

Precipitation Report

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

Tuesday, 05 / 6 / 2025

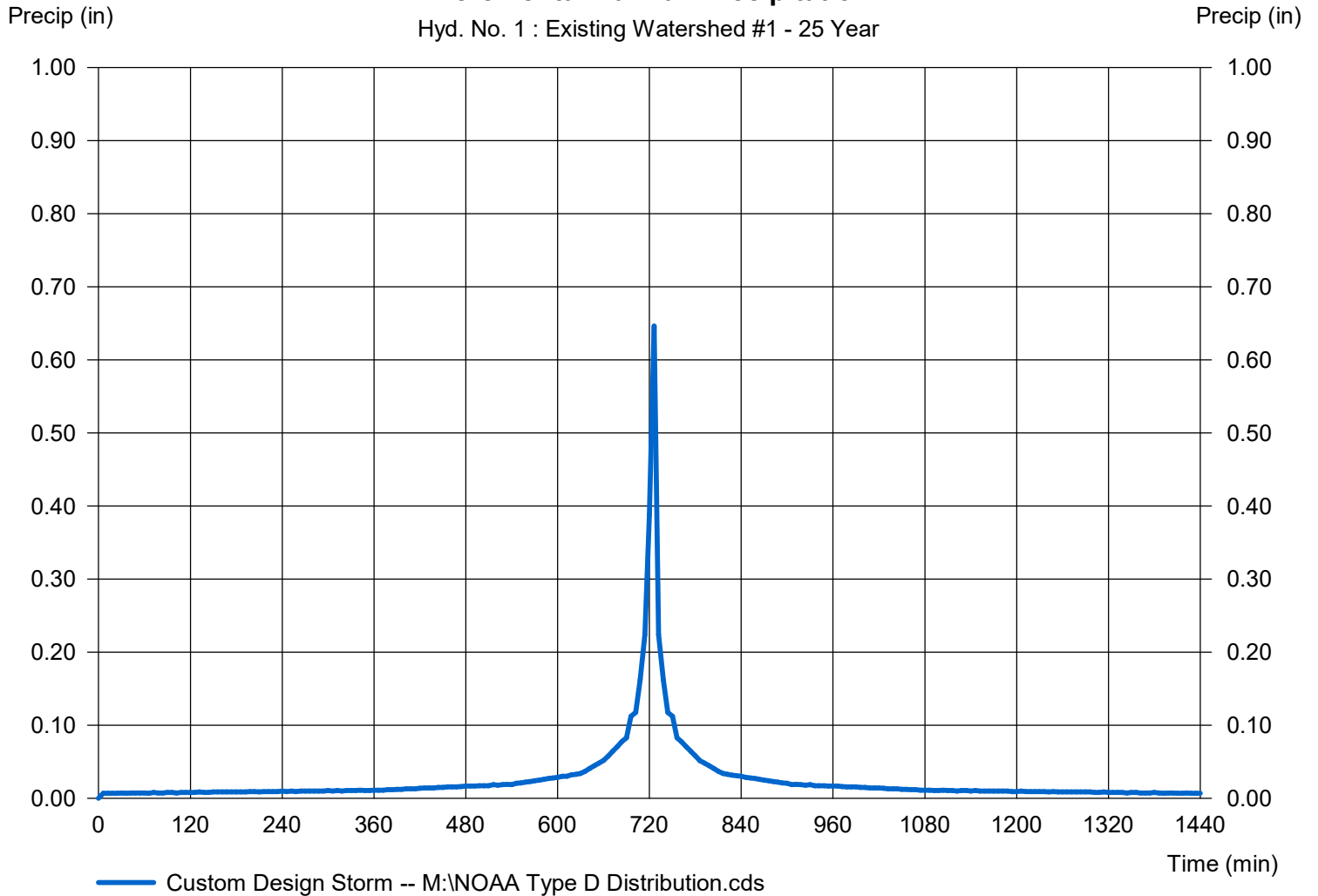
Hyd. No. 1

Existing Watershed #1

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : Existing Watershed #1 - 25 Year



Hydrograph Report

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Tuesday, 05 / 6 / 2025

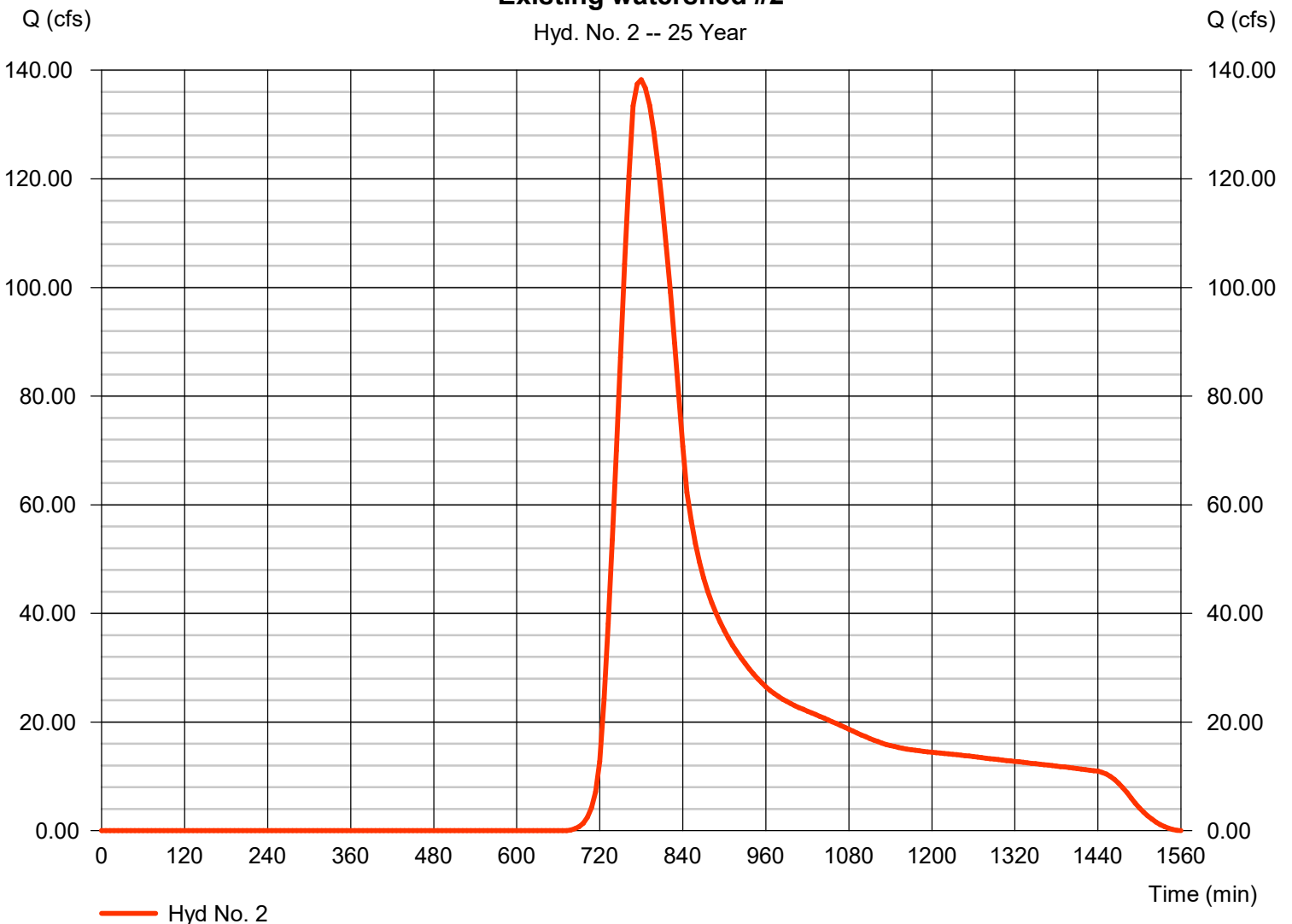
Hyd. No. 2

Existing watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 138.27 cfs
Storm frequency	= 25 yrs	Time to peak	= 780 min
Time interval	= 6 min	Hyd. volume	= 1,495,130 cuft
Drainage area	= 257.000 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

Existing watershed #2

Hyd. No. 2 -- 25 Year



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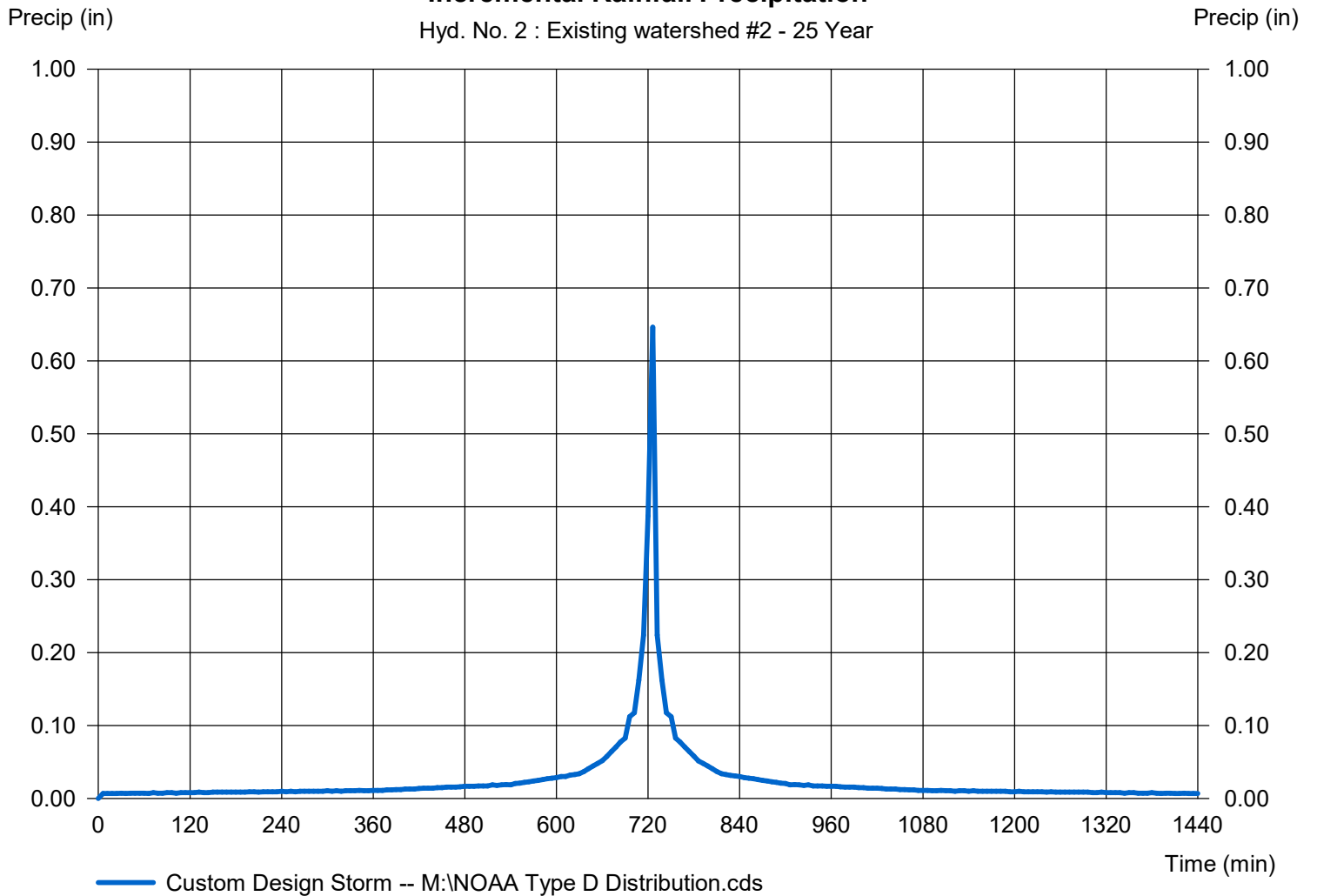
Hyd. No. 2

Existing watershed #2

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : Existing watershed #2 - 25 Year



Hydrograph Report

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

Tuesday, 05 / 6 / 2025

Hyd. No. 3

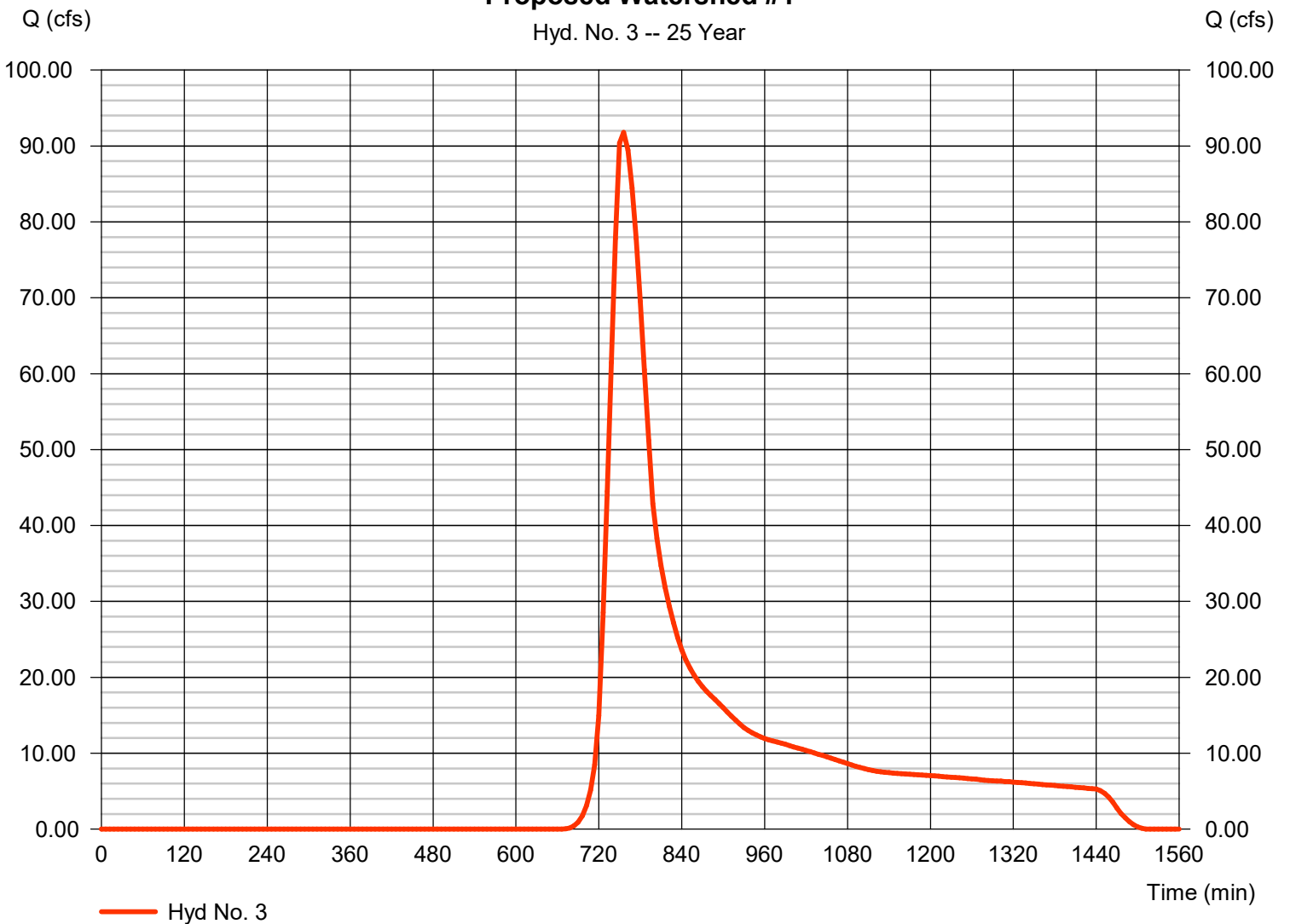
Proposed Watershed #1

Hydrograph type	= SCS Runoff	Peak discharge	= 91.80 cfs
Storm frequency	= 25 yrs	Time to peak	= 756 min
Time interval	= 6 min	Hyd. volume	= 743,326 cuft
Drainage area	= 129.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 46.90 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

* Composite (Area/CN) = [(1.000 x 98) + (2.400 x 61) + (125.600 x 55)] / 129.000

Proposed Watershed #1

Hyd. No. 3 -- 25 Year



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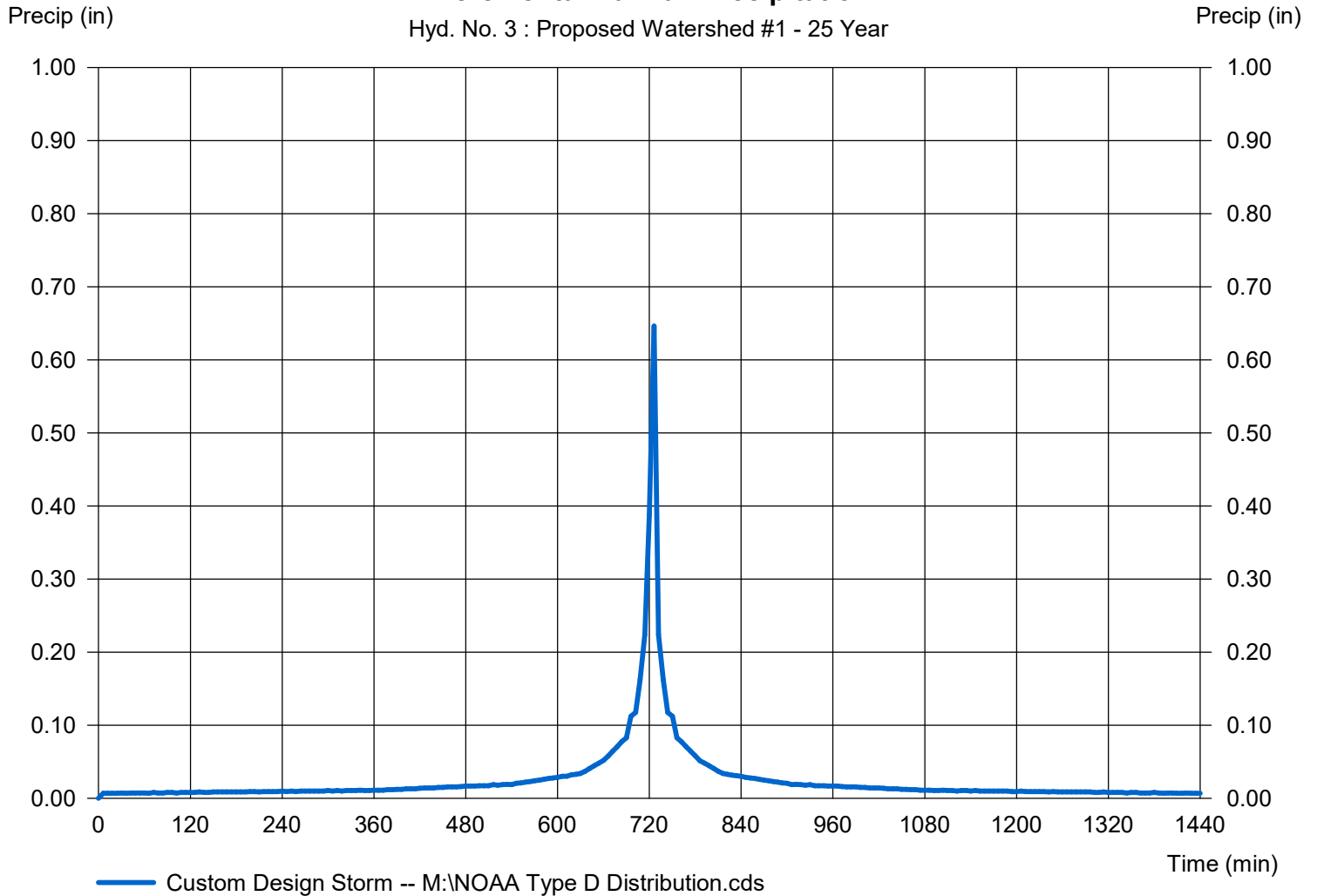
Hyd. No. 3

Proposed Watershed #1

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : Proposed Watershed #1 - 25 Year



Hydrograph Report

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Tuesday, 05 / 6 / 2025

Hyd. No. 4

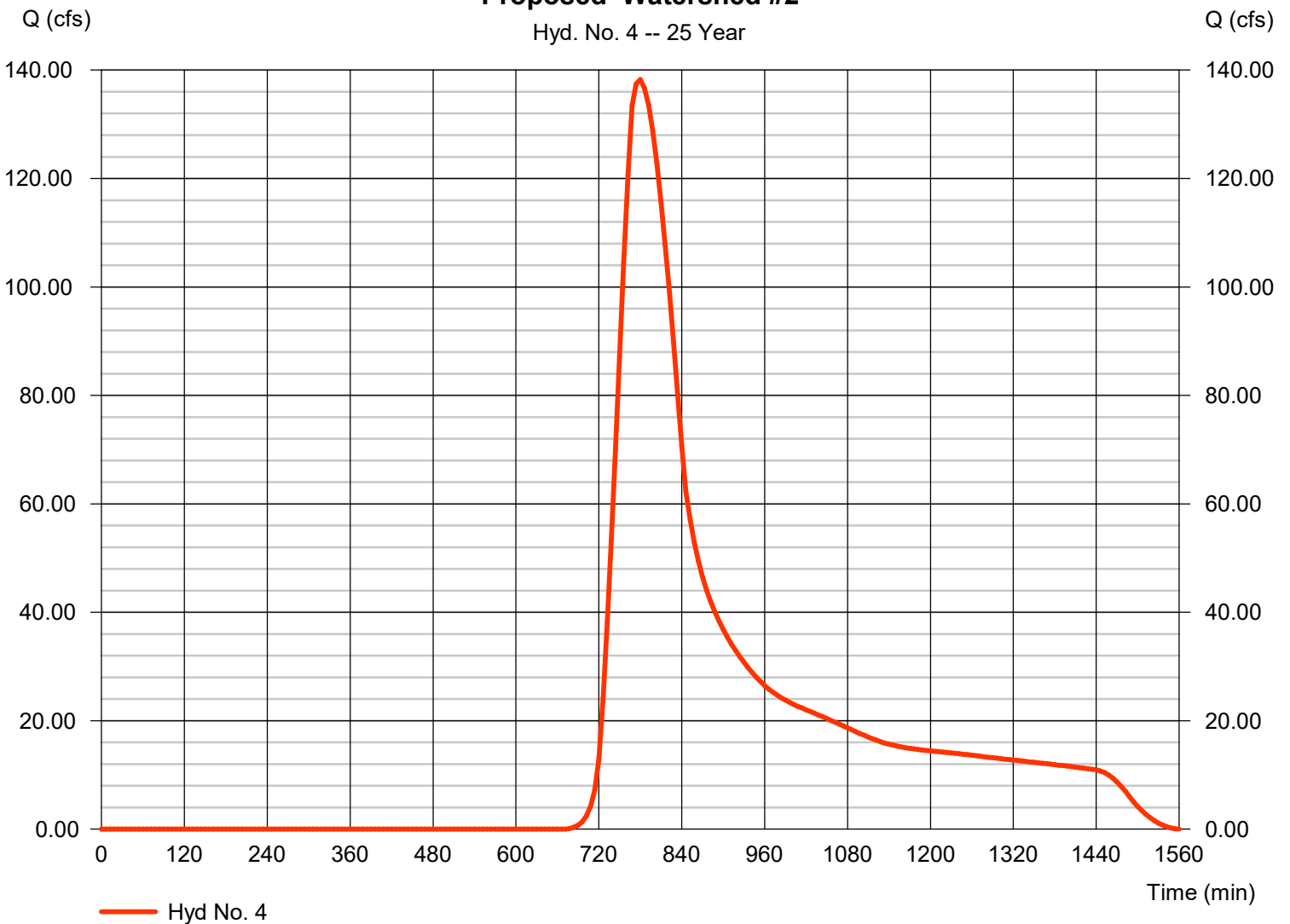
Proposed Watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 138.27 cfs
Storm frequency	= 25 yrs	Time to peak	= 780 min
Time interval	= 6 min	Hyd. volume	= 1,495,130 cuft
Drainage area	= 257.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

* Composite (Area/CN) = [(0.850 x 61) + (1.000 x 98) + (255.150 x 55)] / 257.000

Proposed Watershed #2

Hyd. No. 4 -- 25 Year



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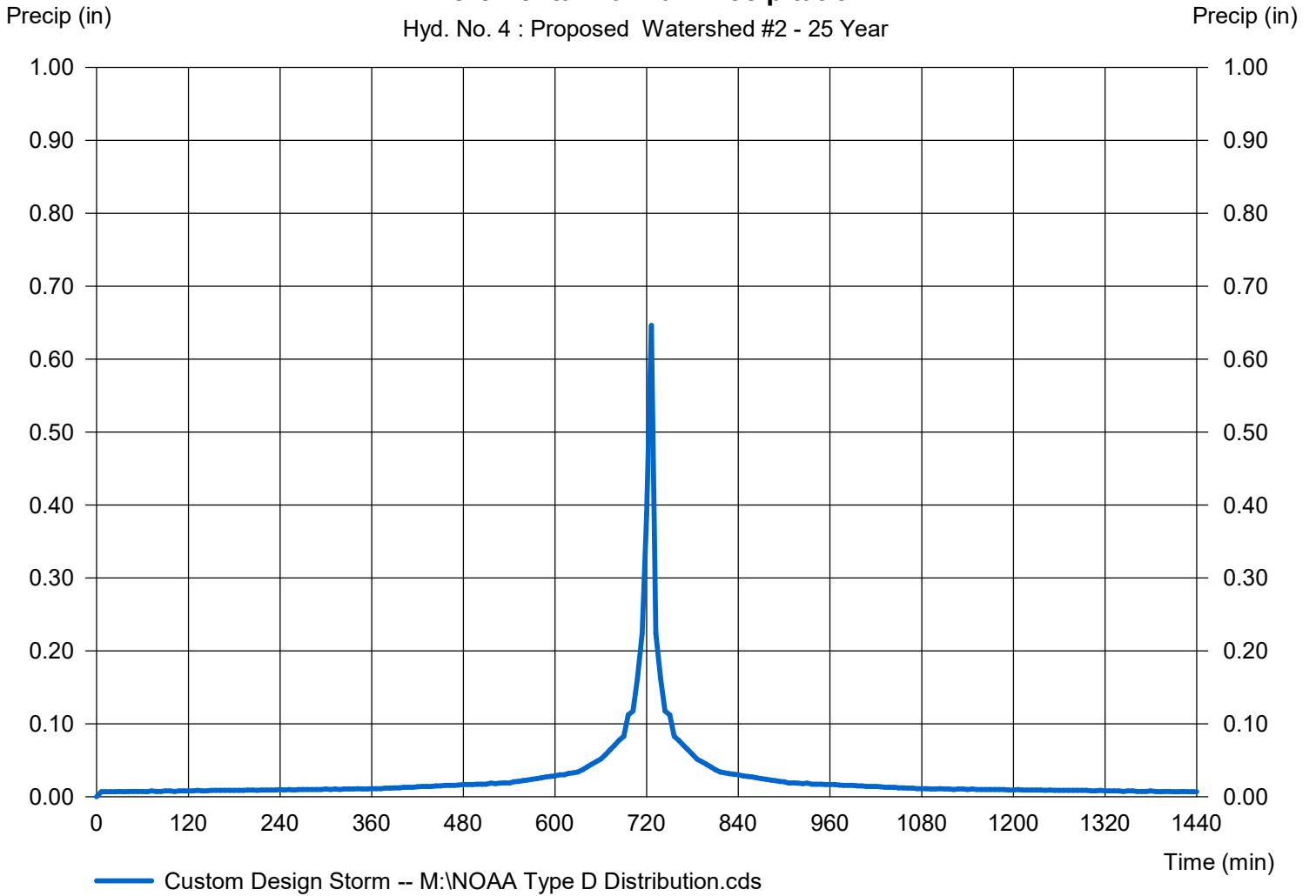
Hyd. No. 4

Proposed Watershed #2

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : Proposed Watershed #2 - 25 Year



Hydrograph Report

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

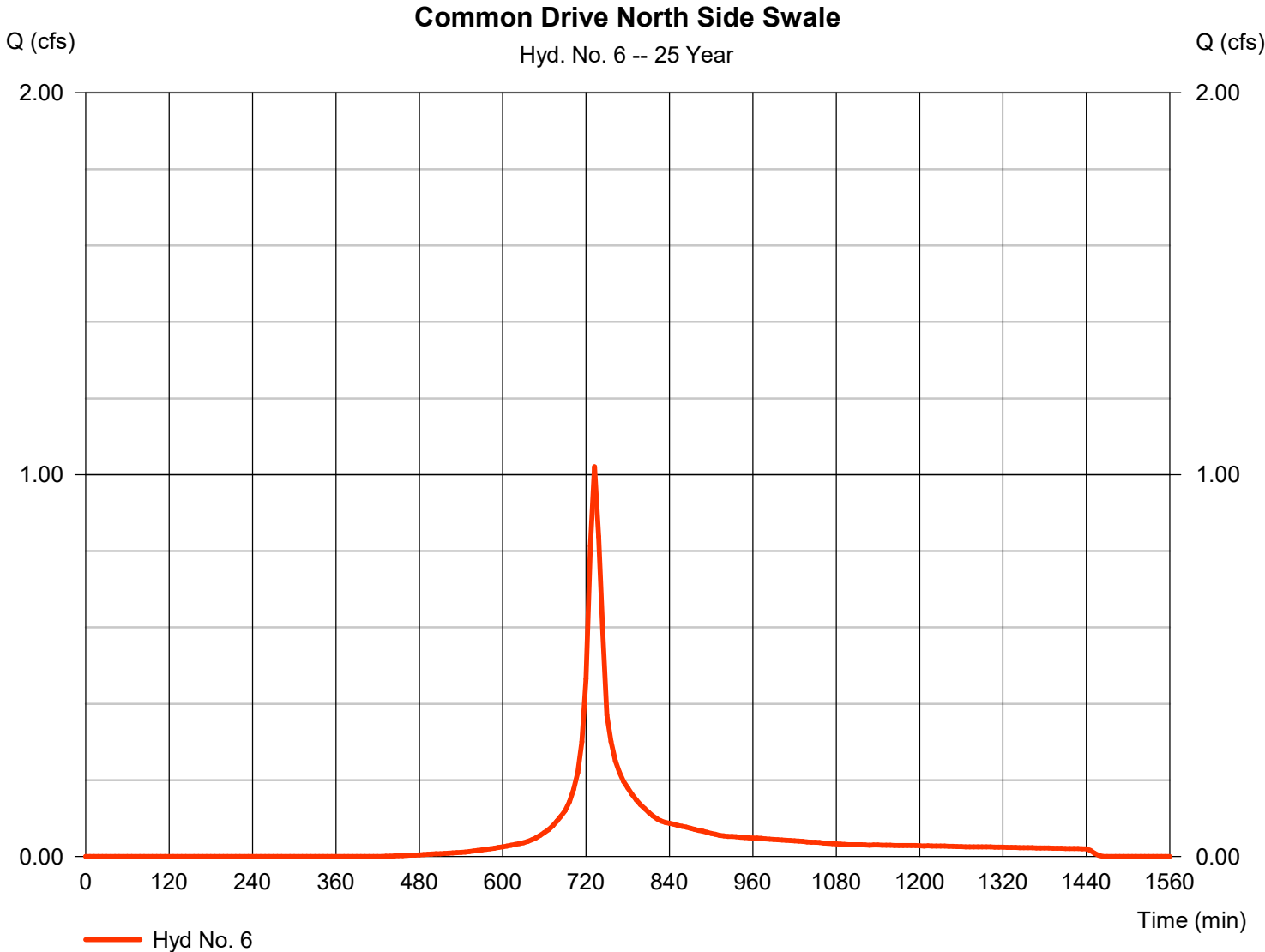
Tuesday, 05 / 6 / 2025

Hyd. No. 6

Common Drive North Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 1.021 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 4,343 cuft
Drainage area	= 0.360 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.80 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.180 x 98) + (0.180 x 54)] / 0.360



Precipitation Report

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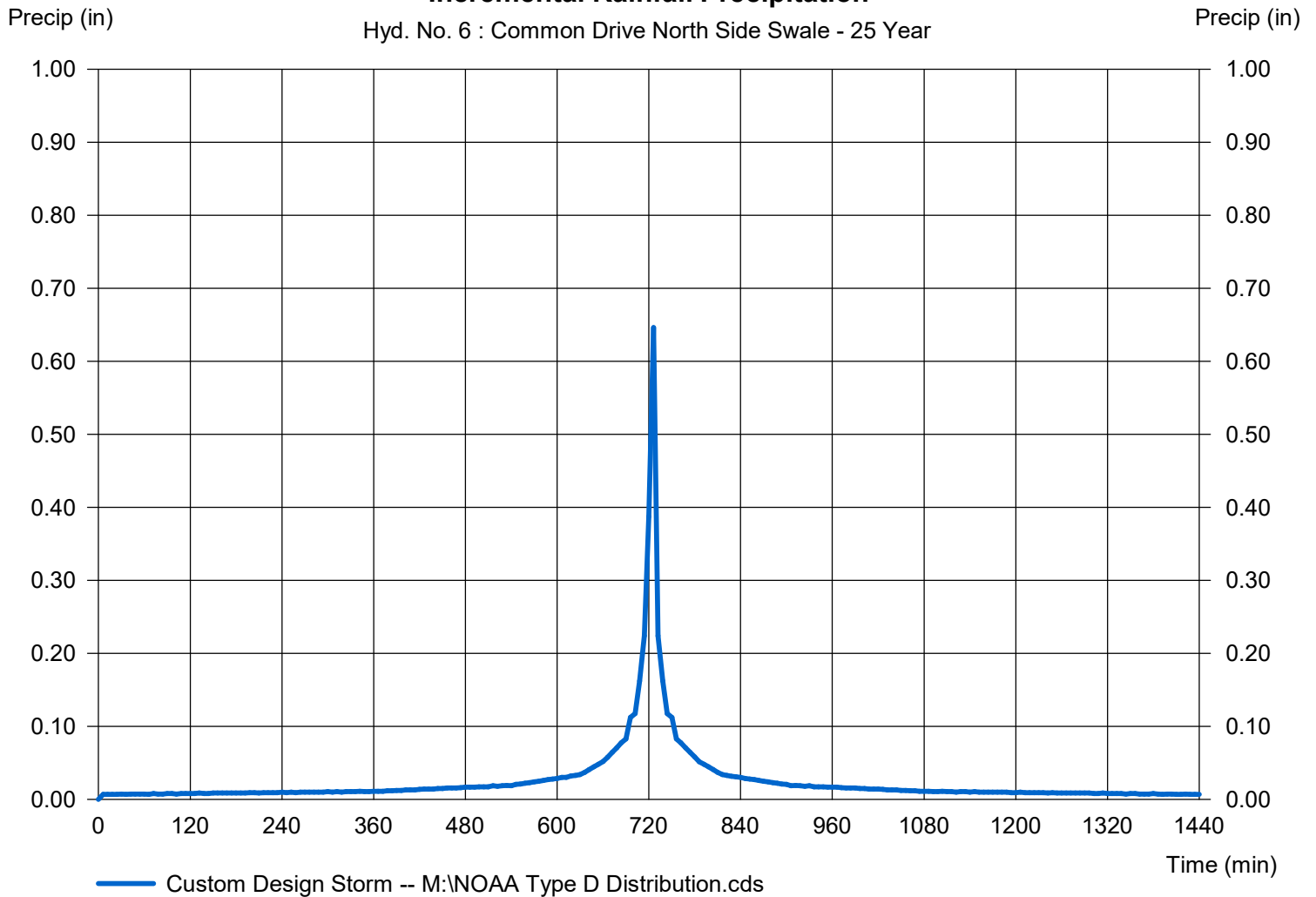
Hyd. No. 6

Common Drive North Side Swale

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : Common Drive North Side Swale - 25 Year



Hydrograph Report

Hyd. No. 7

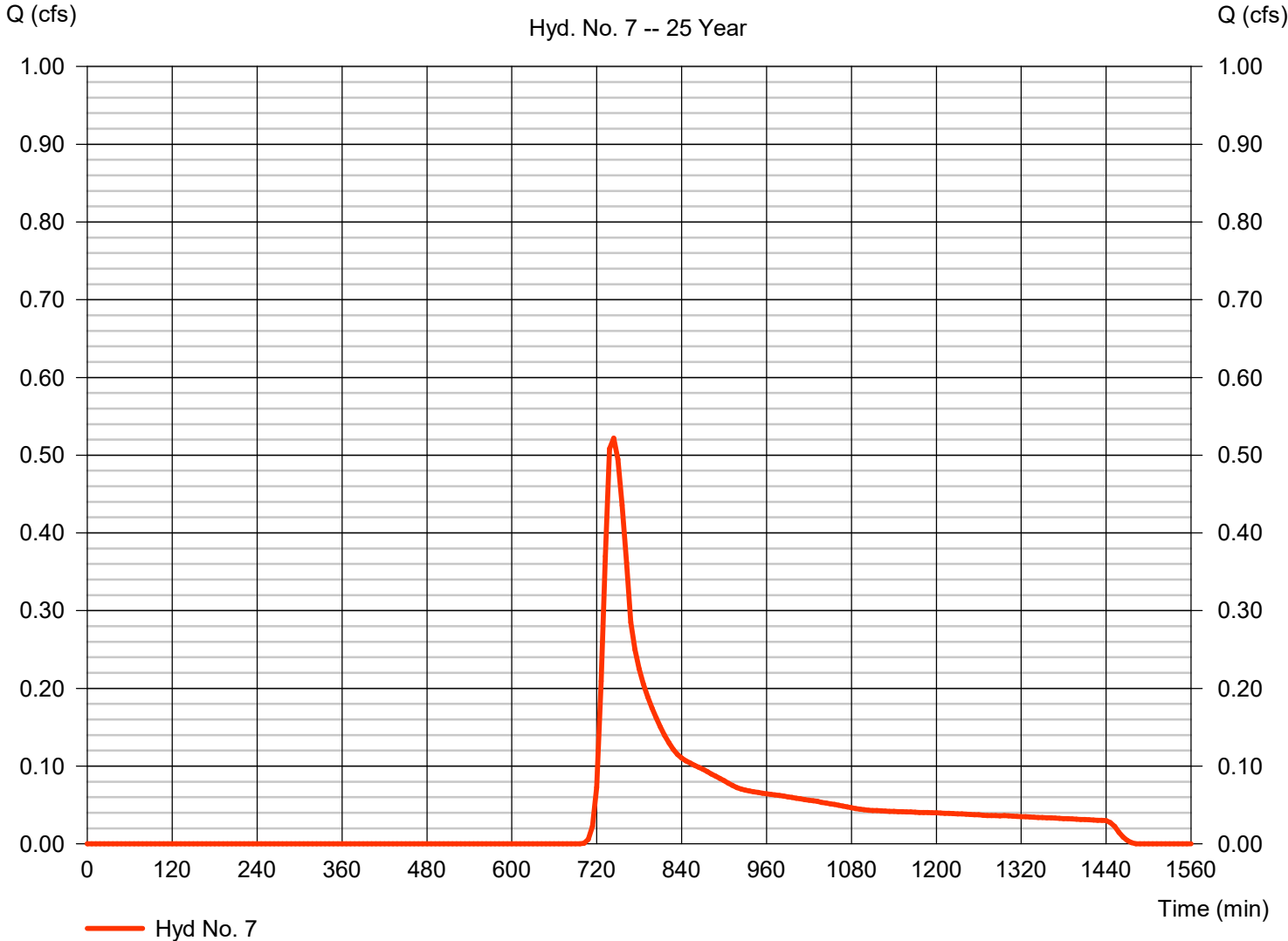
Common Drive South Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 0.522 cfs
Storm frequency	= 25 yrs	Time to peak	= 744 min
Time interval	= 6 min	Hyd. volume	= 3,714 cuft
Drainage area	= 0.880 ac	Curve number	= 49*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.90 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.170 x 98) + (0.123 x 54) + (0.590 x 34)] / 0.880

Common Drive South Side Swale

Hyd. No. 7 -- 25 Year



Precipitation Report

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

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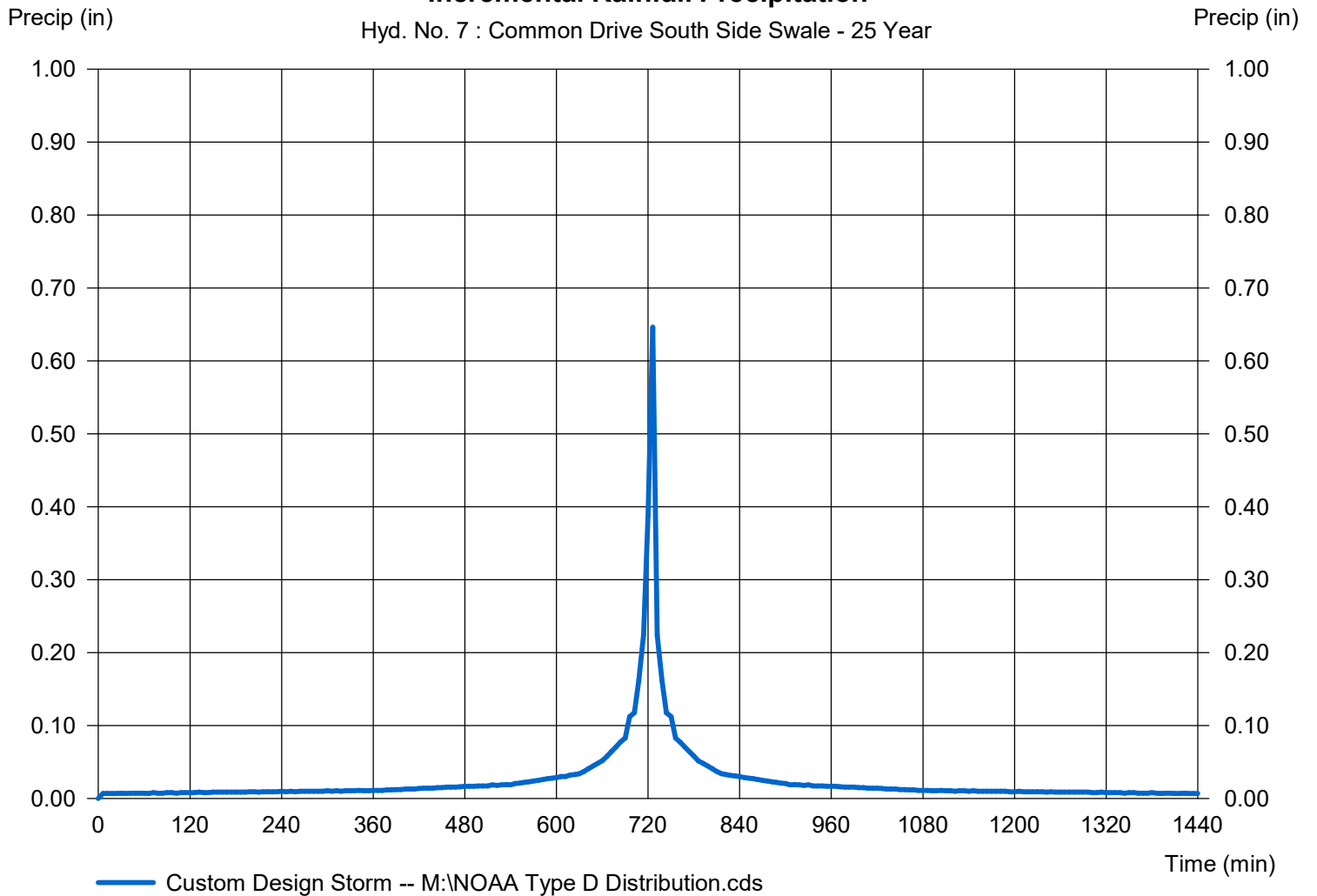
Hyd. No. 7

Common Drive South Side Swale

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 7 : Common Drive South Side Swale - 25 Year



Hydrograph Report

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

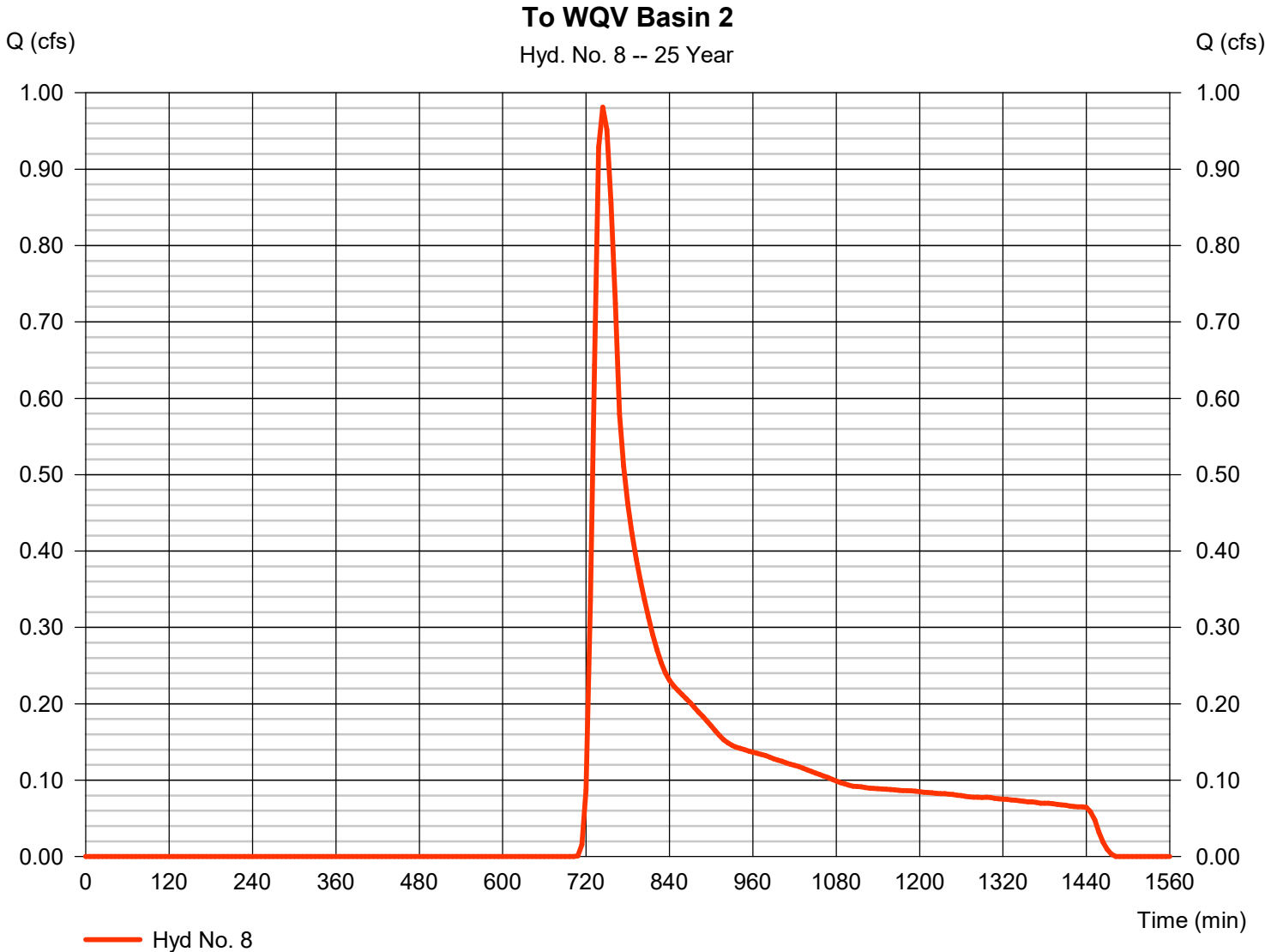
Tuesday, 05 / 6 / 2025

Hyd. No. 8

To WQV Basin 2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.981 cfs
Storm frequency	= 25 yrs	Time to peak	= 744 min
Time interval	= 6 min	Hyd. volume	= 7,534 cuft
Drainage area	= 2.040 ac	Curve number	= 47*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.70 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

* Composite (Area/CN) = [(0.240 x 98) + (0.530 x 54) + (1.270 x 34)] / 2.040



Precipitation Report

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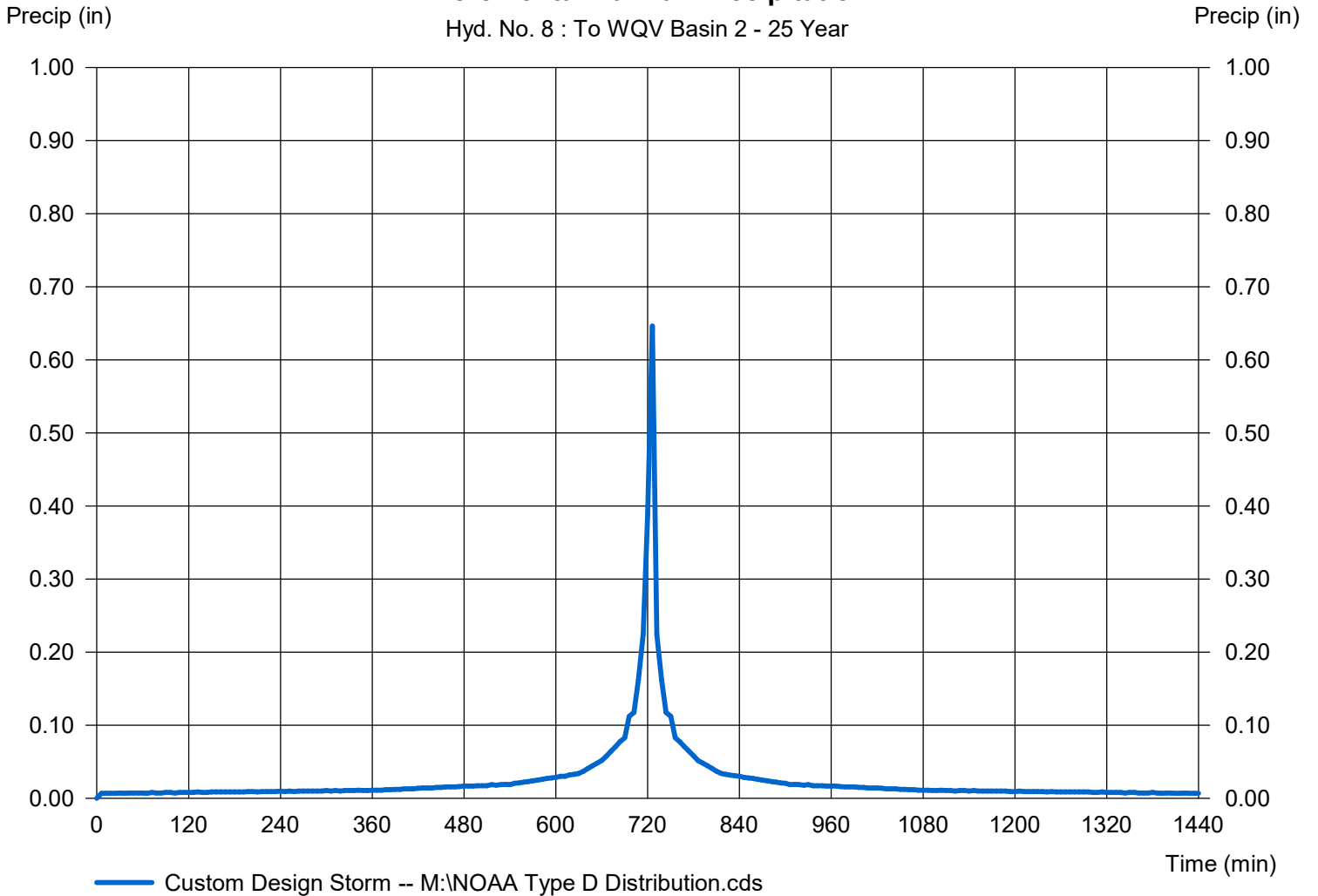
Hyd. No. 8

To WQV Basin 2

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : To WQV Basin 2 - 25 Year



Hydrograph Report

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

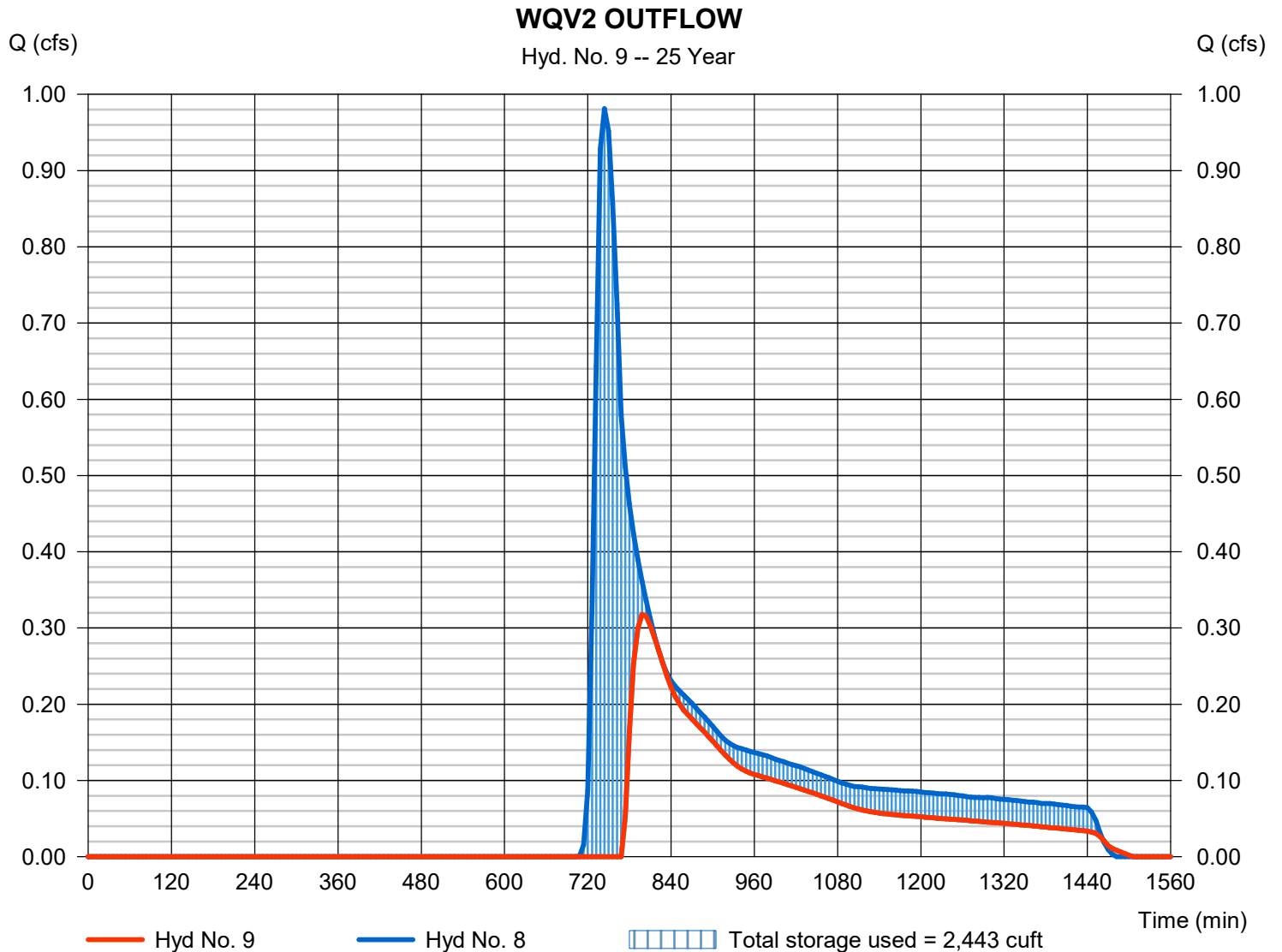
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Hyd. No. 9

WQV2 OUTFLOW

Hydrograph type	= Reservoir	Peak discharge	= 0.318 cfs
Storm frequency	= 25 yrs	Time to peak	= 798 min
Time interval	= 6 min	Hyd. volume	= 3,905 cuft
Inflow hyd. No.	= 8 - To WQV Basin 2	Max. Elevation	= 187.76 ft
Reservoir name	= wqv2	Max. Storage	= 2,443 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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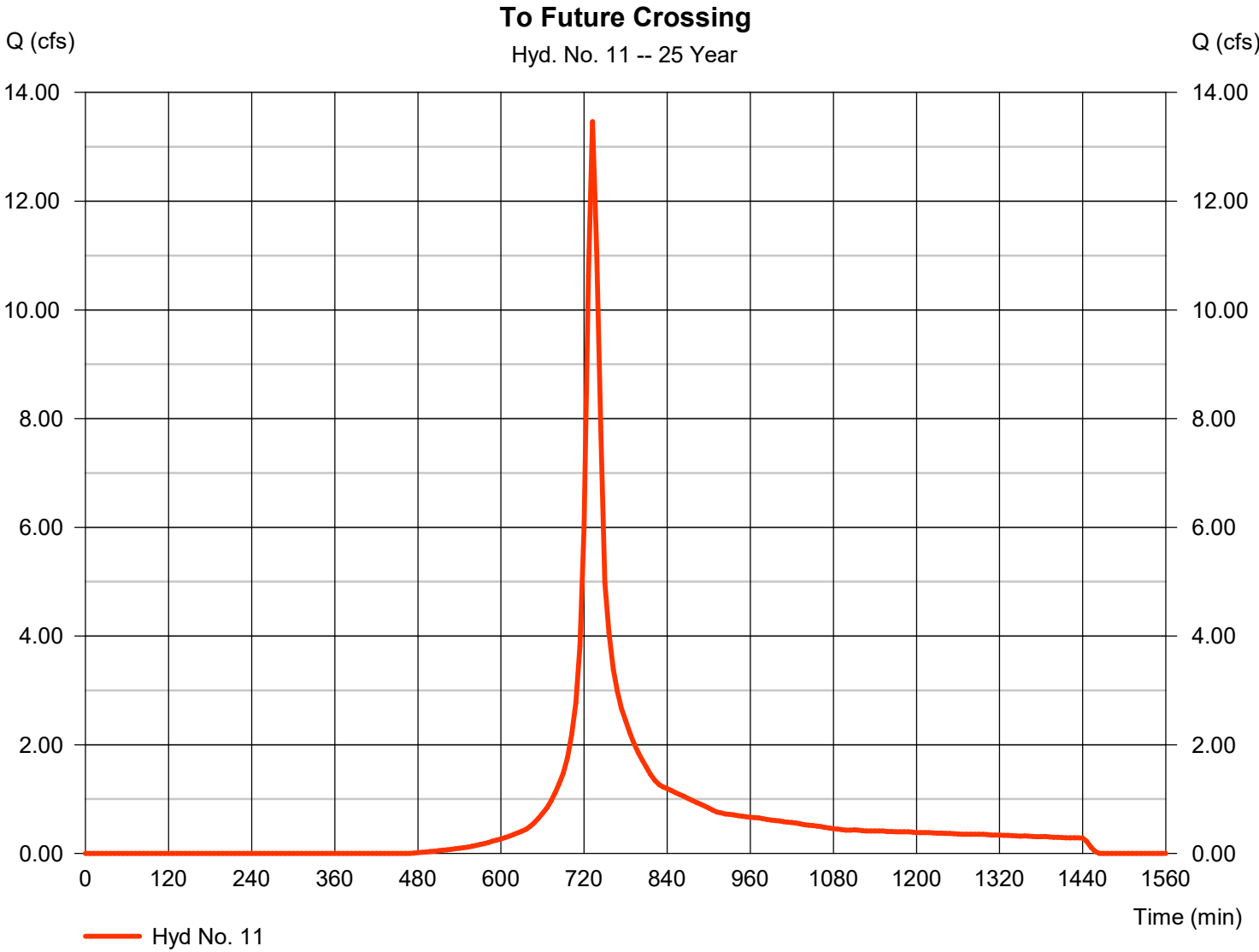
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Hyd. No. 11

To Future Crossing

Hydrograph type	= SCS Runoff	Peak discharge	= 13.46 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 57,237 cuft
Drainage area	= 5.180 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.90 min
Total precip.	= 6.19 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Slope factor	= 484

* Composite (Area/CN) = [(3.000 x 98) + (0.550 x 56) + (1.630 x 34)] / 5.180



Precipitation Report

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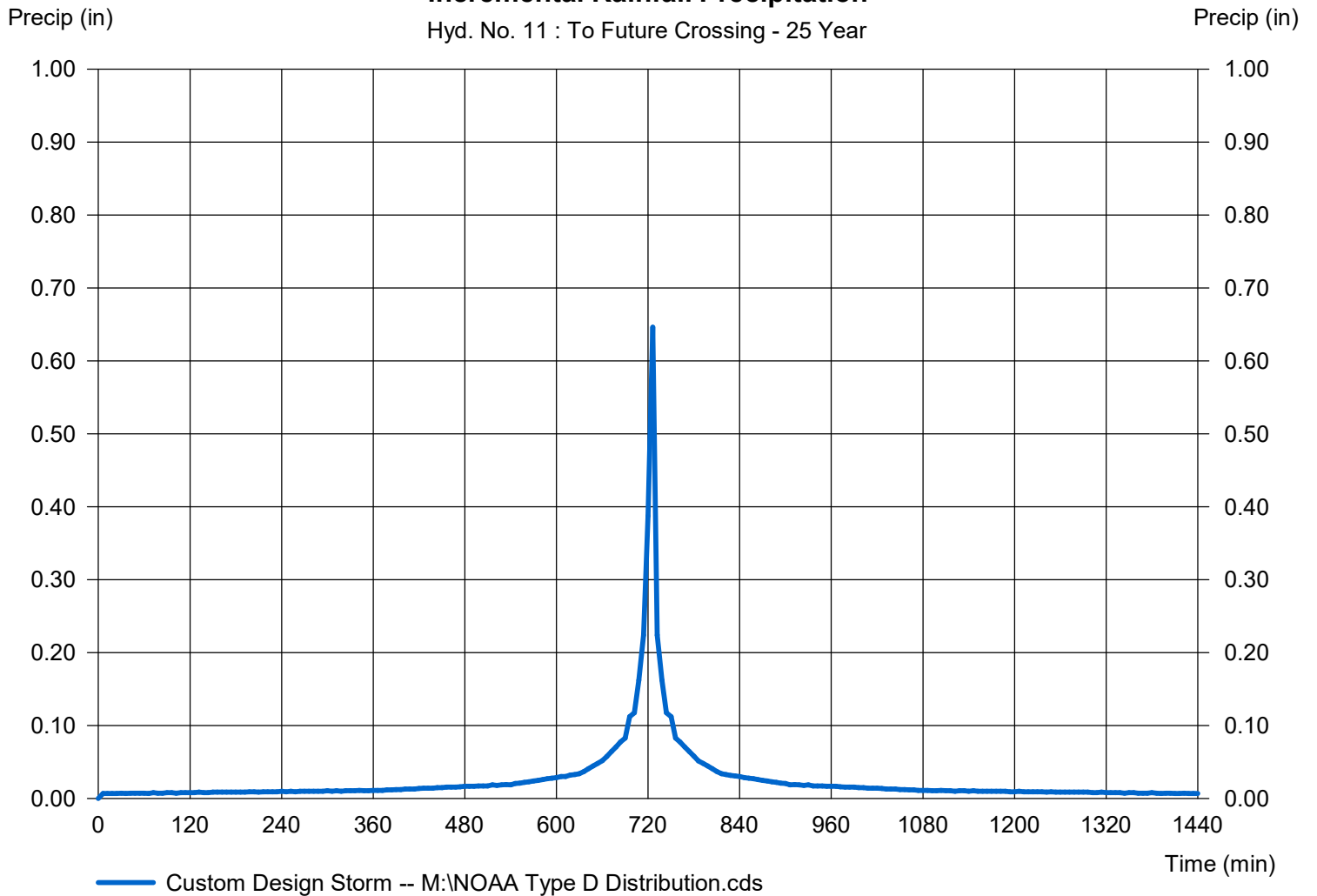
Hyd. No. 11

To Future Crossing

Storm Frequency	= 25 yrs	Time interval	= 6 min
Total precip.	= 6.1900 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : To Future Crossing - 25 Year



Hydrograph Report

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

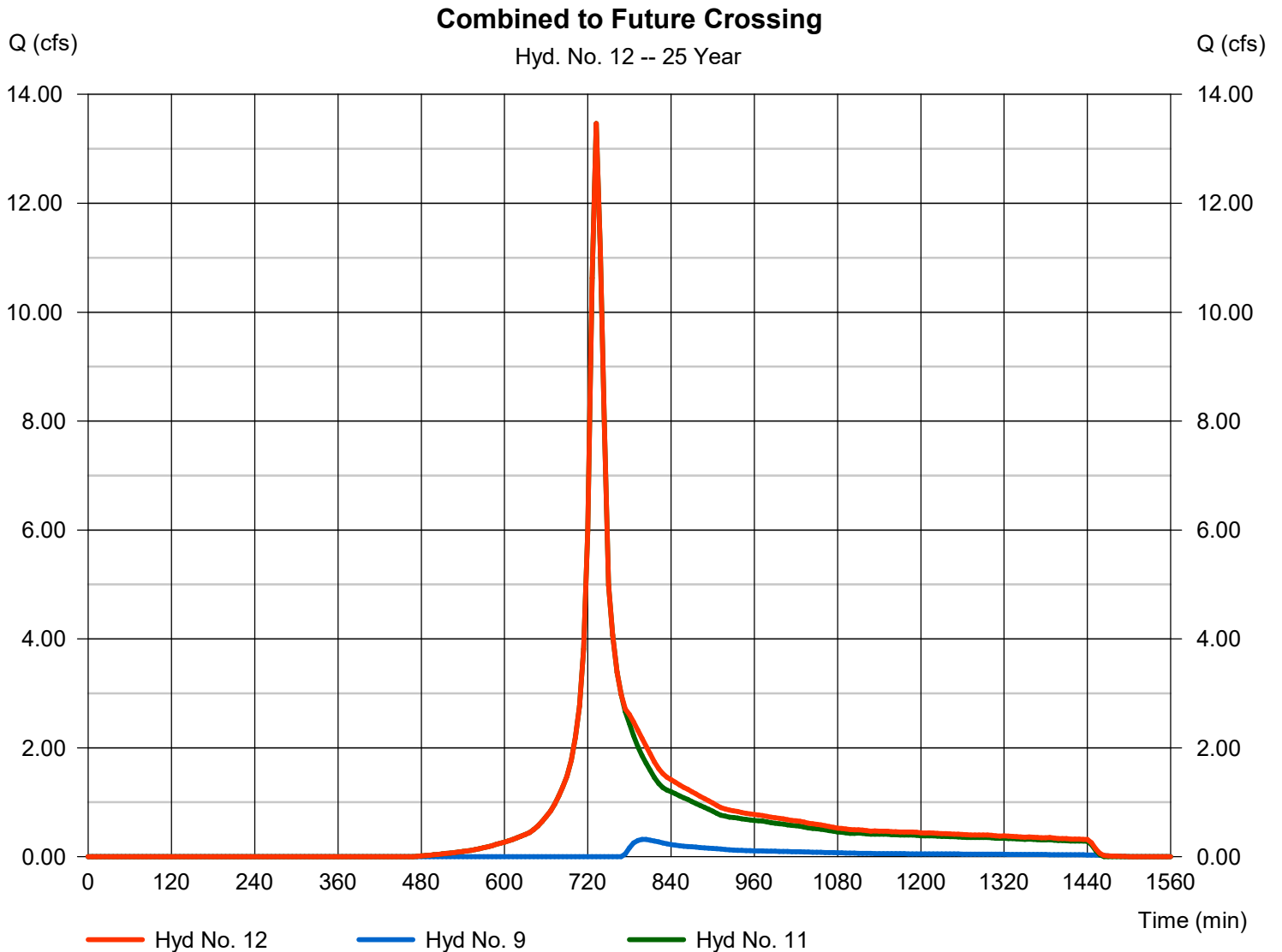
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Hyd. No. 12

Combined to Future Crossing

Hydrograph type = Combine
Storm frequency = 25 yrs
Time interval = 6 min
Inflow hyds. = 9, 11

Peak discharge = 13.46 cfs
Time to peak = 732 min
Hyd. volume = 61,142 cuft
Contrib. drain. area = 5.180 ac



Hydrograph Report

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

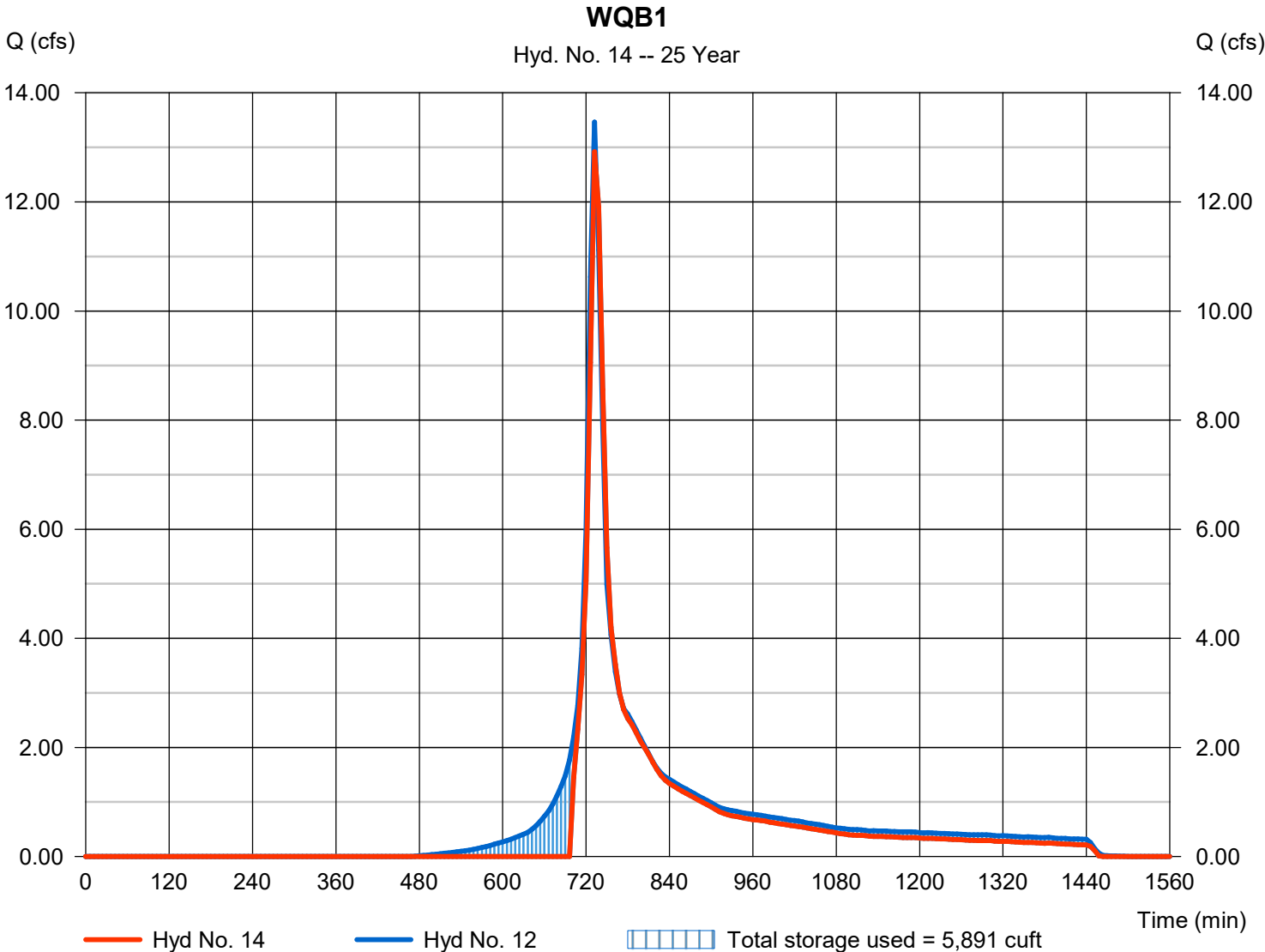
Tuesday, 05 / 6 / 2025

Hyd. No. 14

WQB1

Hydrograph type	= Reservoir	Peak discharge	= 12.92 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 51,389 cuft
Inflow hyd. No.	= 12 - Combined to Future Crossings	Max. Elevation	= 129.36 ft
Reservoir name	= WQB1	Max. Storage	= 5,891 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	123.39	6	756	963,867	-----	-----	-----	Existing Watershed #1
2	SCS Runoff	186.07	6	774	1,938,727	-----	-----	-----	Existing watershed #2
3	SCS Runoff	123.39	6	756	963,867	-----	-----	-----	Proposed Watershed #1
4	SCS Runoff	186.07	6	774	1,938,727	-----	-----	-----	Proposed Watershed #2
6	SCS Runoff	1.217	6	732	5,194	-----	-----	-----	Common Drive North Side Swale
7	SCS Runoff	0.760	6	738	5,007	-----	-----	-----	Common Drive South Side Swale
8	SCS Runoff	1.495	6	744	10,329	-----	-----	-----	To WQV Basin 2
9	Reservoir	0.792	6	768	6,652	8	187.92	2,690	WQV2 OUTFLOW
11	SCS Runoff	16.24	6	732	69,068	-----	-----	-----	To Future Crossing
12	Combine	16.24	6	732	75,720	9, 11	-----	-----	Combined to Future Crossing
14	Reservoir	15.70	6	732	65,745	12	129.40	6,120	WQB1
7885 Hydrographs.gpw					Return Period: 50 Year			Tuesday, 05 / 6 / 2025	

Hydrograph Report

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

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Hyd. No. 1

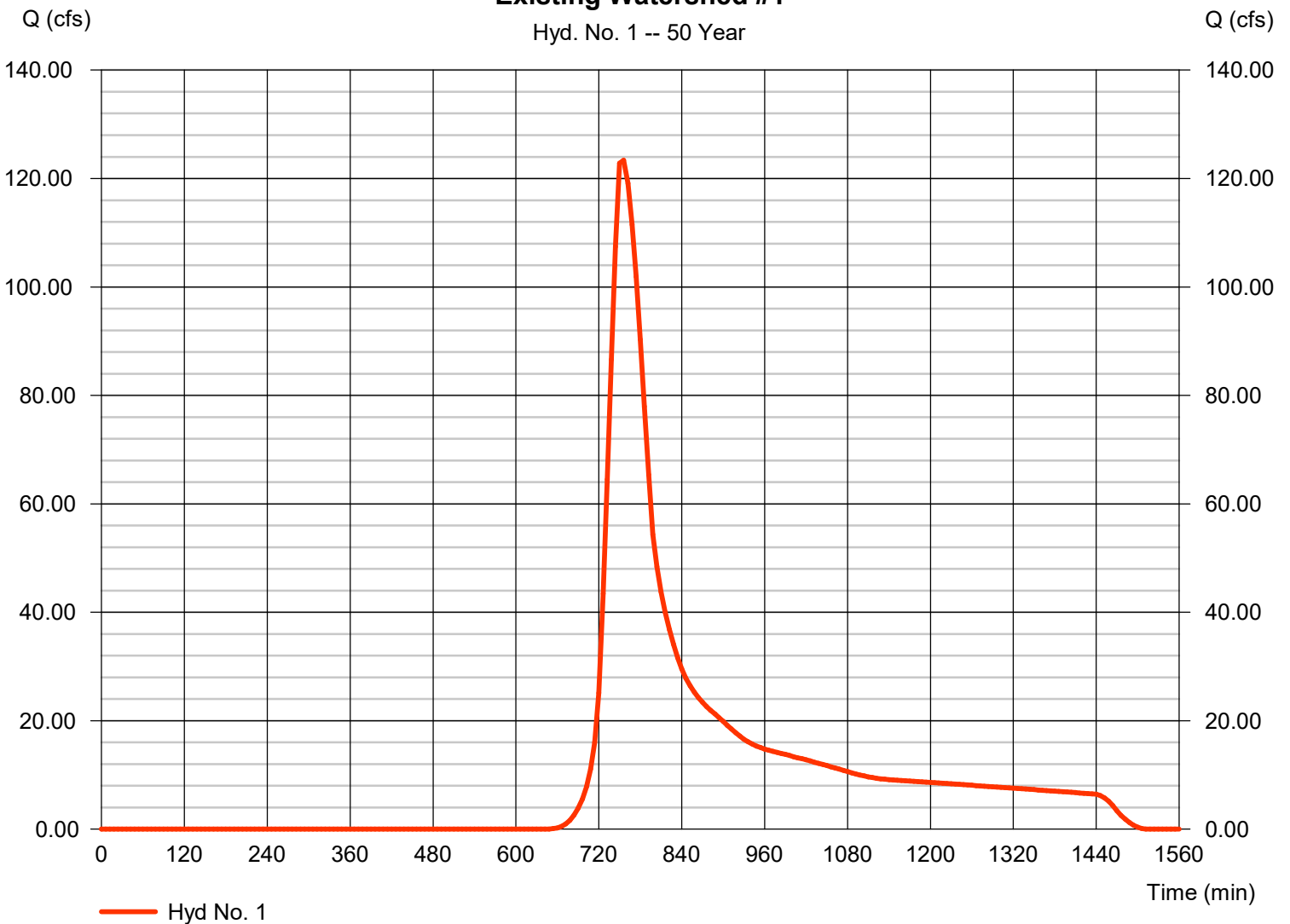
Existing Watershed #1

Hydrograph type	= SCS Runoff	Peak discharge	= 123.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 756 min
Time interval	= 6 min	Hyd. volume	= 963,867 cuft
Drainage area	= 129.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 46.90 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(129.000 x 55)] / 129.000

Existing Watershed #1

Hyd. No. 1 -- 50 Year



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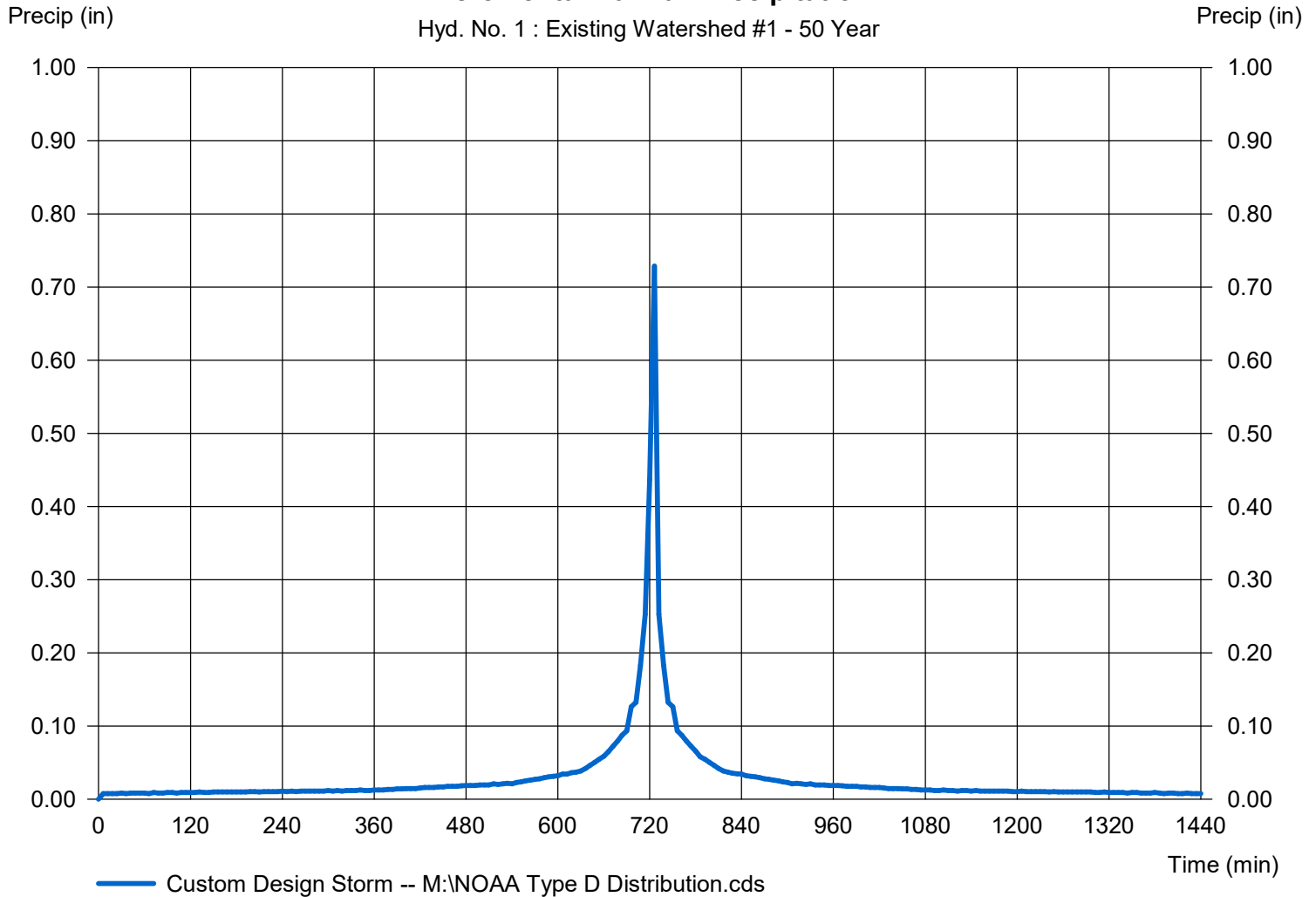
Hyd. No. 1

Existing Watershed #1

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : Existing Watershed #1 - 50 Year



Hydrograph Report

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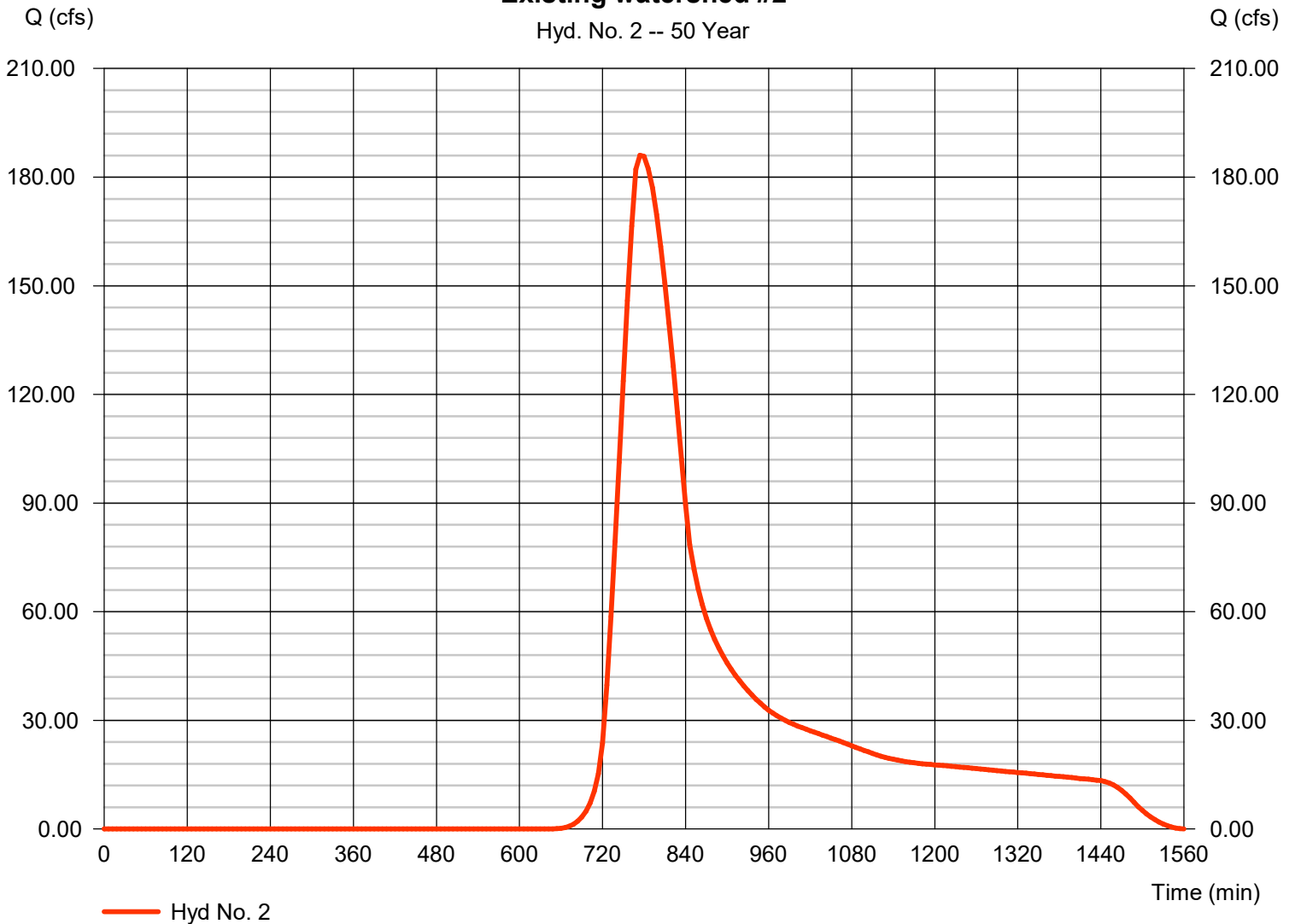
Hyd. No. 2

Existing watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 186.07 cfs
Storm frequency	= 50 yrs	Time to peak	= 774 min
Time interval	= 6 min	Hyd. volume	= 1,938,727 cuft
Drainage area	= 257.000 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

Existing watershed #2

Hyd. No. 2 -- 50 Year



Precipitation Report

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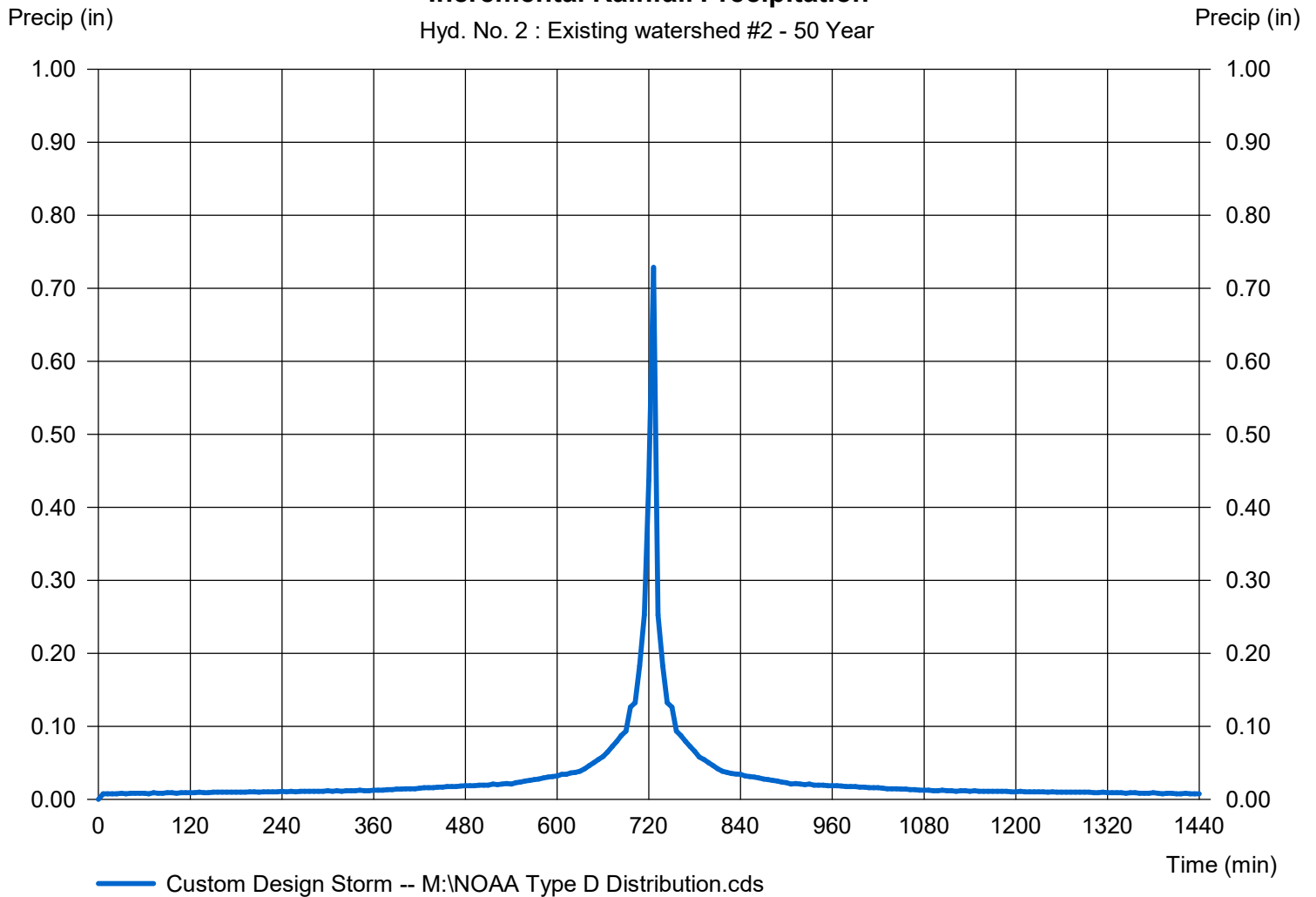
Hyd. No. 2

Existing watershed #2

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : Existing watershed #2 - 50 Year



Hydrograph Report

Hyd. No. 3

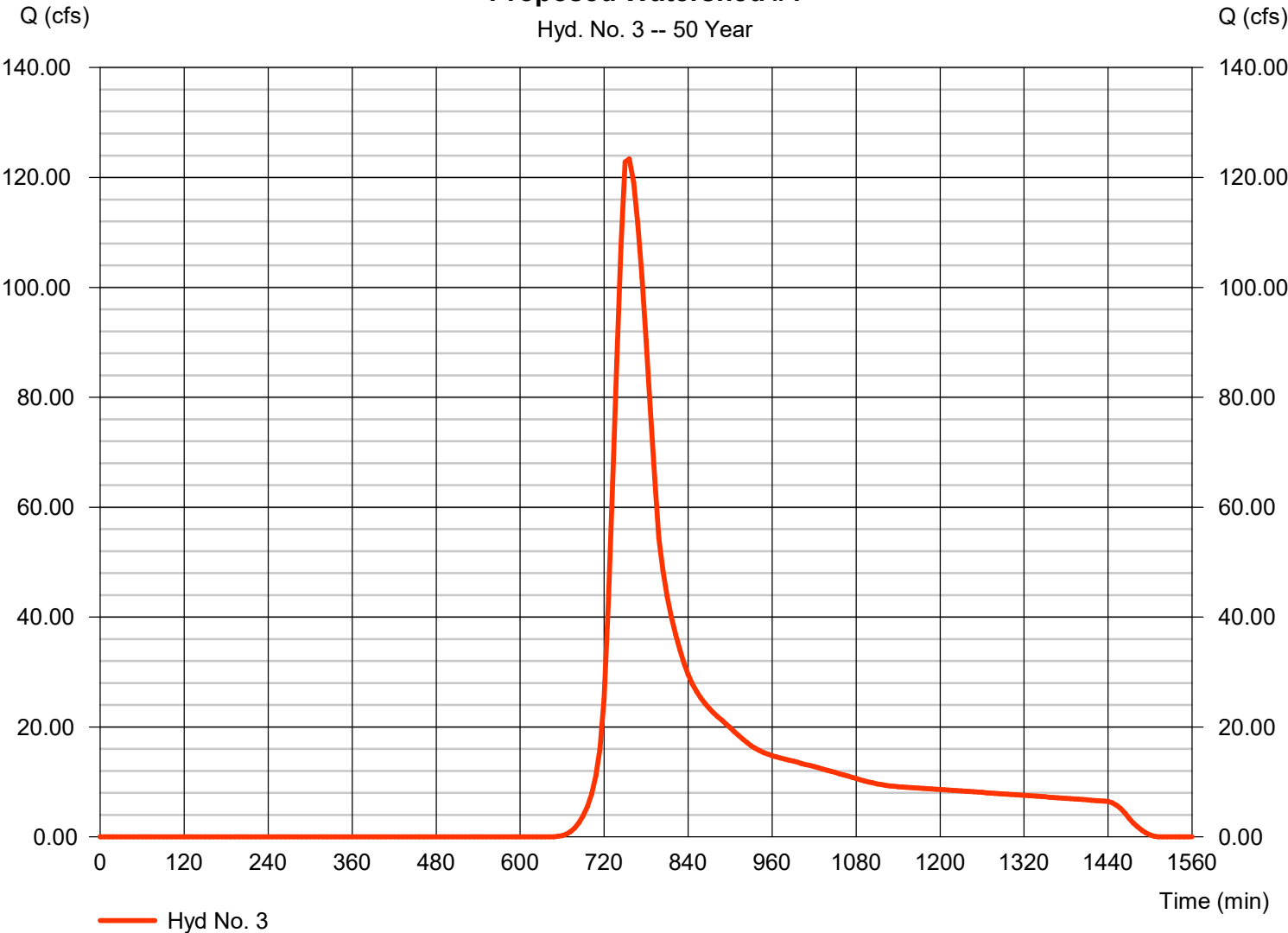
Proposed Watershed #1

Hydrograph type	= SCS Runoff	Peak discharge	= 123.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 756 min
Time interval	= 6 min	Hyd. volume	= 963,867 cuft
Drainage area	= 129.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 46.90 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(1.000 x 98) + (2.400 x 61) + (125.600 x 55)] / 129.000

Proposed Watershed #1

Hyd. No. 3 -- 50 Year



Precipitation Report

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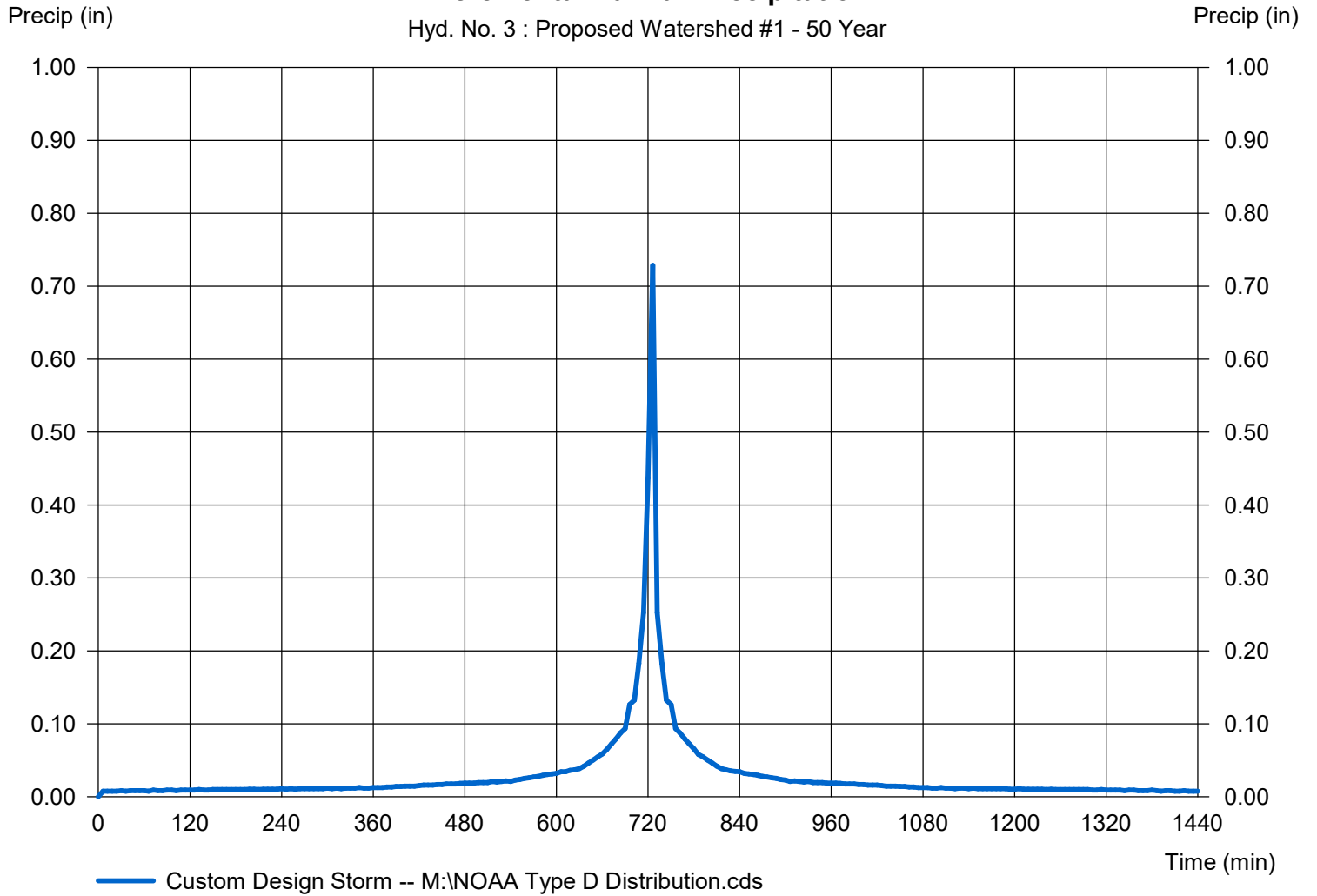
Hyd. No. 3

Proposed Watershed #1

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : Proposed Watershed #1 - 50 Year



Hydrograph Report

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

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Hyd. No. 4

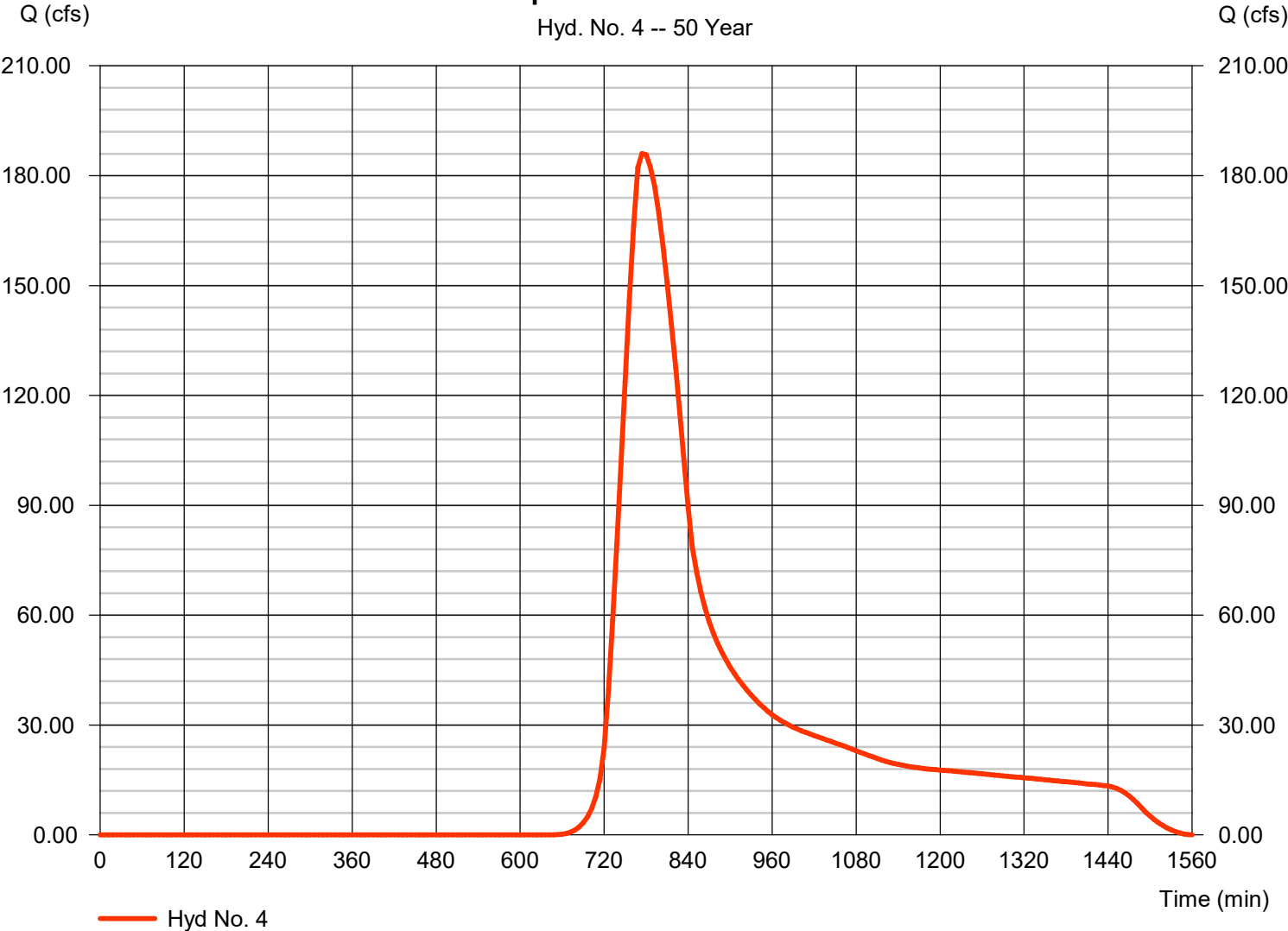
Proposed Watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 186.07 cfs
Storm frequency	= 50 yrs	Time to peak	= 774 min
Time interval	= 6 min	Hyd. volume	= 1,938,727 cuft
Drainage area	= 257.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.850 x 61) + (1.000 x 98) + (255.150 x 55)] / 257.000

Proposed Watershed #2

Hyd. No. 4 -- 50 Year



Precipitation Report

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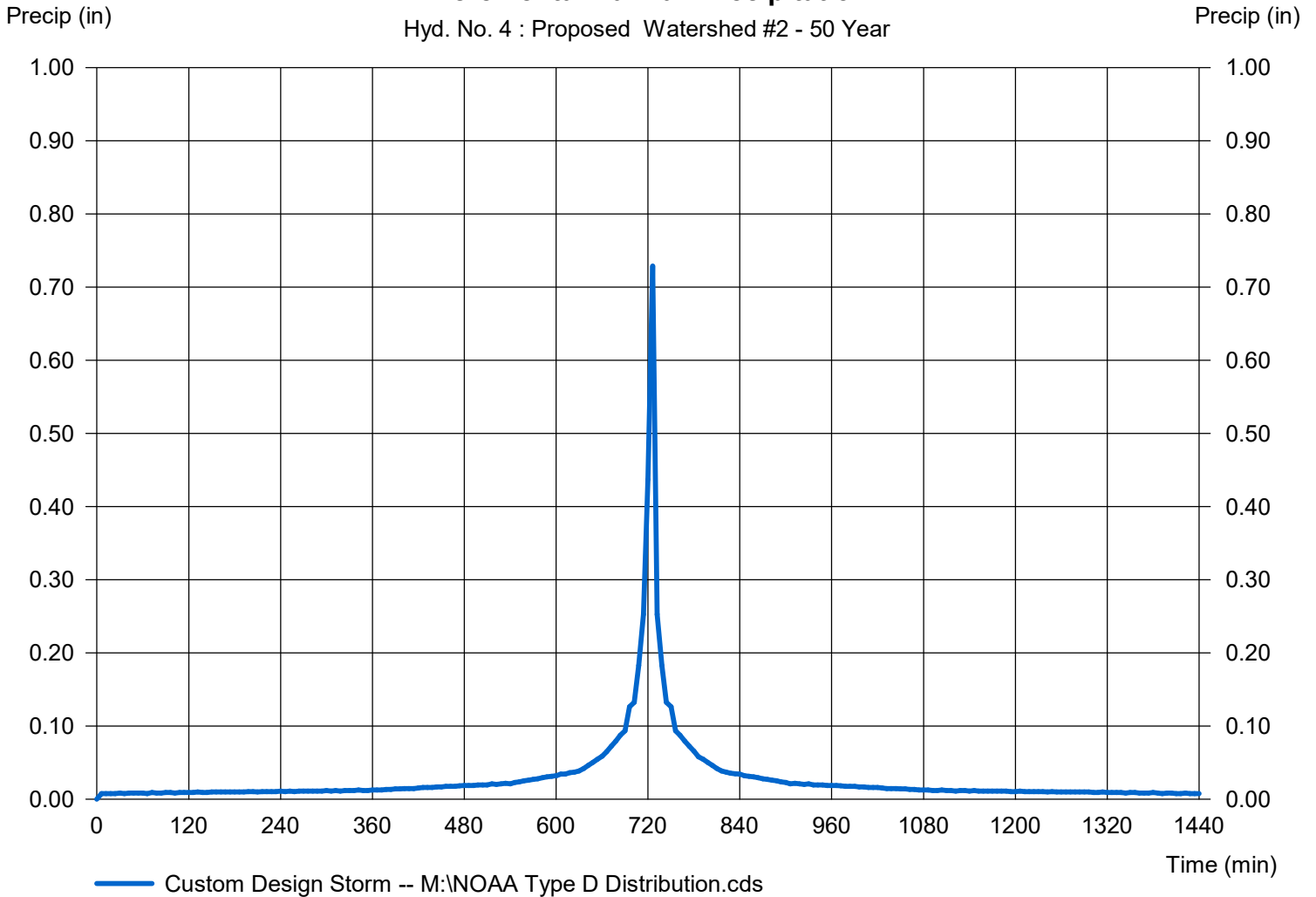
Hyd. No. 4

Proposed Watershed #2

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : Proposed Watershed #2 - 50 Year



Hydrograph Report

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

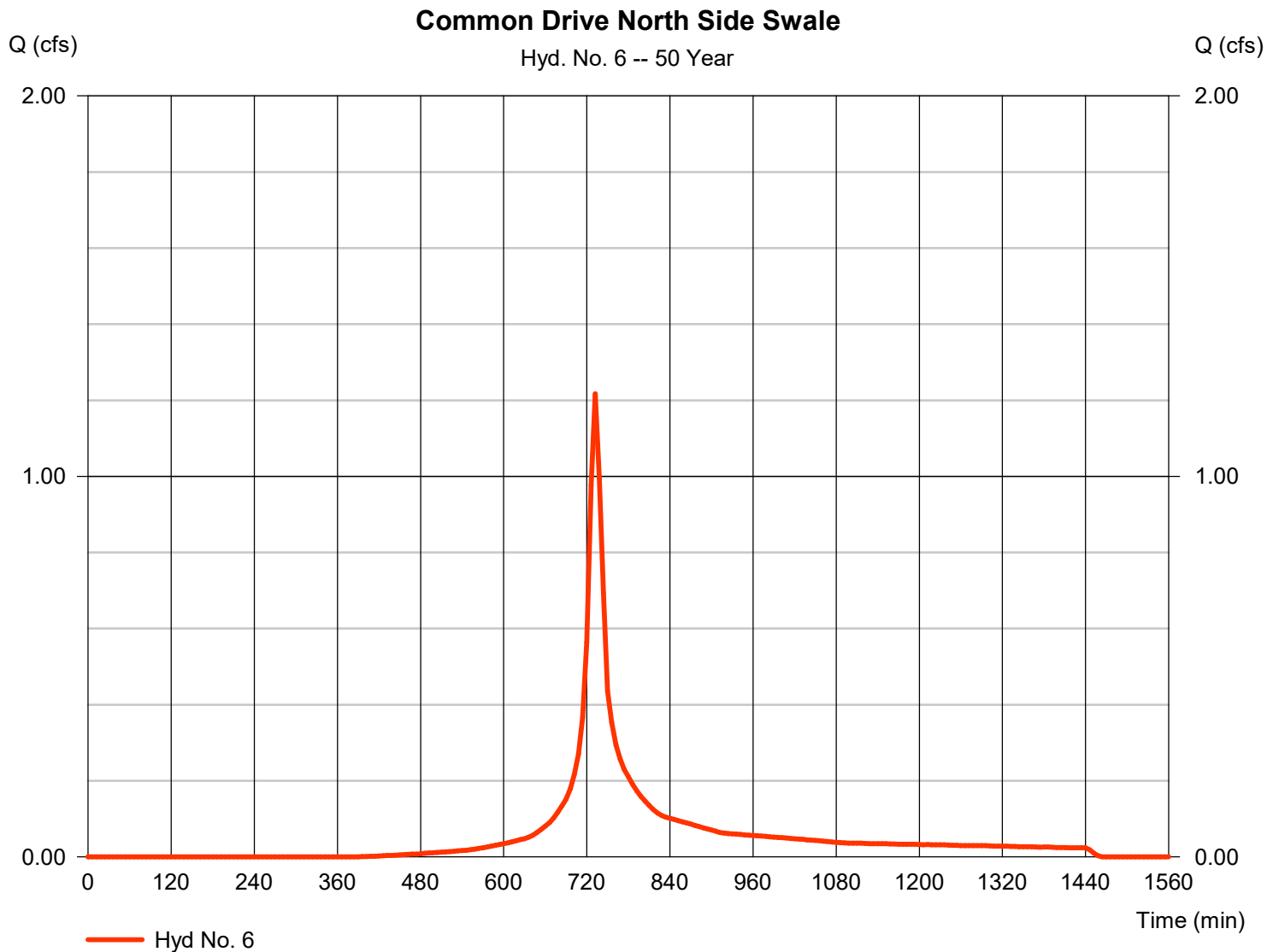
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Hyd. No. 6

Common Drive North Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 1.217 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 5,194 cuft
Drainage area	= 0.360 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.80 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.180 x 98) + (0.180 x 54)] / 0.360



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

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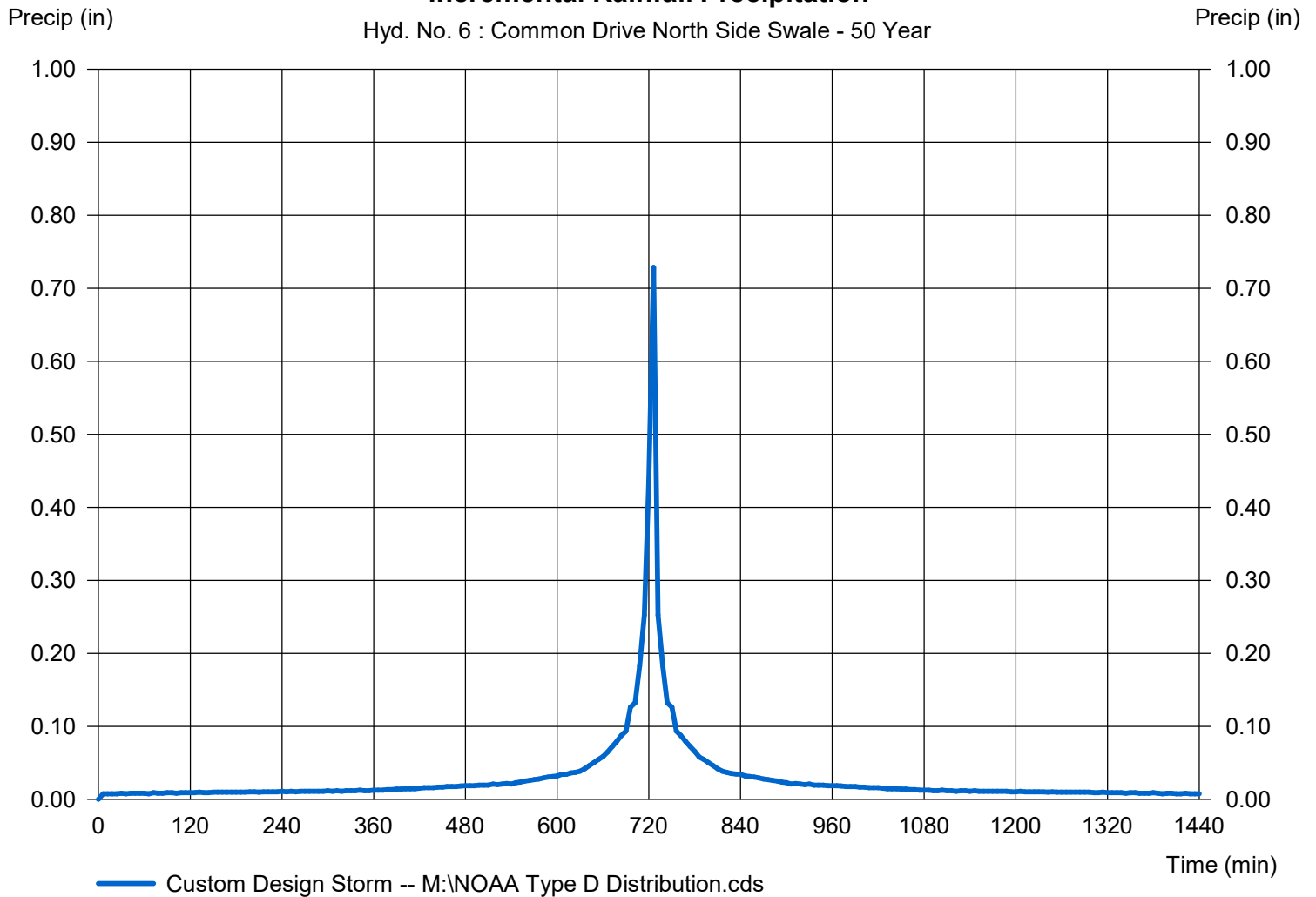
Hyd. No. 6

Common Drive North Side Swale

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : Common Drive North Side Swale - 50 Year



Hydrograph Report

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

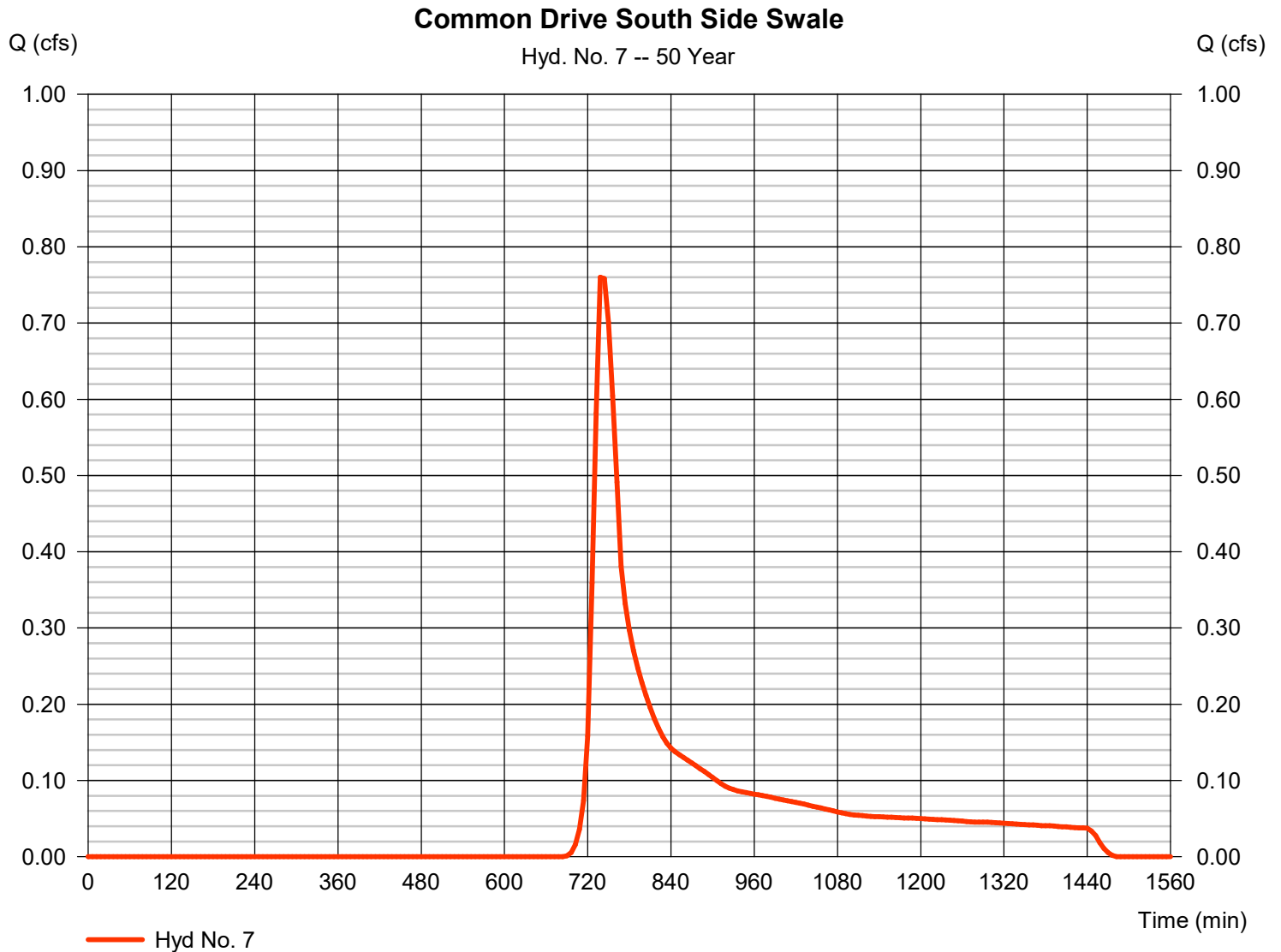
Tuesday, 05 / 6 / 2025

Hyd. No. 7

Common Drive South Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 0.760 cfs
Storm frequency	= 50 yrs	Time to peak	= 738 min
Time interval	= 6 min	Hyd. volume	= 5,007 cuft
Drainage area	= 0.880 ac	Curve number	= 49*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.90 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Slope factor	= 484

* Composite (Area/CN) = [(0.170 x 98) + (0.123 x 54) + (0.590 x 34)] / 0.880



Precipitation Report

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

Tuesday, 05 / 6 / 2025

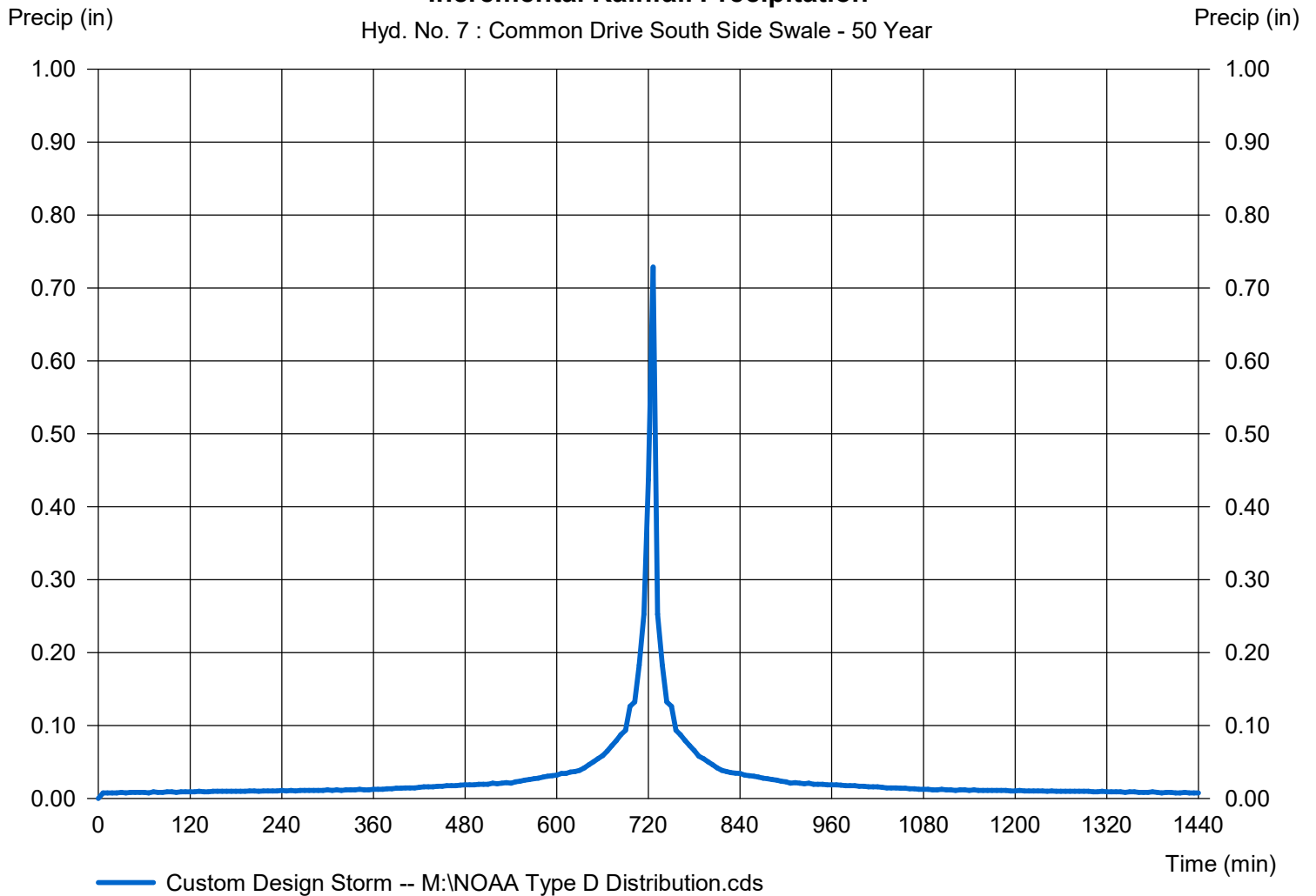
Hyd. No. 7

Common Drive South Side Swale

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 7 : Common Drive South Side Swale - 50 Year



Hydrograph Report

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

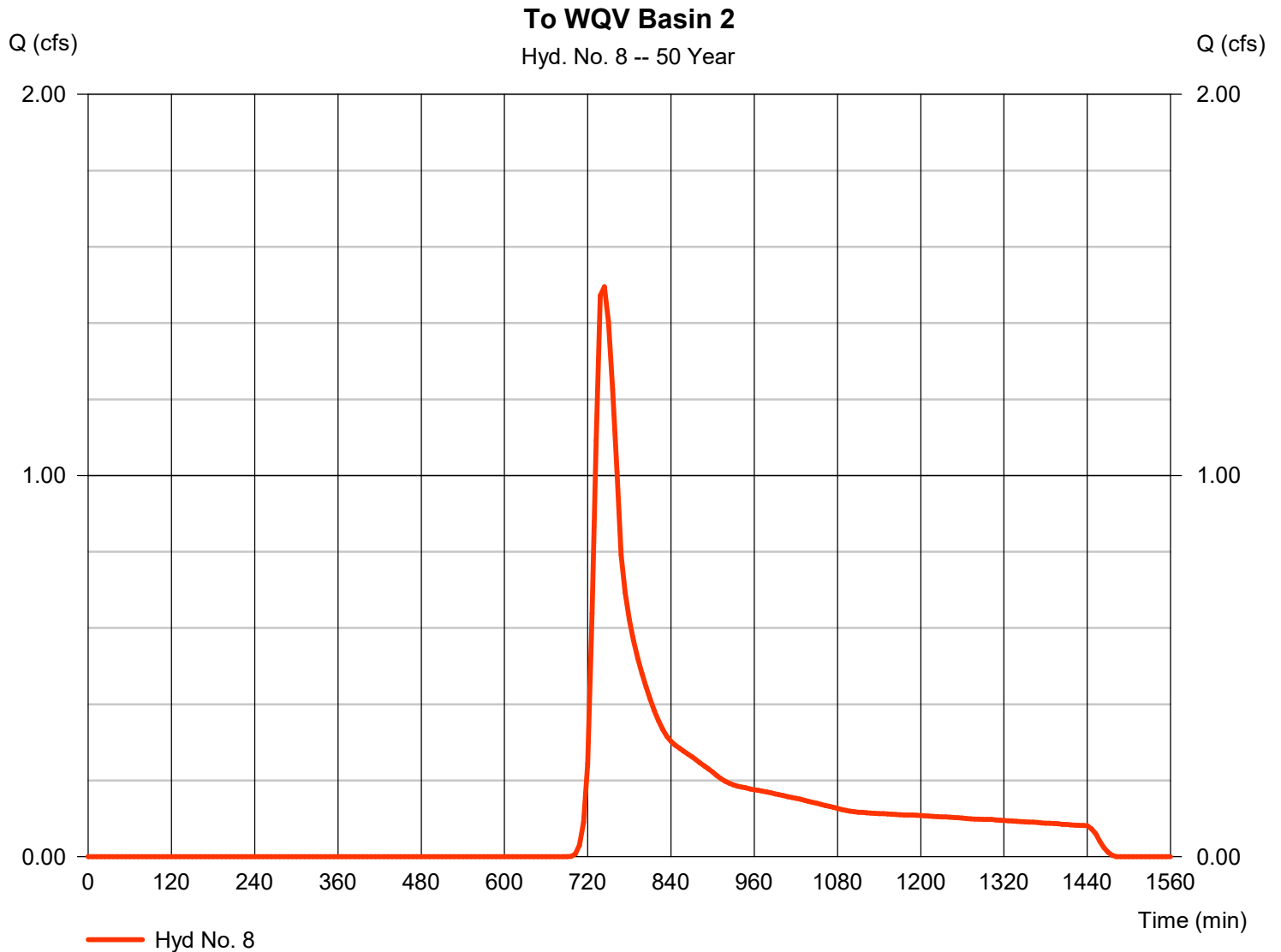
Tuesday, 05 / 6 / 2025

Hyd. No. 8

To WQV Basin 2

Hydrograph type	= SCS Runoff	Peak discharge	= 1.495 cfs
Storm frequency	= 50 yrs	Time to peak	= 744 min
Time interval	= 6 min	Hyd. volume	= 10,329 cuft
Drainage area	= 2.040 ac	Curve number	= 47*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.70 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Slope factor	= 484

* Composite (Area/CN) = [(0.240 x 98) + (0.530 x 54) + (1.270 x 34)] / 2.040



Precipitation Report

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

Tuesday, 05 / 6 / 2025

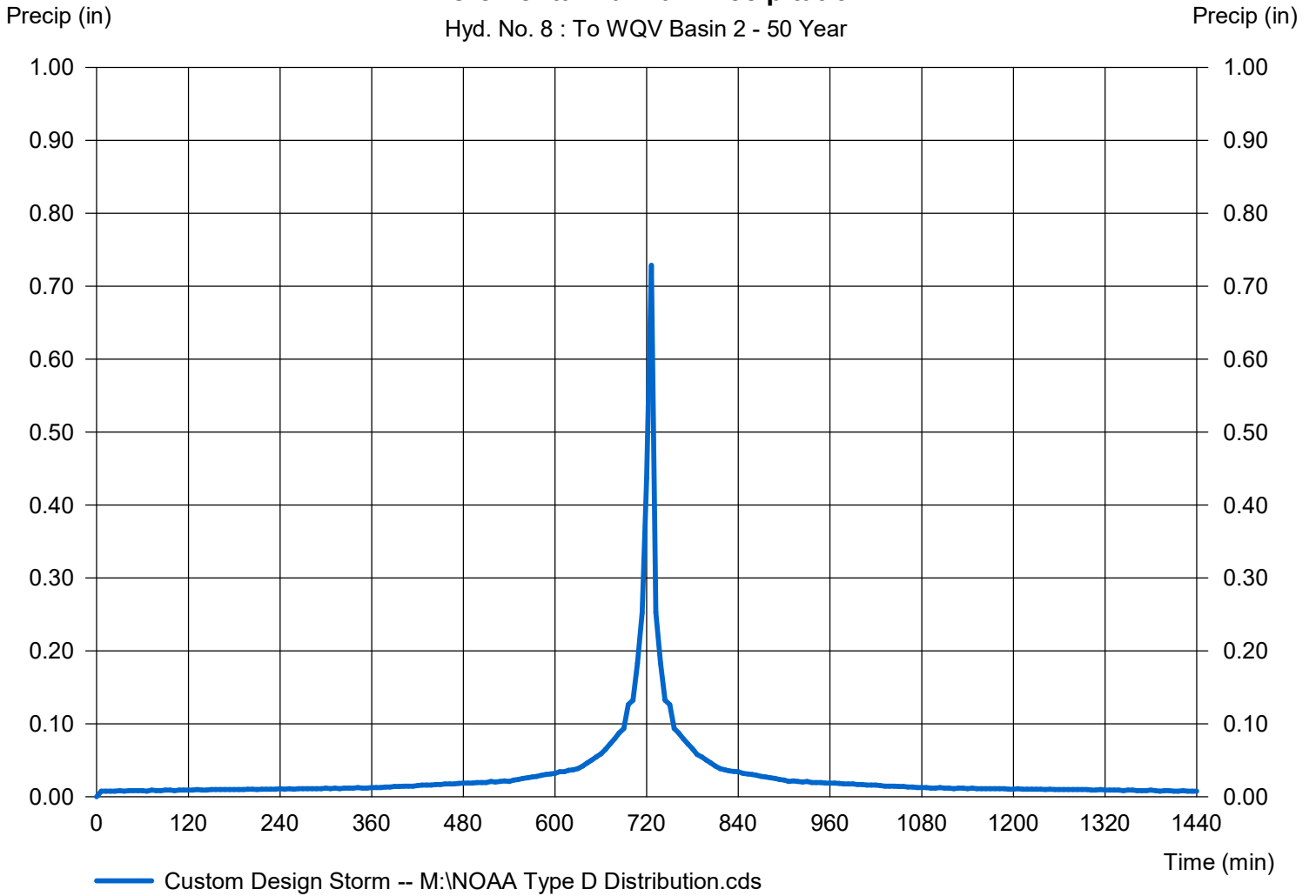
Hyd. No. 8

To WQV Basin 2

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : To WQV Basin 2 - 50 Year



Hydrograph Report

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

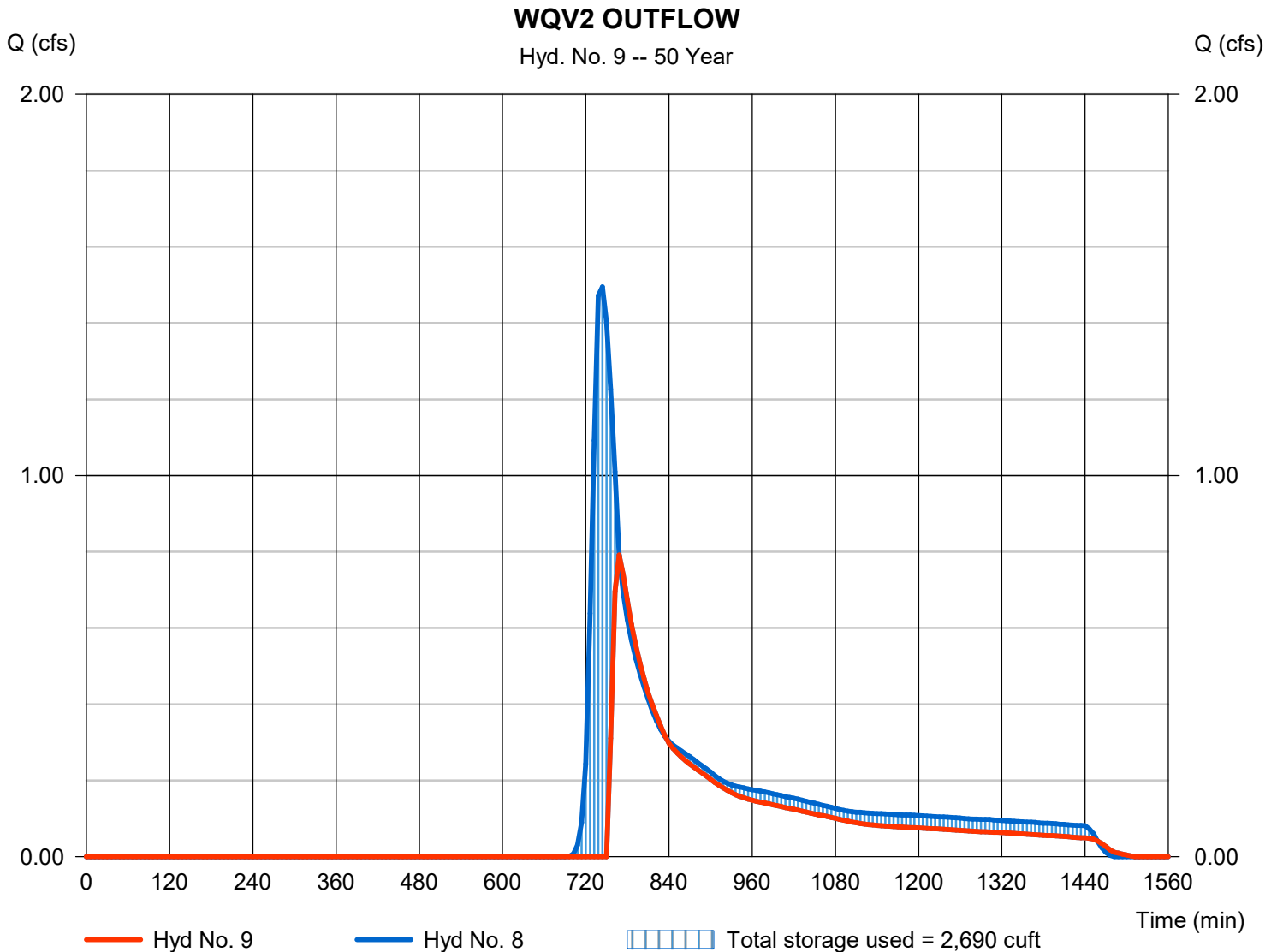
Tuesday, 05 / 6 / 2025

Hyd. No. 9

WQV2 OUTFLOW

Hydrograph type	= Reservoir	Peak discharge	= 0.792 cfs
Storm frequency	= 50 yrs	Time to peak	= 768 min
Time interval	= 6 min	Hyd. volume	= 6,652 cuft
Inflow hyd. No.	= 8 - To WQV Basin 2	Max. Elevation	= 187.92 ft
Reservoir name	= wqv2	Max. Storage	= 2,690 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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

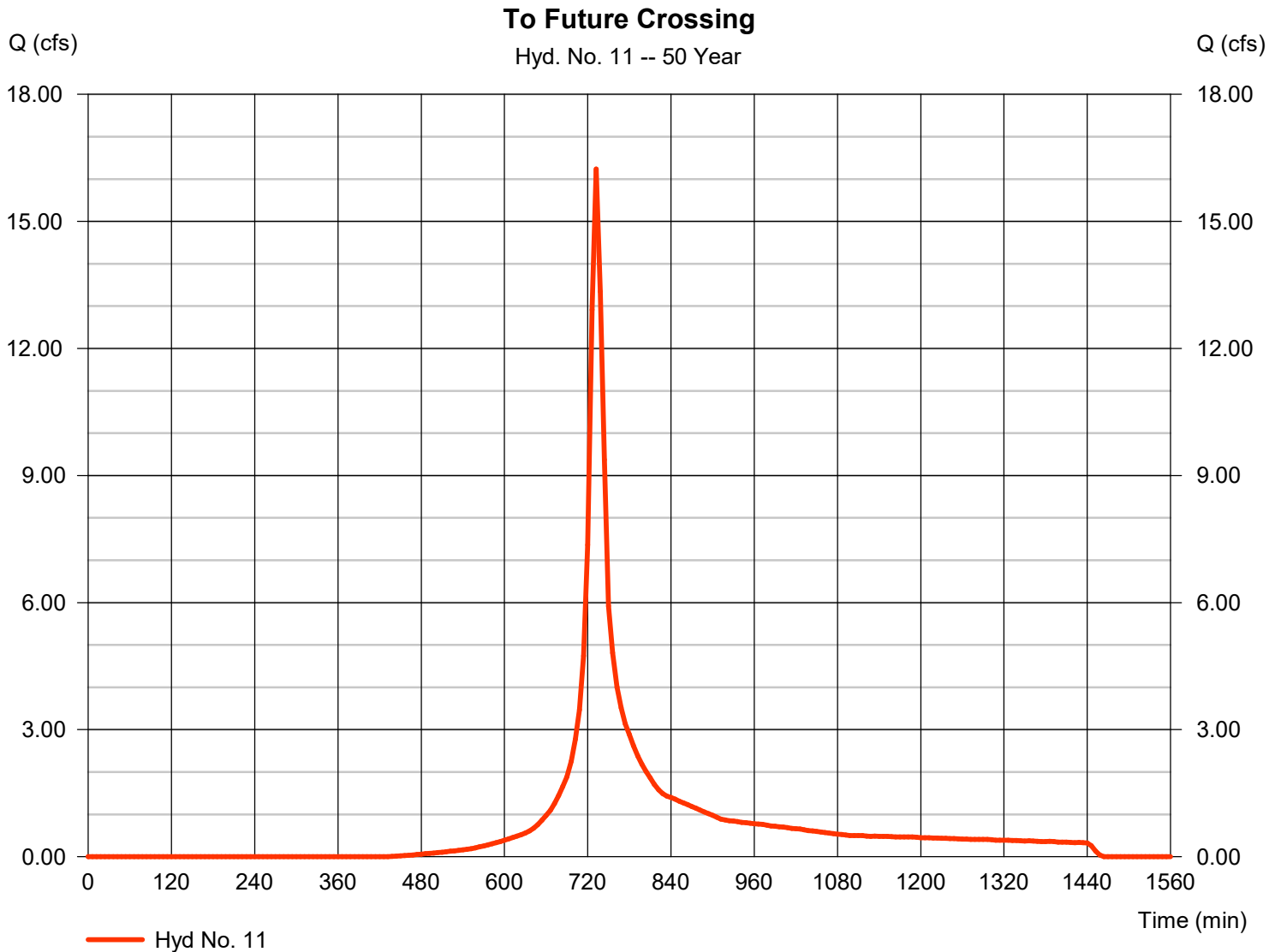
Tuesday, 05 / 6 / 2025

Hyd. No. 11

To Future Crossing

Hydrograph type	= SCS Runoff	Peak discharge	= 16.24 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 69,068 cuft
Drainage area	= 5.180 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.90 min
Total precip.	= 6.98 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(3.000 x 98) + (0.550 x 56) + (1.630 x 34)] / 5.180



Precipitation Report

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

Tuesday, 05 / 6 / 2025

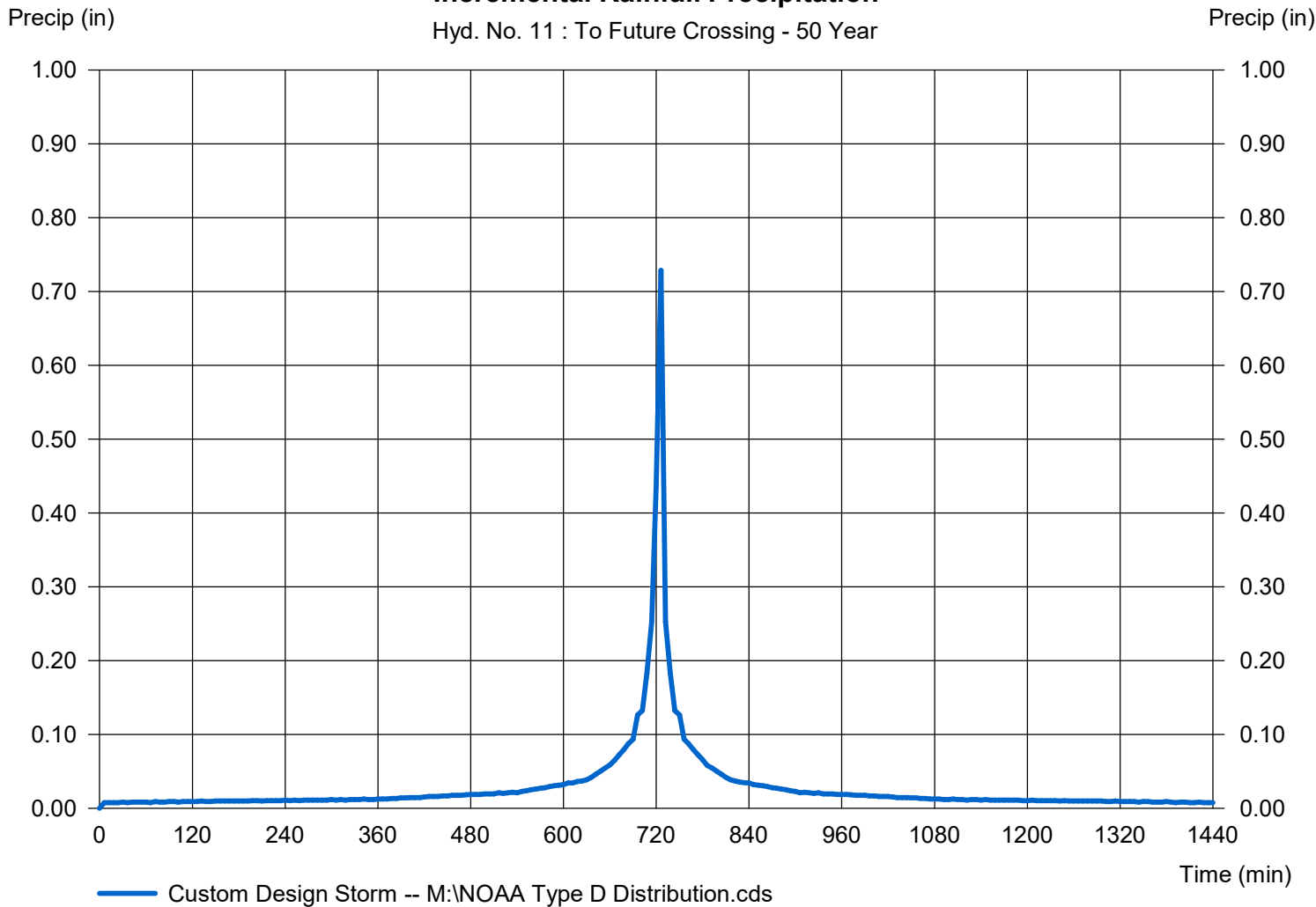
Hyd. No. 11

To Future Crossing

Storm Frequency	= 50 yrs	Time interval	= 6 min
Total precip.	= 6.9800 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : To Future Crossing - 50 Year



Hydrograph Report

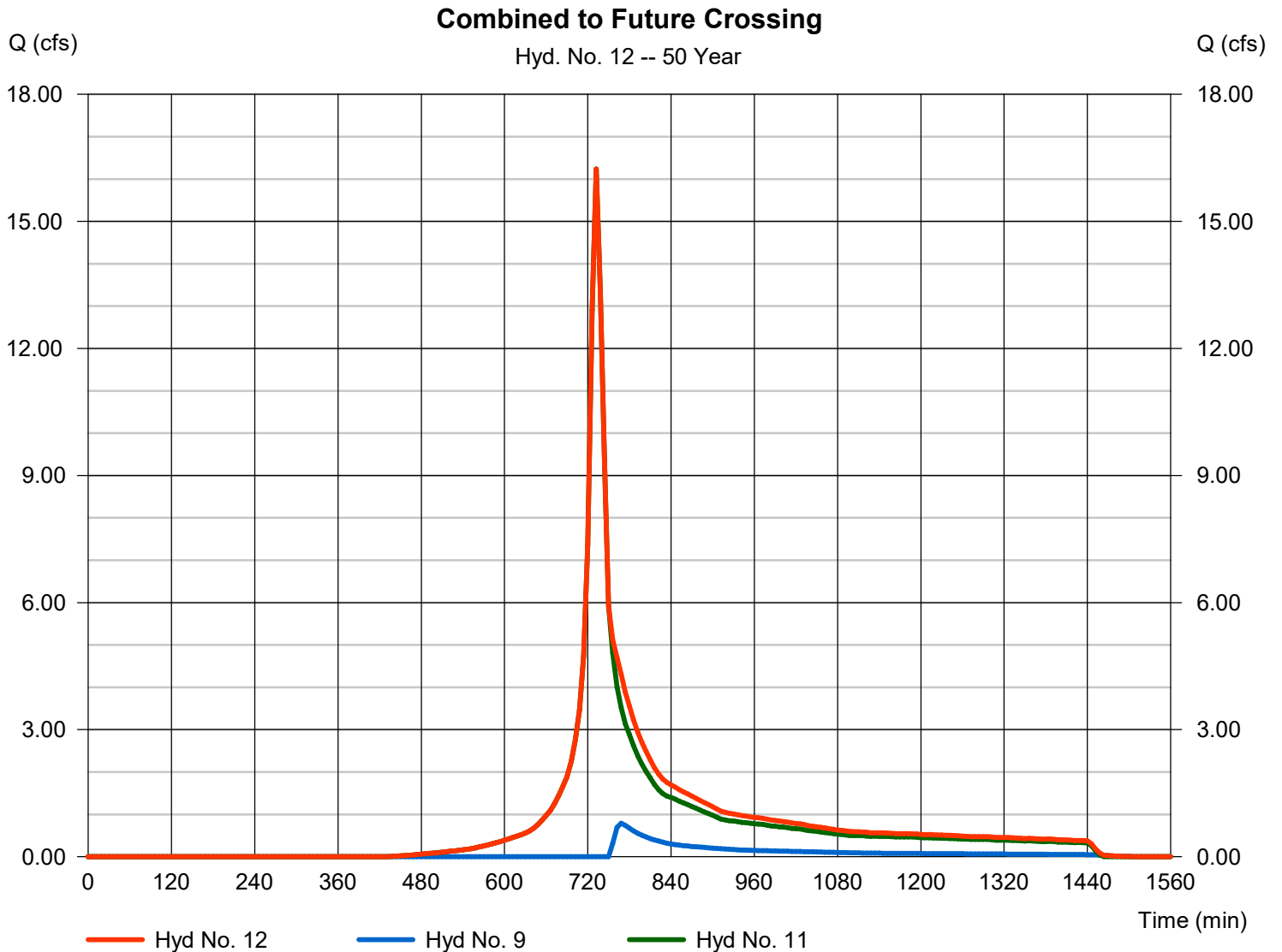
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Tuesday, 05 / 6 / 2025

Hyd. No. 12

Combined to Future Crossing

Hydrograph type	= Combine	Peak discharge	= 16.24 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 75,720 cuft
Inflow hyds.	= 9, 11	Contrib. drain. area	= 5.180 ac



Hydrograph Report

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

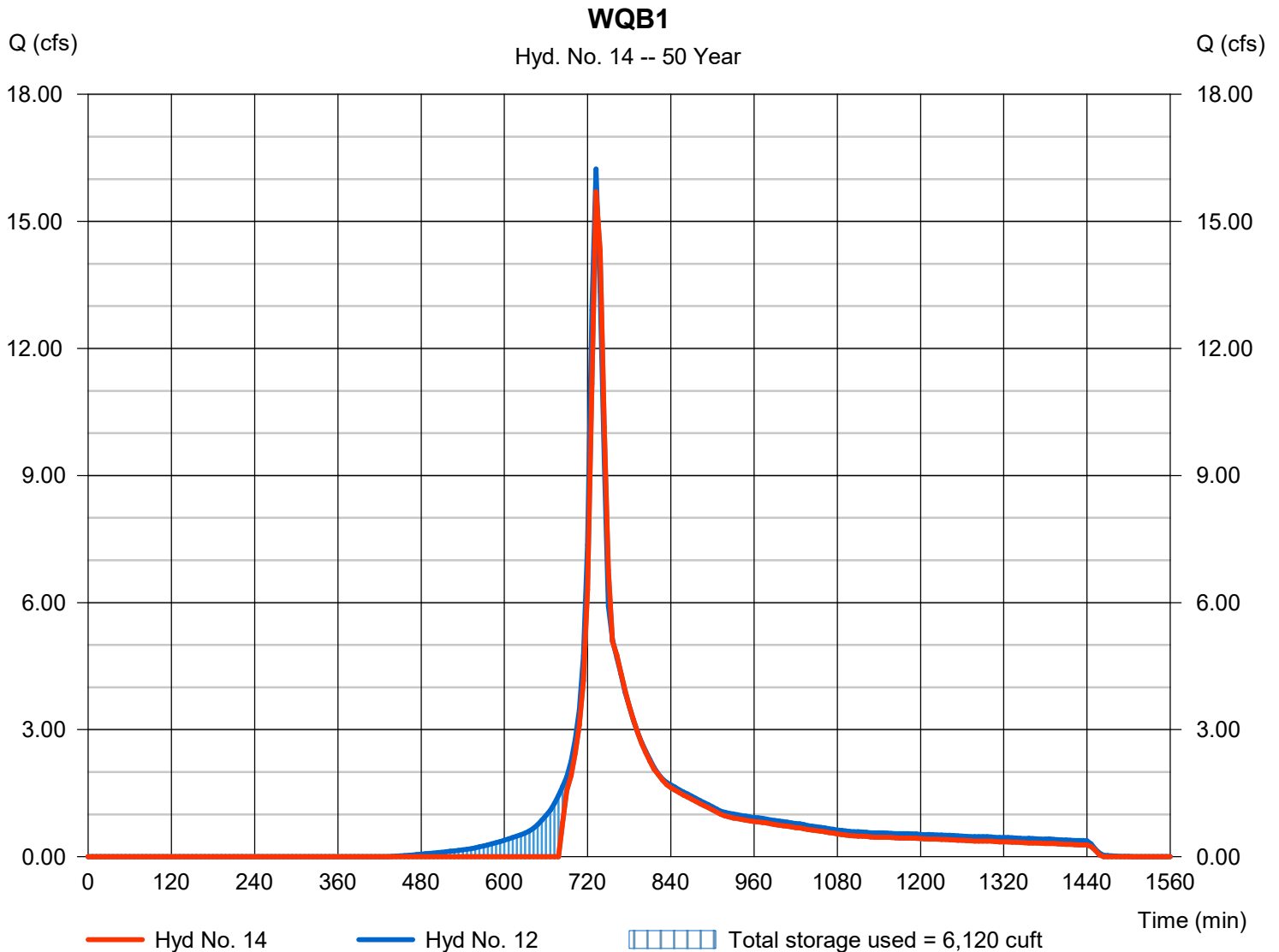
Tuesday, 05 / 6 / 2025

Hyd. No. 14

WQB1

Hydrograph type	= Reservoir	Peak discharge	= 15.70 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 65,745 cuft
Inflow hyd. No.	= 12 - Combined to Future Crossings	Max. Elevation	= 129.40 ft
Reservoir name	= WQB1	Max. Storage	= 6,120 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	159.71	6	750	1,215,255	-----	-----	-----	Existing Watershed #1	
2	SCS Runoff	241.25	6	774	2,444,370	-----	-----	-----	Existing watershed #2	
3	SCS Runoff	159.71	6	750	1,215,255	-----	-----	-----	Proposed Watershed #1	
4	SCS Runoff	241.25	6	774	2,444,370	-----	-----	-----	Proposed Watershed #2	
6	SCS Runoff	1.428	6	732	6,119	-----	-----	-----	Common Drive North Side Swale	
7	SCS Runoff	1.053	6	738	6,514	-----	-----	-----	Common Drive South Side Swale	
8	SCS Runoff	2.111	6	738	13,615	-----	-----	-----	To WQV Basin 2	
9	Reservoir	1.484	6	756	9,895	8	188.10	2,986	WQV2 OUTFLOW	
11	SCS Runoff	19.24	6	732	81,985	-----	-----	-----	To Future Crossing	
12	Combine	19.24	6	732	91,880	9, 11	-----	-----	Combined to Future Crossing	
14	Reservoir	18.70	6	732	81,686	12	129.45	6,343	WQB1	
7885 Hydrographs.gpw					Return Period: 100 Year			Tuesday, 05 / 6 / 2025		

Hydrograph Report

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

Tuesday, 05 / 6 / 2025

Hyd. No. 1

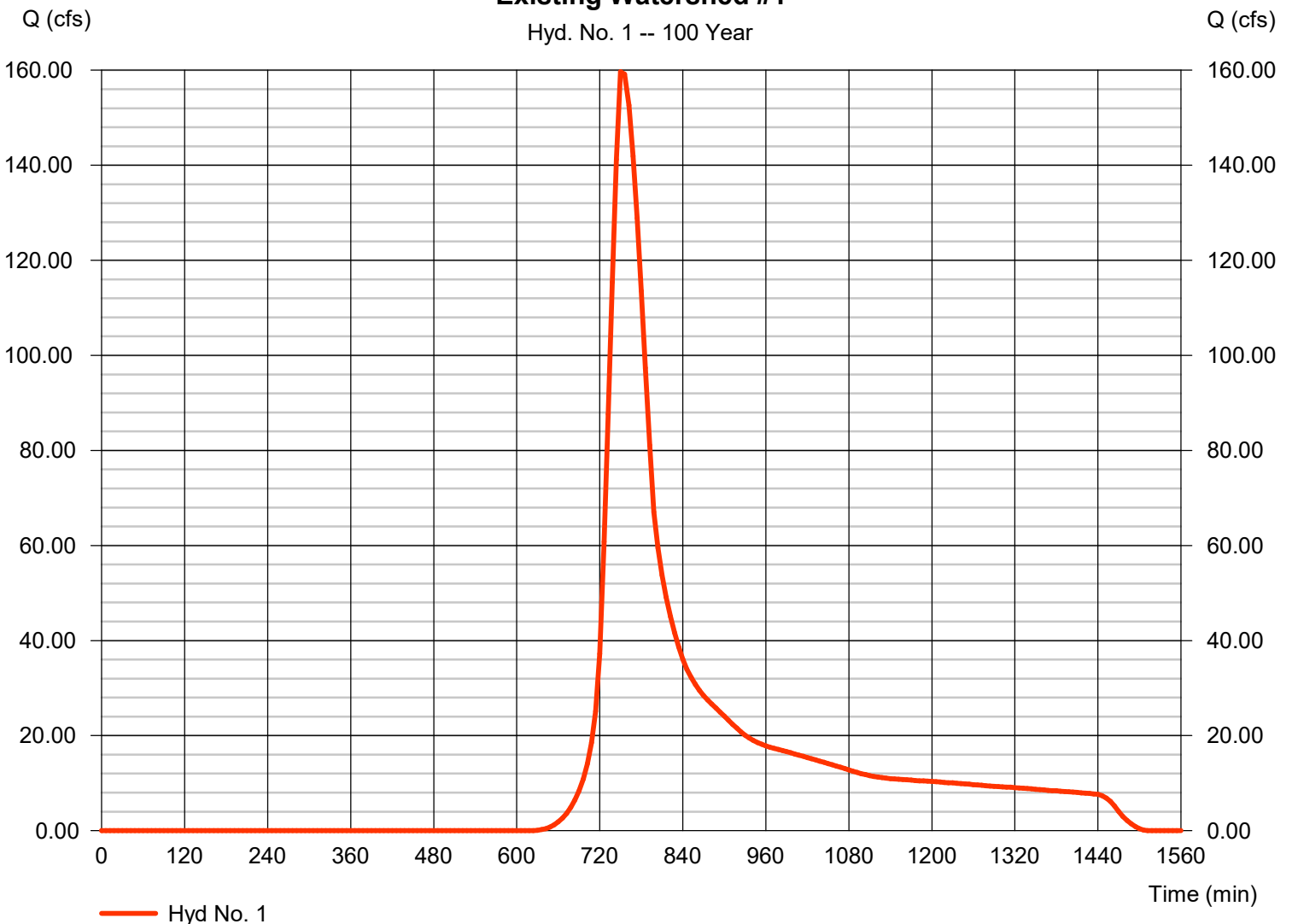
Existing Watershed #1

Hydrograph type	= SCS Runoff	Peak discharge	= 159.71 cfs
Storm frequency	= 100 yrs	Time to peak	= 750 min
Time interval	= 6 min	Hyd. volume	= 1,215,255 cuft
Drainage area	= 129.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 46.90 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Shape factor	= 484

* Composite (Area/CN) = [(129.000 x 55)] / 129.000

Existing Watershed #1

Hyd. No. 1 -- 100 Year



Precipitation Report

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

Tuesday, 05 / 6 / 2025

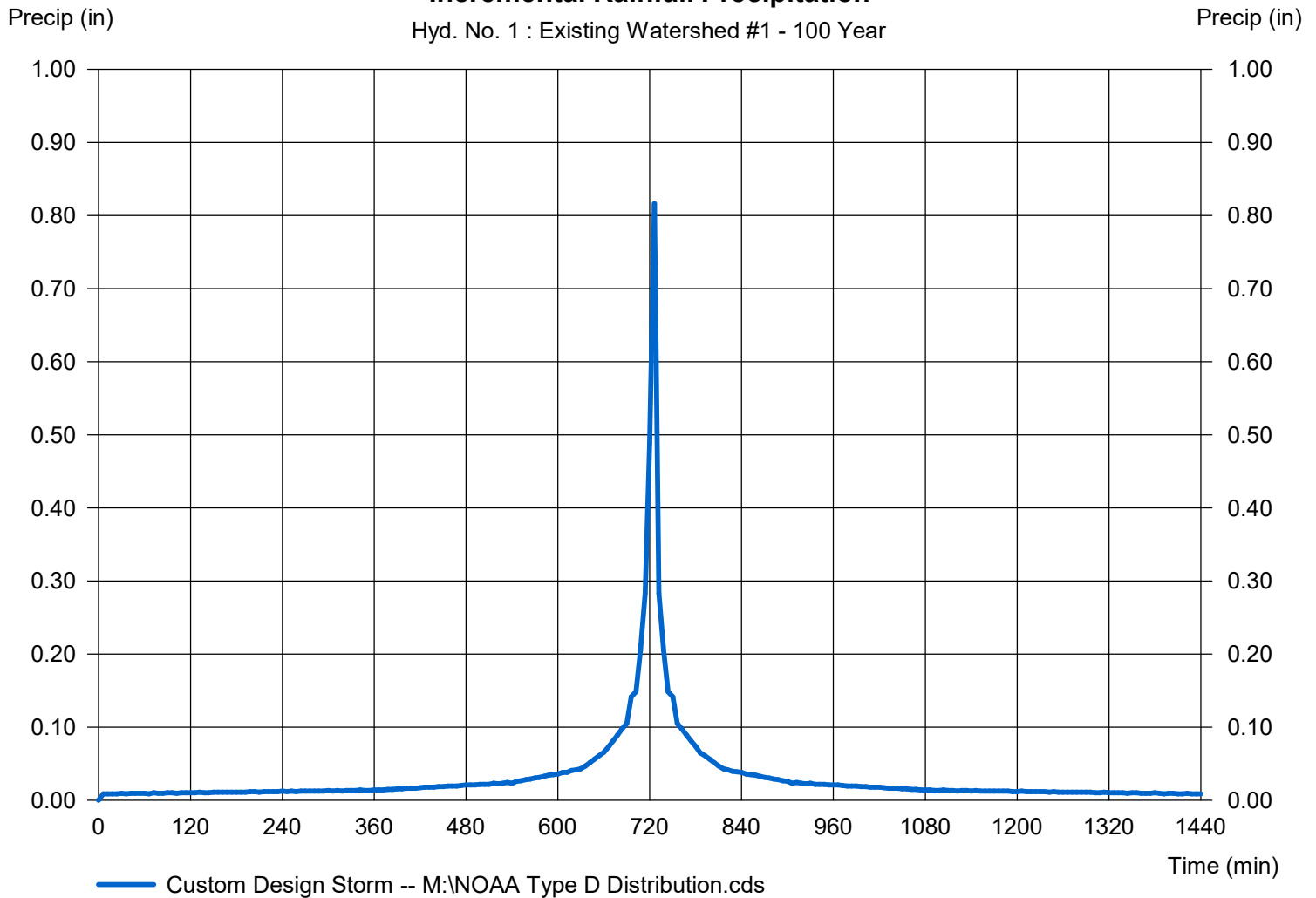
Hyd. No. 1

Existing Watershed #1

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 1 : Existing Watershed #1 - 100 Year



Hydrograph Report

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

Tuesday, 05 / 6 / 2025

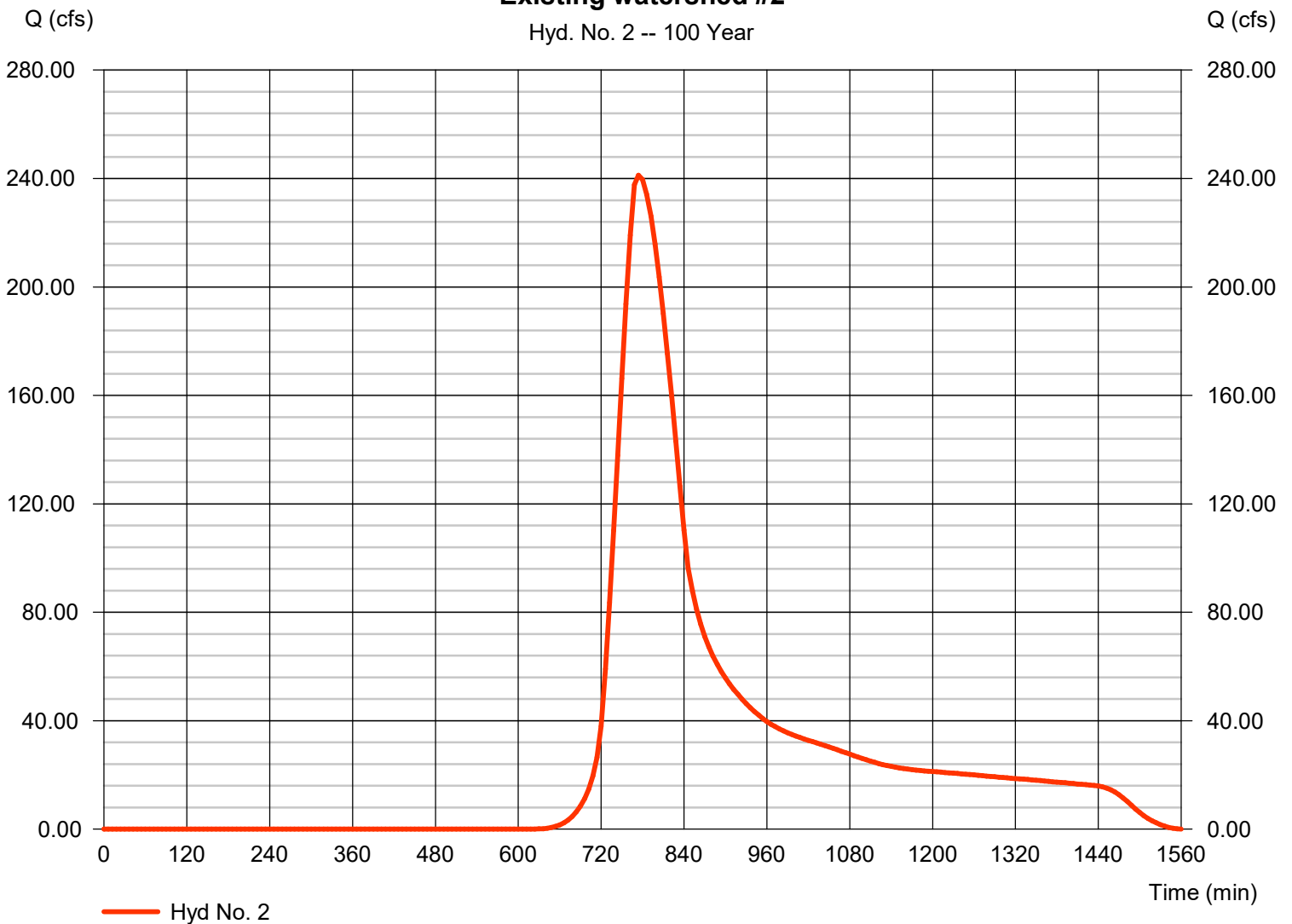
Hyd. No. 2

Existing watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 241.25 cfs
Storm frequency	= 100 yrs	Time to peak	= 774 min
Time interval	= 6 min	Hyd. volume	= 2,444,370 cuft
Drainage area	= 257.000 ac	Curve number	= 55
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Shape factor	= 484

Existing watershed #2

Hyd. No. 2 -- 100 Year



Precipitation Report

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

Tuesday, 05 / 6 / 2025

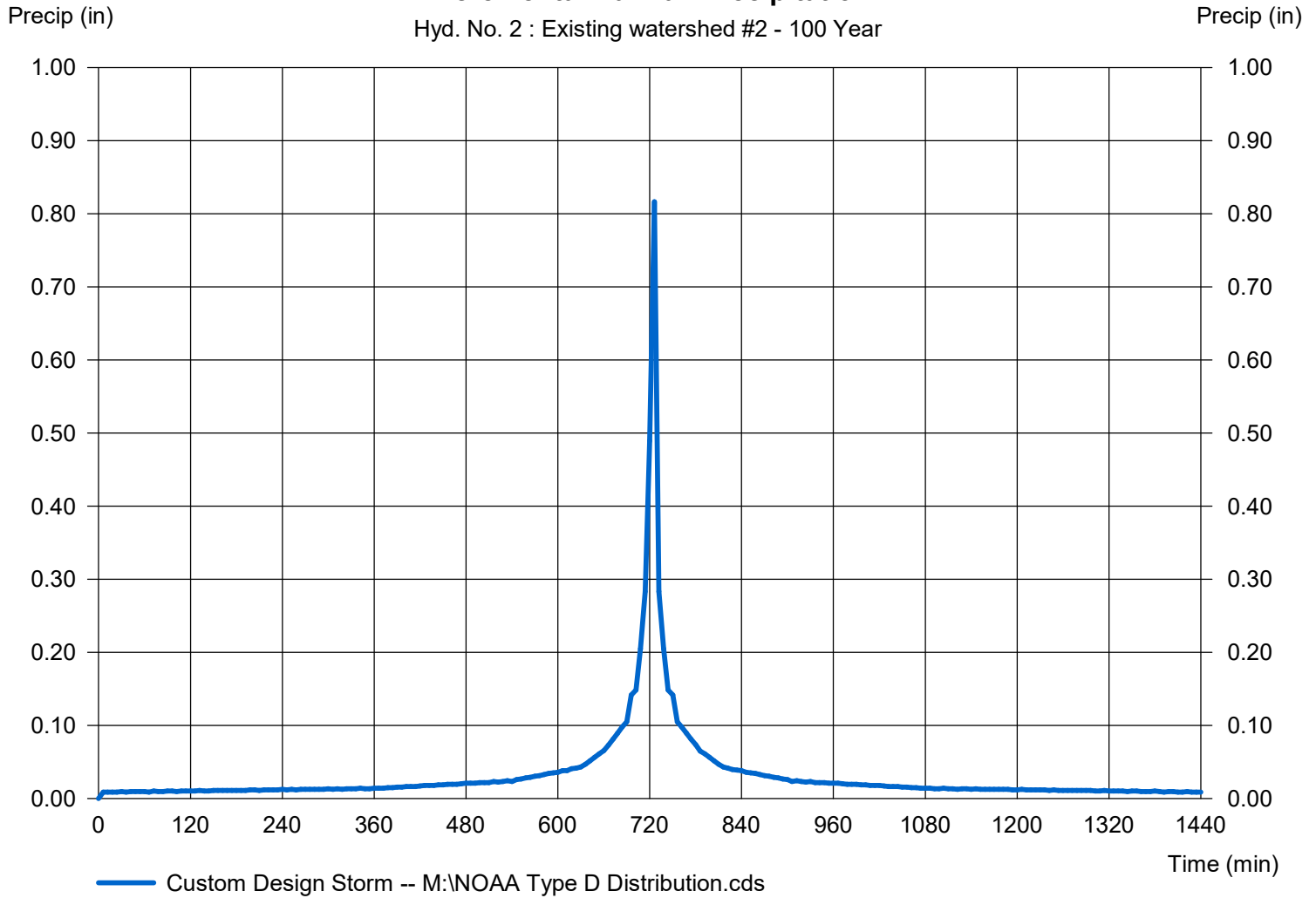
Hyd. No. 2

Existing watershed #2

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 2 : Existing watershed #2 - 100 Year



Hydrograph Report

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

Tuesday, 05 / 6 / 2025

Hyd. No. 3

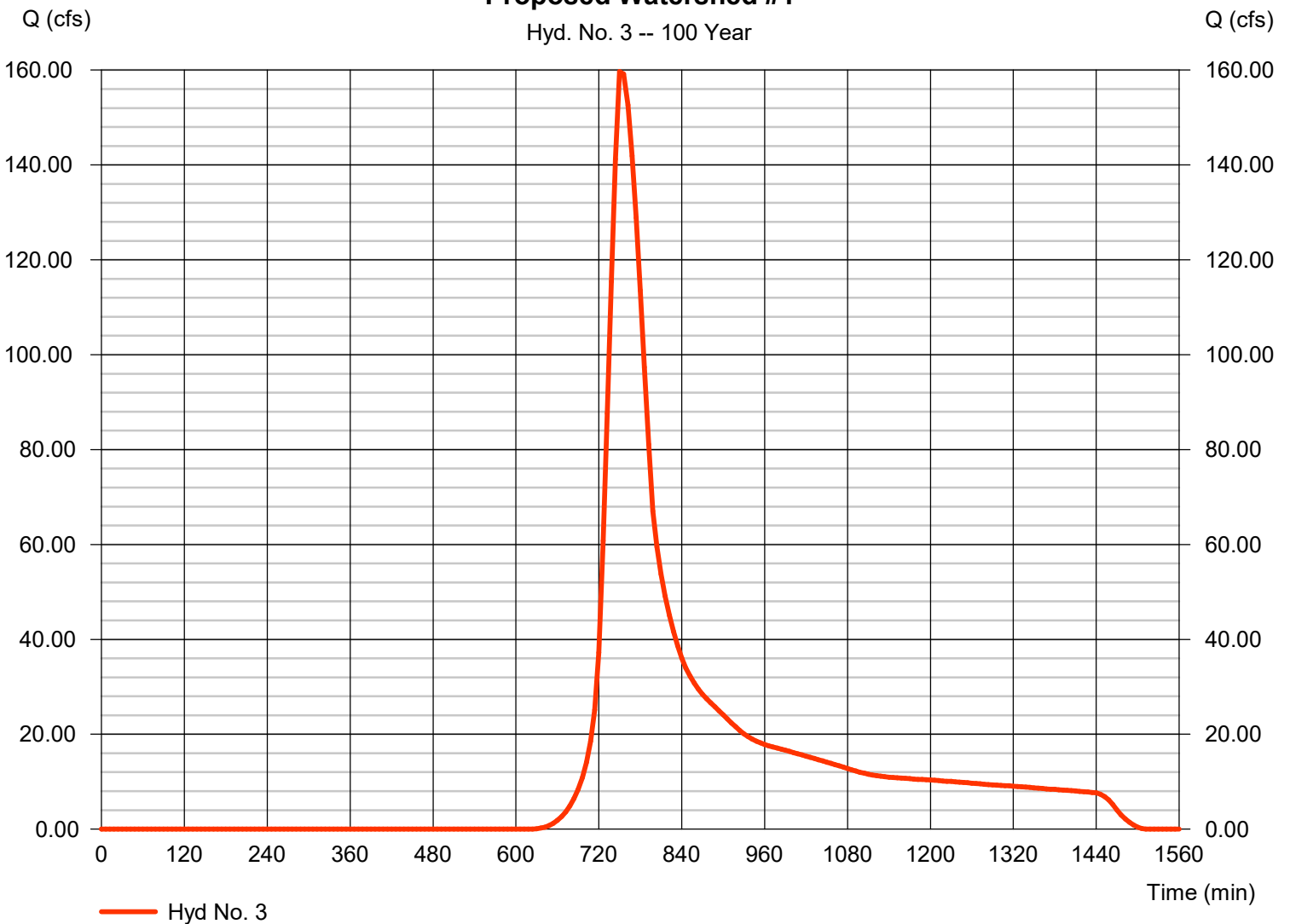
Proposed Watershed #1

Hydrograph type	= SCS Runoff	Peak discharge	= 159.71 cfs
Storm frequency	= 100 yrs	Time to peak	= 750 min
Time interval	= 6 min	Hyd. volume	= 1,215,255 cuft
Drainage area	= 129.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 46.90 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Shape factor	= 484

* Composite (Area/CN) = [(1.000 x 98) + (2.400 x 61) + (125.600 x 55)] / 129.000

Proposed Watershed #1

Hyd. No. 3 -- 100 Year



Precipitation Report

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

Tuesday, 05 / 6 / 2025

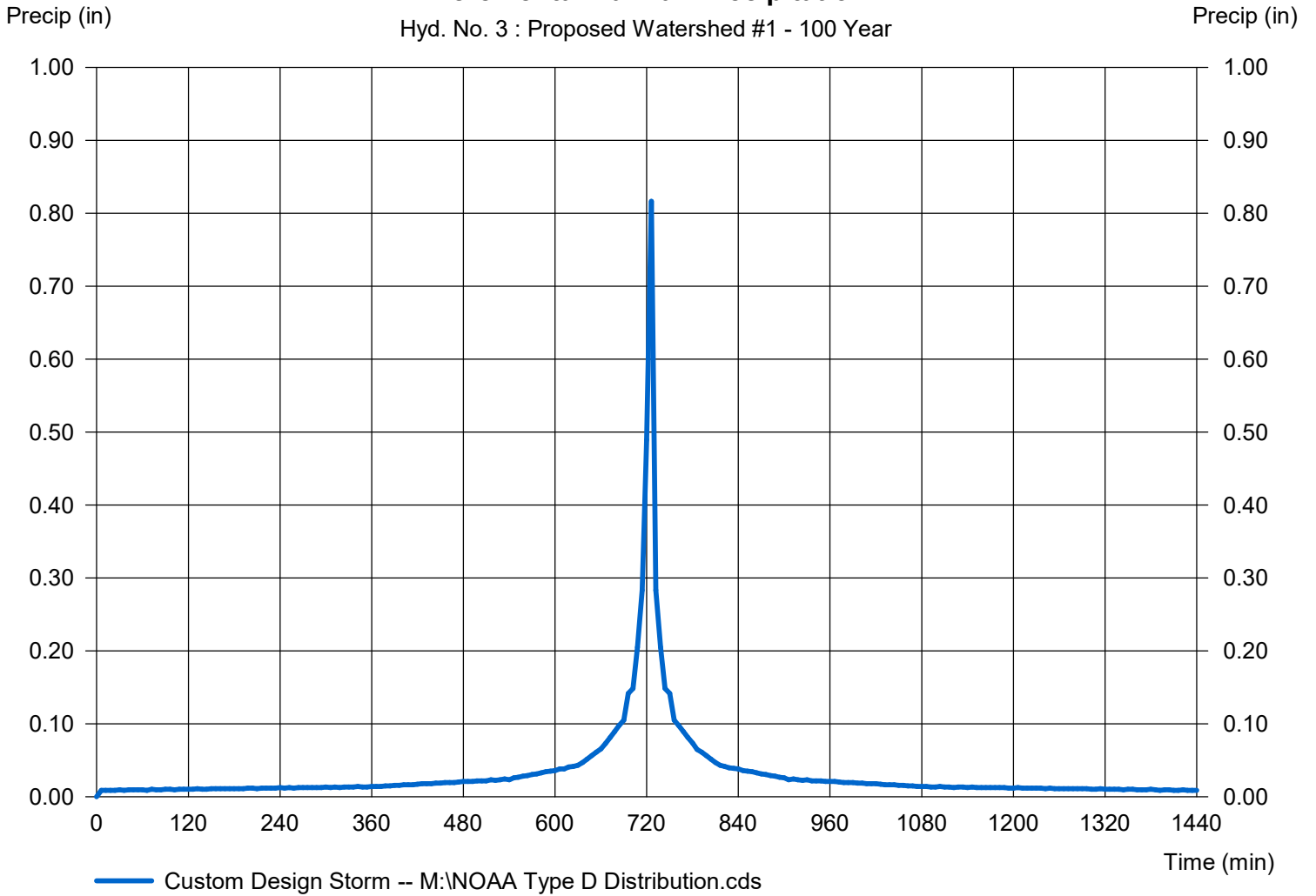
Hyd. No. 3

Proposed Watershed #1

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 3 : Proposed Watershed #1 - 100 Year



Hydrograph Report

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

Tuesday, 05 / 6 / 2025

Hyd. No. 4

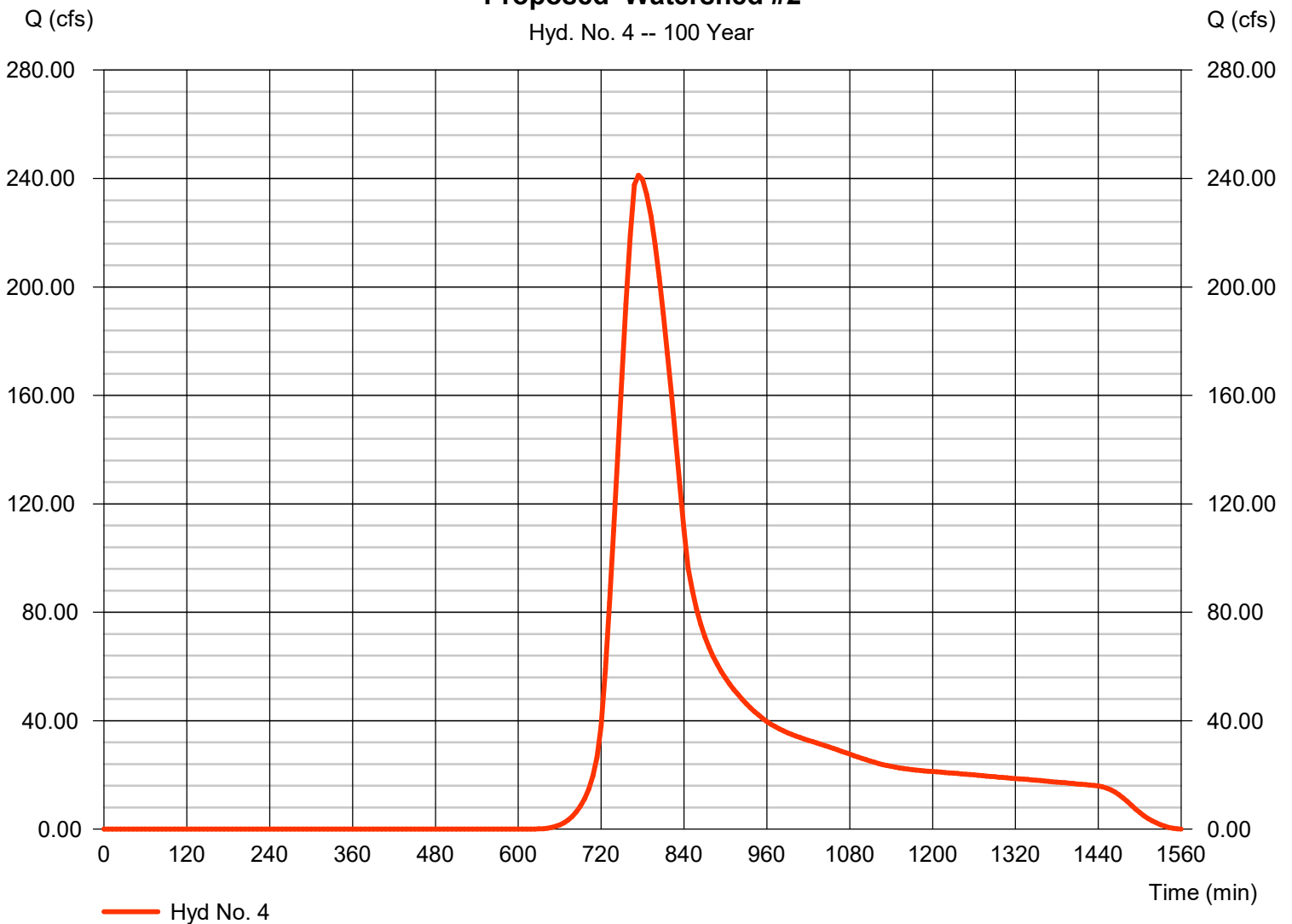
Proposed Watershed #2

Hydrograph type	= SCS Runoff	Peak discharge	= 241.25 cfs
Storm frequency	= 100 yrs	Time to peak	= 774 min
Time interval	= 6 min	Hyd. volume	= 2,444,370 cuft
Drainage area	= 257.000 ac	Curve number	= 55*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 76.40 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.850 x 61) + (1.000 x 98) + (255.150 x 55)] / 257.000

Proposed Watershed #2

Hyd. No. 4 -- 100 Year



Precipitation Report

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

Tuesday, 05 / 6 / 2025

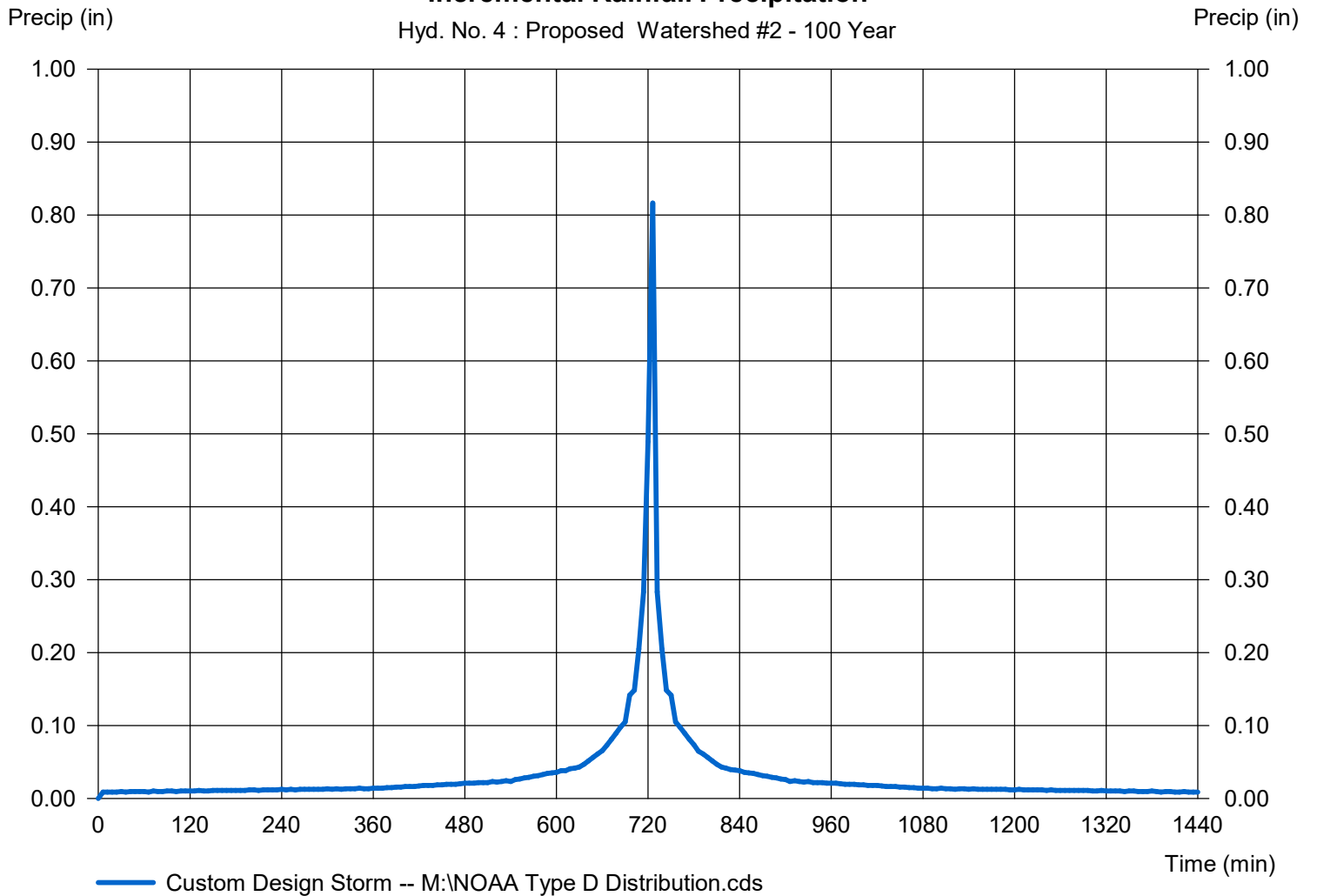
Hyd. No. 4

Proposed Watershed #2

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 4 : Proposed Watershed #2 - 100 Year



Hydrograph Report

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

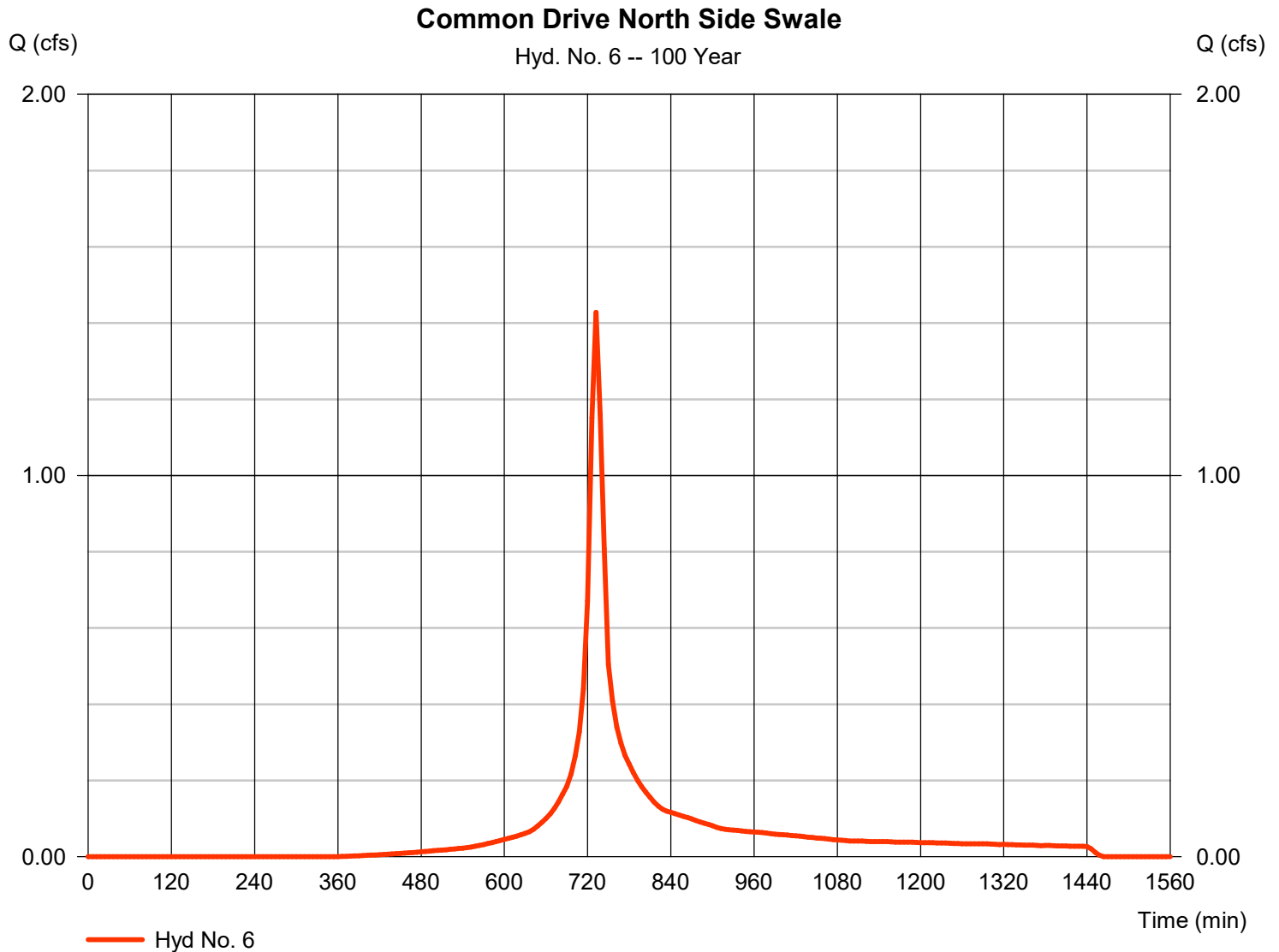
Tuesday, 05 / 6 / 2025

Hyd. No. 6

Common Drive North Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 1.428 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 6,119 cuft
Drainage area	= 0.360 ac	Curve number	= 76*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.80 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.180 x 98) + (0.180 x 54)] / 0.360



Precipitation Report

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

Tuesday, 05 / 6 / 2025

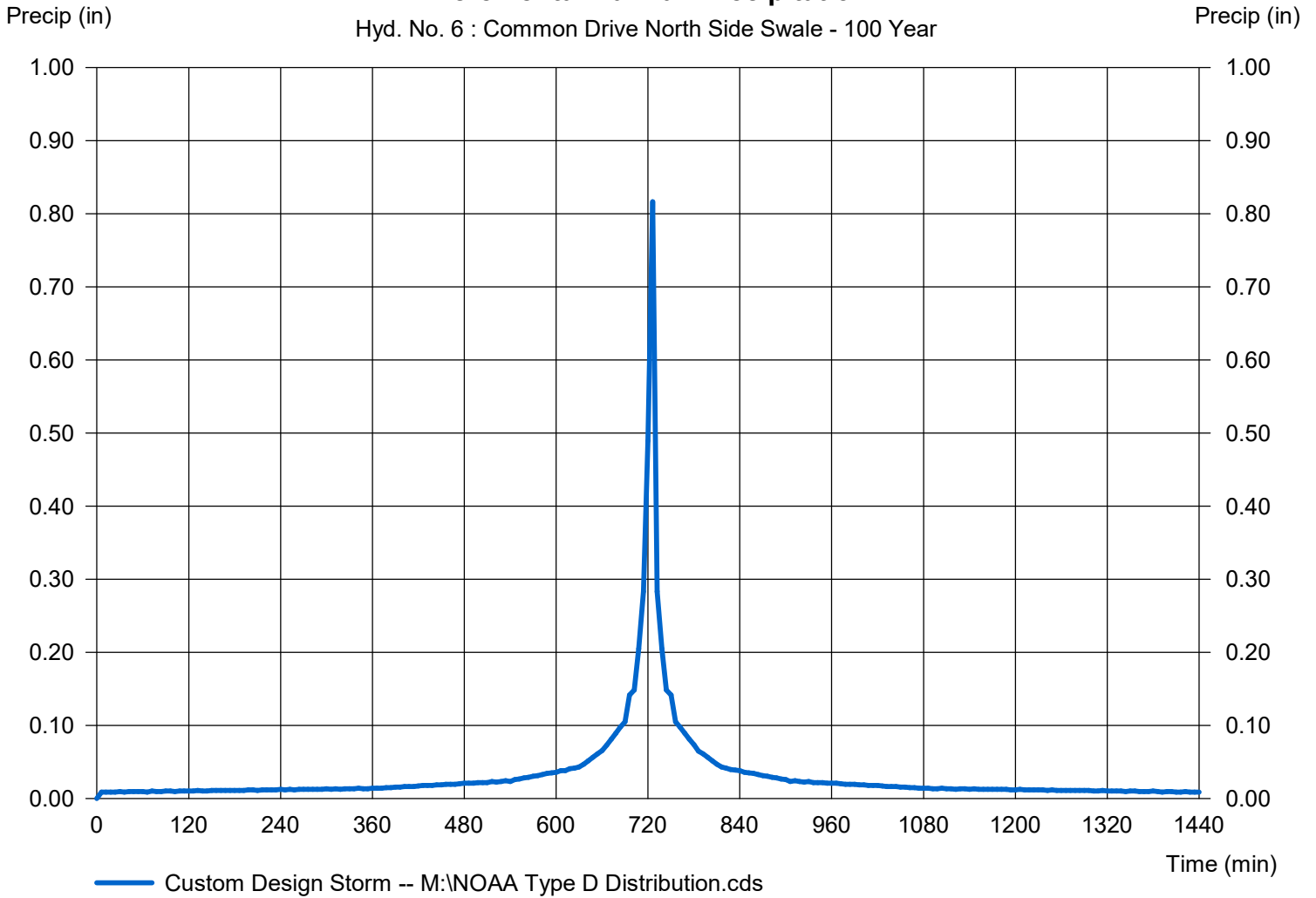
Hyd. No. 6

Common Drive North Side Swale

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 6 : Common Drive North Side Swale - 100 Year



Hydrograph Report

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

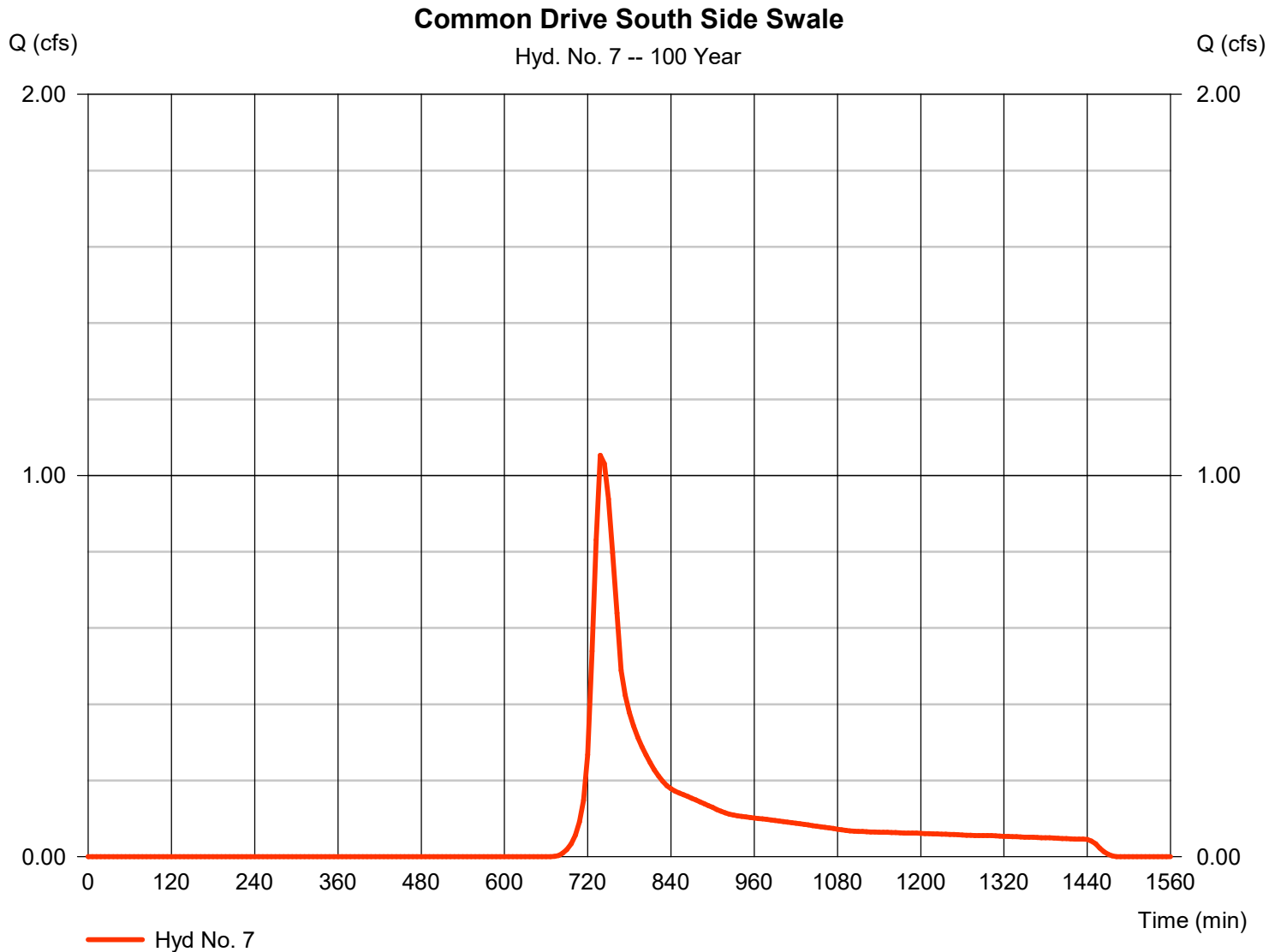
Tuesday, 05 / 6 / 2025

Hyd. No. 7

Common Drive South Side Swale

Hydrograph type	= SCS Runoff	Peak discharge	= 1.053 cfs
Storm frequency	= 100 yrs	Time to peak	= 738 min
Time interval	= 6 min	Hyd. volume	= 6,514 cuft
Drainage area	= 0.880 ac	Curve number	= 49*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.90 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(0.170 x 98) + (0.123 x 54) + (0.590 x 34)] / 0.880



Precipitation Report

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

Tuesday, 05 / 6 / 2025

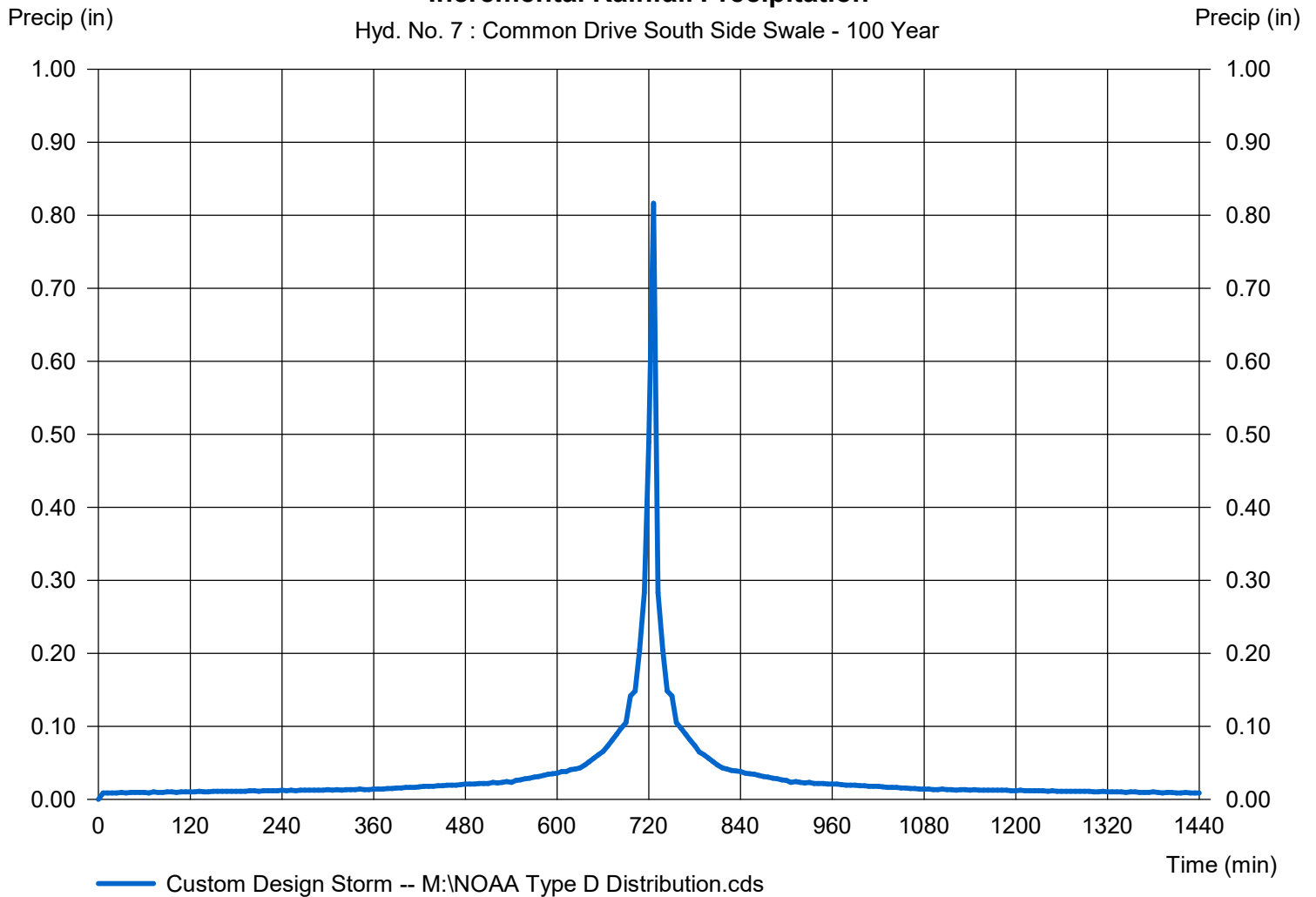
Hyd. No. 7

Common Drive South Side Swale

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 7 : Common Drive South Side Swale - 100 Year



Hydrograph Report

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

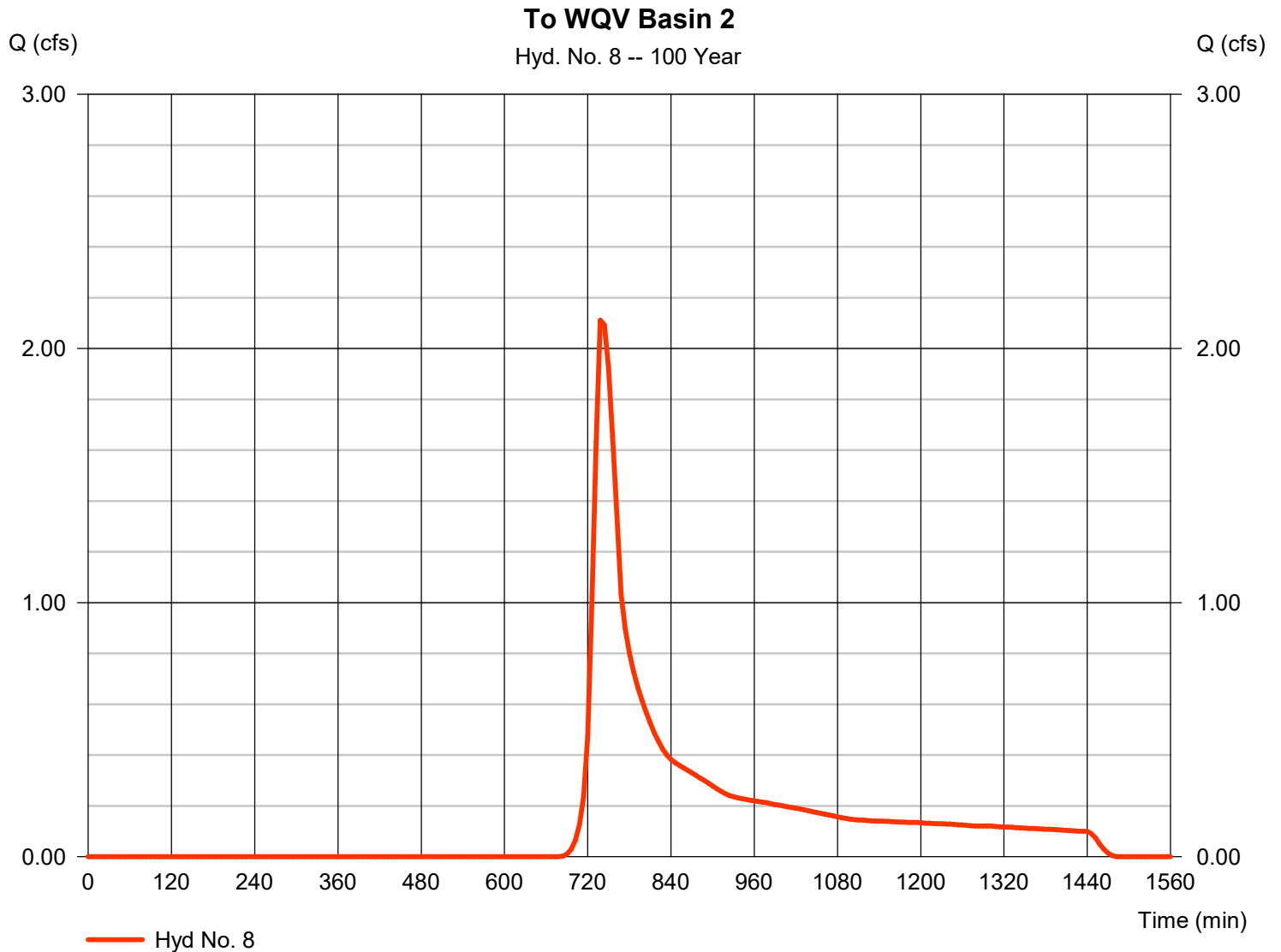
Tuesday, 05 / 6 / 2025

Hyd. No. 8

To WQV Basin 2

Hydrograph type	= SCS Runoff	Peak discharge	= 2.111 cfs
Storm frequency	= 100 yrs	Time to peak	= 738 min
Time interval	= 6 min	Hyd. volume	= 13,615 cuft
Drainage area	= 2.040 ac	Curve number	= 47*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 21.70 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.xls	Slope factor	= 484

* Composite (Area/CN) = [(0.240 x 98) + (0.530 x 54) + (1.270 x 34)] / 2.040



Precipitation Report

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

Tuesday, 05 / 6 / 2025

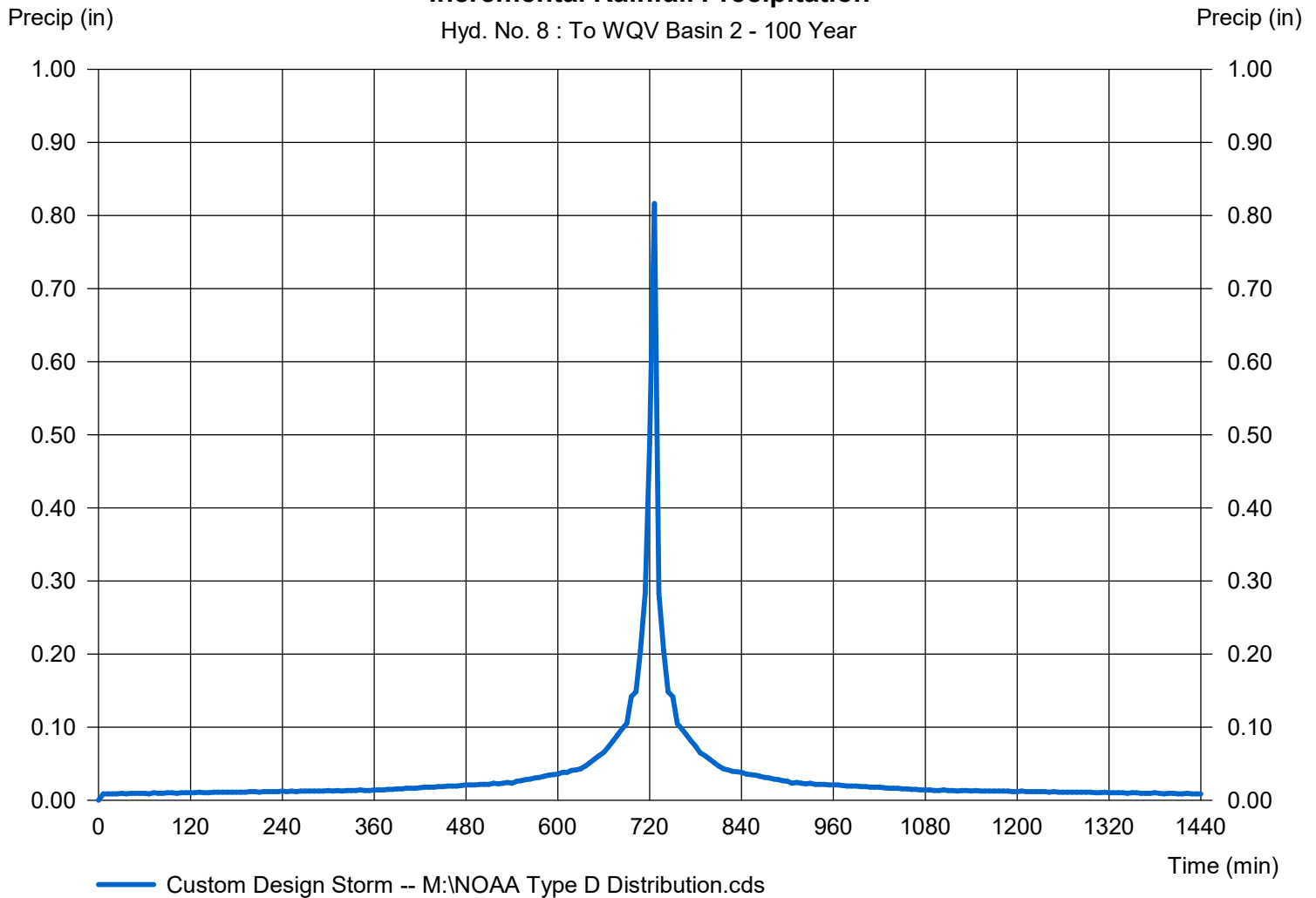
Hyd. No. 8

To WQV Basin 2

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 8 : To WQV Basin 2 - 100 Year



Hydrograph Report

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

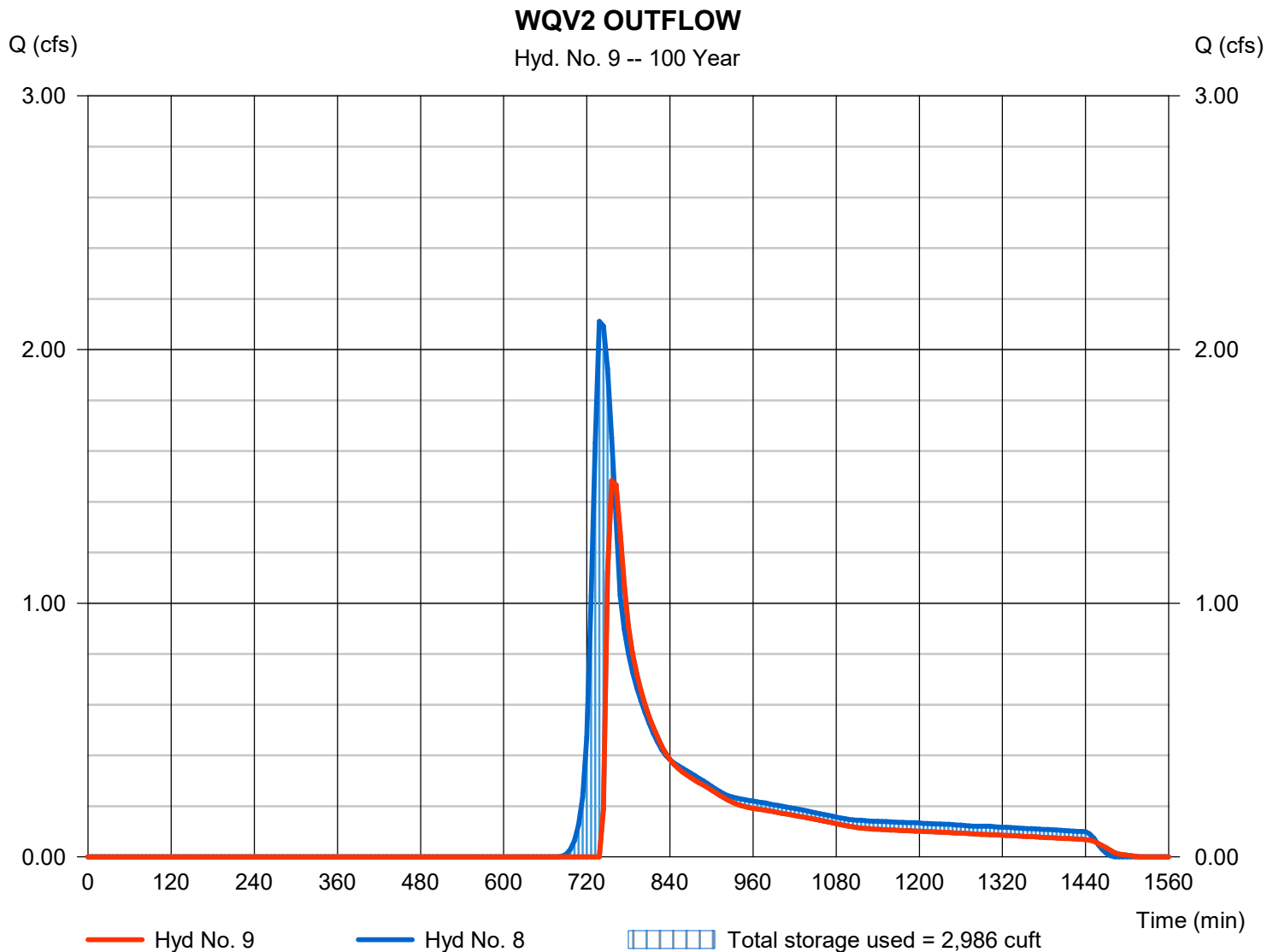
Tuesday, 05 / 6 / 2025

Hyd. No. 9

WQV2 OUTFLOW

Hydrograph type	= Reservoir	Peak discharge	= 1.484 cfs
Storm frequency	= 100 yrs	Time to peak	= 756 min
Time interval	= 6 min	Hyd. volume	= 9,895 cuft
Inflow hyd. No.	= 8 - To WQV Basin 2	Max. Elevation	= 188.10 ft
Reservoir name	= wqv2	Max. Storage	= 2,986 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

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

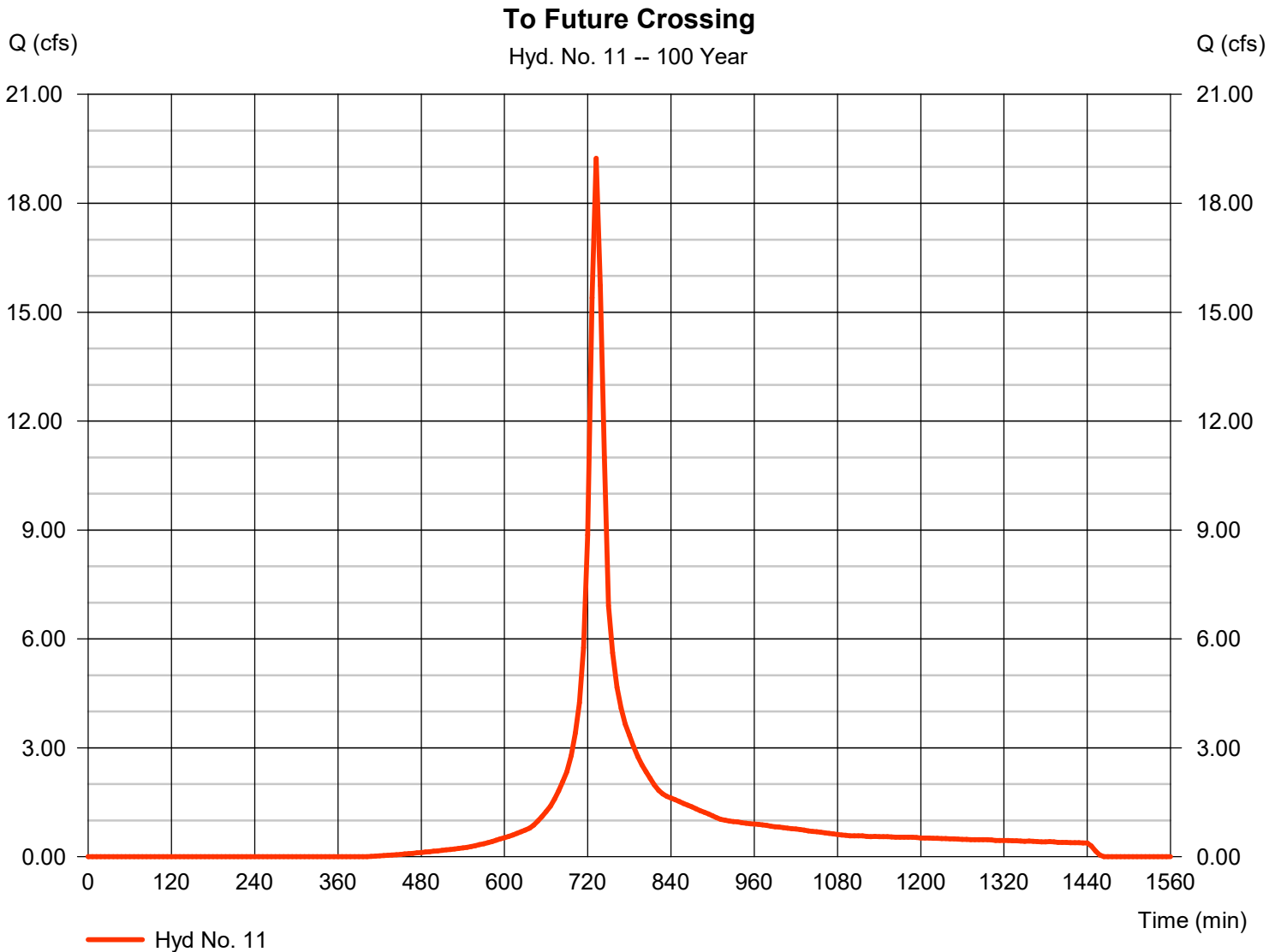
Tuesday, 05 / 6 / 2025

Hyd. No. 11

To Future Crossing

Hydrograph type	= SCS Runoff	Peak discharge	= 19.24 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 81,985 cuft
Drainage area	= 5.180 ac	Curve number	= 73*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.90 min
Total precip.	= 7.82 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.01	Slope factor	= 484

* Composite (Area/CN) = [(3.000 x 98) + (0.550 x 56) + (1.630 x 34)] / 5.180



Precipitation Report

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

Tuesday, 05 / 6 / 2025

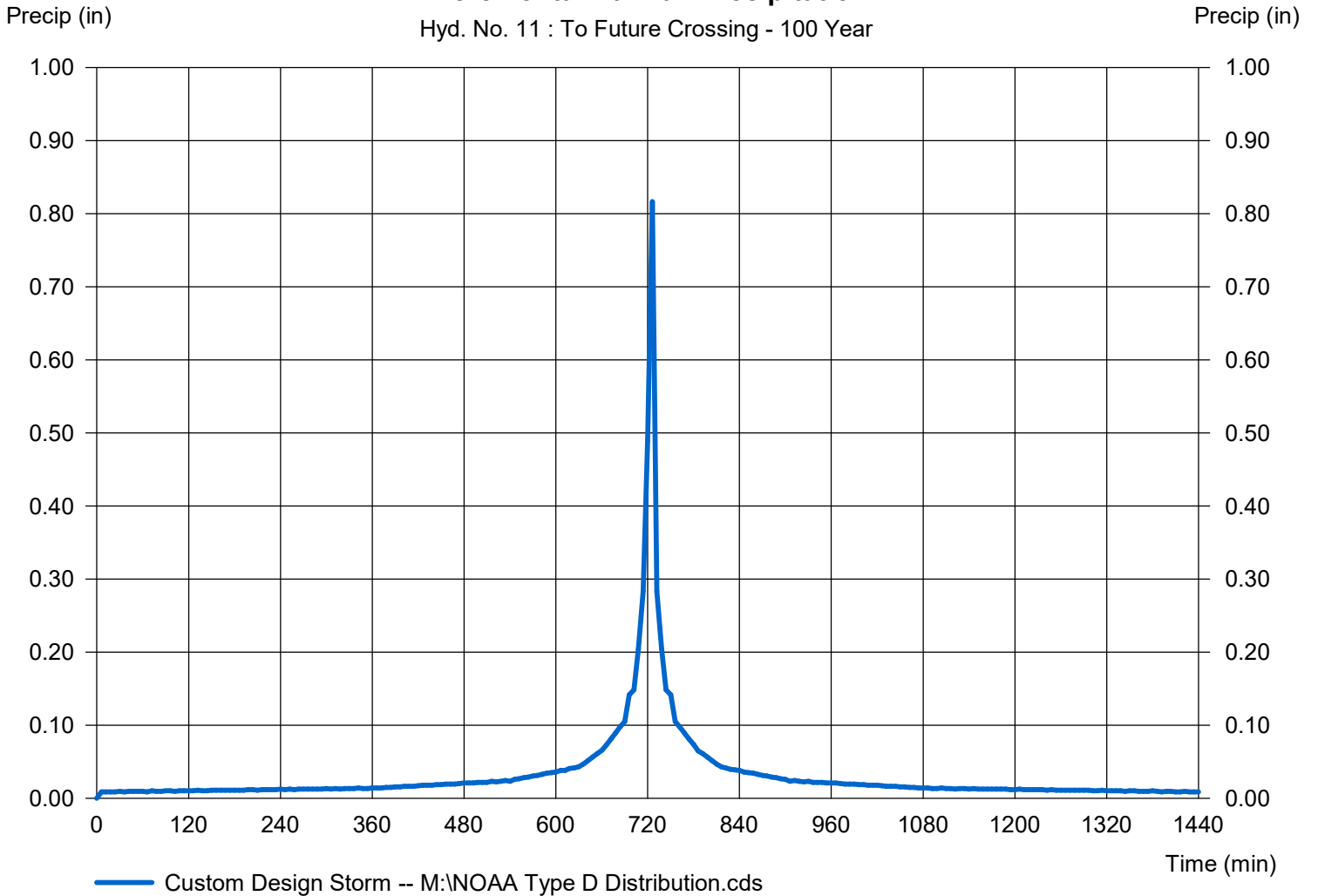
Hyd. No. 11

To Future Crossing

Storm Frequency	= 100 yrs	Time interval	= 6 min
Total precip.	= 7.8200 in	Distribution	= Custom
Storm duration	= M:\NOAA Type D Distribution.cds		

Incremental Rainfall Precipitation

Hyd. No. 11 : To Future Crossing - 100 Year



Hydrograph Report

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

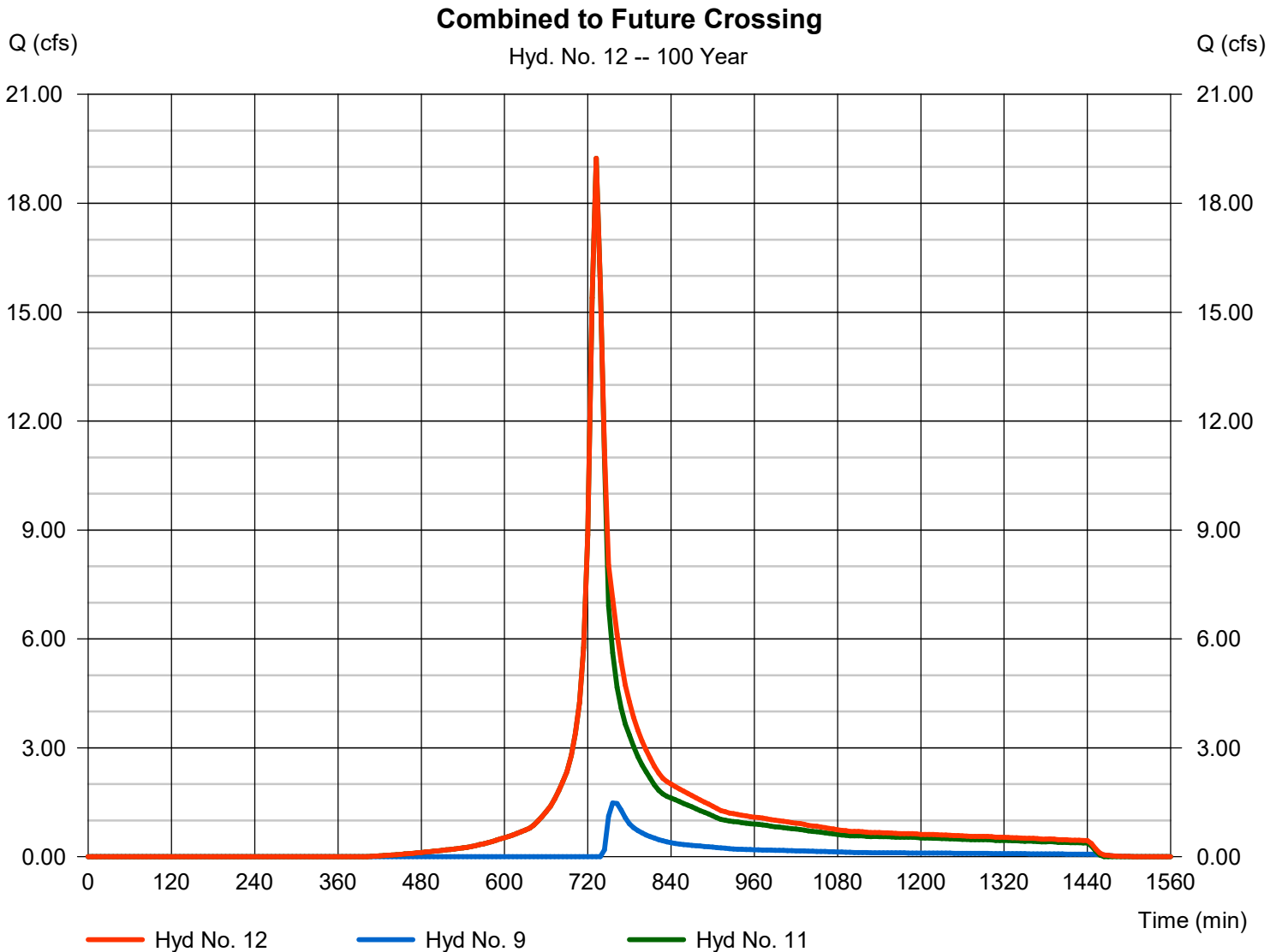
Tuesday, 05 / 6 / 2025

Hyd. No. 12

Combined to Future Crossing

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 6 min
Inflow hyds. = 9, 11

Peak discharge = 19.24 cfs
Time to peak = 732 min
Hyd. volume = 91,880 cuft
Contrib. drain. area = 5.180 ac



Hydrograph Report

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

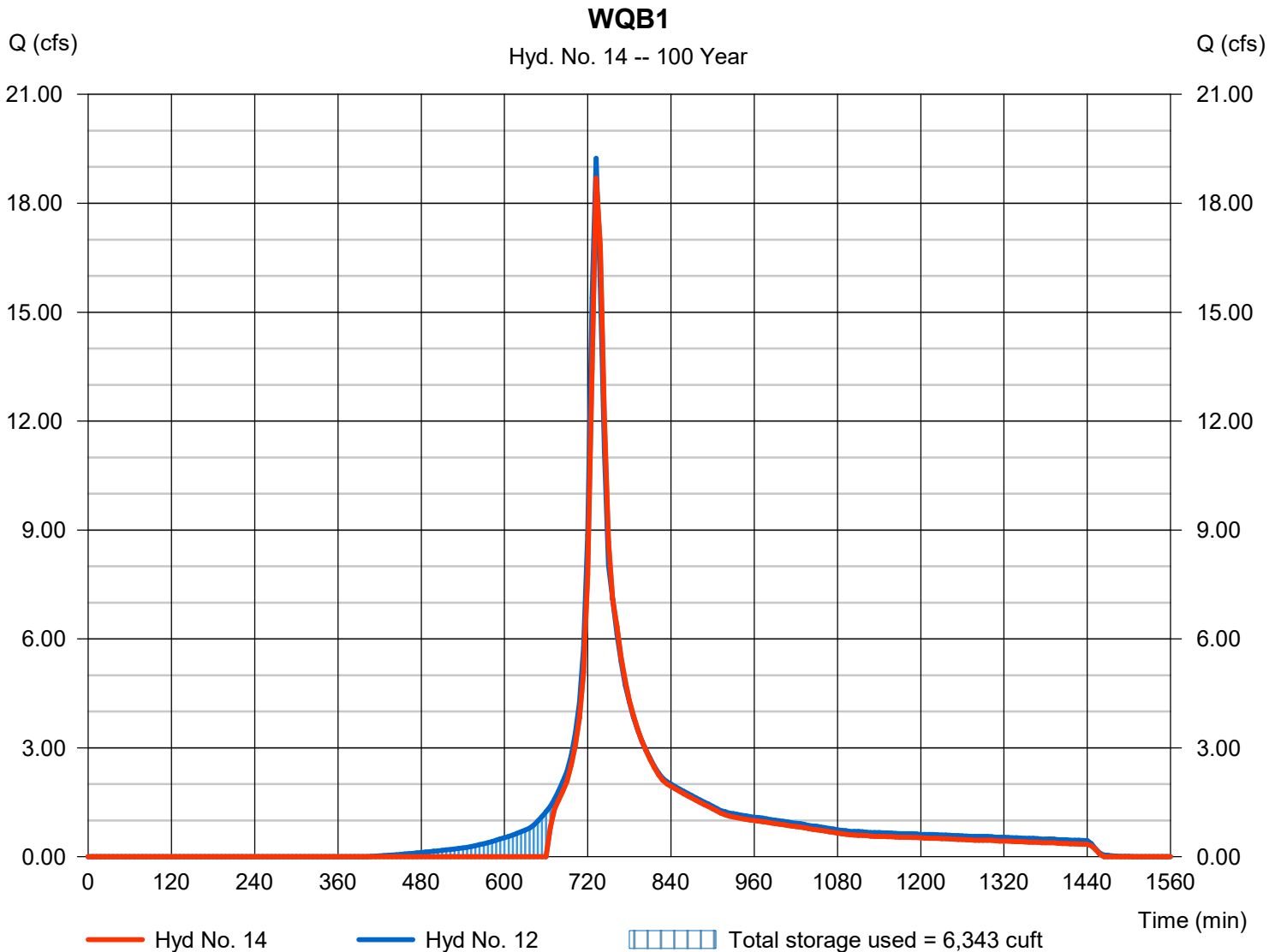
Tuesday, 05 / 6 / 2025

Hyd. No. 14

WQB1

Hydrograph type	= Reservoir	Peak discharge	= 18.70 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 6 min	Hyd. volume	= 81,686 cuft
Inflow hyd. No.	= 12 - Combined to Future Crossings	Max. Elevation	= 129.45 ft
Reservoir name	= WQB1	Max. Storage	= 6,343 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, 05 / 6 / 2025

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	18.1733	3.5000	0.7010	-----
2	22.7904	3.9000	0.7142	-----
3	0.0000	0.0000	0.0000	-----
5	26.8118	3.1000	0.7005	-----
10	32.8535	3.8000	0.7098	-----
25	38.4672	3.6000	0.7049	-----
50	43.8334	3.7000	0.7074	-----
100	48.6510	3.7000	0.7060	-----

File name: Brooklyn 2024.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.05	2.93	2.35	1.99	1.74	1.55	1.41	1.29	1.20	1.12	1.05	0.99
2	4.78	3.48	2.79	2.36	2.06	1.84	1.67	1.53	1.42	1.32	1.24	1.17
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	6.19	4.42	3.53	2.97	2.59	2.31	2.09	1.92	1.78	1.66	1.56	1.47
10	7.02	5.10	4.09	3.46	3.02	2.70	2.45	2.25	2.08	1.94	1.82	1.72
25	8.44	6.11	4.90	4.14	3.62	3.23	2.93	2.69	2.49	2.32	2.18	2.06
50	9.49	6.88	5.52	4.67	4.08	3.64	3.30	3.03	2.81	2.62	2.46	2.32
100	10.56	7.67	6.15	5.21	4.55	4.06	3.68	3.38	3.13	2.92	2.74	2.59

Tc = time in minutes. Values may exceed 60.

Precip. file name: M:\7000\7300\7386 Reynolds St. Improvements\Studies-Calculations\Danielson storms.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	2.89	3.45	0.00	4.37	4.15	6.19	6.98	7.82
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	2.89	3.45	0.00	4.37	5.14	6.19	6.98	7.82

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Channel Report

Common Drive North Side Swale

Trapezoidal

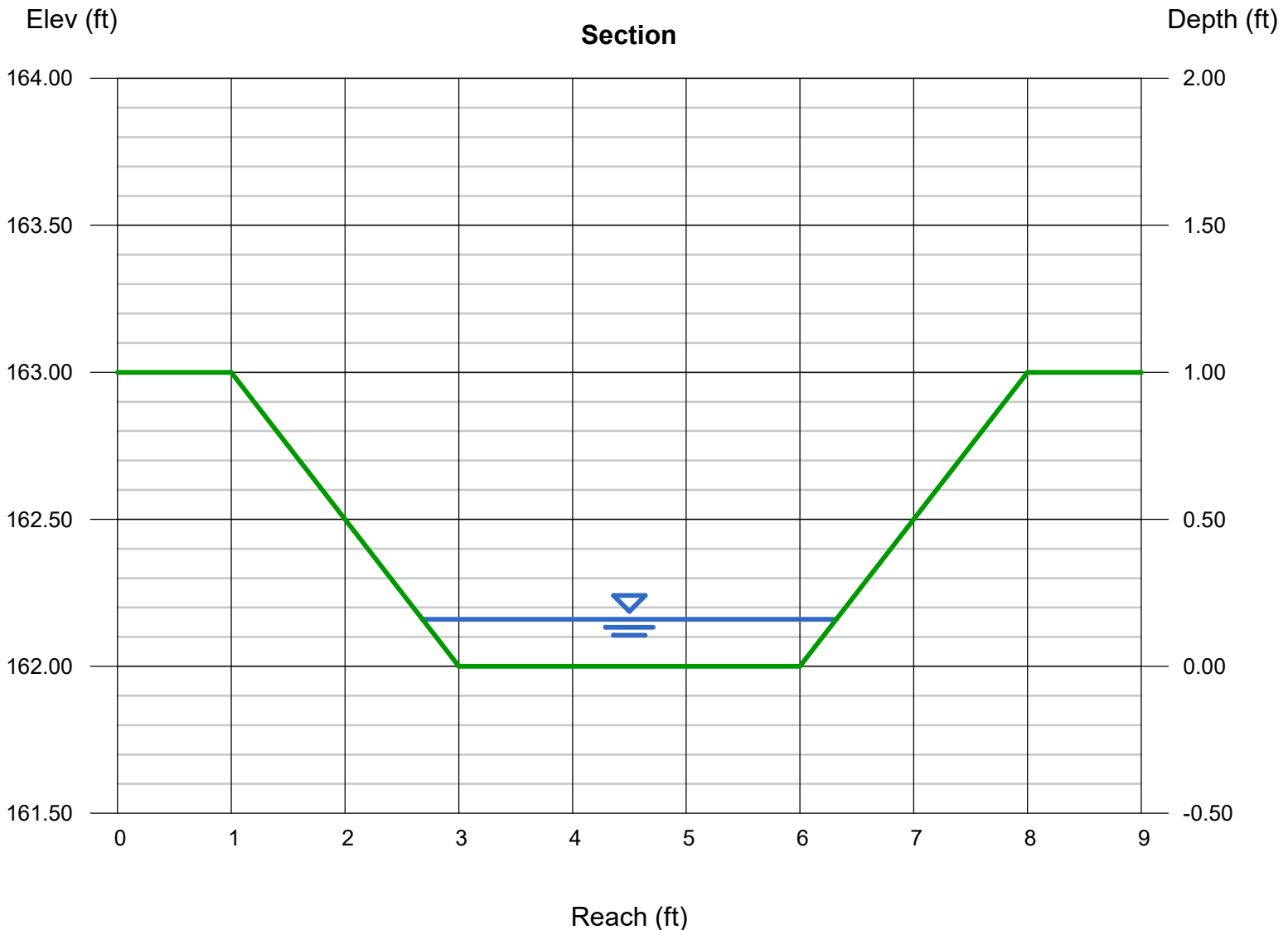
Bottom Width (ft) = 3.00
Side Slopes (z:1) = 2.00, 2.00
Total Depth (ft) = 1.00
Invert Elev (ft) = 162.00
Slope (%) = 8.50
N-Value = 0.040

Highlighted

Depth (ft) = 0.16
Q (cfs) = 1.430
Area (sqft) = 0.53
Velocity (ft/s) = 2.69
Wetted Perim (ft) = 3.72
Crit Depth, Yc (ft) = 0.19
Top Width (ft) = 3.64
EGL (ft) = 0.27

Calculations

Compute by: Known Q
Known Q (cfs) = 1.43



Channel Report

Common Drive North Side Swale

Trapezoidal

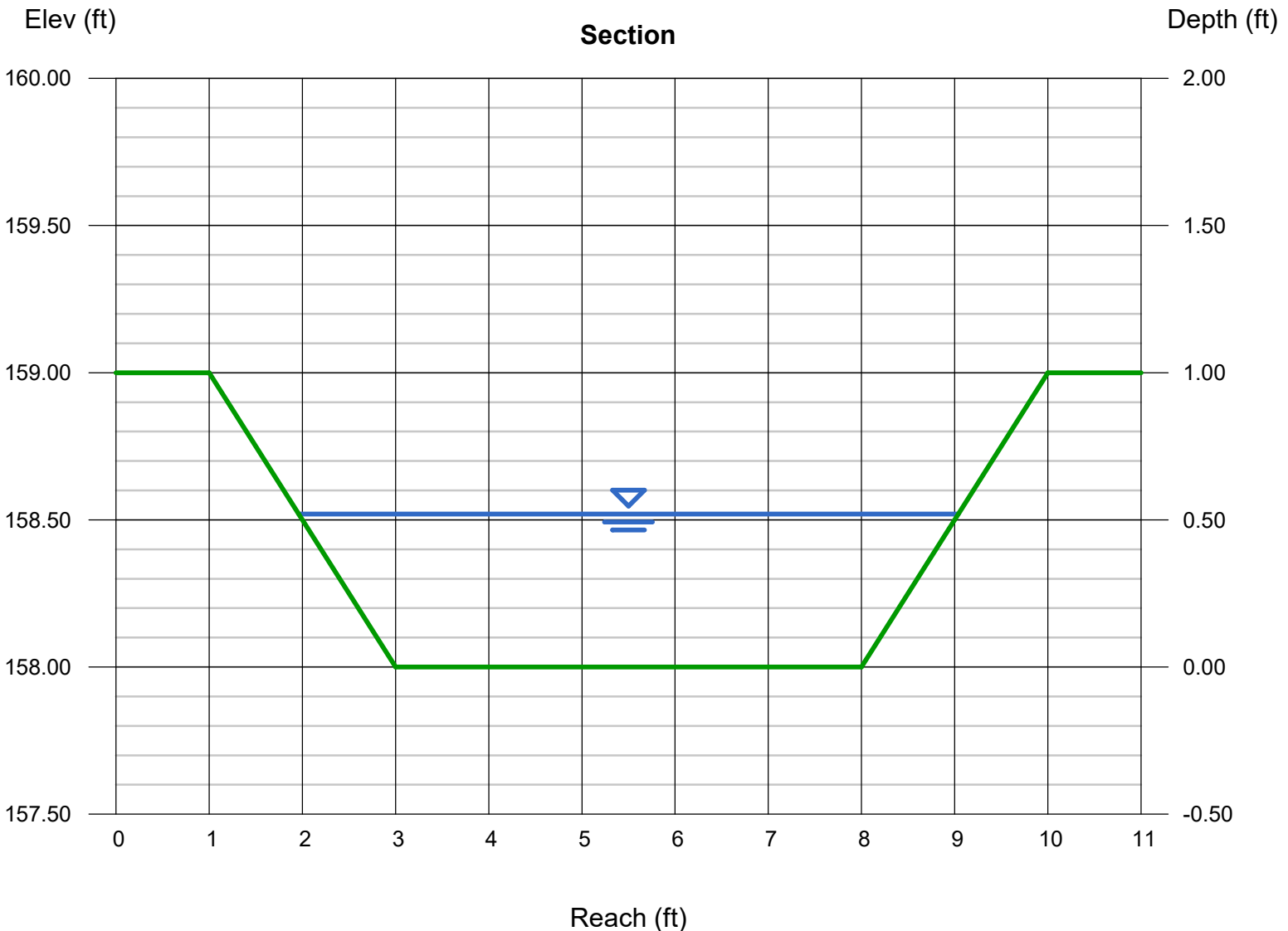
Bottom Width (ft) = 5.00
Side Slopes (z:1) = 2.00, 2.00
Total Depth (ft) = 1.00
Invert Elev (ft) = 158.00
Slope (%) = 8.50
N-Value = 0.040

Highlighted

Depth (ft) = 0.52
Q (cfs) = 19.24
Area (sqft) = 3.14
Velocity (ft/s) = 6.13
Wetted Perim (ft) = 7.33
Crit Depth, Yc (ft) = 0.70
Top Width (ft) = 7.08
EGL (ft) = 1.10

Calculations

Compute by: Known Q
Known Q (cfs) = 19.24



Culvert Report

Pipe Leave WQV2

Invert Elev Dn (ft) = 182.00
Pipe Length (ft) = 210.00
Slope (%) = 1.19
Invert Elev Up (ft) = 184.50
Rise (in) = 12.0
Shape = Circular
Span (in) = 12.0
No. Barrels = 1
n-Value = 0.012
Culvert Type = Circular Concrete
Culvert Entrance = Groove end projecting (C)
Coeff. K,M,c,Y,k = 0.0045, 2, 0.0317, 0.69, 0.2

Embankment

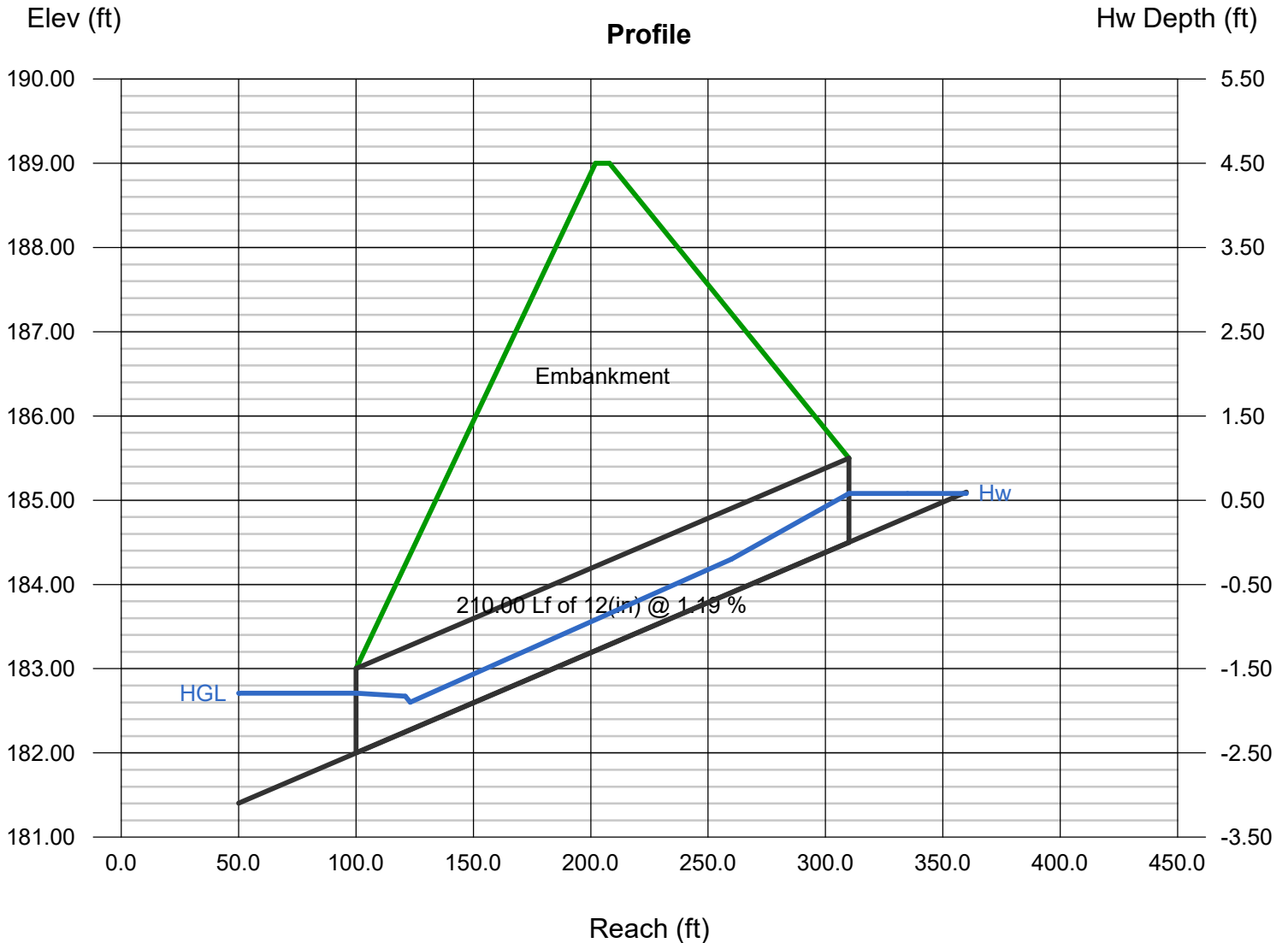
Top Elevation (ft) = 189.00
Top Width (ft) = 6.00
Crest Width (ft) = 0.00

Calculations

Qmin (cfs) = 1.00
Qmax (cfs) = 1.60
Tailwater Elev (ft) = (dc+D)/2

Highlighted

Qtot (cfs) = 1.00
Qpipe (cfs) = 1.00
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 1.68
Veloc Up (ft/s) = 3.20
HGL Dn (ft) = 182.71
HGL Up (ft) = 184.92
Hw Elev (ft) = 185.08
Hw/D (ft) = 0.58
Flow Regime = Inlet Control



Culvert Report

Future Crossing

Invert Elev Dn (ft)	= 144.00
Pipe Length (ft)	= 63.00
Slope (%)	= 7.94
Invert Elev Up (ft)	= 149.00
Rise (in)	= 15.0
Shape	= Circular
Span (in)	= 15.0
No. Barrels	= 3
n-Value	= 0.012
Culvert Type	= Circular Concrete
Culvert Entrance	= Groove end projecting (C)
Coeff. K,M,c,Y,k	= 0.0045, 2, 0.0317, 0.69, 0.2

Calculations

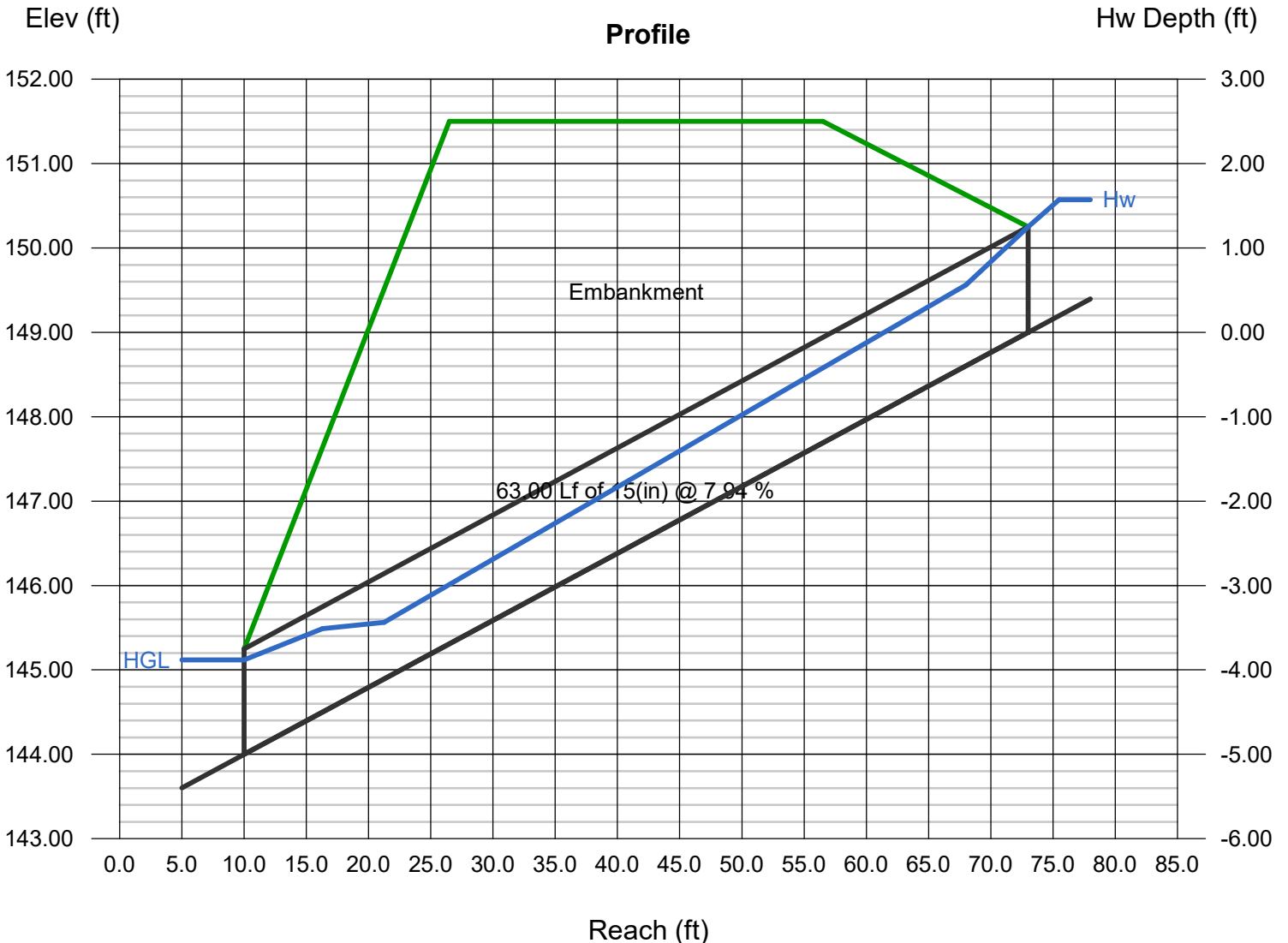
Qmin (cfs)	= 18.00
Qmax (cfs)	= 20.00
Tailwater Elev (ft)	= (dc+D)/2

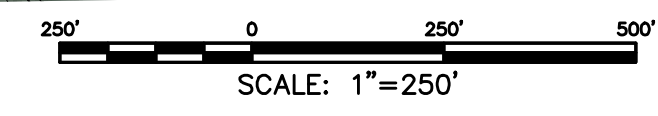
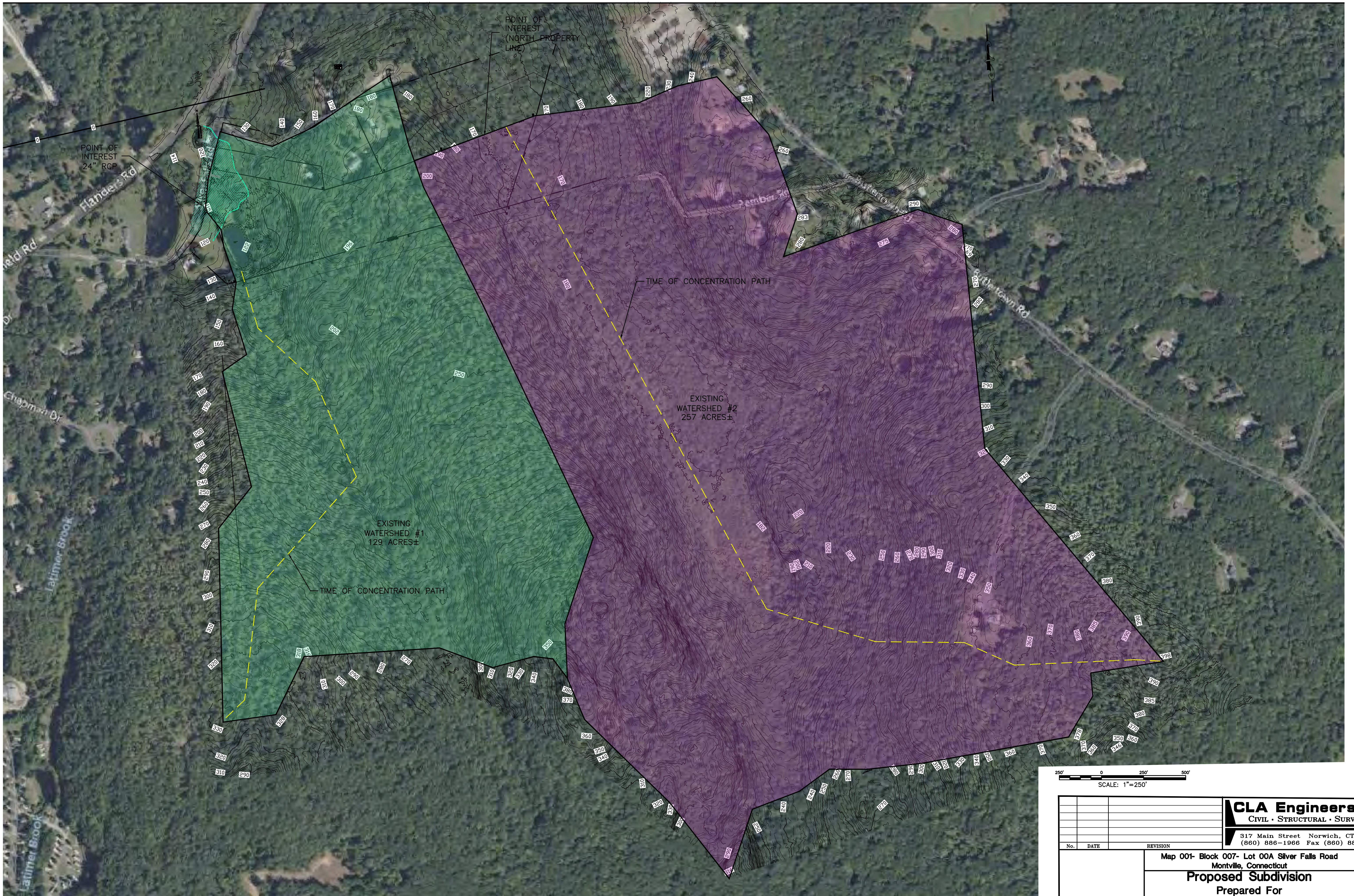
Highlighted

Qtotal (cfs)	= 18.00
Qpipe (cfs)	= 18.00
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 5.17
Veloc Up (ft/s)	= 5.76
HGL Dn (ft)	= 145.12
HGL Up (ft)	= 149.99
Hw Elev (ft)	= 150.57
Hw/D (ft)	= 1.26
Flow Regime	= Inlet Control

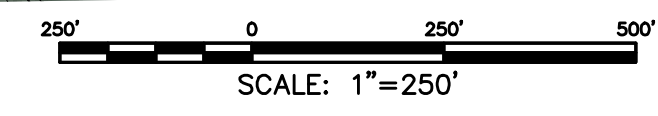
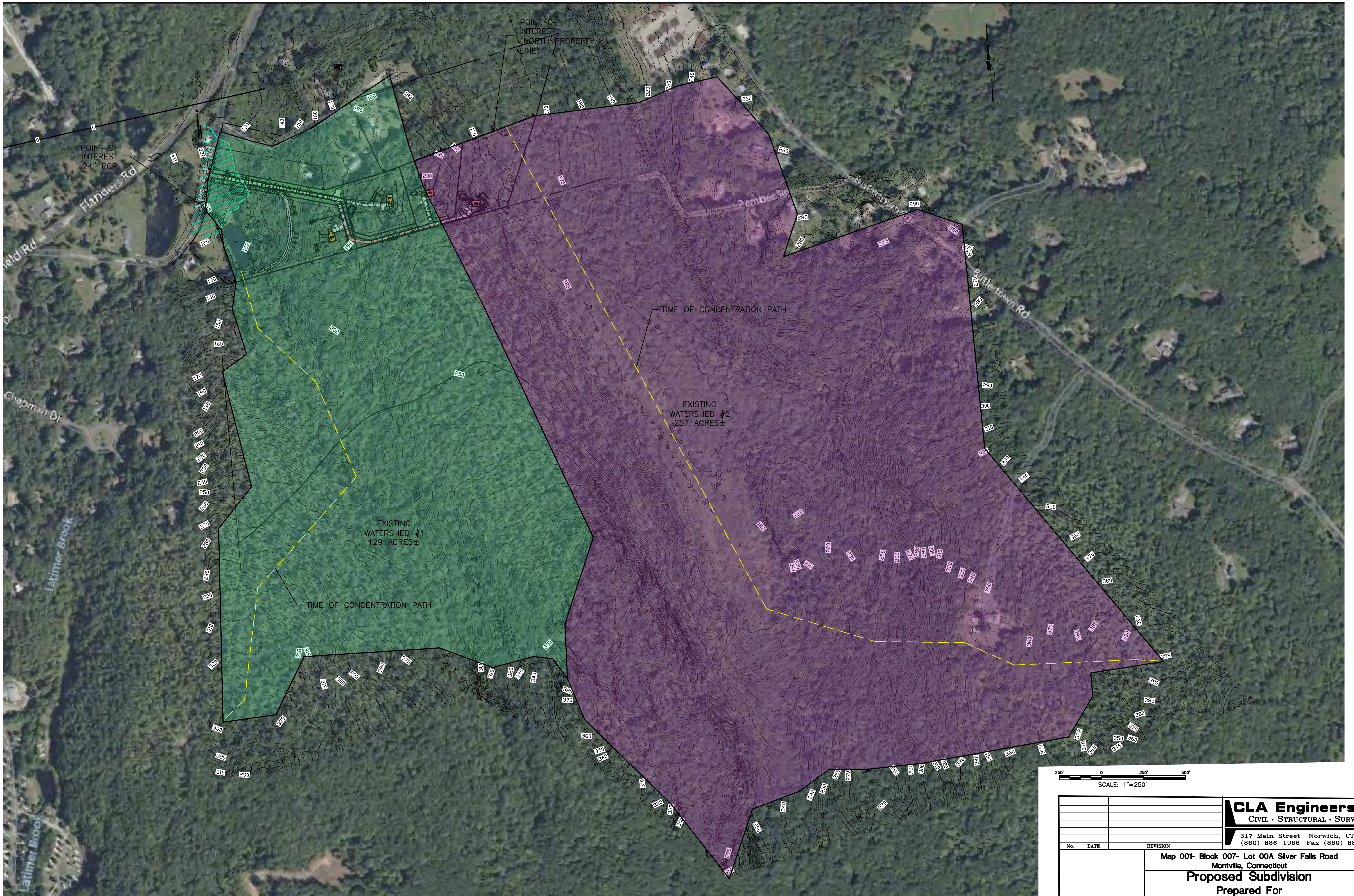
Embankment

Top Elevation (ft)	= 151.50
Top Width (ft)	= 30.00
Crest Width (ft)	= 100.00





		CLA Engineers, Inc. CIVIL · STRUCTURAL · SURVEYING 317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	Project No. CLA-7885 Proj. Engineer R.A.D. Date: 4/10/2025 FIGURE:
		Map 001- Block 007- Lot 00A Silver Falls Road Montville, Connecticut Proposed Subdivision Prepared For Daniela Gjergjaj	1
		EXISTING WATERSHED AREAS	



		CLA Engineers, Inc. CIVIL • STRUCTURAL • SURVEYING 317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	Project No. CLA-7885 Proj. Engineer R.A.D. Date: 4/10/2025 FIGURE:
		Map 001- Block 007- Lot 00A Silver Falls Road Montville, Connecticut Proposed Subdivision Prepared For Daniela Gjergjaj PROPOSED WATERSHED AREAS	2



NOAA Atlas 14, Volume 10, Version 3
Location name: Oakdale, Connecticut, USA*
Latitude: 41.4143°, Longitude: -72.215°
Elevation: 163 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerials](#)

PF tabular

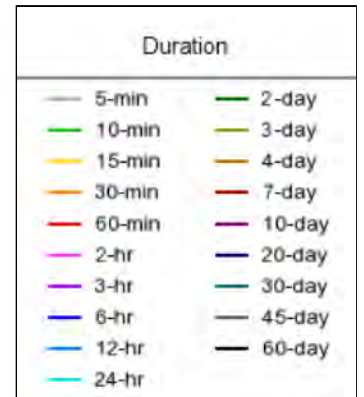
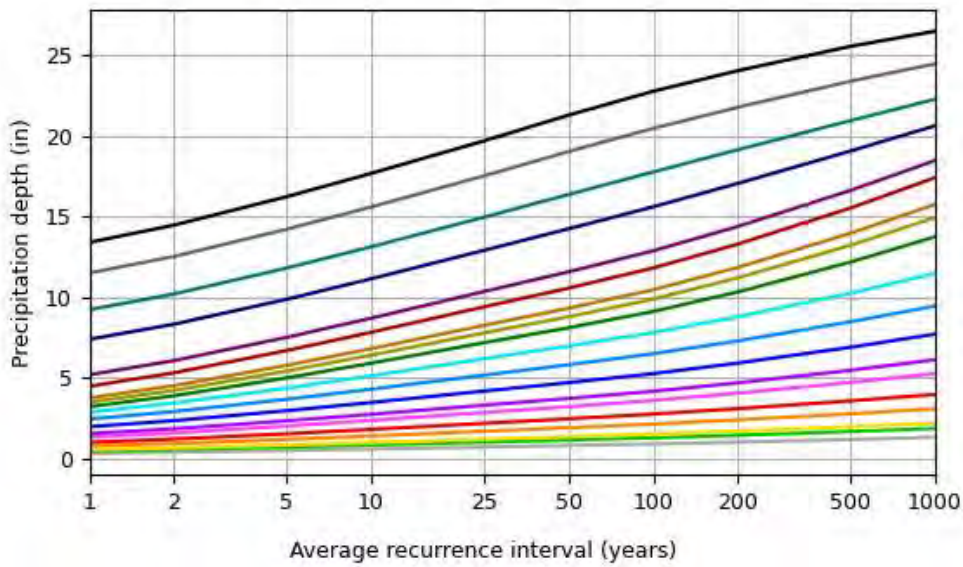
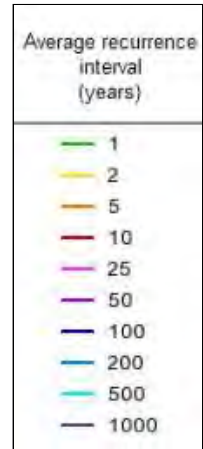
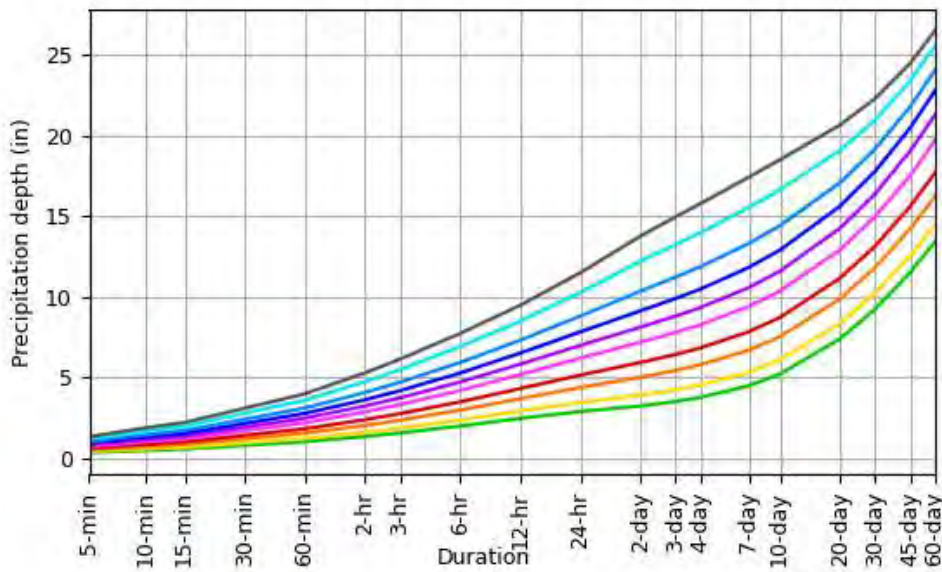
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.338 (0.263-0.422)	0.404 (0.314-0.505)	0.512 (0.397-0.642)	0.603 (0.464-0.759)	0.727 (0.543-0.952)	0.820 (0.600-1.09)	0.919 (0.653-1.26)	1.03 (0.694-1.44)	1.19 (0.773-1.72)	1.33 (0.840-1.94)
10-min	0.478 (0.372-0.597)	0.573 (0.445-0.716)	0.727 (0.563-0.911)	0.855 (0.658-1.08)	1.03 (0.769-1.35)	1.16 (0.850-1.55)	1.30 (0.926-1.79)	1.46 (0.983-2.04)	1.69 (1.09-2.43)	1.88 (1.19-2.76)
15-min	0.563 (0.438-0.703)	0.674 (0.523-0.842)	0.855 (0.662-1.07)	1.00 (0.774-1.27)	1.21 (0.905-1.59)	1.37 (1.00-1.82)	1.53 (1.09-2.11)	1.72 (1.16-2.40)	1.99 (1.29-2.86)	2.21 (1.40-3.24)
30-min	0.791 (0.615-0.988)	0.947 (0.735-1.18)	1.20 (0.930-1.51)	1.41 (1.09-1.78)	1.70 (1.27-2.23)	1.92 (1.40-2.56)	2.15 (1.53-2.96)	2.41 (1.62-3.37)	2.79 (1.81-4.02)	3.10 (1.96-4.54)
60-min	1.02 (0.793-1.27)	1.22 (0.948-1.52)	1.55 (1.20-1.94)	1.82 (1.40-2.29)	2.19 (1.64-2.87)	2.48 (1.81-3.30)	2.77 (1.97-3.81)	3.10 (2.09-4.34)	3.59 (2.32-5.17)	3.98 (2.52-5.84)
2-hr	1.34 (1.05-1.66)	1.60 (1.25-1.99)	2.03 (1.58-2.52)	2.38 (1.85-2.98)	2.87 (2.16-3.73)	3.23 (2.38-4.28)	3.62 (2.59-4.95)	4.06 (2.75-5.63)	4.73 (3.08-6.74)	5.28 (3.36-7.66)
3-hr	1.56 (1.23-1.92)	1.86 (1.46-2.30)	2.35 (1.84-2.91)	2.76 (2.15-3.43)	3.32 (2.51-4.30)	3.74 (2.76-4.93)	4.18 (3.01-5.70)	4.70 (3.19-6.49)	5.48 (3.58-7.78)	6.14 (3.91-8.85)
6-hr	1.98 (1.58-2.44)	2.36 (1.87-2.90)	2.98 (2.35-3.67)	3.49 (2.74-4.31)	4.19 (3.19-5.38)	4.71 (3.51-6.17)	5.27 (3.82-7.13)	5.93 (4.04-8.10)	6.90 (4.52-9.70)	7.72 (4.94-11.0)
12-hr	2.46 (1.97-3.00)	2.92 (2.34-3.57)	3.68 (2.93-4.50)	4.31 (3.41-5.30)	5.18 (3.96-6.59)	5.82 (4.37-7.55)	6.51 (4.74-8.71)	7.31 (5.01-9.89)	8.48 (5.58-11.8)	9.47 (6.07-13.4)
24-hr	2.89 (2.33-3.50)	3.45 (2.78-4.18)	4.37 (3.51-5.31)	5.14 (4.10-6.27)	6.19 (4.78-7.84)	6.98 (5.27-8.99)	7.82 (5.73-10.4)	8.80 (6.06-11.8)	10.3 (6.78-14.1)	11.5 (7.40-16.1)
2-day	3.23 (2.63-3.88)	3.90 (3.17-4.70)	5.01 (4.05-6.04)	5.92 (4.76-7.17)	7.18 (5.59-9.03)	8.12 (6.18-10.4)	9.12 (6.76-12.1)	10.3 (7.15-13.7)	12.2 (8.08-16.6)	13.8 (8.89-19.0)
3-day	3.50 (2.86-4.20)	4.23 (3.46-5.08)	5.43 (4.41-6.52)	6.42 (5.19-7.74)	7.78 (6.08-9.75)	8.80 (6.73-11.2)	9.89 (7.35-13.0)	11.2 (7.78-14.8)	13.2 (8.79-17.9)	14.9 (9.69-20.5)
4-day	3.76 (3.08-4.49)	4.53 (3.71-5.41)	5.78 (4.72-6.93)	6.83 (5.53-8.21)	8.26 (6.47-10.3)	9.32 (7.15-11.8)	10.5 (7.80-13.7)	11.9 (8.24-15.6)	14.0 (9.30-18.8)	15.8 (10.2-21.6)
7-day	4.49 (3.70-5.33)	5.33 (4.39-6.33)	6.70 (5.50-7.98)	7.84 (6.39-9.37)	9.40 (7.41-11.6)	10.6 (8.14-13.3)	11.8 (8.83-15.3)	13.3 (9.29-17.4)	15.5 (10.4-20.8)	17.4 (11.3-23.6)
10-day	5.20 (4.31-6.15)	6.08 (5.03-7.20)	7.52 (6.20-8.92)	8.71 (7.14-10.4)	10.4 (8.18-12.7)	11.6 (8.94-14.5)	12.9 (9.62-16.6)	14.4 (10.1-18.7)	16.6 (11.1-22.1)	18.5 (12.1-24.9)
20-day	7.40 (6.19-8.69)	8.34 (6.96-9.80)	9.88 (8.21-11.6)	11.2 (9.21-13.2)	12.9 (10.3-15.7)	14.2 (11.0-17.5)	15.6 (11.6-19.7)	17.1 (12.0-21.9)	19.1 (12.9-25.1)	20.6 (13.5-27.5)
30-day	9.24 (7.76-10.8)	10.2 (8.57-12.0)	11.8 (9.87-13.9)	13.1 (10.9-15.5)	15.0 (11.9-18.0)	16.4 (12.7-20.0)	17.8 (13.2-22.1)	19.2 (13.6-24.4)	20.9 (14.2-27.4)	22.3 (14.6-29.5)
45-day	11.5 (9.72-13.4)	12.5 (10.6-14.6)	14.2 (11.9-16.6)	15.6 (13.0-18.3)	17.5 (14.0-20.9)	19.0 (14.8-23.0)	20.5 (15.2-25.2)	21.8 (15.5-27.6)	23.4 (15.9-30.3)	24.5 (16.1-32.2)
60-day	13.4 (11.4-15.6)	14.5 (12.2-16.8)	16.2 (13.7-18.9)	17.7 (14.8-20.7)	19.7 (15.8-23.4)	21.3 (16.6-25.6)	22.8 (16.9-27.8)	24.0 (17.2-30.3)	25.5 (17.4-33.0)	26.5 (17.5-34.7)

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

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PF graphical

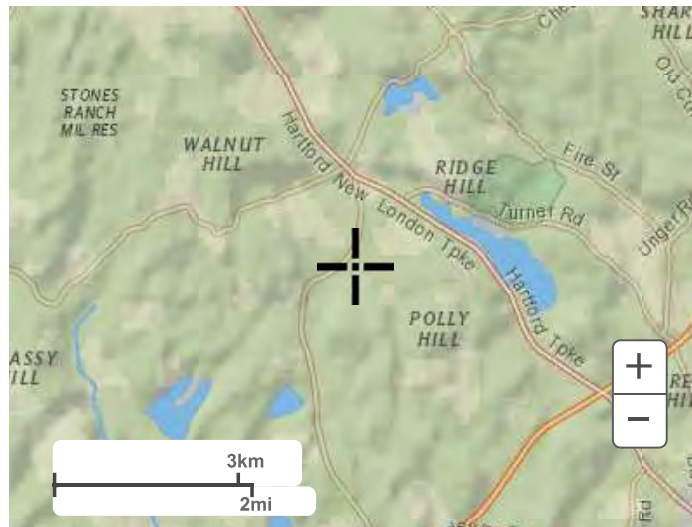
PDS-based depth-duration-frequency (DDF) curves
Latitude: 41.4143°, Longitude: -72.2150°



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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



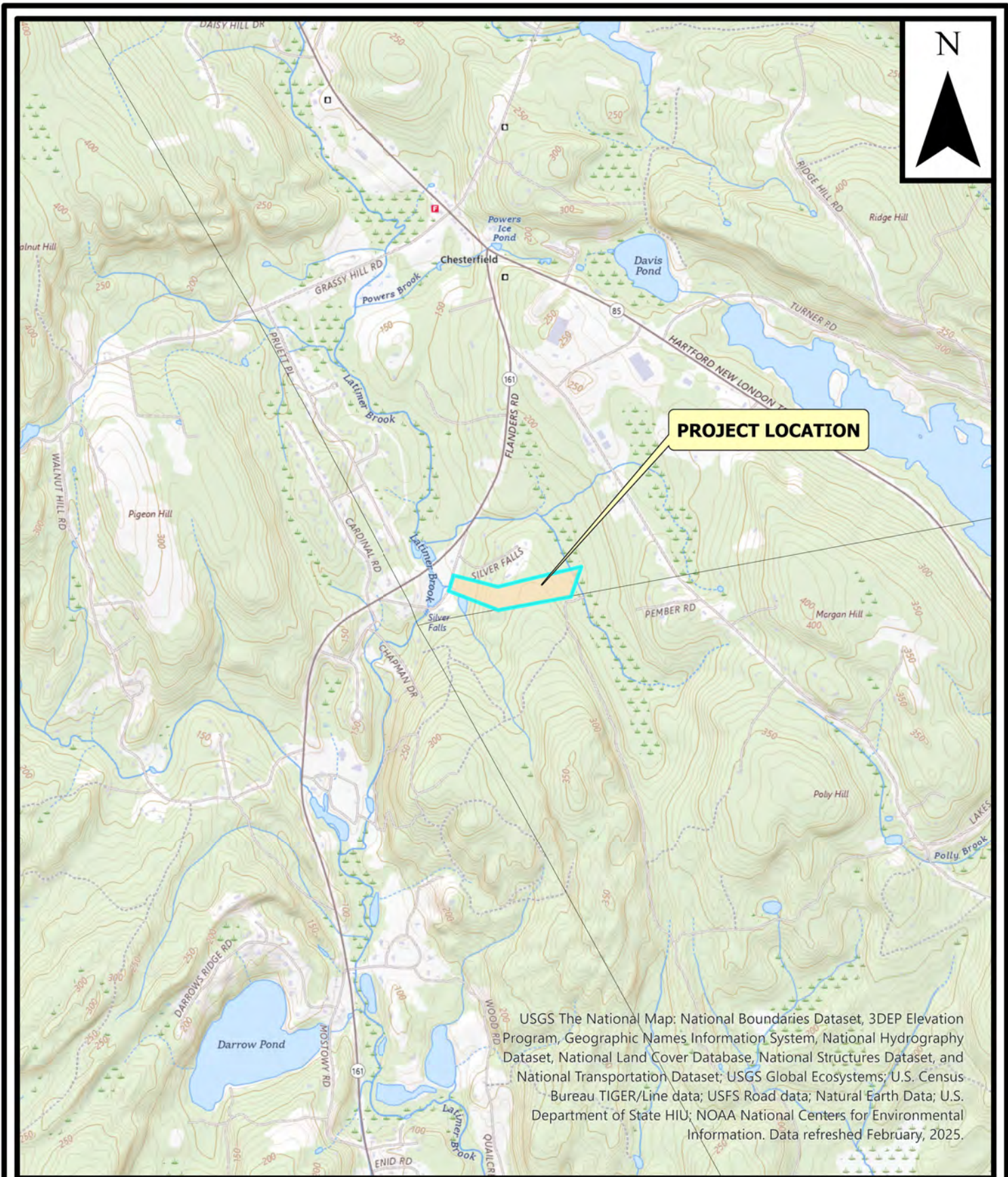
Large scale aerial



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USGS MAP

DANIELA GJERGJAJ
SILVER FALLS ROAD
MONTVILLE, CT

DATE: 3/26/2025

SCALE: 1"=2,000'

FIGURE

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