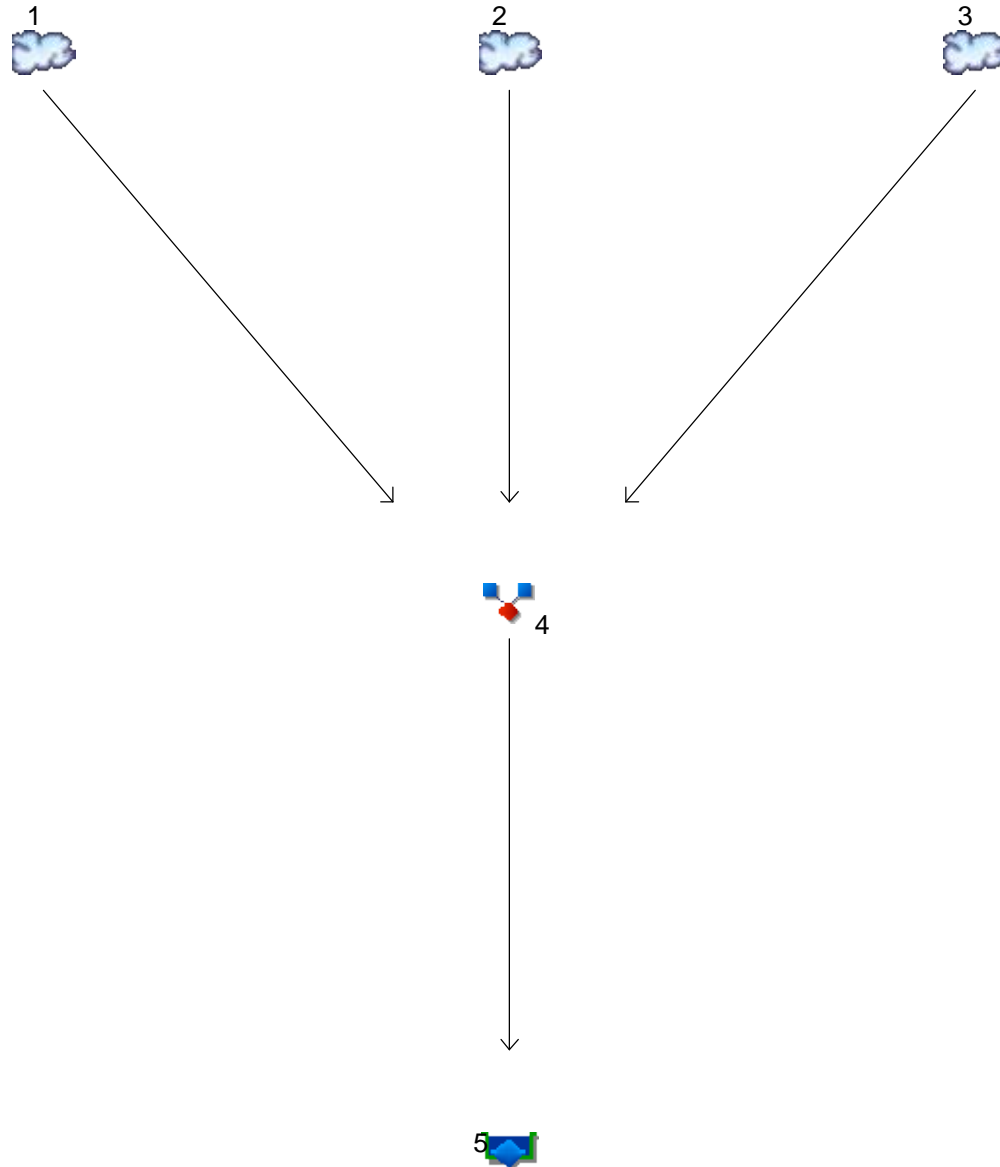


# Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10



## Legend

| <u>Hyd. Origin</u> | <u>Description</u>               |
|--------------------|----------------------------------|
| 1                  | SCS Runoff West offsite          |
| 2                  | SCS Runoff East Offsite          |
| 3                  | SCS Runoff West High Athletics   |
| 4                  | Combine to Sed basin             |
| 5                  | Reservoir Sediment Basin Outfall |

# Hydrograph Return Period Recap

Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| 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               | -----         | 33.08              | 46.17 | 6.432 | 65.24  | 78.68  | 95.96  | 111.30 | 128.50 | West offsite           |
| 2        | SCS Runoff               | -----         | 15.99              | 21.30 | 4.278 | 28.86  | 34.13  | 40.86  | 46.82  | 53.49  | East Offsite           |
| 3        | SCS Runoff               | -----         | 20.52              | 30.14 | 2.519 | 44.54  | 54.85  | 68.23  | 80.17  | 93.62  | West High Athletics    |
| 4        | Combine                  | 1, 2, 3       | 60.56              | 85.35 | 11.06 | 121.74 | 147.52 | 180.78 | 210.35 | 243.56 | to Sed basin           |
| 5        | Reservoir                | 4             | 0.000              | 0.000 | 0.000 | 0.054  | 0.510  | 1.691  | 3.217  | 5.376  | Sediment Basin Outfall |

# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)    | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 33.08           | 2                   | 734                | 150,028               | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 15.99           | 2                   | 722                | 45,380                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 20.52           | 2                   | 722                | 58,024                | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 60.56           | 2                   | 724                | 253,432               | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 0.000           | 2                   | 1008               | 0                     | 4             | 1290.03                | 180,447                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 1 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

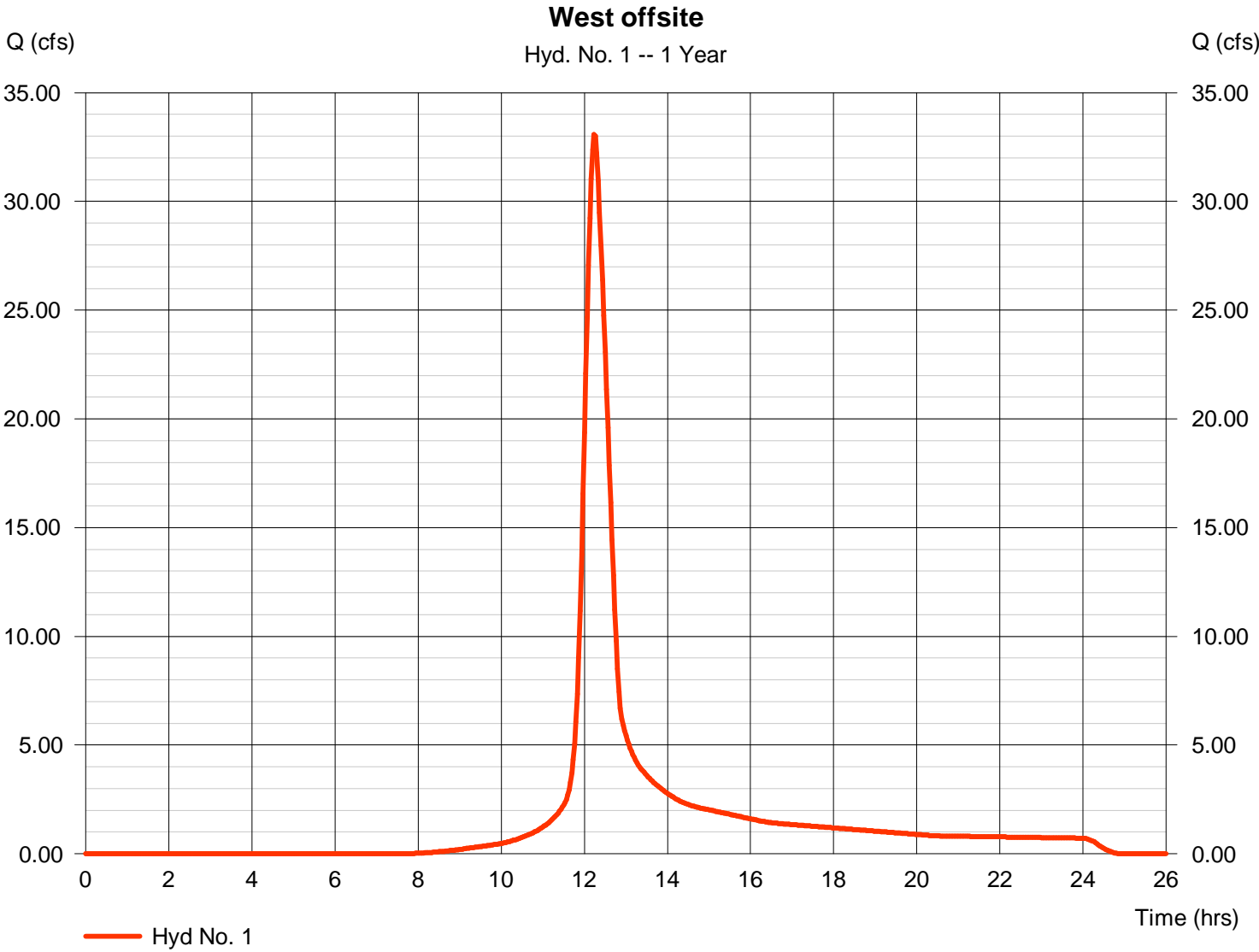
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 33.08 cfs    |
| Storm frequency | = 1 yrs      | Time to peak       | = 12.23 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 150,028 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min    |
| Total precip.   | = 2.80 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

## Hyd. No. 1

West offsite

| <u>Description</u>                 | <u>A</u>       | <u>B</u>      | <u>C</u>      | <u>Totals</u>    |
|------------------------------------|----------------|---------------|---------------|------------------|
| <b>Sheet Flow</b>                  |                |               |               |                  |
| Manning's n-value                  | = 0.050        | 0.011         | 0.011         |                  |
| Flow length (ft)                   | = 250.0        | 0.0           | 0.0           |                  |
| Two-year 24-hr precip. (in)        | = 3.50         | 0.00          | 0.00          |                  |
| Land slope (%)                     | = 0.40         | 0.00          | 0.00          |                  |
| <b>Travel Time (min)</b>           | <b>= 15.41</b> | <b>+ 0.00</b> | <b>+ 0.00</b> | <b>= 15.41</b>   |
| <b>Shallow Concentrated Flow</b>   |                |               |               |                  |
| Flow length (ft)                   | = 1500.00      | 0.00          | 0.00          |                  |
| Watercourse slope (%)              | = 0.40         | 0.00          | 0.00          |                  |
| Surface description                | = Paved        | Paved         | Paved         |                  |
| Average velocity (ft/s)            | =1.29          | 0.00          | 0.00          |                  |
| <b>Travel Time (min)</b>           | <b>= 19.45</b> | <b>+ 0.00</b> | <b>+ 0.00</b> | <b>= 19.45</b>   |
| <b>Channel Flow</b>                |                |               |               |                  |
| X sectional flow area (sqft)       | = 0.00         | 0.00          | 0.00          |                  |
| Wetted perimeter (ft)              | = 0.00         | 0.00          | 0.00          |                  |
| Channel slope (%)                  | = 0.00         | 0.00          | 0.00          |                  |
| Manning's n-value                  | = 0.015        | 0.015         | 0.015         |                  |
| Velocity (ft/s)                    | =0.00          | 0.00          | 0.00          |                  |
| Flow length (ft)                   | {{0}}0.0       | 0.0           | 0.0           |                  |
| <b>Travel Time (min)</b>           | <b>= 0.00</b>  | <b>+ 0.00</b> | <b>+ 0.00</b> | <b>= 0.00</b>    |
| <b>Total Travel Time, Tc .....</b> |                |               |               | <b>34.90 min</b> |

# Hydrograph Report

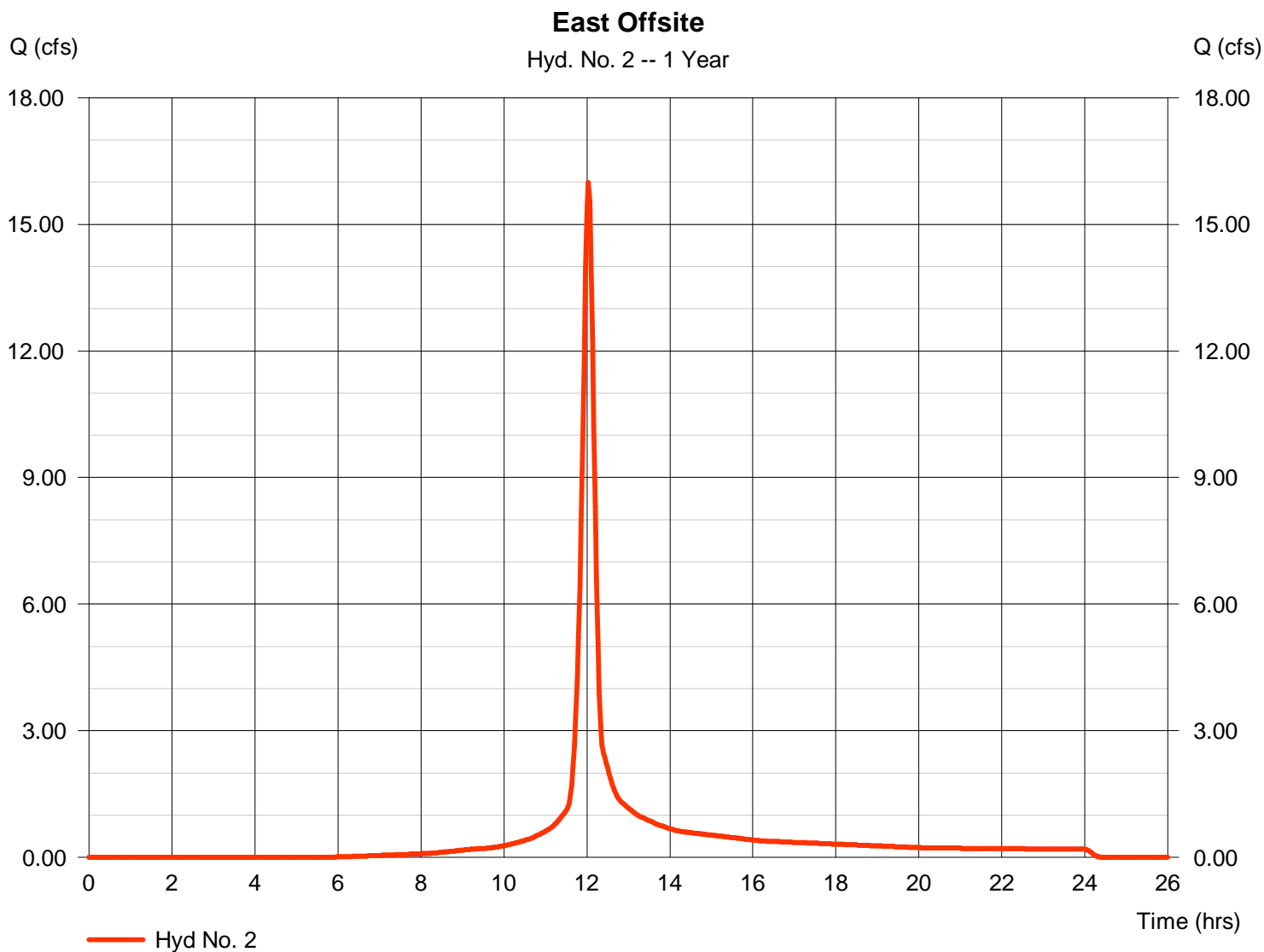
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 15.99 cfs   |
| Storm frequency | = 1 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 45,380 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 2.80 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

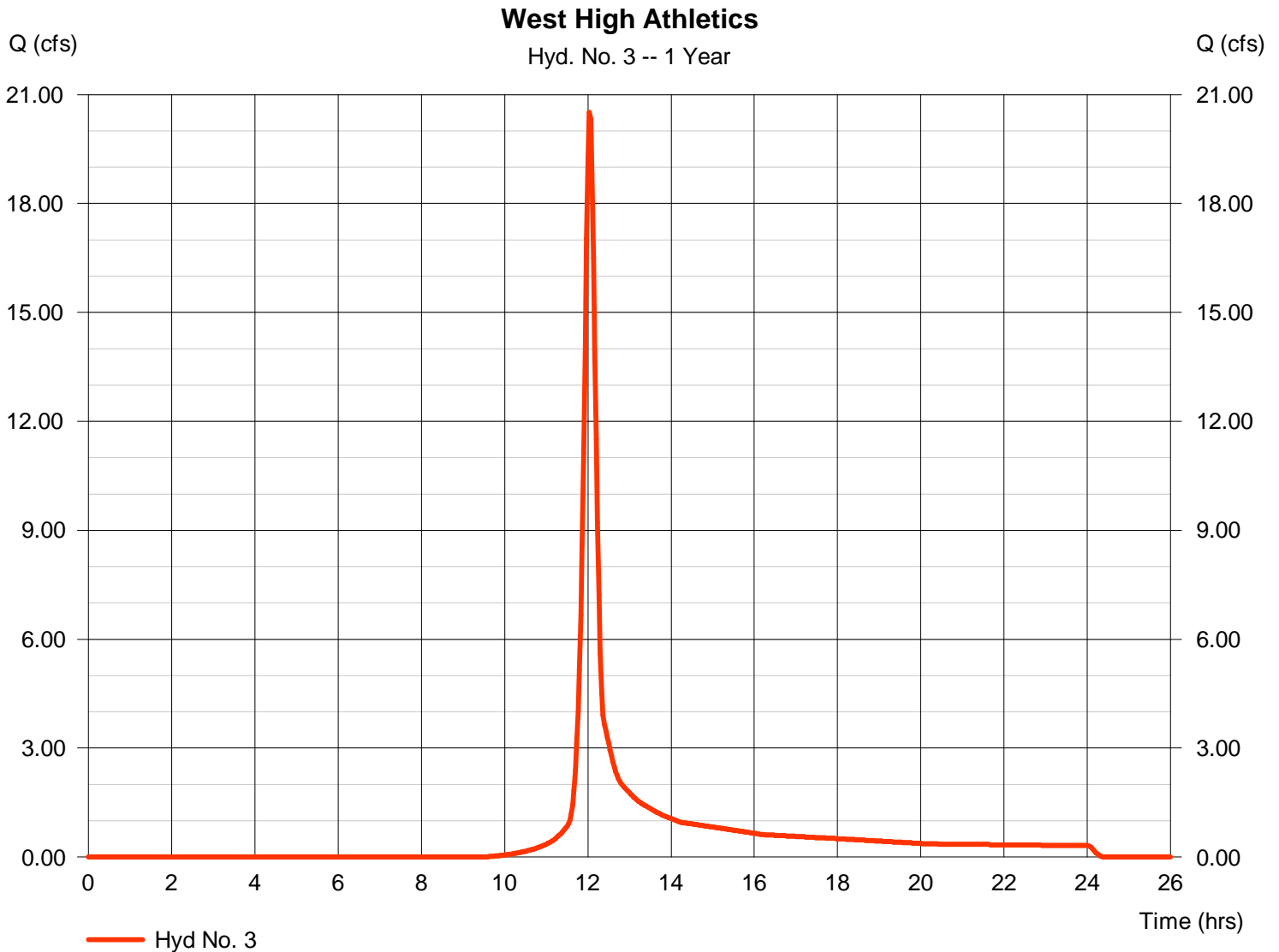
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 20.52 cfs   |
| Storm frequency | = 1 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 58,024 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 2.80 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

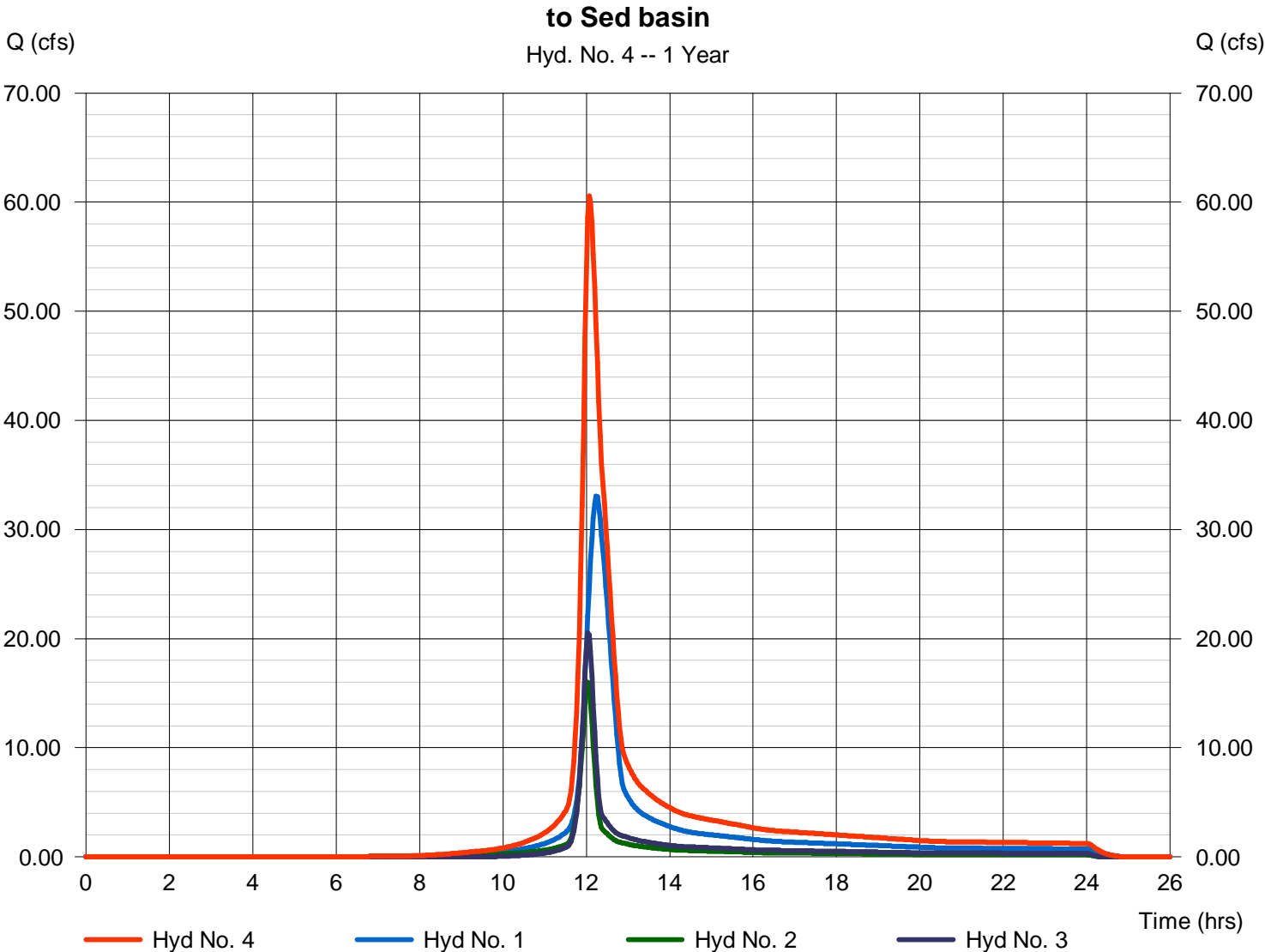
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

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

Peak discharge = 60.56 cfs  
Time to peak = 12.07 hrs  
Hyd. volume = 253,432 cuft  
Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

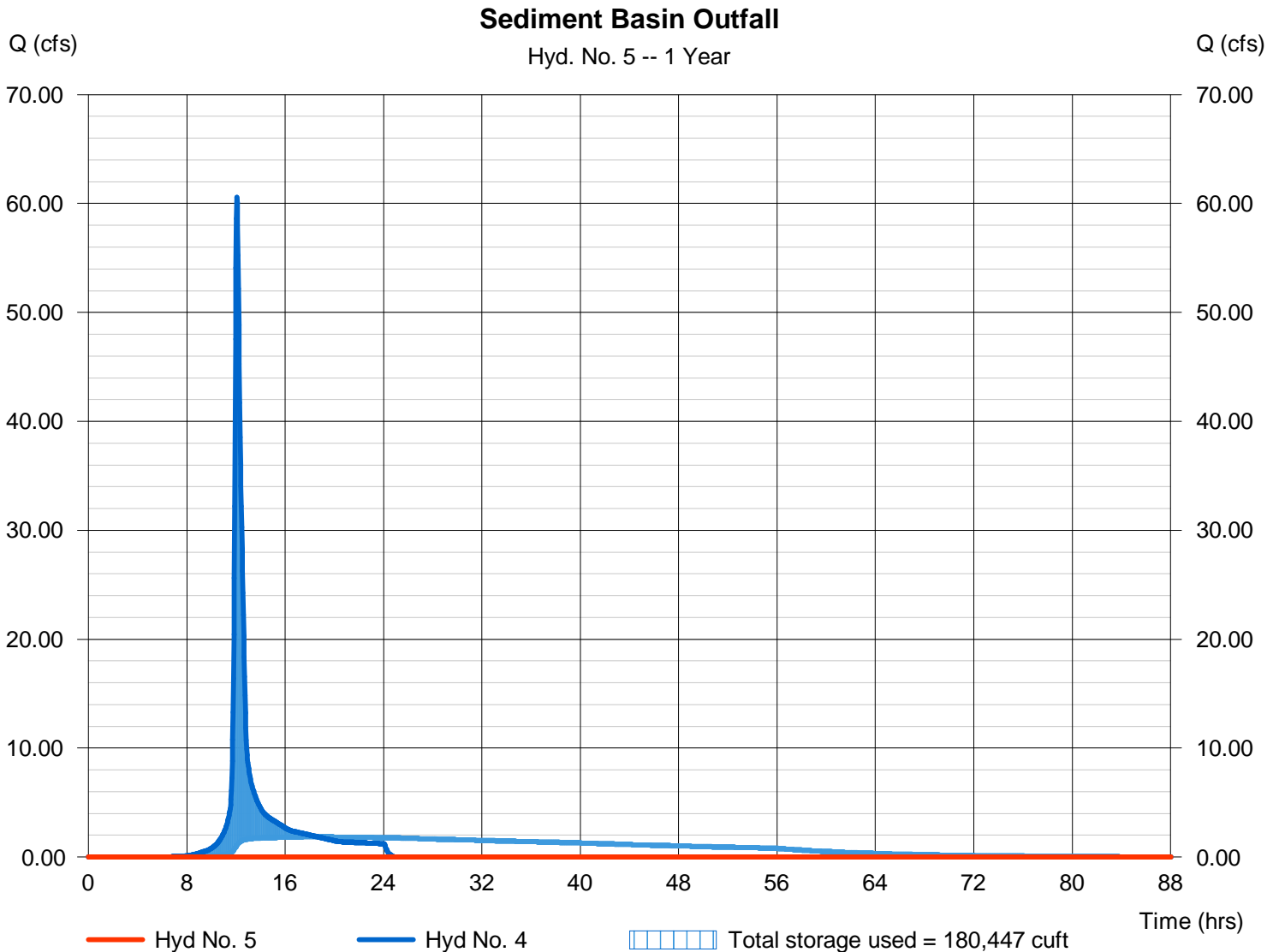
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 0.000 cfs    |
| Storm frequency | = 1 yrs            | Time to peak   | = 16.80 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 0 cuft       |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1290.03 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 180,447 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



## Pond No. 1 - Sediment Basin

### Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 1287.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|------------|----------------|---------------------|----------------------|----------------------|
| 0.00       | 1287.00        | 10,800              | 0                    | 0                    |
| 1.00       | 1288.00        | 46,630              | 26,621               | 26,621               |
| 2.00       | 1289.00        | 75,350              | 60,412               | 87,033               |
| 3.00       | 1290.00        | 104,300             | 89,425               | 176,458              |
| 4.00       | 1291.00        | 207,060             | 152,757              | 329,215              |
| 5.00       | 1292.00        | 520,160             | 351,766              | 680,981              |
| 6.00       | 1293.00        | 900,000             | 701,387              | 1,382,368            |

### Culvert / Orifice Structures

|                 | [A]       | [B]  | [C]  | [PrfRsr] |
|-----------------|-----------|------|------|----------|
| Rise (in)       | = 24.00   | 0.00 | 0.00 | 0.00     |
| Span (in)       | = 24.00   | 0.00 | 0.00 | 0.00     |
| No. Barrels     | = 1       | 0    | 0    | 0        |
| Invert El. (ft) | = 1291.00 | 0.00 | 0.00 | 0.00     |
| Length (ft)     | = 110.00  | 0.00 | 0.00 | 0.00     |
| Slope (%)       | = 0.90    | 0.00 | 0.00 | n/a      |
| N-Value         | = .013    | .013 | .013 | n/a      |
| Orifice Coeff.  | = 0.60    | 0.60 | 0.60 | 0.60     |
| Multi-Stage     | = n/a     | No   | No   | No       |

### Weir Structures

|                | [A]                  | [B]  | [C]  | [D]  |
|----------------|----------------------|------|------|------|
| Crest Len (ft) | Inactive             | 0.00 | 0.00 | 0.00 |
| Crest El. (ft) | = 1289.25            | 0.00 | 0.00 | 0.00 |
| Weir Coeff.    | = 2.60               | 3.33 | 3.33 | 3.33 |
| Weir Type      | = Broad              | ---  | ---  | ---  |
| Multi-Stage    | = No                 | No   | No   | No   |
| Exfil.(in/hr)  | = 0.750 (by Contour) |      |      |      |
| TW Elev. (ft)  | = 0.00               |      |      |      |

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

### Stage / Storage / Discharge Table

| Stage ft | Storage cuft | Elevation ft | Civ A cfs | Civ B cfs | Civ C cfs | PrfRsr cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | User cfs | Total cfs |
|----------|--------------|--------------|-----------|-----------|-----------|------------|----------|----------|----------|----------|-----------|----------|-----------|
| 0.00     | 0            | 1287.00      | 0.00      | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 0.000     | ---      | 0.000     |
| 1.00     | 26,621       | 1288.00      | 0.00      | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 0.810     | ---      | 0.810     |
| 2.00     | 87,033       | 1289.00      | 0.00      | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 1.308     | ---      | 1.308     |
| 3.00     | 176,458      | 1290.00      | 0.00      | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 1.811     | ---      | 1.811     |
| 4.00     | 329,215      | 1291.00      | 0.00      | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 3.595     | ---      | 3.595     |
| 5.00     | 680,981      | 1292.00      | 5.36 ic   | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 9.030     | ---      | 14.39     |
| 6.00     | 1,382,368    | 1293.00      | 14.84 oc  | ---       | ---       | ---        | 0.00     | ---      | ---      | ---      | 15.625    | ---      | 30.47     |

# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)    | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 46.17           | 2                   | 734                | 209,119               | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 21.30           | 2                   | 722                | 61,157                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 30.14           | 2                   | 722                | 84,542                | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 85.35           | 2                   | 724                | 354,818               | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 0.000           | 2                   | 762                | 0                     | 4             | 1290.50                | 252,997                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 2 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

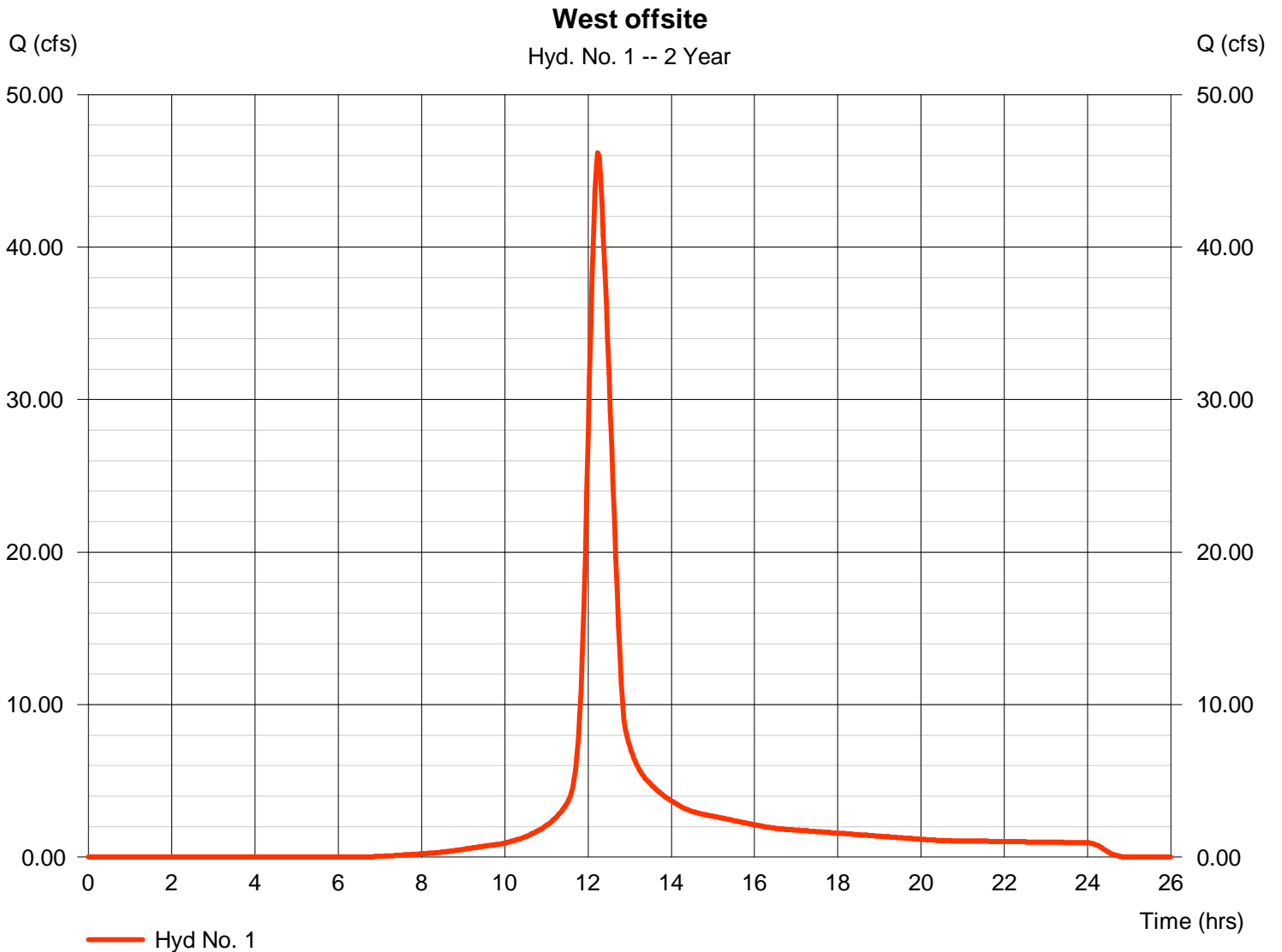
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 46.17 cfs    |
| Storm frequency | = 2 yrs      | Time to peak       | = 12.23 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 209,119 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min    |
| Total precip.   | = 3.50 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

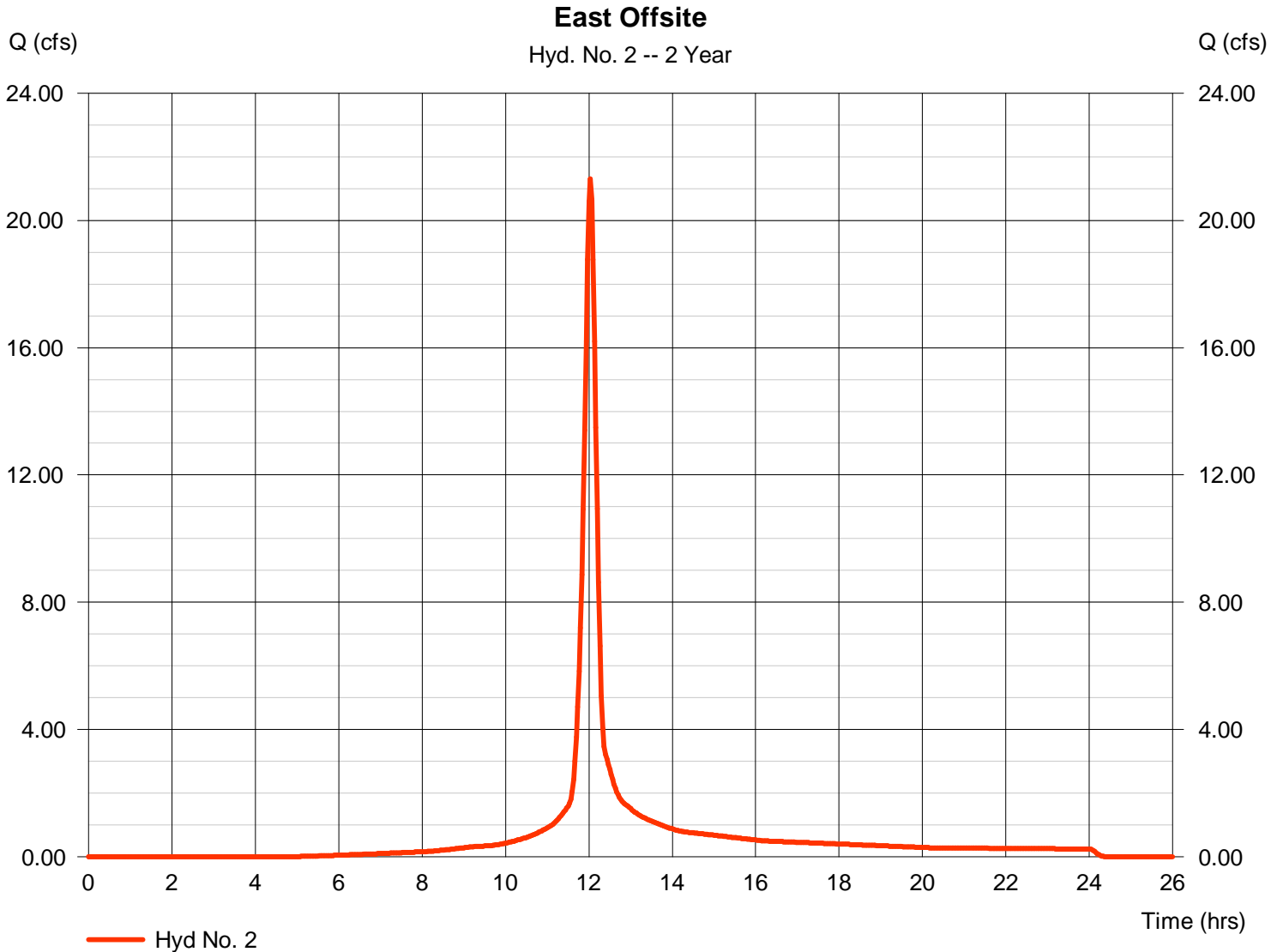
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 21.30 cfs   |
| Storm frequency | = 2 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 61,157 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 3.50 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

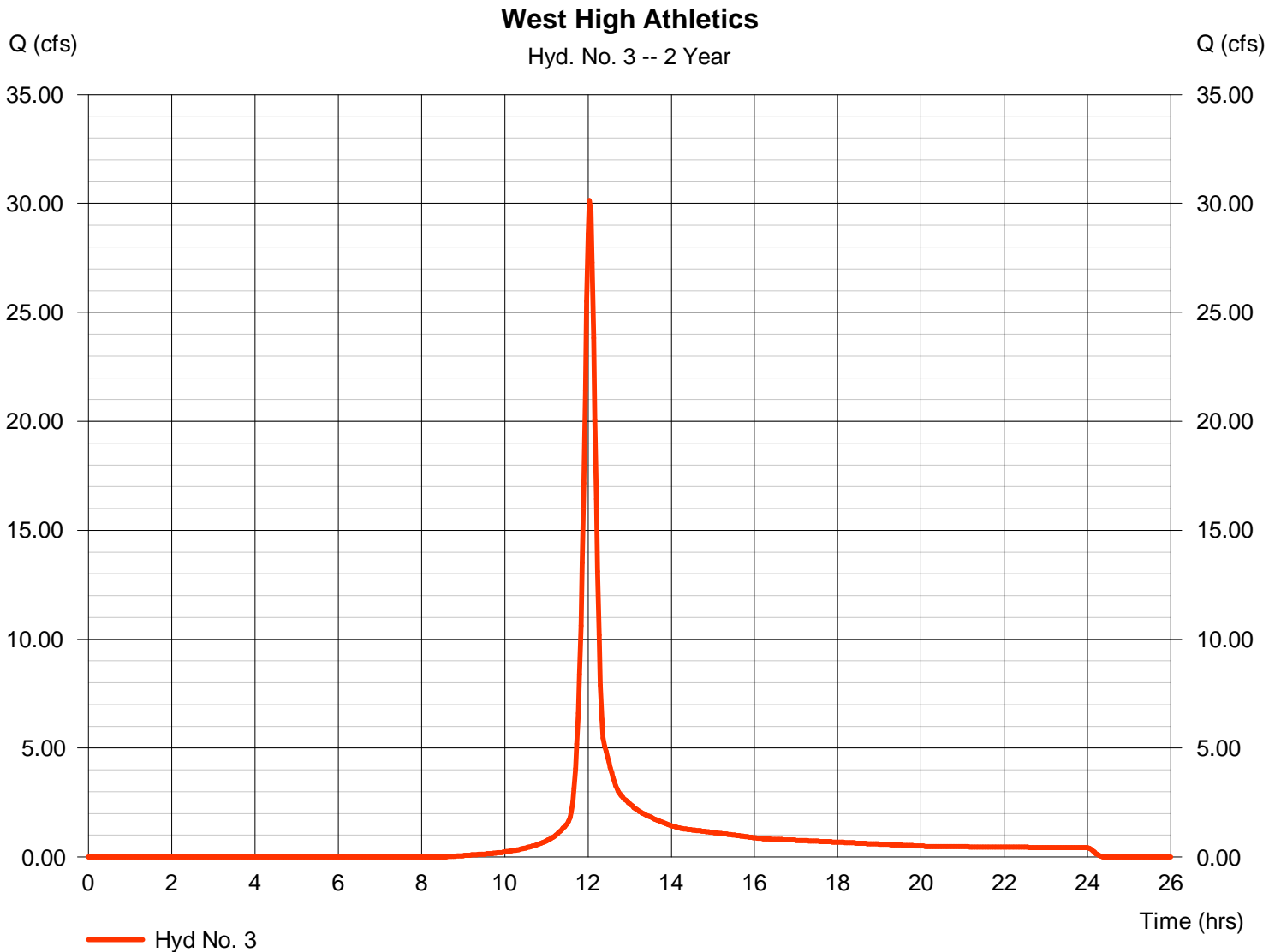
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 30.14 cfs   |
| Storm frequency | = 2 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 84,542 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 3.50 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

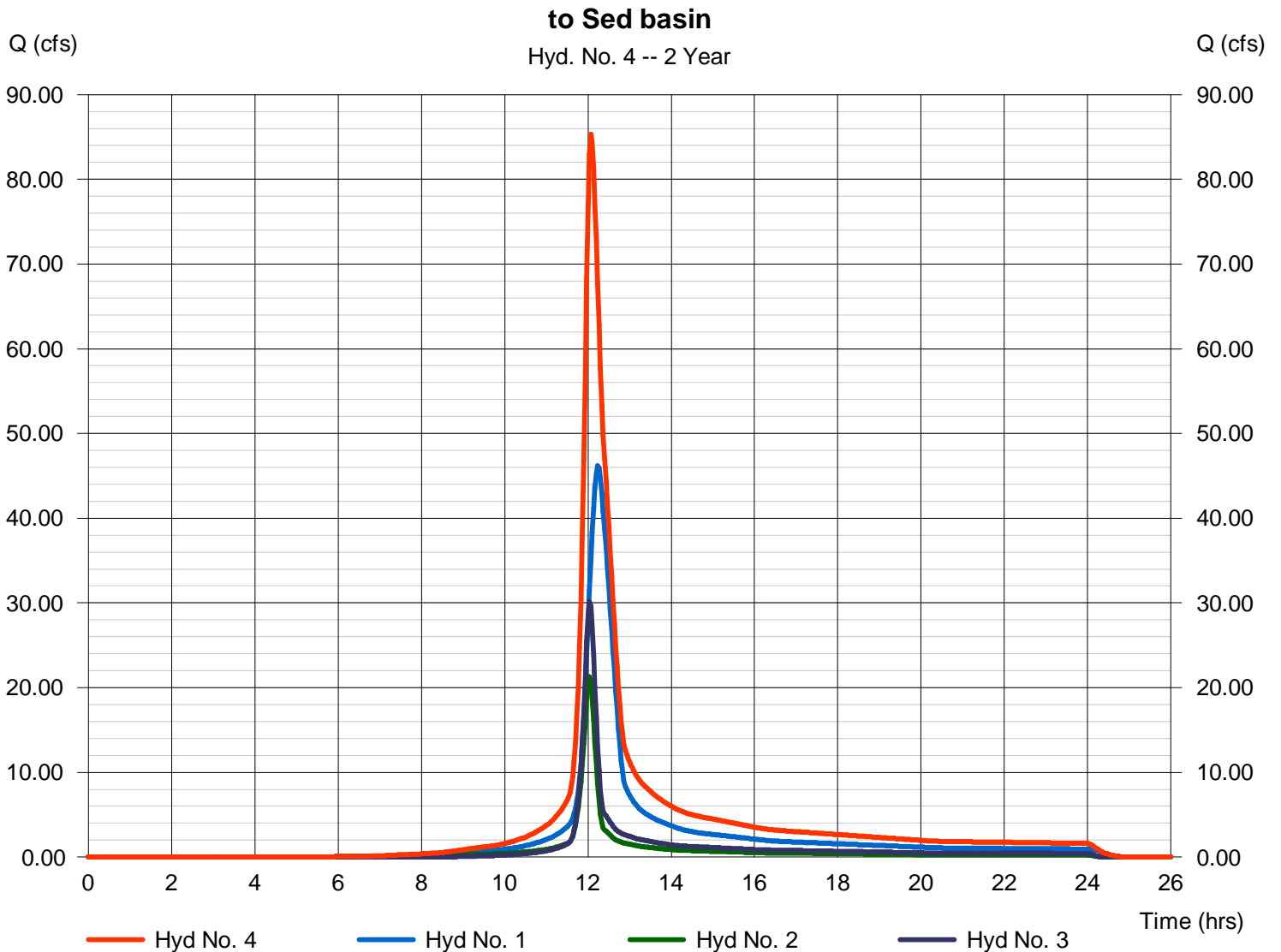
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

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

Peak discharge = 85.35 cfs  
 Time to peak = 12.07 hrs  
 Hyd. volume = 354,818 cuft  
 Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

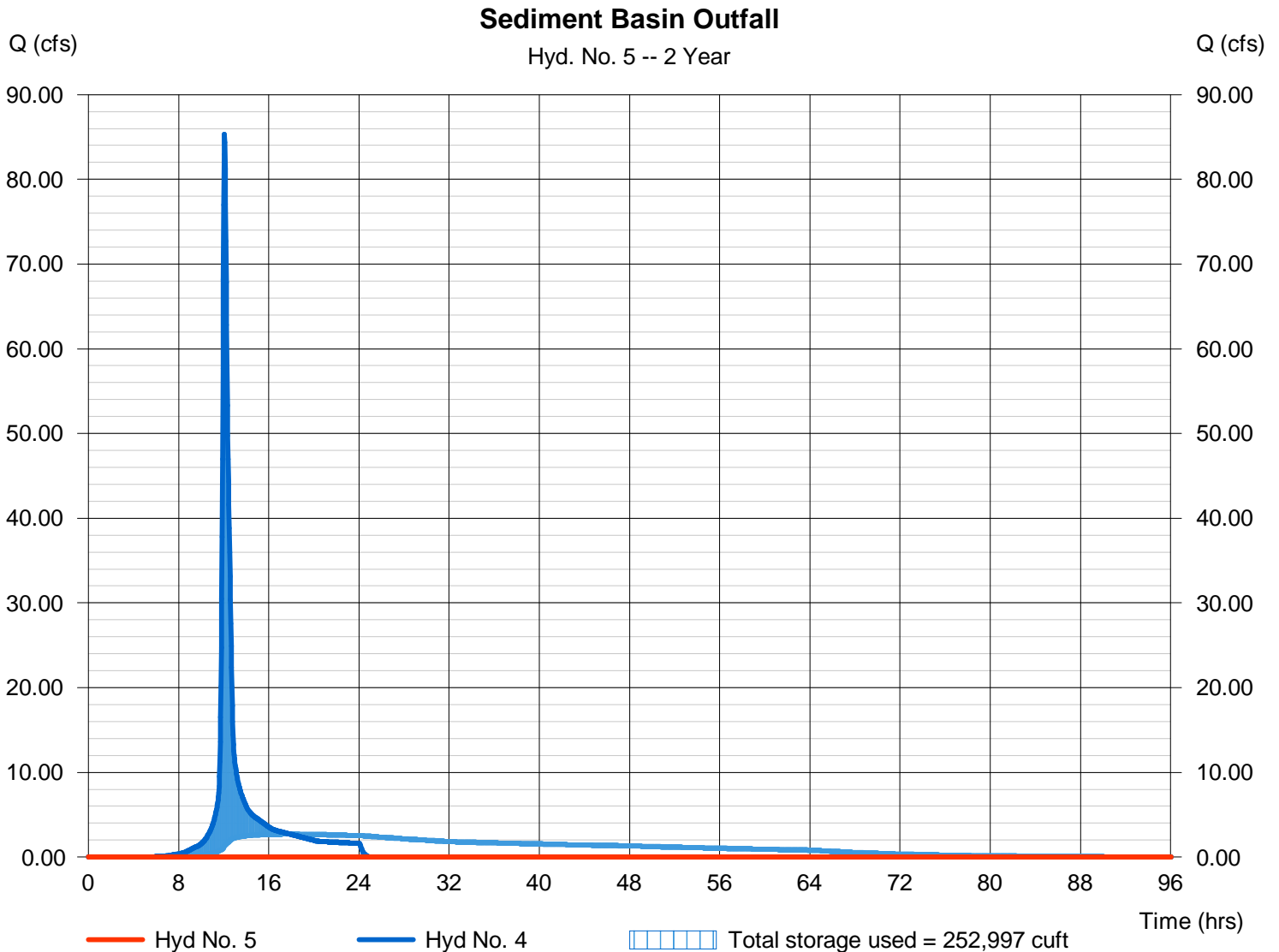
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 0.000 cfs    |
| Storm frequency | = 2 yrs            | Time to peak   | = 12.70 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 0 cuft       |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1290.50 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 252,997 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)    | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 6.432           | 2                   | 736                | 32,484                | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 4.278           | 2                   | 722                | 12,140                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 2.519           | 2                   | 724                | 9,288                 | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 11.06           | 2                   | 726                | 53,911                | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 0.000           | 2                   | 956                | 0                     | 4             | 1288.04                | 28,739                    | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 3 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

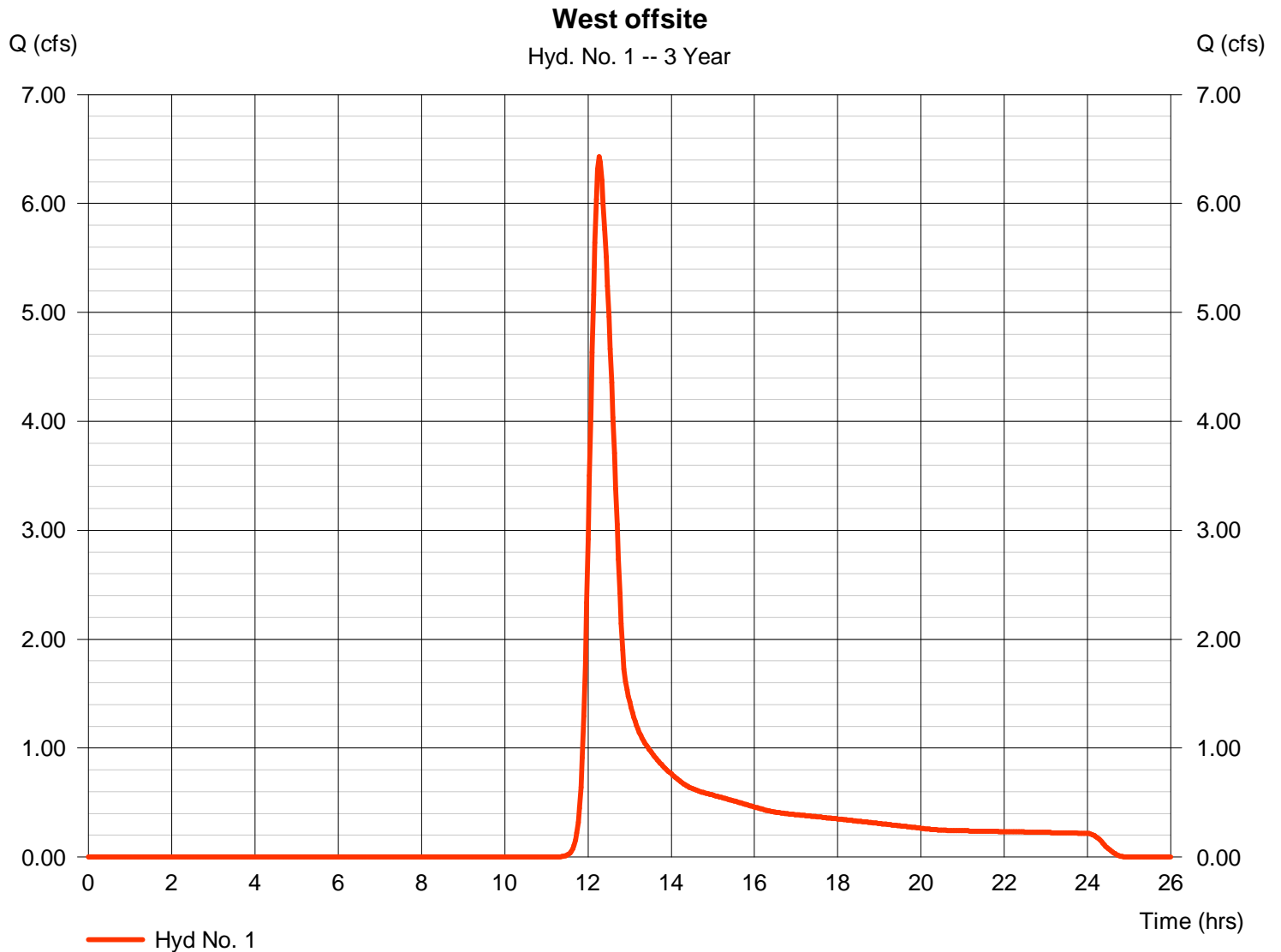
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 6.432 cfs   |
| Storm frequency | = 3 yrs      | Time to peak       | = 12.27 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 32,484 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min   |
| Total precip.   | = 1.20 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

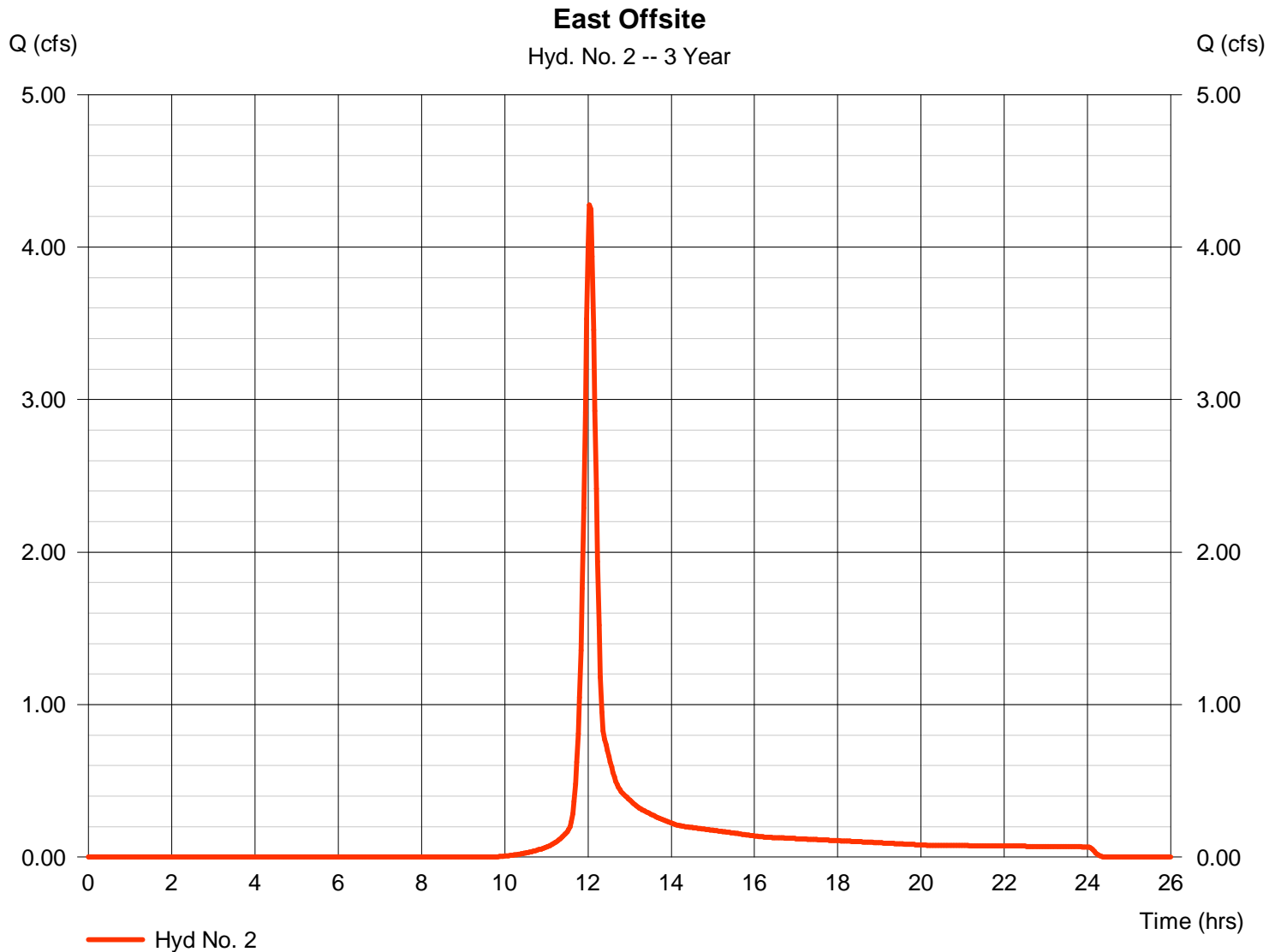
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 4.278 cfs   |
| Storm frequency | = 3 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 12,140 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 1.20 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

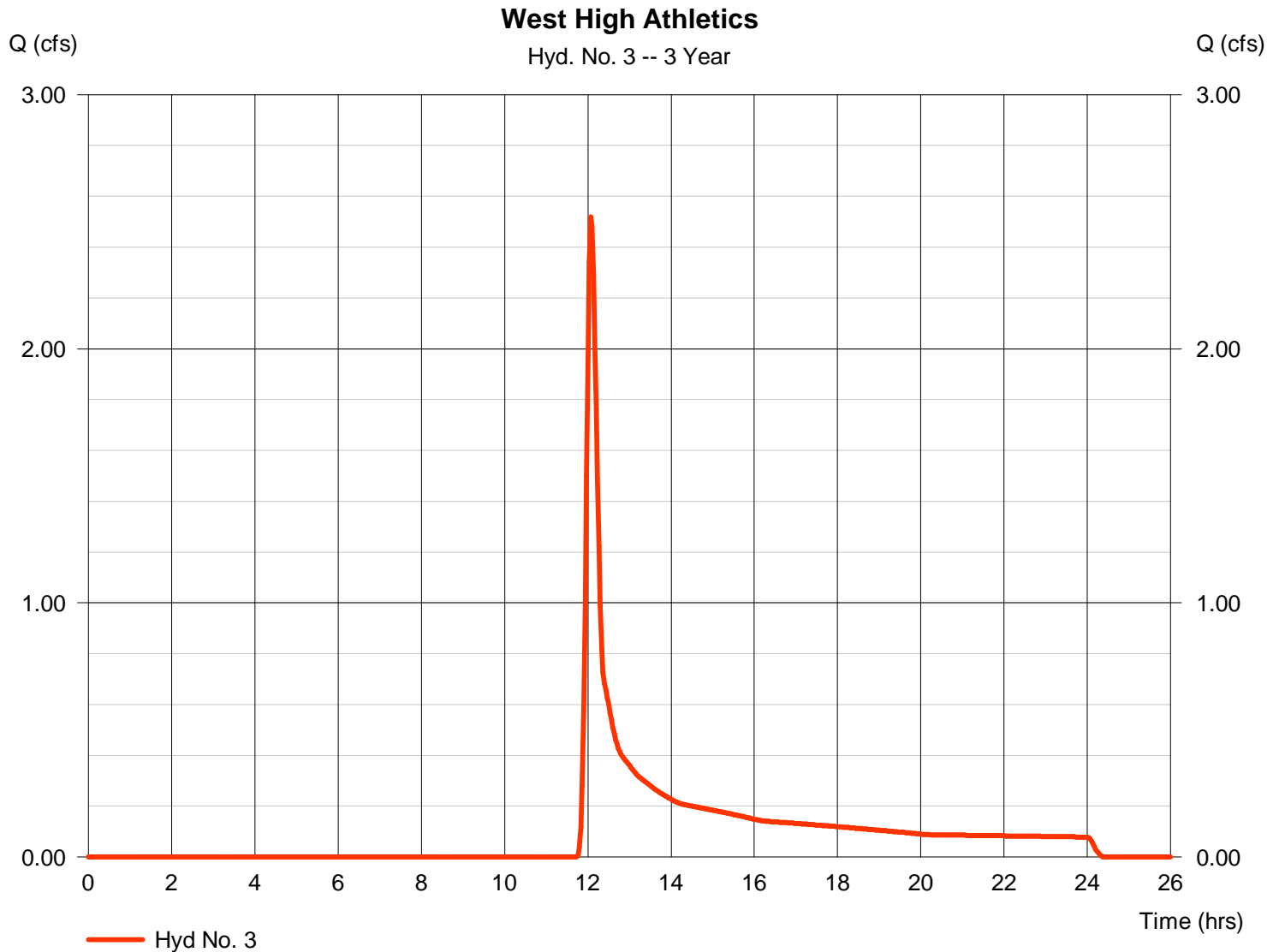
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |              |
|-----------------|--------------|--------------------|--------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 2.519 cfs  |
| Storm frequency | = 3 yrs      | Time to peak       | = 12.07 hrs  |
| Time interval   | = 2 min      | Hyd. volume        | = 9,288 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82         |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft       |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min  |
| Total precip.   | = 1.20 in    | Distribution       | = Type II    |
| Storm duration  | = 24 hrs     | Shape factor       | = 484        |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

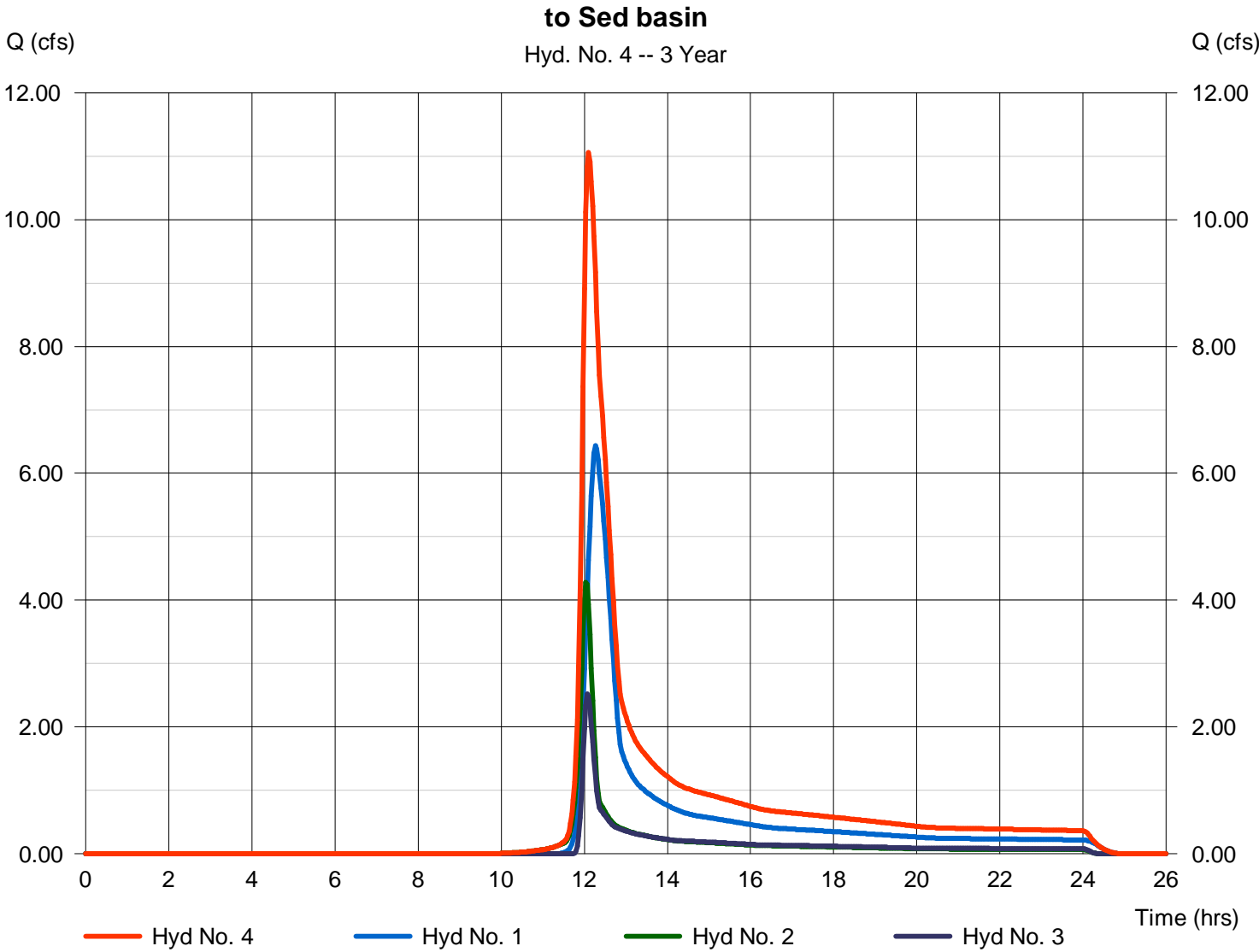
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

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

Peak discharge = 11.06 cfs  
Time to peak = 12.10 hrs  
Hyd. volume = 53,911 cuft  
Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

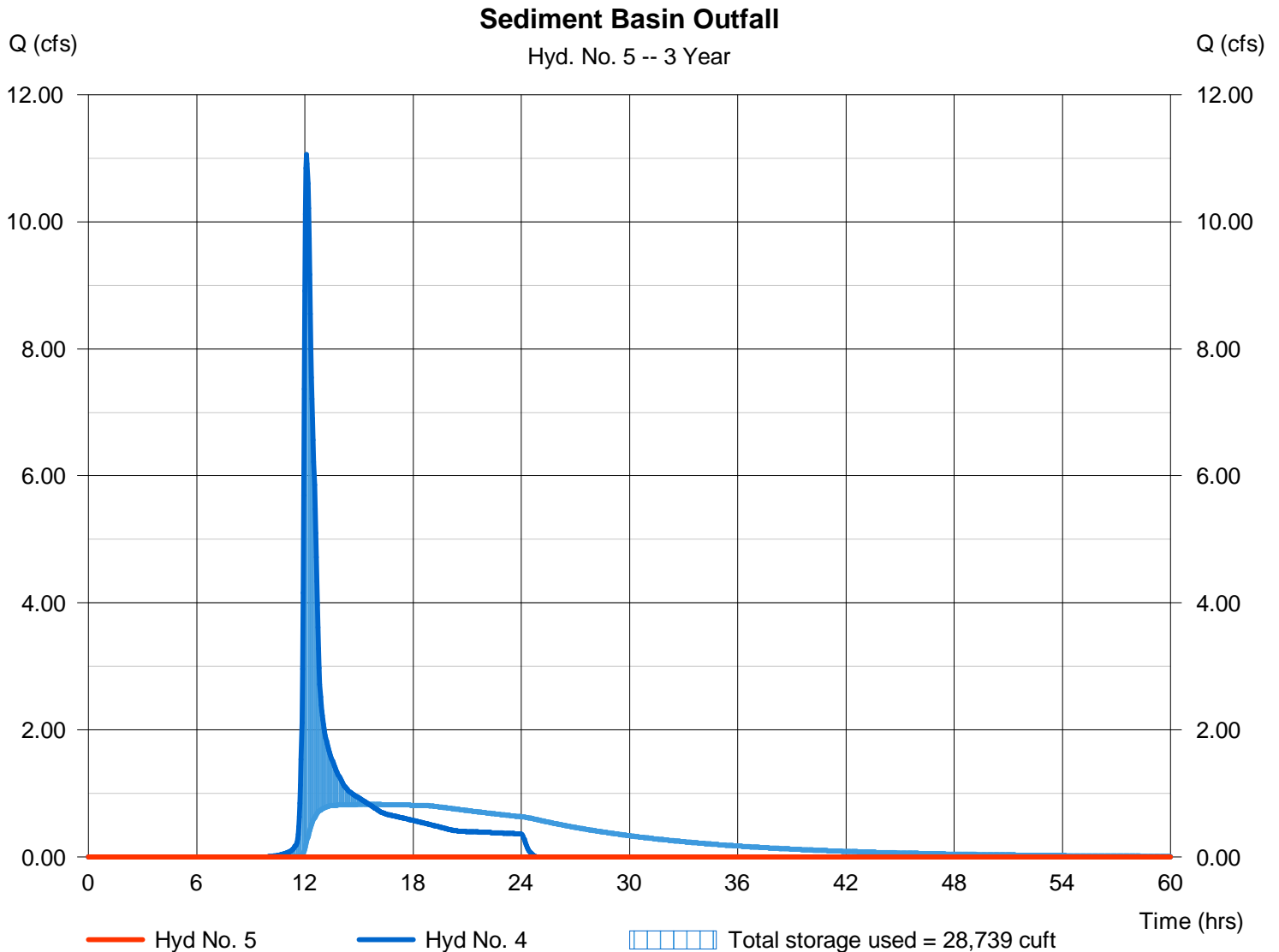
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |               |
|-----------------|--------------------|----------------|---------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 0.000 cfs   |
| Storm frequency | = 3 yrs            | Time to peak   | = 15.93 hrs   |
| Time interval   | = 2 min            | Hyd. volume    | = 0 cuft      |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1288.04 ft  |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 28,739 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)    | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 65.24           | 2                   | 734                | 296,938               | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 28.86           | 2                   | 722                | 84,187                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 44.54           | 2                   | 722                | 125,018               | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 121.74          | 2                   | 724                | 506,144               | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 0.054           | 2                   | 1010               | 1,375                 | 4             | 1291.09                | 359,255                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 5 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

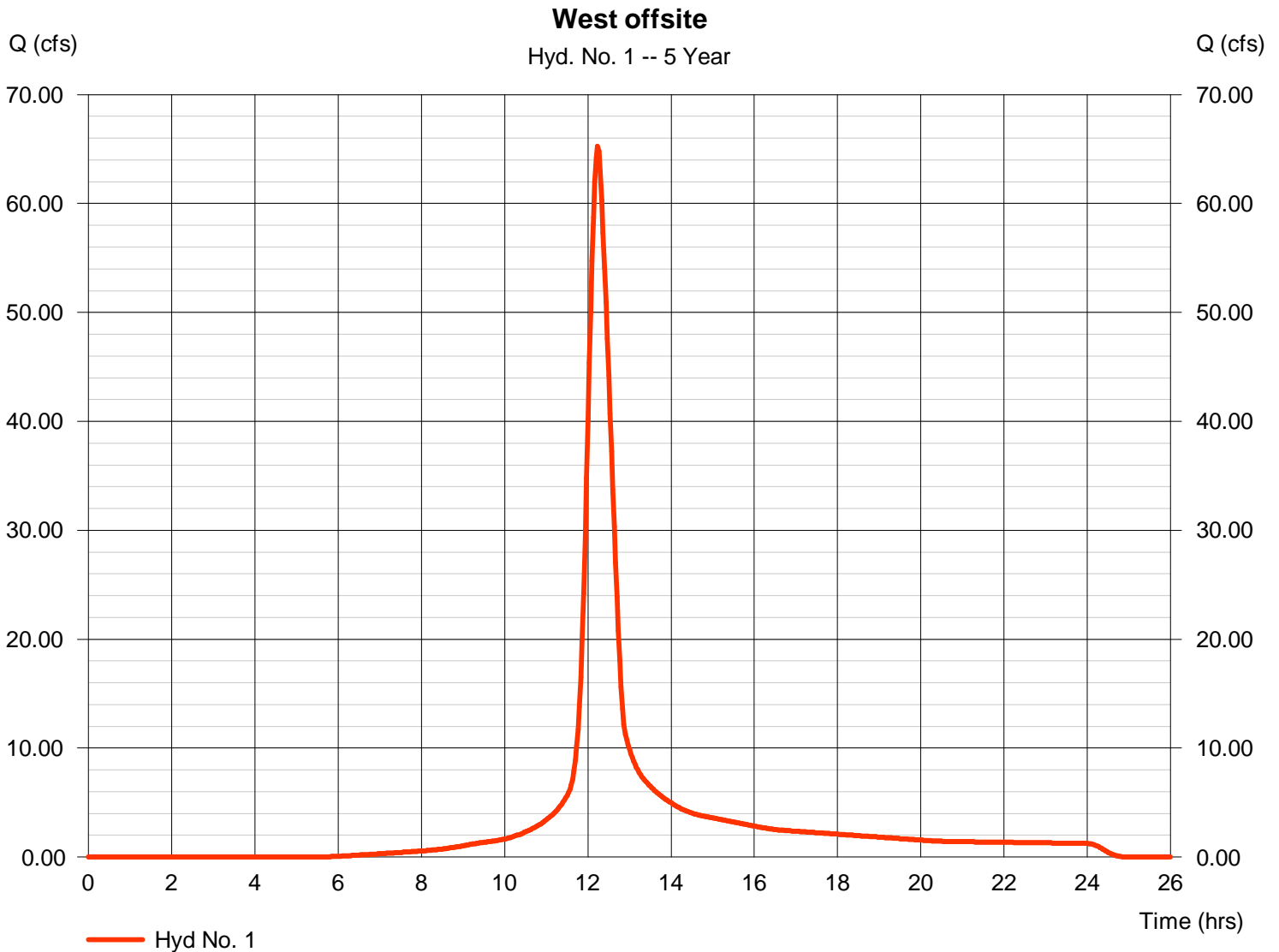
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 65.24 cfs    |
| Storm frequency | = 5 yrs      | Time to peak       | = 12.23 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 296,938 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min    |
| Total precip.   | = 4.50 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

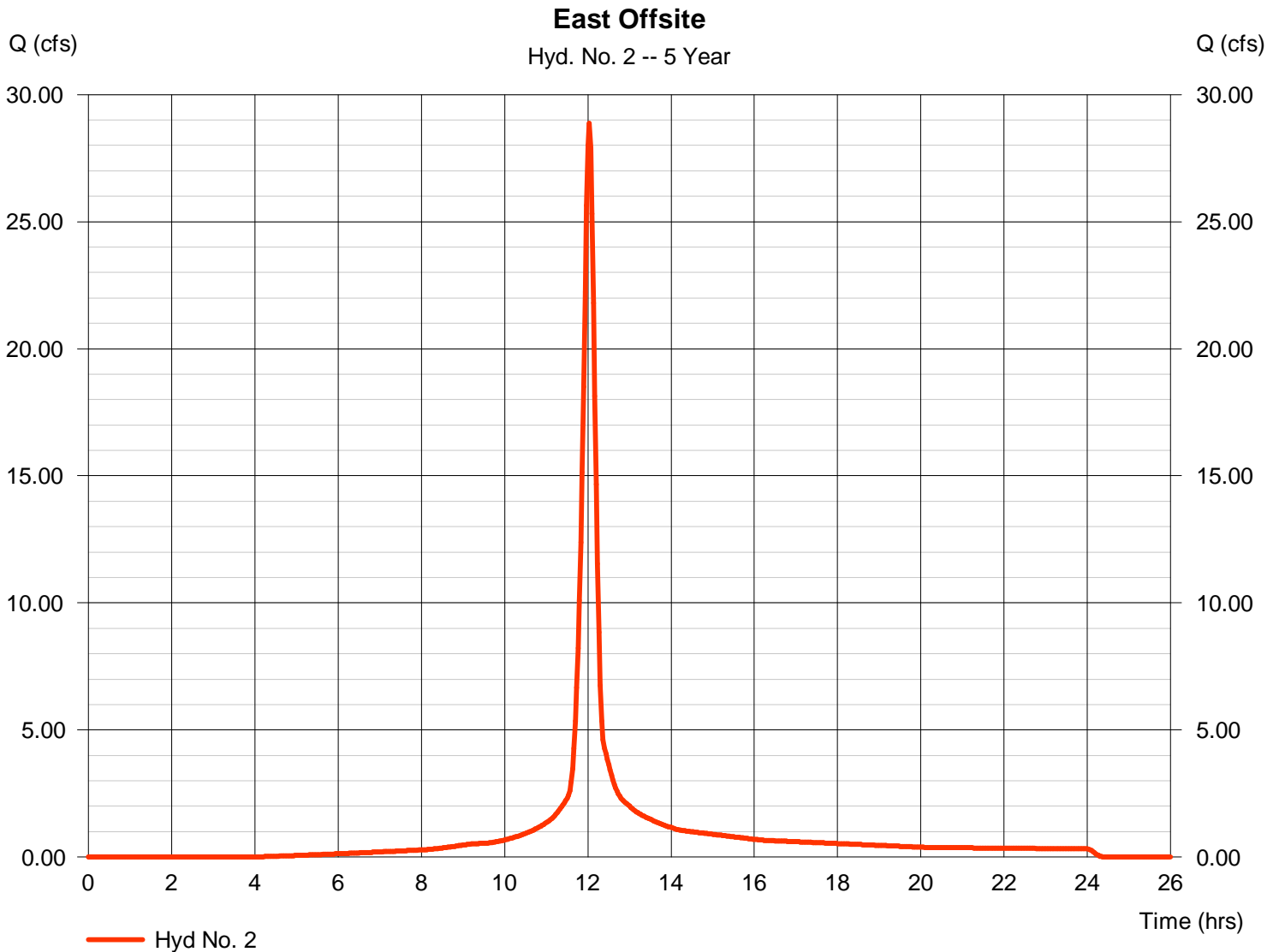
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |               |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 28.86 cfs   |
| Storm frequency | = 5 yrs      | Time to peak       | = 12.03 hrs   |
| Time interval   | = 2 min      | Hyd. volume        | = 84,187 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91          |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft        |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min   |
| Total precip.   | = 4.50 in    | Distribution       | = Type II     |
| Storm duration  | = 24 hrs     | Shape factor       | = 484         |



# Hydrograph Report

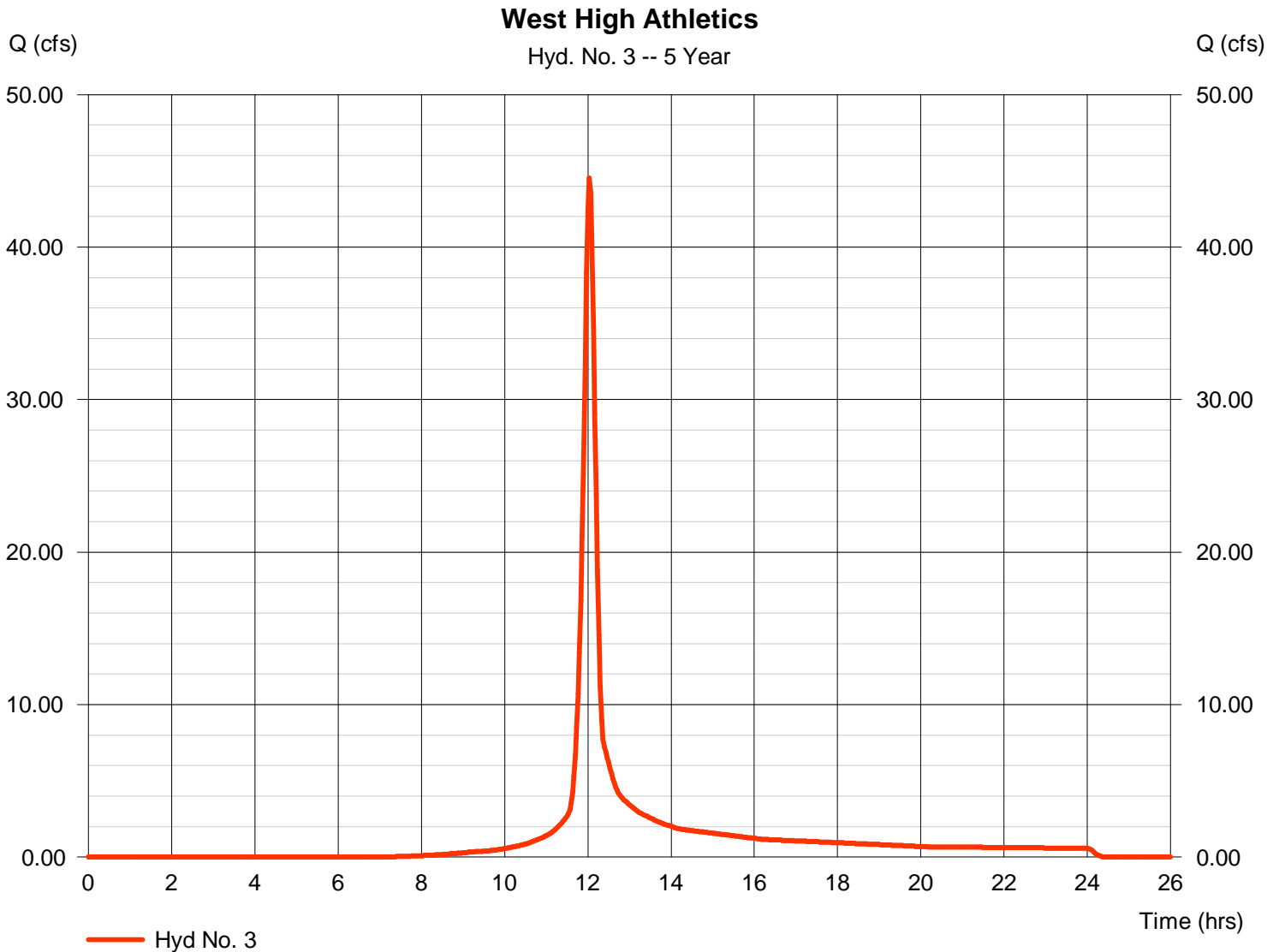
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 44.54 cfs    |
| Storm frequency | = 5 yrs      | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 125,018 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 4.50 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

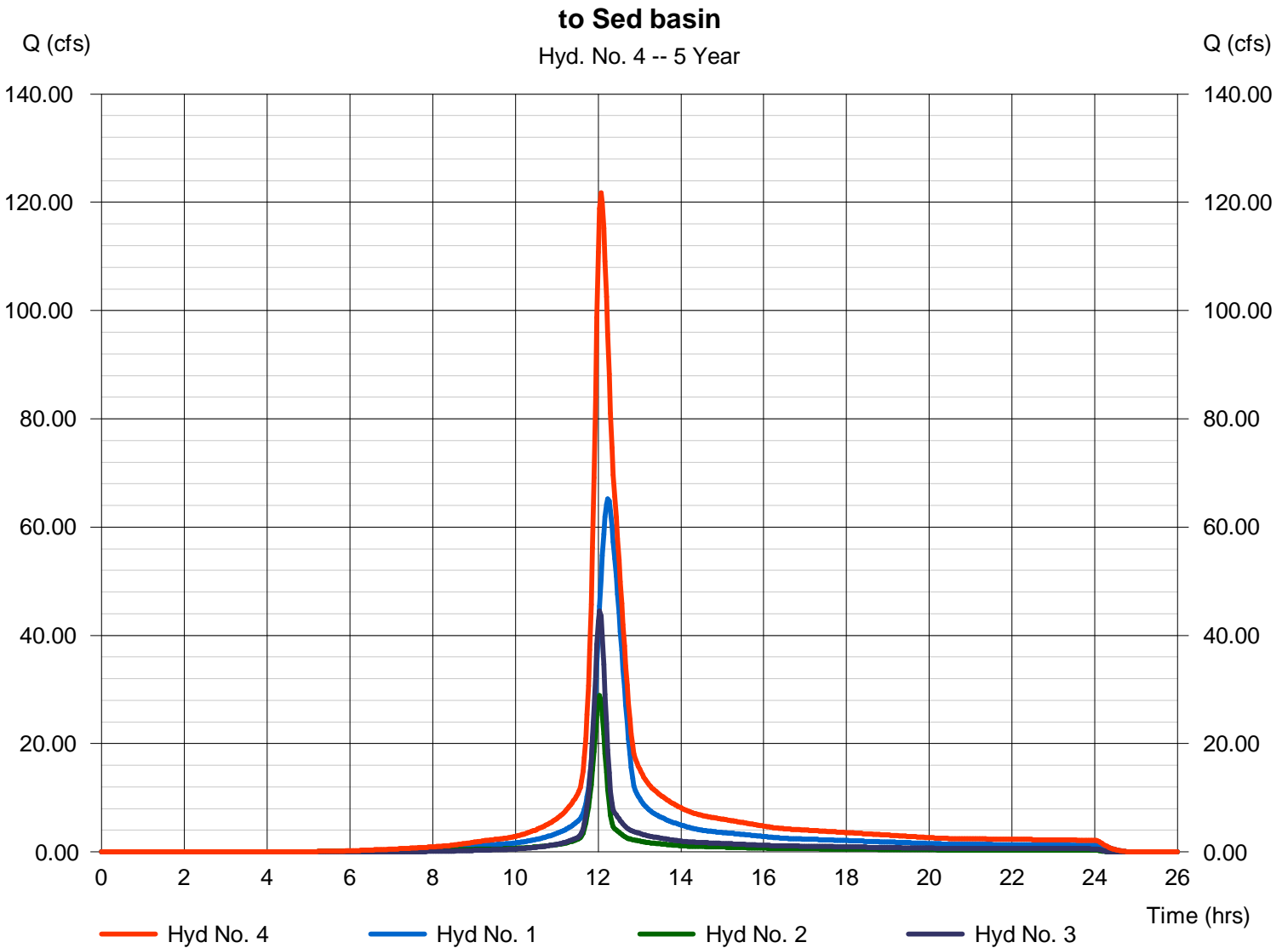
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

Hydrograph type = Combine  
 Storm frequency = 5 yrs  
 Time interval = 2 min  
 Inflow hyds. = 1, 2, 3

Peak discharge = 121.74 cfs  
 Time to peak = 12.07 hrs  
 Hyd. volume = 506,144 cuft  
 Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

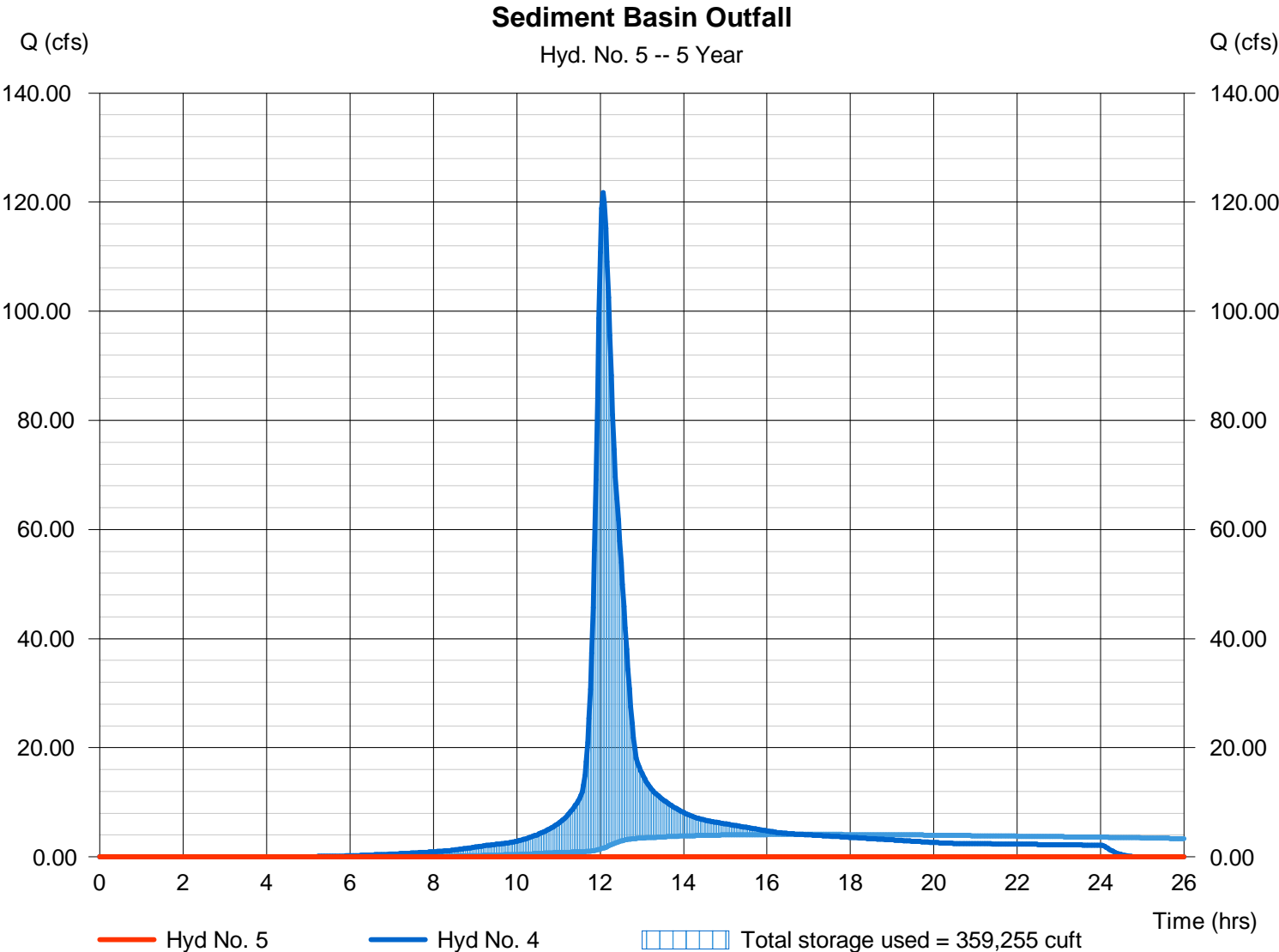
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 0.054 cfs    |
| Storm frequency | = 5 yrs            | Time to peak   | = 16.83 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 1,375 cuft   |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1291.09 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 359,255 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)     | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 78.68           | 2                   | 734                | 359,901                | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 34.13           | 2                   | 722                | 100,514                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 54.85           | 2                   | 722                | 154,540                | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 147.52          | 2                   | 724                | 614,955                | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 0.510           | 2                   | 958                | 15,451                 | 4             | 1291.29                | 429,728                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 10 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

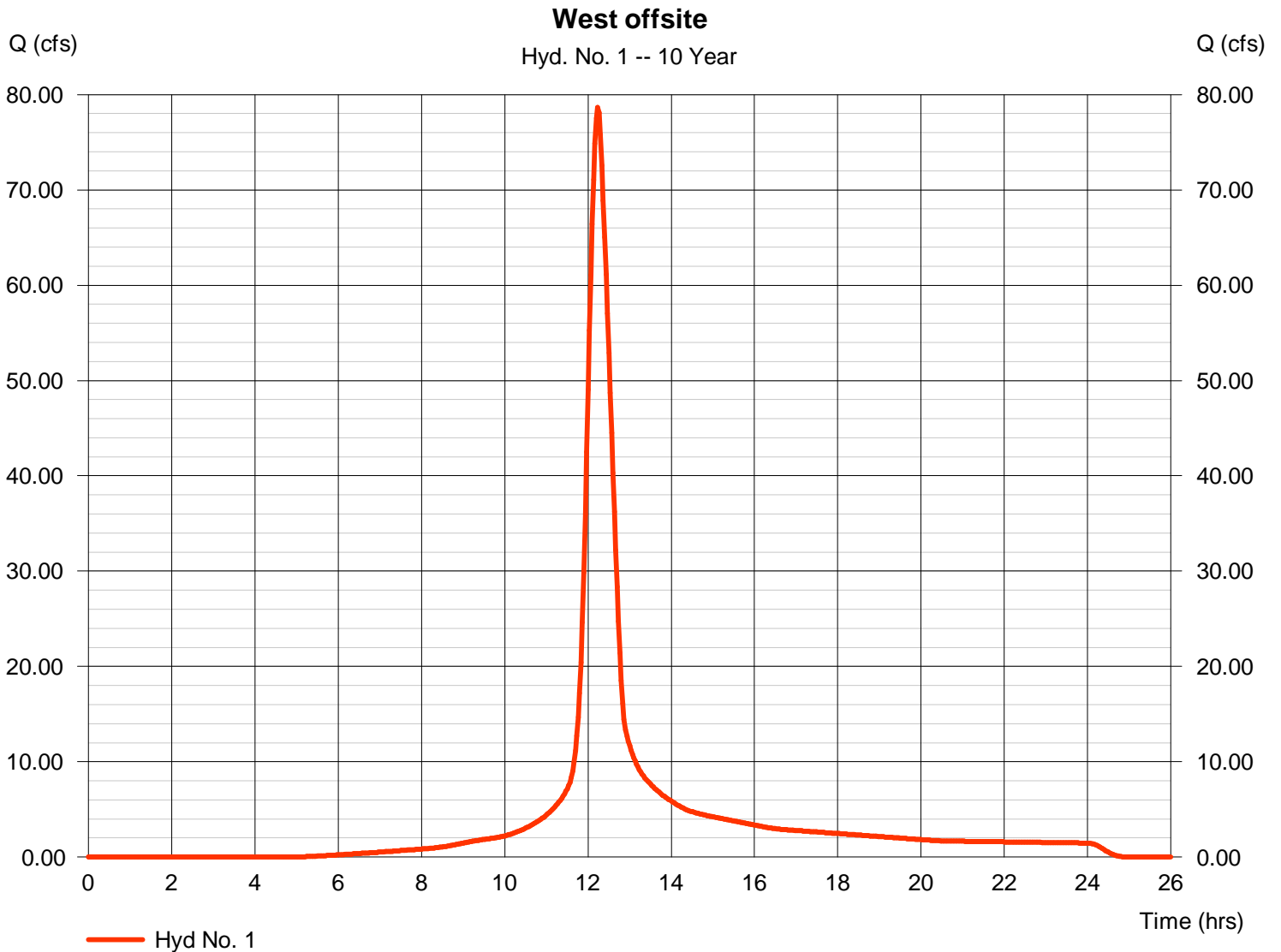
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 78.68 cfs    |
| Storm frequency | = 10 yrs     | Time to peak       | = 12.23 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 359,901 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min    |
| Total precip.   | = 5.20 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

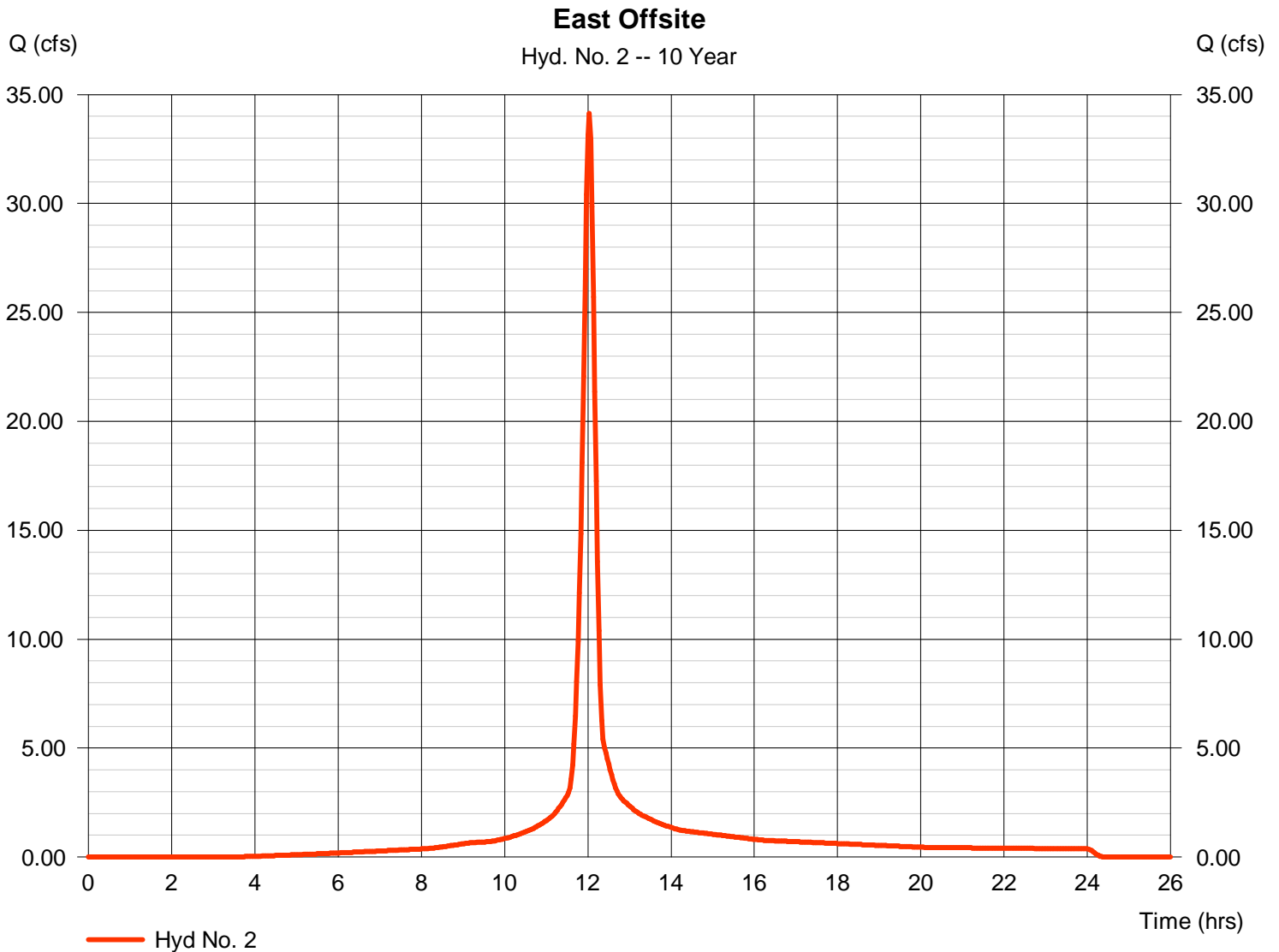
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 34.13 cfs    |
| Storm frequency | = 10 yrs     | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 100,514 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 5.20 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

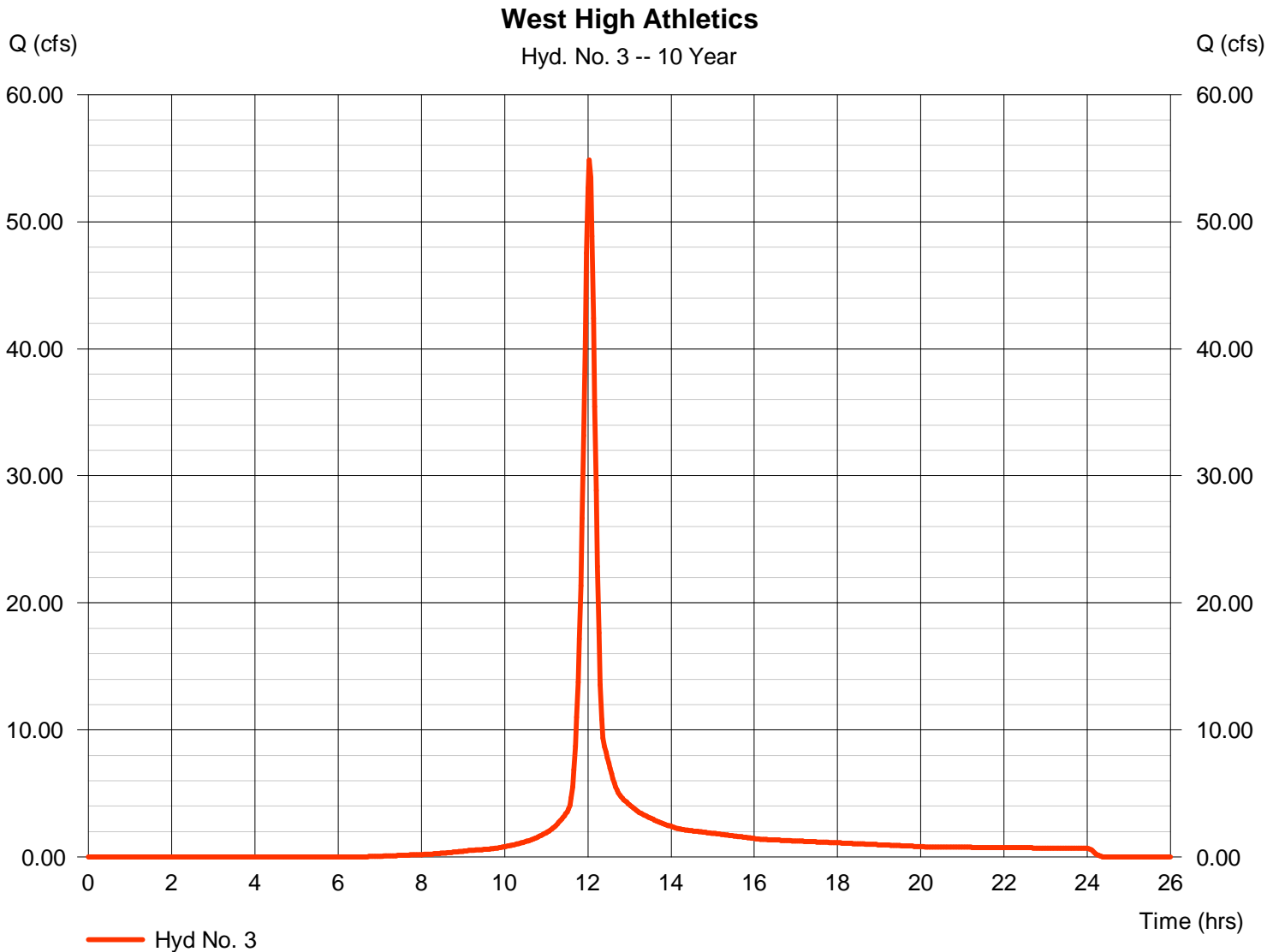
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 54.85 cfs    |
| Storm frequency | = 10 yrs     | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 154,540 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 5.20 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

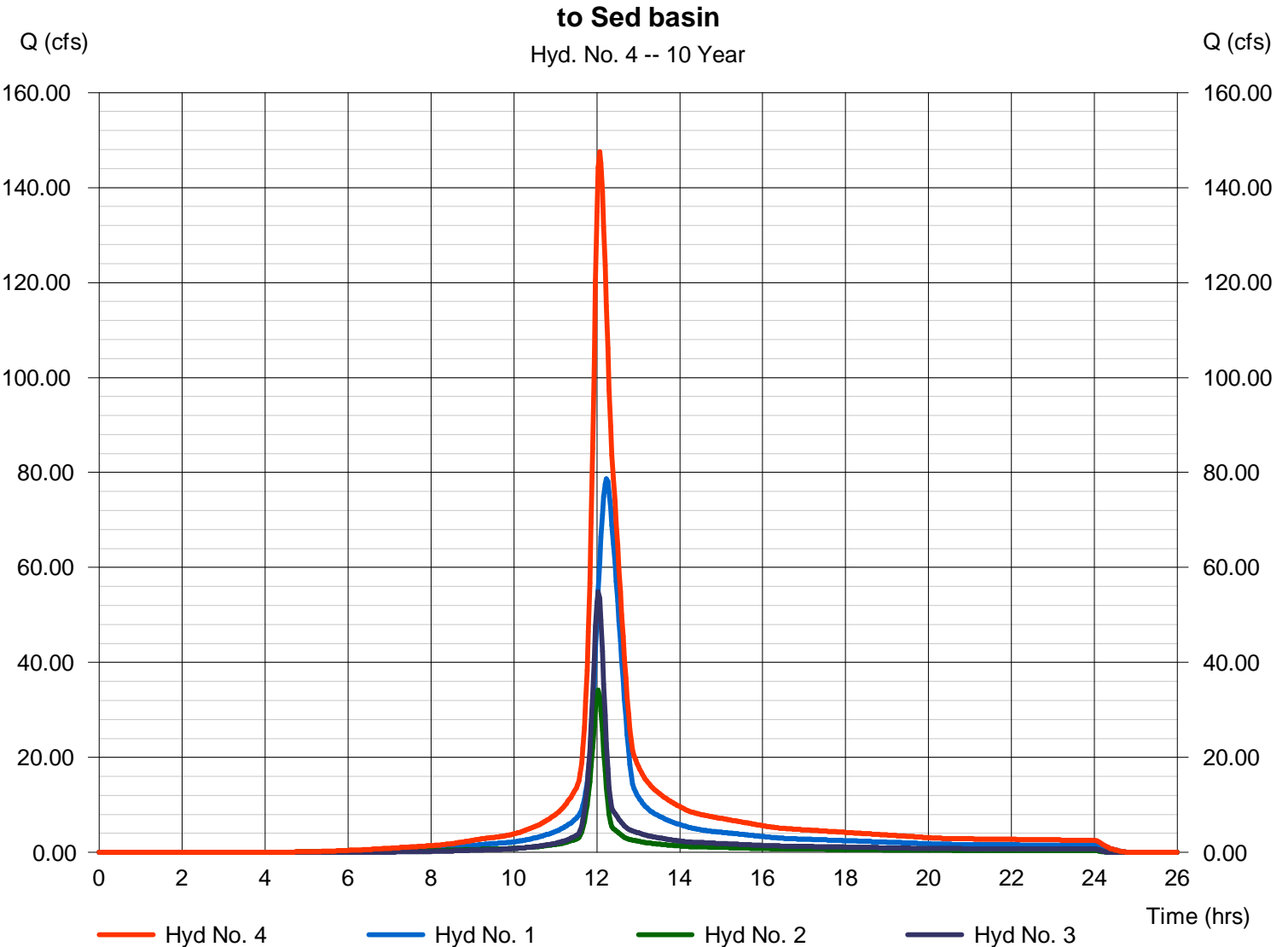
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

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

Peak discharge = 147.52 cfs  
Time to peak = 12.07 hrs  
Hyd. volume = 614,955 cuft  
Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

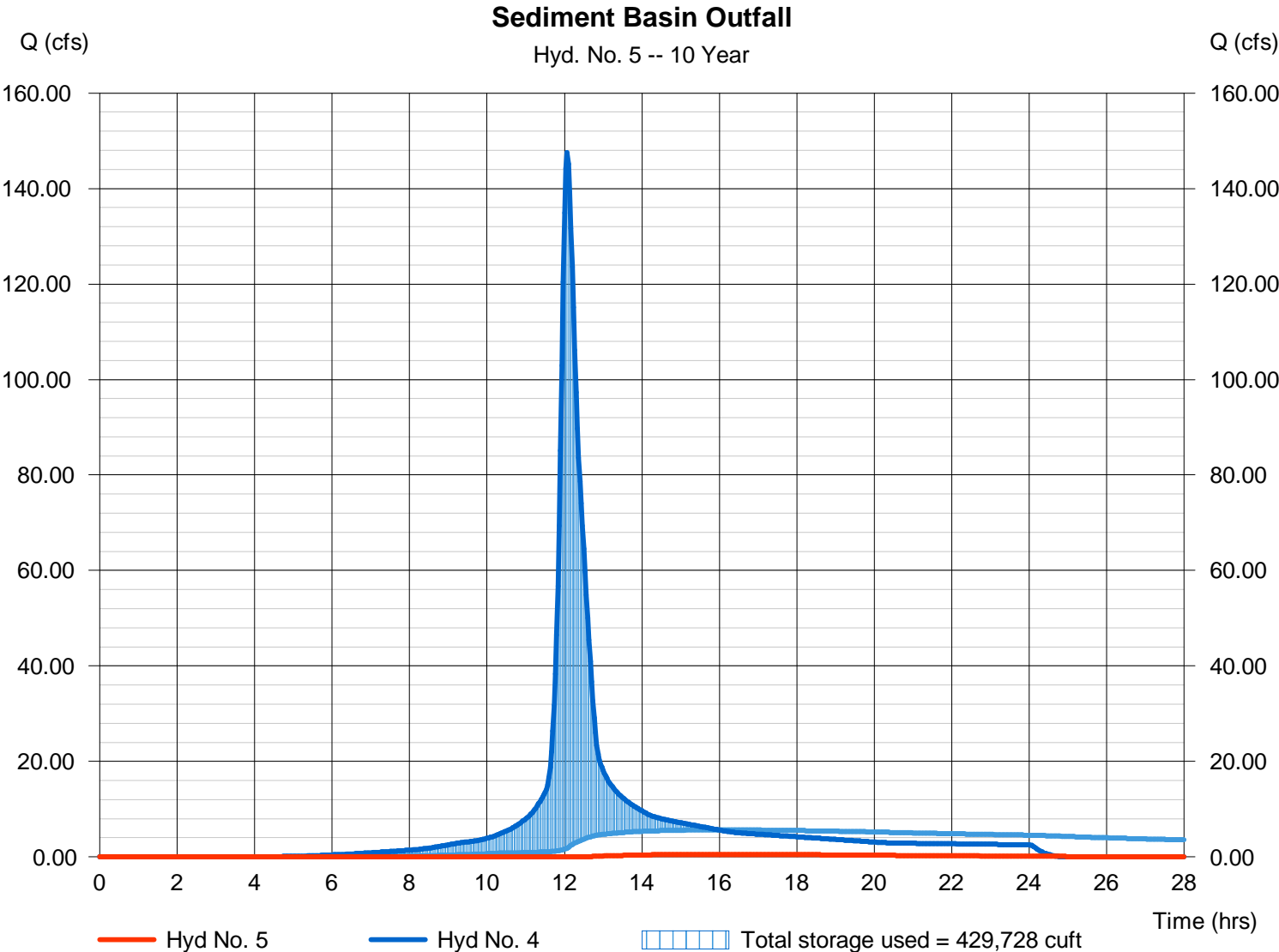
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 0.510 cfs    |
| Storm frequency | = 10 yrs           | Time to peak   | = 15.97 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 15,451 cuft  |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1291.29 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 429,728 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)     | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 95.96           | 2                   | 734                | 442,011                | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 40.86           | 2                   | 722                | 121,661                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 68.23           | 2                   | 722                | 193,460                | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 180.78          | 2                   | 724                | 757,133                | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 1.691           | 2                   | 912                | 54,750                 | 4             | 1291.53                | 517,260                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 25 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

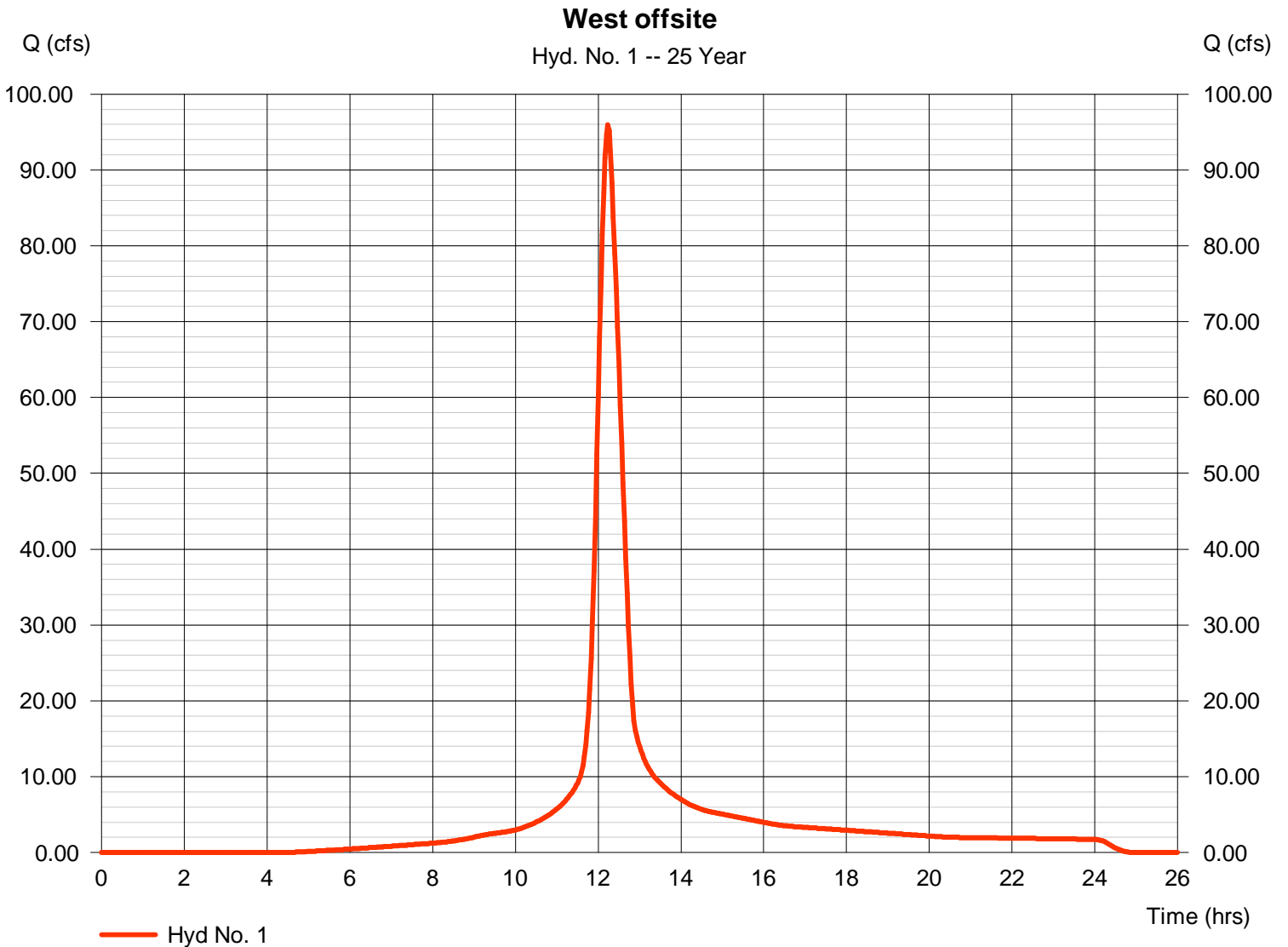
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 95.96 cfs    |
| Storm frequency | = 25 yrs     | Time to peak       | = 12.23 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 442,011 cuft |
| Drainage area   | = 26.700 ac  | Curve number       | = 87           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = TR55       | Time of conc. (Tc) | = 34.90 min    |
| Total precip.   | = 6.10 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

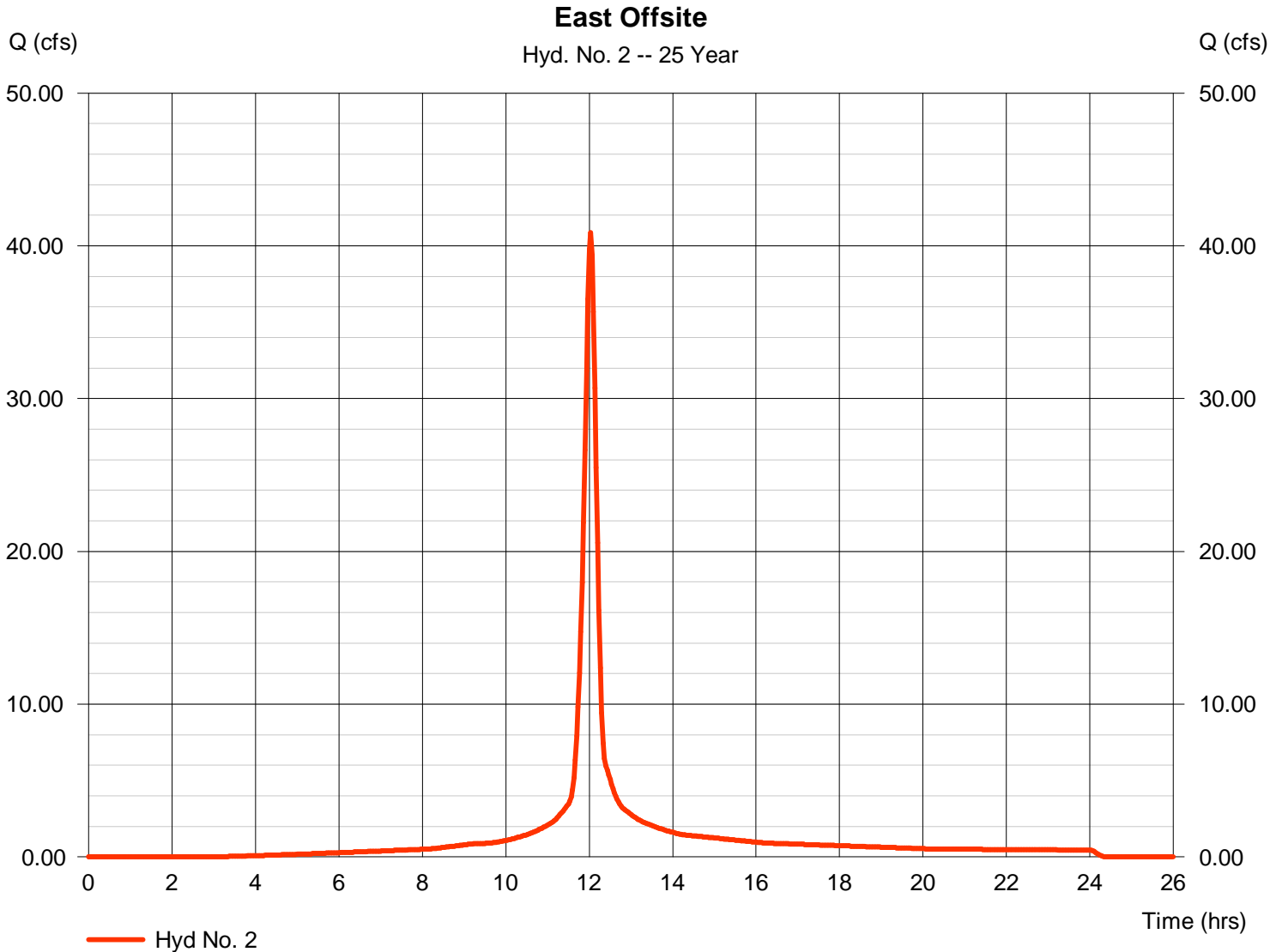
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 40.86 cfs    |
| Storm frequency | = 25 yrs     | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 121,661 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 6.10 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

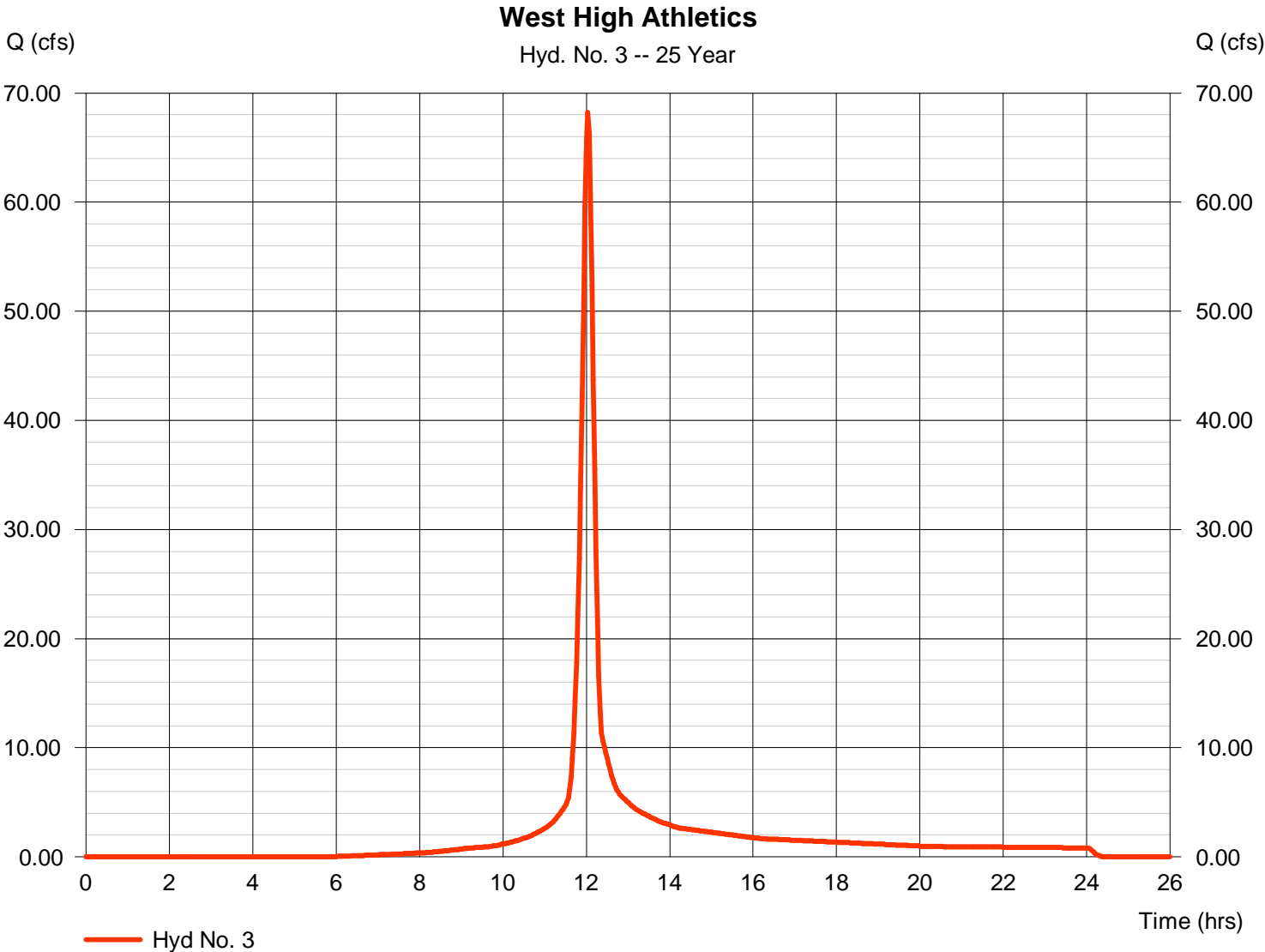
Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

Hydrograph type = SCS Runoff  
Storm frequency = 25 yrs  
Time interval = 2 min  
Drainage area = 13.400 ac  
Basin Slope = 0.0 %  
Tc method = User  
Total precip. = 6.10 in  
Storm duration = 24 hrs

Peak discharge = 68.23 cfs  
Time to peak = 12.03 hrs  
Hyd. volume = 193,460 cuft  
Curve number = 82  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 15.00 min  
Distribution = Type II  
Shape factor = 484



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

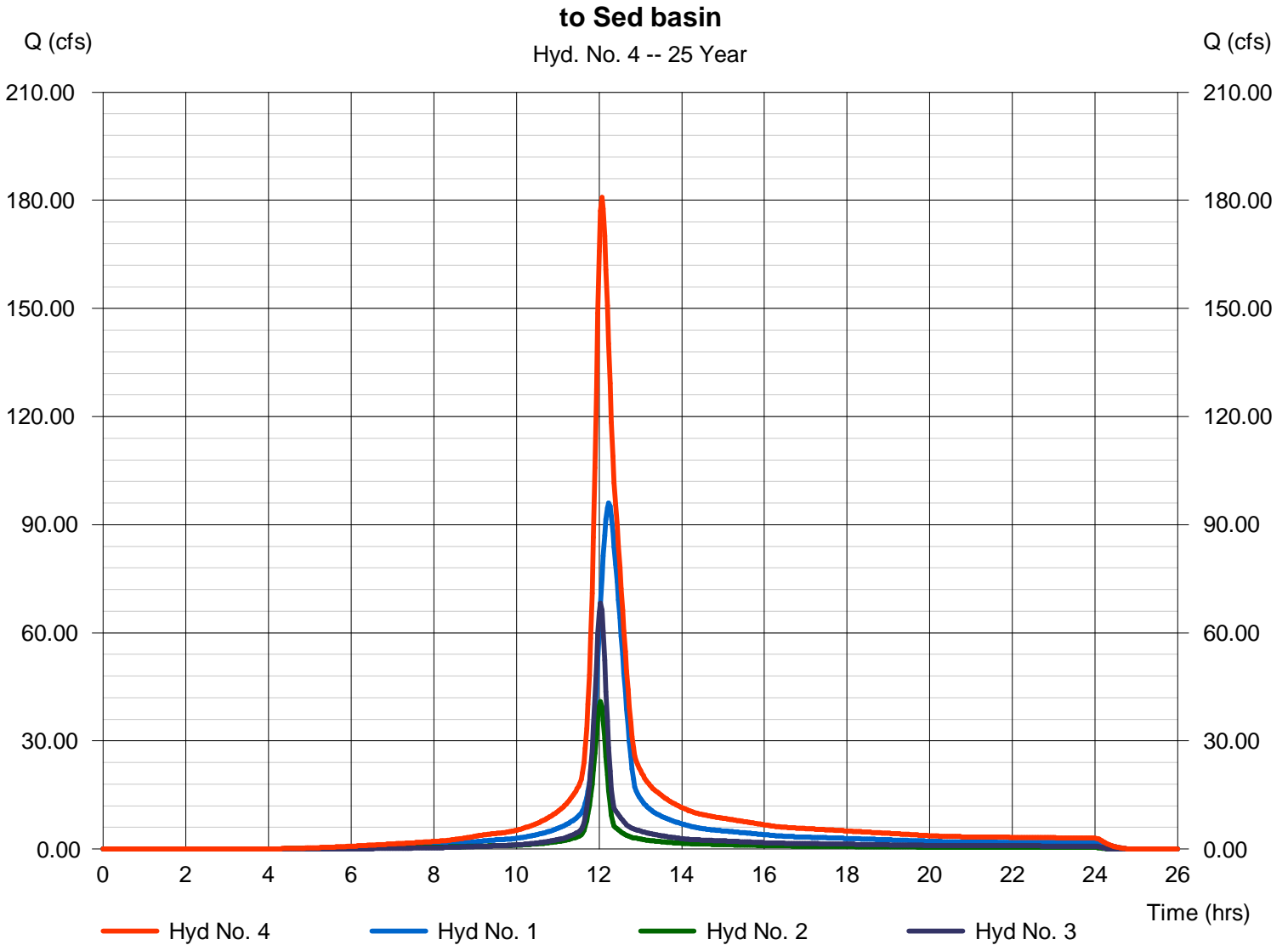
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

Hydrograph type = Combine  
 Storm frequency = 25 yrs  
 Time interval = 2 min  
 Inflow hyds. = 1, 2, 3

Peak discharge = 180.78 cfs  
 Time to peak = 12.07 hrs  
 Hyd. volume = 757,133 cuft  
 Contrib. drain. area = 46.900 ac



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

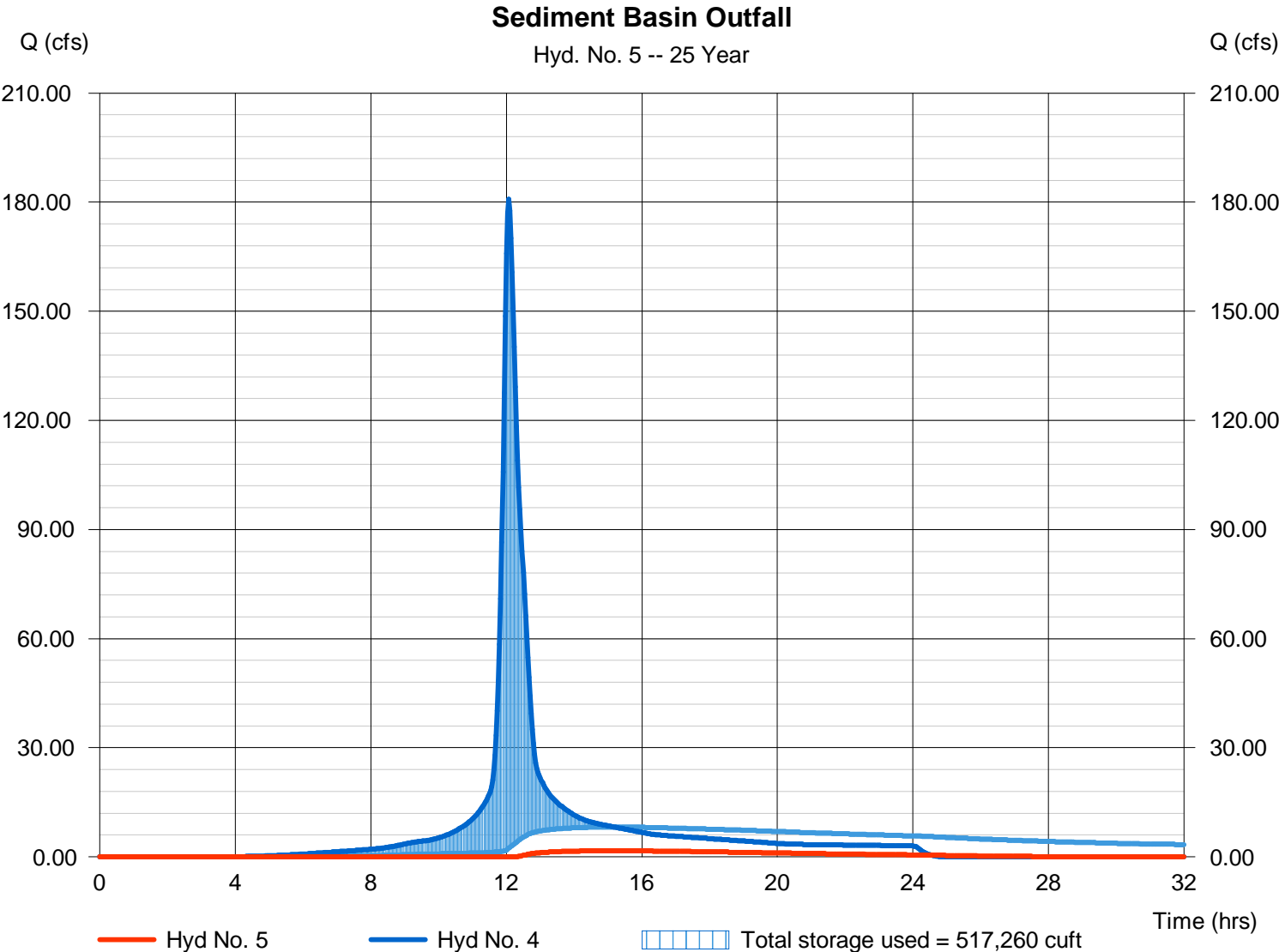
Wednesday, 11 / 13 / 2013

## Hyd. No. 5

### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 1.691 cfs    |
| Storm frequency | = 25 yrs           | Time to peak   | = 15.20 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 54,750 cuft  |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1291.53 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 517,260 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)     | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 111.30          | 2                   | 734                | 515,769                | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 46.82           | 2                   | 722                | 140,560                | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 80.17           | 2                   | 722                | 228,713                | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 210.35          | 2                   | 724                | 885,041                | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 3.217           | 2                   | 872                | 104,026                | 4             | 1291.75                | 594,580                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 50 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

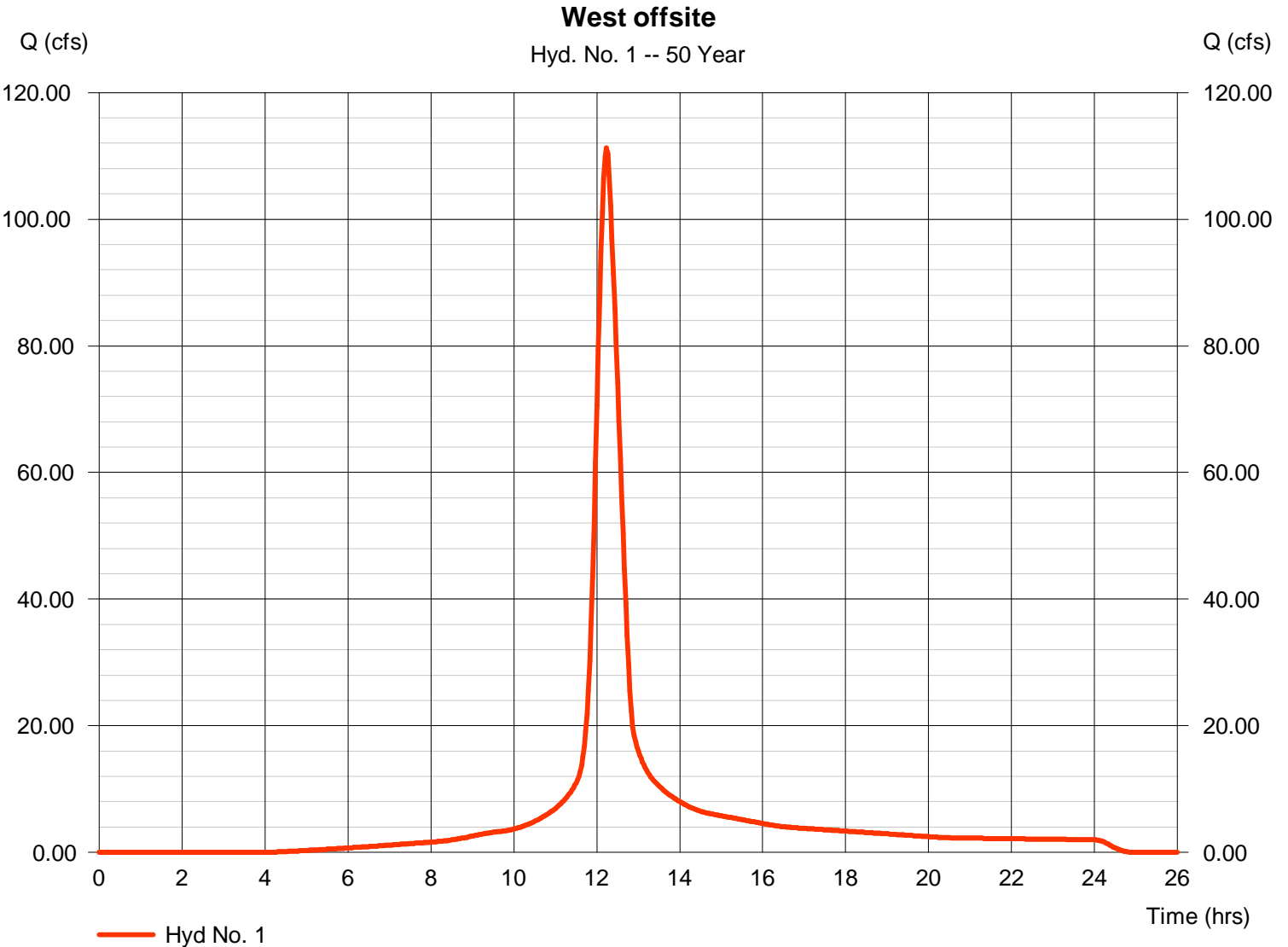
Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

Hydrograph type = SCS Runoff  
Storm frequency = 50 yrs  
Time interval = 2 min  
Drainage area = 26.700 ac  
Basin Slope = 0.0 %  
Tc method = TR55  
Total precip. = 6.90 in  
Storm duration = 24 hrs

Peak discharge = 111.30 cfs  
Time to peak = 12.23 hrs  
Hyd. volume = 515,769 cuft  
Curve number = 87  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 34.90 min  
Distribution = Type II  
Shape factor = 484



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

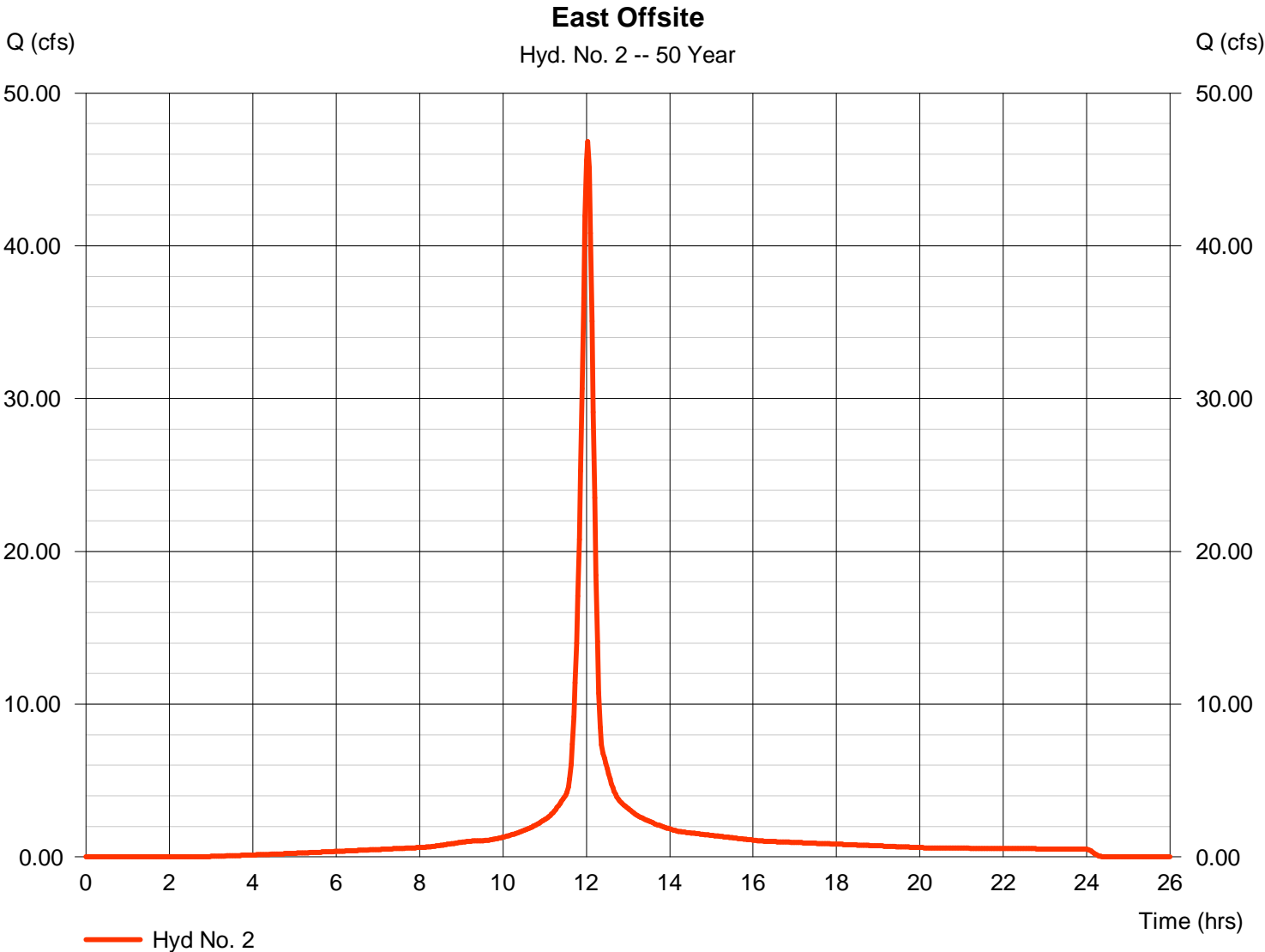
Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

Hydrograph type = SCS Runoff  
Storm frequency = 50 yrs  
Time interval = 2 min  
Drainage area = 6.800 ac  
Basin Slope = 0.0 %  
Tc method = User  
Total precip. = 6.90 in  
Storm duration = 24 hrs

Peak discharge = 46.82 cfs  
Time to peak = 12.03 hrs  
Hyd. volume = 140,560 cuft  
Curve number = 91  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 15.00 min  
Distribution = Type II  
Shape factor = 484



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

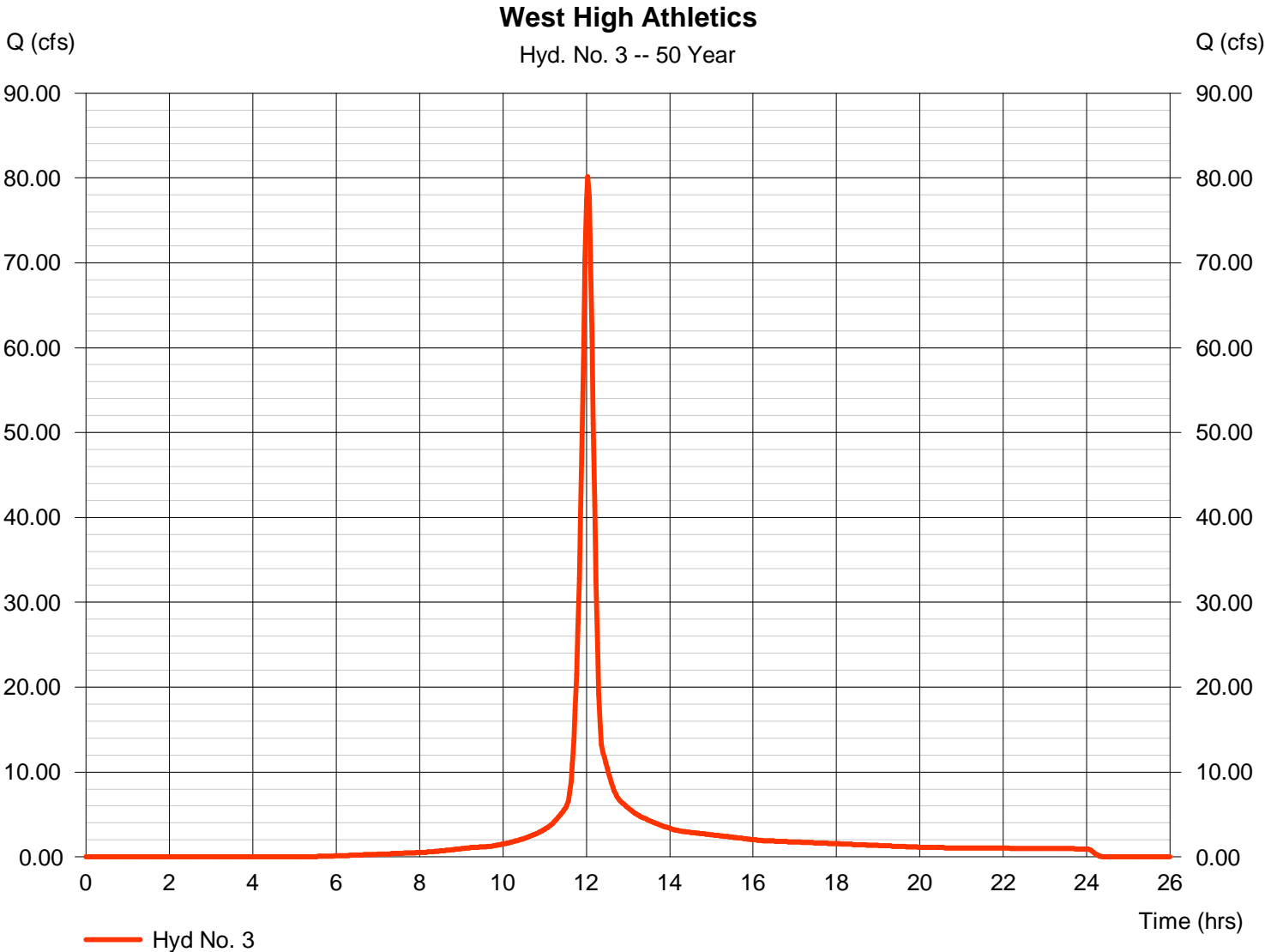
Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

Hydrograph type = SCS Runoff  
Storm frequency = 50 yrs  
Time interval = 2 min  
Drainage area = 13.400 ac  
Basin Slope = 0.0 %  
Tc method = User  
Total precip. = 6.90 in  
Storm duration = 24 hrs

Peak discharge = 80.17 cfs  
Time to peak = 12.03 hrs  
Hyd. volume = 228,713 cuft  
Curve number = 82  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 15.00 min  
Distribution = Type II  
Shape factor = 484



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

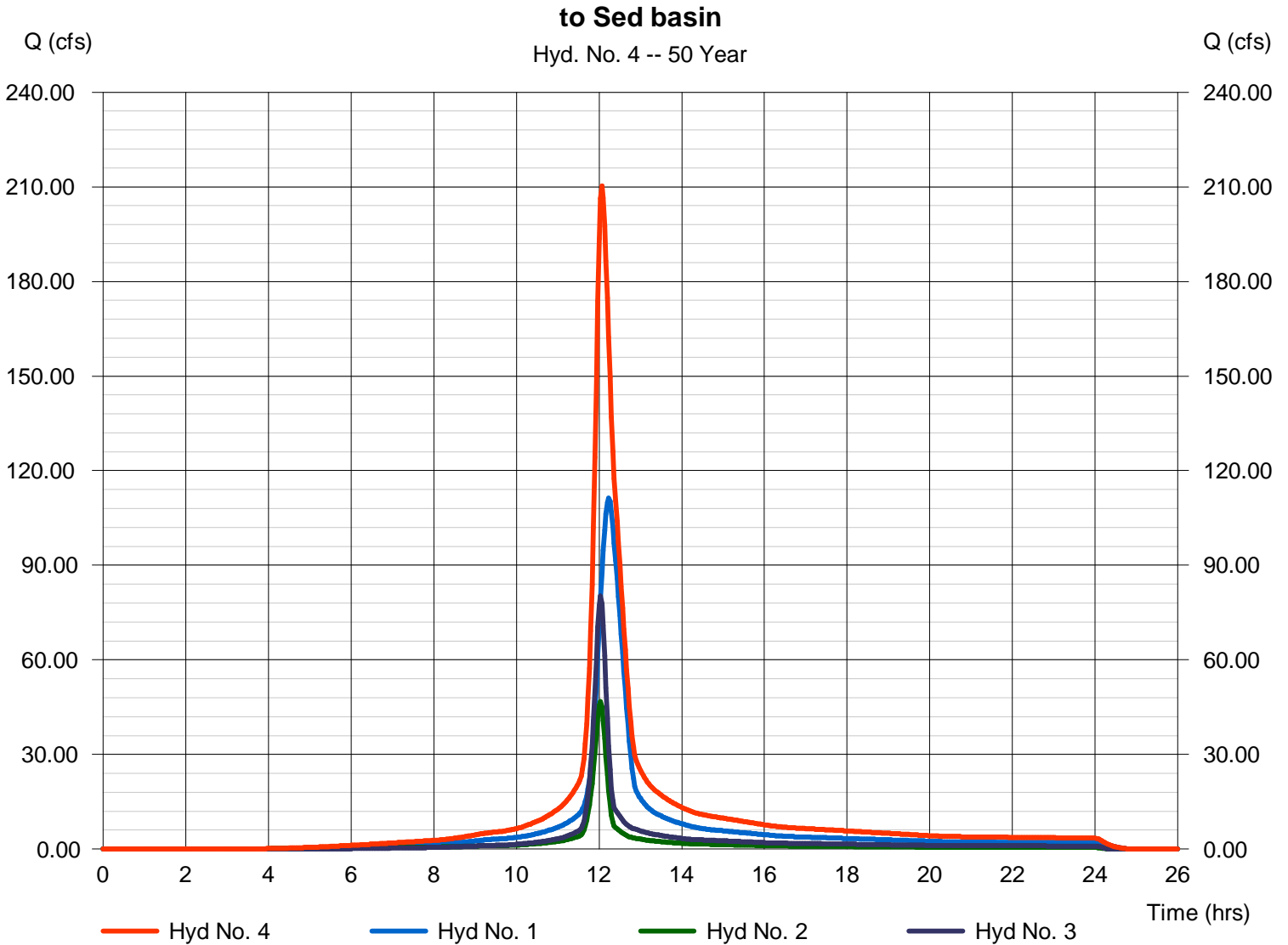
Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

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

Peak discharge = 210.35 cfs  
 Time to peak = 12.07 hrs  
 Hyd. volume = 885,041 cuft  
 Contrib. drain. area = 46.900 ac



# Hydrograph Report

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Wednesday, 11 / 13 / 2013

## Hyd. No. 5

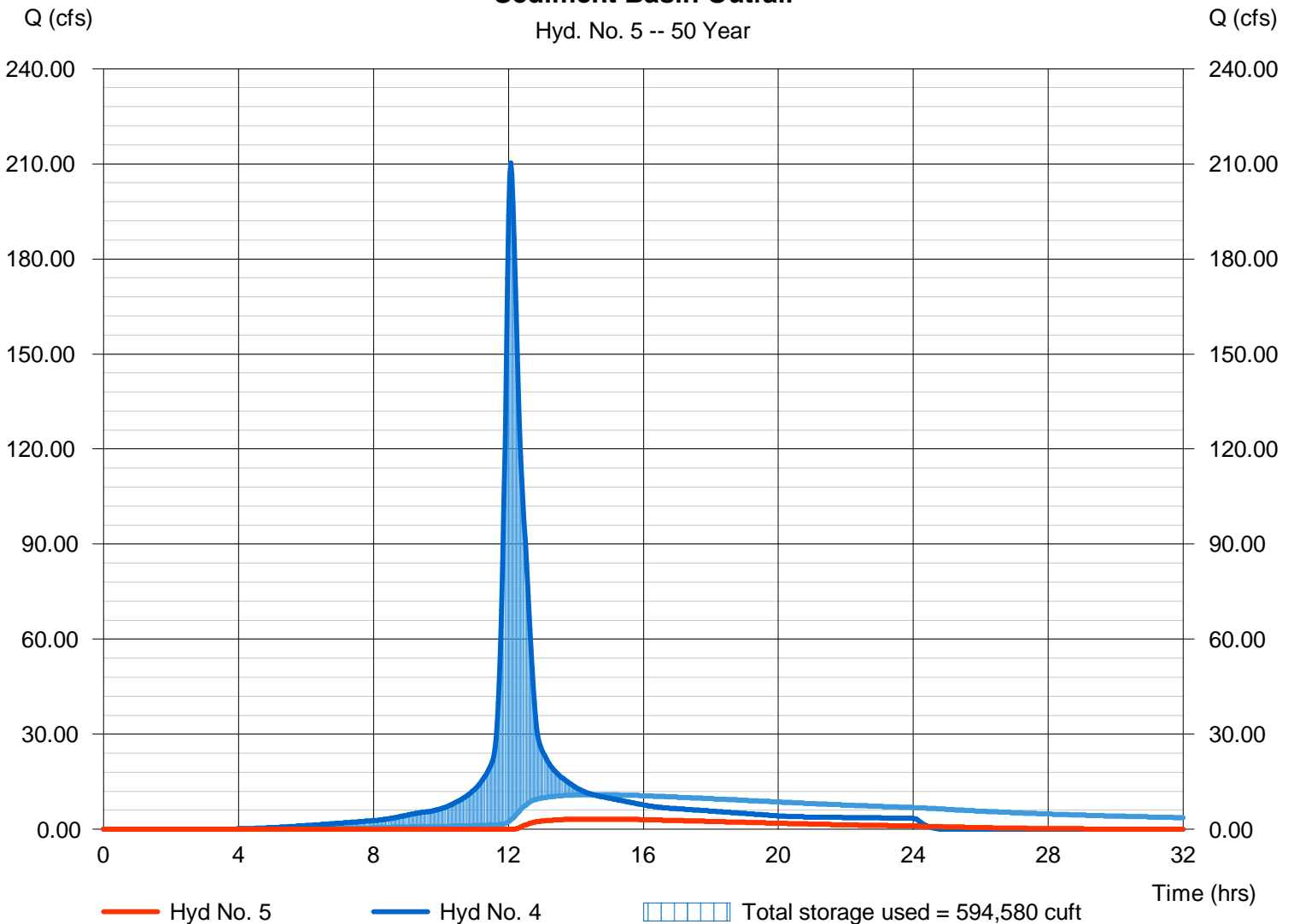
### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 3.217 cfs    |
| Storm frequency | = 50 yrs           | Time to peak   | = 14.53 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 104,026 cuft |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1291.75 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 594,580 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.

### Sediment Basin Outfall

Hyd. No. 5 -- 50 Year



# Hydrograph Summary Report

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| Hyd. No.                      | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft)      | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft)   | Hydrograph Description |  |
|-------------------------------|--------------------------|-----------------|---------------------|--------------------|-------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1                             | SCS Runoff               | 128.50          | 2                   | 734                | 599,362                 | -----         | -----                  | -----                     | West offsite           |  |
| 2                             | SCS Runoff               | 53.49           | 2                   | 722                | 161,899                 | -----         | -----                  | -----                     | East Offsite           |  |
| 3                             | SCS Runoff               | 93.62           | 2                   | 722                | 268,910                 | -----         | -----                  | -----                     | West High Athletics    |  |
| 4                             | Combine                  | 243.56          | 2                   | 724                | 1,030,170               | 1, 2, 3       | -----                  | -----                     | to Sed basin           |  |
| 5                             | Reservoir                | 5.376           | 2                   | 846                | 170,539                 | 4             | 1292.00                | 682,241                   | Sediment Basin Outfall |  |
| West High Athletics Field.gpw |                          |                 |                     |                    | Return Period: 100 Year |               |                        | Wednesday, 11 / 13 / 2013 |                        |  |

# Hydrograph Report

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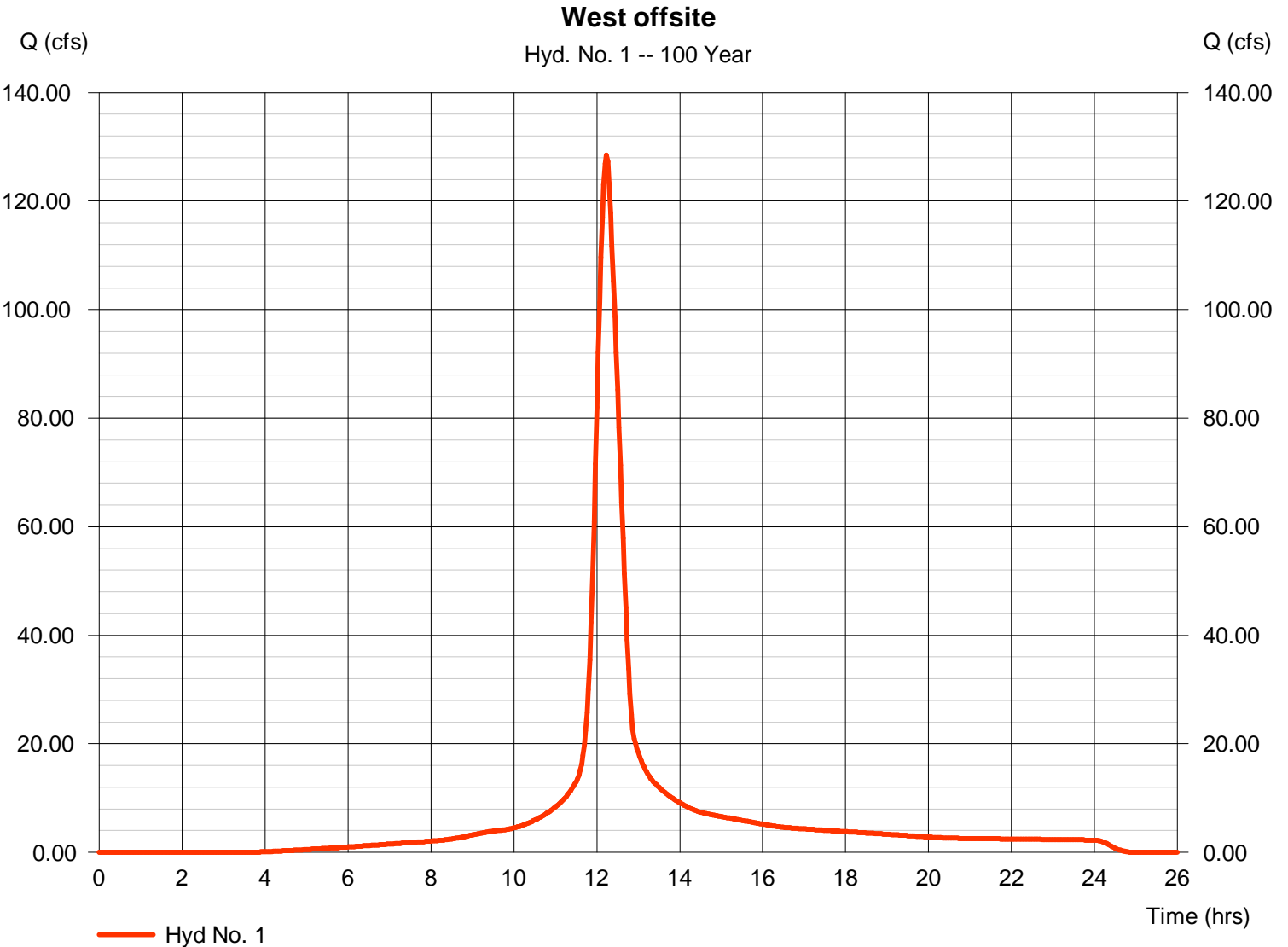
Wednesday, 11 / 13 / 2013

## Hyd. No. 1

West offsite

Hydrograph type = SCS Runoff  
Storm frequency = 100 yrs  
Time interval = 2 min  
Drainage area = 26.700 ac  
Basin Slope = 0.0 %  
Tc method = TR55  
Total precip. = 7.80 in  
Storm duration = 24 hrs

Peak discharge = 128.50 cfs  
Time to peak = 12.23 hrs  
Hyd. volume = 599,362 cuft  
Curve number = 87  
Hydraulic length = 0 ft  
Time of conc. (Tc) = 34.90 min  
Distribution = Type II  
Shape factor = 484



# Hydrograph Report

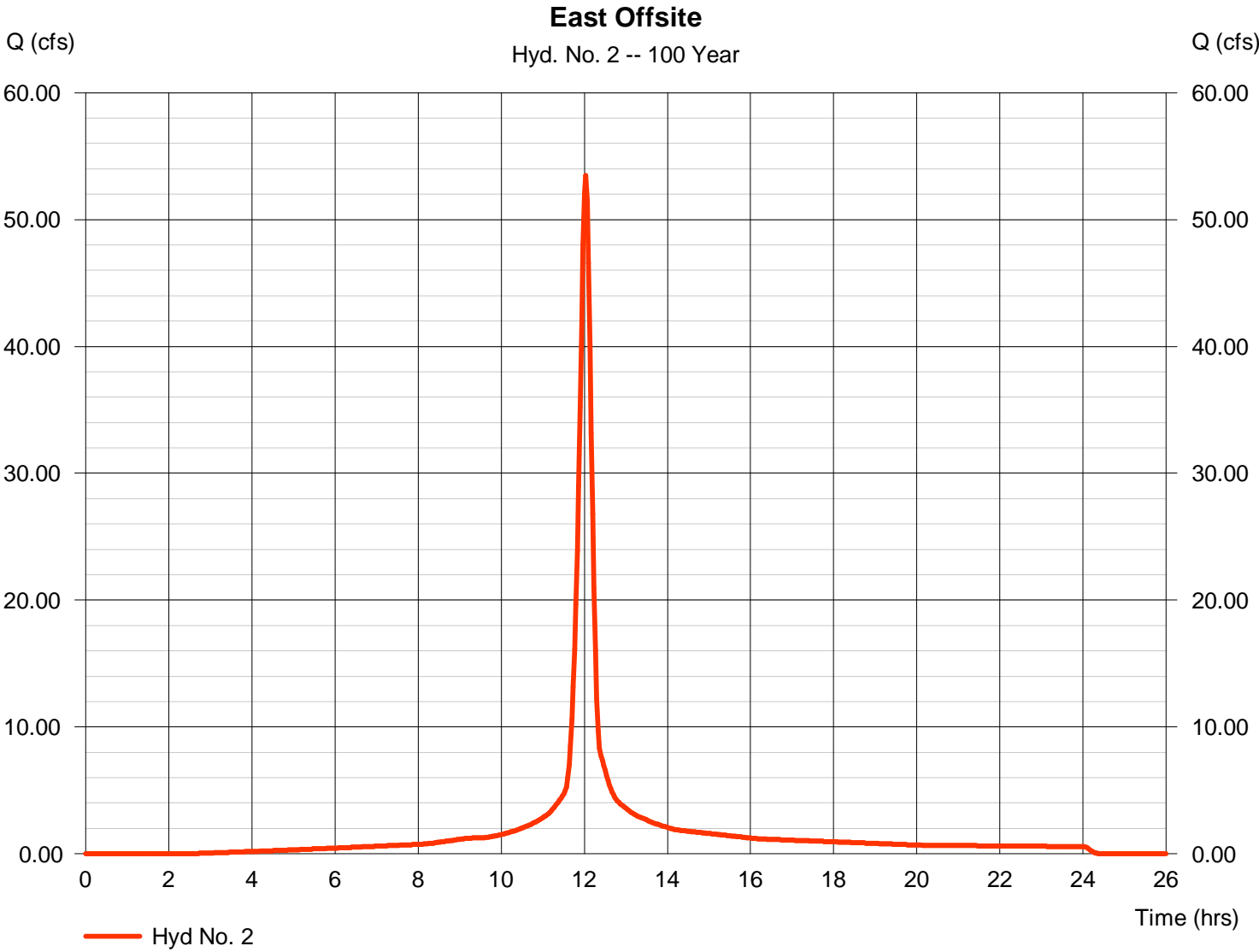
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Wednesday, 11 / 13 / 2013

## Hyd. No. 2

East Offsite

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 53.49 cfs    |
| Storm frequency | = 100 yrs    | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 161,899 cuft |
| Drainage area   | = 6.800 ac   | Curve number       | = 91           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 7.80 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

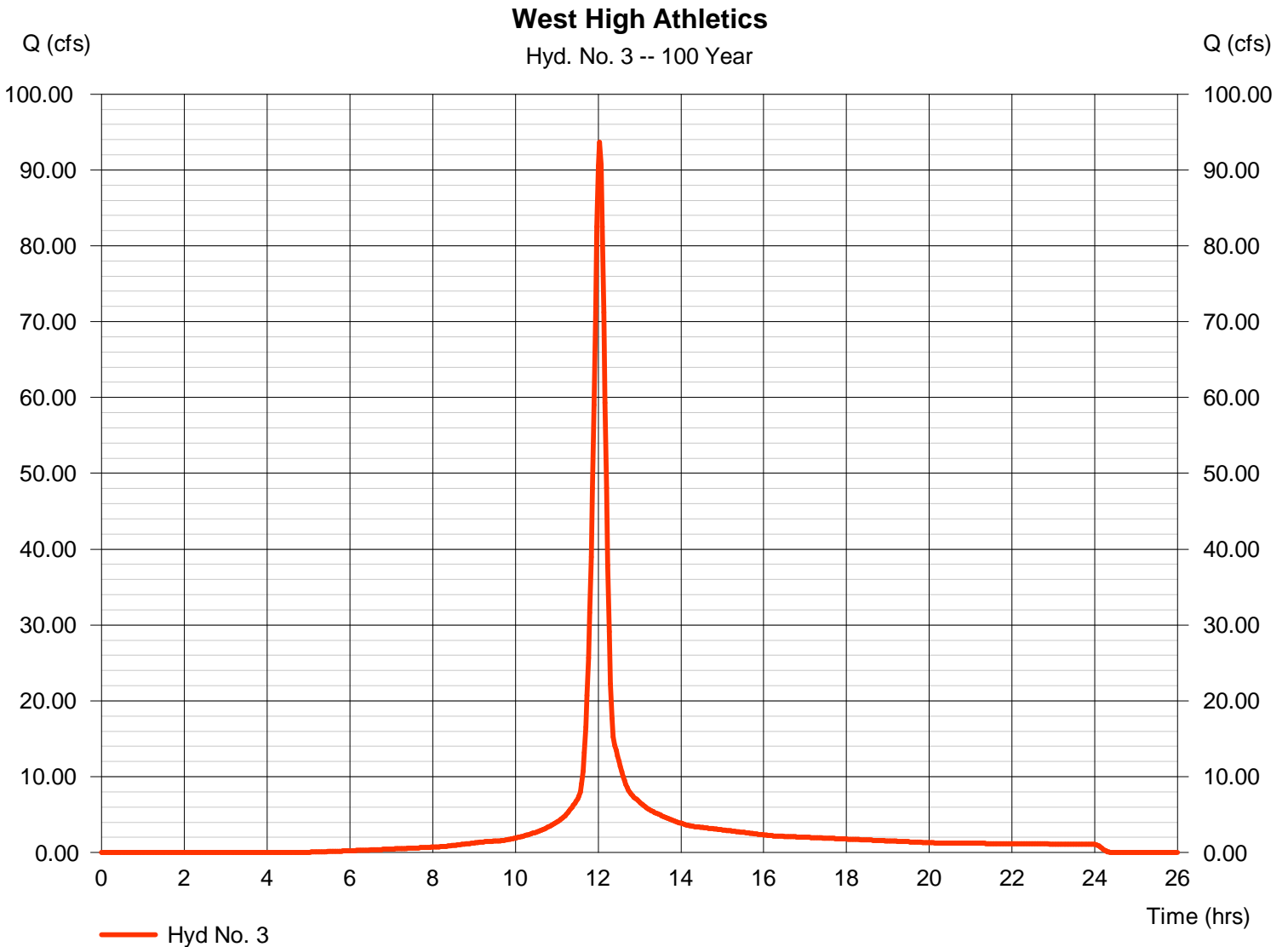
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Wednesday, 11 / 13 / 2013

## Hyd. No. 3

West High Athletics

|                 |              |                    |                |
|-----------------|--------------|--------------------|----------------|
| Hydrograph type | = SCS Runoff | Peak discharge     | = 93.62 cfs    |
| Storm frequency | = 100 yrs    | Time to peak       | = 12.03 hrs    |
| Time interval   | = 2 min      | Hyd. volume        | = 268,910 cuft |
| Drainage area   | = 13.400 ac  | Curve number       | = 82           |
| Basin Slope     | = 0.0 %      | Hydraulic length   | = 0 ft         |
| Tc method       | = User       | Time of conc. (Tc) | = 15.00 min    |
| Total precip.   | = 7.80 in    | Distribution       | = Type II      |
| Storm duration  | = 24 hrs     | Shape factor       | = 484          |



# Hydrograph Report

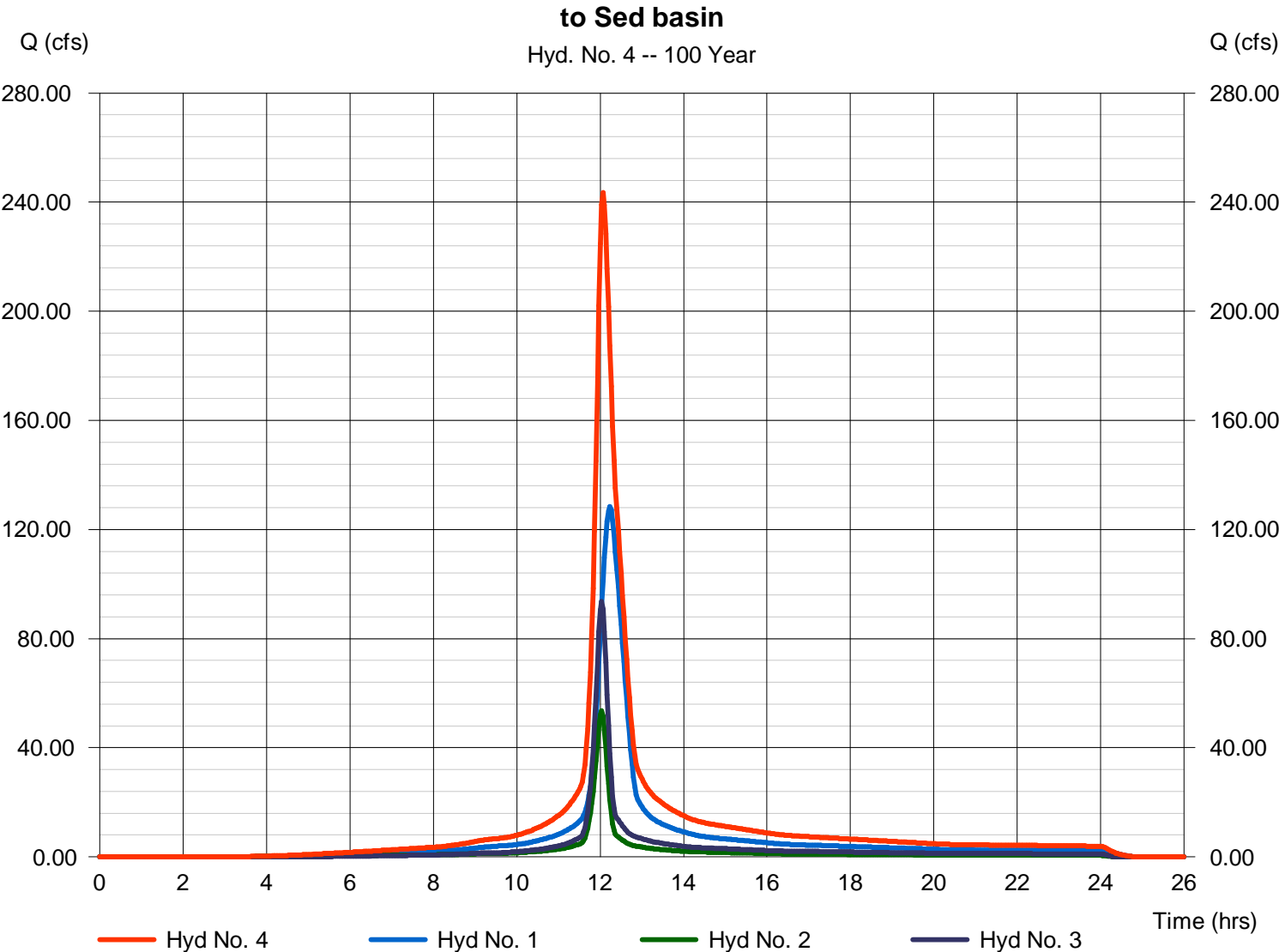
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Wednesday, 11 / 13 / 2013

## Hyd. No. 4

to Sed basin

|                 |           |                      |                  |
|-----------------|-----------|----------------------|------------------|
| Hydrograph type | = Combine | Peak discharge       | = 243.56 cfs     |
| Storm frequency | = 100 yrs | Time to peak         | = 12.07 hrs      |
| Time interval   | = 2 min   | Hyd. volume          | = 1,030,170 cuft |
| Inflow hyds.    | = 1, 2, 3 | Contrib. drain. area | = 46.900 ac      |



# Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 11 / 13 / 2013

## Hyd. No. 5

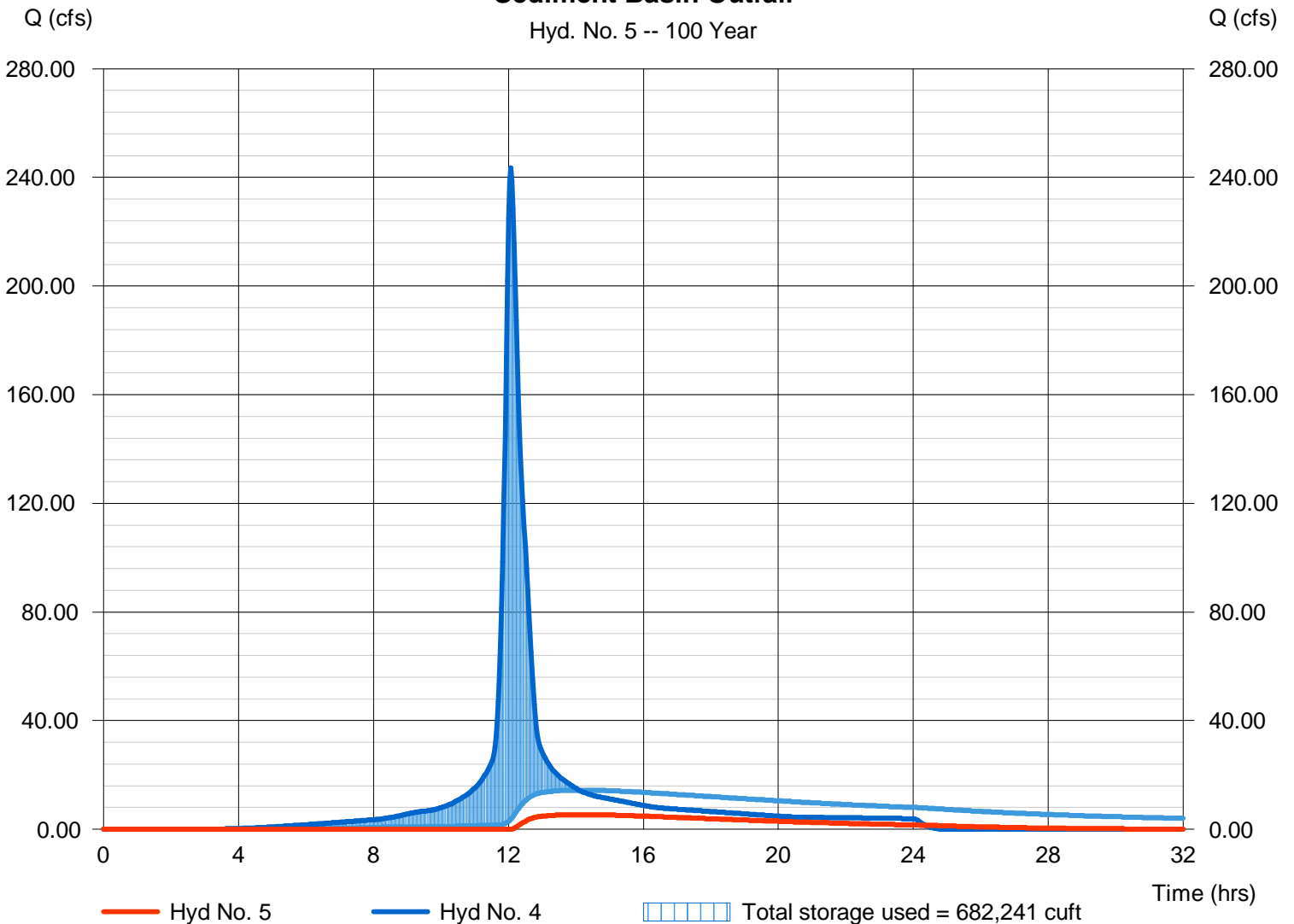
### Sediment Basin Outfall

|                 |                    |                |                |
|-----------------|--------------------|----------------|----------------|
| Hydrograph type | = Reservoir        | Peak discharge | = 5.376 cfs    |
| Storm frequency | = 100 yrs          | Time to peak   | = 14.10 hrs    |
| Time interval   | = 2 min            | Hyd. volume    | = 170,539 cuft |
| Inflow hyd. No. | = 4 - to Sed basin | Max. Elevation | = 1292.00 ft   |
| Reservoir name  | = Sediment Basin   | Max. Storage   | = 682,241 cuft |

Storage Indication method used. Exfiltration extracted from Outflow.

### Sediment Basin Outfall

Hyd. No. 5 -- 100 Year



|  |           |
|--|-----------|
| <b>Watershed Model Schematic .....</b>                   | <b>1</b>  |
| <b>Hydrograph Return Period Recap .....</b>              | <b>2</b>  |
| <b>1 - Year</b>  |           |
| <b>Summary Report.....</b>                               | <b>3</b>  |
| <b>Hydrograph Reports.....</b>                           | <b>4</b>  |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 4         |
| TR-55 Tc Worksheet.....                                  | 5         |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 6         |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 7         |
| Hydrograph No. 4, Combine, to Sed basin.....             | 8         |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 9         |
| Pond Report - Sediment Basin.....                        | 10        |
| <b>2 - Year</b>  |           |
| <b>Summary Report.....</b>                               | <b>11</b> |
| <b>Hydrograph Reports.....</b>                           | <b>12</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 12        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 13        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 14        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 15        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 16        |
| <b>3 - Year</b>  |           |
| <b>Summary Report.....</b>                               | <b>17</b> |
| <b>Hydrograph Reports.....</b>                           | <b>18</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 18        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 19        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 20        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 21        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 22        |
| <b>5 - Year</b>  |           |
| <b>Summary Report.....</b>                               | <b>23</b> |
| <b>Hydrograph Reports.....</b>                           | <b>24</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 24        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 25        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 26        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 27        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 28        |
| <b>10 - Year</b>   |           |
| <b>Summary Report.....</b>                               | <b>29</b> |
| <b>Hydrograph Reports.....</b>                           | <b>30</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 30        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 31        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 32        |

|  |    |
|--|----|
| Hydrograph No. 4, Combine, to Sed basin.....             | 33 |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 34 |

**25 - Year**

|  |           |
|--|-----------|
| <b>Summary Report.....</b>                               | <b>35</b> |
| <b>Hydrograph Reports.....</b>                           | <b>36</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 36        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 37        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 38        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 39        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 40        |

**50 - Year**

|  |           |
|--|-----------|
| <b>Summary Report.....</b>                               | <b>41</b> |
| <b>Hydrograph Reports.....</b>                           | <b>42</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 42        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 43        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 44        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 45        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 46        |

**100 - Year**

|  |           |
|--|-----------|
| <b>Summary Report.....</b>                               | <b>47</b> |
| <b>Hydrograph Reports.....</b>                           | <b>48</b> |
| Hydrograph No. 1, SCS Runoff, West offsite.....          | 48        |
| Hydrograph No. 2, SCS Runoff, East Offsite.....          | 49        |
| Hydrograph No. 3, SCS Runoff, West High Athletics.....   | 50        |
| Hydrograph No. 4, Combine, to Sed basin.....             | 51        |
| Hydrograph No. 5, Reservoir, Sediment Basin Outfall..... | 52        |