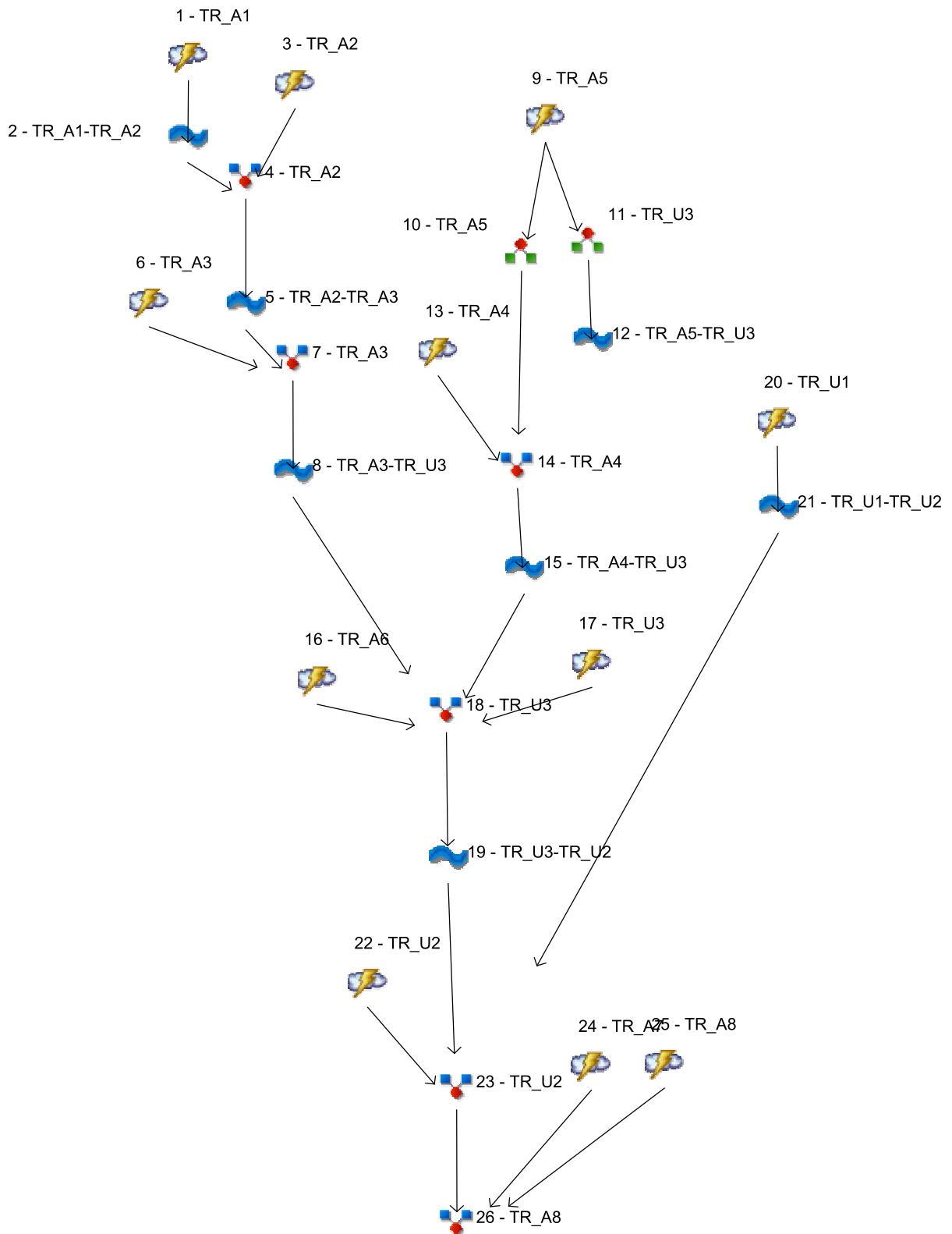


Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	1.128	1	60	5 278.2	-----	-----	-----	TR_A1
2	Reach	1.098	1	63	5 281.7	1	-----	-----	TR_A1-TR_A2
3	Rational	0.189	1	60	886.7	-----	-----	-----	TR_A2
4	Combine	1.282	1	63	6 168.5	2, 3	-----	-----	TR_A2
5	Reach	1.275	1	65	6 171.3	4	-----	-----	TR_A2-TR_A3
6	Rational	0.046	1	60	213.6	-----	-----	-----	TR_A3
7	Combine	1.318	1	65	6 384.9	5, 6	-----	-----	TR_A3
8	Reach	1.292	1	70	6 390.8	7	-----	-----	TR_A3-TR_U3
9	Rational	0.076	1	60	354.4	-----	-----	-----	TR_A5
10	Diversion1	0.076	1	60	354.4	9	-----	-----	TR_A5
11	Diversion2	0.000	1	n/a	0.0	9	-----	-----	TR_U3
12	Reach	0.000	1	n/a	-1.#IND	11	-----	-----	TR_A5-TR_U3
13	Rational	0.174	1	60	813.5	-----	-----	-----	TR_A4
14	Combine	0.250	1	60	1 167.9	10, 13	-----	-----	TR_A4
15	Reach	0.246	1	62	1 168.3	14	-----	-----	TR_A4-TR_U3
16	Rational	0.117	1	60	546.3	-----	-----	-----	TR_A6
17	Rational	0.056	1	60	263.2	-----	-----	-----	TR_U3
18	Combine	1.681	1	68	8 368.7	8, 15, 16, 17	-----	-----	TR_U3
19	Reach	1.656	1	73	8 377.0	18	-----	-----	TR_U3-TR_U2
20	Rational	0.273	1	60	1 276.9	-----	-----	-----	TR_U1
21	Reach	0.255	1	67	1 278.7	20	-----	-----	TR_U1-TR_U2
22	Rational	0.356	1	60	1 665.2	-----	-----	-----	TR_U2
23	Combine	2.217	1	71	11 320.9	19, 21, 22	-----	-----	TR_U2
24	Rational	0.194	1	60	907.9	-----	-----	-----	TR_A7
25	Rational	0.005	1	60	21.4	-----	-----	-----	TR_A8
26	Combine	2.393	1	70	12 250.2	23, 24, 25	-----	-----	TR_A8

Hydrograph Report

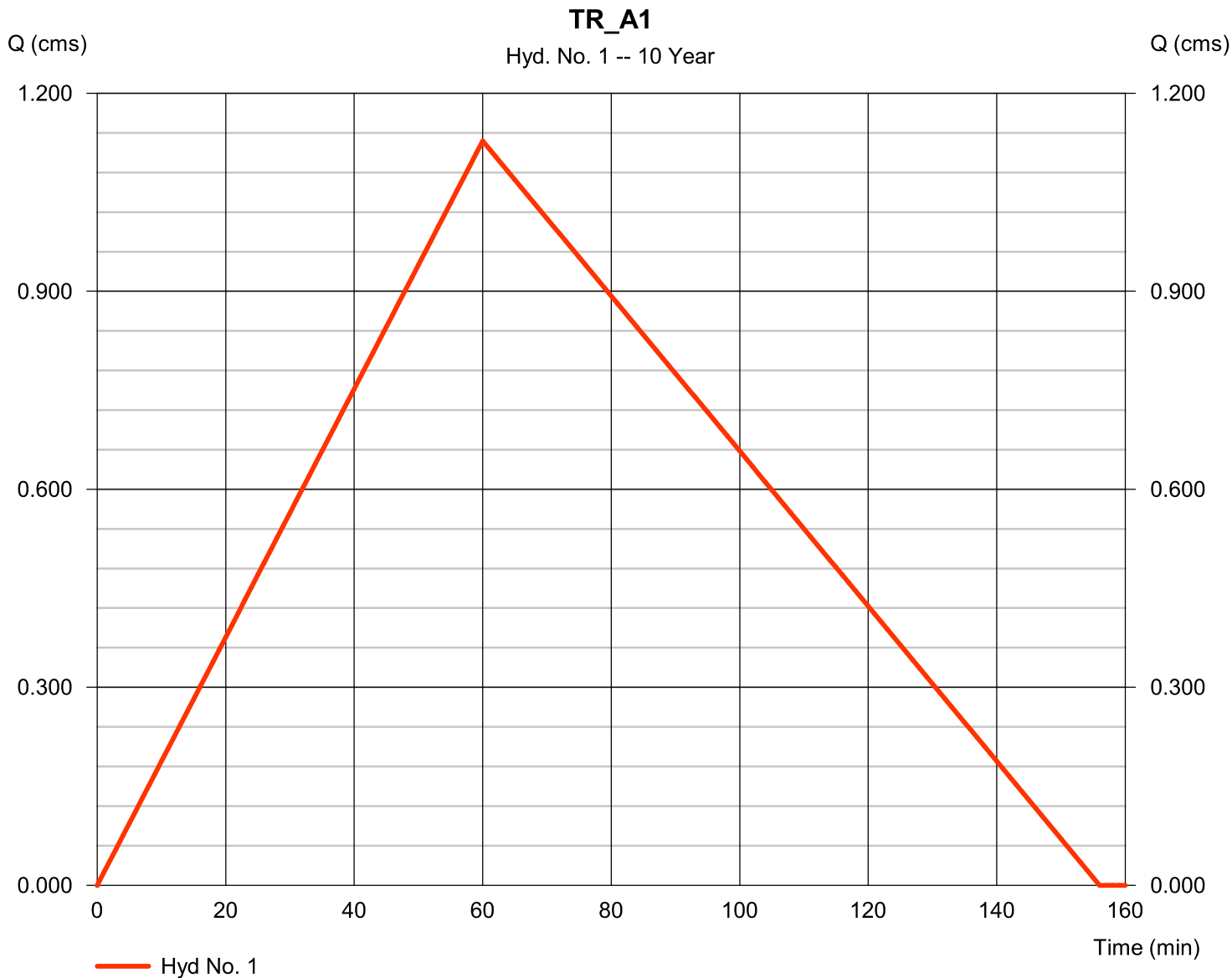
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

mardi, avr 3, 2012

Hyd. No. 1

TR_A1

Hydrograph type	= Rational	Peak discharge	= 1.128 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 278.2 cum
Drainage area	= 139.250 hectare	Runoff coeff.	= 0.14
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hyd. No. 2

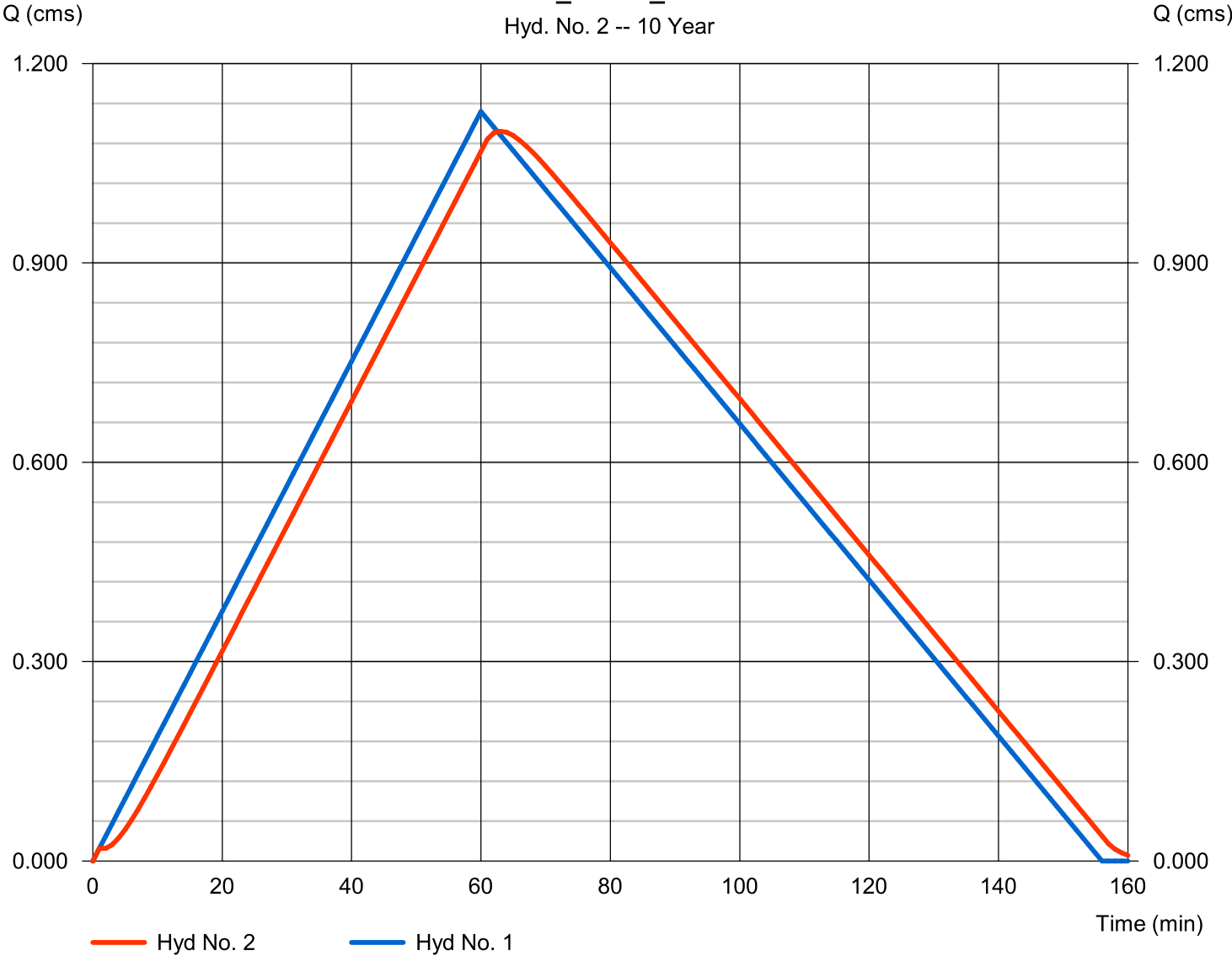
TR_A1-TR_A2

Hydrograph type	= Reach	Peak discharge	= 1.098 cms
Storm frequency	= 10 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 5 281.7 cum
Inflow hyd. No.	= 1 - TR_A1	Section type	= Trapezoidal
Reach length	= 350.0 m	Channel slope	= 0.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.560	Rating curve m	= 1.353
Ave. velocity	= 1.60 m/s	Routing coeff.	= 0.3124

Modified Att-Kin routing method used.

TR_A1-TR_A2

Hyd. No. 2 -- 10 Year



Hydrograph Report

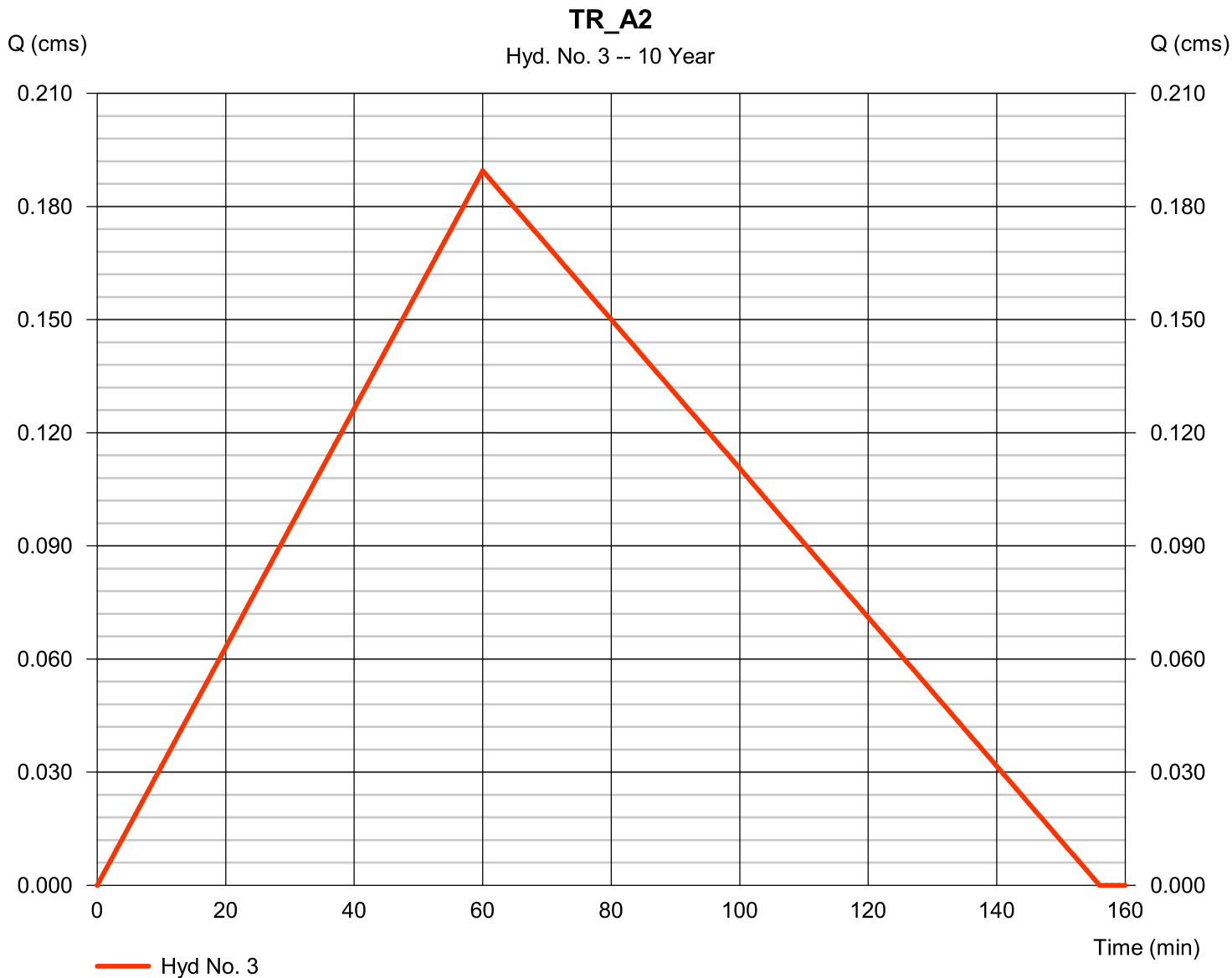
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Hyd. No. 3

TR_A2

Hydrograph type	= Rational	Peak discharge	= 0.189 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 886.7 cum
Drainage area	= 20.470 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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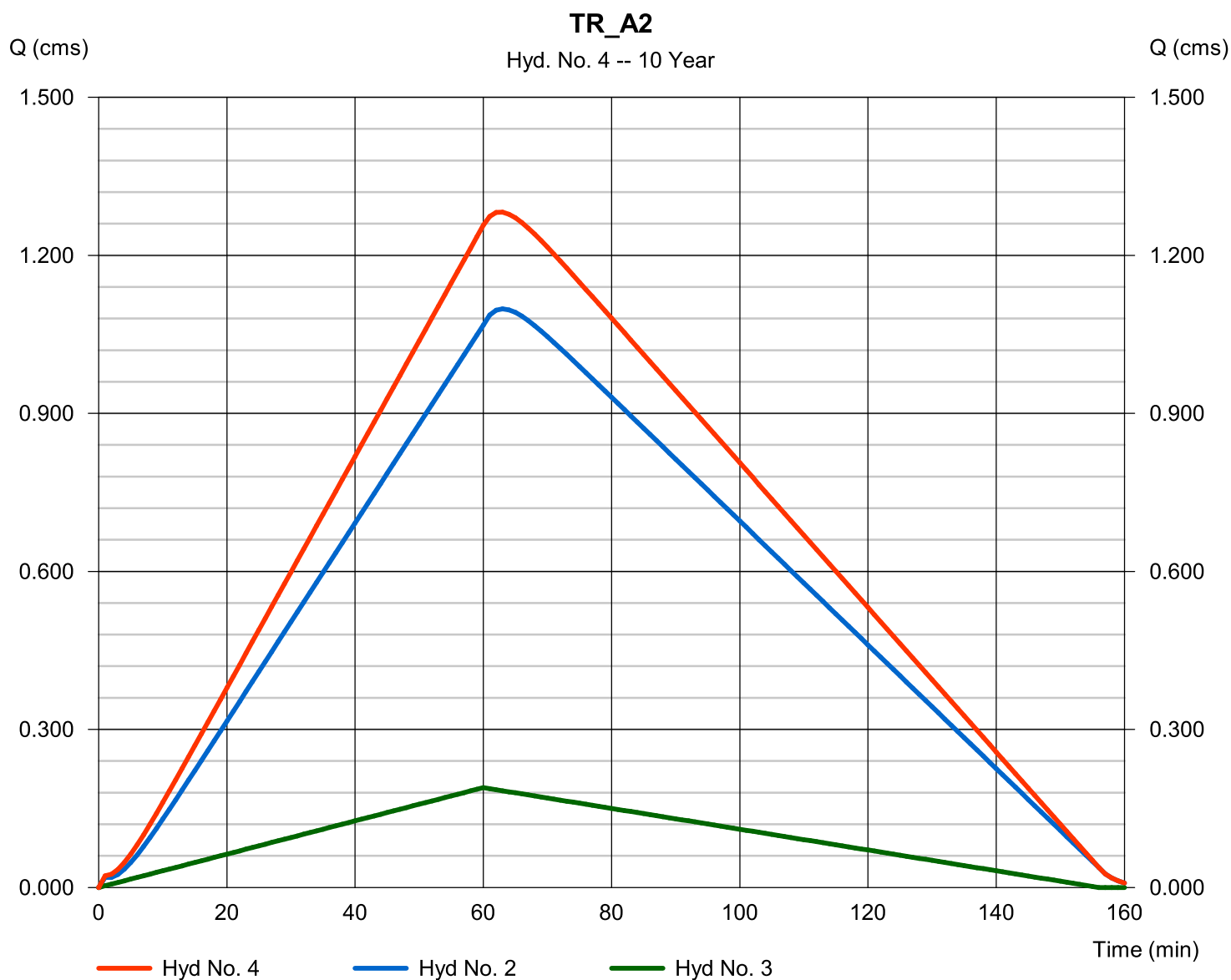
mardi, avr 3, 2012

Hyd. No. 4

TR_A2

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 2, 3

Peak discharge = 1.282 cms
 Time to peak = 63 min
 Hyd. volume = 6 168.5 cum
 Contrib. drain. area = 20.470 hectare



Hydrograph Report

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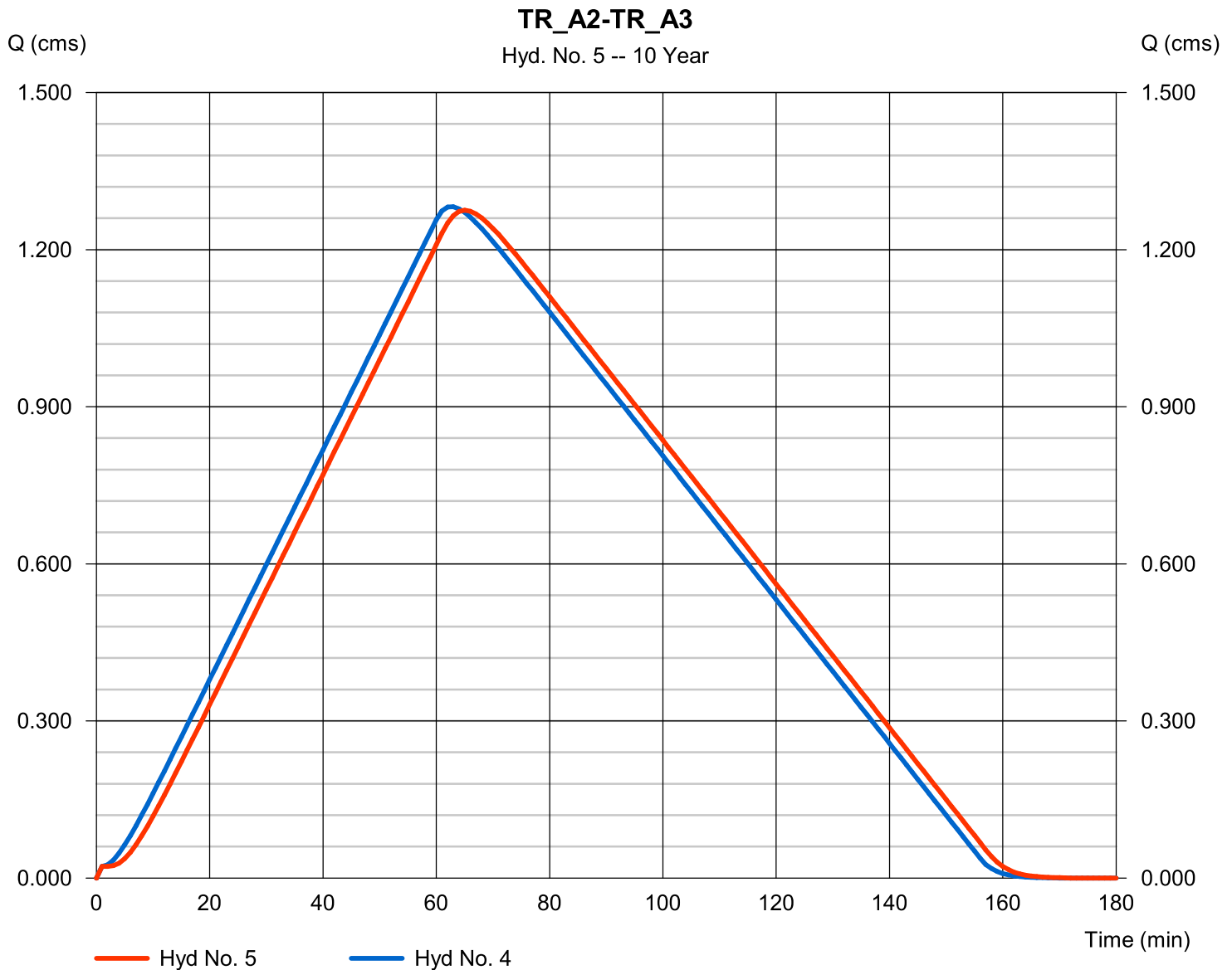
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Hyd. No. 5

TR_A2-TR_A3

Hydrograph type	= Reach	Peak discharge	= 1.275 cms
Storm frequency	= 10 yrs	Time to peak	= 65 min
Time interval	= 1 min	Hyd. volume	= 6 171.3 cum
Inflow hyd. No.	= 4 - TR_A2	Section type	= Trapezoidal
Reach length	= 250.0 m	Channel slope	= 1.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.956	Rating curve m	= 1.353
Ave. velocity	= 1.84 m/s	Routing coeff.	= 0.4593

Modified Att-Kin routing method used.



Hydrograph Report

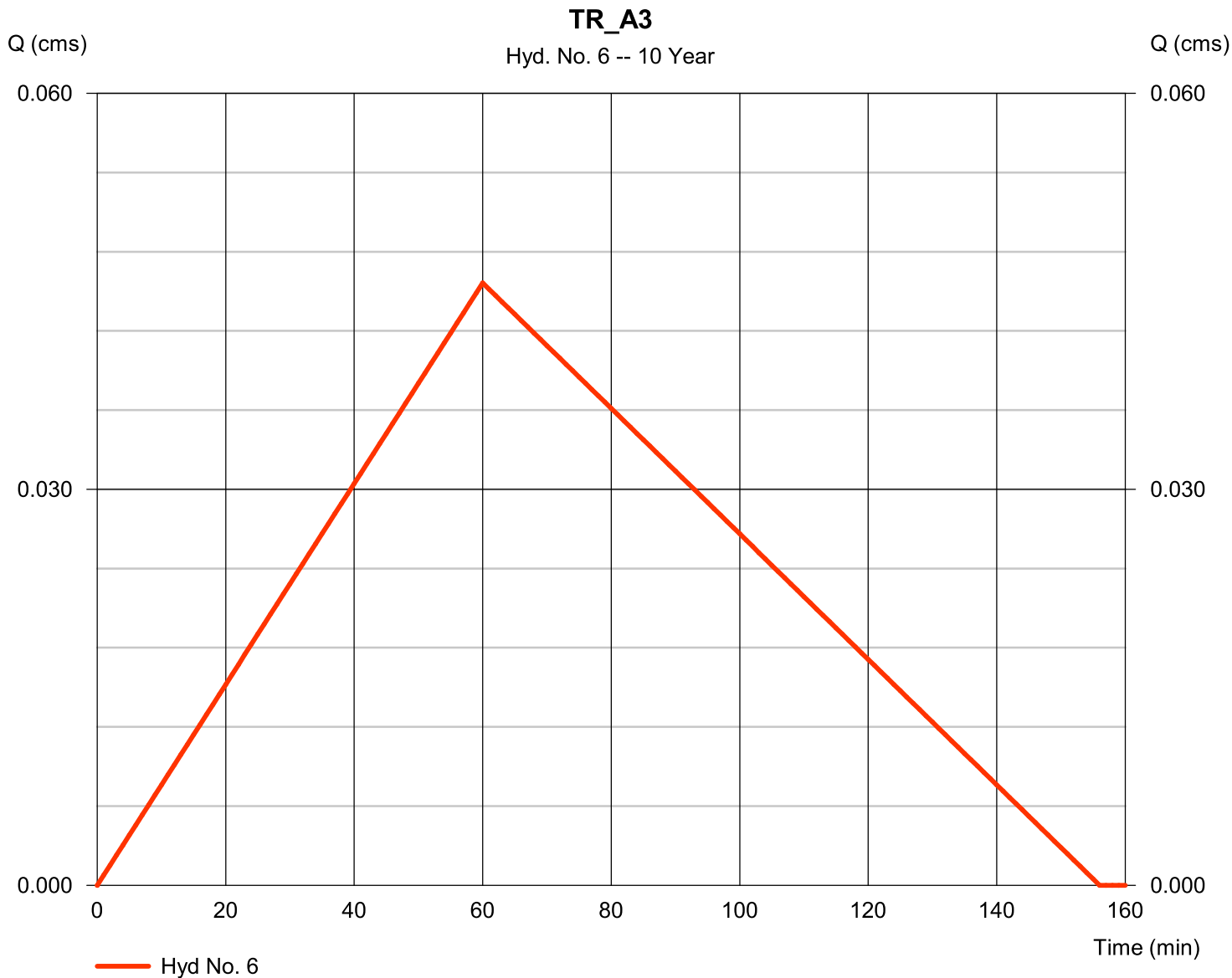
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Hyd. No. 6

TR_A3

Hydrograph type	= Rational	Peak discharge	= 0.046 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 213.6 cum
Drainage area	= 4.640 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

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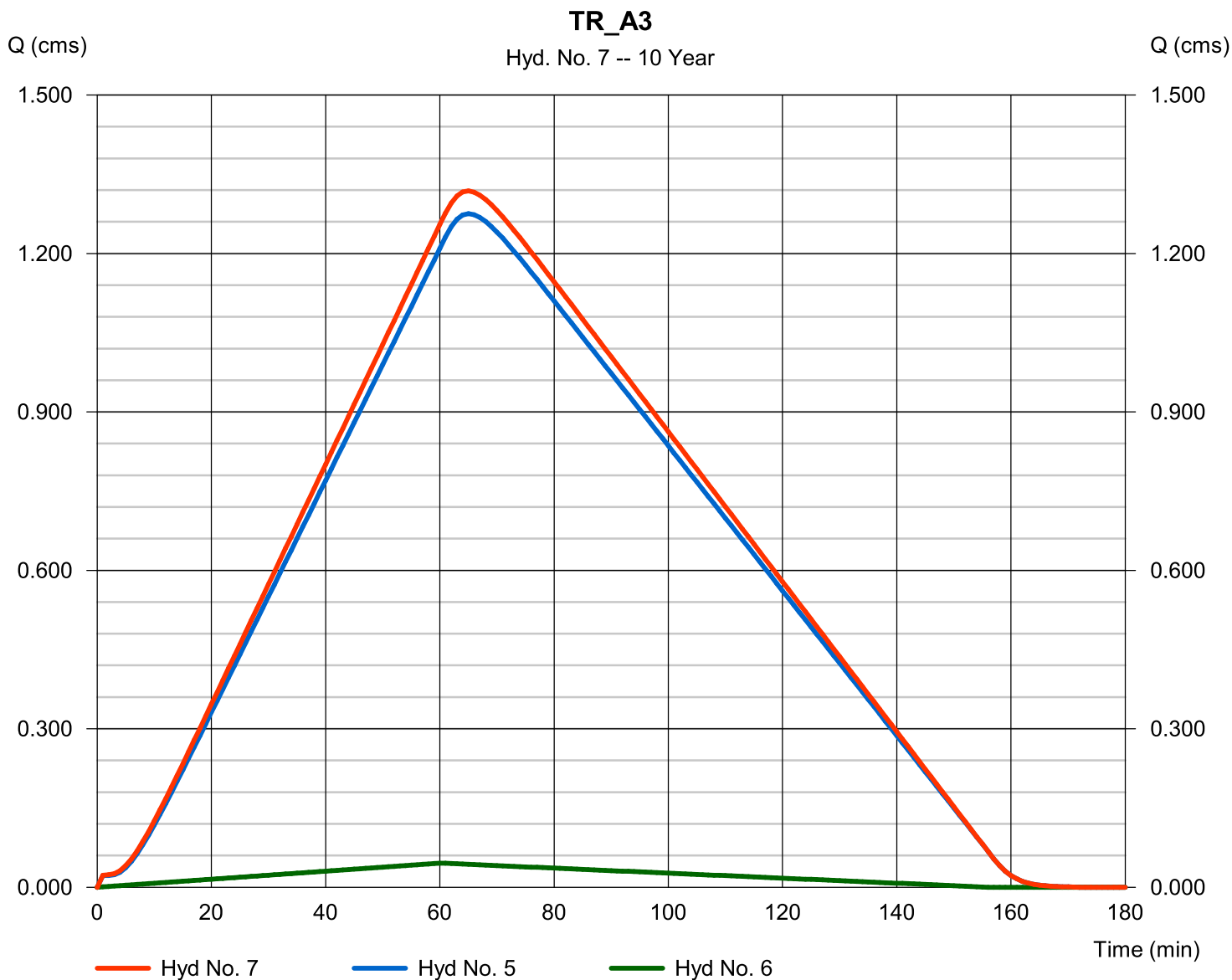
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Hyd. No. 7

TR_A3

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 6

Peak discharge = 1.318 cms
 Time to peak = 65 min
 Hyd. volume = 6 384.9 cum
 Contrib. drain. area = 4.640 hectare



Hydrograph Report

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Hyd. No. 8

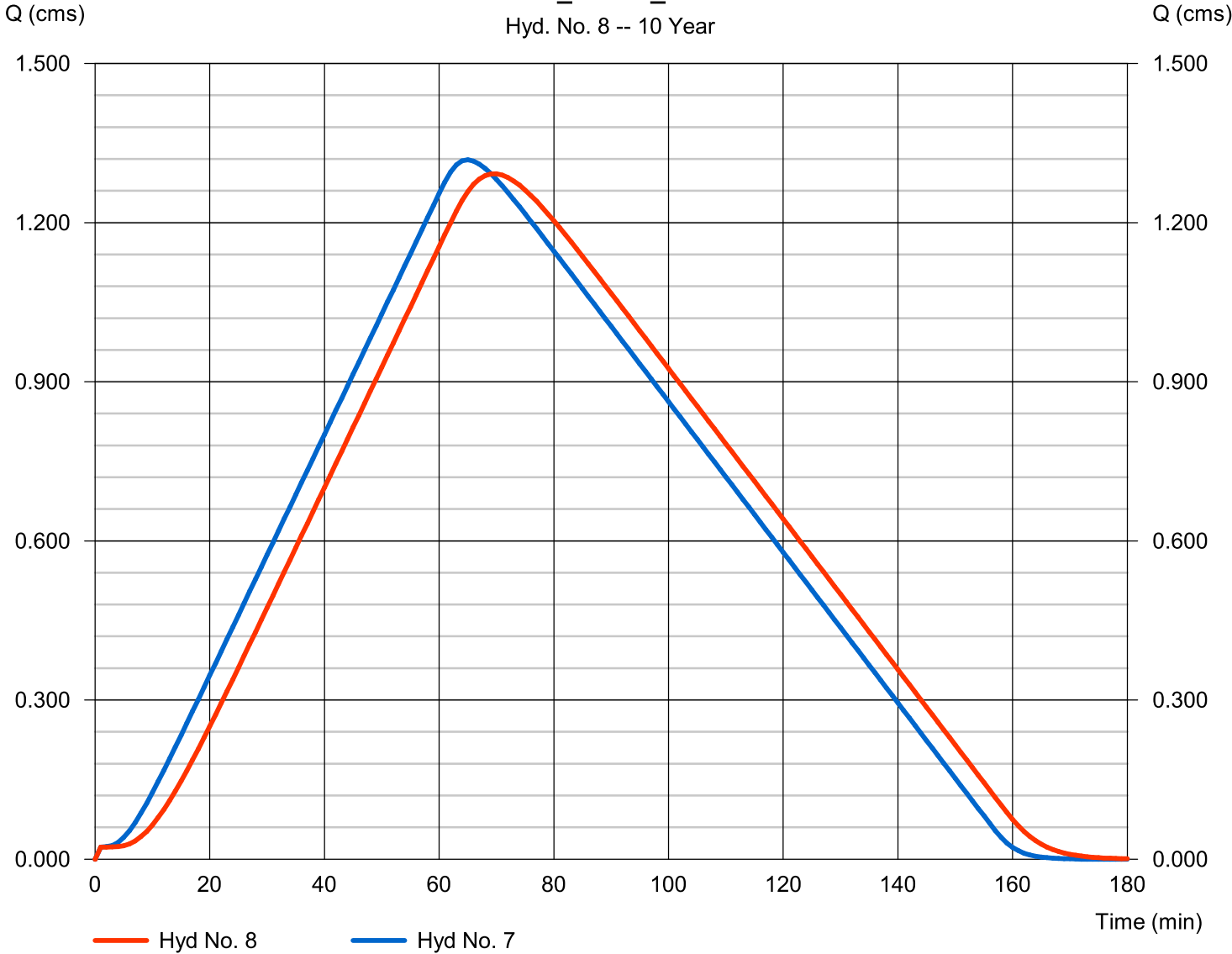
TR_A3-TR_U3

Hydrograph type	= Reach	Peak discharge	= 1.292 cms
Storm frequency	= 10 yrs	Time to peak	= 70 min
Time interval	= 1 min	Hyd. volume	= 6 390.8 cum
Inflow hyd. No.	= 7 - TR_A3	Section type	= Trapezoidal
Reach length	= 100.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.32 m/s	Routing coeff.	= 0.2269

Modified Att-Kin routing method used.

TR_A3-TR_U3

Hyd. No. 8 -- 10 Year

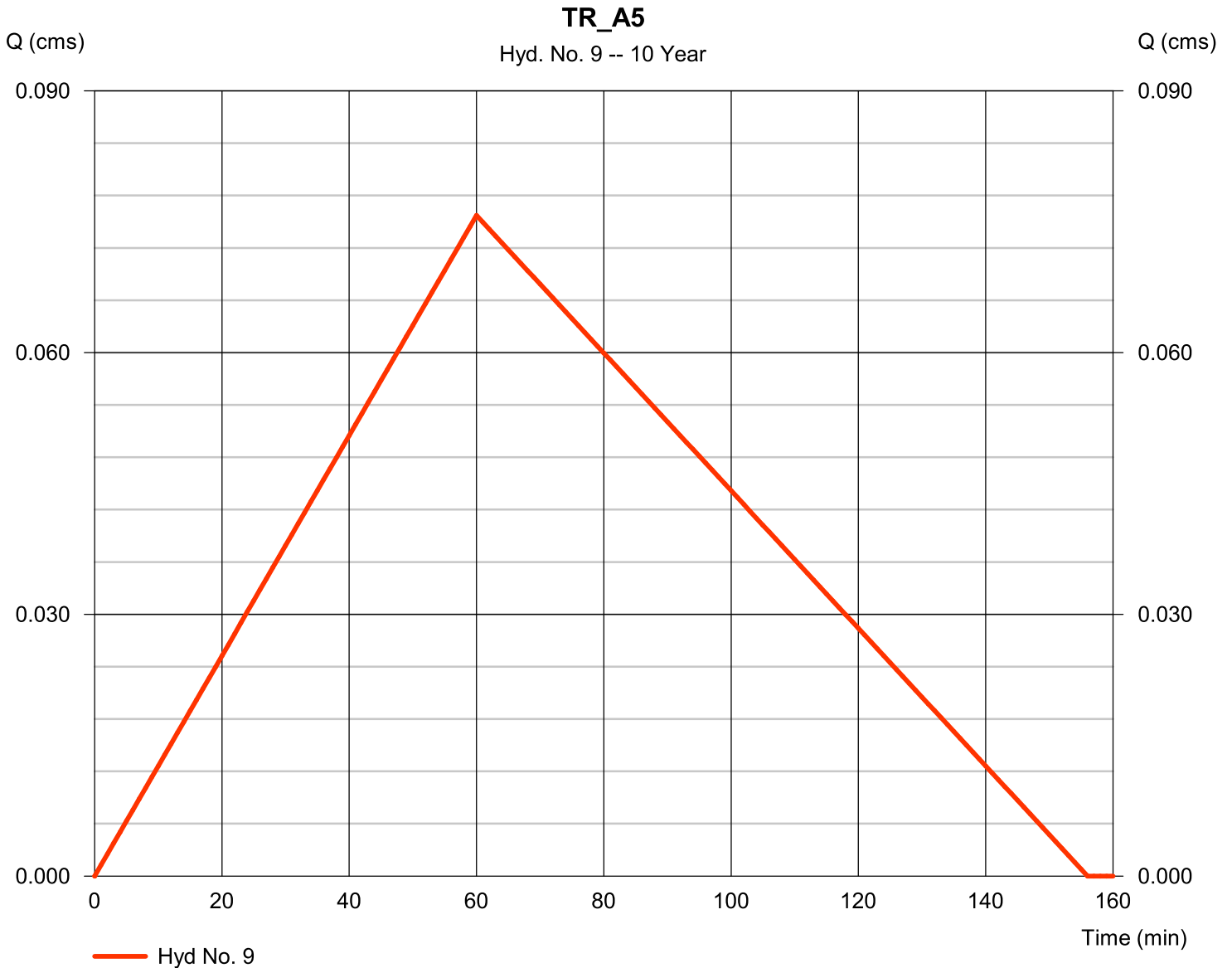


Hydrograph Report

Hyd. No. 9

TR_A5

Hydrograph type	= Rational	Peak discharge	= 0.076 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 354.4 cum
Drainage area	= 7.700 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

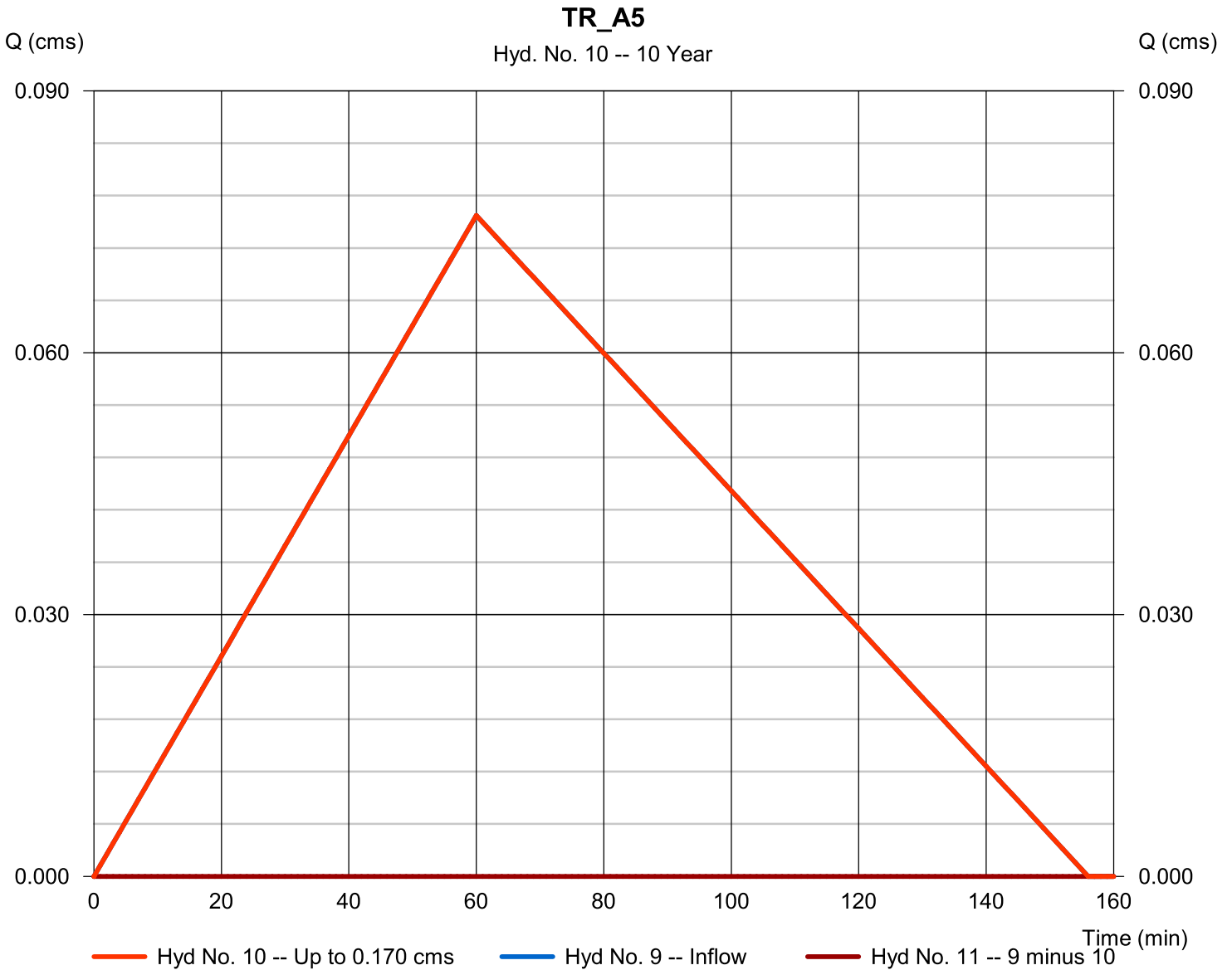
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Hyd. No. 10

TR_A5

Hydrograph type	= Diversion1	Peak discharge	= 0.076 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 354.4 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 11
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

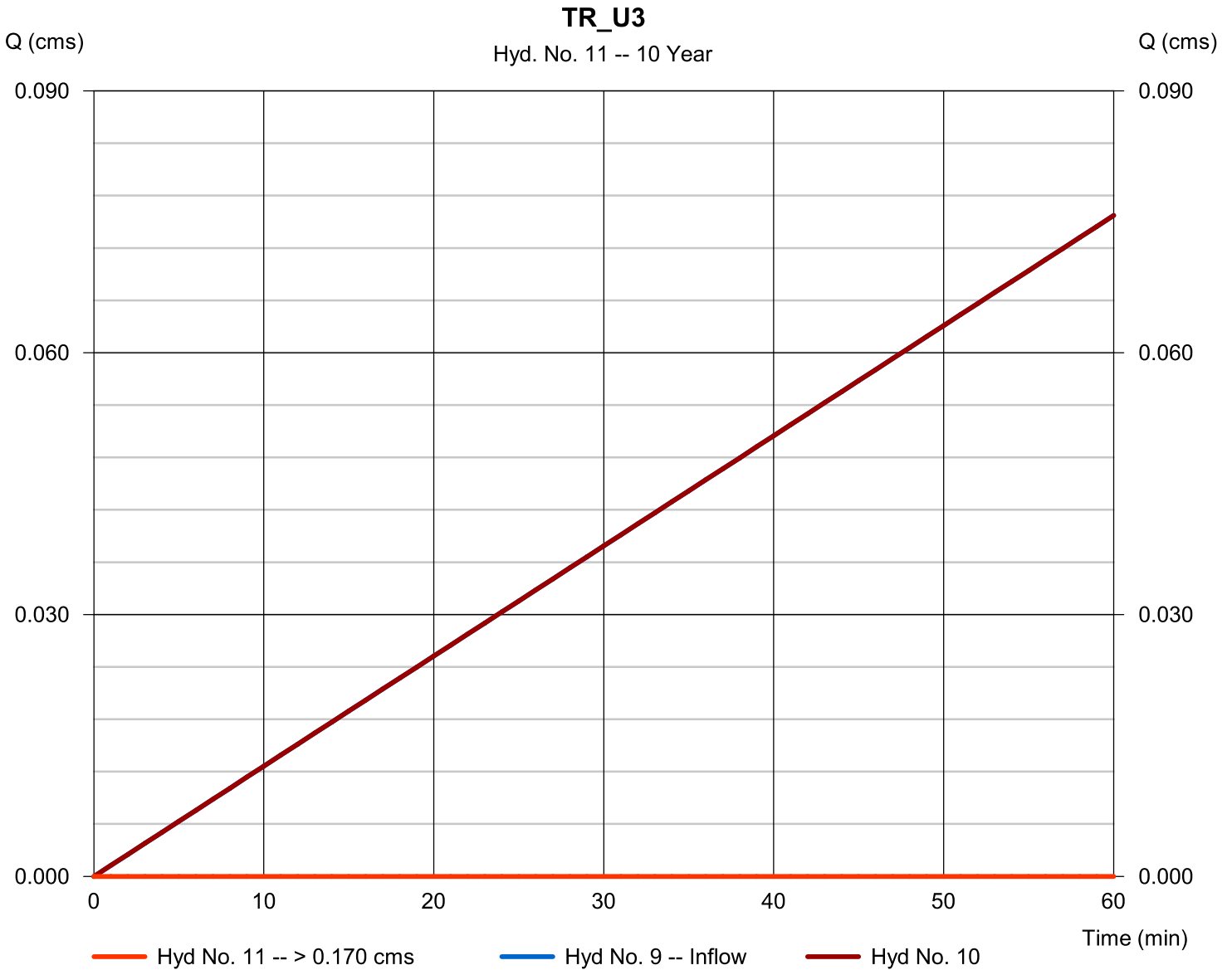
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Hyd. No. 11

TR_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 10
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

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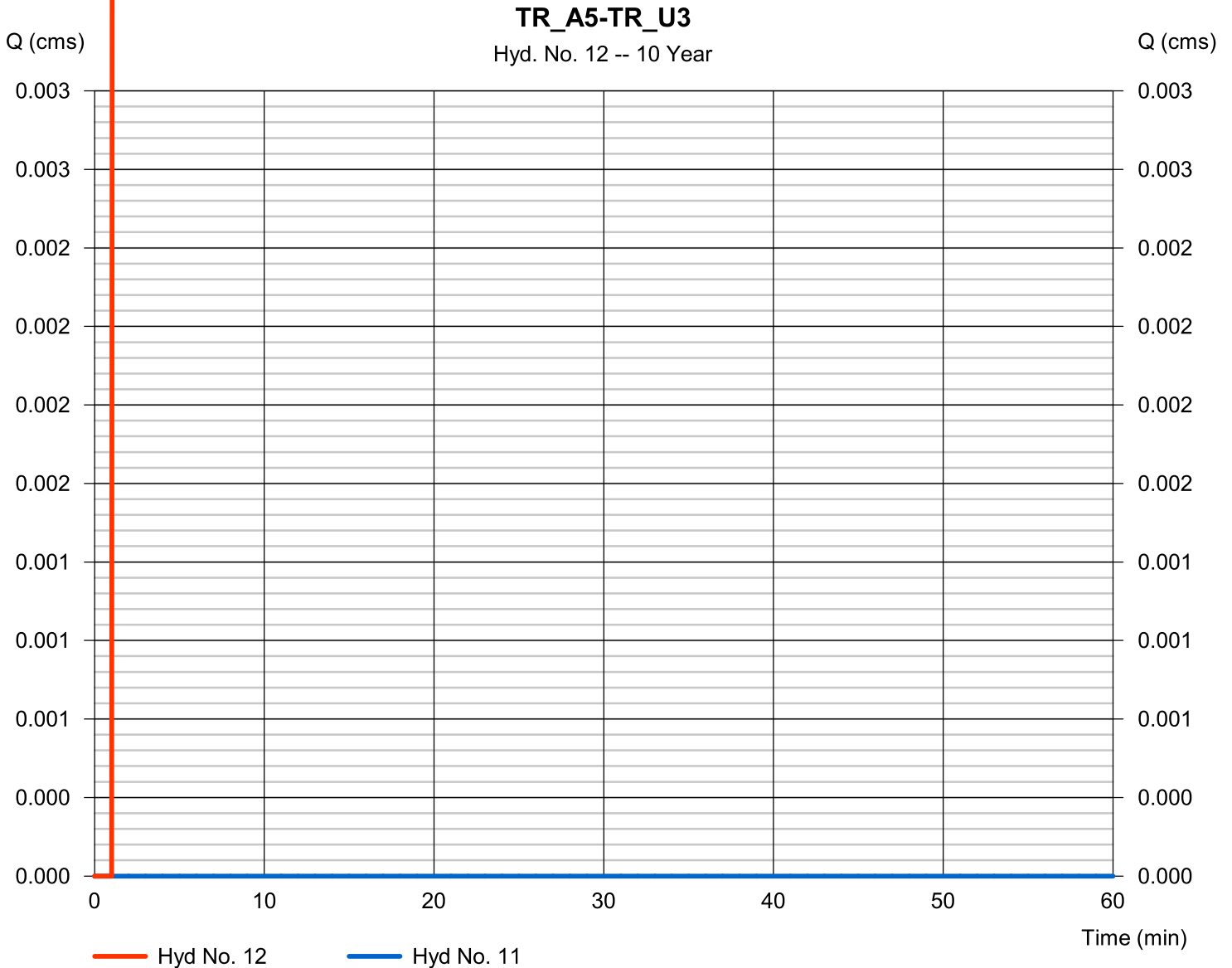
mardi, avr 3, 2012

Hyd. No. 12

TR_A5-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= -1.#IND cum
Inflow hyd. No.	= 11 - TR_U3	Section type	= Trapezoidal
Reach length	= 80.0 m	Channel slope	= 5.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 6.033	Rating curve m	= 1.353
Ave. velocity	= -1.#IND m/s	Routing coeff.	= -1.#IND

Modified Att-Kin routing method used.



Hydrograph Report

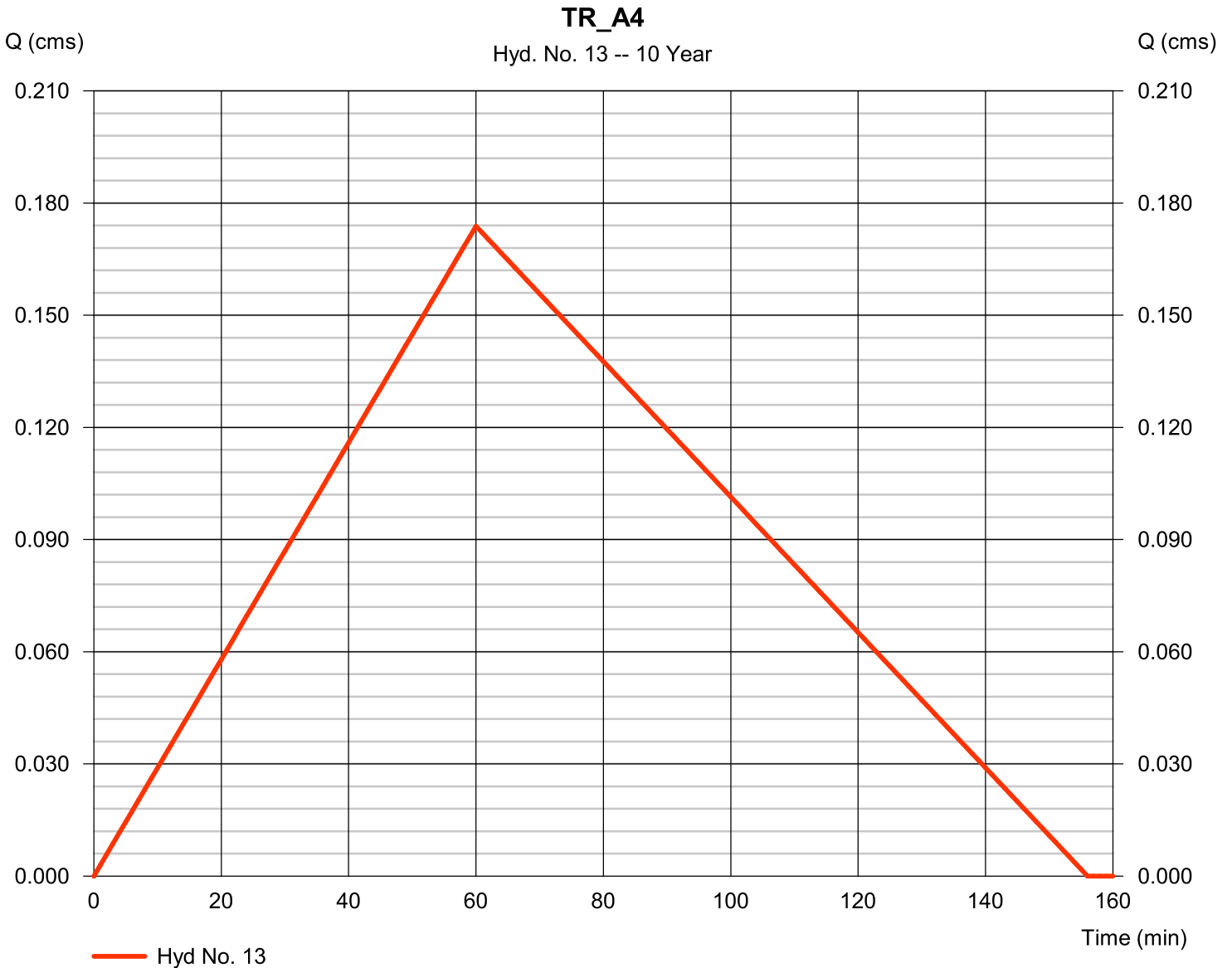
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Hyd. No. 13

TR_A4

Hydrograph type	= Rational	Peak discharge	= 0.174 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 813.5 cum
Drainage area	= 20.030 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

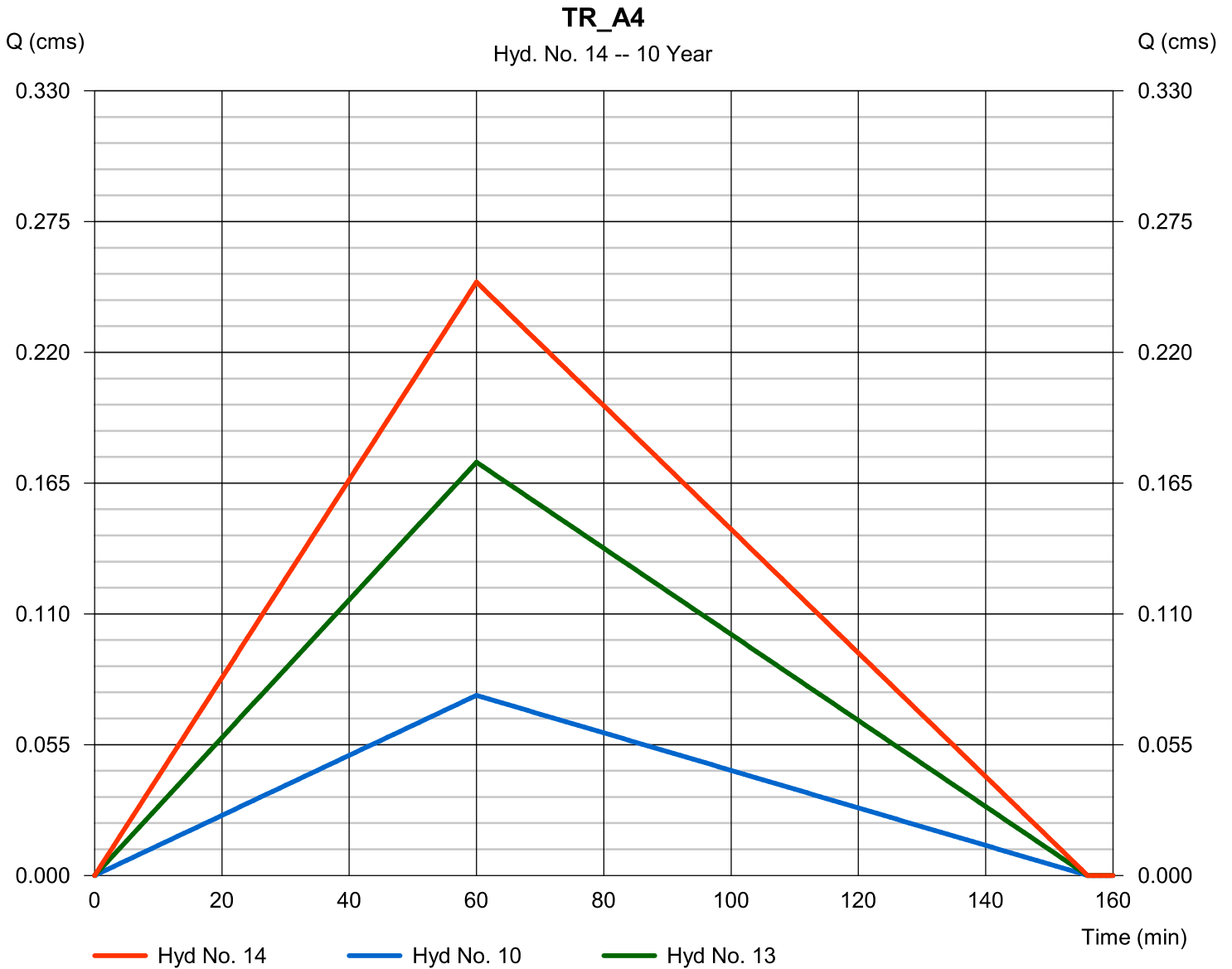
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Hyd. No. 14

TR_A4

Hydrograph type	= Combine	Peak discharge	= 0.250 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 167.9 cum
Inflow hyds.	= 10, 13	Contrib. drain. area	= 20.030 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

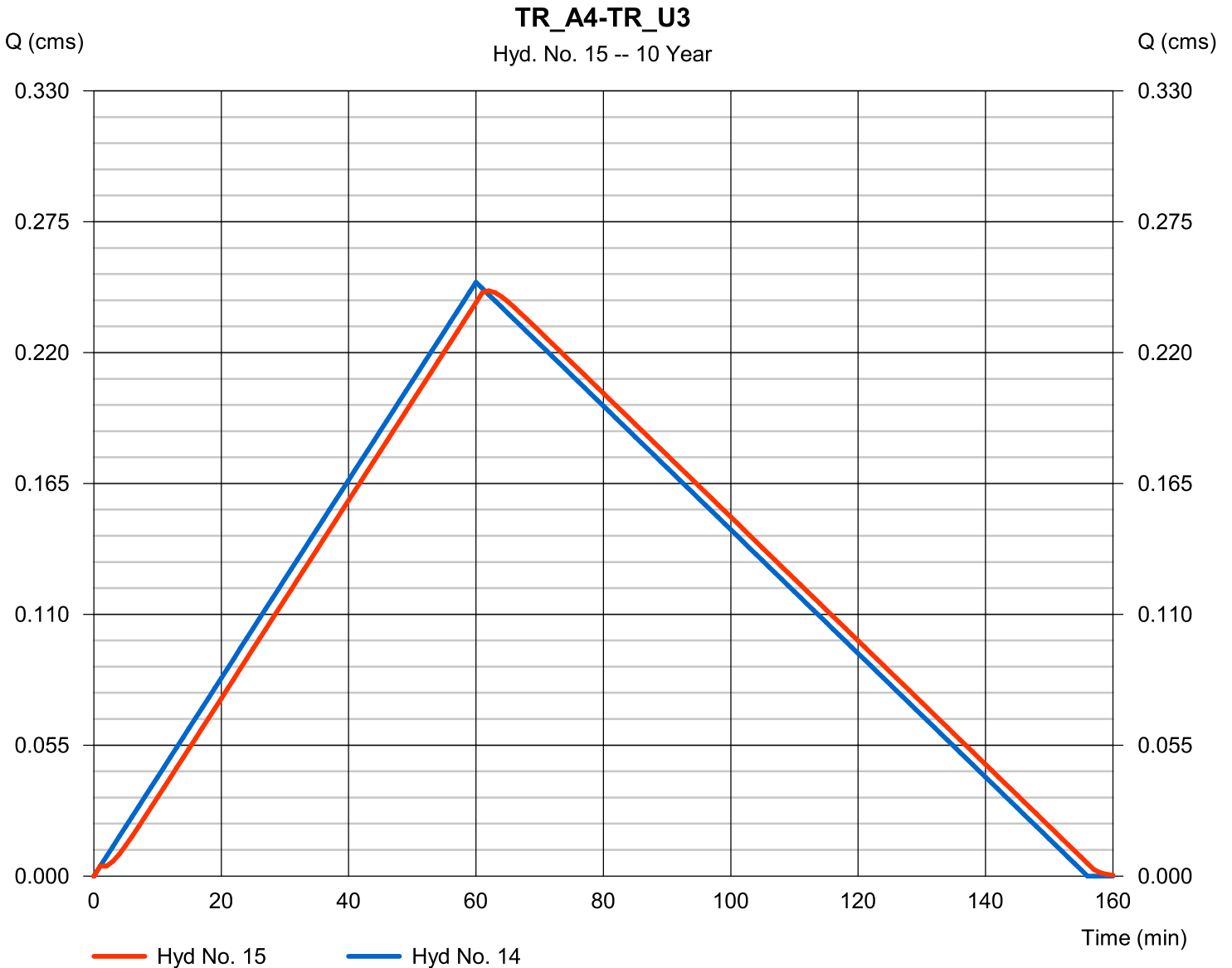
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Hyd. No. 15

TR_A4-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.246 cms
Storm frequency	= 10 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 1 168.3 cum
Inflow hyd. No.	= 14 - TR_A4	Section type	= Trapezoidal
Reach length	= 130.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 1.03 m/s	Routing coeff.	= 0.4871

Modified Att-Kin routing method used.



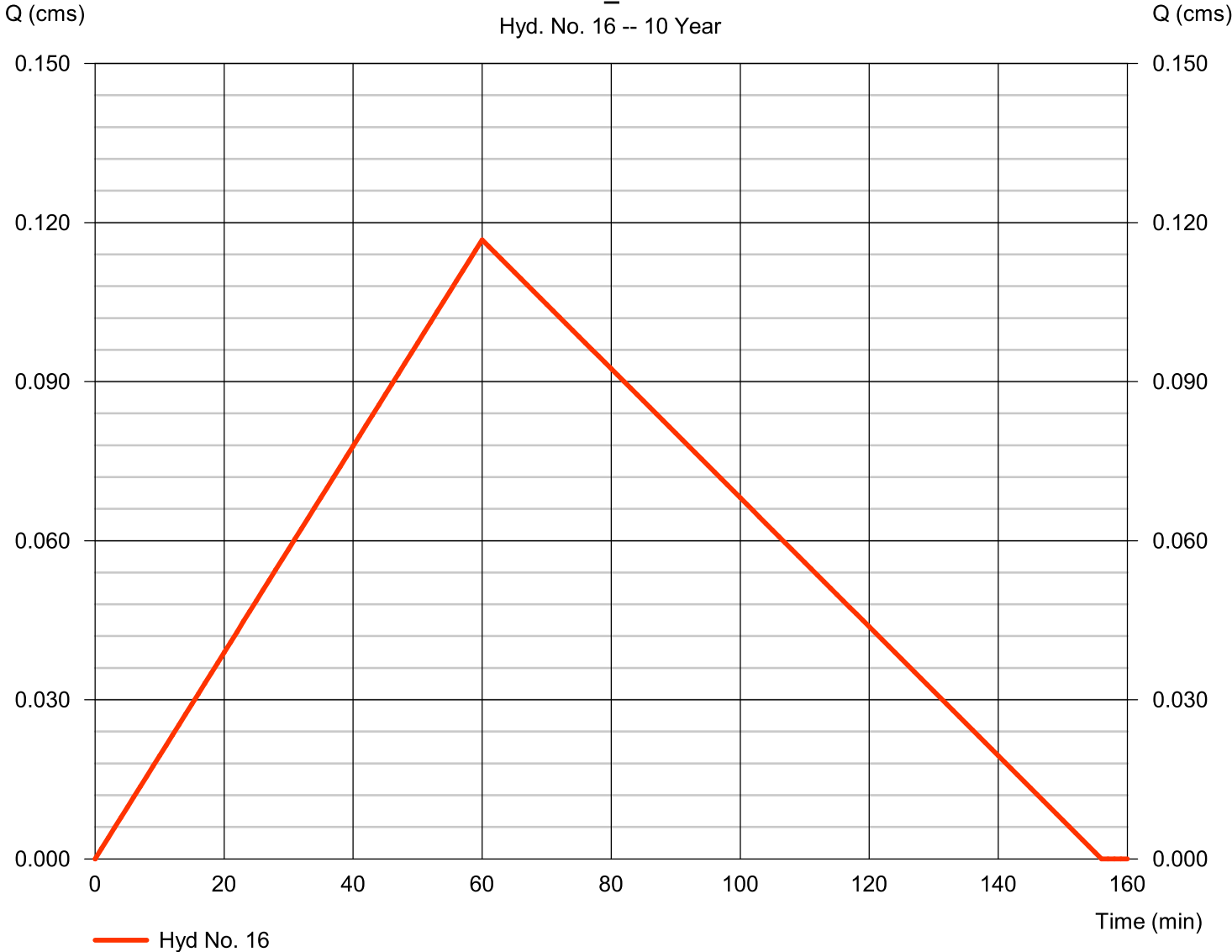
Hydrograph Report

Hyd. No. 16

TR_A6

Hydrograph type	= Rational	Peak discharge	= 0.117 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 546.3 cum
Drainage area	= 11.870 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6

TR_A6
Hyd. No. 16 -- 10 Year



Hydrograph Report

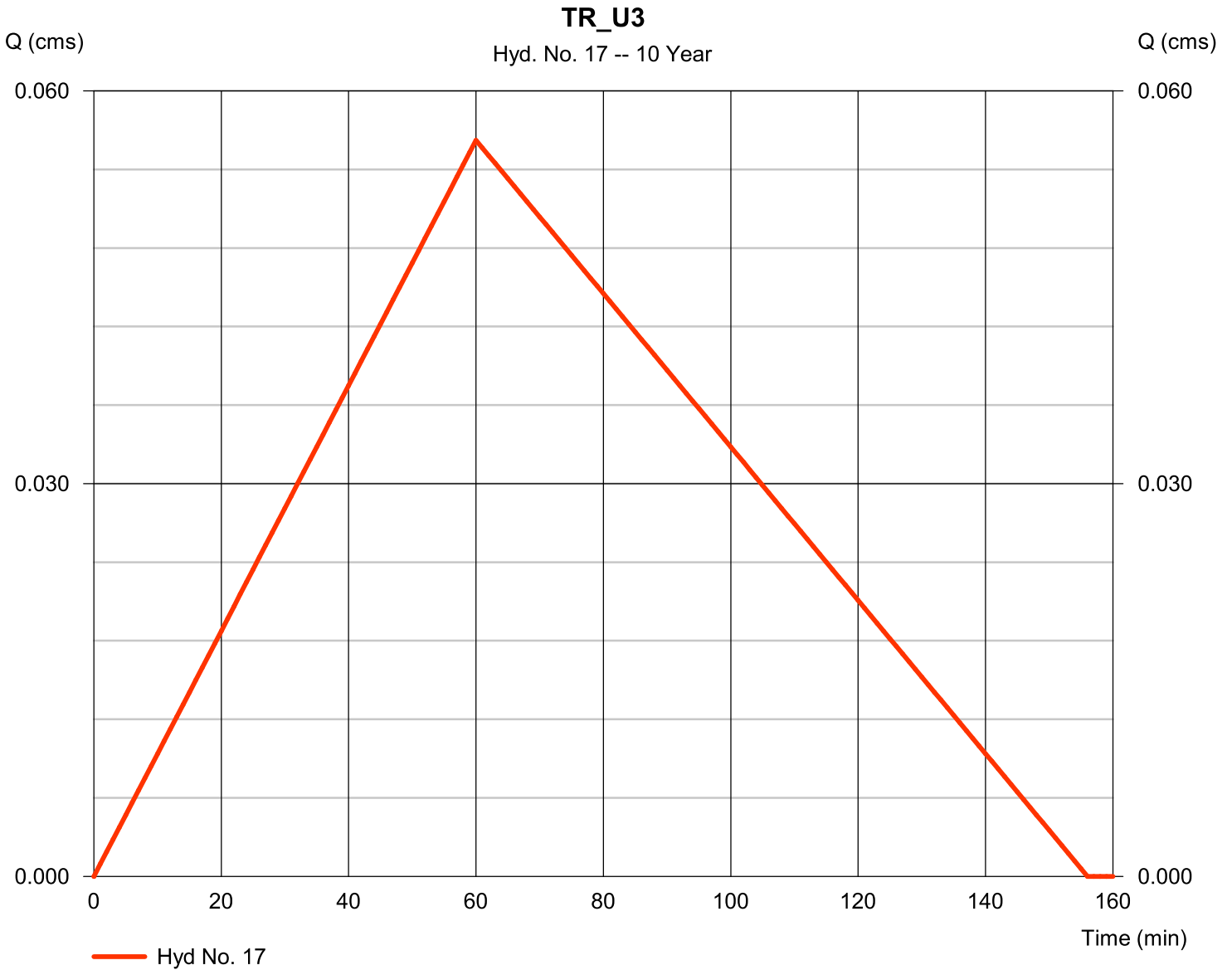
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

TR_U3

Hydrograph type	= Rational	Peak discharge	= 0.056 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 263.2 cum
Drainage area	= 3.240 hectare	Runoff coeff.	= 0.3
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

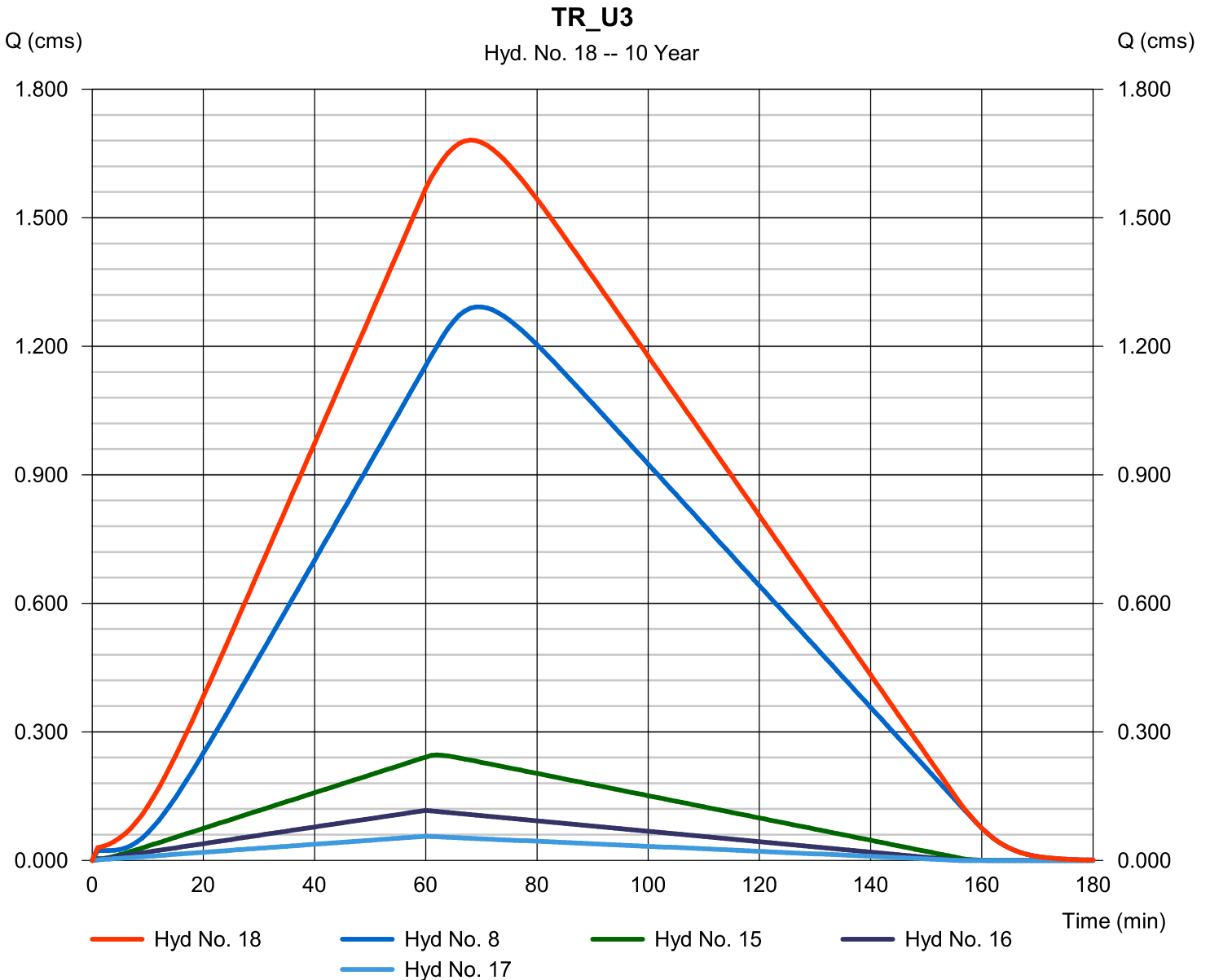
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Hyd. No. 18

TR_U3

Hydrograph type	= Combine	Peak discharge	= 1.681 cms
Storm frequency	= 10 yrs	Time to peak	= 68 min
Time interval	= 1 min	Hyd. volume	= 8 368.7 cum
Inflow hyds.	= 8, 15, 16, 17	Contrib. drain. area	= 15.110 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

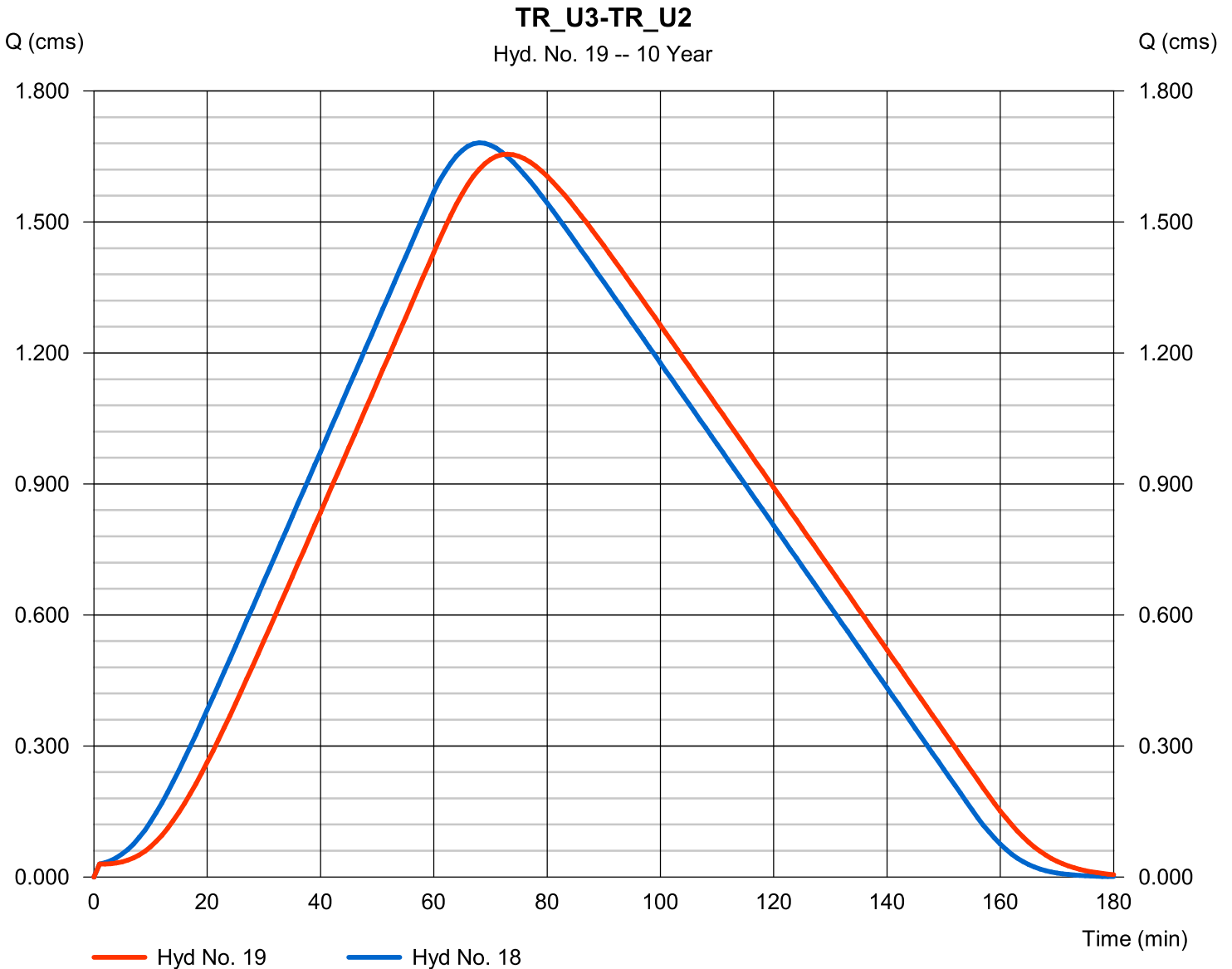
mardi, avr 3, 2012

Hyd. No. 19

TR_U3-TR_U2

Hydrograph type	= Reach	Peak discharge	= 1.656 cms
Storm frequency	= 10 yrs	Time to peak	= 73 min
Time interval	= 1 min	Hyd. volume	= 8 377.0 cum
Inflow hyd. No.	= 18 - TR_U3	Section type	= Trapezoidal
Reach length	= 400.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 1.18 m/s	Routing coeff.	= 0.2139

Modified Att-Kin routing method used.



Hydrograph Report

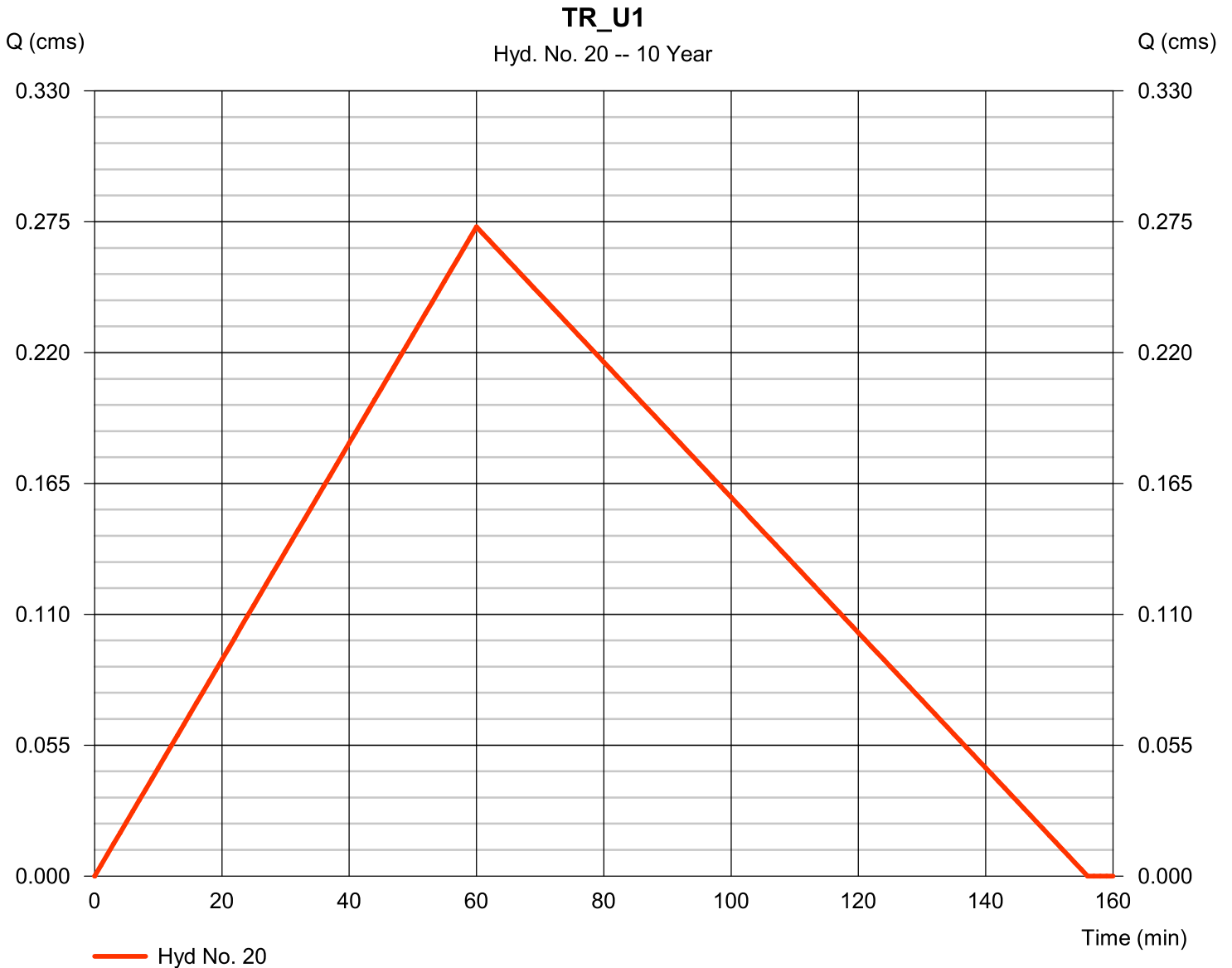
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Hyd. No. 20

TR_U1

Hydrograph type	= Rational	Peak discharge	= 0.273 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 276.9 cum
Drainage area	= 18.140 hectare	Runoff coeff.	= 0.26
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

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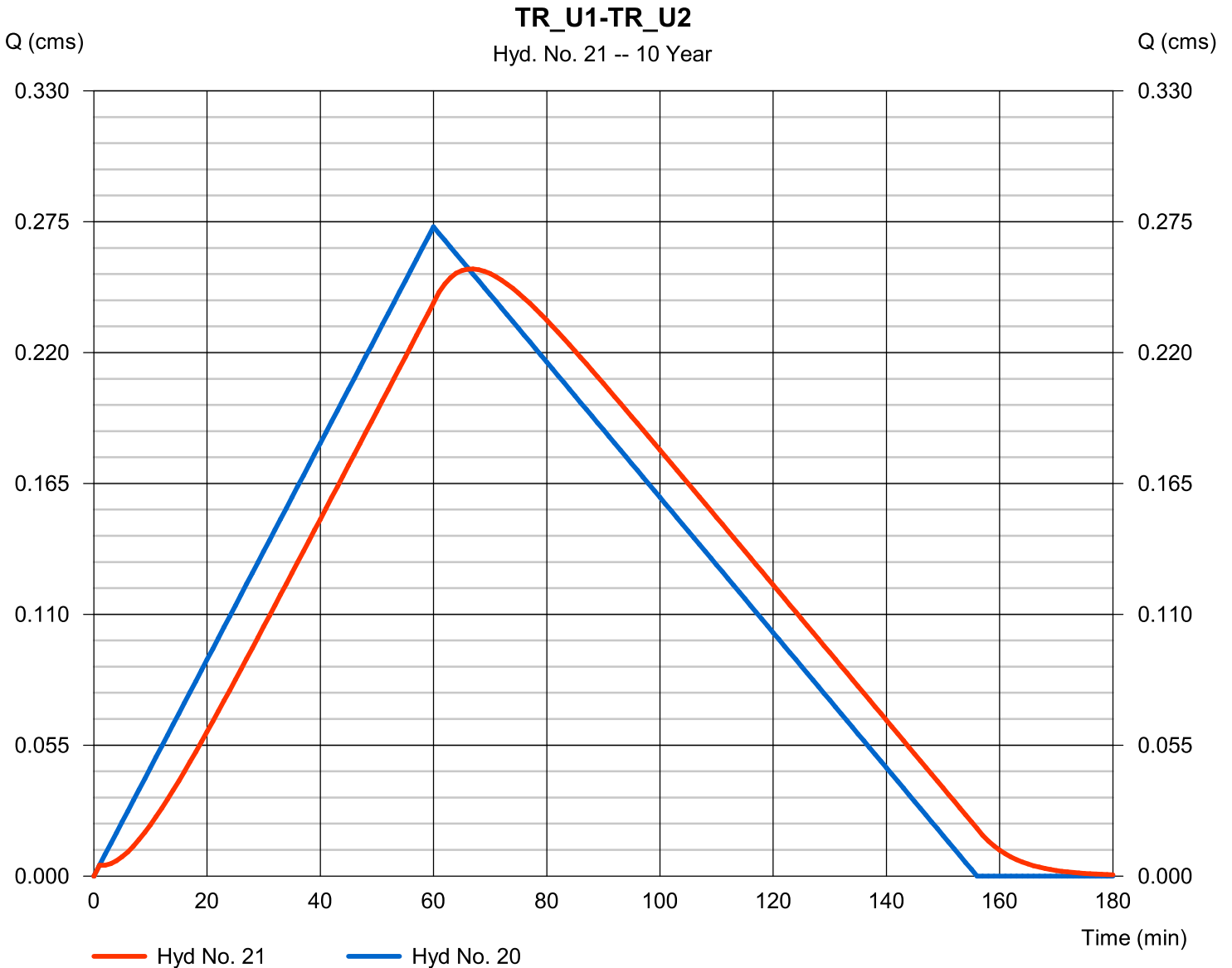
mardi, avr 3, 2012

Hyd. No. 21

TR_U1-TR_U2

Hydrograph type	= Reach	Peak discharge	= 0.255 cms
Storm frequency	= 10 yrs	Time to peak	= 67 min
Time interval	= 1 min	Hyd. volume	= 1 278.7 cum
Inflow hyd. No.	= 20 - TR_U1	Section type	= Trapezoidal
Reach length	= 390.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 0.73 m/s	Routing coeff.	= 0.1421

Modified Att-Kin routing method used.



Hydrograph Report

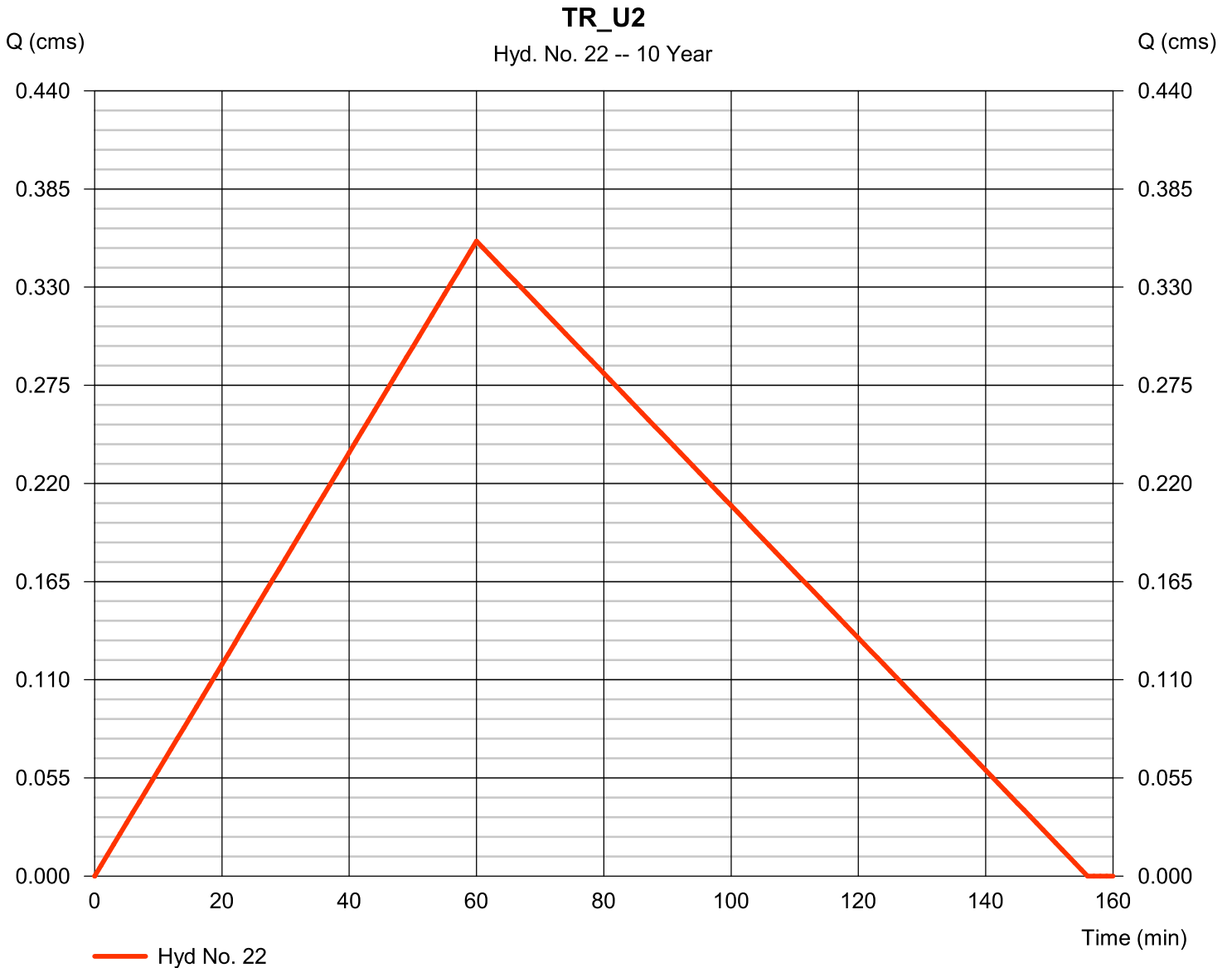
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Hyd. No. 22

TR_U2

Hydrograph type	= Rational	Peak discharge	= 0.356 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 665.2 cum
Drainage area	= 19.840 hectare	Runoff coeff.	= 0.31
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

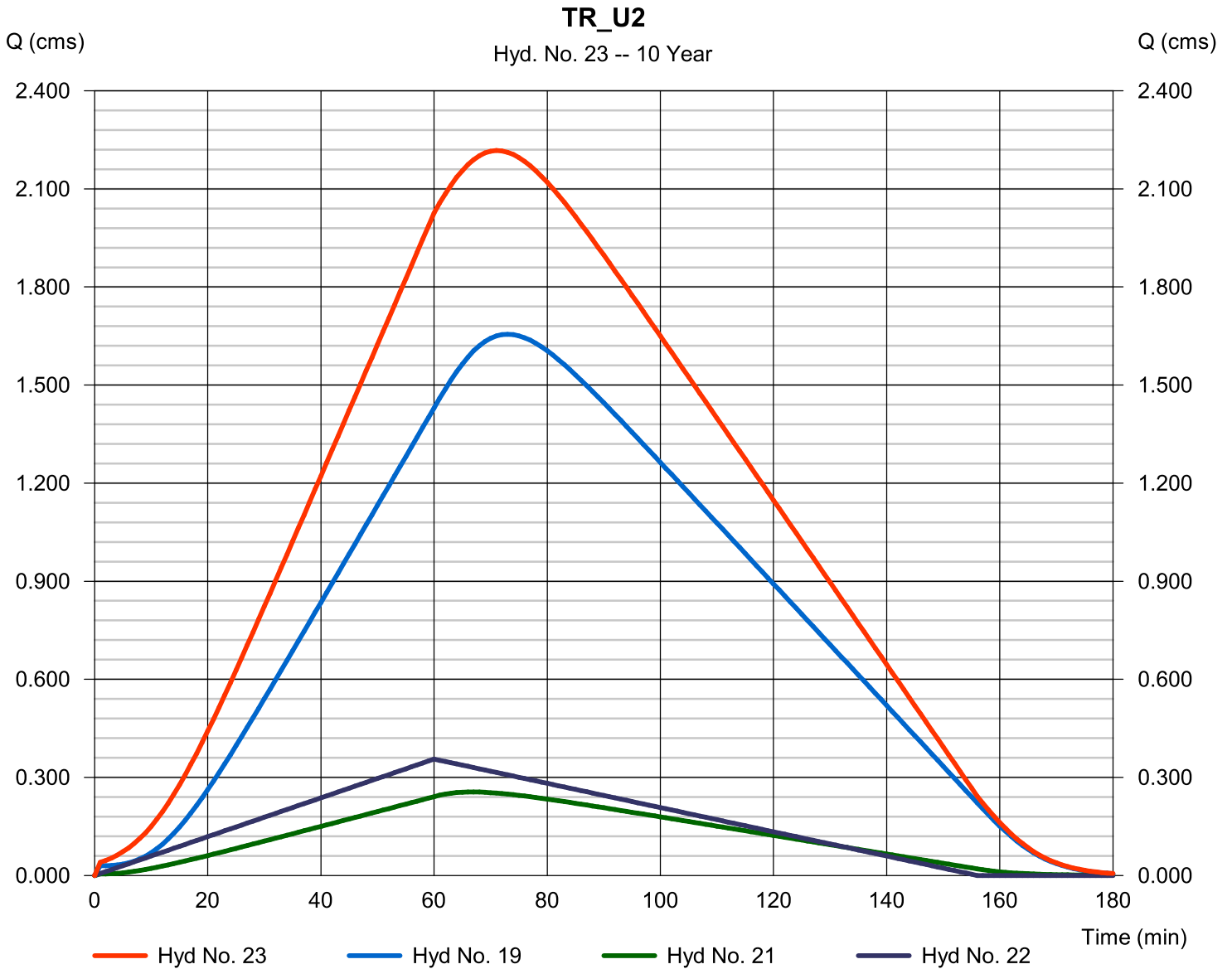
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Hyd. No. 23

TR_U2

Hydrograph type	= Combine	Peak discharge	= 2.217 cms
Storm frequency	= 10 yrs	Time to peak	= 71 min
Time interval	= 1 min	Hyd. volume	= 11 320.9 cum
Inflow hyds.	= 19, 21, 22	Contrib. drain. area	= 19.840 hectare



Hydrograph Report

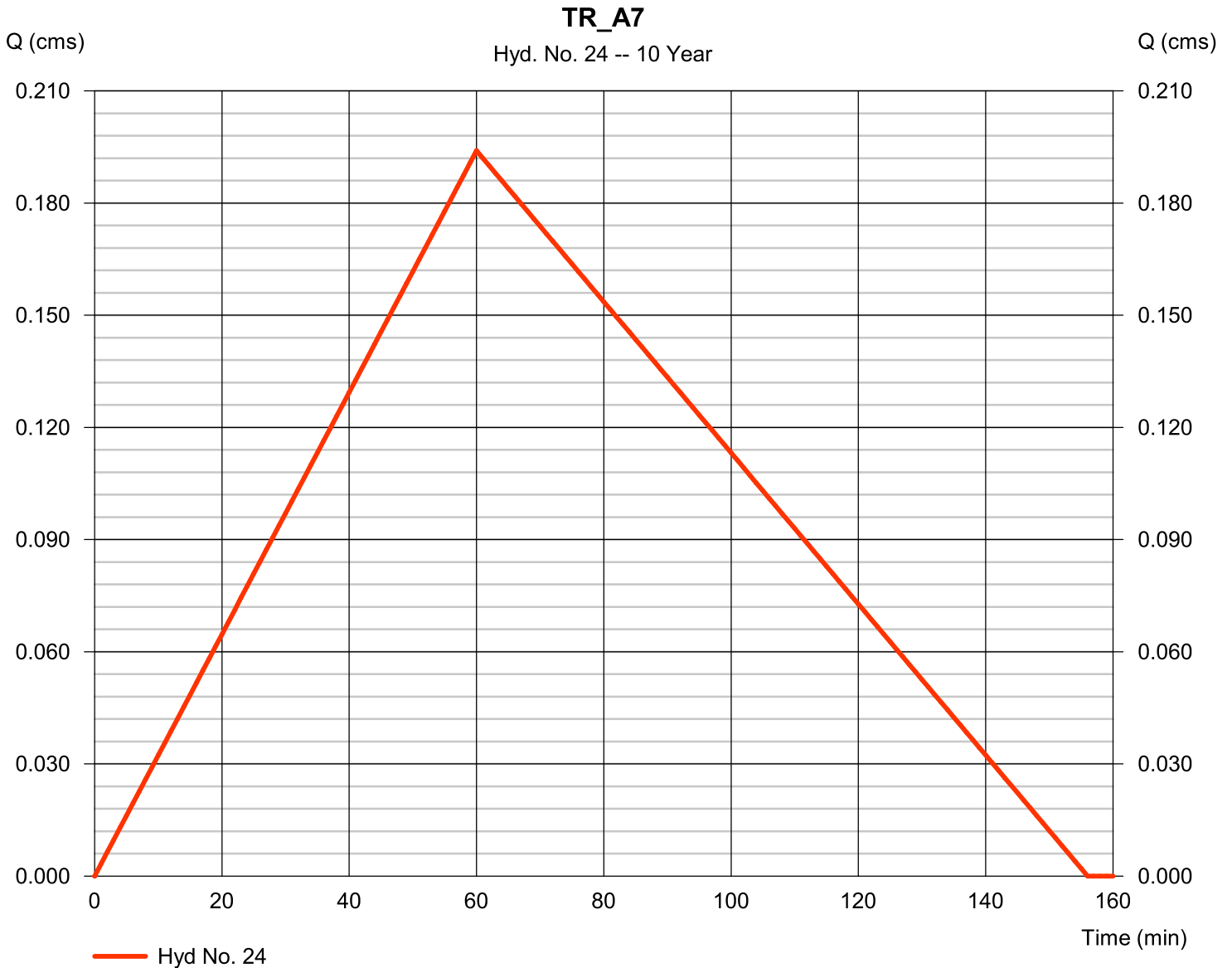
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 24

TR_A7

Hydrograph type	= Rational	Peak discharge	= 0.194 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 907.9 cum
Drainage area	= 12.420 hectare	Runoff coeff.	= 0.27
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

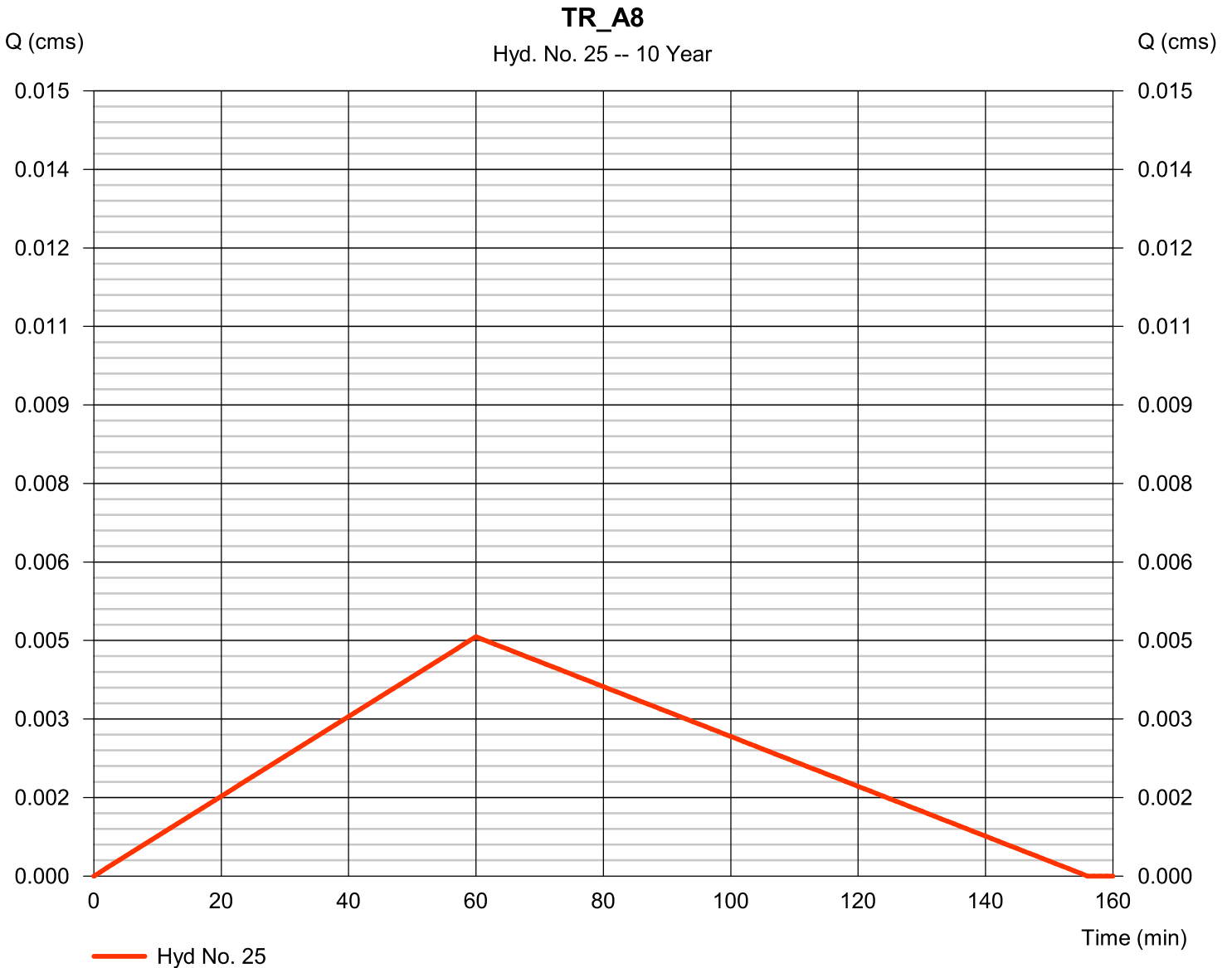
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Hyd. No. 25

TR_A8

Hydrograph type	= Rational	Peak discharge	= 0.005 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 21.4 cum
Drainage area	= 1.580 hectare	Runoff coeff.	= 0.05
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

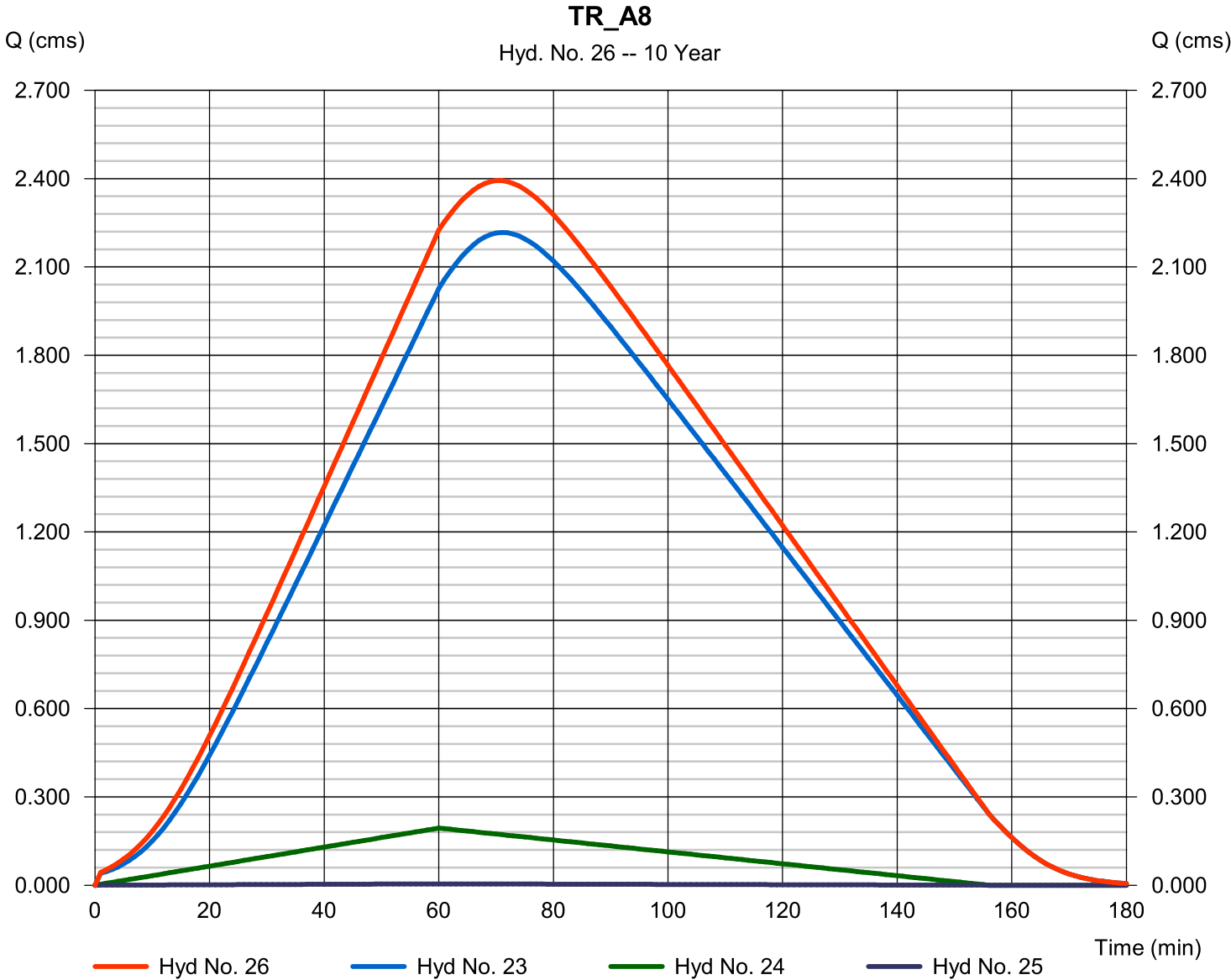
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Hyd. No. 26

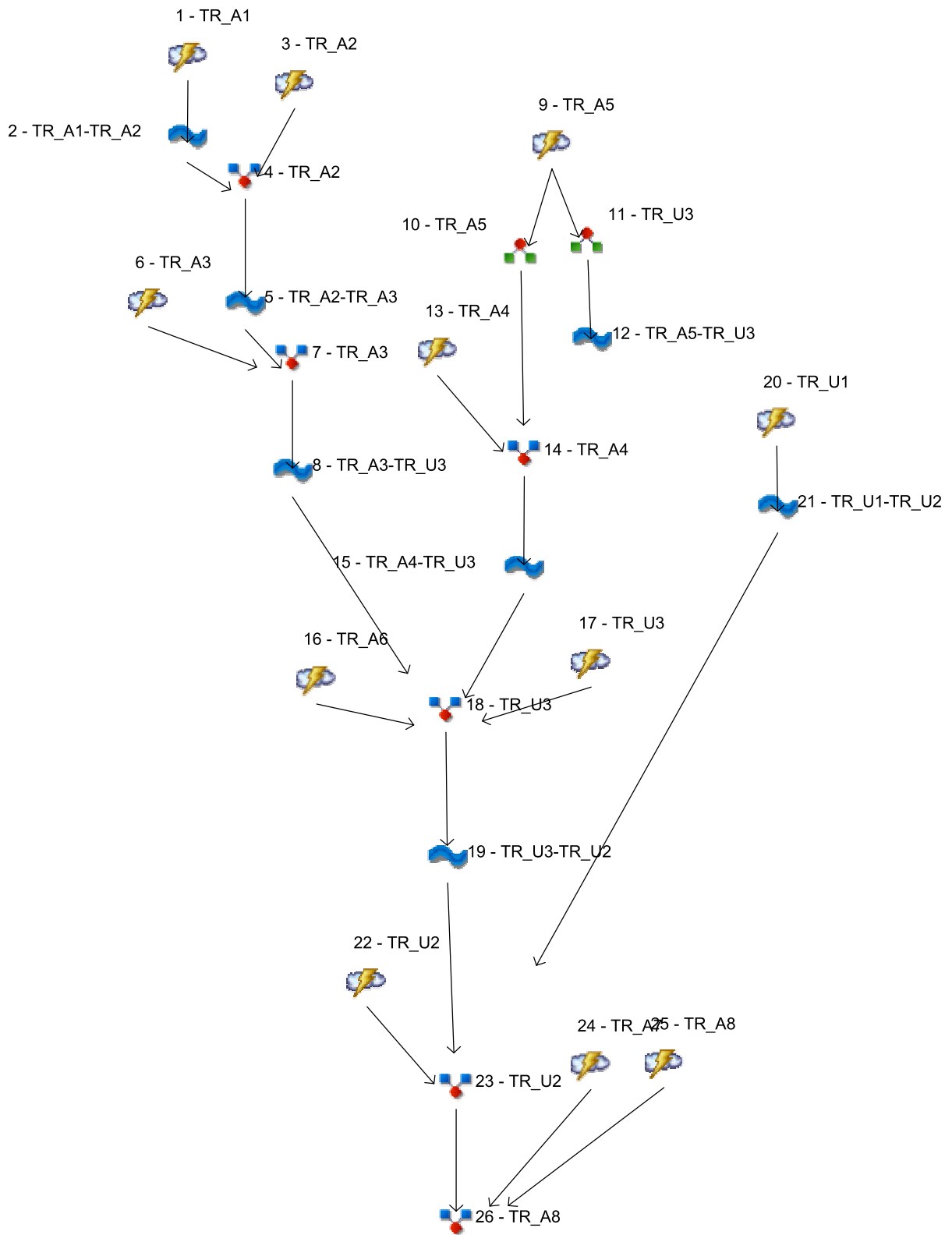
TR_A8

Hydrograph type	= Combine	Peak discharge	= 2.393 cms
Storm frequency	= 10 yrs	Time to peak	= 70 min
Time interval	= 1 min	Hyd. volume	= 12 250.2 cum
Inflow hyds.	= 23, 24, 25	Contrib. drain. area	= 14.000 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

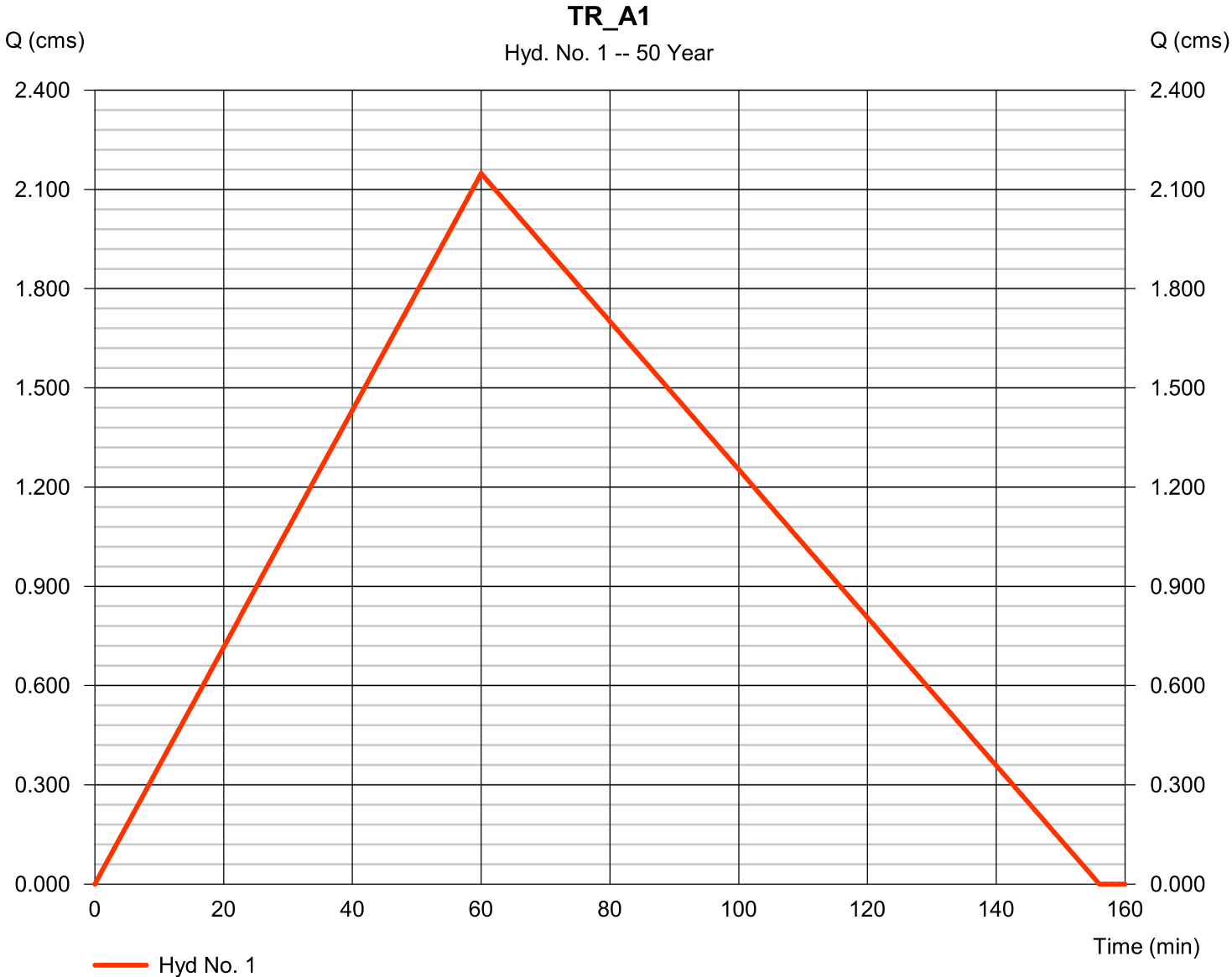
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	2.148	1	60	10 053.7	-----	-----	-----	TR_A1
2	Reach	0.000	1	n/a	0.0	1	-----	-----	TR_A1-TR_A2
3	Rational	0.347	1	60	1 625.7	-----	-----	-----	TR_A2
4	Combine	0.000	1	n/a	0.0	2, 3	-----	-----	TR_A2
5	Reach	0.000	1	n/a	0.0	4	-----	-----	TR_A2-TR_A3
6	Rational	0.079	1	60	368.5	-----	-----	-----	TR_A3
7	Combine	0.000	1	n/a	0.0	5, 6	-----	-----	TR_A3
8	Reach	0.000	1	n/a	0.0	7	-----	-----	TR_A3-TR_U3
9	Rational	0.137	1	60	639.3	-----	-----	-----	TR_A5
10	Diversion1	0.000	1	n/a	0.0	9	-----	-----	TR_A5
11	Diversion2	0.000	1	n/a	0.0	9	-----	-----	TR_U3
12	Reach	0.000	1	n/a	0.0	11	-----	-----	TR_A5-TR_U3
13	Rational	0.309	1	60	1 446.1	-----	-----	-----	TR_A4
14	Combine	0.000	1	n/a	0.0	10, 13	-----	-----	TR_A4
15	Reach	0.000	1	n/a	0.0	14	-----	-----	TR_A4-TR_U3
16	Rational	0.201	1	60	942.7	-----	-----	-----	TR_A6
17	Rational	0.082	1	60	386.0	-----	-----	-----	TR_U3
18	Combine	0.000	1	n/a	0.0	8, 15, 16, 17	-----	-----	TR_U3
19	Reach	0.000	1	n/a	0.0	18	-----	-----	TR_U3-TR_U2
20	Rational	0.392	1	60	1 833.6	-----	-----	-----	TR_U1
21	Reach	0.000	1	n/a	0.0	20	-----	-----	TR_U1-TR_U2
22	Rational	0.505	1	60	2 363.5	-----	-----	-----	TR_U2
23	Combine	0.000	1	n/a	0.0	19, 21, 22	-----	-----	TR_U2
24	Rational	0.297	1	60	1 389.9	-----	-----	-----	TR_A7
25	Rational	0.010	1	60	45.6	-----	-----	-----	TR_A8
26	Combine	0.000	1	n/a	0.0	23, 24, 25	-----	-----	TR_A8
03.gpw					Return Period: 50 Year			mardi, avr 3, 2012	

Hydrograph Report

Hyd. No. 1

TR_A1

Hydrograph type	= Rational	Peak discharge	= 2.148 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 10 053.7 cum
Drainage area	= 139.250 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hyd. No. 2

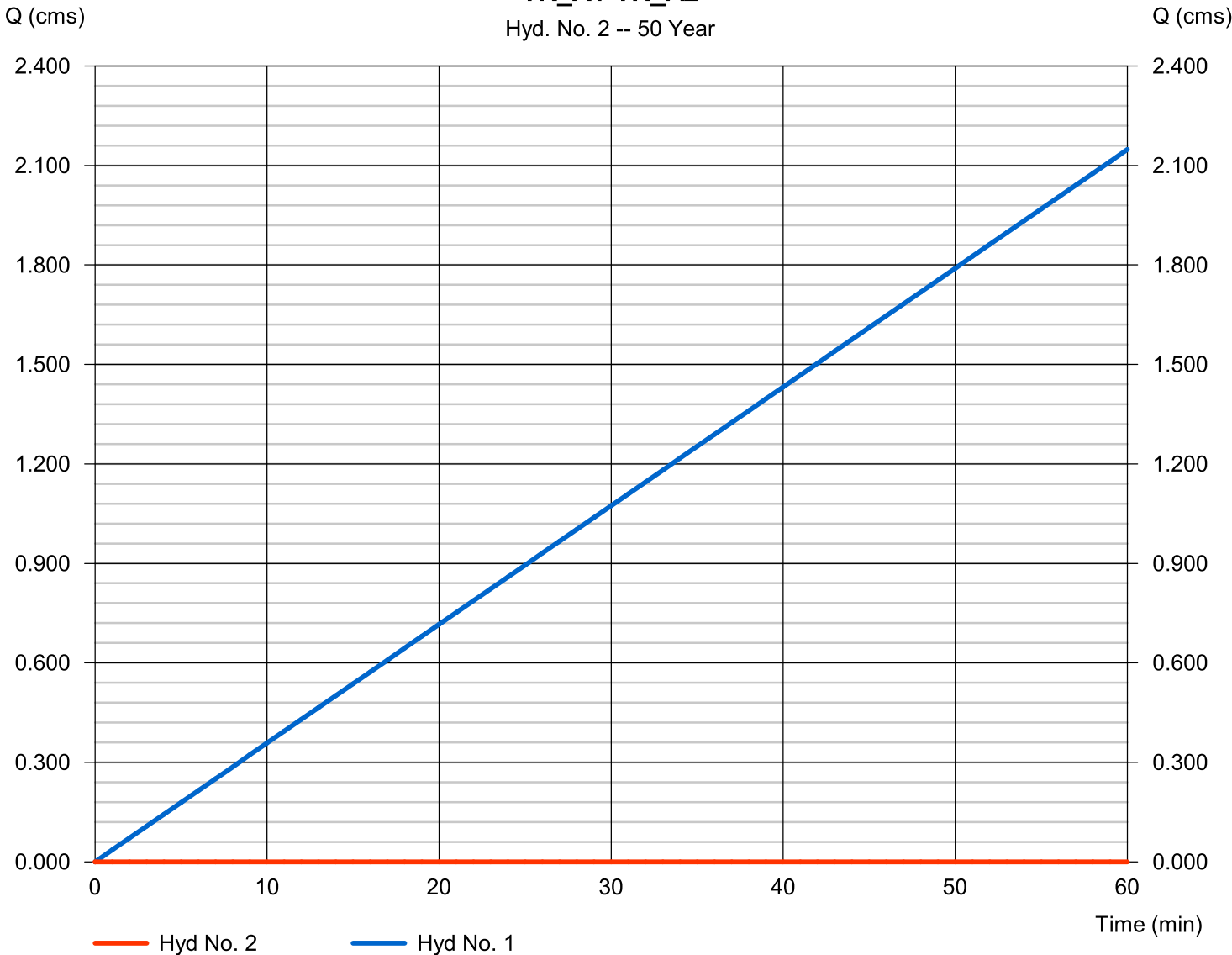
TR_A1-TR_A2

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 1 - TR_A1	Section type	= Trapezoidal
Reach length	= 350.0 m	Channel slope	= 0.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.560	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.

TR_A1-TR_A2

Hyd. No. 2 -- 50 Year



Hydrograph Report

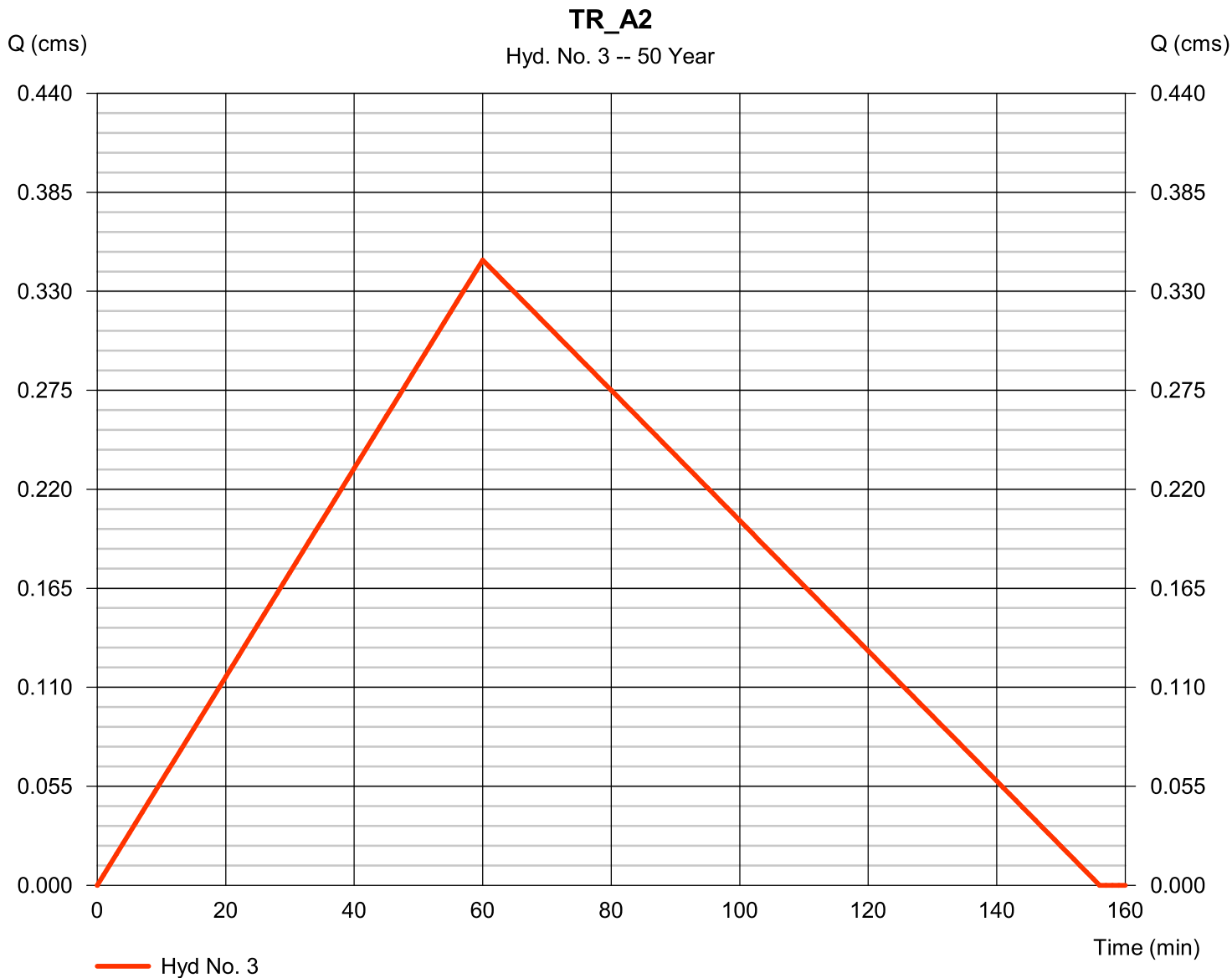
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Hyd. No. 3

TR_A2

Hydrograph type	= Rational	Peak discharge	= 0.347 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 625.7 cum
Drainage area	= 20.470 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

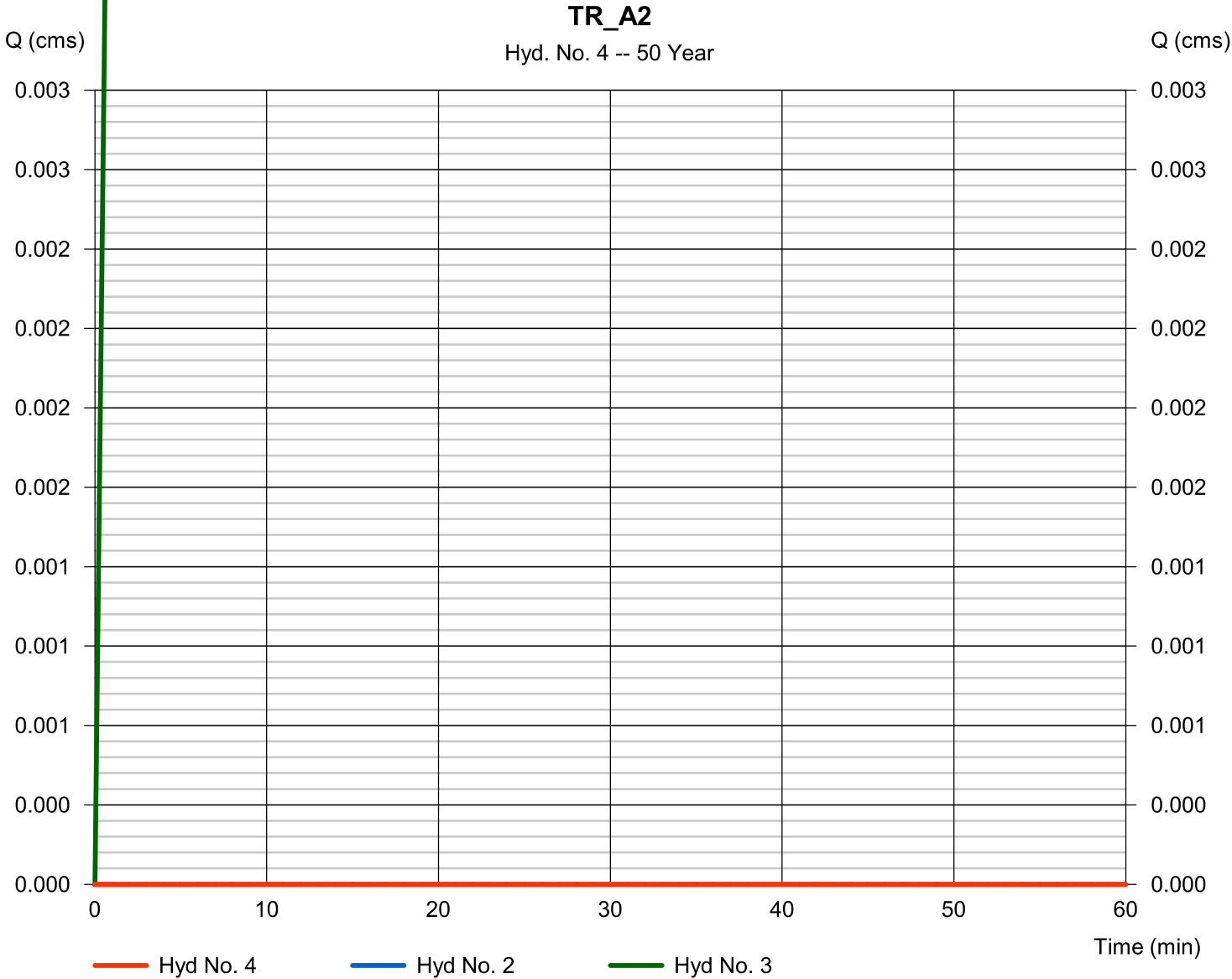
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 4

TR_A2

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 2, 3	Contrib. drain. area	= 20.470 hectare



Hydrograph Report

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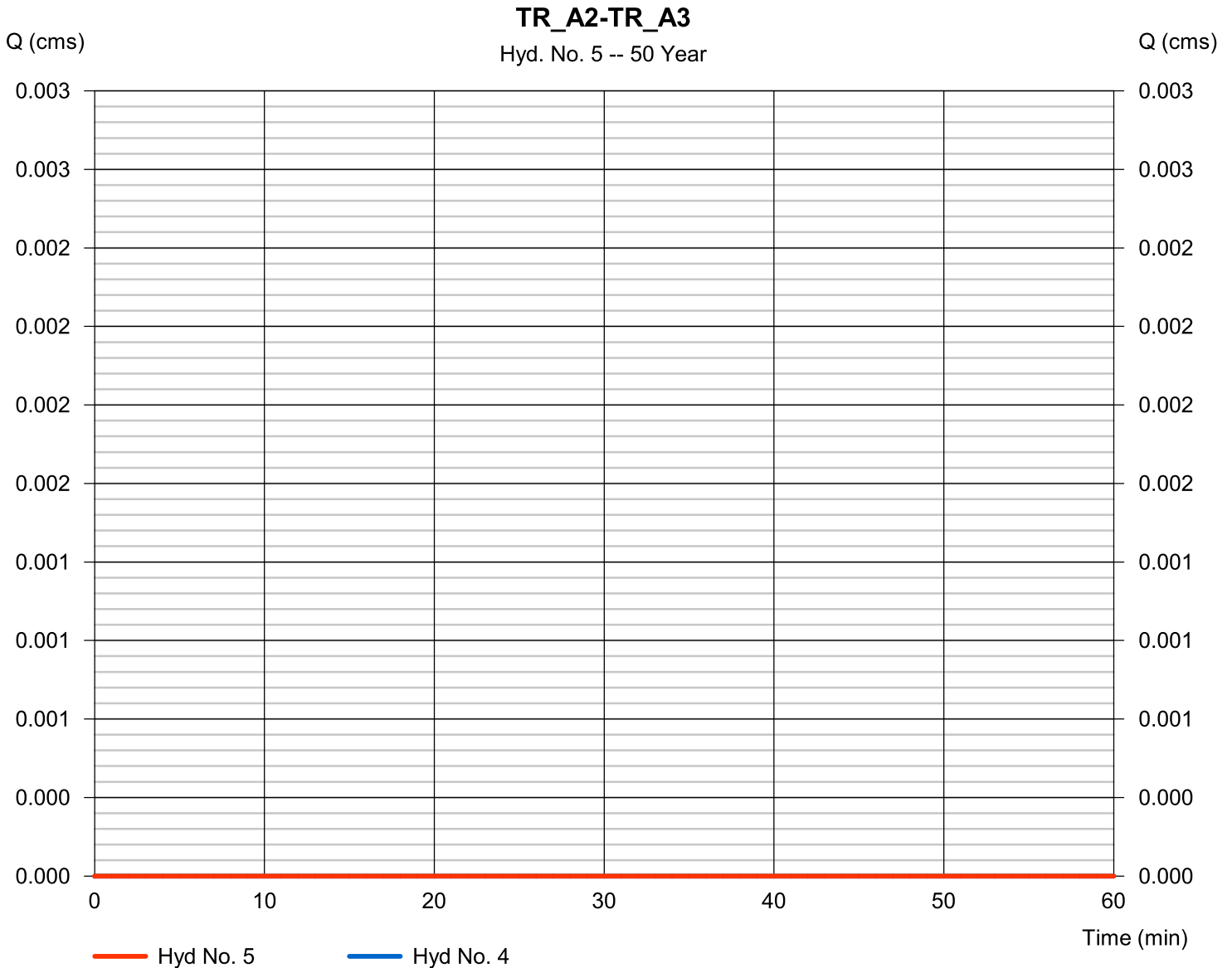
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Hyd. No. 5

TR_A2-TR_A3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 4 - TR_A2	Section type	= Trapezoidal
Reach length	= 250.0 m	Channel slope	= 1.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.956	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.



Hydrograph Report

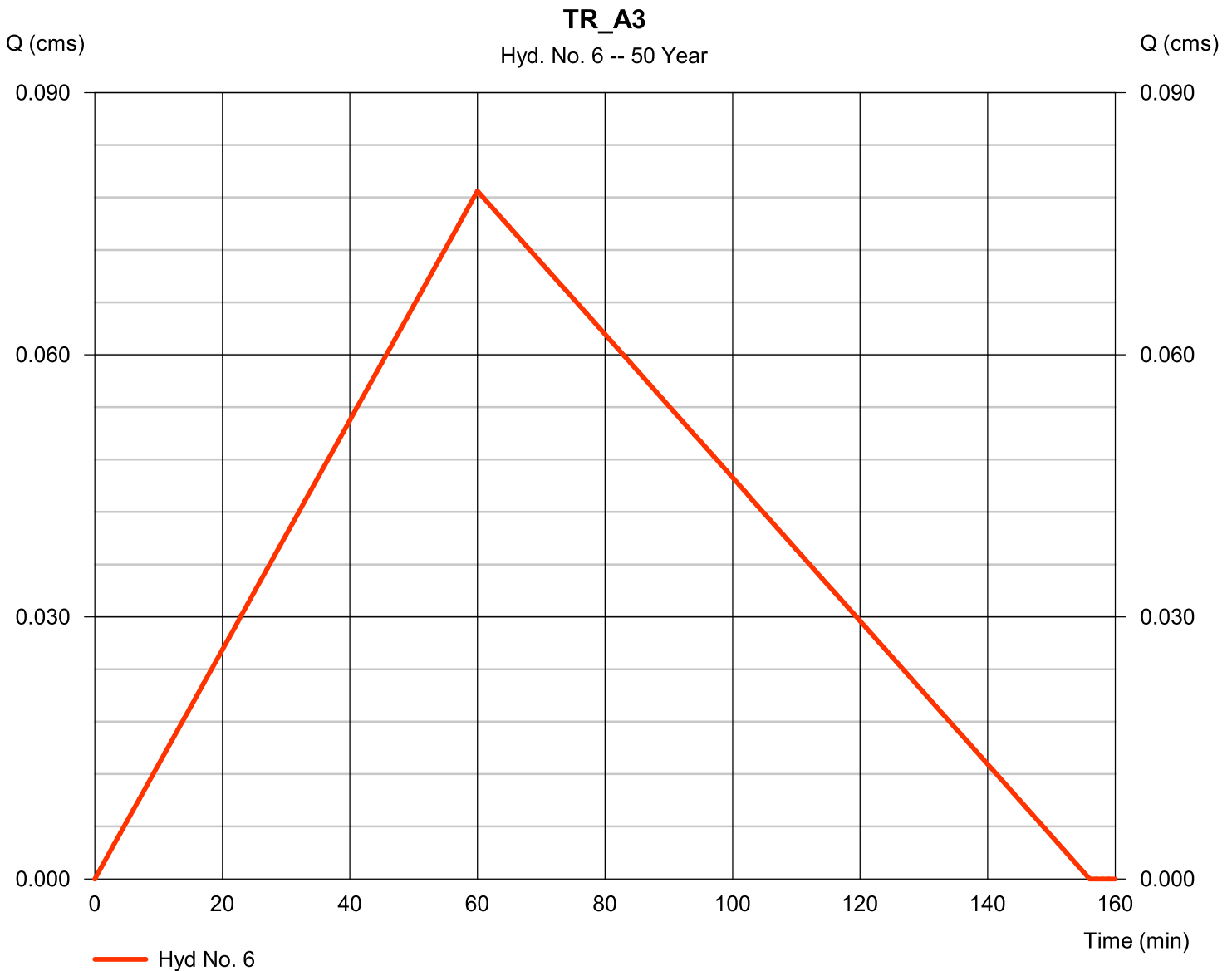
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Hyd. No. 6

TR_A3

Hydrograph type	= Rational	Peak discharge	= 0.079 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 368.5 cum
Drainage area	= 4.640 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

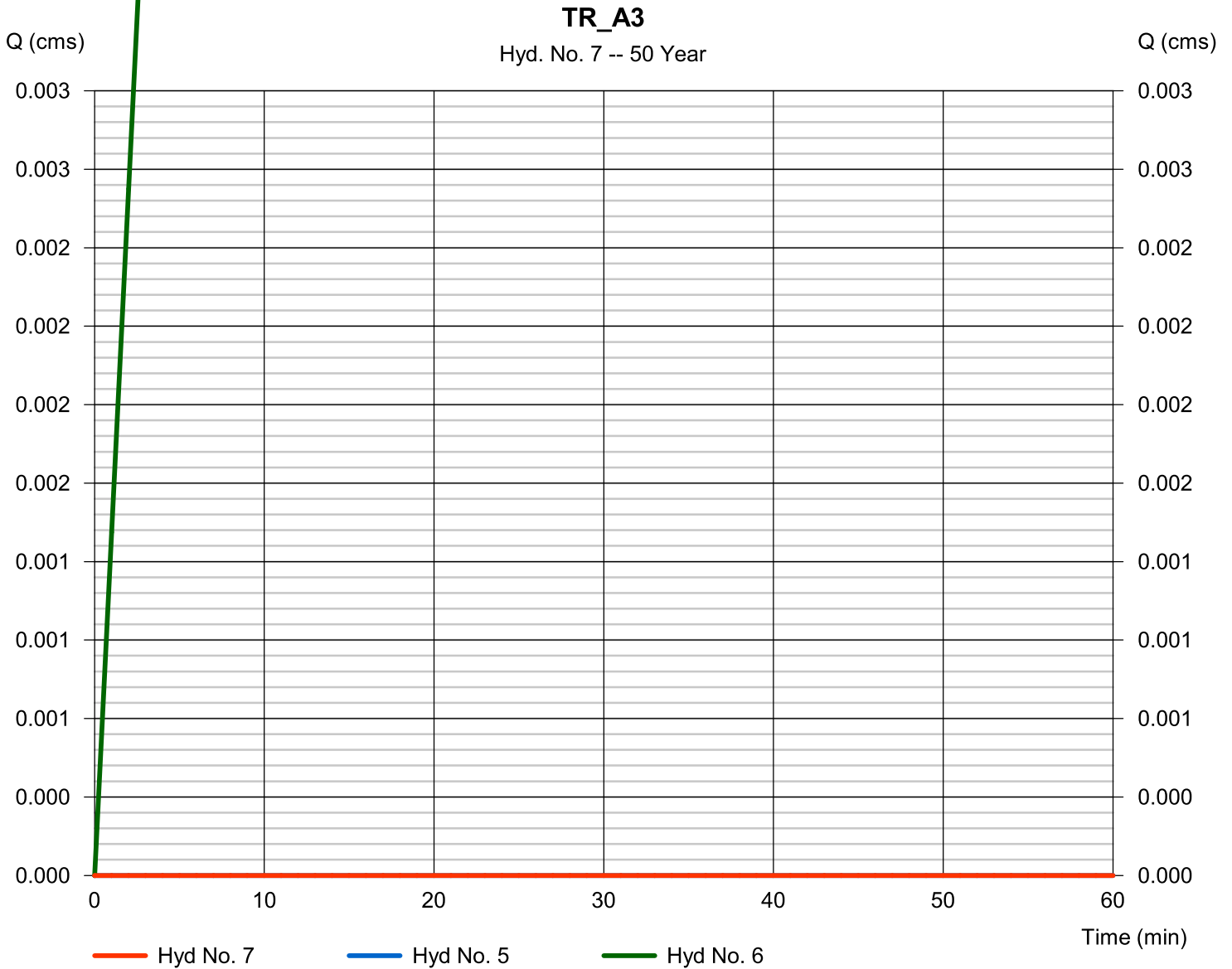
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Hyd. No. 7

TR_A3

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds = 5, 6

Peak discharge = 0.000 cms
 Time to peak = n/a
 Hyd. volume = 0.0 cum
 Contrib. drain. area = 4.640 hectare



Hydrograph Report

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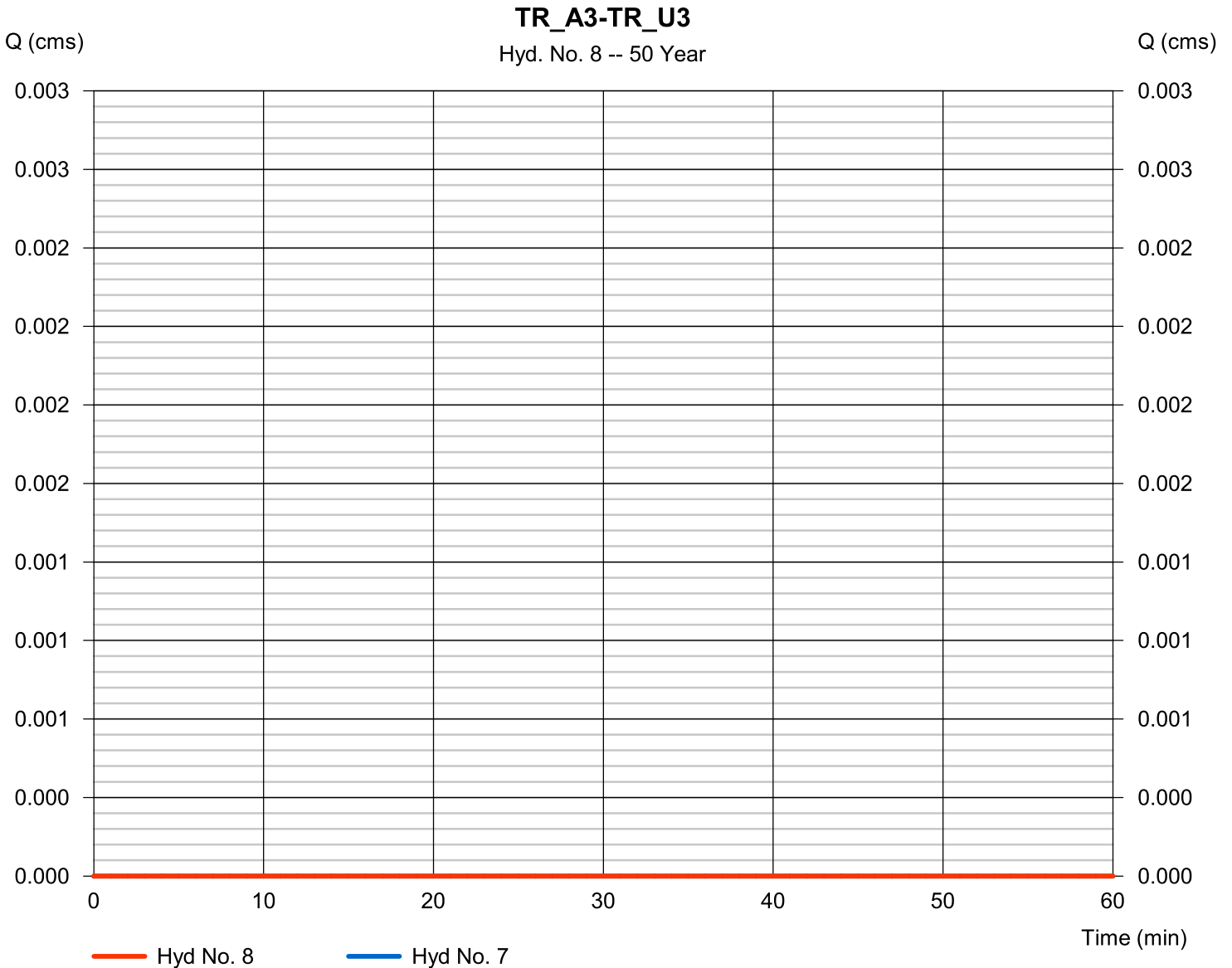
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Hyd. No. 8

TR_A3-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 7 - TR_A3	Section type	= Trapezoidal
Reach length	= 100.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.



Hydrograph Report

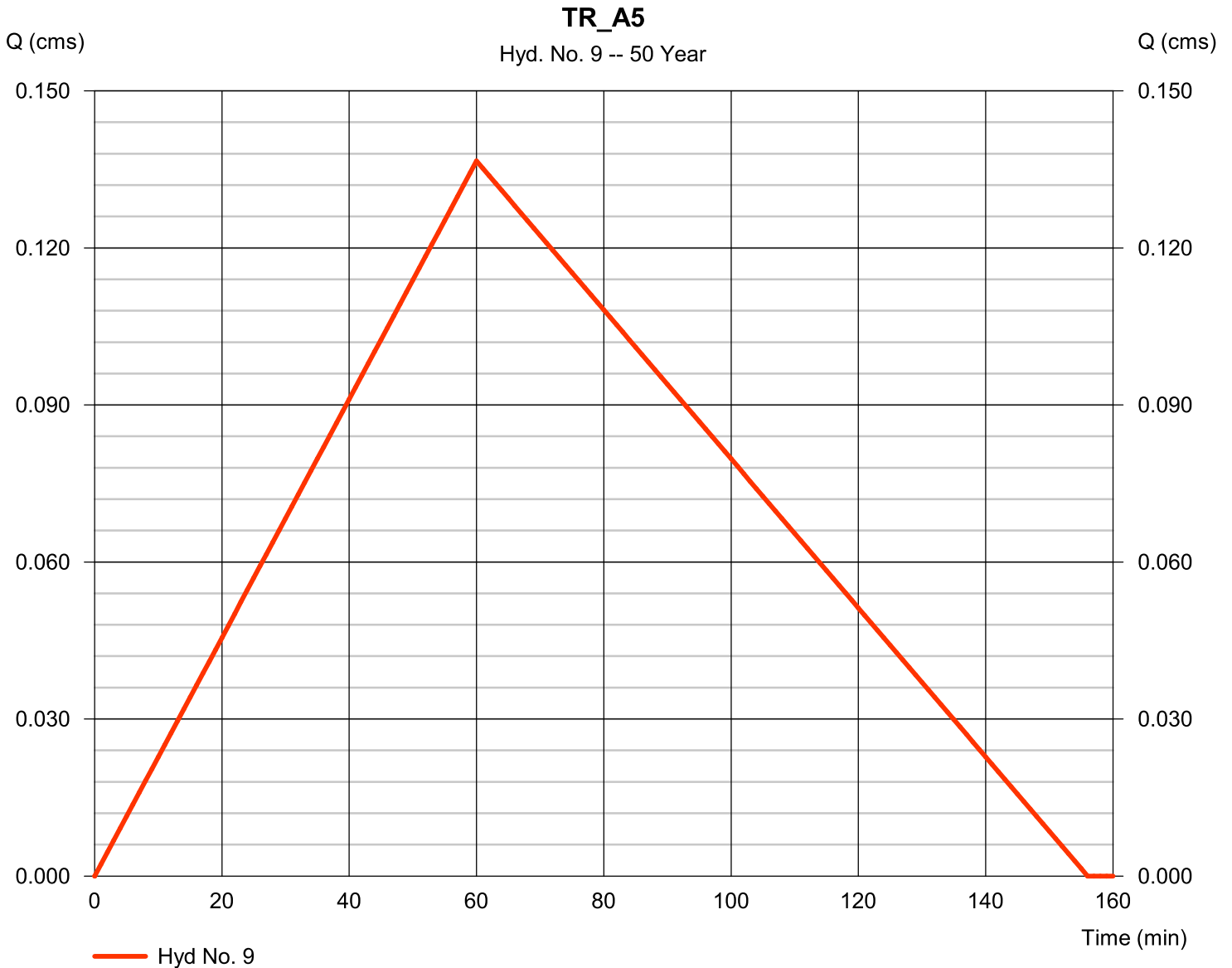
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Hyd. No. 9

TR_A5

Hydrograph type	= Rational	Peak discharge	= 0.137 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 639.3 cum
Drainage area	= 7.700 hectare	Runoff coeff.	= 0.23
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

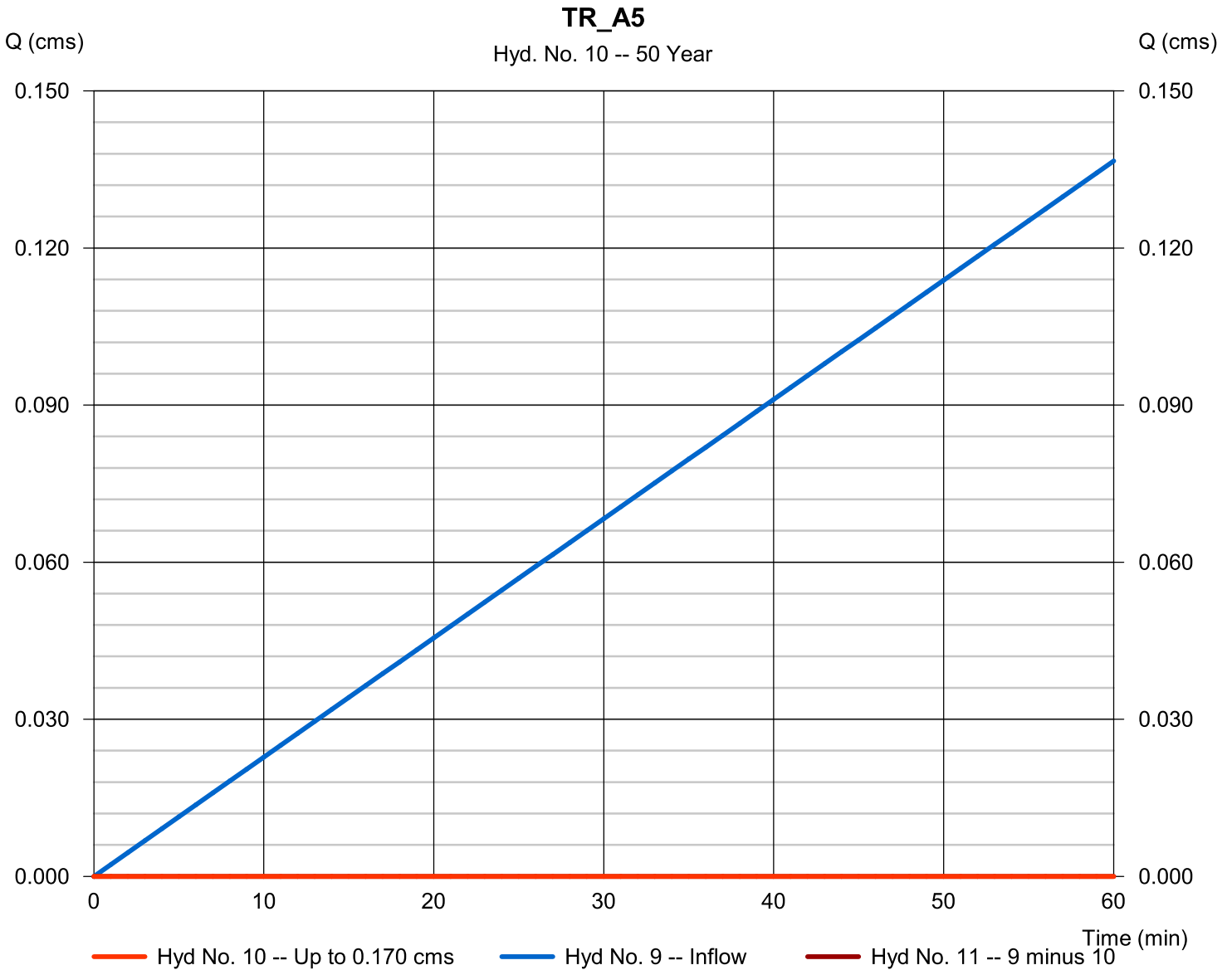
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Hyd. No. 10

TR_A5

Hydrograph type	= Diversion1	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 11
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

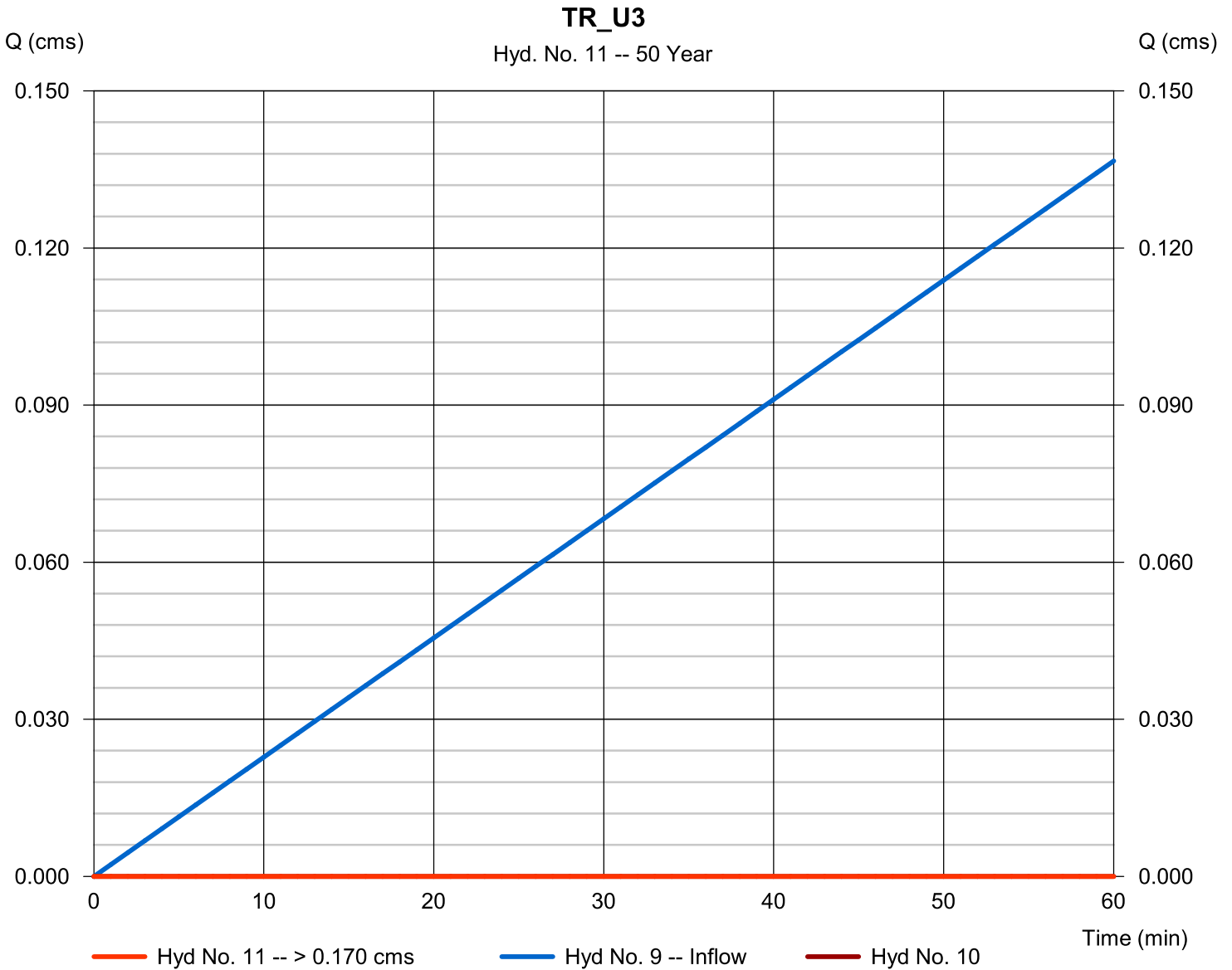
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Hyd. No. 11

TR_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 10
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

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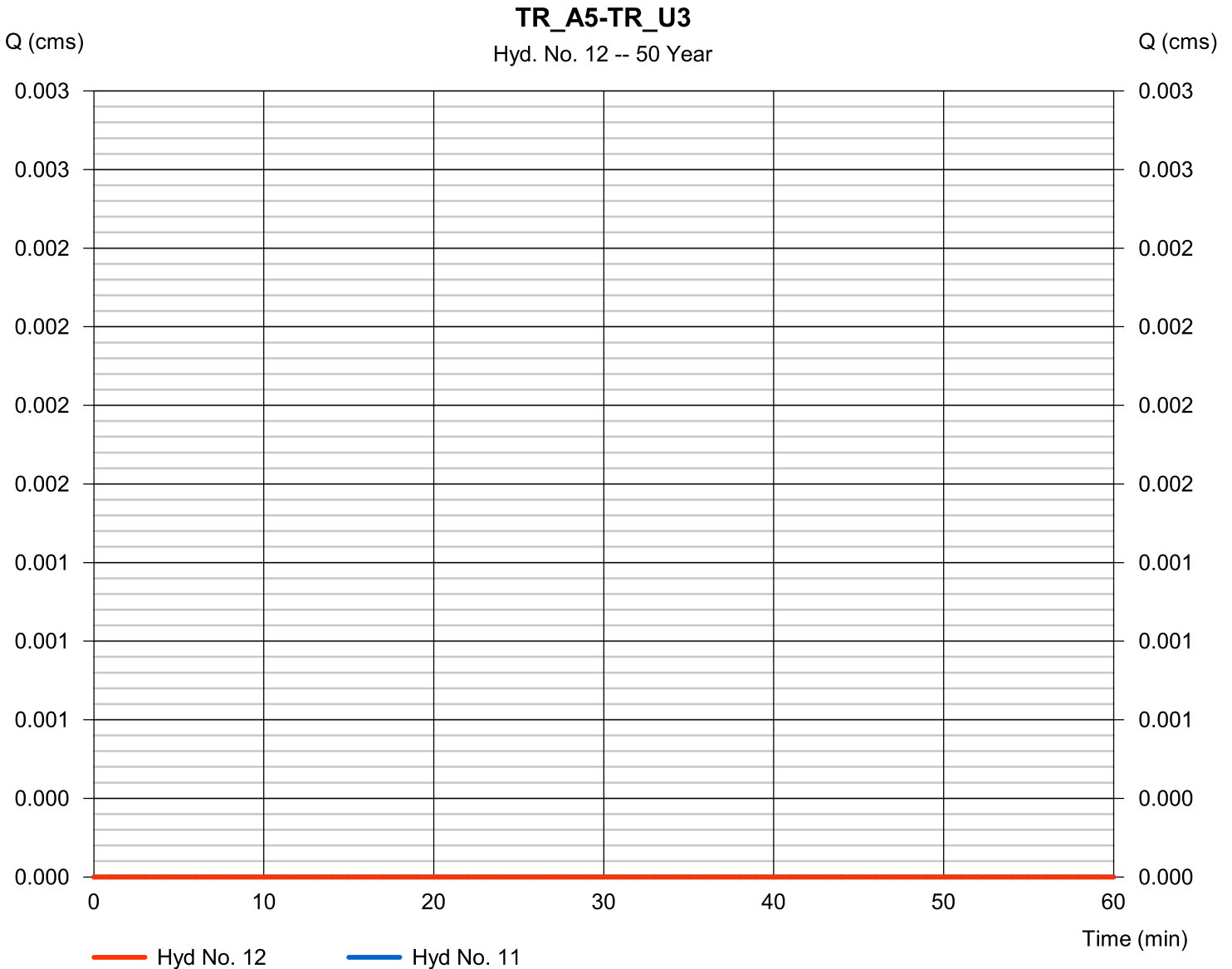
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Hyd. No. 12

TR_A5-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 11 - TR_U3	Section type	= Trapezoidal
Reach length	= 80.0 m	Channel slope	= 5.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 6.033	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.



Hydrograph Report

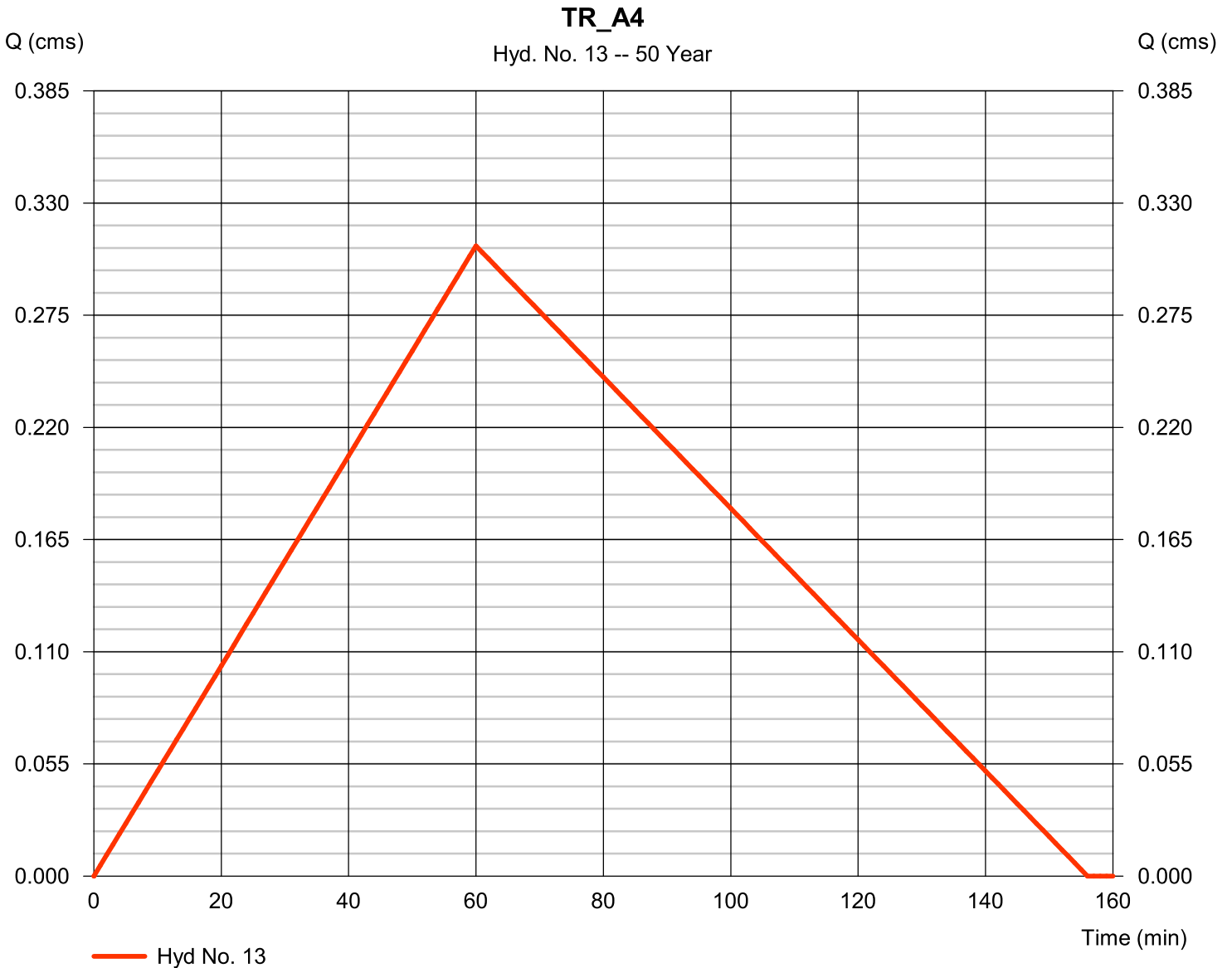
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Hyd. No. 13

TR_A4

Hydrograph type	= Rational	Peak discharge	= 0.309 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 446.1 cum
Drainage area	= 20.030 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

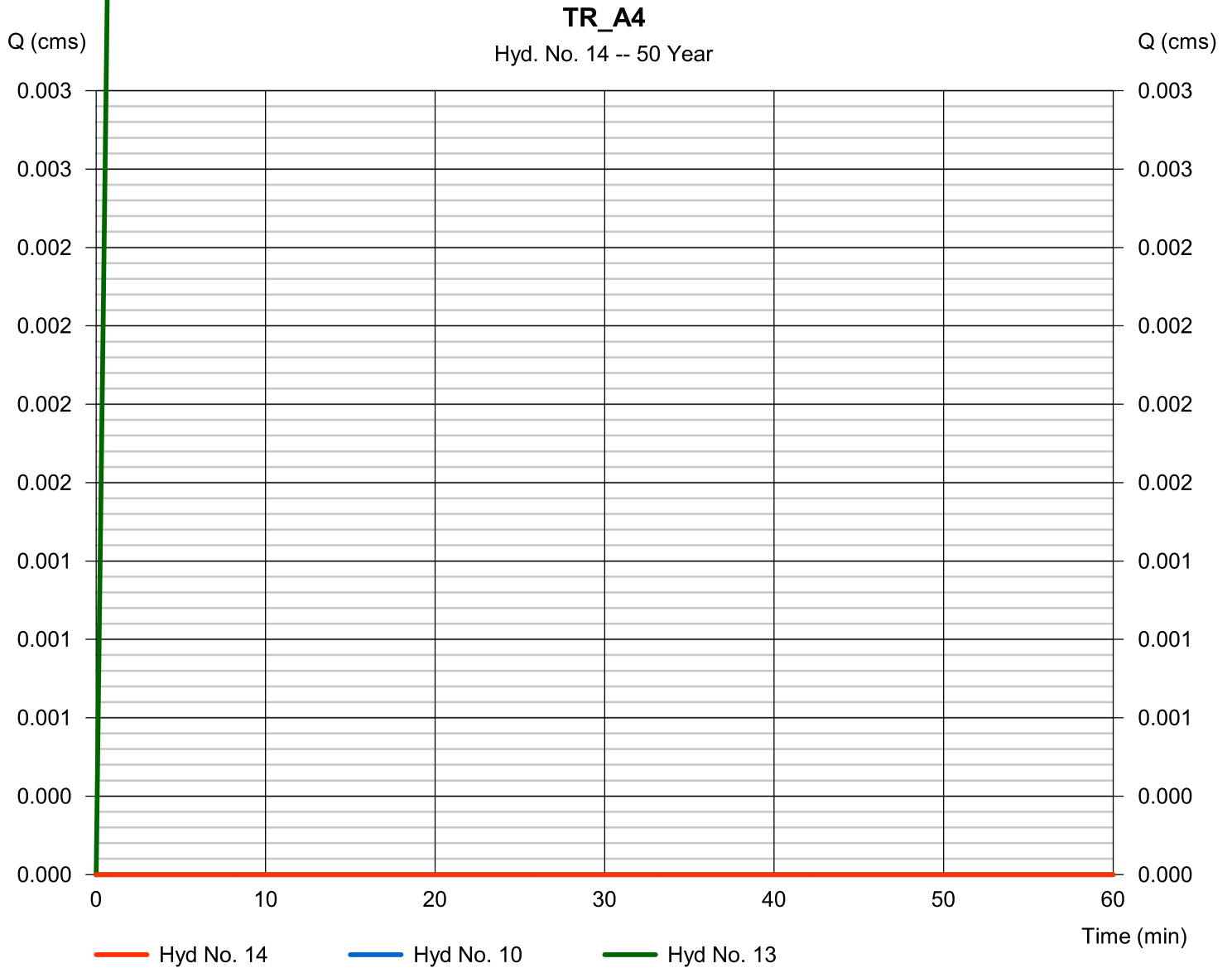
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

TR_A4

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 10, 13	Contrib. drain. area	= 20.030 hectare



Hydrograph Report

Hyd. No. 15

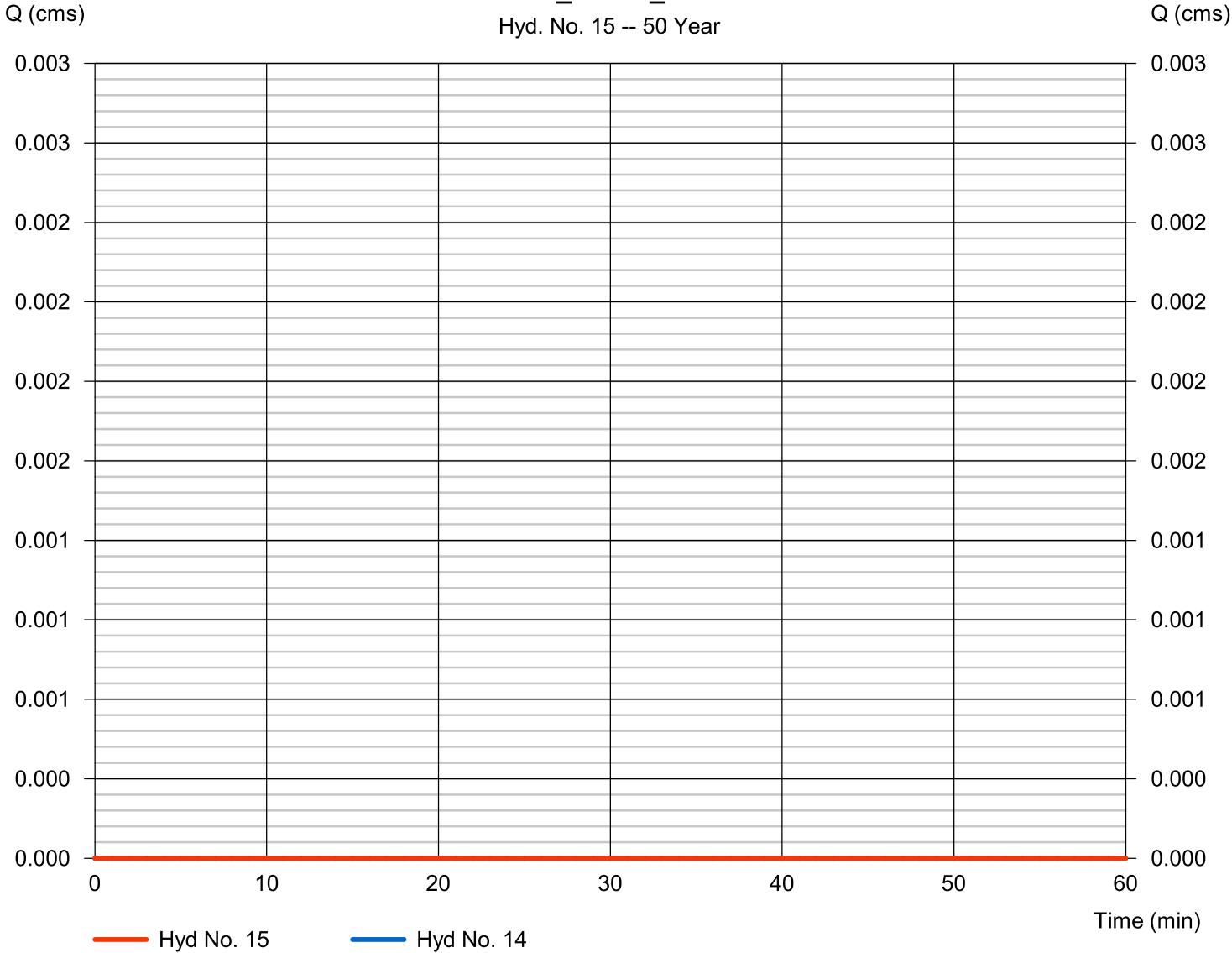
TR_A4-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 14 - TR_A4	Section type	= Trapezoidal
Reach length	= 130.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.

TR_A4-TR_U3

Hyd. No. 15 -- 50 Year



Hydrograph Report

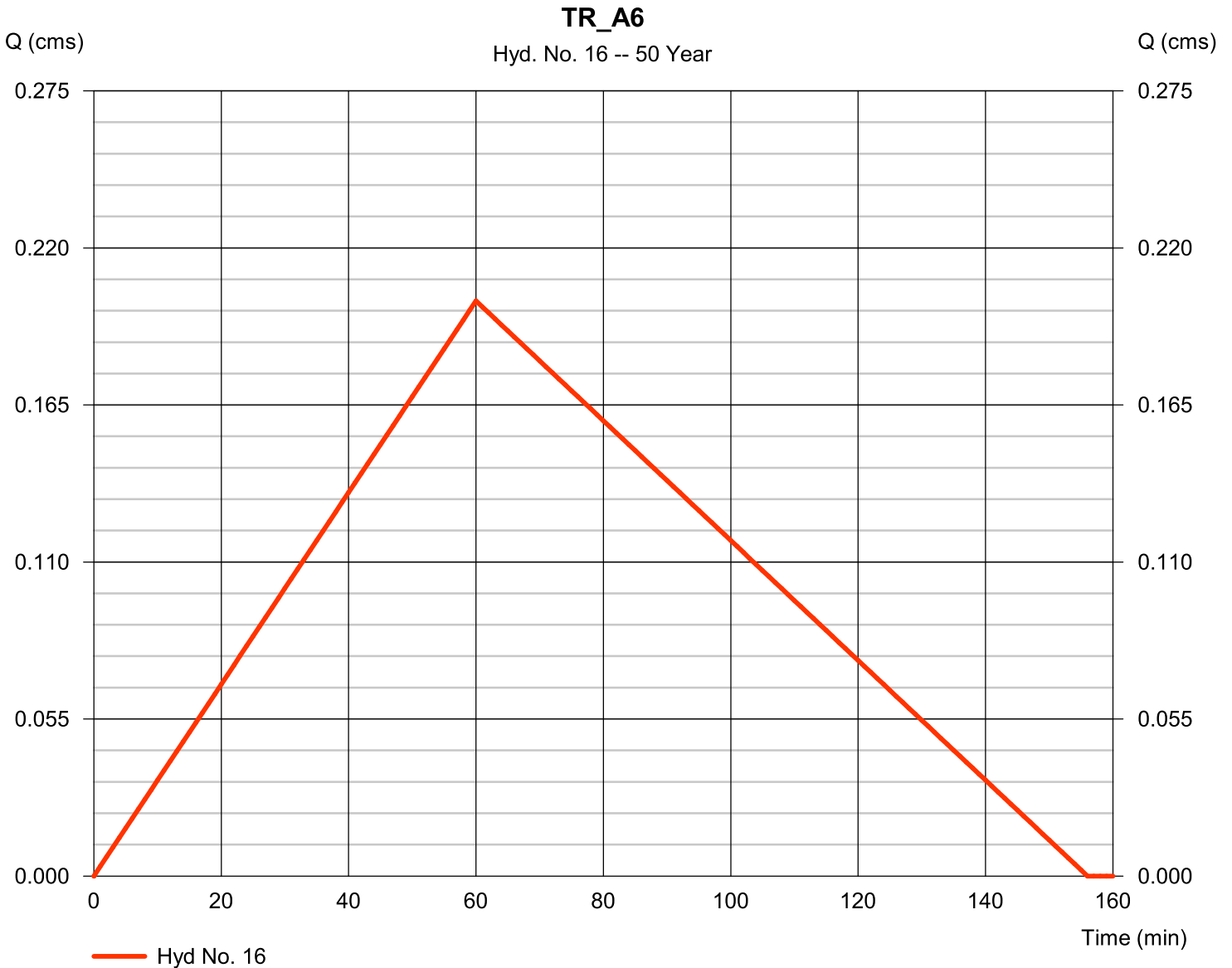
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Hyd. No. 16

TR_A6

Hydrograph type	= Rational	Peak discharge	= 0.201 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 942.7 cum
Drainage area	= 11.870 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

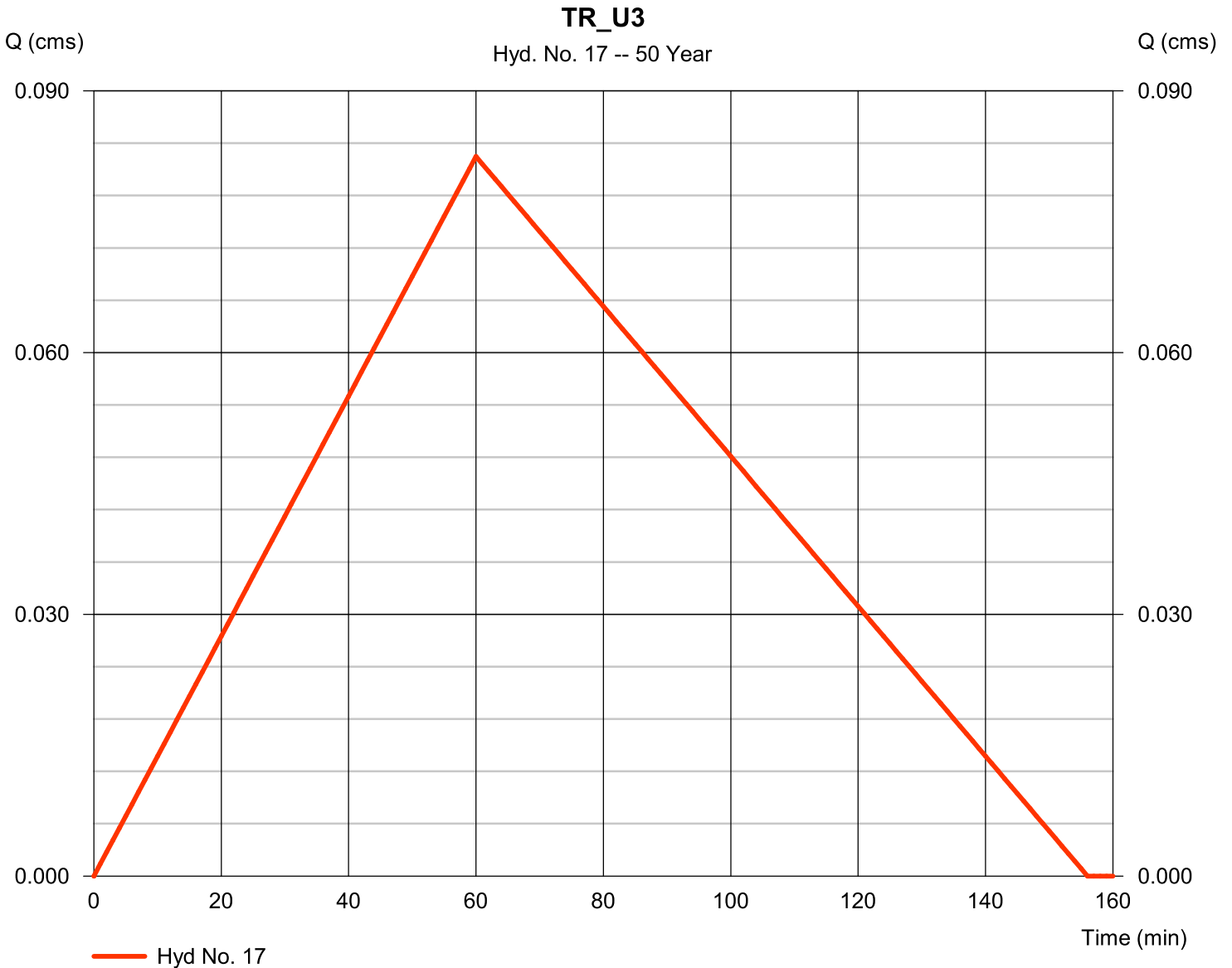
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Hyd. No. 17

TR_U3

Hydrograph type	= Rational	Peak discharge	= 0.082 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 386.0 cum
Drainage area	= 3.240 hectare	Runoff coeff.	= 0.33
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

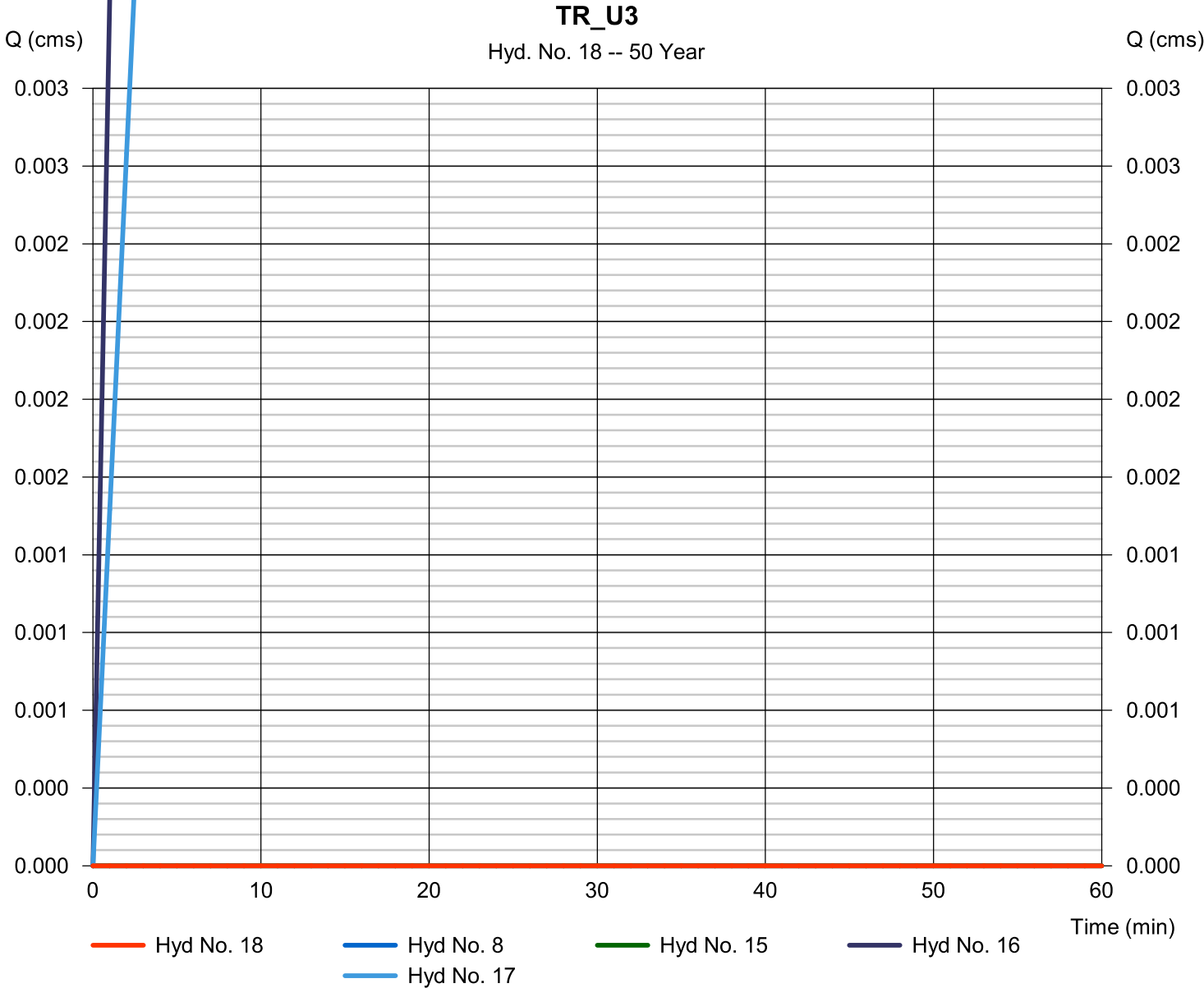
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Hyd. No. 18

TR_U3

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 8, 15, 16, 17	Contrib. drain. area	= 15.110 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

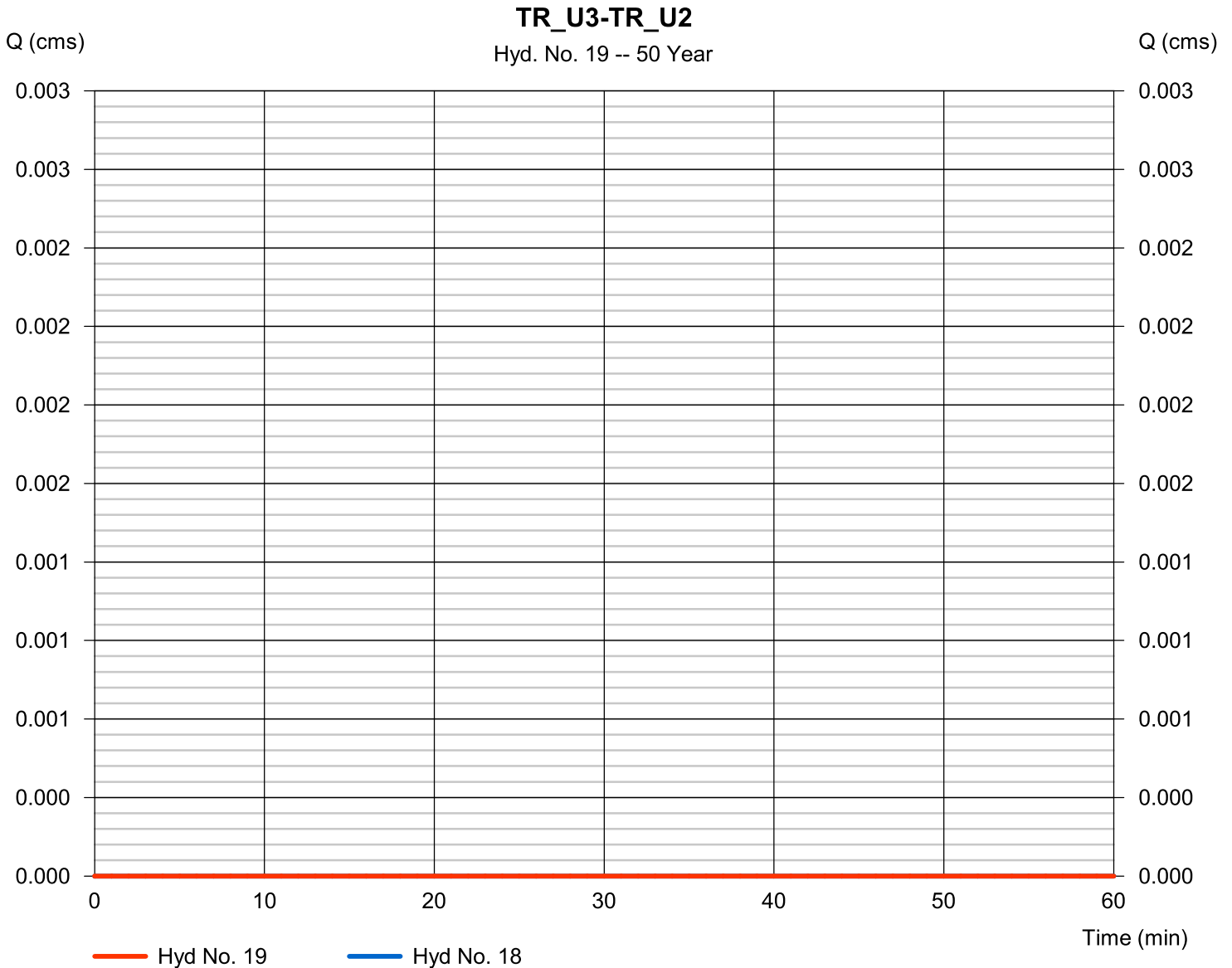
mardi, avr 3, 2012

Hyd. No. 19

TR_U3-TR_U2

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 18 - TR_U3	Section type	= Trapezoidal
Reach length	= 400.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.



Hydrograph Report

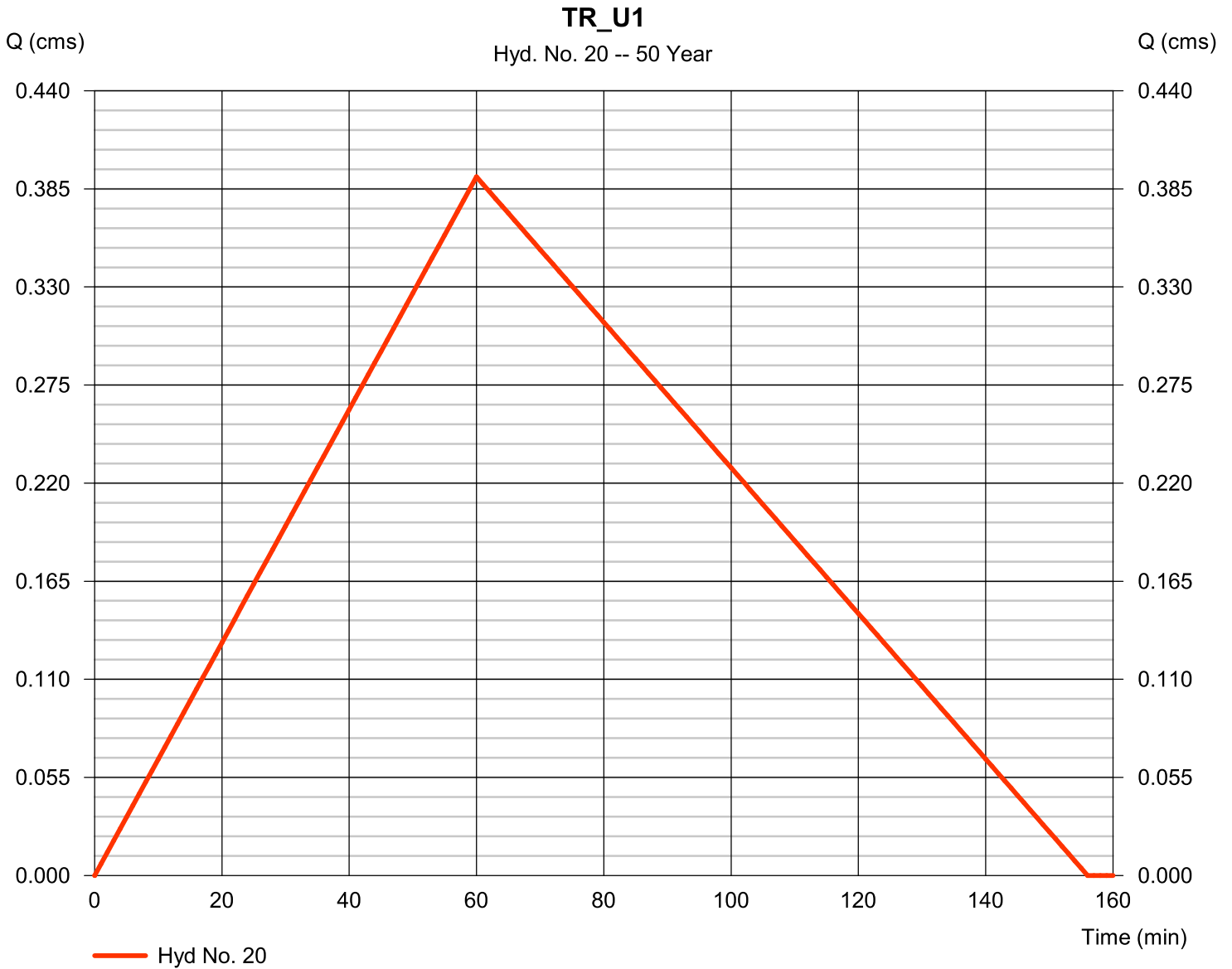
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Hyd. No. 20

TR_U1

Hydrograph type	= Rational	Peak discharge	= 0.392 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 833.6 cum
Drainage area	= 18.140 hectare	Runoff coeff.	= 0.28
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



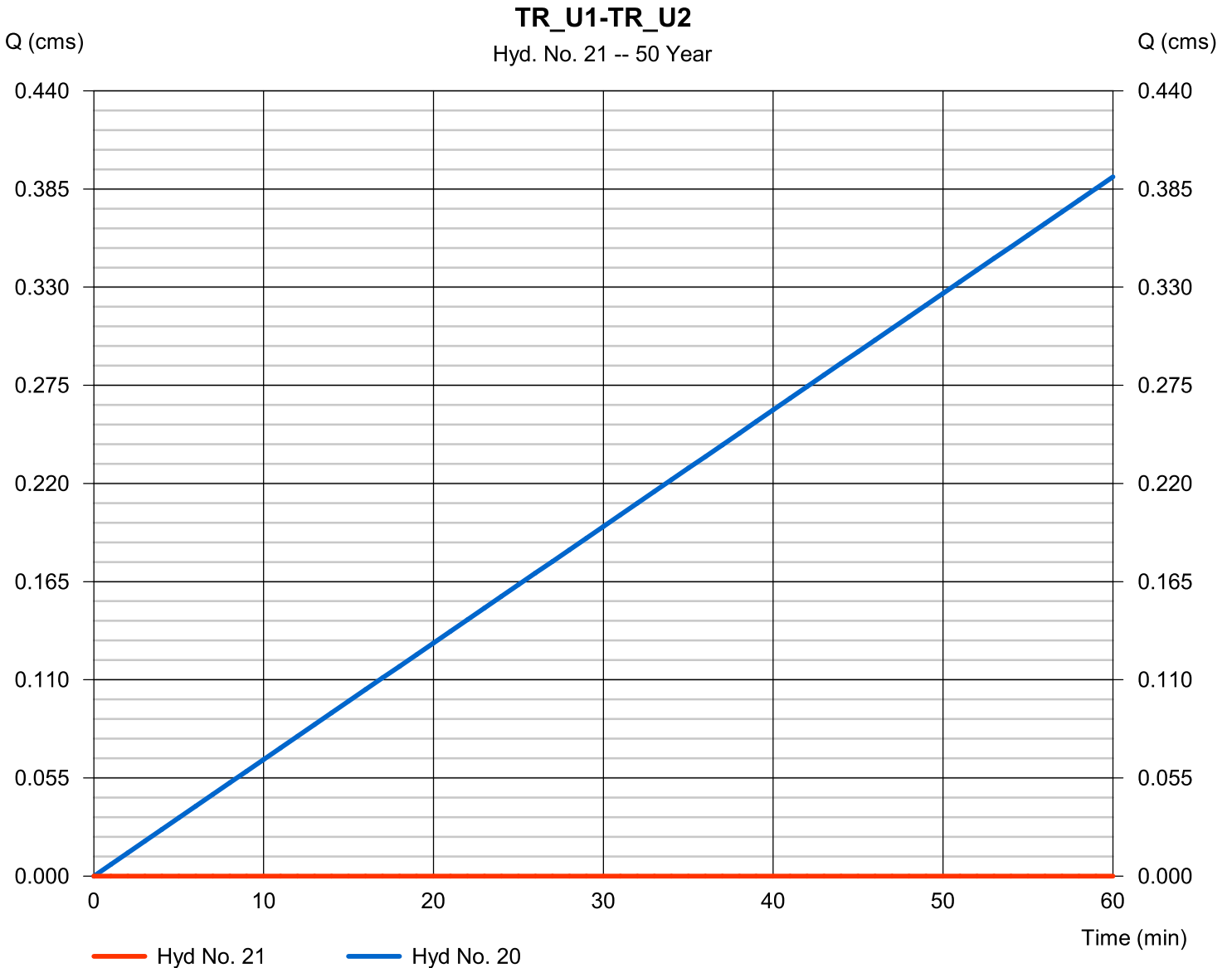
Hydrograph Report

Hyd. No. 21

TR_U1-TR_U2

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyd. No.	= 20 - TR_U1	Section type	= Trapezoidal
Reach length	= 390.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 0.00 m/s	Routing coeff.	= 0.0000

Modified Att-Kin routing method used.



Hydrograph Report

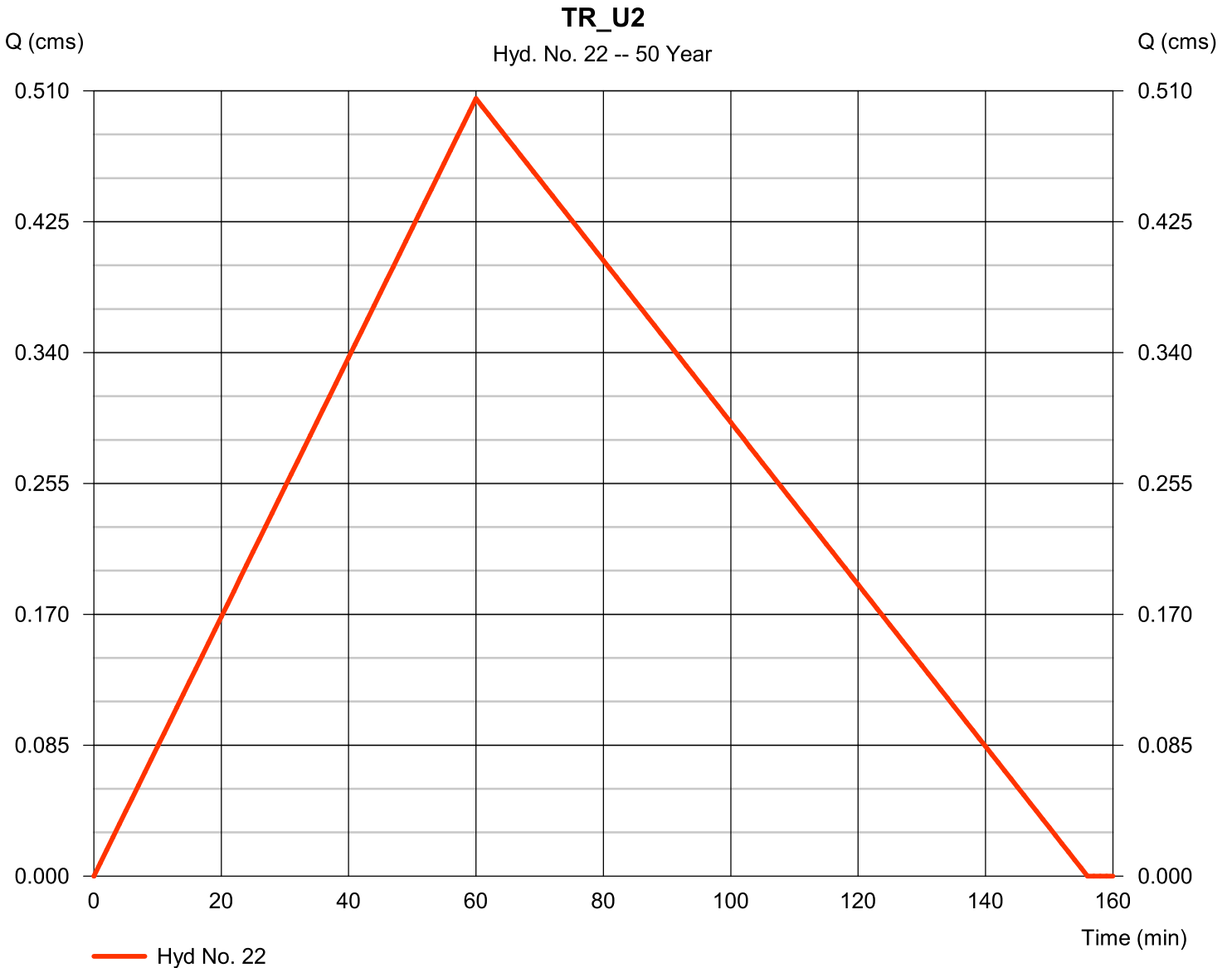
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Hyd. No. 22

TR_U2

Hydrograph type	= Rational	Peak discharge	= 0.505 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 363.5 cum
Drainage area	= 19.840 hectare	Runoff coeff.	= 0.33
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

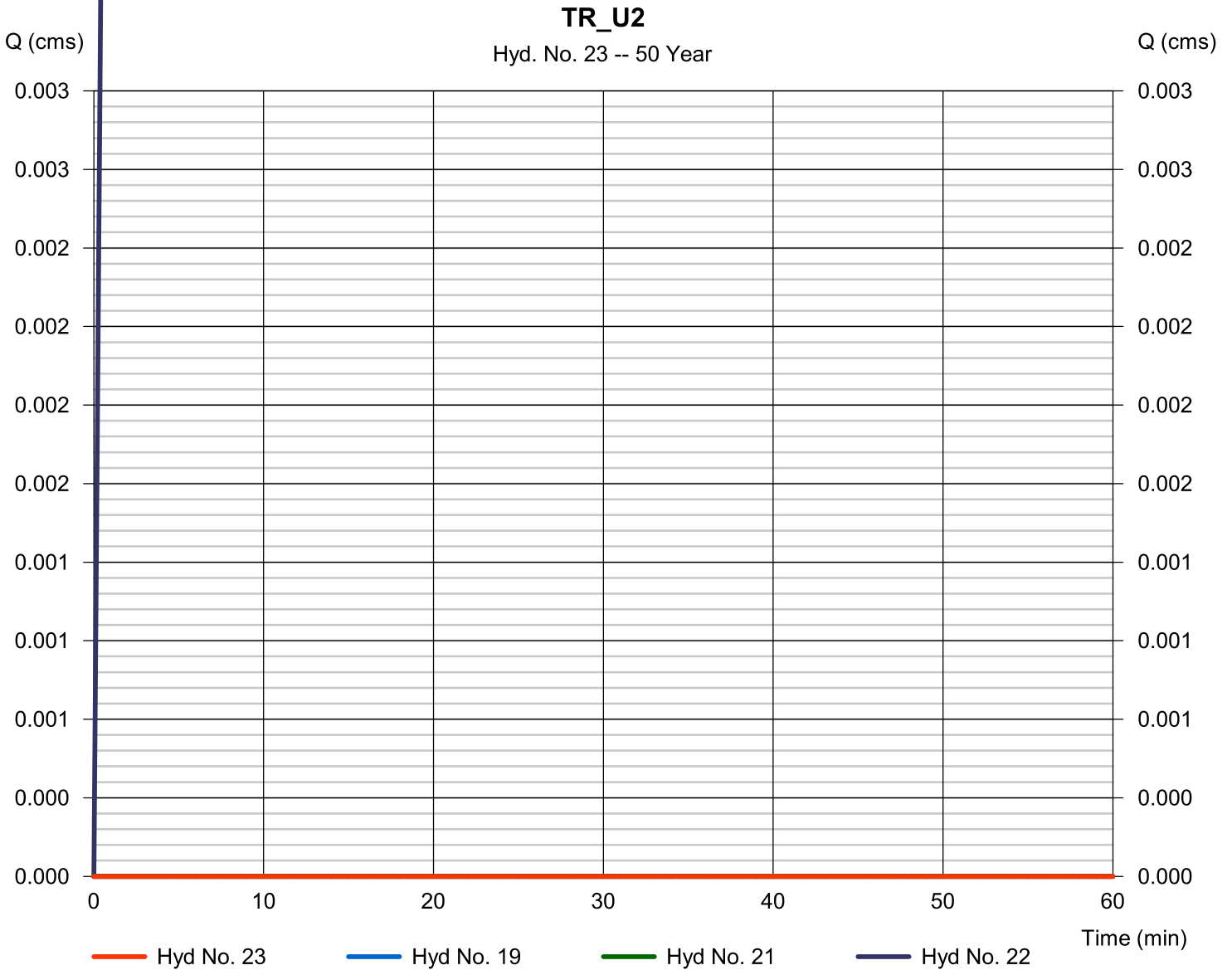
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Hyd. No. 23

TR_U2

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 19, 21, 22	Contrib. drain. area	= 19.840 hectare



Hydrograph Report

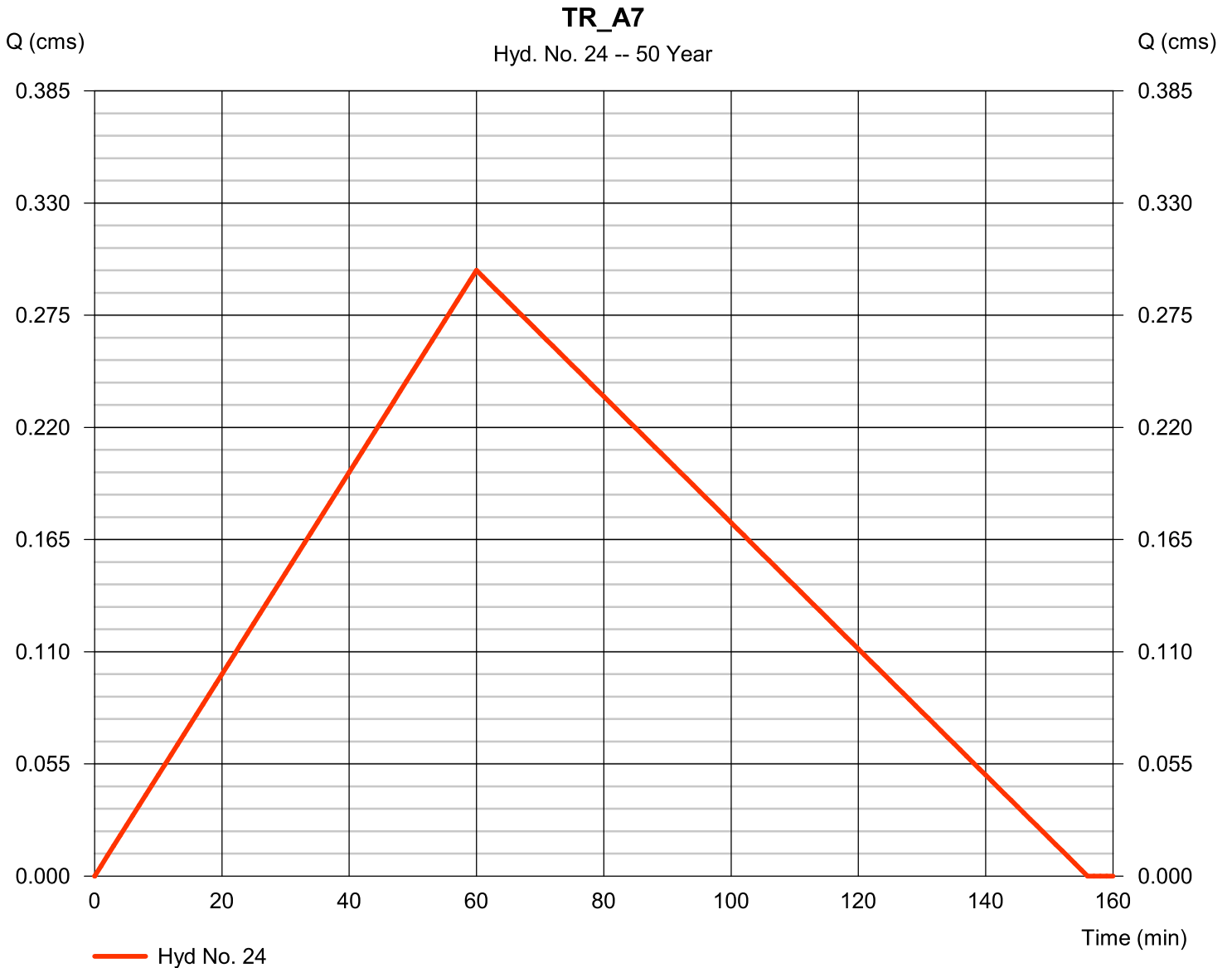
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

mardi, avr 3, 2012

Hyd. No. 24

TR_A7

Hydrograph type	= Rational	Peak discharge	= 0.297 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 389.9 cum
Drainage area	= 12.420 hectare	Runoff coeff.	= 0.31
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

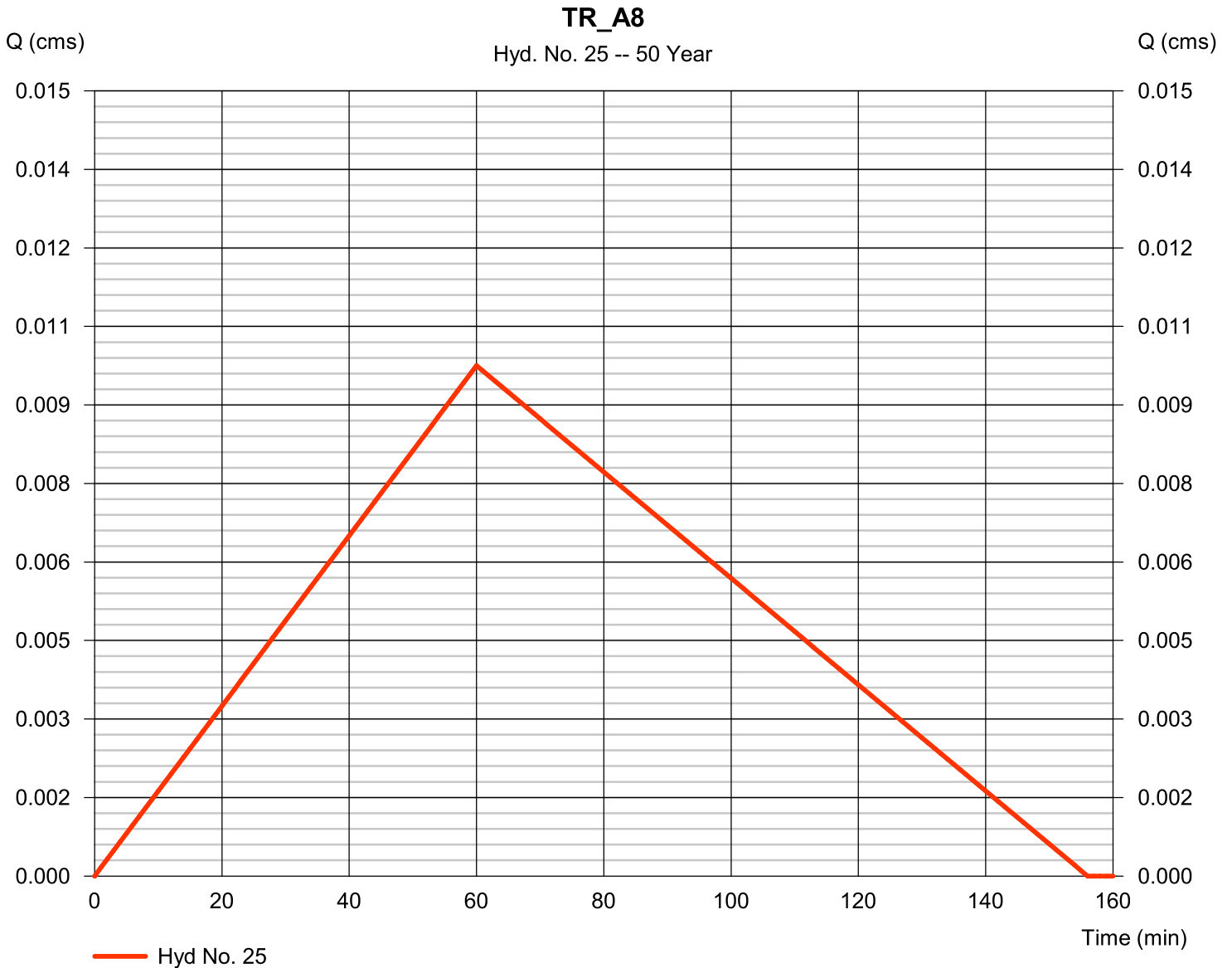
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 25

TR_A8

Hydrograph type	= Rational	Peak discharge	= 0.010 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 45.6 cum
Drainage area	= 1.580 hectare	Runoff coeff.	= 0.08
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

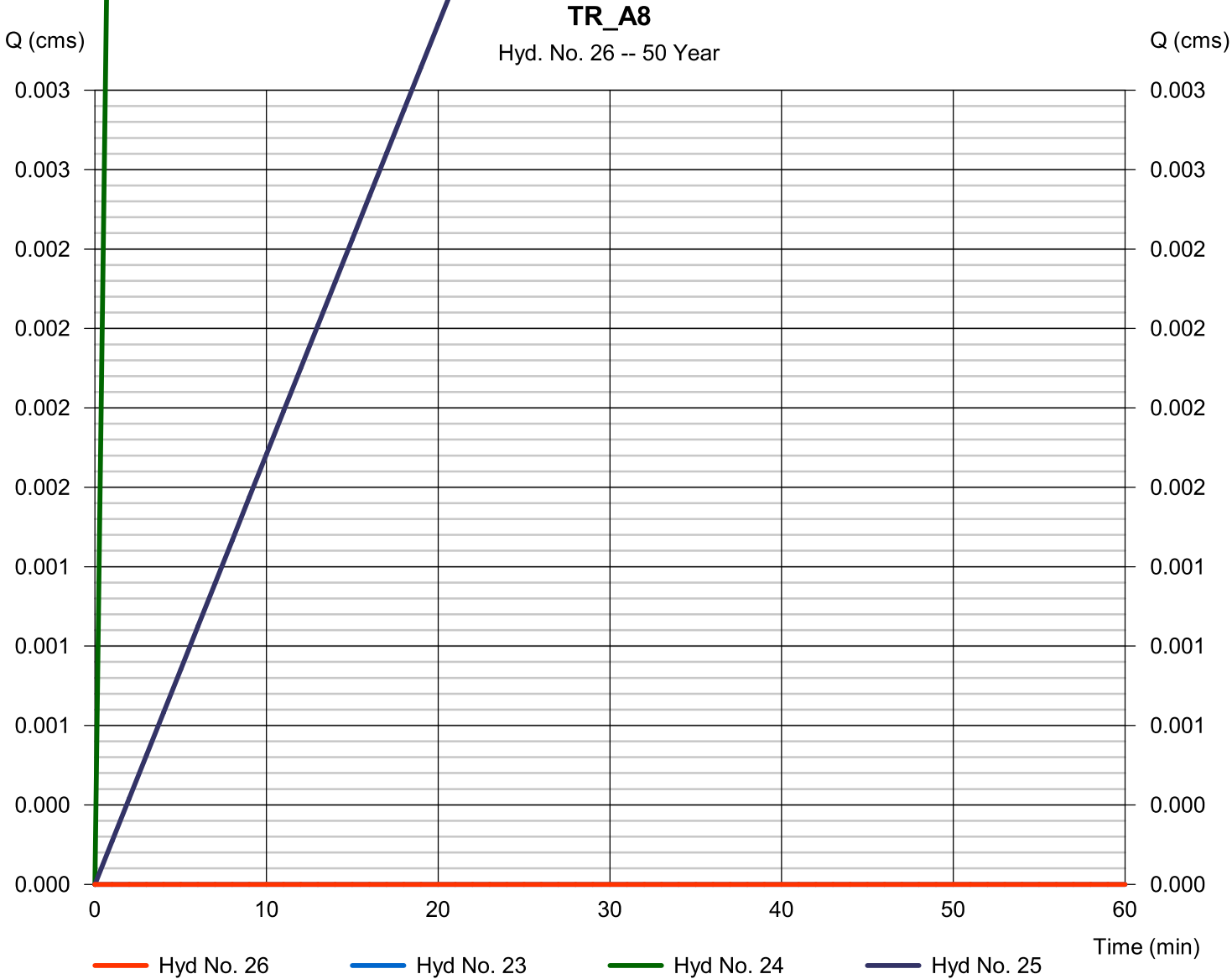
mardi, avr 3, 2012

Hyd. No. 26

TR_A8

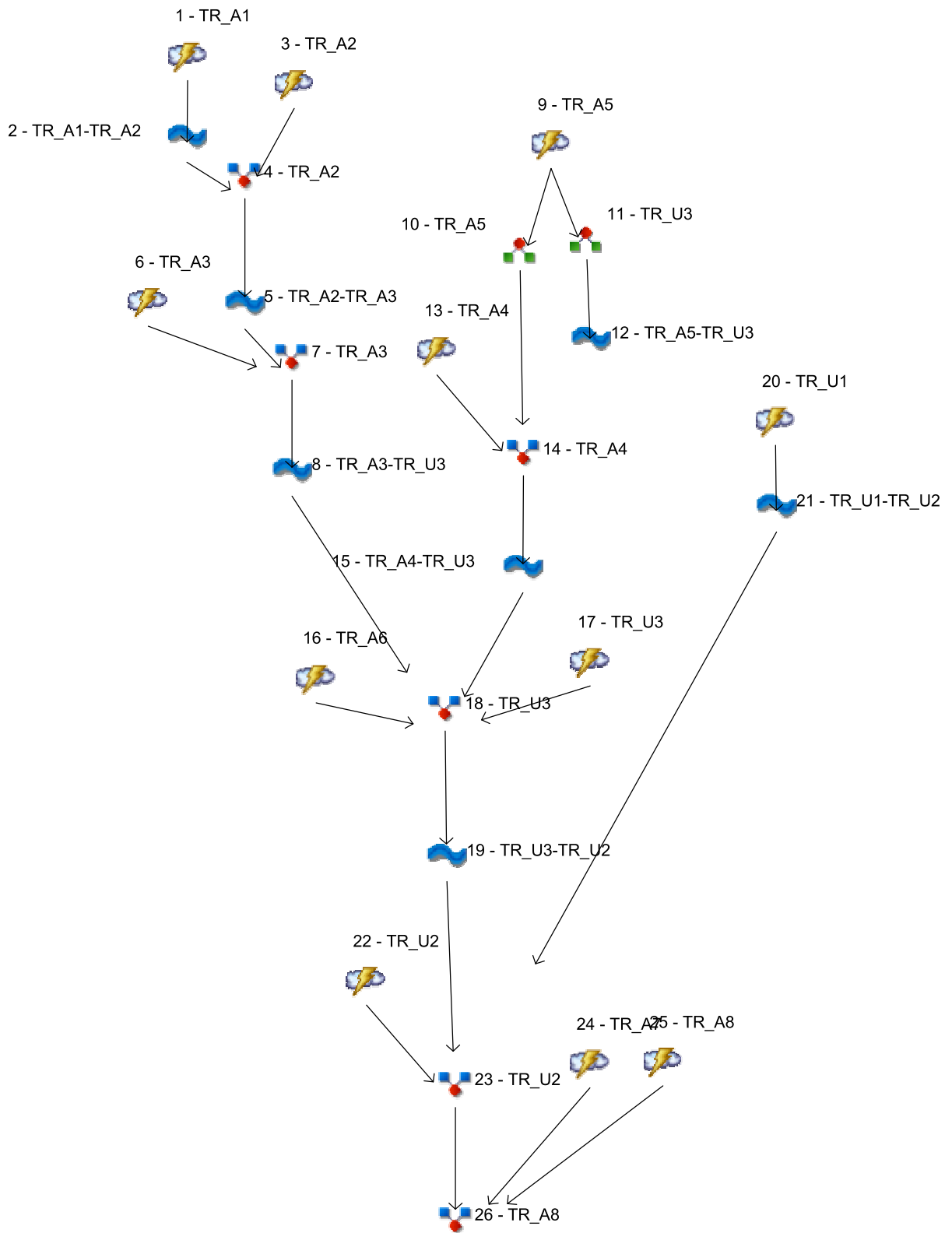
Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hyds. = 23, 24, 25

Peak discharge = 0.000 cms
Time to peak = n/a
Hyd. volume = 0.0 cum
Contrib. drain. area = 14.000 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

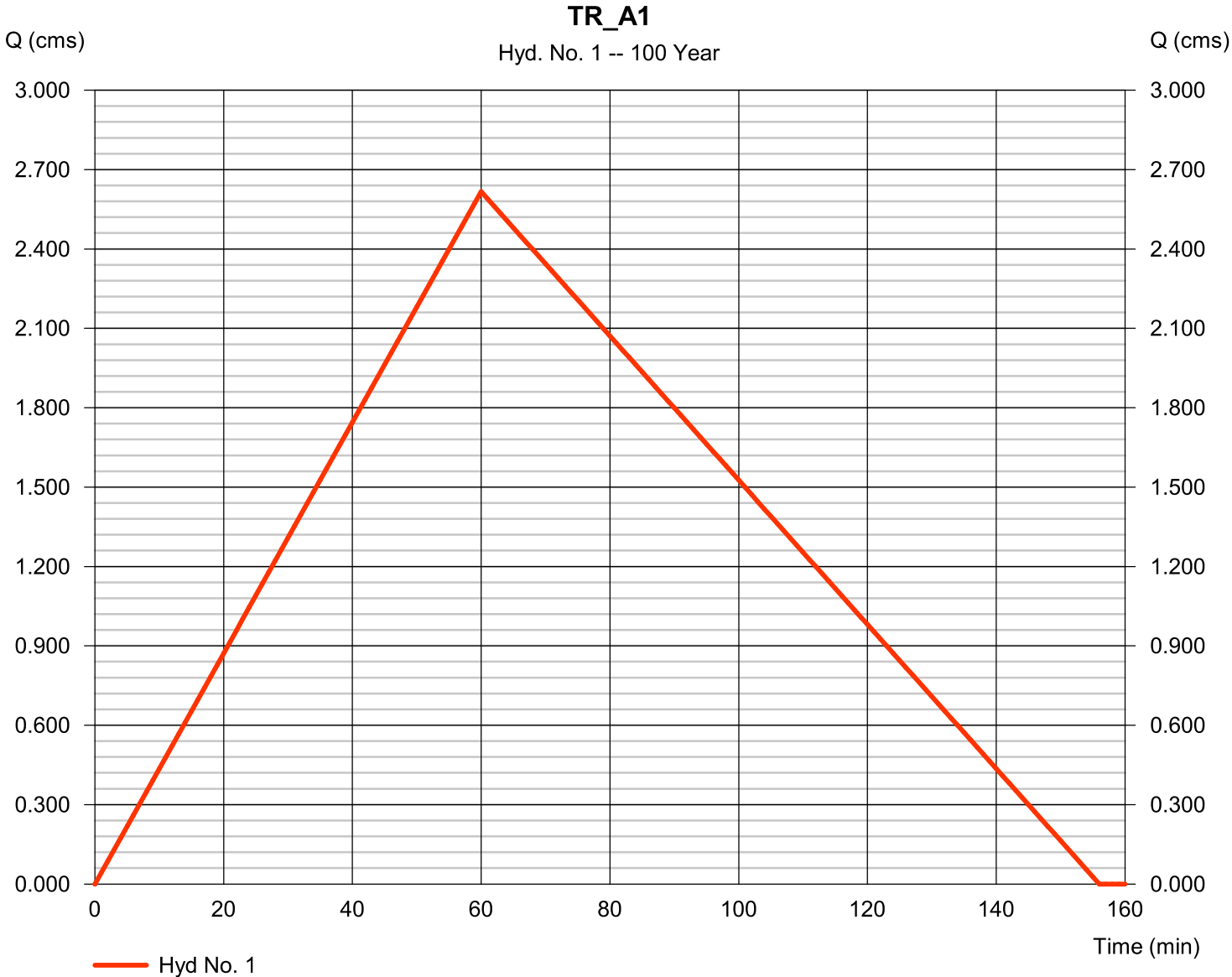
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	2.616	1	60	12 243.9	-----	-----	-----	TR_A1
2	Reach	2.561	1	63	12 250.9	1	-----	-----	TR_A1-TR_A2
3	Rational	0.420	1	60	1 963.5	-----	-----	-----	TR_A2
4	Combine	2.971	1	62	14 214.4	2, 3	-----	-----	TR_A2
5	Reach	2.959	1	64	14 220.0	4	-----	-----	TR_A2-TR_A3
6	Rational	0.095	1	60	445.1	-----	-----	-----	TR_A3
7	Combine	3.050	1	64	14 665.1	5, 6	-----	-----	TR_A3
8	Reach	3.001	1	68	14 676.4	7	-----	-----	TR_A3-TR_U3
9	Rational	0.164	1	60	769.4	-----	-----	-----	TR_A5
10	Diversion1	0.164	1	60	769.4	9	-----	-----	TR_A5
11	Diversion2	0.000	1	n/a	0.0	9	-----	-----	TR_U3
12	Reach	0.000	1	n/a	-1.#IND	11	-----	-----	TR_A5-TR_U3
13	Rational	0.393	1	60	1 841.2	-----	-----	-----	TR_A4
14	Combine	0.558	1	60	2 610.6	10, 13	-----	-----	TR_A4
15	Reach	0.551	1	62	2 611.6	14	-----	-----	TR_A4-TR_U3
16	Rational	0.233	1	60	1 091.1	-----	-----	-----	TR_A6
17	Rational	0.094	1	60	440.3	-----	-----	-----	TR_U3
18	Combine	3.828	1	67	18 819.4	8, 15, 16, 17	-----	-----	TR_U3
19	Reach	3.781	1	71	18 834.9	18	-----	-----	TR_U3-TR_U2
20	Rational	0.449	1	60	2 102.5	-----	-----	-----	TR_U1
21	Reach	0.424	1	66	2 105.2	20	-----	-----	TR_U1-TR_U2
22	Rational	0.559	1	60	2 616.7	-----	-----	-----	TR_U2
23	Combine	4.697	1	70	23 556.8	19, 21, 22	-----	-----	TR_U2
24	Rational	0.339	1	60	1 588.5	-----	-----	-----	TR_A7
25	Rational	0.013	1	60	63.1	-----	-----	-----	TR_A8
26	Combine	5.014	1	69	25 208.5	23, 24, 25	-----	-----	TR_A8
04.gpw					Return Period: 100 Year			mardi, avr 3, 2012	

Hydrograph Report

Hyd. No. 1

TR_A1

Hydrograph type	= Rational	Peak discharge	= 2.616 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 12 243.9 cum
Drainage area	= 139.250 hectare	Runoff coeff.	= 0.22
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

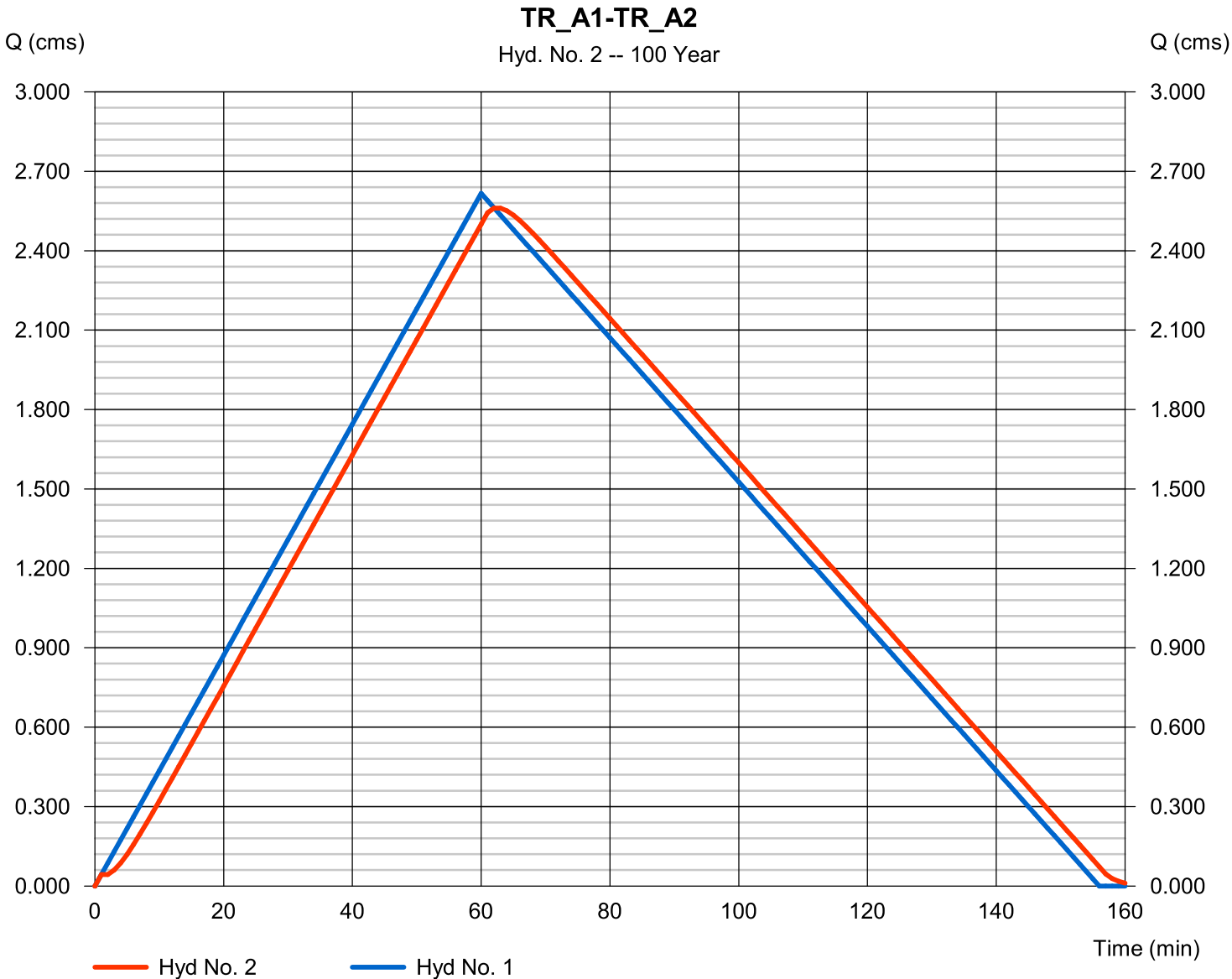
mardi, avr 3, 2012

Hyd. No. 2

TR_A1-TR_A2

Hydrograph type	= Reach	Peak discharge	= 2.561 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 12 250.9 cum
Inflow hyd. No.	= 1 - TR_A1	Section type	= Trapezoidal
Reach length	= 350.0 m	Channel slope	= 0.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.560	Rating curve m	= 1.353
Ave. velocity	= 1.99 m/s	Routing coeff.	= 0.3748

Modified Att-Kin routing method used.

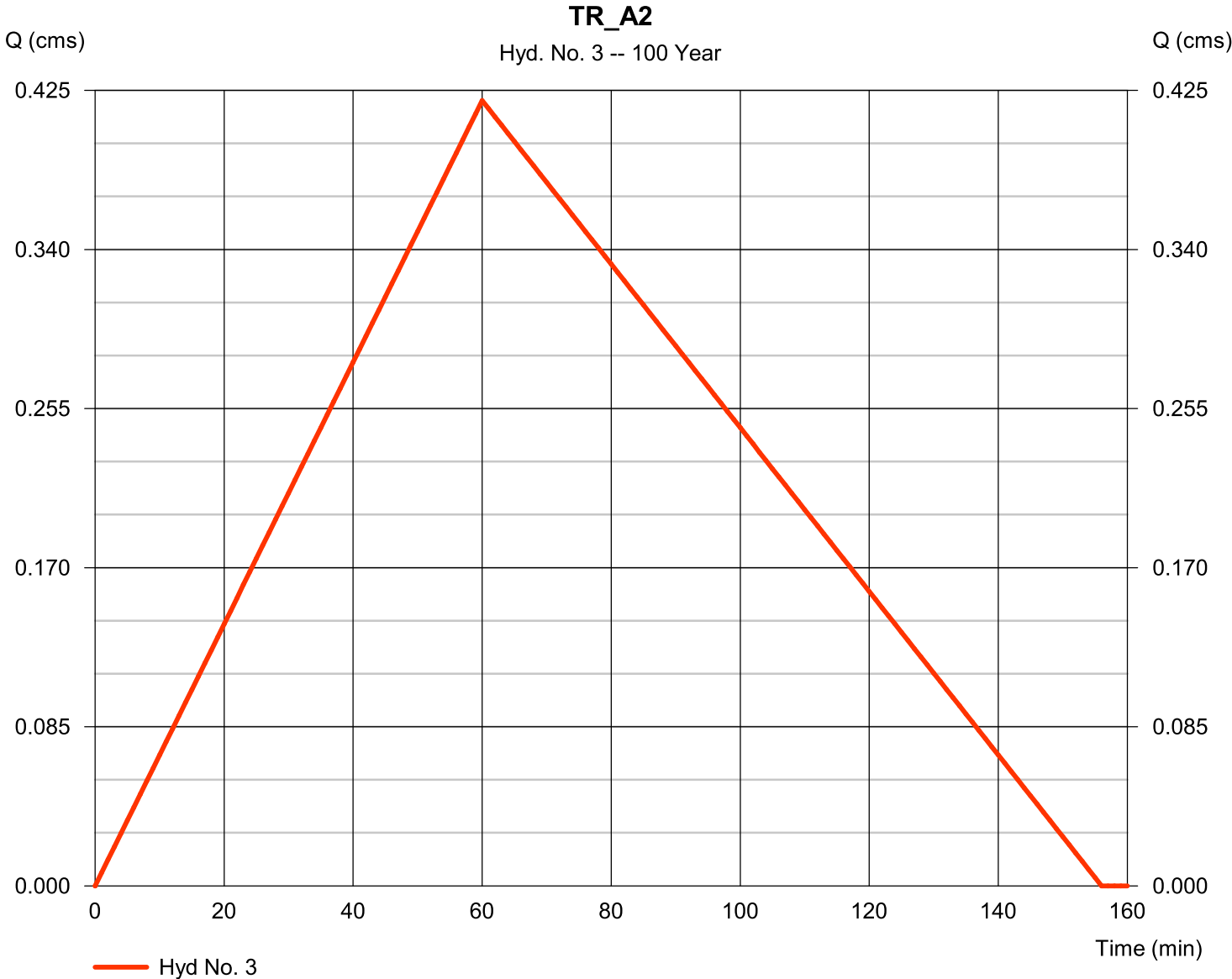


Hydrograph Report

Hyd. No. 3

TR_A2

Hydrograph type	= Rational	Peak discharge	= 0.420 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 963.5 cum
Drainage area	= 20.470 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

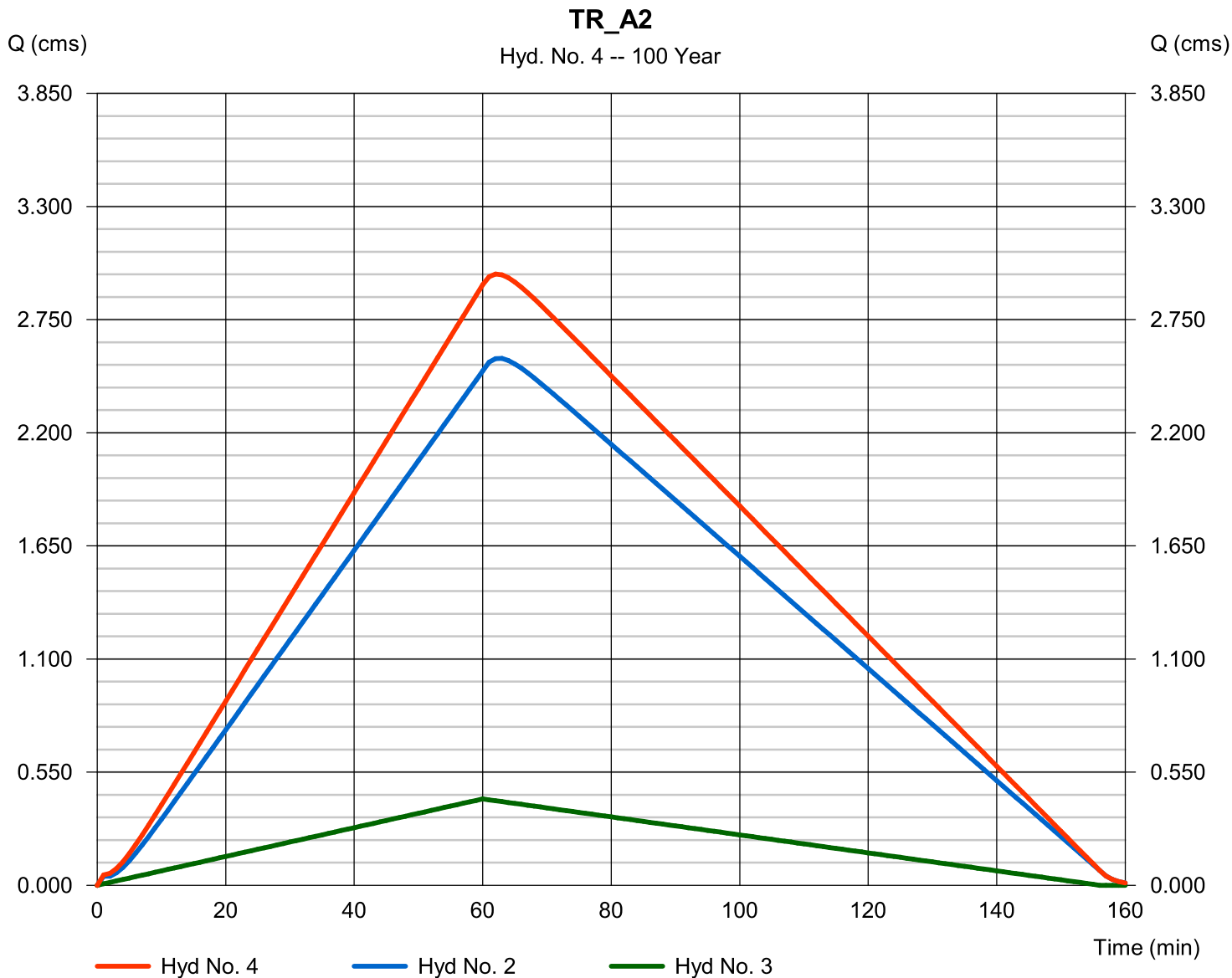
mardi, avr 3, 2012

Hyd. No. 4

TR_A2

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 2, 3

Peak discharge = 2.971 cms
 Time to peak = 62 min
 Hyd. volume = 14 214.4 cum
 Contrib. drain. area = 20.470 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

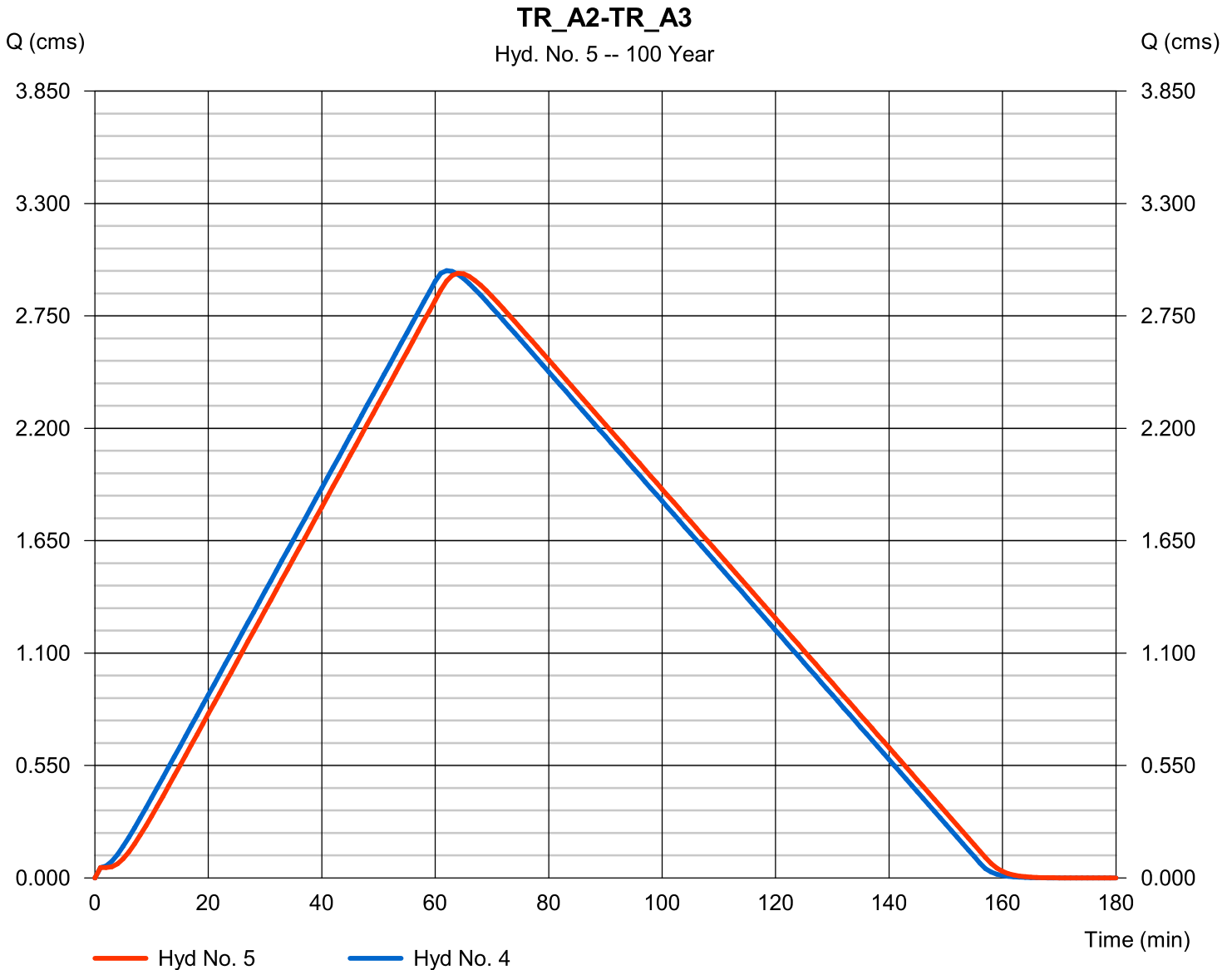
mardi, avr 3, 2012

Hyd. No. 5

TR_A2-TR_A3

Hydrograph type	= Reach	Peak discharge	= 2.959 cms
Storm frequency	= 100 yrs	Time to peak	= 64 min
Time interval	= 1 min	Hyd. volume	= 14 220.0 cum
Inflow hyd. No.	= 4 - TR_A2	Section type	= Trapezoidal
Reach length	= 250.0 m	Channel slope	= 1.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.956	Rating curve m	= 1.353
Ave. velocity	= 2.29 m/s	Routing coeff.	= 0.5414

Modified Att-Kin routing method used.



Hydrograph Report

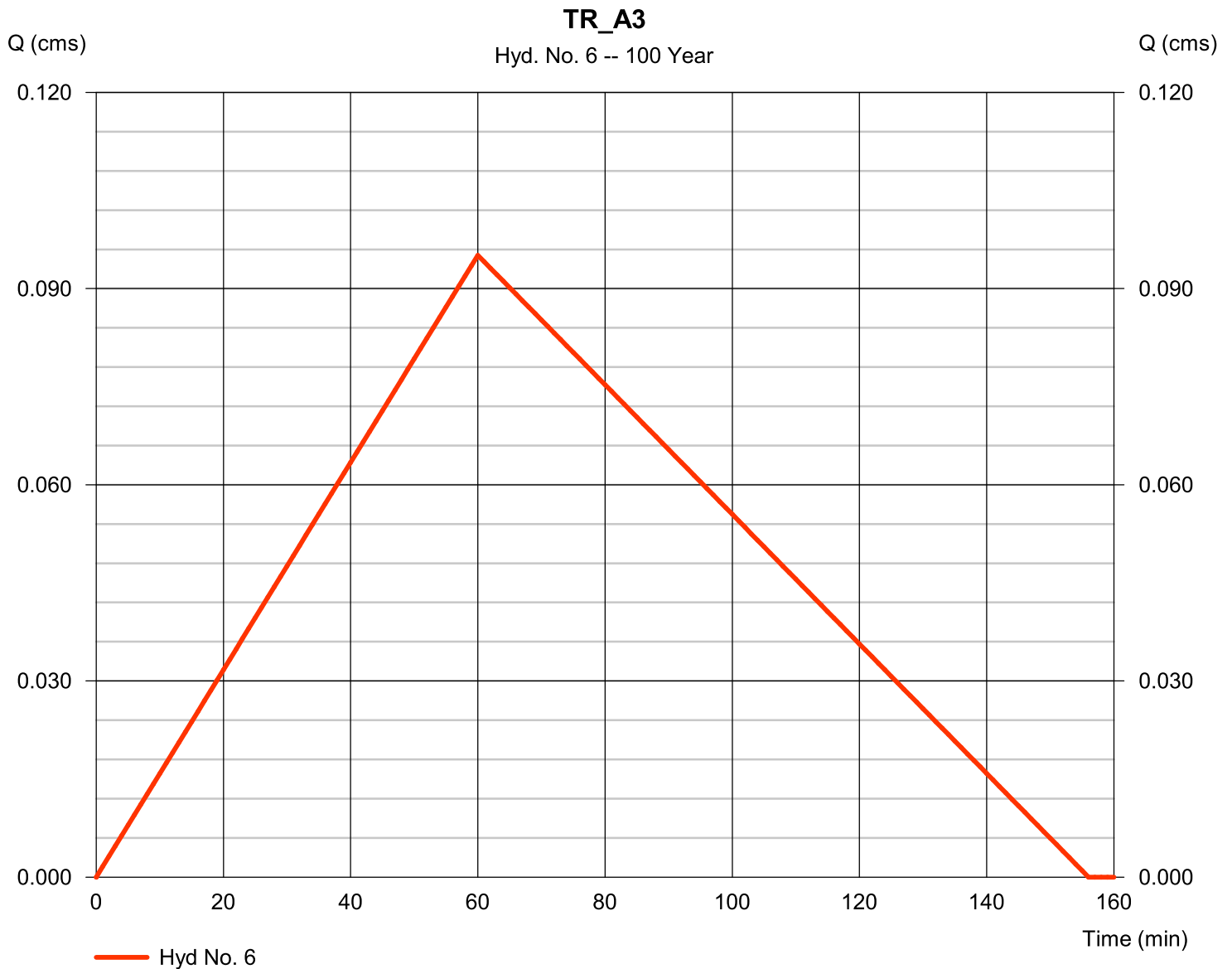
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Hyd. No. 6

TR_A3

Hydrograph type	= Rational	Peak discharge	= 0.095 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 445.1 cum
Drainage area	= 4.640 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

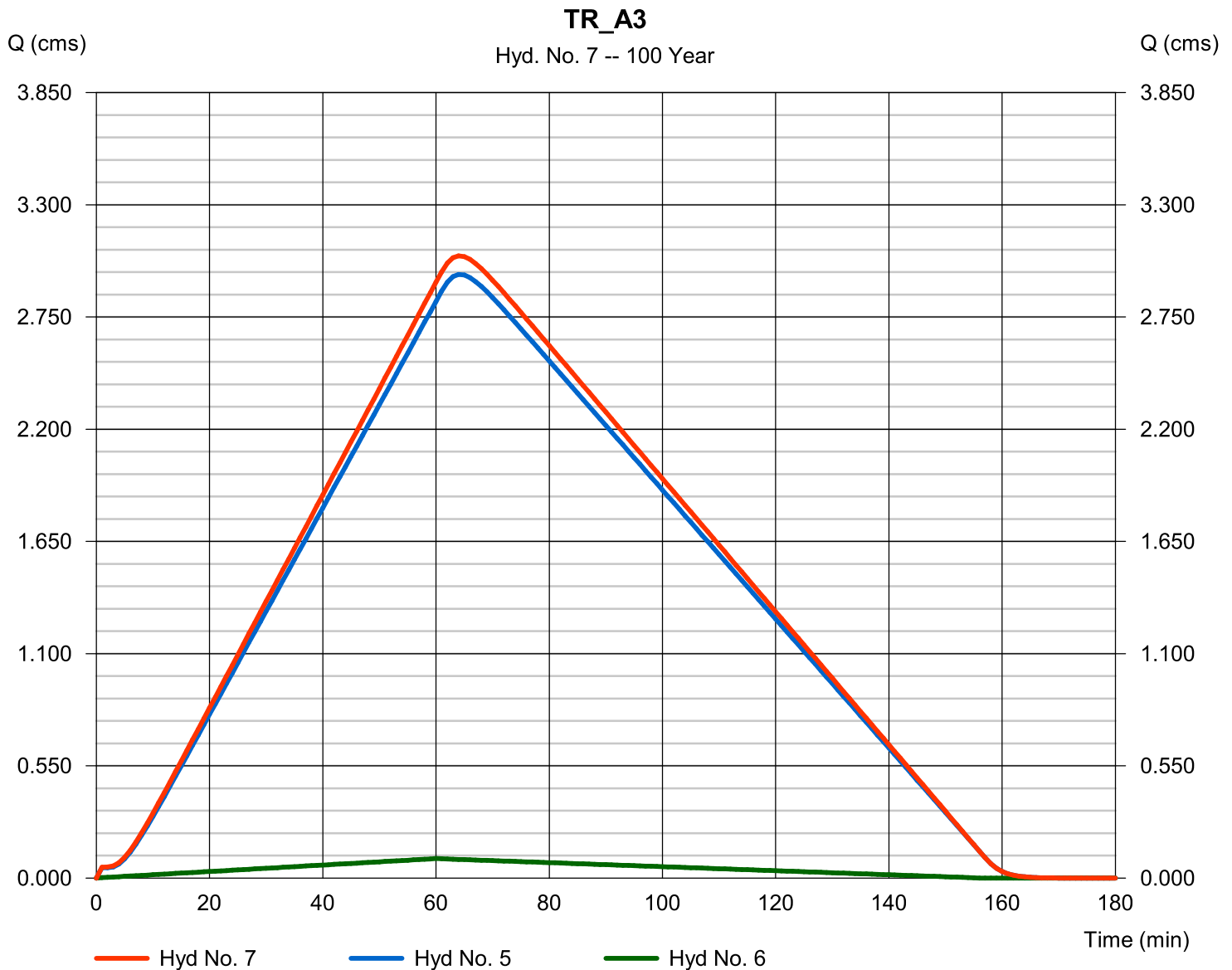
mardi, avr 3, 2012

Hyd. No. 7

TR_A3

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 6

Peak discharge = 3.050 cms
 Time to peak = 64 min
 Hyd. volume = 14 665.1 cum
 Contrib. drain. area = 4.640 hectare



Hydrograph Report

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Hyd. No. 8

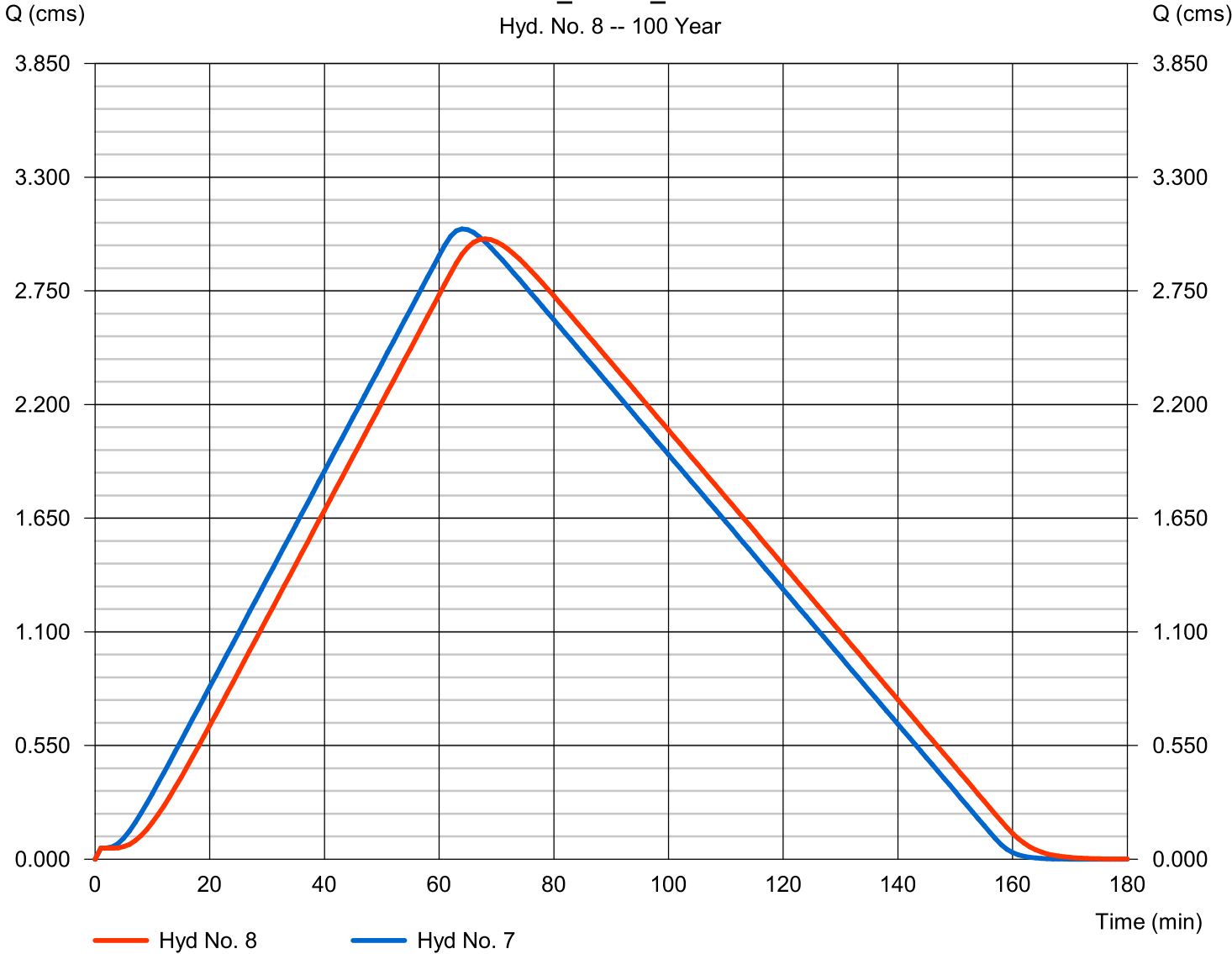
TR_A3-TR_U3

Hydrograph type	= Reach	Peak discharge	= 3.001 cms
Storm frequency	= 100 yrs	Time to peak	= 68 min
Time interval	= 1 min	Hyd. volume	= 14 676.4 cum
Inflow hyd. No.	= 7 - TR_A3	Section type	= Trapezoidal
Reach length	= 100.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.39 m/s	Routing coeff.	= 0.2747

Modified Att-Kin routing method used.

TR_A3-TR_U3

Hyd. No. 8 -- 100 Year

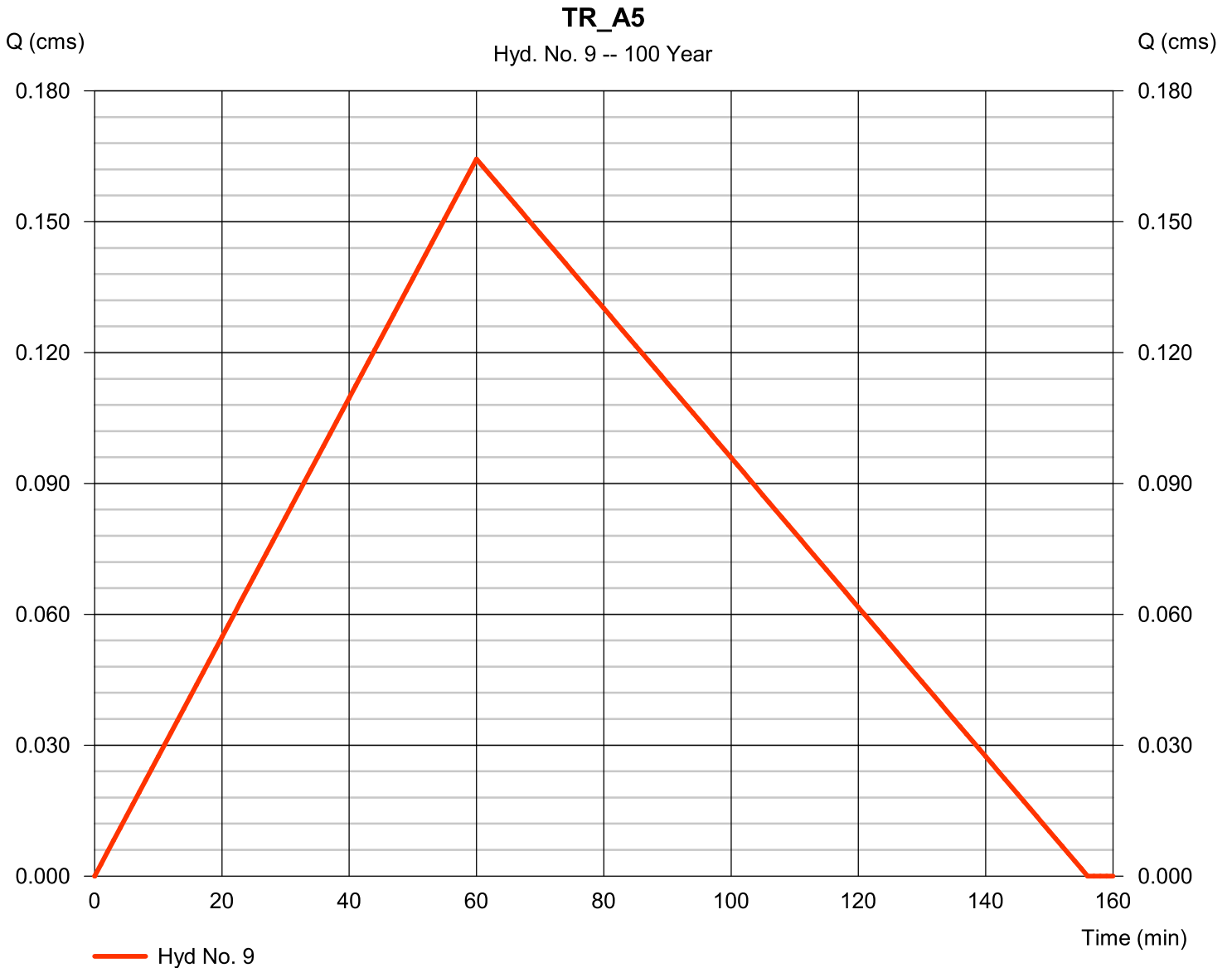


Hydrograph Report

Hyd. No. 9

TR_A5

Hydrograph type	= Rational	Peak discharge	= 0.164 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 769.4 cum
Drainage area	= 7.700 hectare	Runoff coeff.	= 0.25
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

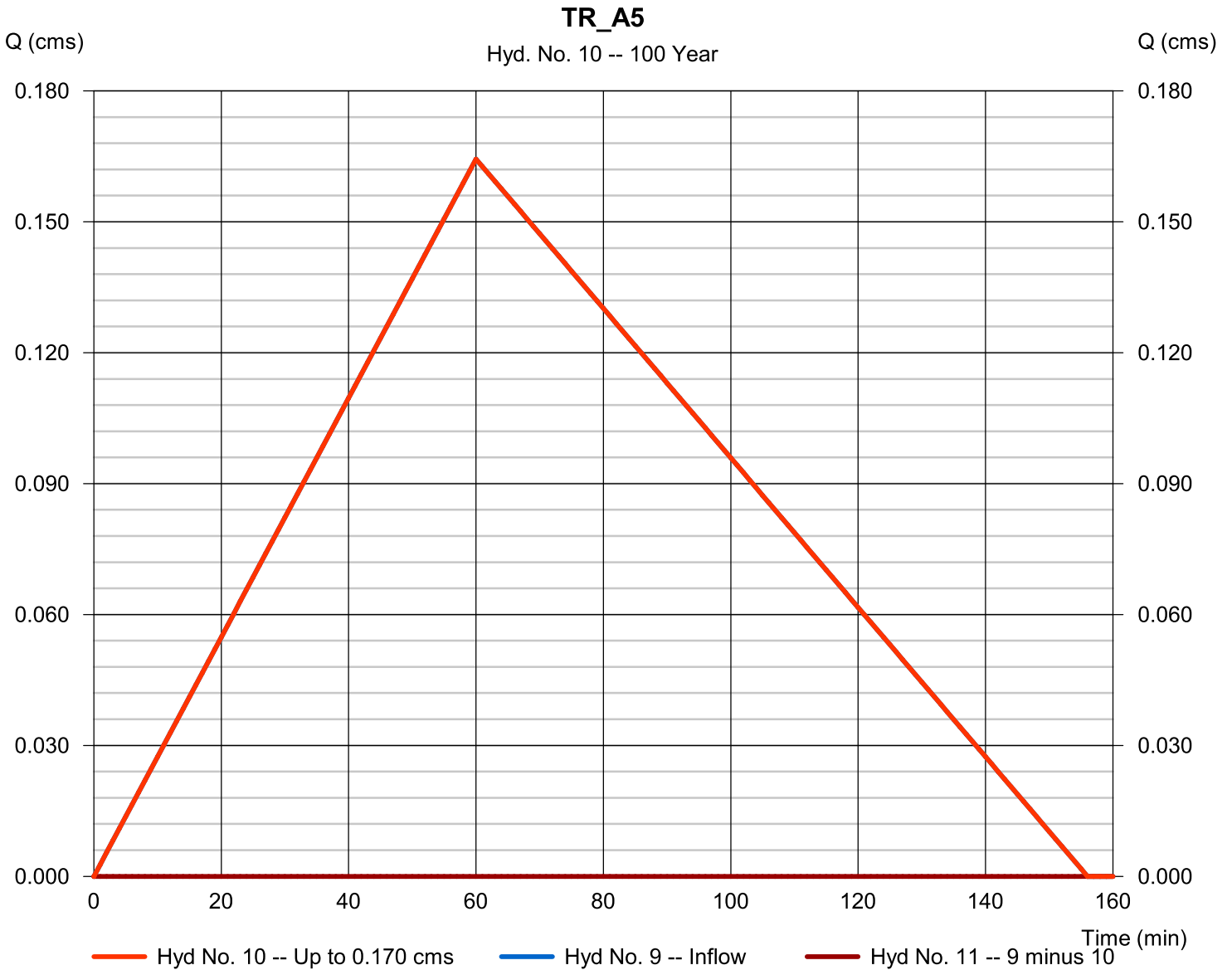
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Hyd. No. 10

TR_A5

Hydrograph type	= Diversion1	Peak discharge	= 0.164 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 769.4 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 11
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

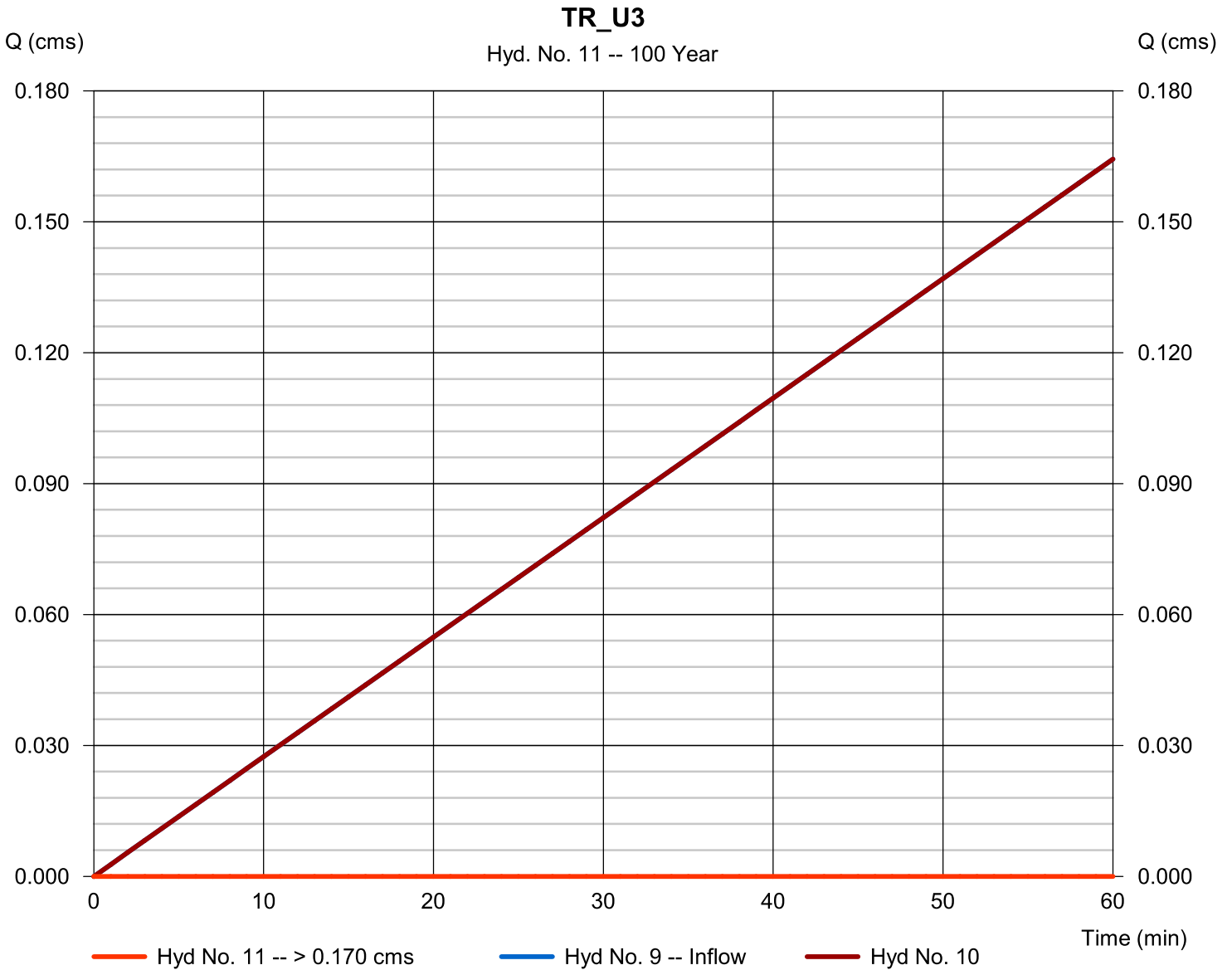
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Hyd. No. 11

TR_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 9 - TR_A5	2nd diverted hyd.	= 10
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

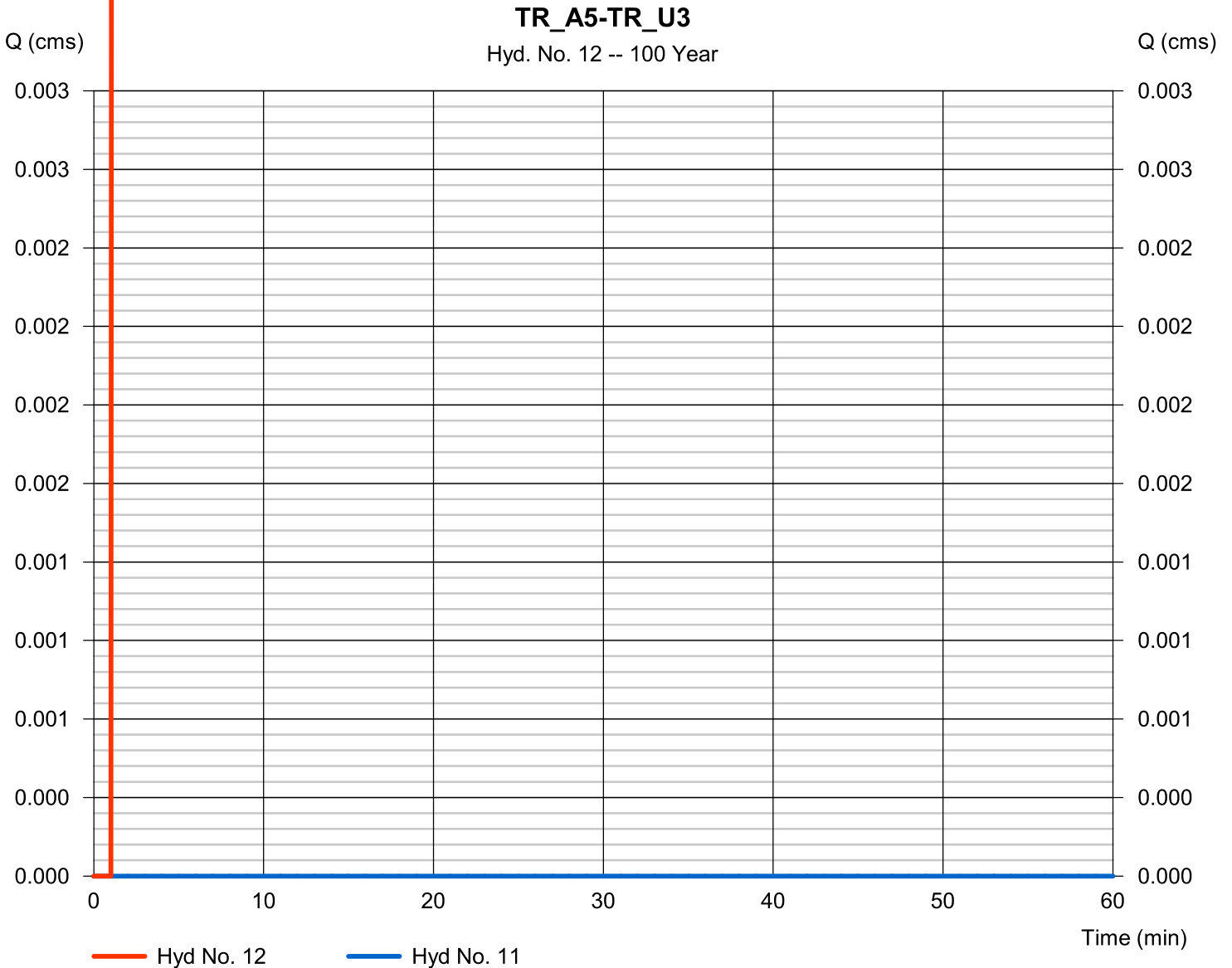
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Hyd. No. 12

TR_A5-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.000 cms
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= -1.#IND cum
Inflow hyd. No.	= 11 - TR_U3	Section type	= Trapezoidal
Reach length	= 80.0 m	Channel slope	= 5.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 6.033	Rating curve m	= 1.353
Ave. velocity	= -1.#IND m/s	Routing coeff.	= -1.#IND

Modified Att-Kin routing method used.



Hydrograph Report

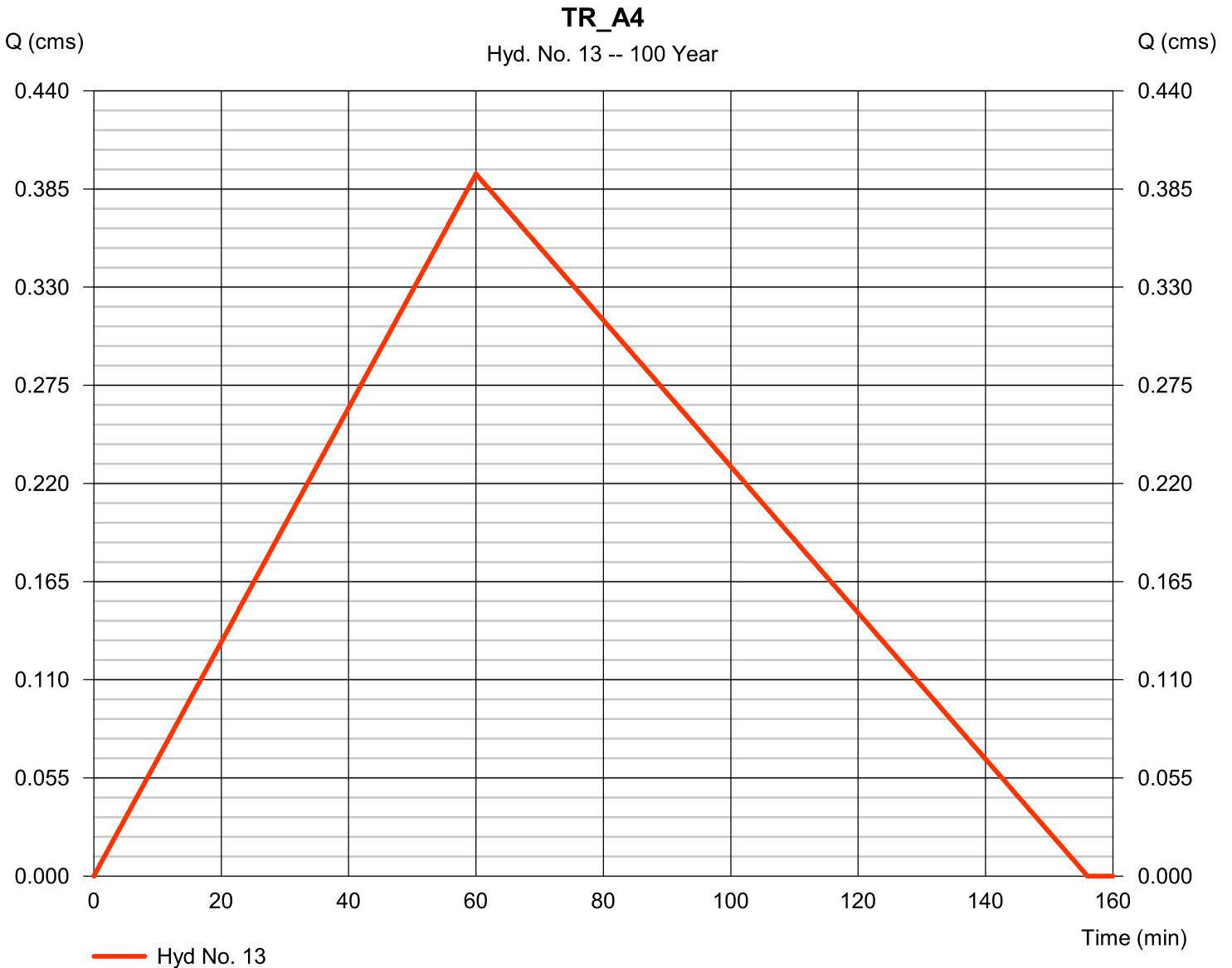
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 13

TR_A4

Hydrograph type	= Rational	Peak discharge	= 0.393 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 841.2 cum
Drainage area	= 20.030 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

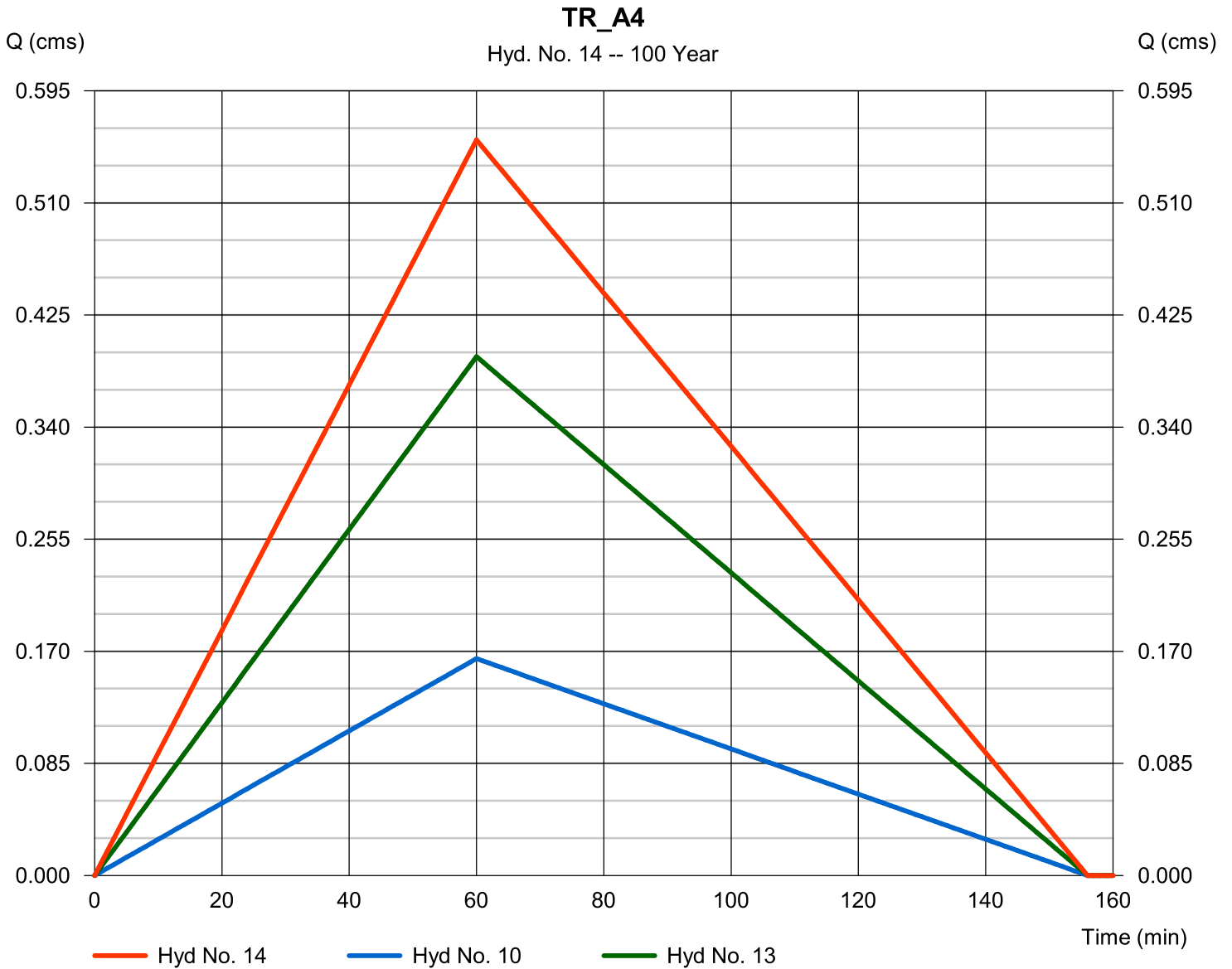
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

TR_A4

Hydrograph type	= Combine	Peak discharge	= 0.558 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 610.6 cum
Inflow hyds.	= 10, 13	Contrib. drain. area	= 20.030 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

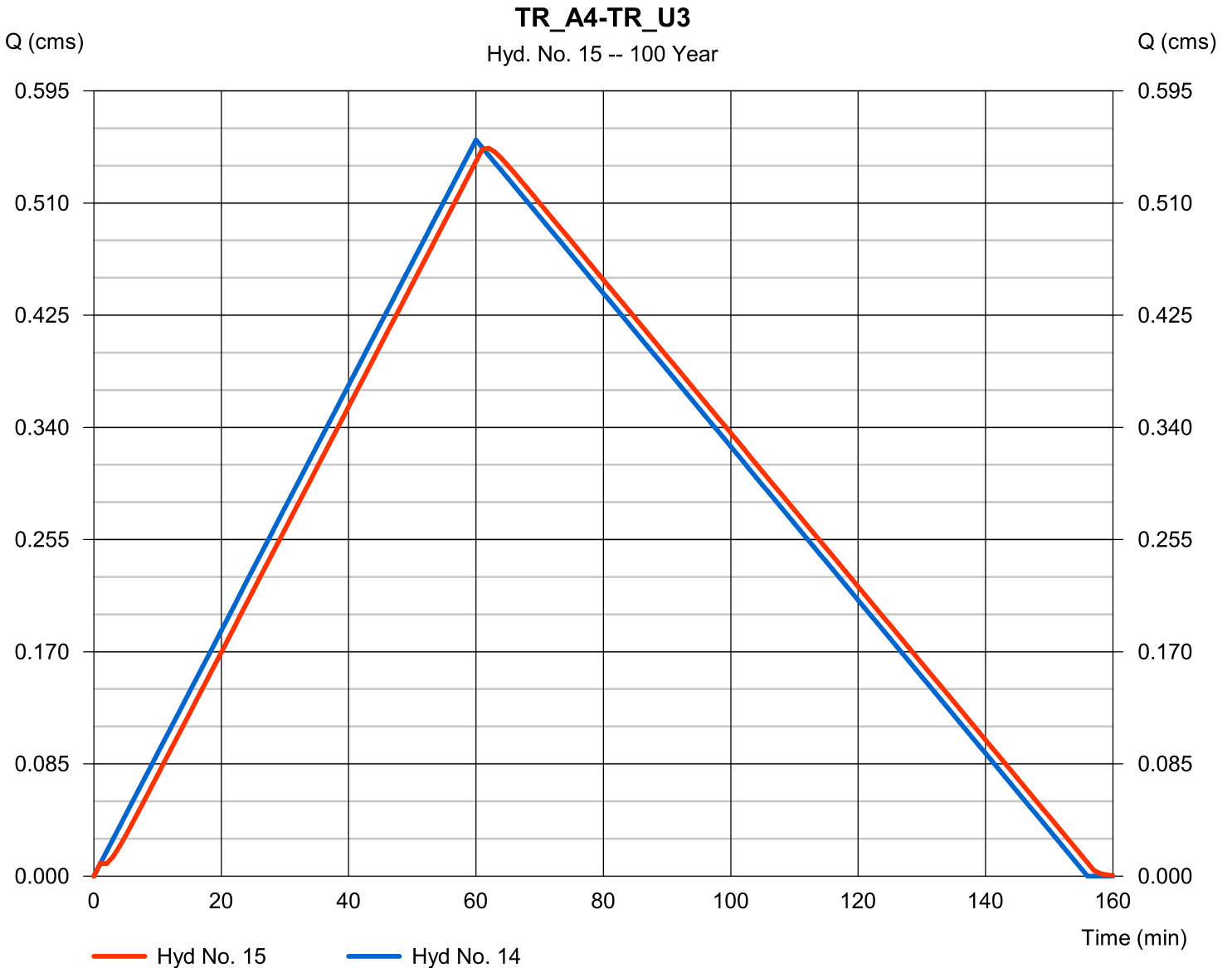
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Hyd. No. 15

TR_A4-TR_U3

Hydrograph type	= Reach	Peak discharge	= 0.551 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 2 611.6 cum
Inflow hyd. No.	= 14 - TR_A4	Section type	= Trapezoidal
Reach length	= 130.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 1.27 m/s	Routing coeff.	= 0.5685

Modified Att-Kin routing method used.



Hydrograph Report

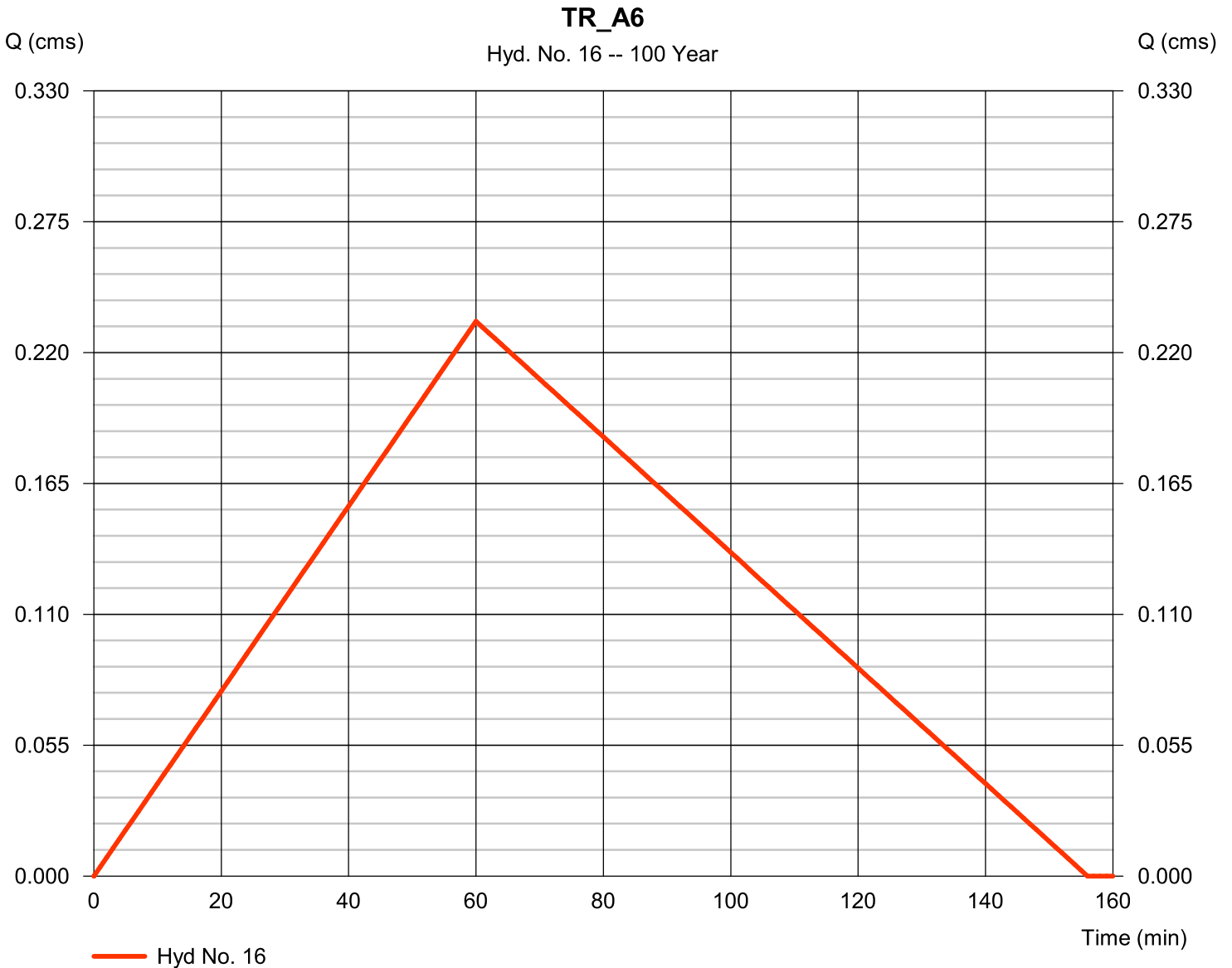
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Hyd. No. 16

TR_A6

Hydrograph type	= Rational	Peak discharge	= 0.233 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 091.1 cum
Drainage area	= 11.870 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6

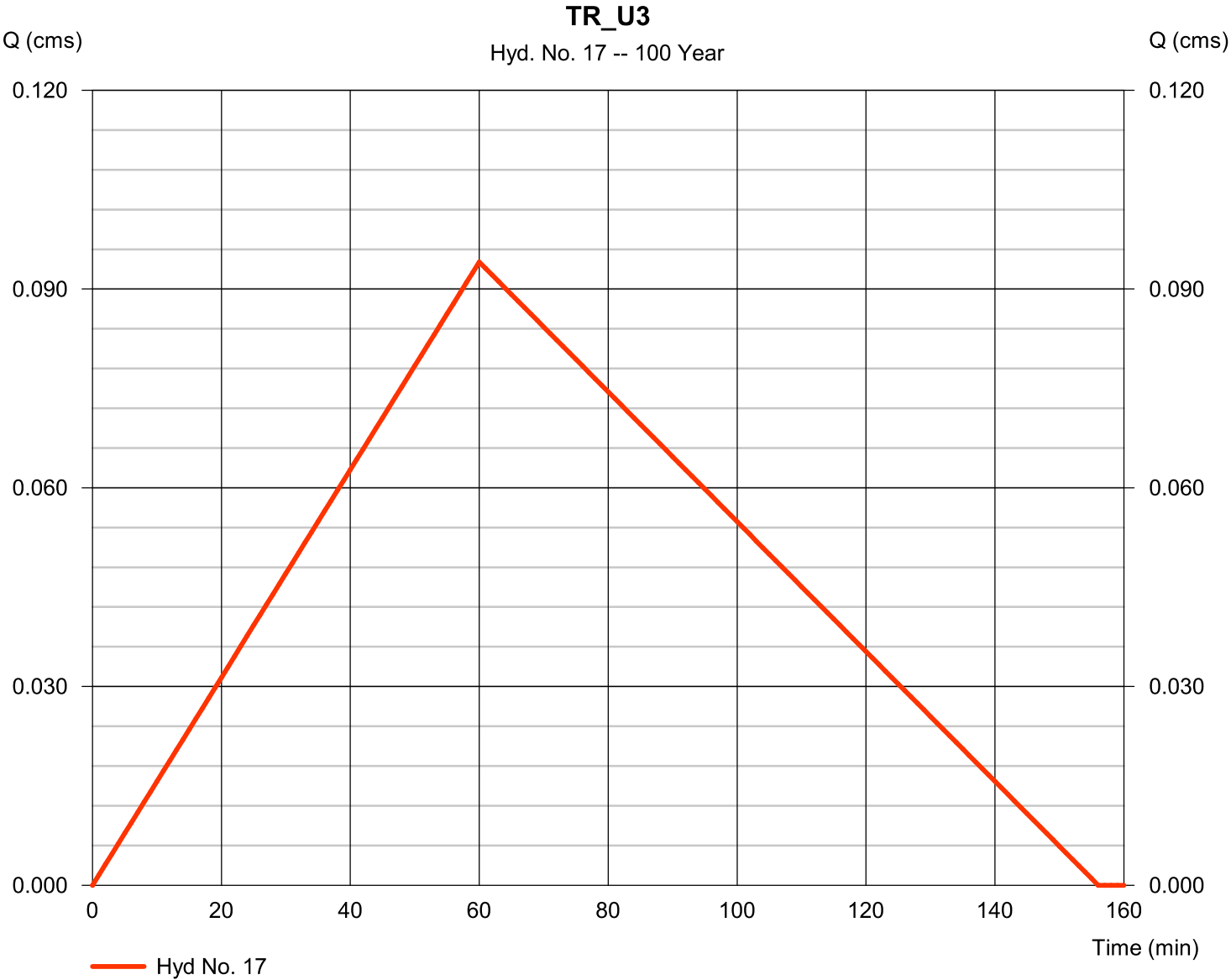


Hydrograph Report

Hyd. No. 17

TR_U3

Hydrograph type	= Rational	Peak discharge	= 0.094 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 440.3 cum
Drainage area	= 3.240 hectare	Runoff coeff.	= 0.34
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

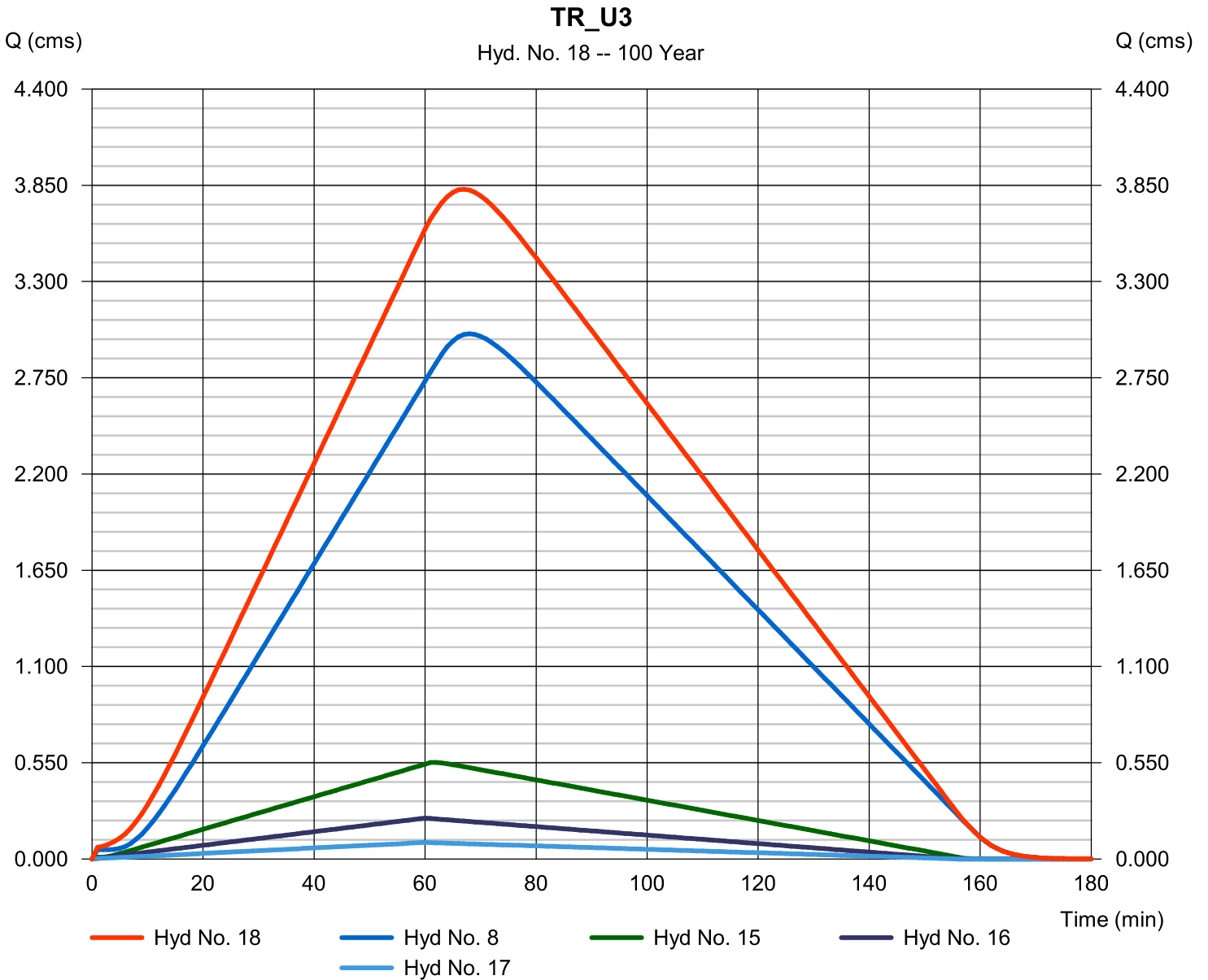
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Hyd. No. 18

TR_U3

Hydrograph type	= Combine	Peak discharge	= 3.828 cms
Storm frequency	= 100 yrs	Time to peak	= 67 min
Time interval	= 1 min	Hyd. volume	= 18 819.4 cum
Inflow hyds.	= 8, 15, 16, 17	Contrib. drain. area	= 15.110 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

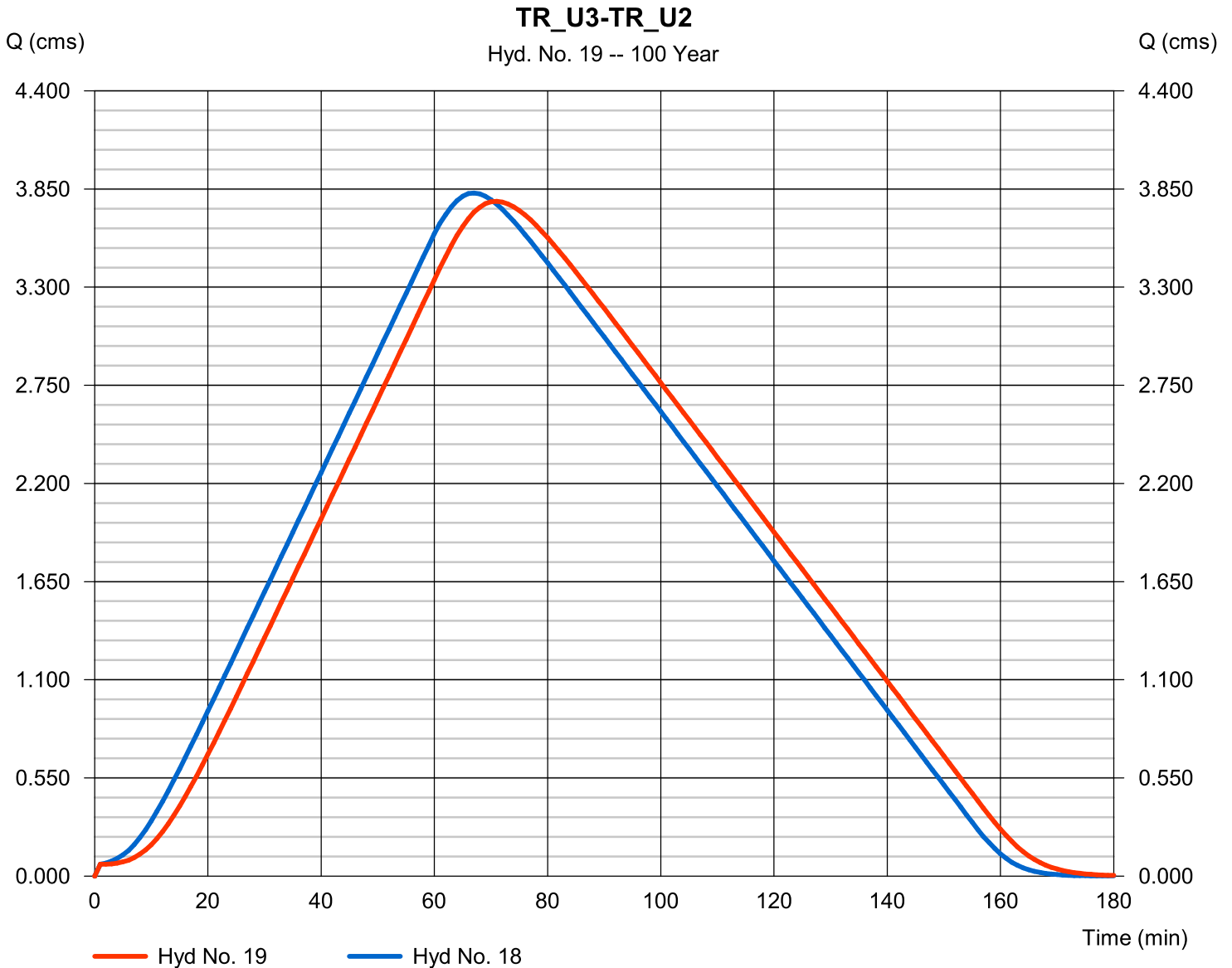
mardi, avr 3, 2012

Hyd. No. 19

TR_U3-TR_U2

Hydrograph type	= Reach	Peak discharge	= 3.781 cms
Storm frequency	= 100 yrs	Time to peak	= 71 min
Time interval	= 1 min	Hyd. volume	= 18 834.9 cum
Inflow hyd. No.	= 18 - TR_U3	Section type	= Trapezoidal
Reach length	= 400.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 1.46 m/s	Routing coeff.	= 0.2586

Modified Att-Kin routing method used.



Hydrograph Report

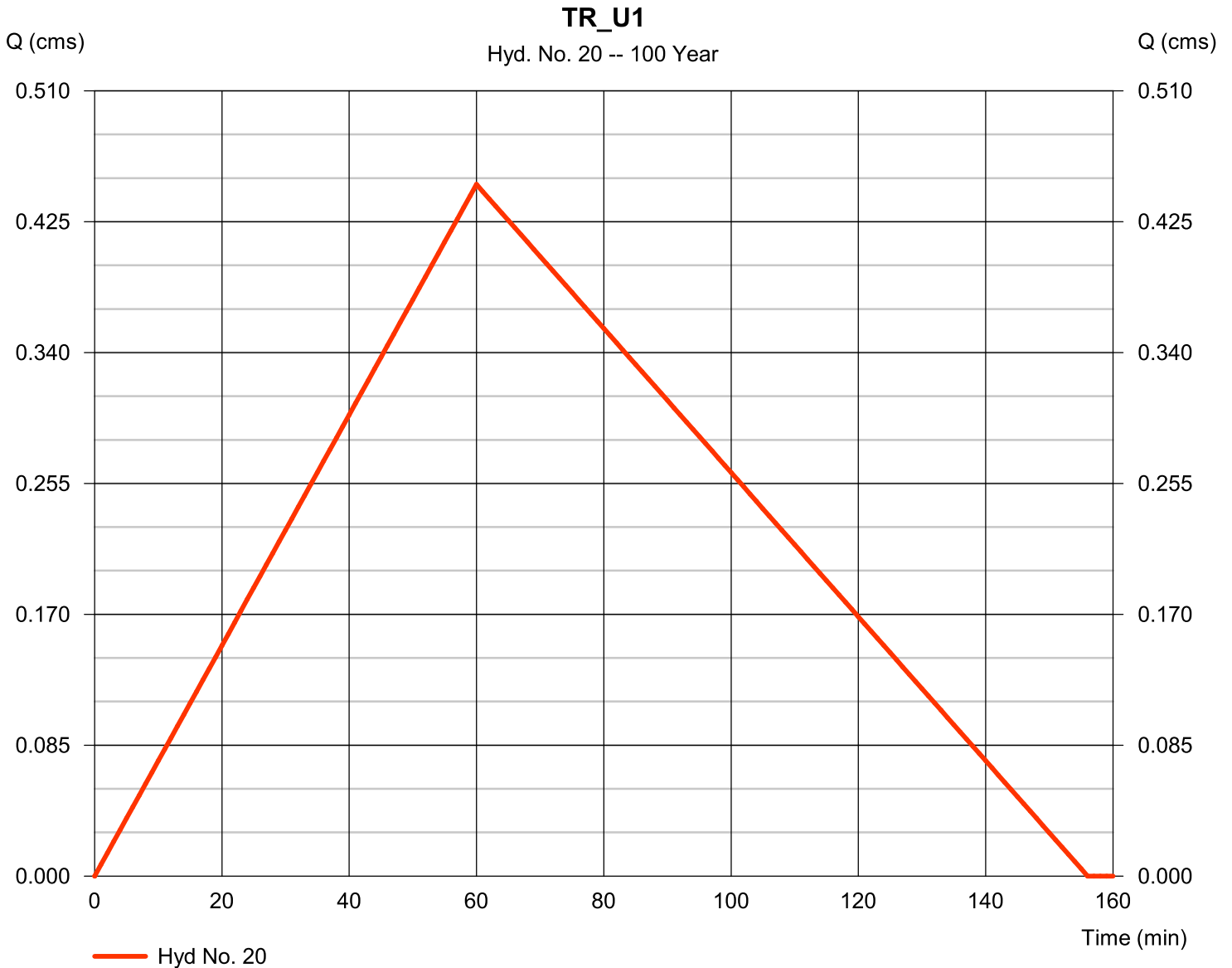
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mardi, avr 3, 2012

Hyd. No. 20

TR_U1

Hydrograph type	= Rational	Peak discharge	= 0.449 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 102.5 cum
Drainage area	= 18.140 hectare	Runoff coeff.	= 0.29
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

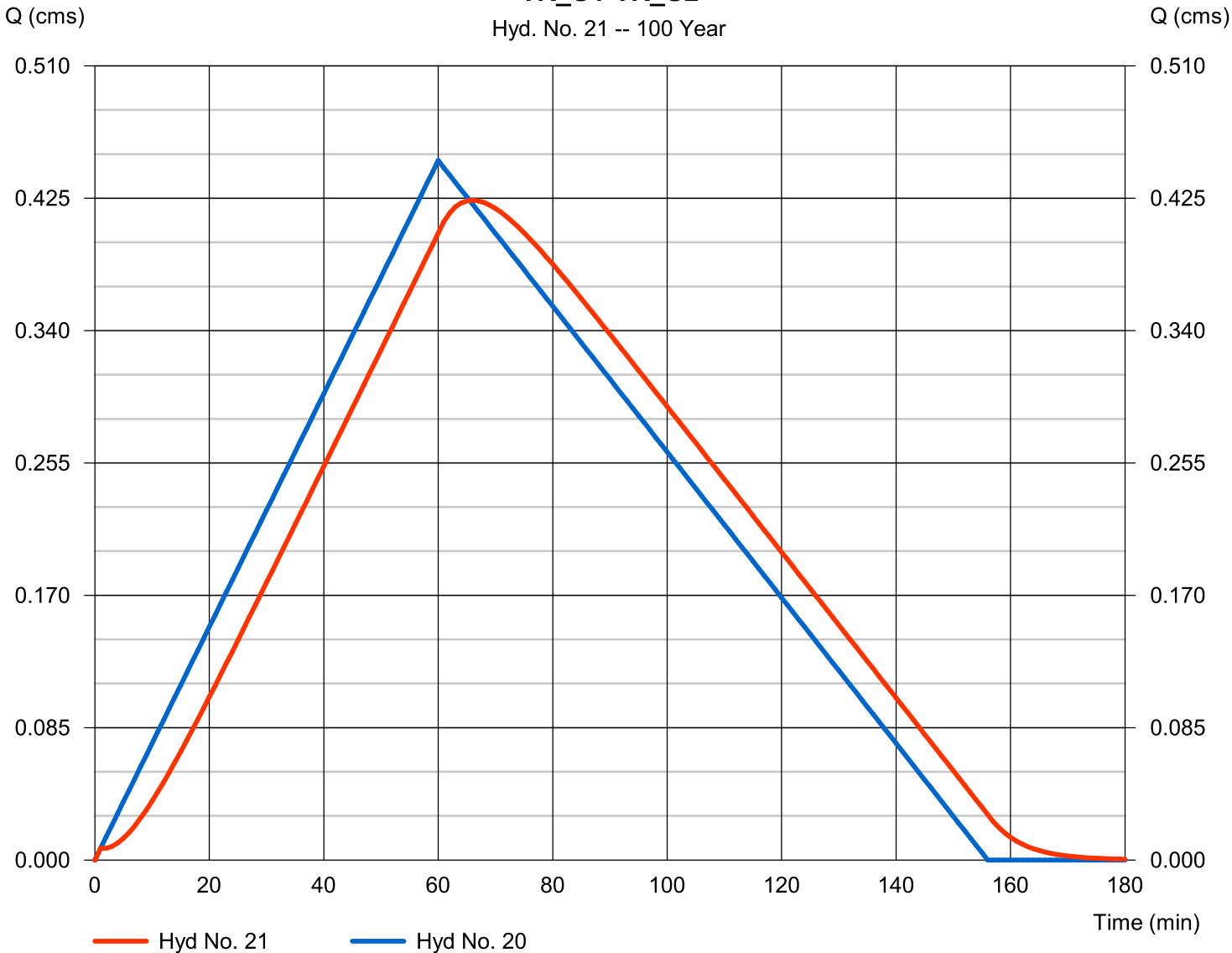
Hyd. No. 21

TR_U1-TR_U2

Hydrograph type	= Reach	Peak discharge	= 0.424 cms
Storm frequency	= 100 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 2 105.2 cum
Inflow hyd. No.	= 20 - TR_U1	Section type	= Trapezoidal
Reach length	= 390.0 m	Channel slope	= 0.3 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.478	Rating curve m	= 1.353
Ave. velocity	= 0.84 m/s	Routing coeff.	= 0.1602

Modified Att-Kin routing method used.

TR_U1-TR_U2
Hyd. No. 21 -- 100 Year



Hydrograph Report

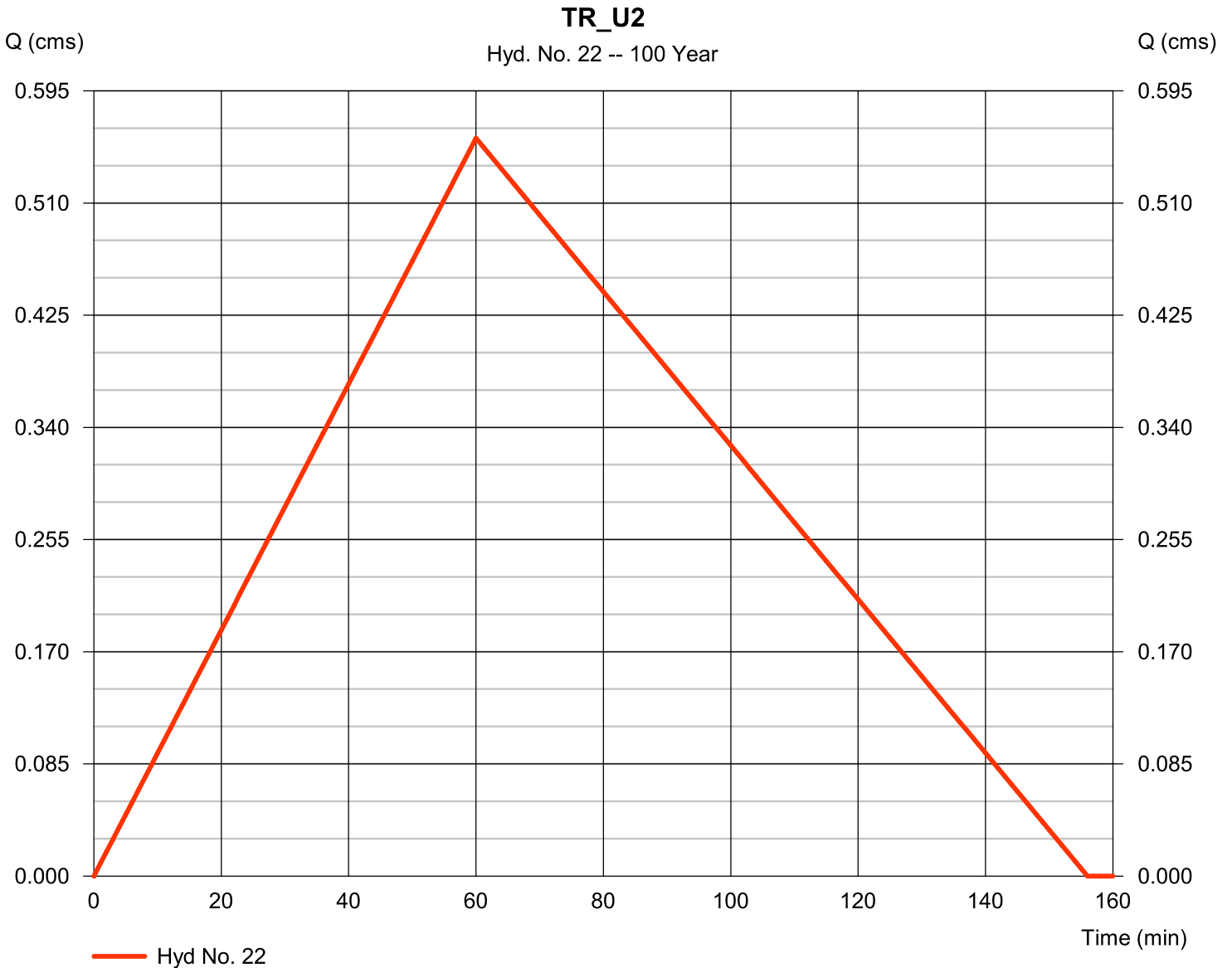
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mardi, avr 3, 2012

Hyd. No. 22

TR_U2

Hydrograph type	= Rational	Peak discharge	= 0.559 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 616.7 cum
Drainage area	= 19.840 hectare	Runoff coeff.	= 0.33
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

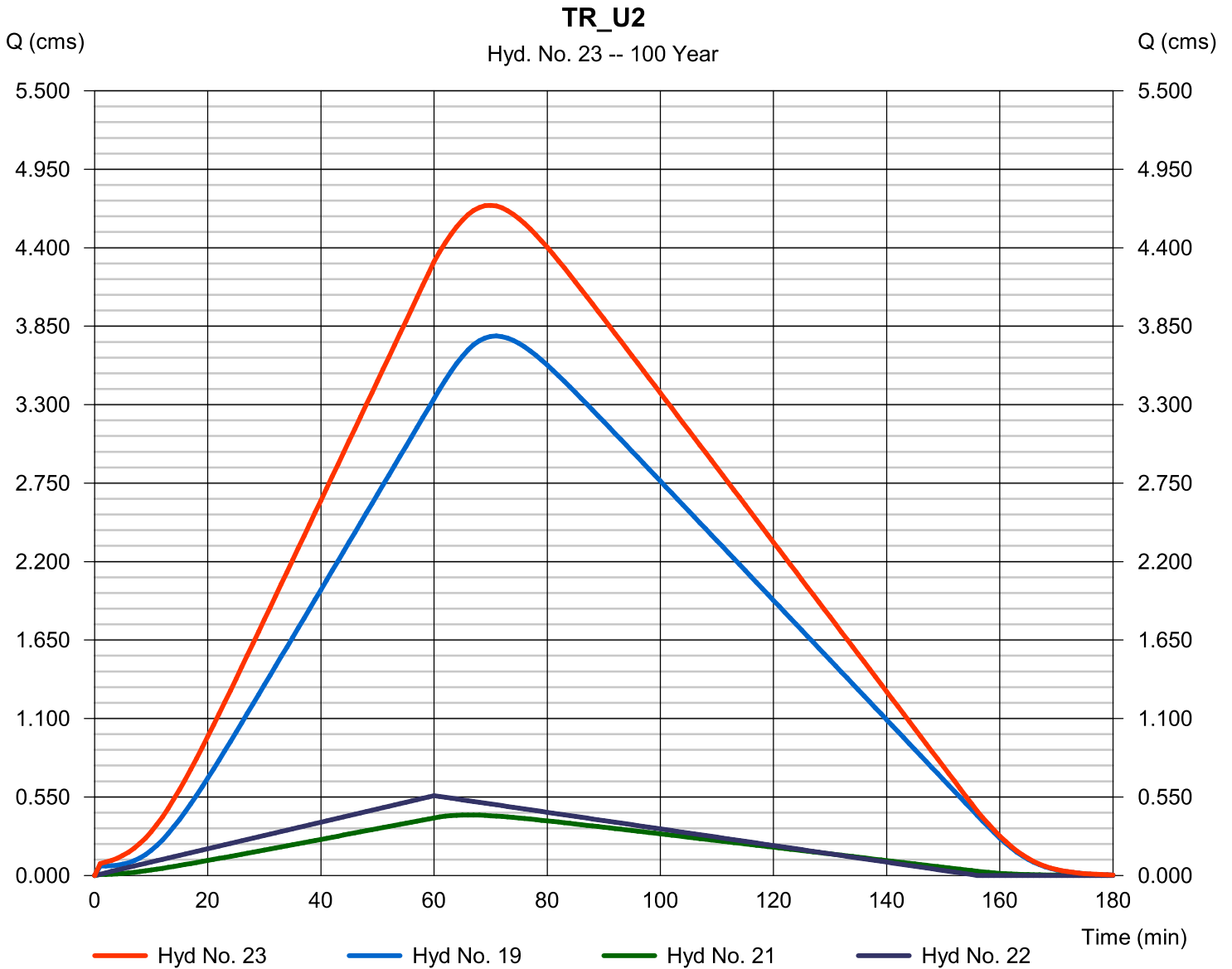
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 23

TR_U2

Hydrograph type	= Combine	Peak discharge	= 4.697 cms
Storm frequency	= 100 yrs	Time to peak	= 70 min
Time interval	= 1 min	Hyd. volume	= 23 556.8 cum
Inflow hyds.	= 19, 21, 22	Contrib. drain. area	= 19.840 hectare



Hydrograph Report

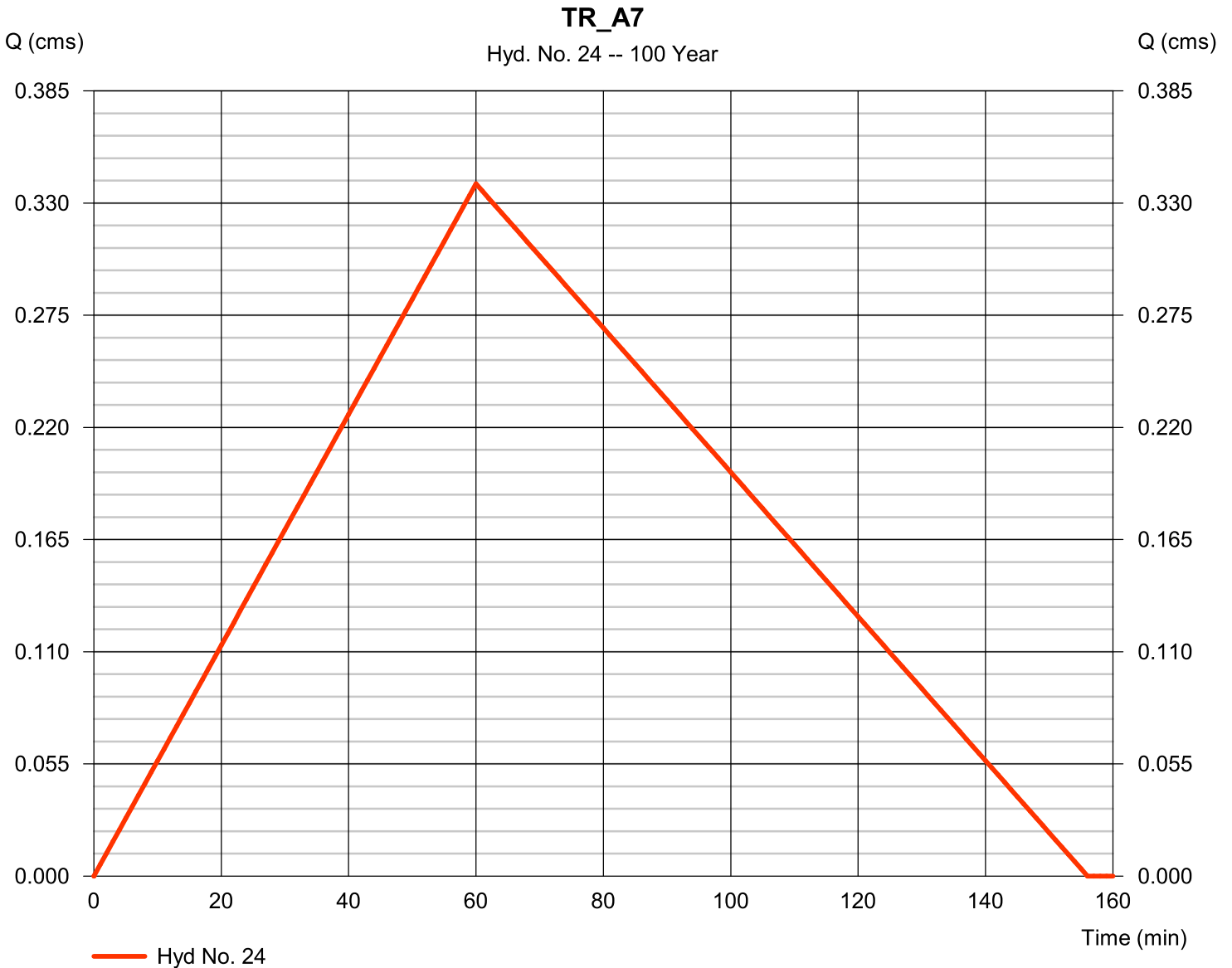
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

mardi, avr 3, 2012

Hyd. No. 24

TR_A7

Hydrograph type	= Rational	Peak discharge	= 0.339 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 588.5 cum
Drainage area	= 12.420 hectare	Runoff coeff.	= 0.32
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

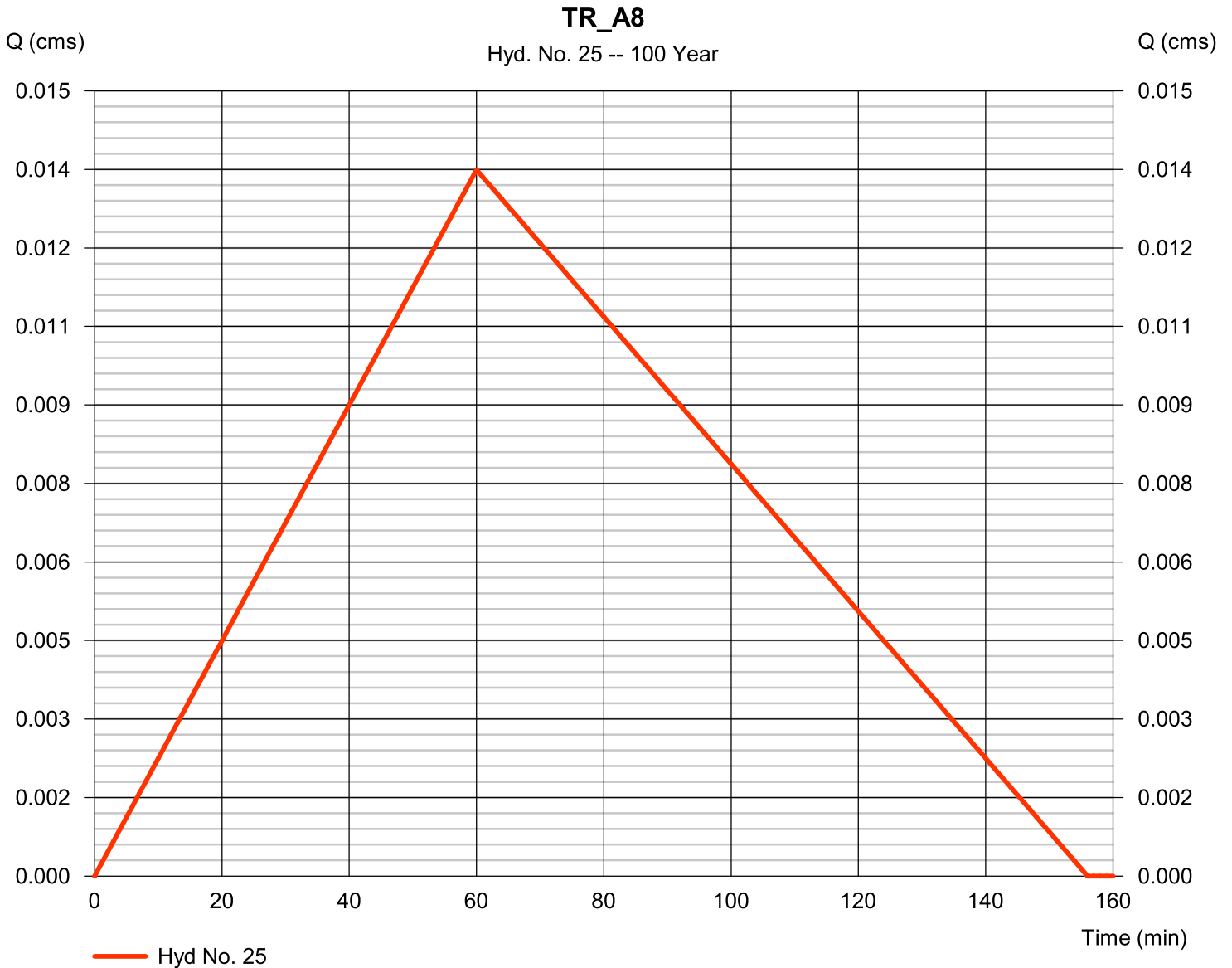
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

mardi, avr 3, 2012

Hyd. No. 25

TR_A8

Hydrograph type	= Rational	Peak discharge	= 0.013 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 63.1 cum
Drainage area	= 1.580 hectare	Runoff coeff.	= 0.1
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

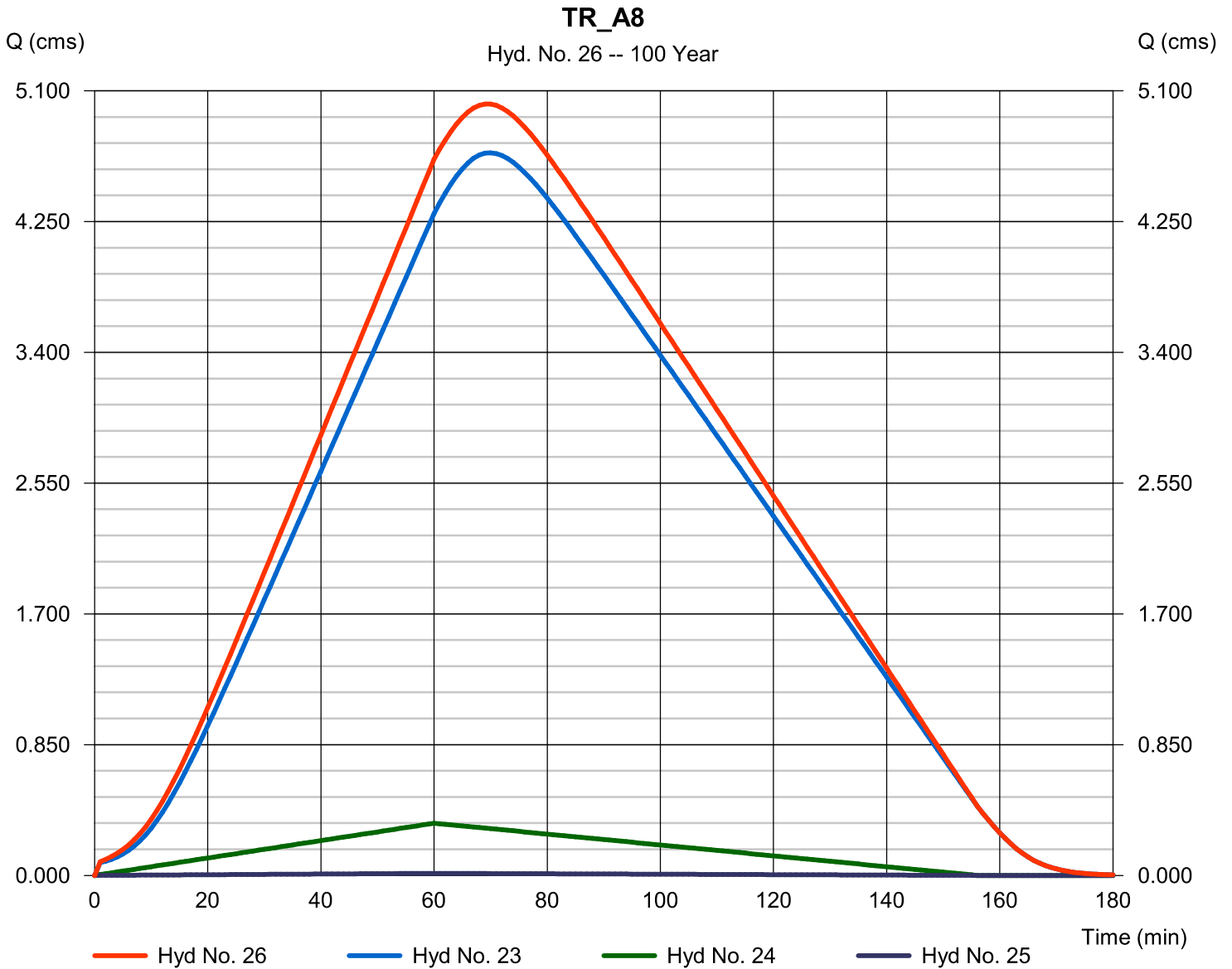
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

mardi, avr 3, 2012

Hyd. No. 26

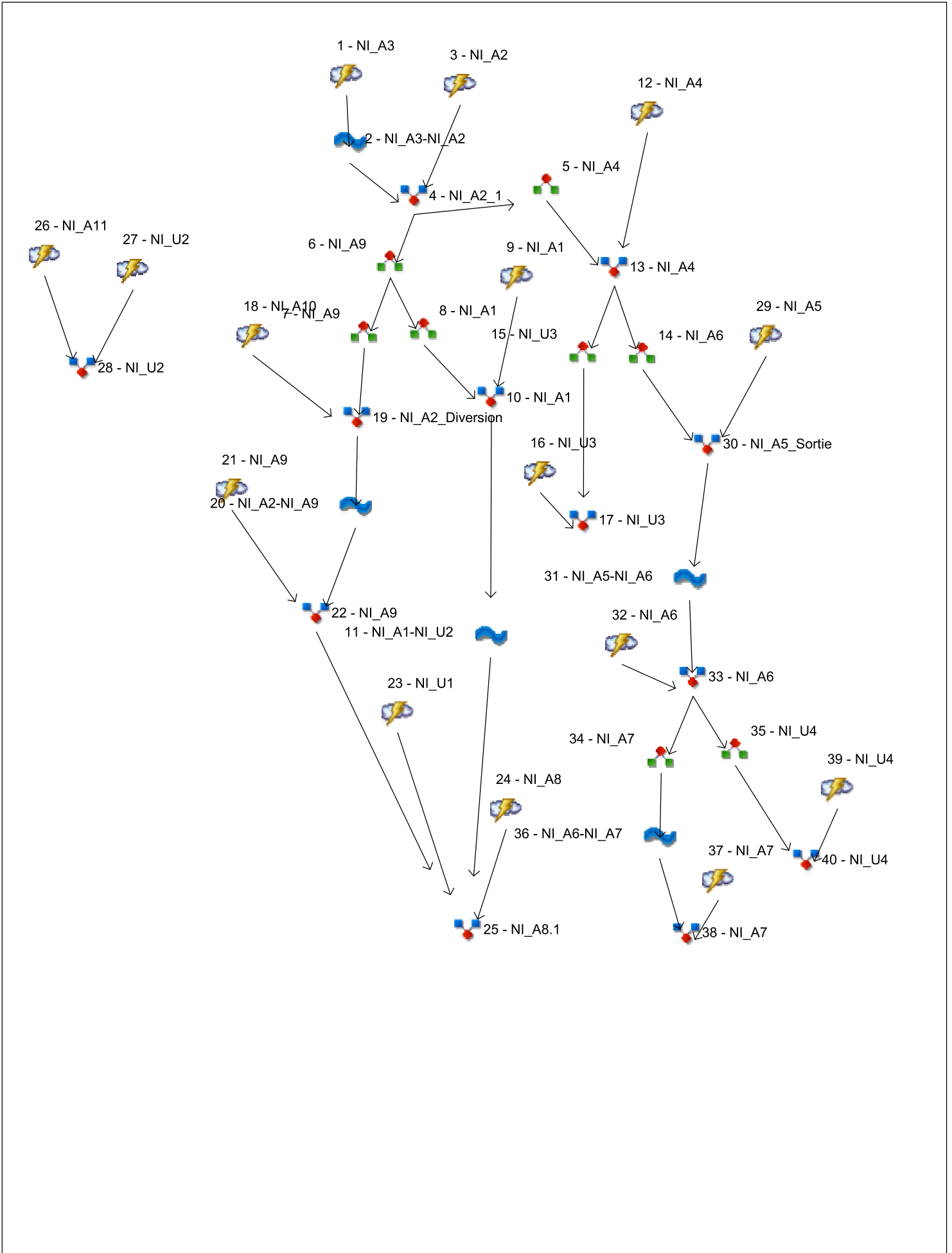
TR_A8

Hydrograph type	= Combine	Peak discharge	= 5.014 cms
Storm frequency	= 100 yrs	Time to peak	= 69 min
Time interval	= 1 min	Hyd. volume	= 25 208.5 cum
Inflow hyds.	= 23, 24, 25	Contrib. drain. area	= 14.000 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description	
1	Rational	0.544	1	60	2 544.1	-----	-----	-----	NI_A3	
2	Reach	0.528	1	63	2 546.0	1	-----	-----	NI_A3-NI_A2	
3	Rational	0.127	1	60	595.0	-----	-----	-----	NI_A2	
4	Combine	0.651	1	63	3 140.9	2, 3	-----	-----	NI_A2_1	
5	Diversion1	0.651	1	63	3 140.9	4	-----	-----	NI_A4	
6	Diversion2	0.000	1	n/a	0.0	4	-----	-----	NI_A9	
7	Diversion1	0.000	1	n/a	0.0	6	-----	-----	NI_A9	
8	Diversion2	0.000	1	n/a	0.0	6	-----	-----	NI_A1	
9	Rational	0.047	1	60	219.0	-----	-----	-----	NI_A1	
10	Combine	0.047	1	60	219.0	8, 9	-----	-----	NI_A1	
11	Reach	0.044	1	66	219.2	10	-----	-----	NI_A1-NI_U2	
12	Rational	0.078	1	60	364.0	-----	-----	-----	NI_A4	
13	Combine	0.727	1	62	3 505.0	5, 12	-----	-----	NI_A4	
14	Diversion1	0.170	1	53	1 417.3	13	-----	-----	NI_A6	
15	Diversion2	0.557	1	62	2 087.7	13	-----	-----	NI_U3	
16	Rational	0.402	1	60	1 879.3	-----	-----	-----	NI_U3	
17	Combine	0.952	1	61	3 967.0	15, 16	-----	-----	NI_U3	
18	Rational	0.112	1	60	523.3	-----	-----	-----	NI_A10	
19	Combine	0.112	1	60	523.3	7, 18	-----	-----	NI_A2_Diversion	
20	Reach	0.109	1	63	523.6	19	-----	-----	NI_A2-NI_A9	
21	Rational	0.037	1	60	172.1	-----	-----	-----	NI_A9	
22	Combine	0.145	1	62	695.7	20, 21	-----	-----	NI_A9	
23	Rational	0.028	1	60	133.0	-----	-----	-----	NI_U1	
24	Rational	0.002	1	60	9.1	-----	-----	-----	NI_A8	
25	Combine	0.218	1	62	1 057.0	11, 22, 23, 24	-----	-----	NI_A8.1	
26	Rational	0.179	1	60	838.2	-----	-----	-----	NI_A11	
27	Rational	0.233	1	60	1 091.6	-----	-----	-----	NI_U2	
28	Combine	0.412	1	60	1 929.9	26, 27	-----	-----	NI_U2	
29	Rational	0.115	1	60	537.7	-----	-----	-----	NI_A5	
30	Combine	0.285	1	60	1 955.0	14, 29	-----	-----	NI_A5_Sortie	
31	Reach	0.278	1	66	1 960.6	30	-----	-----	NI_A5-NI_A6	
32	Rational	0.240	1	60	1 120.9	-----	-----	-----	NI_A6	
33	Combine	0.512	1	60	3 081.5	31, 32	-----	-----	NI_A6	
34	Diversion1	0.512	1	60	3 081.5	33	-----	-----	NI_A7	
35	Diversion2	0.000	1	n/a	0.0	33	-----	-----	NI_U4	
36	Reach	0.492	1	70	3 090.2	34	-----	-----	NI_A6-NI_A7	
06.gpw					Return Period: 10 Year			jeudi, avr 5, 2012		

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

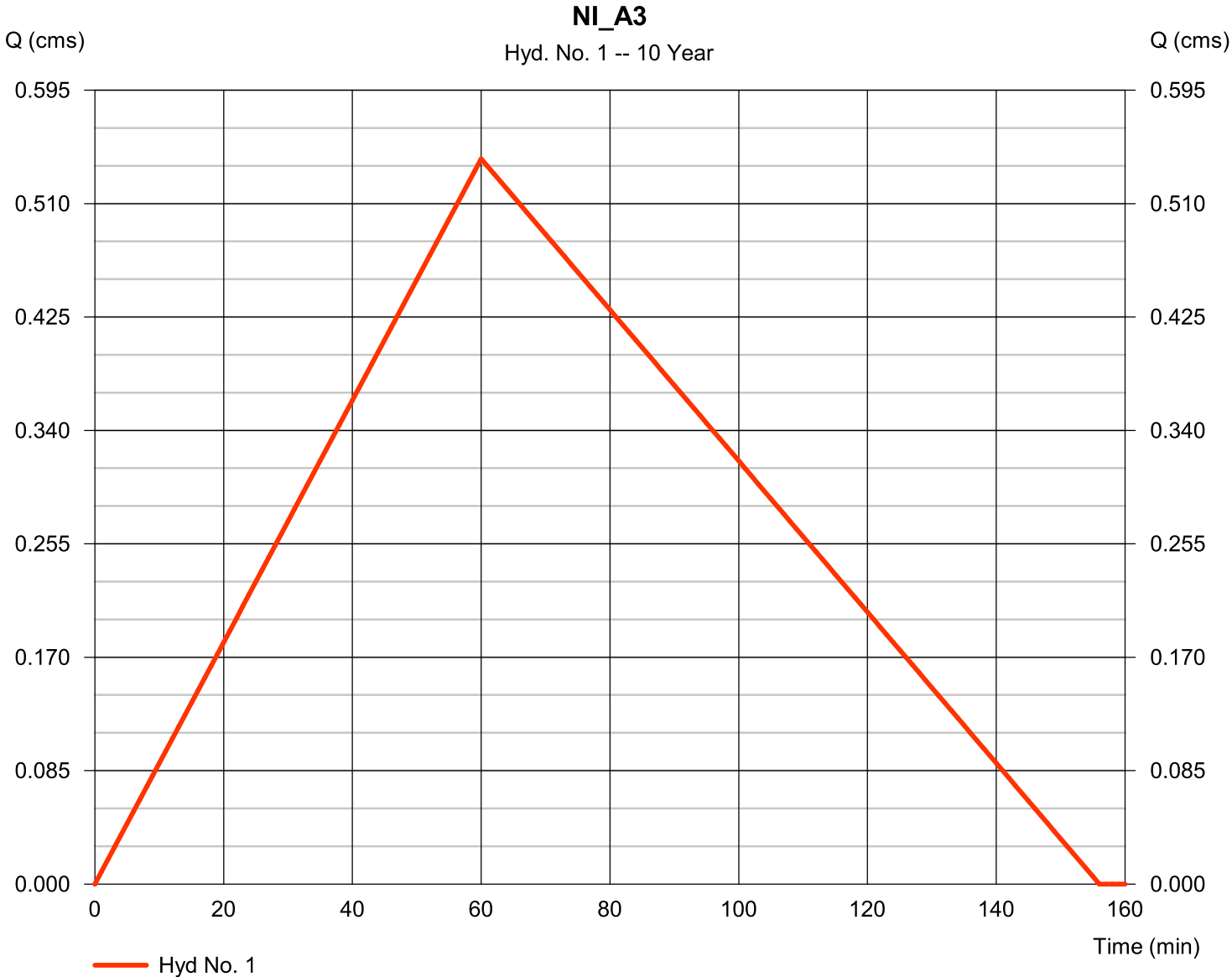
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
37	Rational	0.145	1	60	676.3	-----	-----	-----	NI_A7
38	Combine	0.624	1	67	3 766.5	36, 37	-----	-----	NI_A7
39	Rational	0.402	1	60	1 879.2	-----	-----	-----	NI_U4
40	Combine	0.402	1	60	1 879.2	35, 39	-----	-----	NI_U4
06.gpw					Return Period: 10 Year			jeudi, avr 5, 2012	

Hydrograph Report

Hyd. No. 1

NI_A3

Hydrograph type	= Rational	Peak discharge	= 0.544 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 544.1 cum
Drainage area	= 58.730 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

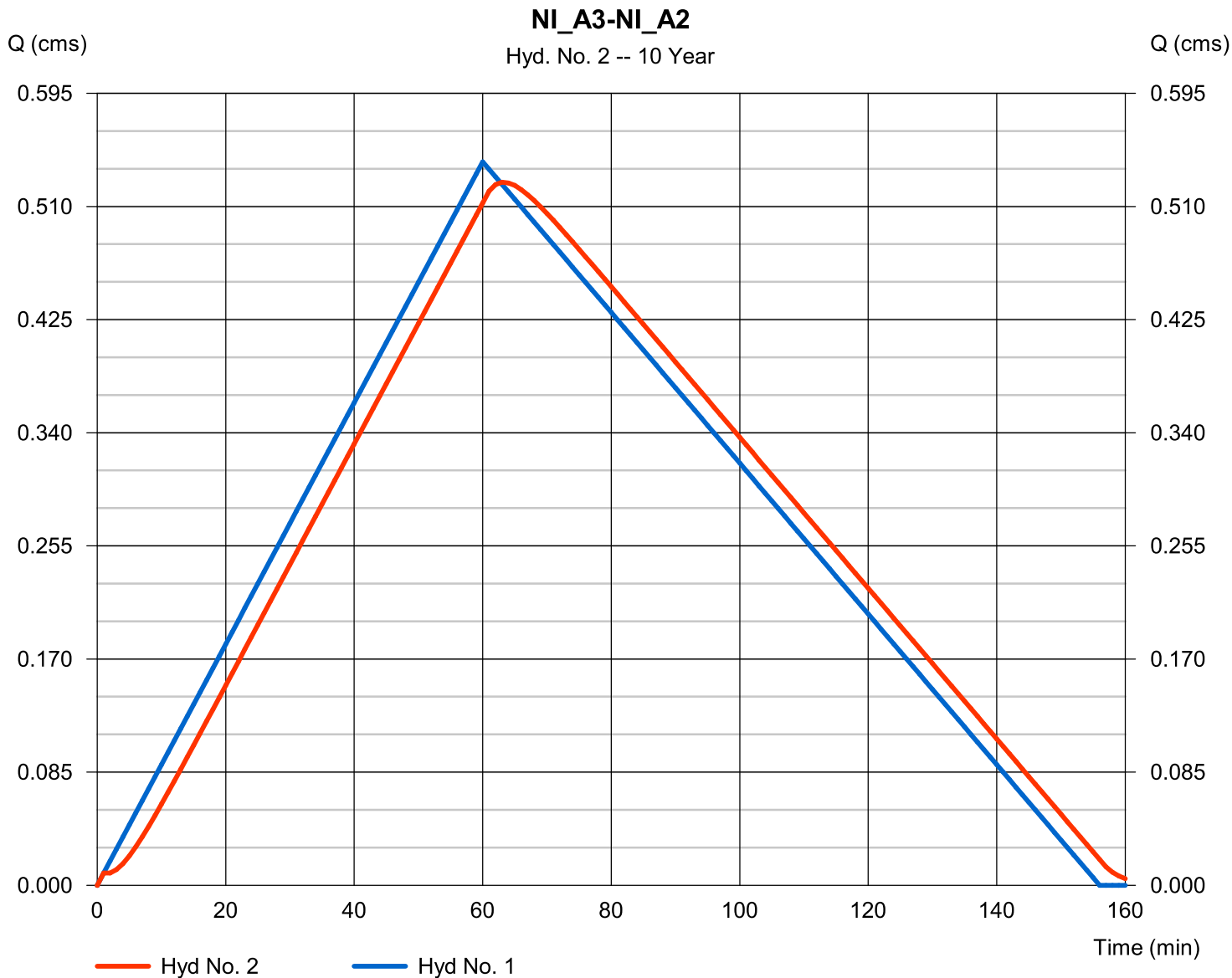
jeudi, avr 5, 2012

Hyd. No. 2

NI_A3-NI_A2

Hydrograph type	= Reach	Peak discharge	= 0.528 cms
Storm frequency	= 10 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 2 546.0 cum
Inflow hyd. No.	= 1 - NI_A3	Section type	= Trapezoidal
Reach length	= 500.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 2.11 m/s	Routing coeff.	= 0.2924

Modified Att-Kin routing method used.



Hydrograph Report

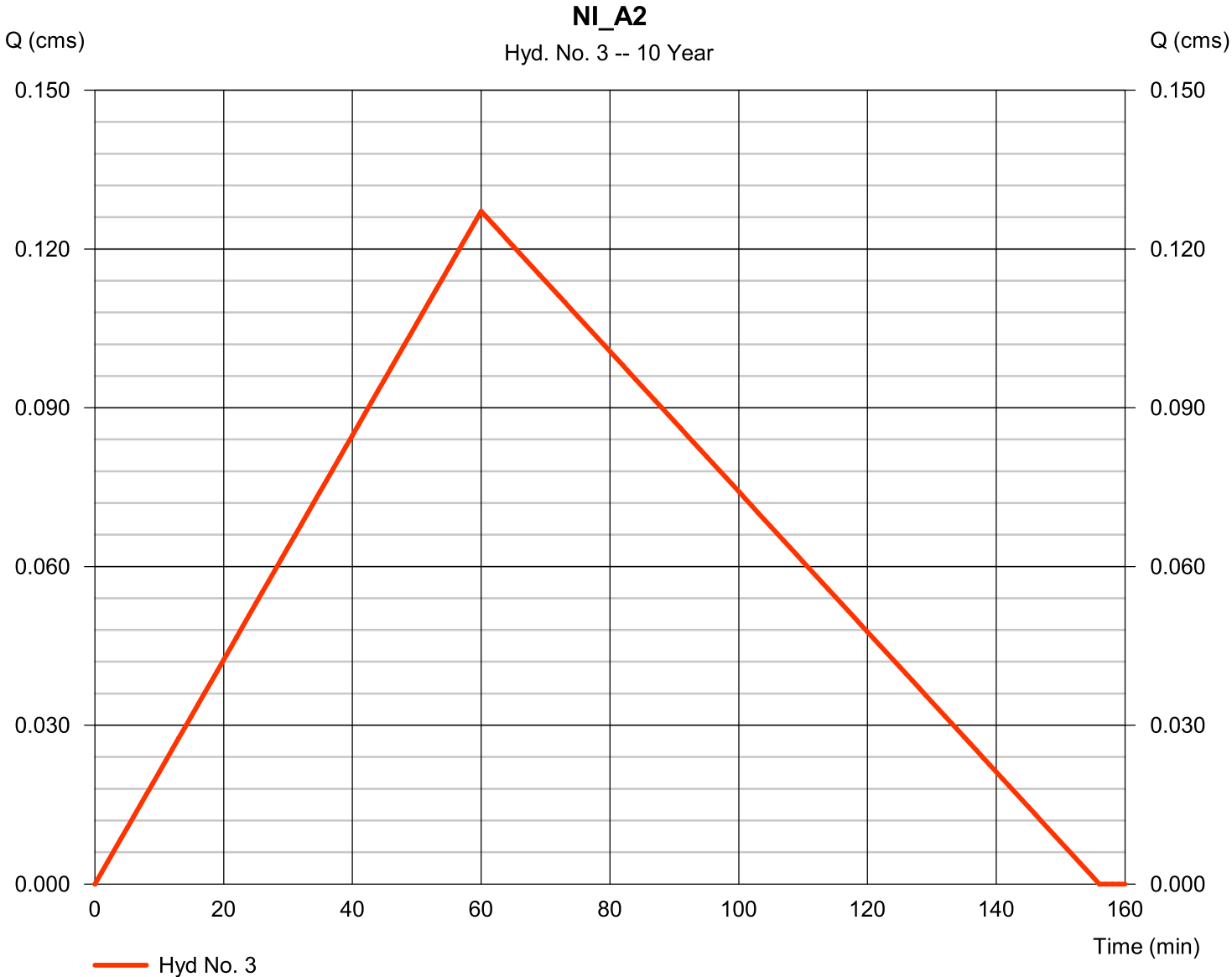
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 3

NI_A2

Hydrograph type	= Rational	Peak discharge	= 0.127 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 595.0 cum
Drainage area	= 14.650 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

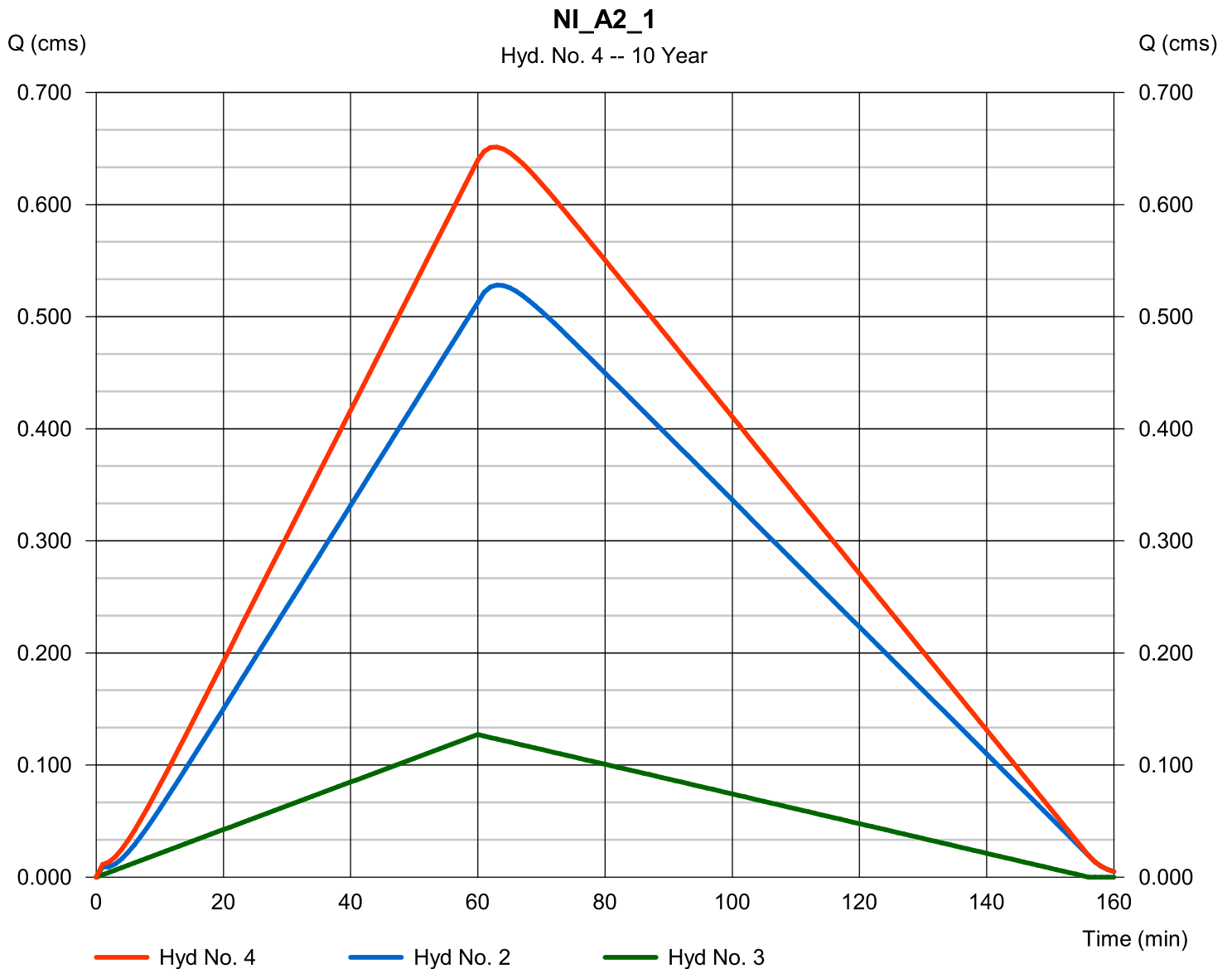
jeudi, avr 5, 2012

Hyd. No. 4

NI_A2_1

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 2, 3

Peak discharge = 0.651 cms
 Time to peak = 63 min
 Hyd. volume = 3 140.9 cum
 Contrib. drain. area = 14.650 hectare



Hydrograph Report

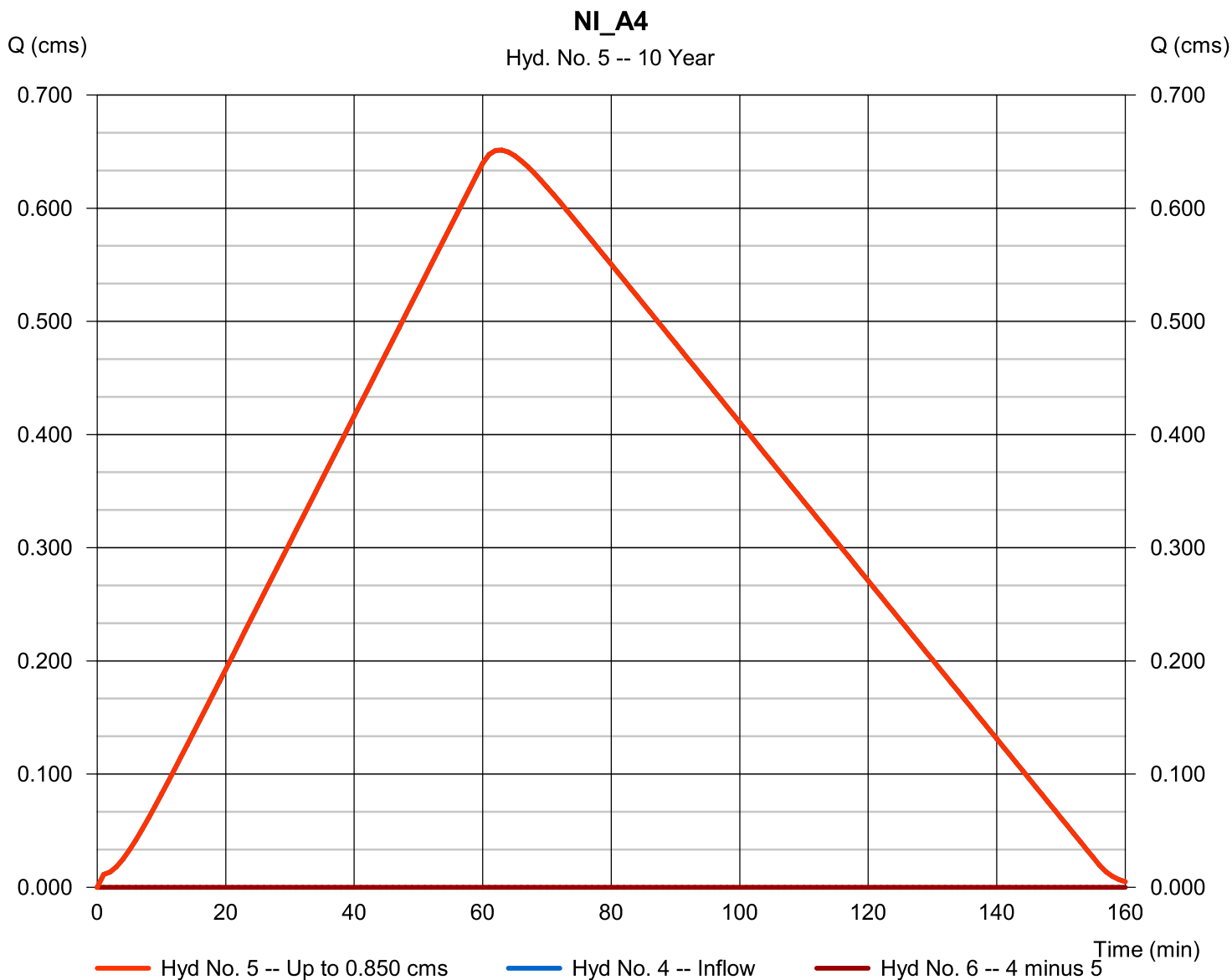
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jeudi, avr 5, 2012

Hyd. No. 5

NI_A4

Hydrograph type	= Diversion1	Peak discharge	= 0.651 cms
Storm frequency	= 10 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 3 140.9 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

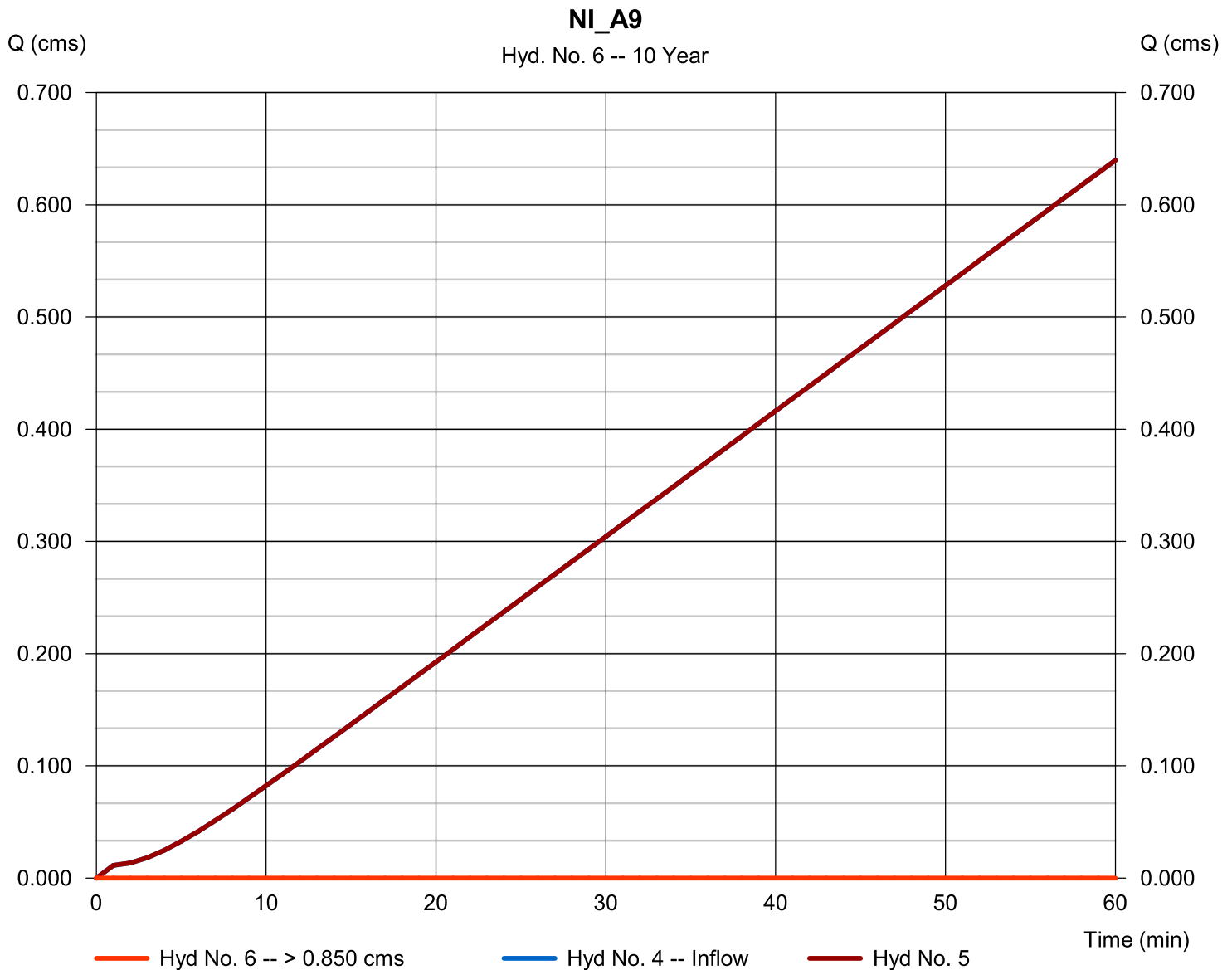
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

NI_A9

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 5
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

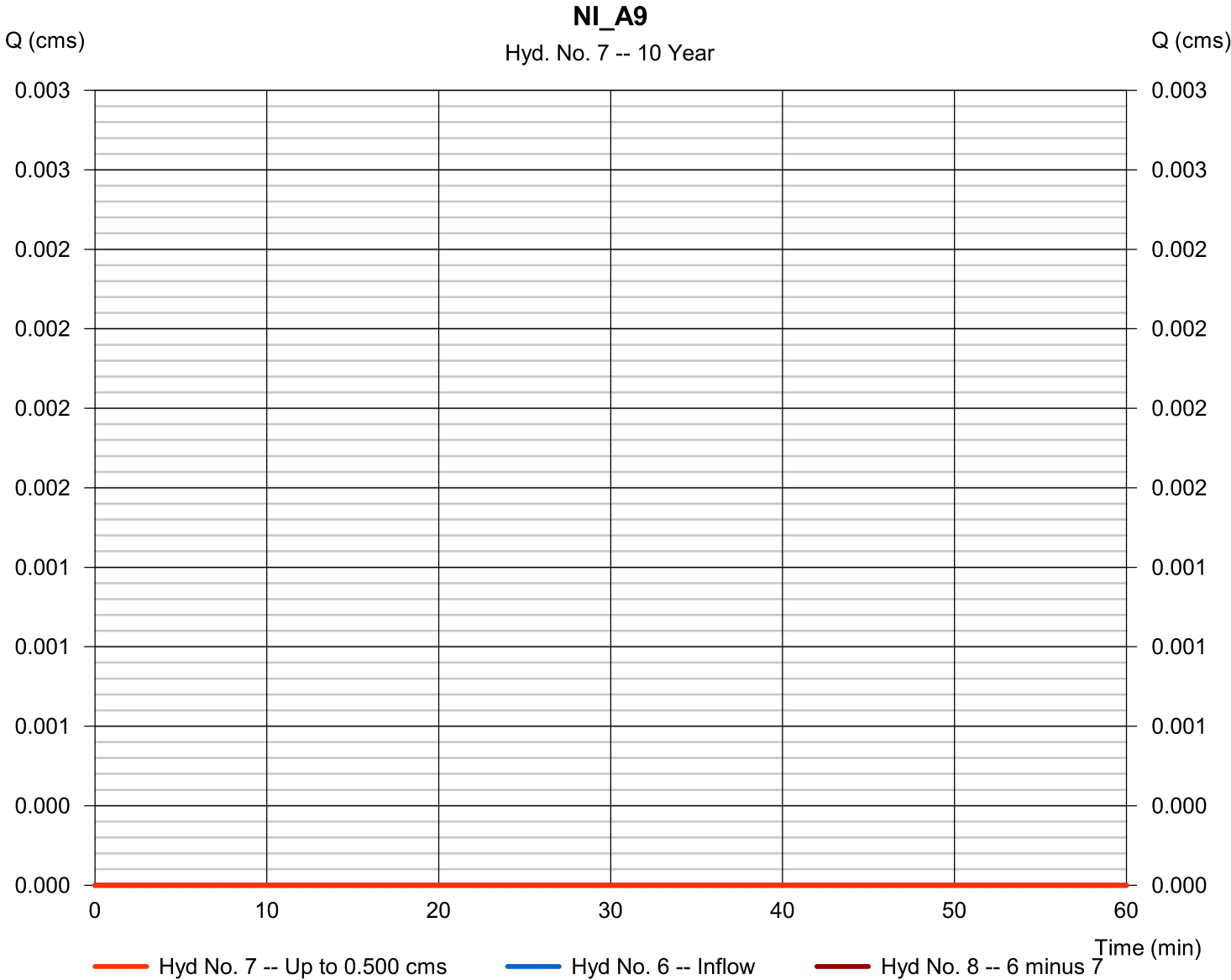
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Hyd. No. 7

NI_A9

Hydrograph type	= Diversion1	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 8
Diversion method	= Constant Q	Constant Q	= 0.50 cms

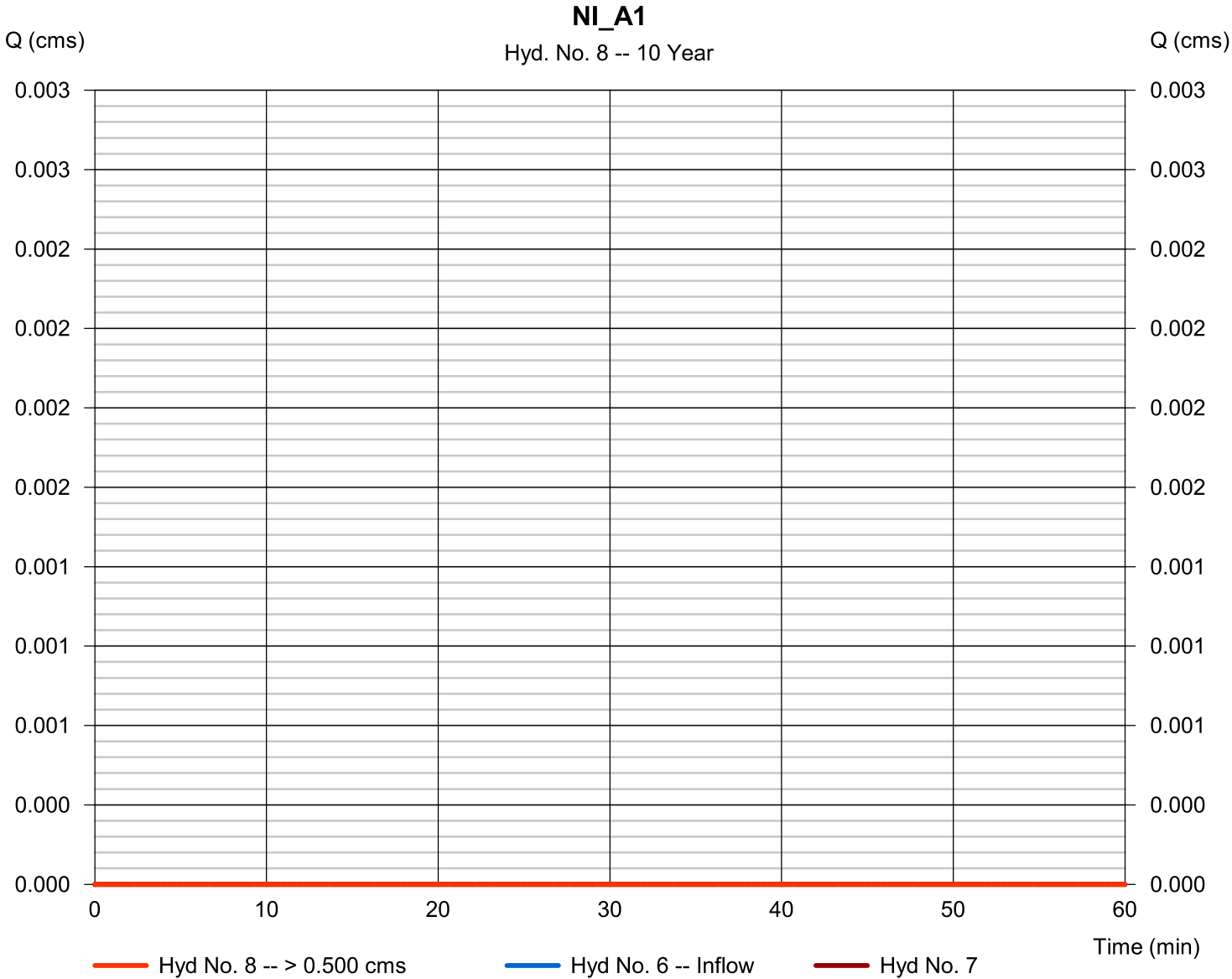


Hydrograph Report

Hyd. No. 8

NI_A1

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.50 cms



Hydrograph Report

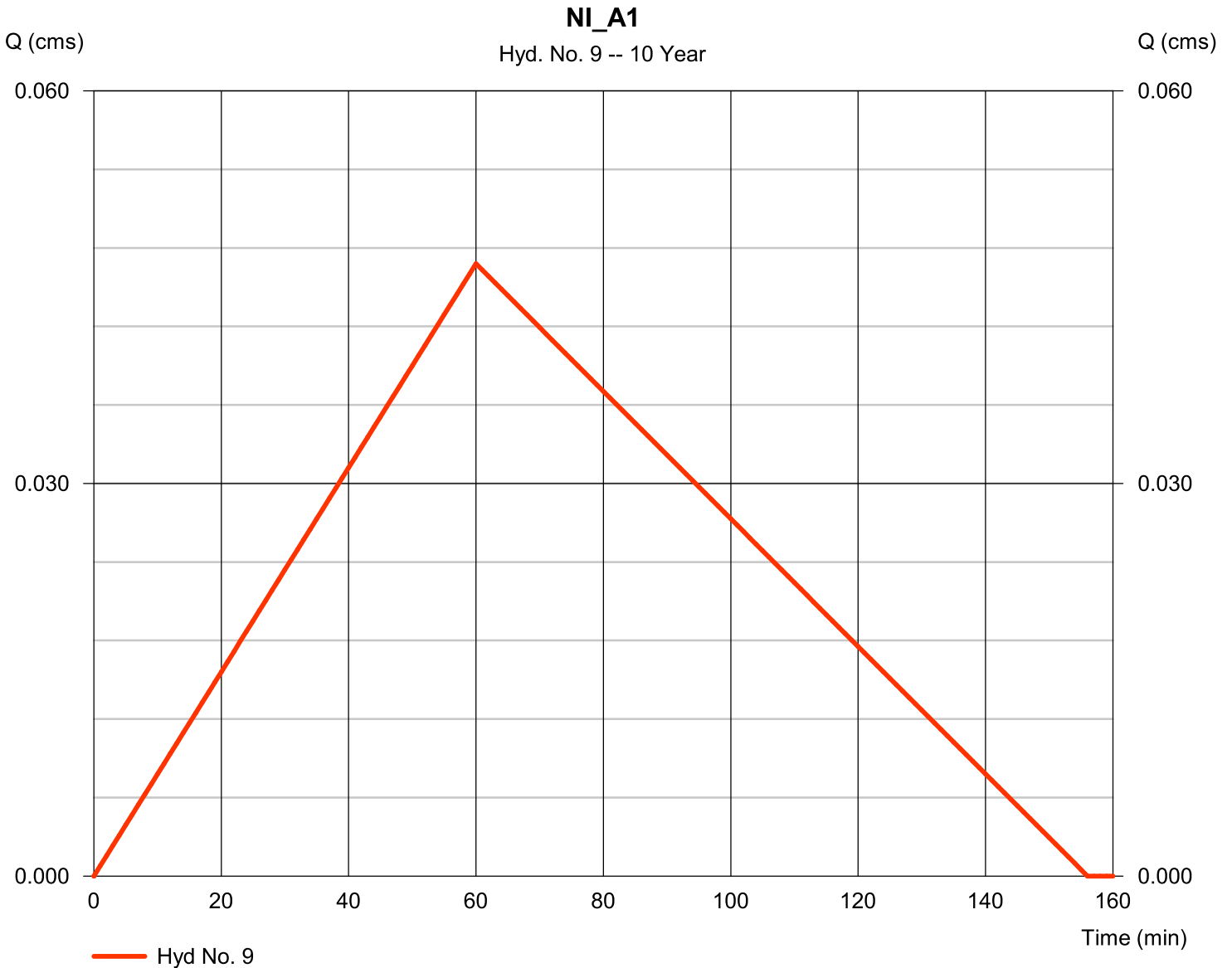
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Hyd. No. 9

NI_A1

Hydrograph type	= Rational	Peak discharge	= 0.047 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 219.0 cum
Drainage area	= 6.740 hectare	Runoff coeff.	= 0.12
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

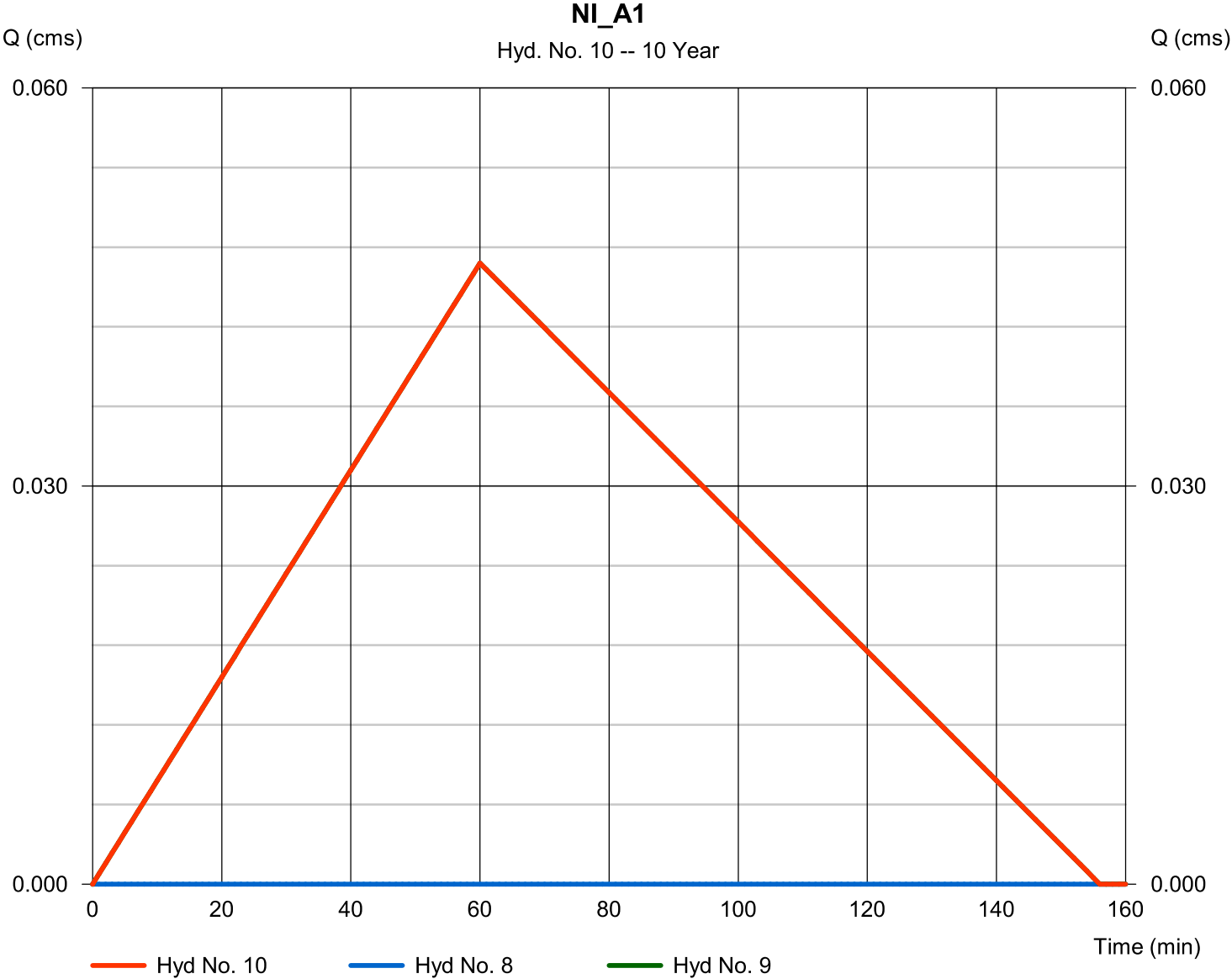
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

NI_A1

Hydrograph type	= Combine	Peak discharge	= 0.047 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 219.0 cum
Inflow hyds.	= 8, 9	Contrib. drain. area	= 6.740 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

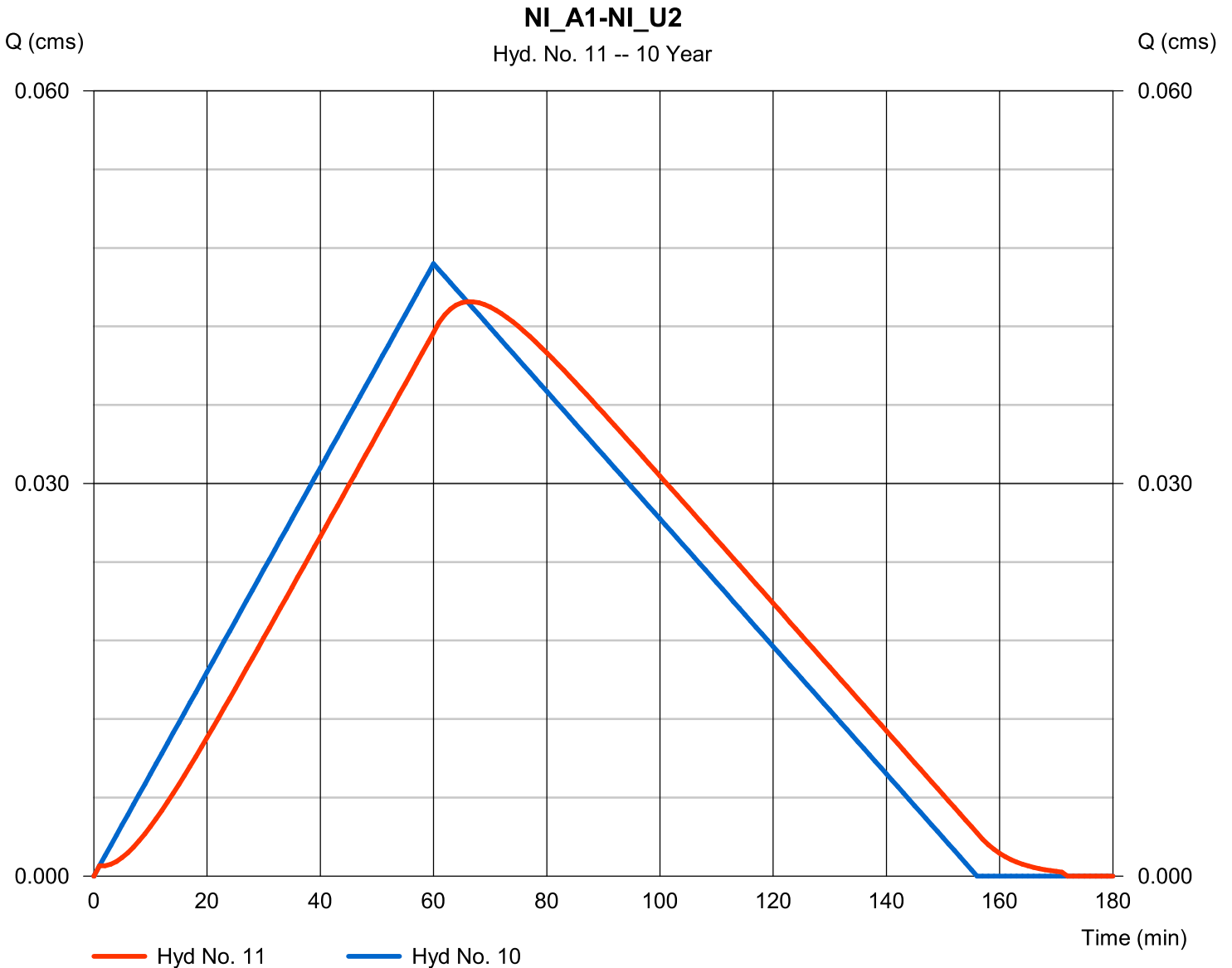
jeudi, avr 5, 2012

Hyd. No. 11

NI_A1-NI_U2

Hydrograph type	= Reach	Peak discharge	= 0.044 cms
Storm frequency	= 10 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 219.2 cum
Inflow hyd. No.	= 10 - NI_A1	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.017	Bottom width	= 10.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.643	Rating curve m	= 1.593
Ave. velocity	= 0.50 m/s	Routing coeff.	= 0.1481

Modified Att-Kin routing method used.



Hydrograph Report

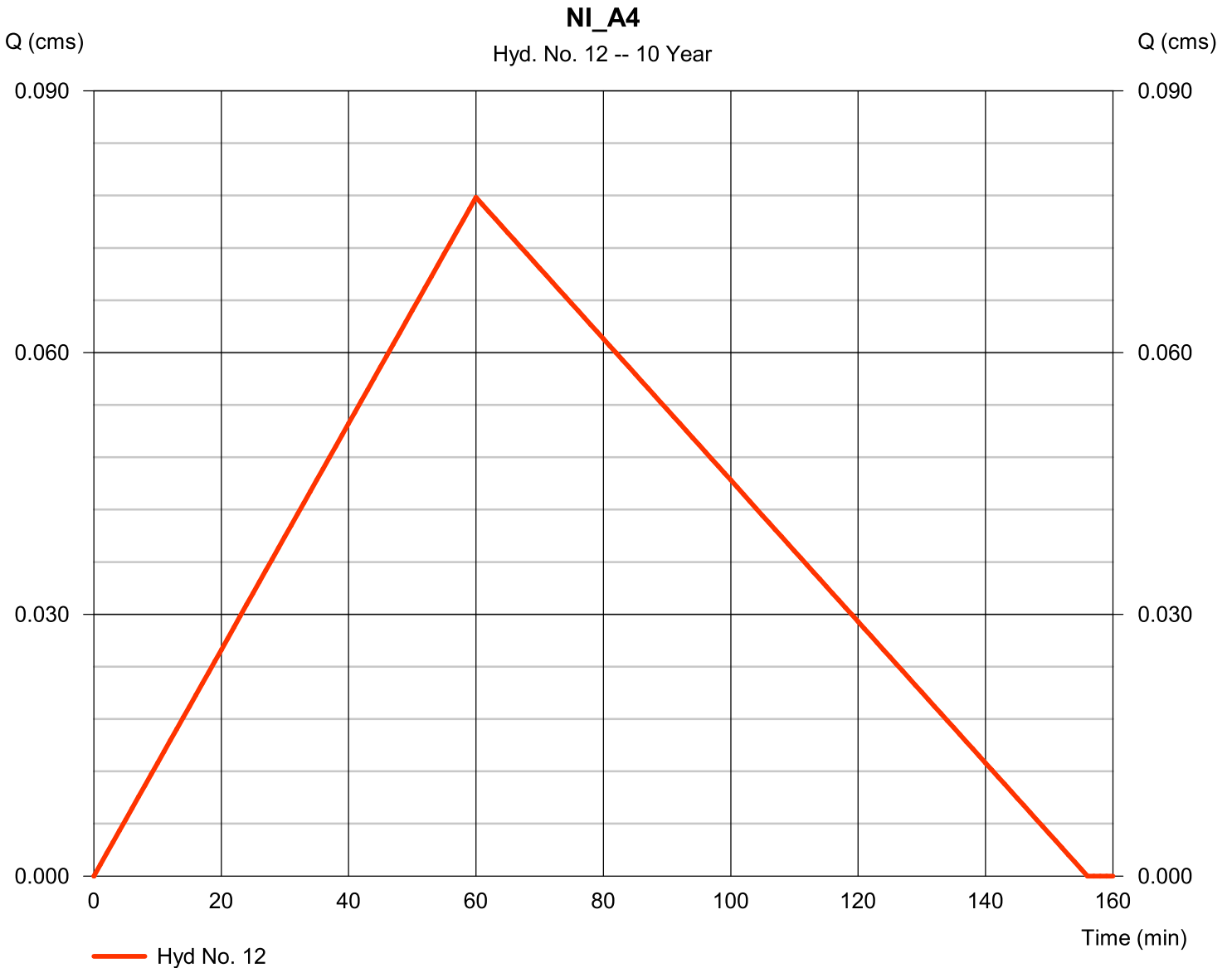
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jeudi, avr 5, 2012

Hyd. No. 12

NI_A4

Hydrograph type	= Rational	Peak discharge	= 0.078 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 364.0 cum
Drainage area	= 7.470 hectare	Runoff coeff.	= 0.18
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

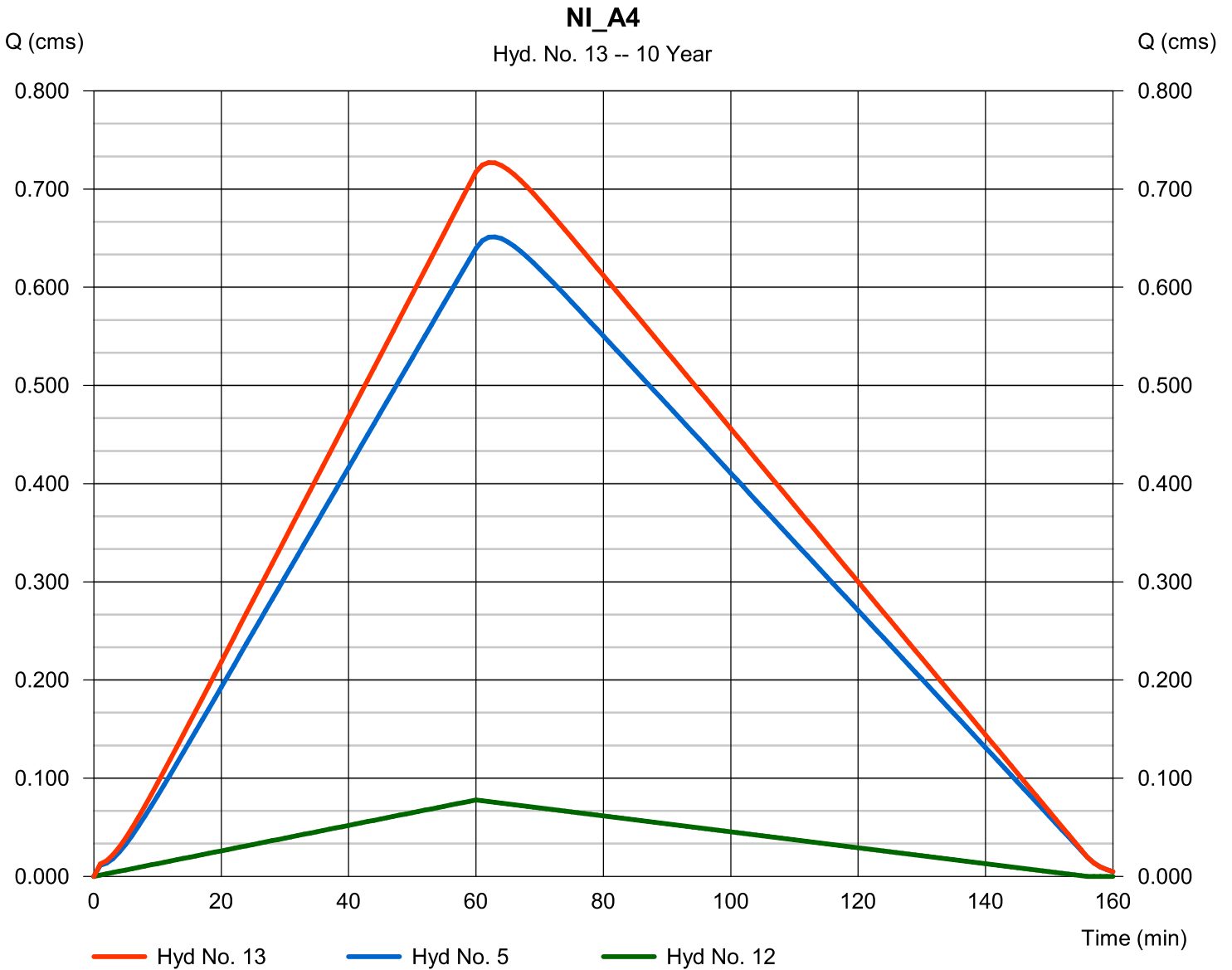
jeudi, avr 5, 2012

Hyd. No. 13

NI_A4

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 12

Peak discharge = 0.727 cms
 Time to peak = 62 min
 Hyd. volume = 3 505.0 cum
 Contrib. drain. area = 7.470 hectare



Hydrograph Report

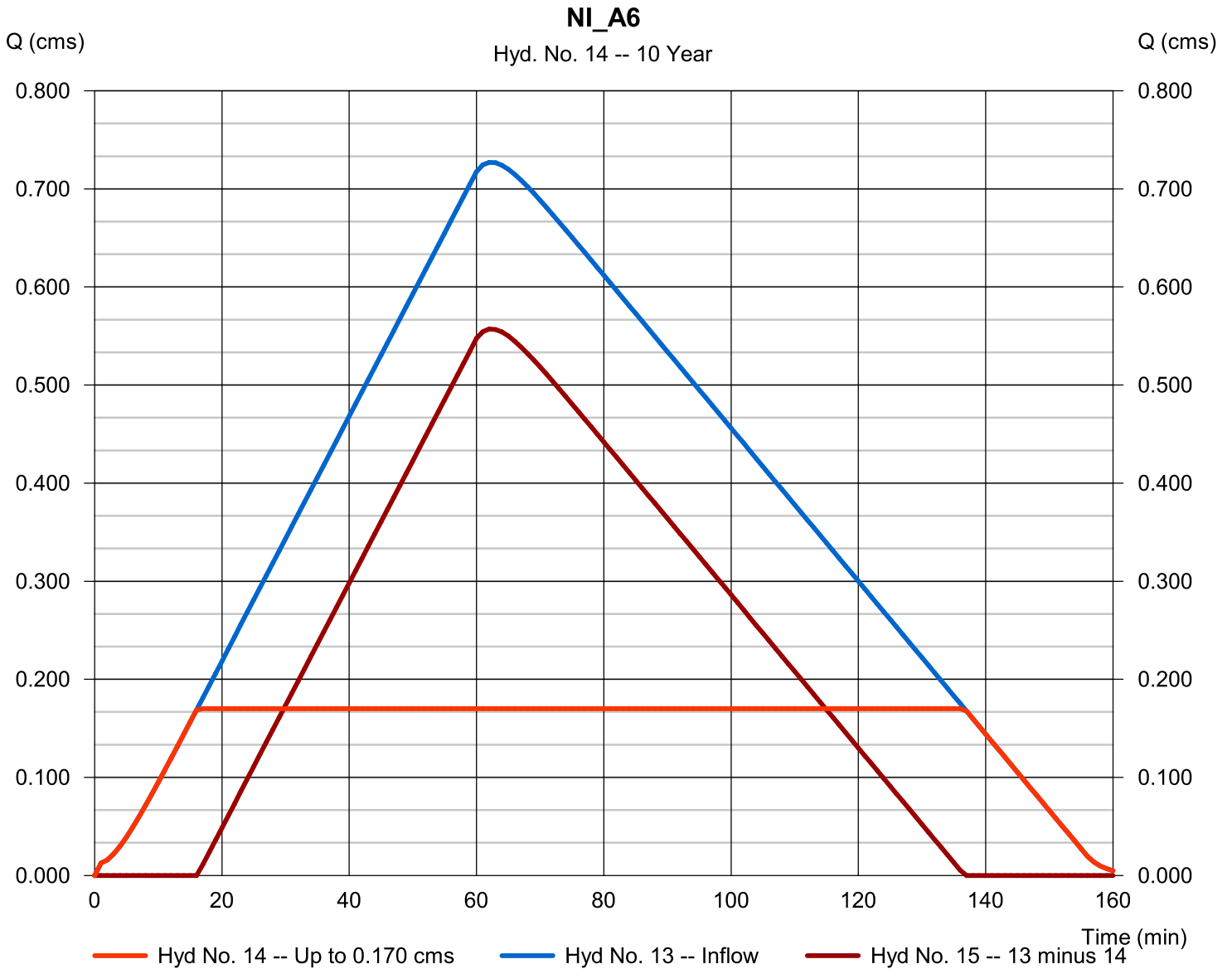
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Hyd. No. 14

NI_A6

Hydrograph type	= Diversion1	Peak discharge	= 0.170 cms
Storm frequency	= 10 yrs	Time to peak	= 53 min
Time interval	= 1 min	Hyd. volume	= 1 417.3 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 15
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

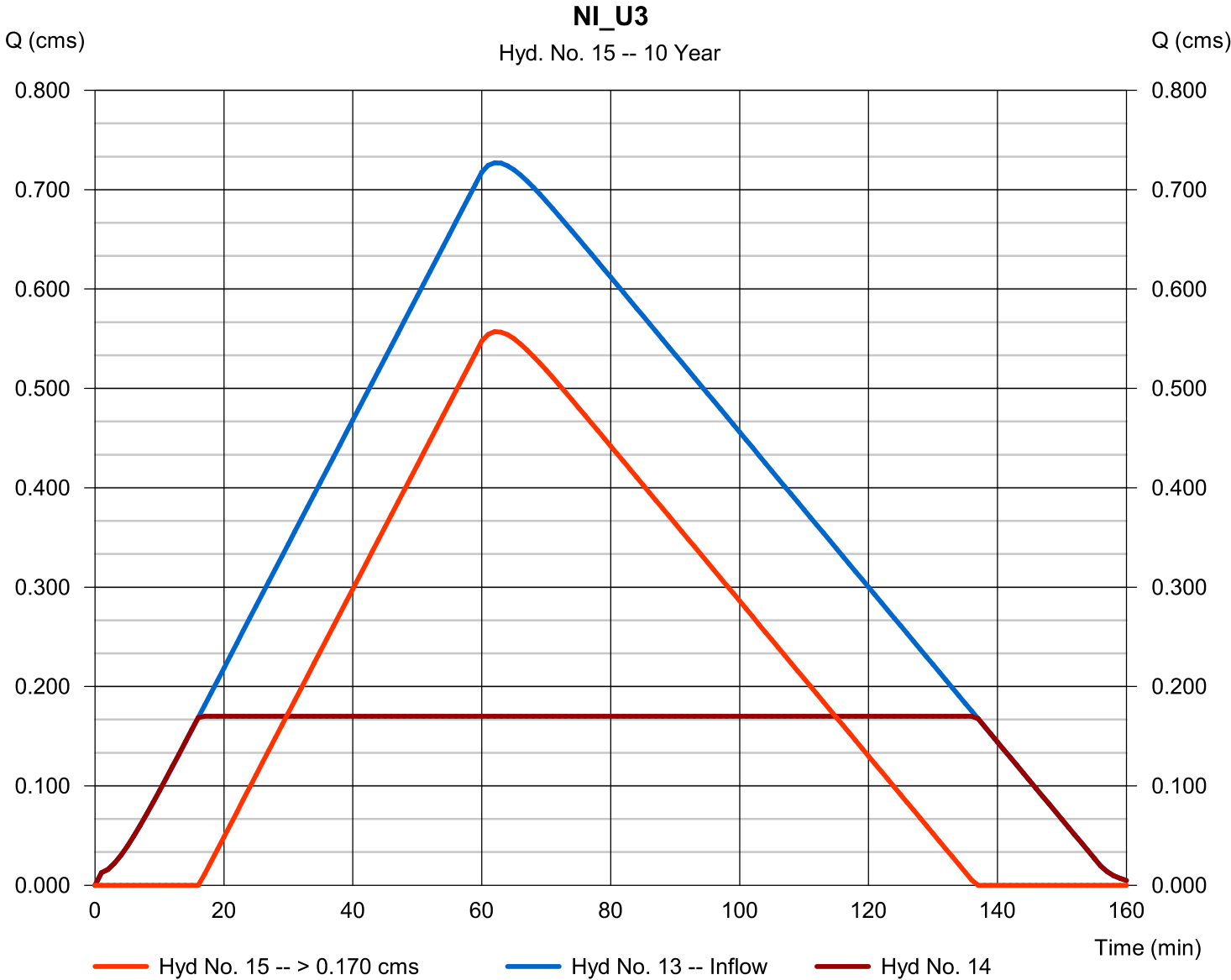
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jeudi, avr 5, 2012

Hyd. No. 15

NI_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.557 cms
Storm frequency	= 10 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 2 087.7 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 14
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

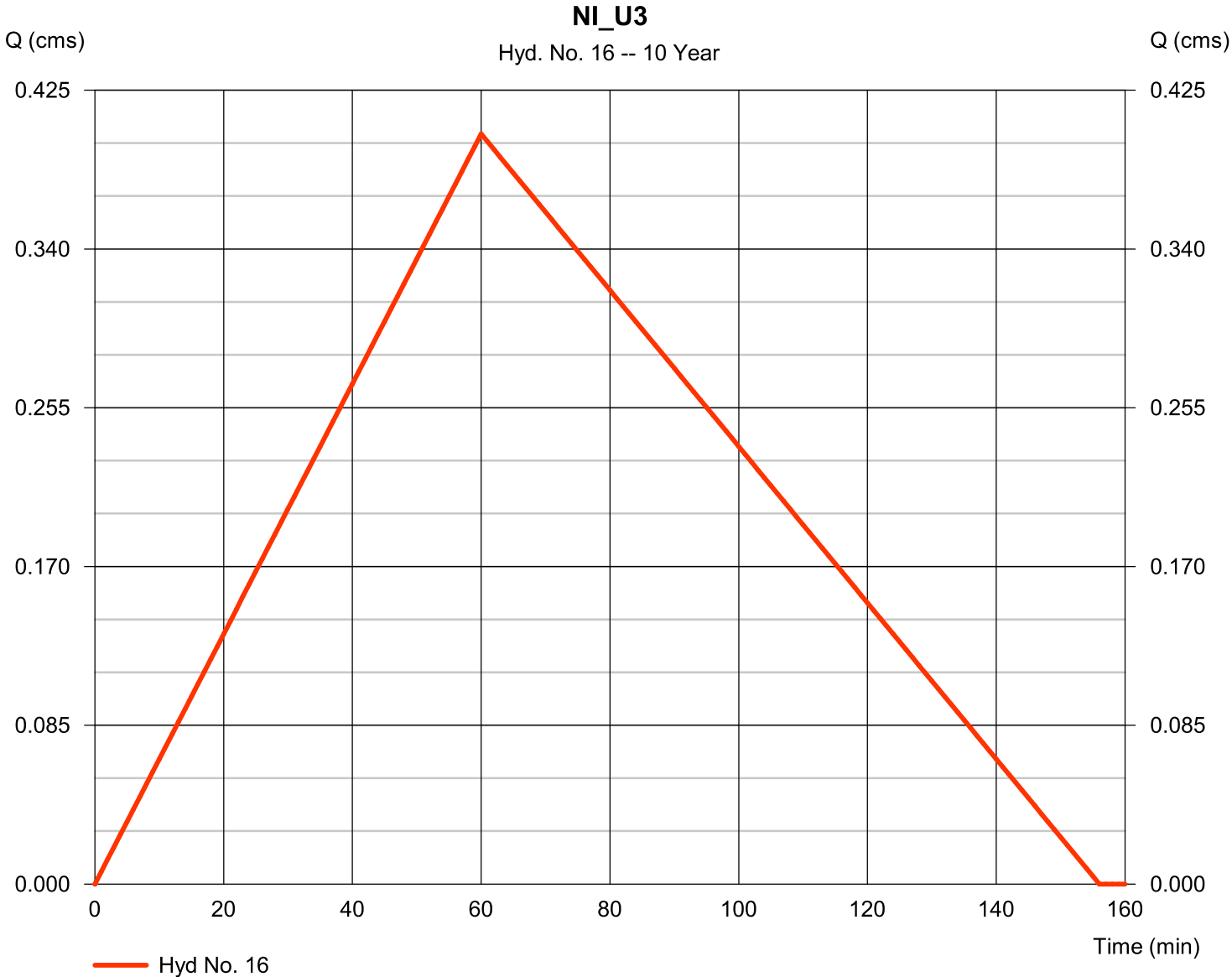
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Hyd. No. 16

NI_U3

Hydrograph type	= Rational	Peak discharge	= 0.402 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 879.3 cum
Drainage area	= 18.760 hectare	Runoff coeff.	= 0.37
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

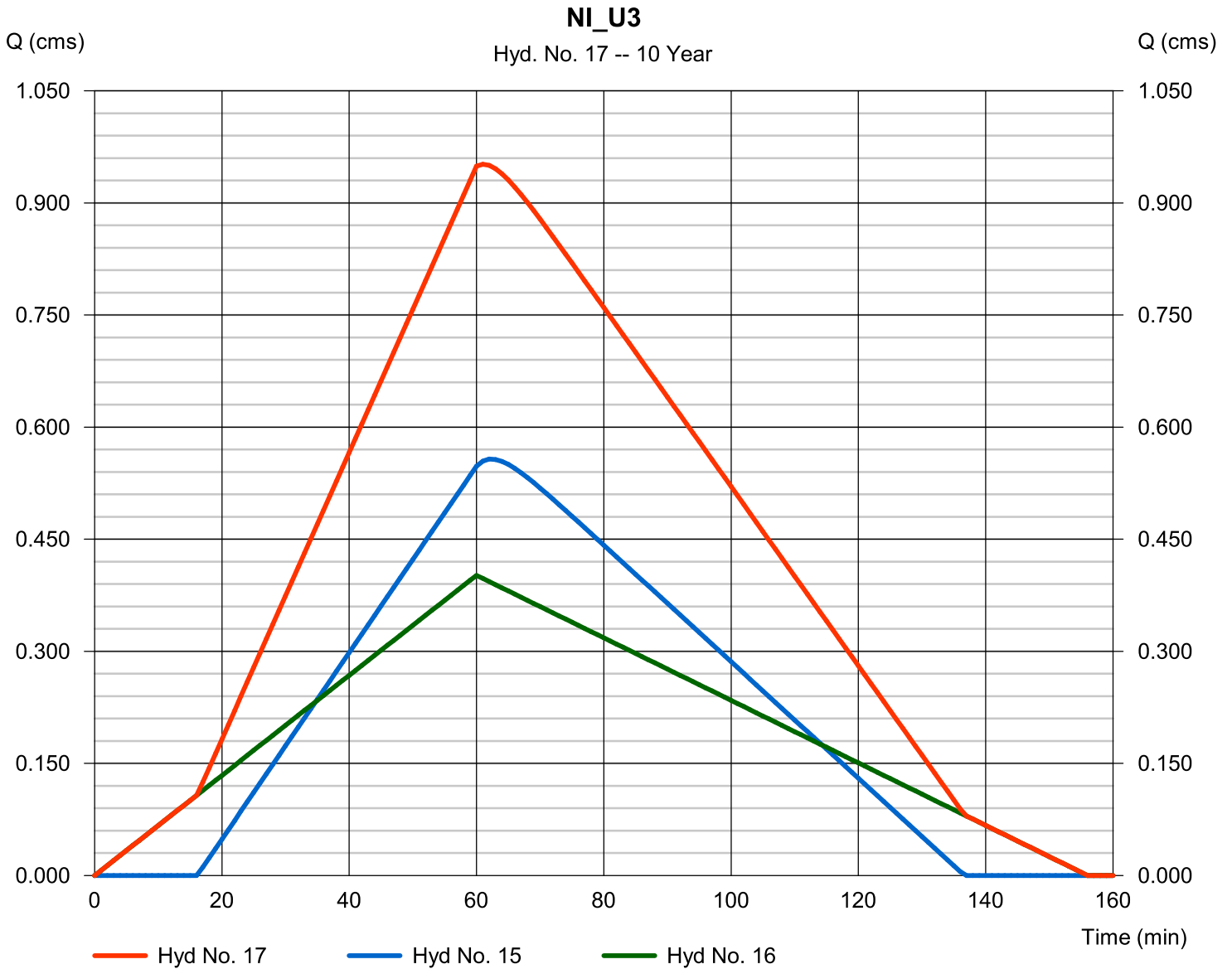
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

NI_U3

Hydrograph type	= Combine	Peak discharge	= 0.952 cms
Storm frequency	= 10 yrs	Time to peak	= 61 min
Time interval	= 1 min	Hyd. volume	= 3 967.0 cum
Inflow hyds.	= 15, 16	Contrib. drain. area	= 18.760 hectare



Hydrograph Report

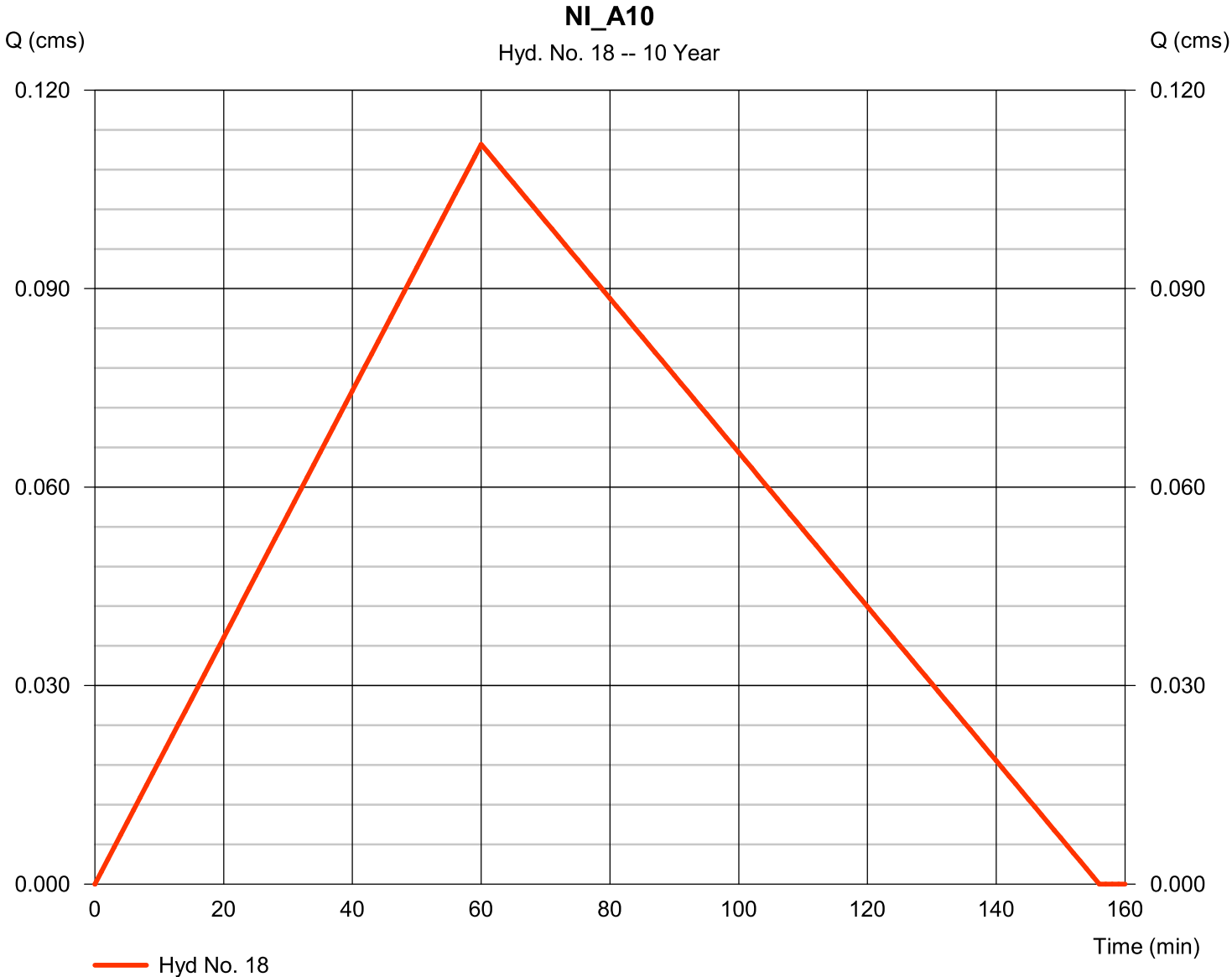
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Hyd. No. 18

NI_A10

Hydrograph type	= Rational	Peak discharge	= 0.112 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 523.3 cum
Drainage area	= 11.370 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

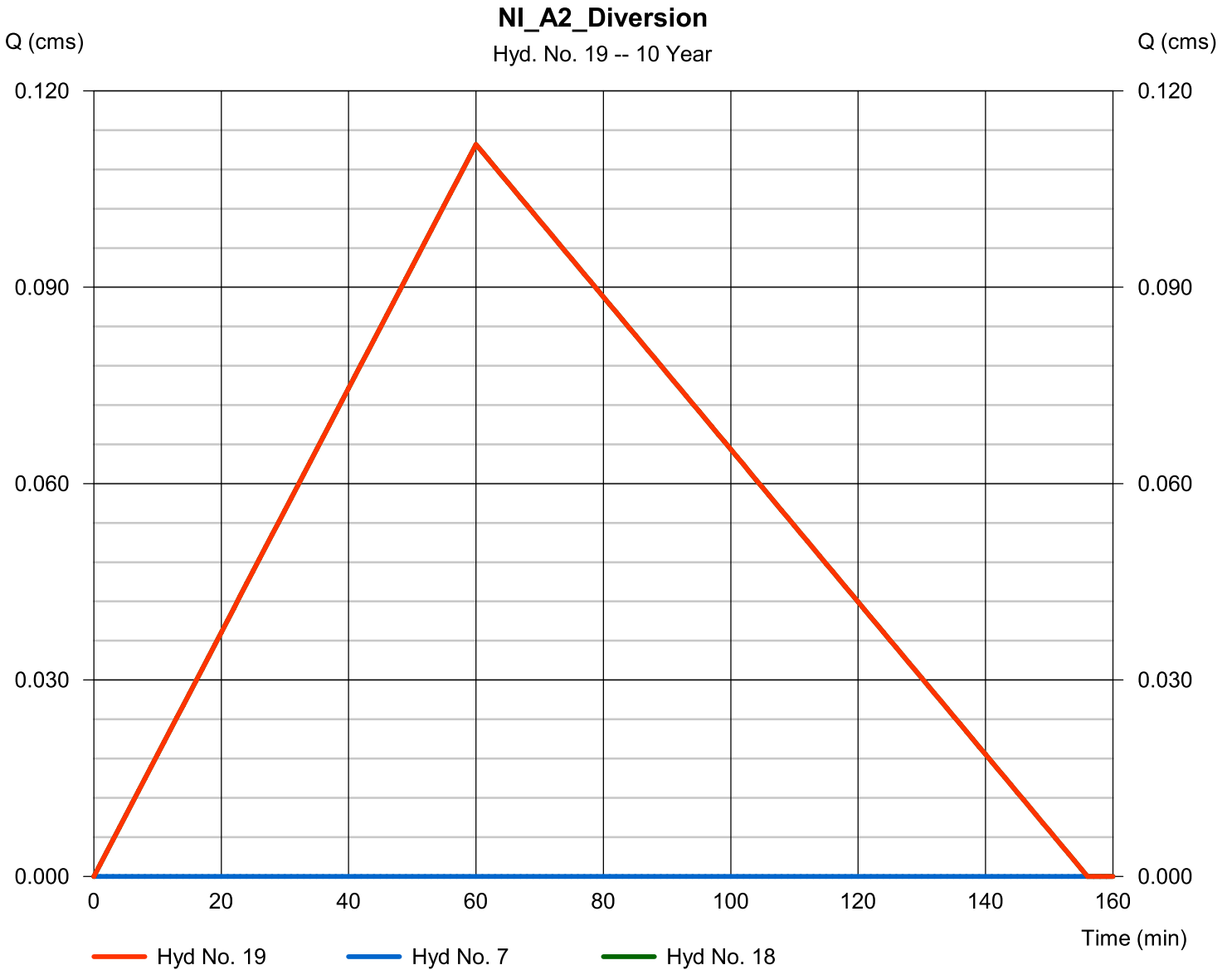
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 19

NI_A2_Diversion

Hydrograph type	= Combine	Peak discharge	= 0.112 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 523.3 cum
Inflow hyds.	= 7, 18	Contrib. drain. area	= 11.370 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

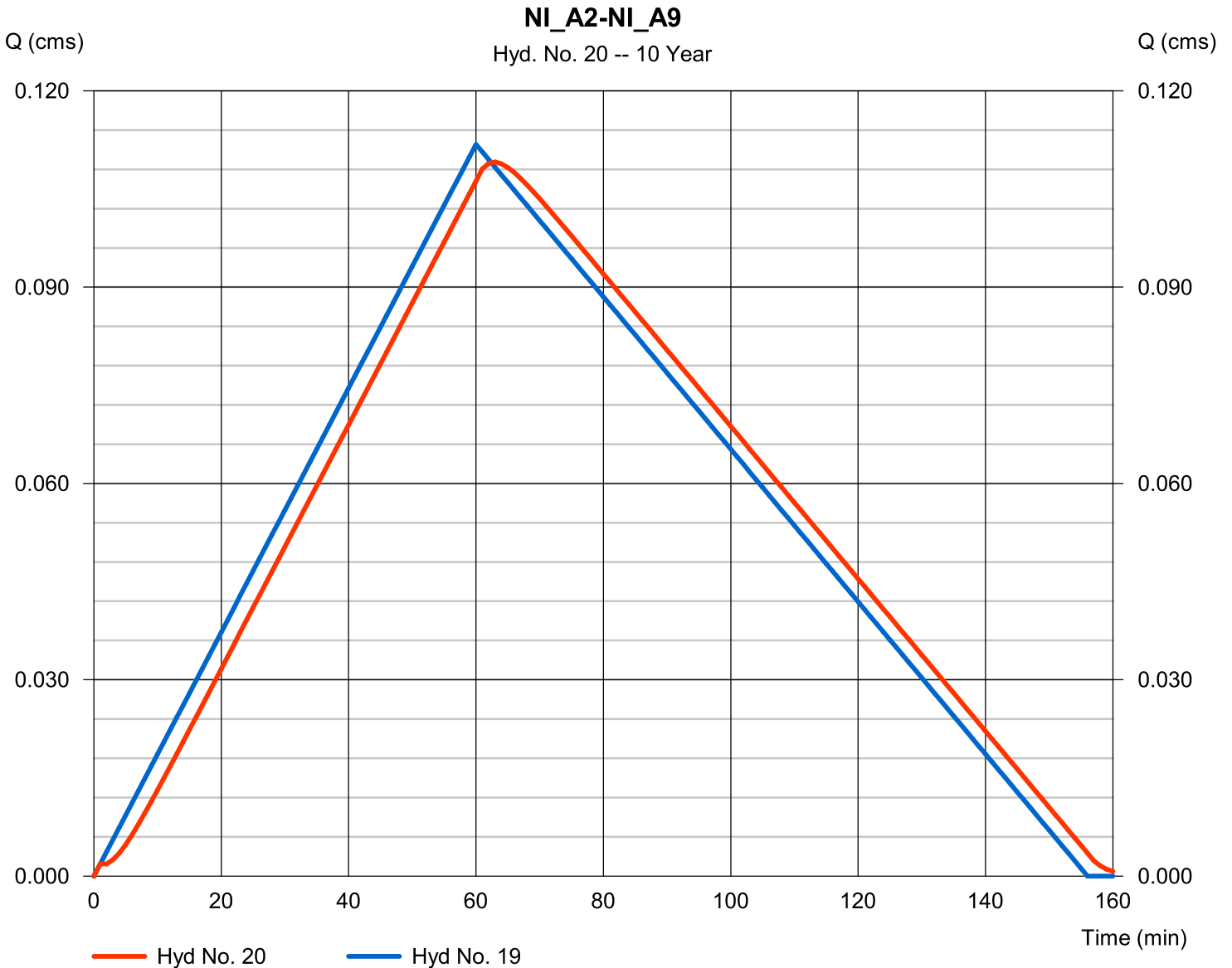
jeudi, avr 5, 2012

Hyd. No. 20

NI_A2-NI_A9

Hydrograph type	= Reach	Peak discharge	= 0.109 cms
Storm frequency	= 10 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 523.6 cum
Inflow hyd. No.	= 19 - NI_A2_Diversion	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.190	Rating curve m	= 1.353
Ave. velocity	= 1.47 m/s	Routing coeff.	= 0.3324

Modified Att-Kin routing method used.



Hydrograph Report

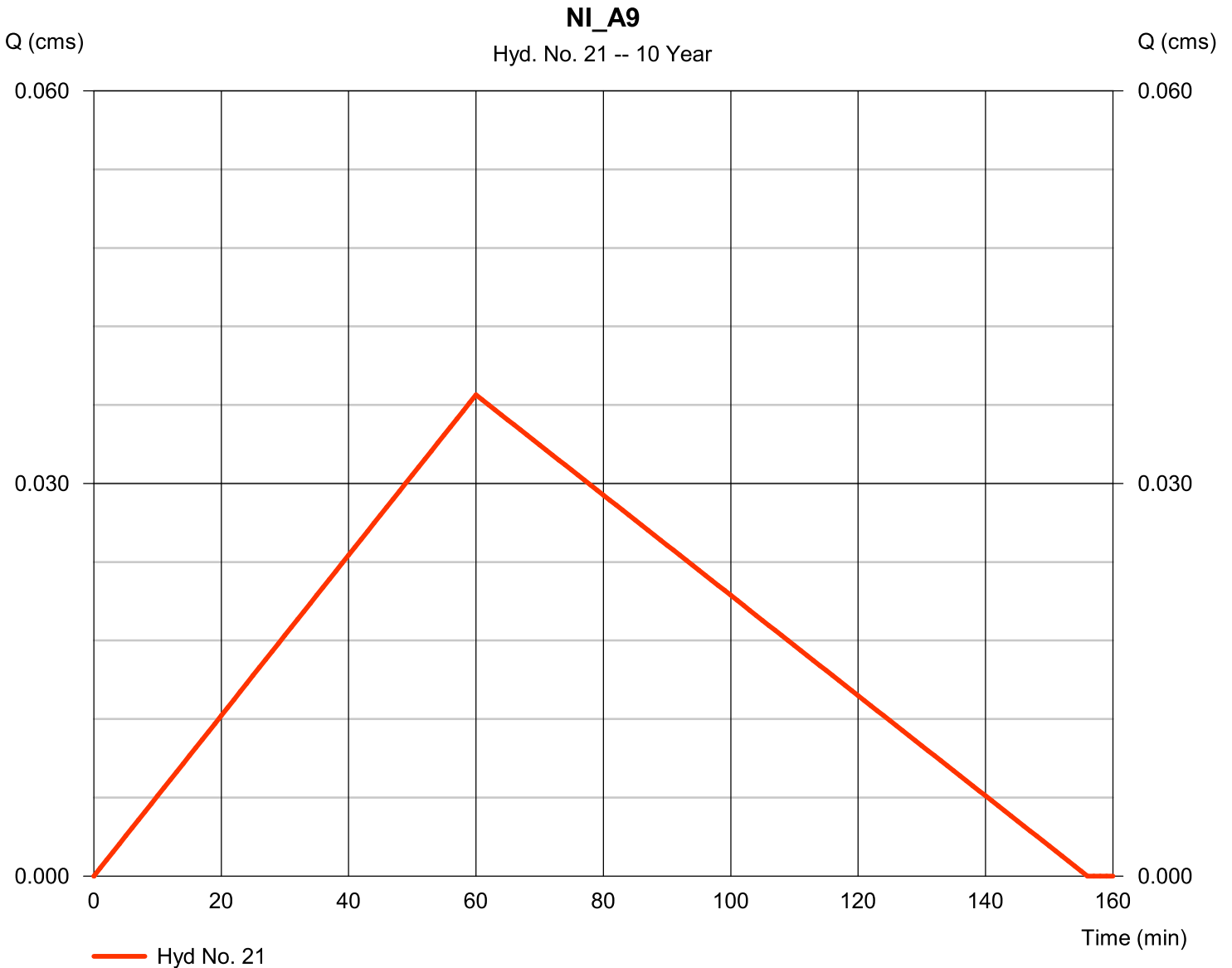
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Hyd. No. 21

NI_A9

Hydrograph type	= Rational	Peak discharge	= 0.037 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 172.1 cum
Drainage area	= 4.540 hectare	Runoff coeff.	= 0.14
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

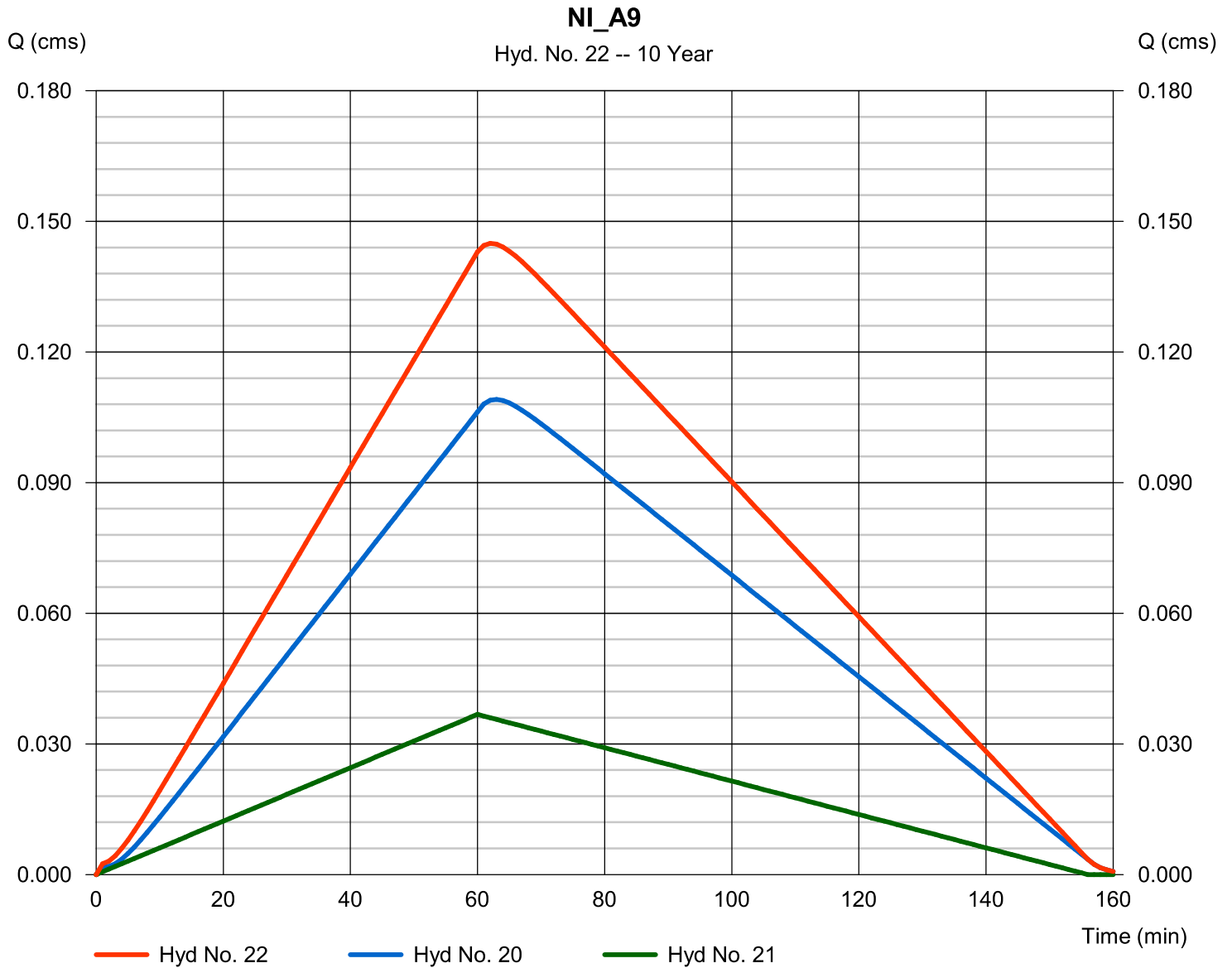
jeudi, avr 5, 2012

Hyd. No. 22

NI_A9

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 20, 21

Peak discharge = 0.145 cms
 Time to peak = 62 min
 Hyd. volume = 695.7 cum
 Contrib. drain. area = 4.540 hectare



Hydrograph Report

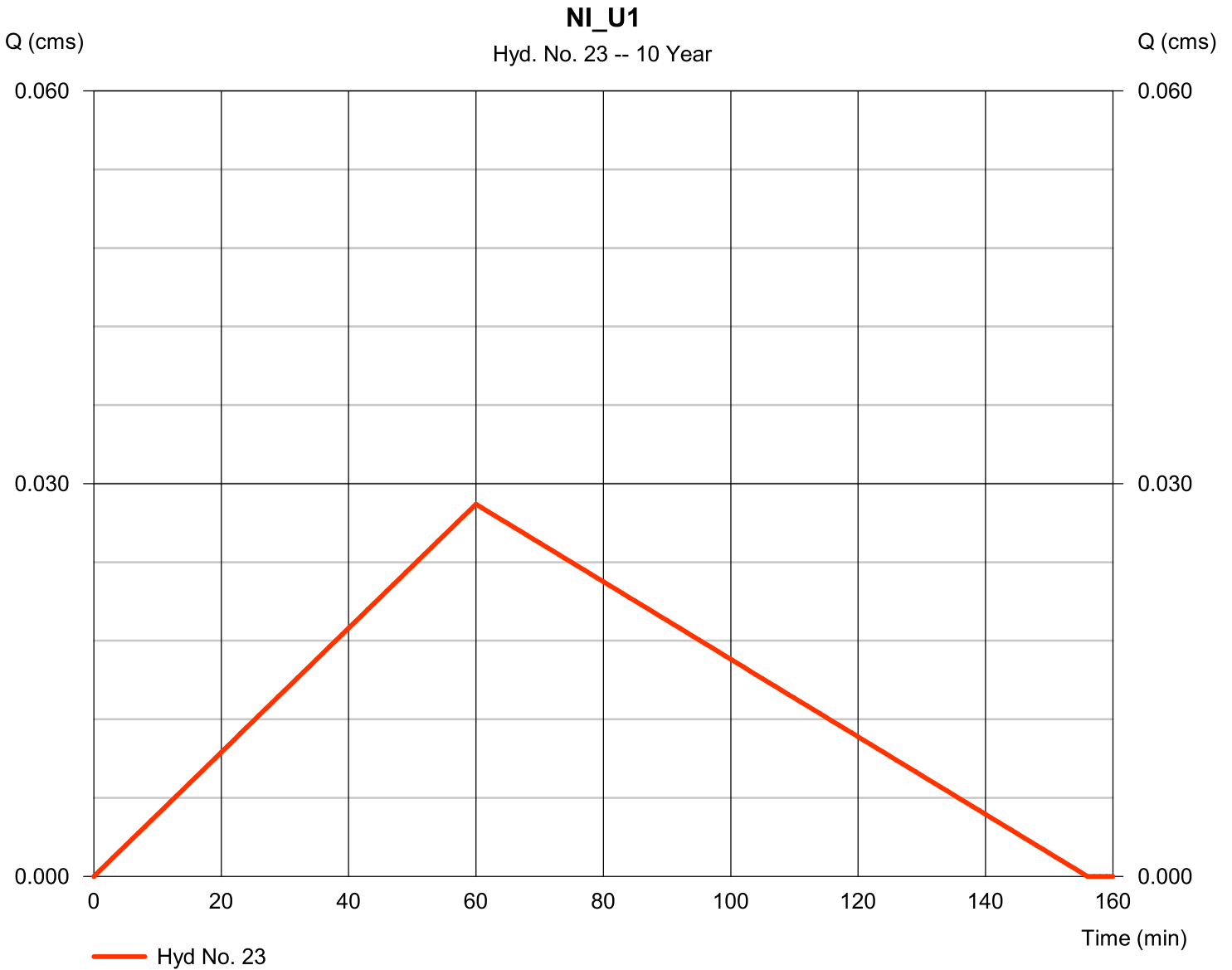
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Hyd. No. 23

NI_U1

Hydrograph type	= Rational	Peak discharge	= 0.028 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 133.0 cum
Drainage area	= 2.730 hectare	Runoff coeff.	= 0.18
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

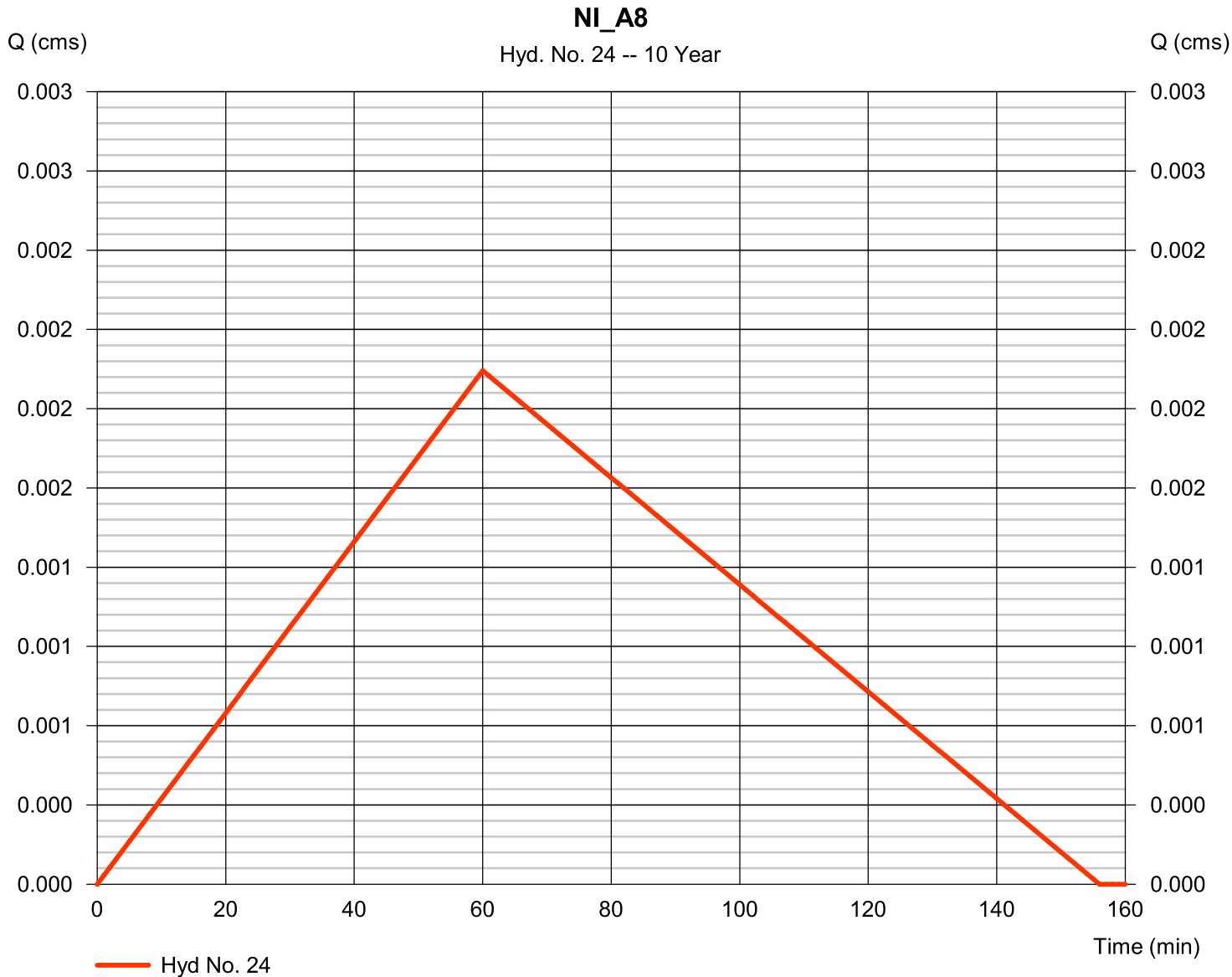
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 24

NI_A8

Hydrograph type	= Rational	Peak discharge	= 0.002 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 9.1 cum
Drainage area	= 0.560 hectare	Runoff coeff.	= 0.06
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

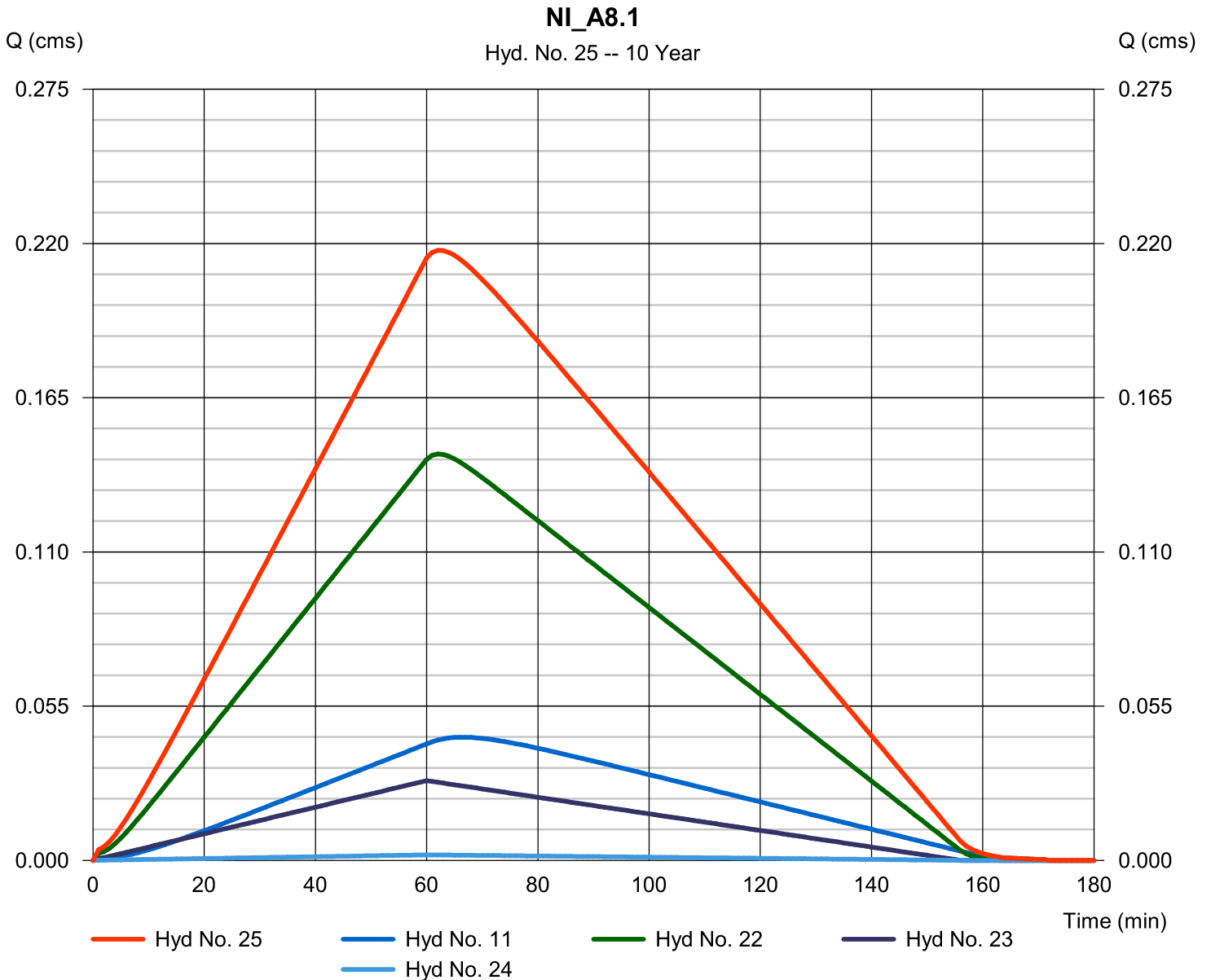
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 25

NI_A8.1

Hydrograph type	= Combine	Peak discharge	= 0.218 cms
Storm frequency	= 10 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 1 057.0 cum
Inflow hyds.	= 11, 22, 23, 24	Contrib. drain. area	= 3.290 hectare



Hydrograph Report

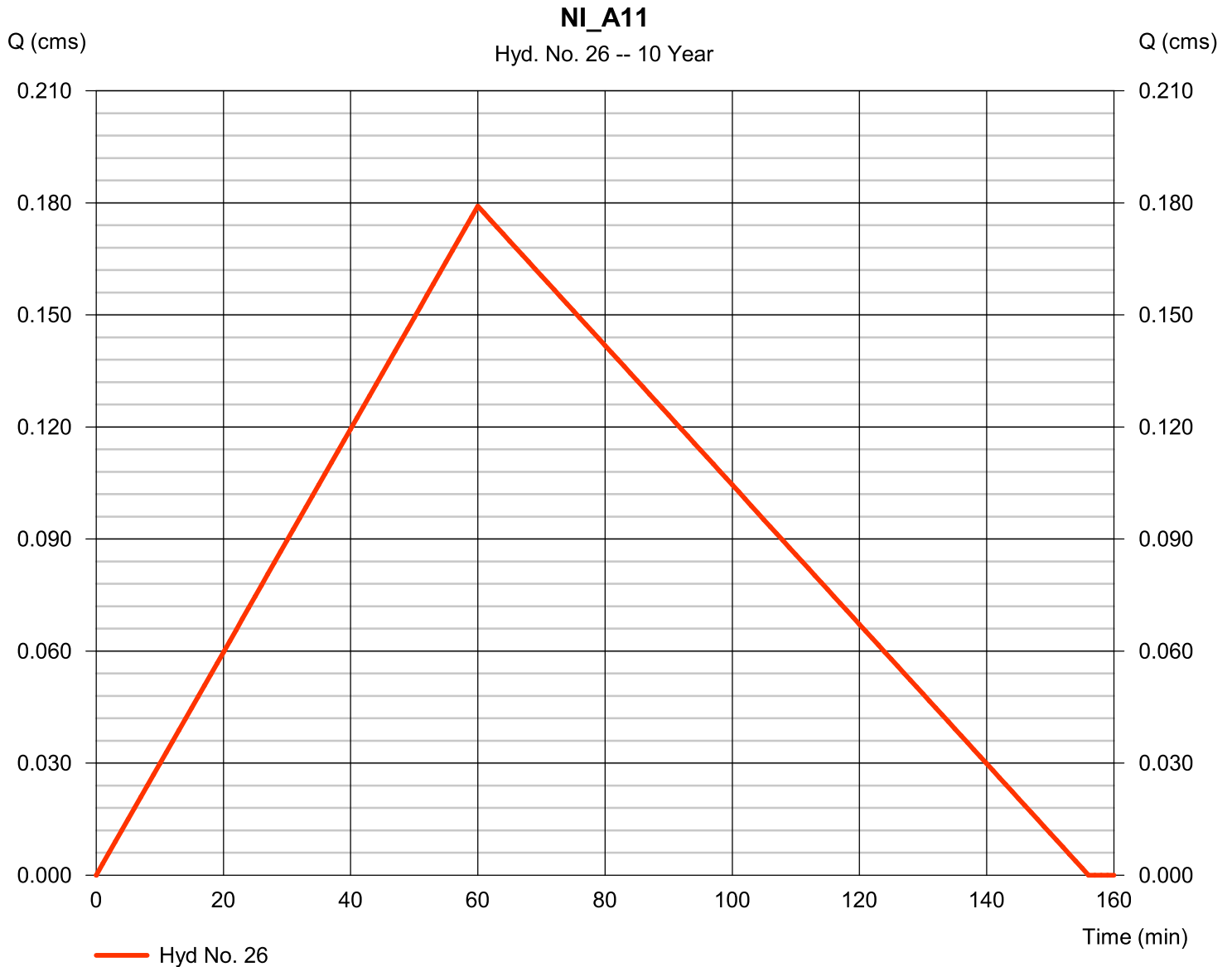
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 26

NI_A11

Hydrograph type	= Rational	Peak discharge	= 0.179 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 838.2 cum
Drainage area	= 20.640 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

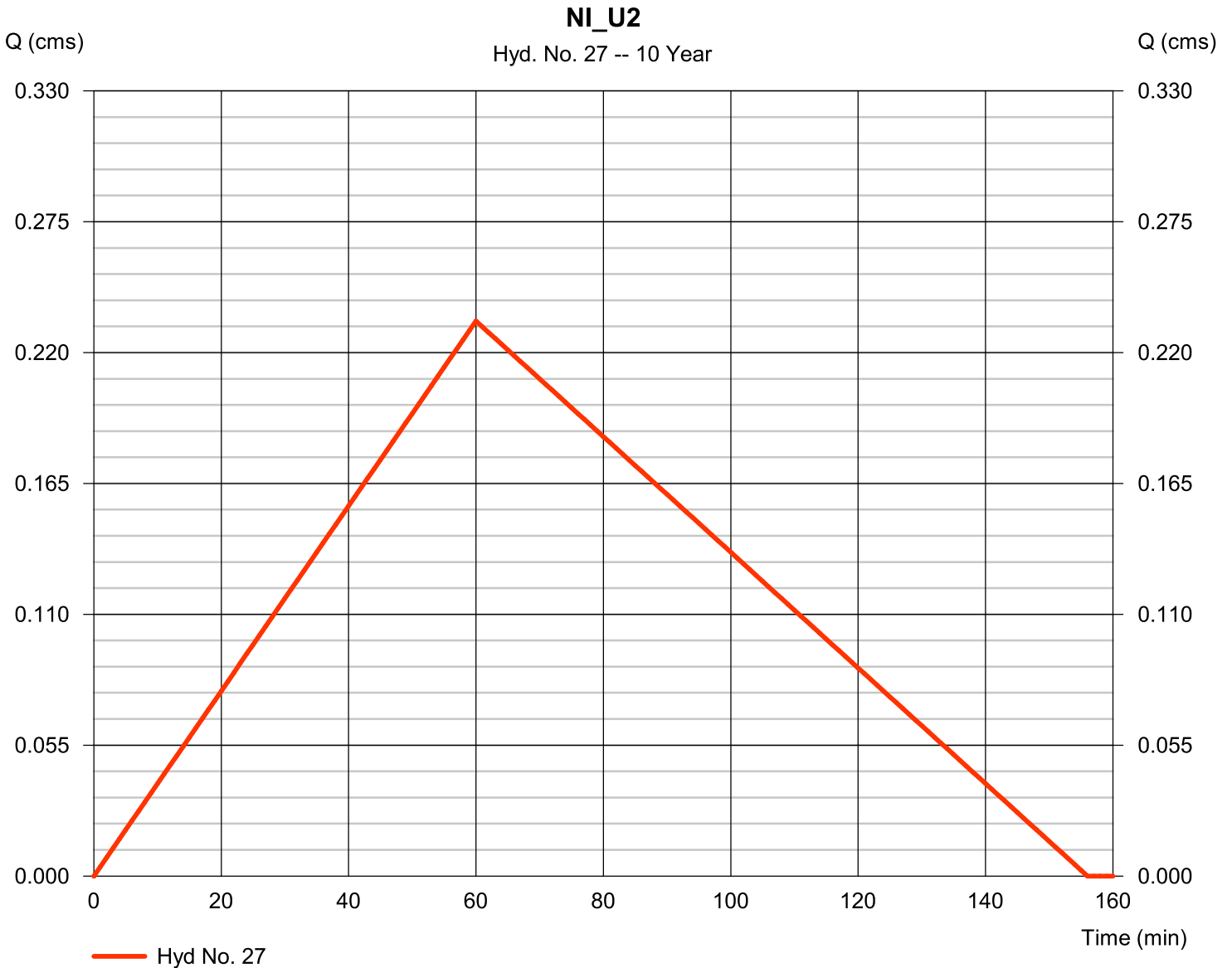
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 27

NI_U2

Hydrograph type	= Rational	Peak discharge	= 0.233 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 091.6 cum
Drainage area	= 10.080 hectare	Runoff coeff.	= 0.4
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

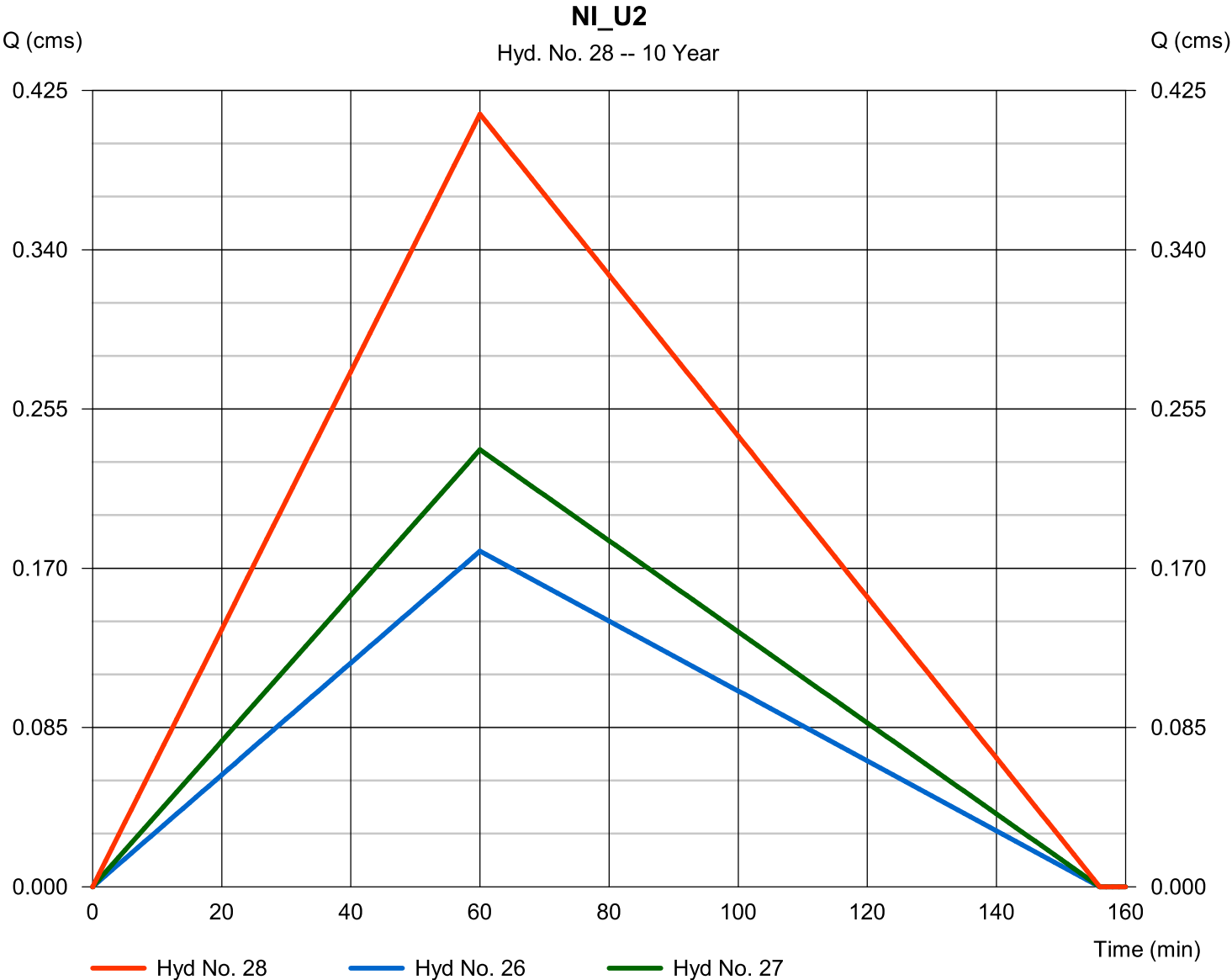
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Hyd. No. 28

NI_U2

Hydrograph type	= Combine	Peak discharge	= 0.412 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 929.9 cum
Inflow hyds.	= 26, 27	Contrib. drain. area	= 30.720 hectare



Hydrograph Report

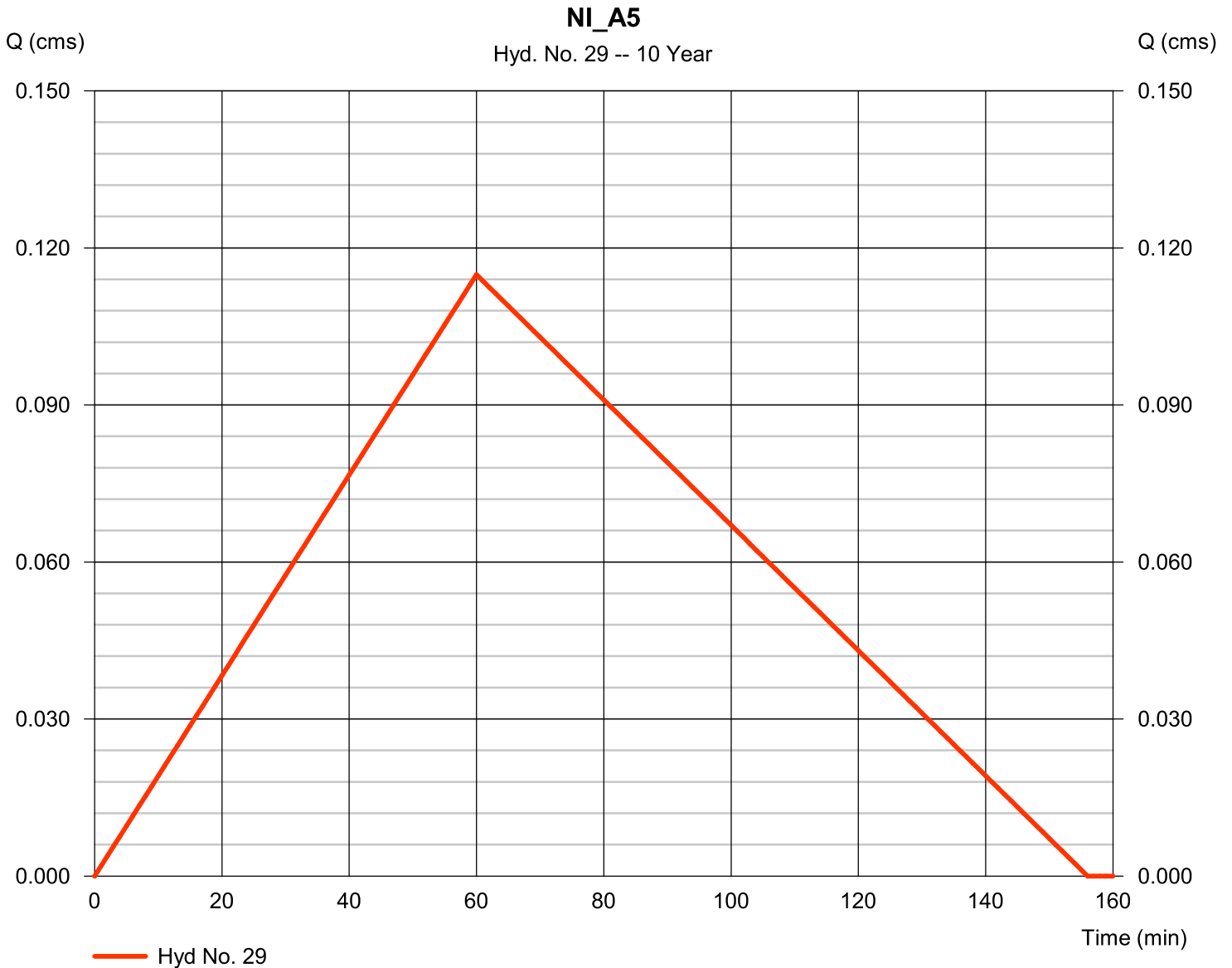
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 29

NI_A5

Hydrograph type	= Rational	Peak discharge	= 0.115 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 537.7 cum
Drainage area	= 13.240 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

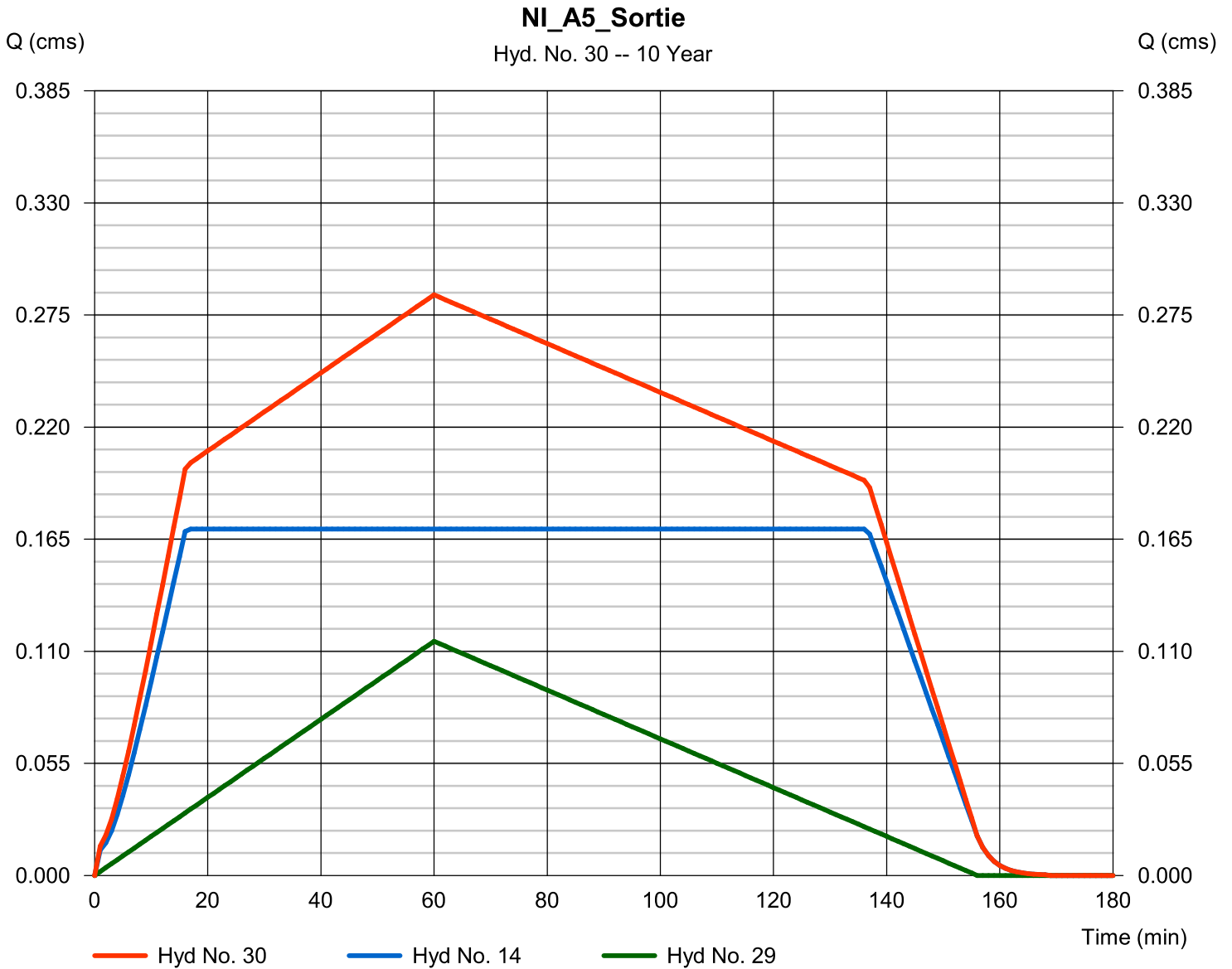
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 30

NI_A5_Sortie

Hydrograph type	= Combine	Peak discharge	= 0.285 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 955.0 cum
Inflow hyds.	= 14, 29	Contrib. drain. area	= 13.240 hectare



Hydrograph Report

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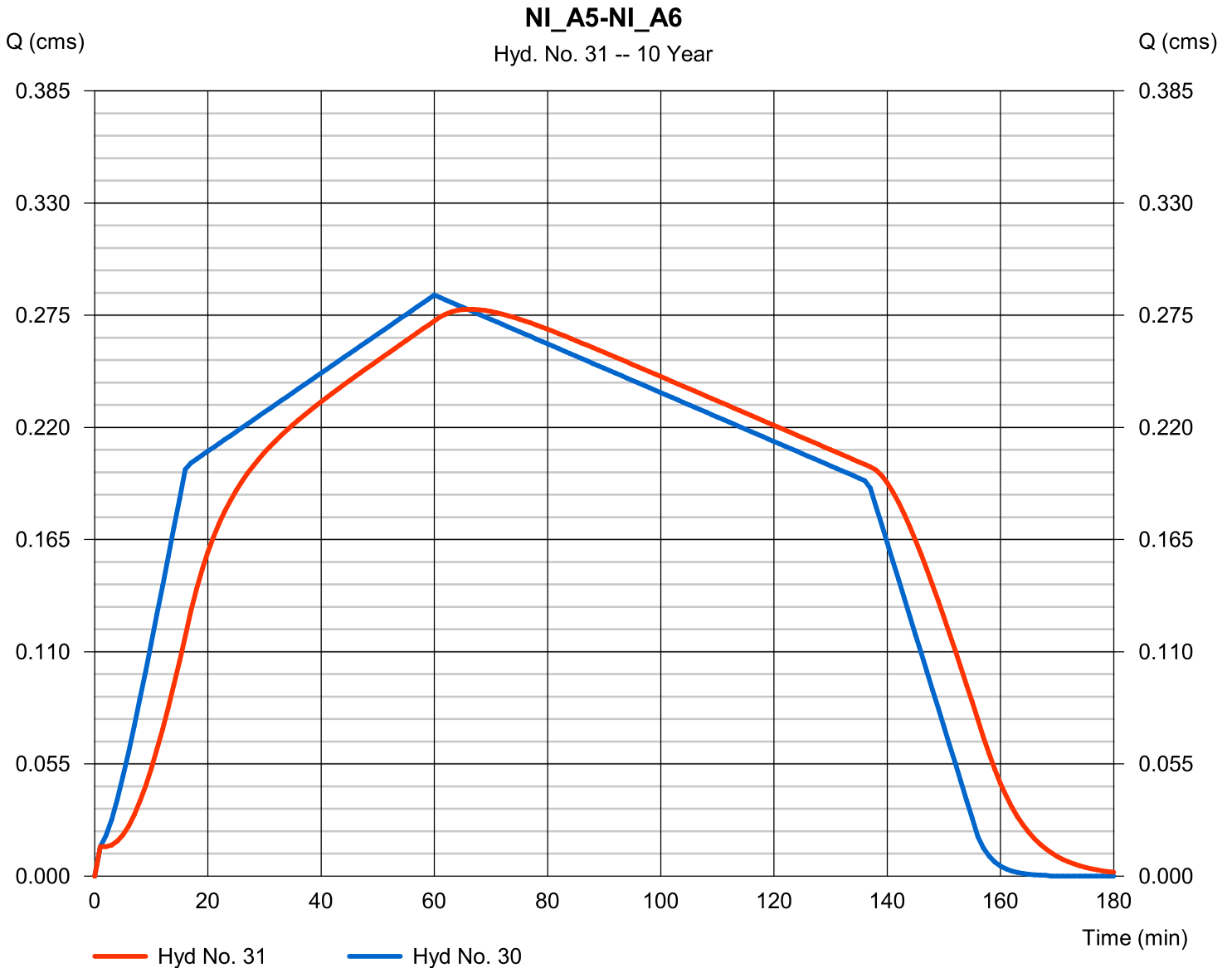
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Hyd. No. 31

NI_A5-NI_A6

Hydrograph type	= Reach	Peak discharge	= 0.278 cms
Storm frequency	= 10 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 1 960.6 cum
Inflow hyd. No.	= 30 - NI_A5_Sortie	Section type	= Trapezoidal
Reach length	= 530.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 1.07 m/s	Routing coeff.	= 0.1512

Modified Att-Kin routing method used.



Hydrograph Report

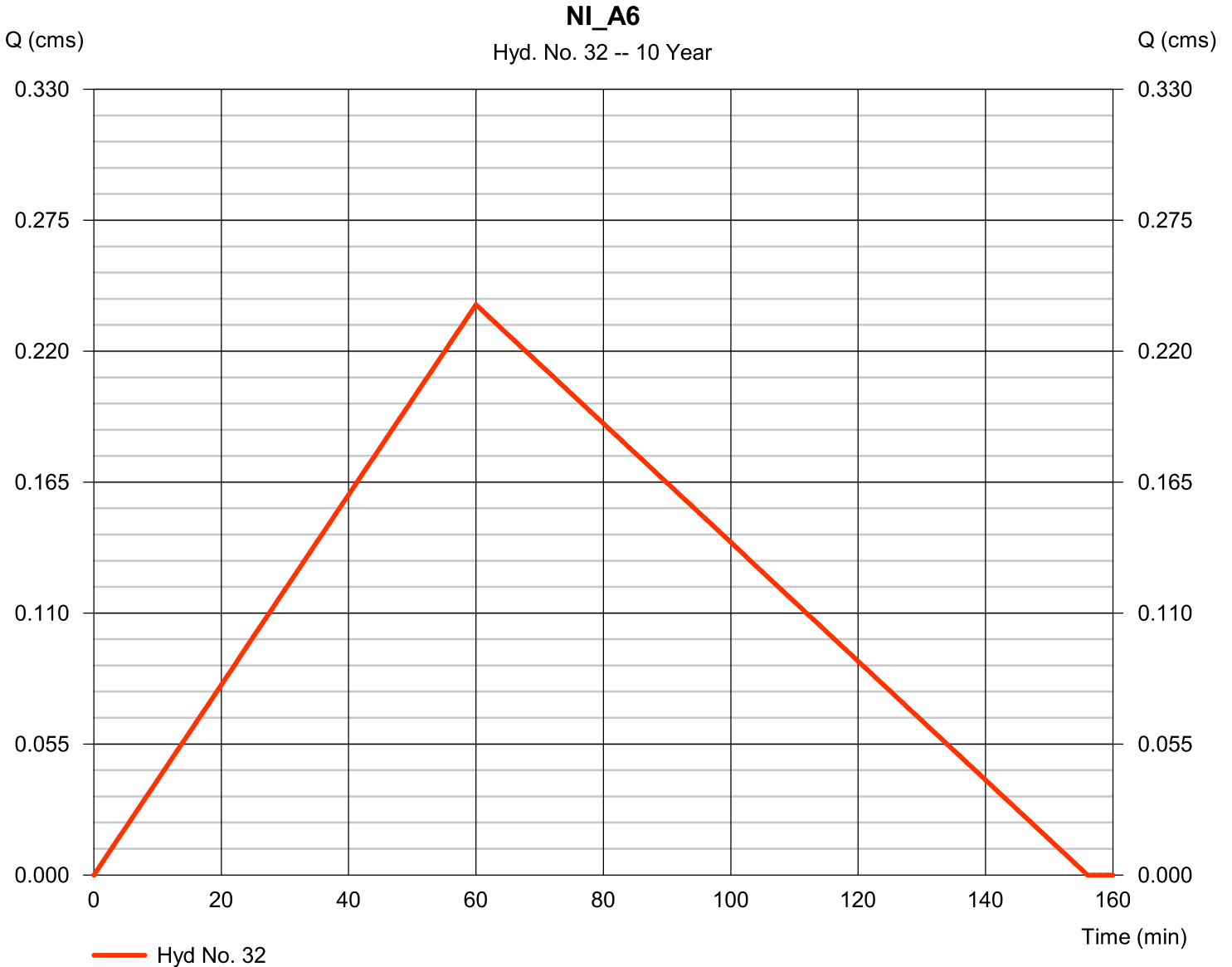
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Hyd. No. 32

NI_A6

Hydrograph type	= Rational	Peak discharge	= 0.240 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 120.9 cum
Drainage area	= 23.000 hectare	Runoff coeff.	= 0.18
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

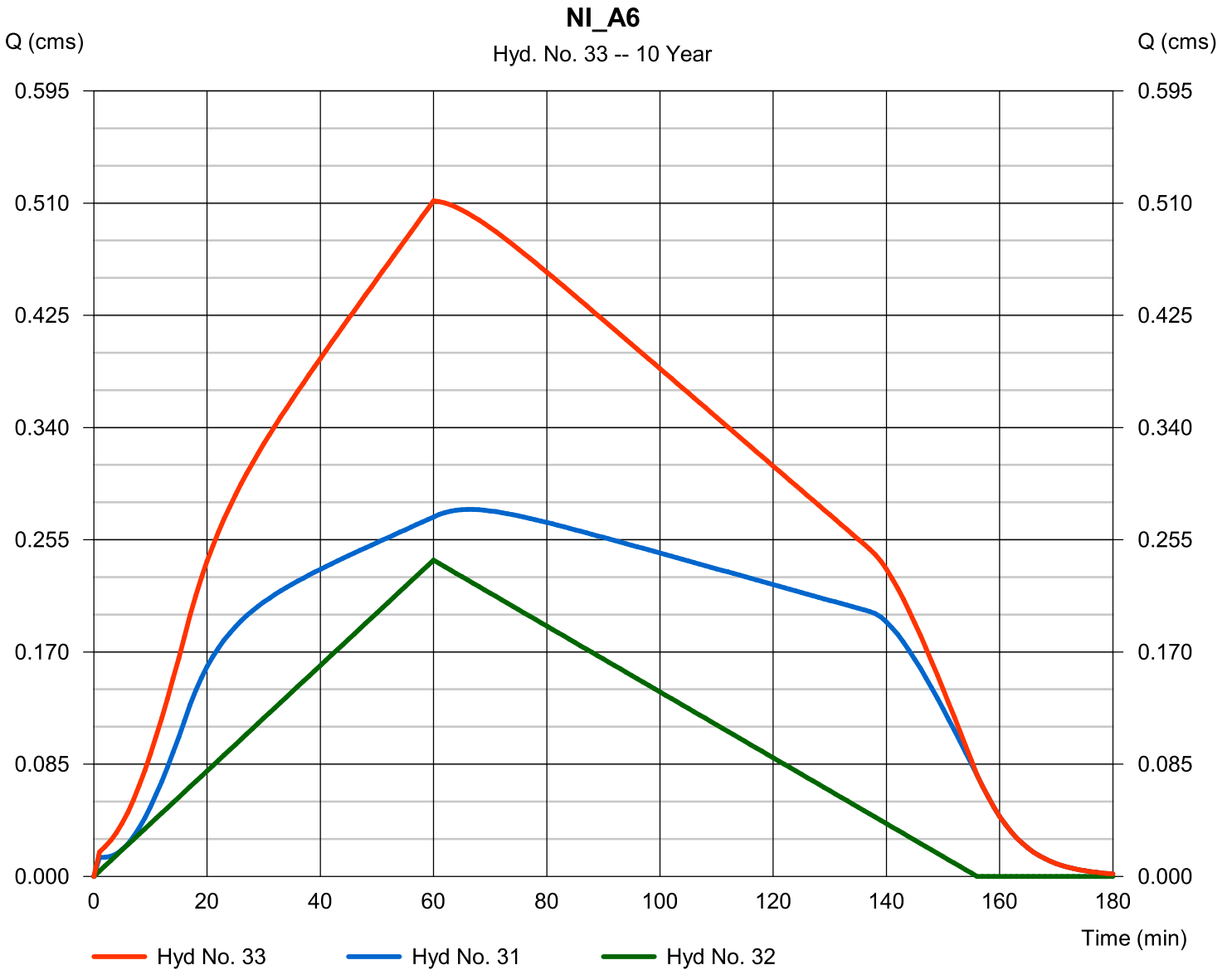
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Hyd. No. 33

NI_A6

Hydrograph type	= Combine	Peak discharge	= 0.512 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 081.5 cum
Inflow hyds.	= 31, 32	Contrib. drain. area	= 23.000 hectare



Hydrograph Report

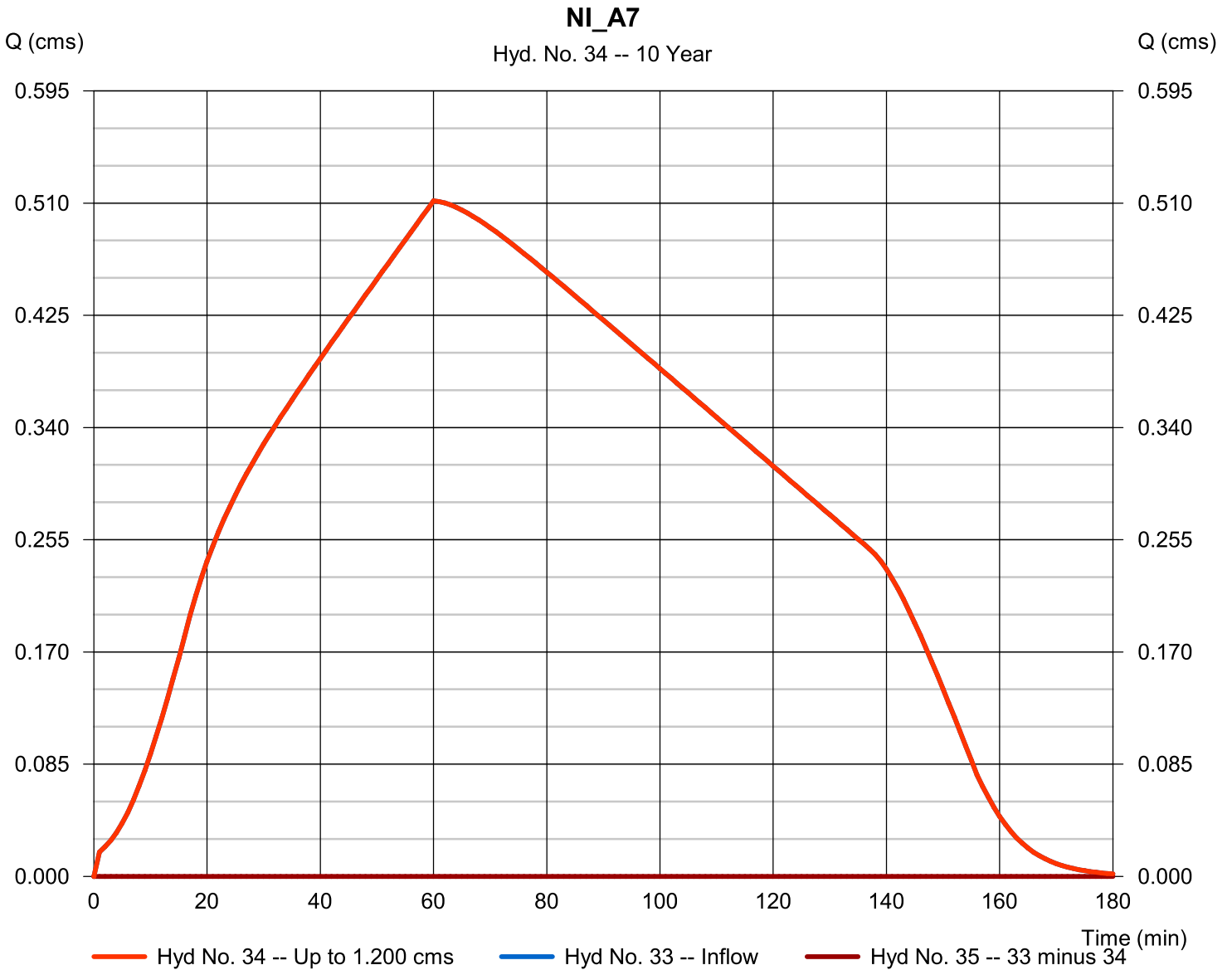
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Hyd. No. 34

NI_A7

Hydrograph type	= Diversion1	Peak discharge	= 0.512 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 081.5 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 35
Diversion method	= Constant Q	Constant Q	= 1.20 cms



Hydrograph Report

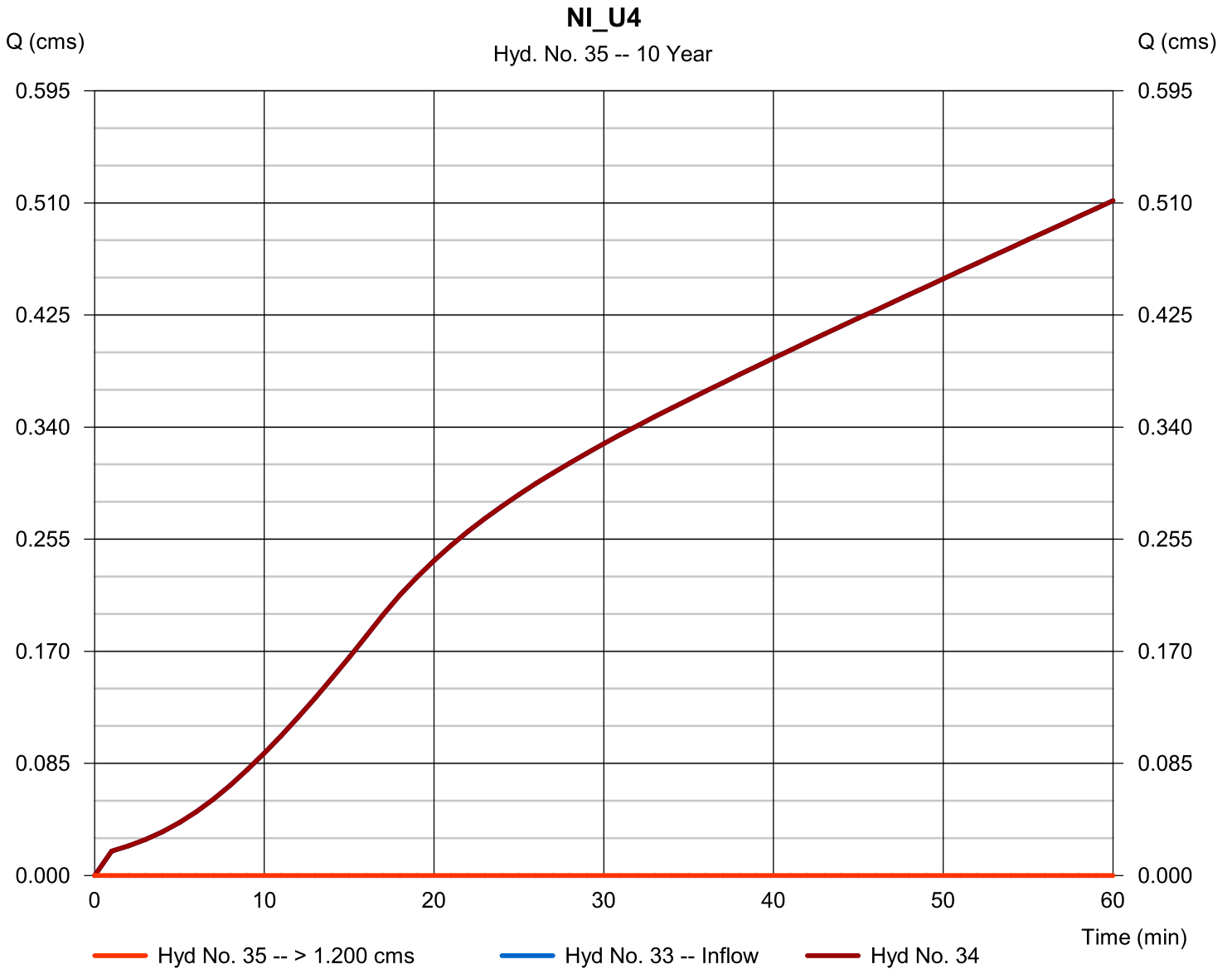
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Hyd. No. 35

NI_U4

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 34
Diversion method	= Constant Q	Constant Q	= 1.20 cms



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

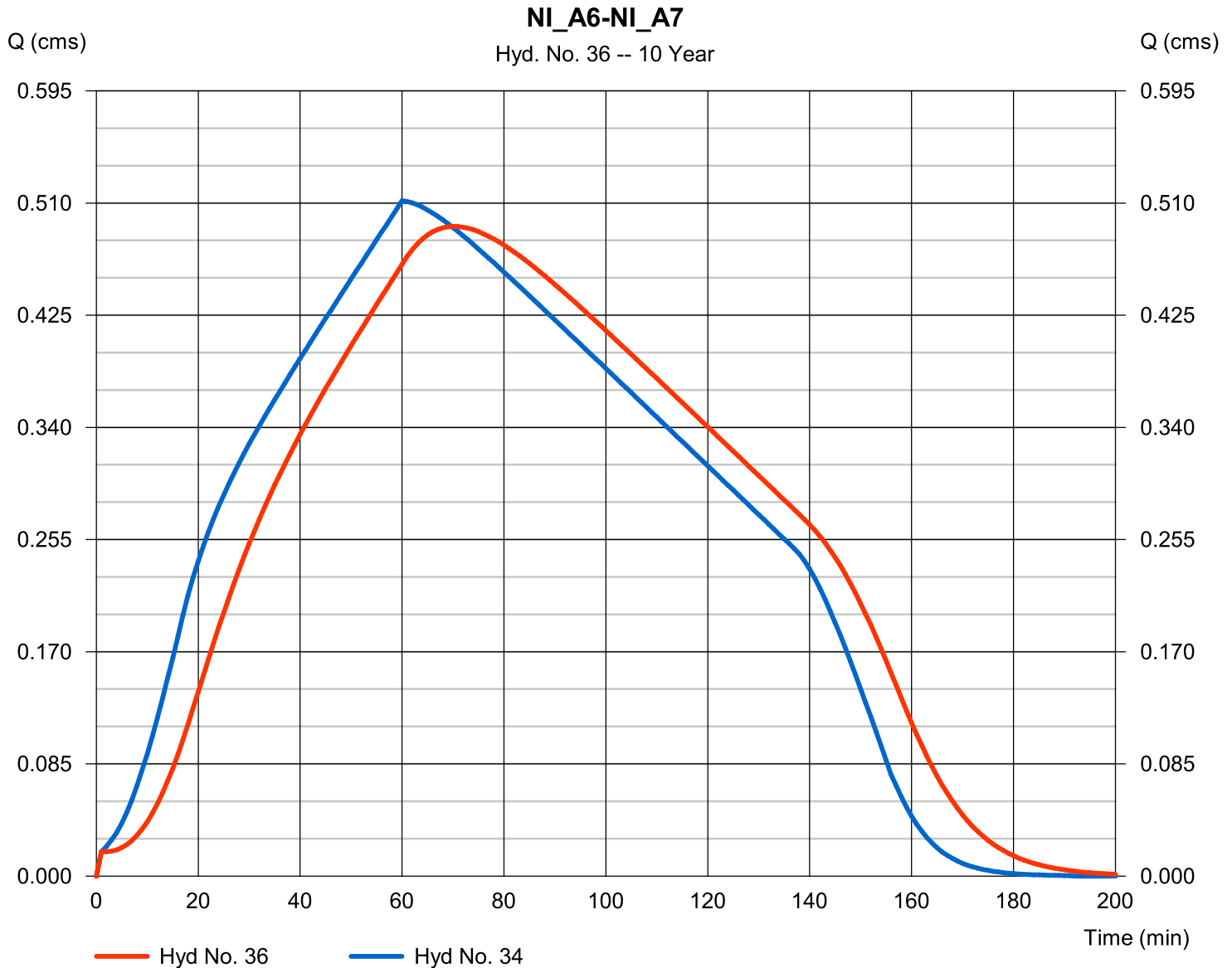
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Hyd. No. 36

NI_A6-NI_A7

Hydrograph type	= Reach	Peak discharge	= 0.492 cms
Storm frequency	= 10 yrs	Time to peak	= 70 min
Time interval	= 1 min	Hyd. volume	= 3 090.2 cum
Inflow hyd. No.	= 34 - NI_A7	Section type	= Trapezoidal
Reach length	= 150.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.25 m/s	Routing coeff.	= 0.1250

Modified Att-Kin routing method used.



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

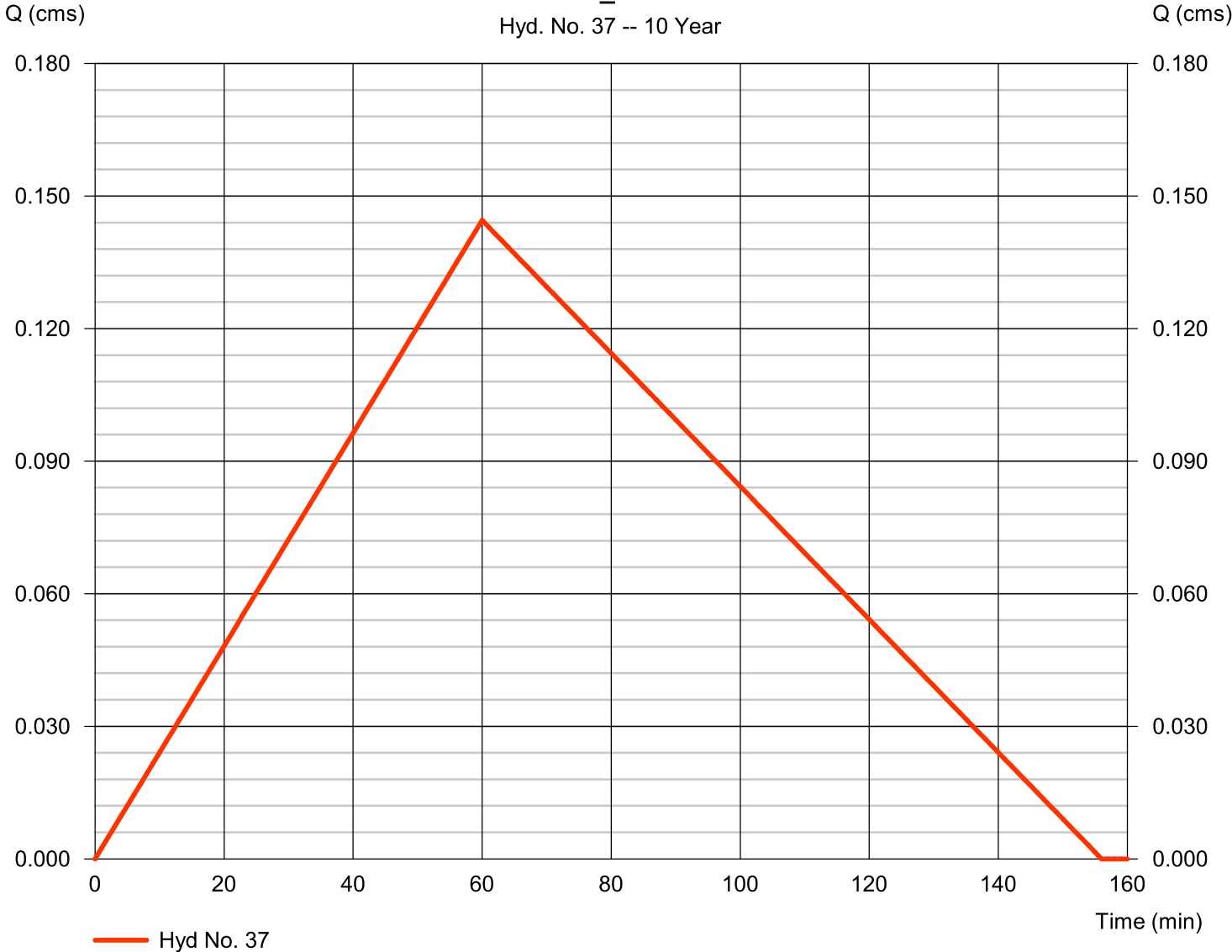
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Hyd. No. 37

NI_A7

Hydrograph type	= Rational	Peak discharge	= 0.145 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 676.3 cum
Drainage area	= 12.490 hectare	Runoff coeff.	= 0.2
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6

NI_A7
Hyd. No. 37 -- 10 Year



Hydrograph Report

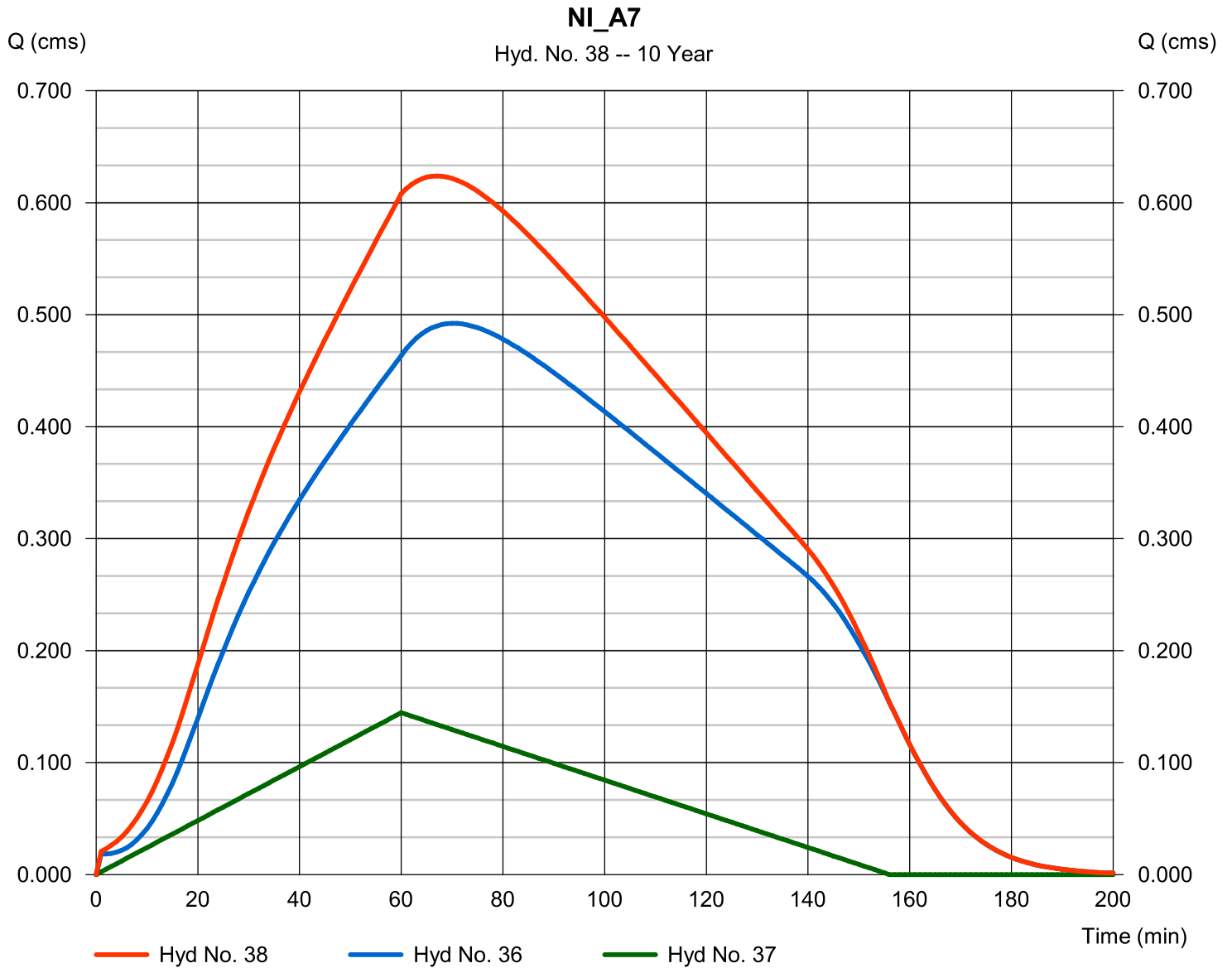
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Hyd. No. 38

NI_A7

Hydrograph type	= Combine	Peak discharge	= 0.624 cms
Storm frequency	= 10 yrs	Time to peak	= 67 min
Time interval	= 1 min	Hyd. volume	= 3 766.5 cum
Inflow hyds.	= 36, 37	Contrib. drain. area	= 12.490 hectare



Hydrograph Report

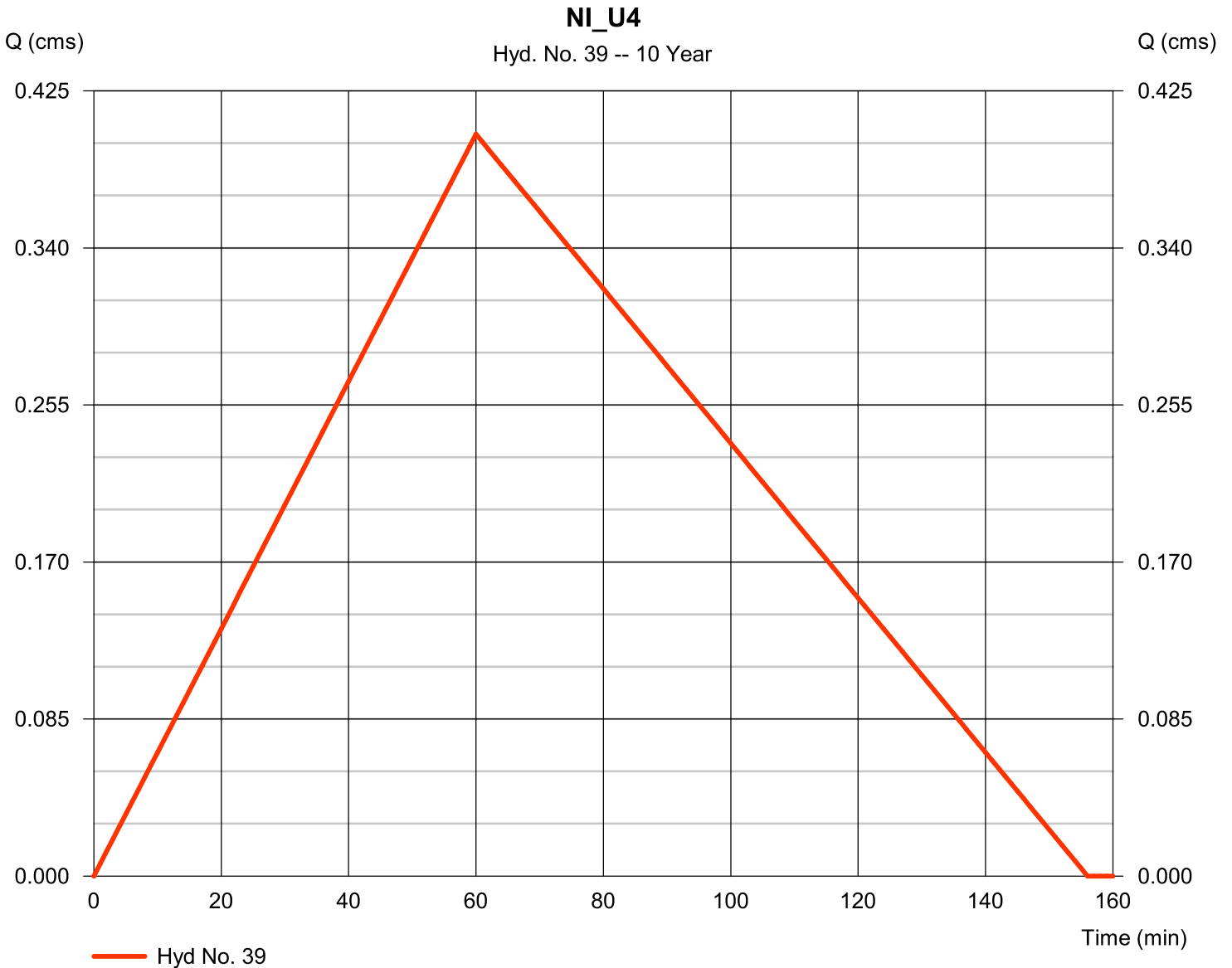
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Hyd. No. 39

NI_U4

Hydrograph type	= Rational	Peak discharge	= 0.402 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 879.2 cum
Drainage area	= 22.390 hectare	Runoff coeff.	= 0.31
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

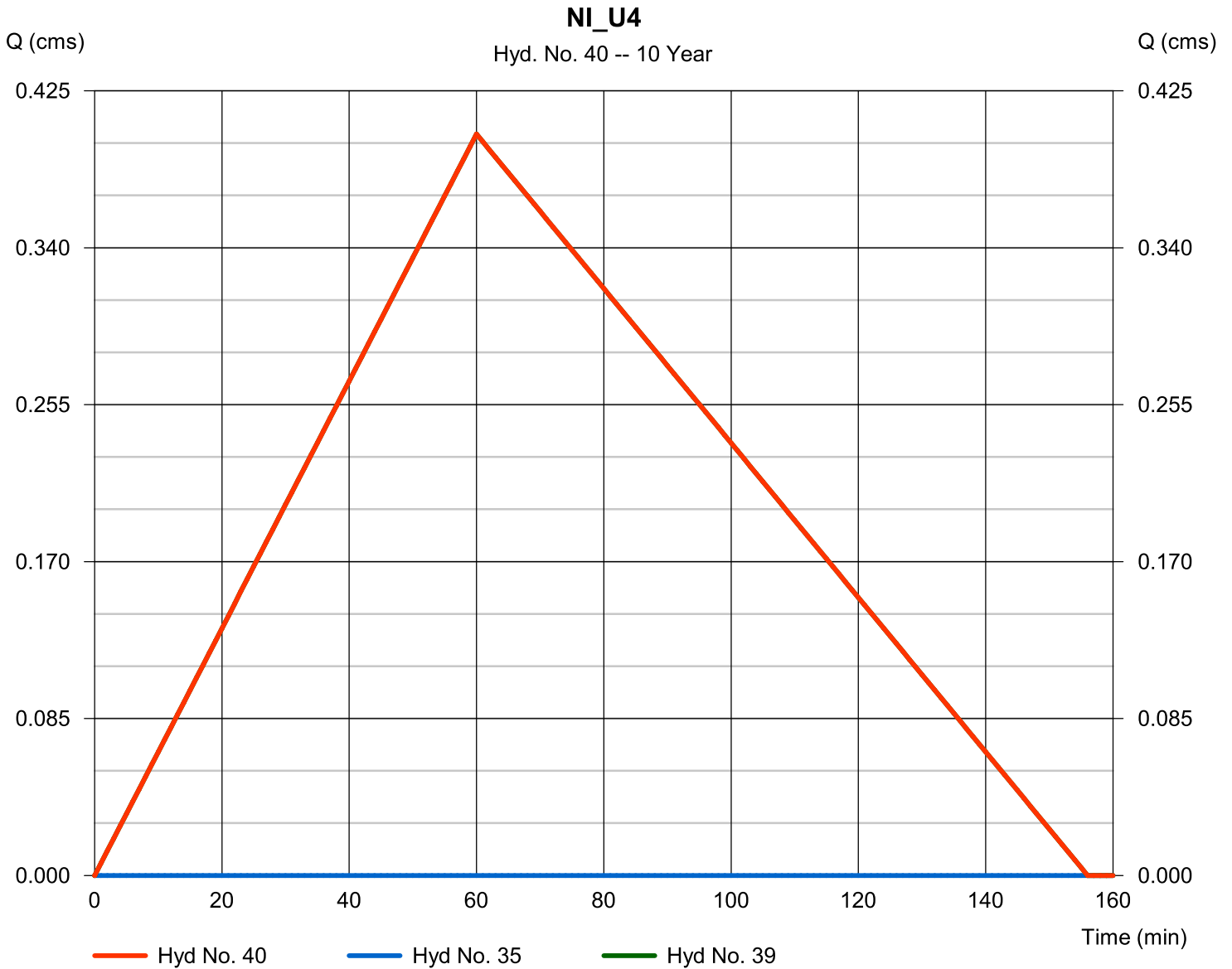
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 40

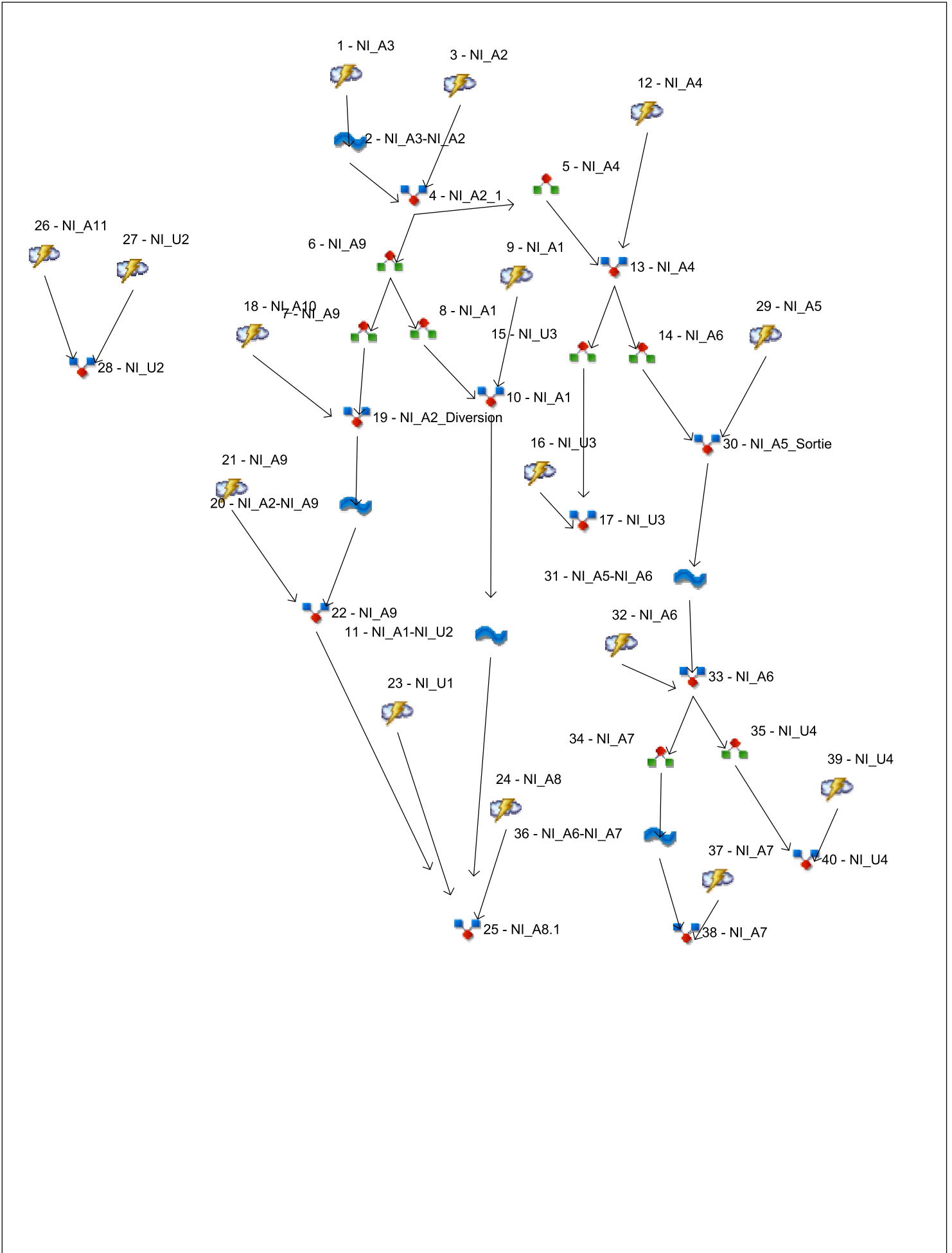
NI_U4

Hydrograph type	= Combine	Peak discharge	= 0.402 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 879.2 cum
Inflow hyds.	= 35, 39	Contrib. drain. area	= 22.390 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	-----	-----	-----	-----	-----	-----	0.997	-----	NI_A3
2	Reach	1	-----	-----	-----	-----	-----	-----	0.973	-----	NI_A3-NI_A2
3	Rational	-----	-----	-----	-----	-----	-----	-----	0.237	-----	NI_A2
4	Combine	2, 3	-----	-----	-----	-----	-----	-----	1.203	-----	NI_A2_1
5	Diversion1	4	-----	-----	-----	-----	-----	-----	0.850	-----	NI_A4
6	Diversion2	4	-----	-----	-----	-----	-----	-----	0.353	-----	NI_A9
7	Diversion1	6	-----	-----	-----	-----	-----	-----	0.353	-----	NI_A9
8	Diversion2	6	-----	-----	-----	-----	-----	-----	0.000	-----	NI_A1
9	Rational	-----	-----	-----	-----	-----	-----	-----	0.094	-----	NI_A1
10	Combine	8, 9	-----	-----	-----	-----	-----	-----	0.094	-----	NI_A1
11	Reach	10	-----	-----	-----	-----	-----	-----	0.089	-----	NI_A1-NI_U2
12	Rational	-----	-----	-----	-----	-----	-----	-----	0.138	-----	NI_A4
13	Combine	5, 12	-----	-----	-----	-----	-----	-----	0.988	-----	NI_A4
14	Diversion1	13	-----	-----	-----	-----	-----	-----	0.170	-----	NI_A6
15	Diversion2	13	-----	-----	-----	-----	-----	-----	0.818	-----	NI_U3
16	Rational	-----	-----	-----	-----	-----	-----	-----	0.550	-----	NI_U3
17	Combine	15, 16	-----	-----	-----	-----	-----	-----	1.368	-----	NI_U3
18	Rational	-----	-----	-----	-----	-----	-----	-----	0.202	-----	NI_A10
19	Combine	7, 18	-----	-----	-----	-----	-----	-----	0.551	-----	NI_A2_Diversion
20	Reach	19	-----	-----	-----	-----	-----	-----	0.543	-----	NI_A2-NI_A9
21	Rational	-----	-----	-----	-----	-----	-----	-----	0.070	-----	NI_A9
22	Combine	20, 21	-----	-----	-----	-----	-----	-----	0.610	-----	NI_A9
23	Rational	-----	-----	-----	-----	-----	-----	-----	0.048	-----	NI_U1
24	Rational	-----	-----	-----	-----	-----	-----	-----	0.004	-----	NI_A8
25	Combine	11, 22, 23, 24	-----	-----	-----	-----	-----	-----	0.749	-----	NI_A8.1
26	Rational	-----	-----	-----	-----	-----	-----	-----	0.318	-----	NI_A11
27	Rational	-----	-----	-----	-----	-----	-----	-----	0.319	-----	NI_U2
28	Combine	26, 27	-----	-----	-----	-----	-----	-----	0.637	-----	NI_U2
29	Rational	-----	-----	-----	-----	-----	-----	-----	0.214	-----	NI_A5
30	Combine	14, 29	-----	-----	-----	-----	-----	-----	0.384	-----	NI_A5_Sortie
31	Reach	30	-----	-----	-----	-----	-----	-----	0.372	-----	NI_A5-NI_A6
32	Rational	-----	-----	-----	-----	-----	-----	-----	0.426	-----	NI_A6
33	Combine	31, 32	-----	-----	-----	-----	-----	-----	0.788	-----	NI_A6
34	Diversion1	33	-----	-----	-----	-----	-----	-----	0.788	-----	NI_A7
35	Diversion2	33	-----	-----	-----	-----	-----	-----	0.000	-----	NI_U4
36	Reach	34	-----	-----	-----	-----	-----	-----	0.758	-----	NI_A6-NI_A7

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description	
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr		
37	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.250	-----	NI_A7
38	Combine	36, 37	-----	-----	-----	-----	-----	-----	-----	0.988	-----	NI_A7
39	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.570	-----	NI_U4
40	Combine	35, 39	-----	-----	-----	-----	-----	-----	-----	0.570	-----	NI_U4

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.997	1	60	4 664.3	-----	-----	-----	NI_A3
2	Reach	0.973	1	63	4 667.2	1	-----	-----	NI_A3-NI_A2
3	Rational	0.237	1	60	1 110.6	-----	-----	-----	NI_A2
4	Combine	1.203	1	62	5 777.8	2, 3	-----	-----	NI_A2_1
5	Diversion1	0.850	1	44	5 224.7	4	-----	-----	NI_A4
6	Diversion2	0.353	1	62	553.1	4	-----	-----	NI_A9
7	Diversion1	0.353	1	62	553.1	6	-----	-----	NI_A9
8	Diversion2	0.000	1	n/a	0.0	6	-----	-----	NI_A1
9	Rational	0.094	1	60	438.0	-----	-----	-----	NI_A1
10	Combine	0.094	1	60	438.0	8, 9	-----	-----	NI_A1
11	Reach	0.089	1	65	438.4	10	-----	-----	NI_A1-NI_U2
12	Rational	0.138	1	60	647.2	-----	-----	-----	NI_A4
13	Combine	0.988	1	60	5 871.9	5, 12	-----	-----	NI_A4
14	Diversion1	0.170	1	30	1 501.9	13	-----	-----	NI_A6
15	Diversion2	0.818	1	60	4 370.0	13	-----	-----	NI_U3
16	Rational	0.550	1	60	2 573.5	-----	-----	-----	NI_U3
17	Combine	1.368	1	60	6 943.5	15, 16	-----	-----	NI_U3
18	Rational	0.202	1	60	944.0	-----	-----	-----	NI_A10
19	Combine	0.551	1	62	1 497.1	7, 18	-----	-----	NI_A2_Diversion
20	Reach	0.543	1	64	1 497.5	19	-----	-----	NI_A2-NI_A9
21	Rational	0.070	1	60	327.8	-----	-----	-----	NI_A9
22	Combine	0.610	1	64	1 825.3	20, 21	-----	-----	NI_A9
23	Rational	0.048	1	60	226.7	-----	-----	-----	NI_U1
24	Rational	0.004	1	60	18.2	-----	-----	-----	NI_A8
25	Combine	0.749	1	64	2 508.5	11, 22, 23, 24	-----	-----	NI_A8.1
26	Rational	0.318	1	60	1 490.2	-----	-----	-----	NI_A11
27	Rational	0.319	1	60	1 491.9	-----	-----	-----	NI_U2
28	Combine	0.637	1	60	2 982.1	26, 27	-----	-----	NI_U2
29	Rational	0.214	1	60	1 003.7	-----	-----	-----	NI_A5
30	Combine	0.384	1	60	2 505.6	14, 29	-----	-----	NI_A5_Sortie
31	Reach	0.372	1	66	2 515.3	30	-----	-----	NI_A5-NI_A6
32	Rational	0.426	1	60	1 992.7	-----	-----	-----	NI_A6
33	Combine	0.788	1	60	4 508.0	31, 32	-----	-----	NI_A6
34	Diversion1	0.788	1	60	4 508.0	33	-----	-----	NI_A7
35	Diversion2	0.000	1	n/a	0.0	33	-----	-----	NI_U4
36	Reach	0.758	1	69	4 522.4	34	-----	-----	NI_A6-NI_A7
E:\MODELISATION_HYDRAFLOW\ALSP1025\NiPierc\50m07						jeudi, avr 5, 2012			

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description	
37	Rational	0.250	1	60	1 172.3	-----	-----	-----	NI_A7	
38	Combine	0.988	1	66	5 694.7	36, 37	-----	-----	NI_A7	
39	Rational	0.570	1	60	2 667.3	-----	-----	-----	NI_U4	
40	Combine	0.570	1	60	2 667.3	35, 39	-----	-----	NI_U4	
					E:\MODELISATION_HYDRAFLOW\ALSP110\125 Ni Periode 50 m.gpw		jeudi, avr 5, 2012			

Hydrograph Report

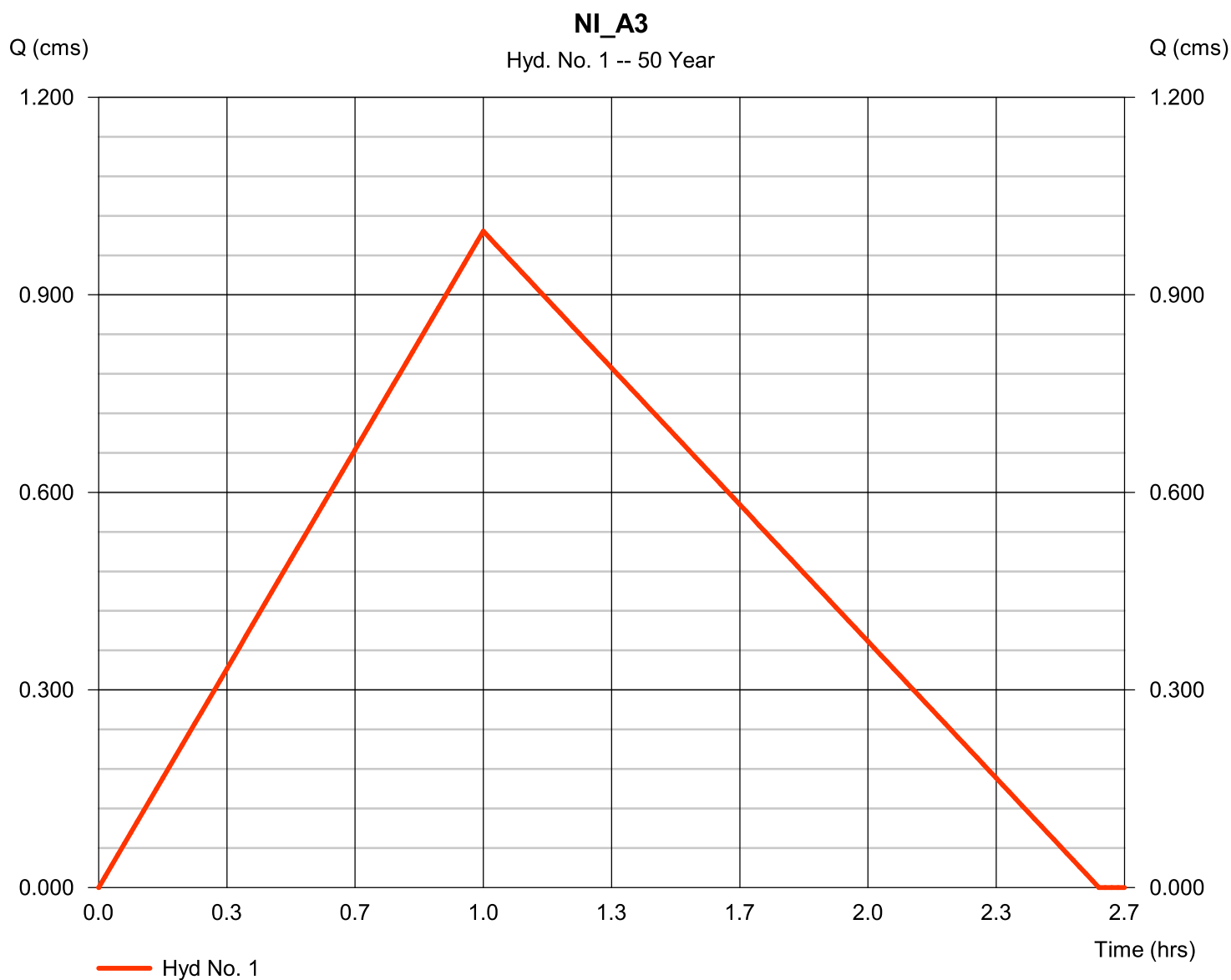
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 1

NI_A3

Hydrograph type	= Rational	Peak discharge	= 0.997 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 4 664.3 cum
Drainage area	= 58.730 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

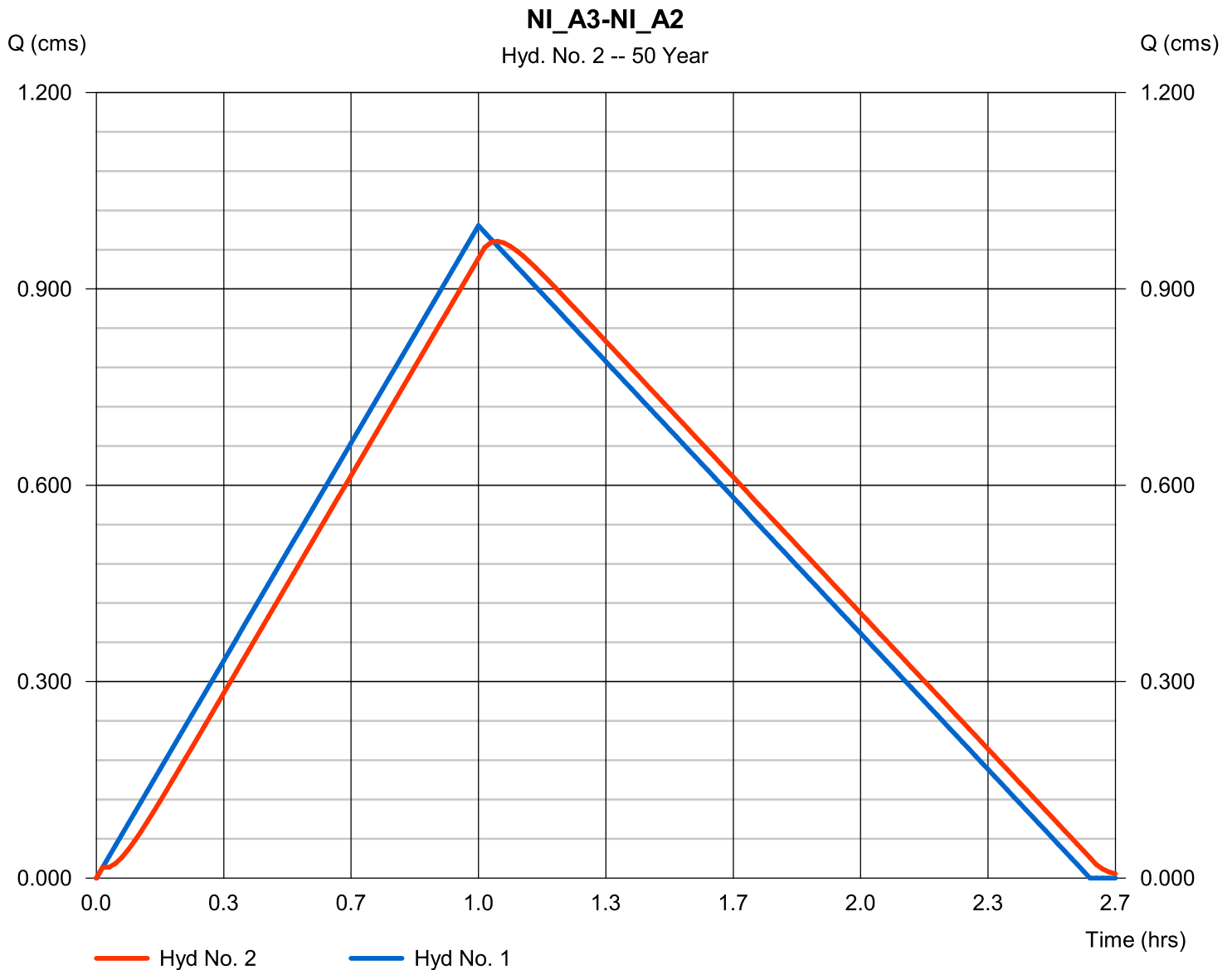
jeudi, avr 5, 2012

Hyd. No. 2

NI_A3-NI_A2

Hydrograph type	= Reach	Peak discharge	= 0.973 cms
Storm frequency	= 50 yrs	Time to peak	= 1.05 hrs
Time interval	= 1 min	Hyd. volume	= 4 667.2 cum
Inflow hyd. No.	= 1 - NI_A3	Section type	= Trapezoidal
Reach length	= 500.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 2.47 m/s	Routing coeff.	= 0.3341

Modified Att-Kin routing method used.



Hydrograph Report

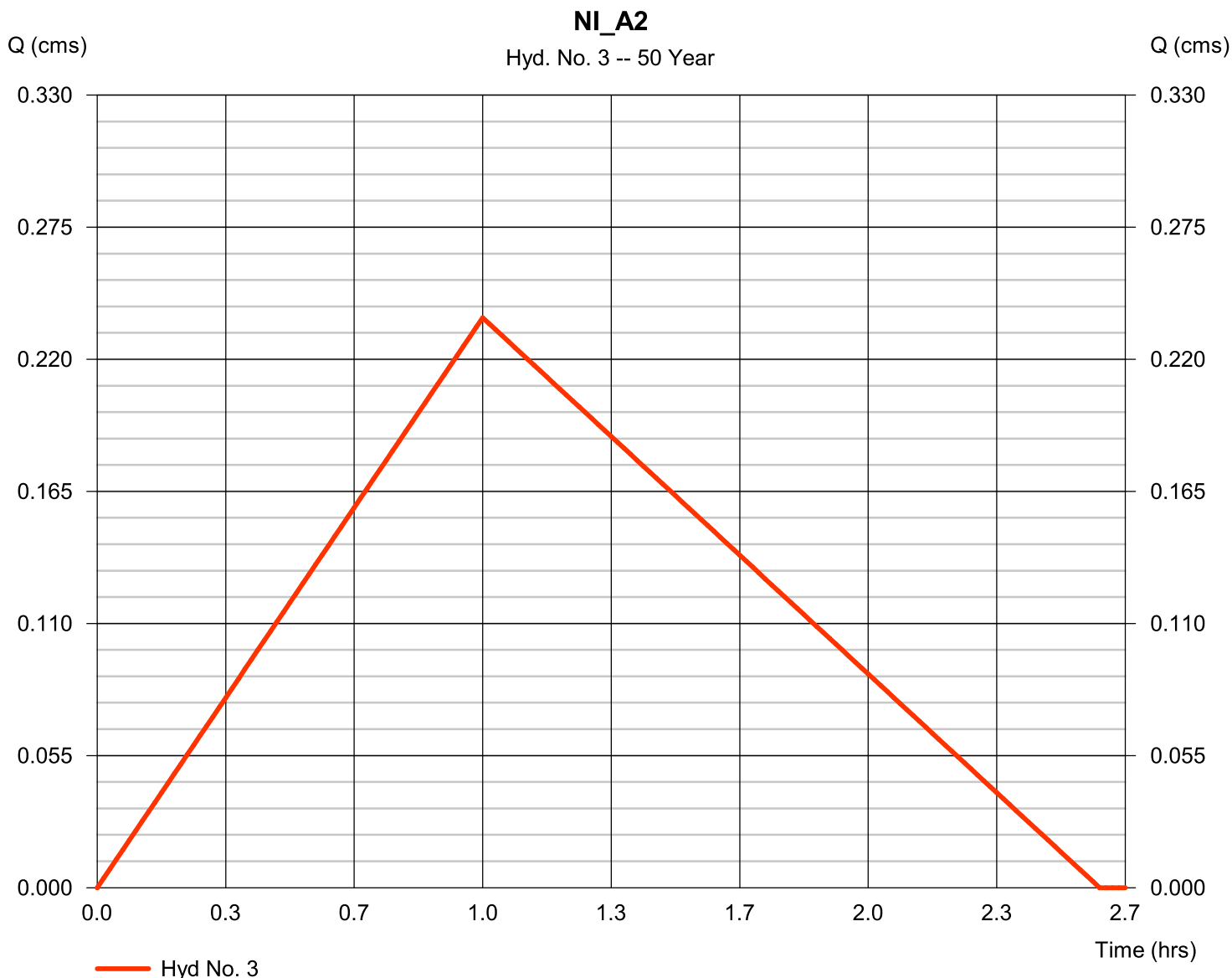
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 3

NI_A2

Hydrograph type	= Rational	Peak discharge	= 0.237 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 110.6 cum
Drainage area	= 14.650 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

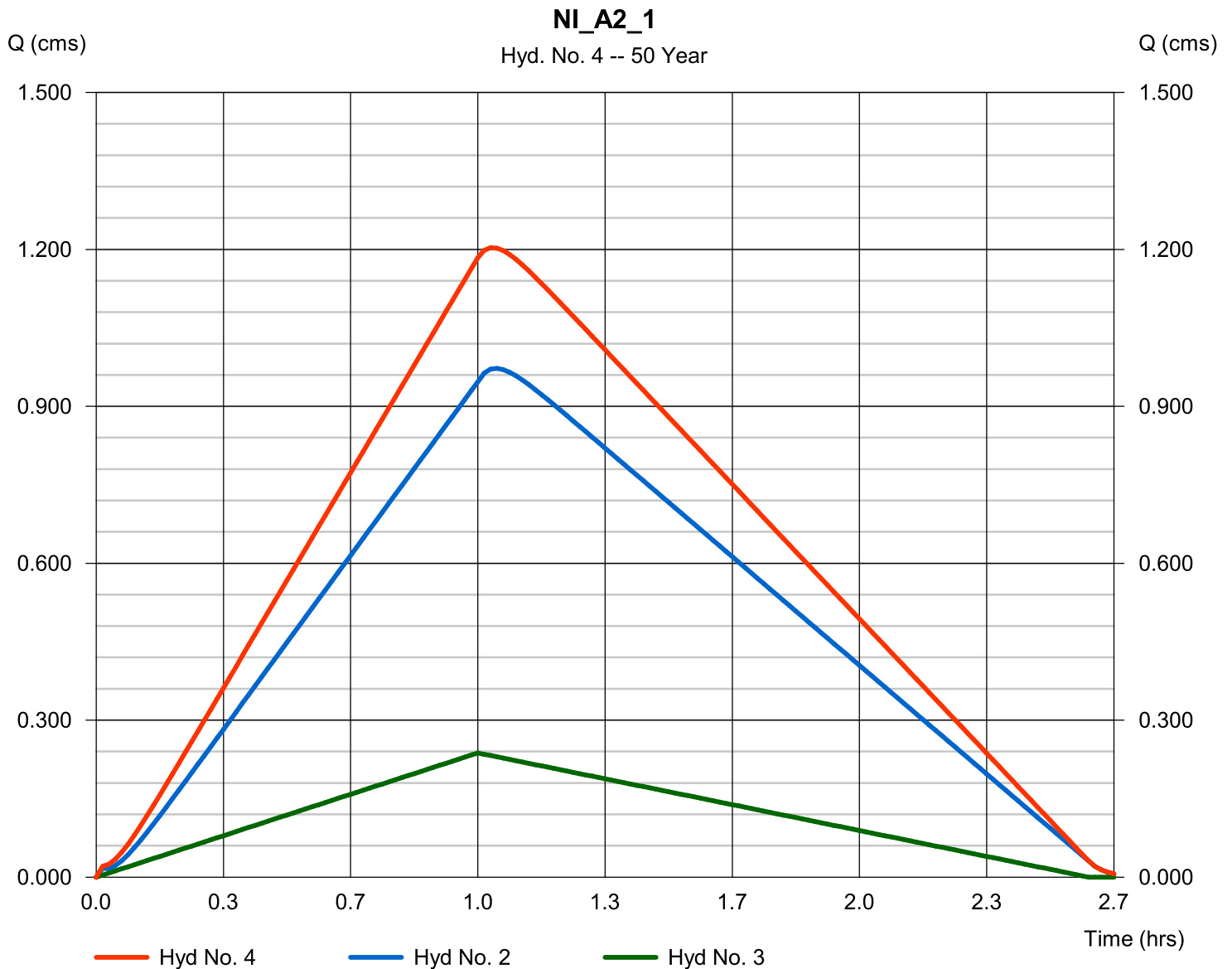
jeudi, avr 5, 2012

Hyd. No. 4

NI_A2_1

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 2, 3

Peak discharge = 1.203 cms
 Time to peak = 1.03 hrs
 Hyd. volume = 5 777.8 cum
 Contrib. drain. area = 14.650 hectare



Hydrograph Report

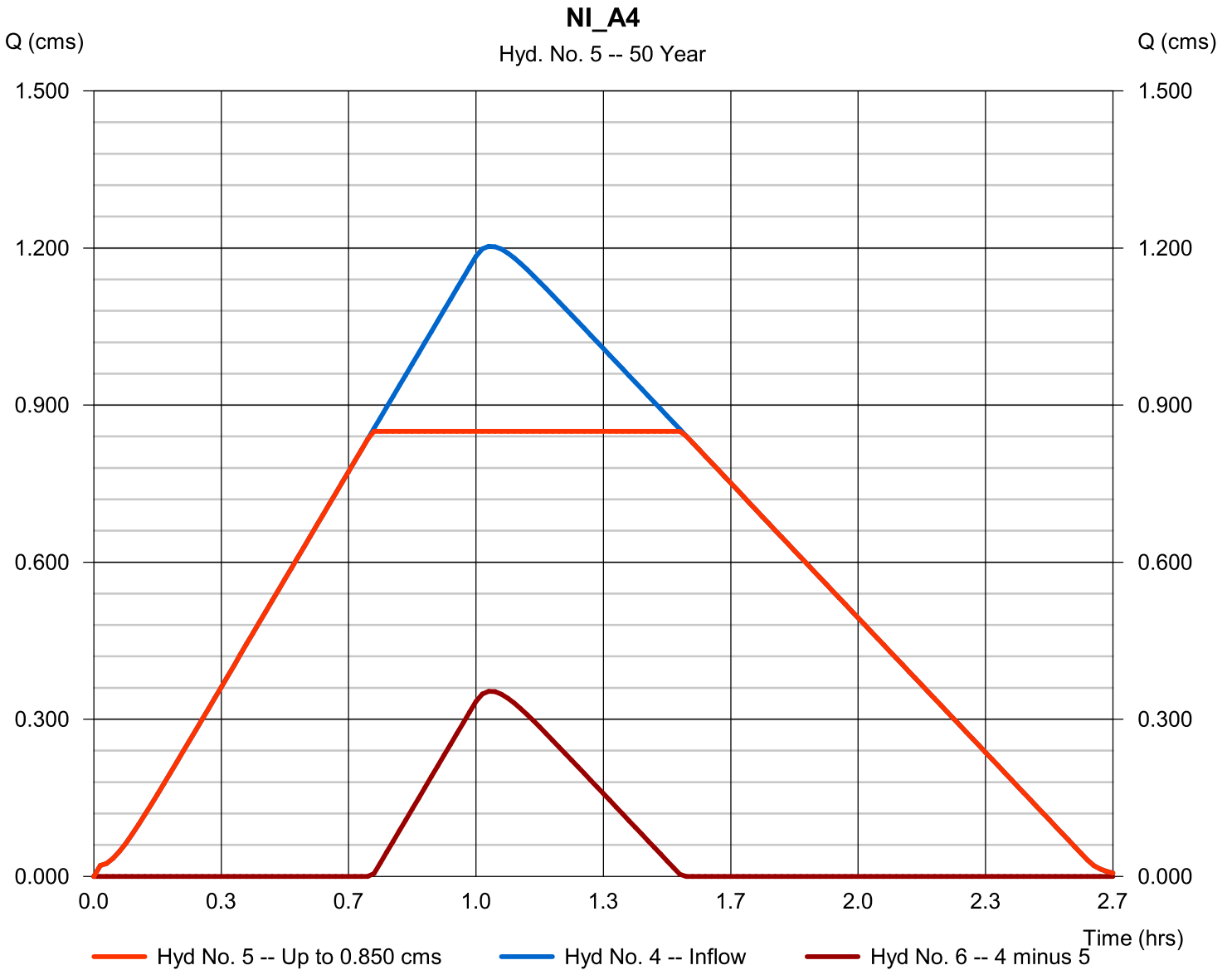
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

NI_A4

Hydrograph type	= Diversion1	Peak discharge	= 0.850 cms
Storm frequency	= 50 yrs	Time to peak	= 0.73 hrs
Time interval	= 1 min	Hyd. volume	= 5 224.7 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

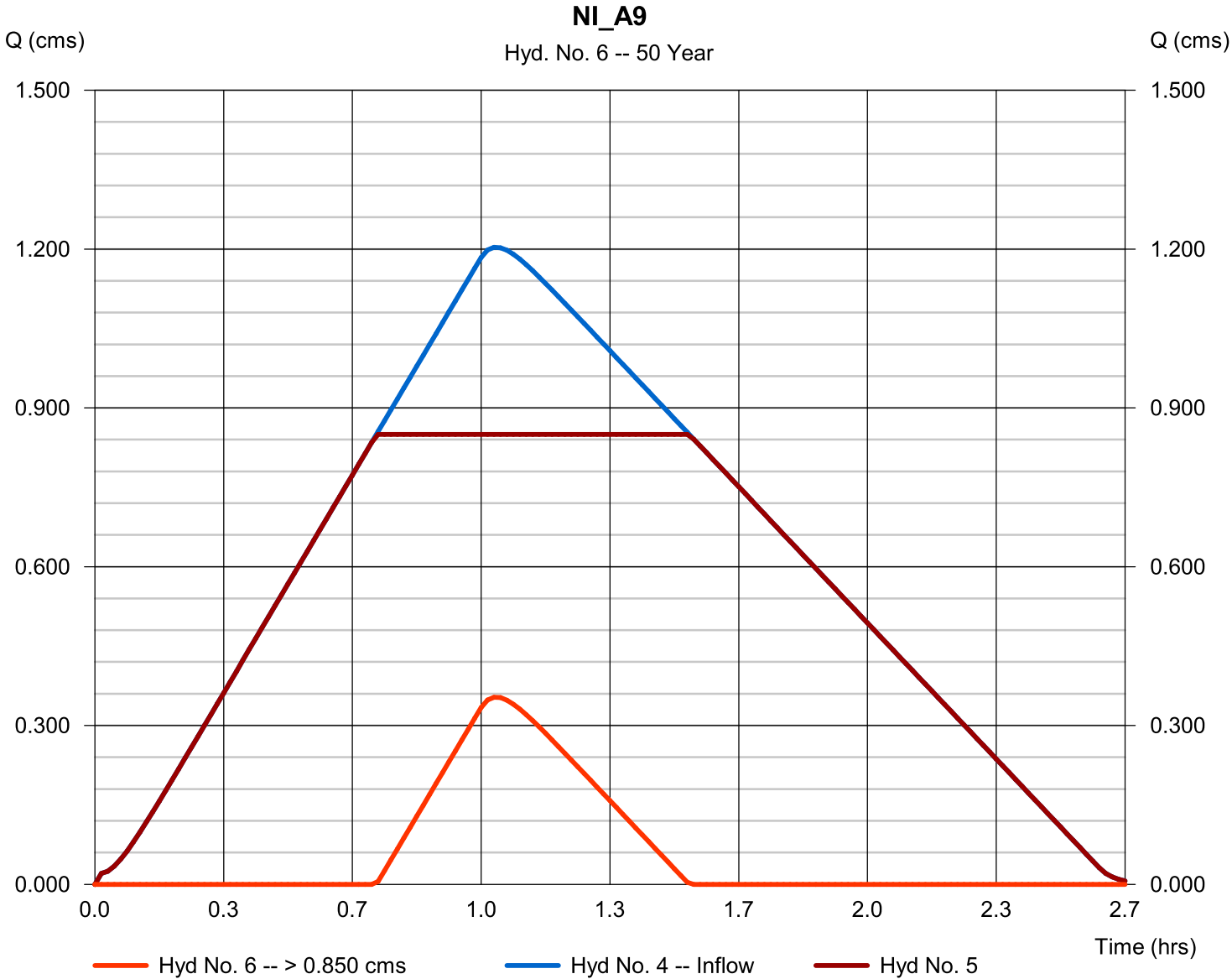
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 6

NI_A9

Hydrograph type	= Diversion2	Peak discharge	= 0.353 cms
Storm frequency	= 50 yrs	Time to peak	= 1.03 hrs
Time interval	= 1 min	Hyd. volume	= 553.1 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 5
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

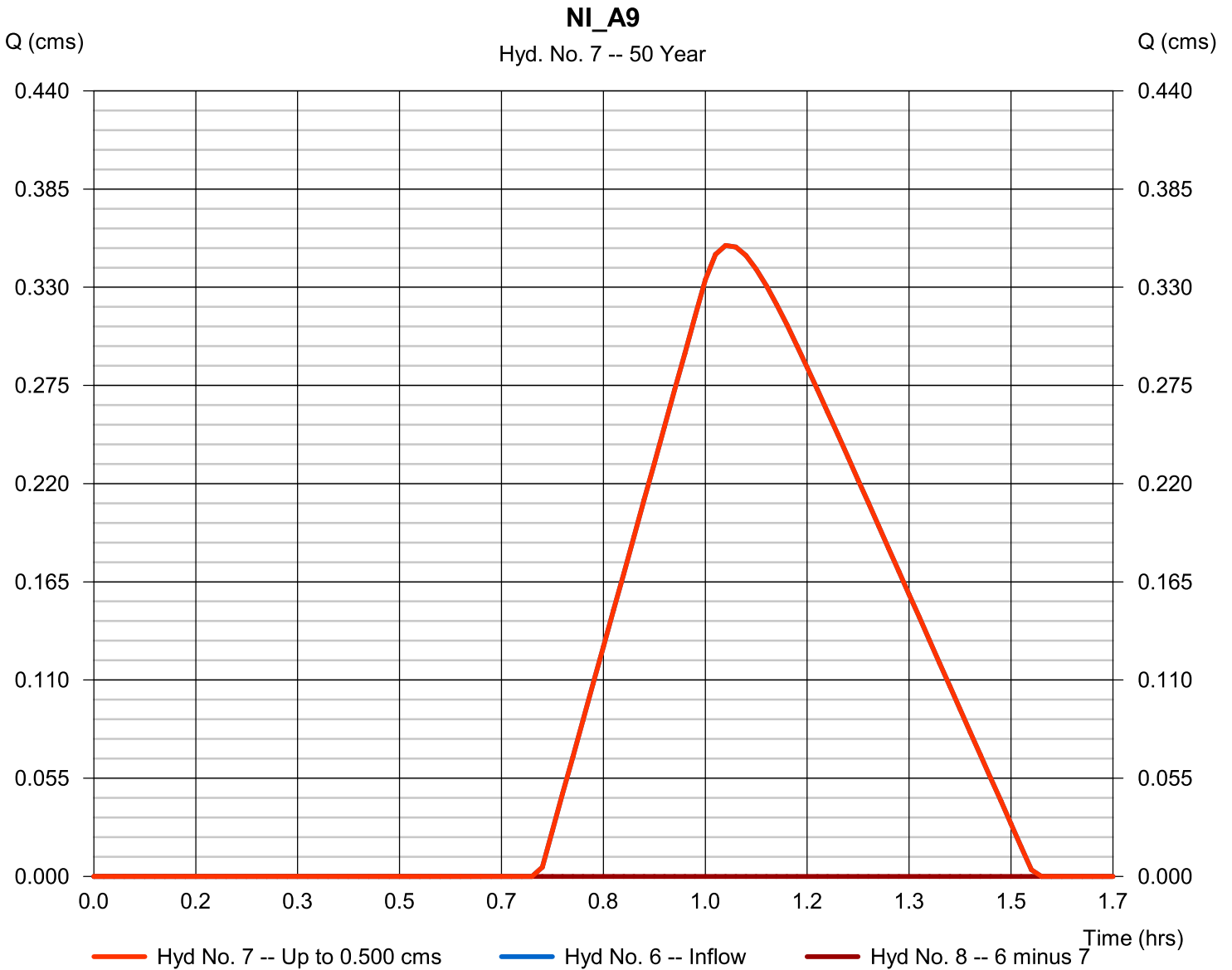
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 7

NI_A9

Hydrograph type	= Diversion1	Peak discharge	= 0.353 cms
Storm frequency	= 50 yrs	Time to peak	= 1.03 hrs
Time interval	= 1 min	Hyd. volume	= 553.1 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 8
Diversion method	= Constant Q	Constant Q	= 0.50 cms



Hydrograph Report

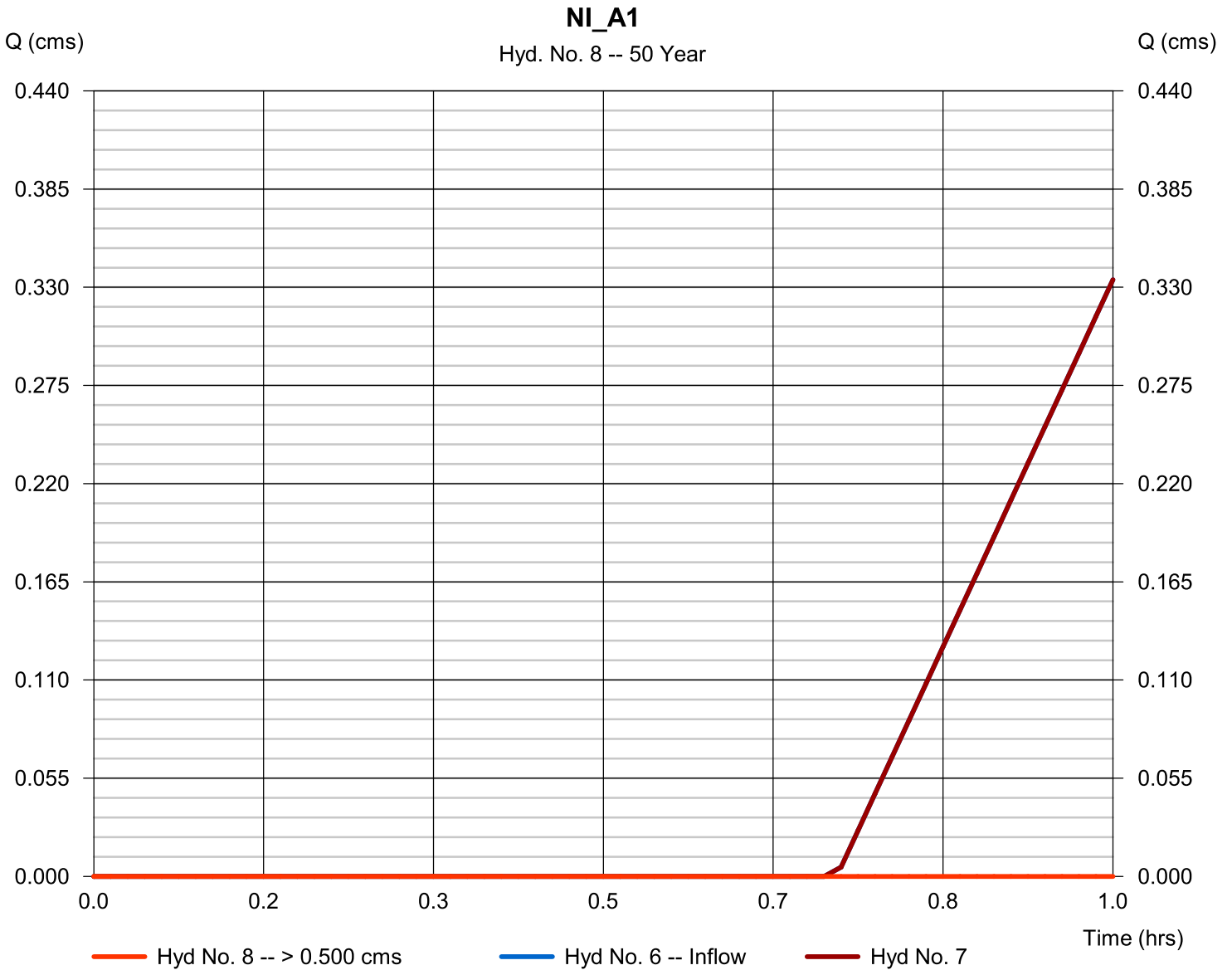
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

NI_A1

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.50 cms



Hydrograph Report

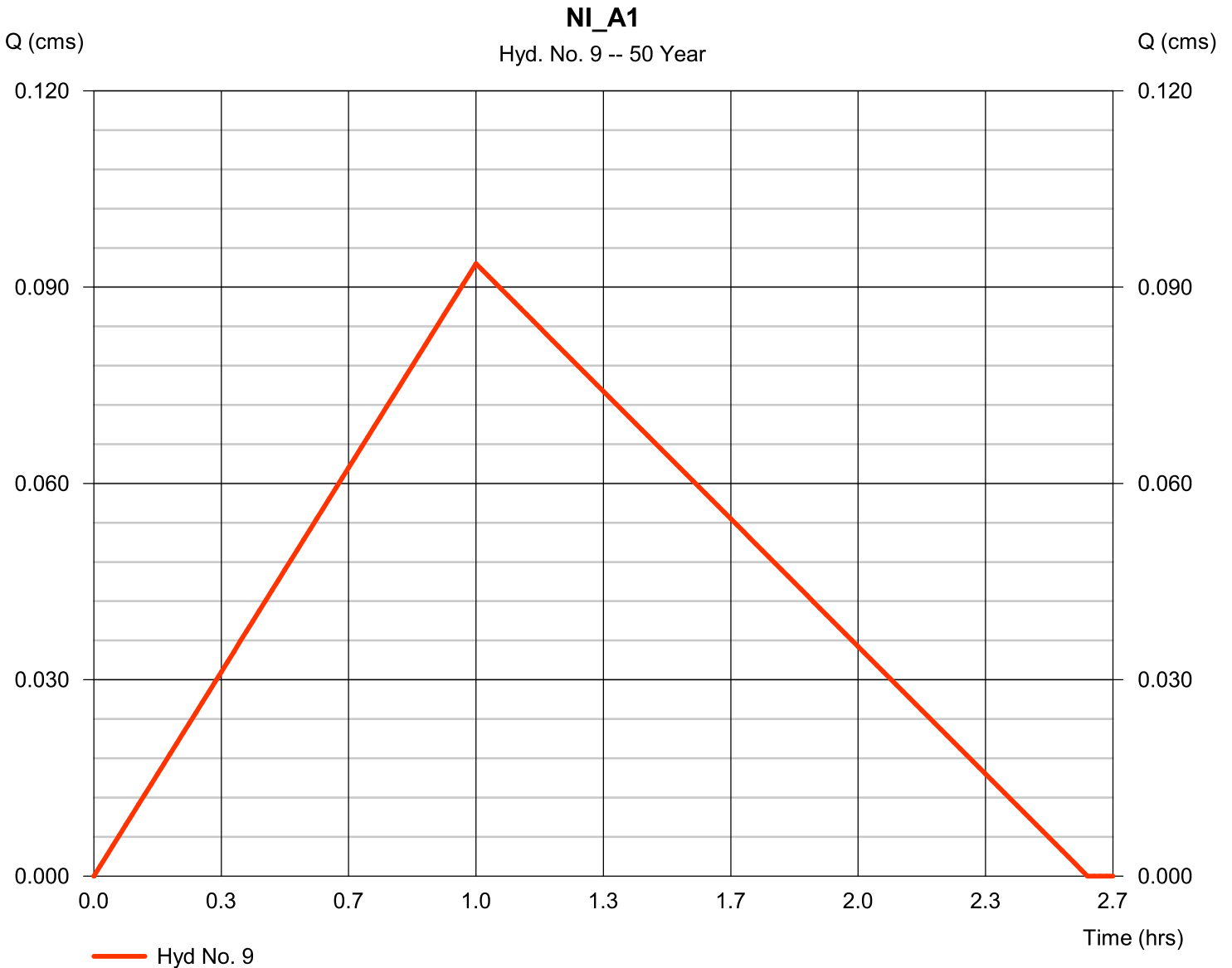
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 9

NI_A1

Hydrograph type	= Rational	Peak discharge	= 0.094 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 438.0 cum
Drainage area	= 6.740 hectare	Runoff coeff.	= 0.18
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

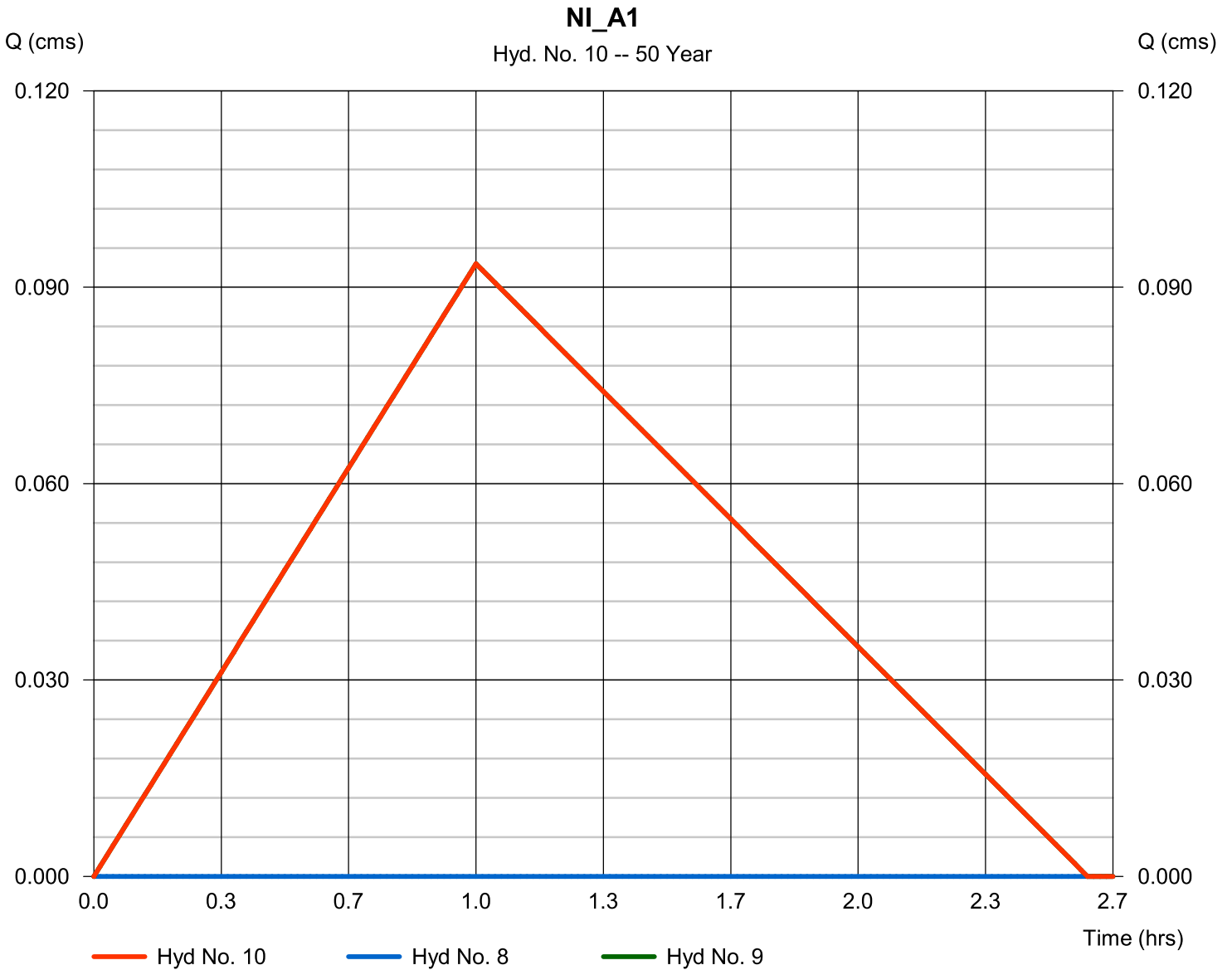
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

NI_A1

Hydrograph type	= Combine	Peak discharge	= 0.094 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 438.0 cum
Inflow hyds.	= 8, 9	Contrib. drain. area	= 6.740 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

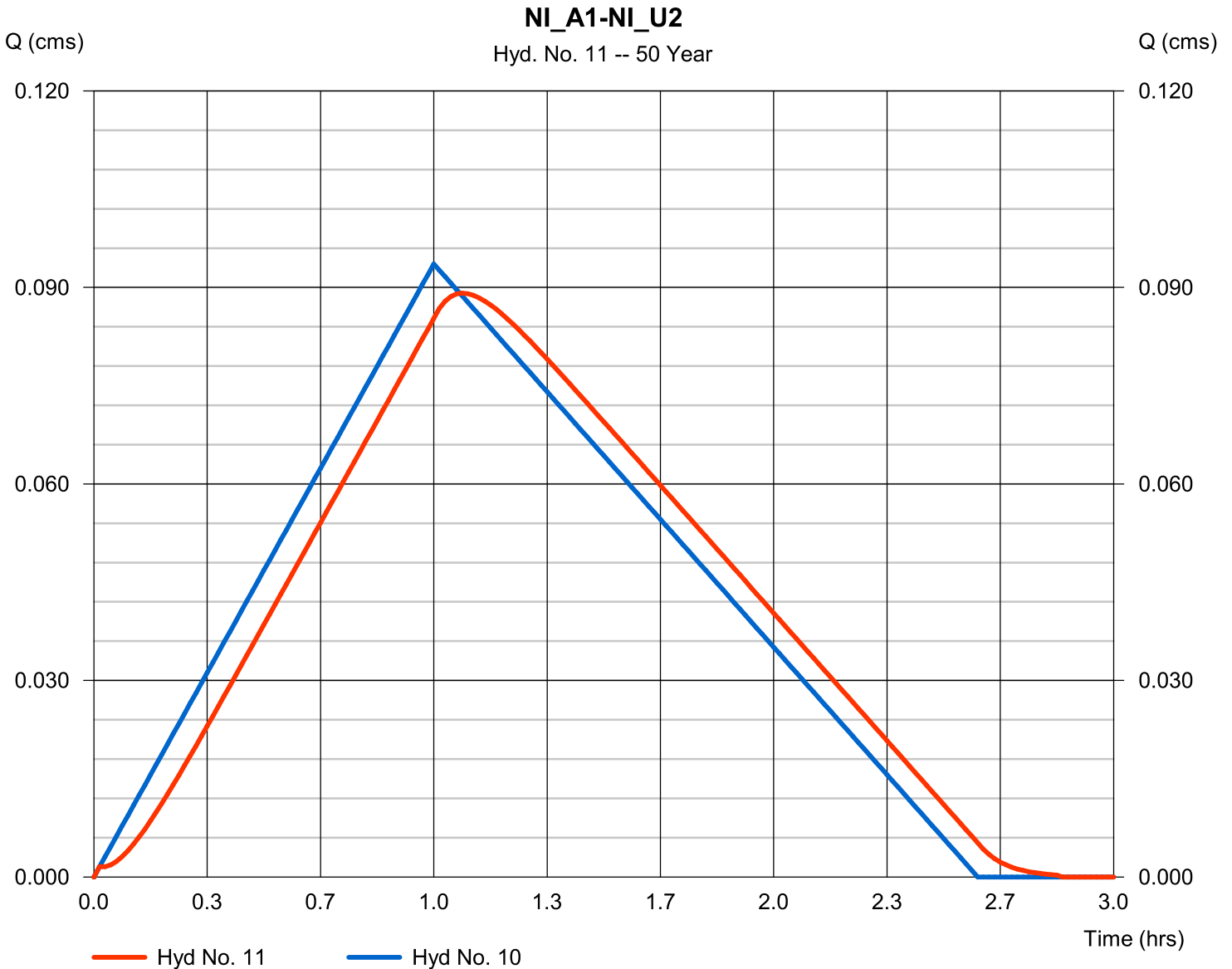
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Hyd. No. 11

NI_A1-NI_U2

Hydrograph type	= Reach	Peak discharge	= 0.089 cms
Storm frequency	= 50 yrs	Time to peak	= 1.08 hrs
Time interval	= 1 min	Hyd. volume	= 438.4 cum
Inflow hyd. No.	= 10 - NI_A1	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.017	Bottom width	= 10.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.643	Rating curve m	= 1.593
Ave. velocity	= 0.65 m/s	Routing coeff.	= 0.1876

Modified Att-Kin routing method used.



Hydrograph Report

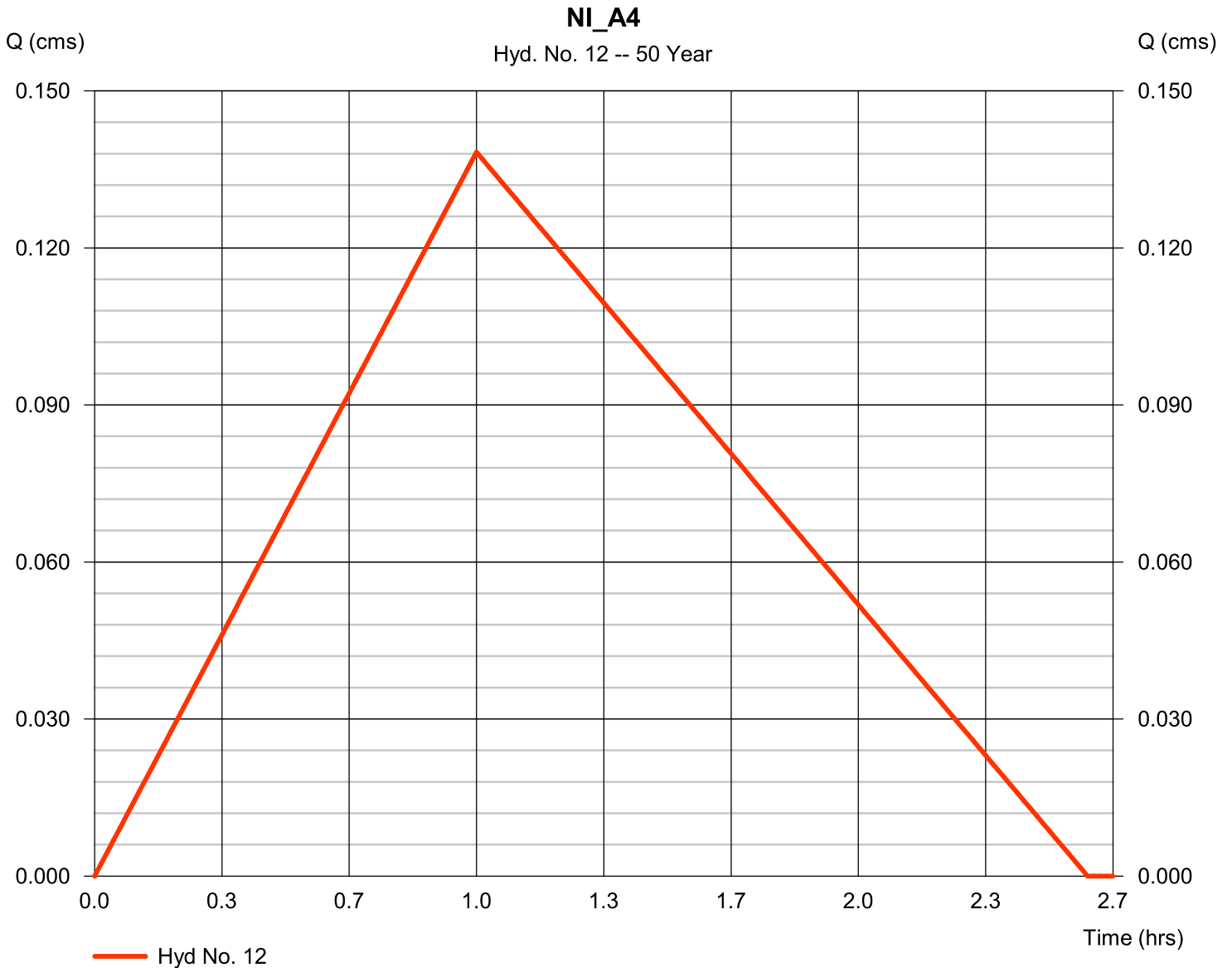
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 12

NI_A4

Hydrograph type	= Rational	Peak discharge	= 0.138 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 647.2 cum
Drainage area	= 7.470 hectare	Runoff coeff.	= 0.24
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

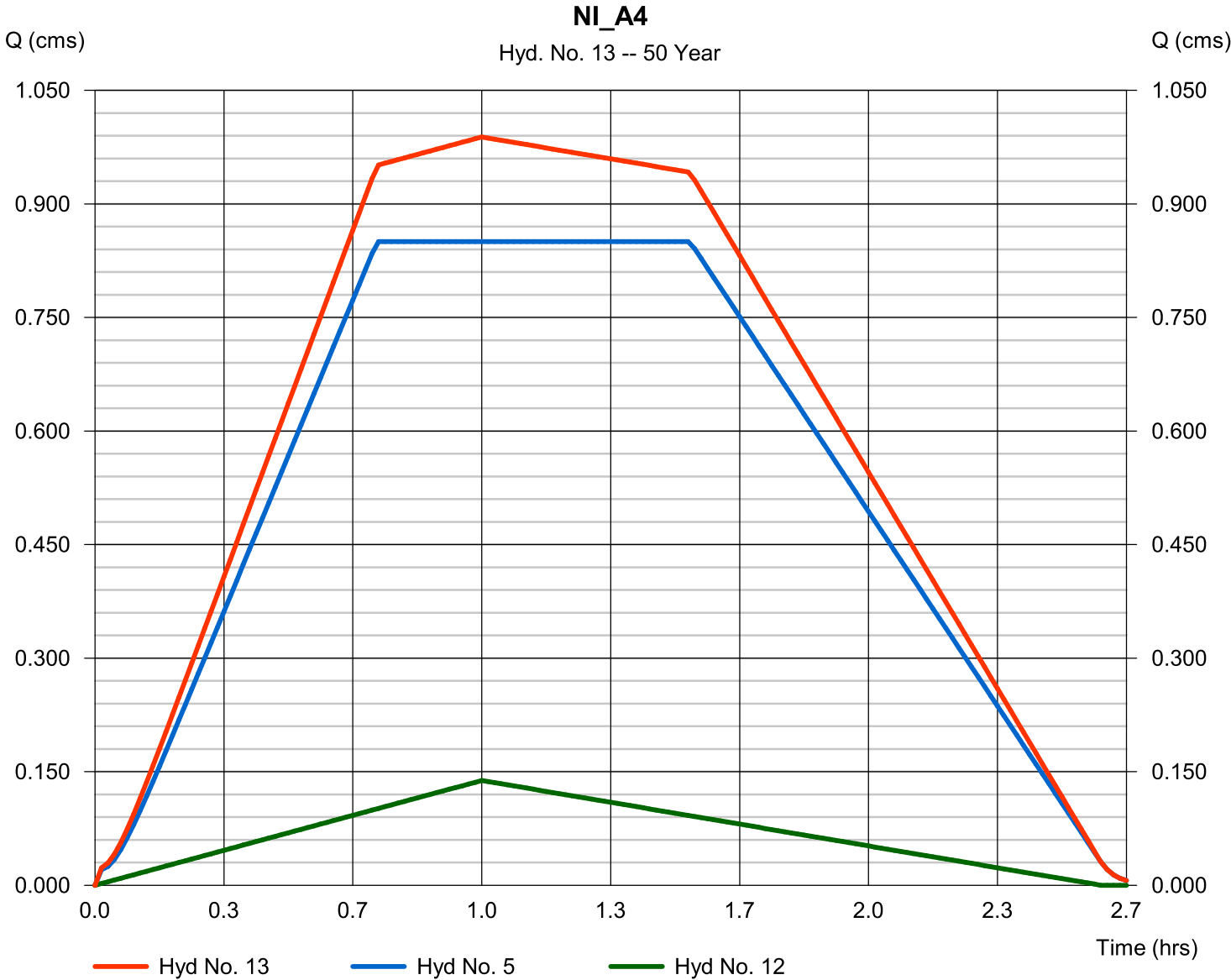
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Hyd. No. 13

NI_A4

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hyds. = 5, 12

Peak discharge = 0.988 cms
Time to peak = 1.00 hrs
Hyd. volume = 5 871.9 cum
Contrib. drain. area = 7.470 hectare



Hydrograph Report

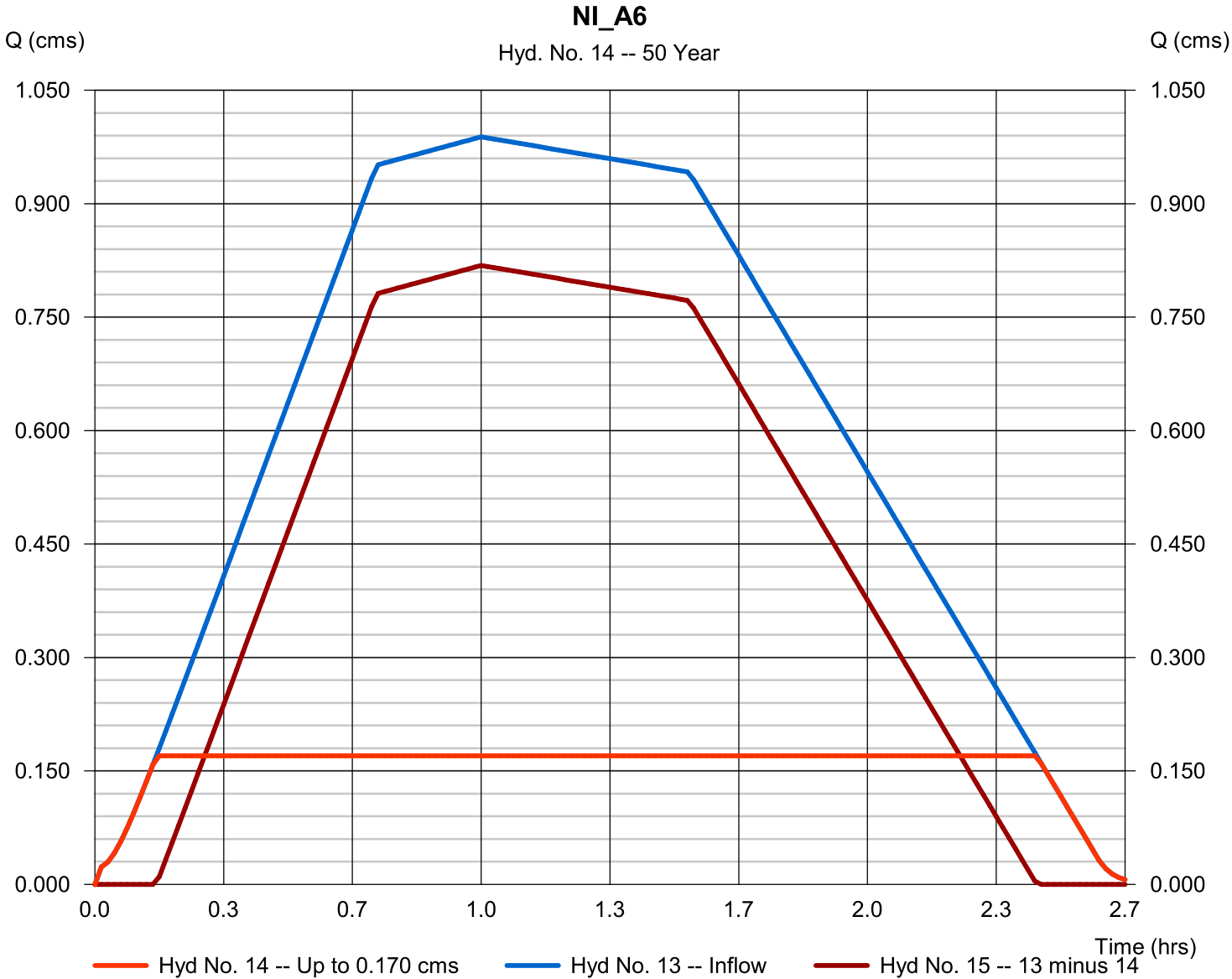
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

NI_A6

Hydrograph type	= Diversion1	Peak discharge	= 0.170 cms
Storm frequency	= 50 yrs	Time to peak	= 0.50 hrs
Time interval	= 1 min	Hyd. volume	= 1 501.9 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 15
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

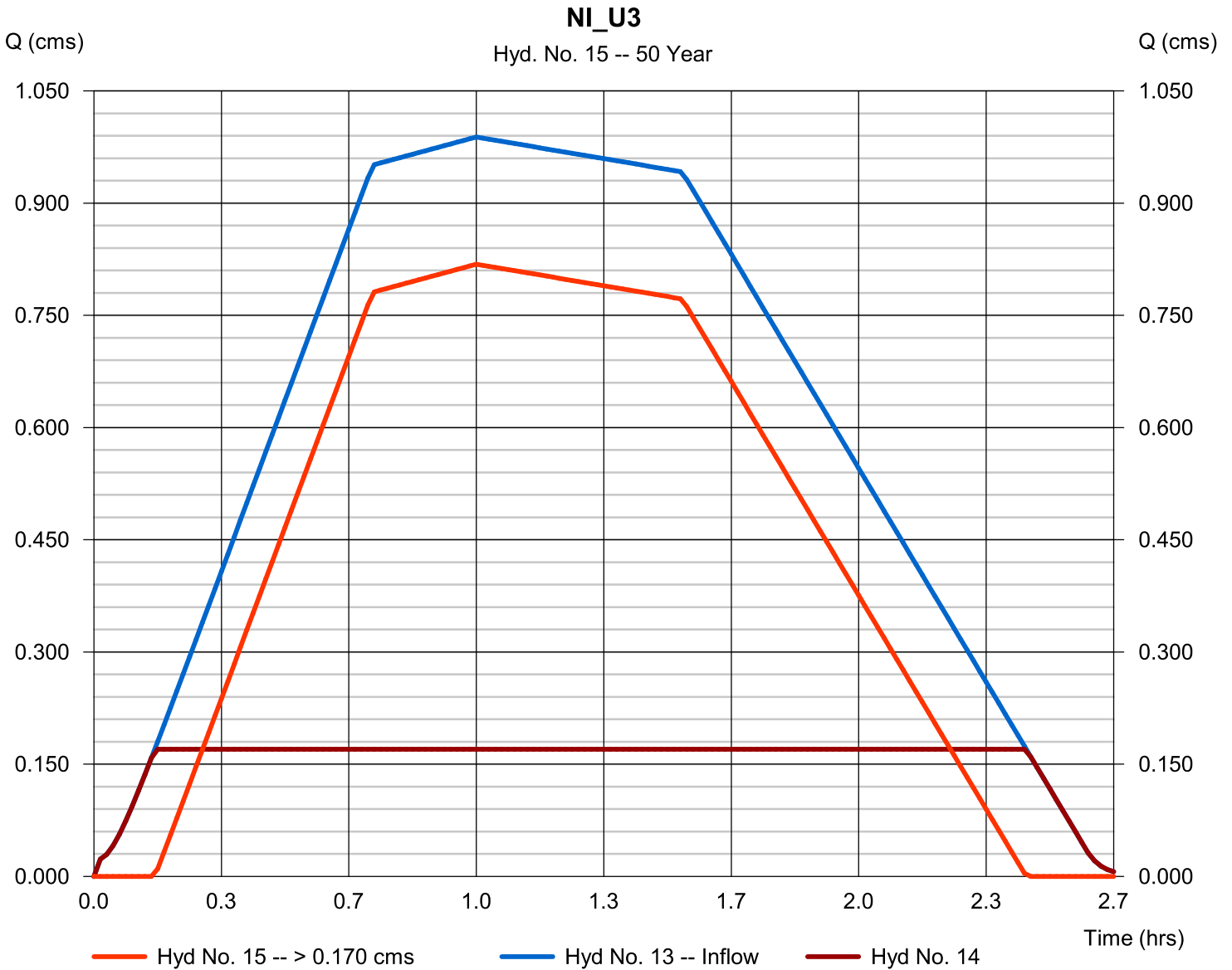
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 15

NI_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.818 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 4 370.0 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 14
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

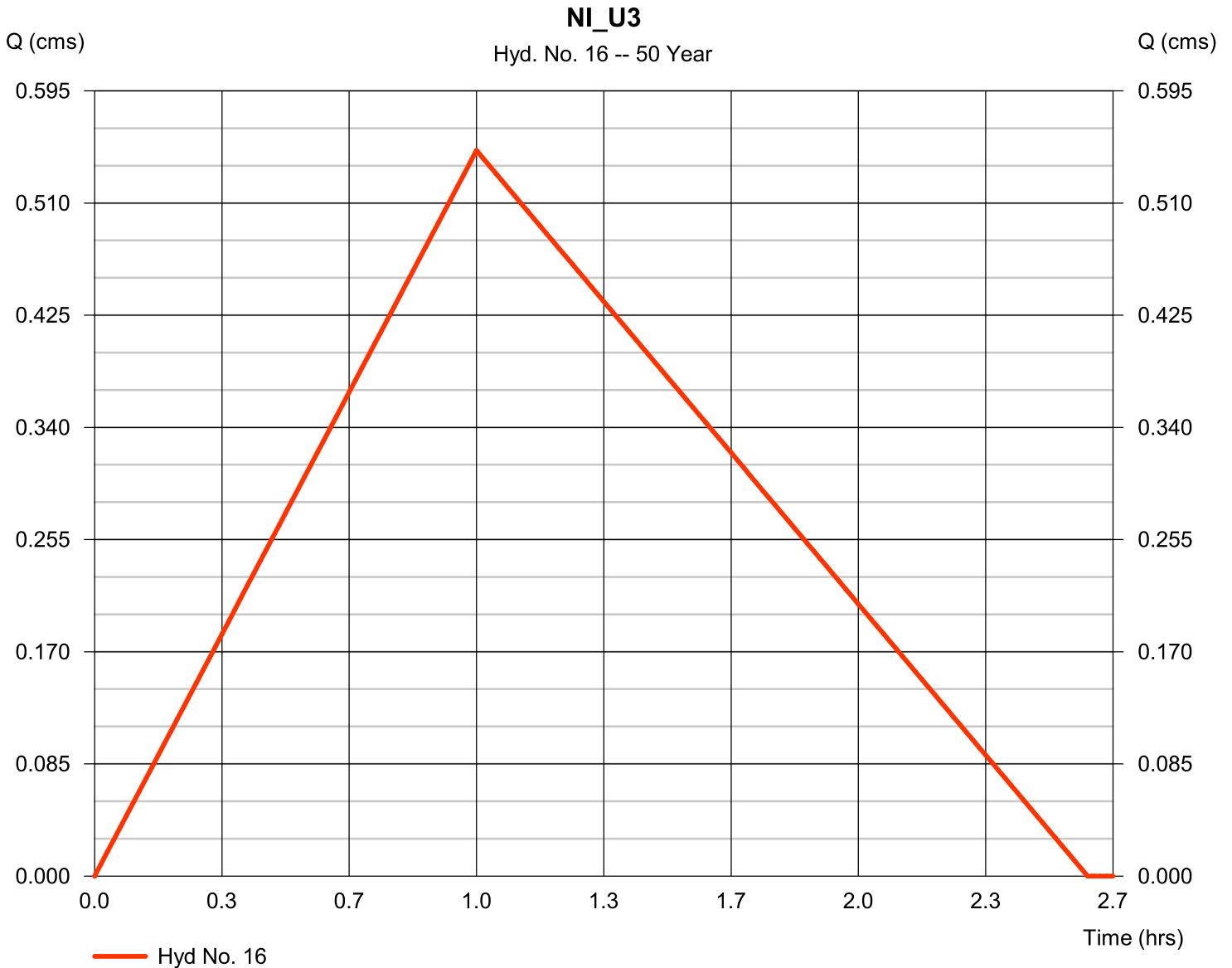
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 16

NI_U3

Hydrograph type	= Rational	Peak discharge	= 0.550 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 573.5 cum
Drainage area	= 18.760 hectare	Runoff coeff.	= 0.38
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

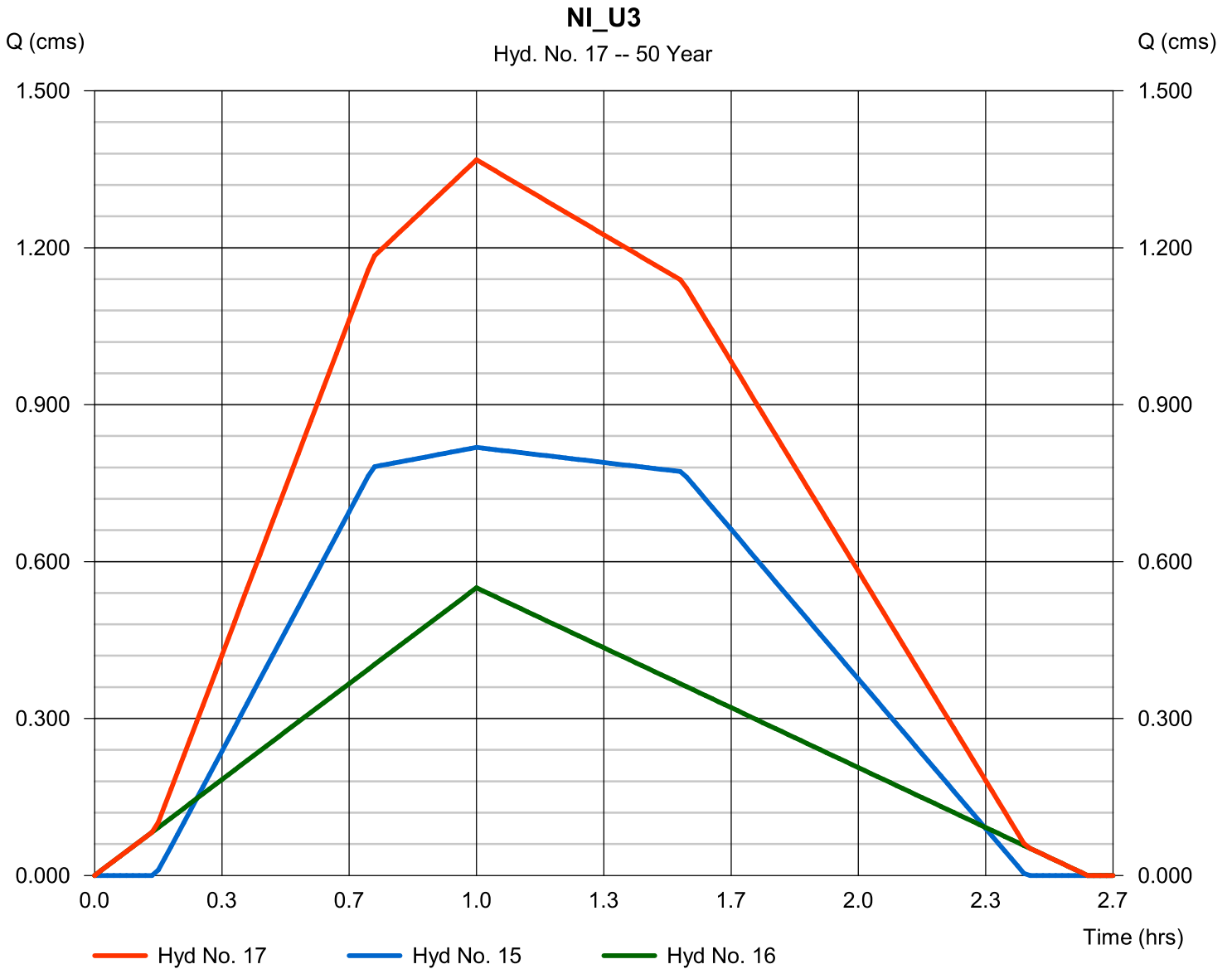
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

NI_U3

Hydrograph type	= Combine	Peak discharge	= 1.368 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 6 943.5 cum
Inflow hyds.	= 15, 16	Contrib. drain. area	= 18.760 hectare



Hydrograph Report

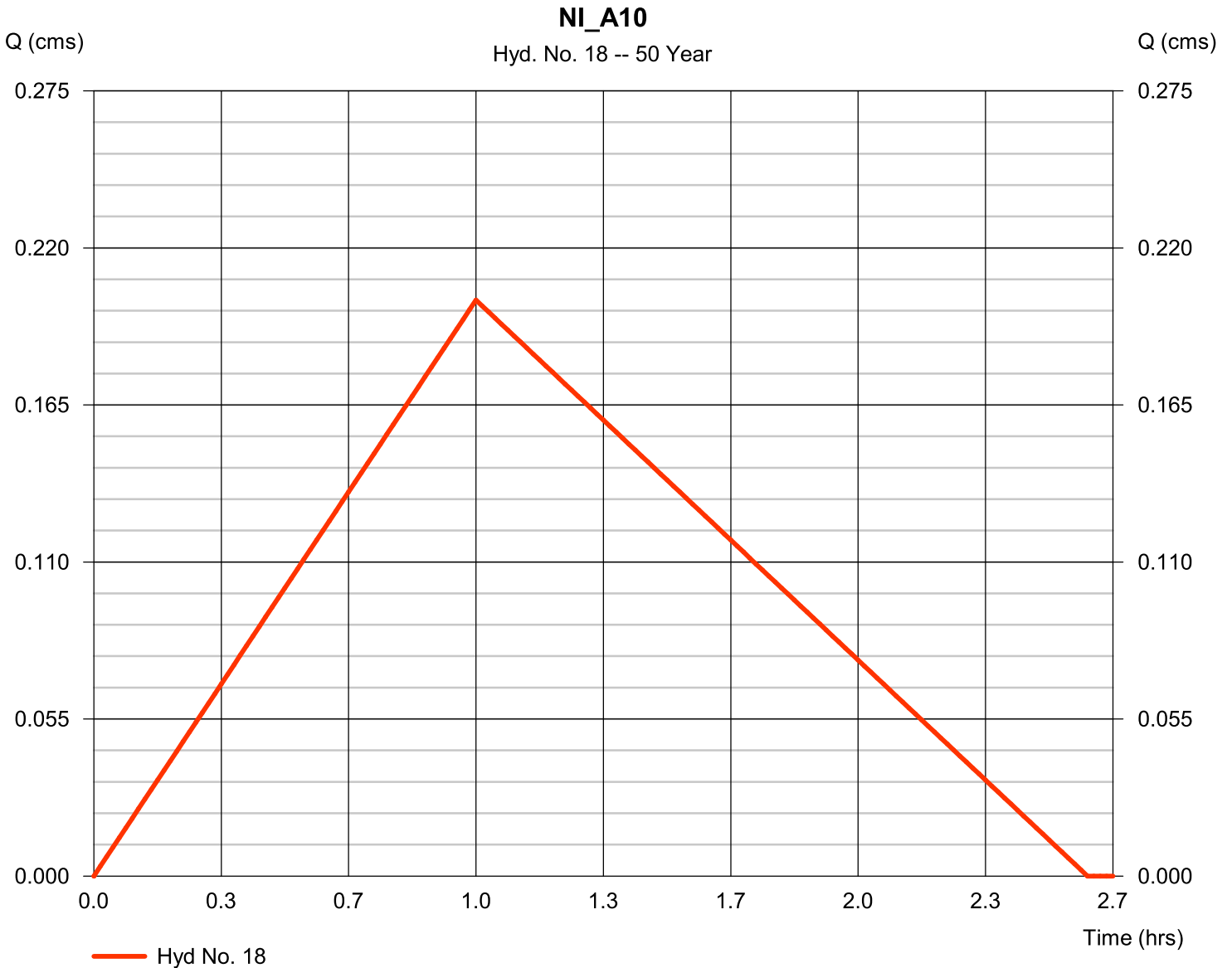
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 18

NI_A10

Hydrograph type	= Rational	Peak discharge	= 0.202 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 944.0 cum
Drainage area	= 11.370 hectare	Runoff coeff.	= 0.23
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

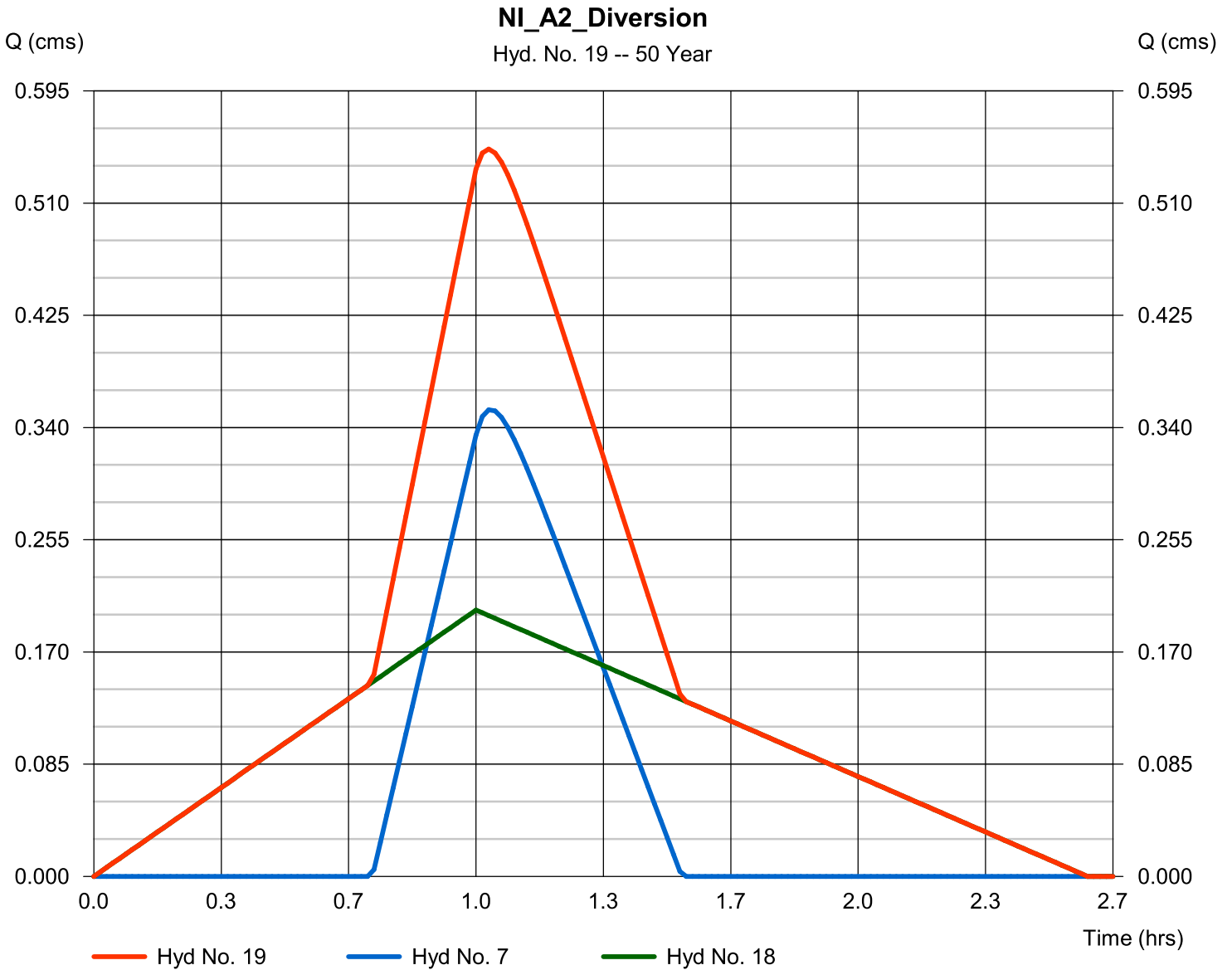
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 19

NI_A2_Diversion

Hydrograph type	= Combine	Peak discharge	= 0.551 cms
Storm frequency	= 50 yrs	Time to peak	= 1.03 hrs
Time interval	= 1 min	Hyd. volume	= 1 497.1 cum
Inflow hyds.	= 7, 18	Contrib. drain. area	= 11.370 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

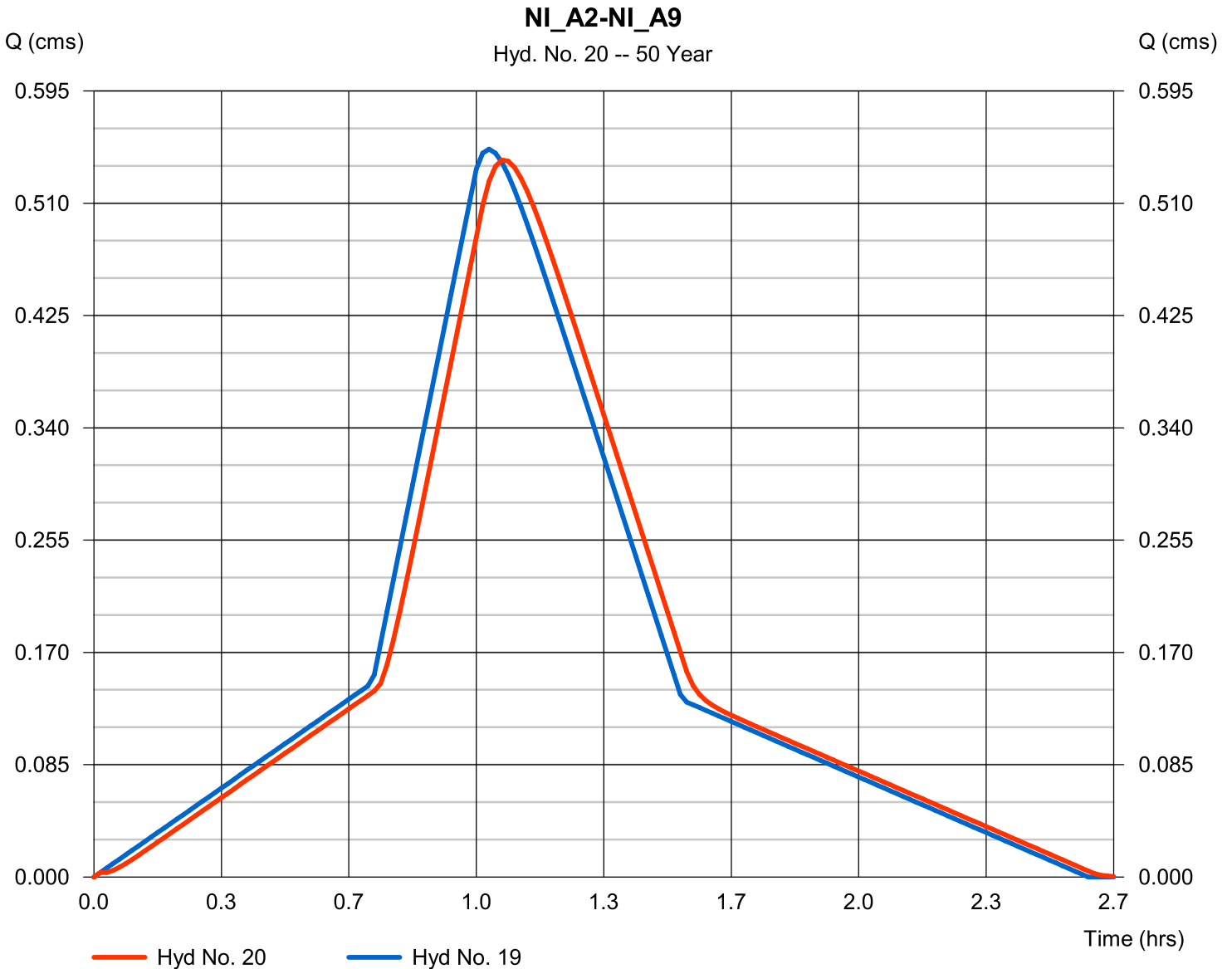
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Hyd. No. 20

NI_A2-NI_A9

Hydrograph type	= Reach	Peak discharge	= 0.543 cms
Storm frequency	= 50 yrs	Time to peak	= 1.07 hrs
Time interval	= 1 min	Hyd. volume	= 1 497.5 cum
Inflow hyd. No.	= 19 - NI_A2_Diversion	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.190	Rating curve m	= 1.353
Ave. velocity	= 2.23 m/s	Routing coeff.	= 0.4641

Modified Att-Kin routing method used.



Hydrograph Report

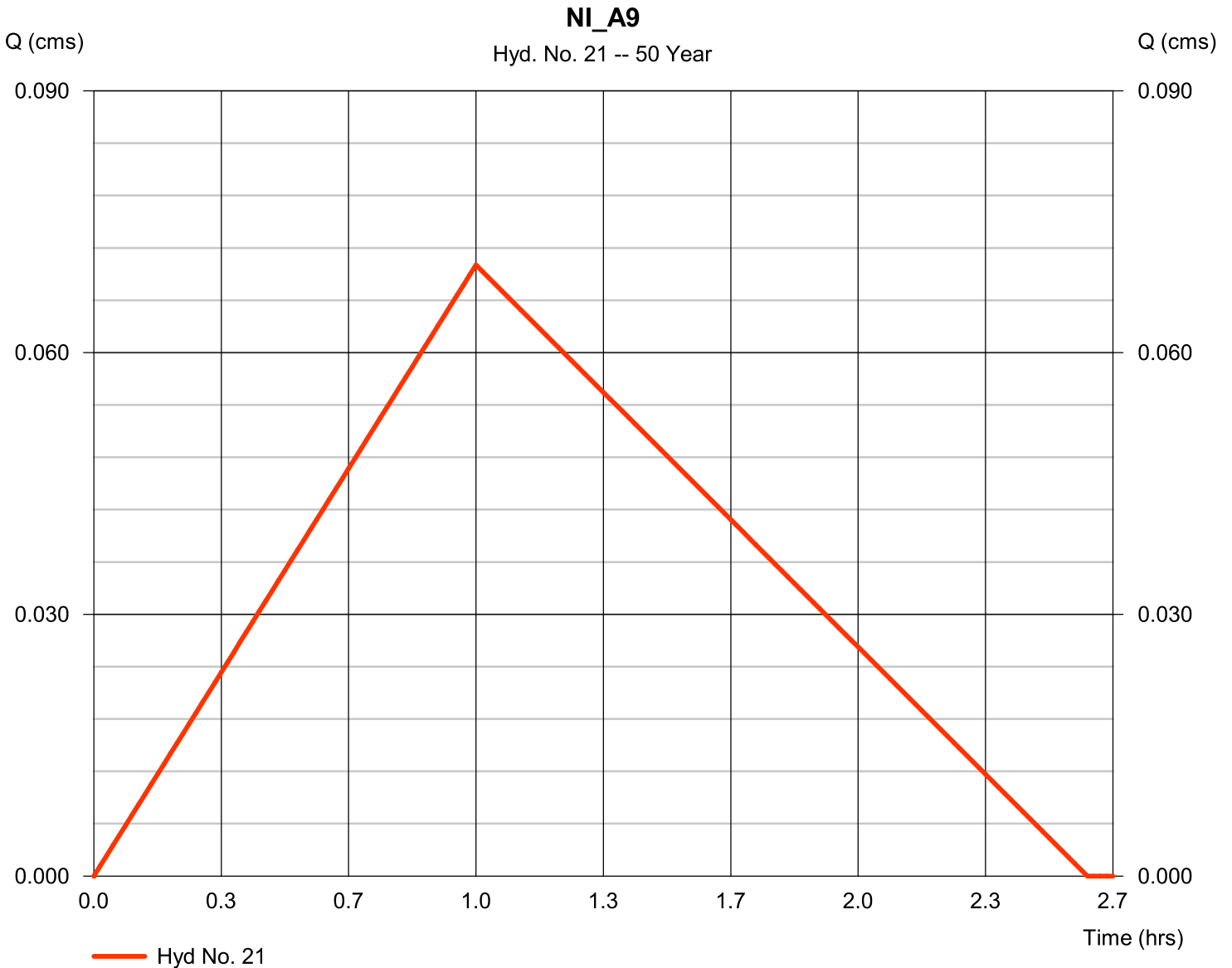
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Hyd. No. 21

NI_A9

Hydrograph type	= Rational	Peak discharge	= 0.070 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 327.8 cum
Drainage area	= 4.540 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

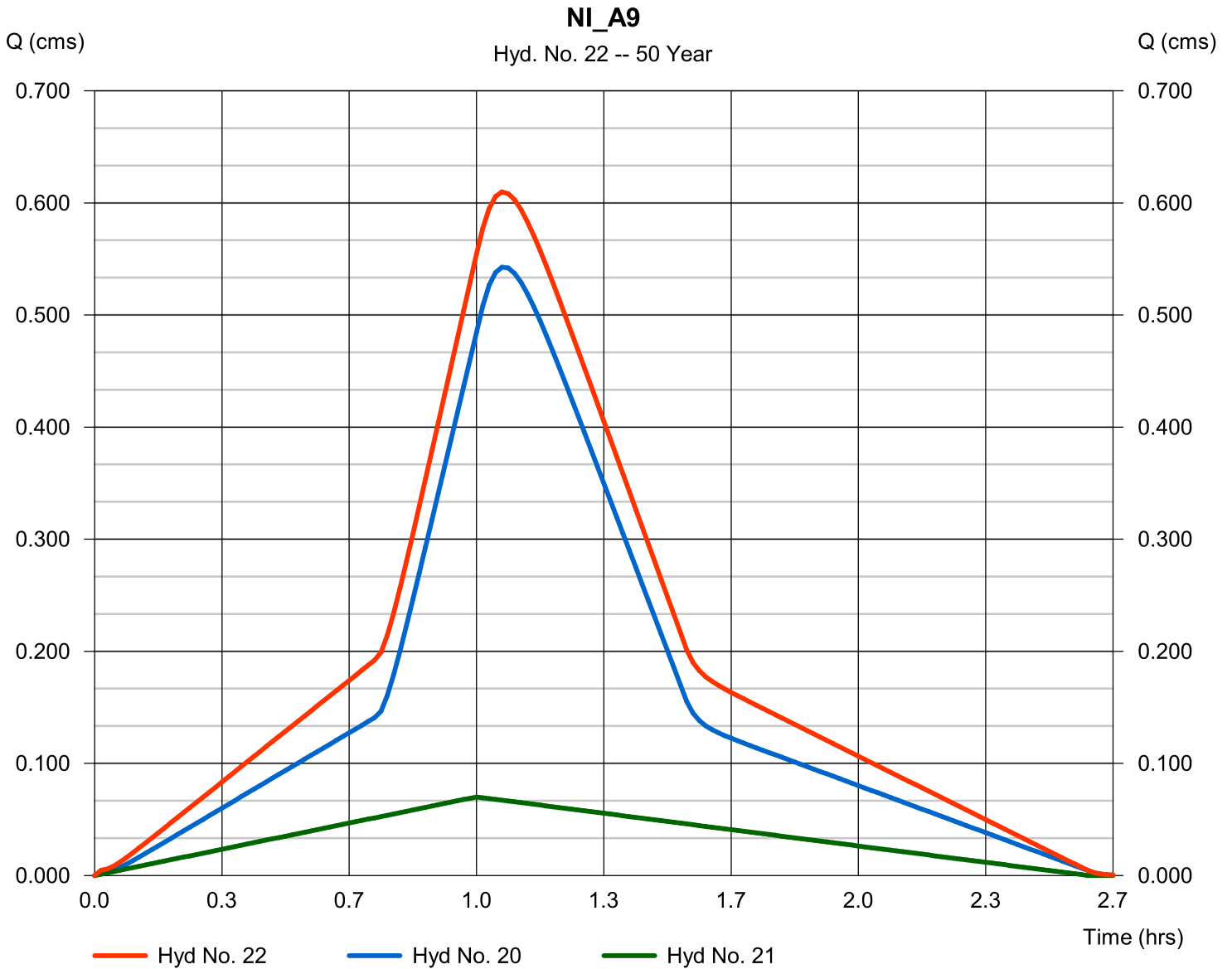
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Hyd. No. 22

NI_A9

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 20, 21

Peak discharge = 0.610 cms
 Time to peak = 1.07 hrs
 Hyd. volume = 1 825.3 cum
 Contrib. drain. area = 4.540 hectare



Hydrograph Report

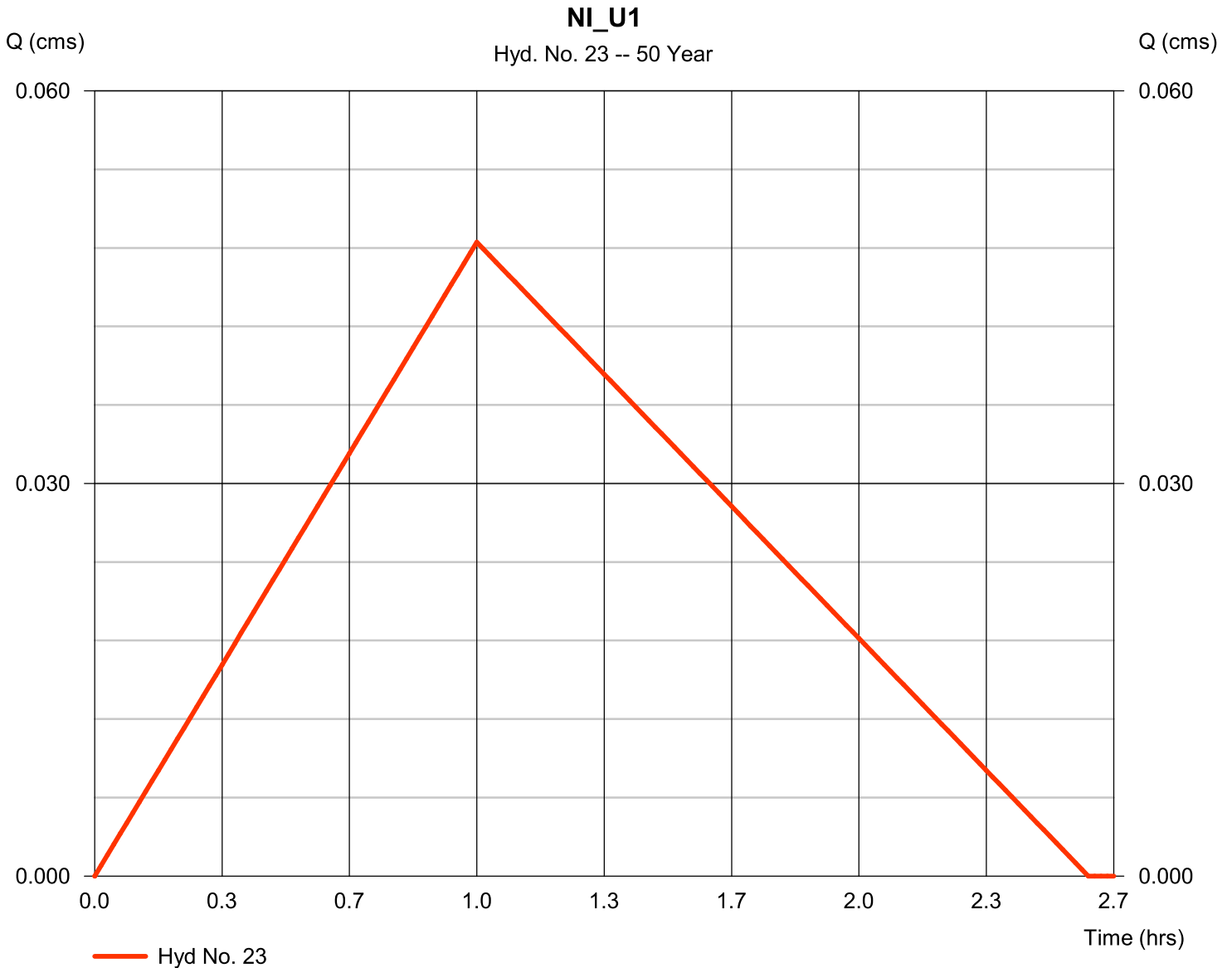
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 23

NI_U1

Hydrograph type	= Rational	Peak discharge	= 0.048 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 226.7 cum
Drainage area	= 2.730 hectare	Runoff coeff.	= 0.23
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

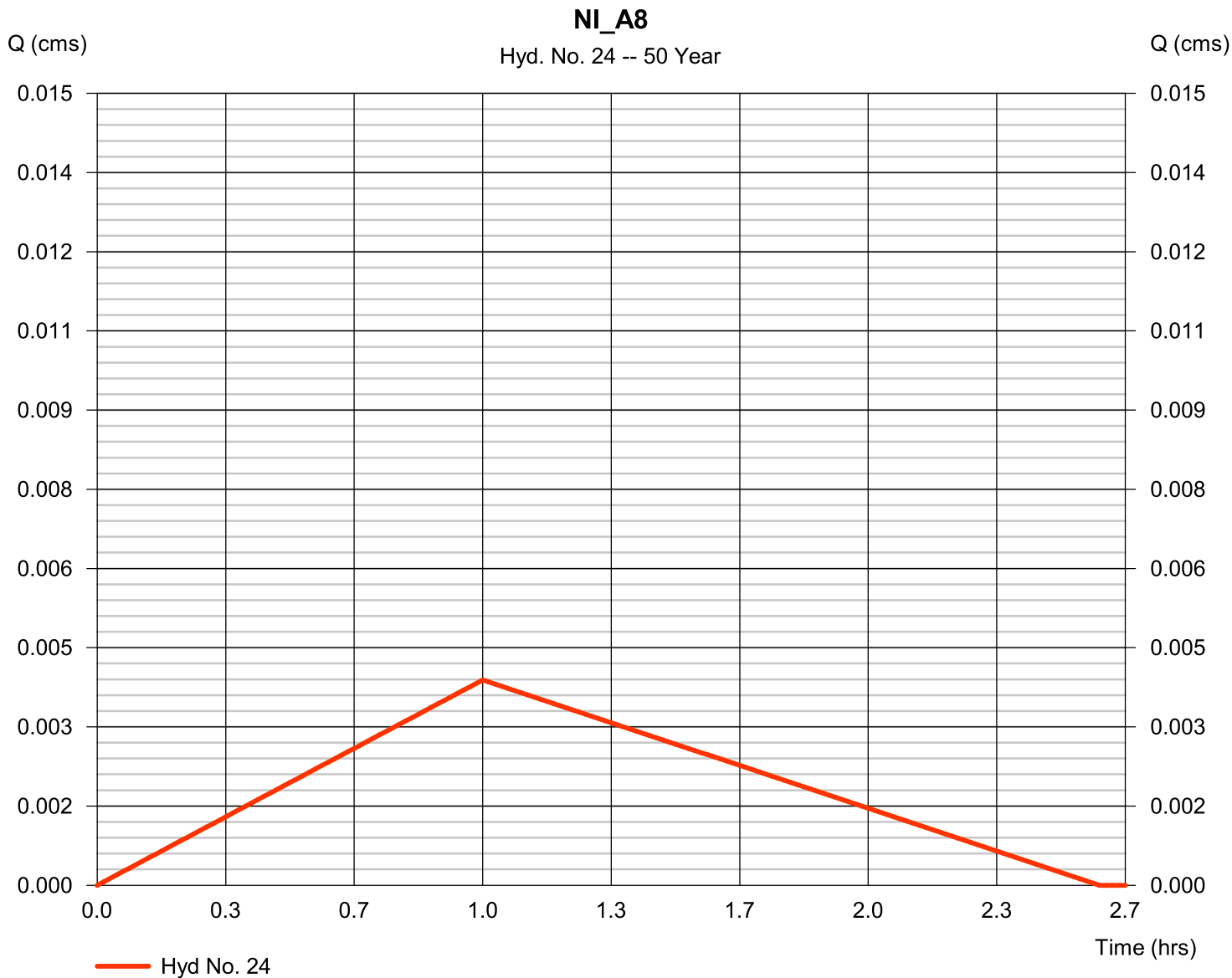
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 24

NI_A8

Hydrograph type	= Rational	Peak discharge	= 0.004 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 18.2 cum
Drainage area	= 0.560 hectare	Runoff coeff.	= 0.09
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

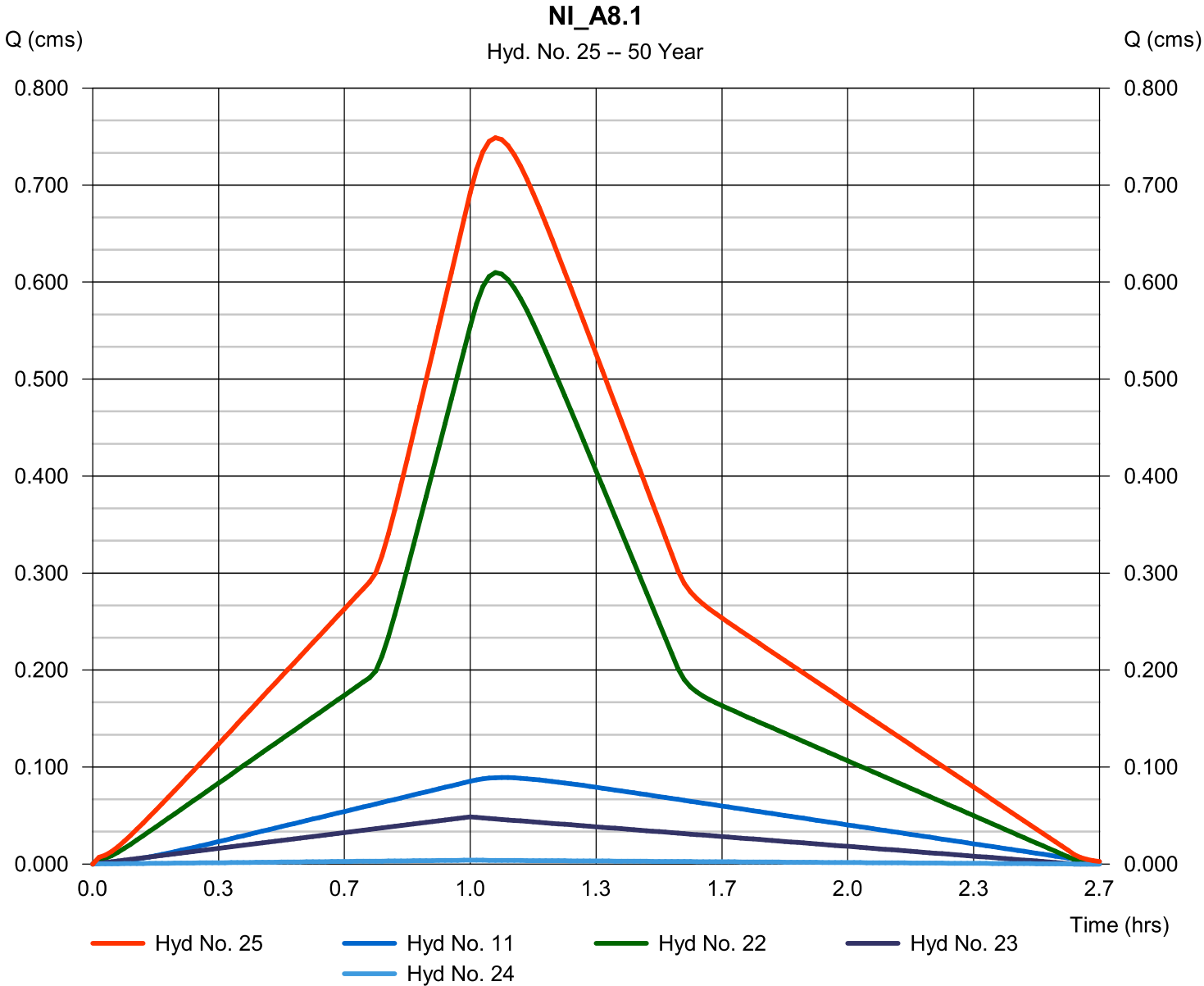
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Hyd. No. 25

NI_A8.1

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hyds. = 11, 22, 23, 24

Peak discharge = 0.749 cms
Time to peak = 1.07 hrs
Hyd. volume = 2 508.5 cum
Contrib. drain. area = 3.290 hectare



Hydrograph Report

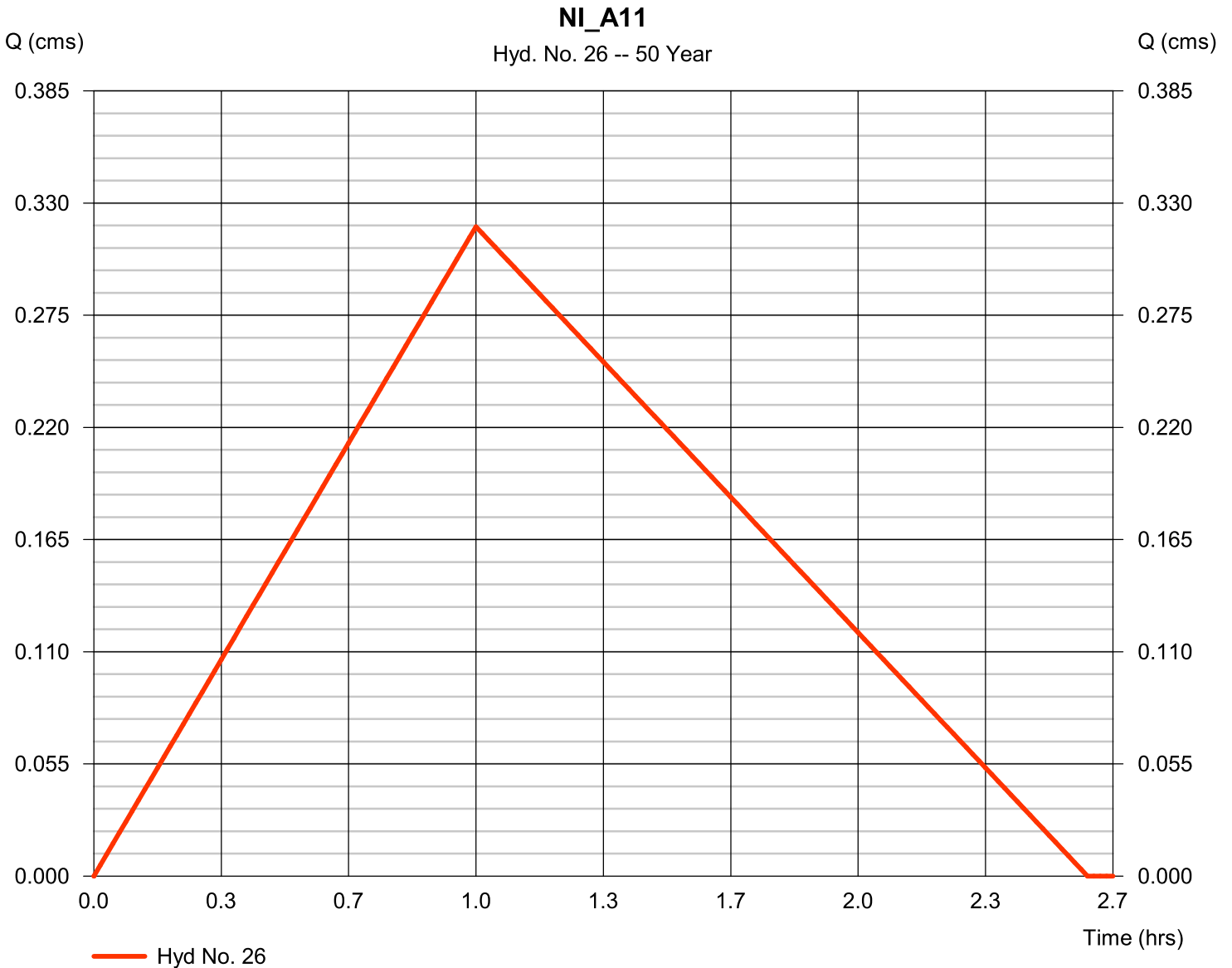
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 26

NI_A11

Hydrograph type	= Rational	Peak discharge	= 0.318 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 490.2 cum
Drainage area	= 20.640 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

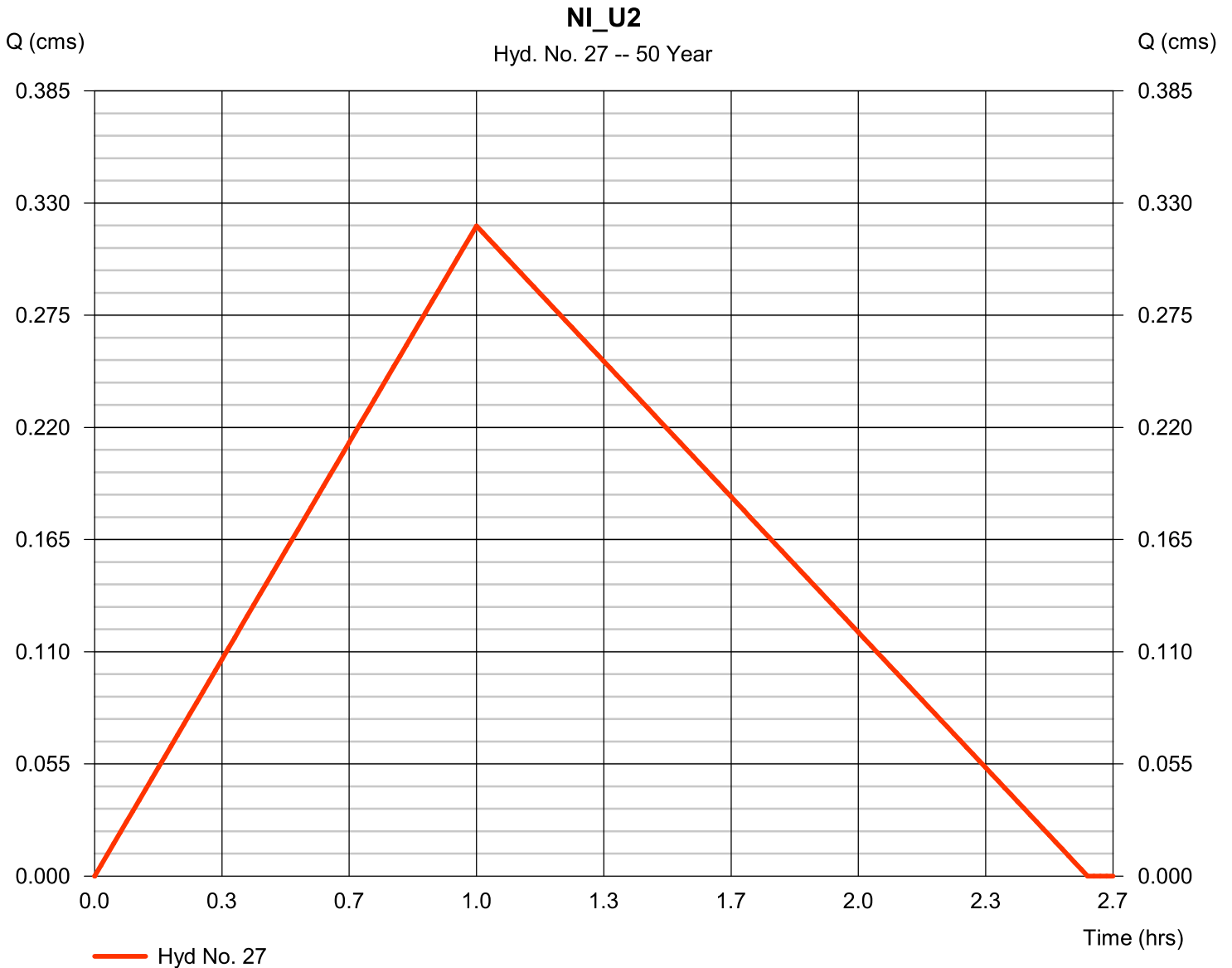
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 27

NI_U2

Hydrograph type	= Rational	Peak discharge	= 0.319 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 491.9 cum
Drainage area	= 10.080 hectare	Runoff coeff.	= 0.41
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

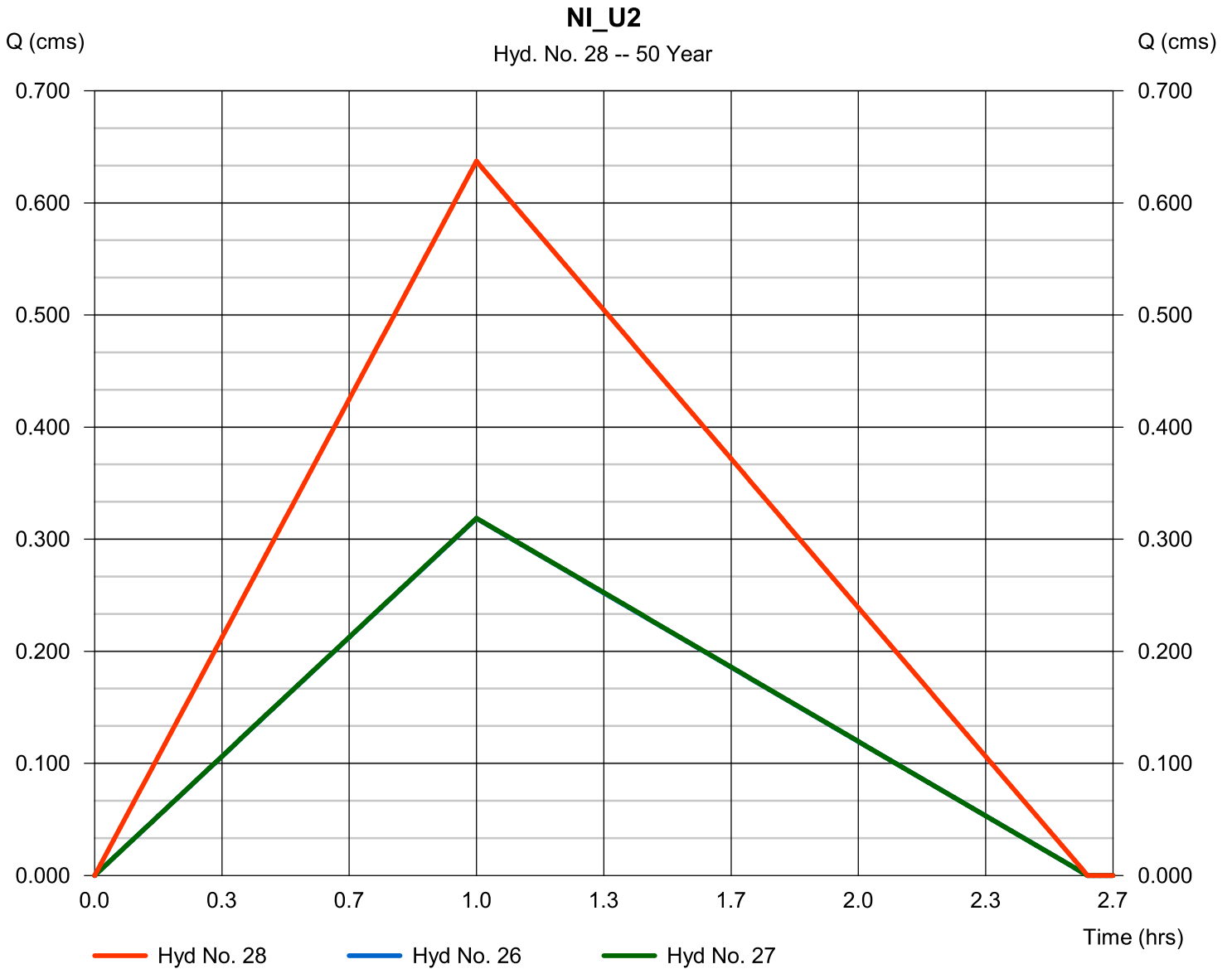
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 28

NI_U2

Hydrograph type	= Combine	Peak discharge	= 0.637 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 982.1 cum
Inflow hyds.	= 26, 27	Contrib. drain. area	= 30.720 hectare



Hydrograph Report

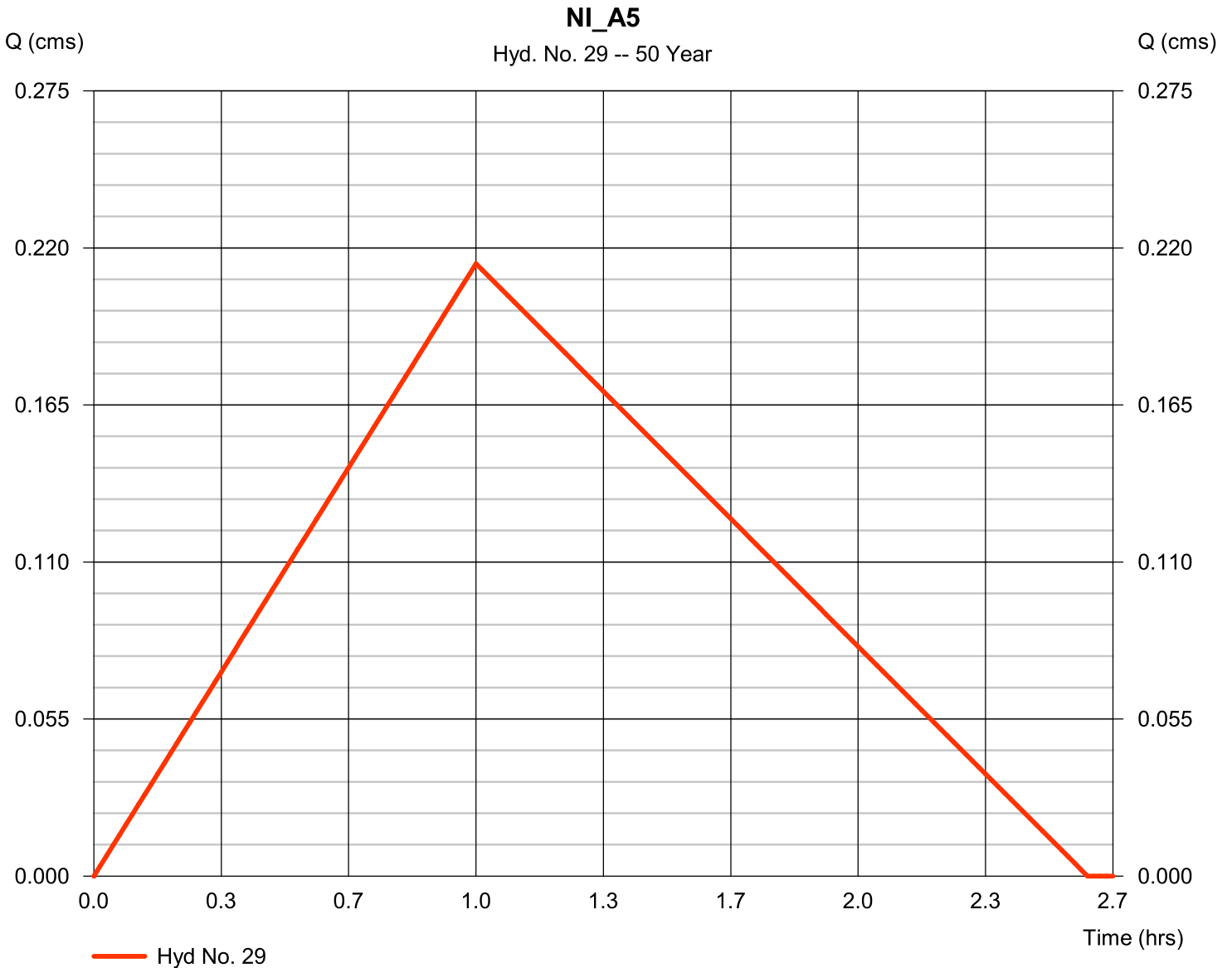
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 29

NI_A5

Hydrograph type	= Rational	Peak discharge	= 0.214 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 003.7 cum
Drainage area	= 13.240 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

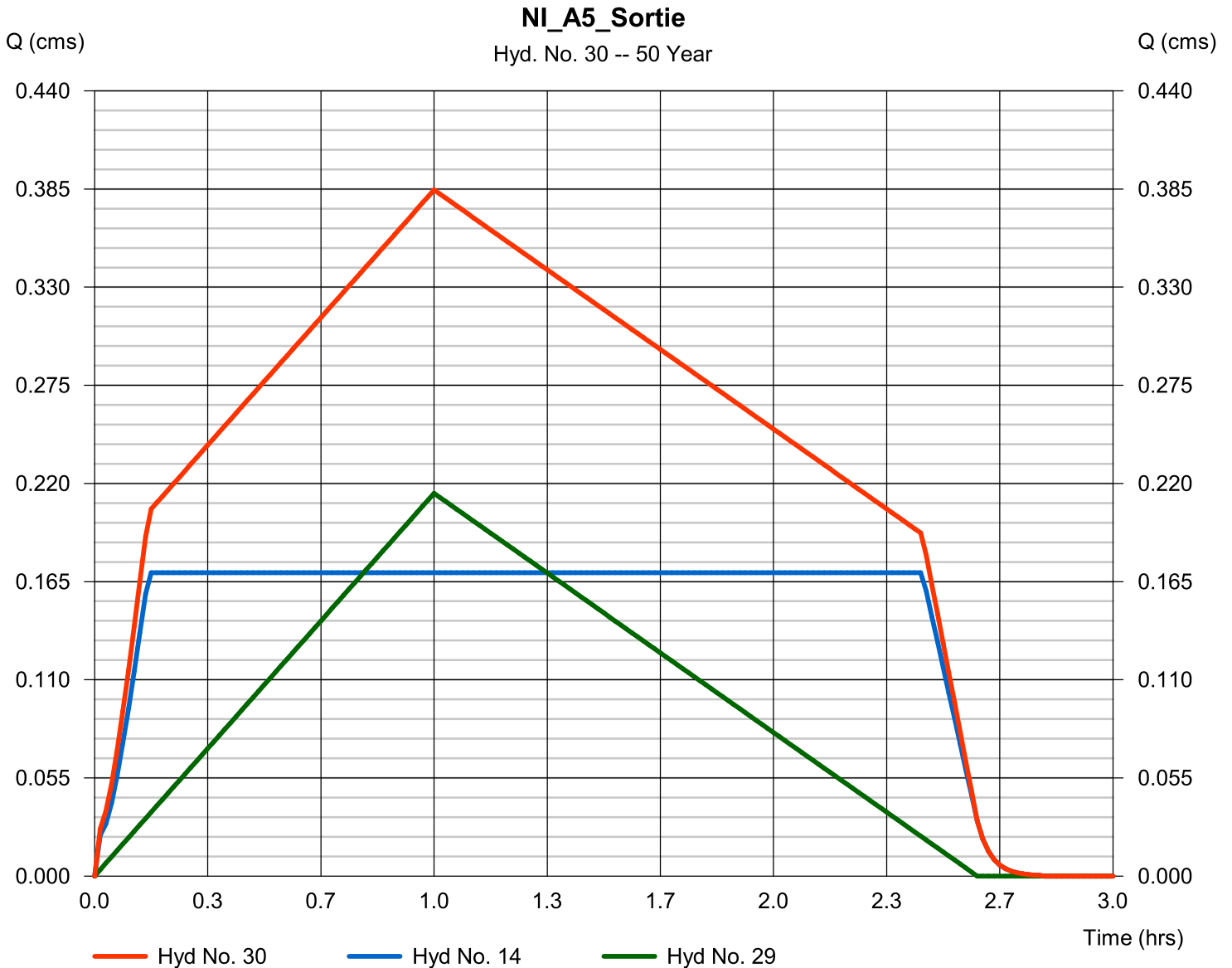
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Hyd. No. 30

NI_A5_Sortie

Hydrograph type	= Combine	Peak discharge	= 0.384 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 505.6 cum
Inflow hyds.	= 14, 29	Contrib. drain. area	= 13.240 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

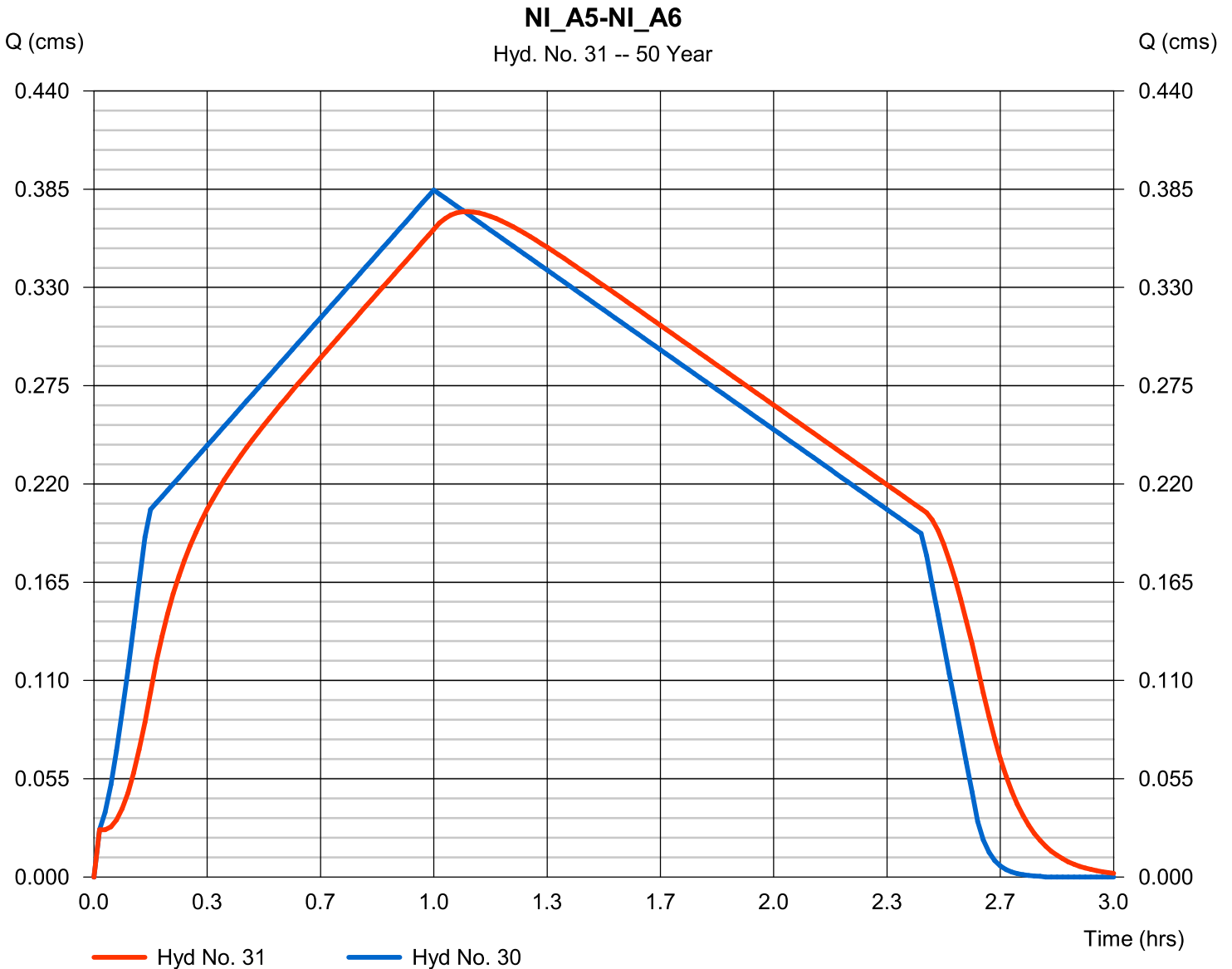
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Hyd. No. 31

NI_A5-NI_A6

Hydrograph type	= Reach	Peak discharge	= 0.372 cms
Storm frequency	= 50 yrs	Time to peak	= 1.10 hrs
Time interval	= 1 min	Hyd. volume	= 2 515.3 cum
Inflow hyd. No.	= 30 - NI_A5_Sortie	Section type	= Trapezoidal
Reach length	= 530.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 1.15 m/s	Routing coeff.	= 0.1624

Modified Att-Kin routing method used.



Hydrograph Report

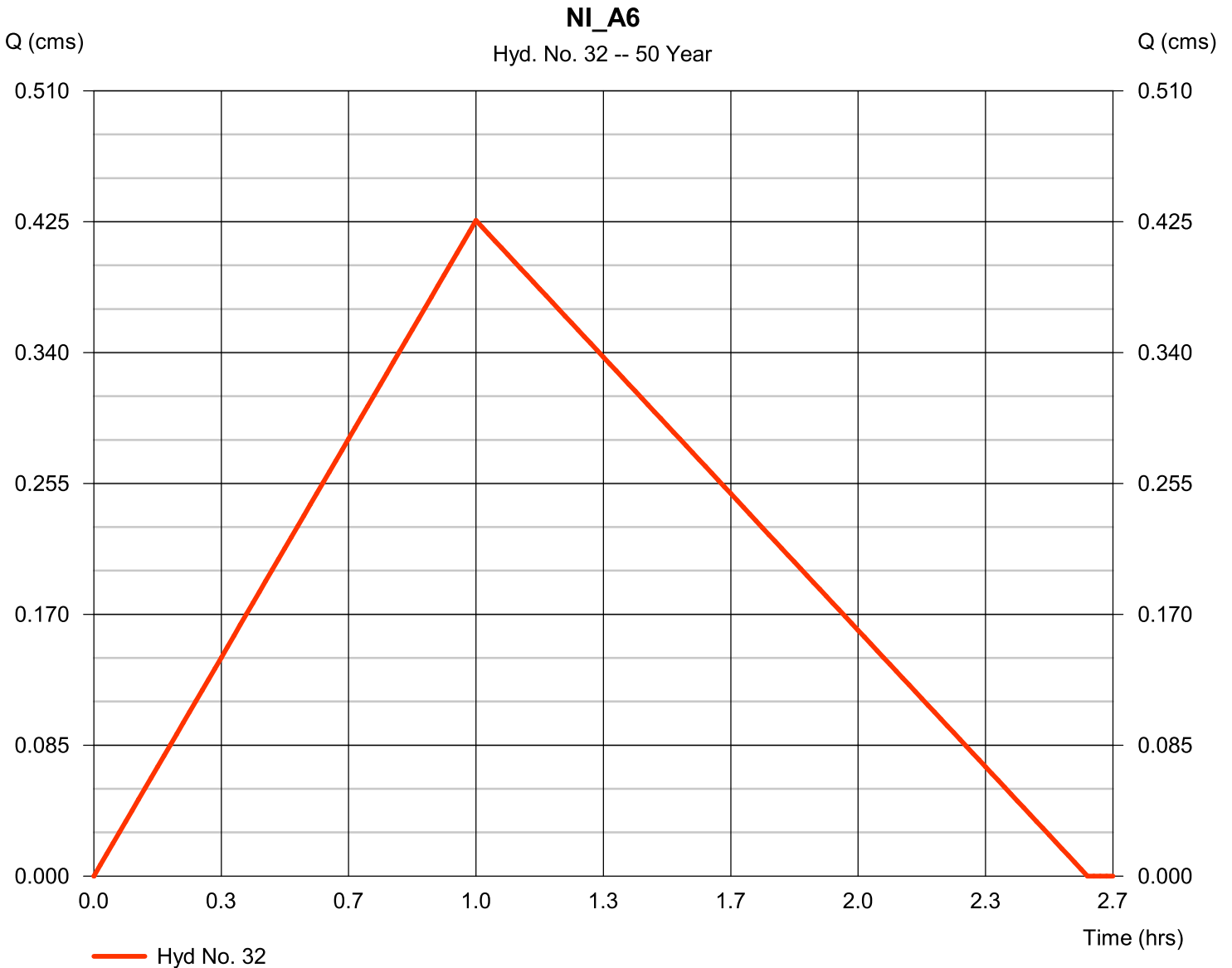
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 32

NI_A6

Hydrograph type	= Rational	Peak discharge	= 0.426 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 992.7 cum
Drainage area	= 23.000 hectare	Runoff coeff.	= 0.24
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

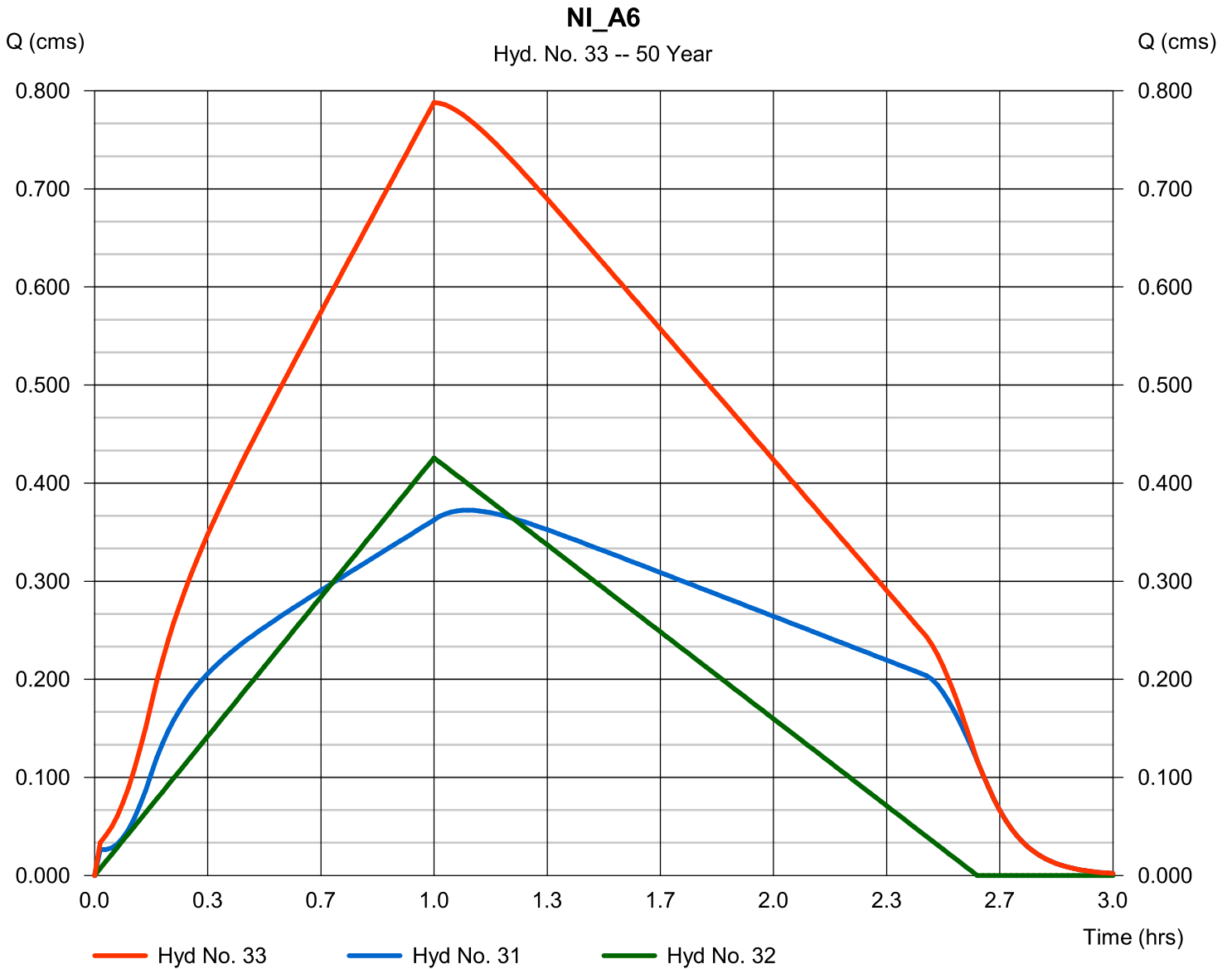
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 33

NI_A6

Hydrograph type	= Combine	Peak discharge	= 0.788 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 4 508.0 cum
Inflow hyds.	= 31, 32	Contrib. drain. area	= 23.000 hectare



Hydrograph Report

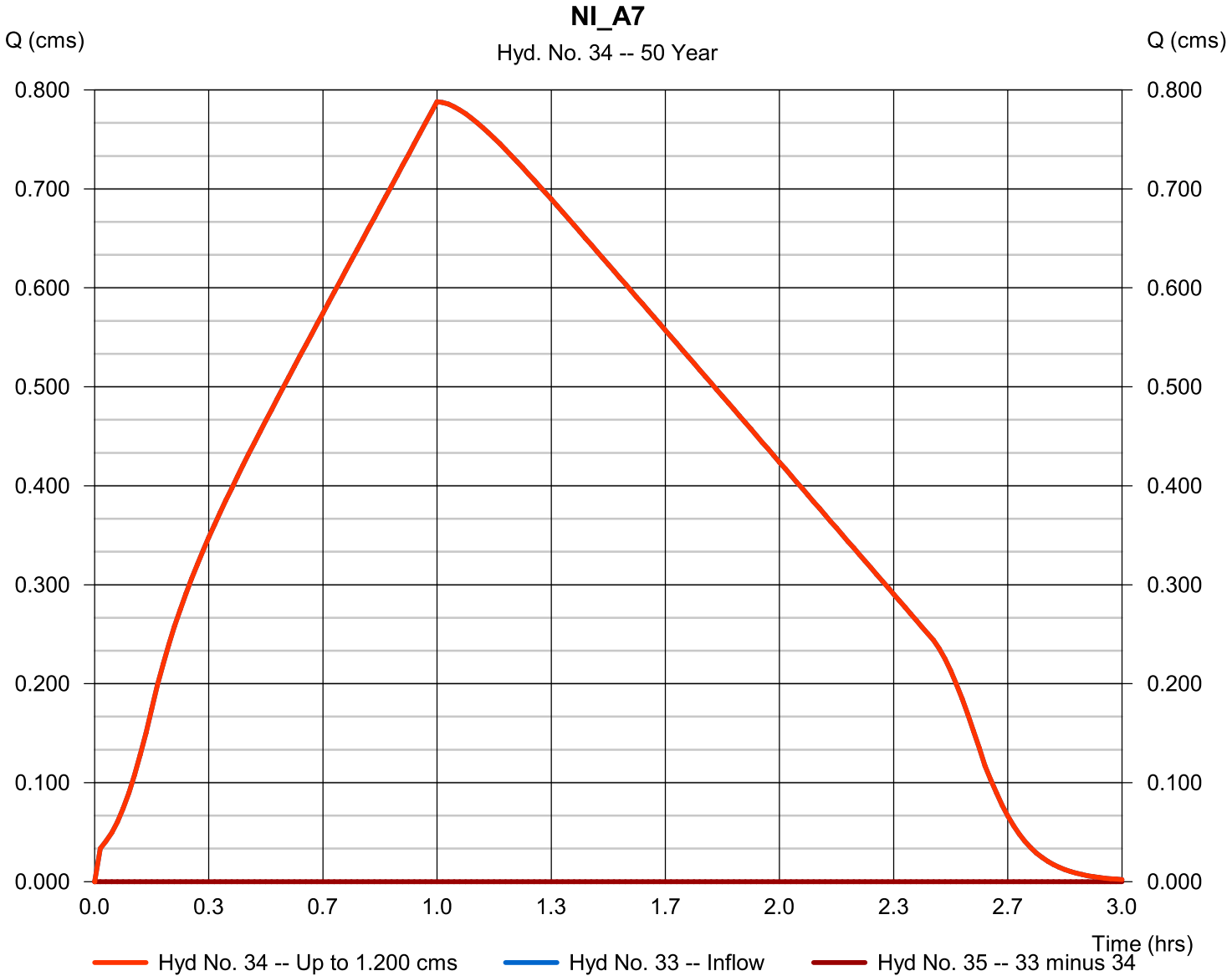
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 34

NI_A7

Hydrograph type	= Diversion1	Peak discharge	= 0.788 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 4 508.0 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 35
Diversion method	= Constant Q	Constant Q	= 1.20 cms



Hydrograph Report

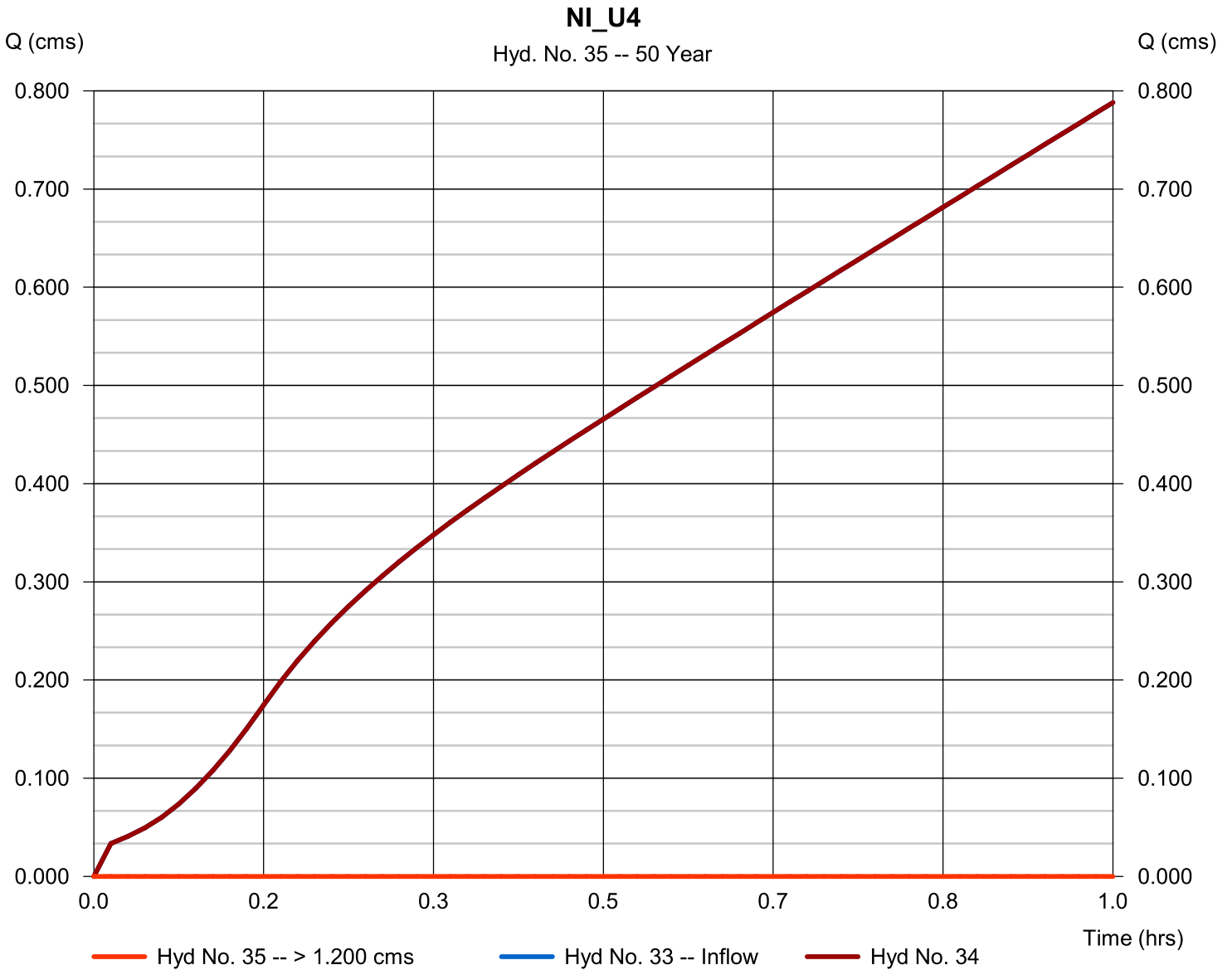
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 35

NI_U4

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 34
Diversion method	= Constant Q	Constant Q	= 1.20 cms



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

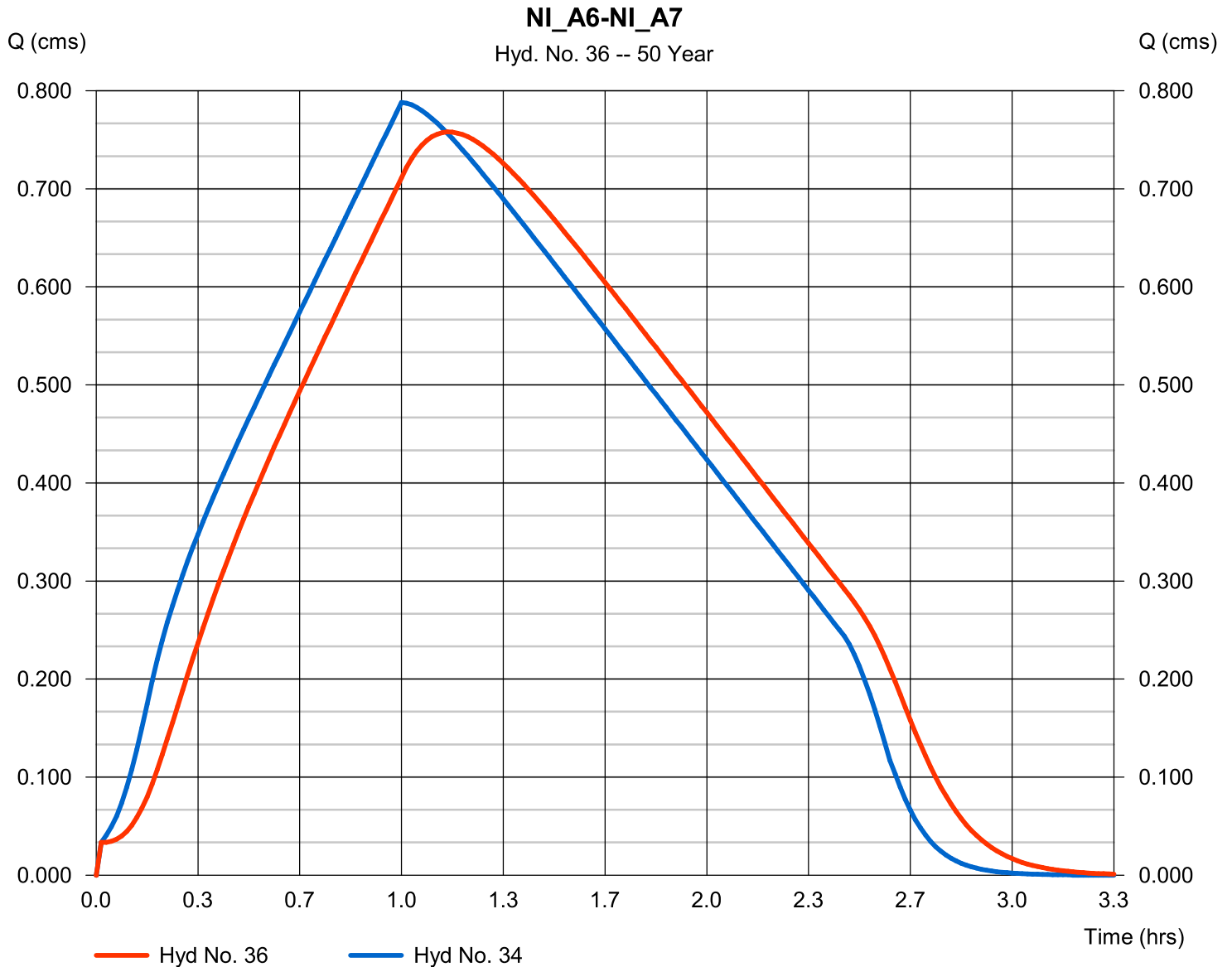
jeudi, avr 5, 2012

Hyd. No. 36

NI_A6-NI_A7

Hydrograph type	= Reach	Peak discharge	= 0.758 cms
Storm frequency	= 50 yrs	Time to peak	= 1.15 hrs
Time interval	= 1 min	Hyd. volume	= 4 522.4 cum
Inflow hyd. No.	= 34 - NI_A7	Section type	= Trapezoidal
Reach length	= 150.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.28 m/s	Routing coeff.	= 0.1388

Modified Att-Kin routing method used.



Hydrograph Report

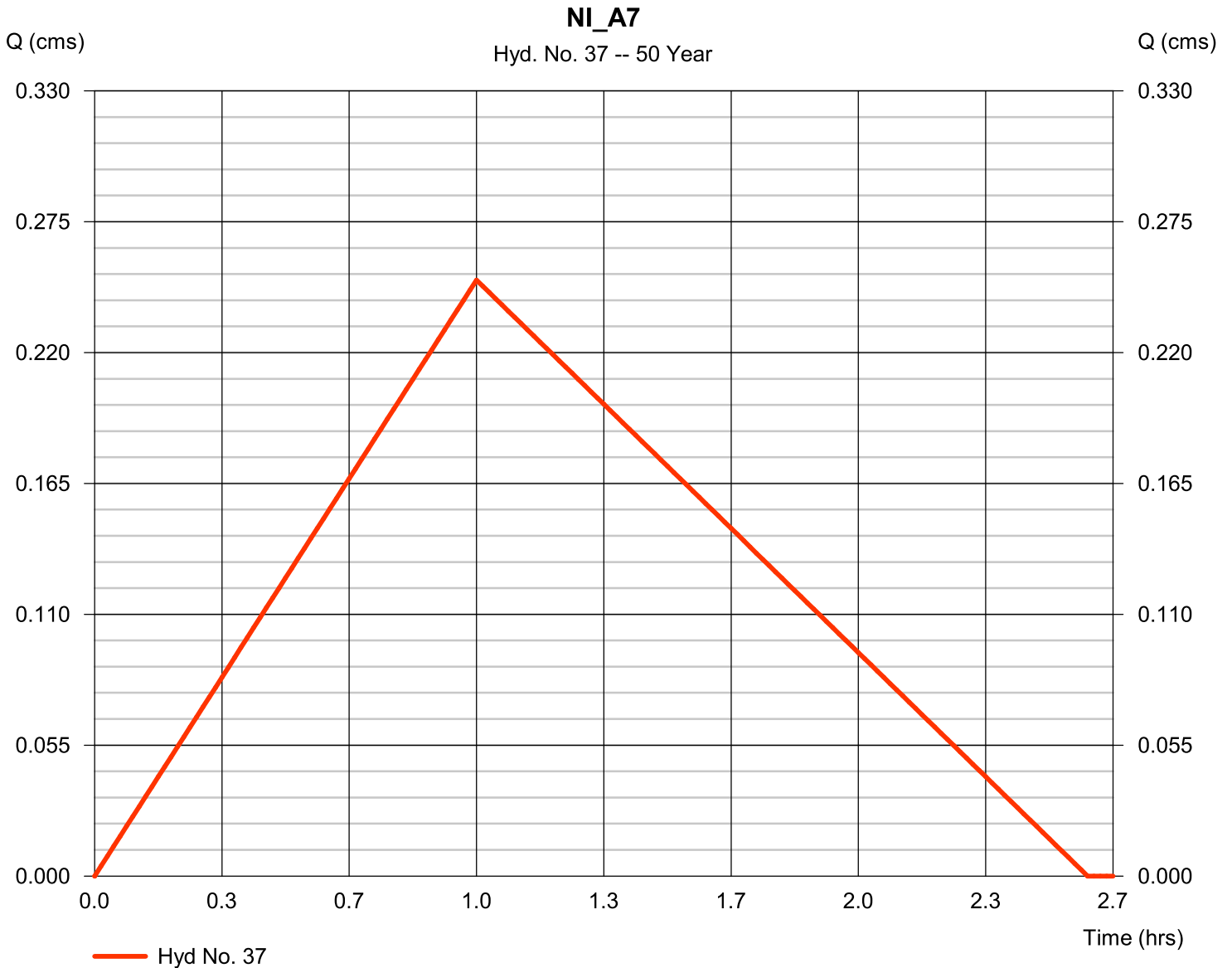
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 37

NI_A7

Hydrograph type	= Rational	Peak discharge	= 0.250 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 172.3 cum
Drainage area	= 12.490 hectare	Runoff coeff.	= 0.26
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

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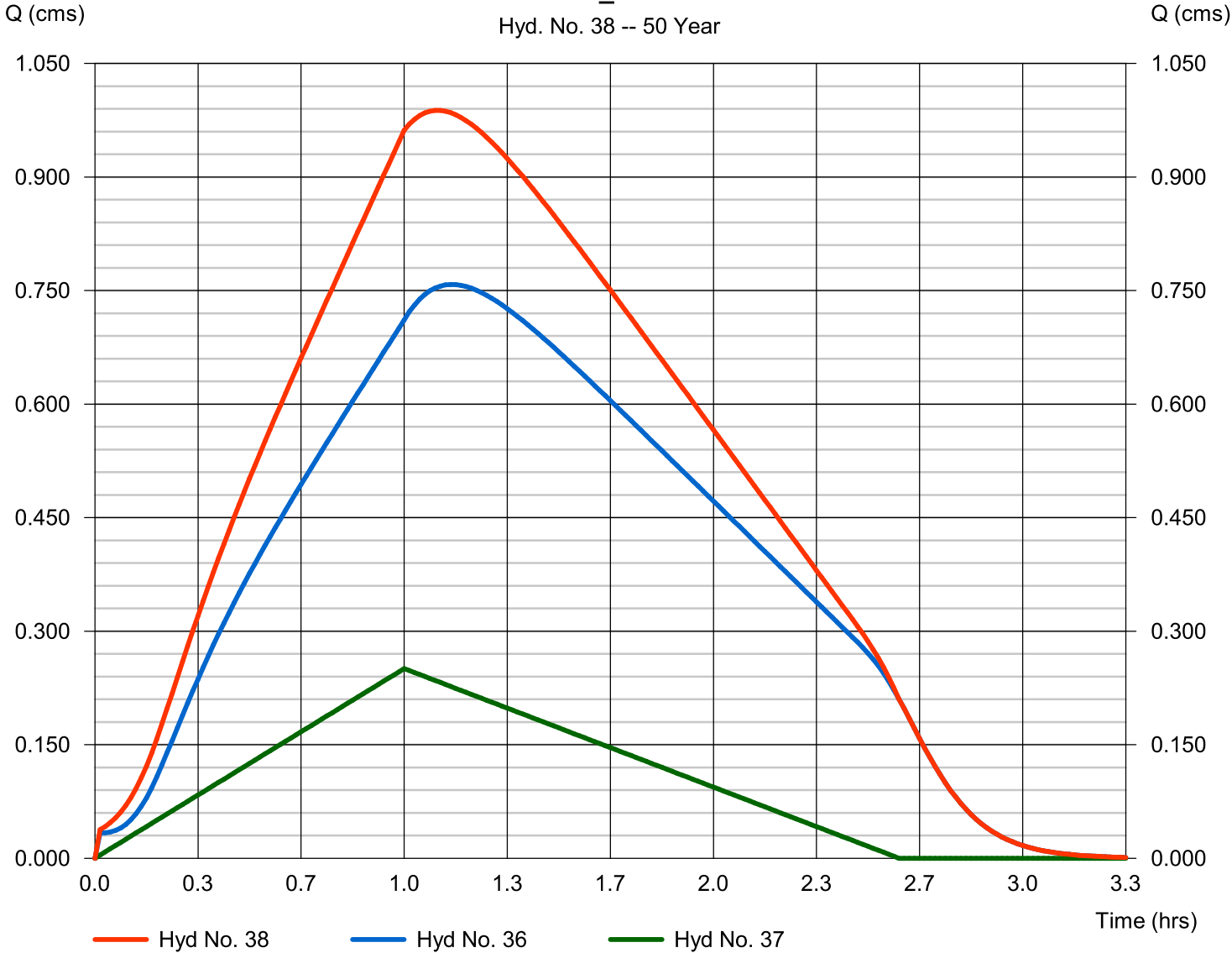
Hyd. No. 38

NI_A7

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hyds. = 36, 37

Peak discharge = 0.988 cms
Time to peak = 1.10 hrs
Hyd. volume = 5 694.7 cum
Contrib. drain. area = 12.490 hectare

NI_A7
Hyd. No. 38 -- 50 Year



Hydrograph Report

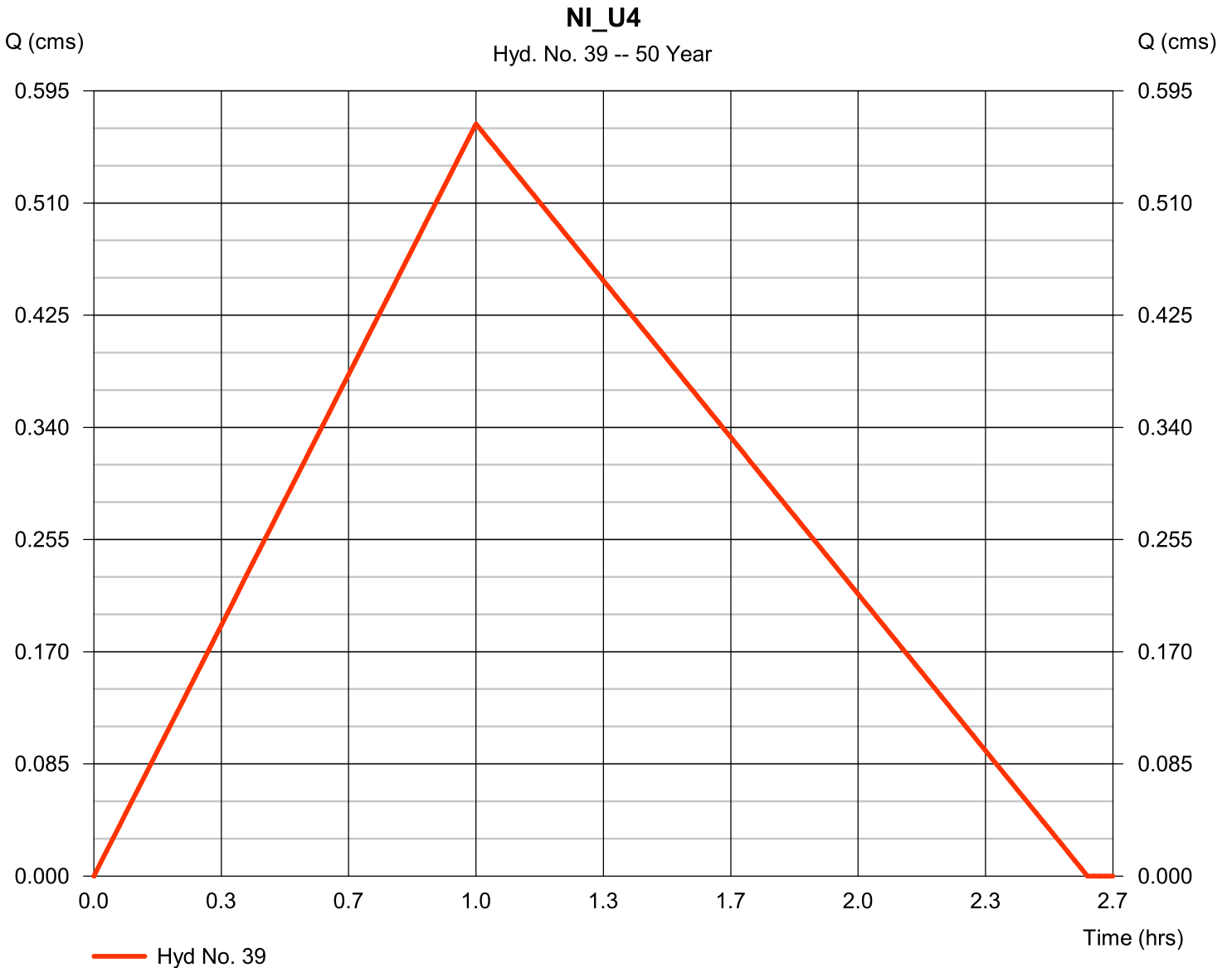
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 39

NI_U4

Hydrograph type	= Rational	Peak discharge	= 0.570 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 667.3 cum
Drainage area	= 22.390 hectare	Runoff coeff.	= 0.33
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

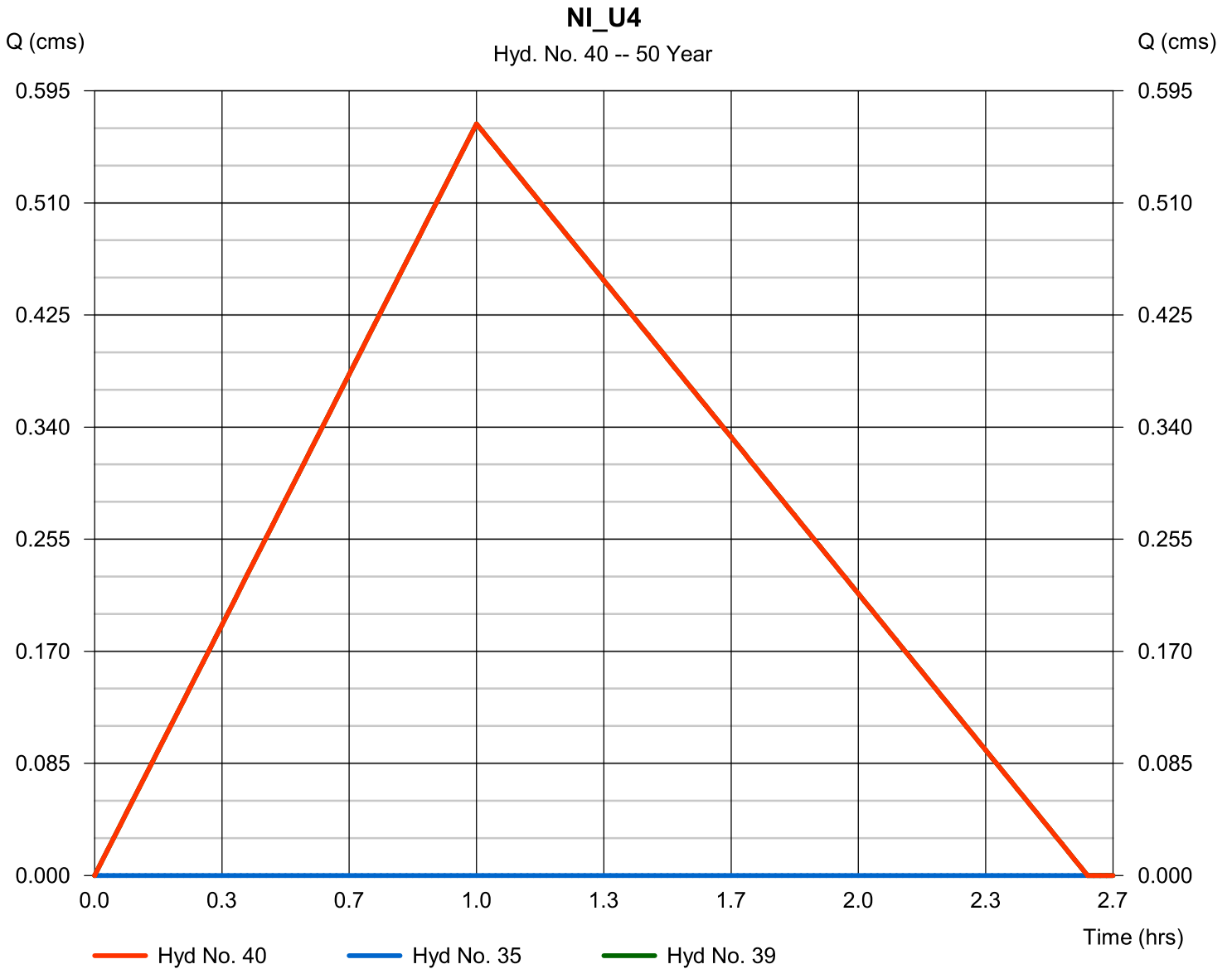
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 40

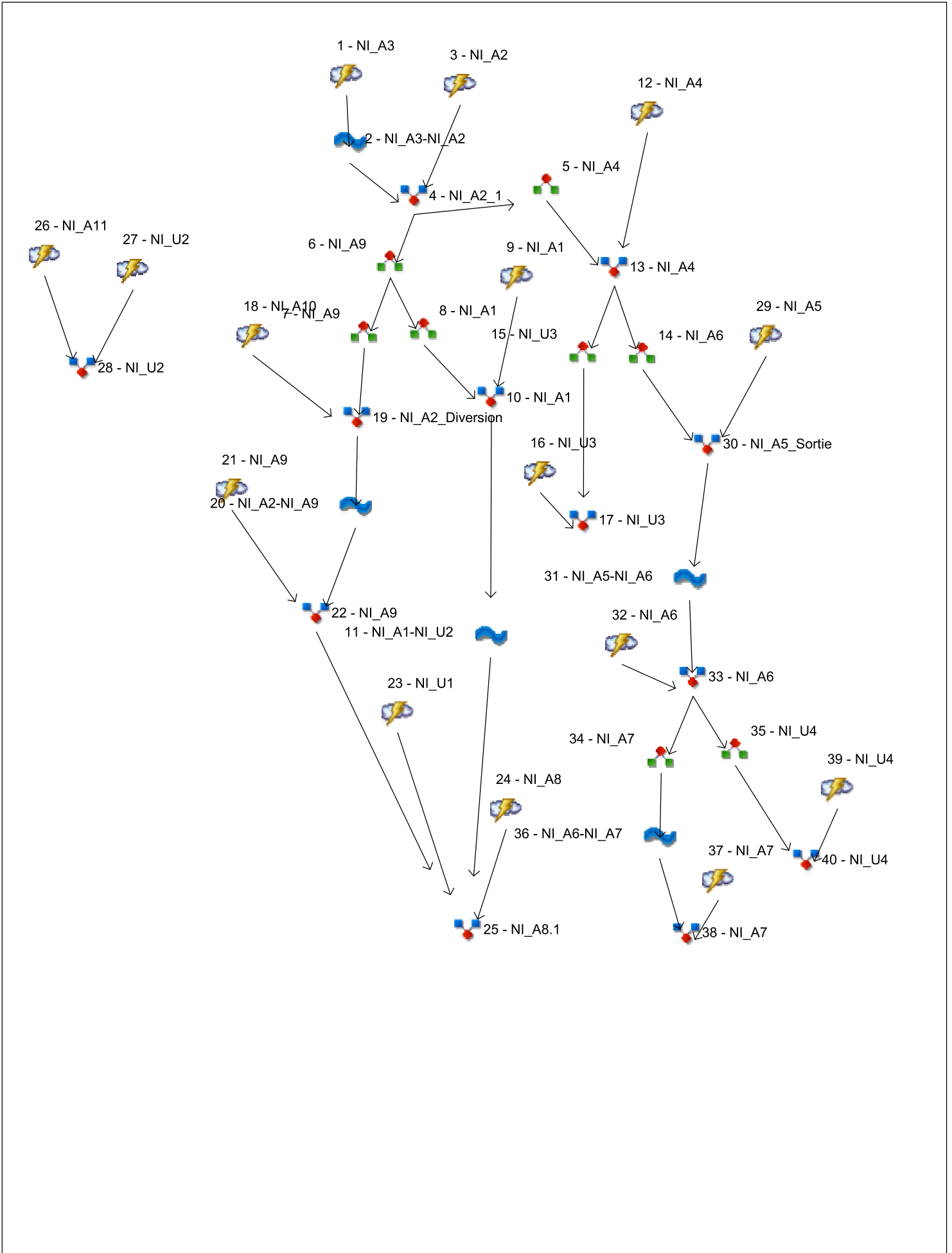
NI_U4

Hydrograph type	= Combine	Peak discharge	= 0.570 cms
Storm frequency	= 50 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 667.3 cum
Inflow hyds.	= 35, 39	Contrib. drain. area	= 22.390 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	-----	-----	-----	-----	-----	-----	-----	1.204	NI_A3
2	Reach	1	-----	-----	-----	-----	-----	-----	-----	1.176	NI_A3-NI_A2
3	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.288	NI_A2
4	Combine	2, 3	-----	-----	-----	-----	-----	-----	-----	1.457	NI_A2_1
5	Diversion1	4	-----	-----	-----	-----	-----	-----	-----	0.850	NI_A4
6	Diversion2	4	-----	-----	-----	-----	-----	-----	-----	0.607	NI_A9
7	Diversion1	6	-----	-----	-----	-----	-----	-----	-----	0.500	NI_A9
8	Diversion2	6	-----	-----	-----	-----	-----	-----	-----	0.107	NI_A1
9	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.115	NI_A1
10	Combine	8, 9	-----	-----	-----	-----	-----	-----	-----	0.219	NI_A1
11	Reach	10	-----	-----	-----	-----	-----	-----	-----	0.194	NI_A1-NI_U2
12	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.166	NI_A4
13	Combine	5, 12	-----	-----	-----	-----	-----	-----	-----	1.016	NI_A4
14	Diversion1	13	-----	-----	-----	-----	-----	-----	-----	0.170	NI_A6
15	Diversion2	13	-----	-----	-----	-----	-----	-----	-----	0.846	NI_U3
16	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.609	NI_U3
17	Combine	15, 16	-----	-----	-----	-----	-----	-----	-----	1.455	NI_U3
18	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.243	NI_A10
19	Combine	7, 18	-----	-----	-----	-----	-----	-----	-----	0.743	NI_A2_Diversion
20	Reach	19	-----	-----	-----	-----	-----	-----	-----	0.738	NI_A2-NI_A9
21	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.085	NI_A9
22	Combine	20, 21	-----	-----	-----	-----	-----	-----	-----	0.822	NI_A9
23	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.056	NI_U1
24	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.005	NI_A8
25	Combine	11, 22, 23, 24	-----	-----	-----	-----	-----	-----	-----	1.066	NI_A8.1
26	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.388	NI_A11
27	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.353	NI_U2
28	Combine	26, 27	-----	-----	-----	-----	-----	-----	-----	0.741	NI_U2
29	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.271	NI_A5
30	Combine	14, 29	-----	-----	-----	-----	-----	-----	-----	0.441	NI_A5_Sortie
31	Reach	30	-----	-----	-----	-----	-----	-----	-----	0.427	NI_A5-NI_A6
32	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.511	NI_A6
33	Combine	31, 32	-----	-----	-----	-----	-----	-----	-----	0.925	NI_A6
34	Diversion1	33	-----	-----	-----	-----	-----	-----	-----	0.925	NI_A7
35	Diversion2	33	-----	-----	-----	-----	-----	-----	-----	0.000	NI_U4
36	Reach	34	-----	-----	-----	-----	-----	-----	-----	0.890	NI_A6-NI_A7

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
37	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.299	NI_A7
38	Combine	36, 37	-----	-----	-----	-----	-----	-----	-----	1.165	NI_A7
39	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.650	NI_U4
40	Combine	35, 39	-----	-----	-----	-----	-----	-----	-----	0.650	NI_U4

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	1.204	1	60	5 633.5	-----	-----	-----	NI_A3
2	Reach	1.176	1	63	5 636.9	1	-----	-----	NI_A3-NI_A2
3	Rational	0.288	1	60	1 346.7	-----	-----	-----	NI_A2
4	Combine	1.457	1	62	6 983.6	2, 3	-----	-----	NI_A2_1
5	Diversion1	0.850	1	37	5 698.9	4	-----	-----	NI_A4
6	Diversion2	0.607	1	62	1 284.7	4	-----	-----	NI_A9
7	Diversion1	0.500	1	57	1 228.3	6	-----	-----	NI_A9
8	Diversion2	0.107	1	62	56.4	6	-----	-----	NI_A1
9	Rational	0.115	1	60	538.8	-----	-----	-----	NI_A1
10	Combine	0.219	1	62	595.1	8, 9	-----	-----	NI_A1
11	Reach	0.194	1	66	595.5	10	-----	-----	NI_A1-NI_U2
12	Rational	0.166	1	60	776.2	-----	-----	-----	NI_A4
13	Combine	1.016	1	60	6 475.1	5, 12	-----	-----	NI_A4
14	Diversion1	0.170	1	26	1 519.9	13	-----	-----	NI_A6
15	Diversion2	0.846	1	60	4 955.2	13	-----	-----	NI_U3
16	Rational	0.609	1	60	2 849.2	-----	-----	-----	NI_U3
17	Combine	1.455	1	60	7 804.4	15, 16	-----	-----	NI_U3
18	Rational	0.243	1	60	1 136.1	-----	-----	-----	NI_A10
19	Combine	0.743	1	60	2 364.4	7, 18	-----	-----	NI_A2_Diversion
20	Reach	0.738	1	62	2 364.9	19	-----	-----	NI_A2-NI_A9
21	Rational	0.085	1	60	399.2	-----	-----	-----	NI_A9
22	Combine	0.822	1	62	2 764.1	20, 21	-----	-----	NI_A9
23	Rational	0.056	1	60	261.9	-----	-----	-----	NI_U1
24	Rational	0.005	1	60	22.4	-----	-----	-----	NI_A8
25	Combine	1.066	1	65	3 643.8	11, 22, 23, 24	-----	-----	NI_A8.1
26	Rational	0.388	1	60	1 814.8	-----	-----	-----	NI_A11
27	Rational	0.353	1	60	1 651.8	-----	-----	-----	NI_U2
28	Combine	0.741	1	60	3 466.6	26, 27	-----	-----	NI_U2
29	Rational	0.271	1	60	1 270.0	-----	-----	-----	NI_A5
30	Combine	0.441	1	60	2 789.9	14, 29	-----	-----	NI_A5_Sortie
31	Reach	0.427	1	66	2 801.3	30	-----	-----	NI_A5-NI_A6
32	Rational	0.511	1	60	2 390.0	-----	-----	-----	NI_A6
33	Combine	0.925	1	60	5 191.4	31, 32	-----	-----	NI_A6
34	Diversion1	0.925	1	60	5 191.4	33	-----	-----	NI_A7
35	Diversion2	0.000	1	n/a	0.0	33	-----	-----	NI_U4
36	Reach	0.890	1	69	5 208.1	34	-----	-----	NI_A6-NI_A7
08.gpw					Return Period: 100 Year			jeudi, avr 5, 2012	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
37	Rational	0.299	1	60	1 397.7	-----	-----	-----	NI_A7
38	Combine	1.165	1	66	6 605.9	36, 37	-----	-----	NI_A7
39	Rational	0.650	1	60	3 042.5	-----	-----	-----	NI_U4
40	Combine	0.650	1	60	3 042.5	35, 39	-----	-----	NI_U4
08.gpw					Return Period: 100 Year			jeudi, avr 5, 2012	

Hydrograph Report

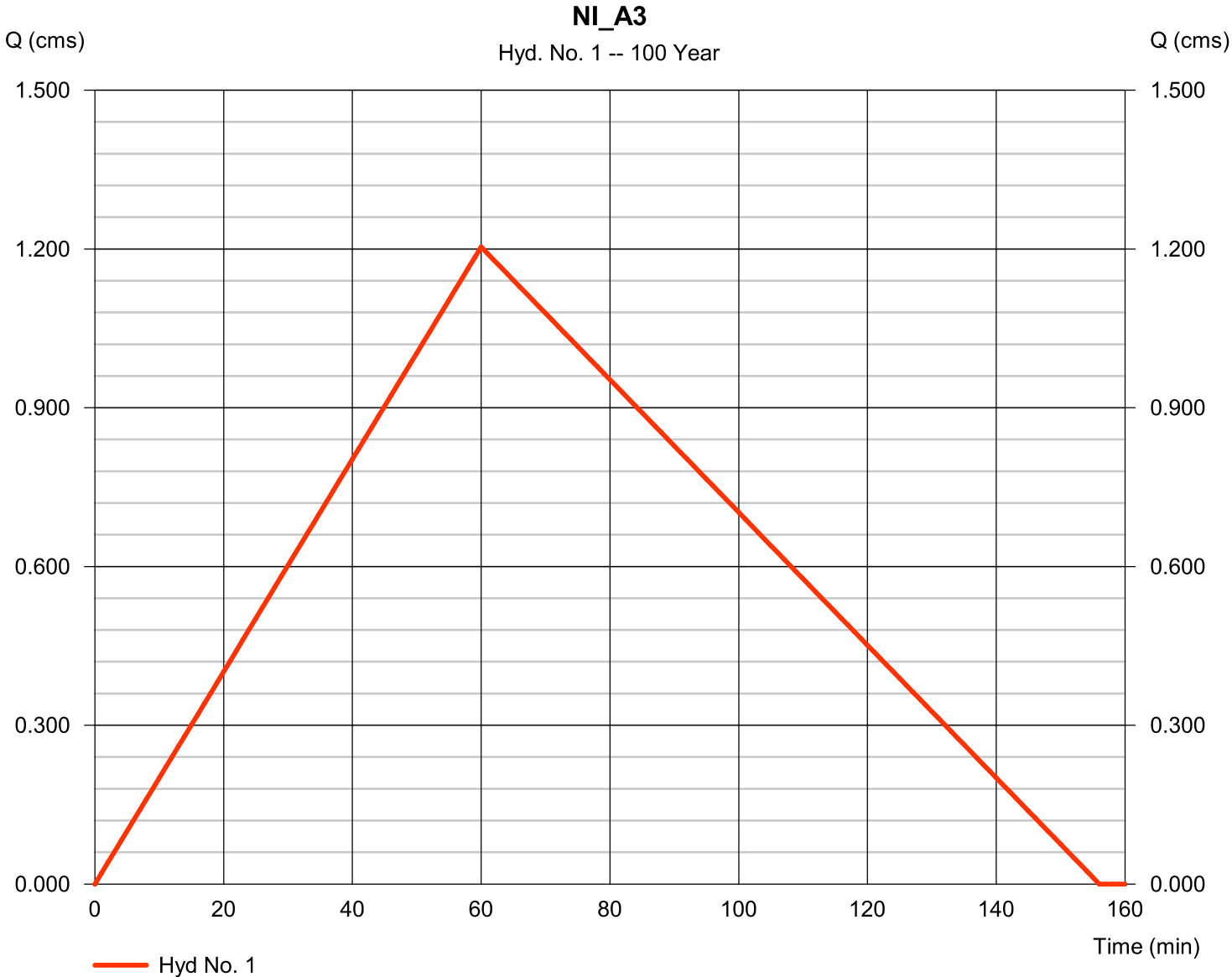
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 1

NI_A3

Hydrograph type	= Rational	Peak discharge	= 1.204 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 633.5 cum
Drainage area	= 58.730 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

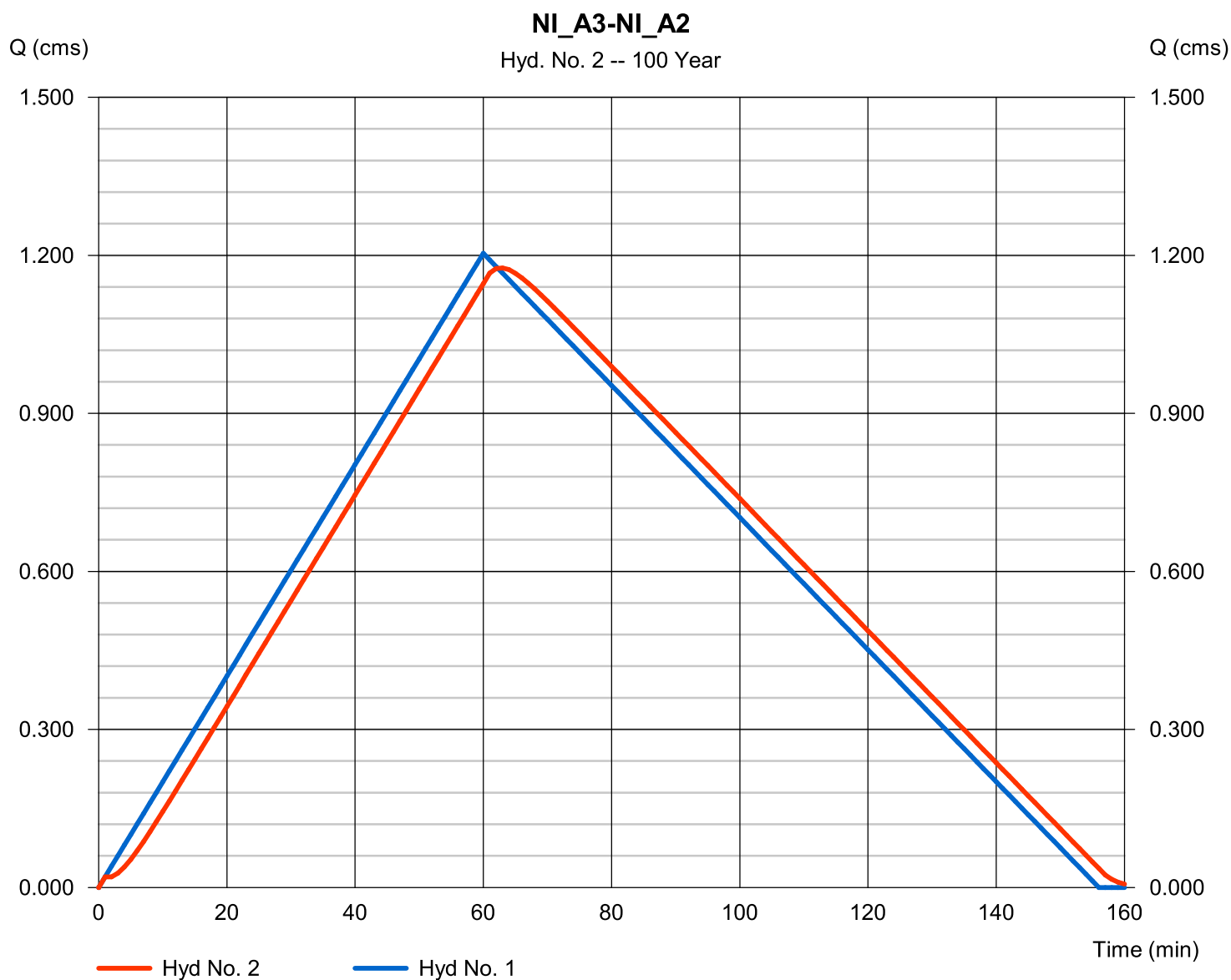
jeudi, avr 5, 2012

Hyd. No. 2

NI_A3-NI_A2

Hydrograph type	= Reach	Peak discharge	= 1.176 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 5 636.9 cum
Inflow hyd. No.	= 1 - NI_A3	Section type	= Trapezoidal
Reach length	= 500.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 2.60 m/s	Routing coeff.	= 0.3480

Modified Att-Kin routing method used.



Hydrograph Report

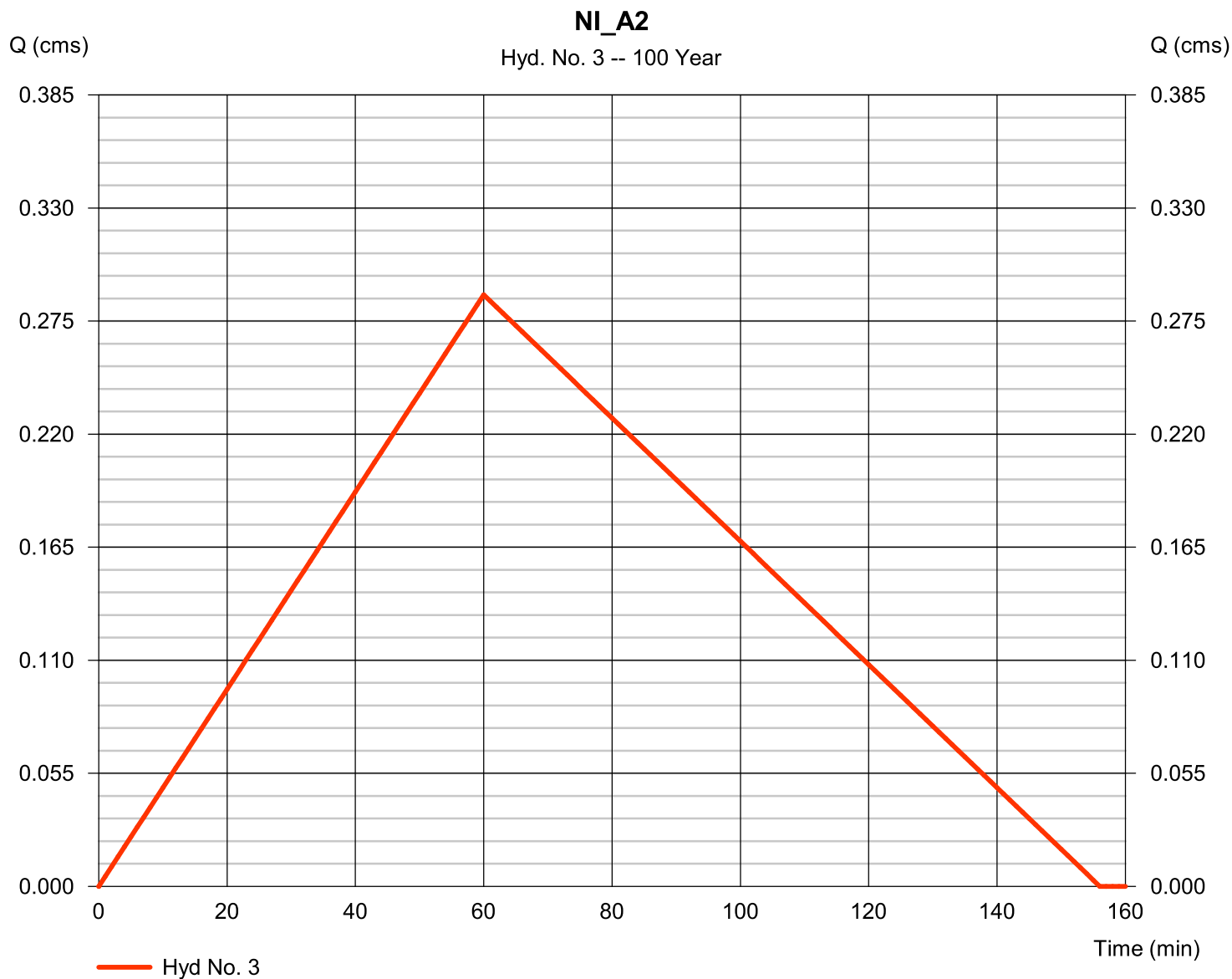
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 3

NI_A2

Hydrograph type	= Rational	Peak discharge	= 0.288 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 346.7 cum
Drainage area	= 14.650 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

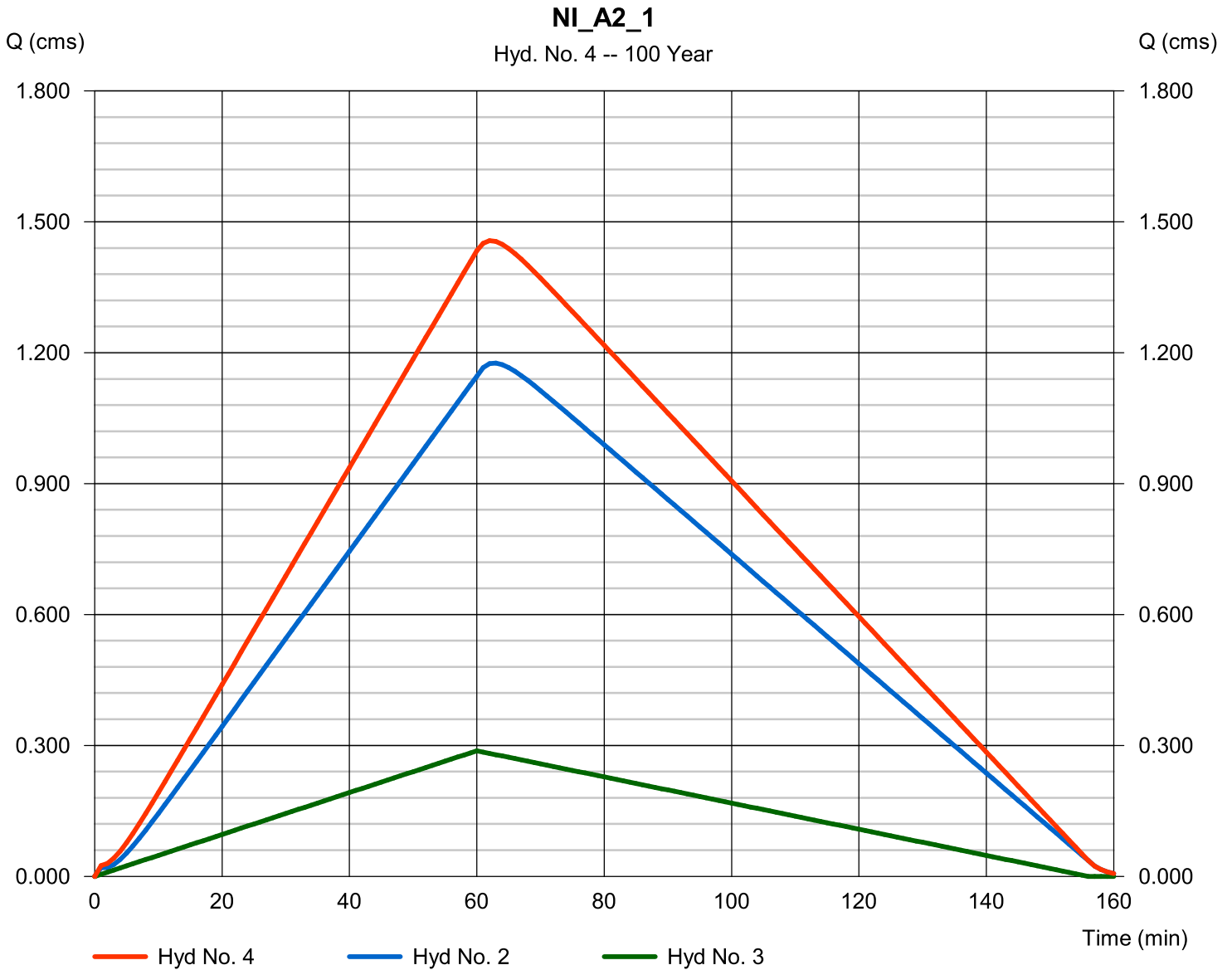
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 4

NI_A2_1

Hydrograph type	= Combine	Peak discharge	= 1.457 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 6 983.6 cum
Inflow hyds.	= 2, 3	Contrib. drain. area	= 14.650 hectare



Hydrograph Report

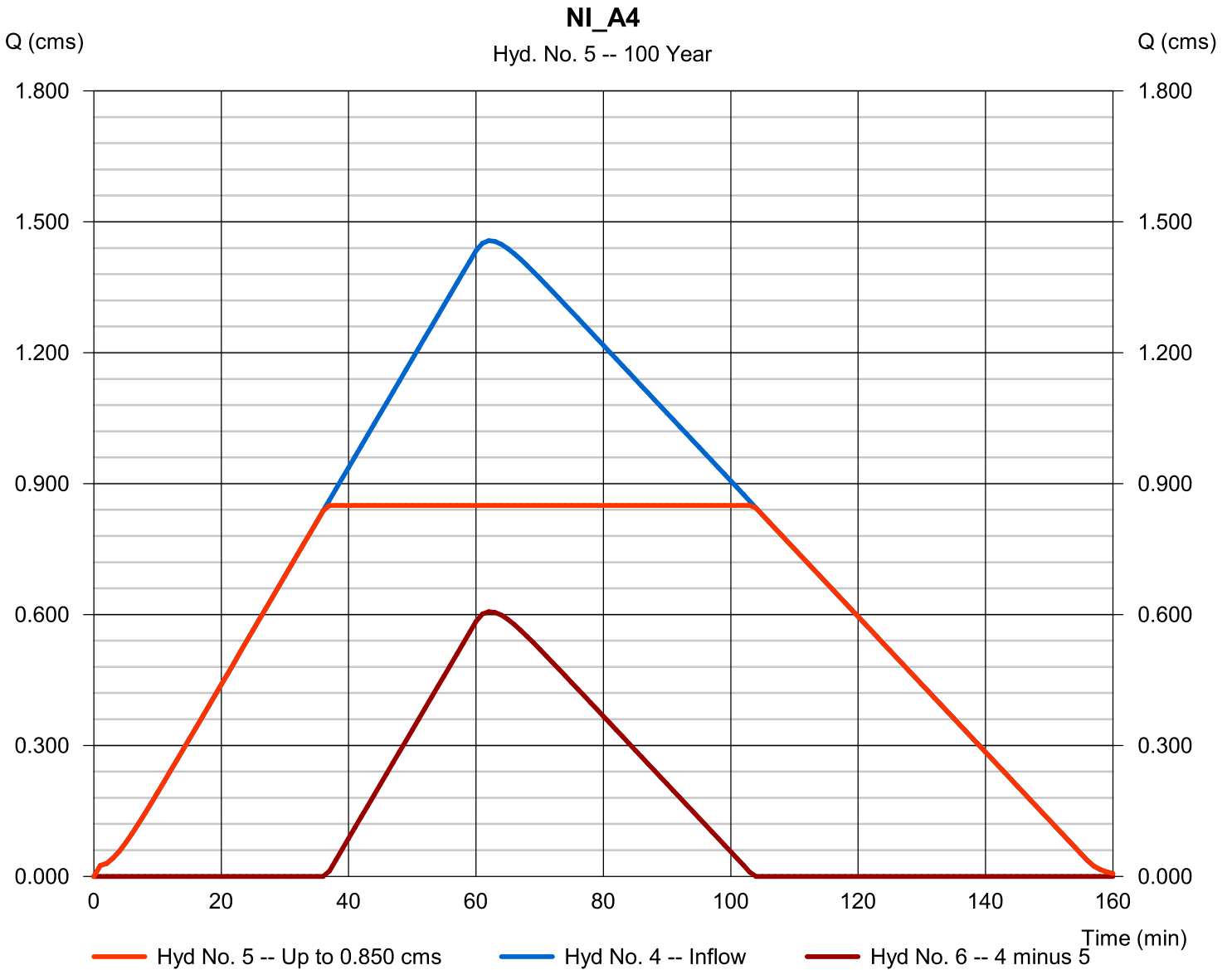
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

NI_A4

Hydrograph type	= Diversion1	Peak discharge	= 0.850 cms
Storm frequency	= 100 yrs	Time to peak	= 37 min
Time interval	= 1 min	Hyd. volume	= 5 698.9 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

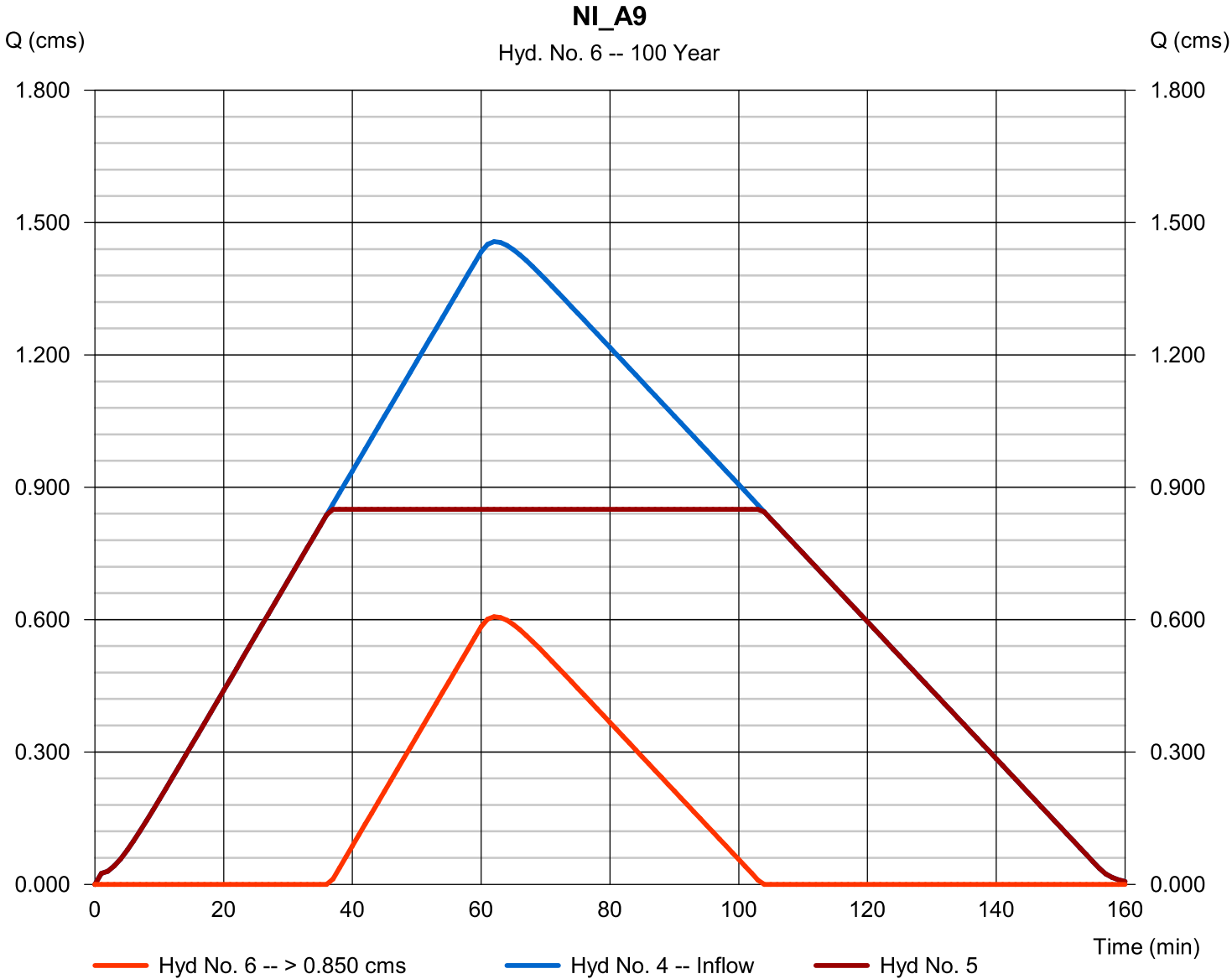
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 6

NI_A9

Hydrograph type	= Diversion2	Peak discharge	= 0.607 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 1 284.7 cum
Inflow hydrograph	= 4 - NI_A2_1	2nd diverted hyd.	= 5
Diversion method	= Constant Q	Constant Q	= 0.85 cms



Hydrograph Report

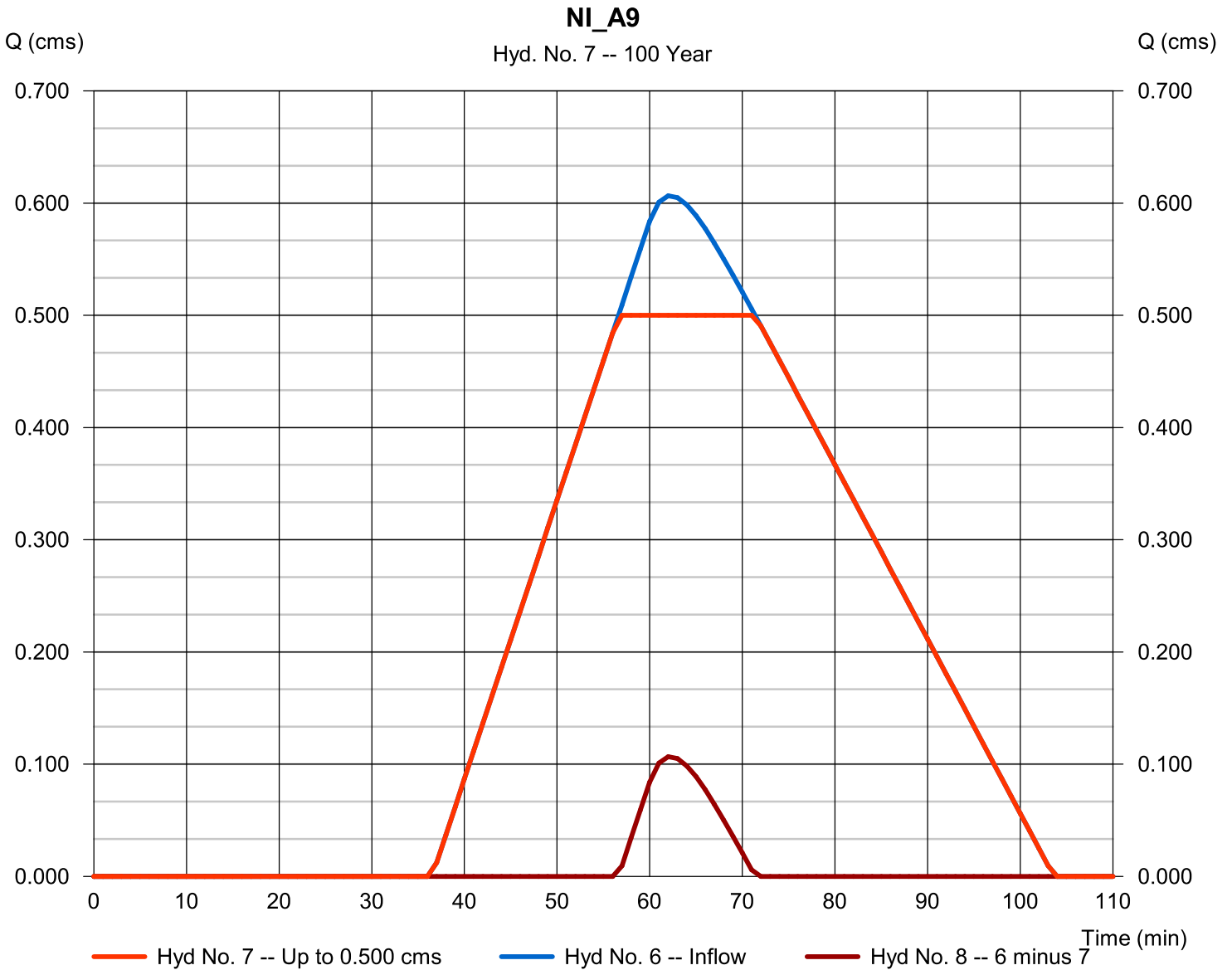
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

NI_A9

Hydrograph type	= Diversion1	Peak discharge	= 0.500 cms
Storm frequency	= 100 yrs	Time to peak	= 57 min
Time interval	= 1 min	Hyd. volume	= 1 228.3 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 8
Diversion method	= Constant Q	Constant Q	= 0.50 cms



Hydrograph Report

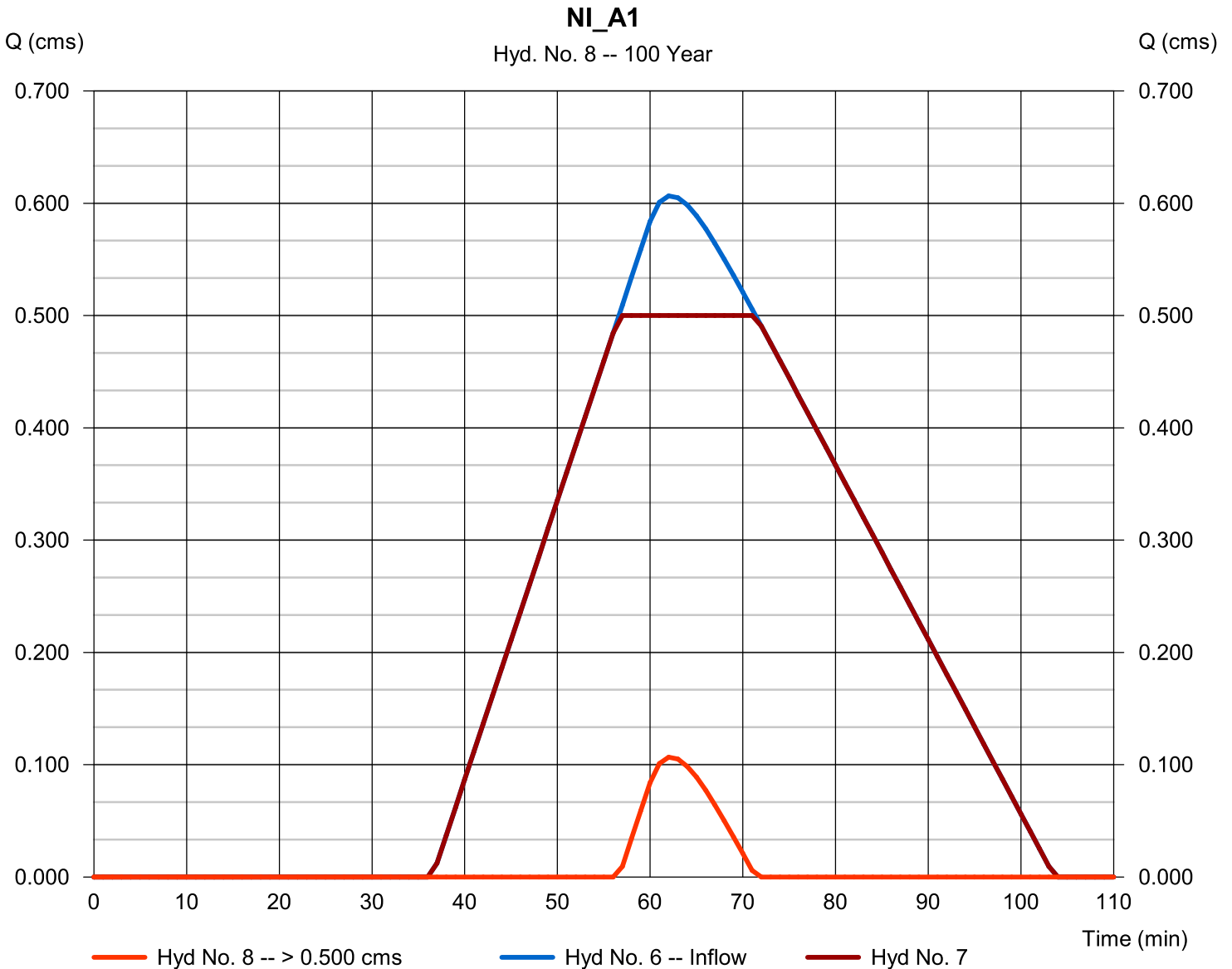
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 8

NI_A1

Hydrograph type	= Diversion2	Peak discharge	= 0.107 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 56.4 cum
Inflow hydrograph	= 6 - NI_A9	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.50 cms



Hydrograph Report

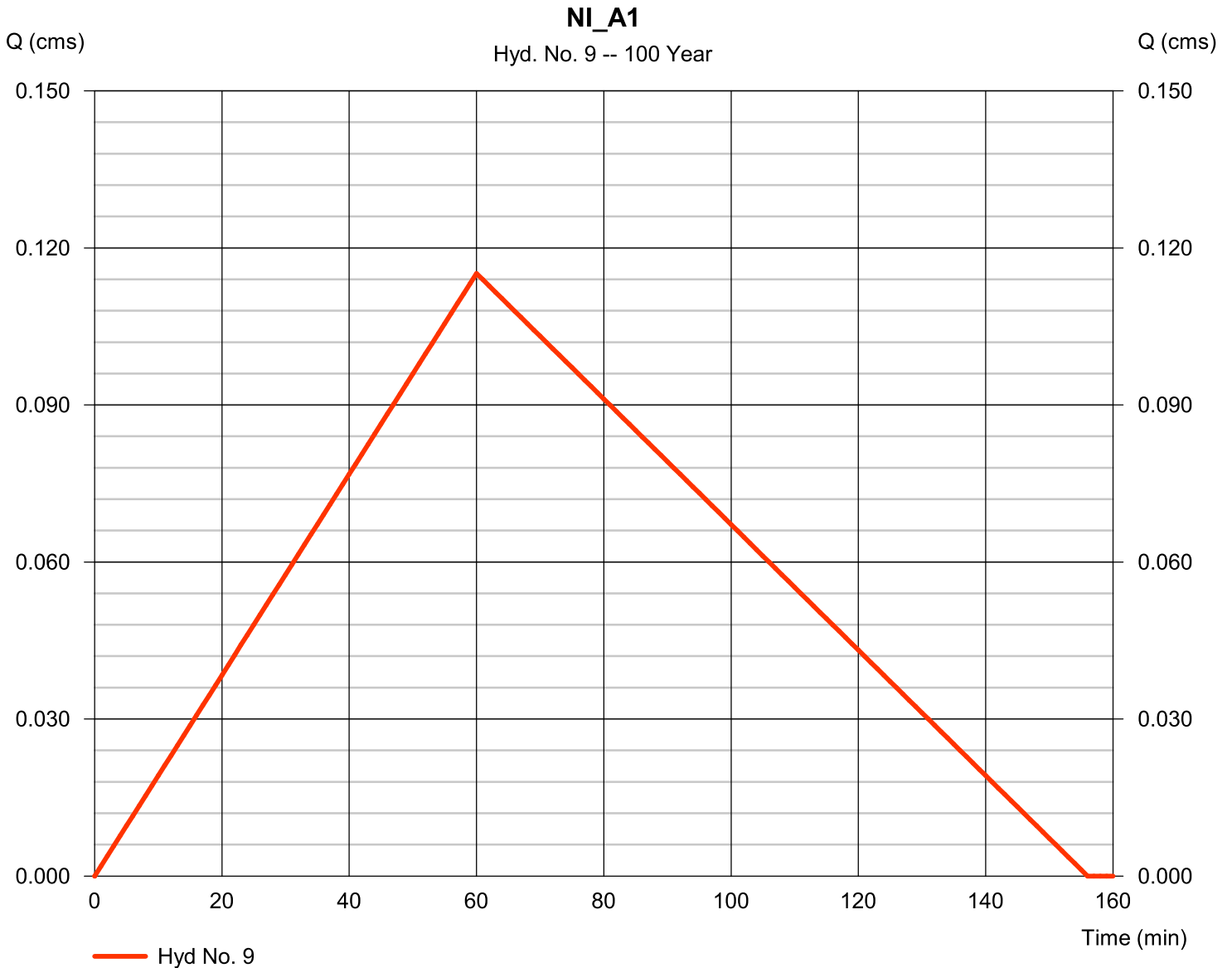
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 9

NI_A1

Hydrograph type	= Rational	Peak discharge	= 0.115 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 538.8 cum
Drainage area	= 6.740 hectare	Runoff coeff.	= 0.2
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

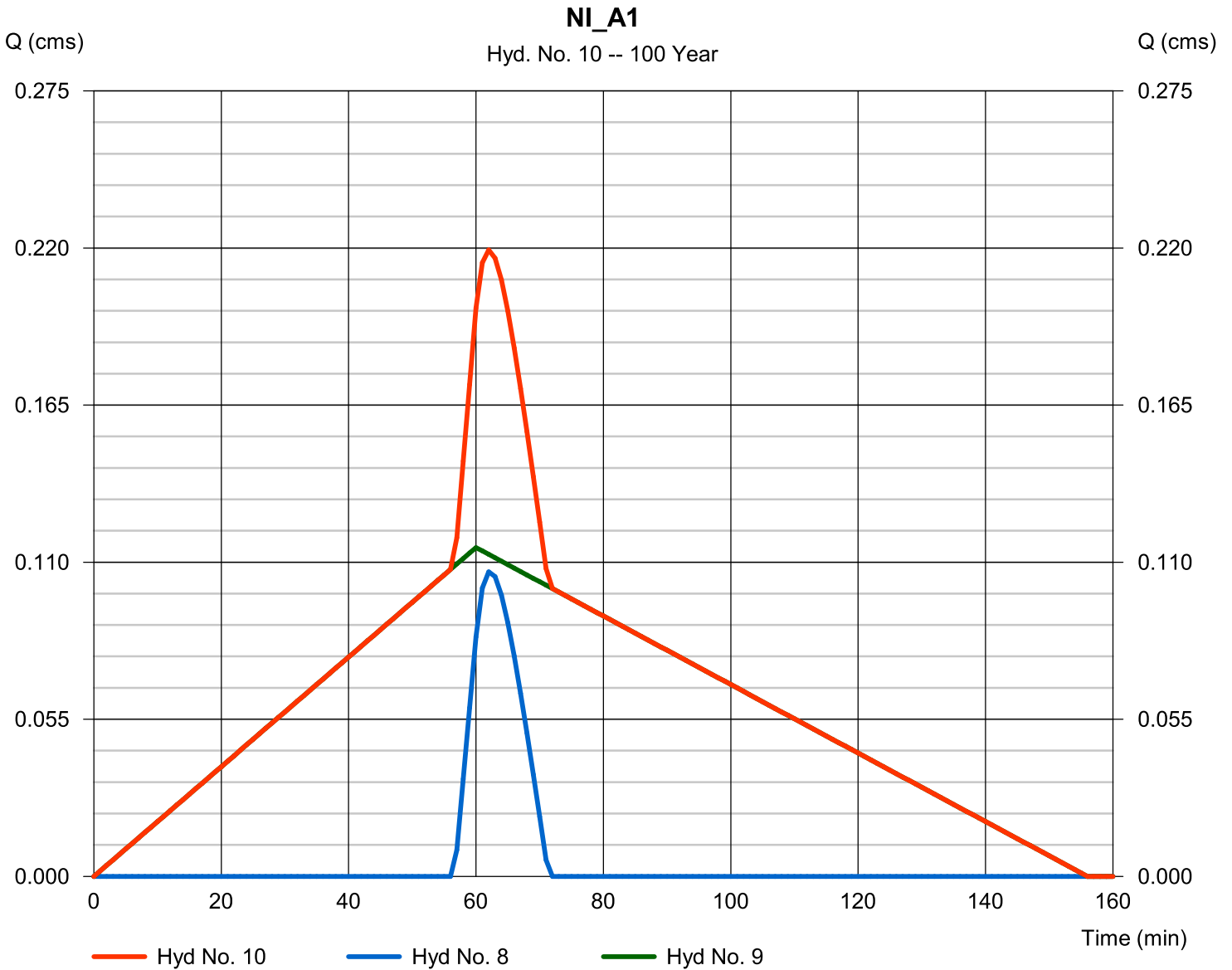
jeudi, avr 5, 2012

Hyd. No. 10

NI_A1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 8, 9

Peak discharge = 0.219 cms
Time to peak = 62 min
Hyd. volume = 595.1 cum
Contrib. drain. area = 6.740 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

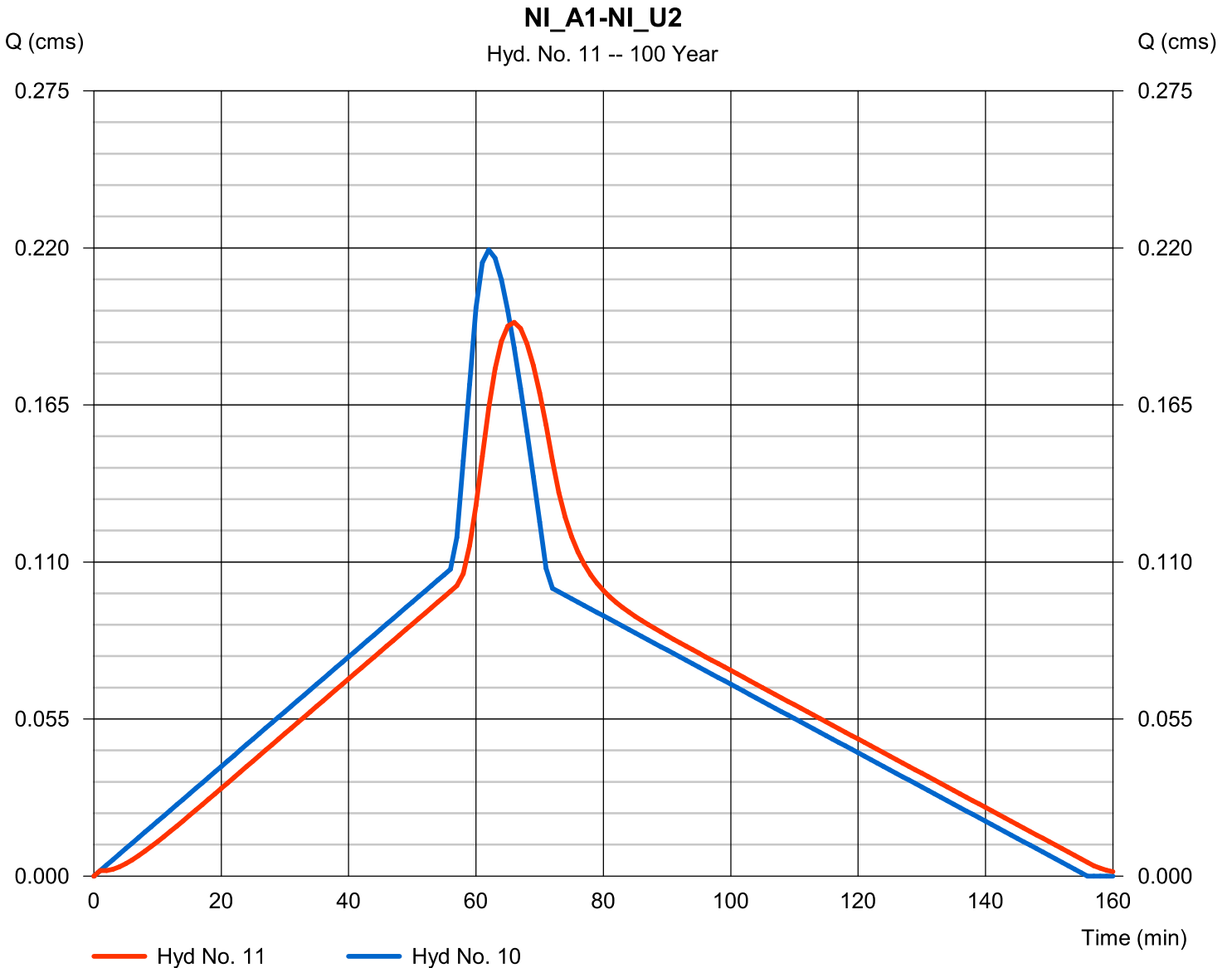
jeudi, avr 5, 2012

Hyd. No. 11

NI_A1-NI_U2

Hydrograph type	= Reach	Peak discharge	= 0.194 cms
Storm frequency	= 100 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 595.5 cum
Inflow hyd. No.	= 10 - NI_A1	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.017	Bottom width	= 10.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 1.643	Rating curve m	= 1.593
Ave. velocity	= 0.89 m/s	Routing coeff.	= 0.2489

Modified Att-Kin routing method used.



Hydrograph Report

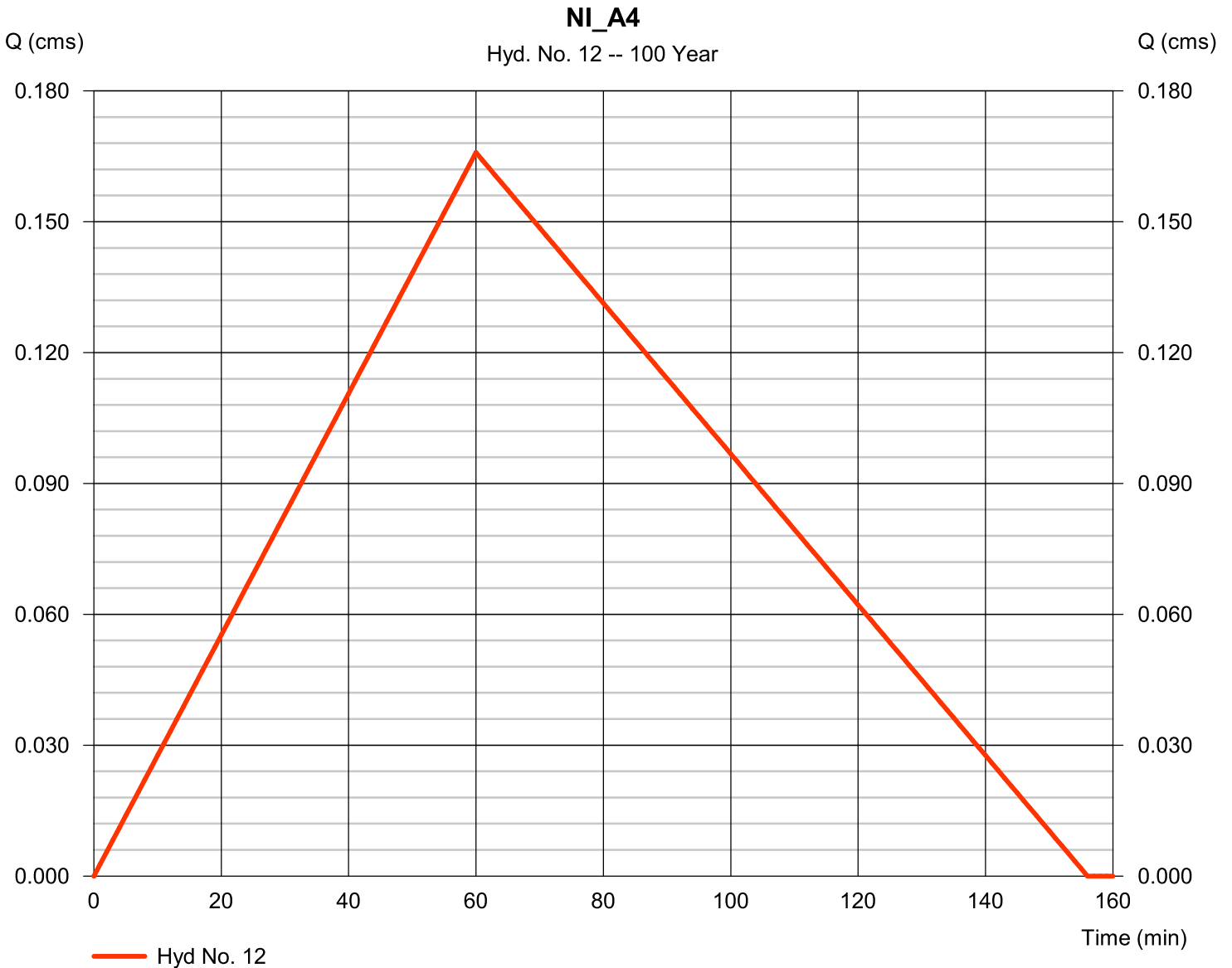
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 12

NI_A4

Hydrograph type	= Rational	Peak discharge	= 0.166 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 776.2 cum
Drainage area	= 7.470 hectare	Runoff coeff.	= 0.26
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

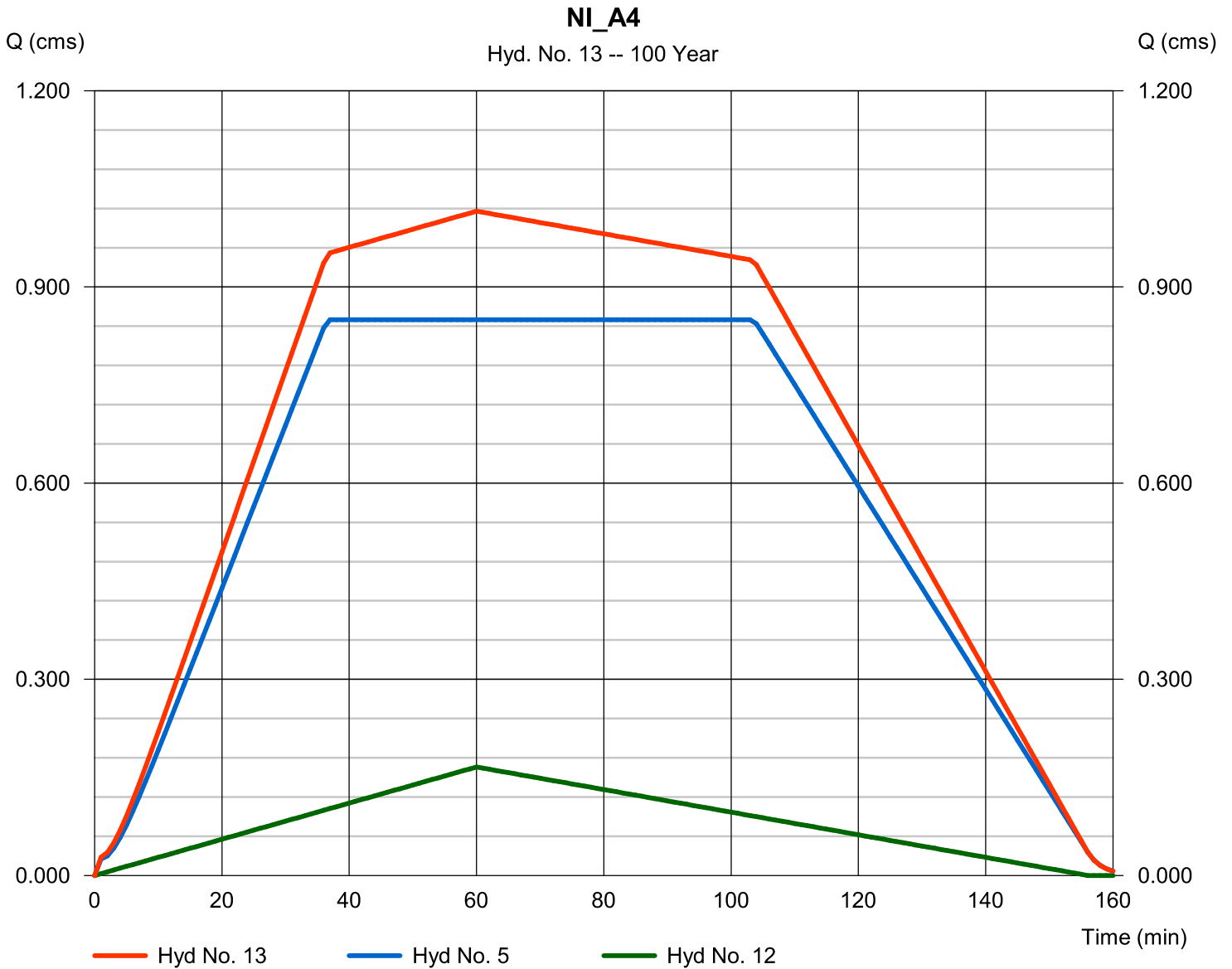
jeudi, avr 5, 2012

Hyd. No. 13

NI_A4

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 12

Peak discharge = 1.016 cms
 Time to peak = 60 min
 Hyd. volume = 6 475.1 cum
 Contrib. drain. area = 7.470 hectare



Hydrograph Report

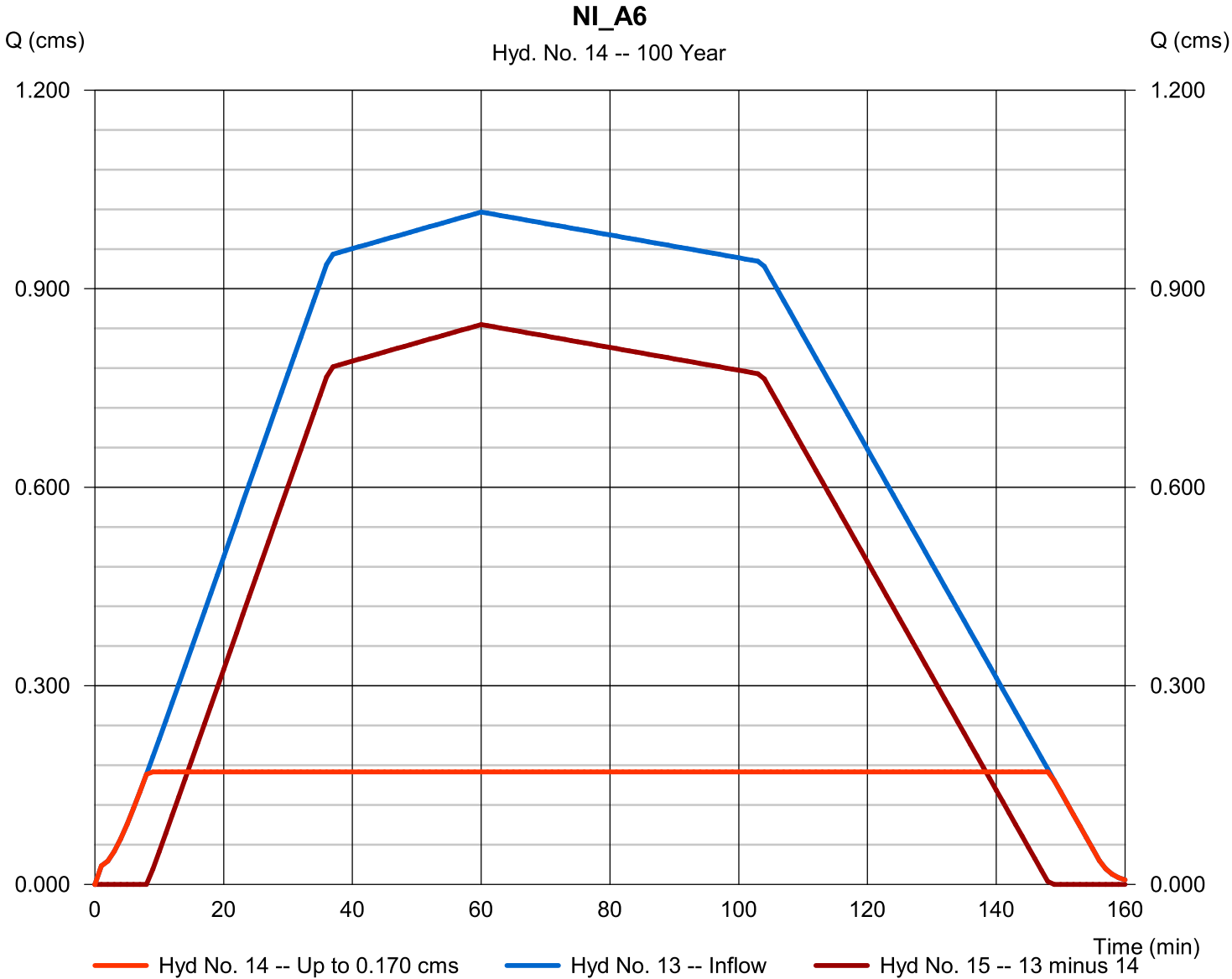
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

NI_A6

Hydrograph type	= Diversion1	Peak discharge	= 0.170 cms
Storm frequency	= 100 yrs	Time to peak	= 26 min
Time interval	= 1 min	Hyd. volume	= 1 519.9 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 15
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

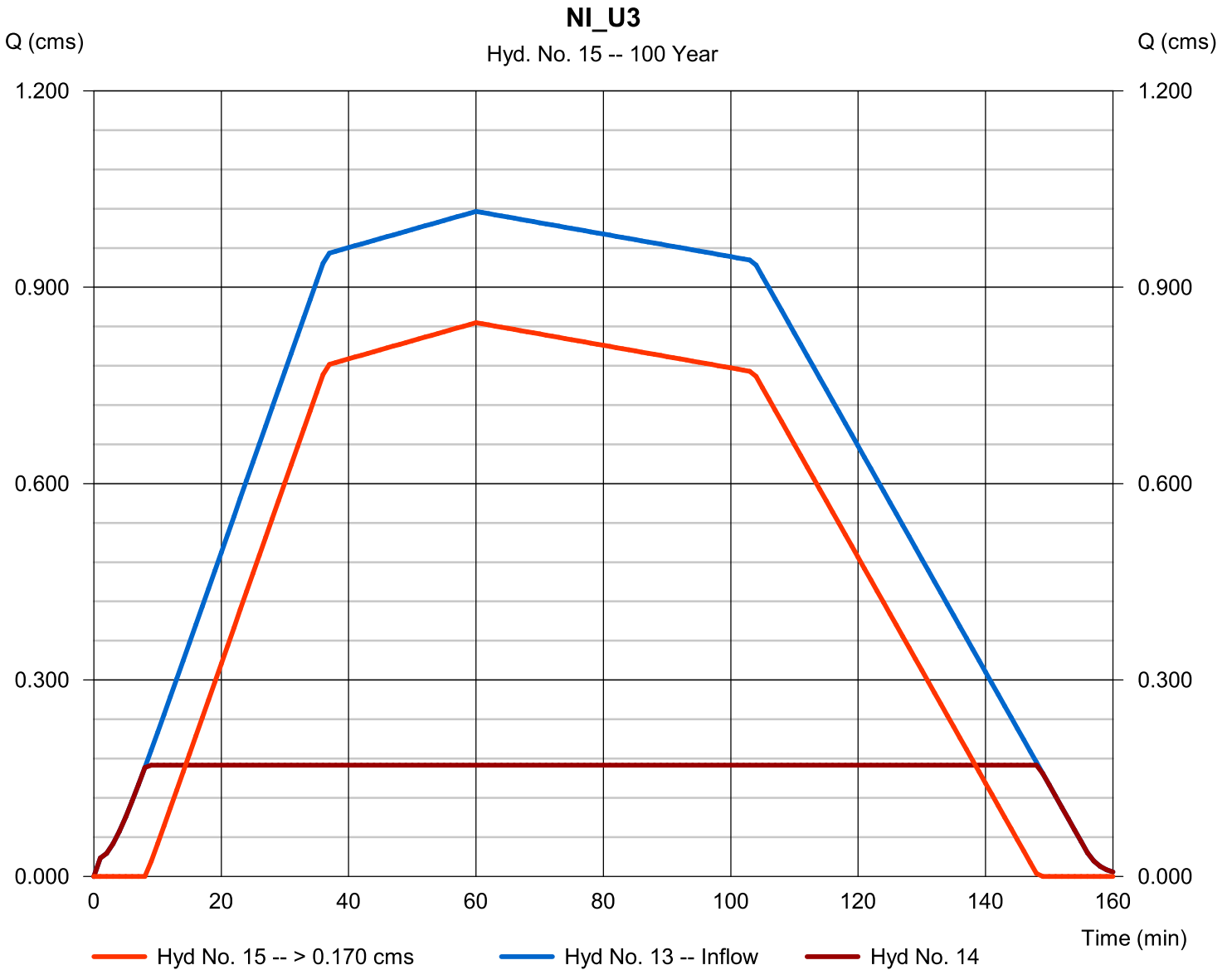
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 15

NI_U3

Hydrograph type	= Diversion2	Peak discharge	= 0.846 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 955.2 cum
Inflow hydrograph	= 13 - NI_A4	2nd diverted hyd.	= 14
Diversion method	= Constant Q	Constant Q	= 0.17 cms



Hydrograph Report

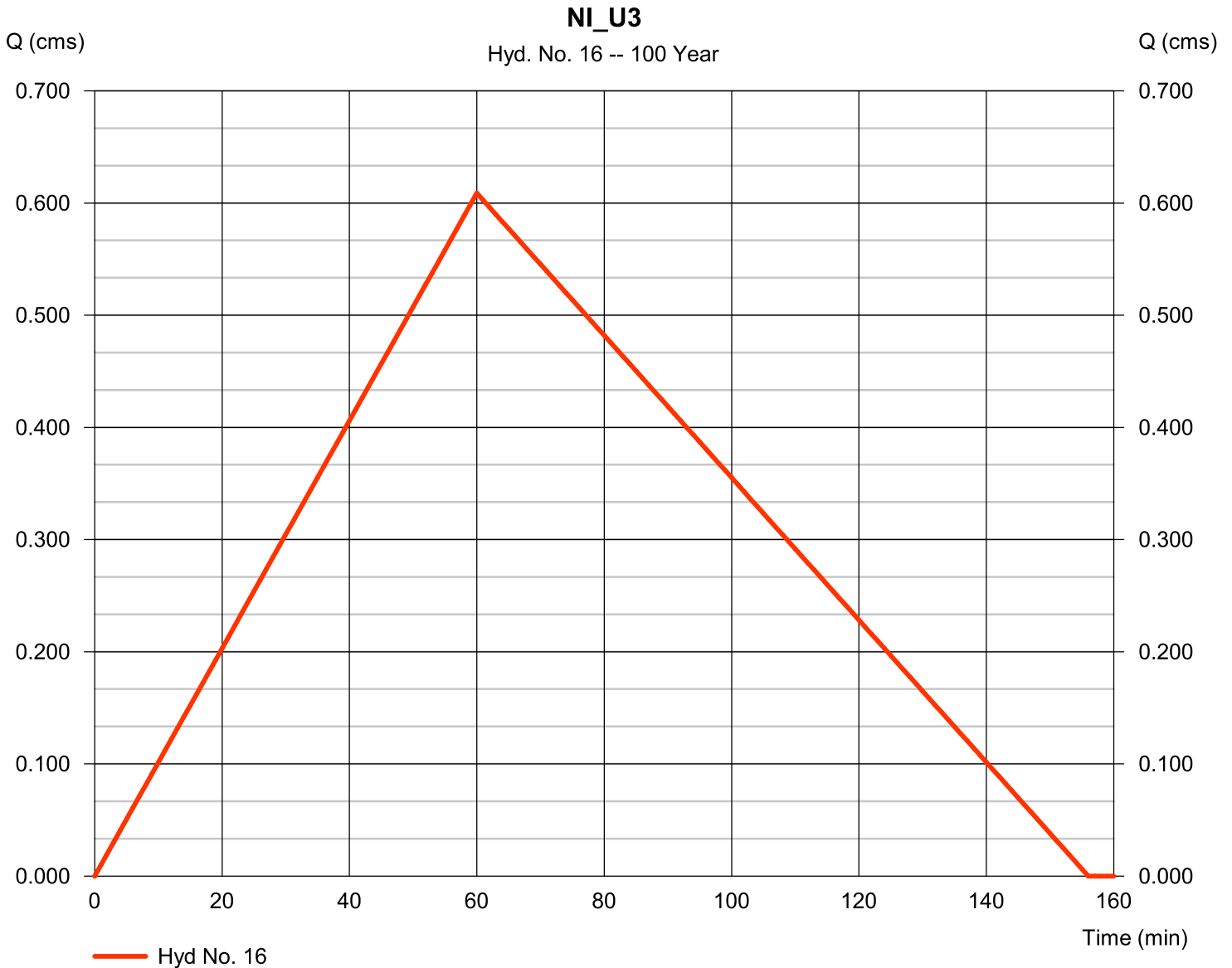
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 16

NI_U3

Hydrograph type	= Rational	Peak discharge	= 0.609 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 849.2 cum
Drainage area	= 18.760 hectare	Runoff coeff.	= 0.38
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

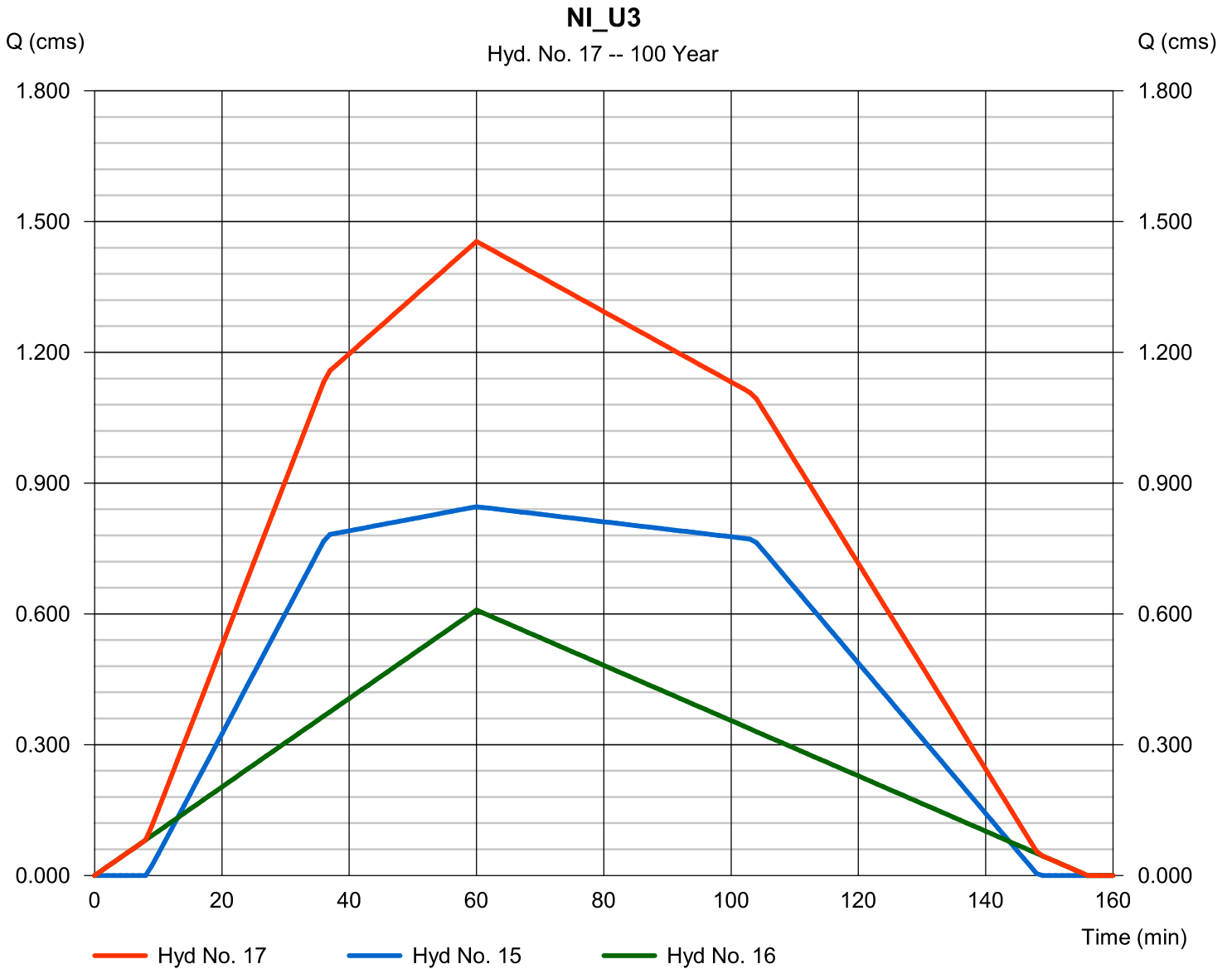
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

NI_U3

Hydrograph type	= Combine	Peak discharge	= 1.455 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 7 804.4 cum
Inflow hyds.	= 15, 16	Contrib. drain. area	= 18.760 hectare



Hydrograph Report

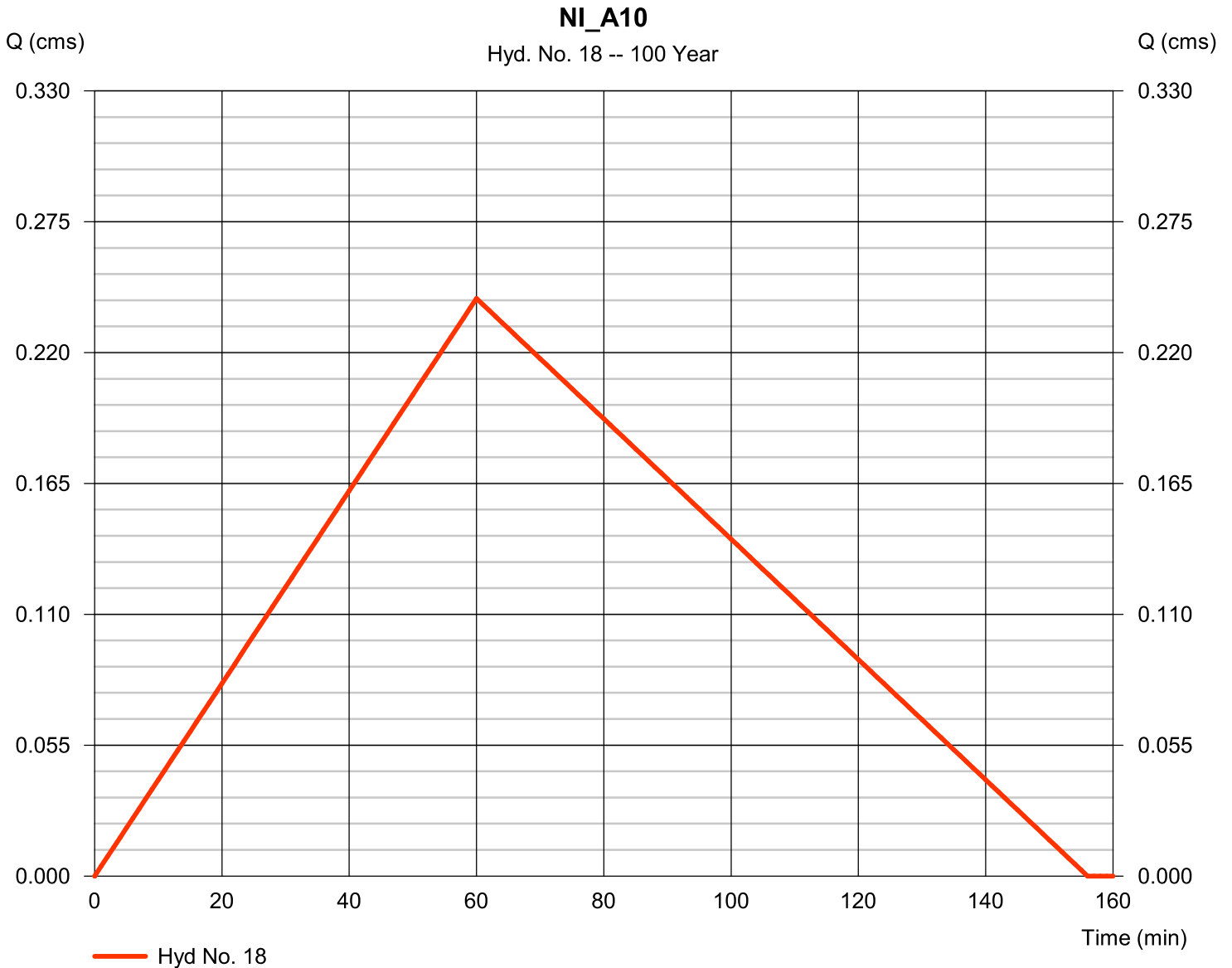
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 18

NI_A10

Hydrograph type	= Rational	Peak discharge	= 0.243 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 136.1 cum
Drainage area	= 11.370 hectare	Runoff coeff.	= 0.25
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

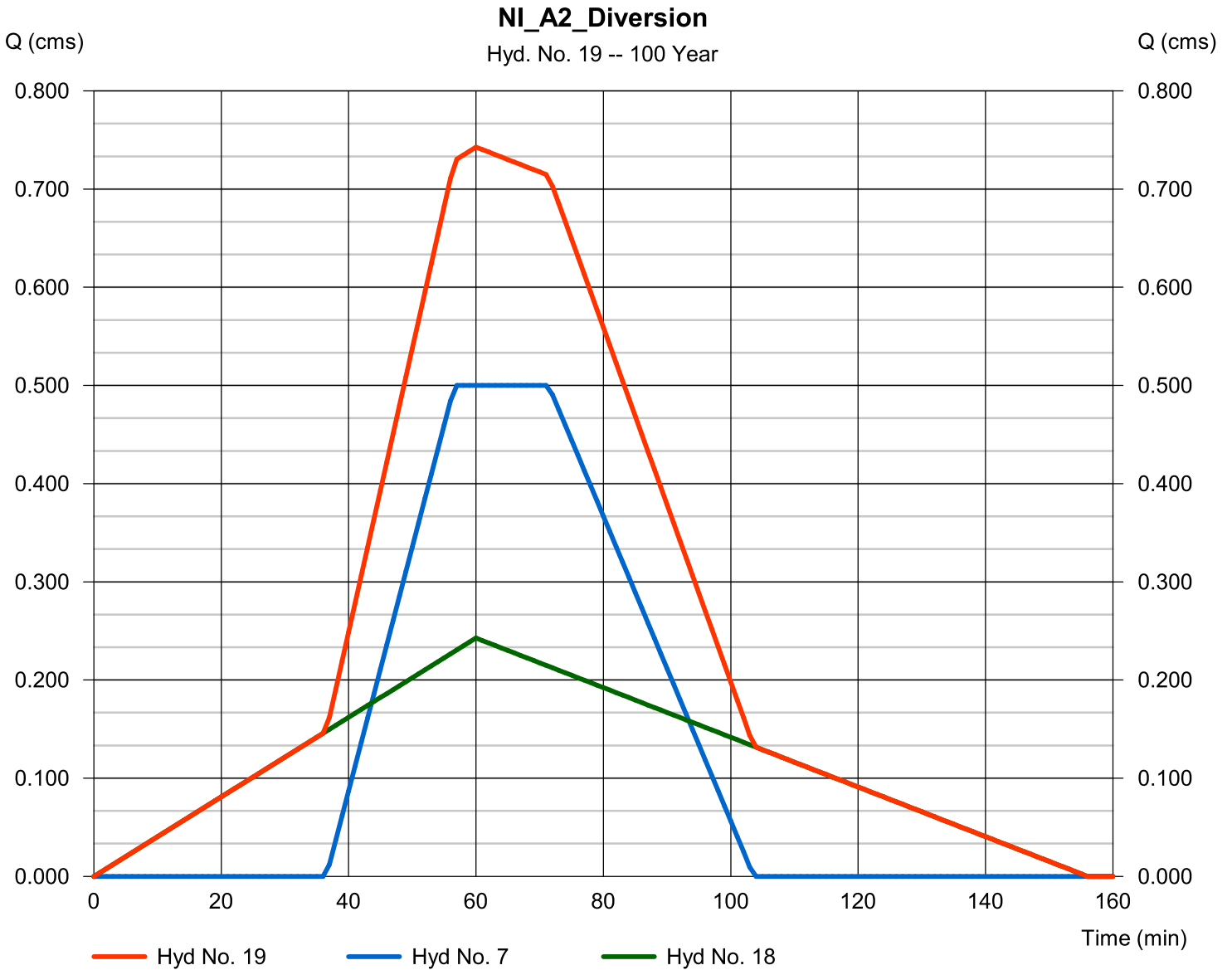
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Hyd. No. 19

NI_A2_Diversion

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 7, 18

Peak discharge = 0.743 cms
Time to peak = 60 min
Hyd. volume = 2 364.4 cum
Contrib. drain. area = 11.370 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

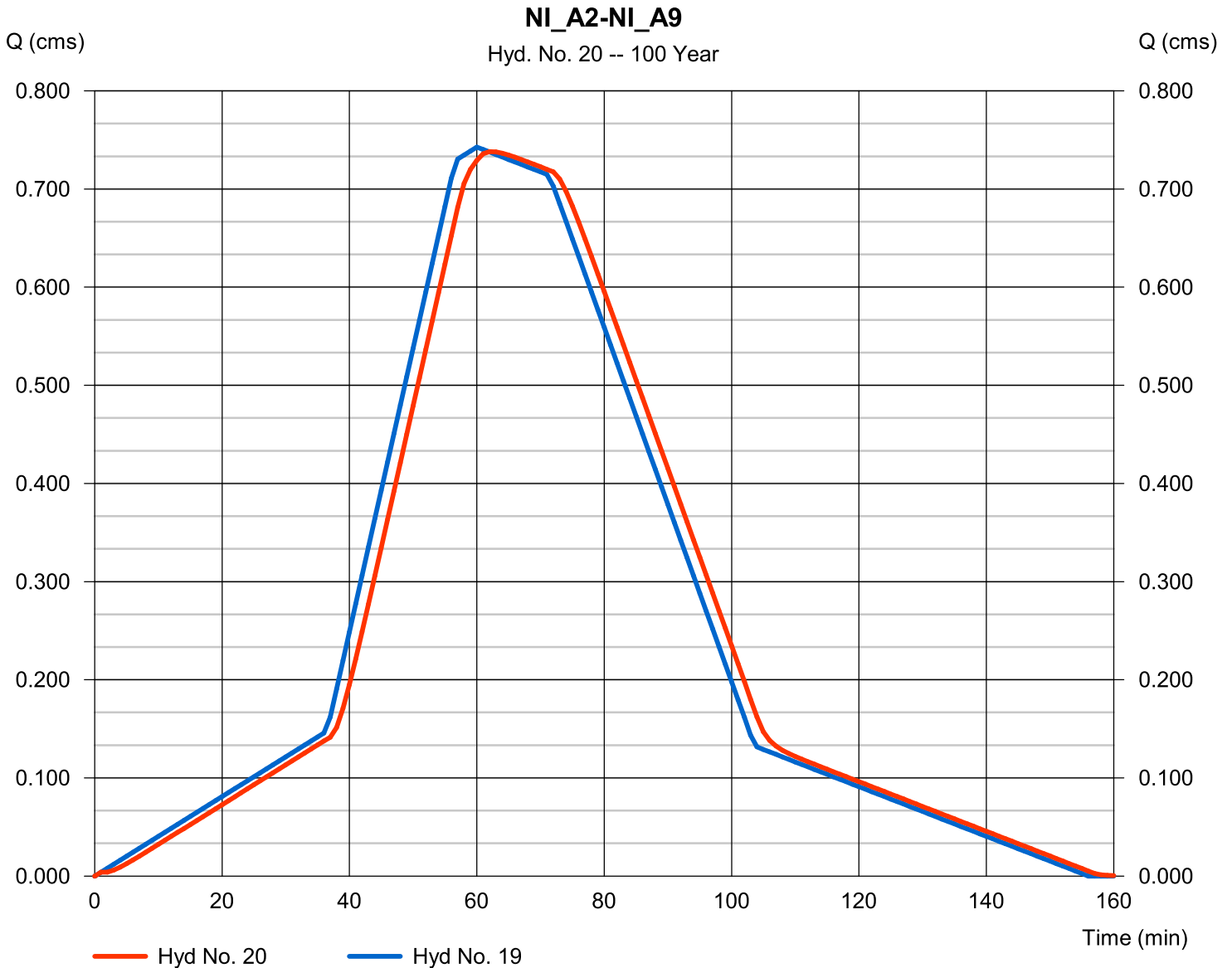
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Hyd. No. 20

NI_A2-NI_A9

Hydrograph type	= Reach	Peak discharge	= 0.738 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 2 364.9 cum
Inflow hyd. No.	= 19 - NI_A2_Diversion	Section type	= Trapezoidal
Reach length	= 300.0 m	Channel slope	= 3.7 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.190	Rating curve m	= 1.353
Ave. velocity	= 2.41 m/s	Routing coeff.	= 0.4924

Modified Att-Kin routing method used.



Hydrograph Report

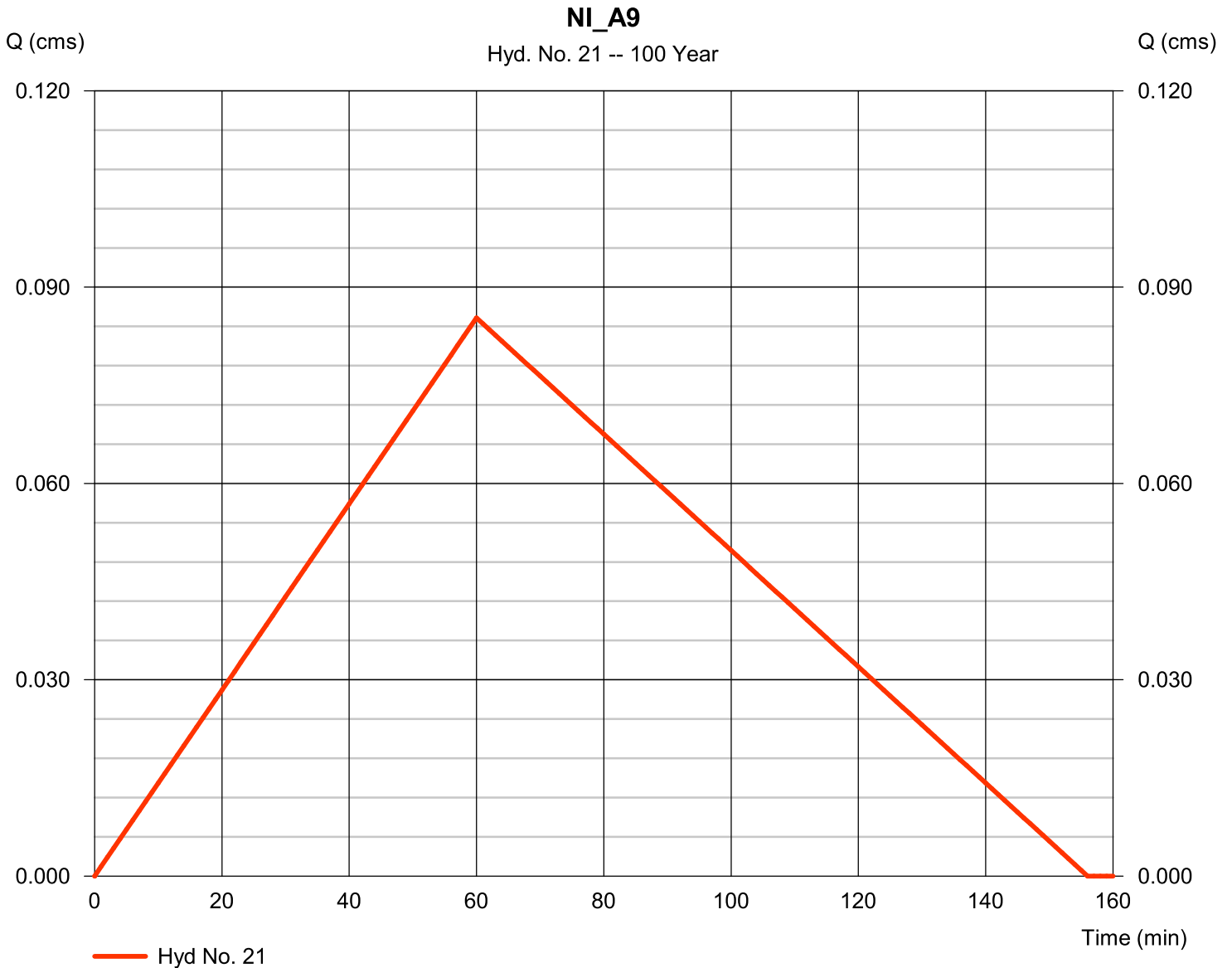
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 21

NI_A9

Hydrograph type	= Rational	Peak discharge	= 0.085 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 399.2 cum
Drainage area	= 4.540 hectare	Runoff coeff.	= 0.22
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

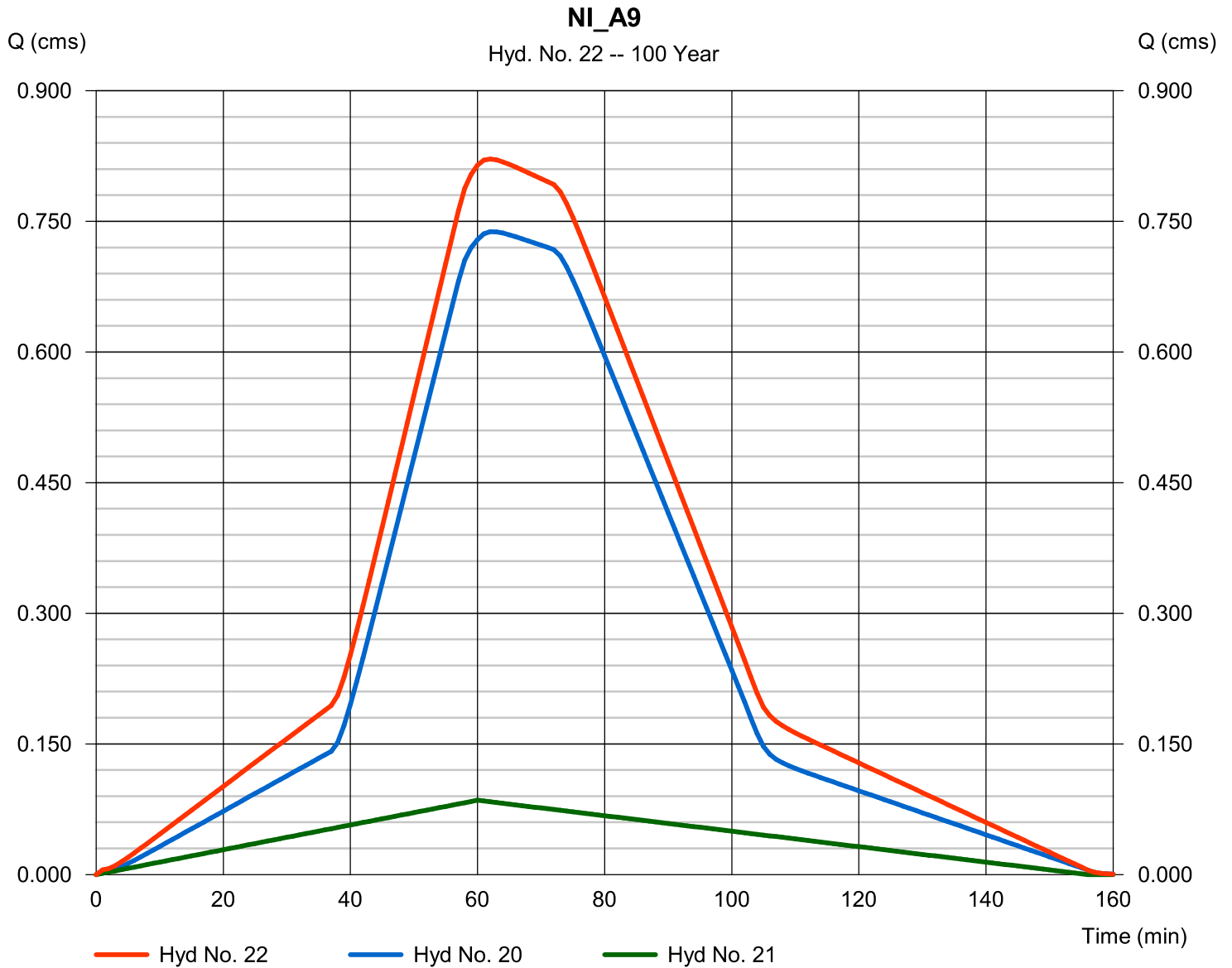
jeudi, avr 5, 2012

Hyd. No. 22

NI_A9

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 20, 21

Peak discharge = 0.822 cms
Time to peak = 62 min
Hyd. volume = 2 764.1 cum
Contrib. drain. area = 4.540 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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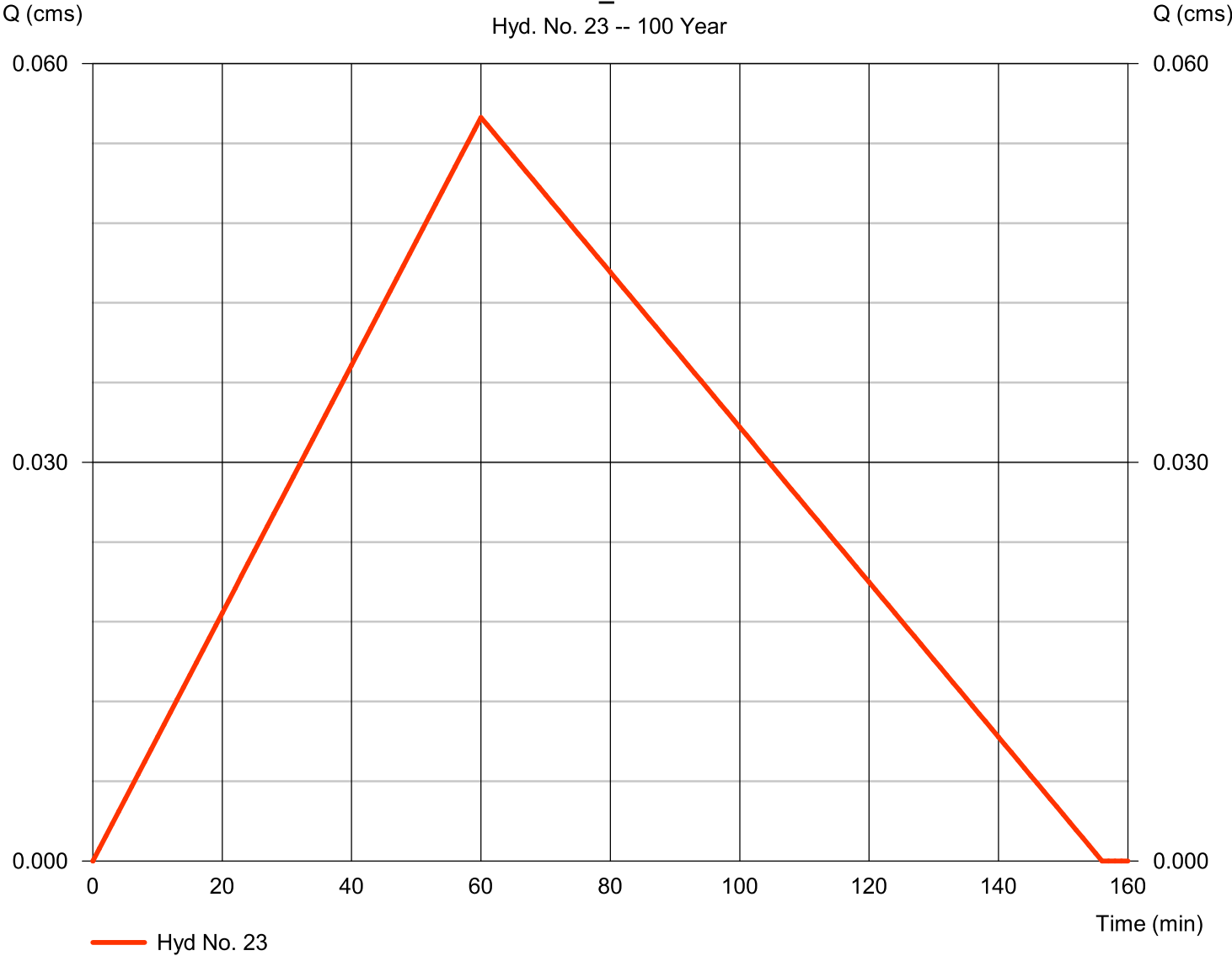
Hyd. No. 23

NI_U1

Hydrograph type	= Rational	Peak discharge	= 0.056 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 261.9 cum
Drainage area	= 2.730 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6

NI_U1

Hyd. No. 23 -- 100 Year

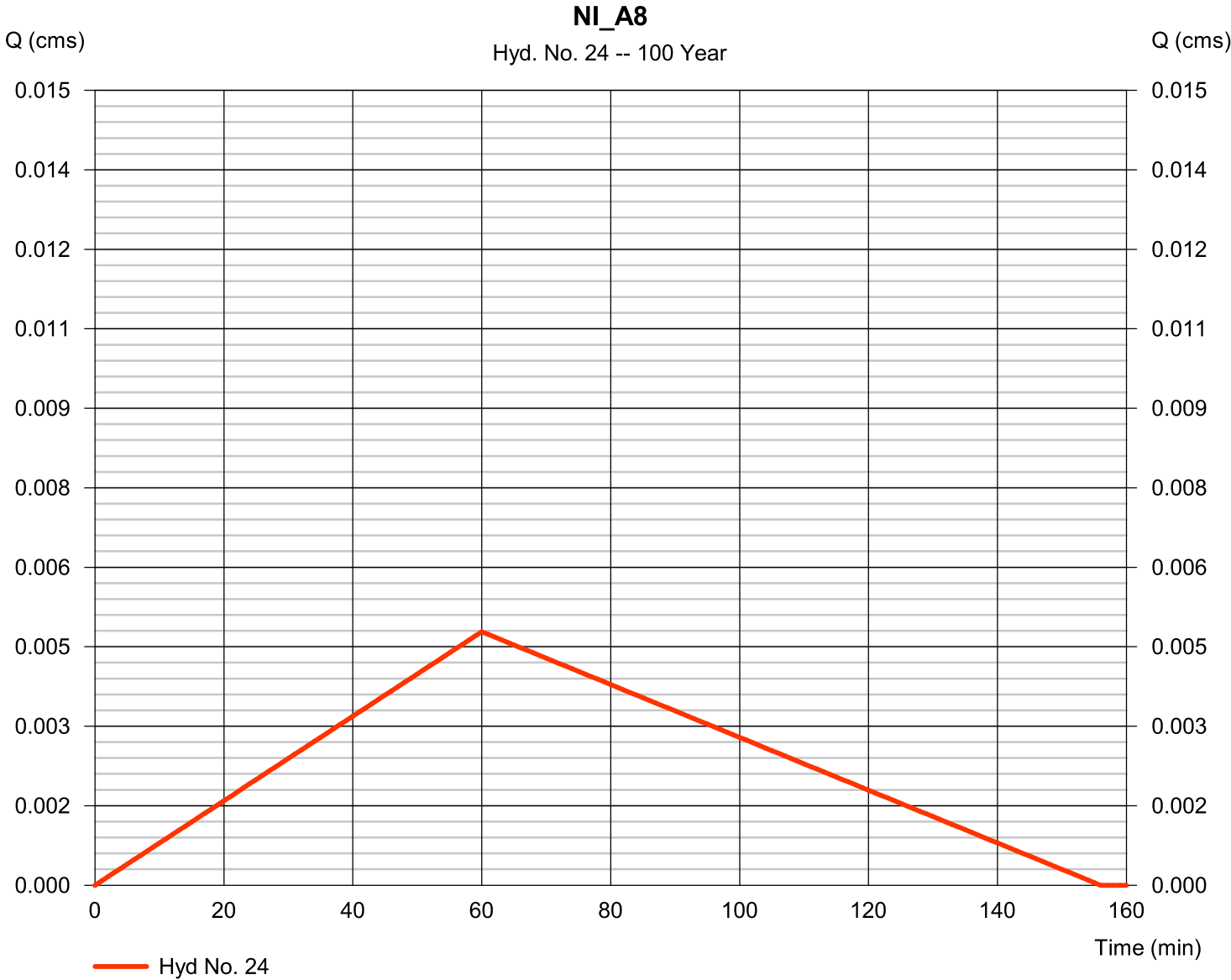


Hydrograph Report

Hyd. No. 24

NI_A8

Hydrograph type	= Rational	Peak discharge	= 0.005 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 22.4 cum
Drainage area	= 0.560 hectare	Runoff coeff.	= 0.1
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

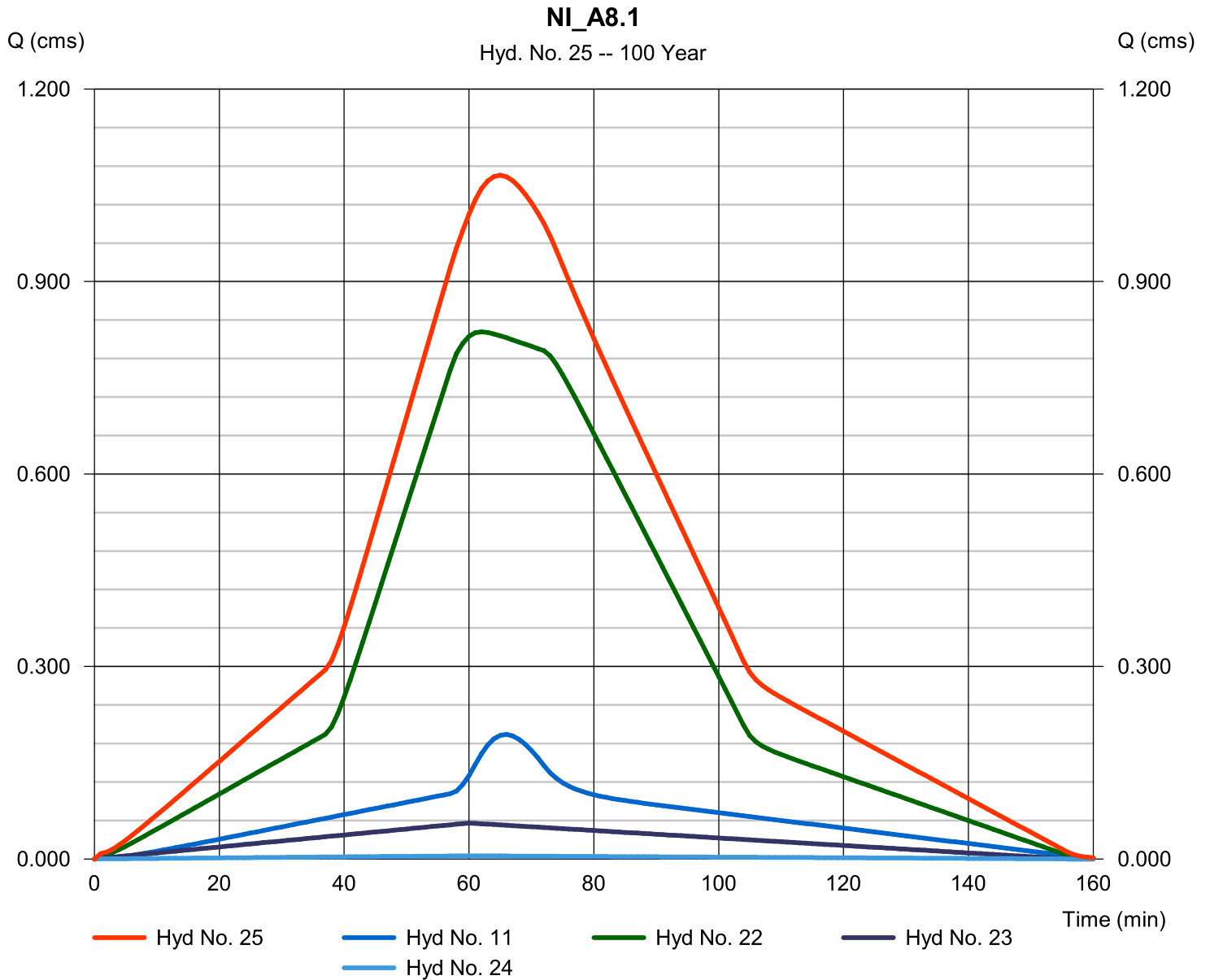
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Hyd. No. 25

NI_A8.1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 11, 22, 23, 24

Peak discharge = 1.066 cms
Time to peak = 65 min
Hyd. volume = 3 643.8 cum
Contrib. drain. area = 3.290 hectare



Hydrograph Report

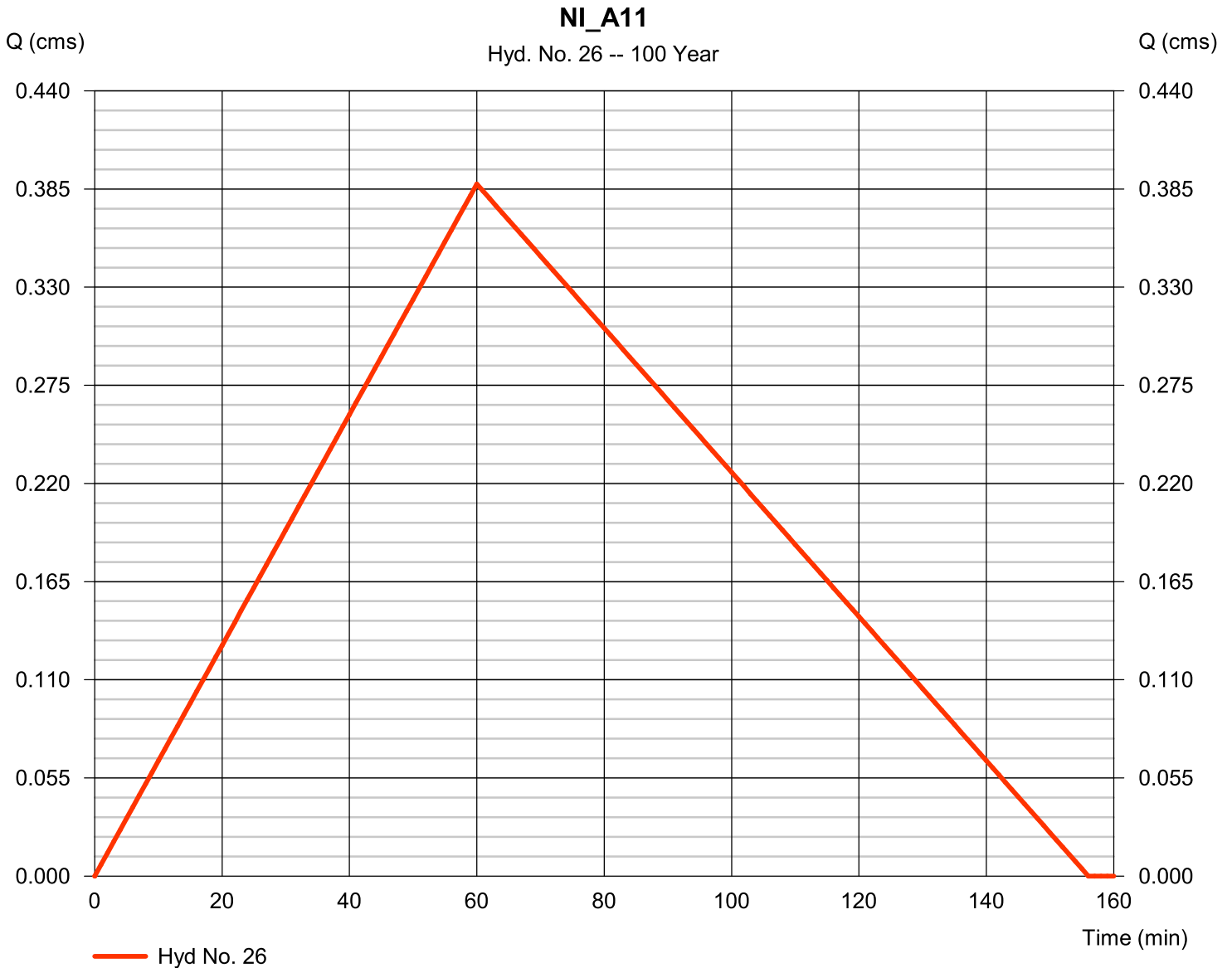
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 26

NI_A11

Hydrograph type	= Rational	Peak discharge	= 0.388 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 814.8 cum
Drainage area	= 20.640 hectare	Runoff coeff.	= 0.22
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

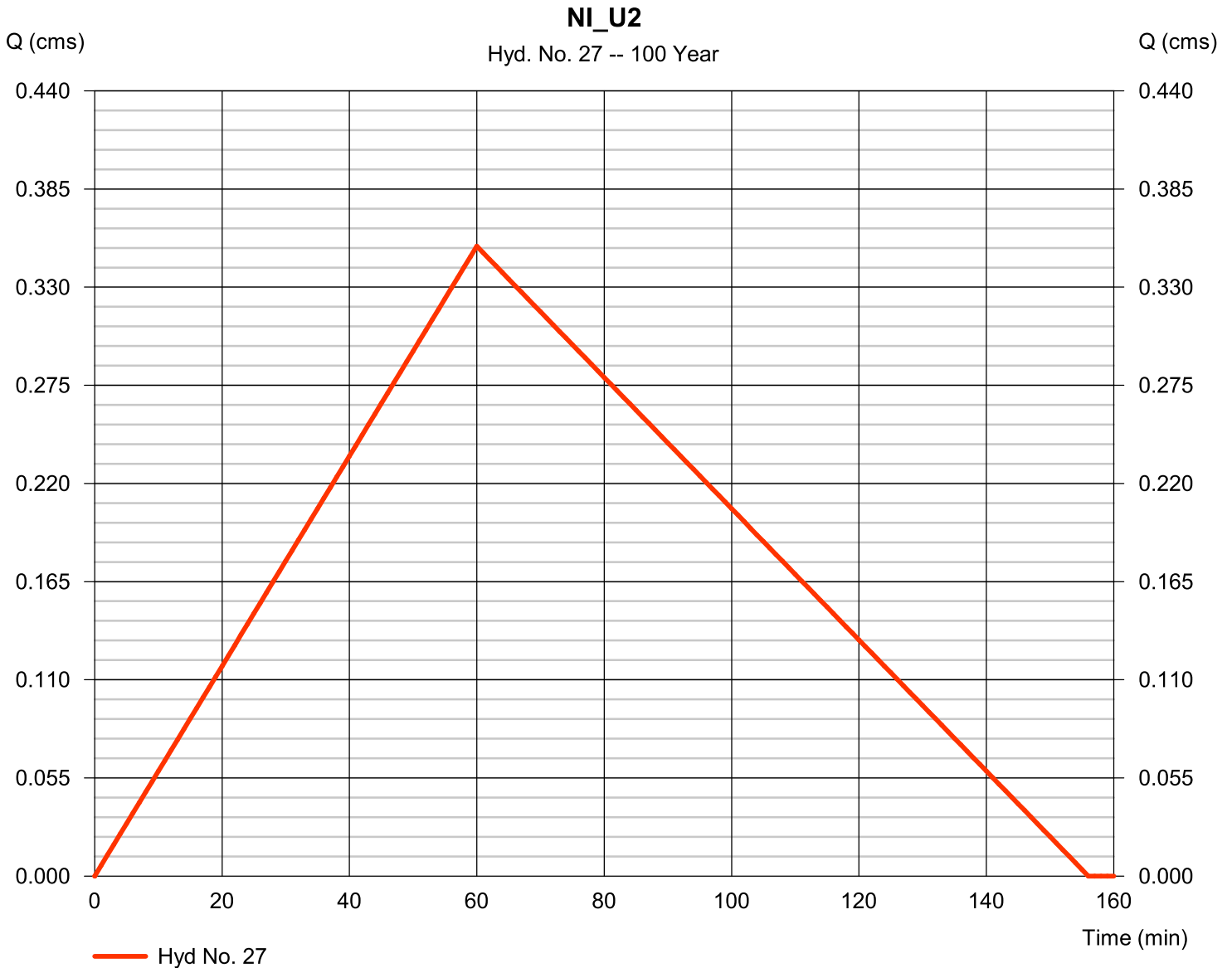
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 27

NI_U2

Hydrograph type	= Rational	Peak discharge	= 0.353 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 651.8 cum
Drainage area	= 10.080 hectare	Runoff coeff.	= 0.41
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

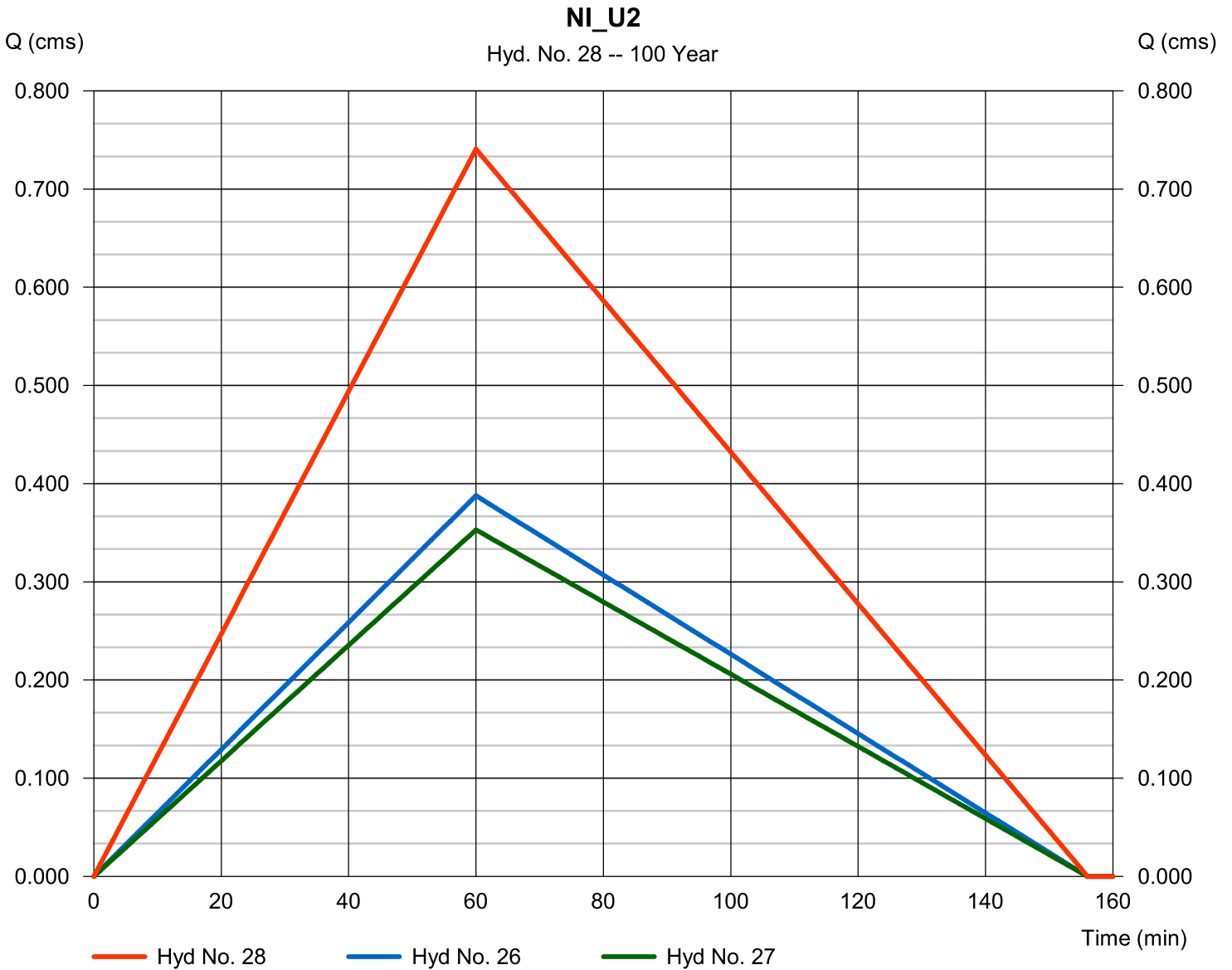
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Hyd. No. 28

NI_U2

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 26, 27

Peak discharge = 0.741 cms
 Time to peak = 60 min
 Hyd. volume = 3 466.6 cum
 Contrib. drain. area = 30.720 hectare



Hydrograph Report

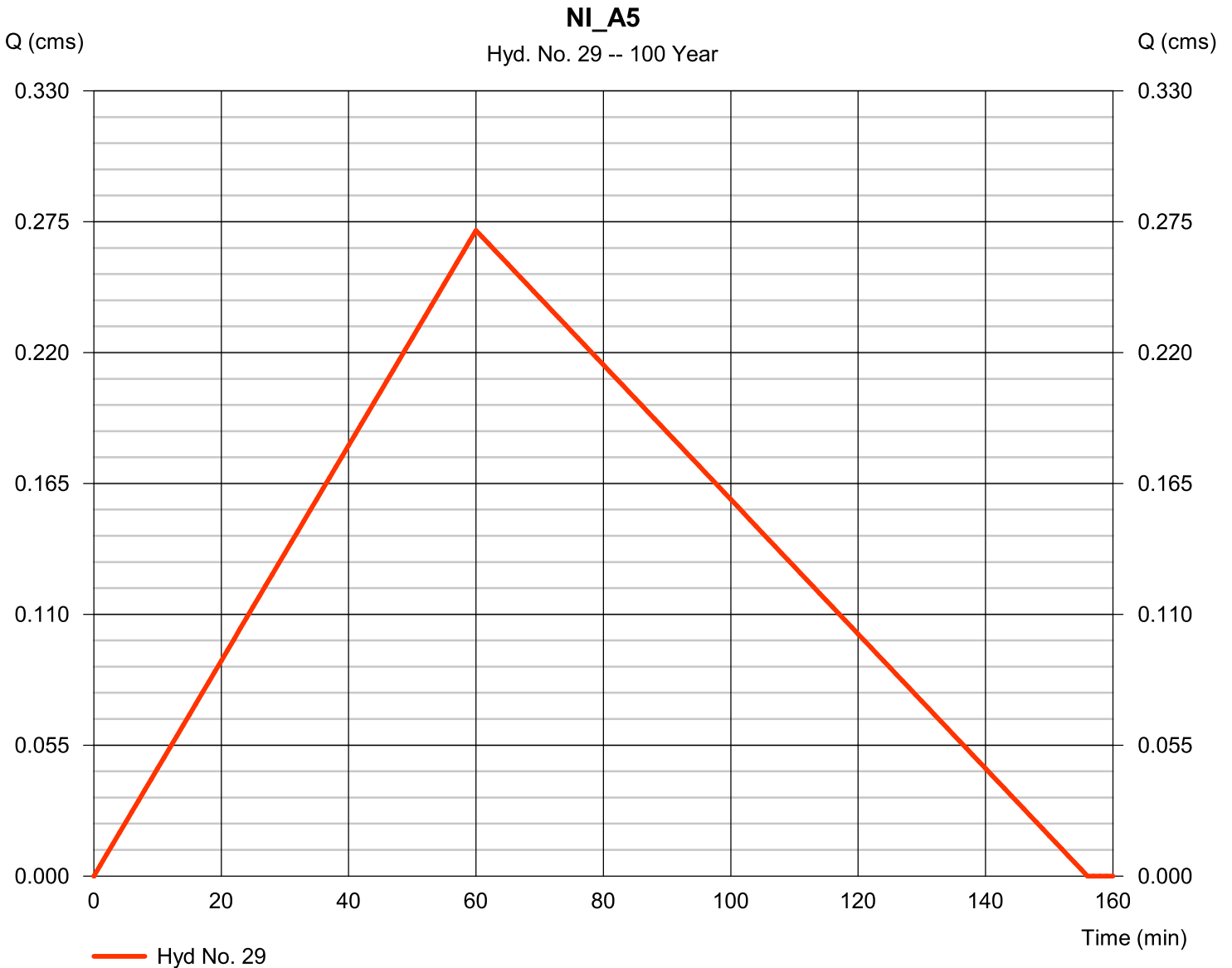
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 29

NI_A5

Hydrograph type	= Rational	Peak discharge	= 0.271 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 270.0 cum
Drainage area	= 13.240 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

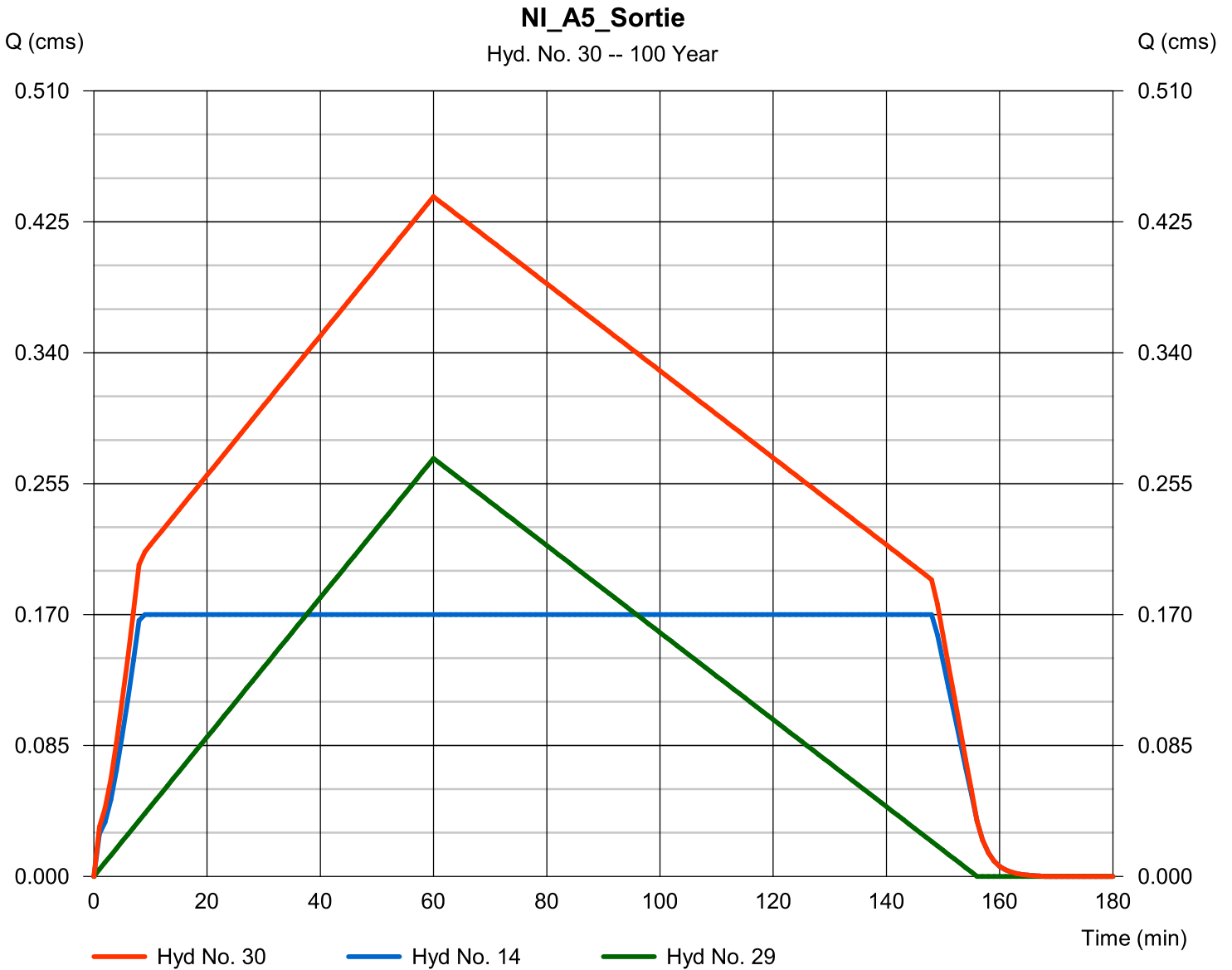
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 30

NI_A5_Sortie

Hydrograph type	= Combine	Peak discharge	= 0.441 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 789.9 cum
Inflow hyds.	= 14, 29	Contrib. drain. area	= 13.240 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

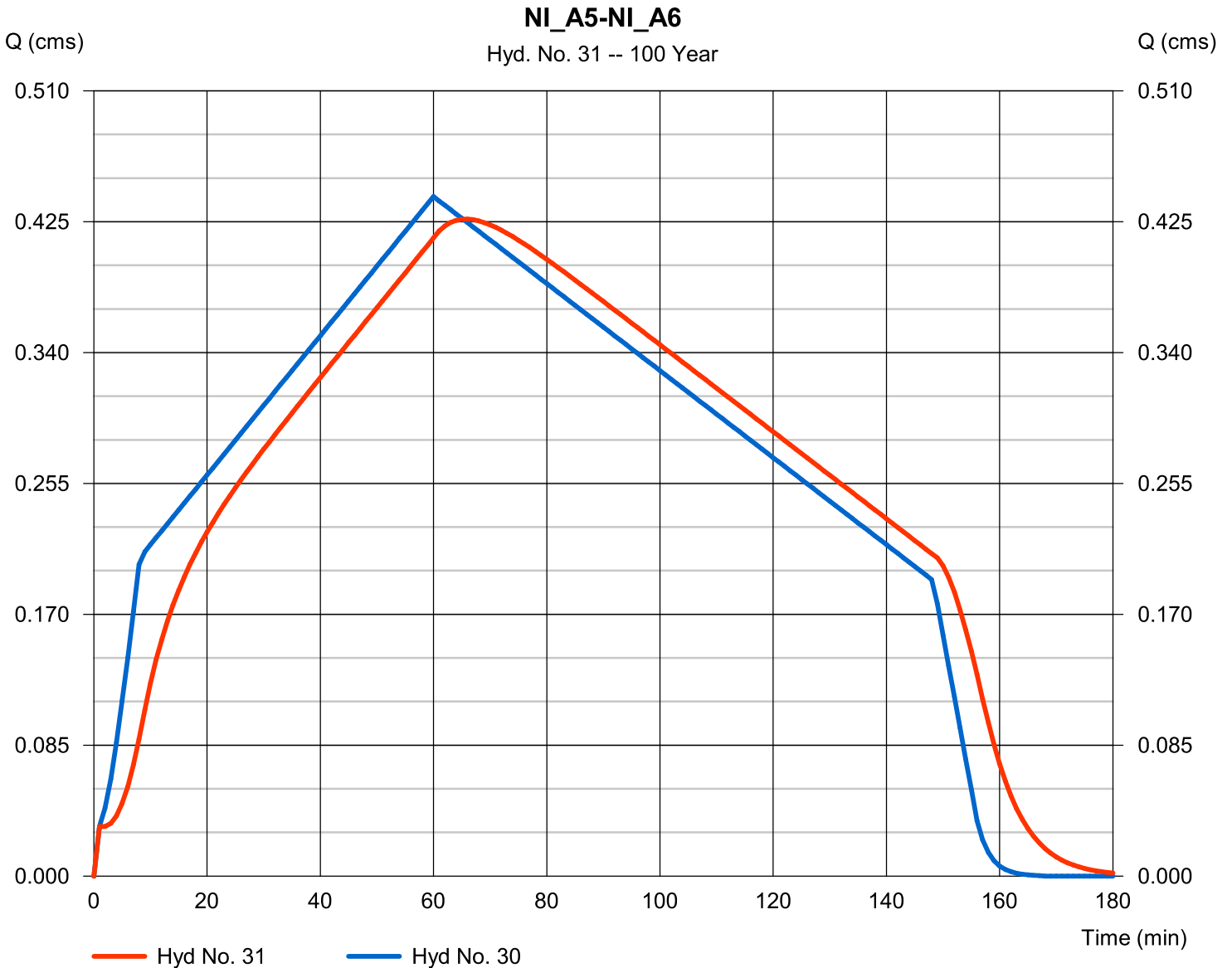
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Hyd. No. 31

NI_A5-NI_A6

Hydrograph type	= Reach	Peak discharge	= 0.427 cms
Storm frequency	= 100 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 2 801.3 cum
Inflow hyd. No.	= 30 - NI_A5_Sortie	Section type	= Trapezoidal
Reach length	= 530.0 m	Channel slope	= 0.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.413	Rating curve m	= 1.353
Ave. velocity	= 1.20 m/s	Routing coeff.	= 0.1679

Modified Att-Kin routing method used.



Hydrograph Report

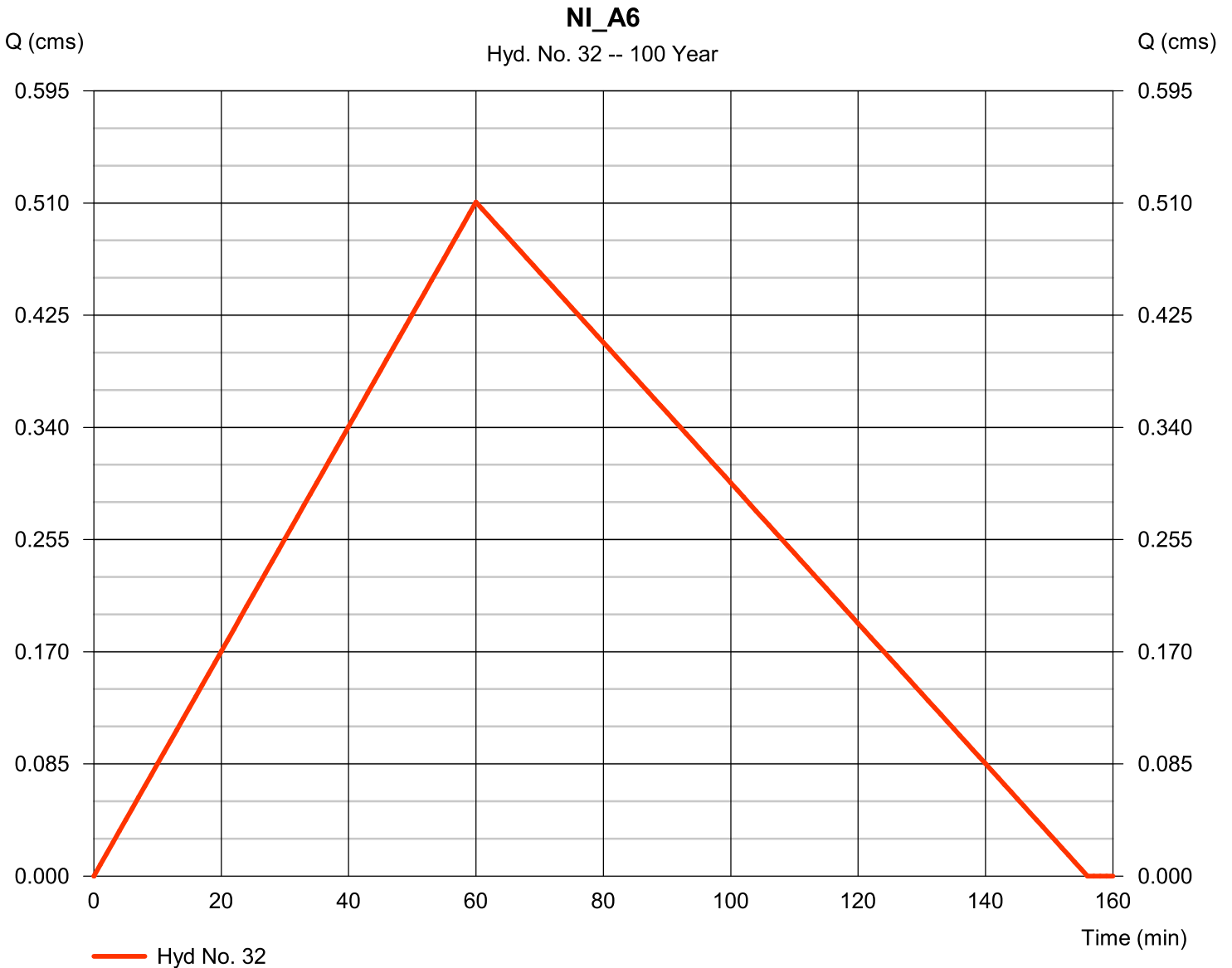
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 32

NI_A6

Hydrograph type	= Rational	Peak discharge	= 0.511 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 390.0 cum
Drainage area	= 23.000 hectare	Runoff coeff.	= 0.26
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

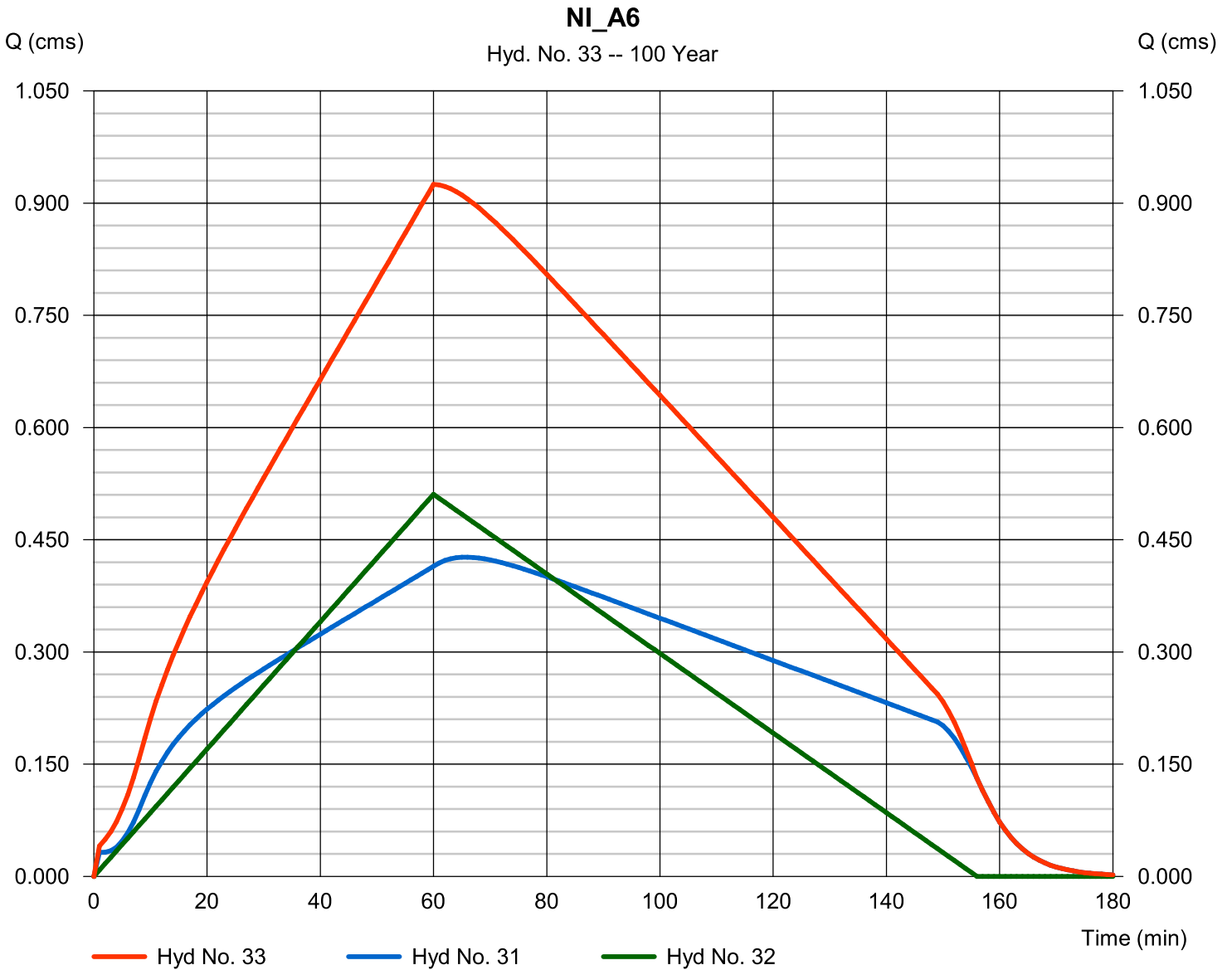
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 33

NI_A6

Hydrograph type	= Combine	Peak discharge	= 0.925 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 191.4 cum
Inflow hyds.	= 31, 32	Contrib. drain. area	= 23.000 hectare



Hydrograph Report

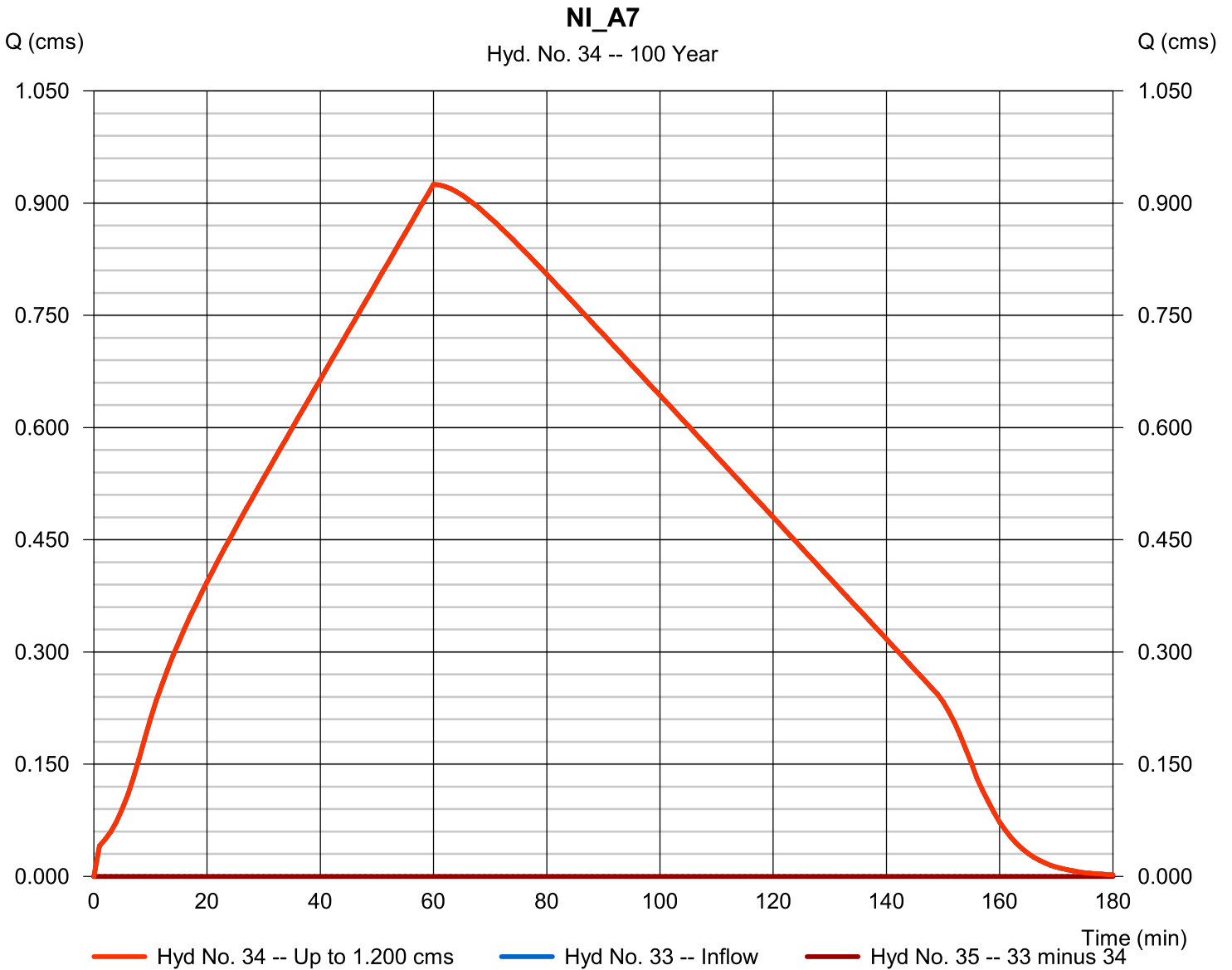
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 34

NI_A7

Hydrograph type	= Diversion1	Peak discharge	= 0.925 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 191.4 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 35
Diversion method	= Constant Q	Constant Q	= 1.20 cms



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

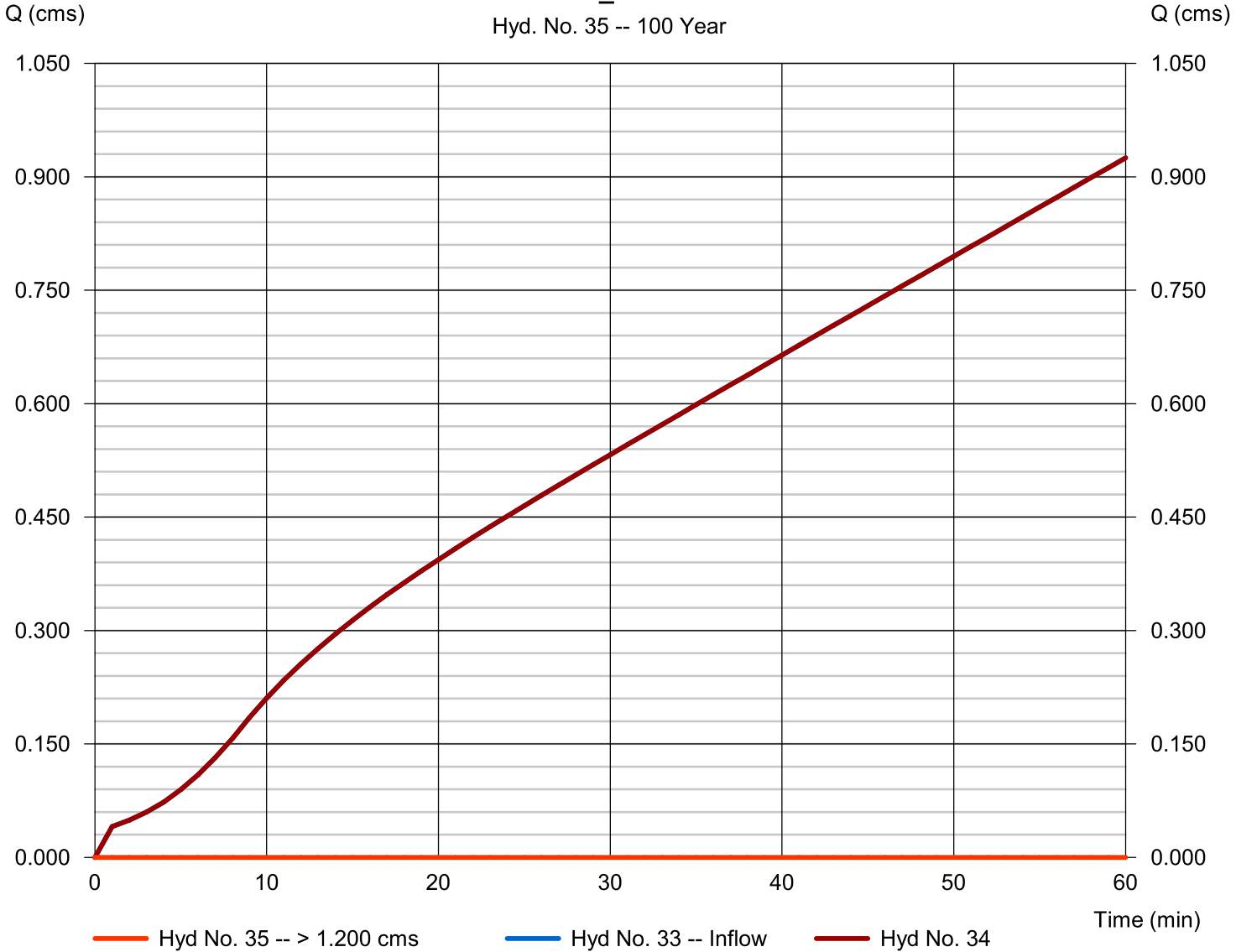
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Hyd. No. 35

NI_U4

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 33 - NI_A6	2nd diverted hyd.	= 34
Diversion method	= Constant Q	Constant Q	= 1.20 cms

NI_U4
Hyd. No. 35 -- 100 Year



Hydrograph Report

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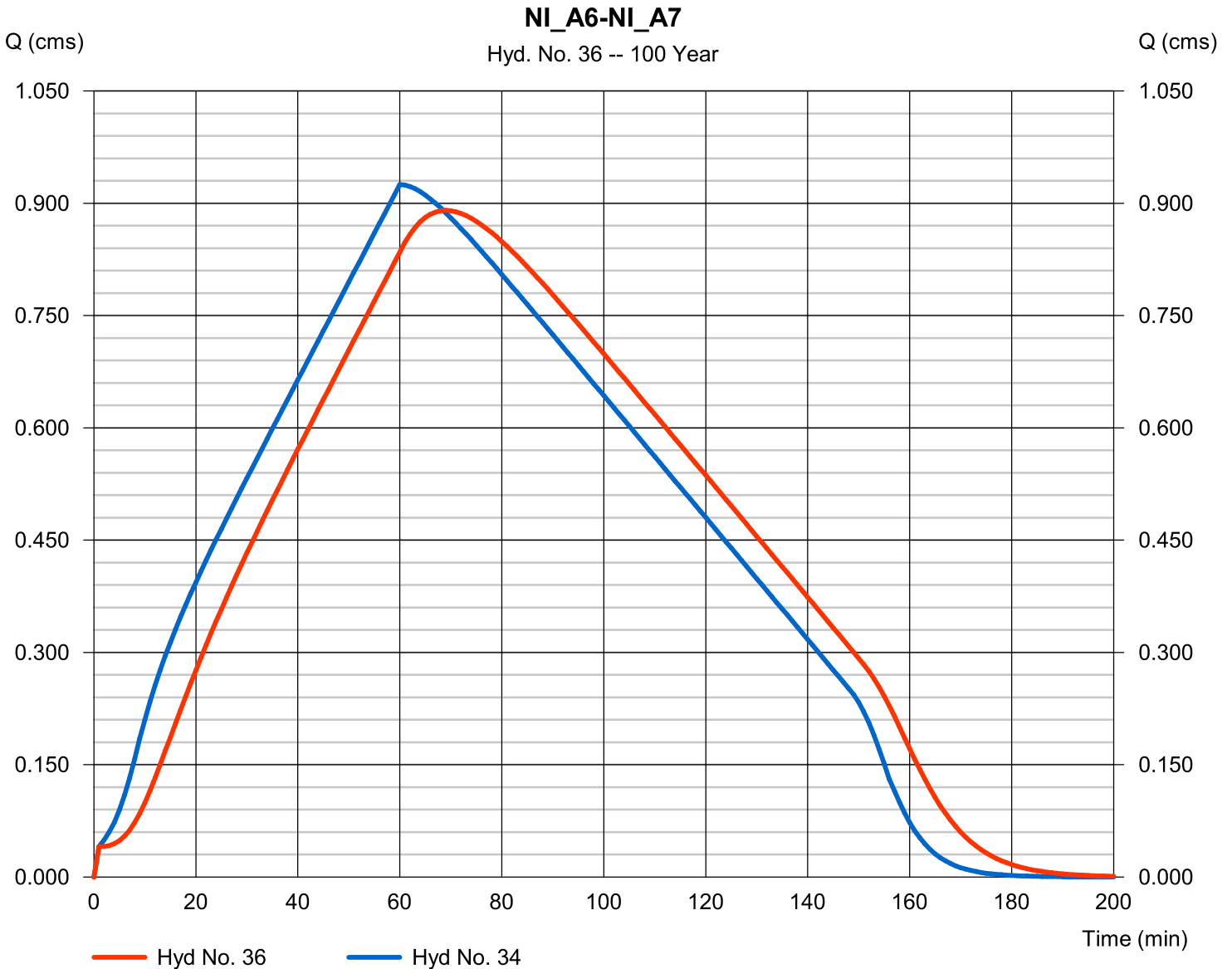
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Hyd. No. 36

NI_A6-NI_A7

Hydrograph type	= Reach	Peak discharge	= 0.890 cms
Storm frequency	= 100 yrs	Time to peak	= 69 min
Time interval	= 1 min	Hyd. volume	= 5 208.1 cum
Inflow hyd. No.	= 34 - NI_A7	Section type	= Trapezoidal
Reach length	= 150.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.29 m/s	Routing coeff.	= 0.1443

Modified Att-Kin routing method used.



Hydrograph Report

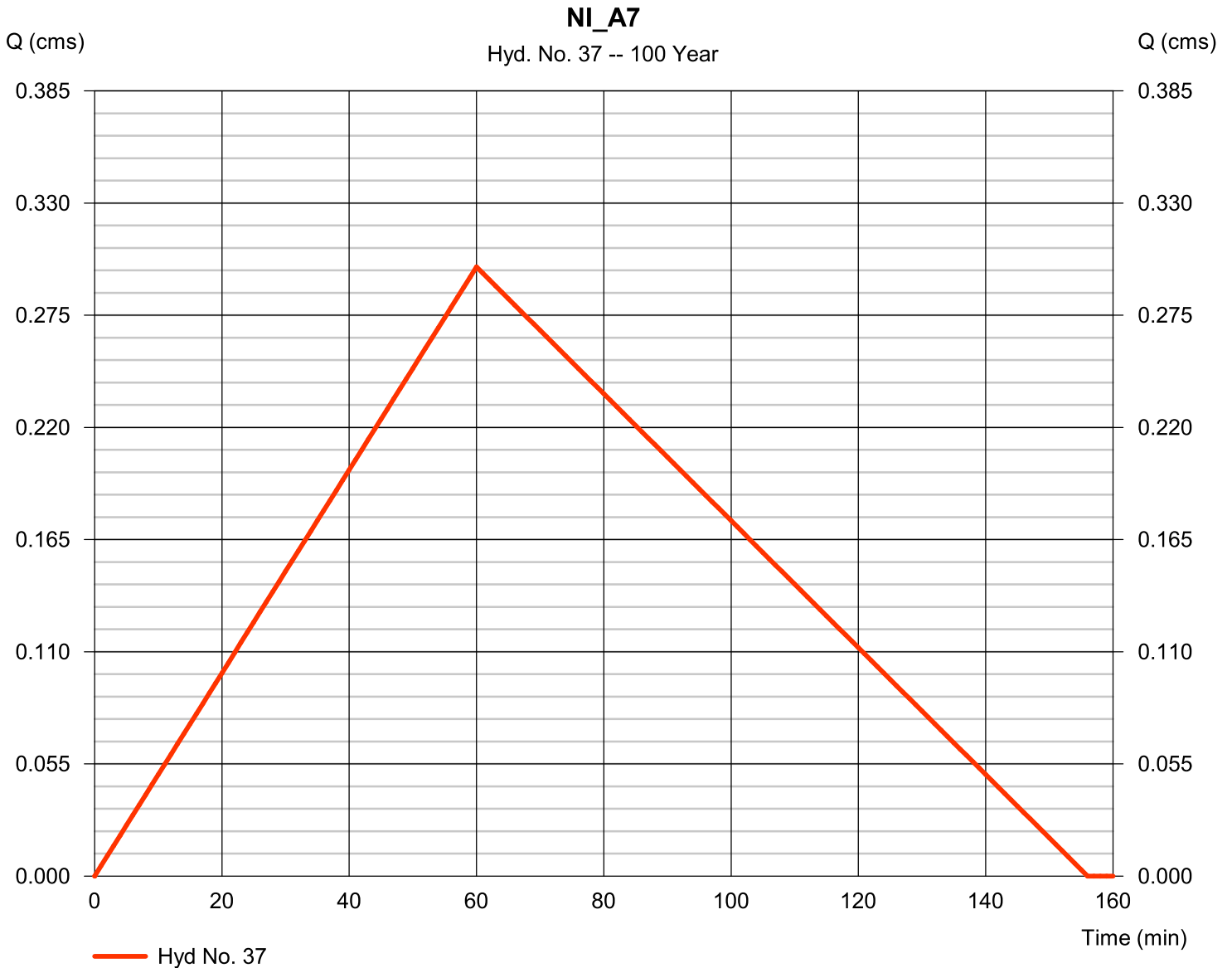
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 37

NI_A7

Hydrograph type	= Rational	Peak discharge	= 0.299 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 397.7 cum
Drainage area	= 12.490 hectare	Runoff coeff.	= 0.28
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

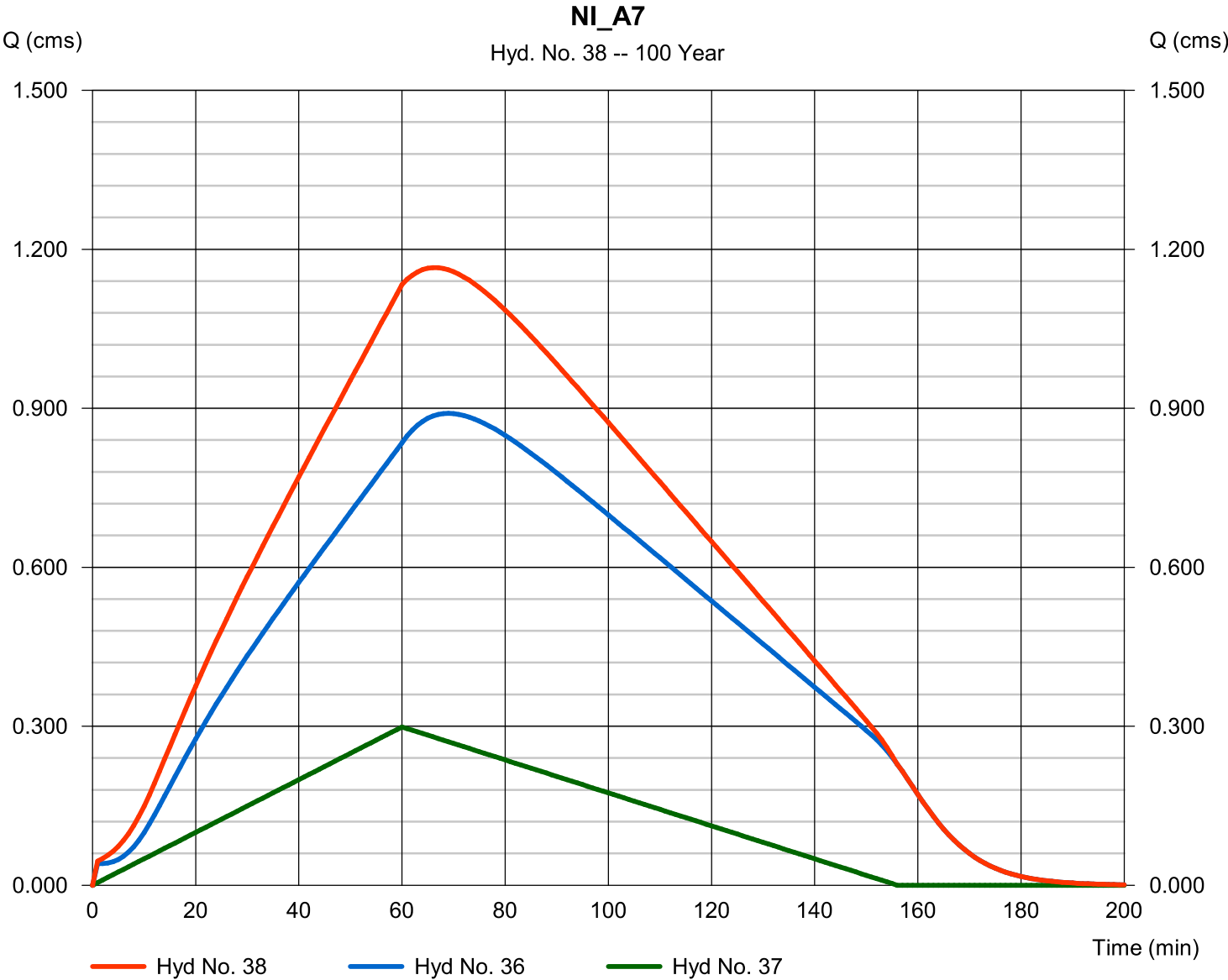
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 38

NI_A7

Hydrograph type	= Combine	Peak discharge	= 1.165 cms
Storm frequency	= 100 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 6 605.9 cum
Inflow hyds.	= 36, 37	Contrib. drain. area	= 12.490 hectare



Hydrograph Report

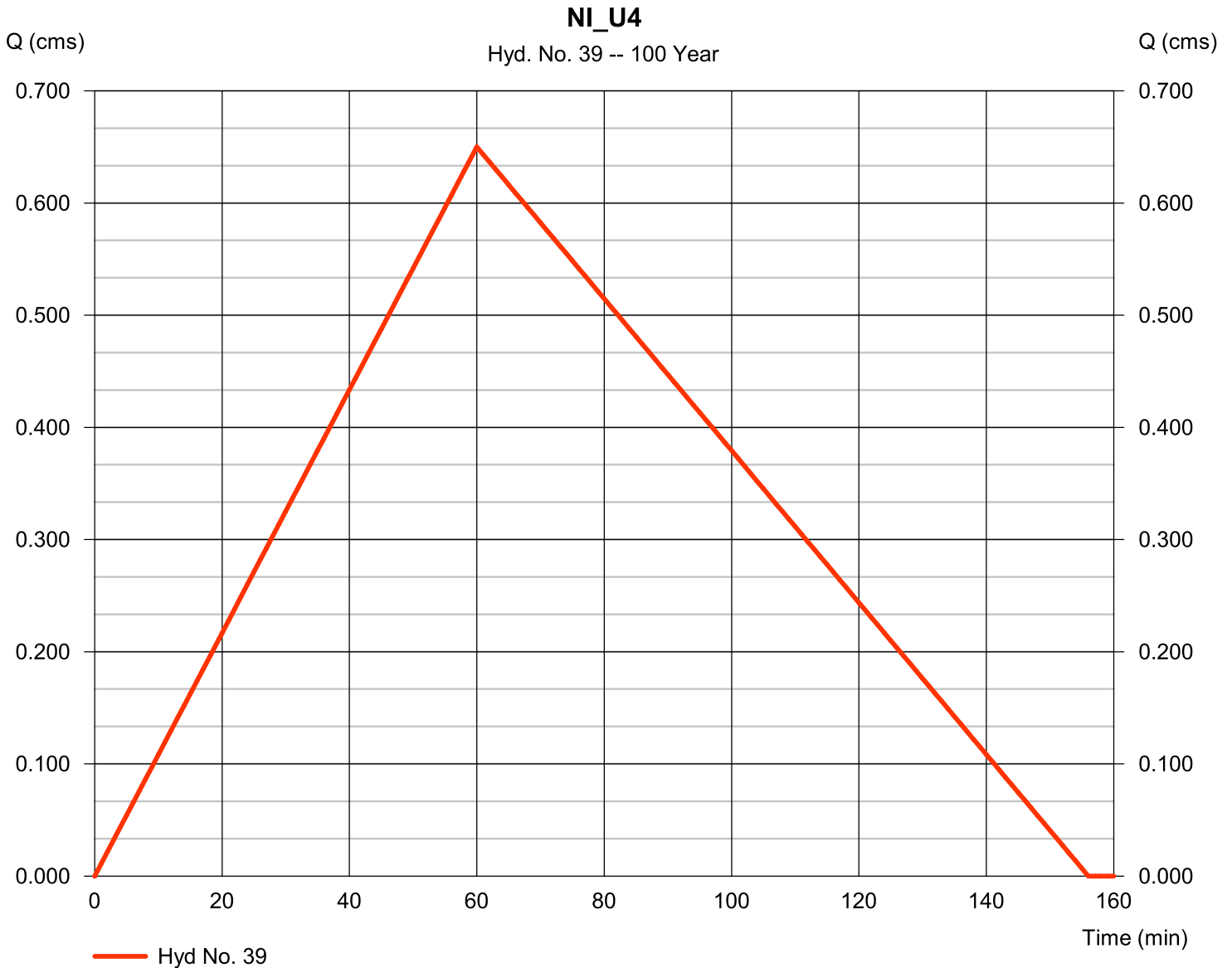
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 39

NI_U4

Hydrograph type	= Rational	Peak discharge	= 0.650 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 042.5 cum
Drainage area	= 22.390 hectare	Runoff coeff.	= 0.34
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

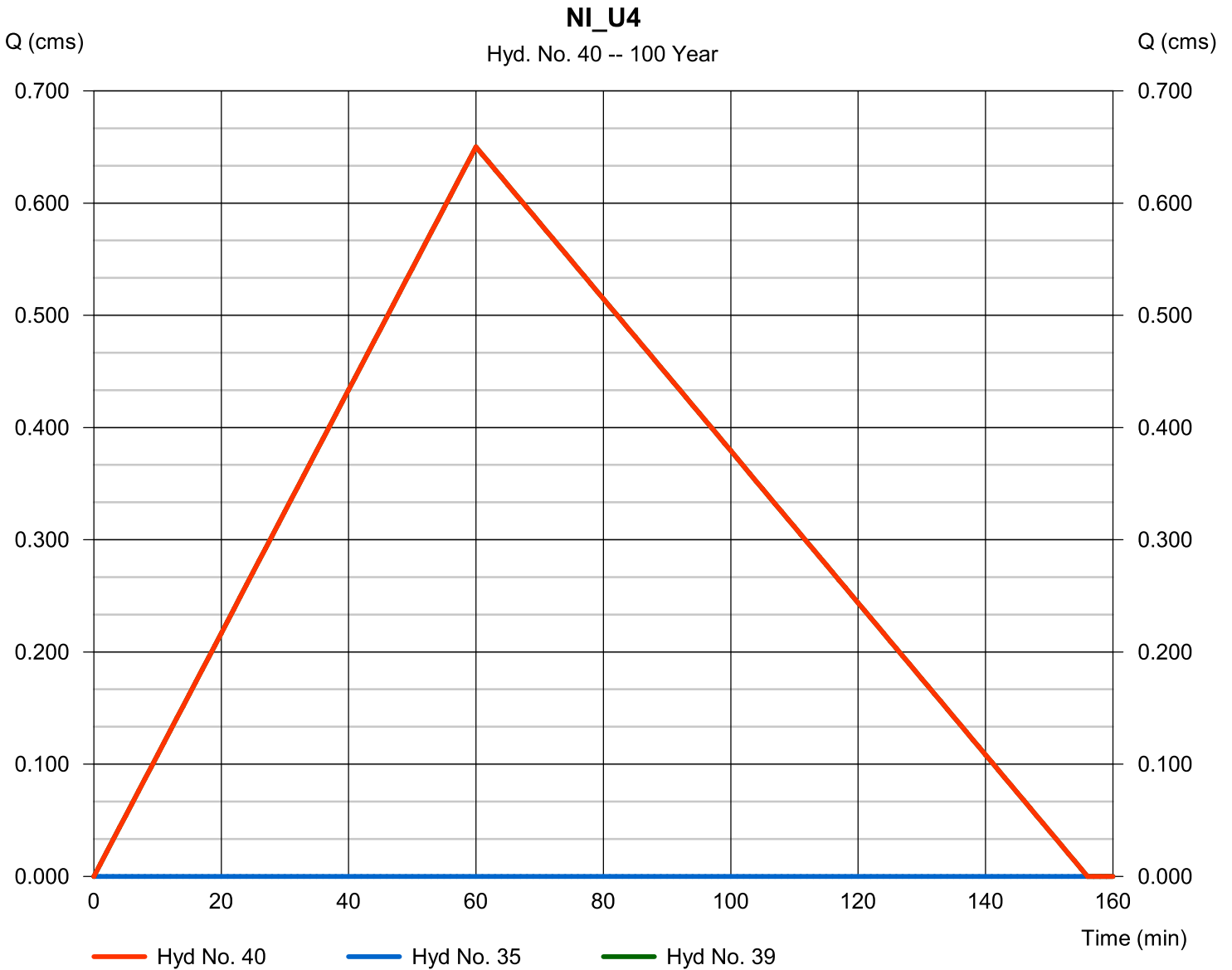
jeudi, avr 5, 2012

Hyd. No. 40

NI_U4

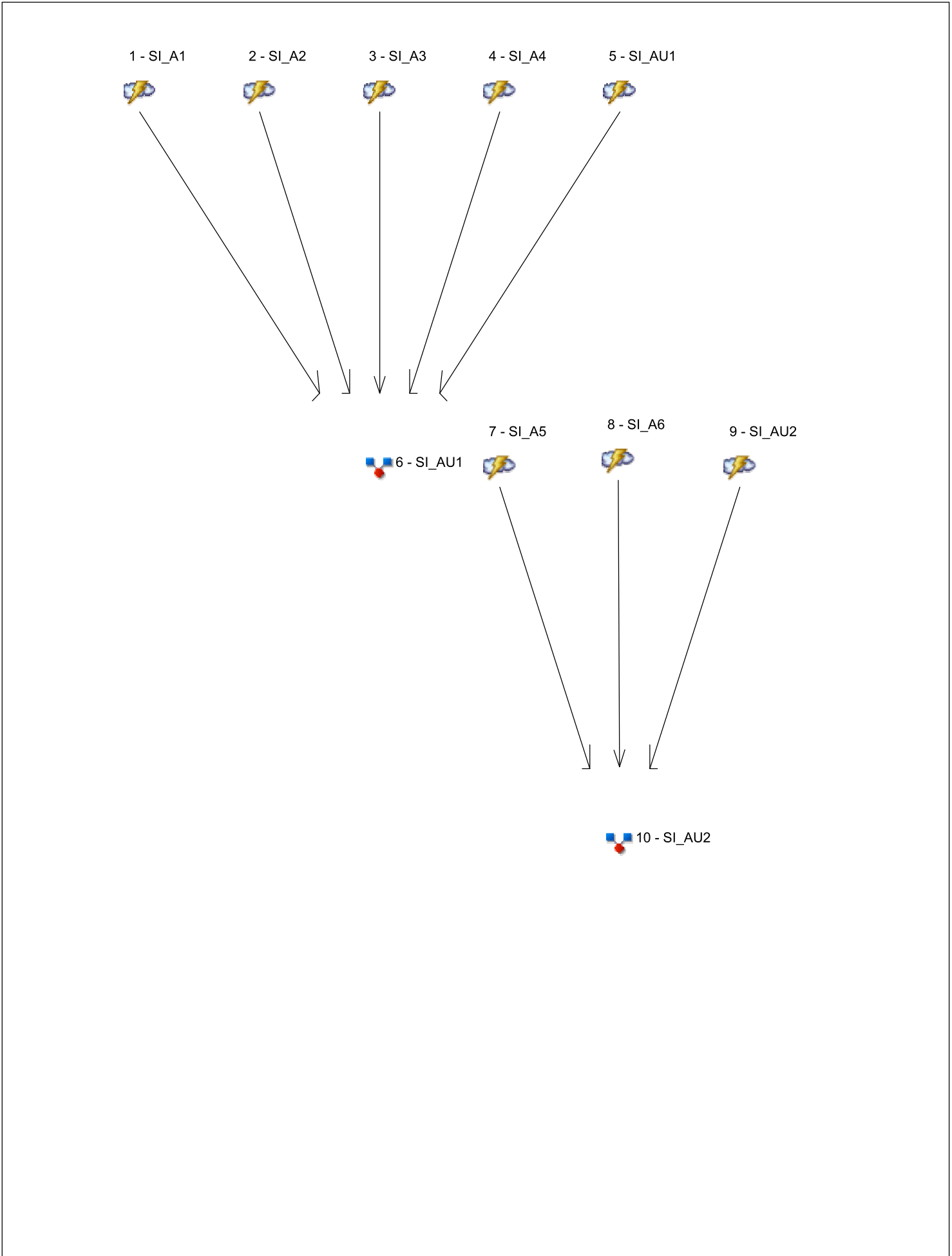
Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 35, 39

Peak discharge = 0.650 cms
Time to peak = 60 min
Hyd. volume = 3 042.5 cum
Contrib. drain. area = 22.390 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A1
2	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A2
3	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A3
4	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A4
5	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_AU1
6	Combine	1, 2, 3, 4, 5	-----	-----	-----	-----	0.000	-----	-----	-----	SI_AU1
7	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A5
8	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_A6
9	Rational	-----	-----	-----	-----	-----	0.000	-----	-----	-----	SI_AU2
10	Combine	7, 8, 9	-----	-----	-----	-----	0.000	-----	-----	-----	SI_AU2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

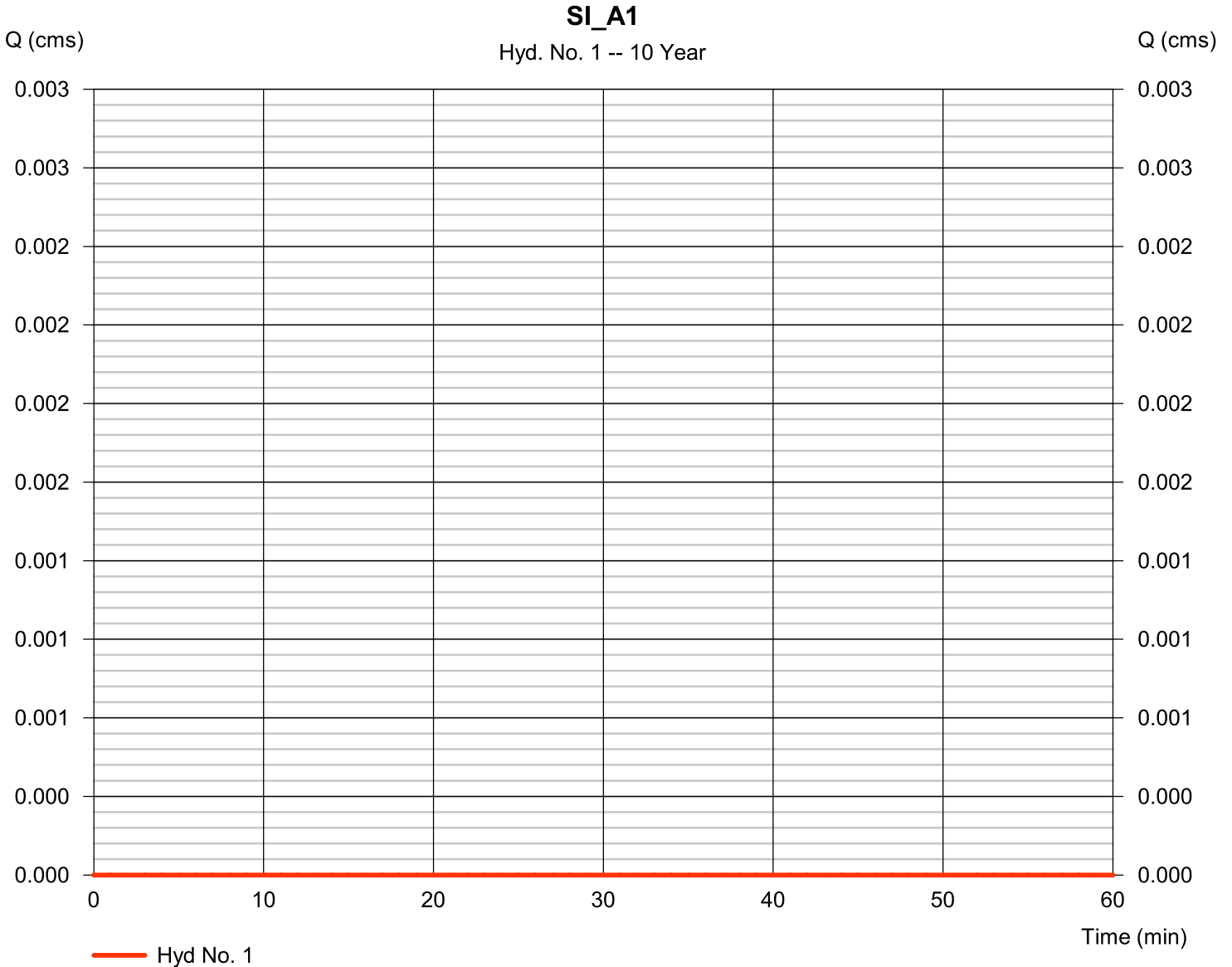
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A1
2	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A2
3	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A3
4	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A4
5	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_AU1
6	Combine	0.000	1	n/a	0.0	1, 2, 3, 4, 5	-----	-----	SI_AU1
7	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A5
8	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_A6
9	Rational	0.000	1	n/a	0.0	-----	-----	-----	SI_AU2
10	Combine	0.000	1	n/a	0.0	7, 8, 9	-----	-----	SI_AU2
E:\MODELISATION_HYDRAFLOW\ALSP110\25 - Ni Periode 10 m 10								jeudi, avr 5, 2012	

Hydrograph Report

Hyd. No. 1

SI_A1

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 7.330 hectare	Runoff coeff.	= 0.13
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6

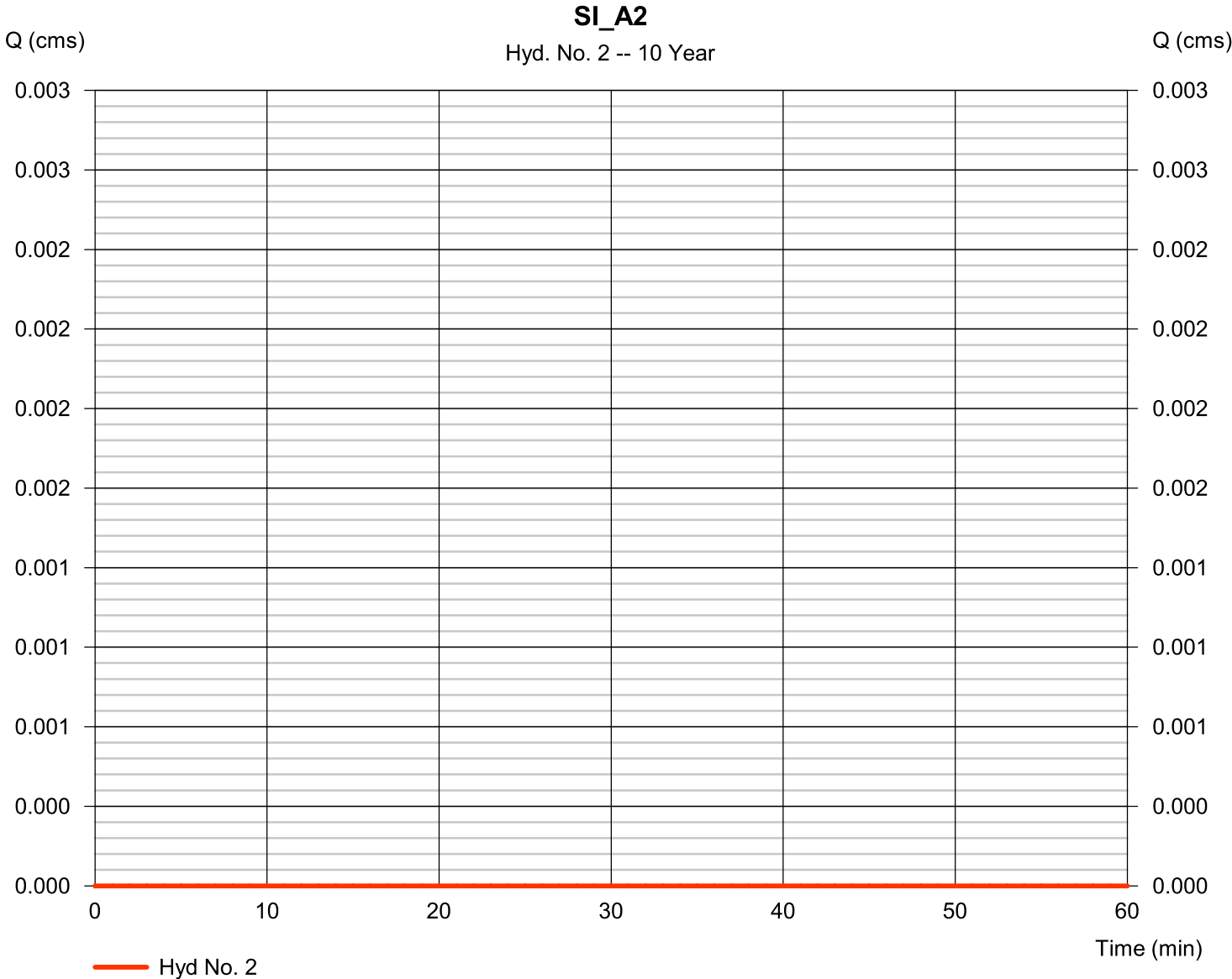


Hydrograph Report

Hyd. No. 2

SI_A2

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 2.820 hectare	Runoff coeff.	= 0.08
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

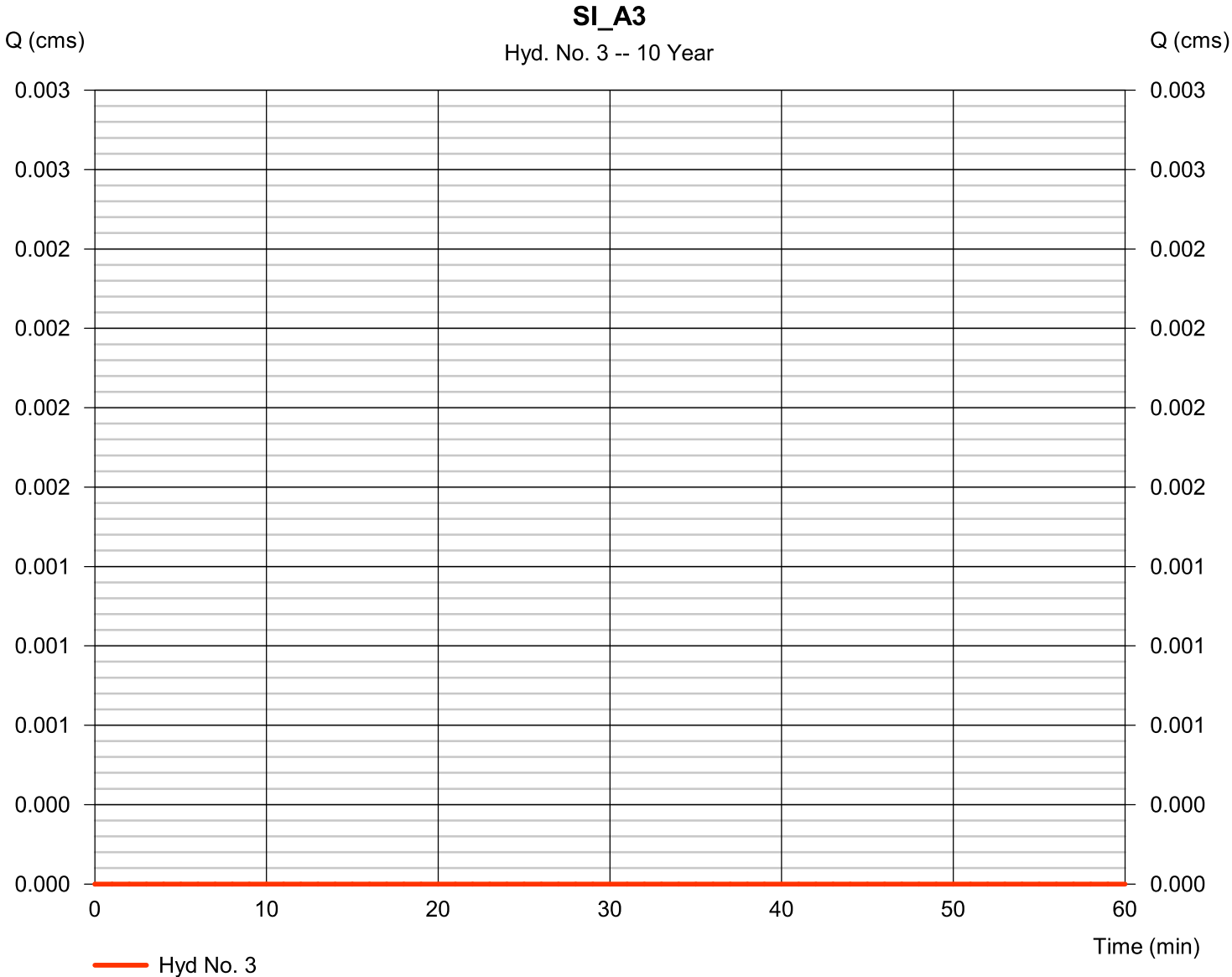
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 3

SI_A3

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 0.990 hectare	Runoff coeff.	= 0.09
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

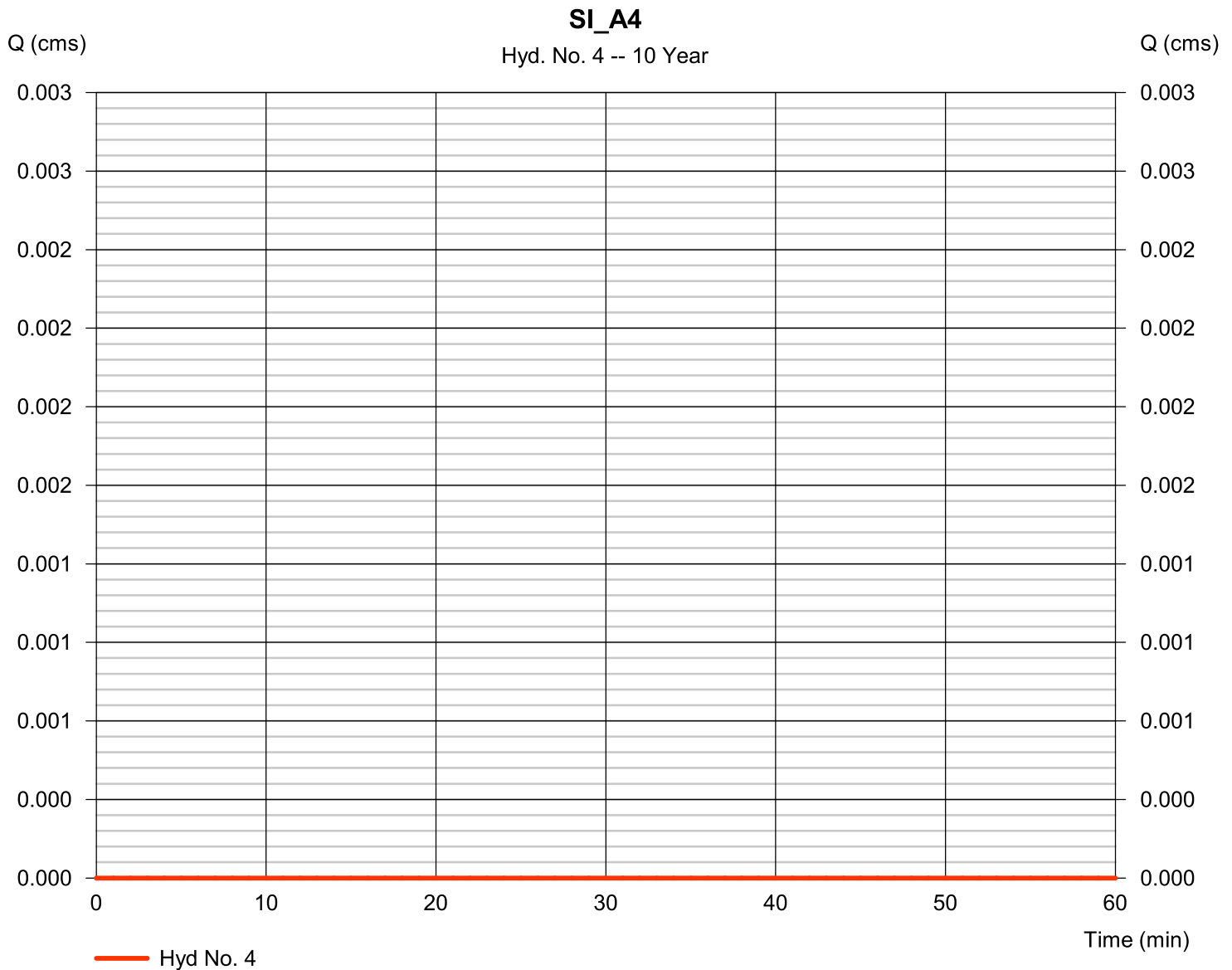
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 4

SI_A4

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 1.260 hectare	Runoff coeff.	= 0.14
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

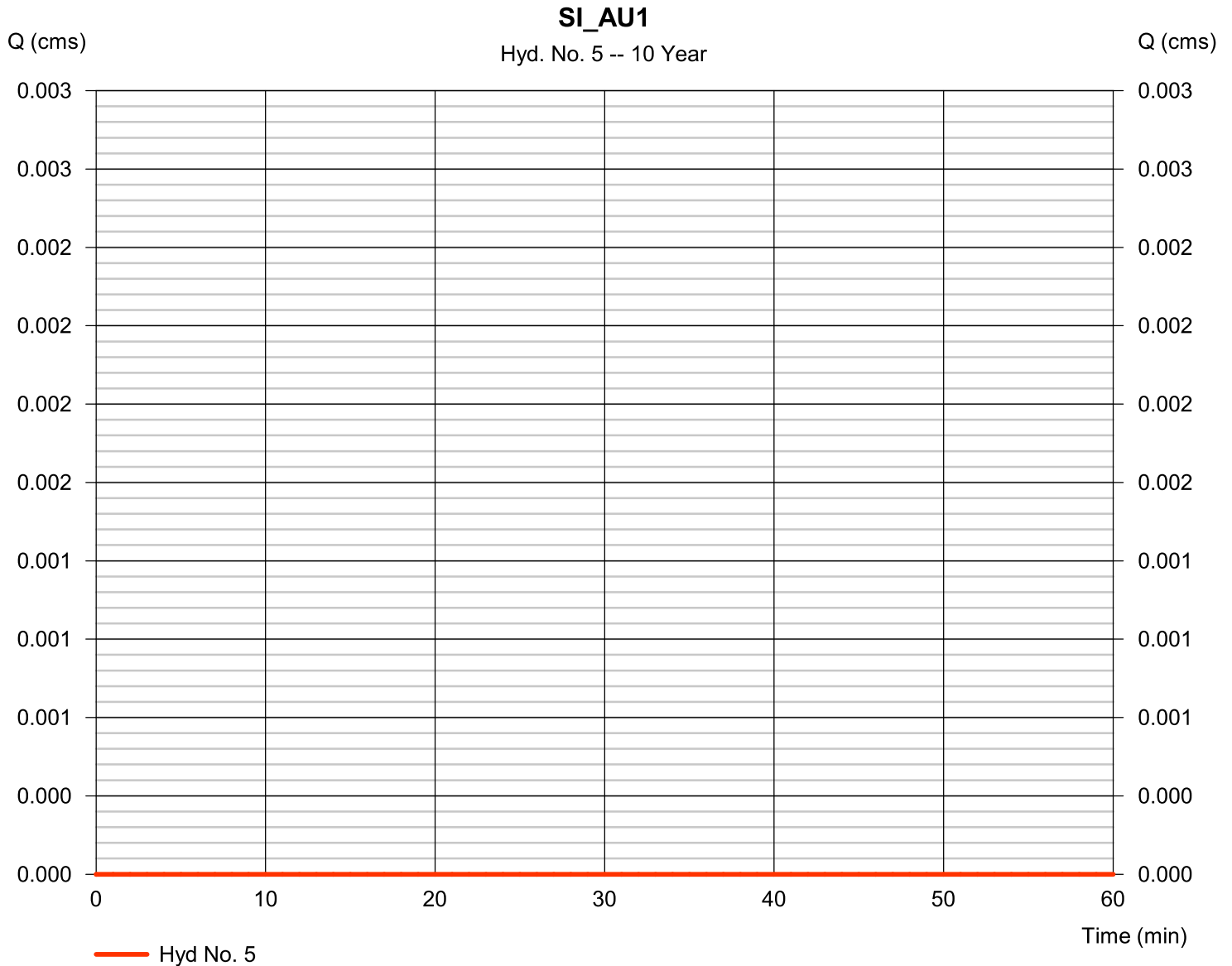
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 5

SI_AU1

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 41.500 hectare	Runoff coeff.	= 0.25
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

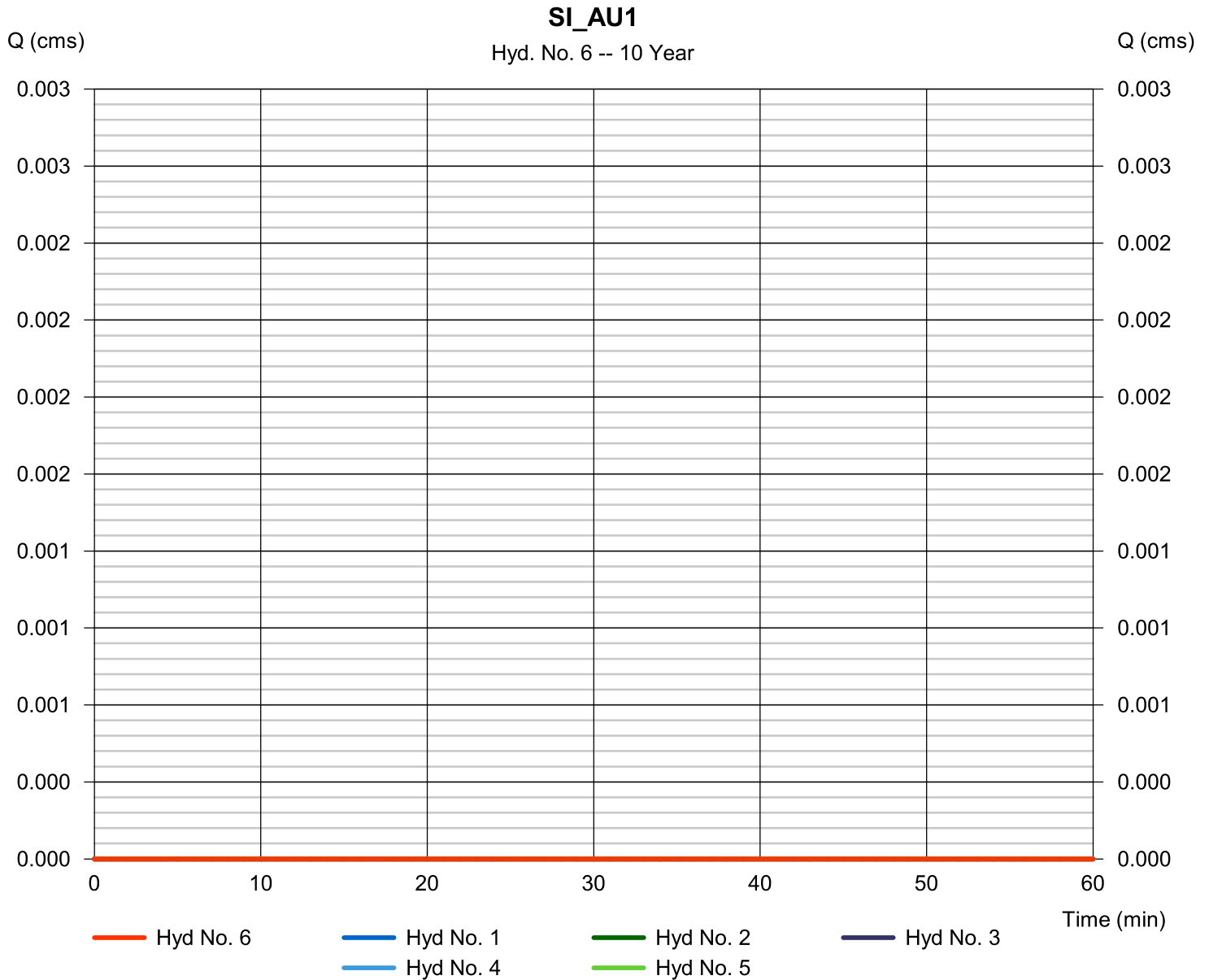
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

SI_AU1

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 1, 2, 3, 4, 5	Contrib. drain. area	= 53.900 hectare



Hydrograph Report

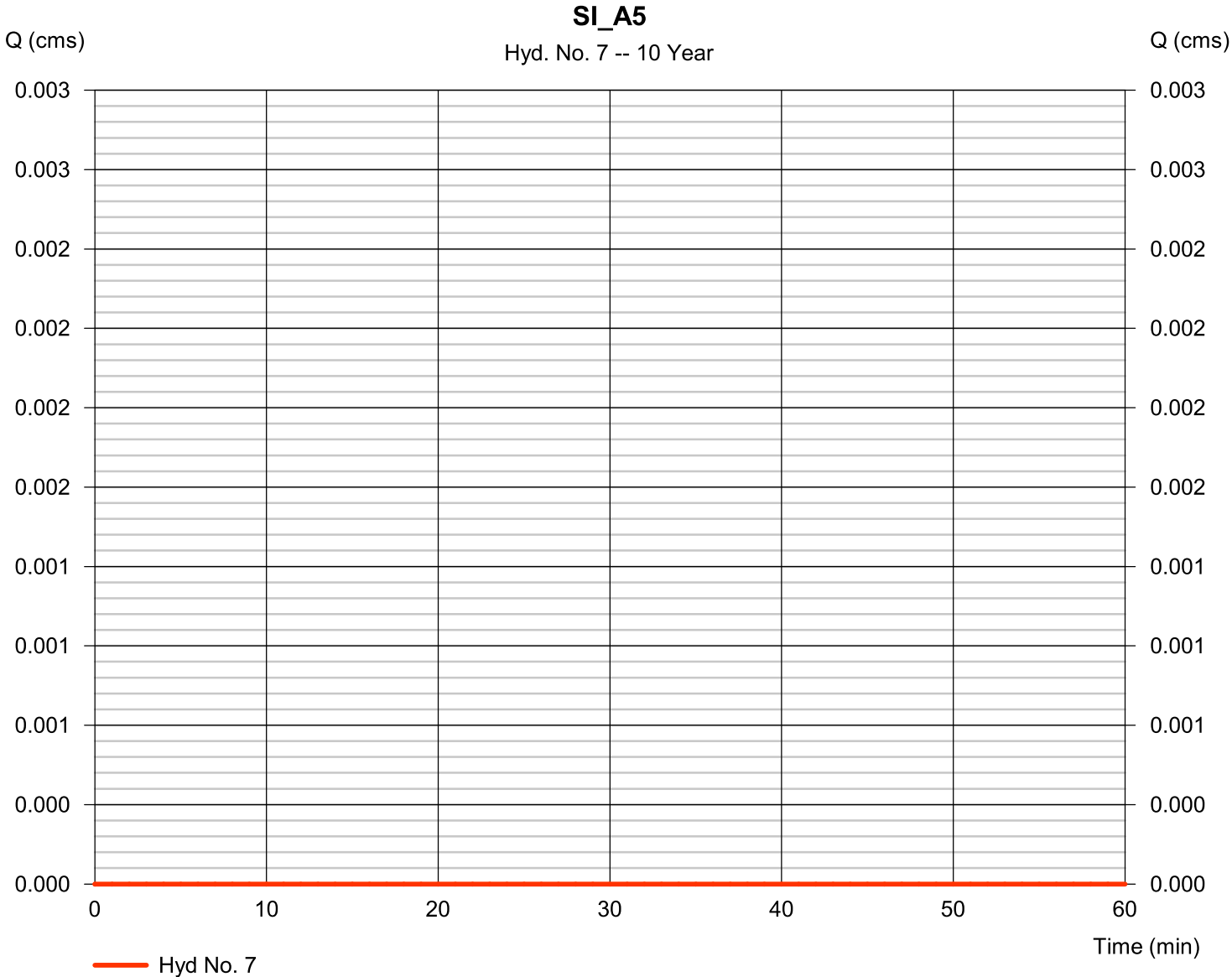
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

SI_A5

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 35.650 hectare	Runoff coeff.	= 0.16
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

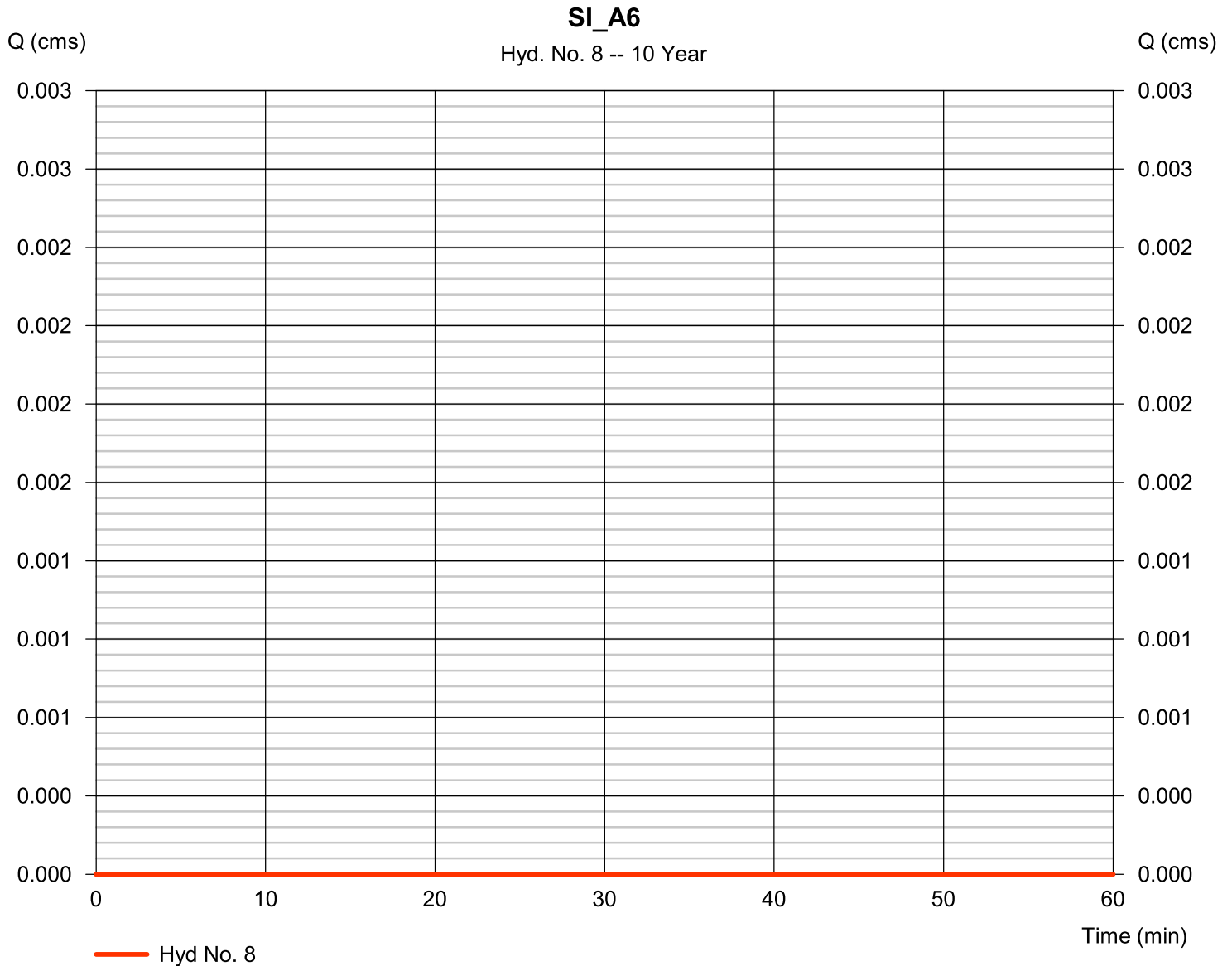
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

SI_A6

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 1.870 hectare	Runoff coeff.	= 0.46
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

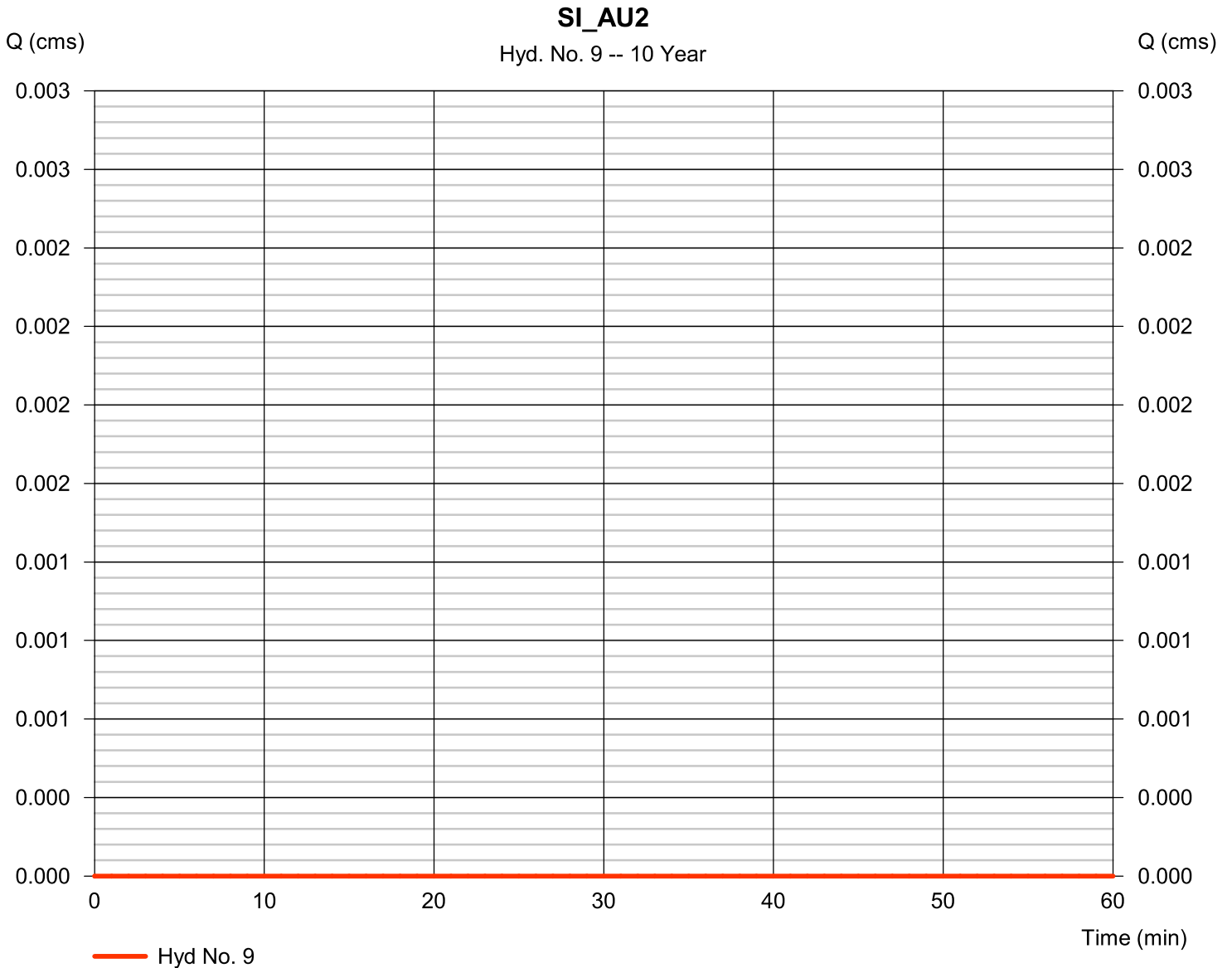
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 9

SI_AU2

Hydrograph type	= Rational	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Drainage area	= 22.070 hectare	Runoff coeff.	= 0.31
Intensity	= 0.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

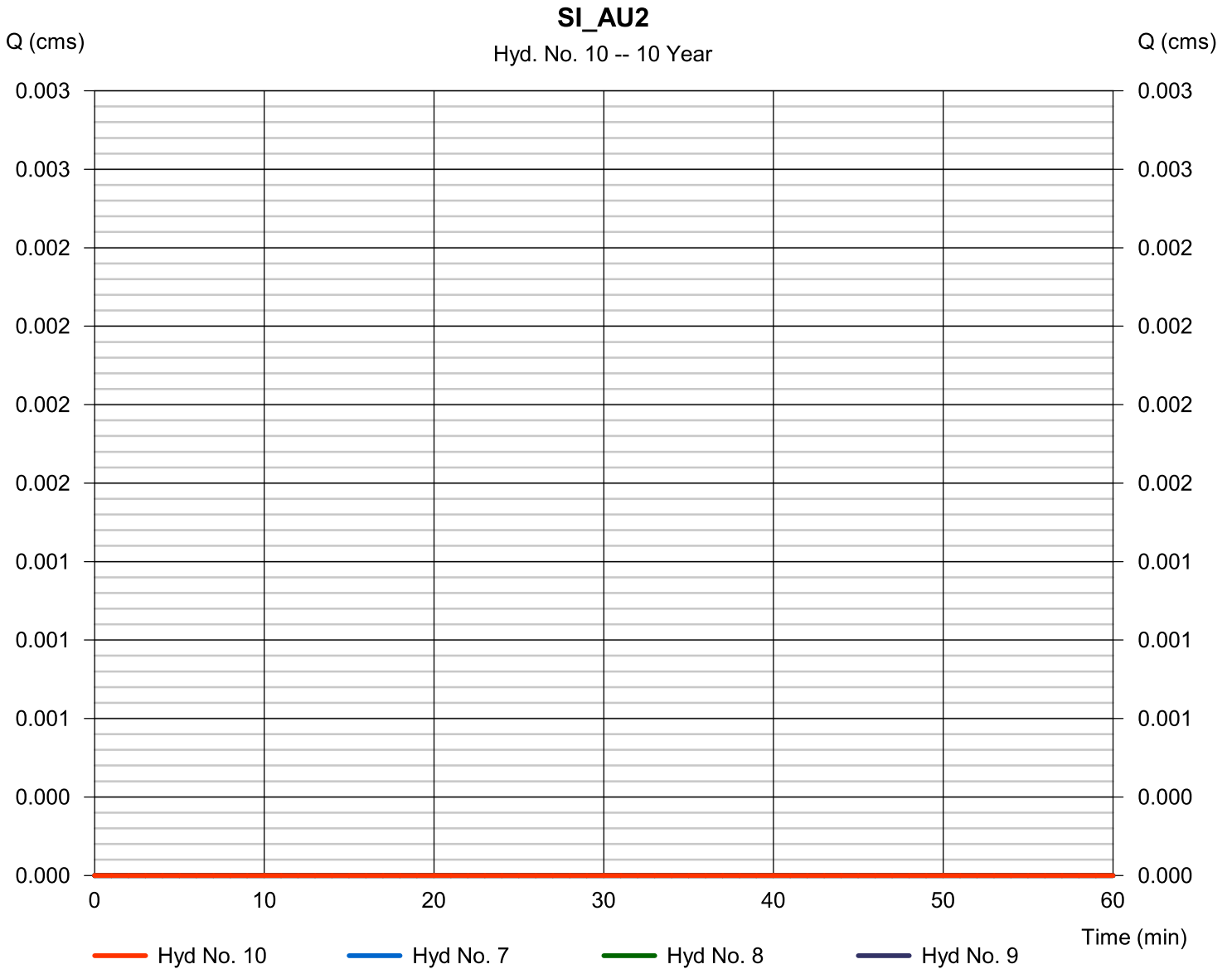
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

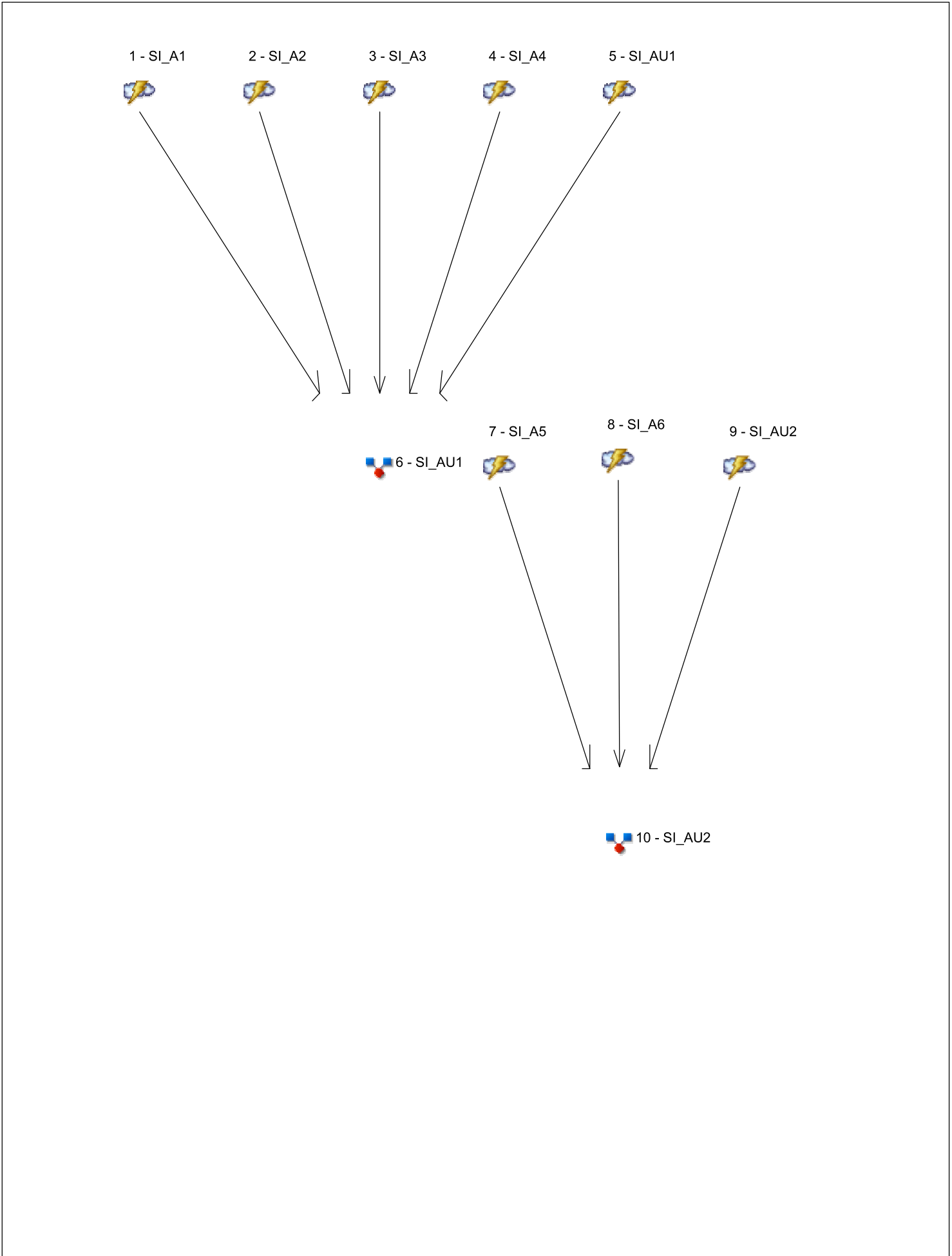
SI_AU2

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 7, 8, 9	Contrib. drain. area	= 59.590 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description	
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr		
1	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.102	-----	SI_A1
2	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.028	-----	SI_A2
3	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.011	-----	SI_A3
4	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.019	-----	SI_A4
5	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.864	-----	SI_AU1
6	Combine	1, 2, 3, 4, 5	-----	-----	-----	-----	-----	-----	-----	0.000	-----	SI_AU1
7	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.128	-----	SI_A5
8	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.071	-----	SI_A6
9	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.579	-----	SI_AU2
10	Combine	7, 8, 9	-----	-----	-----	-----	-----	-----	-----	0.000	-----	SI_AU2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.102	1	60	476.3	-----	-----	-----	SI_A1
2	Rational	0.028	1	60	132.3	-----	-----	-----	SI_A2
3	Rational	0.011	1	60	50.0	-----	-----	-----	SI_A3
4	Rational	0.019	1	60	91.0	-----	-----	-----	SI_A4
5	Rational	0.864	1	60	4 044.9	-----	-----	-----	SI_AU1
6	Combine	0.000	1	n/a	0.0	1, 2, 3, 4, 5	-----	-----	SI_AU1
7	Rational	0.128	1	60	600.0	-----	-----	-----	SI_A5
8	Rational	0.071	1	60	330.8	-----	-----	-----	SI_A6
9	Rational	0.579	1	60	2 708.8	-----	-----	-----	SI_AU2
10	Combine	0.000	1	n/a	0.0	7, 8, 9	-----	-----	SI_AU2
E:\MODELISATION_HYDRAFLOW\ALSP110\125 - Ni de crue 50 m de crue						jeudi, avr 5, 2012			

Hydrograph Report

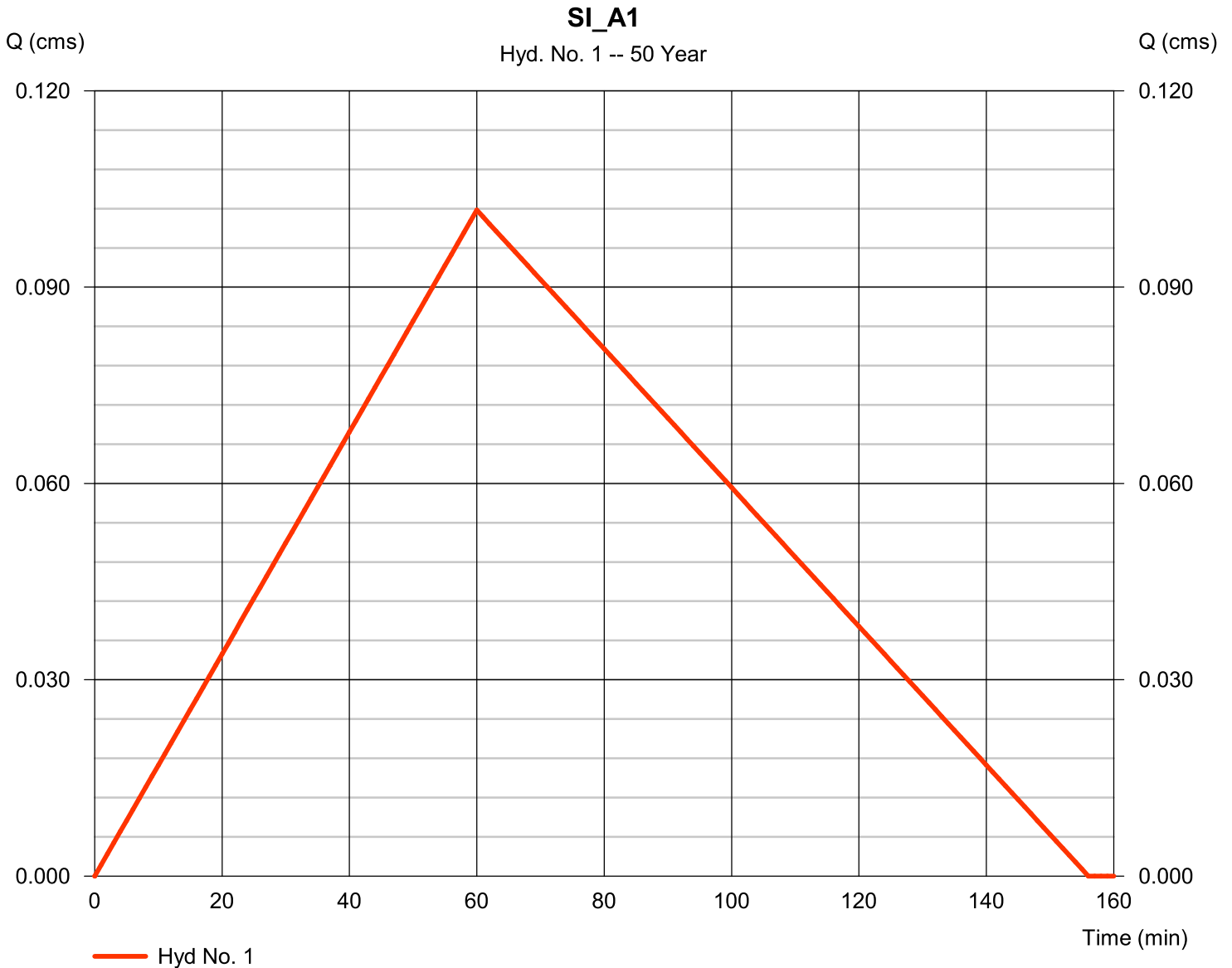
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 1

SI_A1

Hydrograph type	= Rational	Peak discharge	= 0.102 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 476.3 cum
Drainage area	= 7.330 hectare	Runoff coeff.	= 0.18
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

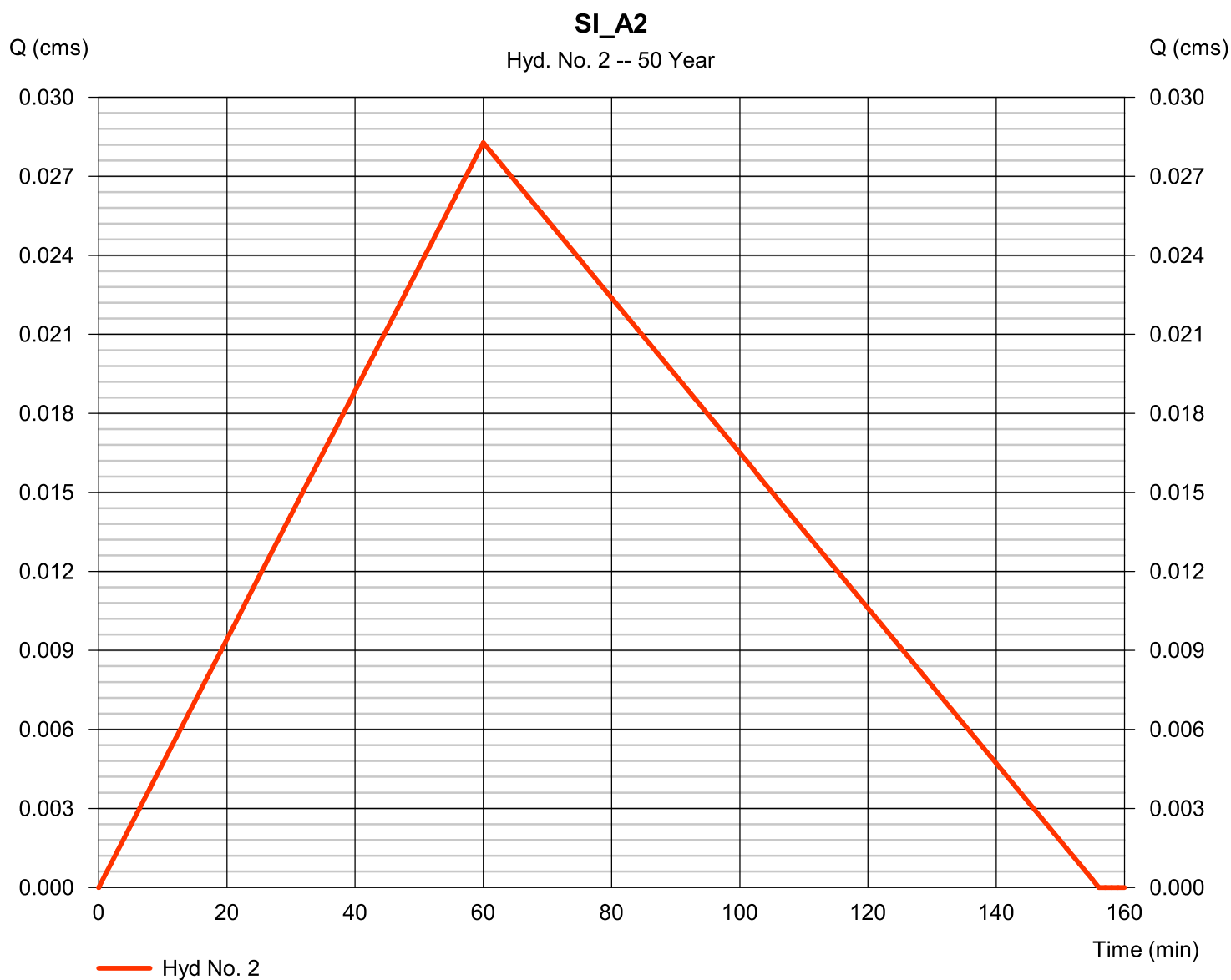
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 2

SI_A2

Hydrograph type	= Rational	Peak discharge	= 0.028 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 132.3 cum
Drainage area	= 2.820 hectare	Runoff coeff.	= 0.13
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

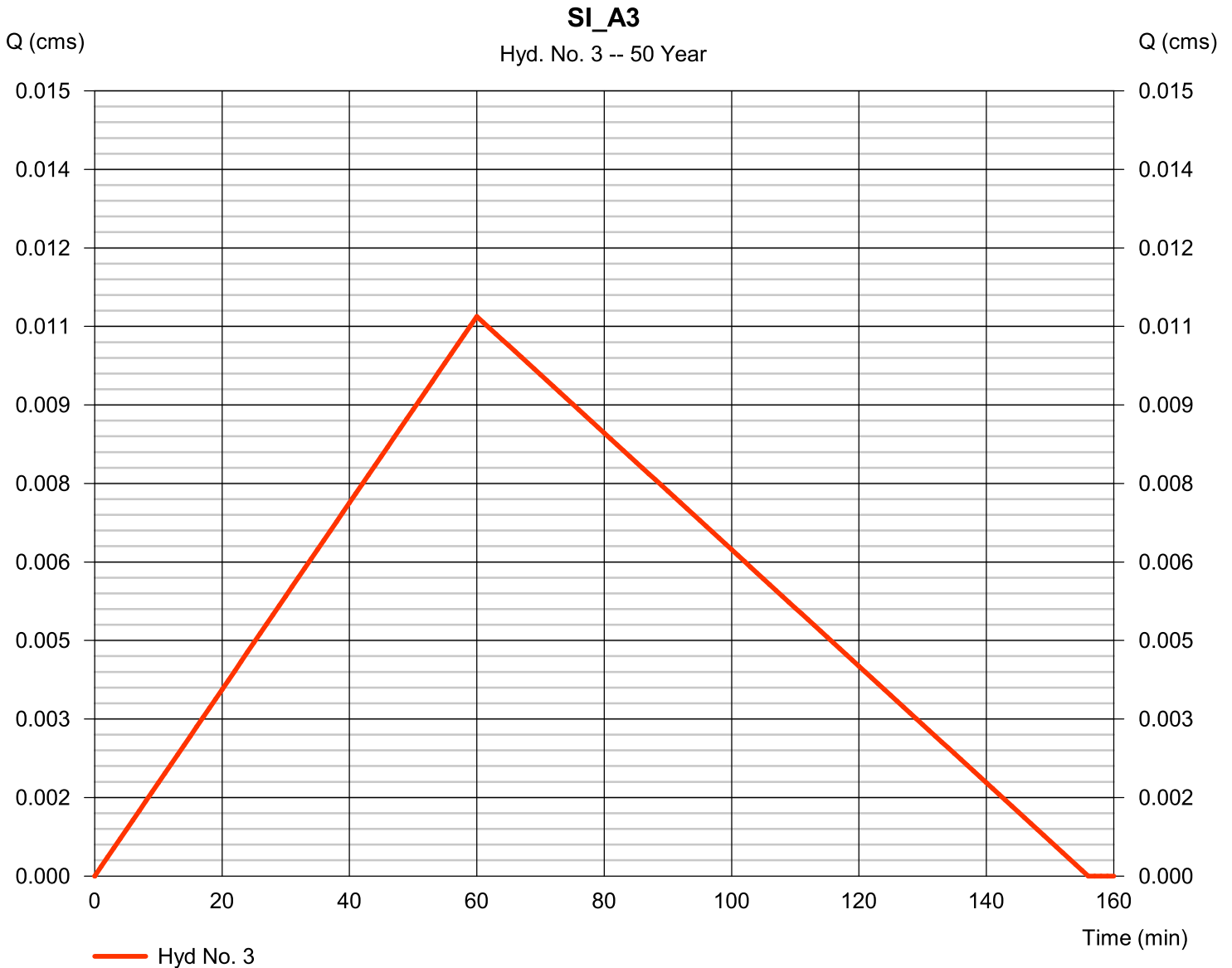
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Hyd. No. 3

SI_A3

Hydrograph type	= Rational	Peak discharge	= 0.011 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 50.0 cum
Drainage area	= 0.990 hectare	Runoff coeff.	= 0.14
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

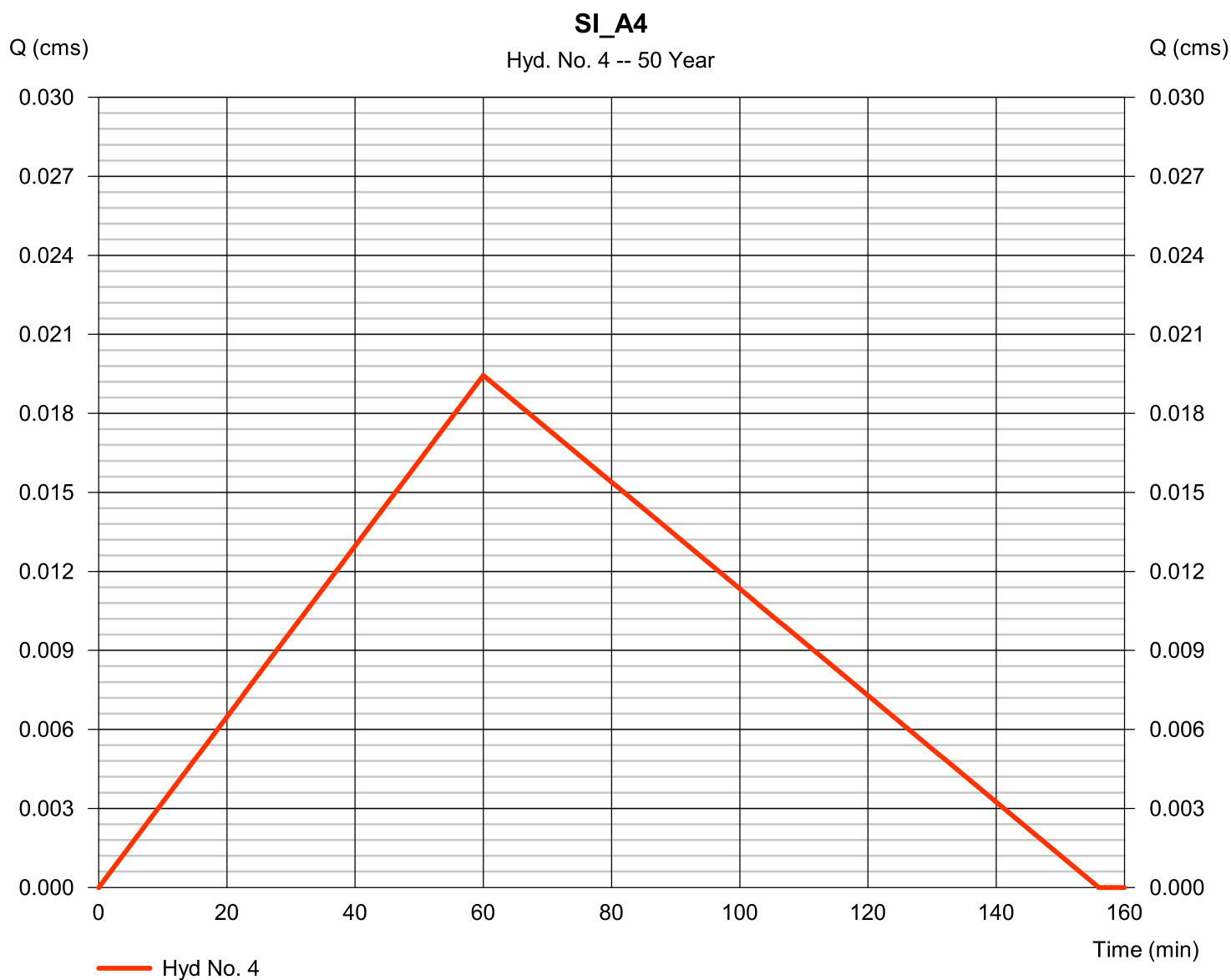
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 4

SI_A4

Hydrograph type	= Rational	Peak discharge	= 0.019 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 91.0 cum
Drainage area	= 1.260 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

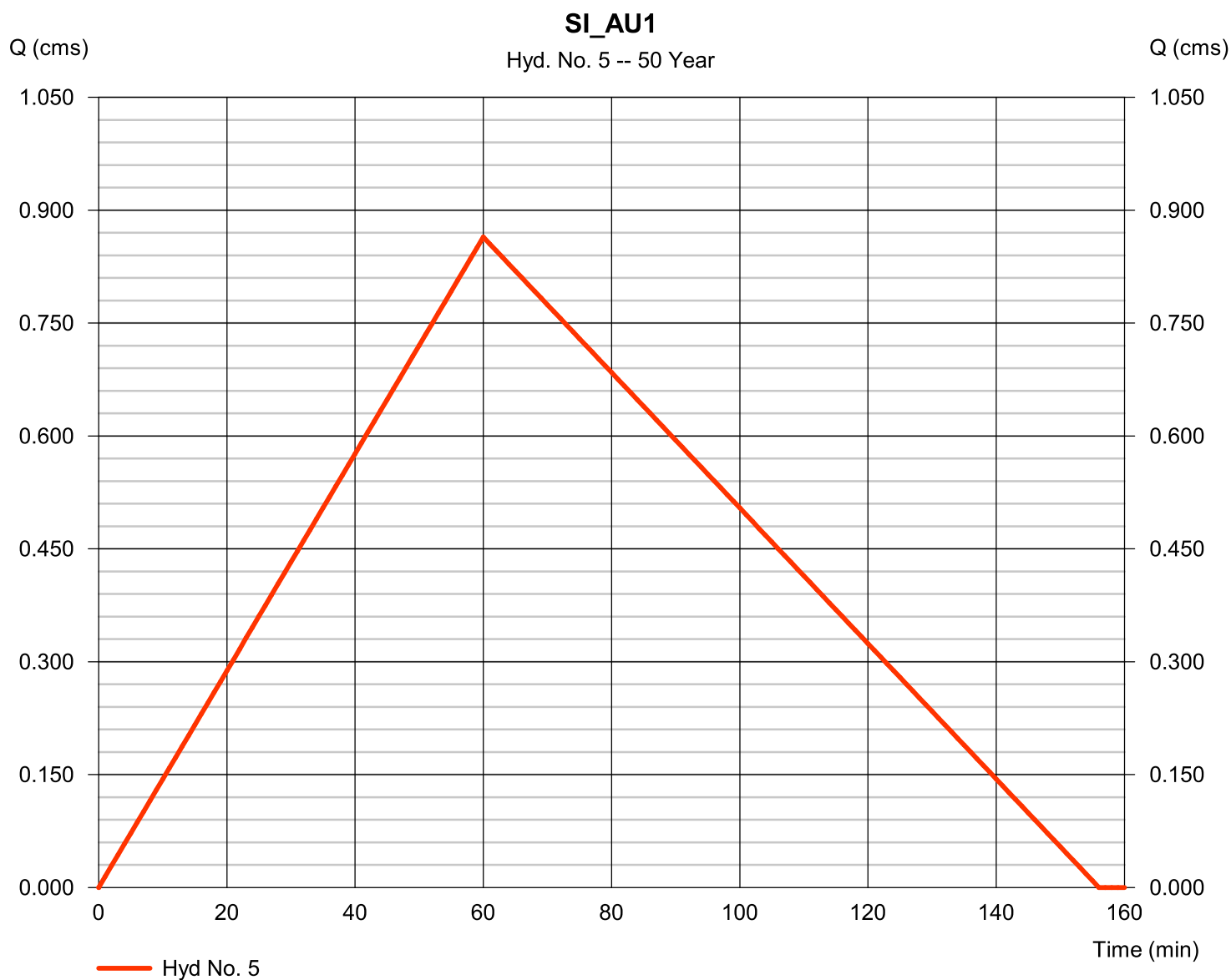
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

SI_AU1

Hydrograph type	= Rational	Peak discharge	= 0.864 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 044.9 cum
Drainage area	= 41.500 hectare	Runoff coeff.	= 0.27
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

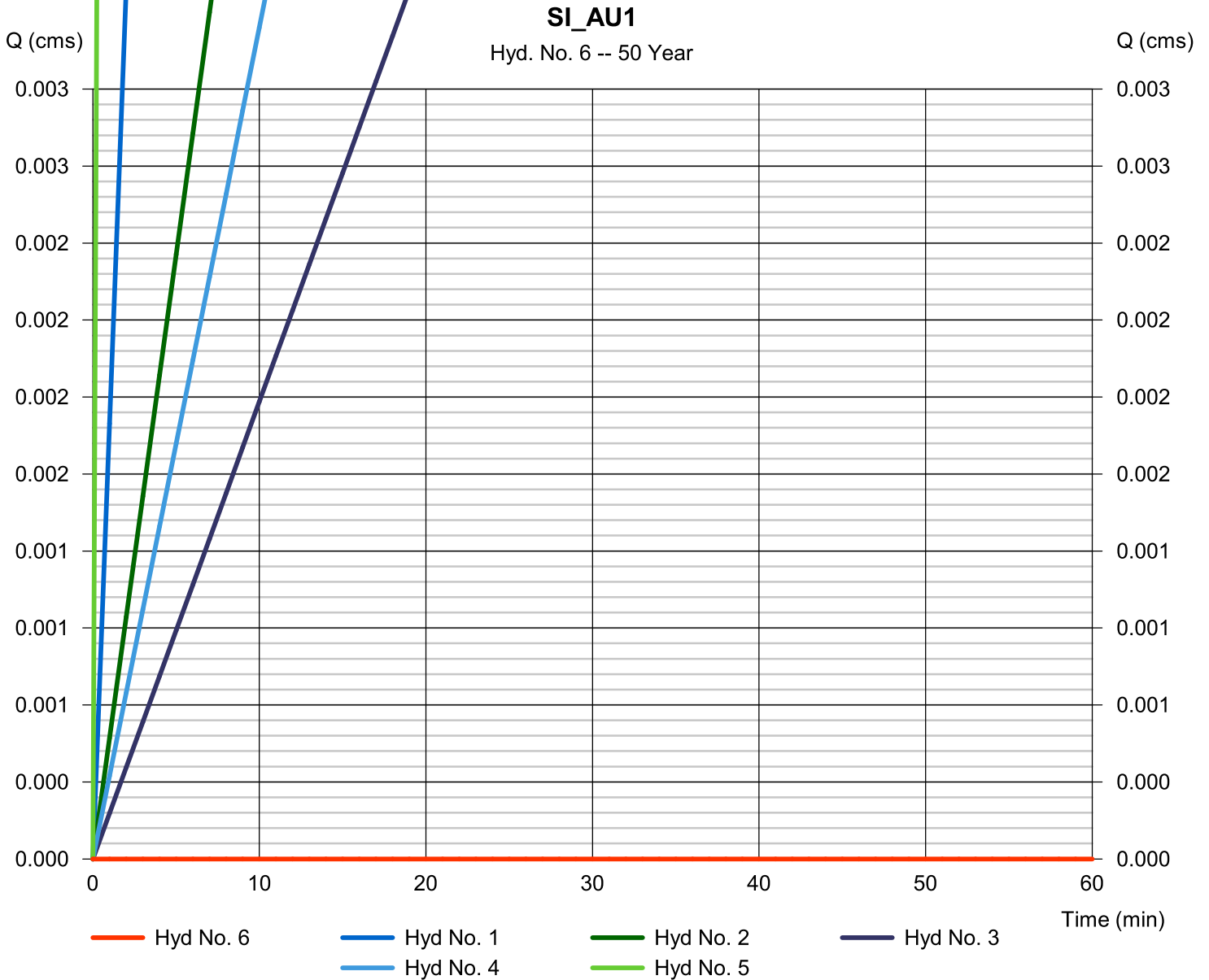
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

SI_AU1

Hydrograph type	= Combine	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hyds.	= 1, 2, 3, 4, 5	Contrib. drain. area	= 53.900 hectare

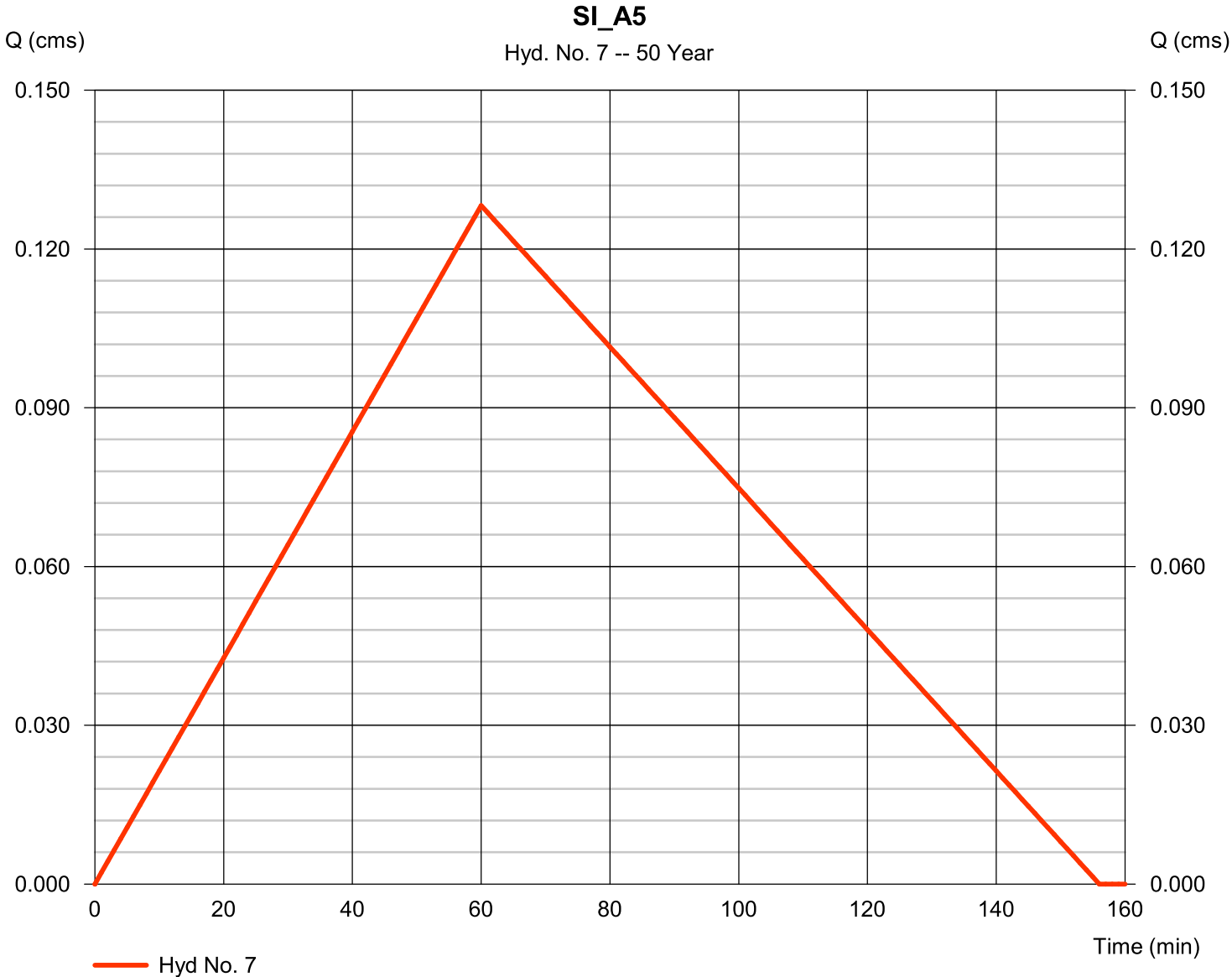


Hydrograph Report

Hyd. No. 7

SI_A5

Hydrograph type	= Rational	Peak discharge	= 0.128 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 600.0 cum
Drainage area	= 8.310 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6

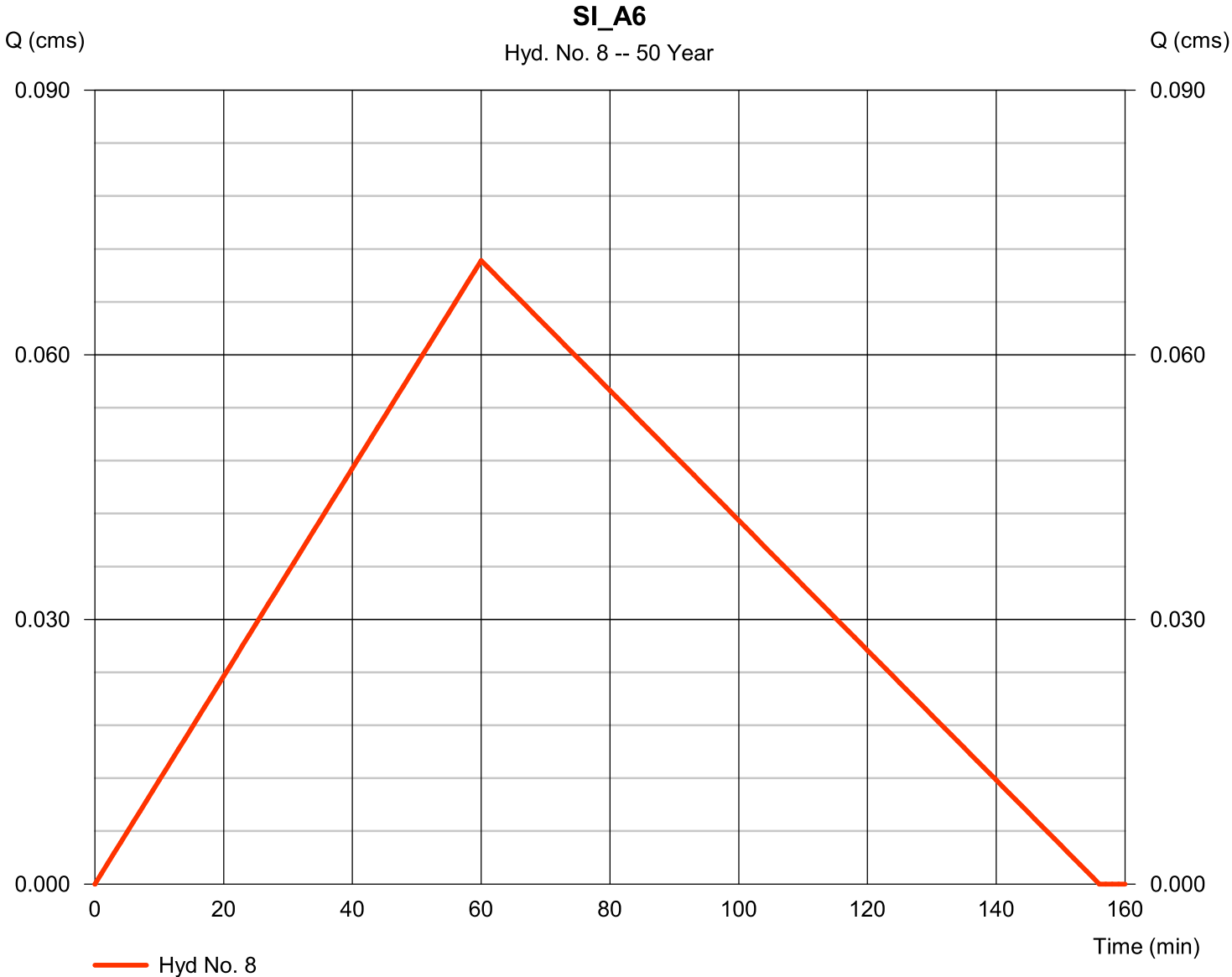


Hydrograph Report

Hyd. No. 8

SI_A6

Hydrograph type	= Rational	Peak discharge	= 0.071 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 330.8 cum
Drainage area	= 1.870 hectare	Runoff coeff.	= 0.49
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

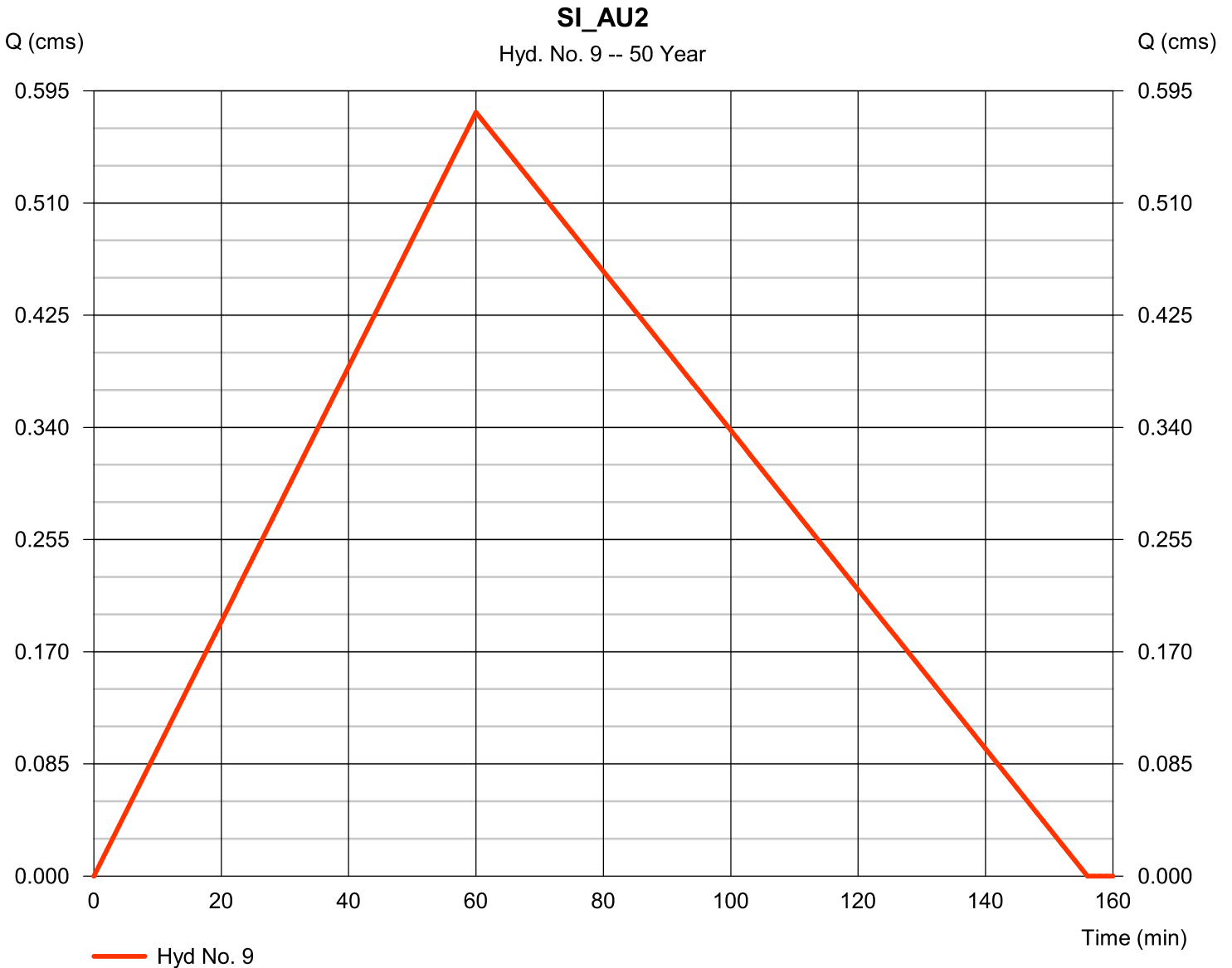
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 9

SI_AU2

Hydrograph type	= Rational	Peak discharge	= 0.579 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 708.8 cum
Drainage area	= 22.070 hectare	Runoff coeff.	= 0.34
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

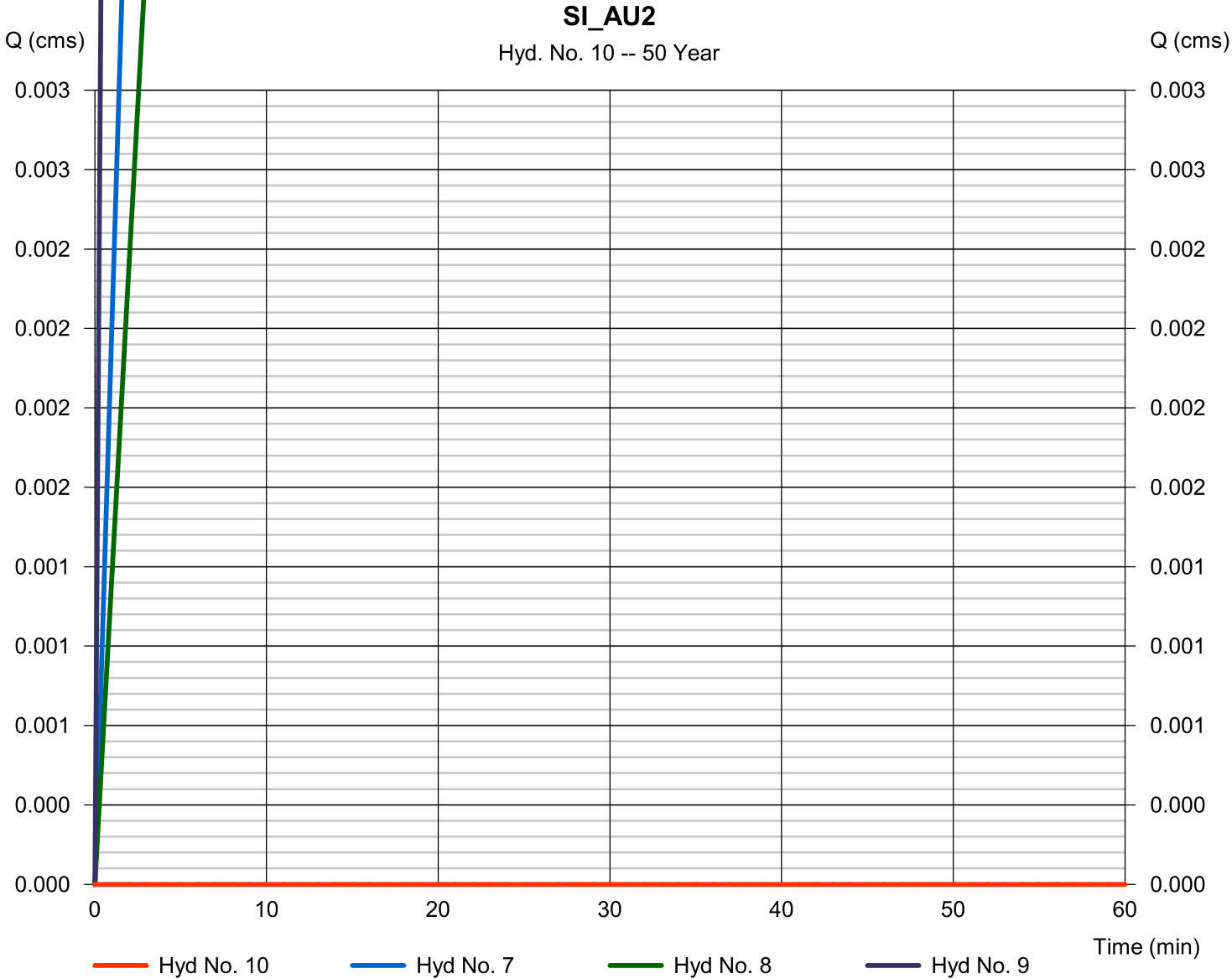
jeudi, avr 5, 2012

Hyd. No. 10

SI_AU2

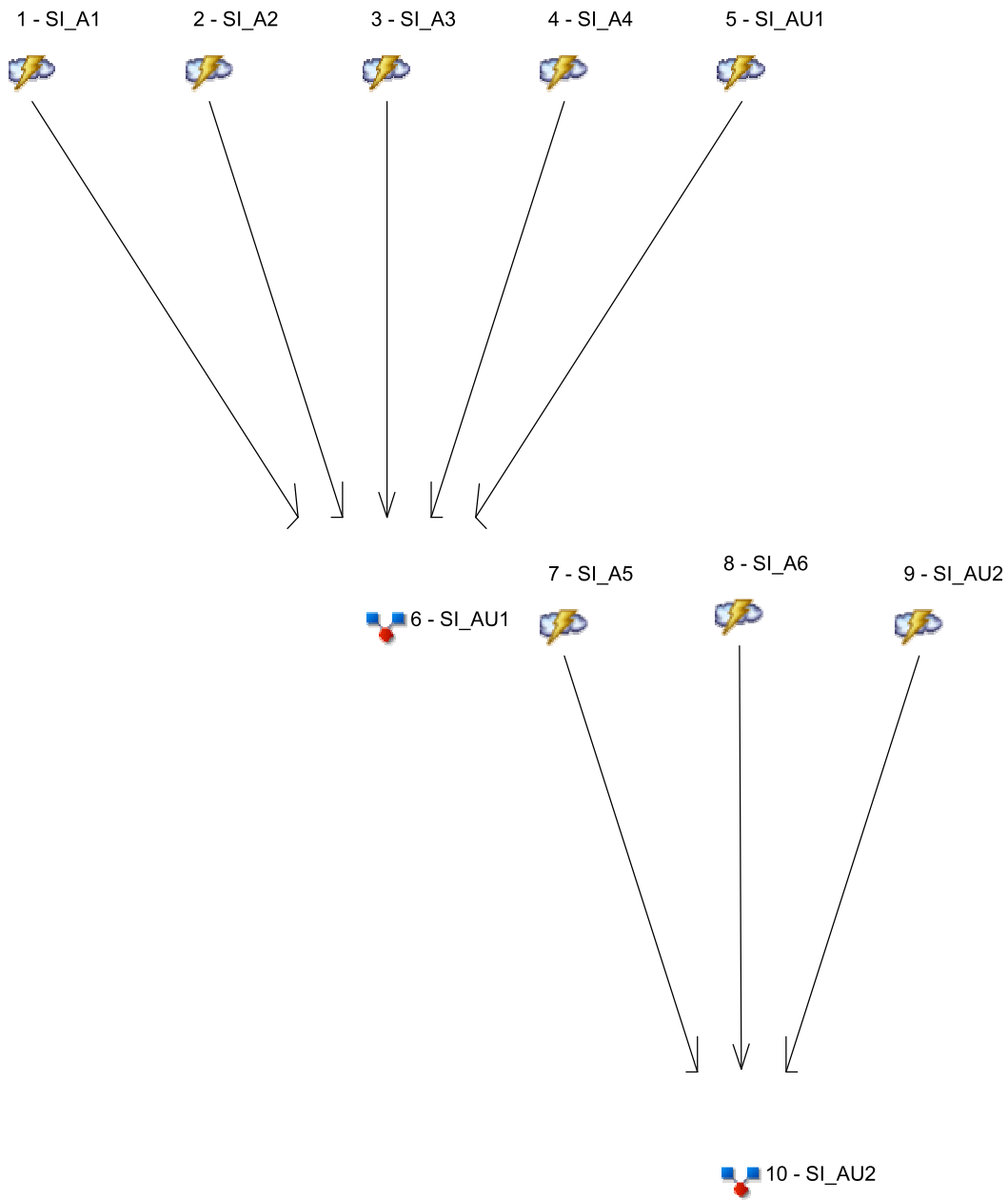
Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hys. = 7, 8, 9

Peak discharge = 0.000 cms
Time to peak = n/a
Hyd. volume = 0.0 cum
Contrib. drain. area = 32.250 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Legend

Hyd. Origin	Description
1	Rational SI_A1
2	Rational SI_A2
3	Rational SI_A3
4	Rational SI_A4
5	Rational SI_AU1
6	Combine SI_AU1
7	Rational SI_A5
8	Rational SI_A6
9	Rational SI_AU2
10	Combine SI_AU2

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description	
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr		
1	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.125	SI_A1
2	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.036	SI_A2
3	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.014	SI_A3
4	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.024	SI_A4
5	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.992	SI_AU1
6	Combine	1, 2, 3, 4, 5	-----	-----	-----	-----	-----	-----	-----	-----	1.191	SI_AU1
7	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.163	SI_A5
8	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.080	SI_A6
9	Rational	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.660	SI_AU2
10	Combine	7, 8, 9	-----	-----	-----	-----	-----	-----	-----	-----	0.903	SI_AU2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.125	1	60	585.9	-----	-----	-----	SI_A1
2	Rational	0.036	1	60	169.1	-----	-----	-----	SI_A2
3	Rational	0.014	1	60	63.3	-----	-----	-----	SI_A3
4	Rational	0.024	1	60	110.8	-----	-----	-----	SI_A4
5	Rational	0.992	1	60	4 644.2	-----	-----	-----	SI_AU1
6	Combine	1.191	1	60	5 573.3	1, 2, 3, 4, 5	-----	-----	SI_AU1
7	Rational	0.163	1	60	763.9	-----	-----	-----	SI_A5
8	Rational	0.080	1	60	373.7	-----	-----	-----	SI_A6
9	Rational	0.660	1	60	3 087.3	-----	-----	-----	SI_AU2
10	Combine	0.903	1	60	4 224.9	7, 8, 9	-----	-----	SI_AU2
12.gpw					Return Period: 100 Year			jeudi, avr 5, 2012	

Hydrograph Report

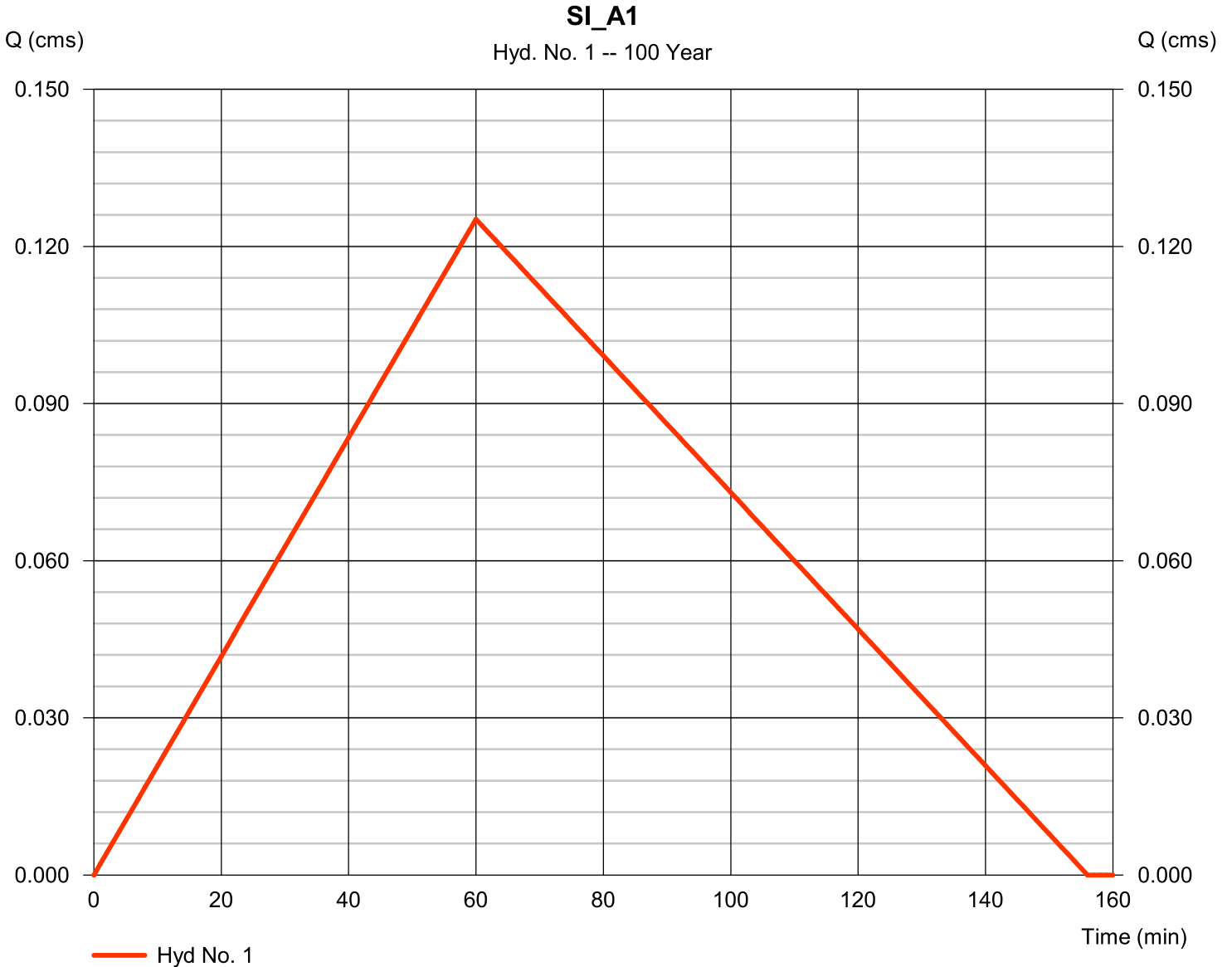
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 1

SI_A1

Hydrograph type	= Rational	Peak discharge	= 0.125 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 585.9 cum
Drainage area	= 7.330 hectare	Runoff coeff.	= 0.2
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

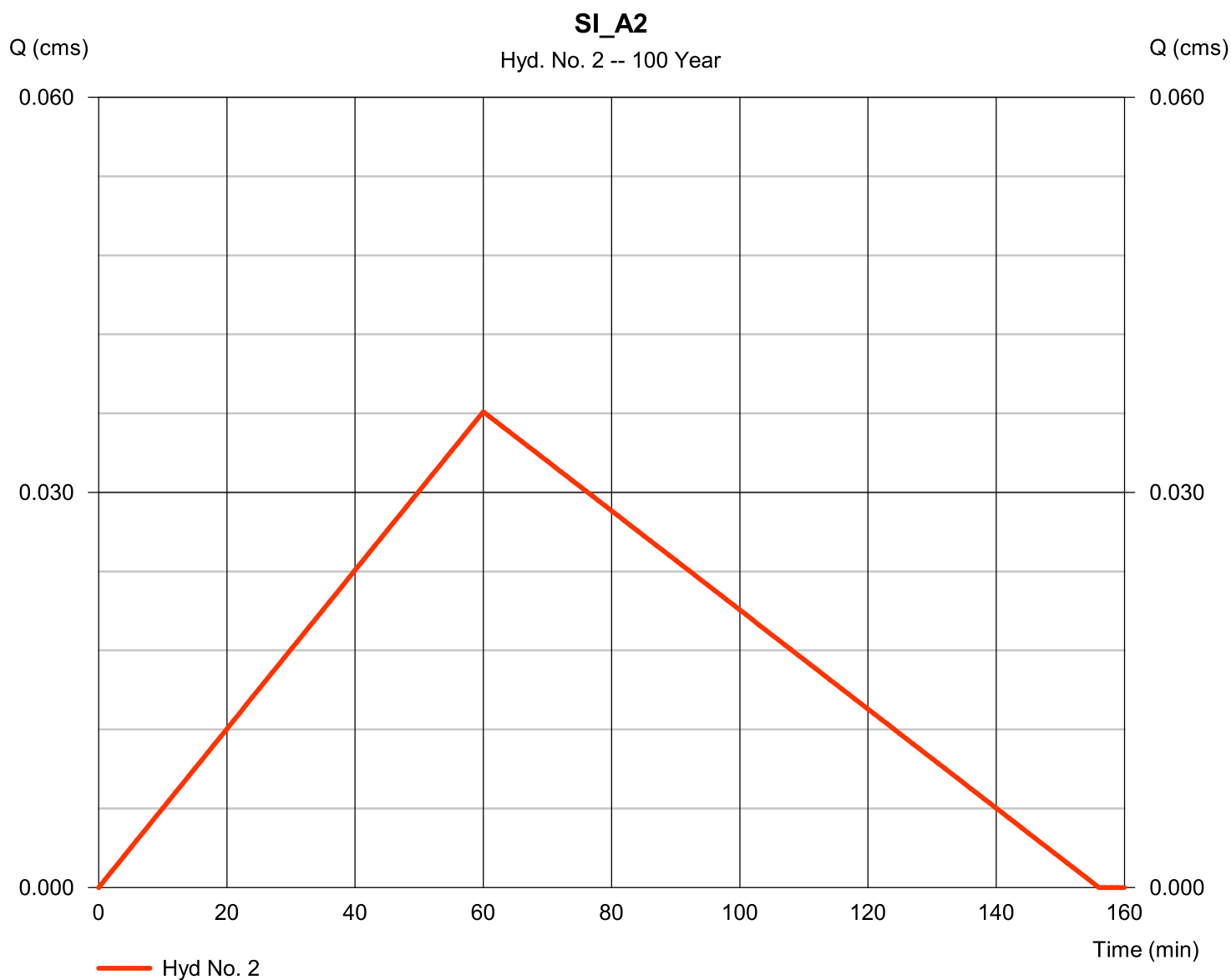
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 2

SI_A2

Hydrograph type	= Rational	Peak discharge	= 0.036 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 169.1 cum
Drainage area	= 2.820 hectare	Runoff coeff.	= 0.15
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

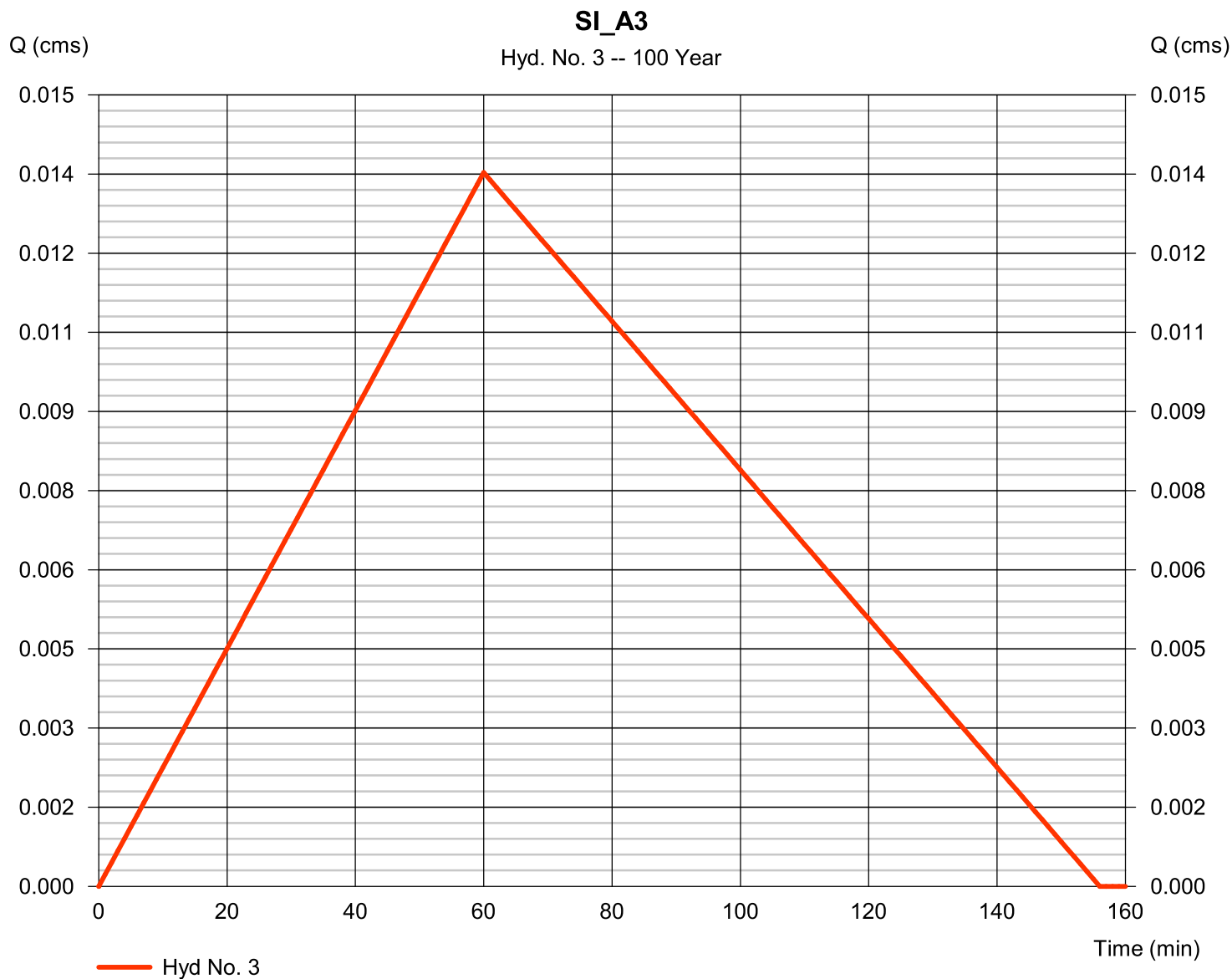
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 3

SI_A3

Hydrograph type	= Rational	Peak discharge	= 0.014 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 63.3 cum
Drainage area	= 0.990 hectare	Runoff coeff.	= 0.16
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

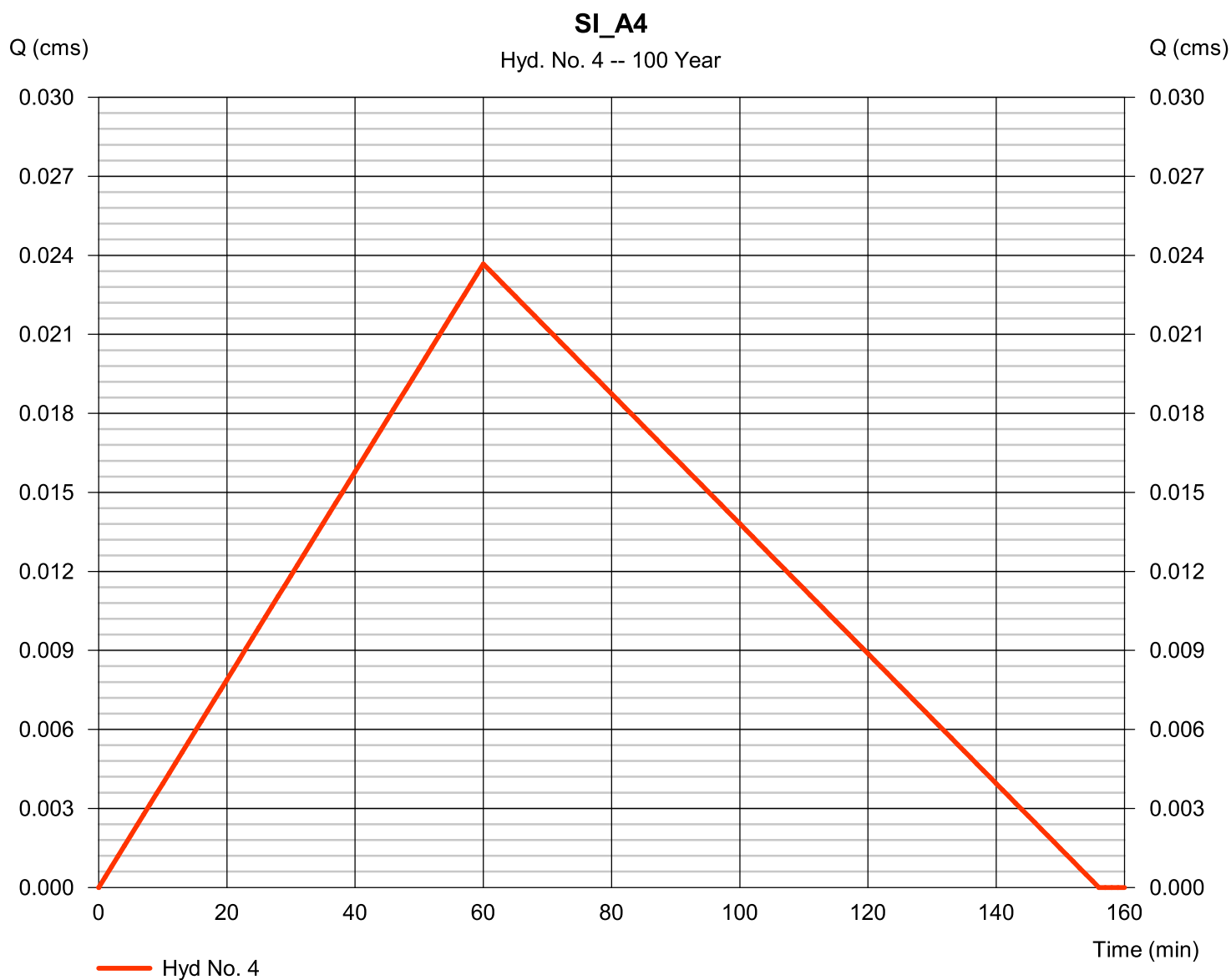
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 4

SI_A4

Hydrograph type	= Rational	Peak discharge	= 0.024 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 110.8 cum
Drainage area	= 1.260 hectare	Runoff coeff.	= 0.22
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

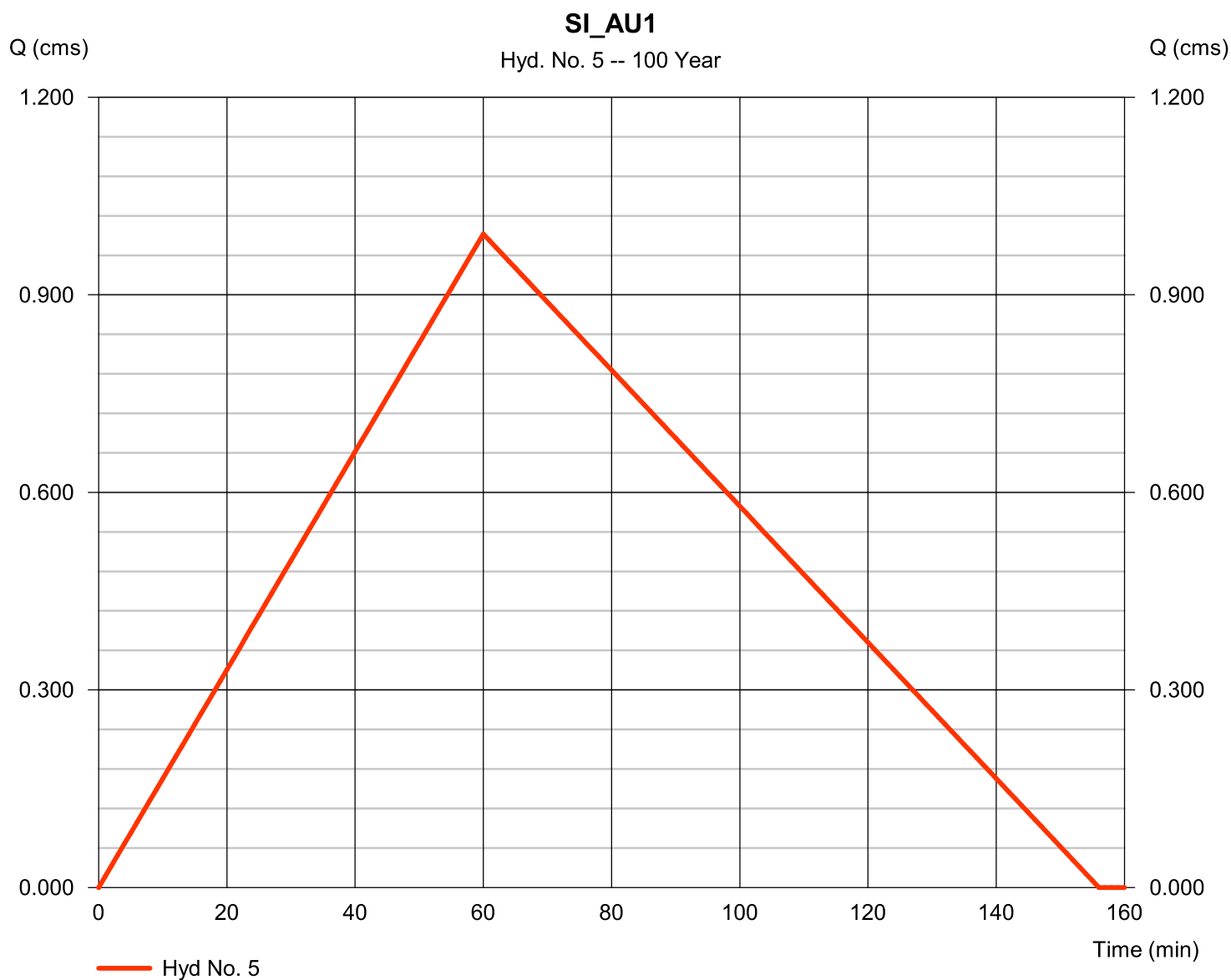
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

SI_AU1

Hydrograph type	= Rational	Peak discharge	= 0.992 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 644.2 cum
Drainage area	= 41.500 hectare	Runoff coeff.	= 0.28
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

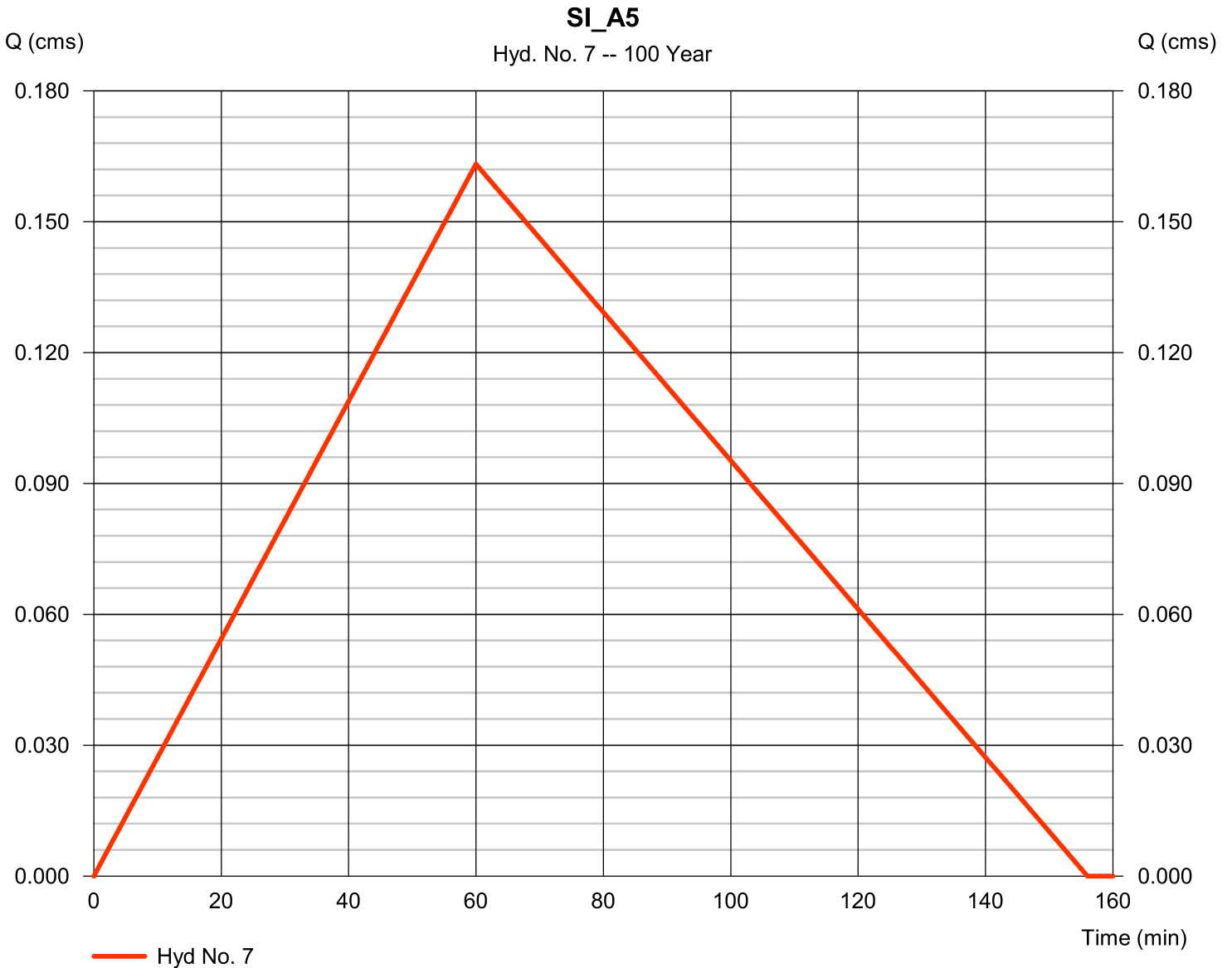
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

SI_A5

Hydrograph type	= Rational	Peak discharge	= 0.163 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 763.9 cum
Drainage area	= 8.310 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

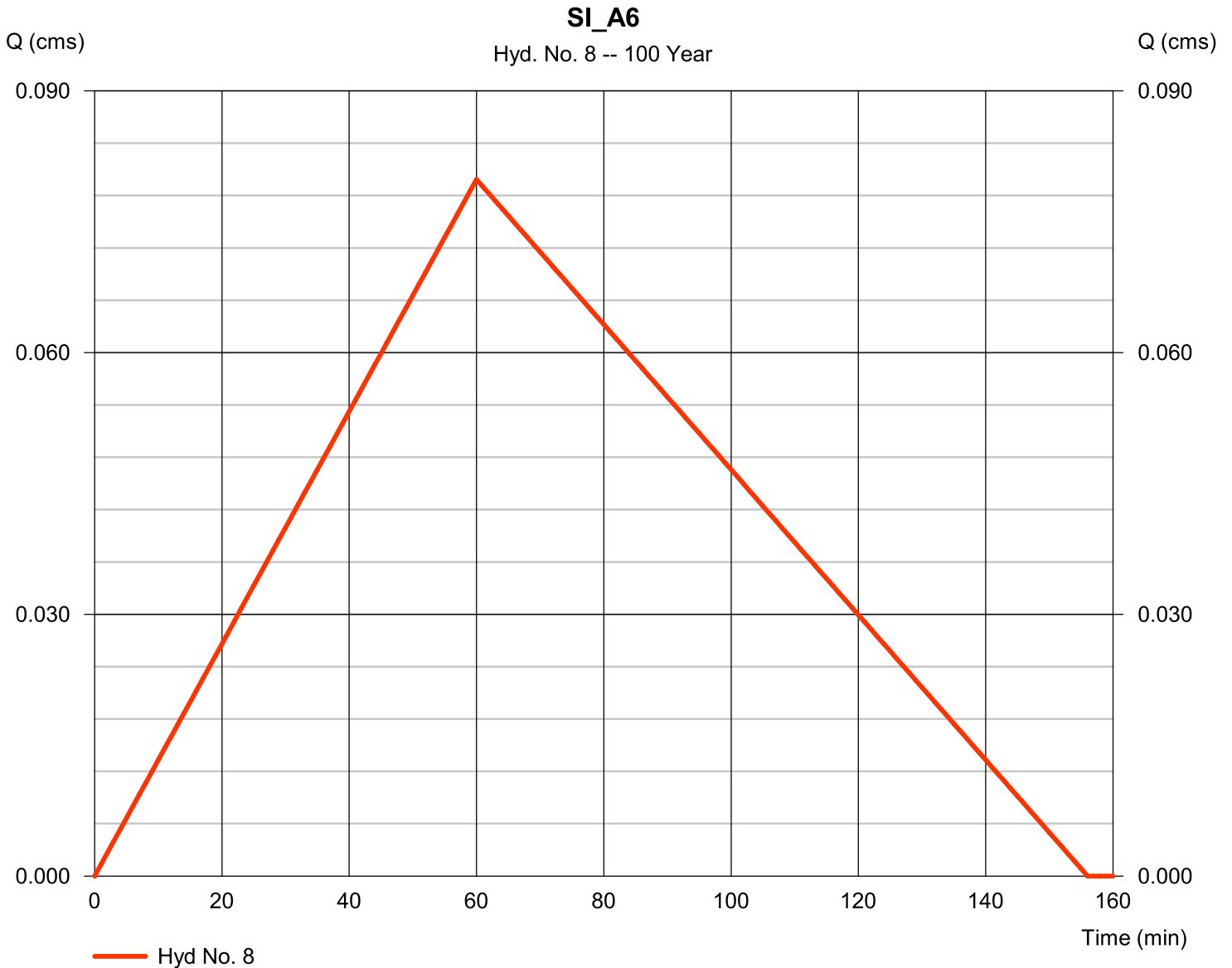
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

SI_A6

Hydrograph type	= Rational	Peak discharge	= 0.080 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 373.7 cum
Drainage area	= 1.870 hectare	Runoff coeff.	= 0.5
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

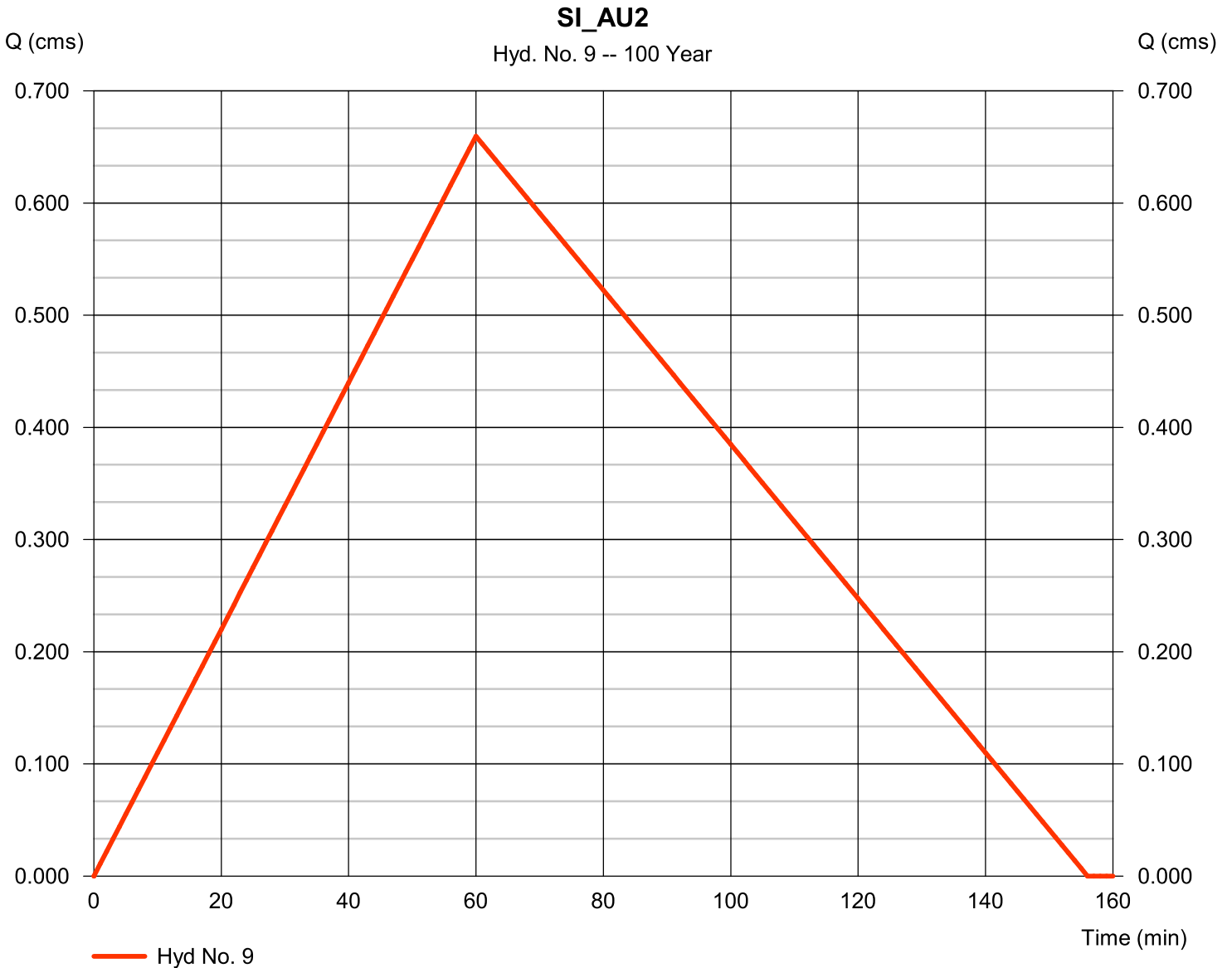
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 9

SI_AU2

Hydrograph type	= Rational	Peak discharge	= 0.660 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 087.3 cum
Drainage area	= 22.070 hectare	Runoff coeff.	= 0.35
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

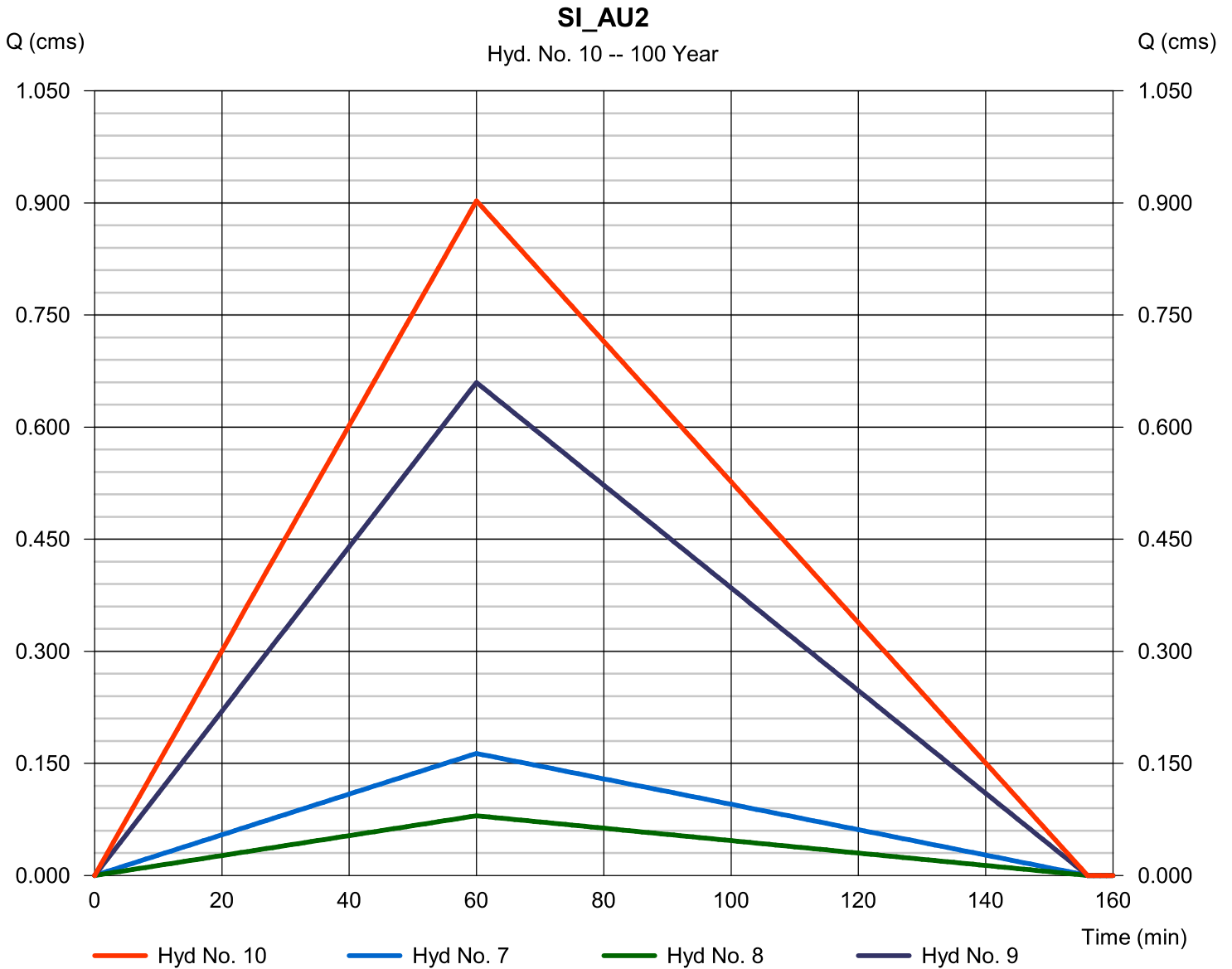
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

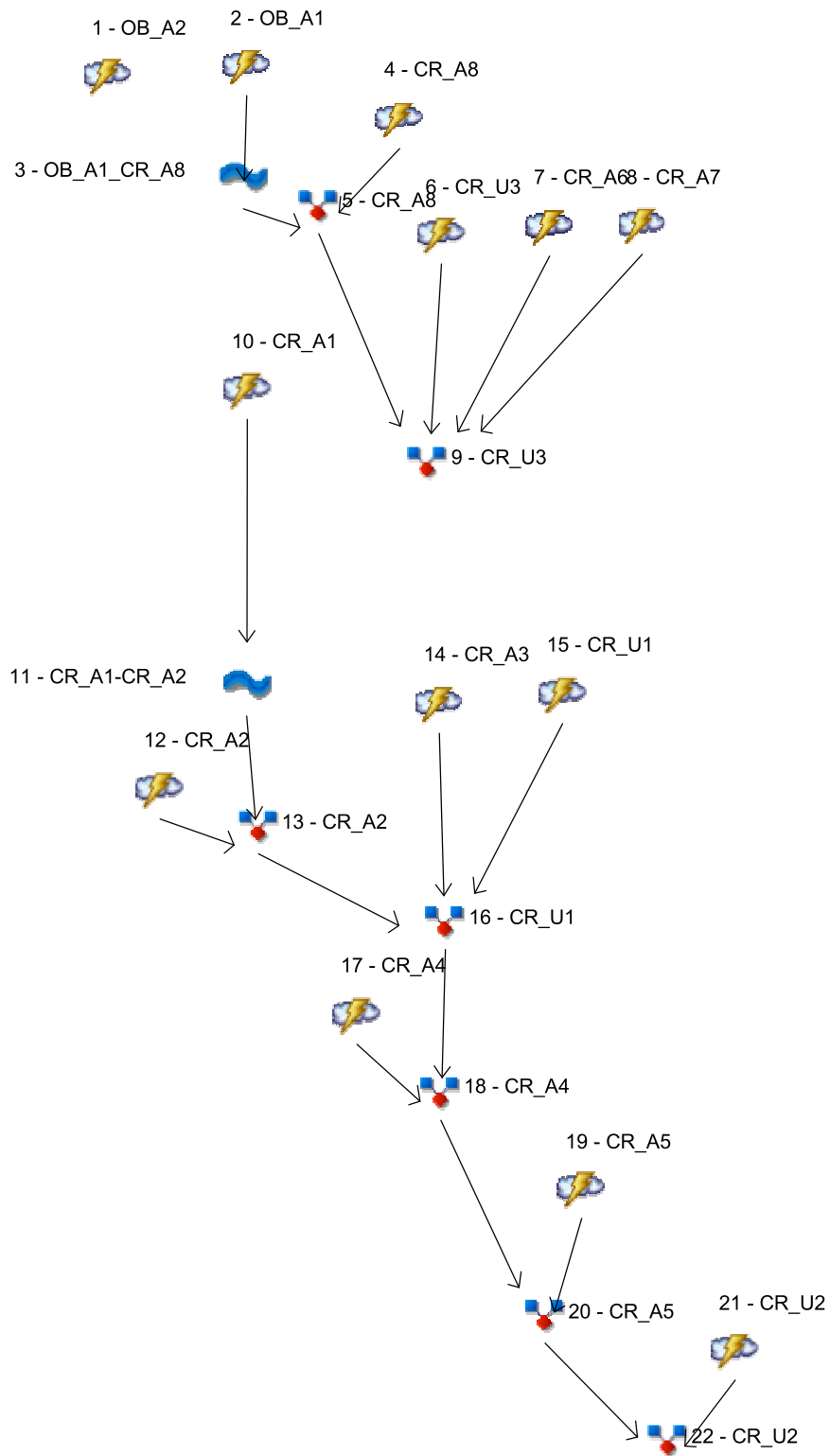
SI_AU2

Hydrograph type	= Combine	Peak discharge	= 0.903 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 224.9 cum
Inflow hyds.	= 7, 8, 9	Contrib. drain. area	= 32.250 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	-----	-----	-----	-----	1.410	-----	-----	-----	OB_A2
2	Rational	-----	-----	-----	-----	-----	2.524	-----	-----	-----	OB_A1
3	Reach	2	-----	-----	-----	-----	2.191	-----	-----	-----	OB_A1_CR_A8
4	Rational	-----	-----	-----	-----	-----	3.208	-----	-----	-----	CR_A8
5	Combine	3, 4	-----	-----	-----	-----	5.167	-----	-----	-----	CR_A8
6	Rational	-----	-----	-----	-----	-----	0.031	-----	-----	-----	CR_U3
7	Rational	-----	-----	-----	-----	-----	0.041	-----	-----	-----	CR_A6
8	Rational	-----	-----	-----	-----	-----	0.012	-----	-----	-----	CR_A7
9	Combine	5, 6, 7, 8	-----	-----	-----	-----	5.250	-----	-----	-----	CR_U3
10	Rational	-----	-----	-----	-----	-----	0.163	-----	-----	-----	CR_A1
11	Reach	10	-----	-----	-----	-----	0.157	-----	-----	-----	CR_A1-CR_A2
12	Rational	-----	-----	-----	-----	-----	0.137	-----	-----	-----	CR_A2
13	Combine	11, 12	-----	-----	-----	-----	0.290	-----	-----	-----	CR_A2
14	Rational	-----	-----	-----	-----	-----	0.086	-----	-----	-----	CR_A3
15	Rational	-----	-----	-----	-----	-----	0.035	-----	-----	-----	CR_U1
16	Combine	13, 14, 15	-----	-----	-----	-----	0.410	-----	-----	-----	CR_U1
17	Rational	-----	-----	-----	-----	-----	0.103	-----	-----	-----	CR_A4
18	Combine	16, 17	-----	-----	-----	-----	0.513	-----	-----	-----	CR_A4
19	Rational	-----	-----	-----	-----	-----	0.040	-----	-----	-----	CR_A5
20	Combine	18, 19	-----	-----	-----	-----	0.553	-----	-----	-----	CR_A5
21	Rational	-----	-----	-----	-----	-----	0.307	-----	-----	-----	CR_U2
22	Combine	20, 21	-----	-----	-----	-----	0.860	-----	-----	-----	CR_U2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

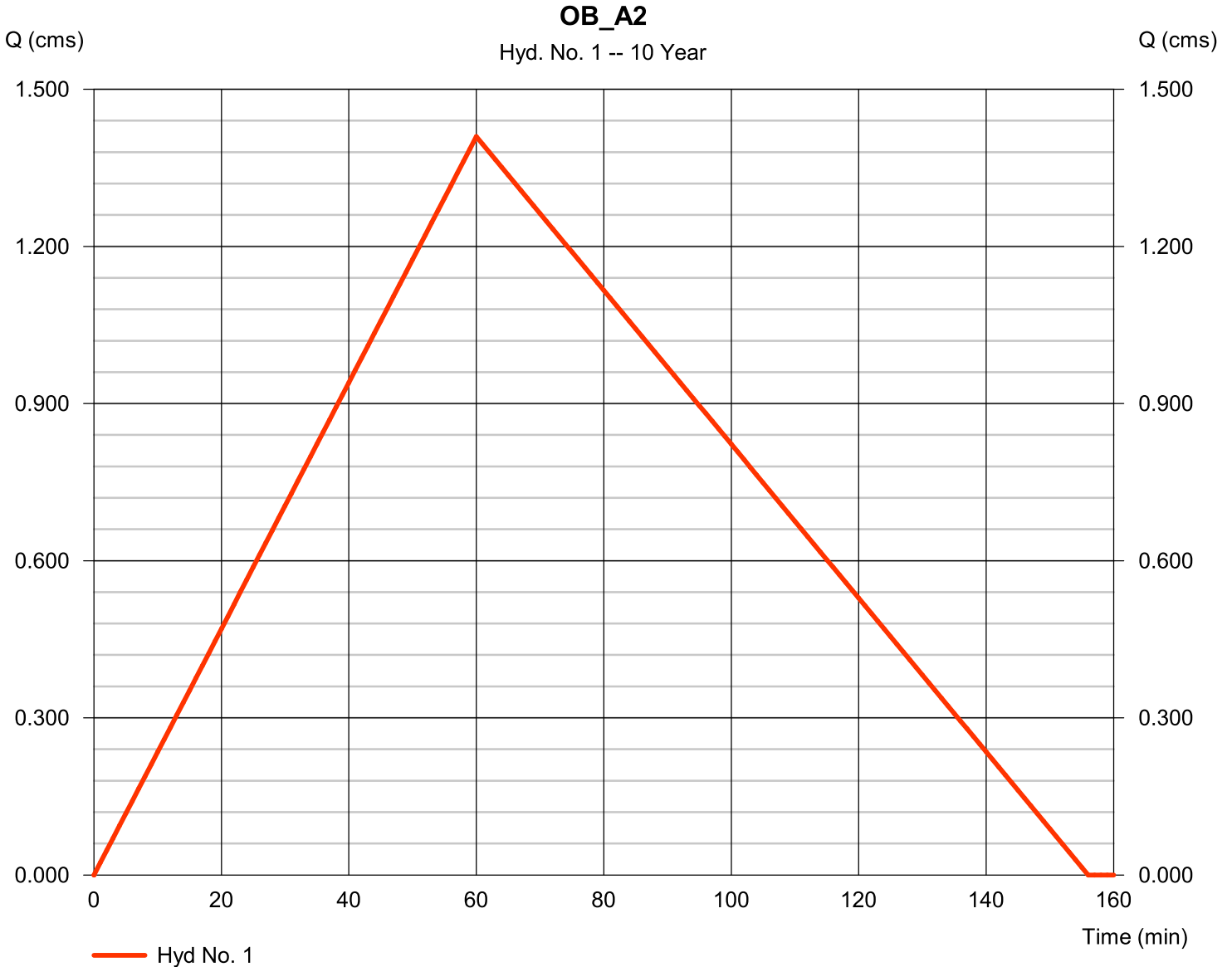
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	1.410	1	60	6 597.3	-----	-----	-----	OB_A2
2	Rational	2.524	1	60	11 811.5	-----	-----	-----	OB_A1
3	Reach	2.191	1	73	11 846.3	2	-----	-----	OB_A1_CR_A8
4	Rational	3.208	1	60	15 015.0	-----	-----	-----	CR_A8
5	Combine	5.167	1	62	26 861.3	3, 4	-----	-----	CR_A8
6	Rational	0.031	1	60	147.2	-----	-----	-----	CR_U3
7	Rational	0.041	1	60	190.1	-----	-----	-----	CR_A6
8	Rational	0.012	1	60	57.5	-----	-----	-----	CR_A7
9	Combine	5.250	1	62	27 256.1	5, 6, 7, 8	-----	-----	CR_U3
10	Rational	0.163	1	60	761.7	-----	-----	-----	CR_A1
11	Reach	0.157	1	64	762.4	10	-----	-----	CR_A1-CR_A2
12	Rational	0.137	1	60	641.6	-----	-----	-----	CR_A2
13	Combine	0.290	1	62	1 403.9	11, 12	-----	-----	CR_A2
14	Rational	0.086	1	60	404.6	-----	-----	-----	CR_A3
15	Rational	0.035	1	60	165.4	-----	-----	-----	CR_U1
16	Combine	0.410	1	61	1 973.9	13, 14, 15	-----	-----	CR_U1
17	Rational	0.103	1	60	482.5	-----	-----	-----	CR_A4
18	Combine	0.513	1	60	2 456.5	16, 17	-----	-----	CR_A4
19	Rational	0.040	1	60	188.4	-----	-----	-----	CR_A5
20	Combine	0.553	1	60	2 644.9	18, 19	-----	-----	CR_A5
21	Rational	0.307	1	60	1 436.8	-----	-----	-----	CR_U2
22	Combine	0.860	1	60	4 081.7	20, 21	-----	-----	CR_U2

Hydrograph Report

Hyd. No. 1

OB_A2

Hydrograph type	= Rational	Peak discharge	= 1.410 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 597.3 cum
Drainage area	= 110.760 hectare	Runoff coeff.	= 0.22
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

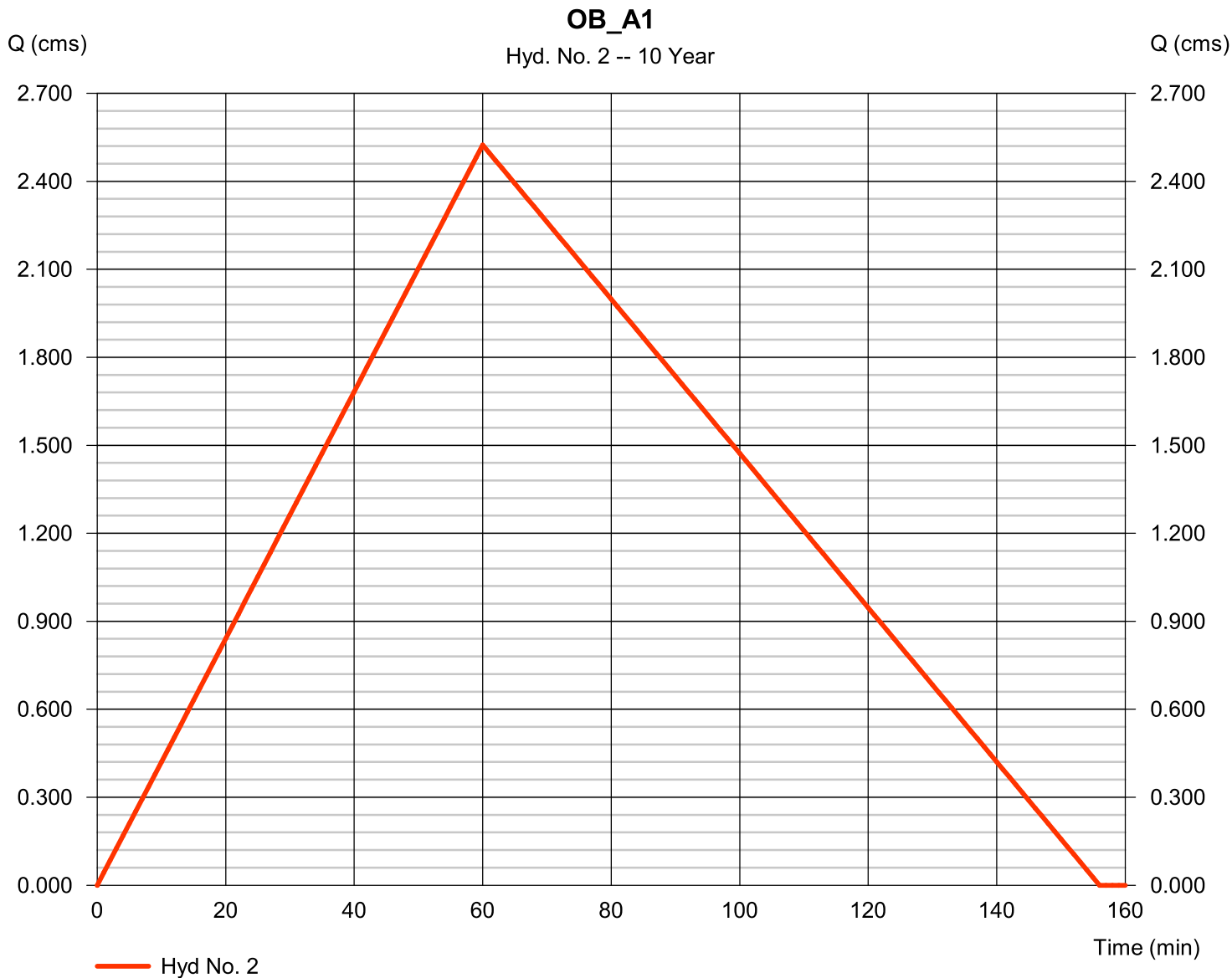
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 2

OB_A1

Hydrograph type	= Rational	Peak discharge	= 2.524 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 11 811.5 cum
Drainage area	= 290.840 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

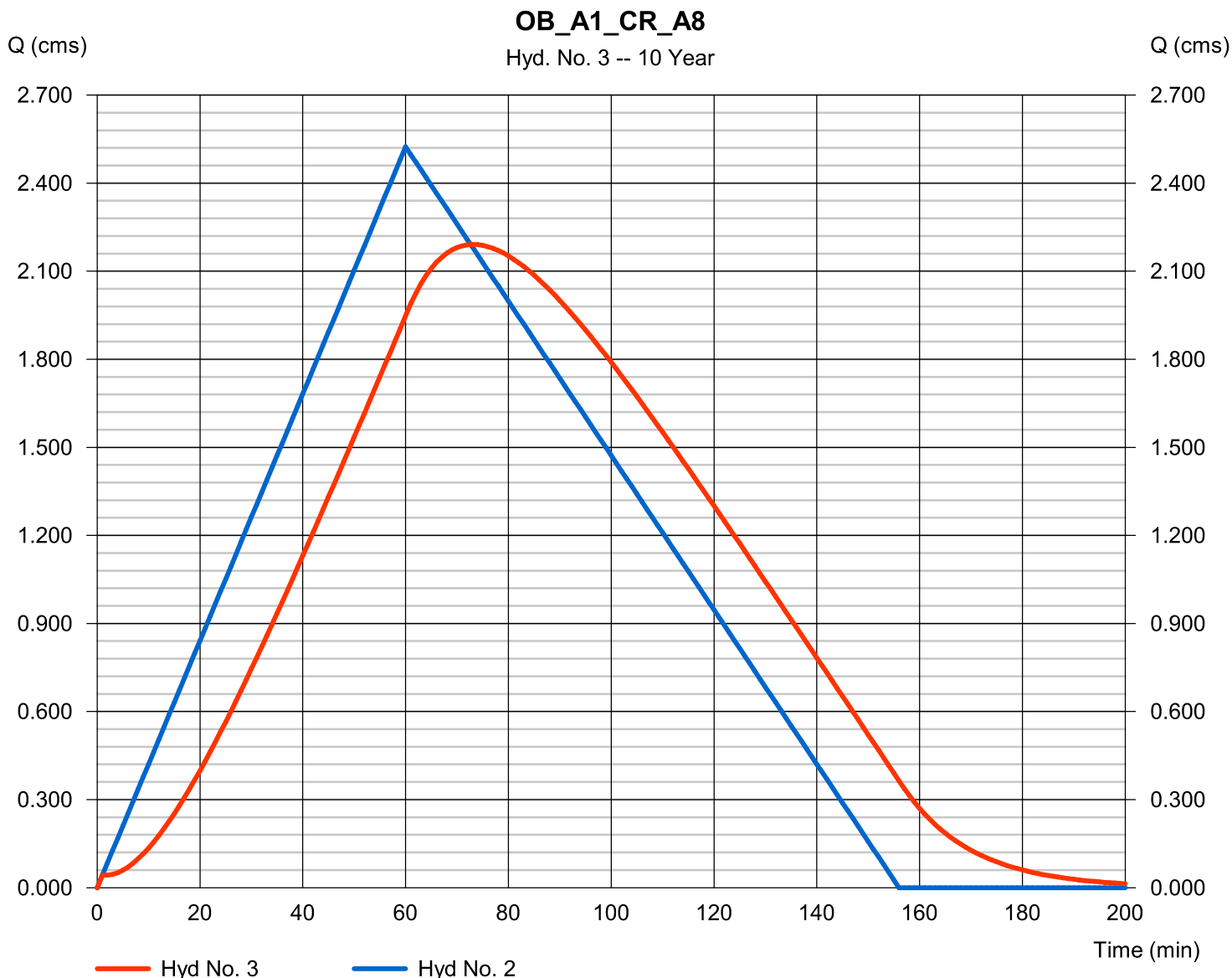
jeudi, avr 5, 2012

Hyd. No. 3

OB_A1_CR_A8

Hydrograph type	= Reach	Peak discharge	= 2.191 cms
Storm frequency	= 10 yrs	Time to peak	= 73 min
Time interval	= 1 min	Hyd. volume	= 11 846.3 cum
Inflow hyd. No.	= 2 - OB_A1	Section type	= Trapezoidal
Reach length	= 1840.0 m	Channel slope	= 0.6 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.090	Rating curve m	= 1.353
Ave. velocity	= 1.70 m/s	Routing coeff.	= 0.0721

Modified Att-Kin routing method used.



Hydrograph Report

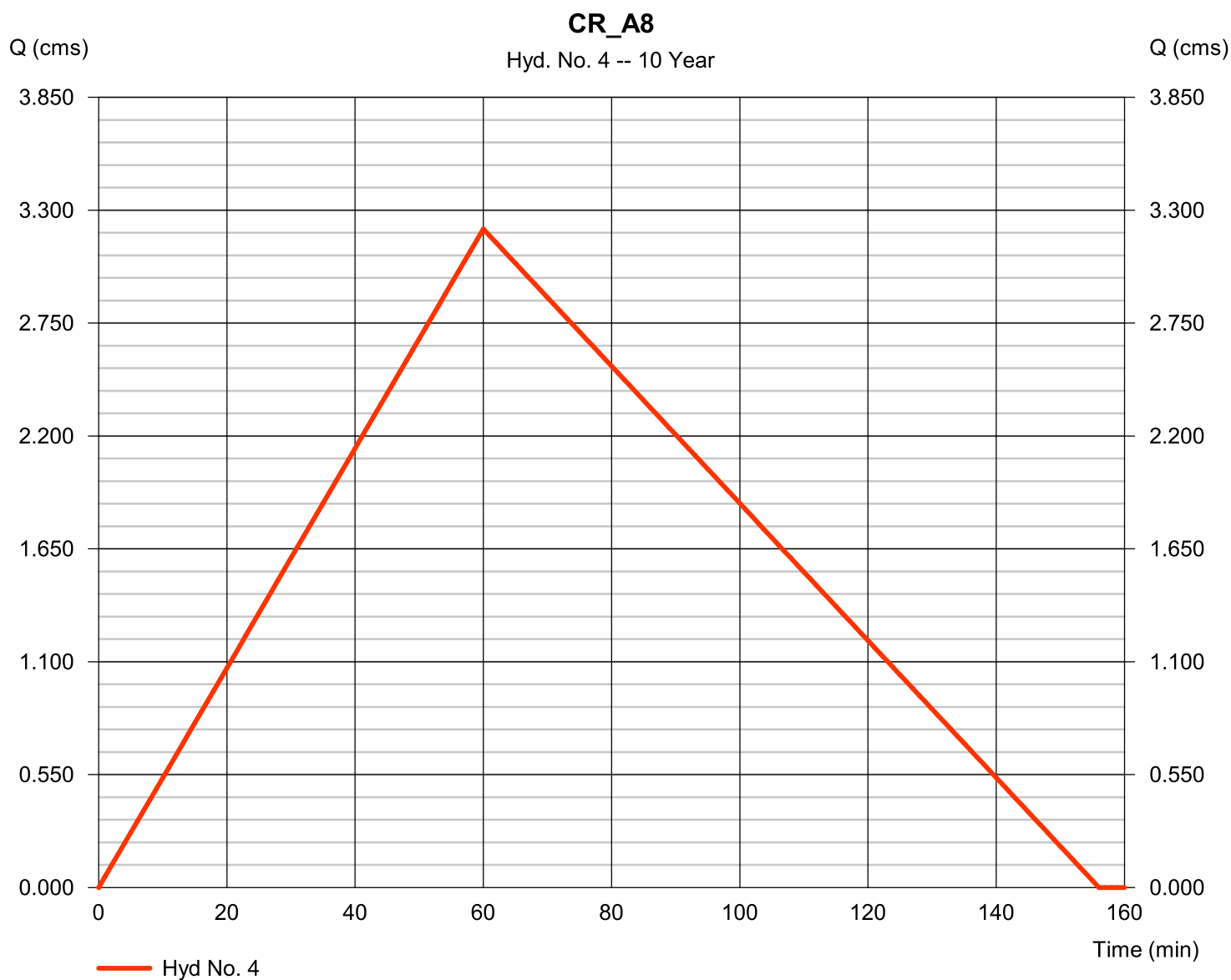
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 4

CR_A8

Hydrograph type	= Rational	Peak discharge	= 3.208 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 15 015.0 cum
Drainage area	= 369.720 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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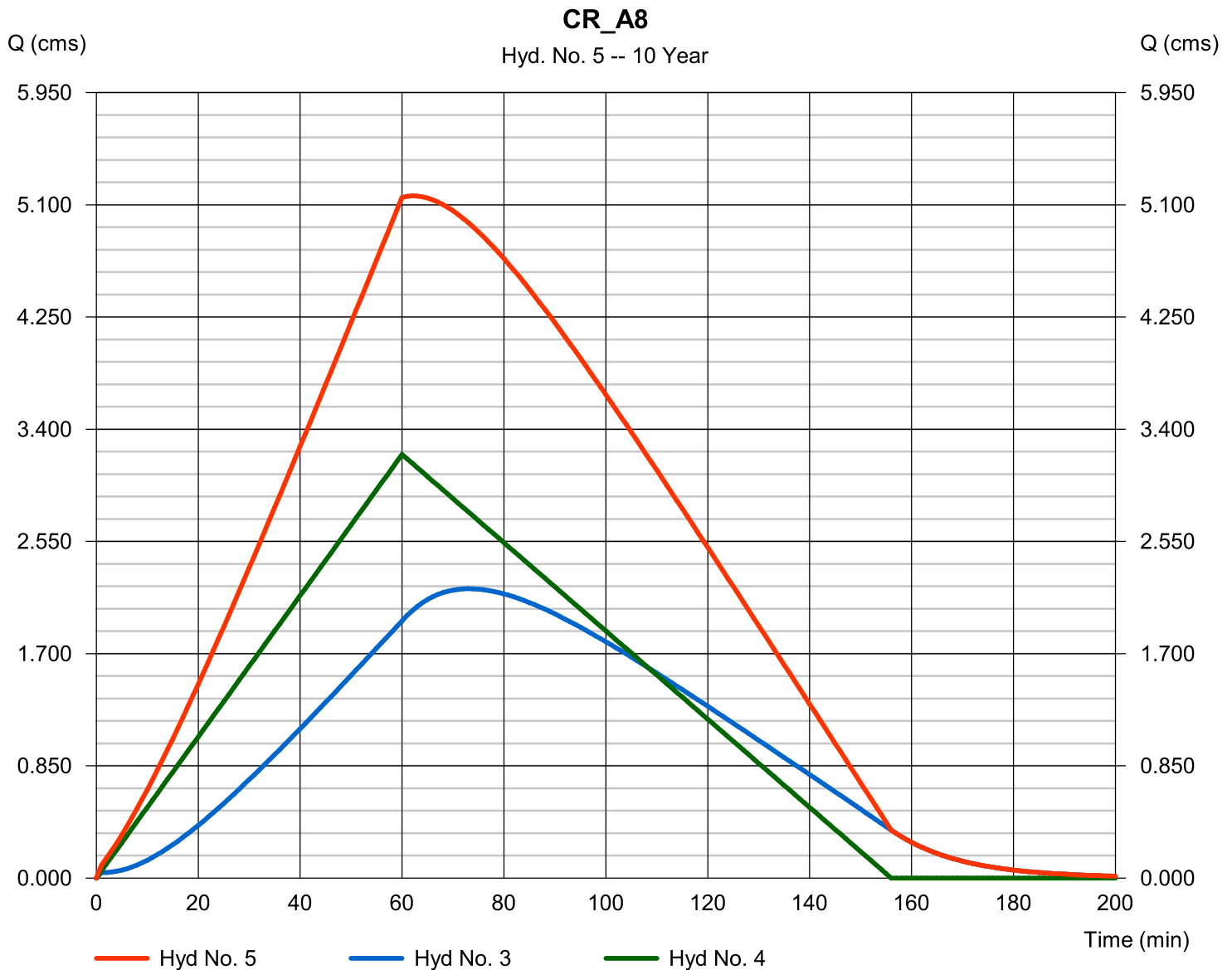
jeudi, avr 5, 2012

Hyd. No. 5

CR_A8

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 3, 4

Peak discharge = 5.167 cms
 Time to peak = 62 min
 Hyd. volume = 26 861.3 cum
 Contrib. drain. area = 369.720 hectare



Hydrograph Report

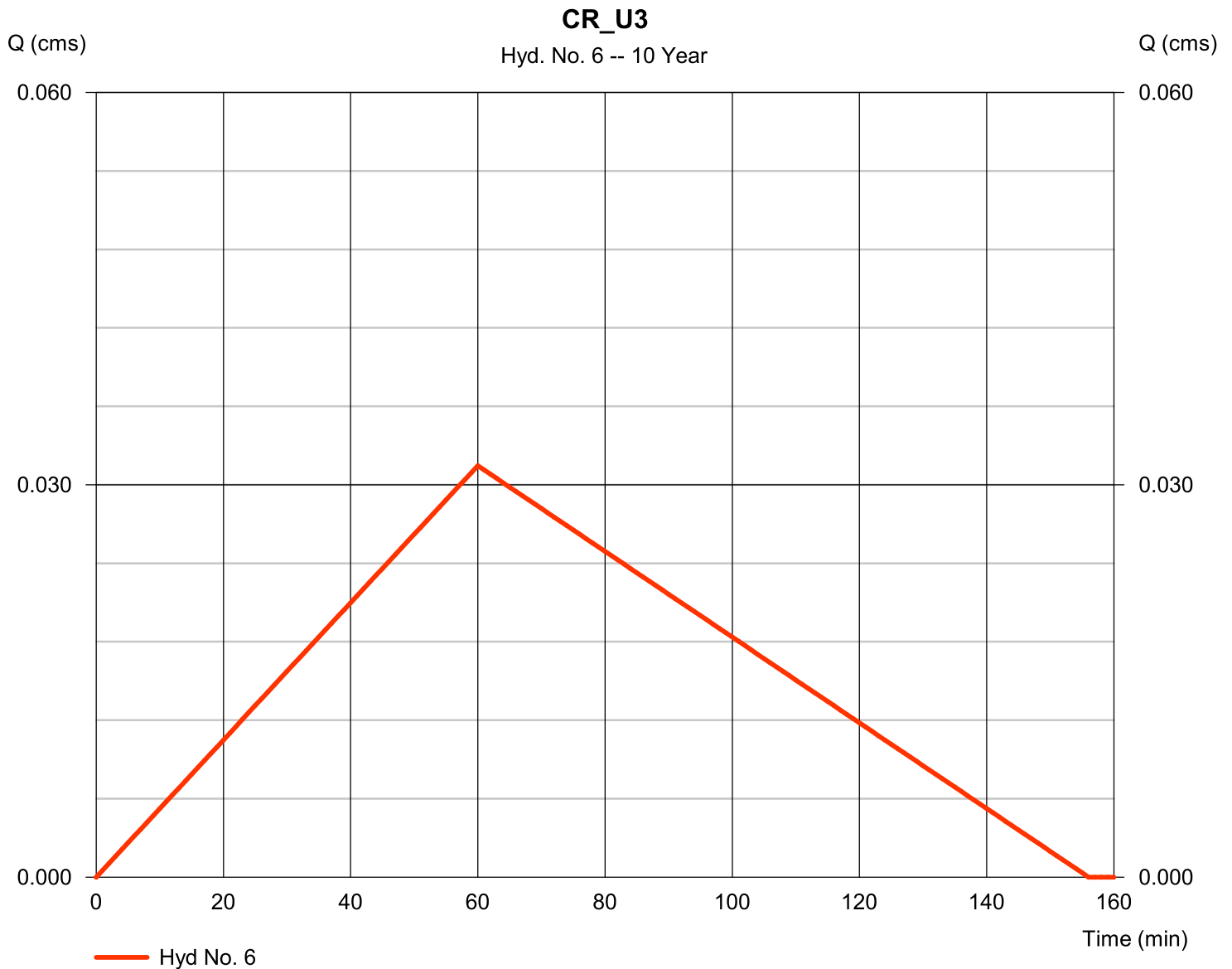
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

CR_U3

Hydrograph type	= Rational	Peak discharge	= 0.031 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 147.2 cum
Drainage area	= 1.026 hectare	Runoff coeff.	= 0.53
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

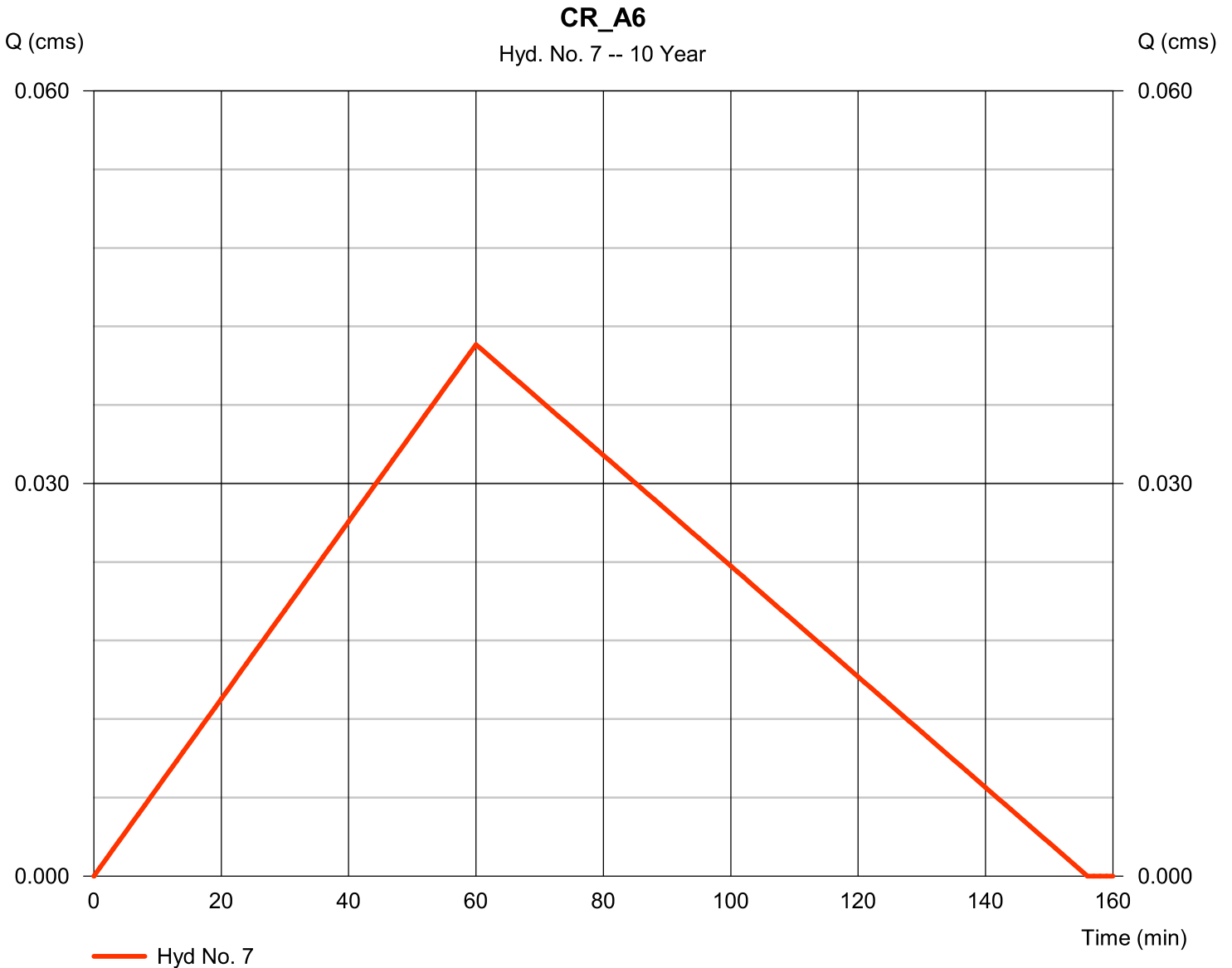
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

CR_A6

Hydrograph type	= Rational	Peak discharge	= 0.041 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 190.1 cum
Drainage area	= 4.130 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

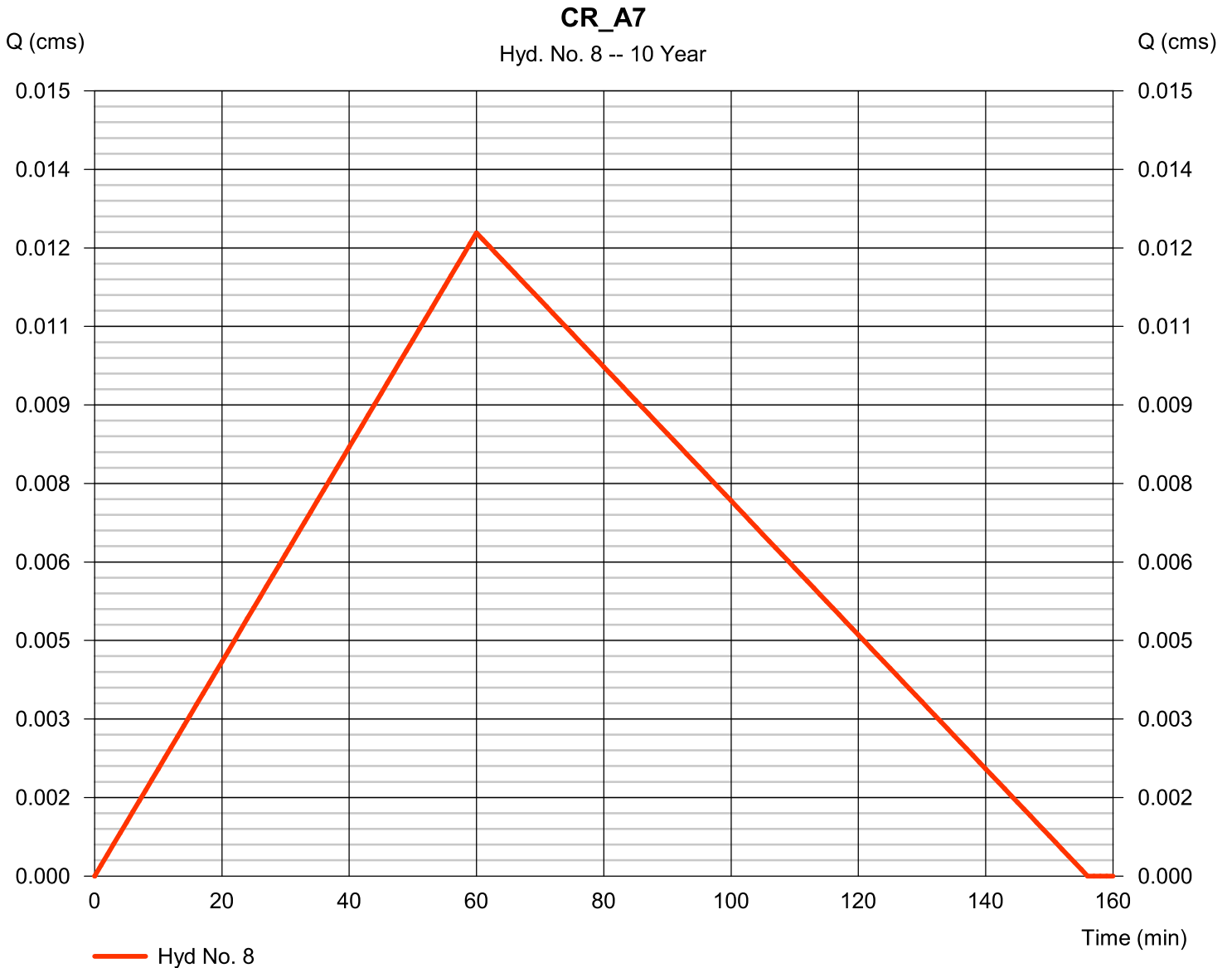
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

CR_A7

Hydrograph type	= Rational	Peak discharge	= 0.012 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 57.5 cum
Drainage area	= 2.360 hectare	Runoff coeff.	= 0.09
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

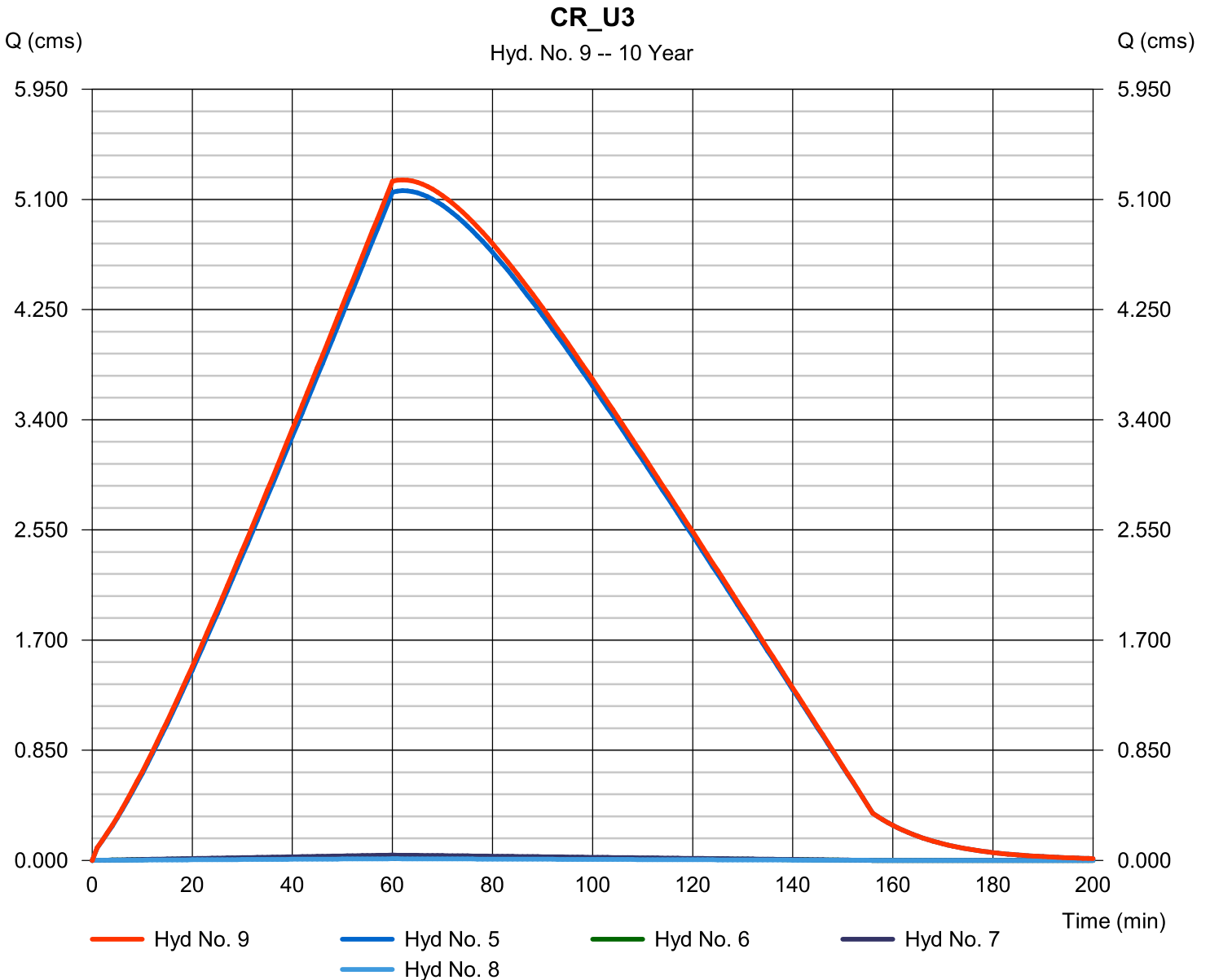
jeudi, avr 5, 2012

Hyd. No. 9

CR_U3

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 6, 7, 8

Peak discharge = 5.250 cms
 Time to peak = 62 min
 Hyd. volume = 27 256.1 cum
 Contrib. drain. area = 7.516 hectare



Hydrograph Report

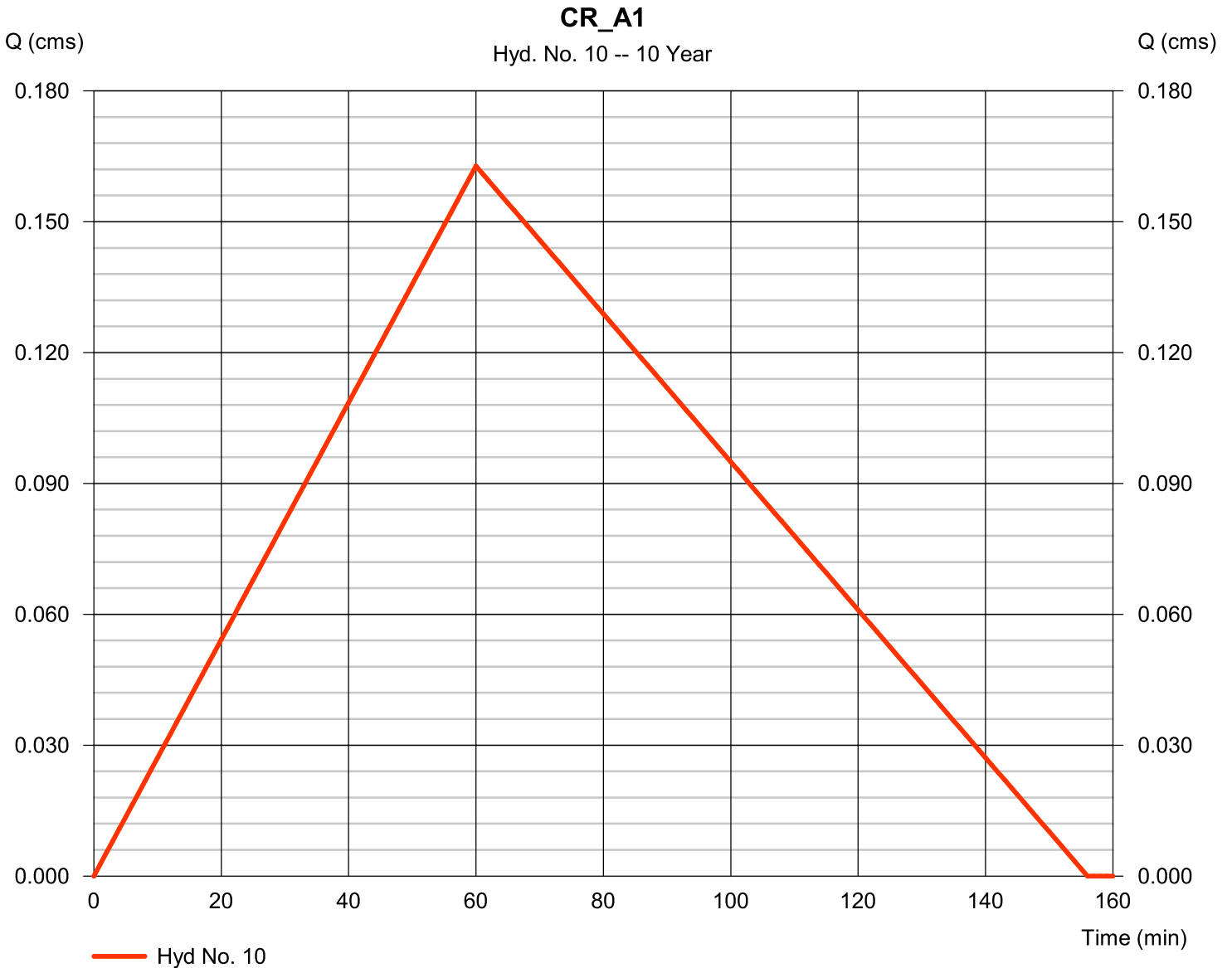
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

CR_A1

Hydrograph type	= Rational	Peak discharge	= 0.163 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 761.7 cum
Drainage area	= 16.550 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

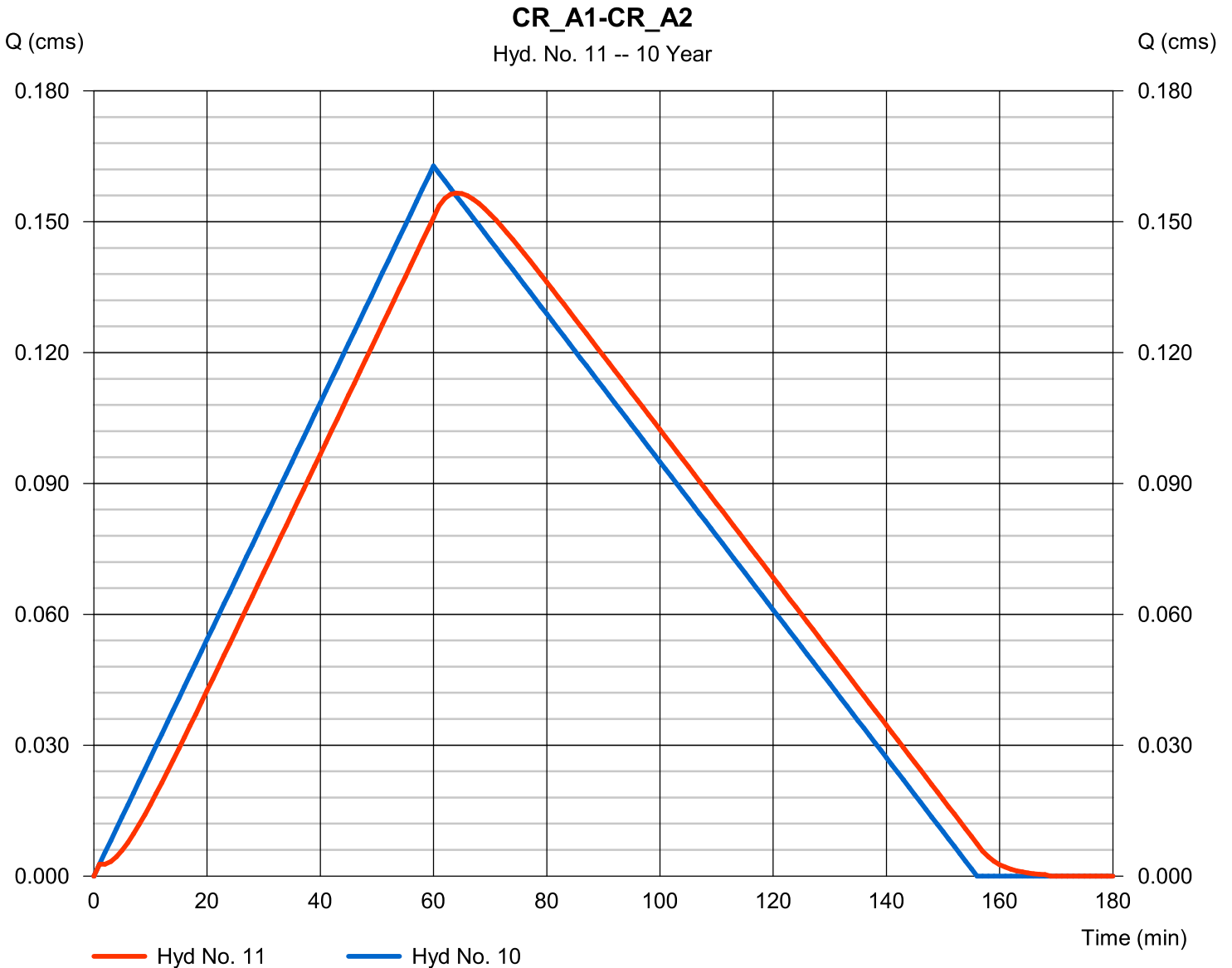
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Hyd. No. 11

CR_A1-CR_A2

Hydrograph type	= Reach	Peak discharge	= 0.157 cms
Storm frequency	= 10 yrs	Time to peak	= 64 min
Time interval	= 1 min	Hyd. volume	= 762.4 cum
Inflow hyd. No.	= 10 - CR_A1	Section type	= Trapezoidal
Reach length	= 460.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 1.47 m/s	Routing coeff.	= 0.2290

Modified Att-Kin routing method used.



Hydrograph Report

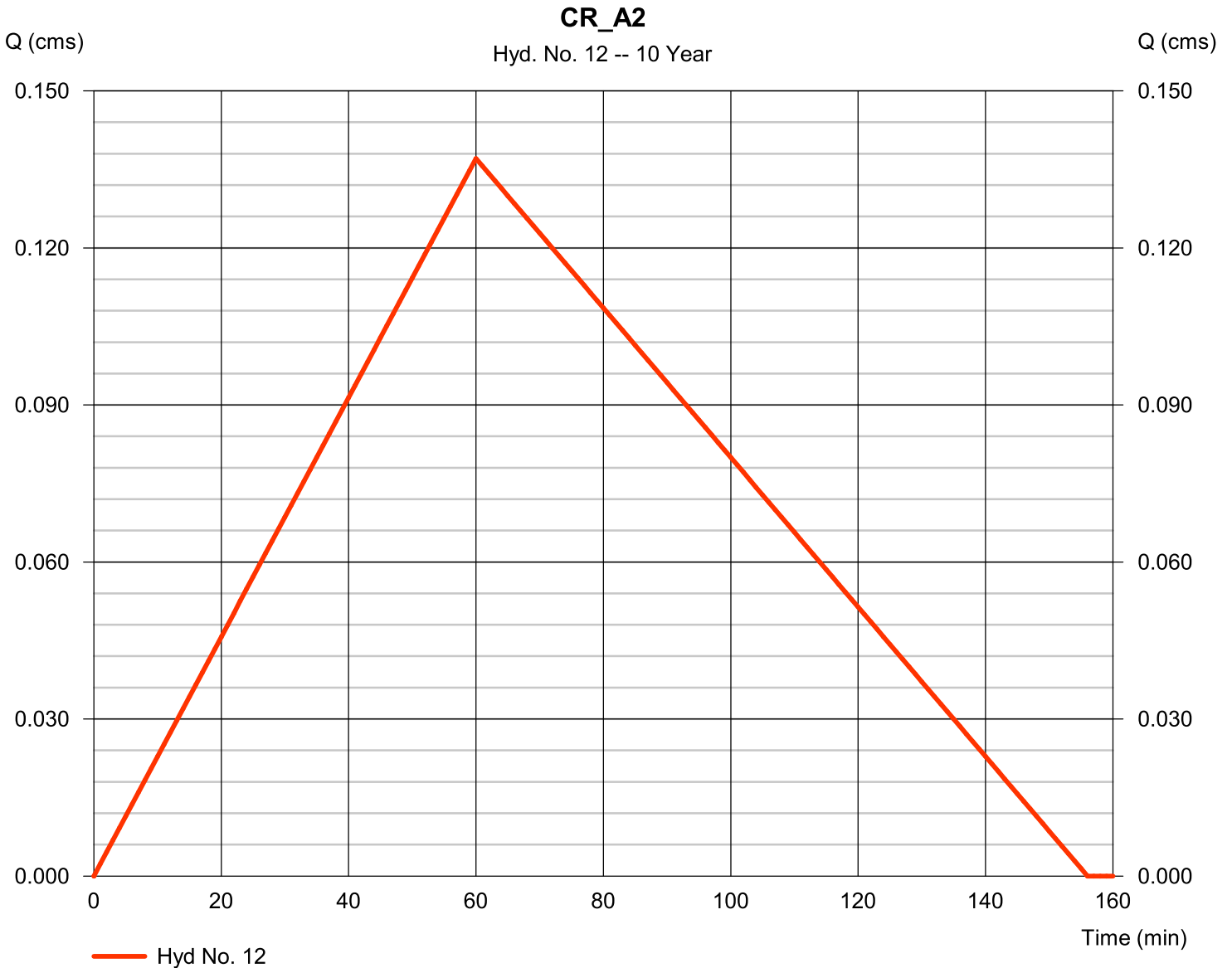
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 12

CR_A2

Hydrograph type	= Rational	Peak discharge	= 0.137 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 641.6 cum
Drainage area	= 14.810 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

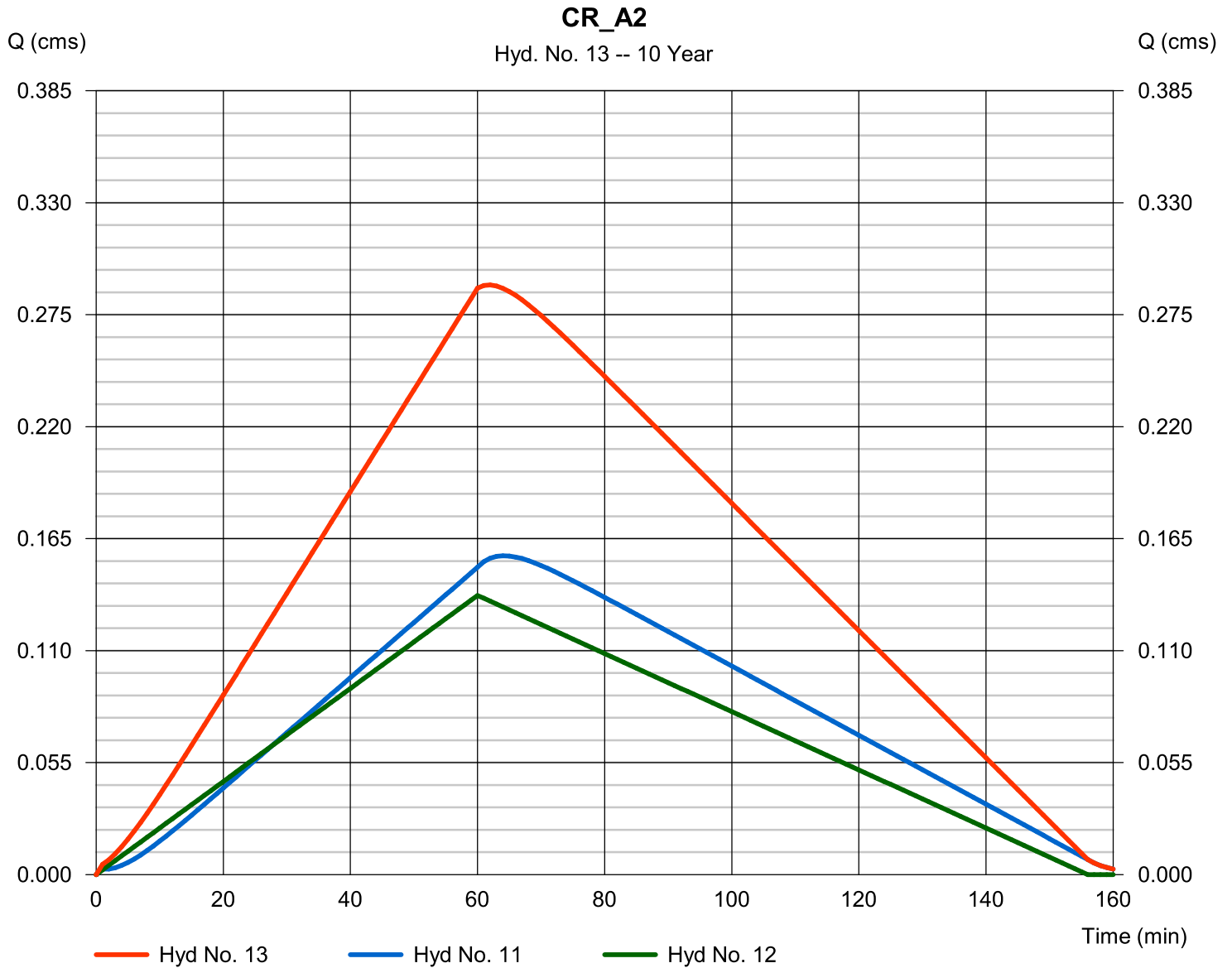
jeudi, avr 5, 2012

Hyd. No. 13

CR_A2

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 11, 12

Peak discharge = 0.290 cms
 Time to peak = 62 min
 Hyd. volume = 1 403.9 cum
 Contrib. drain. area = 14.810 hectare



Hydrograph Report

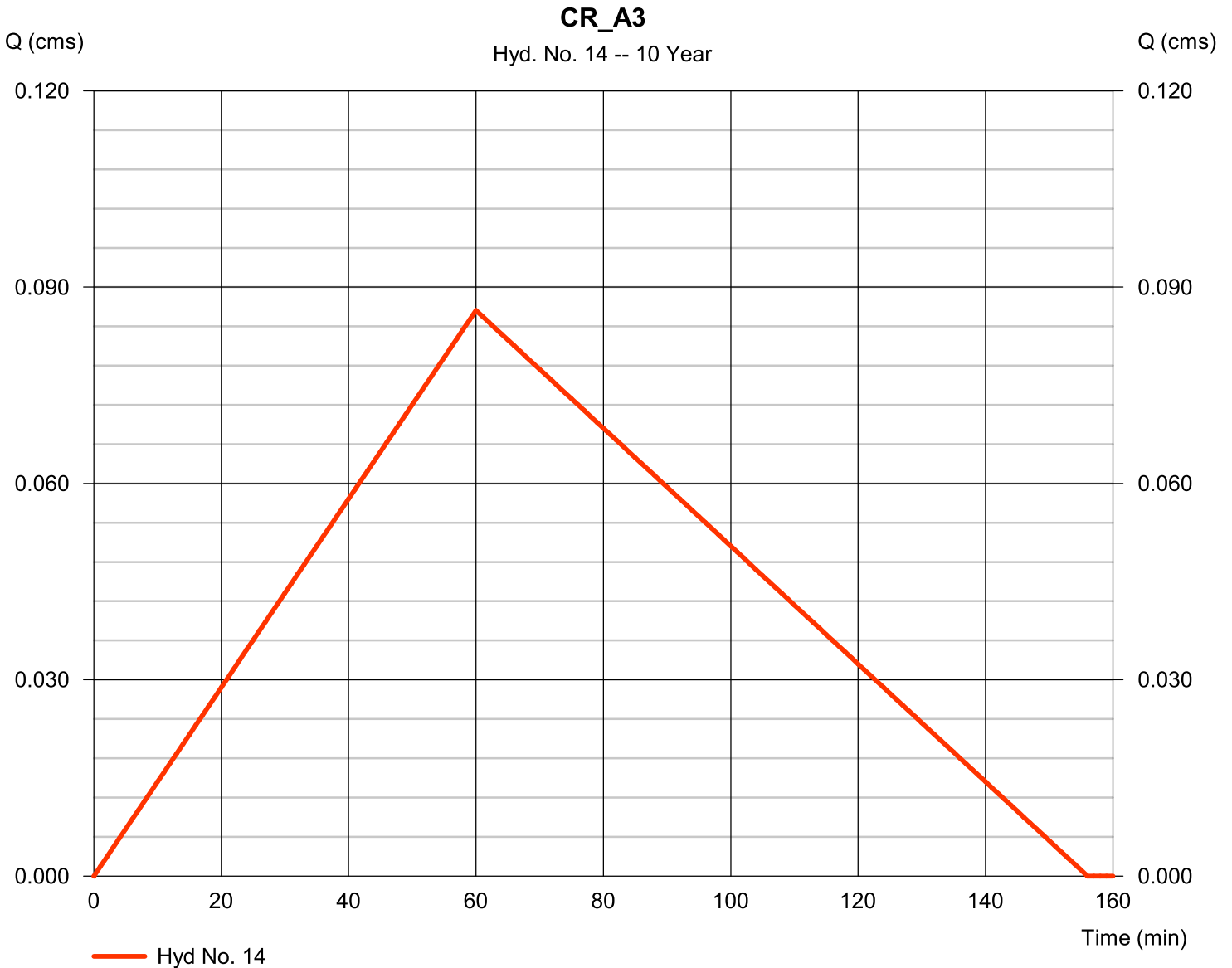
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

CR_A3

Hydrograph type	= Rational	Peak discharge	= 0.086 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 404.6 cum
Drainage area	= 8.790 hectare	Runoff coeff.	= 0.17
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

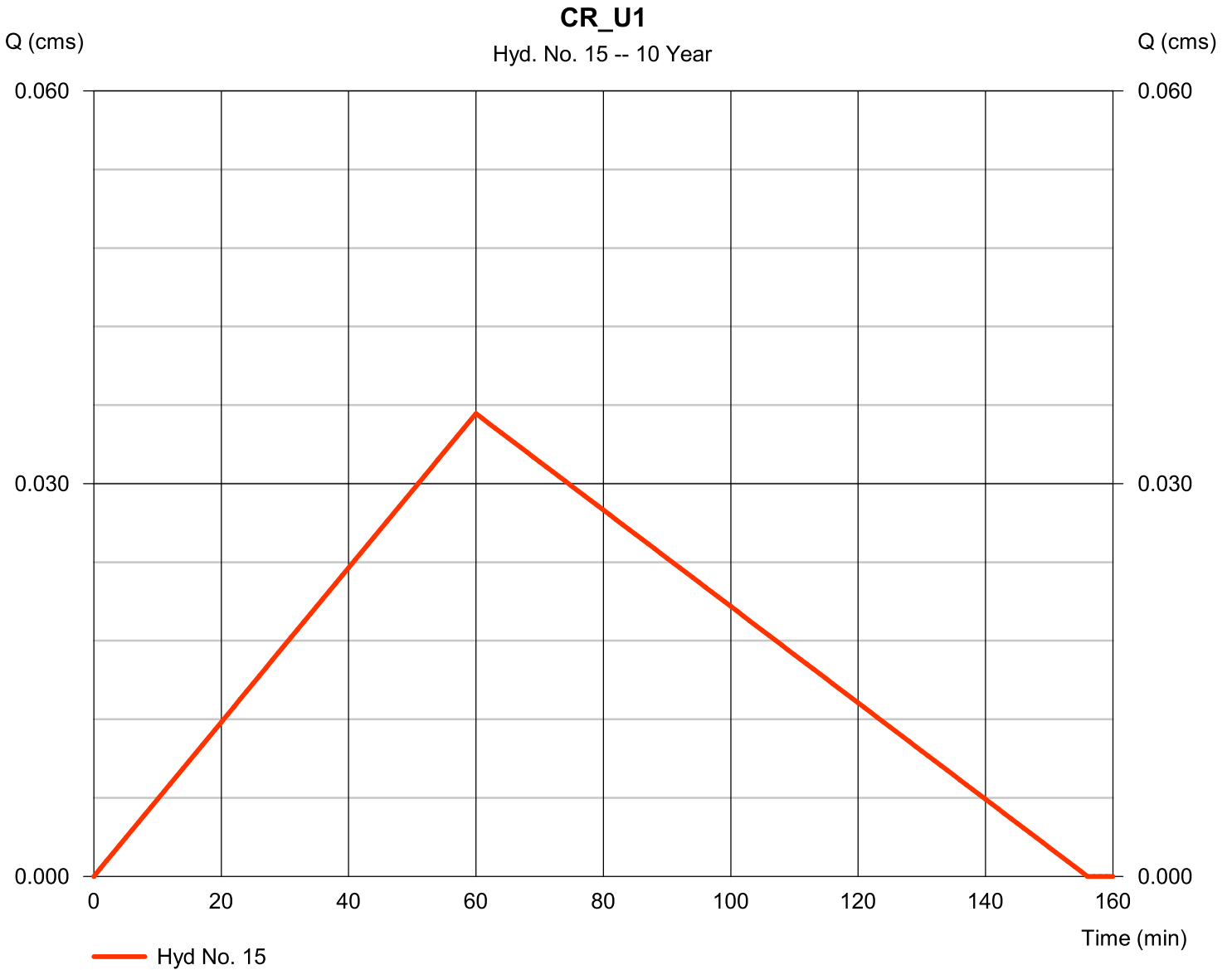
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 15

CR_U1

Hydrograph type	= Rational	Peak discharge	= 0.035 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 165.4 cum
Drainage area	= 2.350 hectare	Runoff coeff.	= 0.26
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

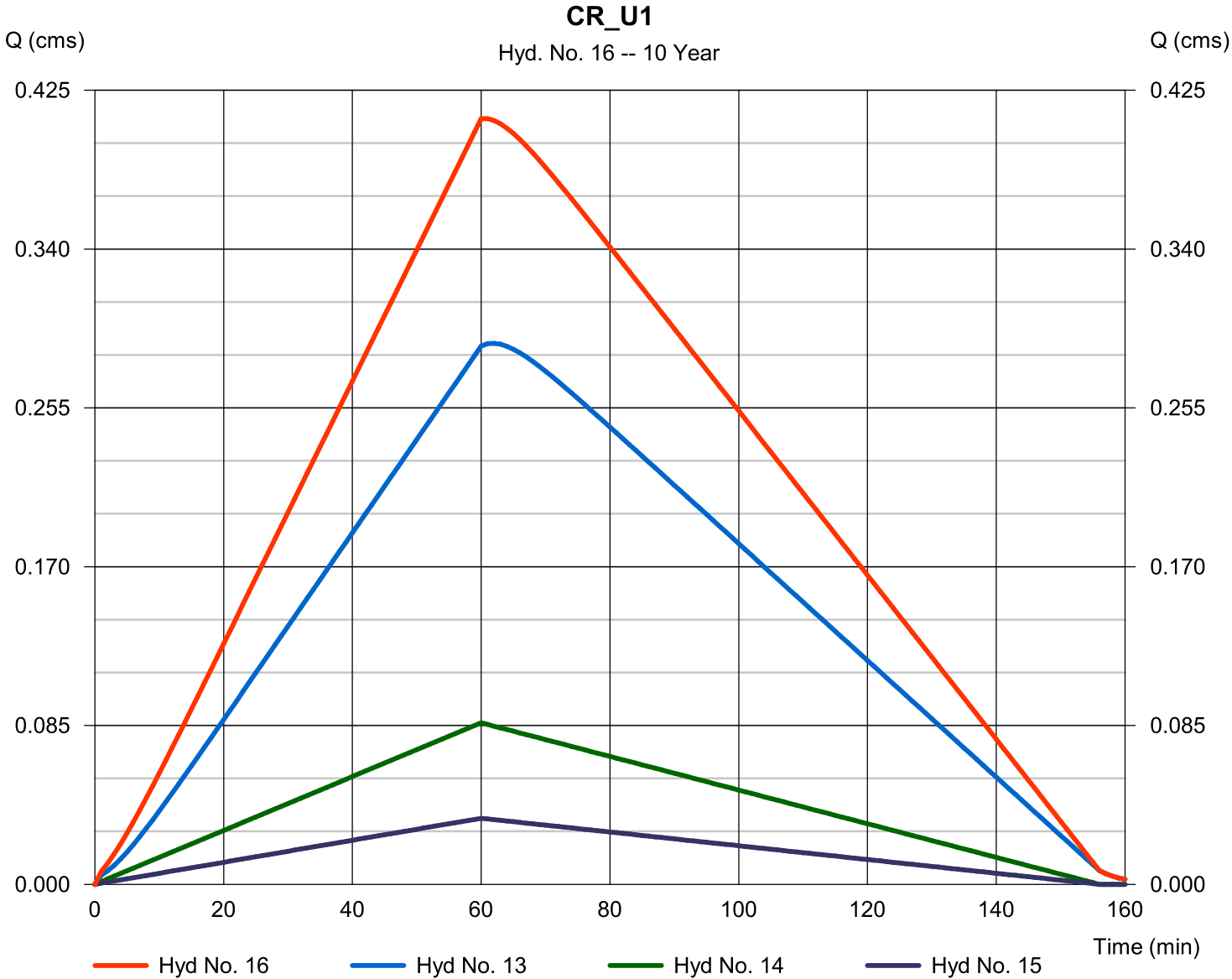
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 16

CR_U1

Hydrograph type	= Combine	Peak discharge	= 0.410 cms
Storm frequency	= 10 yrs	Time to peak	= 61 min
Time interval	= 1 min	Hyd. volume	= 1 973.9 cum
Inflow hyds.	= 13, 14, 15	Contrib. drain. area	= 11.140 hectare



Hydrograph Report

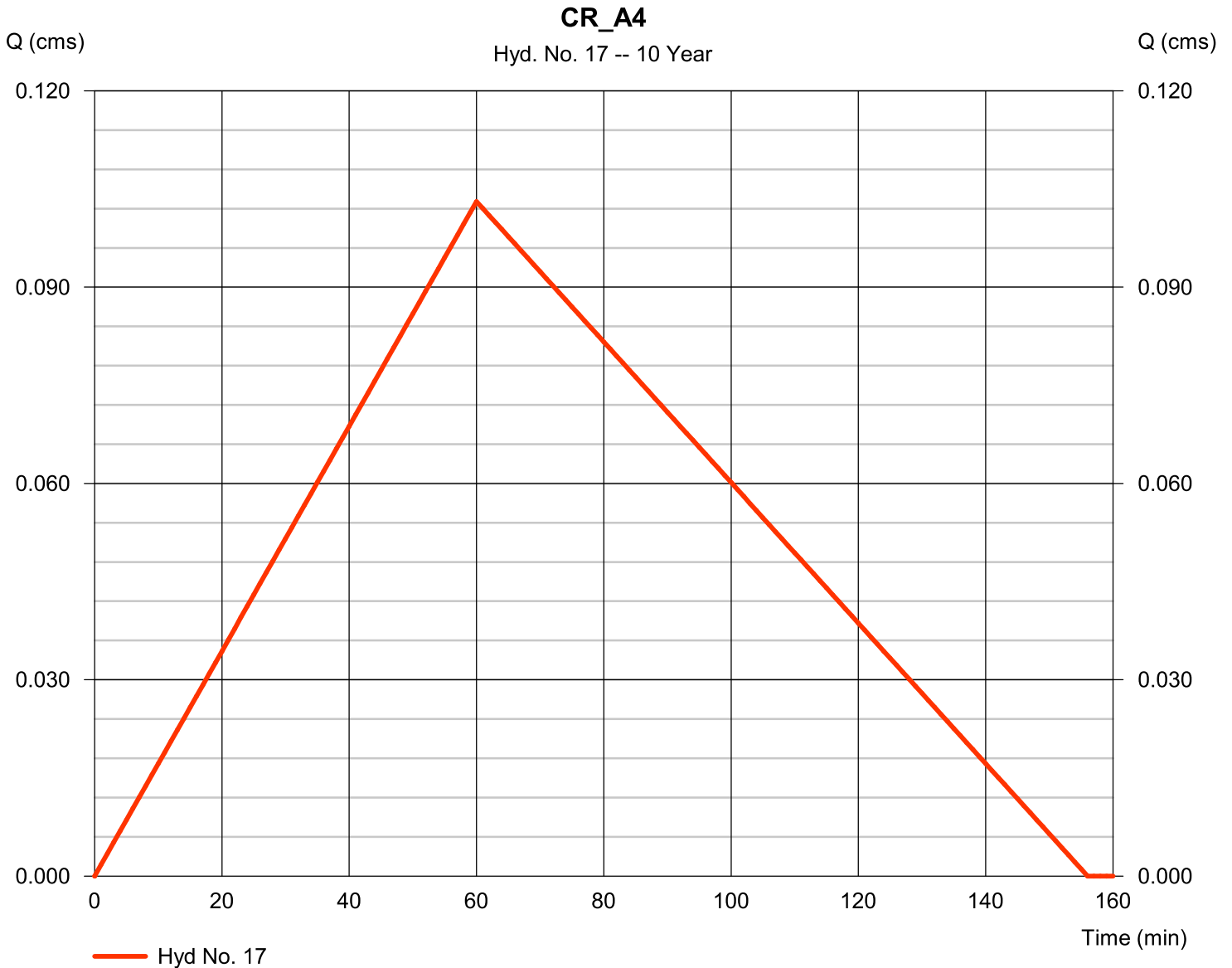
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

CR_A4

Hydrograph type	= Rational	Peak discharge	= 0.103 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 482.5 cum
Drainage area	= 9.380 hectare	Runoff coeff.	= 0.19
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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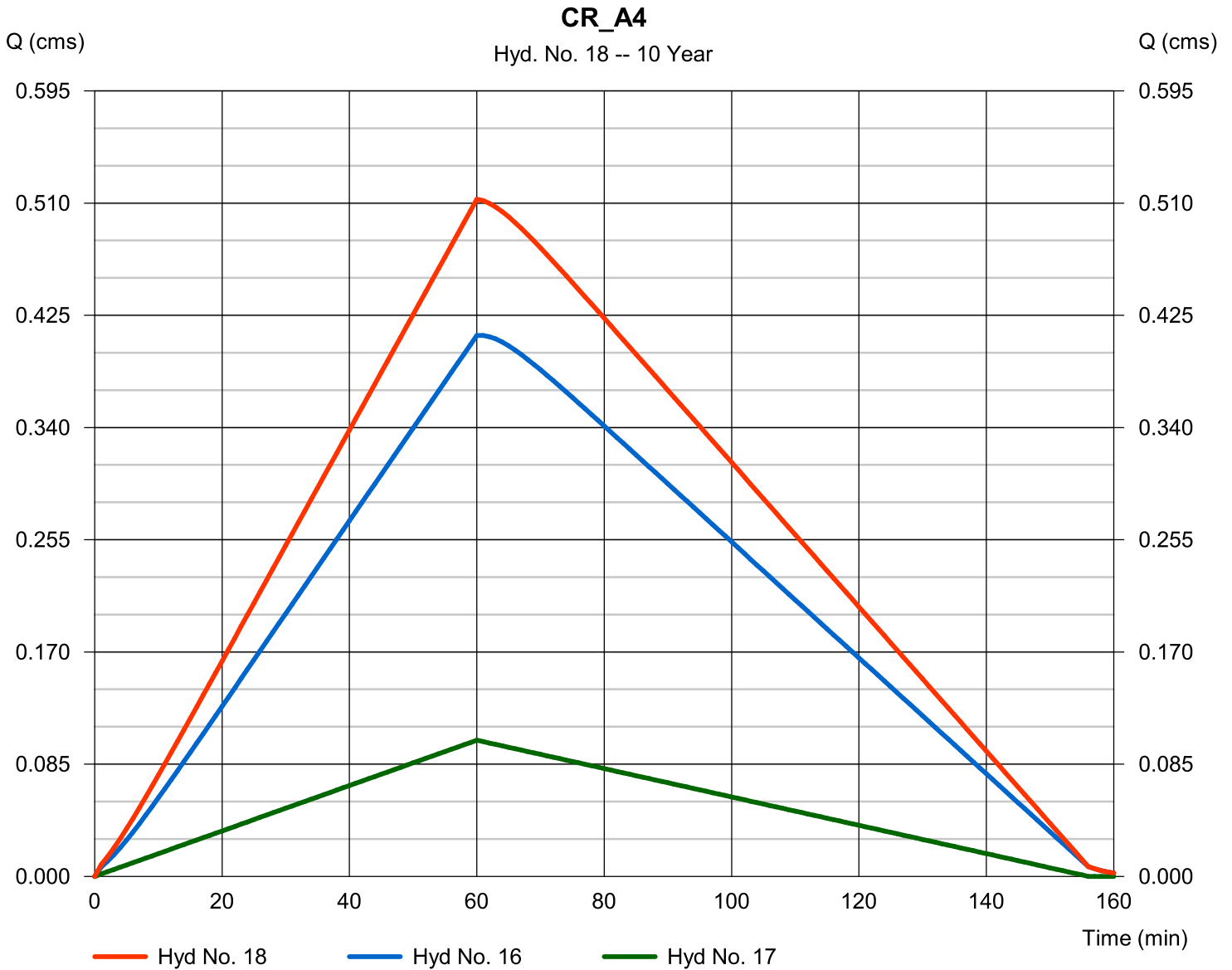
jeudi, avr 5, 2012

Hyd. No. 18

CR_A4

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 16, 17

Peak discharge = 0.513 cms
 Time to peak = 60 min
 Hyd. volume = 2 456.5 cum
 Contrib. drain. area = 9.380 hectare

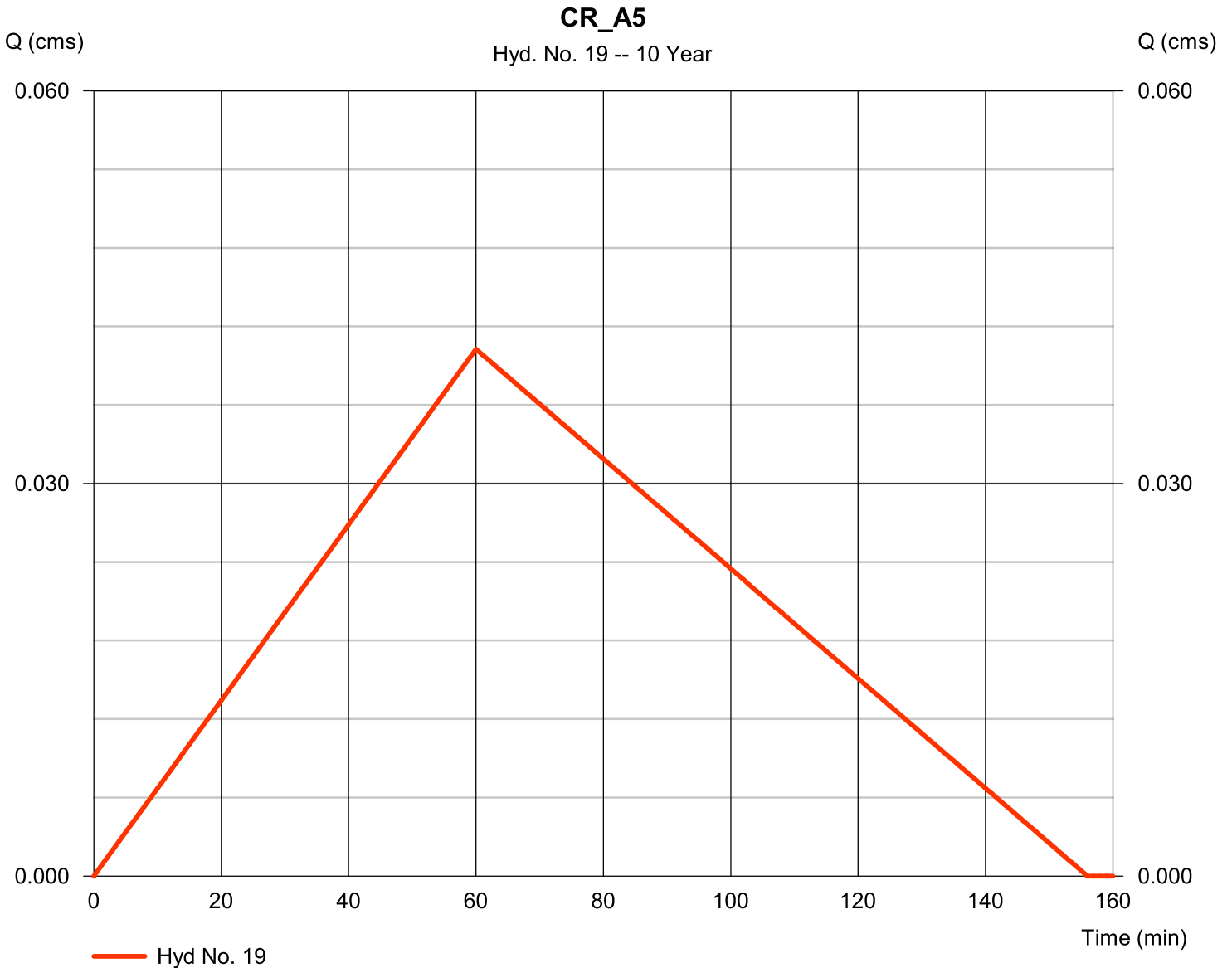


Hydrograph Report

Hyd. No. 19

CR_A5

Hydrograph type	= Rational	Peak discharge	= 0.040 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 188.4 cum
Drainage area	= 4.350 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

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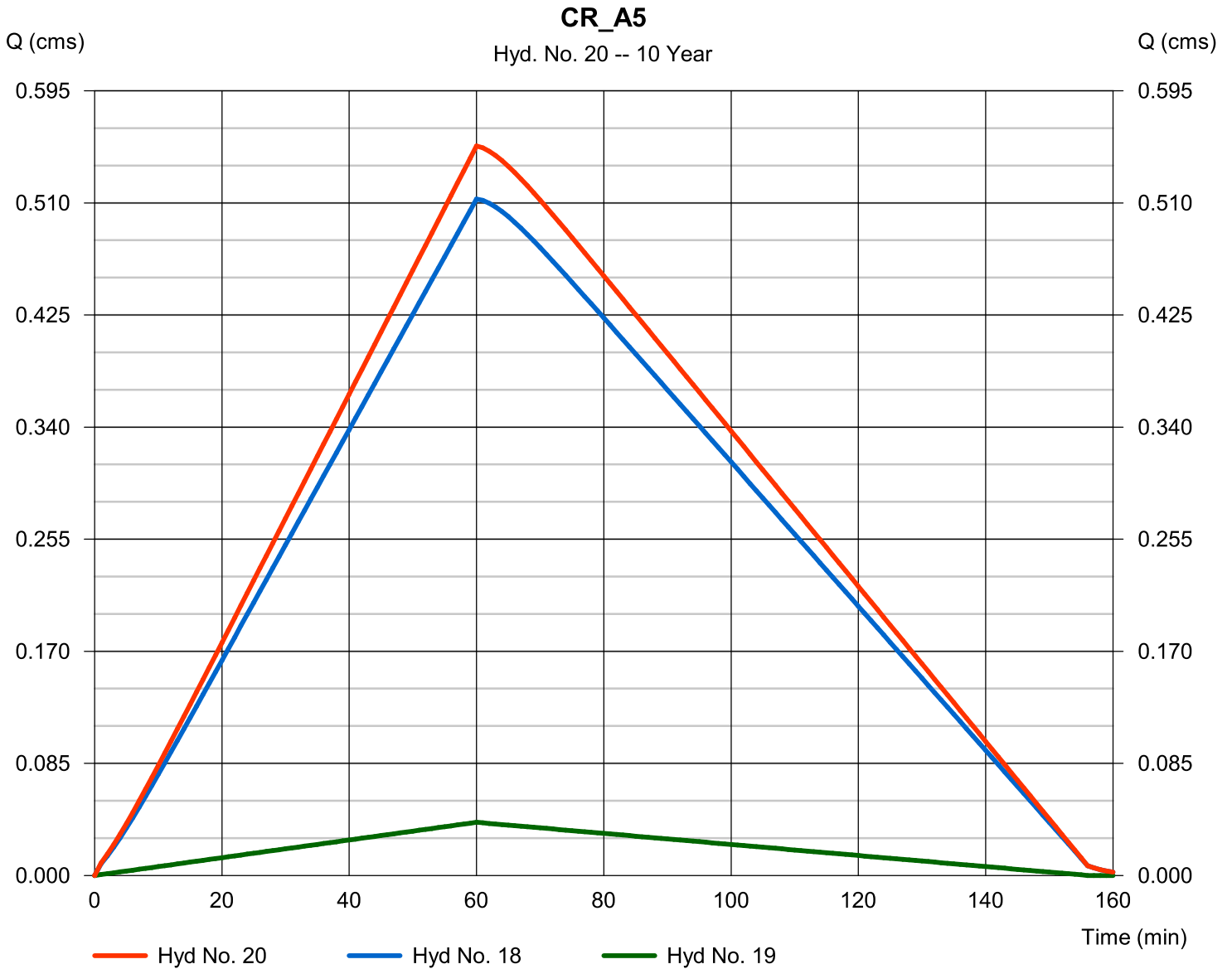
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Hyd. No. 20

CR_A5

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 1 min
 Inflow hyds. = 18, 19

Peak discharge = 0.553 cms
 Time to peak = 60 min
 Hyd. volume = 2 644.9 cum
 Contrib. drain. area = 4.350 hectare



Hydrograph Report

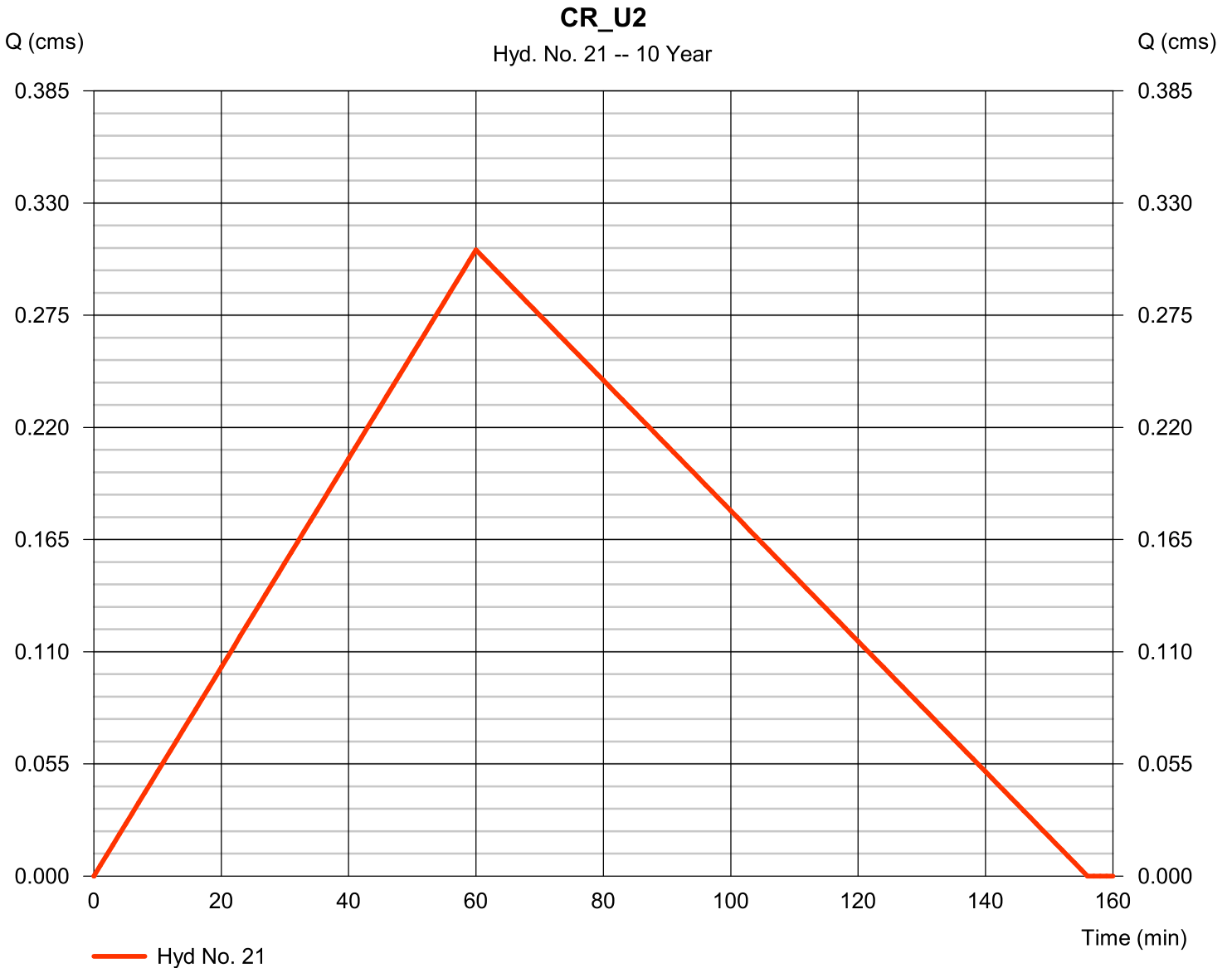
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Hyd. No. 21

CR_U2

Hydrograph type	= Rational	Peak discharge	= 0.307 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 436.8 cum
Drainage area	= 18.300 hectare	Runoff coeff.	= 0.29
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

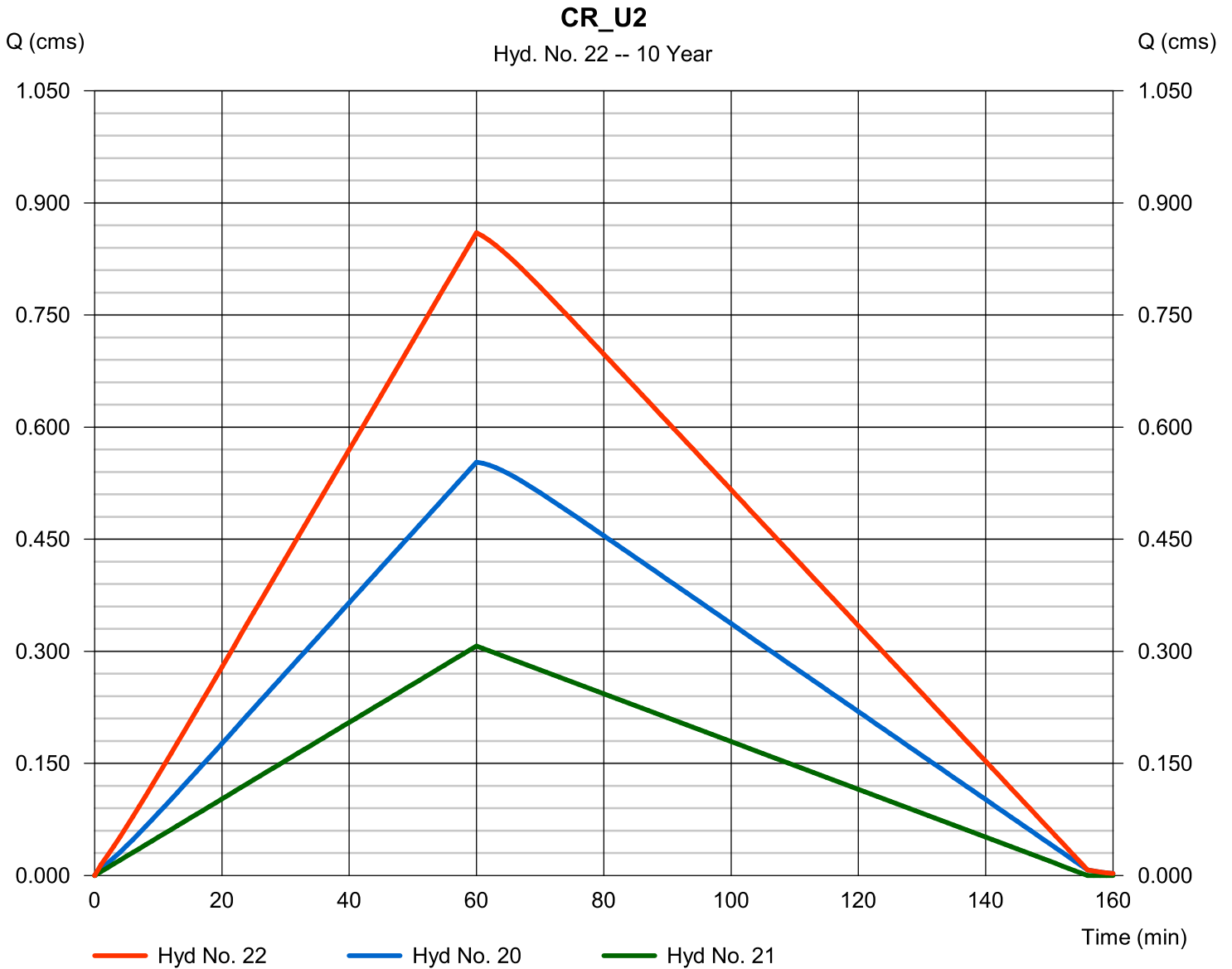
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 22

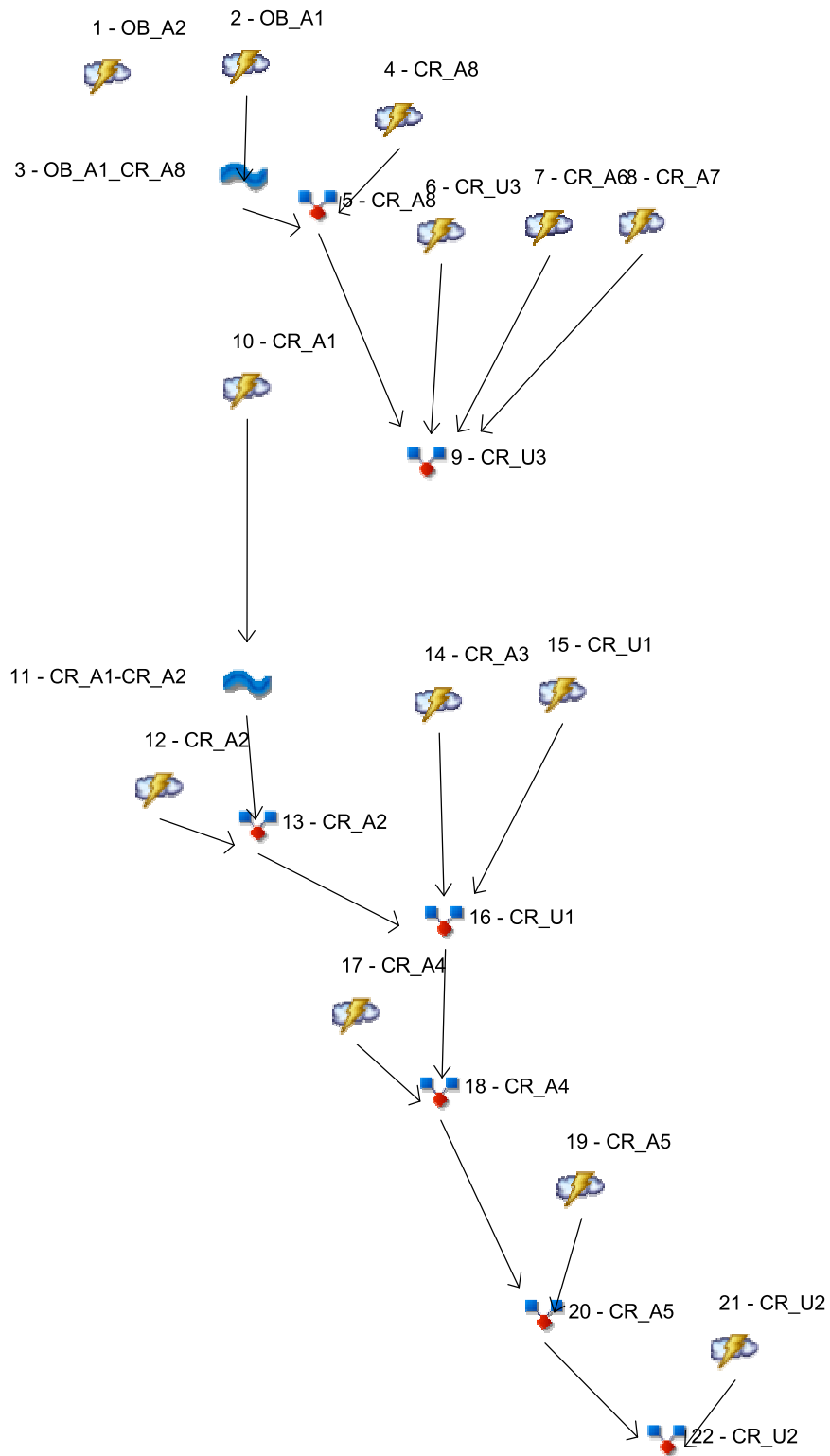
CR_U2

Hydrograph type	= Combine	Peak discharge	= 0.860 cms
Storm frequency	= 10 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 081.7 cum
Inflow hyds.	= 20, 21	Contrib. drain. area	= 18.300 hectare



Watershed Model Schematic

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Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description	
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr		
1	Rational	-----	-----	-----	-----	-----	-----	-----	-----	1.880	-----	OB_A2
2	Rational	-----	-----	-----	-----	-----	-----	-----	-----	4.711	-----	OB_A1
3	Reach	2	-----	-----	-----	-----	-----	-----	-----	4.181	-----	OB_A1_CR_A8
4	Rational	-----	-----	-----	-----	-----	-----	-----	-----	5.704	-----	CR_A8
5	Combine	3, 4	-----	-----	-----	-----	-----	-----	-----	9.516	-----	CR_A8
6	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.042	-----	CR_U3
7	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.073	-----	CR_A6
8	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.025	-----	CR_A7
9	Combine	5, 6, 7, 8	-----	-----	-----	-----	-----	-----	-----	9.653	-----	CR_U3
10	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.294	-----	CR_A1
11	Reach	10	-----	-----	-----	-----	-----	-----	-----	0.284	-----	CR_A1-CR_A2
12	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.251	-----	CR_A2
13	Combine	11, 12	-----	-----	-----	-----	-----	-----	-----	0.529	-----	CR_A2
14	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.149	-----	CR_A3
15	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.053	-----	CR_U1
16	Combine	13, 14, 15	-----	-----	-----	-----	-----	-----	-----	0.728	-----	CR_U1
17	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.174	-----	CR_A4
18	Combine	16, 17	-----	-----	-----	-----	-----	-----	-----	0.902	-----	CR_A4
19	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.070	-----	CR_A5
20	Combine	18, 19	-----	-----	-----	-----	-----	-----	-----	0.972	-----	CR_A5
21	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.438	-----	CR_U2
22	Combine	20, 21	-----	-----	-----	-----	-----	-----	-----	1.410	-----	CR_U2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

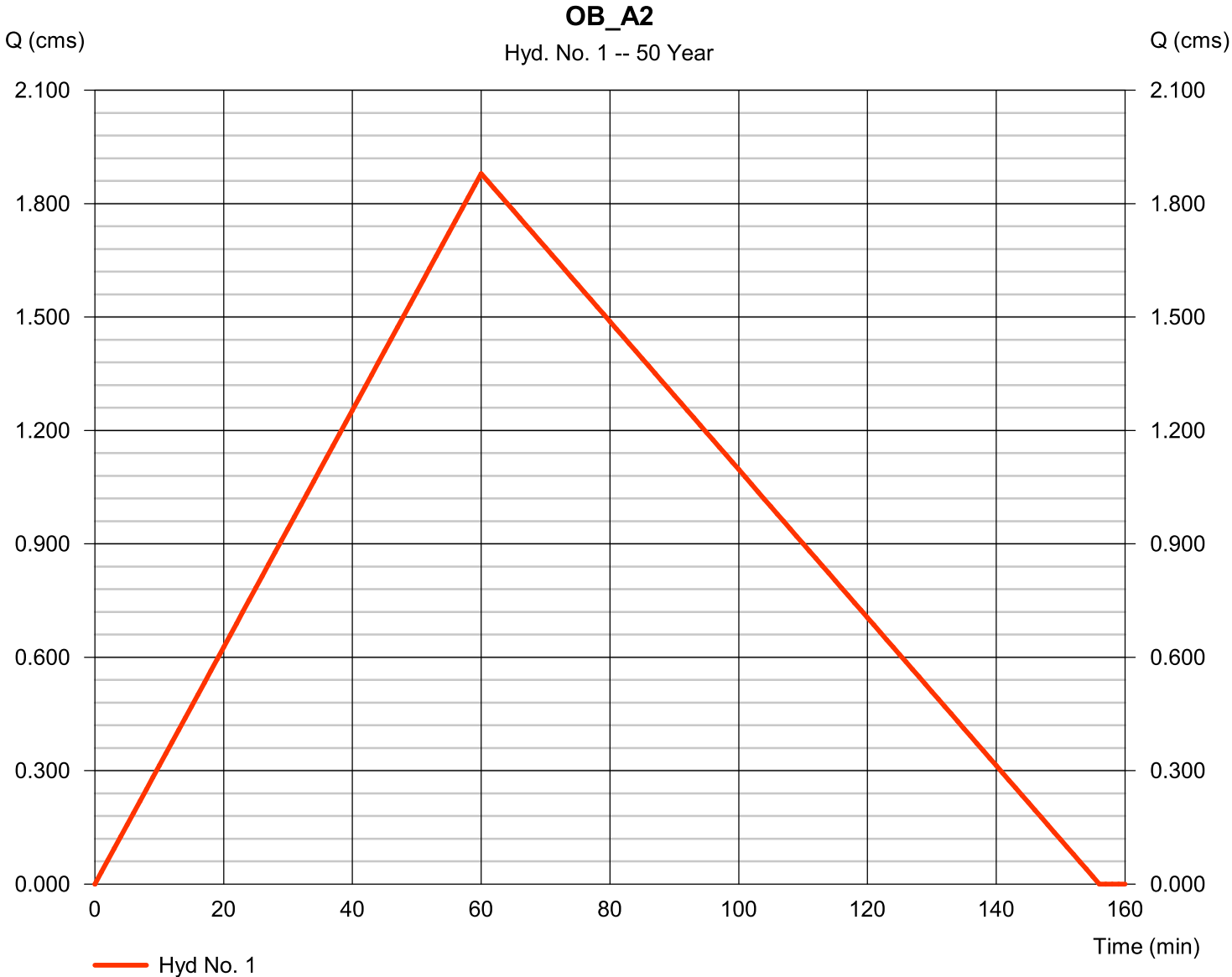
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	1.880	1	60	8 796.4	-----	-----	-----	OB_A2
2	Rational	4.711	1	60	22 048.2	-----	-----	-----	OB_A1
3	Reach	4.181	1	71	22 103.8	2	-----	-----	OB_A1_CR_A8
4	Rational	5.704	1	60	26 693.3	-----	-----	-----	CR_A8
5	Combine	9.516	1	62	48 797.2	3, 4	-----	-----	CR_A8
6	Rational	0.042	1	60	196.3	-----	-----	-----	CR_U3
7	Rational	0.073	1	60	342.9	-----	-----	-----	CR_A6
8	Rational	0.025	1	60	119.3	-----	-----	-----	CR_A7
9	Combine	9.653	1	62	49 455.6	5, 6, 7, 8	-----	-----	CR_U3
10	Rational	0.294	1	60	1 374.1	-----	-----	-----	CR_A1
11	Reach	0.284	1	64	1 375.2	10	-----	-----	CR_A1-CR_A2
12	Rational	0.251	1	60	1 176.2	-----	-----	-----	CR_A2
13	Combine	0.529	1	62	2 551.4	11, 12	-----	-----	CR_A2
14	Rational	0.149	1	60	698.1	-----	-----	-----	CR_A3
15	Rational	0.053	1	60	246.0	-----	-----	-----	CR_U1
16	Combine	0.728	1	61	3 495.5	13, 14, 15	-----	-----	CR_U1
17	Rational	0.174	1	60	812.7	-----	-----	-----	CR_A4
18	Combine	0.902	1	60	4 308.2	16, 17	-----	-----	CR_A4
19	Rational	0.070	1	60	329.8	-----	-----	-----	CR_A5
20	Combine	0.972	1	60	4 637.9	18, 19	-----	-----	CR_A5
21	Rational	0.438	1	60	2 047.9	-----	-----	-----	CR_U2
22	Combine	1.410	1	60	6 685.8	20, 21	-----	-----	CR_U2

Hydrograph Report

Hyd. No. 1

OB_A2

Hydrograph type	= Rational	Peak discharge	= 1.880 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 8 796.4 cum
Drainage area	= 110.760 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

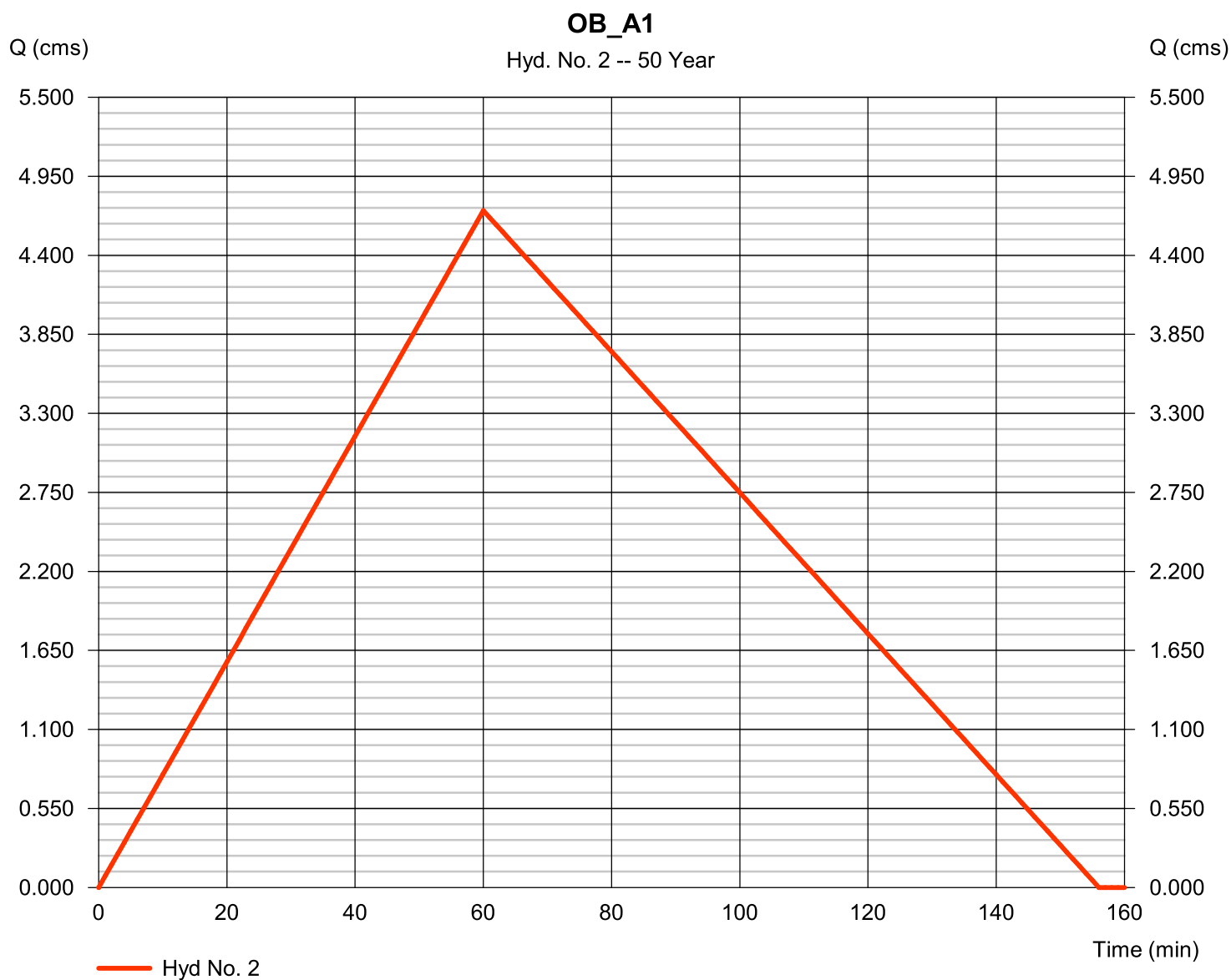
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Hyd. No. 2

OB_A1

Hydrograph type	= Rational	Peak discharge	= 4.711 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 22 048.2 cum
Drainage area	= 290.840 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

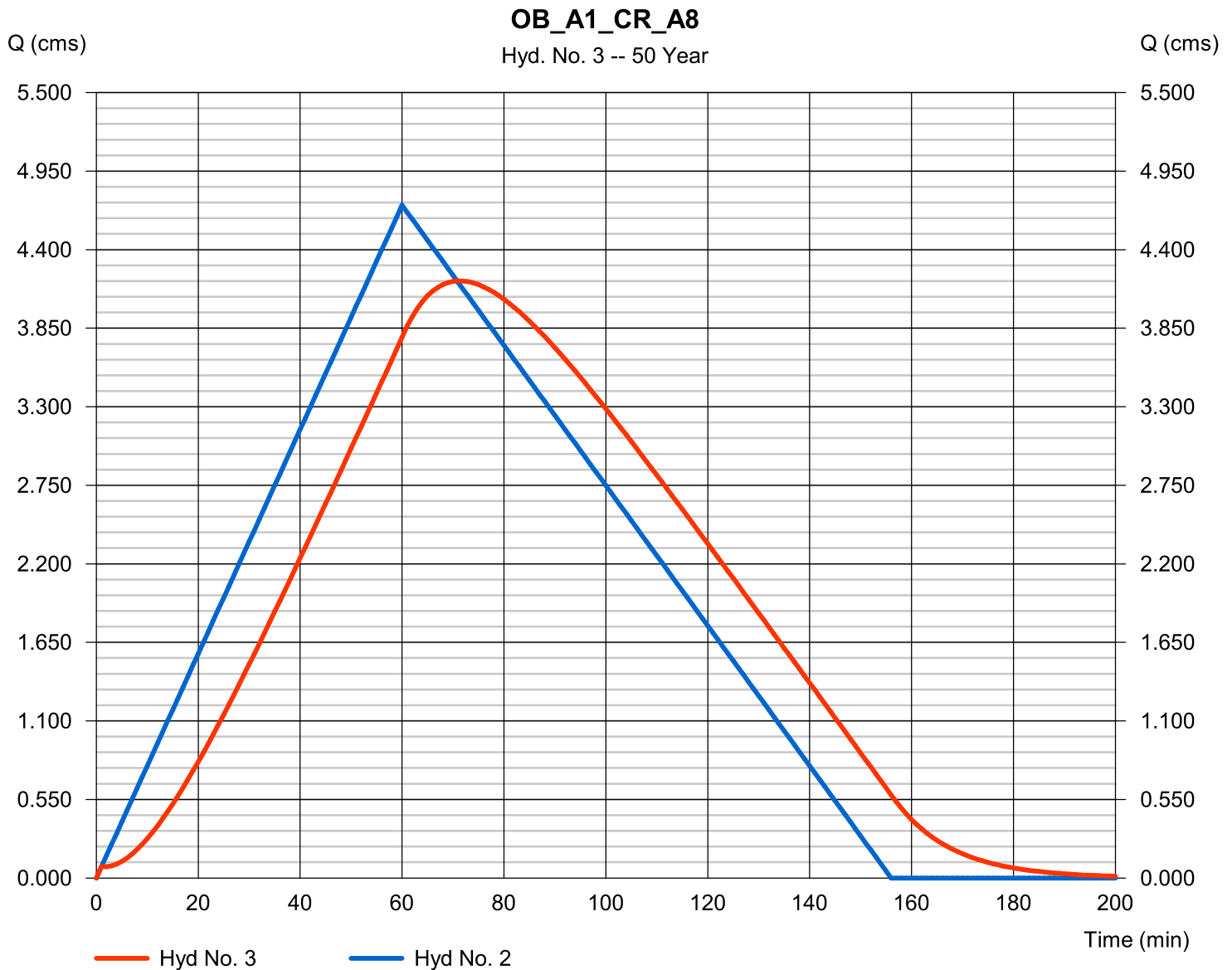
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Hyd. No. 3

OB_A1_CR_A8

Hydrograph type	= Reach	Peak discharge	= 4.181 cms
Storm frequency	= 50 yrs	Time to peak	= 71 min
Time interval	= 1 min	Hyd. volume	= 22 103.8 cum
Inflow hyd. No.	= 2 - OB_A1	Section type	= Trapezoidal
Reach length	= 1840.0 m	Channel slope	= 0.6 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.090	Rating curve m	= 1.353
Ave. velocity	= 2.00 m/s	Routing coeff.	= 0.0843

Modified Att-Kin routing method used.



Hydrograph Report

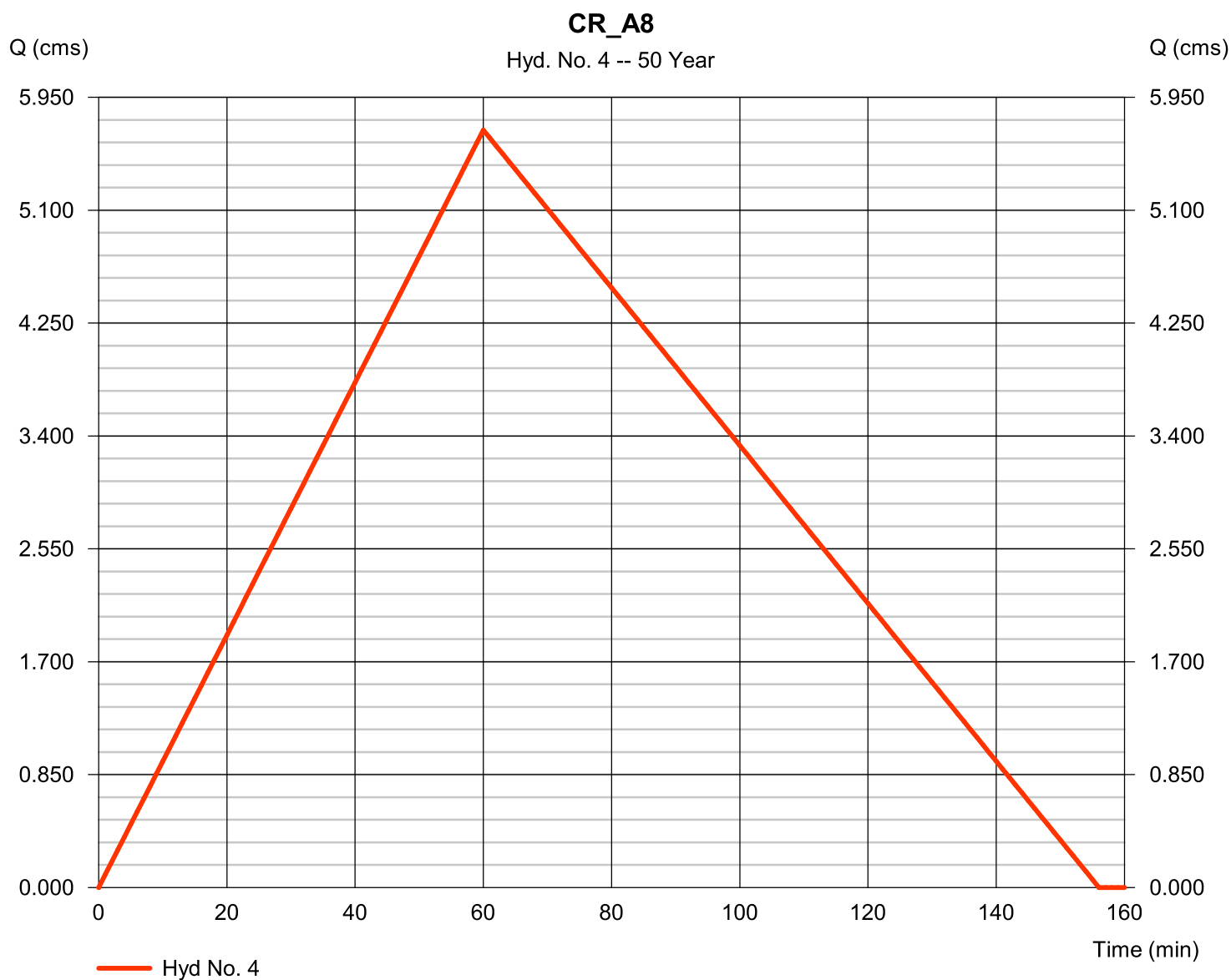
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 4

CR_A8

Hydrograph type	= Rational	Peak discharge	= 5.704 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 26 693.3 cum
Drainage area	= 369.720 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

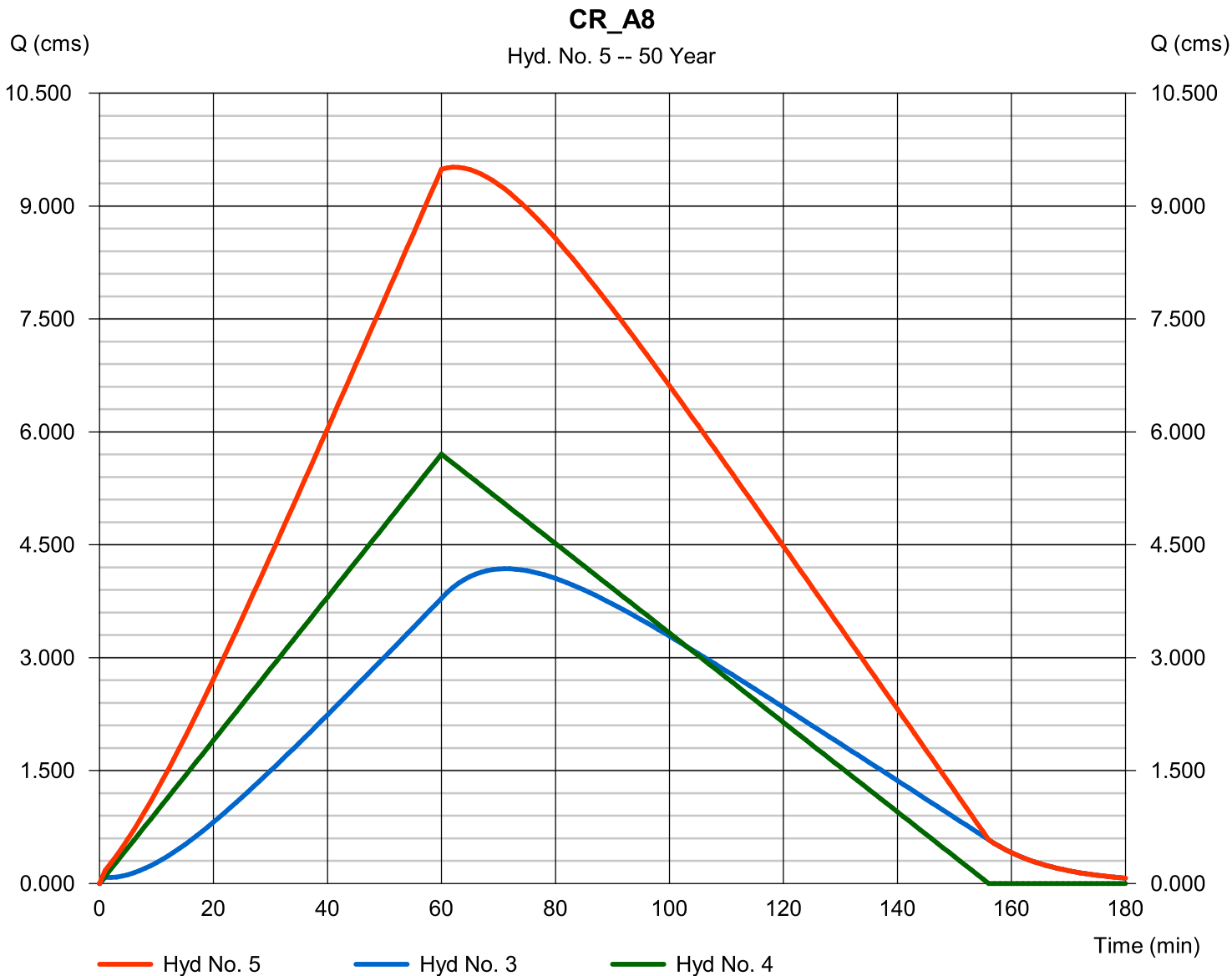
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

CR_A8

Hydrograph type	= Combine	Peak discharge	= 9.516 cms
Storm frequency	= 50 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 48 797.2 cum
Inflow hyds.	= 3, 4	Contrib. drain. area	= 369.720 hectare



Hydrograph Report

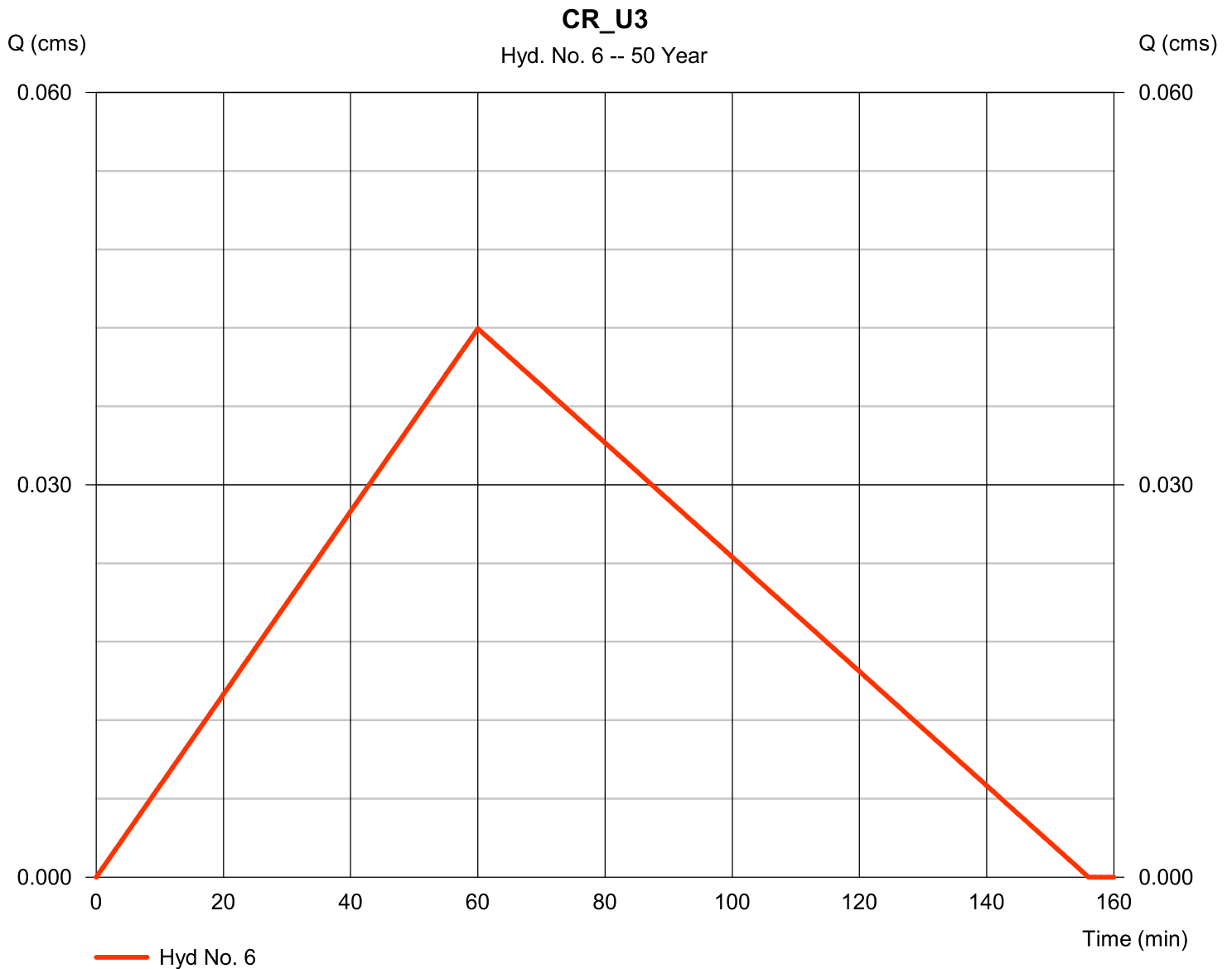
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

CR_U3

Hydrograph type	= Rational	Peak discharge	= 0.042 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 196.3 cum
Drainage area	= 1.026 hectare	Runoff coeff.	= 0.53
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

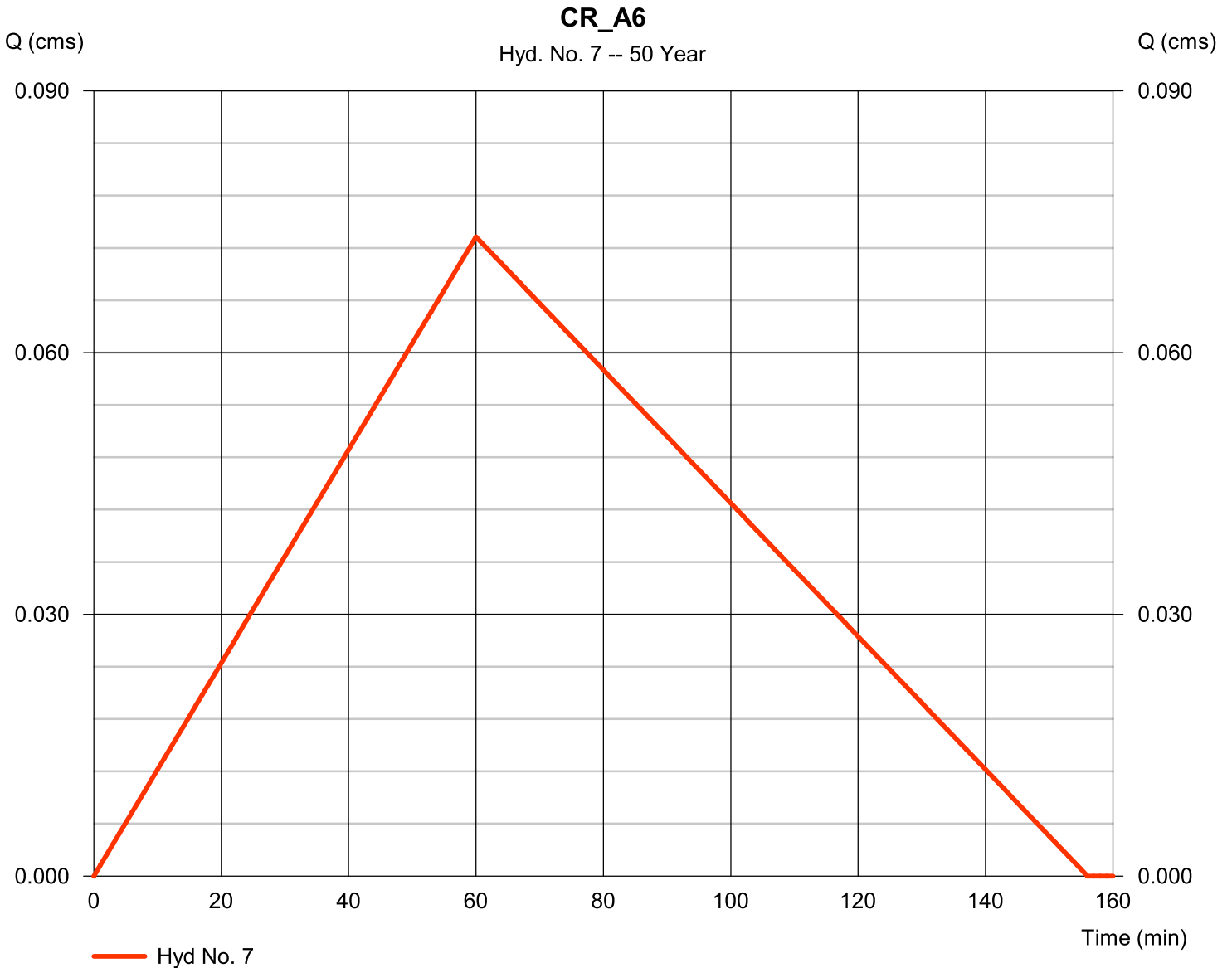
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

CR_A6

Hydrograph type	= Rational	Peak discharge	= 0.073 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 342.9 cum
Drainage area	= 4.130 hectare	Runoff coeff.	= 0.23
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

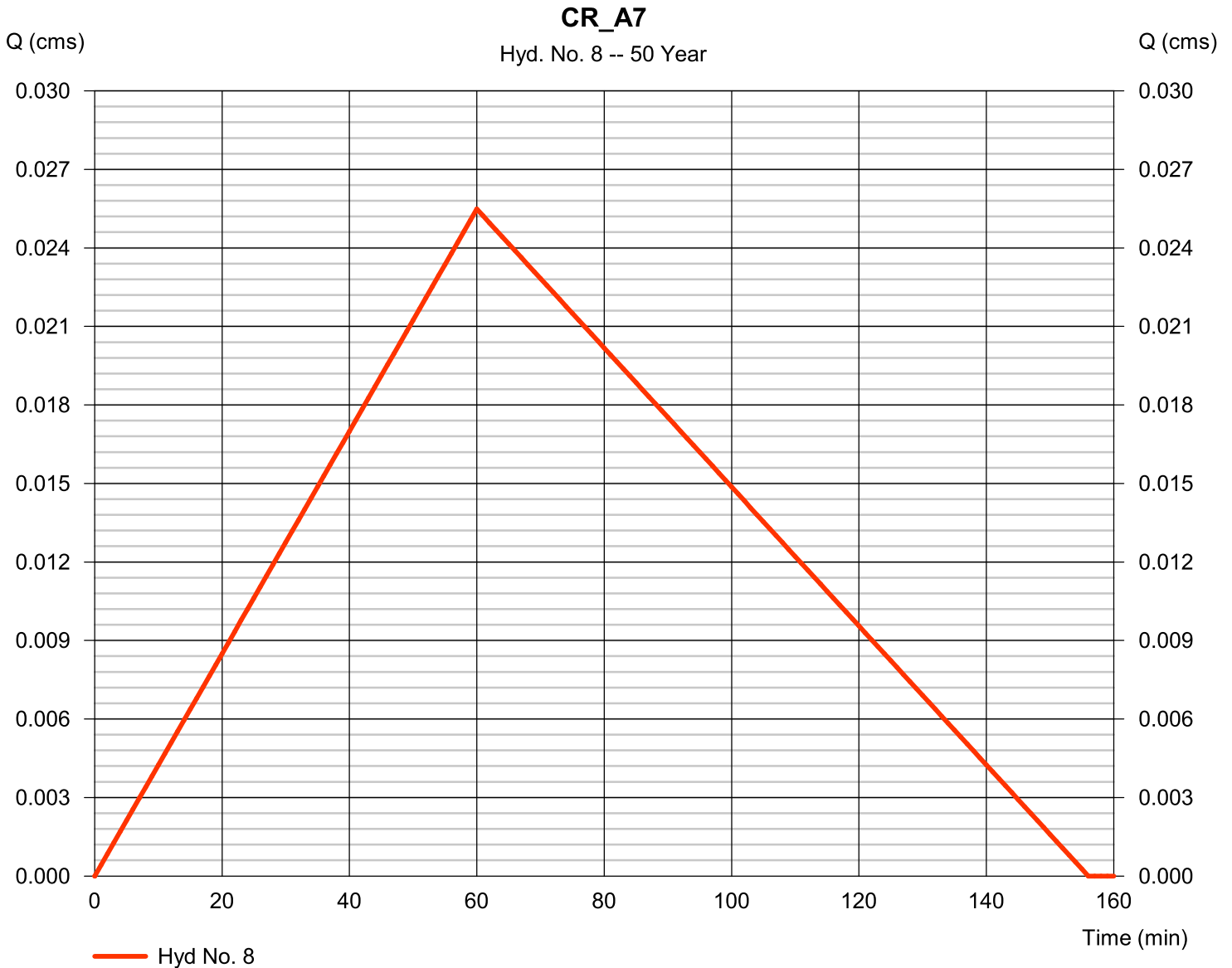
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

CR_A7

Hydrograph type	= Rational	Peak discharge	= 0.025 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 119.3 cum
Drainage area	= 2.360 hectare	Runoff coeff.	= 0.14
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

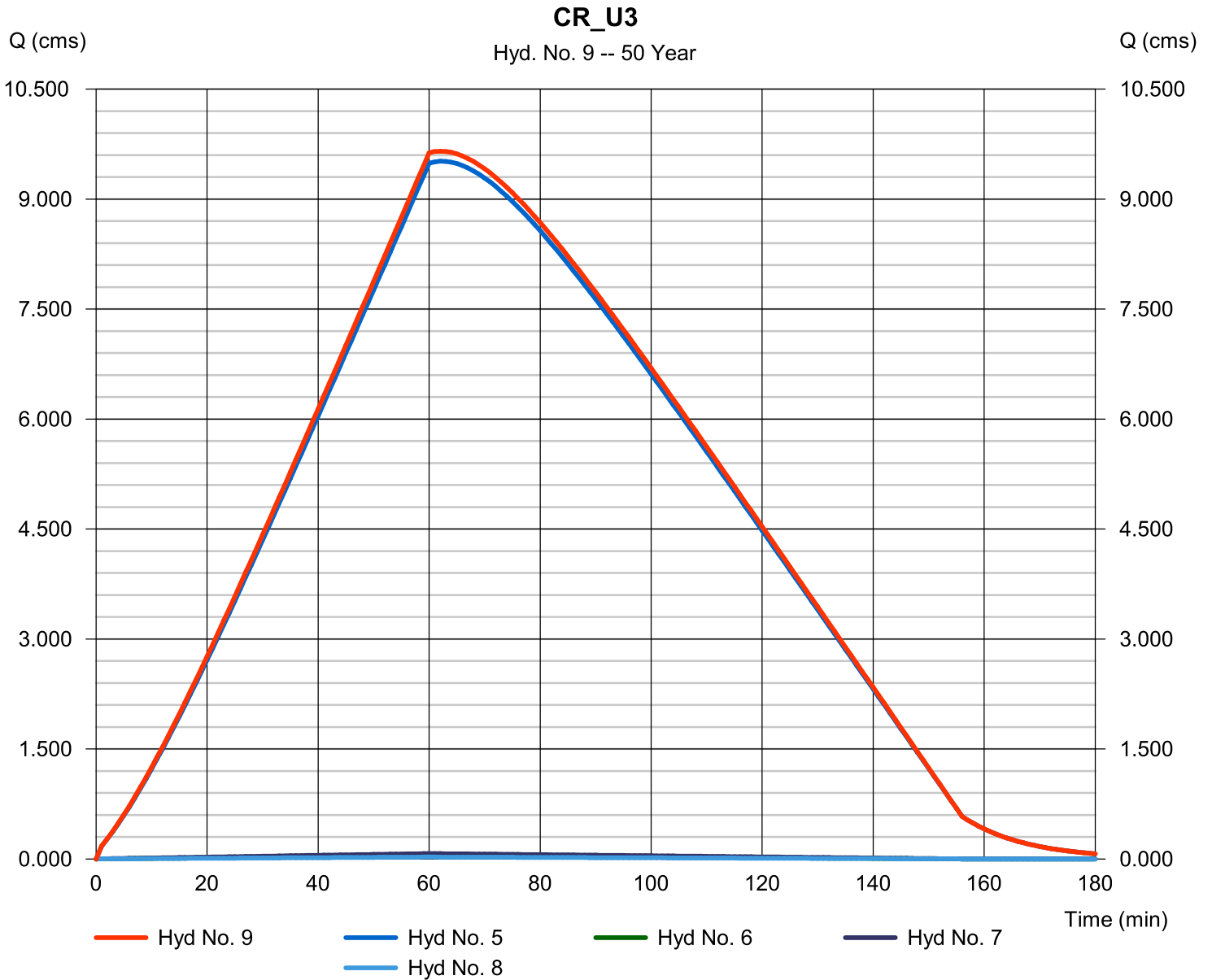
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Hyd. No. 9

CR_U3

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 6, 7, 8

Peak discharge = 9.653 cms
 Time to peak = 62 min
 Hyd. volume = 49 455.6 cum
 Contrib. drain. area = 7.516 hectare



Hydrograph Report

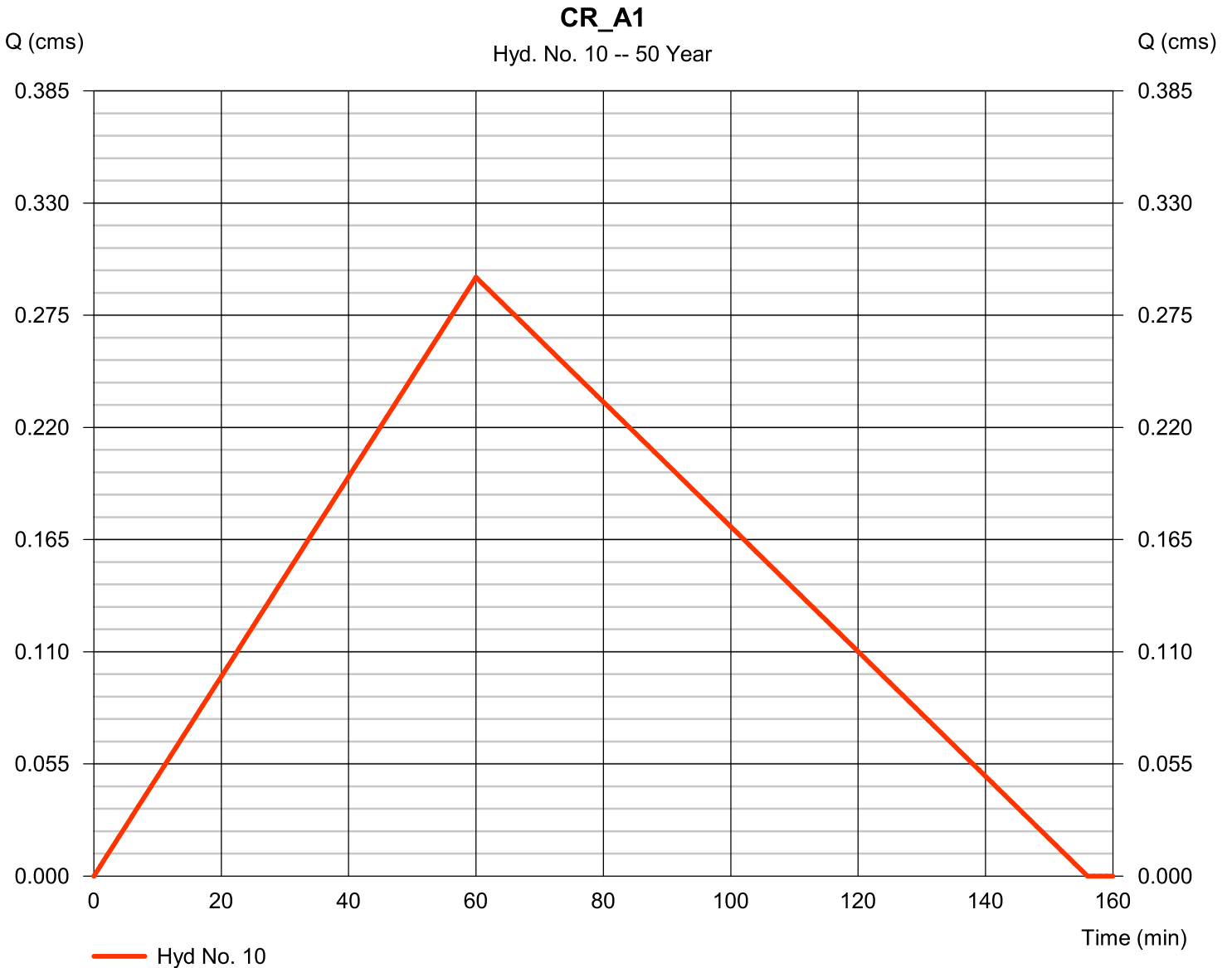
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Hyd. No. 10

CR_A1

Hydrograph type	= Rational	Peak discharge	= 0.294 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 374.1 cum
Drainage area	= 16.550 hectare	Runoff coeff.	= 0.23
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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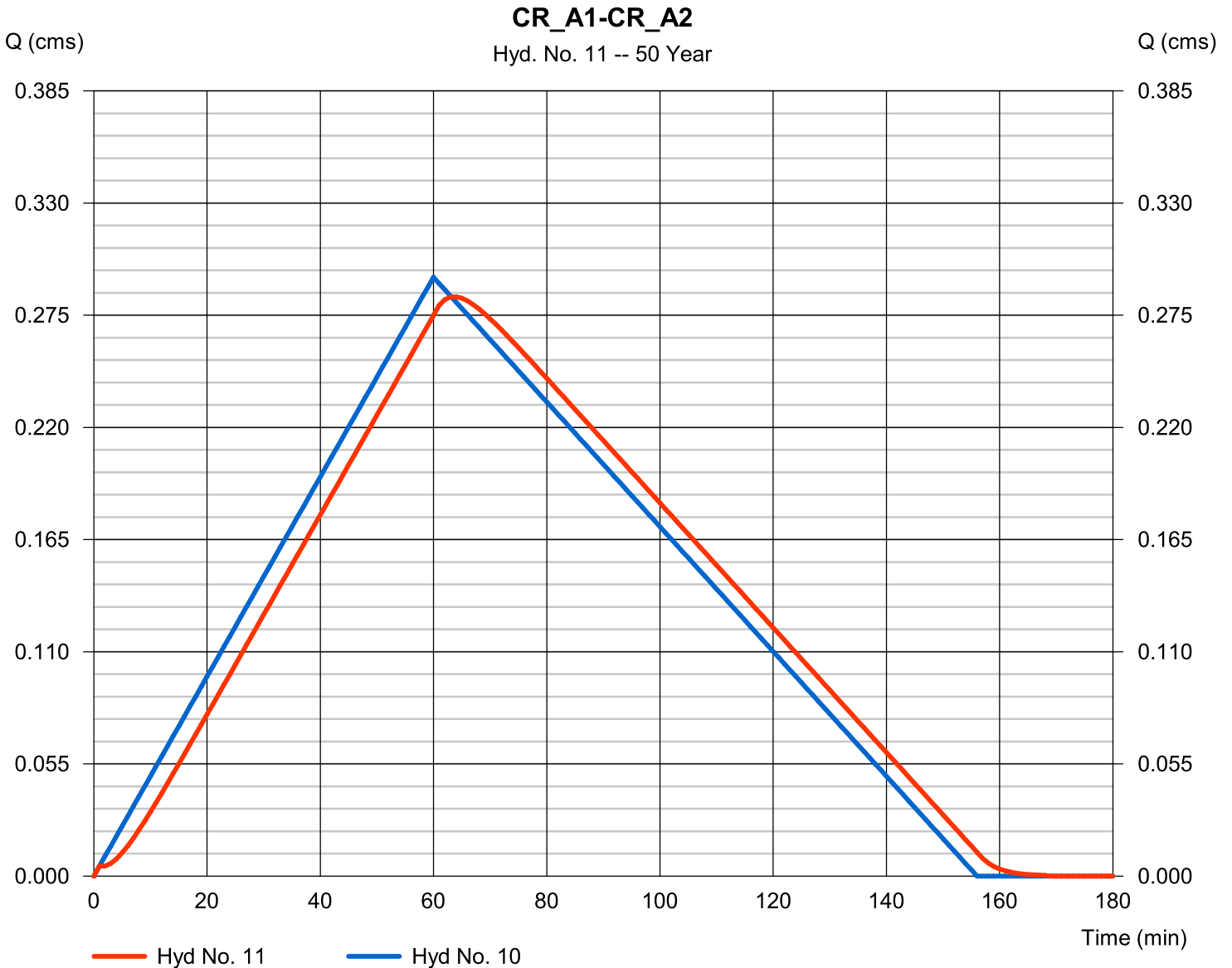
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Hyd. No. 11

CR_A1-CR_A2

Hydrograph type	= Reach	Peak discharge	= 0.284 cms
Storm frequency	= 50 yrs	Time to peak	= 64 min
Time interval	= 1 min	Hyd. volume	= 1 375.2 cum
Inflow hyd. No.	= 10 - CR_A1	Section type	= Trapezoidal
Reach length	= 460.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 1.71 m/s	Routing coeff.	= 0.2621

Modified Att-Kin routing method used.



Hydrograph Report

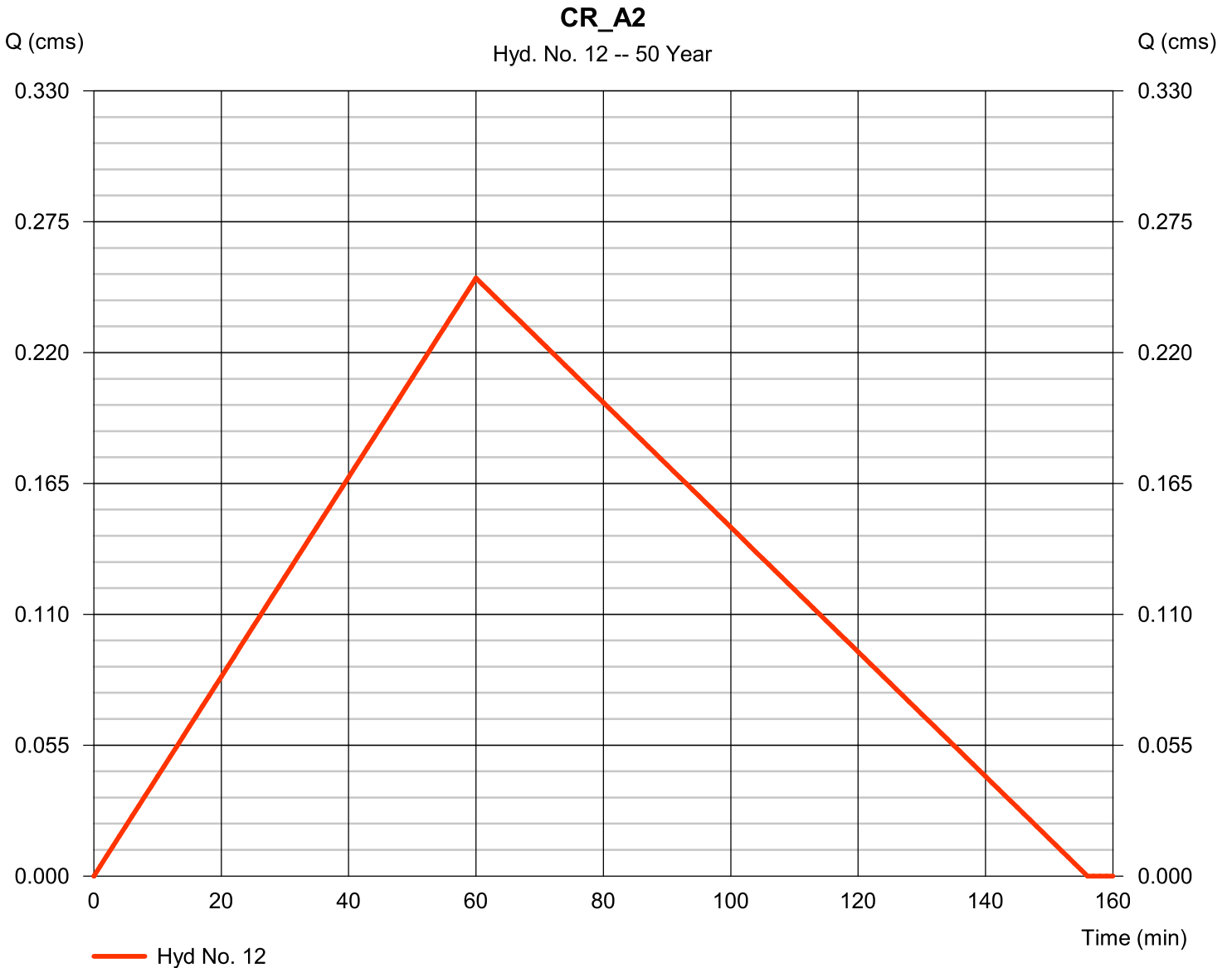
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Hyd. No. 12

CR_A2

Hydrograph type	= Rational	Peak discharge	= 0.251 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 176.2 cum
Drainage area	= 14.810 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

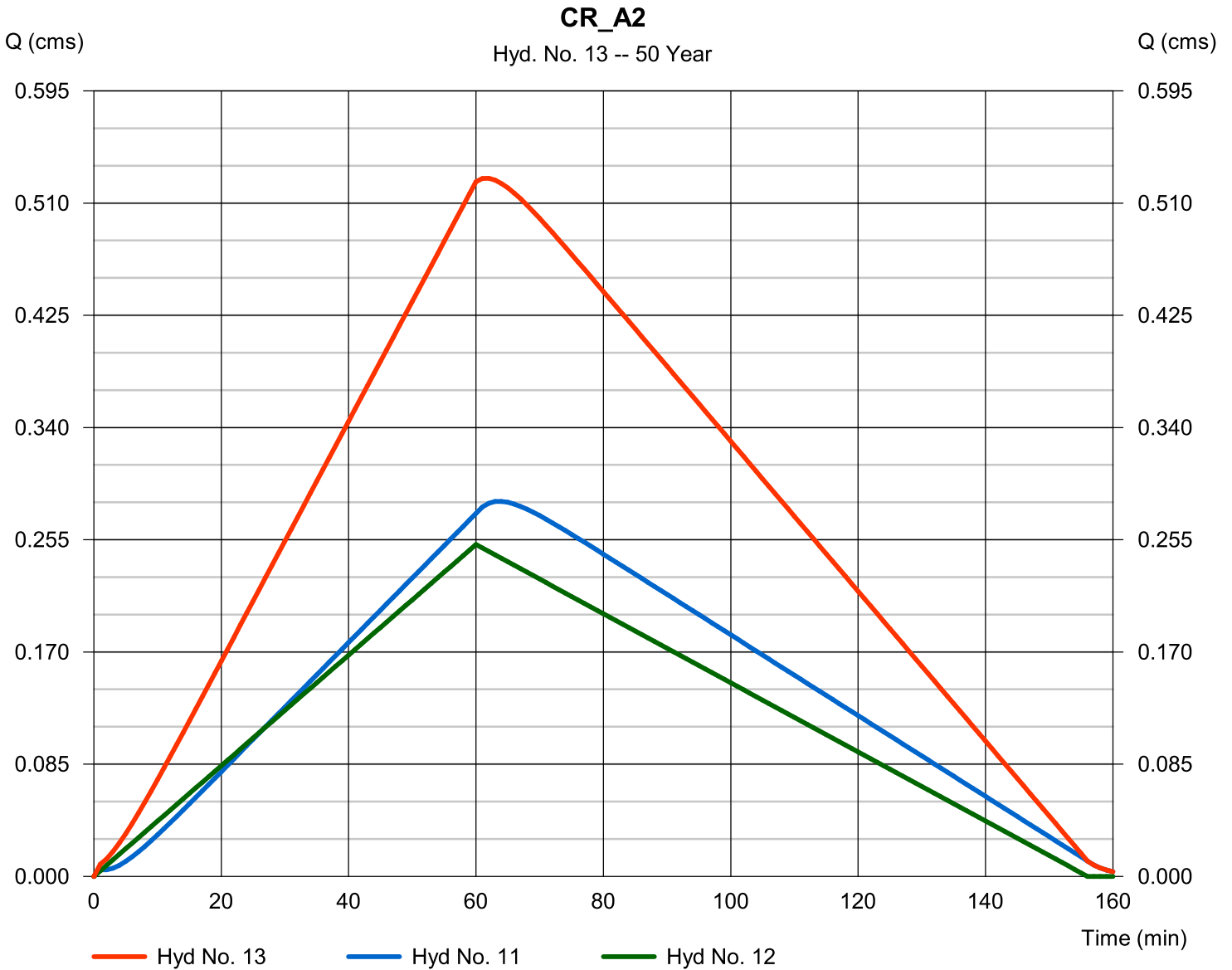
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Hyd. No. 13

CR_A2

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 11, 12

Peak discharge = 0.529 cms
 Time to peak = 62 min
 Hyd. volume = 2 551.4 cum
 Contrib. drain. area = 14.810 hectare



Hydrograph Report

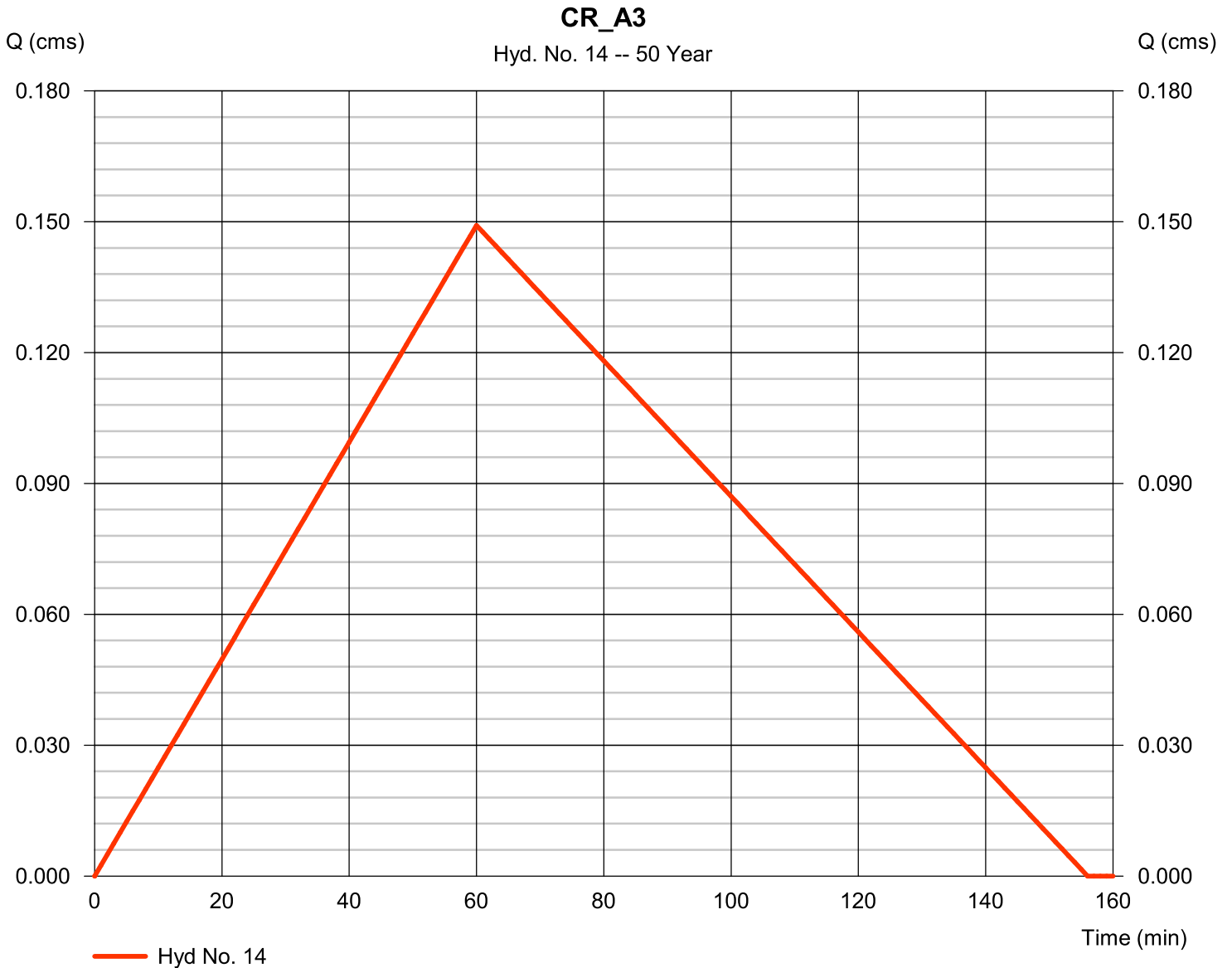
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Hyd. No. 14

CR_A3

Hydrograph type	= Rational	Peak discharge	= 0.149 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 698.1 cum
Drainage area	= 8.790 hectare	Runoff coeff.	= 0.22
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

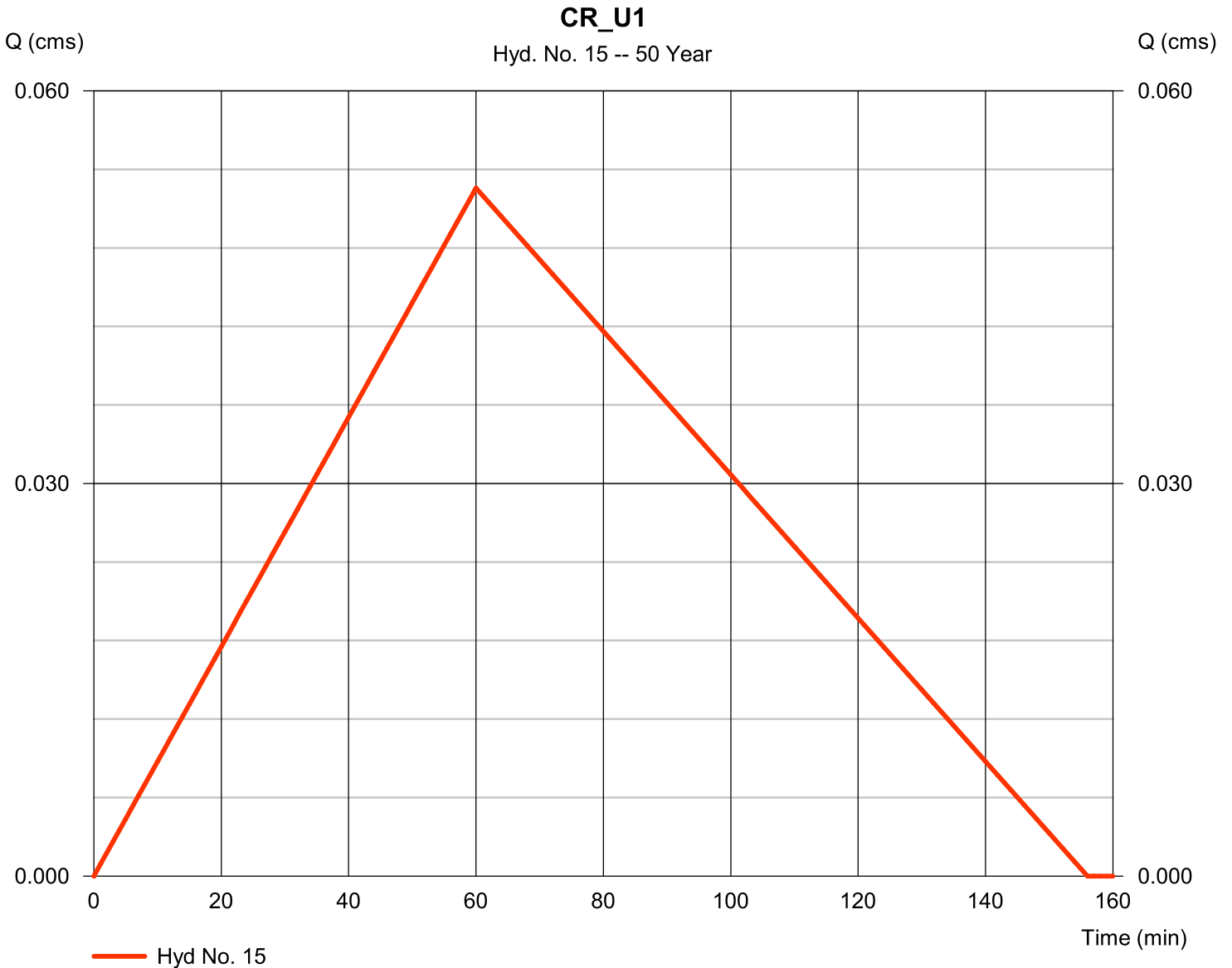
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 15

CR_U1

Hydrograph type	= Rational	Peak discharge	= 0.053 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 246.0 cum
Drainage area	= 2.350 hectare	Runoff coeff.	= 0.29
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

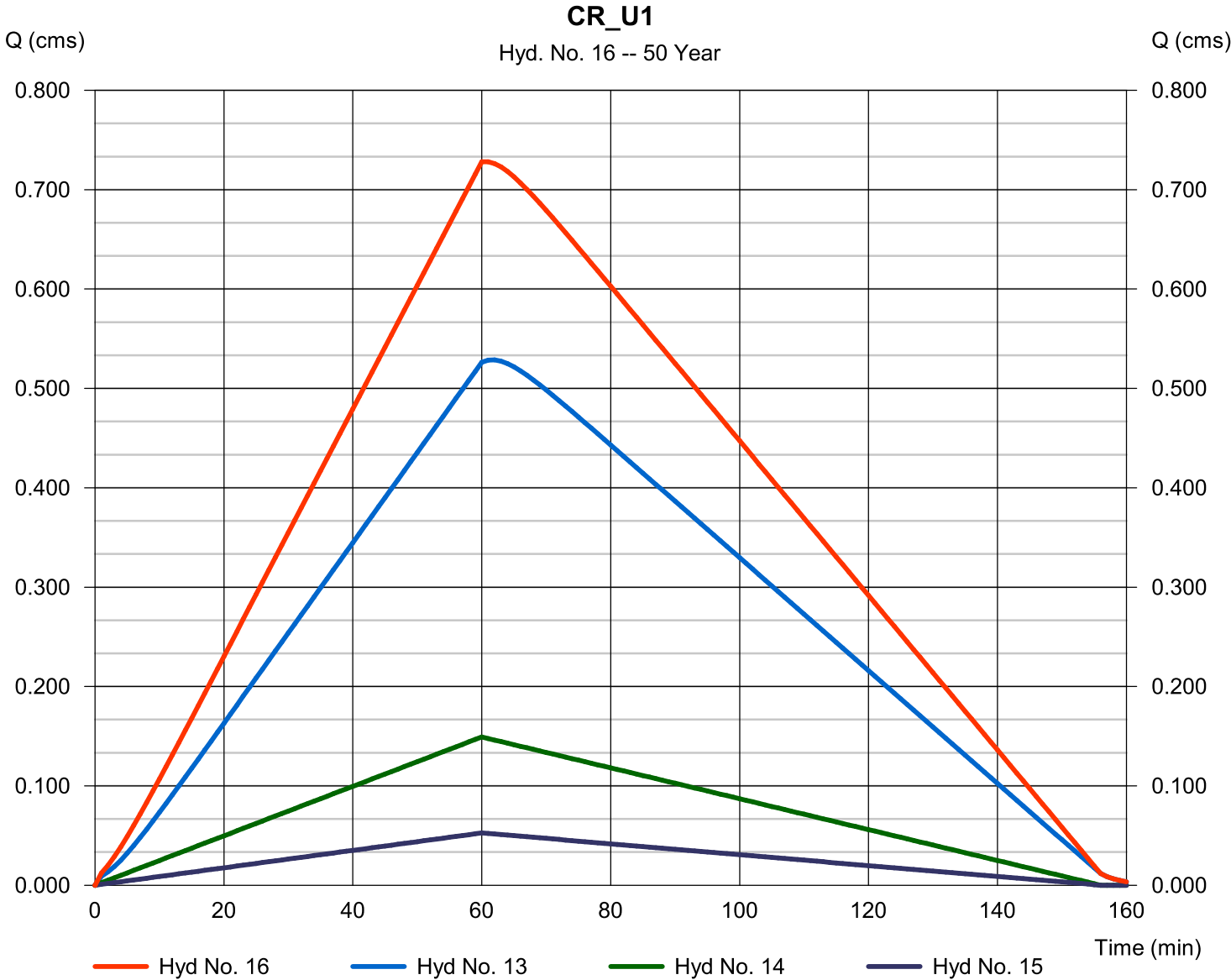
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 16

CR_U1

Hydrograph type	= Combine	Peak discharge	= 0.728 cms
Storm frequency	= 50 yrs	Time to peak	= 61 min
Time interval	= 1 min	Hyd. volume	= 3 495.5 cum
Inflow hyds.	= 13, 14, 15	Contrib. drain. area	= 11.140 hectare



Hydrograph Report

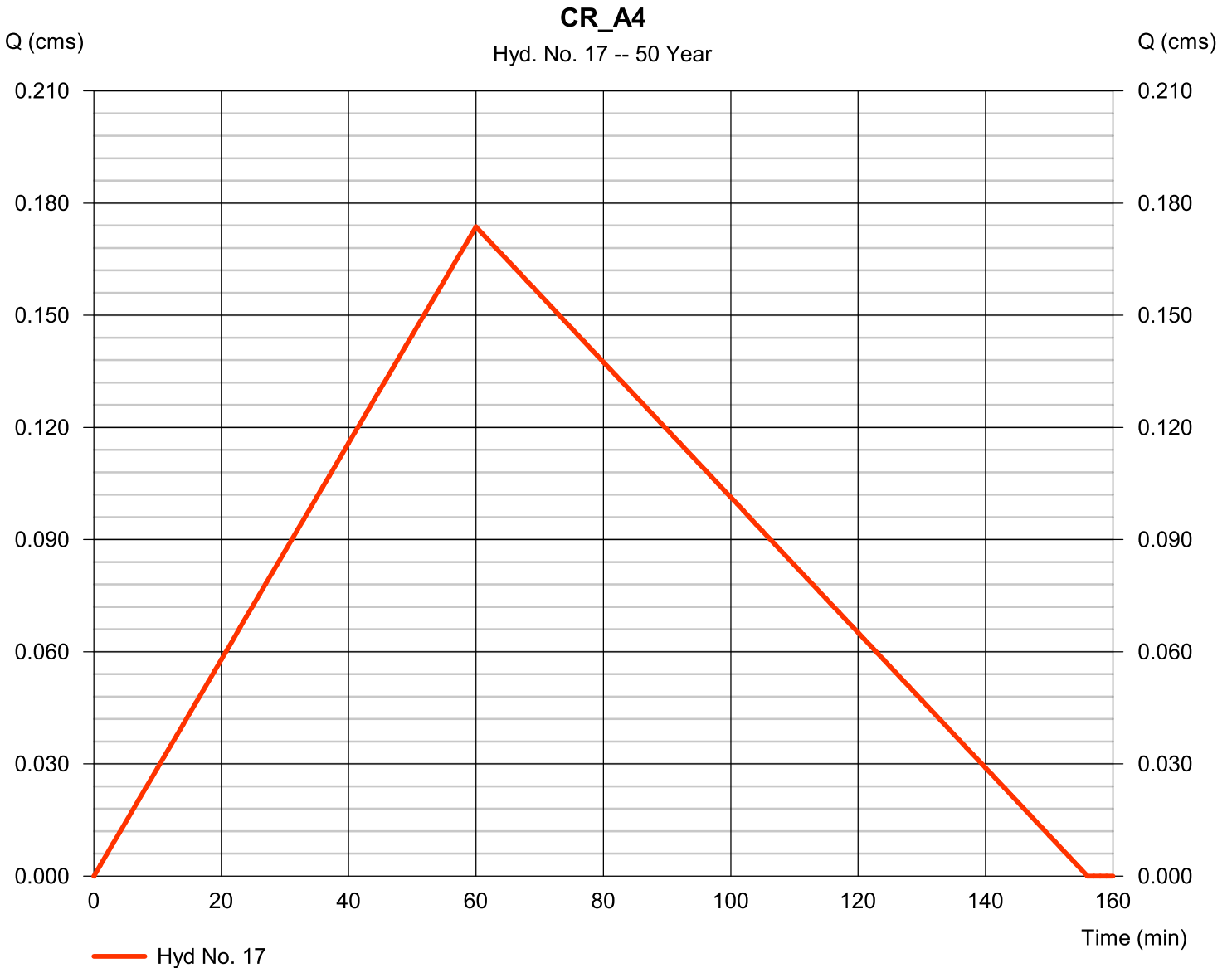
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 17

CR_A4

Hydrograph type	= Rational	Peak discharge	= 0.174 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 812.7 cum
Drainage area	= 9.380 hectare	Runoff coeff.	= 0.24
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

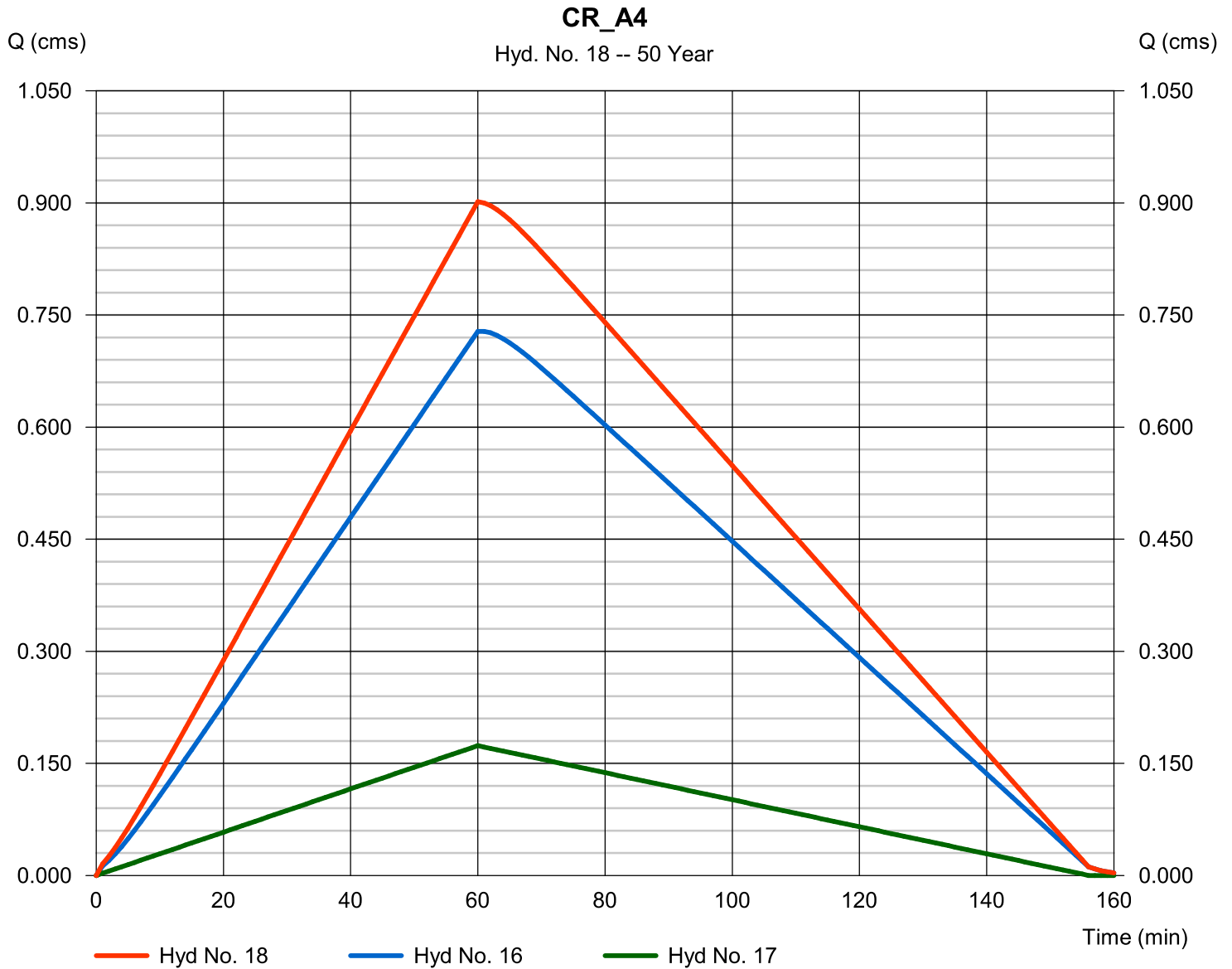
jeudi, avr 5, 2012

Hyd. No. 18

CR_A4

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 16, 17

Peak discharge = 0.902 cms
 Time to peak = 60 min
 Hyd. volume = 4 308.2 cum
 Contrib. drain. area = 9.380 hectare



Hydrograph Report

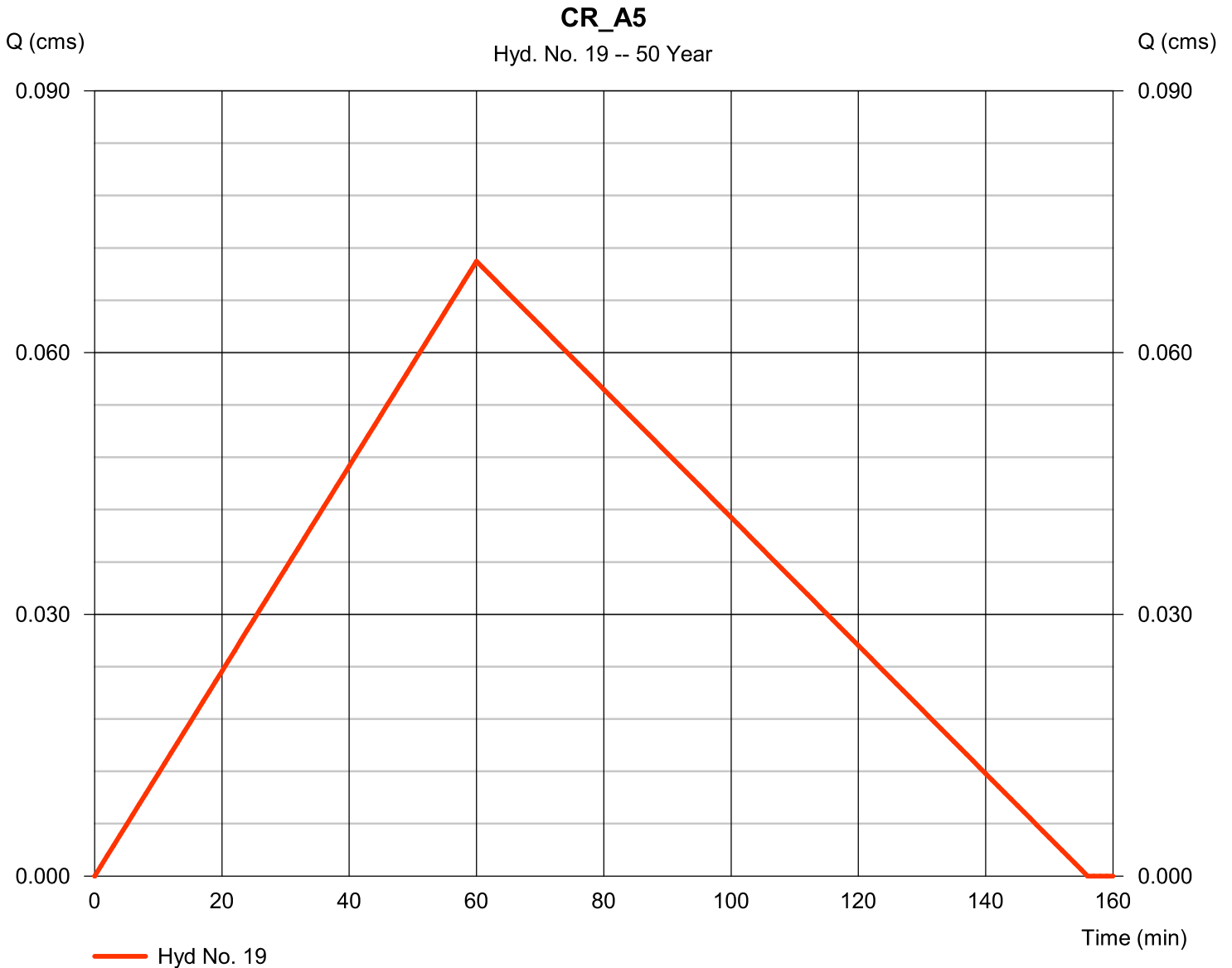
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 19

CR_A5

Hydrograph type	= Rational	Peak discharge	= 0.070 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 329.8 cum
Drainage area	= 4.350 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

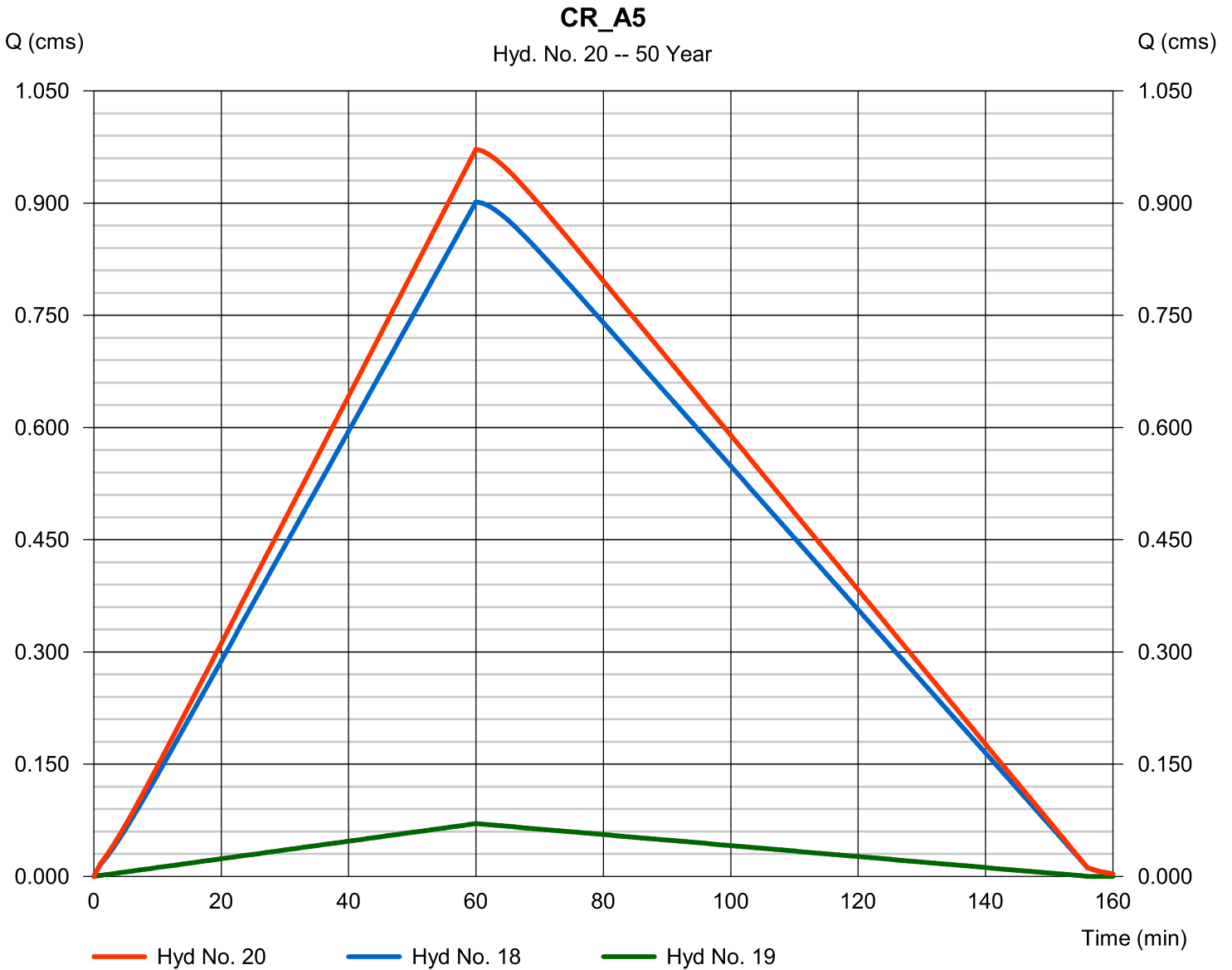
jeudi, avr 5, 2012

Hyd. No. 20

CR_A5

Hydrograph type = Combine
 Storm frequency = 50 yrs
 Time interval = 1 min
 Inflow hyds. = 18, 19

Peak discharge = 0.972 cms
 Time to peak = 60 min
 Hyd. volume = 4 637.9 cum
 Contrib. drain. area = 4.350 hectare



Hydrograph Report

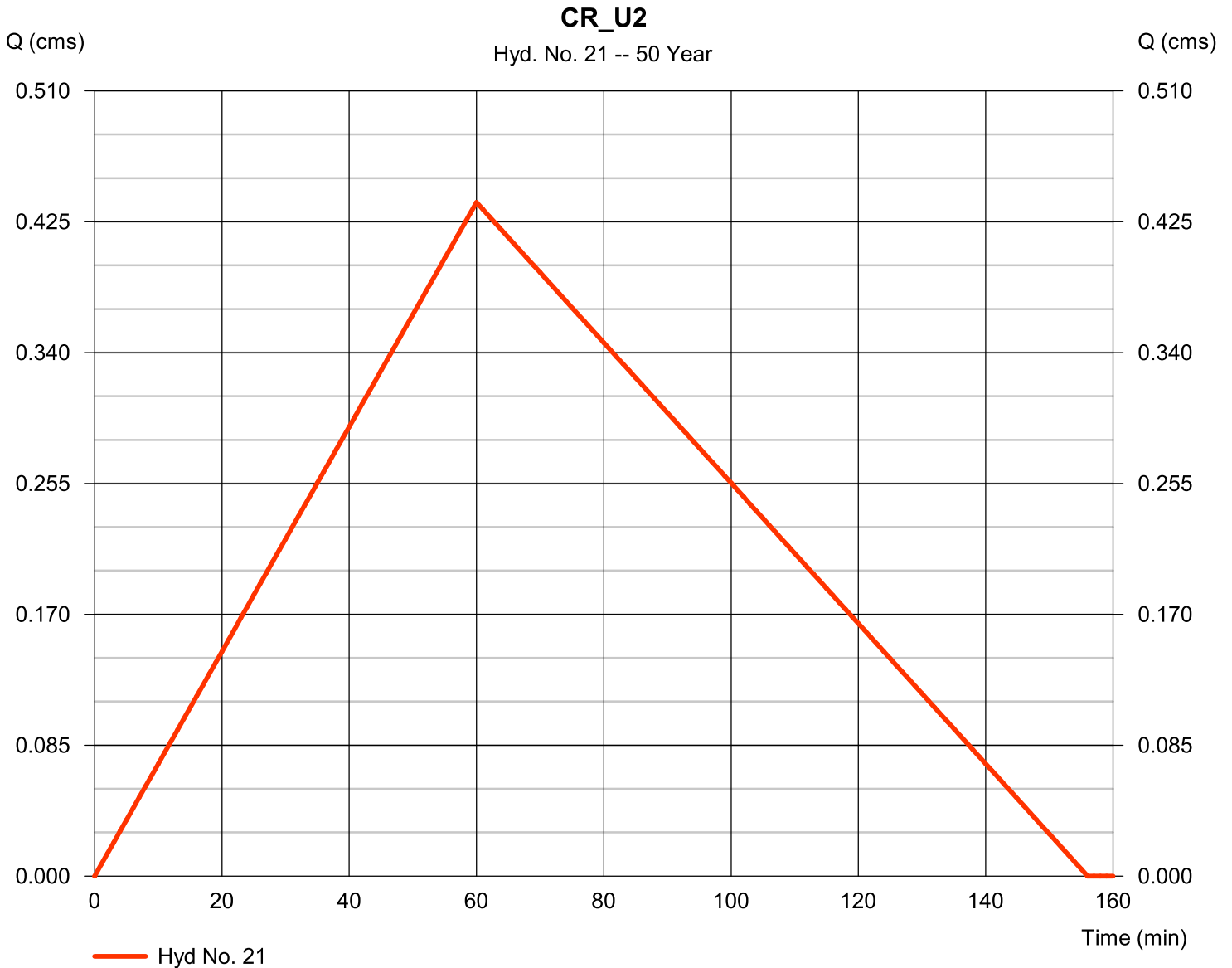
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 21

CR_U2

Hydrograph type	= Rational	Peak discharge	= 0.438 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 047.9 cum
Drainage area	= 18.300 hectare	Runoff coeff.	= 0.31
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

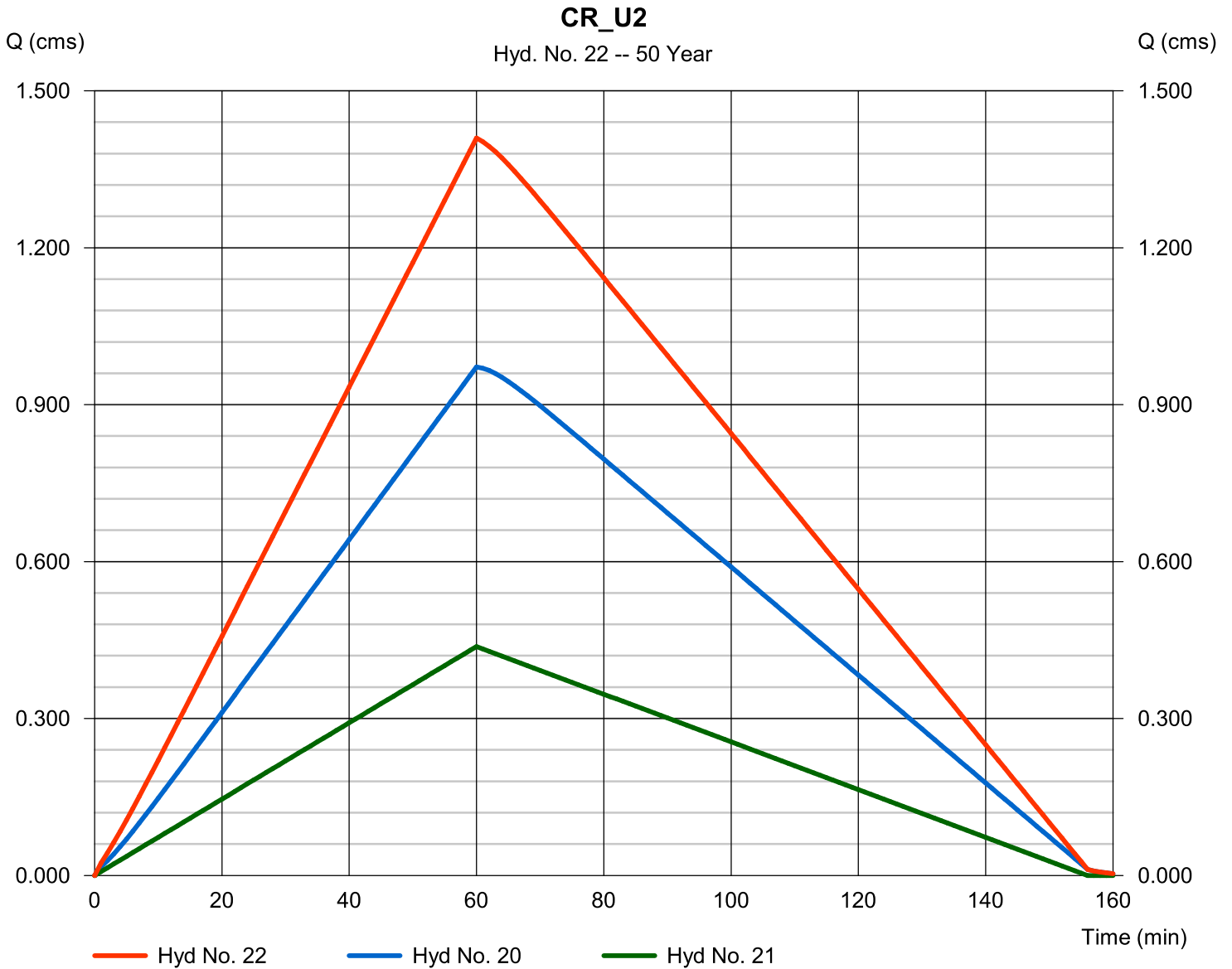
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 22

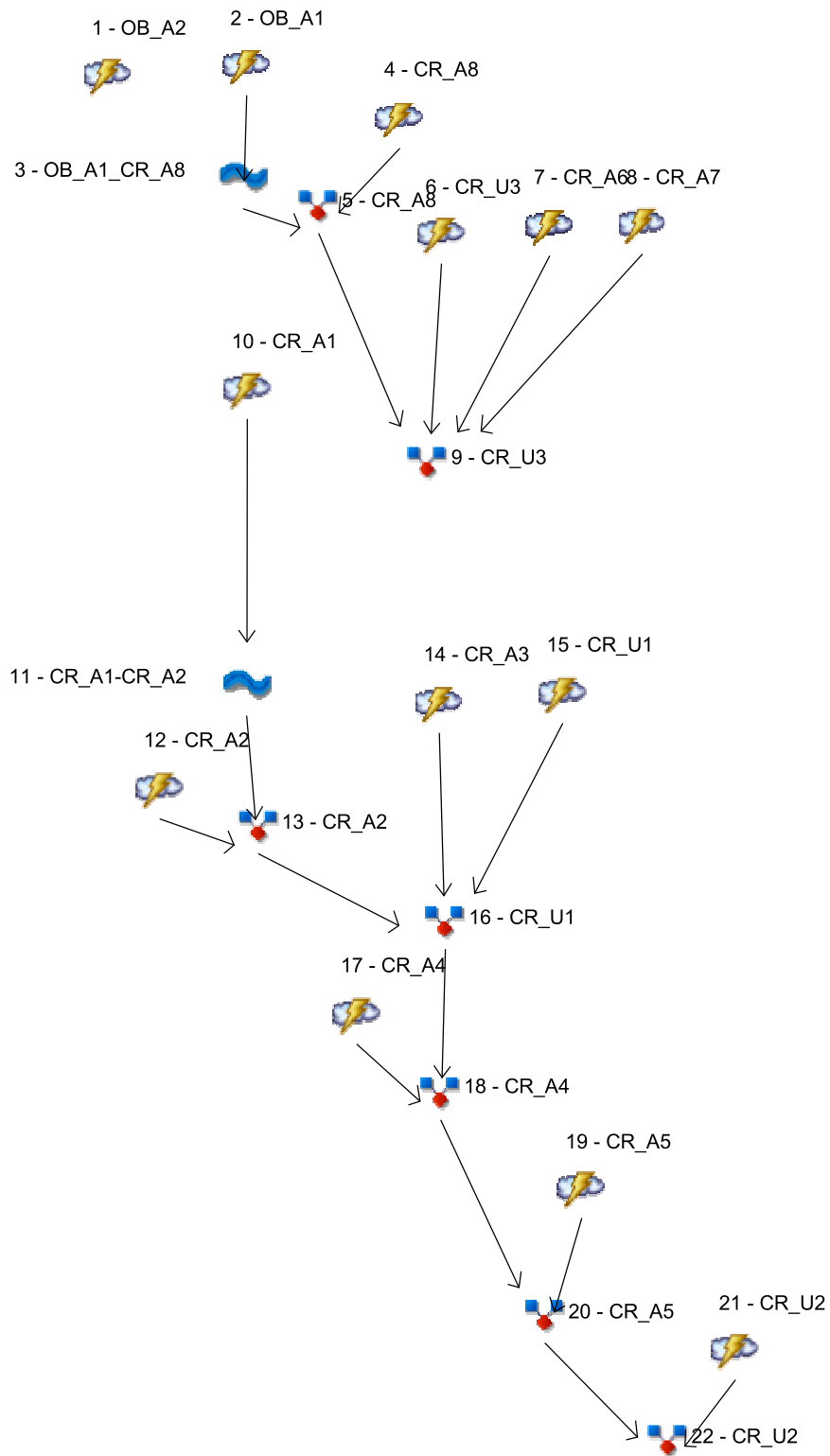
CR_U2

Hydrograph type	= Combine	Peak discharge	= 1.410 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 685.8 cum
Inflow hyds.	= 20, 21	Contrib. drain. area	= 18.300 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cms)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	-----	-----	-----	-----	-----	-----	-----	-----	2.270	OB_A2
2	Rational	-----	-----	-----	-----	-----	-----	-----	-----	5.713	OB_A1
3	Reach	2	-----	-----	-----	-----	-----	-----	-----	5.101	OB_A1_CR_A8
4	Rational	-----	-----	-----	-----	-----	-----	-----	-----	7.262	CR_A8
5	Combine	3, 4	-----	-----	-----	-----	-----	-----	-----	11.93	CR_A8
6	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.046	CR_U3
7	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.092	CR_A6
8	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.030	CR_A7
9	Combine	5, 6, 7, 8	-----	-----	-----	-----	-----	-----	-----	12.09	CR_U3
10	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.353	CR_A1
11	Reach	10	-----	-----	-----	-----	-----	-----	-----	0.342	CR_A1-CR_A2
12	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.304	CR_A2
13	Combine	11, 12	-----	-----	-----	-----	-----	-----	-----	0.638	CR_A2
14	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.180	CR_A3
15	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.060	CR_U1
16	Combine	13, 14, 15	-----	-----	-----	-----	-----	-----	-----	0.876	CR_U1
17	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.208	CR_A4
18	Combine	16, 17	-----	-----	-----	-----	-----	-----	-----	1.084	CR_A4
19	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.085	CR_A5
20	Combine	18, 19	-----	-----	-----	-----	-----	-----	-----	1.169	CR_A5
21	Rational	-----	-----	-----	-----	-----	-----	-----	-----	0.500	CR_U2
22	Combine	20, 21	-----	-----	-----	-----	-----	-----	-----	1.670	CR_U2

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

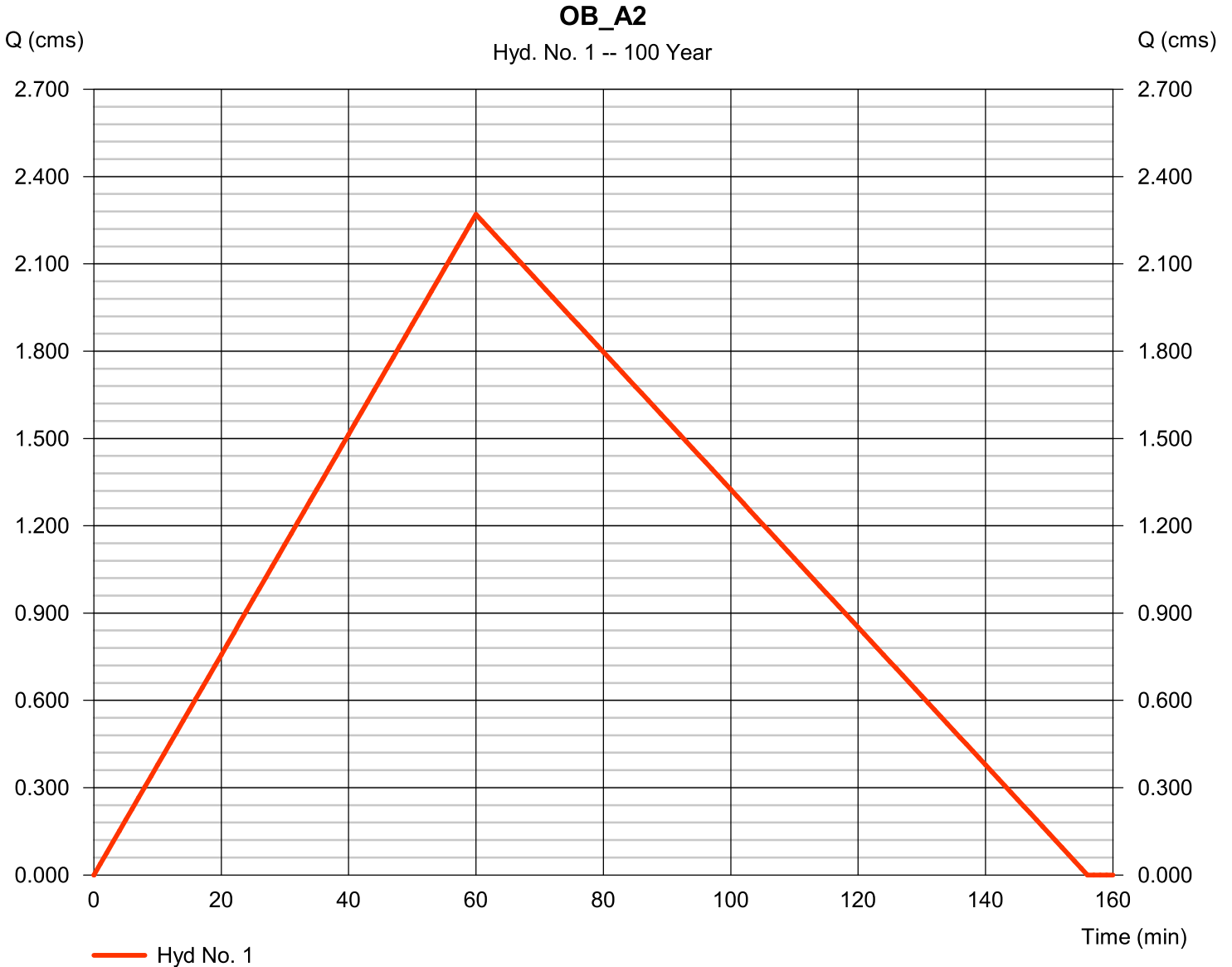
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	2.270	1	60	10 624.2	-----	-----	-----	OB_A2
2	Rational	5.713	1	60	26 735.3	-----	-----	-----	OB_A1
3	Reach	5.101	1	71	26 799.7	2	-----	-----	OB_A1_CR_A8
4	Rational	7.262	1	60	33 986.3	-----	-----	-----	CR_A8
5	Combine	11.93	1	62	60 786.1	3, 4	-----	-----	CR_A8
6	Rational	0.046	1	60	217.3	-----	-----	-----	CR_U3
7	Rational	0.092	1	60	429.2	-----	-----	-----	CR_A6
8	Rational	0.030	1	60	141.5	-----	-----	-----	CR_A7
9	Combine	12.09	1	62	61 574.0	5, 6, 7, 8	-----	-----	CR_U3
10	Rational	0.353	1	60	1 653.6	-----	-----	-----	CR_A1
11	Reach	0.342	1	63	1 654.9	10	-----	-----	CR_A1-CR_A2
12	Rational	0.304	1	60	1 420.6	-----	-----	-----	CR_A2
13	Combine	0.638	1	62	3 075.5	11, 12	-----	-----	CR_A2
14	Rational	0.180	1	60	843.1	-----	-----	-----	CR_A3
15	Rational	0.060	1	60	281.8	-----	-----	-----	CR_U1
16	Combine	0.876	1	61	4 200.4	13, 14, 15	-----	-----	CR_U1
17	Rational	0.208	1	60	974.7	-----	-----	-----	CR_A4
18	Combine	1.084	1	60	5 175.1	16, 17	-----	-----	CR_A4
19	Rational	0.085	1	60	399.9	-----	-----	-----	CR_A5
20	Combine	1.169	1	60	5 575.0	18, 19	-----	-----	CR_A5
21	Rational	0.500	1	60	2 340.5	-----	-----	-----	CR_U2
22	Combine	1.670	1	60	7 915.5	20, 21	-----	-----	CR_U2

Hydrograph Report

Hyd. No. 1

OB_A2

Hydrograph type	= Rational	Peak discharge	= 2.270 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 10 624.2 cum
Drainage area	= 110.760 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

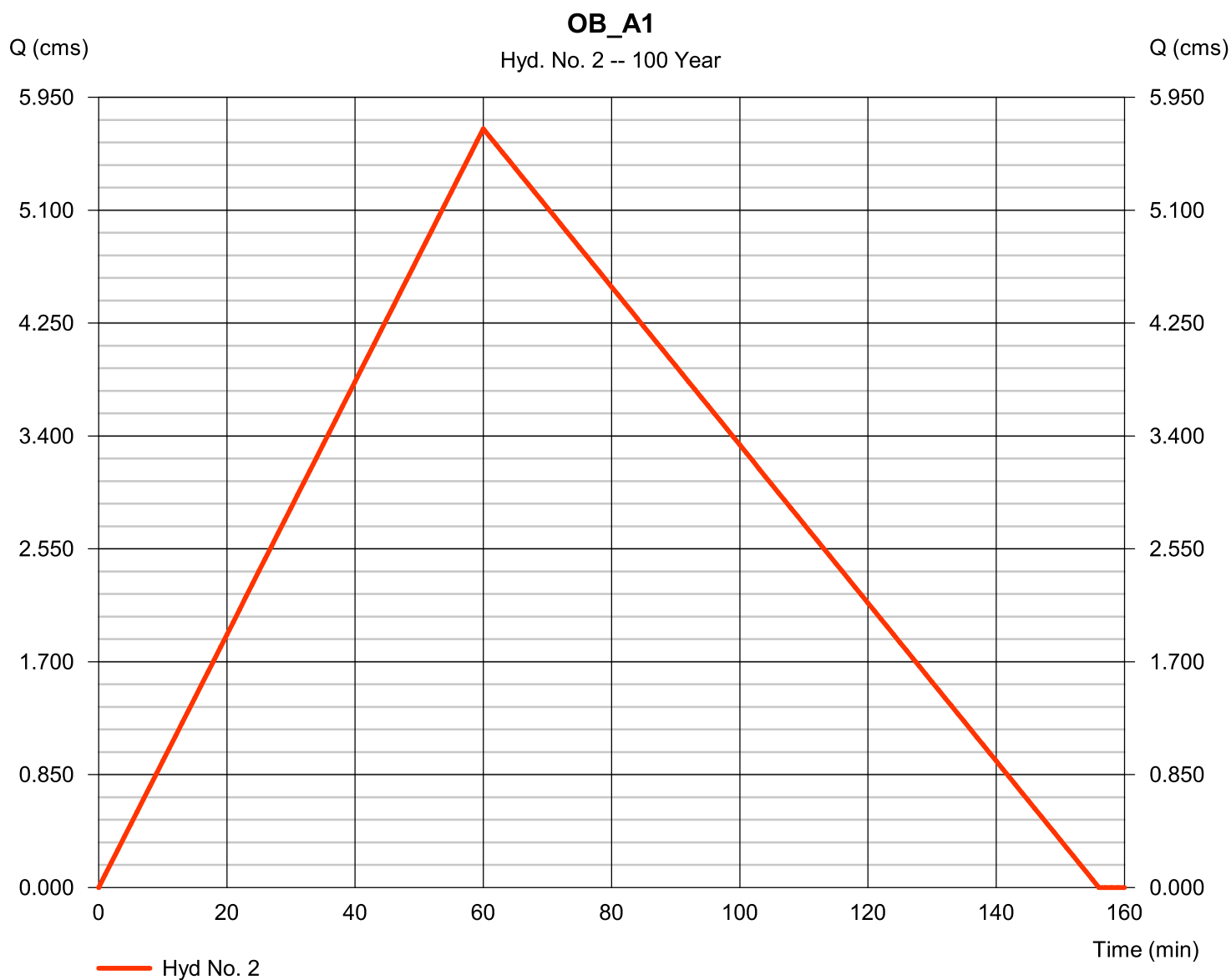
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Hyd. No. 2

OB_A1

Hydrograph type	= Rational	Peak discharge	= 5.713 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 26 735.3 cum
Drainage area	= 290.840 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

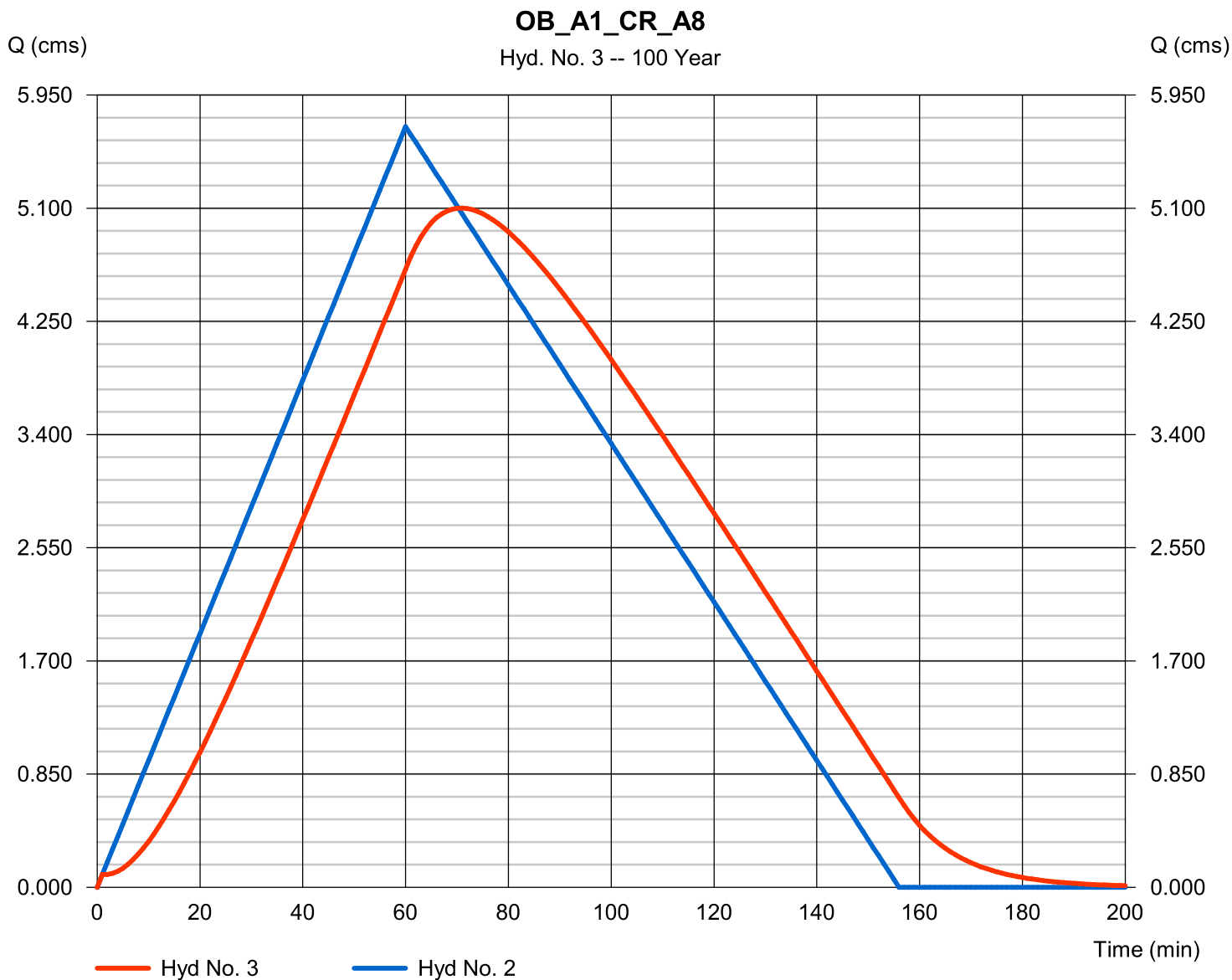
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Hyd. No. 3

OB_A1_CR_A8

Hydrograph type	= Reach	Peak discharge	= 5.101 cms
Storm frequency	= 100 yrs	Time to peak	= 71 min
Time interval	= 1 min	Hyd. volume	= 26 799.7 cum
Inflow hyd. No.	= 2 - OB_A1	Section type	= Trapezoidal
Reach length	= 1840.0 m	Channel slope	= 0.6 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 2.090	Rating curve m	= 1.353
Ave. velocity	= 2.10 m/s	Routing coeff.	= 0.0885

Modified Att-Kin routing method used.



Hydrograph Report

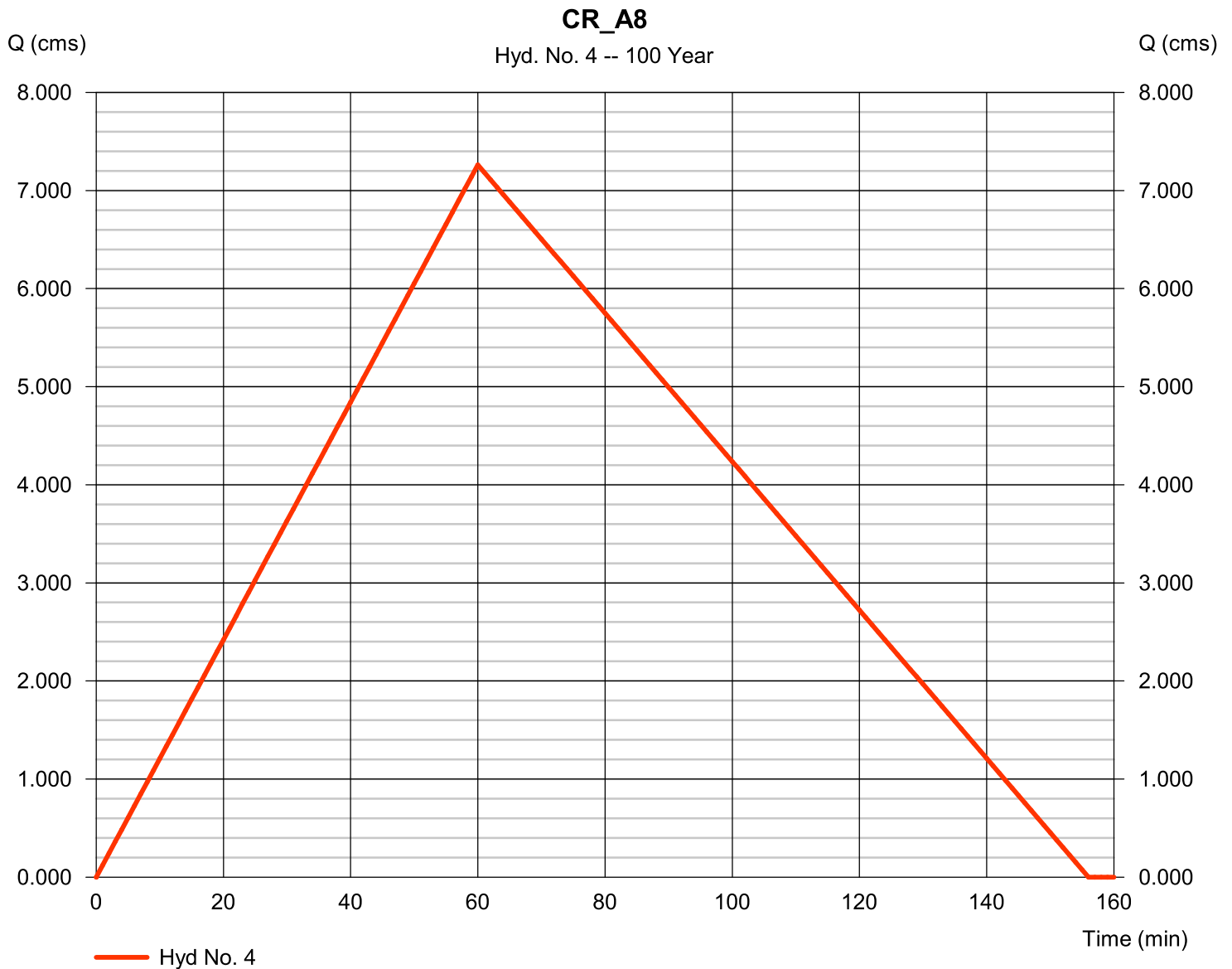
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 4

CR_A8

Hydrograph type	= Rational	Peak discharge	= 7.262 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 33 986.3 cum
Drainage area	= 369.720 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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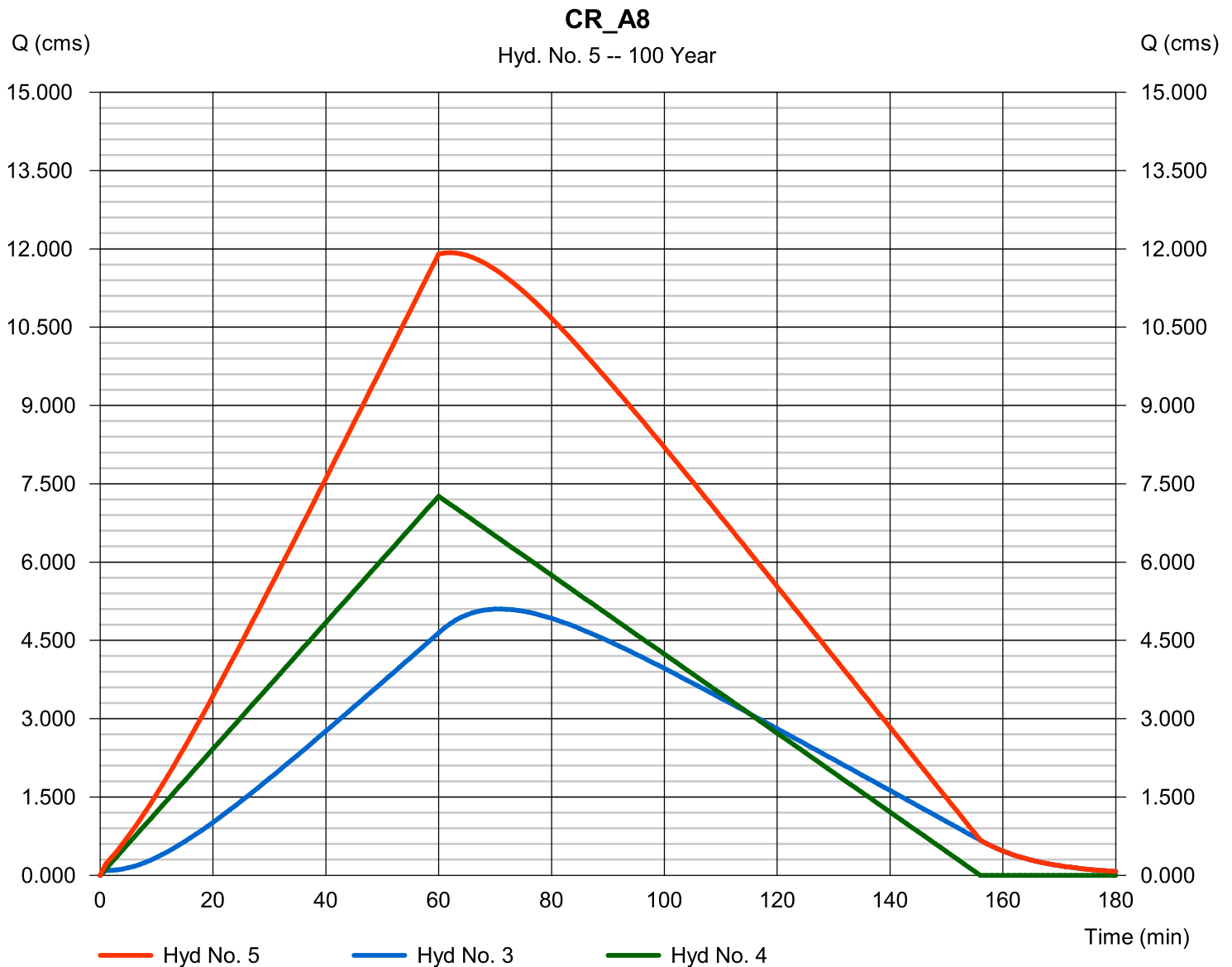
jeudi, avr 5, 2012

Hyd. No. 5

CR_A8

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 3, 4

Peak discharge = 11.93 cms
 Time to peak = 62 min
 Hyd. volume = 60 786.1 cum
 Contrib. drain. area = 369.720 hectare



Hydrograph Report

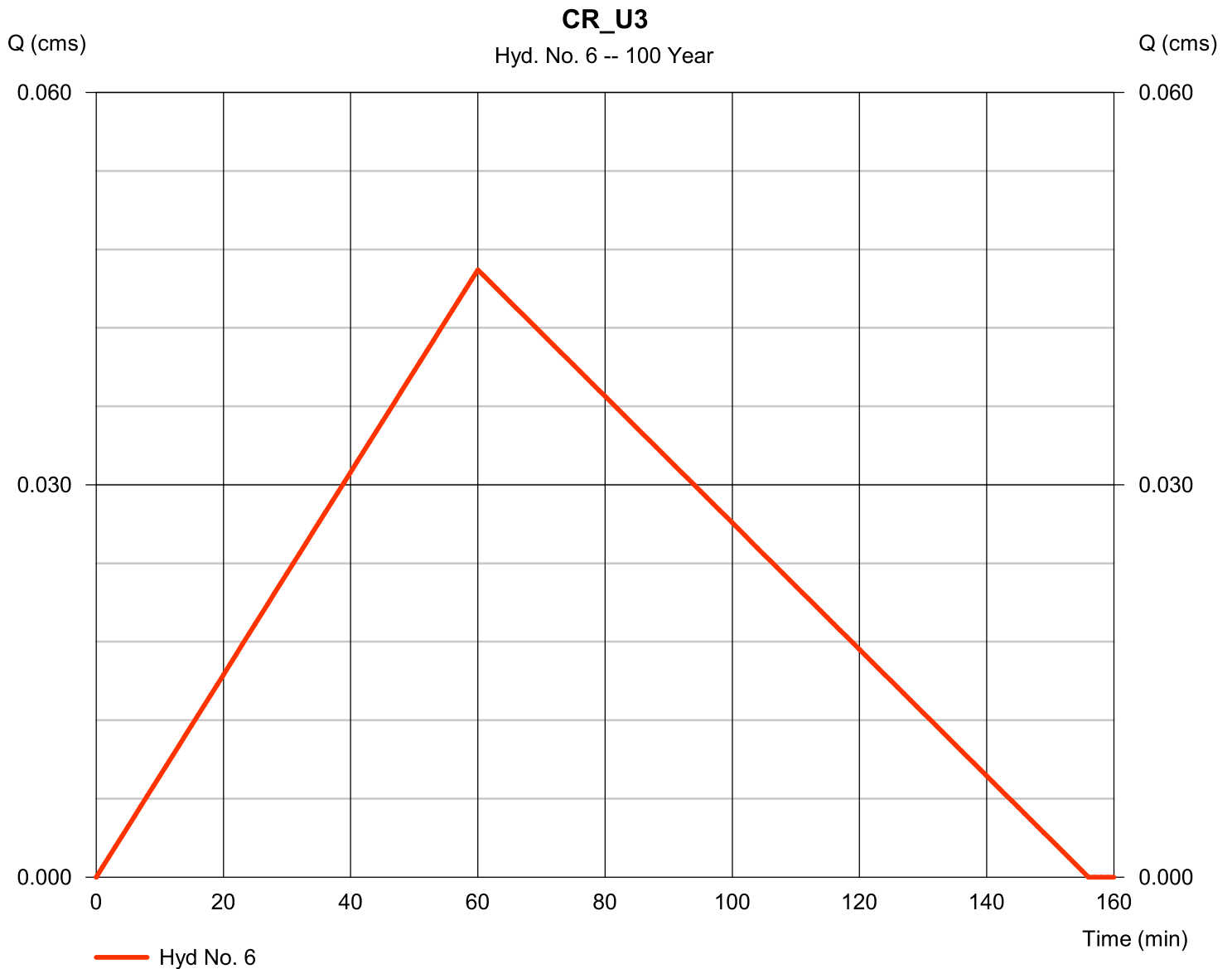
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

CR_U3

Hydrograph type	= Rational	Peak discharge	= 0.046 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 217.3 cum
Drainage area	= 1.026 hectare	Runoff coeff.	= 0.53
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

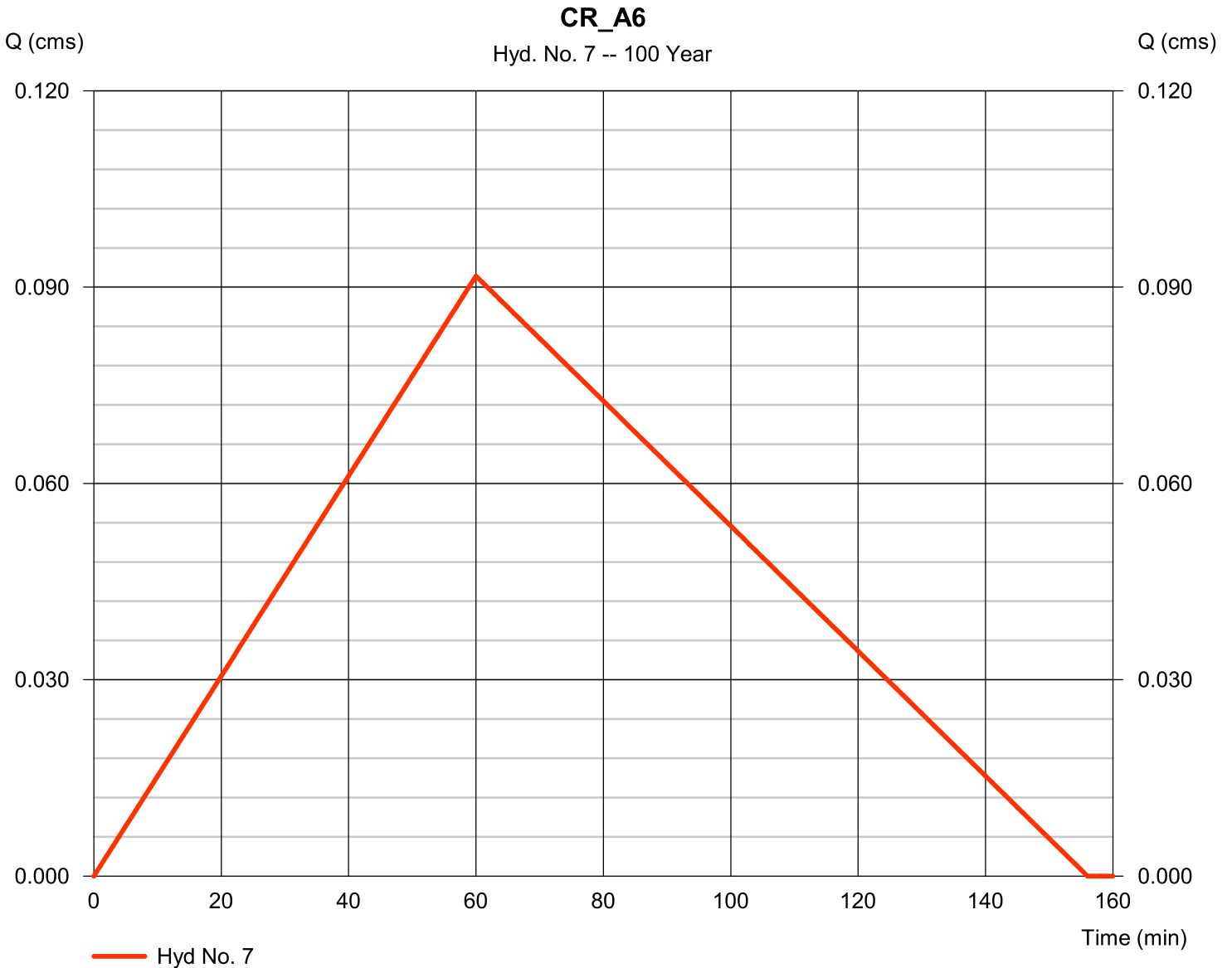
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

CR_A6

Hydrograph type	= Rational	Peak discharge	= 0.092 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 429.2 cum
Drainage area	= 4.130 hectare	Runoff coeff.	= 0.26
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

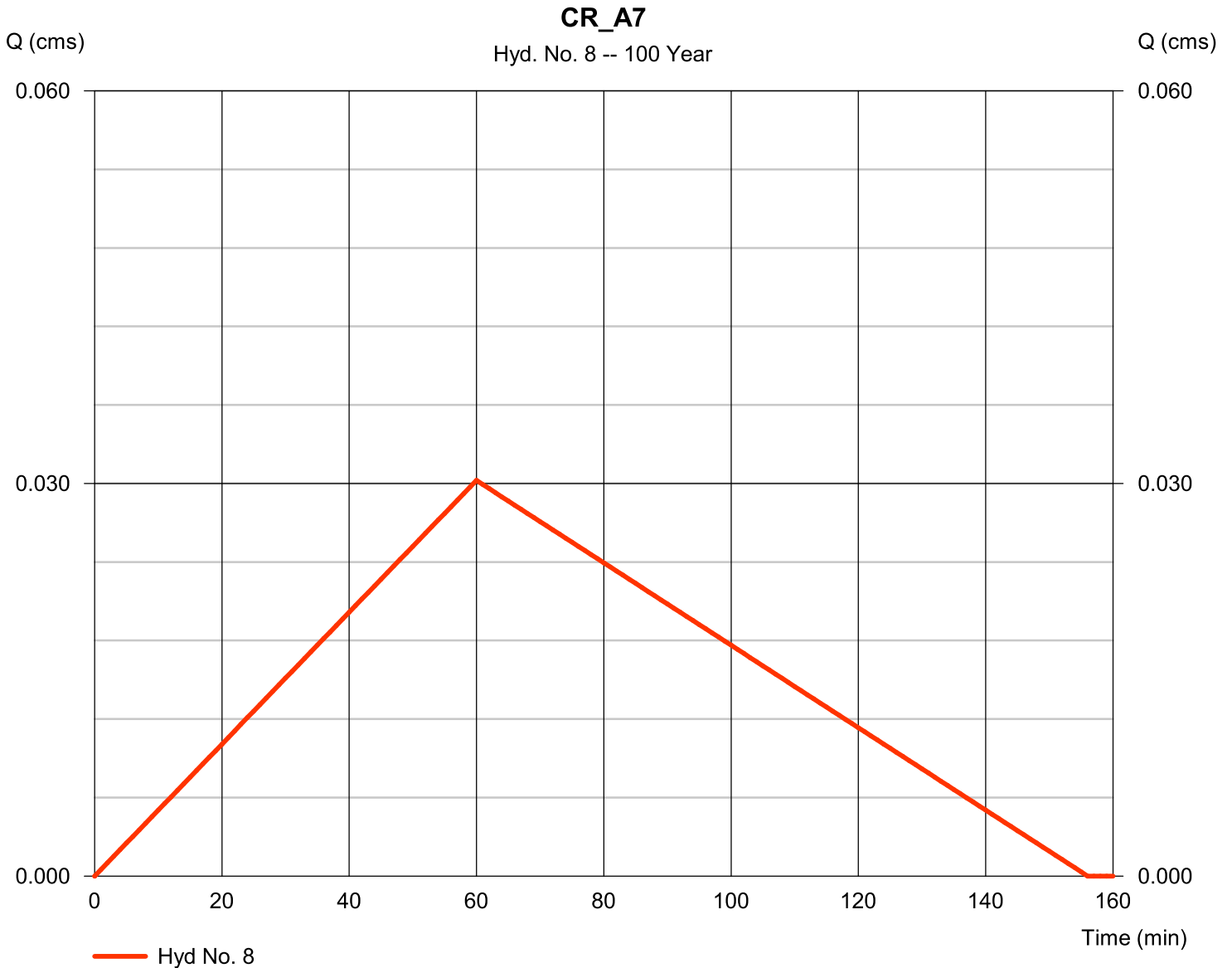
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

CR_A7

Hydrograph type	= Rational	Peak discharge	= 0.030 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 141.5 cum
Drainage area	= 2.360 hectare	Runoff coeff.	= 0.15
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

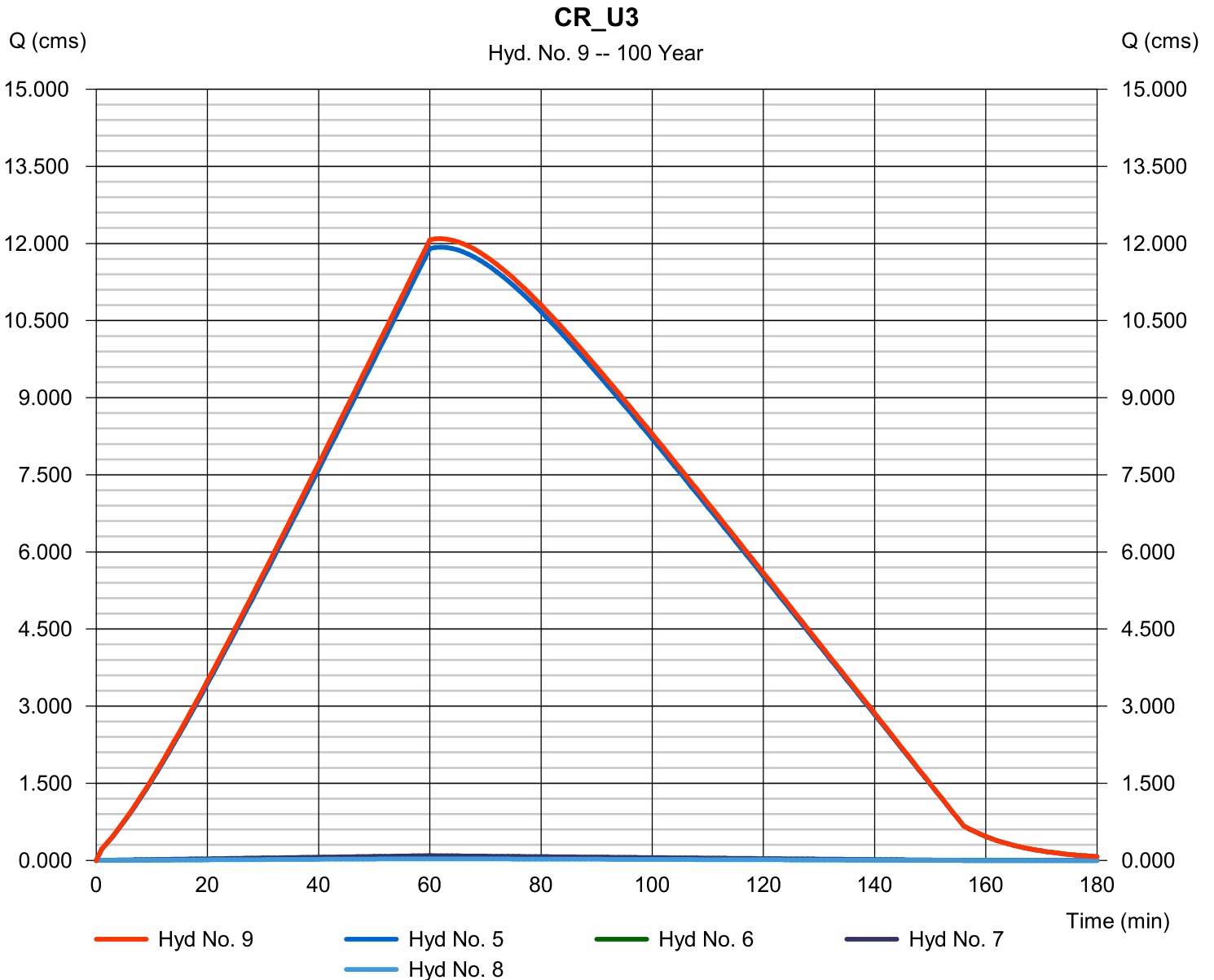
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Hyd. No. 9

CR_U3

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 5, 6, 7, 8

Peak discharge = 12.09 cms
 Time to peak = 62 min
 Hyd. volume = 61 574.0 cum
 Contrib. drain. area = 7.516 hectare



Hydrograph Report

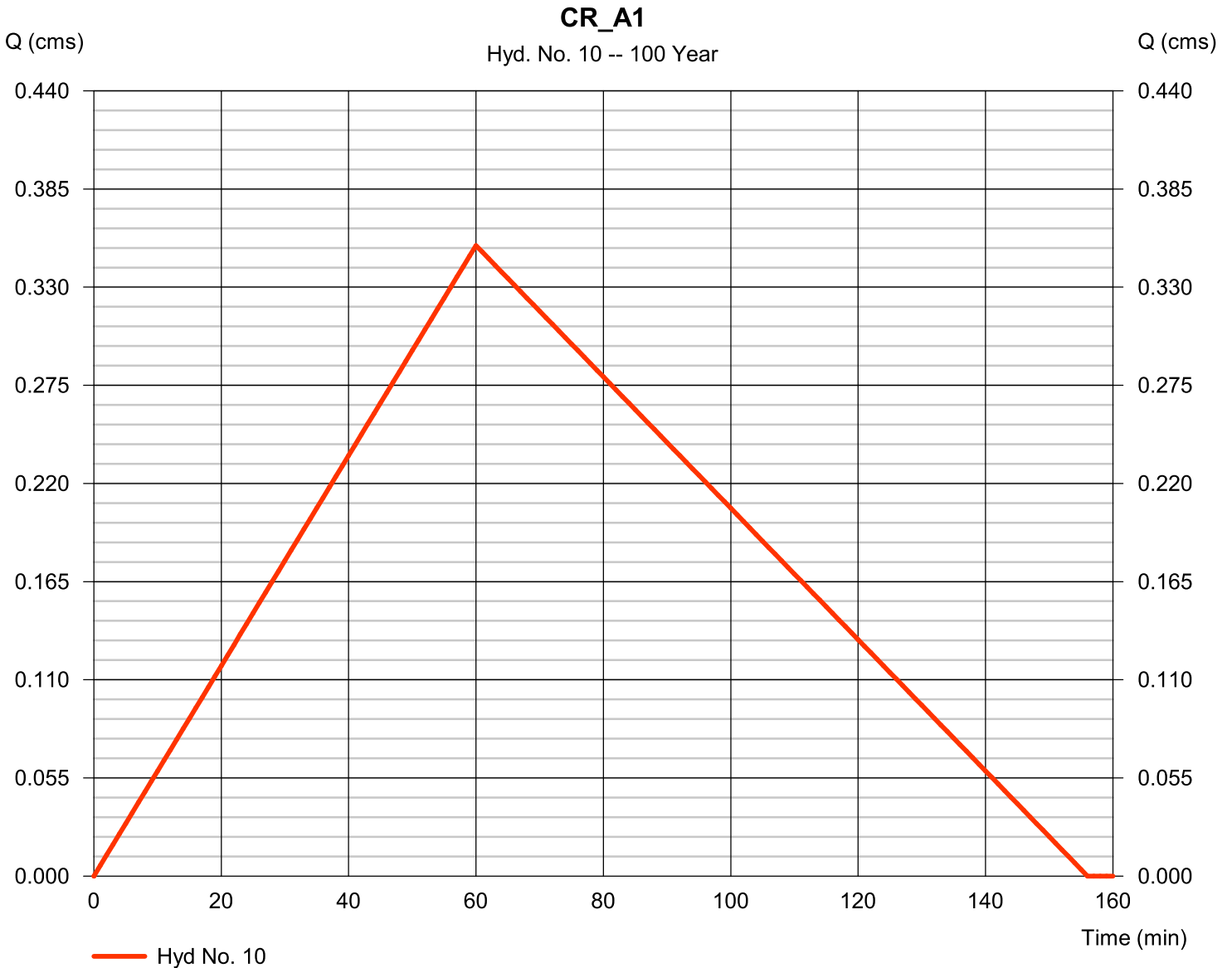
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Hyd. No. 10

CR_A1

Hydrograph type	= Rational	Peak discharge	= 0.353 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 653.6 cum
Drainage area	= 16.550 hectare	Runoff coeff.	= 0.25
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



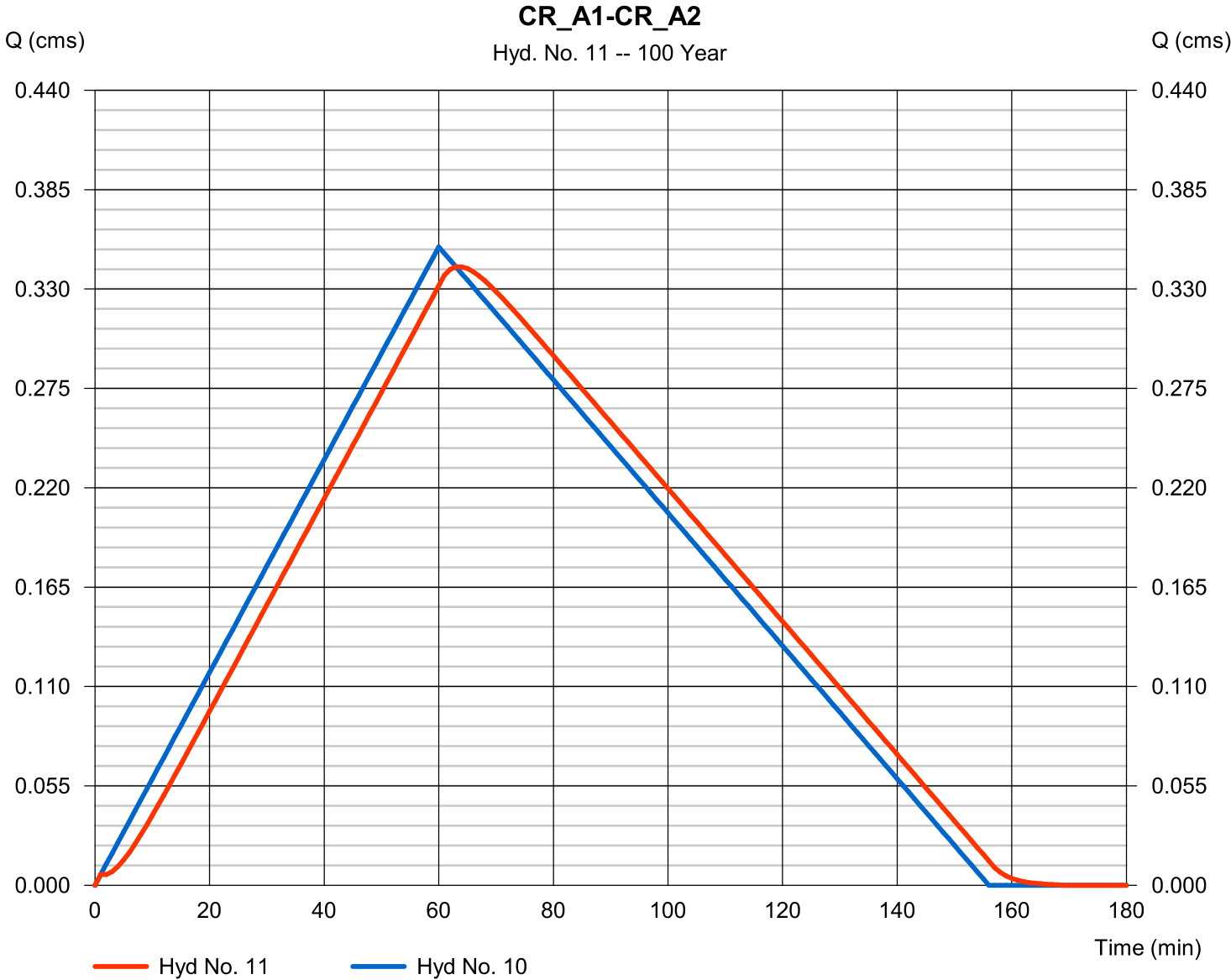
Hydrograph Report

Hyd. No. 11

CR_A1-CR_A2

Hydrograph type	= Reach	Peak discharge	= 0.342 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 1 654.9 cum
Inflow hyd. No.	= 10 - CR_A1	Section type	= Trapezoidal
Reach length	= 460.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 1.79 m/s	Routing coeff.	= 0.2733

Modified Att-Kin routing method used.



Hydrograph Report

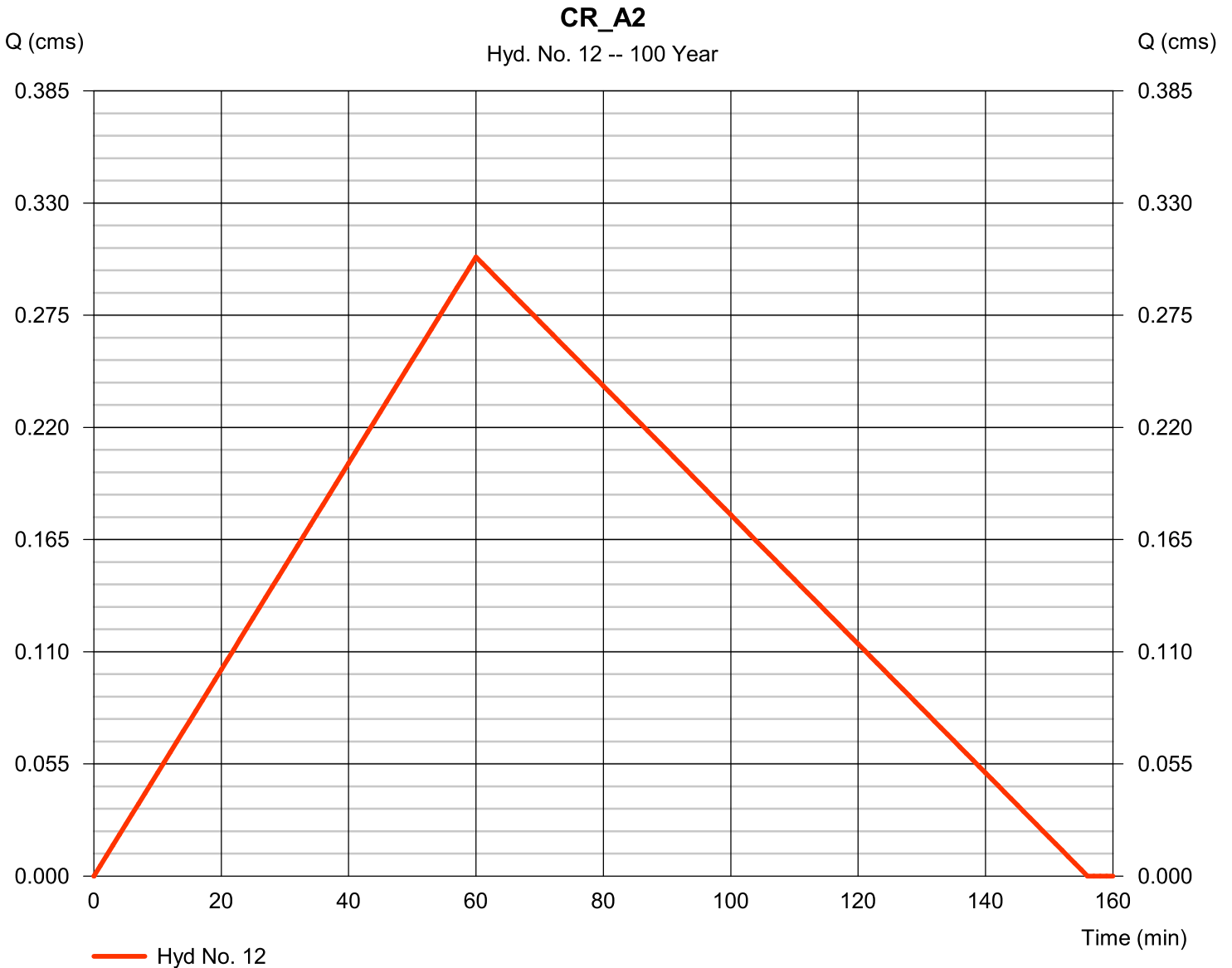
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Hyd. No. 12

CR_A2

Hydrograph type	= Rational	Peak discharge	= 0.304 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 420.6 cum
Drainage area	= 14.810 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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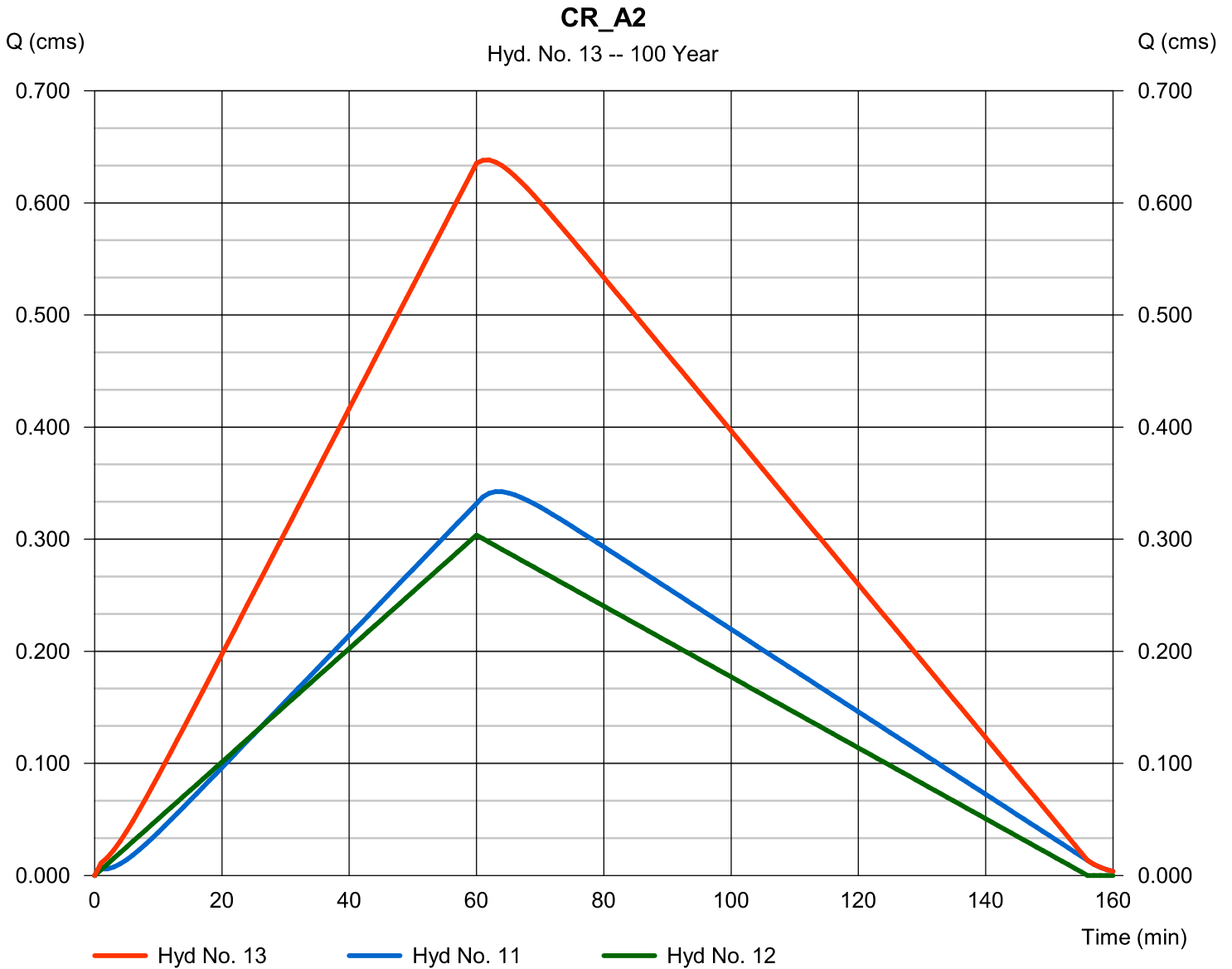
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Hyd. No. 13

CR_A2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 11, 12

Peak discharge = 0.638 cms
Time to peak = 62 min
Hyd. volume = 3 075.5 cum
Contrib. drain. area = 14.810 hectare



Hydrograph Report

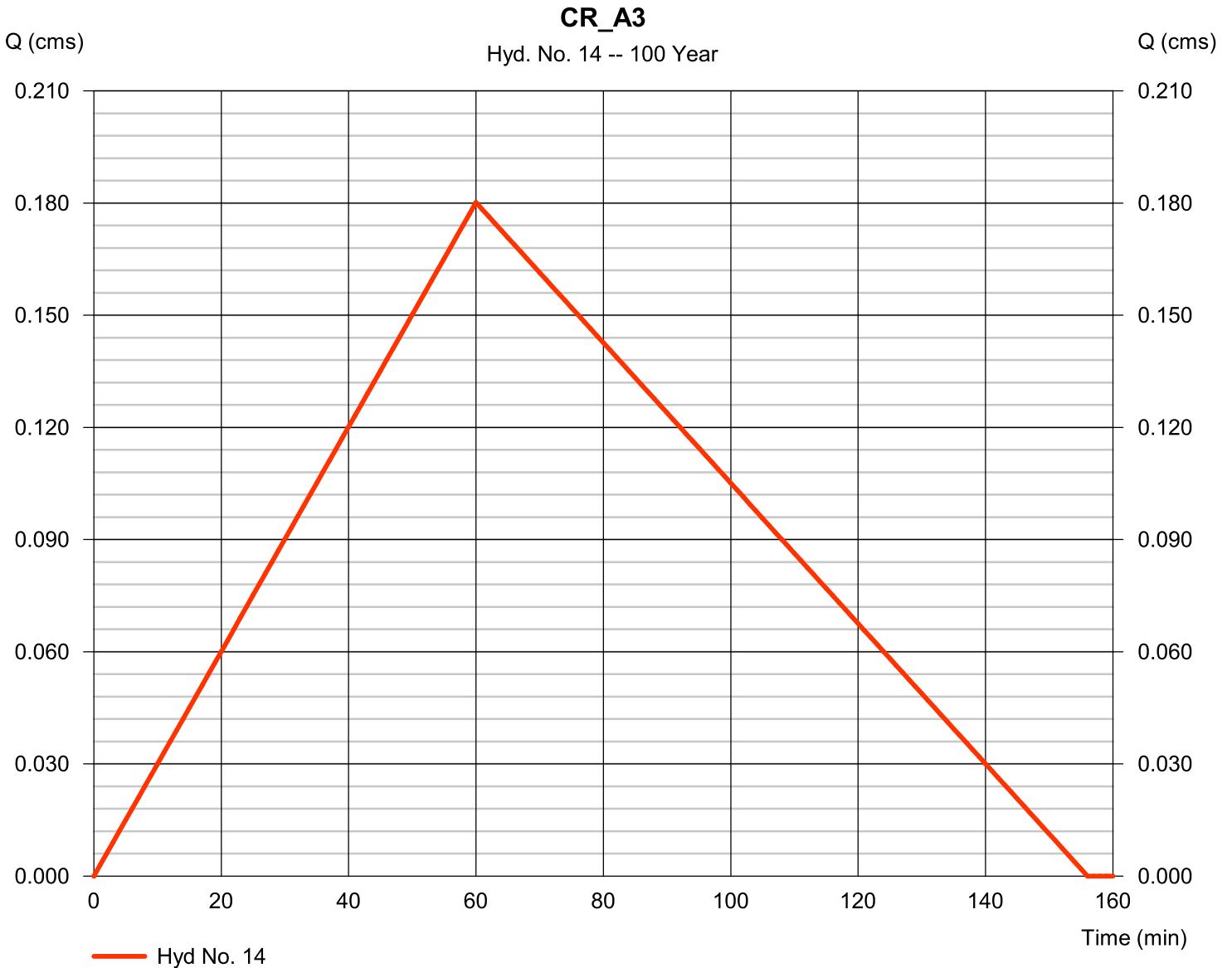
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

CR_A3

Hydrograph type	= Rational	Peak discharge	= 0.180 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 843.1 cum
Drainage area	= 8.790 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

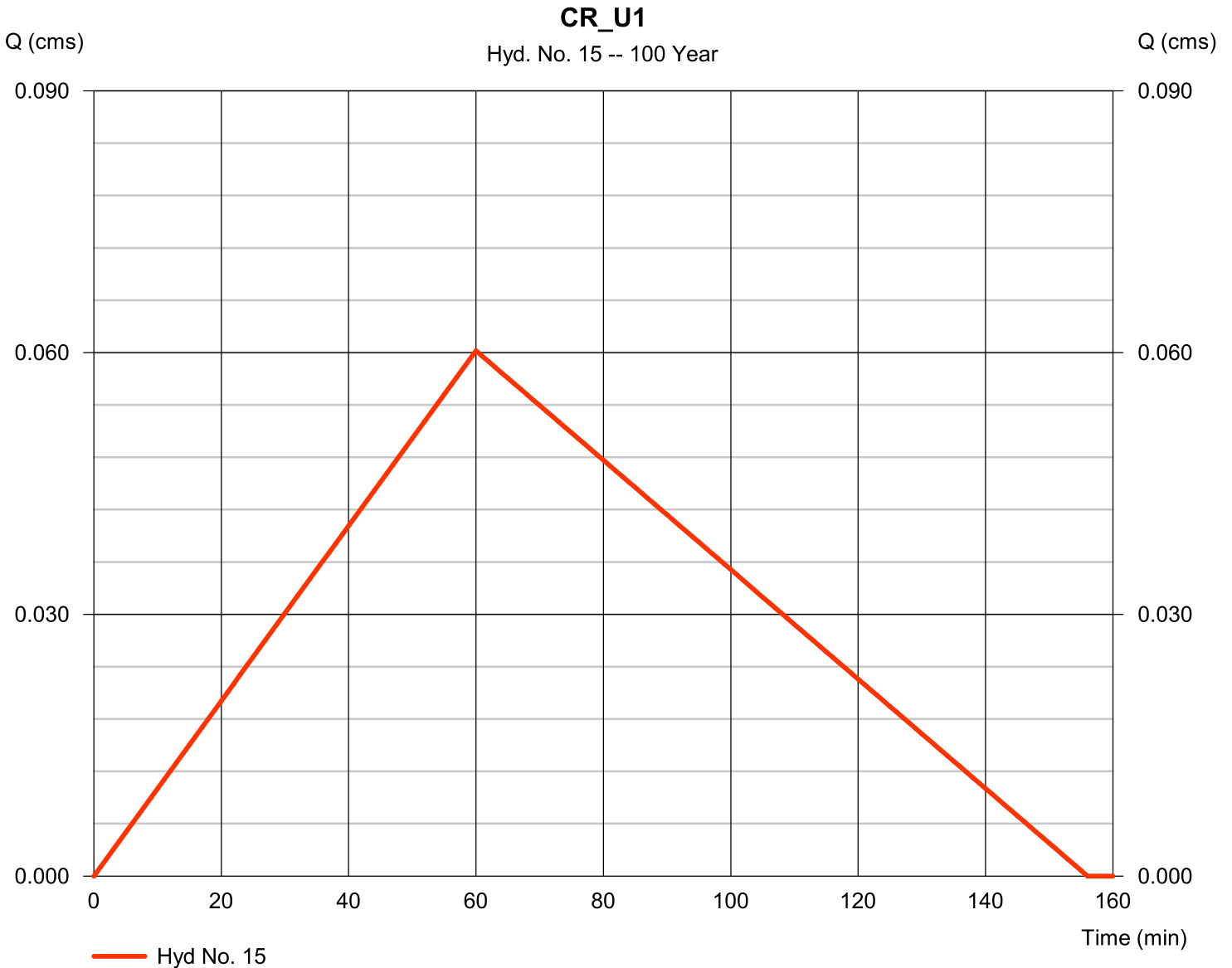
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 15

CR_U1

Hydrograph type	= Rational	Peak discharge	= 0.060 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 281.8 cum
Drainage area	= 2.350 hectare	Runoff coeff.	= 0.3
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

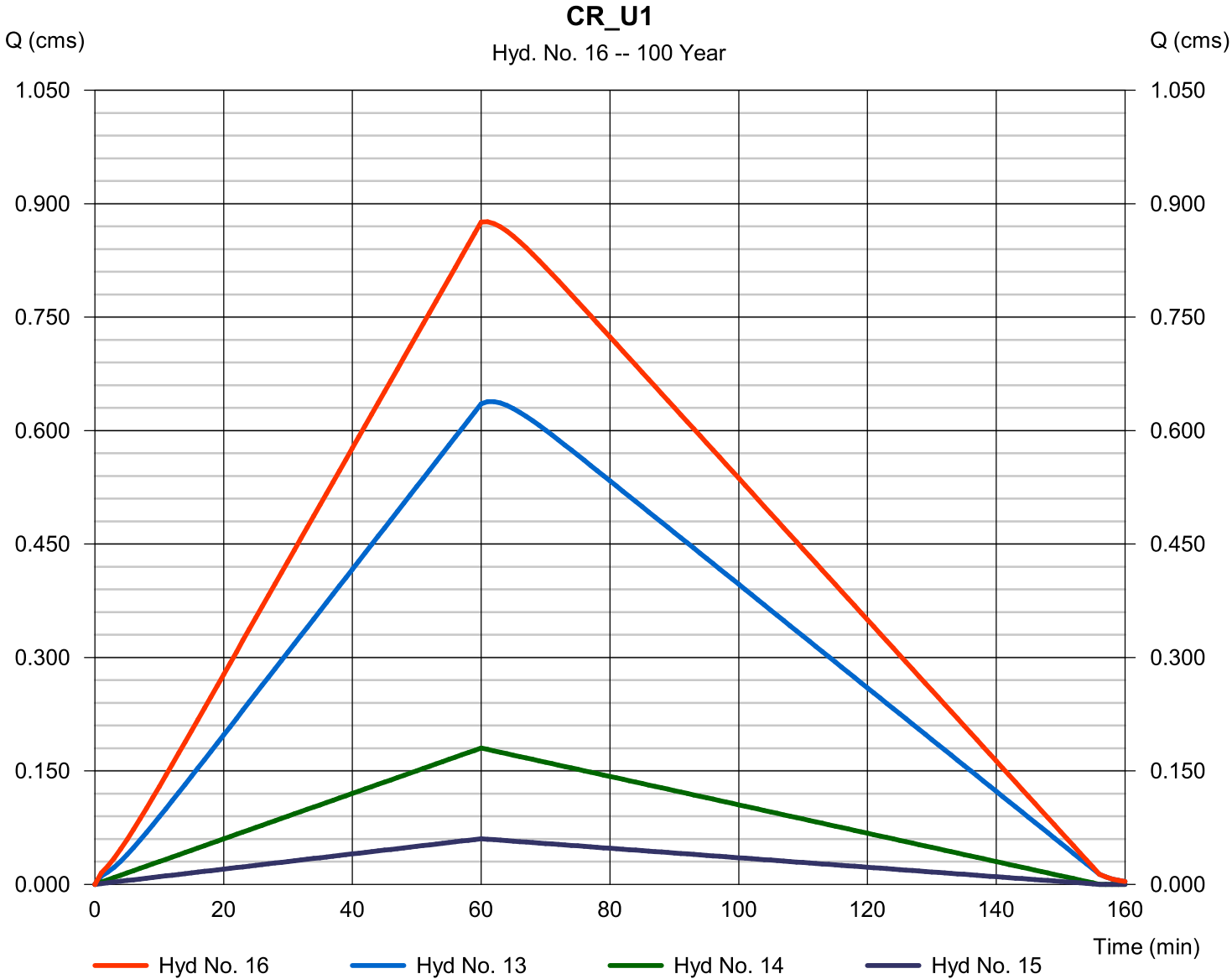
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Hyd. No. 16

CR_U1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 13, 14, 15

Peak discharge = 0.876 cms
Time to peak = 61 min
Hyd. volume = 4 200.4 cum
Contrib. drain. area = 11.140 hectare



Hydrograph Report

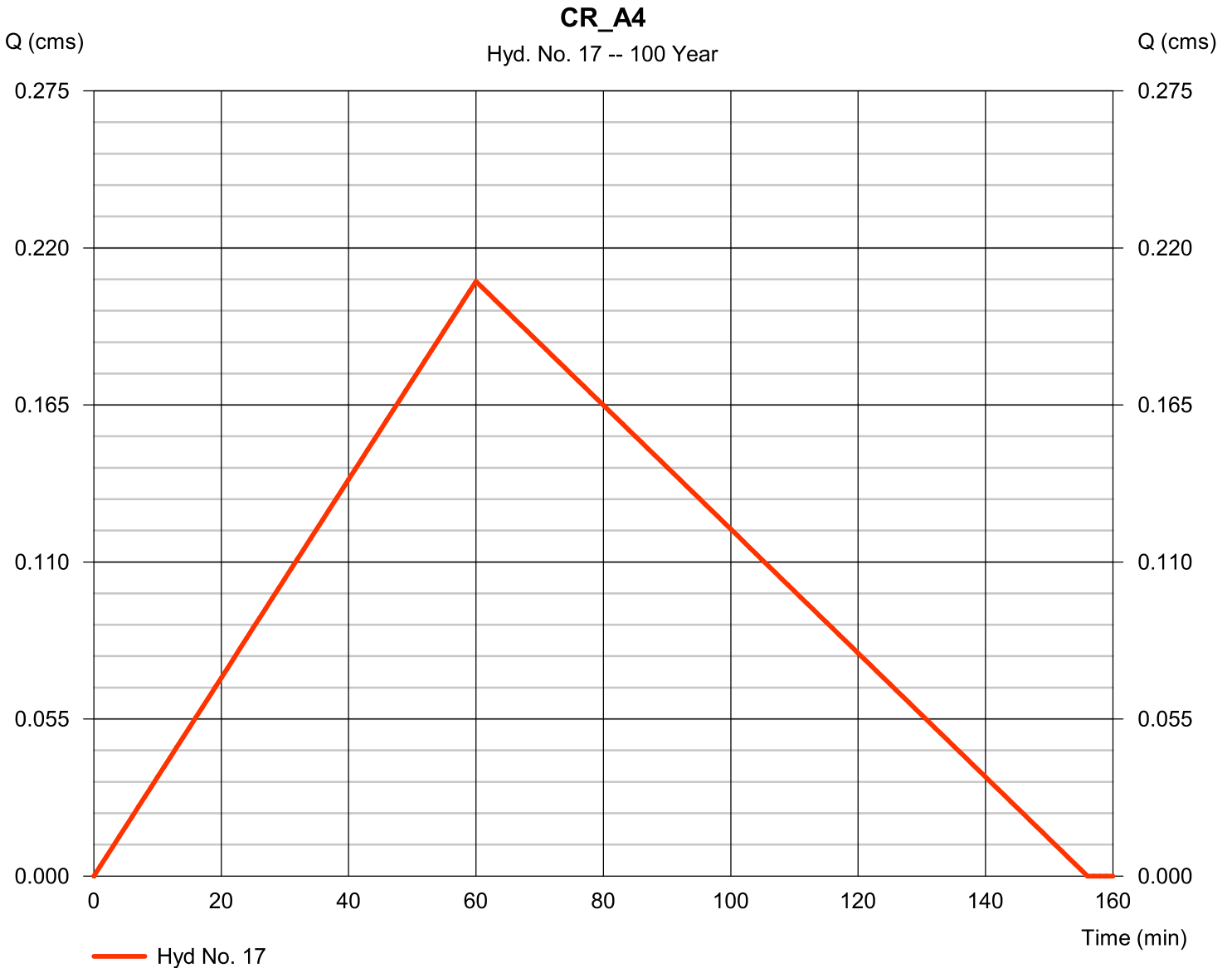
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 17

CR_A4

Hydrograph type	= Rational	Peak discharge	= 0.208 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 974.7 cum
Drainage area	= 9.380 hectare	Runoff coeff.	= 0.26
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

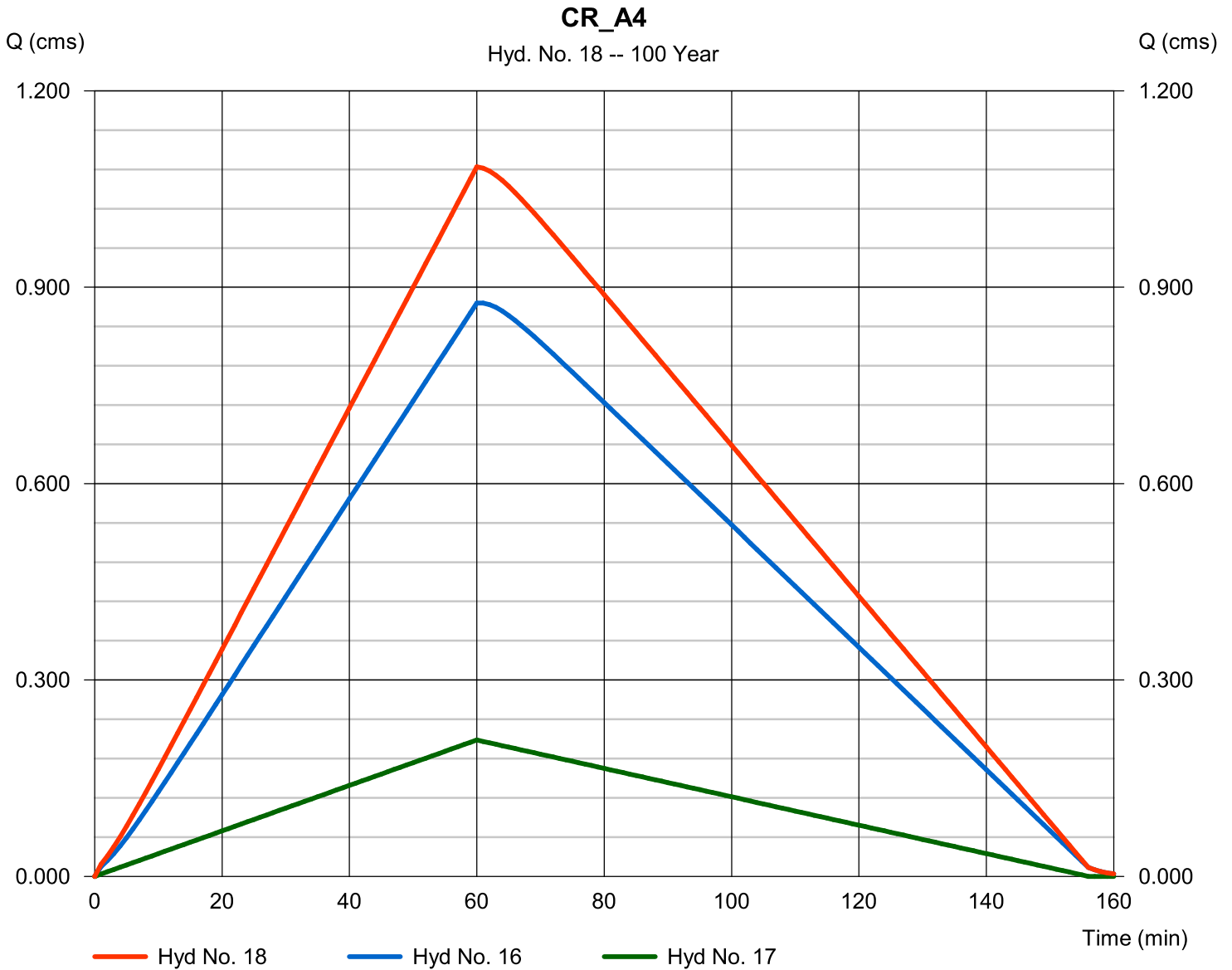
jeudi, avr 5, 2012

Hyd. No. 18

CR_A4

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 16, 17

Peak discharge = 1.084 cms
 Time to peak = 60 min
 Hyd. volume = 5 175.1 cum
 Contrib. drain. area = 9.380 hectare



Hydrograph Report

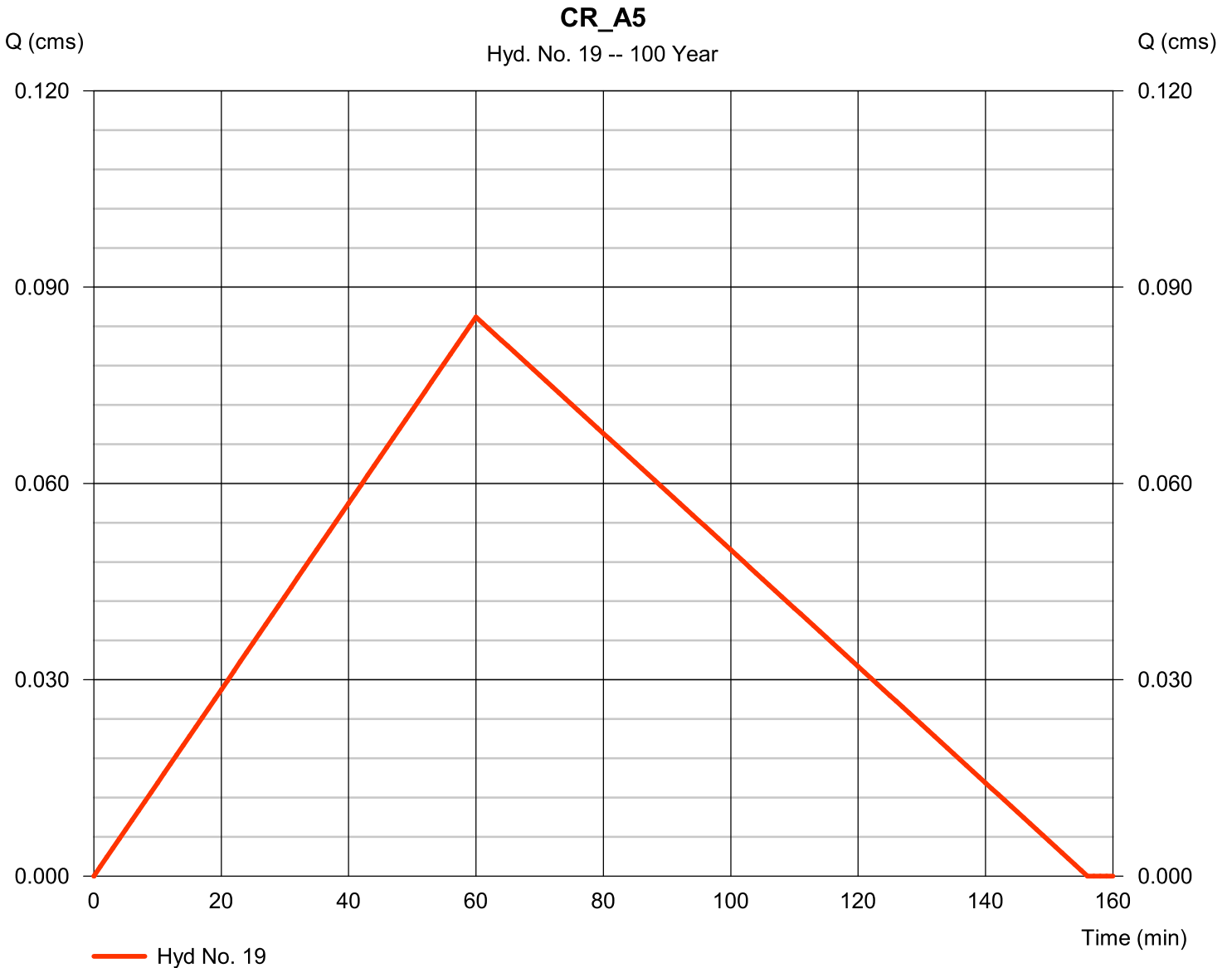
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 19

CR_A5

Hydrograph type	= Rational	Peak discharge	= 0.085 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 399.9 cum
Drainage area	= 4.350 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

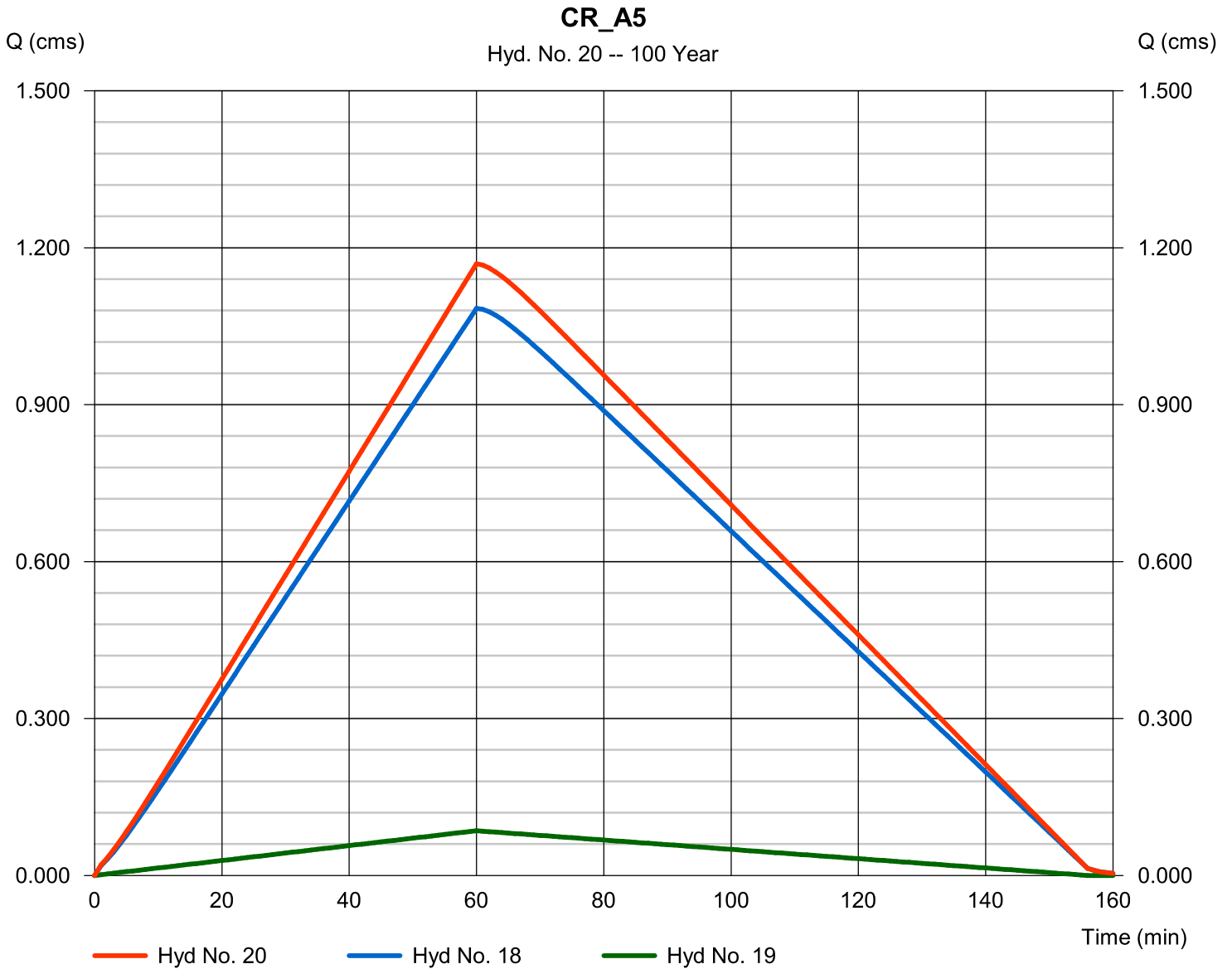
jeudi, avr 5, 2012

Hyd. No. 20

CR_A5

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 1 min
 Inflow hyds. = 18, 19

Peak discharge = 1.169 cms
 Time to peak = 60 min
 Hyd. volume = 5 575.0 cum
 Contrib. drain. area = 4.350 hectare



Hydrograph Report

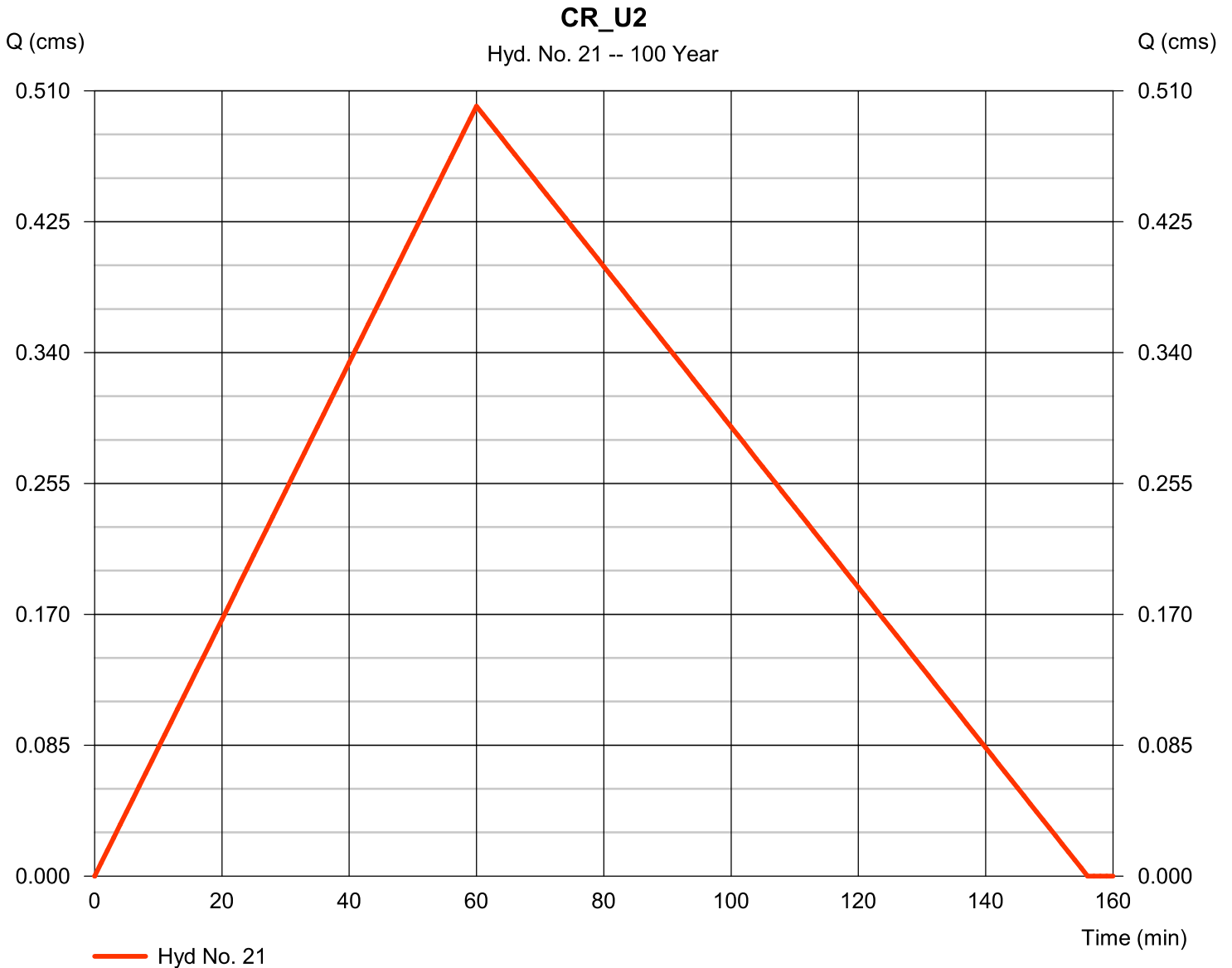
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

jeudi, avr 5, 2012

Hyd. No. 21

CR_U2

Hydrograph type	= Rational	Peak discharge	= 0.500 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 340.5 cum
Drainage area	= 18.300 hectare	Runoff coeff.	= 0.32
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

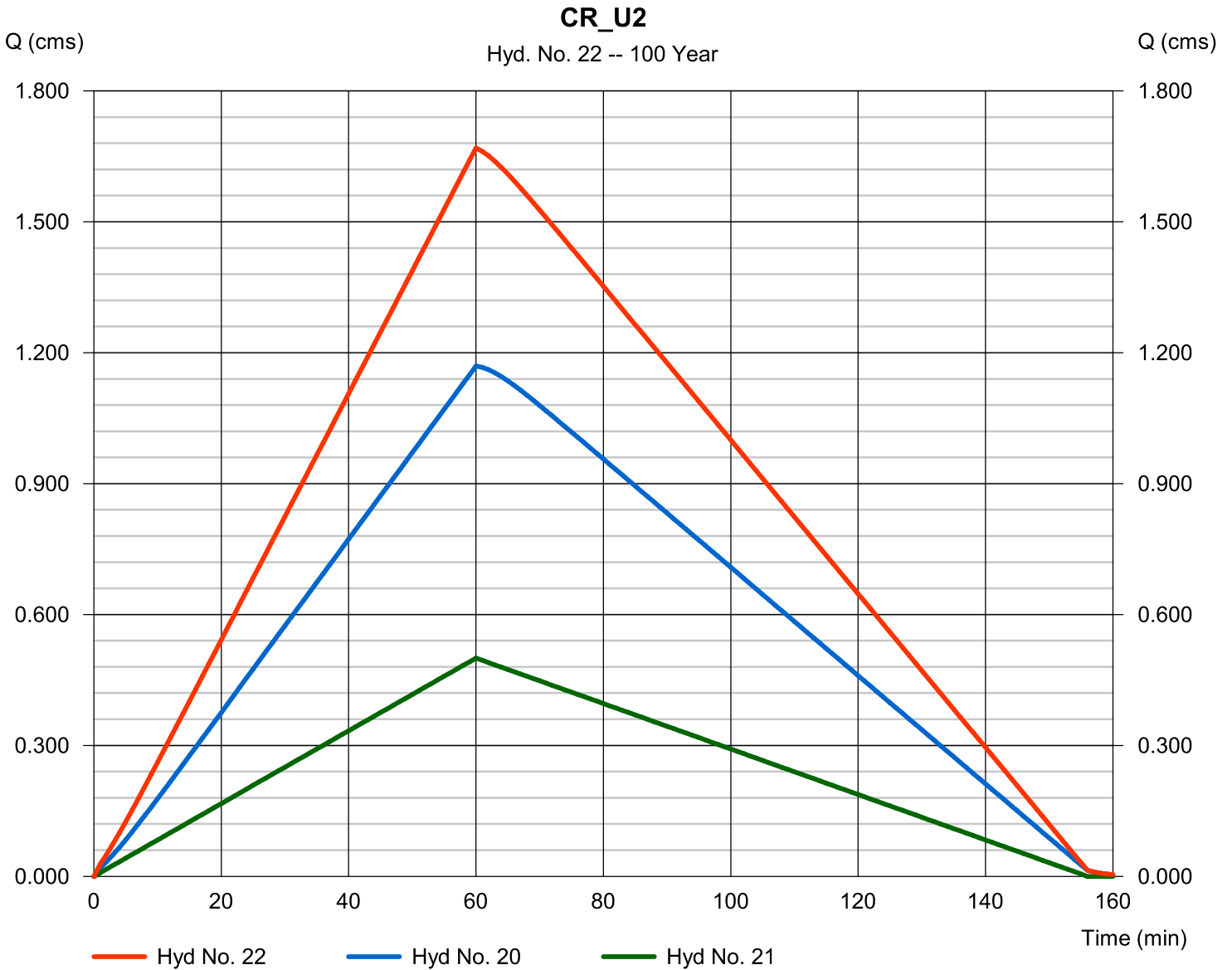
jeudi, avr 5, 2012

Hyd. No. 22

CR_U2

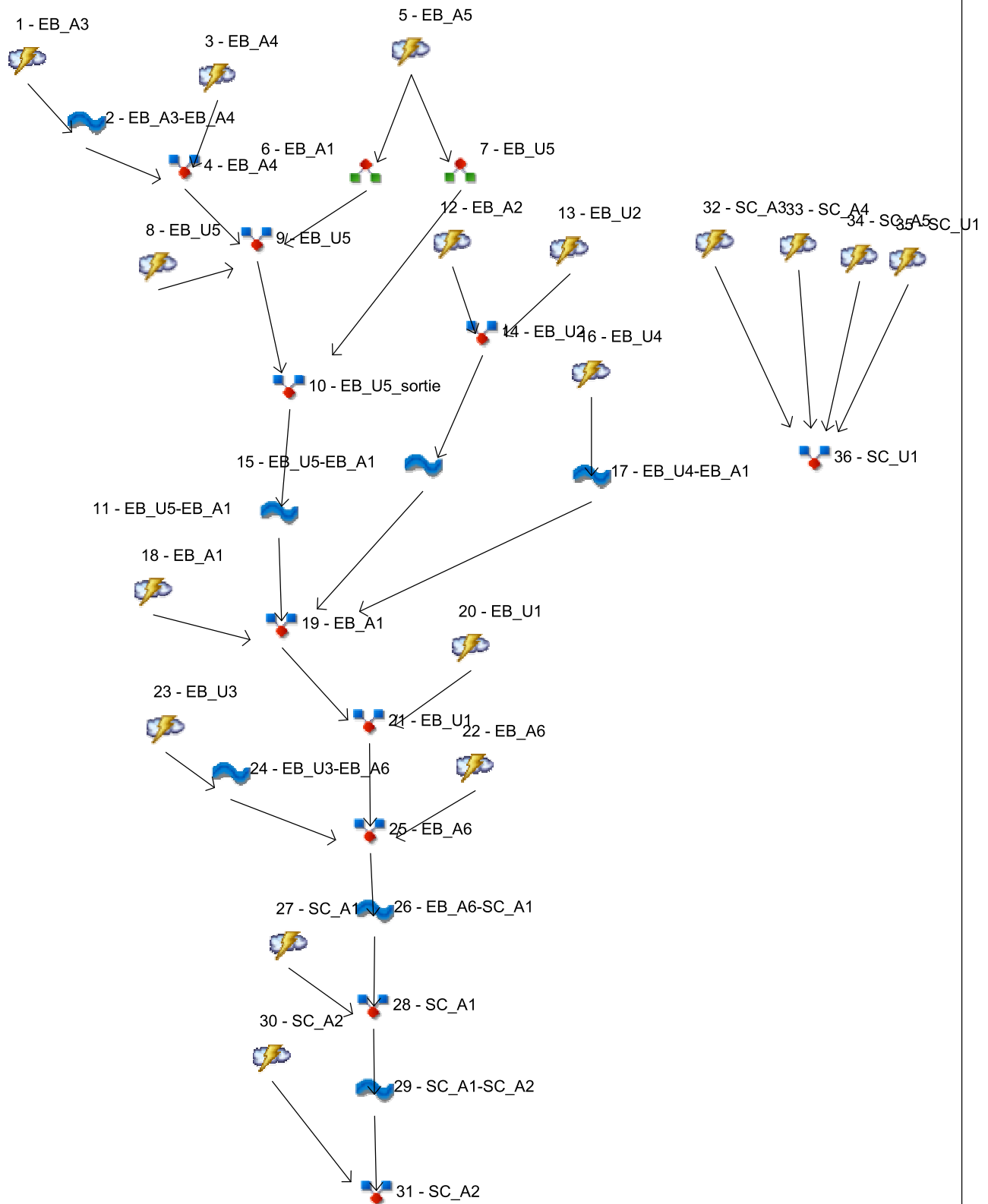
Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 20, 21

Peak discharge = 1.670 cms
Time to peak = 60 min
Hyd. volume = 7 915.5 cum
Contrib. drain. area = 18.300 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.212	1	60	991.7	-----	-----	-----	EB_A3
2	Reach	0.208	1	62	992.3	1	-----	-----	EB_A3-EB_A4
3	Rational	0.434	1	60	2 030.2	-----	-----	-----	EB_A4
4	Combine	0.637	1	60	3 022.4	2, 3	-----	-----	EB_A4
5	Rational	0.083	1	60	386.1	-----	-----	-----	EB_A5
6	Diversion1	0.083	1	60	386.1	5	-----	-----	EB_A1
7	Diversion2	0.000	1	n/a	0.0	5	-----	-----	EB_U5
8	Rational	0.043	1	60	199.6	-----	-----	-----	EB_U5
9	Combine	0.762	1	60	3 608.1	4, 6, 8	-----	-----	EB_U5
10	Combine	0.762	1	60	3 608.1	7, 9	-----	-----	EB_U5_sortie
11	Reach	0.740	1	65	3 611.2	10	-----	-----	EB_U5-EB_A1
12	Rational	0.284	1	60	1 328.5	-----	-----	-----	EB_A2
13	Rational	0.140	1	60	655.2	-----	-----	-----	EB_U2
14	Combine	0.424	1	60	1 983.8	12, 13	-----	-----	EB_U2
15	Reach	0.414	1	63	1 985.0	14	-----	-----	EB_U5-EB_A1
16	Rational	0.139	1	60	652.1	-----	-----	-----	EB_U4
17	Reach	0.137	1	62	652.4	16	-----	-----	EB_U4-EB_A1
18	Rational	0.118	1	60	551.9	-----	-----	-----	EB_A1
19	Combine	1.402	1	63	6 800.5	11, 15, 17, 18	-----	-----	EB_A1
20	Rational	0.314	1	60	1 469.2	-----	-----	-----	EB_U1
21	Combine	1.706	1	63	8 269.7	19, 20	-----	-----	EB_U1
22	Rational	1.345	1	60	6 295.2	-----	-----	-----	EB_A6
23	Rational	0.030	1	60	138.9	-----	-----	-----	EB_U3
24	Reach	0.024	1	77	139.1	23	-----	-----	EB_U3-EB_A6
25	Combine	3.048	1	61	14 704.0	21, 22, 24	-----	-----	EB_A6
26	Reach	2.966	1	67	14 719.0	25	-----	-----	EB_A6-SC_A1
27	Rational	2.071	1	60	9 693.5	-----	-----	-----	SC_A1
28	Combine	4.928	1	64	24 412.5	26, 27	-----	-----	SC_A1
29	Reach	3.399	1	98	24 631.0	28	-----	-----	SC_A1-SC_A2
30	Rational	1.182	1	60	5 533.9	-----	-----	-----	SC_A2
31	Combine	4.169	1	89	30 164.9	29, 30	-----	-----	SC_A2
32	Rational	0.153	1	60	714.4	-----	-----	-----	SC_A3
33	Rational	0.009	1	60	40.7	-----	-----	-----	SC_A4
34	Rational	0.124	1	60	582.2	-----	-----	-----	SC_A5
35	Rational	0.539	1	60	2 520.5	-----	-----	-----	SC_U1
36	Combine	0.824	1	60	3 857.9	32, 33, 34, 35	-----	-----	SC_U1
E:\MODELISATION_HYDRAFLOW\ALSP10\25_Niveau_10m18.gpw								vendredi, avr 6, 2012	

Hydrograph Report

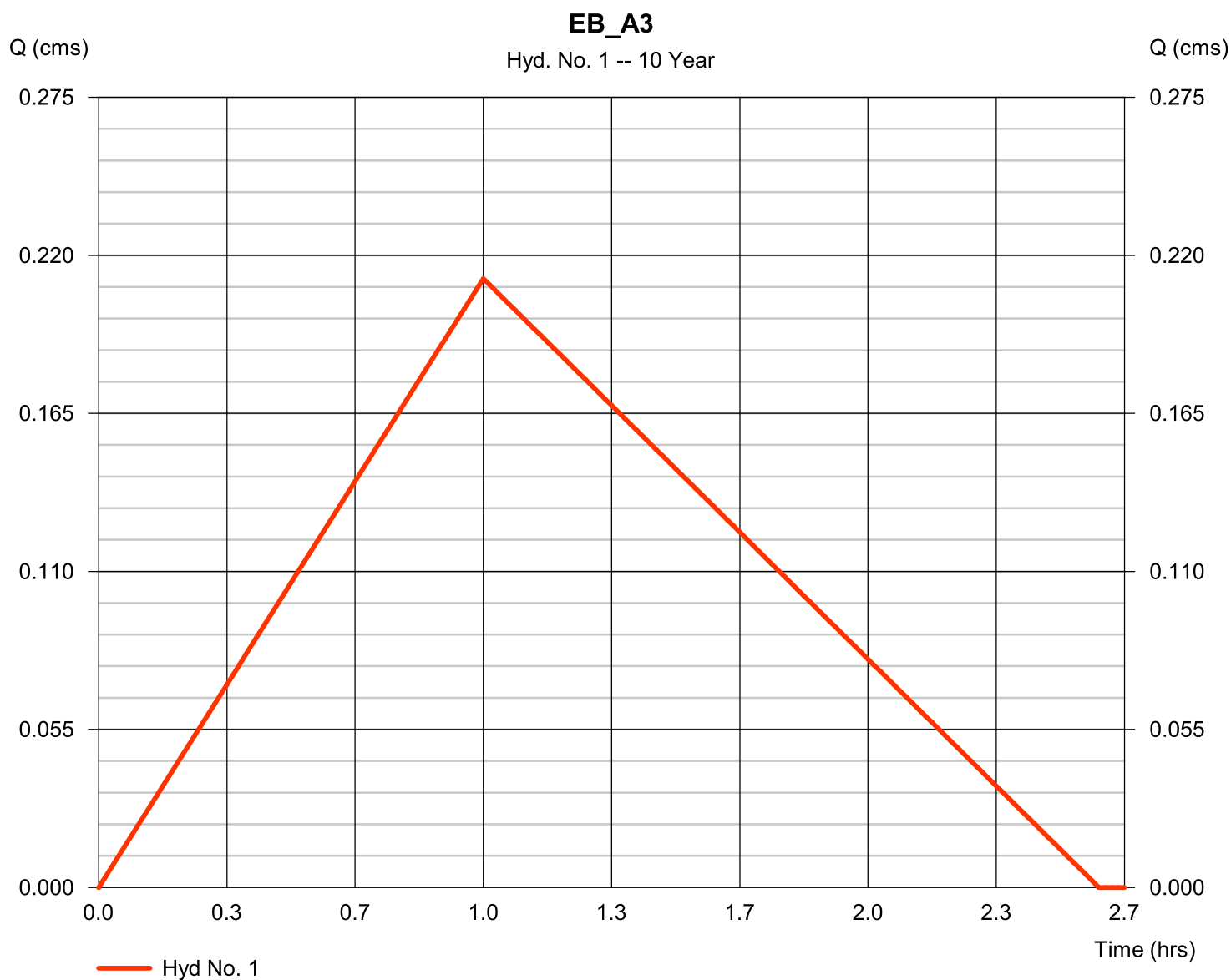
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vendredi, avr 6, 2012

Hyd. No. 1

EB_A3

Hydrograph type	= Rational	Peak discharge	= 0.212 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 991.7 cum
Drainage area	= 24.420 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

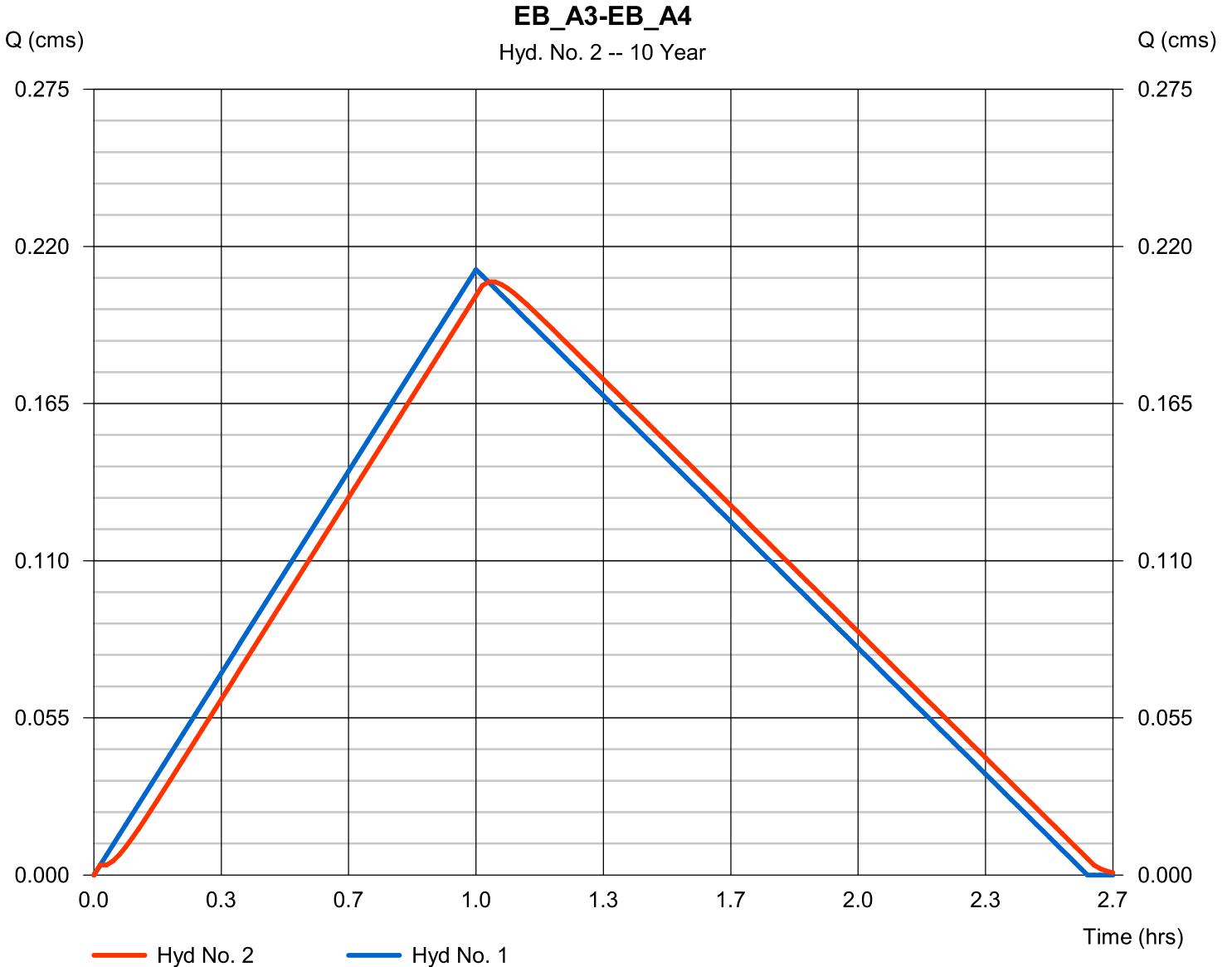
vendredi, avr 6, 2012

Hyd. No. 2

EB_A3-EB_A4

Hydrograph type	= Reach	Peak discharge	= 0.208 cms
Storm frequency	= 10 yrs	Time to peak	= 1.03 hrs
Time interval	= 1 min	Hyd. volume	= 992.3 cum
Inflow hyd. No.	= 1 - EB_A3	Section type	= Trapezoidal
Reach length	= 280.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 1.65 m/s	Routing coeff.	= 0.3859

Modified Att-Kin routing method used.

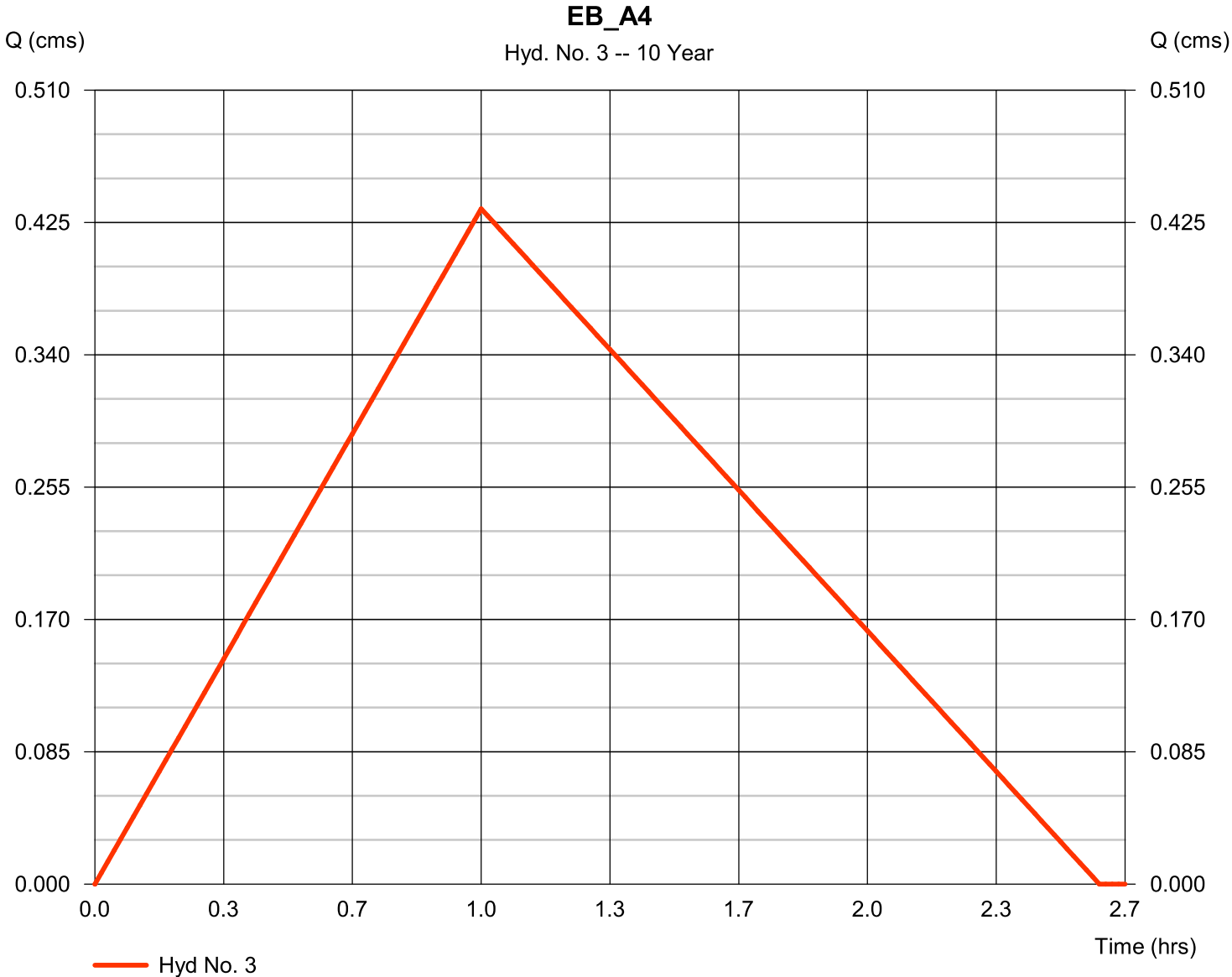


Hydrograph Report

Hyd. No. 3

EB_A4

Hydrograph type	= Rational	Peak discharge	= 0.434 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 030.2 cum
Drainage area	= 49.990 hectare	Runoff coeff.	= 0.15
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

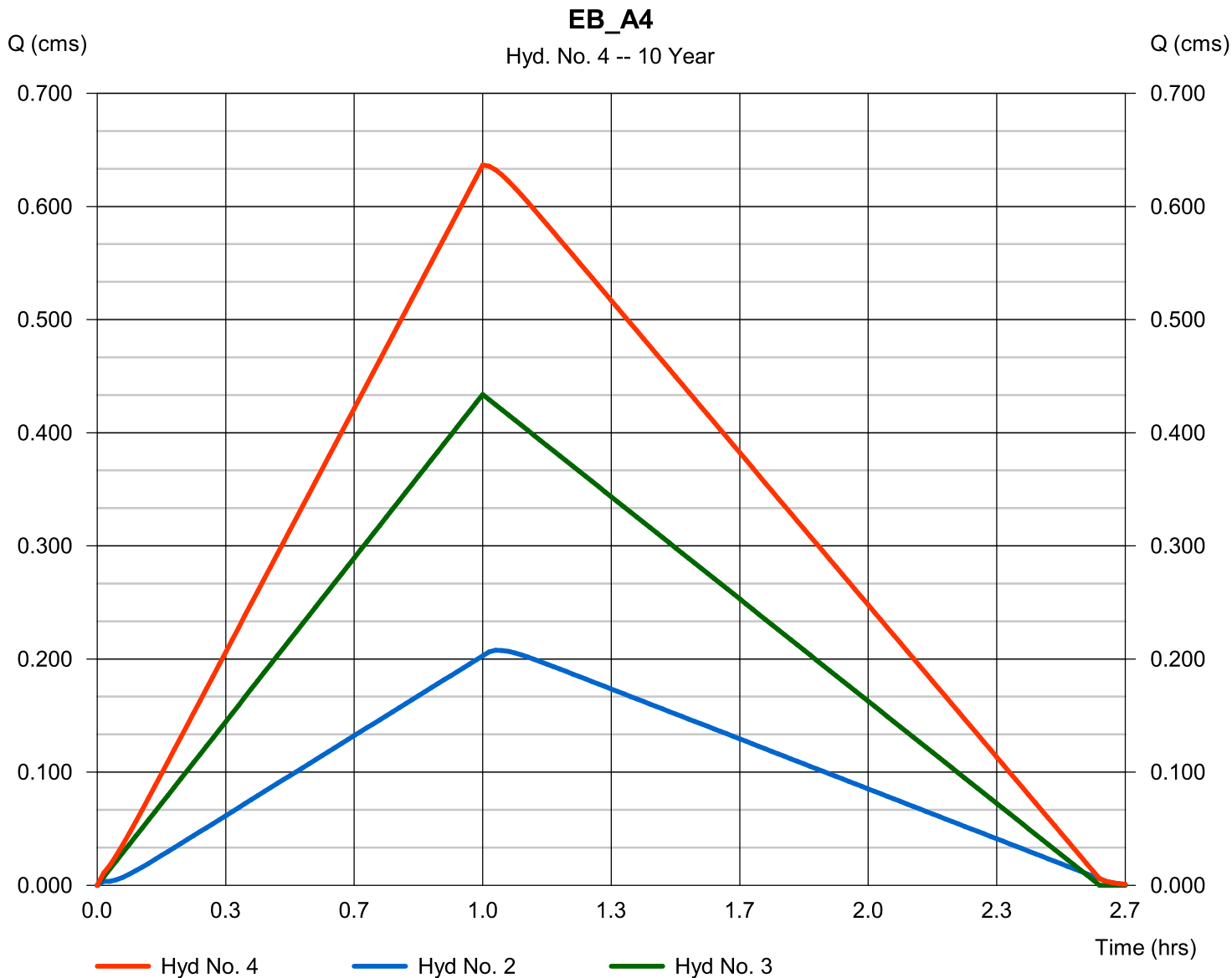
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 4

EB_A4

Hydrograph type	= Combine	Peak discharge	= 0.637 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 3 022.4 cum
Inflow hyds.	= 2, 3	Contrib. drain. area	= 49.990 hectare



Hydrograph Report

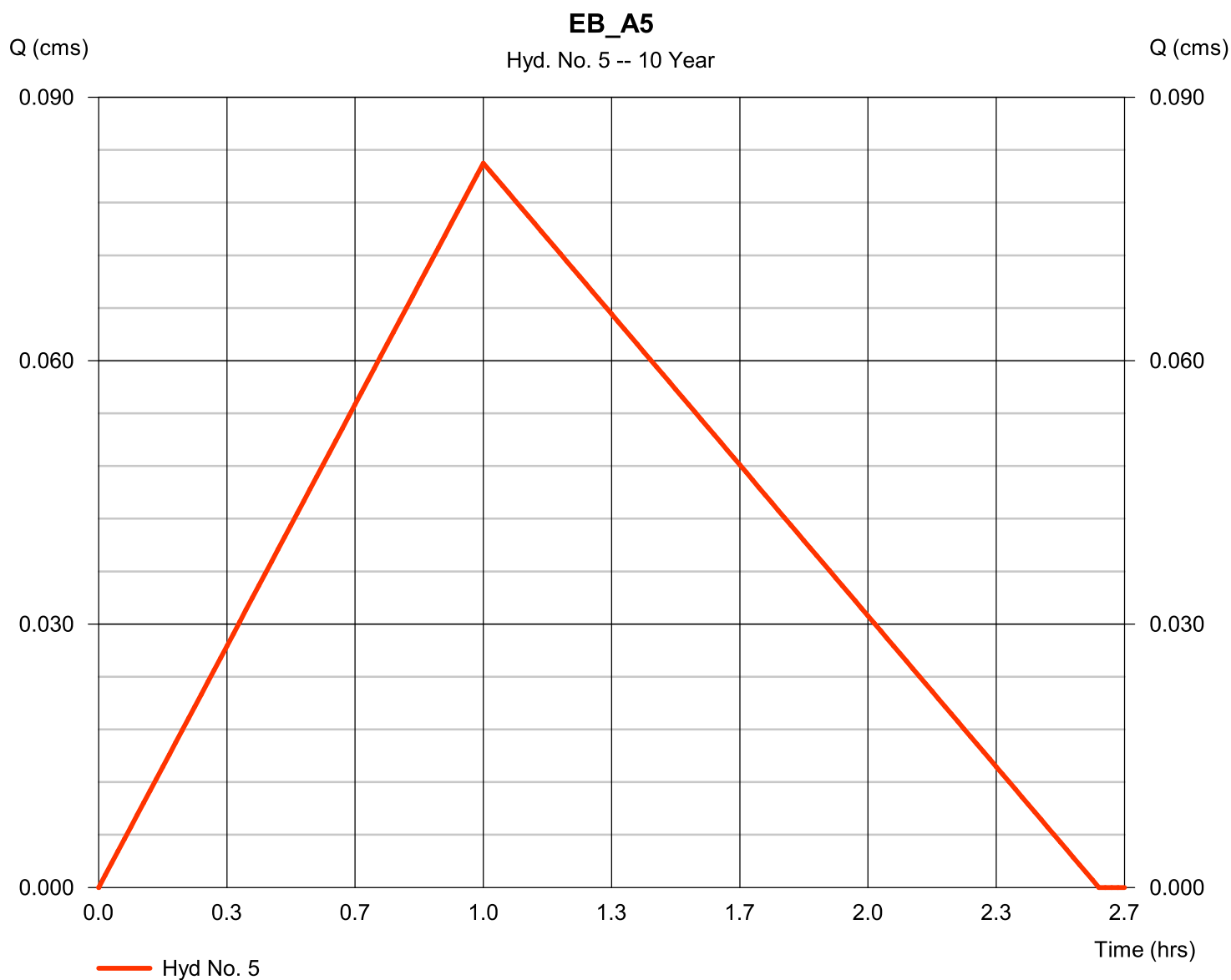
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 5

EB_A5

Hydrograph type	= Rational	Peak discharge	= 0.083 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 386.1 cum
Drainage area	= 10.970 hectare	Runoff coeff.	= 0.13
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

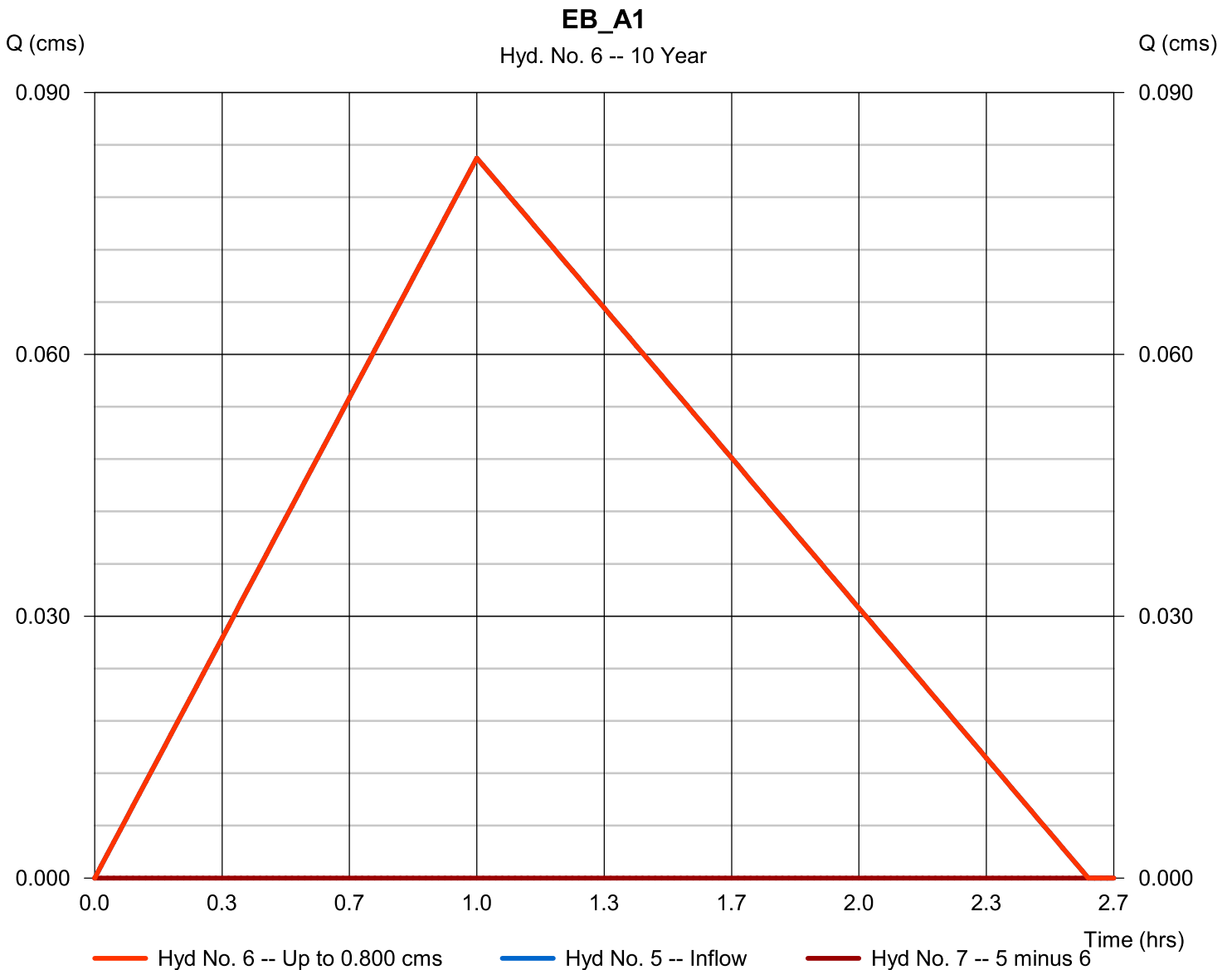
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 6

EB_A1

Hydrograph type	= Diversion1	Peak discharge	= 0.083 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 386.1 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.80 cms



Hydrograph Report

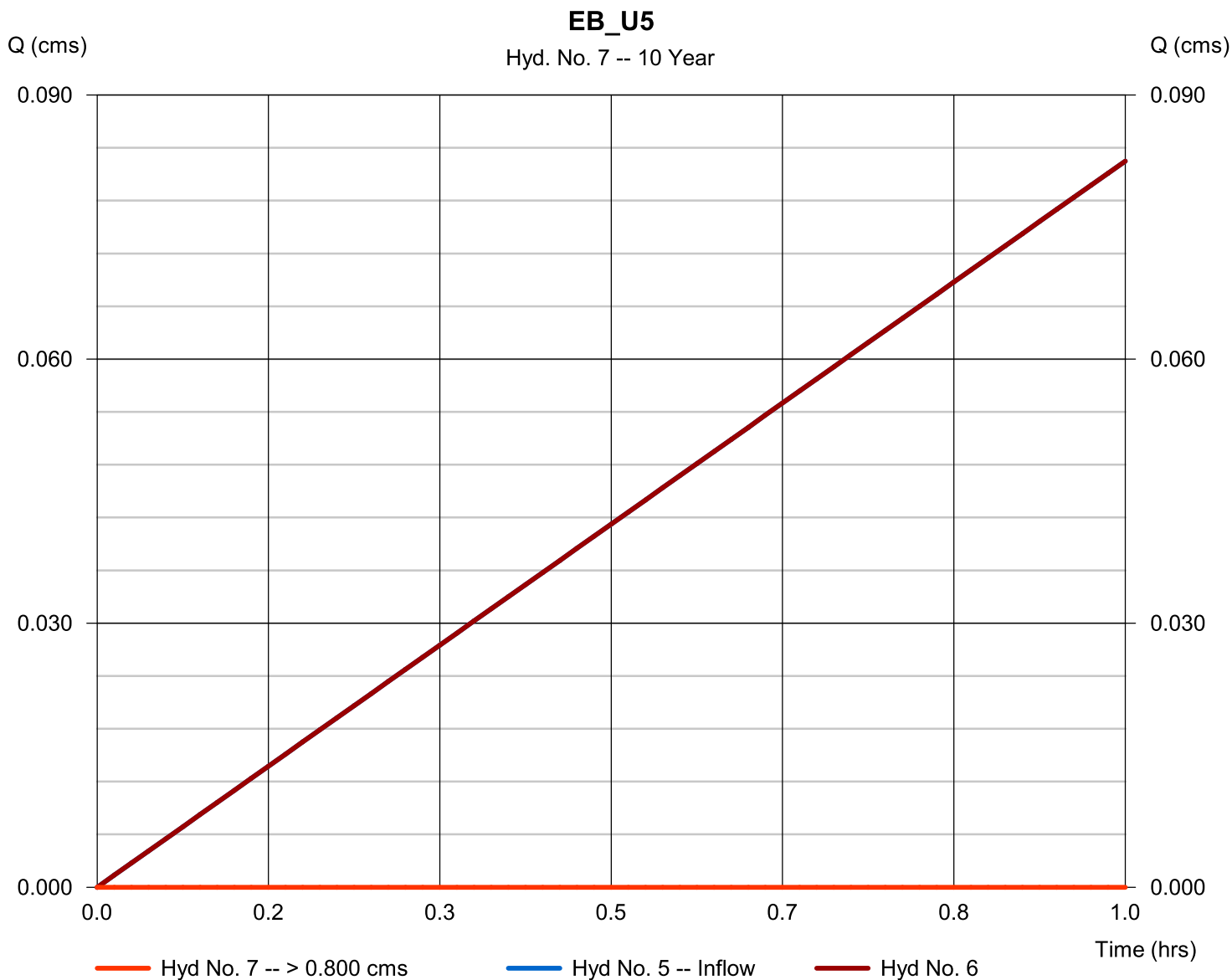
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 7

EB_U5

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.80 cms



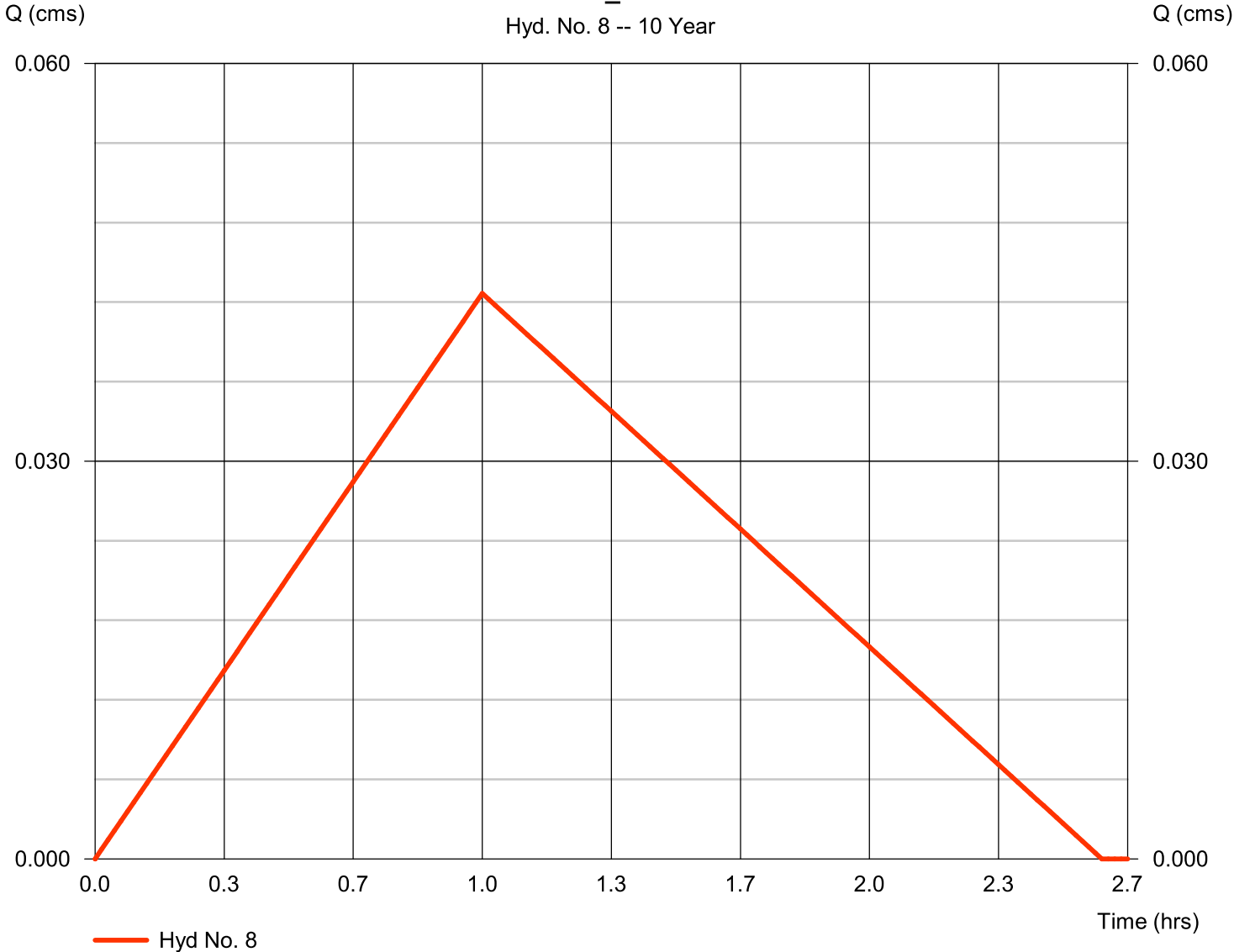
Hydrograph Report

Hyd. No. 8

EB_U5

Hydrograph type	= Rational	Peak discharge	= 0.043 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 199.6 cum
Drainage area	= 1.940 hectare	Runoff coeff.	= 0.38
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6

EB_U5
Hyd. No. 8 -- 10 Year



Hydrograph Report

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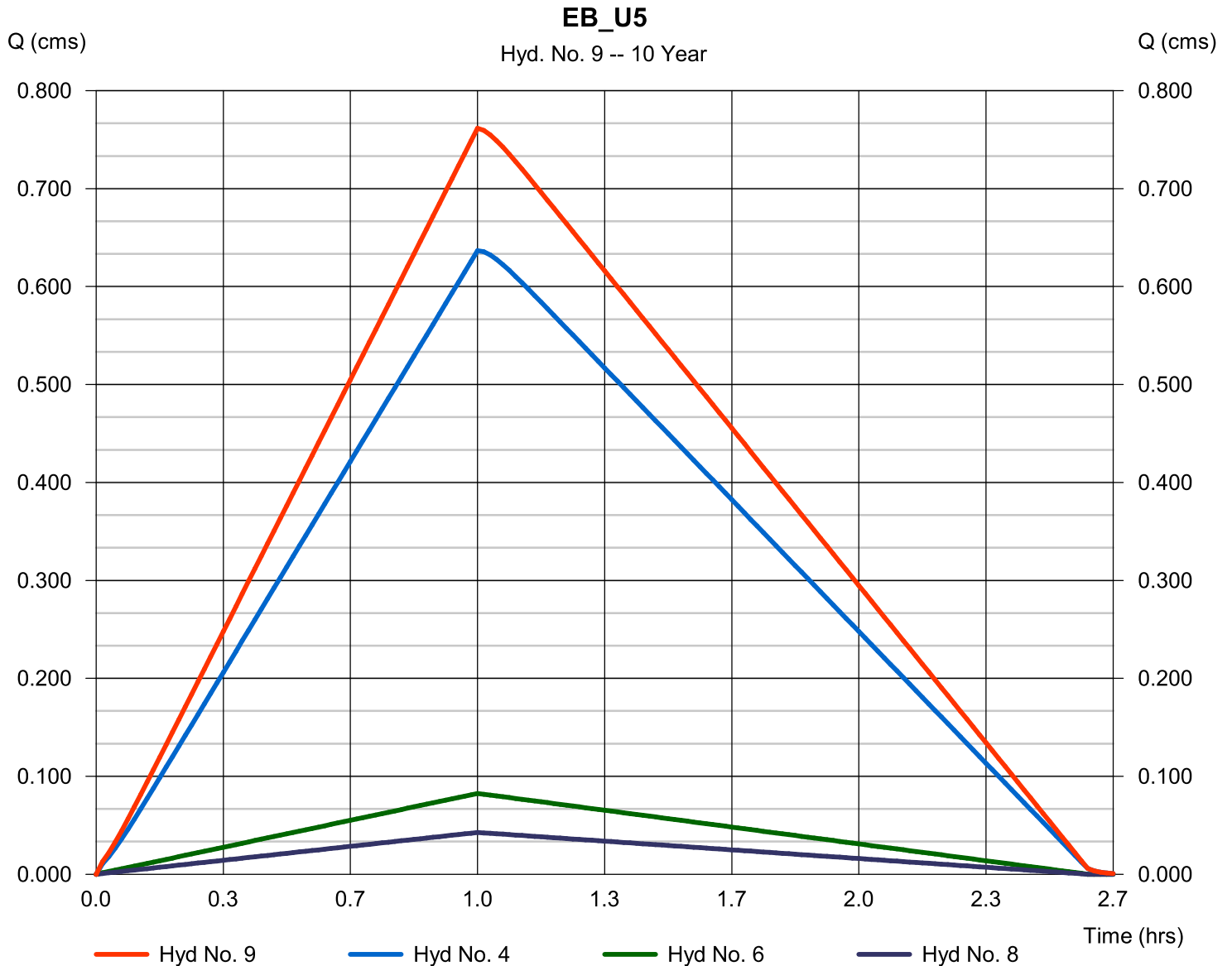
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Hyd. No. 9

EB_U5

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 1 min
Inflow hyds. = 4, 6, 8

Peak discharge = 0.762 cms
Time to peak = 1.00 hrs
Hyd. volume = 3 608.1 cum
Contrib. drain. area = 1.940 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

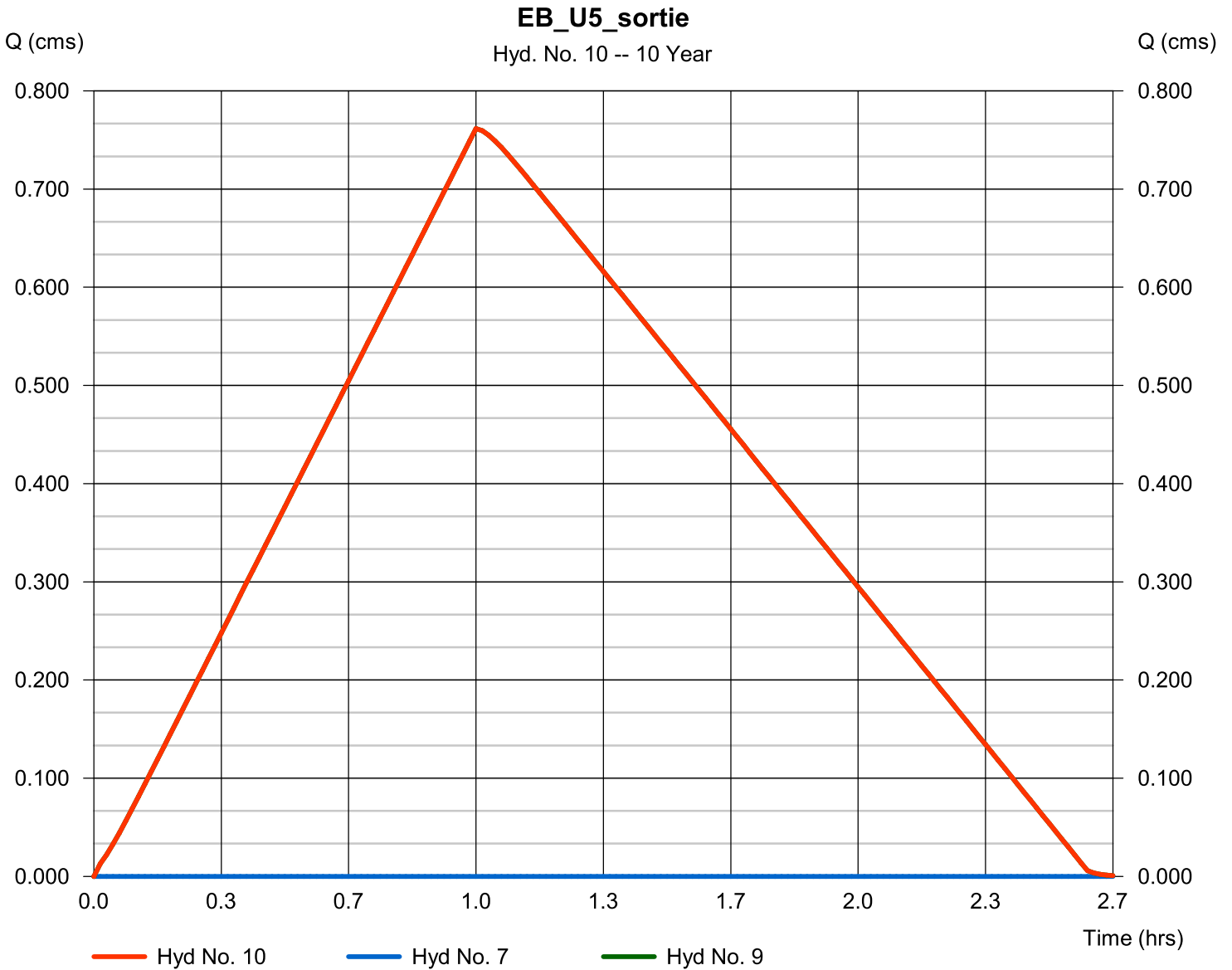
vendredi, avr 6, 2012

Hyd. No. 10

EB_U5_sortie

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 1 min
Inflow hyds. = 7, 9

Peak discharge = 0.762 cms
Time to peak = 1.00 hrs
Hyd. volume = 3 608.1 cum
Contrib. drain. area = 0.000 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 11

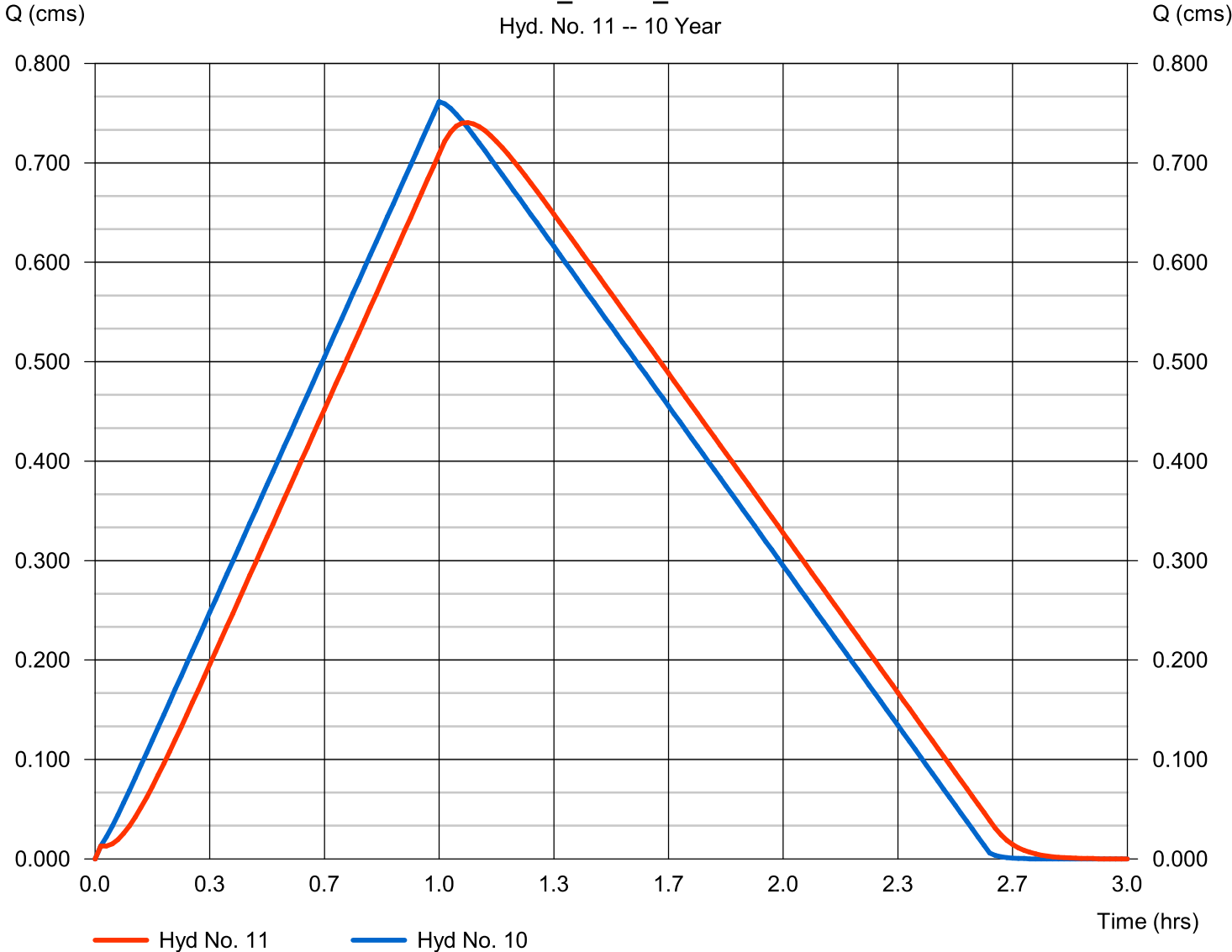
EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.740 cms
Storm frequency	= 10 yrs	Time to peak	= 1.08 hrs
Time interval	= 1 min	Hyd. volume	= 3 611.2 cum
Inflow hyd. No.	= 10 - EB_U5_sortie	Section type	= Trapezoidal
Reach length	= 640.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 2.19 m/s	Routing coeff.	= 0.2441

Modified Att-Kin routing method used.

EB_U5-EB_A1

Hyd. No. 11 -- 10 Year



Hydrograph Report

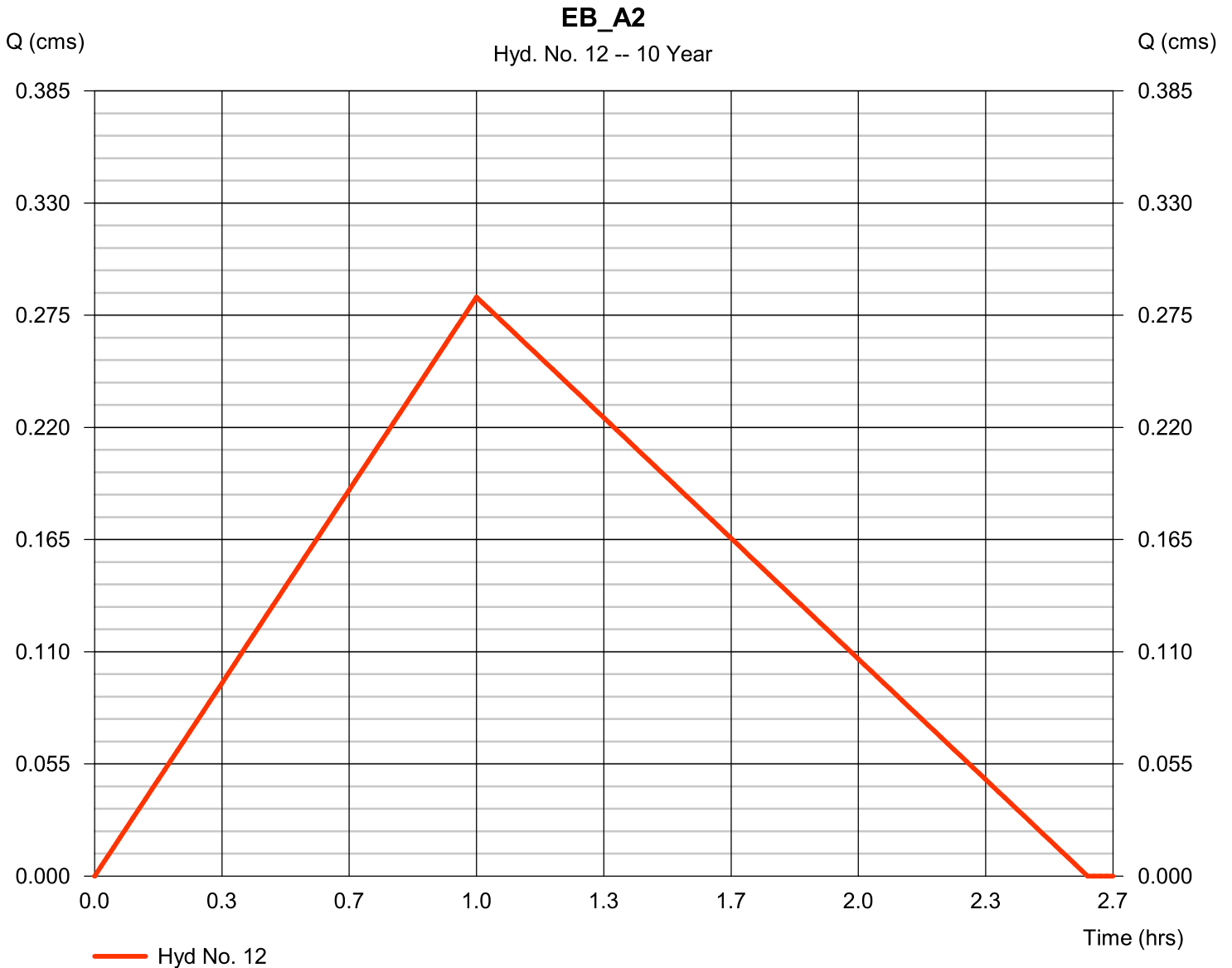
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 12

EB_A2

Hydrograph type	= Rational	Peak discharge	= 0.284 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 328.5 cum
Drainage area	= 35.050 hectare	Runoff coeff.	= 0.14
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

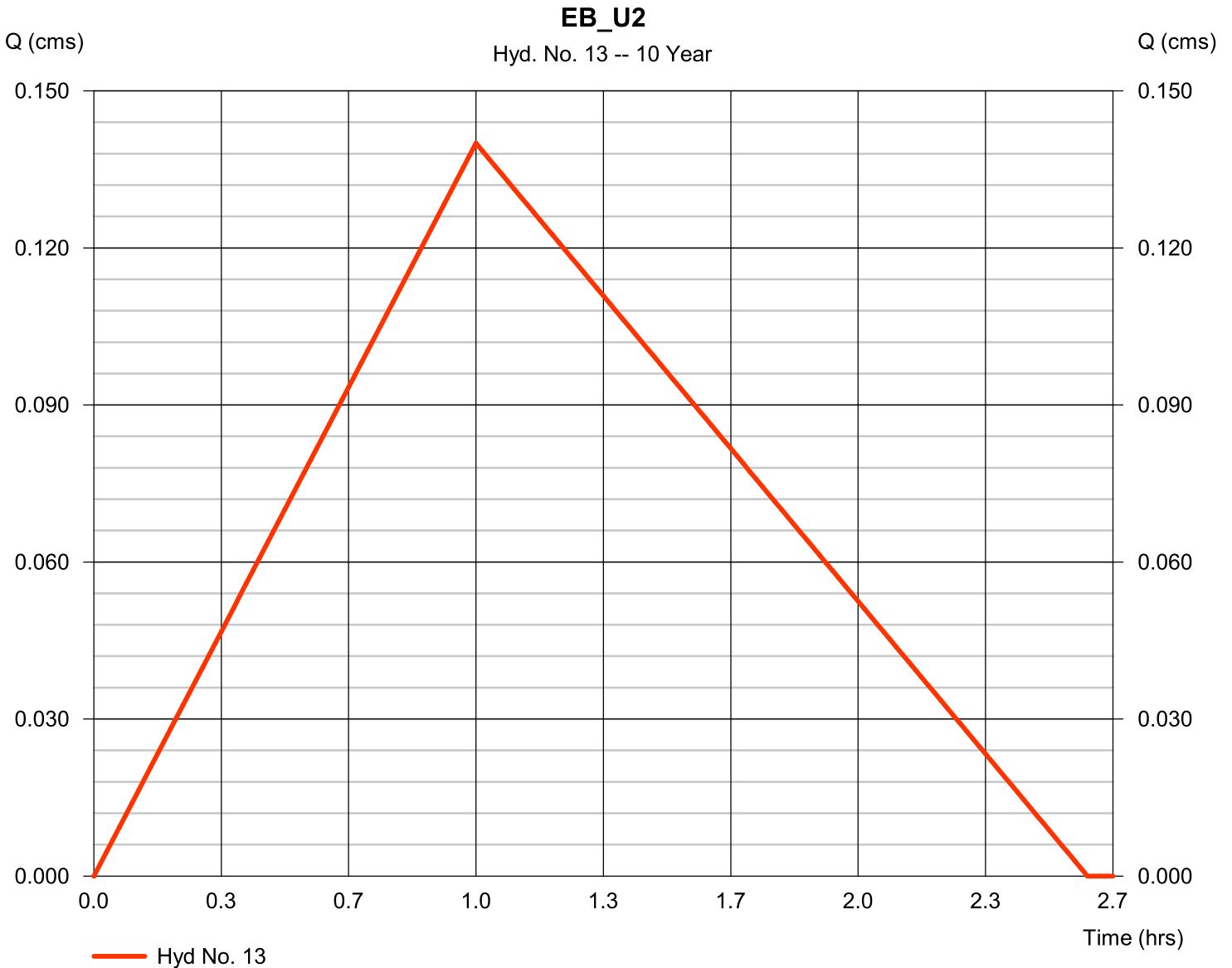
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 13

EB_U2

Hydrograph type	= Rational	Peak discharge	= 0.140 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 655.2 cum
Drainage area	= 6.050 hectare	Runoff coeff.	= 0.4
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

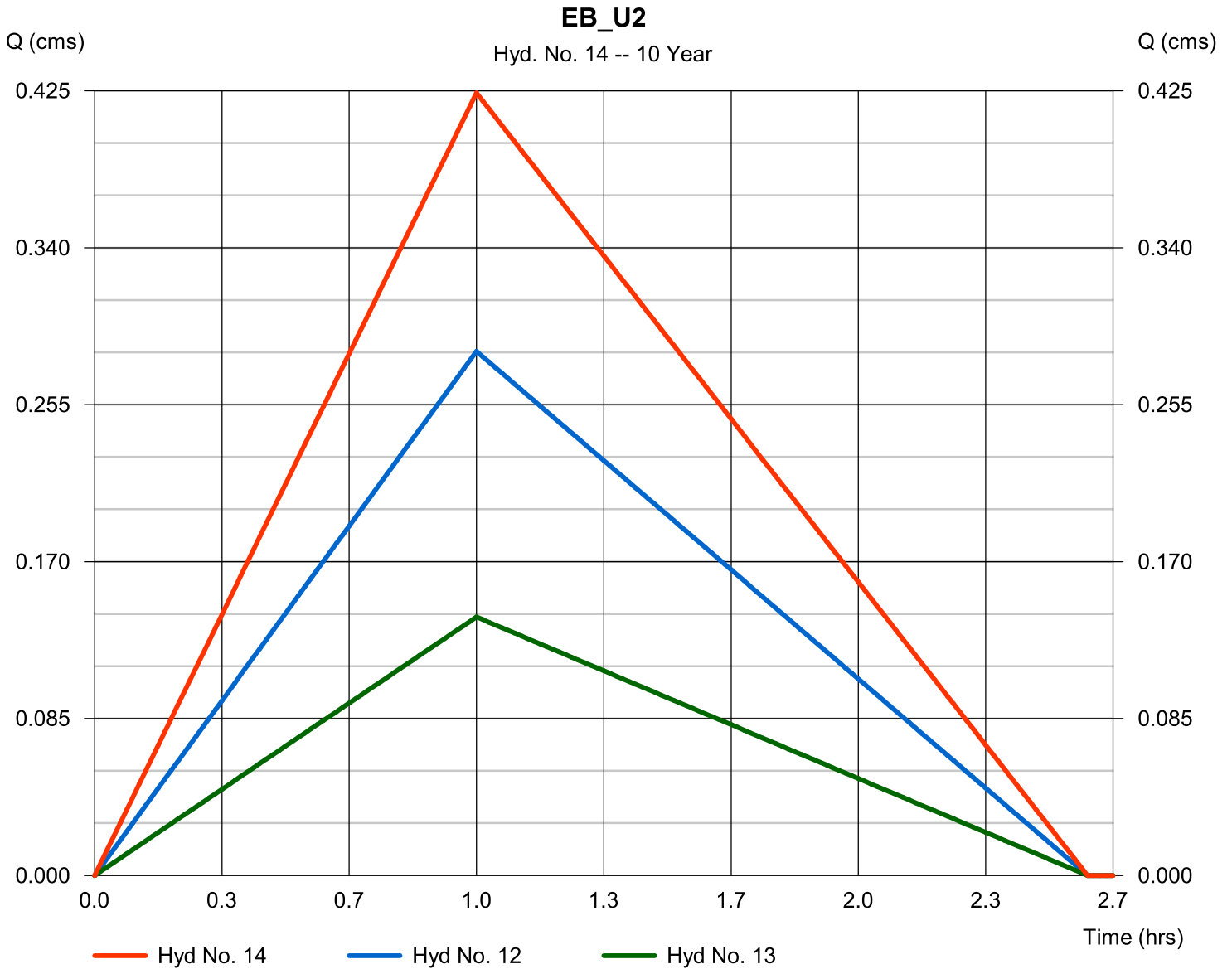
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 14

EB_U2

Hydrograph type	= Combine	Peak discharge	= 0.424 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 983.8 cum
Inflow hyds.	= 12, 13	Contrib. drain. area	= 41.100 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

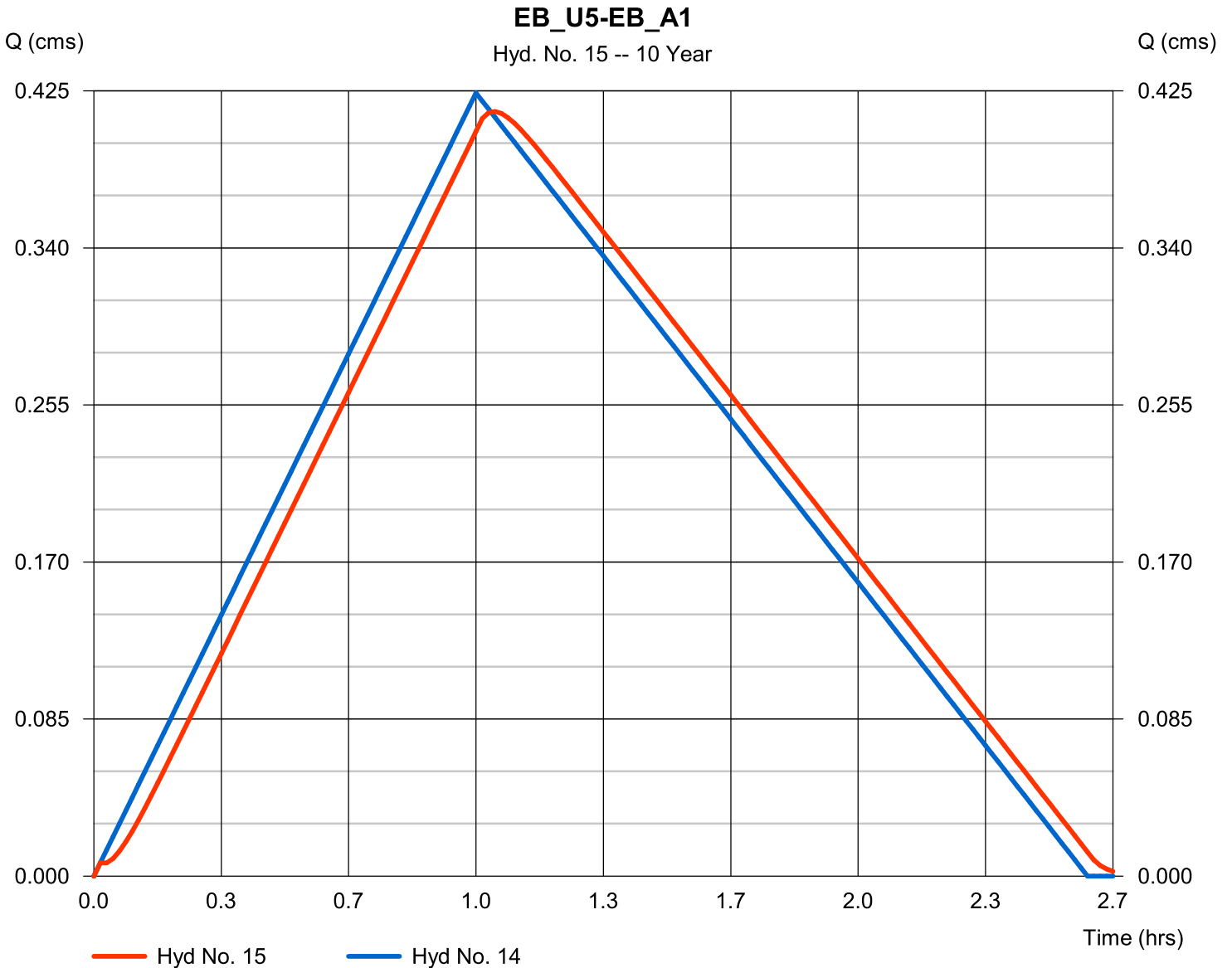
vendredi, avr 6, 2012

Hyd. No. 15

EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.414 cms
Storm frequency	= 10 yrs	Time to peak	= 1.05 hrs
Time interval	= 1 min	Hyd. volume	= 1 985.0 cum
Inflow hyd. No.	= 14 - EB_U2	Section type	= Trapezoidal
Reach length	= 360.0 m	Channel slope	= 2.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.266	Rating curve m	= 1.353
Ave. velocity	= 1.80 m/s	Routing coeff.	= 0.3381

Modified Att-Kin routing method used.



Hydrograph Report

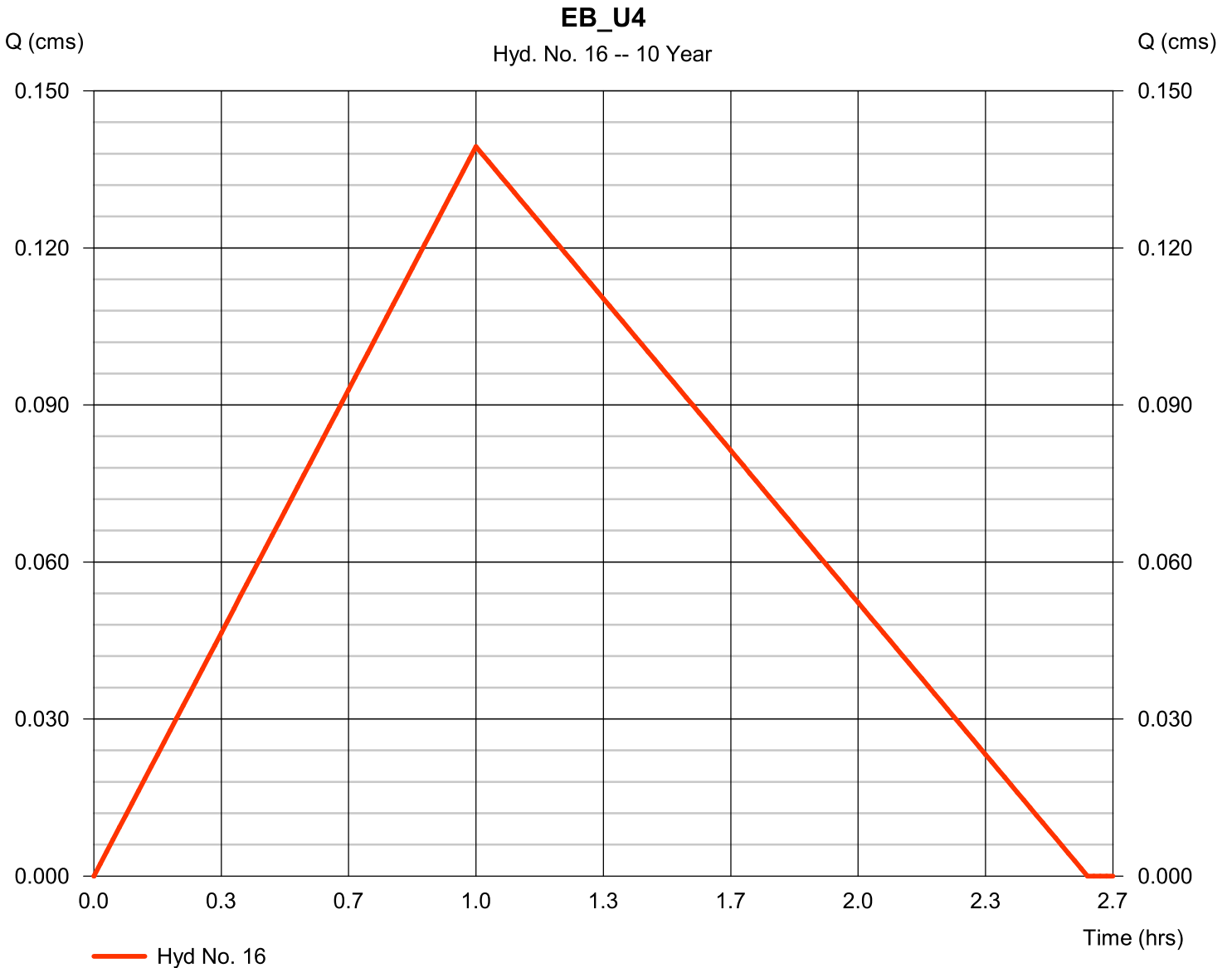
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 16

EB_U4

Hydrograph type	= Rational	Peak discharge	= 0.139 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 652.1 cum
Drainage area	= 6.510 hectare	Runoff coeff.	= 0.37
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



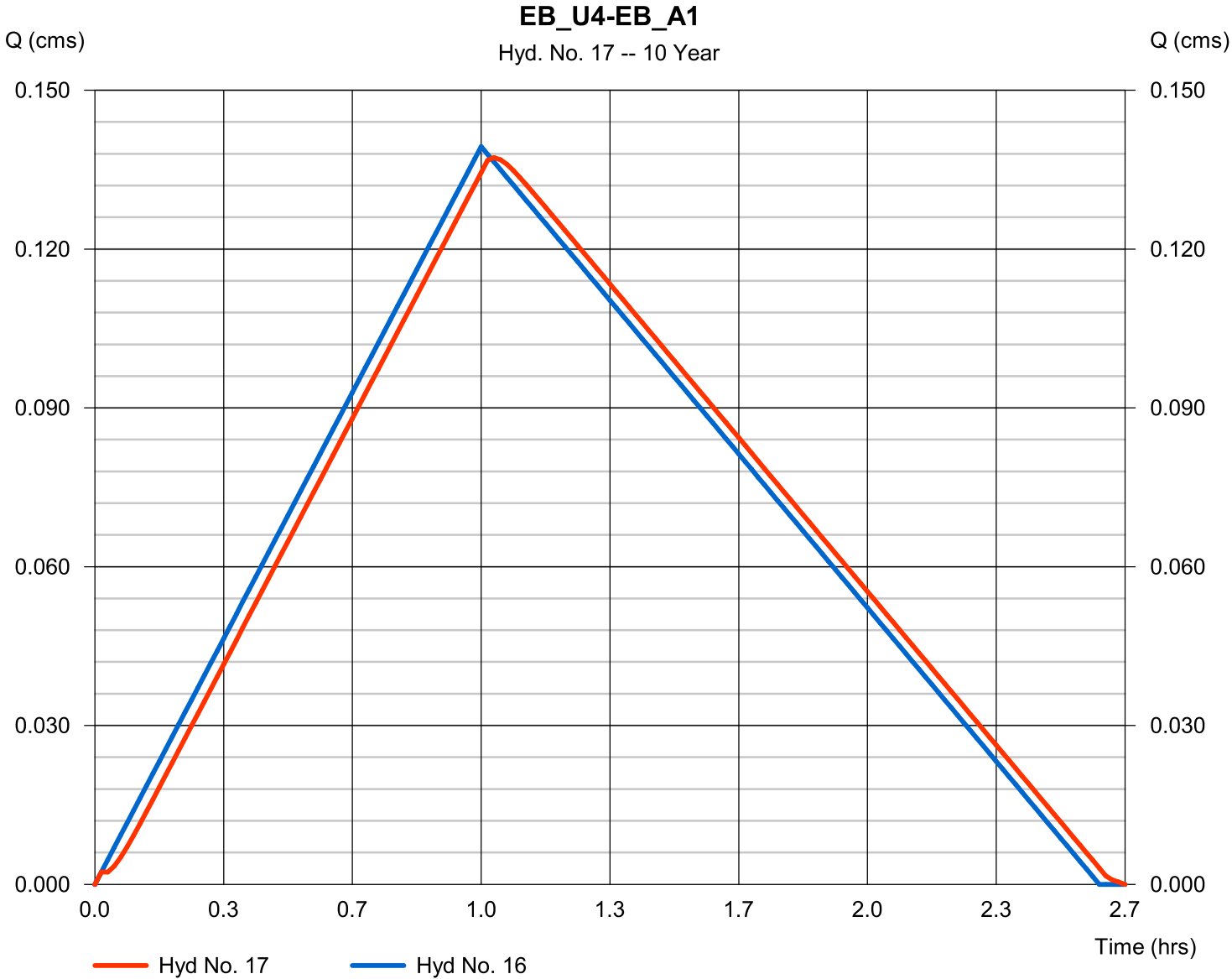
Hydrograph Report

Hyd. No. 17

EB_U4-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.137 cms
Storm frequency	= 10 yrs	Time to peak	= 1.03 hrs
Time interval	= 1 min	Hyd. volume	= 652.4 cum
Inflow hyd. No.	= 16 - EB_U4	Section type	= Trapezoidal
Reach length	= 200.0 m	Channel slope	= 3.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.048	Rating curve m	= 1.353
Ave. velocity	= 1.53 m/s	Routing coeff.	= 0.4735

Modified Att-Kin routing method used.



Hydrograph Report

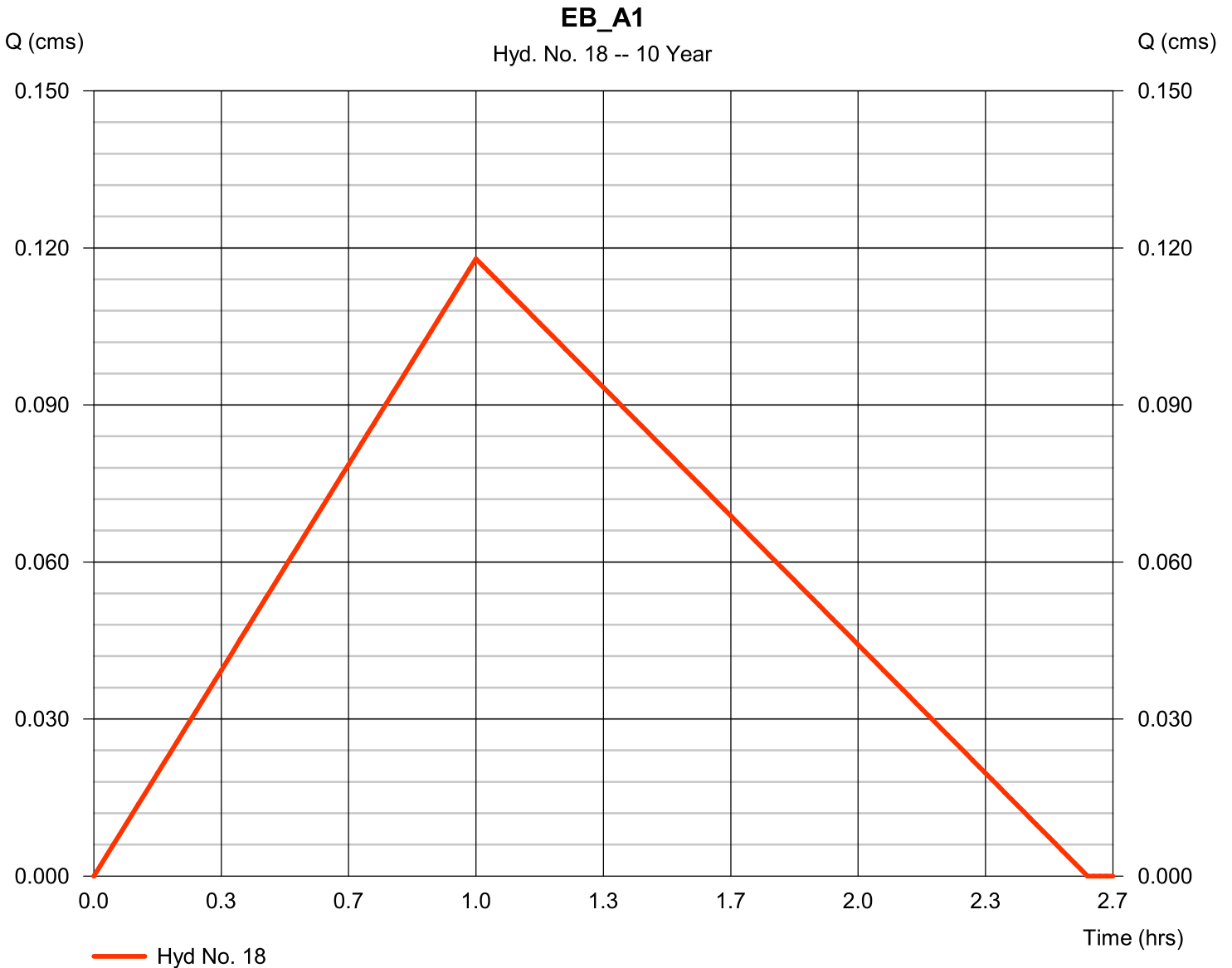
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 18

EB_A1

Hydrograph type	= Rational	Peak discharge	= 0.118 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 551.9 cum
Drainage area	= 15.680 hectare	Runoff coeff.	= 0.13
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

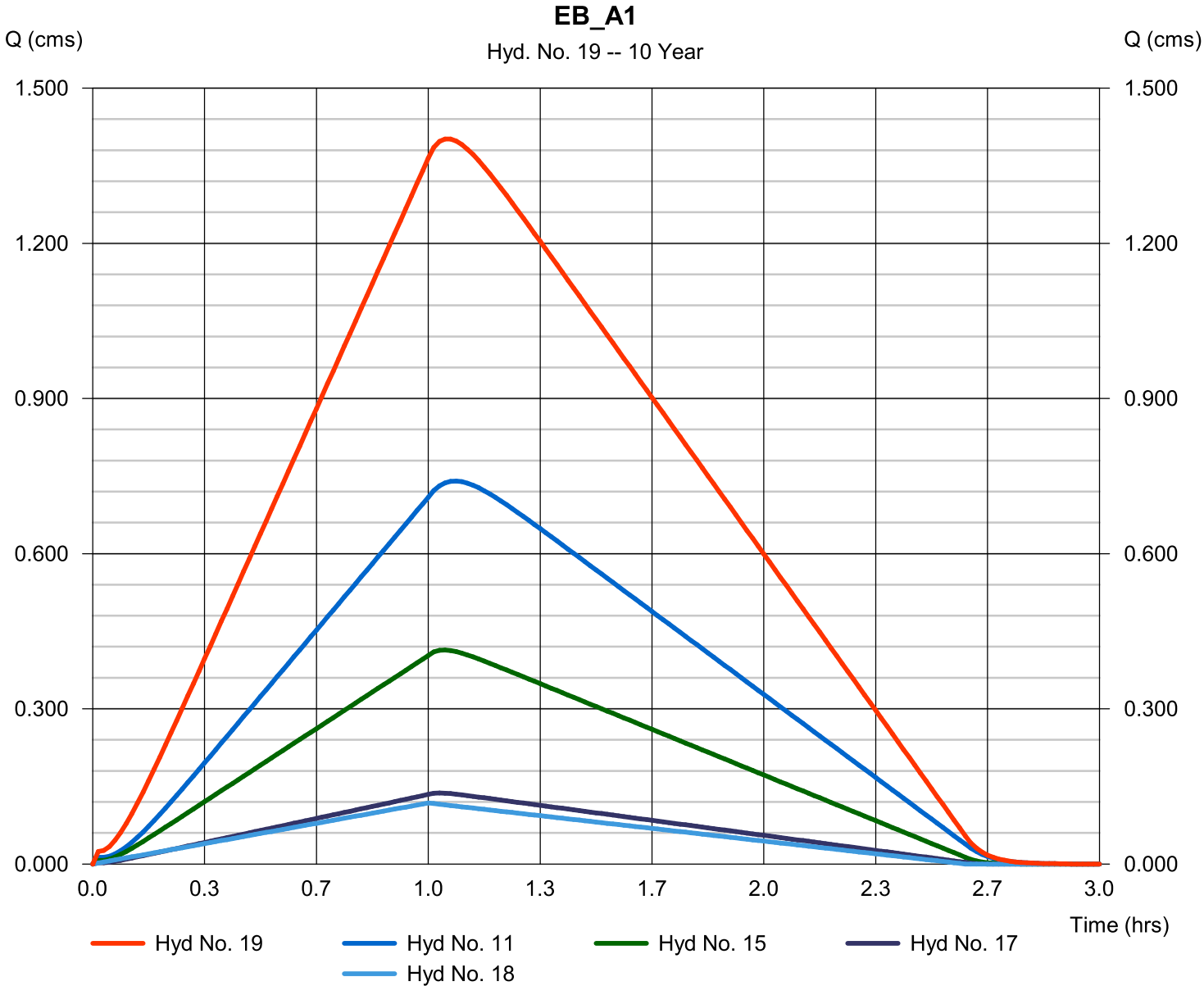
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 19

EB_A1

Hydrograph type	= Combine	Peak discharge	= 1.402 cms
Storm frequency	= 10 yrs	Time to peak	= 1.05 hrs
Time interval	= 1 min	Hyd. volume	= 6 800.5 cum
Inflow hyds.	= 11, 15, 17, 18	Contrib. drain. area	= 15.680 hectare



Hydrograph Report

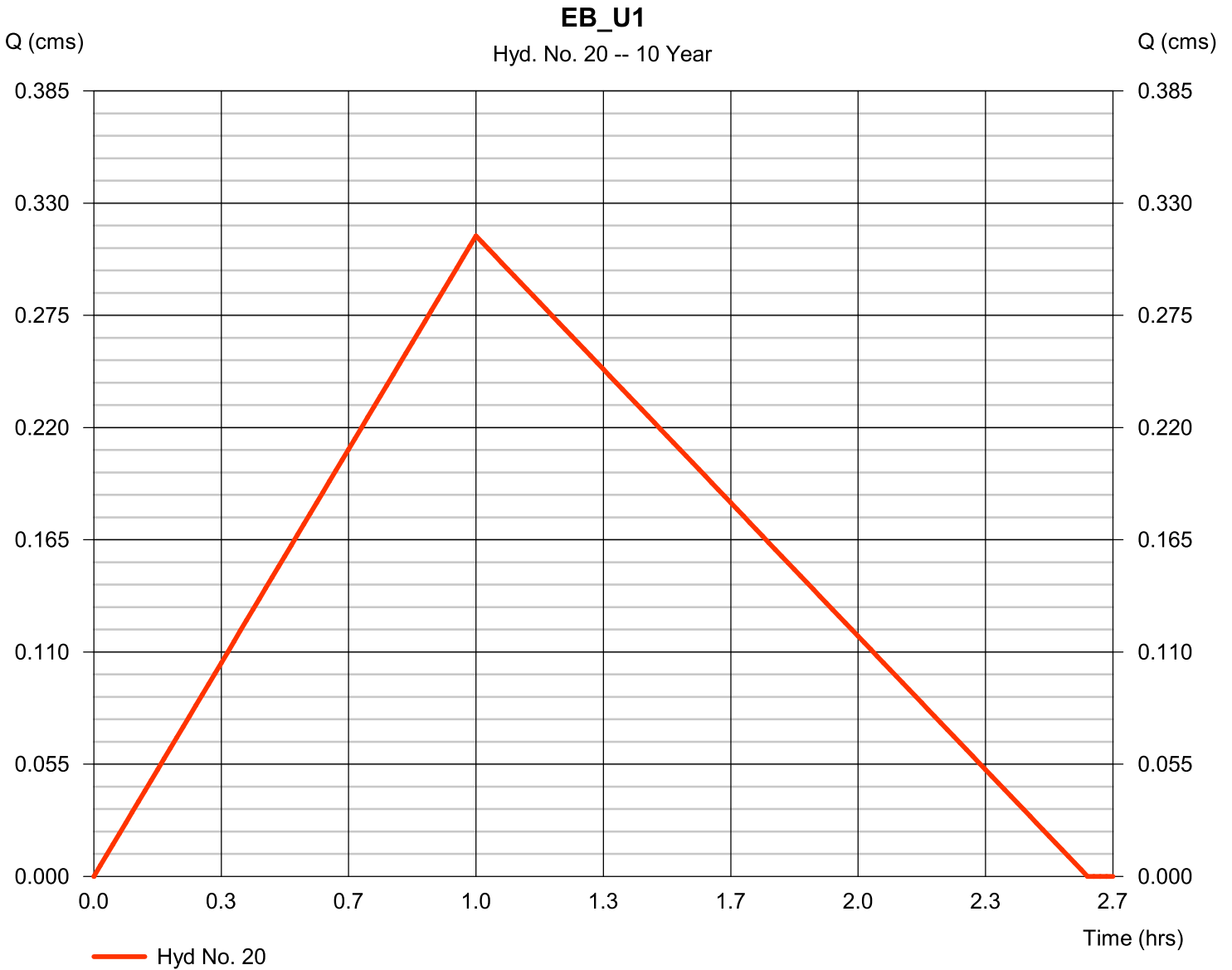
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 20

EB_U1

Hydrograph type	= Rational	Peak discharge	= 0.314 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 1 469.2 cum
Drainage area	= 15.960 hectare	Runoff coeff.	= 0.34
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

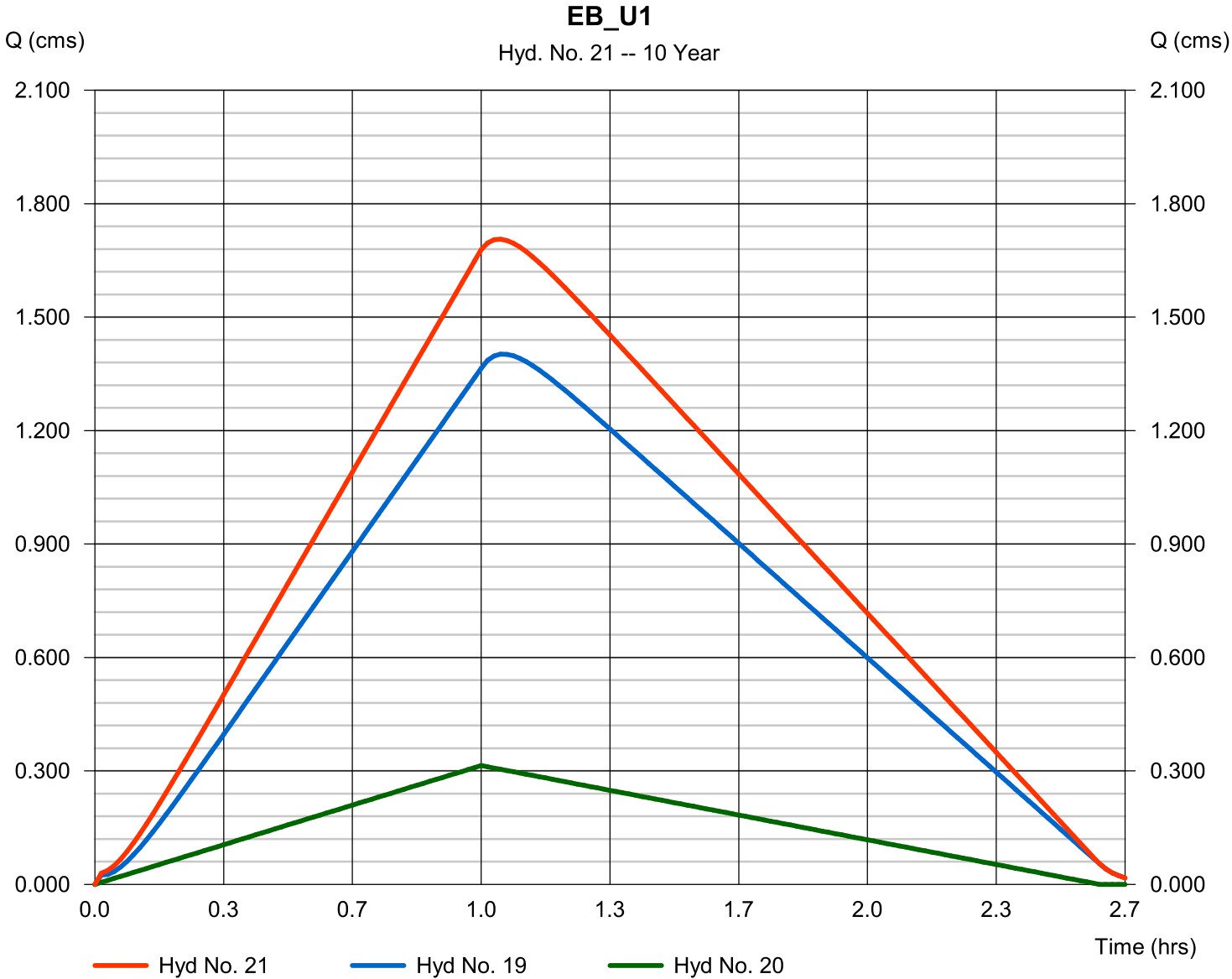
vendredi, avr 6, 2012

Hyd. No. 21

EB_U1

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 1 min
Inflow hyds. = 19, 20

Peak discharge = 1.706 cms
Time to peak = 1.05 hrs
Hyd. volume = 8 269.7 cum
Contrib. drain. area = 15.960 hectare



Hydrograph Report

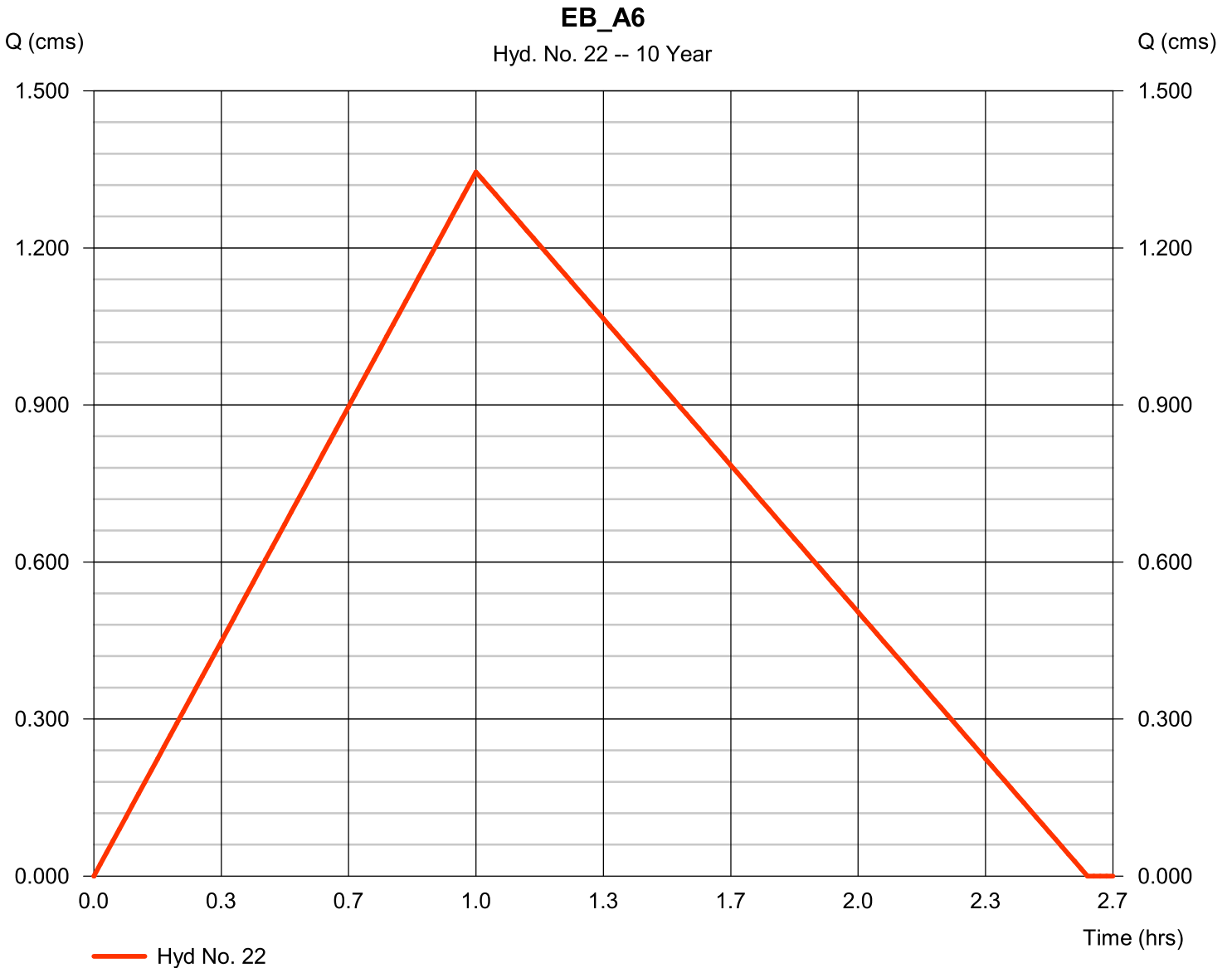
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Hyd. No. 22

EB_A6

Hydrograph type	= Rational	Peak discharge	= 1.345 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 6 295.2 cum
Drainage area	= 145.320 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

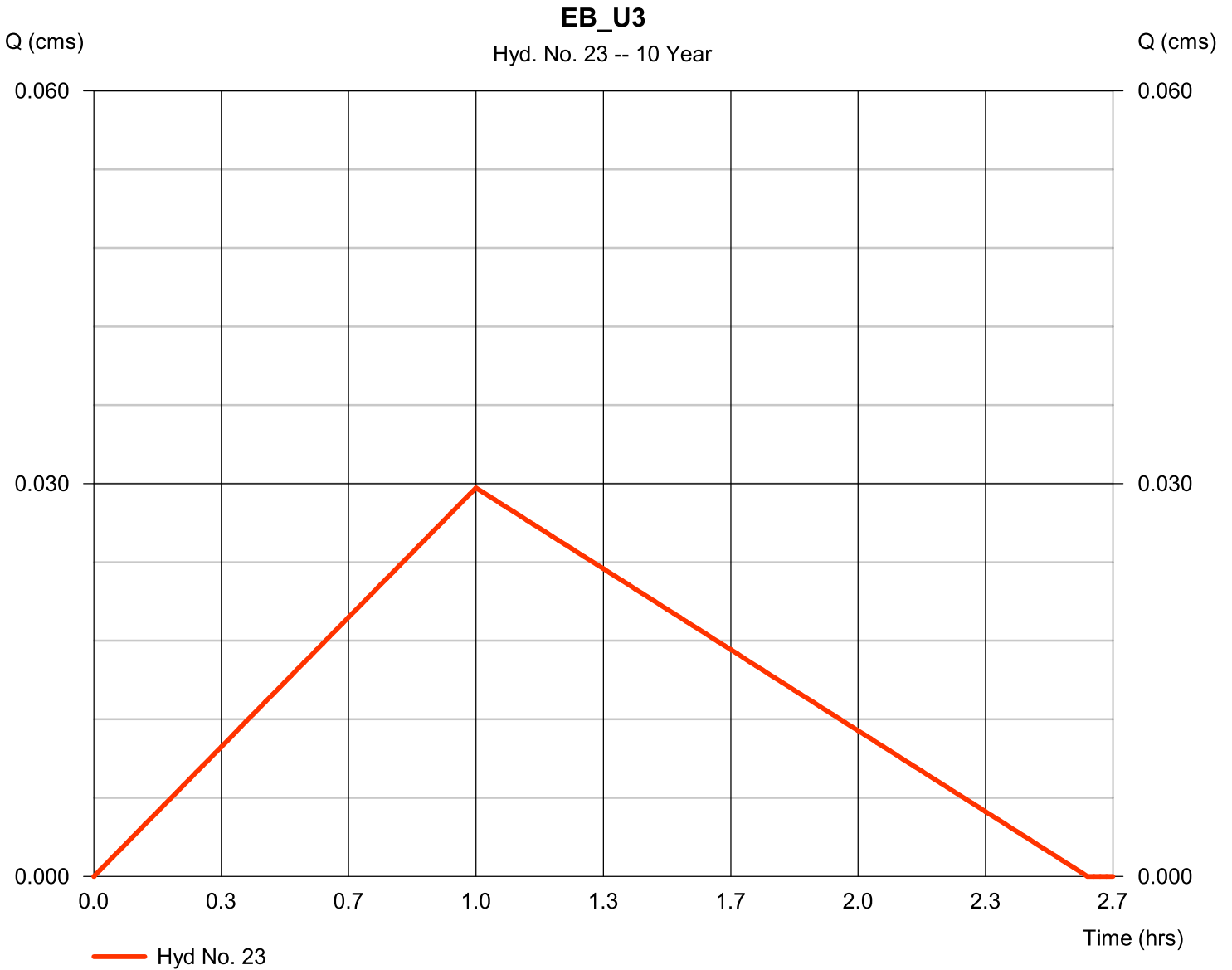
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 23

EB_U3

Hydrograph type	= Rational	Peak discharge	= 0.030 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 138.9 cum
Drainage area	= 1.350 hectare	Runoff coeff.	= 0.38
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

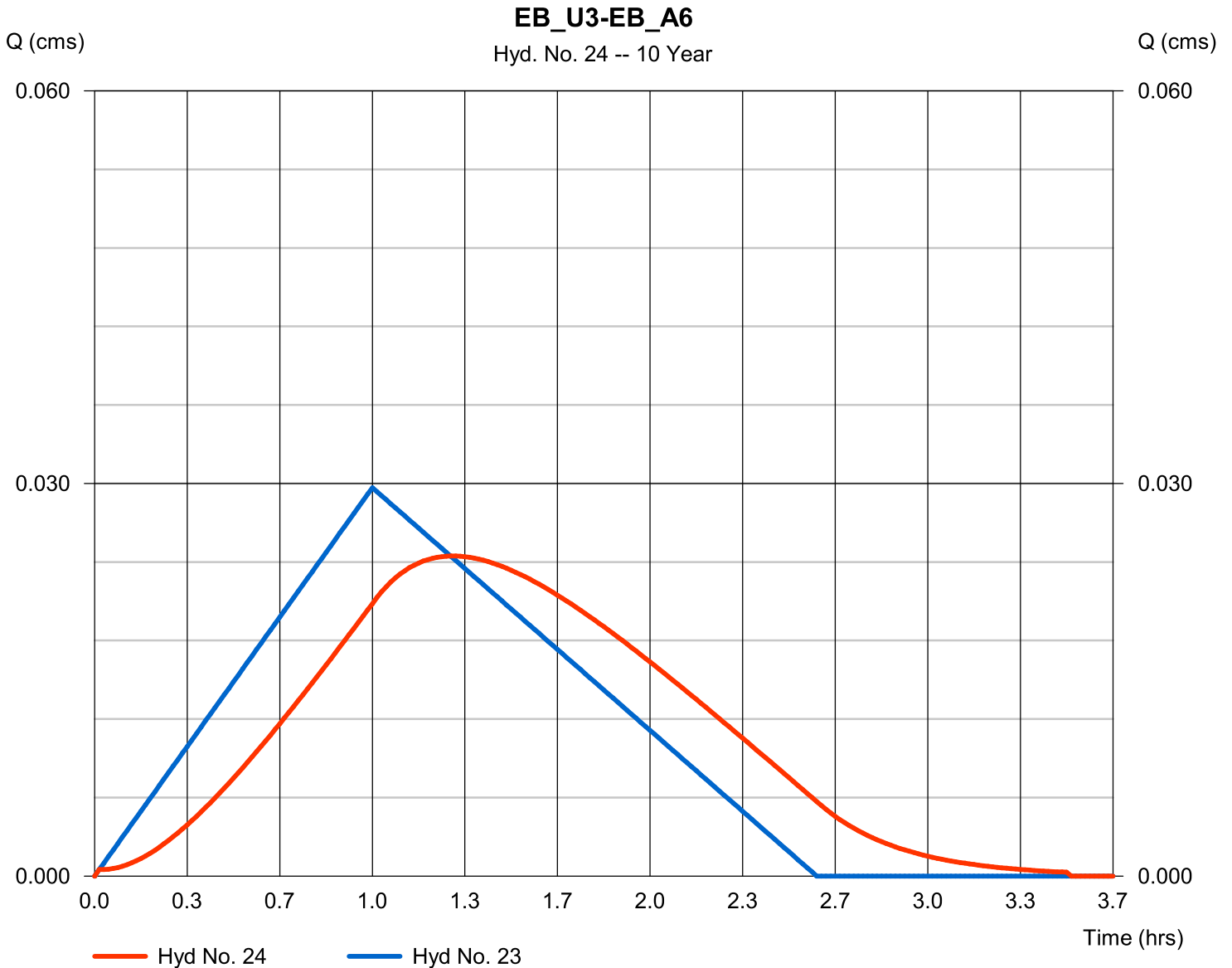
vendredi, avr 6, 2012

Hyd. No. 24

EB_U3-EB_A6

Hydrograph type	= Reach	Peak discharge	= 0.024 cms
Storm frequency	= 10 yrs	Time to peak	= 1.28 hrs
Time interval	= 1 min	Hyd. volume	= 139.1 cum
Inflow hyd. No.	= 23 - EB_U3	Section type	= Trapezoidal
Reach length	= 1200.0 m	Channel slope	= 1.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.719	Rating curve m	= 1.353
Ave. velocity	= 0.81 m/s	Routing coeff.	= 0.0536

Modified Att-Kin routing method used.



Hydrograph Report

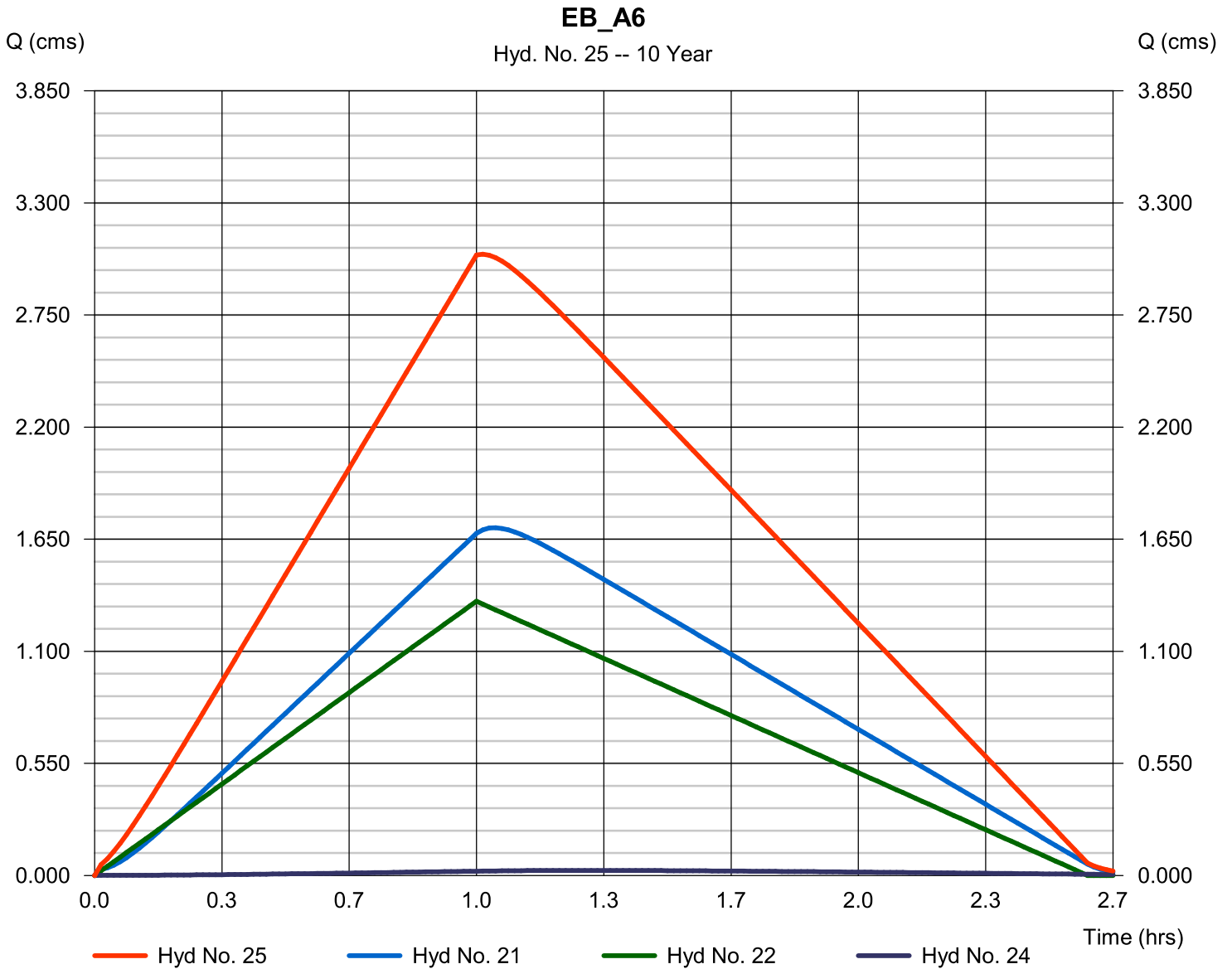
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 25

EB_A6

Hydrograph type	= Combine	Peak discharge	= 3.048 cms
Storm frequency	= 10 yrs	Time to peak	= 1.02 hrs
Time interval	= 1 min	Hyd. volume	= 14 704.0 cum
Inflow hyds.	= 21, 22, 24	Contrib. drain. area	= 145.320 hectare



Hydrograph Report

Hyd. No. 26

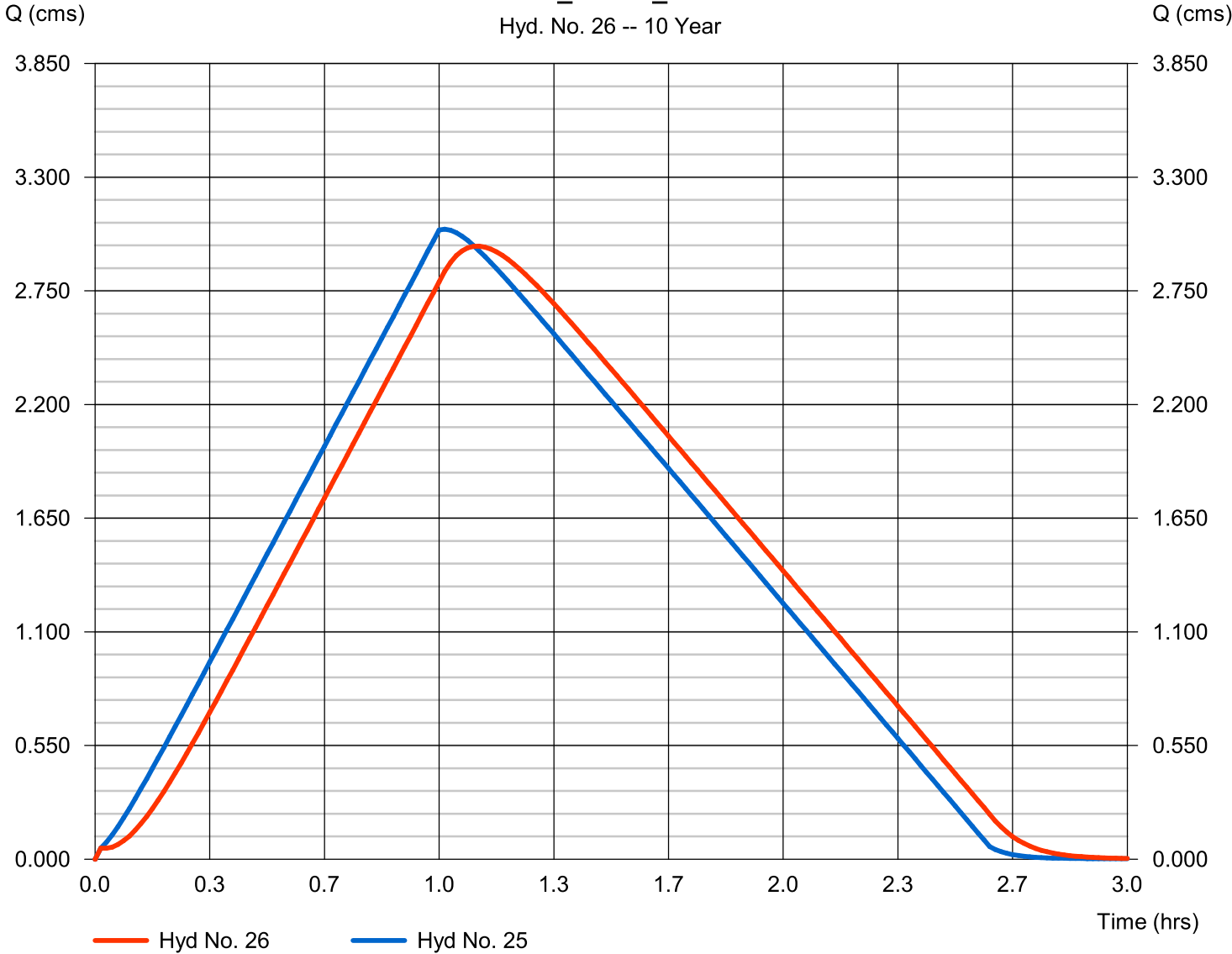
EB_A6-SC_A1

Hydrograph type	= Reach	Peak discharge	= 2.966 cms
Storm frequency	= 10 yrs	Time to peak	= 1.12 hrs
Time interval	= 1 min	Hyd. volume	= 14 719.0 cum
Inflow hyd. No.	= 25 - EB_A6	Section type	= Trapezoidal
Reach length	= 850.0 m	Channel slope	= 1.4 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.193	Rating curve m	= 1.353
Ave. velocity	= 2.44 m/s	Routing coeff.	= 0.2084

Modified Att-Kin routing method used.

EB_A6-SC_A1

Hyd. No. 26 -- 10 Year



Hydrograph Report

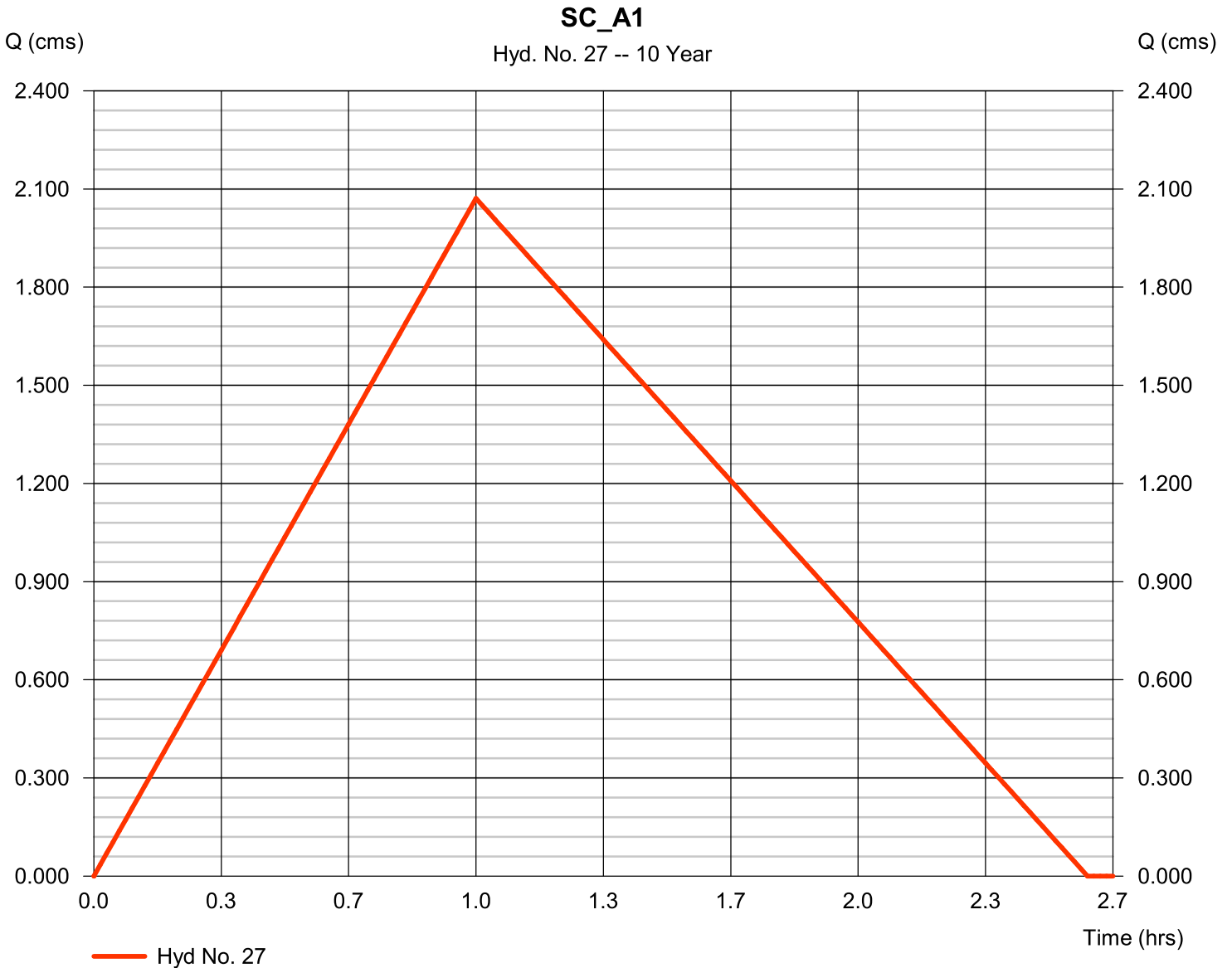
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Hyd. No. 27

SC_A1

Hydrograph type	= Rational	Peak discharge	= 2.071 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 9 693.5 cum
Drainage area	= 223.770 hectare	Runoff coeff.	= 0.16
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

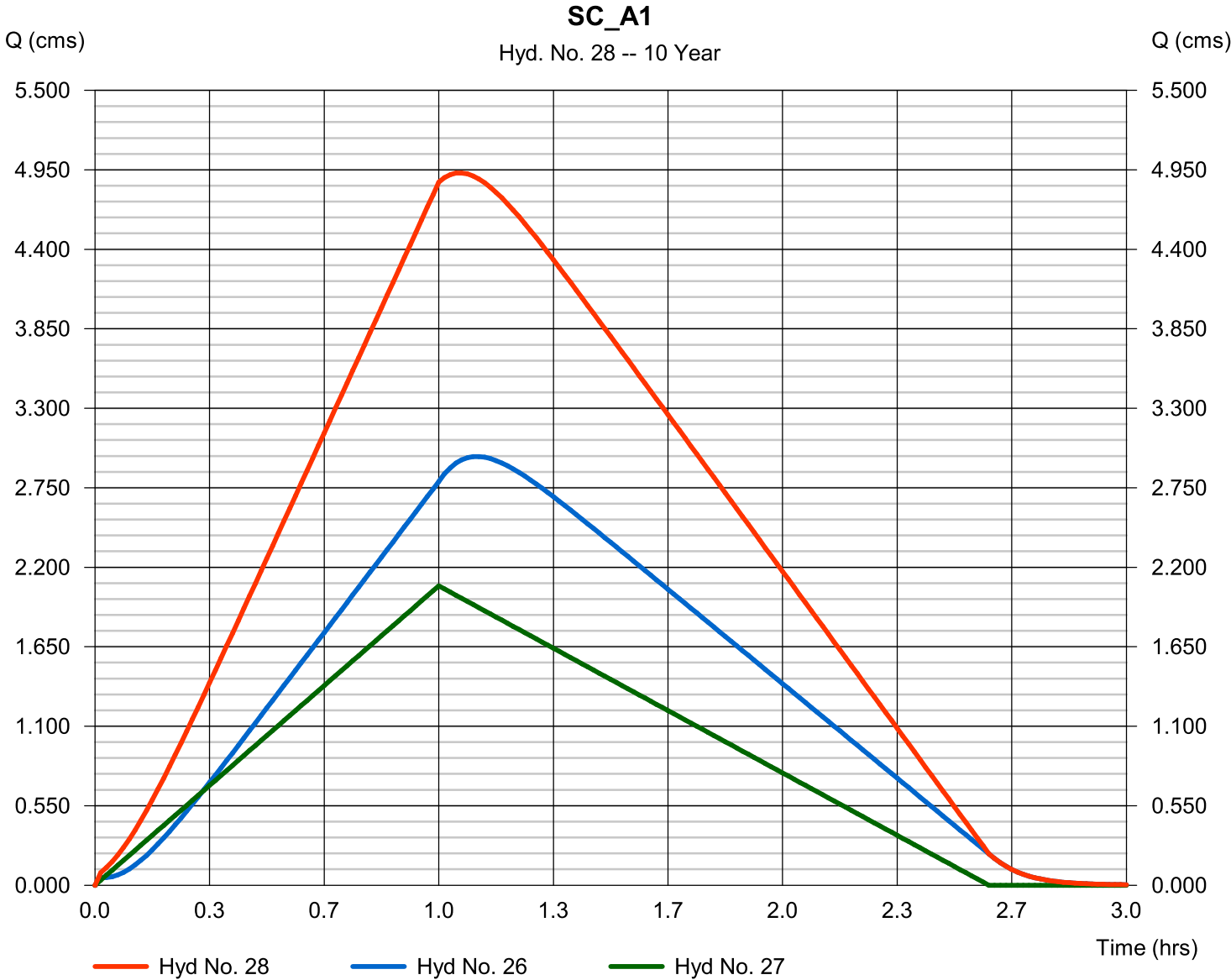
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Hyd. No. 28

SC_A1

Hydrograph type	= Combine	Peak discharge	= 4.928 cms
Storm frequency	= 10 yrs	Time to peak	= 1.07 hrs
Time interval	= 1 min	Hyd. volume	= 24 412.5 cum
Inflow hyds.	= 26, 27	Contrib. drain. area	= 223.770 hectare



Hydrograph Report

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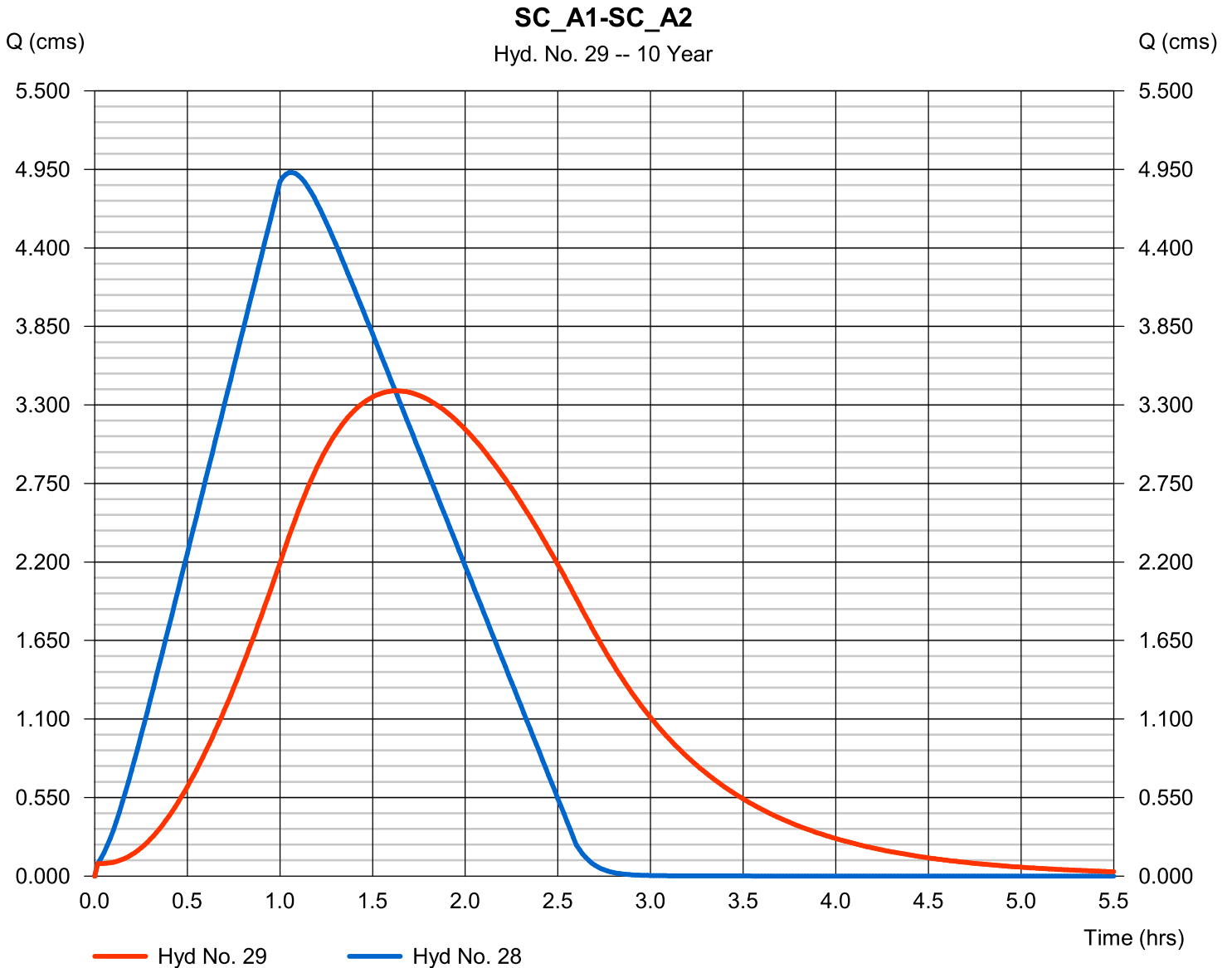
vendredi, avr 6, 2012

Hyd. No. 29

SC_A1-SC_A2

Hydrograph type	= Reach	Peak discharge	= 3.399 cms
Storm frequency	= 10 yrs	Time to peak	= 1.63 hrs
Time interval	= 1 min	Hyd. volume	= 24 631.0 cum
Inflow hyd. No.	= 28 - SC_A1	Section type	= Trapezoidal
Reach length	= 1500.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.44 m/s	Routing coeff.	= 0.0238

Modified Att-Kin routing method used.



Hydrograph Report

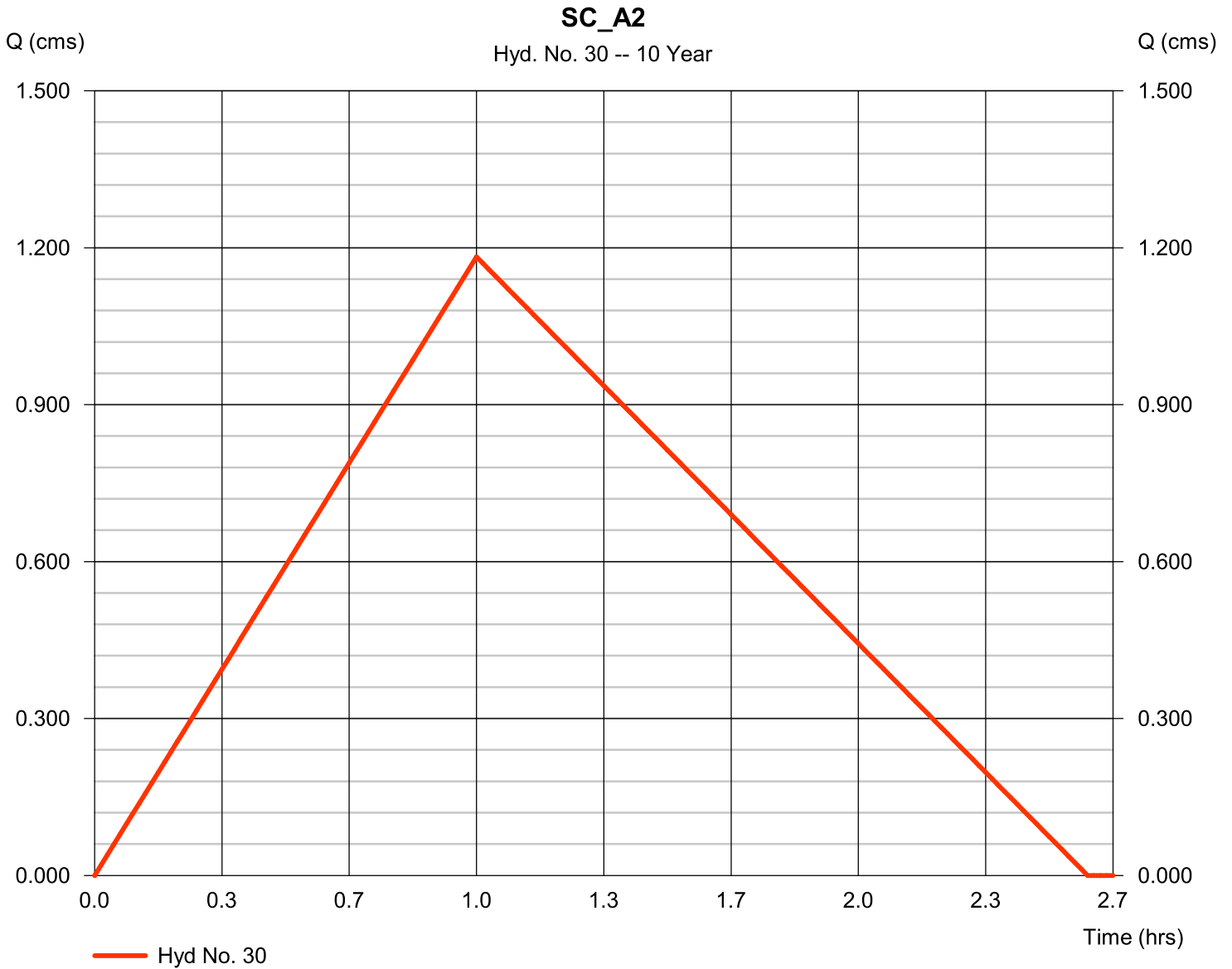
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 30

SC_A2

Hydrograph type	= Rational	Peak discharge	= 1.182 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 5 533.9 cum
Drainage area	= 170.330 hectare	Runoff coeff.	= 0.12
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

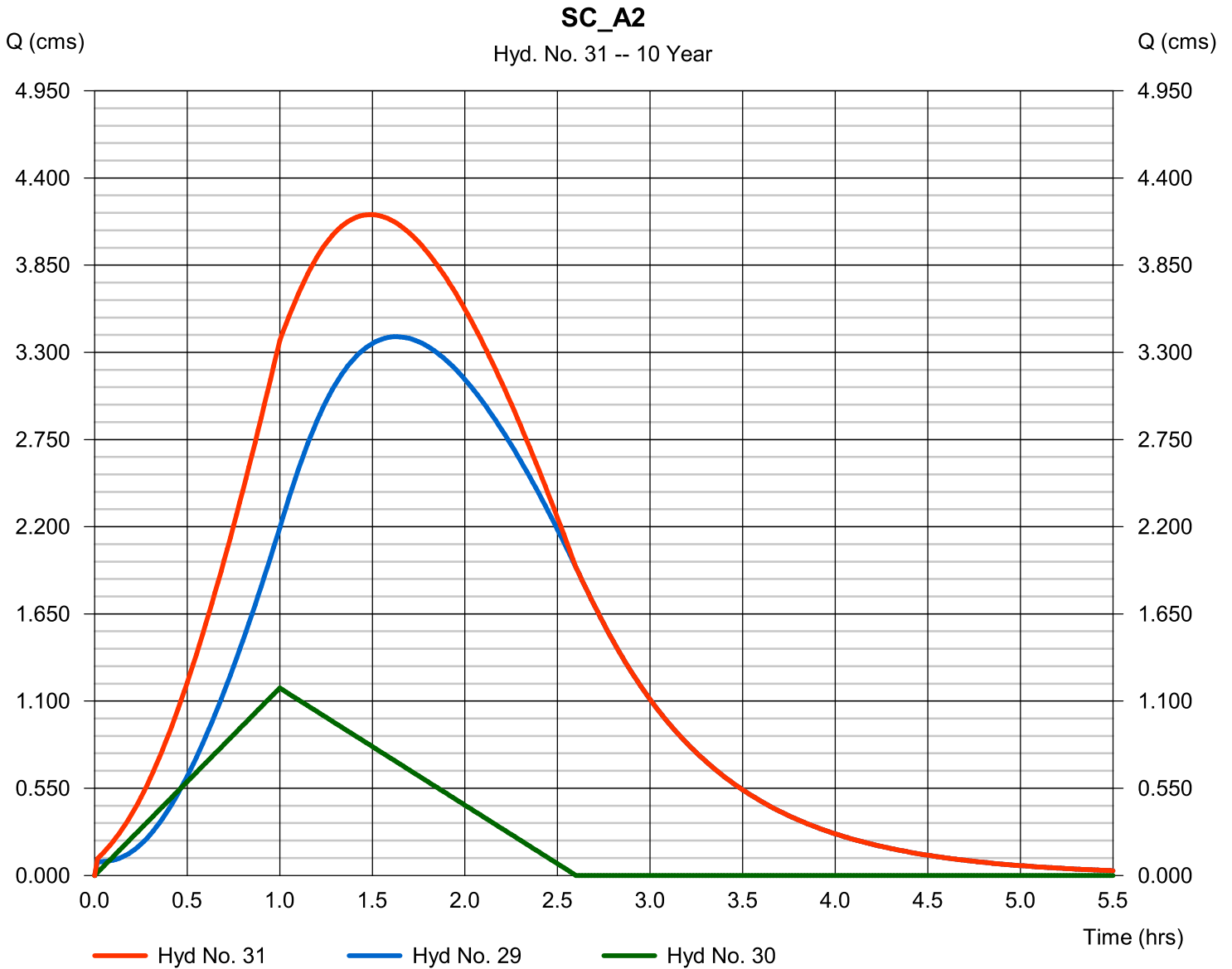
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vendredi, avr 6, 2012

Hyd. No. 31

SC_A2

Hydrograph type	= Combine	Peak discharge	= 4.169 cms
Storm frequency	= 10 yrs	Time to peak	= 1.48 hrs
Time interval	= 1 min	Hyd. volume	= 30 164.9 cum
Inflow hyds.	= 29, 30	Contrib. drain. area	= 170.330 hectare



Hydrograph Report

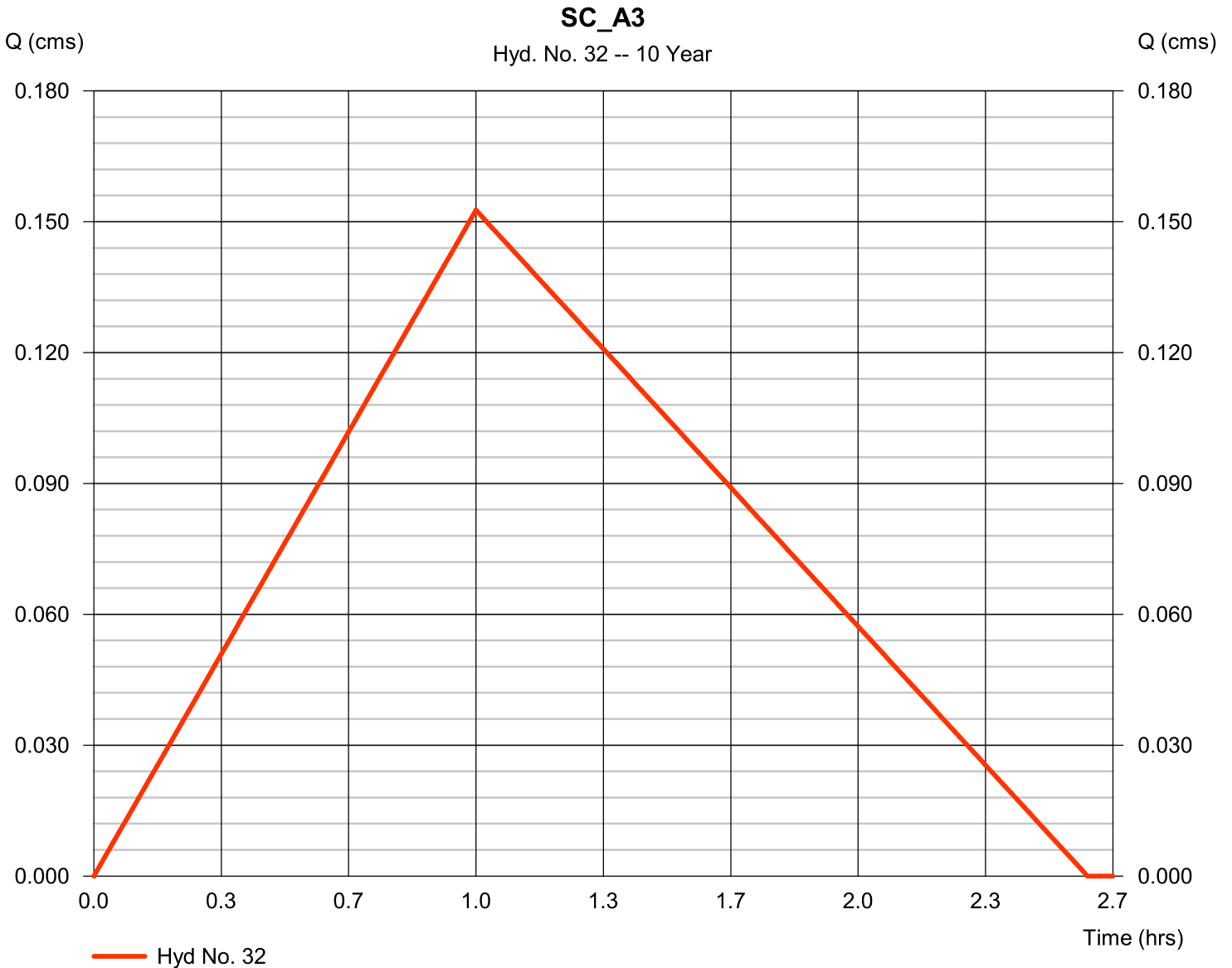
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 32

SC_A3

Hydrograph type	= Rational	Peak discharge	= 0.153 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 714.4 cum
Drainage area	= 21.990 hectare	Runoff coeff.	= 0.12
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

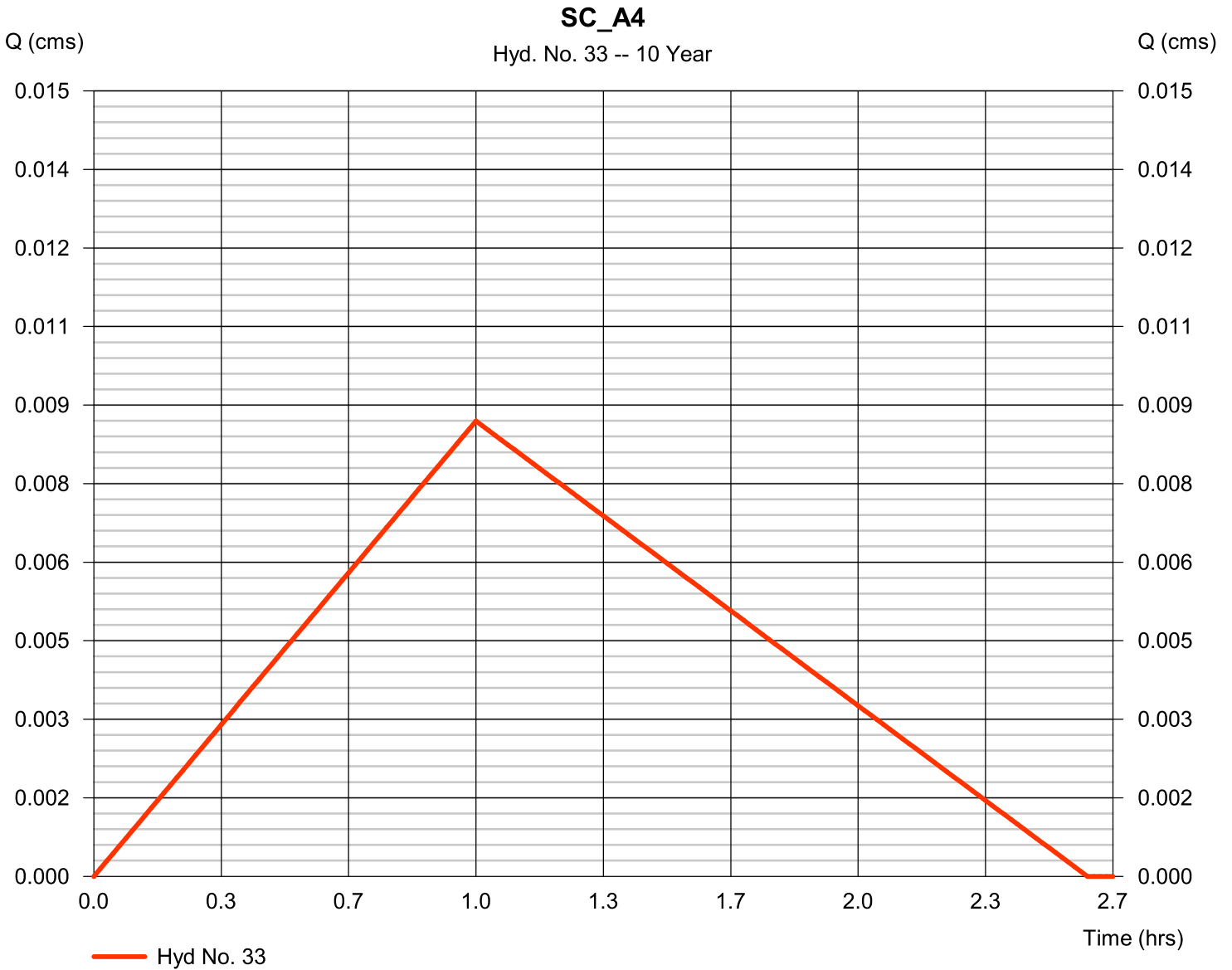
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Hyd. No. 33

SC_A4

Hydrograph type	= Rational	Peak discharge	= 0.009 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 40.7 cum
Drainage area	= 1.670 hectare	Runoff coeff.	= 0.09
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

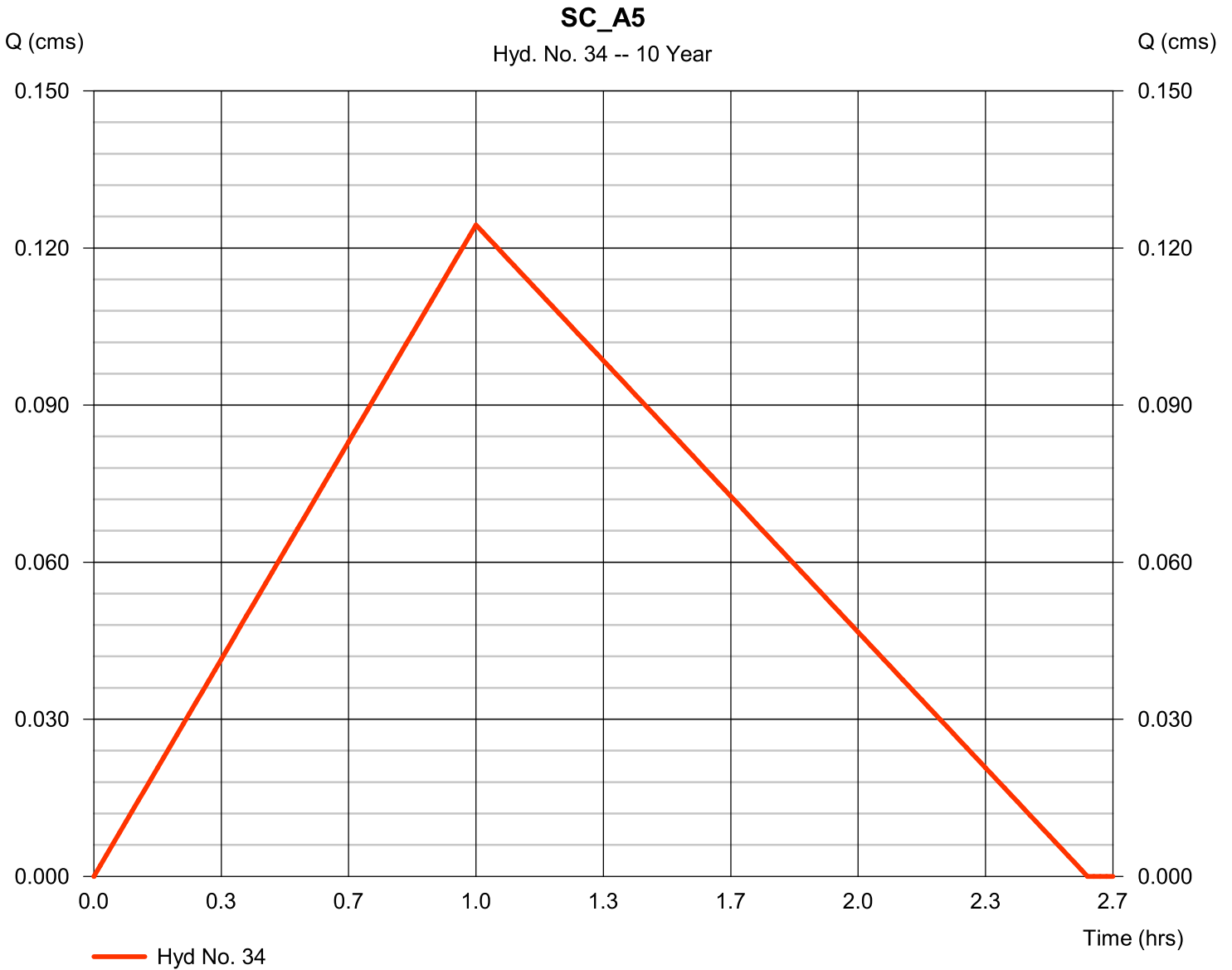
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Hyd. No. 34

SC_A5

Hydrograph type	= Rational	Peak discharge	= 0.124 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 582.2 cum
Drainage area	= 17.920 hectare	Runoff coeff.	= 0.12
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

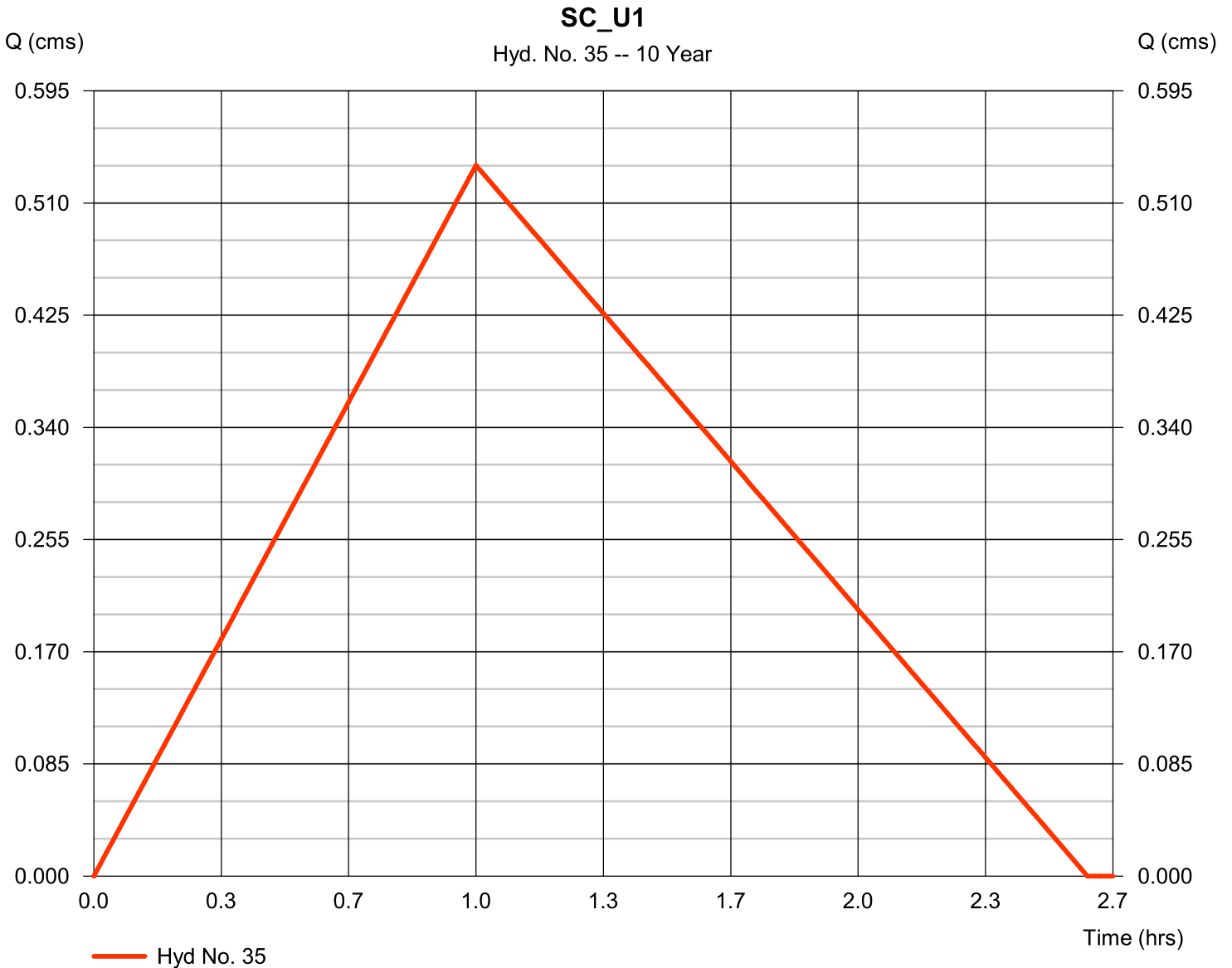
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Hyd. No. 35

SC_U1

Hydrograph type	= Rational	Peak discharge	= 0.539 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 2 520.5 cum
Drainage area	= 25.860 hectare	Runoff coeff.	= 0.36
Intensity	= 21.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

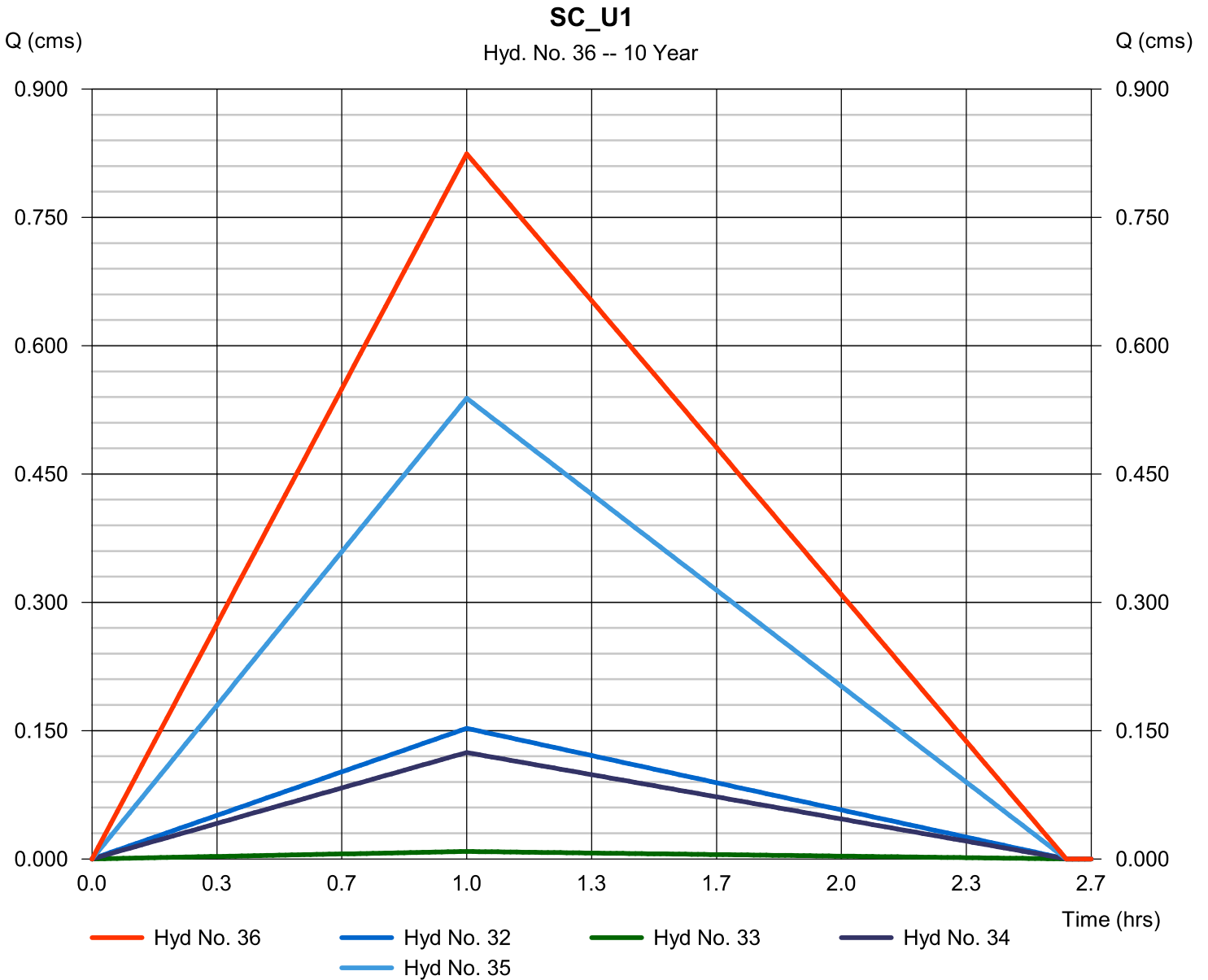
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vendredi, avr 6, 2012

Hyd. No. 36

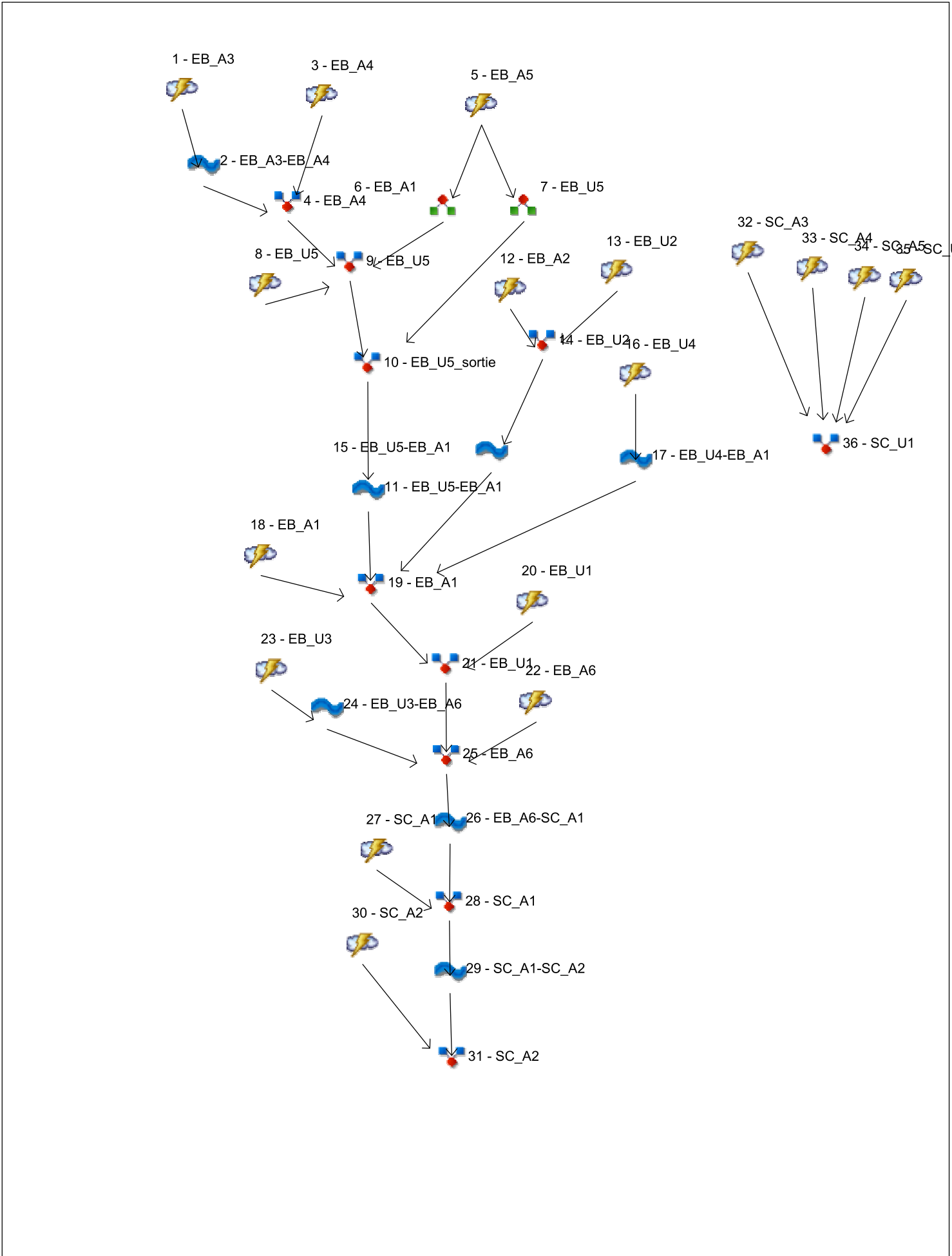
SC_U1

Hydrograph type	= Combine	Peak discharge	= 0.824 cms
Storm frequency	= 10 yrs	Time to peak	= 1.00 hrs
Time interval	= 1 min	Hyd. volume	= 3 857.9 cum
Inflow hyds.	= 32, 33, 34, 35	Contrib. drain. area	= 67.440 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

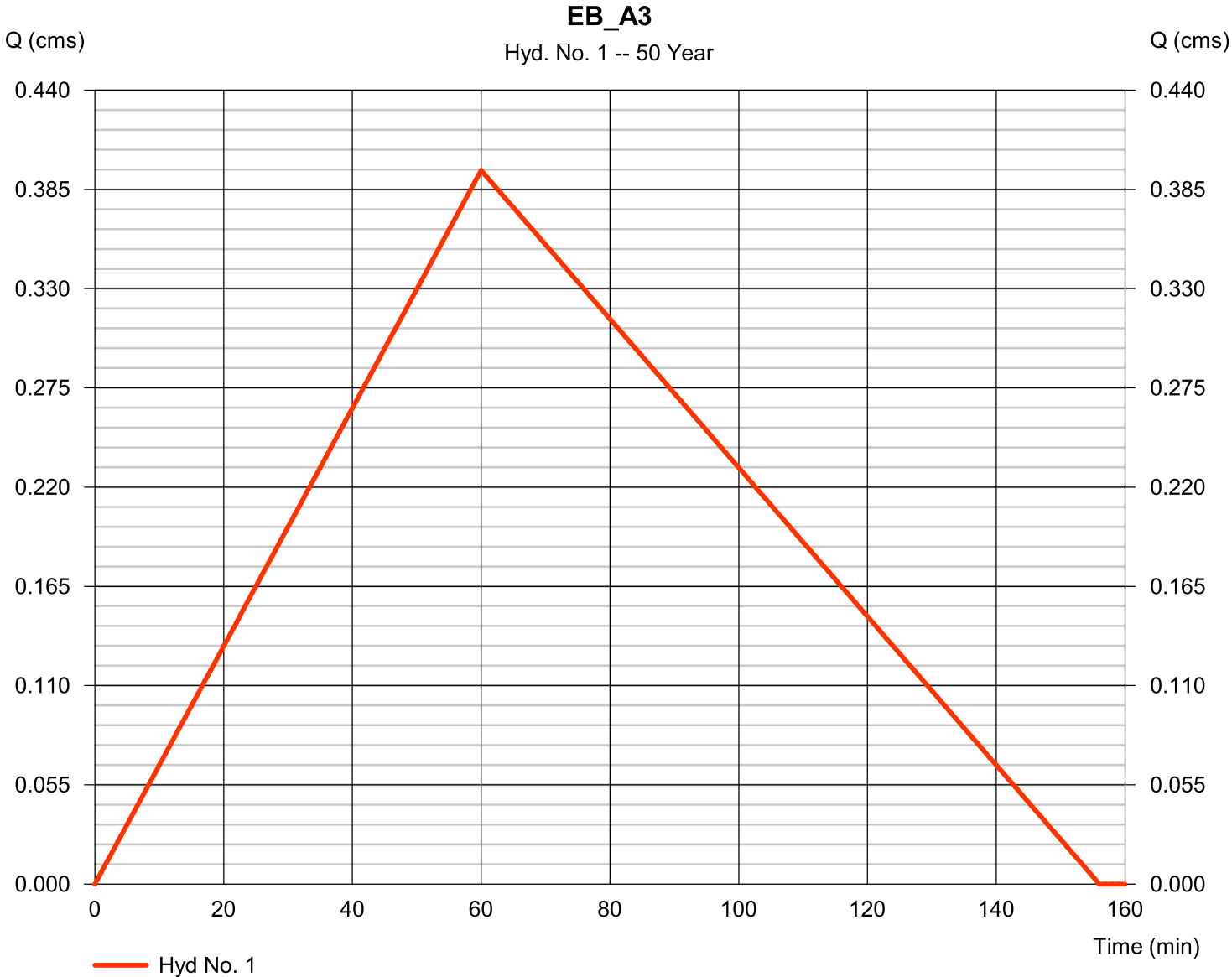
Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.396	1	60	1 851.2	-----	-----	-----	EB_A3
2	Reach	0.389	1	62	1 852.1	1	-----	-----	EB_A3-EB_A4
3	Rational	0.771	1	60	3 609.2	-----	-----	-----	EB_A4
4	Combine	1.152	1	60	5 461.3	2, 3	-----	-----	EB_A4
5	Rational	0.161	1	60	752.4	-----	-----	-----	EB_A5
6	Diversion1	0.161	1	60	752.4	5	-----	-----	EB_A1
7	Diversion2	0.000	1	n/a	0.0	5	-----	-----	EB_U5
8	Rational	0.058	1	60	273.1	-----	-----	-----	EB_U5
9	Combine	1.371	1	60	6 486.9	4, 6, 8	-----	-----	EB_U5
10	Combine	1.371	1	60	6 486.9	7, 9	-----	-----	EB_U5_sortie
11	Reach	1.339	1	64	6 491.8	10	-----	-----	EB_U5-EB_A1
12	Rational	0.514	1	60	2 404.0	-----	-----	-----	EB_A2
13	Rational	0.191	1	60	895.4	-----	-----	-----	EB_U2
14	Combine	0.705	1	60	3 299.5	12, 13	-----	-----	EB_U2
15	Reach	0.690	1	63	3 301.3	14	-----	-----	EB_U5-EB_A1
16	Rational	0.186	1	60	869.5	-----	-----	-----	EB_U4
17	Reach	0.183	1	62	869.9	16	-----	-----	EB_U4-EB_A1
18	Rational	0.194	1	60	905.7	-----	-----	-----	EB_A1
19	Combine	2.396	1	63	11 568.7	11, 15, 17, 18	-----	-----	EB_A1
20	Rational	0.443	1	60	2 074.1	-----	-----	-----	EB_U1
21	Combine	2.825	1	63	13 642.8	19, 20	-----	-----	EB_U1
22	Rational	2.354	1	60	11 016.5	-----	-----	-----	EB_A6
23	Rational	0.041	1	60	190.1	-----	-----	-----	EB_U3
24	Reach	0.034	1	76	190.5	23	-----	-----	EB_U3-EB_A6
25	Combine	5.169	1	61	24 849.8	21, 22, 24	-----	-----	EB_A6
26	Reach	5.051	1	66	24 872.2	25	-----	-----	EB_A6-SC_A1
27	Rational	3.625	1	60	16 963.7	-----	-----	-----	SC_A1
28	Combine	8.506	1	63	41 835.9	26, 27	-----	-----	SC_A1
29	Reach	6.124	1	94	42 161.8	28	-----	-----	SC_A1-SC_A2
30	Rational	2.234	1	60	10 453.0	-----	-----	-----	SC_A2
31	Combine	7.661	1	86	52 614.8	29, 30	-----	-----	SC_A2
32	Rational	0.288	1	60	1 349.5	-----	-----	-----	SC_A3
33	Rational	0.017	1	60	78.4	-----	-----	-----	SC_A4
34	Rational	0.235	1	60	1 099.7	-----	-----	-----	SC_A5
35	Rational	0.738	1	60	3 454.1	-----	-----	-----	SC_U1
36	Combine	1.278	1	60	5 981.7	32, 33, 34, 35	-----	-----	SC_U1
E:\MODELISATION_HYDRAFLOW\ALSP10\25-11-2011\25-11-2011-19.gpw								vendredi, avr 6, 2012	

Hydrograph Report

Hyd. No. 1

EB_A3

Hydrograph type	= Rational	Peak discharge	= 0.396 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 851.2 cum
Drainage area	= 24.420 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

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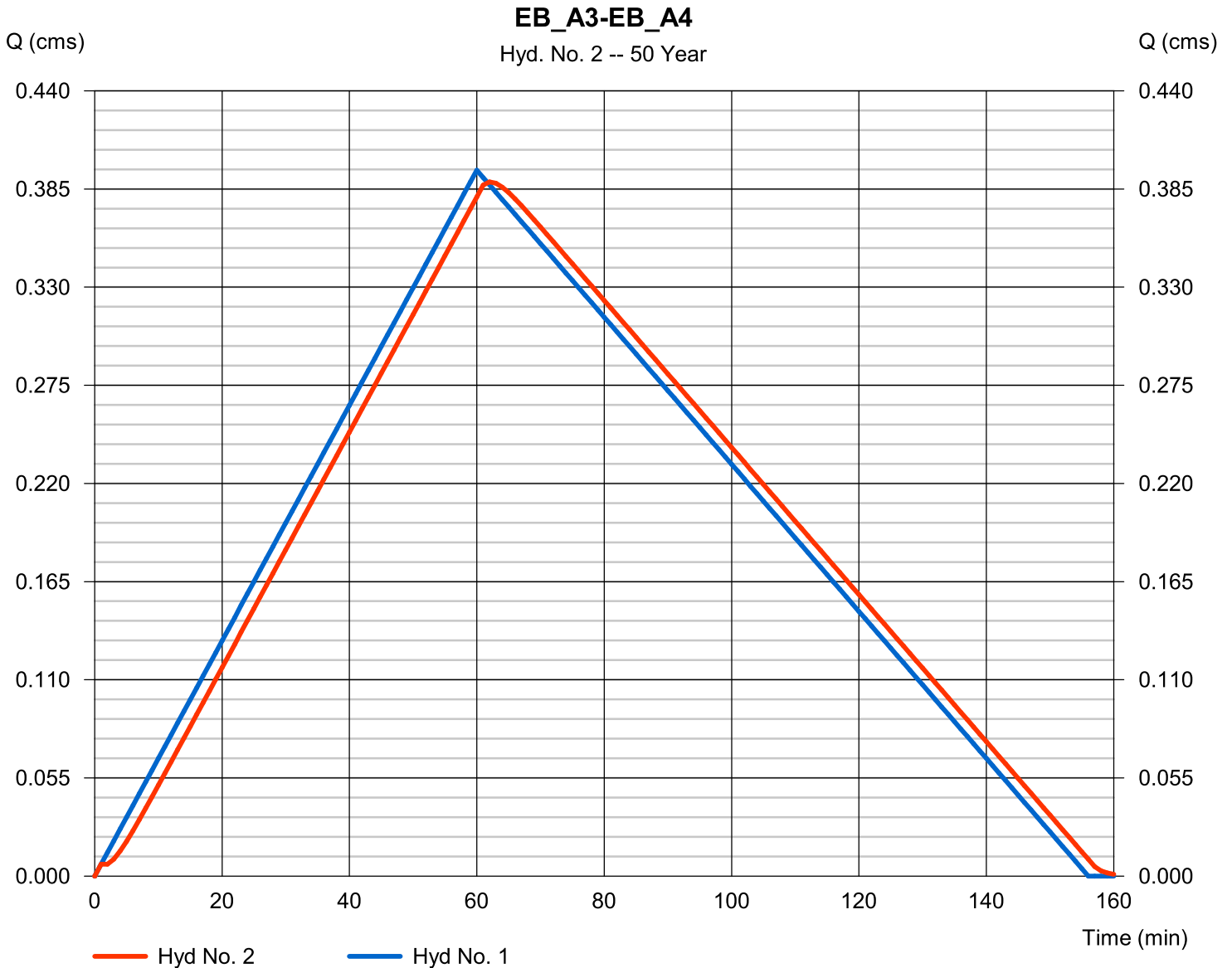
vendredi, avr 6, 2012

Hyd. No. 2

EB_A3-EB_A4

Hydrograph type	= Reach	Peak discharge	= 0.389 cms
Storm frequency	= 50 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 1 852.1 cum
Inflow hyd. No.	= 1 - EB_A3	Section type	= Trapezoidal
Reach length	= 280.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 1.94 m/s	Routing coeff.	= 0.4392

Modified Att-Kin routing method used.



Hydrograph Report

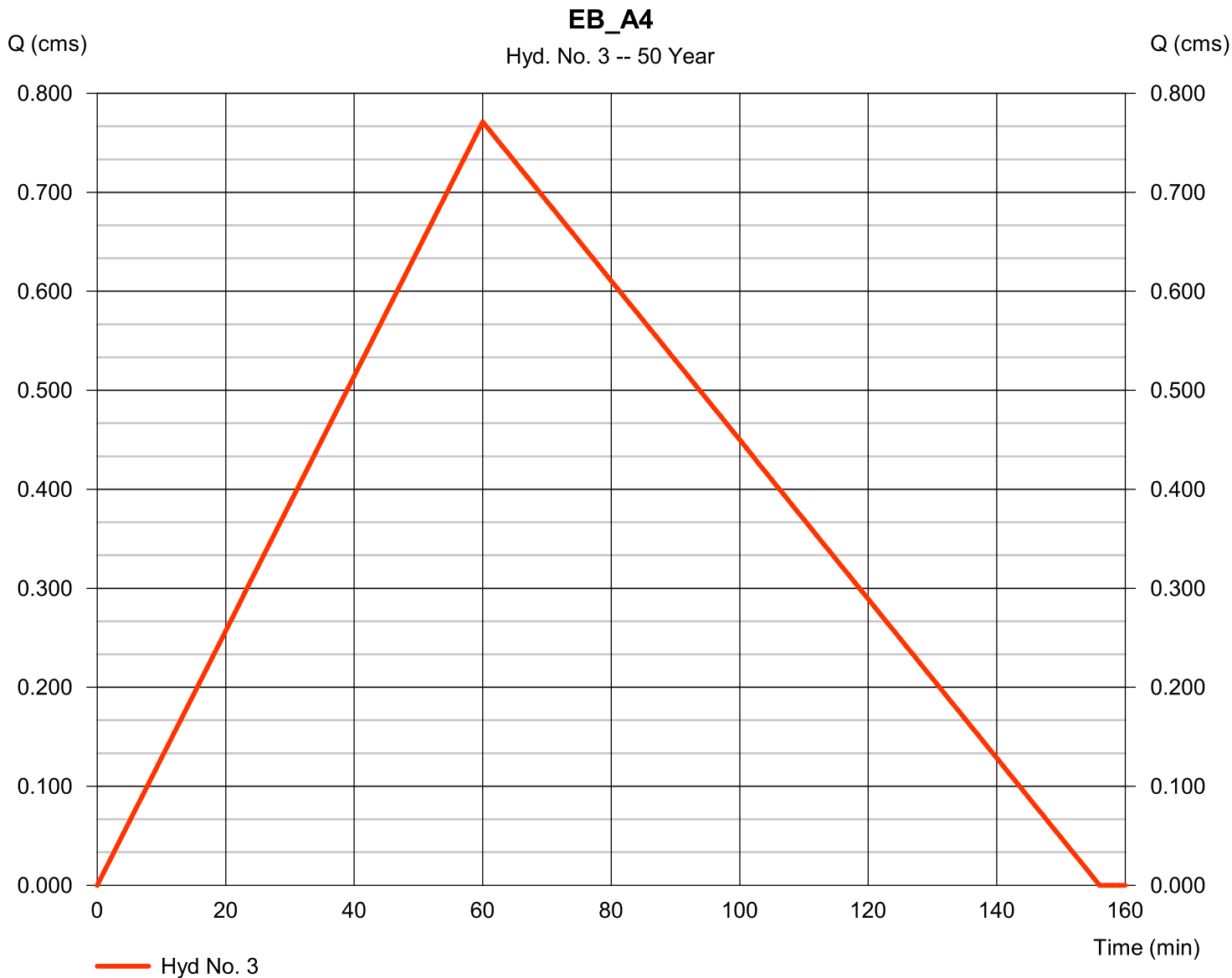
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Hyd. No. 3

EB_A4

Hydrograph type	= Rational	Peak discharge	= 0.771 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 609.2 cum
Drainage area	= 49.990 hectare	Runoff coeff.	= 0.2
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

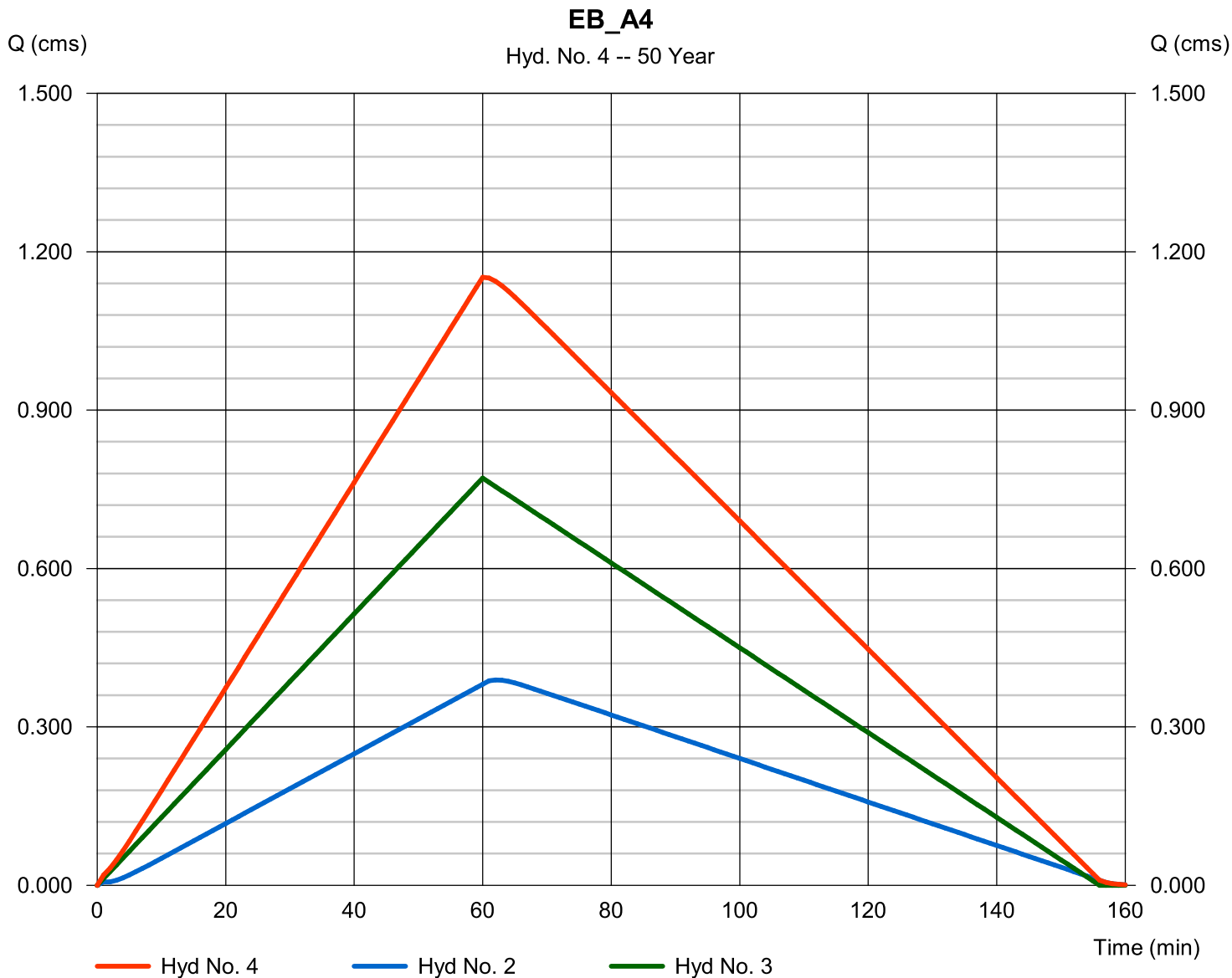
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Hyd. No. 4

EB_A4

Hydrograph type	= Combine	Peak discharge	= 1.152 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 461.3 cum
Inflow hyds.	= 2, 3	Contrib. drain. area	= 49.990 hectare



Hydrograph Report

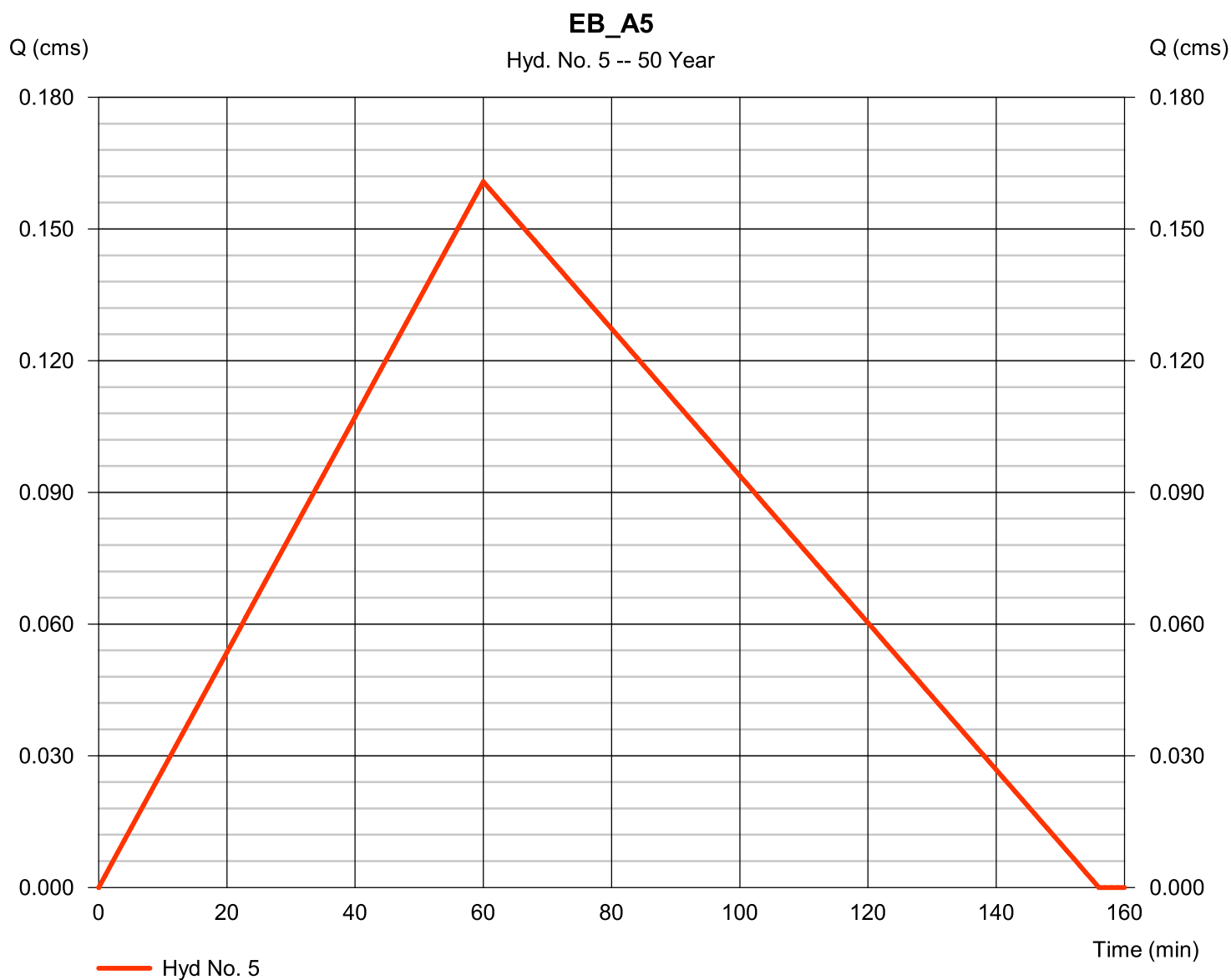
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 5

EB_A5

Hydrograph type	= Rational	Peak discharge	= 0.161 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 752.4 cum
Drainage area	= 10.970 hectare	Runoff coeff.	= 0.19
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

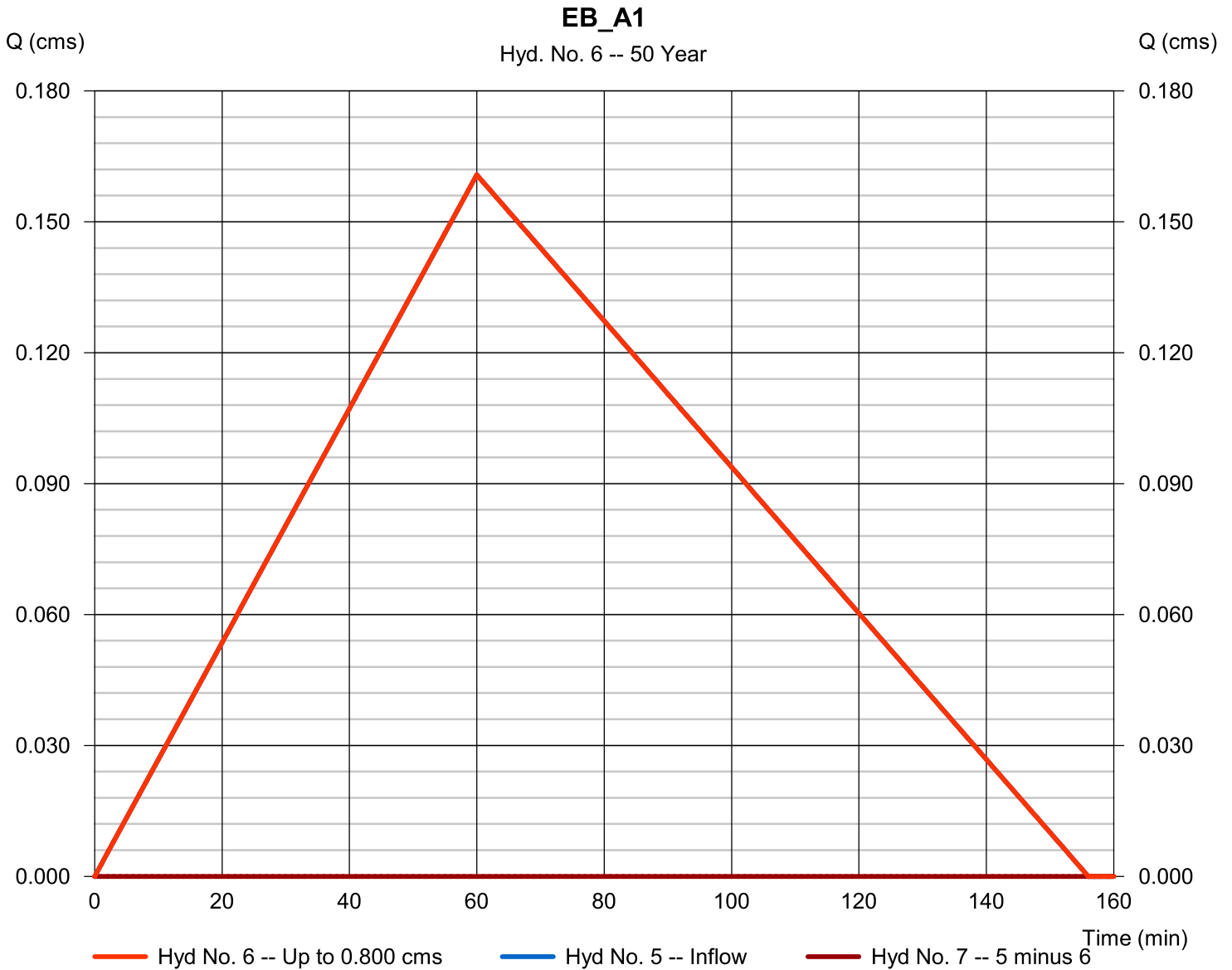
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 6

EB_A1

Hydrograph type	= Diversion1	Peak discharge	= 0.161 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 752.4 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.80 cms



Hydrograph Report

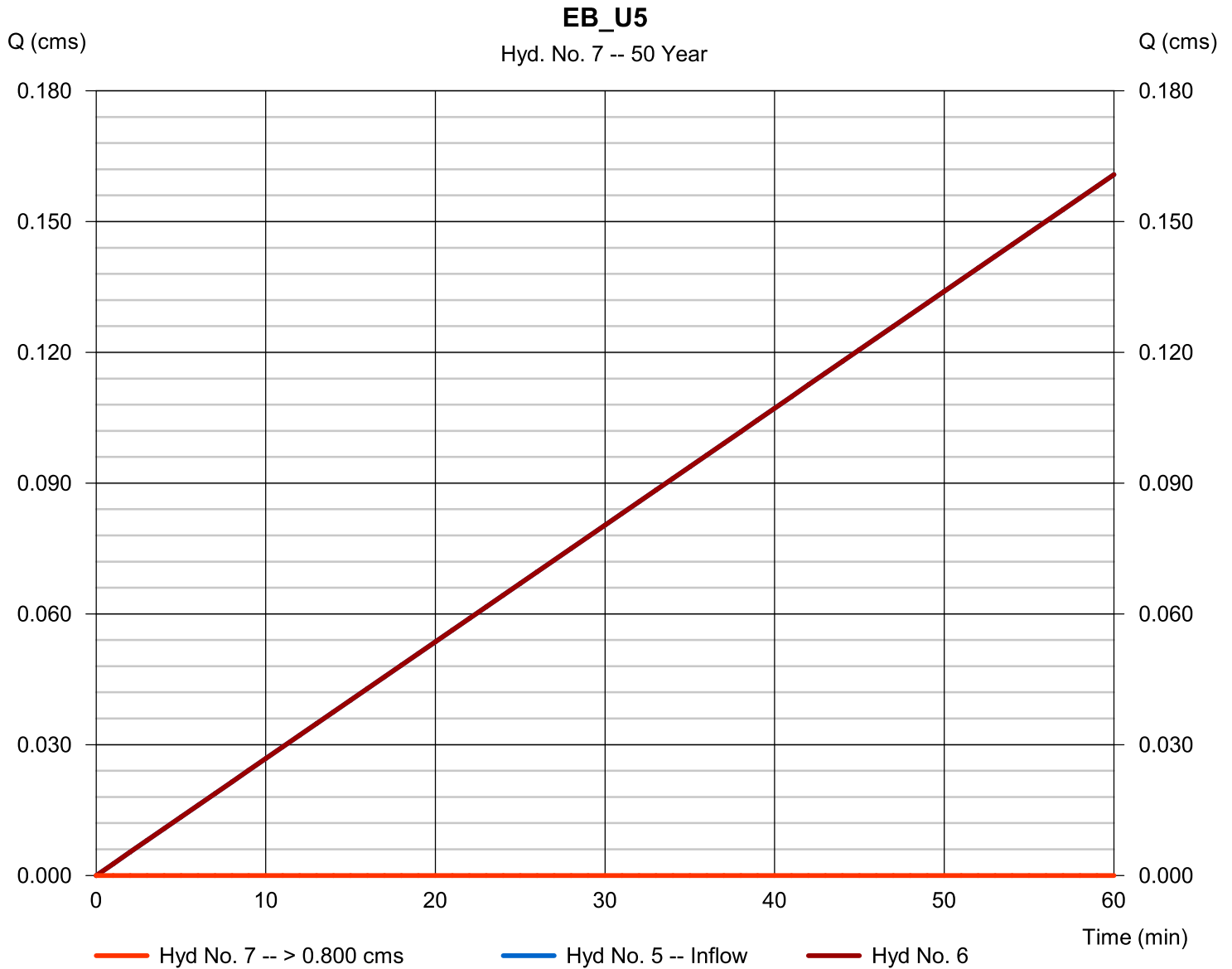
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 7

EB_U5

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.80 cms



Hydrograph Report

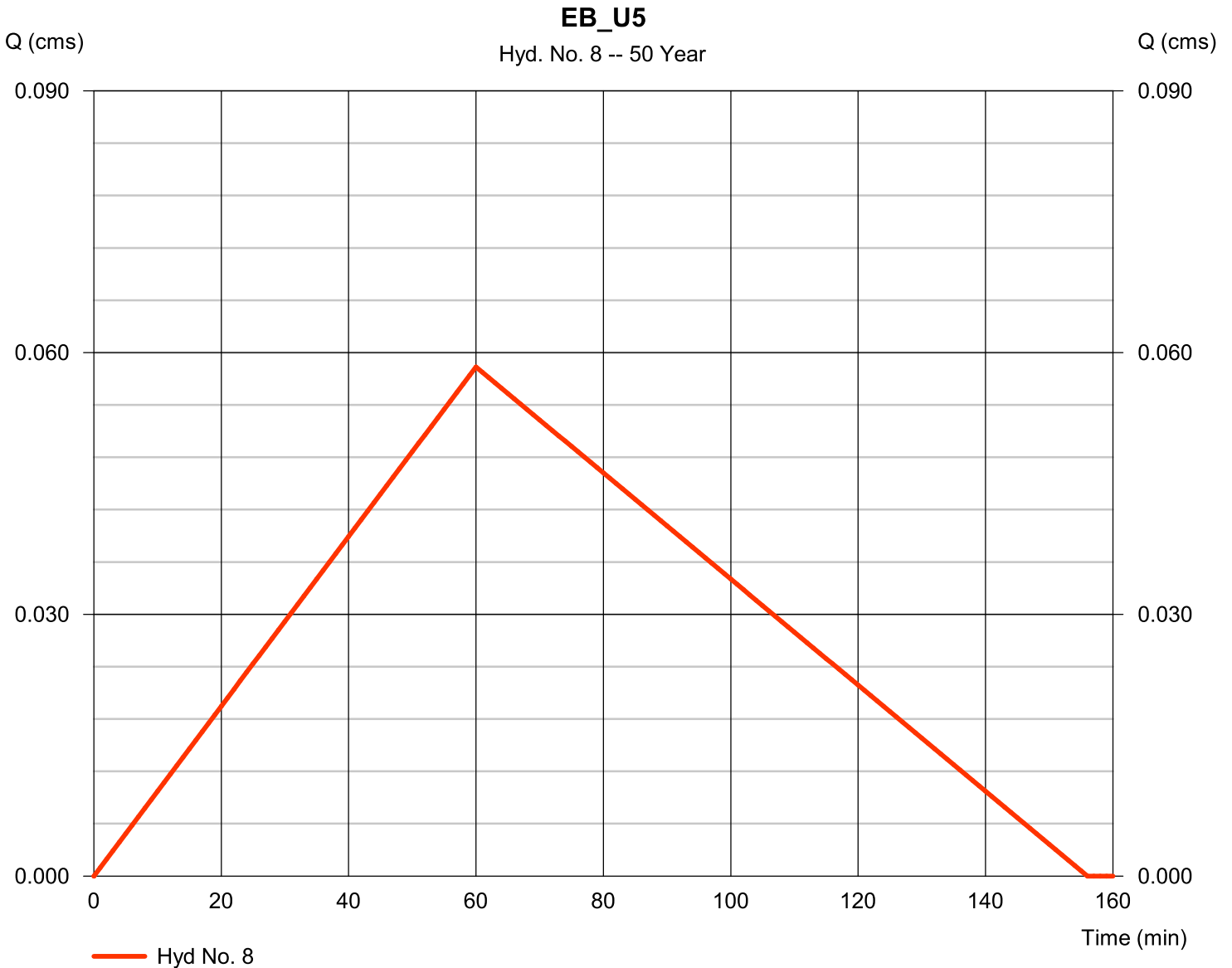
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 8

EB_U5

Hydrograph type	= Rational	Peak discharge	= 0.058 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 273.1 cum
Drainage area	= 1.940 hectare	Runoff coeff.	= 0.39
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

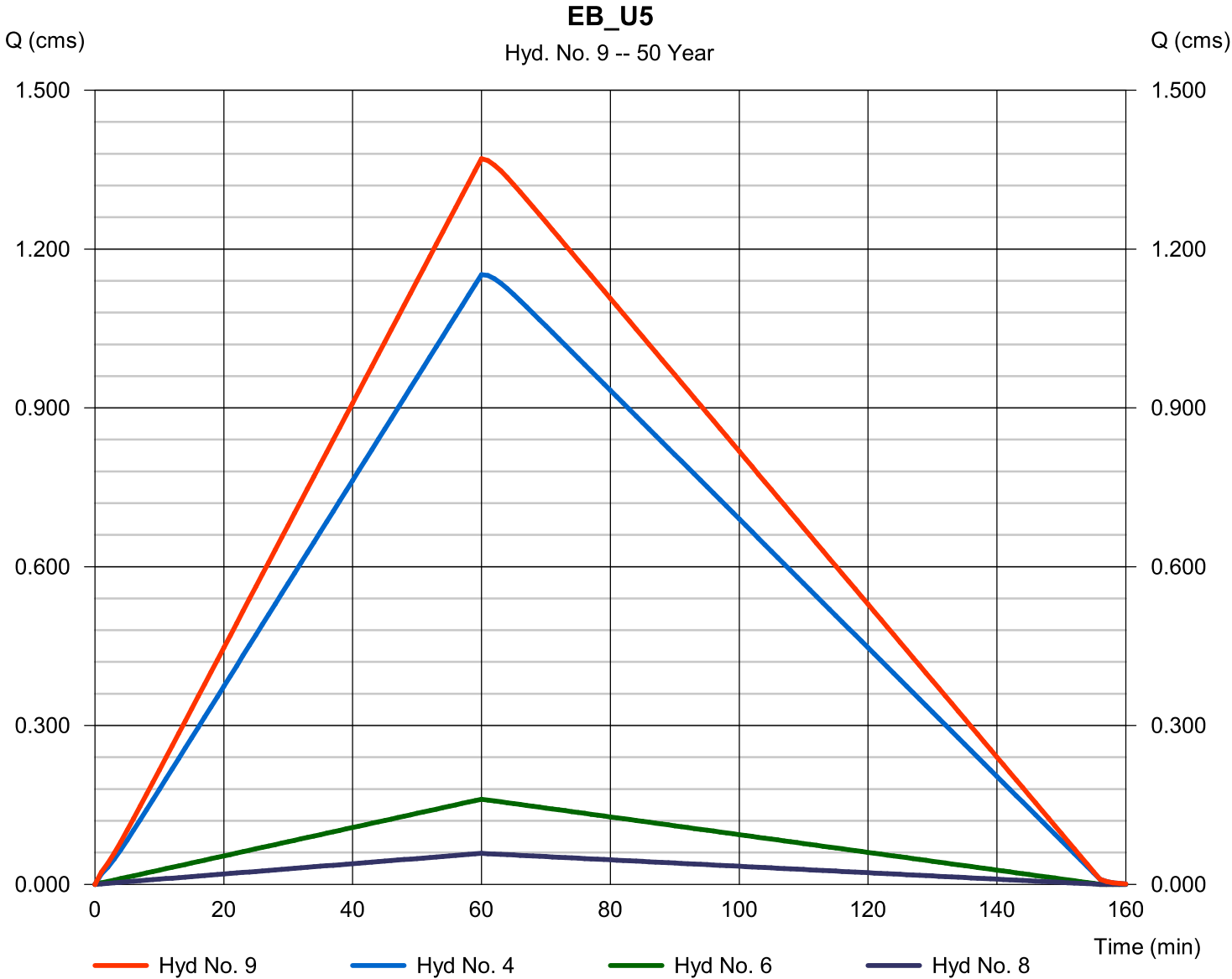
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Hyd. No. 9

EB_U5

Hydrograph type	= Combine	Peak discharge	= 1.371 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 486.9 cum
Inflow hyds.	= 4, 6, 8	Contrib. drain. area	= 1.940 hectare



Hydrograph Report

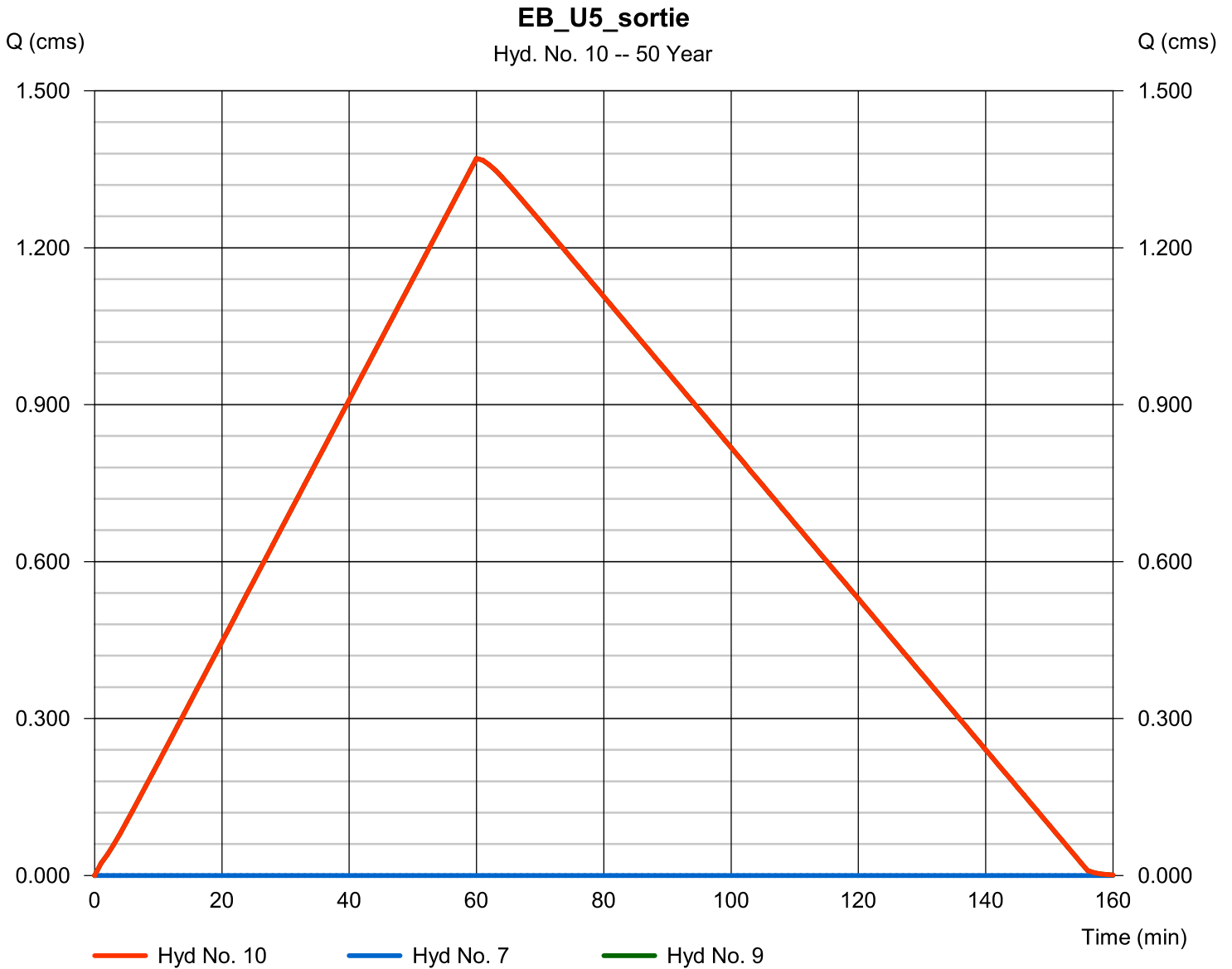
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 10

EB_U5_sortie

Hydrograph type	= Combine	Peak discharge	= 1.371 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 486.9 cum
Inflow hyds.	= 7, 9	Contrib. drain. area	= 0.000 hectare



Hydrograph Report

Hyd. No. 11

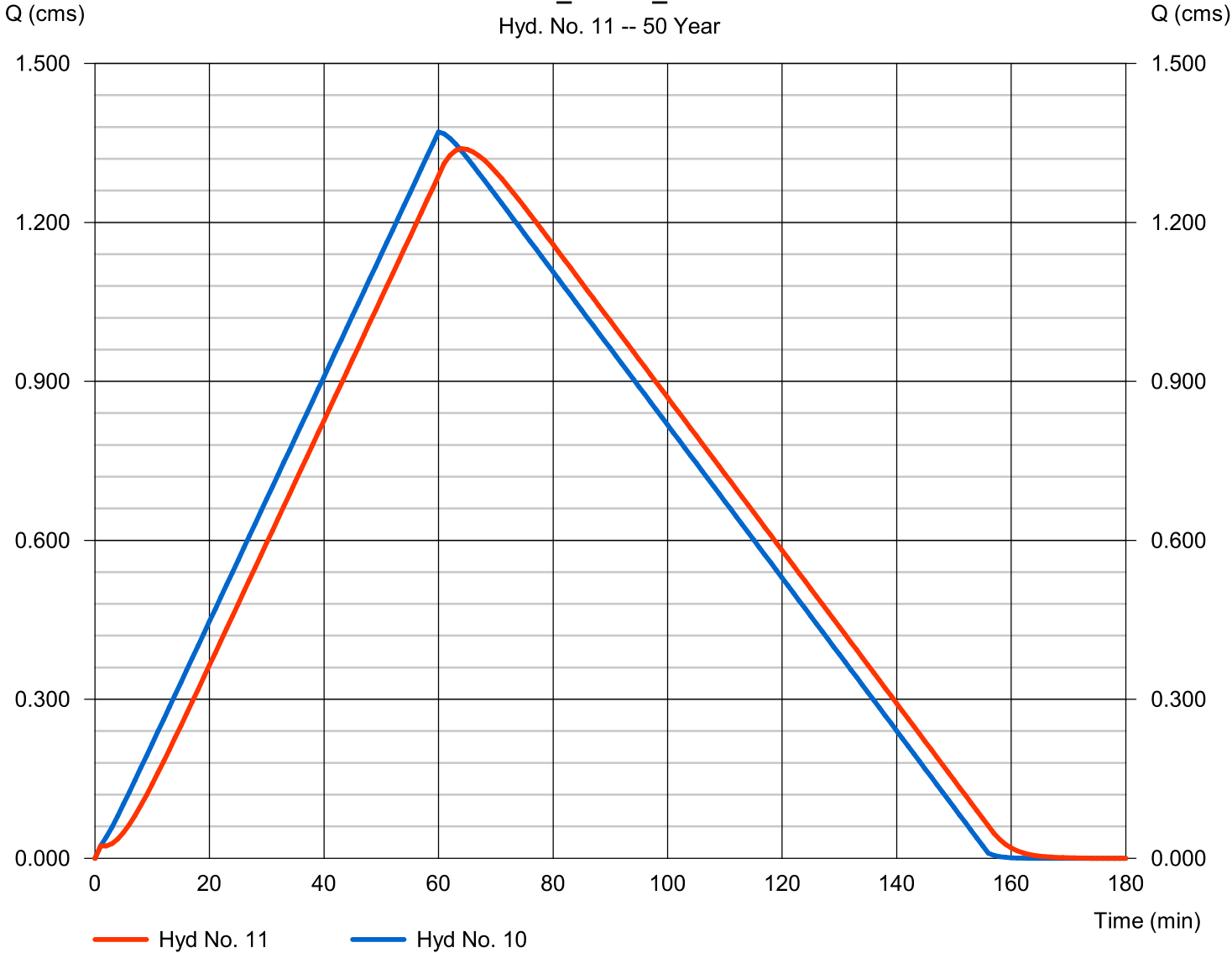
EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 1.339 cms
Storm frequency	= 50 yrs	Time to peak	= 64 min
Time interval	= 1 min	Hyd. volume	= 6 491.8 cum
Inflow hyd. No.	= 10 - EB_U5_sortie	Section type	= Trapezoidal
Reach length	= 640.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 2.56 m/s	Routing coeff.	= 0.2789

Modified Att-Kin routing method used.

EB_U5-EB_A1

Hyd. No. 11 -- 50 Year



Hydrograph Report

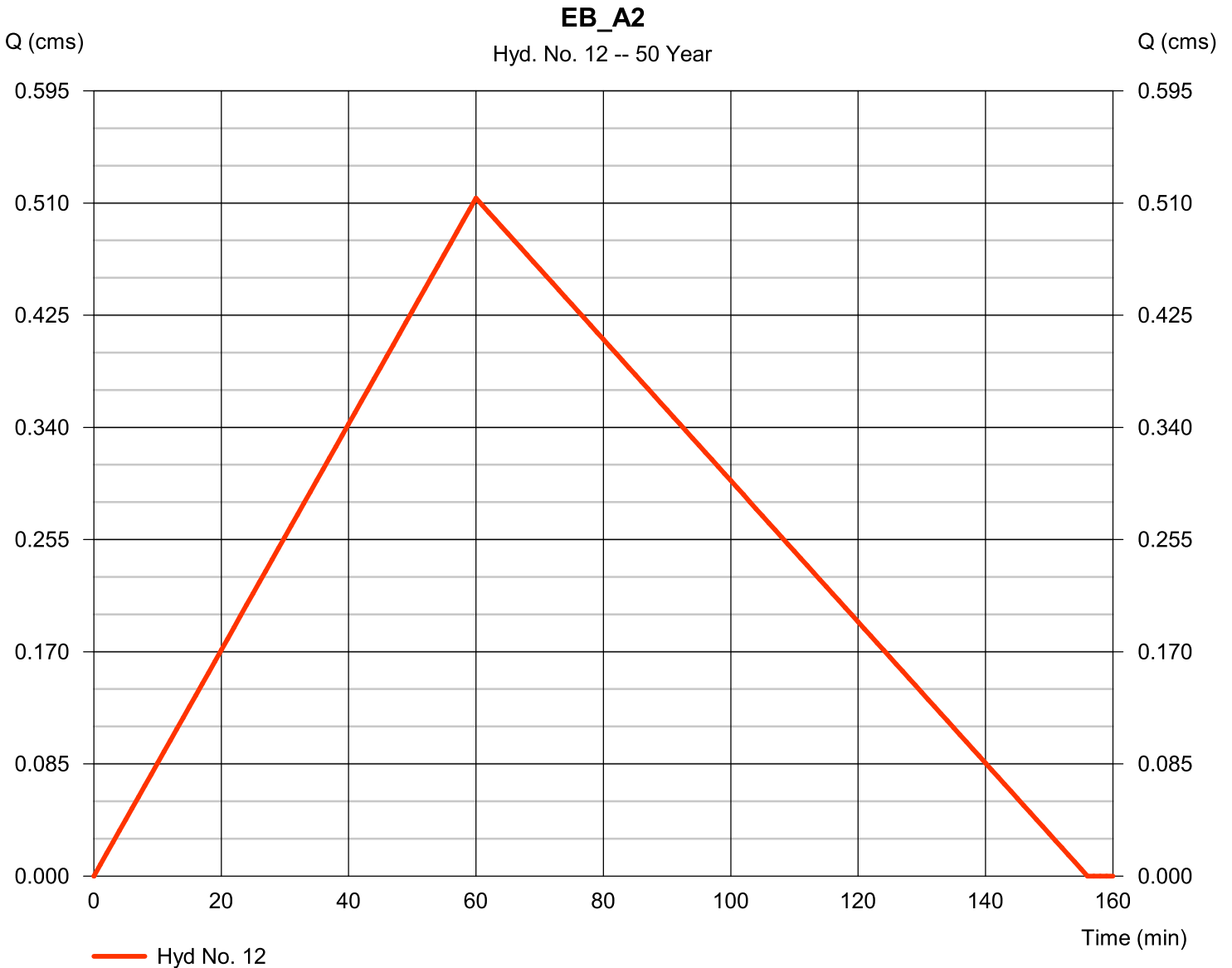
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 12

EB_A2

Hydrograph type	= Rational	Peak discharge	= 0.514 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 404.0 cum
Drainage area	= 35.050 hectare	Runoff coeff.	= 0.19
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

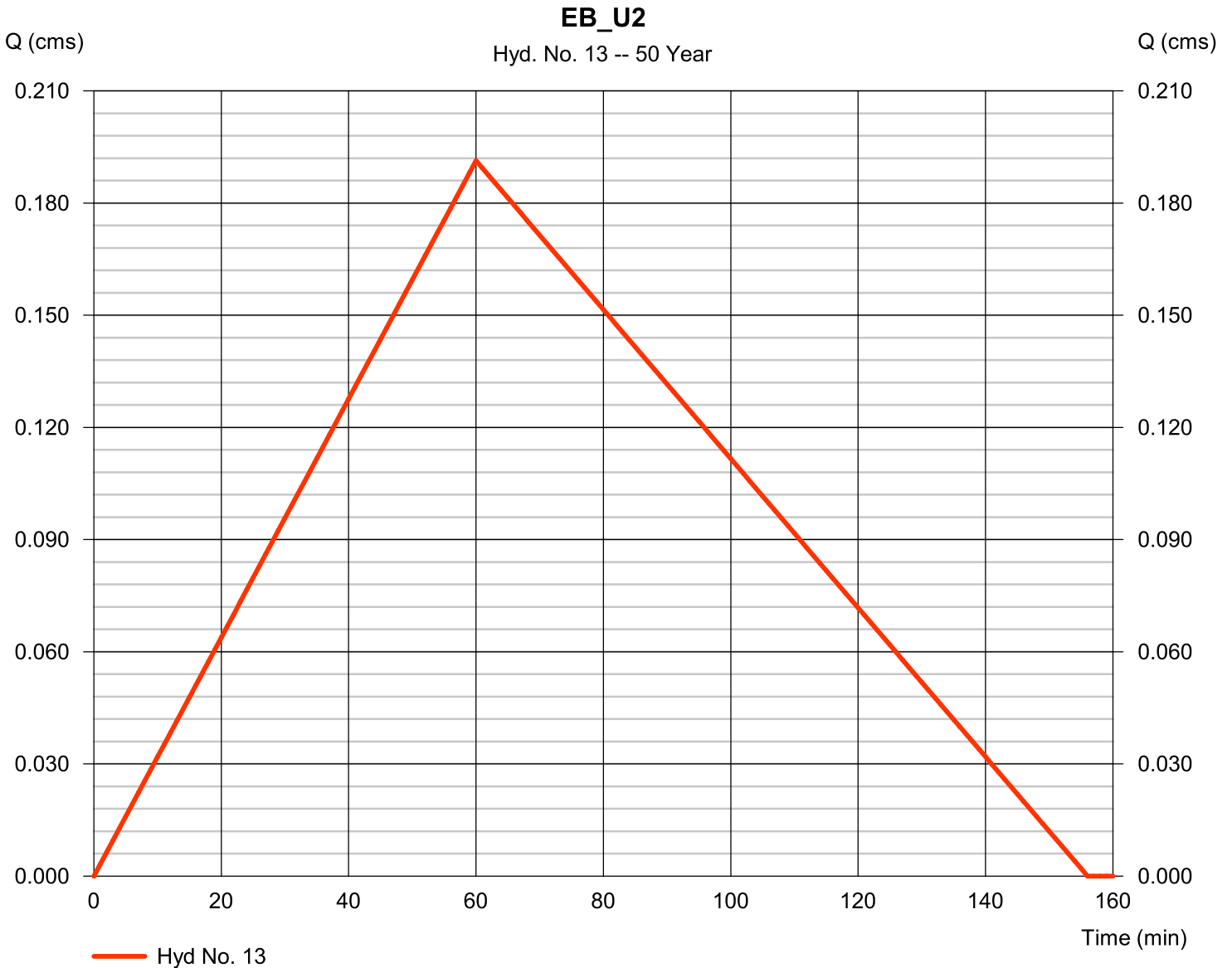
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 13

EB_U2

Hydrograph type	= Rational	Peak discharge	= 0.191 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 895.4 cum
Drainage area	= 6.050 hectare	Runoff coeff.	= 0.41
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

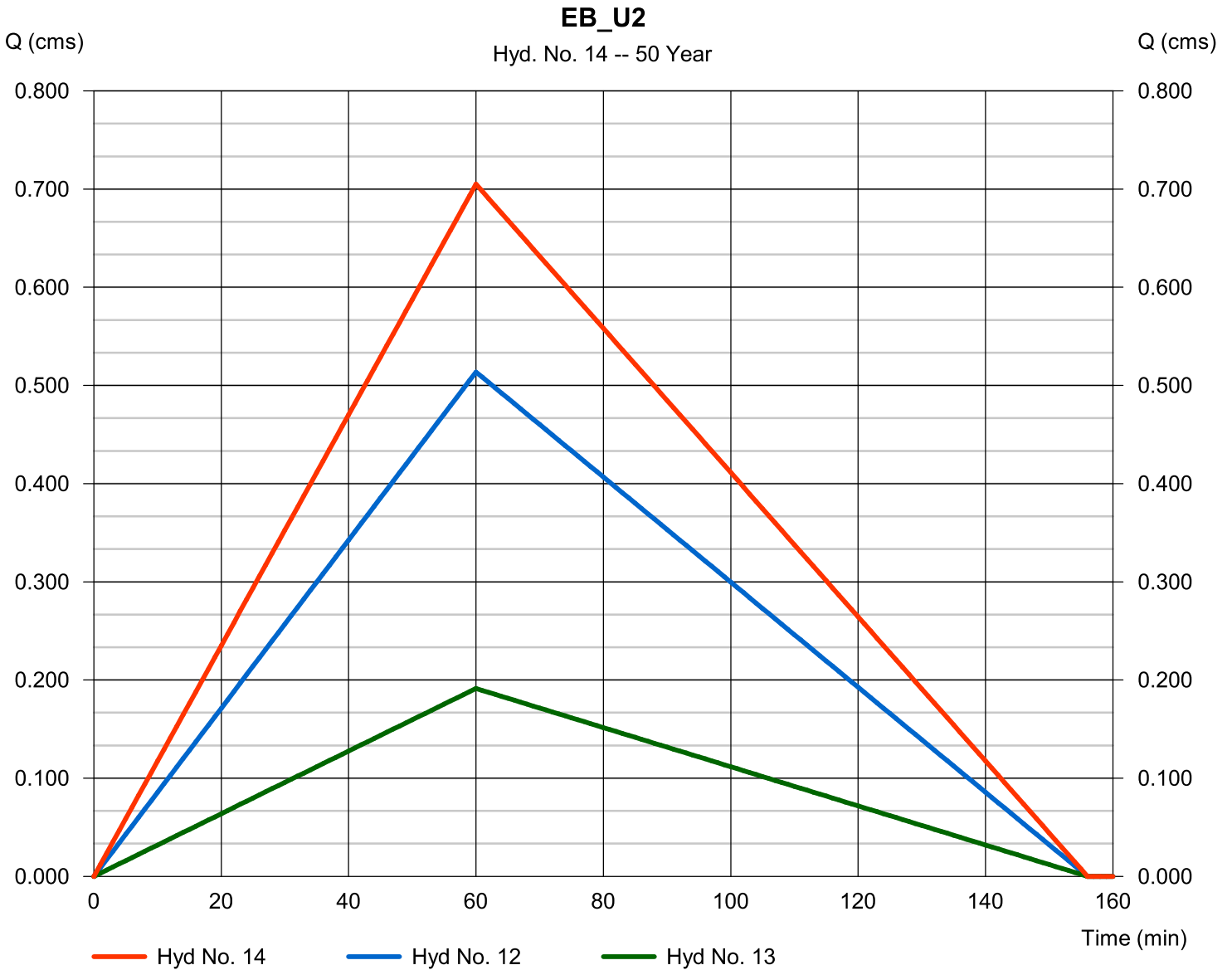
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 14

EB_U2

Hydrograph type	= Combine	Peak discharge	= 0.705 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 299.5 cum
Inflow hyds.	= 12, 13	Contrib. drain. area	= 41.100 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

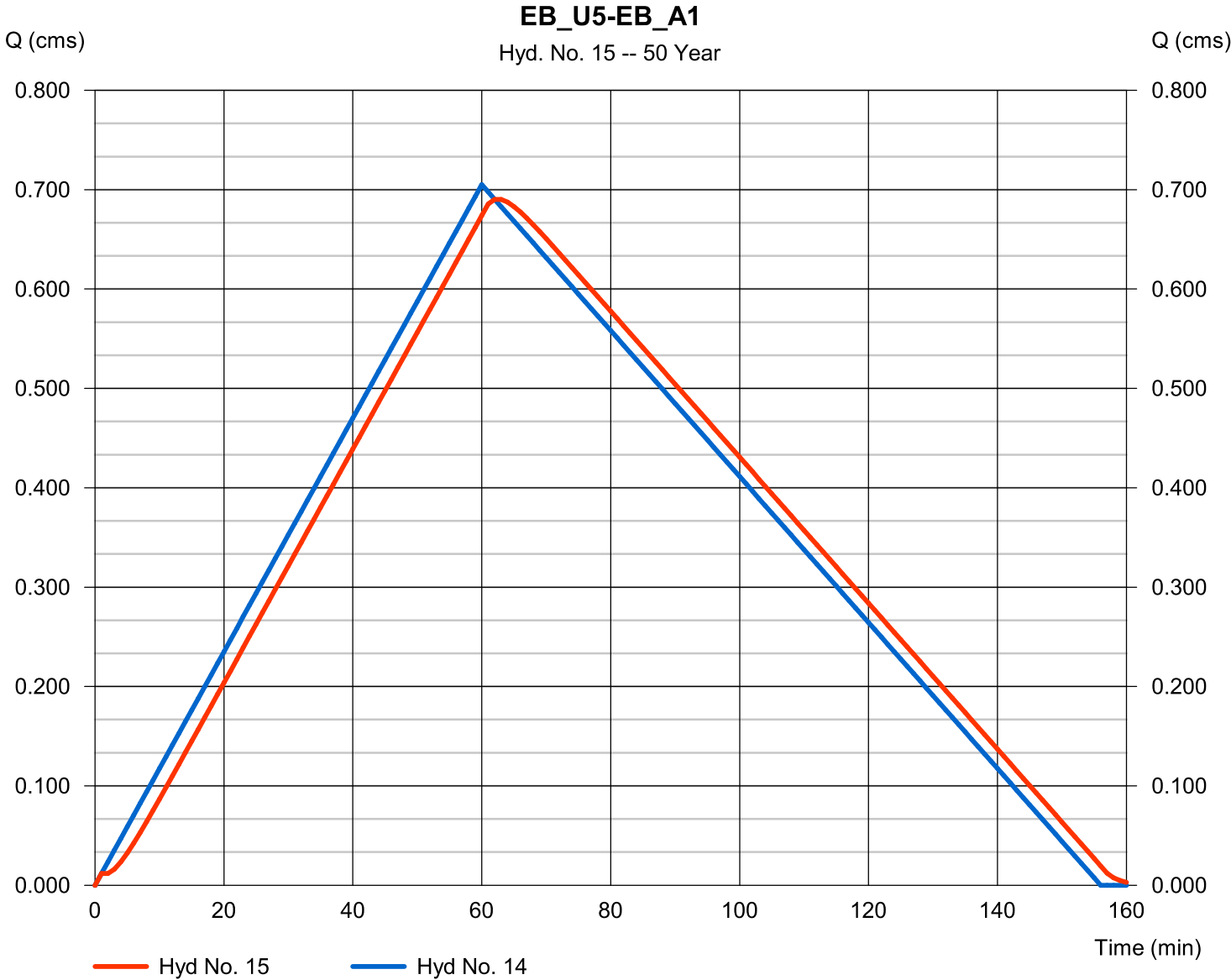
vendredi, avr 6, 2012

Hyd. No. 15

EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.690 cms
Storm frequency	= 50 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 3 301.3 cum
Inflow hyd. No.	= 14 - EB_U2	Section type	= Trapezoidal
Reach length	= 360.0 m	Channel slope	= 2.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.266	Rating curve m	= 1.353
Ave. velocity	= 2.06 m/s	Routing coeff.	= 0.3770

Modified Att-Kin routing method used.



Hydrograph Report

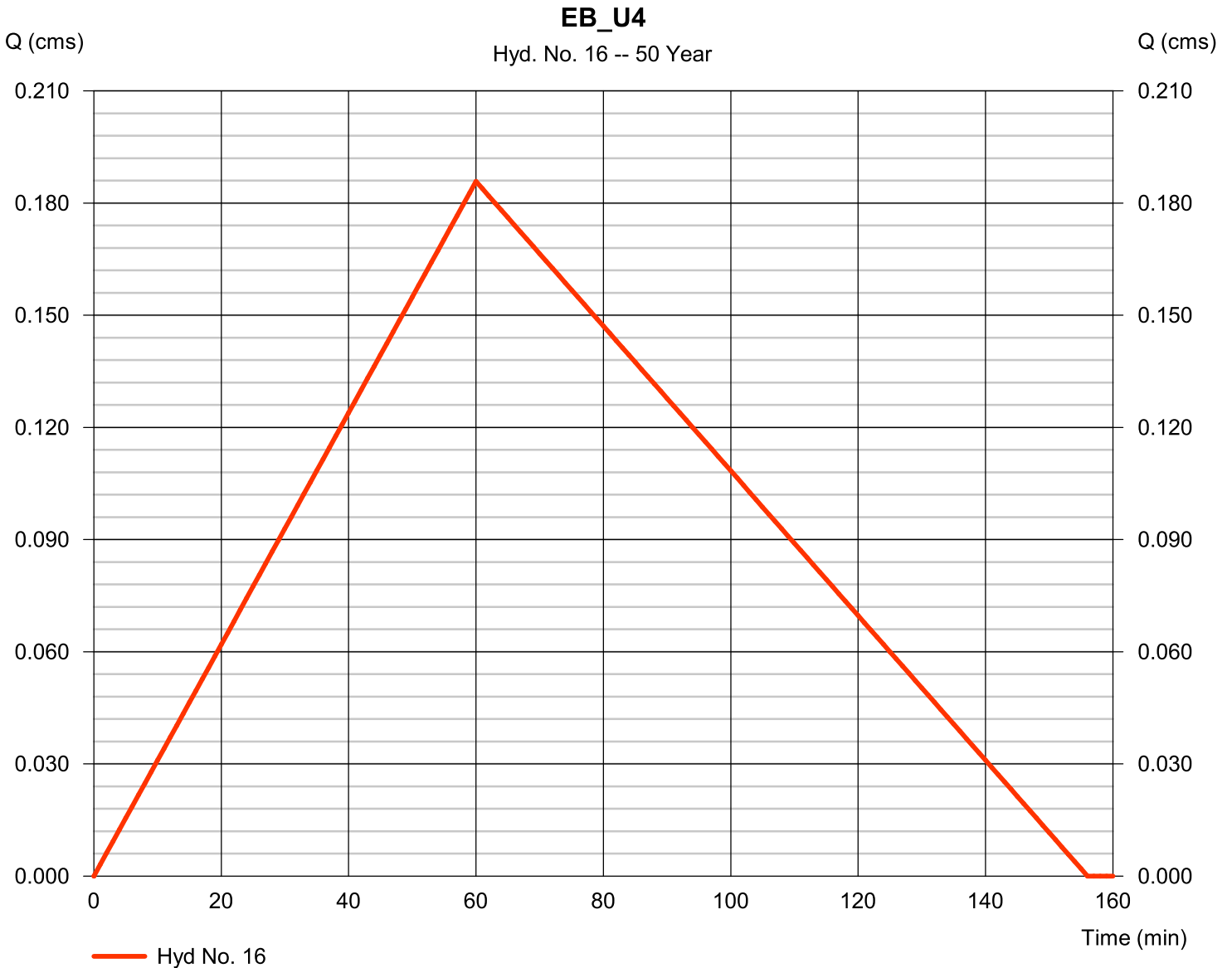
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 16

EB_U4

Hydrograph type	= Rational	Peak discharge	= 0.186 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 869.5 cum
Drainage area	= 6.510 hectare	Runoff coeff.	= 0.37
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

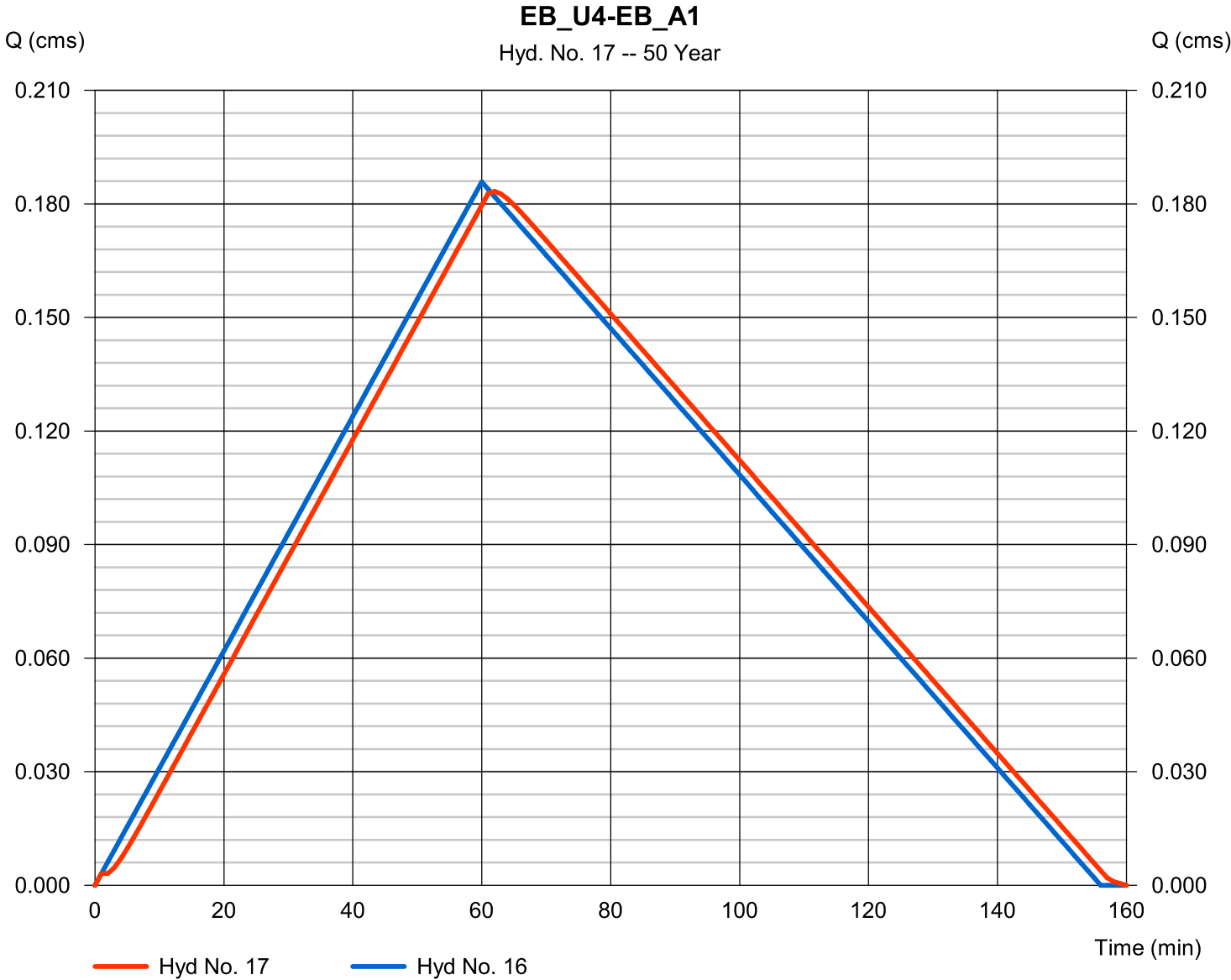
vendredi, avr 6, 2012

Hyd. No. 17

EB_U4-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.183 cms
Storm frequency	= 50 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 869.9 cum
Inflow hyd. No.	= 16 - EB_U4	Section type	= Trapezoidal
Reach length	= 200.0 m	Channel slope	= 3.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.048	Rating curve m	= 1.353
Ave. velocity	= 1.65 m/s	Routing coeff.	= 0.5012

Modified Att-Kin routing method used.



Hydrograph Report

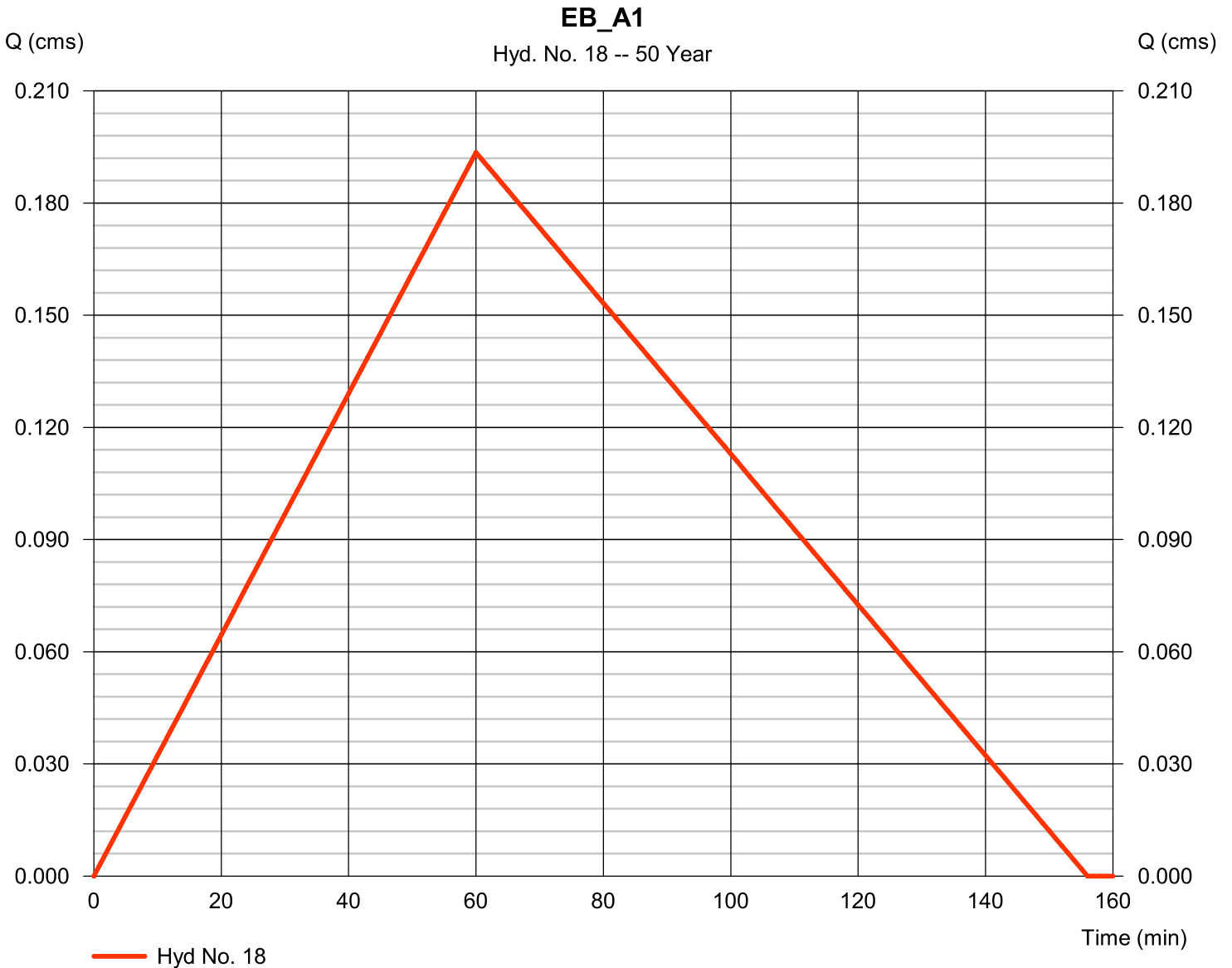
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 18

EB_A1

Hydrograph type	= Rational	Peak discharge	= 0.194 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 905.7 cum
Drainage area	= 15.680 hectare	Runoff coeff.	= 0.16
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

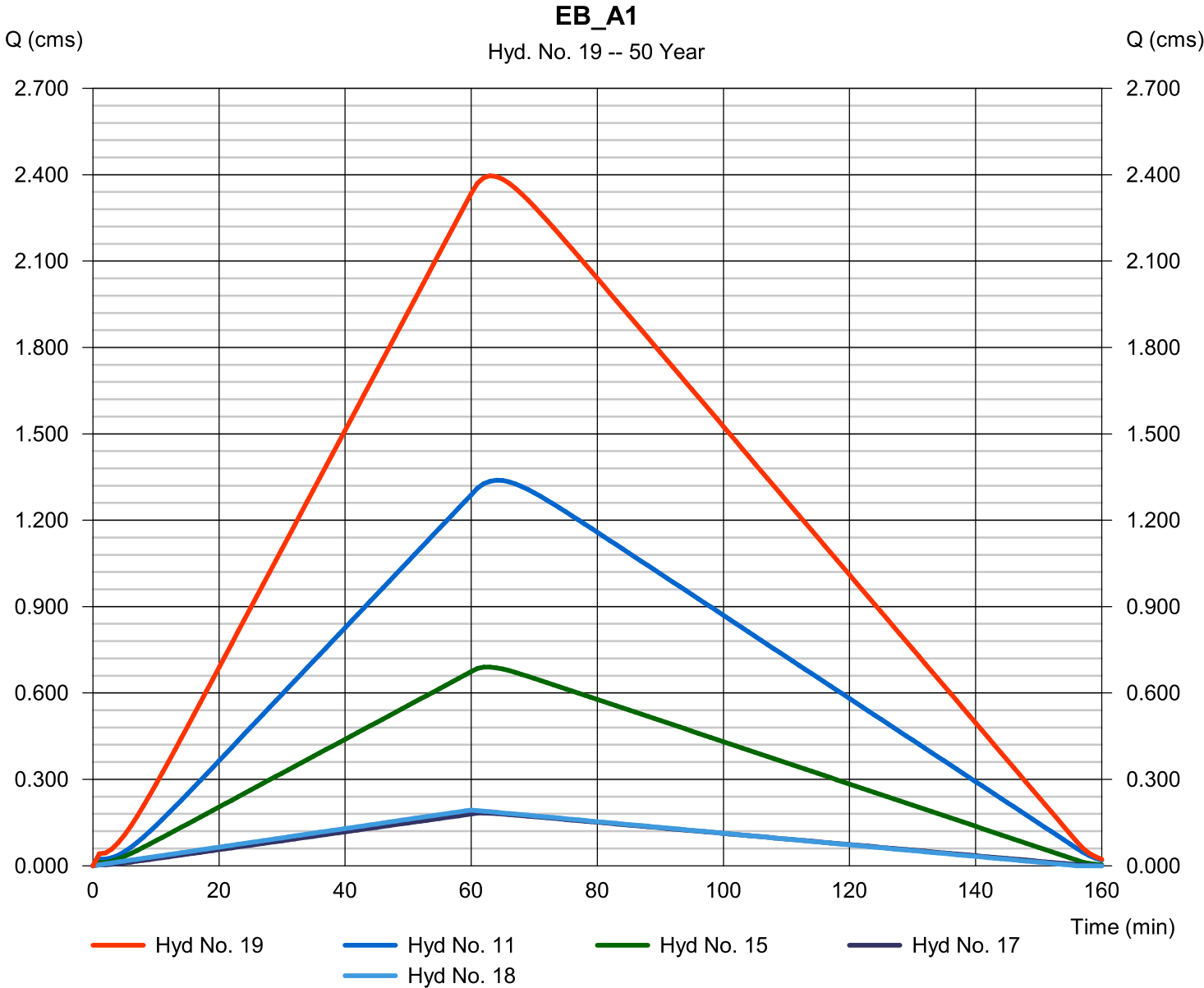
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 19

EB_A1

Hydrograph type	= Combine	Peak discharge	= 2.396 cms
Storm frequency	= 50 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 11 568.7 cum
Inflow hyds.	= 11, 15, 17, 18	Contrib. drain. area	= 15.680 hectare



Hydrograph Report

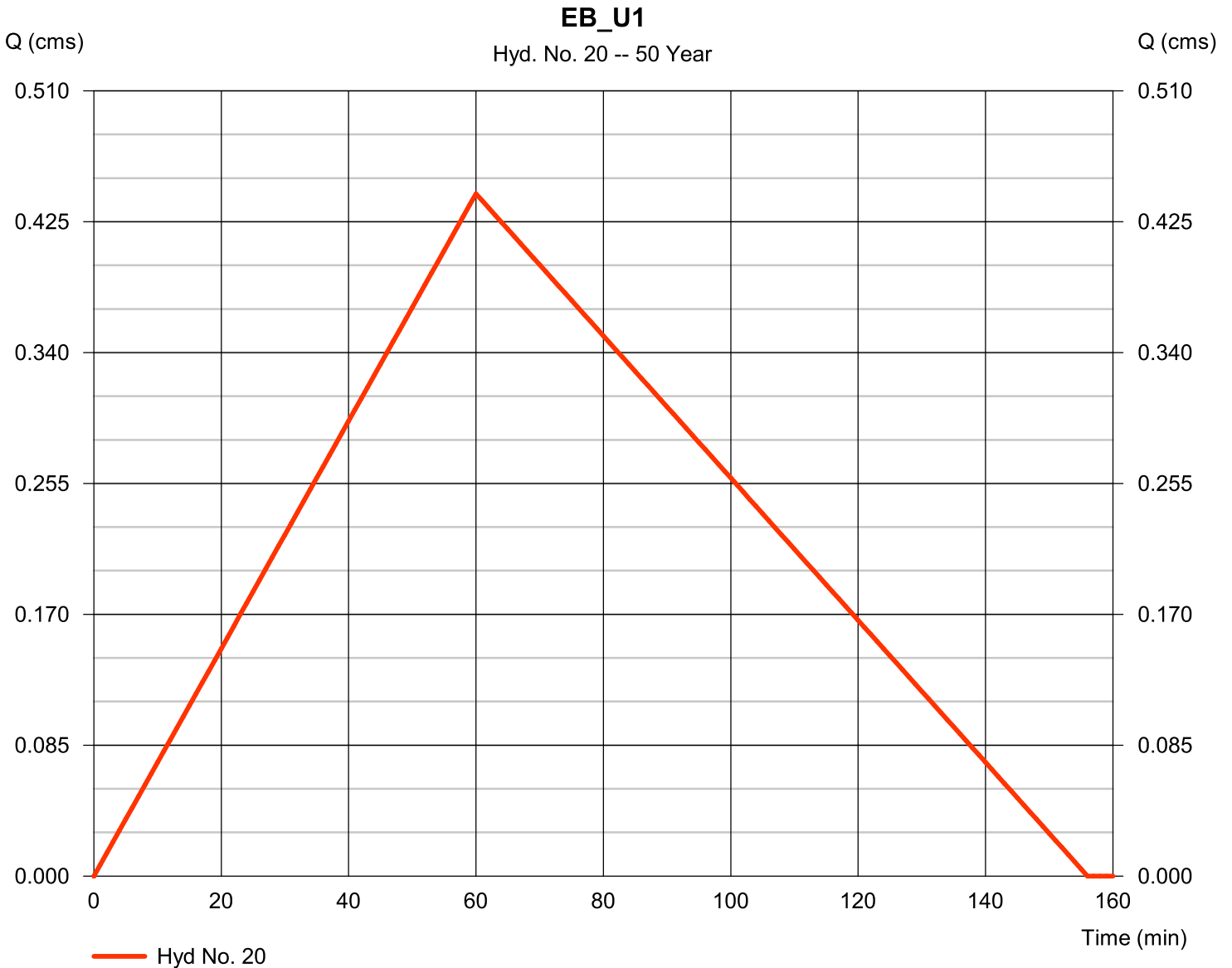
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 20

EB_U1

Hydrograph type	= Rational	Peak discharge	= 0.443 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 074.1 cum
Drainage area	= 15.960 hectare	Runoff coeff.	= 0.36
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

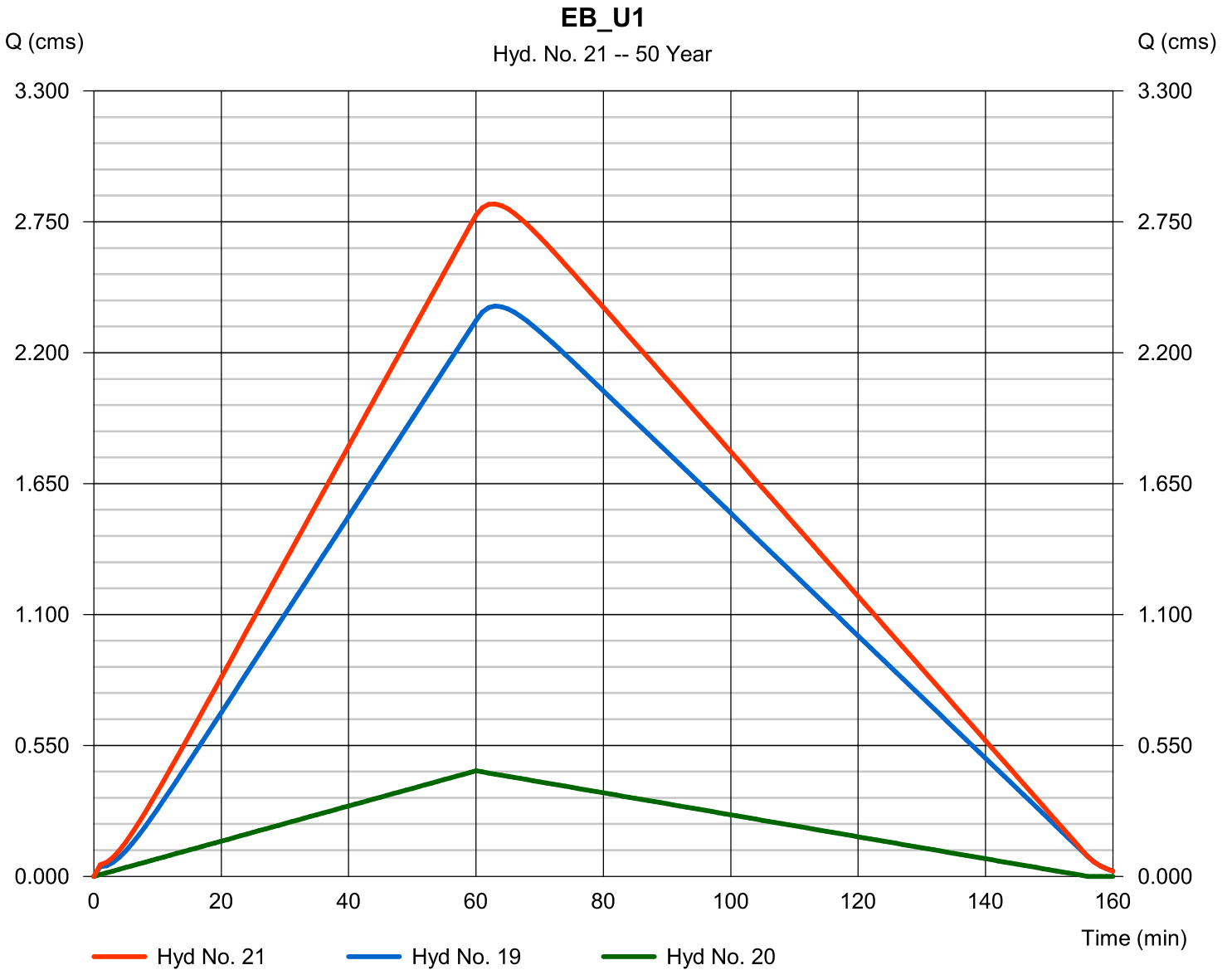
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 21

EB_U1

Hydrograph type	= Combine	Peak discharge	= 2.825 cms
Storm frequency	= 50 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 13 642.8 cum
Inflow hyds.	= 19, 20	Contrib. drain. area	= 15.960 hectare



Hydrograph Report

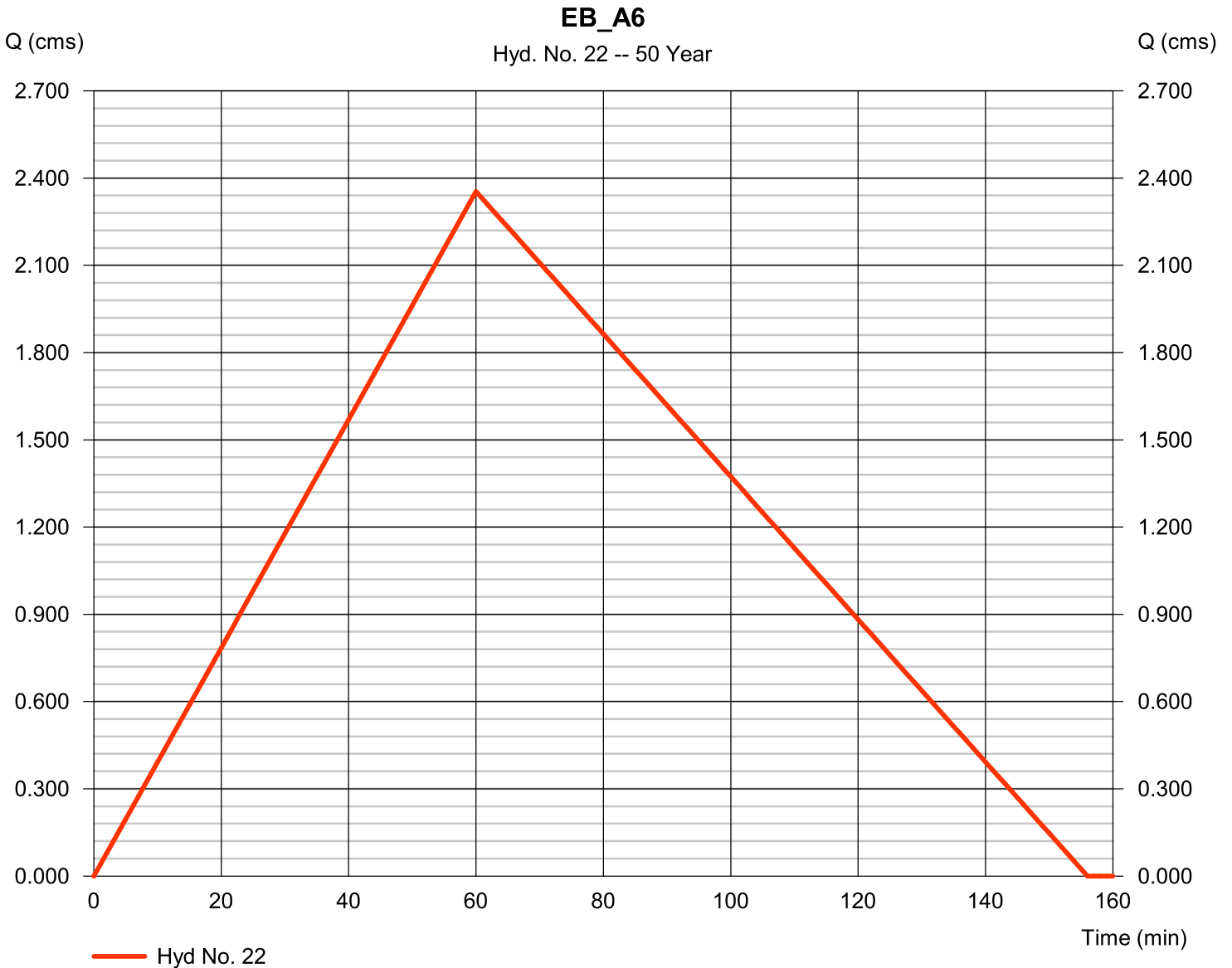
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 22

EB_A6

Hydrograph type	= Rational	Peak discharge	= 2.354 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 11 016.5 cum
Drainage area	= 145.320 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

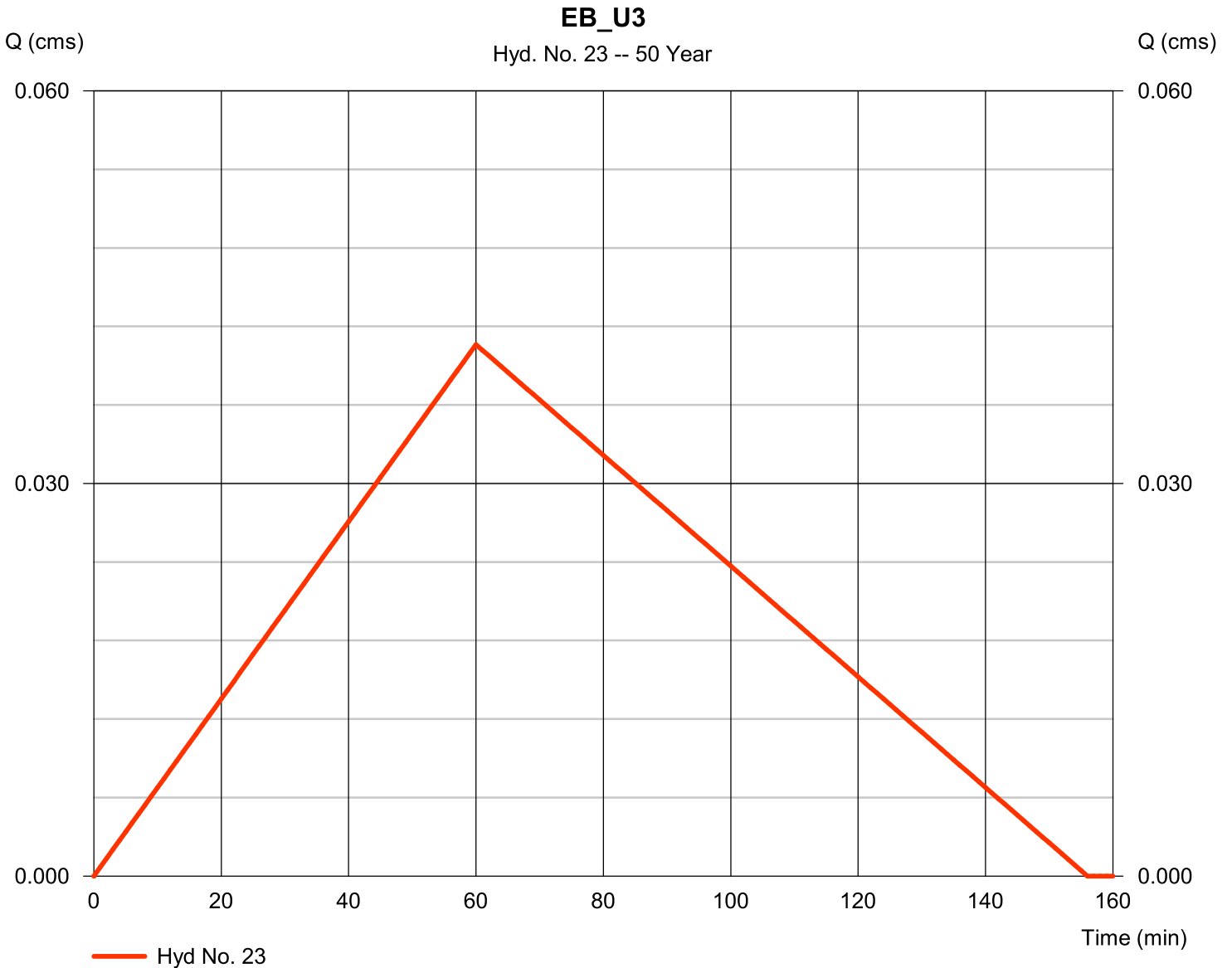
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Hyd. No. 23

EB_U3

Hydrograph type	= Rational	Peak discharge	= 0.041 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 190.1 cum
Drainage area	= 1.350 hectare	Runoff coeff.	= 0.39
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

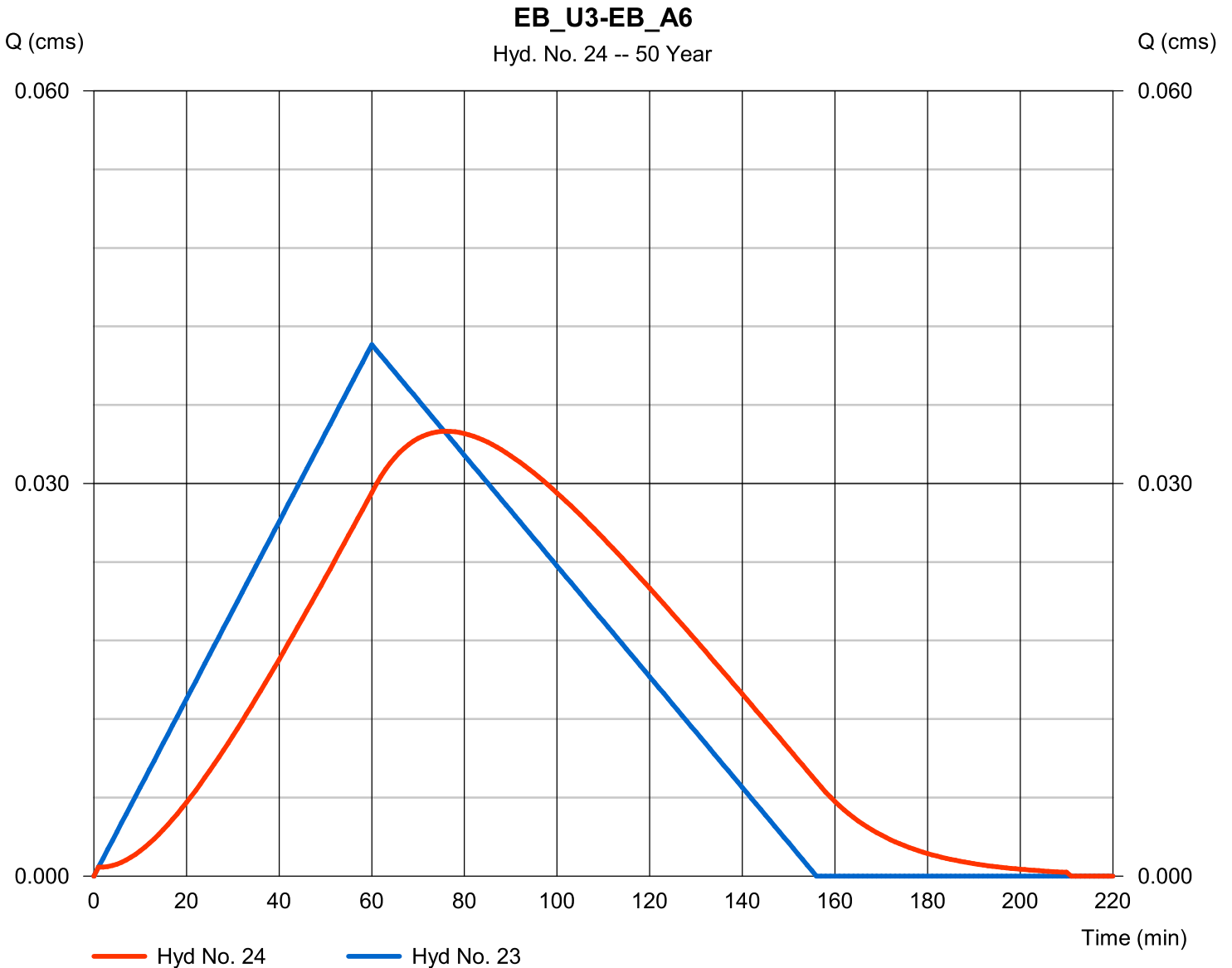
vendredi, avr 6, 2012

Hyd. No. 24

EB_U3-EB_A6

Hydrograph type	= Reach	Peak discharge	= 0.034 cms
Storm frequency	= 50 yrs	Time to peak	= 76 min
Time interval	= 1 min	Hyd. volume	= 190.5 cum
Inflow hyd. No.	= 23 - EB_U3	Section type	= Trapezoidal
Reach length	= 1200.0 m	Channel slope	= 1.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.719	Rating curve m	= 1.353
Ave. velocity	= 0.88 m/s	Routing coeff.	= 0.0581

Modified Att-Kin routing method used.



Hydrograph Report

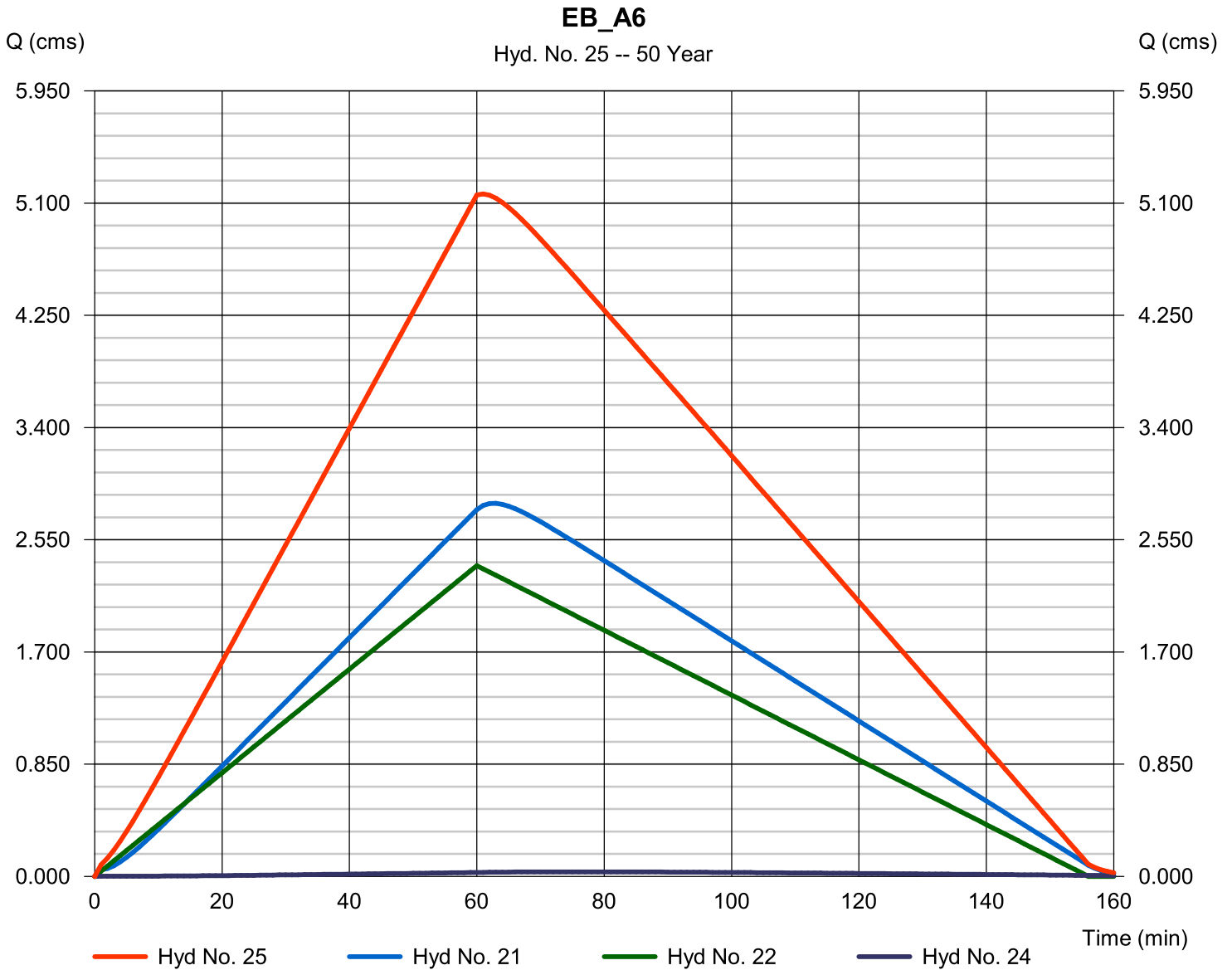
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 25

EB_A6

Hydrograph type	= Combine	Peak discharge	= 5.169 cms
Storm frequency	= 50 yrs	Time to peak	= 61 min
Time interval	= 1 min	Hyd. volume	= 24 849.8 cum
Inflow hyds.	= 21, 22, 24	Contrib. drain. area	= 145.320 hectare



Hydrograph Report

Hyd. No. 26

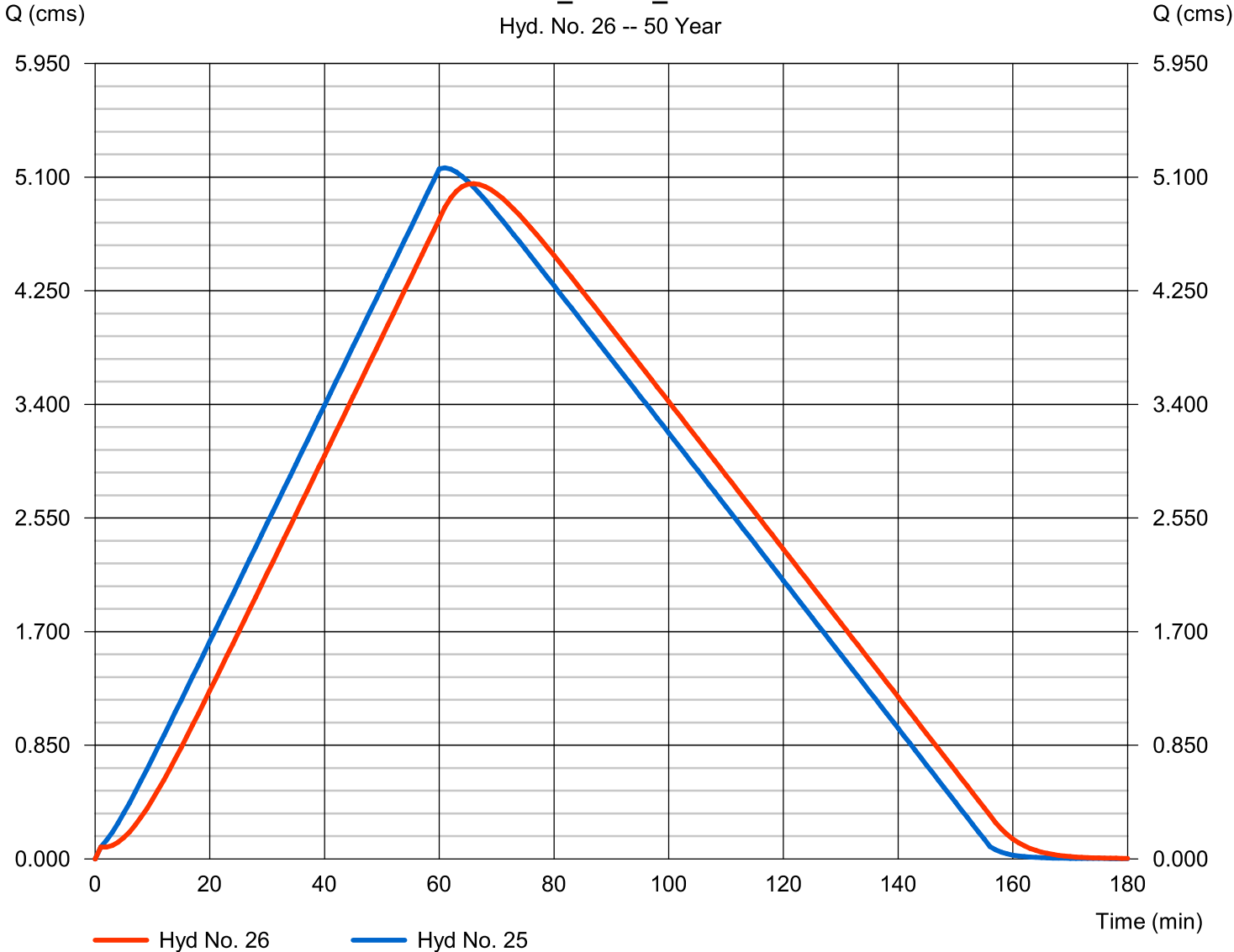
EB_A6-SC_A1

Hydrograph type	= Reach	Peak discharge	= 5.051 cms
Storm frequency	= 50 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 24 872.2 cum
Inflow hyd. No.	= 25 - EB_A6	Section type	= Trapezoidal
Reach length	= 850.0 m	Channel slope	= 1.4 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.193	Rating curve m	= 1.353
Ave. velocity	= 2.80 m/s	Routing coeff.	= 0.2356

Modified Att-Kin routing method used.

EB_A6-SC_A1

Hyd. No. 26 -- 50 Year



Hydrograph Report

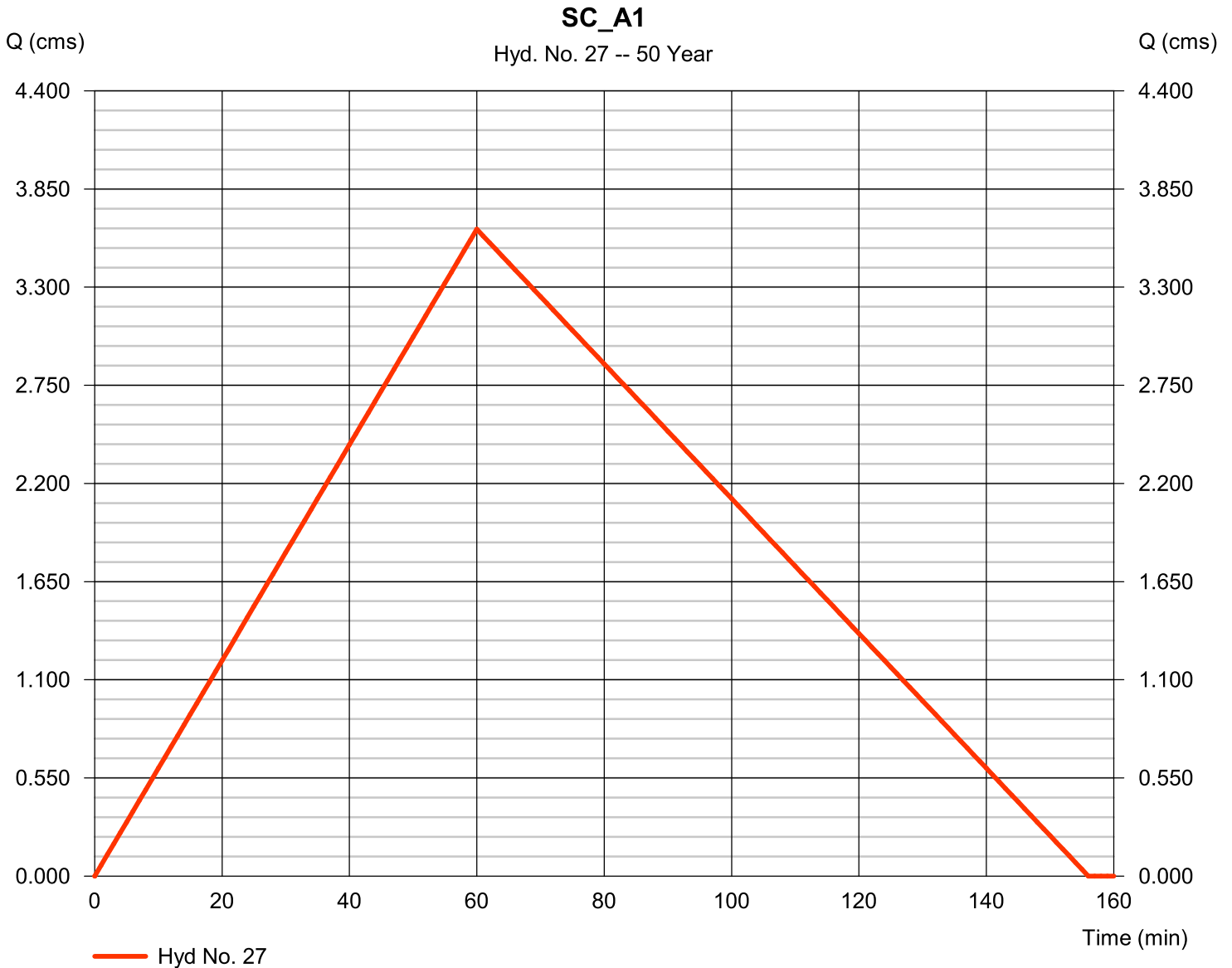
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 27

SC_A1

Hydrograph type	= Rational	Peak discharge	= 3.625 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 16 963.7 cum
Drainage area	= 223.770 hectare	Runoff coeff.	= 0.21
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

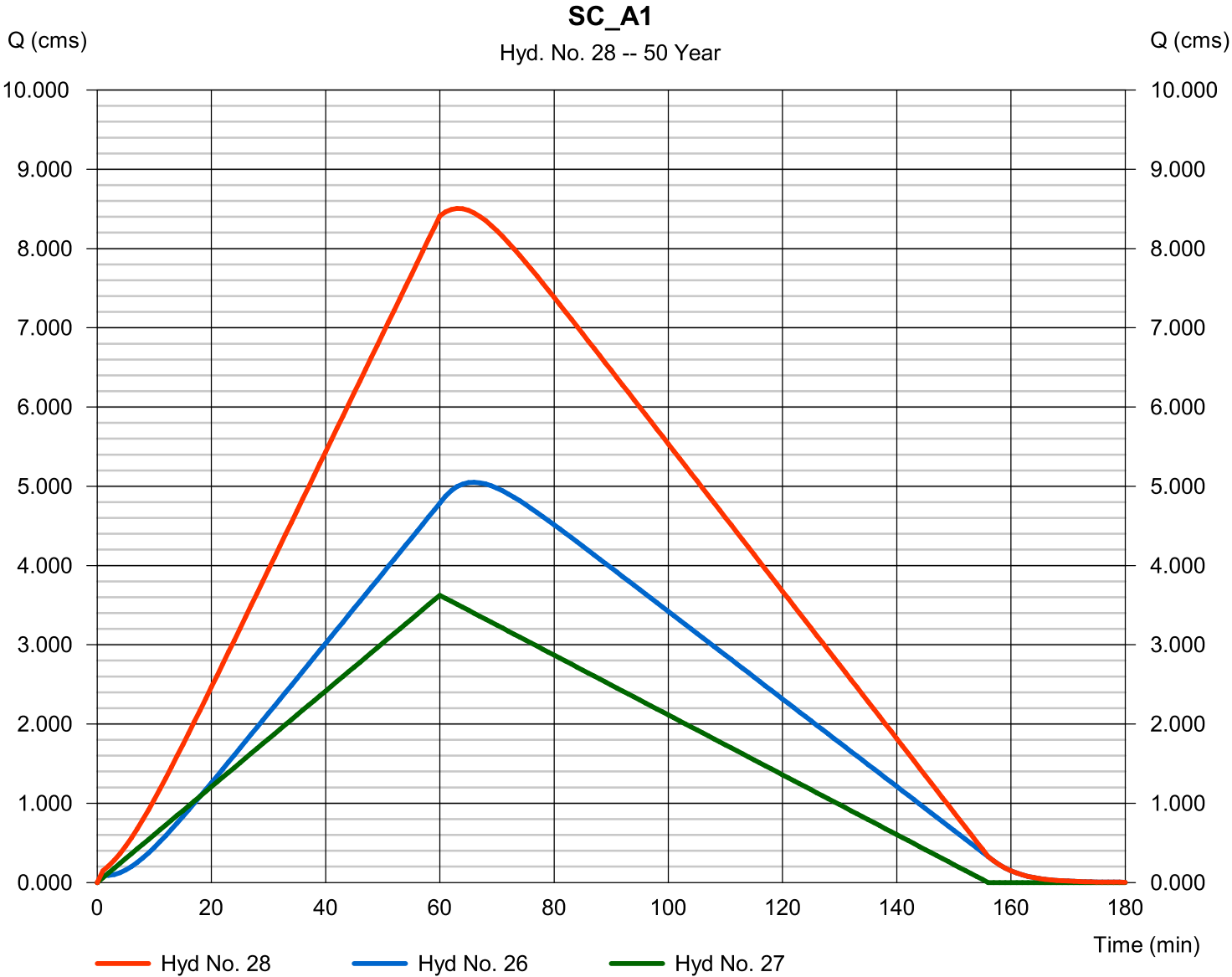
vendredi, avr 6, 2012

Hyd. No. 28

SC_A1

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 1 min
Inflow hyds. = 26, 27

Peak discharge = 8.506 cms
Time to peak = 63 min
Hyd. volume = 41 835.9 cum
Contrib. drain. area = 223.770 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

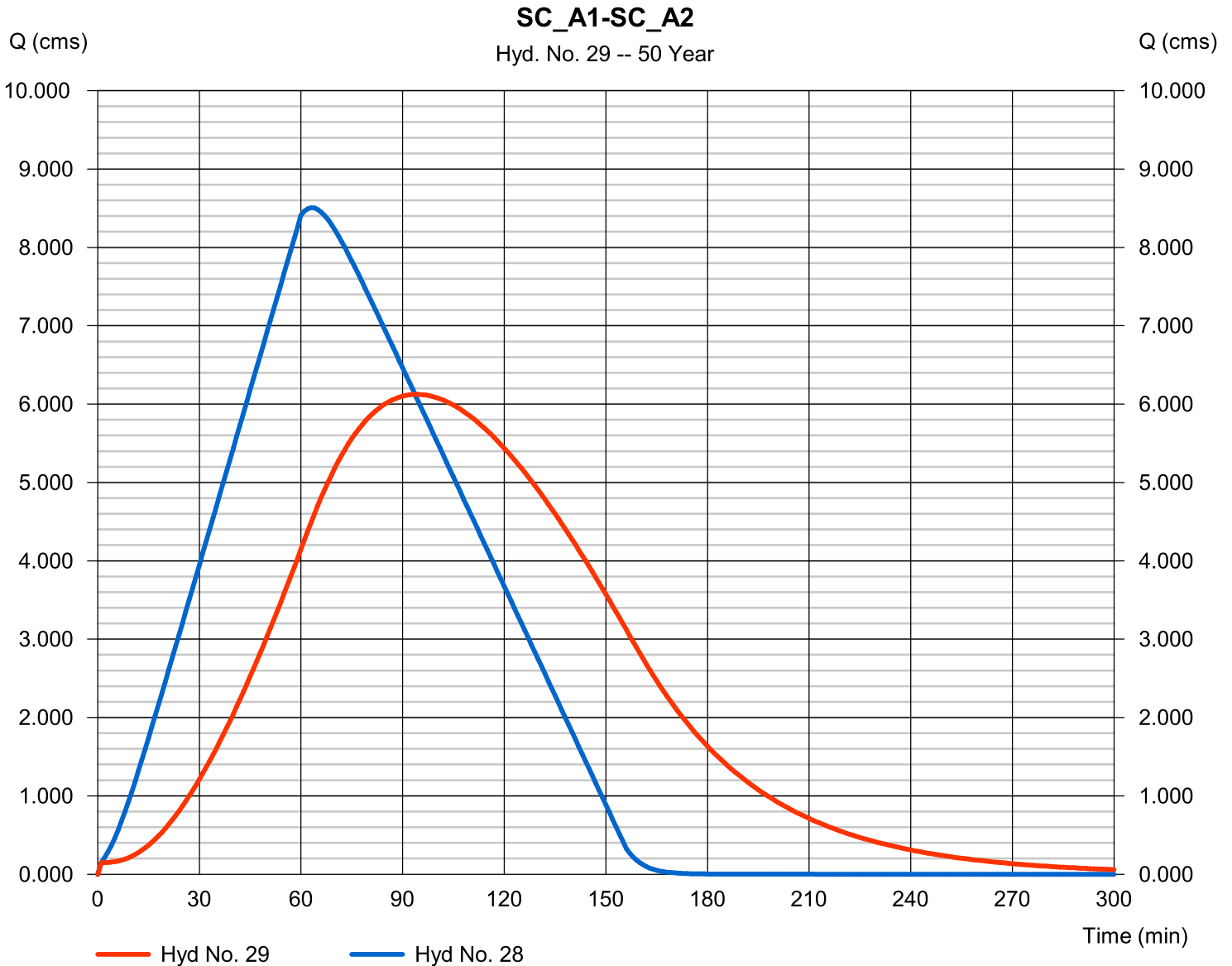
vendredi, avr 6, 2012

Hyd. No. 29

SC_A1-SC_A2

Hydrograph type	= Reach	Peak discharge	= 6.124 cms
Storm frequency	= 50 yrs	Time to peak	= 94 min
Time interval	= 1 min	Hyd. volume	= 42 161.8 cum
Inflow hyd. No.	= 28 - SC_A1	Section type	= Trapezoidal
Reach length	= 1500.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.51 m/s	Routing coeff.	= 0.0274

Modified Att-Kin routing method used.



Hydrograph Report

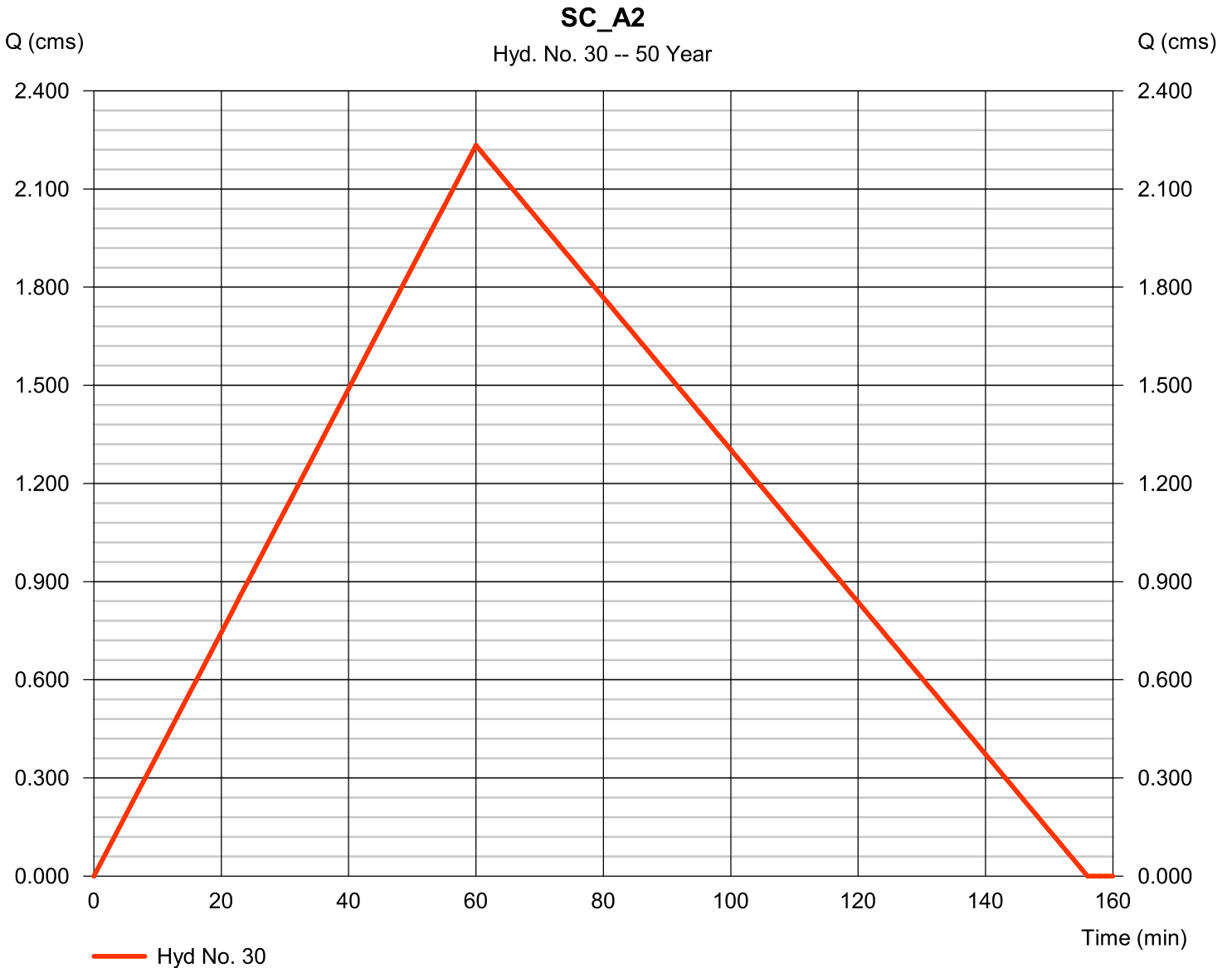
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Hyd. No. 30

SC_A2

Hydrograph type	= Rational	Peak discharge	= 2.234 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 10 453.0 cum
Drainage area	= 170.330 hectare	Runoff coeff.	= 0.17
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

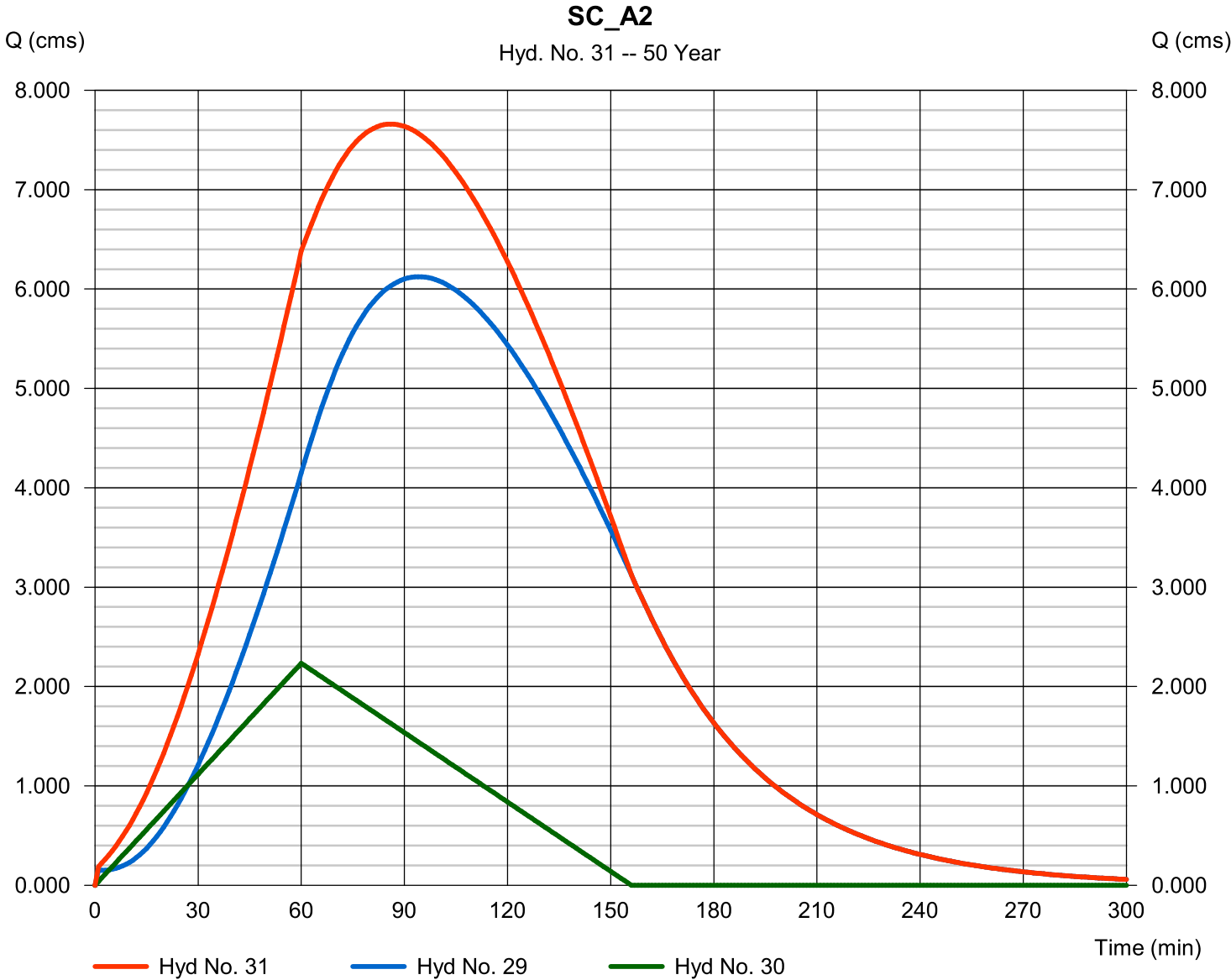
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 31

SC_A2

Hydrograph type	= Combine	Peak discharge	= 7.661 cms
Storm frequency	= 50 yrs	Time to peak	= 86 min
Time interval	= 1 min	Hyd. volume	= 52 614.8 cum
Inflow hyds.	= 29, 30	Contrib. drain. area	= 170.330 hectare



Hydrograph Report

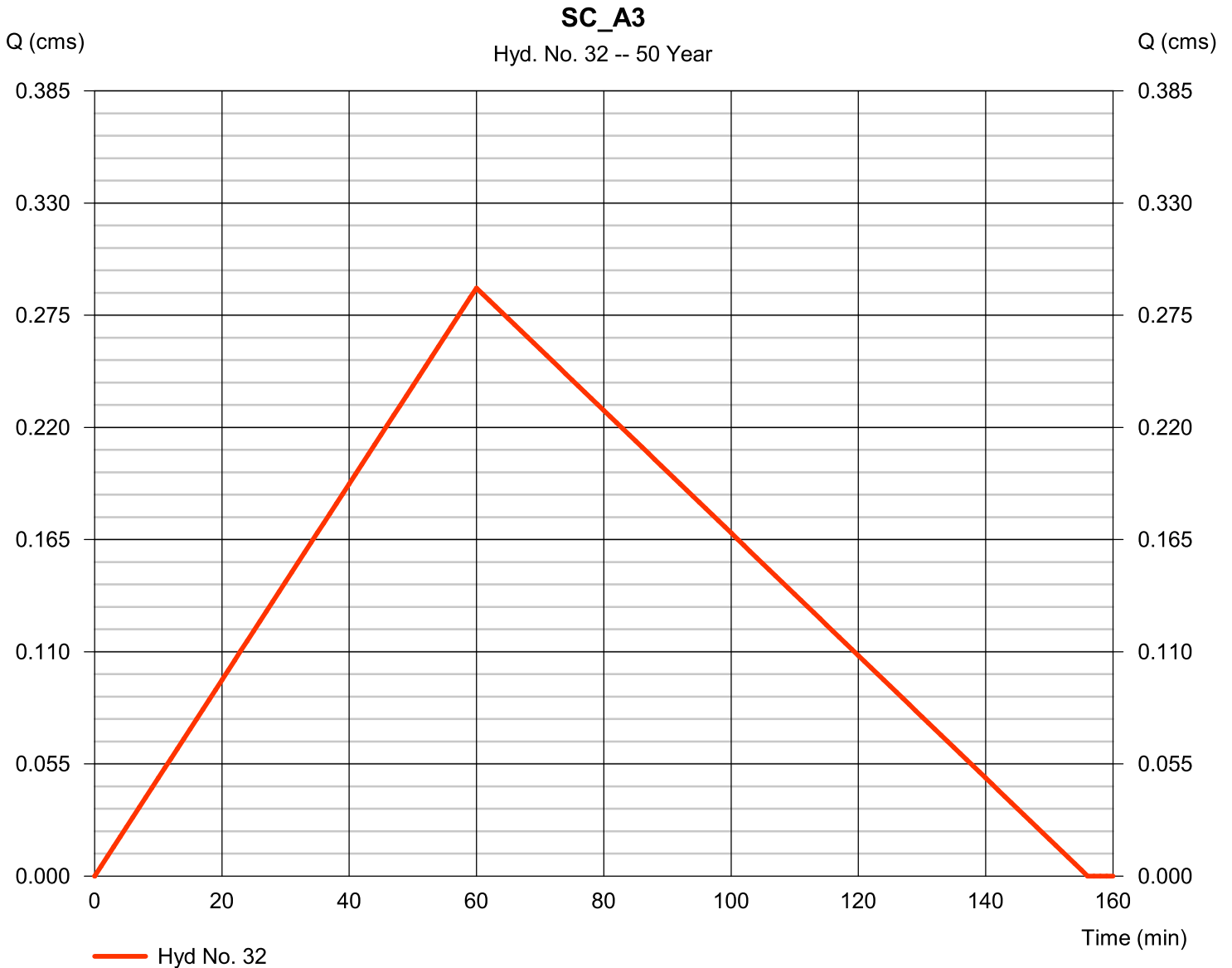
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Hyd. No. 32

SC_A3

Hydrograph type	= Rational	Peak discharge	= 0.288 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 349.5 cum
Drainage area	= 21.990 hectare	Runoff coeff.	= 0.17
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

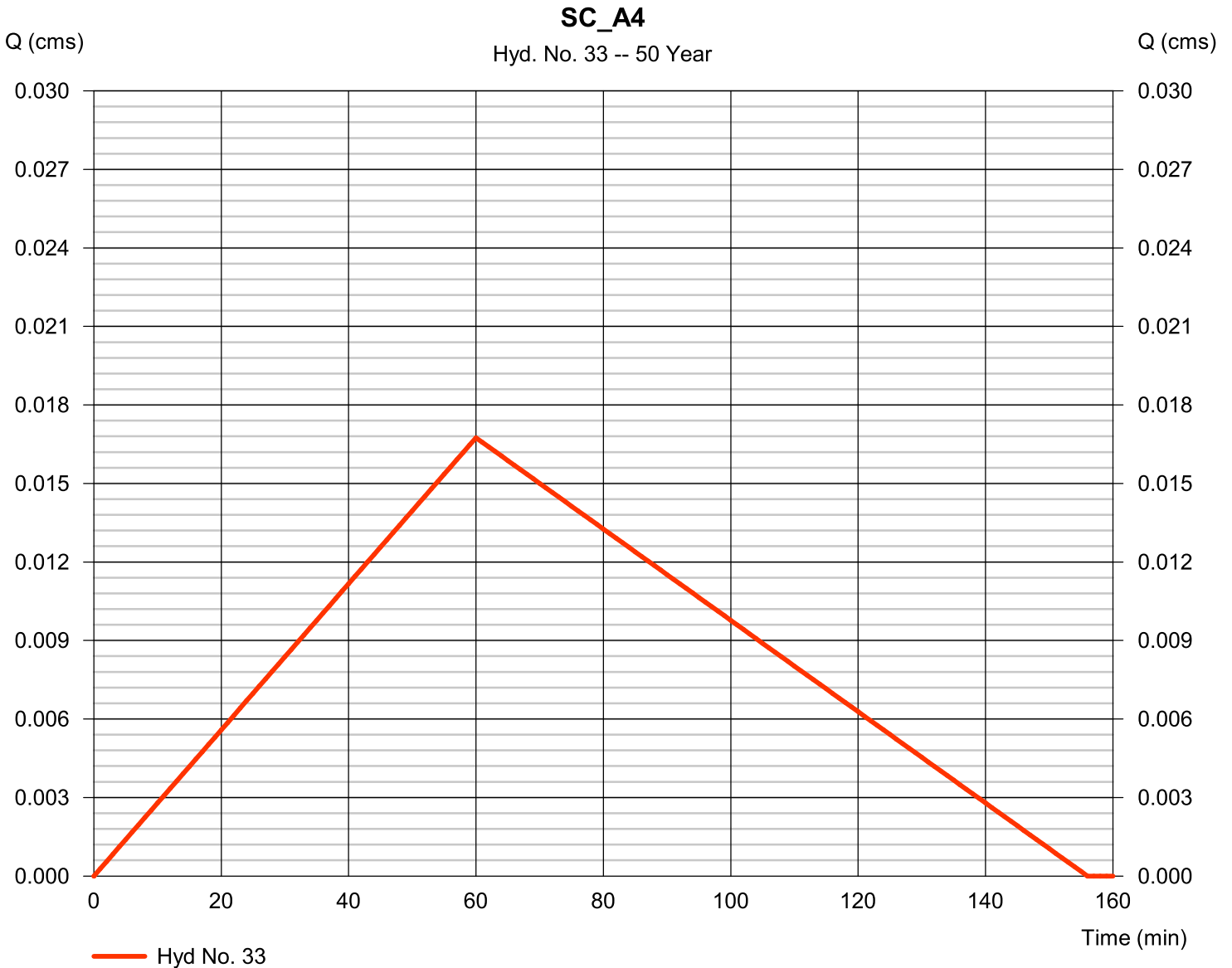
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Hyd. No. 33

SC_A4

Hydrograph type	= Rational	Peak discharge	= 0.017 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 78.4 cum
Drainage area	= 1.670 hectare	Runoff coeff.	= 0.13
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

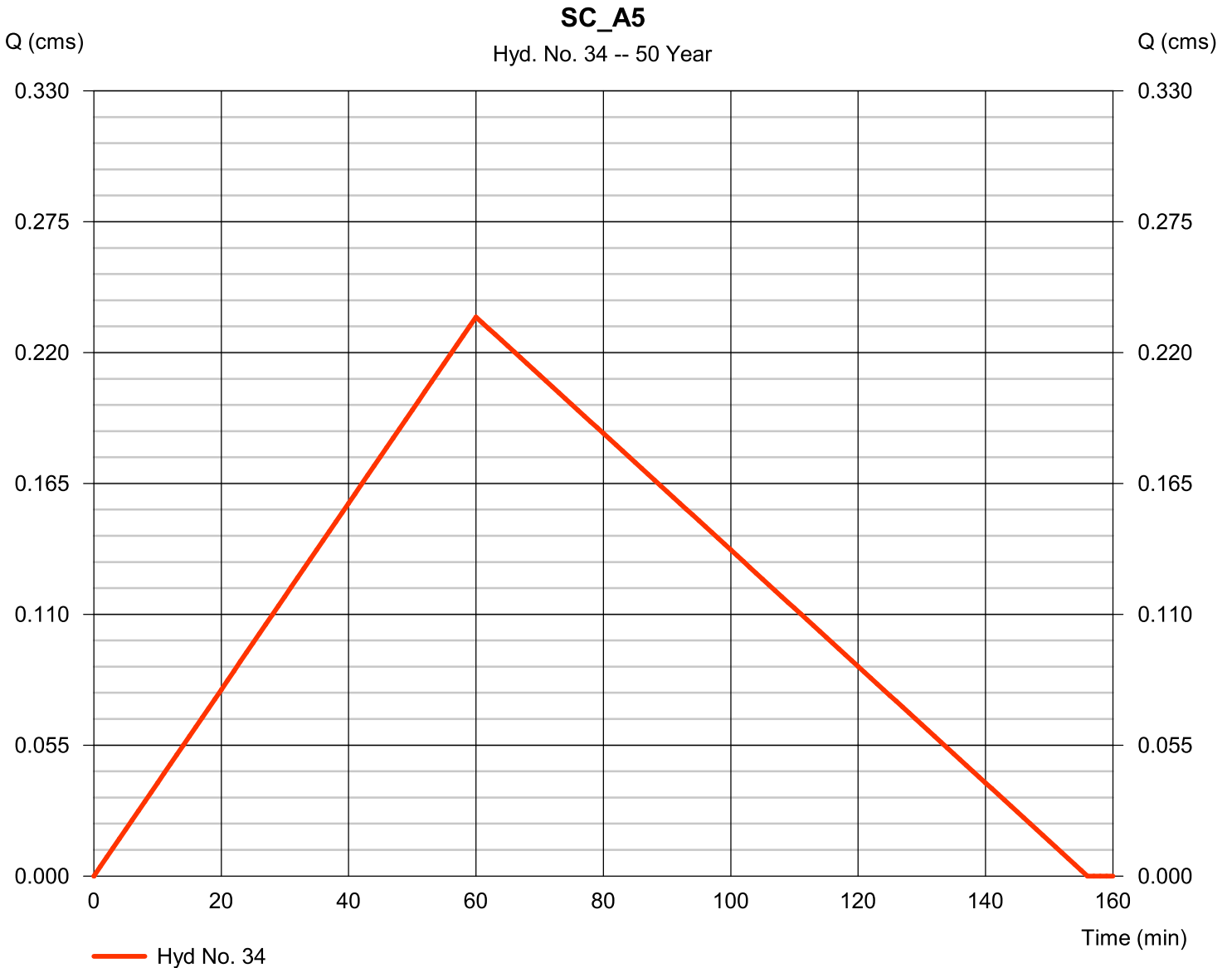
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

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Hyd. No. 34

SC_A5

Hydrograph type	= Rational	Peak discharge	= 0.235 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 099.7 cum
Drainage area	= 17.920 hectare	Runoff coeff.	= 0.17
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

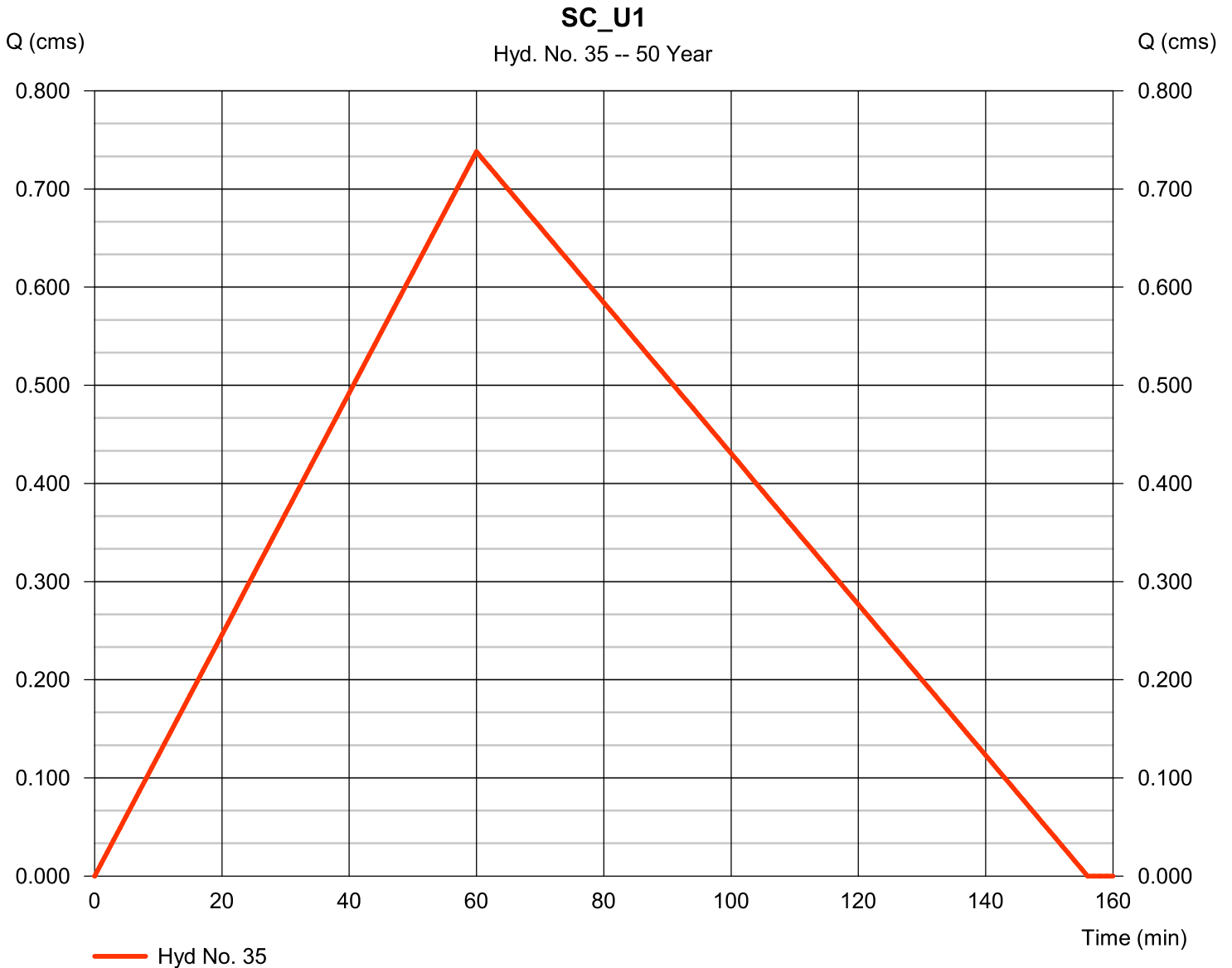
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 35

SC_U1

Hydrograph type	= Rational	Peak discharge	= 0.738 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 454.1 cum
Drainage area	= 25.860 hectare	Runoff coeff.	= 0.37
Intensity	= 28.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

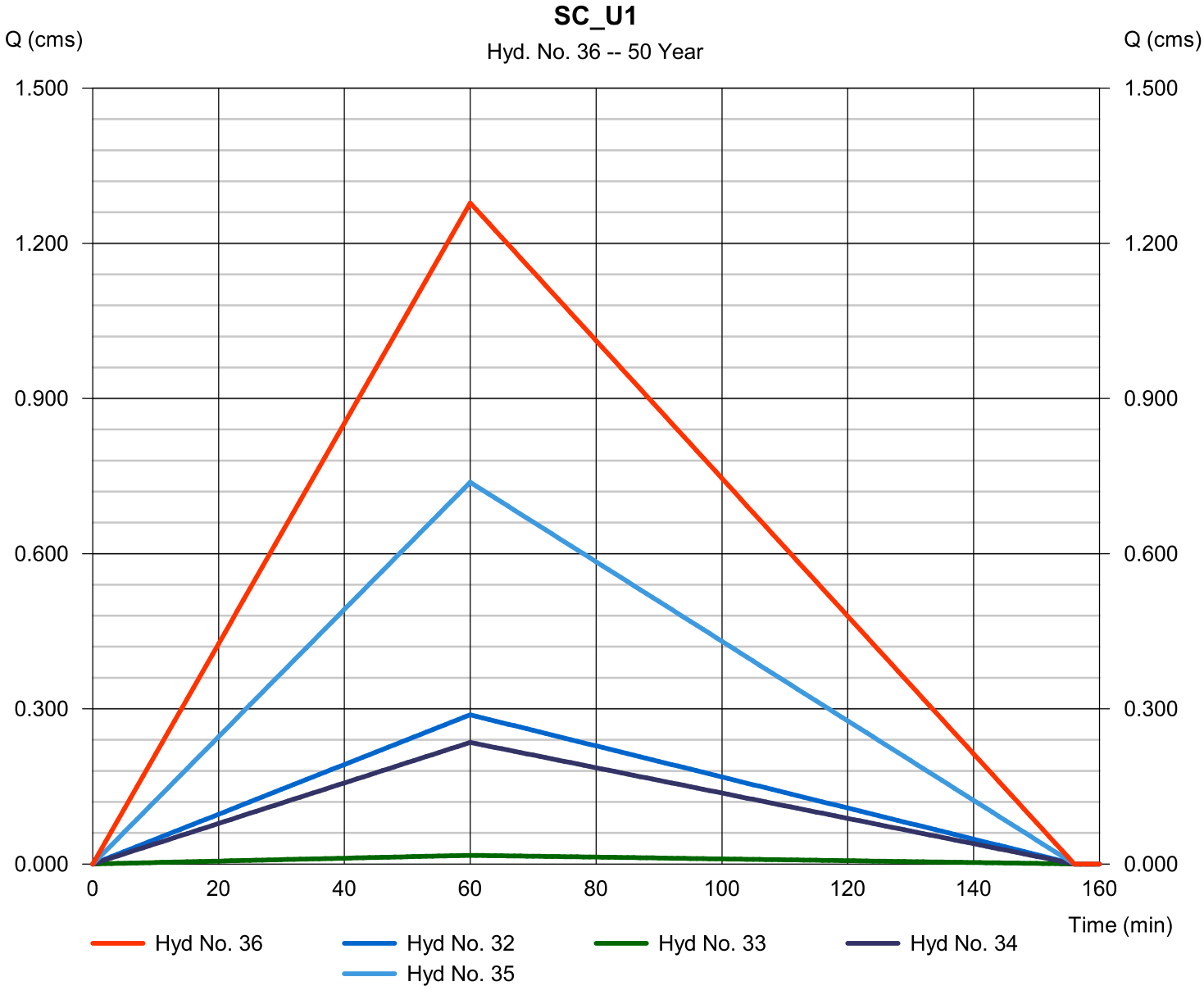
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vendredi, avr 6, 2012

Hyd. No. 36

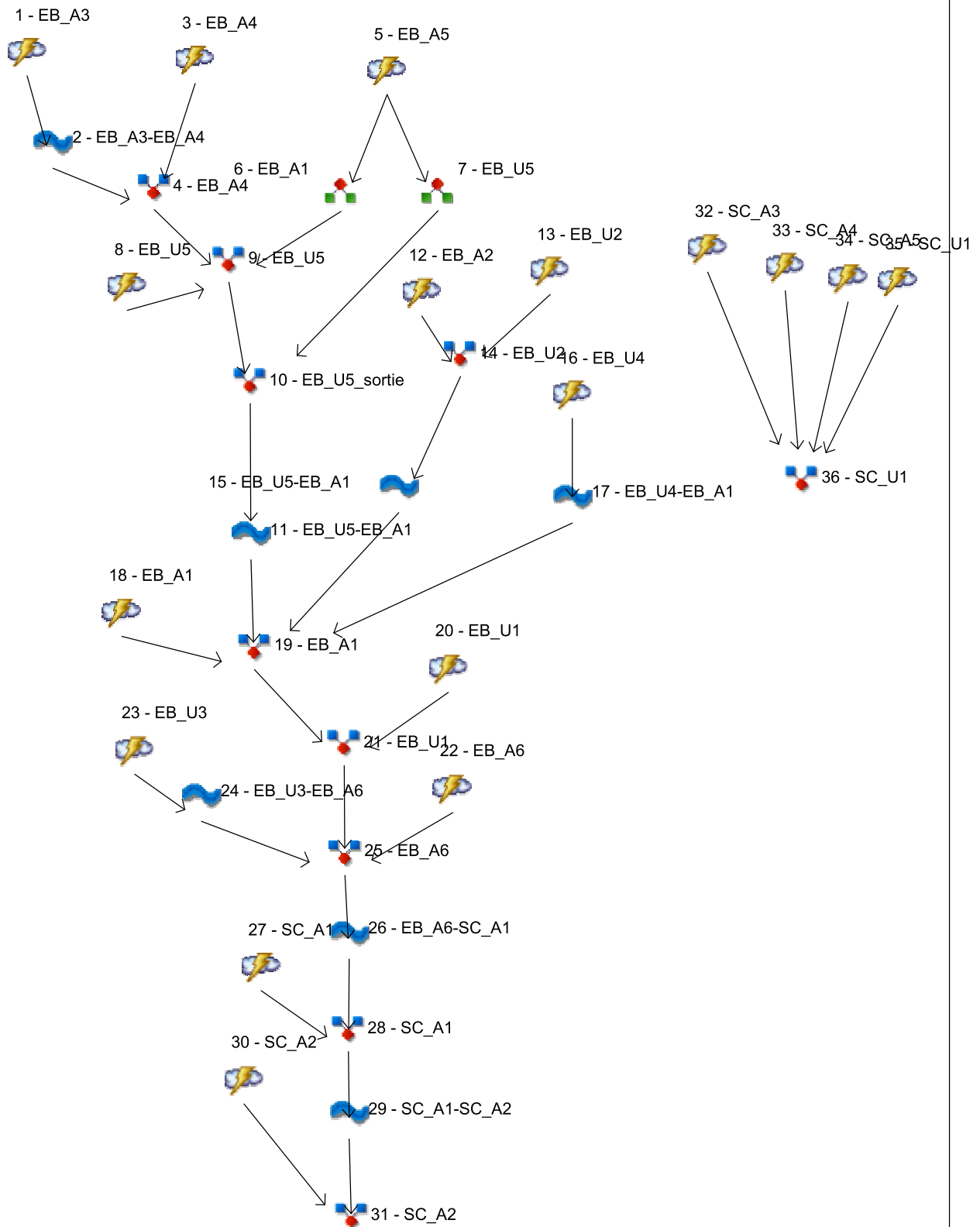
SC_U1

Hydrograph type	= Combine	Peak discharge	= 1.278 cms
Storm frequency	= 50 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 5 981.7 cum
Inflow hyds.	= 32, 33, 34, 35	Contrib. drain. area	= 67.440 hectare



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cms)	Time interval (min)	Time to Peak (min)	Hyd. volume (cum)	Inflow hyd(s)	Maximum elevation (m)	Total strge used (cum)	Hydrograph Description
1	Rational	0.480	1	60	2 244.8	-----	-----	-----	EB_A3
2	Reach	0.472	1	62	2 245.8	1	-----	-----	EB_A3-EB_A4
3	Rational	0.982	1	60	4 595.3	-----	-----	-----	EB_A4
4	Combine	1.444	1	60	6 841.1	2, 3	-----	-----	EB_A4
5	Rational	0.197	1	60	920.7	-----	-----	-----	EB_A5
6	Diversion1	0.197	1	60	920.7	5	-----	-----	EB_A1
7	Diversion2	0.000	1	n/a	0.0	5	-----	-----	EB_U5
8	Rational	0.065	1	60	302.4	-----	-----	-----	EB_U5
9	Combine	1.705	1	60	8 064.2	4, 6, 8	-----	-----	EB_U5
10	Combine	1.705	1	60	8 064.2	7, 9	-----	-----	EB_U5_sortie
11	Reach	1.668	1	64	8 070.1	10	-----	-----	EB_U5-EB_A1
12	Rational	0.629	1	60	2 941.8	-----	-----	-----	EB_A2
13	Rational	0.212	1	60	991.4	-----	-----	-----	EB_U2
14	Combine	0.840	1	60	3 933.2	12, 13	-----	-----	EB_U2
15	Reach	0.824	1	62	3 935.3	14	-----	-----	EB_U5-EB_A1
16	Rational	0.206	1	60	962.7	-----	-----	-----	EB_U4
17	Reach	0.203	1	62	963.1	16	-----	-----	EB_U4-EB_A1
18	Rational	0.228	1	60	1 065.4	-----	-----	-----	EB_A1
19	Combine	2.911	1	63	14 033.8	11, 15, 17, 18	-----	-----	EB_A1
20	Rational	0.491	1	60	2 296.4	-----	-----	-----	EB_U1
21	Combine	3.387	1	63	16 330.1	19, 20	-----	-----	EB_U1
22	Rational	2.978	1	60	13 939.3	-----	-----	-----	EB_A6
23	Rational	0.045	1	60	210.4	-----	-----	-----	EB_U3
24	Reach	0.038	1	76	210.9	23	-----	-----	EB_U3-EB_A6
25	Combine	6.349	1	61	30 480.3	21, 22, 24	-----	-----	EB_A6
26	Reach	6.212	1	66	30 506.6	25	-----	-----	EB_A6-SC_A1
27	Rational	4.395	1	60	20 570.0	-----	-----	-----	SC_A1
28	Combine	10.41	1	63	51 076.6	26, 27	-----	-----	SC_A1
29	Reach	7.609	1	93	51 454.3	28	-----	-----	SC_A1-SC_A2
30	Rational	2.764	1	60	12 934.5	-----	-----	-----	SC_A2
31	Combine	9.543	1	85	64 388.8	29, 30	-----	-----	SC_A2
32	Rational	0.357	1	60	1 669.9	-----	-----	-----	SC_A3
33	Rational	0.021	1	60	100.1	-----	-----	-----	SC_A4
34	Rational	0.291	1	60	1 360.8	-----	-----	-----	SC_A5
35	Rational	0.817	1	60	3 824.1	-----	-----	-----	SC_U1
36	Combine	1.486	1	60	6 954.9	32, 33, 34, 35	-----	-----	SC_U1
E:\MODELISATION_HYDRAFLOW\ALSP10\10-25-Ni-Peirre-100-V20.gpw								vendredi, avr 6, 2012	

Hydrograph Report

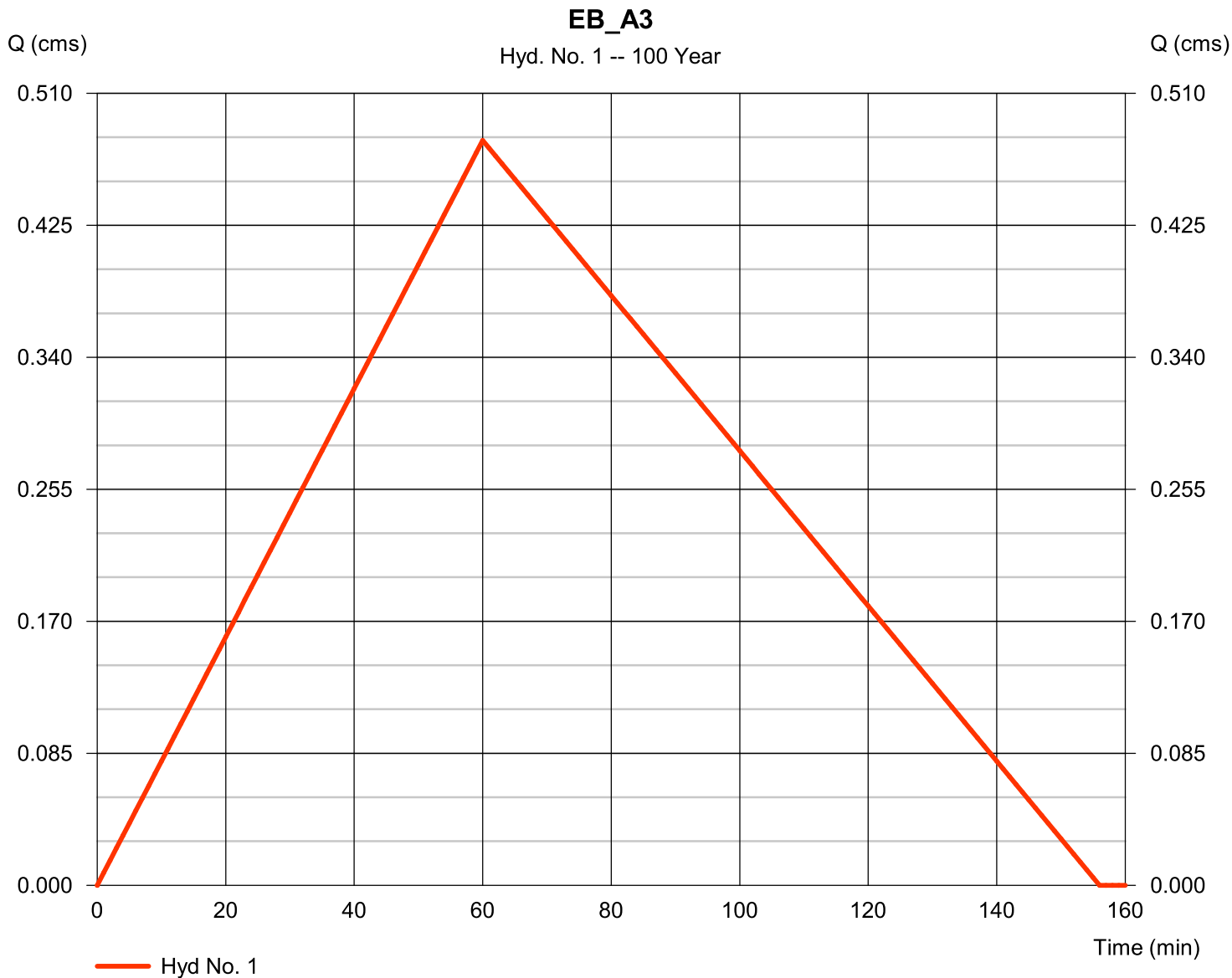
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 1

EB_A3

Hydrograph type	= Rational	Peak discharge	= 0.480 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 244.8 cum
Drainage area	= 24.420 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hyd. No. 2

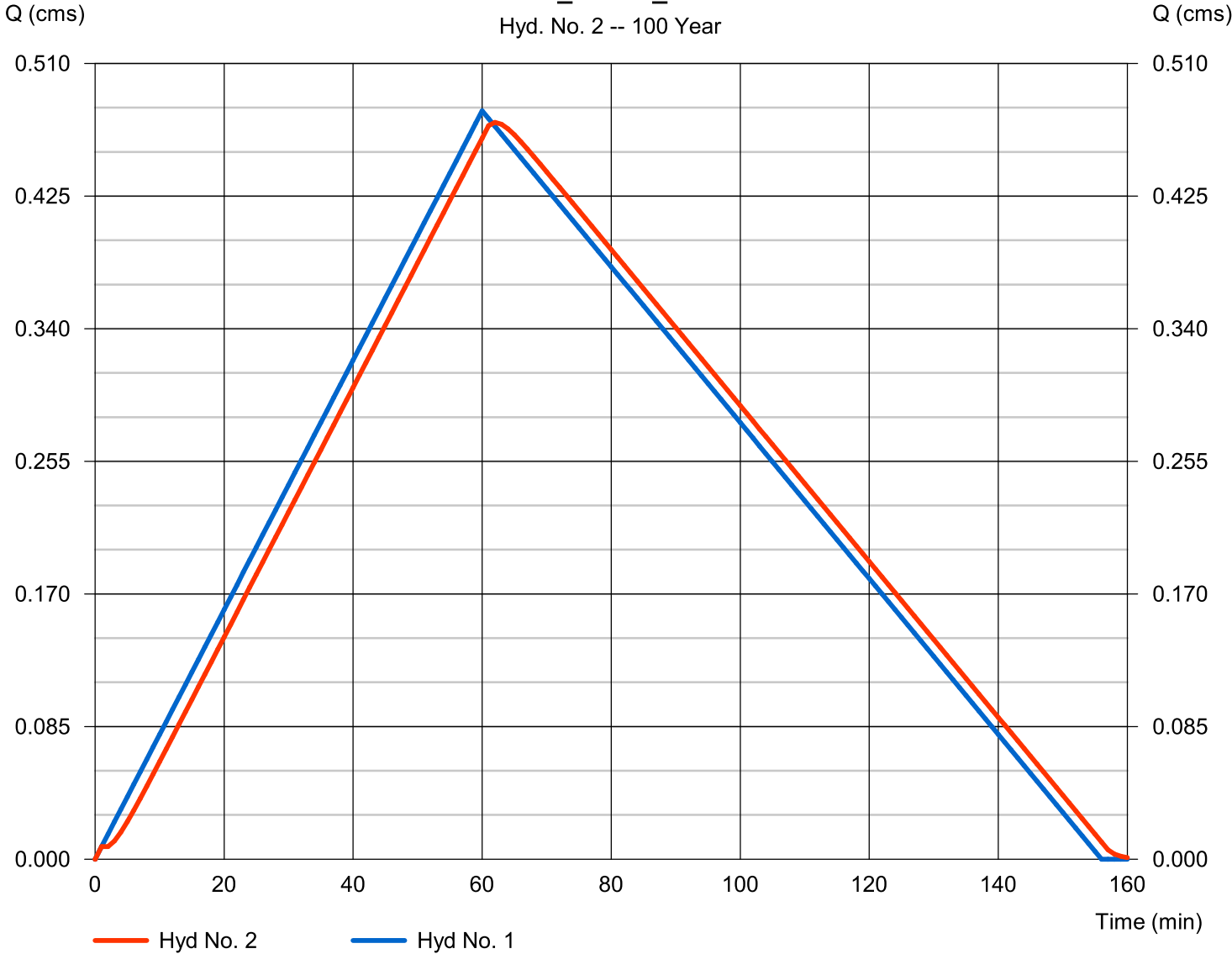
EB_A3-EB_A4

Hydrograph type	= Reach	Peak discharge	= 0.472 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 2 245.8 cum
Inflow hyd. No.	= 1 - EB_A3	Section type	= Trapezoidal
Reach length	= 280.0 m	Channel slope	= 3.2 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.827	Rating curve m	= 1.353
Ave. velocity	= 2.04 m/s	Routing coeff.	= 0.4567

Modified Att-Kin routing method used.

EB_A3-EB_A4

Hyd. No. 2 -- 100 Year



Hydrograph Report

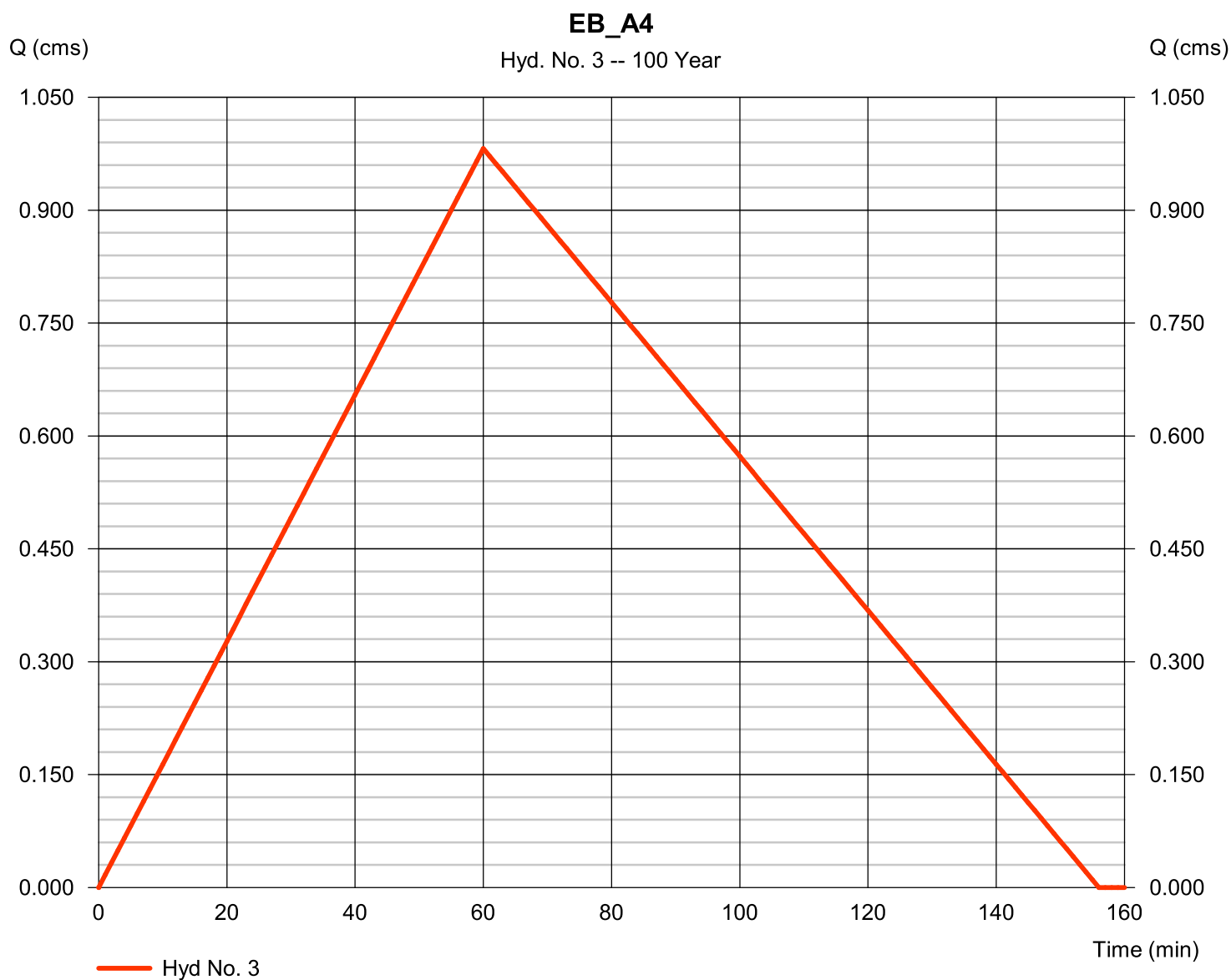
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 3

EB_A4

Hydrograph type	= Rational	Peak discharge	= 0.982 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 4 595.3 cum
Drainage area	= 49.990 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

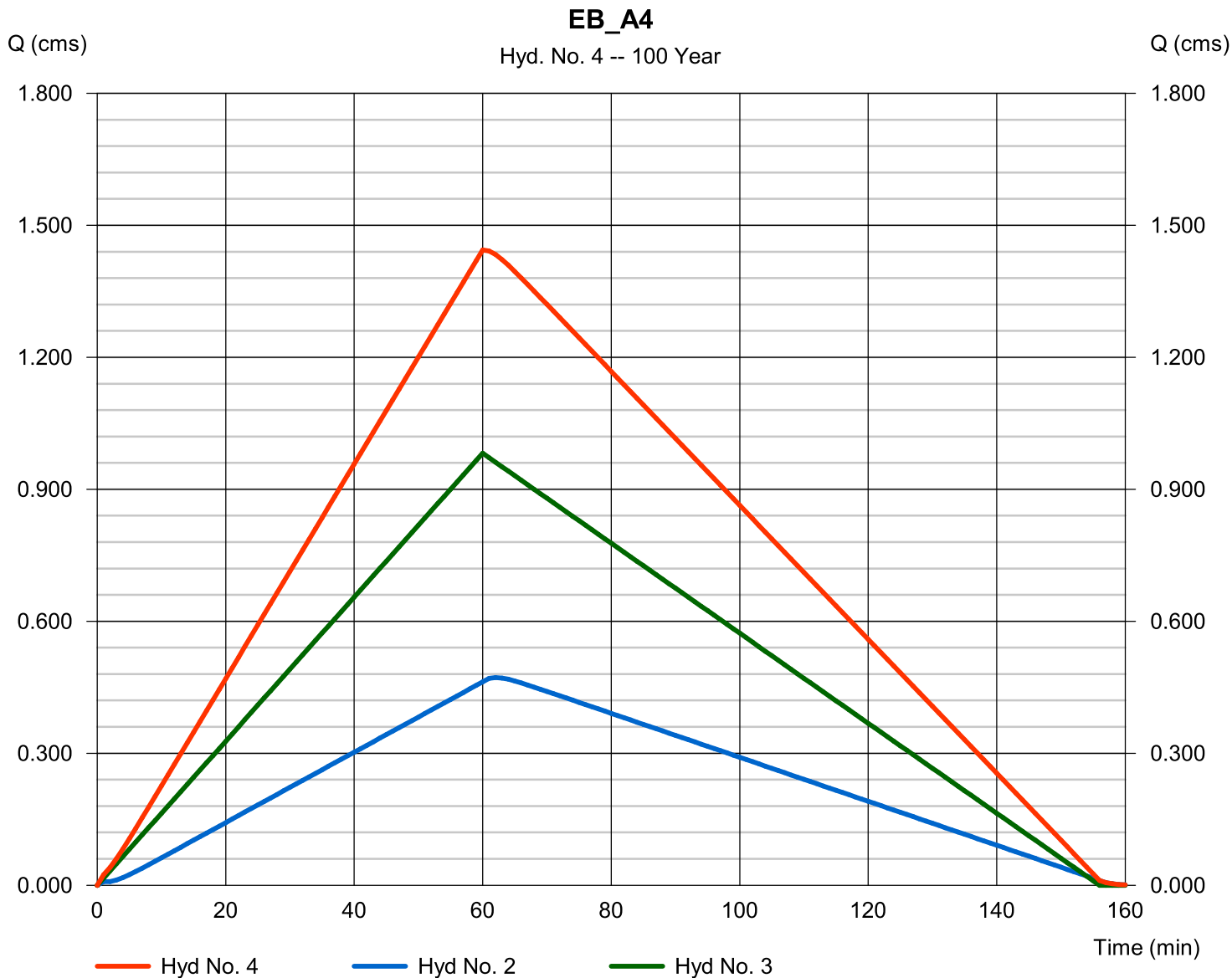
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 4

EB_A4

Hydrograph type	= Combine	Peak discharge	= 1.444 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 841.1 cum
Inflow hyds.	= 2, 3	Contrib. drain. area	= 49.990 hectare



Hydrograph Report

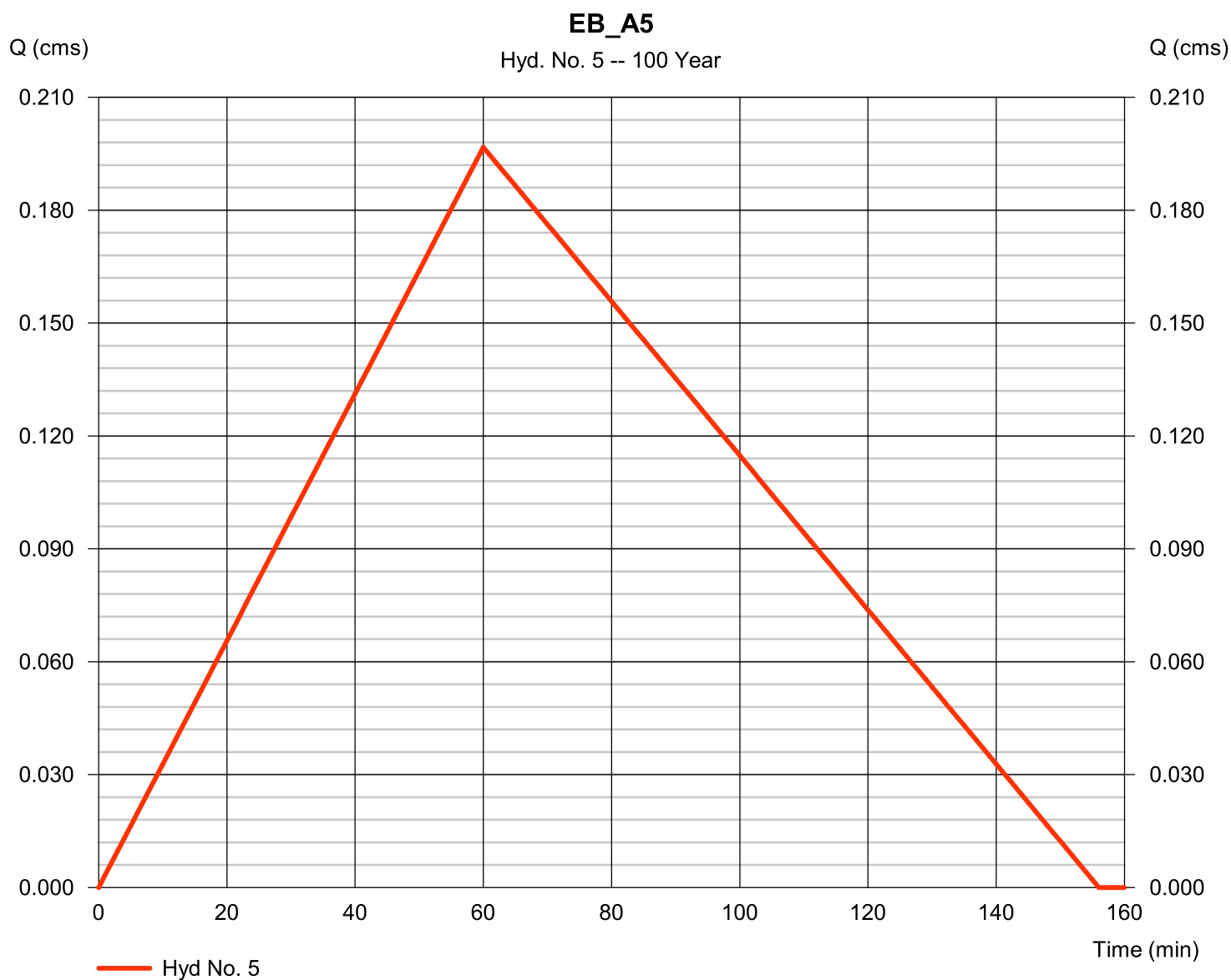
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 5

EB_A5

Hydrograph type	= Rational	Peak discharge	= 0.197 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 920.7 cum
Drainage area	= 10.970 hectare	Runoff coeff.	= 0.21
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

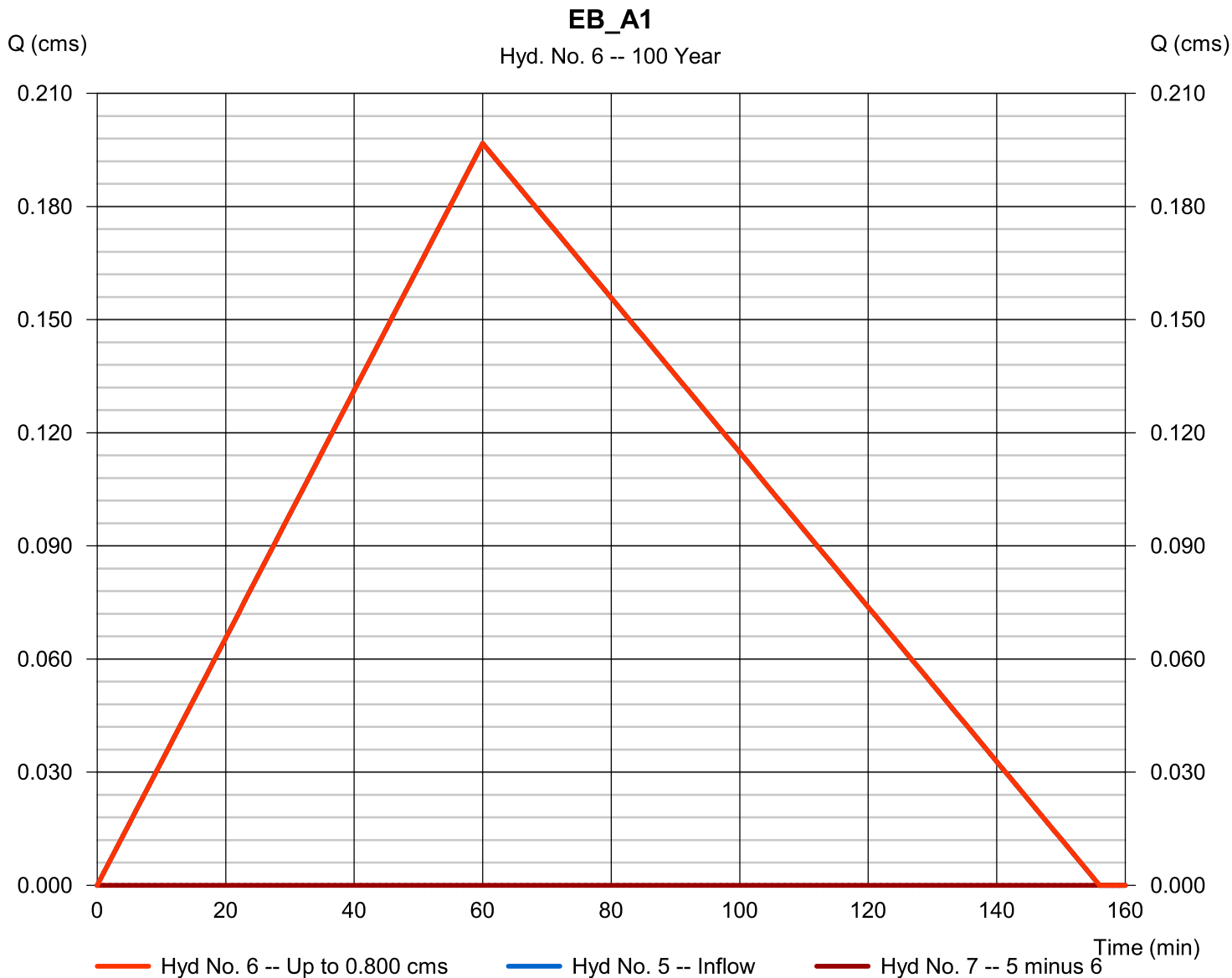
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 6

EB_A1

Hydrograph type	= Diversion1	Peak discharge	= 0.197 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 920.7 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 7
Diversion method	= Constant Q	Constant Q	= 0.80 cms



Hydrograph Report

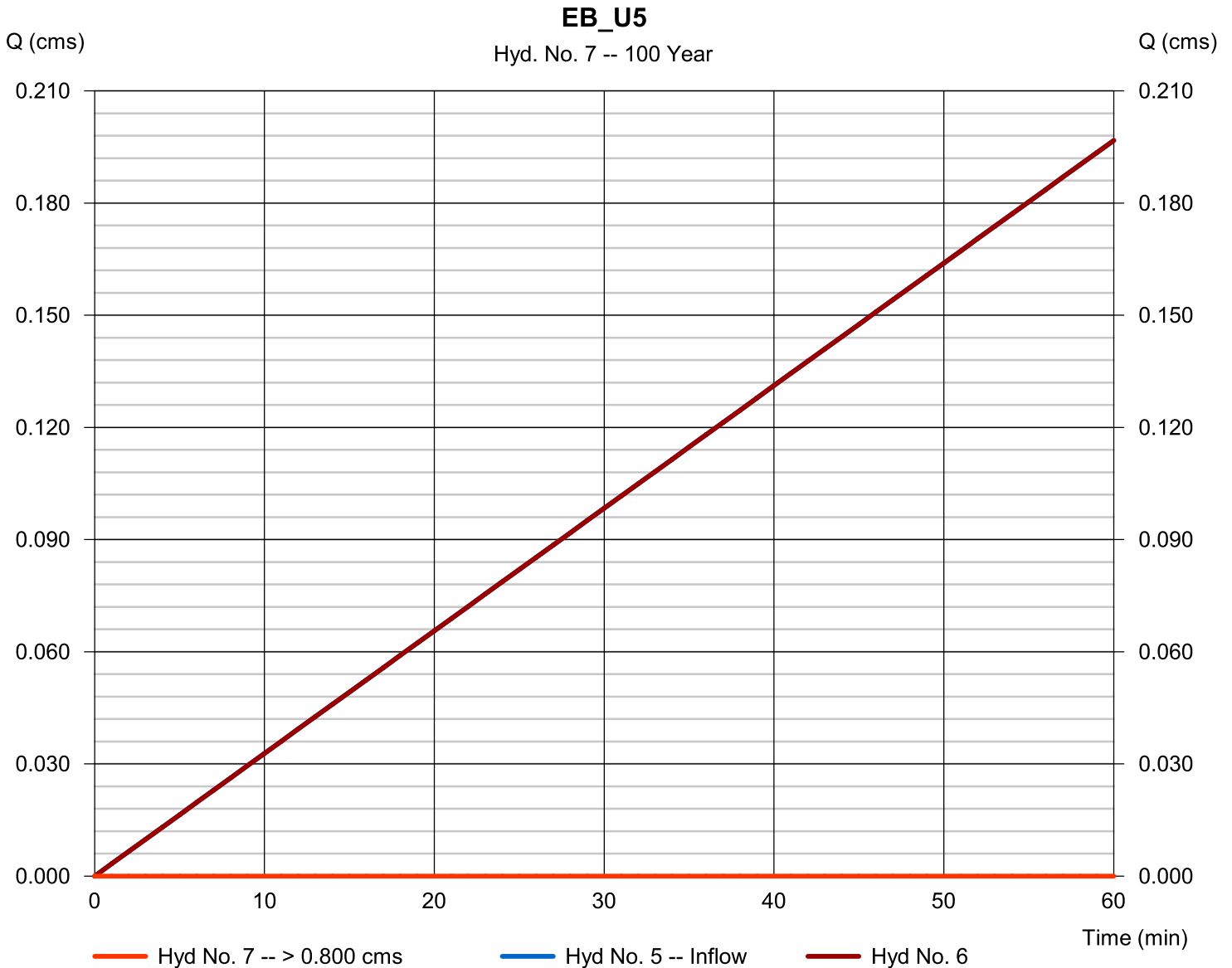
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 7

EB_U5

Hydrograph type	= Diversion2	Peak discharge	= 0.000 cms
Storm frequency	= 100 yrs	Time to peak	= n/a
Time interval	= 1 min	Hyd. volume	= 0.0 cum
Inflow hydrograph	= 5 - EB_A5	2nd diverted hyd.	= 6
Diversion method	= Constant Q	Constant Q	= 0.80 cms



Hydrograph Report

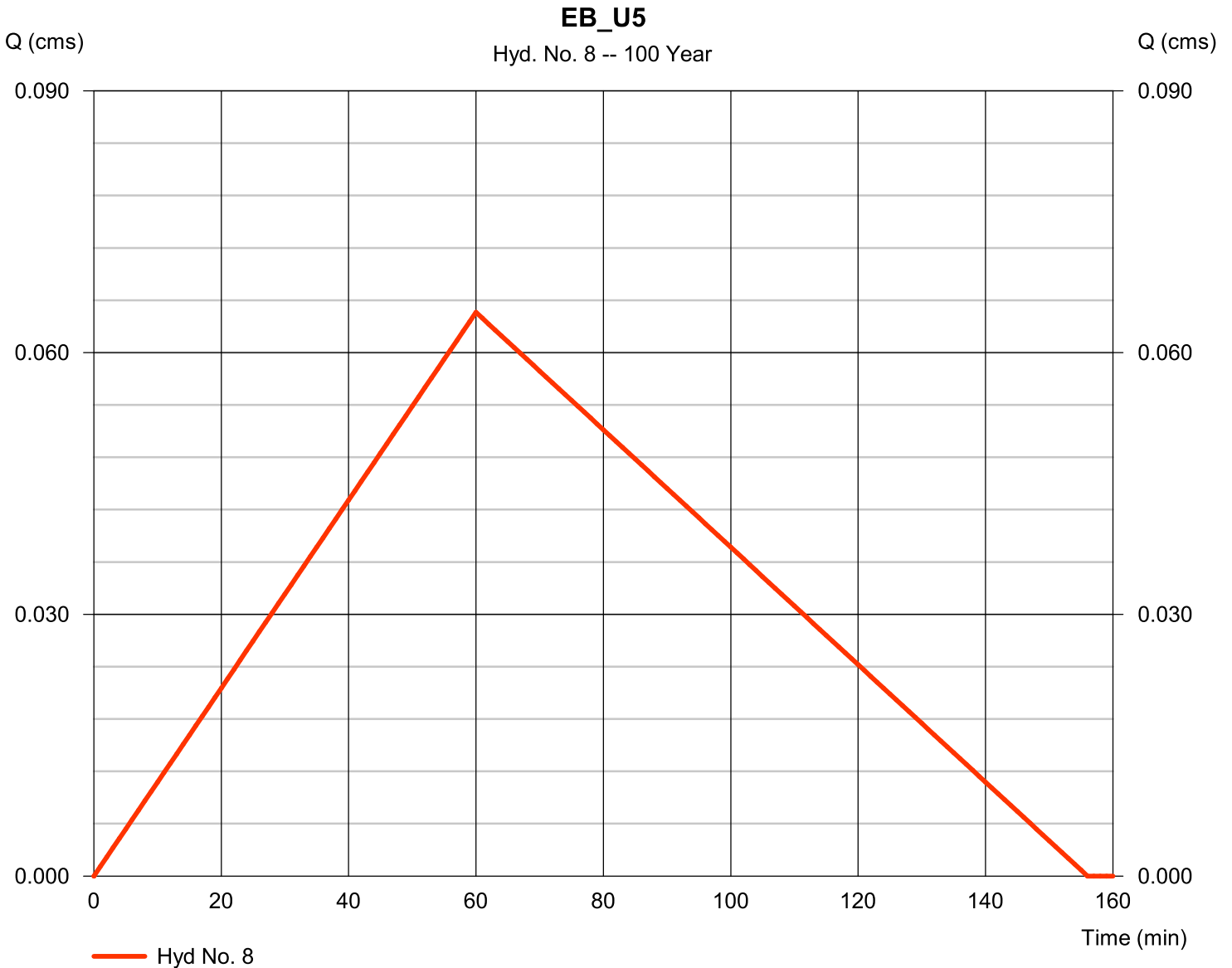
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 8

EB_U5

Hydrograph type	= Rational	Peak discharge	= 0.065 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 302.4 cum
Drainage area	= 1.940 hectare	Runoff coeff.	= 0.39
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

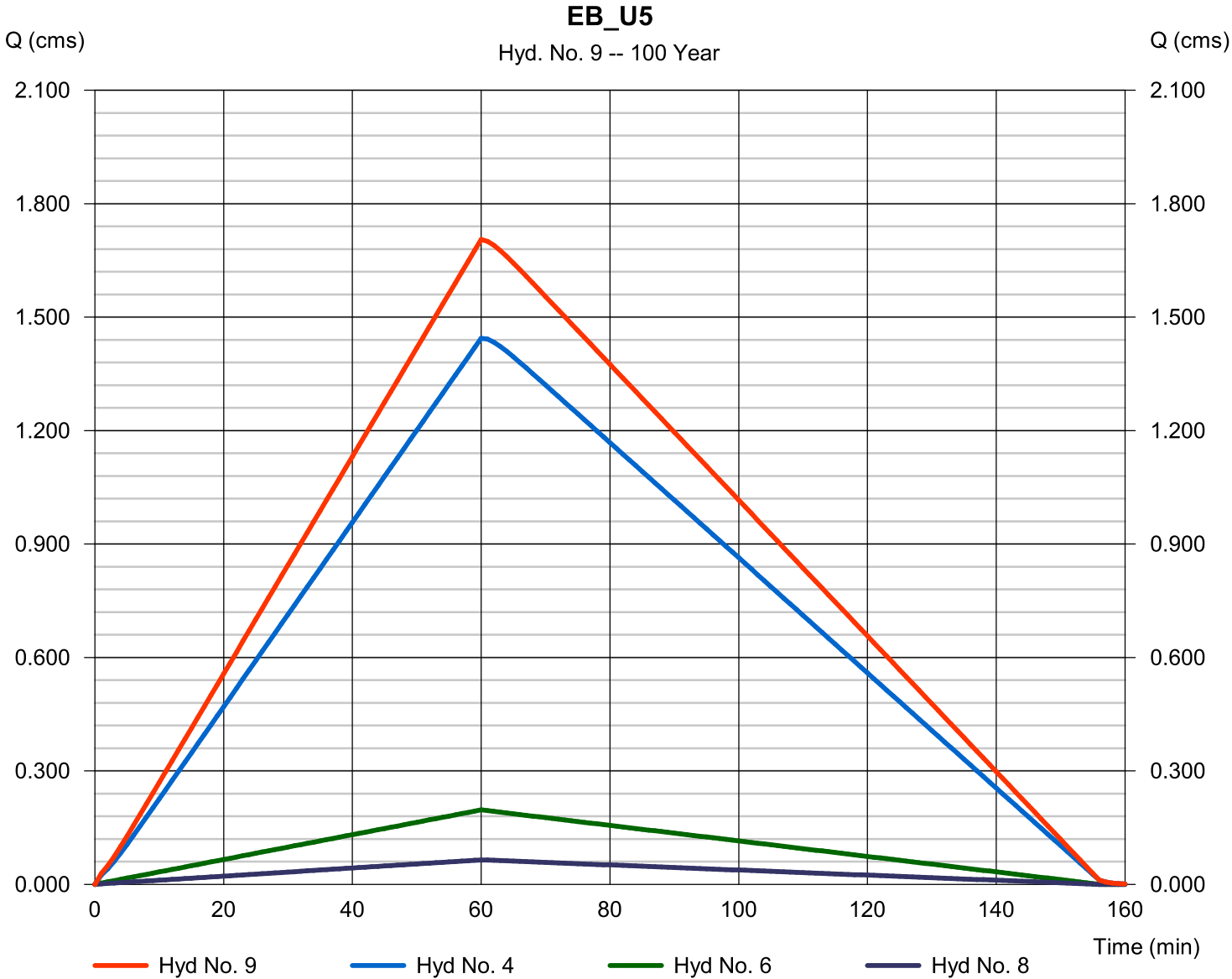
vendredi, avr 6, 2012

Hyd. No. 9

EB_U5

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 1 min
Inflow hyds. = 4, 6, 8

Peak discharge = 1.705 cms
Time to peak = 60 min
Hyd. volume = 8 064.2 cum
Contrib. drain. area = 1.940 hectare



Hydrograph Report

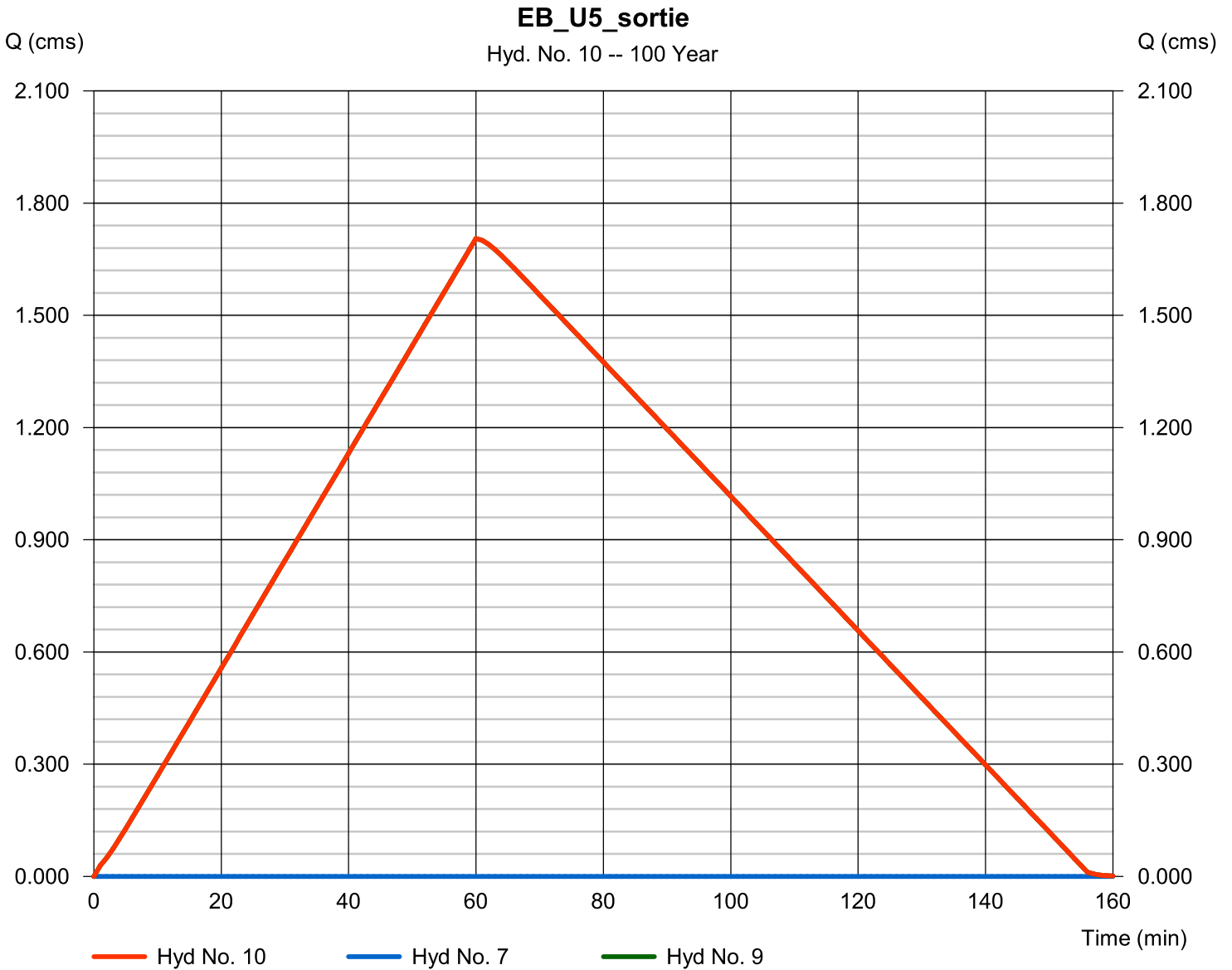
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 10

EB_U5_sortie

Hydrograph type	= Combine	Peak discharge	= 1.705 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 8 064.2 cum
Inflow hyds.	= 7, 9	Contrib. drain. area	= 0.000 hectare



Hydrograph Report

Hyd. No. 11

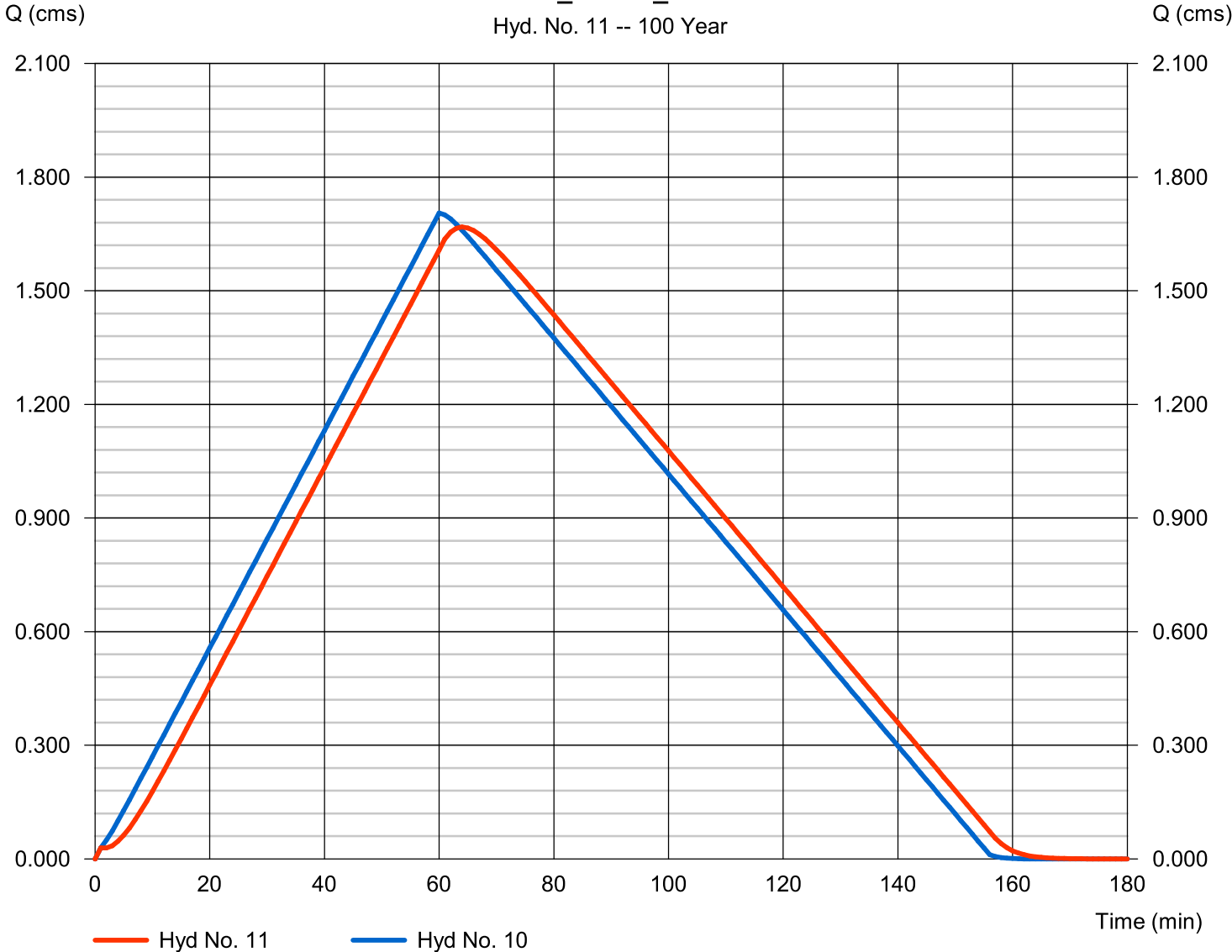
EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 1.668 cms
Storm frequency	= 100 yrs	Time to peak	= 64 min
Time interval	= 1 min	Hyd. volume	= 8 070.1 cum
Inflow hyd. No.	= 10 - EB_U5_sortie	Section type	= Trapezoidal
Reach length	= 640.0 m	Channel slope	= 2.8 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.515	Rating curve m	= 1.353
Ave. velocity	= 2.71 m/s	Routing coeff.	= 0.2929

Modified Att-Kin routing method used.

EB_U5-EB_A1

Hyd. No. 11 -- 100 Year



Hydrograph Report

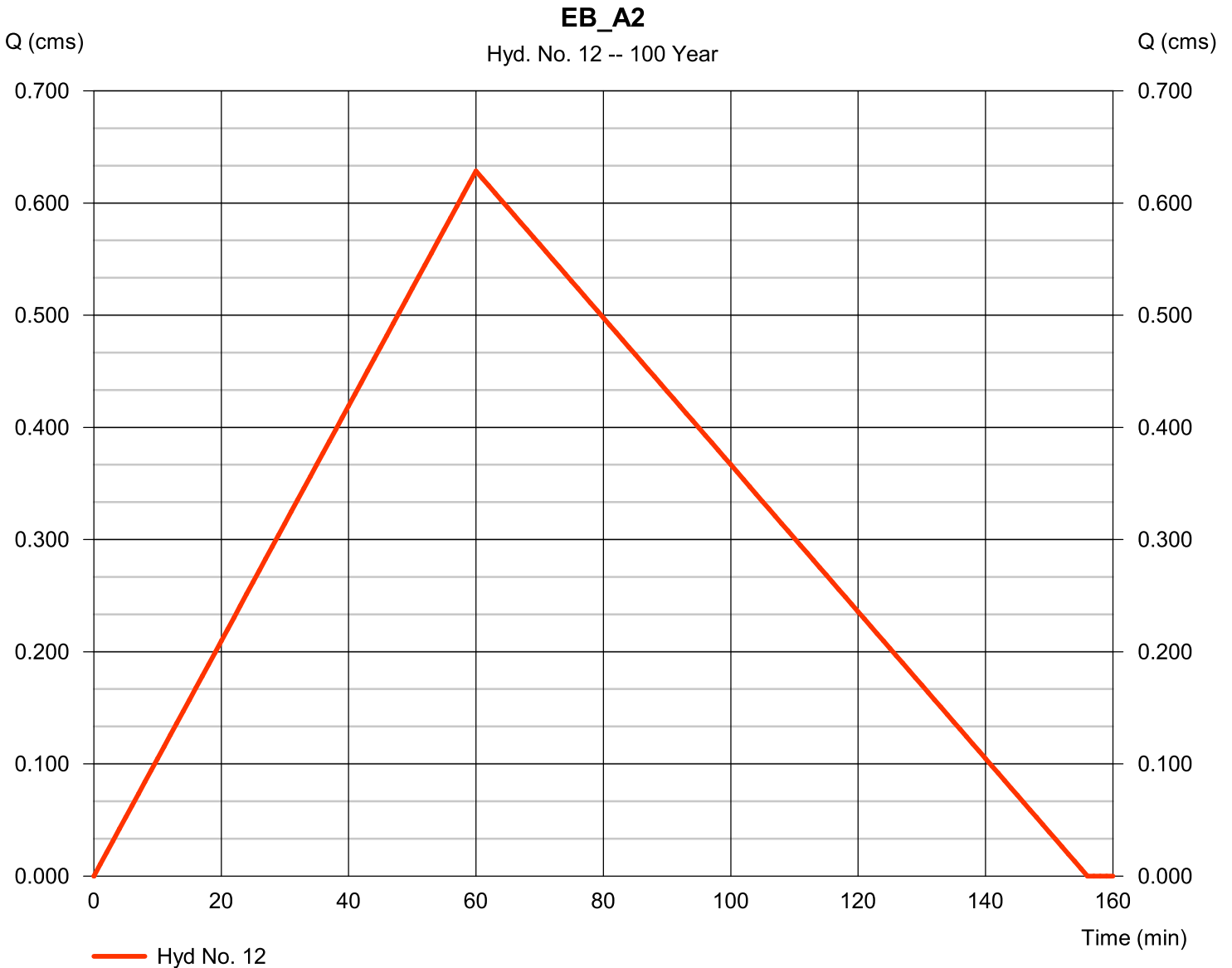
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 12

EB_A2

Hydrograph type	= Rational	Peak discharge	= 0.629 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 941.8 cum
Drainage area	= 35.050 hectare	Runoff coeff.	= 0.21
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

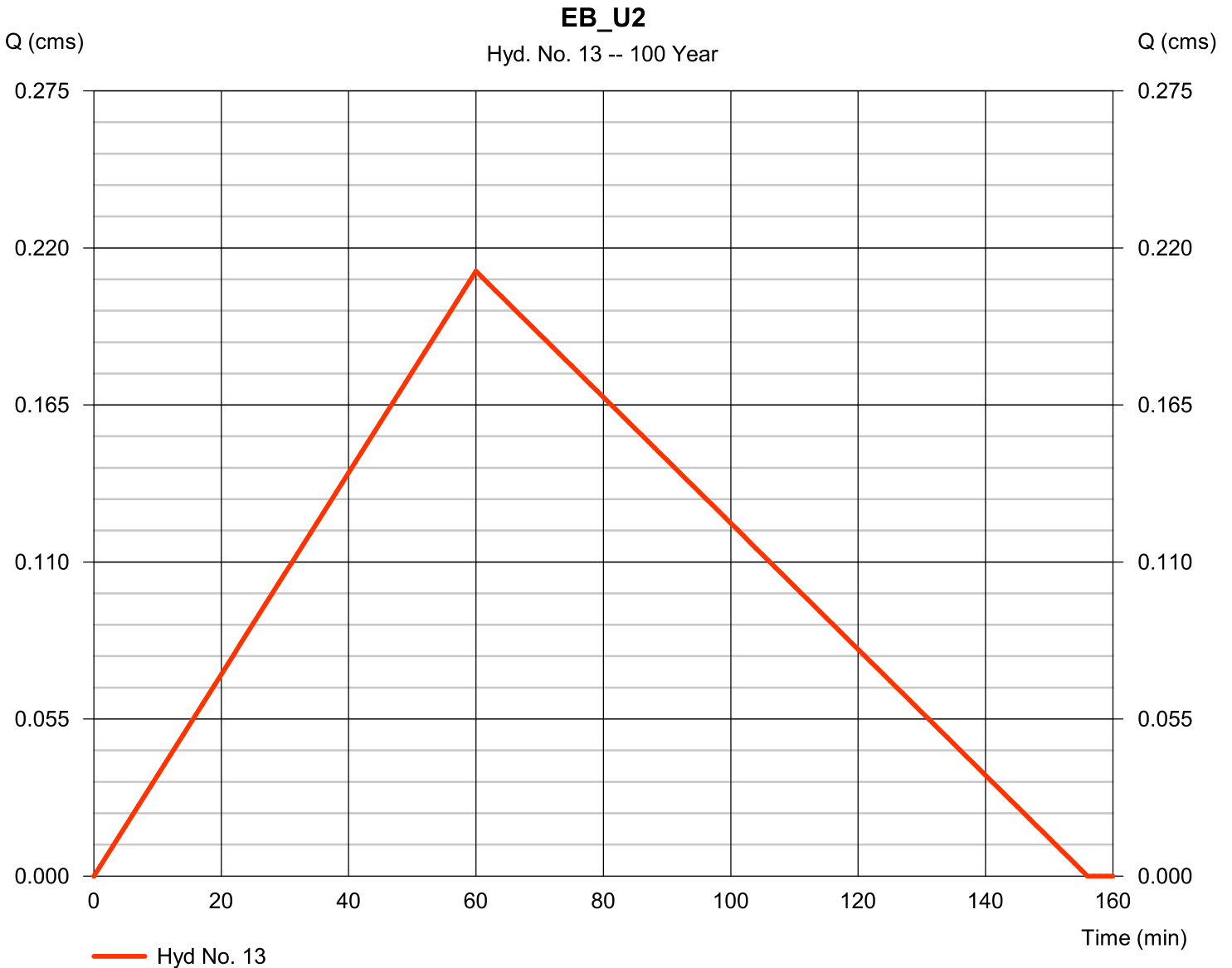
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 13

EB_U2

Hydrograph type	= Rational	Peak discharge	= 0.212 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 991.4 cum
Drainage area	= 6.050 hectare	Runoff coeff.	= 0.41
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

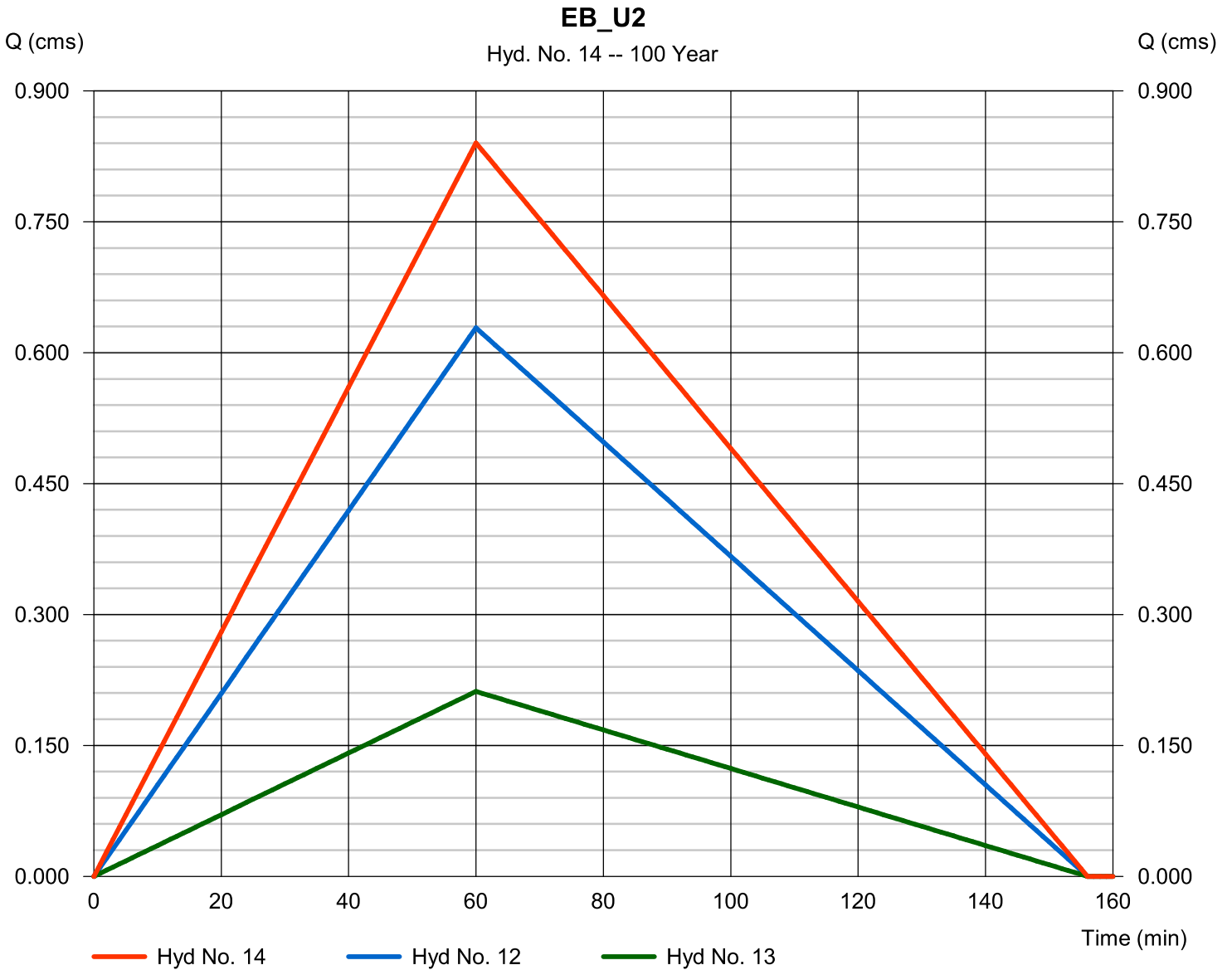
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 14

EB_U2

Hydrograph type	= Combine	Peak discharge	= 0.840 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 933.2 cum
Inflow hyds.	= 12, 13	Contrib. drain. area	= 41.100 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

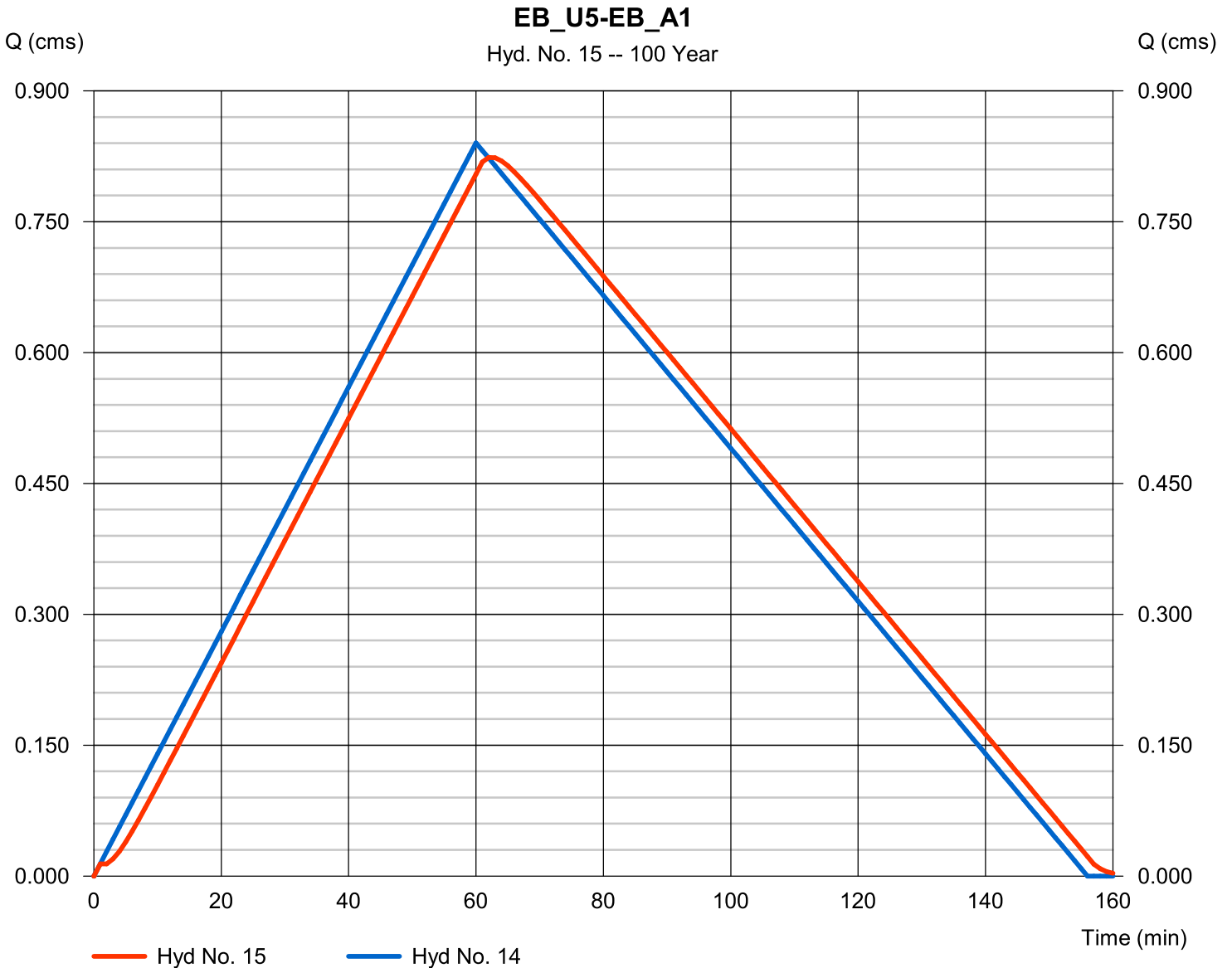
vendredi, avr 6, 2012

Hyd. No. 15

EB_U5-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.824 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 3 935.3 cum
Inflow hyd. No.	= 14 - EB_U2	Section type	= Trapezoidal
Reach length	= 360.0 m	Channel slope	= 2.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 4.266	Rating curve m	= 1.353
Ave. velocity	= 2.16 m/s	Routing coeff.	= 0.3912

Modified Att-Kin routing method used.



Hydrograph Report

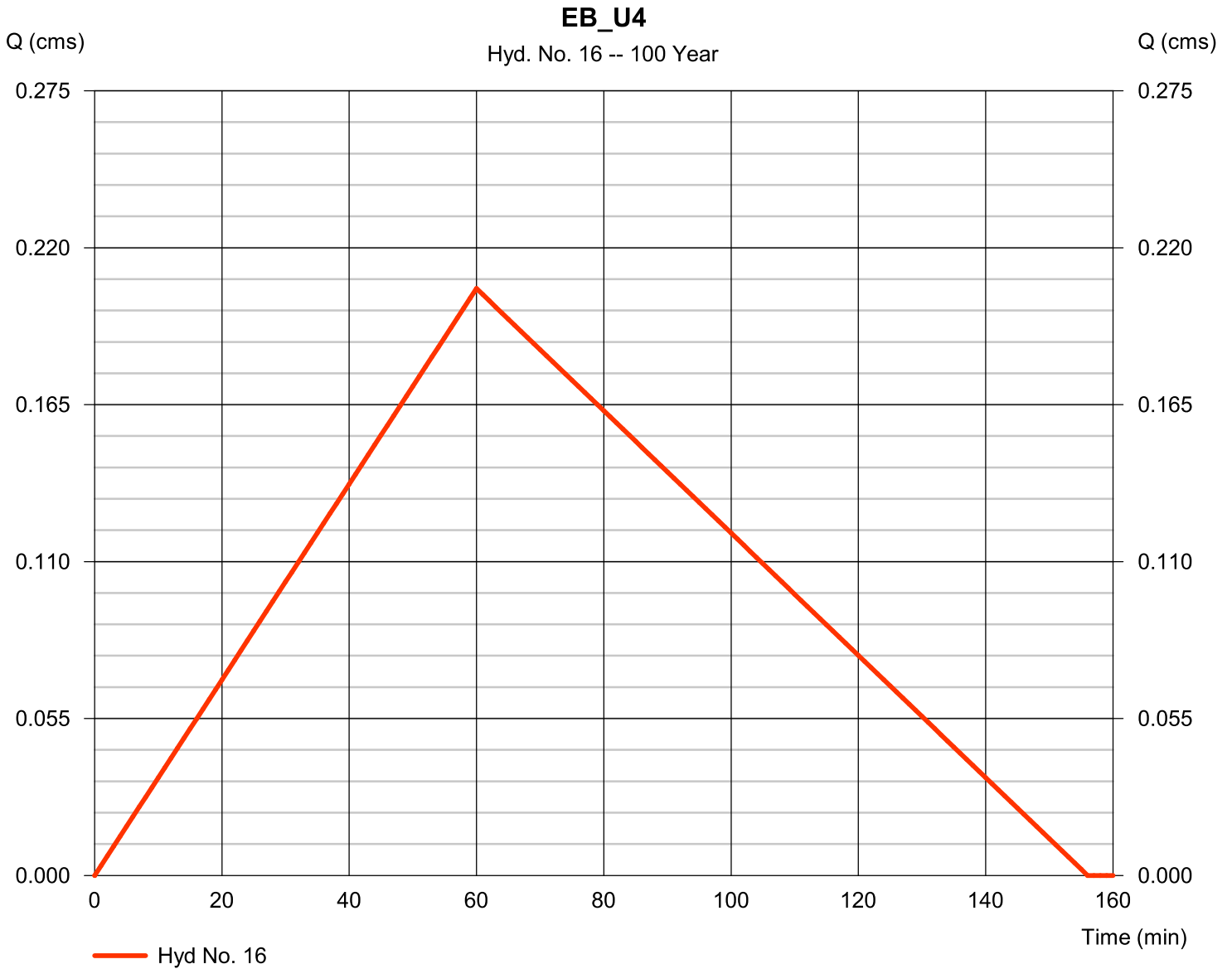
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 16

EB_U4

Hydrograph type	= Rational	Peak discharge	= 0.206 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 962.7 cum
Drainage area	= 6.510 hectare	Runoff coeff.	= 0.37
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 17

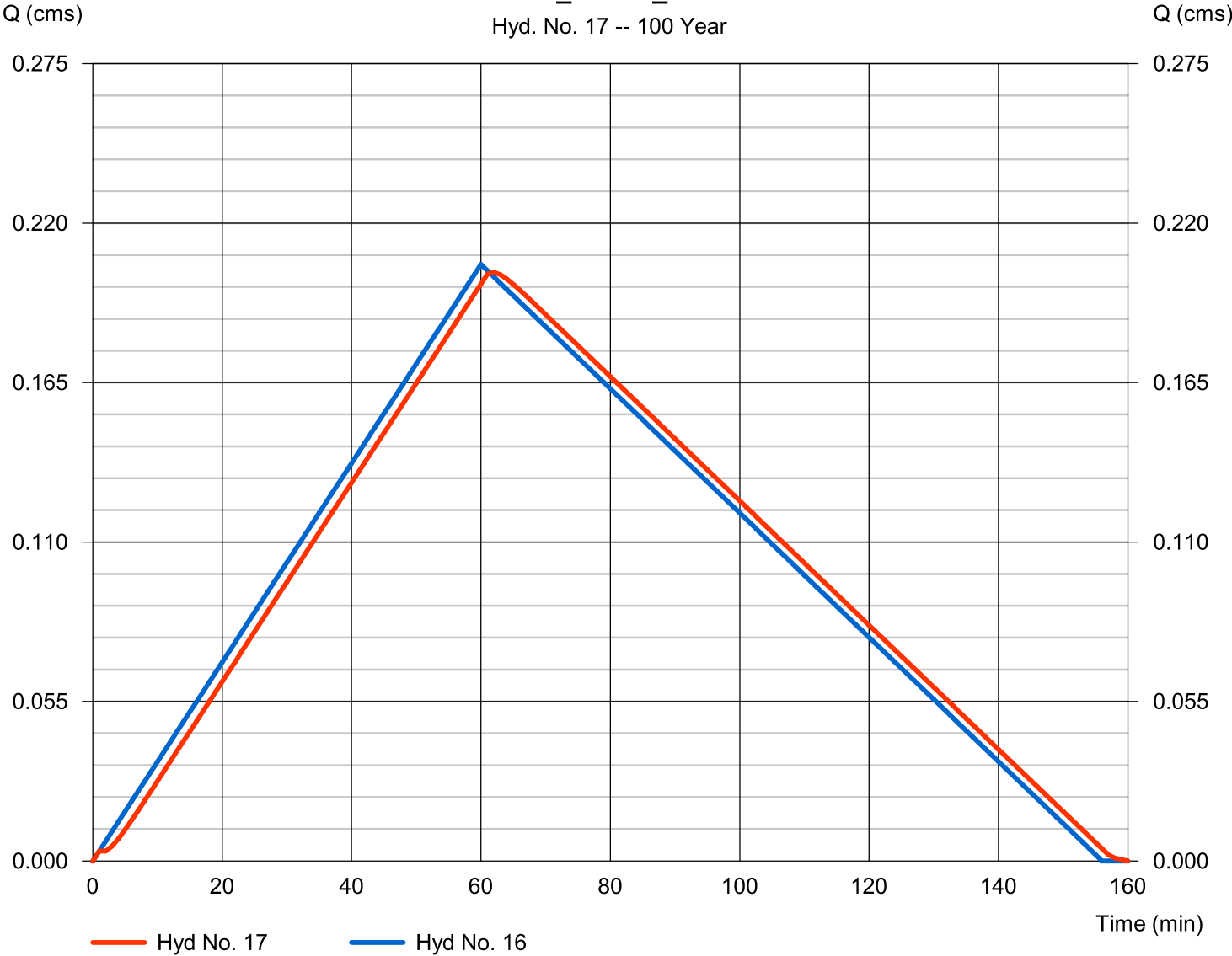
EB_U4-EB_A1

Hydrograph type	= Reach	Peak discharge	= 0.203 cms
Storm frequency	= 100 yrs	Time to peak	= 62 min
Time interval	= 1 min	Hyd. volume	= 963.1 cum
Inflow hyd. No.	= 16 - EB_U4	Section type	= Trapezoidal
Reach length	= 200.0 m	Channel slope	= 3.5 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 5.048	Rating curve m	= 1.353
Ave. velocity	= 1.69 m/s	Routing coeff.	= 0.5112

Modified Att-Kin routing method used.

EB_U4-EB_A1

Hyd. No. 17 -- 100 Year



Hydrograph Report

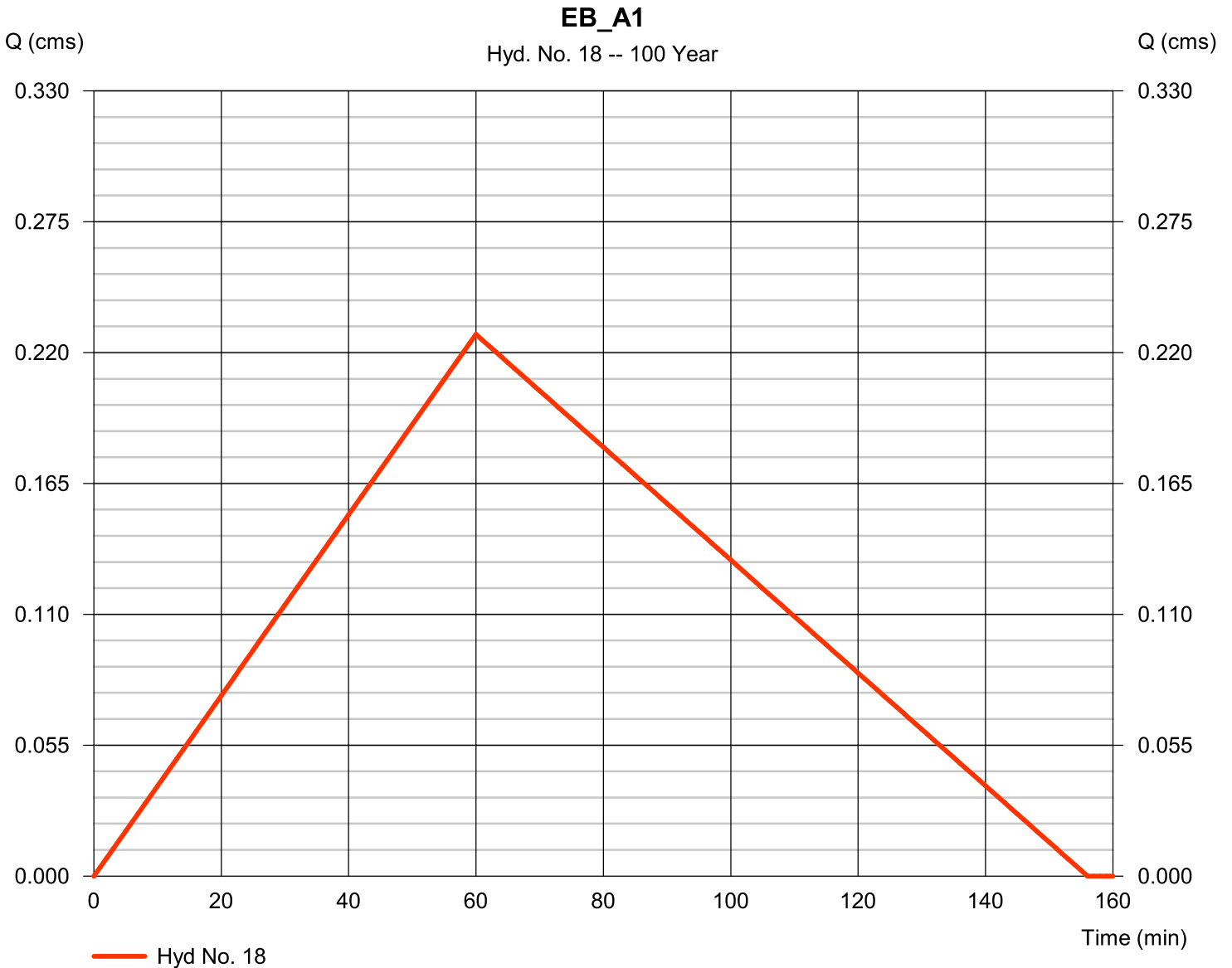
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 18

EB_A1

Hydrograph type	= Rational	Peak discharge	= 0.228 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 065.4 cum
Drainage area	= 15.680 hectare	Runoff coeff.	= 0.17
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

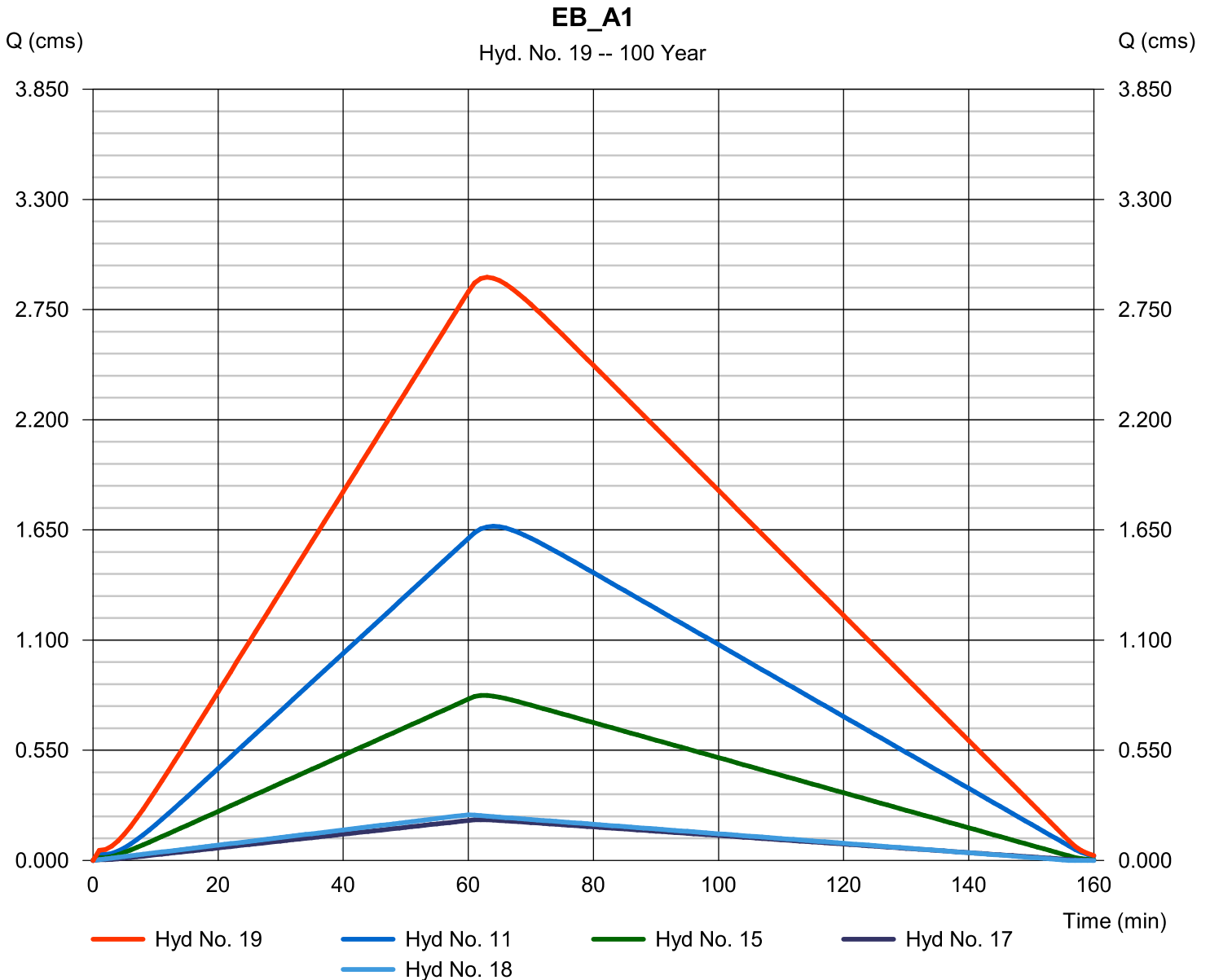
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 19

EB_A1

Hydrograph type	= Combine	Peak discharge	= 2.911 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 14 033.8 cum
Inflow hyds.	= 11, 15, 17, 18	Contrib. drain. area	= 15.680 hectare



Hydrograph Report

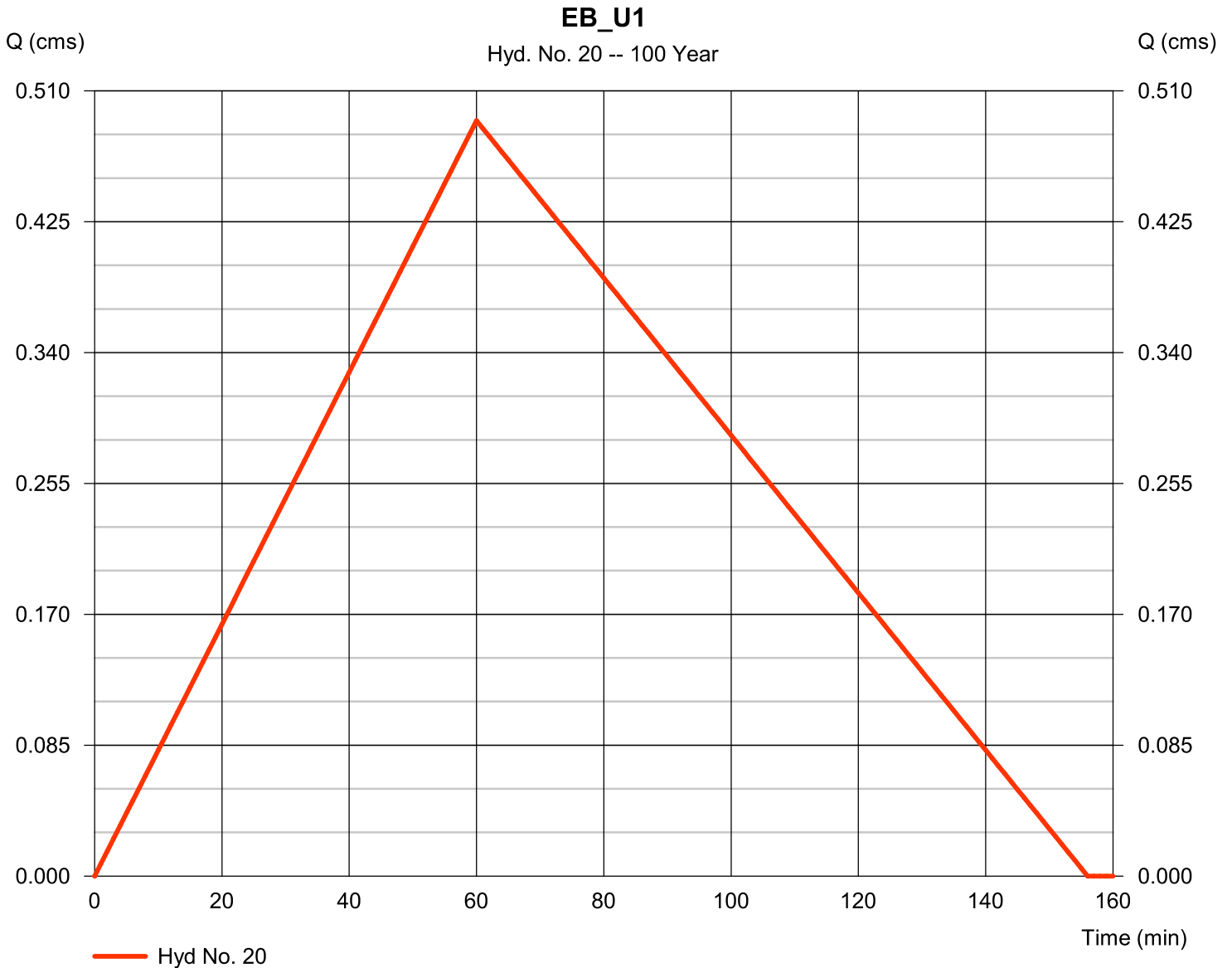
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 20

EB_U1

Hydrograph type	= Rational	Peak discharge	= 0.491 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 2 296.4 cum
Drainage area	= 15.960 hectare	Runoff coeff.	= 0.36
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

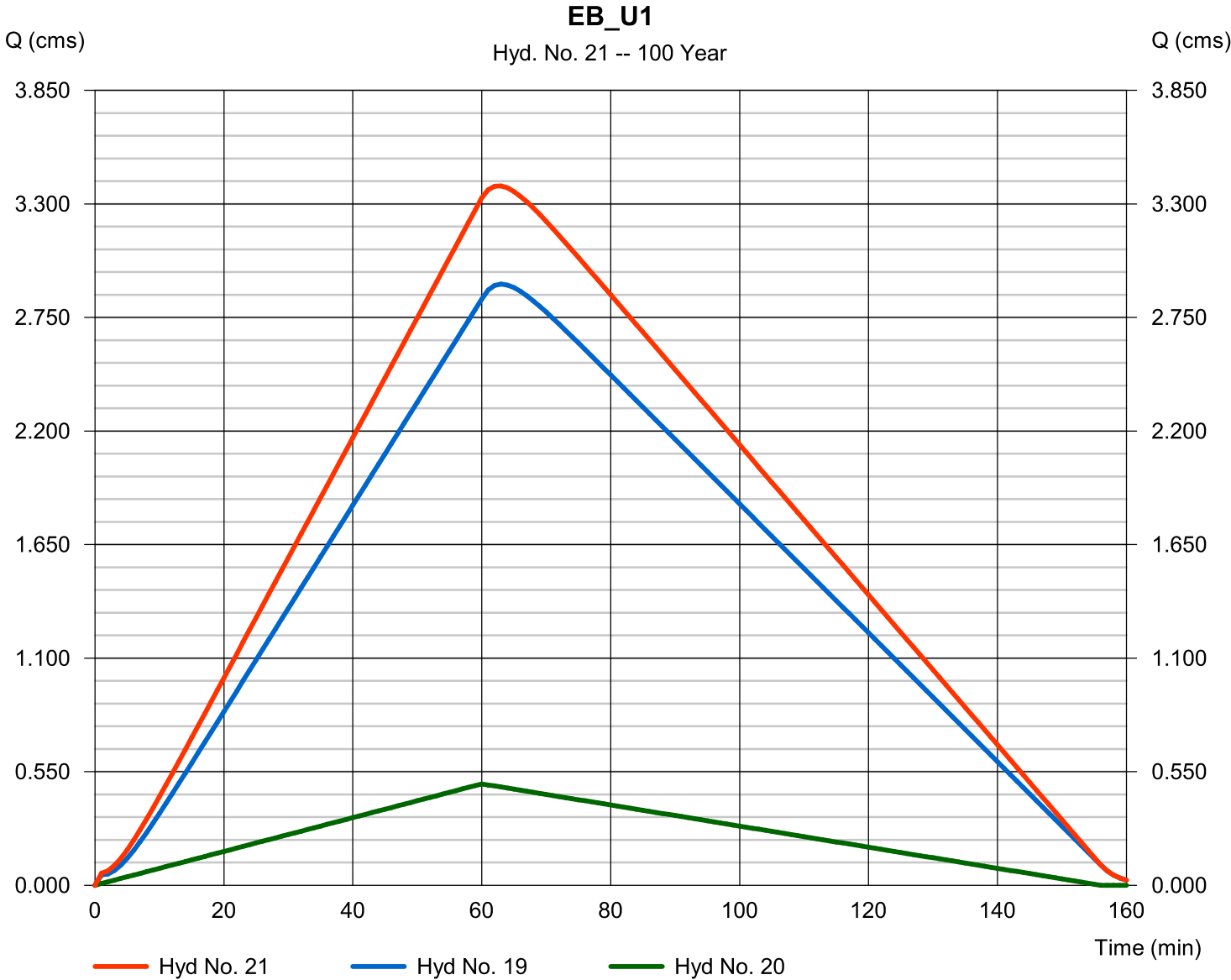
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 21

EB_U1

Hydrograph type	= Combine	Peak discharge	= 3.387 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 16 330.1 cum
Inflow hyds.	= 19, 20	Contrib. drain. area	= 15.960 hectare



Hydrograph Report

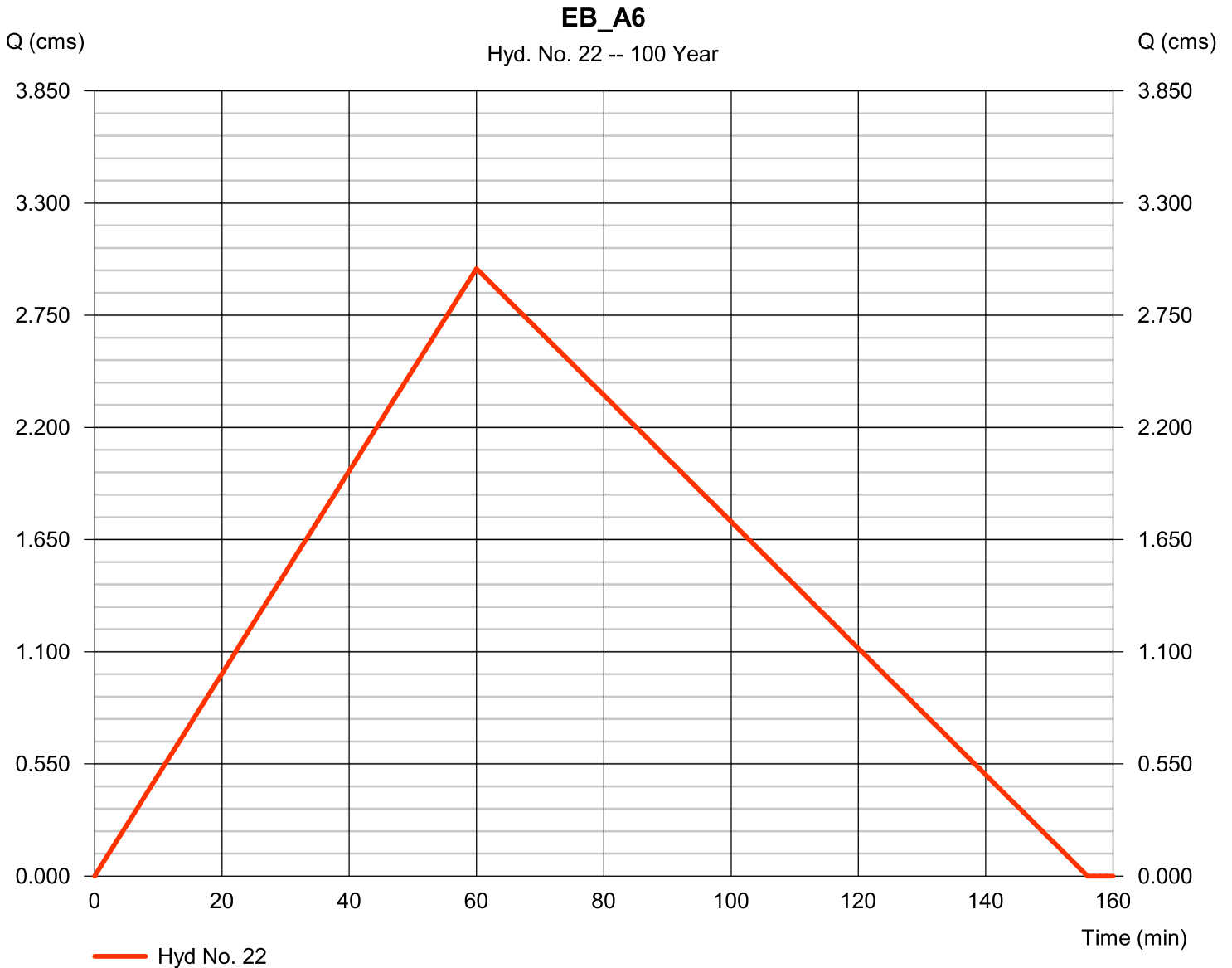
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 22

EB_A6

Hydrograph type	= Rational	Peak discharge	= 2.978 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 13 939.3 cum
Drainage area	= 145.320 hectare	Runoff coeff.	= 0.24
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

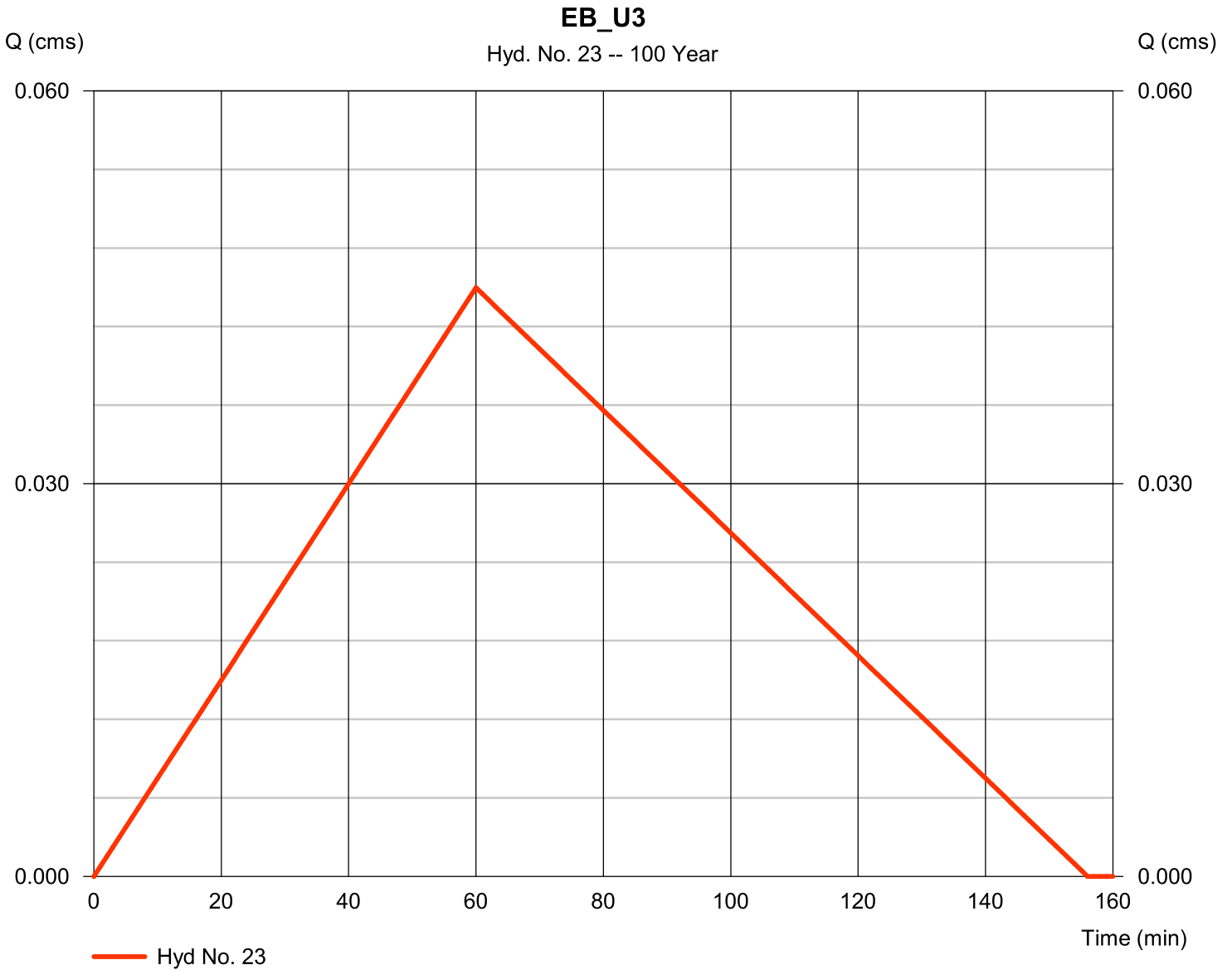
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 23

EB_U3

Hydrograph type	= Rational	Peak discharge	= 0.045 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 210.4 cum
Drainage area	= 1.350 hectare	Runoff coeff.	= 0.39
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

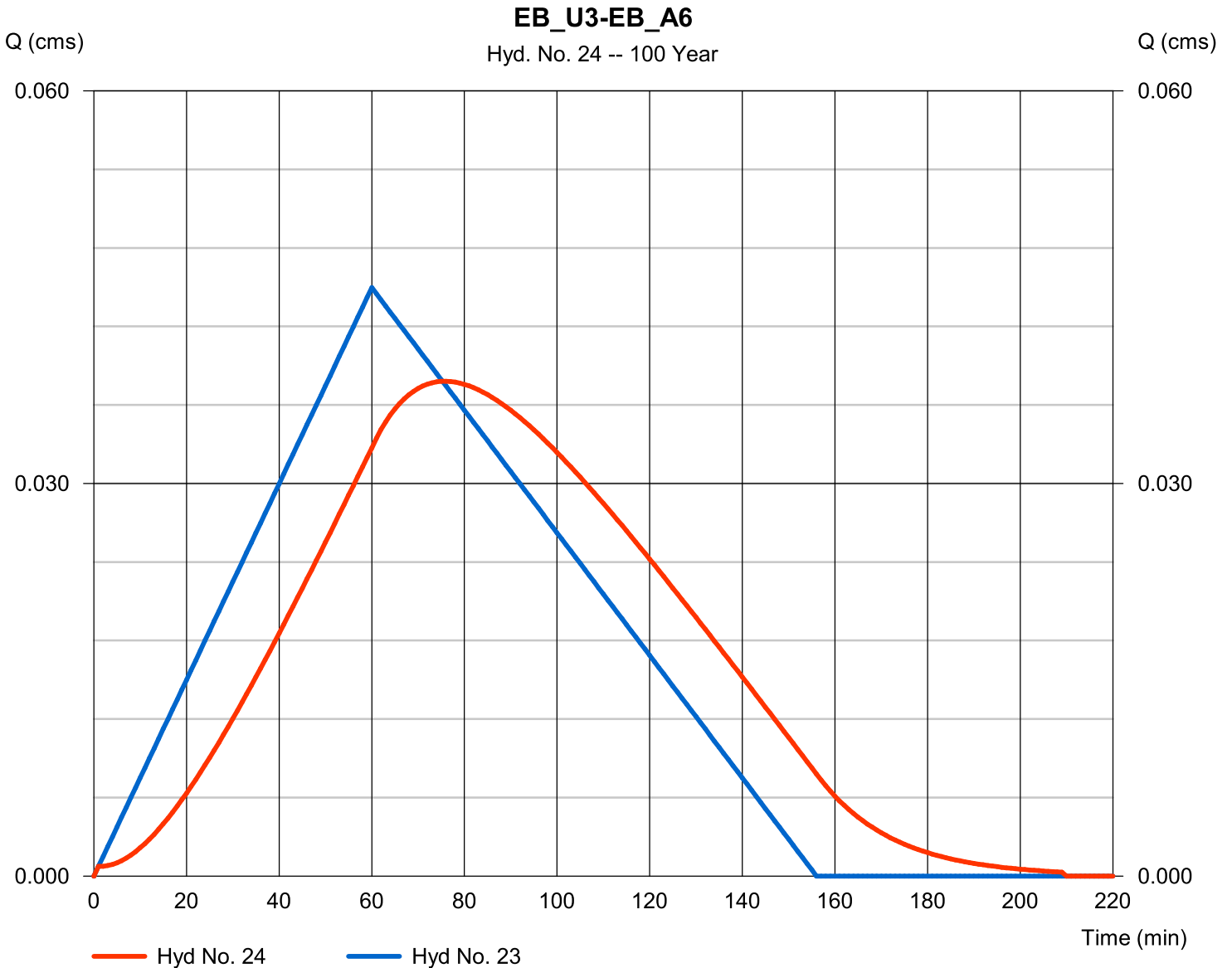
vendredi, avr 6, 2012

Hyd. No. 24

EB_U3-EB_A6

Hydrograph type	= Reach	Peak discharge	= 0.038 cms
Storm frequency	= 100 yrs	Time to peak	= 76 min
Time interval	= 1 min	Hyd. volume	= 210.9 cum
Inflow hyd. No.	= 23 - EB_U3	Section type	= Trapezoidal
Reach length	= 1200.0 m	Channel slope	= 1.9 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.719	Rating curve m	= 1.353
Ave. velocity	= 0.91 m/s	Routing coeff.	= 0.0596

Modified Att-Kin routing method used.



Hydrograph Report

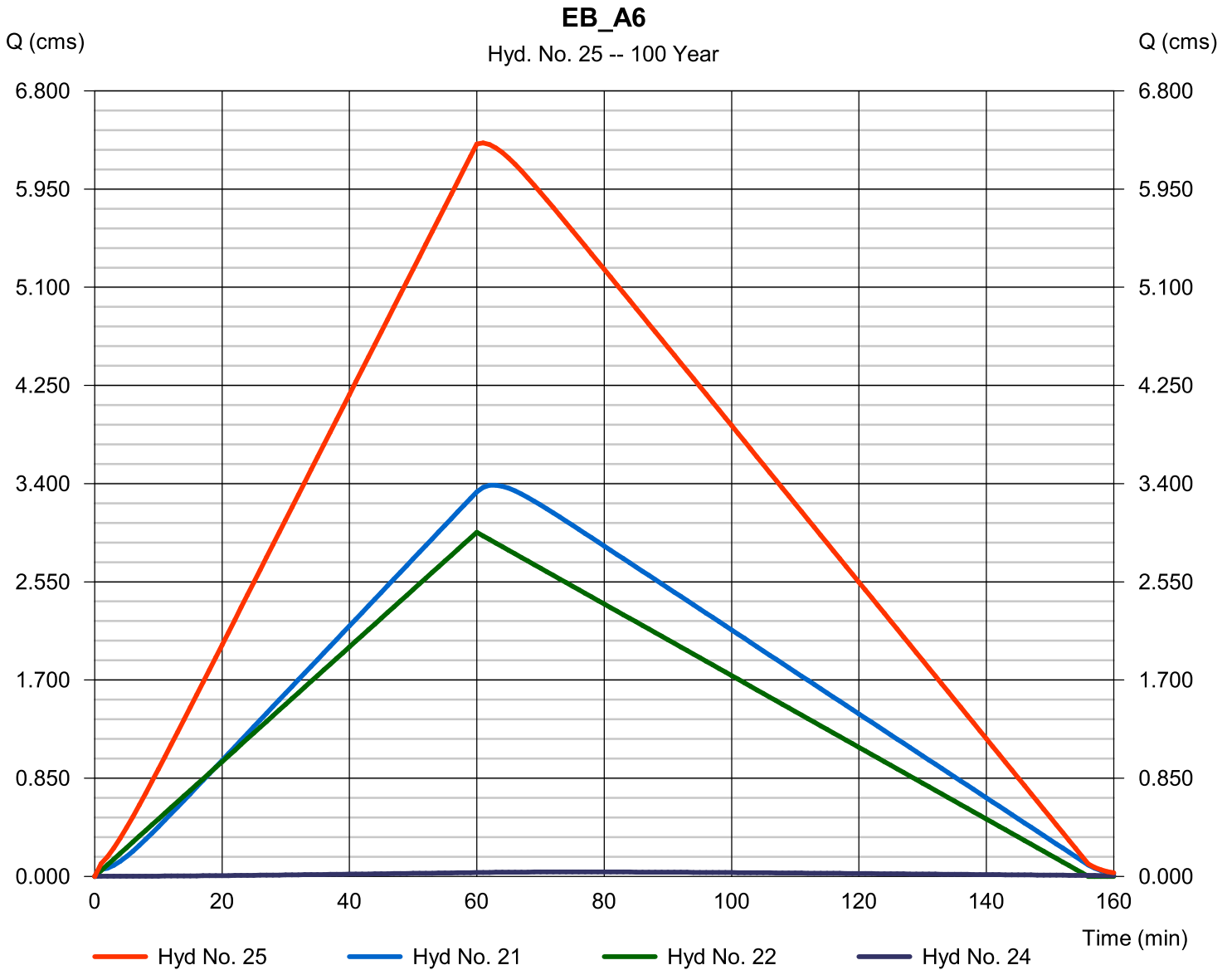
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 25

EB_A6

Hydrograph type	= Combine	Peak discharge	= 6.349 cms
Storm frequency	= 100 yrs	Time to peak	= 61 min
Time interval	= 1 min	Hyd. volume	= 30 480.3 cum
Inflow hyds.	= 21, 22, 24	Contrib. drain. area	= 145.320 hectare



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

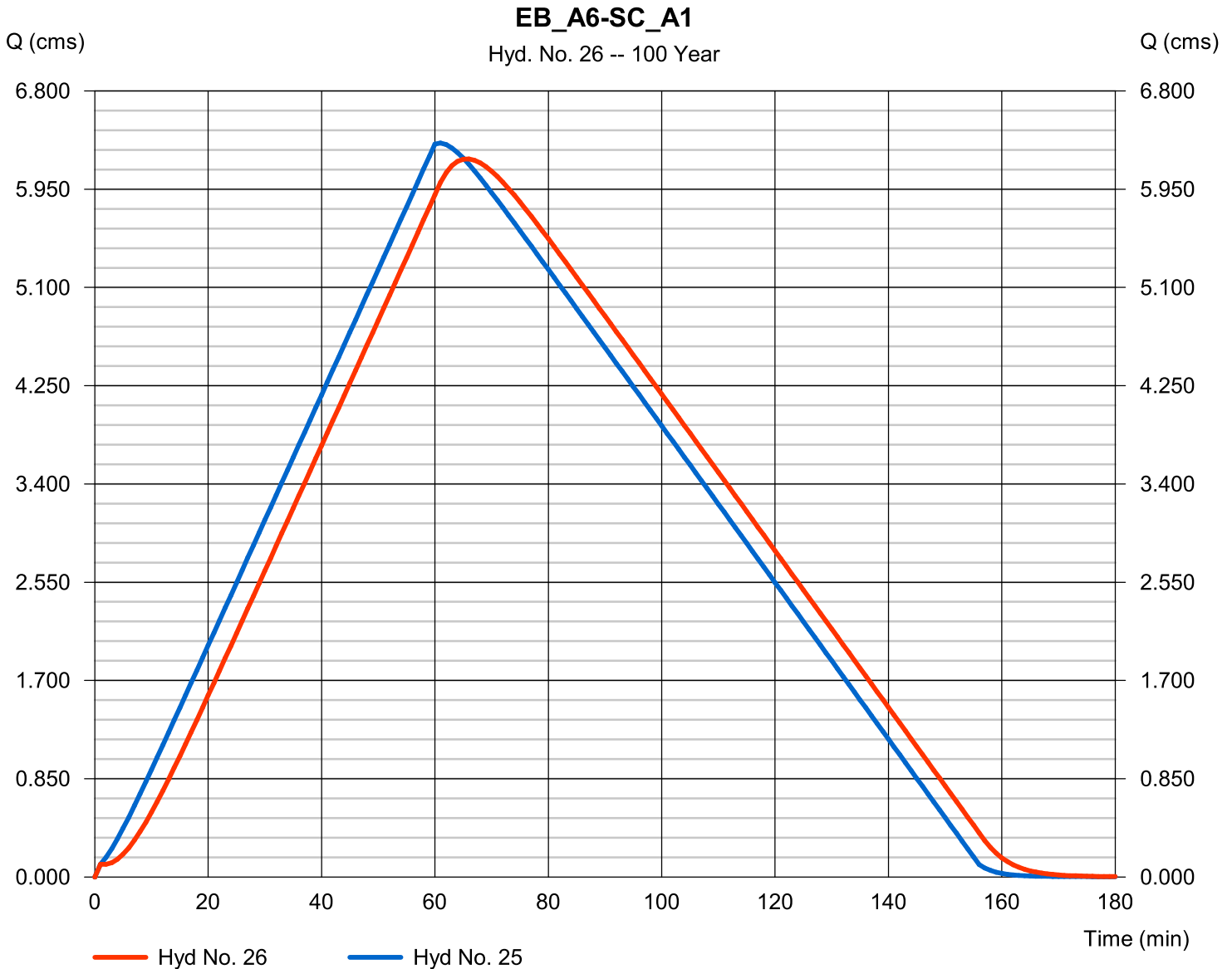
vendredi, avr 6, 2012

Hyd. No. 26

EB_A6-SC_A1

Hydrograph type	= Reach	Peak discharge	= 6.212 cms
Storm frequency	= 100 yrs	Time to peak	= 66 min
Time interval	= 1 min	Hyd. volume	= 30 506.6 cum
Inflow hyd. No.	= 25 - EB_A6	Section type	= Trapezoidal
Reach length	= 850.0 m	Channel slope	= 1.4 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 3.193	Rating curve m	= 1.353
Ave. velocity	= 2.95 m/s	Routing coeff.	= 0.2470

Modified Att-Kin routing method used.



Hydrograph Report

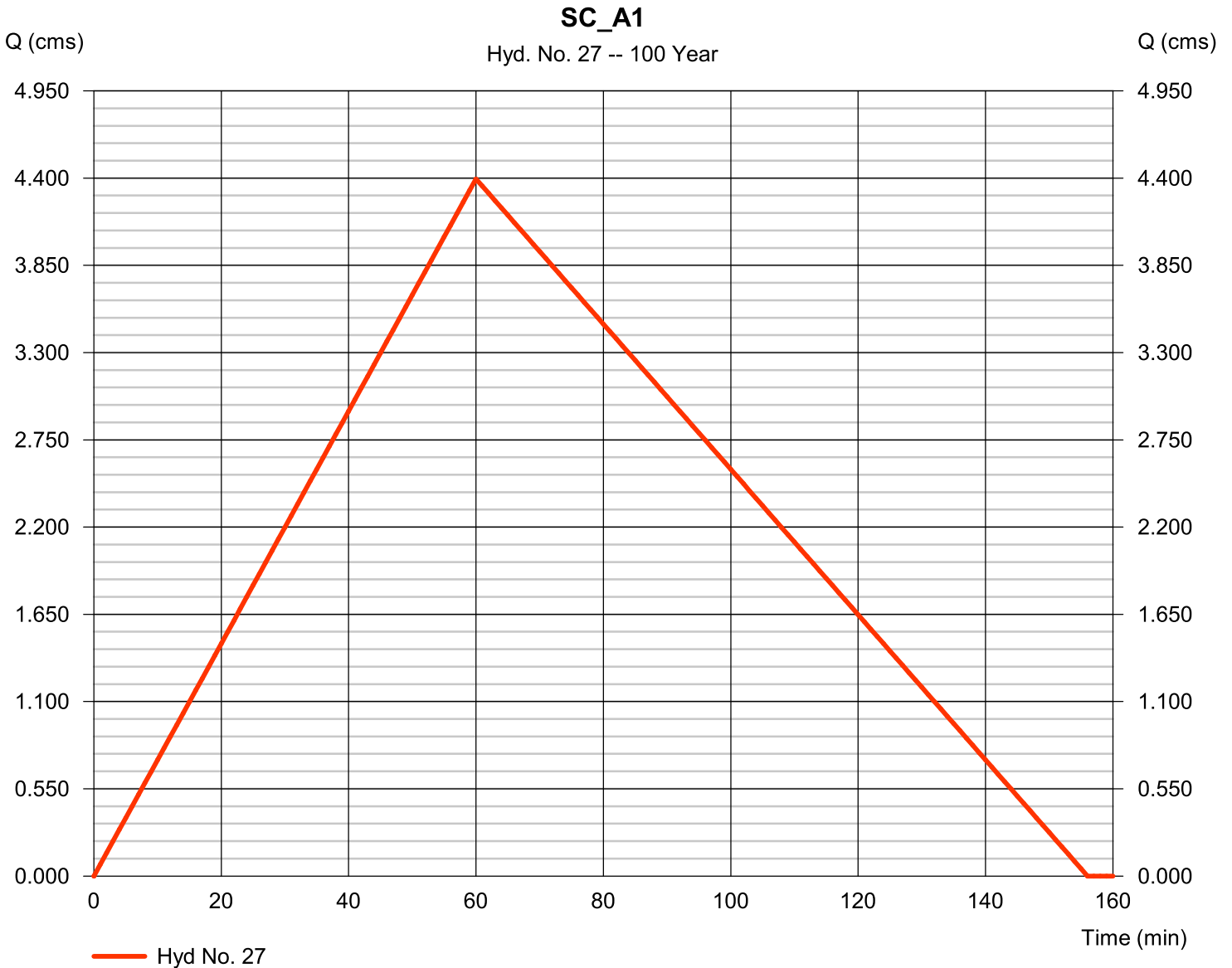
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 27

SC_A1

Hydrograph type	= Rational	Peak discharge	= 4.395 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 20 570.0 cum
Drainage area	= 223.770 hectare	Runoff coeff.	= 0.23
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

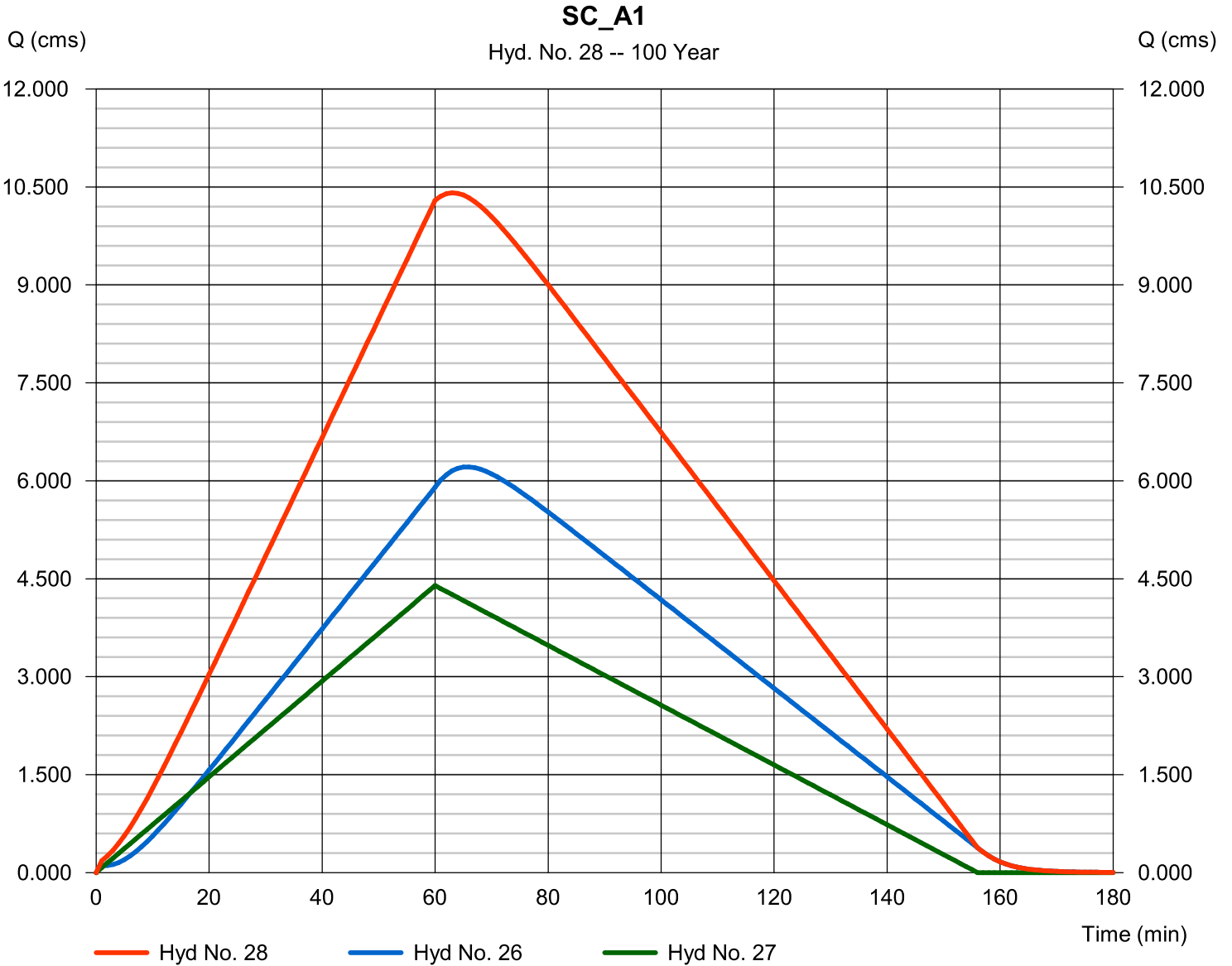
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 28

SC_A1

Hydrograph type	= Combine	Peak discharge	= 10.41 cms
Storm frequency	= 100 yrs	Time to peak	= 63 min
Time interval	= 1 min	Hyd. volume	= 51 076.6 cum
Inflow hyds.	= 26, 27	Contrib. drain. area	= 223.770 hectare



Hydrograph Report

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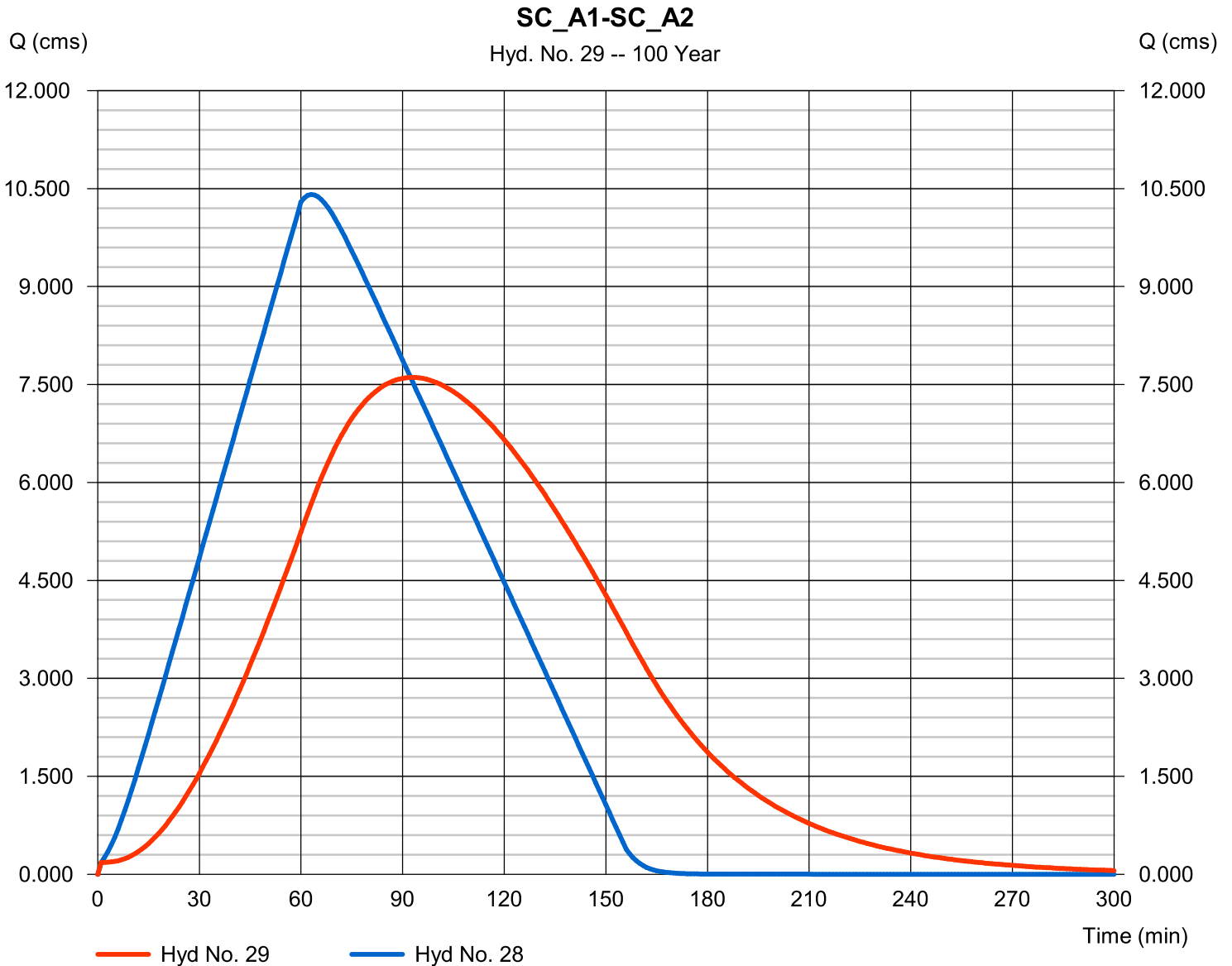
vendredi, avr 6, 2012

Hyd. No. 29

SC_A1-SC_A2

Hydrograph type	= Reach	Peak discharge	= 7.609 cms
Storm frequency	= 100 yrs	Time to peak	= 93 min
Time interval	= 1 min	Hyd. volume	= 51 454.3 cum
Inflow hyd. No.	= 28 - SC_A1	Section type	= Trapezoidal
Reach length	= 1500.0 m	Channel slope	= 0.0 %
Manning's n	= 0.025	Bottom width	= 1.0 m
Side slope	= 1.0:1	Max. depth	= 1.0 m
Rating curve x	= 0.270	Rating curve m	= 1.353
Ave. velocity	= 0.54 m/s	Routing coeff.	= 0.0288

Modified Att-Kin routing method used.



Hydrograph Report

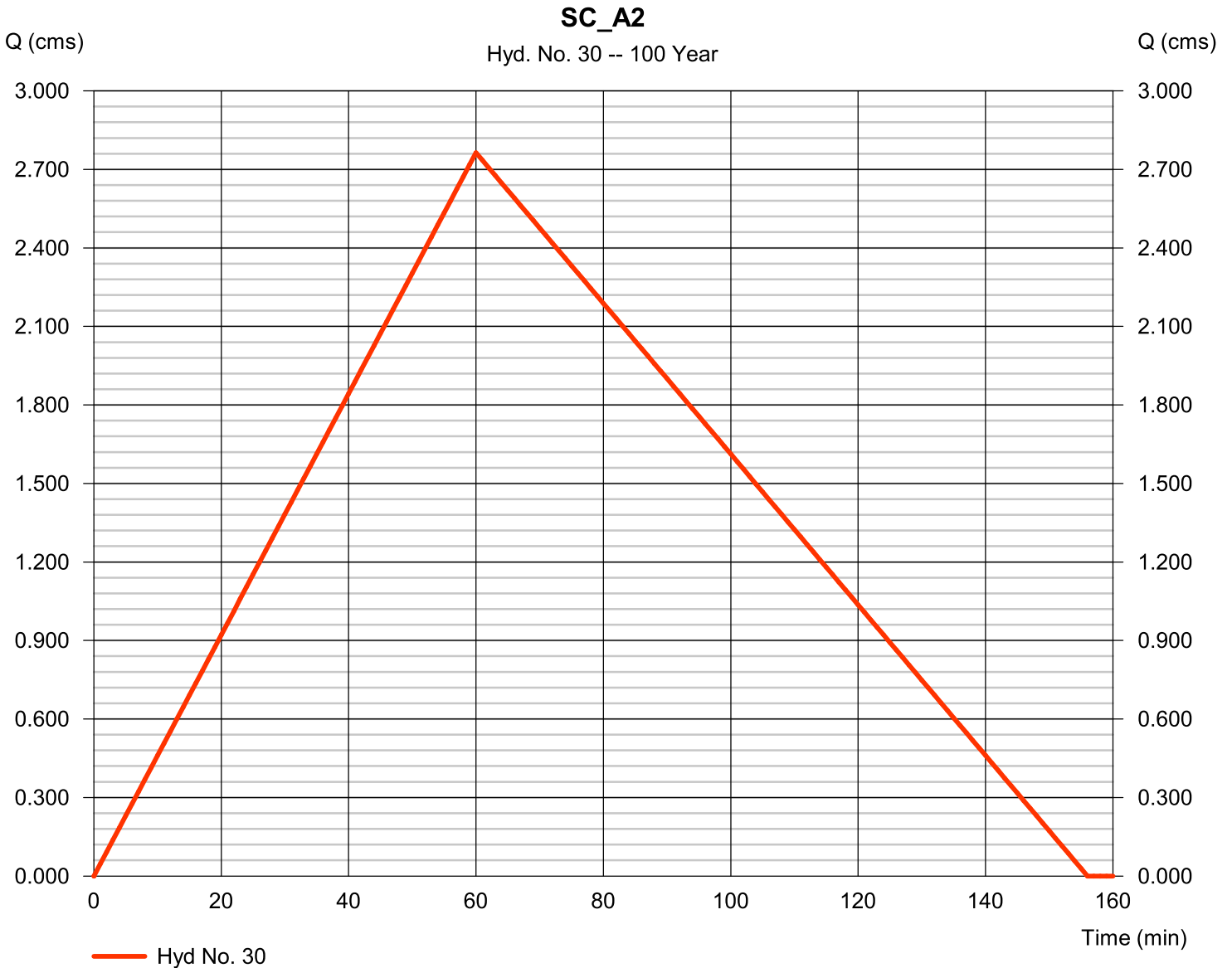
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Hyd. No. 30

SC_A2

Hydrograph type	= Rational	Peak discharge	= 2.764 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 12 934.5 cum
Drainage area	= 170.330 hectare	Runoff coeff.	= 0.19
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

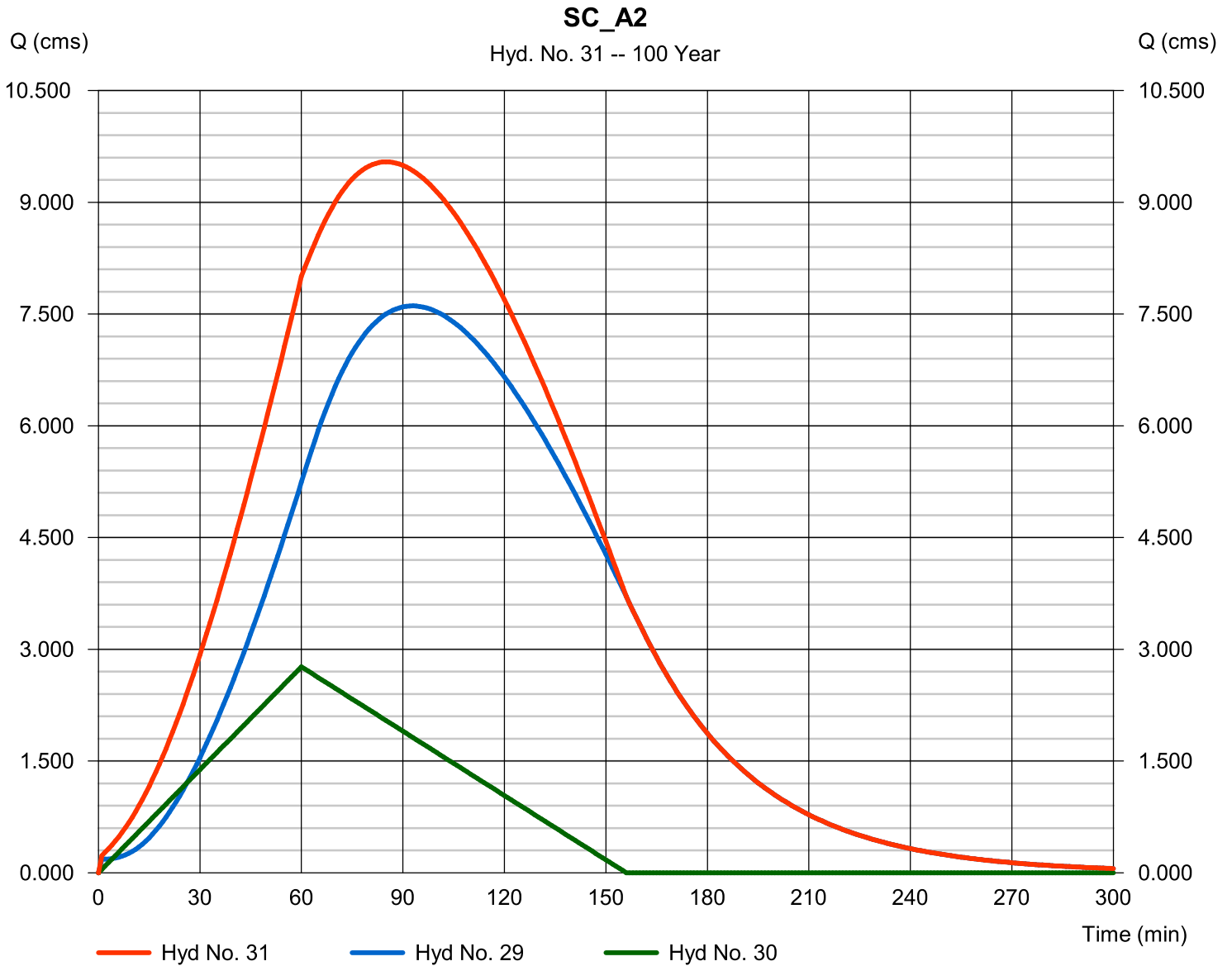
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vendredi, avr 6, 2012

Hyd. No. 31

SC_A2

Hydrograph type	= Combine	Peak discharge	= 9.543 cms
Storm frequency	= 100 yrs	Time to peak	= 85 min
Time interval	= 1 min	Hyd. volume	= 64 388.8 cum
Inflow hyds.	= 29, 30	Contrib. drain. area	= 170.330 hectare



Hydrograph Report

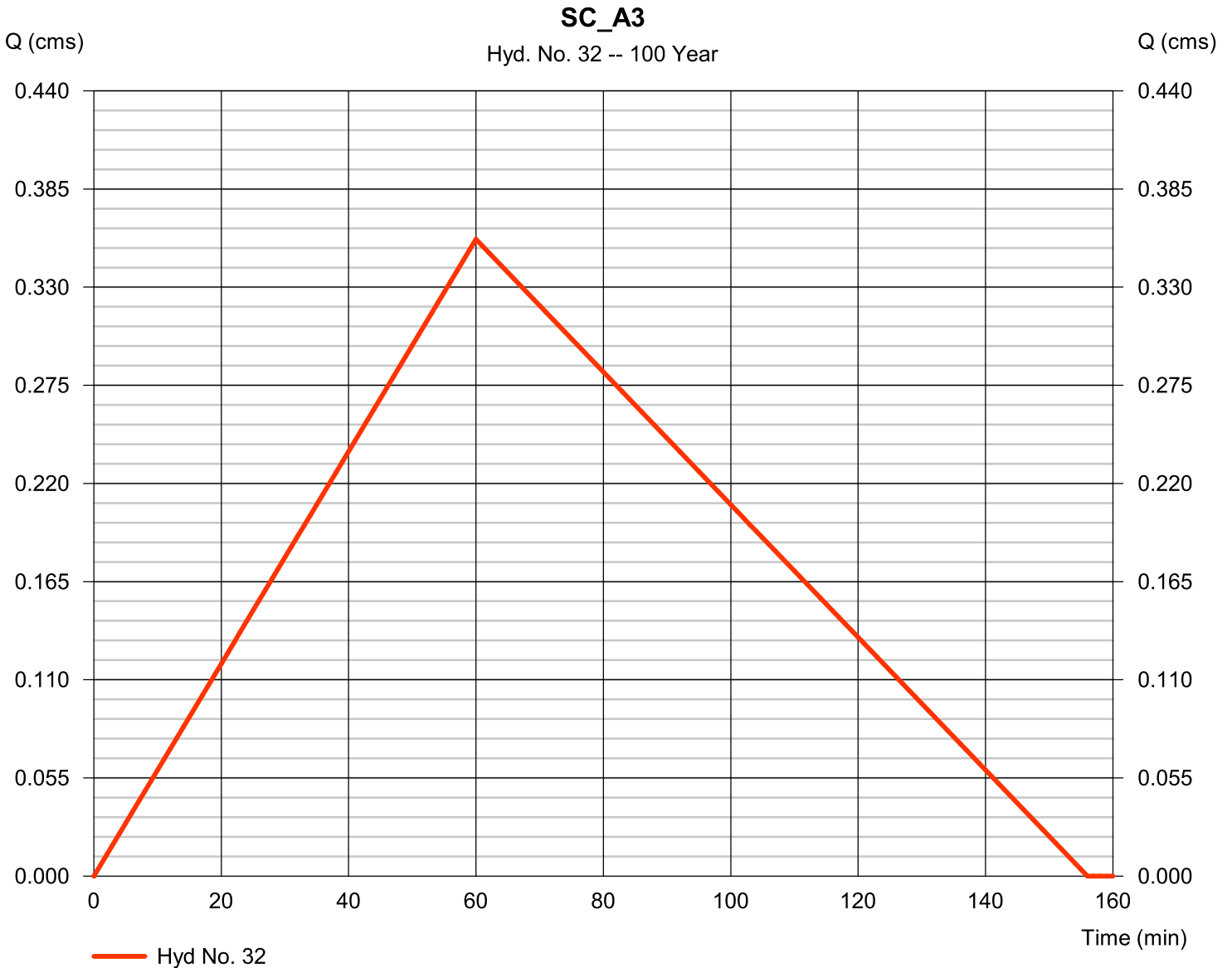
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 32

SC_A3

Hydrograph type	= Rational	Peak discharge	= 0.357 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 669.9 cum
Drainage area	= 21.990 hectare	Runoff coeff.	= 0.19
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

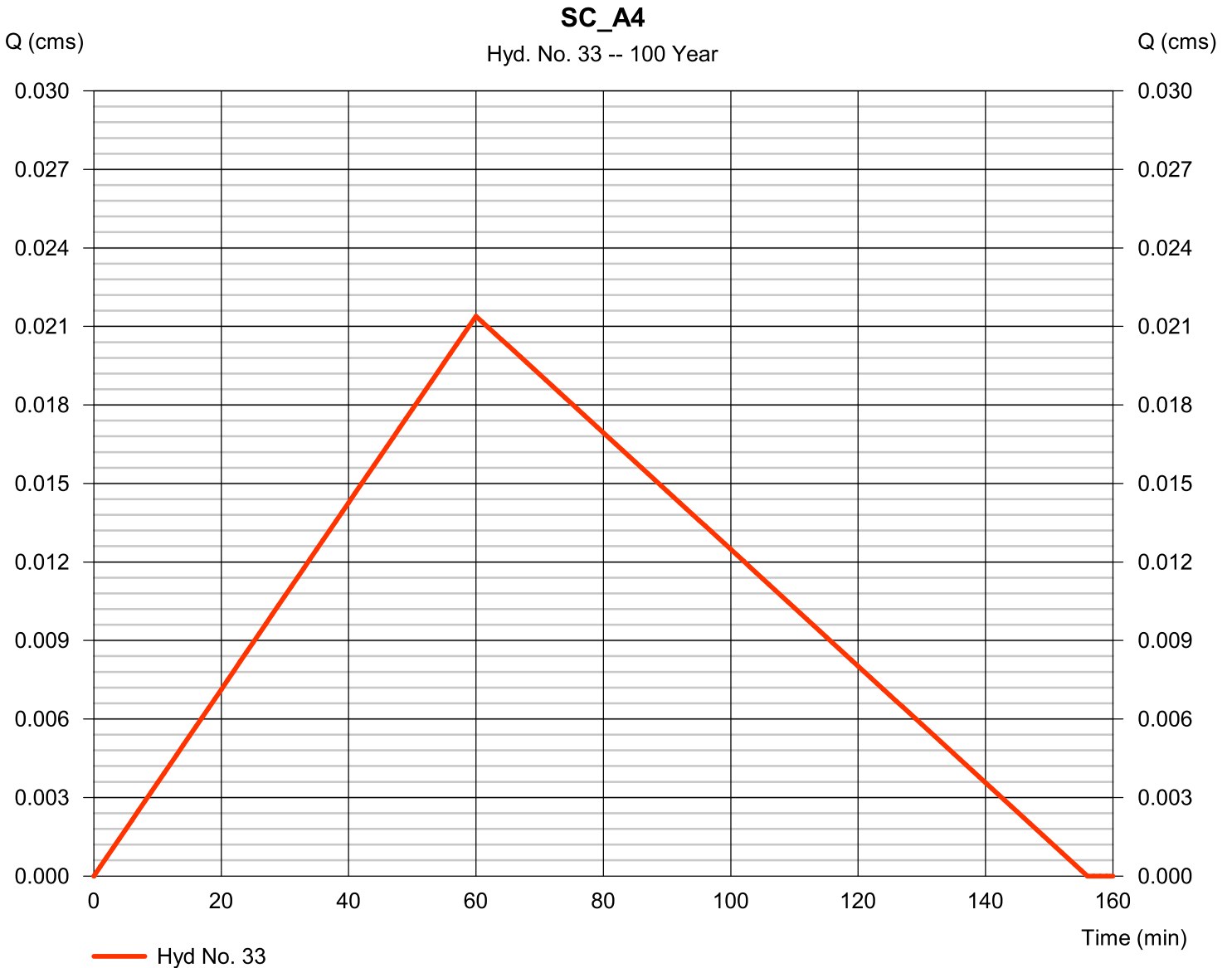
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vendredi, avr 6, 2012

Hyd. No. 33

SC_A4

Hydrograph type	= Rational	Peak discharge	= 0.021 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 100.1 cum
Drainage area	= 1.670 hectare	Runoff coeff.	= 0.15
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

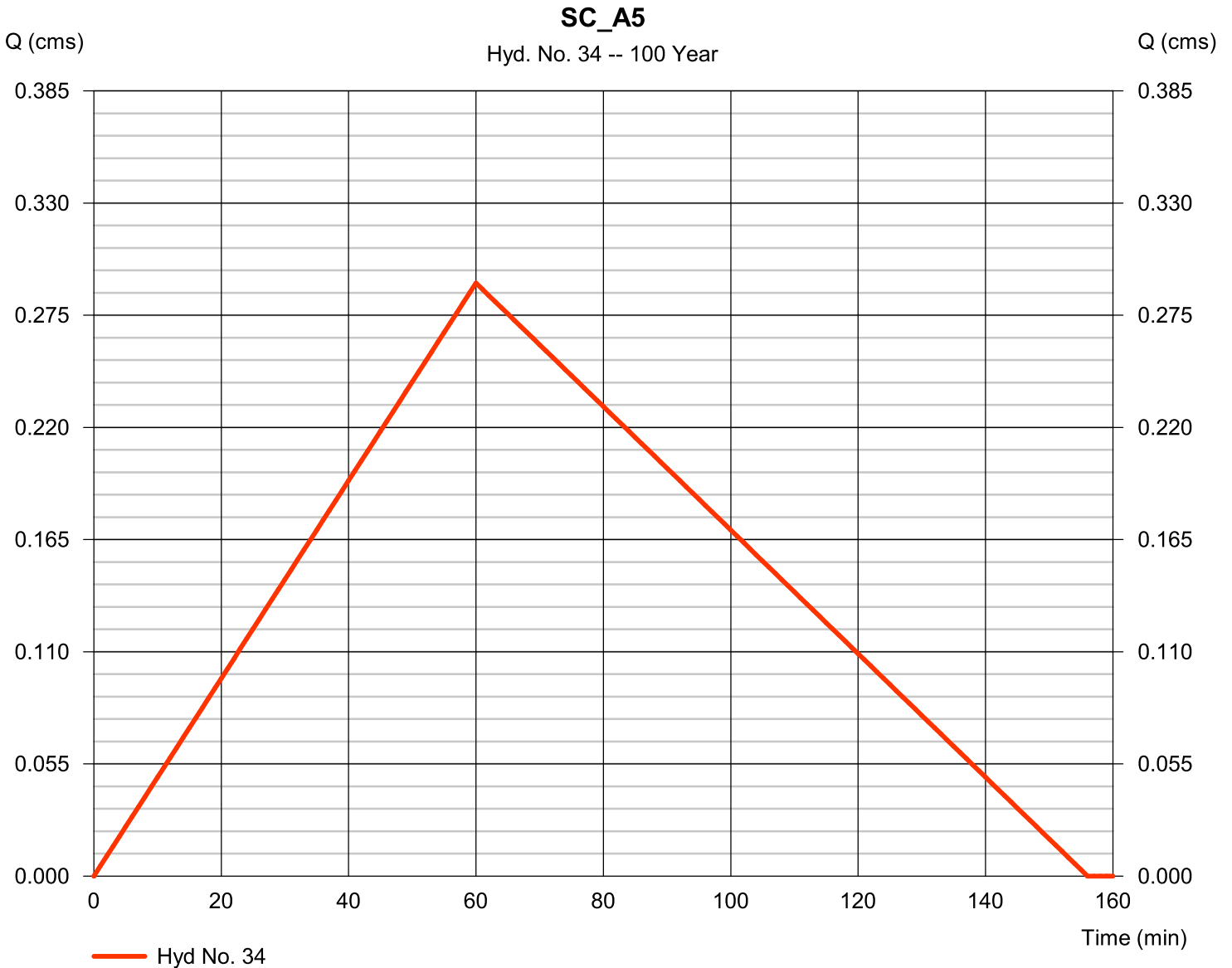
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 34

SC_A5

Hydrograph type	= Rational	Peak discharge	= 0.291 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 1 360.8 cum
Drainage area	= 17.920 hectare	Runoff coeff.	= 0.19
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDF	Asc/Rec limb fact	= 1/1.6



Hydrograph Report

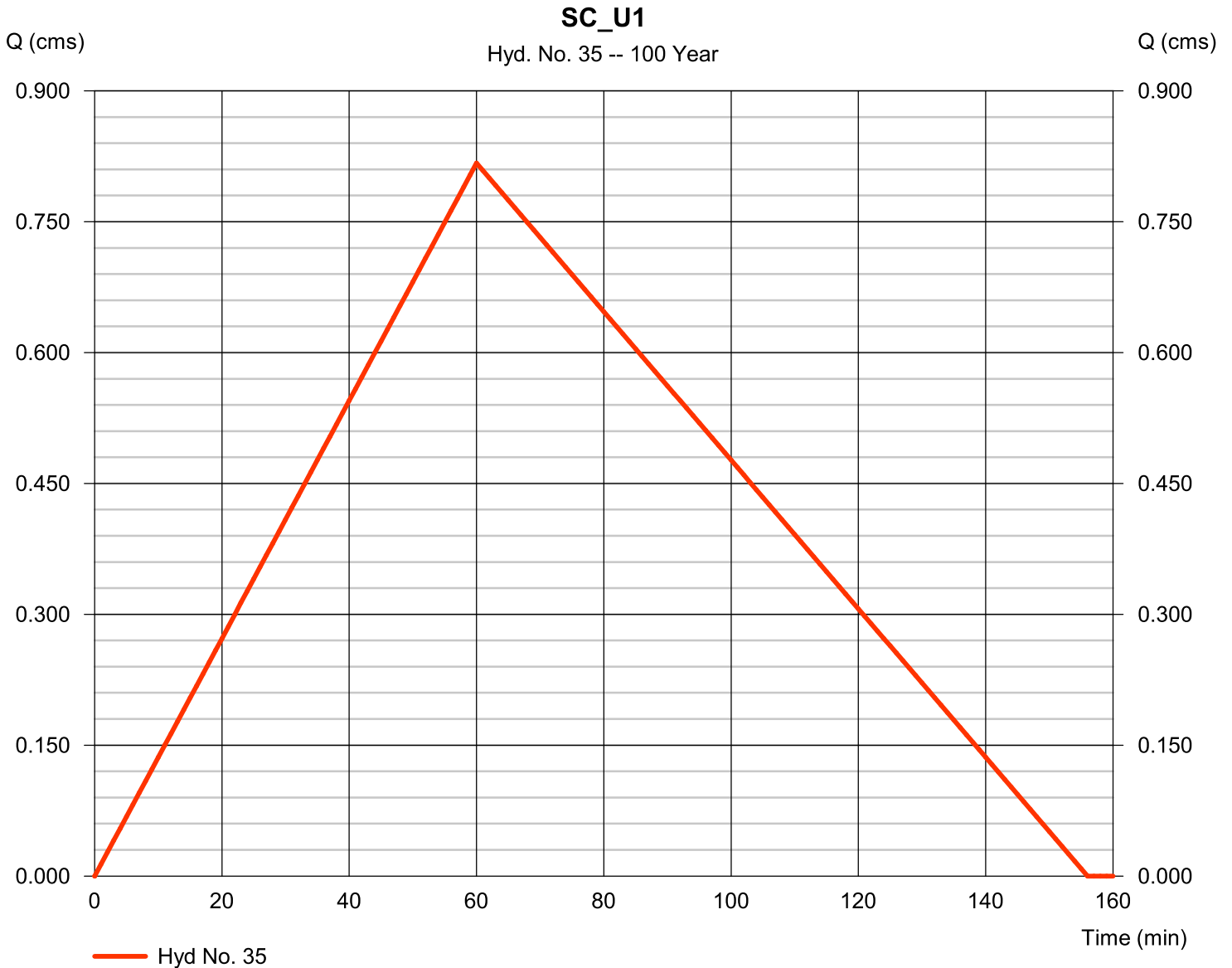
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 35

SC_U1

Hydrograph type	= Rational	Peak discharge	= 0.817 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 3 824.1 cum
Drainage area	= 25.860 hectare	Runoff coeff.	= 0.37
Intensity	= 31.000 mm/hr	Tc by User	= 60.00 min
IDF Curve	= IDF_ALSACE_Strasbourg.IDFAsc/Rec limb fact		= 1/1.6



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

vendredi, avr 6, 2012

Hyd. No. 36

SC_U1

Hydrograph type	= Combine	Peak discharge	= 1.486 cms
Storm frequency	= 100 yrs	Time to peak	= 60 min
Time interval	= 1 min	Hyd. volume	= 6 954.9 cum
Inflow hyds.	= 32, 33, 34, 35	Contrib. drain. area	= 67.440 hectare

