

DYMAR

APPENDIX B - STORM WATER ANALYSIS

DYMAR

2 YEAR STORM

Hydrograph 2-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

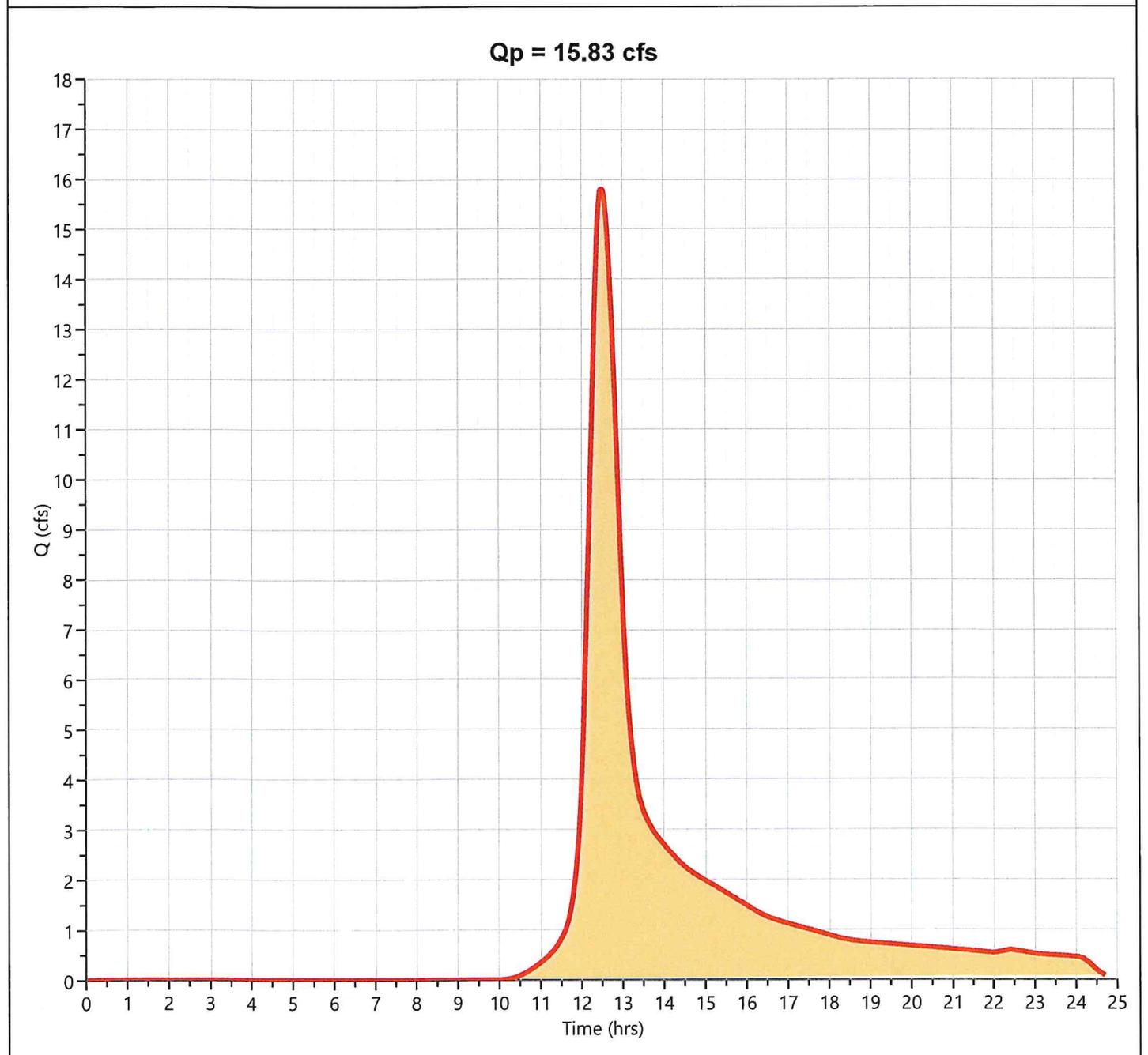
Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DA A AP#1	15.83	12.48	97,735	---		
2	NRCS Runoff	Post DAA	11.42	12.57	77,414	---		
3	NRCS Runoff	Post DA B	8.699	12.33	44,217	---		
4	Pond Route	Post Route DA B	4.118	12.72	44,204	3	159.29	13,275
5	Pond Route	Post Route thru Weir	4.118	12.72	44,030	4	158.04	1,958
6	Junction	Post A.P. #1	15.42	12.60	121,444	2, 5		
7	NRCS Runoff	Pre DA C AP #2	8.374	12.08	25,839	---		
8	NRCS Runoff	Post DA C AP #2	5.741	12.08	17,688	---		

Hydrograph Report

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 15.83 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.48 hrs
Time Interval	= 1 min	Runoff Volume	= 97,735 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 3.50 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

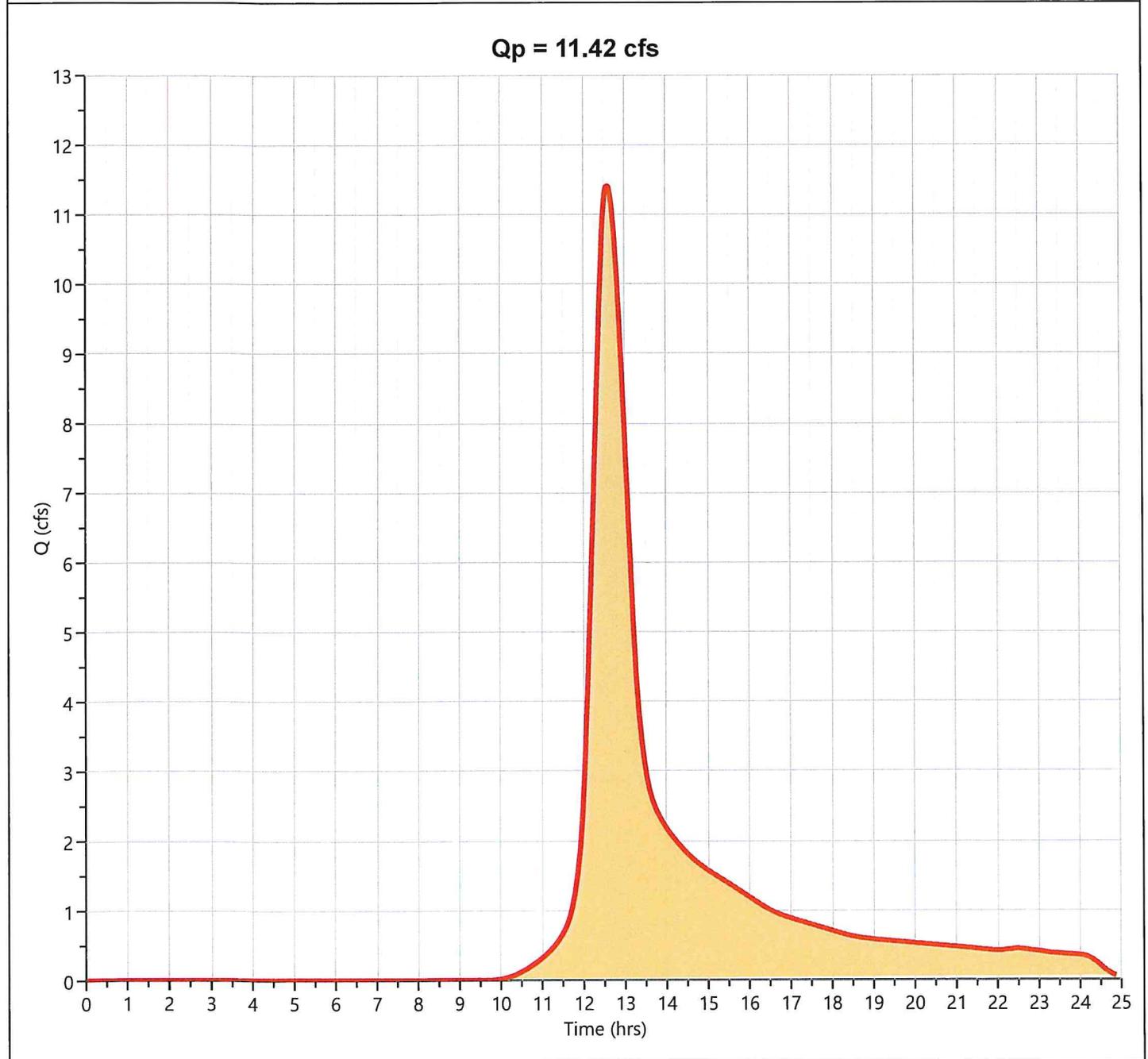


Hydrograph Report

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 11.42 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.57 hrs
Time Interval	= 1 min	Runoff Volume	= 77,414 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 3.50 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

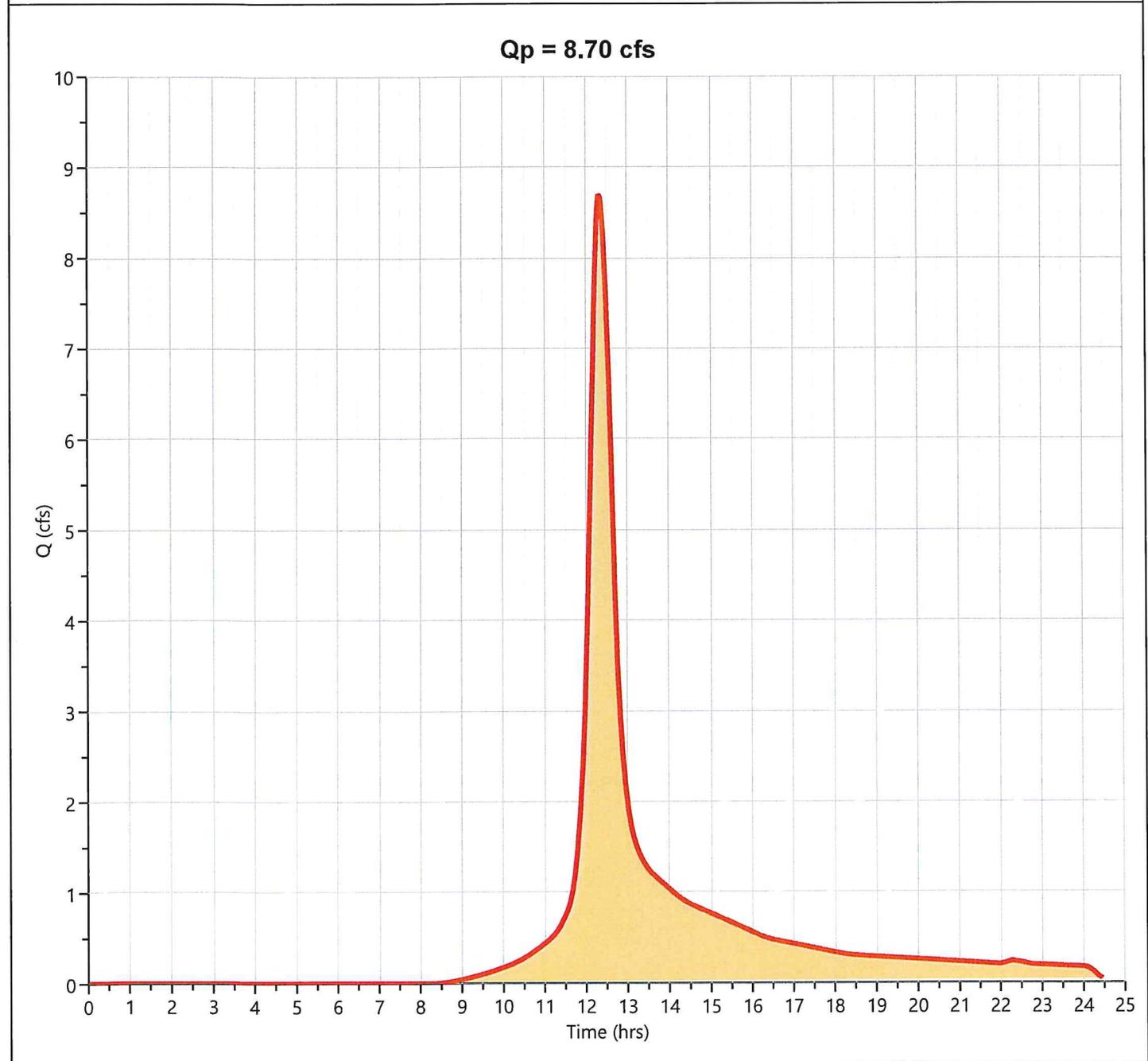


Hydrograph Report

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.699 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.33 hrs
Time Interval	= 1 min	Runoff Volume	= 44,217 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 3.50 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Post Route DA B

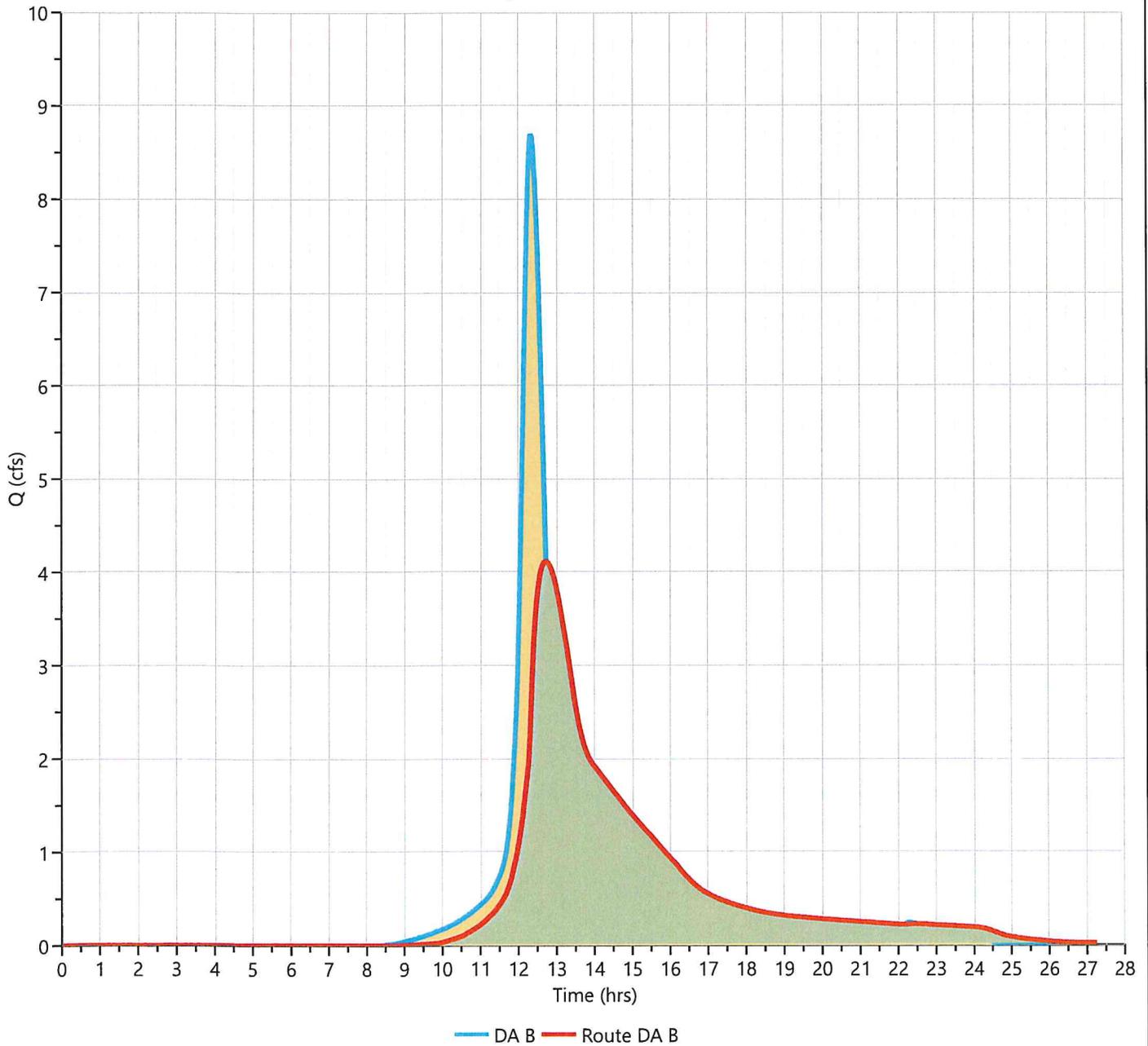
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 4.118 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.72 hrs
Time Interval	= 1 min	Hydrograph Volume	= 44,204 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 159.29 ft
Pond Name	= Detention	Max. Storage	= 13,275 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 52 min

Qp = 4.12 cfs



Hydrograph Report

Post Route thru Weir

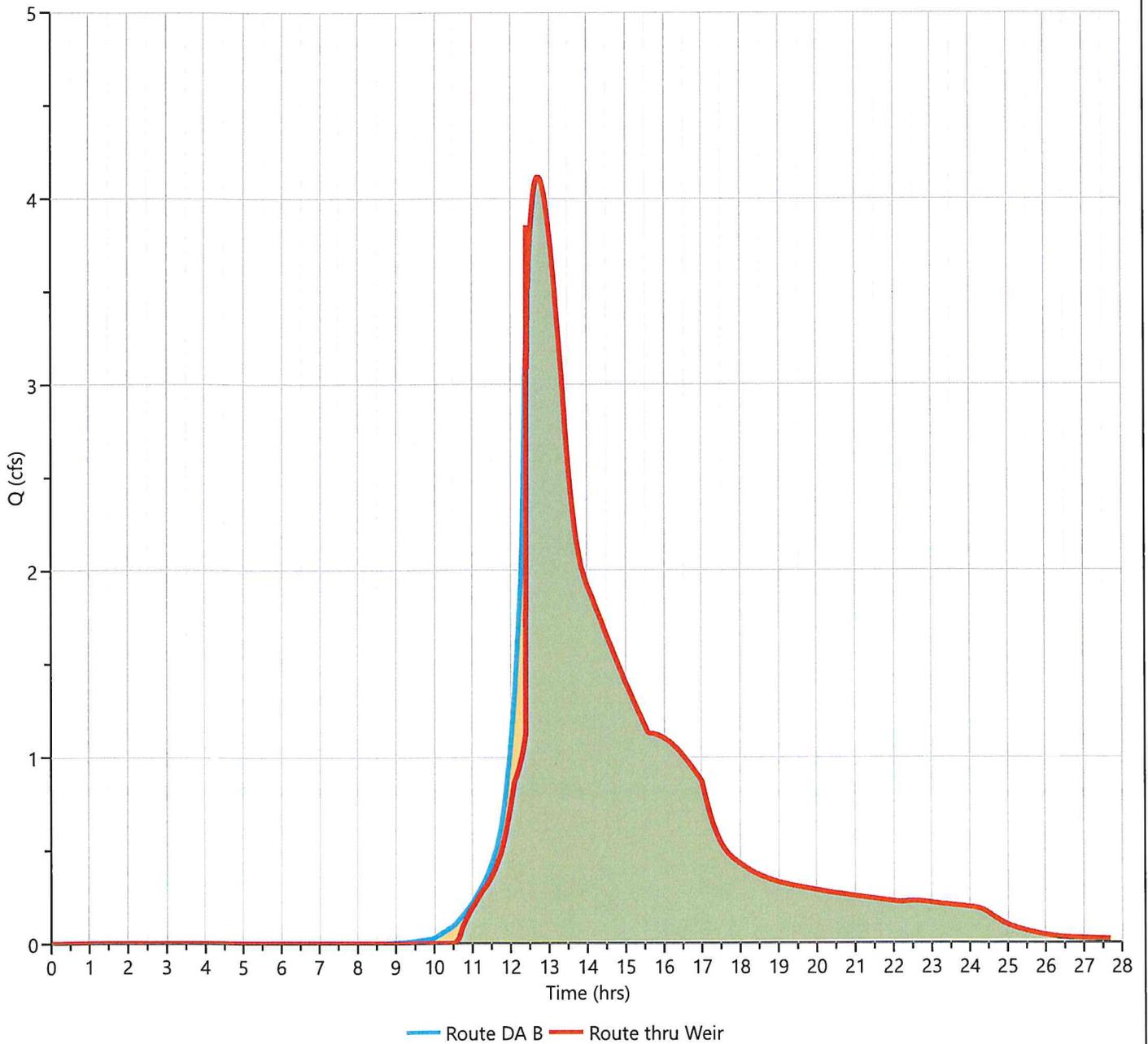
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 4.118 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.72 hrs
Time Interval	= 1 min	Hydrograph Volume	= 44,030 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.04 ft
Pond Name	= Weir	Max. Storage	= 1,958 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 14 min

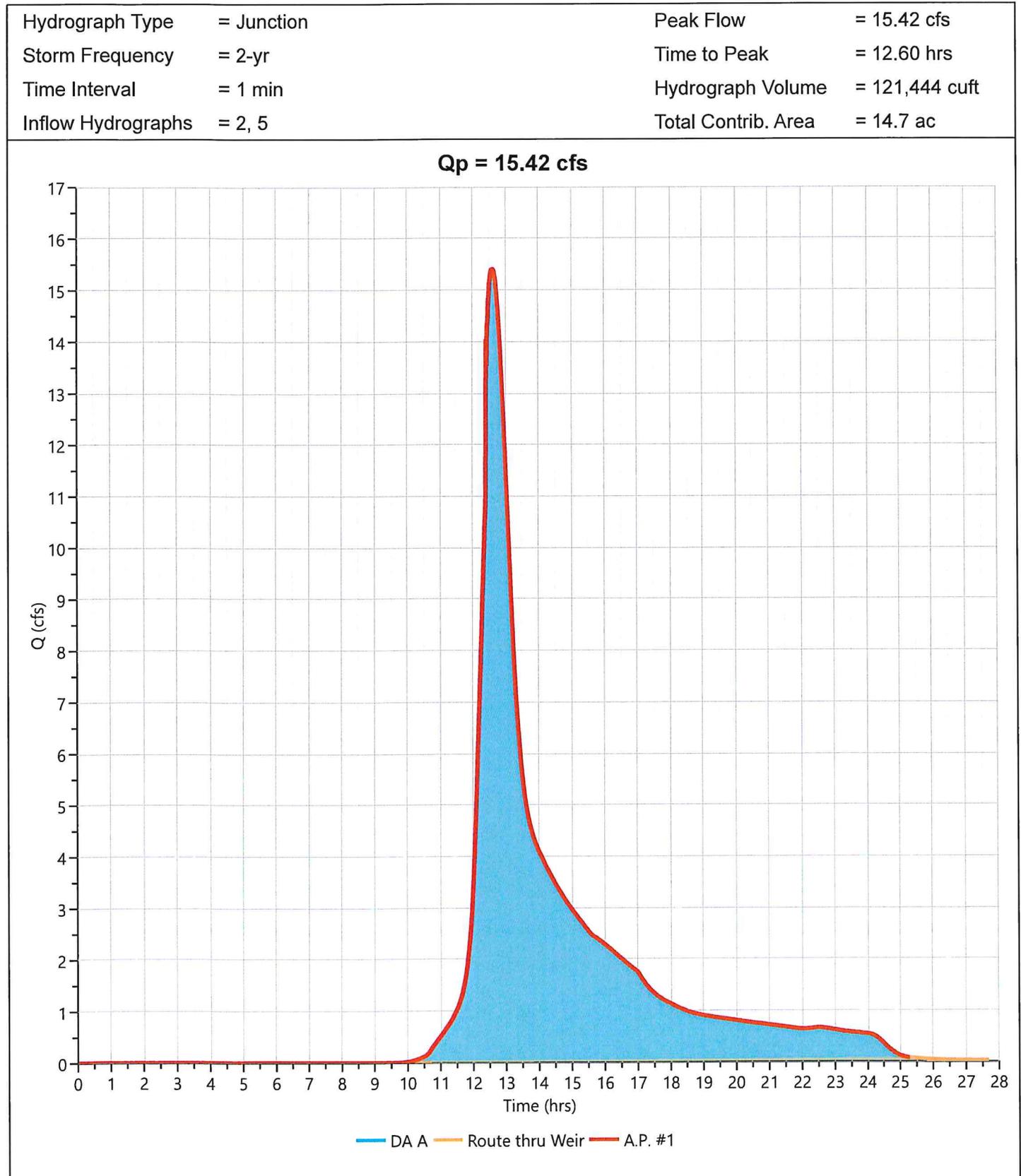
Qp = 4.12 cfs



Hydrograph Report

Post A.P. #1

Hyd. No. 6

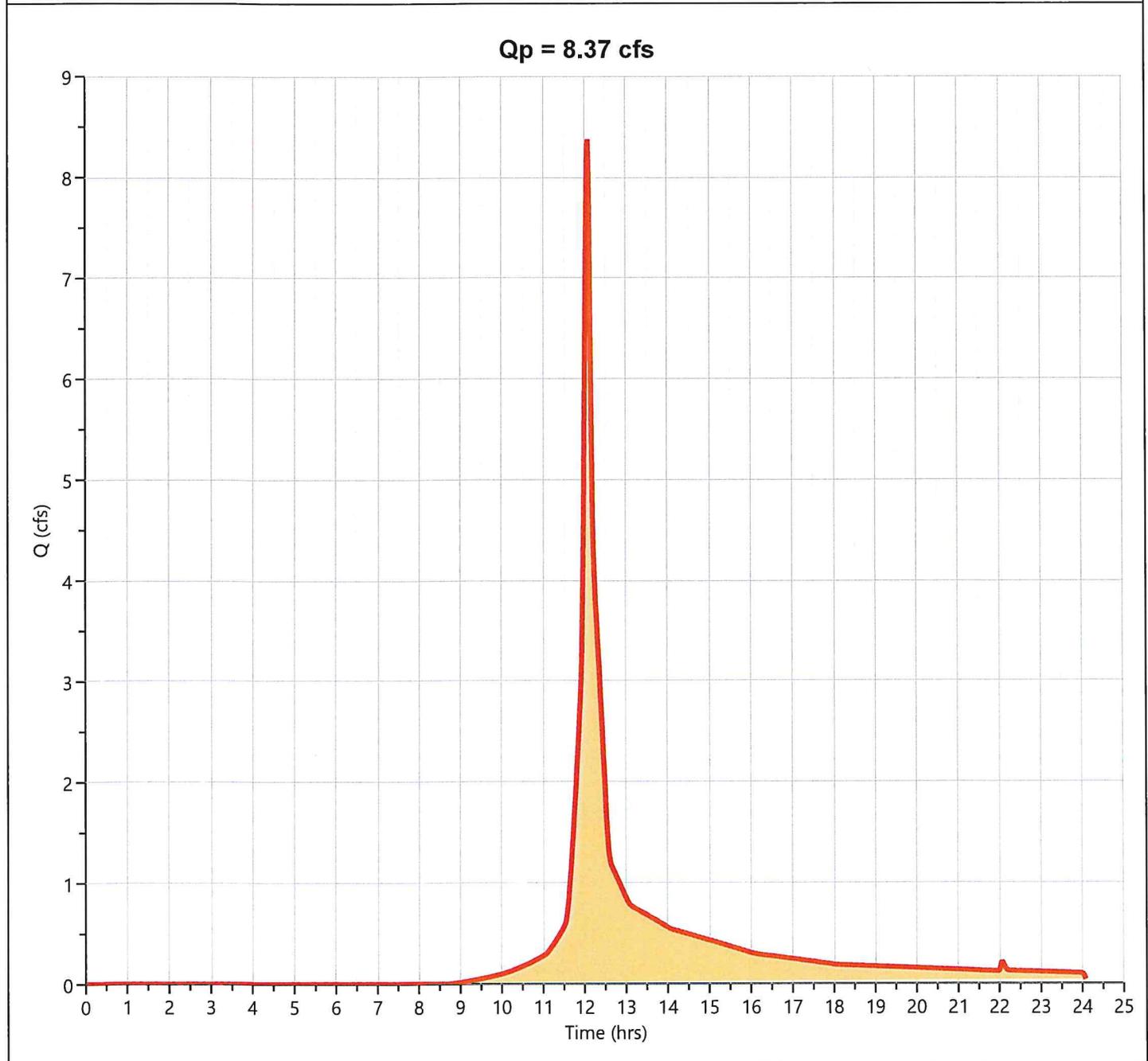


Hydrograph Report

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.374 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 25,839 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.50 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

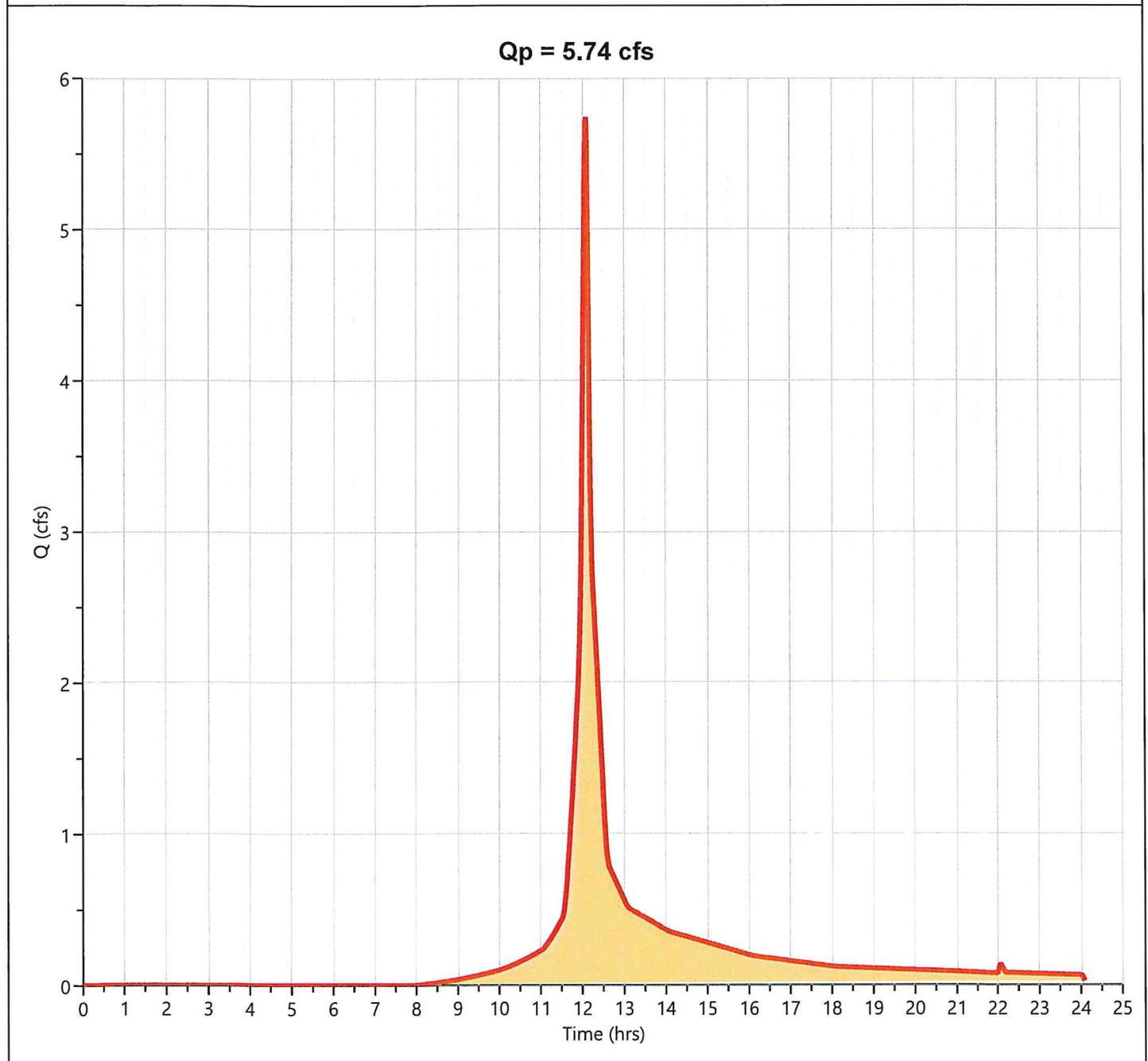
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.741 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 17,688 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.50 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



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5 YEAR STORM

Hydrograph 5-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DAAAP#1	25.50	12.47	154,175	---		
2	NRCS Runoff	Post DAA	18.08	12.55	120,495	---		
3	NRCS Runoff	Post DA B	12.90	12.32	65,535	---		
4	Pond Route	Post Route DA B	5.417	12.75	65,521	3	160.56	20,460
5	Pond Route	Post Route thru Weir	5.417	12.75	65,347	4	158.04	1,966
6	Junction	Post A.P. #1	23.30	12.58	185,842	2, 5		
7	NRCS Runoff	Pre DA C AP #2	12.63	12.08	38,928	---		
8	NRCS Runoff	Post DA C AP #2	8.379	12.08	25,973	---		

Hydrograph Report

Project Name: Belta Final Rev

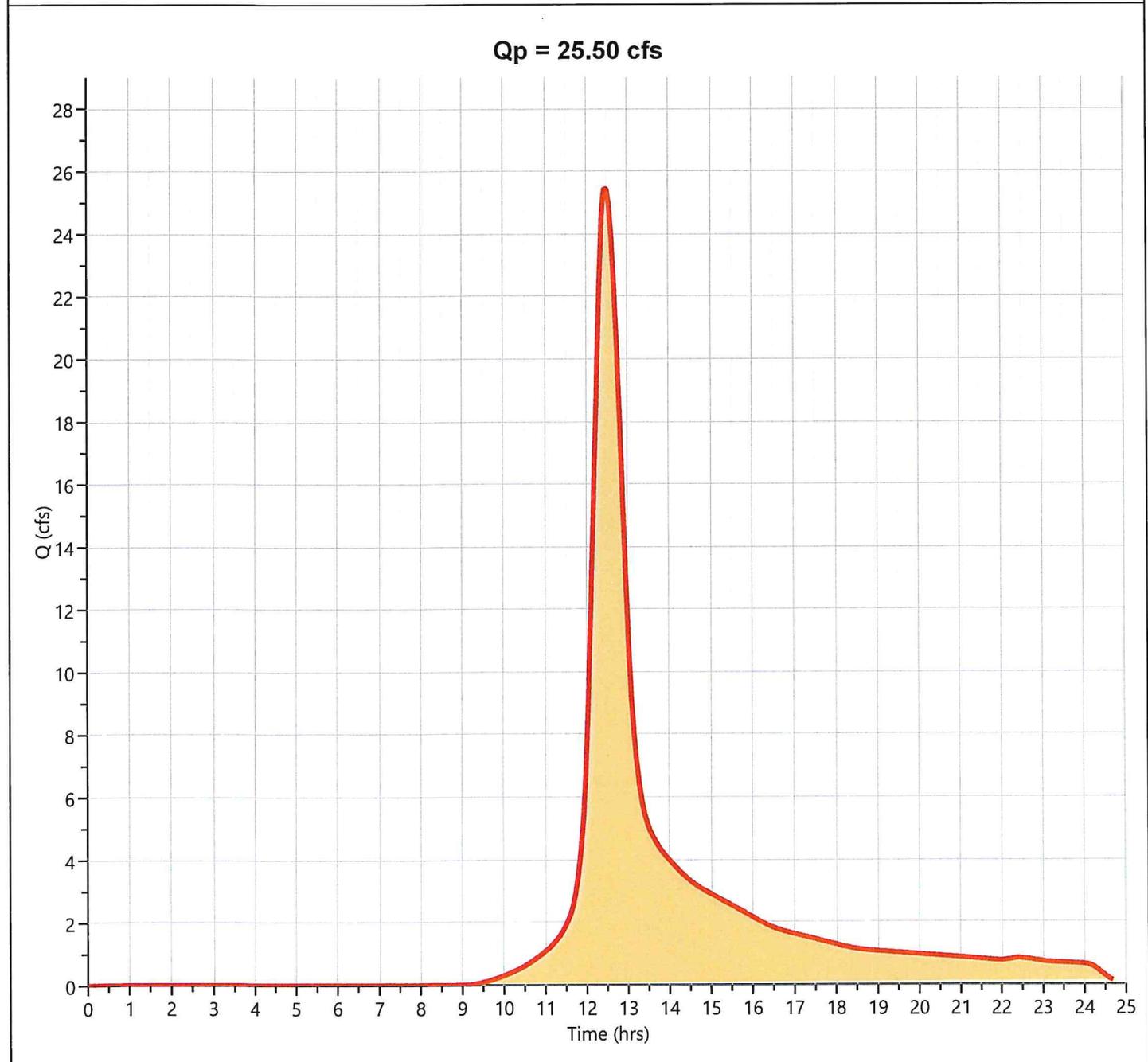
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 25.50 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.47 hrs
Time Interval	= 1 min	Runoff Volume	= 154,175 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 4.53 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

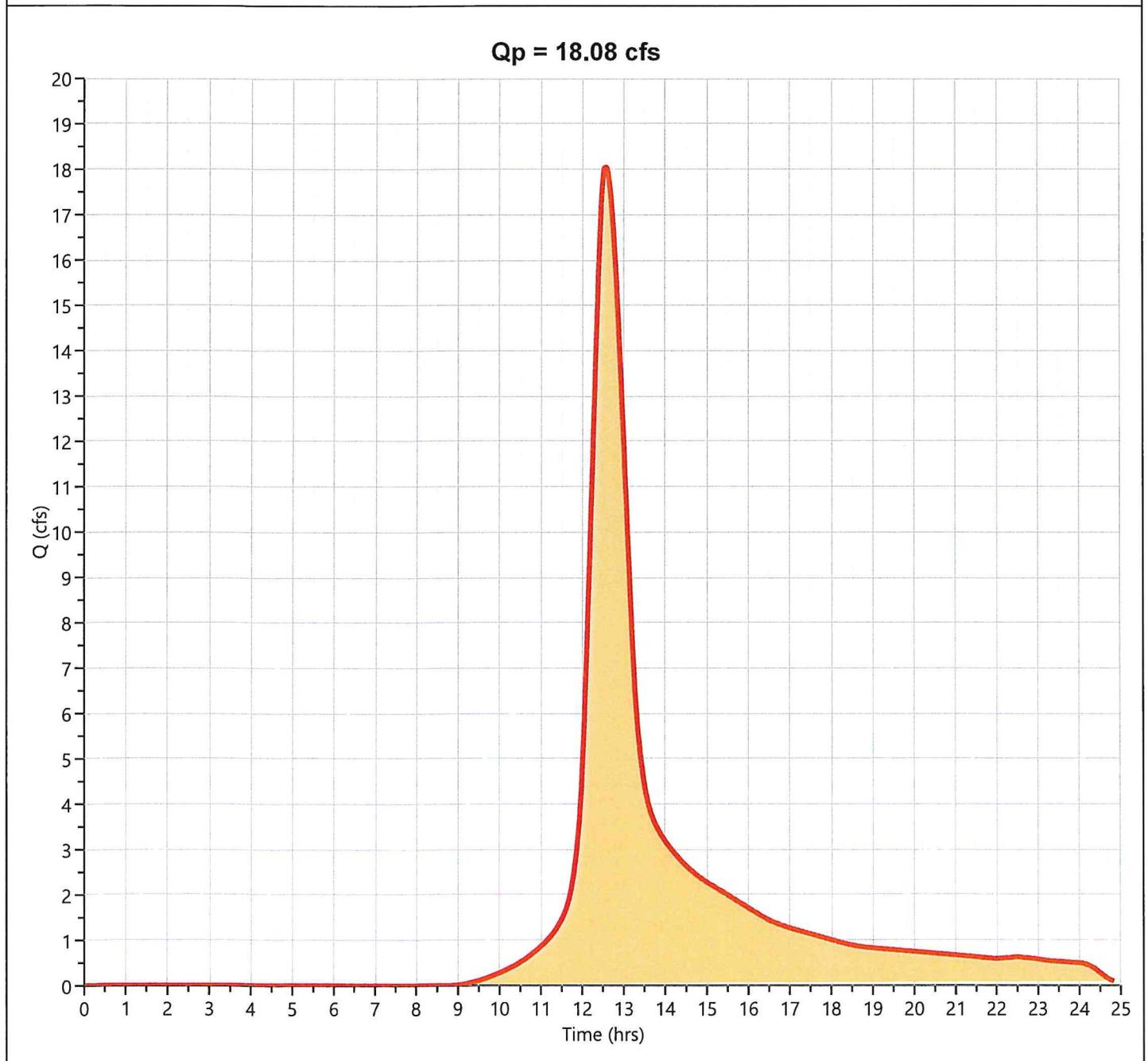
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 18.08 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.55 hrs
Time Interval	= 1 min	Runoff Volume	= 120,495 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 4.53 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Beta Final Rev

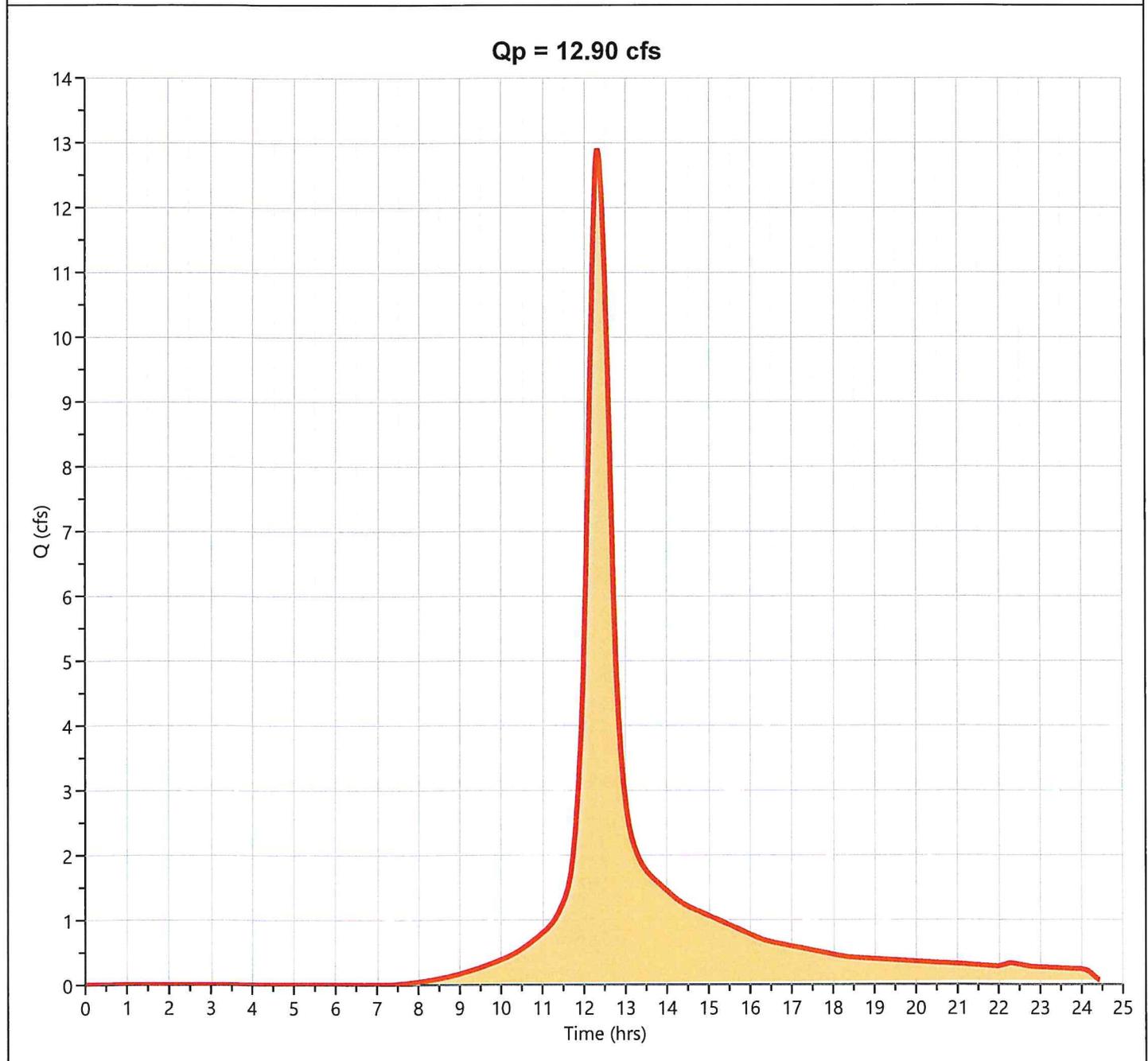
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 12.90 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.32 hrs
Time Interval	= 1 min	Runoff Volume	= 65,535 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 4.53 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route DA B

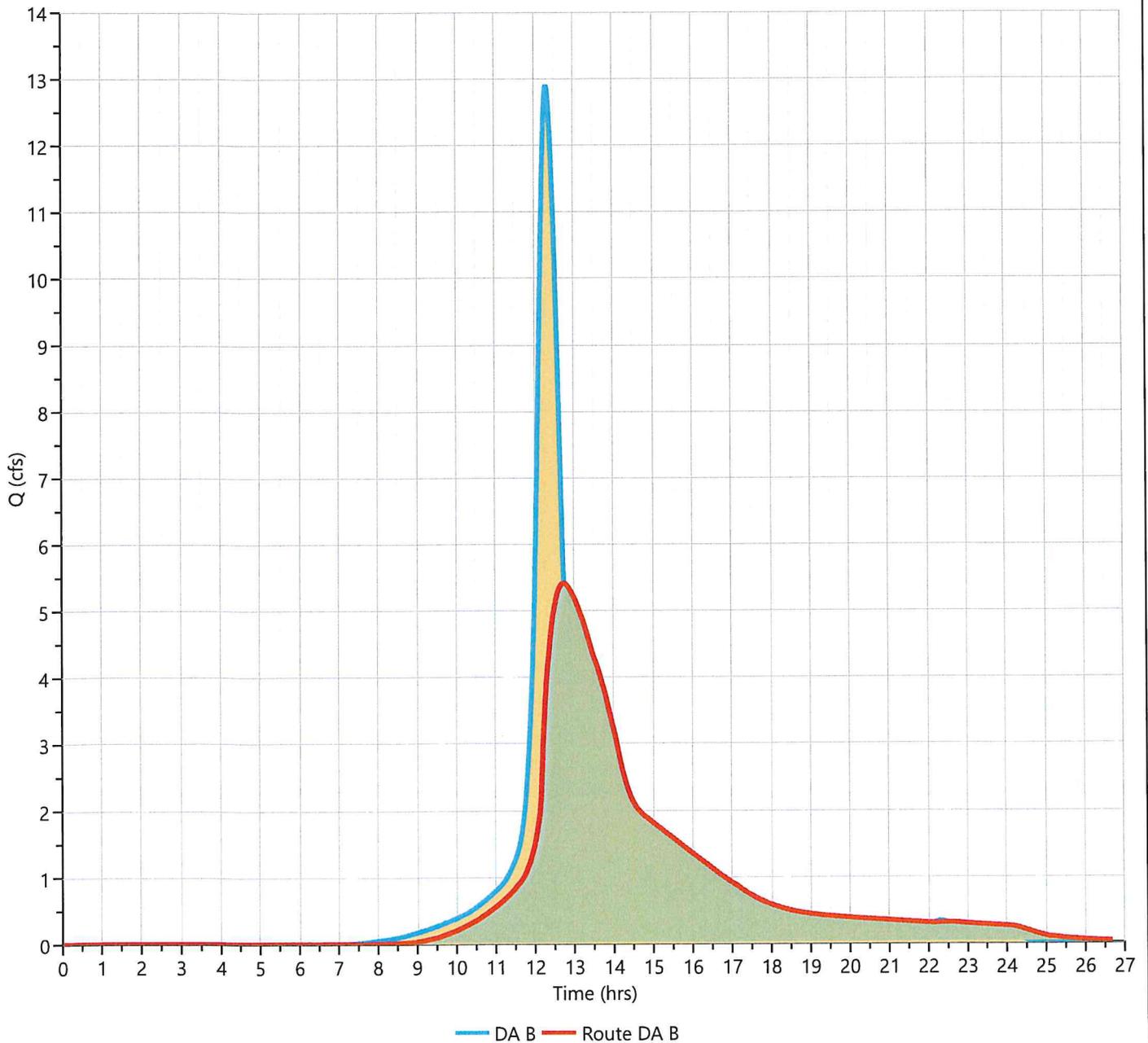
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 5.417 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.75 hrs
Time Interval	= 1 min	Hydrograph Volume	= 65,521 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 160.56 ft
Pond Name	= Detention	Max. Storage	= 20,460 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 53 min

Qp = 5.42 cfs



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route thru Weir

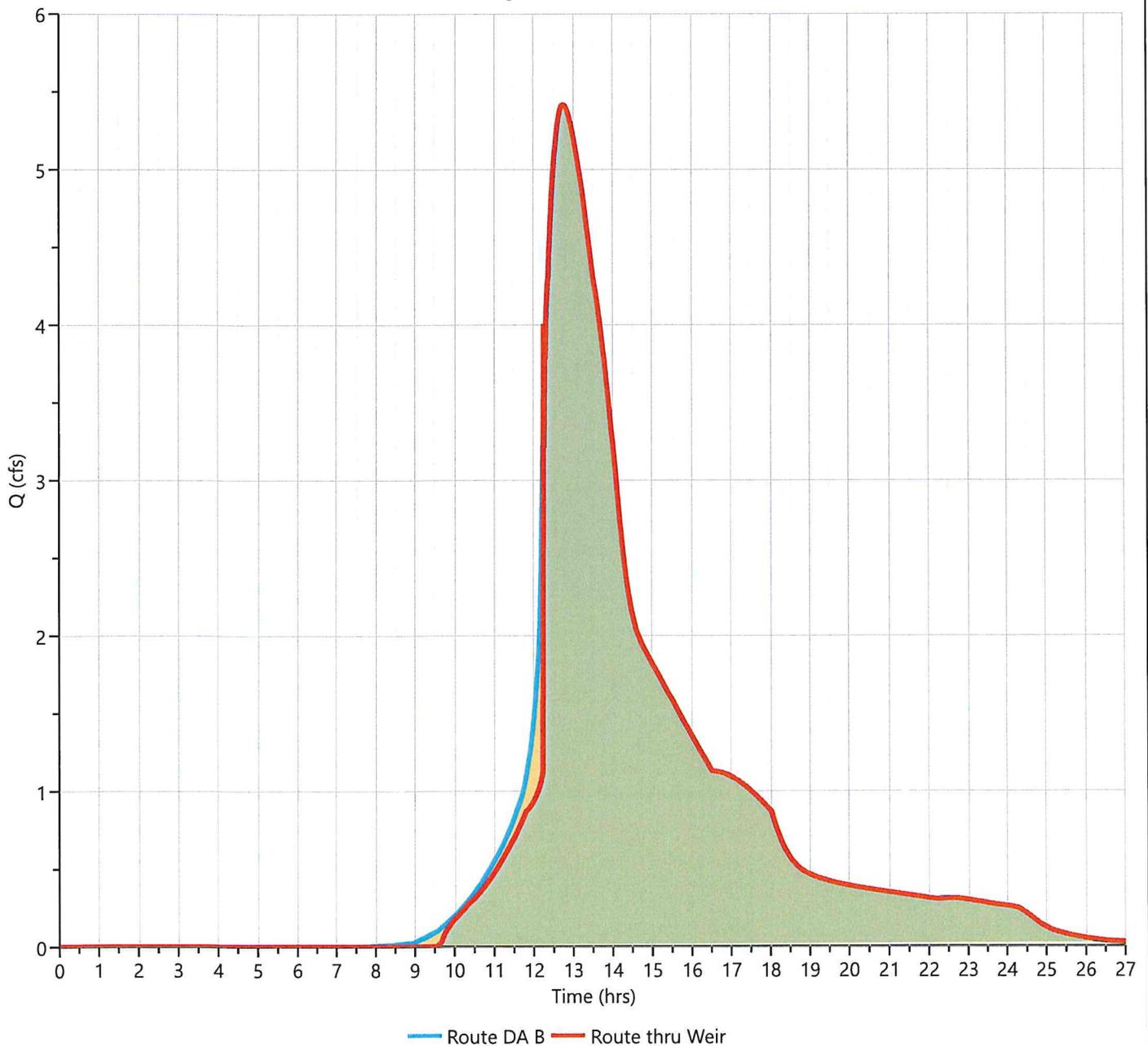
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 5.417 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.75 hrs
Time Interval	= 1 min	Hydrograph Volume	= 65,347 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.04 ft
Pond Name	= Weir	Max. Storage	= 1,966 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 11 min

Qp = 5.42 cfs

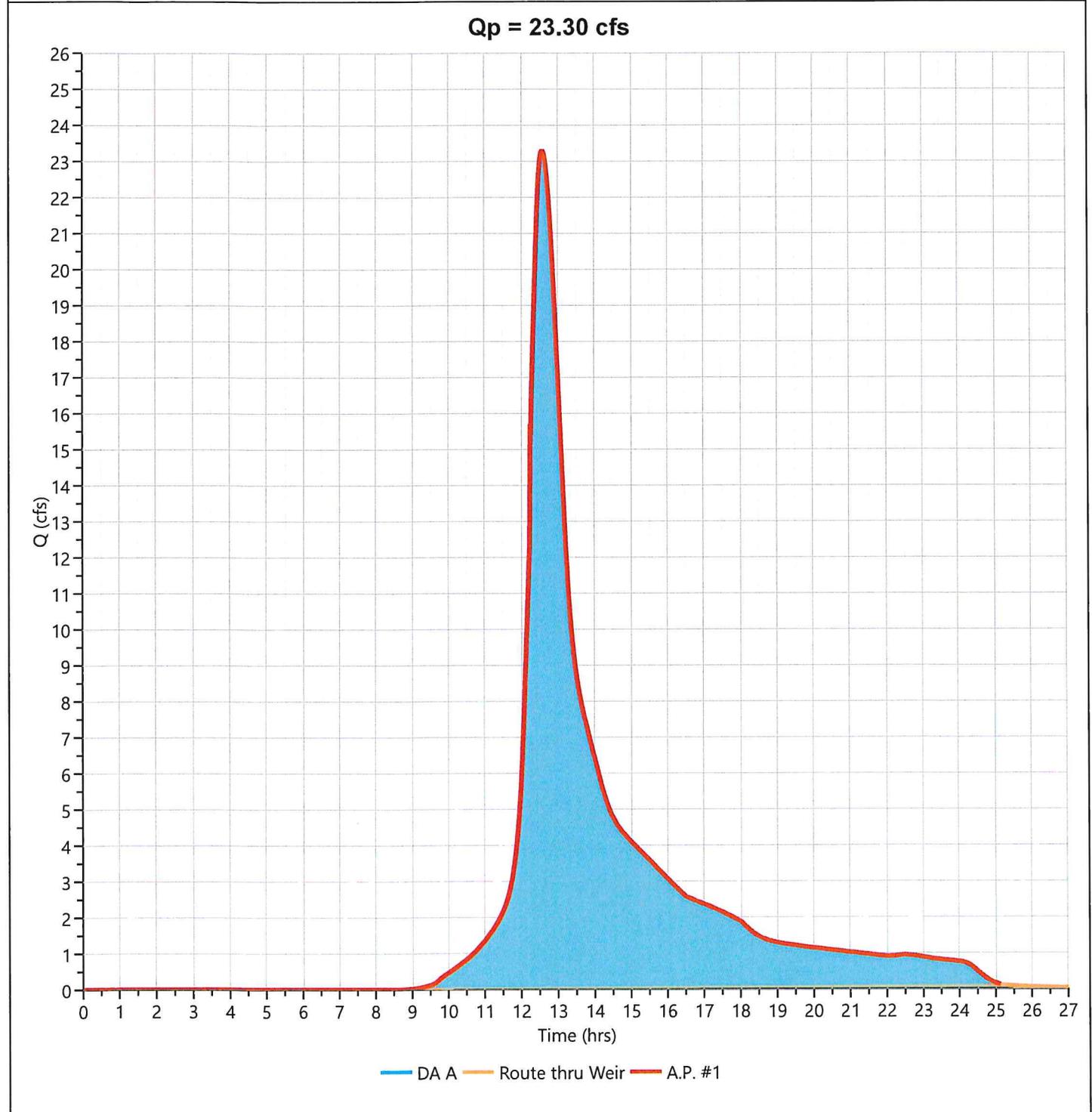


Hydrograph Report

Post A.P. #1

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 23.30 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.58 hrs
Time Interval	= 1 min	Hydrograph Volume	= 185,842 cuft
Inflow Hydrographs	= 2, 5	Total Contrib. Area	= 14.7 ac



Hydrograph Report

Project Name: Belta Final Rev

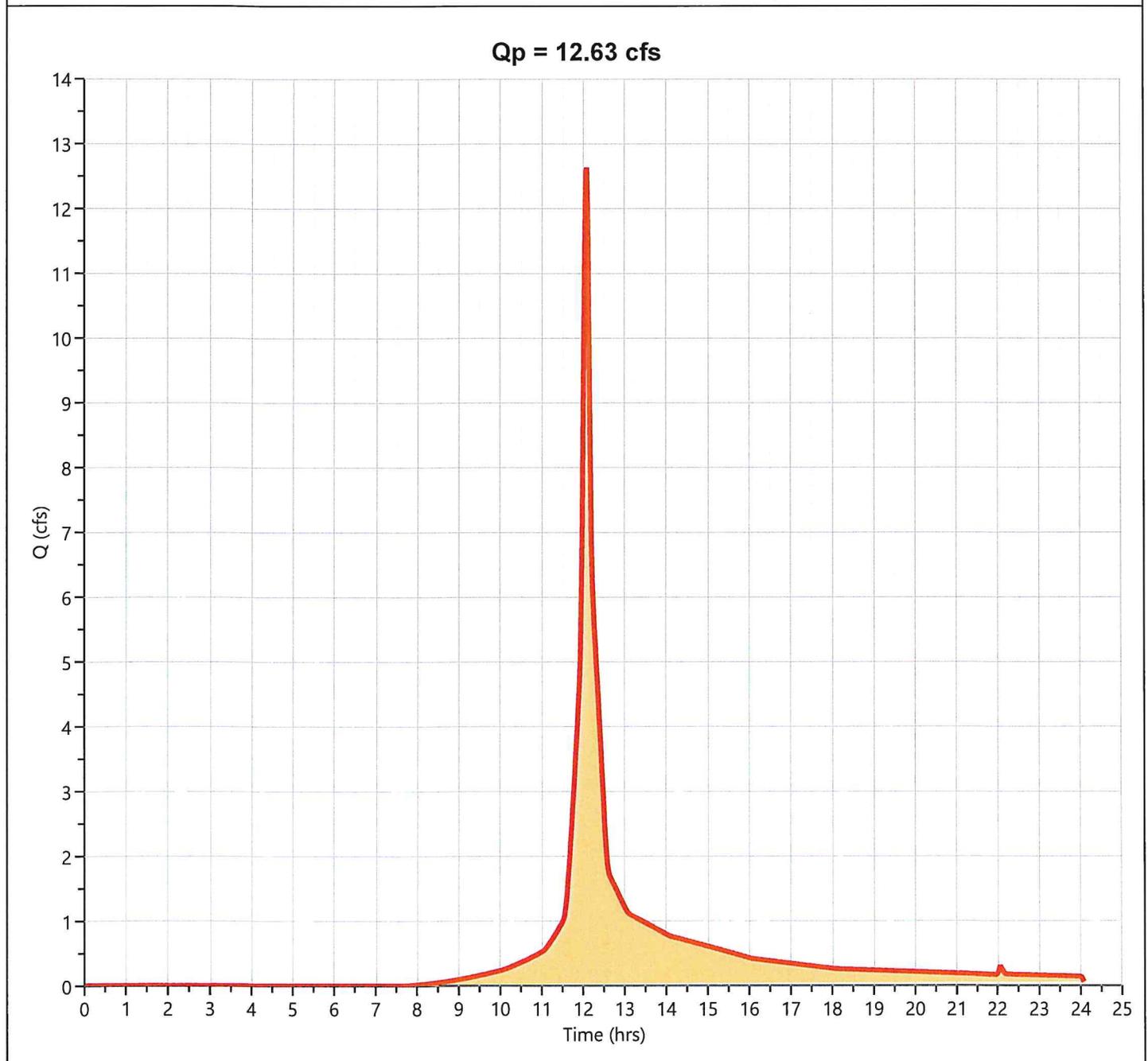
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 12.63 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 38,928 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.53 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

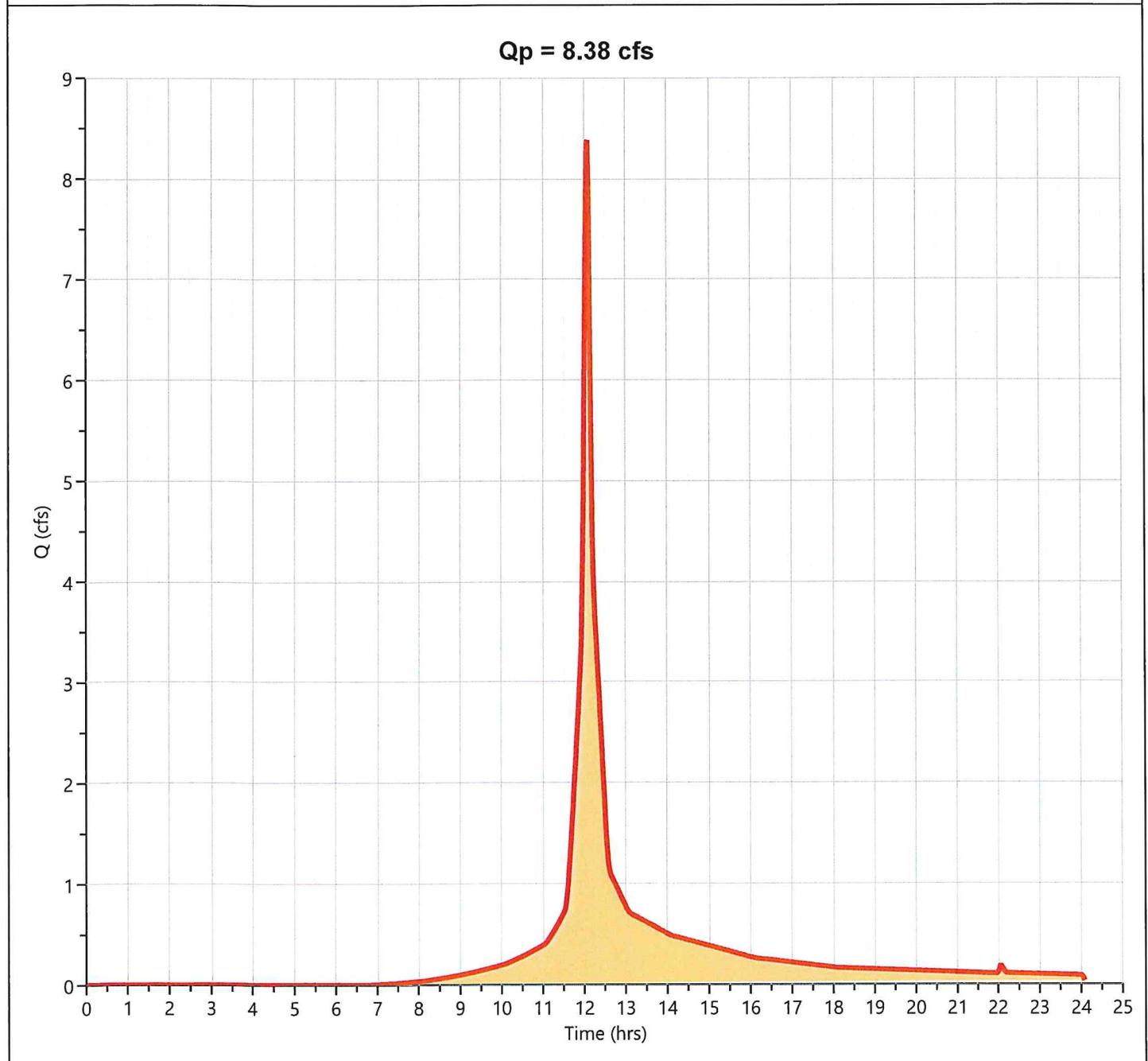
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.379 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 25,973 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.53 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



DYMAR

10 YEAR STORM

Hydrograph 10-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DA AAP#1	33.96	12.47	204,145	---		
2	NRCS Runoff	Post DAA	23.87	12.55	158,388	---		
3	NRCS Runoff	Post DA B	16.45	12.32	83,853	---		
4	Pond Route	Post Route DA B	6.329	12.77	83,839	3	161.64	27,165
5	Pond Route	Post Route thru Weir	6.329	12.77	83,665	4	158.04	1,972
6	Junction	Post A.P. #1	29.91	12.57	242,053	2, 5		
7	NRCS Runoff	Pre DA C AP #2	16.24	12.08	50,262	---		
8	NRCS Runoff	Post DA C AP #2	10.59	12.08	33,063	---		

Hydrograph Report

Project Name: Belta Final Rev

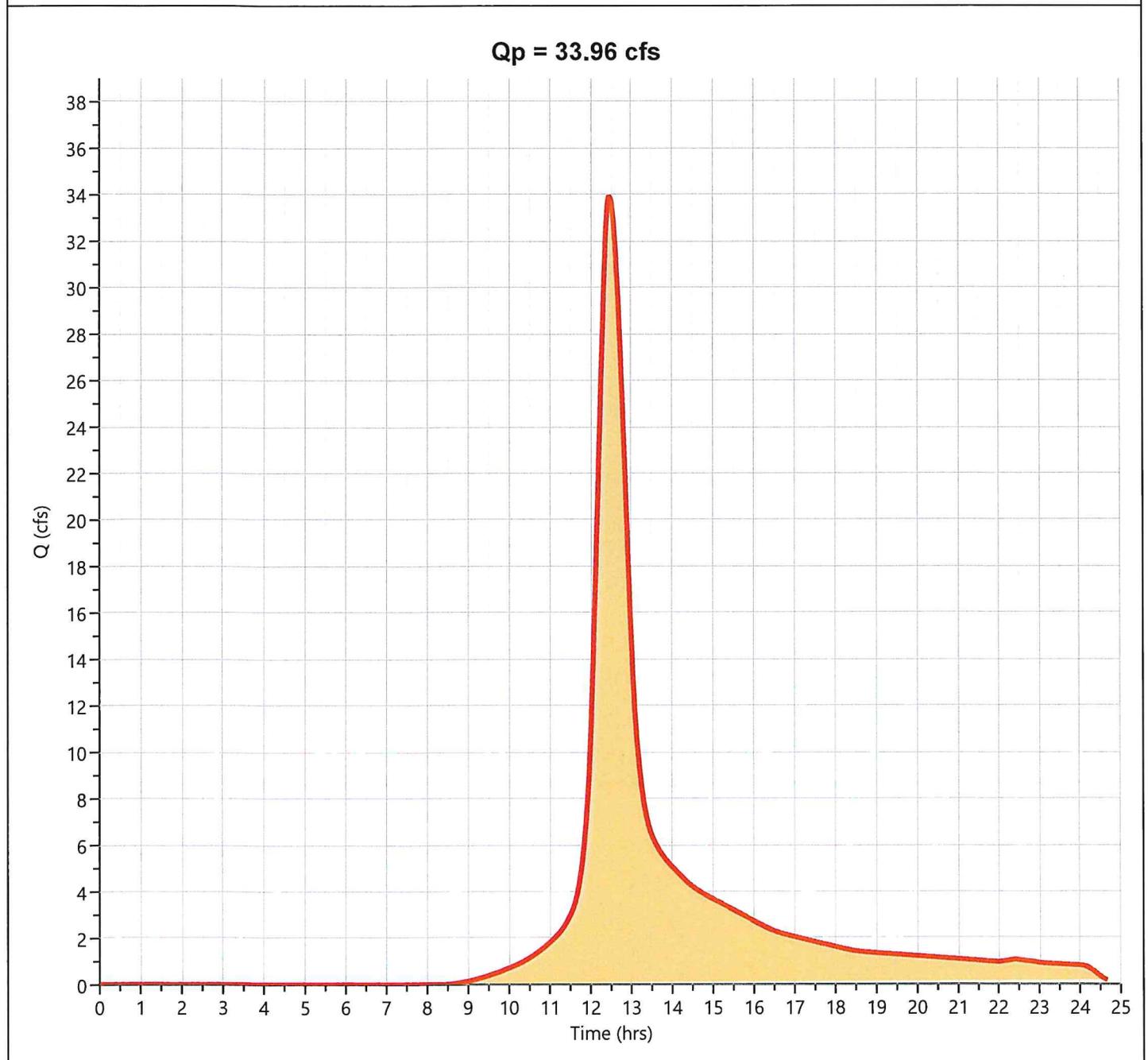
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 33.96 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.47 hrs
Time Interval	= 1 min	Runoff Volume	= 204,145 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 5.38 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

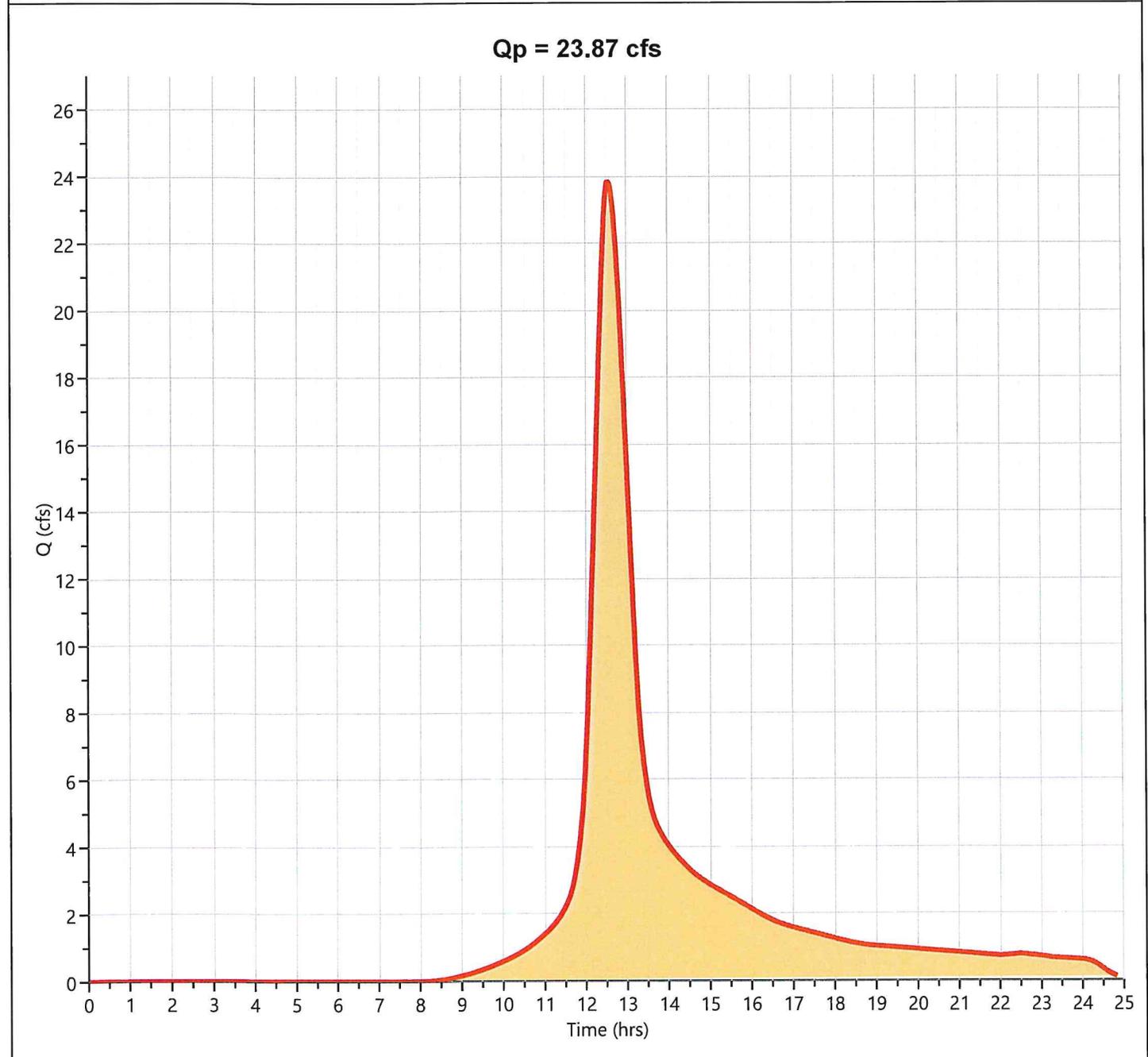
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 23.87 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.55 hrs
Time Interval	= 1 min	Runoff Volume	= 158,388 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 5.38 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

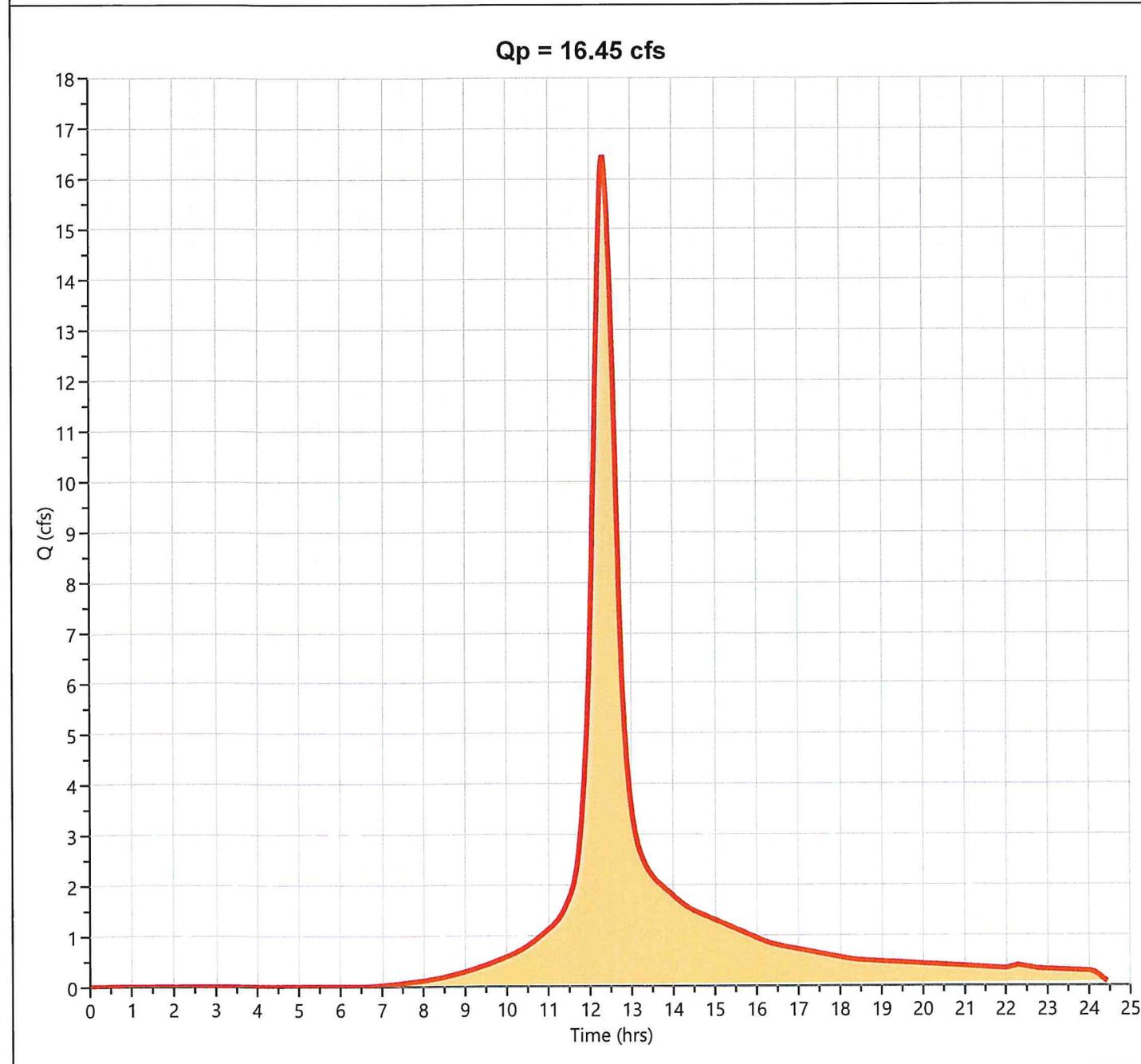


Hydrograph Report

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 16.45 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.32 hrs
Time Interval	= 1 min	Runoff Volume	= 83,853 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 5.38 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route DA B

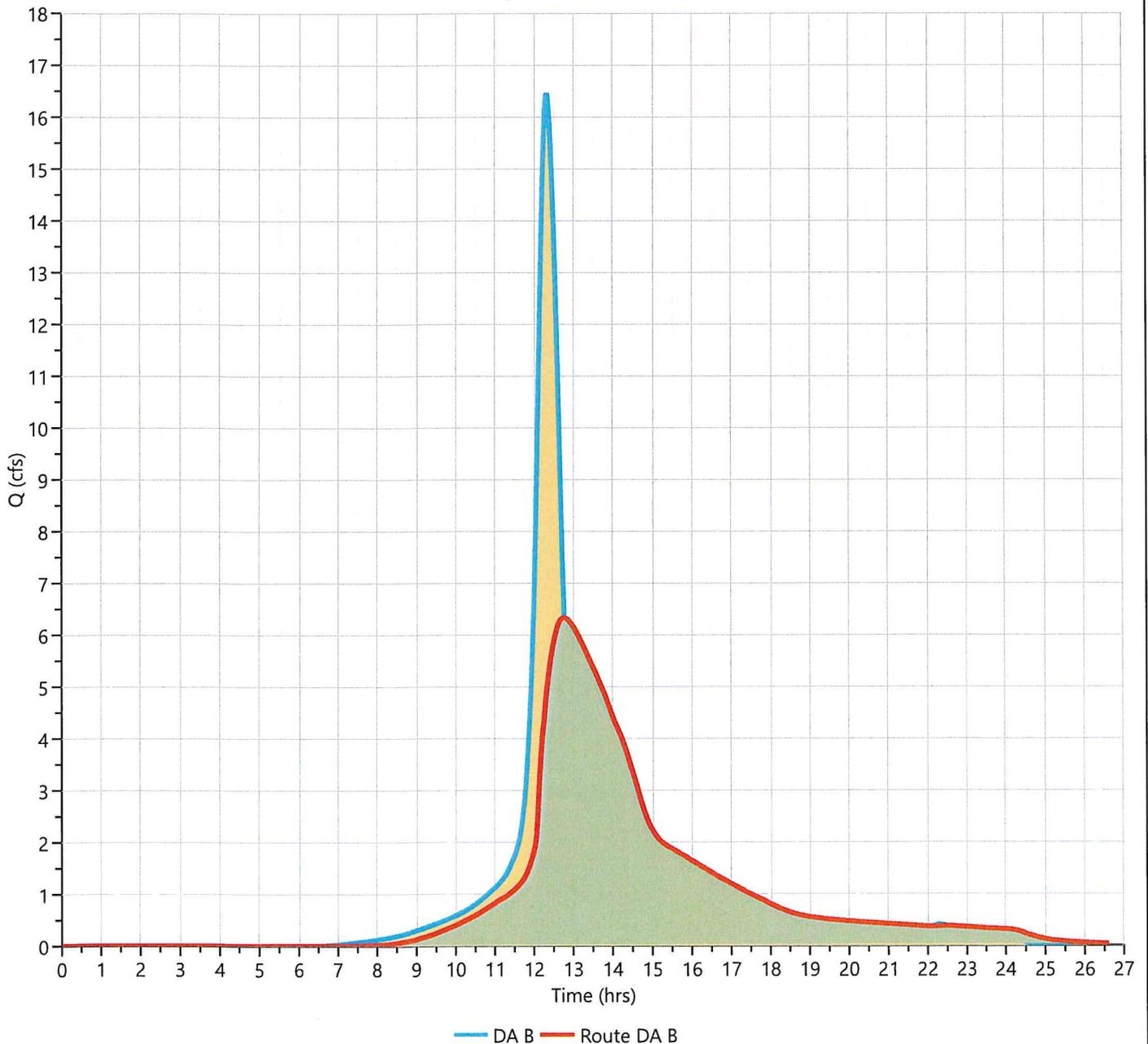
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 6.329 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.77 hrs
Time Interval	= 1 min	Hydrograph Volume	= 83,839 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 161.64 ft
Pond Name	= Detention	Max. Storage	= 27,165 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 56 min

Qp = 6.33 cfs



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route thru Weir

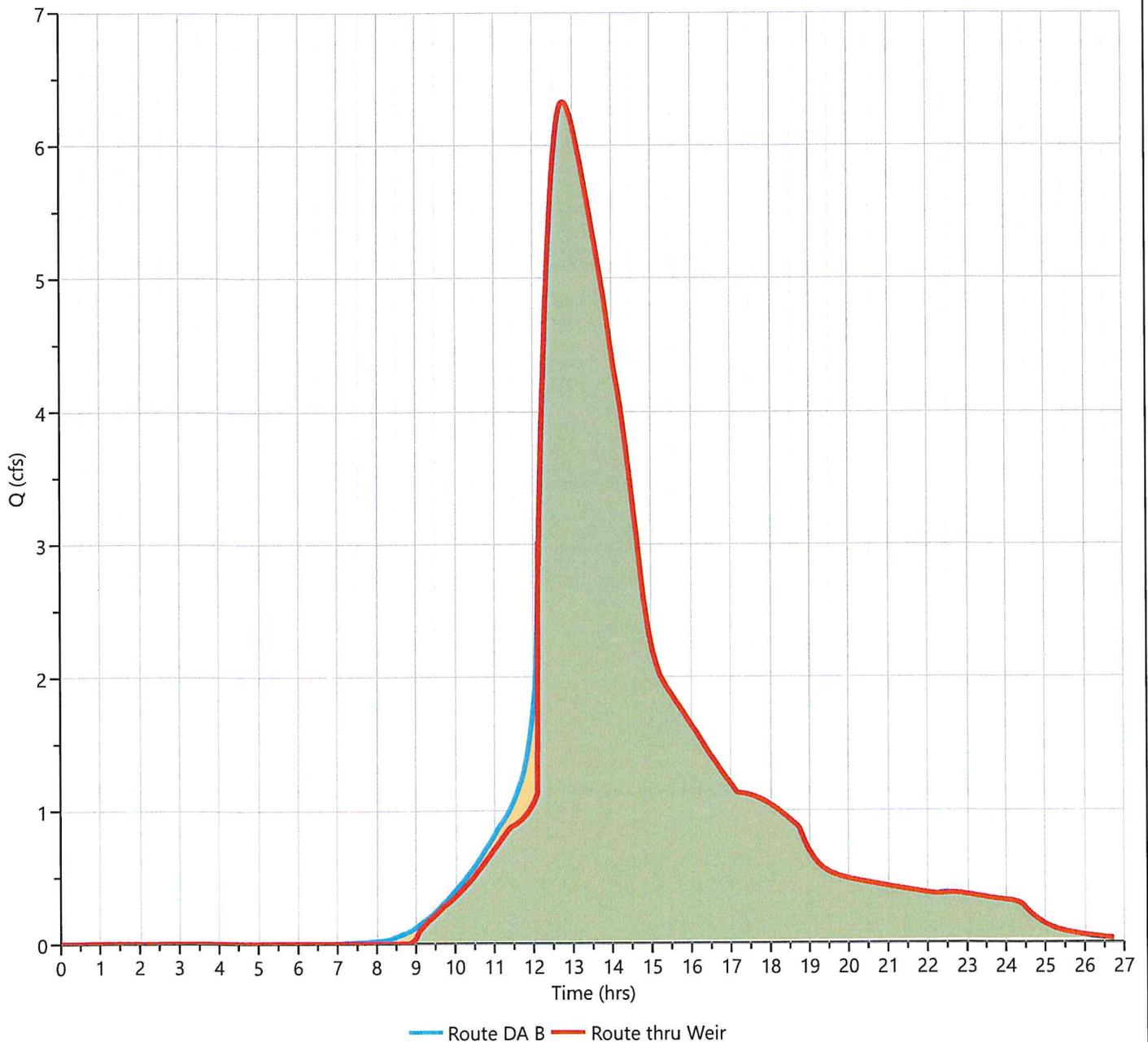
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 6.329 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.77 hrs
Time Interval	= 1 min	Hydrograph Volume	= 83,665 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.04 ft
Pond Name	= Weir	Max. Storage	= 1,972 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 10 min

Qp = 6.33 cfs

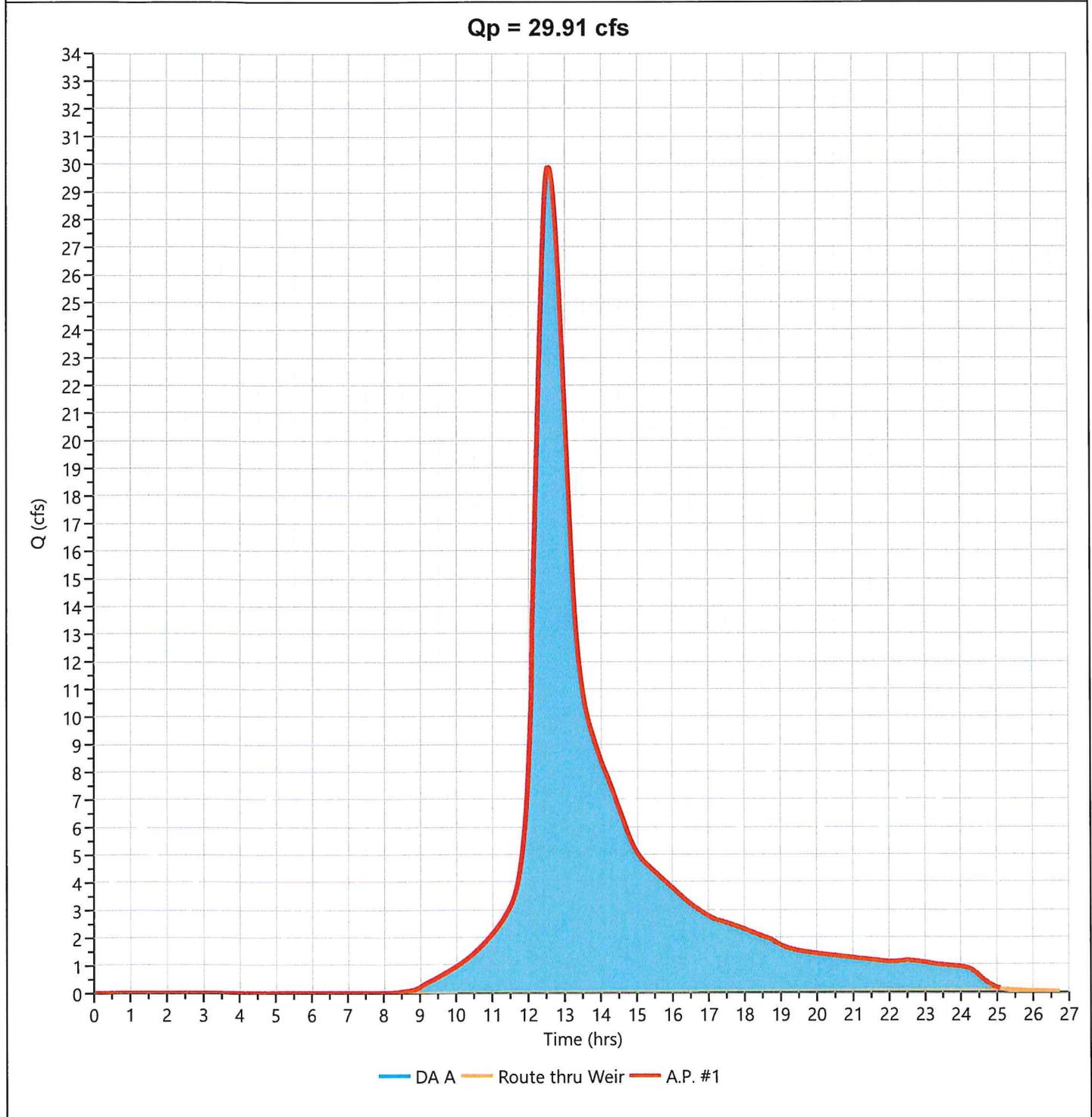


Hydrograph Report

Post A.P. #1

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 29.91 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.57 hrs
Time Interval	= 1 min	Hydrograph Volume	= 242,053 cuft
Inflow Hydrographs	= 2, 5	Total Contrib. Area	= 14.7 ac



Hydrograph Report

Project Name: Belta Final Rev

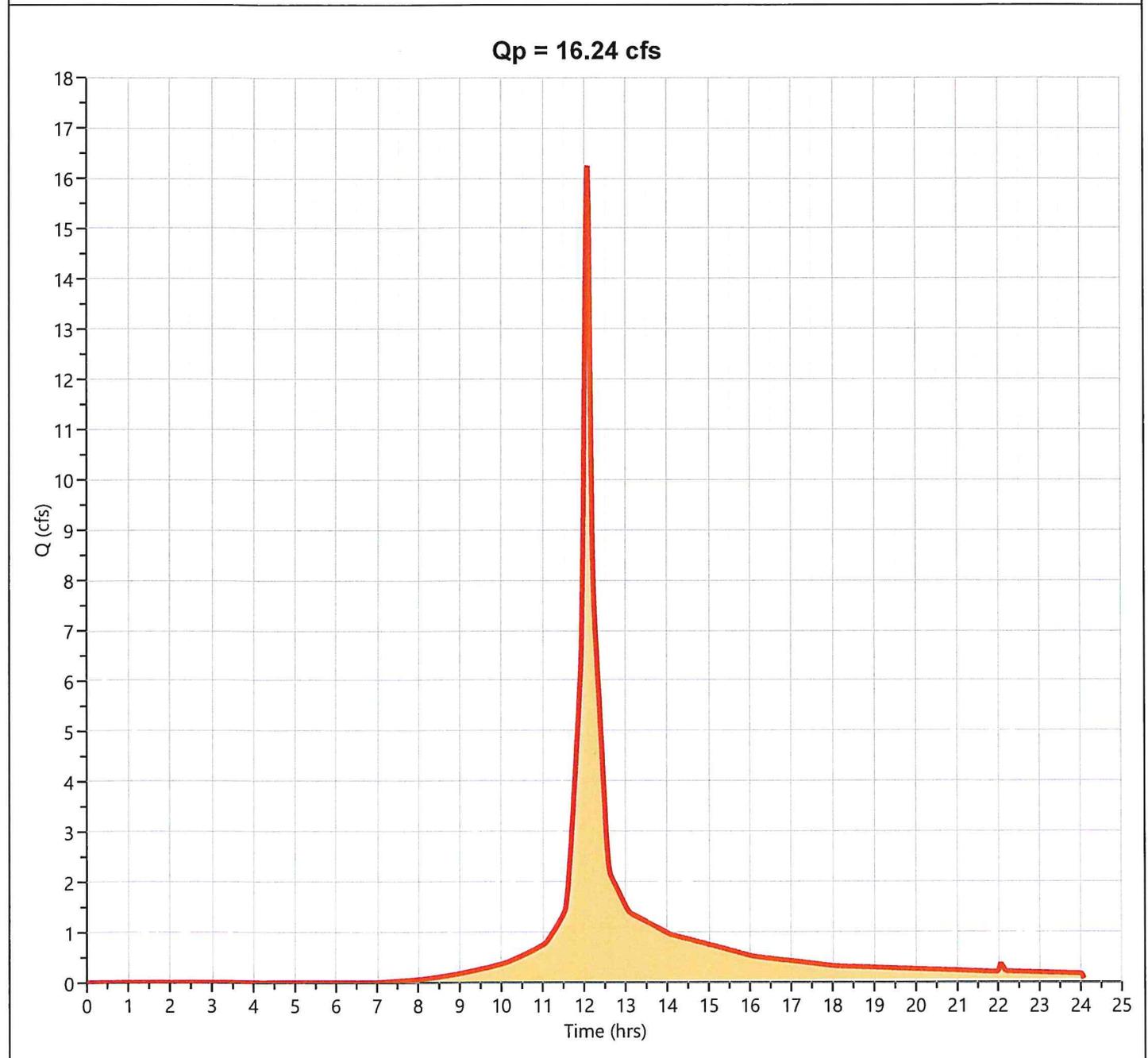
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 16.24 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 50,262 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.38 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

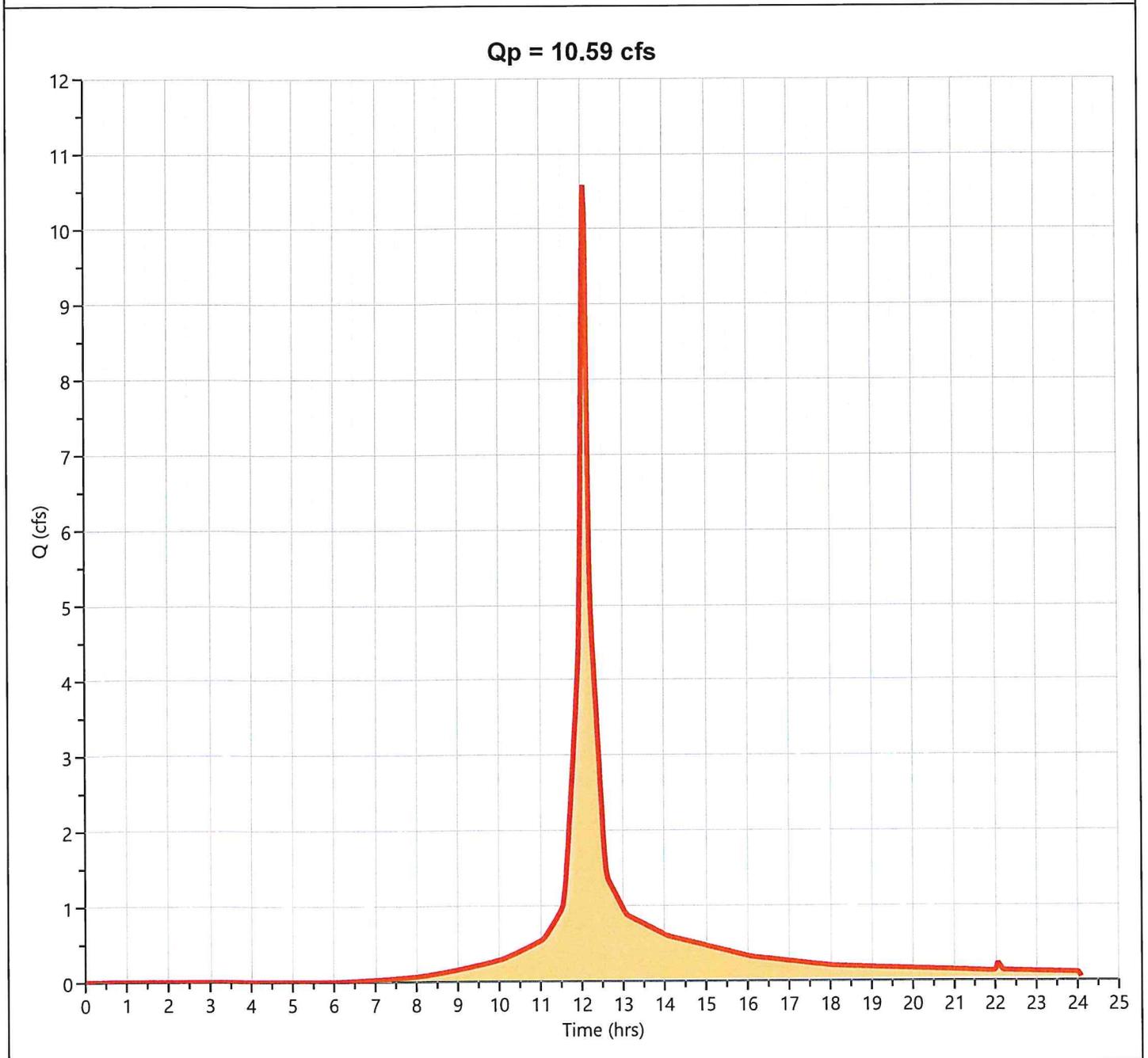
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 10.59 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 33,063 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.38 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



DYMAR

25 YEAR STORM

Hydrograph 25-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

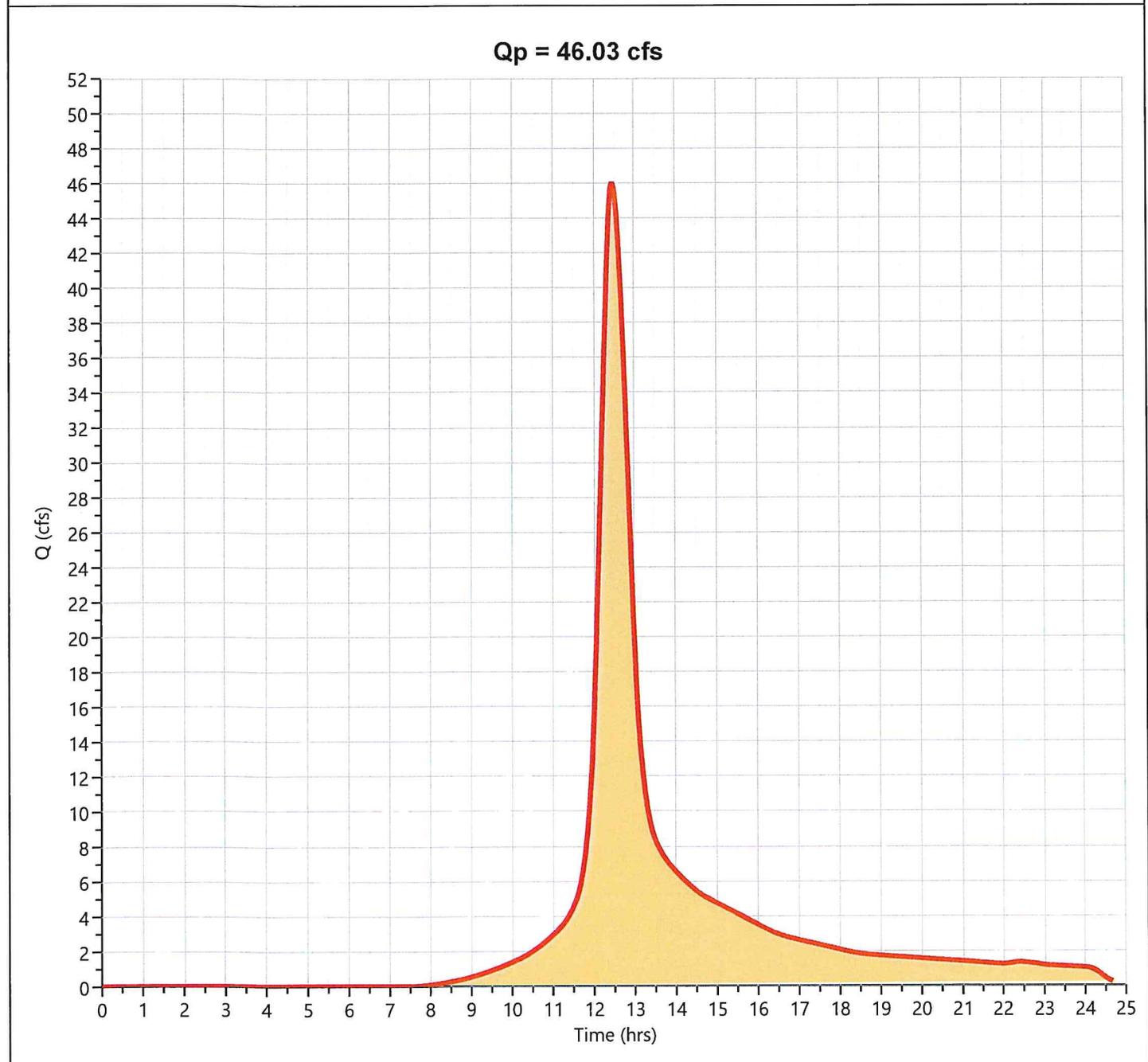
Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DAA AP#1	46.03	12.45	276,258	---		
2	NRCS Runoff	Post DAA	32.07	12.53	212,822	---		
3	NRCS Runoff	Post DA B	21.38	12.32	109,741	---		
4	Pond Route	Post Route DA B	7.697	12.78	109,727	3	163.02	37,181
5	Pond Route	Post Route thru Weir	7.695	12.78	109,553	4	158.05	1,980
6	Junction	Post A.P. #1	39.07	12.55	322,374	2, 5		
7	NRCS Runoff	Pre DA C AP #2	21.26	12.08	66,364	---		
8	NRCS Runoff	Post DA C AP #2	13.66	12.07	43,054	---		

Hydrograph Report

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 46.03 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.45 hrs
Time Interval	= 1 min	Runoff Volume	= 276,258 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 6.55 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

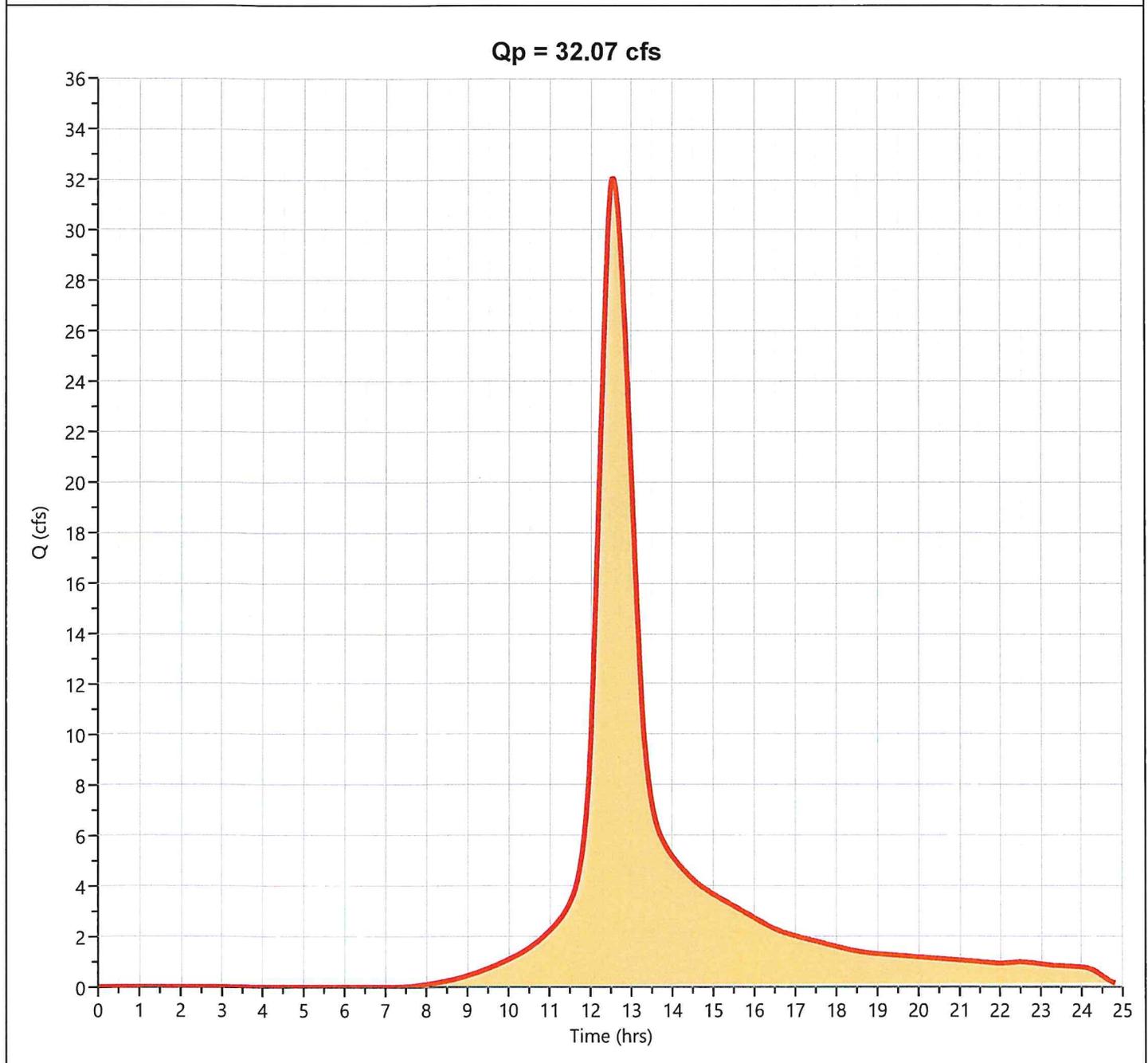
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 32.07 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.53 hrs
Time Interval	= 1 min	Runoff Volume	= 212,822 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 6.55 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

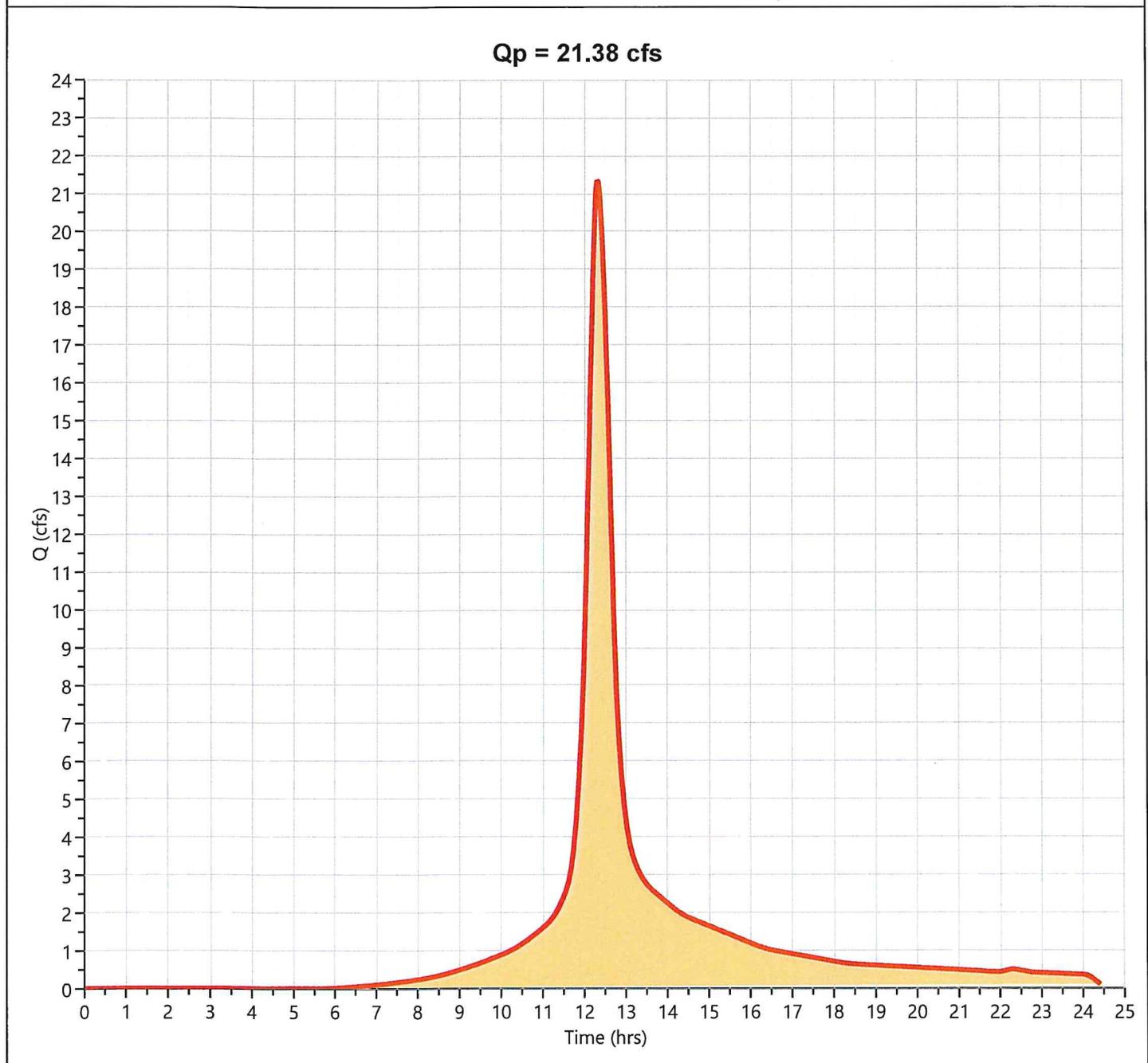
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 21.38 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.32 hrs
Time Interval	= 1 min	Runoff Volume	= 109,741 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 6.55 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route DA B

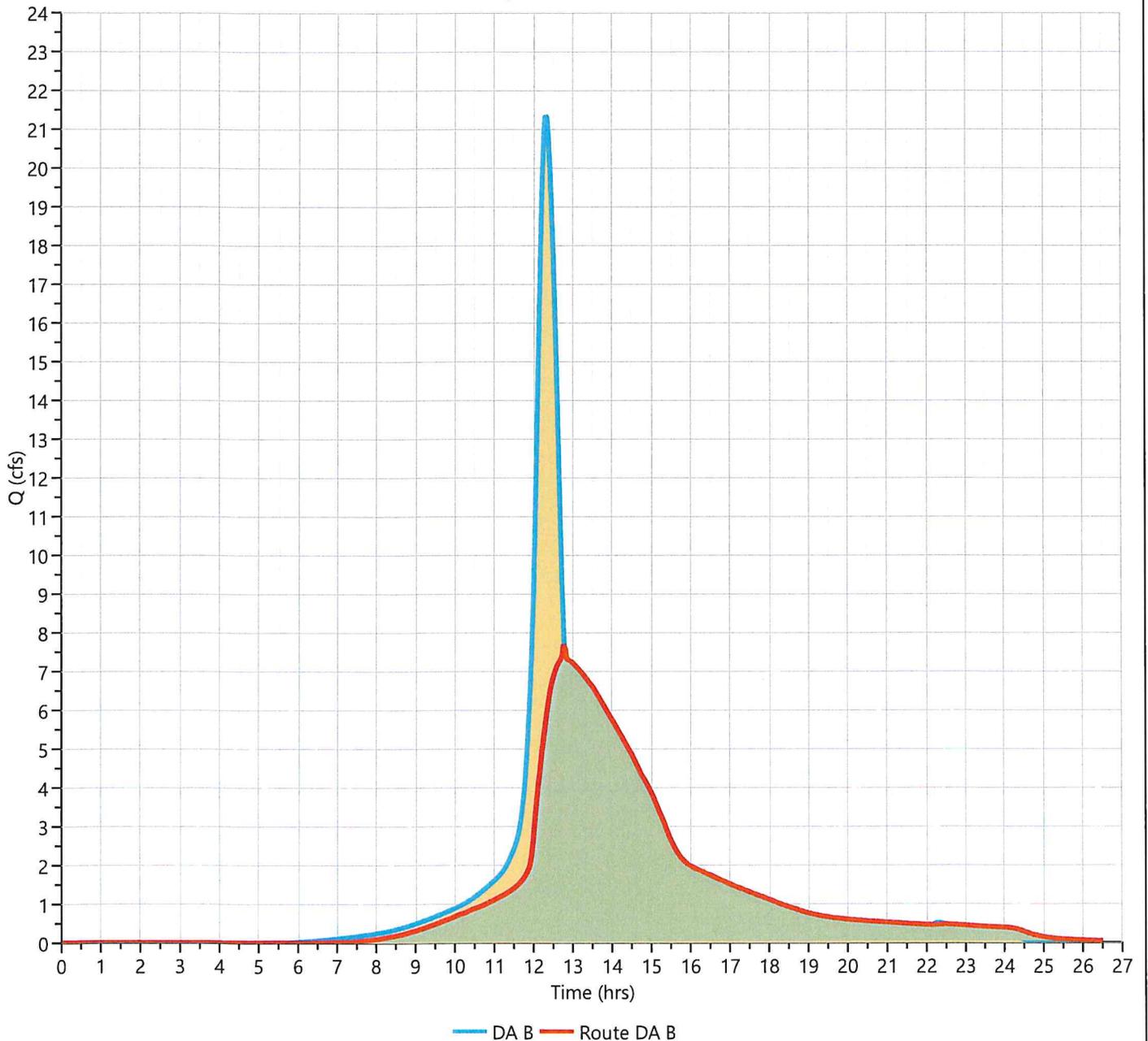
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 7.697 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.78 hrs
Time Interval	= 1 min	Hydrograph Volume	= 109,727 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 163.02 ft
Pond Name	= Detention	Max. Storage	= 37,181 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 1.02 hrs

Qp = 7.70 cfs



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route thru Weir

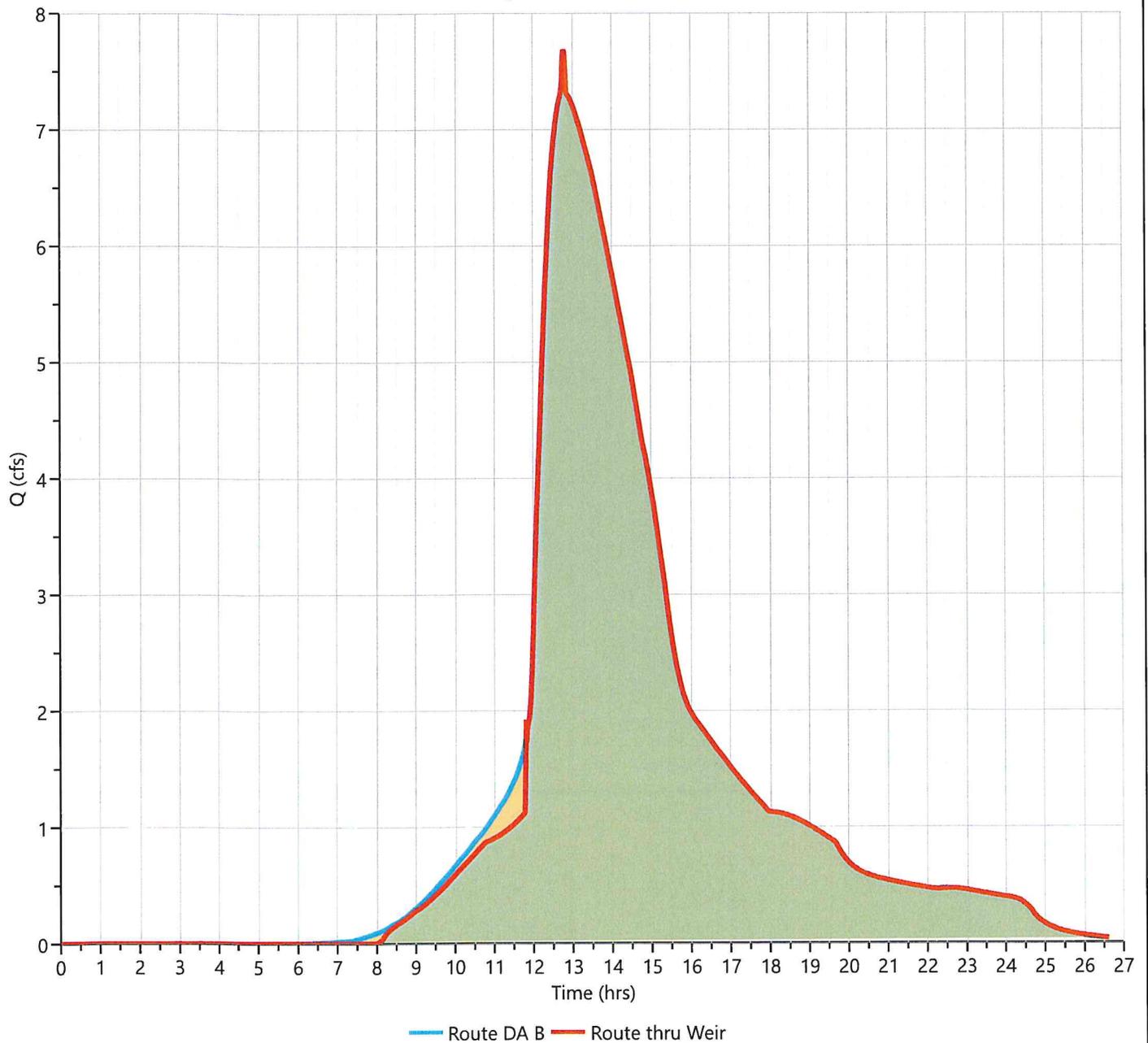
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 7.695 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.78 hrs
Time Interval	= 1 min	Hydrograph Volume	= 109,553 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.05 ft
Pond Name	= Weir	Max. Storage	= 1,980 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 9 min

Qp = 7.70 cfs



Hydrograph Report

Project Name: Belta Final Rev

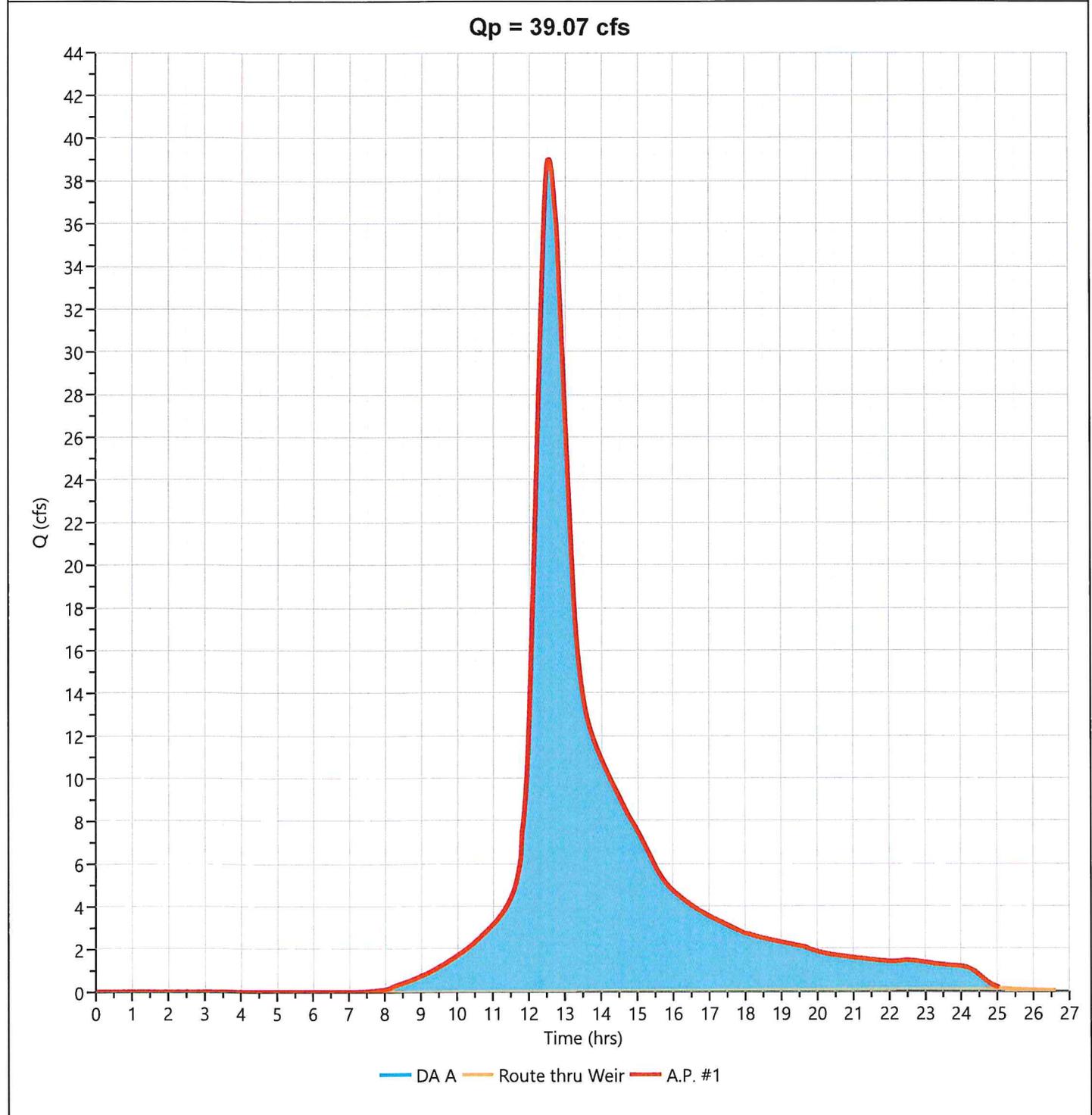
Hydrology Studio v 3.0.0.16

08-18-2020

Post A.P. #1

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 39.07 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.55 hrs
Time Interval	= 1 min	Hydrograph Volume	= 322,374 cuft
Inflow Hydrographs	= 2, 5	Total Contrib. Area	= 14.7 ac



Hydrograph Report

Project Name: Belta Final Rev

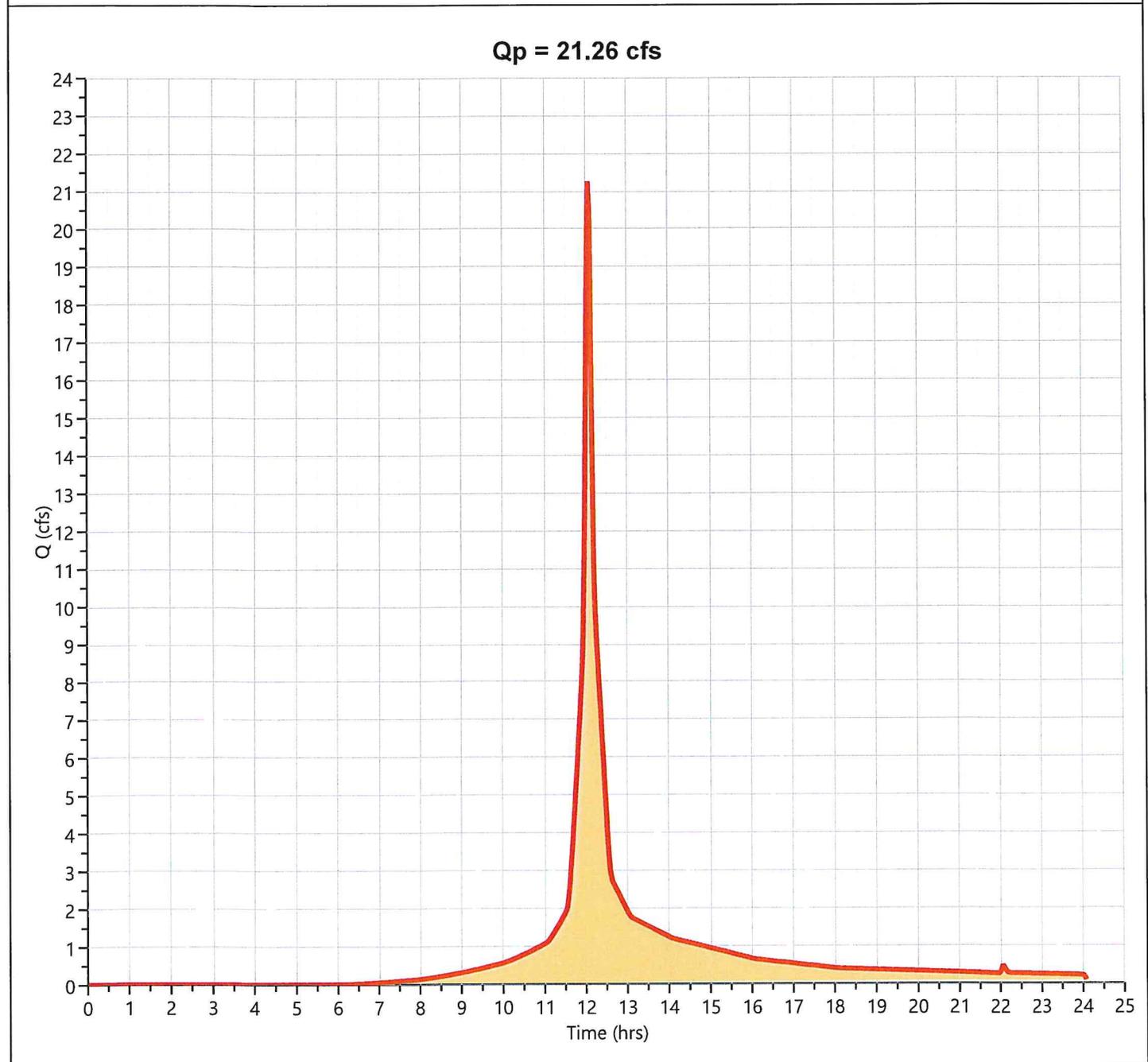
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 21.26 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.08 hrs
Time Interval	= 1 min	Runoff Volume	= 66,364 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.55 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

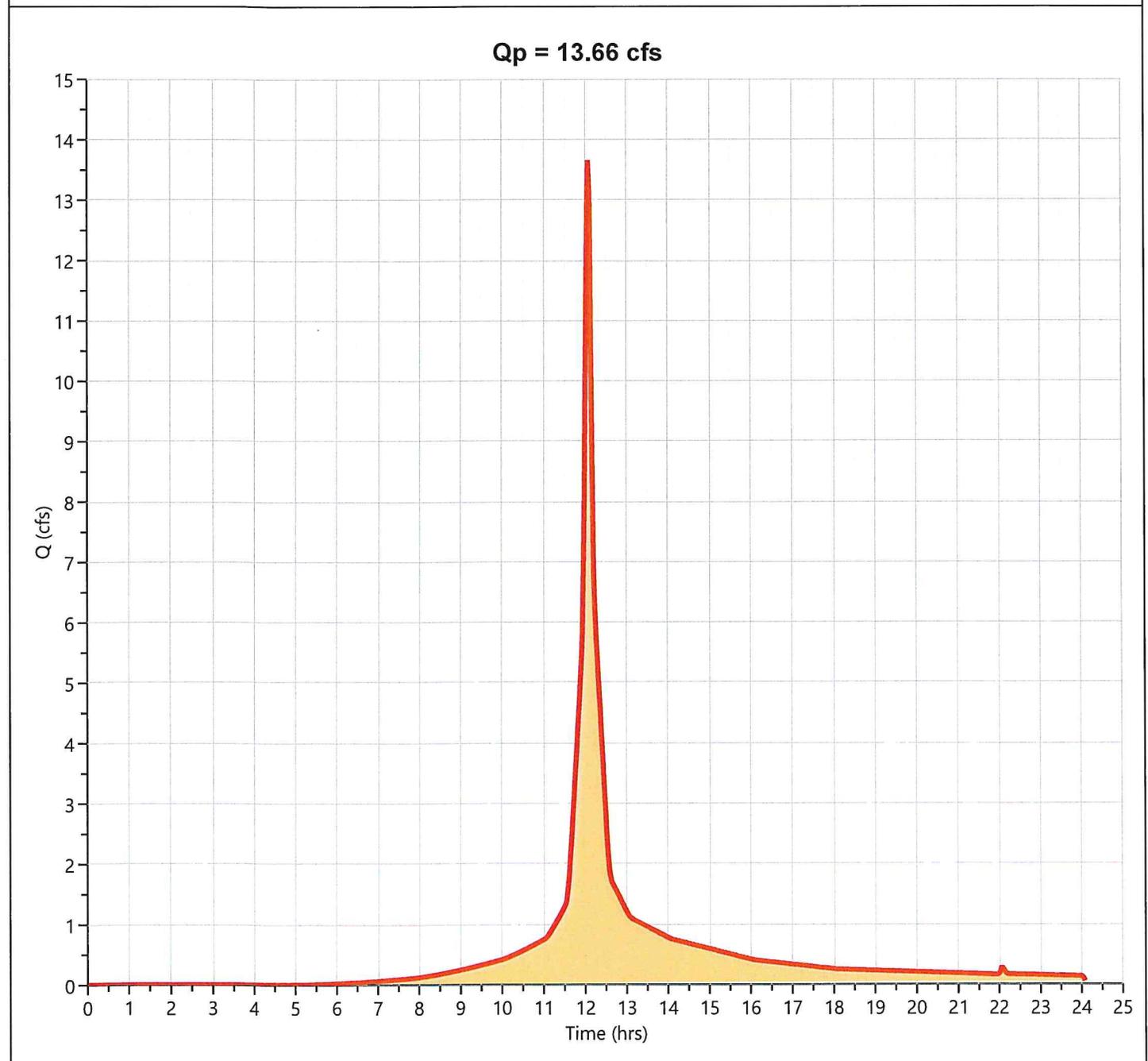
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 13.66 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.07 hrs
Time Interval	= 1 min	Runoff Volume	= 43,054 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.55 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



DYMAR

50 YEAR STORM

Hydrograph 50-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DAA AP#1	55.19	12.45	331,657	---		
2	NRCS Runoff	Post DAA	38.28	12.53	254,499	---		
3	NRCS Runoff	Post DA B	25.05	12.32	129,336	---		
4	Pond Route	Post Route DA B	15.19	12.62	129,322	3	163.40	40,095
5	Pond Route	Post Route thru Weir	15.20	12.63	129,148	4	158.08	2,016
6	Junction	Post A.P. #1	52.90	12.60	383,647	2, 5		
7	NRCS Runoff	Pre DA C AP #2	25.04	12.07	78,597	---		
8	NRCS Runoff	Post DA C AP #2	15.94	12.07	50,602	---		

Hydrograph Report

Project Name: Belta Final Rev

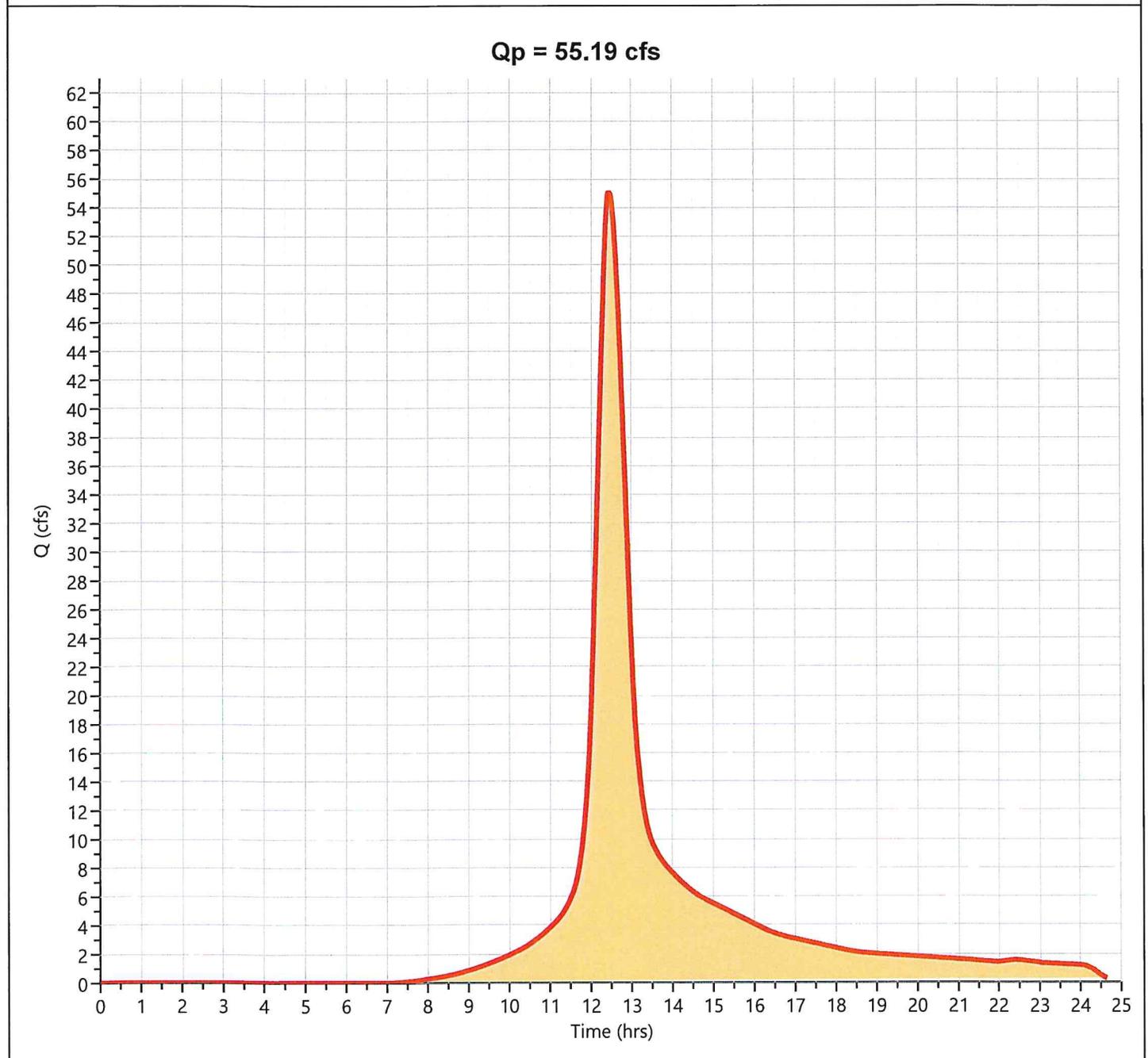
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 55.19 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.45 hrs
Time Interval	= 1 min	Runoff Volume	= 331,657 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 7.42 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

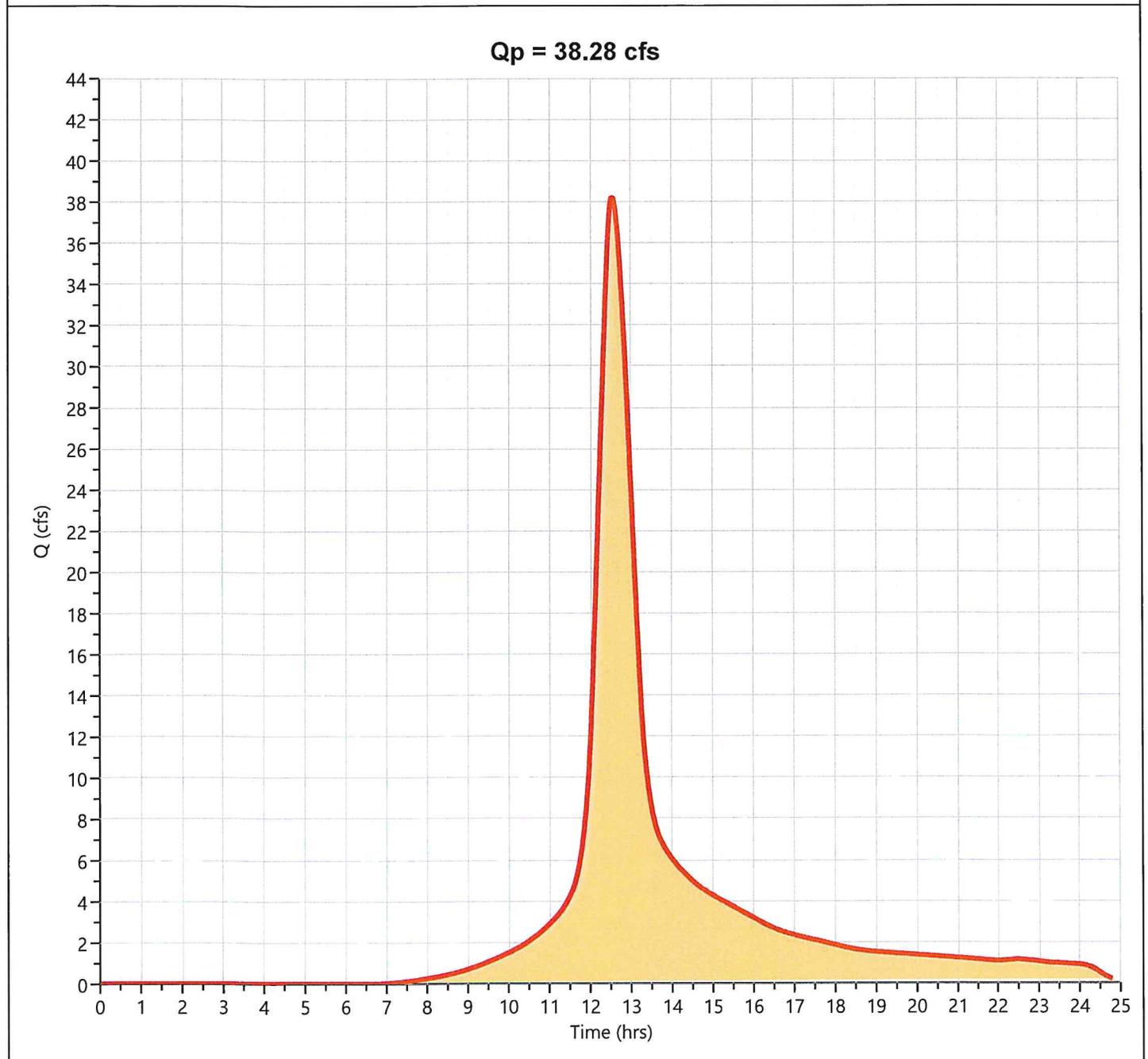
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 38.28 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.53 hrs
Time Interval	= 1 min	Runoff Volume	= 254,499 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 7.42 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

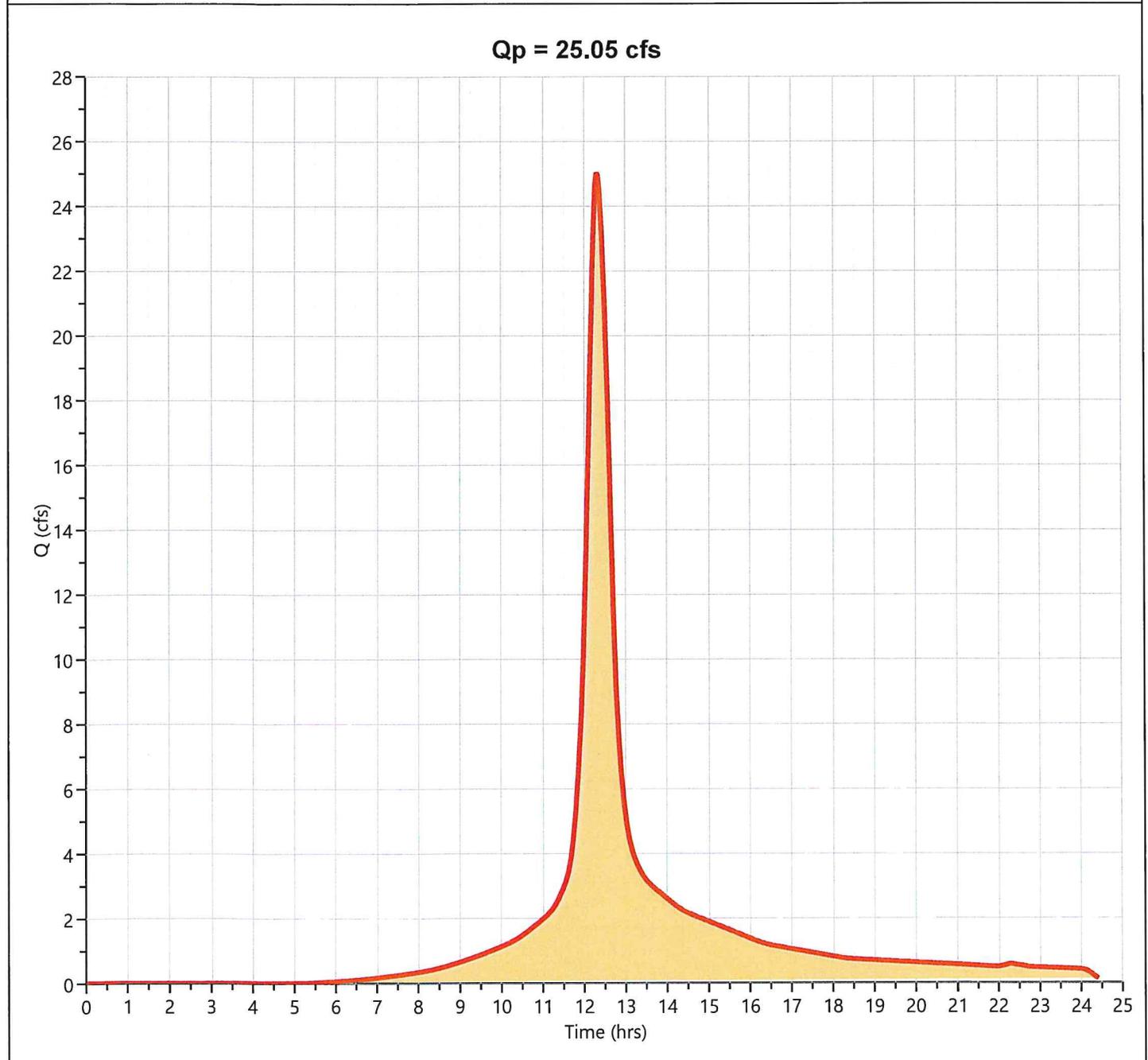
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 25.05 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.32 hrs
Time Interval	= 1 min	Runoff Volume	= 129,336 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 7.42 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Post Route DA B

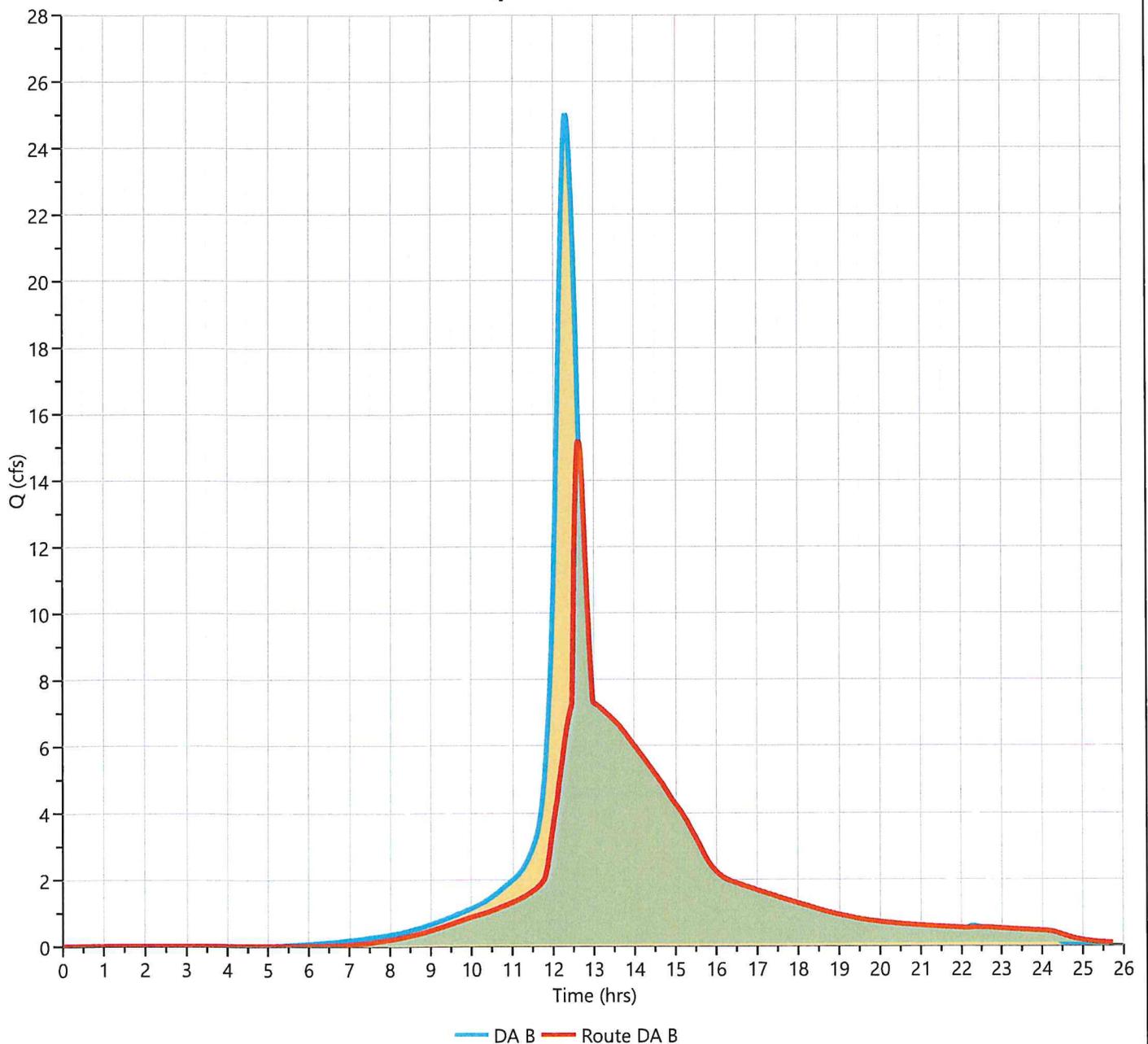
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 15.19 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.62 hrs
Time Interval	= 1 min	Hydrograph Volume	= 129,322 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 163.40 ft
Pond Name	= Detention	Max. Storage	= 40,095 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 57 min

Qp = 15.19 cfs



Hydrograph Report

Post Route thru Weir

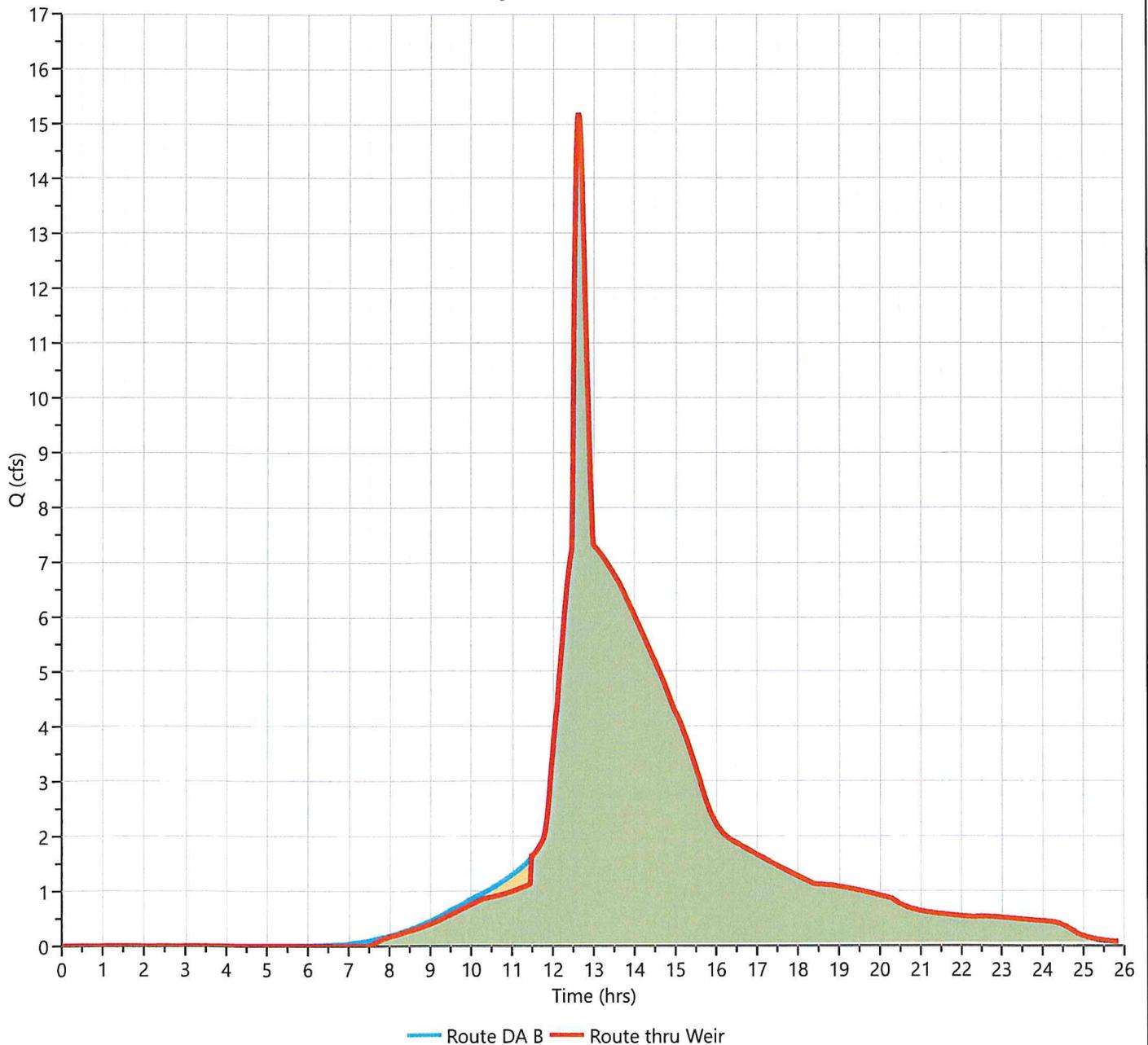
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 15.20 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.63 hrs
Time Interval	= 1 min	Hydrograph Volume	= 129,148 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.08 ft
Pond Name	= Weir	Max. Storage	= 2,016 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 9 min

Qp = 15.20 cfs



Hydrograph Report

Project Name: Belta Final Rev

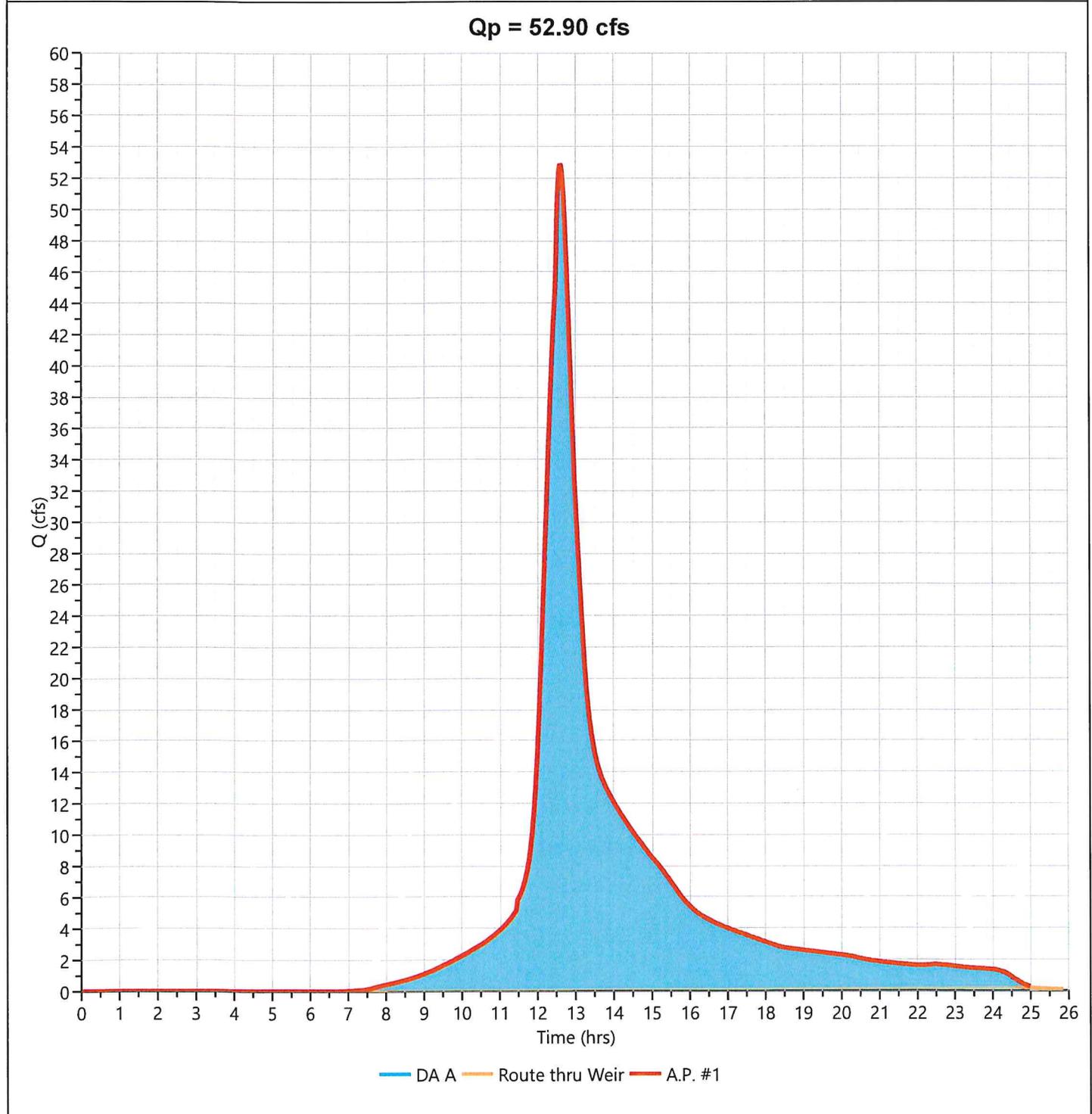
Hydrology Studio v 3.0.0.16

08-18-2020

Post A.P. #1

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 52.90 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.60 hrs
Time Interval	= 1 min	Hydrograph Volume	= 383,647 cuft
Inflow Hydrographs	= 2, 5	Total Contrib. Area	= 14.7 ac



Hydrograph Report

Project Name: Belta Final Rev

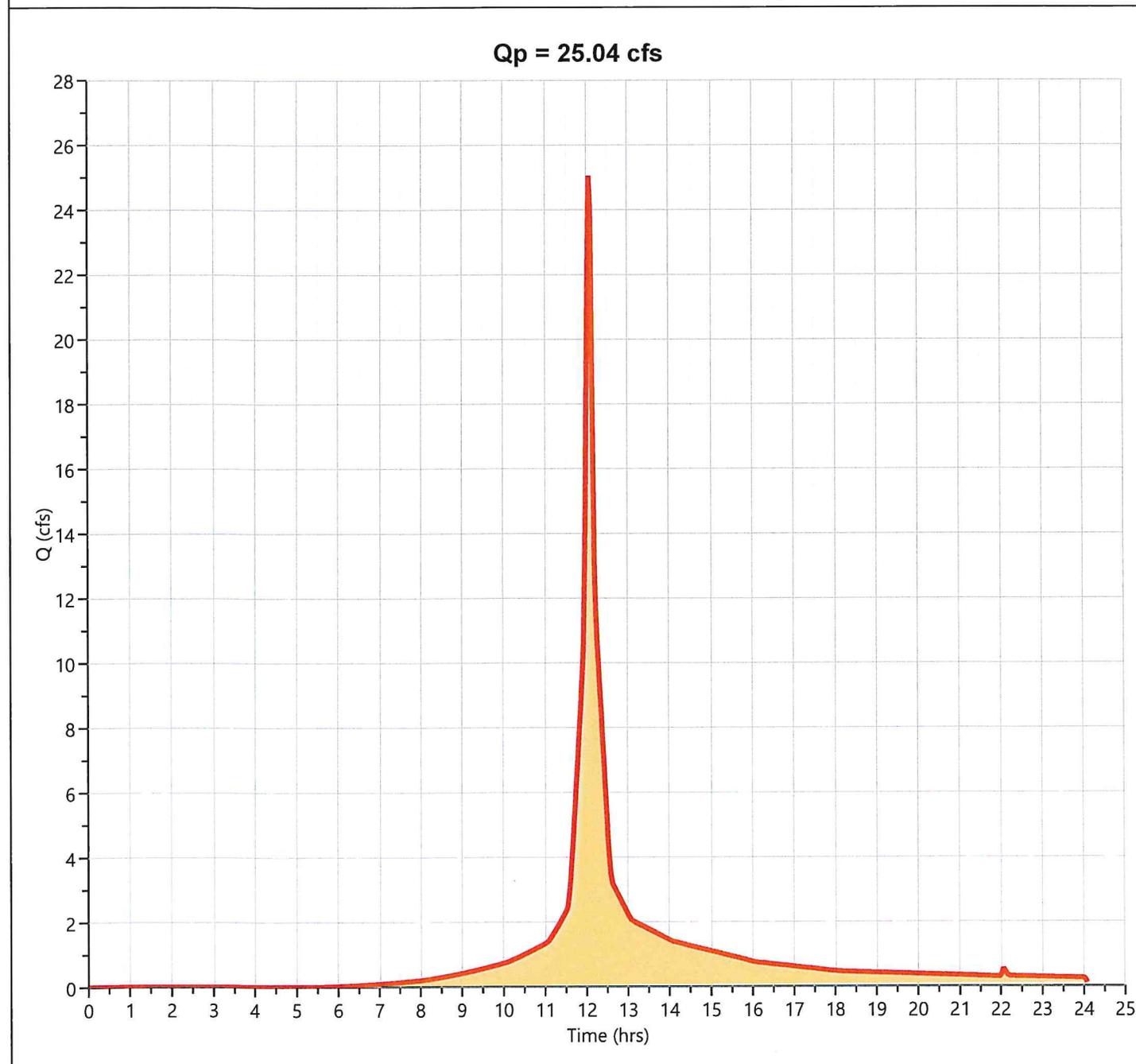
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 25.04 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 1 min	Runoff Volume	= 78,597 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.42 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

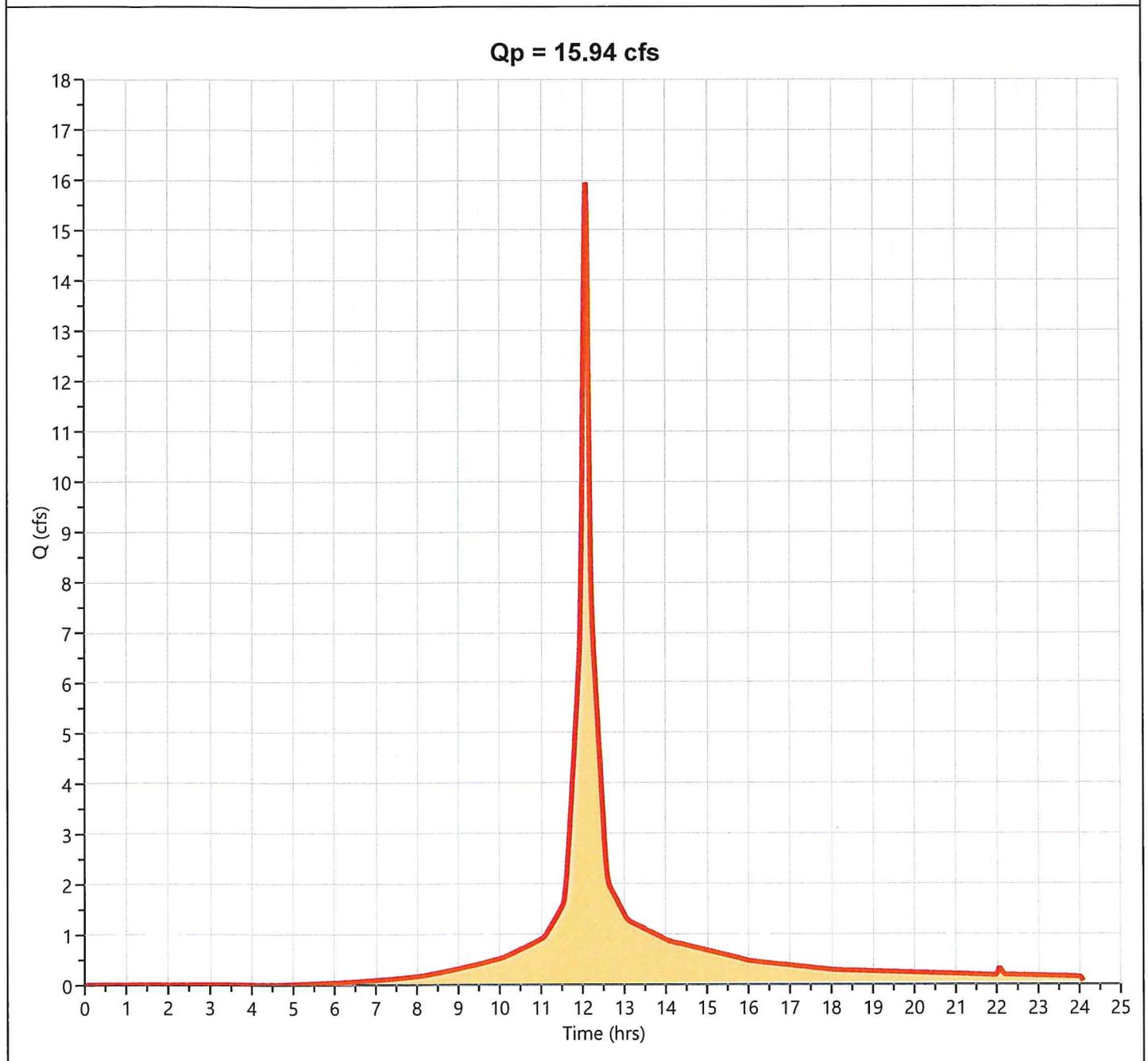
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 15.94 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 1 min	Runoff Volume	= 50,602 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.42 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



DYMAR

100 YEAR STORM

Hydrograph 100-yr Summary

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre DAAAP#1	65.07	12.45	392,092	---		
2	NRCS Runoff	Post DAA	44.97	12.53	299,870	---		
3	NRCS Runoff	Post DA B	28.96	12.32	150,512	---		
4	Pond Route	Post Route DA B	16.00	12.65	150,498	3	164.03	44,906
5	Pond Route	Post Route thru Weir	16.00	12.65	150,324	4	158.08	2,020
6	Junction	Post A.P. #1	60.75	12.55	450,194	2, 5		
7	NRCS Runoff	Pre DA C AP #2	29.08	12.07	91,848	---		
8	NRCS Runoff	Post DA C AP #2	18.38	12.07	58,747	---		

Hydrograph Report

Project Name: Belta Final Rev

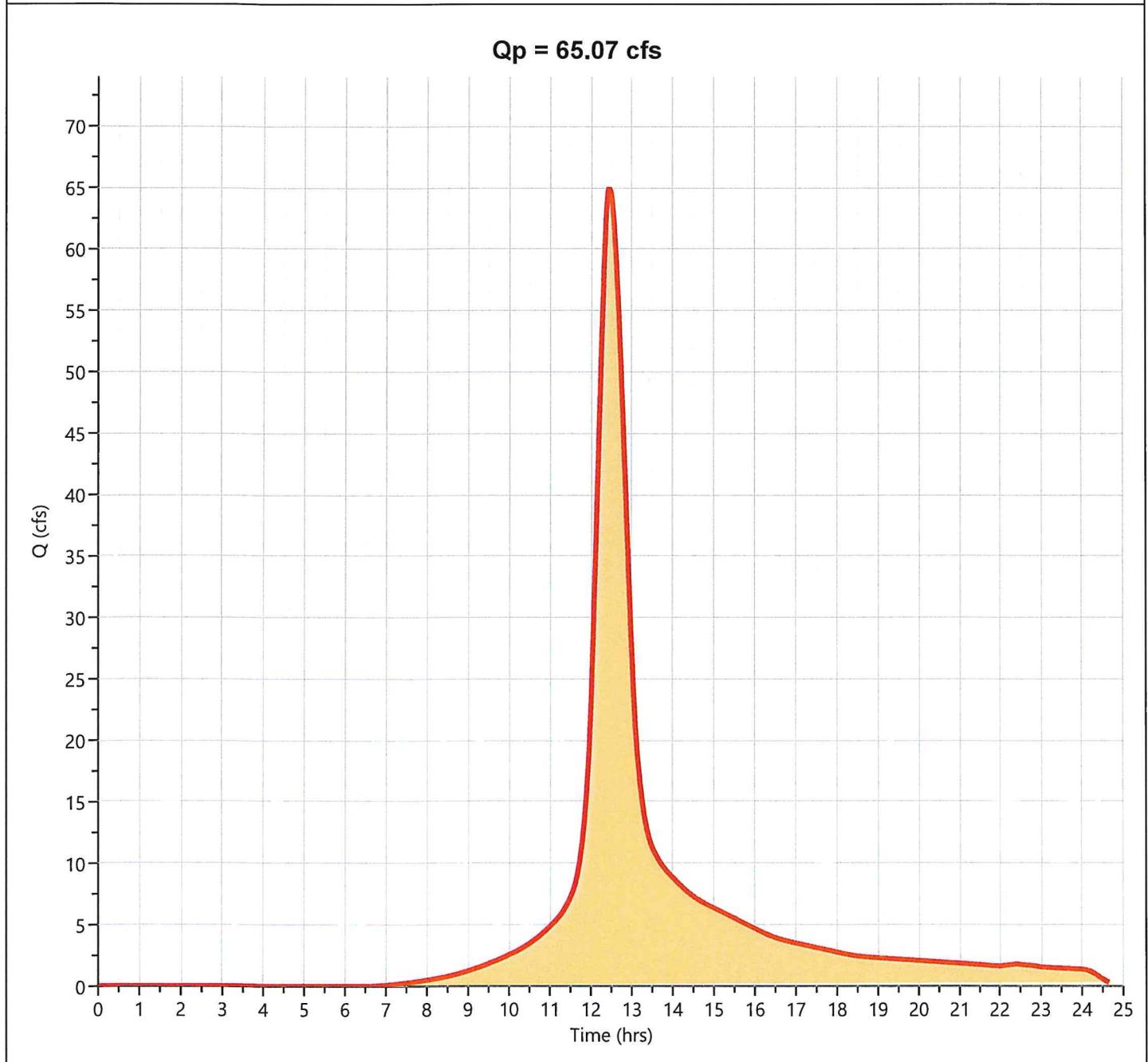
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA A AP#1

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 65.07 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.45 hrs
Time Interval	= 1 min	Runoff Volume	= 392,092 cuft
Drainage Area	= 19.72 ac	Curve Number	= 76
Tc Method	= User	Time of Conc. (Tc)	= 40.2 min
Total Rainfall	= 8.35 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

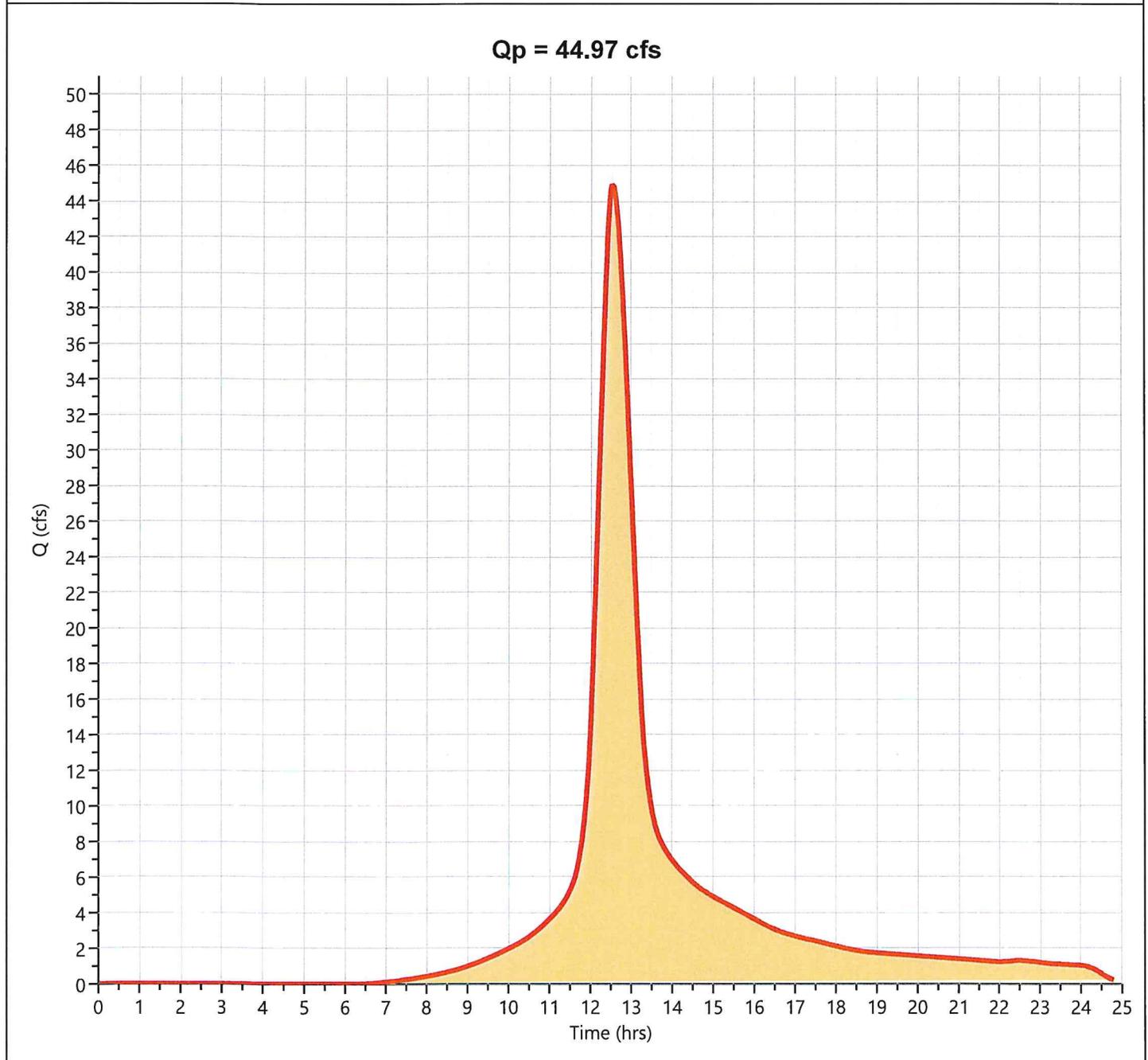
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA A

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 44.97 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.53 hrs
Time Interval	= 1 min	Runoff Volume	= 299,870 cuft
Drainage Area	= 14.7 ac	Curve Number	= 77.4
Tc Method	= User	Time of Conc. (Tc)	= 47.8 min
Total Rainfall	= 8.35 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

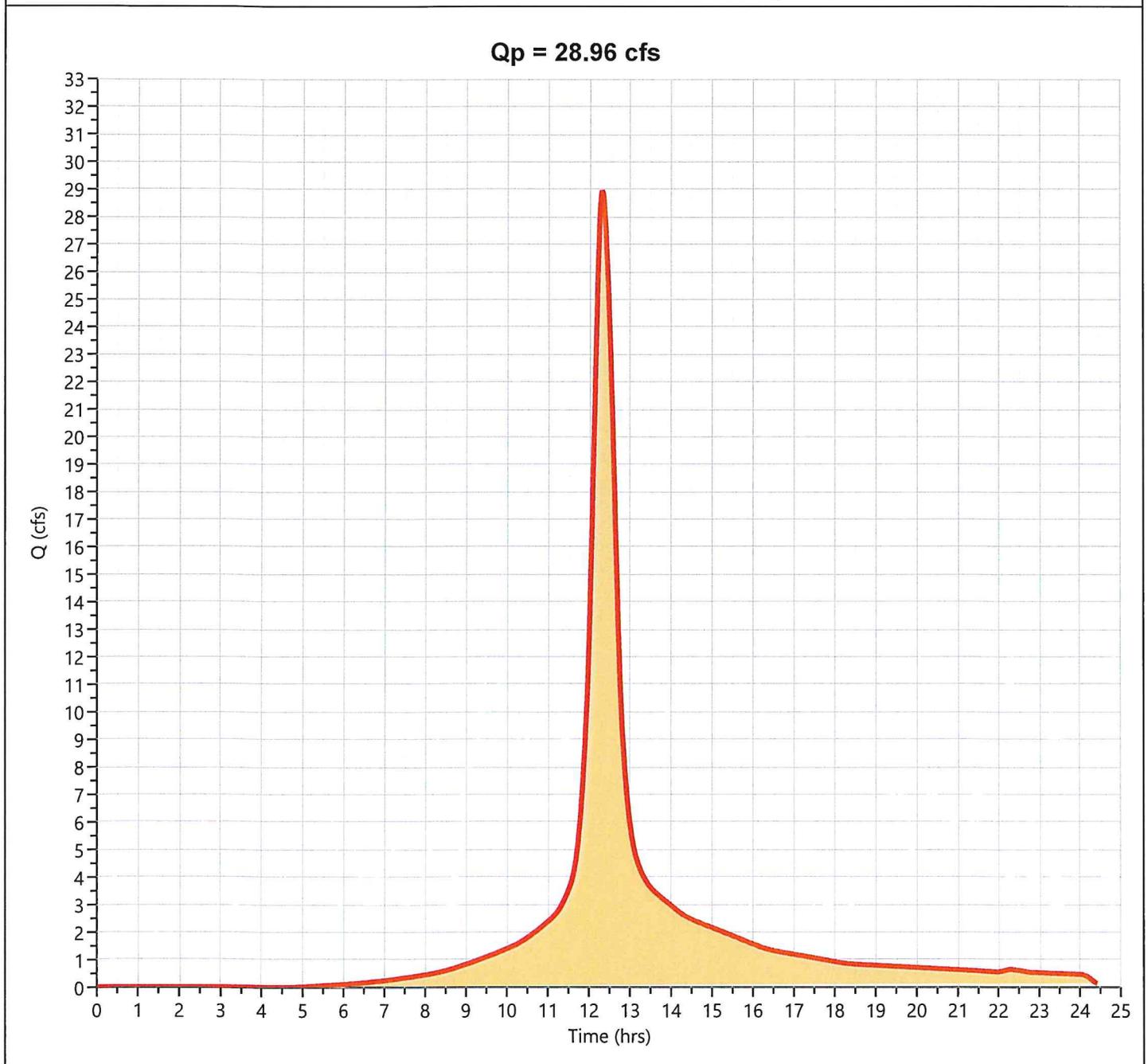
Hydrology Studio v 3.0.0.16

08-18-2020

Post DA B

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 28.96 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.32 hrs
Time Interval	= 1 min	Runoff Volume	= 150,512 cuft
Drainage Area	= 6.63 ac	Curve Number	= 82.9
Tc Method	= User	Time of Conc. (Tc)	= 28.2 min
Total Rainfall	= 8.35 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route DA B

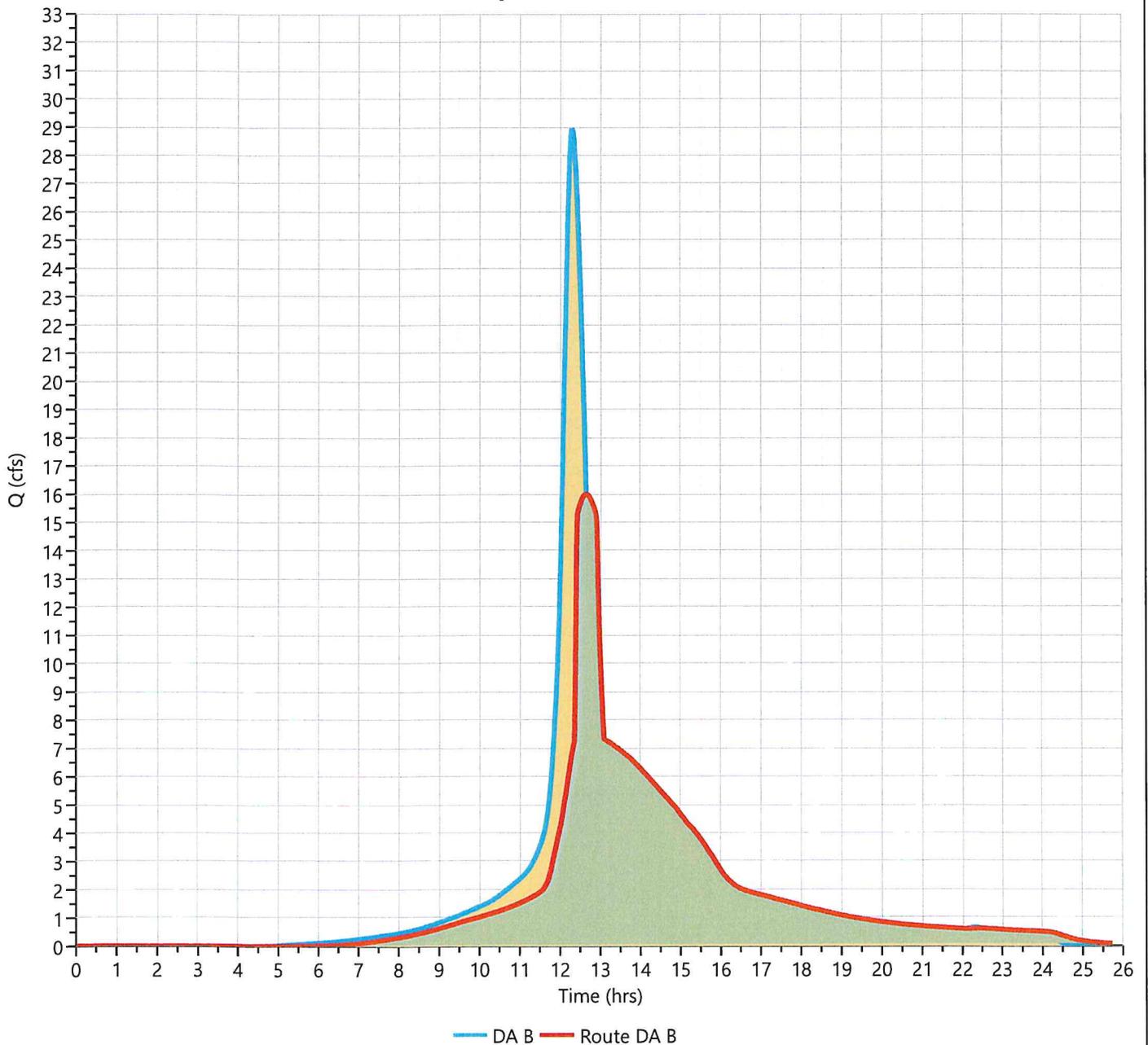
Hyd. No. 4

Hydrograph Type	= Pond Route	Peak Flow	= 16.00 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.65 hrs
Time Interval	= 1 min	Hydrograph Volume	= 150,498 cuft
Inflow Hydrograph	= 3 - DA B	Max. Elevation	= 164.03 ft
Pond Name	= Detention	Max. Storage	= 44,906 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 55 min

Qp = 16.00 cfs



Hydrograph Report

Project Name: Belta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post Route thru Weir

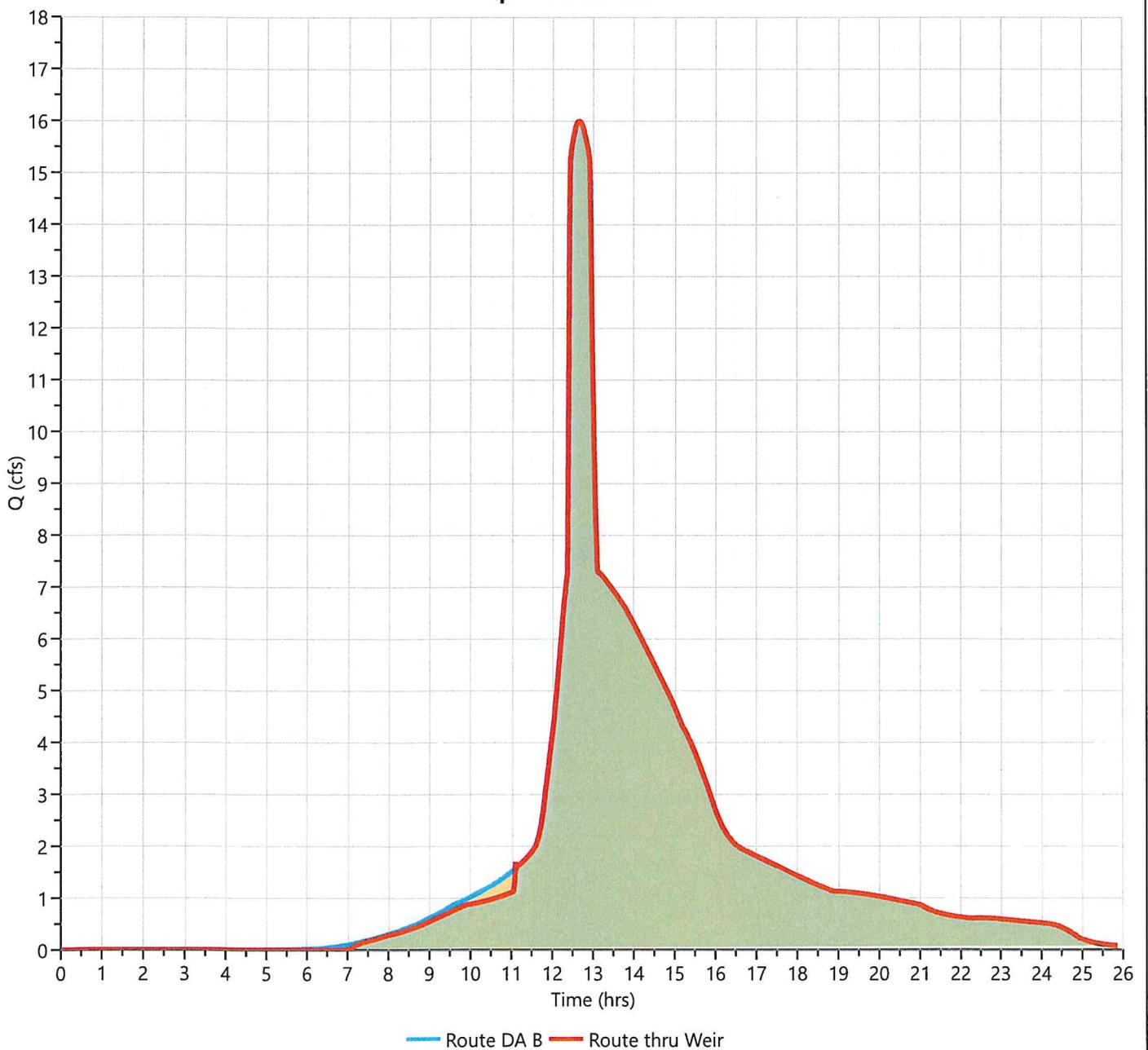
Hyd. No. 5

Hydrograph Type	= Pond Route	Peak Flow	= 16.00 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.65 hrs
Time Interval	= 1 min	Hydrograph Volume	= 150,324 cuft
Inflow Hydrograph	= 4 - Route DA B	Max. Elevation	= 158.08 ft
Pond Name	= Weir	Max. Storage	= 2,020 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 8 min

Qp = 16.00 cfs



Hydrograph Report

Project Name: Beta Final Rev

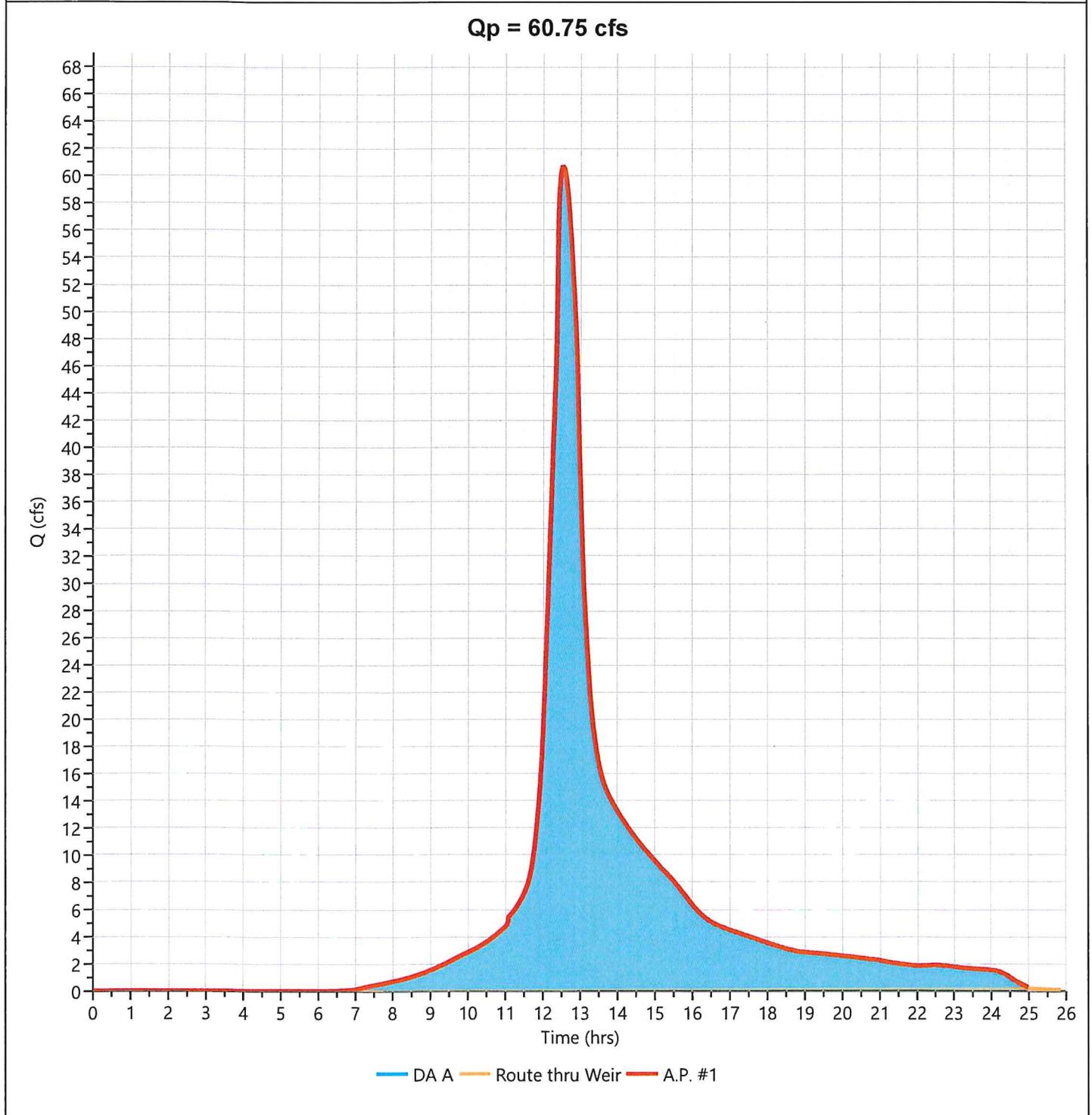
Hydrology Studio v 3.0.0.16

08-18-2020

Post A.P. #1

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 60.75 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.55 hrs
Time Interval	= 1 min	Hydrograph Volume	= 450,194 cuft
Inflow Hydrographs	= 2, 5	Total Contrib. Area	= 14.7 ac



Hydrograph Report

Project Name: Belta Final Rev

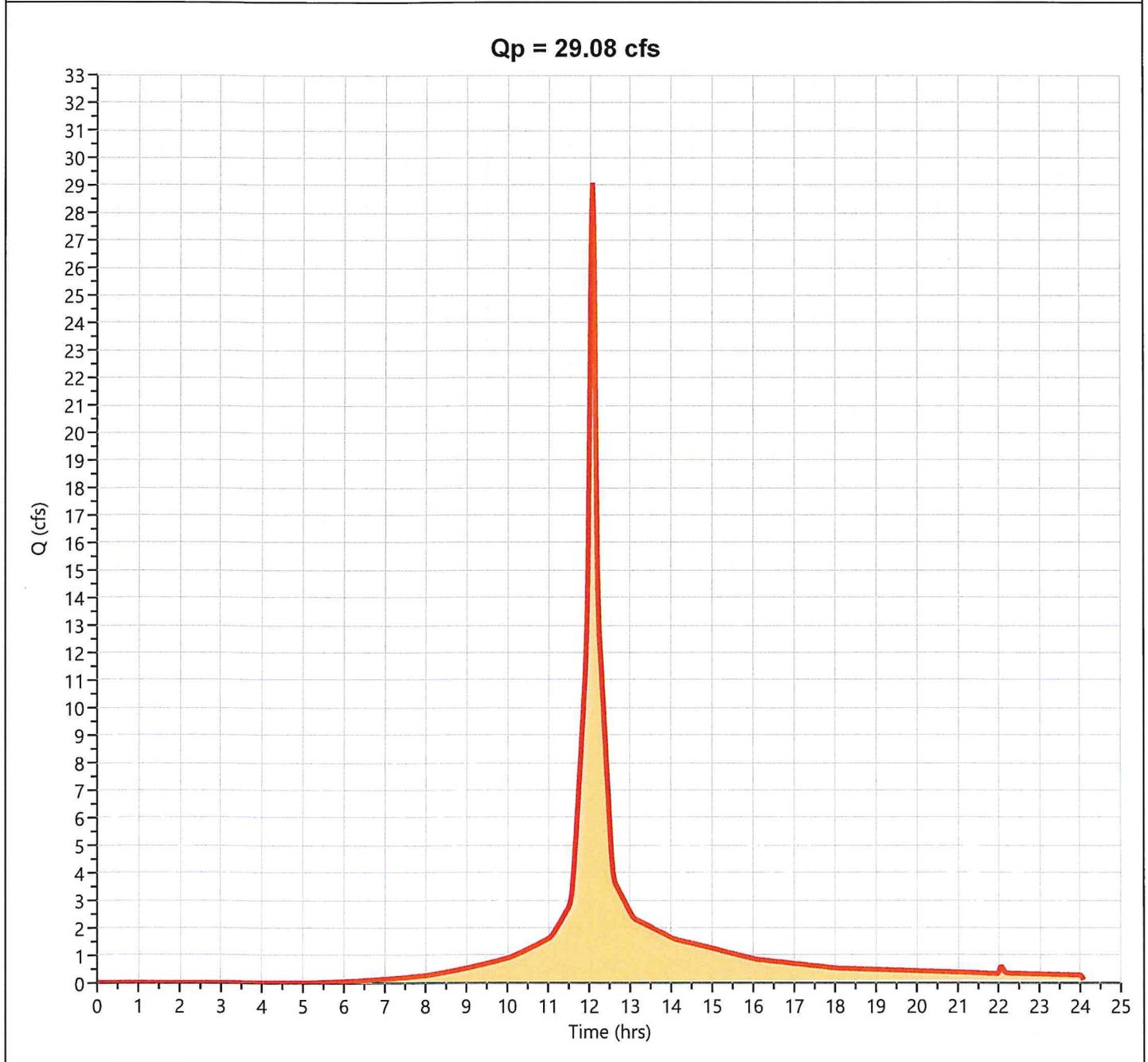
Hydrology Studio v 3.0.0.16

08-18-2020

Pre DA C AP #2

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 29.08 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 1 min	Runoff Volume	= 91,848 cuft
Drainage Area	= 4.04 ac	Curve Number	= 81
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.35 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name: Beta Final Rev

Hydrology Studio v 3.0.0.16

08-18-2020

Post DA C AP #2

Hyd. No. 8

Hydrograph Type	= NRCS Runoff	Peak Flow	= 18.38 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 1 min	Runoff Volume	= 58,747 cuft
Drainage Area	= 2.44 ac	Curve Number	= 84
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.35 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

