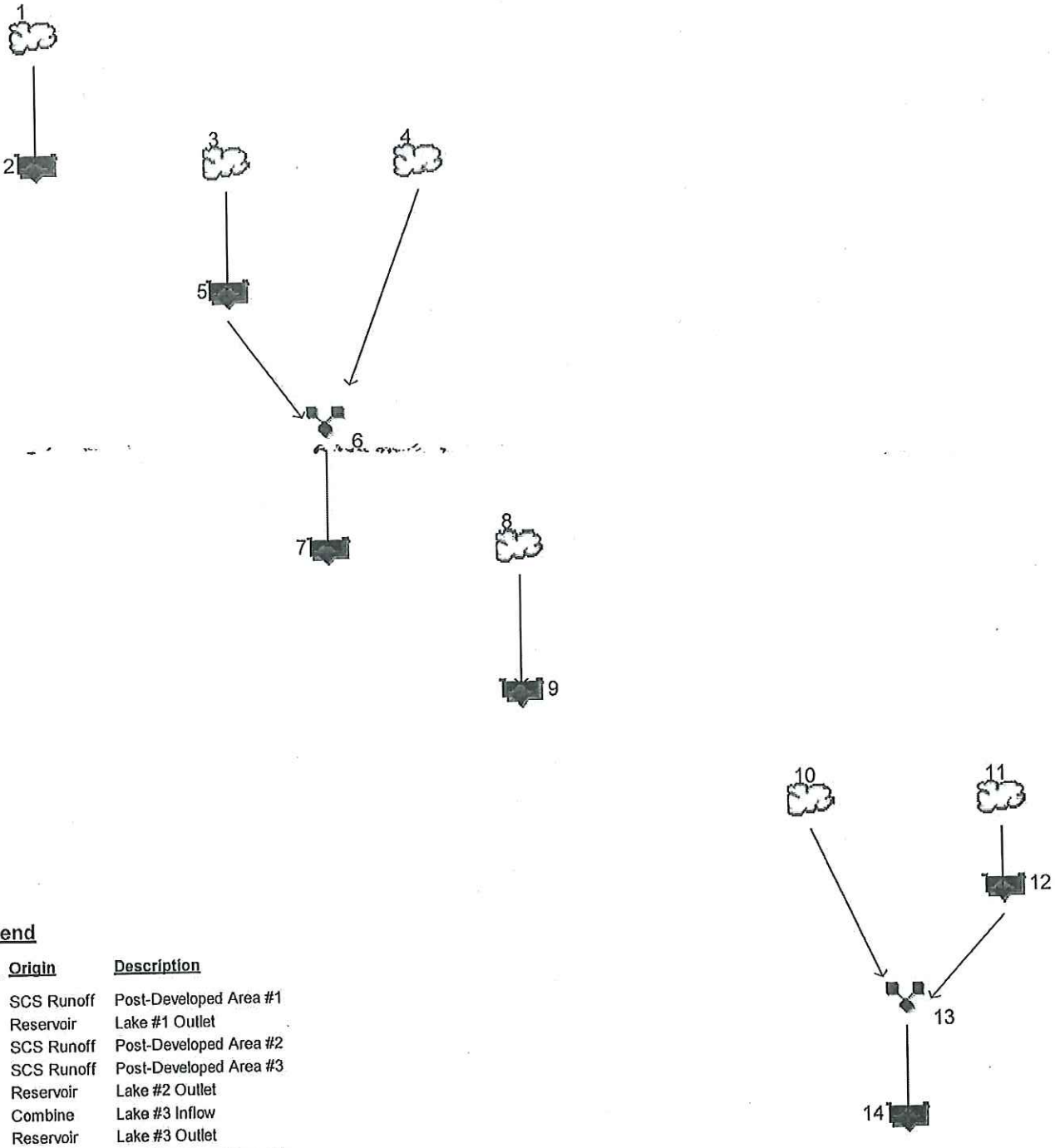
# Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8




## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Post-Developed Area #1 |
| 2 | Reservoir | Lake #1 Outlet |
| 3 | SCS Runoff | Post-Developed Area #2 |
| 4 | SCS Runoff | Post-Developed Area #3 |
| 5 | Reservoir | Lake #2 Outlet |
| 6 | Combine | Lake #3 Inflow |
| 7 | Reservoir | Lake #3 Outlet |
| 8 | SCS Runoff | Post-Developed Area #4 |
| 9 | Reservoir | Lake #4 Outflow |
| 10 | SCS Runoff | Post-Developed Area #5 |
| 11 | SCS Runoff | Offsite Miami University VOA |
| 12 | Reservoir | Offsite MU Basin |
| 13 | Combine | Basin 5 Inflow |
| 14 | Reservoir | Basin 5 Outflow |

Project: Post-Developed.gpw

Monday, Apr 16, 2012

# Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

| Hyd. No. | Hydrograph type (origin) | Inflow hyd(s) | Peak Outflow (cfs) | | | | | | | | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr | |
| 1 | SCS Runoff | ------ | 16.03 | 25.44 | ------- | 37.65 | 47.96 | 63.32 | 77.13 | 93.46 | Post-Developed Area #1 |
| 2 | Reservoir | 1 | 0.799 | 1.238 | ------- | 1.898 | 2.520 | 3.483 | 4.406 | 5.578 | Lake #1 Outlet |
| 3 | SCS Runoff | ------ | 5.994 | 11.72 | ------- | 19.62 | 26.50 | 36.95 | 46.74 | 58.58 | Post-Developed Area #2 |
| 4 | SCS Runoff | ------ | 9.025 | 23.54 | ------- | 46.94 | 68.38 | 101.81 | 133.26 | 171.82 | Post-Developed Area #3 |
| 5 | Reservoir | 3 | 0.196 | 0.315 | ------- | 0.504 | 0.689 | 1.001 | 1.395 | 3.098 | Lake #2 Outlet |
| 6 | Combine | 4, 5 | 9.083 | 23.65 | ------- | 47.10 | 68.60 | 102.13 | 133.70 | 172.44 | Lake #3 Inflow |
| 7 | Reservoir | 6 | 0.343 | 0.620 | ------- | 1.092 | 1.564 | 2.354 | 3.157 | 5.566 | Lake #3 Outlet |
| 8 | SCS Runoff | ------ | 16.74 | 26.16 | ------- | 38.45 | 48.83 | 64.13 | 77.85 | 94.05 | Post-Developed Area #4 |
| 9 | Reservoir | 8 | 0.293 | 0.470 | ------- | 0.729 | 0.975 | 1.378 | 1.852 | 3.606 | Lake #4 Outflow |
| 10 | SCS Runoff | ------ | 32.99 | 56.13 | ------- | 86.85 | 113.03 | 152.35 | 188.38 | 231.37 | Post-Developed Area #5 |
| 11 | SCS Runoff | ------ | 20.89 | 27.84 | ------- | 36.16 | 42.76 | 52.13 | 60.27 | 69.69 | Offsite Miami University VOA |
| 12 | Reservoir | 11 | 4.183 | 4.903 | ------- | 9.299 | 15.66 | 20.40 | 22.70 | 24.97 | Offsite MU Basin |
| 13 | Combine | 10, 12 | 37.00 | 60.81 | ------- | 93.90 | 127.27 | 172.21 | 210.21 | 255.41 | Basin 5 Inflow |
| 14 | Reservoir | 13 | 0.355 | 0.605 | ------- | 0.985 | 1.348 | 1.925 | 4.553 | 9.071 | Basin 5 Outflow |

Proj. file: Post-Developed.gpw

Monday, Apr 16, 2012

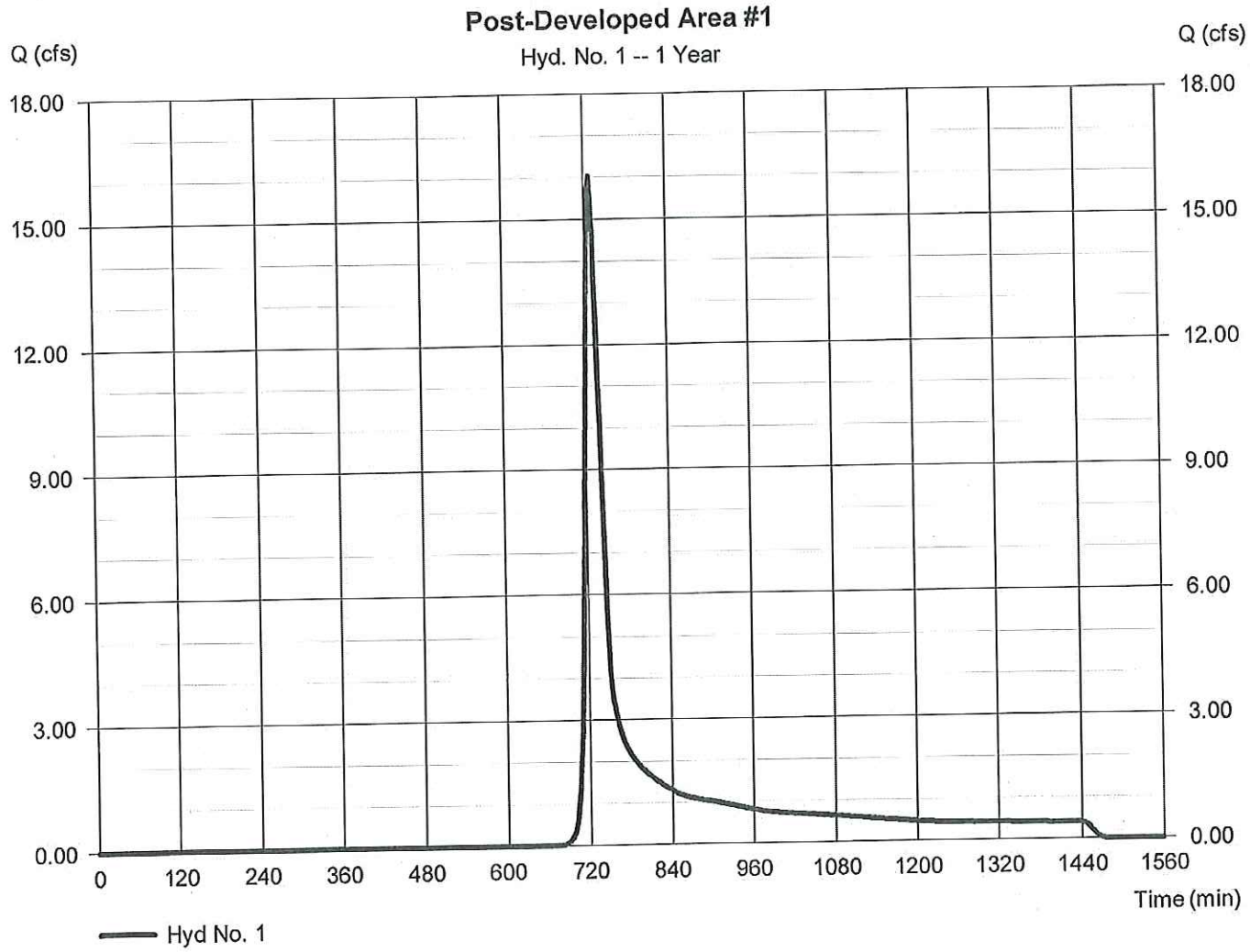
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 16.03 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 60,245 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 2.33 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

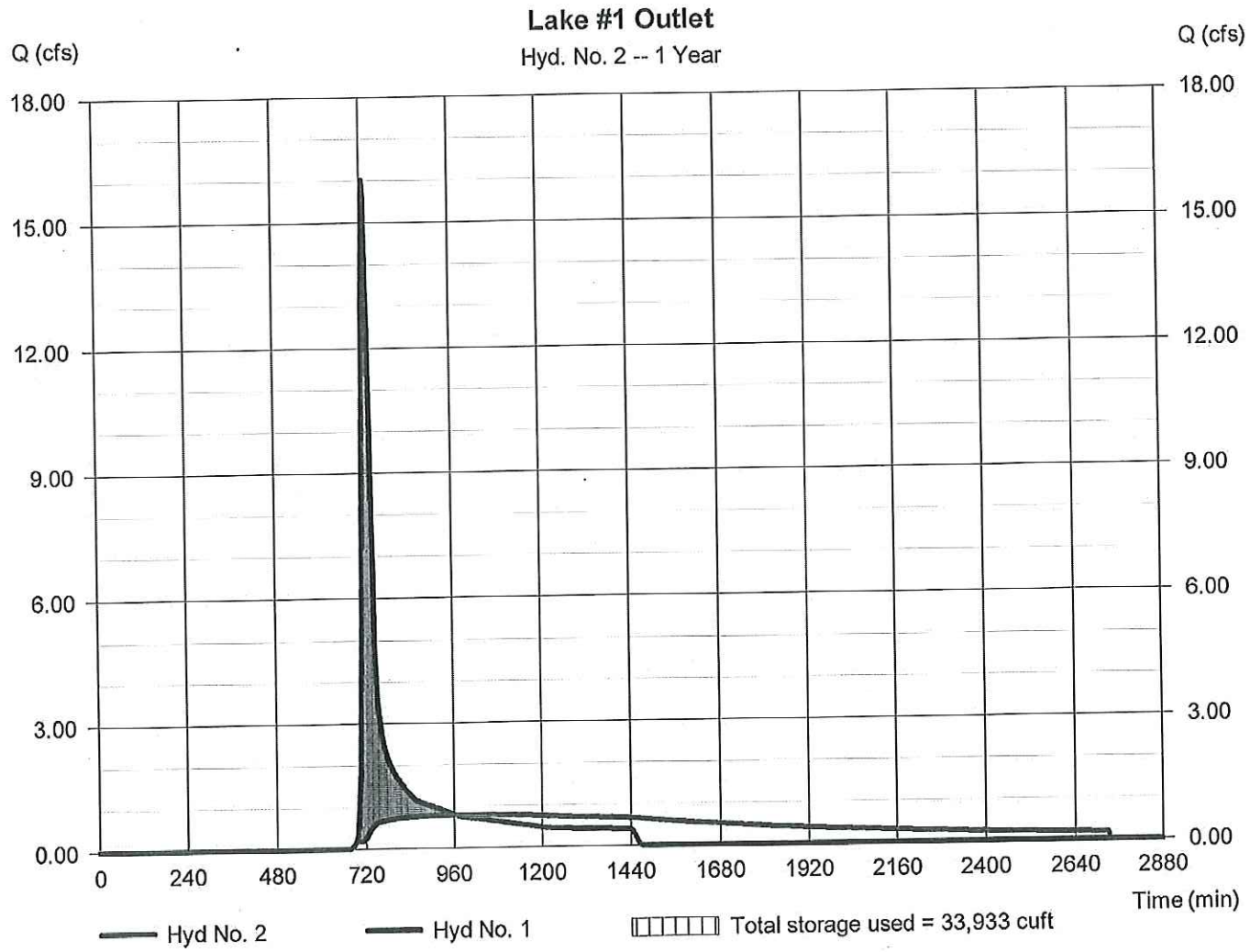
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.799 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 964 min |
| Time interval | = 2 min | Hyd. volume | = 60,252 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 885.16 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 33,933 cuft |

Storage Indication method used.



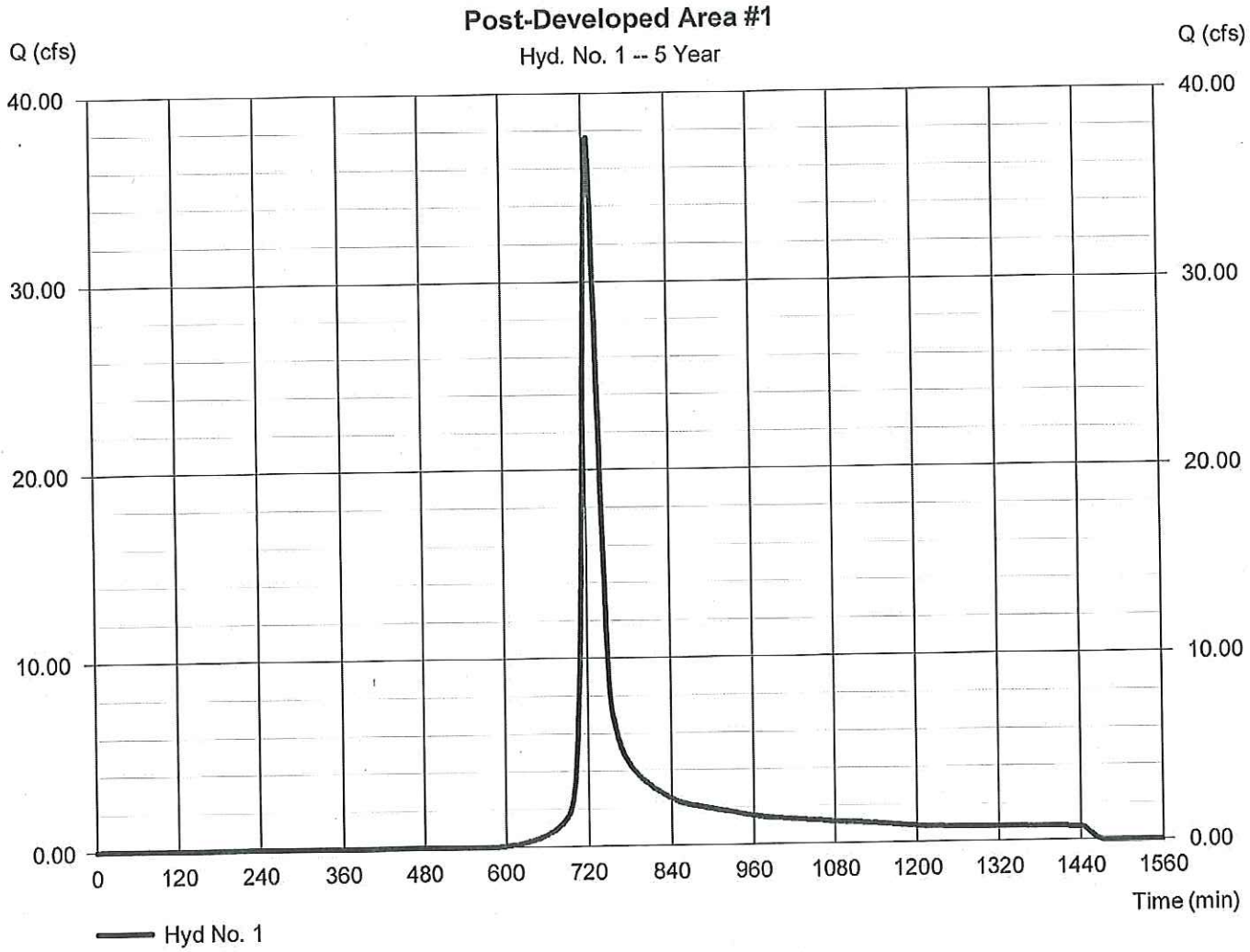
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 37.65 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 132,548 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 3.49 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

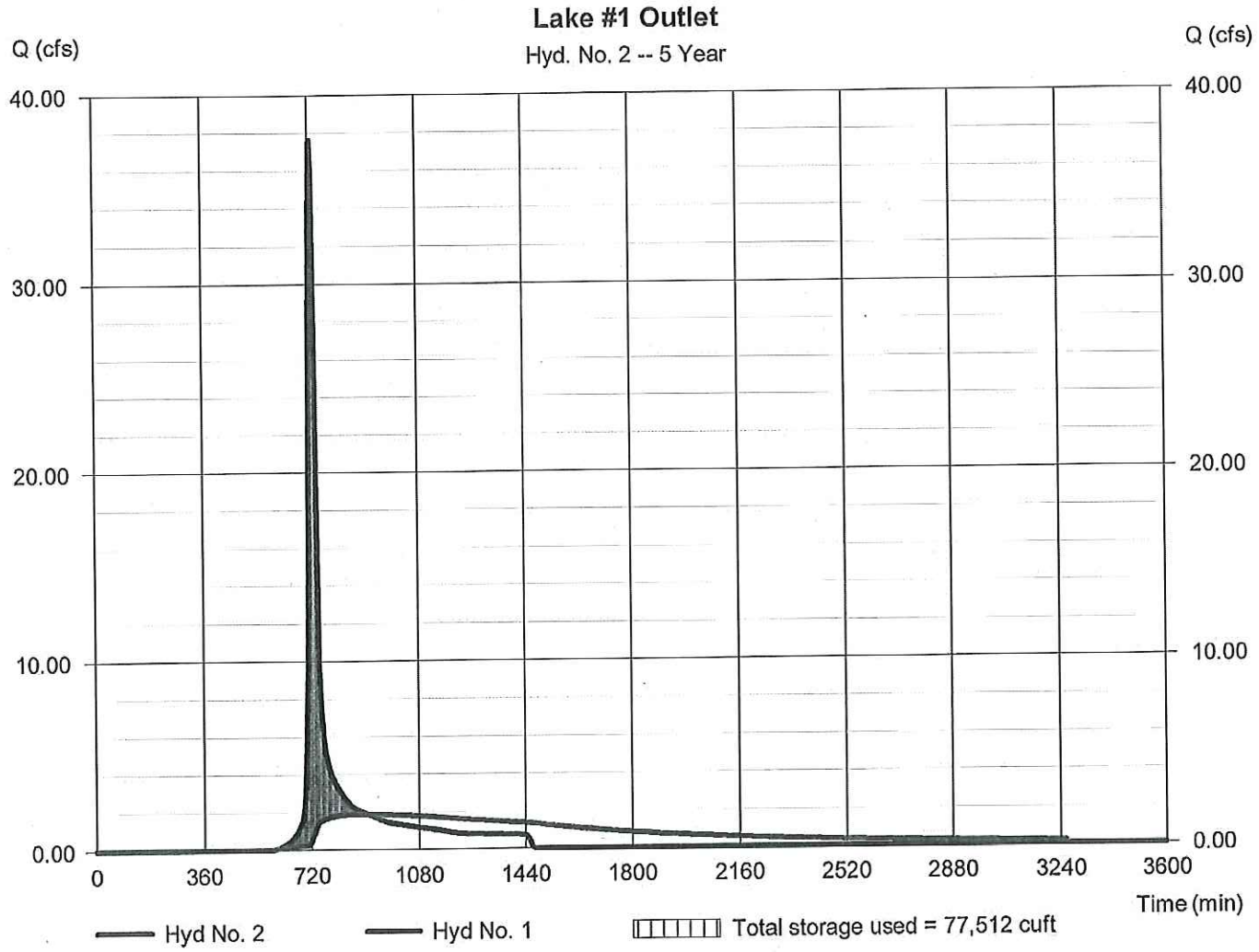
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.898 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 908 min |
| Time interval | = 2 min | Hyd. volume | = 132,557 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 885.67 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 77,512 cuft |

Storage Indication method used.



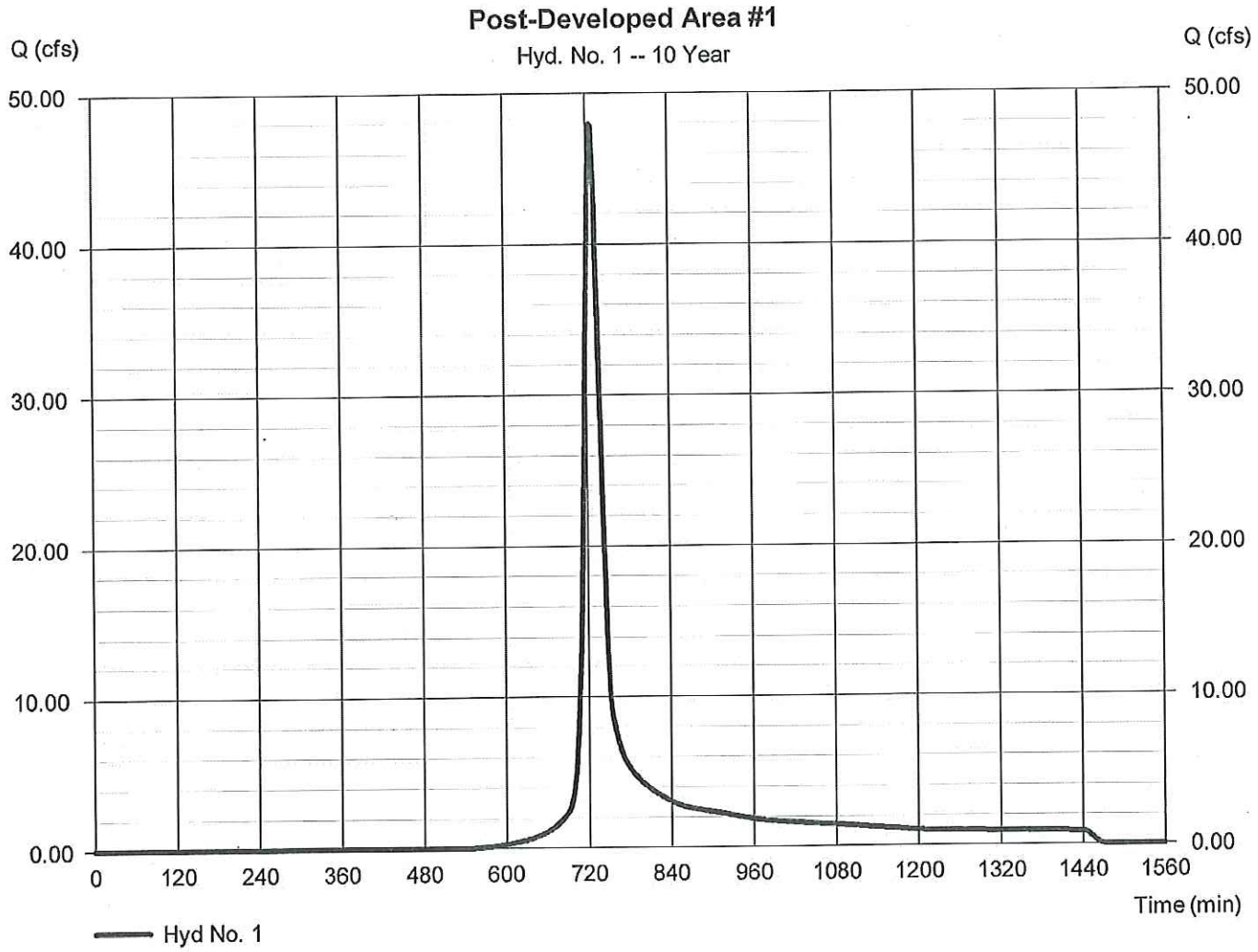
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 47.96 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 167,346 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 3.99 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

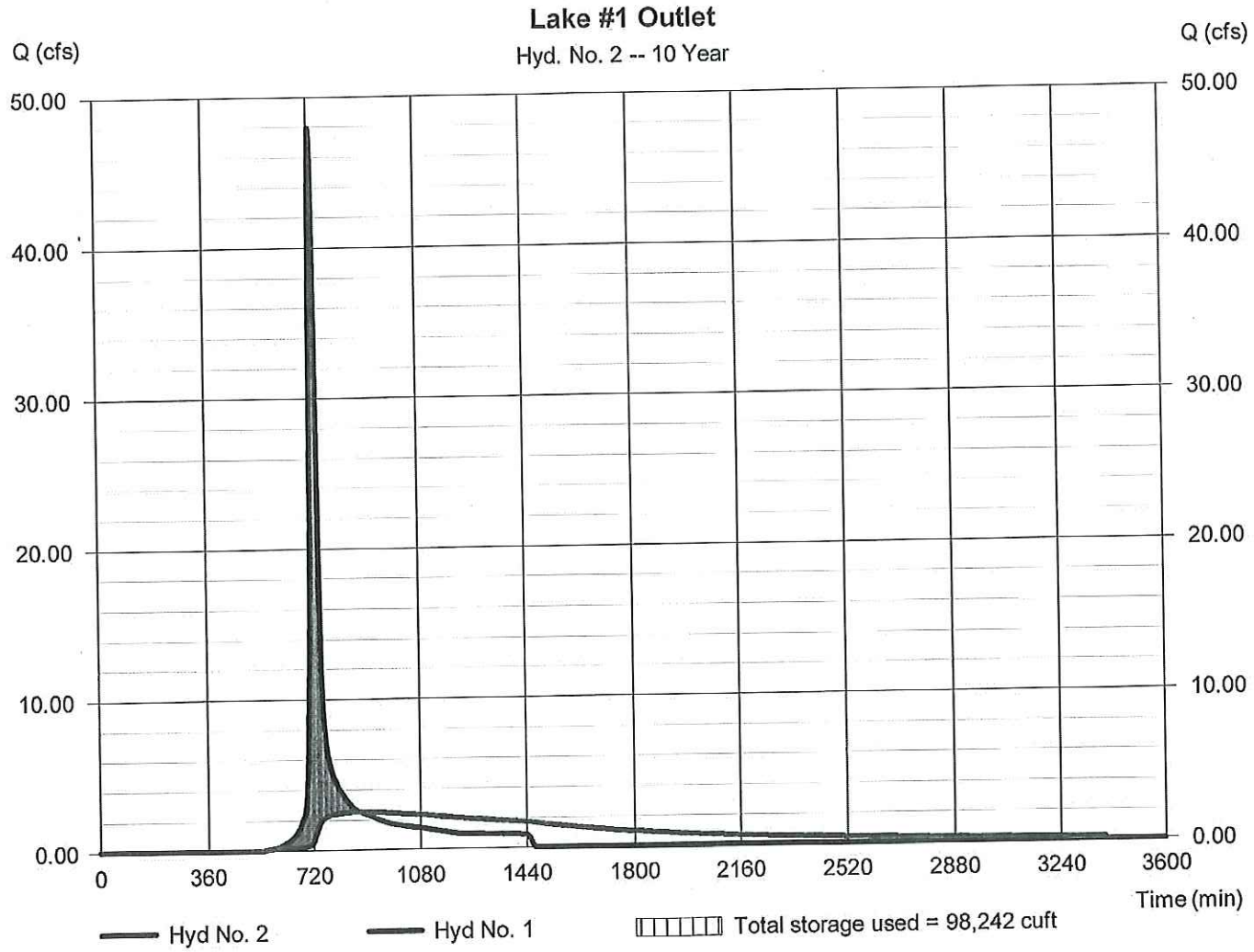
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 2.520 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 880 min |
| Time interval | = 2 min | Hyd. volume | = 167,354 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 885.91 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 98,242 cuft |

Storage Indication method used.



# Hydrograph Report

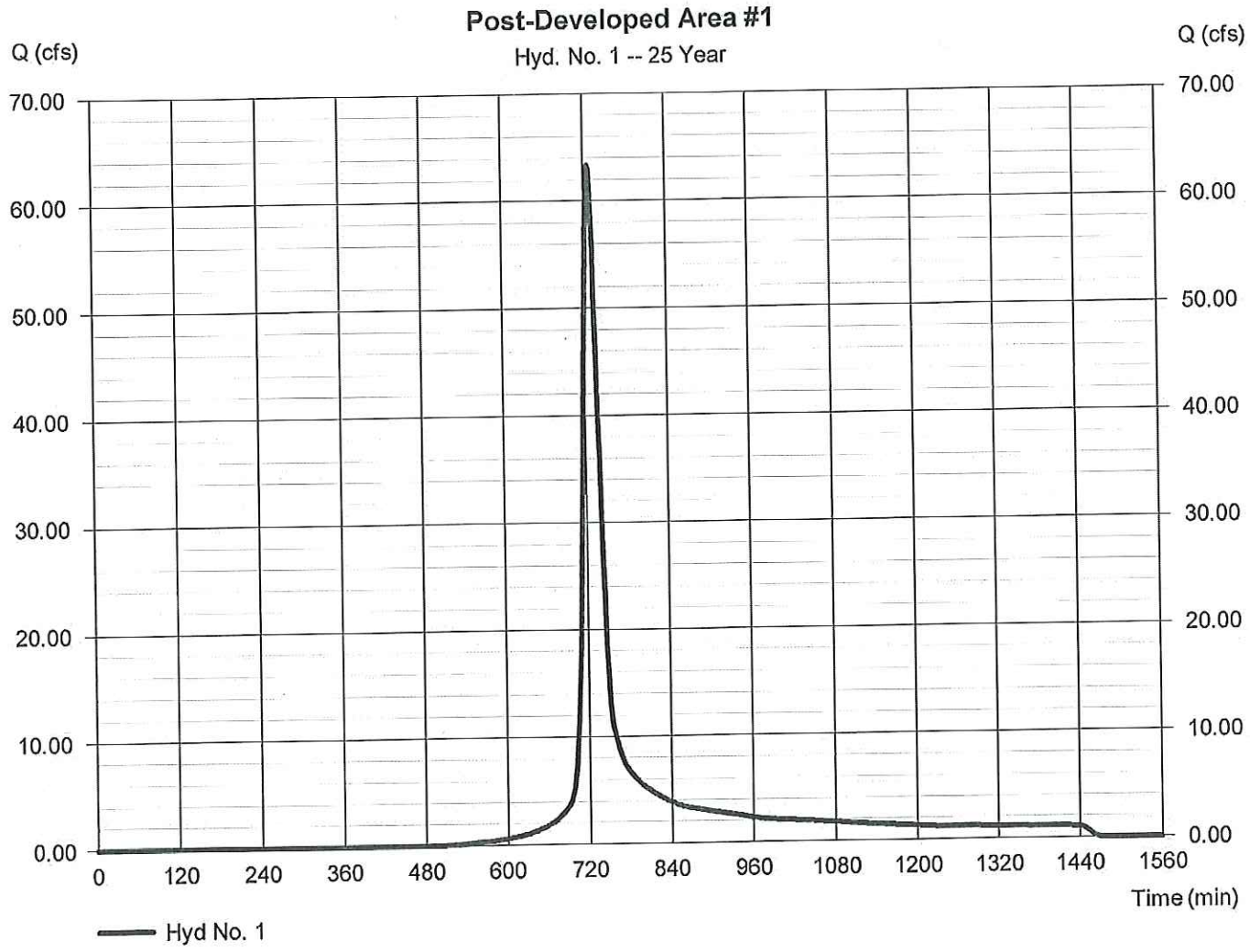
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 63.32 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 219,243 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 4.70 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

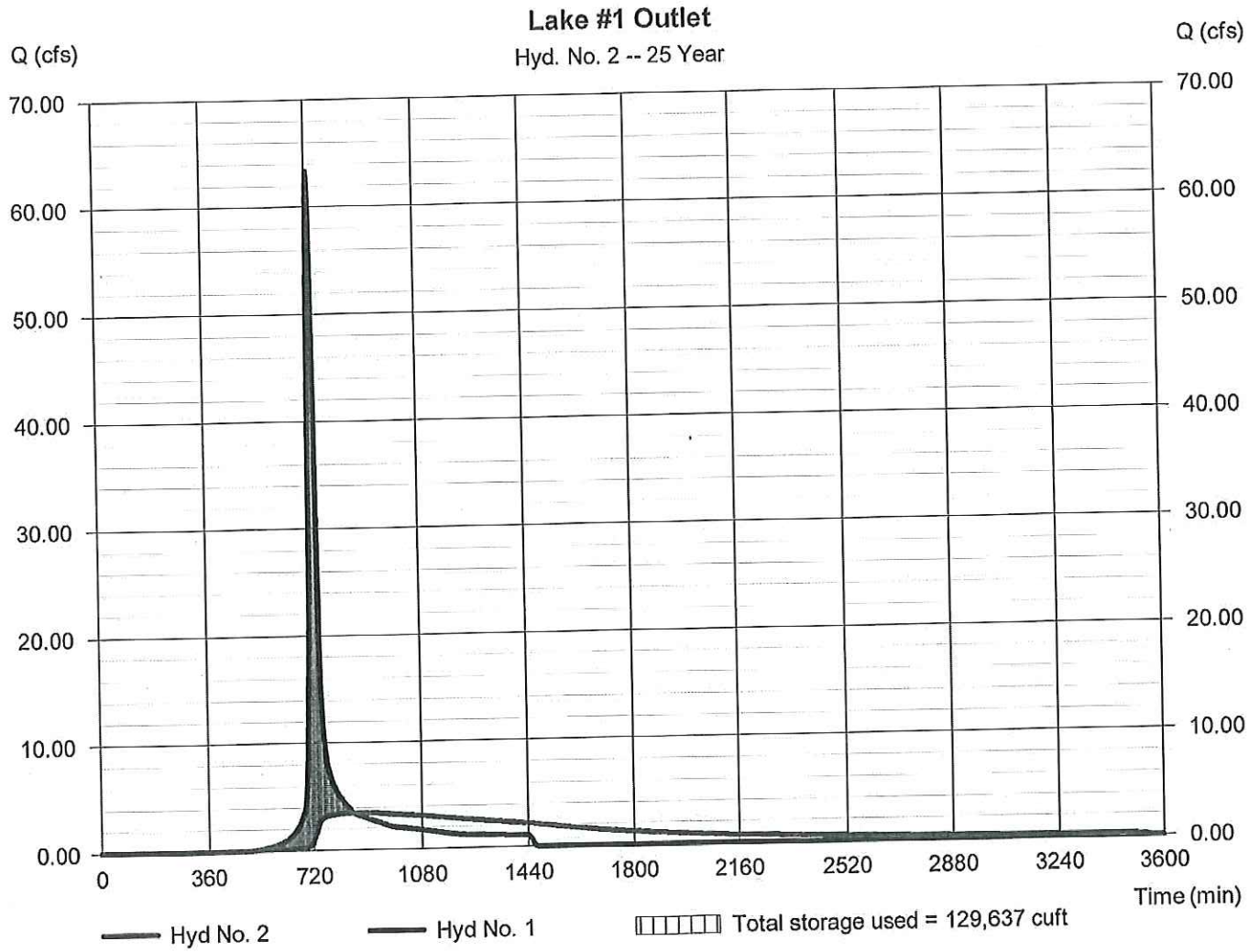
Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 3.483 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 856 min |
| Time interval | = 2 min | Hyd. volume | = 219,246 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 886.27 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 129,637 cuft |

Storage Indication method used.



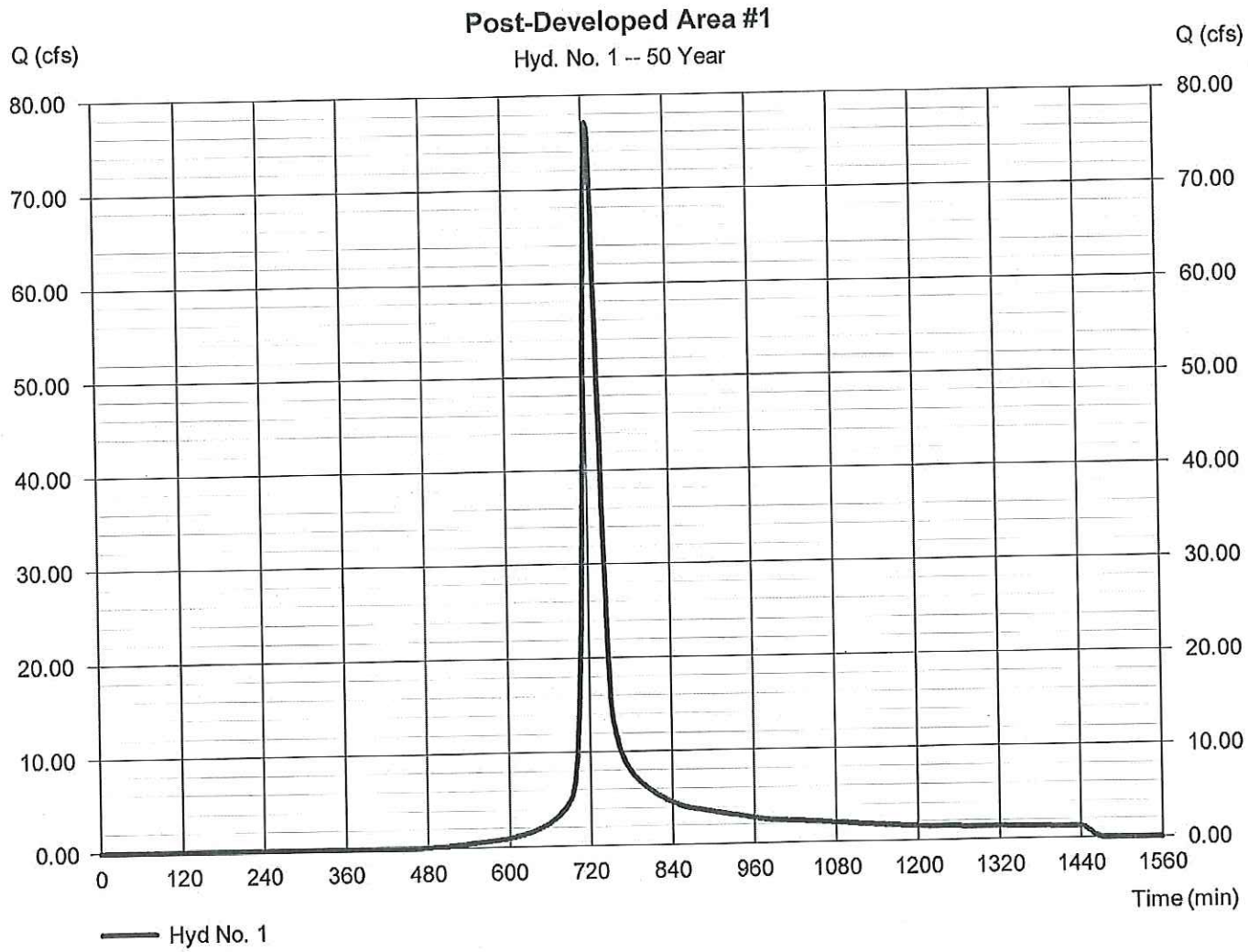
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 77.13 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 266,372 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 5.32 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

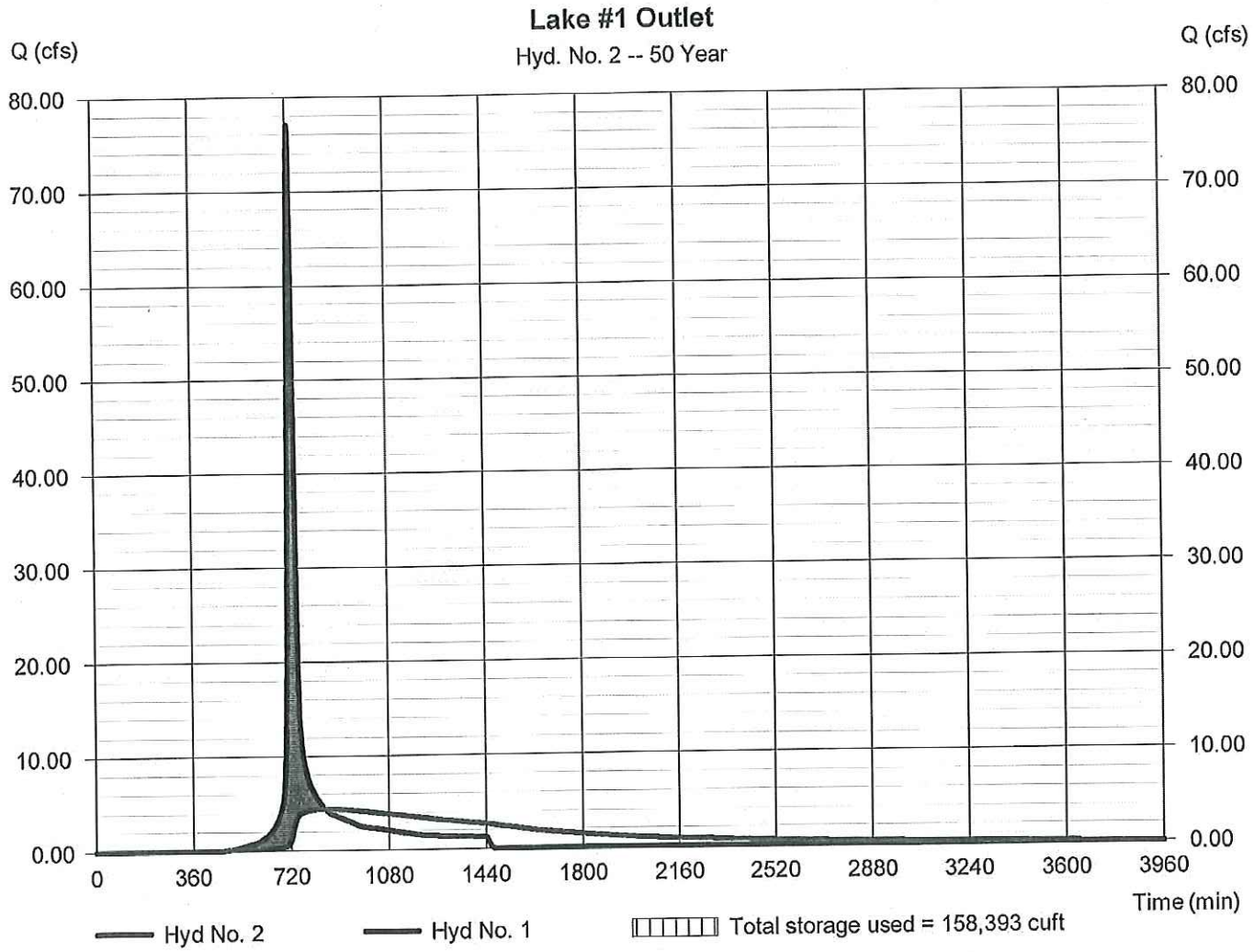
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 4.406 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 844 min |
| Time interval | = 2 min | Hyd. volume | = 266,379 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 886.59 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 158,393 cuft |

Storage Indication method used.



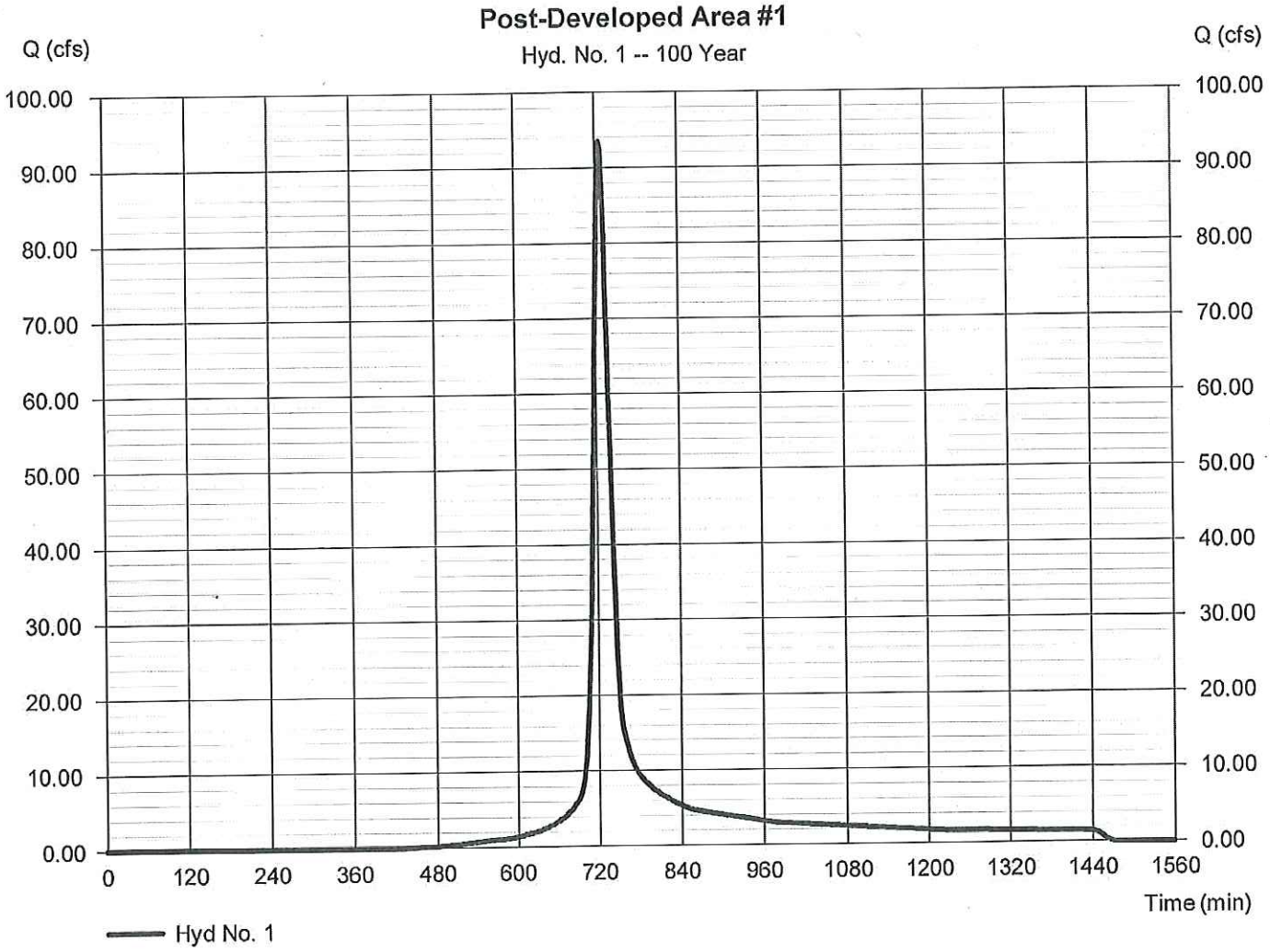
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 1

Post-Developed Area #1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 93.46 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 322,698 cuft |
| Drainage area | = 24.300 ac | Curve number | = 77.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 20.50 min |
| Total precip. | = 6.04 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

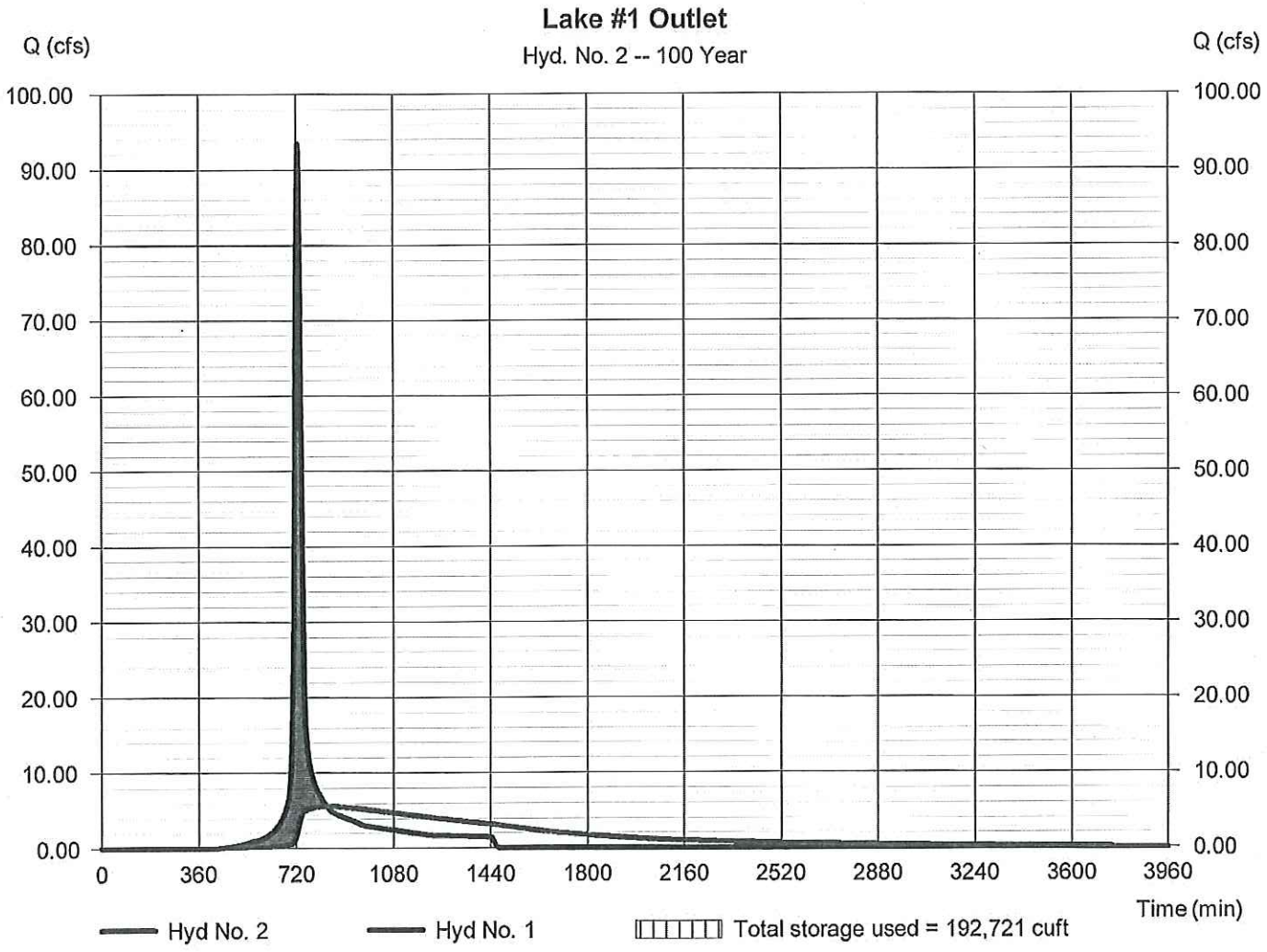
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 2

Lake #1 Outlet

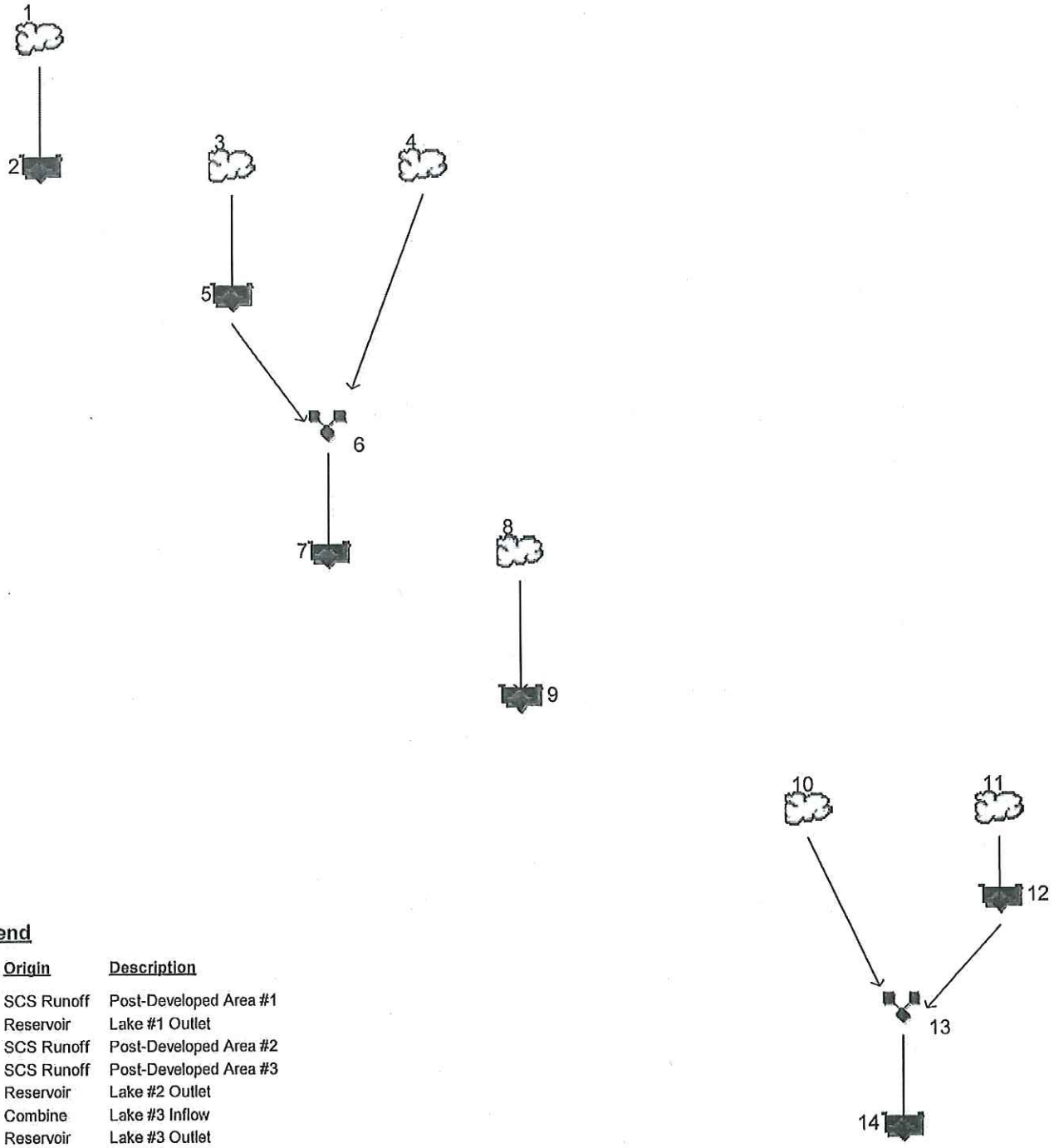
| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 5.578 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 836 min |
| Time interval | = 2 min | Hyd. volume | = 322,702 cuft |
| Inflow hyd. No. | = 1 - Post-Developed Area #1 | Max. Elevation | = 886.97 ft |
| Reservoir name | = Lake #1 | Max. Storage | = 192,721 cuft |

Storage Indication method used.



# Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8




**Legend**

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Post-Developed Area #1 |
| 2 | Reservoir | Lake #1 Outlet |
| 3 | SCS Runoff | Post-Developed Area #2 |
| 4 | SCS Runoff | Post-Developed Area #3 |
| 5 | Reservoir | Lake #2 Outlet |
| 6 | Combine | Lake #3 Inflow |
| 7 | Reservoir | Lake #3 Outlet |
| 8 | SCS Runoff | Post-Developed Area #4 |
| 9 | Reservoir | Lake #4 Outflow |
| 10 | SCS Runoff | Post-Developed Area #5 |
| 11 | SCS Runoff | Offsite Miami University VOA |
| 12 | Reservoir | Offsite MU Basin |
| 13 | Combine | Basin 5 Inflow |
| 14 | Reservoir | Basin 5 Outflow |

Project: Post-Developed.gpw | Monday, Apr 16, 2012

# Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

| Hyd. No. | Hydrograph type (origin) | Inflow hyd(s) | Peak Outflow (cfs) | | | | | | | | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr | |
| 1 | SCS Runoff | ------ | 16.03 | 25.44 | ------- | 37.65 | 47.96 | 63.32 | 77.13 | 93.46 | Post-Developed Area #1 |
| 2 | Reservoir | 1 | 0.799 | 1.238 | ------- | 1.898 | 2.520 | 3.483 | 4.406 | 5.578 | Lake #1 Outlet |
| 3 | SCS Runoff | ------ | 5.994 | 11.72 | ------- | 19.62 | 26.50 | 36.95 | 46.74 | 58.58 | Post-Developed Area #2 |
| 4 | SCS Runoff | ------ | 9.025 | 23.54 | ------- | 46.94 | 68.38 | 101.81 | 133.26 | 171.82 | Post-Developed Area #3 |
| 5 | Reservoir | 3 | 0.196 | 0.315 | ------- | 0.504 | 0.689 | 1.001 | 1.395 | 3.098 | Lake #2 Outlet |
| 6 | Combine | 4, 5 | 9.083 | 23.65 | ------- | 47.10 | 68.60 | 102.13 | 133.70 | 172.44 | Lake #3 Inflow |
| 7 | Reservoir | 6 | 0.343 | 0.620 | ------- | 1.092 | 1.564 | 2.354 | 3.157 | 5.566 | Lake #3 Outlet |
| 8 | SCS Runoff | ------ | 16.74 | 26.16 | ------- | 38.45 | 48.83 | 64.13 | 77.85 | 94.05 | Post-Developed Area #4 |
| 9 | Reservoir | 8 | 0.293 | 0.470 | ------- | 0.729 | 0.975 | 1.378 | 1.852 | 3.606 | Lake #4 Outflow |
| 10 | SCS Runoff | ------ | 32.99 | 56.13 | ------- | 86.85 | 113.03 | 152.35 | 188.38 | 231.37 | Post-Developed Area #5 |
| 11 | SCS Runoff | ------ | 20.89 | 27.84 | ------- | 36.16 | 42.76 | 52.13 | 60.27 | 69.69 | Offsite Miami University VOA |
| 12 | Reservoir | 11 | 4.183 | 4.903 | ------- | 9.299 | 15.66 | 20.40 | 22.70 | 24.97 | Offsite MU Basin |
| 13 | Combine | 10, 12 | 37.00 | 60.81 | ------- | 93.90 | 127.27 | 172.21 | 210.21 | 255.41 | Basin 5 Inflow |
| 14 | Reservoir | 13 | 0.355 | 0.605 | ------- | 0.985 | 1.348 | 1.925 | 4.553 | 9.071 | Basin 5 Outflow |

Proj. file: Post-Developed.gpw

Monday, Apr 16, 2012

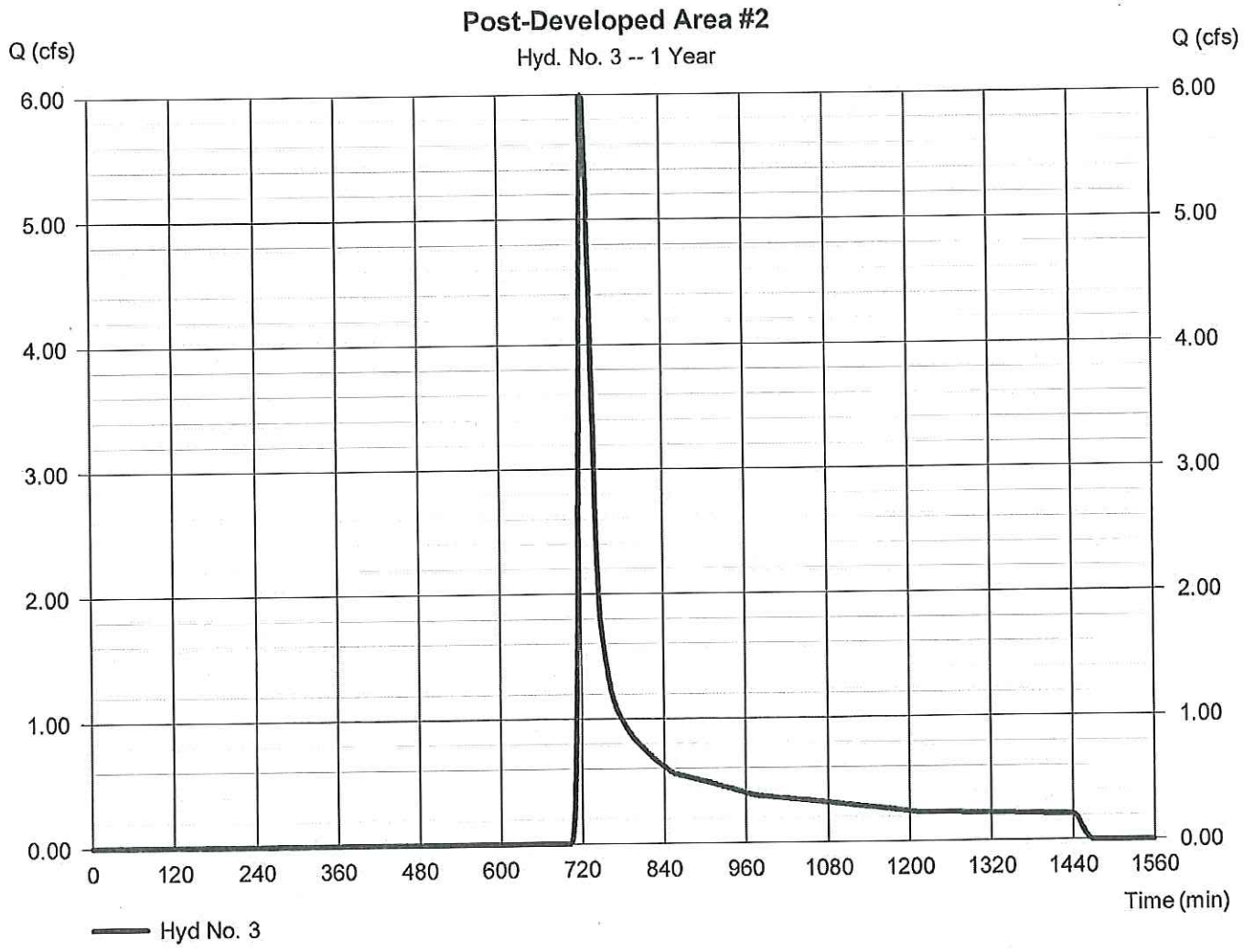
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 5.994 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 25,085 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 2.33 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



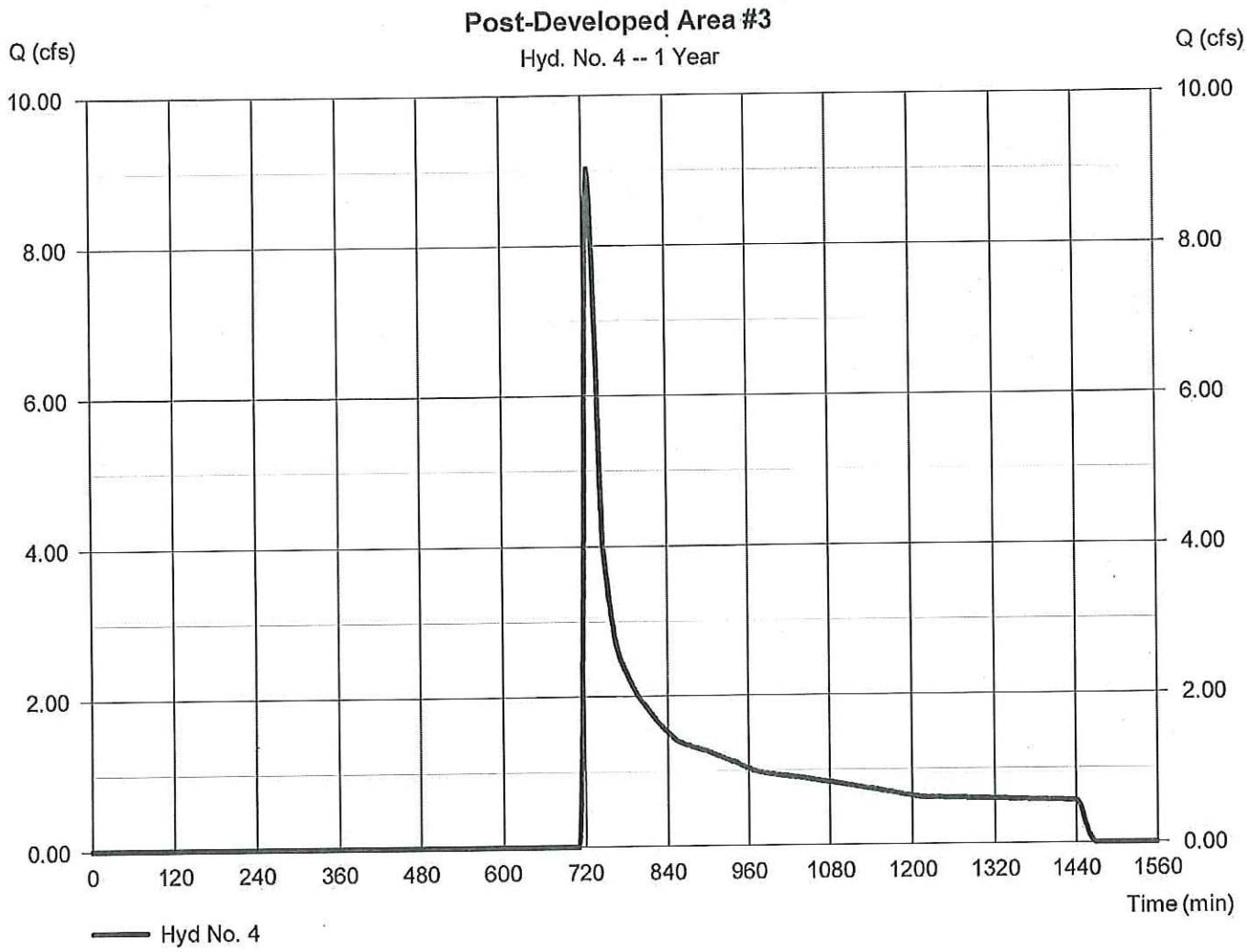
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 9.025 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 55,078 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 2.33 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

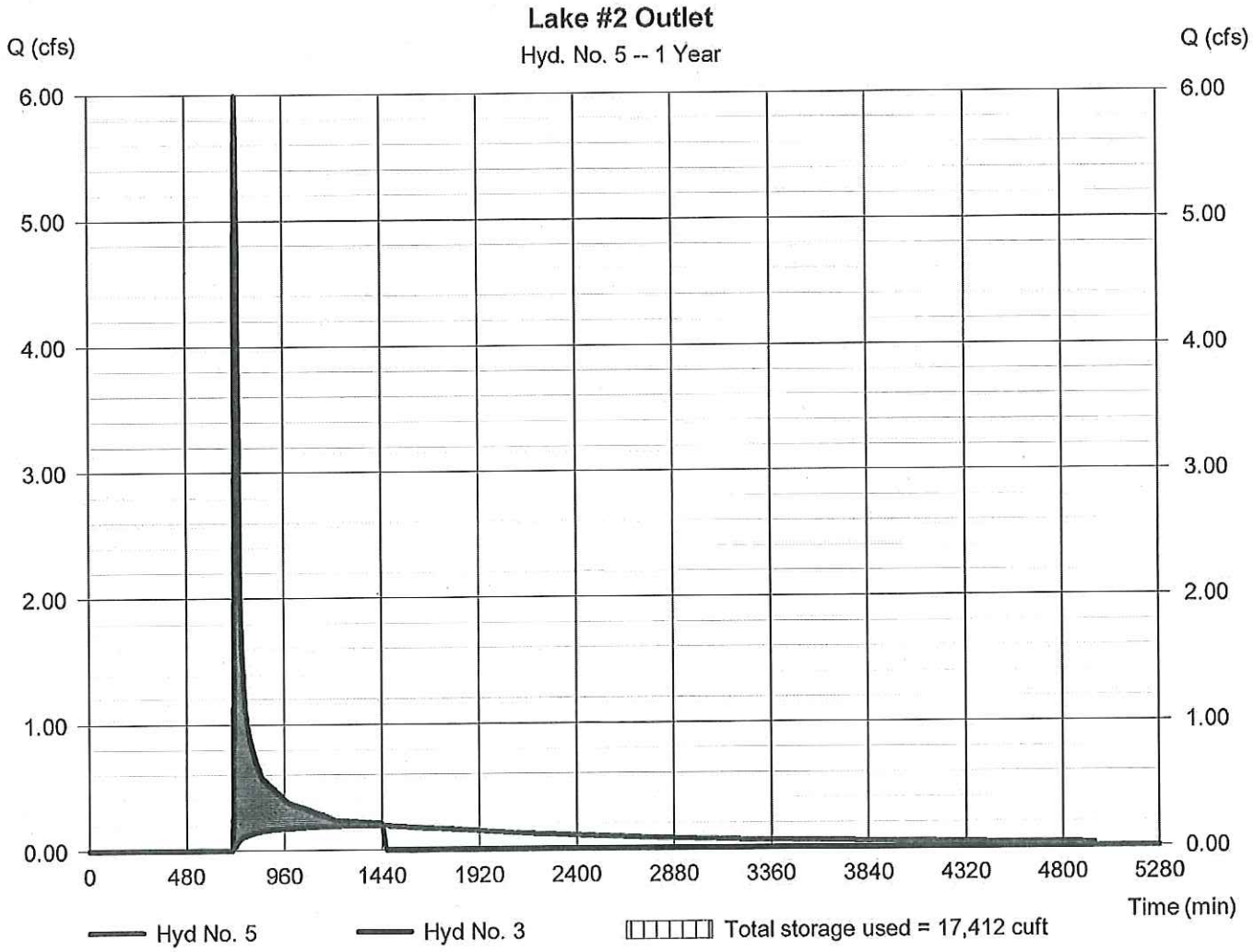
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.196 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 1444 min |
| Time interval | = 2 min | Hyd. volume | = 25,086 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 888.04 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 17,412 cuft |

Storage Indication method used.



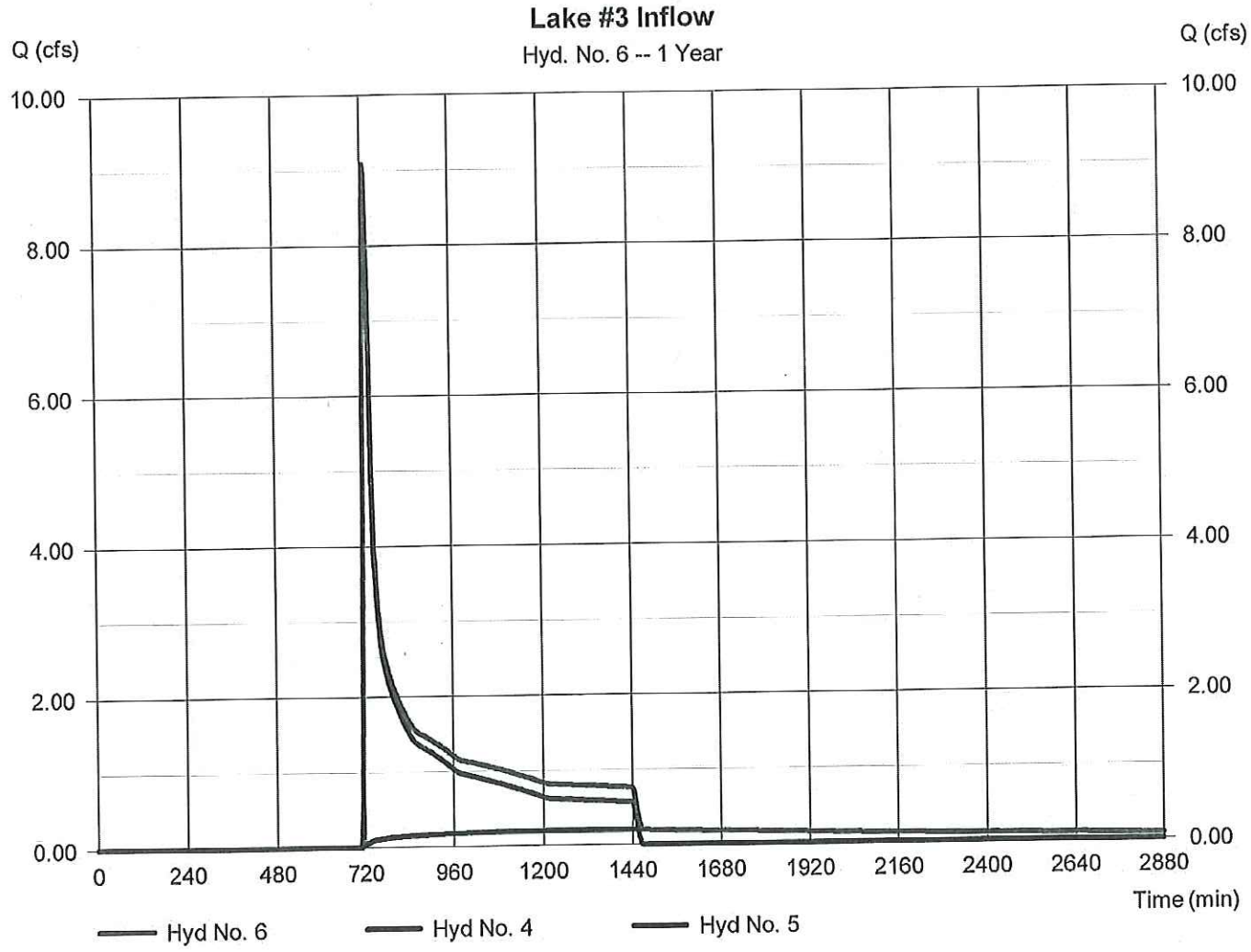
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 9.083 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 80,164 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

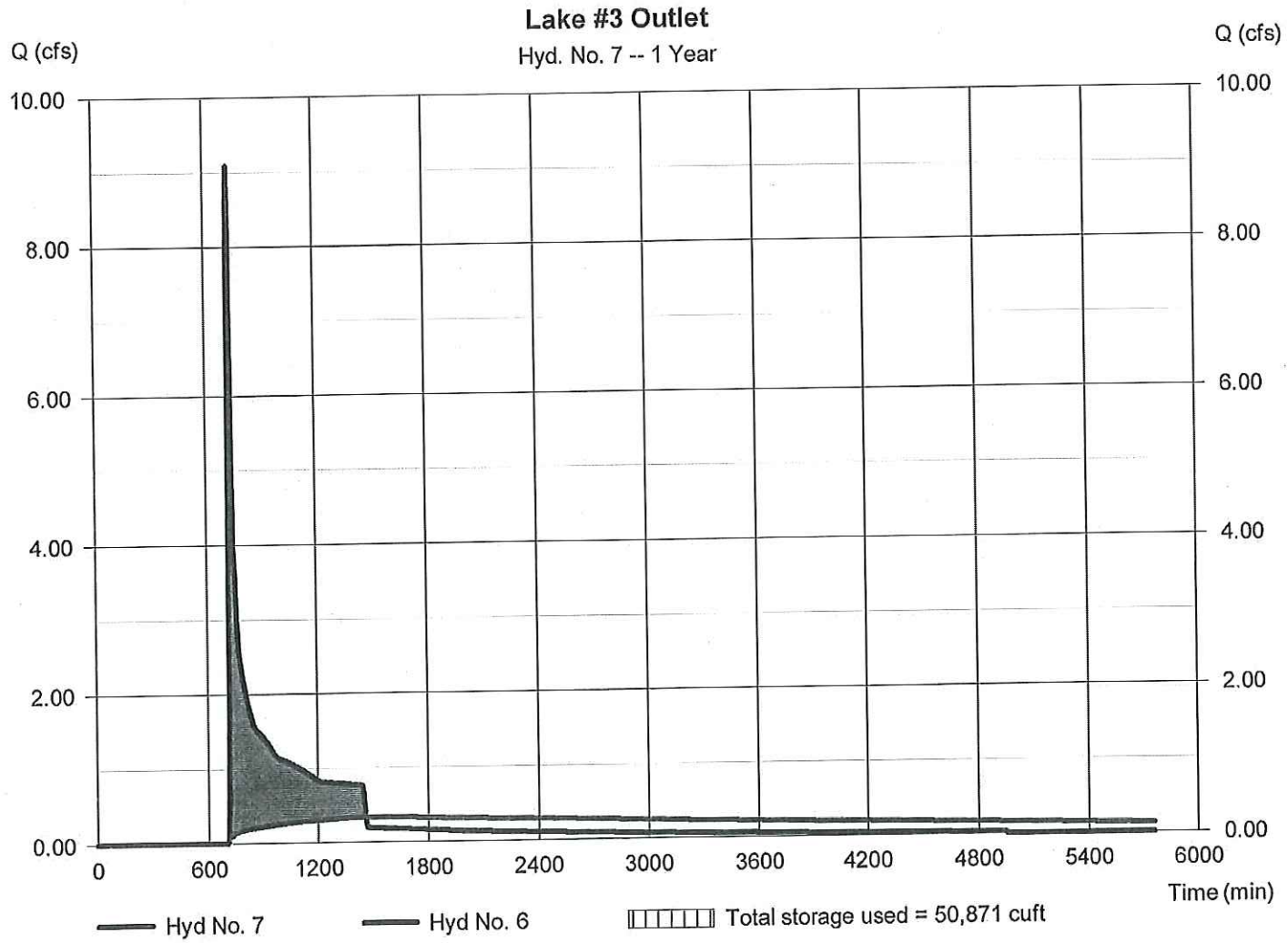
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 7

Lake #3 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.343 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 1458 min |
| Time interval | = 2 min | Hyd. volume | = 70,780 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 882.09 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 50,871 cuft |

Storage Indication method used.



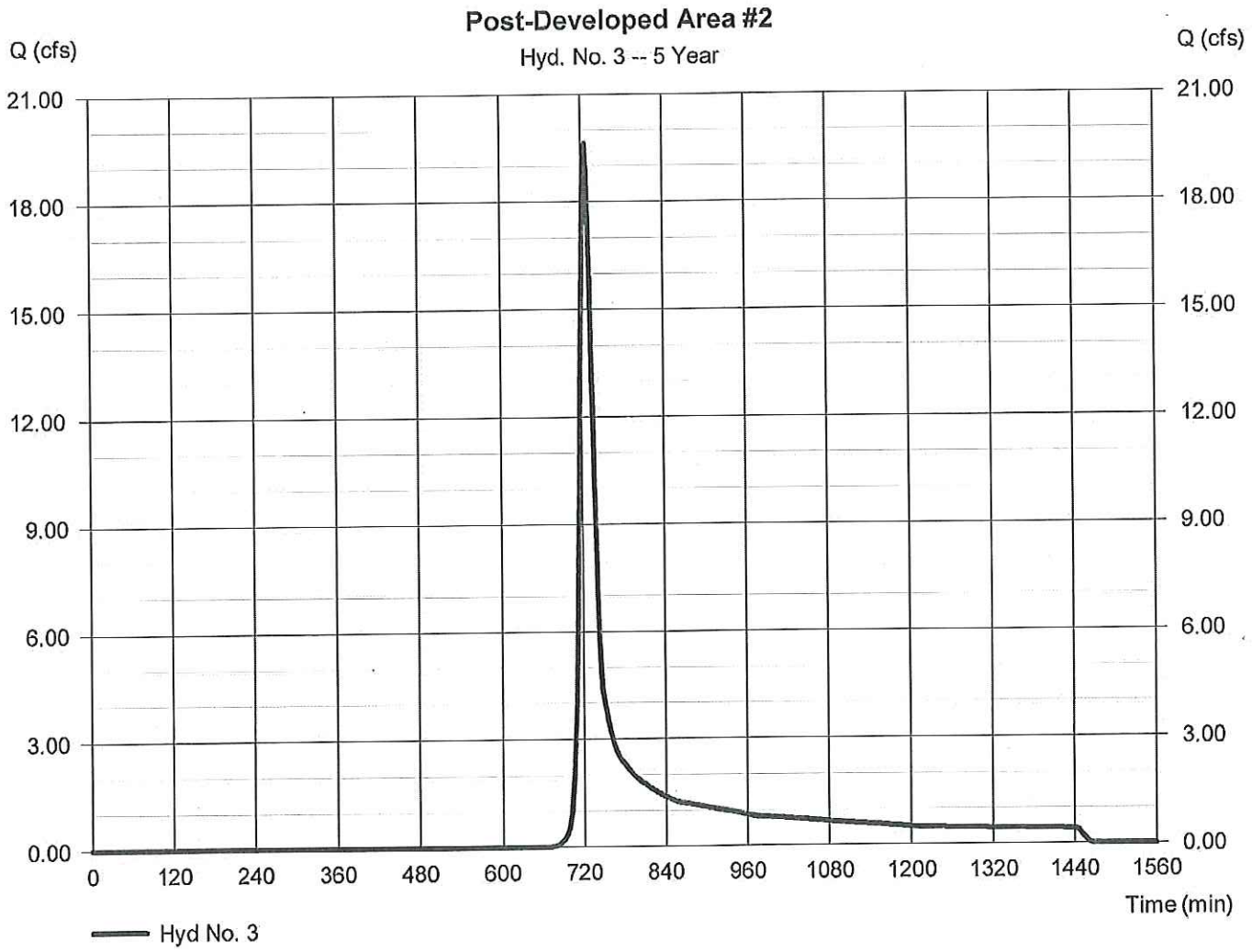
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 19.62 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 65,771 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 3.49 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



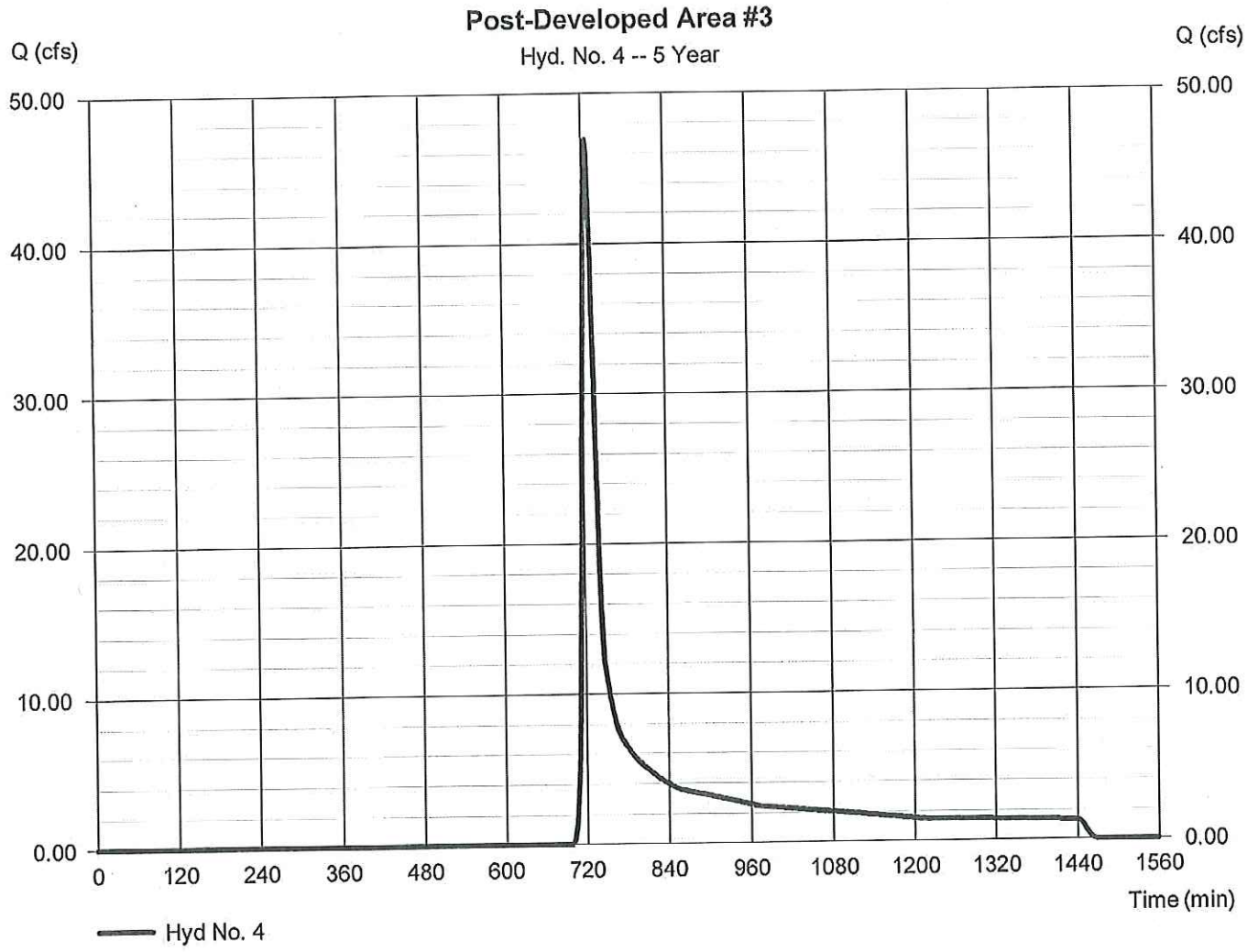
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 46.94 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 173,225 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 3.49 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

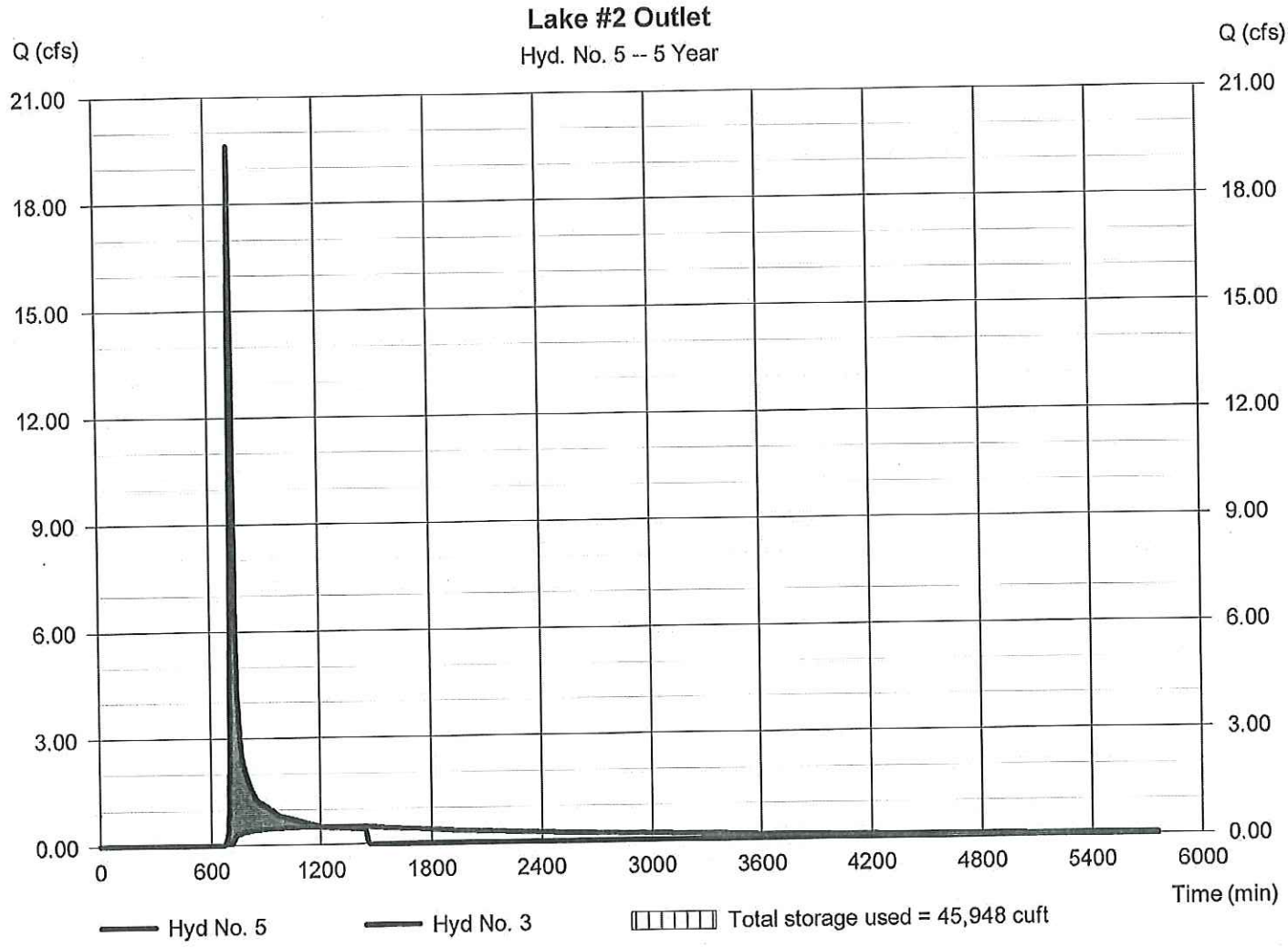
Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.504 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 1204 min |
| Time interval | = 2 min | Hyd. volume | = 64,385 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 888.34 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 45,948 cuft |

Storage Indication method used.



# Hydrograph Report

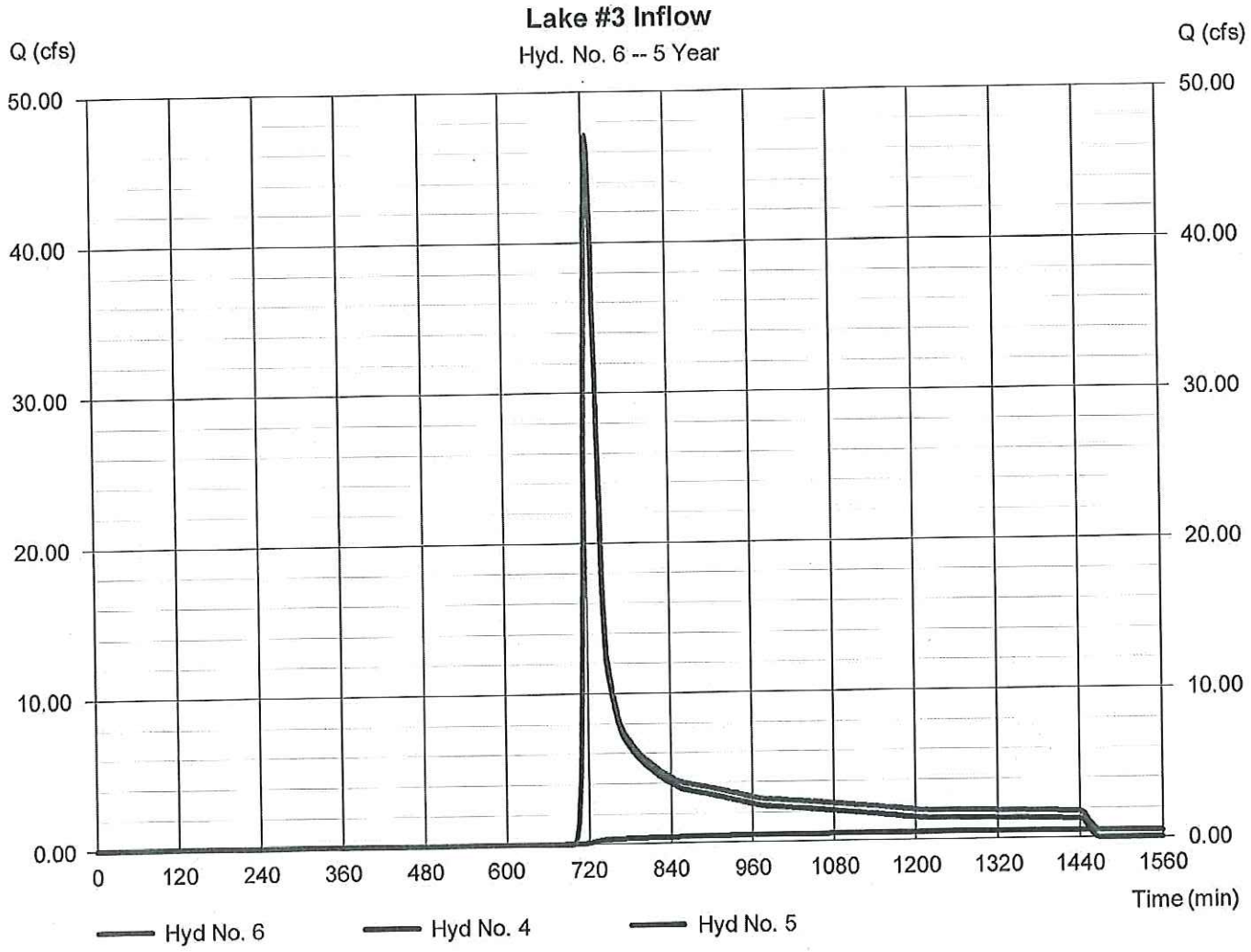
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 47.10 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 237,609 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

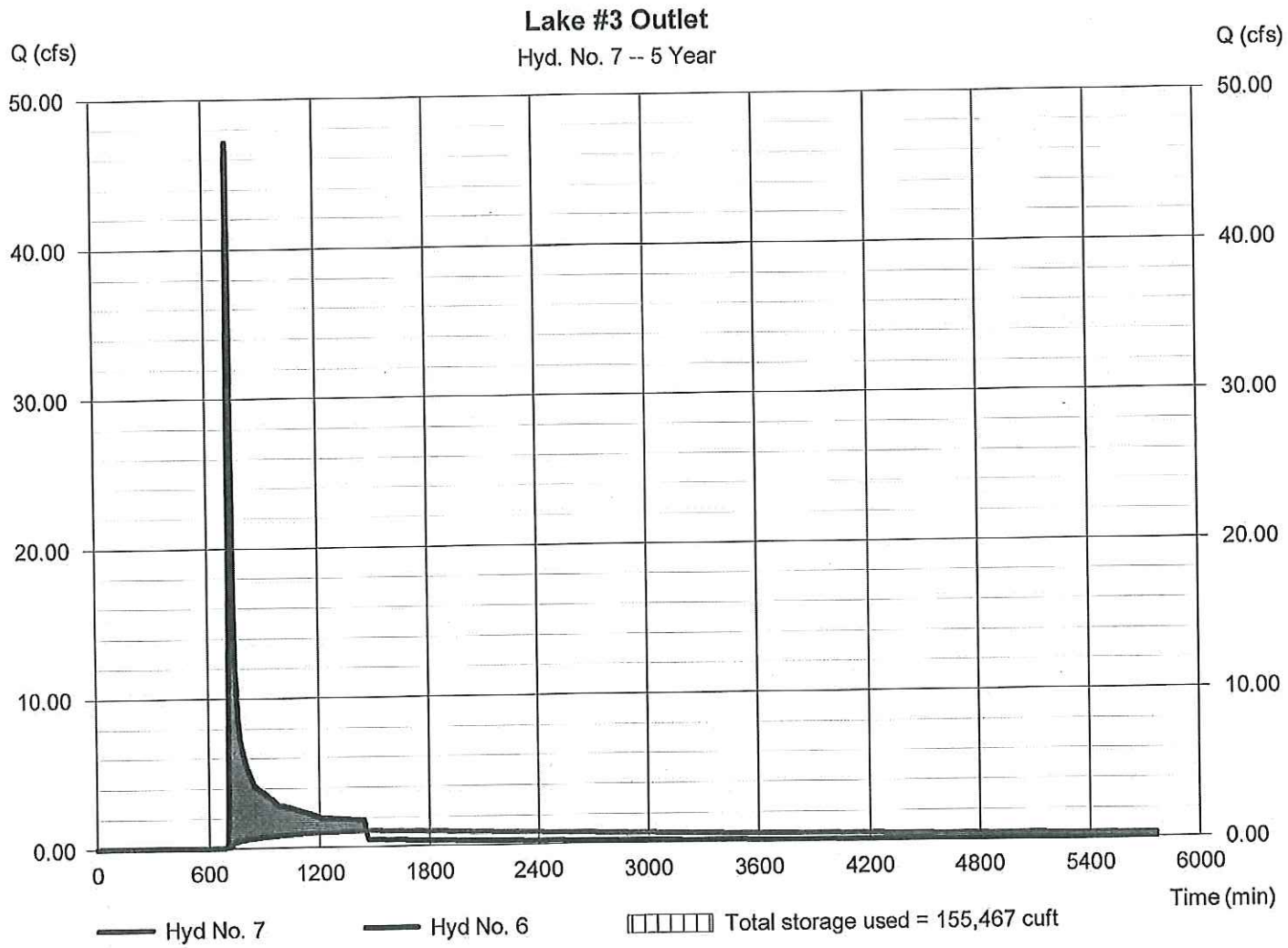
Monday, Apr 16, 2012

## Hyd. No. 7

Lake #3 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.092 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 1454 min |
| Time interval | = 2 min | Hyd. volume | = 195,353 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 882.78 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 155,467 cuft |

Storage Indication method used.



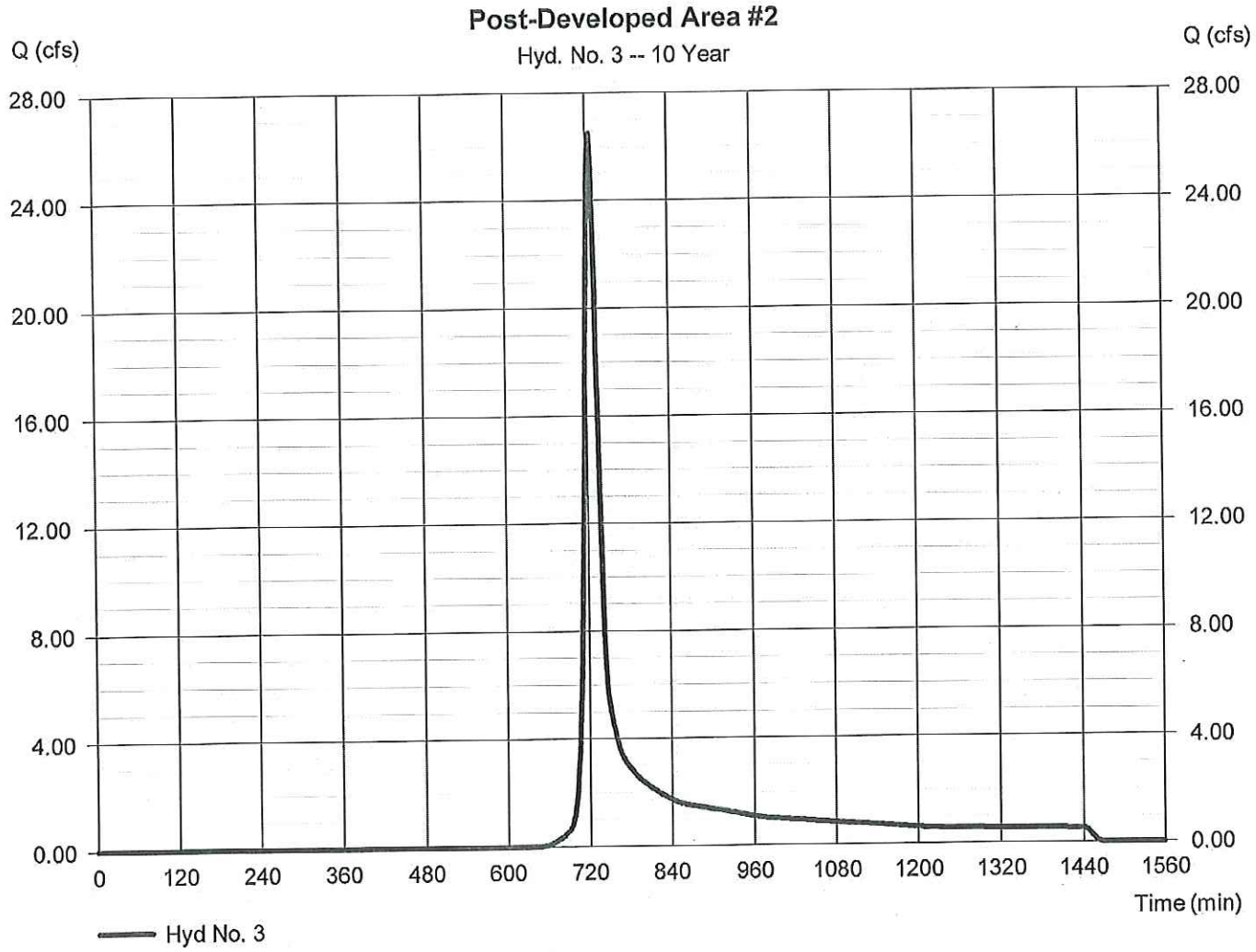
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 26.50 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 86,567 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 3.99 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



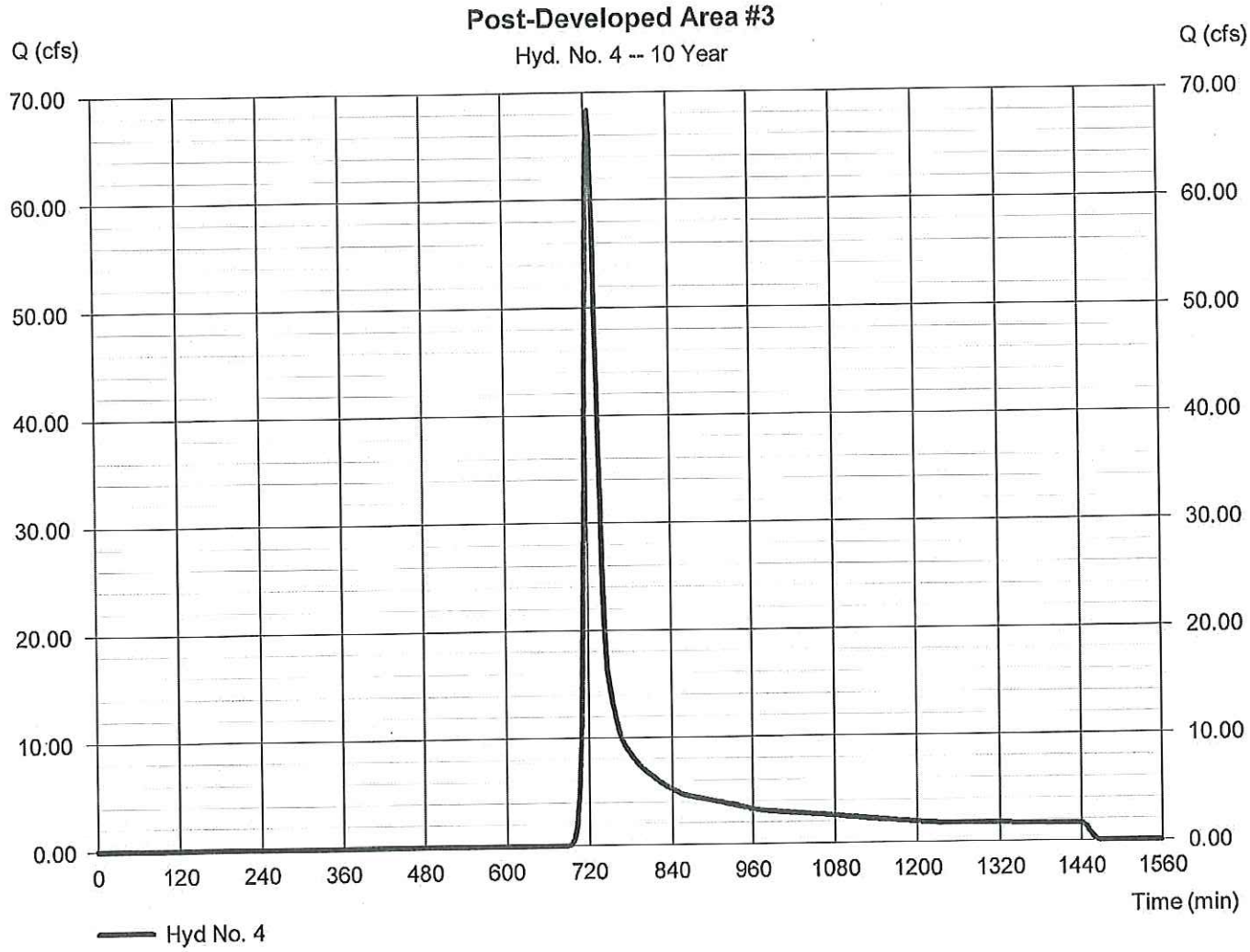
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 68.38 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 237,042 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 3.99 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

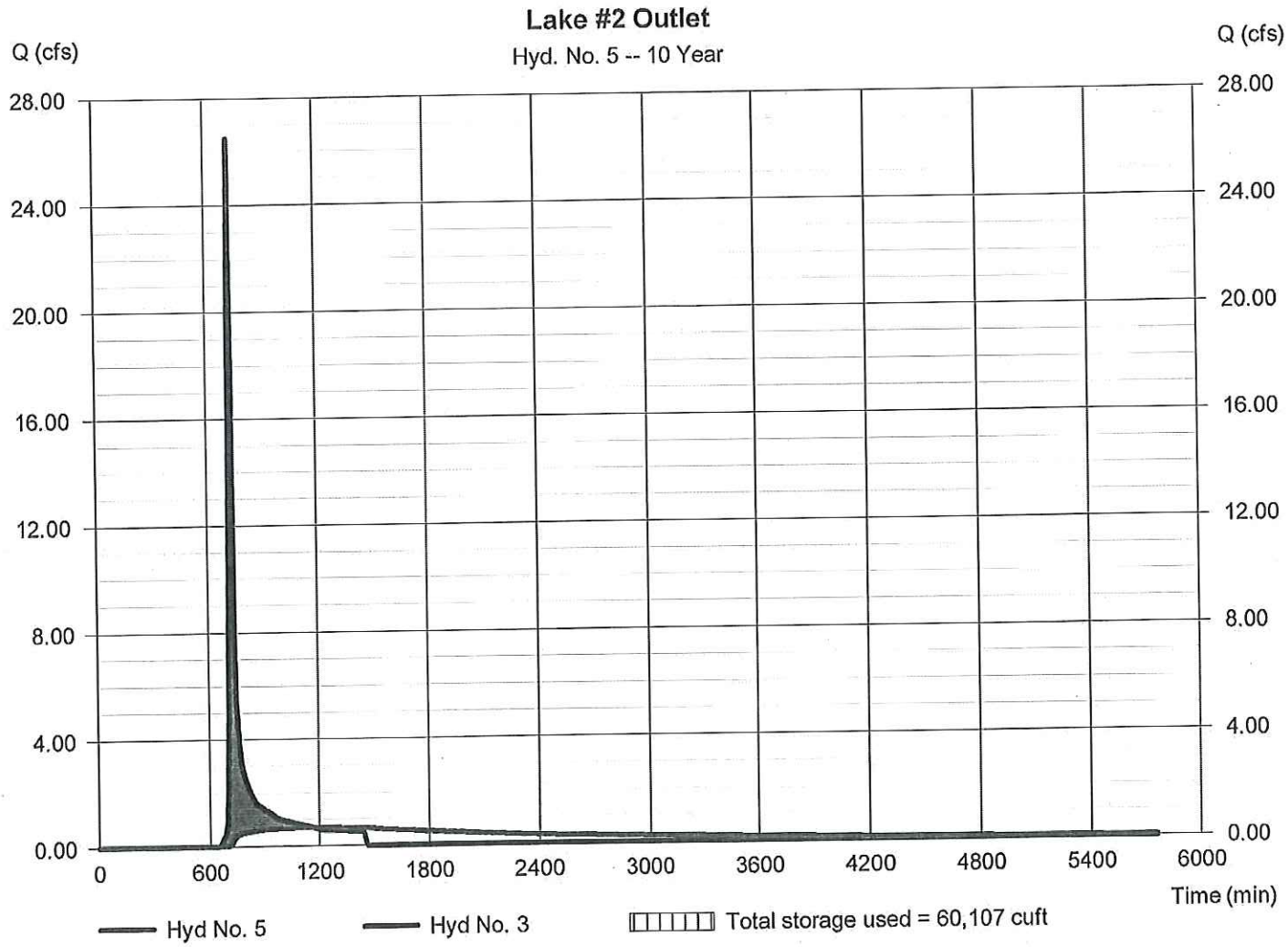
Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.689 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 1168 min |
| Time interval | = 2 min | Hyd. volume | = 84,188 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 888.48 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 60,107 cuft |

Storage Indication method used.



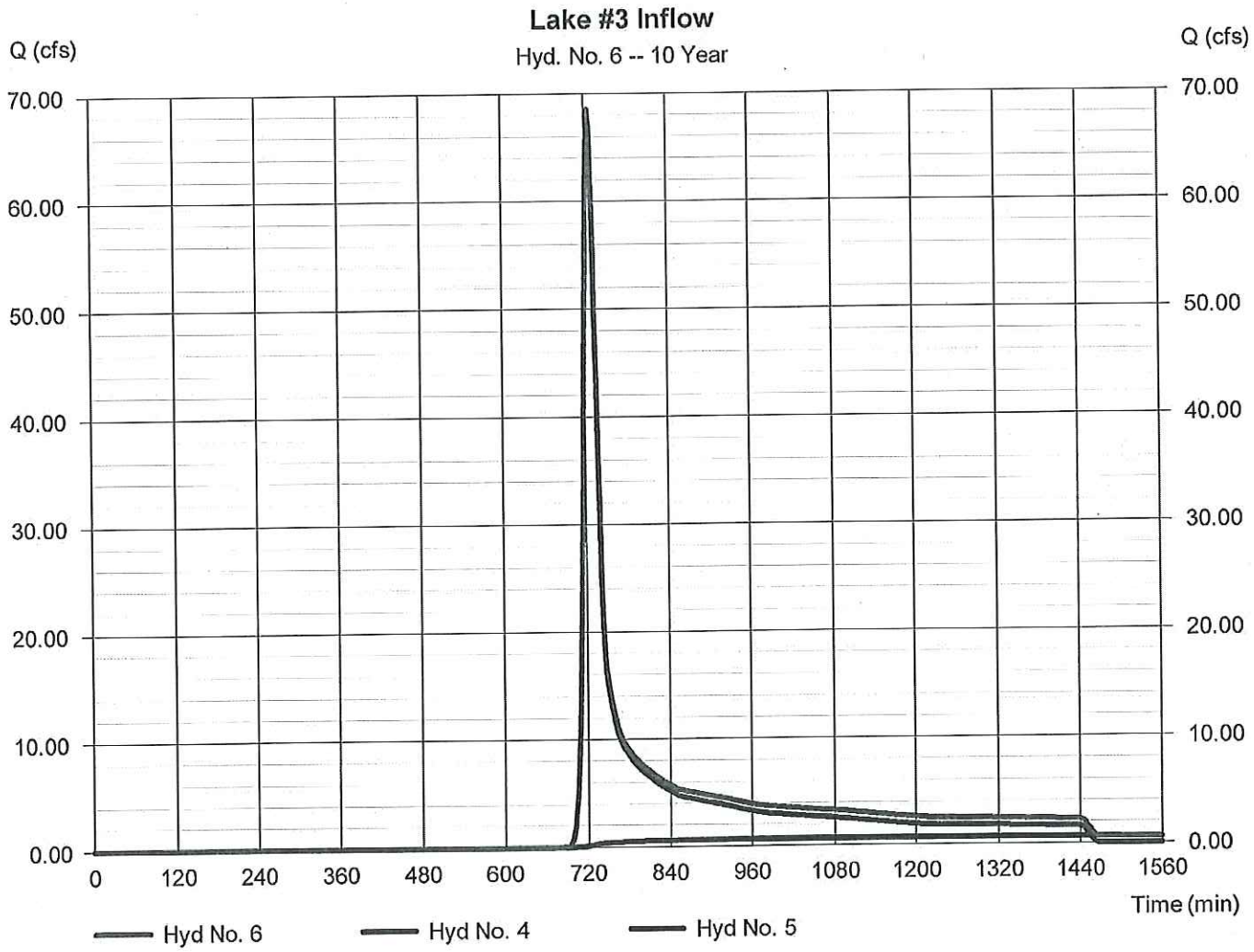
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 68.60 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 321,230 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

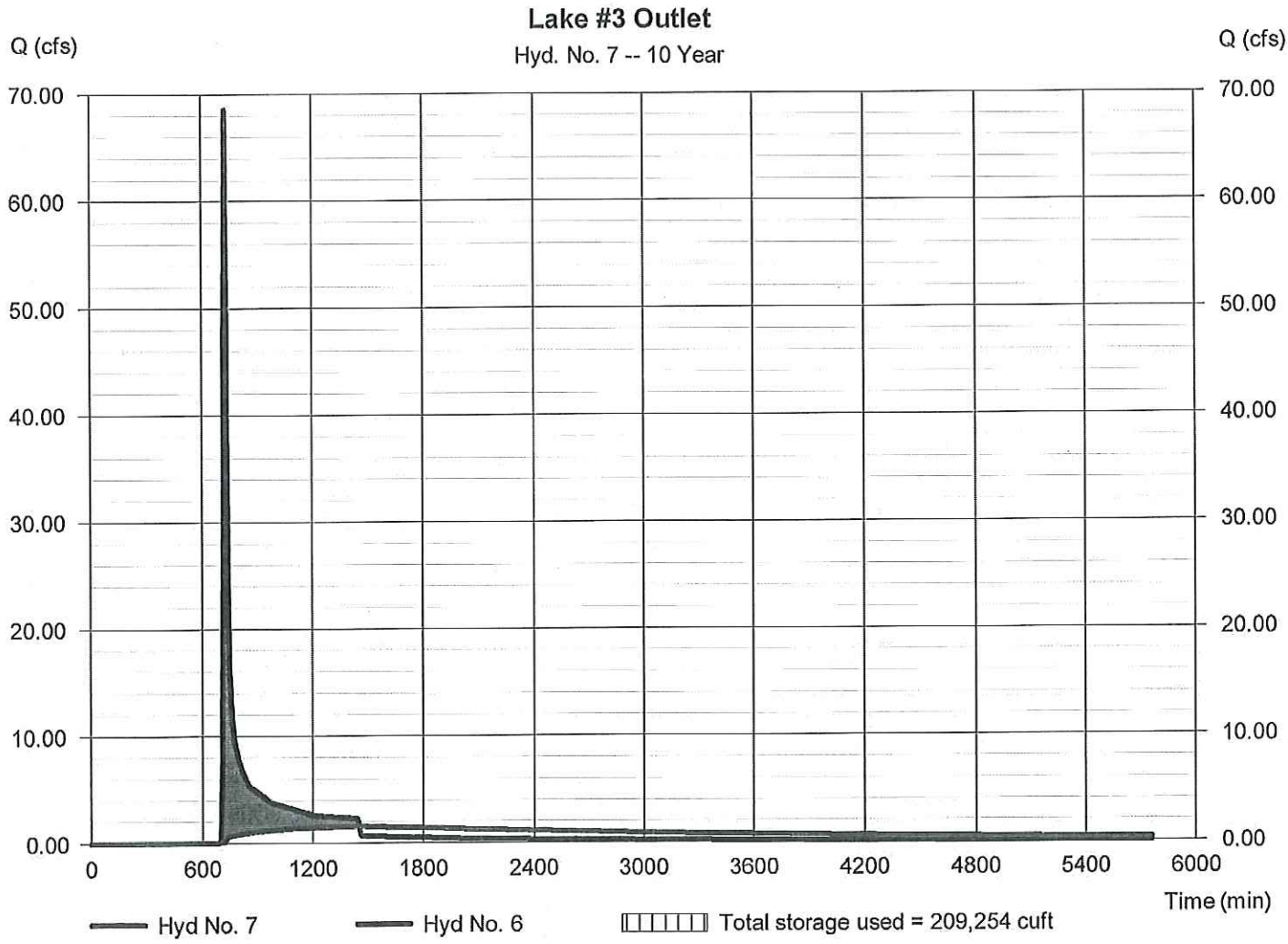
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 7

Lake #3 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.564 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 1452 min |
| Time interval | = 2 min | Hyd. volume | = 266,664 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 883.13 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 209,254 cuft |

Storage Indication method used.



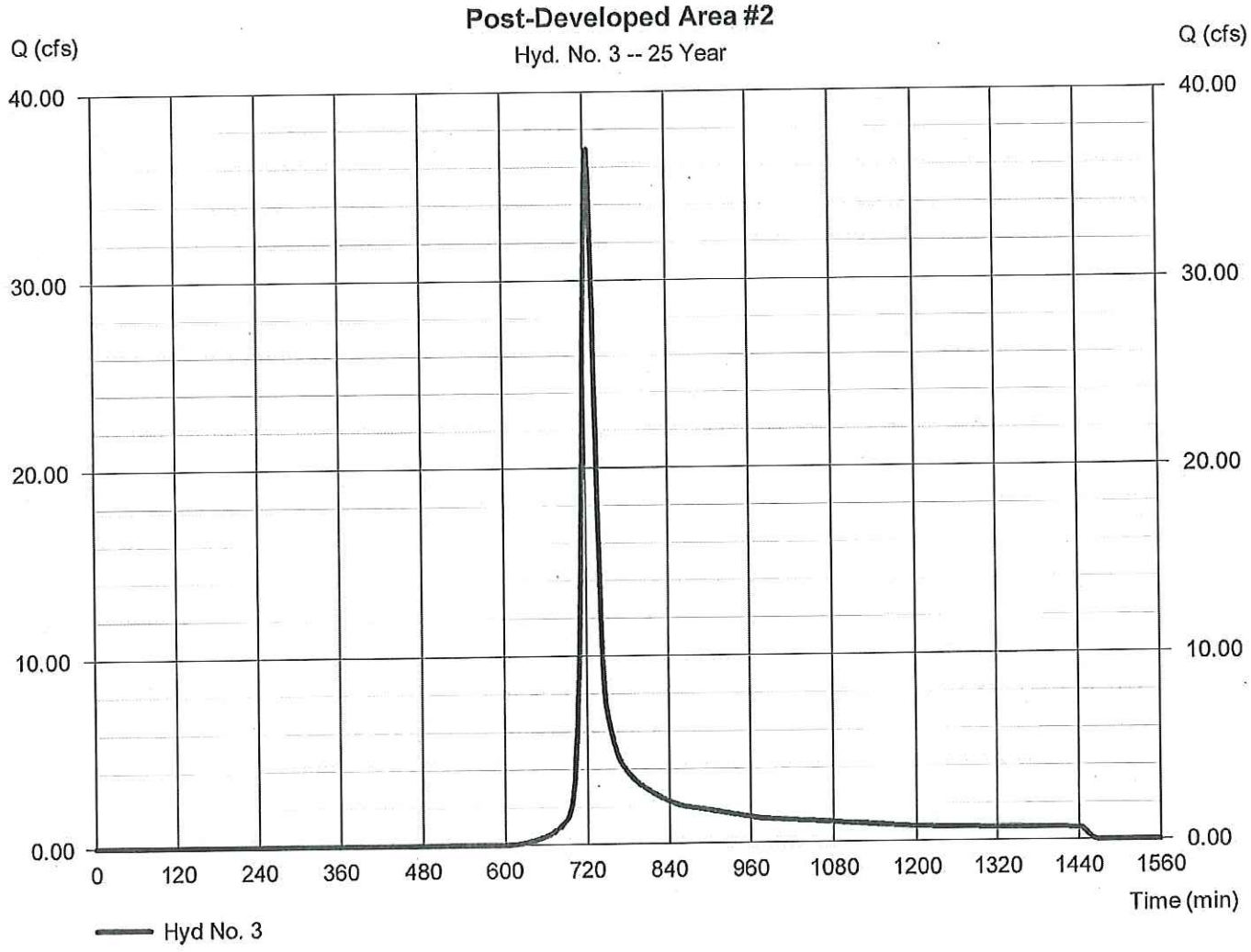
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 36.95 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 118,477 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 4.70 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



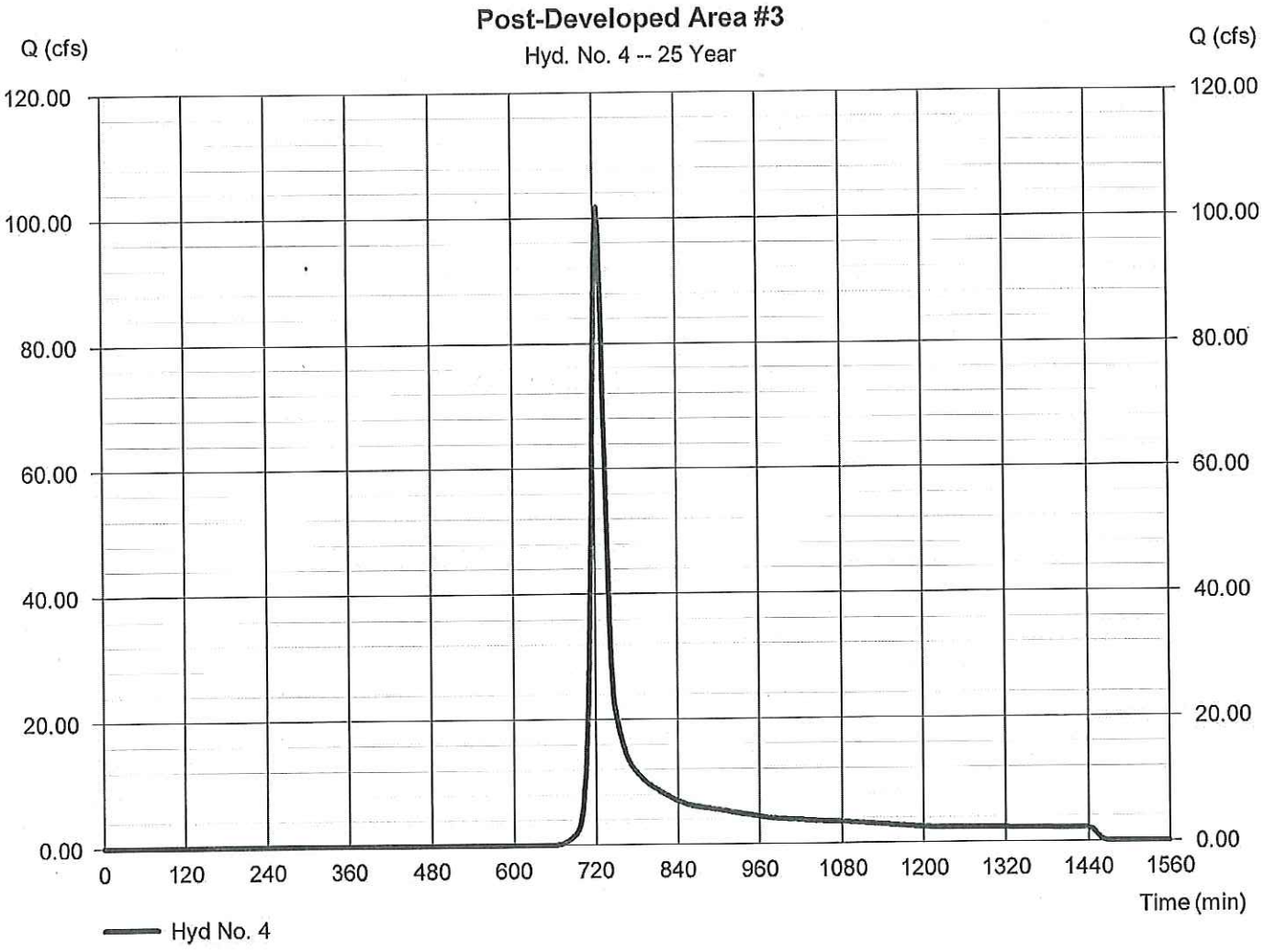
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 101.81 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 337,495 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 4.70 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

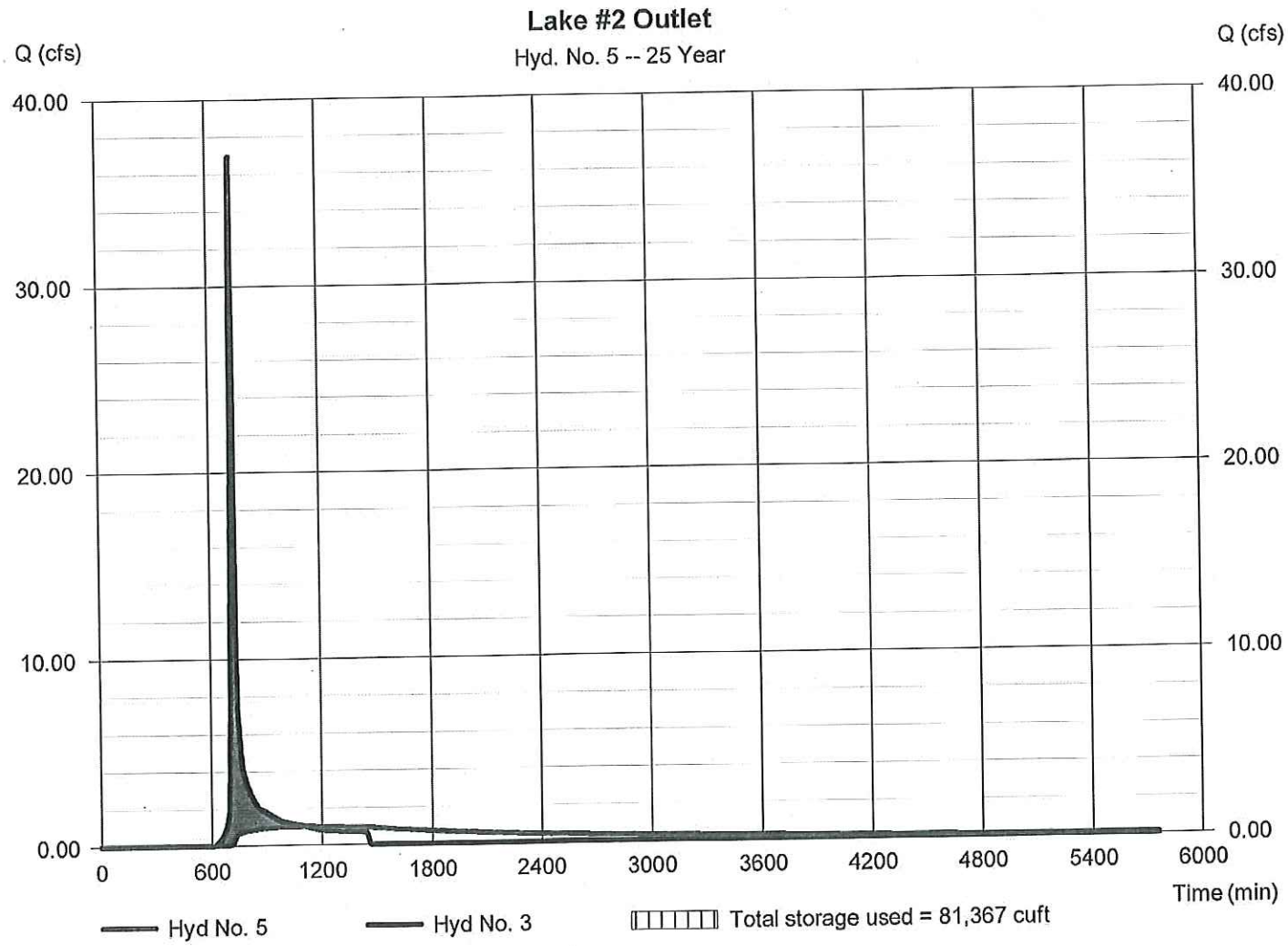
Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.001 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 1118 min |
| Time interval | = 2 min | Hyd. volume | = 114,846 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 888.71 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 81,367 cuft |

Storage Indication method used.



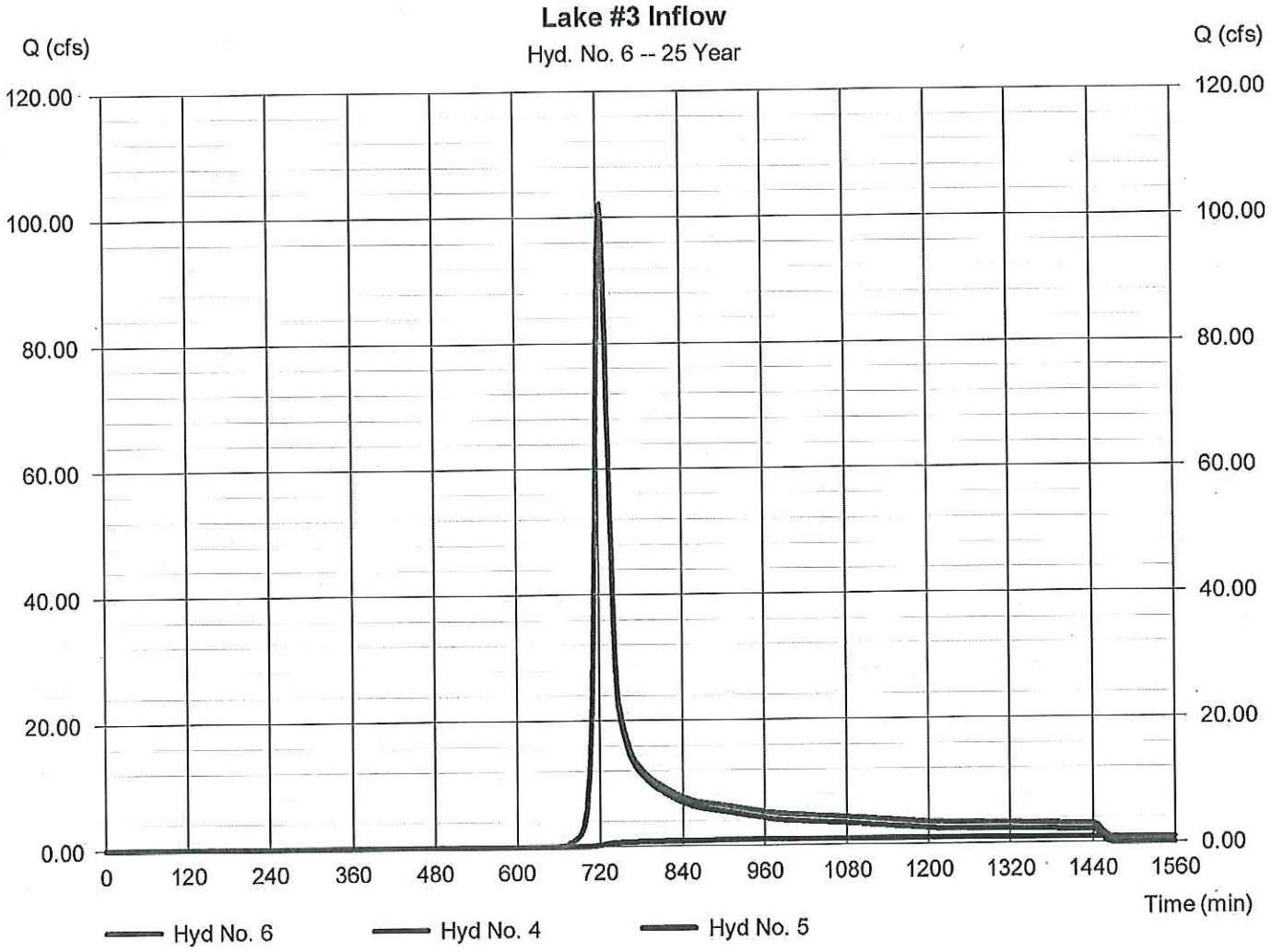
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 102.13 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 452,340 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

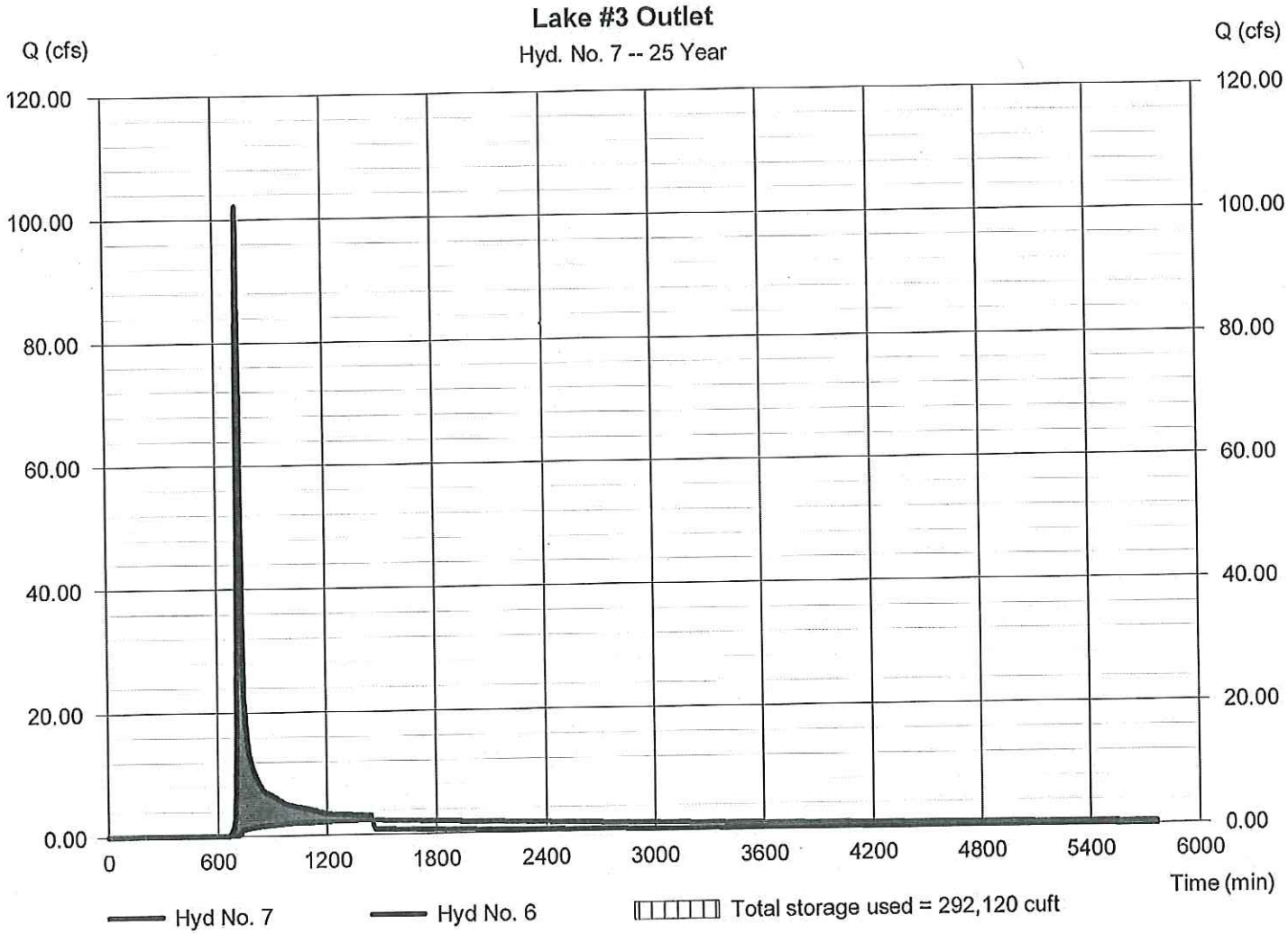
Monday, Apr 16, 2012

## Hyd. No. 7

Lake #3 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 2.354 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 1450 min |
| Time interval | = 2 min | Hyd. volume | = 381,782 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 883.65 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 292,120 cuft |

Storage Indication method used.



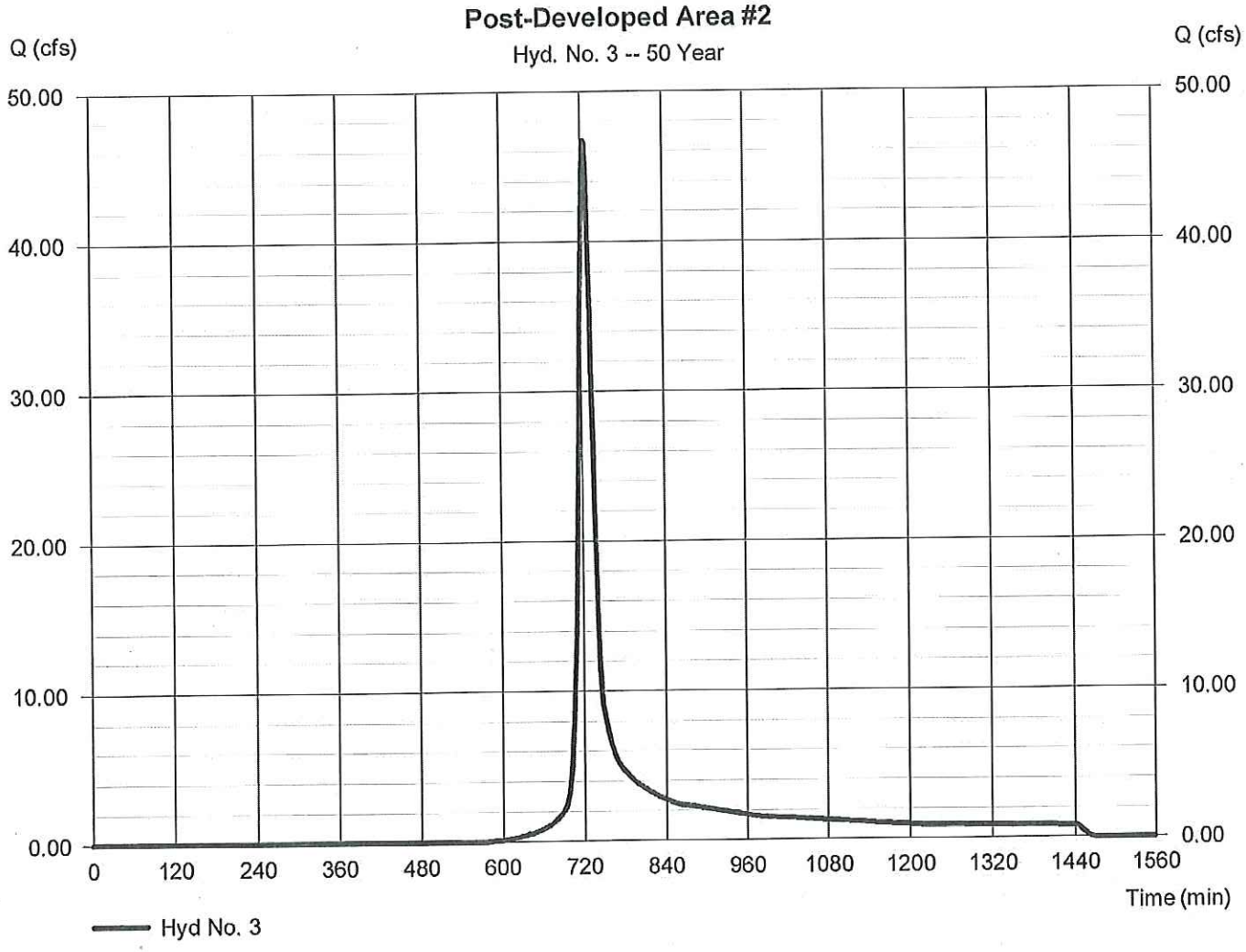
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 46.74 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 148,144 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 5.32 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



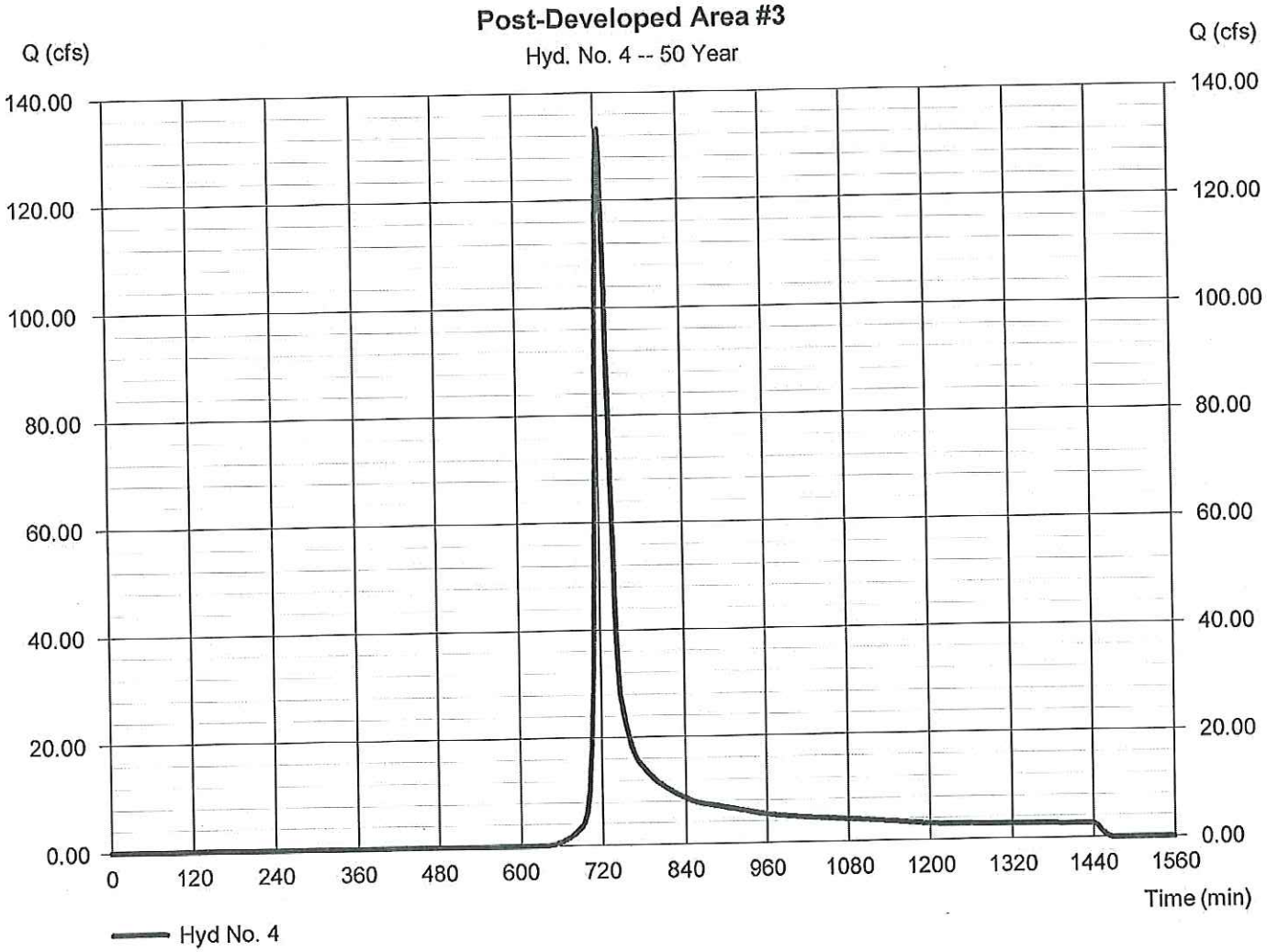
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 133.26 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 432,853 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 5.32 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

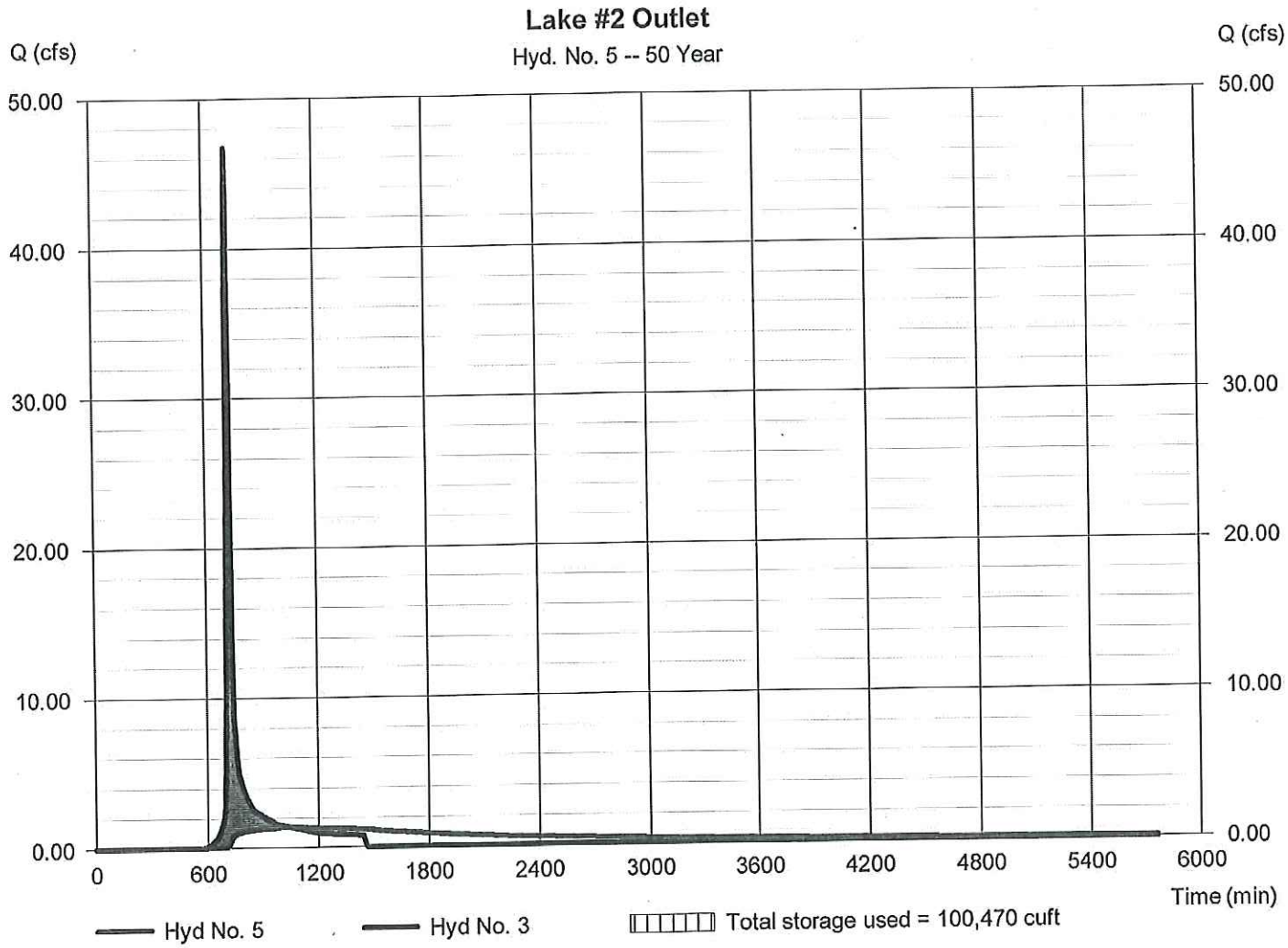
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.395 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 1044 min |
| Time interval | = 2 min | Hyd. volume | = 143,576 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 888.91 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 100,470 cuft |

Storage Indication method used.



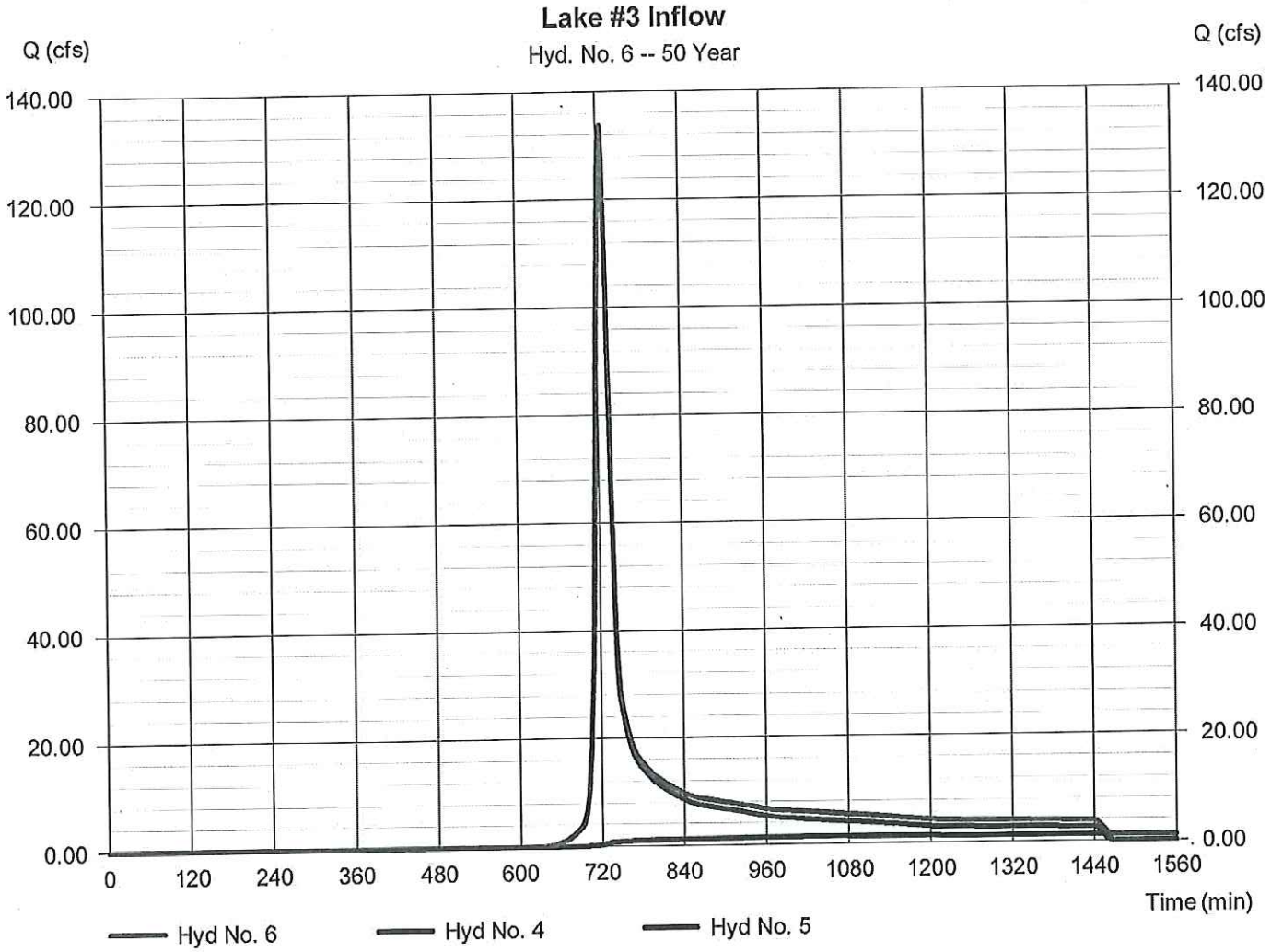
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 133.70 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 576,429 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

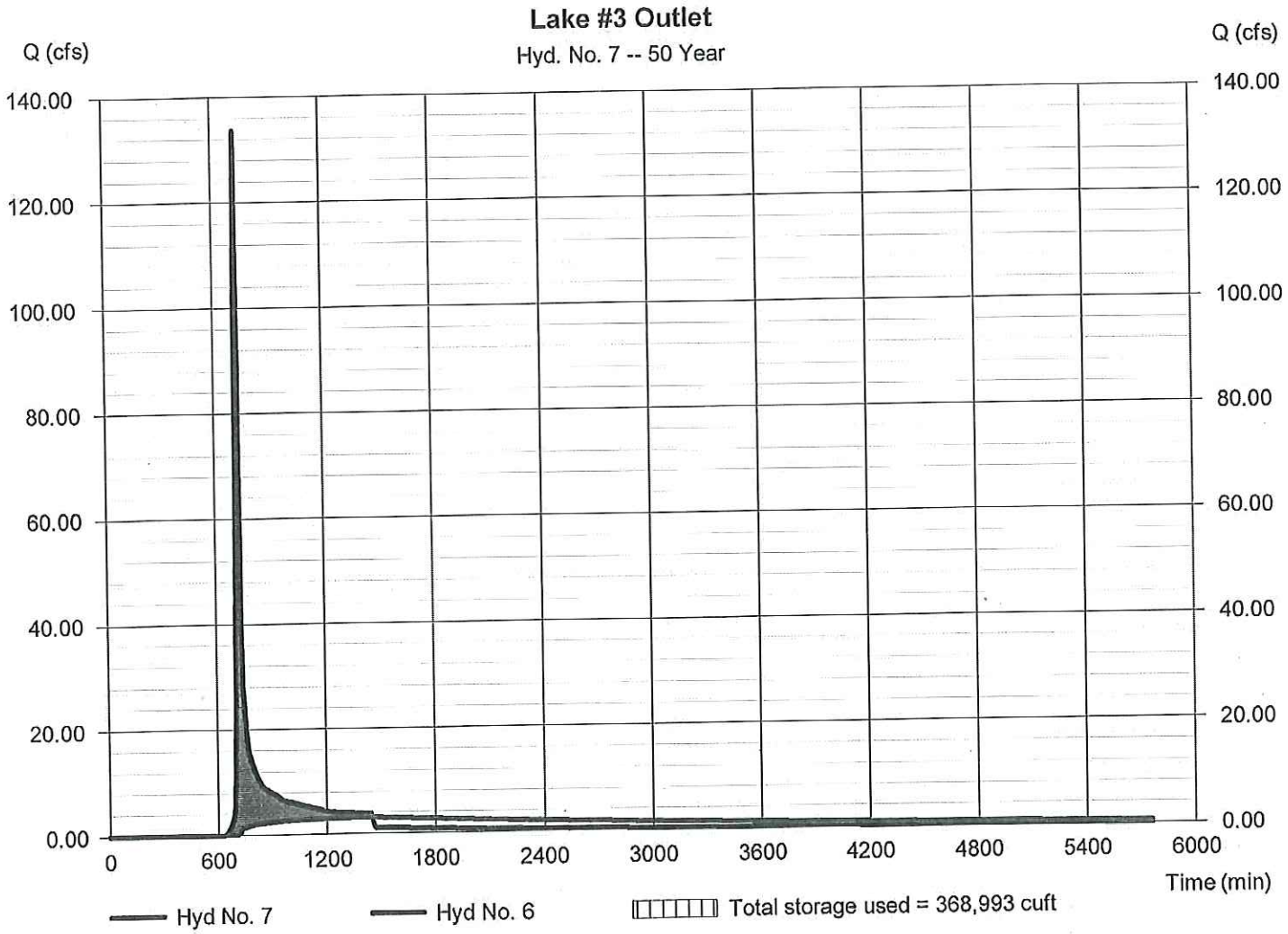
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 7

Lake #3 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 3.157 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 1448 min |
| Time interval | = 2 min | Hyd. volume | = 493,346 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 884.12 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 368,993 cuft |

Storage Indication method used.



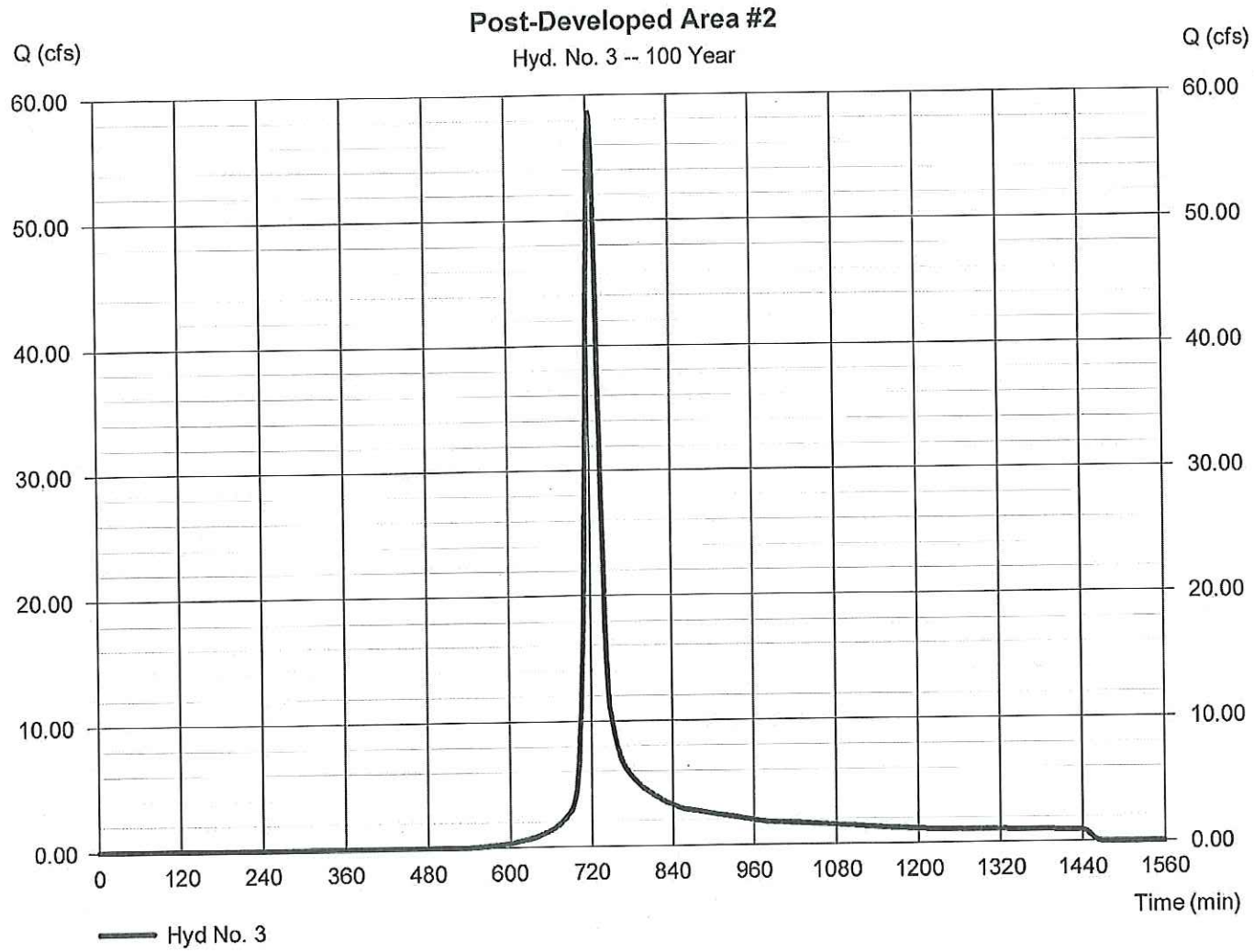
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 3

Post-Developed Area #2

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 58.58 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 184,245 cuft |
| Drainage area | = 17.600 ac | Curve number | = 70.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.00 min |
| Total precip. | = 6.04 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

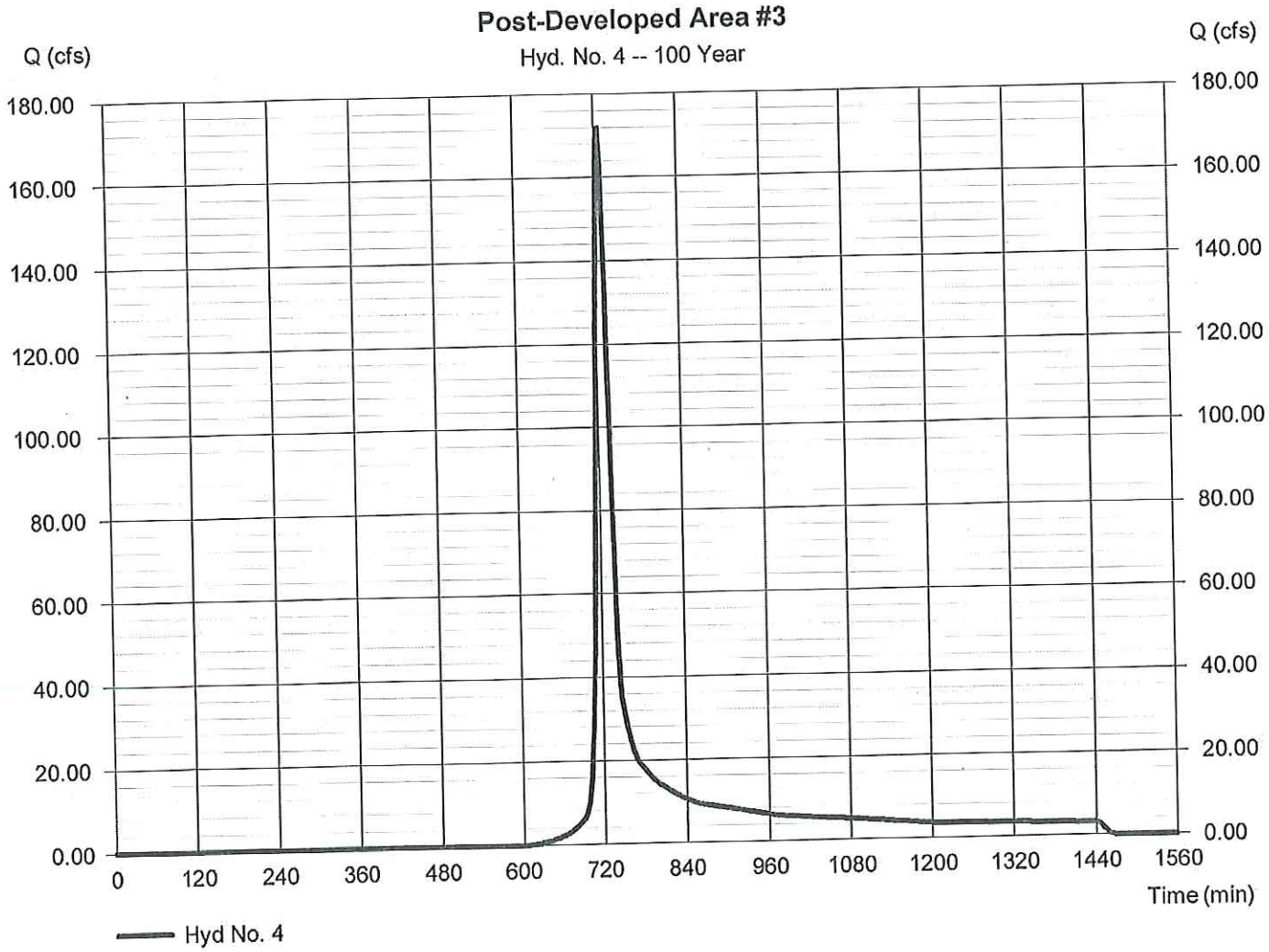
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

Monday, Apr 16, 2012

## Hyd. No. 4

Post-Developed Area #3

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 171.82 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 550,757 cuft |
| Drainage area | = 63.500 ac | Curve number | = 65.1 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 17.10 min |
| Total precip. | = 6.04 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

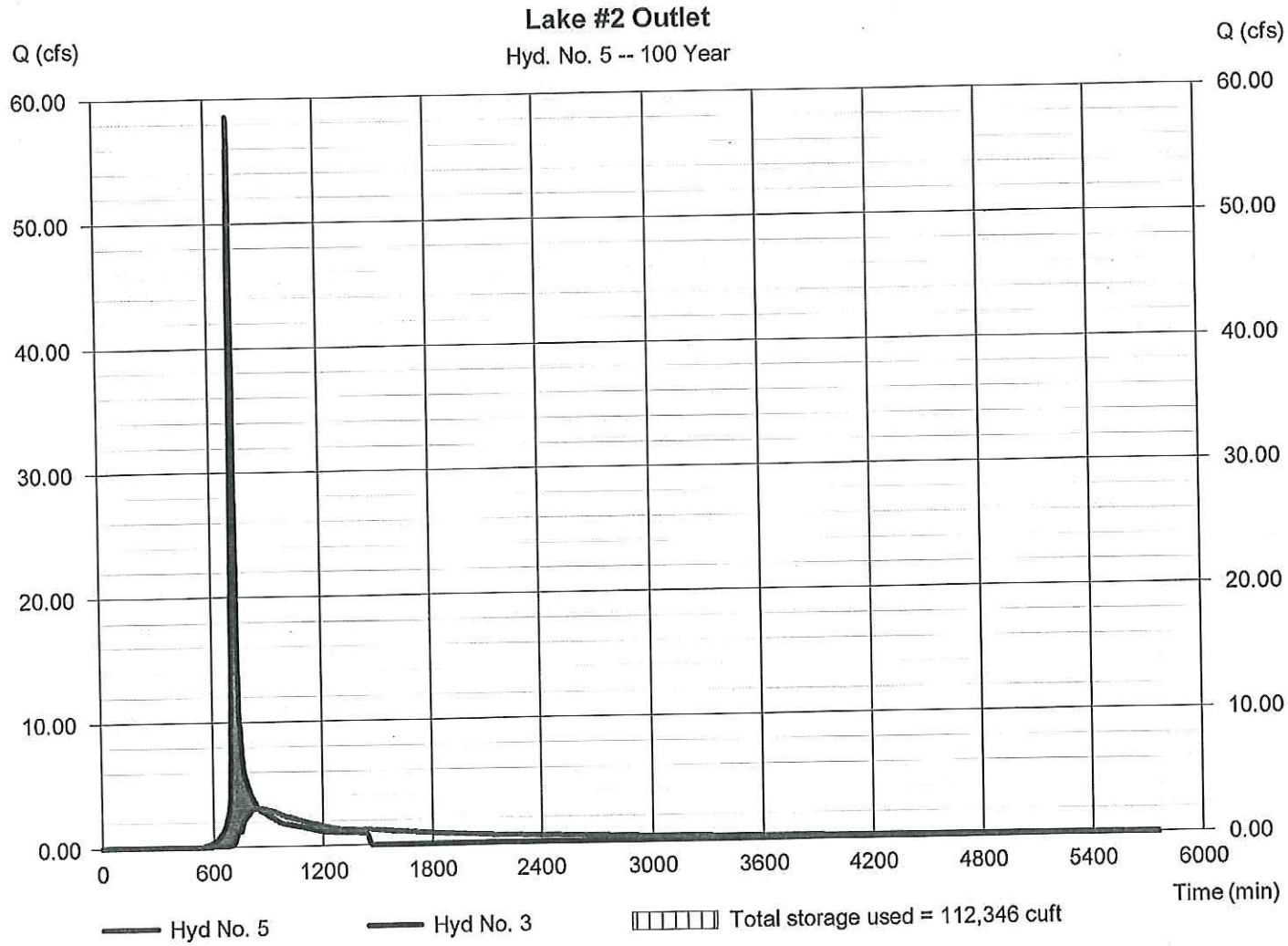
Monday, Apr 16, 2012

## Hyd. No. 5

Lake #2 Outlet

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 3.098 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 848 min |
| Time interval | = 2 min | Hyd. volume | = 179,462 cuft |
| Inflow hyd. No. | = 3 - Post-Developed Area #2 | Max. Elevation | = 889.02 ft |
| Reservoir name | = Lake #2 | Max. Storage | = 112,346 cuft |

Storage Indication method used.



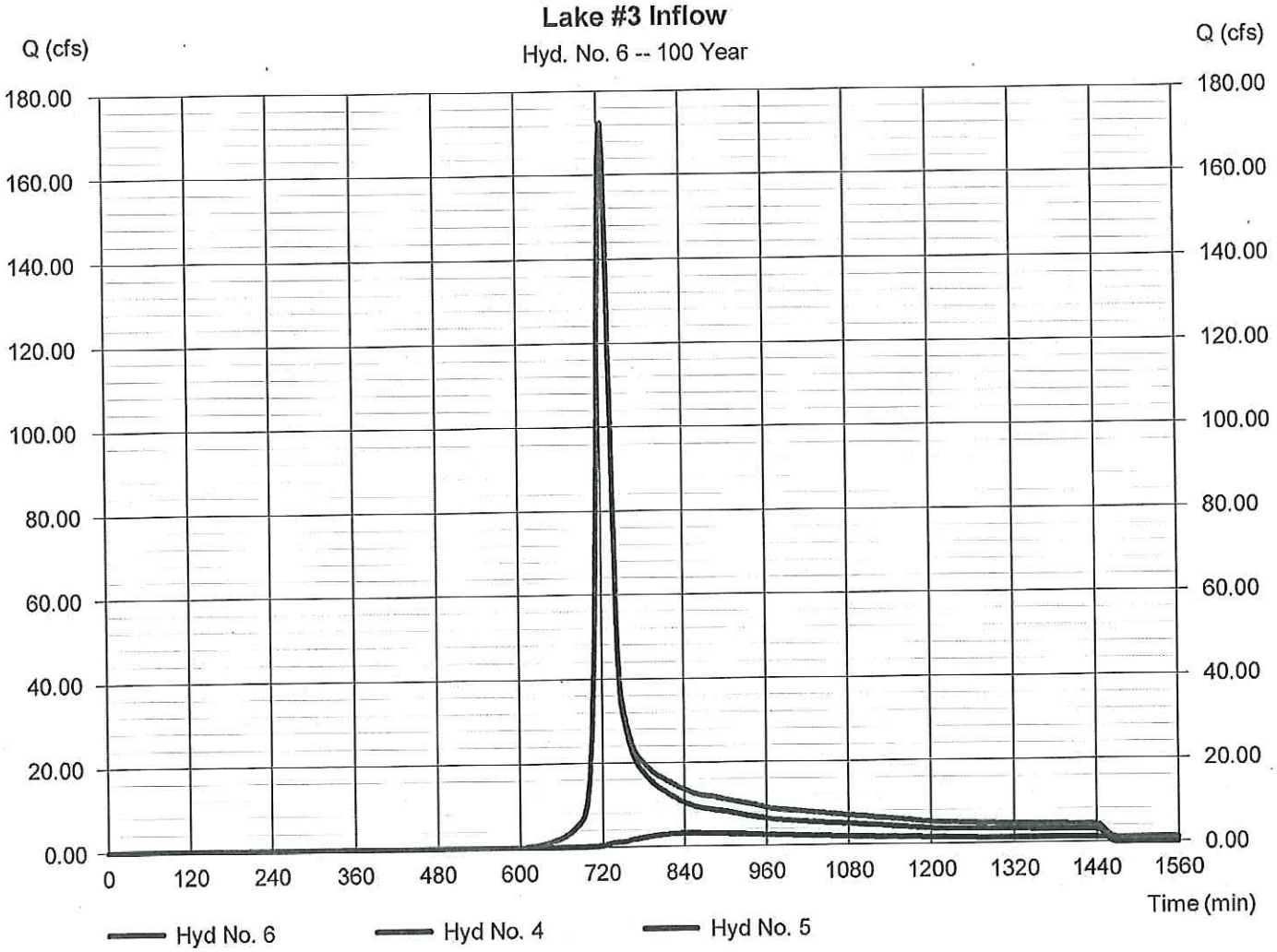
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 6

Lake #3 Inflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 172.44 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 730,218 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 63.500 ac |



# Hydrograph Report

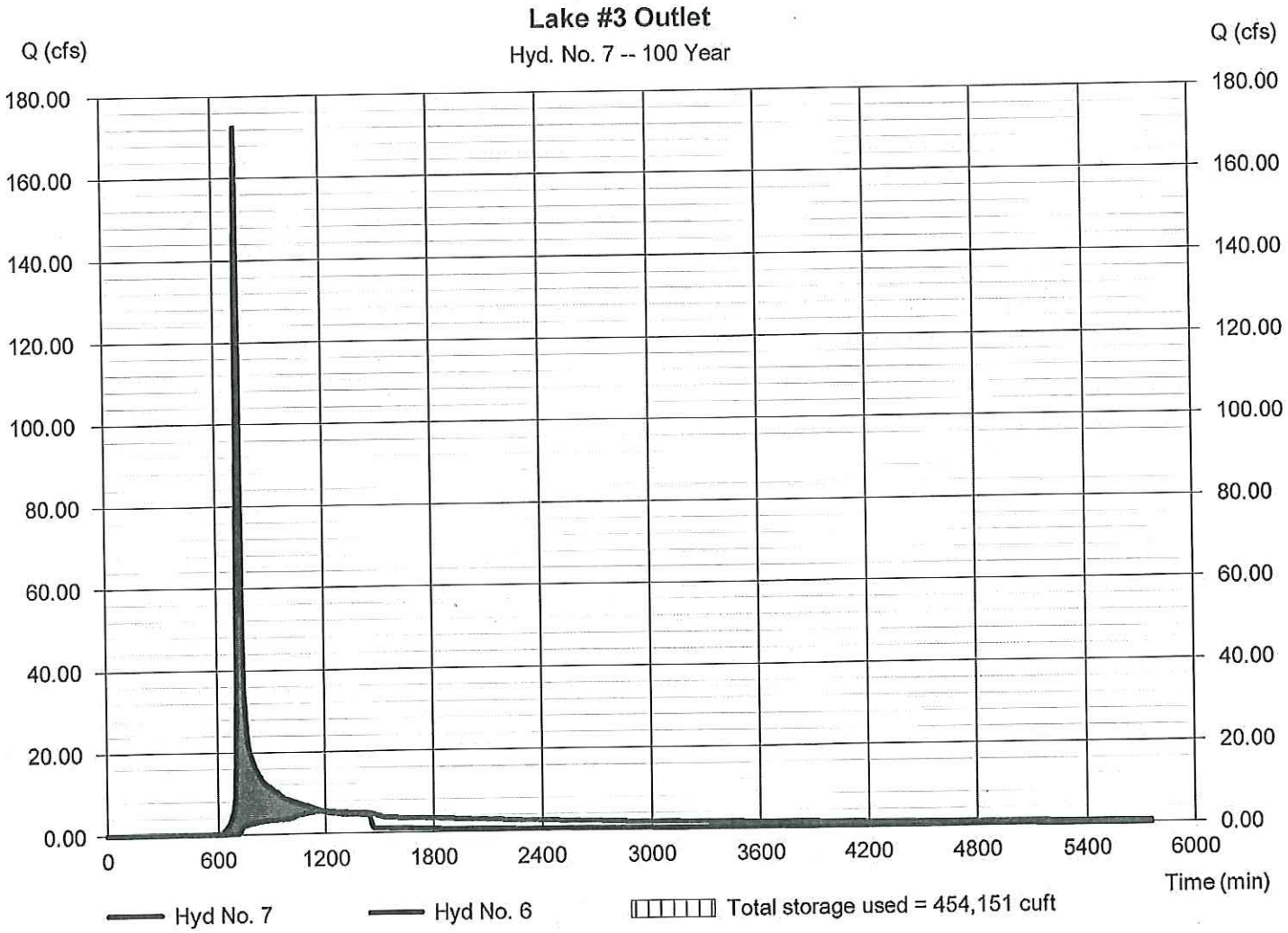
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## Hyd. No. 7

Lake #3 Outlet

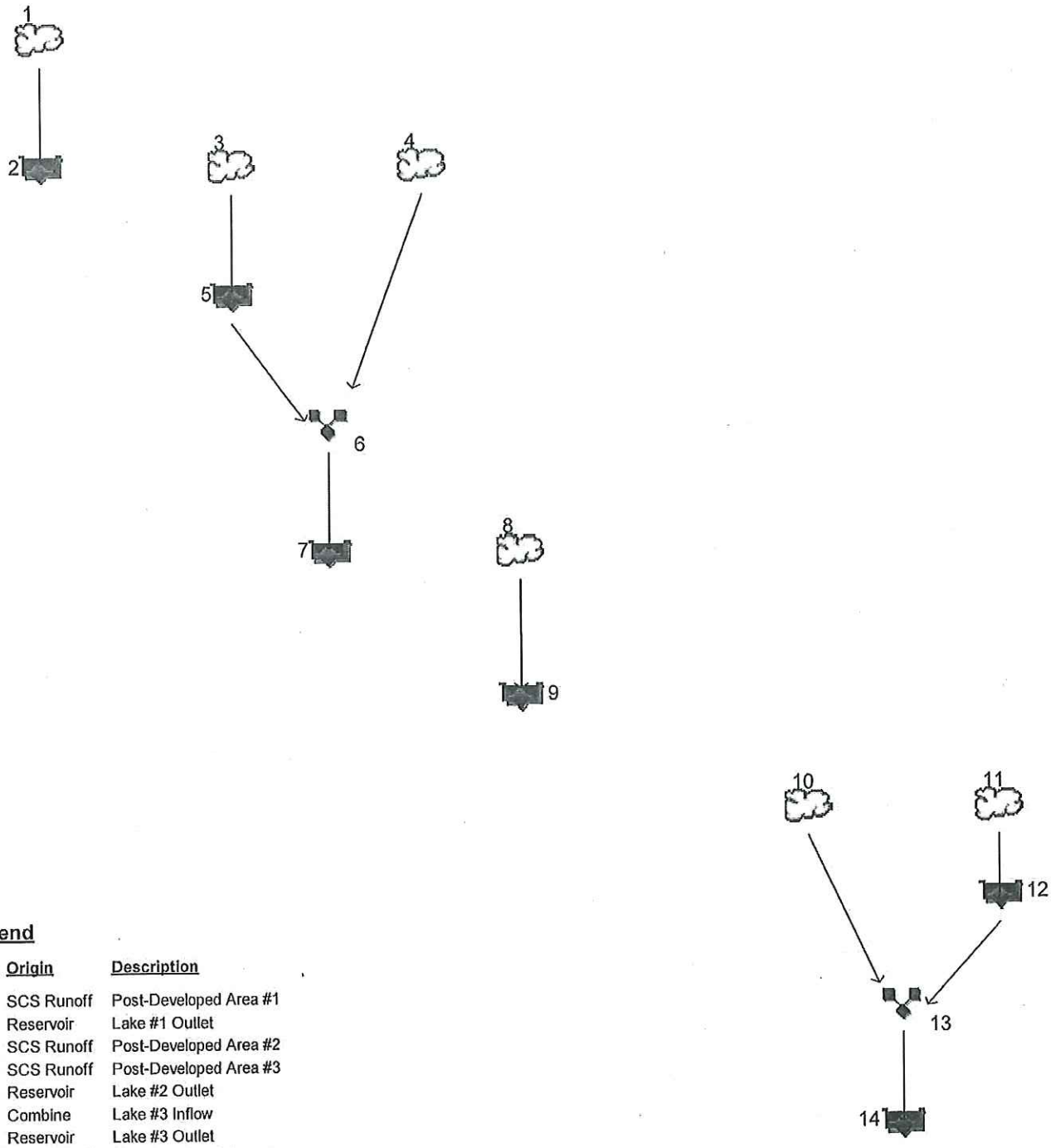
| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 5.566 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 1186 min |
| Time interval | = 2 min | Hyd. volume | = 638,495 cuft |
| Inflow hyd. No. | = 6 - Lake #3 Inflow | Max. Elevation | = 884.62 ft |
| Reservoir name | = Lake #3 | Max. Storage | = 454,151 cuft |

Storage Indication method used.



# Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8




## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Post-Developed Area #1 |
| 2 | Reservoir | Lake #1 Outlet |
| 3 | SCS Runoff | Post-Developed Area #2 |
| 4 | SCS Runoff | Post-Developed Area #3 |
| 5 | Reservoir | Lake #2 Outlet |
| 6 | Combine | Lake #3 Inflow |
| 7 | Reservoir | Lake #3 Outlet |
| 8 | SCS Runoff | Post-Developed Area #4 |
| 9 | Reservoir | Lake #4 Outflow |
| 10 | SCS Runoff | Post-Developed Area #5 |
| 11 | SCS Runoff | Offsite Miami University VOA |
| 12 | Reservoir | Offsite MU Basin |
| 13 | Combine | Basin 5 Inflow |
| 14 | Reservoir | Basin 5 Outflow |

# Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

| Hyd. No. | Hydrograph type (origin) | Inflow hyd(s) | Peak Outflow (cfs) | | | | | | | | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr | |
| 1 | SCS Runoff | ------ | 16.03 | 25.44 | ------- | 37.65 | 47.96 | 63.32 | 77.13 | 93.46 | Post-Developed Area #1 |
| 2 | Reservoir | 1 | 0.799 | 1.238 | ------- | 1.898 | 2.520 | 3.483 | 4.406 | 5.578 | Lake #1 Outlet |
| 3 | SCS Runoff | ------ | 5.994 | 11.72 | ------- | 19.62 | 26.50 | 36.95 | 46.74 | 58.58 | Post-Developed Area #2 |
| 4 | SCS Runoff | ------ | 9.025 | 23.54 | ------- | 46.94 | 68.38 | 101.81 | 133.26 | 171.82 | Post-Developed Area #3 |
| 5 | Reservoir | 3 | 0.196 | 0.315 | ------- | 0.504 | 0.689 | 1.001 | 1.395 | 3.098 | Lake #2 Outlet |
| 6 | Combine | 4, 5 | 9.083 | 23.65 | ------- | 47.10 | 68.60 | 102.13 | 133.70 | 172.44 | Lake #3 Inflow |
| 7 | Reservoir | 6 | 0.343 | 0.620 | ------- | 1.092 | 1.564 | 2.354 | 3.157 | 5.566 | Lake #3 Outlet |
| 8 | SCS Runoff | ------ | 16.74 | 26.16 | ------- | 38.45 | 48.83 | 64.13 | 77.85 | 94.05 | Post-Developed Area #4 |
| 9 | Reservoir | 8 | 0.293 | 0.470 | ------- | 0.729 | 0.975 | 1.378 | 1.852 | 3.606 | Lake #4 Outflow |
| 10 | SCS Runoff | ------ | 32.99 | 56.13 | ------- | 86.85 | 113.03 | 152.35 | 188.38 | 231.37 | Post-Developed Area #5 |
| 11 | SCS Runoff | ------ | 20.89 | 27.84 | ------- | 36.16 | 42.76 | 52.13 | 60.27 | 69.69 | Offsite Miami University VOA |
| 12 | Reservoir | 11 | 4.183 | 4.903 | ------- | 9.299 | 15.66 | 20.40 | 22.70 | 24.97 | Offsite MU Basin |
| 13 | Combine | 10, 12 | 37.00 | 60.81 | ------- | 93.90 | 127.27 | 172.21 | 210.21 | 255.41 | Basin 5 Inflow |
| 14 | Reservoir | 13 | 0.355 | 0.605 | ------- | 0.985 | 1.348 | 1.925 | 4.553 | 9.071 | Basin 5 Outflow |

Proj. file: Post-Developed.gpw

Monday, Apr 16, 2012

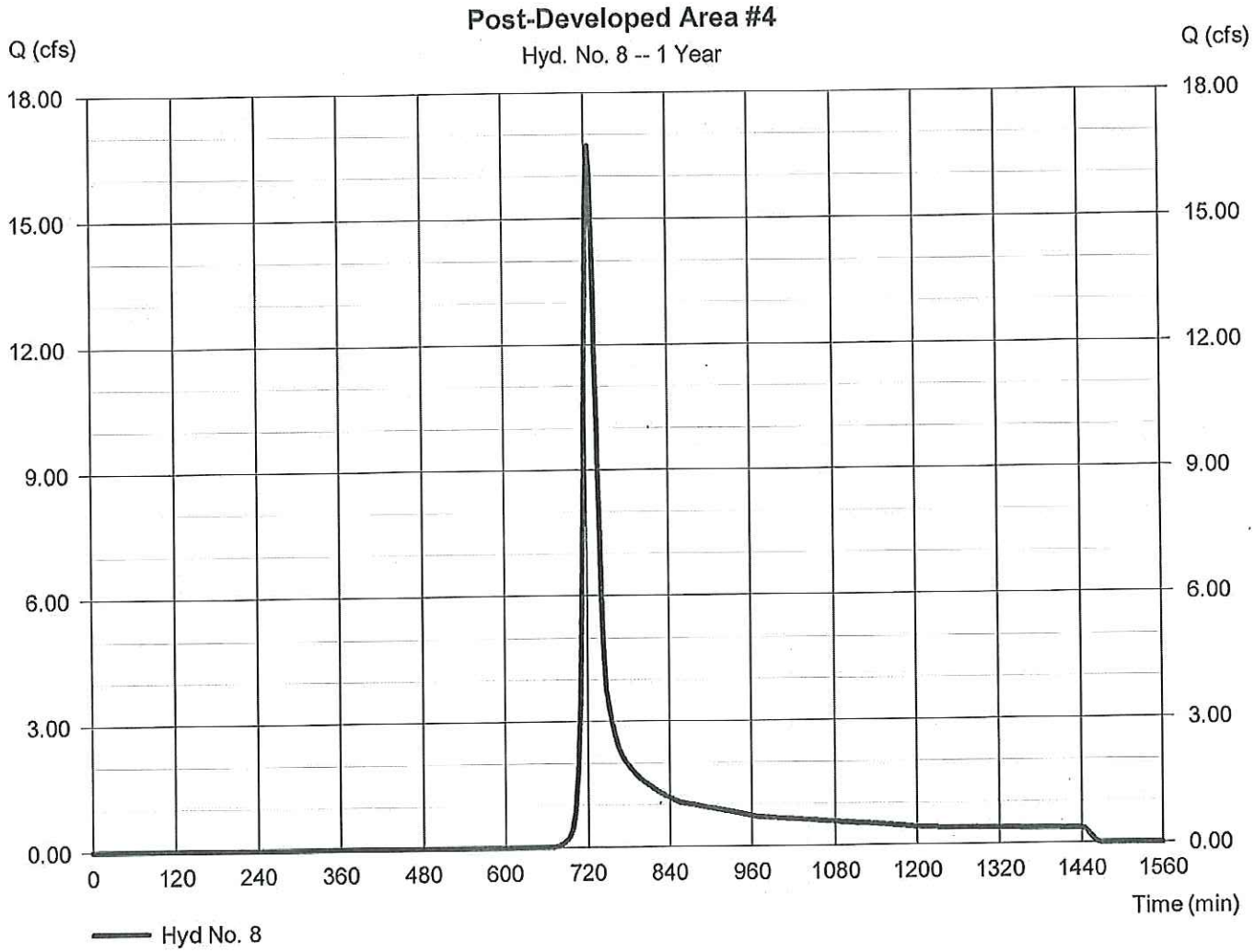
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 16.74 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 726 min |
| Time interval | = 2 min | Hyd. volume | = 56,008 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 2.33 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

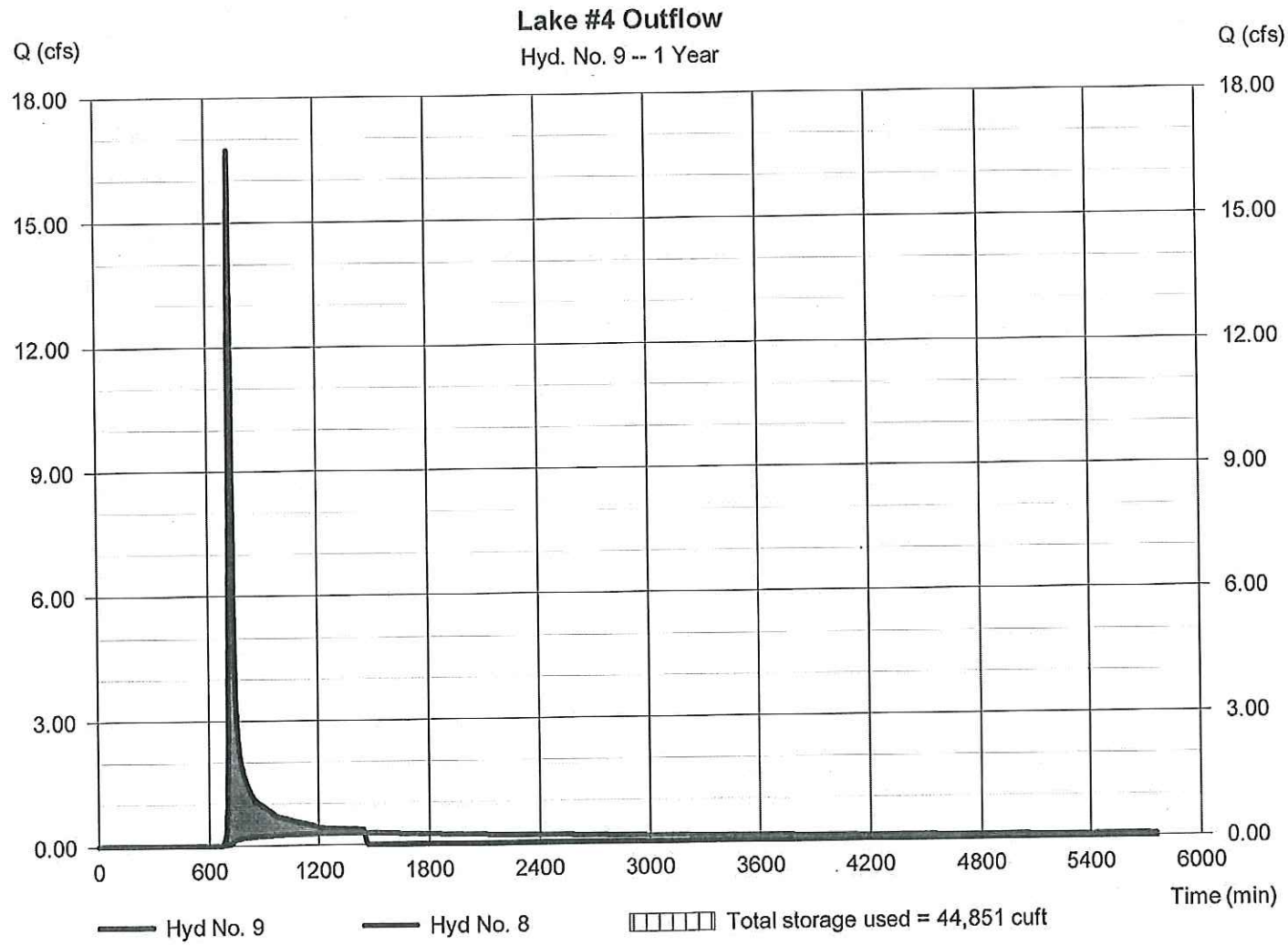
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## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.293 cfs |
| Storm frequency | = 1 yrs | Time to peak | = 1448 min |
| Time interval | = 2 min | Hyd. volume | = 46,780 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 890.03 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 44,851 cuft |

Storage Indication method used.



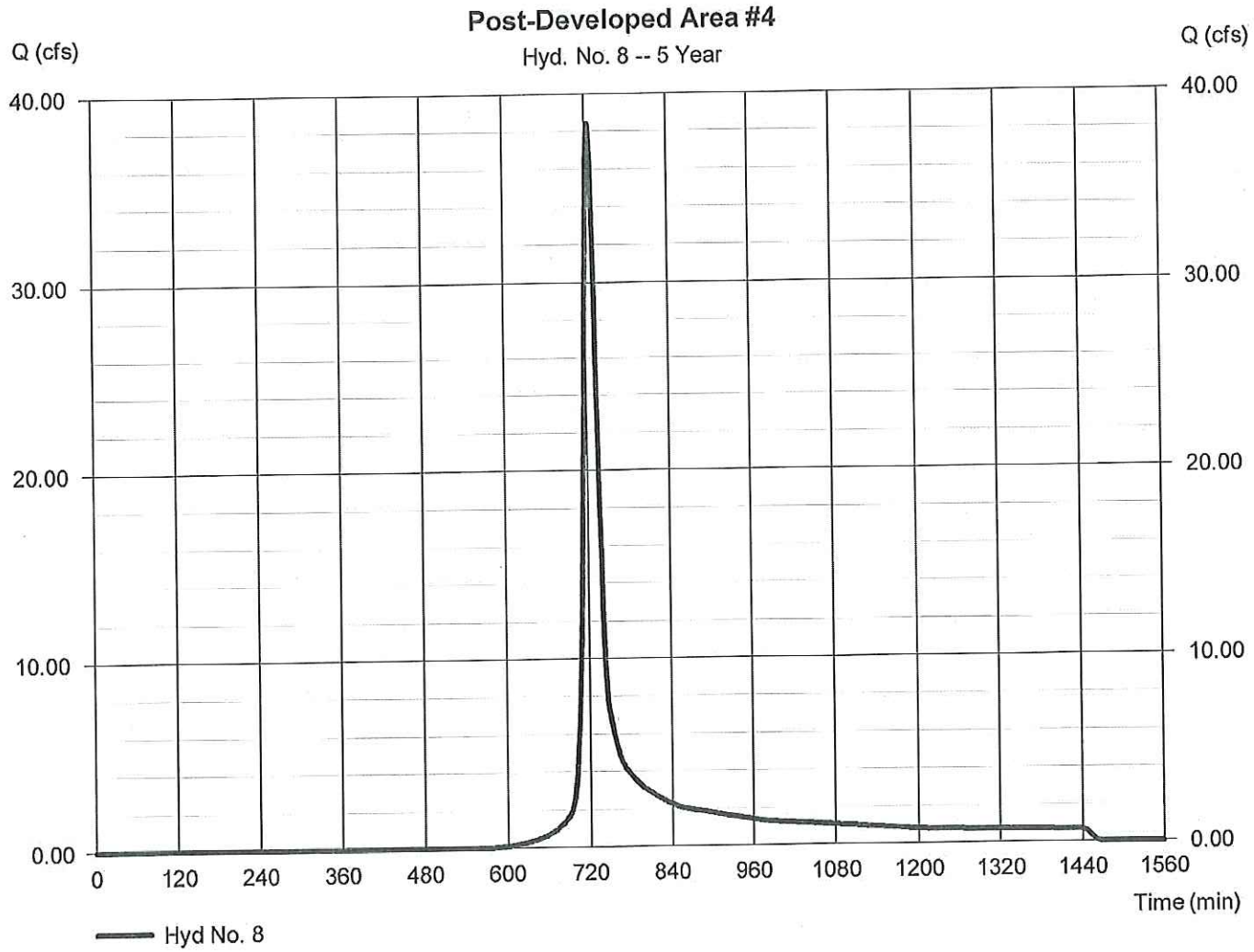
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 38.45 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 121,969 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 3.49 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

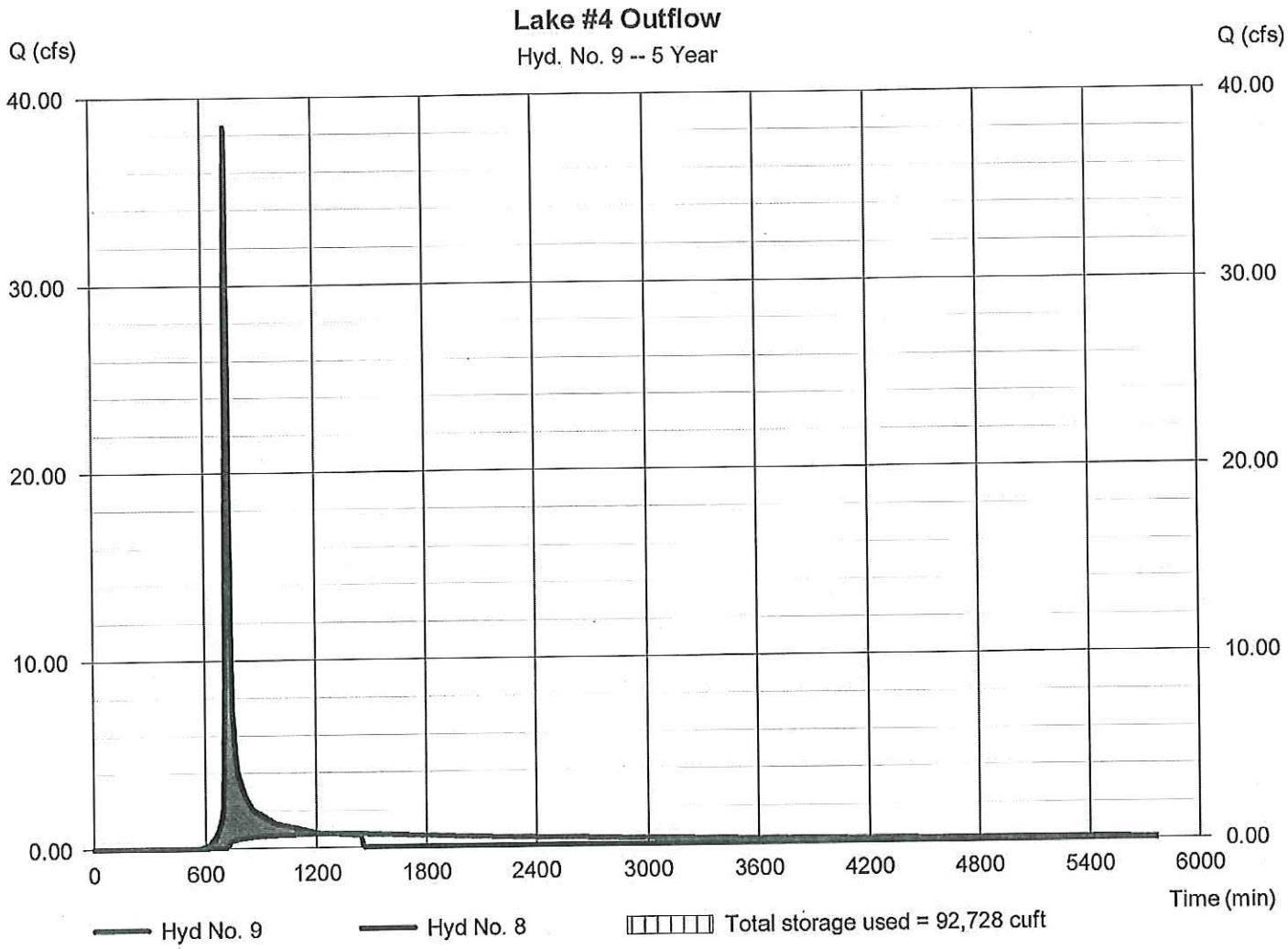
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## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.729 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 1294 min |
| Time interval | = 2 min | Hyd. volume | = 104,661 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 890.48 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 92,728 cuft |

Storage Indication method used.



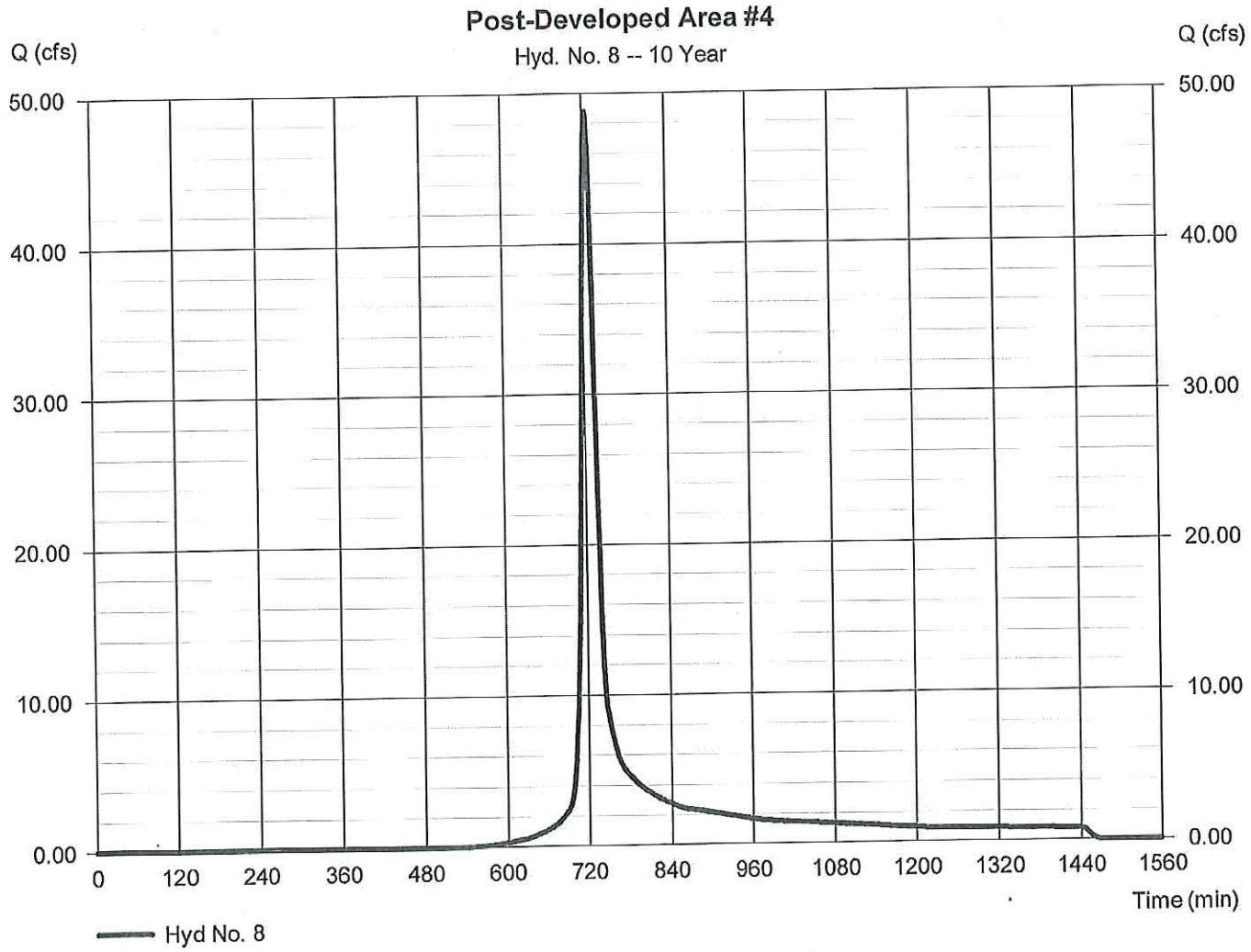
# Hydrograph Report

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## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 48.83 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 153,597 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 3.99 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

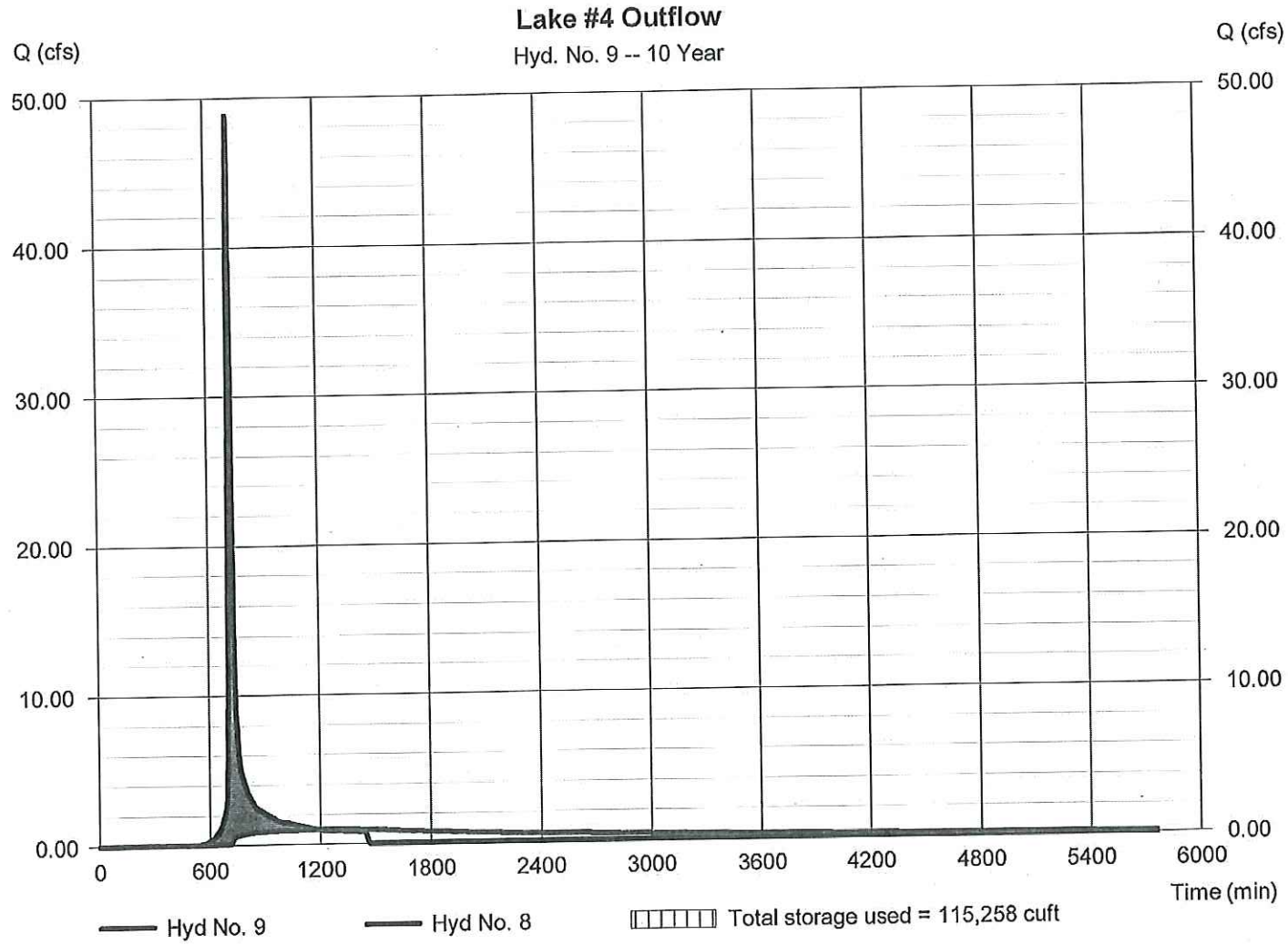
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## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.975 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 1194 min |
| Time interval | = 2 min | Hyd. volume | = 133,478 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 890.69 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 115,258 cuft |

Storage Indication method used.



# Hydrograph Report

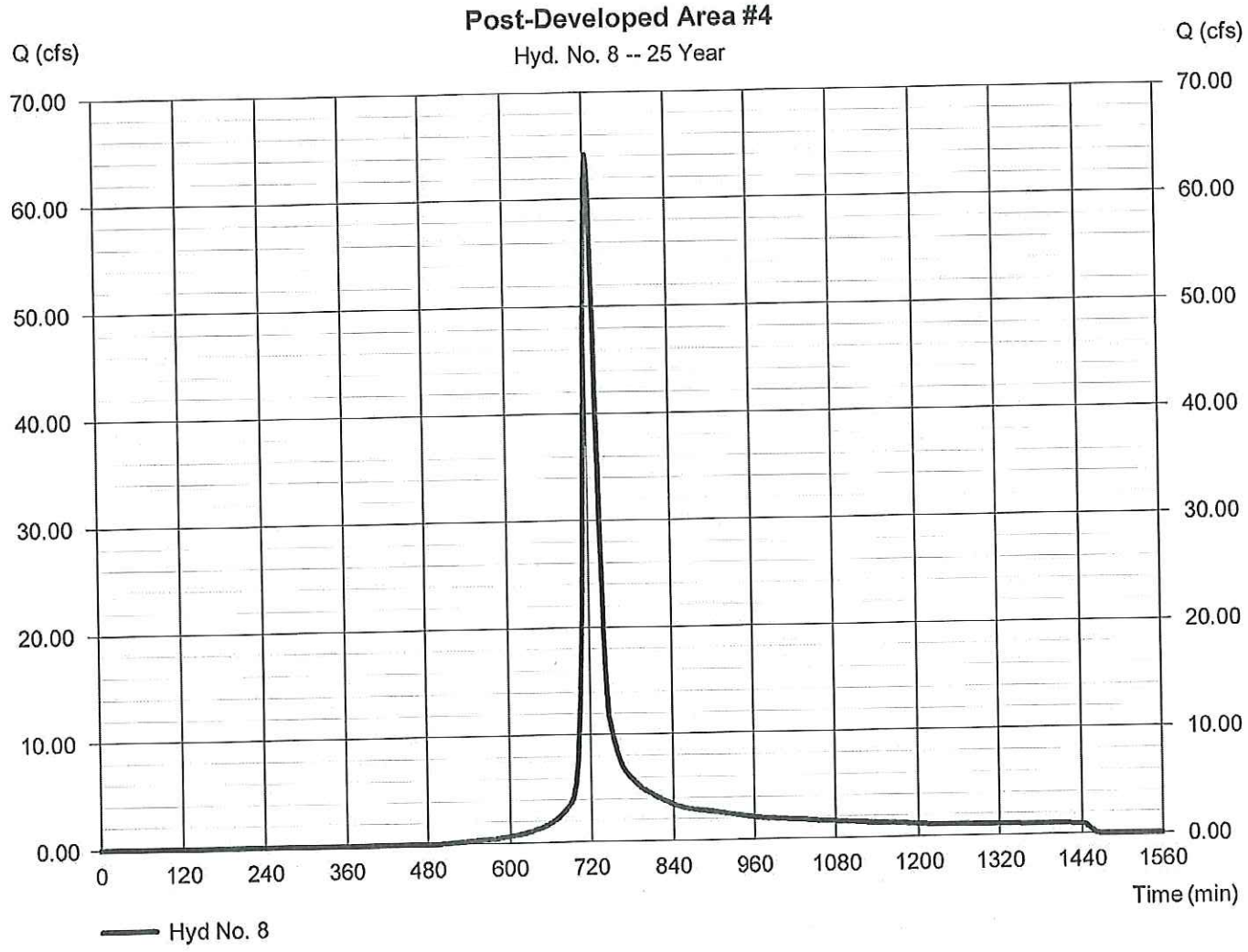
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8

Monday, Apr 16, 2012

## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 64.13 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 200,684 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 4.70 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

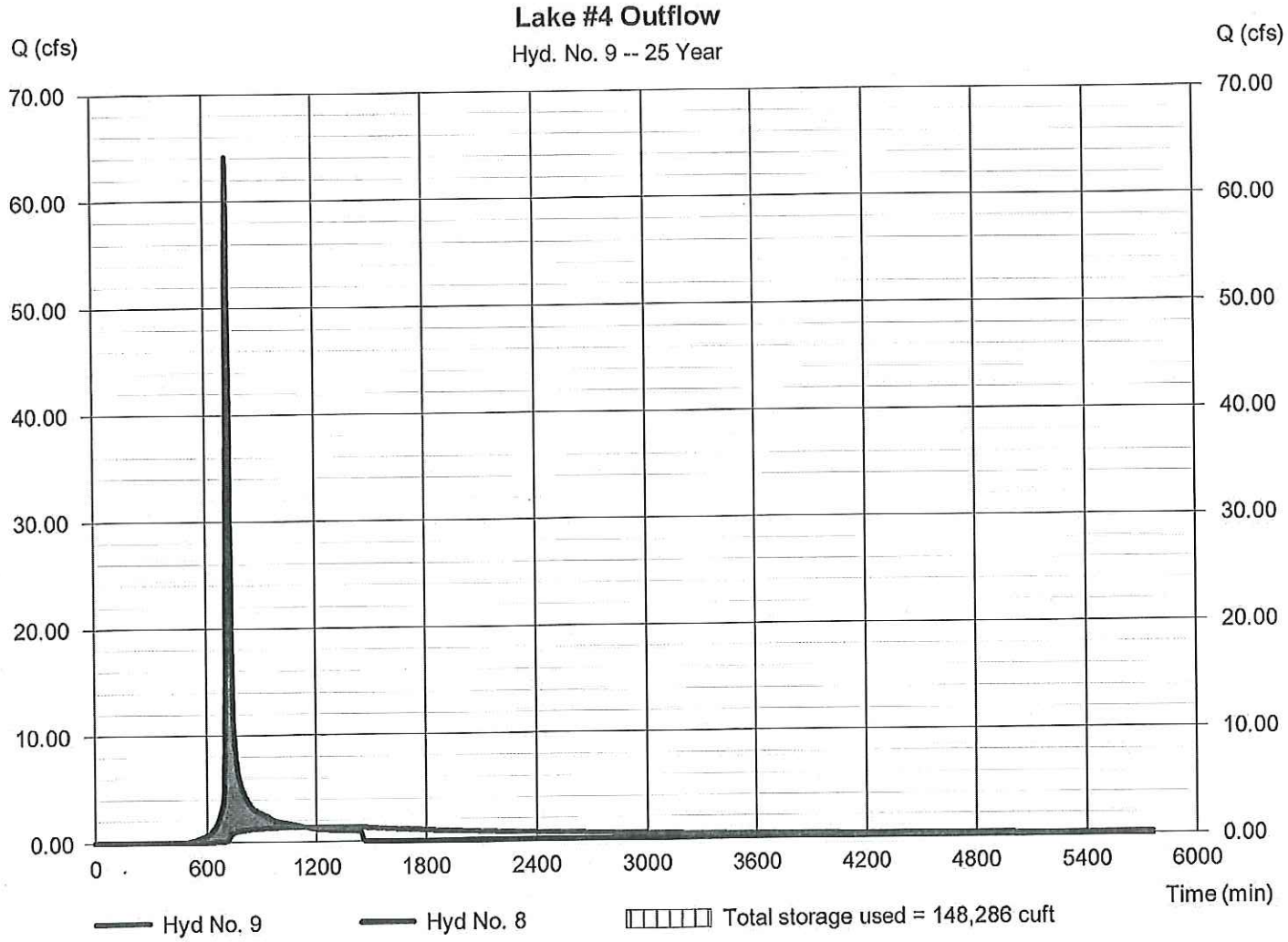
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## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.378 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 1146 min |
| Time interval | = 2 min | Hyd. volume | = 177,117 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 891.00 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 148,286 cuft |

Storage Indication method used.



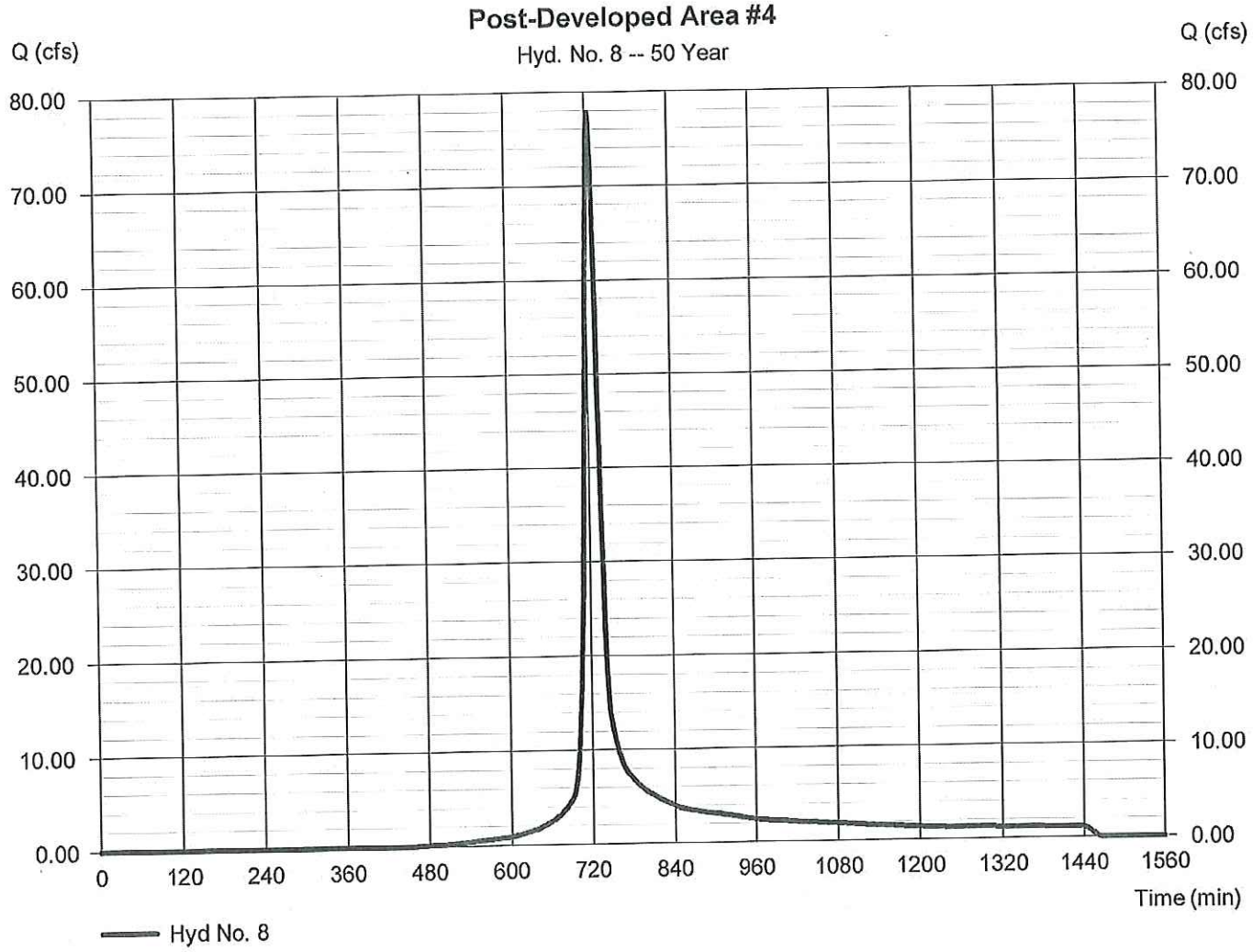
# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 77.85 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 243,382 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 5.32 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

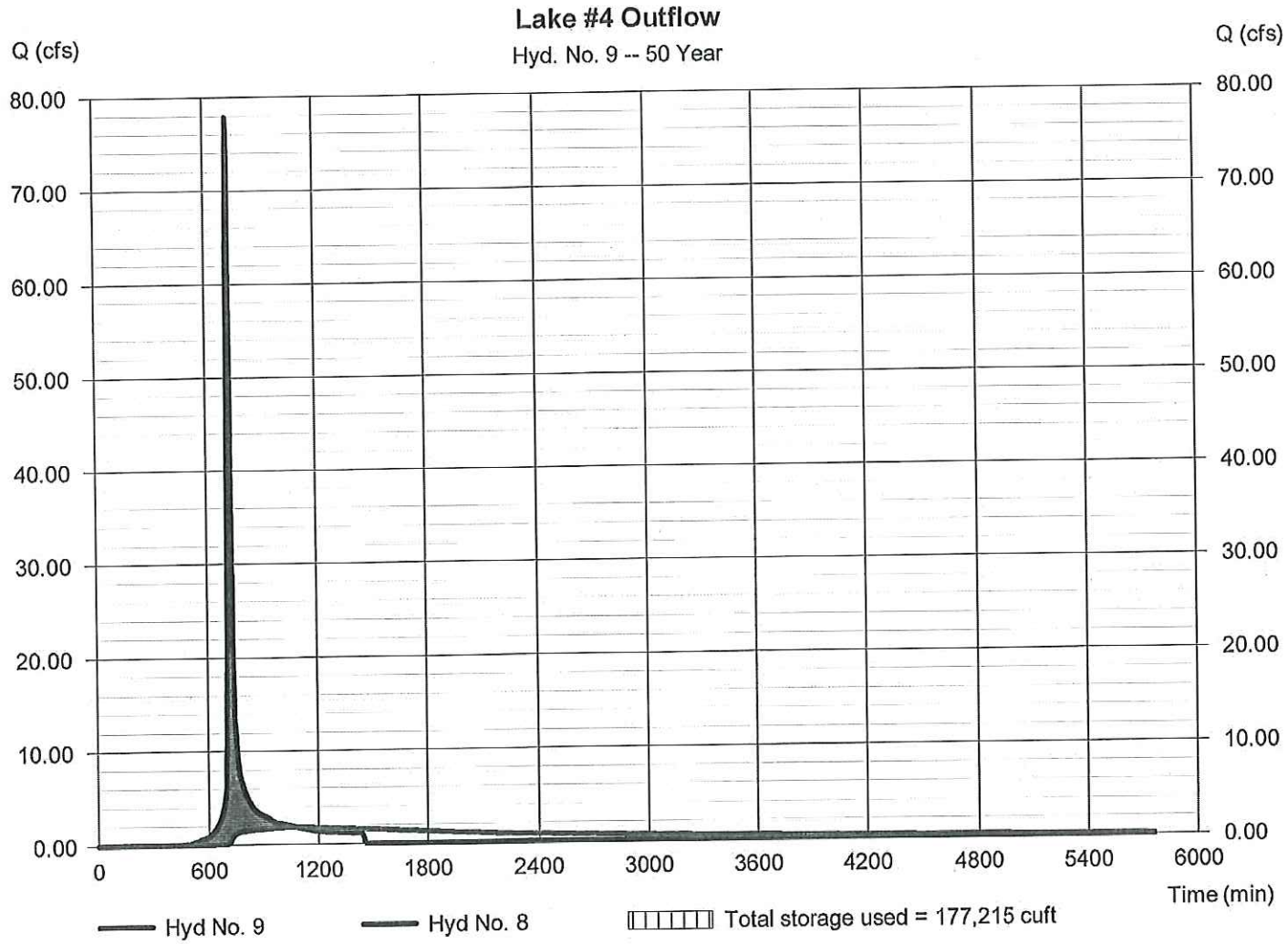
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## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.852 cfs |
| Storm frequency | = 50 yrs | Time to peak | = 1086 min |
| Time interval | = 2 min | Hyd. volume | = 217,301 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 891.26 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 177,215 cuft |

Storage Indication method used.



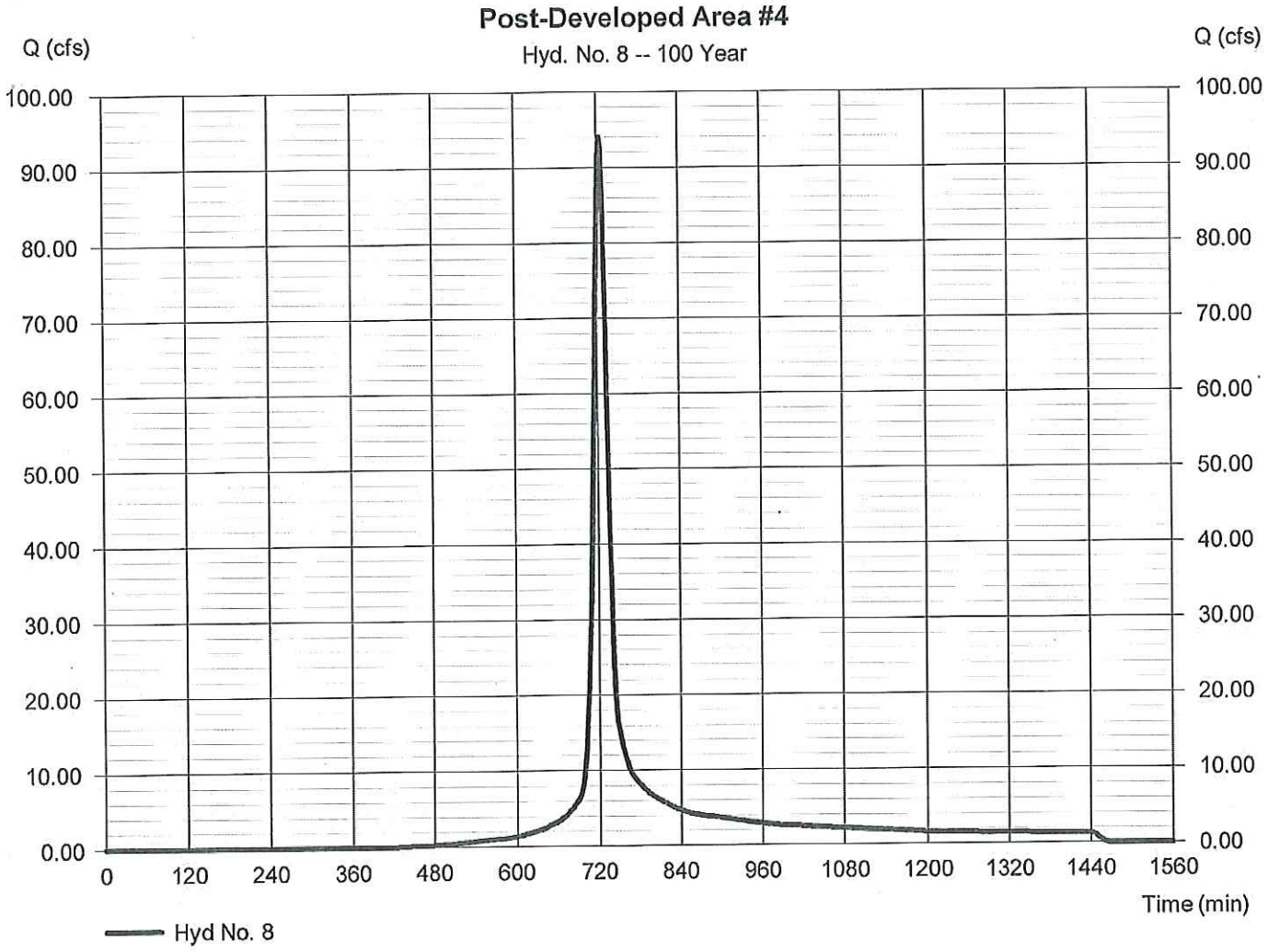
# Hydrograph Report

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## Hyd. No. 8

Post-Developed Area #4

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 94.05 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 724 min |
| Time interval | = 2 min | Hyd. volume | = 294,358 cuft |
| Drainage area | = 22.250 ac | Curve number | = 78.3 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = User | Time of conc. (Tc) | = 18.70 min |
| Total precip. | = 6.04 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. v8 — Monday, Apr 16, 2012

## Hyd. No. 9

Lake #4 Outflow

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 3.606 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 904 min |
| Time interval | = 2 min | Hyd. volume | = 267,424 cuft |
| Inflow hyd. No. | = 8 - Post-Developed Area #4 | Max. Elevation | = 891.45 ft |
| Reservoir name | = Lake #4 | Max. Storage | = 199,116 cuft |

Storage Indication method used.

