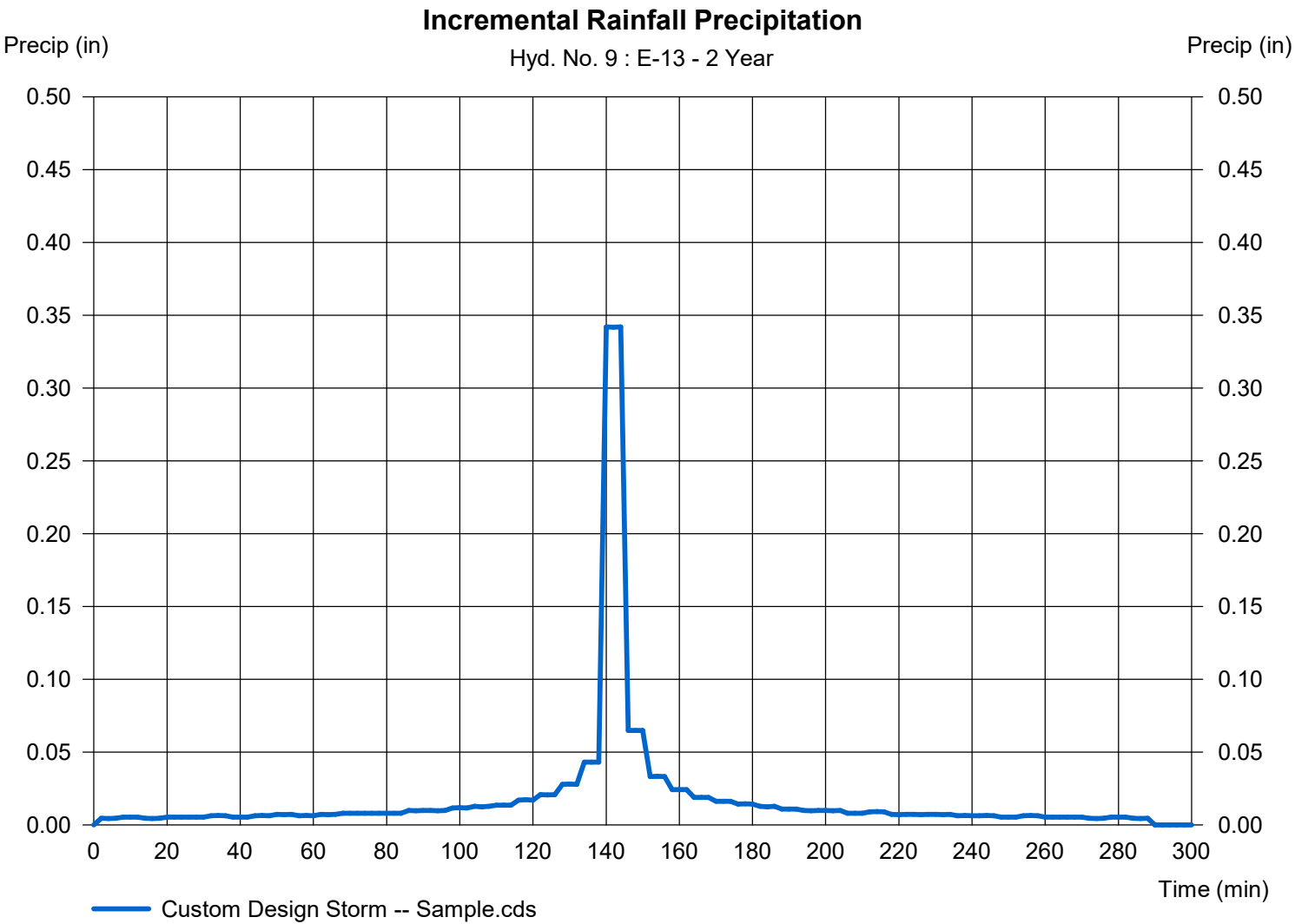


Precipitation Report

Hyd. No. 9

E-13

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

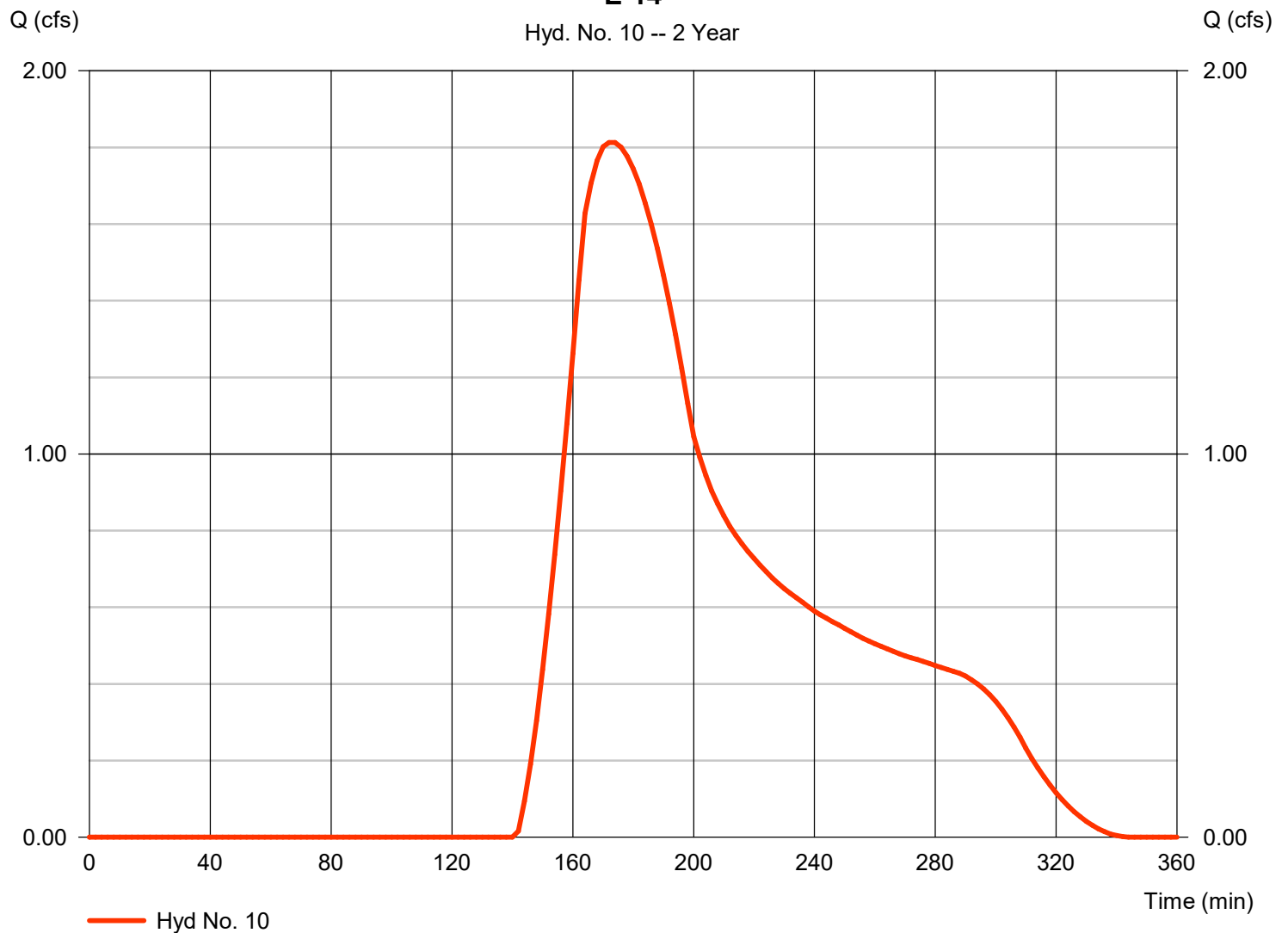
Hyd. No. 10

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 1.813 cfs
Storm frequency	= 2 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 8,241 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$

E-14



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

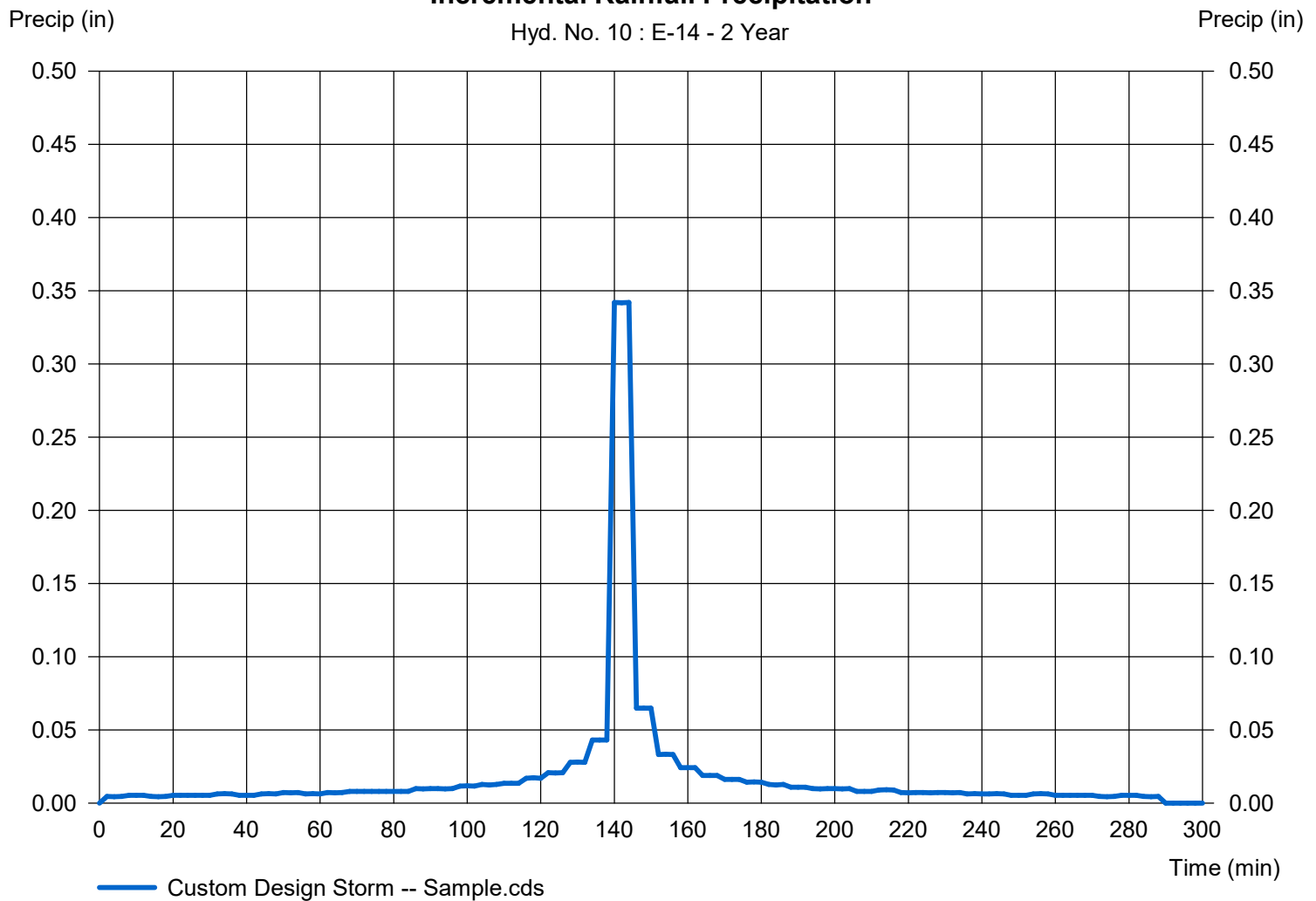
Hyd. No. 10

E-14

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-14 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

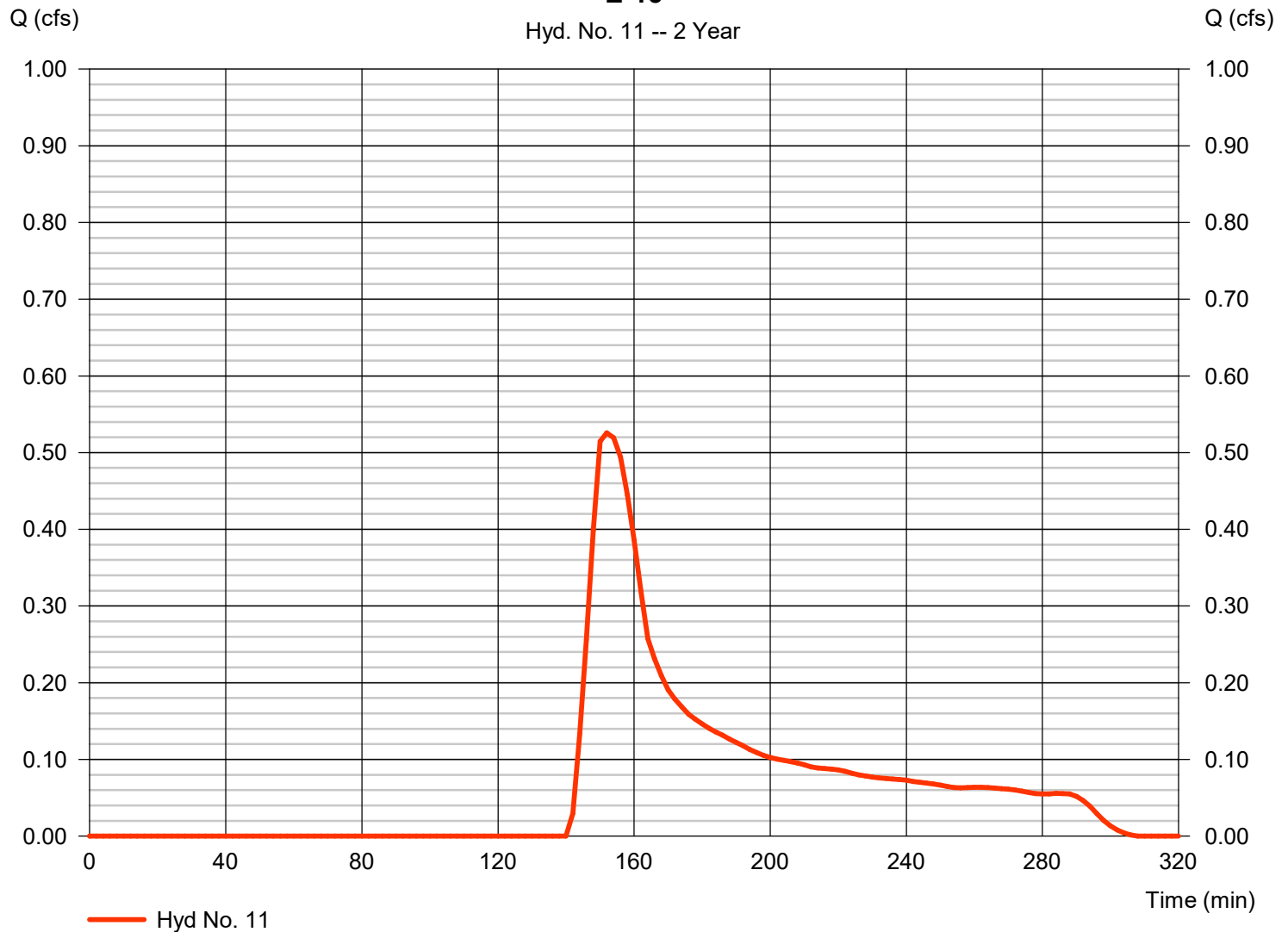
Hyd. No. 11

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 0.526 cfs
Storm frequency	= 2 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 1,238 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-15

Hyd. No. 11 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

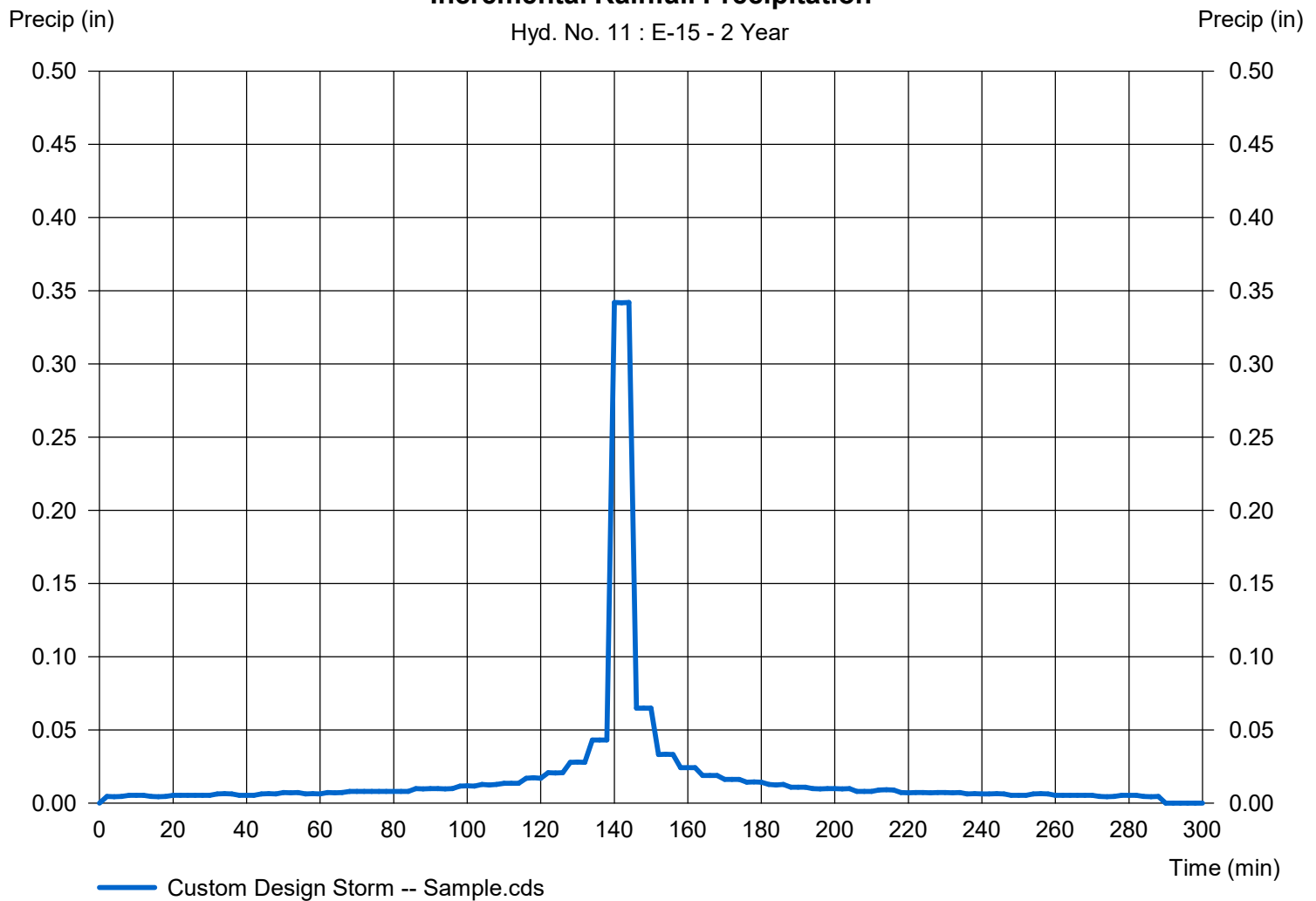
Hyd. No. 11

E-15

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-15 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

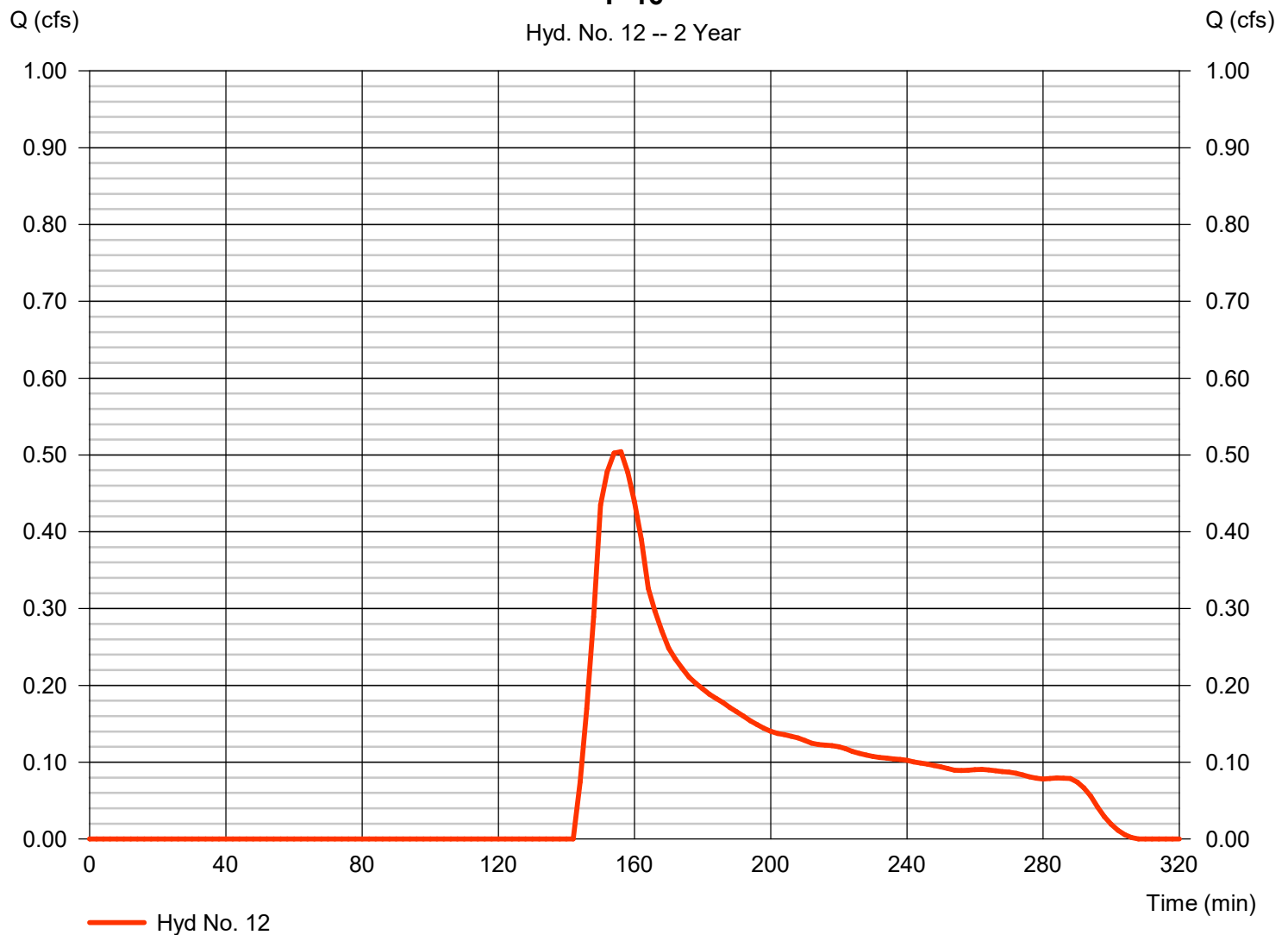
Hyd. No. 12

P-16

Hydrograph type	= SCS Runoff	Peak discharge	= 0.504 cfs
Storm frequency	= 2 yrs	Time to peak	= 156 min
Time interval	= 2 min	Hyd. volume	= 1,484 cuft
Drainage area	= 1.560 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

P-16

Hyd. No. 12 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

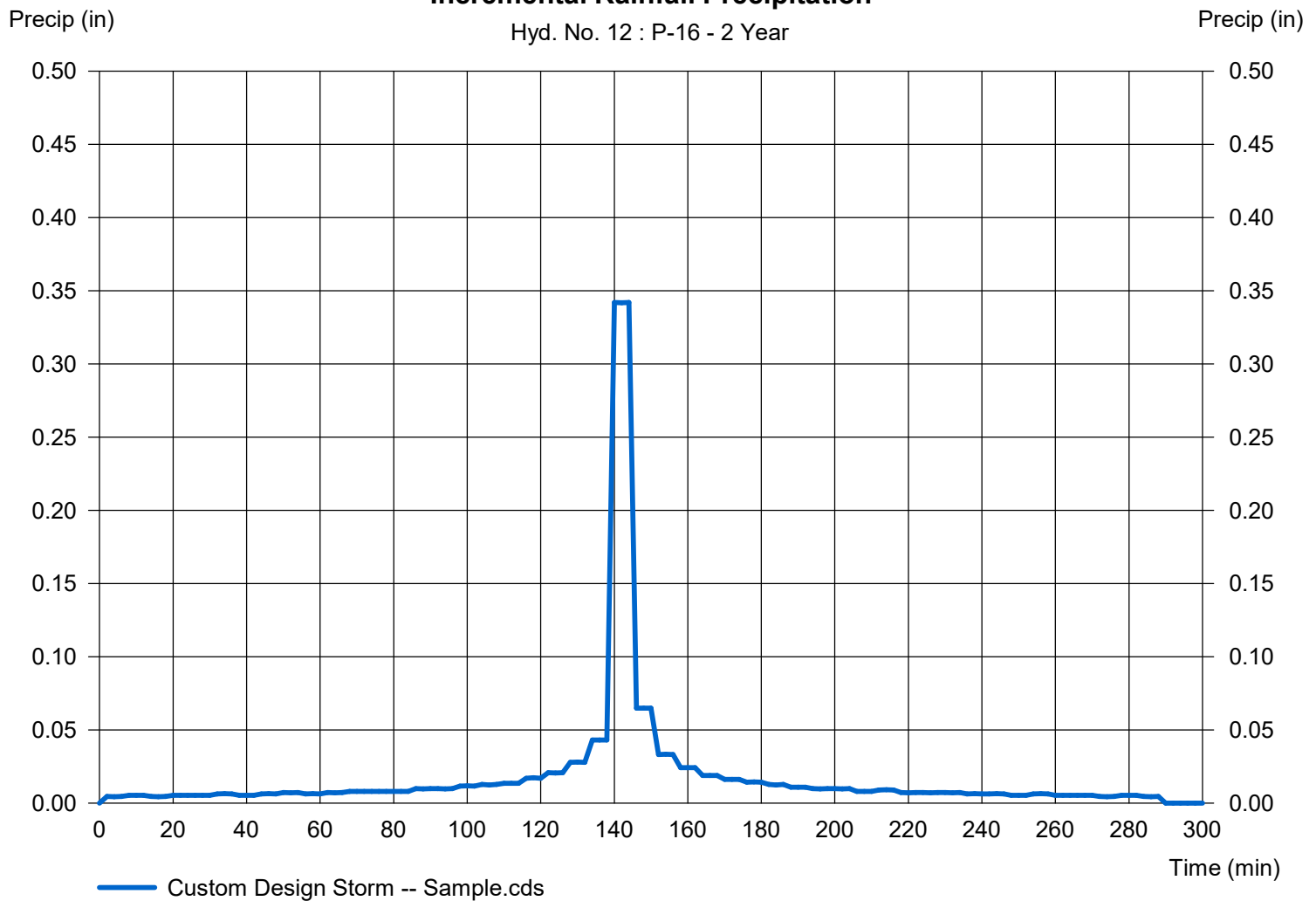
Hyd. No. 12

P-16

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : P-16 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

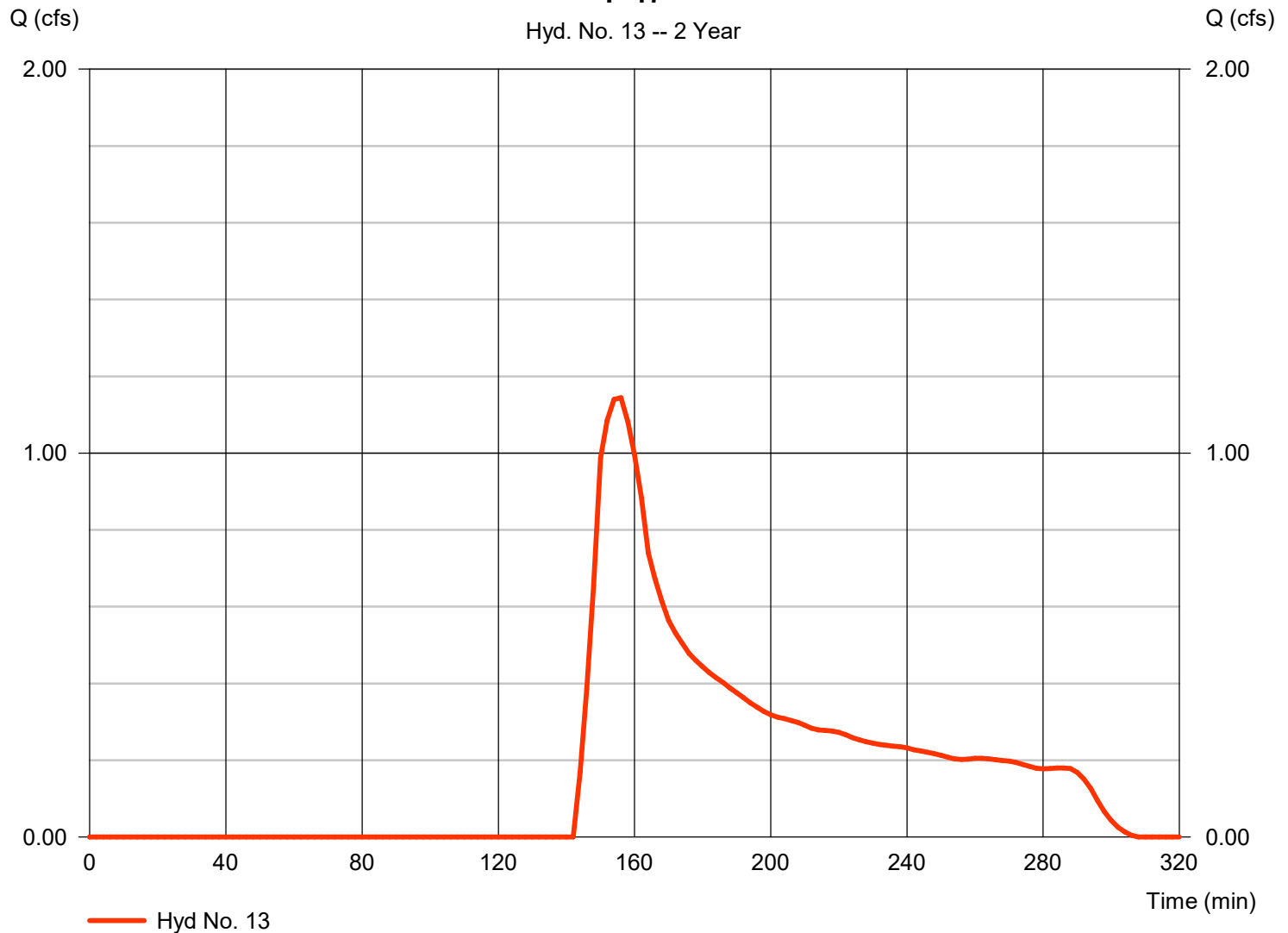
P-17

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 2 min
 Drainage area = 3.540 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.70 in
 Storm duration = Sample.cds

Peak discharge = 1.144 cfs
 Time to peak = 156 min
 Hyd. volume = 3,368 cuft
 Curve number = 61
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 12.00 min
 Distribution = Custom
 Shape factor = 484

P-17

Hyd. No. 13 -- 2 Year



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 13

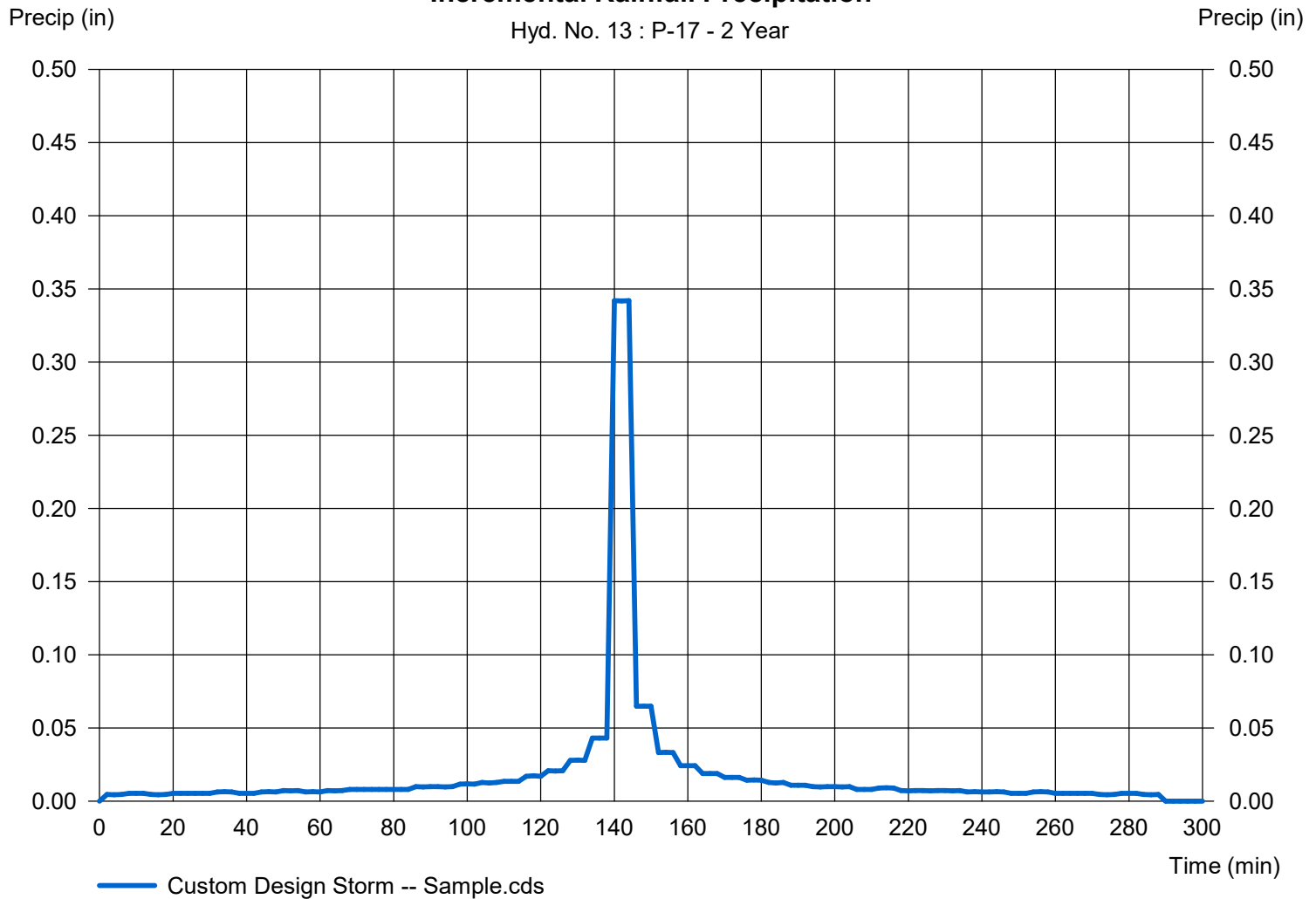
P-17

Storm Frequency = 2 yrs
Total precip. = 2.7000 in
Storm duration = Sample.cds

Time interval = 2 min
Distribution = Custom

Incremental Rainfall Precipitation

Hyd. No. 13 : P-17 - 2 Year



Hydrograph Report

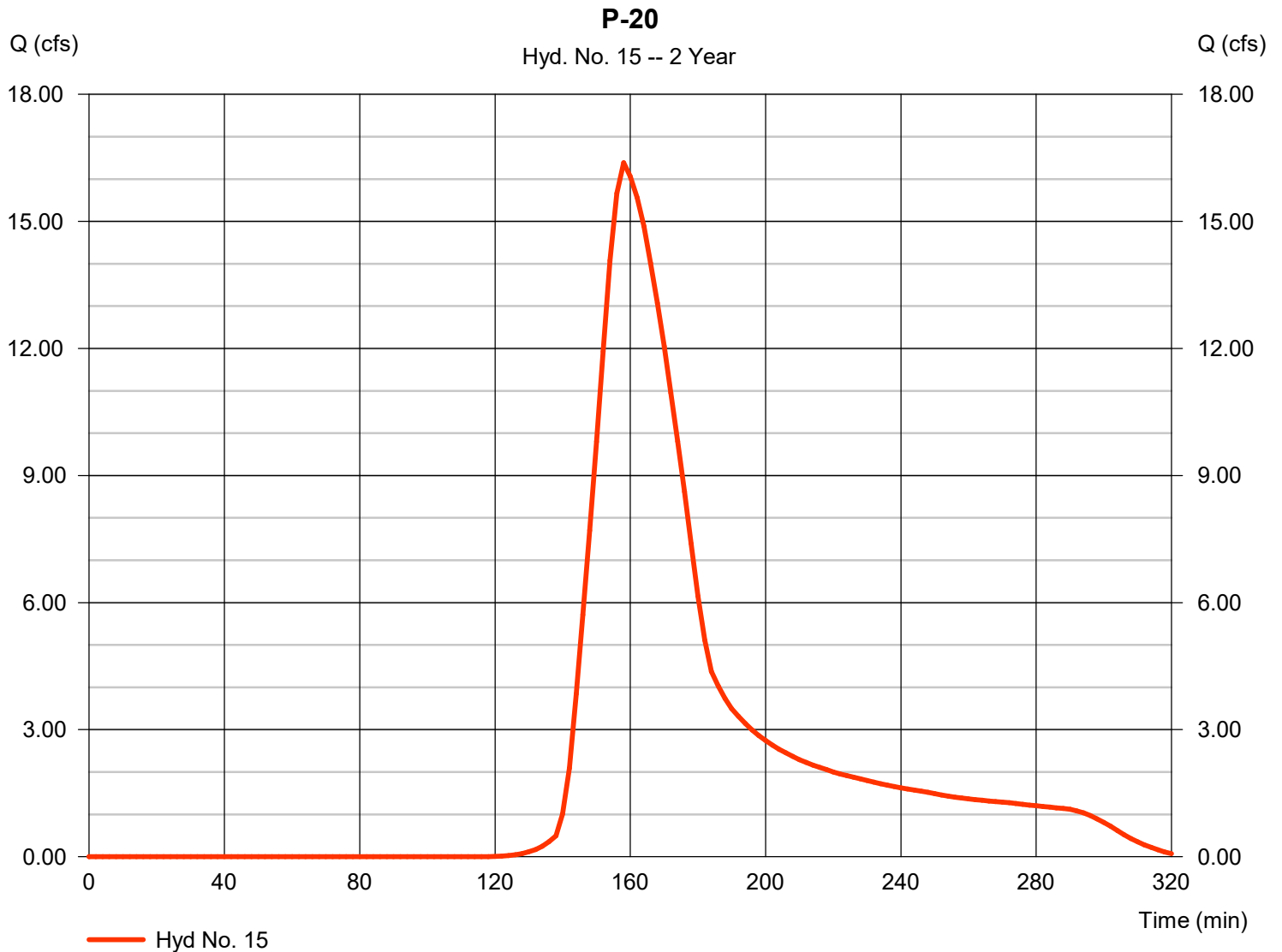
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

P-20

Hydrograph type	= SCS Runoff	Peak discharge	= 16.39 cfs
Storm frequency	= 2 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 40,378 cuft
Drainage area	= 9.850 ac	Curve number	= 82
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

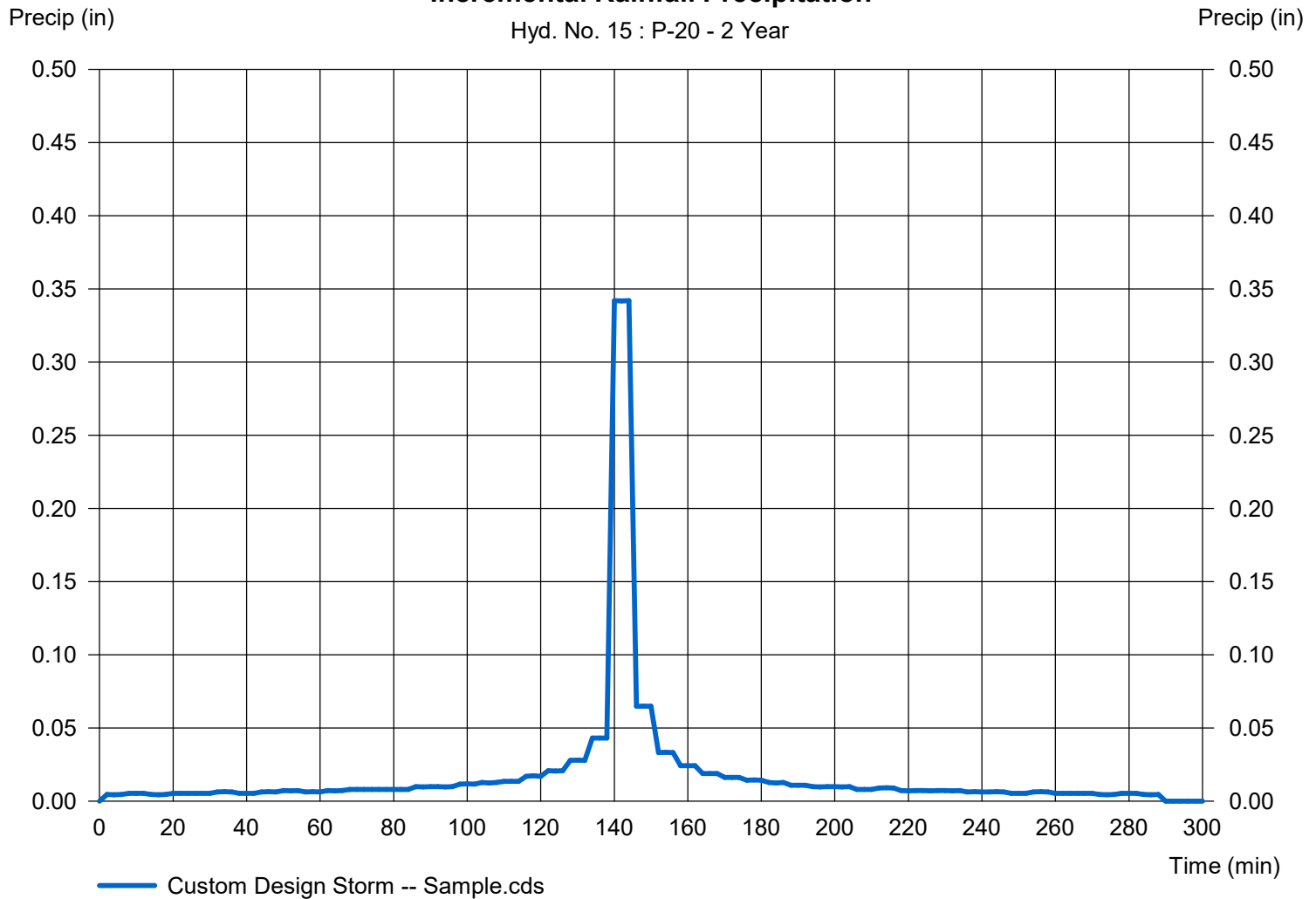
Hyd. No. 15

P-20

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : P-20 - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

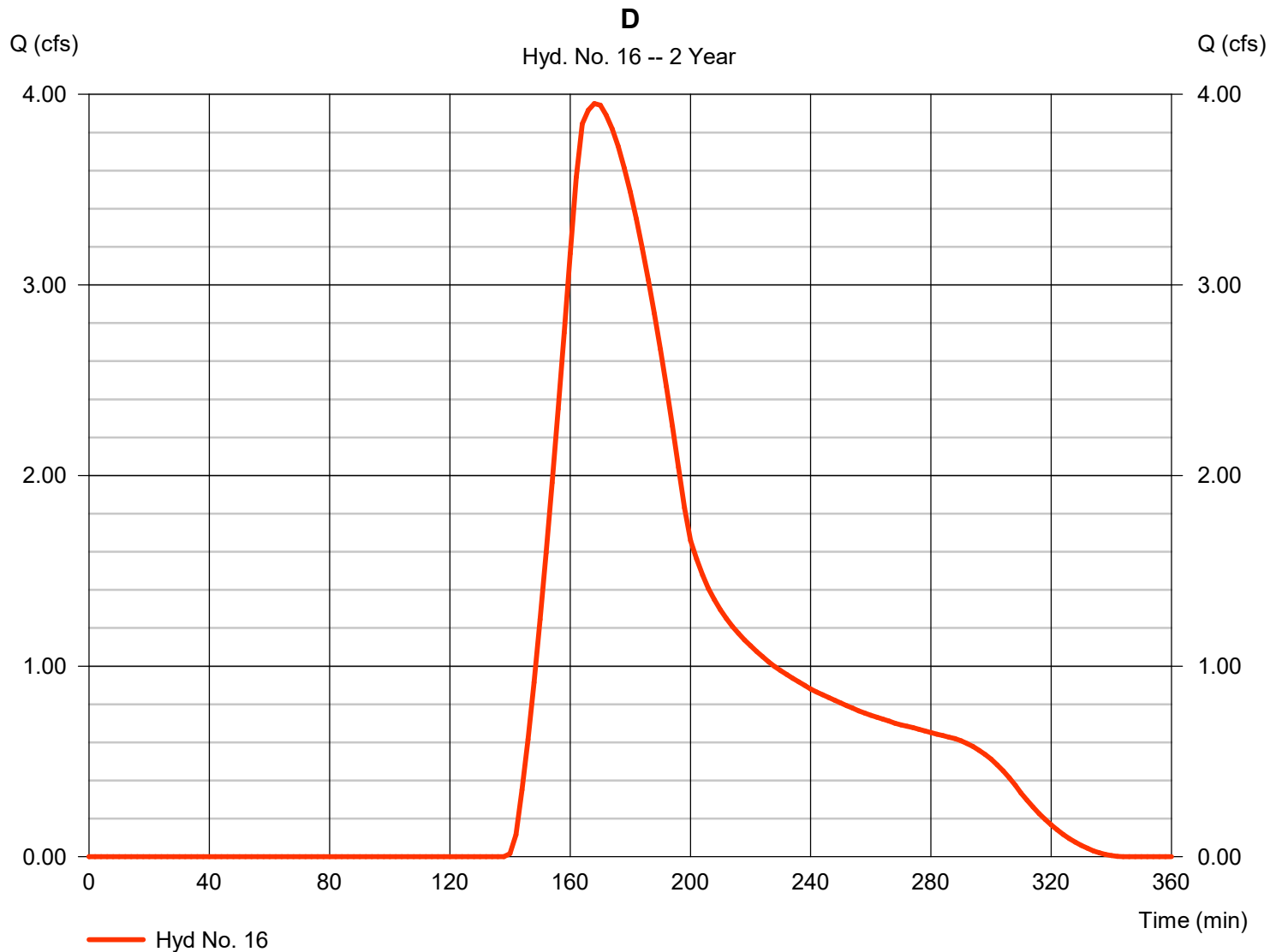
Tuesday, 04 / 7 / 2020

Hyd. No. 16

D

Hydrograph type	= SCS Runoff	Peak discharge	= 3.951 cfs
Storm frequency	= 2 yrs	Time to peak	= 168 min
Time interval	= 2 min	Hyd. volume	= 15,058 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 2.70 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

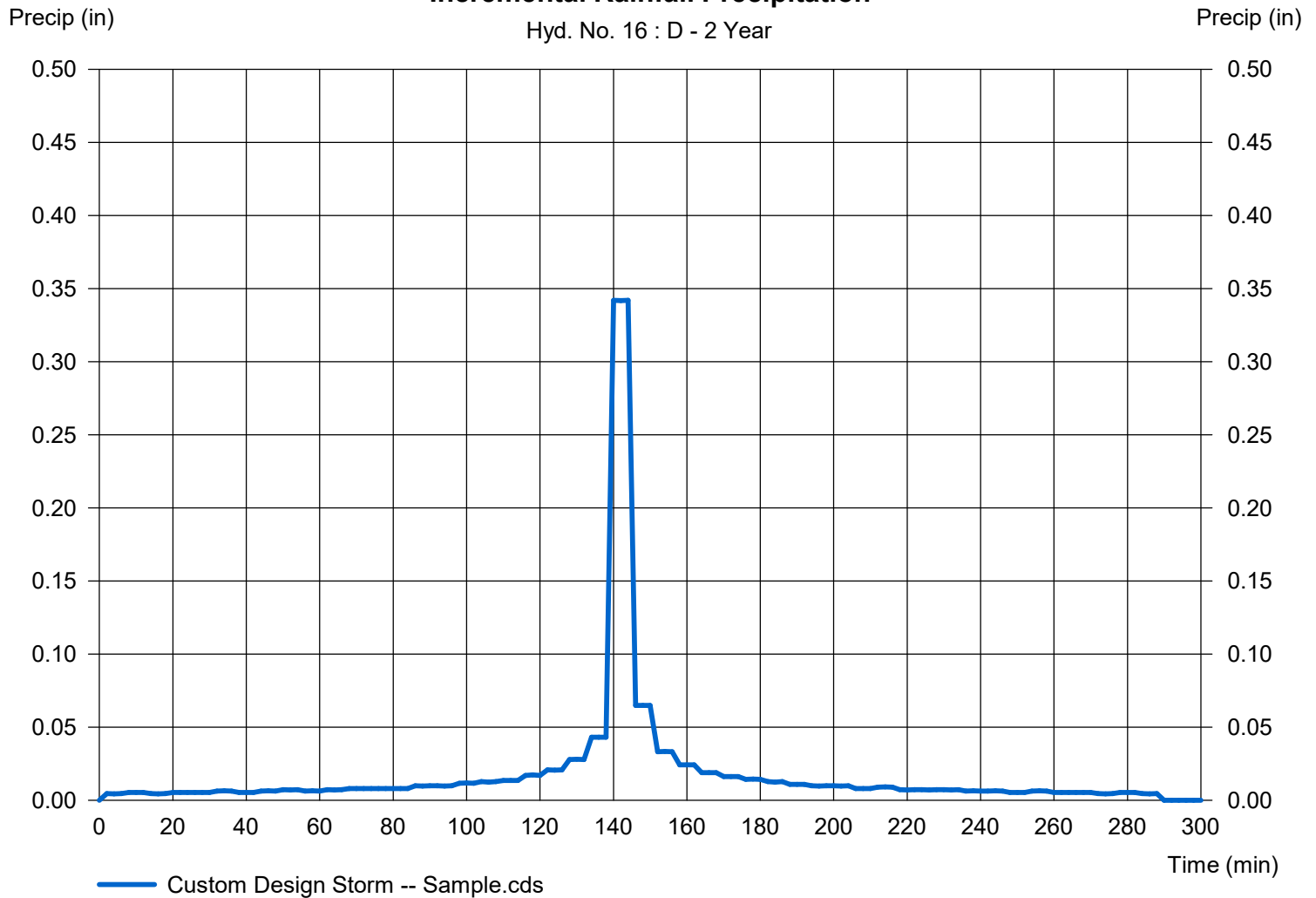
Hyd. No. 16

D

Storm Frequency	= 2 yrs	Time interval	= 2 min
Total precip.	= 2.7000 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 16 : D - 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 18

Pond 5

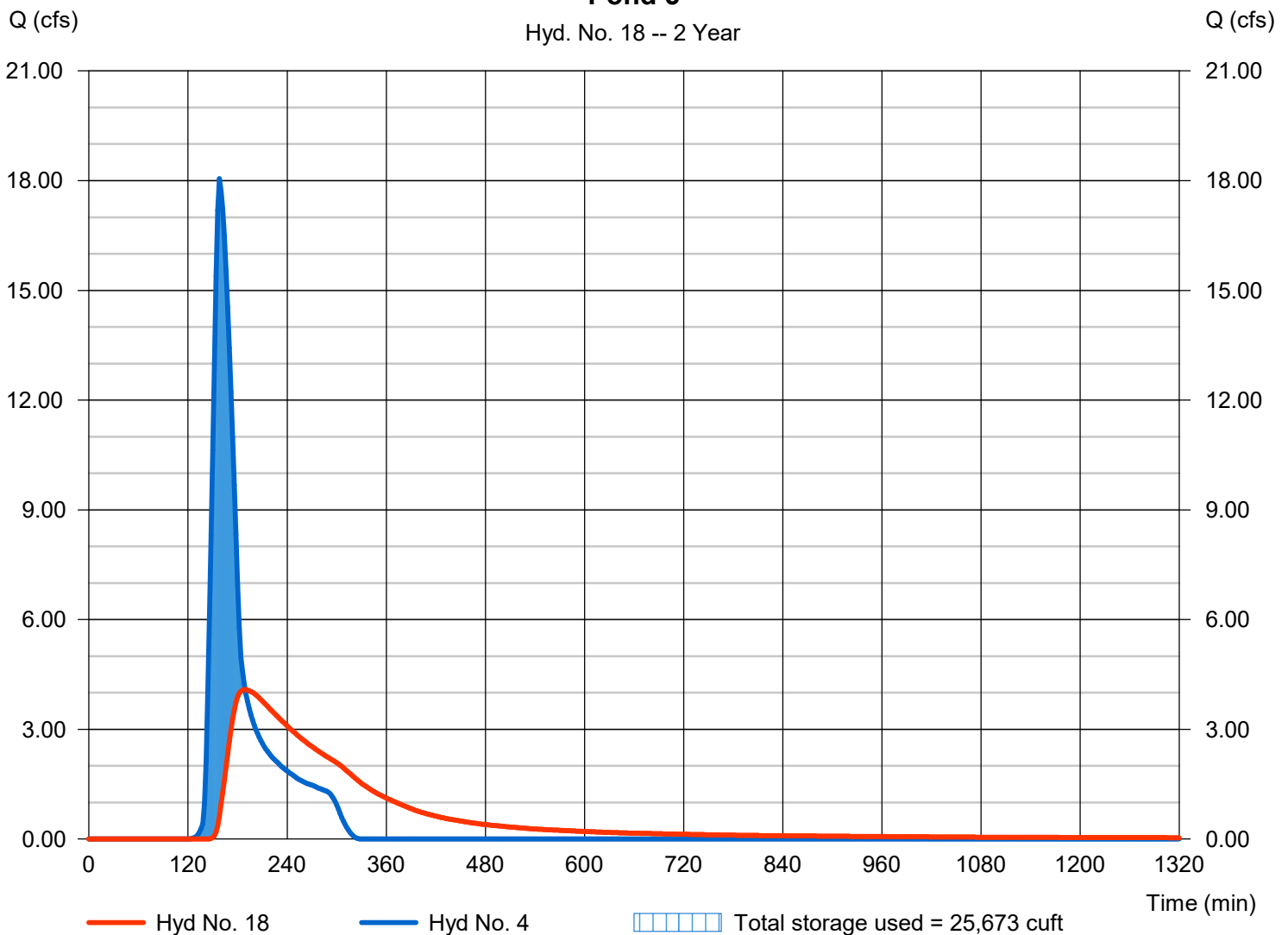
Hydrograph type = Reservoir
 Storm frequency = 2 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - P-5
 Reservoir name = Pond 5

Peak discharge = 4.081 cfs
 Time to peak = 190 min
 Hyd. volume = 43,971 cuft
 Max. Elevation = 982.80 ft
 Max. Storage = 25,673 cuft

Storage Indication method used.

Pond 5

Hyd. No. 18 -- 2 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

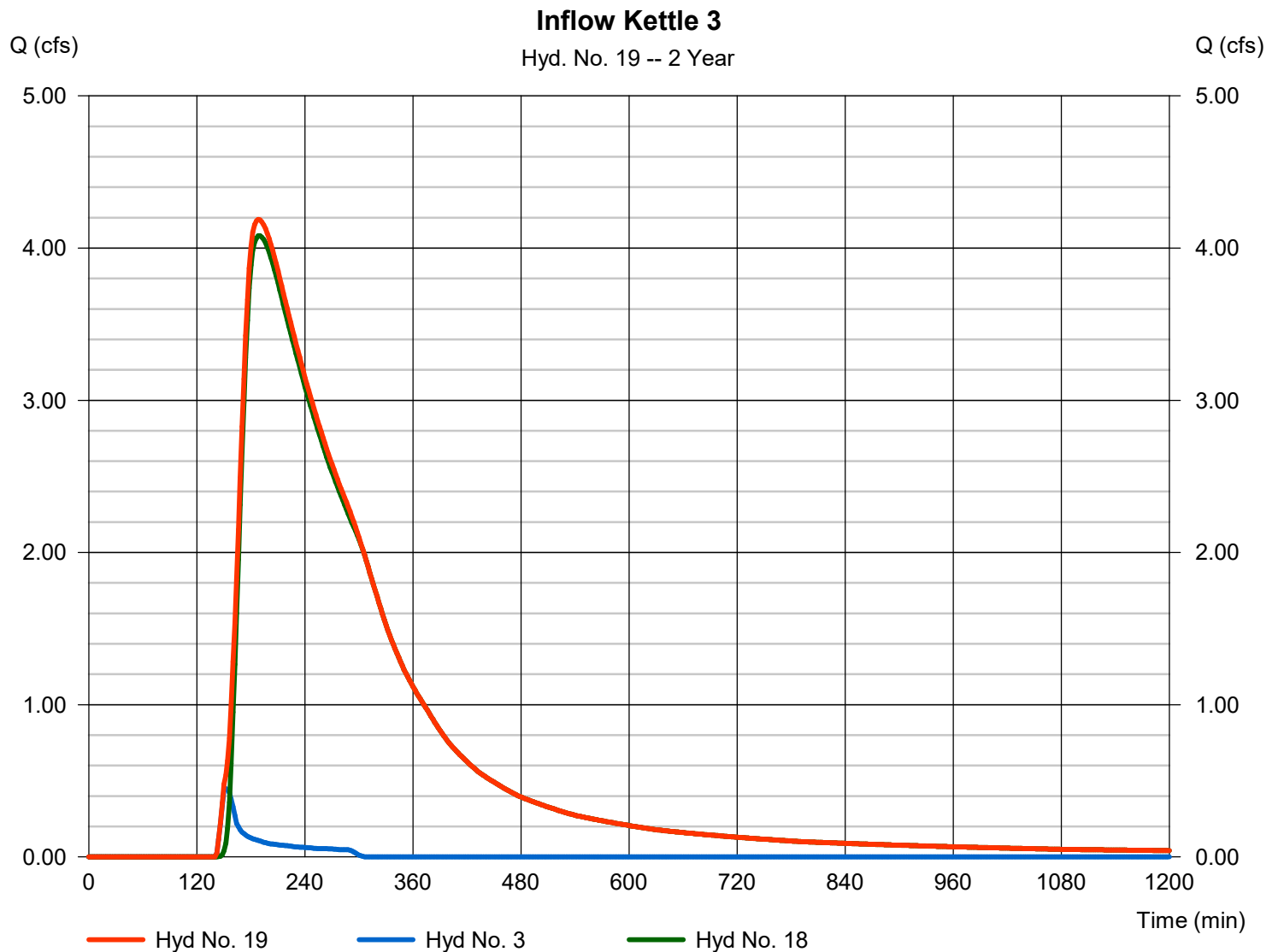
Tuesday, 04 / 7 / 2020

Hyd. No. 19

Inflow Kettle 3

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 3, 18

Peak discharge = 4.188 cfs
Time to peak = 188 min
Hyd. volume = 45,026 cuft
Contrib. drain. area = 0.750 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

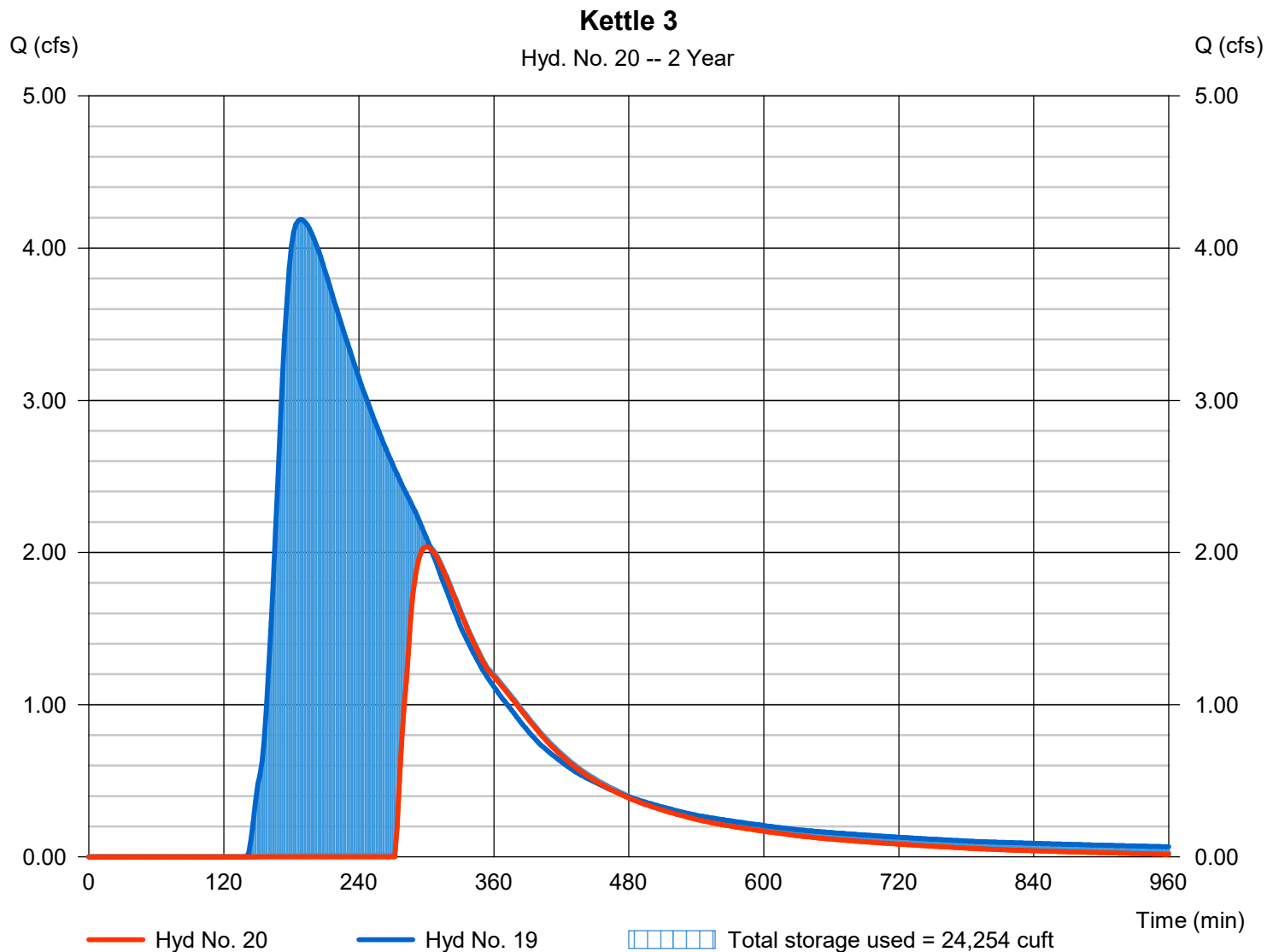
Tuesday, 04 / 7 / 2020

Hyd. No. 20

Kettle 3

Hydrograph type	= Reservoir	Peak discharge	= 2.037 cfs
Storm frequency	= 2 yrs	Time to peak	= 300 min
Time interval	= 2 min	Hyd. volume	= 16,626 cuft
Inflow hyd. No.	= 19 - Inflow Kettle 3	Max. Elevation	= 976.14 ft
Reservoir name	= K-3	Max. Storage	= 24,254 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

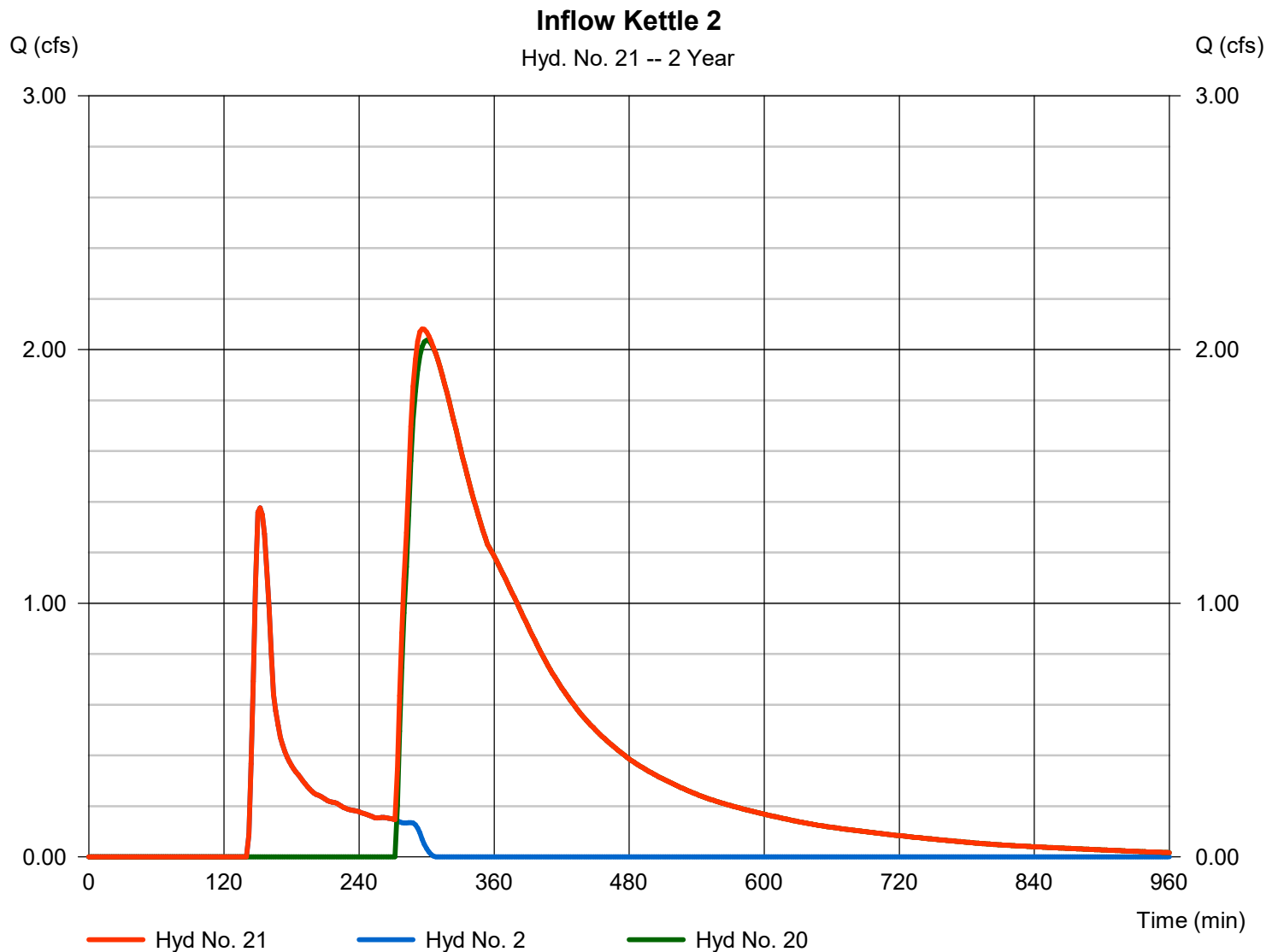
Tuesday, 04 / 7 / 2020

Hyd. No. 21

Inflow Kettle 2

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 2, 20

Peak discharge = 2.081 cfs
Time to peak = 296 min
Hyd. volume = 19,739 cuft
Contrib. drain. area = 2.040 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

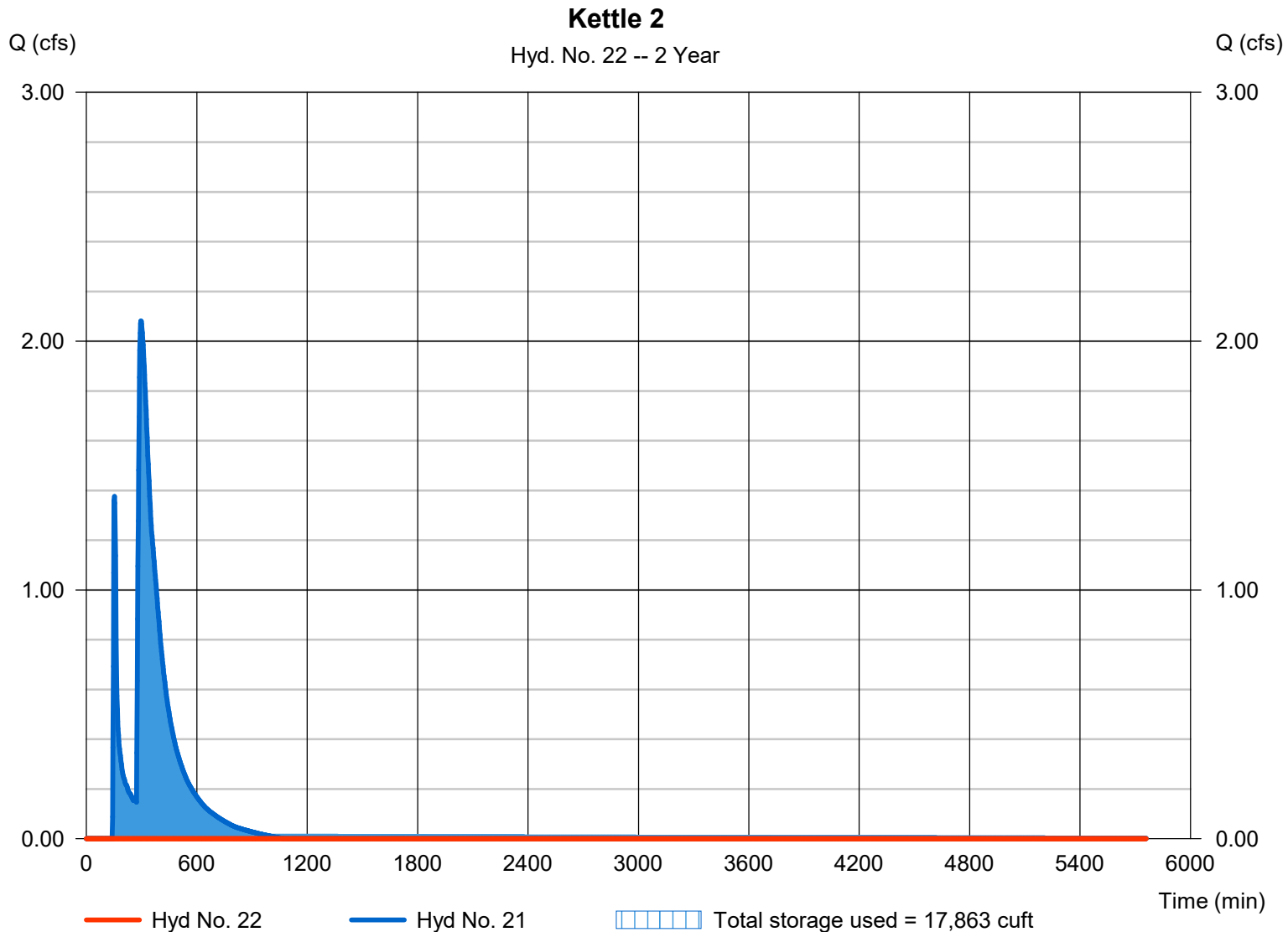
Tuesday, 04 / 7 / 2020

Hyd. No. 22

Kettle 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 5750 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 21 - Inflow Kettle 2	Max. Elevation	= 969.71 ft
Reservoir name	= K-2	Max. Storage	= 17,863 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

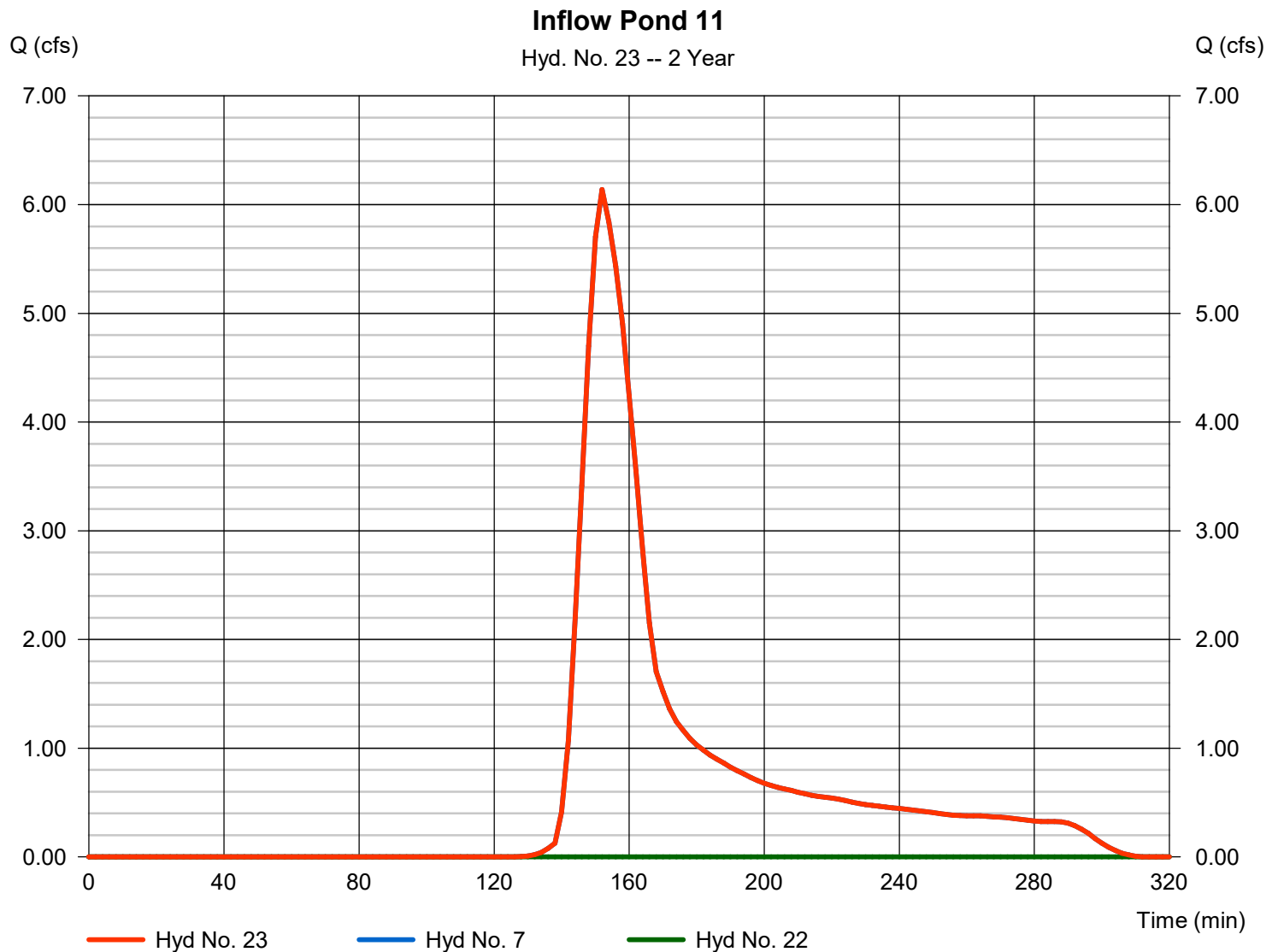
Tuesday, 04 / 7 / 2020

Hyd. No. 23

Inflow Pond 11

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 7, 22

Peak discharge = 6.140 cfs
Time to peak = 152 min
Hyd. volume = 10,964 cuft
Contrib. drain. area = 3.180 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

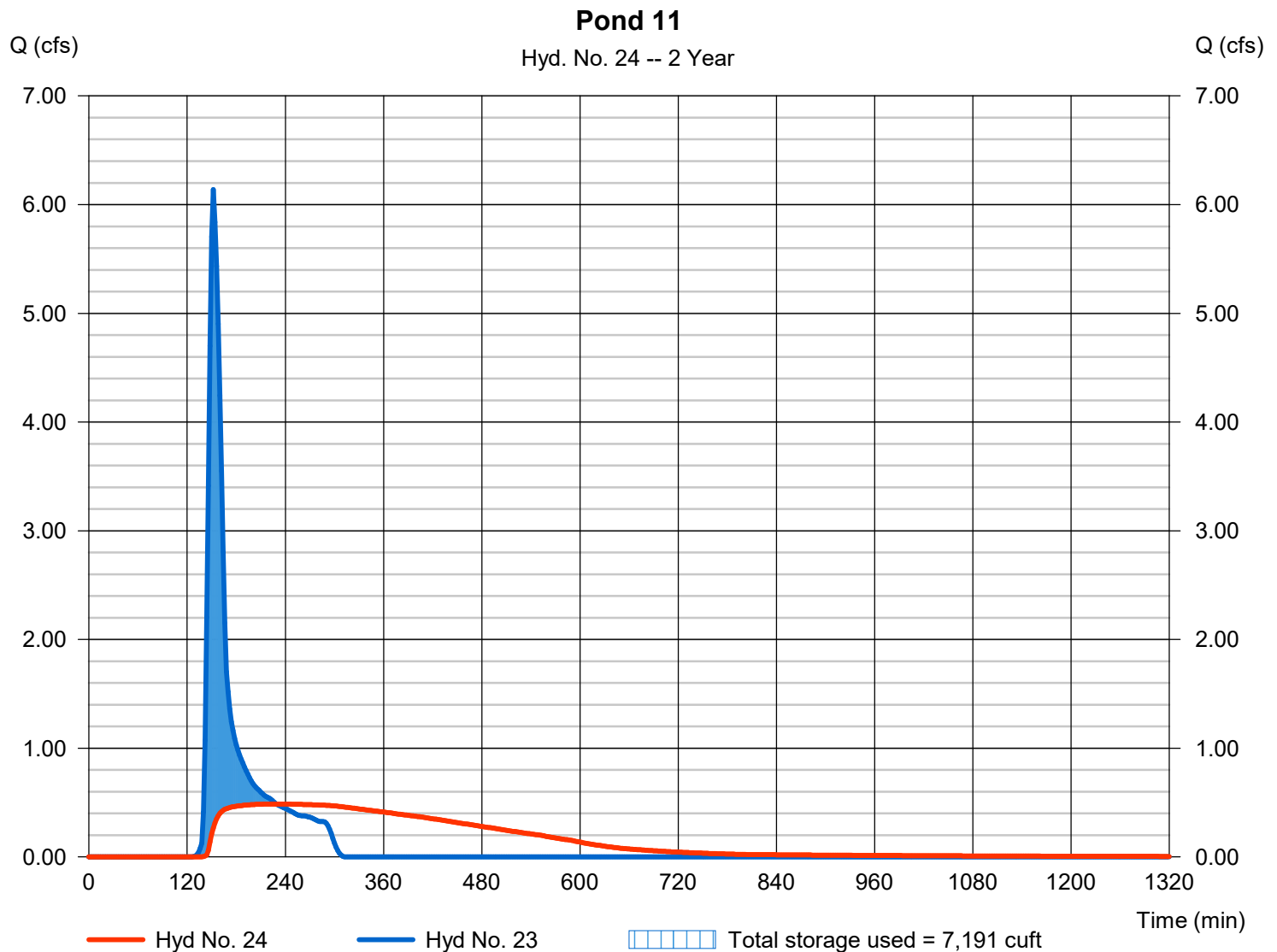
Tuesday, 04 / 7 / 2020

Hyd. No. 24

Pond 11

Hydrograph type	= Reservoir	Peak discharge	= 0.486 cfs
Storm frequency	= 2 yrs	Time to peak	= 228 min
Time interval	= 2 min	Hyd. volume	= 10,945 cuft
Inflow hyd. No.	= 23 - Inflow Pond 11	Max. Elevation	= 965.62 ft
Reservoir name	= Pond 11	Max. Storage	= 7,191 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

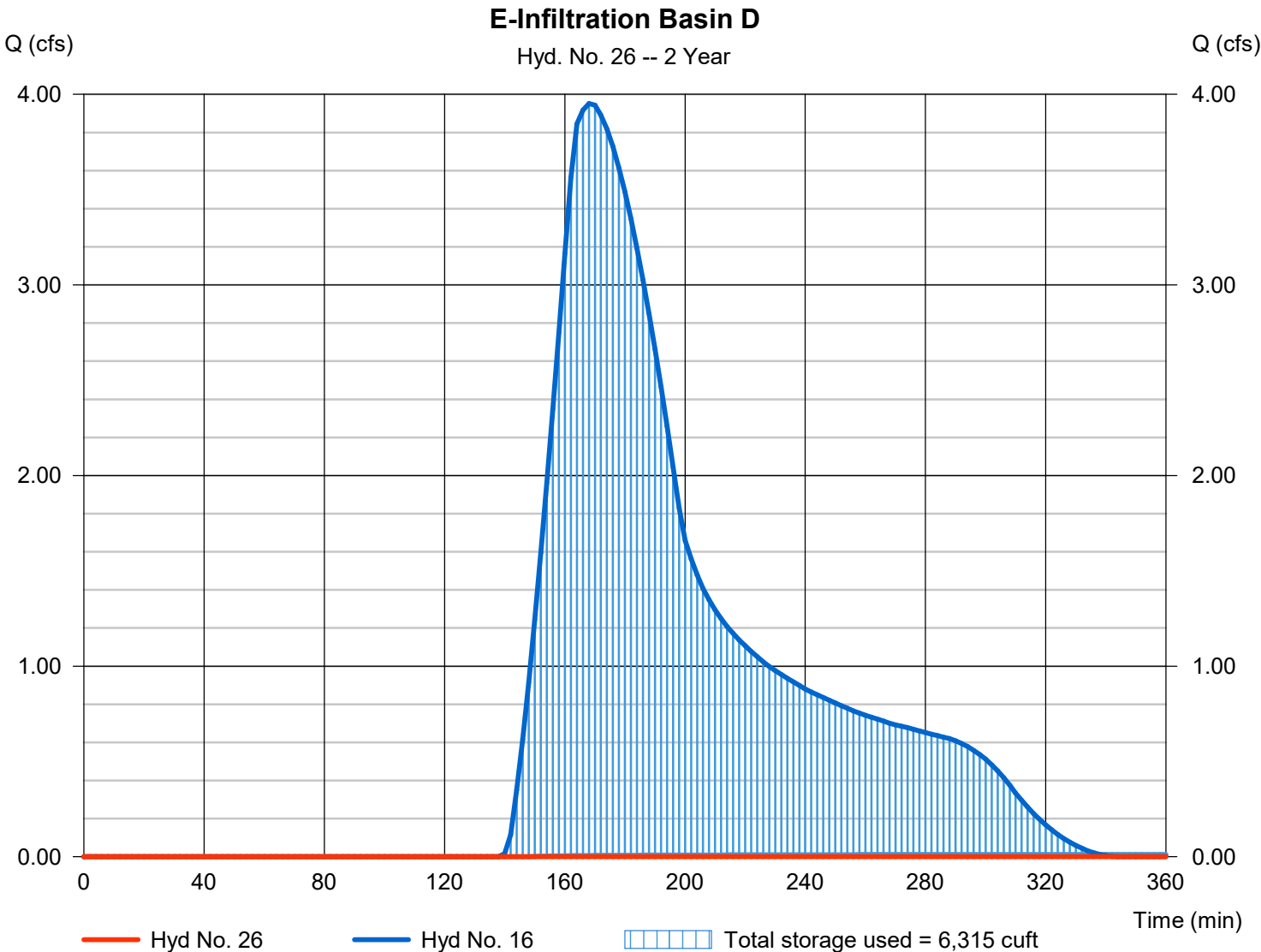
Tuesday, 04 / 7 / 2020

Hyd. No. 26

E-Infiltration Basin D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 322 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 16 - D	Max. Elevation	= 990.20 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 6,315 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

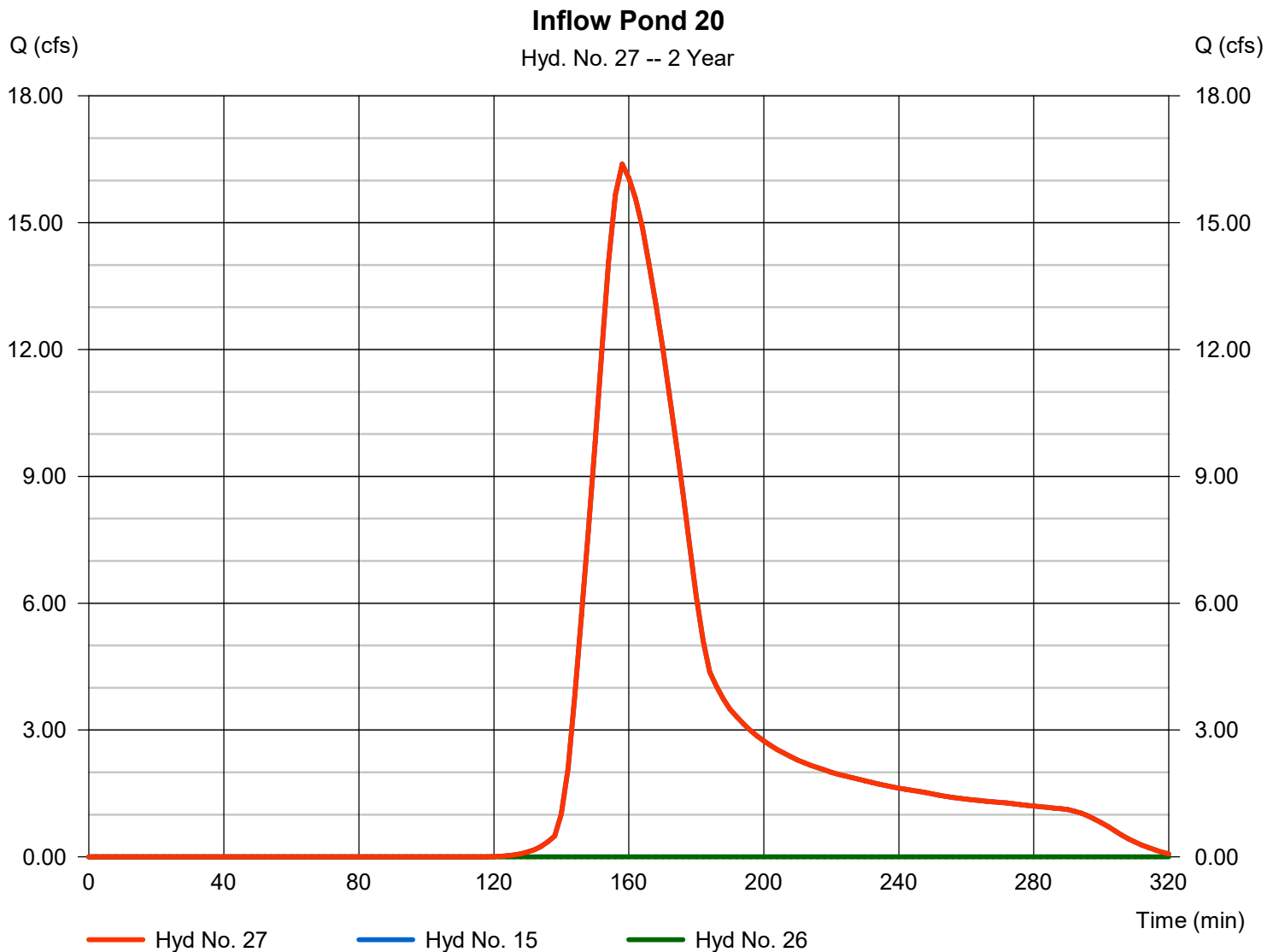
Tuesday, 04 / 7 / 2020

Hyd. No. 27

Inflow Pond 20

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 15, 26

Peak discharge = 16.39 cfs
Time to peak = 158 min
Hyd. volume = 40,378 cuft
Contrib. drain. area = 9.850 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

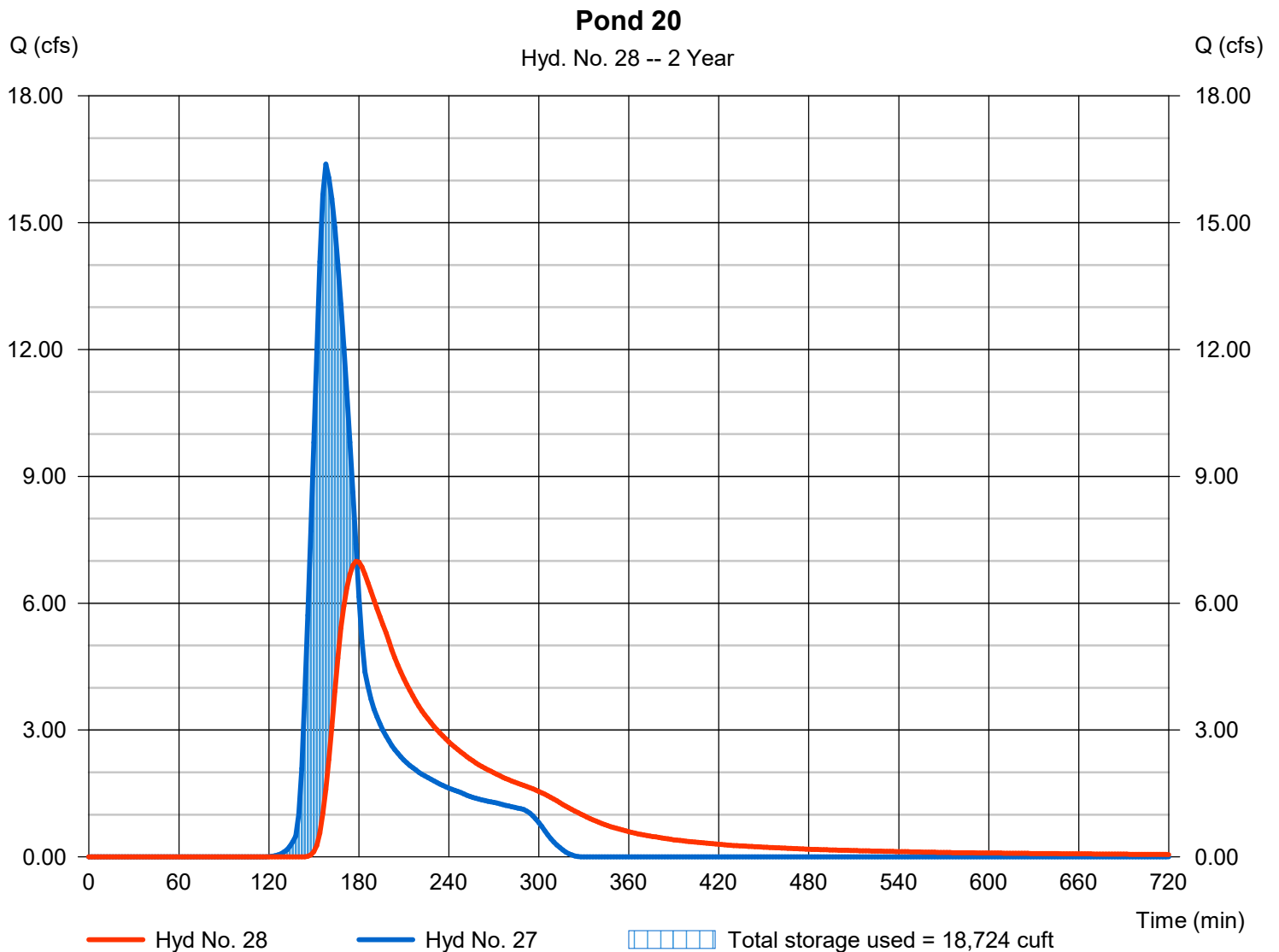
Tuesday, 04 / 7 / 2020

Hyd. No. 28

Pond 20

Hydrograph type	= Reservoir	Peak discharge	= 6.991 cfs
Storm frequency	= 2 yrs	Time to peak	= 178 min
Time interval	= 2 min	Hyd. volume	= 40,048 cuft
Inflow hyd. No.	= 27 - Inflow Pond 20	Max. Elevation	= 991.25 ft
Reservoir name	= Pond 20	Max. Storage	= 18,724 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

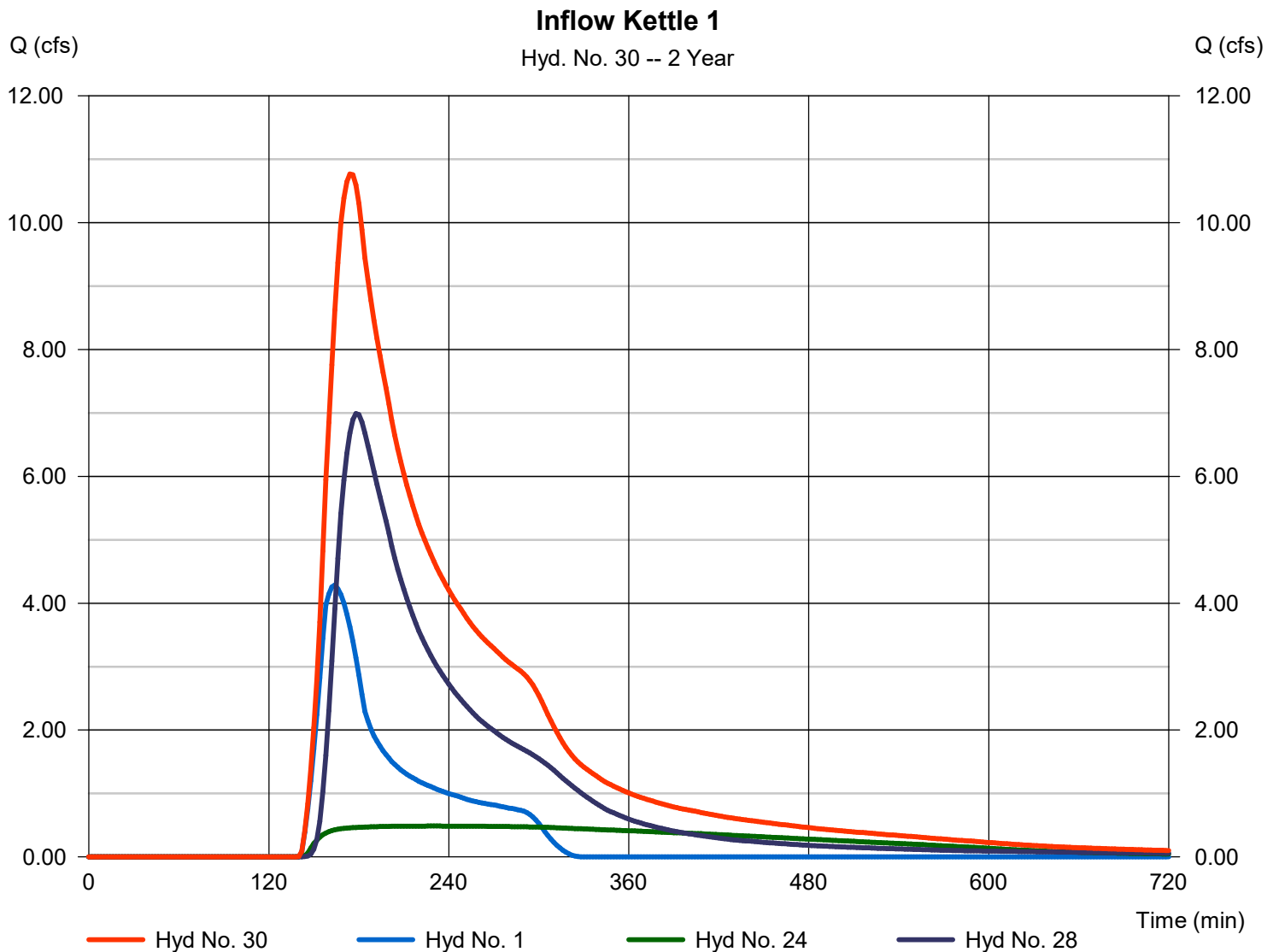
Tuesday, 04 / 7 / 2020

Hyd. No. 30

Inflow Kettle 1

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 1, 24, 28

Peak discharge = 10.77 cfs
Time to peak = 174 min
Hyd. volume = 66,404 cuft
Contrib. drain. area = 12.520 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

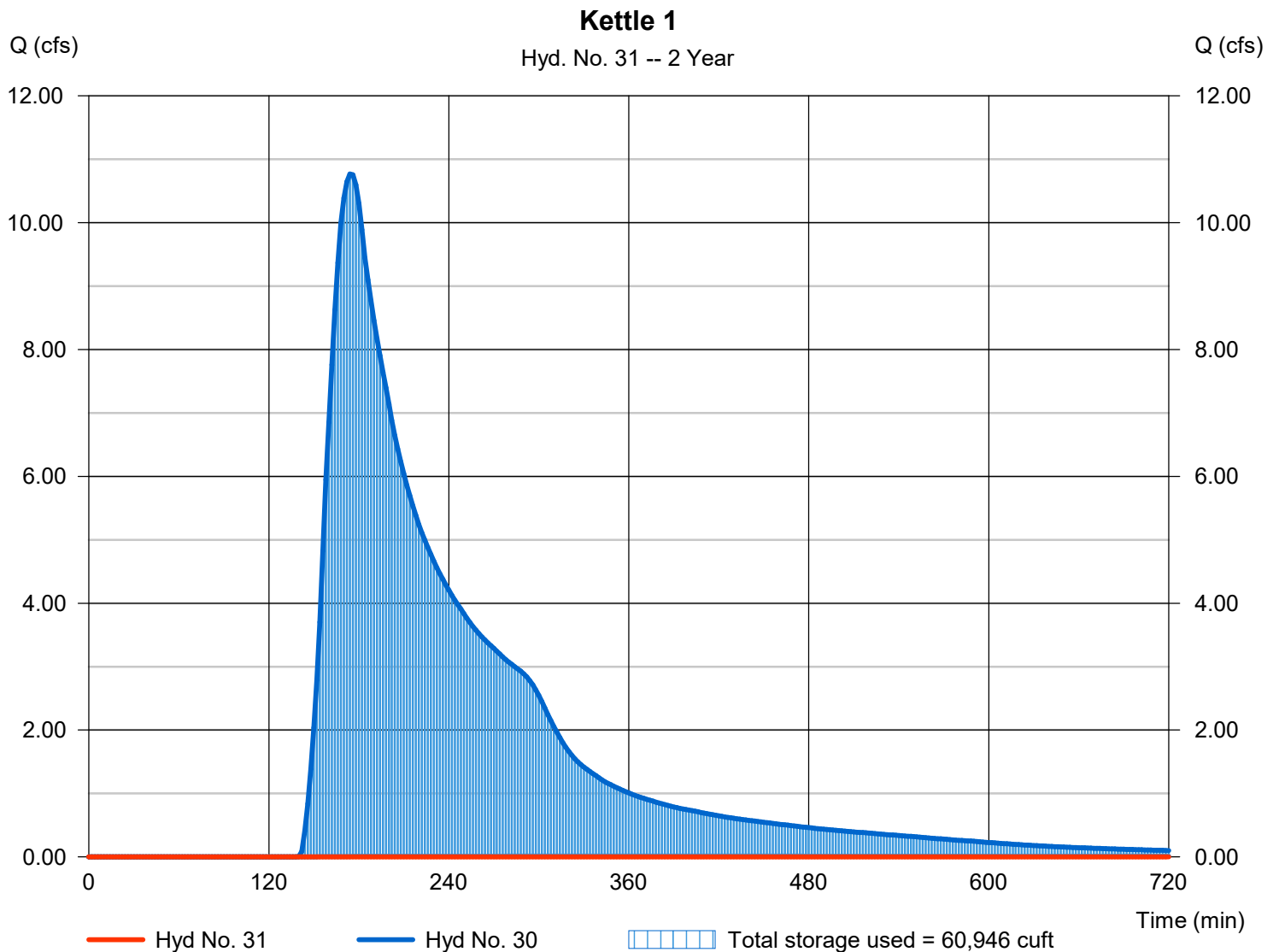
Tuesday, 04 / 7 / 2020

Hyd. No. 31

Kettle 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 30 - Inflow Kettle 1	Max. Elevation	= 949.79 ft
Reservoir name	= K-1	Max. Storage	= 60,946 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

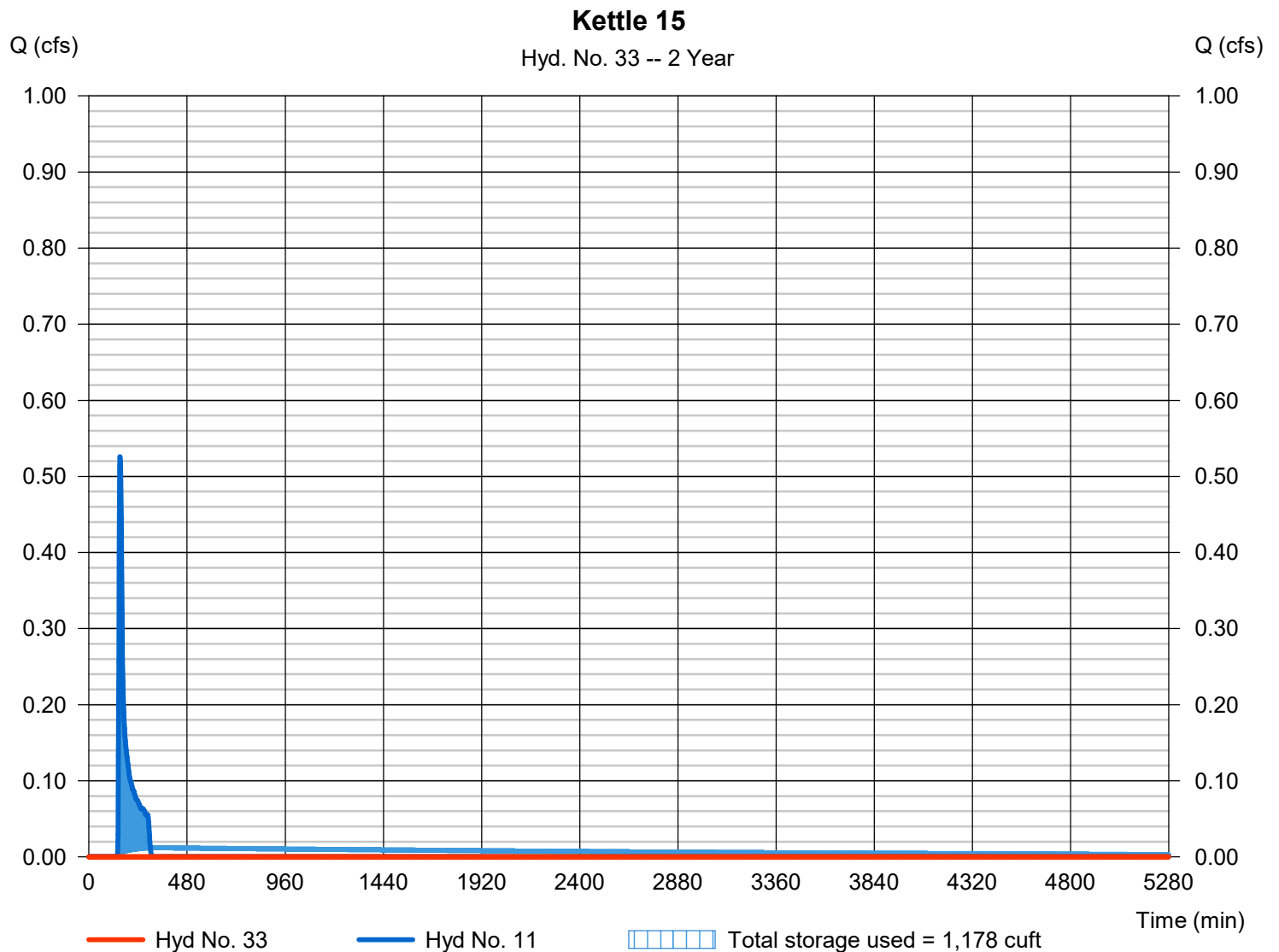
Hyd. No. 33

Kettle 15

Hydrograph type = Reservoir
 Storm frequency = 2 yrs
 Time interval = 2 min
 Inflow hyd. No. = 11 - E-15
 Reservoir name = K-15

Peak discharge = 0.000 cfs
 Time to peak = 286 min
 Hyd. volume = 0 cuft
 Max. Elevation = 970.51 ft
 Max. Storage = 1,178 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

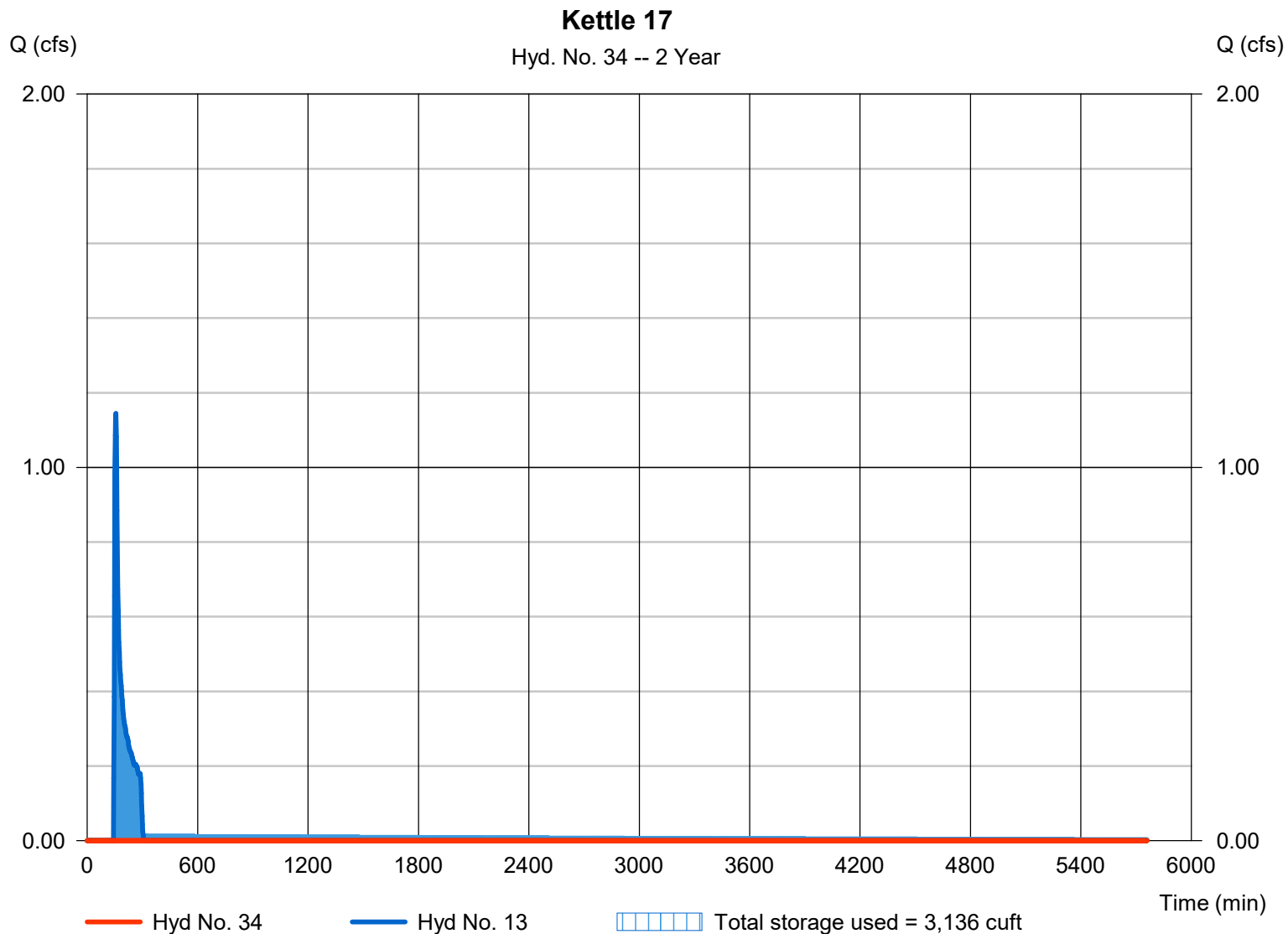
Tuesday, 04 / 7 / 2020

Hyd. No. 34

Kettle 17

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 262 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 13 - P-17	Max. Elevation	= 1011.29 ft
Reservoir name	= P-K-17	Max. Storage	= 3,136 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

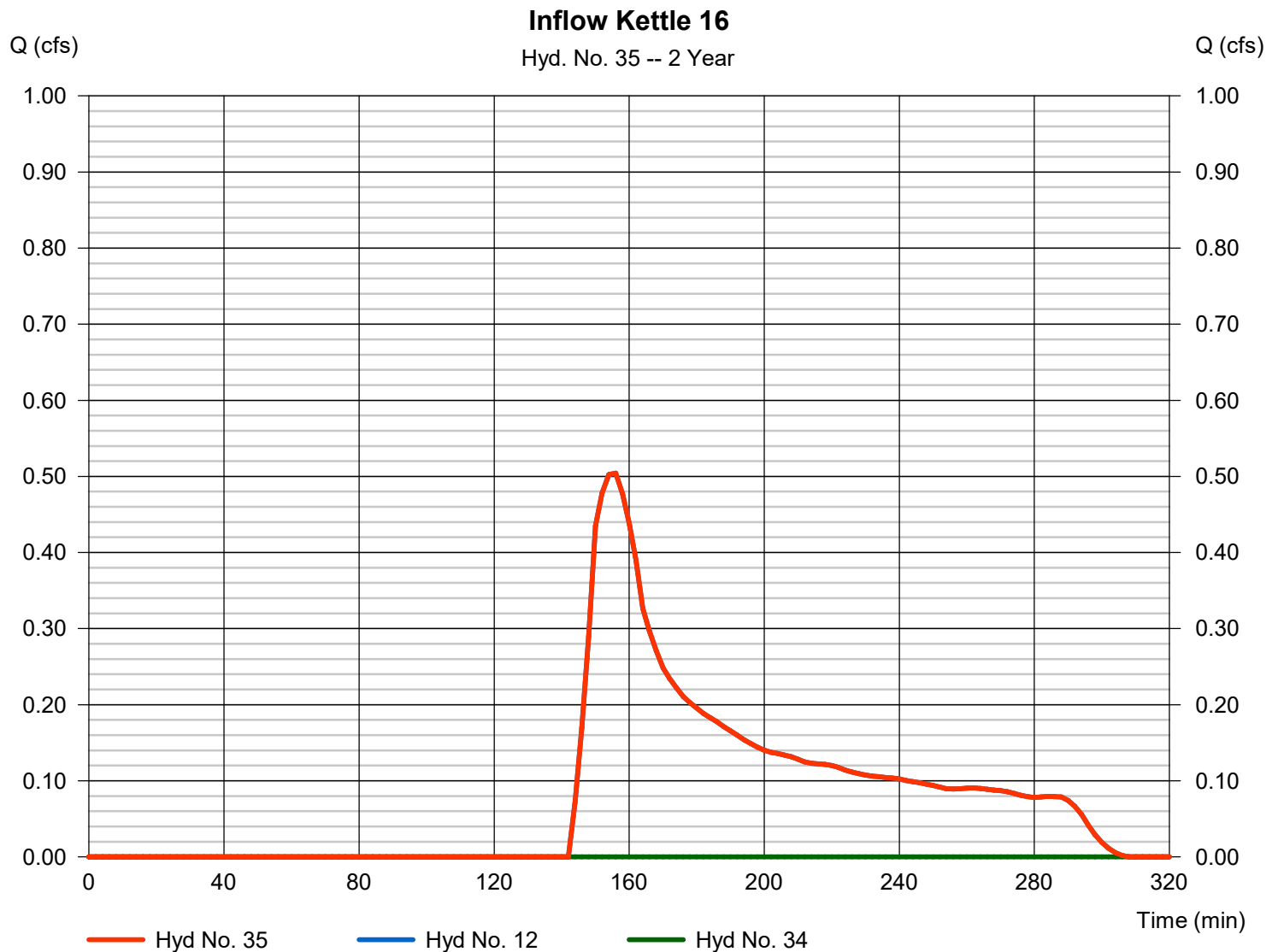
Tuesday, 04 / 7 / 2020

Hyd. No. 35

Inflow Kettle 16

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 12, 34

Peak discharge = 0.504 cfs
Time to peak = 156 min
Hyd. volume = 1,484 cuft
Contrib. drain. area = 1.560 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

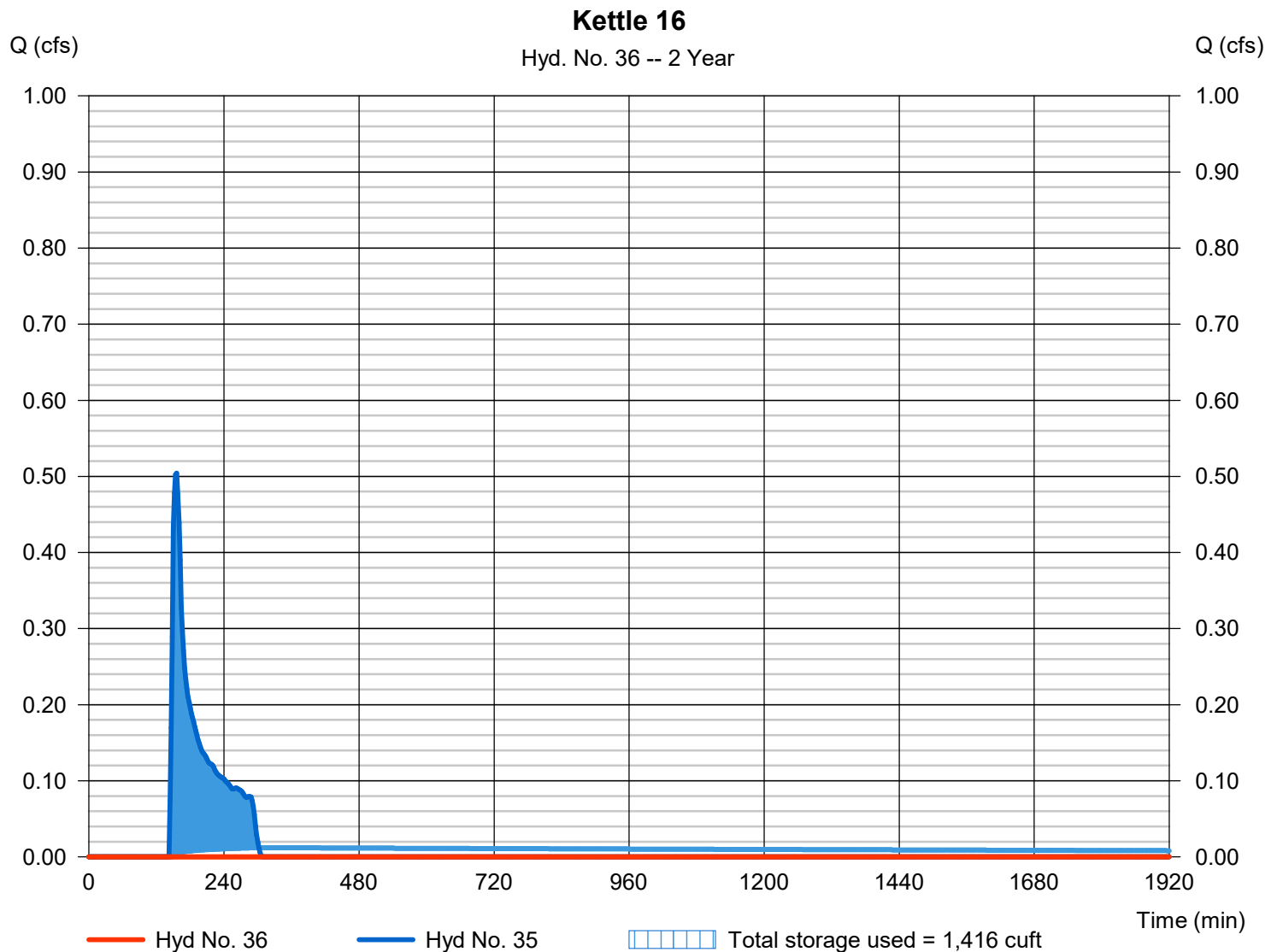
Tuesday, 04 / 7 / 2020

Hyd. No. 36

Kettle 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 220 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 35 - Inflow Kettle 16	Max. Elevation	= 1005.23 ft
Reservoir name	= K-16	Max. Storage	= 1,416 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

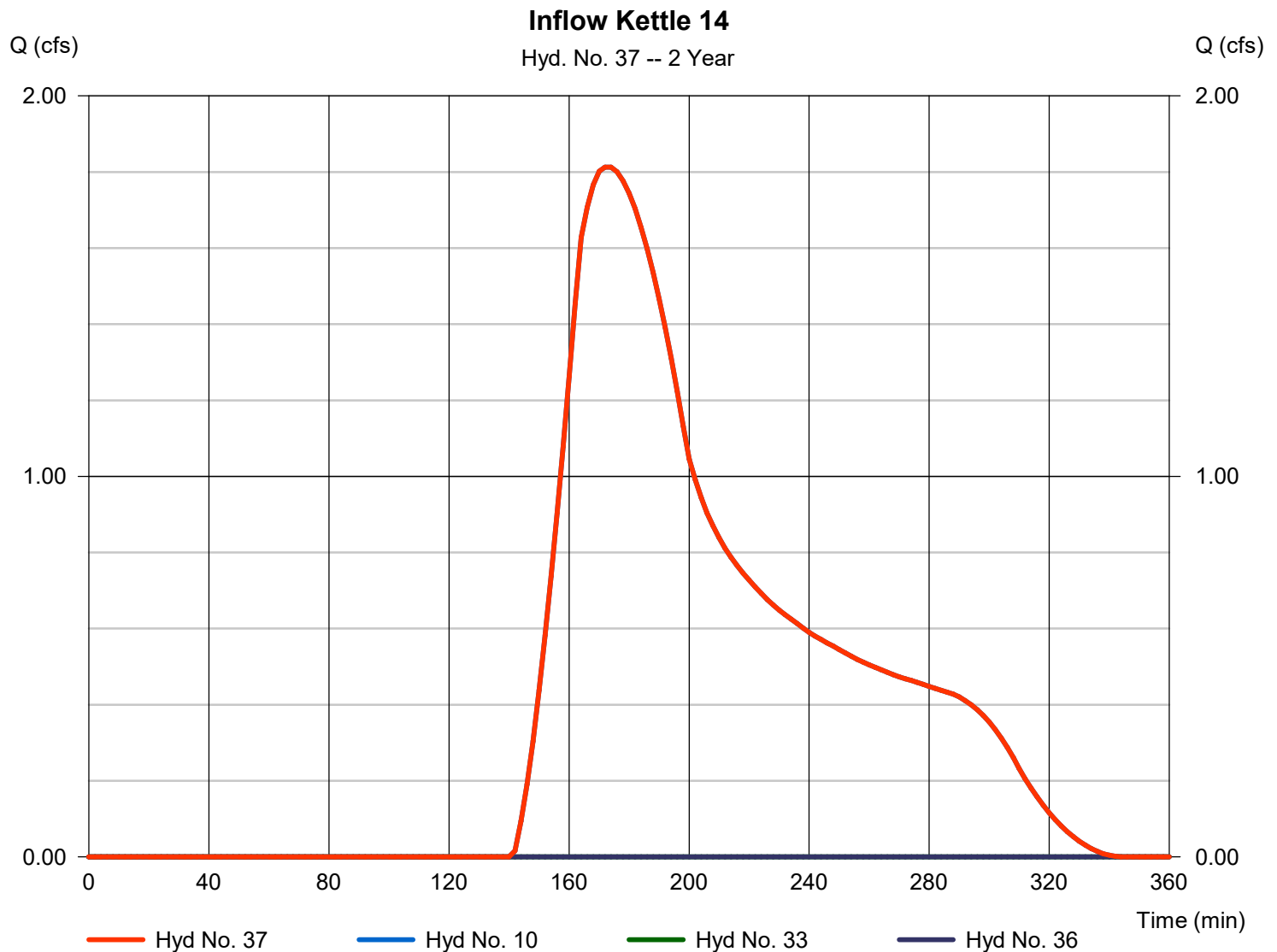
Tuesday, 04 / 7 / 2020

Hyd. No. 37

Inflow Kettle 14

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 10, 33, 36

Peak discharge = 1.813 cfs
Time to peak = 174 min
Hyd. volume = 8,241 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

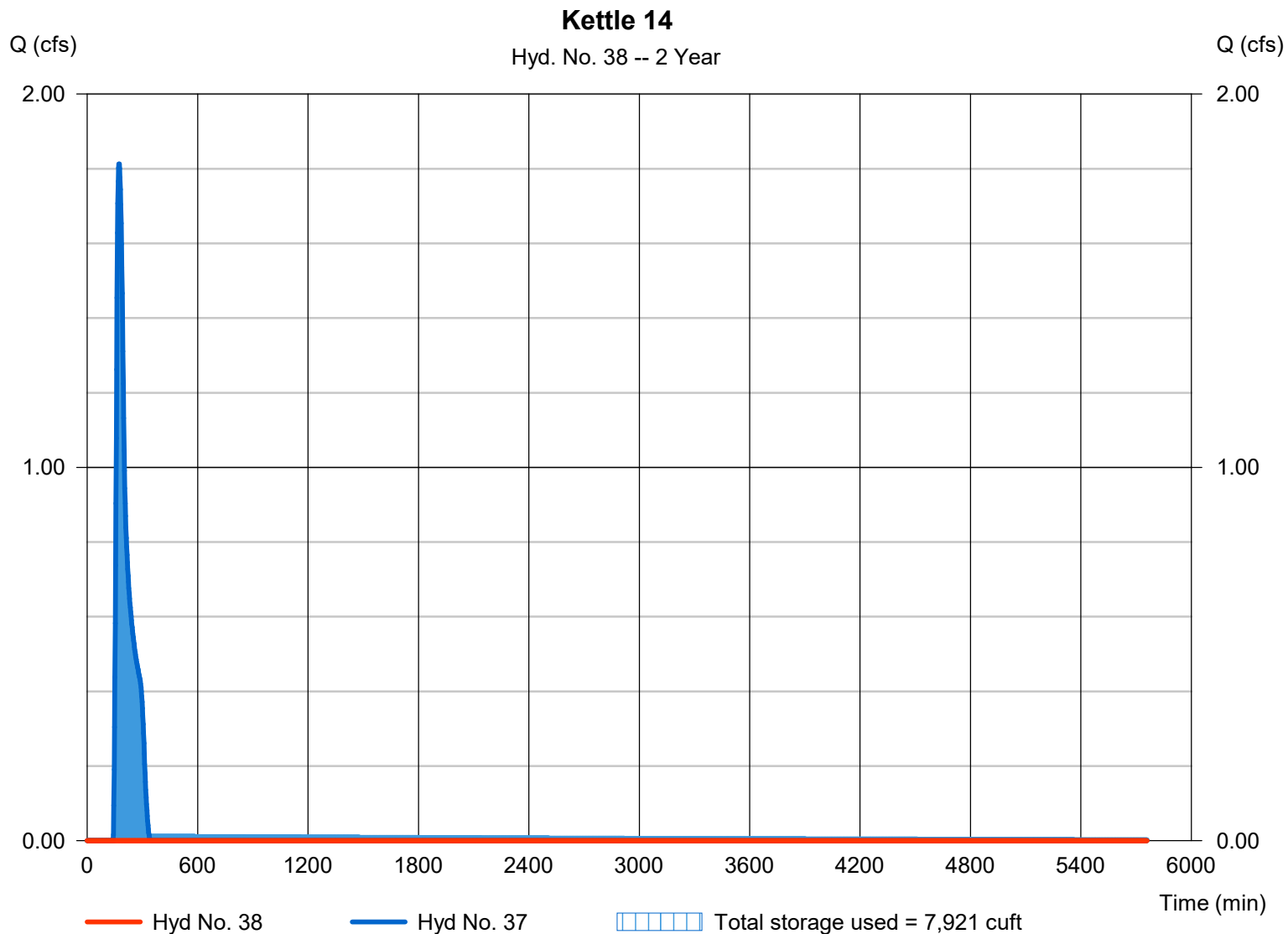
Tuesday, 04 / 7 / 2020

Hyd. No. 38

Kettle 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 2302 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - Inflow Kettle 14	Max. Elevation	= 956.61 ft
Reservoir name	= K-14	Max. Storage	= 7,921 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

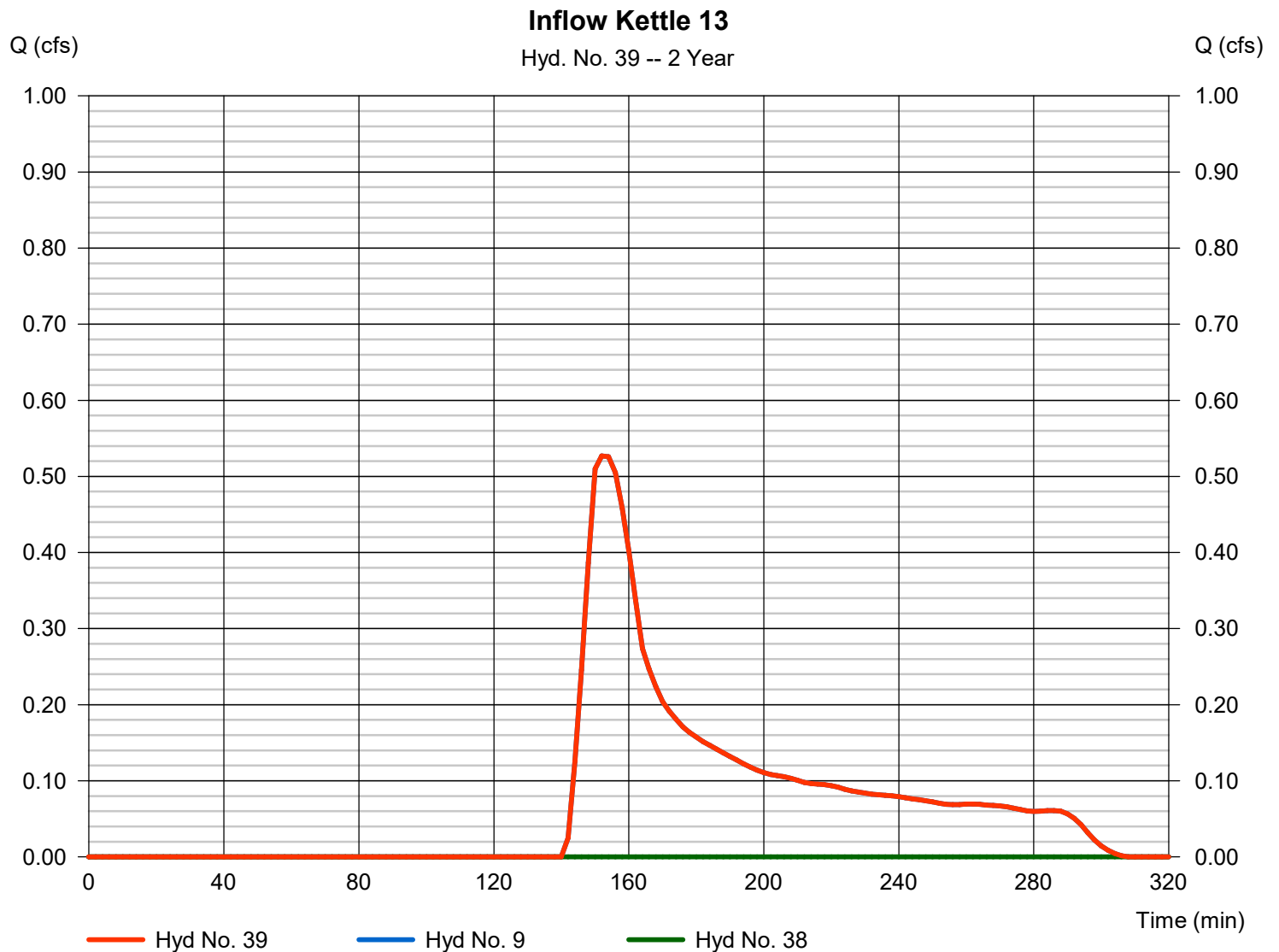
Tuesday, 04 / 7 / 2020

Hyd. No. 39

Inflow Kettle 13

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 9, 38

Peak discharge = 0.527 cfs
Time to peak = 152 min
Hyd. volume = 1,302 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

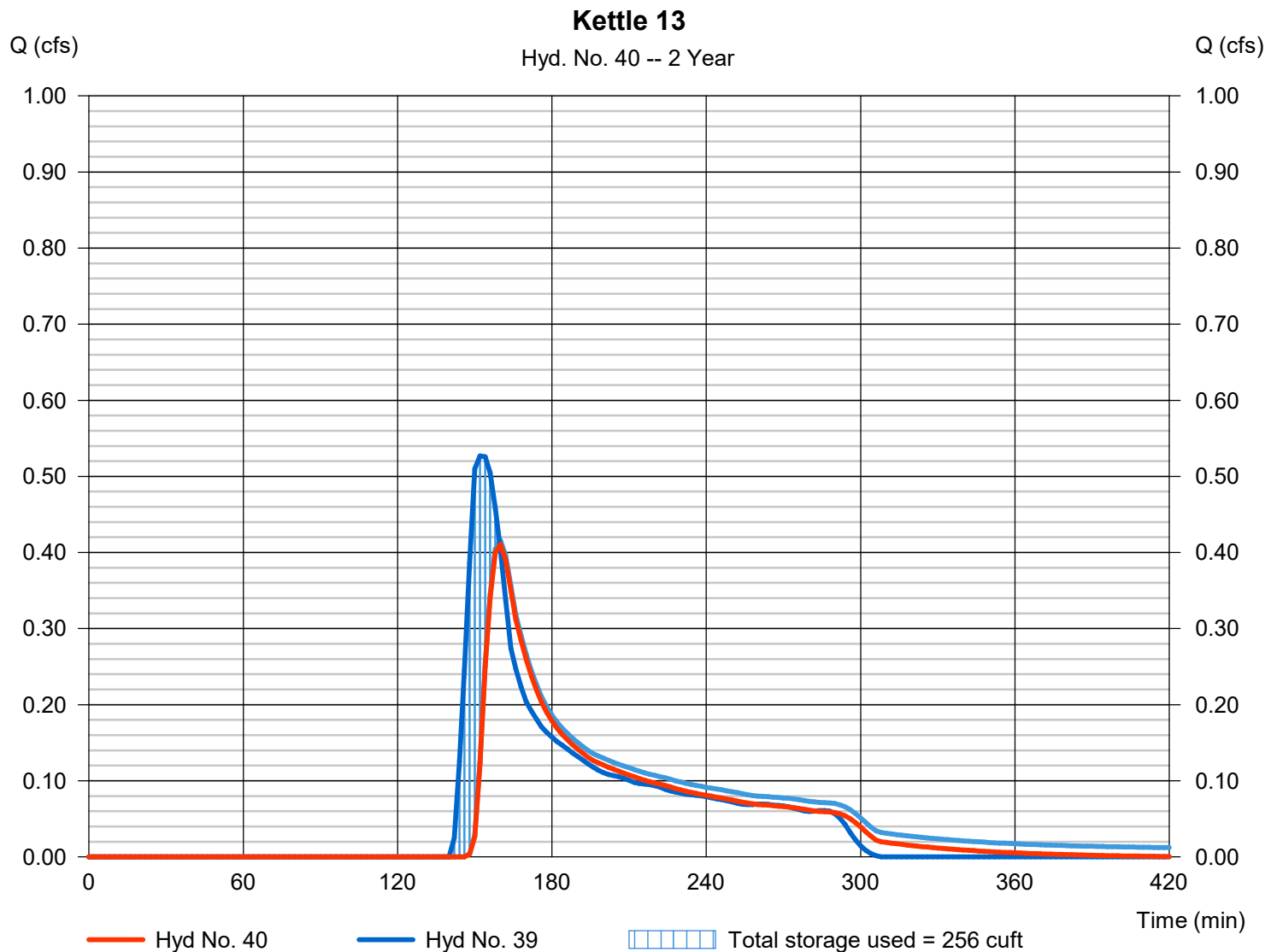
Tuesday, 04 / 7 / 2020

Hyd. No. 40

Kettle 13

Hydrograph type	= Reservoir	Peak discharge	= 0.411 cfs
Storm frequency	= 2 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 1,191 cuft
Inflow hyd. No.	= 39 - Inflow Kettle 13	Max. Elevation	= 959.66 ft
Reservoir name	= K-13	Max. Storage	= 256 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

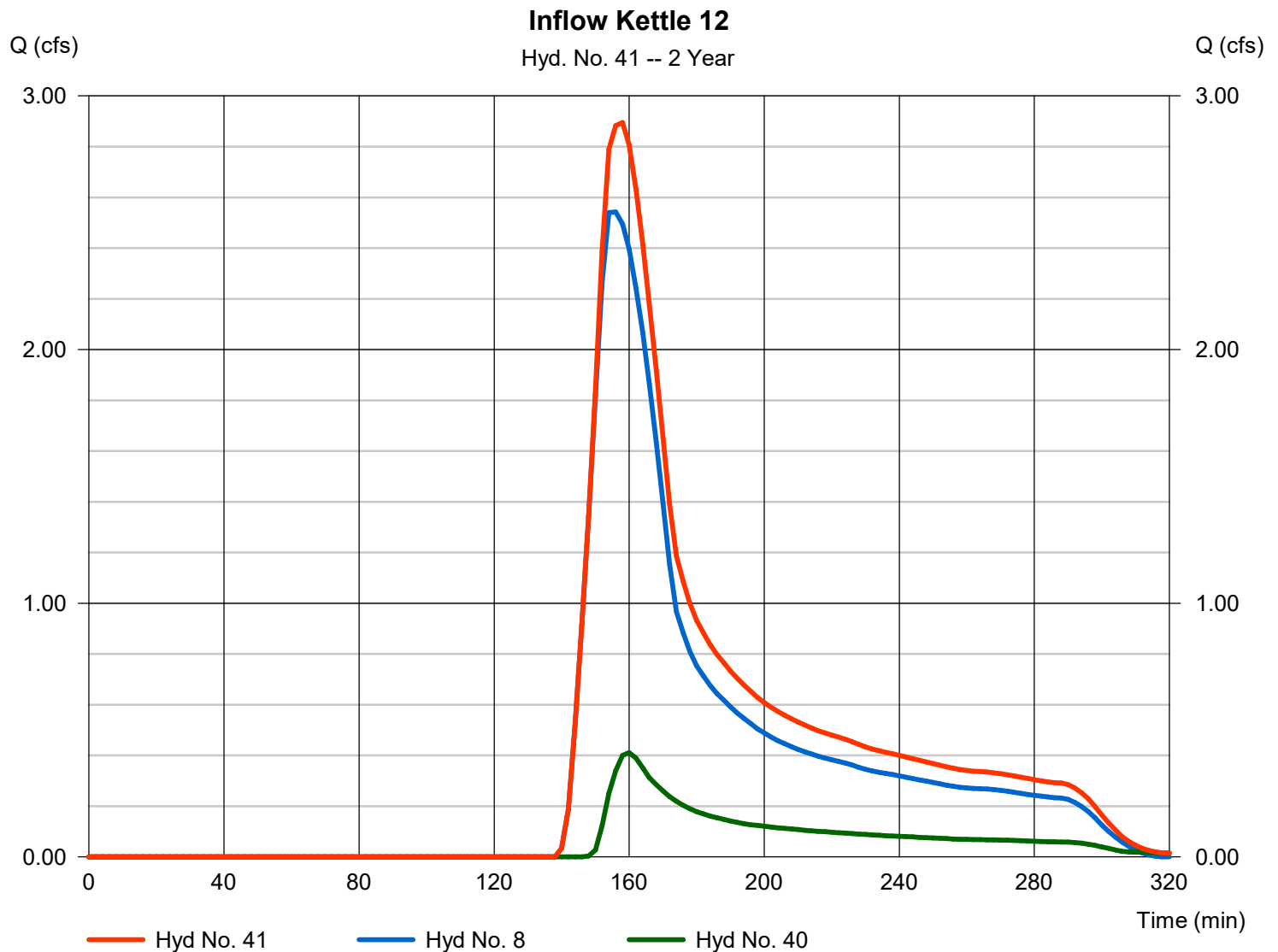
Tuesday, 04 / 7 / 2020

Hyd. No. 41

Inflow Kettle 12

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 8, 40

Peak discharge = 2.895 cfs
Time to peak = 158 min
Hyd. volume = 7,461 cuft
Contrib. drain. area = 2.910 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

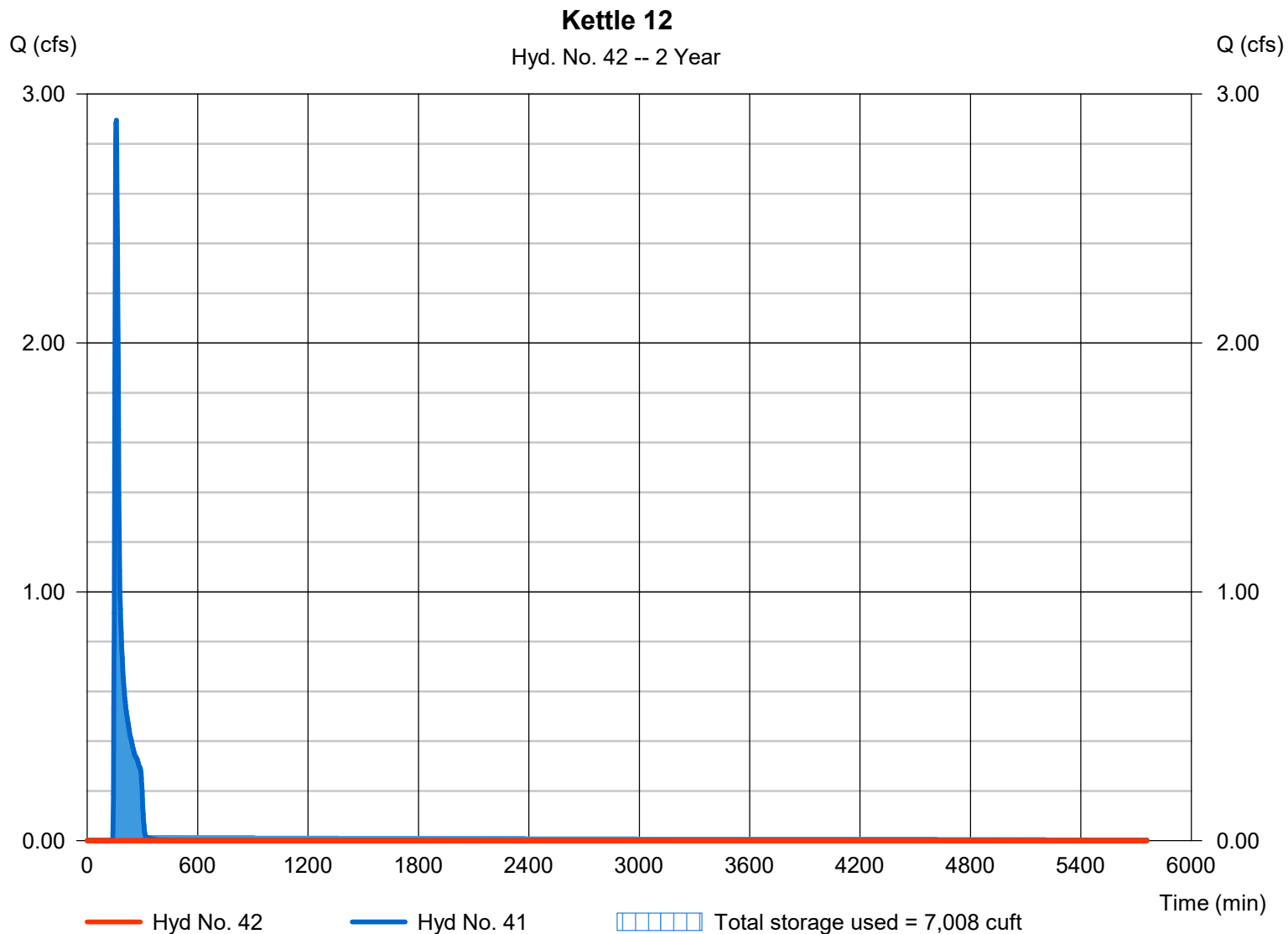
Tuesday, 04 / 7 / 2020

Hyd. No. 42

Kettle 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 1212 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 41 - Inflow Kettle 12	Max. Elevation	= 957.47 ft
Reservoir name	= K-12	Max. Storage	= 7,008 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

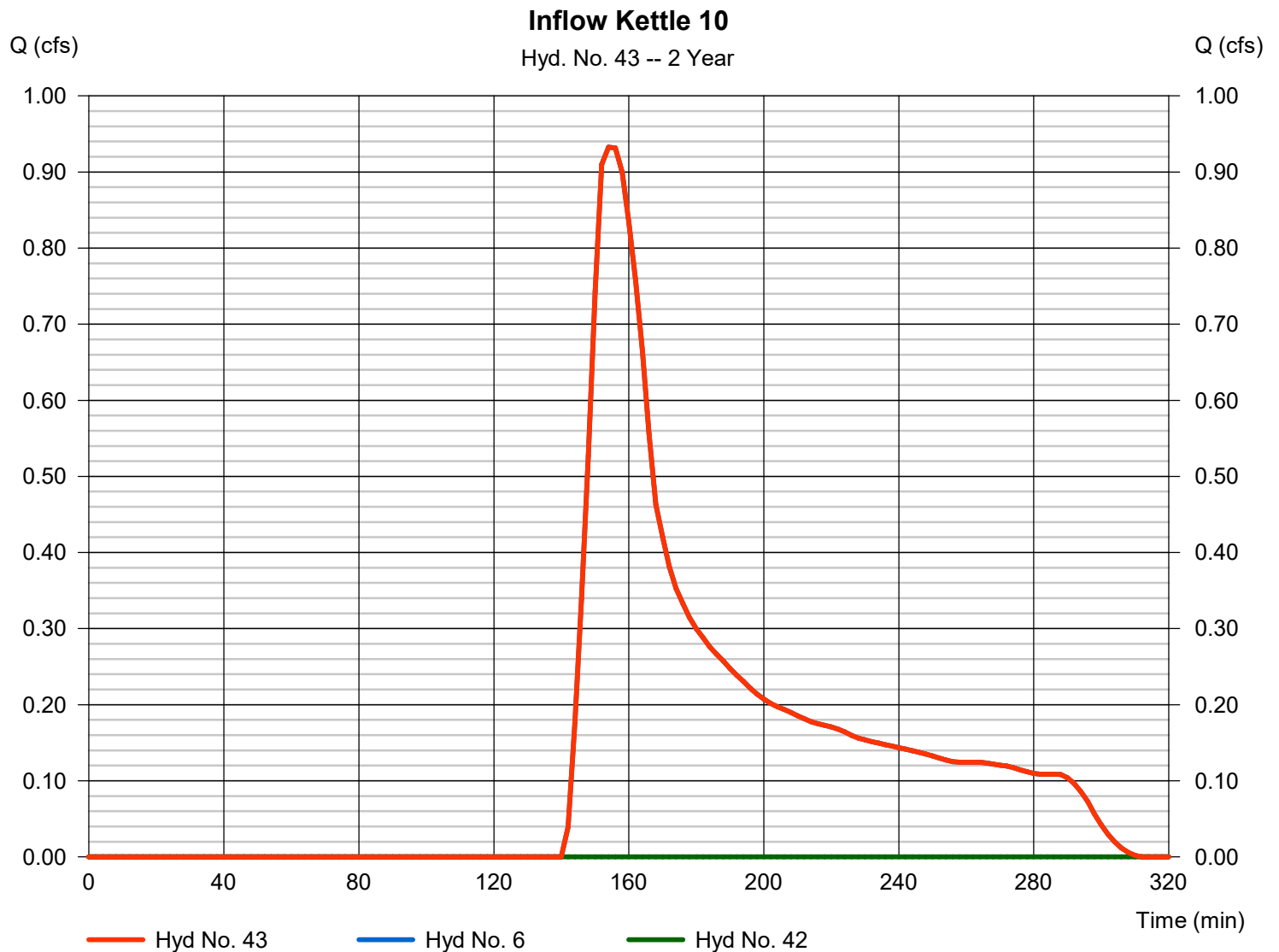
Tuesday, 04 / 7 / 2020

Hyd. No. 43

Inflow Kettle 10

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 6, 42

Peak discharge = 0.933 cfs
Time to peak = 154 min
Hyd. volume = 2,420 cuft
Contrib. drain. area = 1.820 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

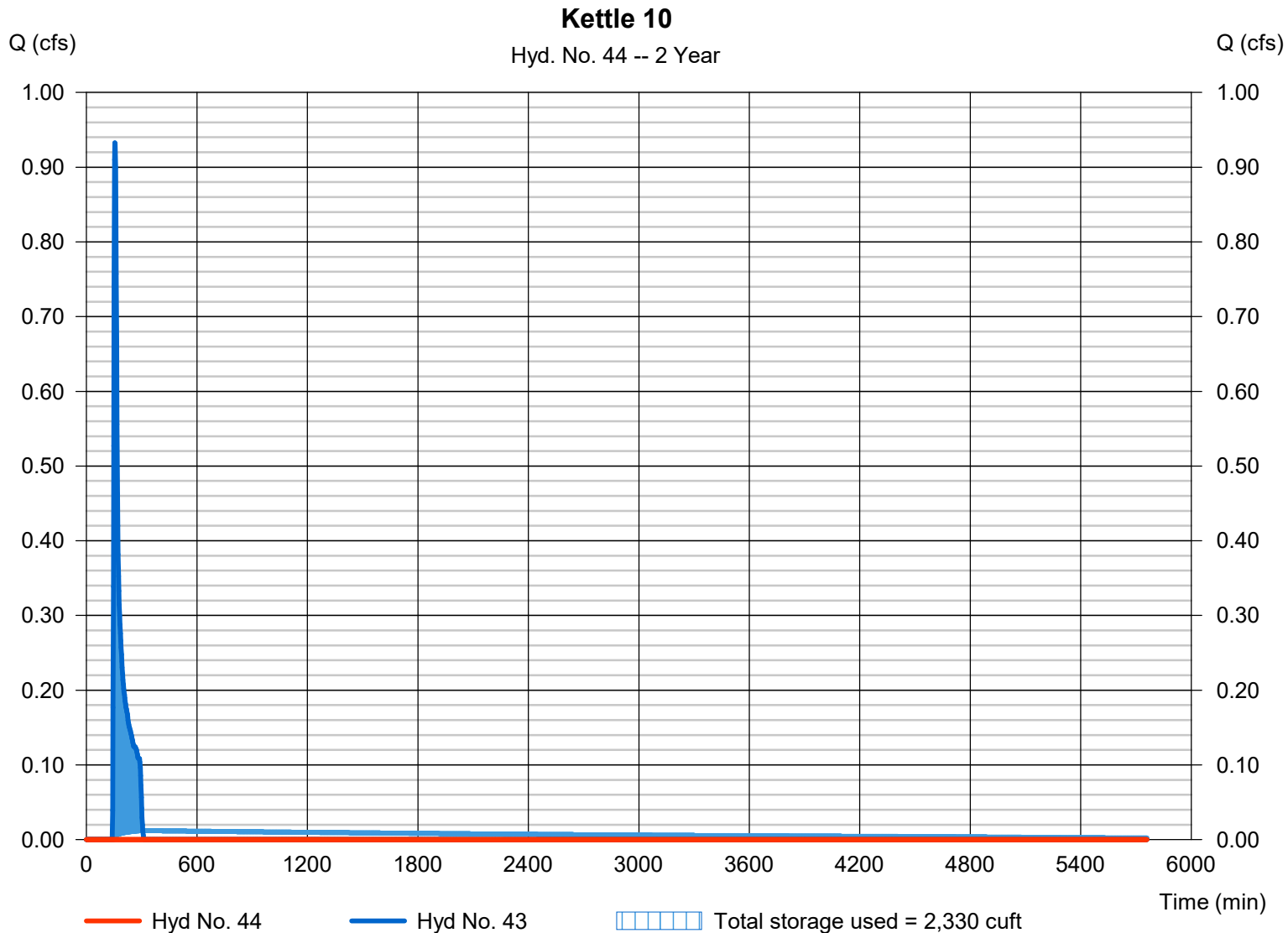
Tuesday, 04 / 7 / 2020

Hyd. No. 44

Kettle 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= 208 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 43 - Inflow Kettle 10	Max. Elevation	= 955.34 ft
Reservoir name	= K-10	Max. Storage	= 2,330 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	13.20	2	160	38,794	-----	-----	-----	P-1
2	SCS Runoff	4.200	2	150	7,439	-----	-----	-----	P-2
3	SCS Runoff	1.426	2	150	2,583	-----	-----	-----	P-3
4	SCS Runoff	33.90	2	158	81,146	-----	-----	-----	P-5
6	SCS Runoff	2.921	2	152	5,927	-----	-----	-----	P-10
7	SCS Runoff	11.96	2	152	20,376	-----	-----	-----	P-11
8	SCS Runoff	6.271	2	154	13,371	-----	-----	-----	P-12
9	SCS Runoff	1.765	2	150	3,279	-----	-----	-----	E-13
10	SCS Runoff	5.693	2	168	21,401	-----	-----	-----	E-14
11	SCS Runoff	1.673	2	150	3,031	-----	-----	-----	E-15
12	SCS Runoff	2.029	2	150	4,155	-----	-----	-----	P-16
13	SCS Runoff	4.605	2	150	9,428	-----	-----	-----	P-17
15	SCS Runoff	30.14	2	158	71,856	-----	-----	-----	P-20
16	SCS Runoff	9.710	2	166	32,854	-----	-----	-----	D
18	Reservoir	10.53	2	182	80,155	4	983.69	43,504	Pond 5
19	Combine	10.78	2	180	82,738	3, 18	-----	-----	Inflow Kettle 3
20	Reservoir	7.793	2	216	54,144	19	976.34	26,410	Kettle 3
21	Combine	8.219	2	216	61,583	2, 20	-----	-----	Inflow Kettle 2
22	Reservoir	0.000	2	712	0	21	973.01	58,107	Kettle 2
23	Combine	11.96	2	152	20,376	7, 22	-----	-----	Inflow Pond 11
24	Reservoir	0.673	2	248	20,357	23	966.89	14,754	Pond 11
26	Reservoir	0.000	2	470	0	16	991.32	18,980	E-Infiltration Basin D
27	Combine	30.14	2	158	71,856	15, 26	-----	-----	Inflow Pond 20
28	Reservoir	16.40	2	174	71,525	27	992.23	29,390	Pond 20
30	Combine	27.41	2	170	130,676	1, 24, 28,	-----	-----	Inflow Kettle 1
31	Reservoir	0.000	2	310	0	30	952.83	122,926	Kettle 1
33	Reservoir	0.000	2	164	0	11	971.14	2,882	Kettle 15
34	Reservoir	0.000	2	552	0	13	1011.82	8,724	Kettle 17
35	Combine	2.029	2	150	4,155	12, 34	-----	-----	Inflow Kettle 16
36	Reservoir	0.000	2	212	0	35	1005.65	3,948	Kettle 16
37	Combine	5.693	2	168	21,401	10, 33, 36	-----	-----	Inflow Kettle 14
PROPOSED_LCL_Stormwater Model_2020-04-08					Reb. Supp. Period: 10 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	0.000	2	n/a	0	37	958.24	20,898	Kettle 14
39	Combine	1.765	2	150	3,279	9, 38	-----	-----	Inflow Kettle 13
40	Reservoir	1.610	2	154	3,153	39	959.84	438	Kettle 13
41	Combine	7.881	2	154	16,524	8, 40	-----	-----	Inflow Kettle 12
42	Reservoir	0.000	2	2690	0	41	958.30	15,850	Kettle 12
43	Combine	2.921	2	152	5,927	6, 42	-----	-----	Inflow Kettle 10
44	Reservoir	0.000	2	180	0	43	956.45	5,745	Kettle 10
PROPOSED_LCL_Stormwater Model_2020-04-08					Reb Supp Period: 10 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

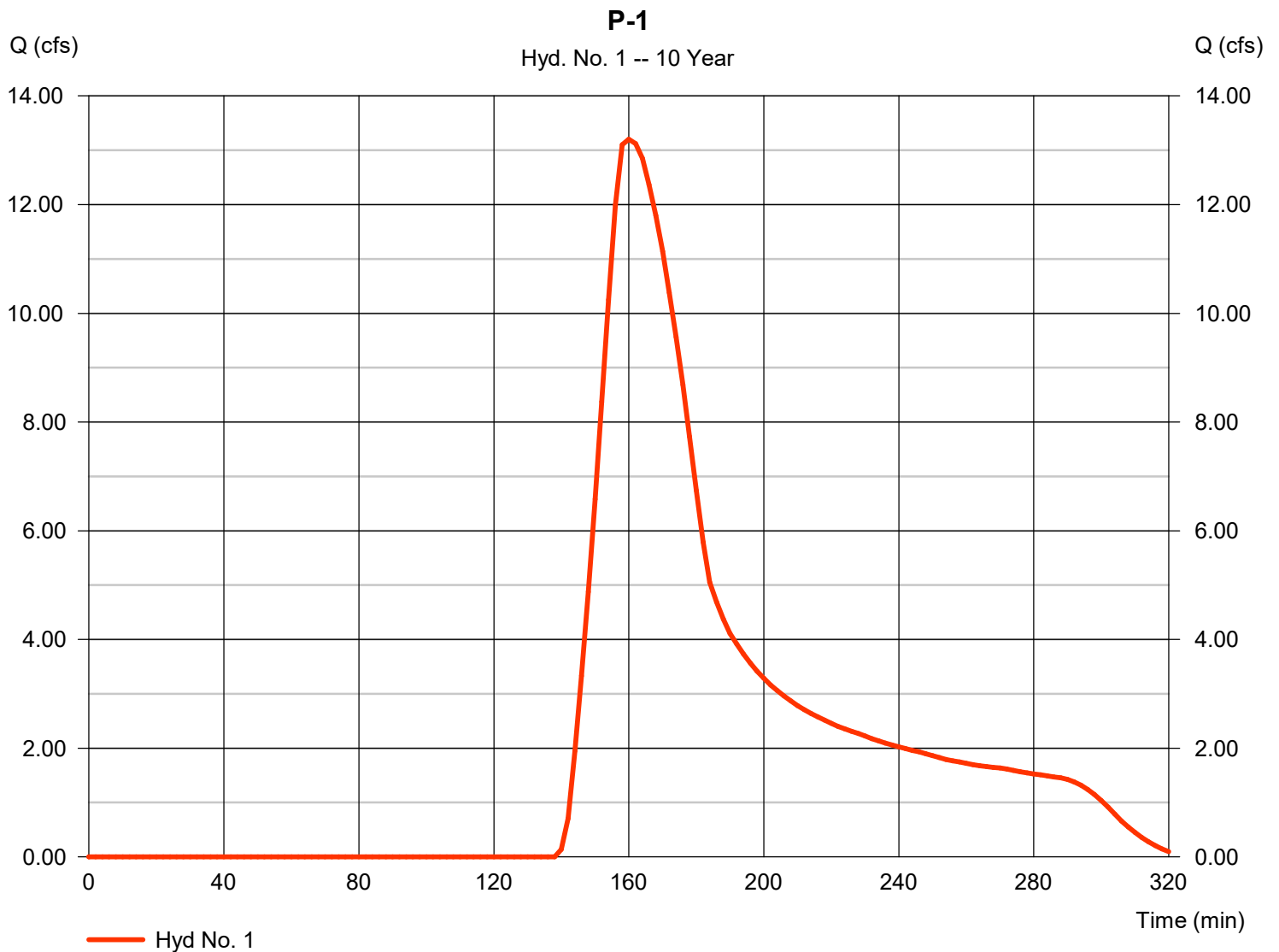
Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Hydrograph type	= SCS Runoff	Peak discharge	= 13.20 cfs
Storm frequency	= 10 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 38,794 cuft
Drainage area	= 12.520 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 12.520$



Precipitation Report

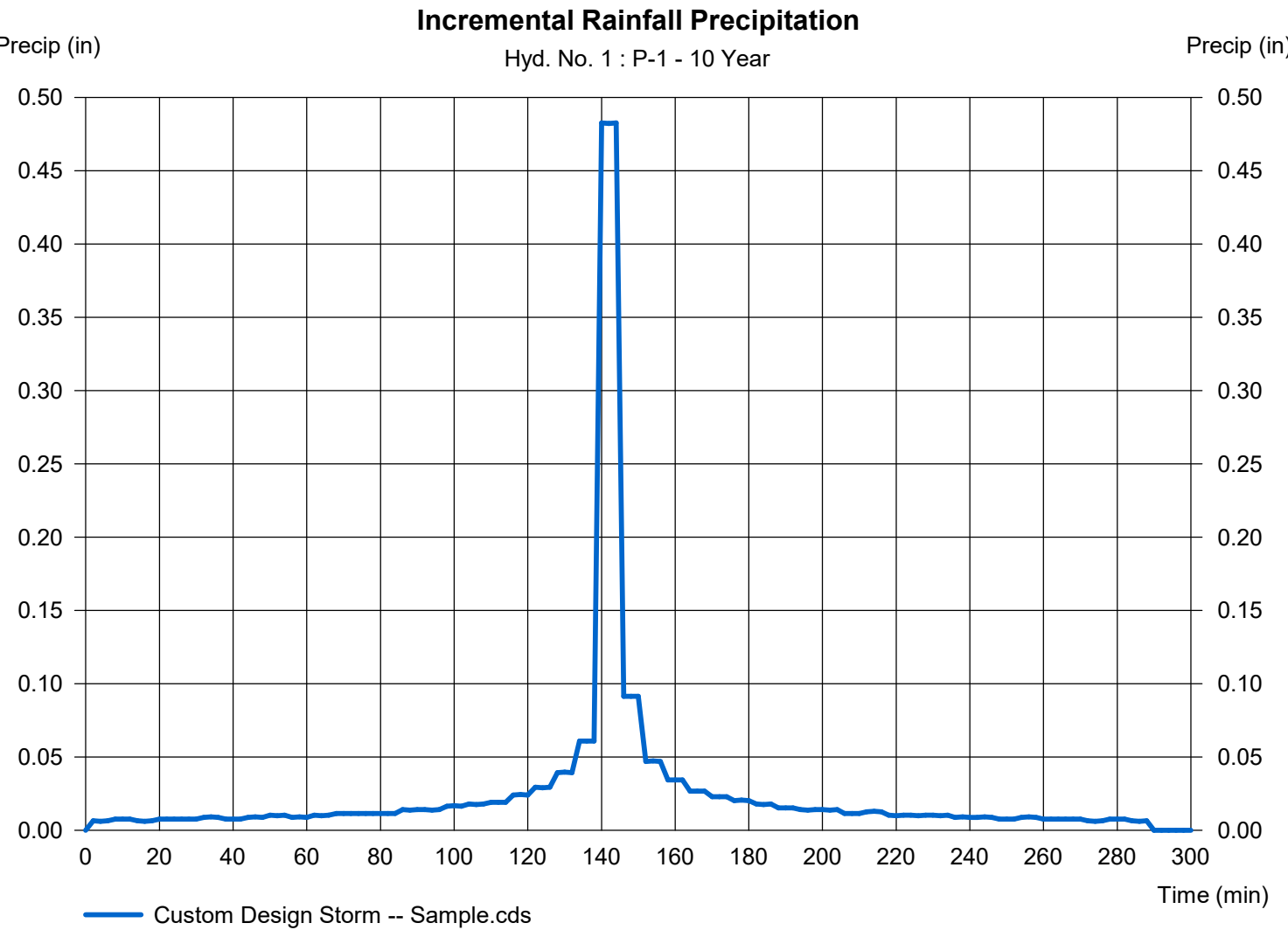
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

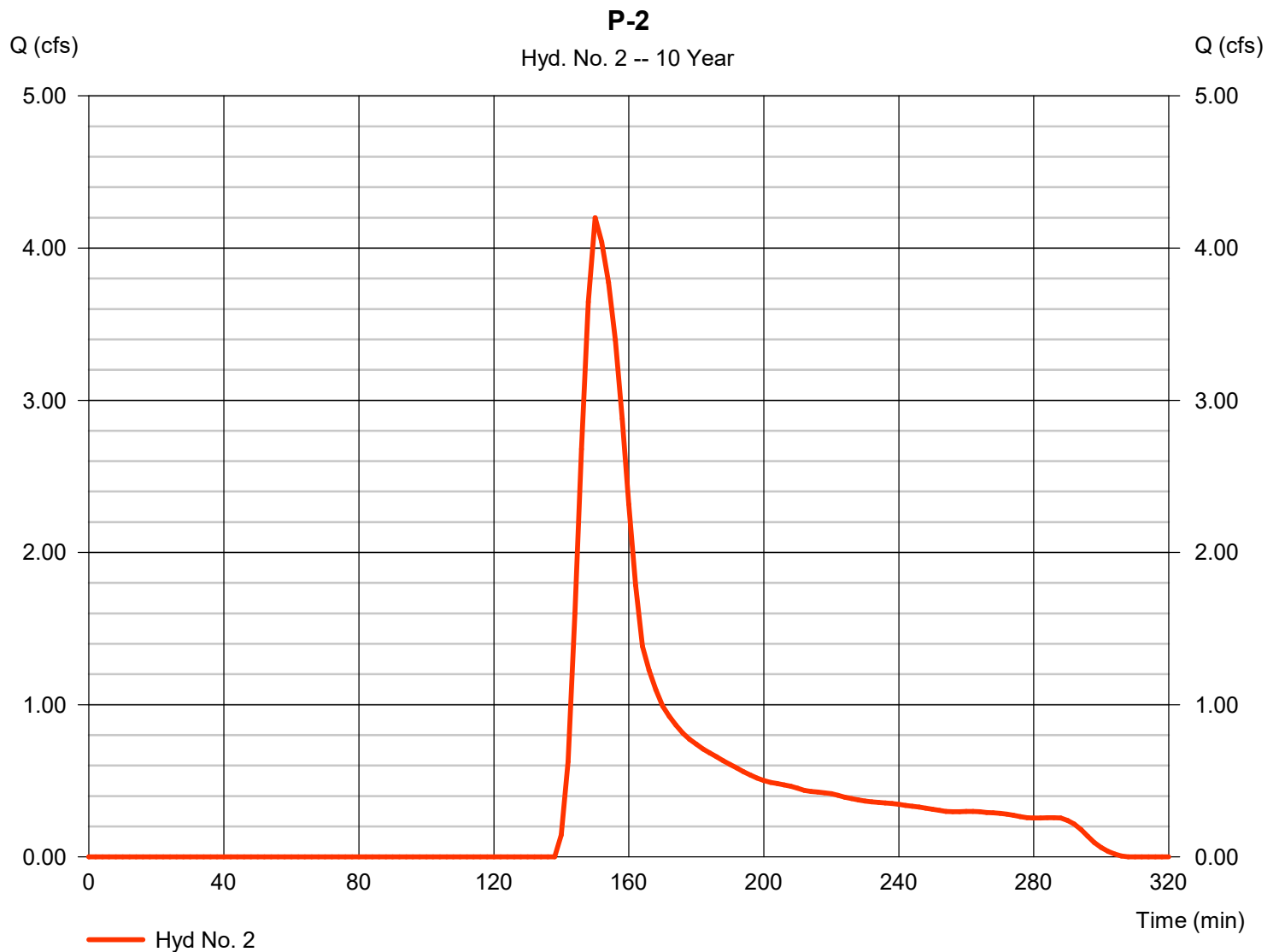
Tuesday, 04 / 7 / 2020

Hyd. No. 2

P-2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.200 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 7,439 cuft
Drainage area	= 2.040 ac	Curve number	= 66*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 2.040$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

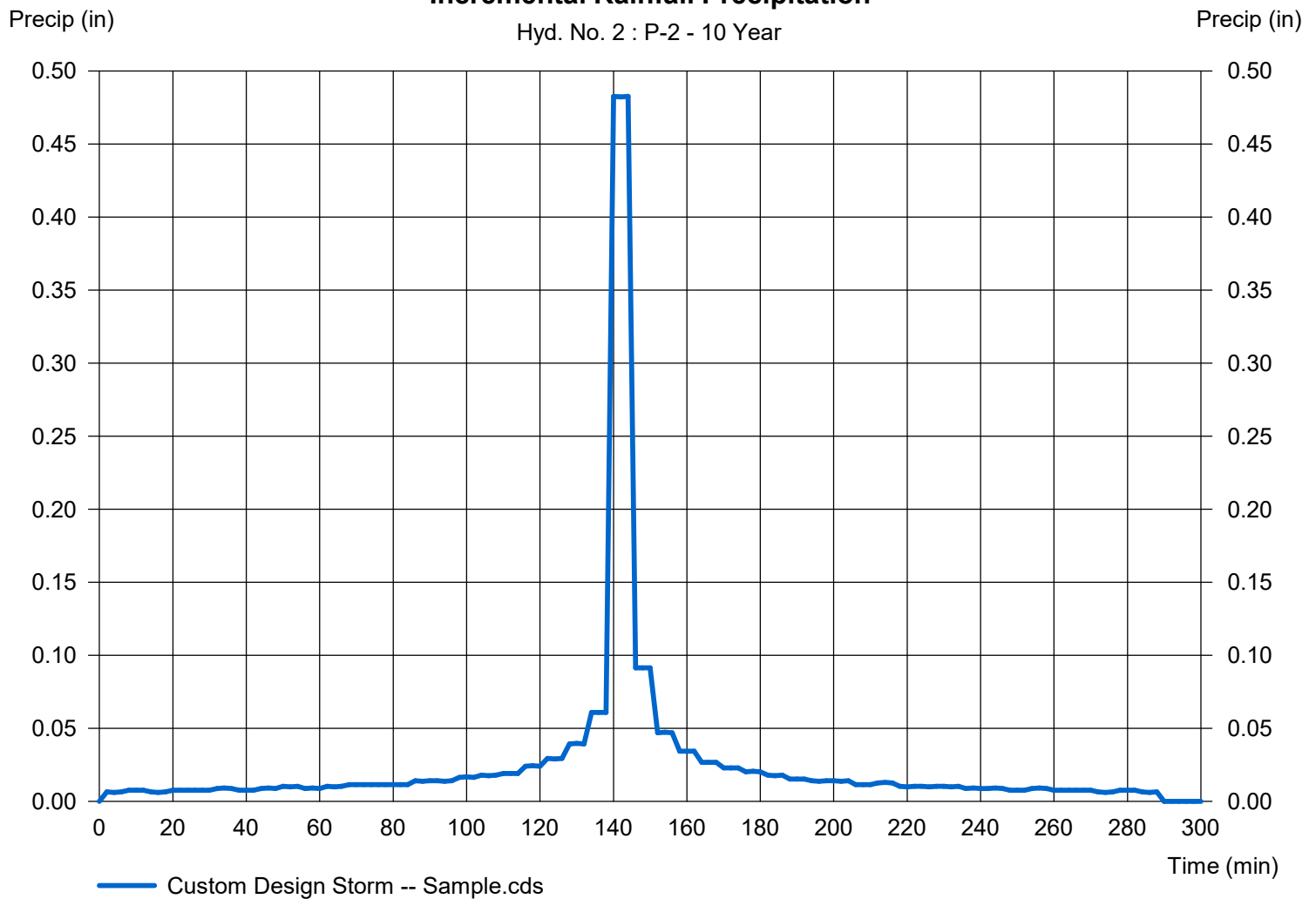
Hyd. No. 2

P-2

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : P-2 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 3

P-3

Hydrograph type	= SCS Runoff	Peak discharge	= 1.426 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 2,583 cuft
Drainage area	= 0.750 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

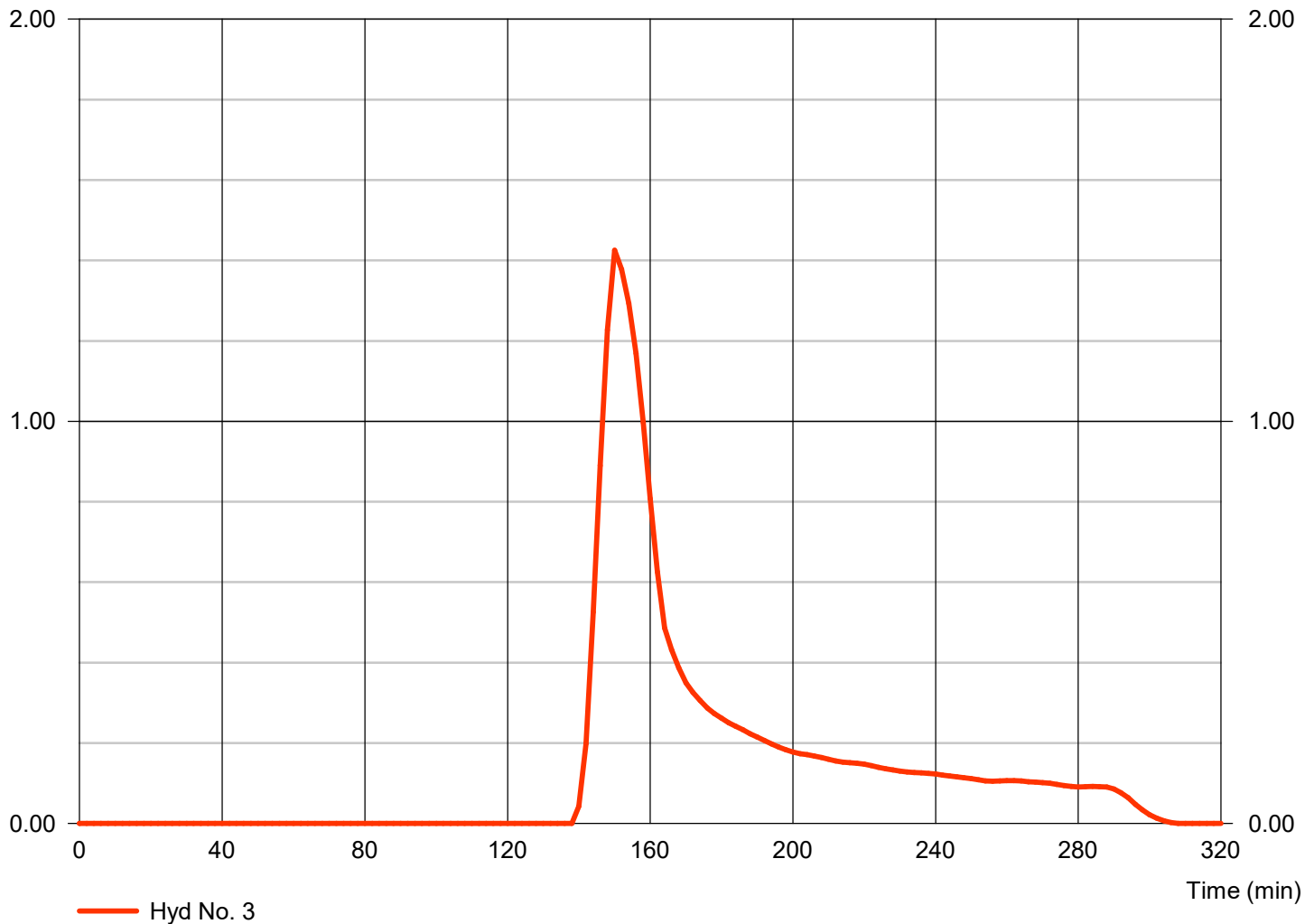
* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 0.750$

P-3

Q (cfs)

Hyd. No. 3 -- 10 Year

Q (cfs)



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

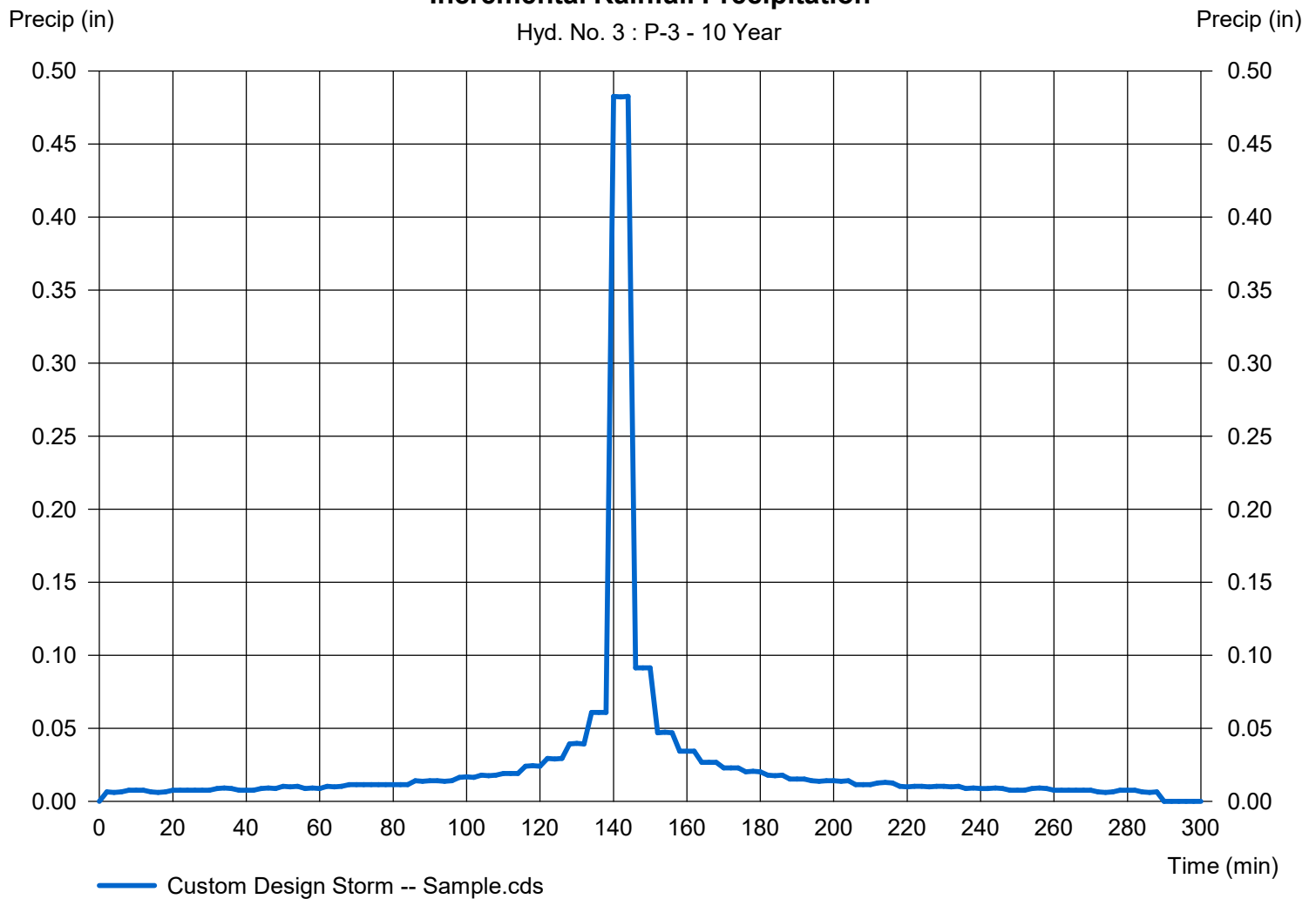
Hyd. No. 3

P-3

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : P-3 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

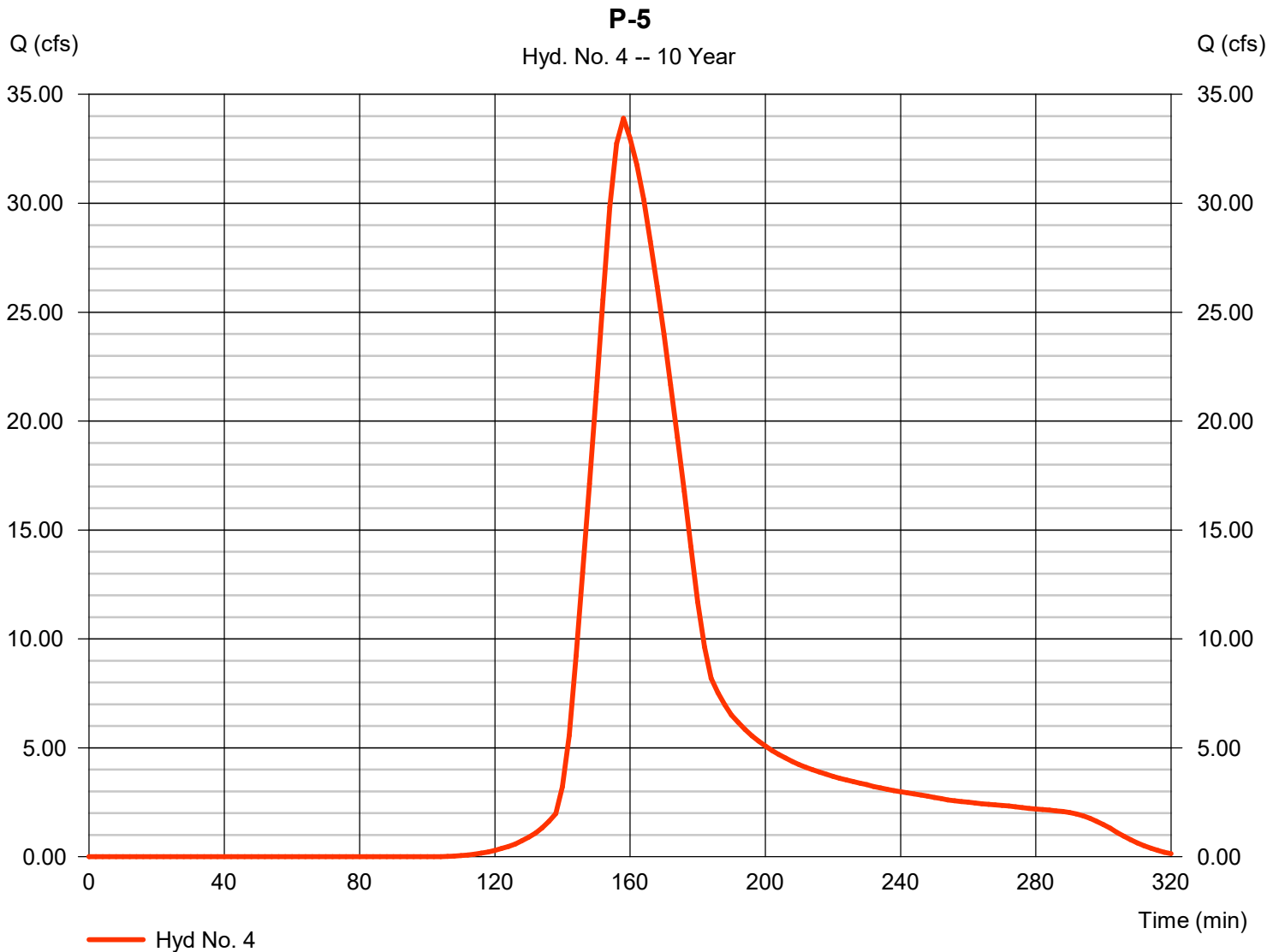
Tuesday, 04 / 7 / 2020

Hyd. No. 4

P-5

Hydrograph type	= SCS Runoff	Peak discharge	= 33.90 cfs
Storm frequency	= 10 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 81,146 cuft
Drainage area	= 11.570 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 11.570$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

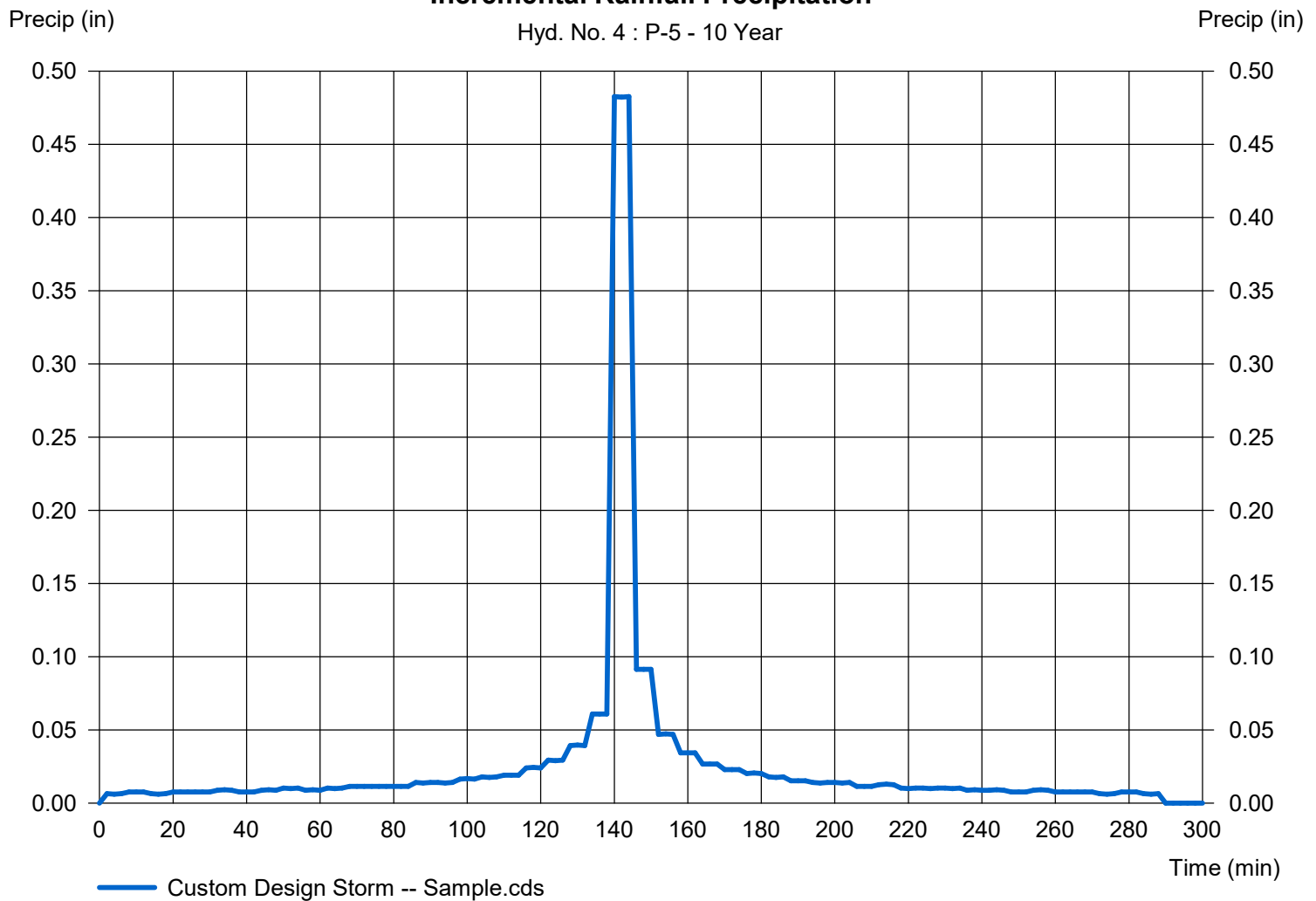
Hyd. No. 4

P-5

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : P-5 - 10 Year



Hydrograph Report

151

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

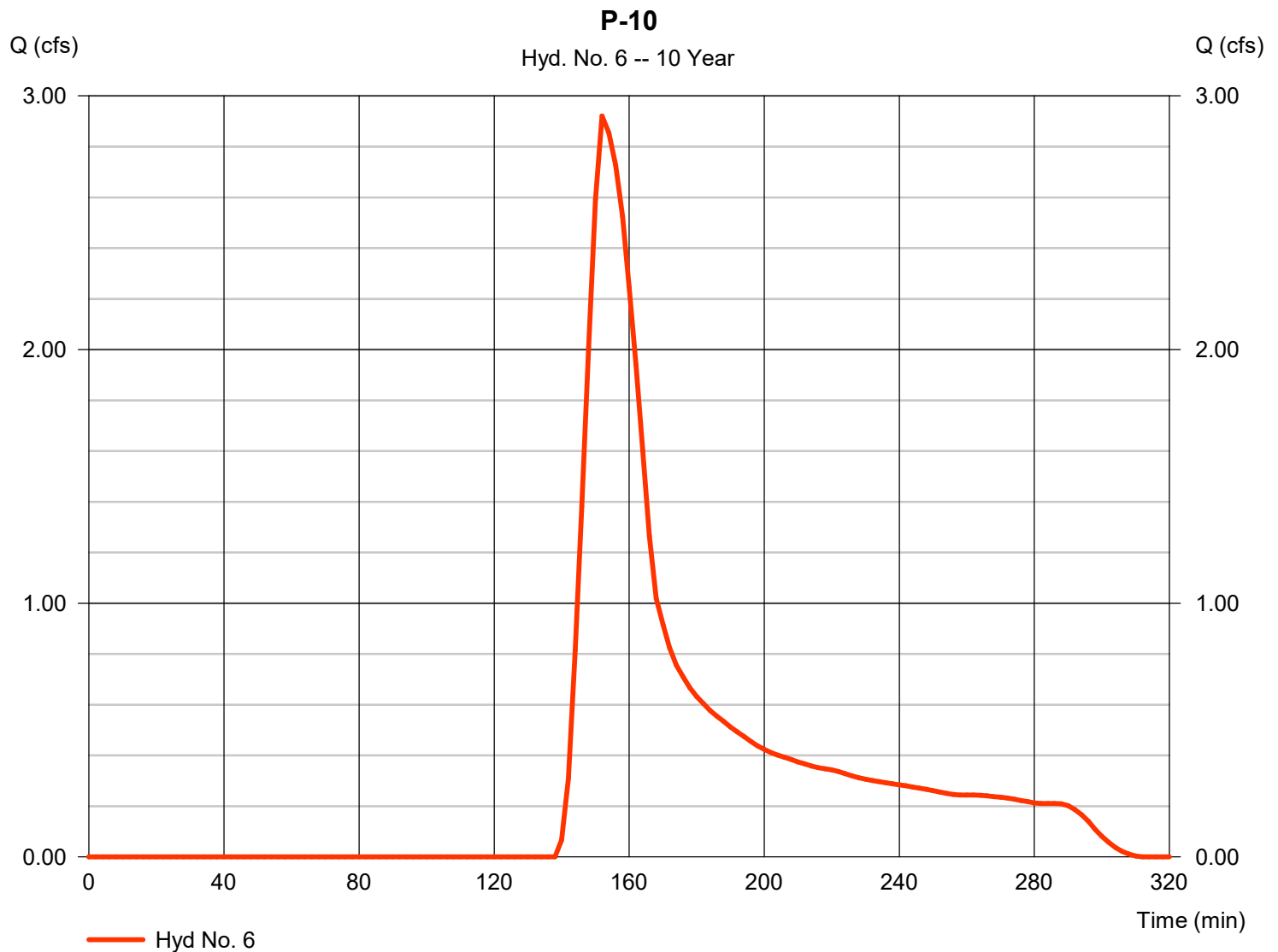
Tuesday, 04 / 7 / 2020

Hyd. No. 6

P-10

Hydrograph type	= SCS Runoff	Peak discharge	= 2.921 cfs
Storm frequency	= 10 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 5,927 cuft
Drainage area	= 1.820 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.820$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

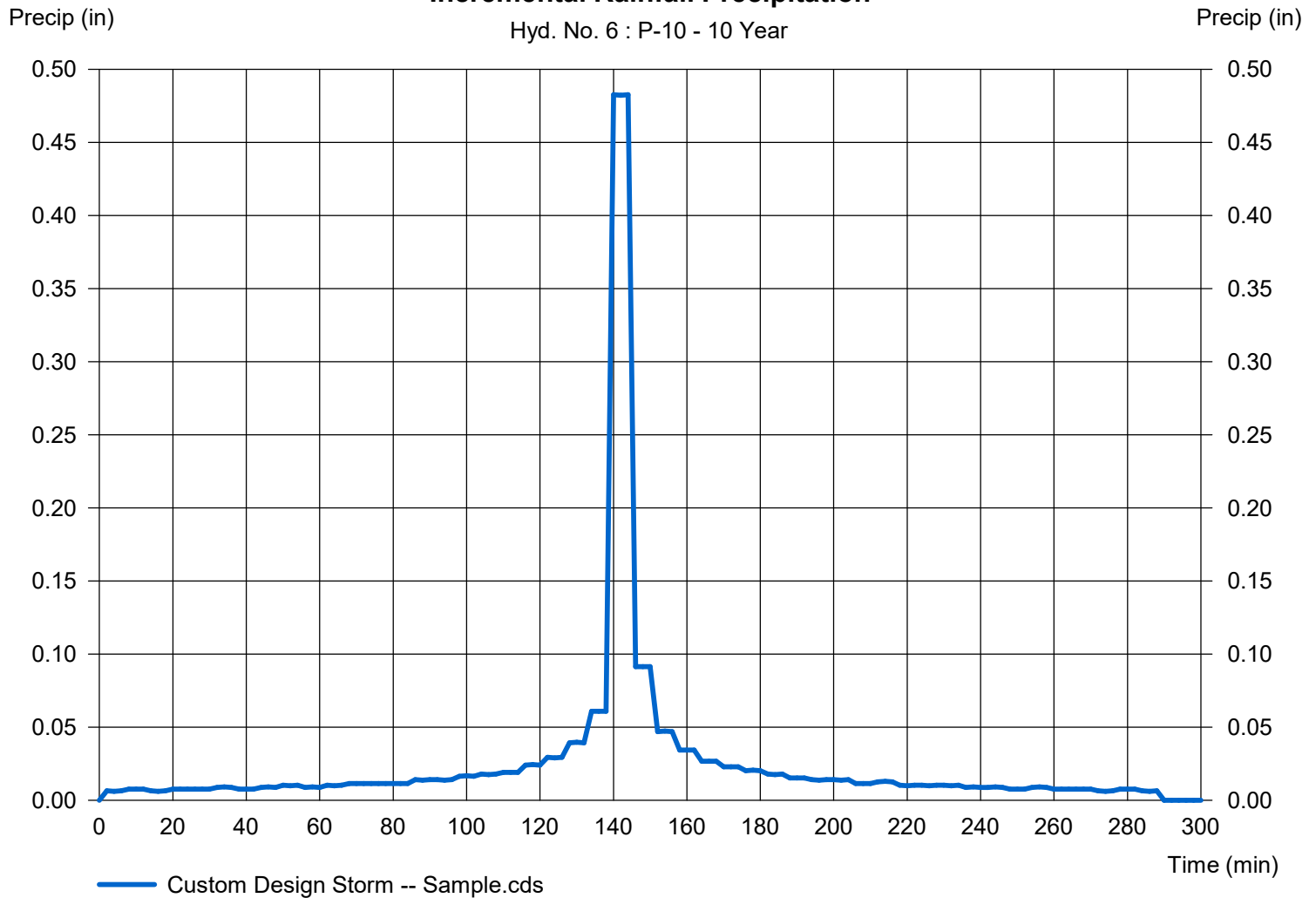
Hyd. No. 6

P-10

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : P-10 - 10 Year



Hydrograph Report

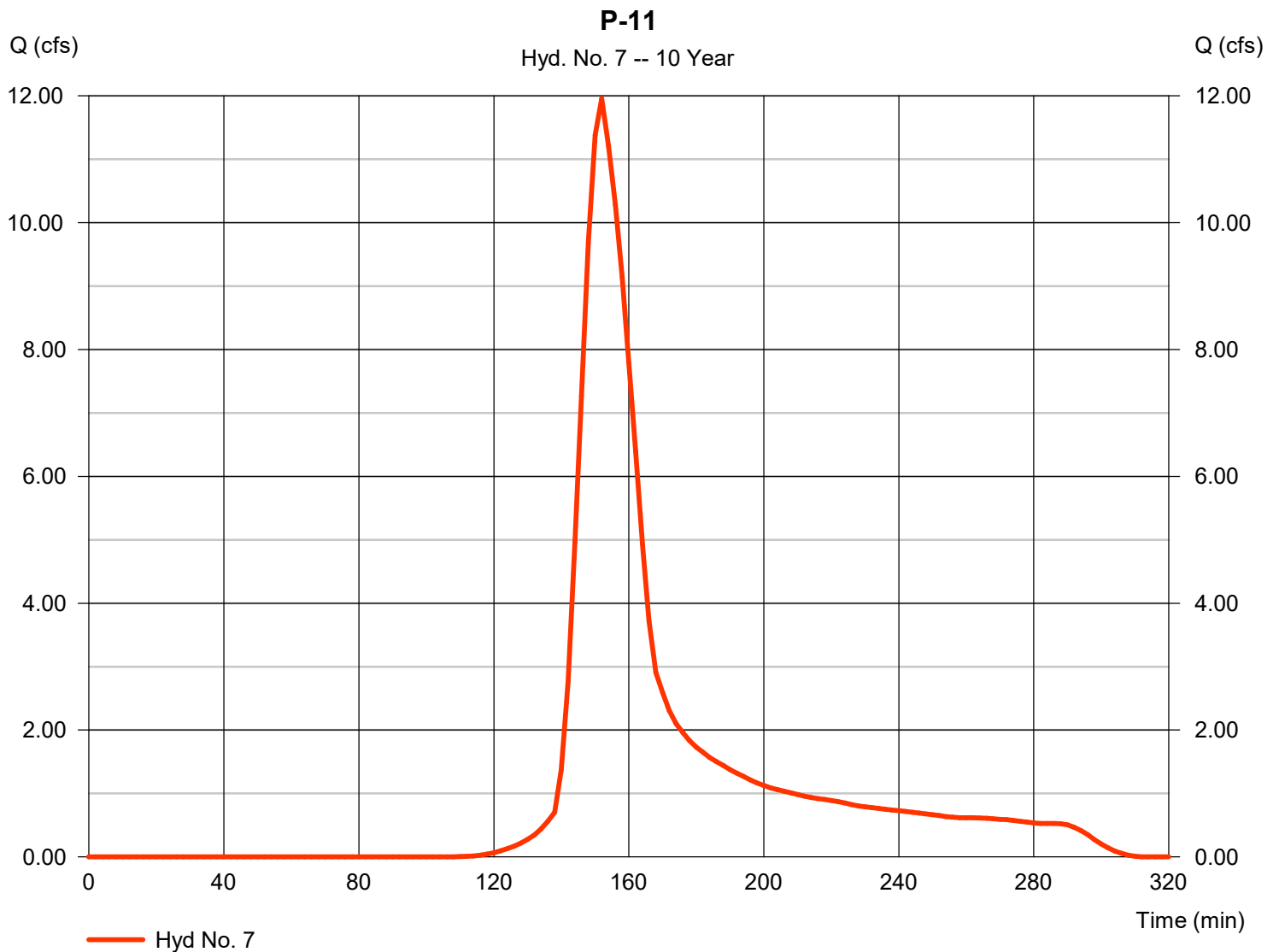
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Hydrograph type	= SCS Runoff	Peak discharge	= 11.96 cfs
Storm frequency	= 10 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 20,376 cuft
Drainage area	= 3.180 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

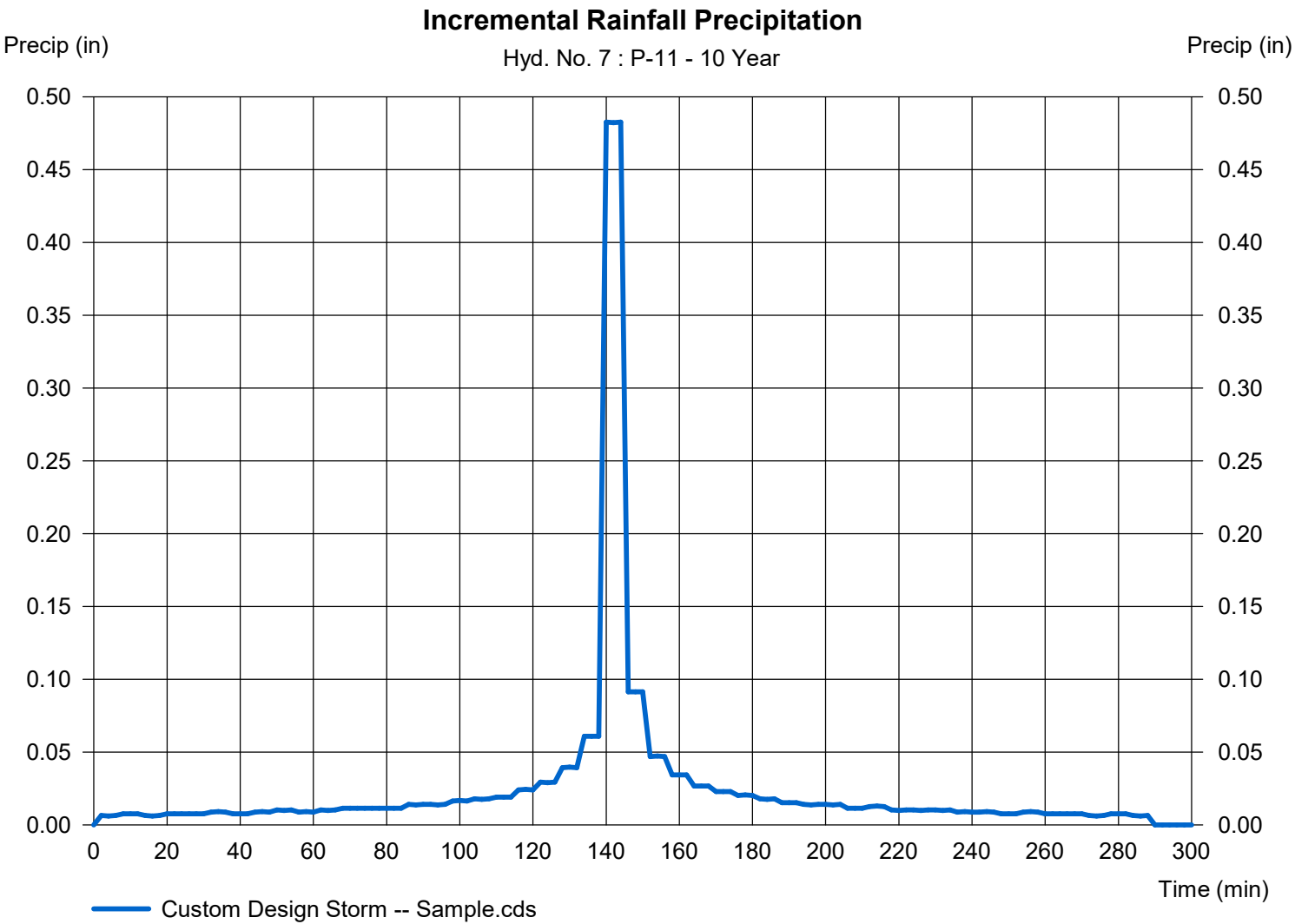
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Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

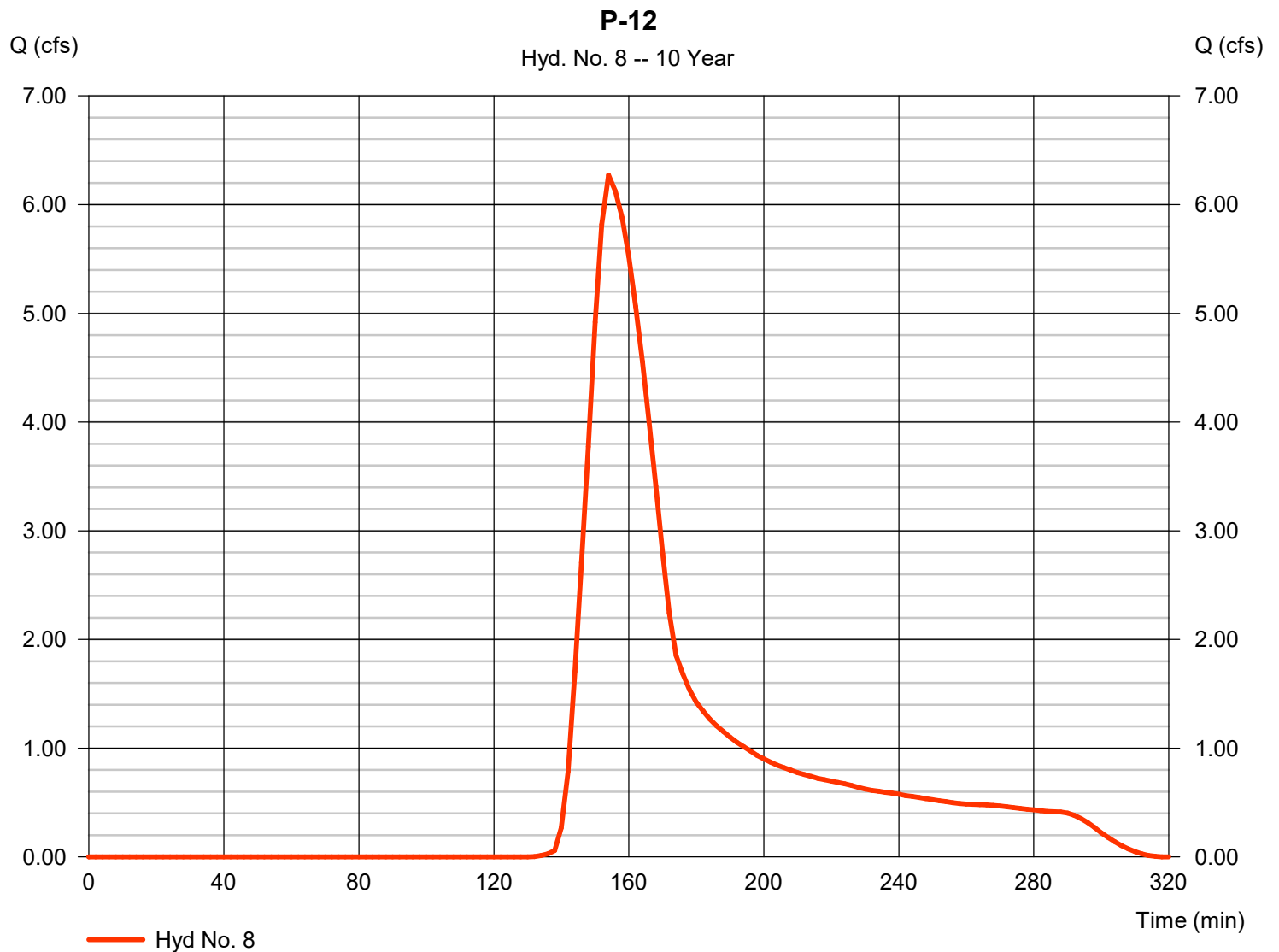
Tuesday, 04 / 7 / 2020

Hyd. No. 8

P-12

Hydrograph type	= SCS Runoff	Peak discharge	= 6.271 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 13,371 cuft
Drainage area	= 2.910 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.910$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

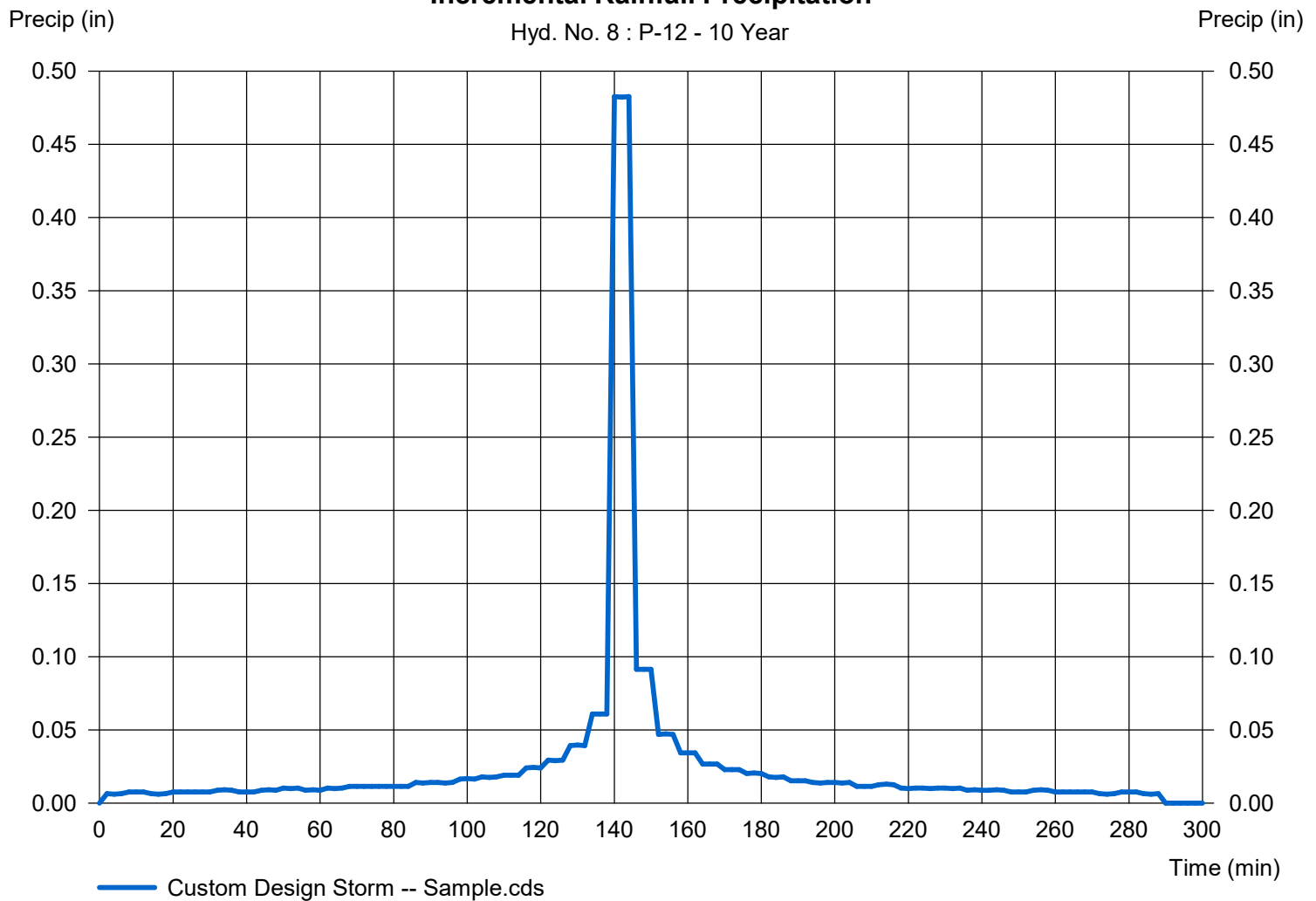
Hyd. No. 8

P-12

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : P-12 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

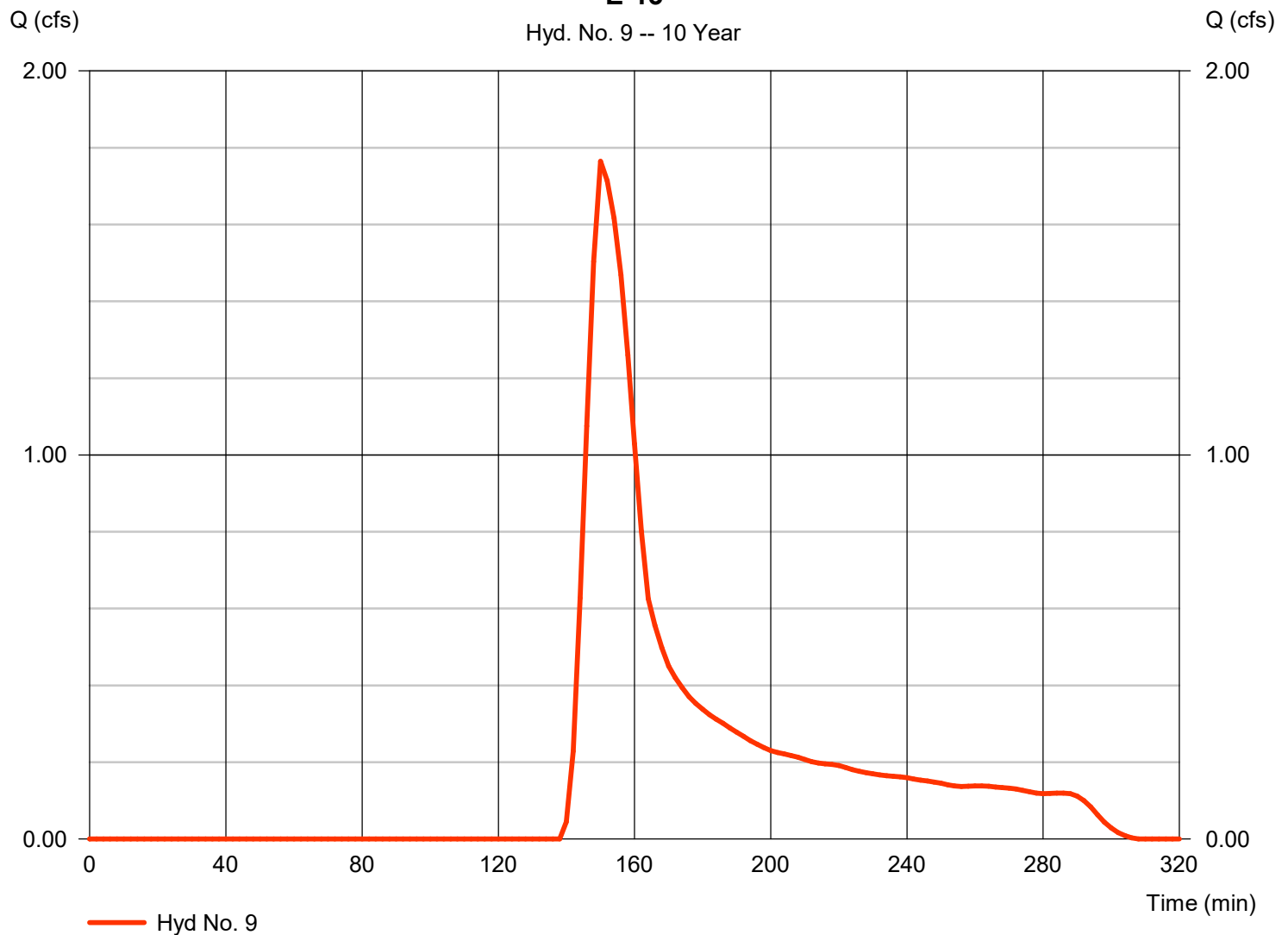
Hyd. No. 9

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 1.765 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 3,279 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$

E-13



Precipitation Report

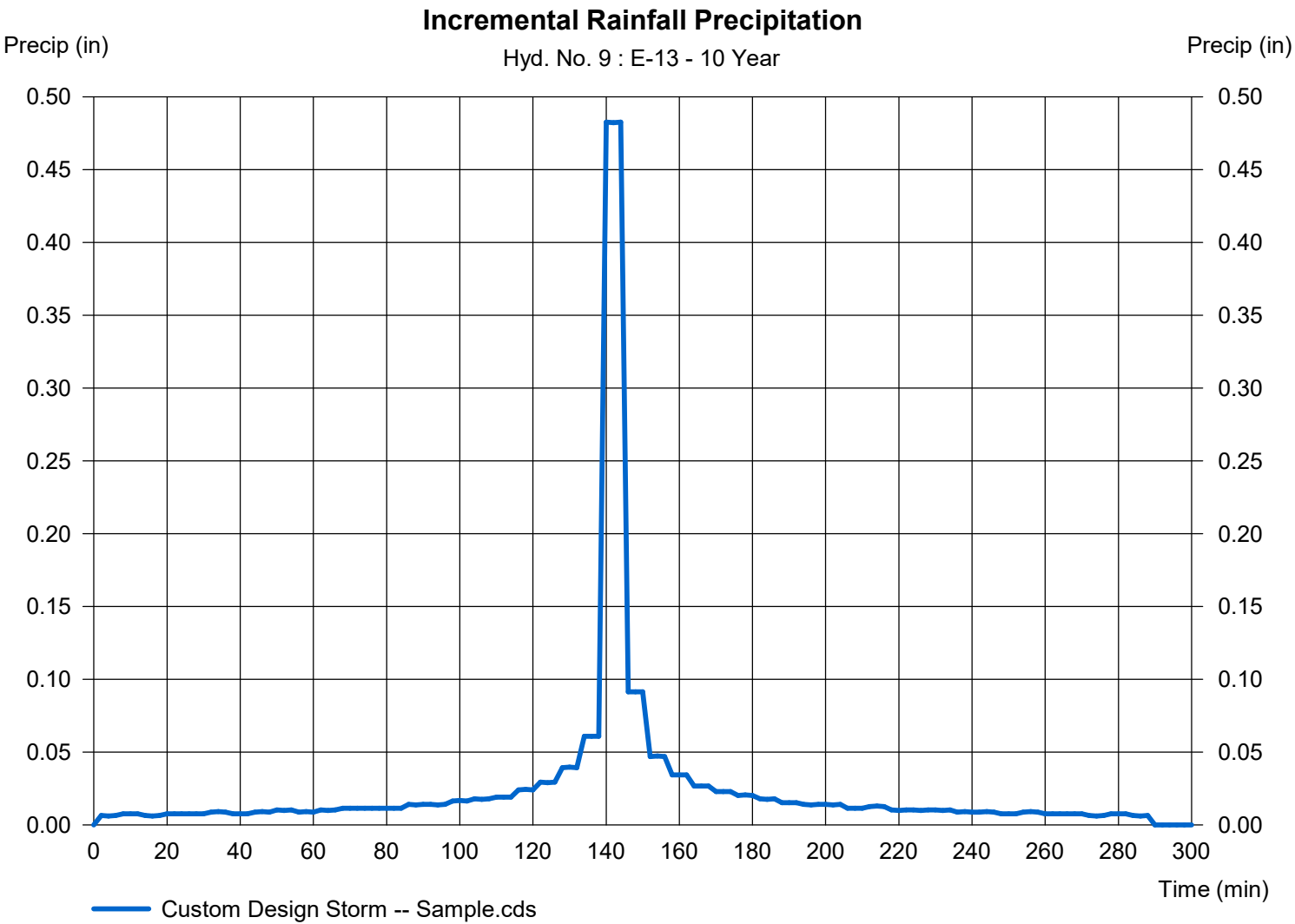
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Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-13

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 10

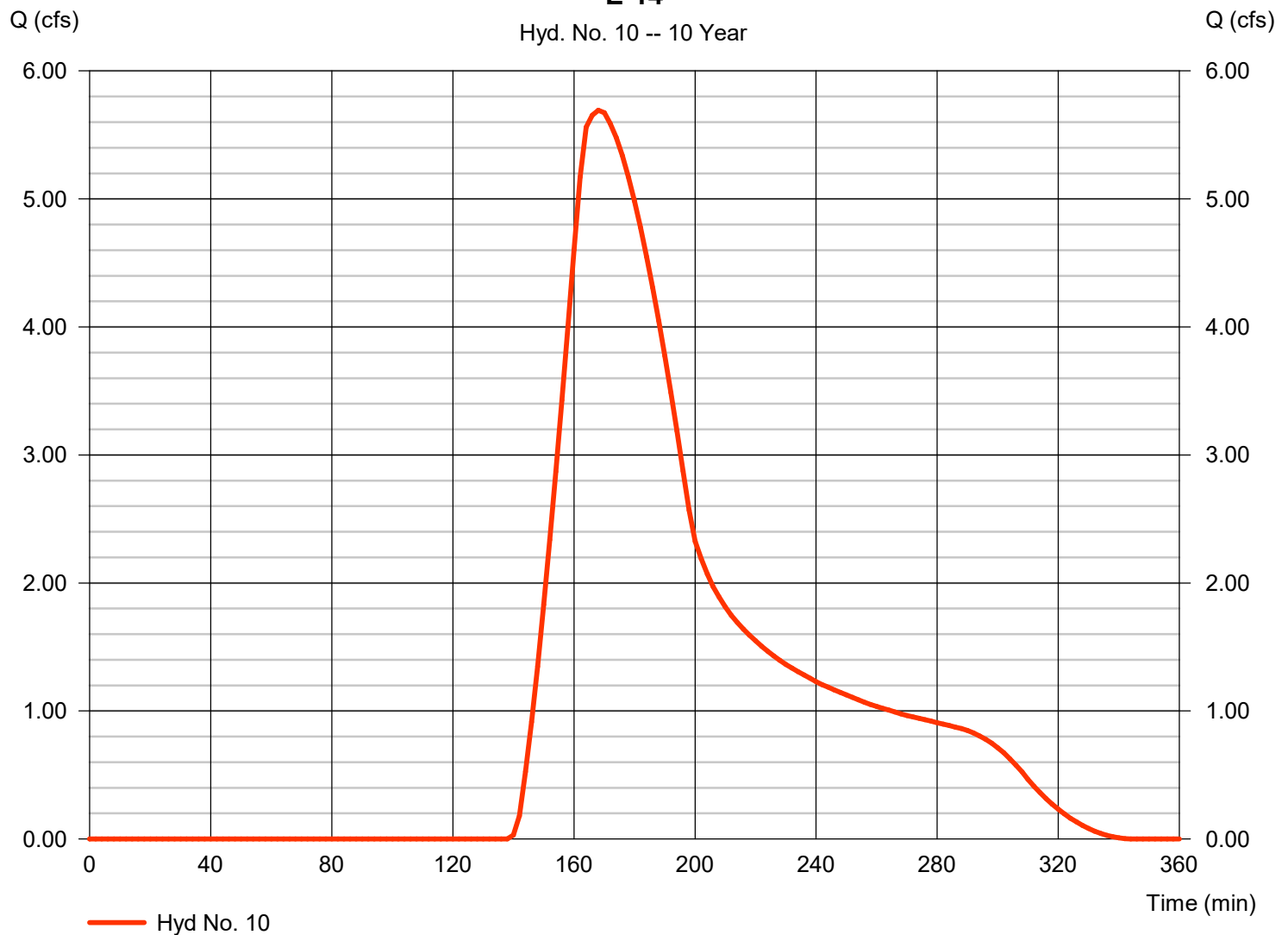
E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 5.693 cfs
Storm frequency	= 10 yrs	Time to peak	= 168 min
Time interval	= 2 min	Hyd. volume	= 21,401 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$

E-14

Hyd. No. 10 -- 10 Year



Precipitation Report

160

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

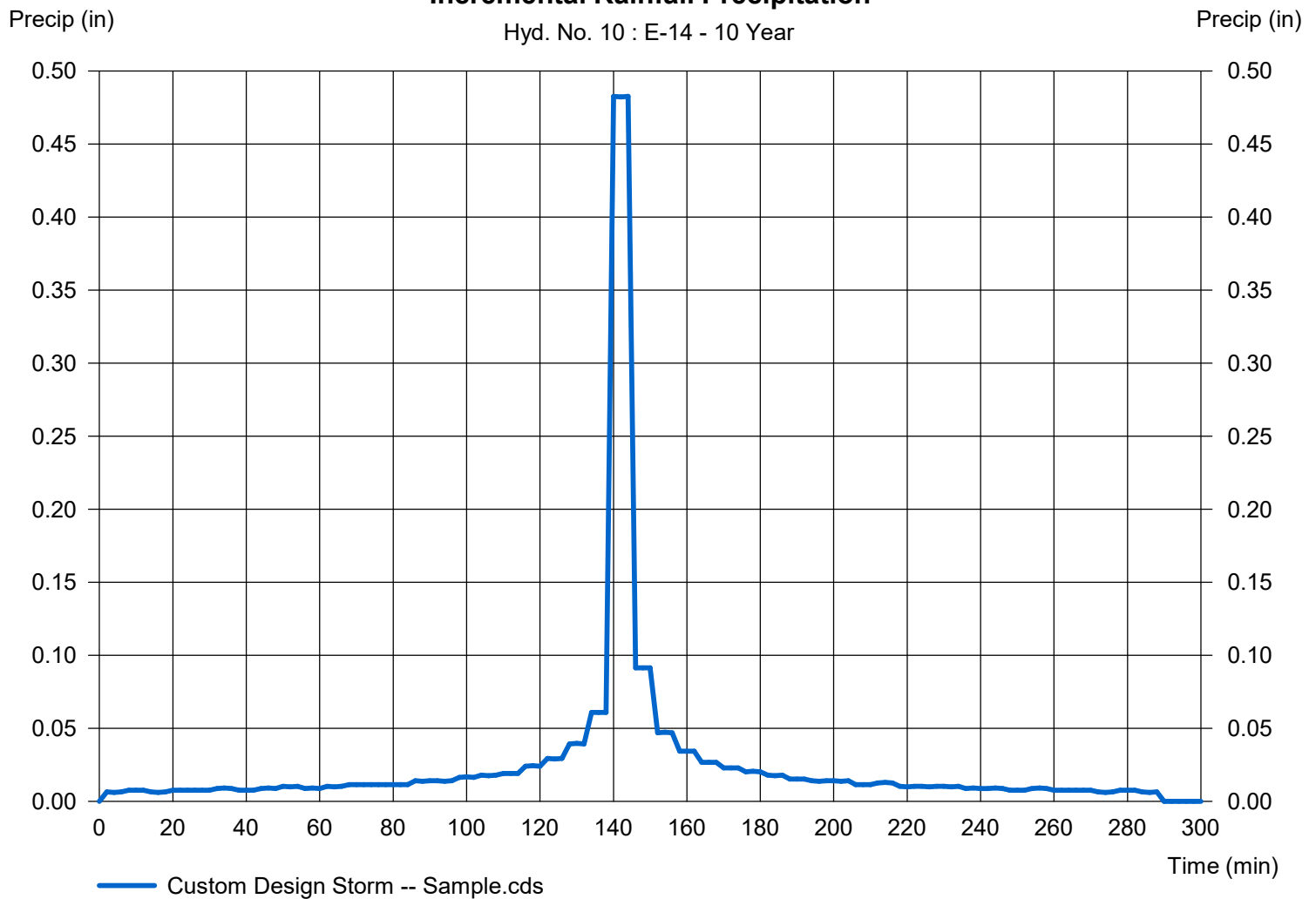
Hyd. No. 10

E-14

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-14 - 10 Year



Hydrograph Report

161

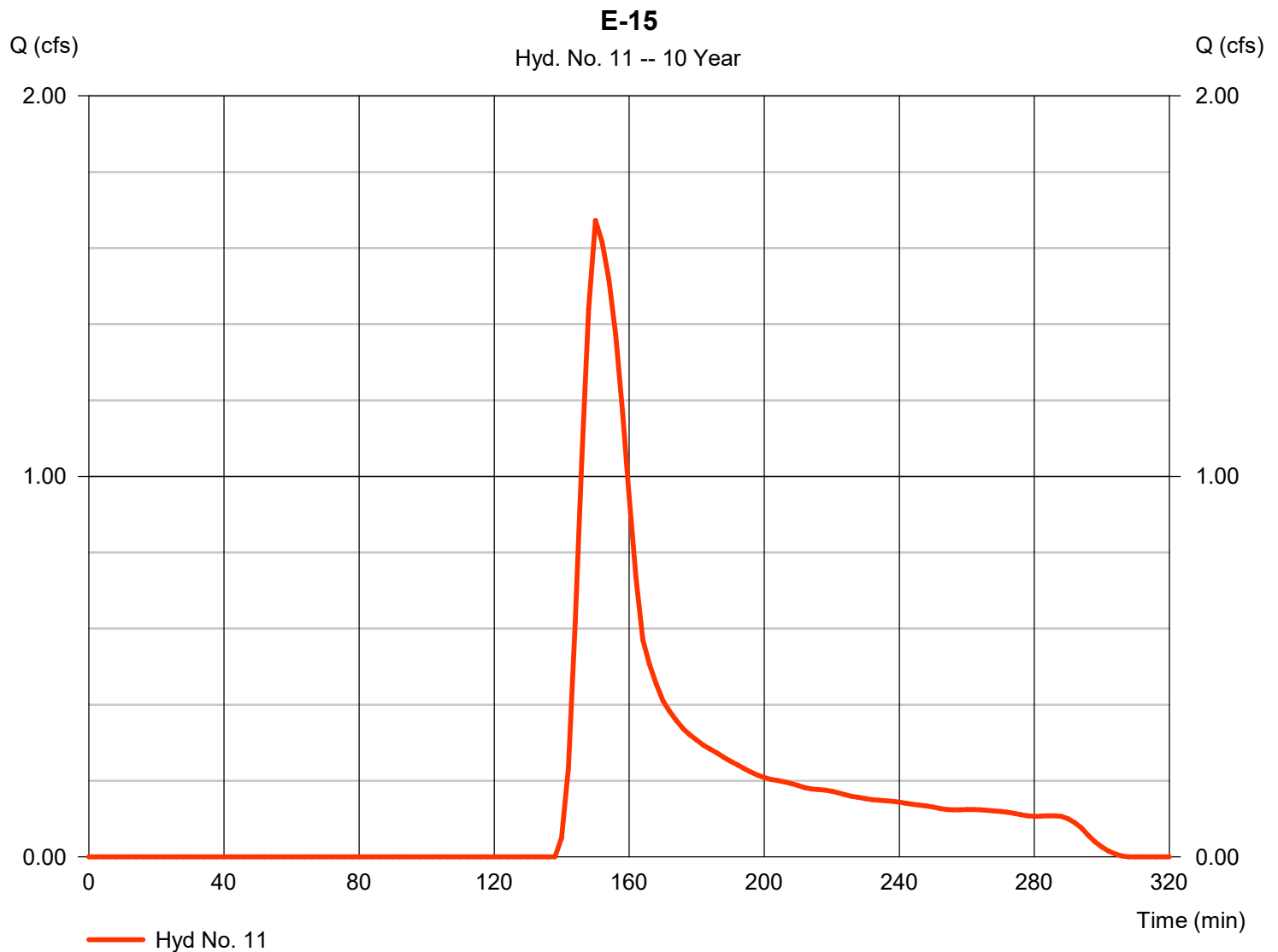
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 1.673 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 3,031 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

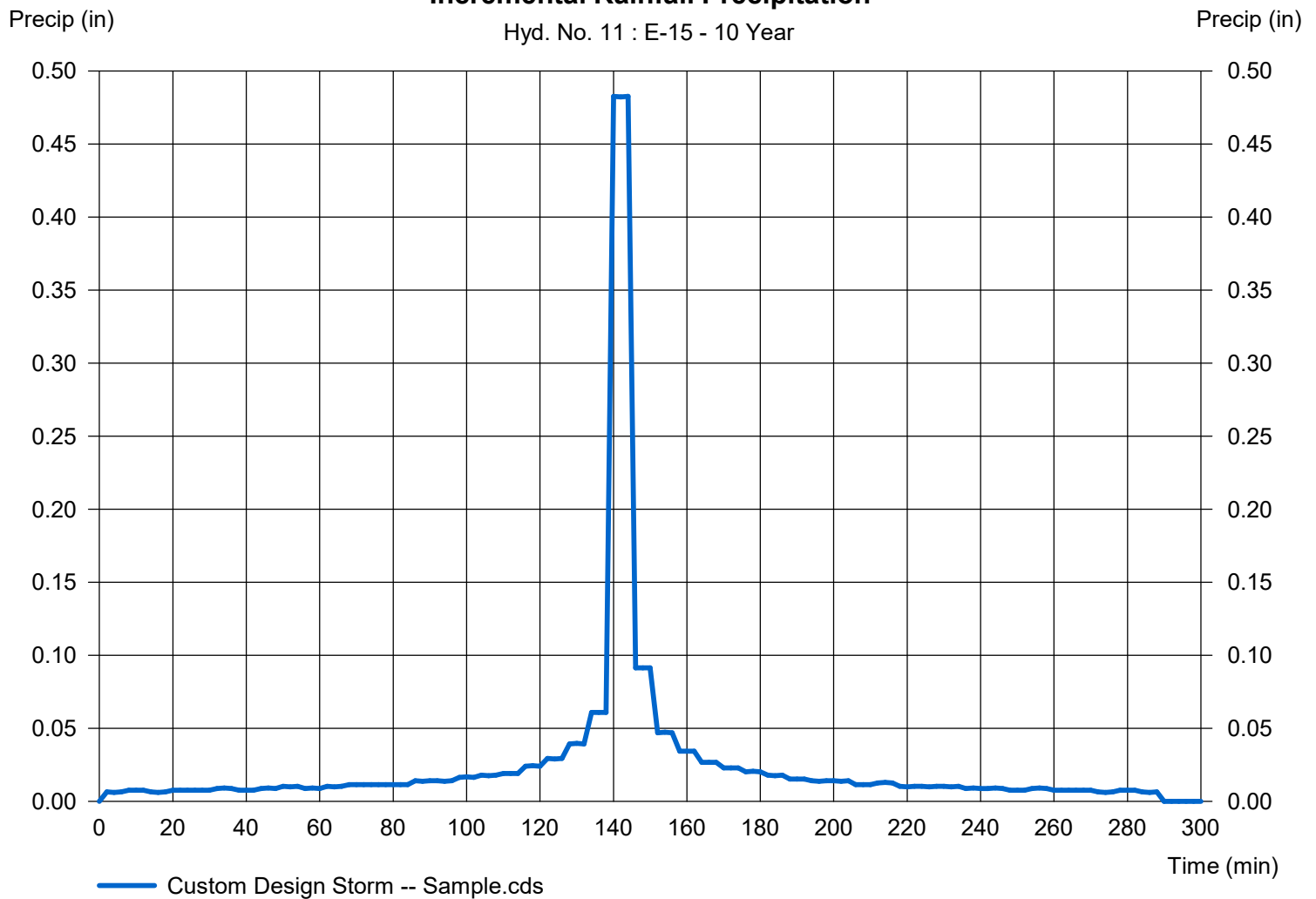
Hyd. No. 11

E-15

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-15 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

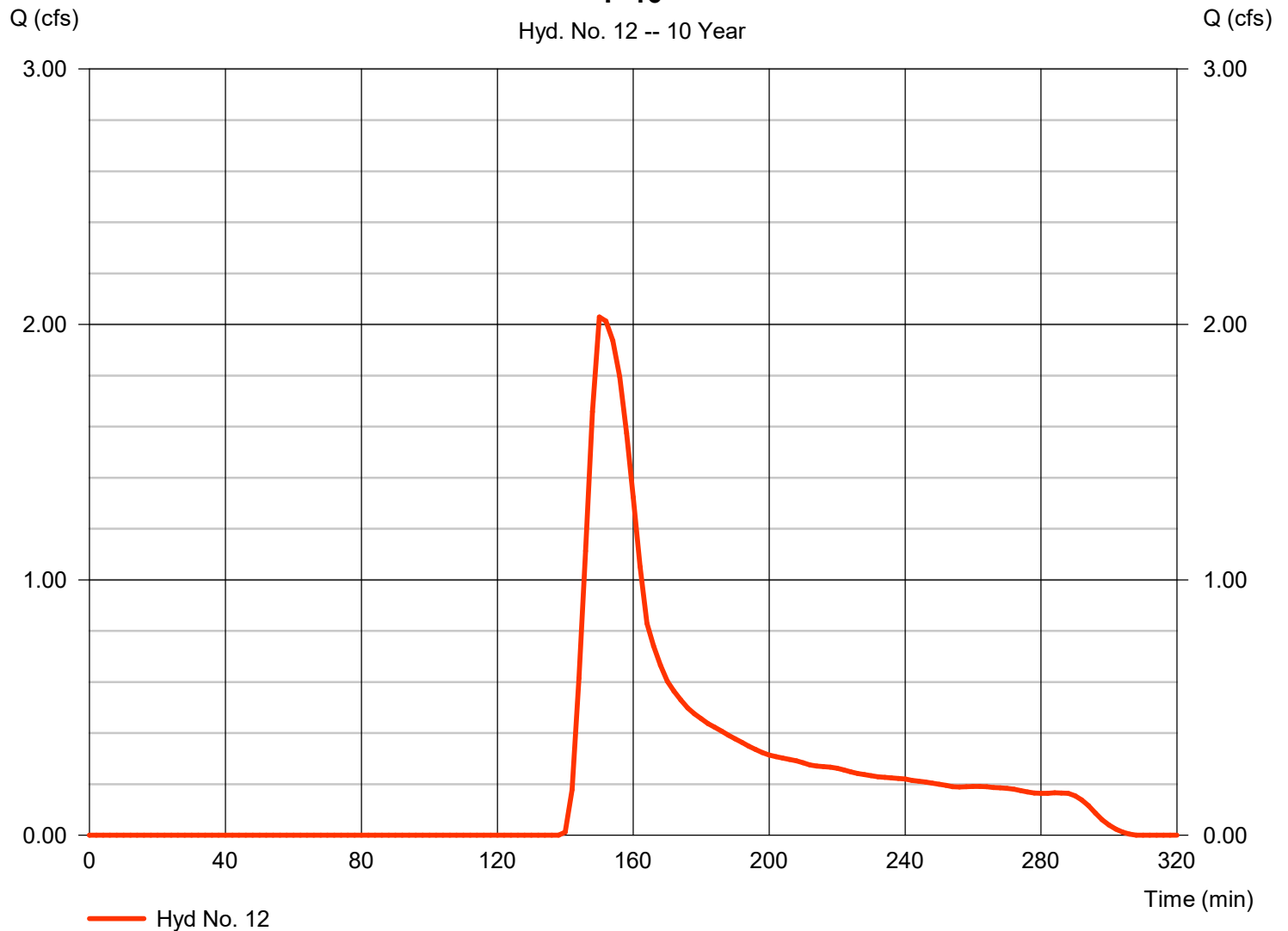
Tuesday, 04 / 7 / 2020

Hyd. No. 12

P-16

Hydrograph type	= SCS Runoff	Peak discharge	= 2.029 cfs
Storm frequency	= 10 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 4,155 cuft
Drainage area	= 1.560 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

P-16



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

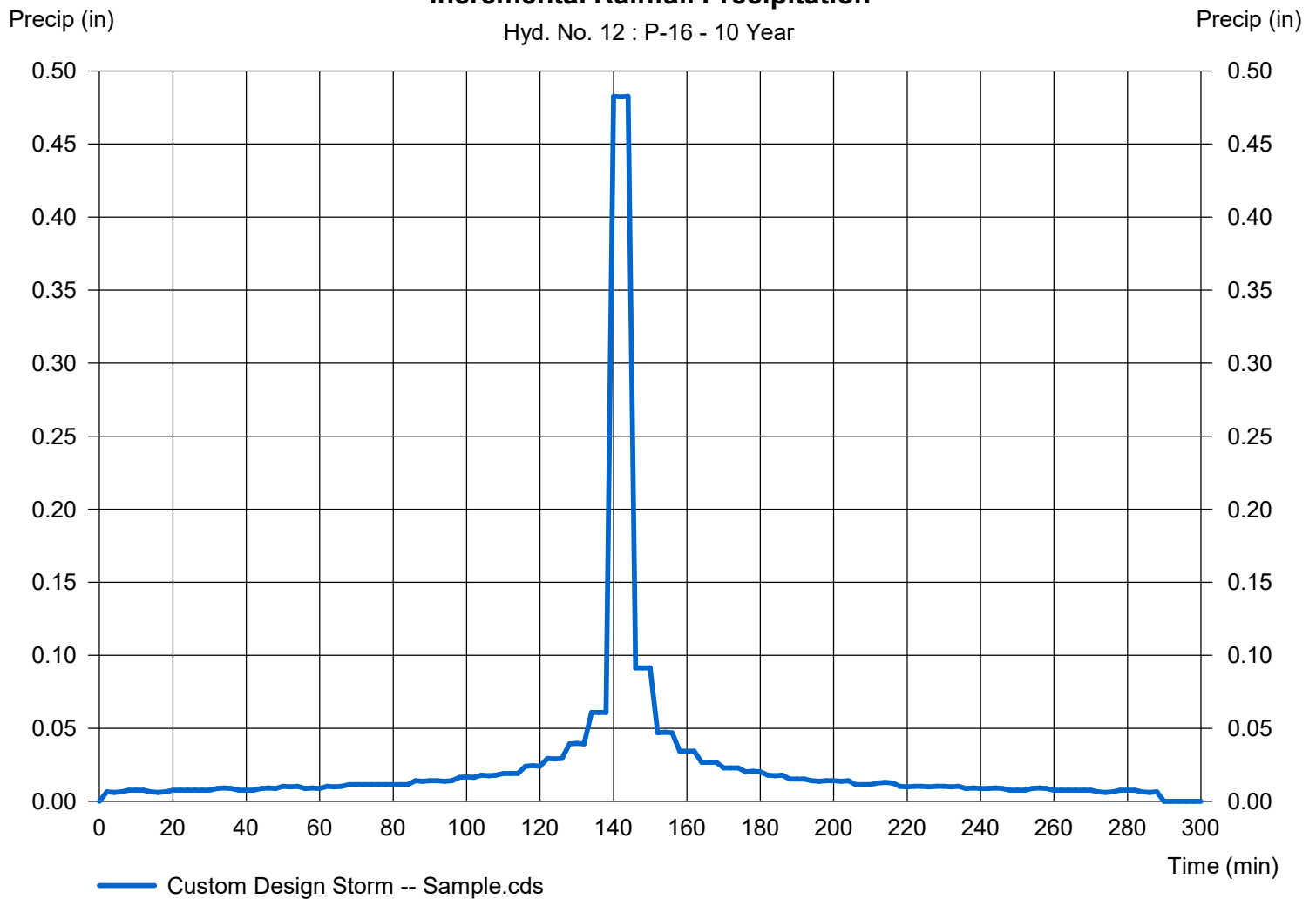
Hyd. No. 12

P-16

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : P-16 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

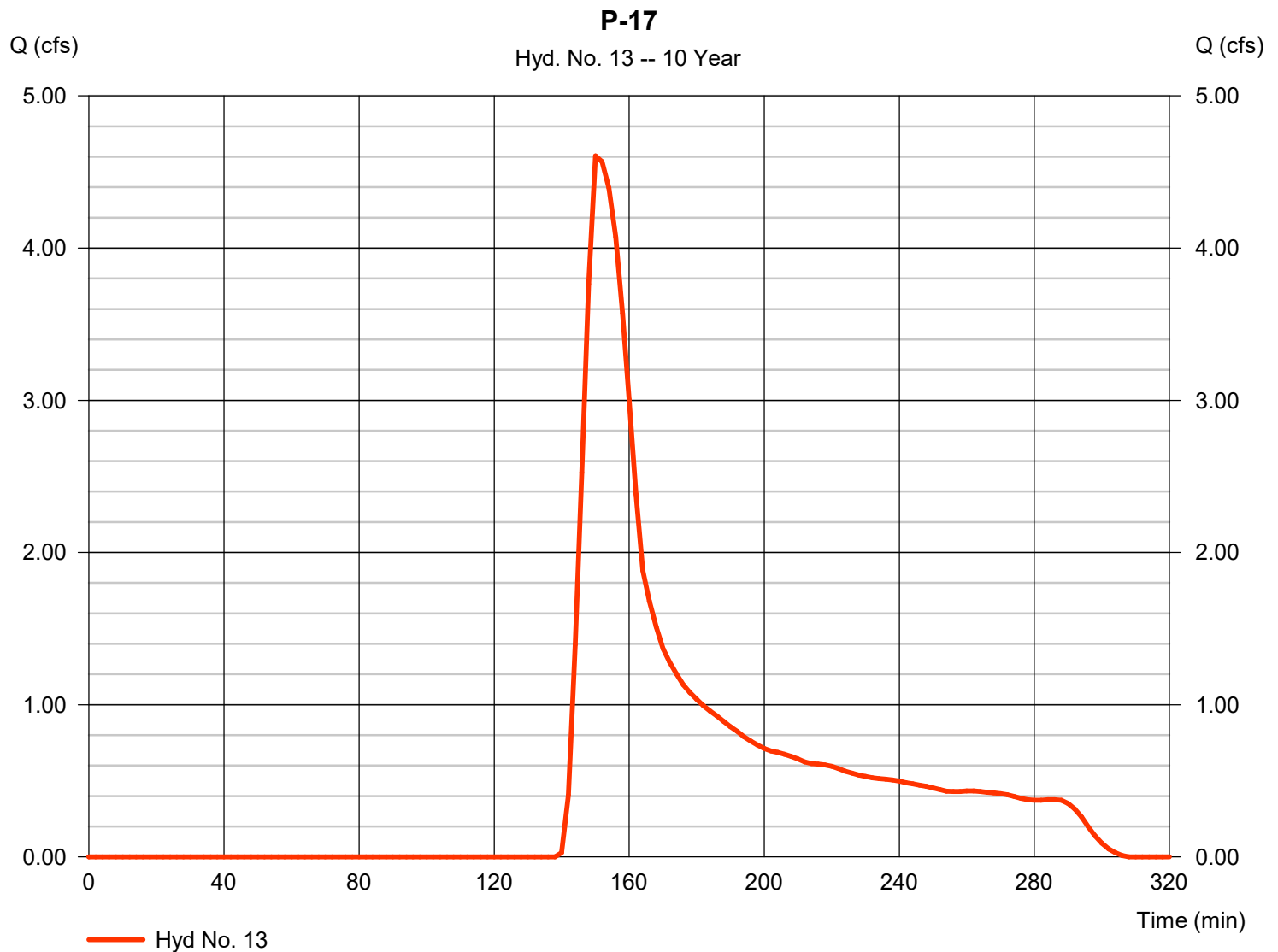
Tuesday, 04 / 7 / 2020

Hyd. No. 13

P-17

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 2 min
 Drainage area = 3.540 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 3.81 in
 Storm duration = Sample.cds

Peak discharge = 4.605 cfs
 Time to peak = 150 min
 Hyd. volume = 9,428 cuft
 Curve number = 61
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 12.00 min
 Distribution = Custom
 Shape factor = 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

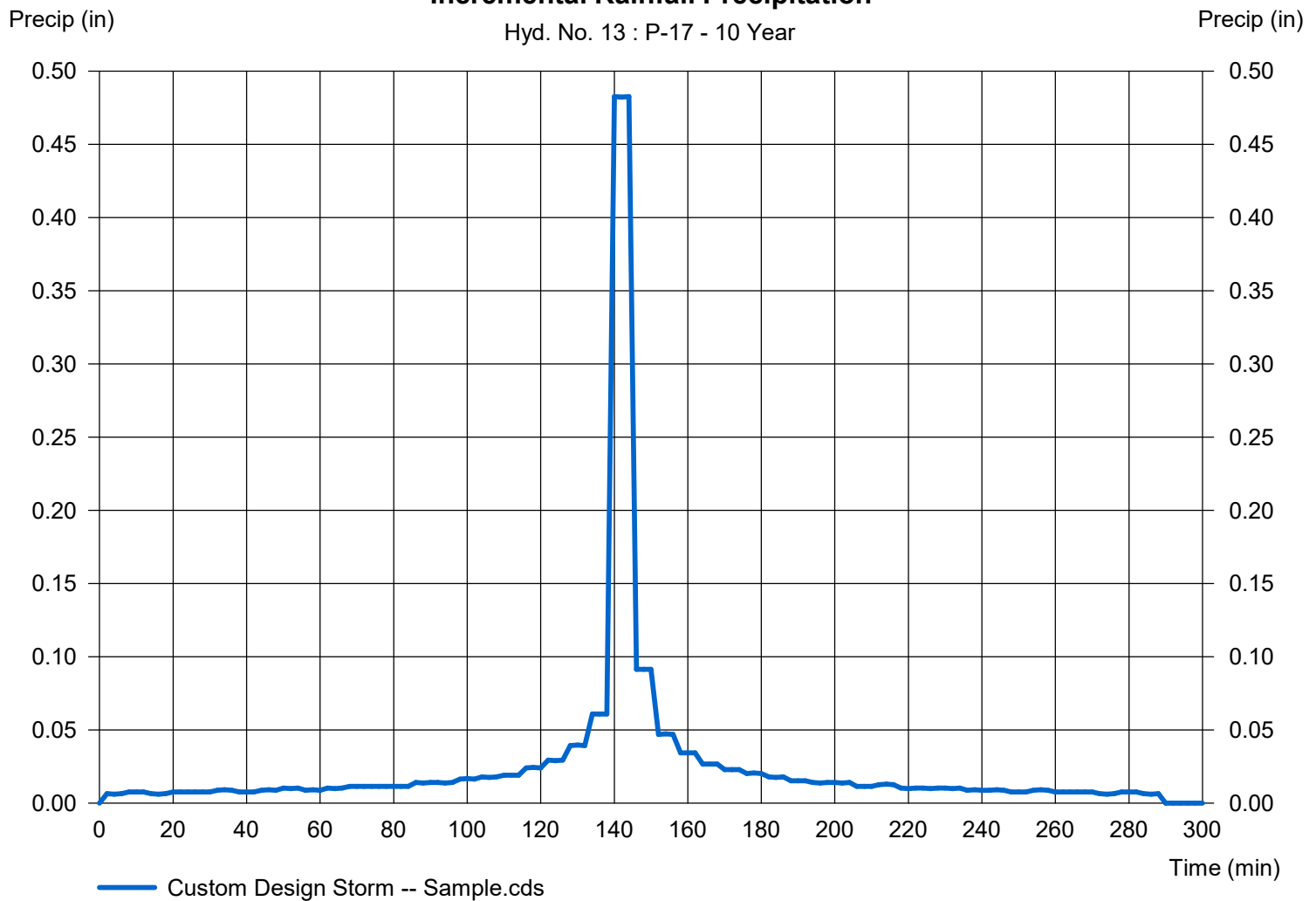
Hyd. No. 13

P-17

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : P-17 - 10 Year



Hydrograph Report

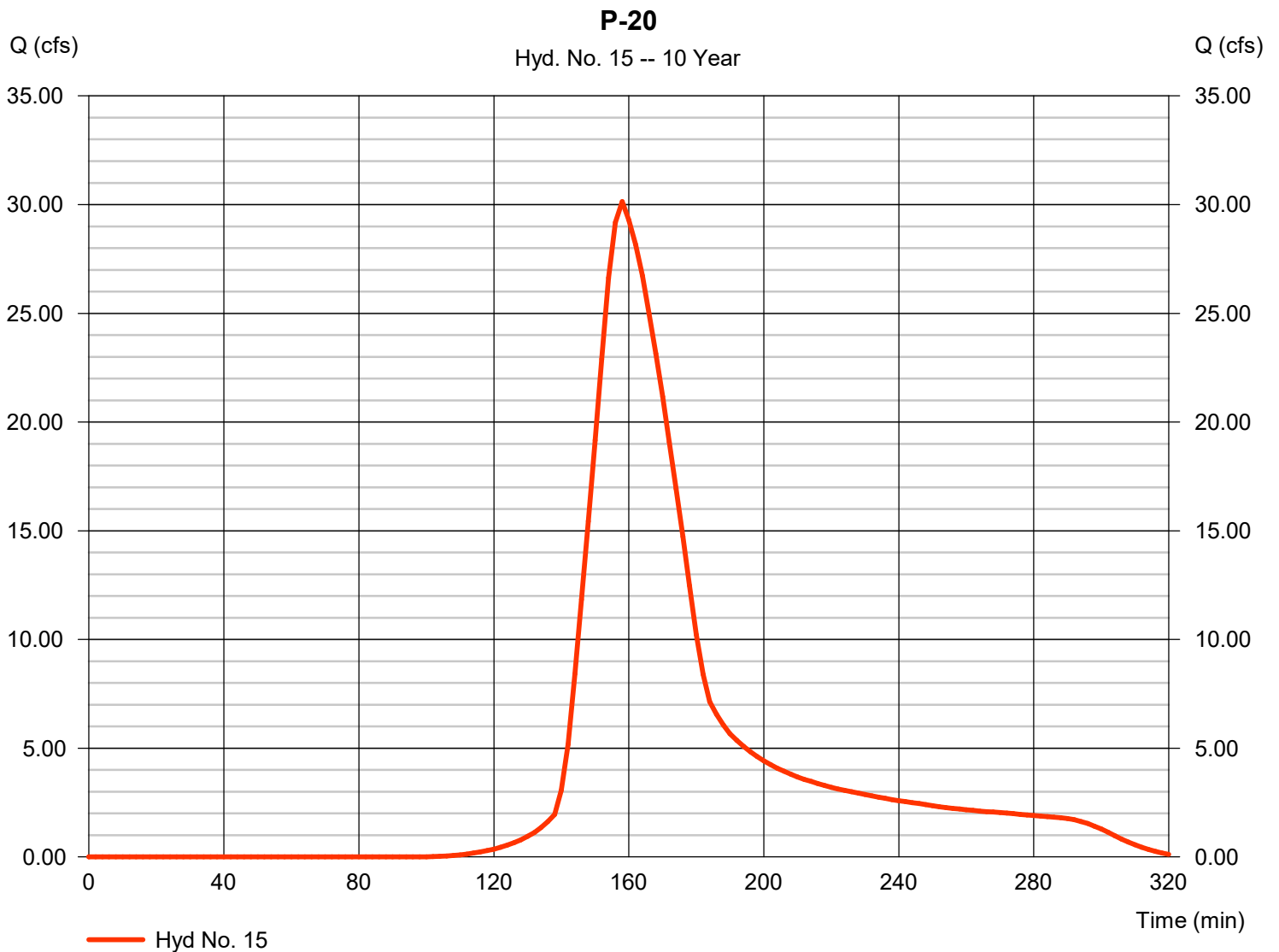
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

P-20

Hydrograph type	= SCS Runoff	Peak discharge	= 30.14 cfs
Storm frequency	= 10 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 71,856 cuft
Drainage area	= 9.850 ac	Curve number	= 82
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

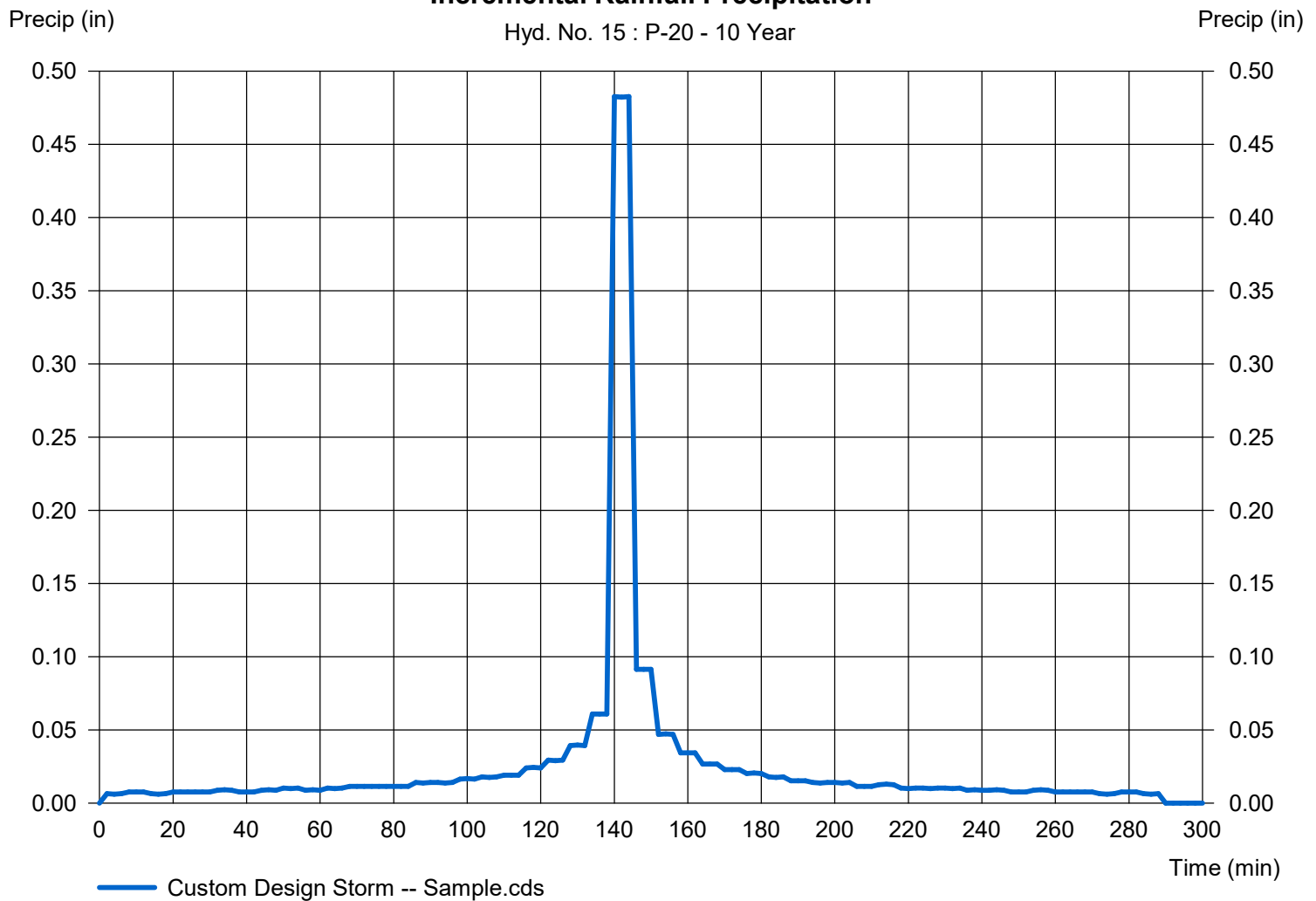
Hyd. No. 15

P-20

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : P-20 - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

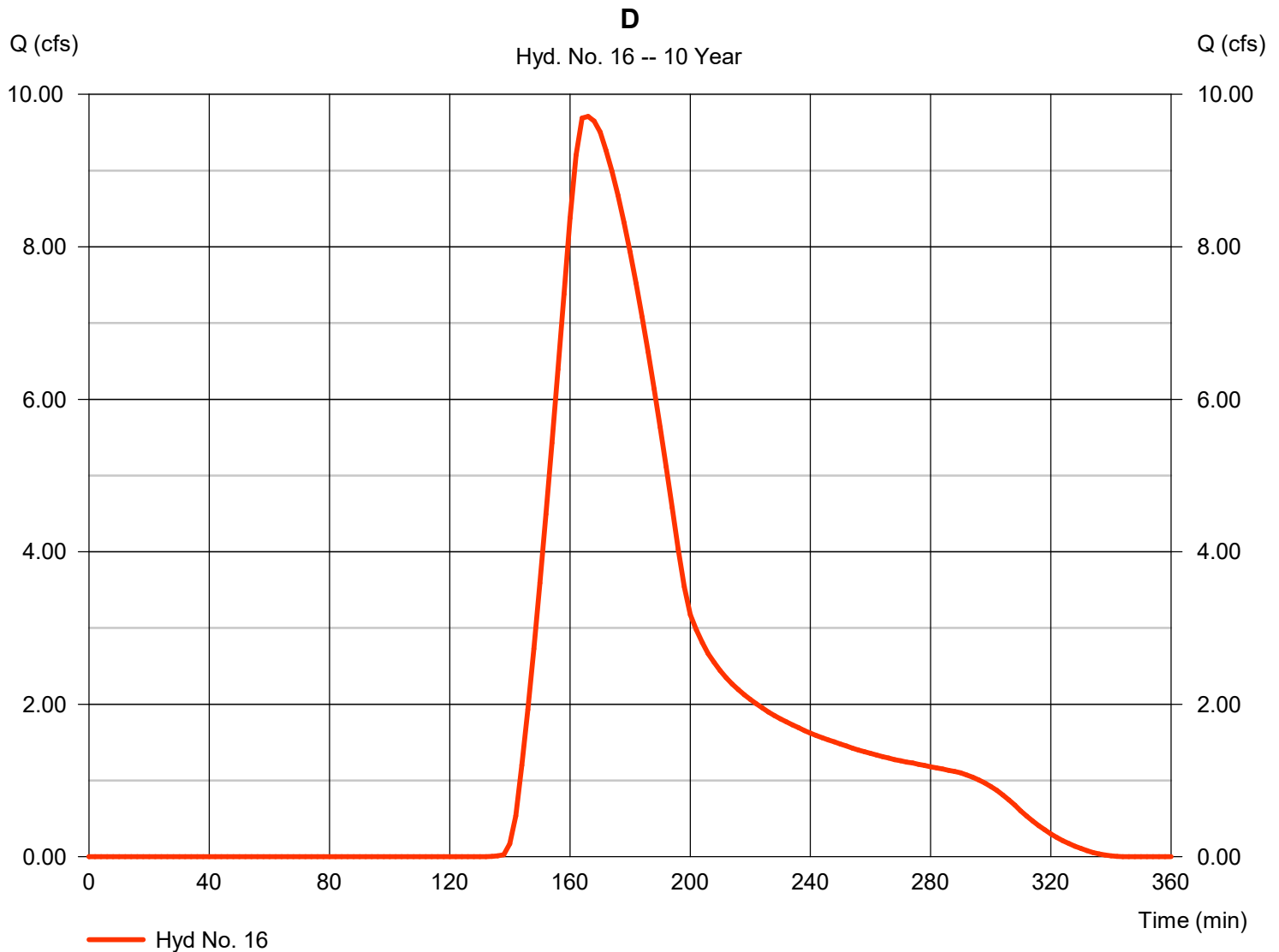
Tuesday, 04 / 7 / 2020

Hyd. No. 16

D

Hydrograph type	= SCS Runoff	Peak discharge	= 9.710 cfs
Storm frequency	= 10 yrs	Time to peak	= 166 min
Time interval	= 2 min	Hyd. volume	= 32,854 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 3.81 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

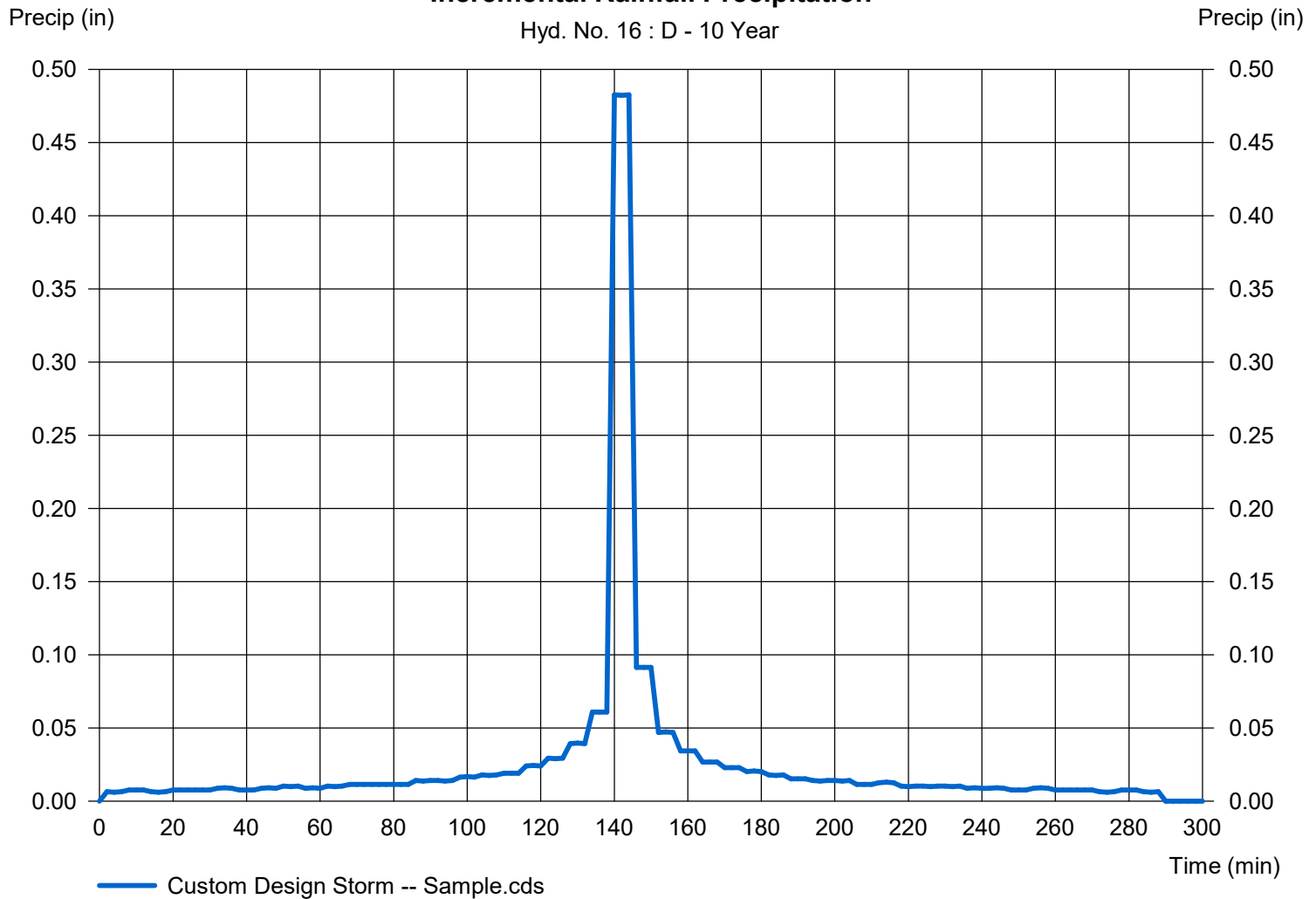
Hyd. No. 16

D

Storm Frequency	= 10 yrs	Time interval	= 2 min
Total precip.	= 3.8100 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 16 : D - 10 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

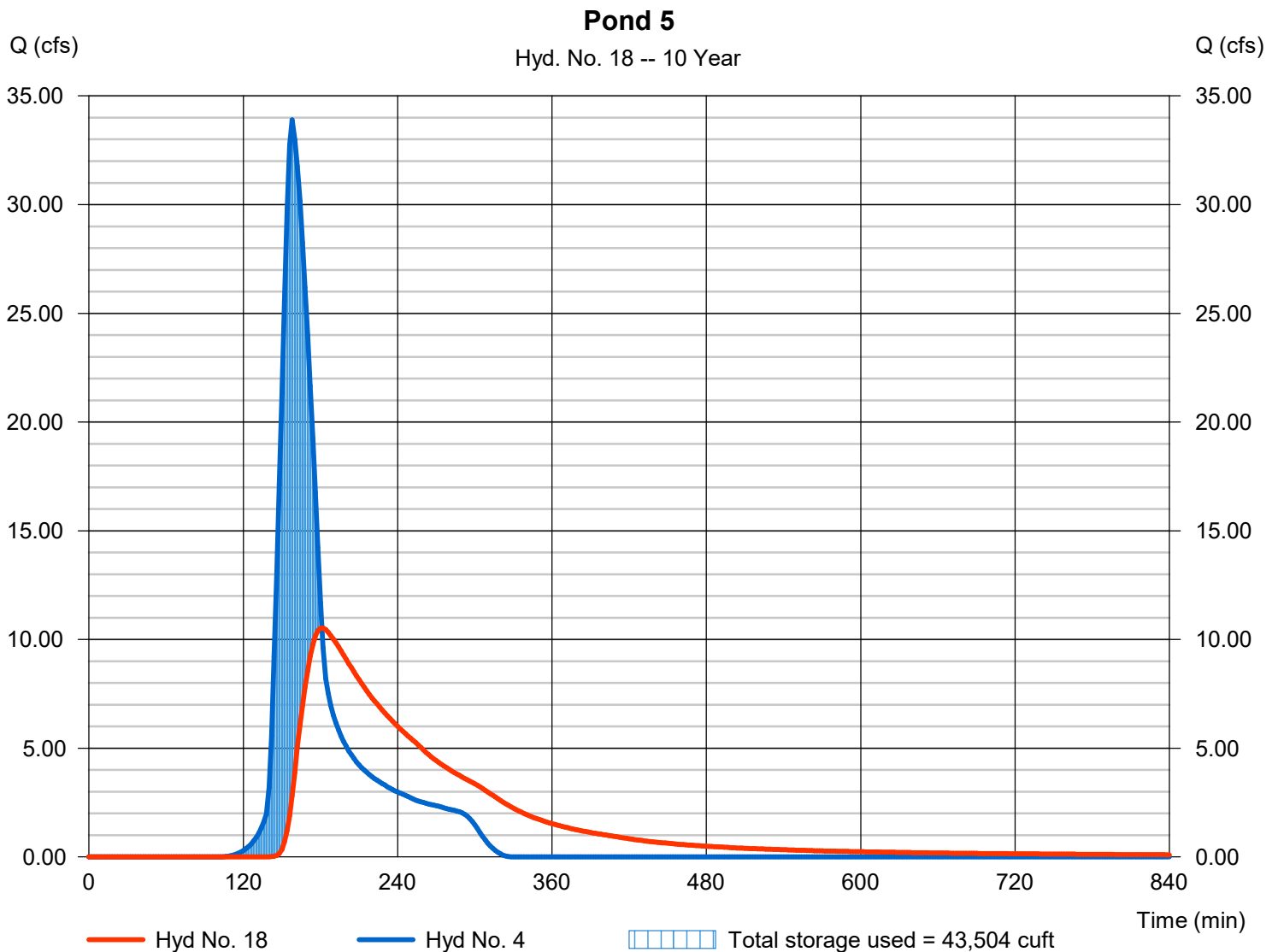
Hyd. No. 18

Pond 5

Hydrograph type = Reservoir
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - P-5
 Reservoir name = Pond 5

Peak discharge = 10.53 cfs
 Time to peak = 182 min
 Hyd. volume = 80,155 cuft
 Max. Elevation = 983.69 ft
 Max. Storage = 43,504 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

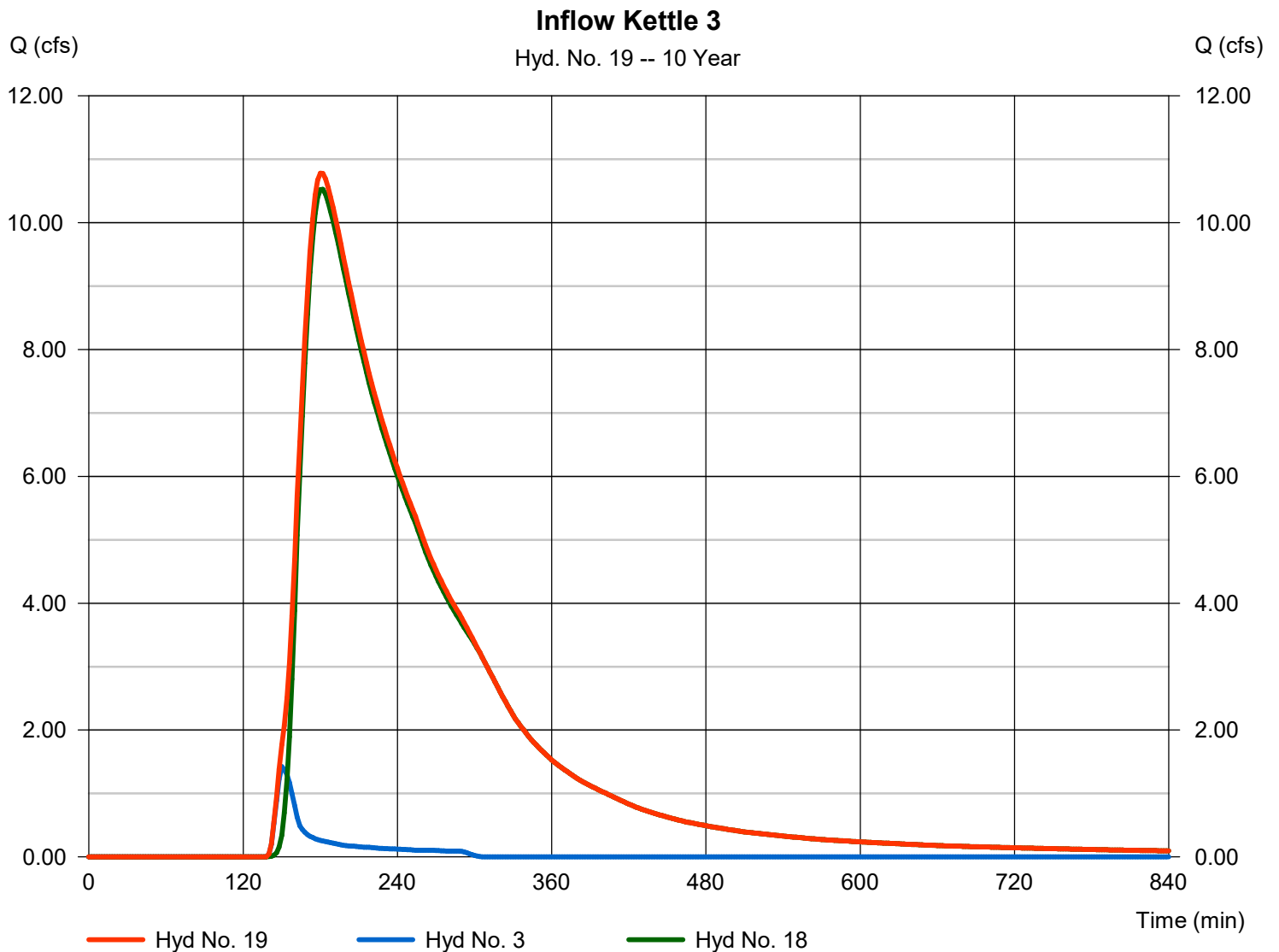
Tuesday, 04 / 7 / 2020

Hyd. No. 19

Inflow Kettle 3

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 3, 18

Peak discharge = 10.78 cfs
Time to peak = 180 min
Hyd. volume = 82,738 cuft
Contrib. drain. area = 0.750 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

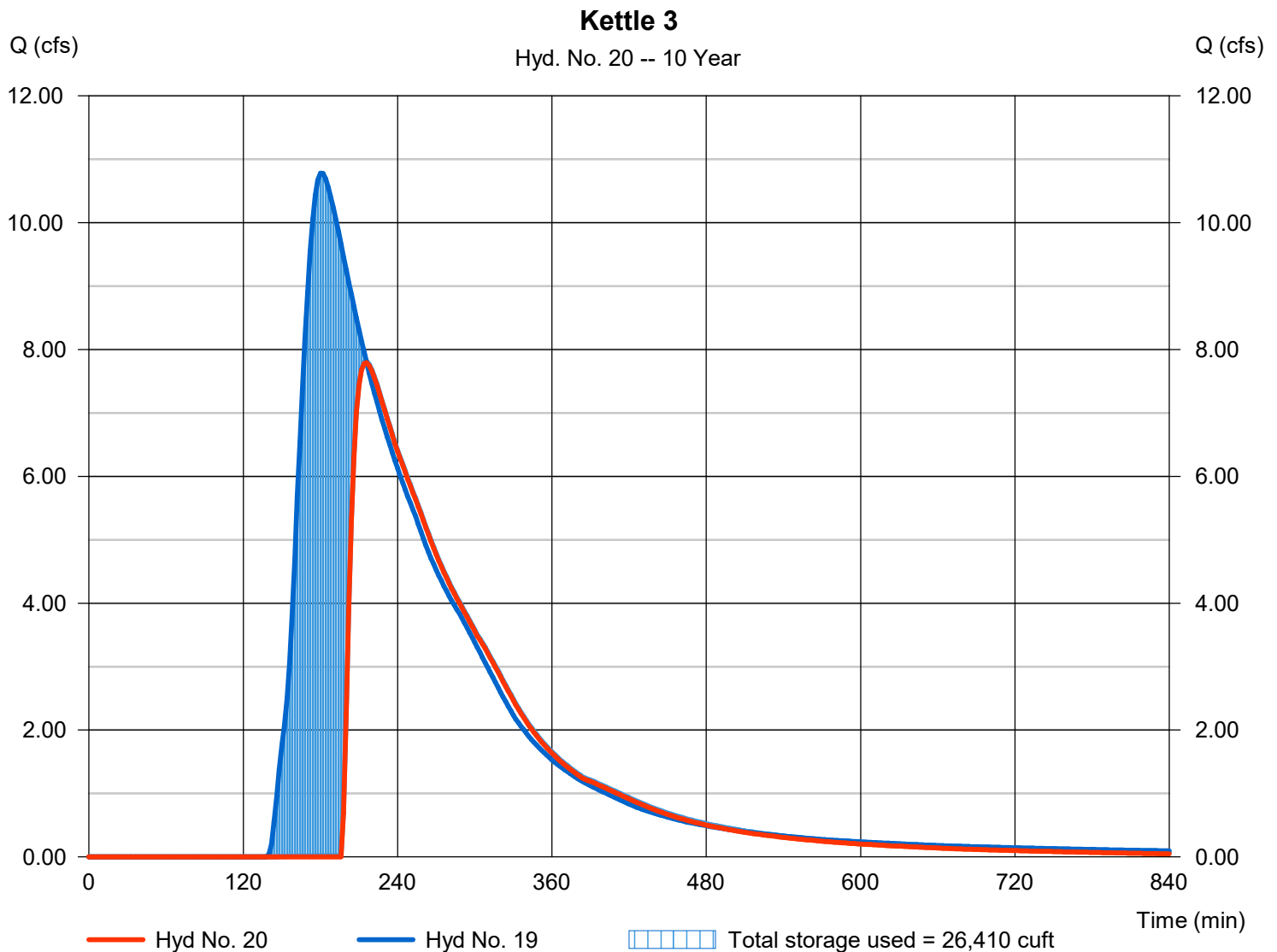
Tuesday, 04 / 7 / 2020

Hyd. No. 20

Kettle 3

Hydrograph type	= Reservoir	Peak discharge	= 7.793 cfs
Storm frequency	= 10 yrs	Time to peak	= 216 min
Time interval	= 2 min	Hyd. volume	= 54,144 cuft
Inflow hyd. No.	= 19 - Inflow Kettle 3	Max. Elevation	= 976.34 ft
Reservoir name	= K-3	Max. Storage	= 26,410 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

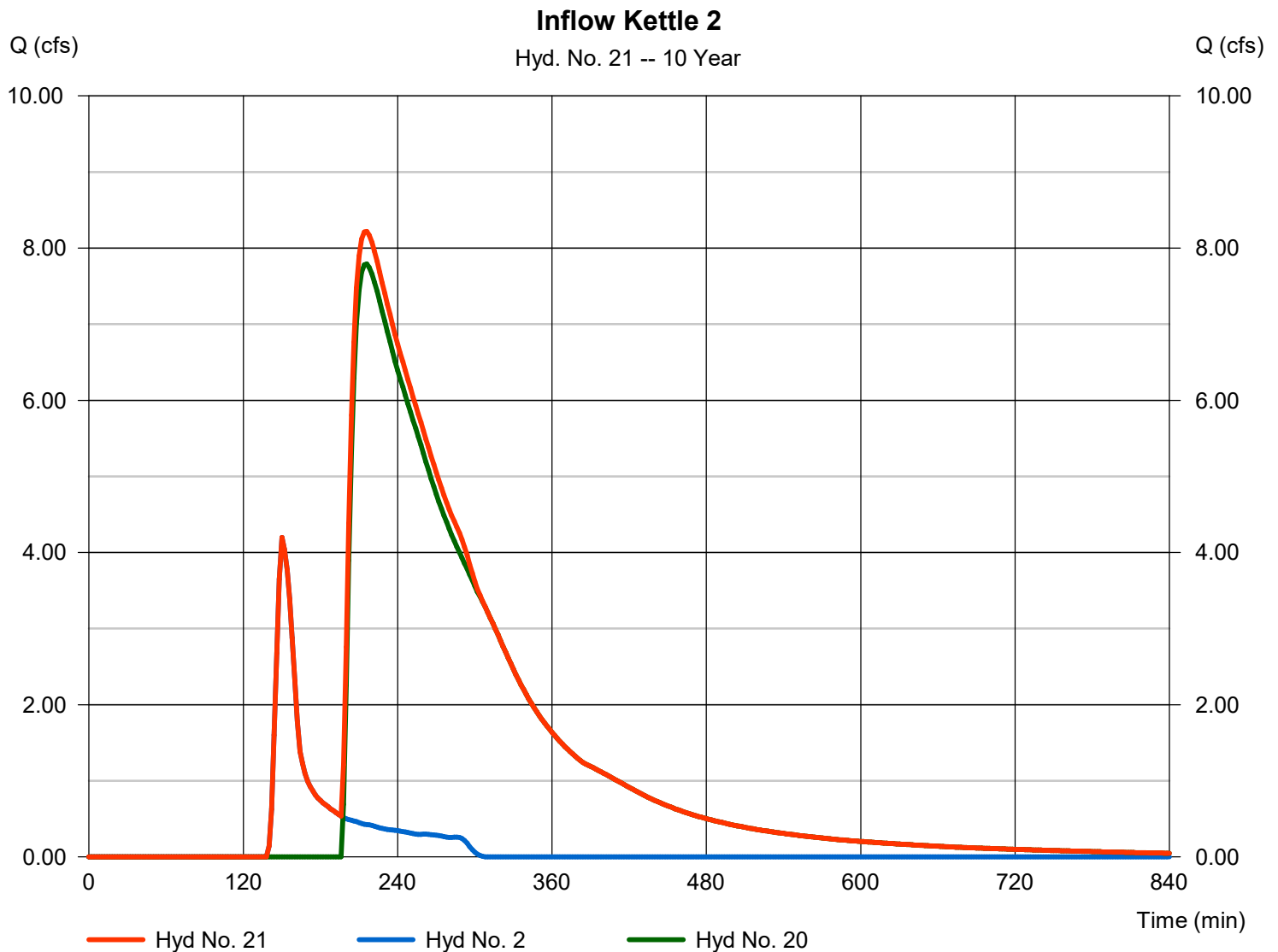
Tuesday, 04 / 7 / 2020

Hyd. No. 21

Inflow Kettle 2

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 2, 20

Peak discharge = 8.219 cfs
Time to peak = 216 min
Hyd. volume = 61,583 cuft
Contrib. drain. area = 2.040 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

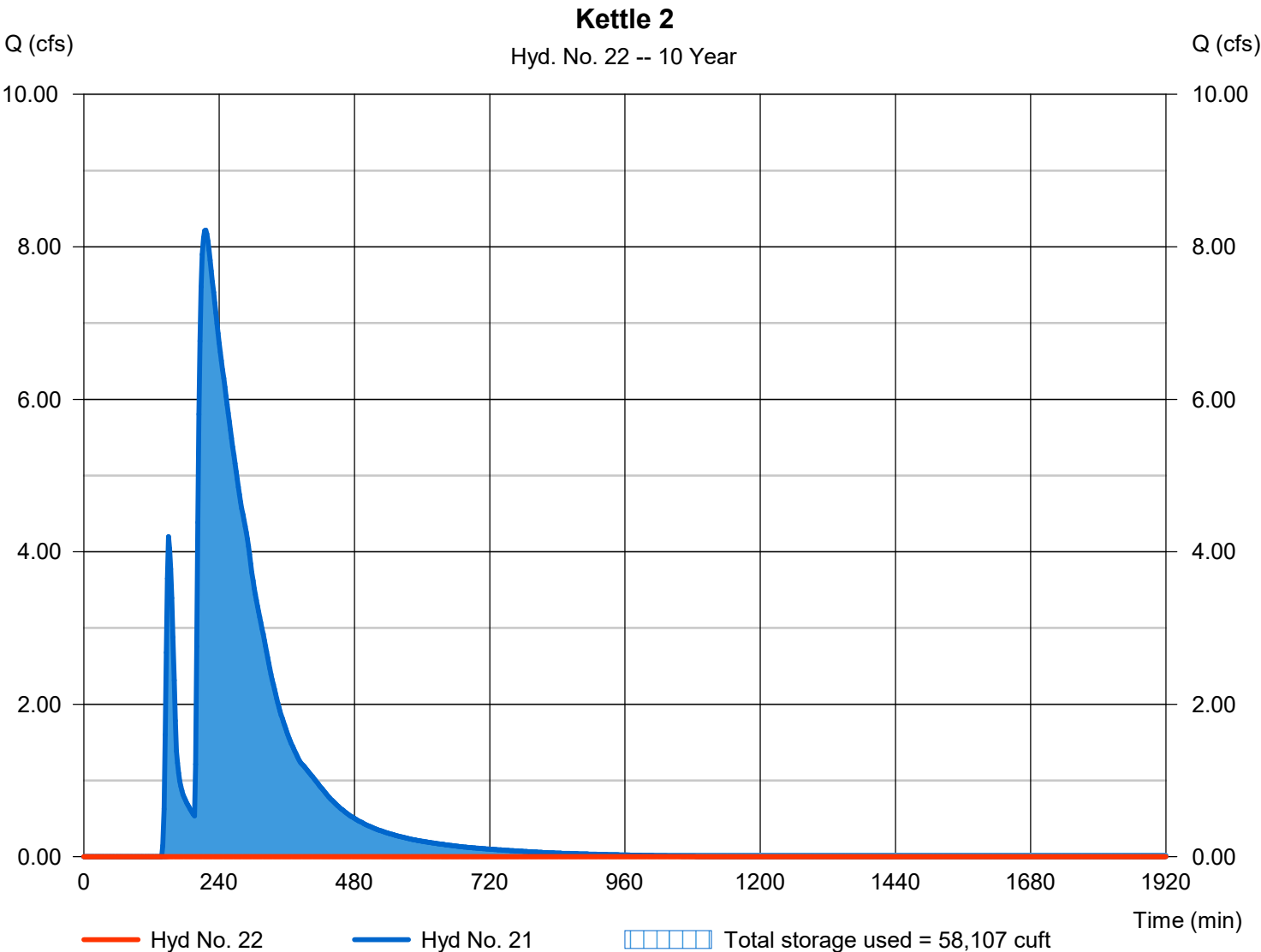
Tuesday, 04 / 7 / 2020

Hyd. No. 22

Kettle 2

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 712 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 21 - Inflow Kettle 2	Max. Elevation	= 973.01 ft
Reservoir name	= K-2	Max. Storage	= 58,107 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

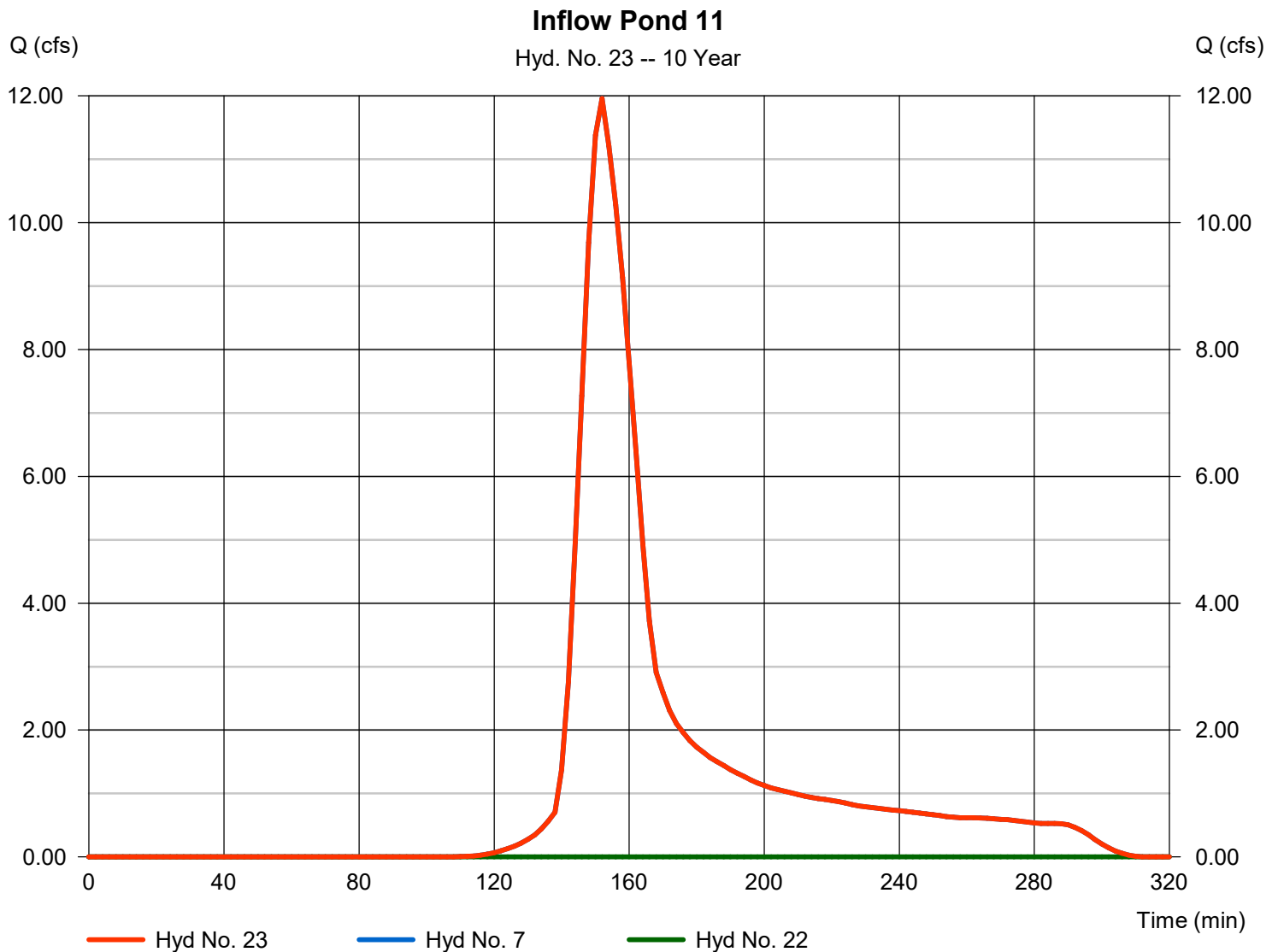
Tuesday, 04 / 7 / 2020

Hyd. No. 23

Inflow Pond 11

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 7, 22

Peak discharge = 11.96 cfs
Time to peak = 152 min
Hyd. volume = 20,376 cuft
Contrib. drain. area = 3.180 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

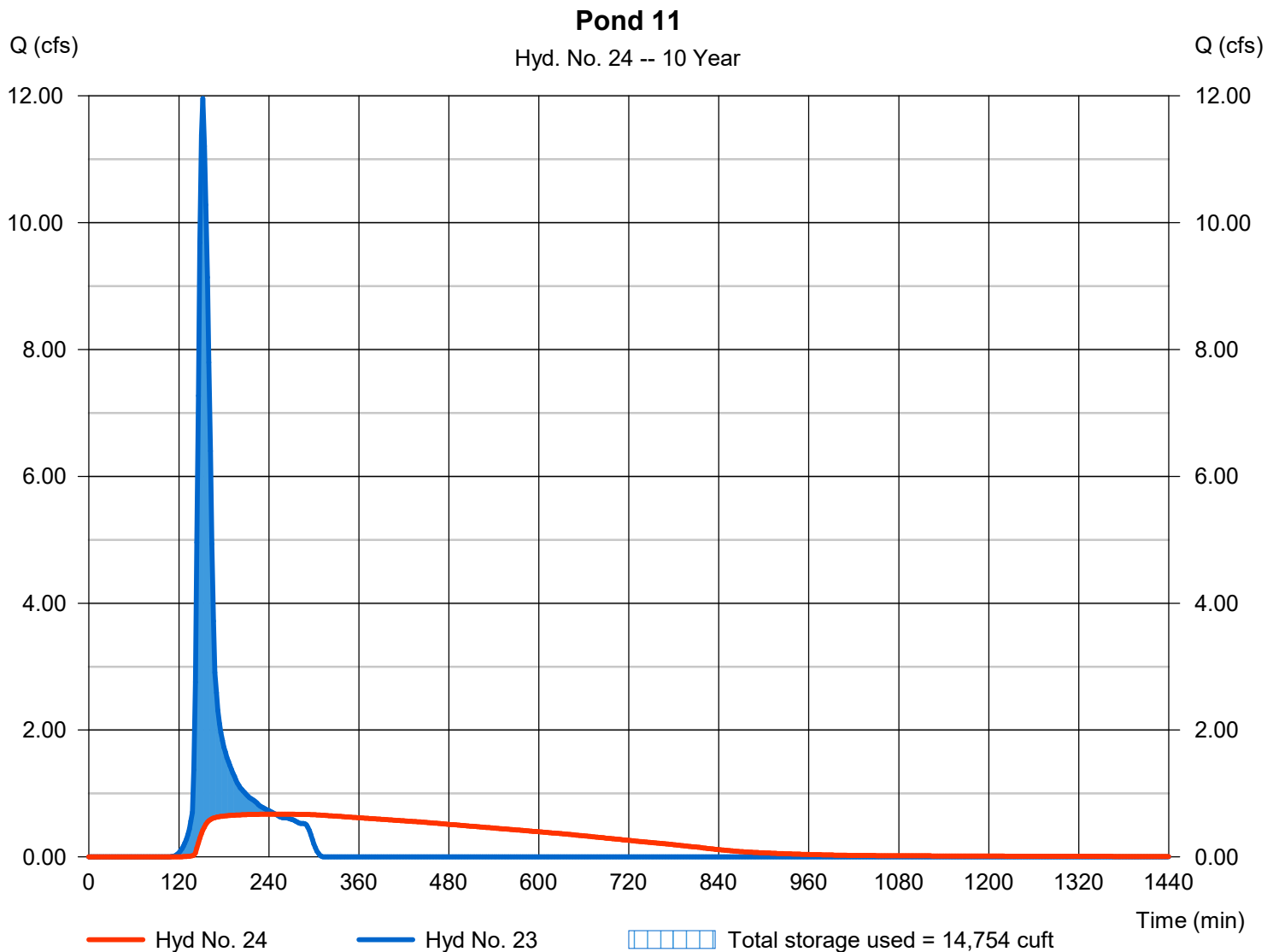
Tuesday, 04 / 7 / 2020

Hyd. No. 24

Pond 11

Hydrograph type	= Reservoir	Peak discharge	= 0.673 cfs
Storm frequency	= 10 yrs	Time to peak	= 248 min
Time interval	= 2 min	Hyd. volume	= 20,357 cuft
Inflow hyd. No.	= 23 - Inflow Pond 11	Max. Elevation	= 966.89 ft
Reservoir name	= Pond 11	Max. Storage	= 14,754 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

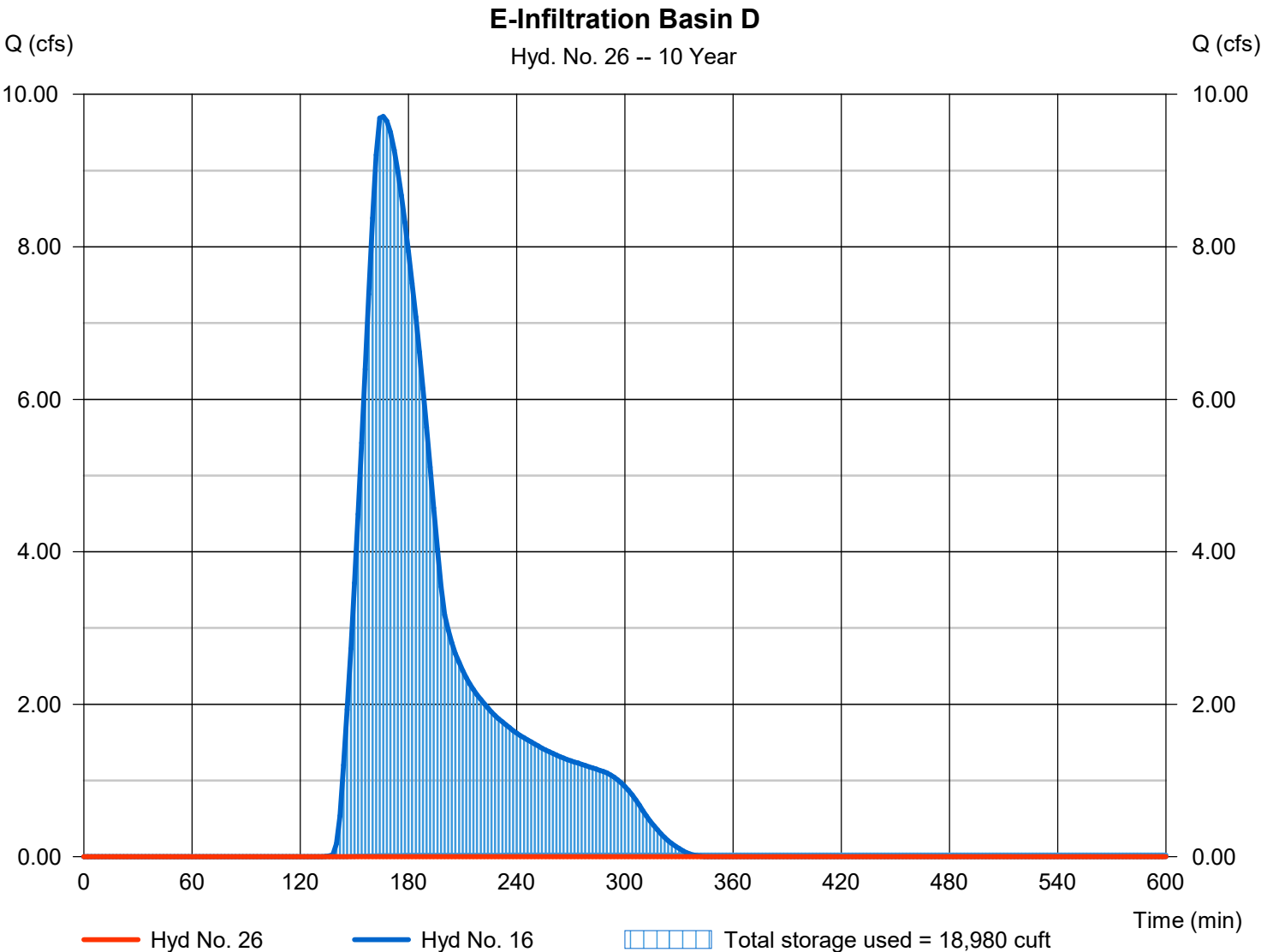
Tuesday, 04 / 7 / 2020

Hyd. No. 26

E-Infiltration Basin D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 470 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 16 - D	Max. Elevation	= 991.32 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 18,980 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

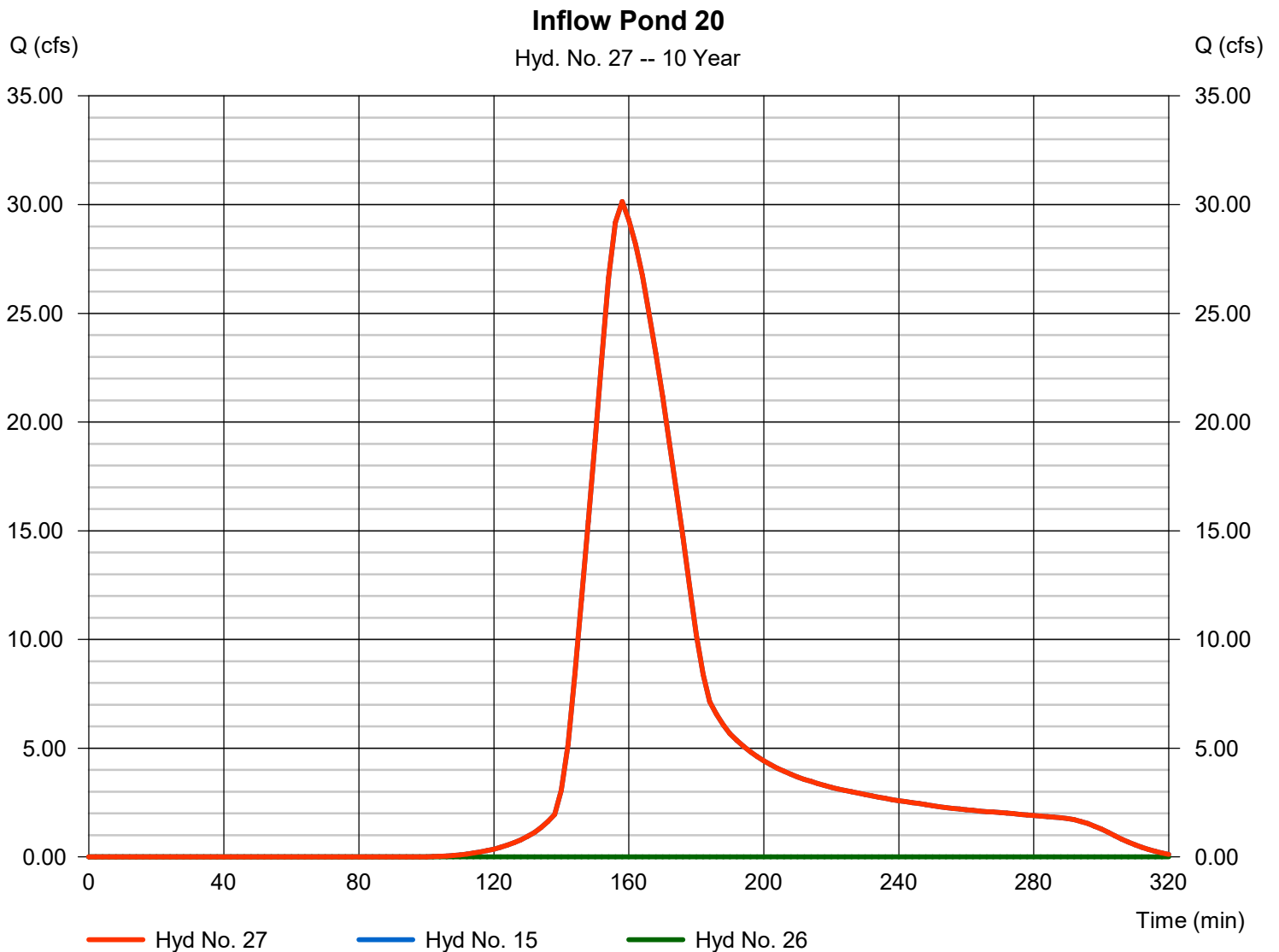
Tuesday, 04 / 7 / 2020

Hyd. No. 27

Inflow Pond 20

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 15, 26

Peak discharge = 30.14 cfs
Time to peak = 158 min
Hyd. volume = 71,856 cuft
Contrib. drain. area = 9.850 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

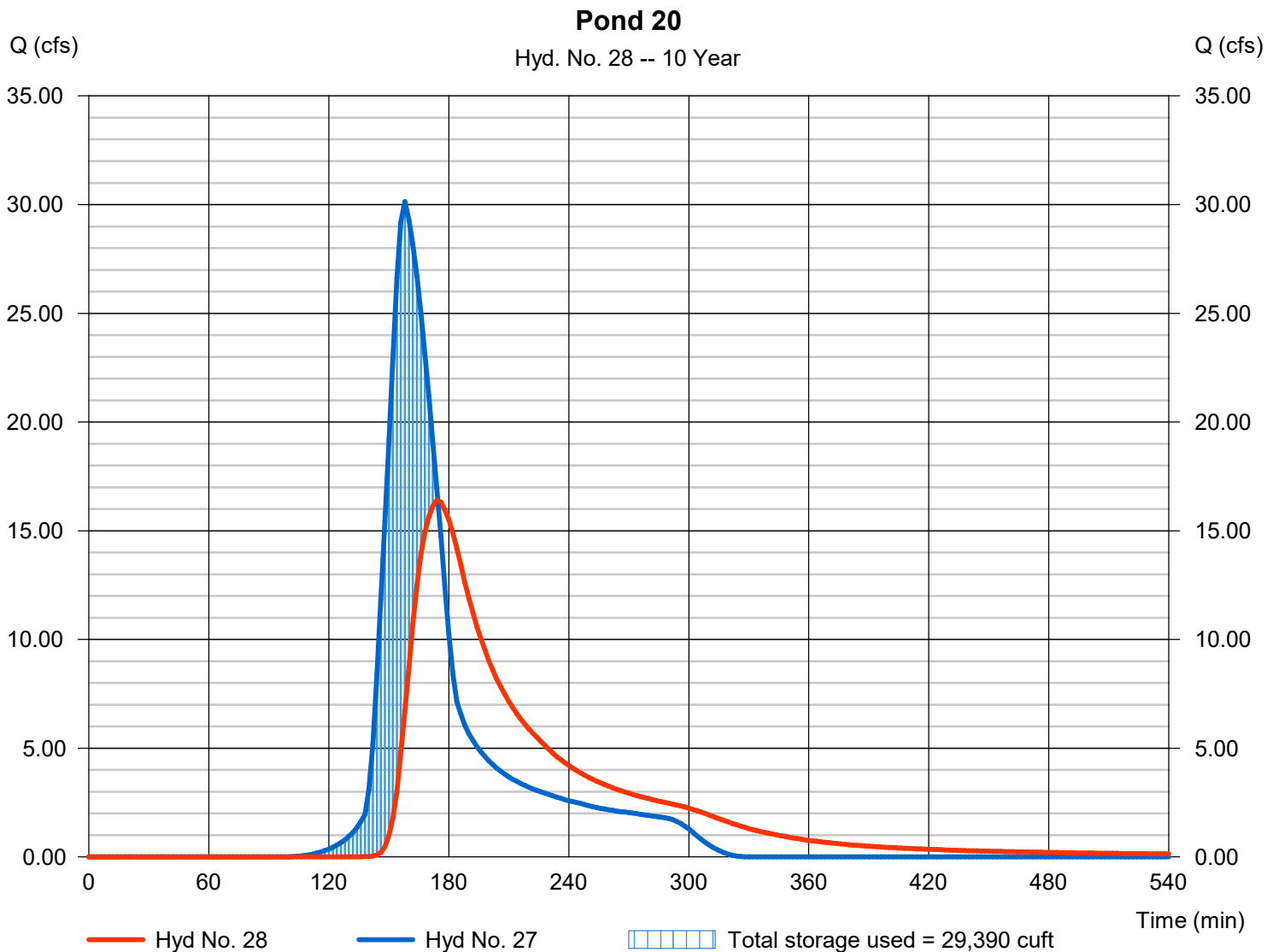
Tuesday, 04 / 7 / 2020

Hyd. No. 28

Pond 20

Hydrograph type	= Reservoir	Peak discharge	= 16.40 cfs
Storm frequency	= 10 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 71,525 cuft
Inflow hyd. No.	= 27 - Inflow Pond 20	Max. Elevation	= 992.23 ft
Reservoir name	= Pond 20	Max. Storage	= 29,390 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

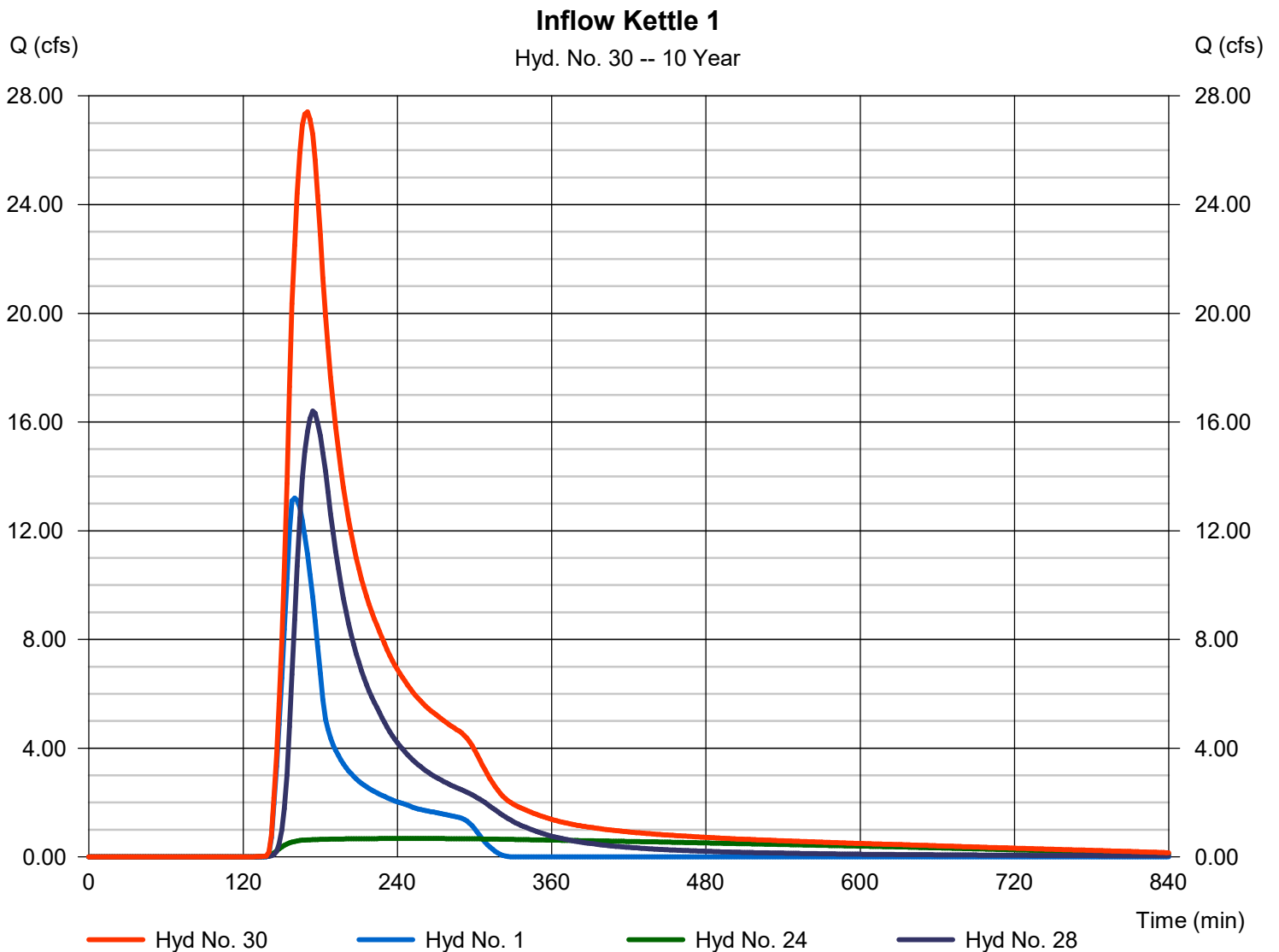
Tuesday, 04 / 7 / 2020

Hyd. No. 30

Inflow Kettle 1

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyds. = 1, 24, 28

Peak discharge = 27.41 cfs
 Time to peak = 170 min
 Hyd. volume = 130,676 cuft
 Contrib. drain. area = 12.520 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

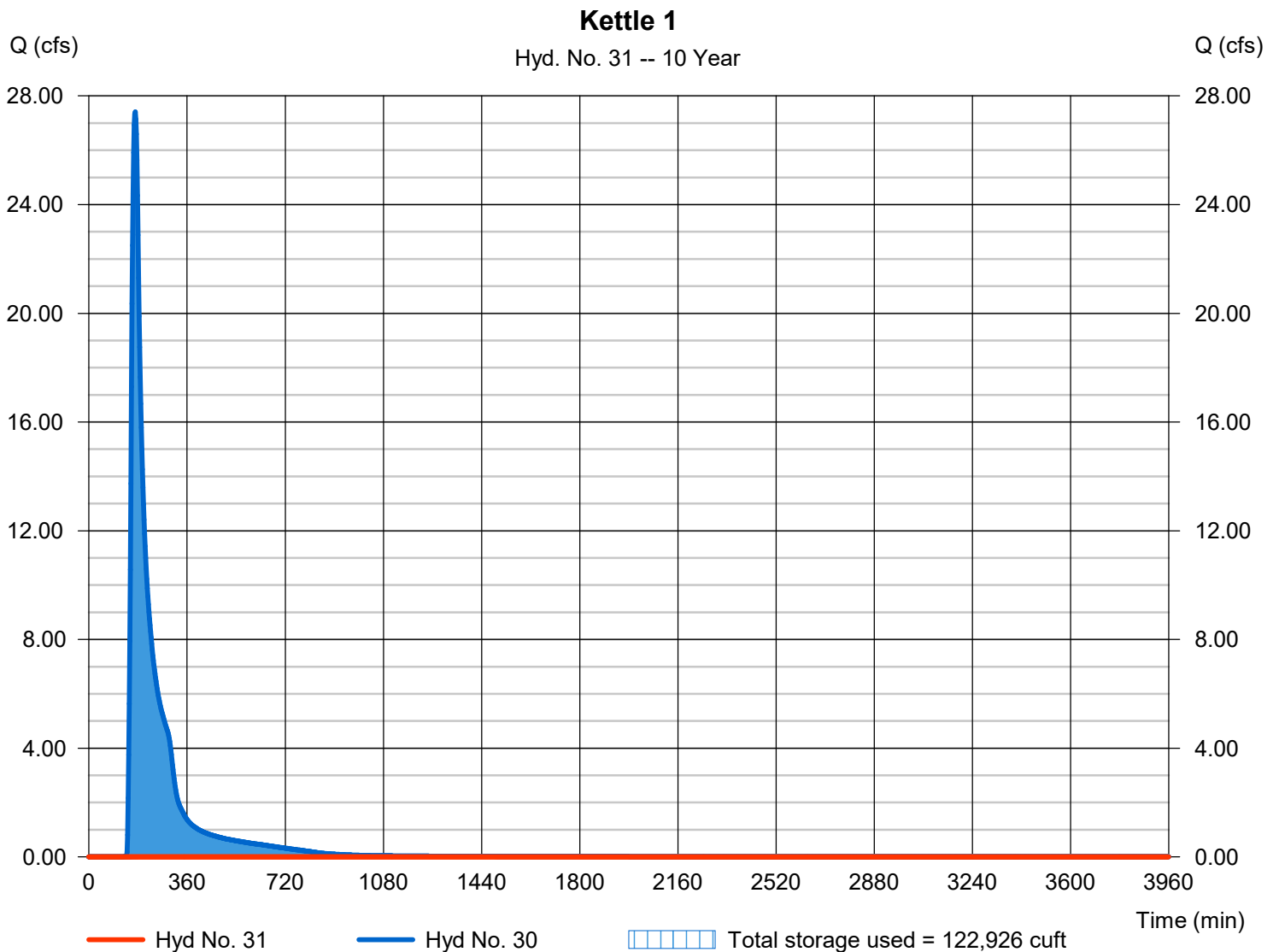
Tuesday, 04 / 7 / 2020

Hyd. No. 31

Kettle 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 310 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 30 - Inflow Kettle 1	Max. Elevation	= 952.83 ft
Reservoir name	= K-1	Max. Storage	= 122,926 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

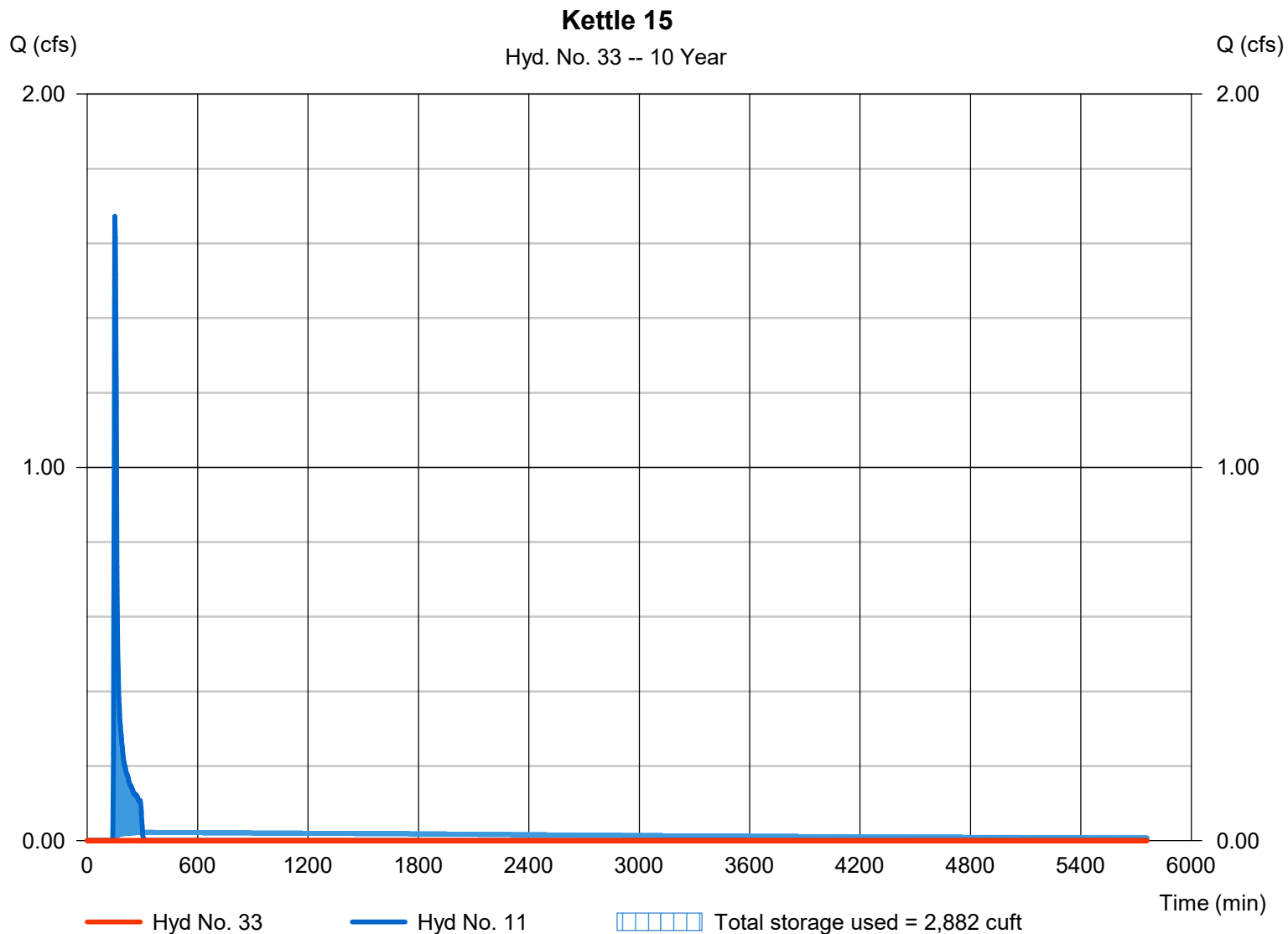
Tuesday, 04 / 7 / 2020

Hyd. No. 33

Kettle 15

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 11 - E-15	Max. Elevation	= 971.14 ft
Reservoir name	= K-15	Max. Storage	= 2,882 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

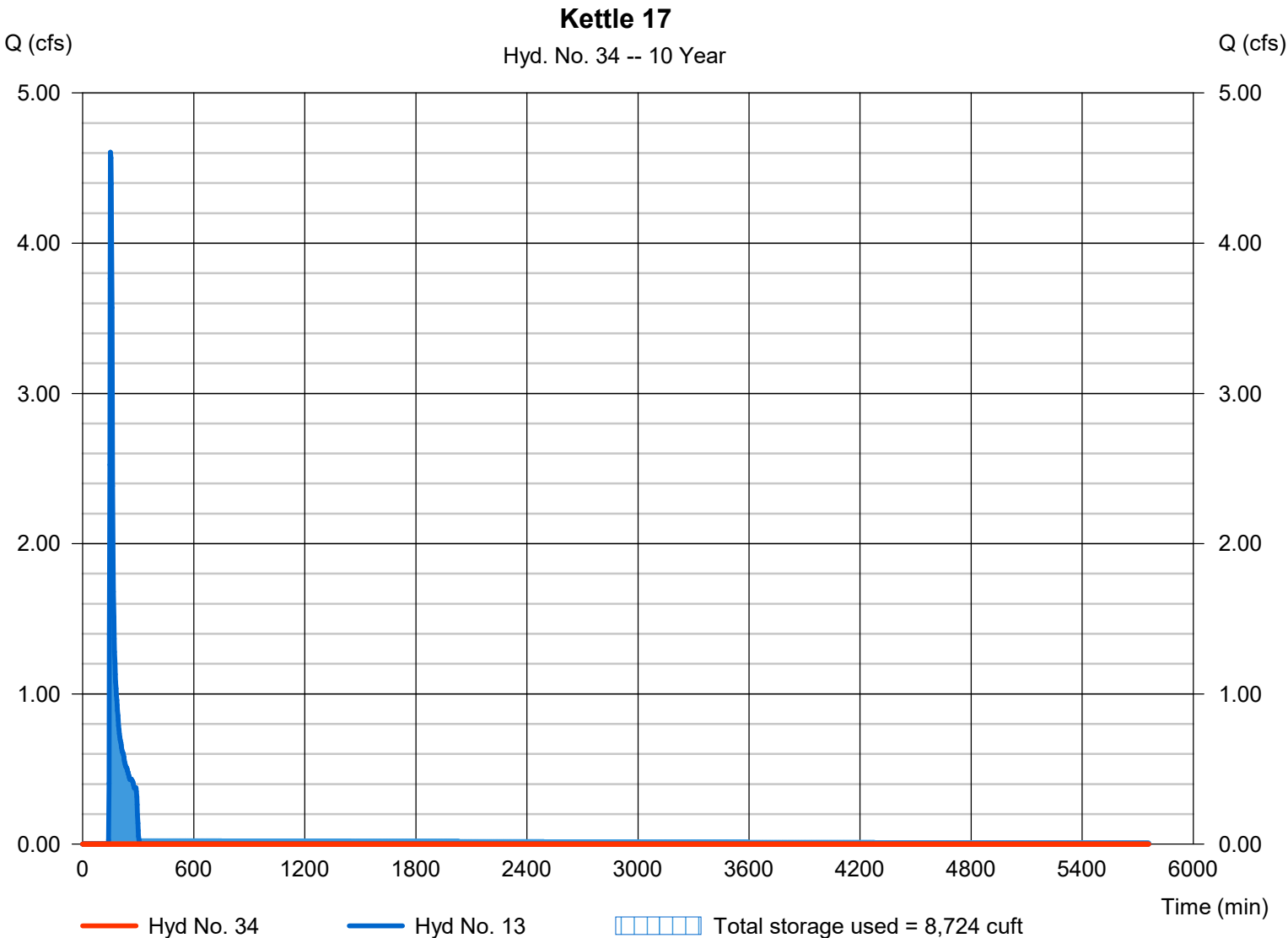
Tuesday, 04 / 7 / 2020

Hyd. No. 34

Kettle 17

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 552 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 13 - P-17	Max. Elevation	= 1011.82 ft
Reservoir name	= P-K-17	Max. Storage	= 8,724 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

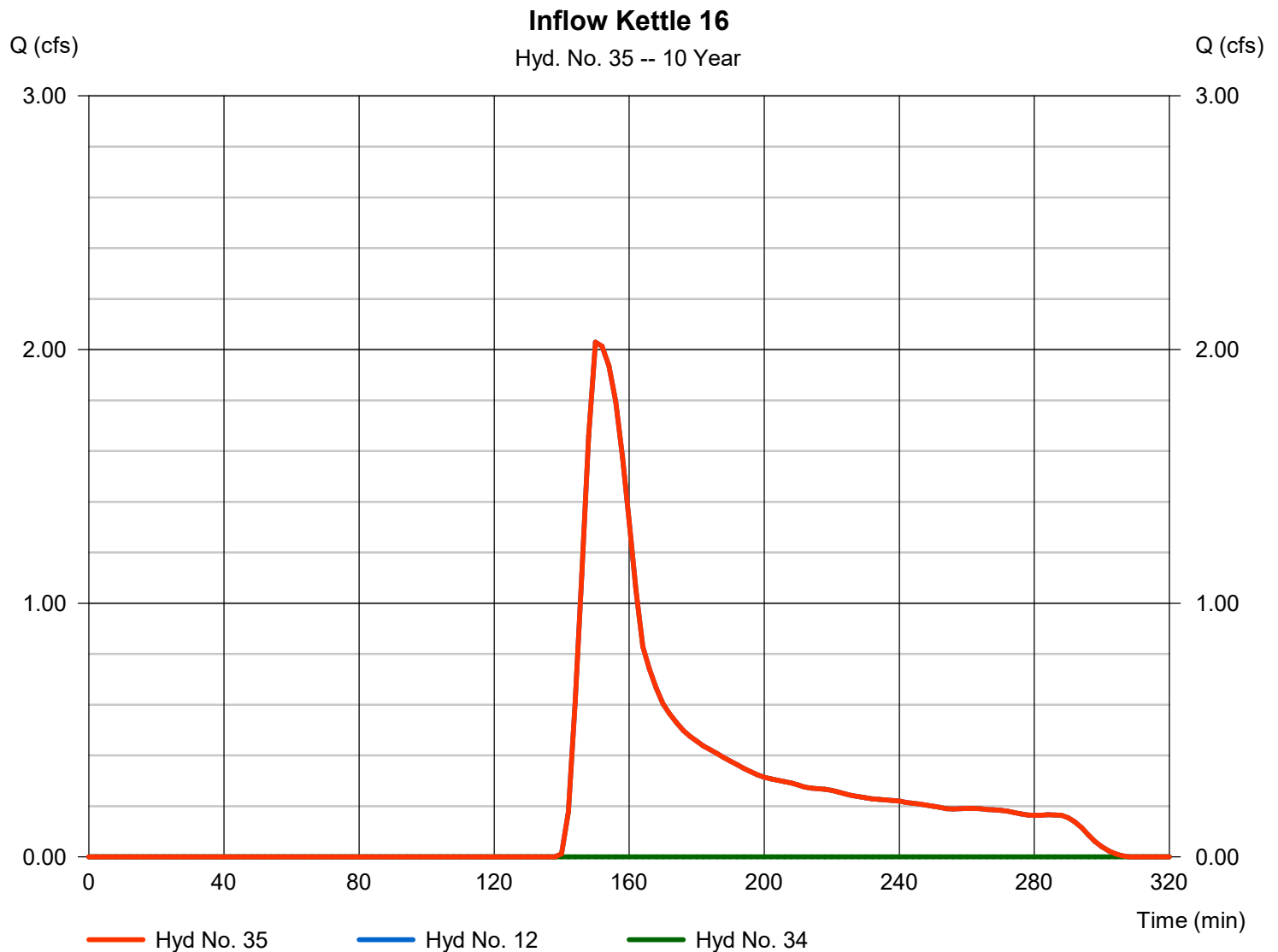
Tuesday, 04 / 7 / 2020

Hyd. No. 35

Inflow Kettle 16

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 12, 34

Peak discharge = 2.029 cfs
Time to peak = 150 min
Hyd. volume = 4,155 cuft
Contrib. drain. area = 1.560 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

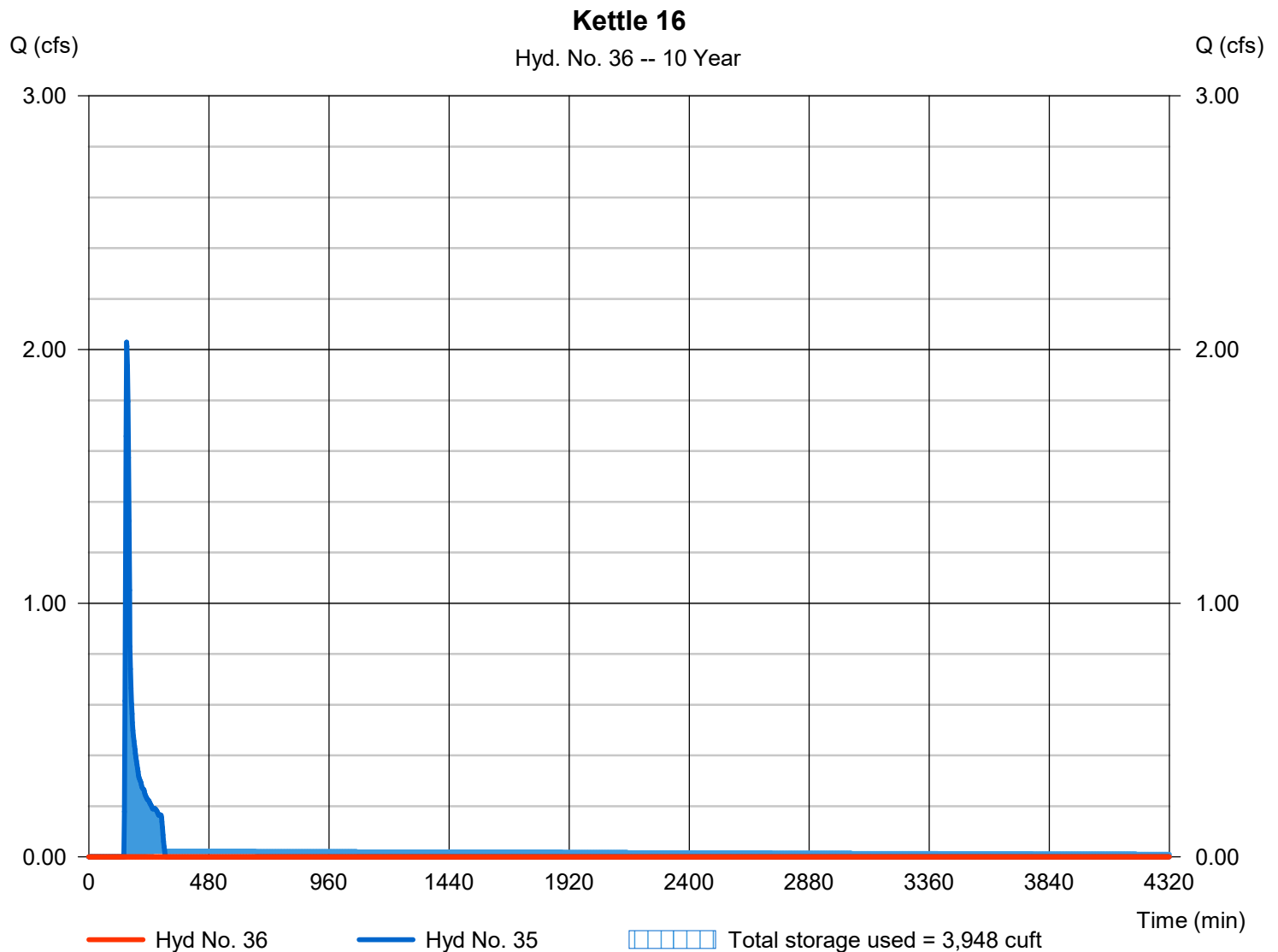
Tuesday, 04 / 7 / 2020

Hyd. No. 36

Kettle 16

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 212 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 35 - Inflow Kettle 16	Max. Elevation	= 1005.65 ft
Reservoir name	= K-16	Max. Storage	= 3,948 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

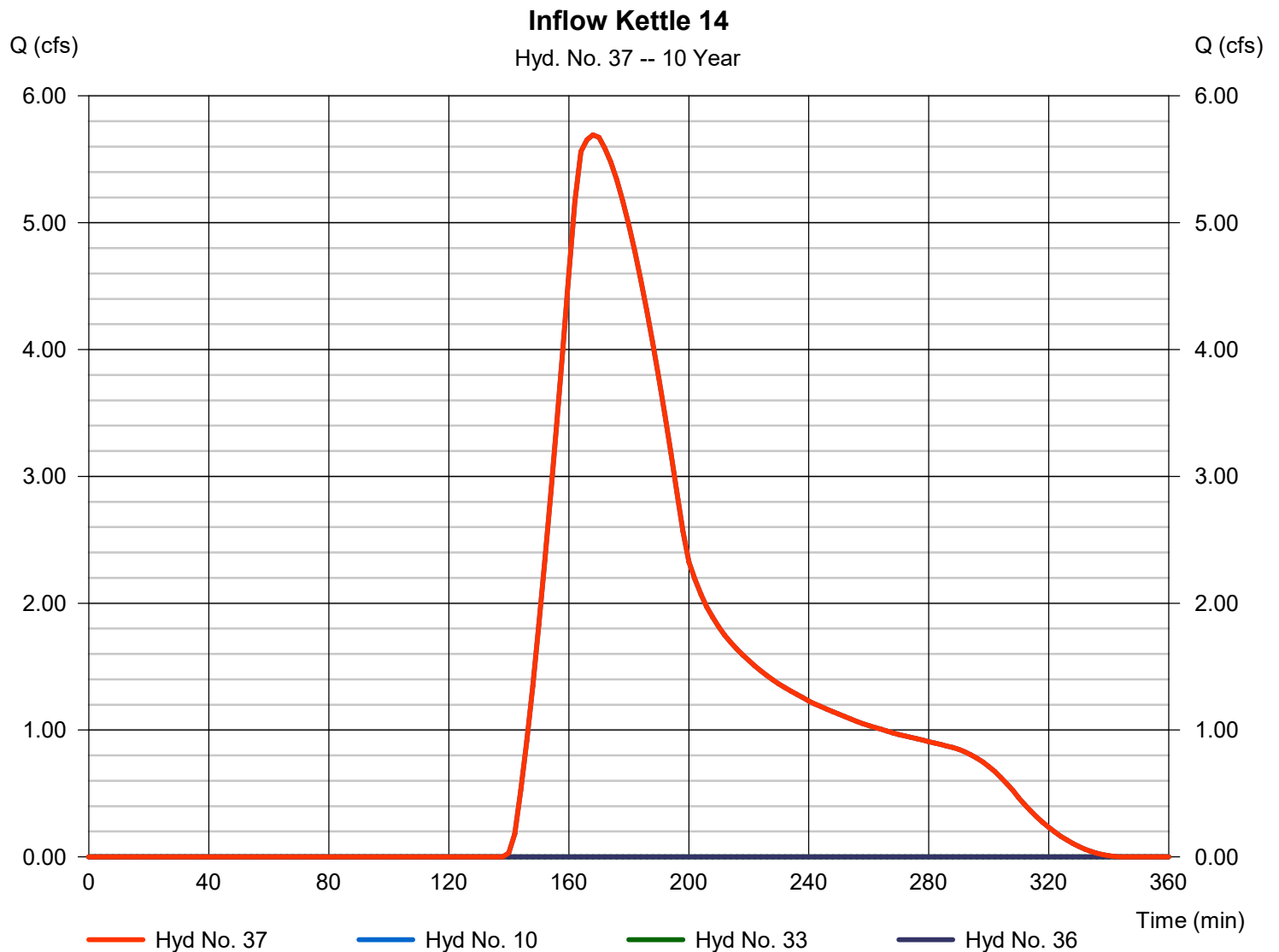
Tuesday, 04 / 7 / 2020

Hyd. No. 37

Inflow Kettle 14

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 10, 33, 36

Peak discharge = 5.693 cfs
Time to peak = 168 min
Hyd. volume = 21,401 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

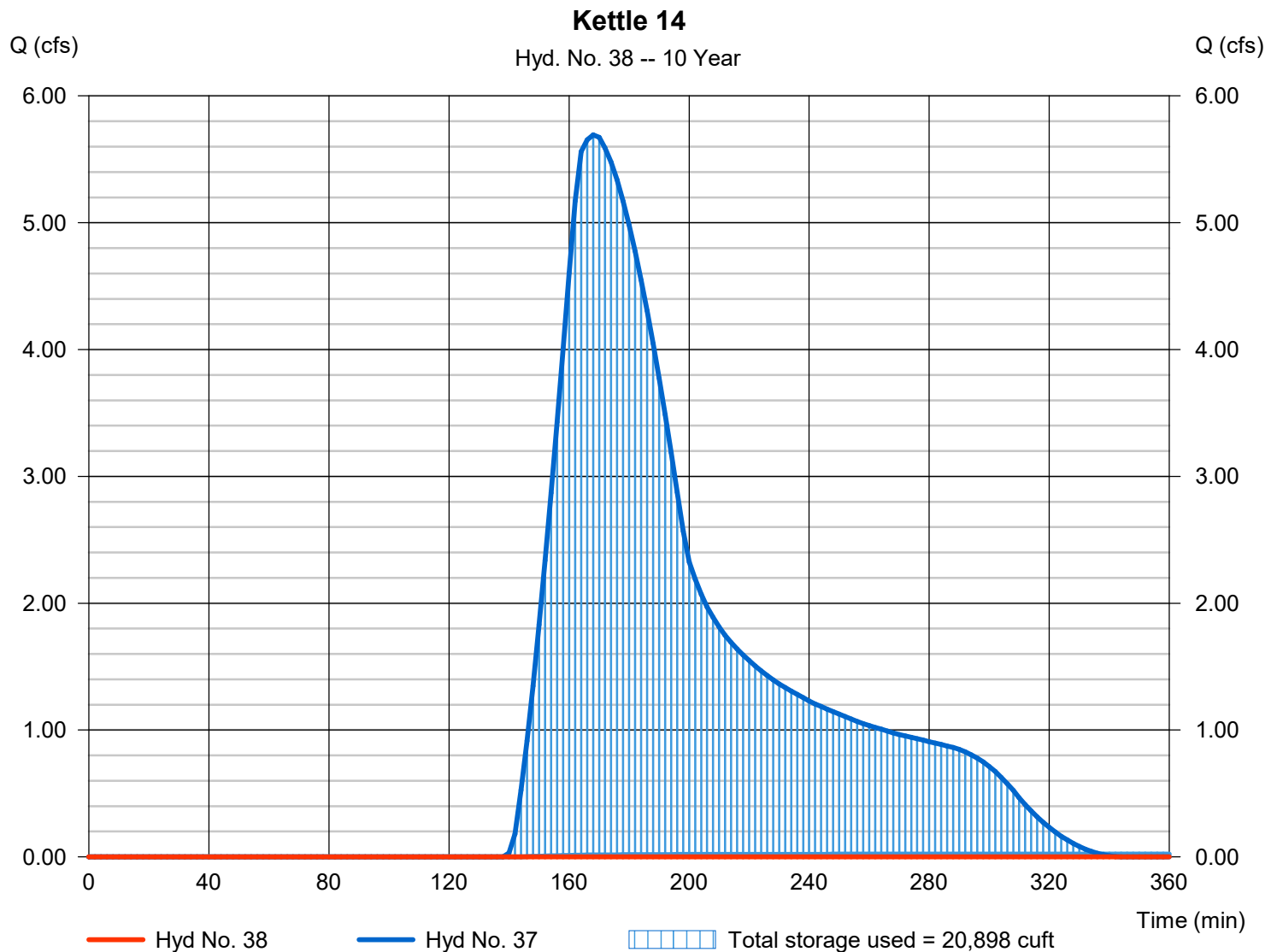
Tuesday, 04 / 7 / 2020

Hyd. No. 38

Kettle 14

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 37 - Inflow Kettle 14	Max. Elevation	= 958.24 ft
Reservoir name	= K-14	Max. Storage	= 20,898 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

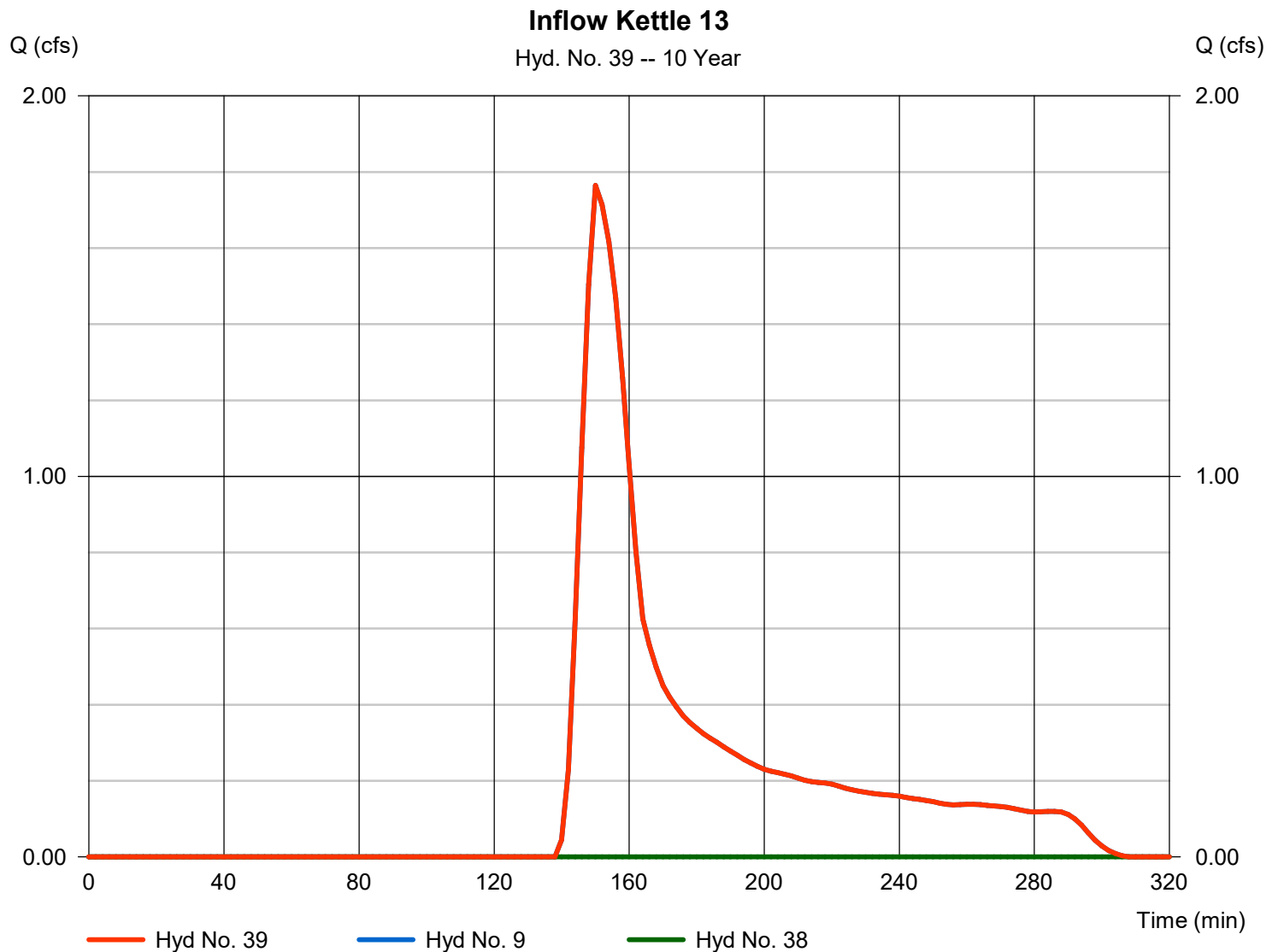
Tuesday, 04 / 7 / 2020

Hyd. No. 39

Inflow Kettle 13

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 9, 38

Peak discharge = 1.765 cfs
Time to peak = 150 min
Hyd. volume = 3,279 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

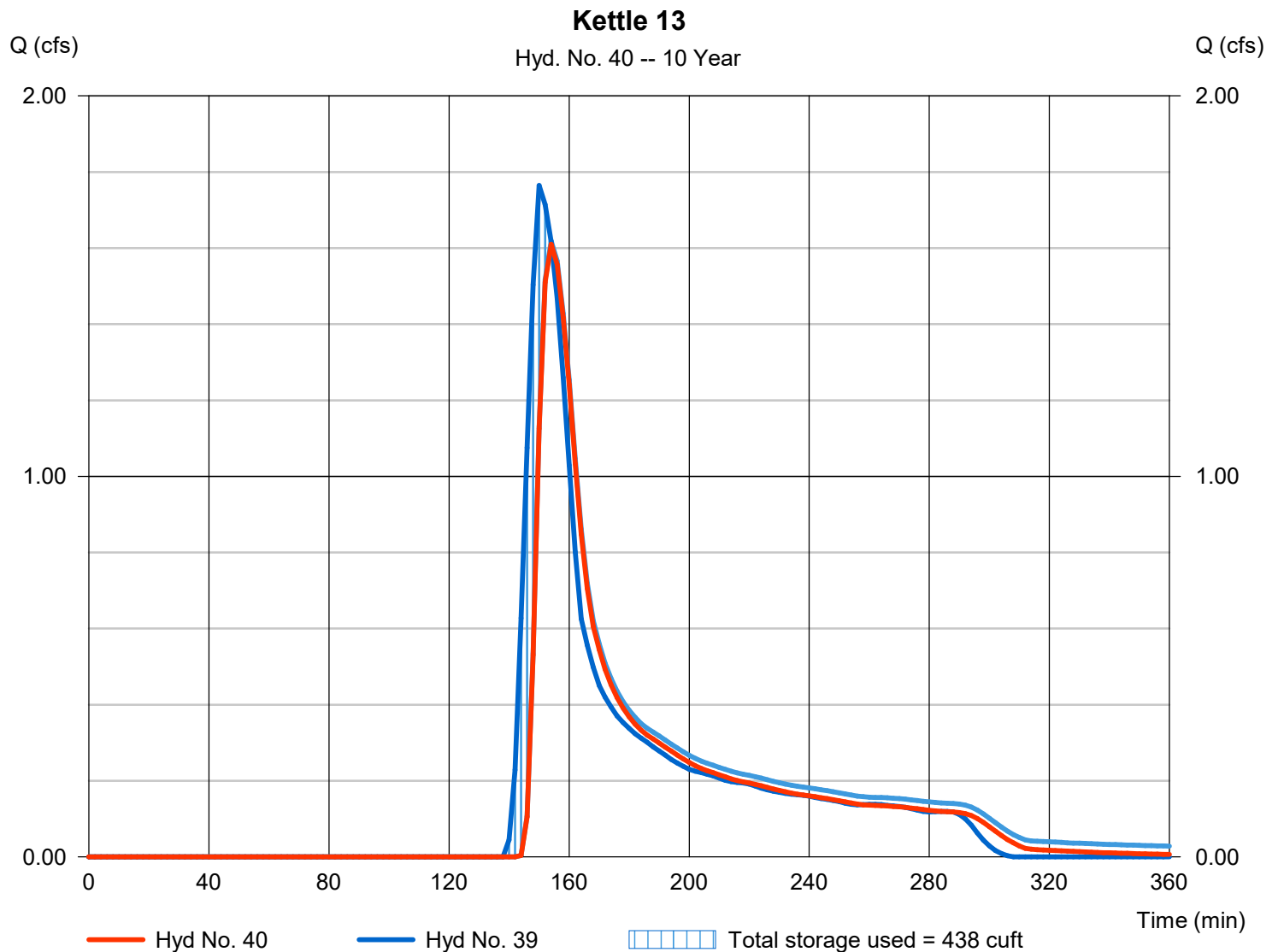
Tuesday, 04 / 7 / 2020

Hyd. No. 40

Kettle 13

Hydrograph type	= Reservoir	Peak discharge	= 1.610 cfs
Storm frequency	= 10 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 3,153 cuft
Inflow hyd. No.	= 39 - Inflow Kettle 13	Max. Elevation	= 959.84 ft
Reservoir name	= K-13	Max. Storage	= 438 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

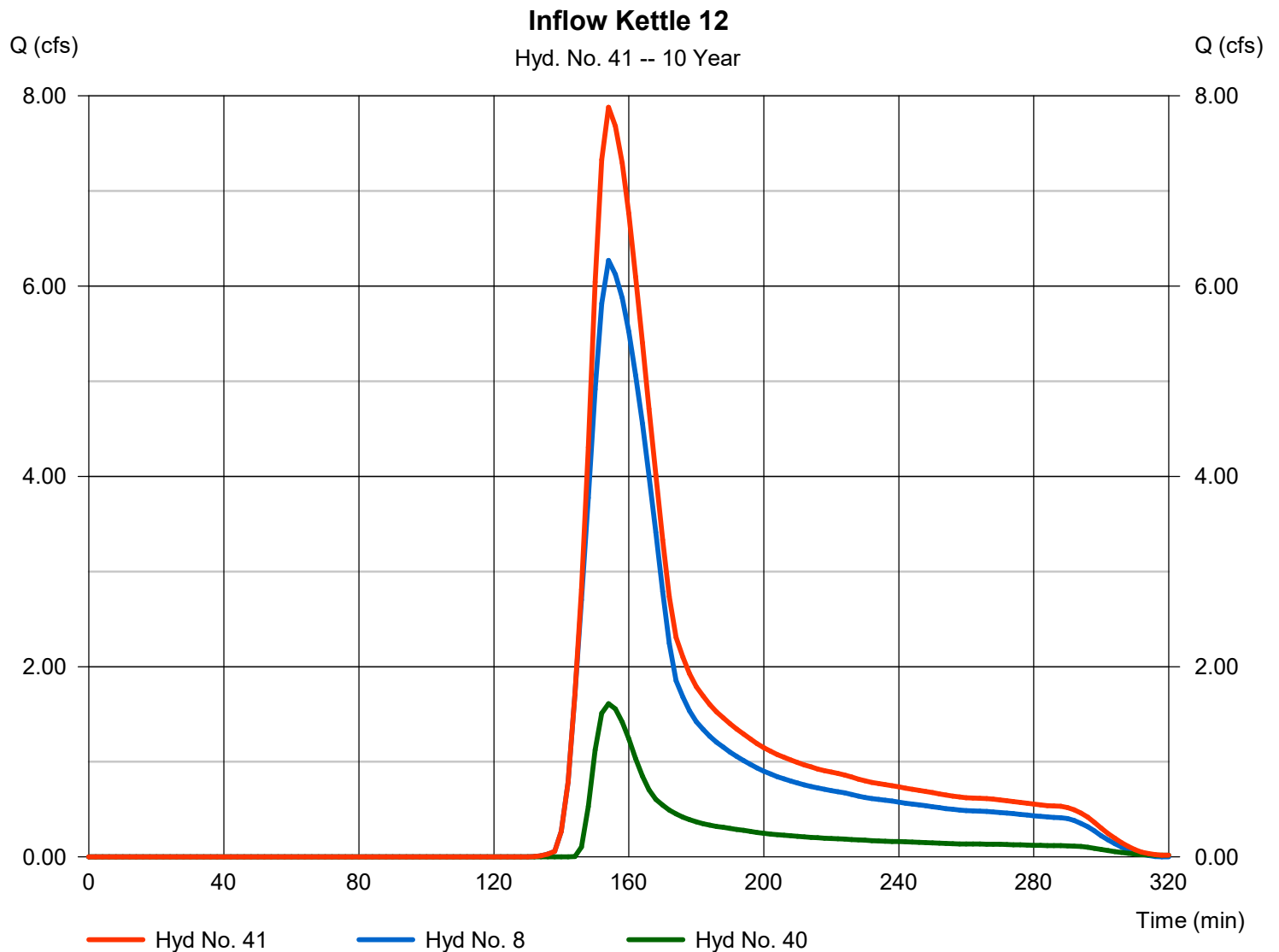
Tuesday, 04 / 7 / 2020

Hyd. No. 41

Inflow Kettle 12

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 8, 40

Peak discharge = 7.881 cfs
Time to peak = 154 min
Hyd. volume = 16,524 cuft
Contrib. drain. area = 2.910 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

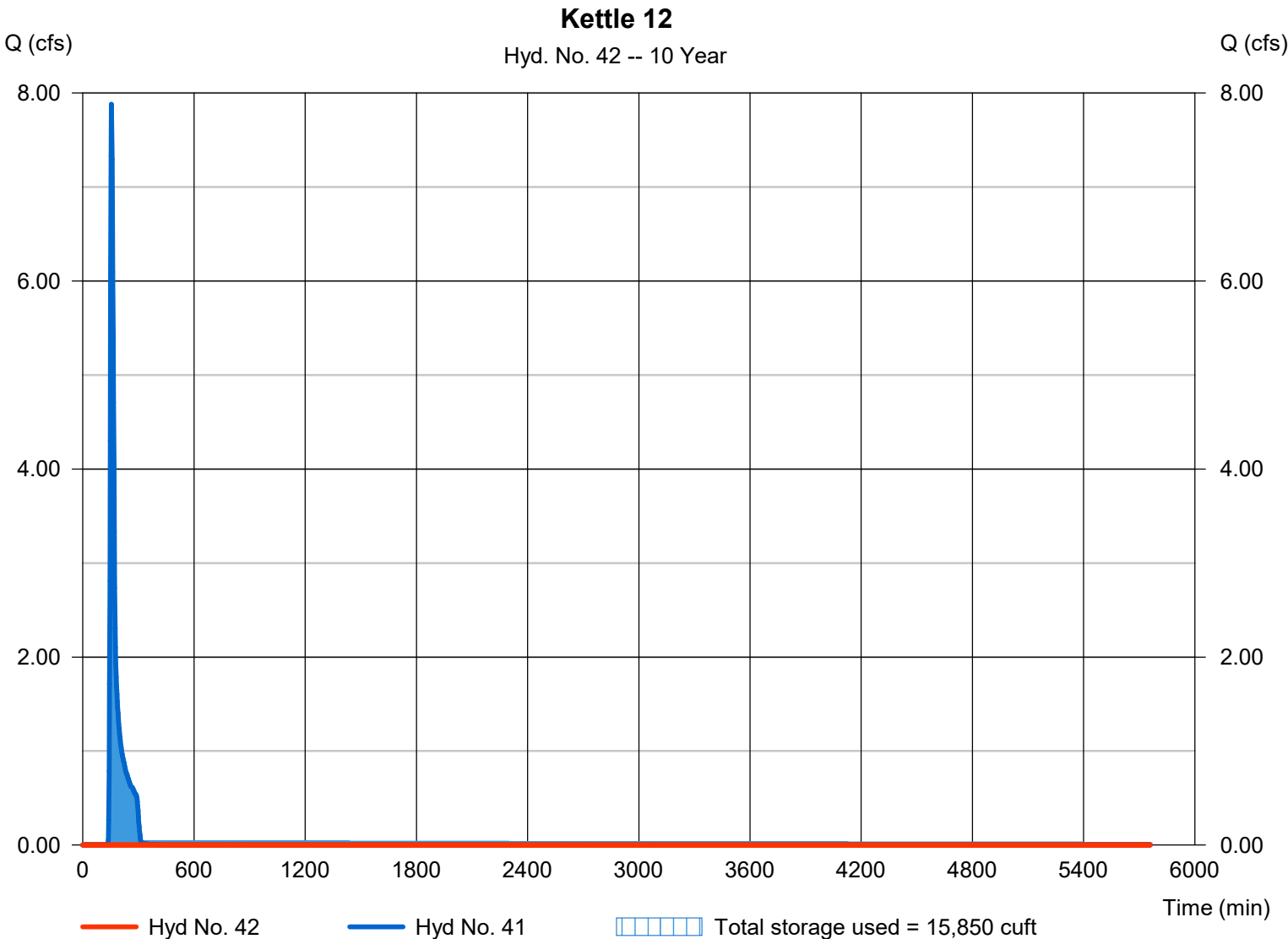
Tuesday, 04 / 7 / 2020

Hyd. No. 42

Kettle 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 2690 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 41 - Inflow Kettle 12	Max. Elevation	= 958.30 ft
Reservoir name	= K-12	Max. Storage	= 15,850 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

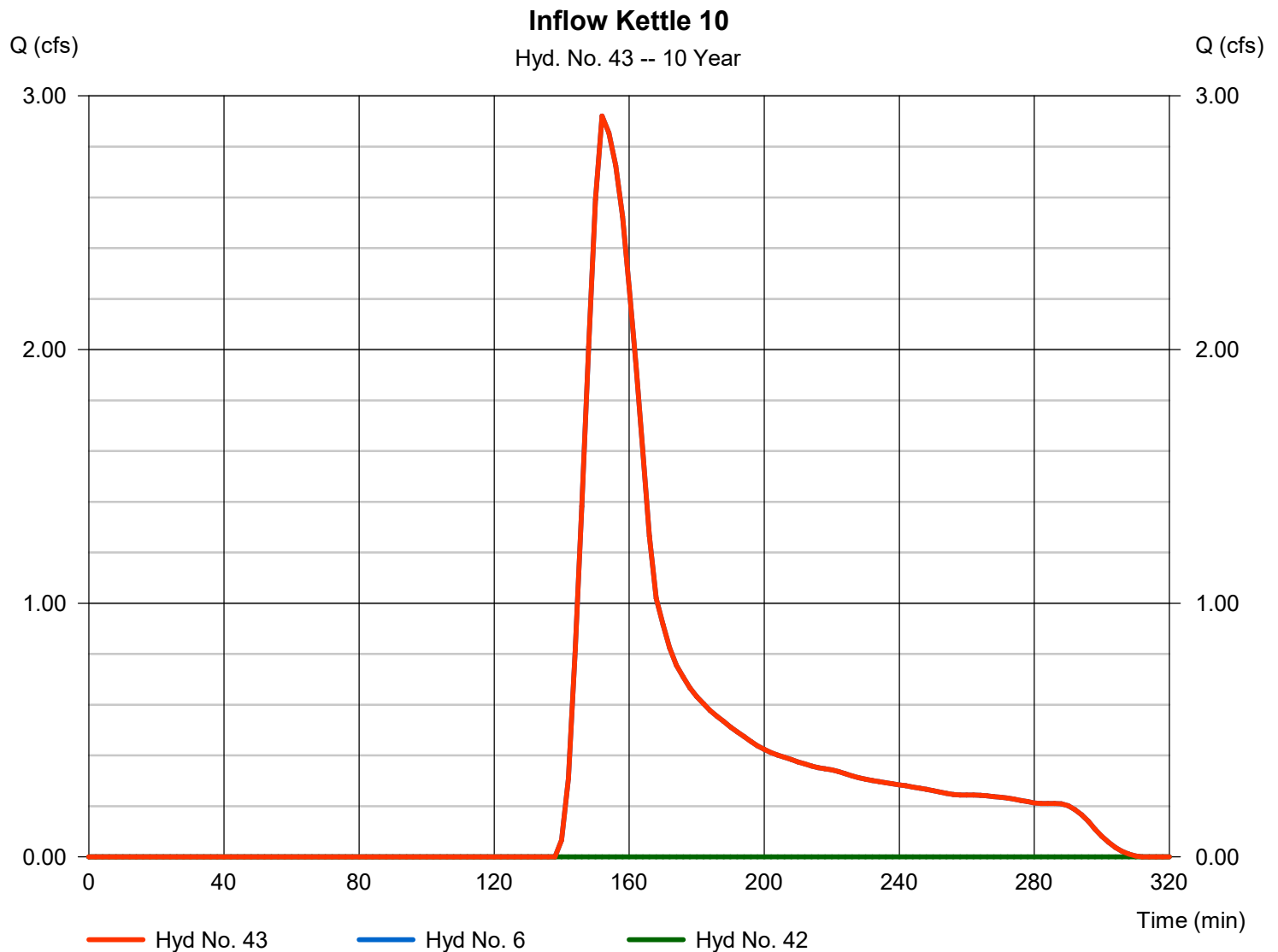
Tuesday, 04 / 7 / 2020

Hyd. No. 43

Inflow Kettle 10

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 6, 42

Peak discharge = 2.921 cfs
Time to peak = 152 min
Hyd. volume = 5,927 cuft
Contrib. drain. area = 1.820 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

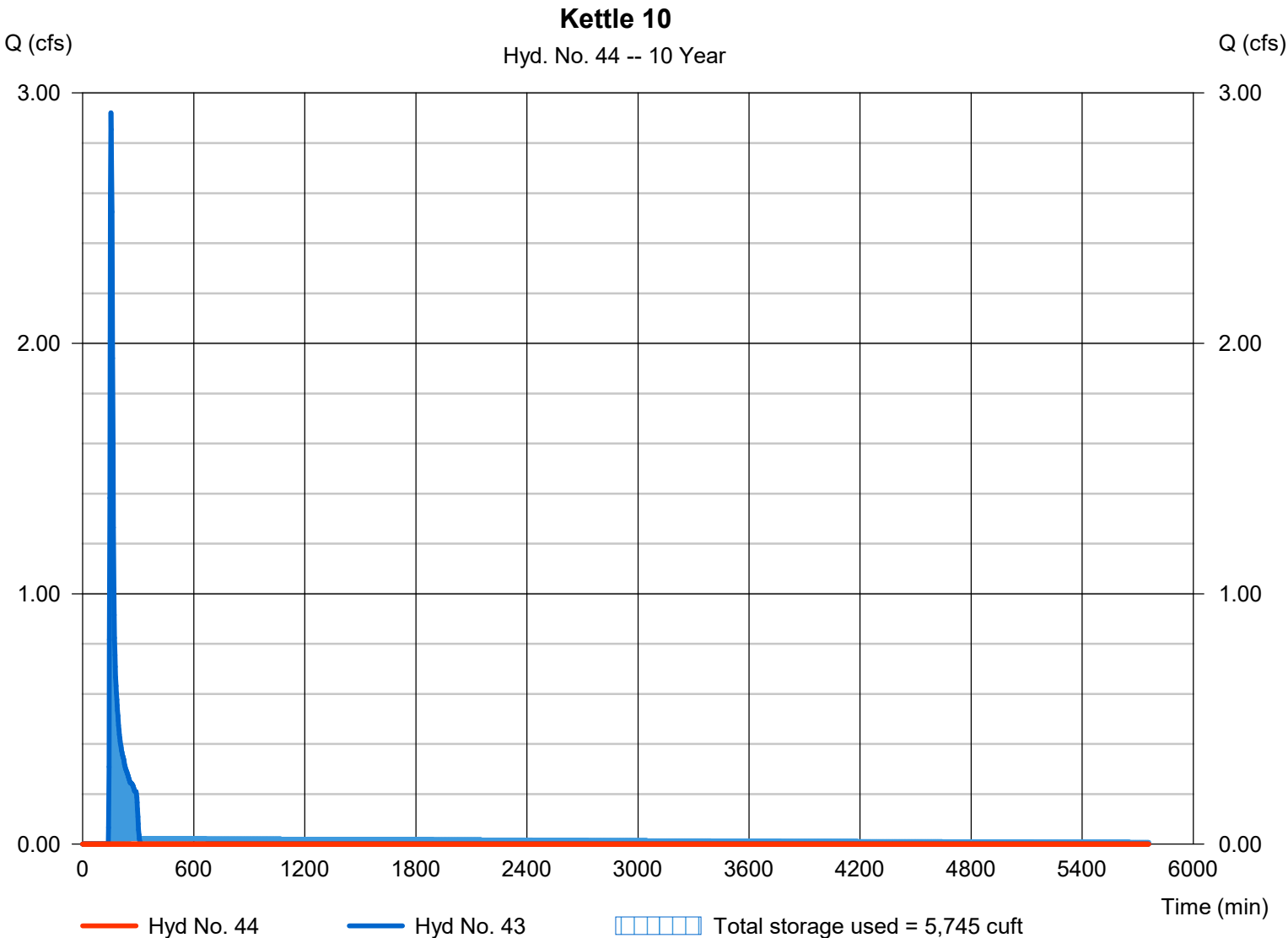
Tuesday, 04 / 7 / 2020

Hyd. No. 44

Kettle 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= 180 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 43 - Inflow Kettle 10	Max. Elevation	= 956.45 ft
Reservoir name	= K-10	Max. Storage	= 5,745 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	42.61	2	158	107,039	-----	-----	-----	P-1
2	SCS Runoff	12.70	2	150	19,660	-----	-----	-----	P-2
3	SCS Runoff	4.476	2	150	6,971	-----	-----	-----	P-3
4	SCS Runoff	70.95	2	158	167,361	-----	-----	-----	P-5
6	SCS Runoff	9.157	2	152	15,994	-----	-----	-----	P-10
7	SCS Runoff	25.81	2	152	43,227	-----	-----	-----	P-11
8	SCS Runoff	16.31	2	154	32,159	-----	-----	-----	P-12
9	SCS Runoff	5.768	2	150	9,046	-----	-----	-----	E-13
10	SCS Runoff	18.62	2	164	60,501	-----	-----	-----	E-14
11	SCS Runoff	5.252	2	150	8,180	-----	-----	-----	E-15
12	SCS Runoff	7.716	2	150	12,420	-----	-----	-----	P-16
13	SCS Runoff	17.51	2	150	28,185	-----	-----	-----	P-17
15	SCS Runoff	61.96	2	158	146,173	-----	-----	-----	P-20
16	SCS Runoff	26.01	2	164	80,424	-----	-----	-----	D
18	Reservoir	39.45	2	174	166,365	4	984.94	74,895	Pond 5
19	Combine	40.15	2	174	173,336	3, 18	-----	-----	Inflow Kettle 3
20	Reservoir	37.03	2	180	144,582	19	976.97	33,005	Kettle 3
21	Combine	38.69	2	180	164,241	2, 20	-----	-----	Inflow Kettle 2
22	Reservoir	10.99	2	244	89,076	21	974.59	88,285	Kettle 2
23	Combine	25.81	2	152	132,303	7, 22	-----	-----	Inflow Pond 11
24	Reservoir	16.95	2	160	132,285	23	967.45	18,781	Pond 11
26	Reservoir	0.000	2	778	0	16	993.77	57,198	E-Infiltration Basin D
27	Combine	61.96	2	158	146,173	15, 26	-----	-----	Inflow Pond 20
28	Reservoir	48.59	2	166	145,841	27	993.22	42,327	Pond 20
30	Combine	102.74	2	162	385,165	1, 24, 28,	-----	-----	Inflow Kettle 1
31	Reservoir	0.000	2	278	0	30	960.24	369,224	Kettle 1
33	Reservoir	0.000	2	218	0	11	972.18	7,891	Kettle 15
34	Reservoir	2.913	2	174	15,824	13	1012.17	15,452	Kettle 17
35	Combine	7.716	2	150	28,245	12, 34	-----	-----	Inflow Kettle 16
36	Reservoir	2.178	2	222	12,031	35	1007.14	17,096	Kettle 16
37	Combine	18.62	2	164	72,532	10, 33, 36	-----	-----	Inflow Kettle 14
PROPOSED_LCL_Stormwater Model_2020-04-08					Recession Period: 100 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	3.142	2	288	12,804	37	961.48	61,500	Kettle 14
39	Combine	5.768	2	150	21,850	9, 38	-----	-----	Inflow Kettle 13
40	Reservoir	4.971	2	154	21,635	39	960.14	1,043	Kettle 13
41	Combine	21.28	2	154	53,794	8, 40	-----	-----	Inflow Kettle 12
42	Reservoir	0.000	2	138	0	41	960.49	52,216	Kettle 12
43	Combine	9.157	2	152	15,994	6, 42	-----	-----	Inflow Kettle 10
44	Reservoir	0.000	2	254	0	43	958.29	15,664	Kettle 10
PROPOSED_LCL_Stormwater Model_2020-04-06					Return Period: 100 Year			Tuesday, 04 / 7 / 2020	

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

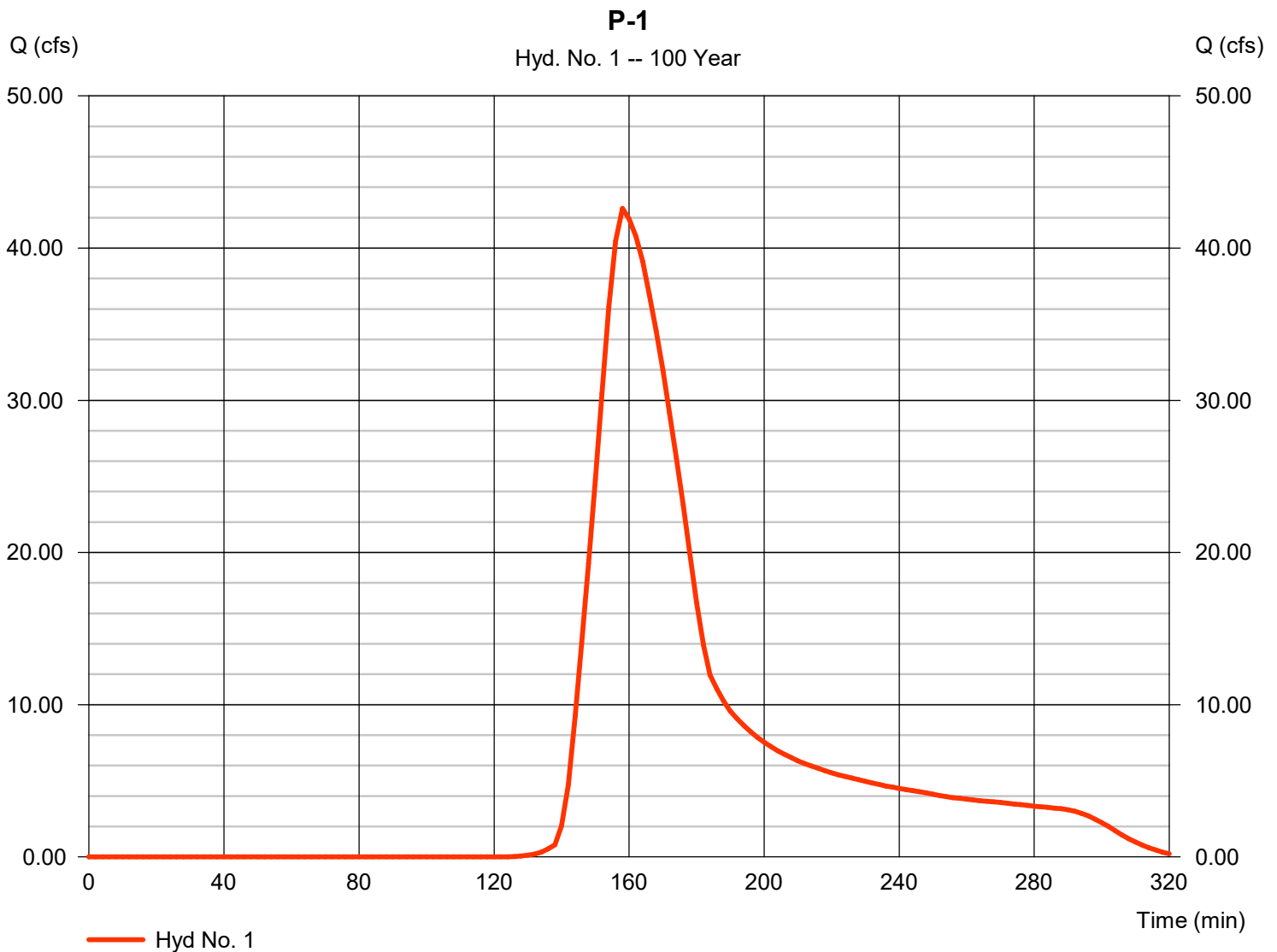
Tuesday, 04 / 7 / 2020

Hyd. No. 1

P-1

Hydrograph type	= SCS Runoff	Peak discharge	= 42.61 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 107,039 cuft
Drainage area	= 12.520 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 12.520$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

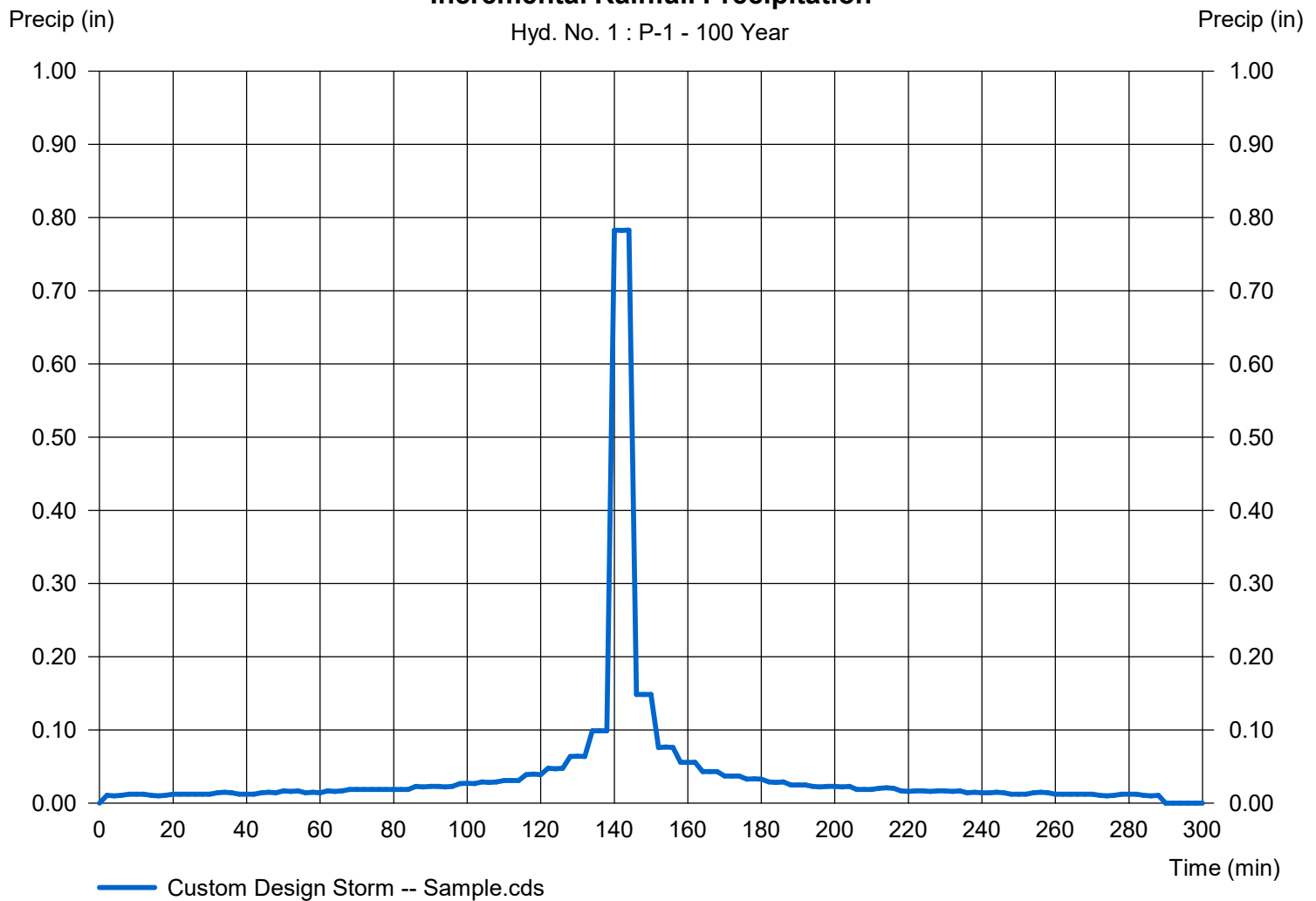
Hyd. No. 1

P-1

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : P-1 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

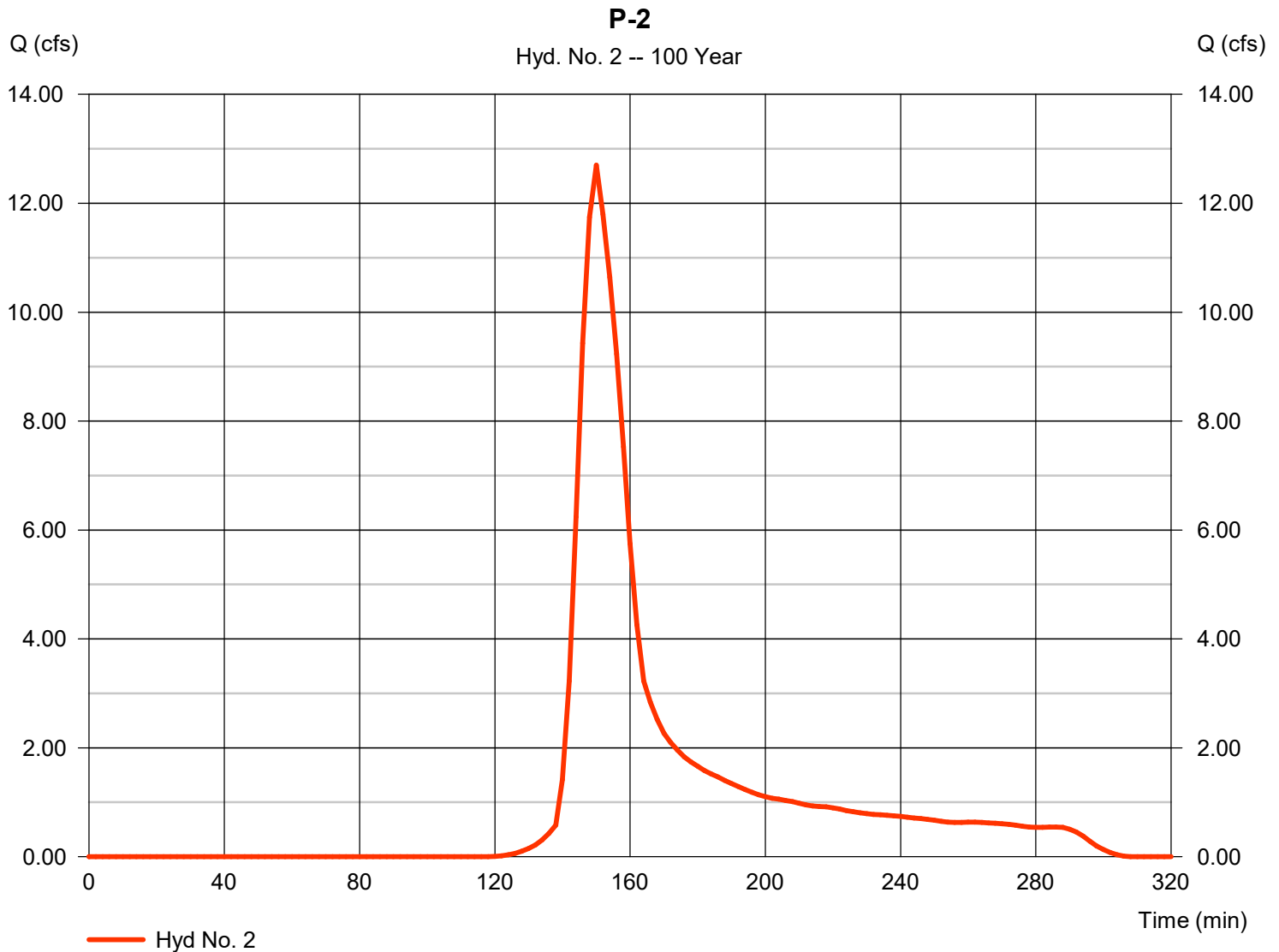
Tuesday, 04 / 7 / 2020

Hyd. No. 2

P-2

Hydrograph type	= SCS Runoff	Peak discharge	= 12.70 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 19,660 cuft
Drainage area	= 2.040 ac	Curve number	= 66*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 2.040$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

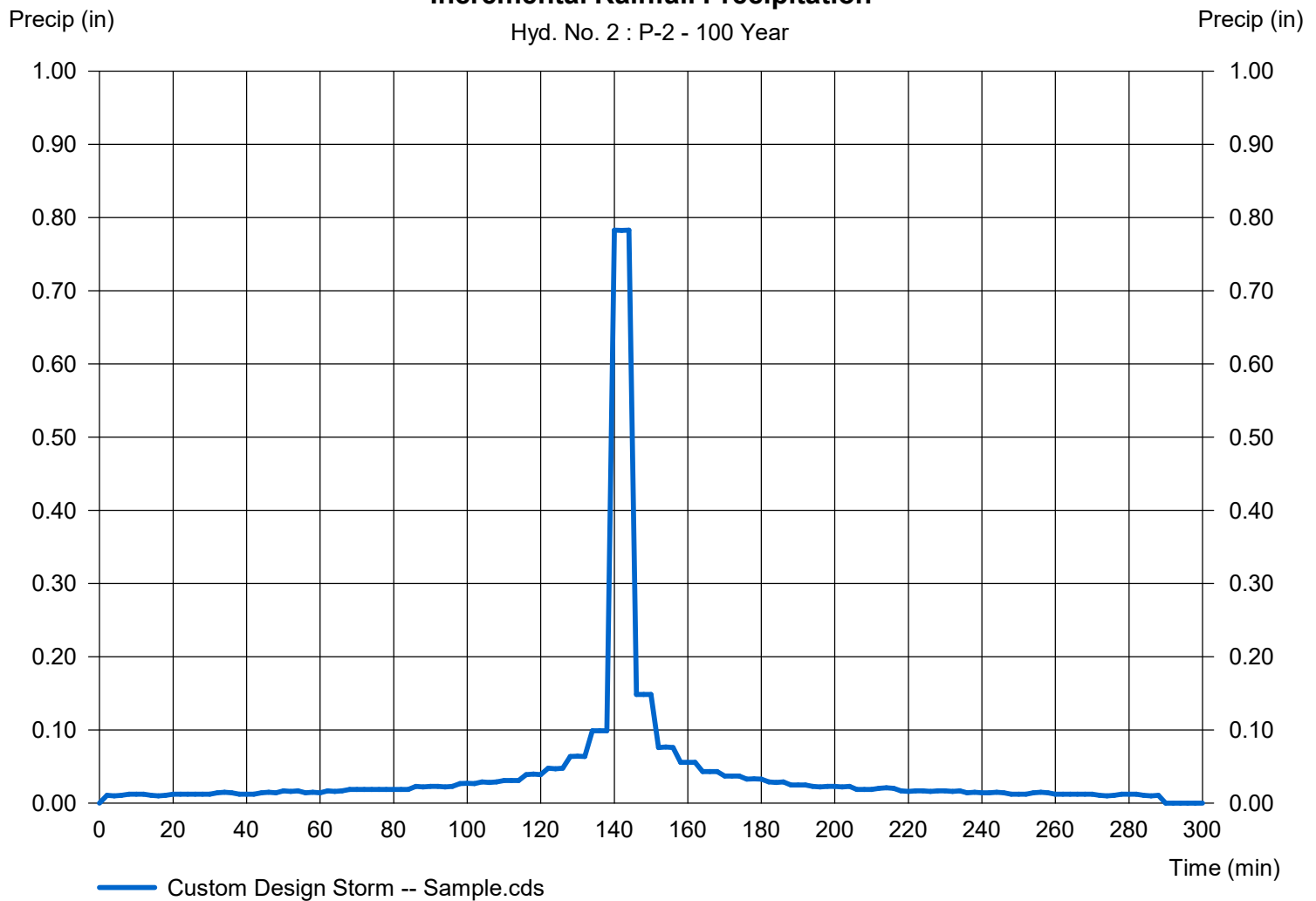
Hyd. No. 2

P-2

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : P-2 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

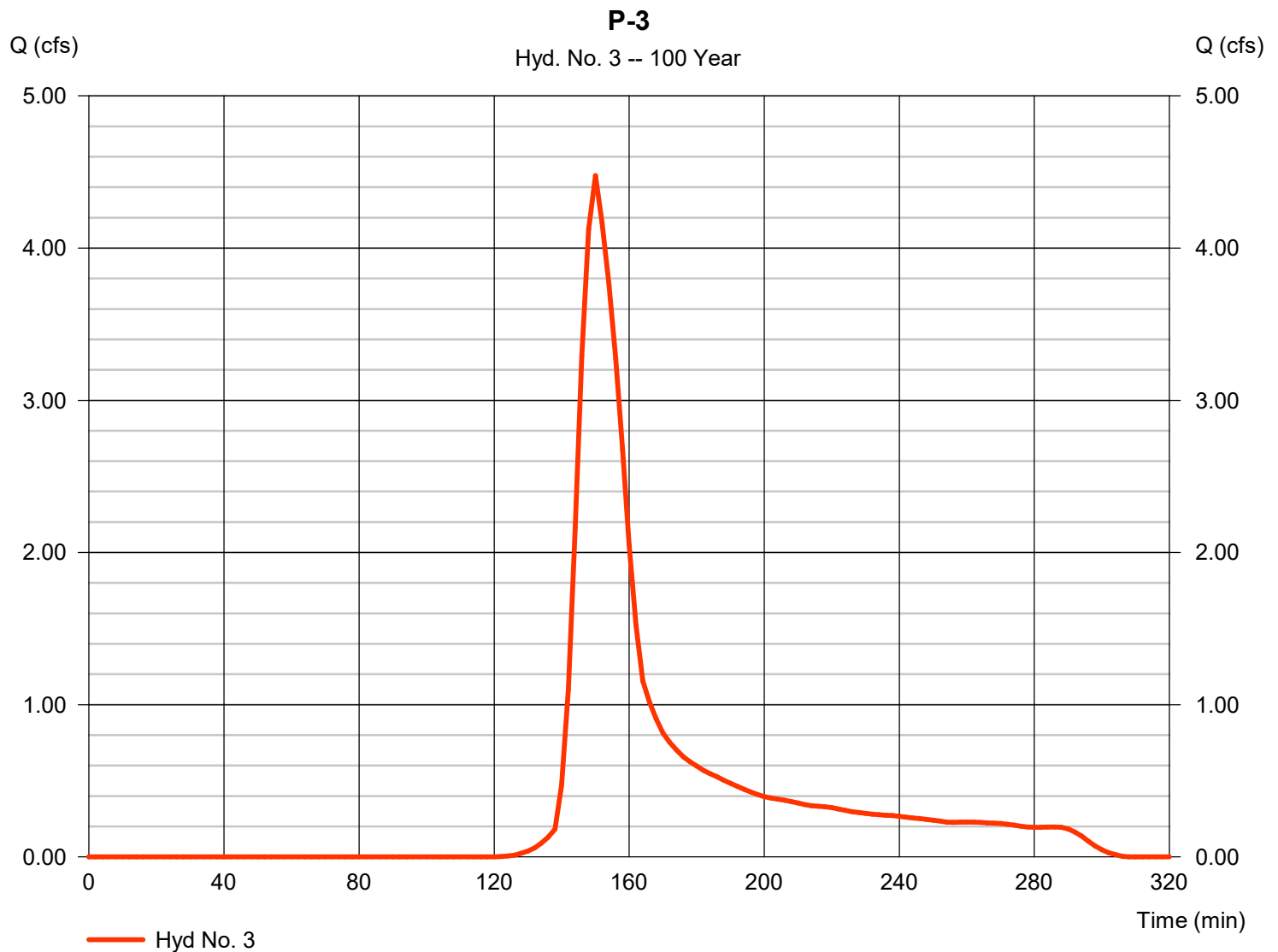
Tuesday, 04 / 7 / 2020

Hyd. No. 3

P-3

Hydrograph type	= SCS Runoff	Peak discharge	= 4.476 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 6,971 cuft
Drainage area	= 0.750 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 0.750$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

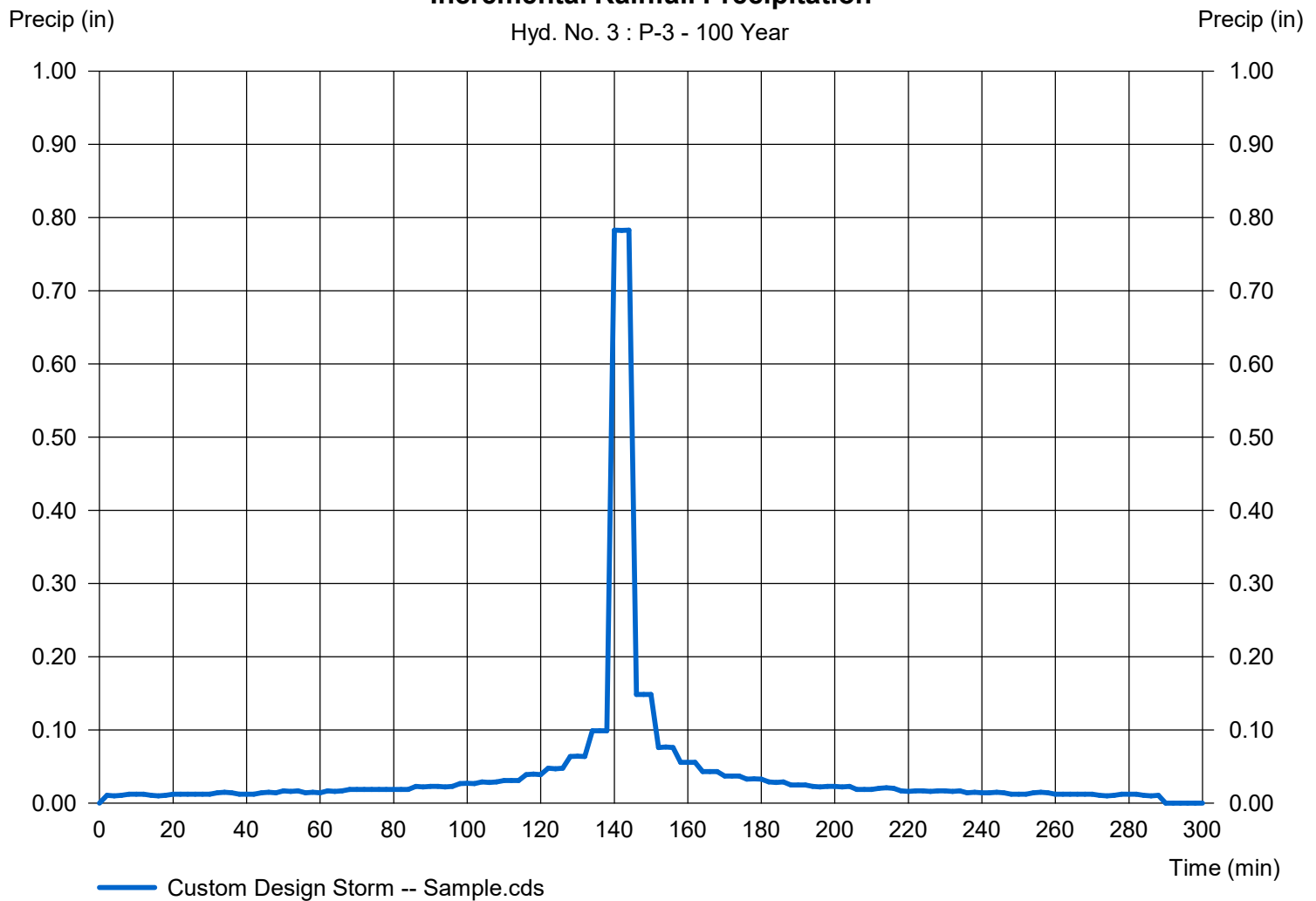
Hyd. No. 3

P-3

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : P-3 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

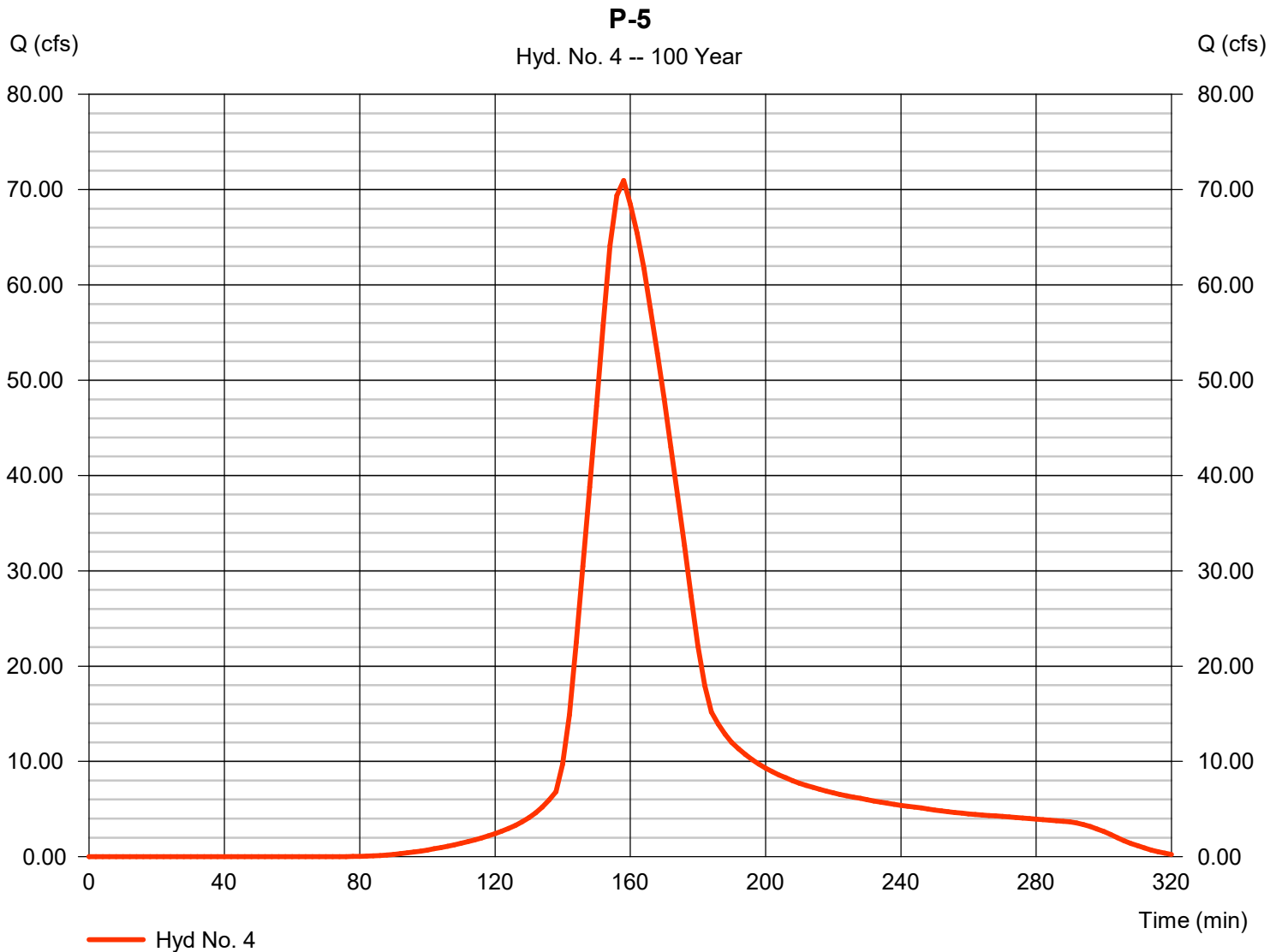
Tuesday, 04 / 7 / 2020

Hyd. No. 4

P-5

Hydrograph type	= SCS Runoff	Peak discharge	= 70.95 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 167,361 cuft
Drainage area	= 11.570 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.040 \times 98) + (5.790 \times 60)] / 11.570$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

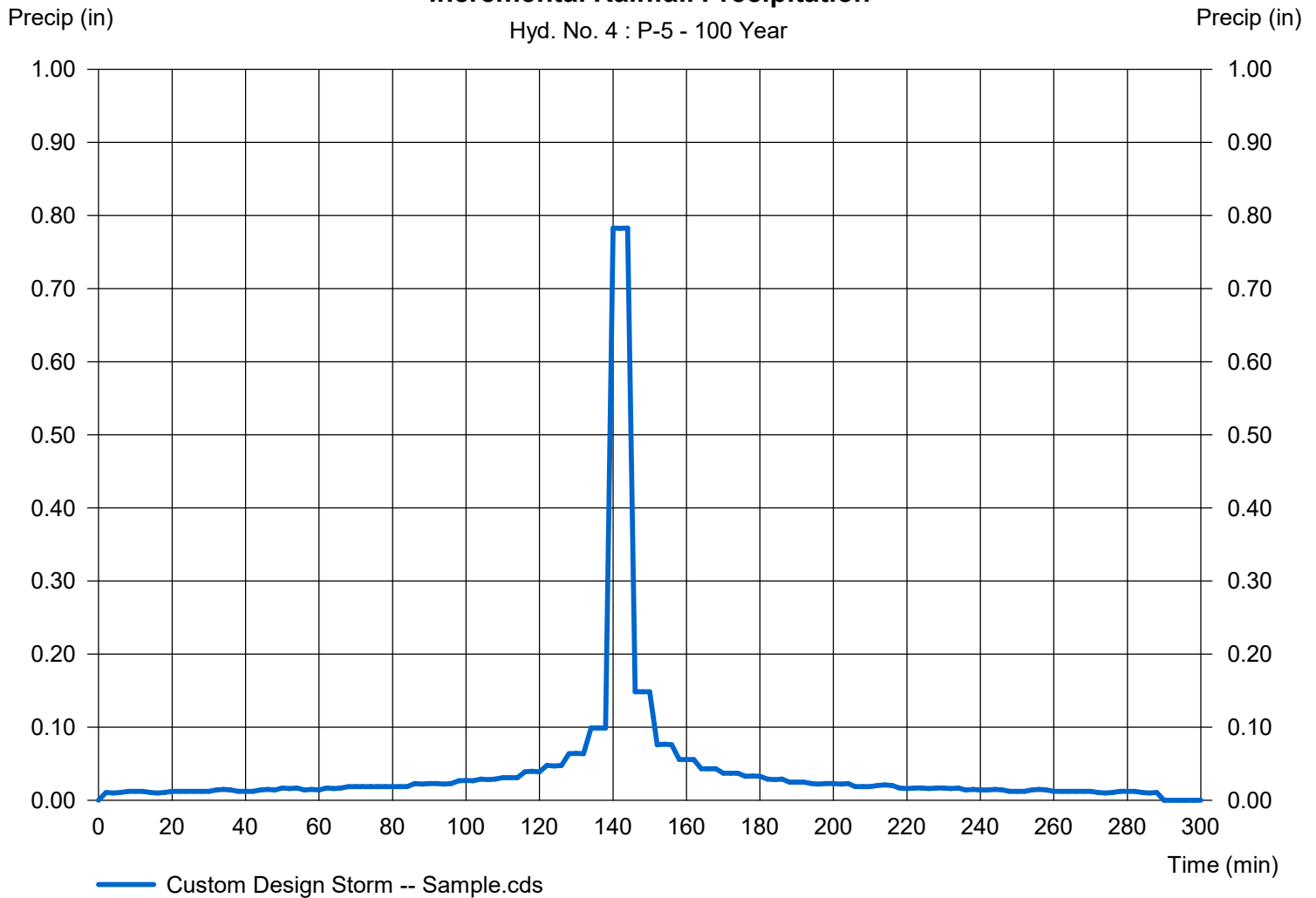
Hyd. No. 4

P-5

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : P-5 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

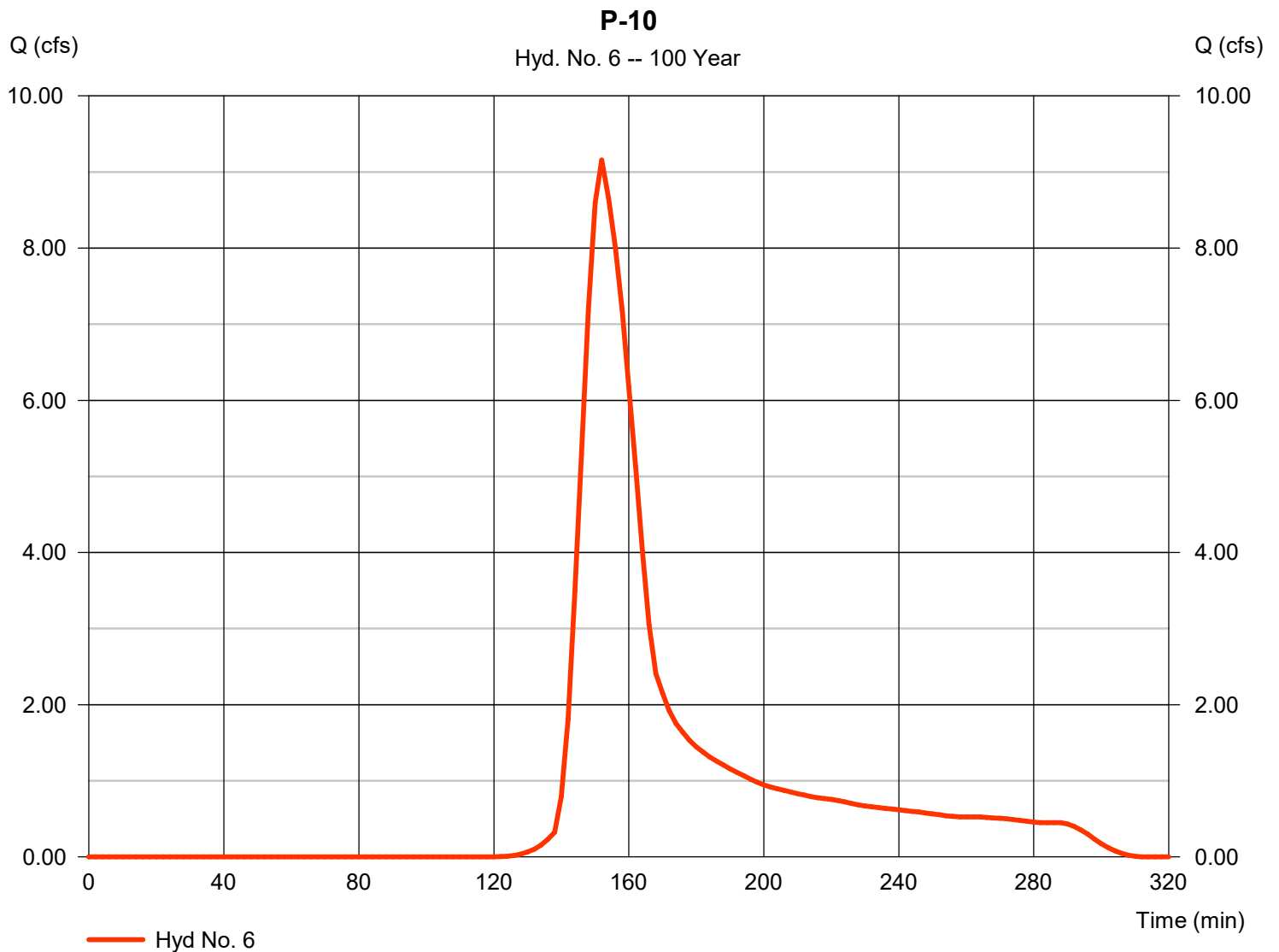
Tuesday, 04 / 7 / 2020

Hyd. No. 6

P-10

Hydrograph type	= SCS Runoff	Peak discharge	= 9.157 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 15,994 cuft
Drainage area	= 1.820 ac	Curve number	= 65*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.820$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

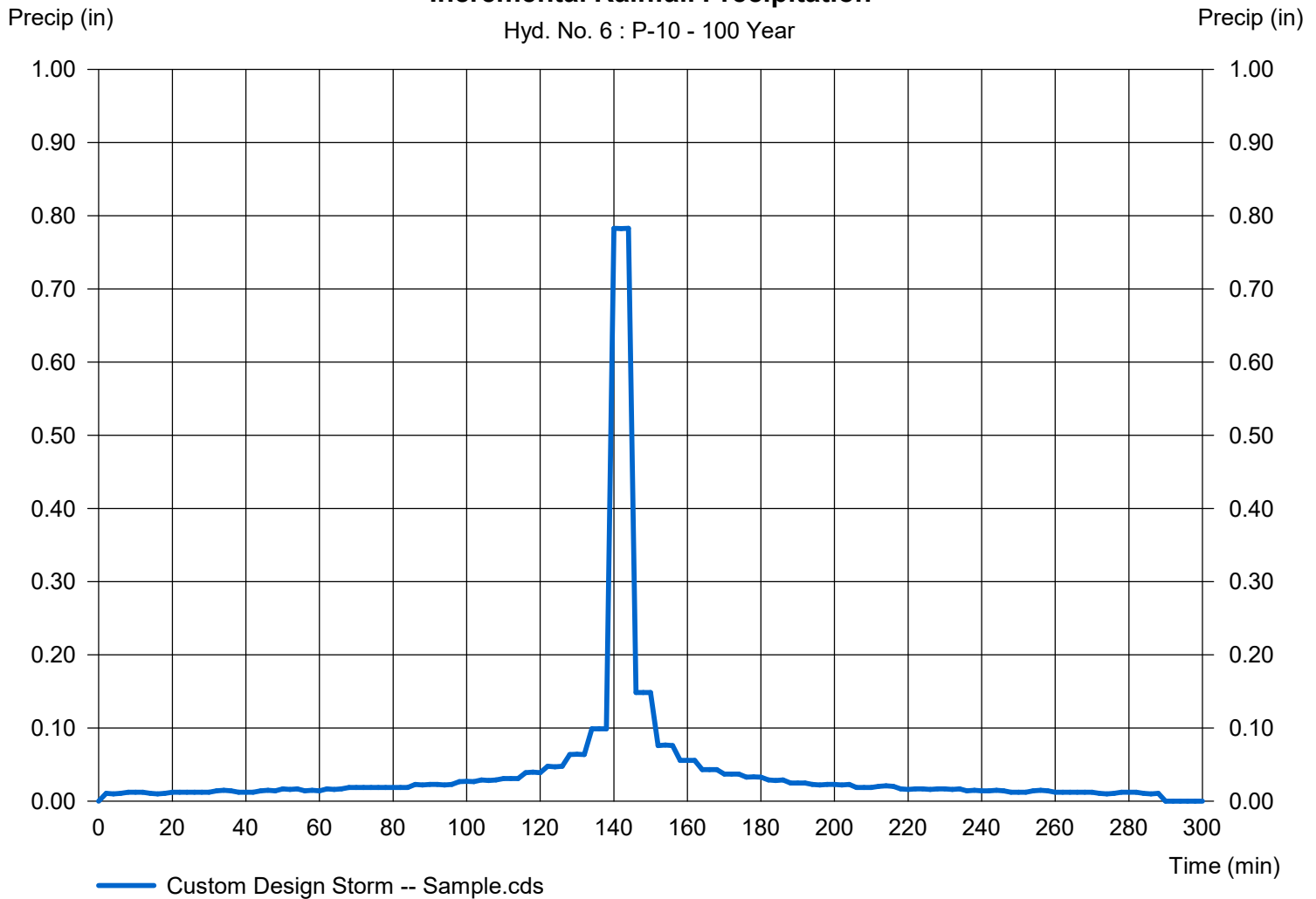
Hyd. No. 6

P-10

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : P-10 - 100 Year



Hydrograph Report

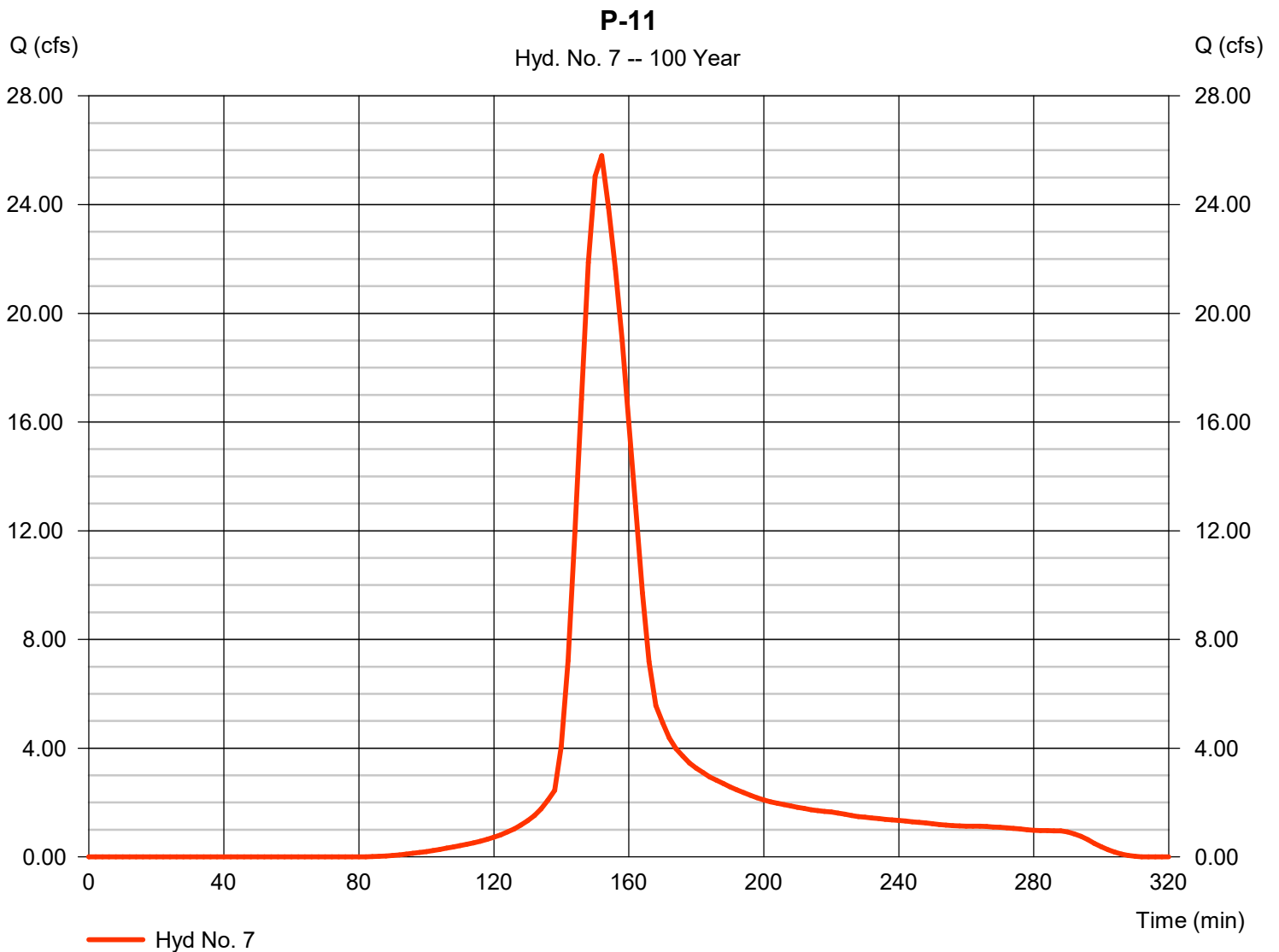
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Hydrograph type	= SCS Runoff	Peak discharge	= 25.81 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 43,227 cuft
Drainage area	= 3.180 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

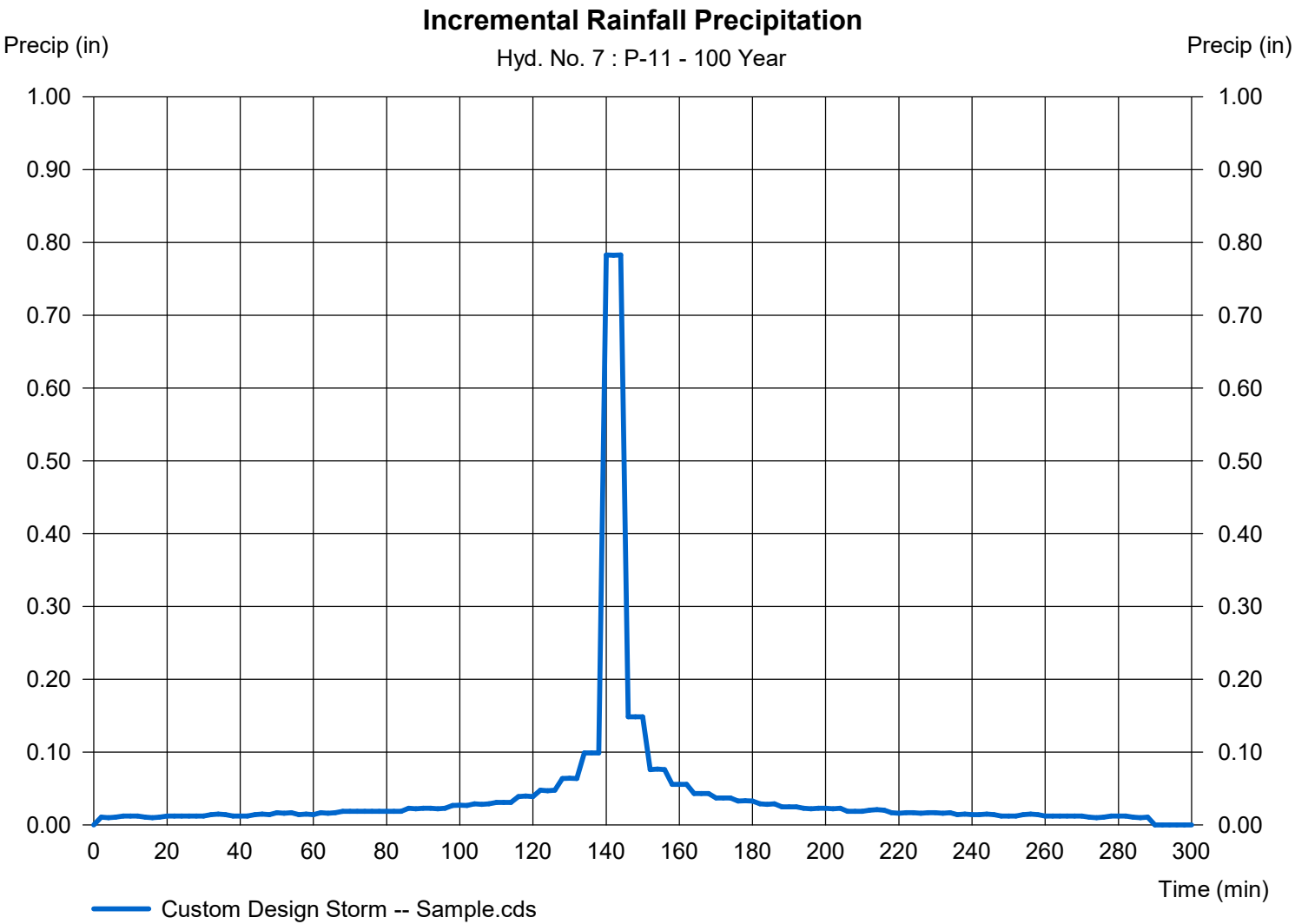
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 7

P-11

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

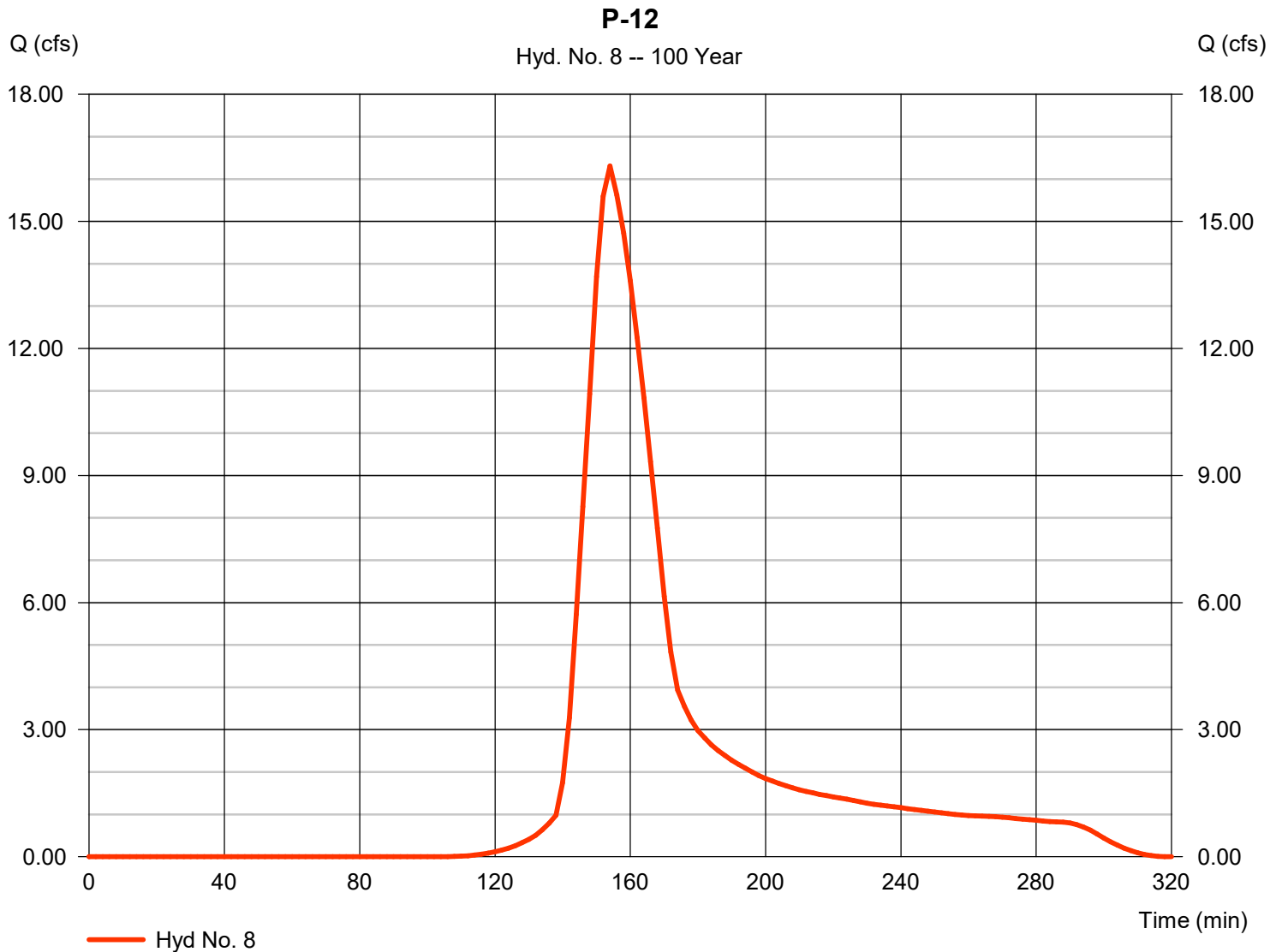
Tuesday, 04 / 7 / 2020

Hyd. No. 8

P-12

Hydrograph type	= SCS Runoff	Peak discharge	= 16.31 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 32,159 cuft
Drainage area	= 2.910 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.910$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

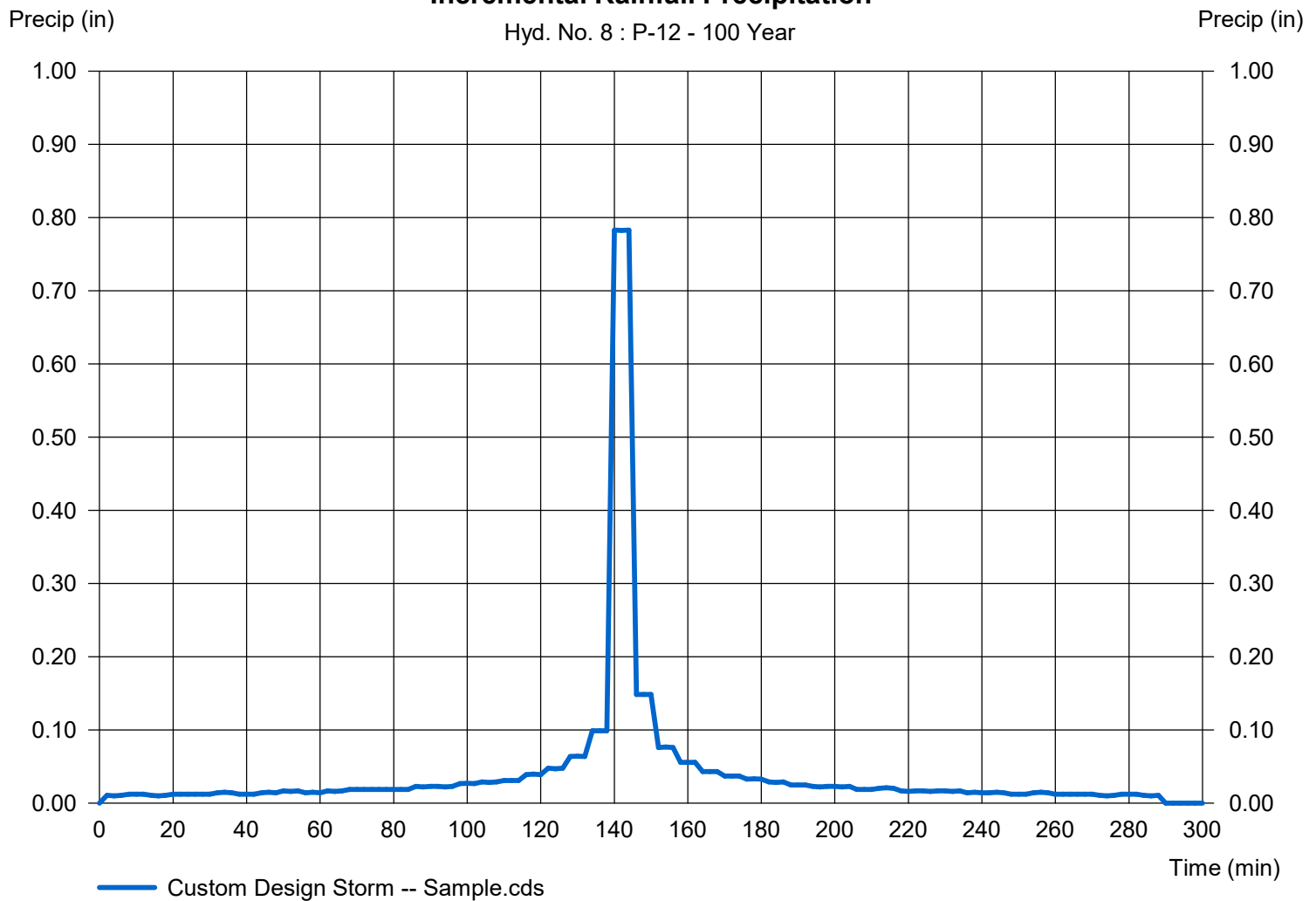
Hyd. No. 8

P-12

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : P-12 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

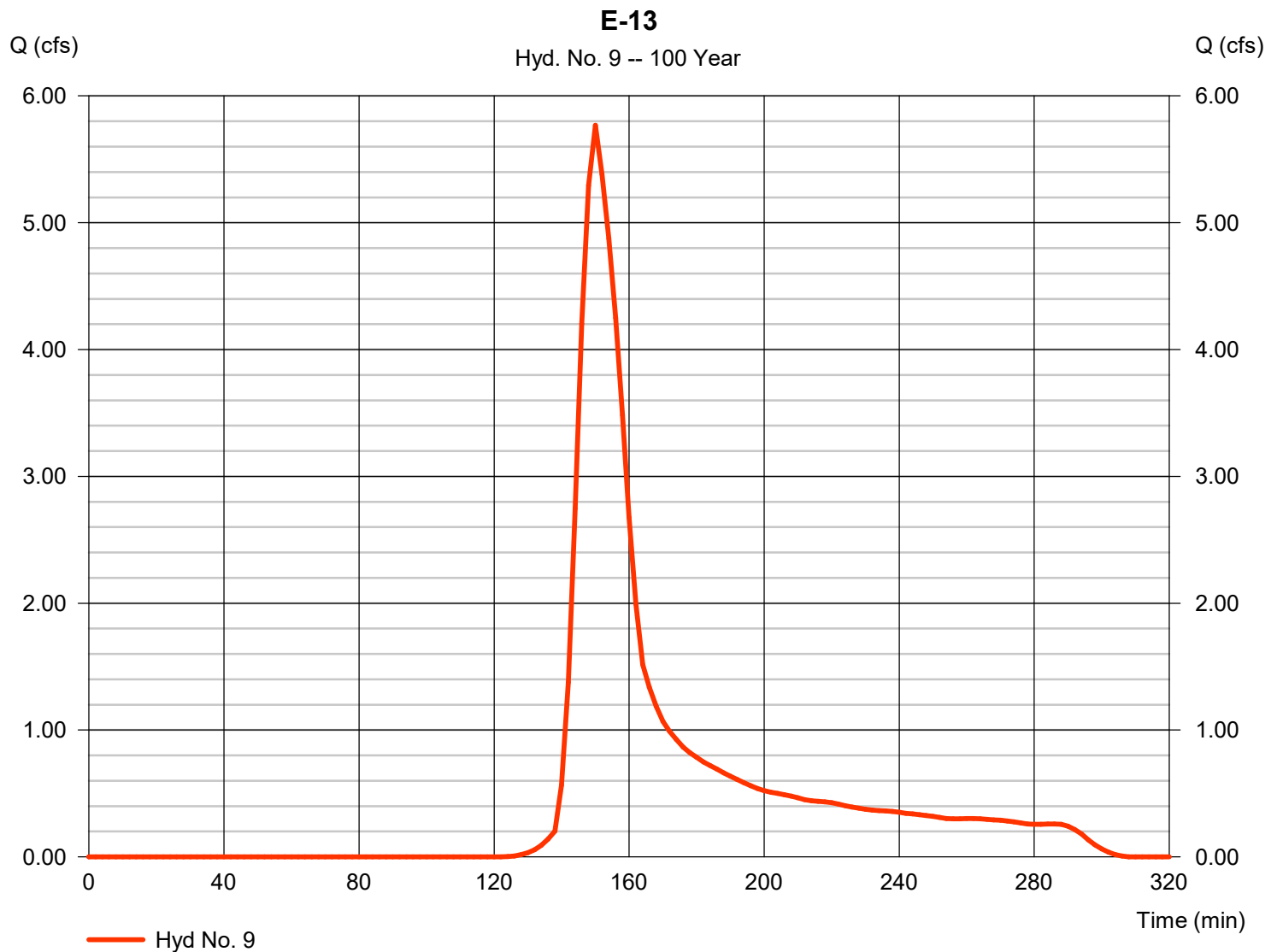
Tuesday, 04 / 7 / 2020

Hyd. No. 9

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 5.768 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 9,046 cuft
Drainage area	= 1.010 ac	Curve number	= 64*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.010$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

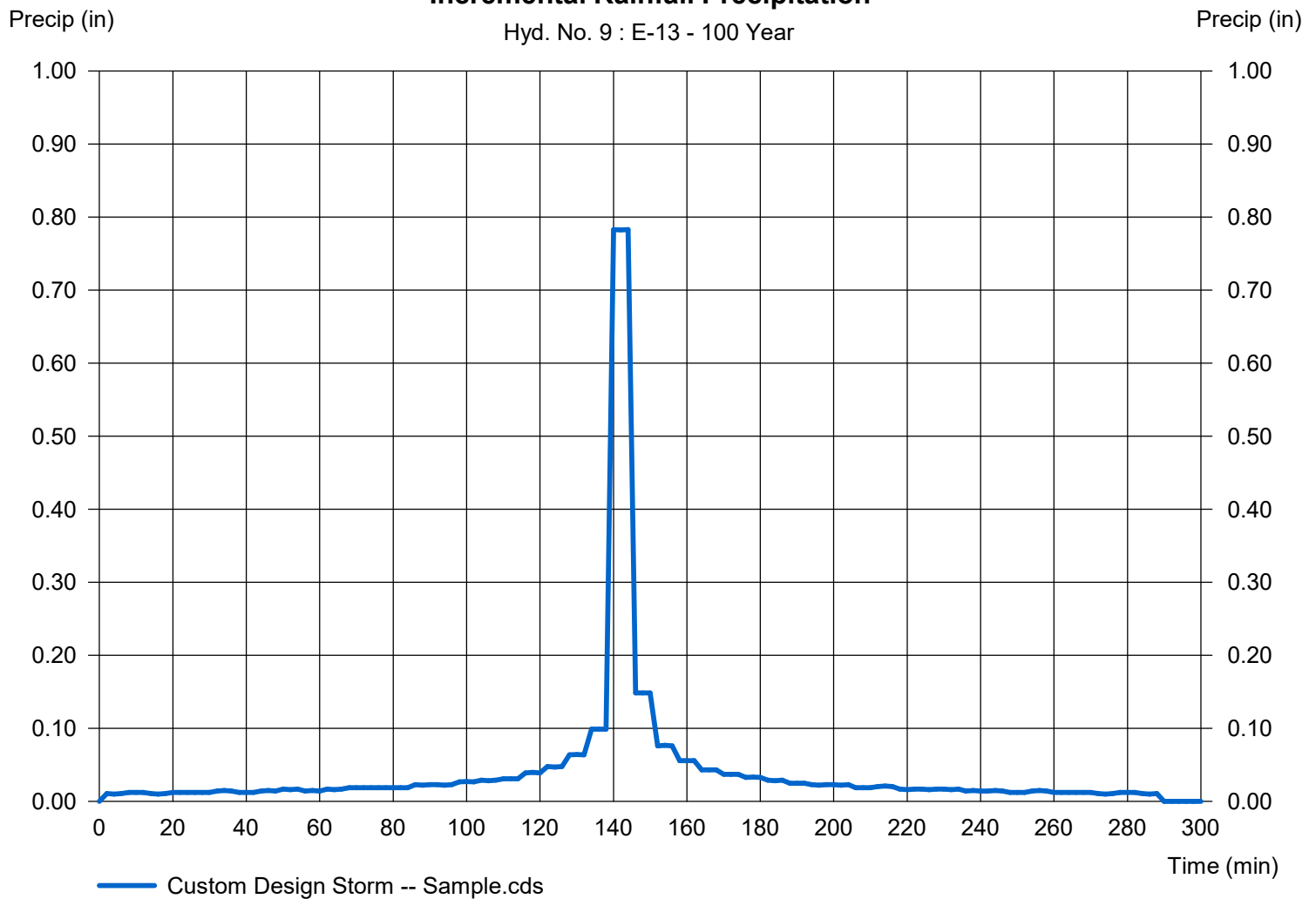
Hyd. No. 9

E-13

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 9 : E-13 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

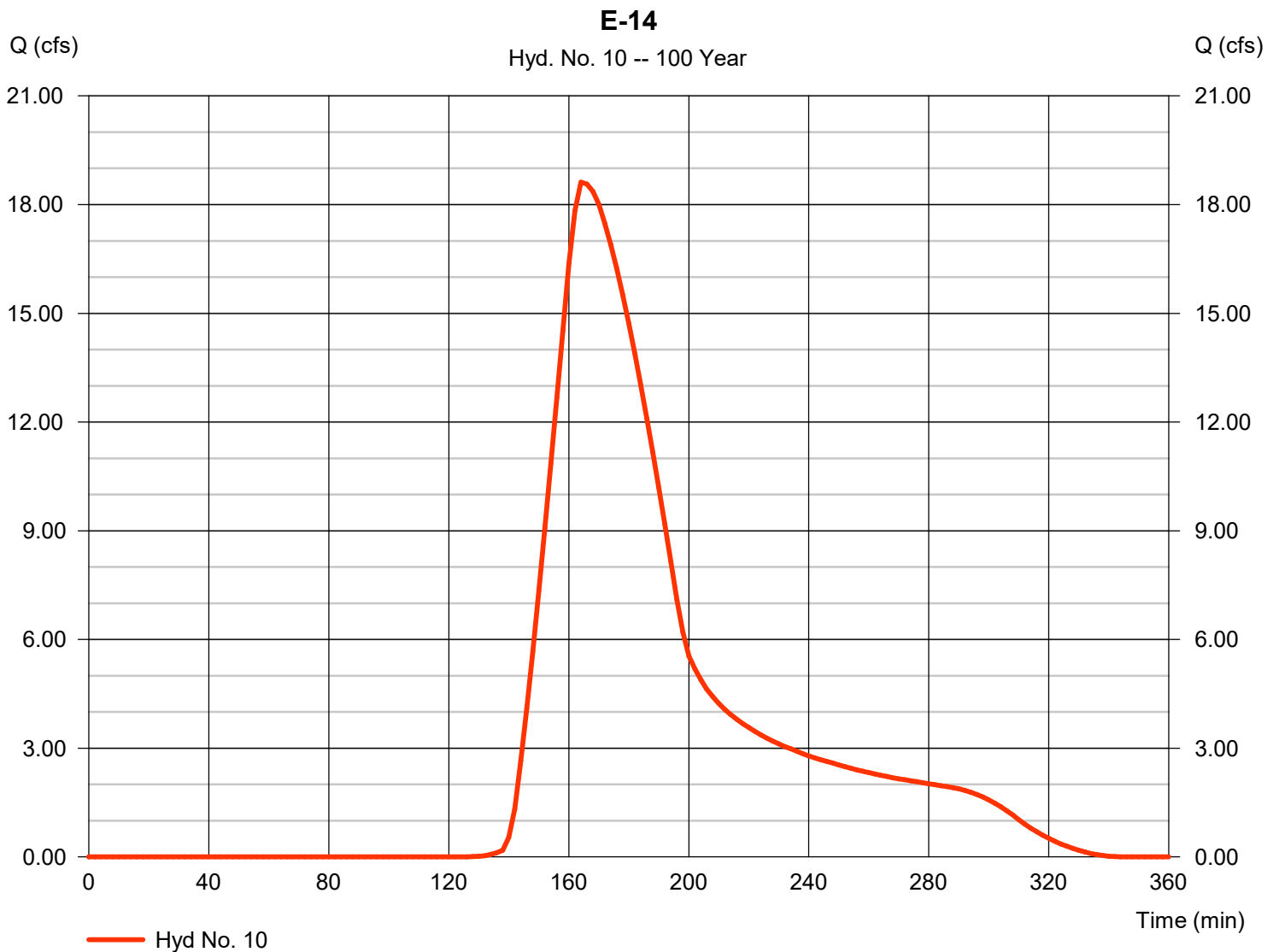
Tuesday, 04 / 7 / 2020

Hyd. No. 10

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 18.62 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 60,501 cuft
Drainage area	= 7.320 ac	Curve number	= 63*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.320$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

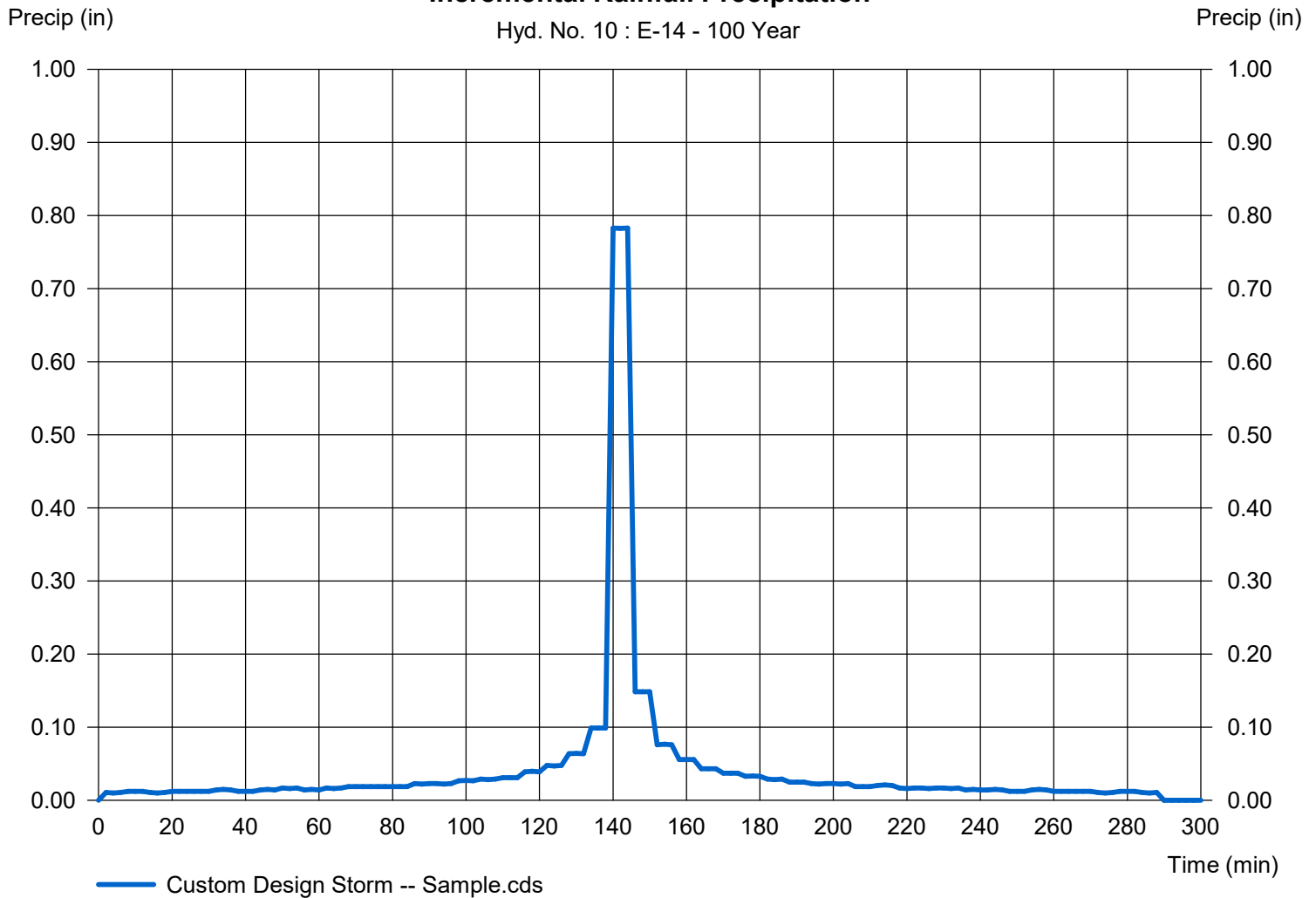
Hyd. No. 10

E-14

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 10 : E-14 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

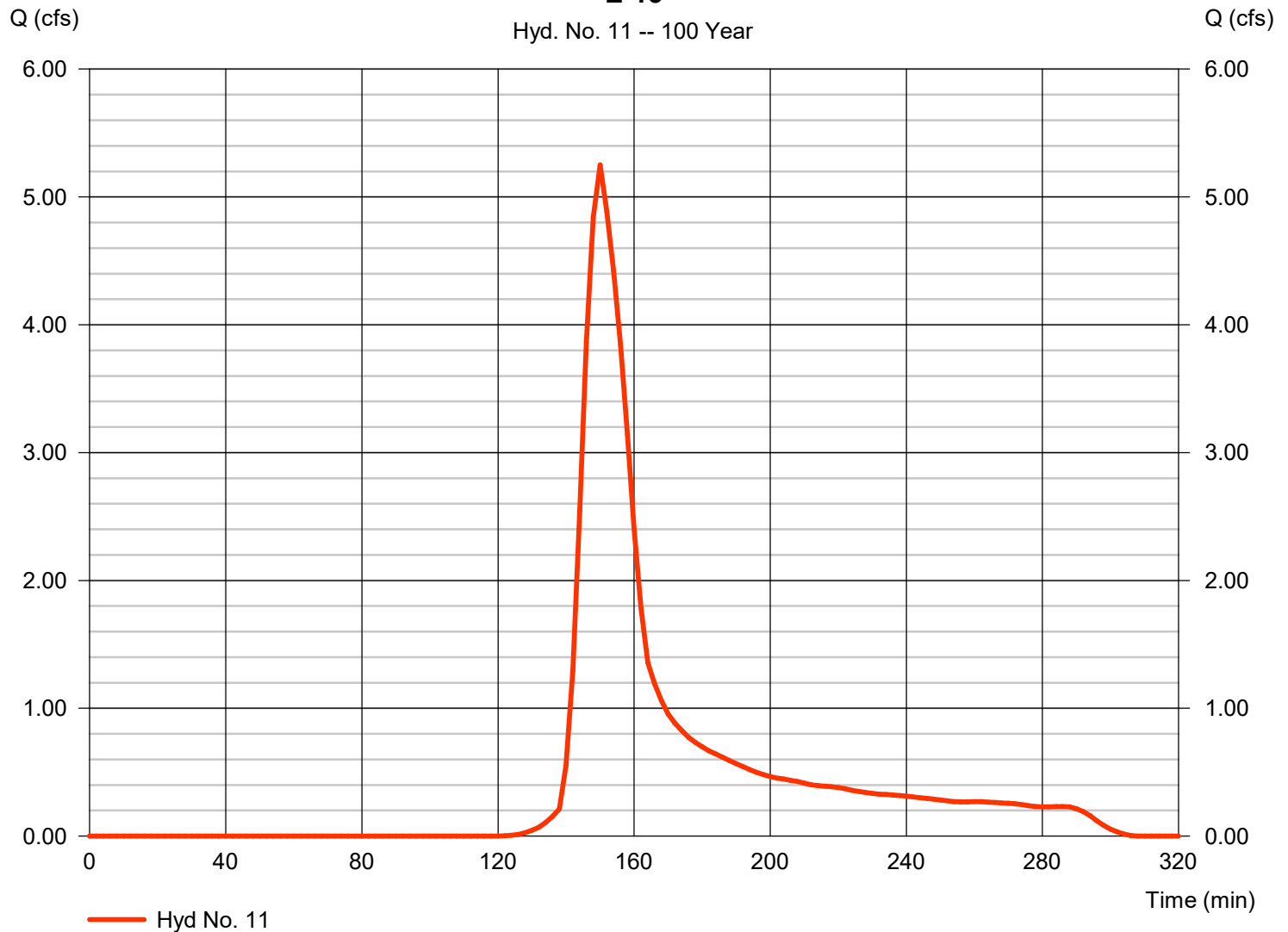
Tuesday, 04 / 7 / 2020

Hyd. No. 11

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 5.252 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 8,180 cuft
Drainage area	= 0.880 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-15



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

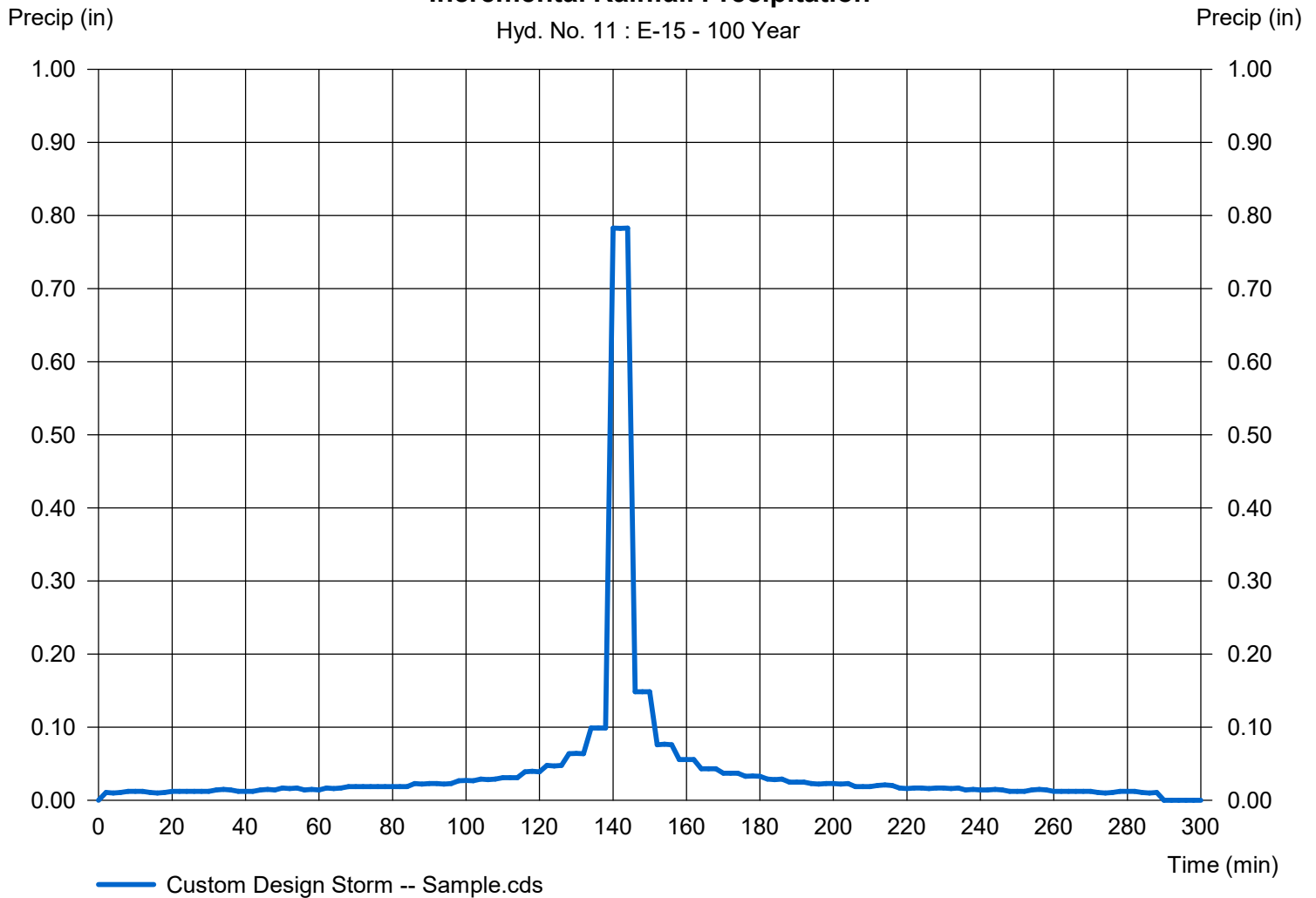
Hyd. No. 11

E-15

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : E-15 - 100 Year



Hydrograph Report

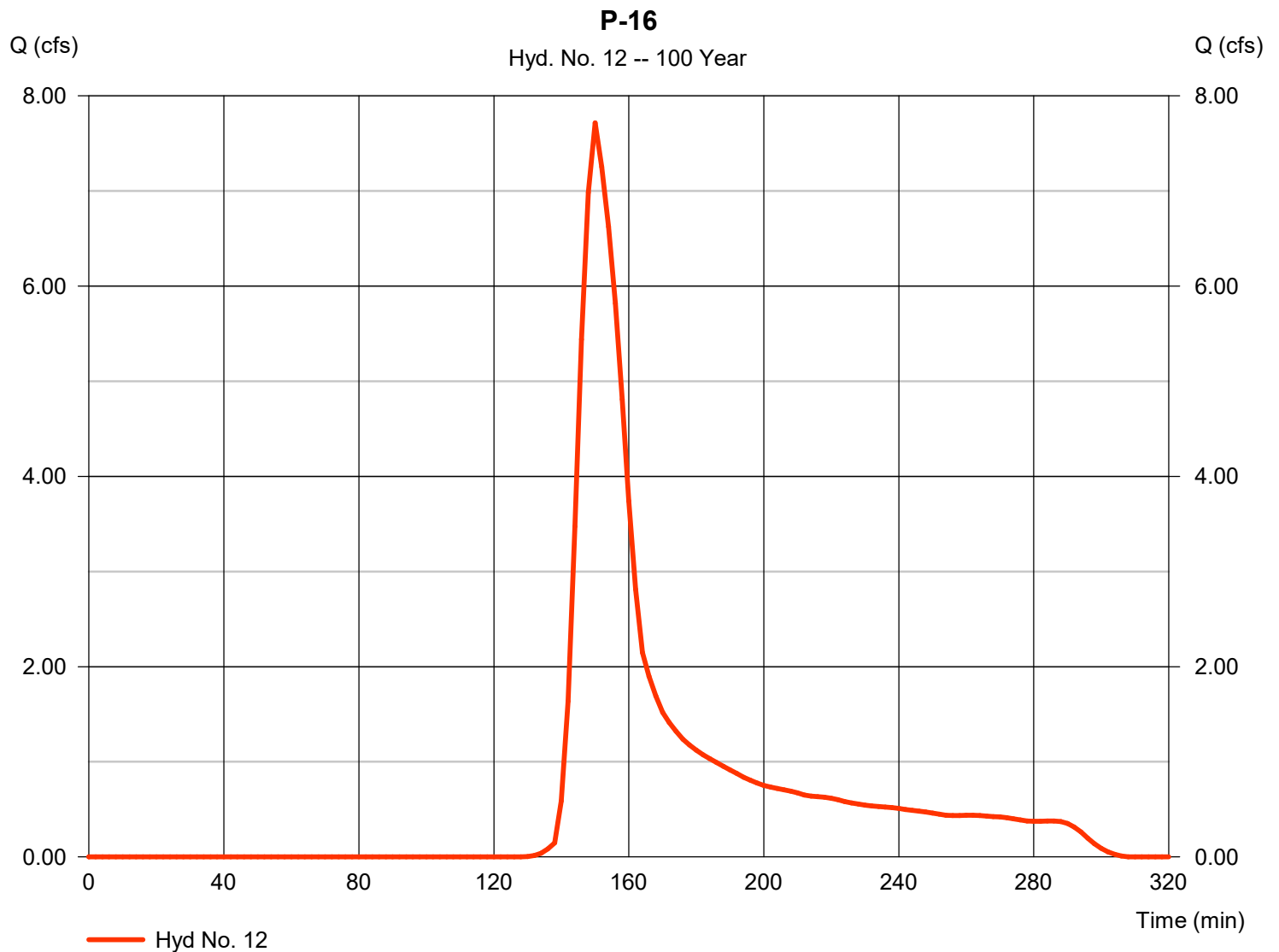
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 12

P-16

Hydrograph type	= SCS Runoff	Peak discharge	= 7.716 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 12,420 cuft
Drainage area	= 1.560 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

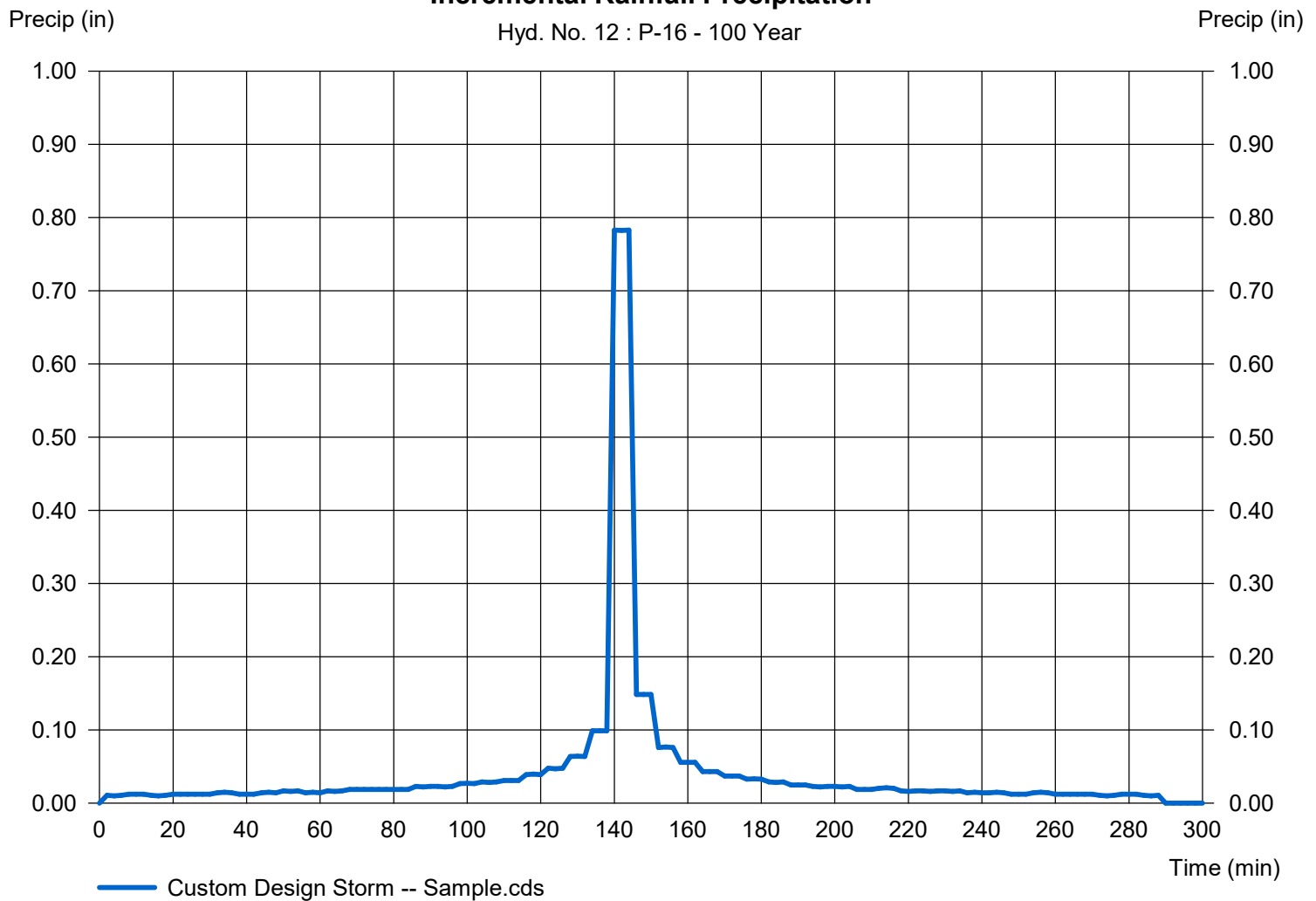
Hyd. No. 12

P-16

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 12 : P-16 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

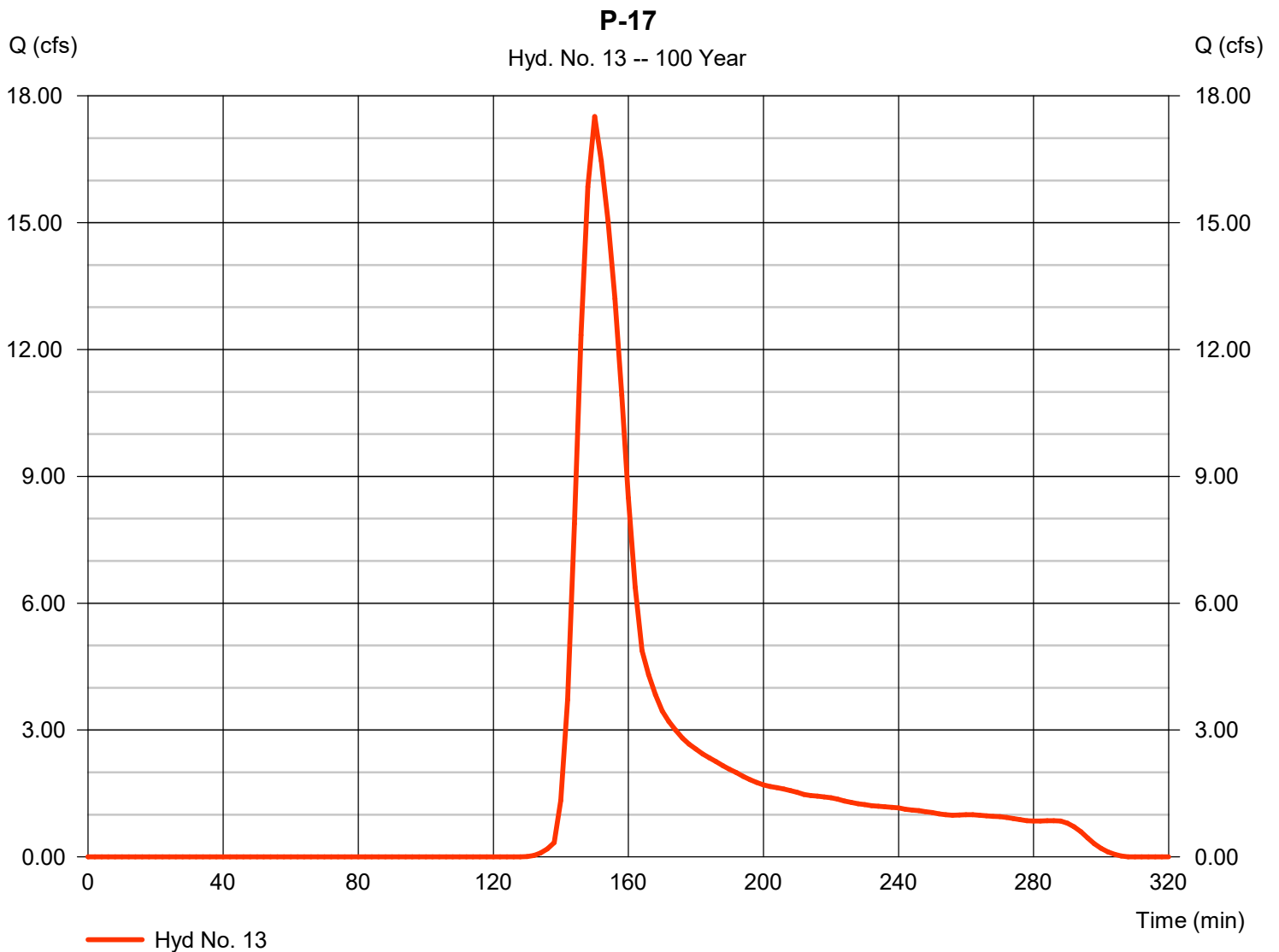
Tuesday, 04 / 7 / 2020

Hyd. No. 13

P-17

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 3.540 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 6.18 in
 Storm duration = Sample.cds

Peak discharge = 17.51 cfs
 Time to peak = 150 min
 Hyd. volume = 28,185 cuft
 Curve number = 61
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 12.00 min
 Distribution = Custom
 Shape factor = 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

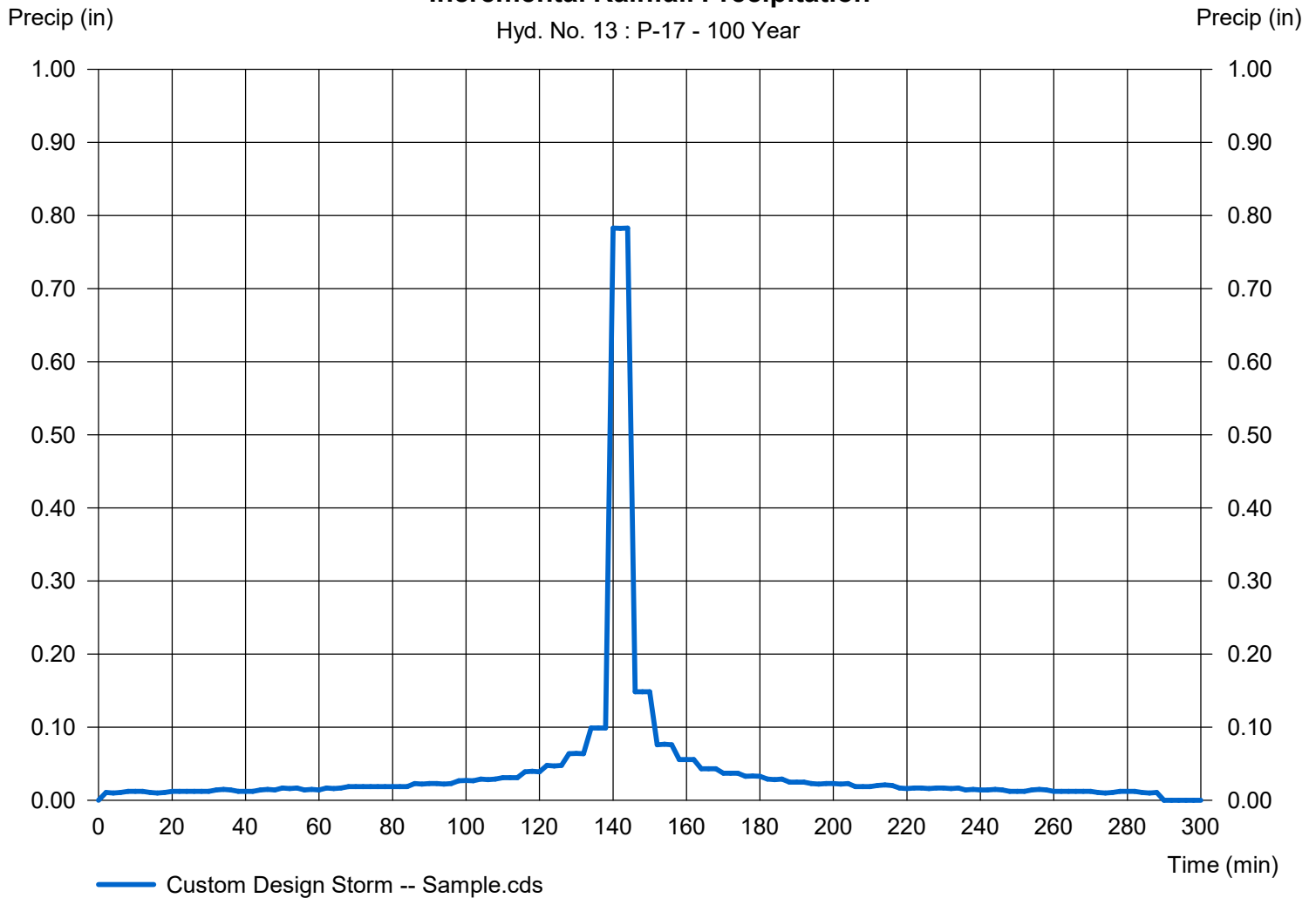
Hyd. No. 13

P-17

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 13 : P-17 - 100 Year



Hydrograph Report

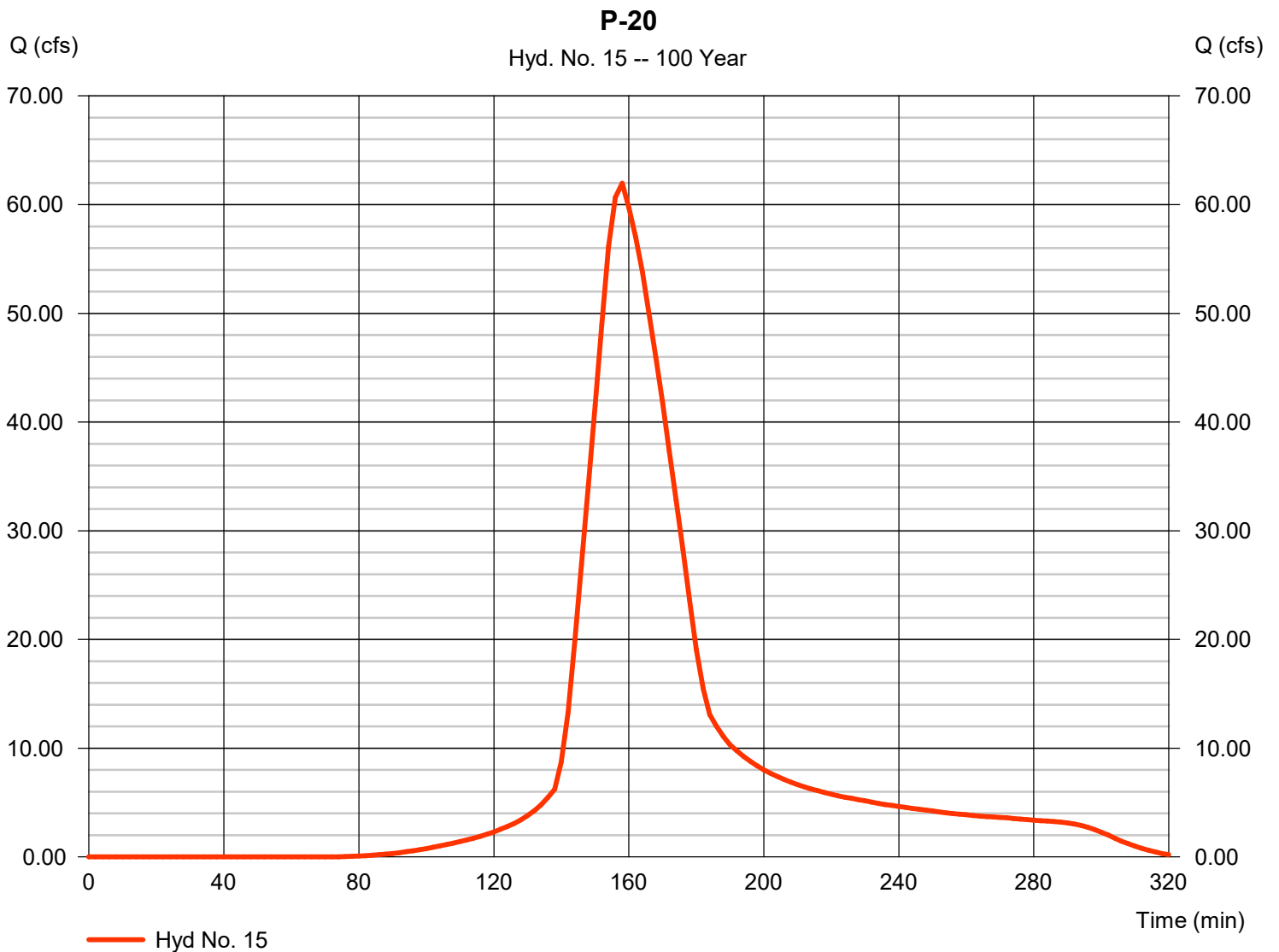
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 15

P-20

Hydrograph type	= SCS Runoff	Peak discharge	= 61.96 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 146,173 cuft
Drainage area	= 9.850 ac	Curve number	= 82
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

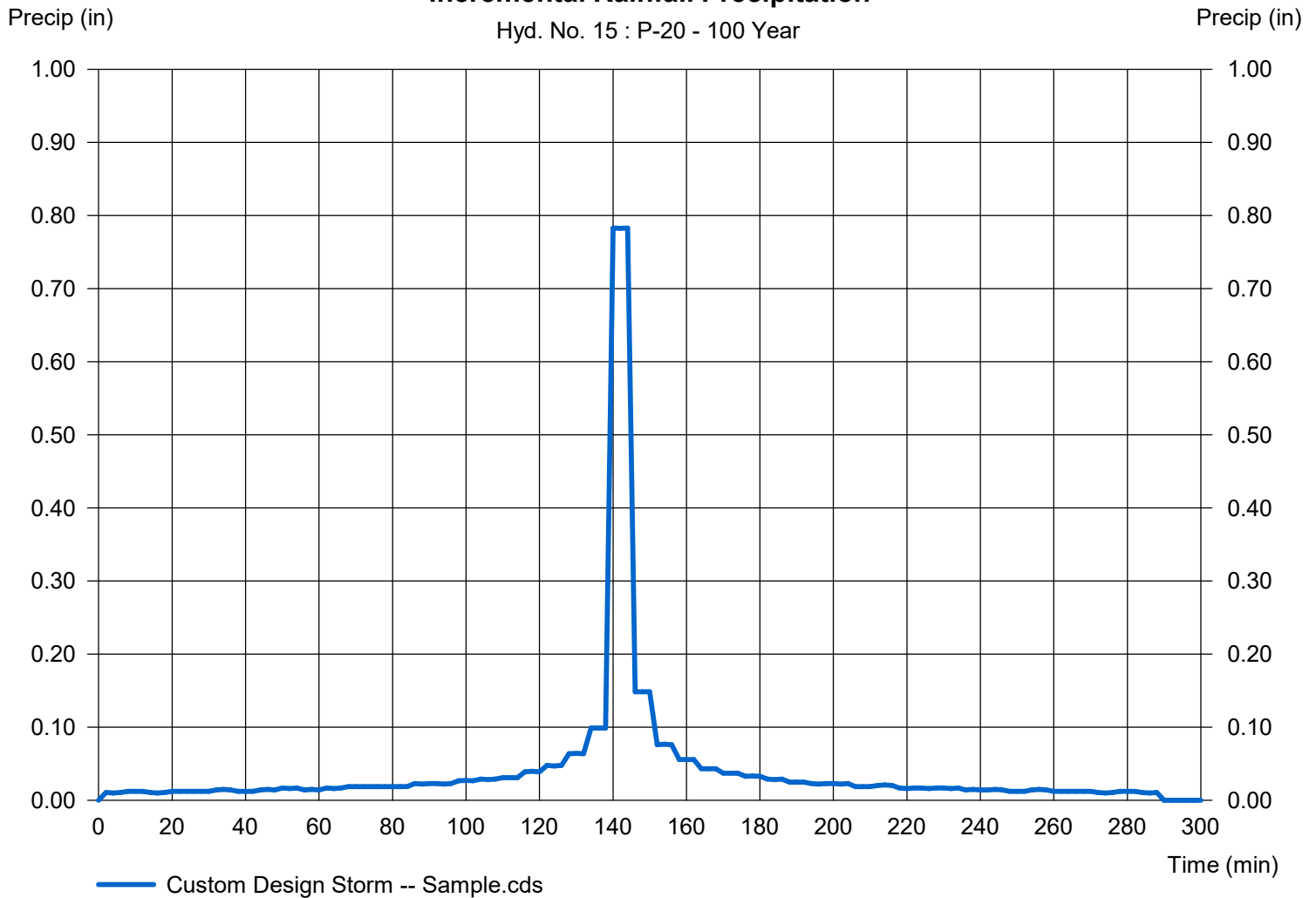
Hyd. No. 15

P-20

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 15 : P-20 - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

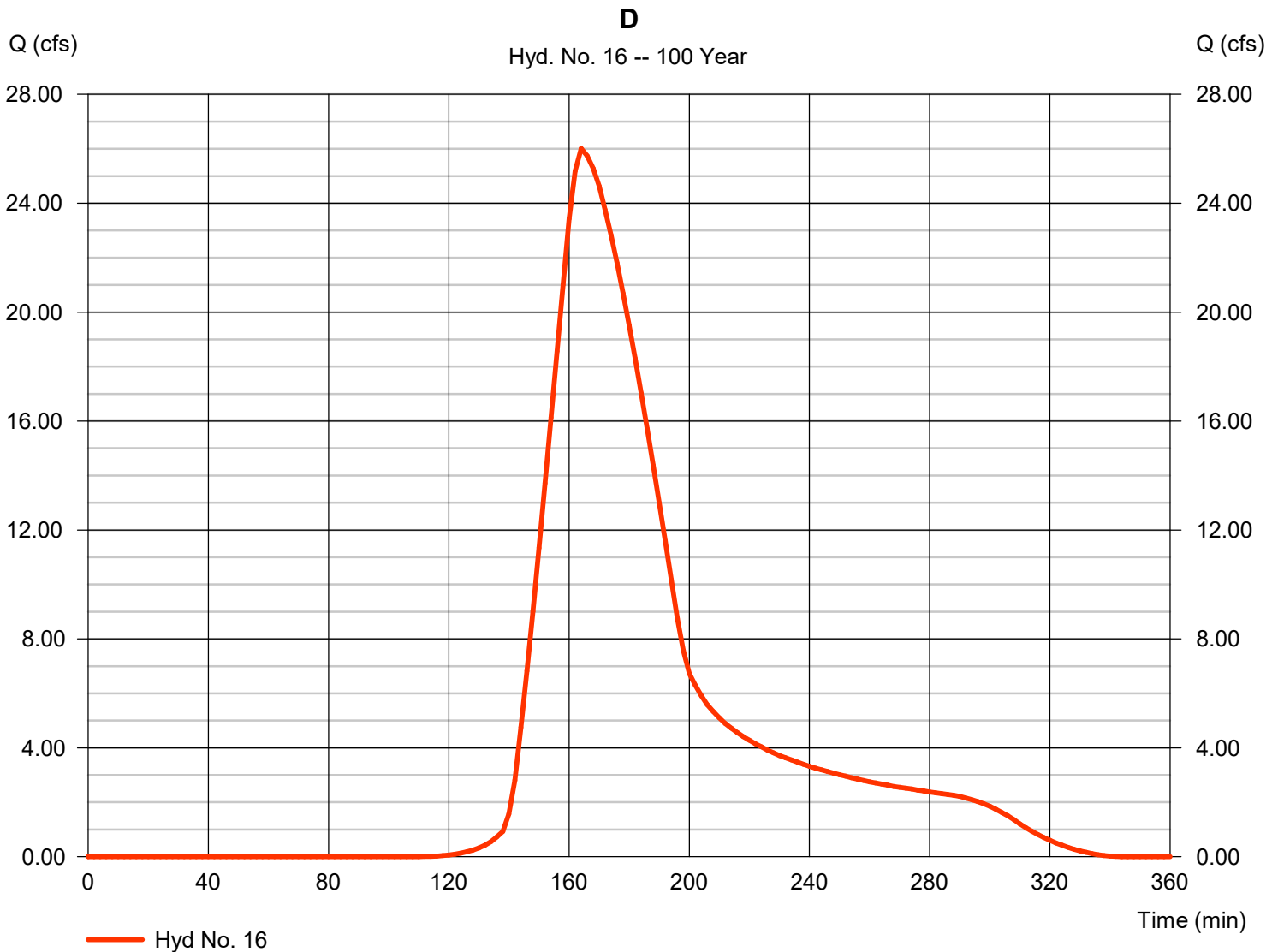
Tuesday, 04 / 7 / 2020

Hyd. No. 16

D

Hydrograph type	= SCS Runoff	Peak discharge	= 26.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 80,424 cuft
Drainage area	= 7.600 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Precipitation Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

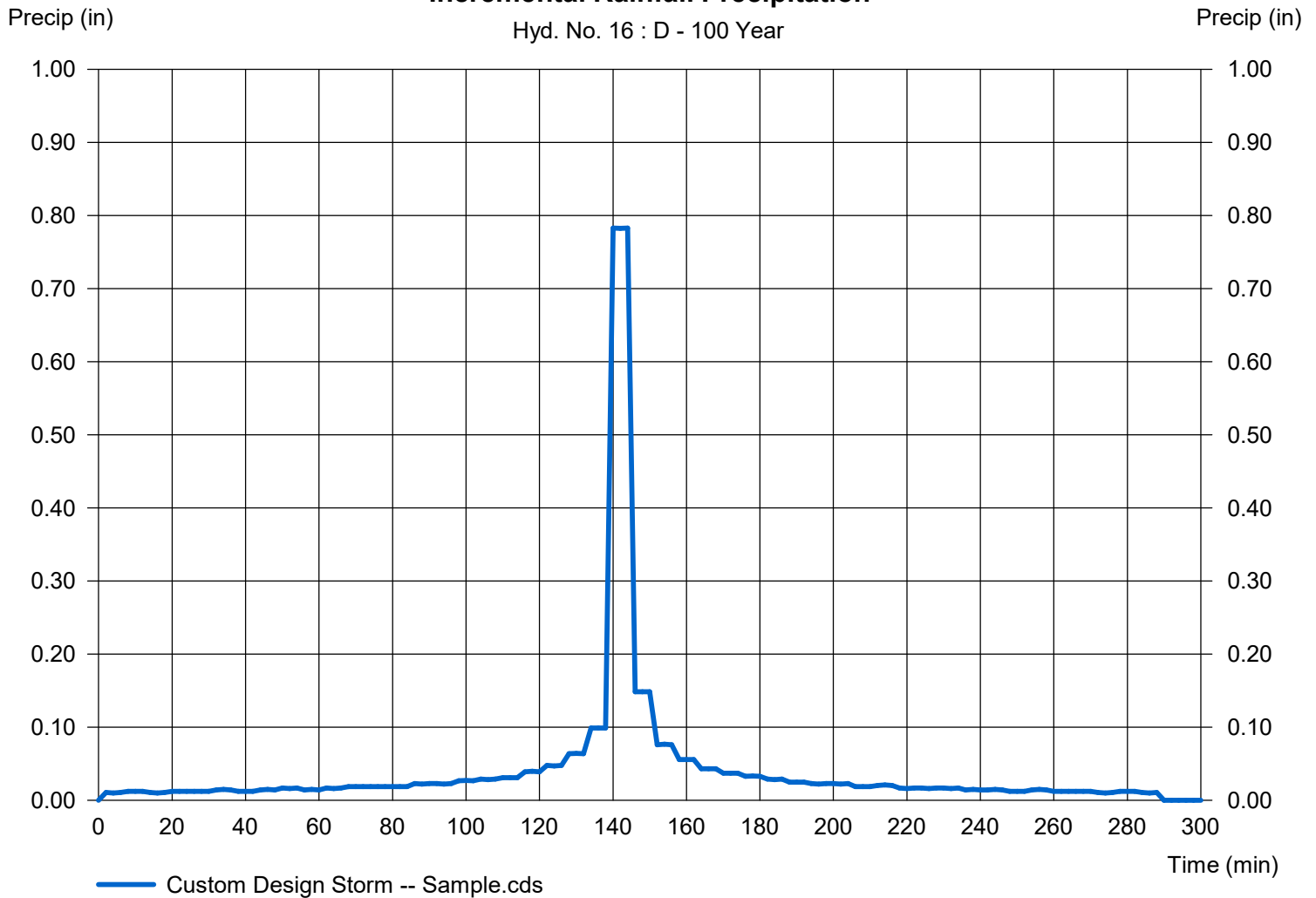
Hyd. No. 16

D

Storm Frequency	= 100 yrs	Time interval	= 2 min
Total precip.	= 6.1800 in	Distribution	= Custom
Storm duration	= Sample.cds		

Incremental Rainfall Precipitation

Hyd. No. 16 : D - 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Hyd. No. 18

Pond 5

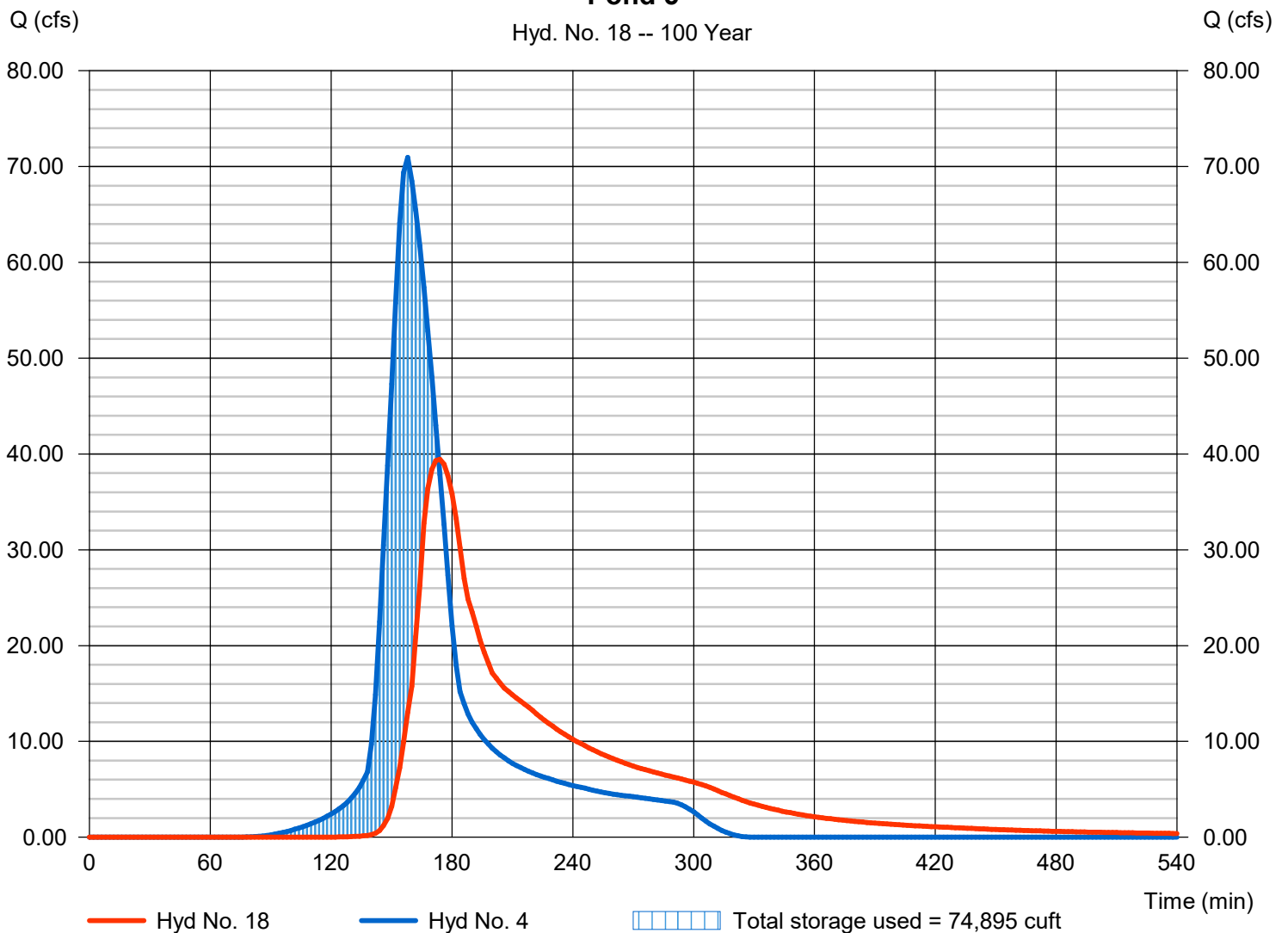
Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - P-5
 Reservoir name = Pond 5

Peak discharge = 39.45 cfs
 Time to peak = 174 min
 Hyd. volume = 166,365 cuft
 Max. Elevation = 984.94 ft
 Max. Storage = 74,895 cuft

Storage Indication method used.

Pond 5

Hyd. No. 18 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

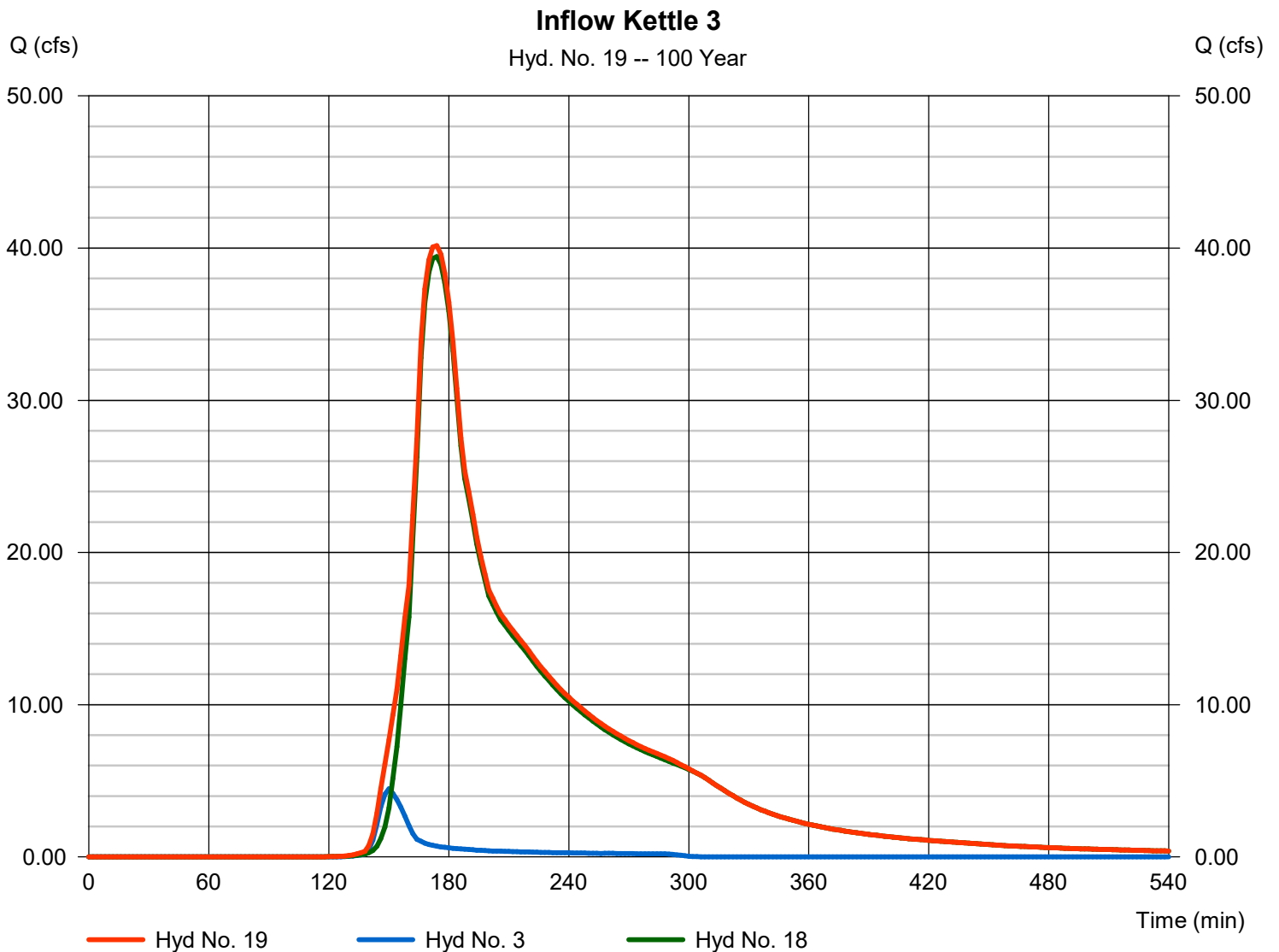
Tuesday, 04 / 7 / 2020

Hyd. No. 19

Inflow Kettle 3

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 3, 18

Peak discharge = 40.15 cfs
Time to peak = 174 min
Hyd. volume = 173,336 cuft
Contrib. drain. area = 0.750 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

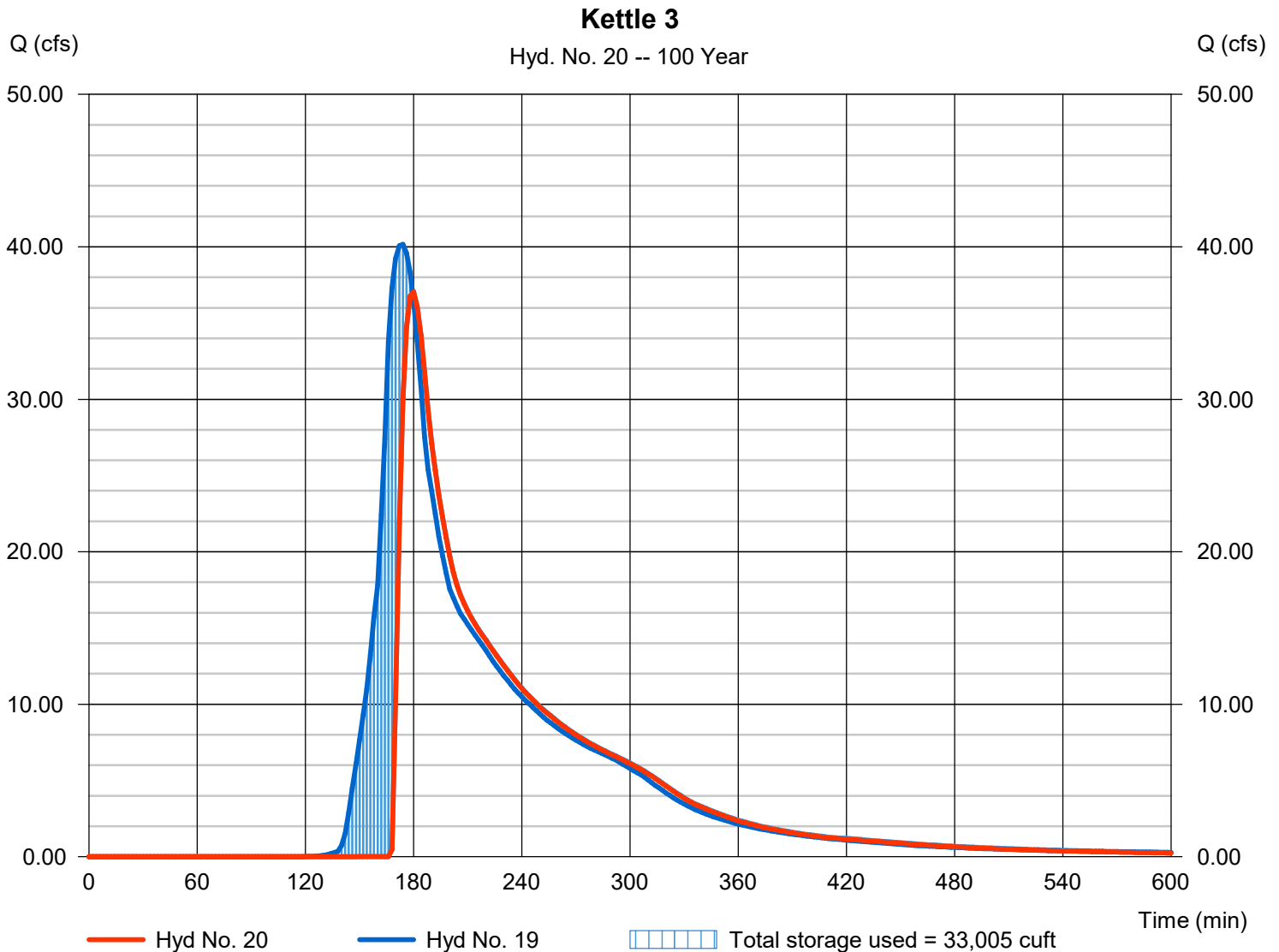
Tuesday, 04 / 7 / 2020

Hyd. No. 20

Kettle 3

Hydrograph type	= Reservoir	Peak discharge	= 37.03 cfs
Storm frequency	= 100 yrs	Time to peak	= 180 min
Time interval	= 2 min	Hyd. volume	= 144,582 cuft
Inflow hyd. No.	= 19 - Inflow Kettle 3	Max. Elevation	= 976.97 ft
Reservoir name	= K-3	Max. Storage	= 33,005 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

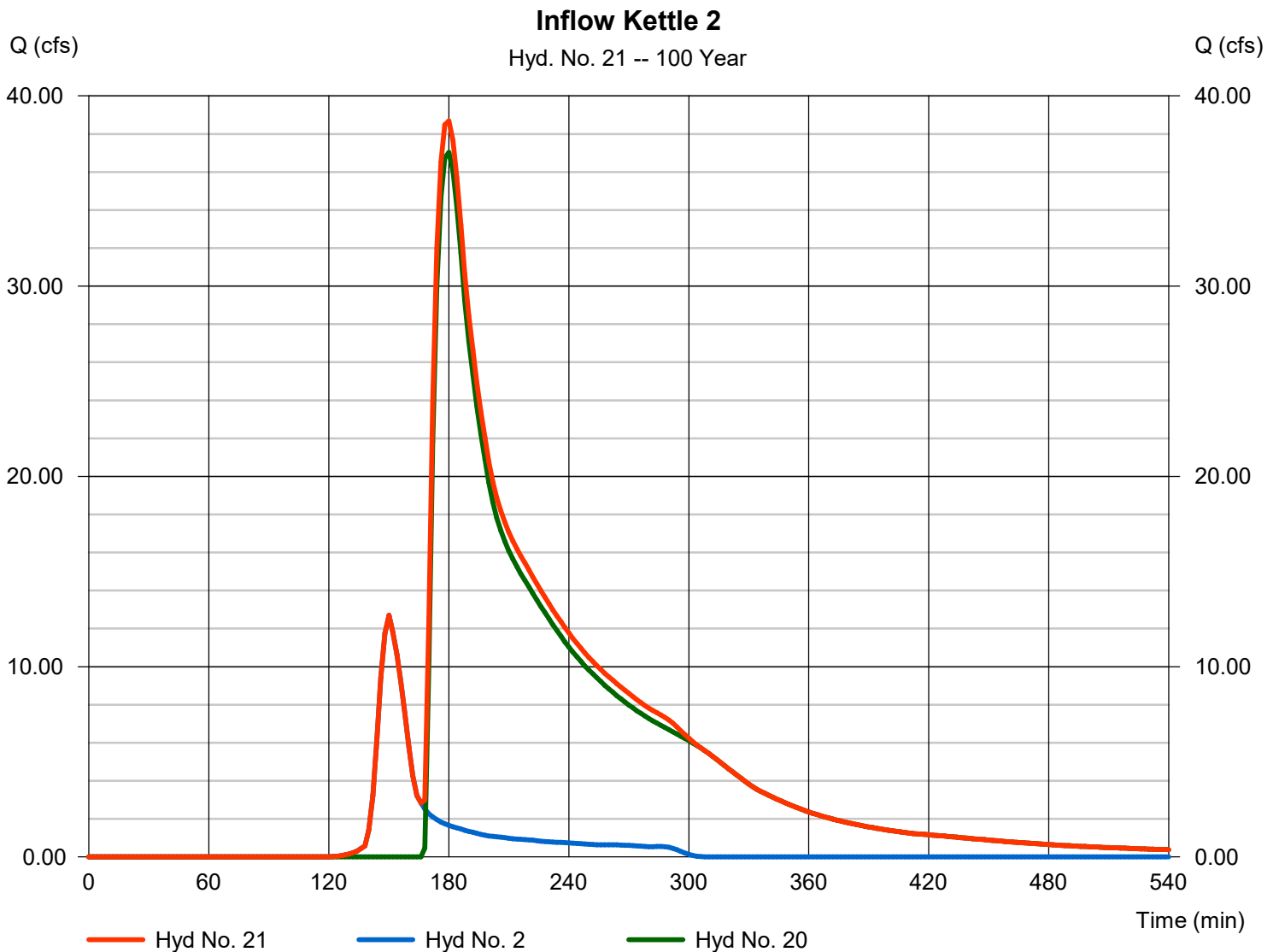
Tuesday, 04 / 7 / 2020

Hyd. No. 21

Inflow Kettle 2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 2, 20

Peak discharge = 38.69 cfs
Time to peak = 180 min
Hyd. volume = 164,241 cuft
Contrib. drain. area = 2.040 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

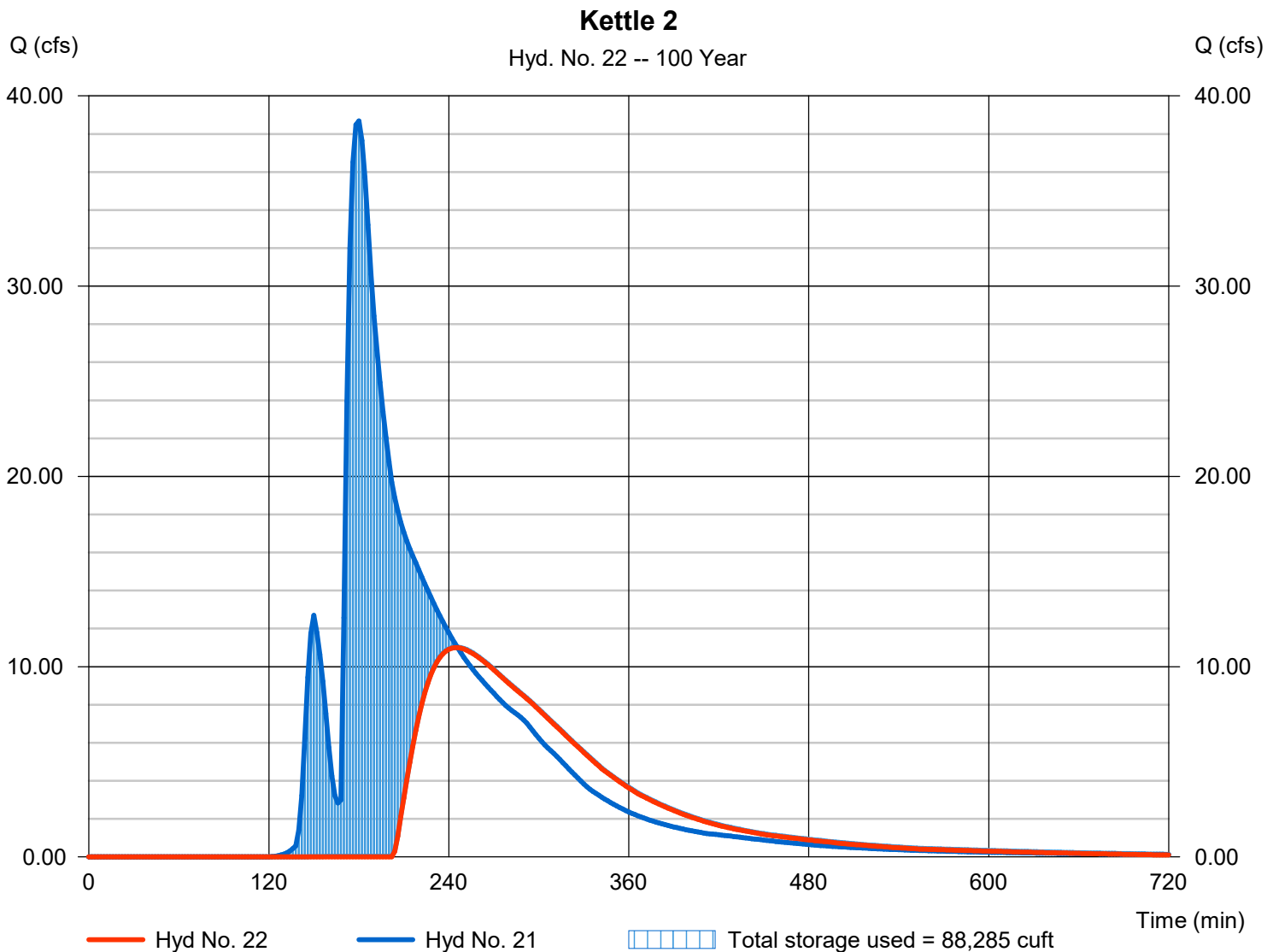
Tuesday, 04 / 7 / 2020

Hyd. No. 22

Kettle 2

Hydrograph type	= Reservoir	Peak discharge	= 10.99 cfs
Storm frequency	= 100 yrs	Time to peak	= 244 min
Time interval	= 2 min	Hyd. volume	= 89,076 cuft
Inflow hyd. No.	= 21 - Inflow Kettle 2	Max. Elevation	= 974.59 ft
Reservoir name	= K-2	Max. Storage	= 88,285 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

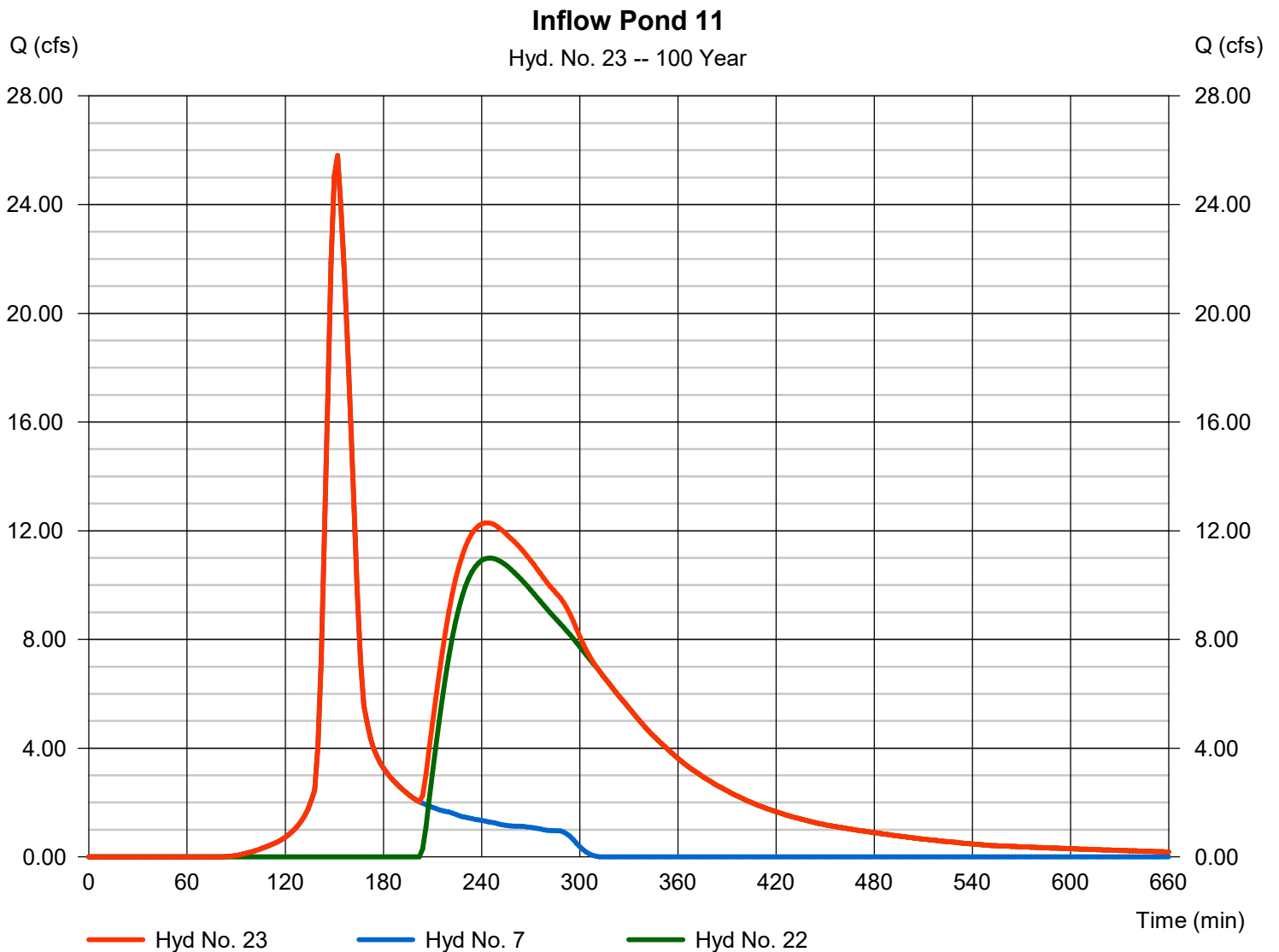
Tuesday, 04 / 7 / 2020

Hyd. No. 23

Inflow Pond 11

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 7, 22

Peak discharge = 25.81 cfs
Time to peak = 152 min
Hyd. volume = 132,303 cuft
Contrib. drain. area = 3.180 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

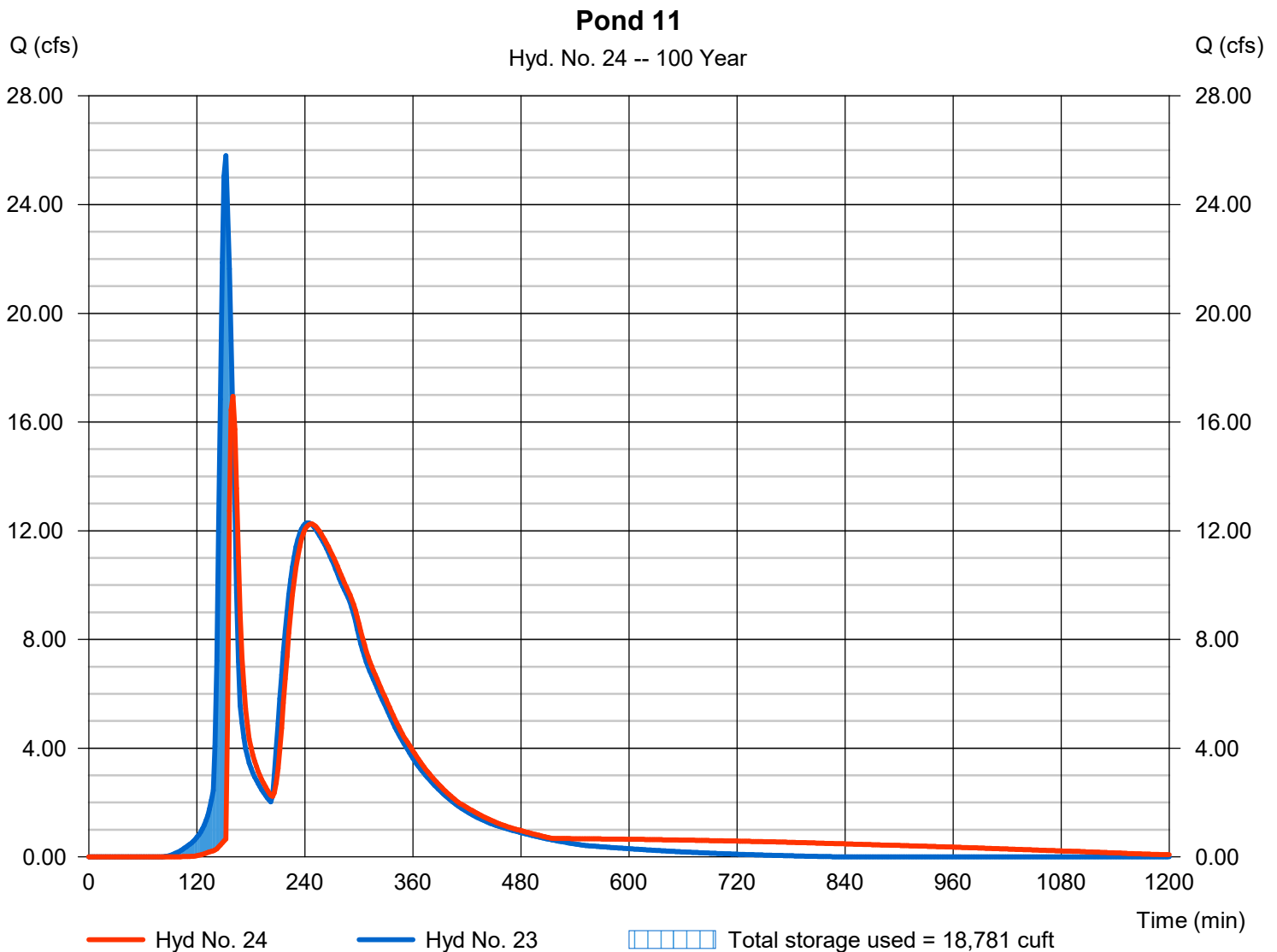
Tuesday, 04 / 7 / 2020

Hyd. No. 24

Pond 11

Hydrograph type	= Reservoir	Peak discharge	= 16.95 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 132,285 cuft
Inflow hyd. No.	= 23 - Inflow Pond 11	Max. Elevation	= 967.45 ft
Reservoir name	= Pond 11	Max. Storage	= 18,781 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

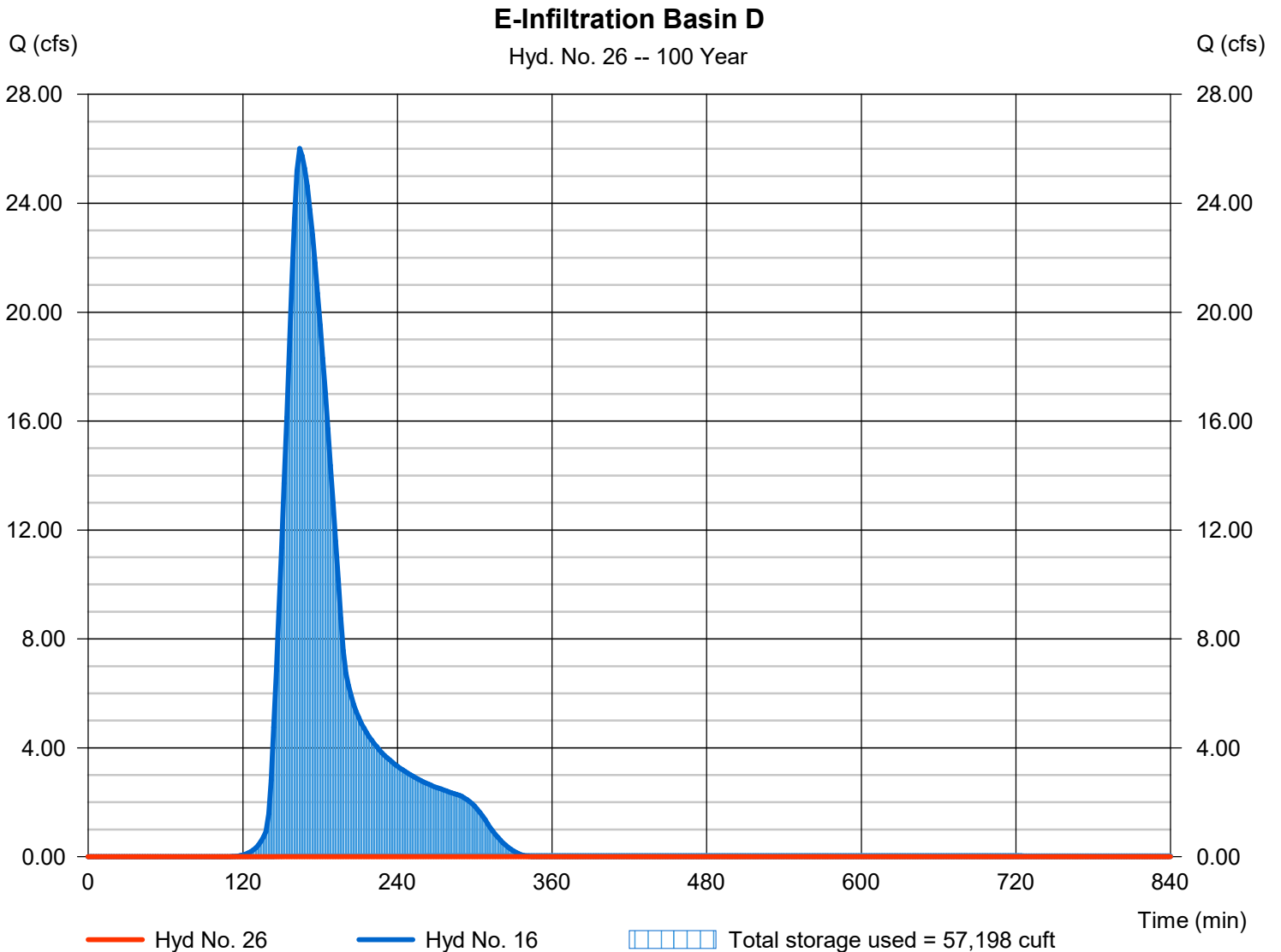
Tuesday, 04 / 7 / 2020

Hyd. No. 26

E-Infiltration Basin D

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 778 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 16 - D	Max. Elevation	= 993.77 ft
Reservoir name	= EXISTING INFILTRATION BASIN	Max Storage	= 57,198 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

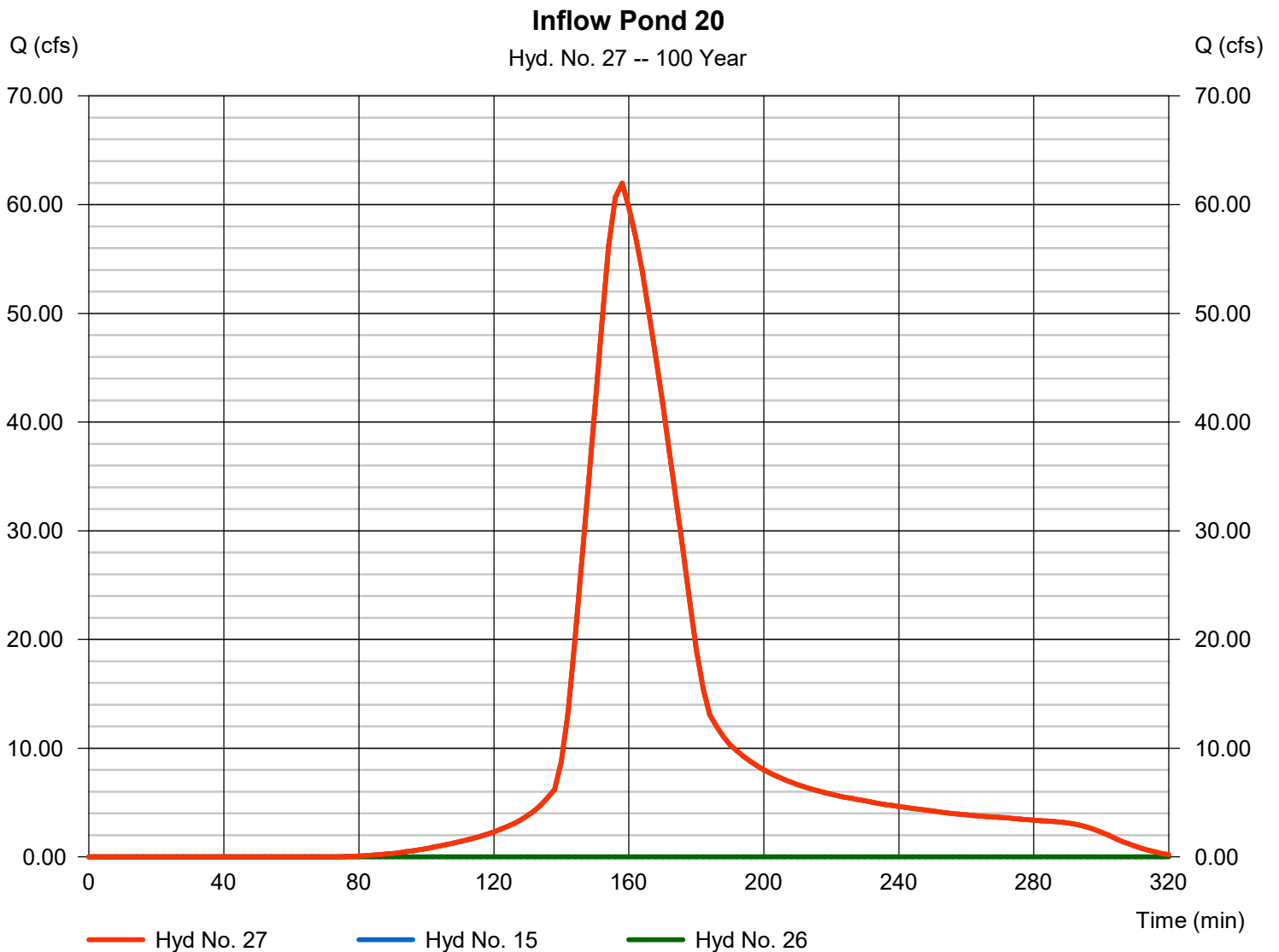
Tuesday, 04 / 7 / 2020

Hyd. No. 27

Inflow Pond 20

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 15, 26

Peak discharge = 61.96 cfs
Time to peak = 158 min
Hyd. volume = 146,173 cuft
Contrib. drain. area = 9.850 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

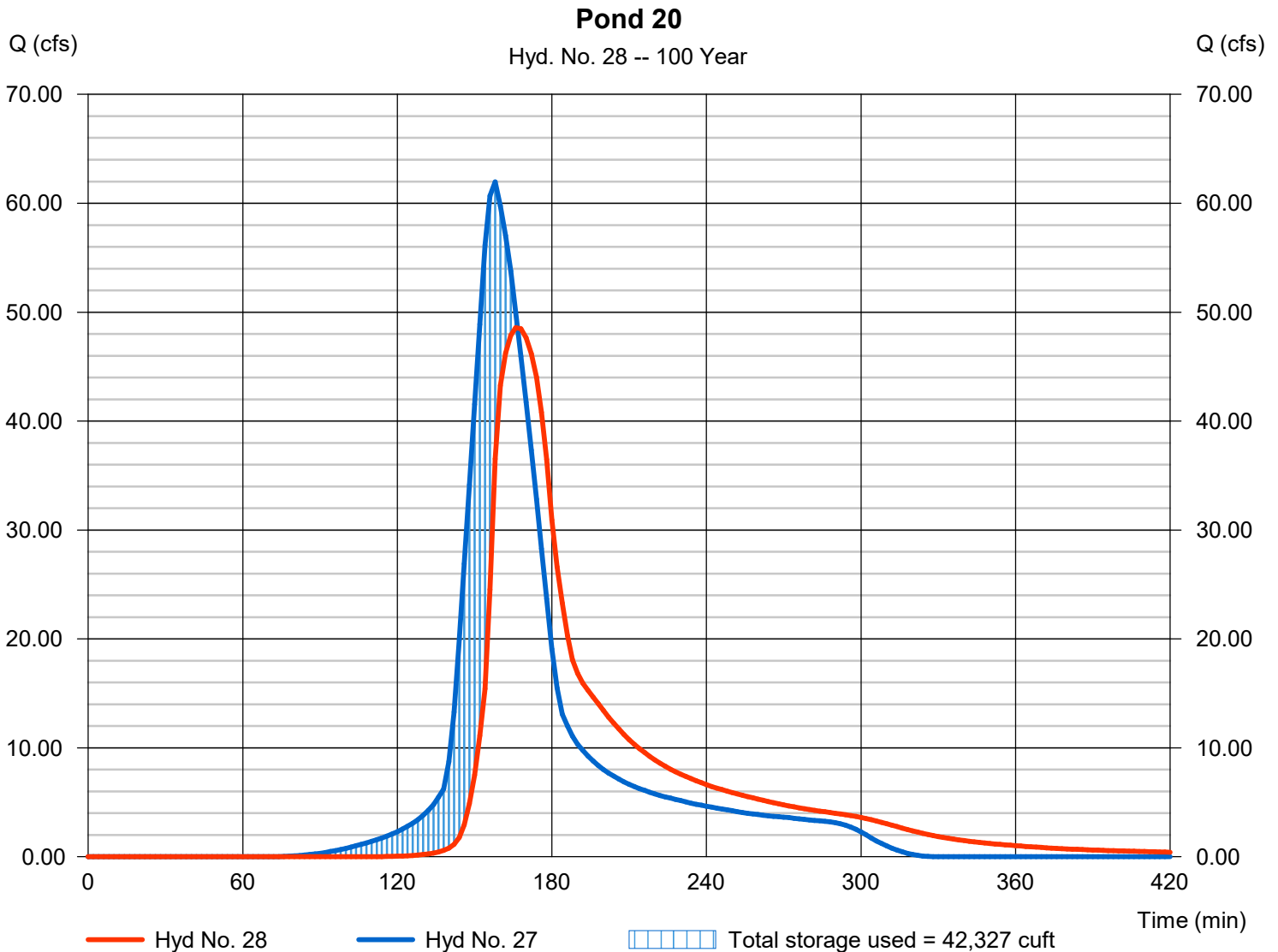
Tuesday, 04 / 7 / 2020

Hyd. No. 28

Pond 20

Hydrograph type	= Reservoir	Peak discharge	= 48.59 cfs
Storm frequency	= 100 yrs	Time to peak	= 166 min
Time interval	= 2 min	Hyd. volume	= 145,841 cuft
Inflow hyd. No.	= 27 - Inflow Pond 20	Max. Elevation	= 993.22 ft
Reservoir name	= Pond 20	Max. Storage	= 42,327 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

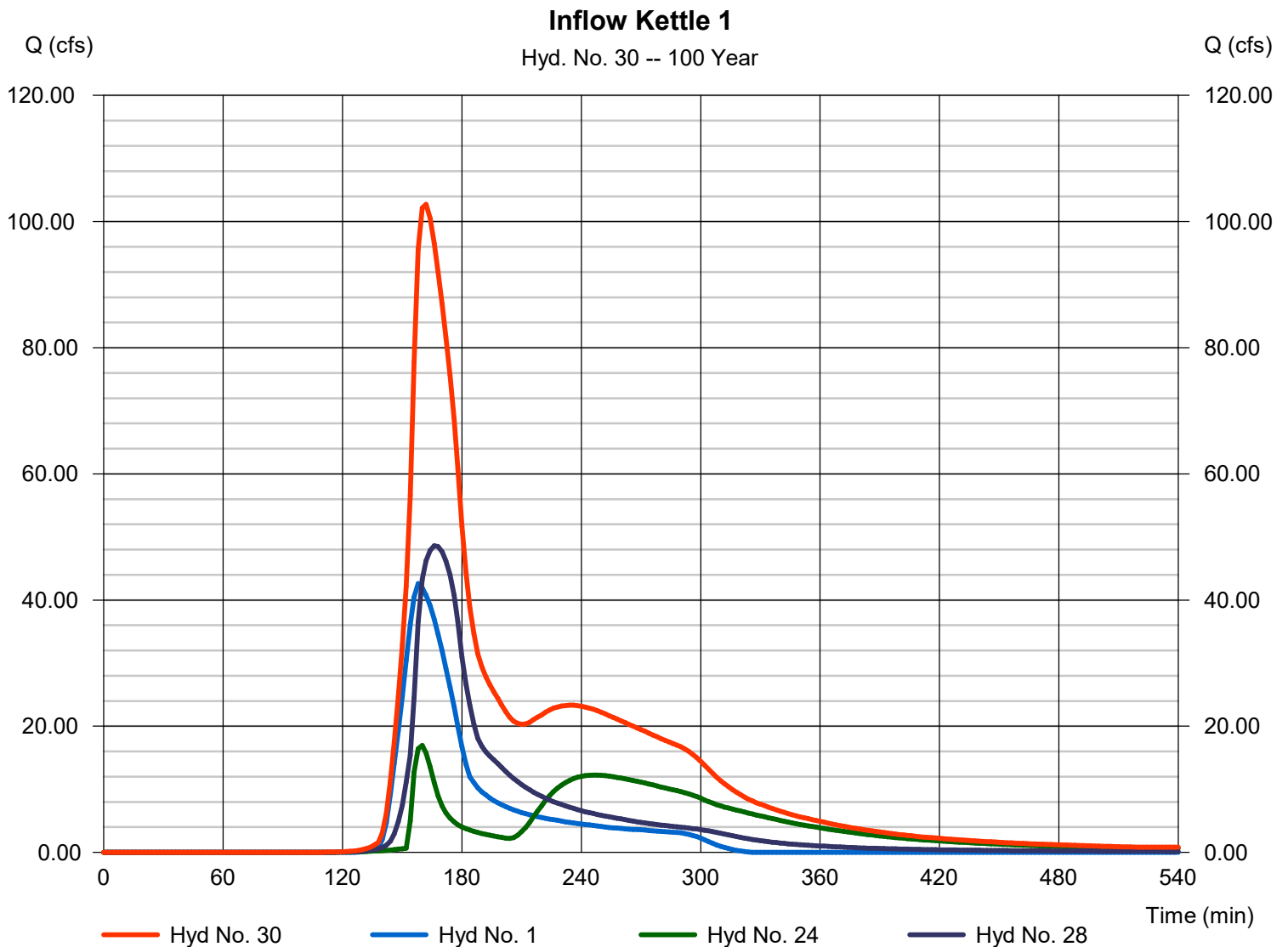
Tuesday, 04 / 7 / 2020

Hyd. No. 30

Inflow Kettle 1

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 1, 24, 28

Peak discharge = 102.74 cfs
 Time to peak = 162 min
 Hyd. volume = 385,165 cuft
 Contrib. drain. area = 12.520 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

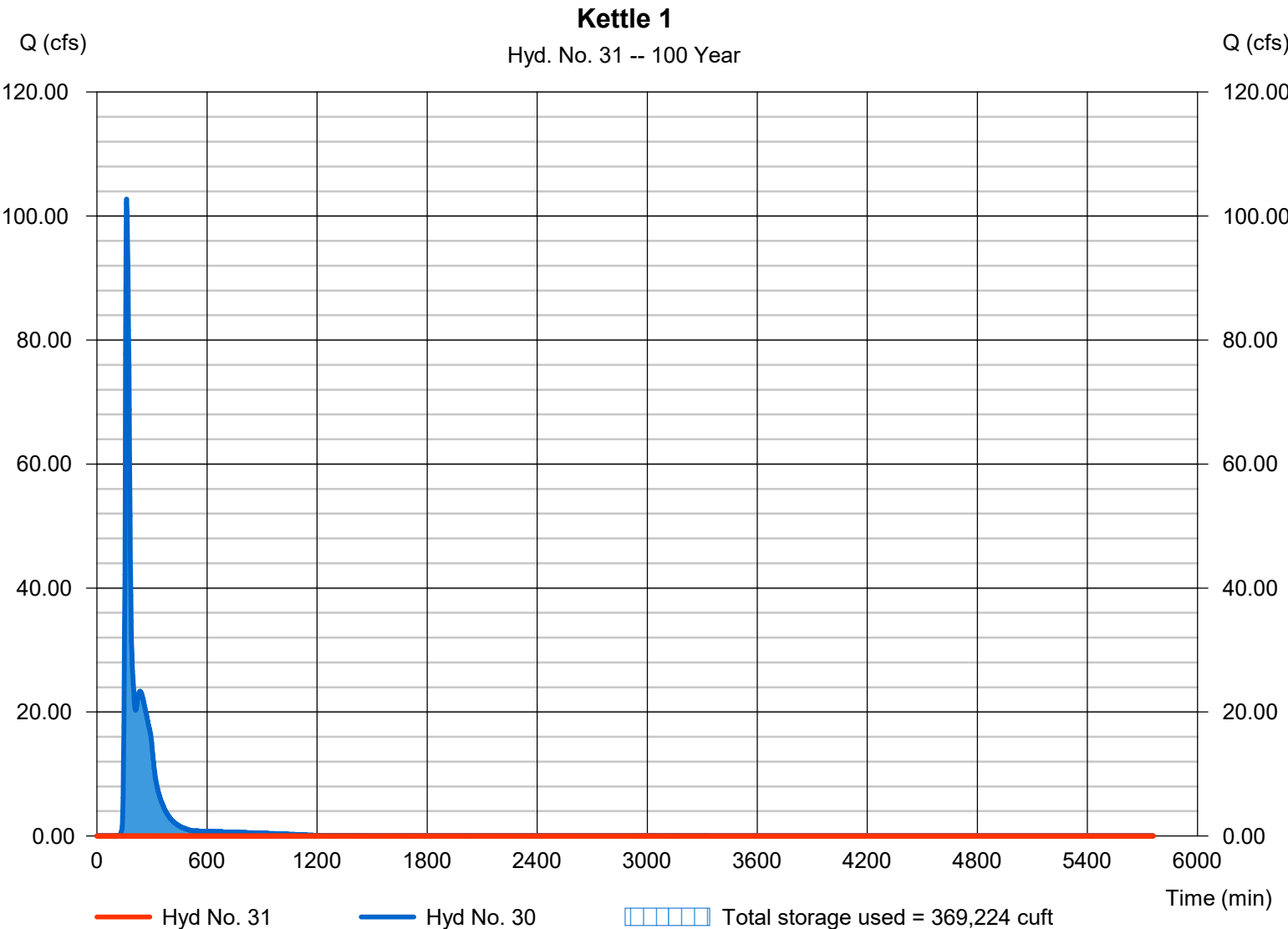
Tuesday, 04 / 7 / 2020

Hyd. No. 31

Kettle 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 278 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 30 - Inflow Kettle 1	Max. Elevation	= 960.24 ft
Reservoir name	= K-1	Max. Storage	= 369,224 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

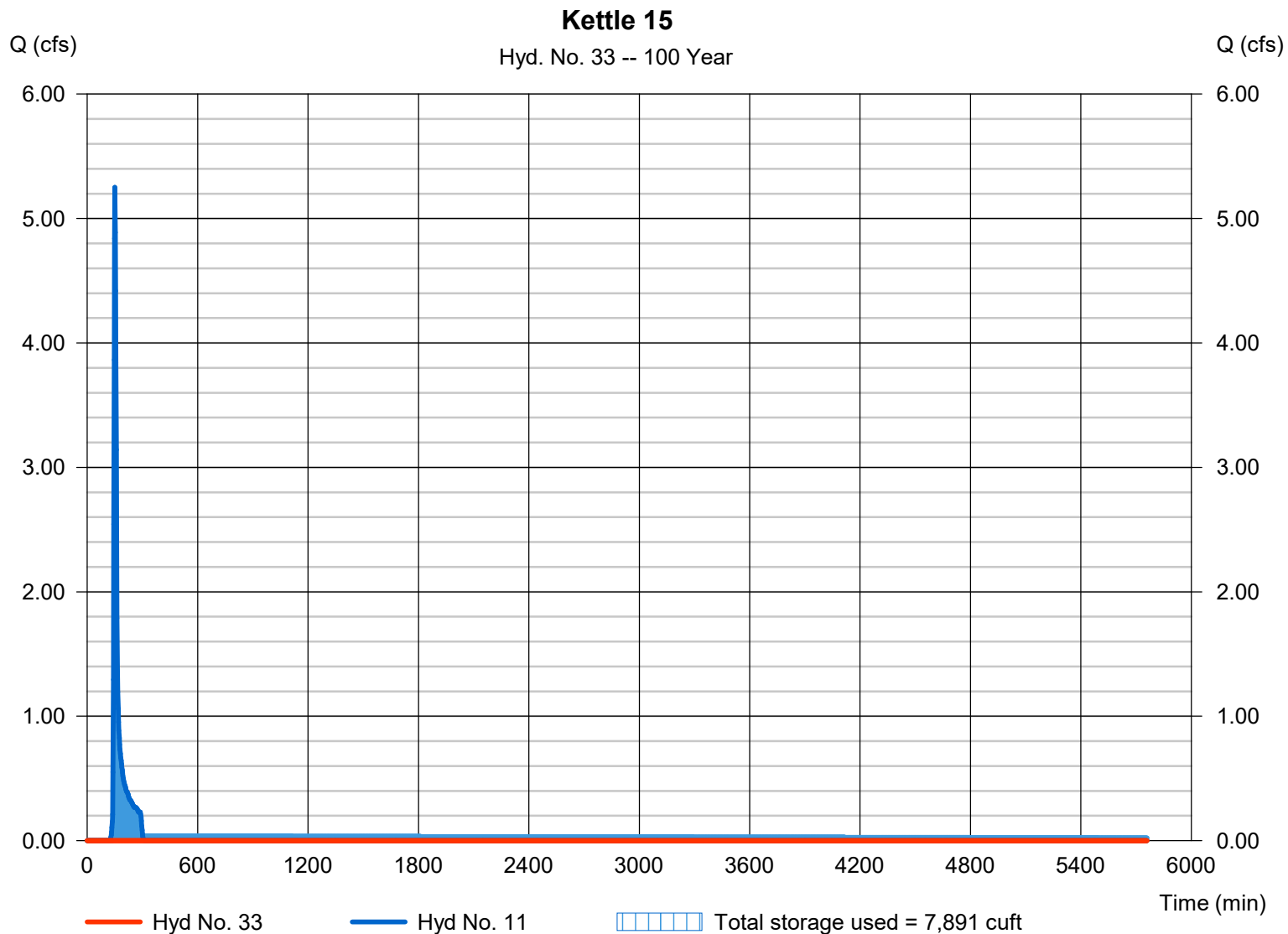
Tuesday, 04 / 7 / 2020

Hyd. No. 33

Kettle 15

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 218 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 11 - E-15	Max. Elevation	= 972.18 ft
Reservoir name	= K-15	Max. Storage	= 7,891 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

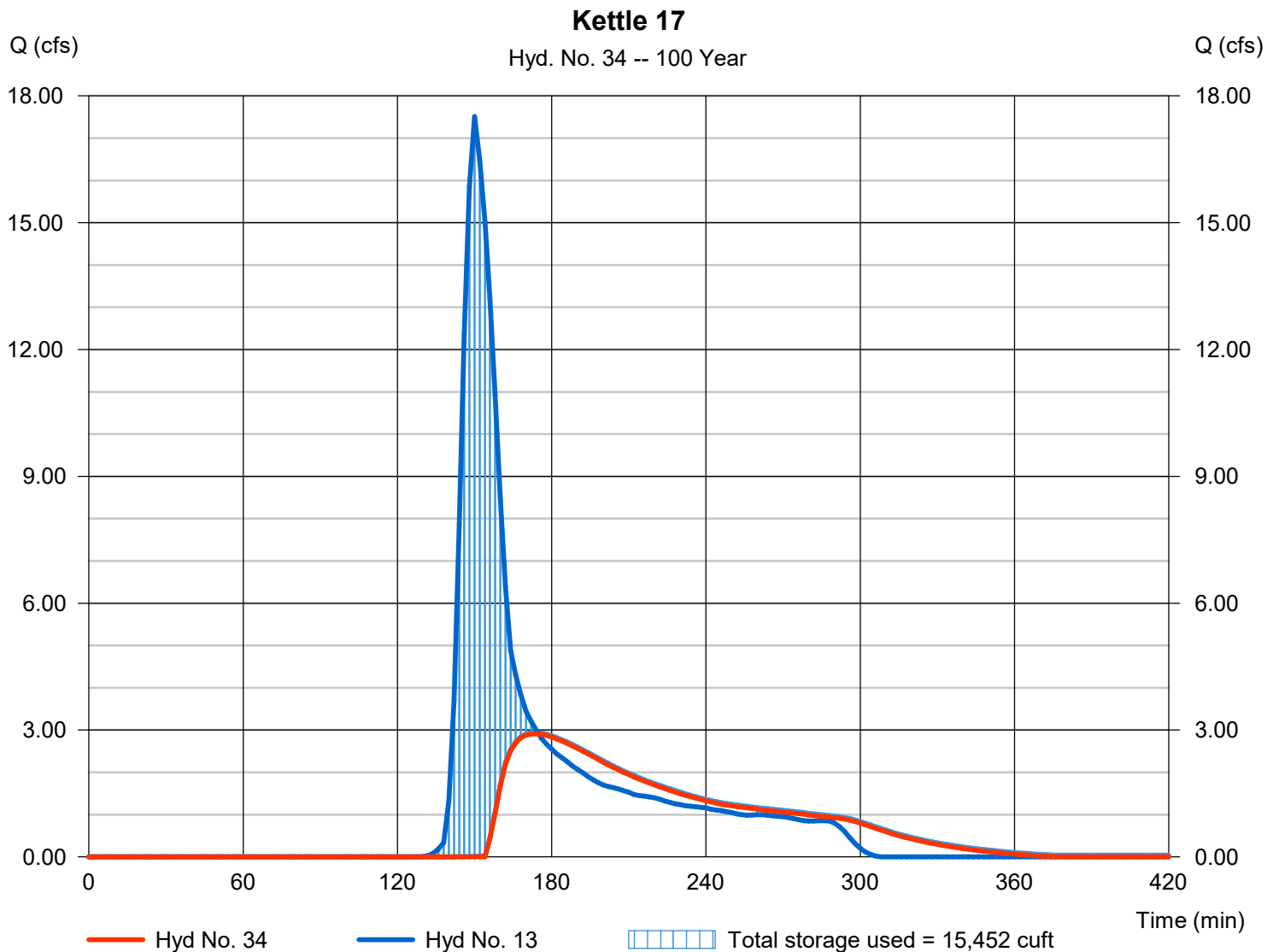
Tuesday, 04 / 7 / 2020

Hyd. No. 34

Kettle 17

Hydrograph type	= Reservoir	Peak discharge	= 2.913 cfs
Storm frequency	= 100 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 15,824 cuft
Inflow hyd. No.	= 13 - P-17	Max. Elevation	= 1012.17 ft
Reservoir name	= P-K-17	Max. Storage	= 15,452 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

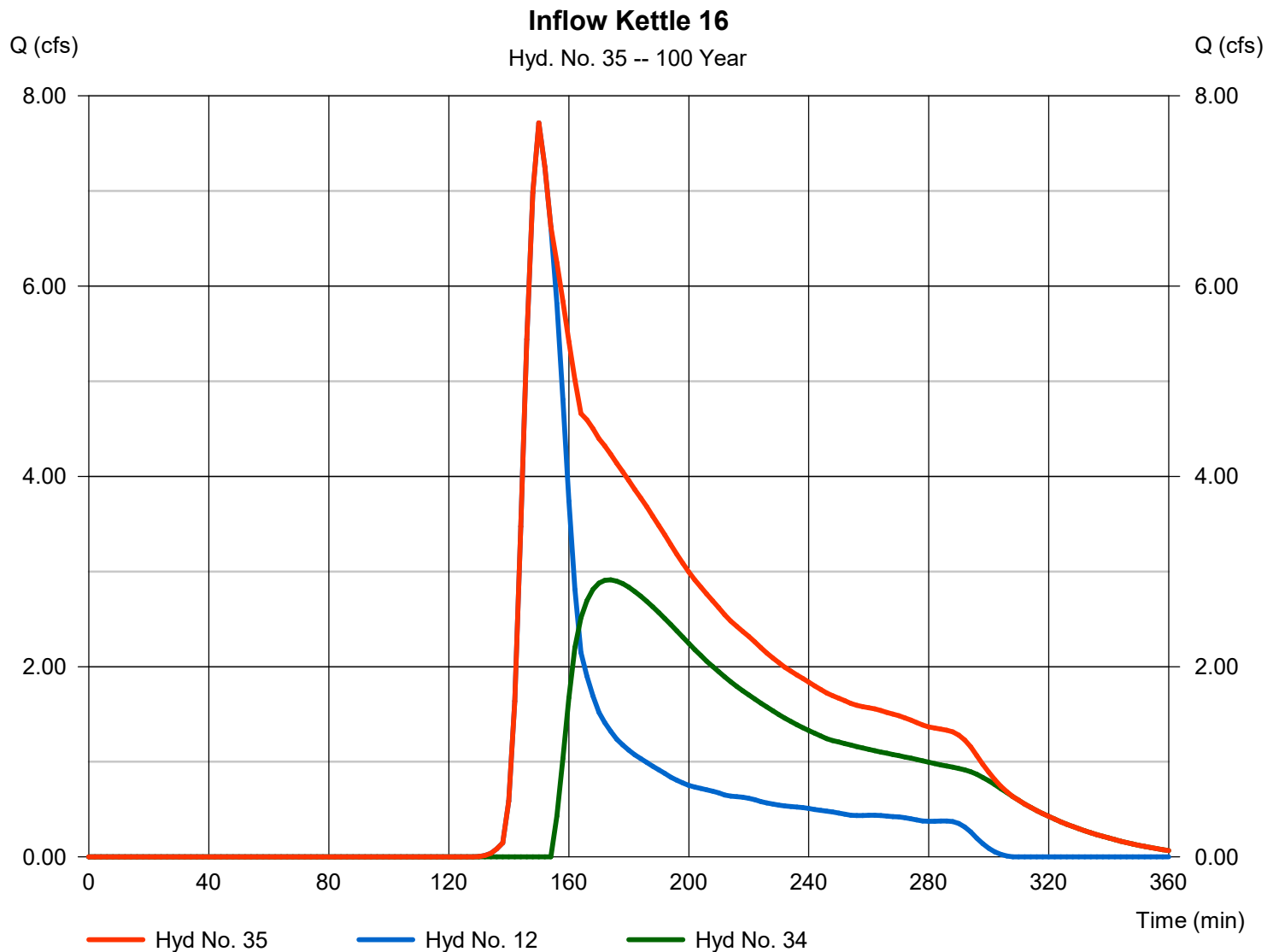
Tuesday, 04 / 7 / 2020

Hyd. No. 35

Inflow Kettle 16

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 12, 34

Peak discharge = 7.716 cfs
Time to peak = 150 min
Hyd. volume = 28,245 cuft
Contrib. drain. area = 1.560 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

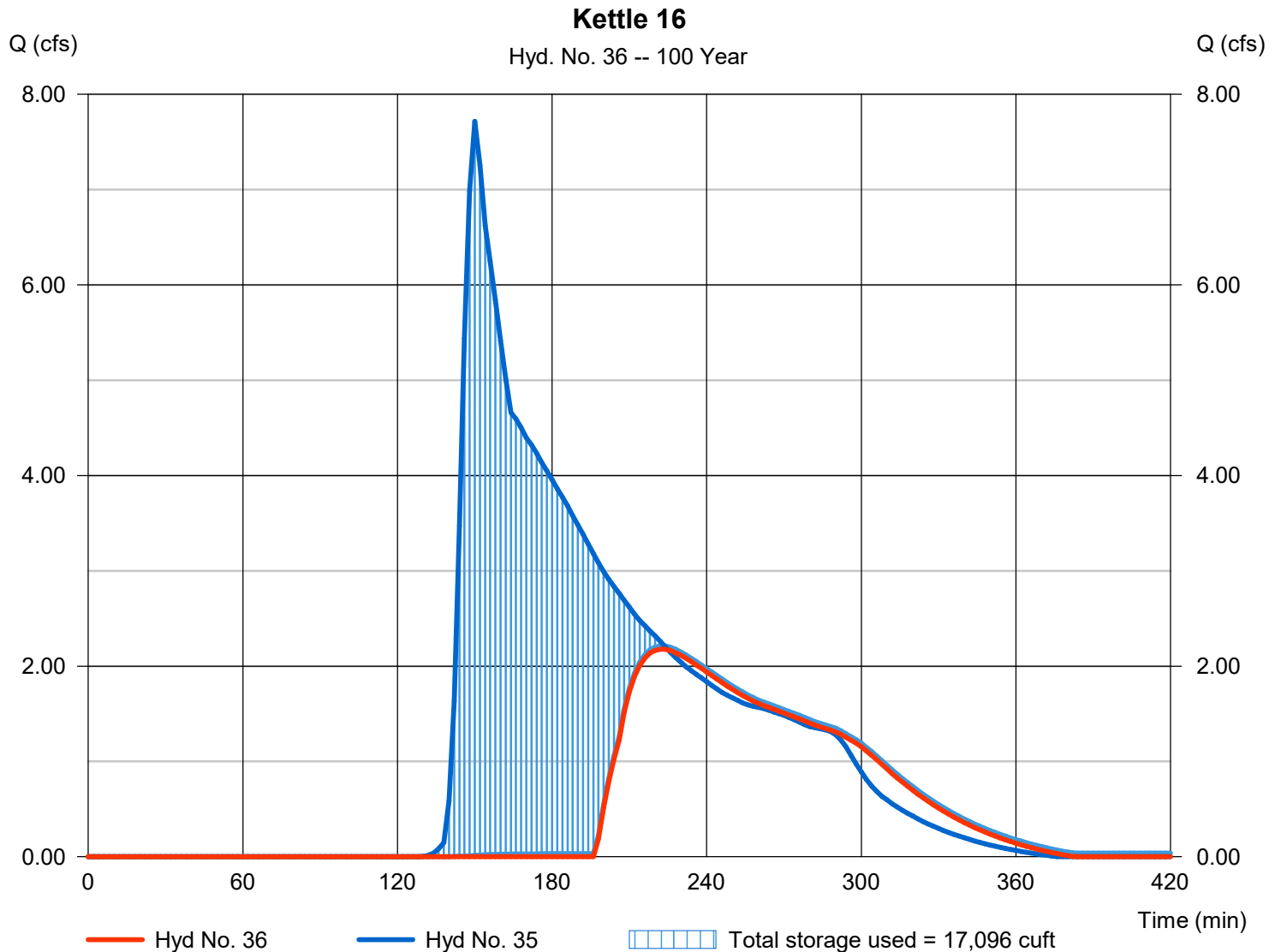
Tuesday, 04 / 7 / 2020

Hyd. No. 36

Kettle 16

Hydrograph type	= Reservoir	Peak discharge	= 2.178 cfs
Storm frequency	= 100 yrs	Time to peak	= 222 min
Time interval	= 2 min	Hyd. volume	= 12,031 cuft
Inflow hyd. No.	= 35 - Inflow Kettle 16	Max. Elevation	= 1007.14 ft
Reservoir name	= K-16	Max. Storage	= 17,096 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

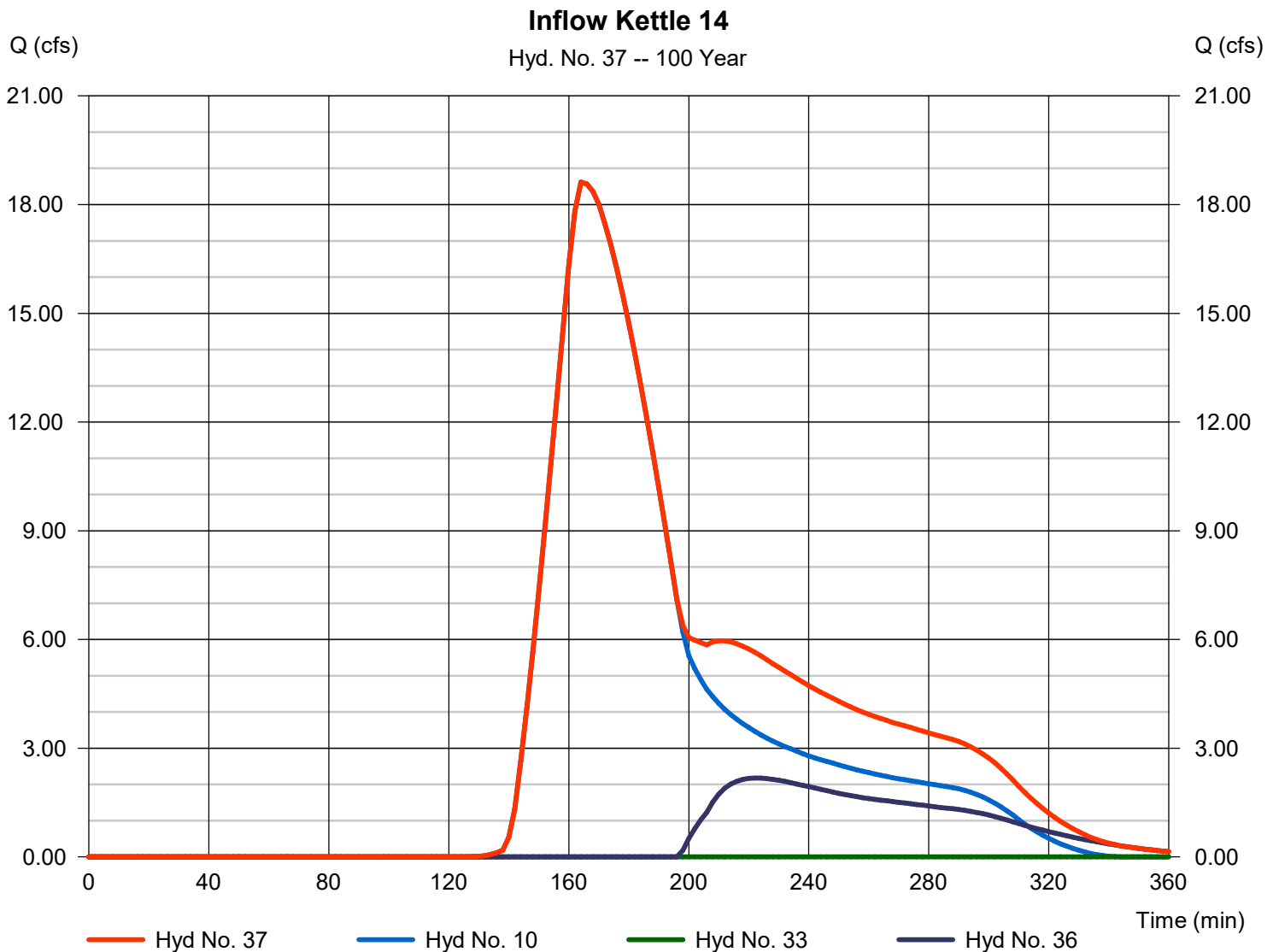
Tuesday, 04 / 7 / 2020

Hyd. No. 37

Inflow Kettle 14

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 10, 33, 36

Peak discharge = 18.62 cfs
Time to peak = 164 min
Hyd. volume = 72,532 cuft
Contrib. drain. area = 7.320 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

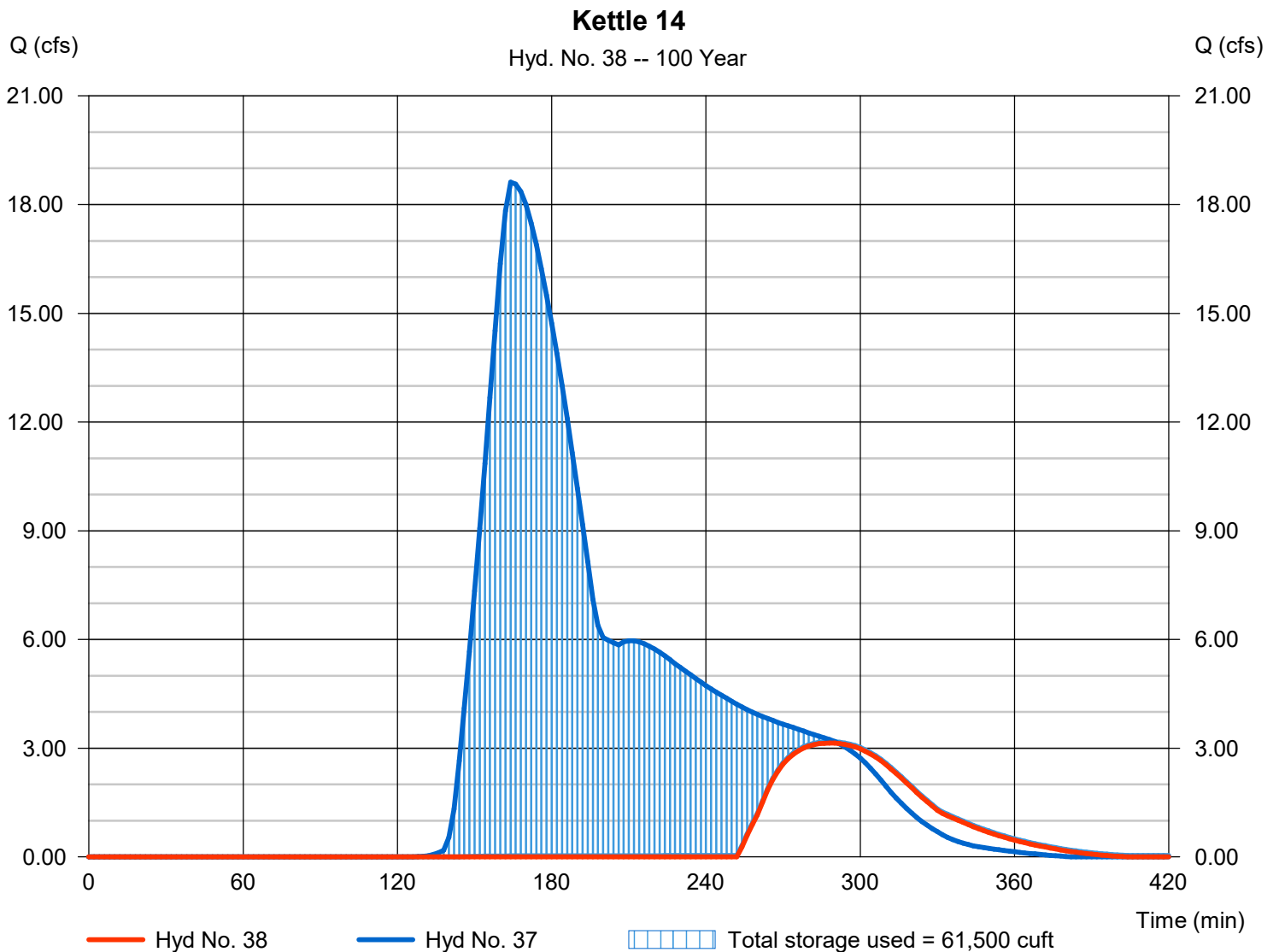
Tuesday, 04 / 7 / 2020

Hyd. No. 38

Kettle 14

Hydrograph type	= Reservoir	Peak discharge	= 3.142 cfs
Storm frequency	= 100 yrs	Time to peak	= 288 min
Time interval	= 2 min	Hyd. volume	= 12,804 cuft
Inflow hyd. No.	= 37 - Inflow Kettle 14	Max. Elevation	= 961.48 ft
Reservoir name	= K-14	Max. Storage	= 61,500 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

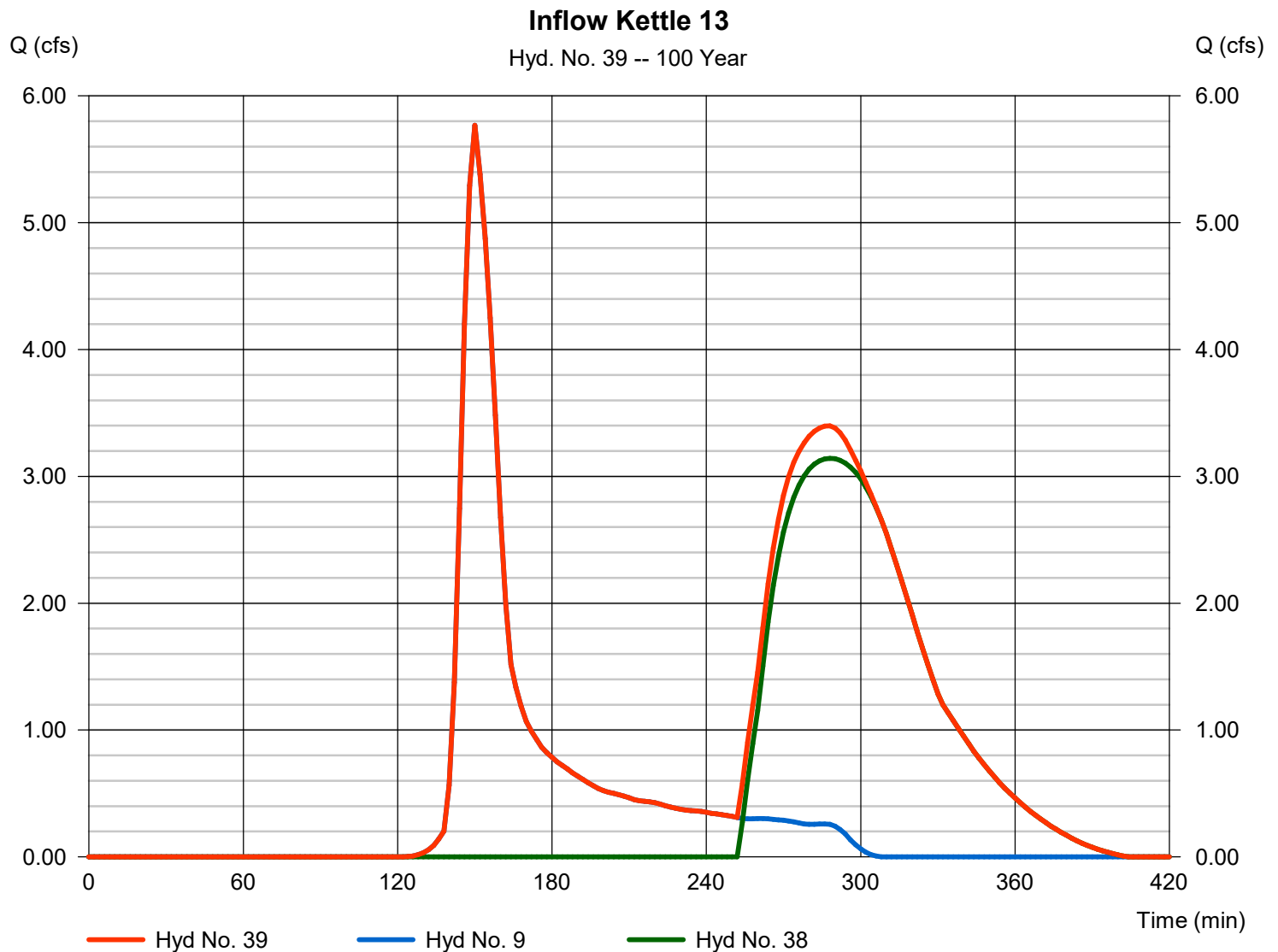
Tuesday, 04 / 7 / 2020

Hyd. No. 39

Inflow Kettle 13

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 9, 38

Peak discharge = 5.768 cfs
Time to peak = 150 min
Hyd. volume = 21,850 cuft
Contrib. drain. area = 1.010 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

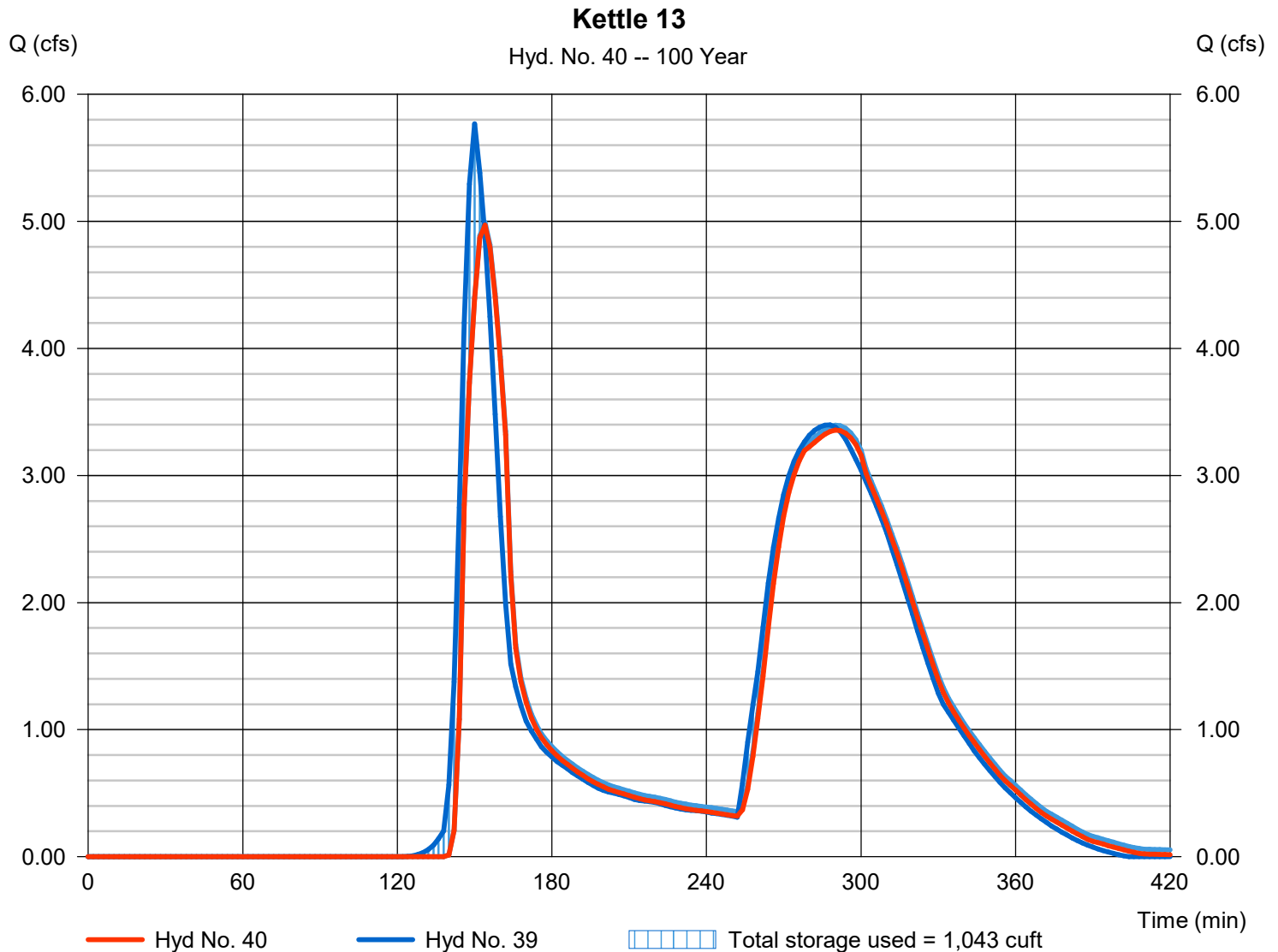
Tuesday, 04 / 7 / 2020

Hyd. No. 40

Kettle 13

Hydrograph type	= Reservoir	Peak discharge	= 4.971 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 21,635 cuft
Inflow hyd. No.	= 39 - Inflow Kettle 13	Max. Elevation	= 960.14 ft
Reservoir name	= K-13	Max. Storage	= 1,043 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

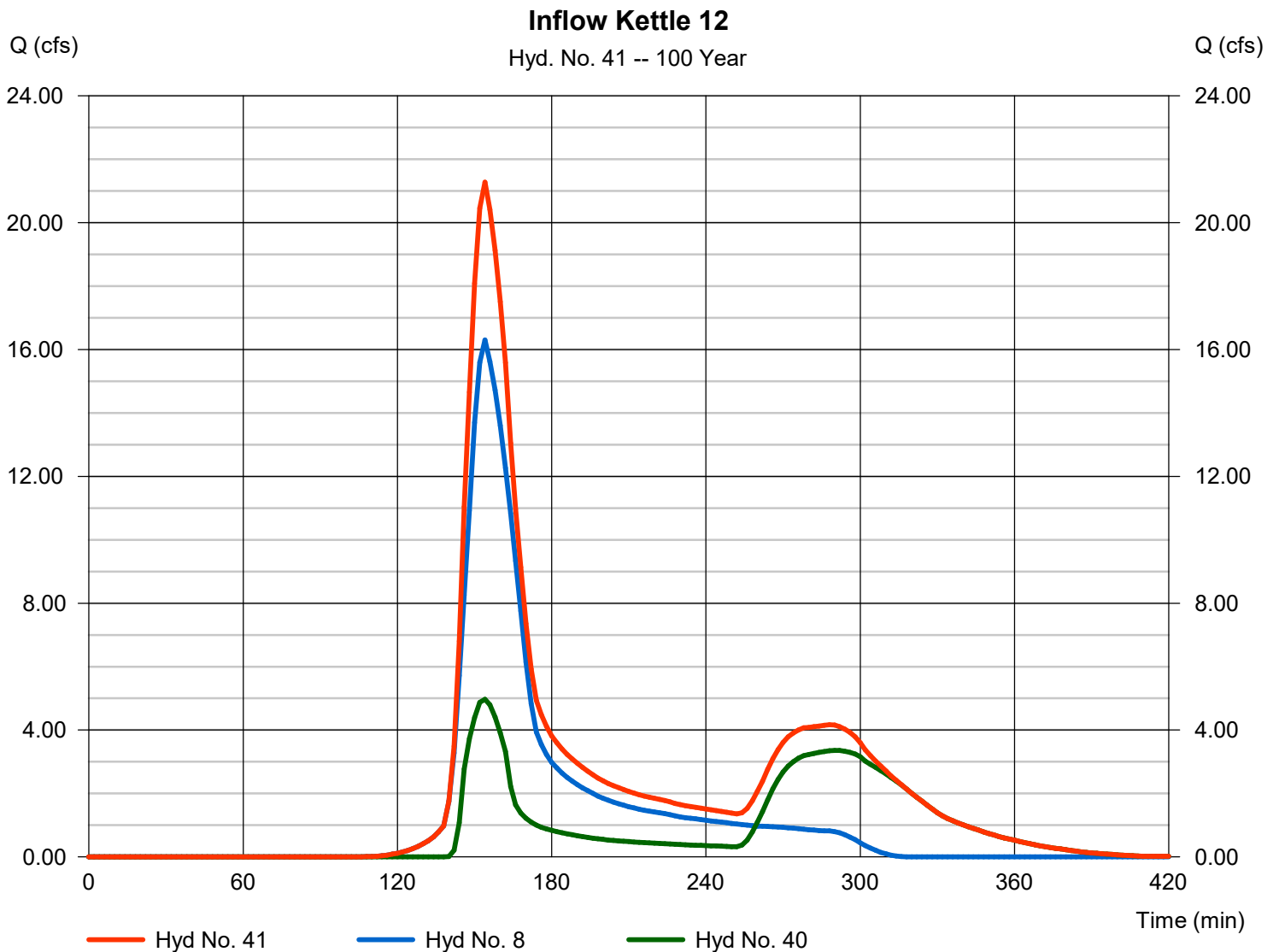
Tuesday, 04 / 7 / 2020

Hyd. No. 41

Inflow Kettle 12

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 8, 40

Peak discharge = 21.28 cfs
Time to peak = 154 min
Hyd. volume = 53,794 cuft
Contrib. drain. area = 2.910 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

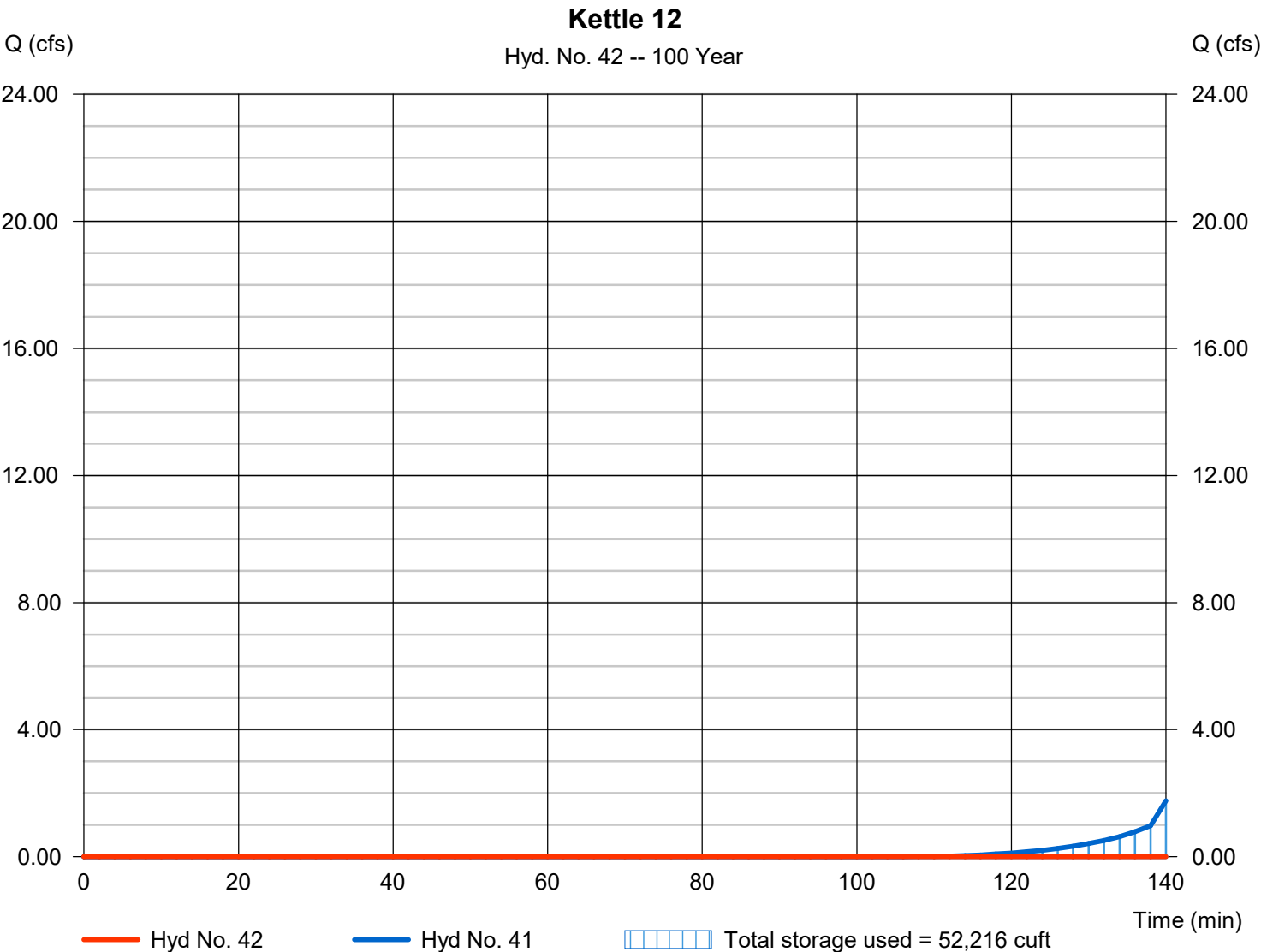
Tuesday, 04 / 7 / 2020

Hyd. No. 42

Kettle 12

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 138 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 41 - Inflow Kettle 12	Max. Elevation	= 960.49 ft
Reservoir name	= K-12	Max. Storage	= 52,216 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

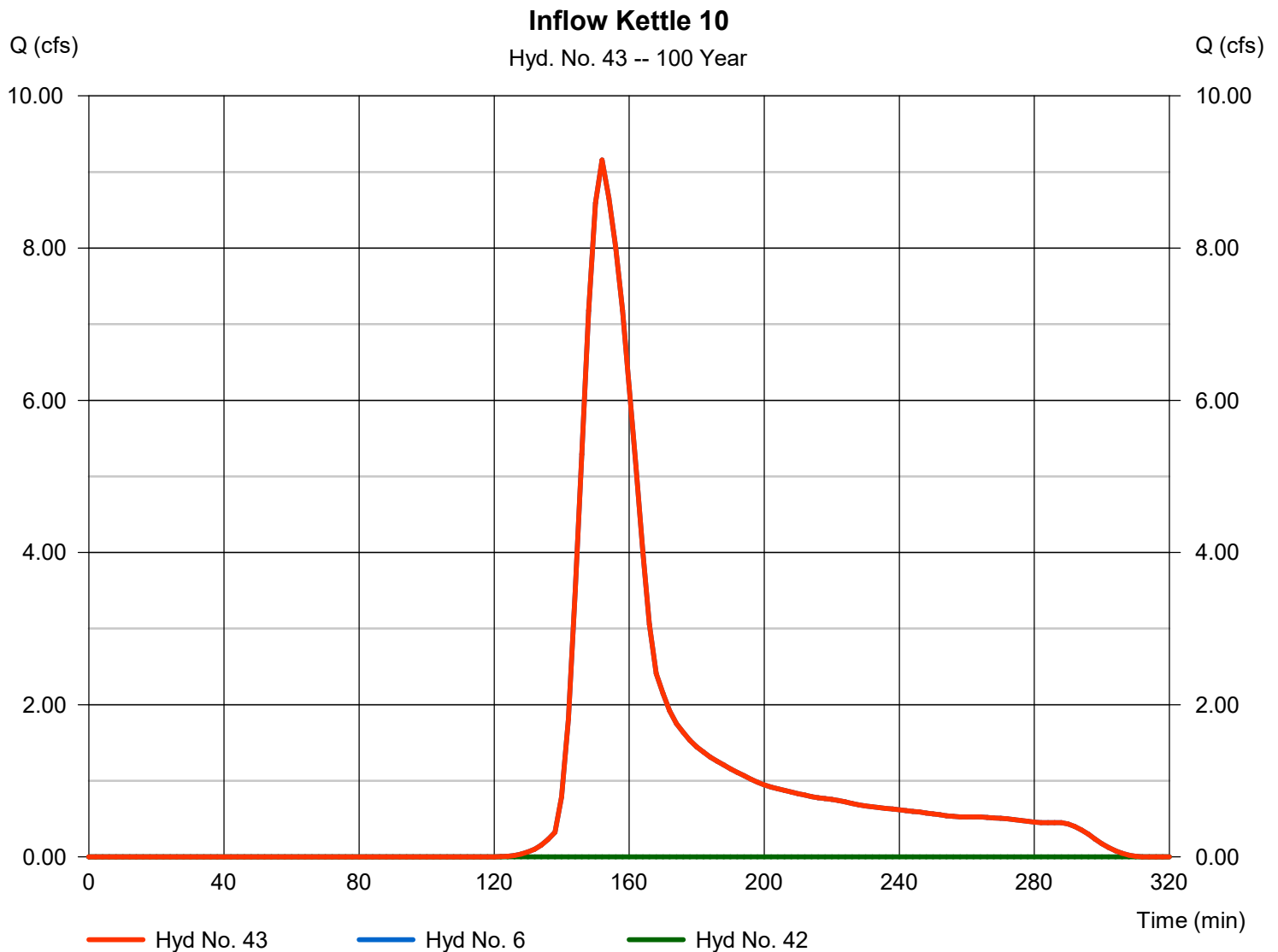
Tuesday, 04 / 7 / 2020

Hyd. No. 43

Inflow Kettle 10

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 6, 42

Peak discharge = 9.157 cfs
Time to peak = 152 min
Hyd. volume = 15,994 cuft
Contrib. drain. area = 1.820 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

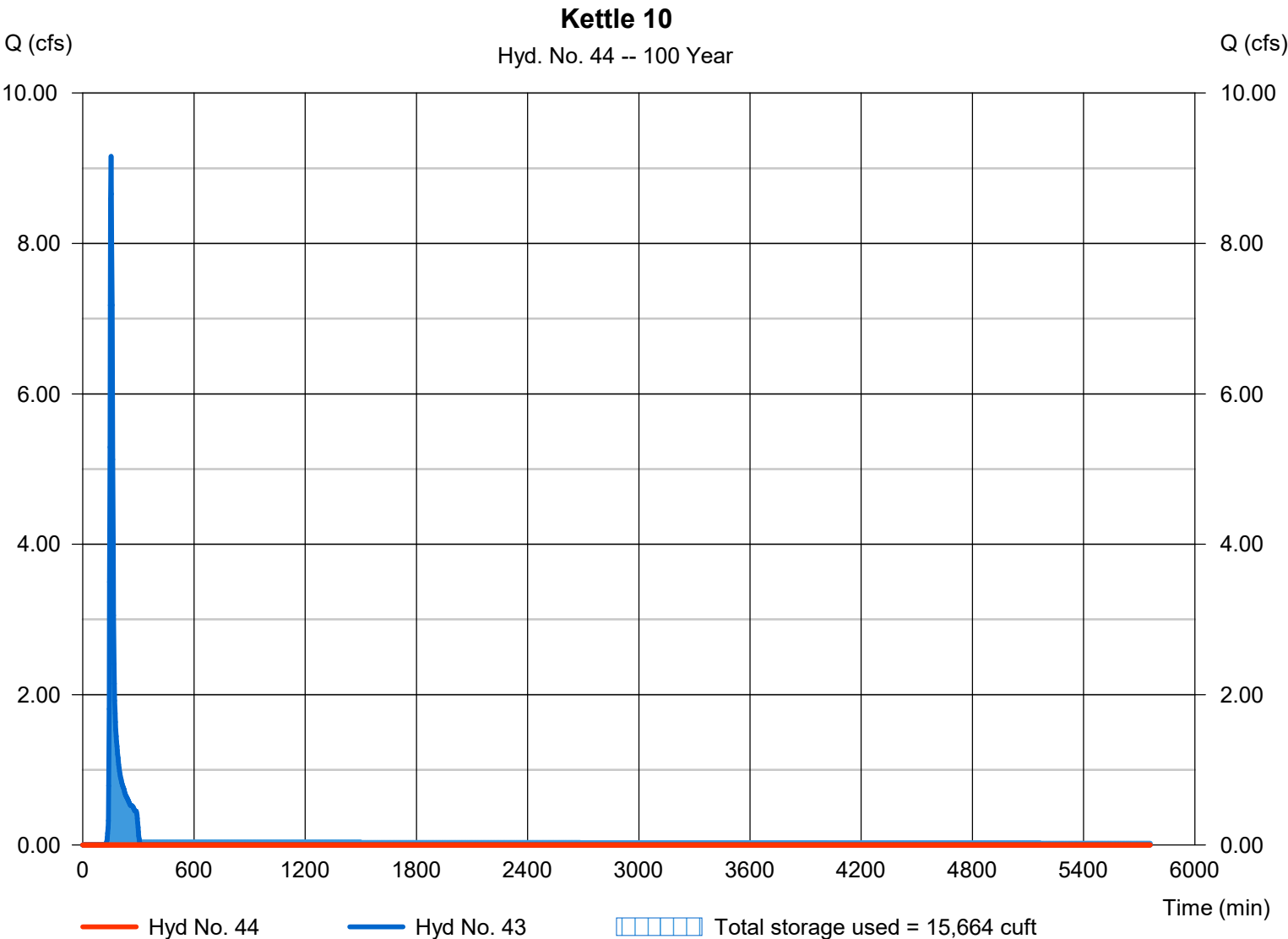
Tuesday, 04 / 7 / 2020

Hyd. No. 44

Kettle 10

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= 254 min
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 43 - Inflow Kettle 10	Max. Elevation	= 958.29 ft
Reservoir name	= K-10	Max. Storage	= 15,664 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 04 / 7 / 2020

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	23.1093	5.4000	0.7350	-----
2	27.1508	5.3000	0.7291	-----
3	0.0000	0.0000	0.0000	-----
5	32.7162	5.1000	0.7139	-----
10	35.3863	4.7000	0.6939	-----
25	34.7551	3.5000	0.6449	-----
50	35.5592	3.0000	0.6213	-----
100	33.9204	2.1000	0.5842	-----

File name: OCONOMOWOC ATLAS 14 IDF.IDF

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.13	3.10	2.52	2.14	1.88	1.68	1.52	1.40	1.30	1.21	1.13	1.07
2	4.96	3.72	3.02	2.58	2.26	2.02	1.83	1.68	1.56	1.46	1.37	1.29
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.28	4.71	3.84	3.28	2.88	2.58	2.35	2.16	2.00	1.87	1.76	1.66
10	7.31	5.48	4.47	3.82	3.36	3.02	2.75	2.53	2.35	2.20	2.07	1.96
25	8.74	6.49	5.29	4.54	4.01	3.61	3.30	3.05	2.84	2.67	2.52	2.39
50	9.77	7.22	5.90	5.07	4.49	4.05	3.71	3.44	3.21	3.02	2.85	2.71
100	10.79	7.90	6.46	5.56	4.93	4.47	4.11	3.82	3.57	3.37	3.19	3.04

T_c = time in minutes. Values may exceed 60.

Desktop\LAKE COUNTRY LUTHER (1)\284-Storm Water Management Plan\OCONOMOWOC ATLAS 14 PRECIP.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCS 6-Hr	1.75	2.05	0.00	2.59	3.09	3.85	4.48	5.17
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	2.40	2.70	0.00	3.31	3.81	4.71	5.44	6.18

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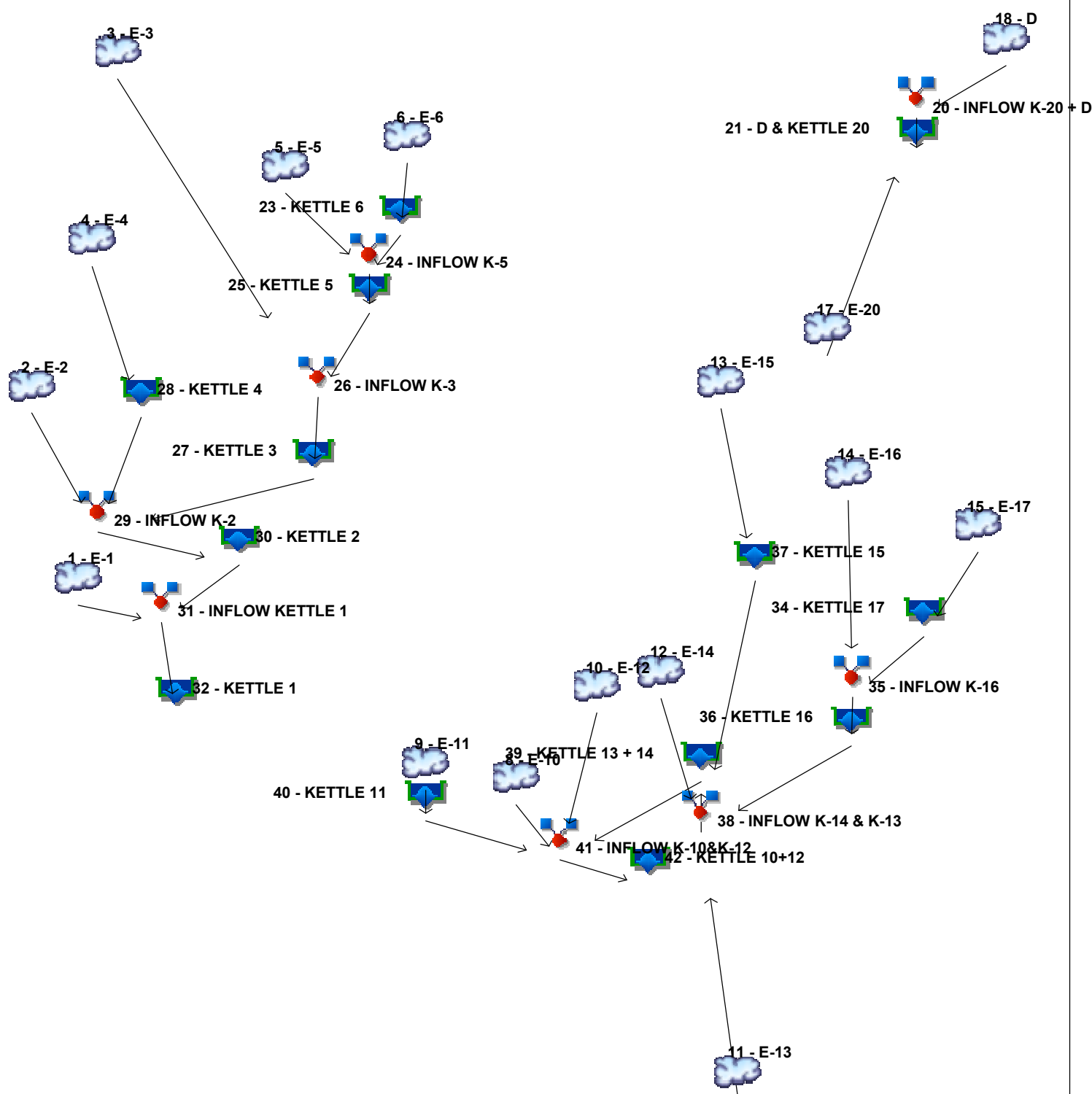
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APPENDIX 4

Frozen Ground (CN=98)
100-yr Hydraflow Modeling

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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	----	----	----	----	----	----	----	----	101.84	E-1
2	SCS Runoff	----	----	----	----	----	----	----	----	44.79	E-2
3	SCS Runoff	----	----	----	----	----	----	----	----	16.06	E-3
4	SCS Runoff	----	----	----	----	----	----	----	----	5.698	E-4
5	SCS Runoff	----	----	----	----	----	----	----	----	53.24	E-5
6	SCS Runoff	----	----	----	----	----	----	----	----	28.00	E-6
8	SCS Runoff	----	----	----	----	----	----	----	----	19.41	E-10
9	SCS Runoff	----	----	----	----	----	----	----	----	9.770	E-11
10	SCS Runoff	----	----	----	----	----	----	----	----	29.32	E-12
11	SCS Runoff	----	----	----	----	----	----	----	----	13.65	E-13
12	SCS Runoff	----	----	----	----	----	----	----	----	46.12	E-14
13	SCS Runoff	----	----	----	----	----	----	----	----	11.78	E-15
14	SCS Runoff	----	----	----	----	----	----	----	----	18.30	E-16
15	SCS Runoff	----	----	----	----	----	----	----	----	48.60	E-17
17	SCS Runoff	----	----	----	----	----	----	----	----	36.66	E-20
18	SCS Runoff	----	----	----	----	----	----	----	----	50.00	D
20	Combine	17, 18,	----	----	----	----	----	----	----	85.04	INFLOW K-20 + D
21	Reservoir	20	----	----	----	----	----	----	----	24.83	D & KETTLE 20
23	Reservoir	6	----	----	----	----	----	----	----	2.830	KETTLE 6
24	Combine	5, 23	----	----	----	----	----	----	----	53.24	INFLOW K-5
25	Reservoir	24	----	----	----	----	----	----	----	25.52	KETTLE 5
26	Combine	3, 25	----	----	----	----	----	----	----	27.67	INFLOW K-3
27	Reservoir	26	----	----	----	----	----	----	----	27.19	KETTLE 3
28	Reservoir	4	----	----	----	----	----	----	----	1.658	KETTLE 4
29	Combine	2, 27, 28	----	----	----	----	----	----	----	65.82	INFLOW K-2
30	Reservoir	29	----	----	----	----	----	----	----	32.84	KETTLE 2
31	Combine	1, 30	----	----	----	----	----	----	----	110.21	INFLOW KETTLE 1
32	Reservoir	31	----	----	----	----	----	----	----	0.000	KETTLE 1
34	Reservoir	15	----	----	----	----	----	----	----	31.65	KETTLE 17
35	Combine	14, 34	----	----	----	----	----	----	----	45.28	INFLOW K-16
36	Reservoir	35	----	----	----	----	----	----	----	41.02	KETTLE 16
Proj. file: EXISTING FROZEN_LCL_Stormwater Model_2020-04-08.gpw										Wednesday, 04 / 8 / 2020	

Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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	
37	Reservoir	13	-----	-----	-----	-----	-----	-----	-----	5.457	KETTLE 15
38	Combine	11, 12, 36, 37	-----	-----	-----	-----	-----	-----	-----	95.13	INFLOW K-14 & K-13
39	Reservoir	38	-----	-----	-----	-----	-----	-----	-----	48.37	KETTLE 13 + 14
40	Reservoir	9	-----	-----	-----	-----	-----	-----	-----	7.824	KETTLE 11
41	Combine	8, 10, 39, 40	-----	-----	-----	-----	-----	-----	-----	74.10	INFLOW K-10&K-12
42	Reservoir	41	-----	-----	-----	-----	-----	-----	-----	17.37	KETTLE 10+12

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	101.84	2	164	330,060	-----	-----	-----	E-1
2	SCS Runoff	44.79	2	158	115,349	-----	-----	-----	E-2
3	SCS Runoff	16.06	2	154	34,250	-----	-----	-----	E-3
4	SCS Runoff	5.698	2	146	7,786	-----	-----	-----	E-4
5	SCS Runoff	53.24	2	160	150,697	-----	-----	-----	E-5
6	SCS Runoff	28.00	2	154	59,722	-----	-----	-----	E-6
8	SCS Runoff	19.41	2	154	41,411	-----	-----	-----	E-10
9	SCS Runoff	9.770	2	150	16,237	-----	-----	-----	E-11
10	SCS Runoff	29.32	2	154	62,548	-----	-----	-----	E-12
11	SCS Runoff	13.65	2	150	22,687	-----	-----	-----	E-13
12	SCS Runoff	46.12	2	164	149,475	-----	-----	-----	E-14
13	SCS Runoff	11.78	2	150	19,573	-----	-----	-----	E-15
14	SCS Runoff	18.30	2	152	33,983	-----	-----	-----	E-16
15	SCS Runoff	48.60	2	152	90,235	-----	-----	-----	E-17
17	SCS Runoff	36.66	2	160	103,764	-----	-----	-----	E-20
18	SCS Runoff	50.00	2	164	162,055	-----	-----	-----	D
20	Combine	85.04	2	162	265,820	17, 18,	-----	-----	INFLOW K-20 + D
21	Reservoir	24.83	2	192	83,963	20	995.21	199,025	D & KETTLE 20
23	Reservoir	2.830	2	190	21,585	6	1012.96	46,402	KETTLE 6
24	Combine	53.24	2	160	172,282	5, 23	-----	-----	INFLOW K-5
25	Reservoir	25.52	2	180	172,071	24	985.82	74,197	KETTLE 5
26	Combine	27.67	2	180	206,322	3, 25	-----	-----	INFLOW K-3
27	Reservoir	27.19	2	182	183,497	26	976.79	31,112	KETTLE 3
28	Reservoir	1.658	2	156	3,428	4	1008.66	5,142	KETTLE 4
29	Combine	65.82	2	158	302,274	2, 27, 28	-----	-----	INFLOW K-2
30	Reservoir	32.84	2	190	231,799	29	975.56	110,241	KETTLE 2
31	Combine	110.21	2	170	561,859	1, 30	-----	-----	INFLOW KETTLE 1
32	Reservoir	0.000	2	n/a	0	31	964.03	561,859	KETTLE 1
34	Reservoir	31.65	2	158	79,073	15	1012.87	37,635	KETTLE 17
35	Combine	45.28	2	156	113,056	14, 34	-----	-----	INFLOW K-16
36	Reservoir	41.02	2	160	97,654	35	1008.04	27,837	KETTLE 16
EXISTING FROZEN_LCL_Stormwater Model 2020-04-08					2020-04-08 100 Year			Wednesday, 04 / 8 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
37	Reservoir	5.457	2	158	9,374	13	972.77	12,148	KETTLE 15
38	Combine	95.13	2	160	279,190	11, 12, 36, 37	-----	-----	INFLOW K-14 & K-13
39	Reservoir	48.37	2	182	245,258	38	963.41	115,883	KETTLE 13 + 14
40	Reservoir	7.824	2	154	11,199	9	980.84	7,130	KETTLE 11
41	Combine	74.10	2	156	360,415	8, 10, 39, 40	-----	-----	INFLOW K-10&K-12
42	Reservoir	17.37	2	252	109,338	41	965.08	283,194	KETTLE 10+12

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

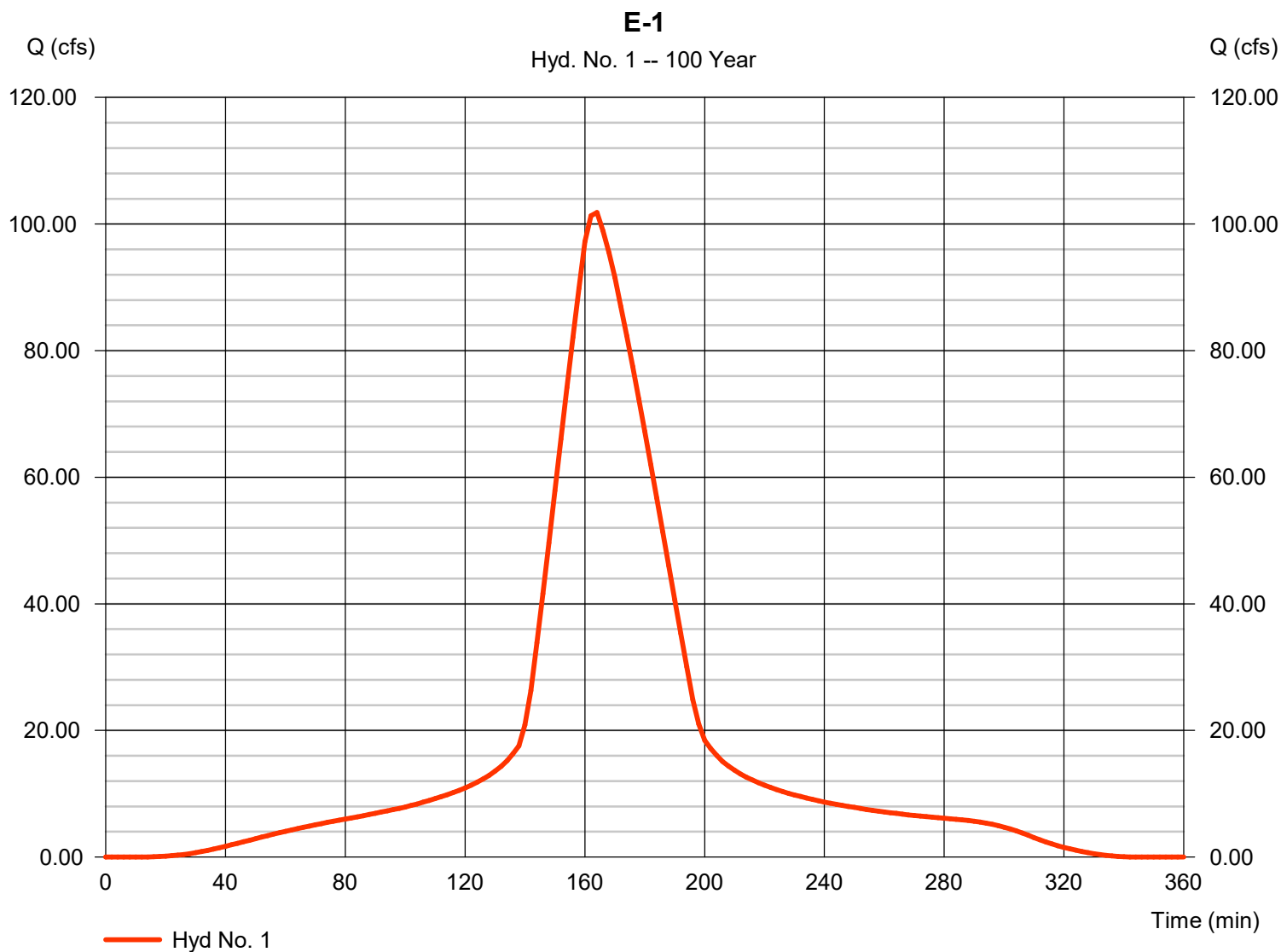
Wednesday, 04 / 8 / 2020

Hyd. No. 1

E-1

Hydrograph type	= SCS Runoff	Peak discharge	= 101.84 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 330,060 cuft
Drainage area	= 15.479 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 15.479$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

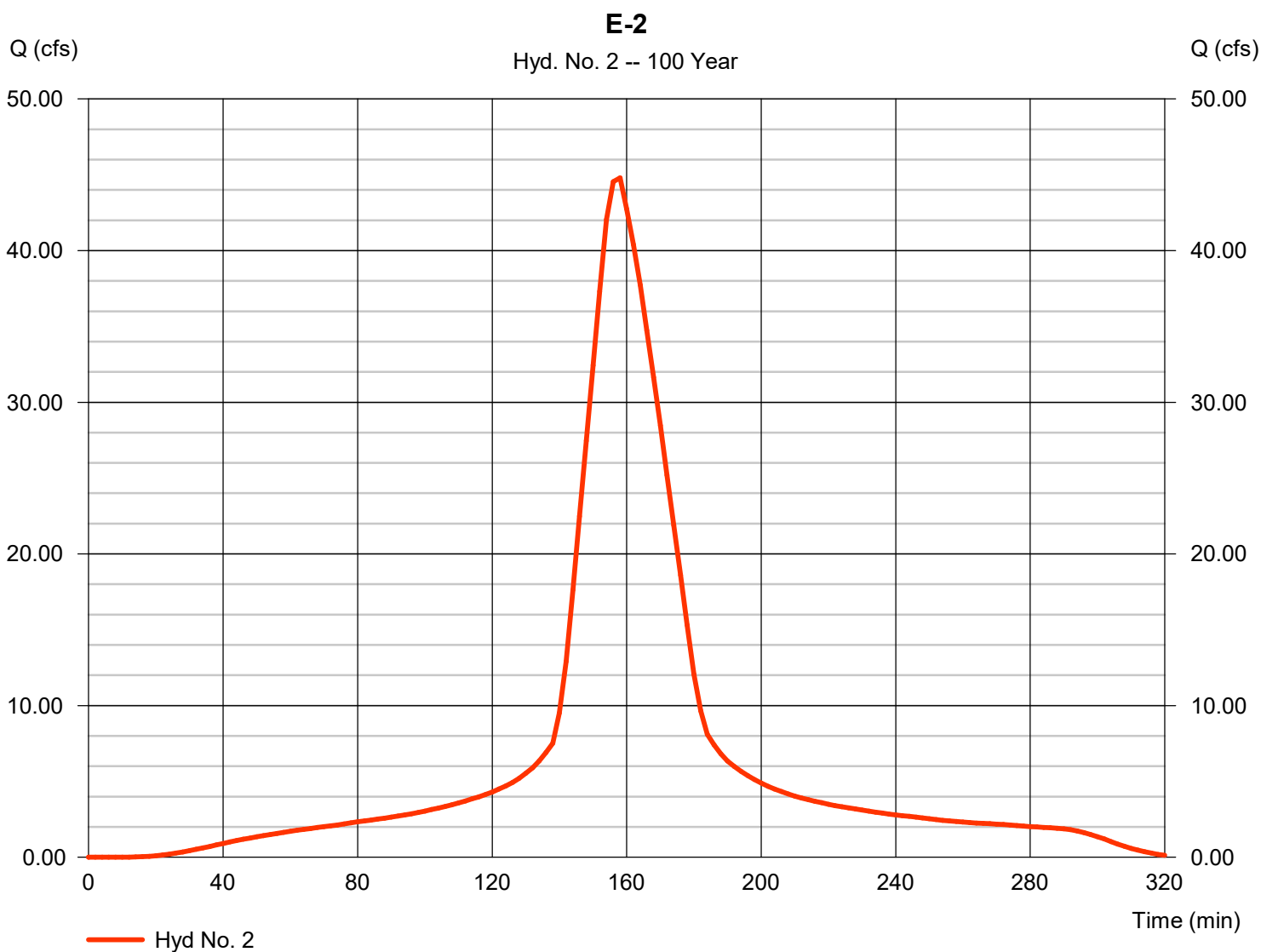
Wednesday, 04 / 8 / 2020

Hyd. No. 2

E-2

Hydrograph type	= SCS Runoff	Peak discharge	= 44.79 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 115,349 cuft
Drainage area	= 5.433 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 5.433$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

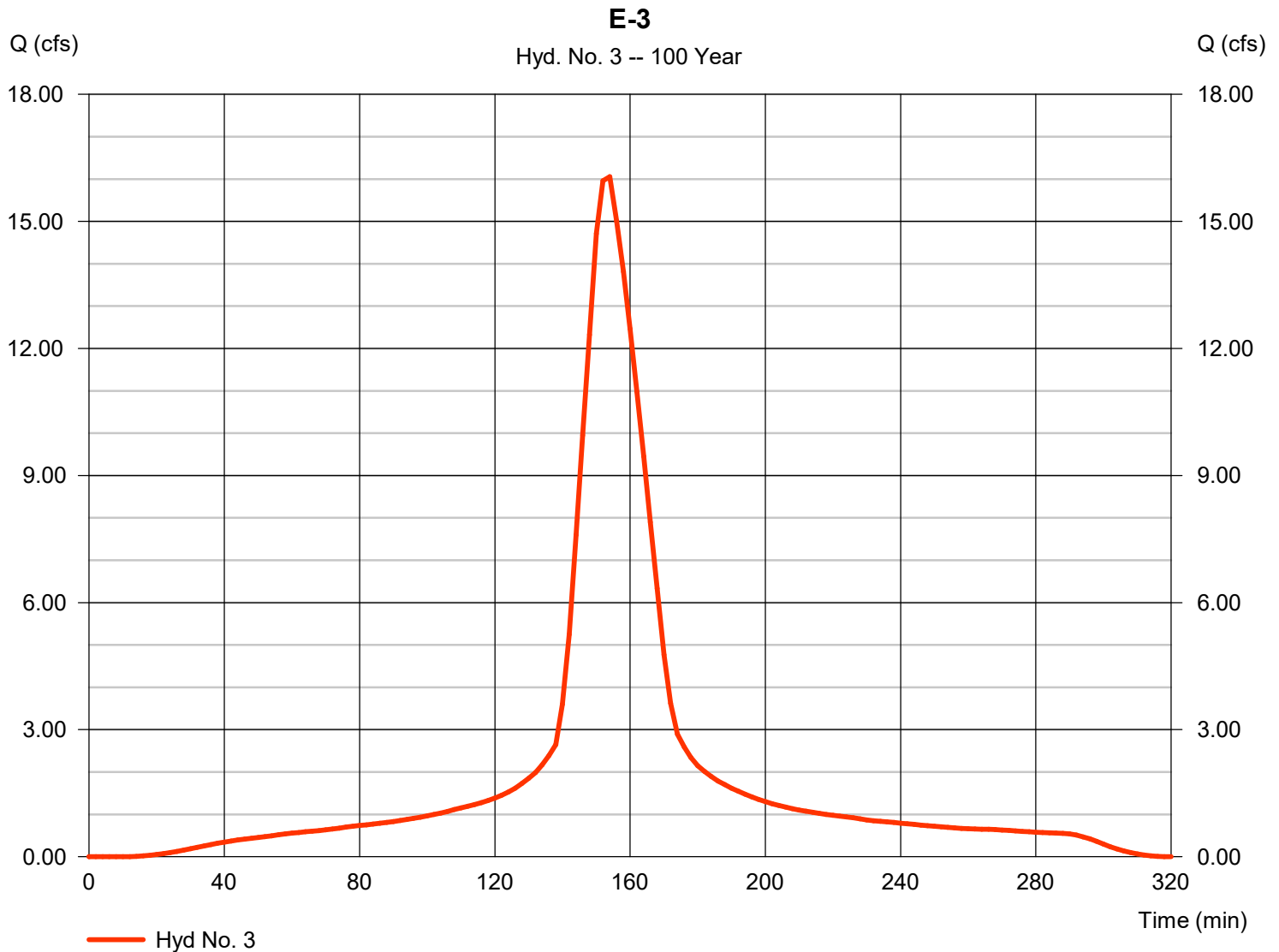
Wednesday, 04 / 8 / 2020

Hyd. No. 3

E-3

Hydrograph type	= SCS Runoff	Peak discharge	= 16.06 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 34,250 cuft
Drainage area	= 1.588 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 1.588$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

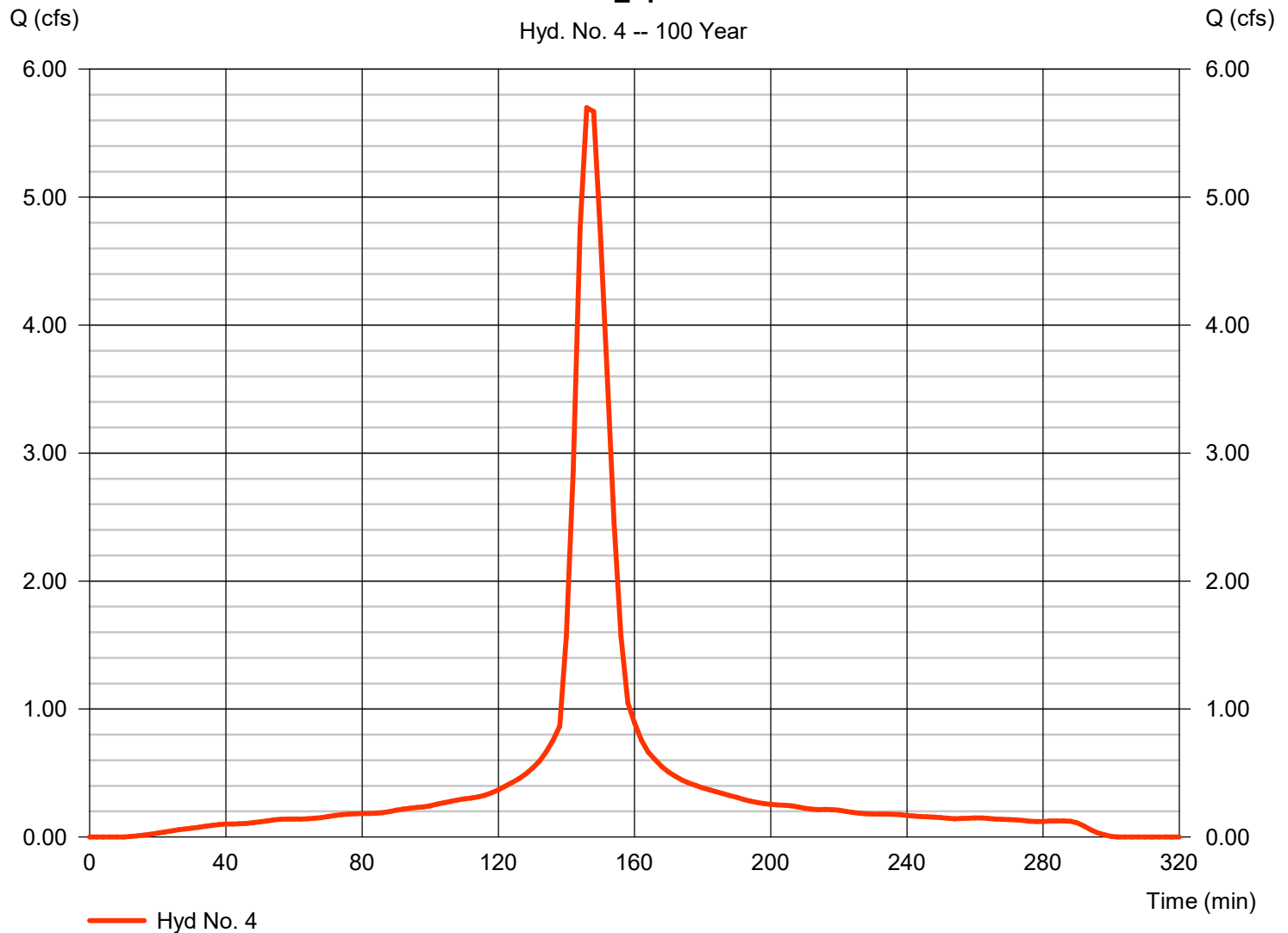
Wednesday, 04 / 8 / 2020

Hyd. No. 4

E-4

Hydrograph type	= SCS Runoff	Peak discharge	= 5.698 cfs
Storm frequency	= 100 yrs	Time to peak	= 146 min
Time interval	= 2 min	Hyd. volume	= 7,786 cuft
Drainage area	= 0.361 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

E-4



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

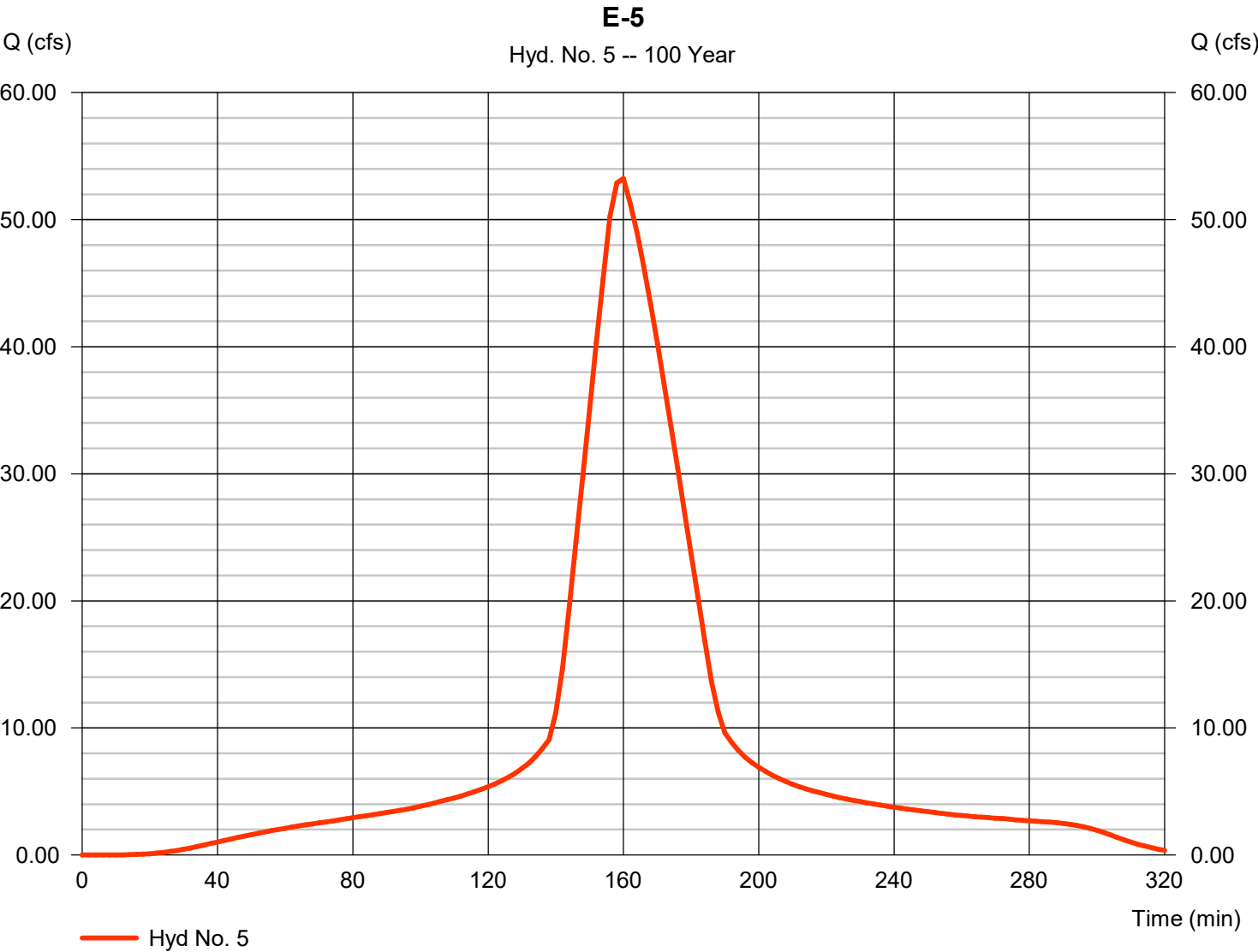
Wednesday, 04 / 8 / 2020

Hyd. No. 5

E-5

Hydrograph type	= SCS Runoff	Peak discharge	= 53.24 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 150,697 cuft
Drainage area	= 6.987 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 27.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = [(0.040 x 98) + (5.790 x 60)] / 6.987



Hydrograph Report

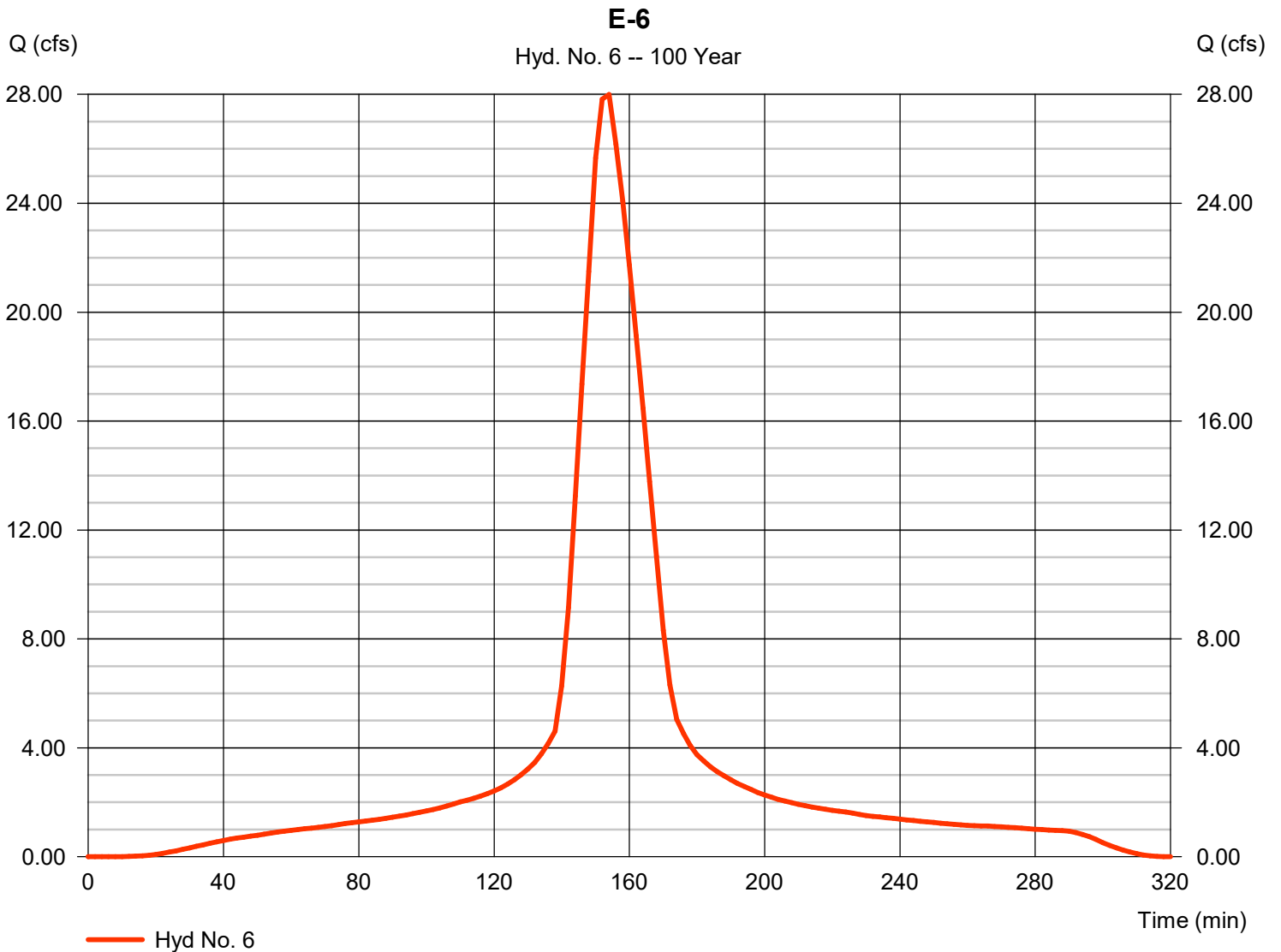
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 6

E-6

Hydrograph type	= SCS Runoff	Peak discharge	= 28.00 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 59,722 cuft
Drainage area	= 2.769 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

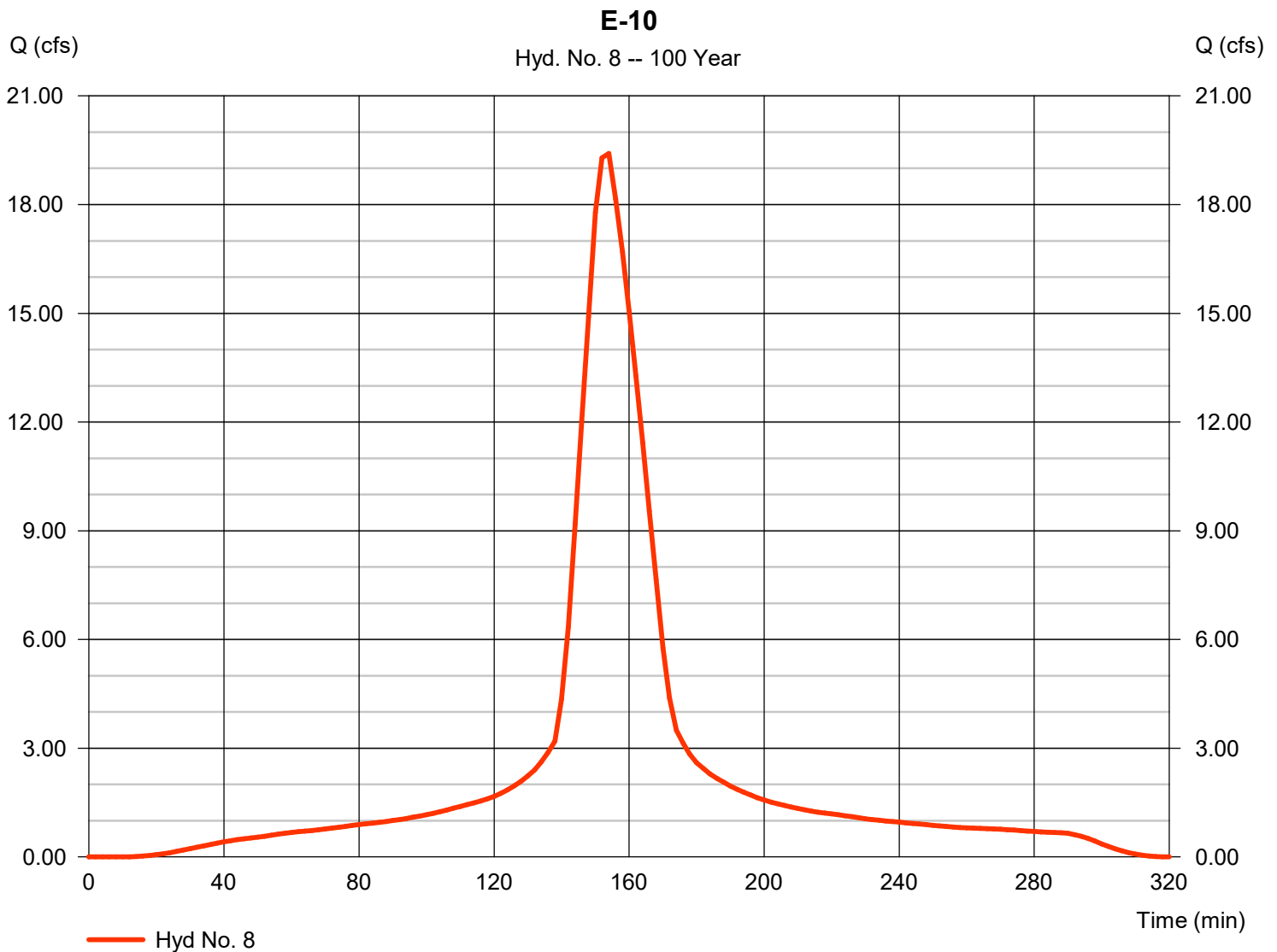
Wednesday, 04 / 8 / 2020

Hyd. No. 8

E-10

Hydrograph type	= SCS Runoff	Peak discharge	= 19.41 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 41,411 cuft
Drainage area	= 1.920 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.920$



Hydrograph Report

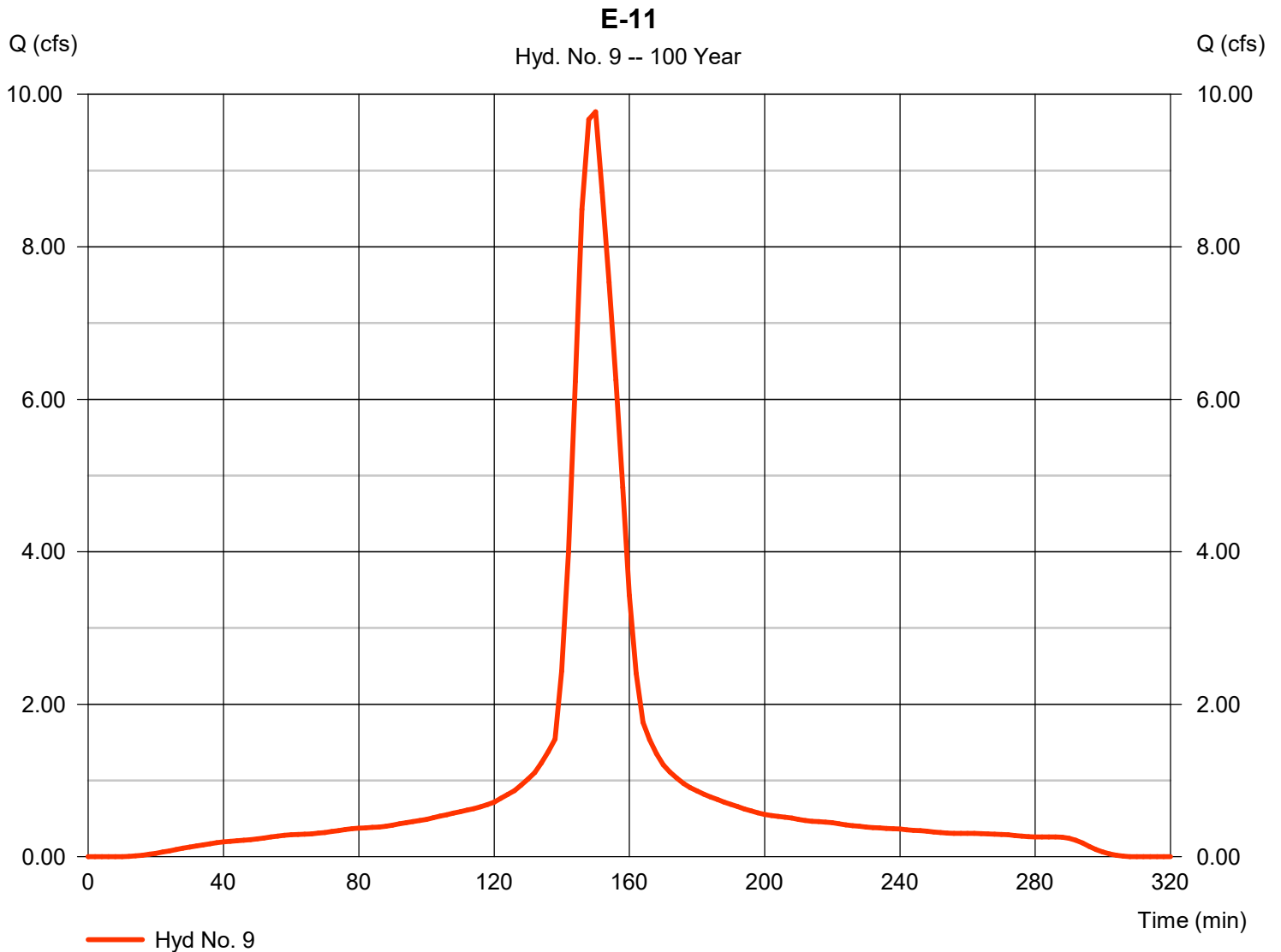
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 9

E-11

Hydrograph type	= SCS Runoff	Peak discharge	= 9.770 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 16,237 cuft
Drainage area	= 0.730 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

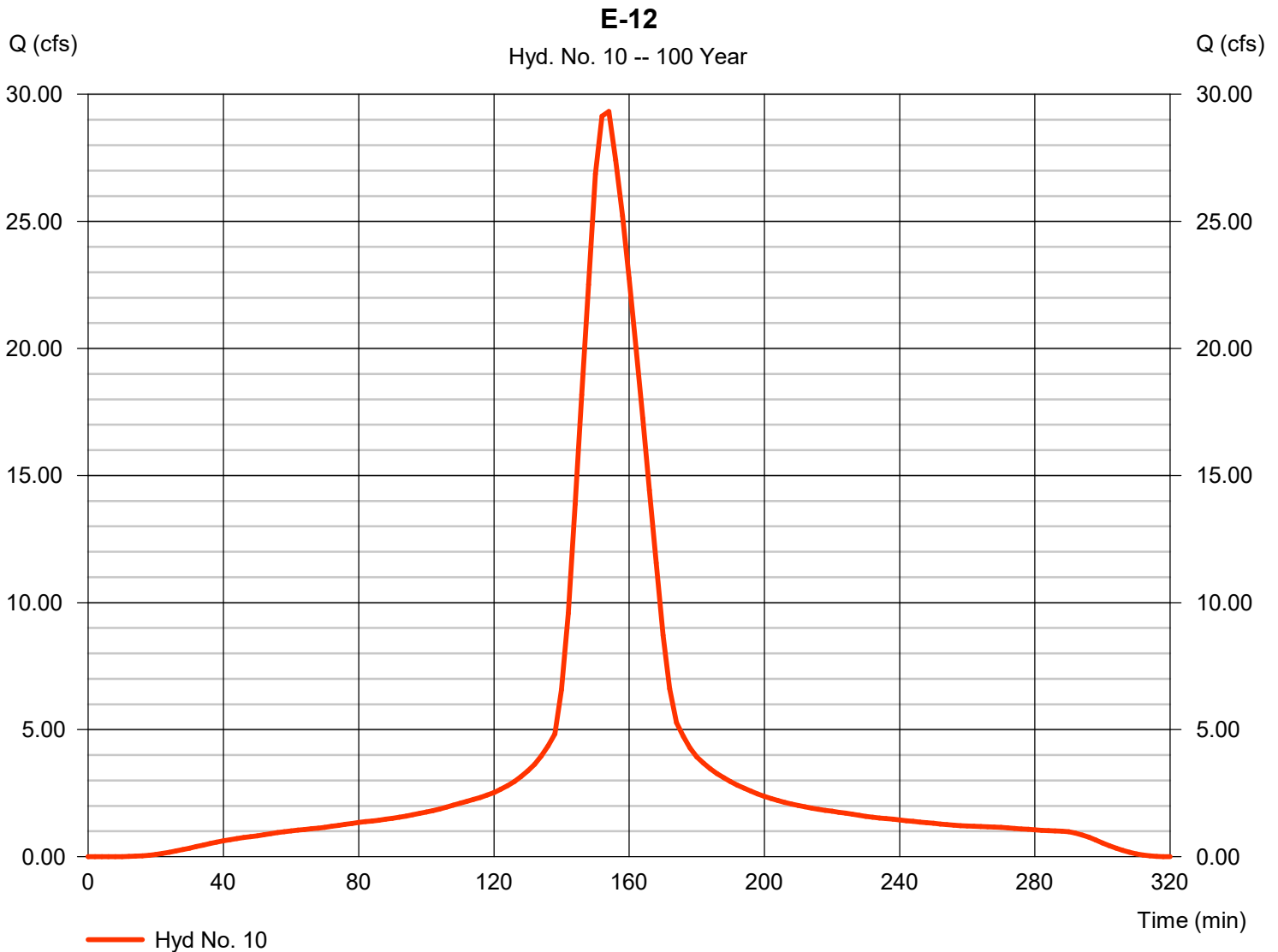
Wednesday, 04 / 8 / 2020

Hyd. No. 10

E-12

Hydrograph type	= SCS Runoff	Peak discharge	= 29.32 cfs
Storm frequency	= 100 yrs	Time to peak	= 154 min
Time interval	= 2 min	Hyd. volume	= 62,548 cuft
Drainage area	= 2.900 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.900$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

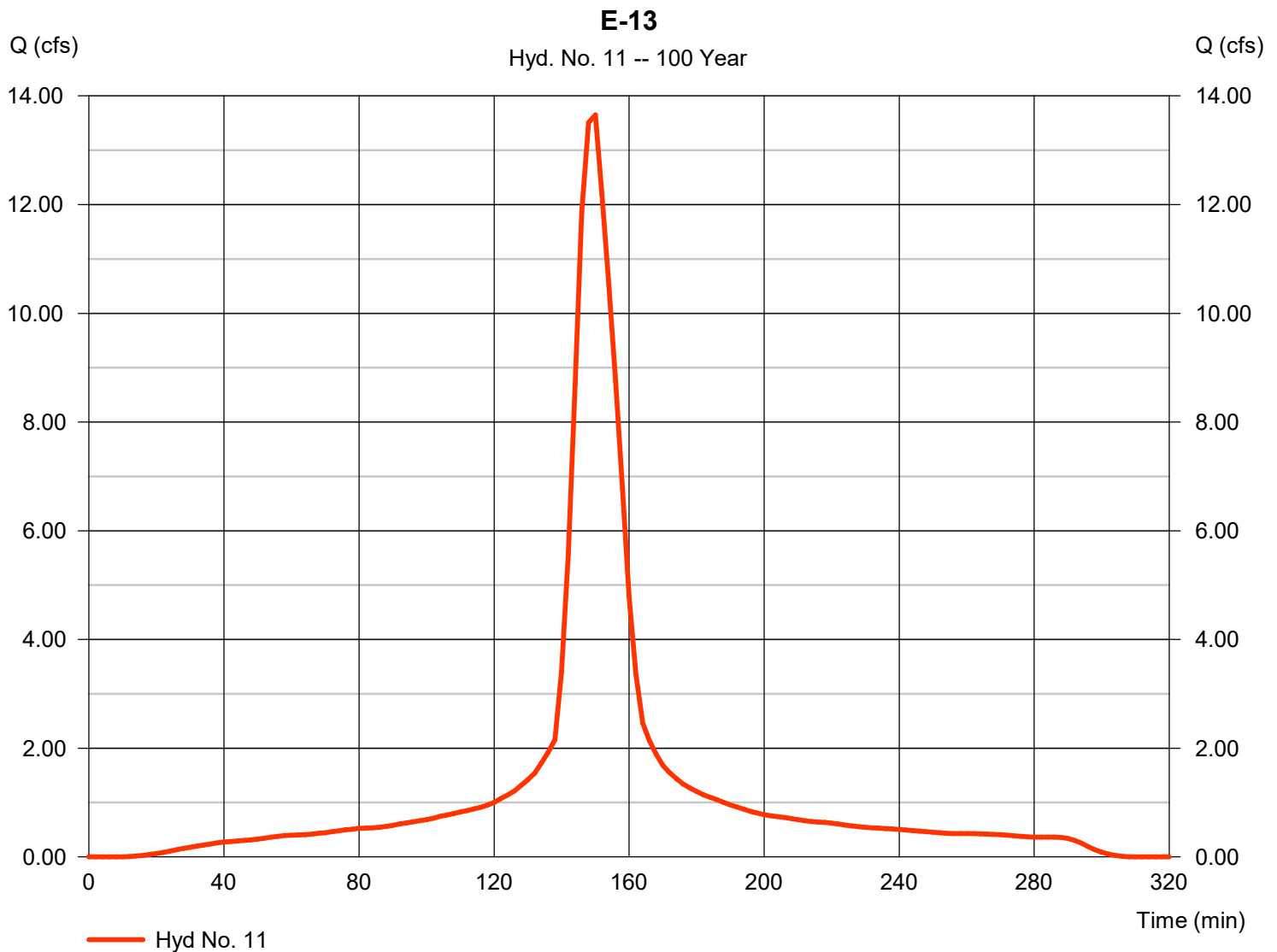
Wednesday, 04 / 8 / 2020

Hyd. No. 11

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 13.65 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 22,687 cuft
Drainage area	= 1.020 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.020$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

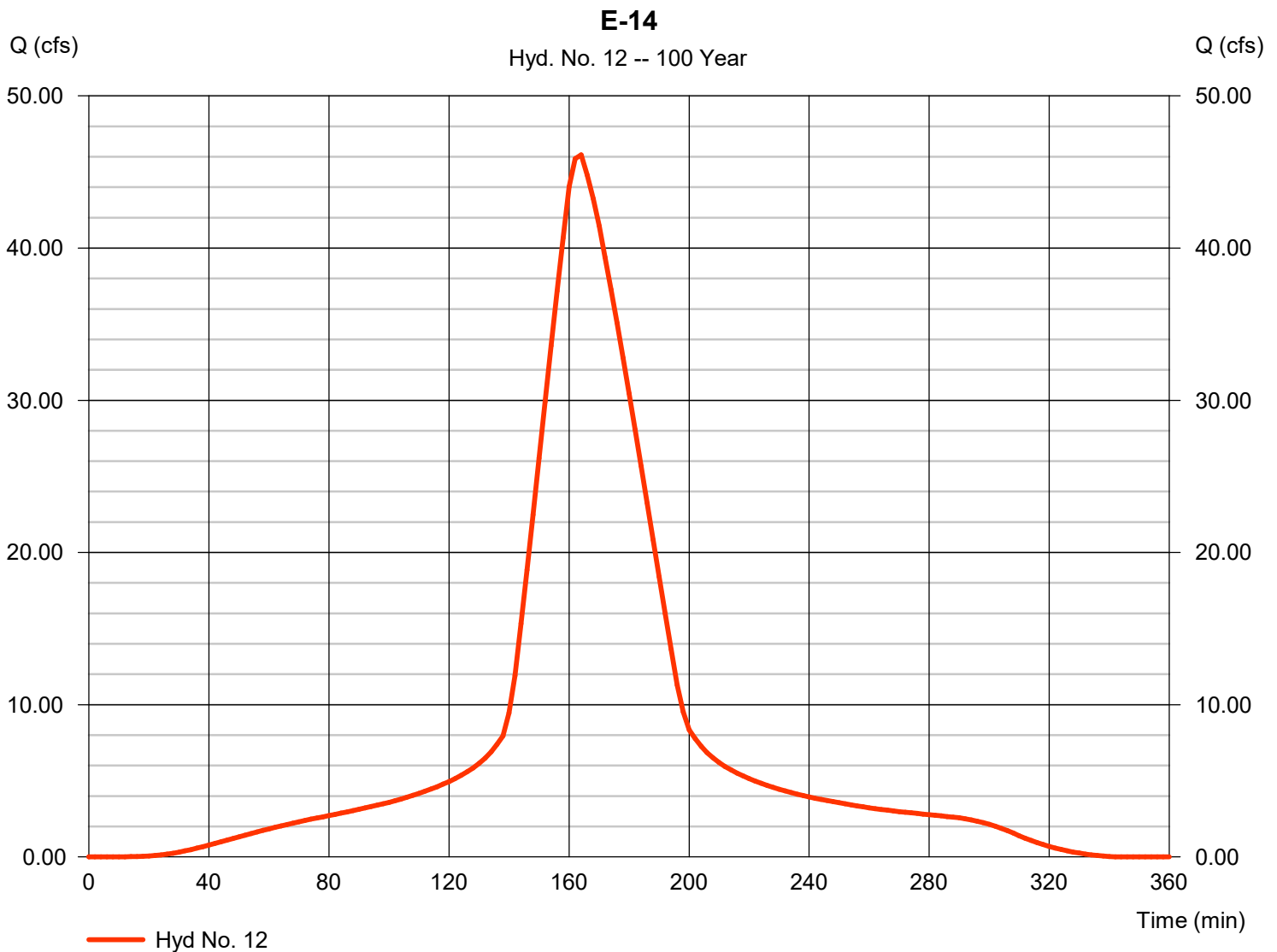
Wednesday, 04 / 8 / 2020

Hyd. No. 12

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 46.12 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 149,475 cuft
Drainage area	= 7.010 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.010$

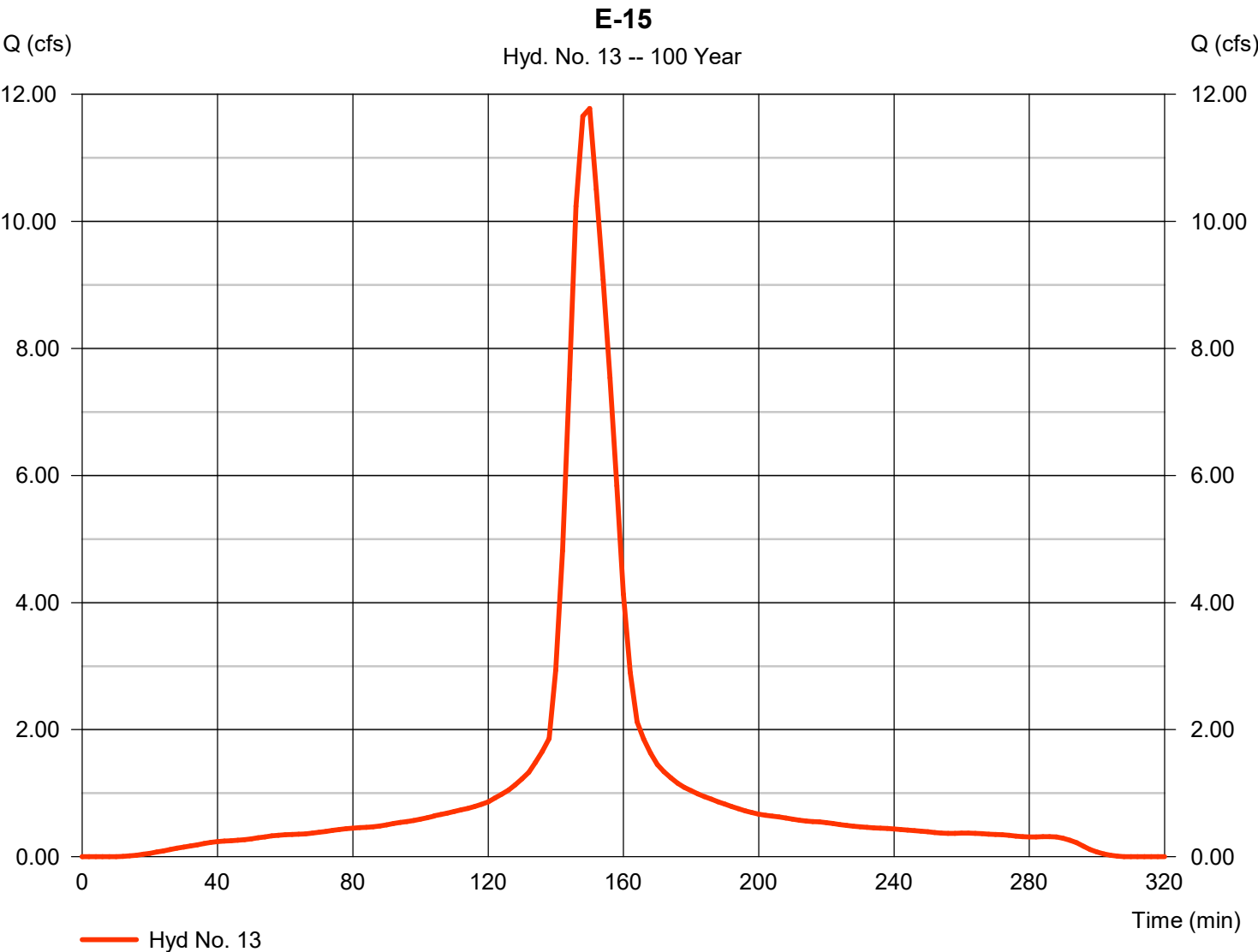


Hydrograph Report

Hyd. No. 13

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 11.78 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 19,573 cuft
Drainage area	= 0.880 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

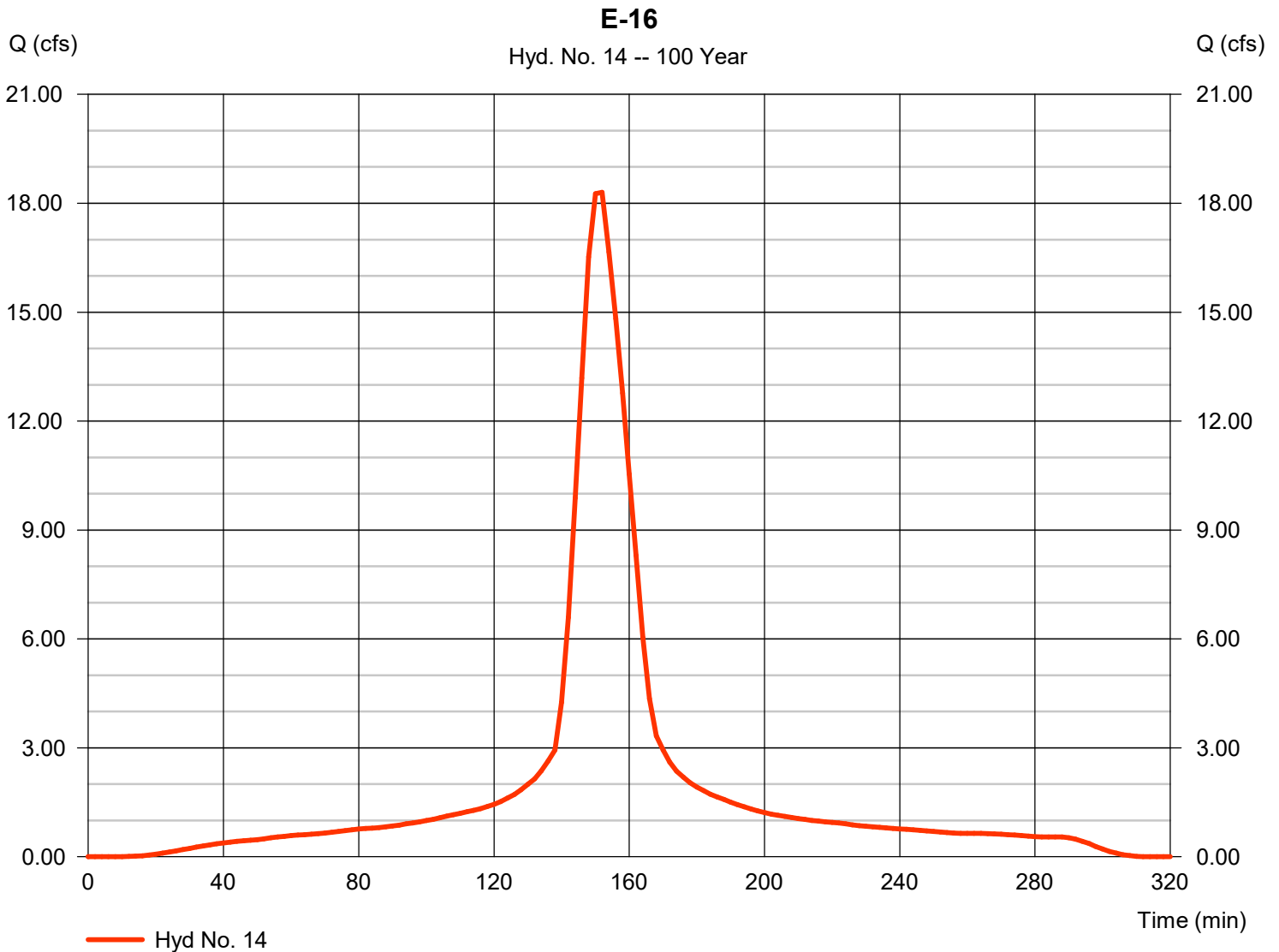
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 14

E-16

Hydrograph type	= SCS Runoff	Peak discharge	= 18.30 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 33,983 cuft
Drainage area	= 1.616 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

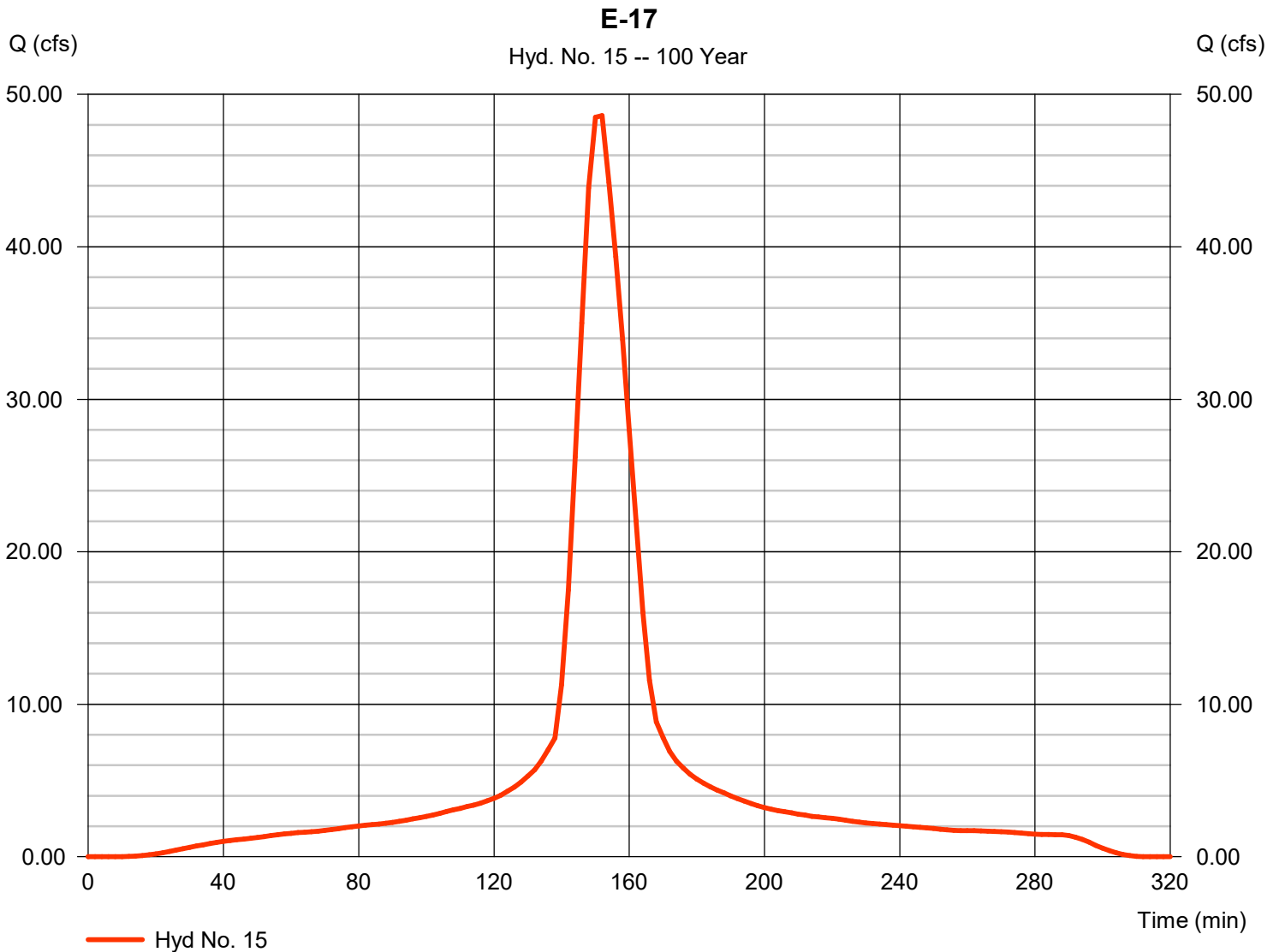
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 15

E-17

Hydrograph type	= SCS Runoff	Peak discharge	= 48.60 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 90,235 cuft
Drainage area	= 4.291 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

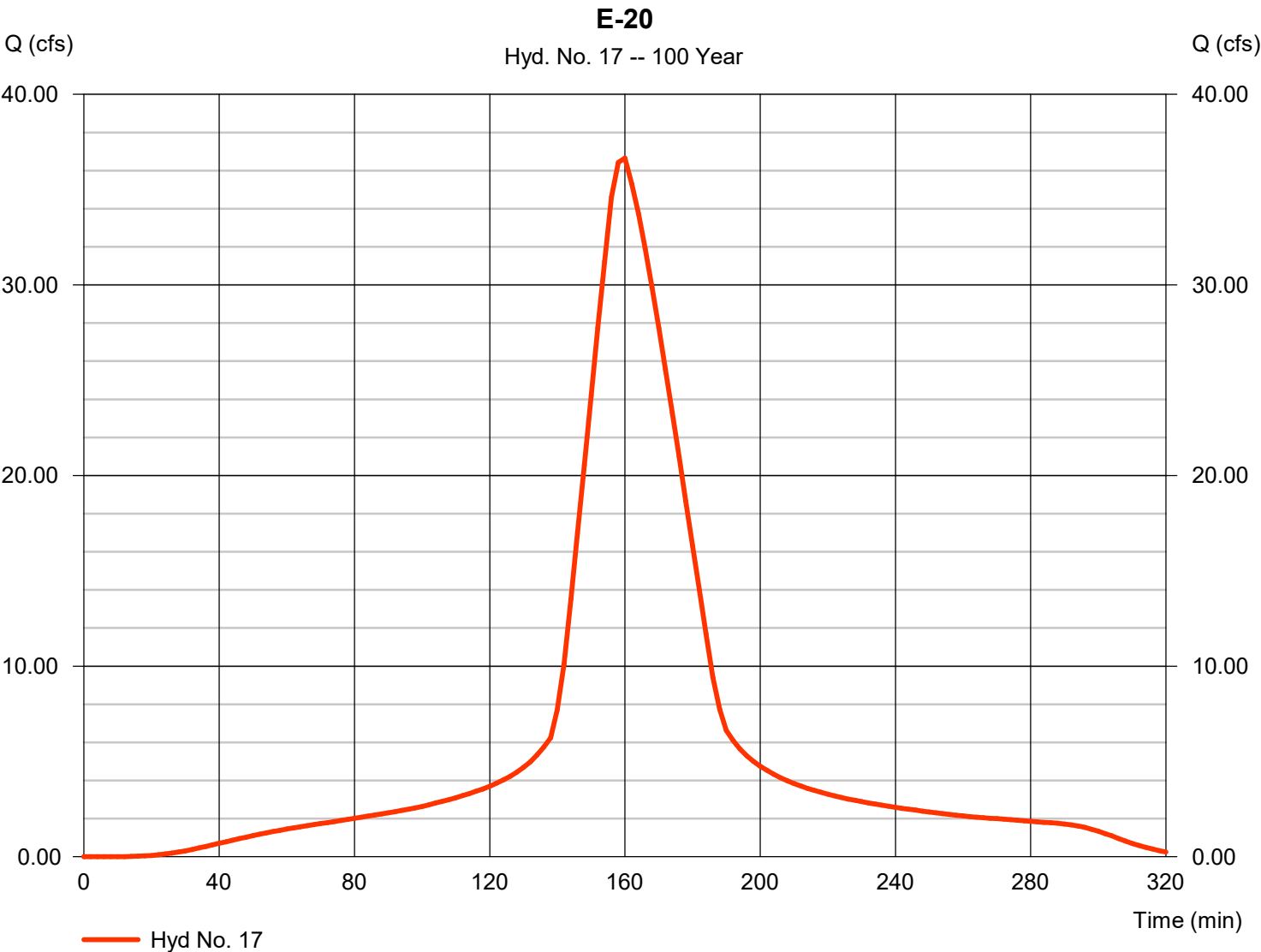
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 17

E-20

Hydrograph type	= SCS Runoff	Peak discharge	= 36.66 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 103,764 cuft
Drainage area	= 4.811 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

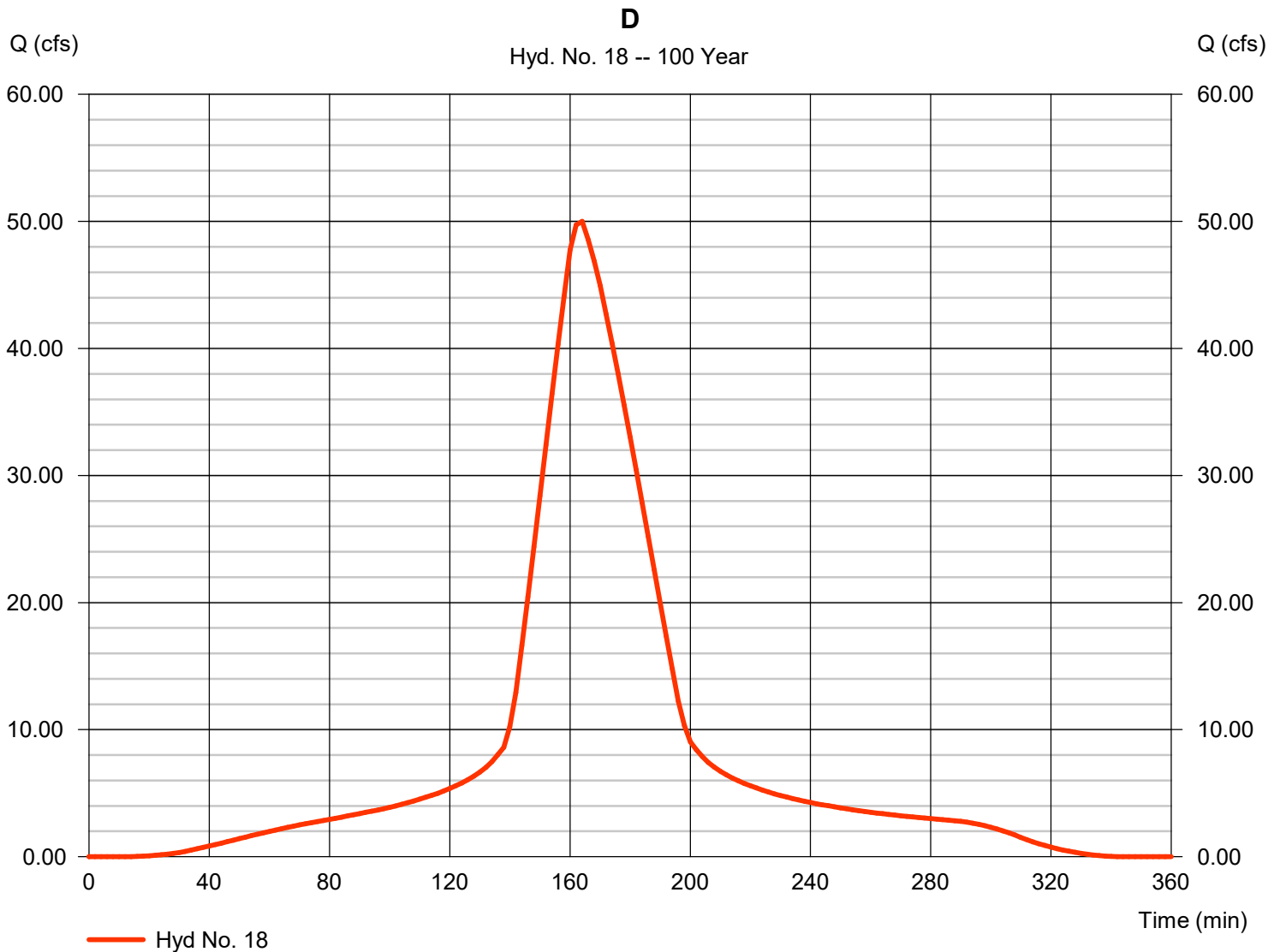
Wednesday, 04 / 8 / 2020

Hyd. No. 18

D

Hydrograph type	= SCS Runoff	Peak discharge	= 50.00 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 162,055 cuft
Drainage area	= 7.600 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 7.600$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

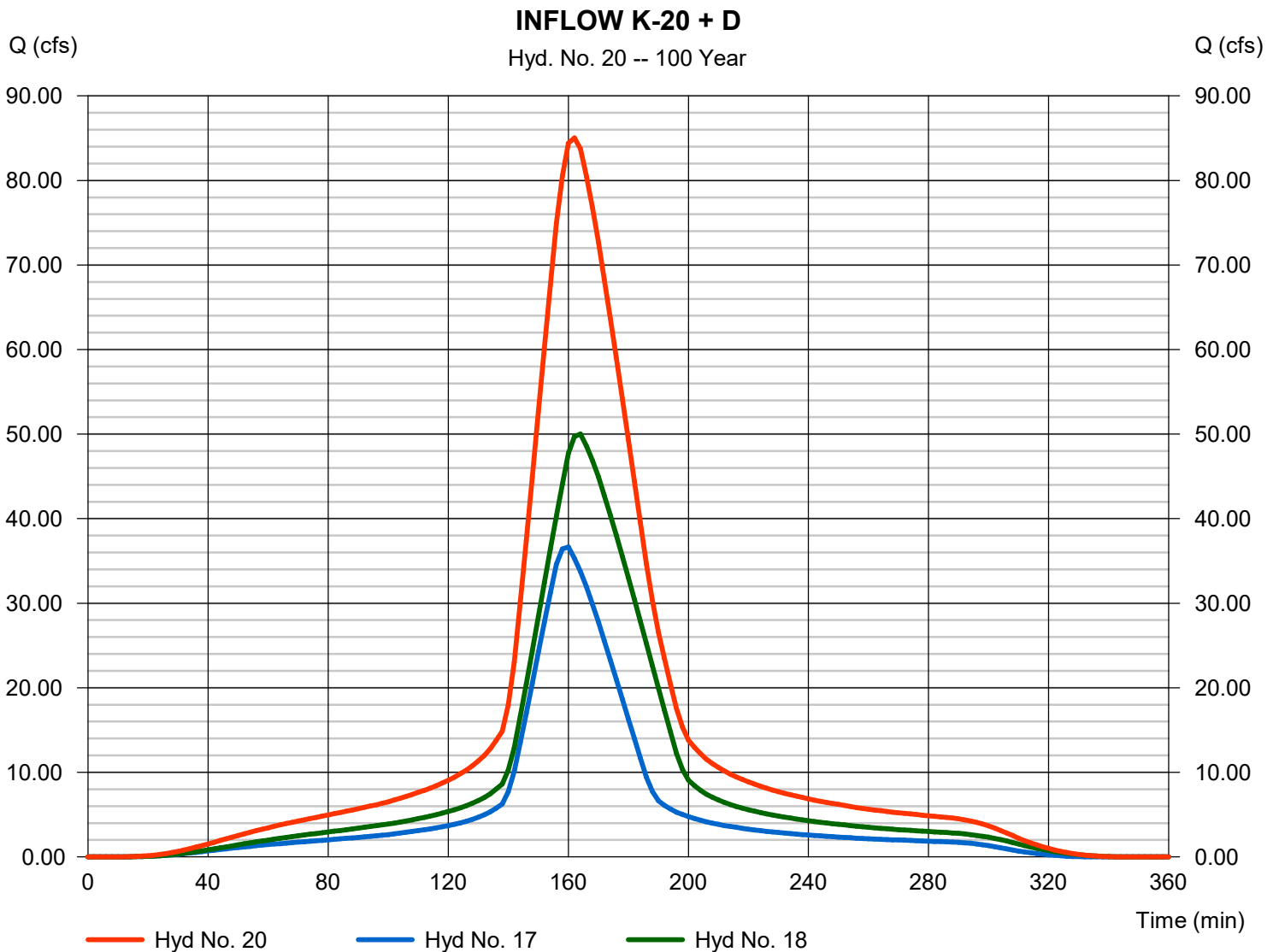
Wednesday, 04 / 8 / 2020

Hyd. No. 20

INFLOW K-20 + D

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 17, 18

Peak discharge = 85.04 cfs
 Time to peak = 162 min
 Hyd. volume = 265,820 cuft
 Contrib. drain. area = 12.411 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

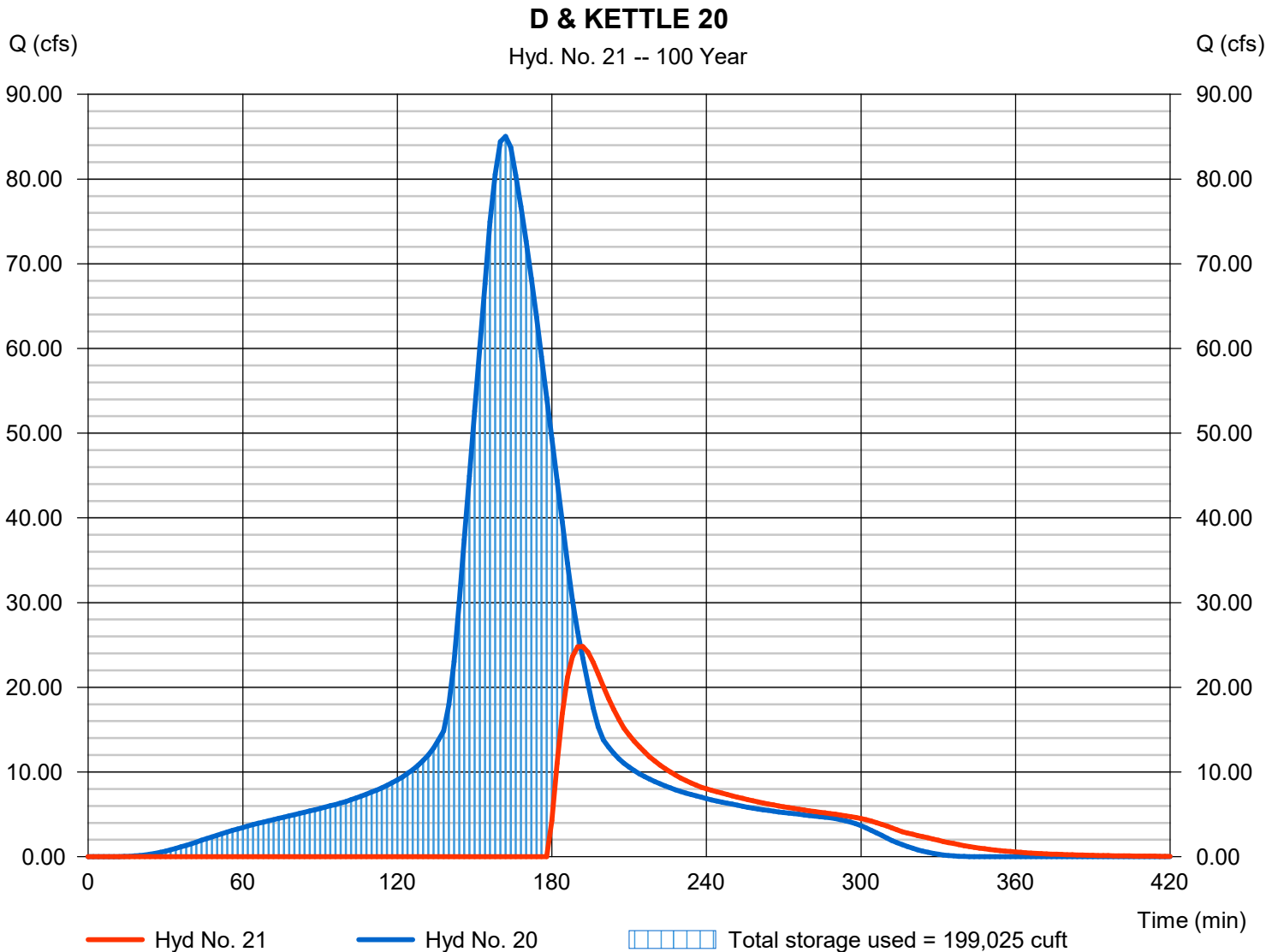
Wednesday, 04 / 8 / 2020

Hyd. No. 21

D & KETTLE 20

Hydrograph type	= Reservoir	Peak discharge	= 24.83 cfs
Storm frequency	= 100 yrs	Time to peak	= 192 min
Time interval	= 2 min	Hyd. volume	= 83,963 cuft
Inflow hyd. No.	= 20 - INFLOW K-20 + D	Max. Elevation	= 995.21 ft
Reservoir name	= D + K-20	Max. Storage	= 199,025 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

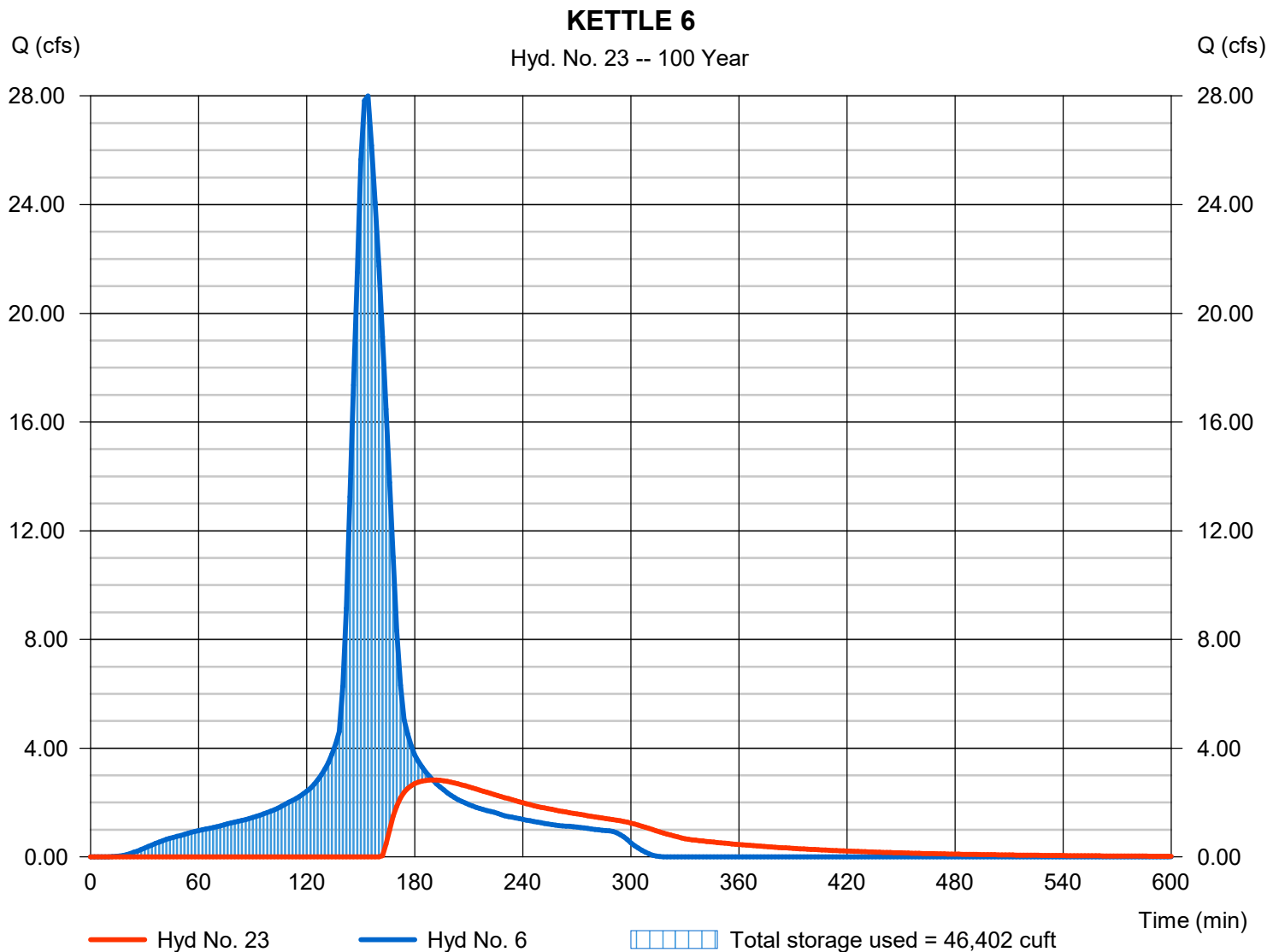
Wednesday, 04 / 8 / 2020

Hyd. No. 23

KETTLE 6

Hydrograph type	= Reservoir	Peak discharge	= 2.830 cfs
Storm frequency	= 100 yrs	Time to peak	= 190 min
Time interval	= 2 min	Hyd. volume	= 21,585 cuft
Inflow hyd. No.	= 6 - E-6	Max. Elevation	= 1012.96 ft
Reservoir name	= K-6	Max. Storage	= 46,402 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

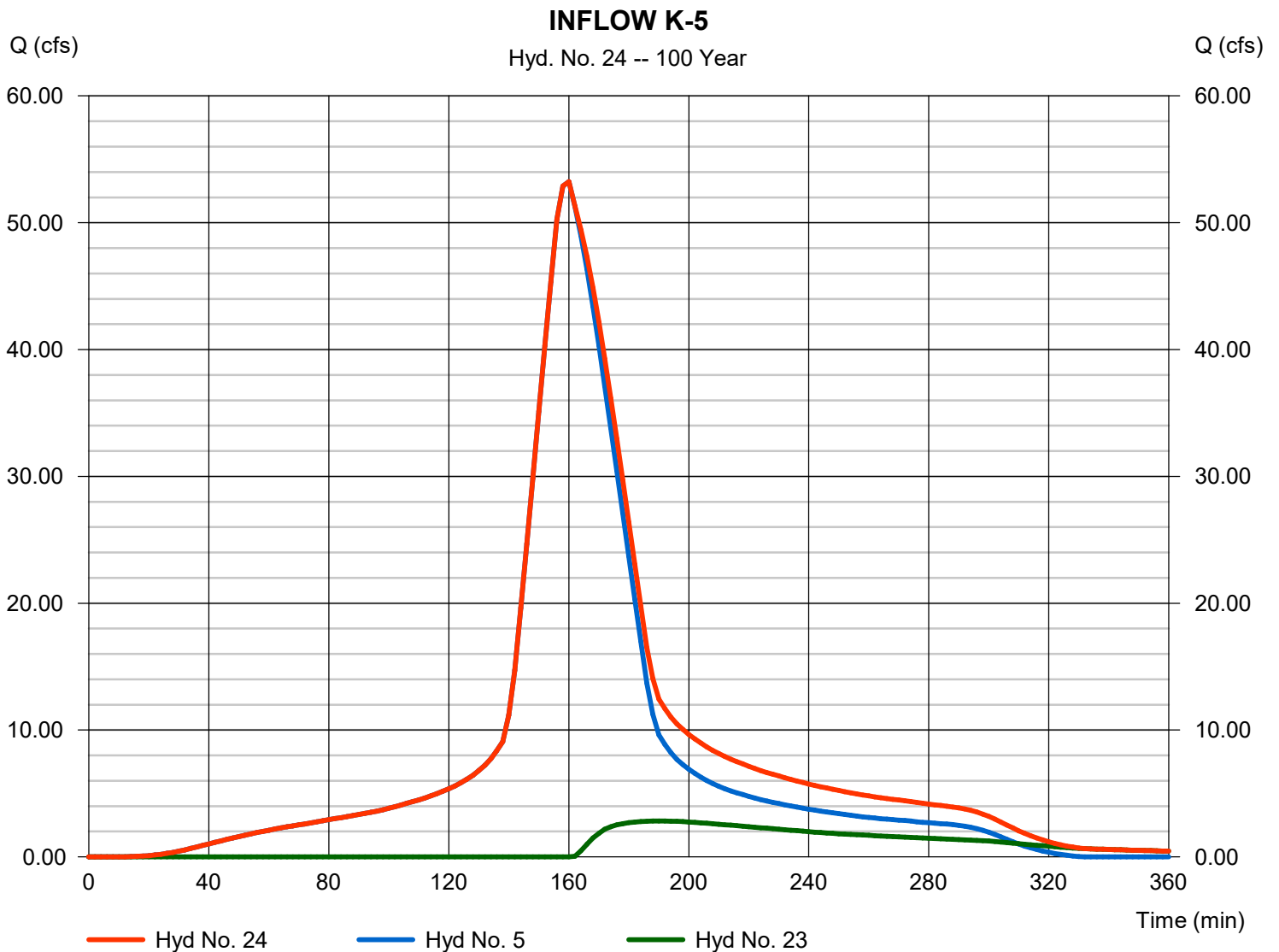
Wednesday, 04 / 8 / 2020

Hyd. No. 24

INFLOW K-5

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 5, 23

Peak discharge = 53.24 cfs
 Time to peak = 160 min
 Hyd. volume = 172,282 cuft
 Contrib. drain. area = 6.987 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

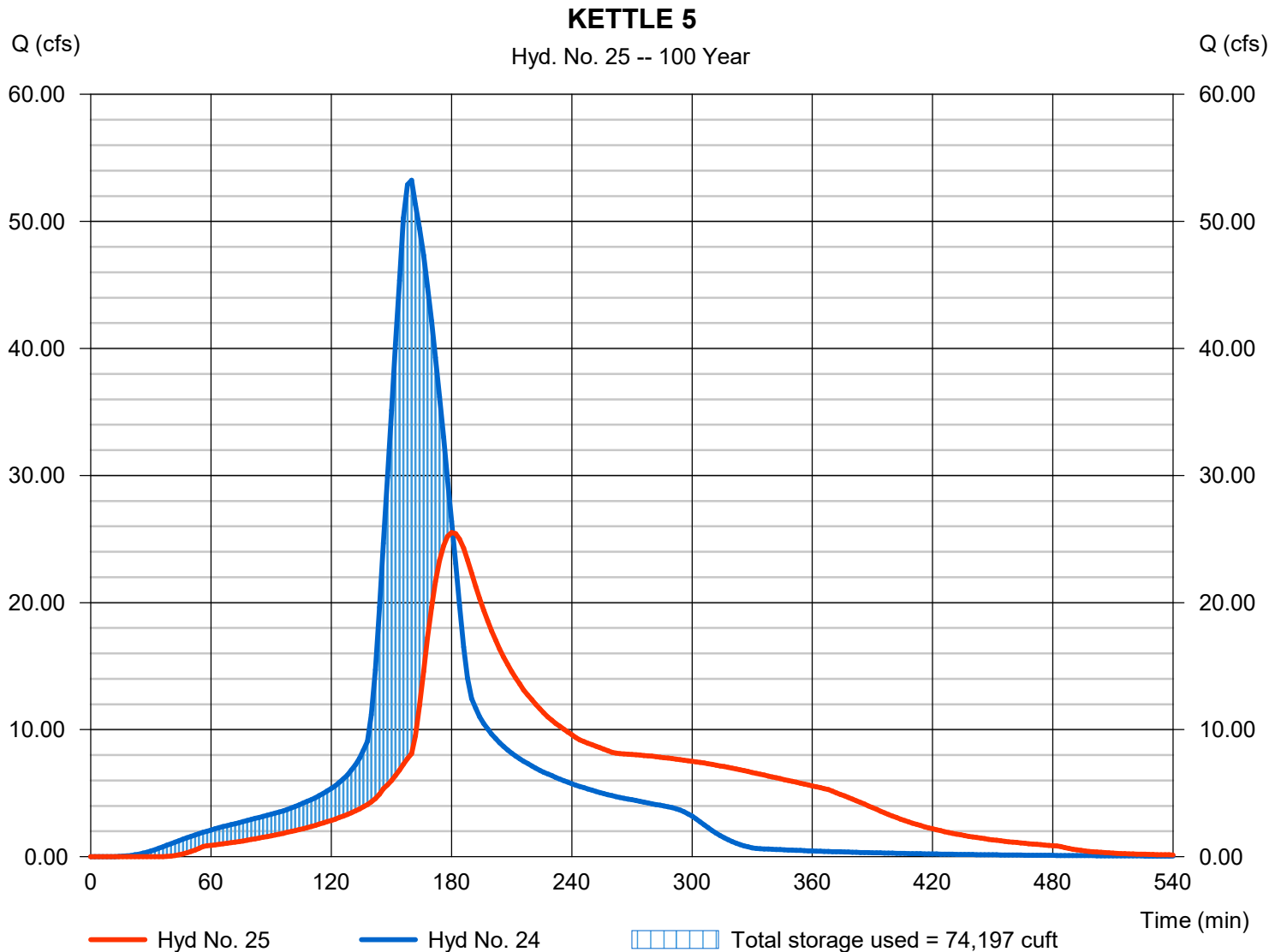
Wednesday, 04 / 8 / 2020

Hyd. No. 25

KETTLE 5

Hydrograph type	= Reservoir	Peak discharge	= 25.52 cfs
Storm frequency	= 100 yrs	Time to peak	= 180 min
Time interval	= 2 min	Hyd. volume	= 172,071 cuft
Inflow hyd. No.	= 24 - INFLOW K-5	Max. Elevation	= 985.82 ft
Reservoir name	= K-5	Max. Storage	= 74,197 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

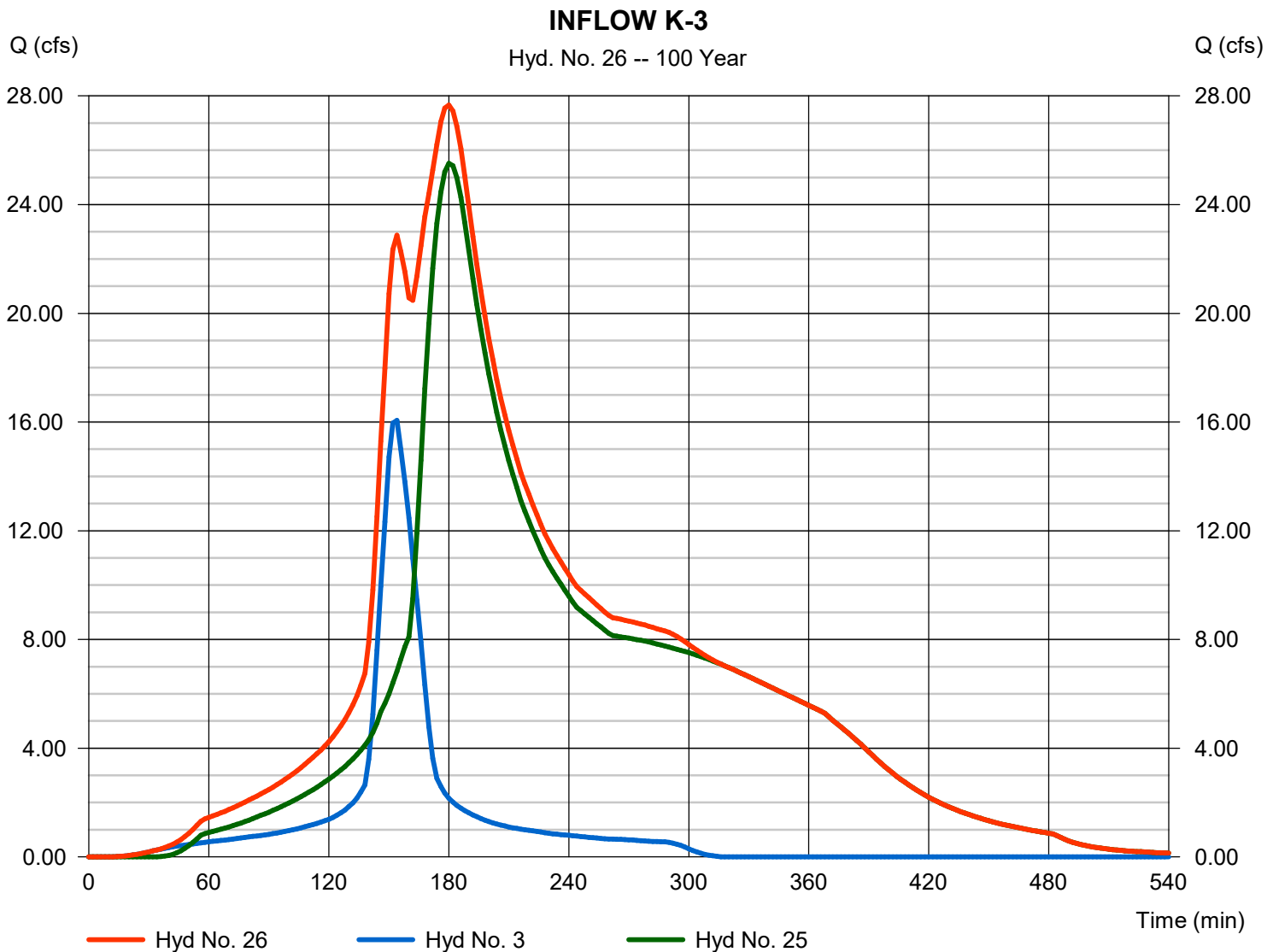
Wednesday, 04 / 8 / 2020

Hyd. No. 26

INFLOW K-3

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 3, 25

Peak discharge = 27.67 cfs
 Time to peak = 180 min
 Hyd. volume = 206,322 cuft
 Contrib. drain. area = 1.588 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

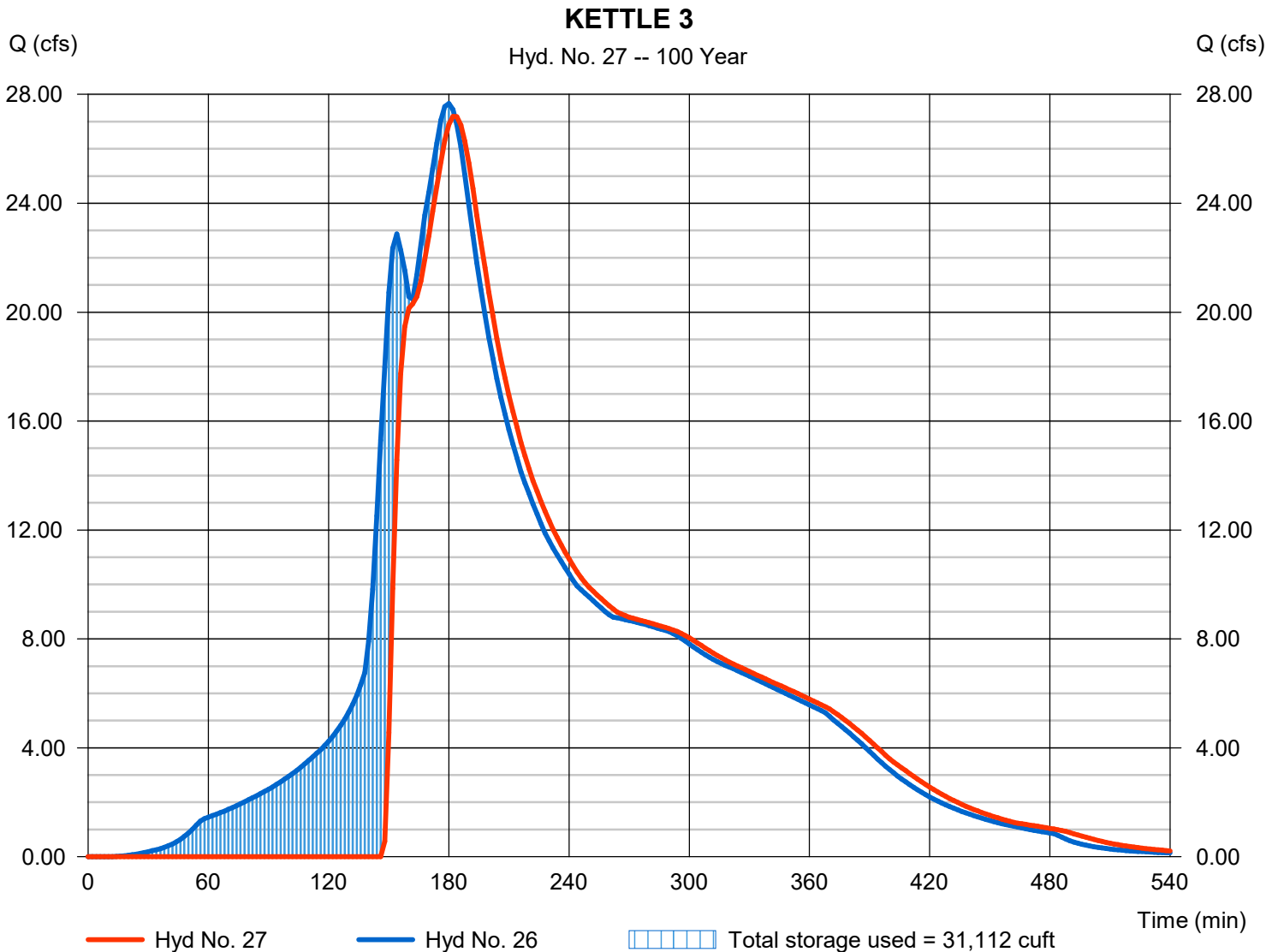
Wednesday, 04 / 8 / 2020

Hyd. No. 27

KETTLE 3

Hydrograph type	= Reservoir	Peak discharge	= 27.19 cfs
Storm frequency	= 100 yrs	Time to peak	= 182 min
Time interval	= 2 min	Hyd. volume	= 183,497 cuft
Inflow hyd. No.	= 26 - INFLOW K-3	Max. Elevation	= 976.79 ft
Reservoir name	= K-3	Max. Storage	= 31,112 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

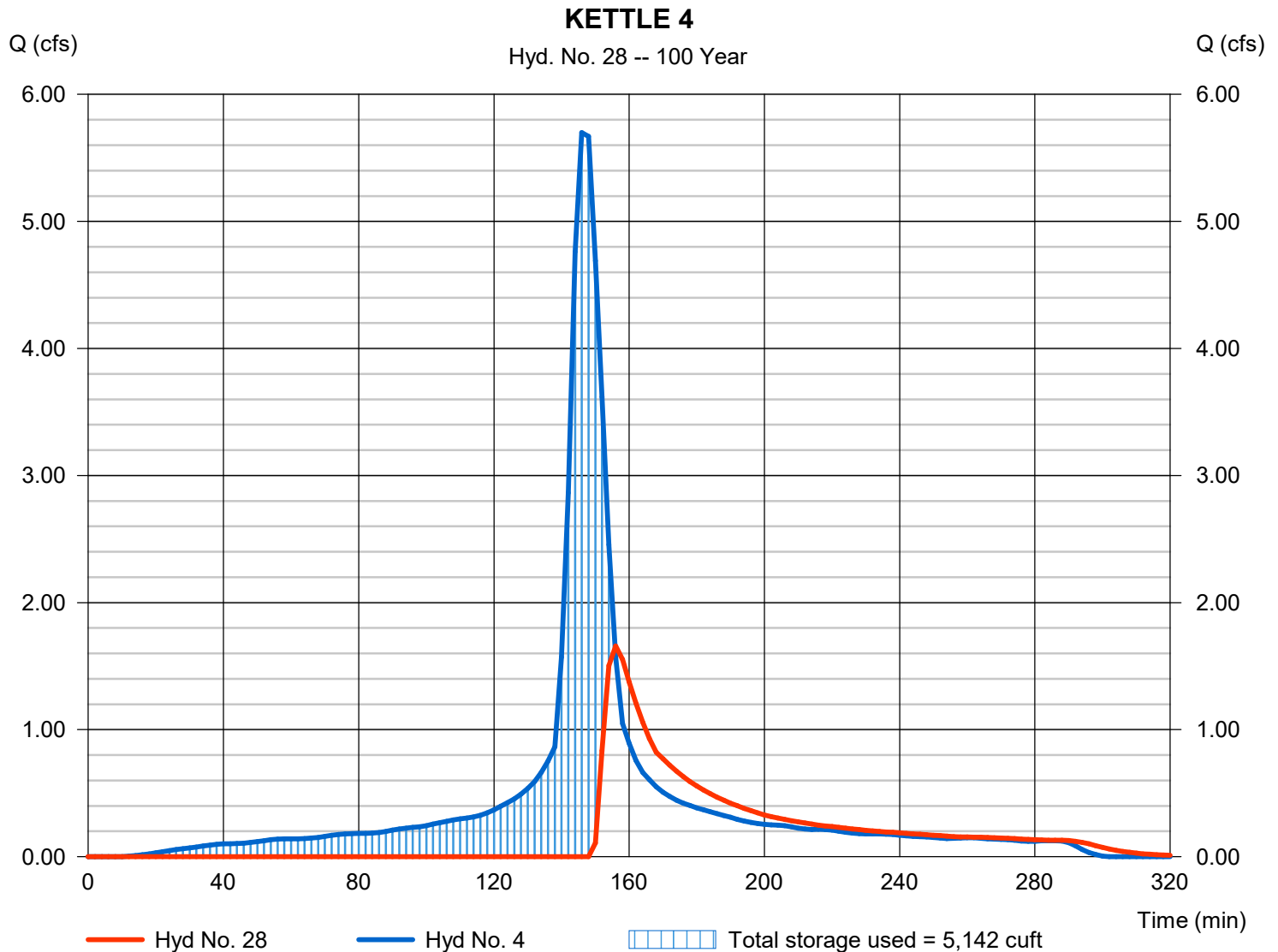
Hyd. No. 28

KETTLE 4

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - E-4
 Reservoir name = K-4

Peak discharge = 1.658 cfs
 Time to peak = 156 min
 Hyd. volume = 3,428 cuft
 Max. Elevation = 1008.66 ft
 Max. Storage = 5,142 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

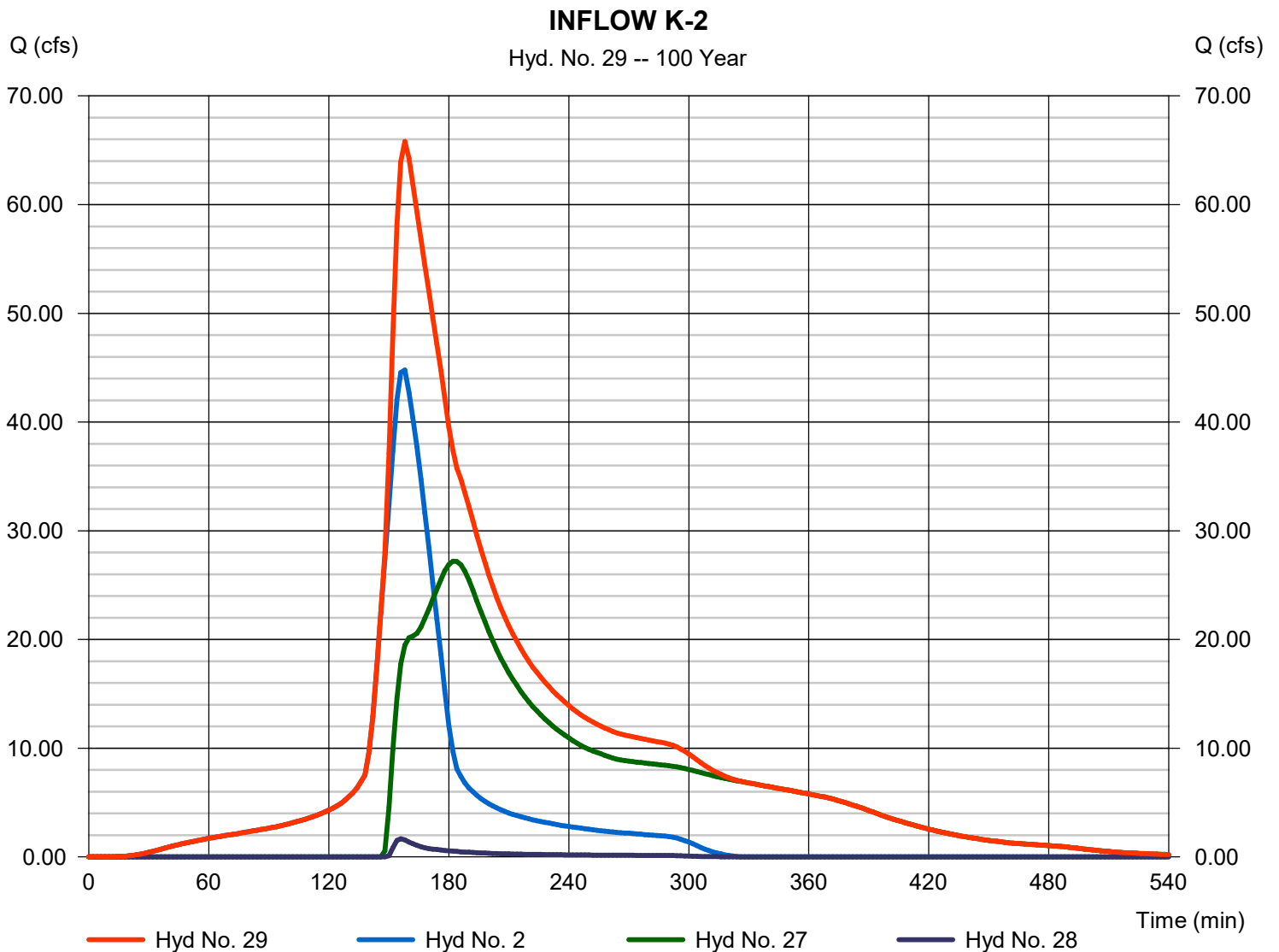
Wednesday, 04 / 8 / 2020

Hyd. No. 29

INFLOW K-2

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 2, 27, 28

Peak discharge = 65.82 cfs
 Time to peak = 158 min
 Hyd. volume = 302,274 cuft
 Contrib. drain. area = 5.433 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 30

KETTLE 2

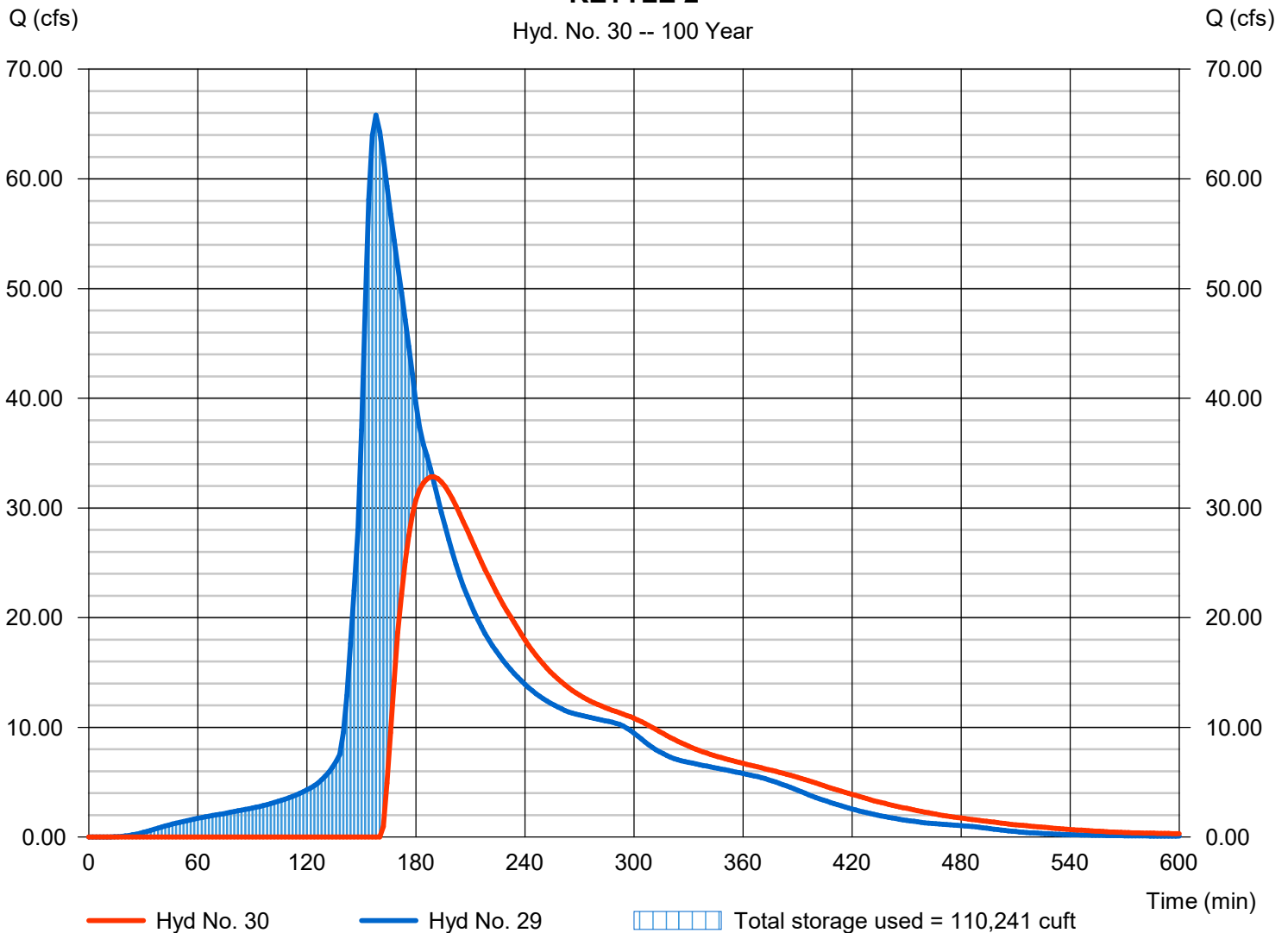
Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 29 - INFLOW K-2
 Reservoir name = K-2

Peak discharge = 32.84 cfs
 Time to peak = 190 min
 Hyd. volume = 231,799 cuft
 Max. Elevation = 975.56 ft
 Max. Storage = 110,241 cuft

Storage Indication method used.

KETTLE 2

Hyd. No. 30 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

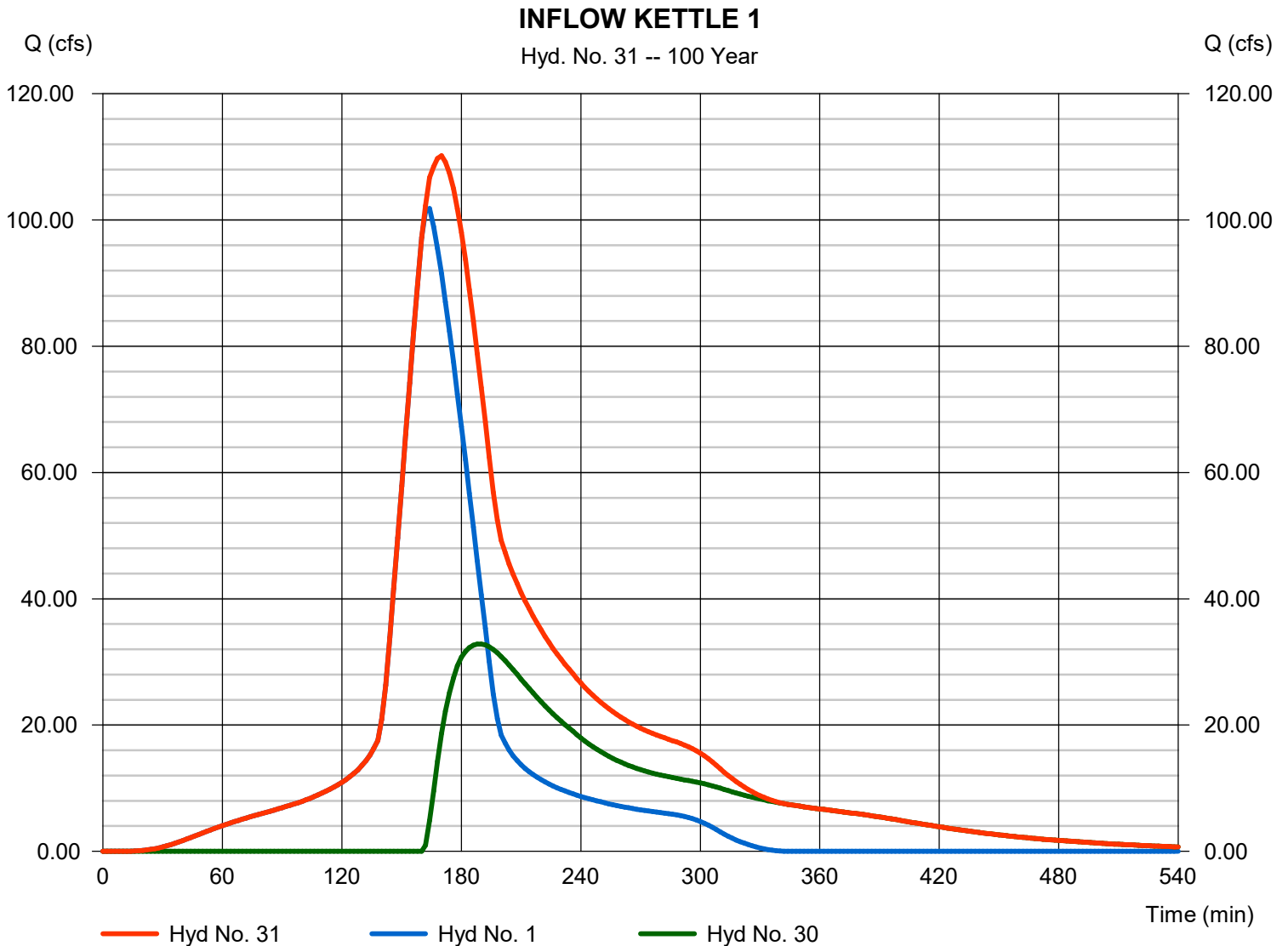
Wednesday, 04 / 8 / 2020

Hyd. No. 31

INFLOW KETTLE 1

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 1, 30

Peak discharge = 110.21 cfs
 Time to peak = 170 min
 Hyd. volume = 561,859 cuft
 Contrib. drain. area = 15.479 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

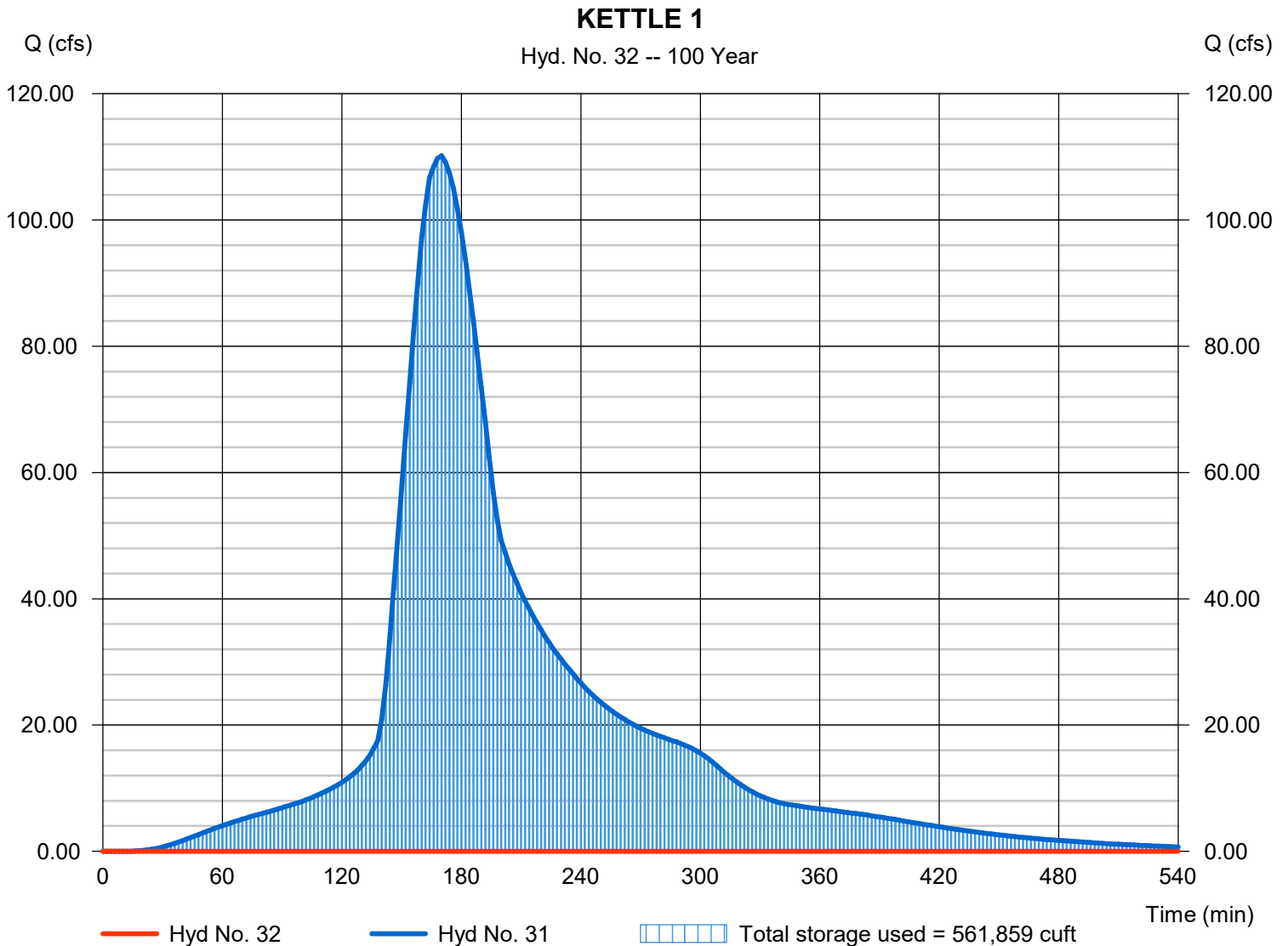
Wednesday, 04 / 8 / 2020

Hyd. No. 32

KETTLE 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 31 - INFLOW KETTLE 1	Max. Elevation	= 964.03 ft
Reservoir name	= K-1	Max. Storage	= 561,859 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 34

KETTLE 17

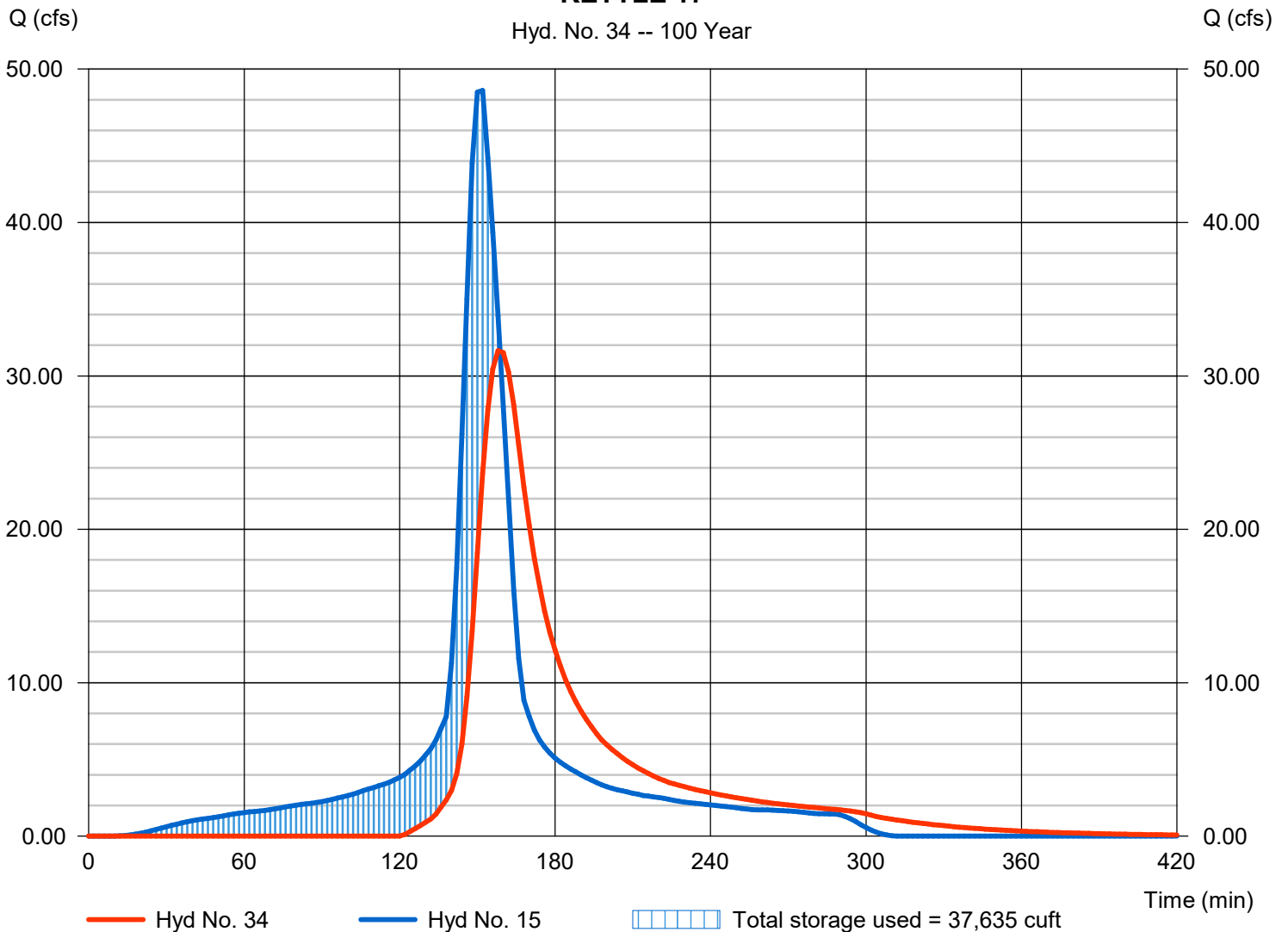
Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 15 - E-17
 Reservoir name = K-17

Peak discharge = 31.65 cfs
 Time to peak = 158 min
 Hyd. volume = 79,073 cuft
 Max. Elevation = 1012.87 ft
 Max. Storage = 37,635 cuft

Storage Indication method used.

KETTLE 17

Hyd. No. 34 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

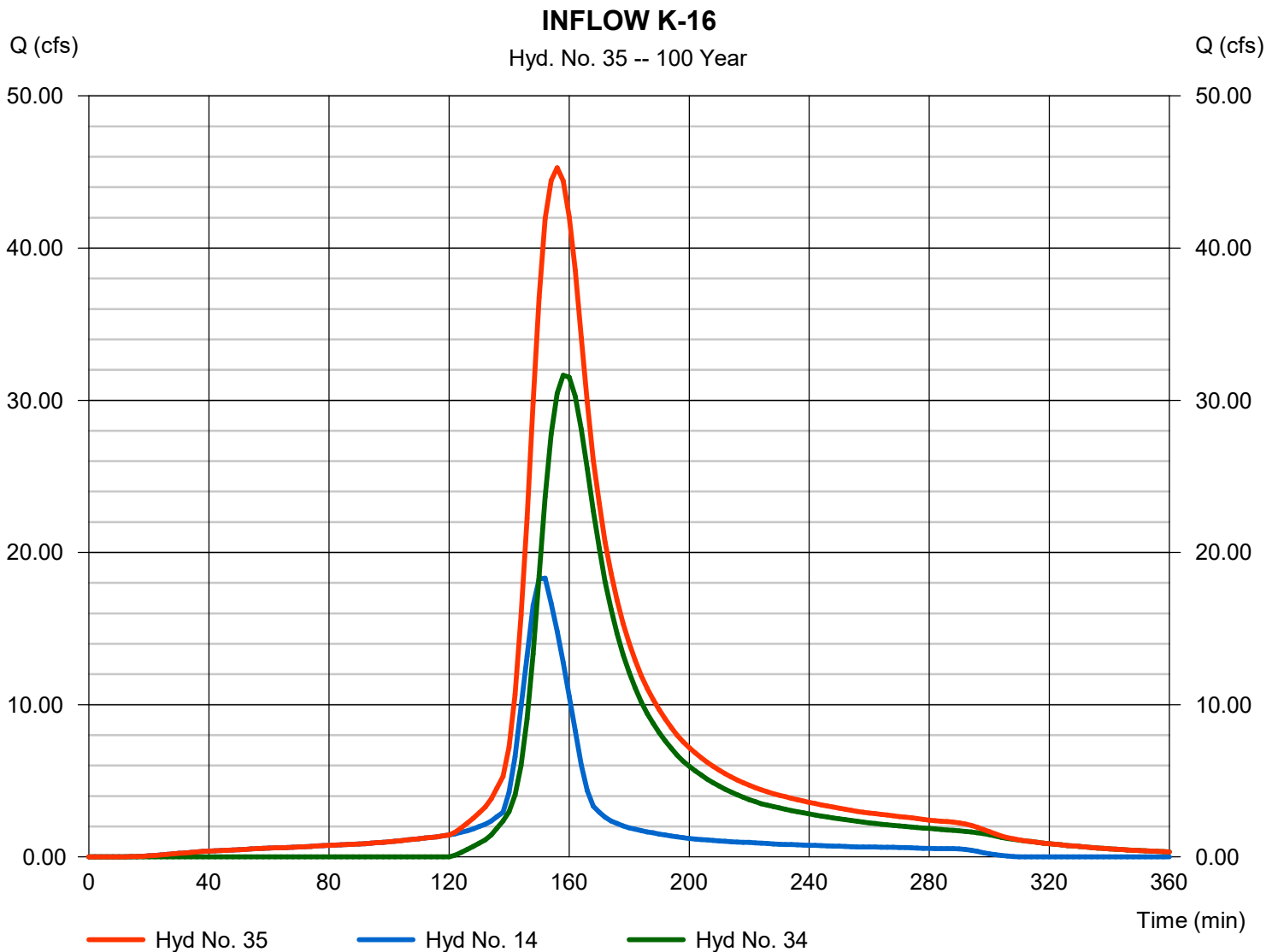
Wednesday, 04 / 8 / 2020

Hyd. No. 35

INFLOW K-16

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 14, 34

Peak discharge = 45.28 cfs
 Time to peak = 156 min
 Hyd. volume = 113,056 cuft
 Contrib. drain. area = 1.616 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 36

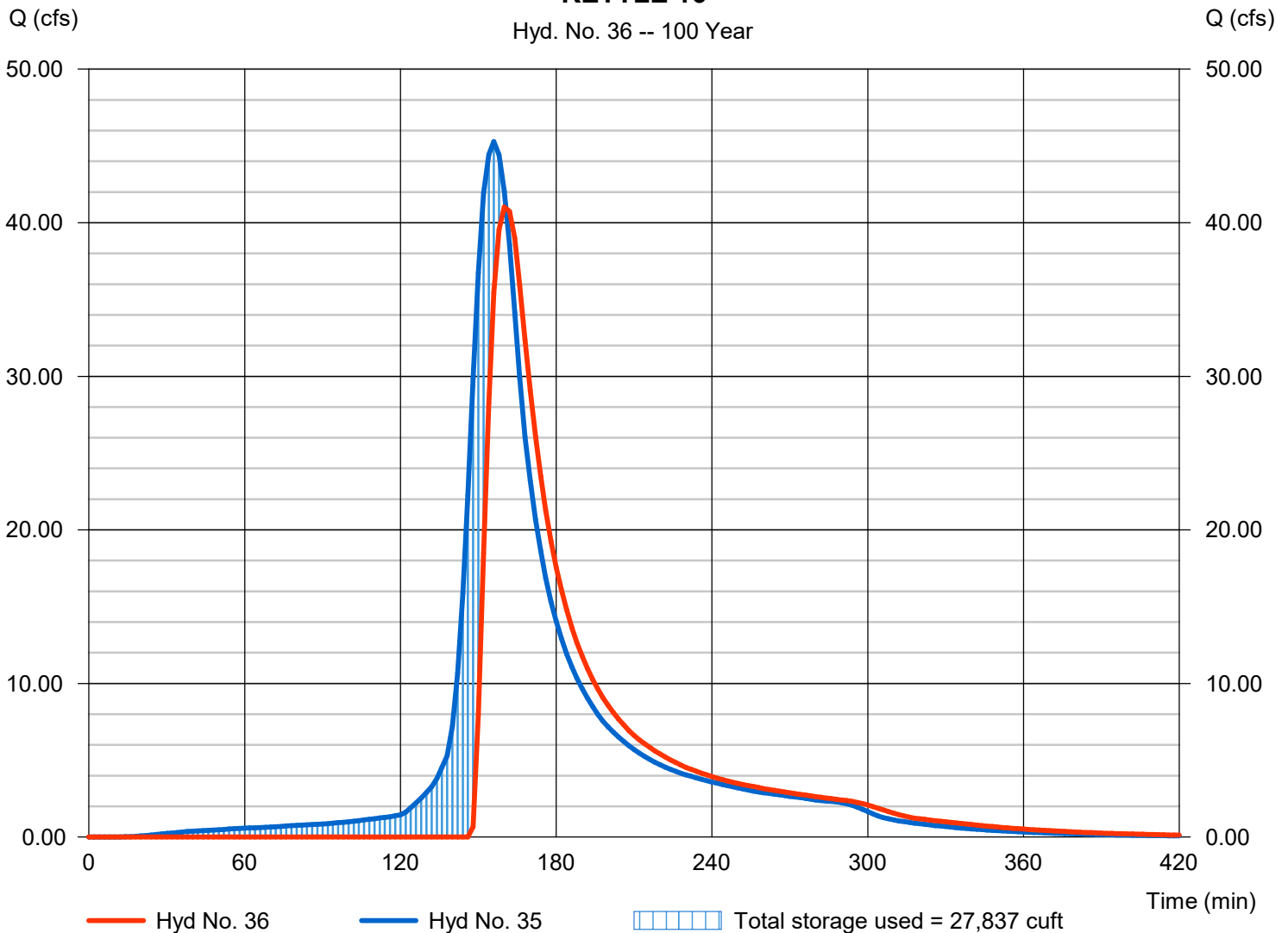
KETTLE 16

Hydrograph type	= Reservoir	Peak discharge	= 41.02 cfs
Storm frequency	= 100 yrs	Time to peak	= 160 min
Time interval	= 2 min	Hyd. volume	= 97,654 cuft
Inflow hyd. No.	= 35 - INFLOW K-16	Max. Elevation	= 1008.04 ft
Reservoir name	= K-16	Max. Storage	= 27,837 cuft

Storage Indication method used.

KETTLE 16

Hyd. No. 36 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

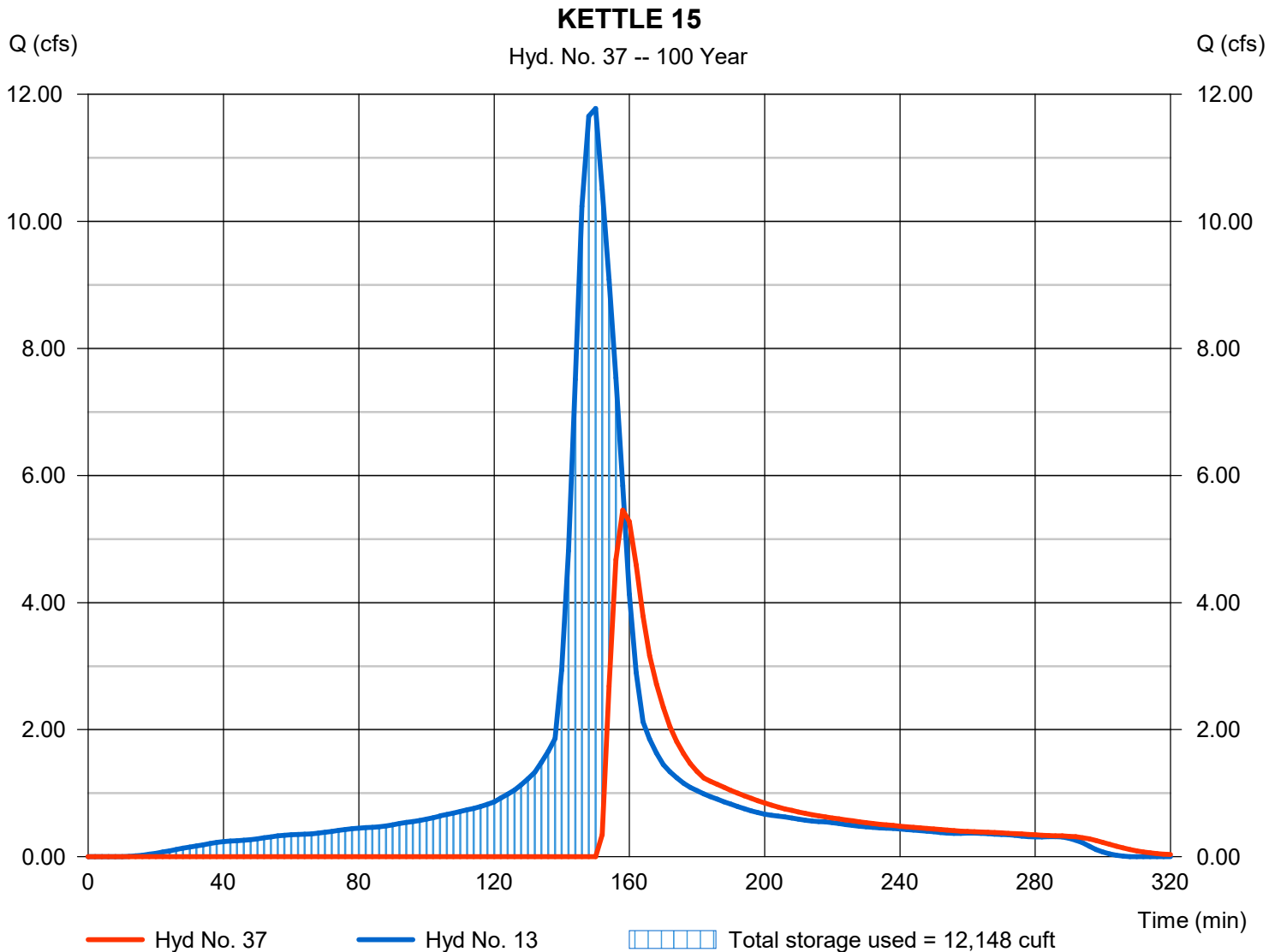
Hyd. No. 37

KETTLE 15

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 13 - E-15
 Reservoir name = K-15

Peak discharge = 5.457 cfs
 Time to peak = 158 min
 Hyd. volume = 9,374 cuft
 Max. Elevation = 972.77 ft
 Max. Storage = 12,148 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

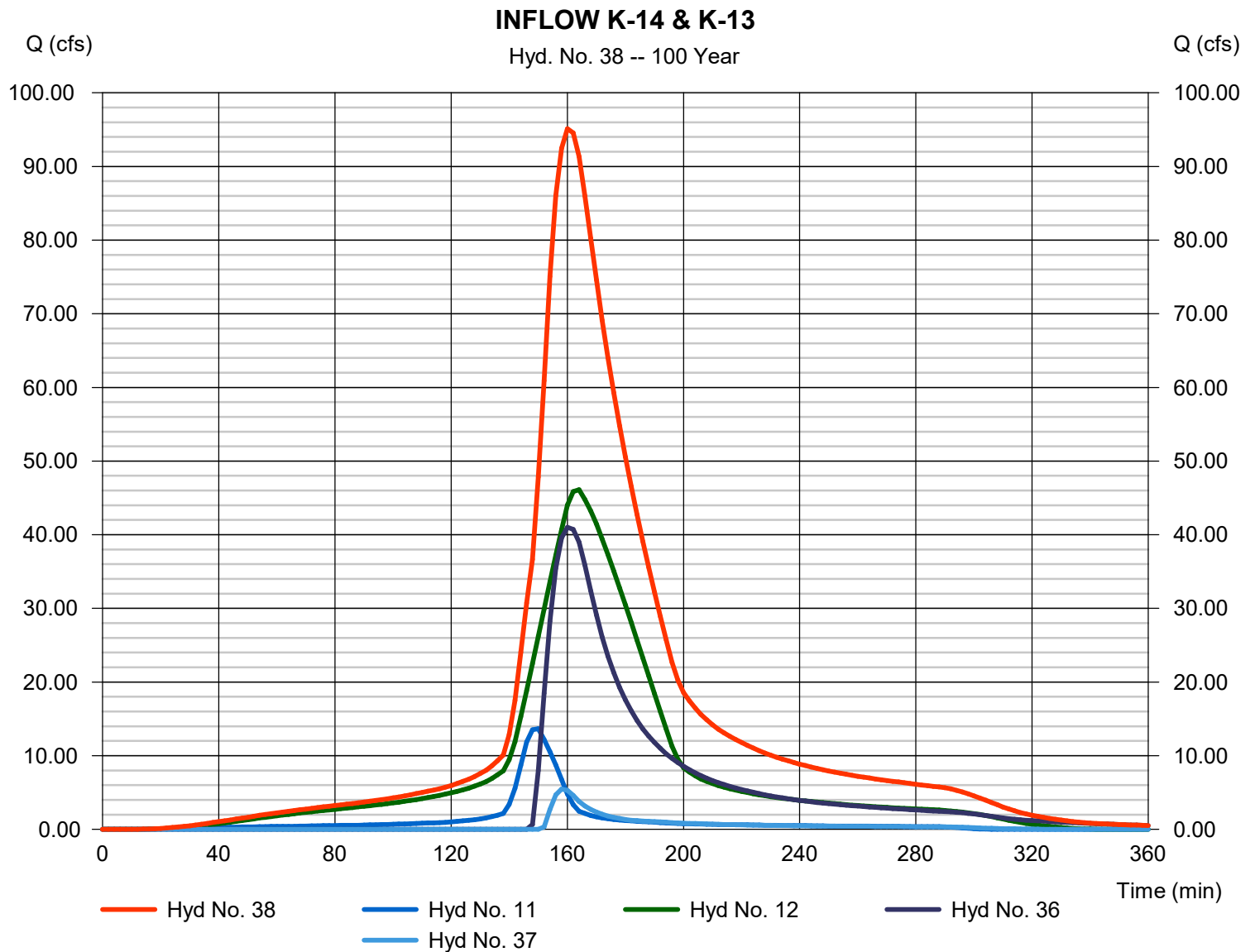
Wednesday, 04 / 8 / 2020

Hyd. No. 38

INFLOW K-14 & K-13

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 11, 12, 36, 37

Peak discharge = 95.13 cfs
 Time to peak = 160 min
 Hyd. volume = 279,190 cuft
 Contrib. drain. area = 8.030 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

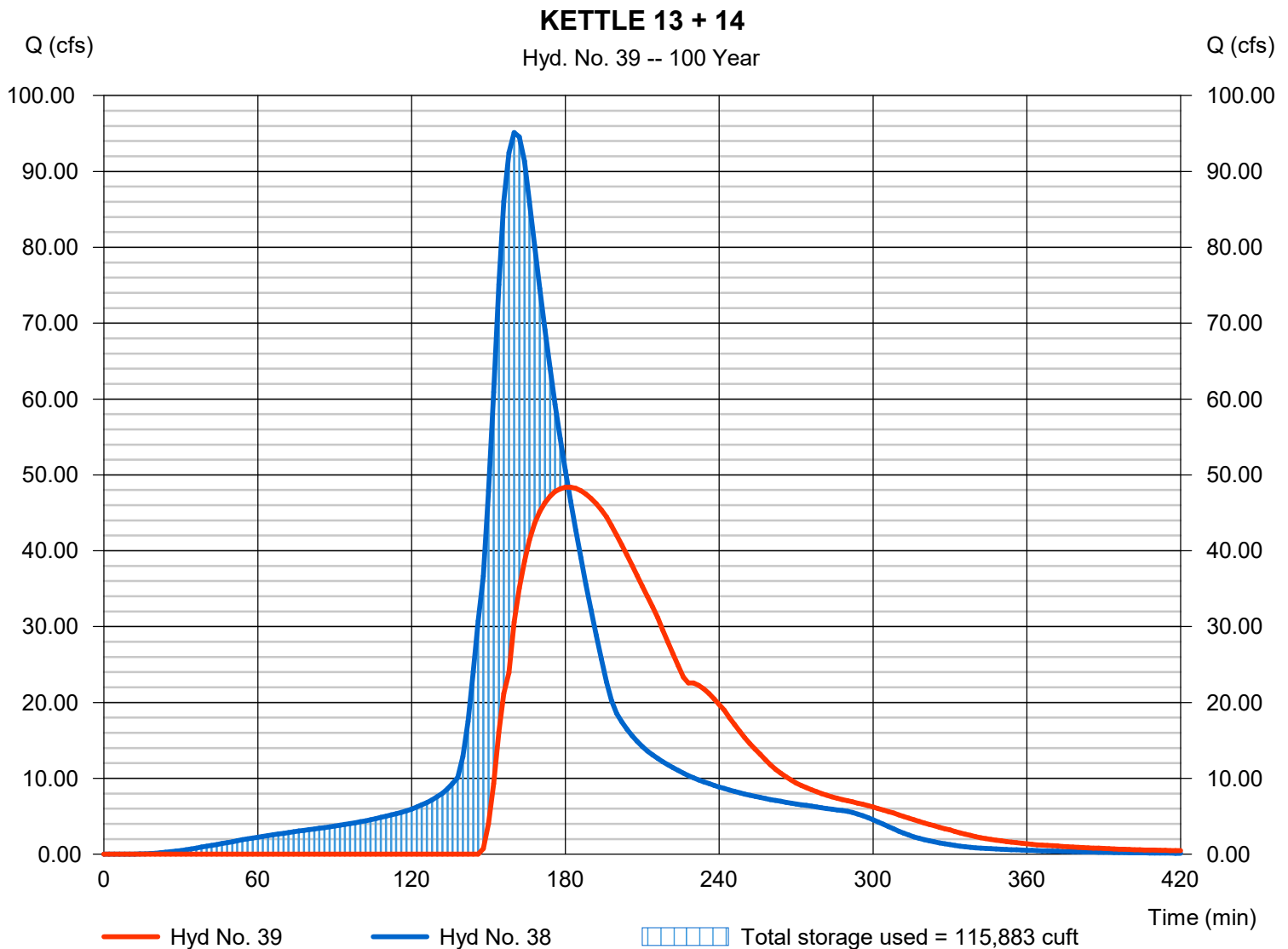
Wednesday, 04 / 8 / 2020

Hyd. No. 39

KETTLE 13 + 14

Hydrograph type	= Reservoir	Peak discharge	= 48.37 cfs
Storm frequency	= 100 yrs	Time to peak	= 182 min
Time interval	= 2 min	Hyd. volume	= 245,258 cuft
Inflow hyd. No.	= 38 - INFLOW K-14 & K-13	Max. Elevation	= 963.41 ft
Reservoir name	= K-13 & K-14	Max. Storage	= 115,883 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

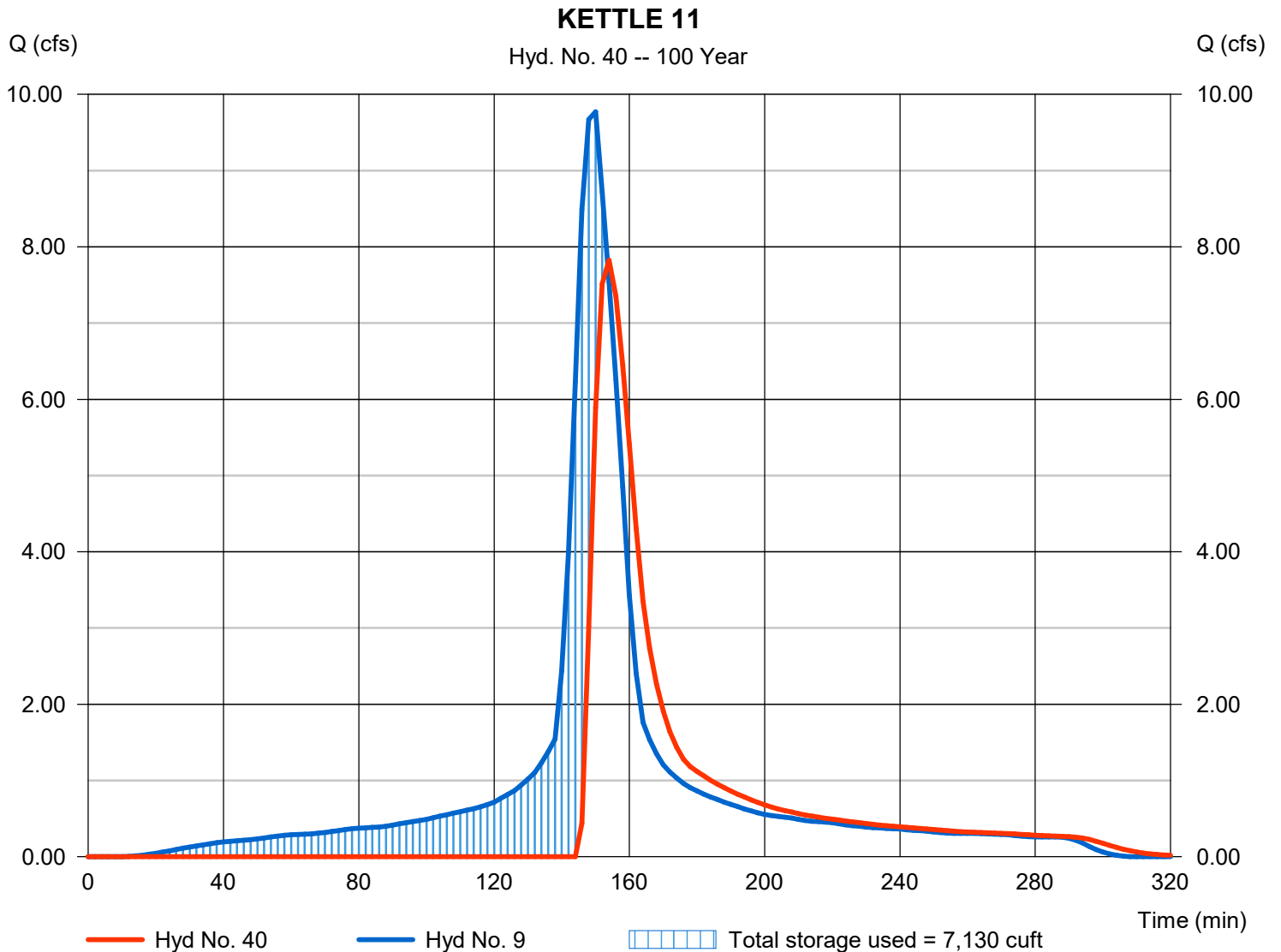
Hyd. No. 40

KETTLE 11

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 9 - E-11
 Reservoir name = K-11

Peak discharge = 7.824 cfs
 Time to peak = 154 min
 Hyd. volume = 11,199 cuft
 Max. Elevation = 980.84 ft
 Max. Storage = 7,130 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

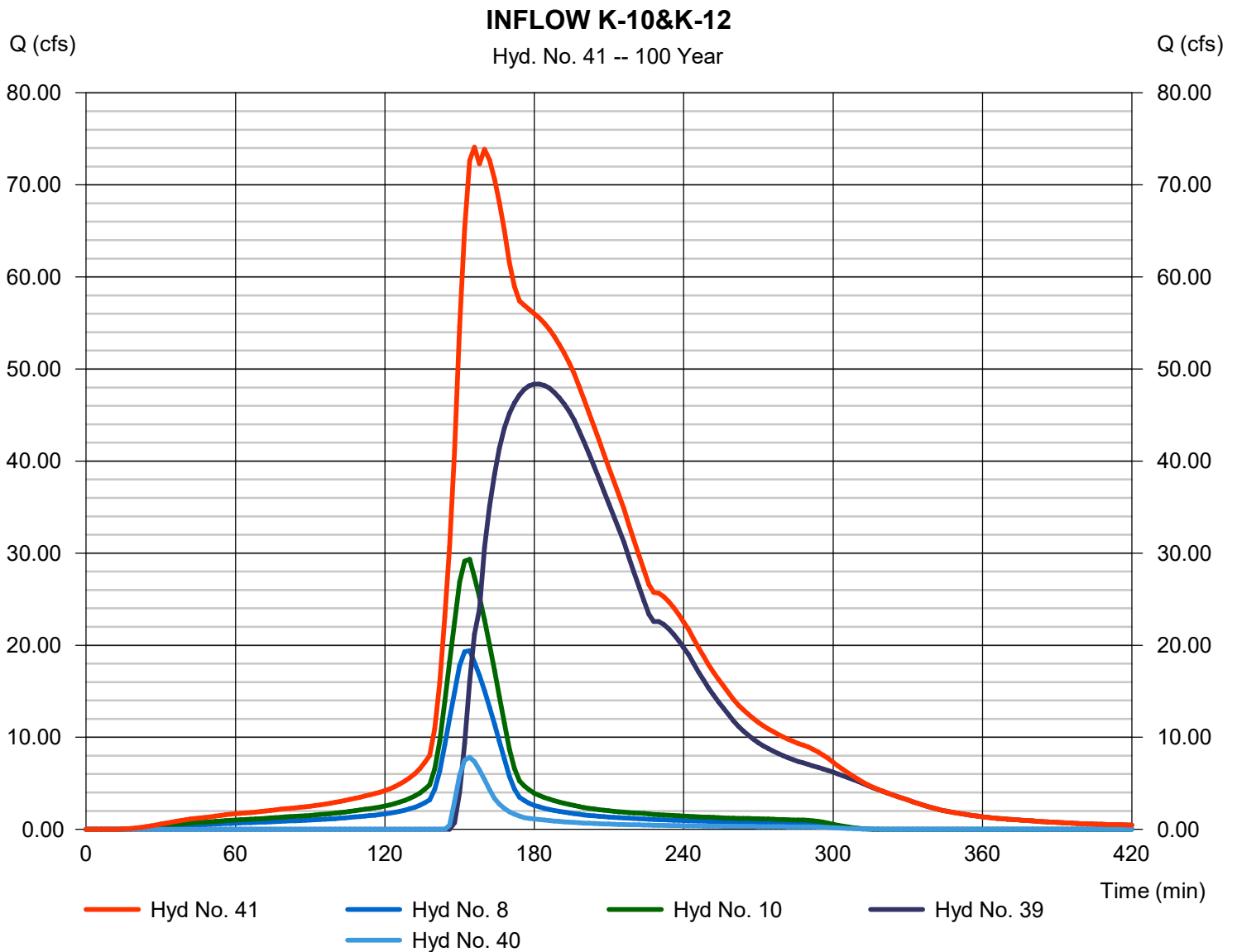
Wednesday, 04 / 8 / 2020

Hyd. No. 41

INFLOW K-10&K-12

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 8, 10, 39, 40

Peak discharge = 74.10 cfs
Time to peak = 156 min
Hyd. volume = 360,415 cuft
Contrib. drain. area = 4.820 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

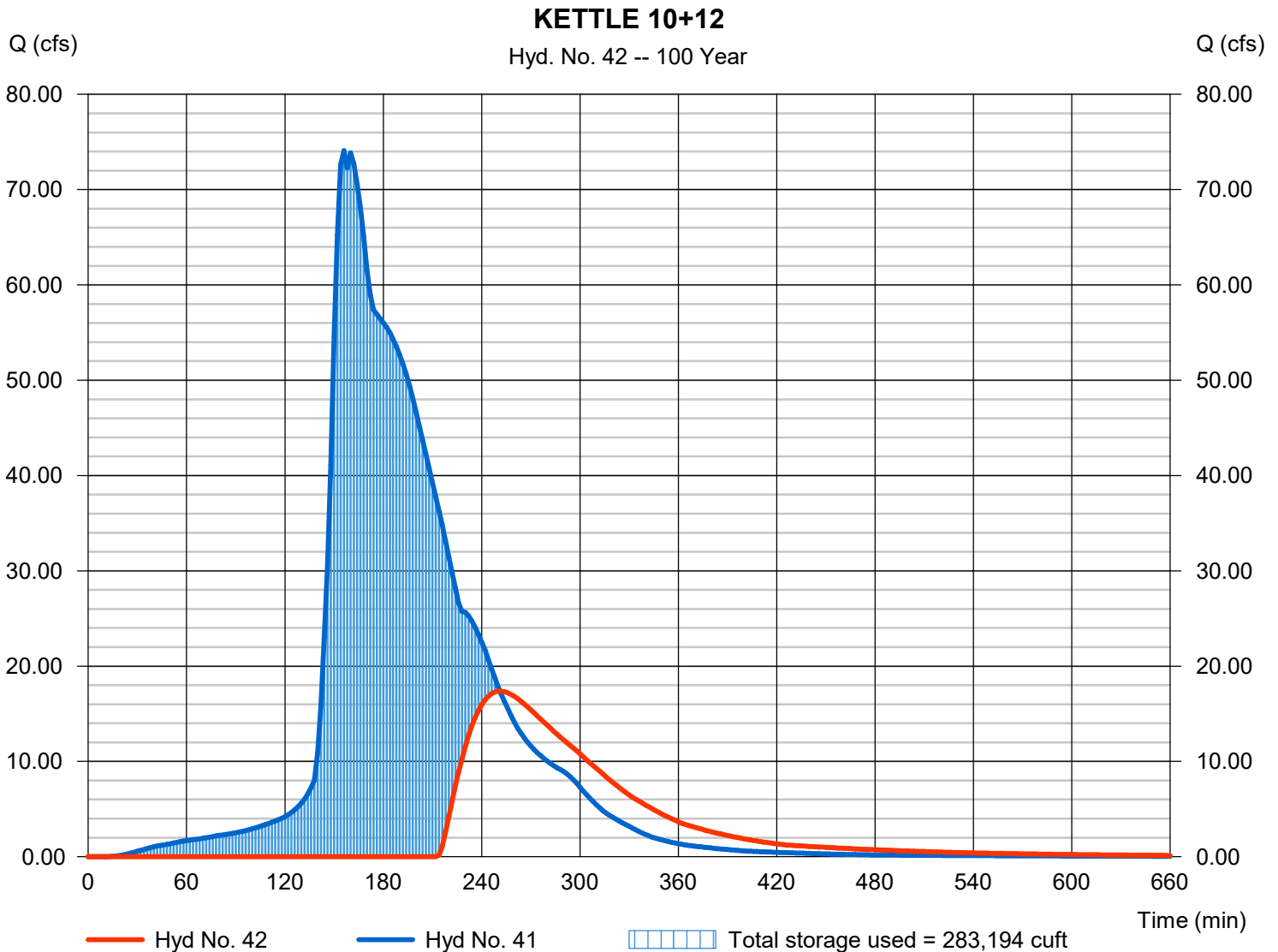
Wednesday, 04 / 8 / 2020

Hyd. No. 42

KETTLE 10+12

Hydrograph type	= Reservoir	Peak discharge	= 17.37 cfs
Storm frequency	= 100 yrs	Time to peak	= 252 min
Time interval	= 2 min	Hyd. volume	= 109,338 cuft
Inflow hyd. No.	= 41 - INFLOW K-10&K-12	Max. Elevation	= 965.08 ft
Reservoir name	= K-10 & K-12	Max. Storage	= 283,194 cuft

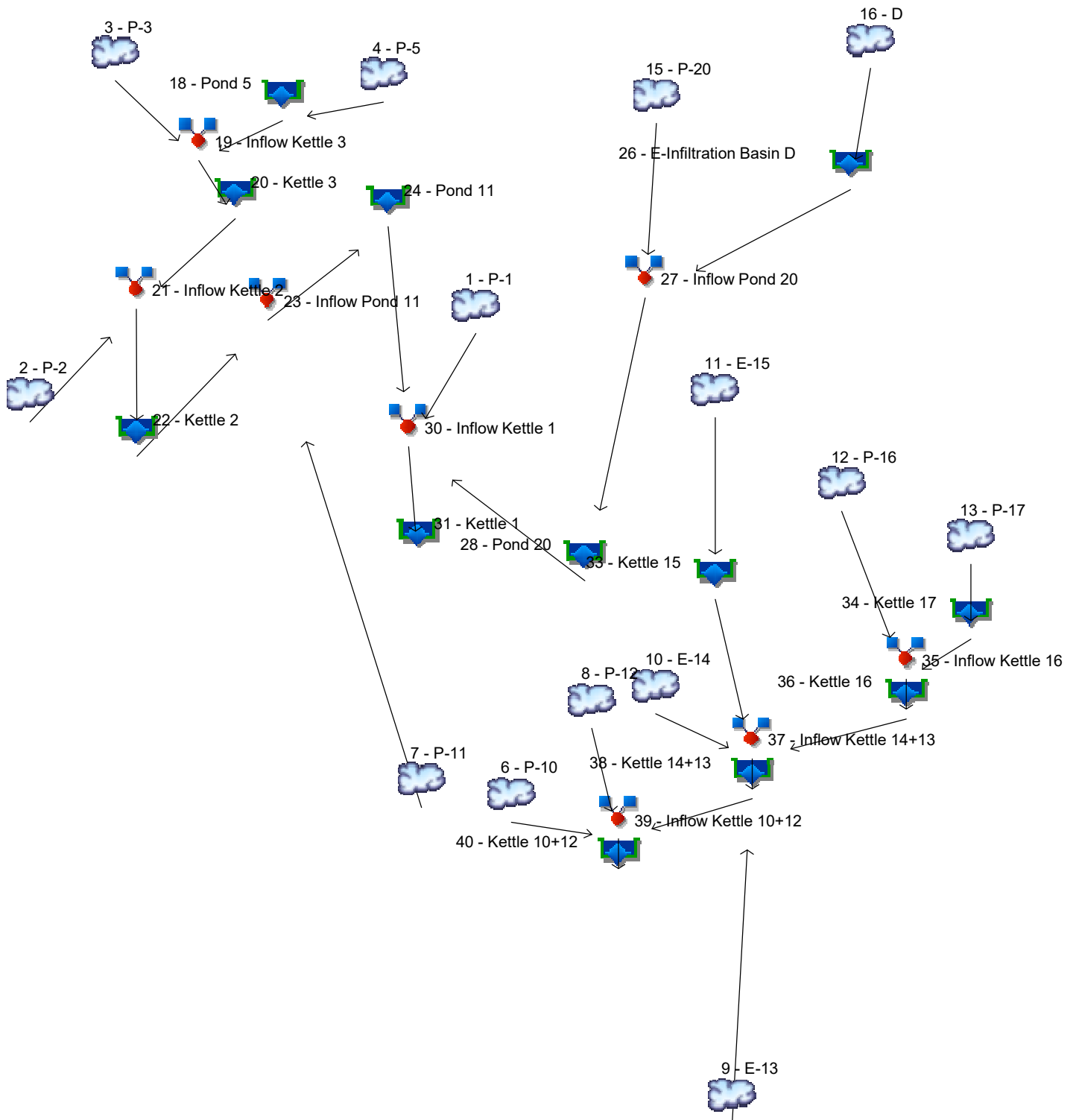
Storage Indication method used.



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Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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	----	----	----	----	----	----	----	----	103.23	P-1
2	SCS Runoff	----	----	----	----	----	----	----	----	27.30	P-2
3	SCS Runoff	----	----	----	----	----	----	----	----	10.04	P-3
4	SCS Runoff	----	----	----	----	----	----	----	----	95.38	P-5
6	SCS Runoff	----	----	----	----	----	----	----	----	24.36	P-10
7	SCS Runoff	----	----	----	----	----	----	----	----	36.00	P-11
8	SCS Runoff	----	----	----	----	----	----	----	----	38.95	P-12
9	SCS Runoff	----	----	----	----	----	----	----	----	13.65	E-13
10	SCS Runoff	----	----	----	----	----	----	----	----	46.12	E-14
11	SCS Runoff	----	----	----	----	----	----	----	----	11.78	E-15
12	SCS Runoff	----	----	----	----	----	----	----	----	20.88	P-16
13	SCS Runoff	----	----	----	----	----	----	----	----	47.38	P-17
15	SCS Runoff	----	----	----	----	----	----	----	----	81.19	P-20
16	SCS Runoff	----	----	----	----	----	----	----	----	50.00	D
18	Reservoir	4	----	----	----	----	----	----	----	57.78	Pond 5
19	Combine	3, 18	----	----	----	----	----	----	----	59.01	Inflow Kettle 3
20	Reservoir	19	----	----	----	----	----	----	----	58.01	Kettle 3
21	Combine	2, 20	----	----	----	----	----	----	----	60.89	Inflow Kettle 2
22	Reservoir	21	----	----	----	----	----	----	----	40.04	Kettle 2
23	Combine	7, 22	----	----	----	----	----	----	----	42.74	Inflow Pond 11
24	Reservoir	23	----	----	----	----	----	----	----	40.92	Pond 11
26	Reservoir	16	----	----	----	----	----	----	----	30.79	E-Infiltration Basin D
27	Combine	15, 26	----	----	----	----	----	----	----	81.19	Inflow Pond 20
28	Reservoir	27	----	----	----	----	----	----	----	69.11	Pond 20
30	Combine	1, 24, 28,	----	----	----	----	----	----	----	189.78	Inflow Kettle 1
31	Reservoir	30	----	----	----	----	----	----	----	0.000	Kettle 1
33	Reservoir	11	----	----	----	----	----	----	----	5.457	Kettle 15
34	Reservoir	13	----	----	----	----	----	----	----	30.02	Kettle 17
35	Combine	12, 34	----	----	----	----	----	----	----	45.22	Inflow Kettle 16
36	Reservoir	35	----	----	----	----	----	----	----	39.89	Kettle 16
37	Combine	9, 10, 33, 36	----	----	----	----	----	----	----	92.94	Inflow Kettle 14+13
Proj. file: PROPOSED FROZEN_LCL_Stormwater Model_2020-04-08.gpw										Wednesday, 04 / 8 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	103.23	2	158	265,856	-----	-----	-----	P-1
2	SCS Runoff	27.30	2	150	45,374	-----	-----	-----	P-2
3	SCS Runoff	10.04	2	150	16,682	-----	-----	-----	P-3
4	SCS Runoff	95.38	2	158	245,644	-----	-----	-----	P-5
6	SCS Runoff	24.36	2	150	40,481	-----	-----	-----	P-10
7	SCS Runoff	36.00	2	152	66,830	-----	-----	-----	P-11
8	SCS Runoff	38.95	2	150	64,725	-----	-----	-----	P-12
9	SCS Runoff	13.65	2	150	22,687	-----	-----	-----	E-13
10	SCS Runoff	46.12	2	164	149,475	-----	-----	-----	E-14
11	SCS Runoff	11.78	2	150	19,573	-----	-----	-----	E-15
12	SCS Runoff	20.88	2	150	34,698	-----	-----	-----	P-16
13	SCS Runoff	47.38	2	150	78,737	-----	-----	-----	P-17
15	SCS Runoff	81.19	2	158	209,084	-----	-----	-----	P-20
16	SCS Runoff	50.00	2	164	162,055	-----	-----	-----	D
18	Reservoir	57.78	2	170	244,648	4	985.74	99,461	Pond 5
19	Combine	59.01	2	170	261,330	3, 18	-----	-----	Inflow Kettle 3
20	Reservoir	58.01	2	174	238,504	19	977.30	37,301	Kettle 3
21	Combine	60.89	2	174	283,878	2, 20	-----	-----	Inflow Kettle 2
22	Reservoir	40.04	2	194	213,398	21	975.82	116,605	Kettle 2
23	Combine	42.74	2	194	280,227	7, 22	-----	-----	Inflow Pond 11
24	Reservoir	40.92	2	200	280,178	23	968.61	28,642	Pond 11
26	Reservoir	30.79	2	182	89,532	16	995.35	92,985	E-Infiltration Basin D
27	Combine	81.19	2	158	298,616	15, 26	-----	-----	Inflow Pond 20
28	Reservoir	69.11	2	164	298,280	27	993.78	50,810	Pond 20
30	Combine	189.78	2	160	844,313	1, 24, 28,	-----	-----	Inflow Kettle 1
31	Reservoir	0.000	2	n/a	0	30	967.90	844,315	Kettle 1
33	Reservoir	5.457	2	158	9,374	11	972.77	12,148	Kettle 15
34	Reservoir	30.02	2	156	68,080	13	1012.84	33,722	Kettle 17
35	Combine	45.22	2	154	102,777	12, 34	-----	-----	Inflow Kettle 16
36	Reservoir	39.89	2	158	87,376	35	1008.02	27,564	Kettle 16
37	Combine	92.94	2	160	268,912	9, 10, 33, 36	-----	-----	Inflow Kettle 14+13
PROPOSED FROZEN_LCL_Stormwater Model - 2020 Period 100 Year					Revised: 04/08/2020			Wednesday, 04 / 8 / 2020	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
38	Reservoir	47.06	2	180	234,981	37	963.27	112,172	Kettle 14+13
39	Combine	68.01	2	150	340,186	6, 8, 38	-----	-----	Inflow Kettle 10+12
40	Reservoir	13.87	2	256	89,108	39	965.00	278,191	Kettle 10+12

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

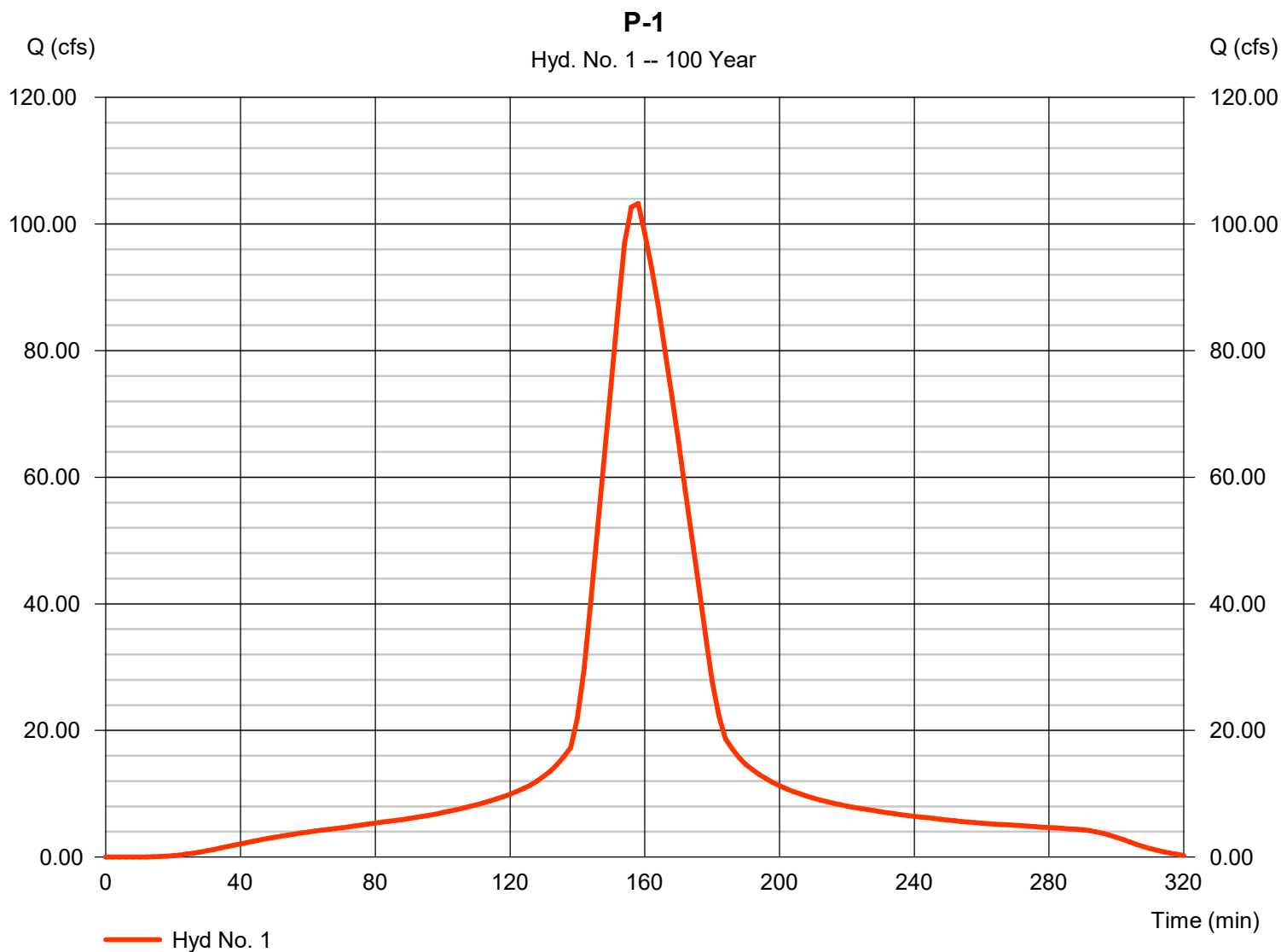
Wednesday, 04 / 8 / 2020

Hyd. No. 1

P-1

Hydrograph type	= SCS Runoff	Peak discharge	= 103.23 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 265,856 cuft
Drainage area	= 12.522 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 25.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(15.060 \times 60) + (2.600 \times 70)] / 12.522$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

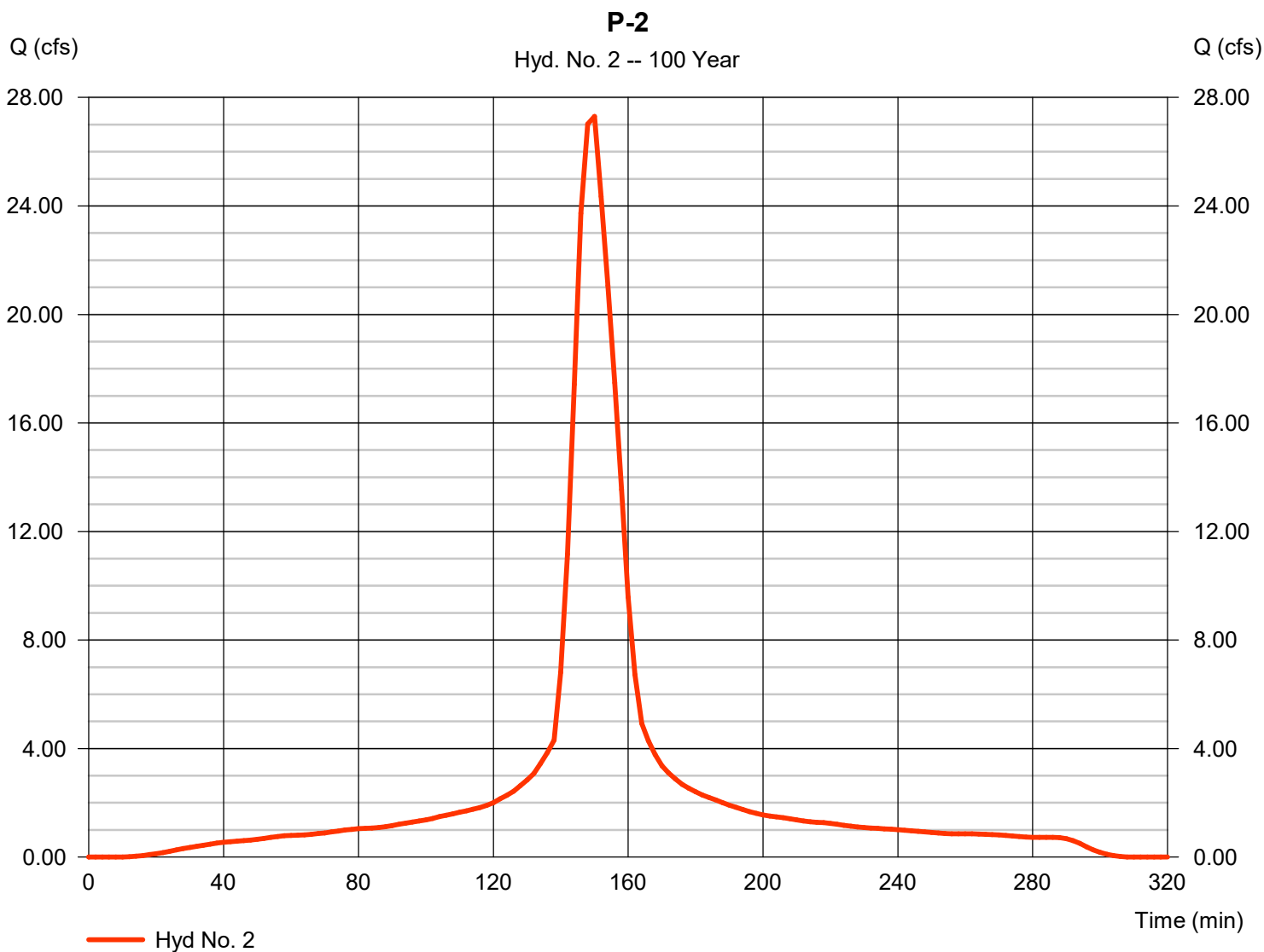
Wednesday, 04 / 8 / 2020

Hyd. No. 2

P-2

Hydrograph type	= SCS Runoff	Peak discharge	= 27.30 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 45,374 cuft
Drainage area	= 2.040 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 98) + (5.290 \times 60)] / 2.040$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

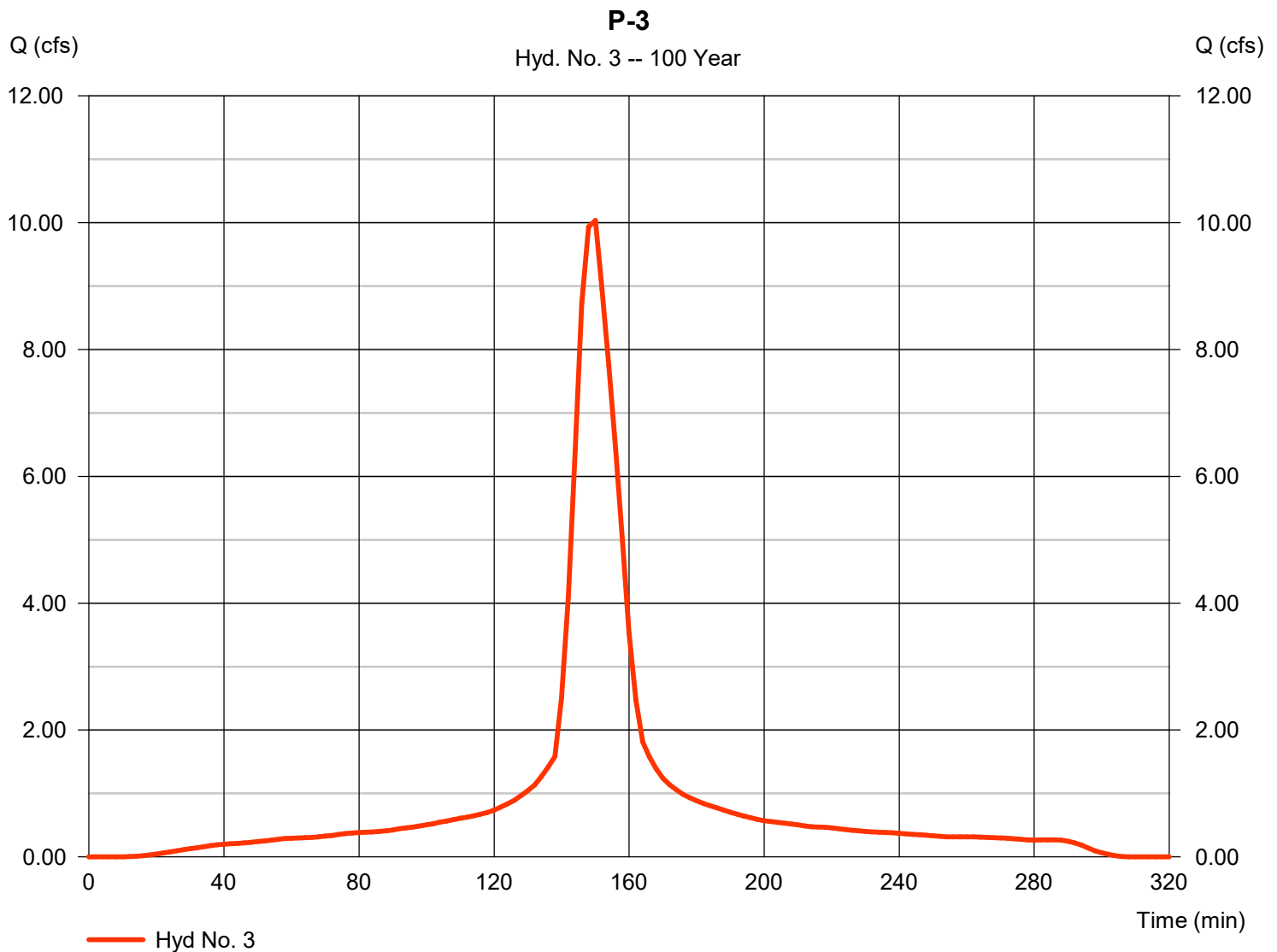
Wednesday, 04 / 8 / 2020

Hyd. No. 3

P-3

Hydrograph type	= SCS Runoff	Peak discharge	= 10.04 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 16,682 cuft
Drainage area	= 0.750 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.050 \times 98) + (1.390 \times 60)] / 0.750$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

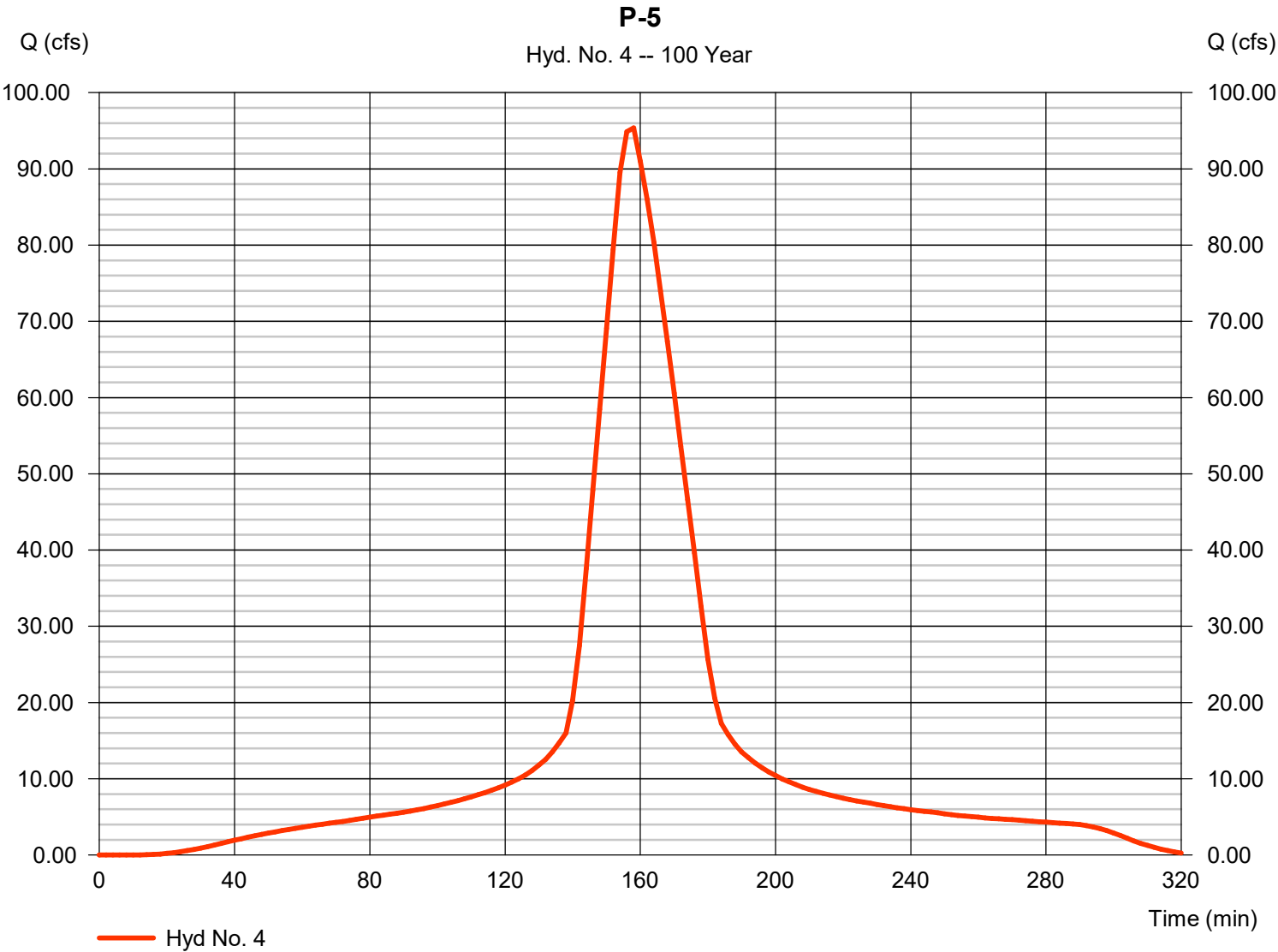
Wednesday, 04 / 8 / 2020

Hyd. No. 4

P-5

Hydrograph type	= SCS Runoff	Peak discharge	= 95.38 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 245,644 cuft
Drainage area	= 11.570 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = [(0.040 x 98) + (5.790 x 60)] / 11.570



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

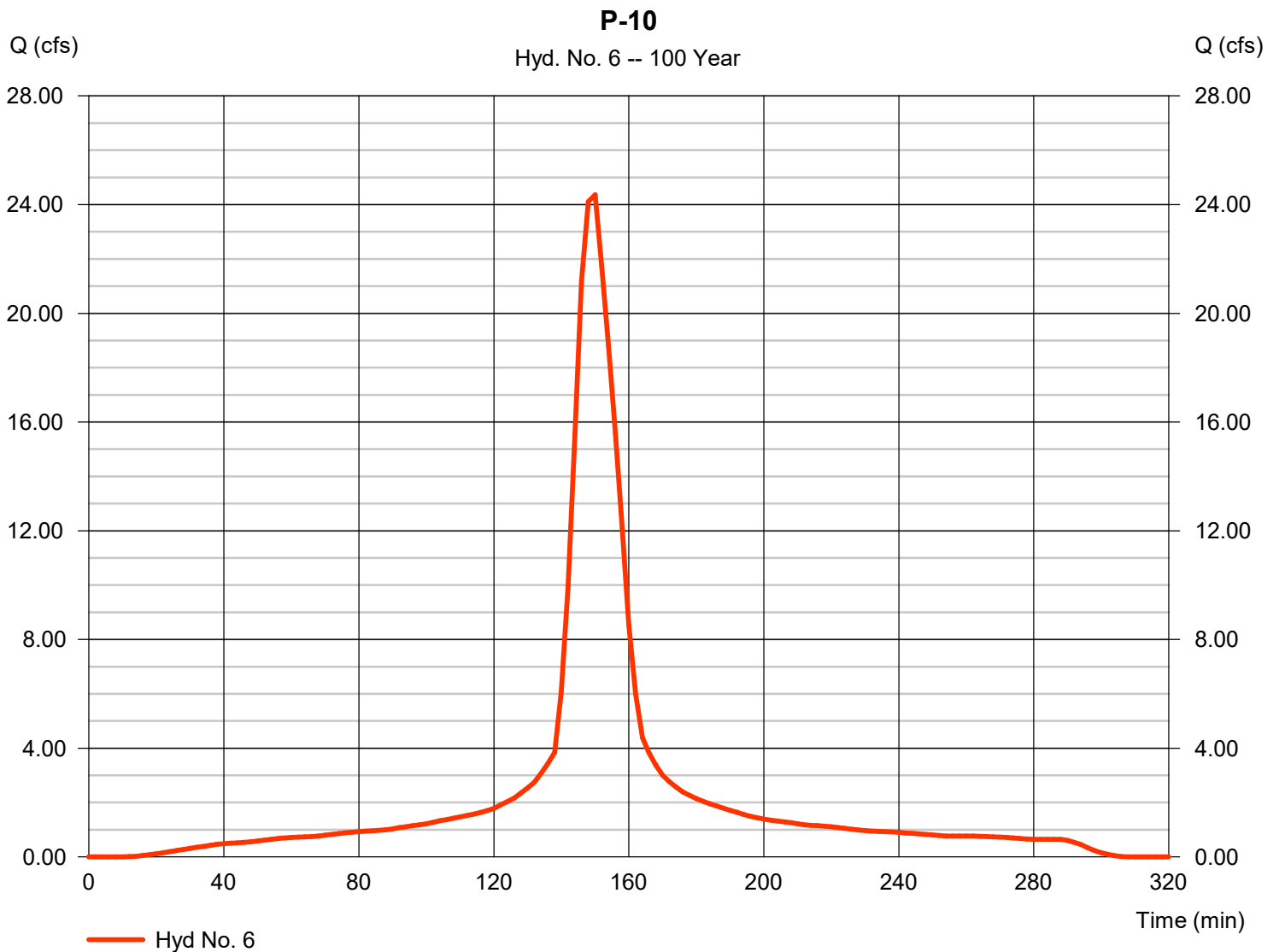
Wednesday, 04 / 8 / 2020

Hyd. No. 6

P-10

Hydrograph type	= SCS Runoff	Peak discharge	= 24.36 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 40,481 cuft
Drainage area	= 1.820 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.120 \times 75) + (1.710 \times 60)] / 1.820$



Hydrograph Report

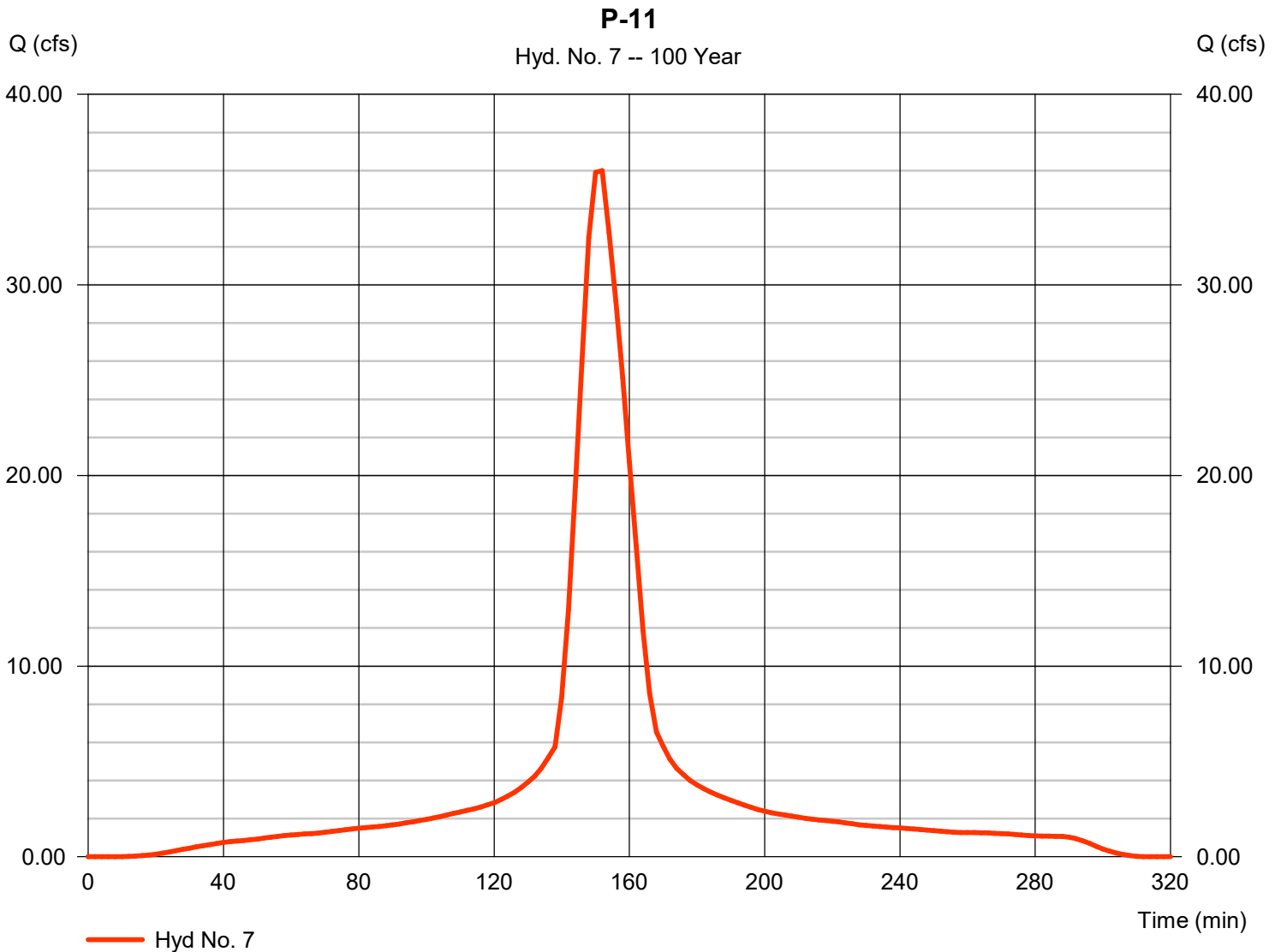
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 7

P-11

Hydrograph type	= SCS Runoff	Peak discharge	= 36.00 cfs
Storm frequency	= 100 yrs	Time to peak	= 152 min
Time interval	= 2 min	Hyd. volume	= 66,830 cuft
Drainage area	= 3.178 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

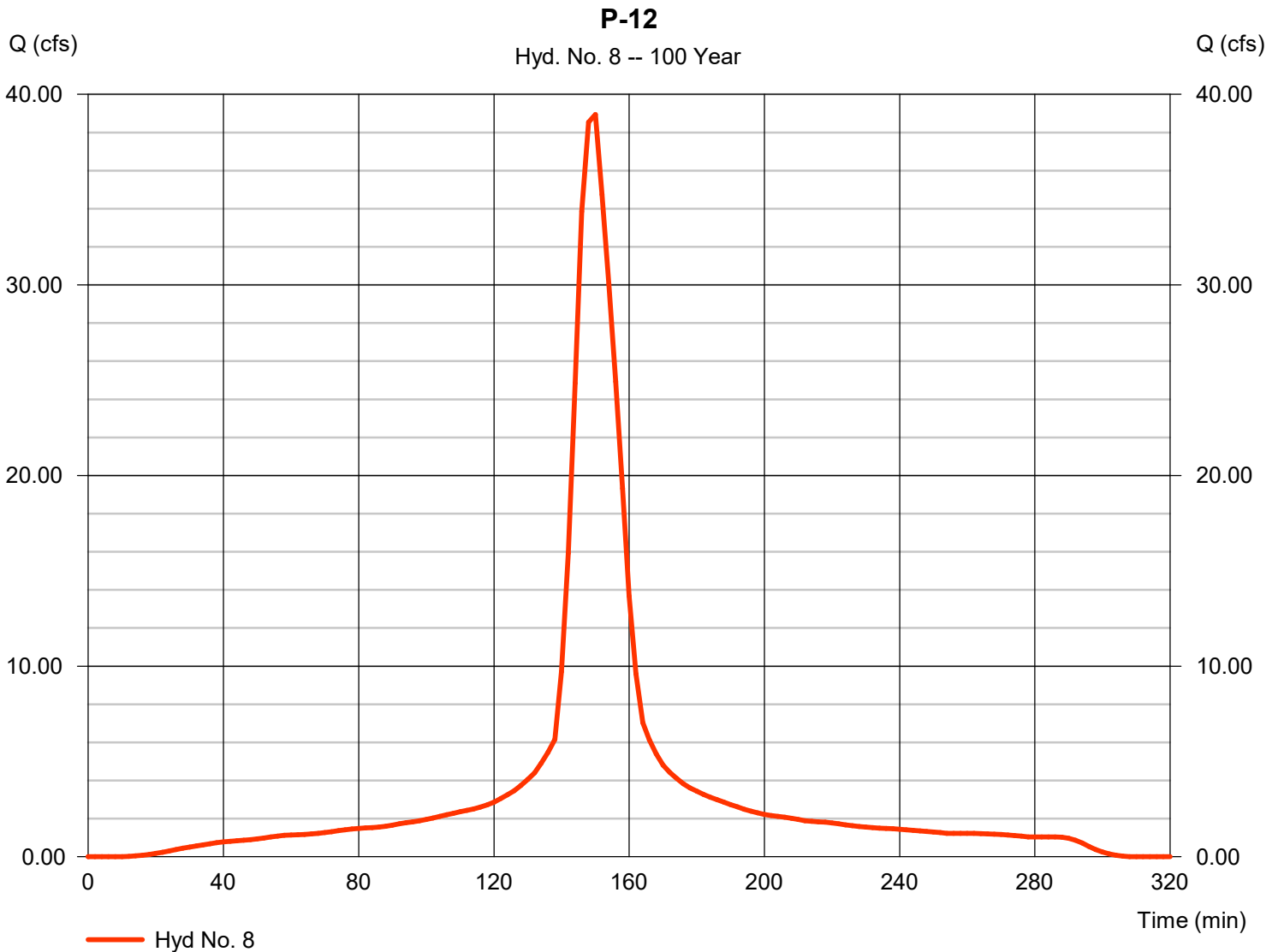
Wednesday, 04 / 8 / 2020

Hyd. No. 8

P-12

Hydrograph type	= SCS Runoff	Peak discharge	= 38.95 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 64,725 cuft
Drainage area	= 2.910 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.280 \times 75) + (1.590 \times 60)] / 2.910$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

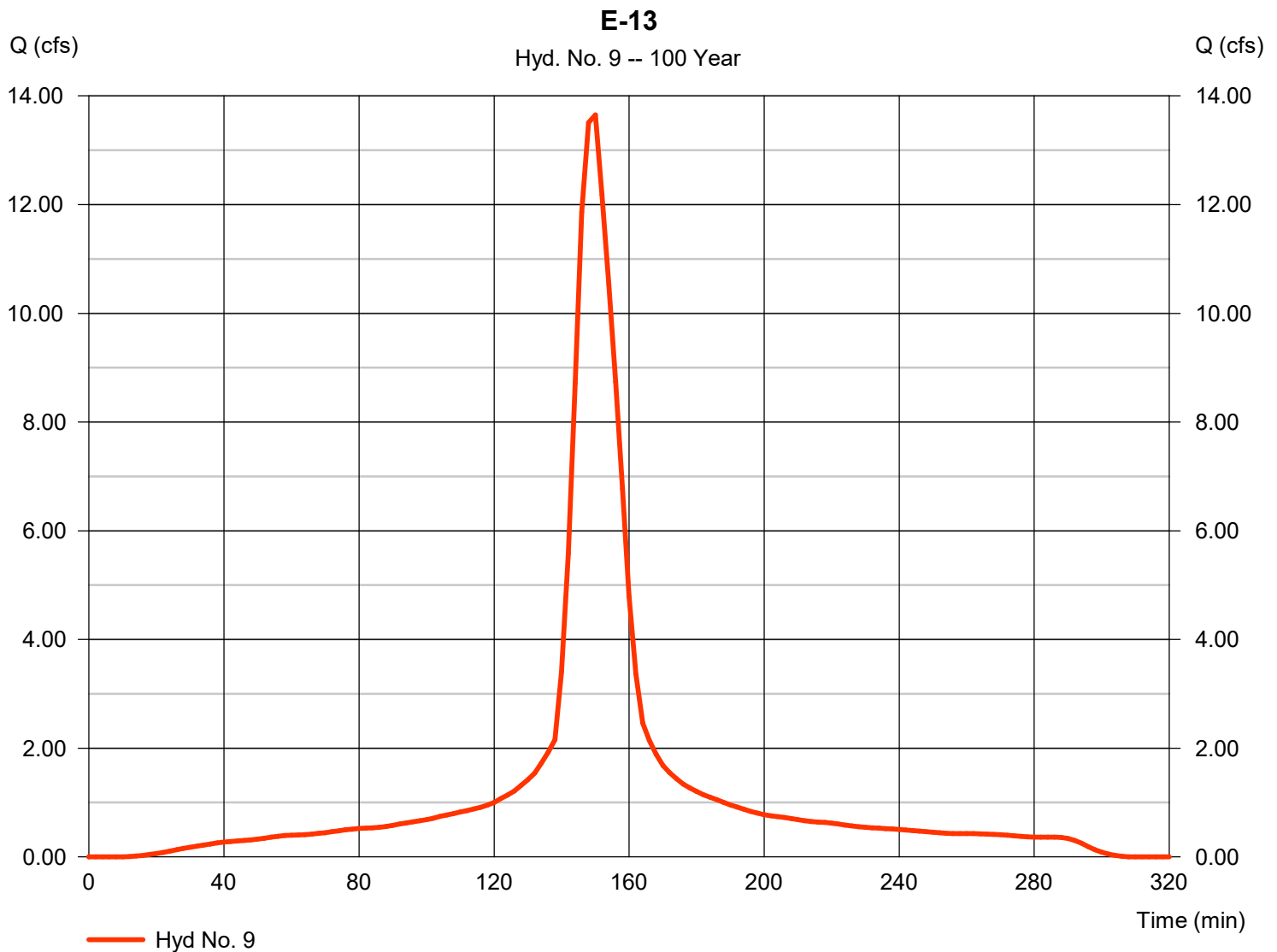
Wednesday, 04 / 8 / 2020

Hyd. No. 9

E-13

Hydrograph type	= SCS Runoff	Peak discharge	= 13.65 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 22,687 cuft
Drainage area	= 1.020 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 1.020$



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

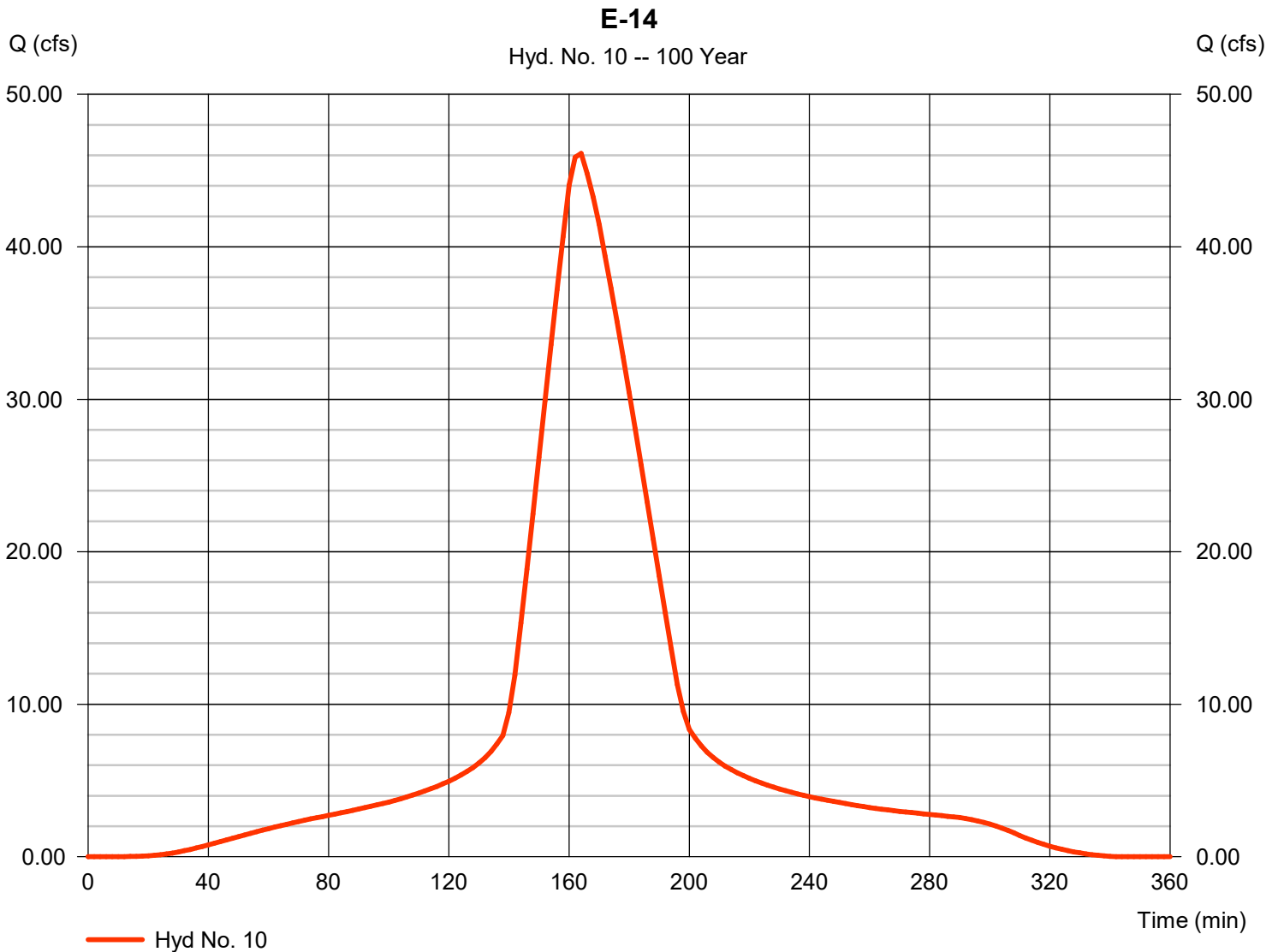
Wednesday, 04 / 8 / 2020

Hyd. No. 10

E-14

Hydrograph type	= SCS Runoff	Peak discharge	= 46.12 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 149,475 cuft
Drainage area	= 7.010 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = $[(0.550 \times 75) + (10.520 \times 60) + (0.180 \times 98)] / 7.010$



Hydrograph Report

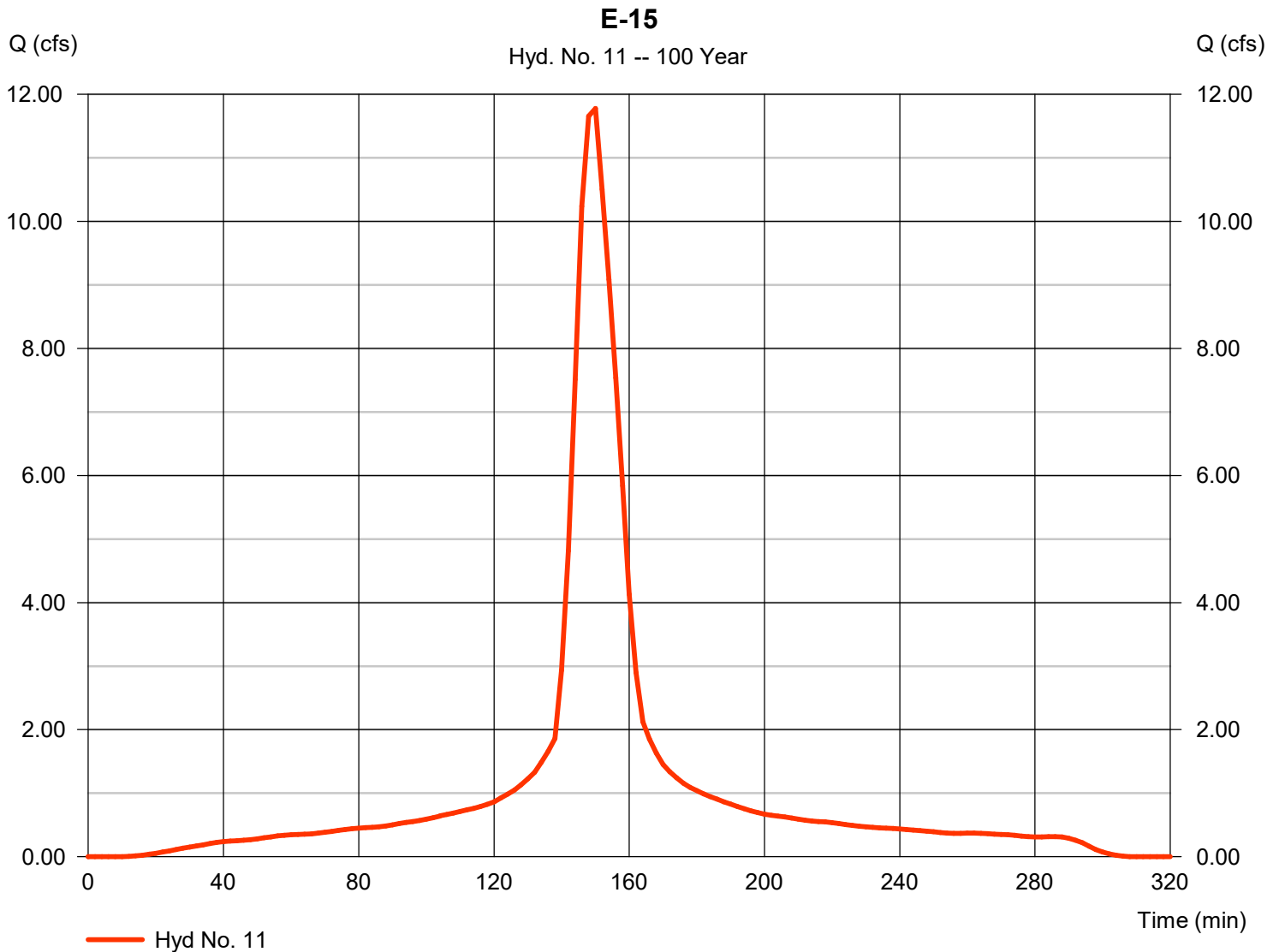
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 11

E-15

Hydrograph type	= SCS Runoff	Peak discharge	= 11.78 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 19,573 cuft
Drainage area	= 0.880 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

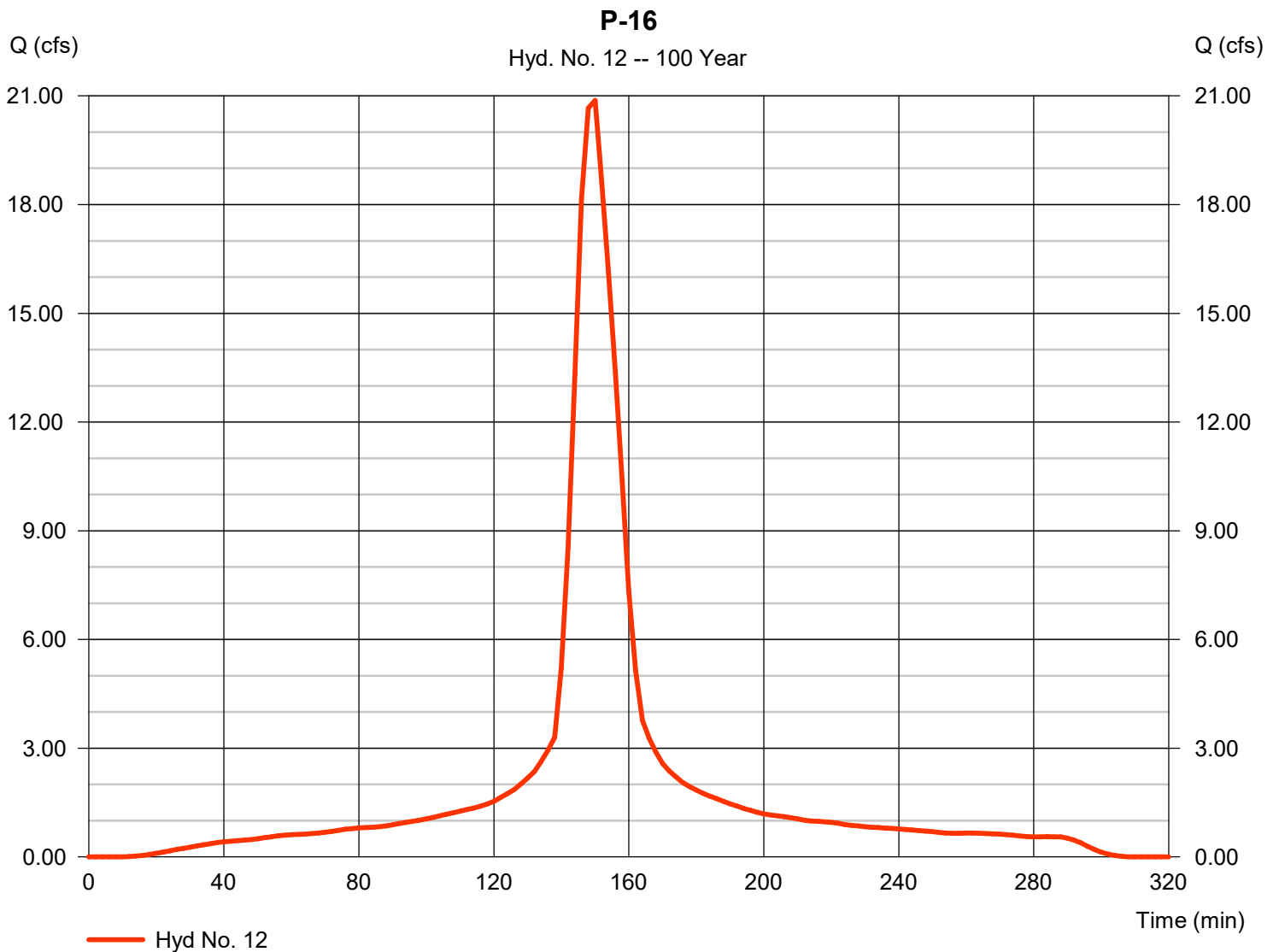
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 12

P-16

Hydrograph type	= SCS Runoff	Peak discharge	= 20.88 cfs
Storm frequency	= 100 yrs	Time to peak	= 150 min
Time interval	= 2 min	Hyd. volume	= 34,698 cuft
Drainage area	= 1.560 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 12.00 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

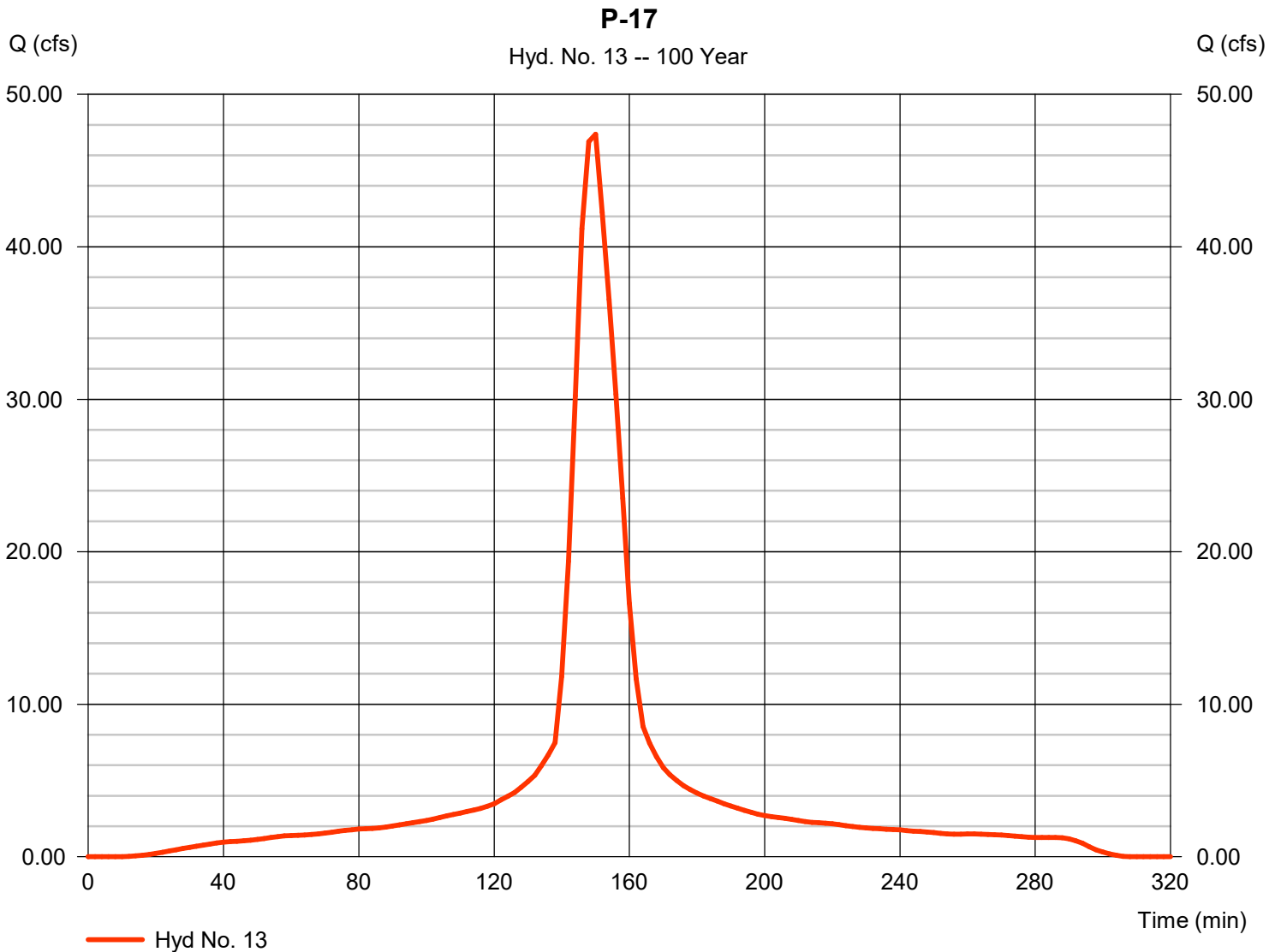
Wednesday, 04 / 8 / 2020

Hyd. No. 13

P-17

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 3.540 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 6.18 in
 Storm duration = Sample.cds

Peak discharge = 47.38 cfs
 Time to peak = 150 min
 Hyd. volume = 78,737 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 12.00 min
 Distribution = Custom
 Shape factor = 484



Hydrograph Report

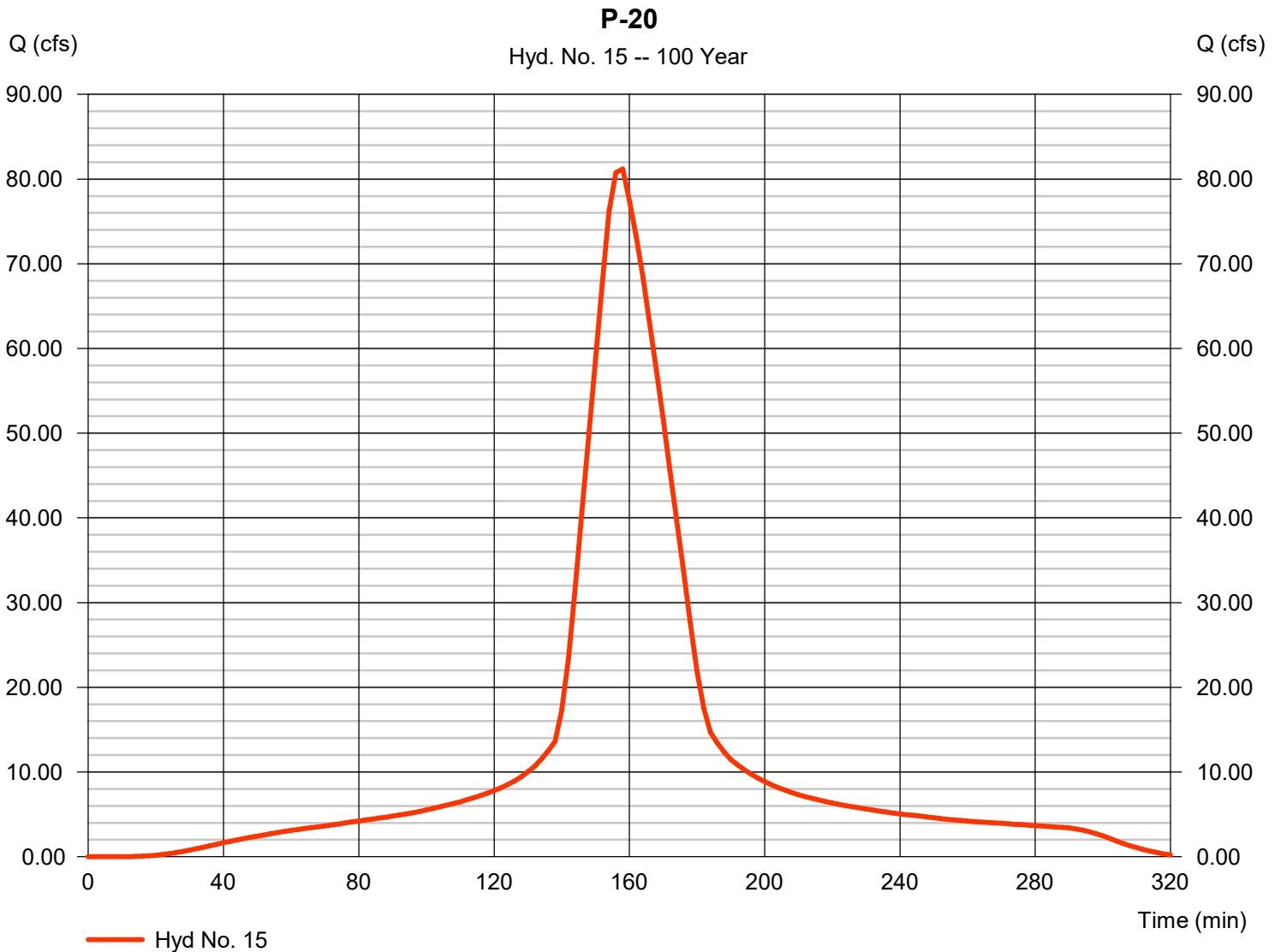
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Wednesday, 04 / 8 / 2020

Hyd. No. 15

P-20

Hydrograph type	= SCS Runoff	Peak discharge	= 81.19 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 209,084 cuft
Drainage area	= 9.848 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 23.50 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

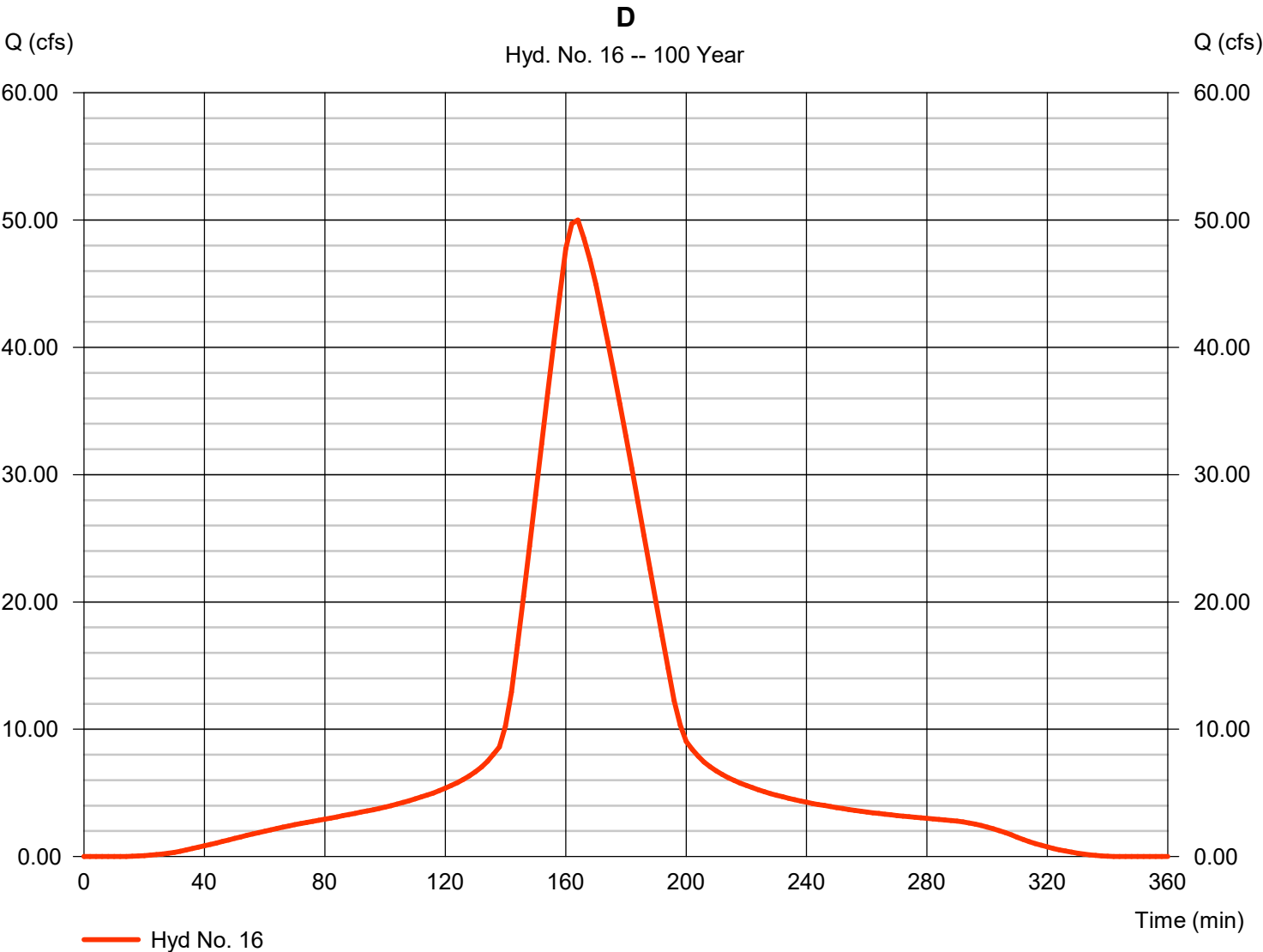
Wednesday, 04 / 8 / 2020

Hyd. No. 16

D

Hydrograph type	= SCS Runoff	Peak discharge	= 50.00 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 162,055 cuft
Drainage area	= 7.600 ac	Curve number	= 98*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 35.10 min
Total precip.	= 6.18 in	Distribution	= Custom
Storm duration	= Sample.cds	Shape factor	= 484

* Composite (Area/CN) = [(15.060 x 60) + (2.600 x 70)] / 7.600



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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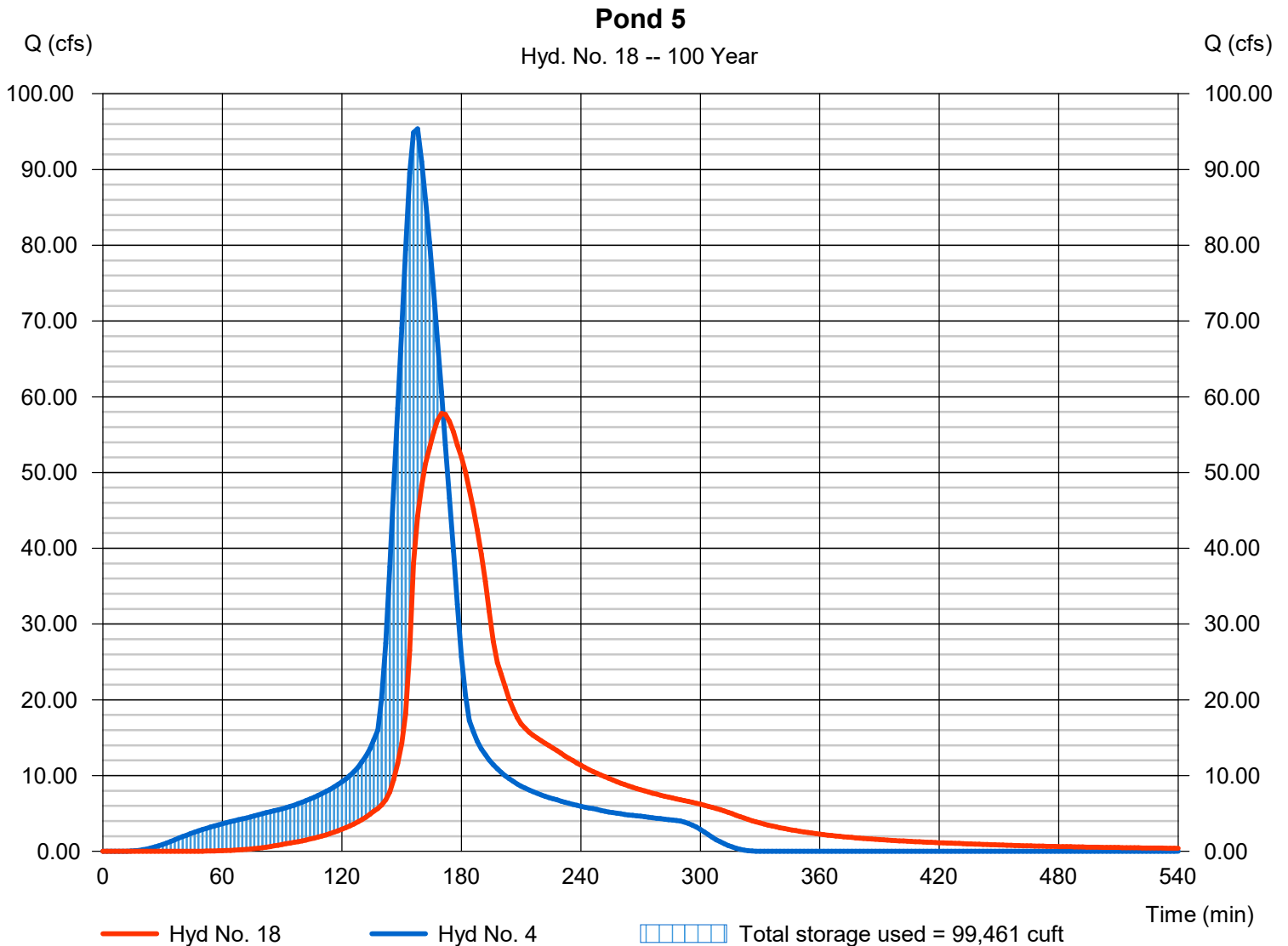
Hyd. No. 18

Pond 5

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 4 - P-5
 Reservoir name = Pond 5

Peak discharge = 57.78 cfs
 Time to peak = 170 min
 Hyd. volume = 244,648 cuft
 Max. Elevation = 985.74 ft
 Max. Storage = 99,461 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

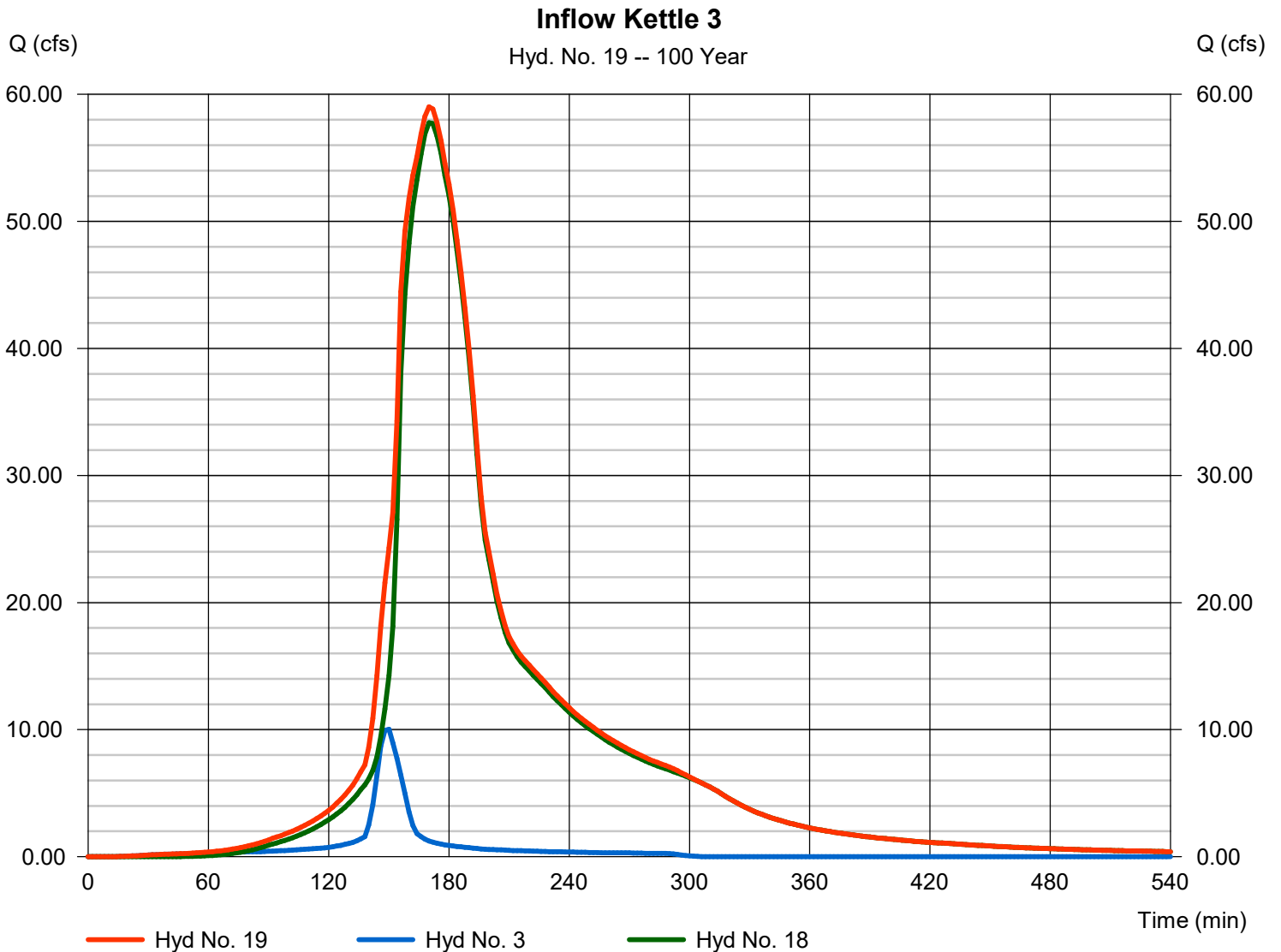
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Hyd. No. 19

Inflow Kettle 3

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 3, 18

Peak discharge = 59.01 cfs
 Time to peak = 170 min
 Hyd. volume = 261,330 cuft
 Contrib. drain. area = 0.750 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

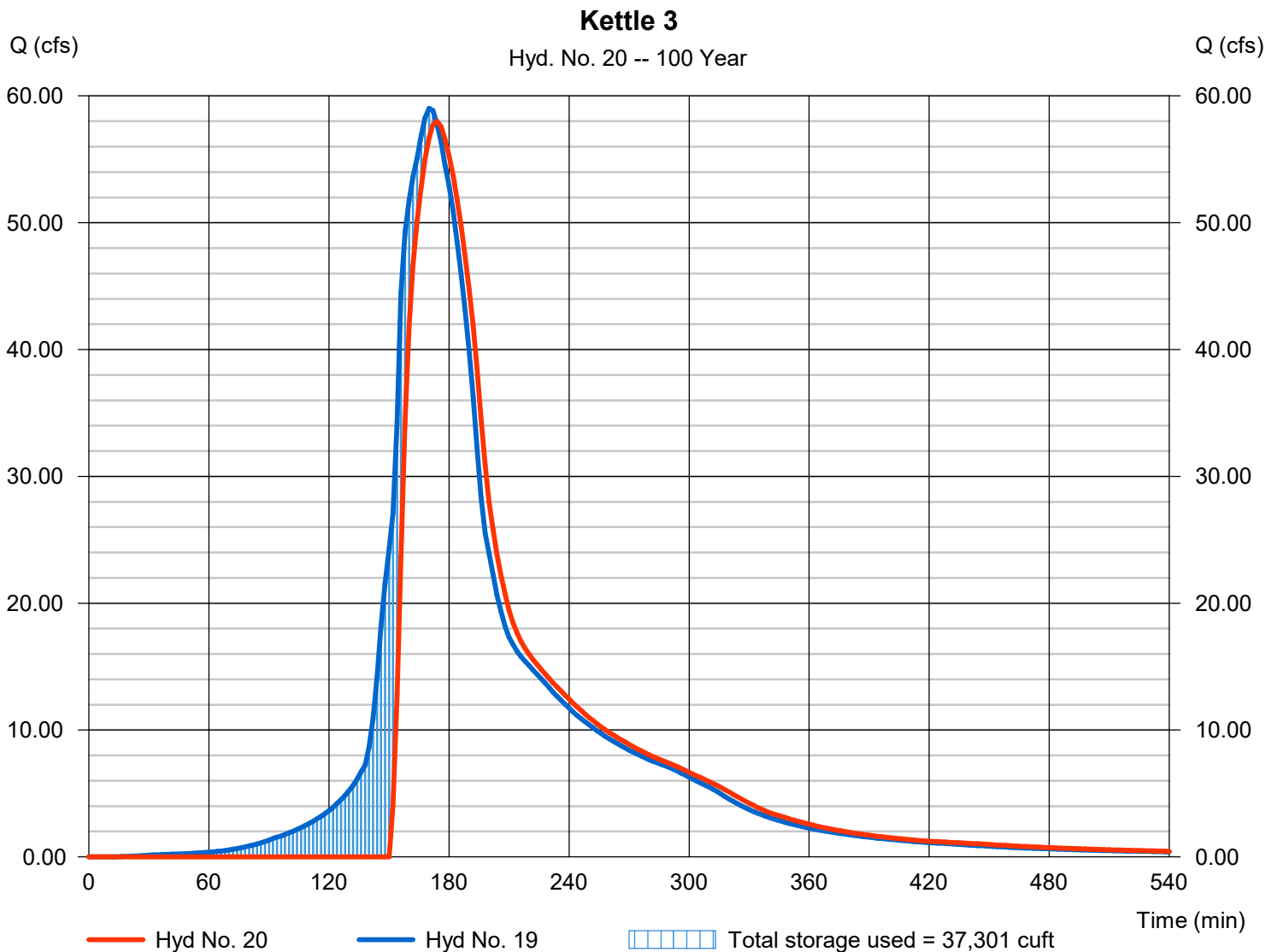
Wednesday, 04 / 8 / 2020

Hyd. No. 20

Kettle 3

Hydrograph type	= Reservoir	Peak discharge	= 58.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 174 min
Time interval	= 2 min	Hyd. volume	= 238,504 cuft
Inflow hyd. No.	= 19 - Inflow Kettle 3	Max. Elevation	= 977.30 ft
Reservoir name	= K-3	Max. Storage	= 37,301 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

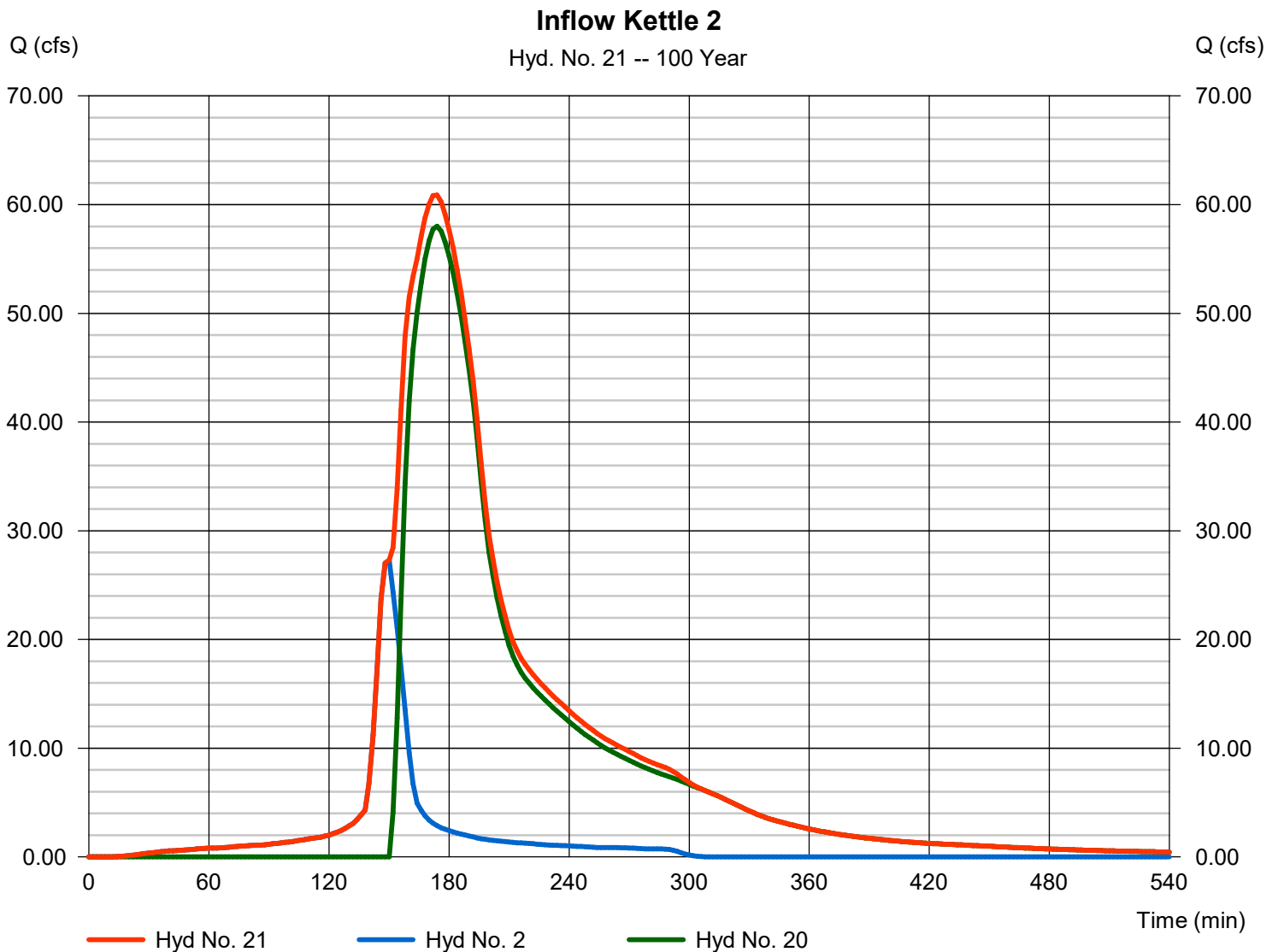
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Hyd. No. 21

Inflow Kettle 2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 2, 20

Peak discharge = 60.89 cfs
Time to peak = 174 min
Hyd. volume = 283,878 cuft
Contrib. drain. area = 2.040 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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Hyd. No. 22

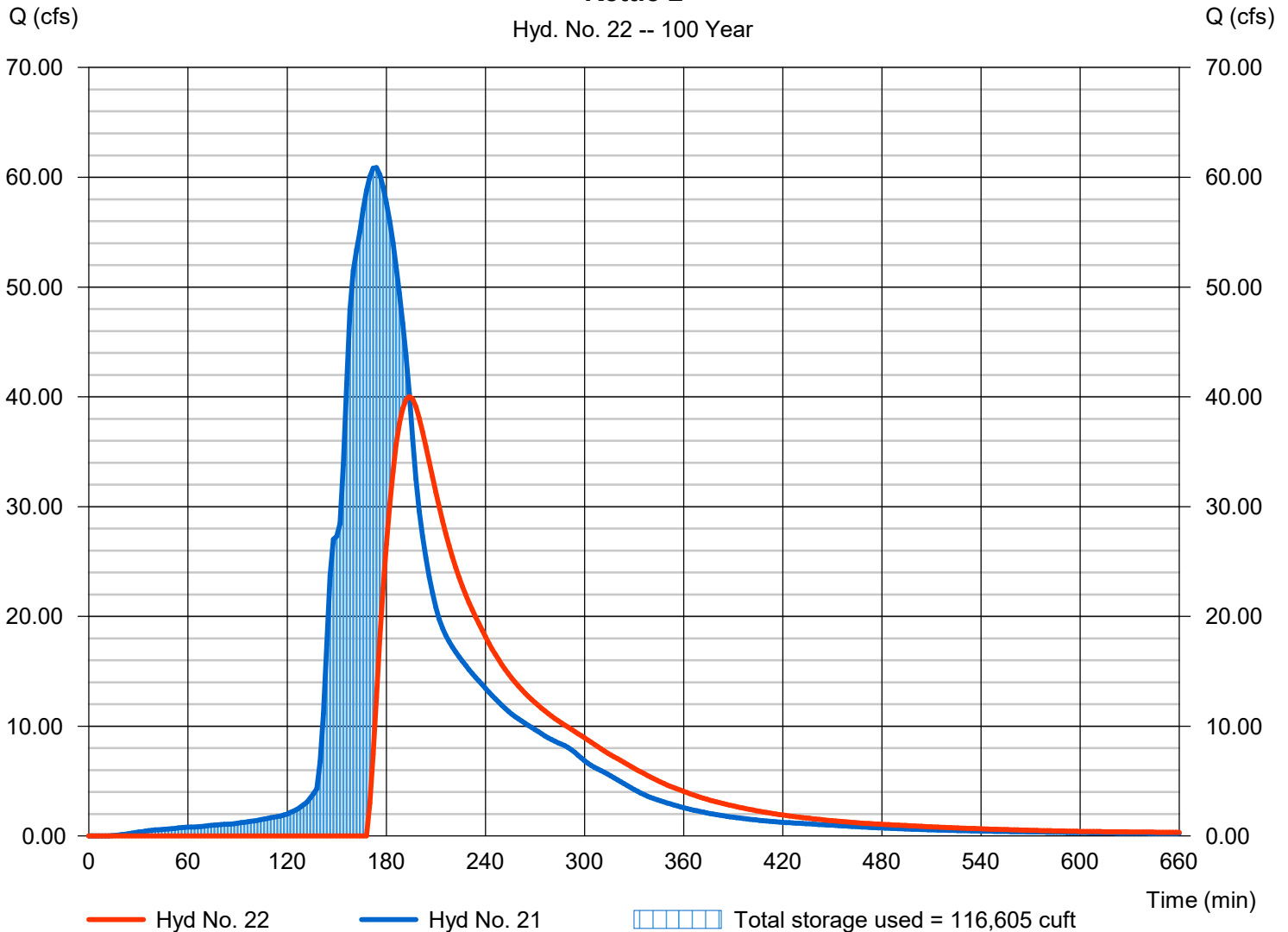
Kettle 2

Hydrograph type	= Reservoir	Peak discharge	= 40.04 cfs
Storm frequency	= 100 yrs	Time to peak	= 194 min
Time interval	= 2 min	Hyd. volume	= 213,398 cuft
Inflow hyd. No.	= 21 - Inflow Kettle 2	Max. Elevation	= 975.82 ft
Reservoir name	= K-2	Max. Storage	= 116,605 cuft

Storage Indication method used.

Kettle 2

Hyd. No. 22 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

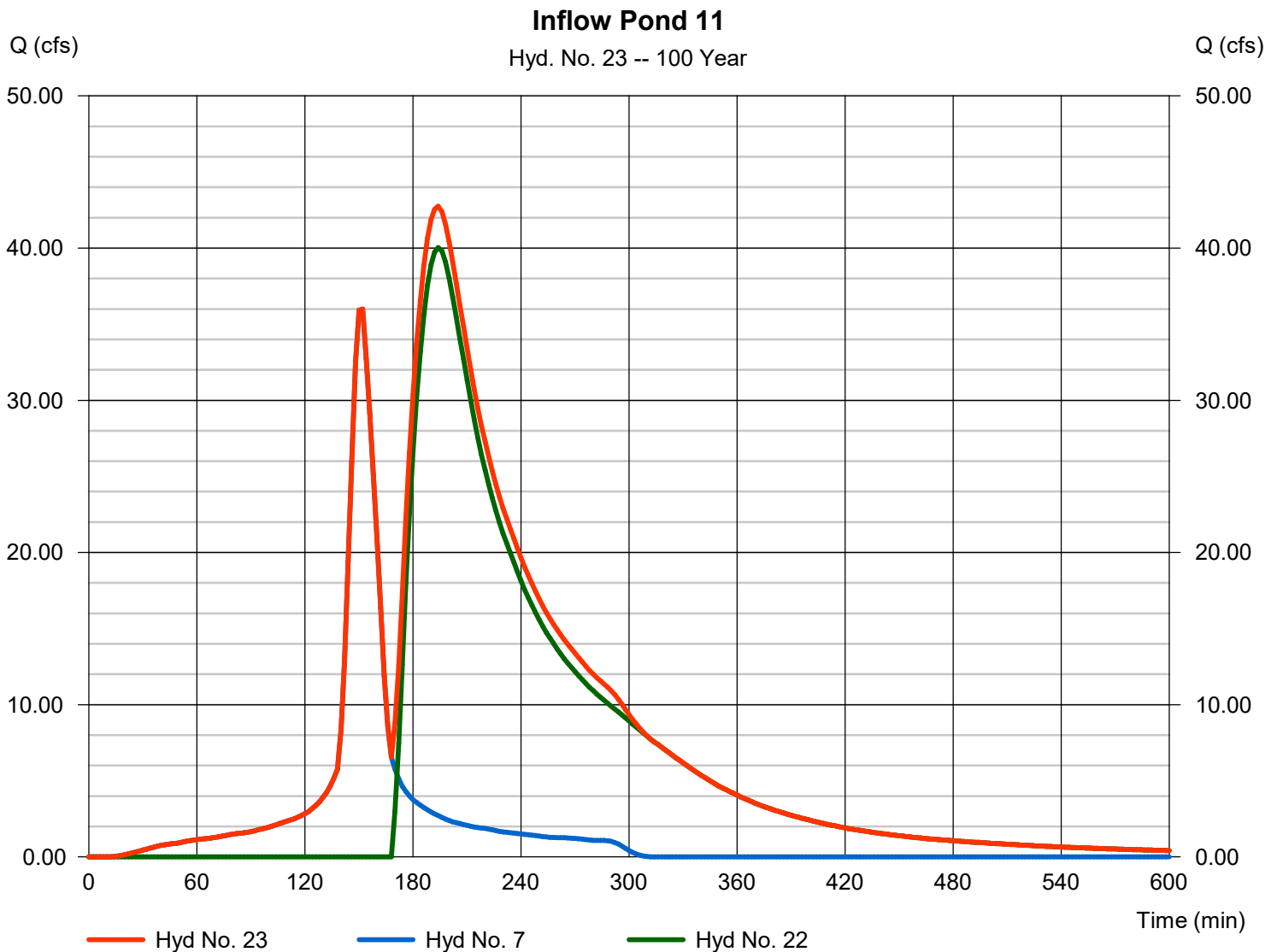
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Hyd. No. 23

Inflow Pond 11

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 7, 22

Peak discharge = 42.74 cfs
 Time to peak = 194 min
 Hyd. volume = 280,227 cuft
 Contrib. drain. area = 3.178 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

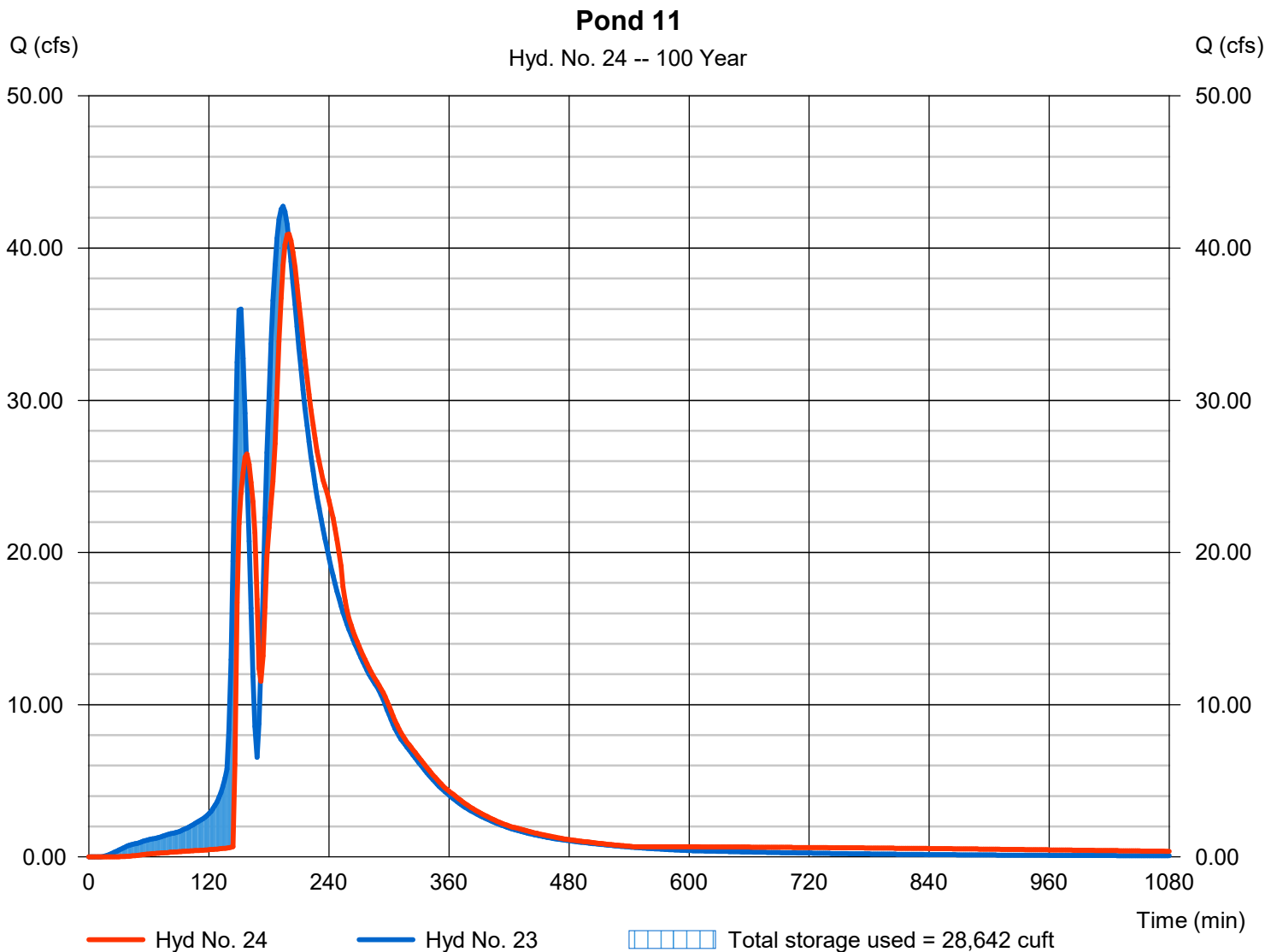
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Hyd. No. 24

Pond 11

Hydrograph type	= Reservoir	Peak discharge	= 40.92 cfs
Storm frequency	= 100 yrs	Time to peak	= 200 min
Time interval	= 2 min	Hyd. volume	= 280,178 cuft
Inflow hyd. No.	= 23 - Inflow Pond 11	Max. Elevation	= 968.61 ft
Reservoir name	= Pond 11	Max. Storage	= 28,642 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

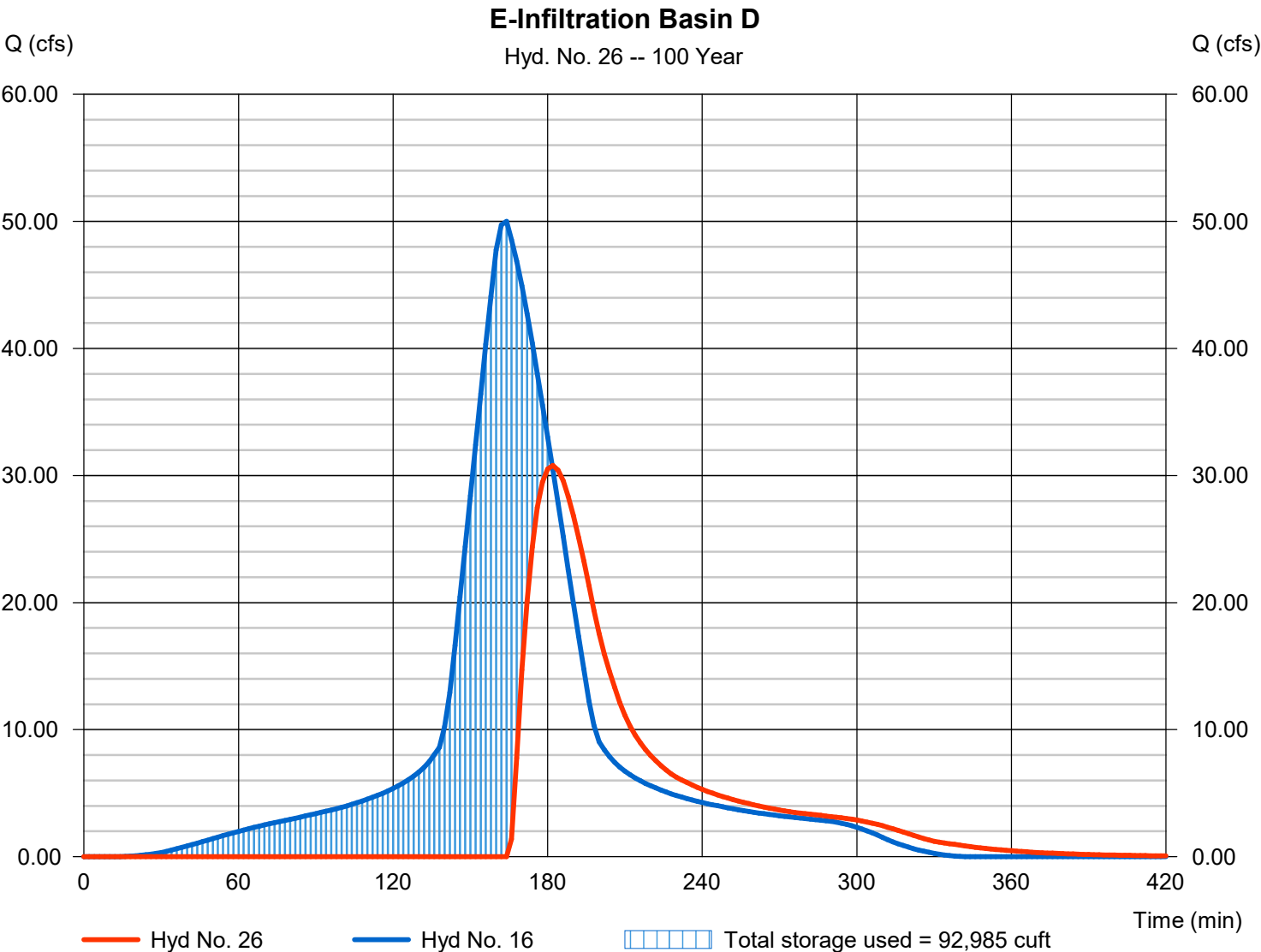
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Hyd. No. 26

E-Infiltration Basin D

Hydrograph type	= Reservoir	Peak discharge	= 30.79 cfs
Storm frequency	= 100 yrs	Time to peak	= 182 min
Time interval	= 2 min	Hyd. volume	= 89,532 cuft
Inflow hyd. No.	= 16 - D	Max. Elevation	= 995.35 ft
Reservoir name	= EXISTING INFILTRATION BASIN D	Max Storage	= 92,985 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

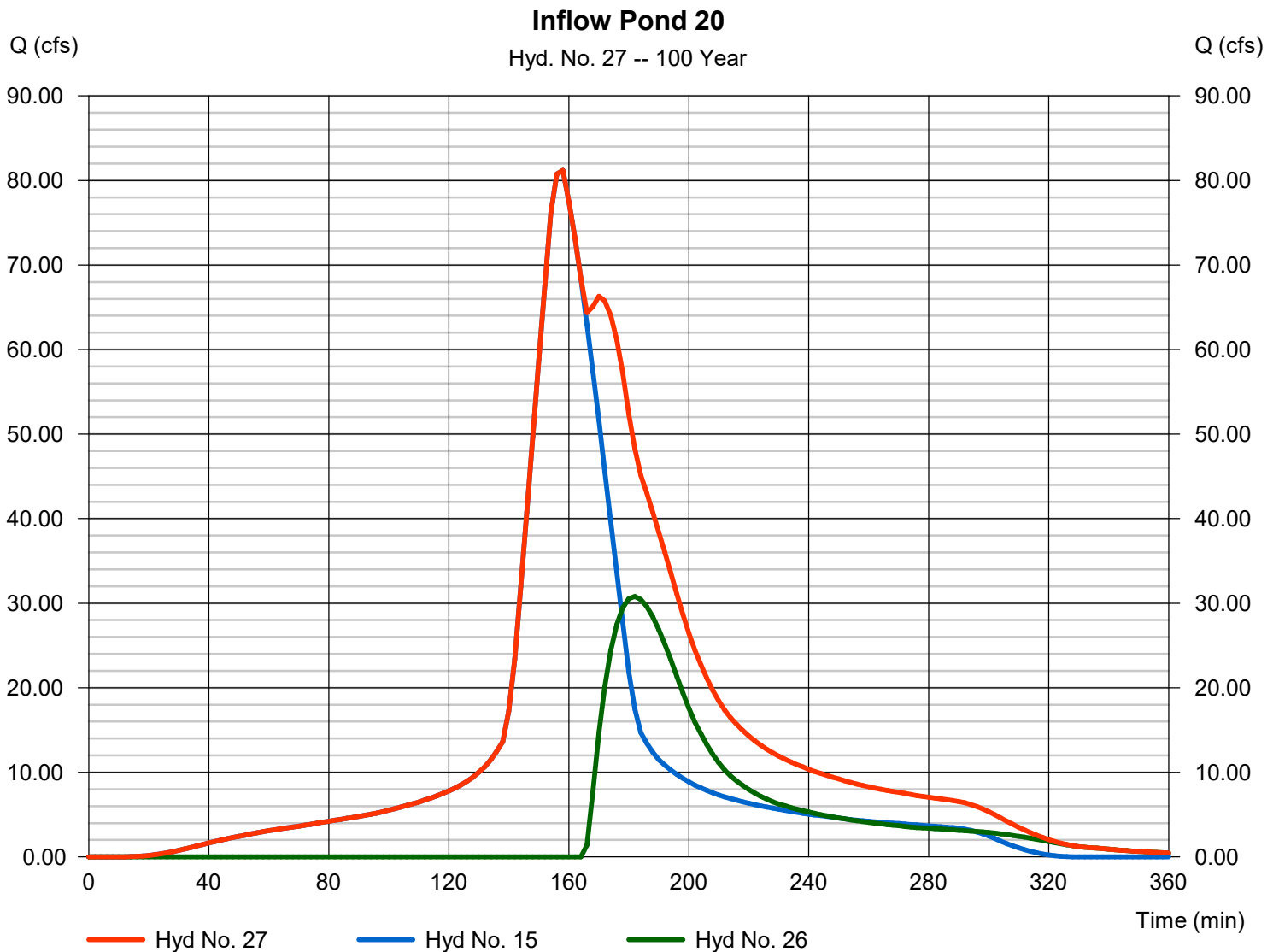
Wednesday, 04 / 8 / 2020

Hyd. No. 27

Inflow Pond 20

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 15, 26

Peak discharge = 81.19 cfs
 Time to peak = 158 min
 Hyd. volume = 298,616 cuft
 Contrib. drain. area = 9.848 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

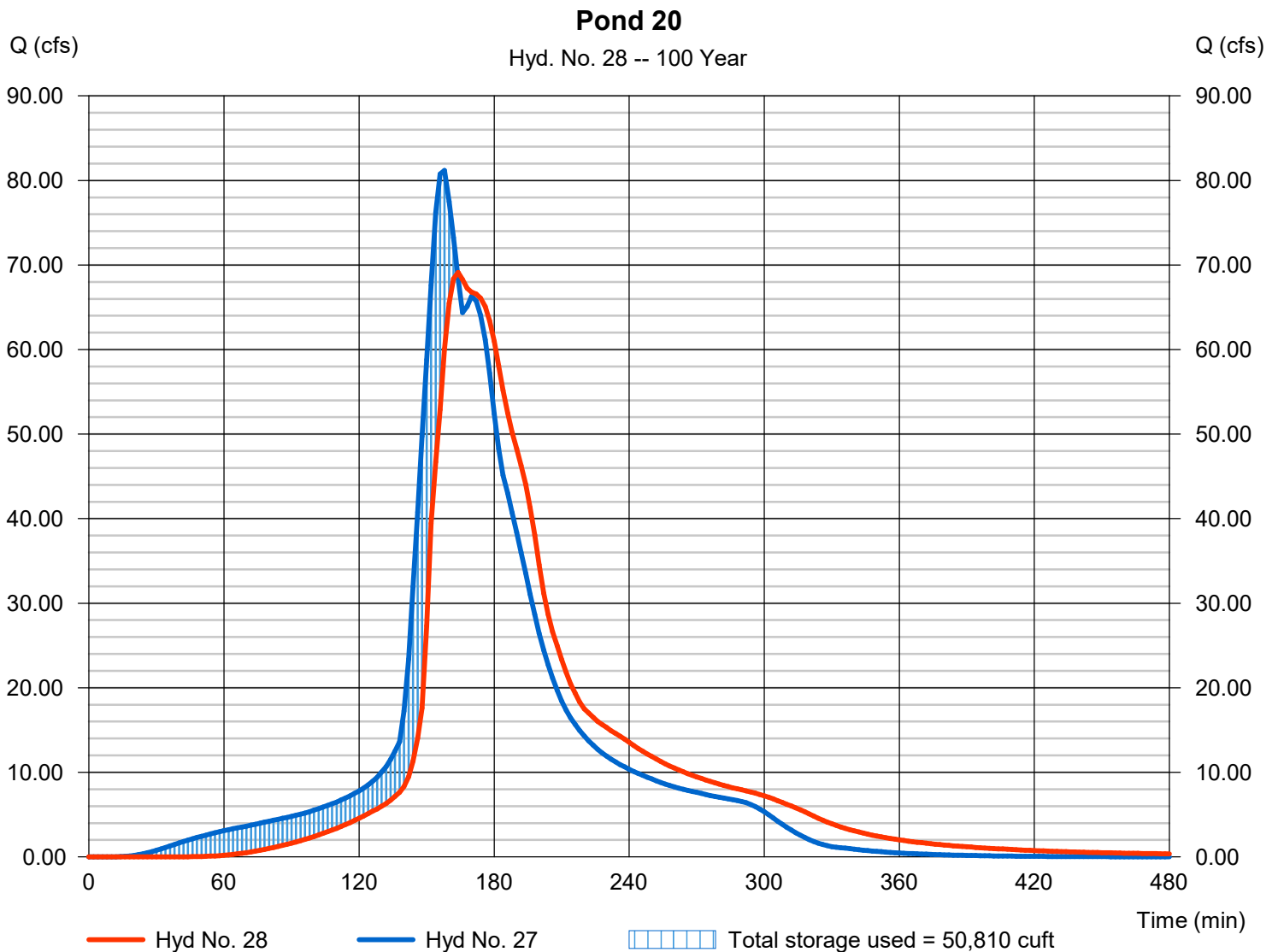
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Hyd. No. 28

Pond 20

Hydrograph type	= Reservoir	Peak discharge	= 69.11 cfs
Storm frequency	= 100 yrs	Time to peak	= 164 min
Time interval	= 2 min	Hyd. volume	= 298,280 cuft
Inflow hyd. No.	= 27 - Inflow Pond 20	Max. Elevation	= 993.78 ft
Reservoir name	= Pond 20	Max. Storage	= 50,810 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

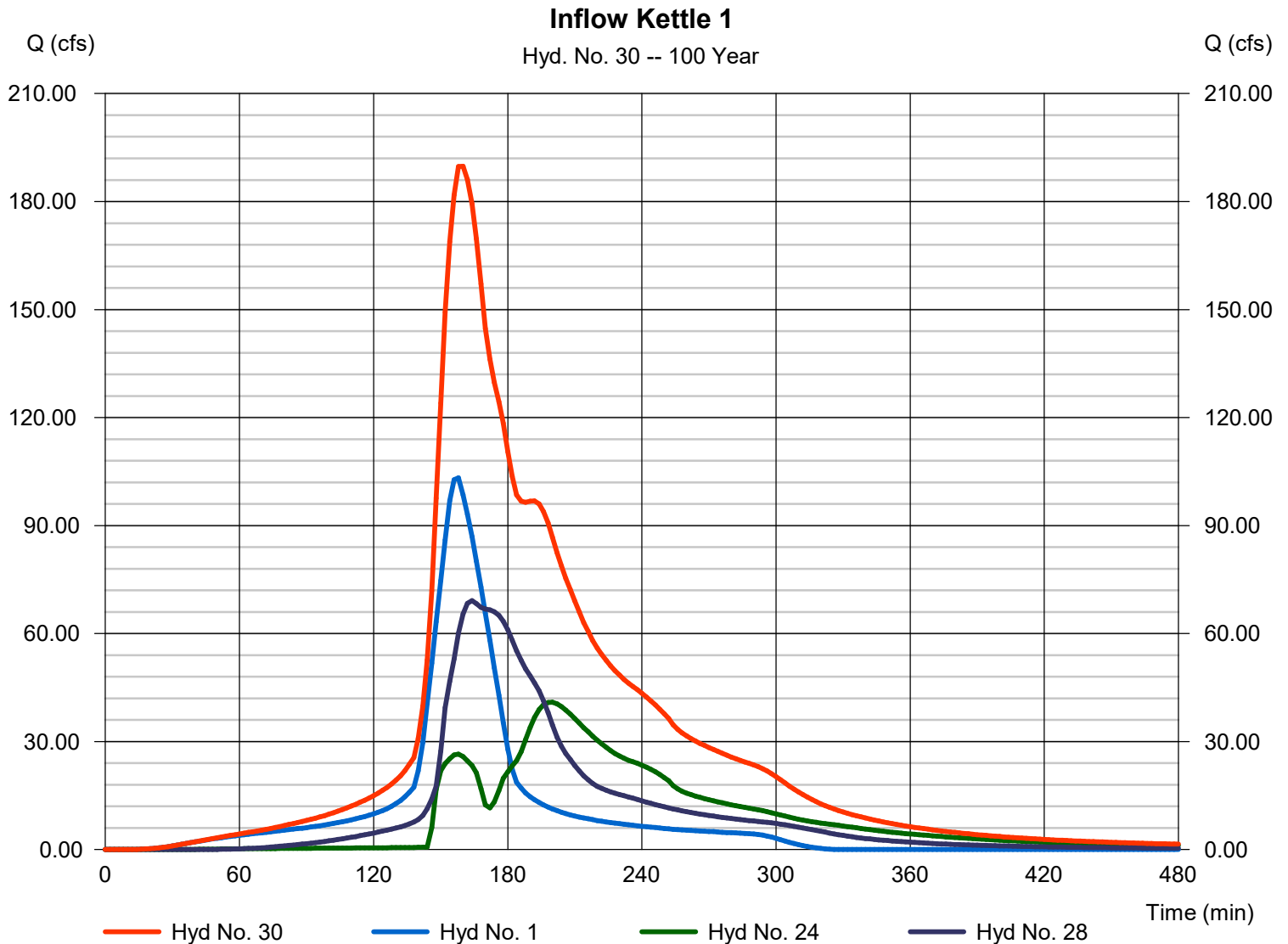
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Hyd. No. 30

Inflow Kettle 1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 1, 24, 28

Peak discharge = 189.78 cfs
Time to peak = 160 min
Hyd. volume = 844,313 cuft
Contrib. drain. area = 12.522 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

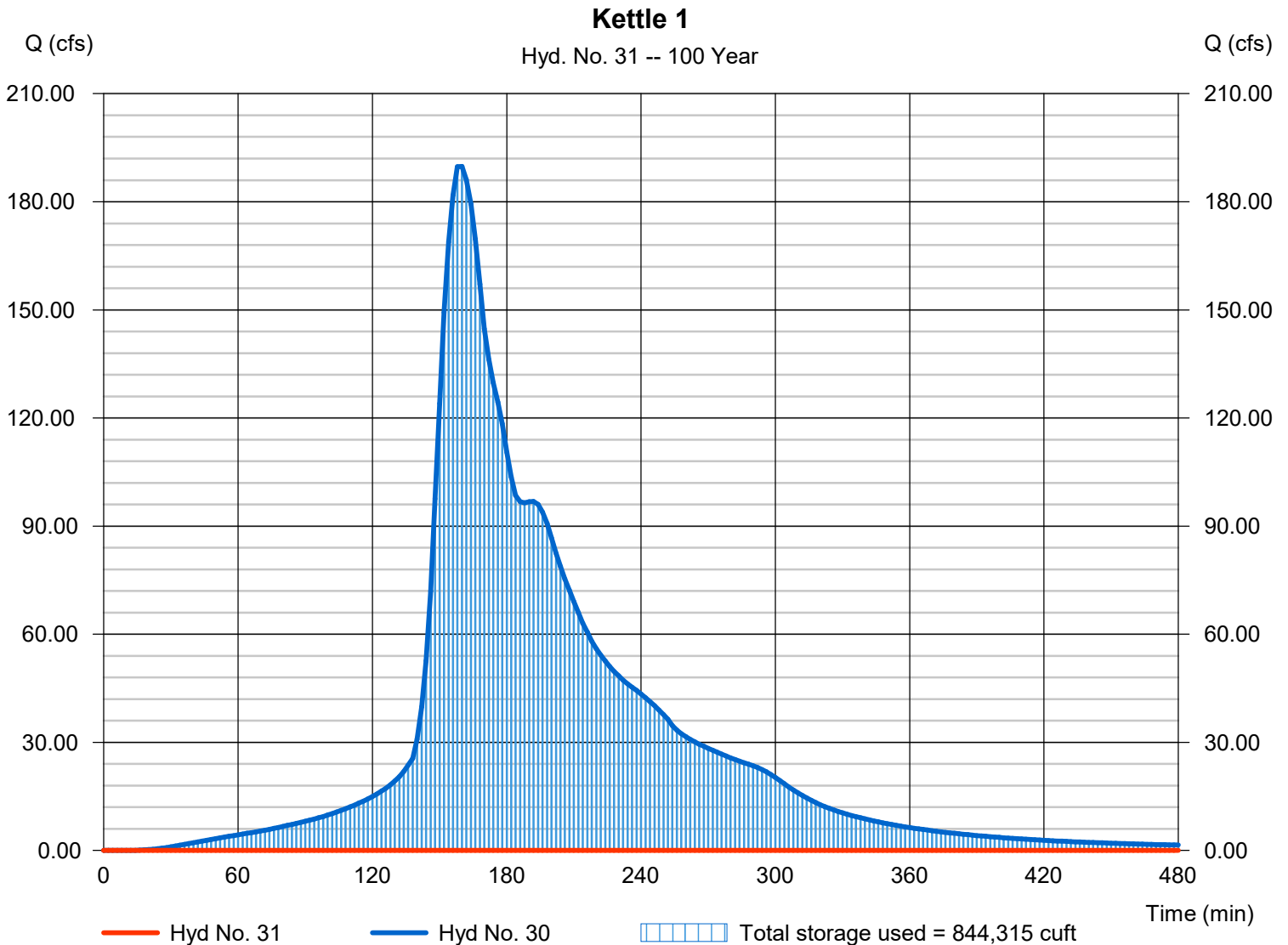
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Hyd. No. 31

Kettle 1

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 30 - Inflow Kettle 1	Max. Elevation	= 967.90 ft
Reservoir name	= K-1	Max. Storage	= 844,315 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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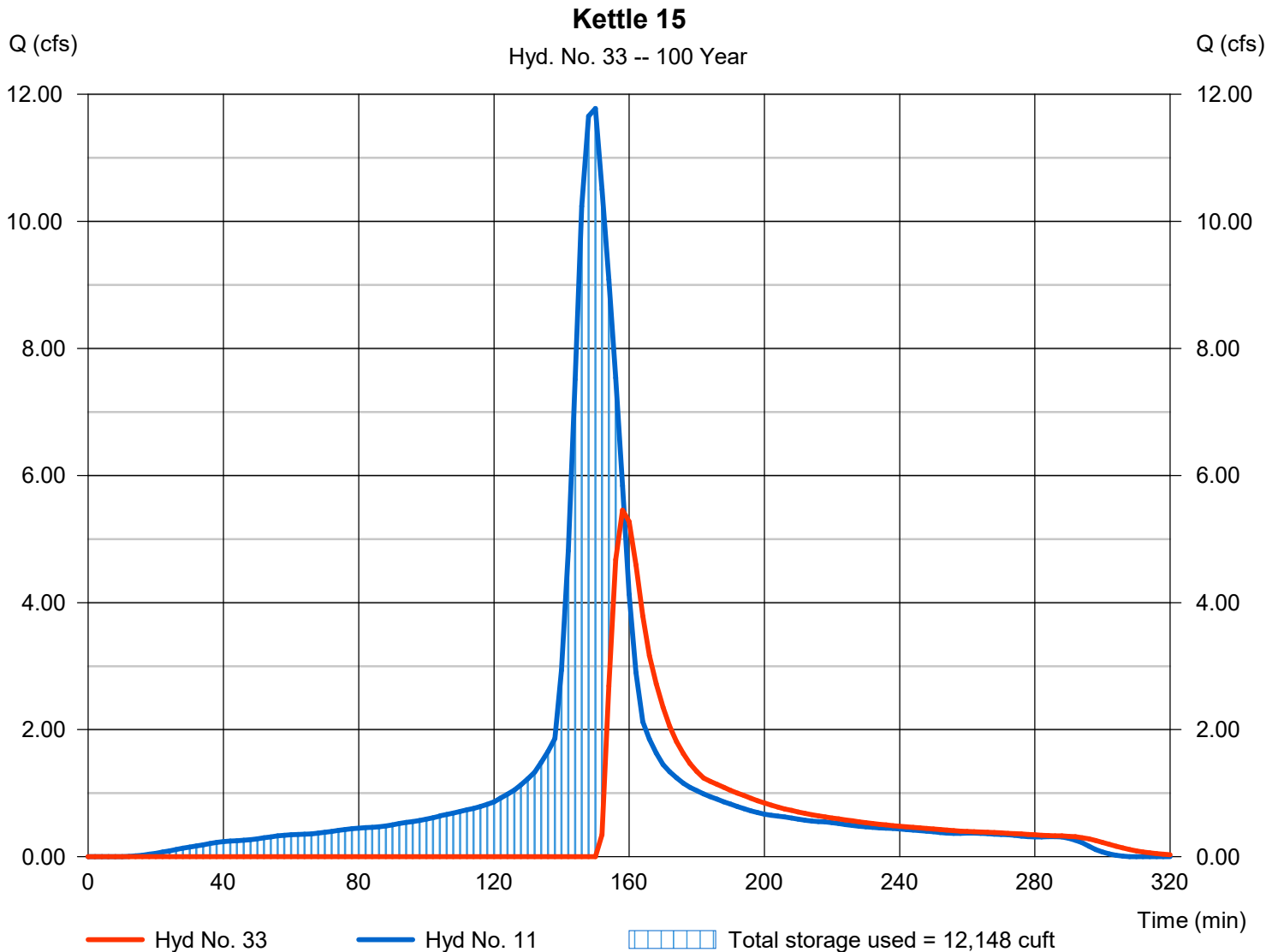
Hyd. No. 33

Kettle 15

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 11 - E-15
 Reservoir name = K-15

Peak discharge = 5.457 cfs
 Time to peak = 158 min
 Hyd. volume = 9,374 cuft
 Max. Elevation = 972.77 ft
 Max. Storage = 12,148 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

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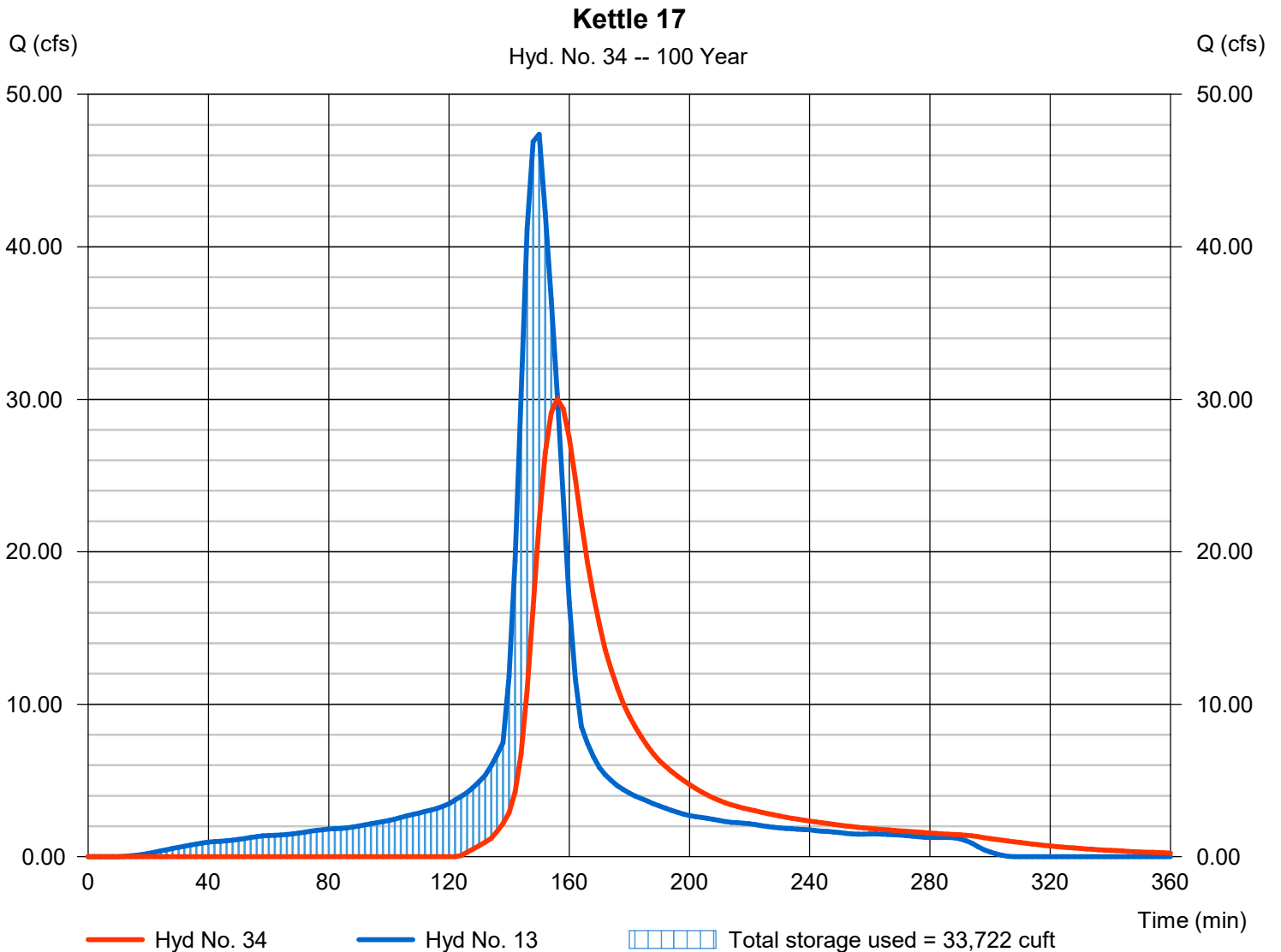
Hyd. No. 34

Kettle 17

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyd. No. = 13 - P-17
 Reservoir name = P-K-17

Peak discharge = 30.02 cfs
 Time to peak = 156 min
 Hyd. volume = 68,080 cuft
 Max. Elevation = 1012.84 ft
 Max. Storage = 33,722 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

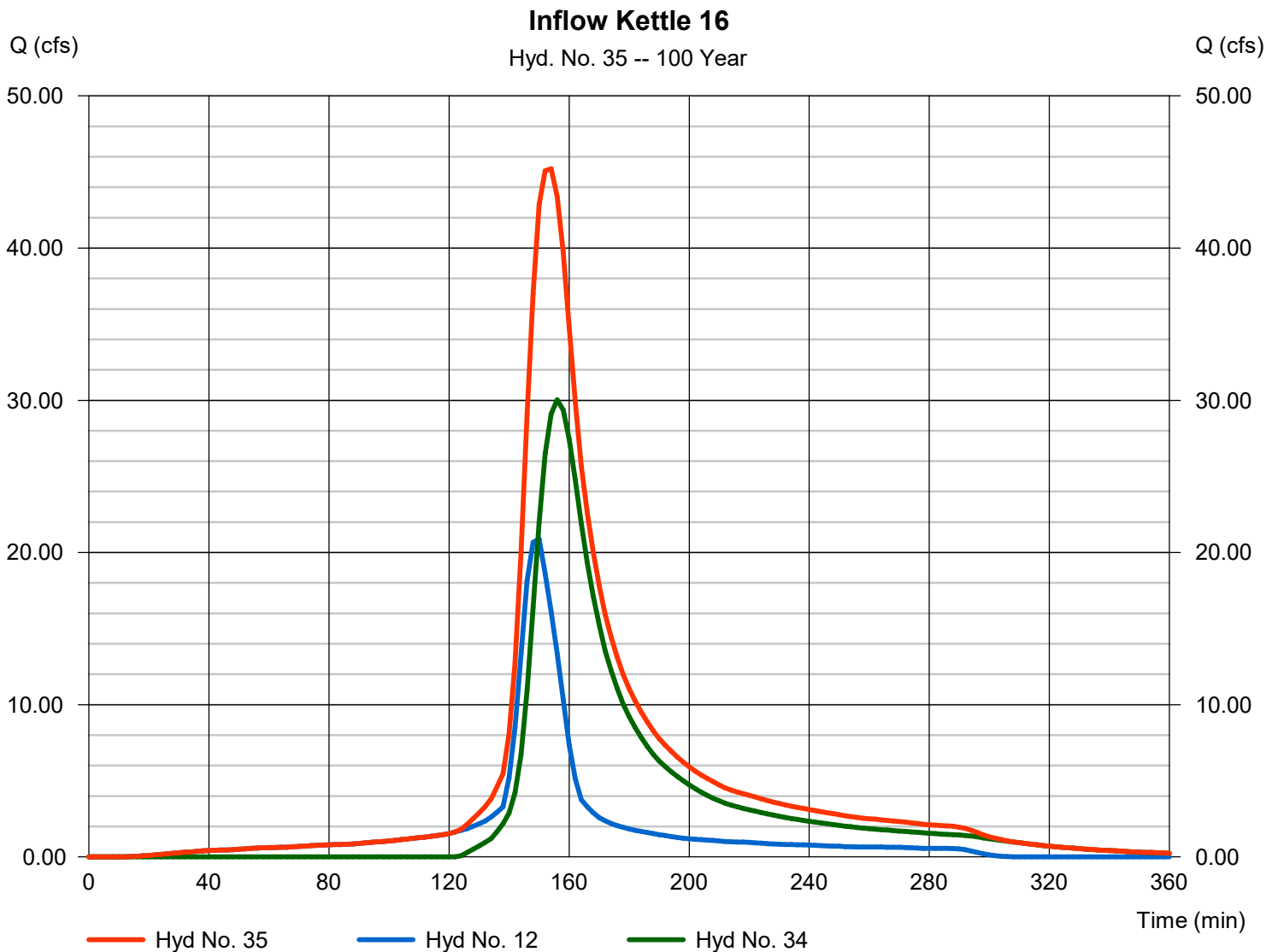
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Hyd. No. 35

Inflow Kettle 16

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 12, 34

Peak discharge = 45.22 cfs
Time to peak = 154 min
Hyd. volume = 102,777 cuft
Contrib. drain. area = 1.560 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

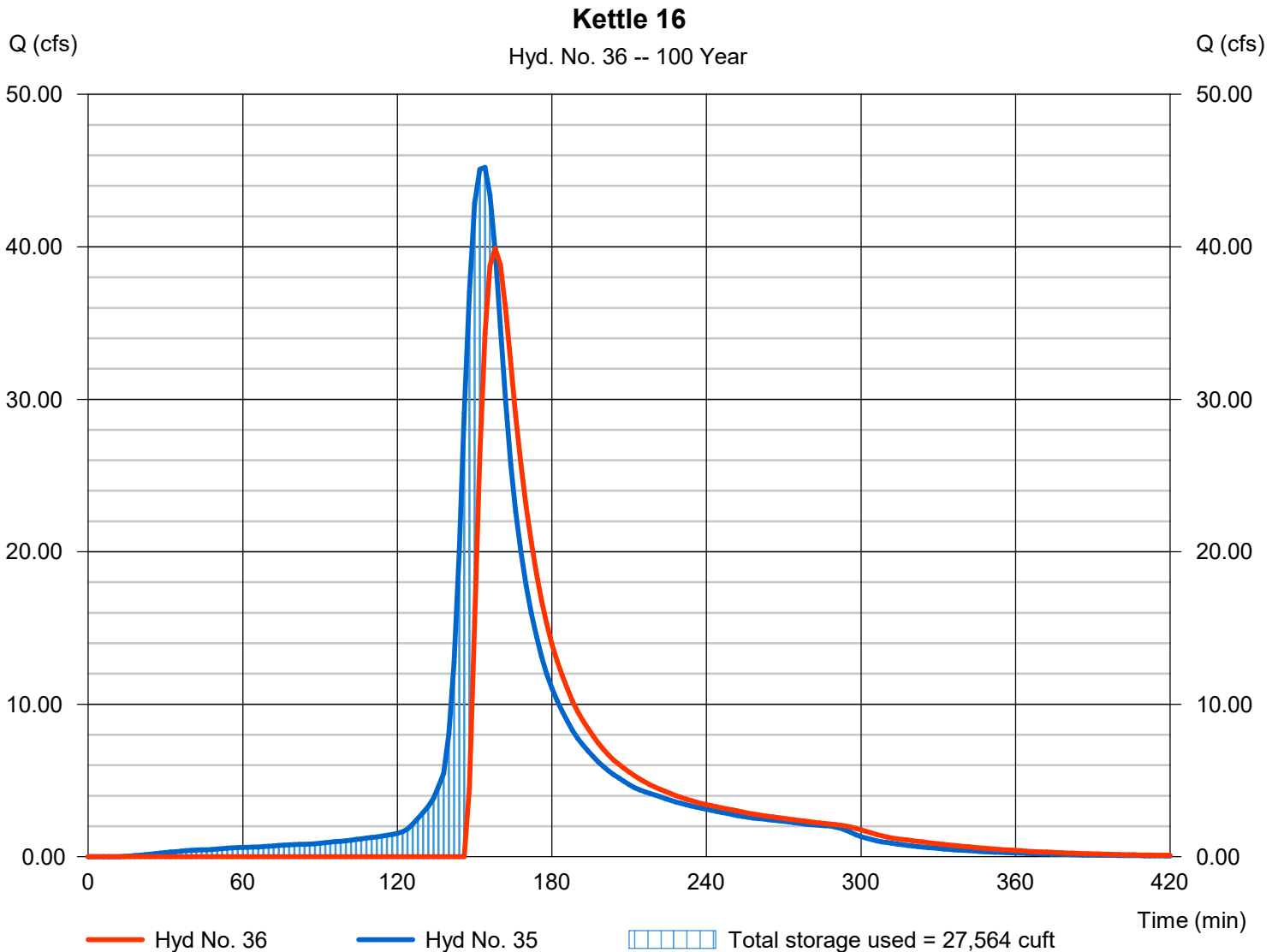
Wednesday, 04 / 8 / 2020

Hyd. No. 36

Kettle 16

Hydrograph type	= Reservoir	Peak discharge	= 39.89 cfs
Storm frequency	= 100 yrs	Time to peak	= 158 min
Time interval	= 2 min	Hyd. volume	= 87,376 cuft
Inflow hyd. No.	= 35 - Inflow Kettle 16	Max. Elevation	= 1008.02 ft
Reservoir name	= K-16	Max. Storage	= 27,564 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

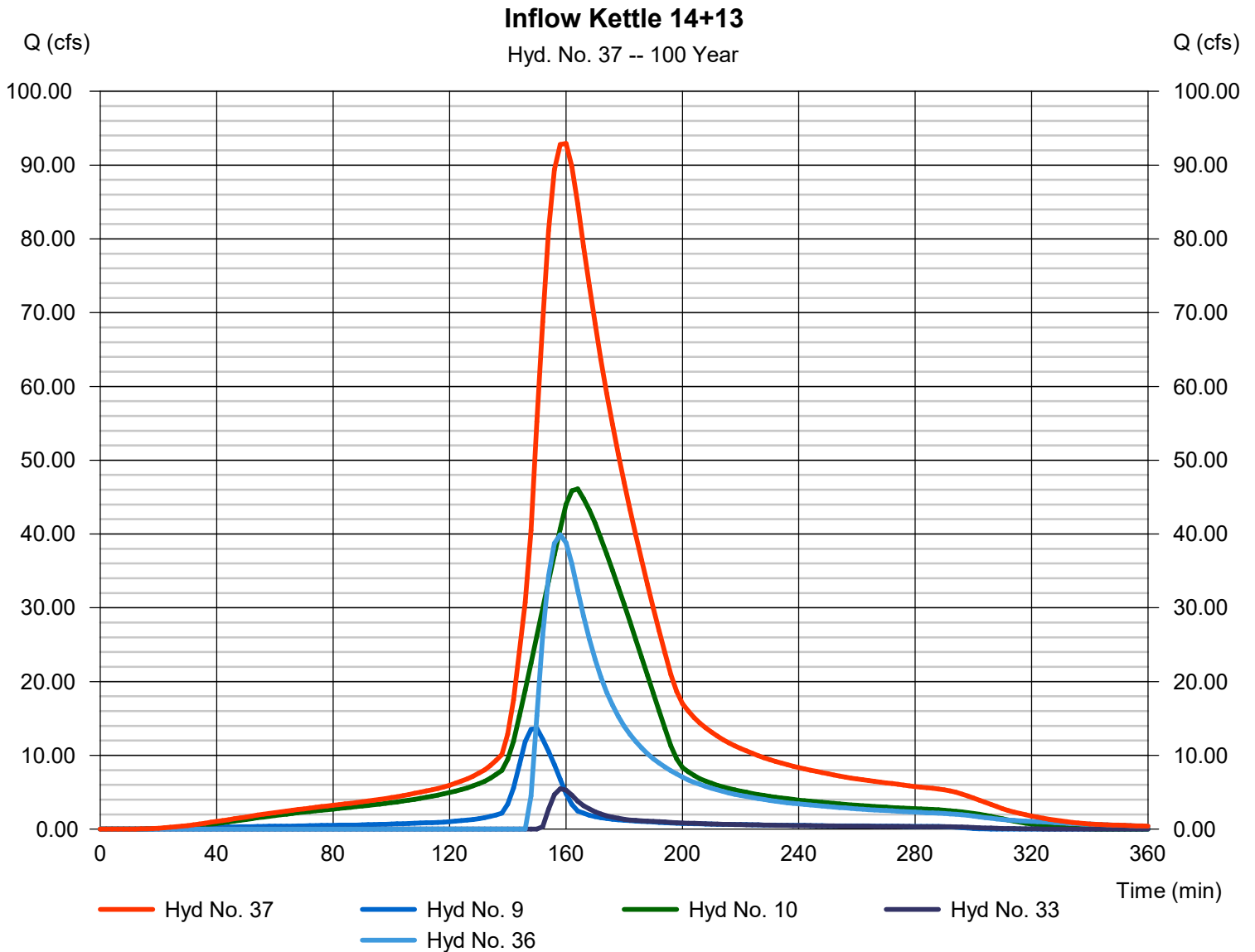
Wednesday, 04 / 8 / 2020

Hyd. No. 37

Inflow Kettle 14+13

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 9, 10, 33, 36

Peak discharge = 92.94 cfs
 Time to peak = 160 min
 Hyd. volume = 268,912 cuft
 Contrib. drain. area = 8.030 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

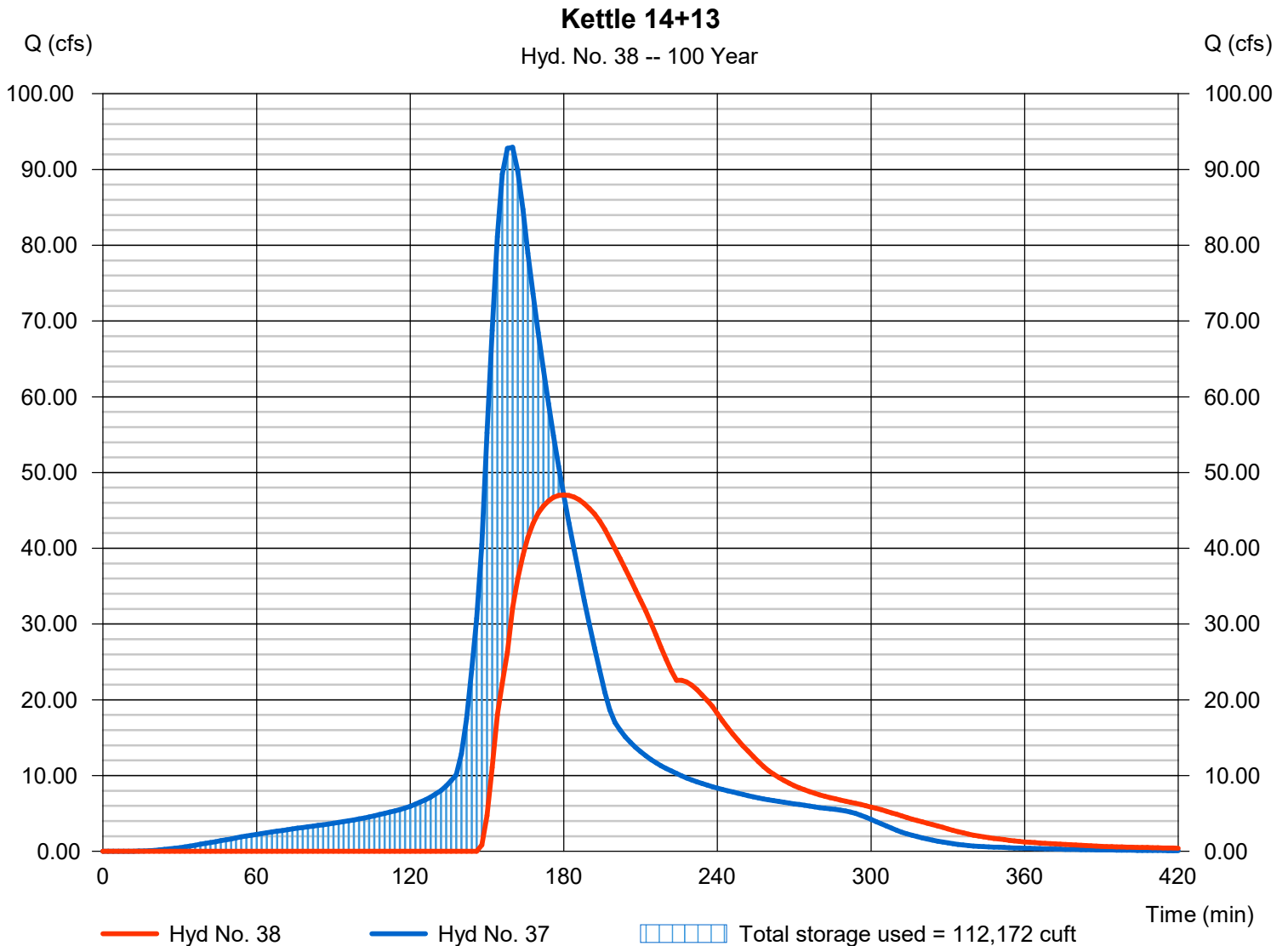
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Hyd. No. 38

Kettle 14+13

Hydrograph type	= Reservoir	Peak discharge	= 47.06 cfs
Storm frequency	= 100 yrs	Time to peak	= 180 min
Time interval	= 2 min	Hyd. volume	= 234,981 cuft
Inflow hyd. No.	= 37 - Inflow Kettle 14+13	Max. Elevation	= 963.27 ft
Reservoir name	= K-13+K-14	Max. Storage	= 112,172 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

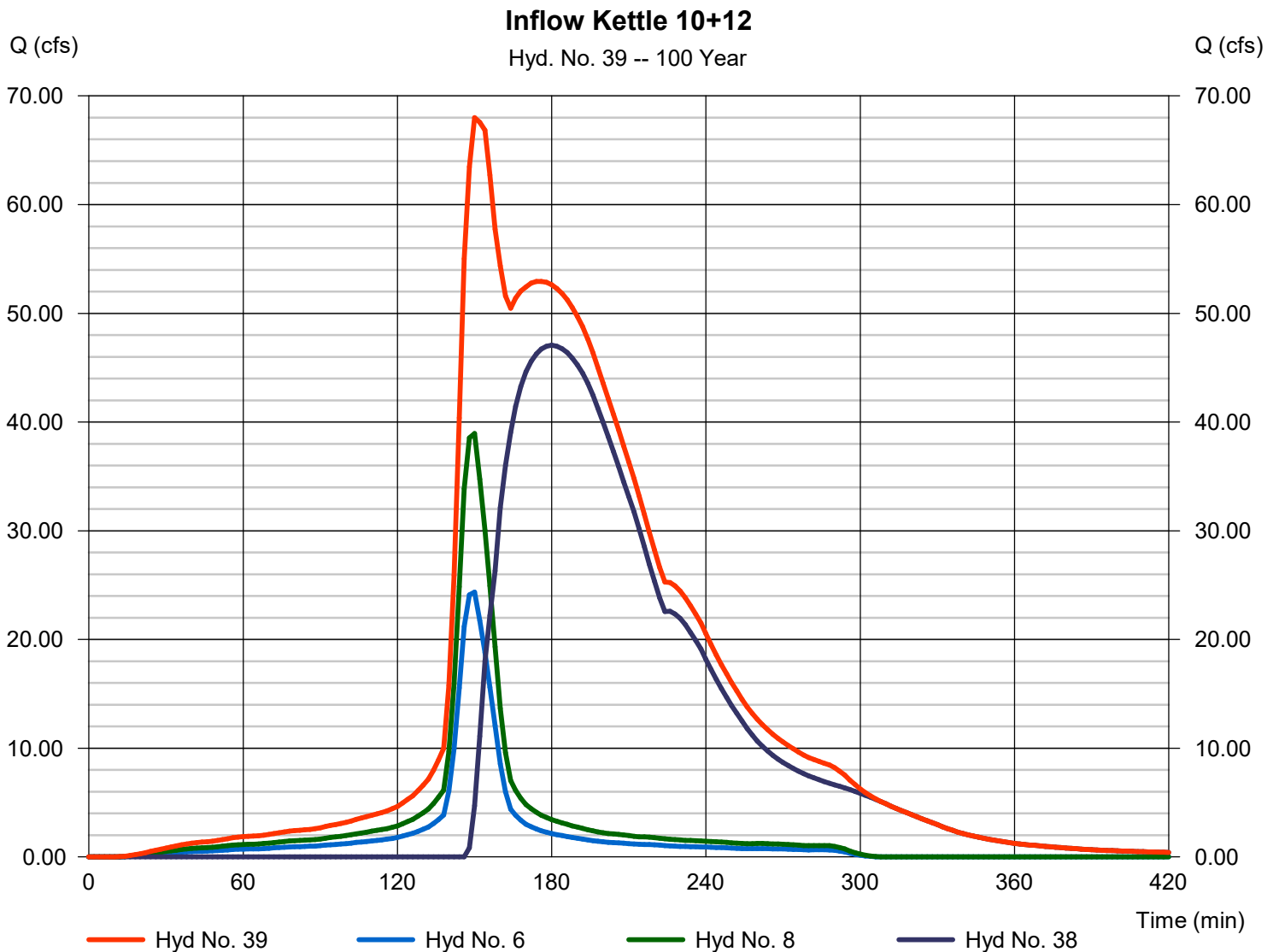
Wednesday, 04 / 8 / 2020

Hyd. No. 39

Inflow Kettle 10+12

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 2 min
 Inflow hyds. = 6, 8, 38

Peak discharge = 68.01 cfs
 Time to peak = 150 min
 Hyd. volume = 340,186 cuft
 Contrib. drain. area = 4.730 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

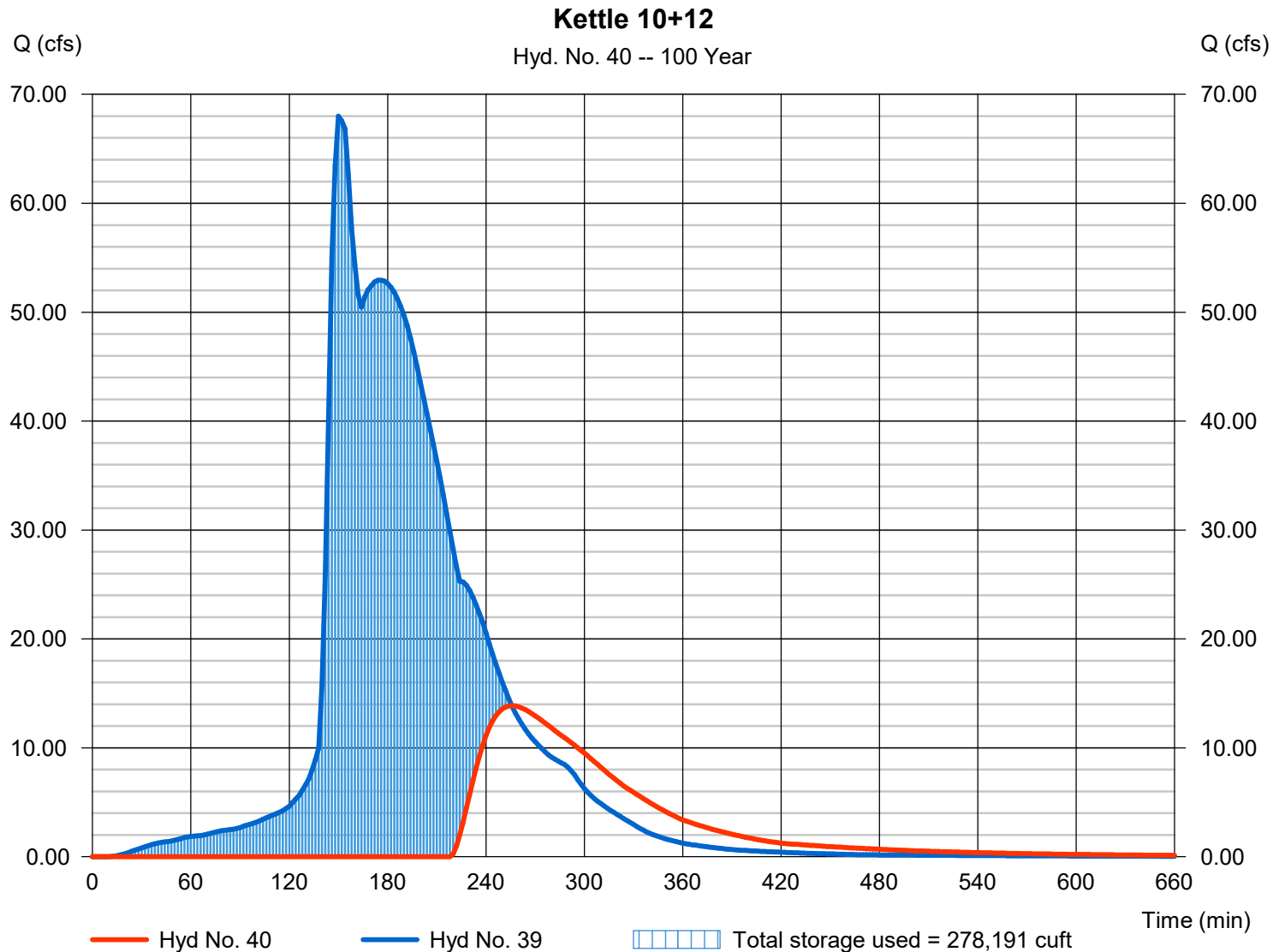
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Hyd. No. 40

Kettle 10+12

Hydrograph type	= Reservoir	Peak discharge	= 13.87 cfs
Storm frequency	= 100 yrs	Time to peak	= 256 min
Time interval	= 2 min	Hyd. volume	= 89,108 cuft
Inflow hyd. No.	= 39 - Inflow Kettle 10+12	Max. Elevation	= 965.00 ft
Reservoir name	= K-10+K-12	Max. Storage	= 278,191 cuft

Storage Indication method used.



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