# OMYA – LUCERNE VALLEY
## SOLAR FACILITY

**FINAL STORMWATER MANAGEMENT REPORT**
**DRNSTY-2025-00008**

30 July 2024

*Revised: 06 March 2025*

| | |
|---|---|
| Owner/Operator: | OMYA North America |
| Address: | 7225 Crystal Creek Road, Lucerne Valley CA 92356 |
| Phone Number: | (760) 248-5200 |
| Developer Contact: | Powerflex EDF Renewables<br>Jack Kessler, Project Developer<br>(908) 721-2859<br>jack.kessler@powerflex.com |

*Prepared by:*


Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.,
**407 Lithia Pinecrest Road**
**Brandon, FL 33511**





Mark Privette
Digitally signed by Mark Privette
Date: 2025.03.12 14:05:47 -04'00'


J. Mark Privette, P.E. #C-91463, Manager of Engineering
MPrivette@tectonicengineering.com, (813) 374-9177
407 Lithia Pinecrest Road, Brandon, FL 33511

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

# TABLE OF CONTENTS


| SECTION | ITEM | PAGE |
|---|---|---|
| 1.0 | NARRATIVE | pg 03-05 |
| 2.0 | SITE CONDITIONS | pg 06-09 |
| 3.0 | METHODOLOGIES | pg 10-16 |
| 4.0 | SUMMARY AND CONCLUSION | pg 17-18 |
| 5.0 | STORMWATER RUNOFF CALCULATIONS | pg 19 |

APPENDICES

| | |
|---|---|
| Appendix A | Antecedent Moisture Conditions Map (Figure ADD-1) |
| Appendix B | NOAA ATLAS 14 Datasheets |
| Appendix C | FEMA FIRM Panel |
| Appendix D | DWR BAM Floodplain Map. |
| Appendix E | NRCS Soils Map and Report |
| Appendix F | Rip-Rap Calculations |

# 1.0 INTRODUCTION

## 1.1 PROJECT NARRATIVE

The proposed development is an unmanned 6.66 MW DC solar energy production and depicted in the attached Site Development Plans located on the grounds of the OMYA Dry Grinding Facility having a property area of 158.1497Ac at 7225 Crystal Creek Road, Lucerne Valley CA. The project involves the installation of a ground mounted solar array and associated equipment/infrastructure within a 28.976 Ac fenced compound having an LOD (which includes the perimeter diversion swale) of 29.390 Ac. The total area of proposed physical ground disturbance is 4.898 Ac, which is above the 1 ac threshold, and as such the project is subject to California State's Construction General SPDES Permit, requiring preparation of a stormwater pollution prevention plan (SWPPP) or applicable post-construction stormwater management improvements.

## 1.2 STANDARDS AND GUIDELINES

The following documents were utilized in the design process:

- San Bernando County Hydrology Manual (August 1986) and County of San Bernardino Hydrology Manual Addendum for Arid Regions (April 2010).
- San Bernardino County Detention Basin Design Memo (Sept 1987).
- NOAA Atlas 14, Volume 6, Version 2 – Point Precipitation Frequency Estimates, (Sourced on 5/22/2024).
- OMYA Lucerne Valley Geotechnical Engineering Report as prepared by Terracon Consultants, Inc., dated May 07, 2024 (Project #60245013).
- OMYA Lucerne Valley Drainage and Grading Plans, by Tectonic Engineering, dated July 25, 2024.
- Boundary and Topographic Survey by PBLA Surveying, Inc., dated May 17, 2024 (Job #5061-1)

## 1.3 SITE LOCATION

The project parcel is located at 7225 Crystal Creek Road, Lucerne Valley CA. Location and Aerial maps are provided in Figures 1.a and 1.b at the end of this section. The APN number for the project parcel is 0446-033-18.

## 1.4 SITE OWNER/OPERATOR

The name and address of the Owner/Operator, including contact person is:

| | |
|---|---|
| Owner/Operator: | OMYA North America |
| Address: | 7225 Crystal Creek Road, Lucerne Valley CA 92356 |
| Phone Number: | (760) 248-5200 |
| Developer Contact: | Powerflex EDF Renewables<br>Jack Kessler, Project Developer<br>(908) 721-2859<br>jack.kessler@powerflex.com |

## 1.a. Site Location and Aerial Maps

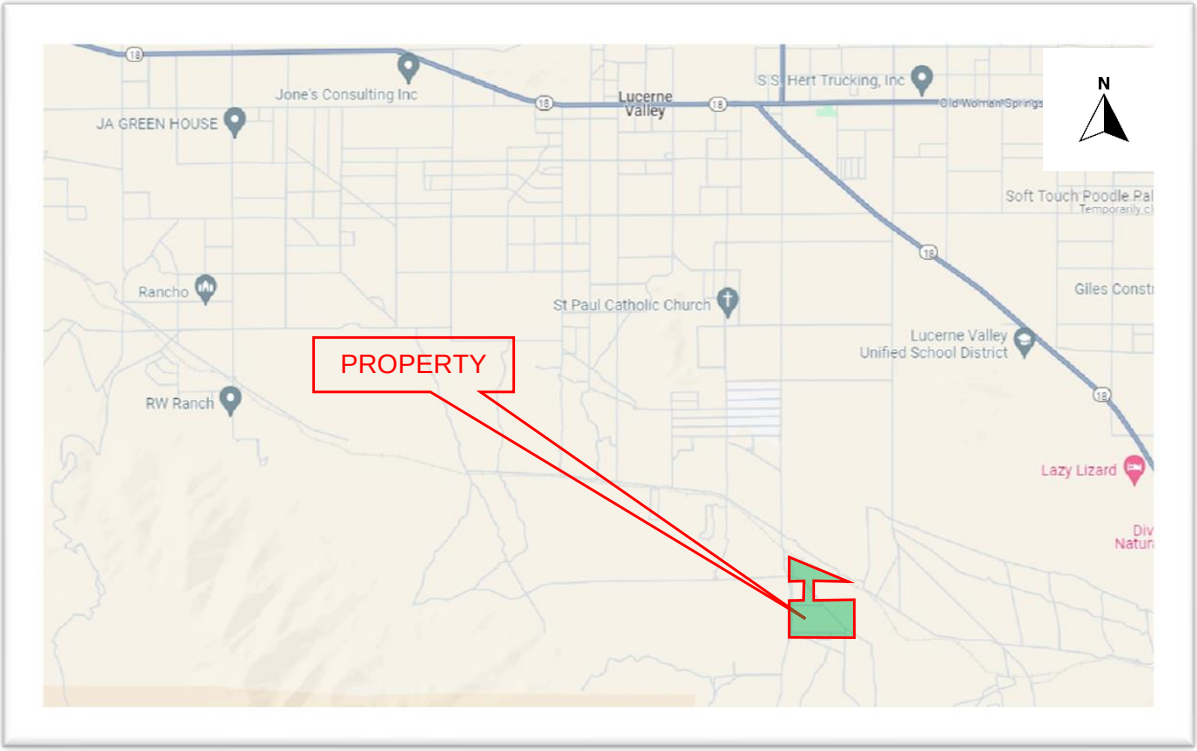



*Figure 1.a. - Site Location Map*

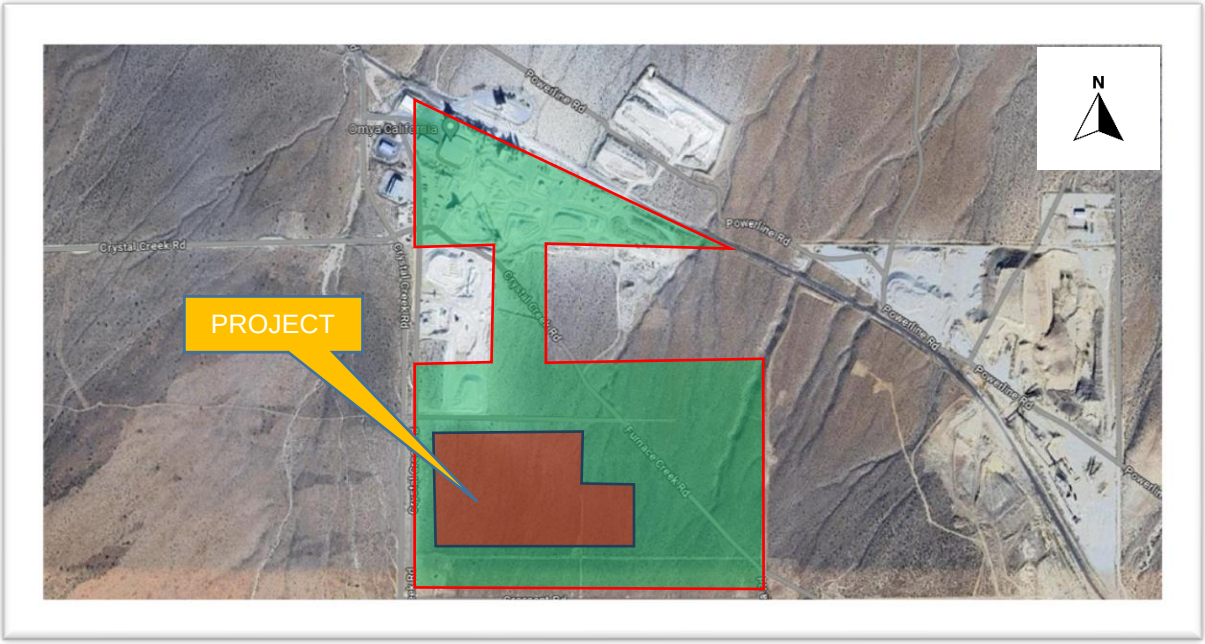



*Figure 1.b. - Site Aerial Map*

# 2.0 SITE CONDITIONS

## 2.1. TOPOGRAPHY

The USGS Topographic overlay maps and the project survey indicate the overall property exhibits localized physical slopes between 5% and 10%, and as such is not anticipated to be subject to any steep slope regulations. The moderate slope will help to minimize any possible erosion or sediment transport issues and is expected to facilitate construction of the proposed site improvements. The topography indicates a general and undefined surficial gradient from the south side of the property north-northeast towards Crystal Creek Road and ultimately to the Dry Lucerne Lake bed, approximately 7.5 miles north of the project location.

## 2.2. FLOODPLAINS AND FLOODWAYS

According to FEMA (FIRM Panel #06071C6575H, 08/28/2008) this parcel is located in Zone D in "an area of undetermined flood hazard", outside any designated 100 year flood plain or floodway. The California DWR's "Best Available Map" for floodplains also depicts the project area outside the 100 year floodplain. See Appendices C and D.

## 2.3. WATERSHED DESIGNATION

The project is located in Crystal Creek watershed (HUC 181001000403). The final receiving waters appears to be the Dry Lucerne Lake bed. The San Bernardino Stormwater Facility Mapping tool depicts the project in a Basin and Range basin-fill aquifer under AQ Code 101. A sub-basin map of the on-site sub-basins indicating pre and post developed flow patterns is provided in Section 5.1. of this report. The mapping tool indicates that the project is subject to runoff from a 37.02 Ac off-site contributing area directly to the south of the project. The off-site contributing area was modeled based on existing topography and ground cover, for the 100 year-24 hour storm event which generated a peak flow rate of 84.48 cfs and a runoff volume of 477,708 cf. The proposed perimeter divertor swale along the south and east sides of the project area were designed for a flow capacity greater than the calculated off-site flows. Calculations for the off-site contributing area are provided in Section 5.

## 2.4. WETLANDS AND WATERBODIES

There are no on-site or adjacent wetlands and other waterbodies in the vicinity of the project. As such there are no wetland impacts.

## 2.5. SOILS

The soil type, for this site as indicated by the NRCS soil survey, consist entirely of Kimberlina soils, which are hydrologically grouped as a type "A" soils, with actual locations depicted in the soils mapping provided in Appendix E. For the purposes of stormwater analysis and design, NCRS has this soil classified as s*omewhat excessively drained.* The soil type present on this parcel is rated with a whole soil erosion K factor of 0.15, which indicates only a slight susceptibility of erosion by runoff and as such only standard ES&C measures are anticipated to be required.

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| 139 | KIMBERLINA GRAVELLY SANDY LOAM, 2 TO 5 PERCENT SLOPES | A | 2.9 | 8.4% |
| 177 | YERMO-KIMBERLINA, COOL, ASSOCIATION, SLOPING* | A | 26.3 | 91.6% |

## 2.6. VEGETATION

The vegetative cover for the project area currently consists primarily of desert brush with 50% coverage as indicated in the photo 2.6.a. below. Based on these observations and in conjunction with the NRCS soils mapping, base curve numbers were applied to specific sub-basin areas for the on-site vegetative coverage, pertinent AMC condition and HSG designation, in accordance with standard TR-55 methodology and guidelines from the San Bernadino County Hydrology Manual.



*Photo 2.6.a. Southwesterly view of project area, just south of the existing haul road on north side of the array, 04/02/2024*

## 2.7. LAND USE

The existing property is currently utilized as a mineral grinding facility, with the proposed project area being vacant desert brush. The existing mineral grinding facility will remain intact and active, with the proposed project area being converted into a post mounted solar array used to provide power to the grinding

facility. The existing grade, excepting the areas directly adjacent to the proposed stormwater facilities, will remain unchanged and thus preserve existing drainage patterns.

## 2.8. SITE HYDROLOGY

Based on the site topography, this site exhibits sheet flow and shallow concentrated flow patterns from the south flowing north-northeast towards the existing haul road just north of the project area. The proposed stormwater conveyance facilities for the site utilize a system of detention basins for volume storage and runoff reduction, swales for runoff conveyance and weir walls for attenuating peak flow rates. The total project watershed area has been calculated at 26.94 Ac and topographically divides into four distinct drainage sub-basins (A-1, A-2 , B-1 and C-1). This project watershed area excludes the diversion berm and swale proposed along the south and east boundaries of the solar array, as they are conveying off-site runoff from the south around the perimeter and are not a contributor to the on-site runoff. The primary difference between pre and post development conditions is that the pre-developed conditions within the project watershed have 0% impervious area while the proposed conditions contain a total of 6.569 Ac (24.38%) of impervious coverage. This impervious coverage includes the proposed array fields (considered as having a 30% impervious coverage) and the proposed equipment slabs and gravel access drive, which replace the existing desert brush as the surface coverage.

There is a +/-37.02 ac area of desert brush directly south of the proposed development, which currently drains across the project watershed. This area was analyzed to ascertain peak flows anticipated from a 100 yr/24 hr storm event, in order to design a divertor swale needed to route the off-site runoff around the proposed development. This analysis utilized the existing topography, hydraulic path and surface cover parameters of the offsite area to calculate a peak runoff rate of 84.48 cfs during the 100 yr/24 hr storm event. Subsequently the proposed divertor swale along the south and east project boundaries was designed with a capacity of +/-156 cfs when flowing full, and is adequate to convey the offsite runoff around the proposed solar development without any impacts to the proposed stormwater system.

The entire actual ground disturbance area including proposed grading areas has been calculated to be 213,366.74sf (4.898 Ac) and is above the state threshold of

1.00 Ac for requiring post construction stormwater management BMPs/SMPs for stormwater management control. The hydrologic basin parameters have been calculated for the pre and post developed conditions based on physical data and are provided in the tables below:

| Pre-developed Sub-Basin | Total Area (Acres) | Weighted CN' (2 Year) | Weighted CN' (10 Year) | Weighted CN' (25 Year) | Weighted CN' (100 Year) | Time of Conc. (minutes) |
|---|---|---|---|---|---|---|
| A-1 | 6.1778 | 60.60 | 78.00 | 78.00 | 92.80 | 9.873 |
| A-2 | 11.8240 | 60.60 | 78.00 | 78.00 | 92.80 | 10.958 |
| B-1 | 6.3199 | 60.60 | 78.00 | 78.00 | 92.80 | 9.927 |
| C-1 | 2.6191 | 60.60 | 78.00 | 78.00 | 92.80 | 8.811 |

*Table 2.8.a. – Pre-developed Conditions sub-basin data used in Hydrologic Modeling*

| Post-developed Sub-Basin | Total Area (Acres) | Weighted CN' (2 Year) | Weighted CN' (10 Year) | Weighted CN' (25 Year) | Weighted CN' (100 Year) | Time of Conc. (minutes) |
|---|---|---|---|---|---|---|
| A-1 | 6.1778 | 70.99 | 83.80 | 83.80 | 94.70 | 9.717 |
| A-2 | 11.8240 | 71.76 | 84.30 | 84.30 | 94.91 | 10.806 |
| B-1 | 6.3199 | 70.22 | 83.37 | 83.37 | 94.56 | 9.815 |
| C-1 | 2.6191 | 69.25 | 82.83 | 82.83 | 94.38 | 8.501 |

*Table 2.8.b. – Post-developed Conditions sub-basin data used in Hydrologic Modeling*

The pre vs post development analysis is therefore based on a conglomerate of the runoff from all drainage basins sheet flowing off-site to the north-northeast and ultimately into the downstream receiving waters. The peak runoff rates were calculated for both pre and post developed conditions from runoff hydrographs for the 15 min., 30 min., 1 hr, 3 hr, 6 hr and 24 hr durations storm events for each of the 2 yr, 10 yr, 25 yr and 100 yr return frequencies. The overall site results are provided in Tables 4.1a. and 4.1b. below, with individual sub-basin results tabulated in Section 5.f. It is noted here, that the 15 min duration was utilized in lieu of the 5 min duration as all calculated time of concentration values exceeded the 5 min duration.

As observed in the tabulated results, post developed peak runoff rates for the design 2, 10, 25 and 100 year storm events are all reduced well below 90% of the pre-developed flows with the use of stormwater detention basins and attenuating devices.

# 3.0 METHODOLOGIES USED

The hydrologic analysis for this report is based on criteria of the San Bernadino County Hydrology Manual and addendum, as well as the results of the Hydraflow computational model which utilized the HEC 22 and TR 55 methods to generate Runoff Hydrographs for each discrete drainage sub-basin (See Section 5.1 for sub-basin maps). For continuity purposes parts of the program methodology documentation are provided below. Model input/output data is provided in Sections 5.3 and 5.4; with summarized modeling results are provided in Section 5.6.

## 3.1. SCS UNIT HYDROGRAPH

More specifically, the program uses the triangular D-hour Unit Hydrograph approach as used in TR-20. The peak discharge for the unit graph is computed using the following equation.

$Q_p = (484 \times A \times Q)/T_p$
$Q_p$ = peak outflow (cfs)
A = area (sq miles)
Q = total excess precipitation (1 inch)
$T_p$ = time to peak (hrs)

The shape factor value used for this analysis was set to 484 and reflects a unit hydrograph that has 3/8 of its area under the rising limb.

The time to peak, $T_p$ and the time base, $T_b$ are what determines the characteristics of the unit Hydrograph. The Hydraflow program computes these values using the following relationships.

$T_p = (T_c + D)/1.7$
$T_p$ = time to peak (hrs)
$T_c$ = time of concentration (hrs)
D = unit duration of time intervals (hrs)
$T_c$ = 1.67 x Lag Time (L)

$L = l^{0.8} (S + 1)^{0.7}/1900 \times Y^{0.5}$
L = Lag Time (hrs) ≈ 0.8 x $T_C$
l = hydraulic length (ft)
S = (1000/CN) – 10
Y = basin slope (%)
CN = SCS curve number

Time Base = 2.67 x $T_p$
$T_b$ = time base (hrs)
$T_p$ = time to peak (hrs)

### 3.2. TIME OF CONCENTRATION CALCULATIONS

Time of Concentration calculations for this analysis were performed using the Fig D-1 Nomograph (based on Kirpitch eqn.) from the San Bernandino County's Hydrology Manual as well as the 3 component TR-55 algorithm shown below. Ultimately the values from the D-1 Fig Nomograph provided more conservative values and were the values used in the overall system modeling.

**NRCS 3 component Algorithm using Manning's Kinematic Wave Equation:**
**Tc = Sheet Flow Time + Shallow Conc Flow Time + Channel Flow Time**

Sheet Flow Time (hrs)
$T_{sheet} = [0.007(n \times L)^{0.8}]/[P_2^{0.5} \times S^{0.4}]$
n = Manning's roughness coefficient
L = Flow Length (a value of 100' used for this site)
$P_2$ = Two Year 24-hr rainfall (in)
S = Land Slope (ft/ft)

Shallow Channel Time (hrs)
$T_{shallow} = L/(3600 \times V)$
V = Average velocity (ft/s)
L = Flow Length (ft)
$V = C_p \times S^{0.5}$
$C_p$ = 20.3282 paved surfaces
$C_p$ = 16.1345 unpaved surfaces
S = Watercourse Slope (ft/ft)

Channel Flow Time (hrs)
$T_{channel} = L/(3600 \times V)$
V = Average velocity (ft/s)
L = Flow Length (ft)
$V = (1.486 \times R^{2/3} \times S^{1/2})/n$
n = Manning's roughness coefficient
R = Hydraulic Radius (ft)
S = Channel Slope (ft/ft

## 3.3. SCS 24-HOUR DISTRIBUTIONS

The analysis utilized the SCS Type II 24-hr distributions for the 2 yr, 10 yr, 25 yr, and 100 yr duration storm events with 2 minute time intervals. The incremental rainfall amounts were computed from a polynomial equation. This equation is used with coefficients that vary depending on the elapsed time of the storm as shown below:

$P_t = C_0 + C_1T + C_2T^2 + C_3T^3$
$P_t$ = Fraction of 24-hour precipitation
T = Elapsed time (hrs)
$C_0$ = Coefficient
$C_1$ = Coefficient
$C_2$ = Coefficient
$C_3$ = Coefficient

## 3.4. SYNTHETIC STORMS

Hydraflow uses the rainfall IDF curves to compute depth increments over the time intervals. From this, the design storm is constructed by placing the maximum depth increment near the center of the storm and arranging the other increments in a symmetrical alternating form. This is the same method used by the SCS to construct their 24-hour storms.

The Synthetic Storm can be matched to the site, that is, its total duration can be specified so that it better fits the computed Tc. This way the storm lasts long enough so that the entire drainage area contributes to flow to the most downstream point.

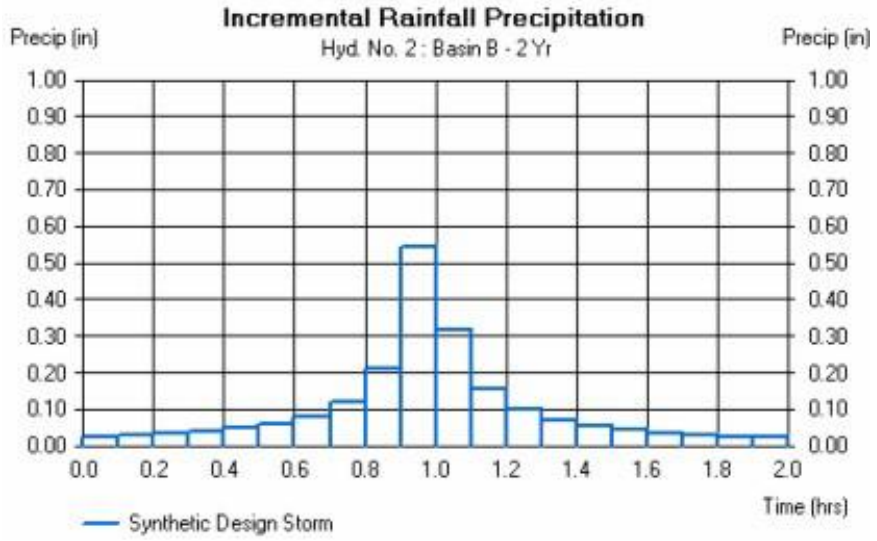



*Figure 3.4 – Typical Synthetic Rainfall Distribution*

## 3.5. EXCESS PRECIPITATION HYETOGRAPH

The precipitation increments of the specified storm are converted to excess precipitation by use of the following equation.

$Q = [P – (0.2 \times S)]^2/[P+(0.8 \times S)]$
Q = Excess volume of precipitation (in)
P = Accumulated precipitation (in)
S = Potential maximum retention = (1000/CN) - 10
S = SCS Curve Number

The computed volumes are then converted to excess increments. These excess increments are then used for the final excess precipitation hyetograph.

## 3.6. COMBINING HYDROGRAPHS

Due to the topography of this project and a downstream confluence of all surface flows, combining of hydrographs was required to properly ascertain pre and post developed condition runoff rates and volumes discharged off-site to the north.

## 3.7. STAGE-STORAGE PROFILE BY CONTOURS

Hydraflow uses either the average-end-area method applied vertically or the Conic method. The conic method uses the following equation:

$V = d \times [(A_1 + (A_1 \times A_2)^{1/2} + A_2)/3]$
V = Storage (cuft)
d = Change in elevation between points 1 and 2
$A_1$ = Surface area at elevation 1 (sqft)
$A_2$ = Surface area at elevation 2 (sqft)

## 3.8 STAGE-DISCHARGE PROFILE FOR WEIRS

The basic equations used to calculate weir flow are:
Rectangular, Cipoletti, Broad Crested & Riser

$Q = C_W \times (L-0.2H) \times H^{1.5}$
Q = Discharge over weir (cfs)
L = Length of the weir crest (ft)
H = Distance between water surface and the crest (ft)
$C_W$ = Weir coefficient, typically 3.33

## 3.9 DETENTION BASIN DRAWDOWN ANALYSIS

The runoff retained in the detention basins is subject to infiltration of the captured runoff volume thru natural soils of the detention basin's bottom down to the groundwater table. As per on-site geotechnical testing, the existing soils underlying the project exhibit a correlated average infiltration rate that varies from 3.05 in/hr to 4.56 in/hr which was multiplied by a de-rating factor of 0.5 to account for future degradation of the soils conveyance capacity. Using this rate and a minimum travel depth to SHWT of 2 ft , the drawdown time for each detention basin was calculated using Darcy's Law for Flow Through a Porous Material, and was well below the 24 hr maximum, see Section 5.5.

$Q = KA (h_1-h_2)/L$ or $q = Q/A = -K\, dh/dl$, h: hydraulic head (ft), $h = p/rg + z$
q = Q/A is the specific discharge [L/T] (cfh),
dh/dl is the hydraulic gradient
K is the hydraulic conductivity [L/T] = Correlated Average Infiltration Rate adjusted with the derating factor.

## 3.10 SITE SPECIFIC HYDROLOGIC CRITERIA

**Impervious Cover:**

San Bernardino County considers the exterior footprint of the post mounted solar array fields as 30% impervious cover. As such, the exterior perimeter area for each array field was ascertained with 30% of that area applied a base curve number of 100. The balance of the array field areas were considered as existing surface and assigned a base curve number consistent with the existing conditions at the prescribed storm event. The 30% of the array field designated as impervious cover was then added to the areas of proposed concrete and gravel access drive to generate a total impervious area for each sub-basin, which is provided in the TR-55 curve number calculations in section 5.1. The total overall site impervious area was calculated to be 6.569 Ac, which constituted 24.38% of the 26.94 Ac project watershed area.

The specific solar panel model (CSI CS3W-450MB-AG 1500V) has a proposed flat dimensional area of 41.260" x 83.937" and was calculated to have a horizontal plane area of 20.8278 sf/panel when mounted at the prescribed tilt angle of 30 degrees.

**Antecedent Moisture Conditions:** According to the San Bernardino County Hydrology Manual, AMC values are varied based on the storm event frequency being analyzed. Pursuant to the SBC Hydrology Manual, Section C.5. AMC I is used for the 2 and 5 year return frequency storms, whereas AMC II is utilized for the 10, 25 and 50 year return frequency storms. AMC III is utilized for the 100 year return frequency storm. In order to incorporate the variable AMC values into the calculations, Section C.5.1. of the manual provides a table (Table C.1.) to adjust the base Curve Numbers depending on the AMC condition being utilized. This is essentially a conversion table based on AMC II as the default, where the base curve numbers can be adjusted to reflect the appropriate AMC for the storm return frequency being analyzed.

| CN Conversion Table | | |
|---|---|---|
| AMC I | AMC II | AMC III |
| 100.00 | 100.00 | 100.00 |
| 87.00 | 95.00 | 99.00 |
| 78.00 | 90.00 | 98.00 |
| 70.00 | 85.00 | 97.00 |
| 63.00 | 80.00 | 94.00 |
| 57.00 | 75.00 | 91.00 |
| 51.00 | 70.00 | 87.00 |
| 45.00 | 65.00 | 83.00 |
| 40.00 | 60.00 | 79.00 |
| 35.00 | 55.00 | 75.00 |
| 31.00 | 50.00 | 70.00 |
| 27.00 | 45.00 | 65.00 |

*Table 3.10.a. - derived from Table C.1. of the SBC Hydrology Manual (Aug 1986)*

**Curve Numbers:**

The base curve number of 78 (@ AMC II) assigned for natural unimproved areas was selected from Figure C-8 of the San Bernardino County Hydrology Manual for the appropriate soil HSG rating, and a surface coverage of Desert Brush @ 50% cover. Base curve numbers (@ AMC II) for proposed surface improvements (concrete = 98, gravel drives = 91, and loose gravel equipment areas = 85), were selected from the standard SCS TR-55 charts. Direction was provided by San Bernandino County staff for calculating the base curve number for the array fields. The direction was to assign 30% of the array field areas a CN of 100 and the balance of the area at a CN of 70-75 at AMC II. Conservatively a CN of 75 was assigned to the 70% non-impervious area of the array fields. This resulted in an adjusted base CN of 82.50 (@ AMC II) being assigned for the array fields, which converted to an adjusted CN of 69.9 for AMC I and 93.7 for AMC III (See chart in Section 5.2.b.). The weighted curve numbers, calculated using the adjusted base curve numbers and proposed area percentages, are provided in Section 5.2 of this report.

**Rainfall Intensity Values:**

The rainfall depth and intensity values were extracted from the NOAA Atlas 14, Volume 6, Version 2 datasheets obtained from the NOAA website for the specific project coordinates. These datasheets are provided in Appendix B of this report.

| Rainfall Intensity (in/hr) - Proposed Conditions Input Data | | | | | |
|---|---|---|---|---|---|
| Duration | 2 Yr | 5 Yr | 10 Yr | 25 Yr | 100 Yr |
| 5 Min. | 1.460 | 1.990 | 2.440 | 3.110 | 4.230 |
| 15 Min. | 0.880 | 1.200 | 1.480 | 1.880 | 2.560 |
| 30 Min. | 0.610 | 0.830 | 1.020 | 1.300 | 1.770 |
| 60 Min. | 0.410 | 0.560 | 0.690 | 0.880 | 1.200 |

| Rainfall Intensity (in/hr) - Existing Conditions Input Data | | | | | |
|---|---|---|---|---|---|
| Duration | 2 Yr | 5 Yr | 10 Yr | 25 Yr | 100 Yr |
| 5 Min. | 1.460 | 1.990 | 1.990 | 2.440 | 3.110 |
| 15 Min. | 0.880 | 1.200 | 1.200 | 1.480 | 1.880 |
| 30 Min. | 0.610 | 0.830 | 0.830 | 1.020 | 1.300 |
| 60 Min. | 0.410 | 0.560 | 0.560 | 0.690 | 0.880 |

*Table 3.10.b. – Rainfall Intensities used in Hydrologic Modeling*

**Detention Basin Design:**

The stormwater design for the proposed solar array necessitated the use of detention basins in order to attenuate post-developed flows and runoff volumes in order to meet county requirements. As such, the design criteria as set forth in the San Bernardino County Detention Basin Design Memo was utilized in the design of these detention basins.

**Peak Flow Attenuation:**

The San Bernardino County Detention Basin Design Memo prescribes a staggered approach in assigning rainfall depths to specific storm events in an effort to provide a better level of confidence in the design of stormwater detention basins. As such, the predeveloped conditions analysis utilized the following staggered assignment of rainfall depths; the 10 year peak flows were calculated using the 5 year rainfall depth; the 25 year peak flows were calculated using the 10 year rainfall depth; and the 100 year peak flows were calculated using the 25 year rainfall depth. By reducing the predeveloped condition flows, the attenuated storage volumes become larger and post developed peak flows become smaller, in order for the system design to meet the pre vs post flow criteria.

| Rainfall Depth (in.) - Proposed Conditions Input Data | | | | | |
|---|---|---|---|---|---|
| Duration | 2 Yr | 5 Yr | 10 Yr | 25 Yr | 100 Yr |
| 15 Min. | 0.211 | 0.288 | 0.353 | 0.450 | 0.613 |
| 30 Min. | 0.305 | 0.416 | 0.510 | 0.649 | 0.884 |
| 1 Hr | 0.413 | 0.563 | 0.690 | 0.878 | 1.200 |
| 3 Hr | 0.659 | 0.877 | 1.060 | 1.330 | 1.780 |
| 6 Hr | 0.869 | 1.150 | 1.400 | 1.740 | 2.310 |
| 24 Hr | 1.420 | 2.000 | 2.490 | 3.190 | 4.340 |

| Rainfall Depth (in.) - Existing Conditions Input Data | | | | | |
|---|---|---|---|---|---|
| Duration | 2 Yr | 5 Yr | 10 Yr | 25 Yr | 100 Yr |
| 15 Min. | 0.211 | 0.288 | 0.288 | 0.353 | 0.450 |
| 30 Min. | 0.305 | 0.416 | 0.416 | 0.510 | 0.649 |
| 1 Hr | 0.413 | 0.563 | 0.563 | 0.690 | 0.878 |
| 3 Hr | 0.659 | 0.877 | 0.877 | 1.060 | 1.330 |
| 6 Hr | 0.869 | 1.150 | 1.150 | 1.400 | 1.740 |
| 24 Hr | 1.420 | 2.000 | 2.000 | 2.490 | 3.190 |

*Table 3.10.c. – Rainfall Depths used in Hydrologic Modeling*

The calculated peak flows from the post developed conditions are subsequently required under San Bernardino County regulations to be attenuated to a level

below 90% of the calculated pre-developed condition flows. See Tables 4.1.a. and 4.1.b. for a summary comparison of the peak flow rates.

**Runoff Volume Attenuation:**

The San Bernardino County Detention Basin Design guidance also includes a provision that the calculated runoff volume from the post developed conditions for the 100 year storm event (at the 100 year intensity) is to be reduced to a level at or below the calculated pre-developed condition runoff volumes. See Table 4.1.c. for a comparison of the peak discharge volumes and compliance with this criteria.

# 4.0 CONCLUSION AND SUMMARY

## 4.1. SUMMARY:

Pursuant to the San Bernardino County Hydrology Manual, the existing site was analyzed as desert brush in fair condition, using the pertinent AMC conditions and assigned base curve numbers accordingly. This analysis also factored in the calculated times of concentration of each sub-basin and the predominate soils HSG rating. Runoff Hydrographs were created for 15 min., 30 min., 1 Hr, 3 Hr, 6 Hr and 24 Hr durations of the 2 yr, 10 yr, 25 yr and 100 yr storm events to determine peak runoff rates and discharge volumes. The discharge hydrographs from each sub-basin were subsequently combined to create a total site discharge hydrograph.

Post developed conditions were analyzed under similar conditions with notable exceptions of the additional impervious cover created by the solar panels, equipment slabs and gravel access road. The time of concentration values (See Tables 2.8.a. and 2.8.b. in Section 2.8. above) were recalculated for the change in length and any alterations in the surface gradient needed as a result of the proposed site grading improvements). The runoff hydrographs from each sub-basin were then routed through the respective detention basin to provide the required attenuation. The inclusion of the three detention basins with outfall weirs into the design, provided the additional runoff storage and flow attenuation needed to mitigate the post developed flows to the required levels.

| Summary of Results: Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
|---|---|---|---|---|---|---|
| **Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| 2 Yr Peak Discharge Rate $Q_{Pre\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.044 |
| 10 Yr Peak Discharge Rate $Q_{Pre\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.684 | 1.658 | 8.529 |
| 25 Yr Peak Discharge Rate $Q_{Pre\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.472 | 1.885 | 4.475 | 14.120 |
| 100 Yr Peak Discharge Rate $Q_{Pre\text{-}Total}$ (cfs) | 13.050 | 19.790 | 24.680 | 35.980 | 37.570 | 44.880 |

*Table 4.1.a. Pre-Developed Conditions Peak Flow Rates*

| Summary of Results: Receiving Waters (Runoff From Post-developed Basins A-1, A-2, B, and C) | | | | | | |
|---|---|---|---|---|---|---|
| **Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| 2 Yr Peak Discharge Rate $Q_{Post\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10 Yr Peak Discharge Rate $Q_{Post\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.432 |
| 25 Yr Peak Discharge Rate $Q_{Post\text{-}Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.852 | 4.171 |
| 100 Yr Peak Discharge Rate $Q_{Post\text{-}Total}$ (cfs) | 0.000 | 0.000 | 3.958 | 12.290 | 20.870 | 35.490 |

*Table 4.1.b. Post Developed Conditions Peak Flow Rates*

It is noted here, that modeling of the 15 min and 30 min duration storm events is no longer a required criteria; however the calculations and results have been left in for informational purposes. In addition, this analysis also addressed the 100 year

runoff volume criteria, with resultant volumes from the 100 year storm event tabulated in the Table below for both pre and post developed conditions. Inspection of the results shows that the proposed detention basins provide adequate storage below the outfall weir crest, to reduce post developed runoff volumes by approximately 31,983 cf below the calculated predeveloped volumes for the 24 Hr duration.

| Summary of Results: Receiving Waters (Runoff From Post-developed Basins A-1, A-2, B, and C) | | | | | | |
|---|---|---|---|---|---|---|
| **Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| 100 Yr Discharge Volume $V_{Pre\text{-}100Yr}$ (cf) | 19,175.0 | 34,338.0 | 58,256.0 | 117,730.0 | 174,196.0 | 354,272.0 |
| 100 Yr Discharge Volume $V_{Post\text{-}100Yr}$ (cf) | 0.0 | 0.0 | 13,673.0 | 75,316.0 | 134,586.0 | 322,289.0 |

*Table 4.1.c. Pre-Developed vs Post Developed Runoff Volumes*

Off-site run-on contributions from adjacent parcels to the south were eliminated under proposed conditions by utilizing a perimeter swale/berm system to divert these flows around the project area. Once diverted around the project area, the off-site flows will be released via a spreader swale with weir wall to the to the north and east of the project area and thus maintain natural drainage patterns without having to include these flows into the proposed stormwater system.

Pertinent summary tables and maps of the raw data utilized for time of concentration, curve number calculations as well as rainfall intensities is provided in section 5.2. for each sub-basin and detention basin. This data was extracted from the Survey and proposed Drainage and Grading Plans.

No proposed drainage easements are required for this project as the entire project is located within the overall property, and the system is to be privately maintained.

Due to the nature of this project being an unmanned post mounted solar array with no pollutant sources, a WQMP was not required. As such, post construction water quality treatment for runoff from this project is not addressed in this report.

## 4.2. CONCLUSION:

Based on the calculations and site construction, the proposed project will not increase the peak discharge rates from any of the proposed condition design storm events above 90% of the flows calculated for the predeveloped conditions. In addition, the runoff volume from the 100 year storm under post conditions will not exceed the runoff volumes calculated for the same design storm under pre-developed conditions.

# 5.0 STORMWATER RUNOFF CALCULATIONS

5.1. Basin Maps and Information Form
5.2. Rainfall Data, Curve Number and Time of Concentration Calculations
5.3. Pre-Developed Conditions Runoff and Discharge Calculations
5.4. Post-Developed Conditions Runoff and Basin Routing Calculations
5.5. Stage-Storage profile with Drawdown Analysis, Stage-Discharge profile & Basin Information Form
5.6. Tabulated Project Area Modeling Results
5.7. Off-site Contributing Area Calculations and Modeling results

## 5.1. Basin Maps and Watershed Information Form

5.1.a. Pre and Post Developed Conditions Basin Maps
5.1.b. Watershed Information Form

5.1.a. Pre and Post Developed Conditions Basin Maps

5.1.a.1. Project Watershed Basin Map
5.1.a.2. Sub-Basin Maps
5.1.a.3. Off-site Contributing Area Basin Map

5.1.a. Pre and Post Developed Conditions Basin Maps




PROPOSED BASIN MAP

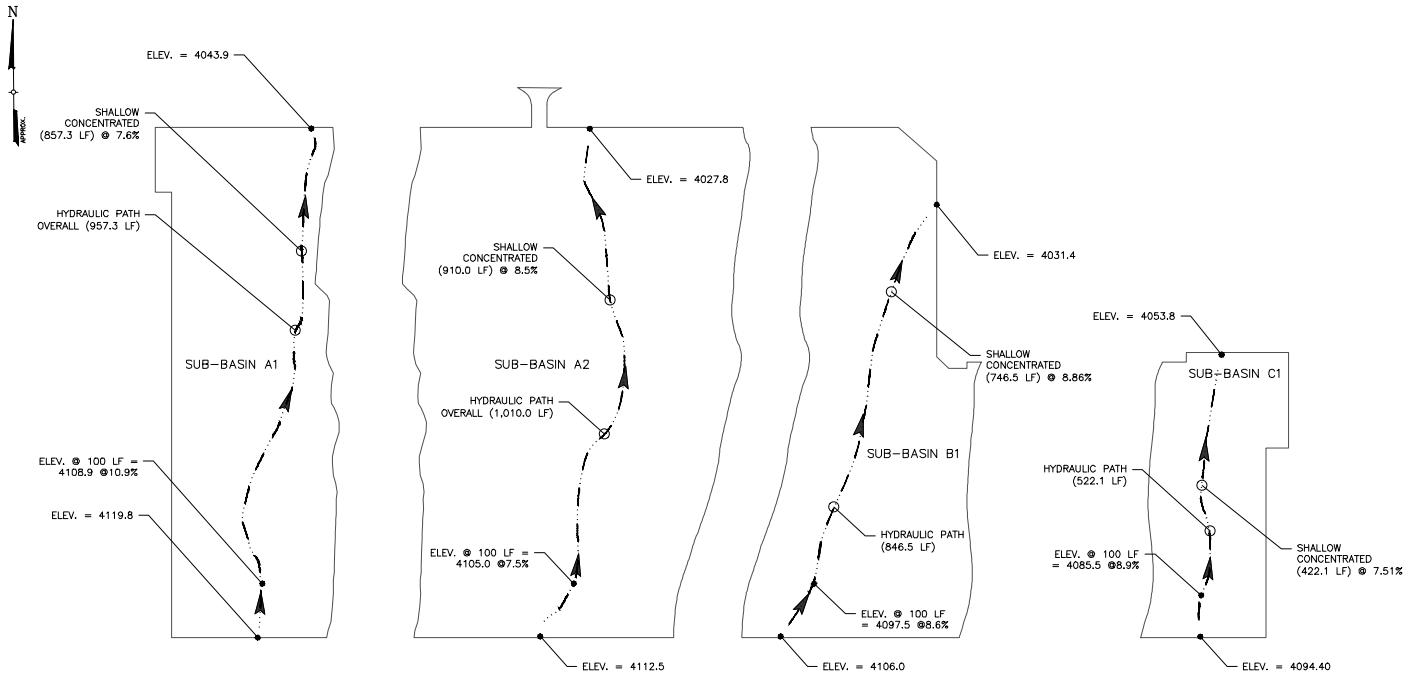
SCALE: NTS

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

Tectonic Engineering Consultants
*Project Contact Info*
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com

# SOLAR GROUND MOUNT SYSTEM AT
# OMYA-LUCERNE VALLEY
## 7225 CRYSTAL CREEK ROAD
## LUCERNE VALLEY, CA 92356

| 11550.07 | ISSUED BY: JMP | DATE: 03/05/25 | SCALE: AS NOTED | SHEET: | REV: 0 |
|---|---|---|---|---|---|




| SUB-BASIN A1 EXISTING CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78 | 269,104.77 |
| | | | | |
| TOTAL: | | | | 269,104.77 |

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 957.3
AVG. GRADIENT = 7.93%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (10.90%)

SHALLOW CONCENTRATED = 857.3 (7.58%)

TIME OF CONCENTRATION (MINUTES) : 13.70

| SUB-BASIN A2 EXISTING CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78 | 515,051.40 |
| | | | | |
| TOTAL: | | | | 515,051.40 |

SUB-BASIN A-2 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 1,010.0
AVG. GRADIENT = 8.39%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (7.5%)

SHALLOW CONCENTRATED = 910.0 (8.50%)

TIME OF CONCENTRATION (MINUTES) : 13.90

| SUB-BASIN B1 EXISTING CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78 | 275,294.27 |
| | | | | |
| TOTAL: | | | | 275,294.27 |

SUB-BASIN B-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 846.5
AVG. GRADIENT = 8.82%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (9.50%)

SHALLOW CONCENTRATED = 746.5 (8.86%)

TIME OF CONCENTRATION (MINUTES) : 12.80

| SUB-BASIN C1 EXISTING CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78 | 114,088.66 |
| | | | | |
| TOTAL: | | | | 114,088.66 |

SUB-BASIN C-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 522.1
AVG. GRADIENT = 7.78%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (9.25%)

SHALLOW CONCENTRATED = 422.1 (7.51%)

TIME OF CONCENTRATION (MINUTES) : 10.80

## 1 / E-1B DRAINAGE BASIN MAP (PRE DEVELOPMENT)

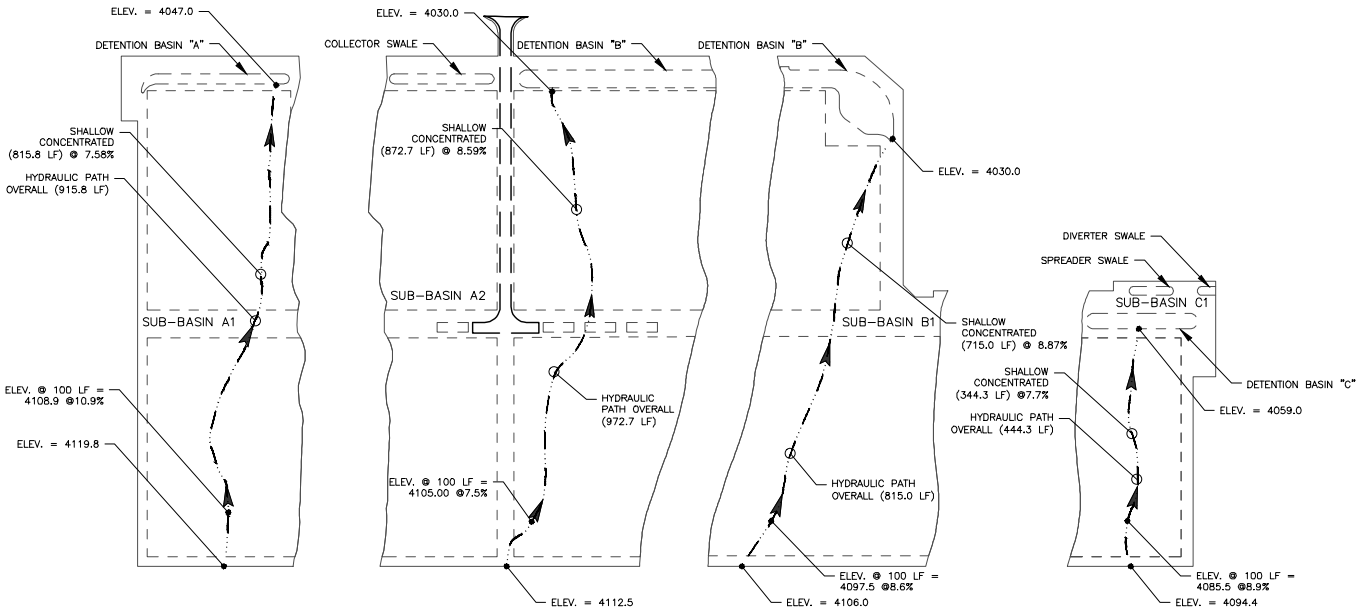
SCALE: NTS


Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

Tectonic Engineering Consultants
*Project Contact Info*
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com


# SOLAR GROUND MOUNT SYSTEM AT
# OMYA-LUCERNE VALLEY
## 7225 CRYSTAL CREEK ROAD
## LUCERNE VALLEY, CA 92356

| 11550.07 | ISSUED BY: JMP | DATE: 03/05/25 | SCALE: AS NOTED | SHEET: E-1B | REV: 0 |
|---|---|---|---|---|---|




| SUB-BASIN A1 PROPOSED CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78.0 | 198,134.16 |
| 177 | A | CONCRETE | 98.0 | – |
| 177 | A | GRAVEL DRIVE | 91.0 | – |
| 177 | A | SOLAR PANEL | 82.5 | 70,970.61 |
| 177 | A | GRAVEL EQUIP. | 85.0 | – |
| 177 | A | STAGING AREA | 84.0 | – |
| TOTAL: | | | | 269,104.77 |

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 915.8 LF
AVG. GRADIENT = 7.94%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (10.90%)

SHALLOW CONCENTRATED = 815.8 (7.58%)

TIME OF CONCENTRATION (MINUTES) : 9.17

| SUB-BASIN A2 PROPOSED CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78.0 | 359,697.70 |
| 177 | A | CONCRETE | 98.0 | 1,384.10 |
| 177 | A | GRAVEL DRIVE | 91.0 | 14,217.58 |
| 177 | A | SOLAR PANEL | 82.5 | 137,104.13 |
| 177 | A | GRAVEL EQUIP. | 85.0 | 2,647.89 |
| 177 | A | STAGING AREA | 84.0 | – |
| TOTAL: | | | | 515,051.40 |

SUB-BASIN A-2 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 972.7
AVG. GRADIENT = 8.48%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (10.90%)

SHALLOW CONCENTRATED = 872.7 (8.59%)

TIME OF CONCENTRATION (MINUTES) : 10.80

| SUB-BASIN B1 PROPOSED CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78.0 | 208,083.85 |
| 177 | A | CONCRETE | 98.0 | – |
| 177 | A | GRAVEL DRIVE | 91.0 | – |
| 177 | A | SOLAR PANEL | 82.5 | 67,210.42 |
| 177 | A | GRAVEL EQUIP. | 85.0 | – |
| 177 | A | STAGING AREA | 84.0 | – |
| TOTAL: | | | | 275,294.27 |

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 815.0
AVG. GRADIENT = 8.83%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (9.50%)

SHALLOW CONCENTRATED = 715.0 (8.87%)

TIME OF CONCENTRATION (MINUTES) : 9.81

| SUB-BASIN C1 PROPOSED CONDITIONS | | | | |
|---|---|---|---|---|
| SOILS | HSG | COVER TYPE | CN | AREA (SF) |
| 177 | A | DESERT BRUSH | 78.0 | 89,036.28 |
| 177 | A | CONCRETE | 98.0 | – |
| 177 | A | GRAVEL DRIVE | 91.0 | – |
| 177 | A | SOLAR PANEL | 82.5 | 25,052.38 |
| 177 | A | GRAVEL EQUIP. | 85.0 | – |
| 177 | A | STAGING AREA | 84.0 | – |
| TOTAL: | | | | 114,088.66 |

SUB-BASIN A-1 EXISTING CONDITIONS
HYDRAULIC PATH TOTAL LENGTH = 444.3
AVG. GRADIENT = 7.97%

SHEET FLOW LENGTH (DESERT BRUSH) = 100 LF (9.25%)

SHALLOW CONCENTRATED = 344.3 (7.70%)

TIME OF CONCENTRATION (MINUTES) : 8.50

## 1 / E-2B BASIN AREA MAP (POST DEVELOPMENT)

SCALE: NTS

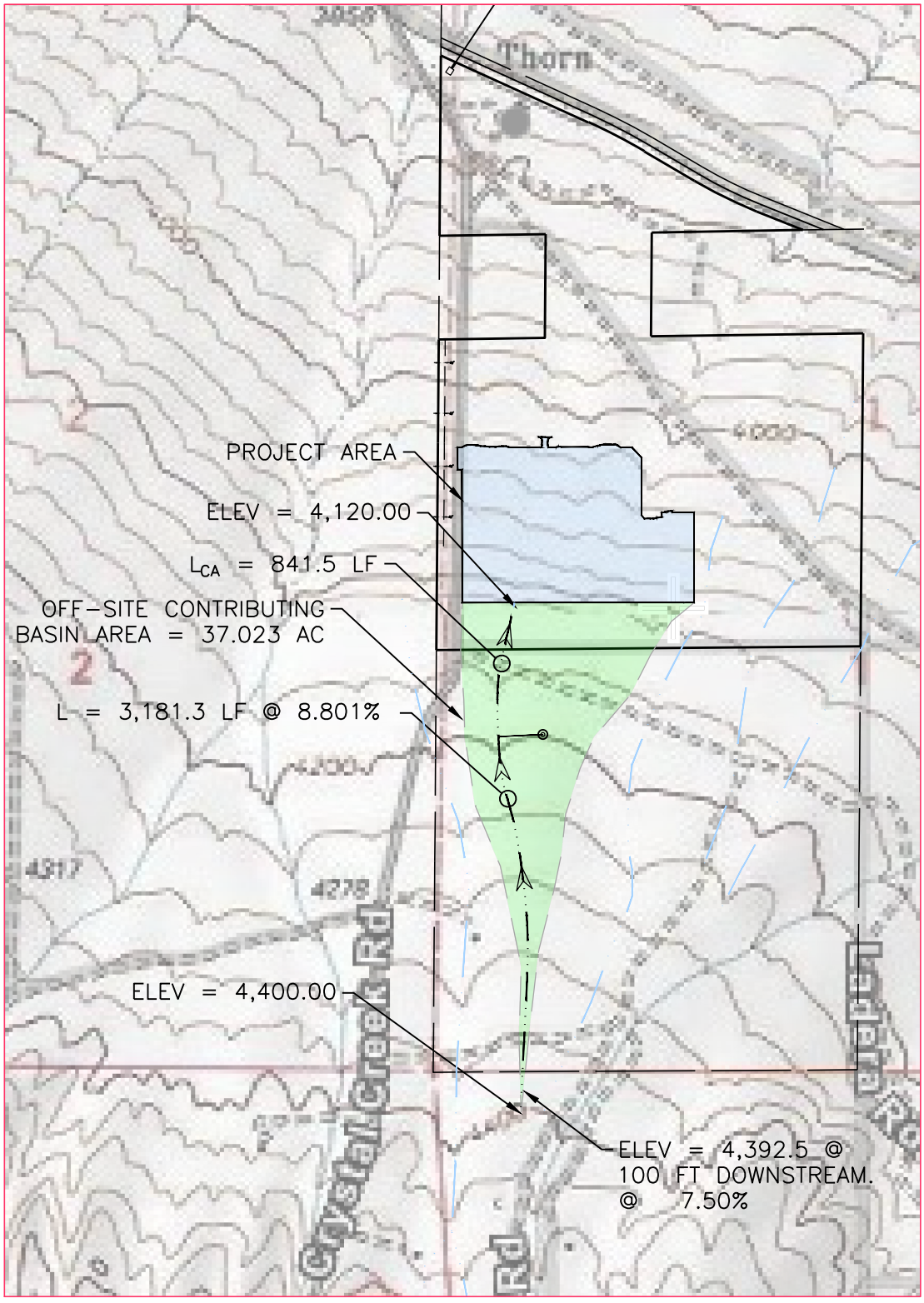

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.

Tectonic Engineering Consultants
*Project Contact Info*
2415 Campus Drive
Suite 265
Irvine, CA 92612
Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com


# SOLAR GROUND MOUNT SYSTEM AT OMYA-LUCERNE VALLEY

7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

| 11550.07 | ISSUED BY: JMP | DATE: 03/05/25 | SCALE: AS NOTED | SHEET: E-2B | REV: 0 |
|---|---|---|---|---|---|




1 / S-1 OFF-SITE CONTRIBUTING AREA

SCALE: NTS

Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.


Tectonic Engineering Consultants

*Project Contact Info*

2415 Campus Drive
Suite 265
Irvine, CA 92612

Phone: (949) 502-8555
(800) 829-6531
www.tectonicengineering.com


# SOLAR GROUND MOUNT SYSTEM AT OMYA-LUCERNE VALLEY

7225 CRYSTAL CREEK ROAD
LUCERNE VALLEY, CA 92356

| 11550.07 | ISSUED BY: JMP | DATE: 03/05/25 | SCALE: AS NOTED | SHEET: OS-1 | REV: 0 |
|---|---|---|---|---|---|

5.1.b. Watershed Information Form

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN A-1: EXISTING CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.132 hrs |
| 3. | Enter the catchment area **(acres)** | 6.178 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.18 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.919 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN A-1: PROPOSED CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.130 hrs |
| 3. | Enter the catchment area **(acres)** | 6.178 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.133 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.845 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN A-2: EXISTING CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.146 hrs |
| 3. | Enter the catchment area **(acres)** | 11.824 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.18 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.919 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN A-2: PROPOSED CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.144 hrs |
| 3. | Enter the catchment area **(acres)** | 11.824 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.127 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.841 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN B-1: EXISTING CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.132 hrs |
| 3. | Enter the catchment area **(acres)** | 6.320 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.18 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.919 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN B-1: PROPOSED CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.131 hrs |
| 3. | Enter the catchment area **(acres)** | 6.320 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.136 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.851 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN C-1: EXISTING CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.117 hrs |
| 3. | Enter the catchment area **(acres)** | 2.619 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.18 in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.919 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

SUB-BASIN C-1: PROPOSED CONDITIONS

**ENGINEER:** TECTONIC ENGINEERING

| | | |
|---|---|---|
| I. | Enter the design storm return frequency **(years)** | 100 yr |
| 2. | Enter catchment lag **(hours)** | 0.113 hrs |
| 3. | Enter the catchment area **(acres)** | 6.320 Ac |
| 4. | Enter baseflow **(cfs/square mile)** | 0.00 |
| *5.* | Enter S-Graph proportions **(decimal)** | |
| | Valley: Developed | |
| | Foothill | |
| | Mountain | |
| | Valley: Undeveloped | |
| | Desert | 1.00 |
| 6. | Enter maximum loss rate, $F_m$ **(inch/hour)** | 0.141in/hr |
| 7. | Enter low loss fraction, $\bar{Y}$ **(decimal)** | 0.858 |
| 8. | Enter watershed area-averaged 5-minute point rainfall **(inches)*** | 0.353 in |
| | Enter watershed area-averaged 30-minute point rain fall **(inches)*** | 0.884 in |
| | Enter watershed area-averaged 1-hour point rainfall **(inches)*** | 1.20 in |
| | Enter watershed area-averaged 3-hour point rainfall **(inches)*** | 1.78 in |
| | Enter watershed area-averaged 6-hour point rainfall **(inches)*** | 2.31 in |
| | Enter watershed area-averaged 24-hour point rainfall **(inches)*** | 4.34 in |
| 9. | Enter 24-hour storm unit interval **(minutes)** | 2.0 min |

*Note: enter values unadjusted by depth-area factors

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**WATERSHED INFORMATION FORM**

Figure E-7

# Runoff Loss Rate Calculations

**SITE NAME:** OMYA Solar Plant

Sub-basin A1

**Pre-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 92.8000 |
| Potential Abstraction "S" | | 0.7759 |
| Initial Abstraction "$I_A$" | | 0.1552 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0807 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9193 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.18 |

**Post-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 93.5166 |
| Potential Abstraction "S" | | 0.6933 |
| Initial Abstraction "$I_A$" | | 0.1387 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.3044 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.6956 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 0.7611 |
| Maximum Loss Rate "$F_m$" | | 0.1370 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0355 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9645 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 81.5830 |
| Potential Abstraction "S" | | 2.2575 |
| Initial Abstraction "$I_A$" | | 0.4515 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.2189 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.7811 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7611 |
| Maximum Loss Rate "$F_m$" | | 0.3197 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0153 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9847 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 81.5830 |
| Potential Abstraction "S" | | 2.2575 |
| Initial Abstraction "$I_A$" | | 0.4515 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.1683 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.8317 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7611 |
| Maximum Loss Rate "$F_m$" | | 0.3197 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 60.6000 |
| Initial Abstraction "$I_A$" | | 1.3003 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0002 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9998 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.66 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 68.0048 |
| Initial Abstraction "$I_A$" | | 0.9410 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0943 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9057 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 0.7611 |
| Maximum Loss Rate "$F_m$" | | 0.5023 |

# Runoff Loss Rate Calculations

**SITE NAME:** OMYA Solar Plant

Sub-basin A2

**Pre-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 92.8000 |
| Potential Abstraction "S" | | 0.7759 |
| Initial Abstraction "$I_A$" | | 0.1552 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0807 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9193 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.18 |

**Post-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 93.7140 |
| Potential Abstraction "S" | | 0.6708 |
| Initial Abstraction "$I_A$" | | 0.1342 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.3110 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.6890 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 0.7299 |
| Maximum Loss Rate "$F_m$" | | 0.1314 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0355 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9645 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 82.0738 |
| Potential Abstraction "S" | | 2.1842 |
| Initial Abstraction "$I_A$" | | 0.4368 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.2239 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.7761 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7299 |
| Maximum Loss Rate "$F_m$" | | 0.3066 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0153 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9847 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 82.0738 |
| Potential Abstraction "S" | | 2.1842 |
| Initial Abstraction "$I_A$" | | 0.4368 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.1722 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.8278 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7299 |
| Maximum Loss Rate "$F_m$" | | 0.3066 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 60.6000 |
| Initial Abstraction "$I_A$" | | 1.3003 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0002 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9998 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.66 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 68.7623 |
| Initial Abstraction "$I_A$" | | 0.9086 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0962 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9038 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 0.7299 |
| Maximum Loss Rate "$F_m$" | | 0.4817 |

# Runoff Loss Rate Calculations

**SITE NAME:** OMYA Solar Plant

Sub-basin B1

**Pre-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 92.8000 |
| Potential Abstraction "S" | | 0.7759 |
| Initial Abstraction "$I_A$" | | 0.1552 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0807 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9193 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.18 |

**Post-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 93.4465 |
| Potential Abstraction "S" | | 0.7013 |
| Initial Abstraction "$I_A$" | | 0.1403 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.2825 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.7175 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 0.7845 |
| Maximum Loss Rate "$F_m$" | | 0.1412 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0355 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9645 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 81.2327 |
| Potential Abstraction "S" | | 2.3103 |
| Initial Abstraction "$I_A$" | | 0.4621 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.2010 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.7990 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7845 |
| Maximum Loss Rate "$F_m$" | | 0.3295 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0153 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9847 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 81.2327 |
| Potential Abstraction "S" | | 2.3103 |
| Initial Abstraction "$I_A$" | | 0.4621 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.1534 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.8466 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.7845 |
| Maximum Loss Rate "$F_m$" | | 0.3295 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 60.6000 |
| Initial Abstraction "$I_A$" | | 1.3003 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0002 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9998 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.66 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 67.2810 |
| Initial Abstraction "$I_A$" | | 0.9726 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0851 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9149 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 0.7845 |
| Maximum Loss Rate "$F_m$" | | 0.5178 |

# Runoff Loss Rate Calculations

**SITE NAME:** OMYA Solar Plant

Sub-basin C1

**Pre-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 92.8000 |
| Potential Abstraction "S" | | 0.7759 |
| Initial Abstraction "$I_A$" | | 0.1552 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0807 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9193 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.18 |

**Post-Developed Conditions:**

| 100-Year | 24 hrs | AMC III |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 93.3906 |
| Potential Abstraction "S" | | 0.7077 |
| Initial Abstraction "$I_A$" | | 0.1415 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.2651 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.7349 |
| Infiltration Rate of Pervious "$F_p$" | | 0.18 |
| Pervious Area Fraction "$a_p$" | | 0.8031 |
| Maximum Loss Rate "$F_m$" | | 0.1446 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0355 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9645 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 25-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 80.9528 |
| Potential Abstraction "S" | | 2.3529 |
| Initial Abstraction "$I_A$" | | 0.4706 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.1866 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.8134 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.8031 |
| Maximum Loss Rate "$F_m$" | | 0.3373 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 78.0000 |
| Potential Abstraction "S" | | 2.8205 |
| Initial Abstraction "$I_A$" | | 0.5641 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0153 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9847 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.42 |

| 10-Year | 24 hrs | AMC II |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 80.9528 |
| Potential Abstraction "S" | | 2.3529 |
| Initial Abstraction "$I_A$" | | 0.4706 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.1414 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.8586 |
| Infiltration Rate of Pervious "$F_p$" | | 0.42 |
| Pervious Area Fraction "$a_p$" | | 0.8031 |
| Maximum Loss Rate "$F_m$" | | 0.3373 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{PRE}$ | | 60.6000 |
| Initial Abstraction "$I_A$" | | 1.3003 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0002 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9998 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 1.00 |
| Maximum Loss Rate "$F_m$" | | 0.66 |

| 2-Year | 24 hrs | AMC I |
|---|---|---|
| Weighted Curve Number: $CN'_{POST}$ | | 66.7024 |
| Initial Abstraction "$I_A$" | | 0.9984 |
| 24 Hr Runoff Yield Fraction "Y" | | 0.0777 |
| Catchment Low Loss Fraction "$\bar{Y}$" | | 0.9223 |
| Infiltration Rate of Pervious "$F_p$" | | 0.66 |
| Pervious Area Fraction "$a_p$" | | 0.8031 |
| Maximum Loss Rate "$F_m$" | | 0.5301 |

## 5.2. Rainfall Data, Area/Curve Number and Time of Concentration Calculations

5.2.a. Rainfall Depth and Intensity Factor Tables/Charts
5.2.b. Area Tabulations and Curve Number Calculations
5.2.c. Time of Concentration Calculations

# 5.2.a. Rainfall Depth and Intensity Factor Tables/Charts

**NOAA Atlas 14, Volume 6, Version 2**
**Location name: Lucerne Valley, California, USA***
**Latitude: 34.3824°, Longitude: -116.9419°**
**Elevation: 3901 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | **1.09** (0.900-1.33) | **1.46** (1.21-1.79) | **1.99** (1.64-2.45) | **2.45** (1.99-3.02) | **3.11** (2.46-3.98) | **3.66** (2.83-4.78) | **4.24** (3.20-5.68) | **4.86** (3.58-6.68) | **5.75** (4.06-8.24) | **6.47** (4.40-9.60) |
| 10-min | **0.780** (0.648-0.954) | **1.05** (0.864-1.28) | **1.43** (1.18-1.75) | **1.75** (1.43-2.17) | **2.23** (1.76-2.86) | **2.62** (2.03-3.42) | **3.04** (2.29-4.07) | **3.49** (2.56-4.79) | **4.12** (2.90-5.90) | **4.64** (3.16-6.88) |
| 15-min | **0.632** (0.520-0.772) | **0.844** (0.696-1.04) | **1.15** (0.948-1.41) | **1.41** (1.15-1.75) | **1.80** (1.42-2.30) | **2.11** (1.64-2.76) | **2.45** (1.85-3.28) | **2.81** (2.06-3.86) | **3.32** (2.34-4.76) | **3.74** (2.55-5.55) |
| 30-min | **0.456** (0.376-0.556) | **0.610** (0.504-0.748) | **0.832** (0.684-1.02) | **1.02** (0.832-1.26) | **1.30** (1.03-1.66) | **1.52** (1.18-1.99) | **1.77** (1.34-2.37) | **2.03** (1.49-2.79) | **2.40** (1.69-3.44) | **2.70** (1.84-4.00) |
| 60-min | **0.308** (0.255-0.377) | **0.413** (0.341-0.506) | **0.563** (0.463-0.691) | **0.690** (0.564-0.855) | **0.878** (0.694-1.12) | **1.03** (0.798-1.35) | **1.20** (0.904-1.60) | **1.37** (1.01-1.89) | **1.62** (1.14-2.33) | **1.83** (1.24-2.71) |
| 2-hr | **0.210** (0.173-0.256) | **0.276** (0.228-0.338) | **0.370** (0.305-0.455) | **0.450** (0.368-0.558) | **0.566** (0.447-0.724) | **0.660** (0.511-0.862) | **0.759** (0.573-1.02) | **0.862** (0.633-1.19) | **1.00** (0.709-1.44) | **1.12** (0.761-1.66) |
| 3-hr | **0.167** (0.138-0.204) | **0.219** (0.181-0.268) | **0.292** (0.240-0.358) | **0.354** (0.289-0.438) | **0.443** (0.350-0.567) | **0.516** (0.399-0.674) | **0.591** (0.446-0.791) | **0.671** (0.493-0.924) | **0.780** (0.550-1.12) | **0.864** (0.588-1.28) |
| 6-hr | **0.110** (0.091-0.135) | **0.145** (0.119-0.177) | **0.192** (0.158-0.236) | **0.232** (0.190-0.288) | **0.290** (0.229-0.372) | **0.337** (0.261-0.440) | **0.385** (0.291-0.516) | **0.437** (0.320-0.601) | **0.507** (0.357-0.727) | **0.561** (0.382-0.833) |
| 12-hr | **0.067** (0.055-0.082) | **0.091** (0.075-0.111) | **0.124** (0.102-0.152) | **0.152** (0.124-0.188) | **0.192** (0.151-0.246) | **0.224** (0.173-0.293) | **0.258** (0.194-0.345) | **0.293** (0.215-0.403) | **0.342** (0.241-0.490) | **0.380** (0.259-0.564) |
| 24-hr | **0.042** (0.037-0.048) | **0.059** (0.052-0.068) | **0.083** (0.073-0.096) | **0.103** (0.090-0.120) | **0.132** (0.112-0.159) | **0.156** (0.129-0.192) | **0.181** (0.146-0.227) | **0.207** (0.163-0.268) | **0.245** (0.185-0.330) | **0.275** (0.201-0.384) |
| 2-day | **0.024** (0.021-0.028) | **0.035** (0.031-0.040) | **0.050** (0.044-0.057) | **0.062** (0.054-0.073) | **0.080** (0.068-0.097) | **0.095** (0.079-0.117) | **0.110** (0.089-0.139) | **0.127** (0.100-0.165) | **0.151** (0.114-0.204) | **0.171** (0.125-0.238) |
| 3-day | **0.017** (0.015-0.020) | **0.025** (0.022-0.029) | **0.036** (0.032-0.042) | **0.045** (0.040-0.053) | **0.059** (0.050-0.071) | **0.069** (0.058-0.086) | **0.081** (0.066-0.102) | **0.094** (0.074-0.121) | **0.112** (0.084-0.151) | **0.127** (0.093-0.177) |
| 4-day | **0.013** (0.012-0.015) | **0.019** (0.017-0.022) | **0.028** (0.025-0.033) | **0.036** (0.032-0.042) | **0.047** (0.040-0.057) | **0.056** (0.046-0.069) | **0.065** (0.053-0.083) | **0.076** (0.060-0.098) | **0.091** (0.069-0.123) | **0.103** (0.075-0.144) |
| 7-day | **0.008** (0.007-0.009) | **0.012** (0.010-0.014) | **0.018** (0.016-0.021) | **0.023** (0.020-0.027) | **0.030** (0.026-0.037) | **0.036** (0.030-0.045) | **0.043** (0.034-0.054) | **0.049** (0.039-0.064) | **0.059** (0.045-0.080) | **0.067** (0.049-0.094) |
| 10-day | **0.006** (0.005-0.007) | **0.009** (0.008-0.010) | **0.013** (0.012-0.015) | **0.017** (0.015-0.020) | **0.023** (0.019-0.028) | **0.028** (0.023-0.034) | **0.033** (0.026-0.041) | **0.038** (0.030-0.049) | **0.046** (0.034-0.062) | **0.052** (0.038-0.072) |
| 20-day | **0.003** (0.002-0.003) | **0.005** (0.004-0.005) | **0.008** (0.007-0.009) | **0.010** (0.009-0.012) | **0.014** (0.012-0.017) | **0.017** (0.014-0.021) | **0.020** (0.016-0.026) | **0.024** (0.019-0.031) | **0.028** (0.021-0.039) | **0.032** (0.023-0.045) |
| 30-day | **0.002** (0.002-0.002) | **0.003** (0.003-0.004) | **0.006** (0.005-0.007) | **0.008** (0.007-0.009) | **0.011** (0.009-0.013) | **0.013** (0.011-0.016) | **0.016** (0.013-0.020) | **0.018** (0.014-0.024) | **0.022** (0.017-0.030) | **0.025** (0.018-0.035) |
| 45-day | **0.001** (0.001-0.002) | **0.002** (0.002-0.003) | **0.004** (0.004-0.005) | **0.006** (0.005-0.007) | **0.008** (0.007-0.010) | **0.010** (0.008-0.013) | **0.012** (0.010-0.016) | **0.015** (0.011-0.019) | **0.018** (0.013-0.024) | **0.020** (0.014-0.028) |
| 60-day | **0.001** (0.001-0.001) | **0.002** (0.002-0.002) | **0.003** (0.003-0.004) | **0.005** (0.004-0.006) | **0.007** (0.006-0.008) | **0.009** (0.007-0.011) | **0.010** (0.008-0.013) | **0.012** (0.010-0.016) | **0.015** (0.011-0.020) | **0.017** (0.012-0.024) |

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

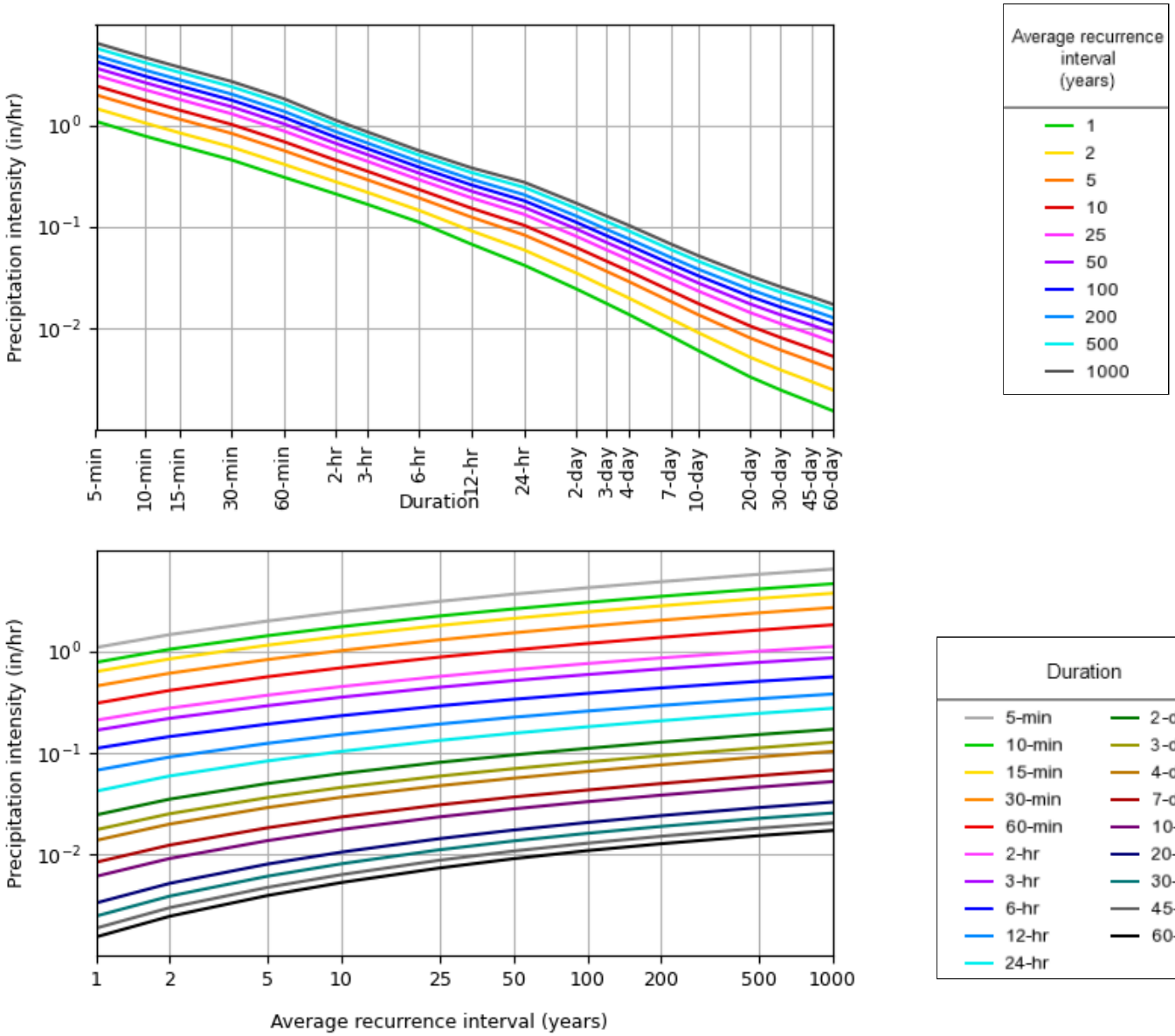
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

## PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 34.3824°, Longitude: -116.9419°



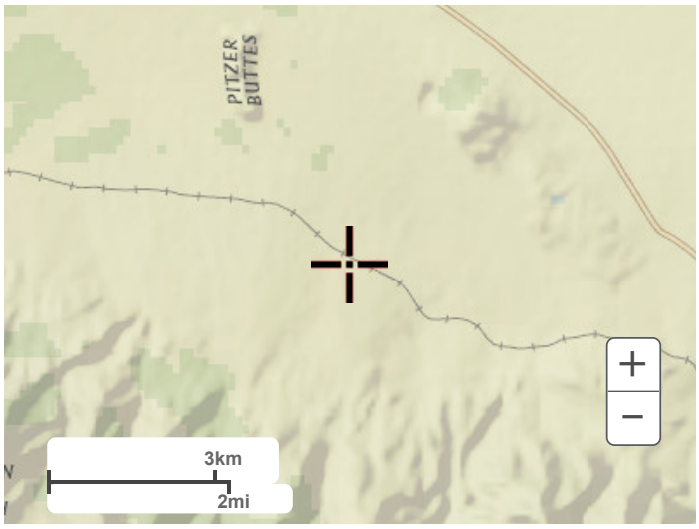

NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Mon Jul 8 11:29:35 2024

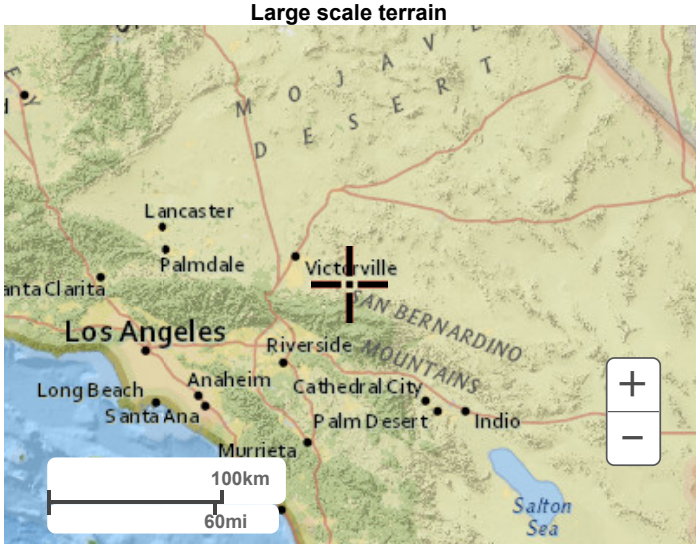
Back to Top

## Maps & aerials

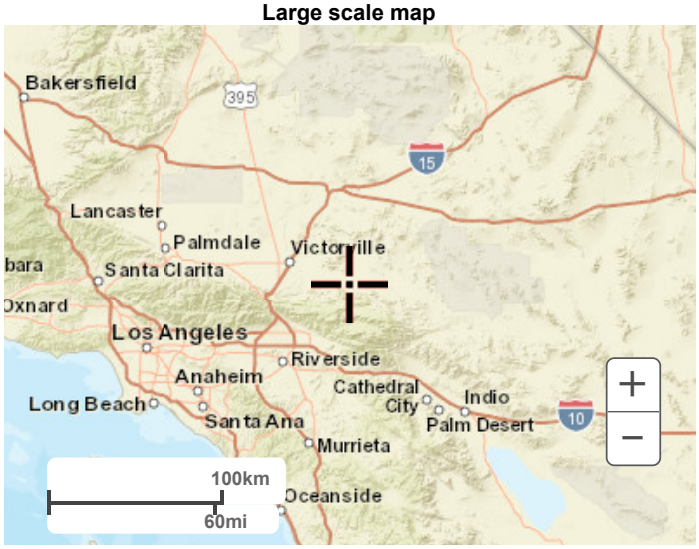
**Small scale terrain**




**Large scale terrain**




**Large scale map**




**Large scale aerial**




Back to Top

---

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

**NOAA Atlas 14, Volume 6, Version 2**
**Location name: Lucerne Valley, California, USA***
**Latitude: 34.3824°, Longitude: -116.9419°**
**Elevation: 3901 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.091 (0.075-0.111) | 0.122 (0.101-0.149) | 0.166 (0.137-0.204) | 0.204 (0.166-0.252) | 0.259 (0.205-0.332) | 0.305 (0.236-0.398) | 0.353 (0.267-0.473) | 0.405 (0.298-0.557) | 0.479 (0.338-0.687) | 0.539 (0.367-0.800) |
| 10-min | 0.130 (0.108-0.159) | 0.175 (0.144-0.214) | 0.238 (0.196-0.292) | 0.292 (0.239-0.362) | 0.372 (0.294-0.476) | 0.437 (0.338-0.570) | 0.506 (0.382-0.678) | 0.581 (0.427-0.799) | 0.687 (0.484-0.984) | 0.773 (0.527-1.15) |
| 15-min | 0.158 (0.130-0.193) | 0.211 (0.174-0.259) | 0.288 (0.237-0.353) | 0.353 (0.288-0.437) | 0.450 (0.355-0.575) | 0.528 (0.409-0.690) | 0.613 (0.462-0.819) | 0.703 (0.516-0.966) | 0.831 (0.585-1.19) | 0.935 (0.637-1.39) |
| 30-min | 0.228 (0.188-0.278) | 0.305 (0.252-0.374) | 0.416 (0.342-0.510) | 0.510 (0.416-0.631) | 0.649 (0.513-0.830) | 0.762 (0.590-0.996) | 0.884 (0.668-1.18) | 1.01 (0.745-1.40) | 1.20 (0.845-1.72) | 1.35 (0.919-2.00) |
| 60-min | 0.308 (0.255-0.377) | 0.413 (0.341-0.506) | 0.563 (0.463-0.691) | 0.690 (0.564-0.855) | 0.878 (0.694-1.12) | 1.03 (0.798-1.35) | 1.20 (0.904-1.60) | 1.37 (1.01-1.89) | 1.62 (1.14-2.33) | 1.83 (1.24-2.71) |
| 2-hr | 0.420 (0.347-0.513) | 0.553 (0.456-0.677) | 0.741 (0.610-0.910) | 0.901 (0.736-1.12) | 1.13 (0.895-1.45) | 1.32 (1.02-1.72) | 1.52 (1.15-2.03) | 1.72 (1.27-2.37) | 2.01 (1.42-2.88) | 2.24 (1.52-3.31) |
| 3-hr | 0.502 (0.415-0.615) | 0.659 (0.544-0.807) | 0.877 (0.721-1.08) | 1.06 (0.868-1.32) | 1.33 (1.05-1.70) | 1.55 (1.20-2.02) | 1.78 (1.34-2.38) | 2.02 (1.48-2.78) | 2.34 (1.65-3.36) | 2.60 (1.77-3.85) |
| 6-hr | 0.664 (0.549-0.812) | 0.869 (0.717-1.06) | 1.15 (0.948-1.41) | 1.40 (1.14-1.73) | 1.74 (1.38-2.23) | 2.02 (1.56-2.64) | 2.31 (1.74-3.09) | 2.62 (1.92-3.60) | 3.04 (2.14-4.36) | 3.36 (2.29-4.99) |
| 12-hr | 0.812 (0.670-0.992) | 1.10 (0.906-1.34) | 1.50 (1.23-1.84) | 1.84 (1.50-2.27) | 2.32 (1.83-2.97) | 2.70 (2.09-3.53) | 3.11 (2.35-4.16) | 3.54 (2.60-4.87) | 4.12 (2.91-5.91) | 4.58 (3.12-6.80) |
| 24-hr | 1.01 (0.894-1.16) | 1.42 (1.26-1.64) | 2.00 (1.77-2.31) | 2.49 (2.18-2.90) | 3.19 (2.70-3.84) | 3.75 (3.11-4.61) | 4.34 (3.52-5.47) | 4.98 (3.93-6.45) | 5.89 (4.45-7.94) | 6.61 (4.84-9.23) |
| 2-day | 1.18 (1.04-1.35) | 1.68 (1.49-1.94) | 2.40 (2.12-2.78) | 3.01 (2.64-3.51) | 3.88 (3.29-4.67) | 4.58 (3.80-5.63) | 5.33 (4.32-6.71) | 6.14 (4.84-7.94) | 7.29 (5.51-9.83) | 8.22 (6.01-11.5) |
| 3-day | 1.26 (1.12-1.45) | 1.82 (1.61-2.09) | 2.62 (2.31-3.02) | 3.29 (2.88-3.84) | 4.26 (3.61-5.12) | 5.04 (4.18-6.19) | 5.87 (4.76-7.40) | 6.78 (5.34-8.78) | 8.09 (6.12-10.9) | 9.17 (6.71-12.8) |
| 4-day | 1.32 (1.17-1.52) | 1.92 (1.70-2.21) | 2.78 (2.46-3.22) | 3.52 (3.08-4.10) | 4.56 (3.87-5.50) | 5.41 (4.49-6.65) | 6.33 (5.13-7.97) | 7.32 (5.77-9.48) | 8.76 (6.63-11.8) | 9.94 (7.27-13.9) |
| 7-day | 1.41 (1.25-1.62) | 2.08 (1.84-2.40) | 3.08 (2.72-3.56) | 3.94 (3.45-4.59) | 5.18 (4.39-6.24) | 6.18 (5.13-7.60) | 7.25 (5.87-9.12) | 8.40 (6.62-10.9) | 10.0 (7.60-13.5) | 11.4 (8.32-15.9) |
| 10-day | 1.46 (1.29-1.68) | 2.19 (1.94-2.53) | 3.29 (2.90-3.80) | 4.24 (3.71-4.94) | 5.63 (4.77-6.78) | 6.75 (5.61-8.30) | 7.94 (6.44-10.0) | 9.22 (7.27-11.9) | 11.1 (8.37-14.9) | 12.5 (9.17-17.5) |
| 20-day | 1.60 (1.42-1.84) | 2.50 (2.21-2.88) | 3.86 (3.41-4.47) | 5.07 (4.44-5.90) | 6.87 (5.82-8.27) | 8.35 (6.93-10.3) | 9.92 (8.04-12.5) | 11.6 (9.14-15.0) | 13.9 (10.5-18.8) | 15.7 (11.5-22.0) |
| 30-day | 1.78 (1.58-2.05) | 2.80 (2.48-3.23) | 4.40 (3.89-5.09) | 5.84 (5.12-6.80) | 8.01 (6.79-9.65) | 9.78 (8.12-12.0) | 11.6 (9.44-14.7) | 13.6 (10.7-17.6) | 16.4 (12.4-22.1) | 18.4 (13.5-25.7) |
| 45-day | 2.03 (1.80-2.33) | 3.24 (2.86-3.73) | 5.12 (4.52-5.92) | 6.84 (5.99-7.97) | 9.48 (8.03-11.4) | 11.7 (9.69-14.3) | 14.0 (11.3-17.6) | 16.3 (12.9-21.1) | 19.6 (14.8-26.5) | 22.1 (16.2-30.9) |
| 60-day | 2.22 (1.96-2.55) | 3.55 (3.14-4.09) | 5.68 (5.02-6.56) | 7.63 (6.68-8.89) | 10.6 (8.98-12.8) | 13.1 (10.9-16.1) | 15.7 (12.7-19.8) | 18.4 (14.5-23.8) | 22.1 (16.7-29.8) | 24.8 (18.2-34.7) |

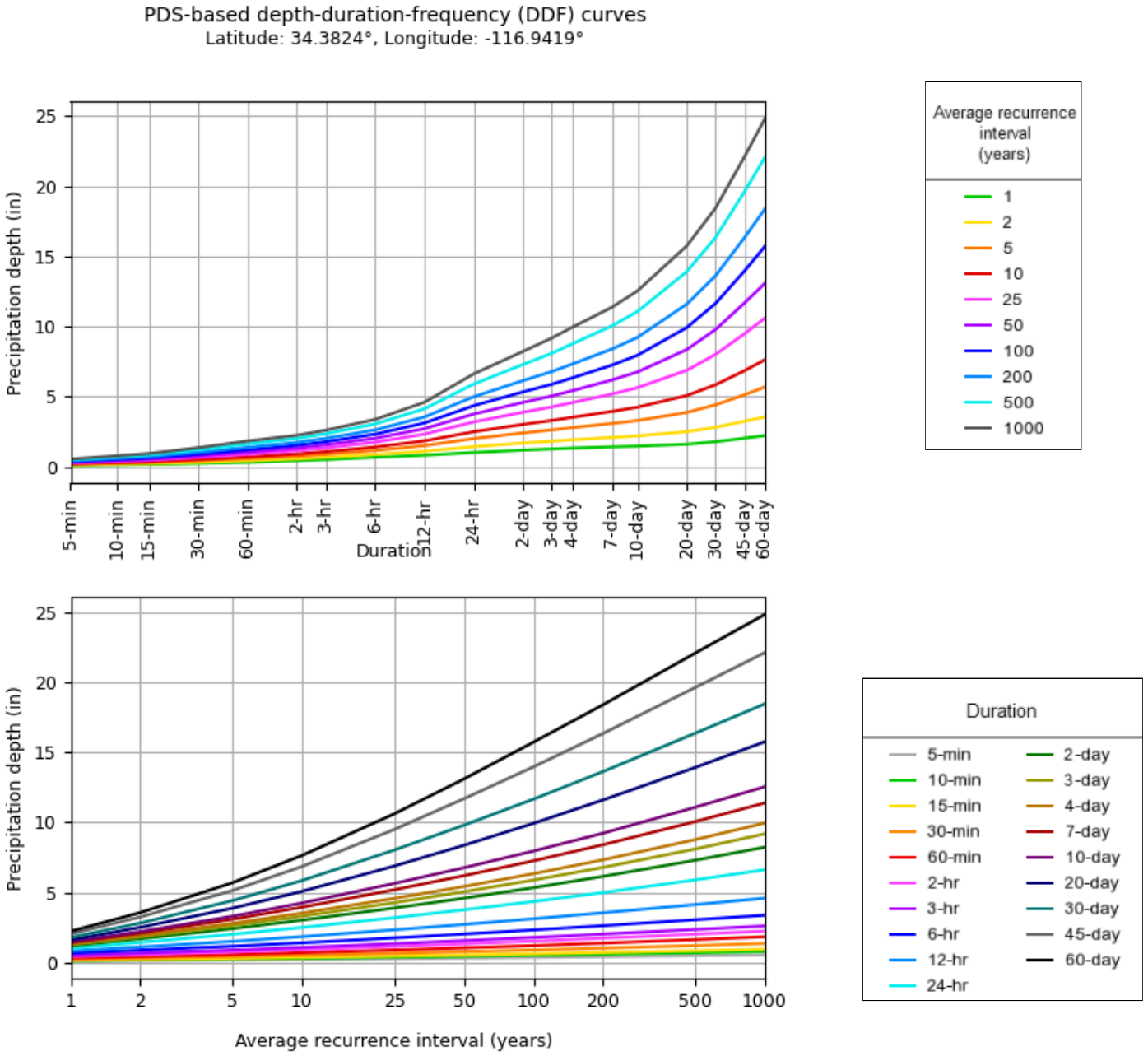
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

## PF graphical



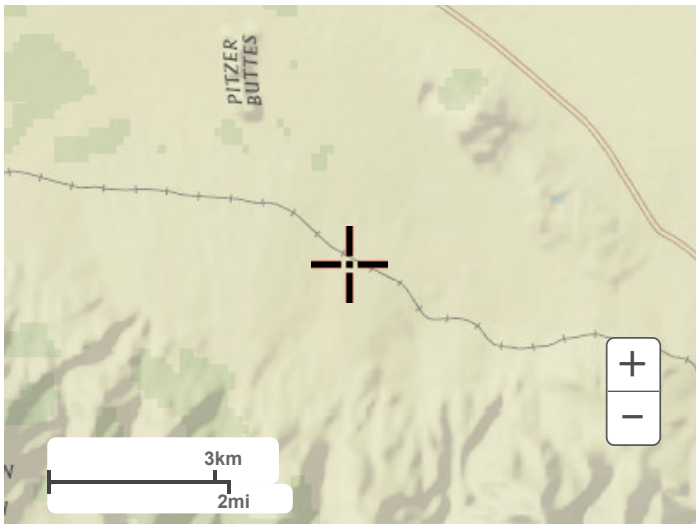

NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Mon Jul 8 11:26:05 2024

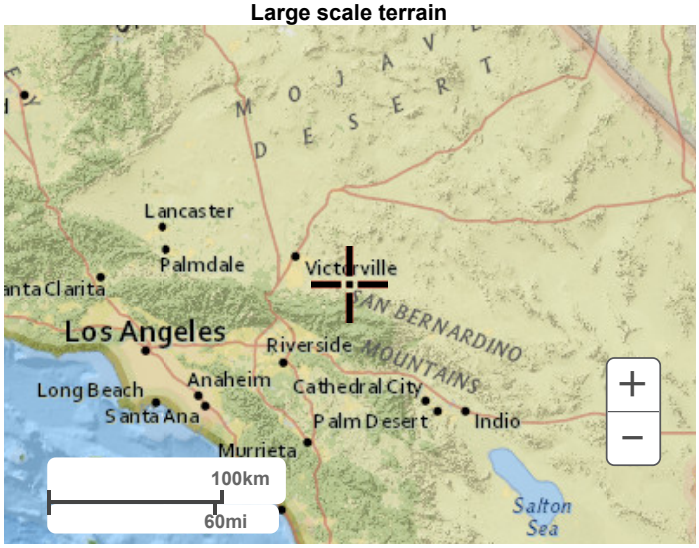
Back to Top

## Maps & aerials

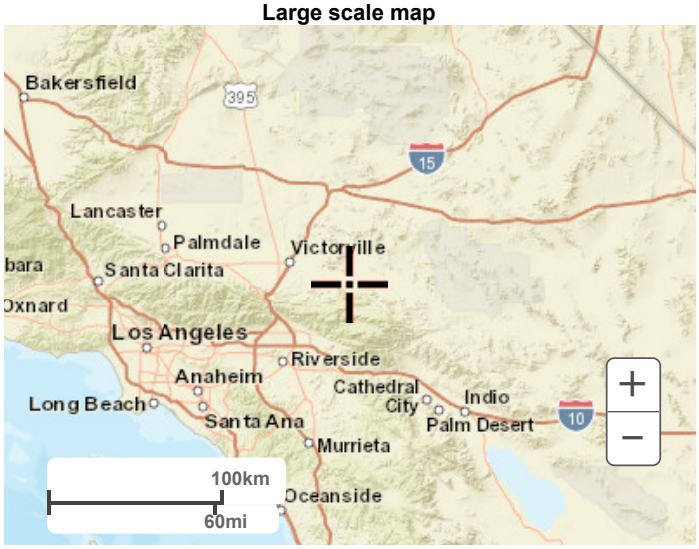
**Small scale terrain**




**Large scale terrain**




**Large scale map**




**Large scale aerial**




Back to Top

---

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

## 5.2.b. Area Tabulations and Curve Number Calculations

- 5.2.b.1. Sub-basin A1
- 5.2.b.2. Sub-basin A2
- 5.2.b.3. Sub-basin B1
- 5.2.b.4. Sub-basin C1

#### 5.2.b.1. Sub-basin A1

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A1 | | | |
| **Design Storm:** | 2-Year | 1.42 in | 24 hrs | AMC I |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac | |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 94.80 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF * | 100.00% | CN= 60.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 65.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 60.6000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Solar Panel Array Area (30% Imperv.) | 214,264.49 | SF * | 79.62% | CN= 69.90 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 79.80 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 70.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 68.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Desert Brush @ 50% cover (HSG A) | 54,840.29 | SF | 20.38% | CN= 60.60 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 68.0048 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC I conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.70 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.96 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.80 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.44 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 64,279.35 | SF * | 23.89% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A1 | | | |
| **Design Storm:** | 10-Year | 2.49 in | 24 hrs | AMC II |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac | |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 214,264.49 | SF * | 79.62% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 54,840.29 | SF | 20.38% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 81.5830 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.70 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.96 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.80 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.44 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 64,279.35 | SF * | 23.89% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A1 | | | |
| **Design Storm:** | 25-Year | 3.19 in | 24 hrs | AMC II |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac | |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 214,264.49 | SF * | 79.62% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 54,840.29 | SF | 20.38% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 81.5830 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.70 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.96 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.80 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.44 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 64,279.35 | SF * | 23.89% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A1 | | | |
| **Design Storm:** | 100-Year | 4.34 in | 24 hrs | AMC III |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac | |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 99.60 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF * | 100.00% | CN= 92.80 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 95.20 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 83.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 92.8000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Solar Panel Array Area (30% Imperv.) | 214,264.49 | SF * | 79.62% | CN= 93.70 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 98.20 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 97.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 96.40 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Desert Brush @ 50% cover (HSG A) | 54,840.29 | SF | 20.38% | CN= 92.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 77.40 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 93.5166 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC III conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.70 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.96 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.80 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.44 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 64,279.35 | SF * | 23.89% |

### 5.2.b.2. Sub-basin A2

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A2 | | | |
| **Design Storm:** | 2-Year | 1.42 in | 24 hrs | AMC I |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 515,051.40 | SF | 11.8240 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 515,051.40 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 94.80 |
| Desert Brush @ 50% cover (HSG A) | 515,051.40 | SF * | 100.00% | CN= 60.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 65.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{PRE}$ | 515,051.40 | | 60.6000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 515,051.40 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete Coverage | 1,384.10 | SF | 0.27% | CN= 94.80 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Solar Panel Array Area (30% Imperv.) | 414,927.23 | SF * | 80.56% | CN= 69.90 |
| Gravel Access Drive (HSG A) | 14,217.58 | SF | 2.76% | CN= 79.80 |
| Gravel Equipment Area (HSG A) | 2,647.90 | SF | 0.51% | CN= 70.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 68.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Desert Brush @ 50% cover (HSG A) | 81,874.59 | SF | 15.90% | CN= 60.60 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{POST}$ | 515,051.40 | | 68.7623 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC I conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.90 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 11.12 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.60 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 139,110.98 | SF * | 27.01% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A2 | | | |
| **Design Storm:** | 10-Year | 2.49 in | 24 hrs | AMC II |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 515,051.40 | SF | 11.8240 | Ac | |
| | 0.00 | | | | |
| **Pre-Developed Conditions:** | 0.00 | | | | |
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 515,051.40 | SF * | 100.00% | | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 515,051.40 | | 78.0000 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Post-Developed Conditions:** | | | | | |
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | | CN= 98 |
| Concrete Coverage | 1,384.10 | SF | 0.27% | | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 414,927.23 | SF * | 80.56% | | CN= 82.50 |
| Gravel Access Drive (HSG A) | 14,217.58 | SF | 2.76% | | CN= 91 |
| Gravel Equipment Area (HSG A) | 2,647.90 | SF | 0.51% | | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 81,874.59 | SF | 15.90% | | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 515,051.40 | | 82.0738 | | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.90 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 11.12 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.60 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 139,110.98 | SF * | 27.01% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A2 | | | |
| **Design Storm:** | 25-Year | 3.19 in | 24 hrs | AMC II |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 515,051.40 | SF | 11.8240 | Ac | |
| | 0.00 | | | | |
| **Pre-Developed Conditions:** | 0.00 | | | | |
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 | |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 | |
| Desert Brush @ 50% cover (HSG A) | 515,051.40 | SF * | 100.00% | CN= 78 | |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 | |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 | |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 | |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 | |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 | |
| Weighted Curve Number: $CN'_{PRE}$ | 515,051.40 | | 78.0000 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Post-Developed Conditions:** | | | | | |
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 | |
| Concrete Coverage | 1,384.10 | SF | 0.27% | CN= 98 | |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 | |
| Solar Panel Array Area (30% Imperv.) | 414,927.23 | SF * | 80.56% | CN= 82.50 | |
| Gravel Access Drive (HSG A) | 14,217.58 | SF | 2.76% | CN= 91 | |
| Gravel Equipment Area (HSG A) | 2,647.90 | SF | 0.51% | CN= 85 | |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 | |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 | |
| Desert Brush @ 50% cover (HSG A) | 81,874.59 | SF | 15.90% | CN= 78 | |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 | |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 | |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 | |
| Weighted Curve Number: $CN'_{POST}$ | 515,051.40 | | 82.0738 | | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.90 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 11.12 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.60 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 139,110.98 | SF * | 27.01% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin A2 | | | |
| **Design Storm:** | 100-Year | 4.34 in | 24 hrs | AMC III |

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area: | 515,051.40 | SF | 11.8240 | Ac | |
| | 0.00 | | | | |
| **Pre-Developed Conditions:** | 0.00 | | | | |
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | | CN= 99.60 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | | CN= 99.60 |
| Desert Brush @ 50% cover (HSG A) | 515,051.40 | SF * | 100.00% | | CN= 92.80 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | | CN= 77.40 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | | CN= 95.20 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 83.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 86.20 |
| Weighted Curve Number: $CN'_{PRE}$ | 515,051.40 | | 92.8000 | | |

**Post-Developed Conditions:**

| | | | | | |
|---|---|---|---|---|---|
| Total Basin Area | 515,051.40 | SF | 100.00% | | |
| Building Coverage | 0.00 | SF | 0.00% | | CN= 99.60 |
| Concrete Coverage | 1,384.10 | SF | 0.27% | | CN= 99.60 |
| Asphalt Coverage | 0.00 | SF | 0.00% | | CN= 99.60 |
| Solar Panel Array Area (30% Imperv.) | 414,927.23 | SF * | 80.56% | | CN= 93.70 |
| Gravel Access Drive (HSG A) | 14,217.58 | SF | 2.76% | | CN= 98.20 |
| Gravel Equipment Area (HSG A) | 2,647.90 | SF | 0.51% | | CN= 97.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | | CN= 96.40 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | | CN= 77.40 |
| Desert Brush @ 50% cover (HSG A) | 81,874.59 | SF | 15.90% | | CN= 92.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 77.40 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | | CN= 86.20 |
| Weighted Curve Number: $CN'_{POST}$ | 515,051.40 | | 93.7140 | | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC III conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 13.90 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 11.12 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.60 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 9.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 139,110.98 | SF * | 27.01% |

### 5.2.b.3. Sub-basin B1

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin B1 | | | |
| **Design Storm:** | 2-Year | 1.42 in | 24 hrs | AMC I |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 275294.2734 | SF | 6.3199 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 94.80 |
| Desert Brush @ 50% cover (HSG A) | 275,294.27 | SF * | 100.00% | CN= 60.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 65.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{PRE}$ | 275,294.27 | | 60.6000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Solar Panel Array Area (30% Imperv.) | 197,766.84 | SF * | 71.84% | CN= 69.90 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 79.80 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 70.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 68.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Desert Brush @ 50% cover (HSG A) | 77,527.44 | SF | 28.16% | CN= 60.60 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{POST}$ | 275,294.27 | | 67.2810 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC I conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 12.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.24 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.20 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 8.96 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 59,330.05 | SF * | 21.55% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin B1 | | | |
| **Design Storm:** | 10-Year | 2.49 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 275,294.27 | SF | 6.3199 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 275,294.27 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 275,294.27 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 197,766.84 | SF * | 71.84% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 77,527.44 | SF | 28.16% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 275,294.27 | | 81.2327 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 12.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.24 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.20 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 8.96 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 59,330.05 | SF * | 21.55% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin B1 | | | |
| **Design Storm:** | 25-Year | 3.19 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 275,294.27 | SF | 6.3199 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 275,294.27 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 275,294.27 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 197,766.84 | SF * | 71.84% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 77,527.44 | SF | 28.16% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 275,294.27 | | 81.2327 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 12.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.24 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.20 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 8.96 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 59,330.05 | SF * | 21.55% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin B1 | | | |
| **Design Storm:** | 100-Year | 4.34 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 275,294.27 | SF | 6.3199 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 99.60 |
| Desert Brush @ 50% cover (HSG A) | 275,294.27 | SF * | 100.00% | CN= 92.80 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 95.20 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 83.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{PRE}$ | 275,294.27 | | 92.8000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 275,294.27 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Solar Panel Array Area (30% Imperv.) | 197,766.84 | SF * | 71.84% | CN= 93.70 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 98.20 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 97.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 96.40 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Desert Brush @ 50% cover (HSG A) | 77,527.44 | SF | 28.16% | CN= 92.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 77.40 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{POST}$ | 275,294.27 | | 93.4465 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC III conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 12.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 10.24 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 11.20 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 8.96 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 59,330.05 | SF * | 21.55% |

#### 5.2.b.4. Sub-basin C1

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin C1 | | | |
| **Design Storm:** | 2-Year | 1.42 in | 24 hrs | AMC I |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 114,088.67 | SF | 2.6191 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 94.80 |
| Desert Brush @ 50% cover (HSG A) | 114,088.67 | SF * | 100.00% | CN= 60.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 65.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{PRE}$ | 114,088.67 | | 60.6000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Solar Panel Array Area (30% Imperv.) | 74,862.18 | SF * | 65.62% | CN= 69.90 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 79.80 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 70.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 68.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Desert Brush @ 50% cover (HSG A) | 39,226.49 | SF | 34.38% | CN= 60.60 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{POST}$ | 114,088.67 | | 66.7024 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 21.519 | µ/sec | 3.0499 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC I conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 10.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 8.64 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 9.10 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 7.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 22,458.65 | SF | 19.69% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin C1 | | | |
| **Design Storm:** | 10-Year | 2.49 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 114,088.67 | SF | 2.6191 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 114,088.67 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF * | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 114,088.67 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 74,862.18 | SF | 65.62% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 39,226.49 | SF * | 34.38% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF * | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 114,088.67 | | 80.9528 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 21.519 | µ/sec | 3.0499 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 10.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 8.64 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 9.10 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 7.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 22,458.65 | SF | 19.69% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin C1 | | | |
| **Design Storm:** | 25-Year | 3.19 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 114,088.67 | SF | 2.6191 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 114,088.67 | SF * | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF * | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 114,088.67 | | 78.0000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 74,862.18 | SF | 65.62% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 39,226.49 | SF * | 34.38% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF * | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 114,088.67 | | 80.9528 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 21.519 | µ/sec | 3.0499 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 10.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 8.64 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 9.10 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 7.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 22,458.65 | SF | 19.69% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Sub-basin C1 | | | |
| **Design Storm:** | 100-Year | 4.34 in | 24 hrs | AMC III |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 114,088.67 | SF | 2.6191 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 99.60 |
| Desert Brush @ 50% cover (HSG A) | 114,088.67 | SF * | 100.00% | CN= 92.80 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF * | 0.00% | CN= 77.40 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 95.20 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 83.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{PRE}$ | 114,088.67 | | 92.8000 | |

**Post-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 114,088.67 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Solar Panel Array Area (30% Imperv.) | 74,862.18 | SF * | 65.62% | CN= 93.70 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 98.20 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 97.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 96.40 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Desert Brush @ 50% cover (HSG A) | 39,226.49 | SF | 34.38% | CN= 92.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 77.40 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{POST}$ | 114,088.67 | | 93.3906 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 21.519 | µ/sec | 3.0499 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC III conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 10.80 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 8.64 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 9.10 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 7.28 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 22,458.65 | SF | 19.69% |

## 5.2.c. Time of Concentration Calculations

- 5.2.c.1. Sub-basin A1
- 5.2.c.2. Sub-basin A2
- 5.2.c.3. Sub-basin B1
- 5.2.c.4. Sub-basin C1

### 5.2.c.1. Sub-basin A1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN : | A-1 |
| EXISTING | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100 | 0.10900 | j | 0.130 | n/a | n/a | n/a | 0.1110 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 857.3 | 0.07582 | u | n/a | n/a | n/a | 4.442672076 | 0.0536 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1646 | hrs |
| | 9.8733 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 13.7000 | min. |

Sheet Flow Surface Codes

| | |
|---|---|
| a Smooth Surface | f grass, dense |
| b fallow (no residue) | g grass, bermuda |
| c cultivated < 20% Res. | h woods, light |
| d cultivated > 20% Res. | i woods, dense |
| e grass - range, short | j range, natural |
| | k gravel, firm |

Shallow Concentrated Surface Codes

u unpaved surface

p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 957.31 | 4119.75 | 4043.85 | 0.07928 |
| Sheetflow | 100.00 | 4119.75 | 4108.85 | 0.10900 |
| Shallow Conc. | 857.31 | 4108.85 | 4043.85 | 0.07582 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$

Manning's Roughness Coefficient: n

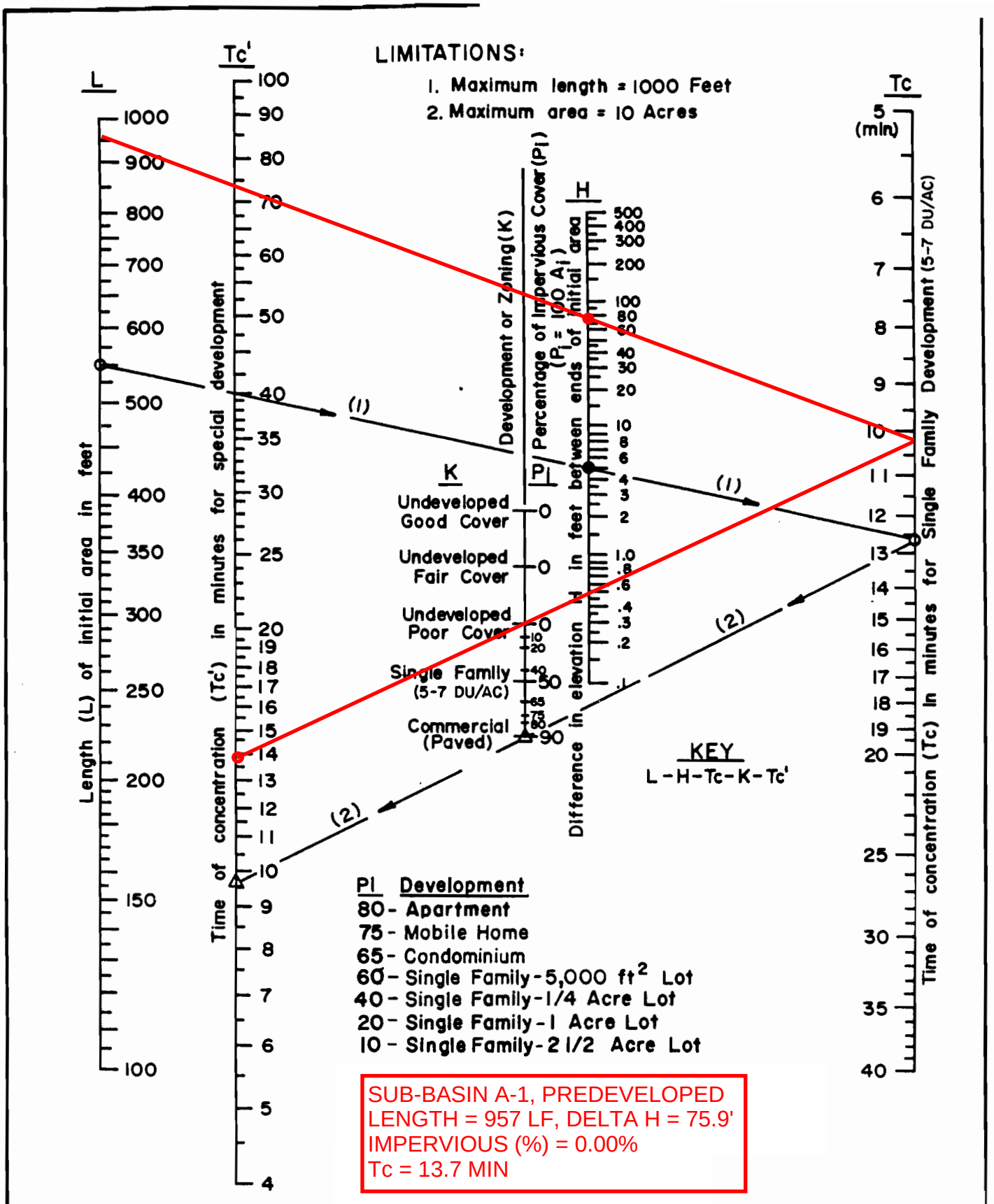
Travel Length (feet): L

Design Storm Rainfall depth: $P_2$

Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 13.7000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 10.9600 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | A |
| PROPOSED | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100.00 | 0.10900 | j | 0.130 | n/a | n/a | n/a | 0.1110 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 815.8 | 0.07582 | u | n/a | n/a | n/a | 4.442689591 | 0.0510 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1620 | hrs |
| | 9.7174 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 11.8000 | min. |

Sheet Flow Surface Codes

| | |
|---|---|
| a Smooth Surface | f grass, dense |
| b fallow (no residue) | g grass, bermuda |
| c cultivated < 20% Res. | h woods, light |
| d cultivated > 20% Res. | i woods, dense |
| e grass - range, short | j range, natural |
| | k gravel, firm |

Shallow Concentrated Surface Codes

u unpaved surface

p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 915.75 | 4119.75 | 4047.00 | 0.07944 |
| Sheetflow | 100.00 | 4119.75 | 4108.85 | 0.10900 |
| Shallow Conc. | 815.75 | 4108.85 | 4047.00 | 0.07582 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$

Manning's Roughness Coefficient: n

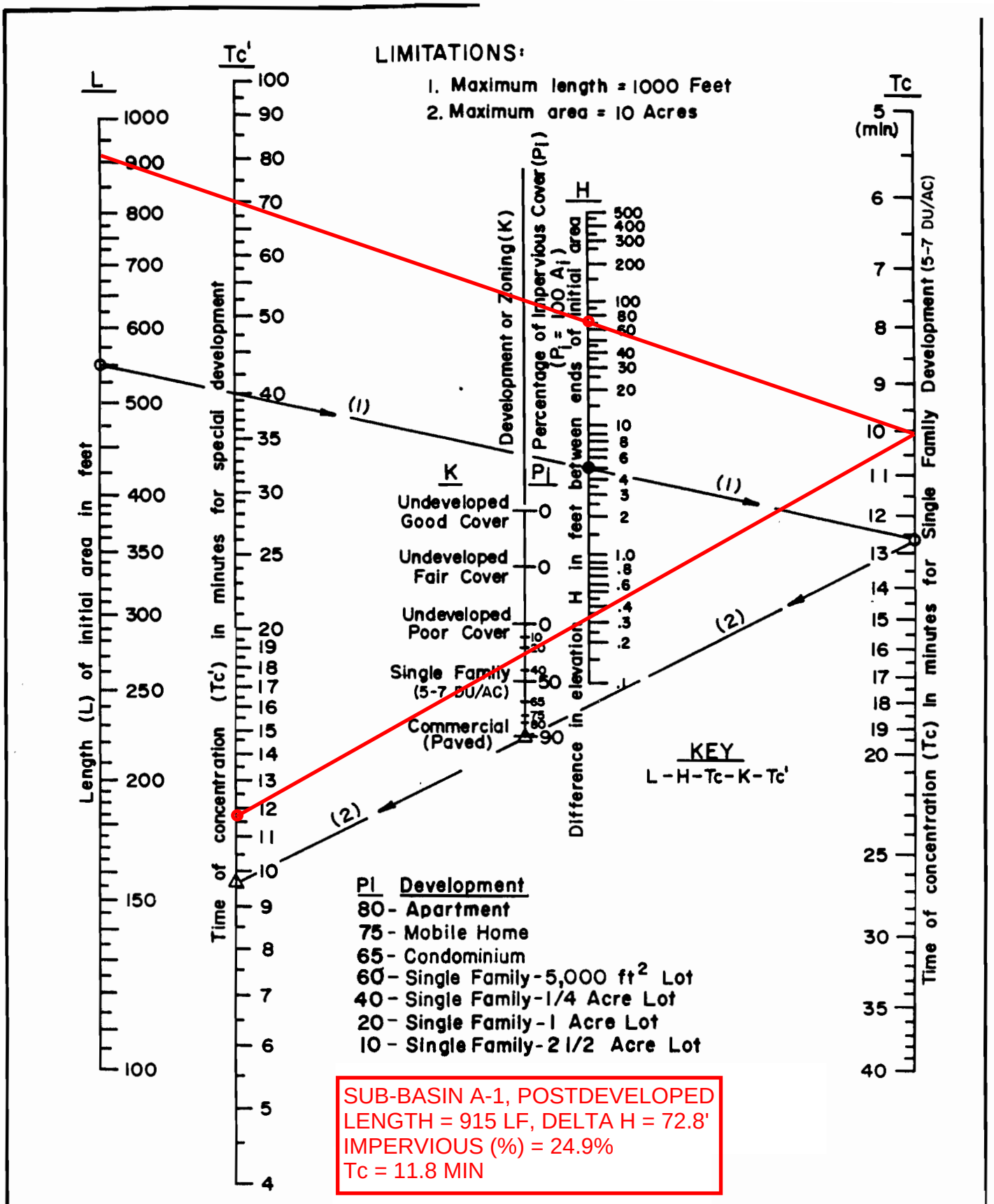
Travel Length (feet): L

Design Storm Rainfall depth: $P_2$

Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 11.8000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 7.7740 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

### 5.2.c.2. Sub-basin A2

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | A-2 |
| EXISTING | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100.0 | 0.07500 | j | 0.130 | n/a | n/a | n/a | 0.1288 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 910.0 | 0.08484 | u | n/a | n/a | n/a | 4.699470524 | 0.0538 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1826 | hrs |
| | 10.9582 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 13.9000 | min. |

Sheet Flow Surface Codes

| | |
|---|---|
| a Smooth Surface | f grass, dense |
| b fallow (no residue) | g grass, bermuda |
| c cultivated < 20% Res. | h woods, light |
| d cultivated > 20% Res. | i woods, dense |
| e grass - range, short | j range, natural |
| | k gravel, firm |

Shallow Concentrated Surface Codes

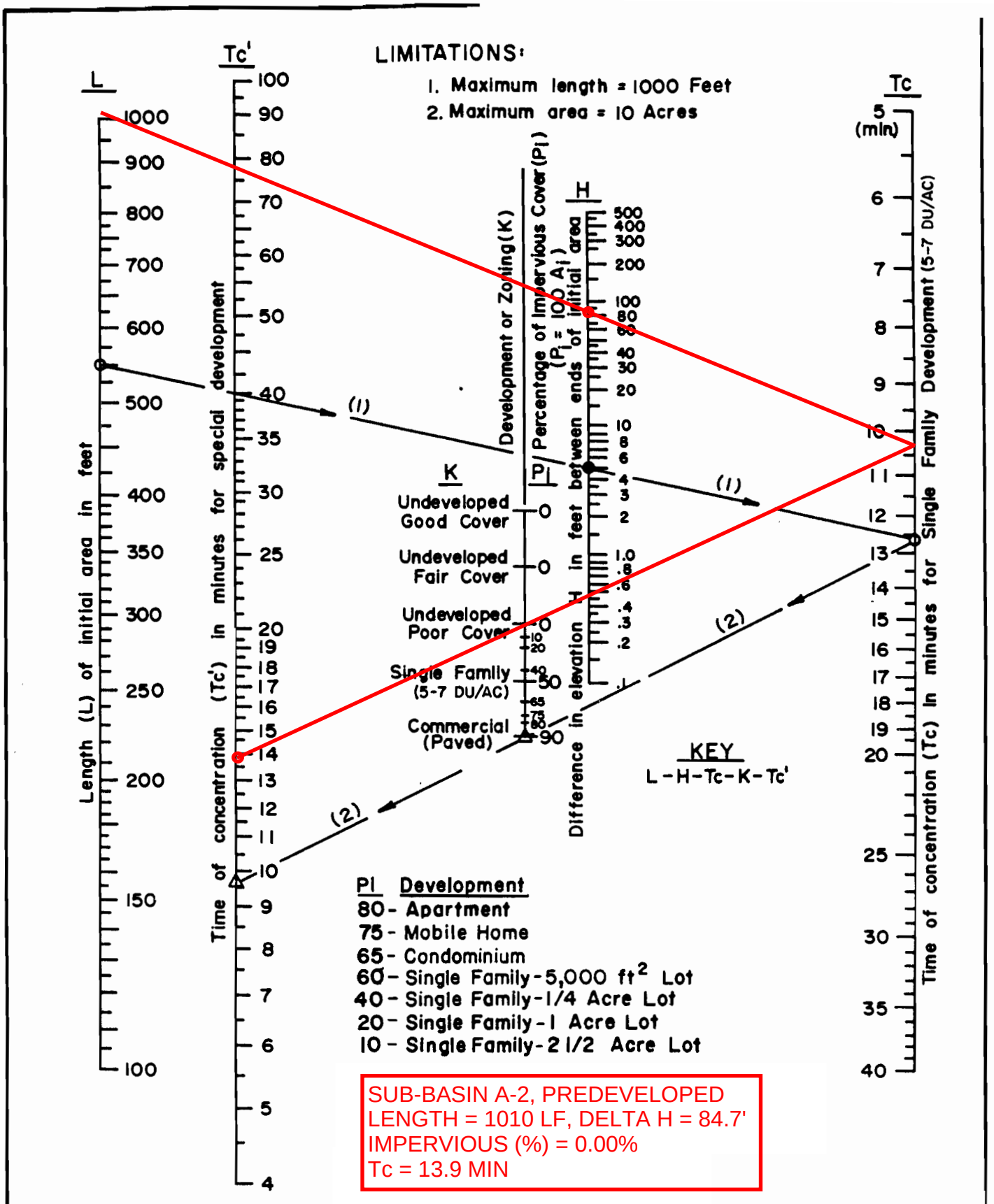
u unpaved surface
p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 1009.98 | 4112.50 | 4027.80 | 0.08386 |
| Sheetflow | 100.00 | 4112.50 | 4105.00 | 0.07500 |
| Shallow Conc. | 909.98 | 4105.00 | 4027.80 | 0.08484 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$
Manning's Roughness Coefficient: n
Travel Length (feet): L
Design Storm Rainfall depth: $P_2$
Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 13.9000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 11.1200 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | A-2 |
| PROPOSED | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100.0 | 0.07500 | j | 0.130 | n/a | n/a | n/a | 0.1288 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 872.7 | 0.08594 | u | n/a | n/a | n/a | 4.729851 | 0.0513 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1801 | hrs |
| | 10.8062 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc =}$ | 11.6000 | min. |

Sheet Flow Surface Codes

| | |
|---|---|
| a Smooth Surface | f grass, dense |
| b fallow (no residue) | g grass, bermuda |
| c cultivated < 20% Res. | h woods, light |
| d cultivated > 20% Res. | i woods, dense |
| e grass - range, short | j range, natural |
| | k gravel, firm |

Shallow Concentrated Surface Codes

u unpaved surface

p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 972.72 | 4112.50 | 4030.00 | 0.08481 |
| Sheetflow | 100.00 | 4112.50 | 4105.00 | 0.07500 |
| Shallow Conc. | 872.72 | 4105.00 | 4030.00 | 0.08594 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$

Manning's Roughness Coefficient: n

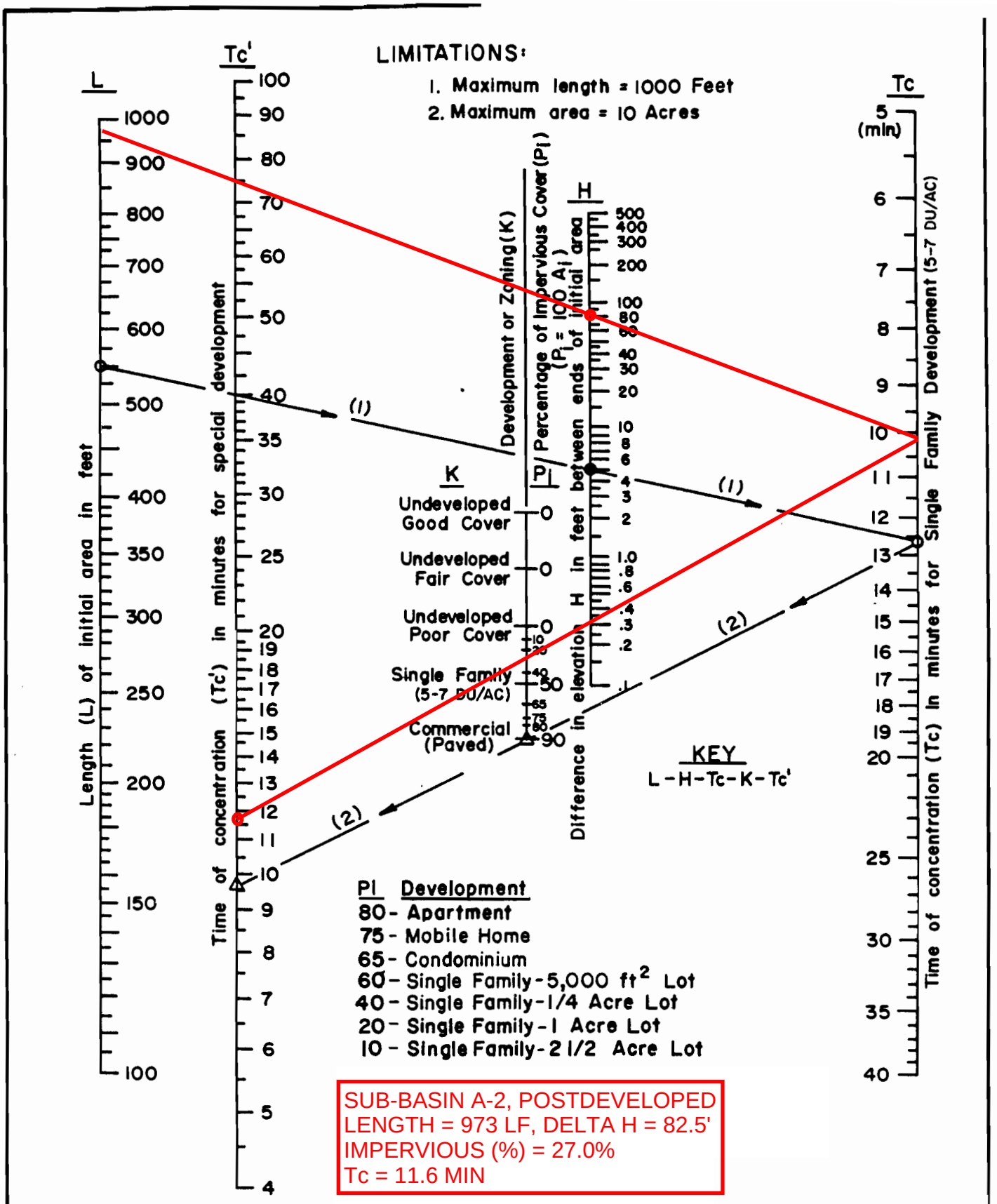
Travel Length (feet): L

Design Storm Rainfall depth: $P_2$

Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | |
|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | = | 11.6000 | min. |
| Overland Lag Time $T_{Lag} = 0.8\ T_{Conc}$ | = | 9.2800 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

### 5.2.c.3. Sub-basin B1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | B-1 |
| EXISTING | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100 | 0.08550 | j | 0.130 | n/a | n/a | n/a | 0.1223 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 746.5 | 0.08855 | u | n/a | n/a | n/a | 4.801241515 | 0.0432 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1655 | hrs |
| | 9.9274 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 12.8000 | min. |

Sheet Flow Surface Codes

a Smooth Surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural
k gravel, firm

Shallow Concentrated Surface Codes

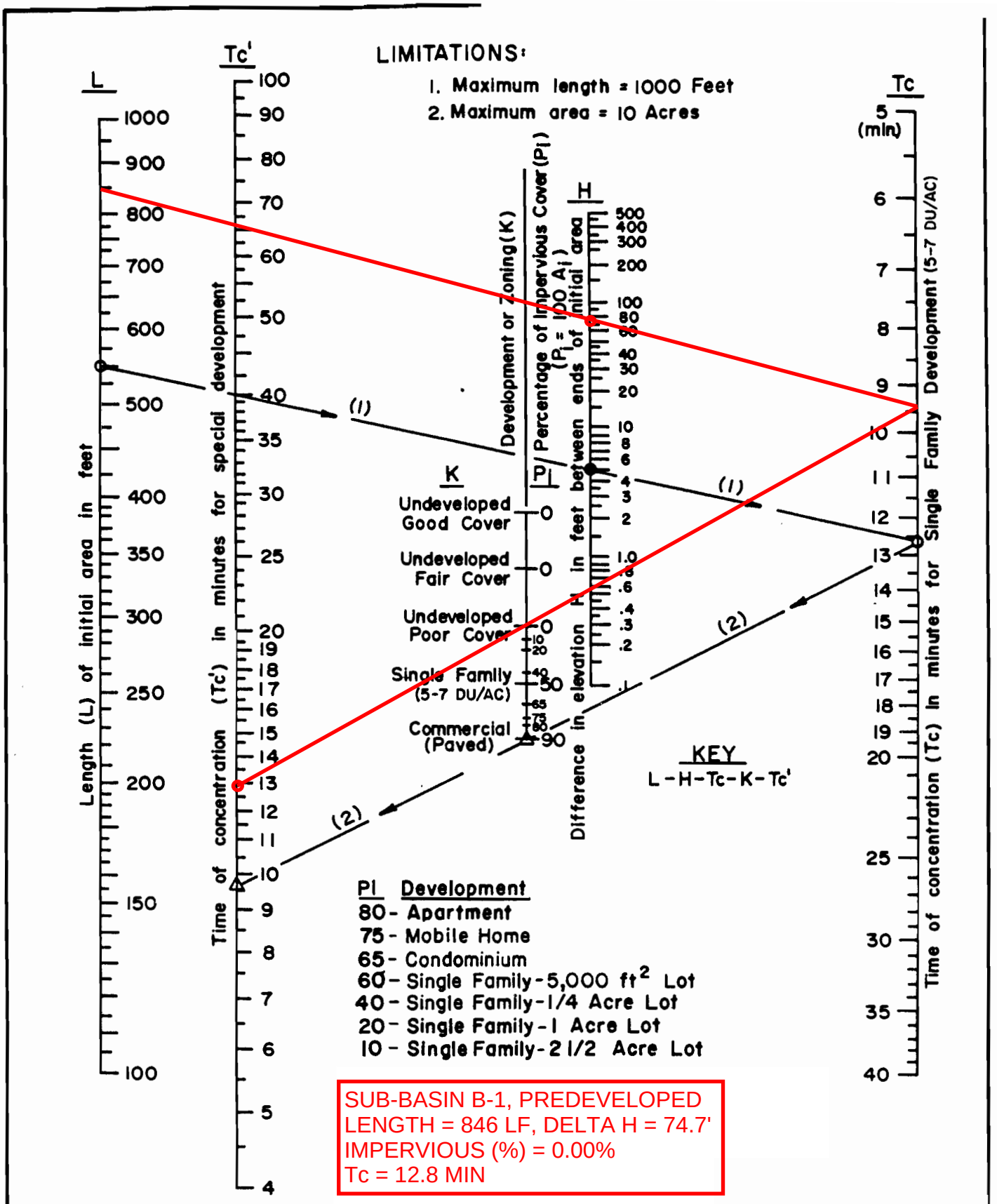
u unpaved surface
p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 846.46 | 4106.00 | 4031.35 | 0.08819 |
| Sheetflow | 100.00 | 4106.00 | 4097.45 | 0.08550 |
| Shallow Conc. | 746.46 | 4097.45 | 4031.35 | 0.08855 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$
Manning's Roughness Coefficient: n
Travel Length (feet): L
Design Storm Rainfall depth: $P_2$
Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 12.8000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 10.2400 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | B-1 |
| PROPOSED | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100.00 | 0.08550 | j | 0.130 | n/a | n/a | n/a | 0.1223 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 715.0 | 0.08875 | u | n/a | n/a | n/a | 4.806520359 | 0.0413 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1636 | hrs |
| | 9.8154 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 11.2000 | min. |

Sheet Flow Surface Codes

a Smooth Surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural
k gravel, firm

Shallow Concentrated Surface Codes

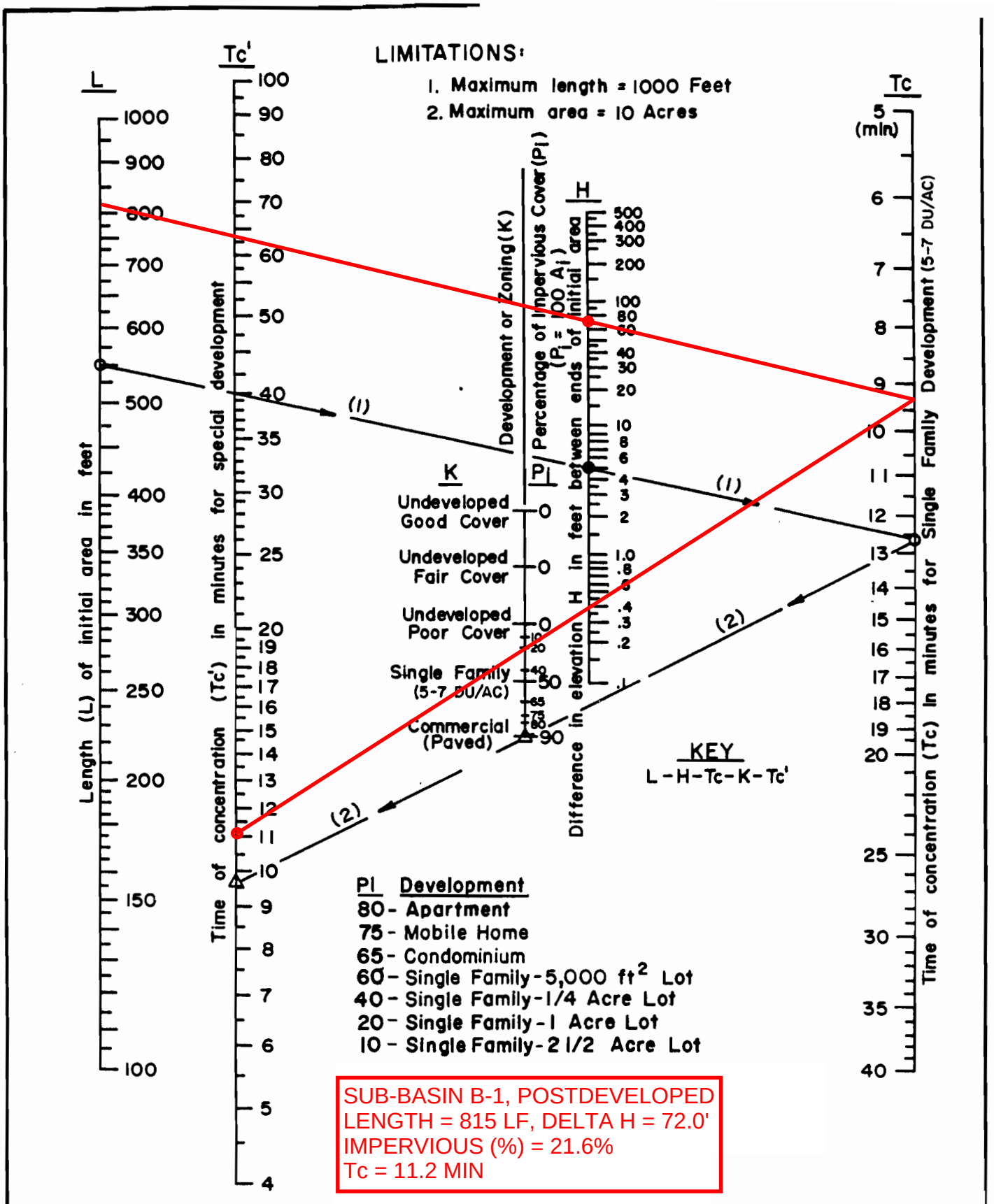
u unpaved surface
p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 814.96 | 4106.00 | 4034.00 | 0.08835 |
| Sheetflow | 100.00 | 4106.00 | 4097.45 | 0.08550 |
| Shallow Conc. | 714.96 | 4097.45 | 4034.00 | 0.08875 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$
Manning's Roughness Coefficient: n
Travel Length (feet): L
Design Storm Rainfall depth: $P_2$
Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 11.2000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 8.9600 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

### 5.2.c.4. Sub-basin C1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | C-1 |
| EXISTING | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100 | 0.08900 | j | 0.130 | n/a | n/a | n/a | 0.1203 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 422.1 | 0.07510 | u | n/a | n/a | n/a | 4.421534223 | 0.0265 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1468 | hrs |
| | 8.8106 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 10.8000 | min. |

Sheet Flow Surface Codes

a Smooth Surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural
k gravel, firm

Shallow Concentrated Surface Codes

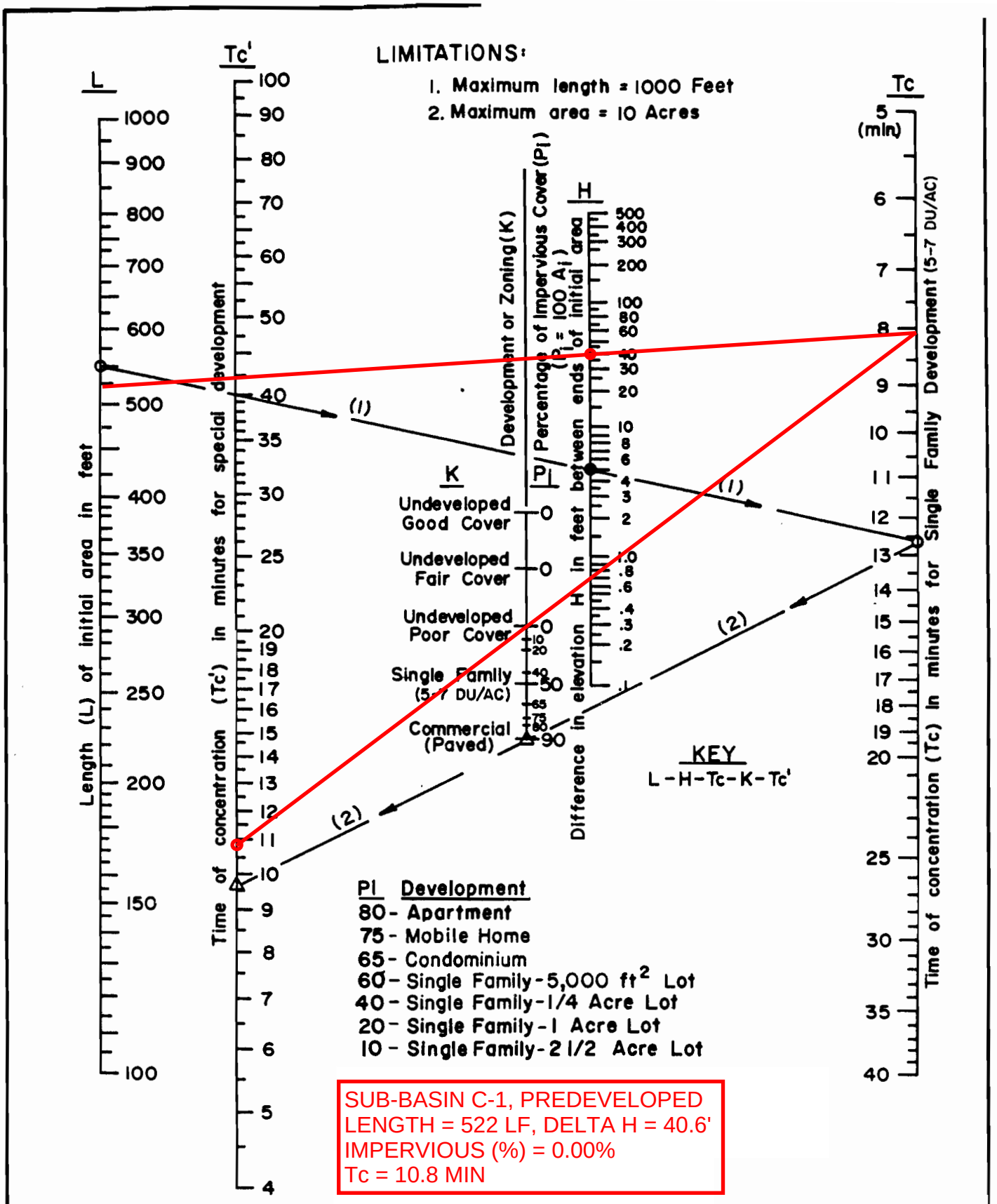
u unpaved surface
p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 522.11 | 4094.40 | 4053.80 | 0.07776 |
| Sheetflow | 100.00 | 4094.40 | 4085.50 | 0.08900 |
| Shallow Conc. | 422.11 | 4085.50 | 4053.80 | 0.07510 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$
Manning's Roughness Coefficient: n
Travel Length (feet): L
Design Storm Rainfall depth: $P_2$
Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 10.8000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 8.6400 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN: | C-1 |
| PROPOSED | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100.00 | 0.08900 | j | 0.130 | n/a | n/a | n/a | 0.1203 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 344.3 | 0.07697 | u | n/a | n/a | n/a | 4.476330794 | 0.0214 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |

| | | |
|---|---|---|
| TR-55 TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | 0.1417 | hrs |
| | 8.5013 | min. |
| SBC (Fig D-1) TIME OF CONCENTRATION, $T_{conc\ =}$ | 9.1000 | min. |

Sheet Flow Surface Codes

a Smooth Surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural
k gravel, firm

Shallow Concentrated Surface Codes

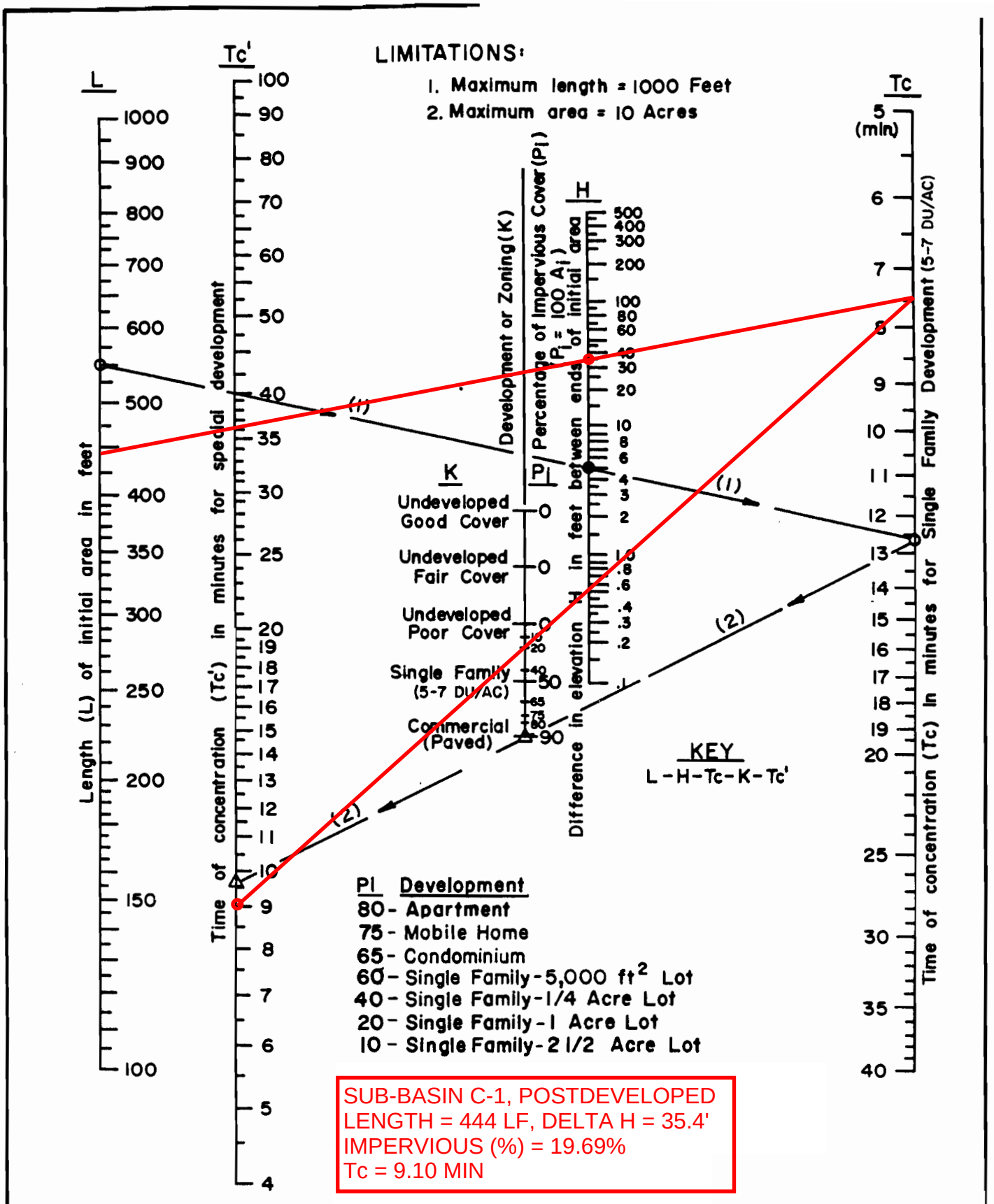
u unpaved surface
p paved surface

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 444.28 | 4094.40 | 4059.00 | 0.07968 |
| Sheetflow | 100.00 | 4094.40 | 4085.50 | 0.08900 |
| Shallow Conc. | 344.28 | 4085.50 | 4059.00 | 0.07697 |

Overland Travel Time (NRCS eqn): $T_t = [0.007 \times (n \times L)^{0.8}/P_2^{0.5} \times S^{0.4}]$
Manning's Roughness Coefficient: n
Travel Length (feet): L
Design Storm Rainfall depth: $P_2$
Hydraulic Grade Line/Slope: S

See Following Sheet for $T_C$ Data and Delineation on Fig. D-1 from SBC Hydrology Manual

| | | | | |
|---|---|---|---|---|
| Time of Concentration used for Design: $T_{Conc}$ | | = | 9.1000 | min. |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 7.2800 | min. |




**SAN BERNARDINO COUNTY**
HYDROLOGY MANUAL

**TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA**

Figure D-1

## 5.3. Pre-Developed Conditions Runoff Hydrographs

5.3.a. 2 Year Storm Event
5.3.b. 10 Year Storm Event
5.3.c. 25 Year Storm Event
5.3.d. 100 Year Storm Event

## 5.3.a. 2 Year Storm Event – Pre-Developed Conditions

5.3.a.1 15 Min Duration

5.3.a.2 30 Min Duration

5.3.a.3 1 Hour Duration

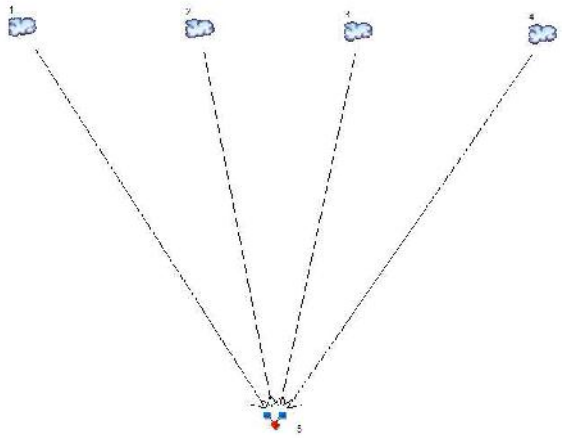
5.3.a.4 3 Hour Duration

5.3.a.5 6 Hour Duration

5.3.a.3 24 Hour Duration

# Watershed Model Schematic





## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

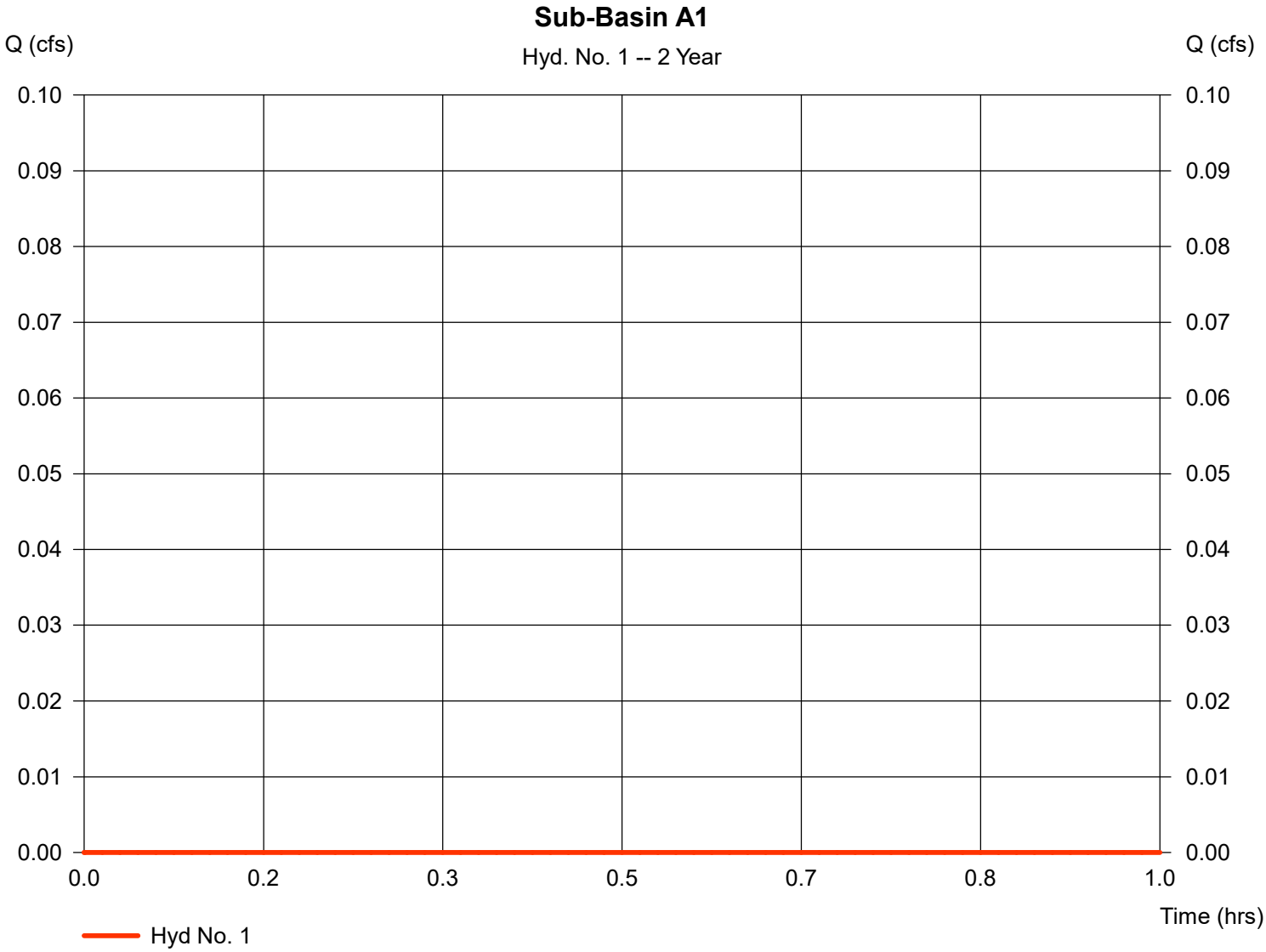
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



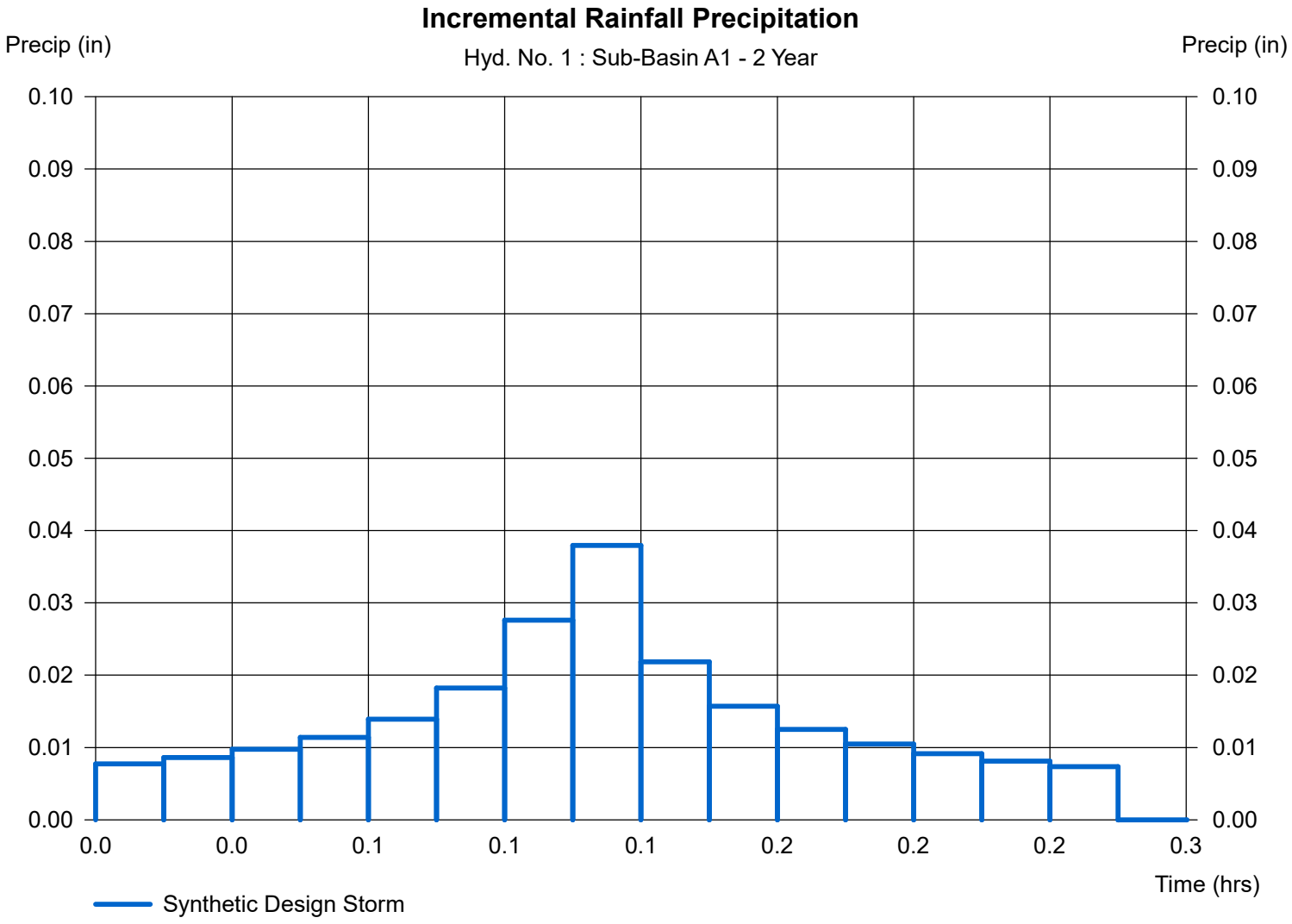
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



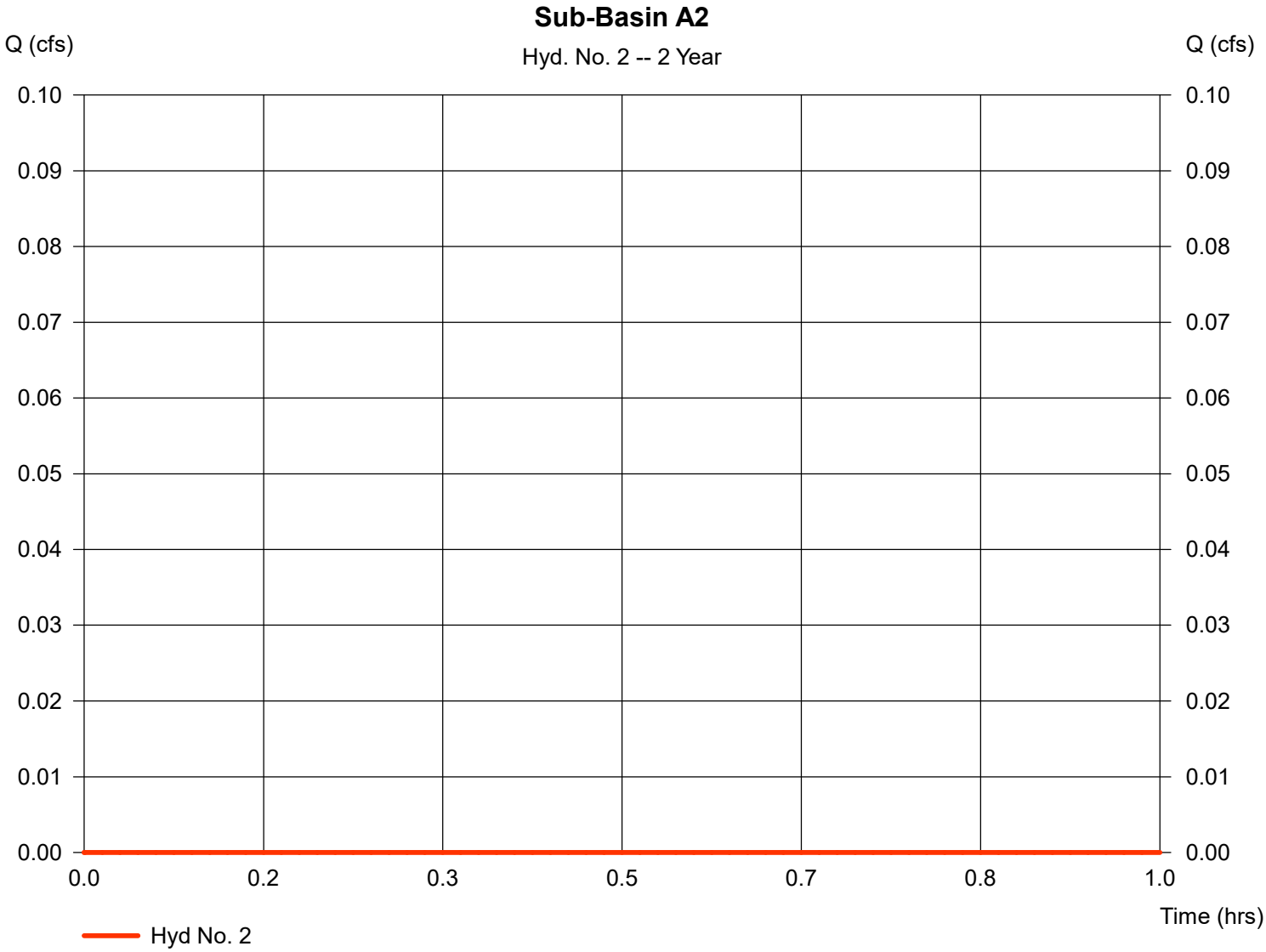
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



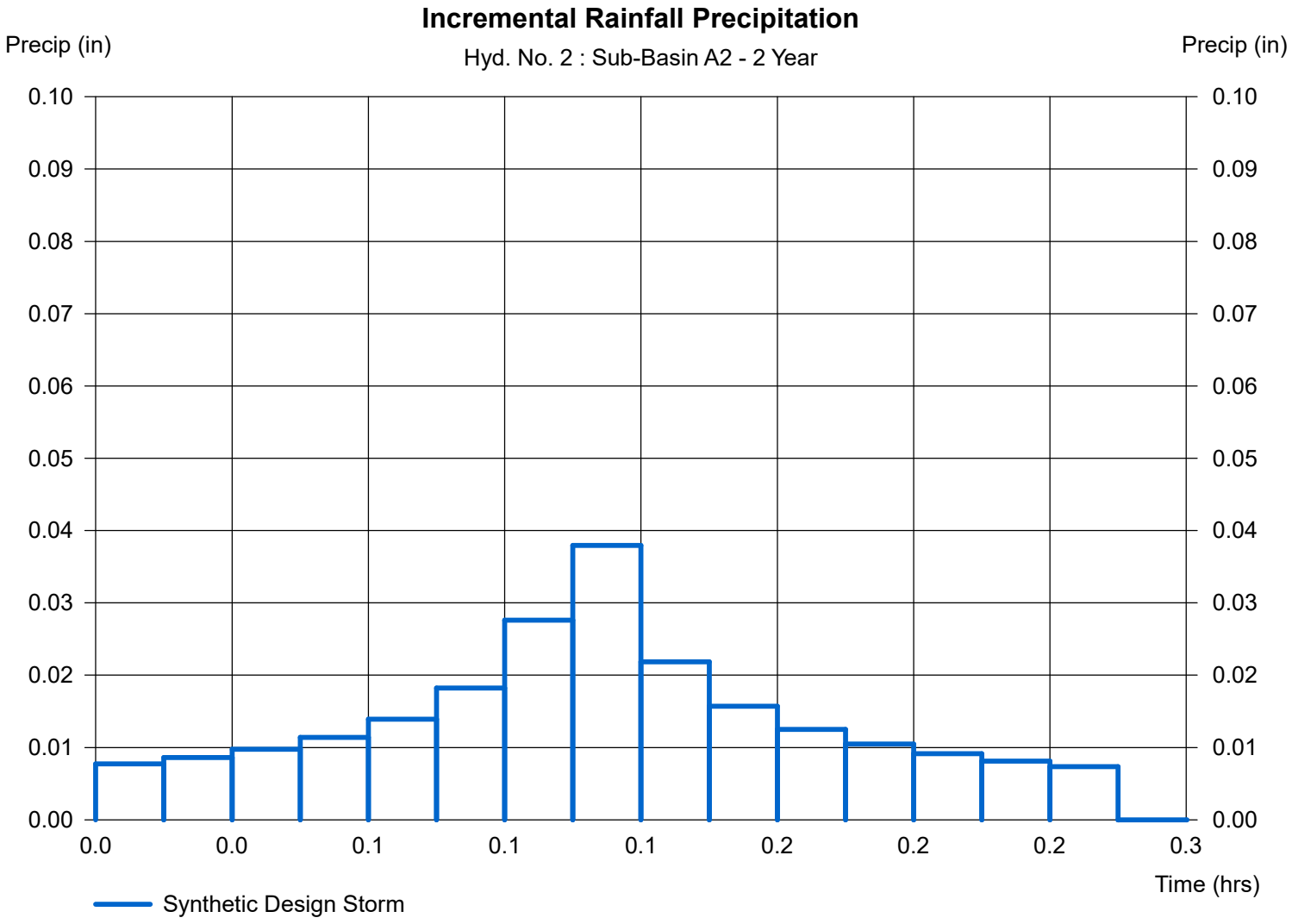
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



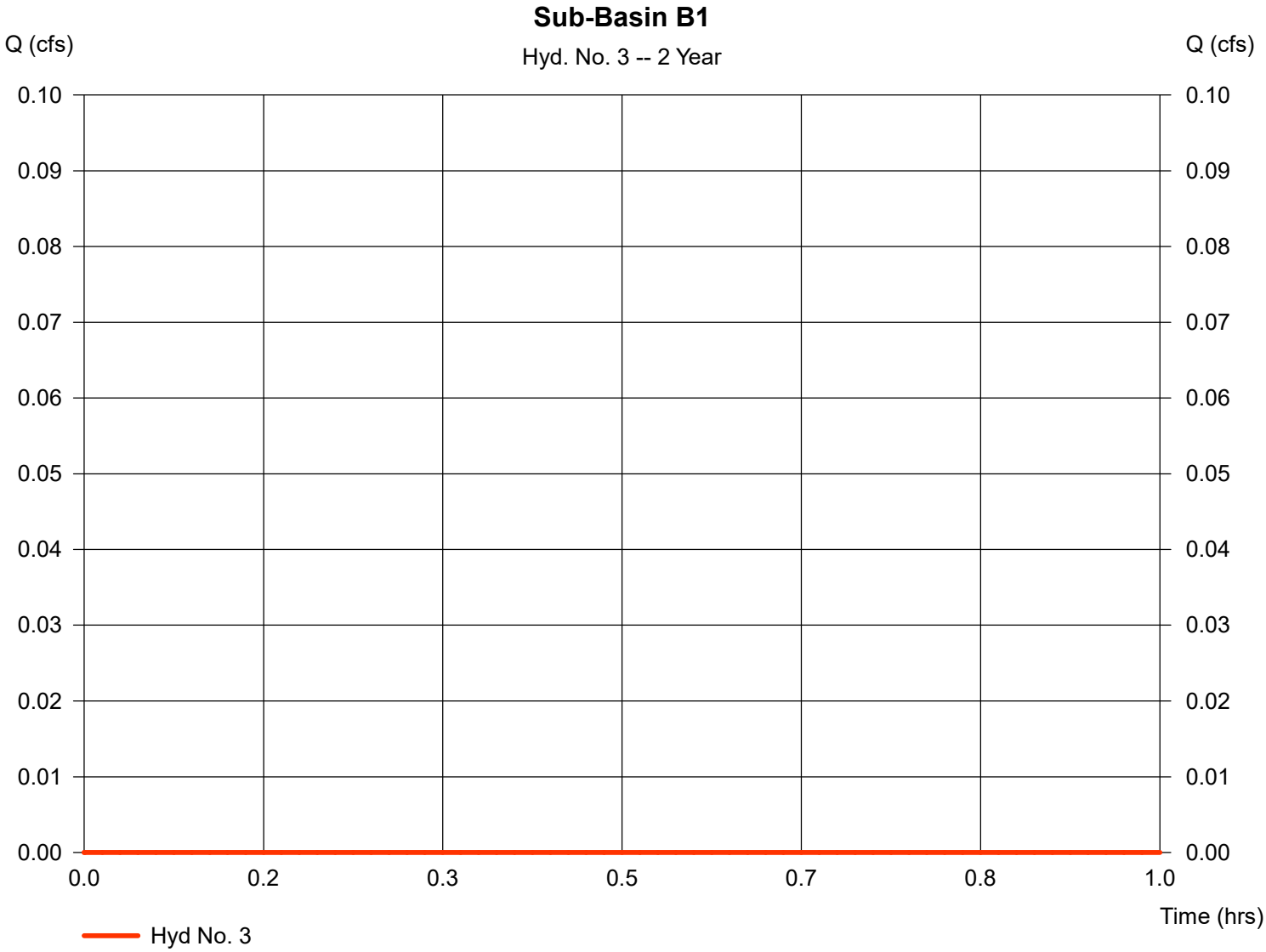
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



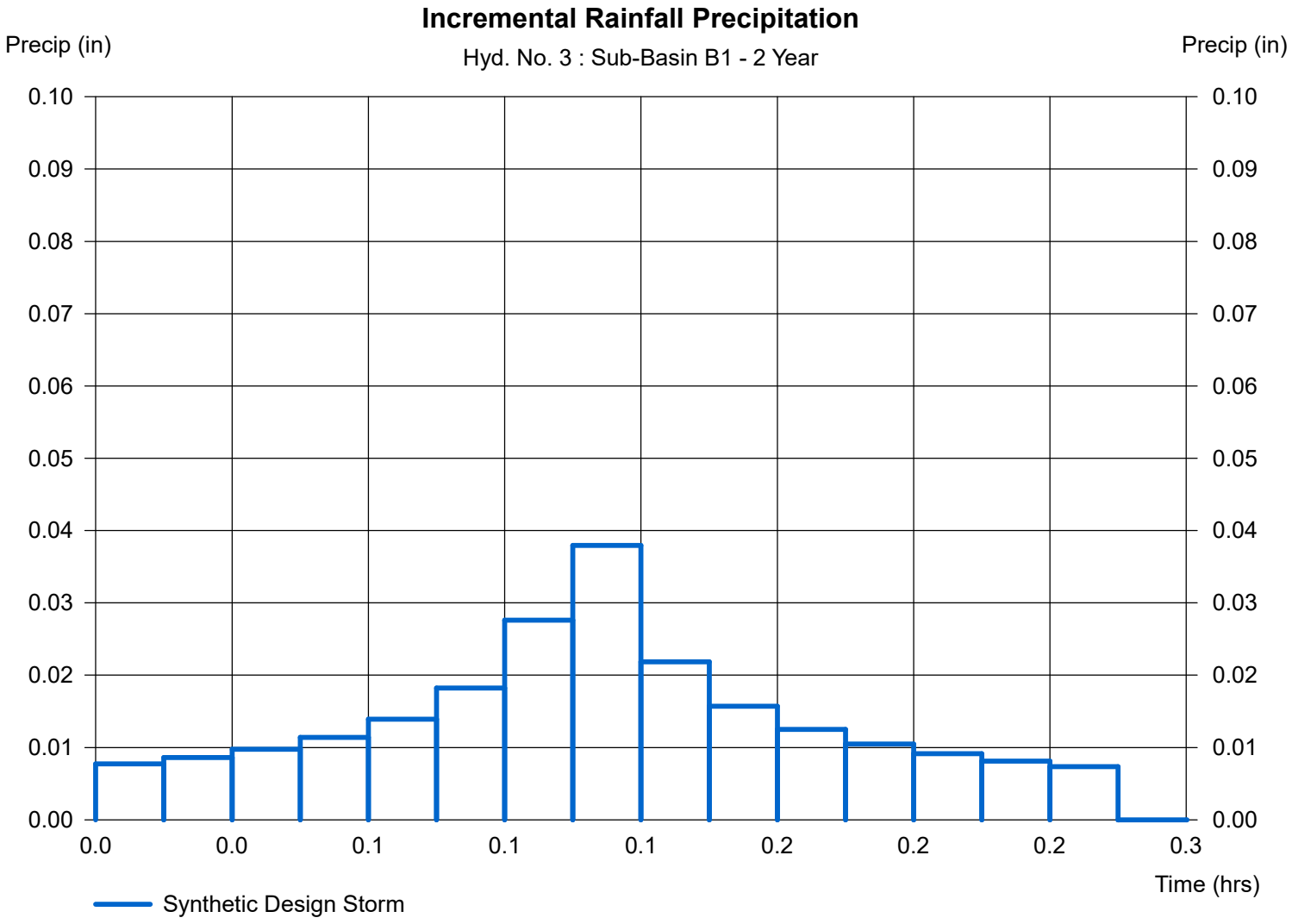
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



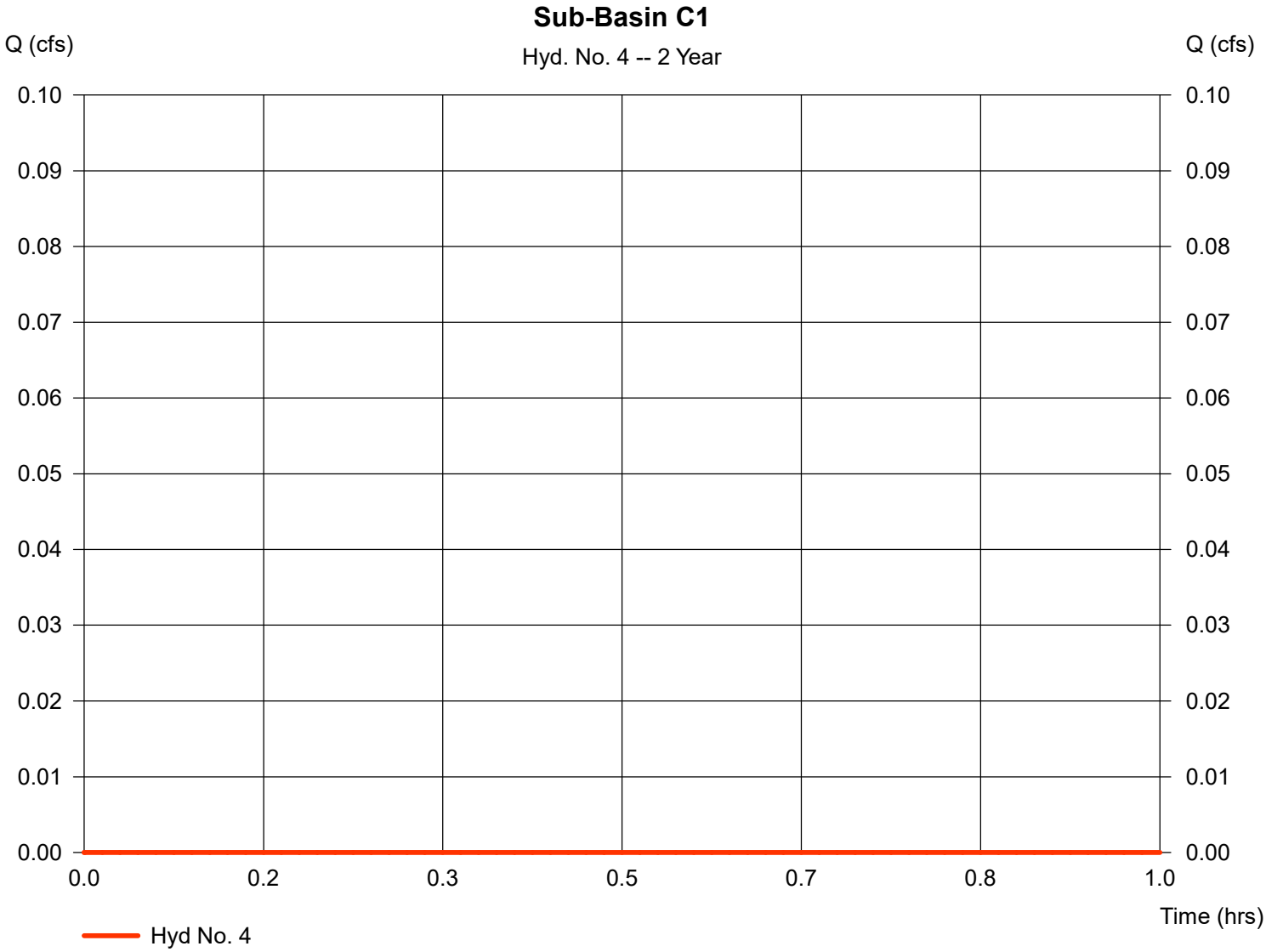
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



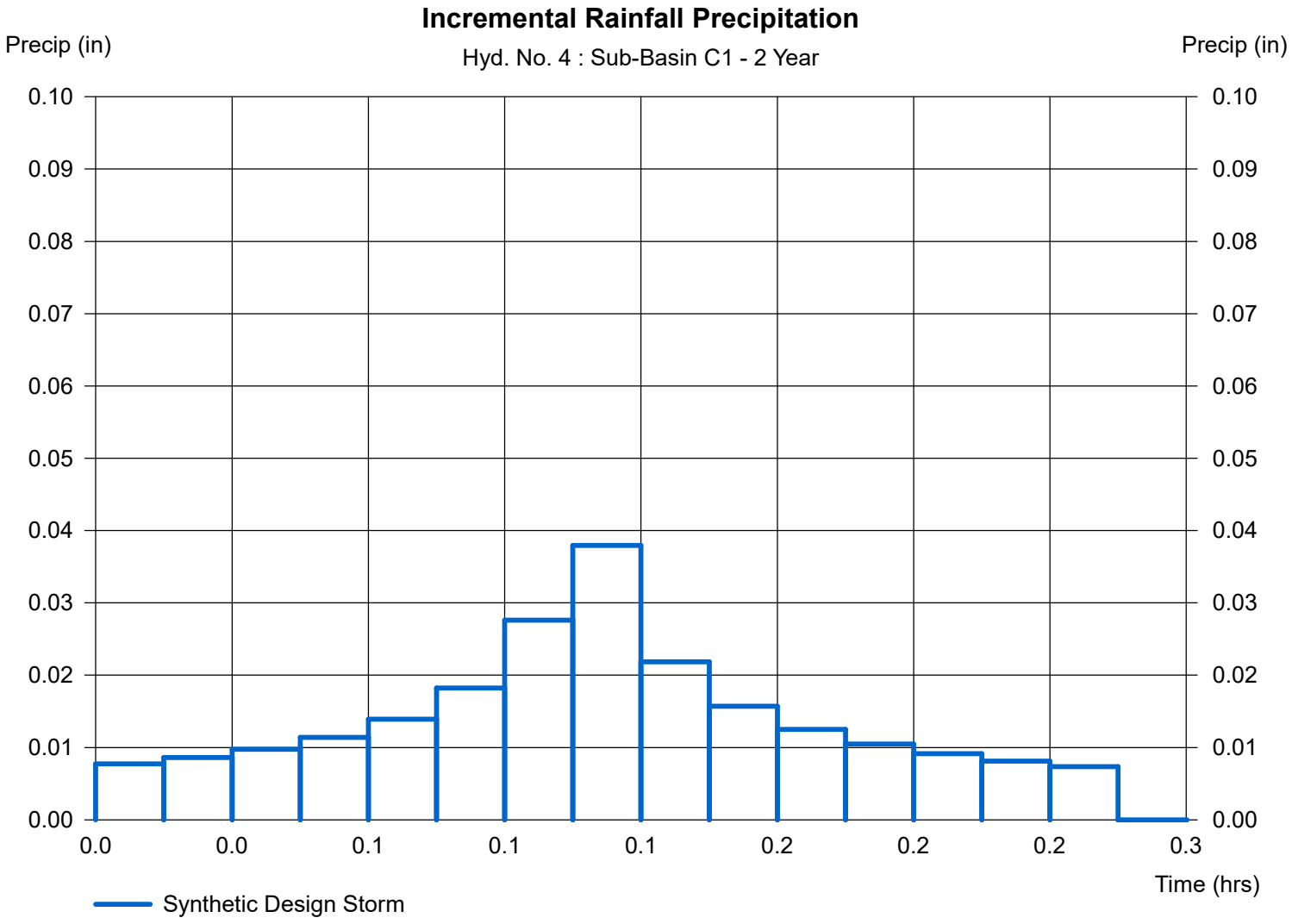
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



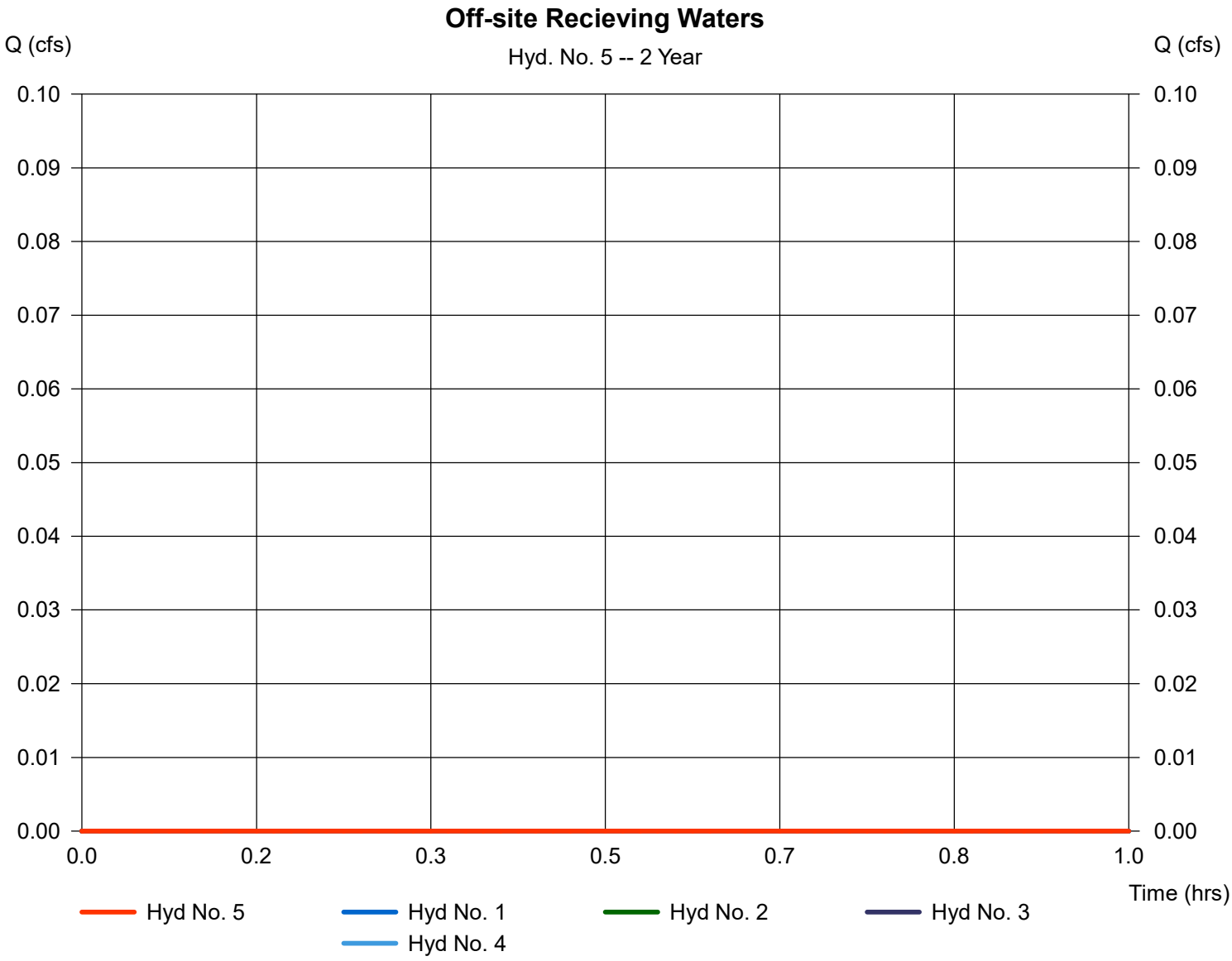
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

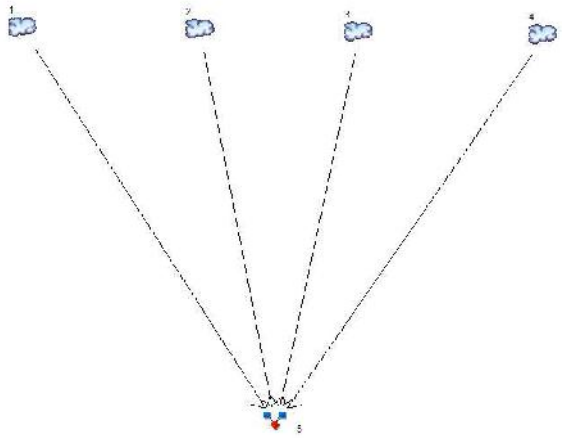
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.29 | 0.35 | 0.00 | 0.45 |

# Watershed Model Schematic





## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

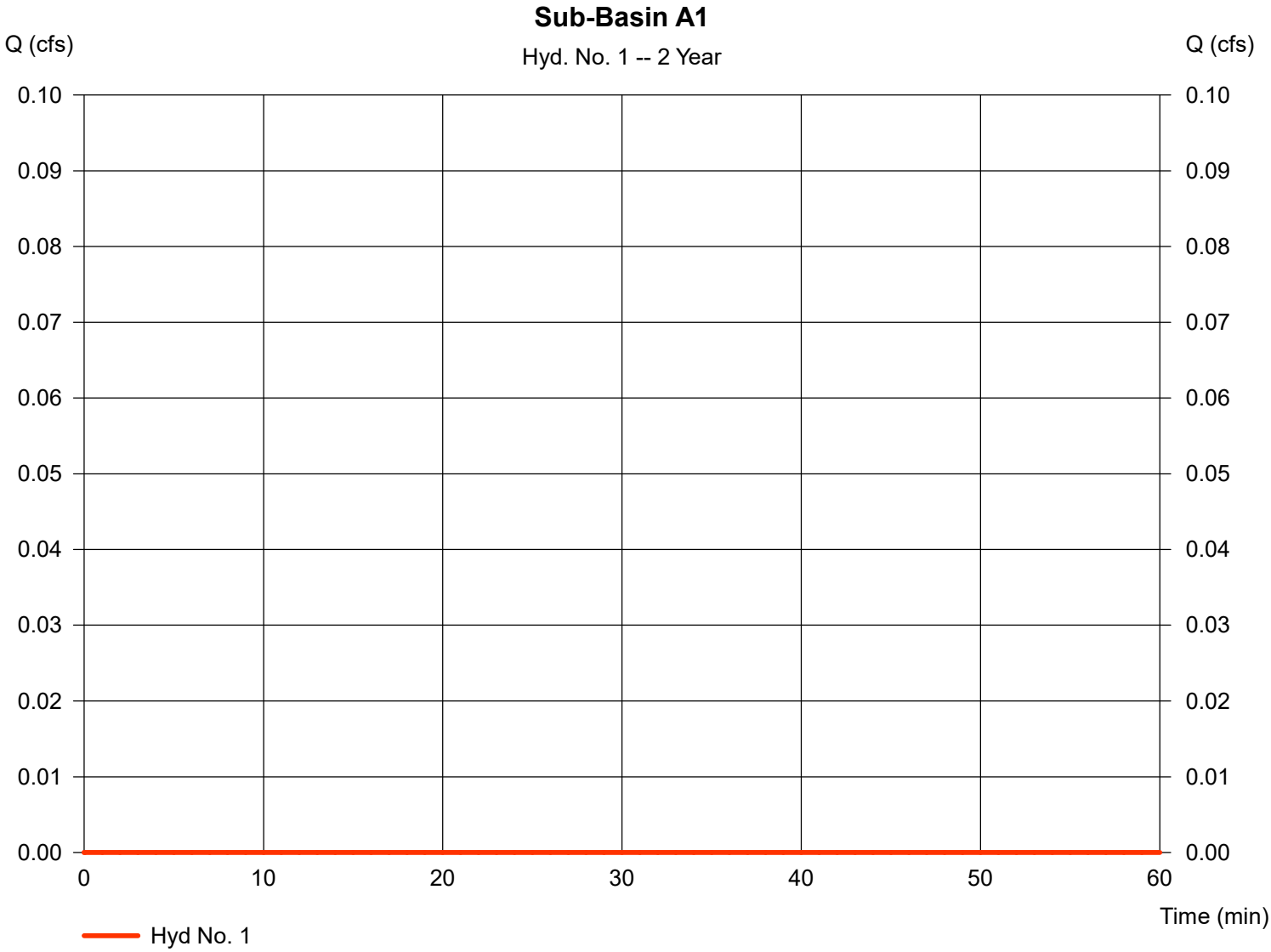
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



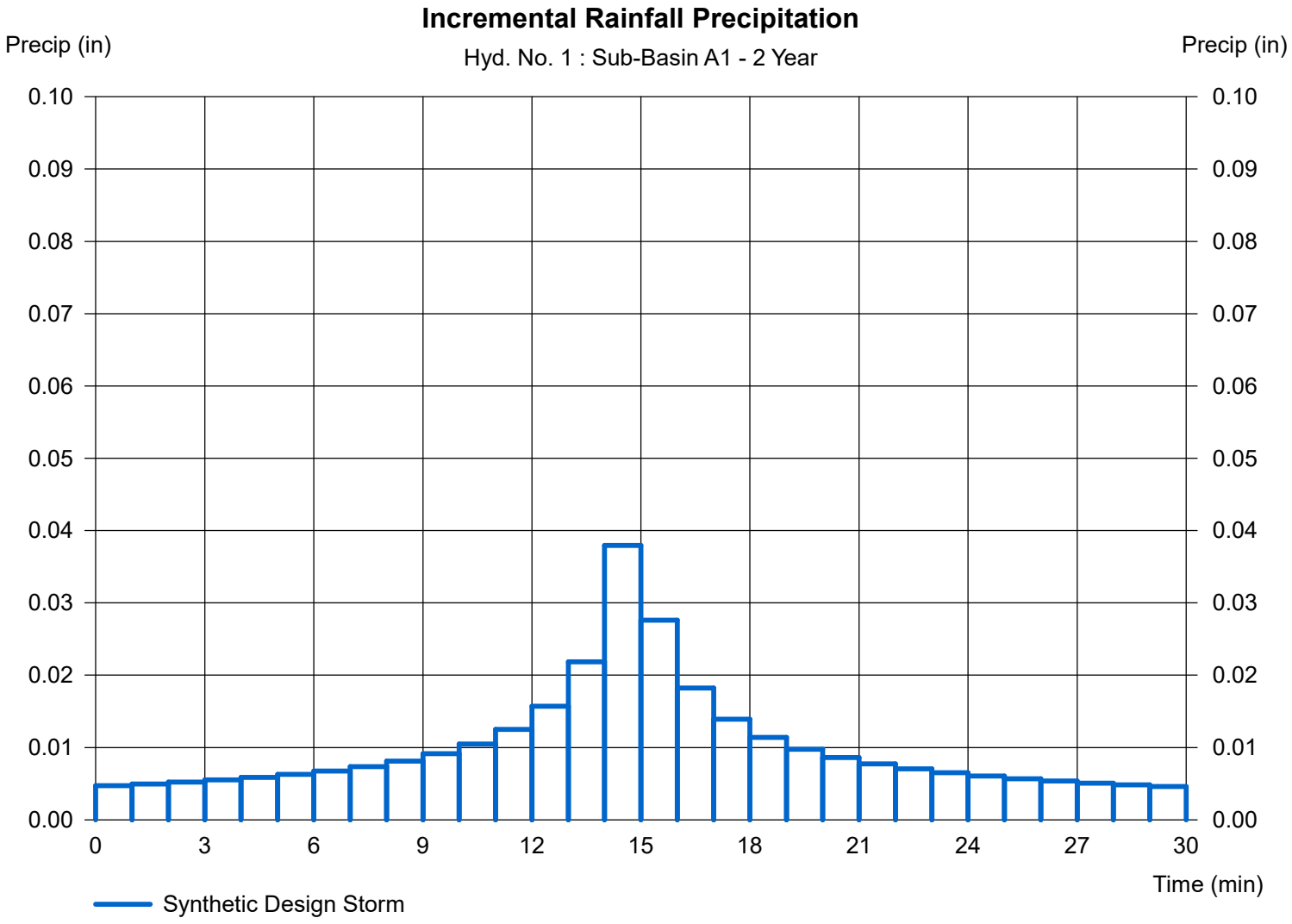
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



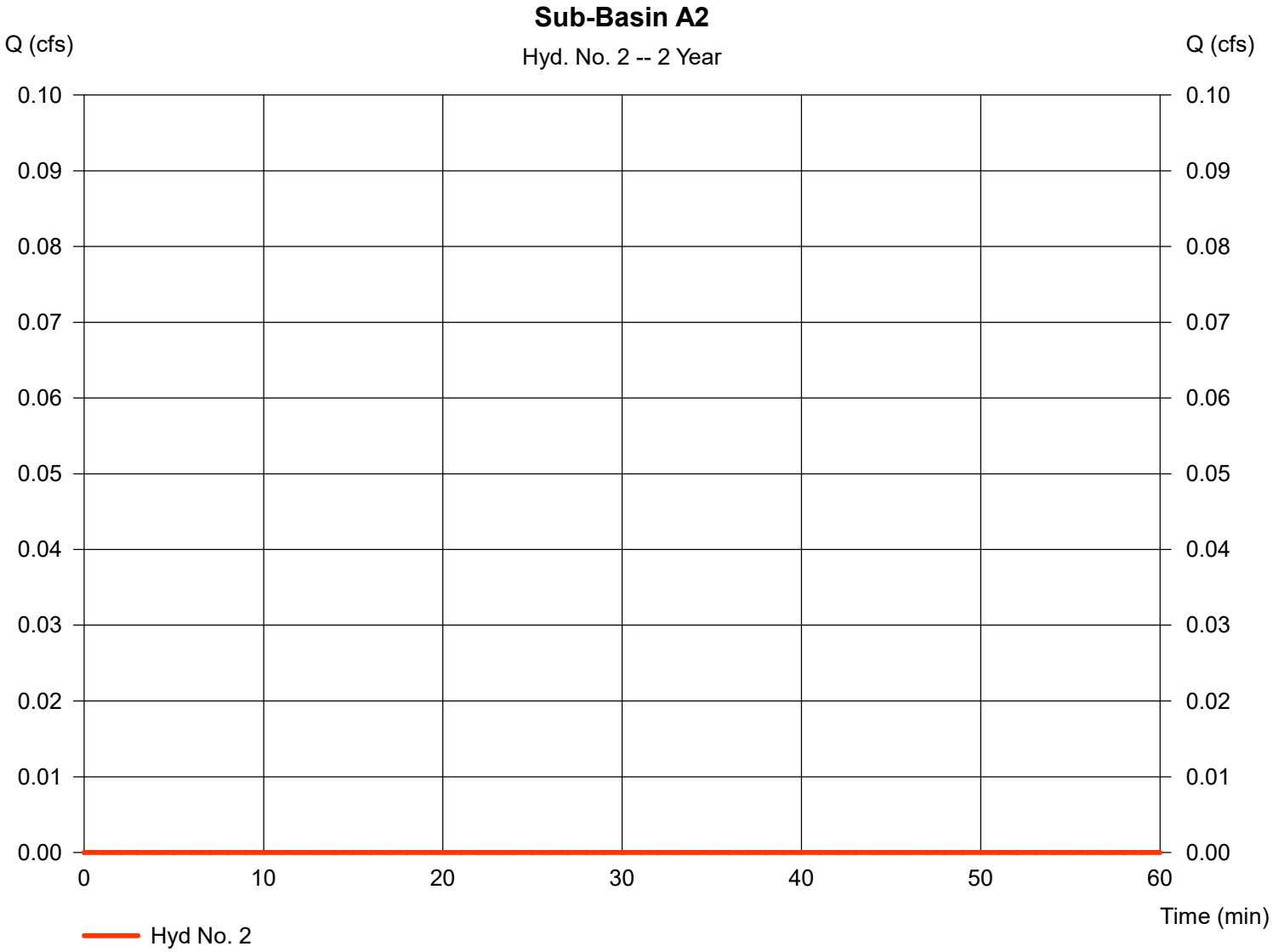
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



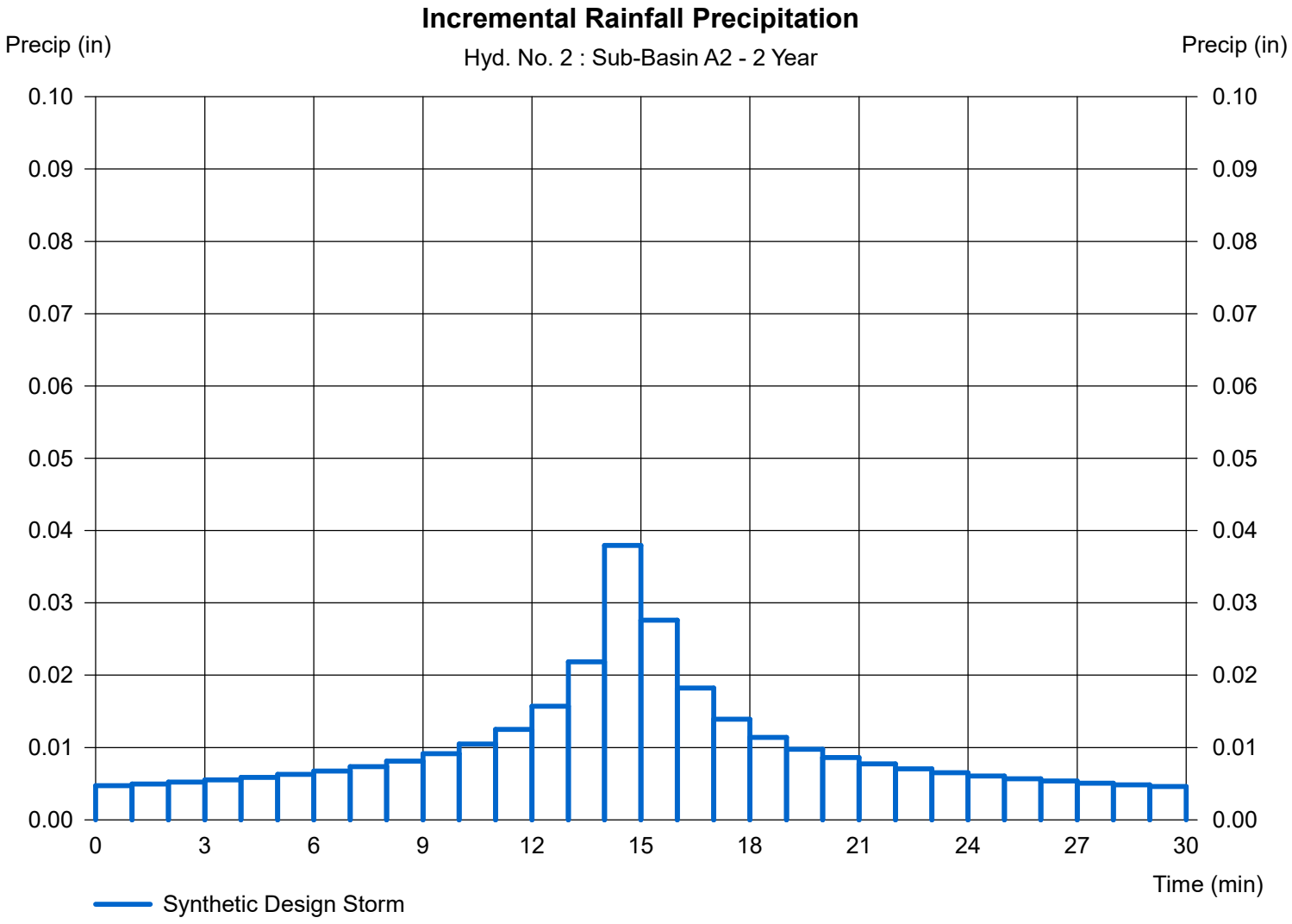
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



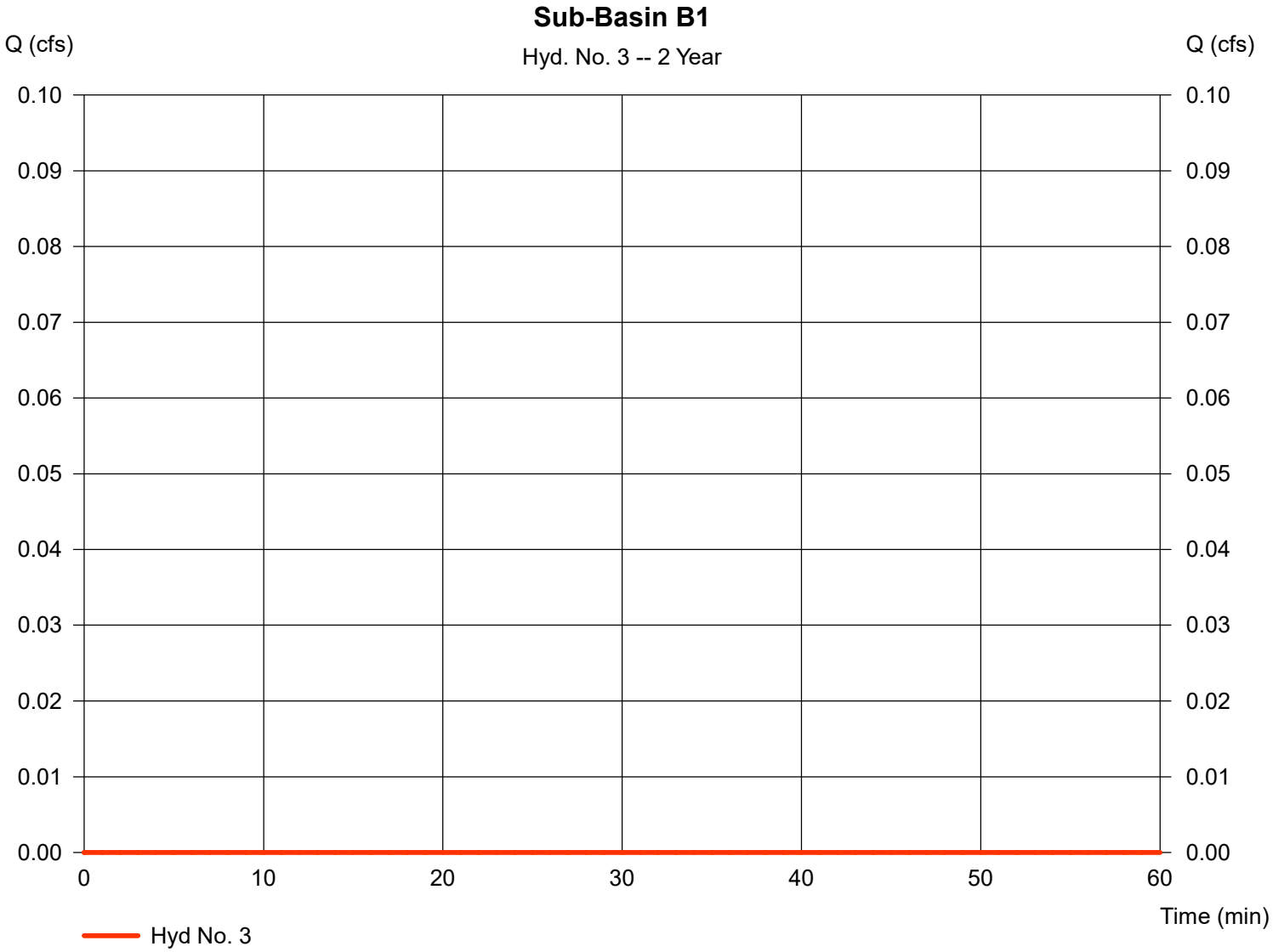
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



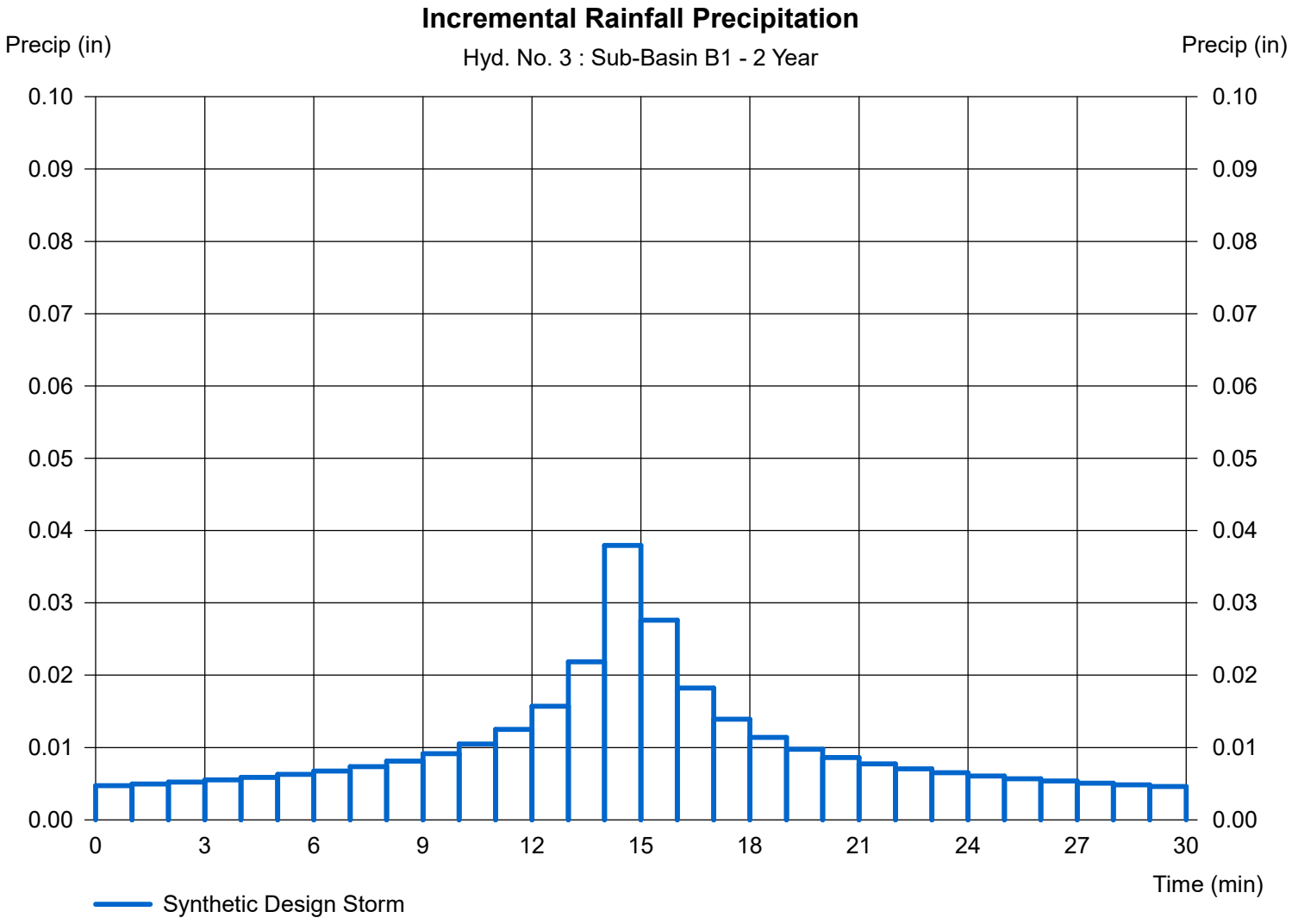
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



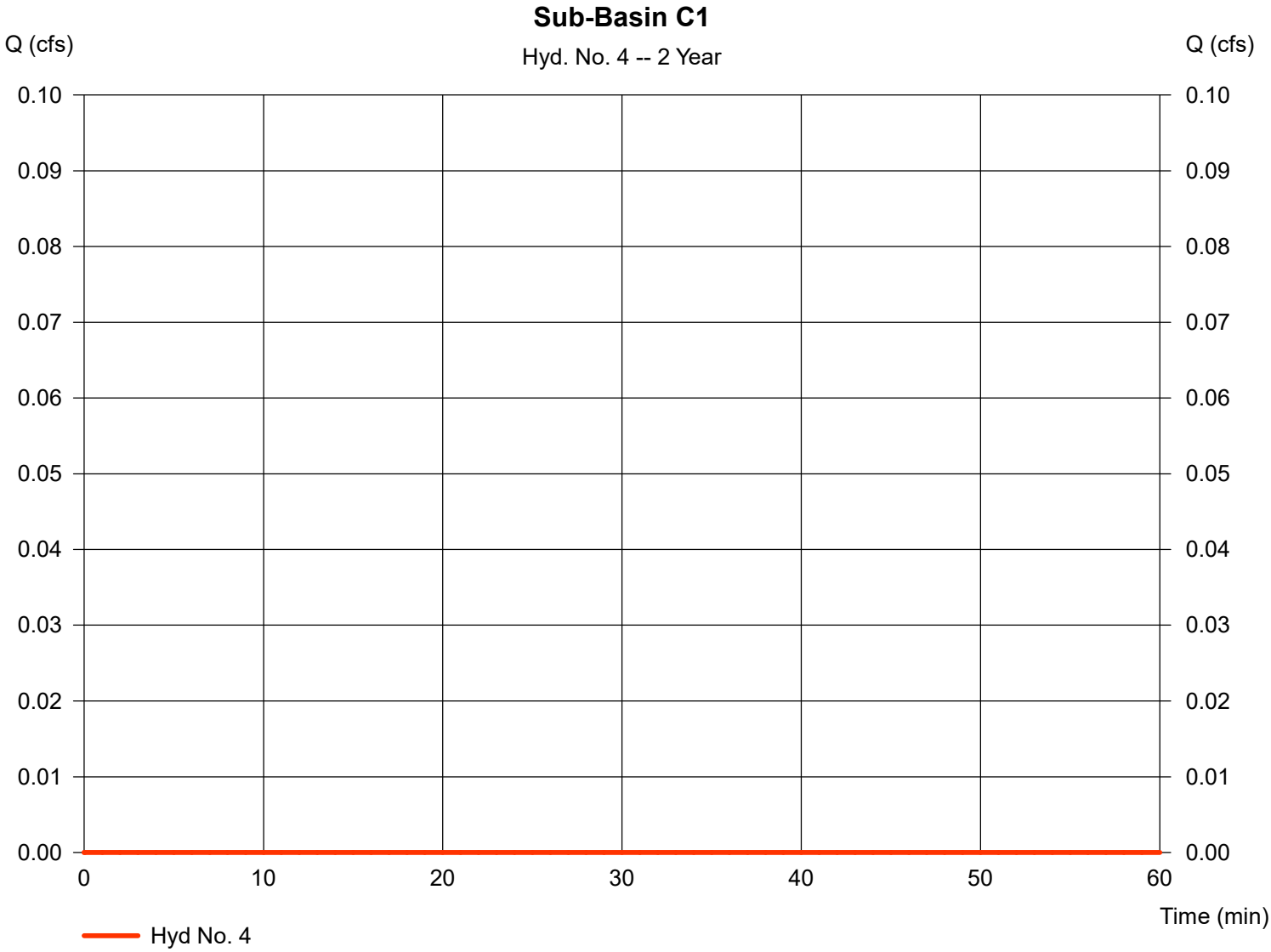
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



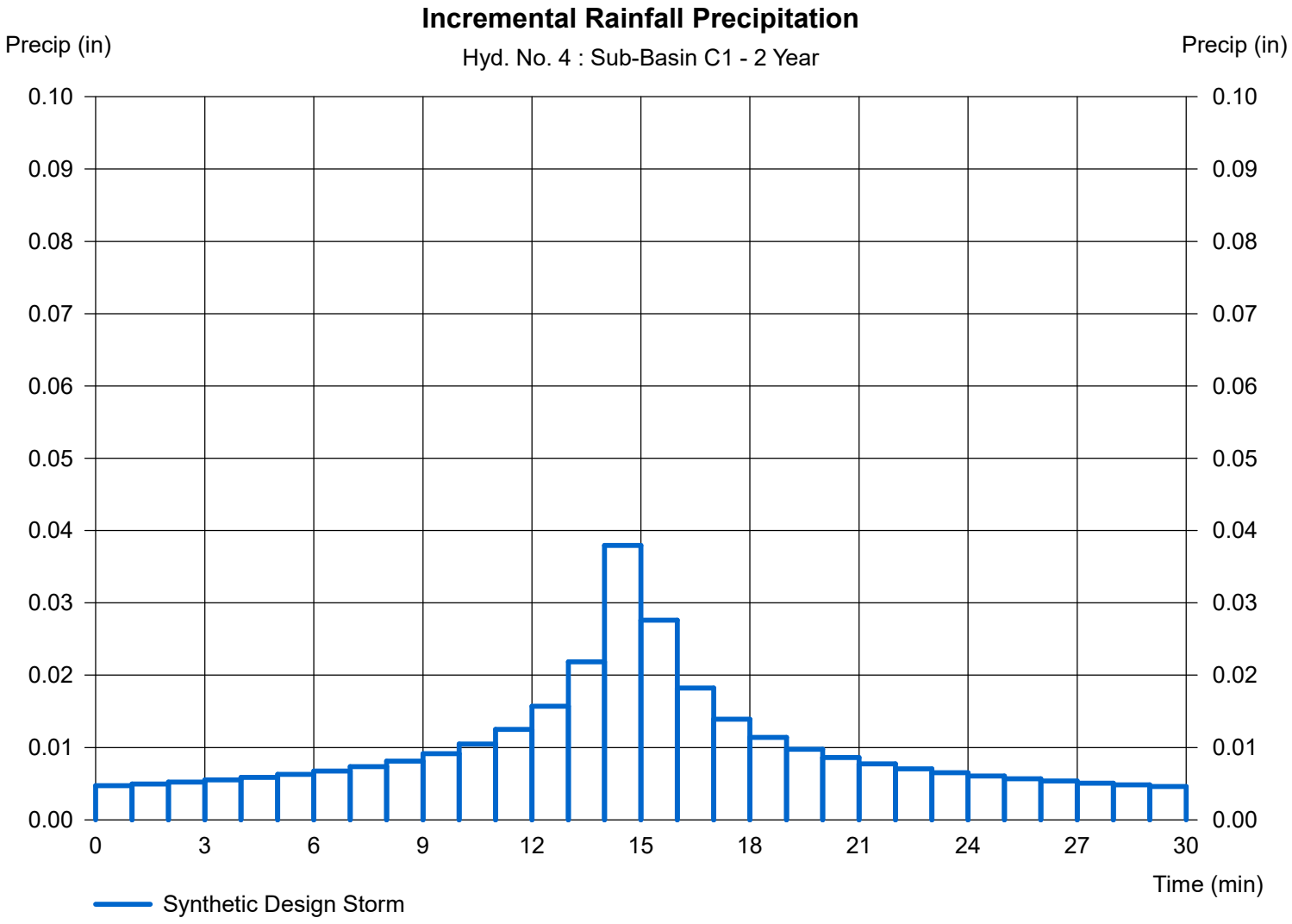
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



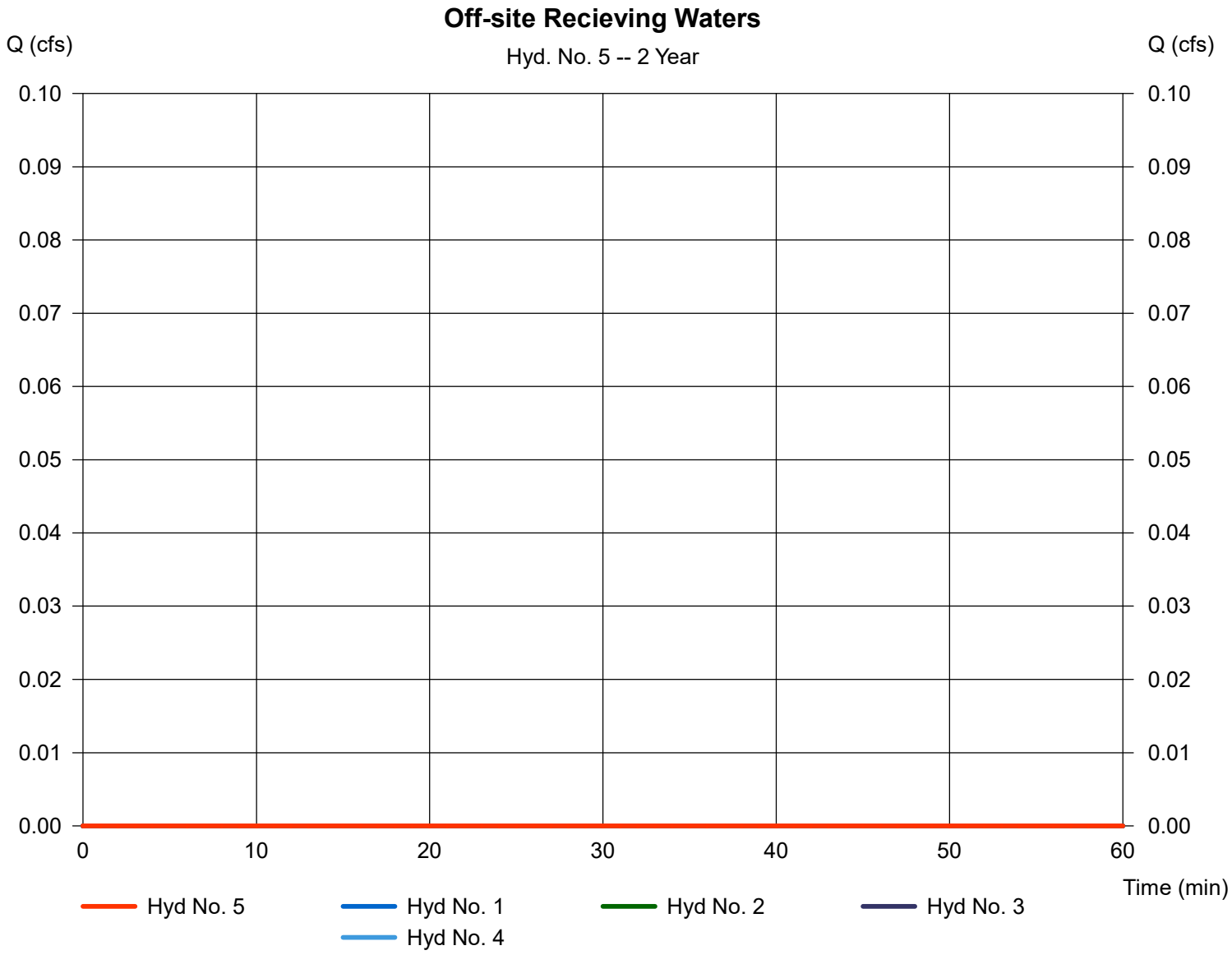
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

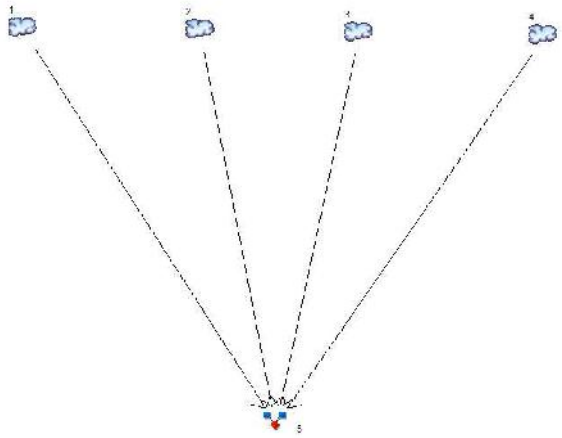
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.42 | 0.51 | 0.00 | 0.65 |

# Watershed Model Schematic





## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 2 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

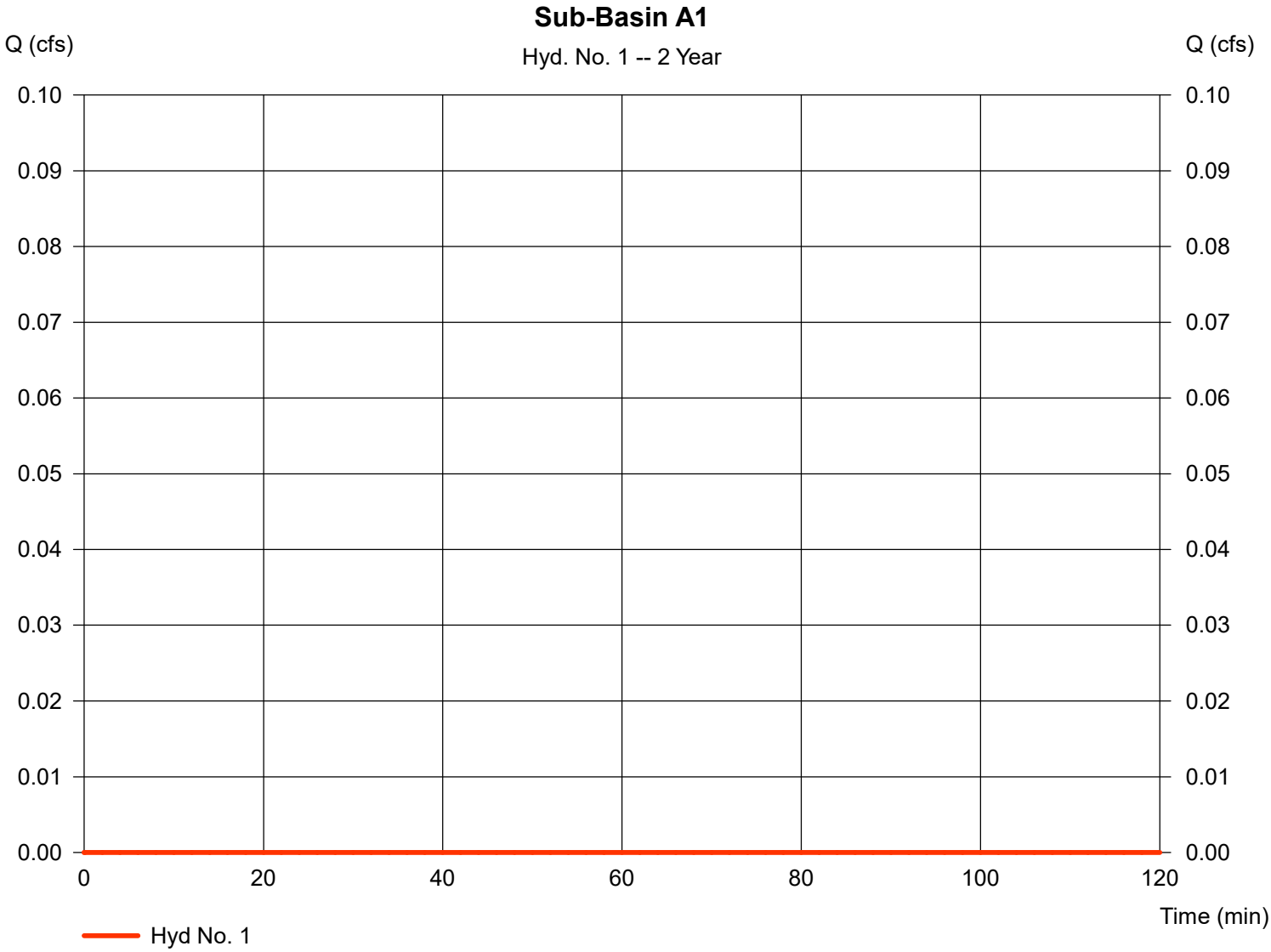
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



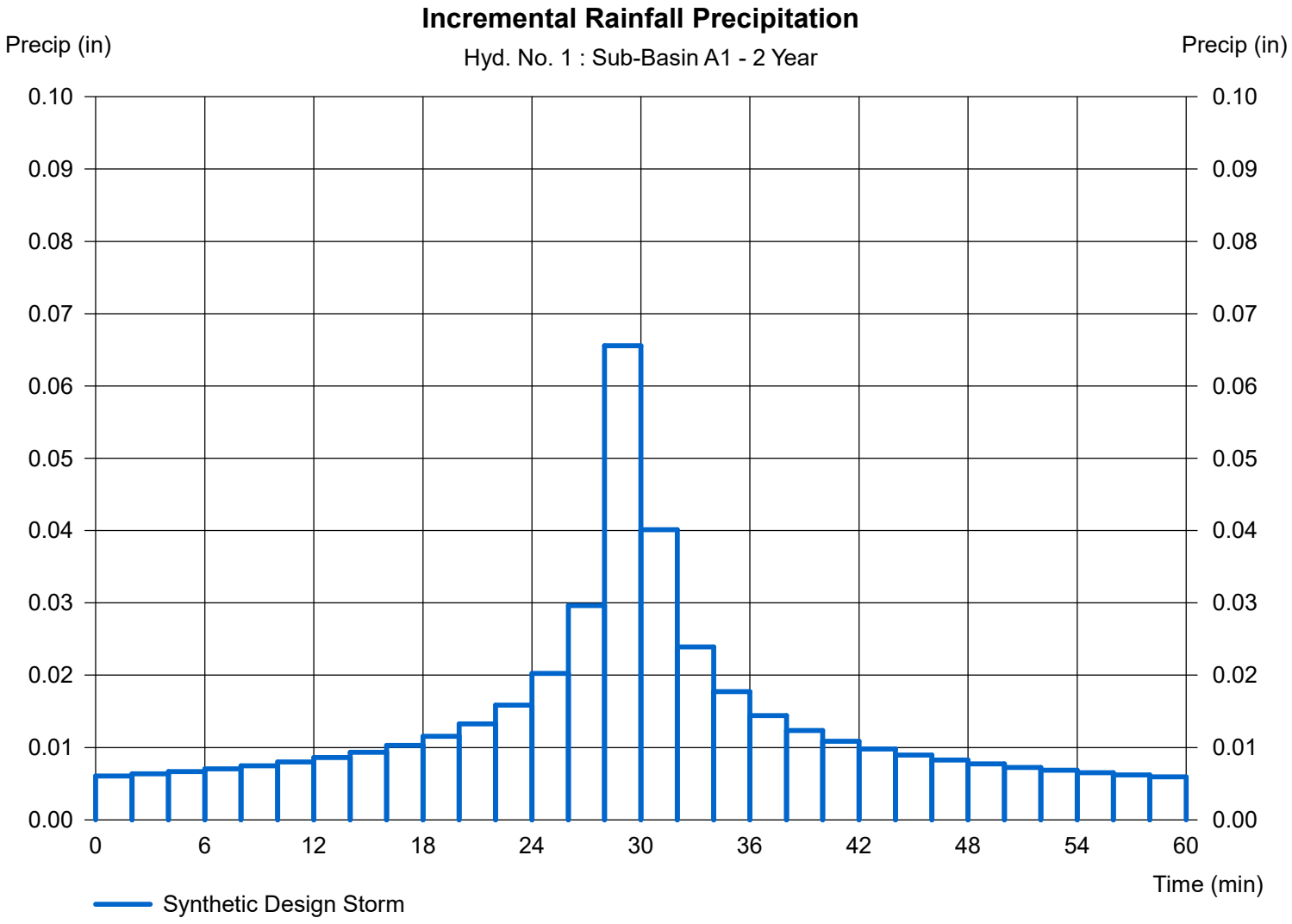
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



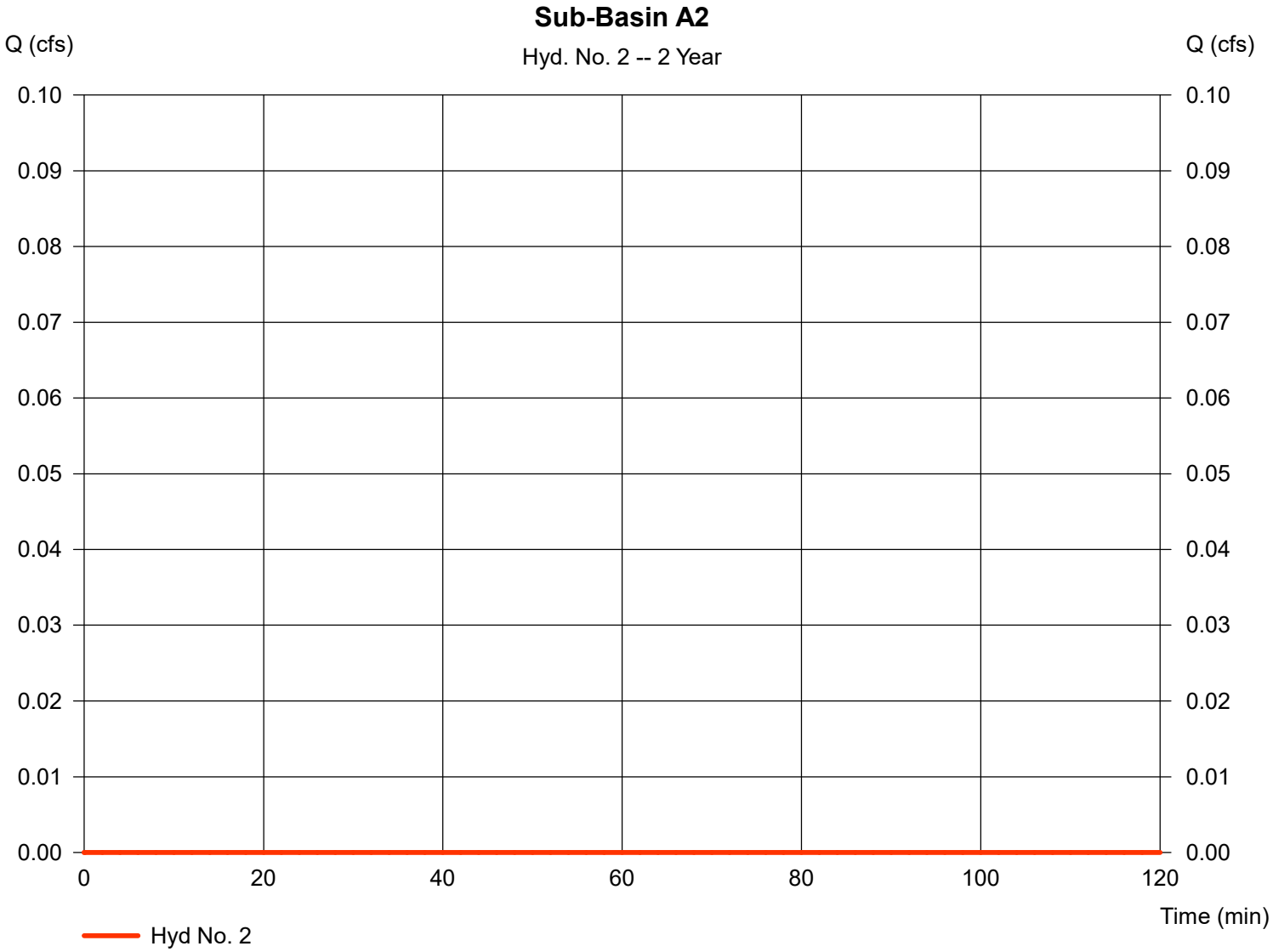
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



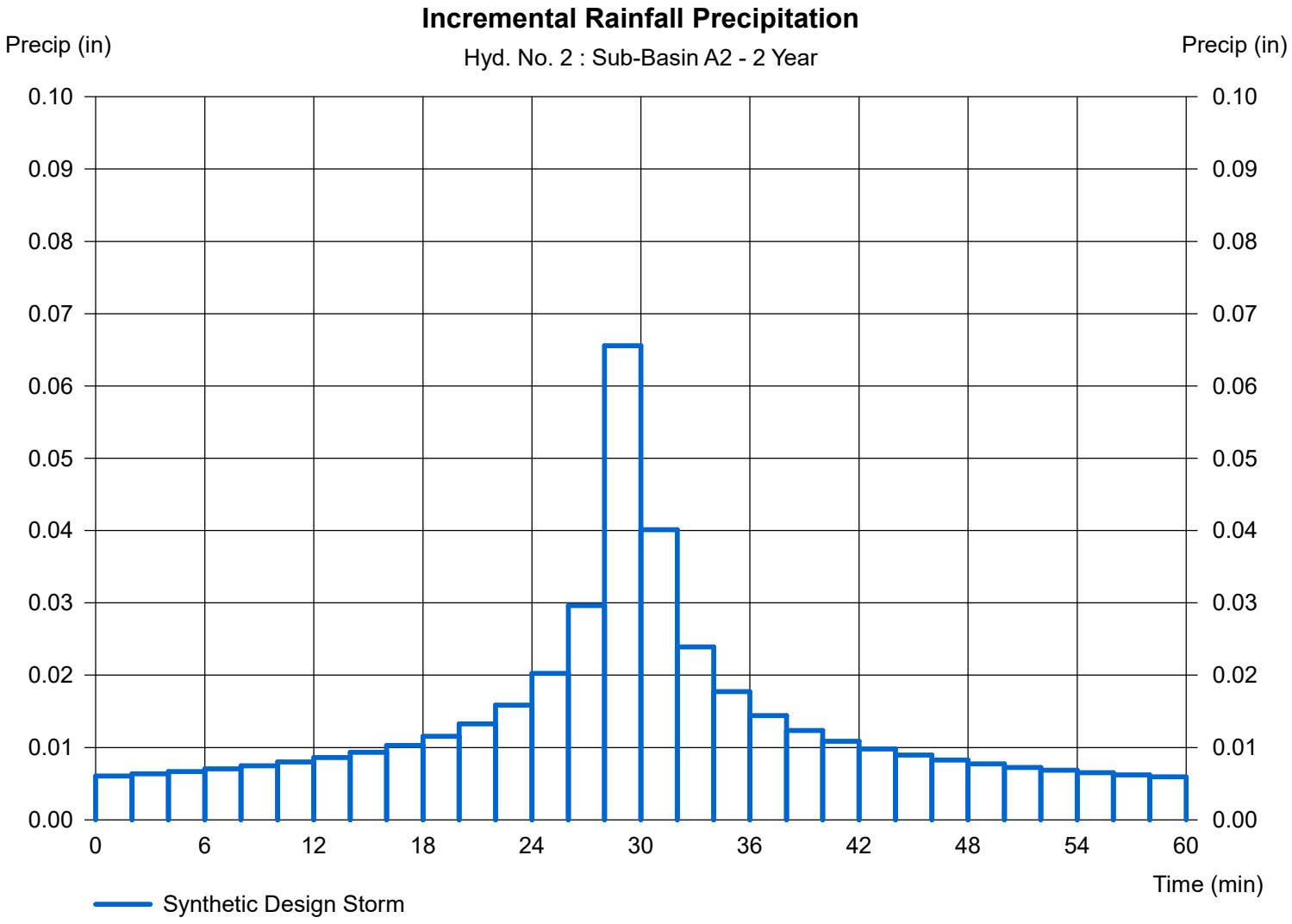
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



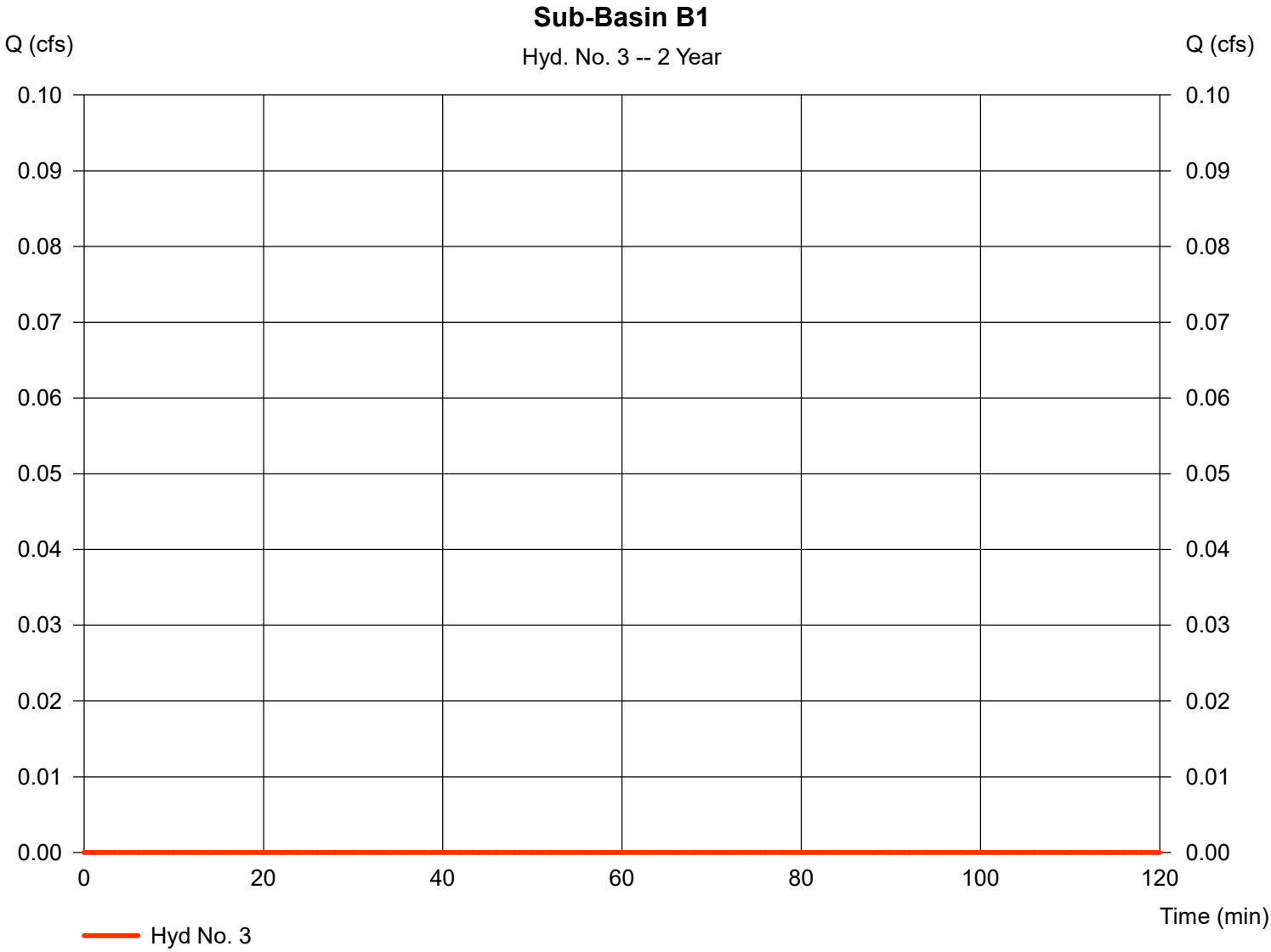
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



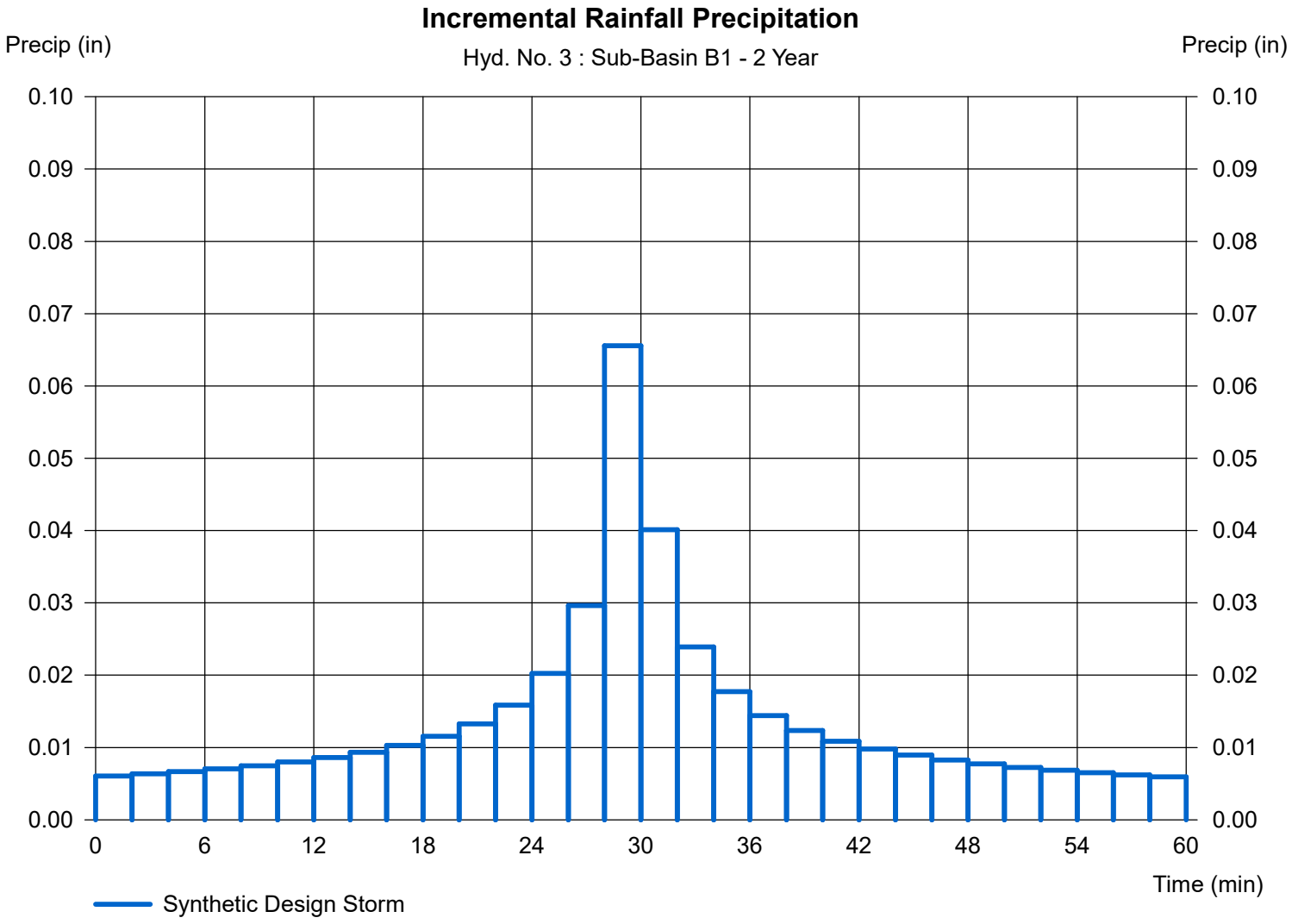
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



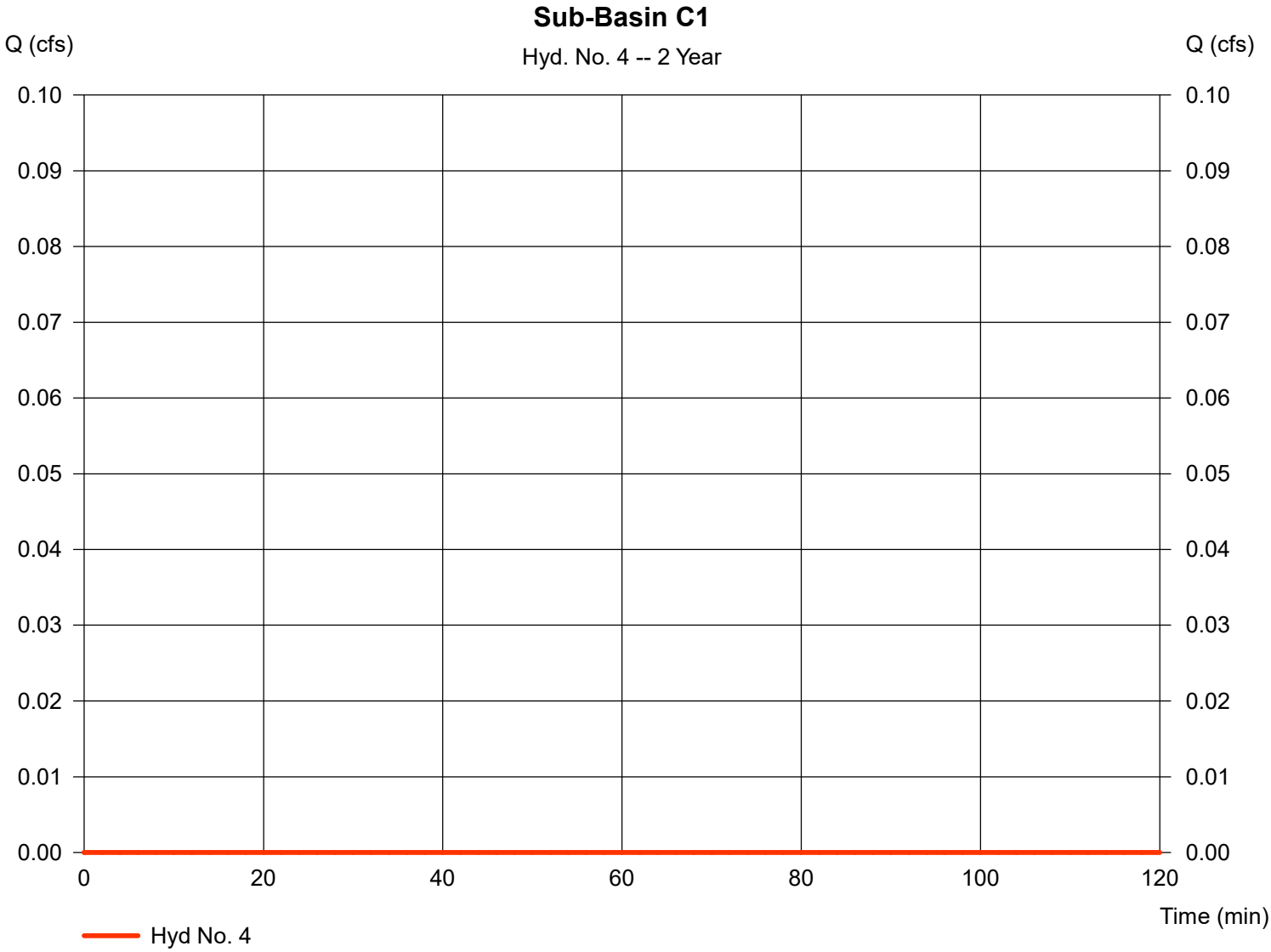
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



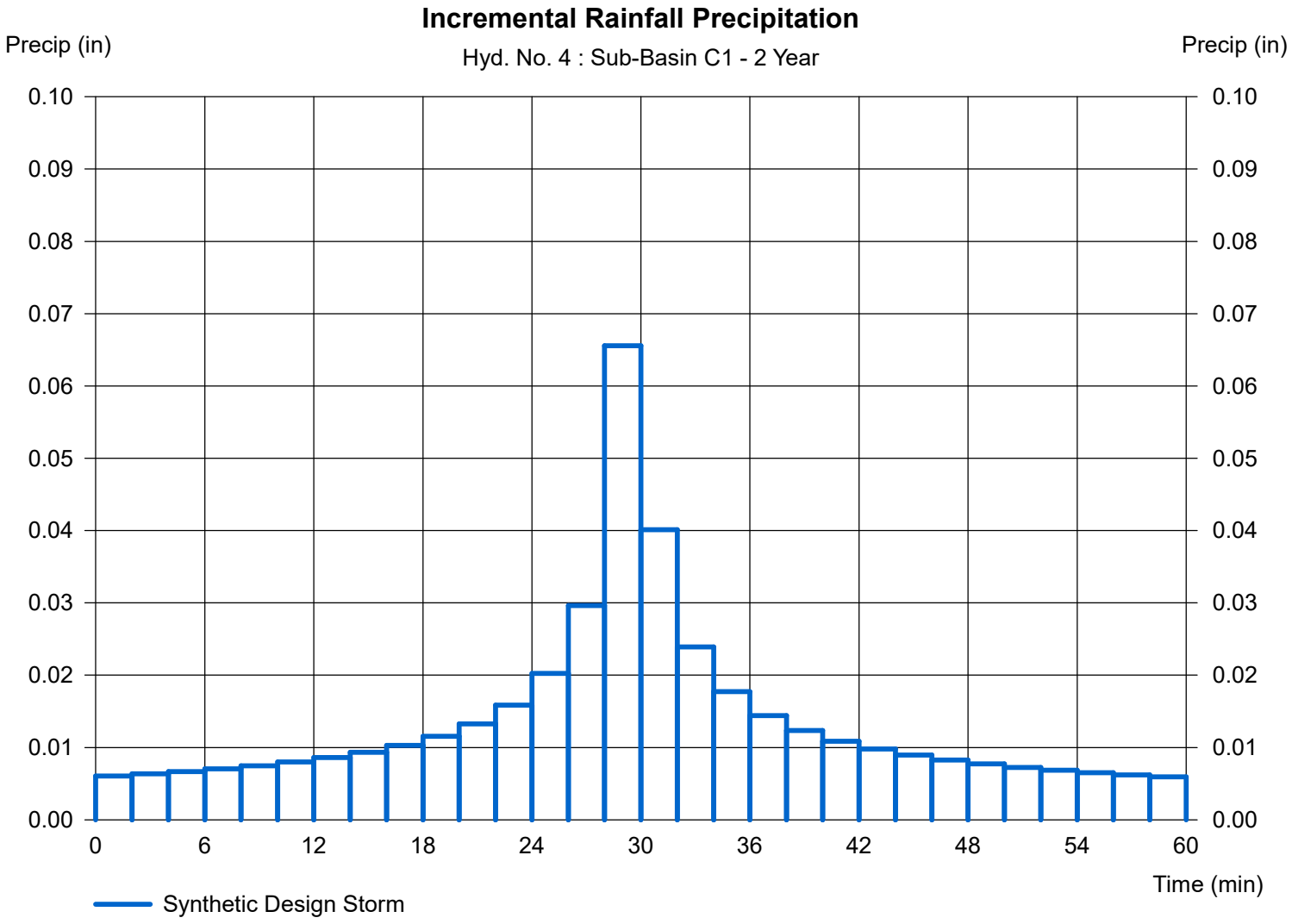
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



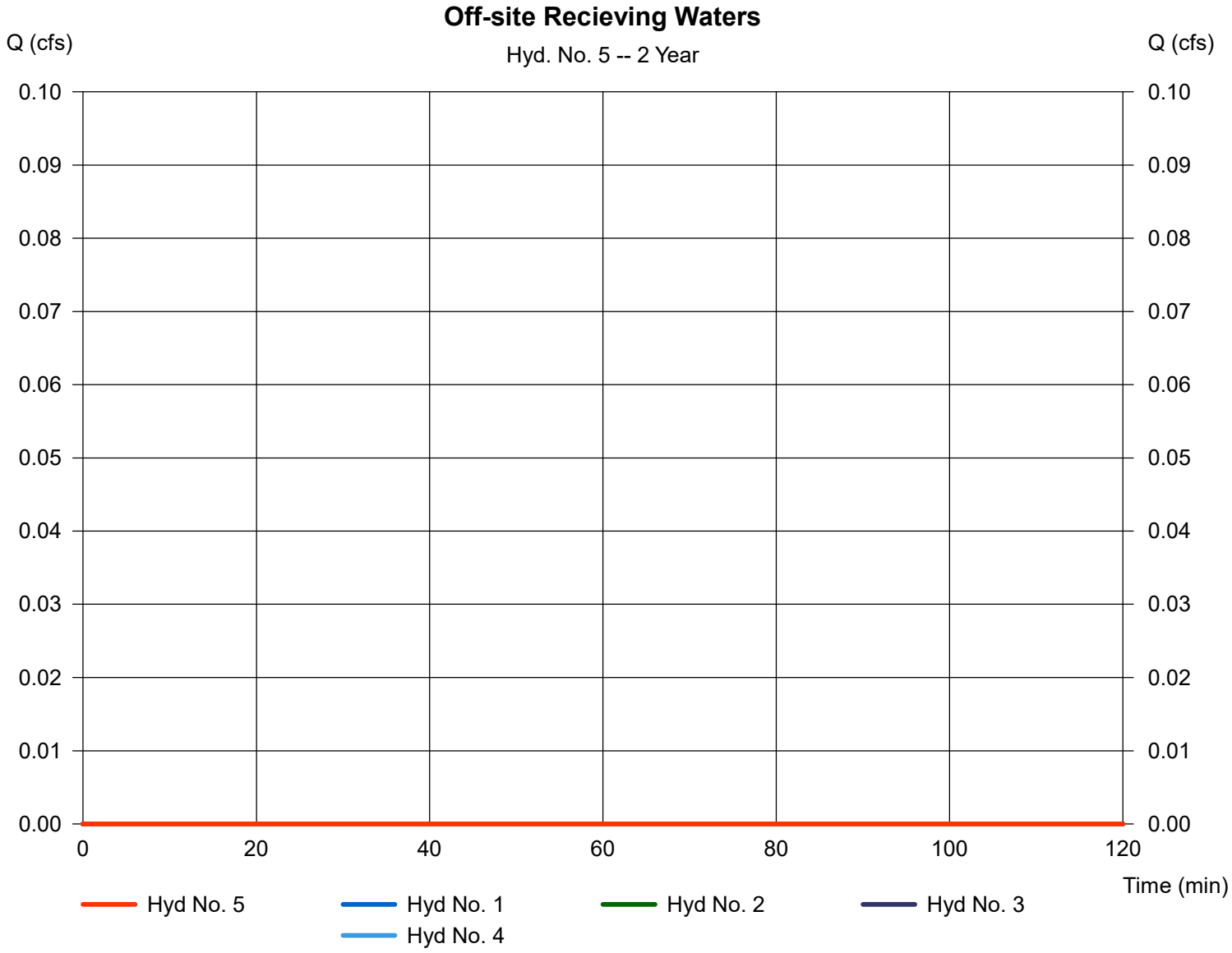
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

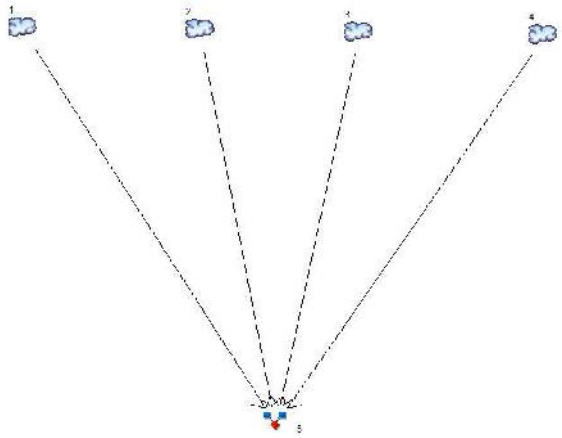
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.56 | 0.69 | 0.00 | 0.88 |

# Watershed Model Schematic





**Legend**

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | 0.022 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | 0.042 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | 0.025 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | 0.011 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | 0.099 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 2 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

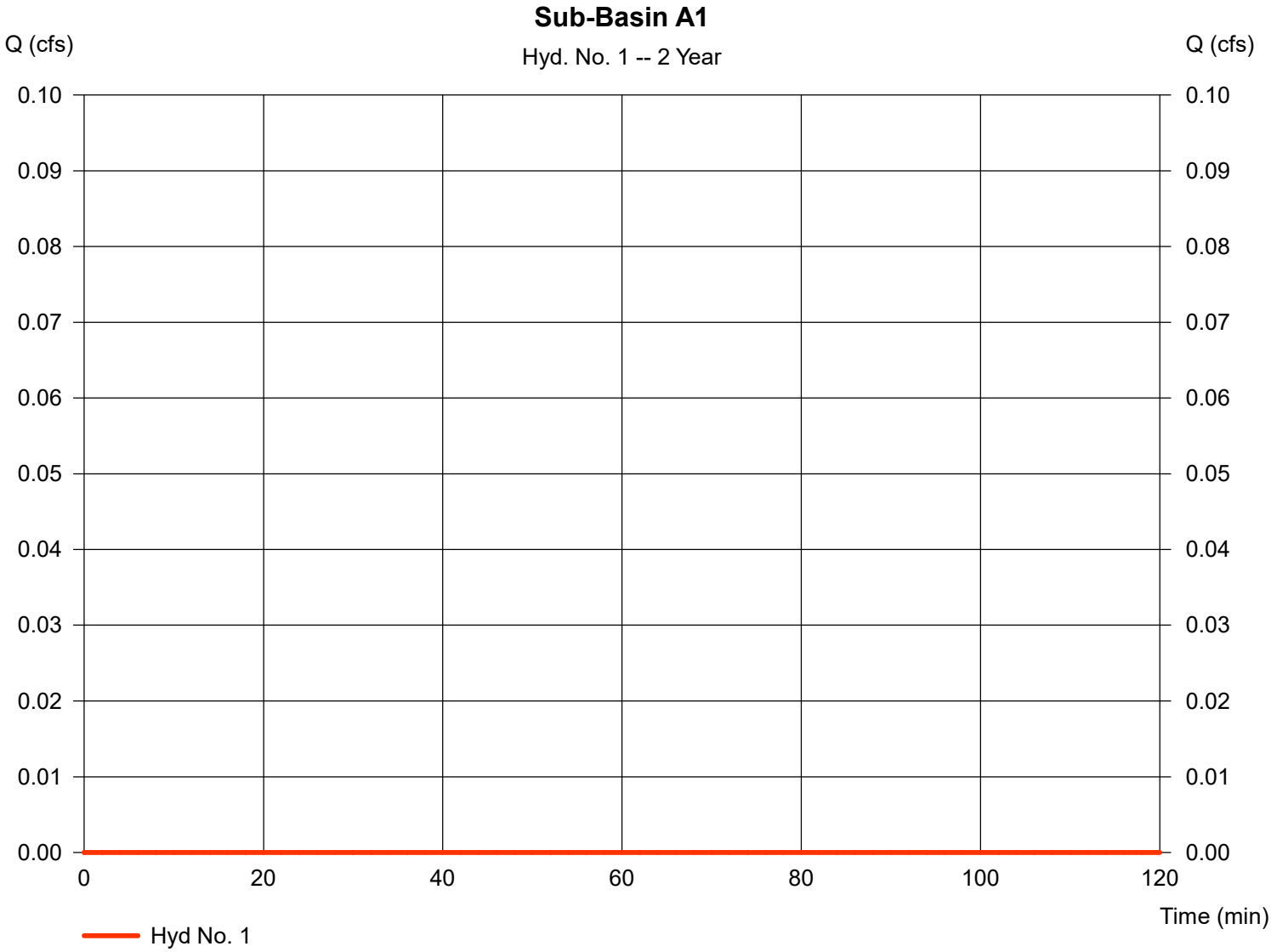
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



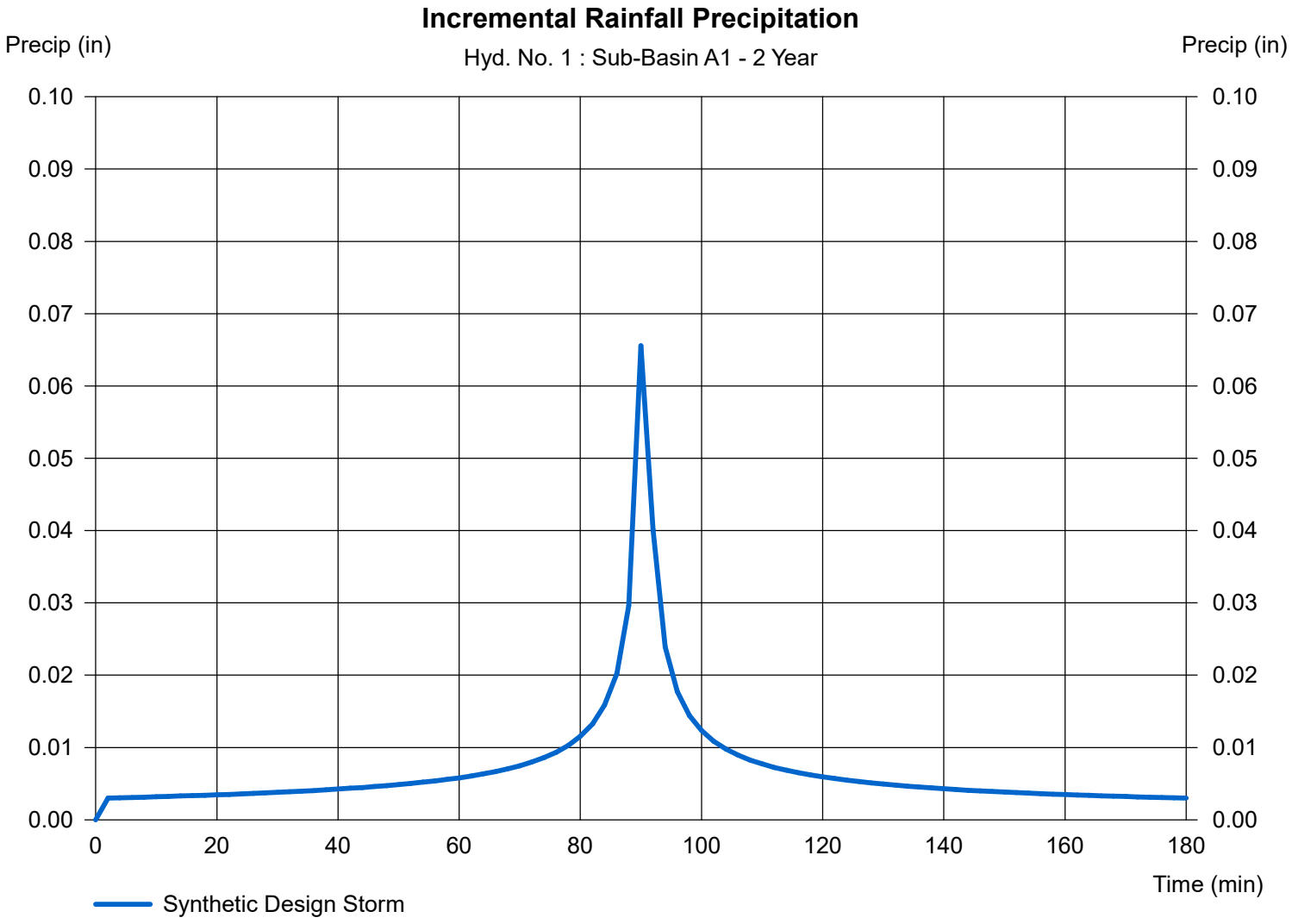
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



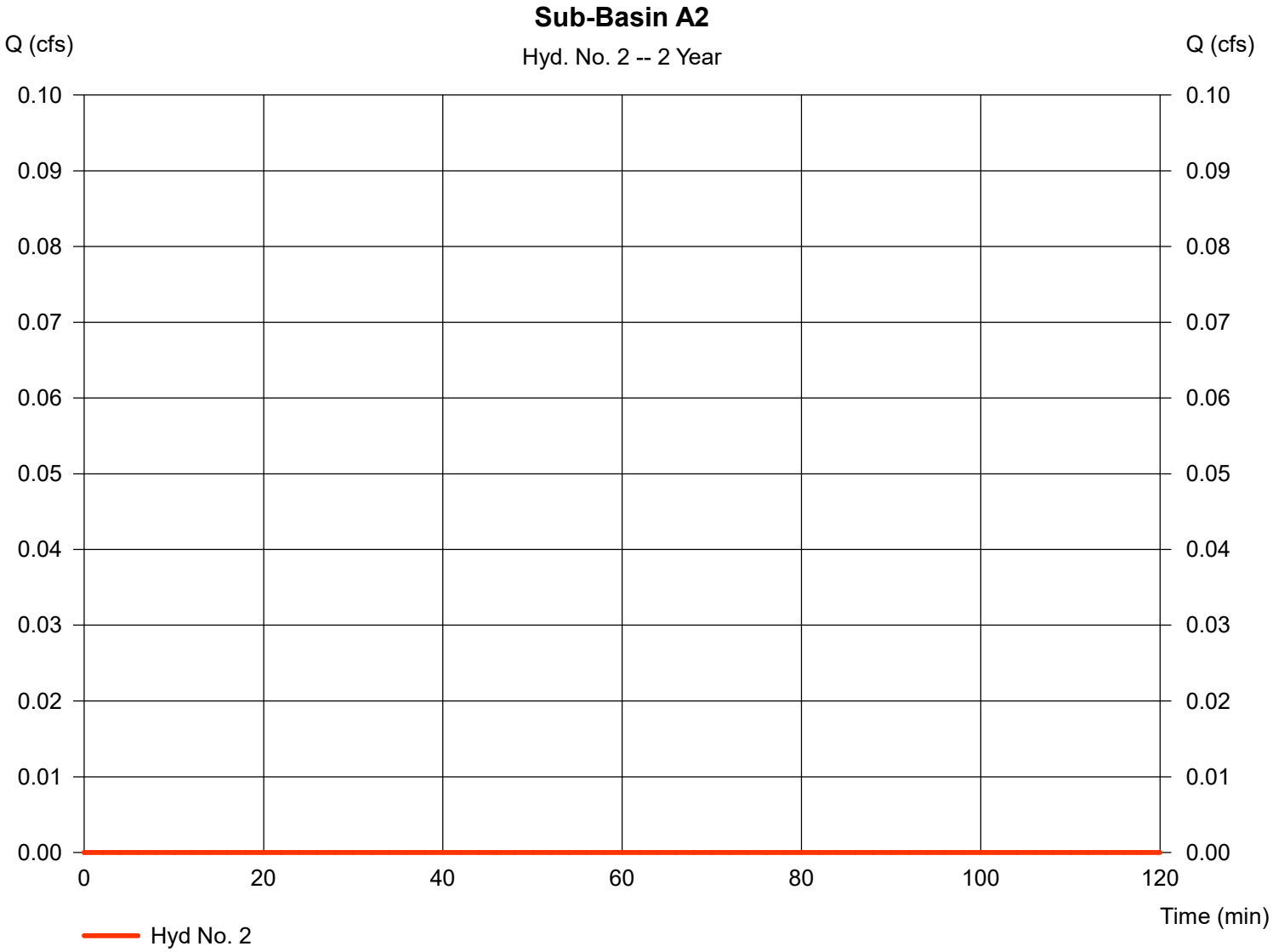
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



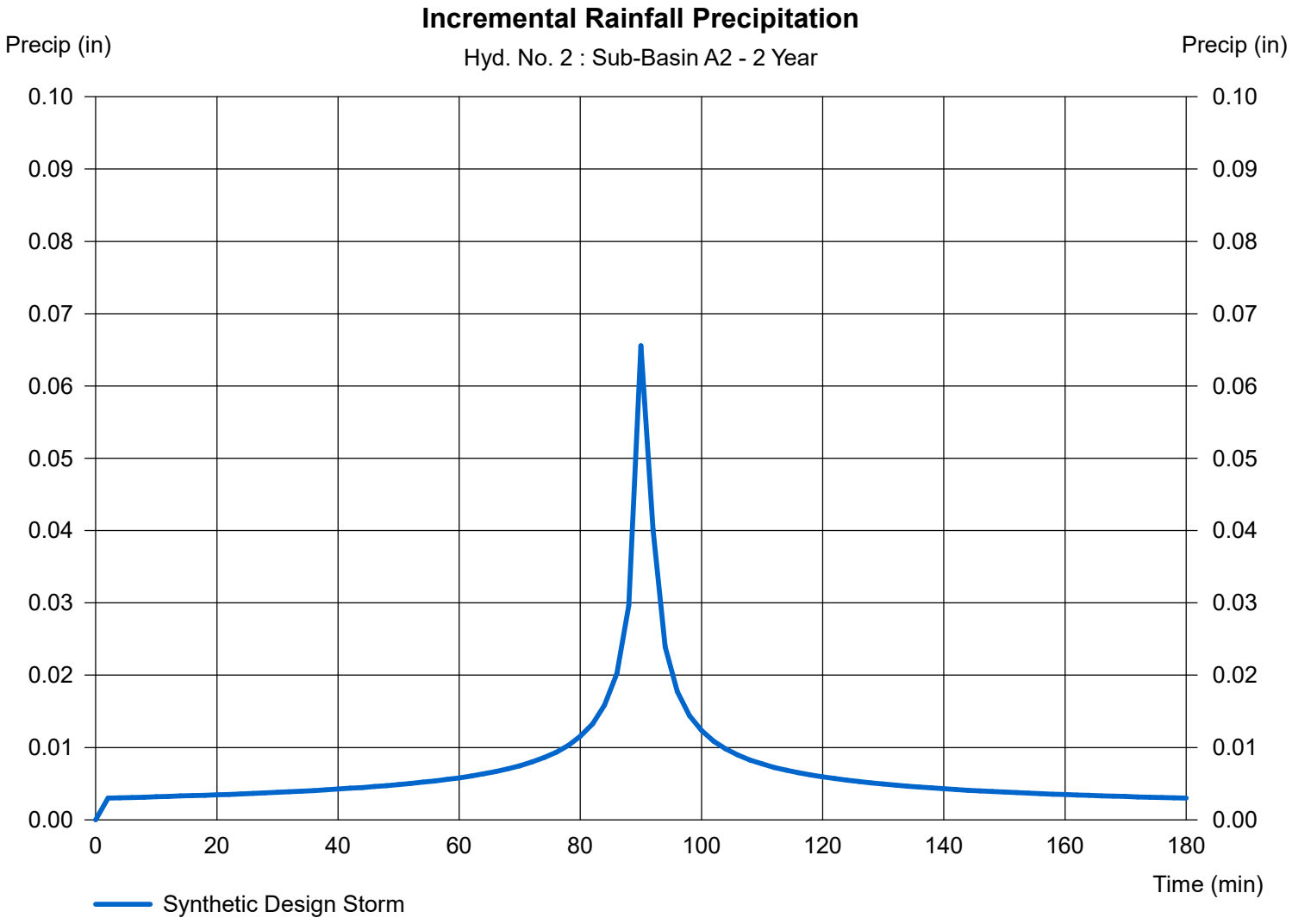
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



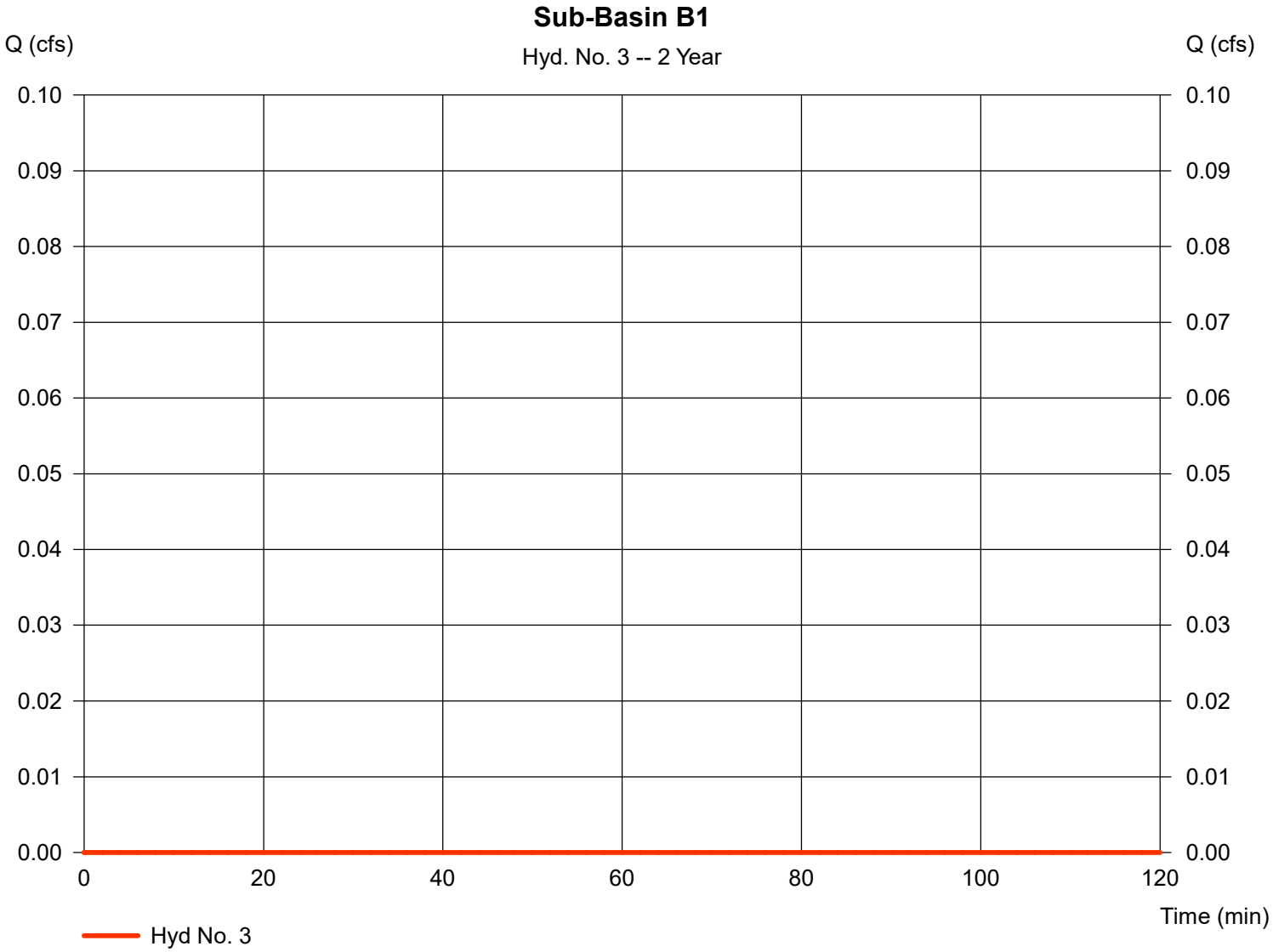
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



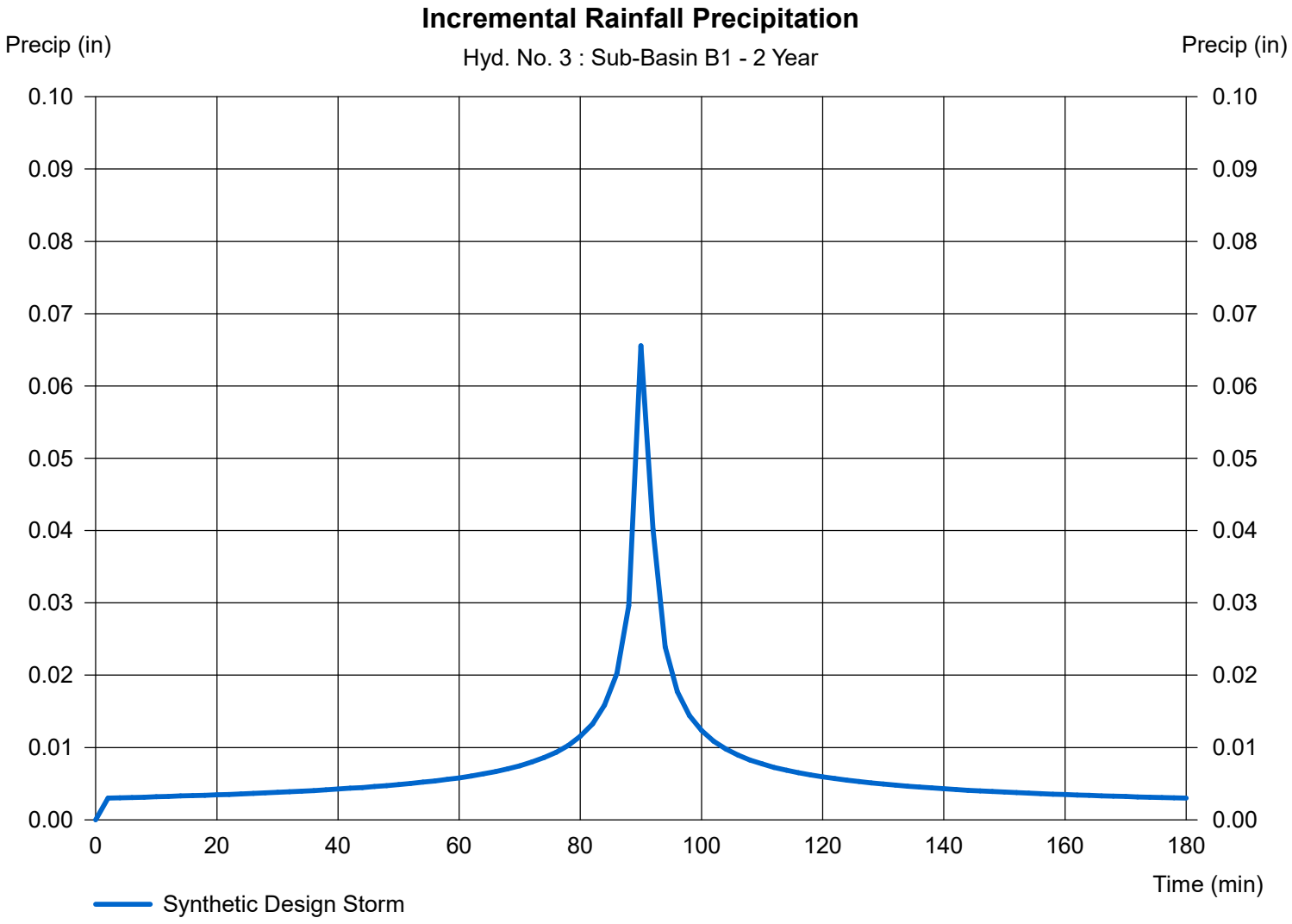
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



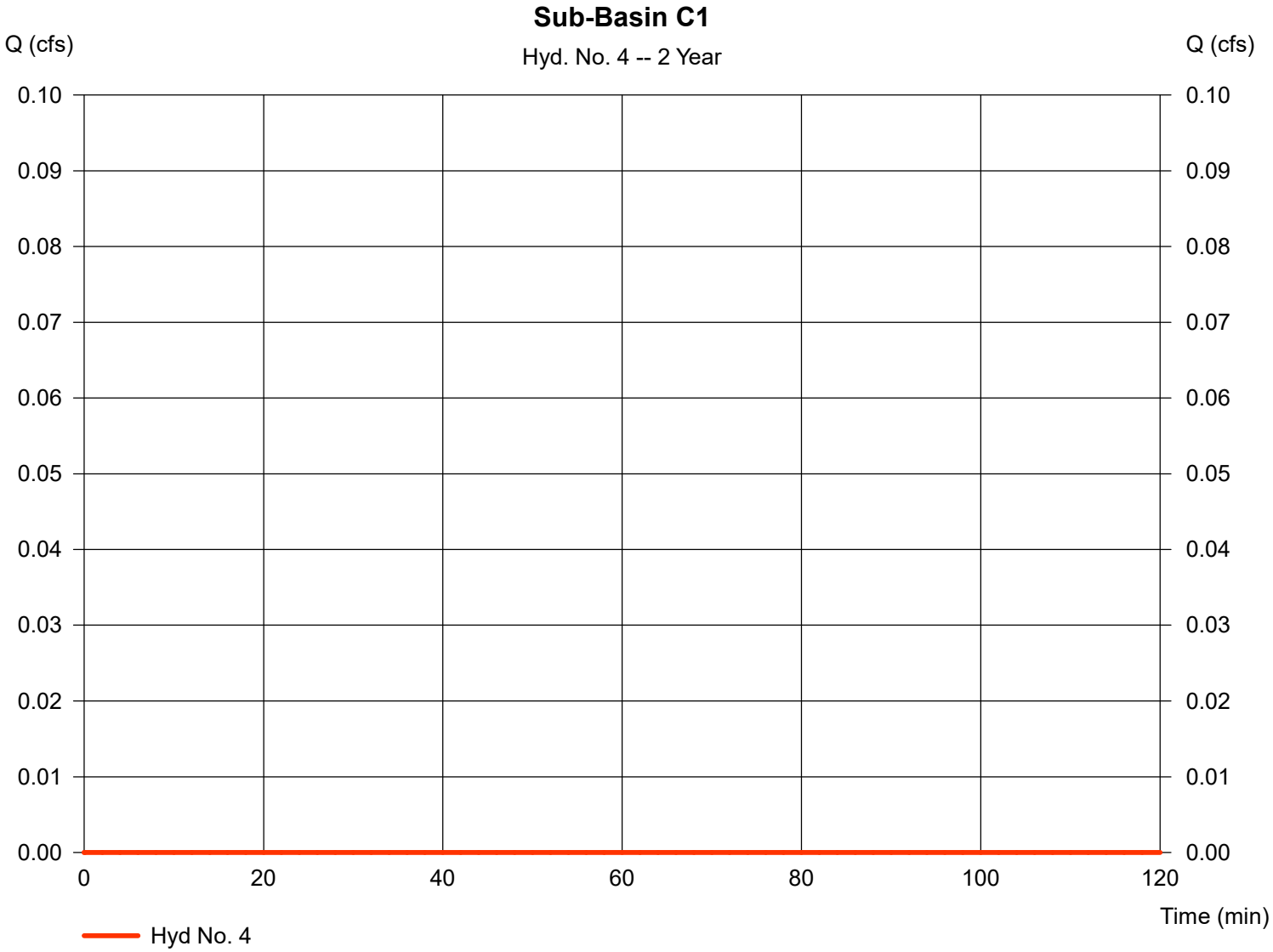
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



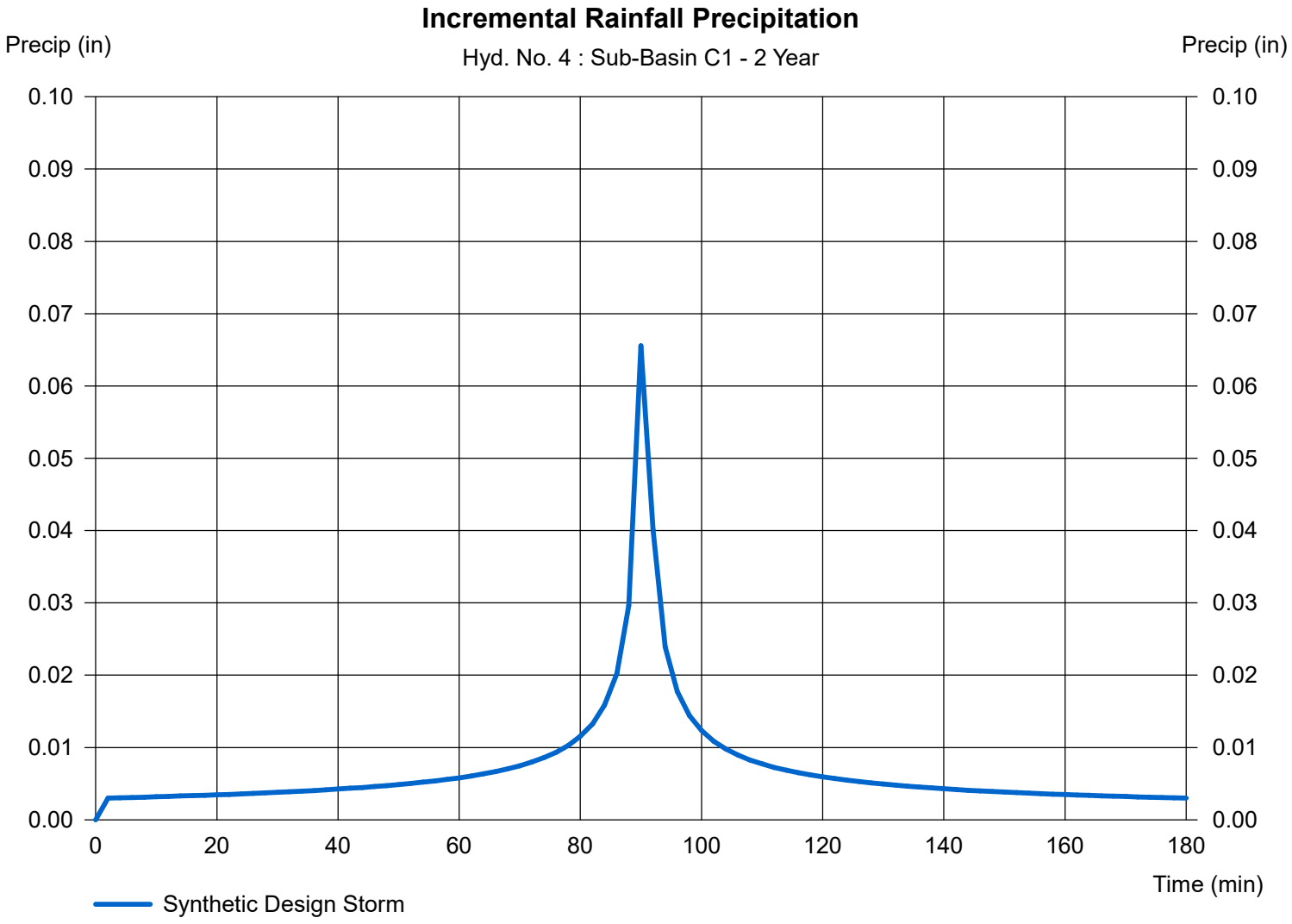
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



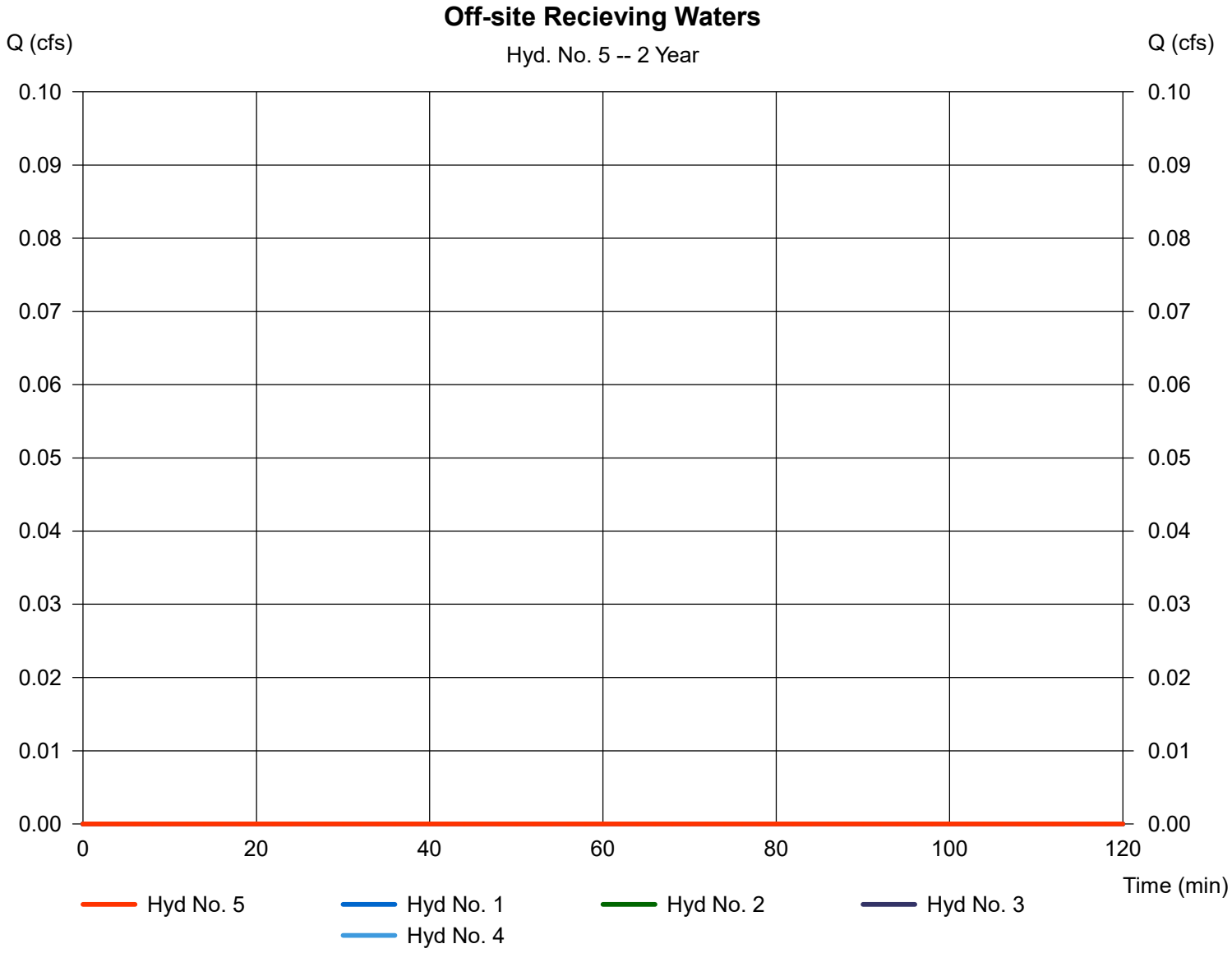
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

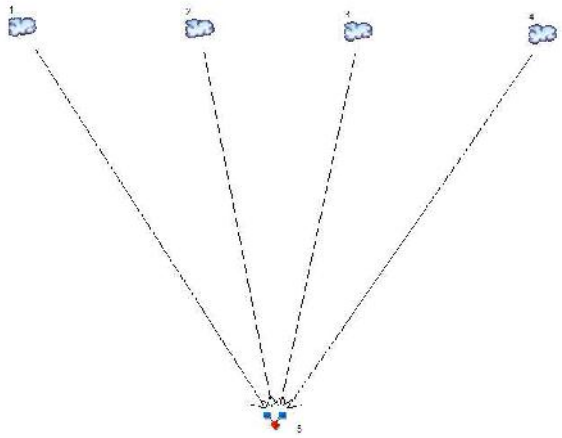
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 0.88 | 1.06 | 0.00 | 1.33 |

# Watershed Model Schematic





## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 2 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

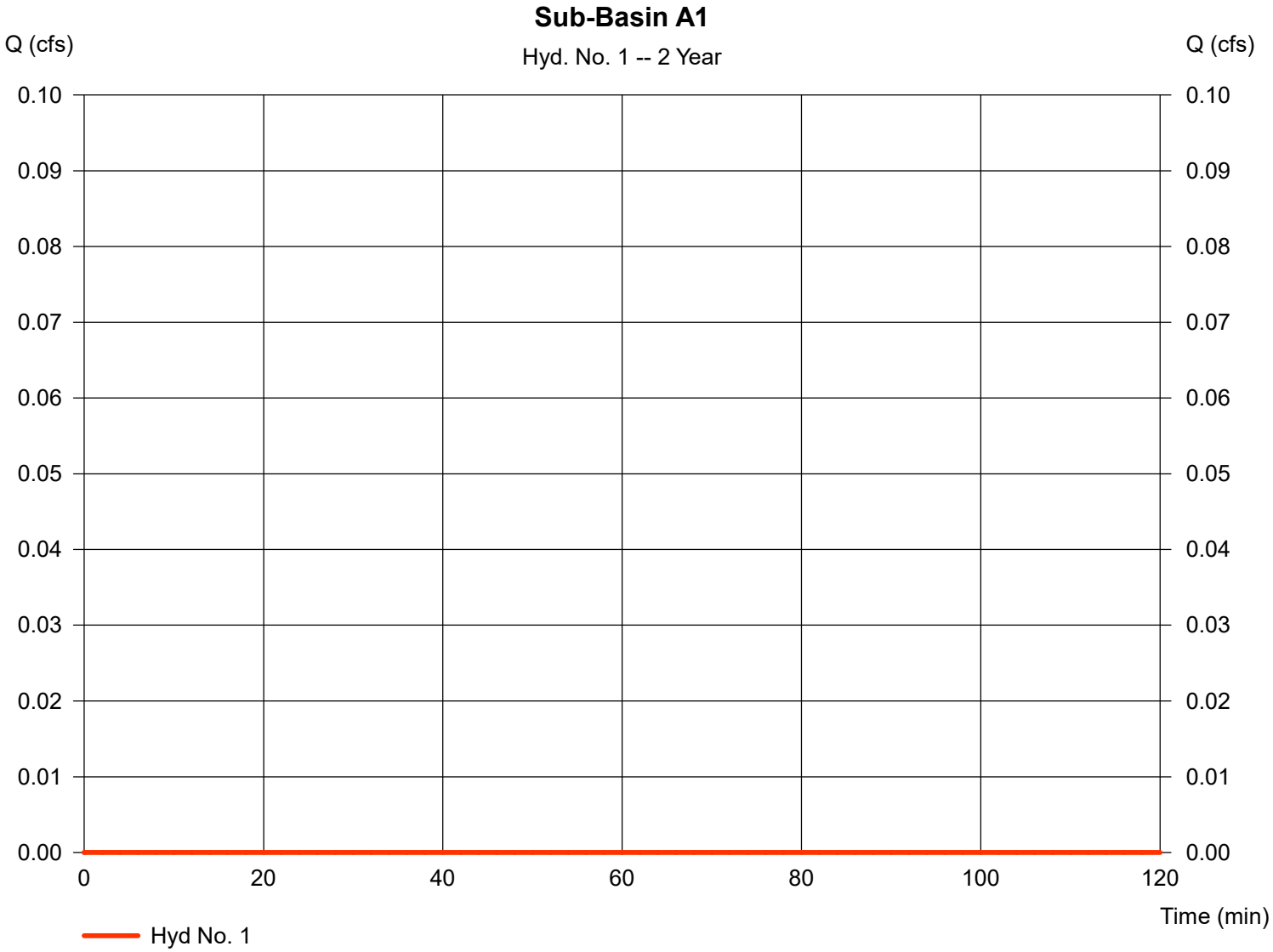
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



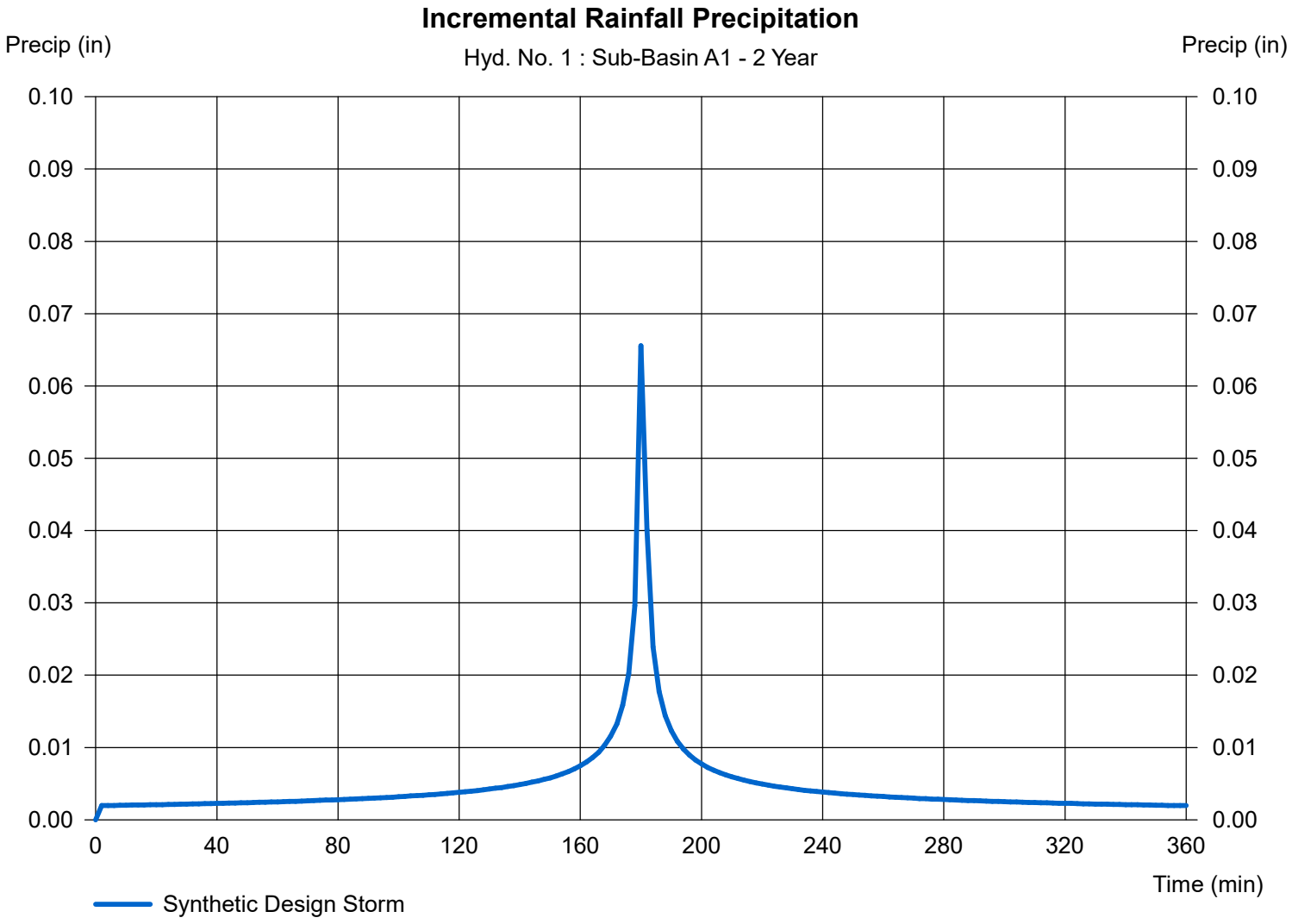
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



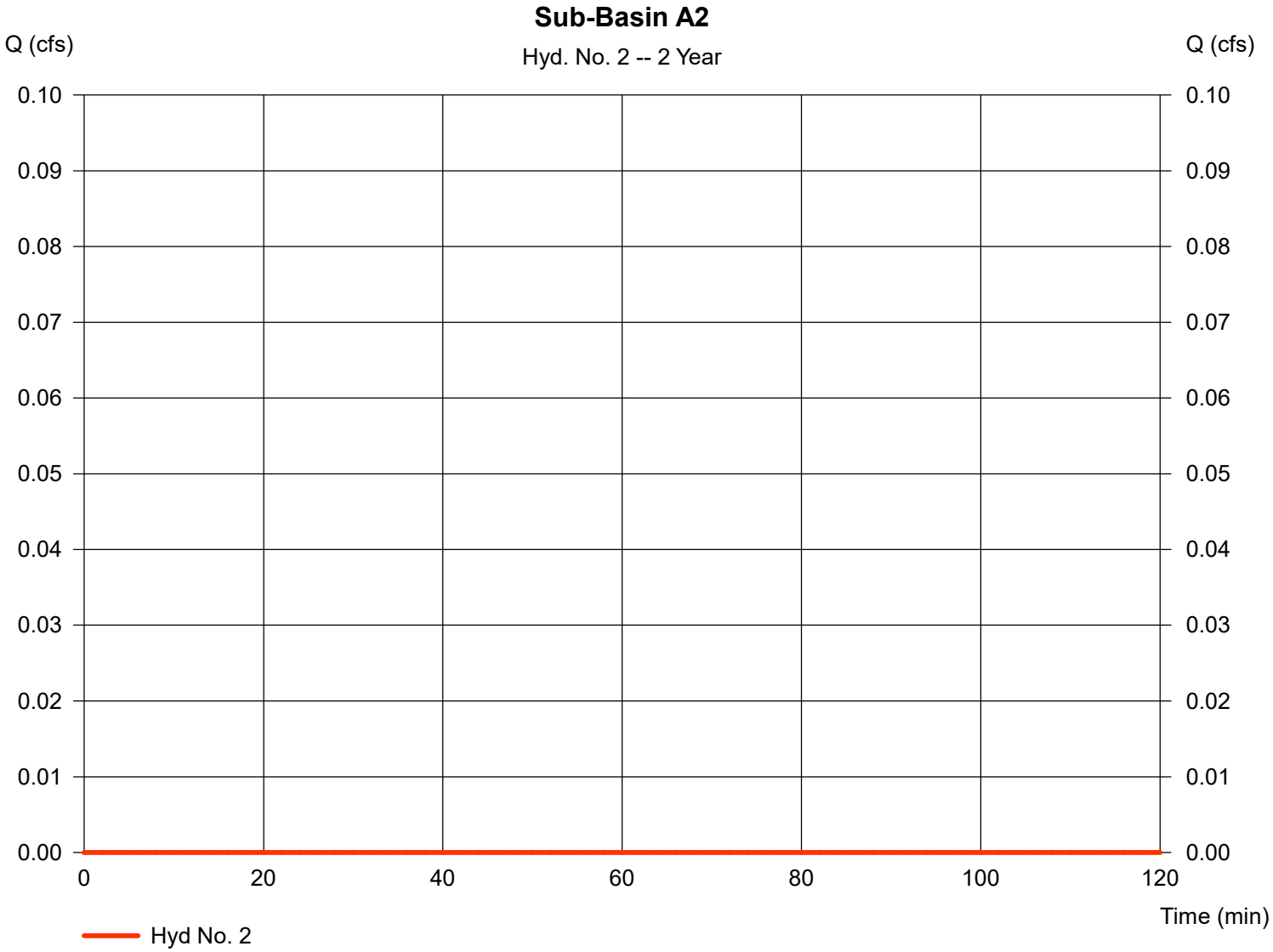
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



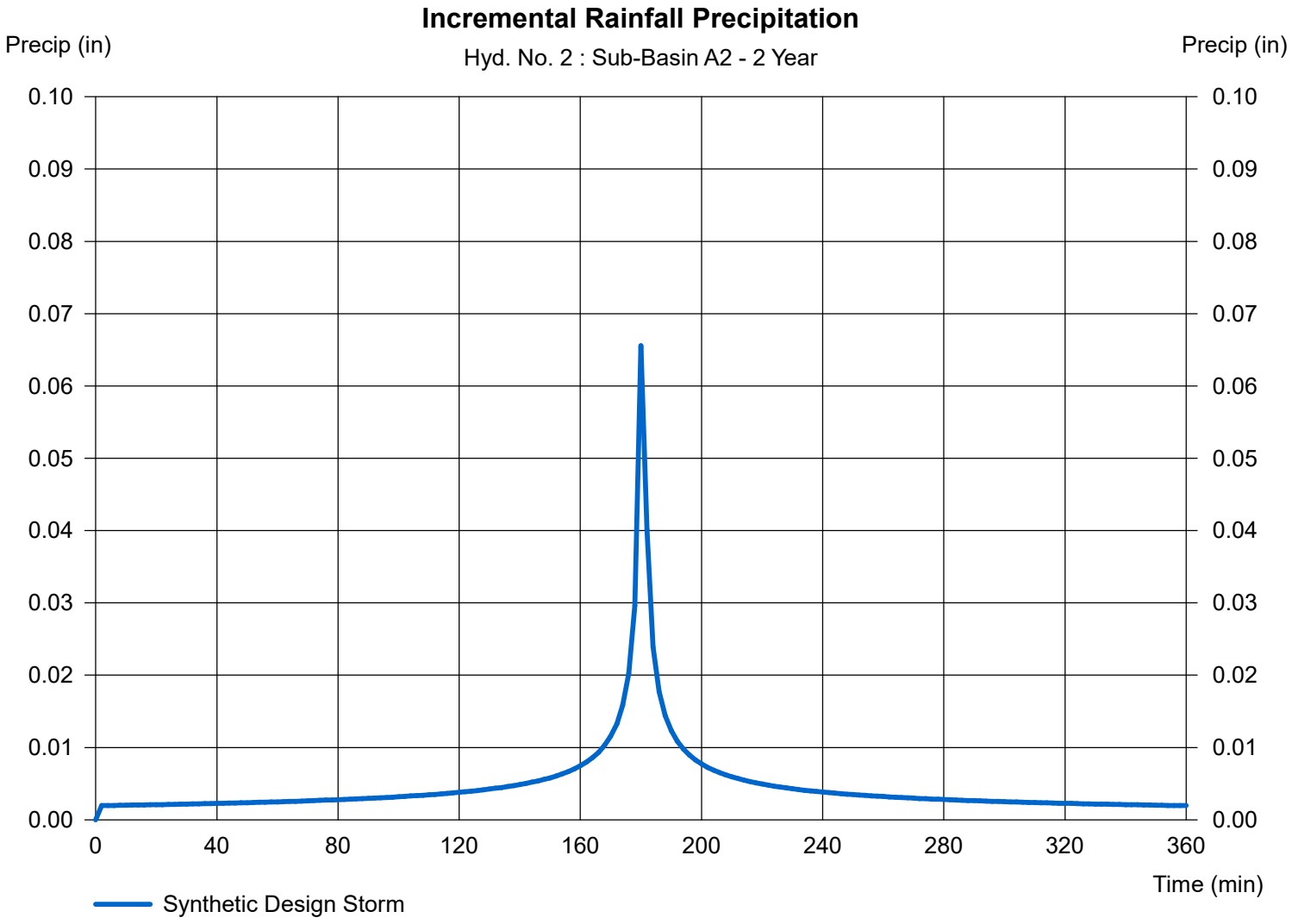
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



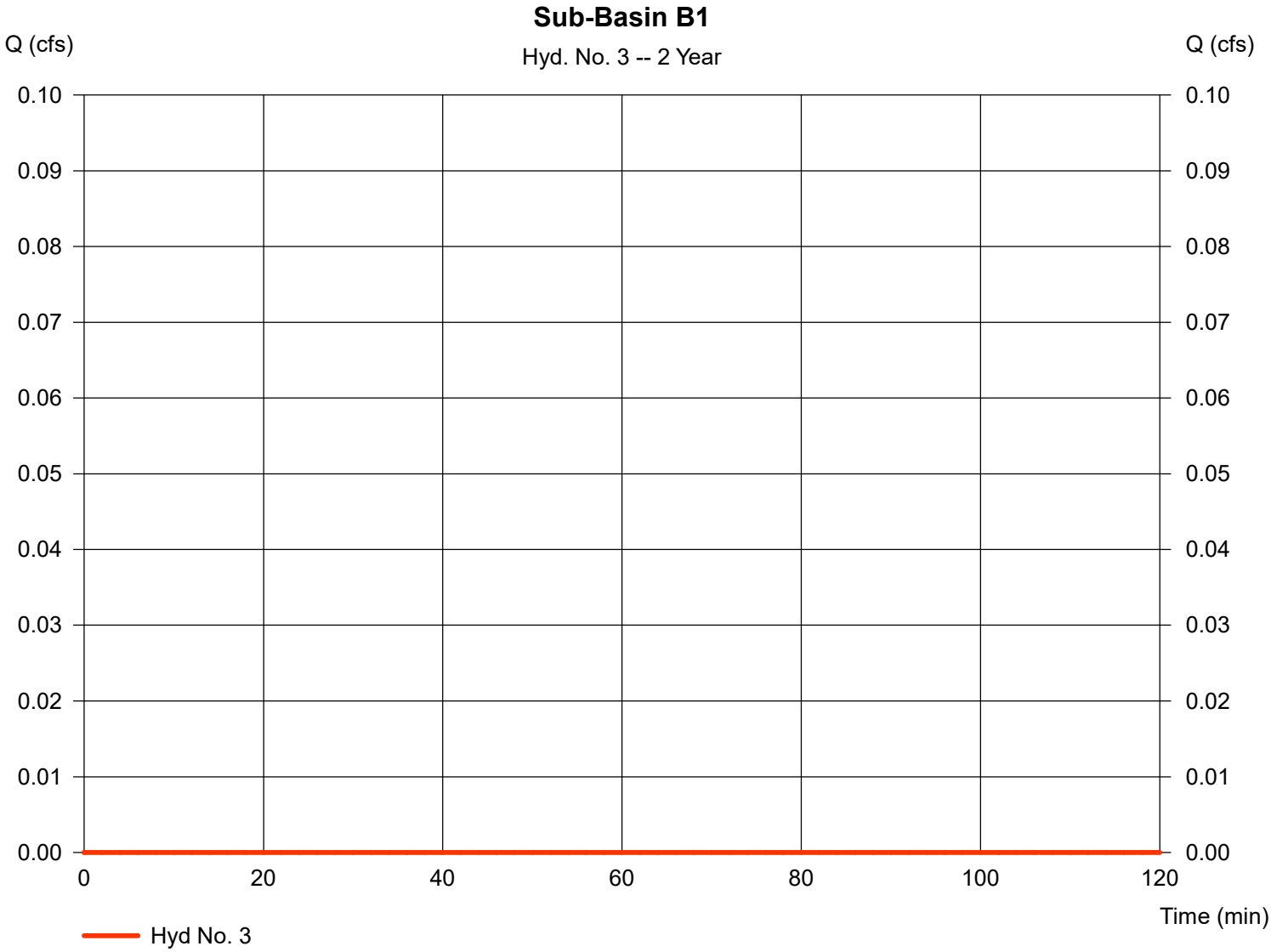
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



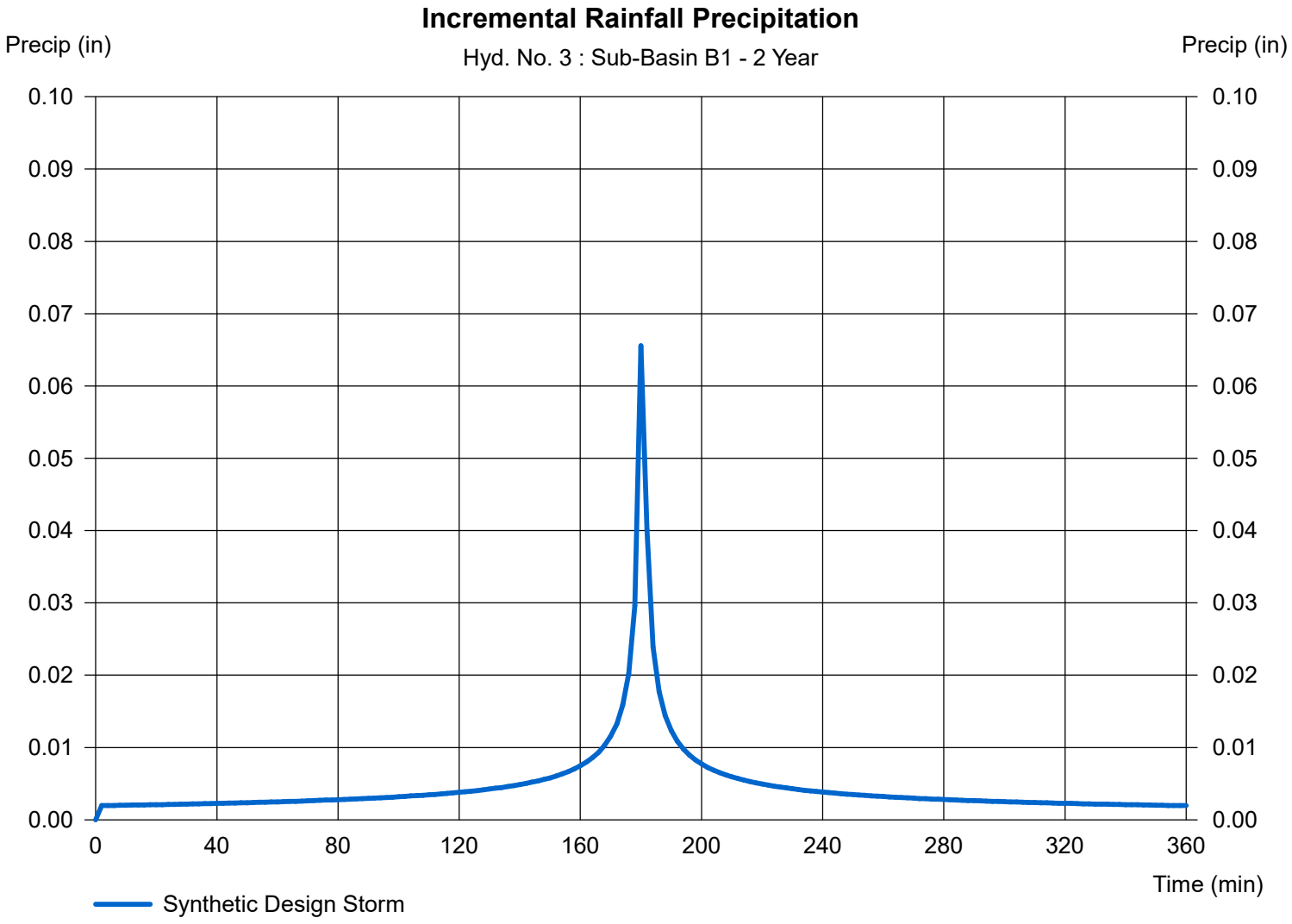
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



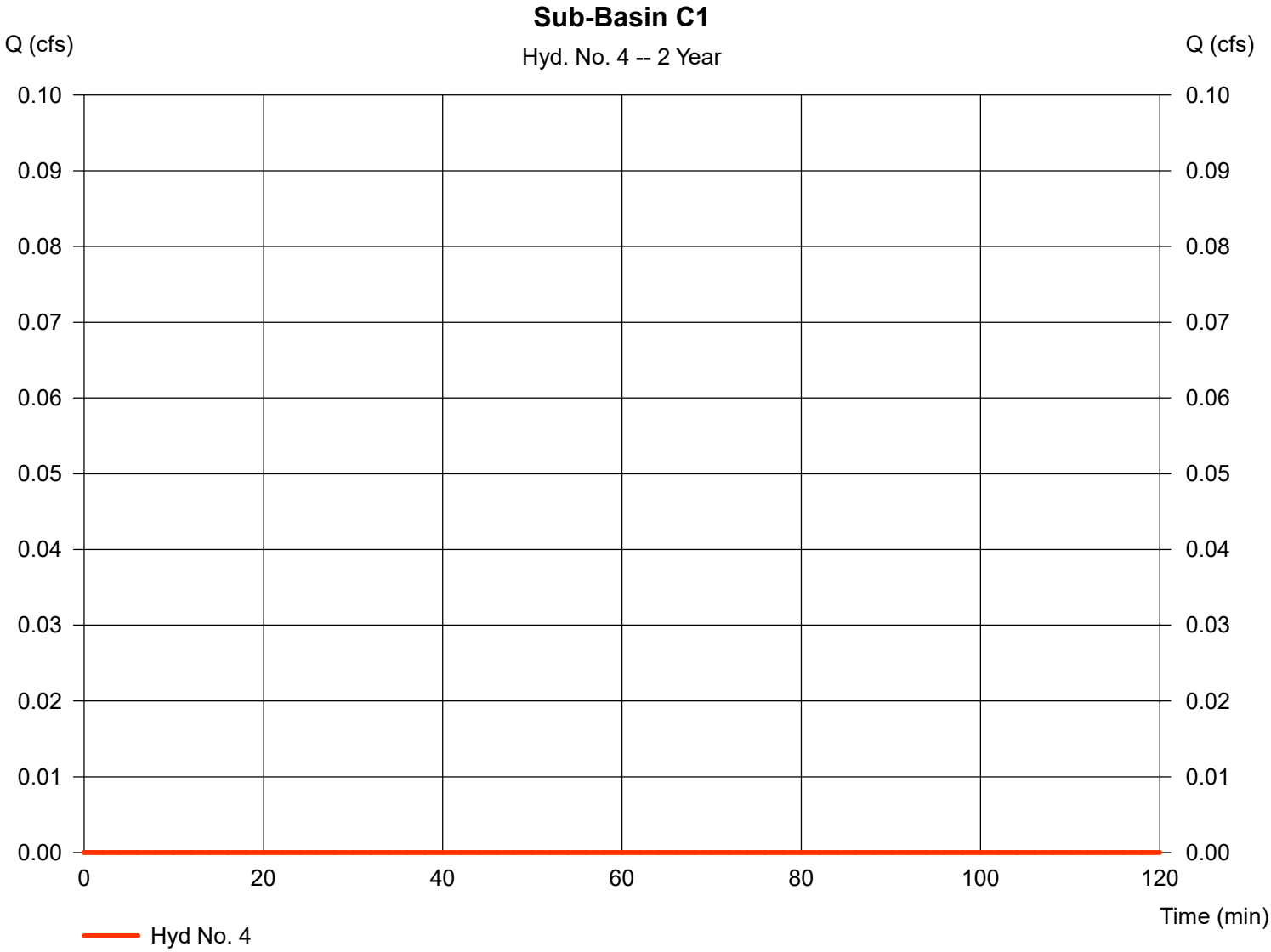
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



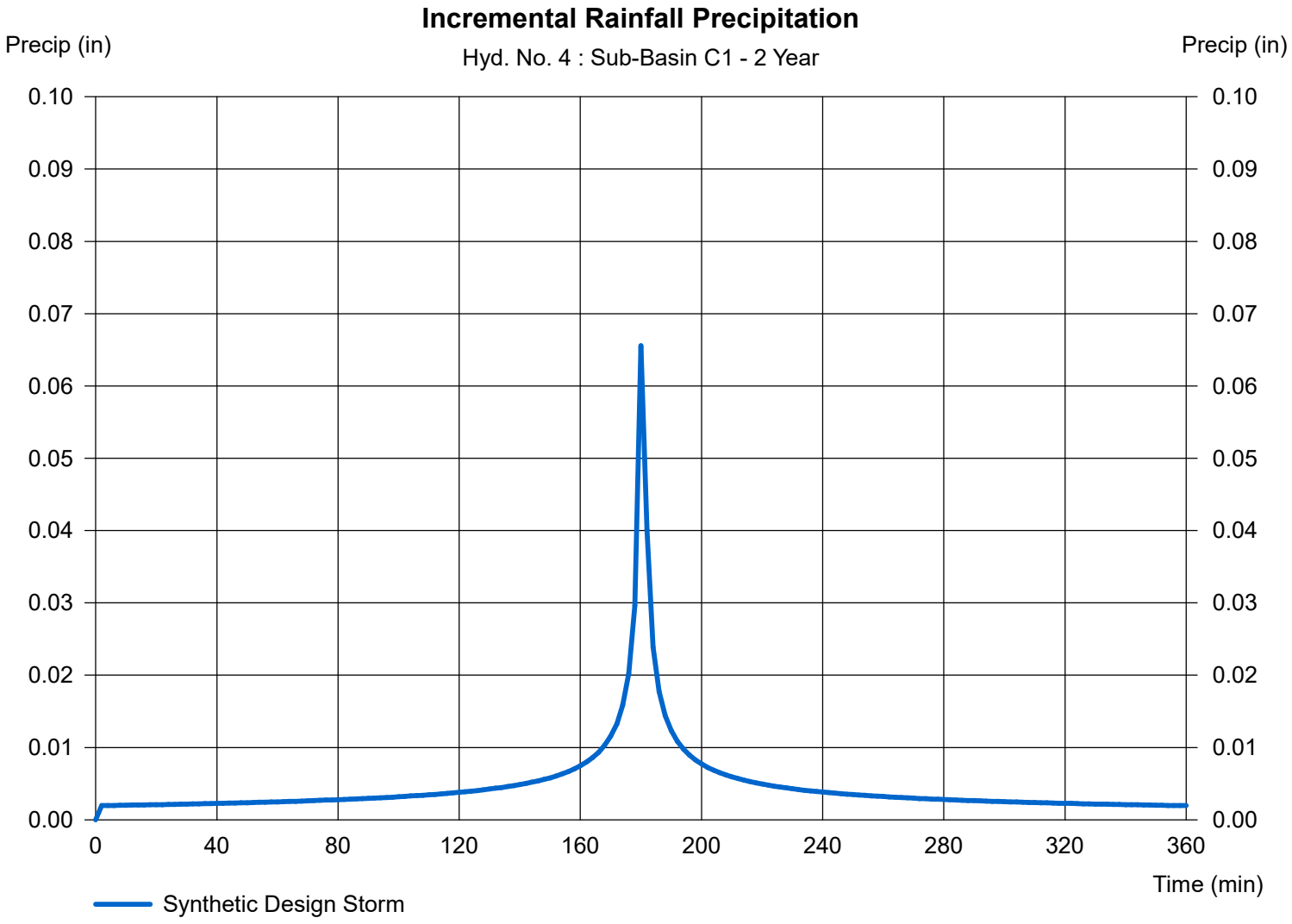
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



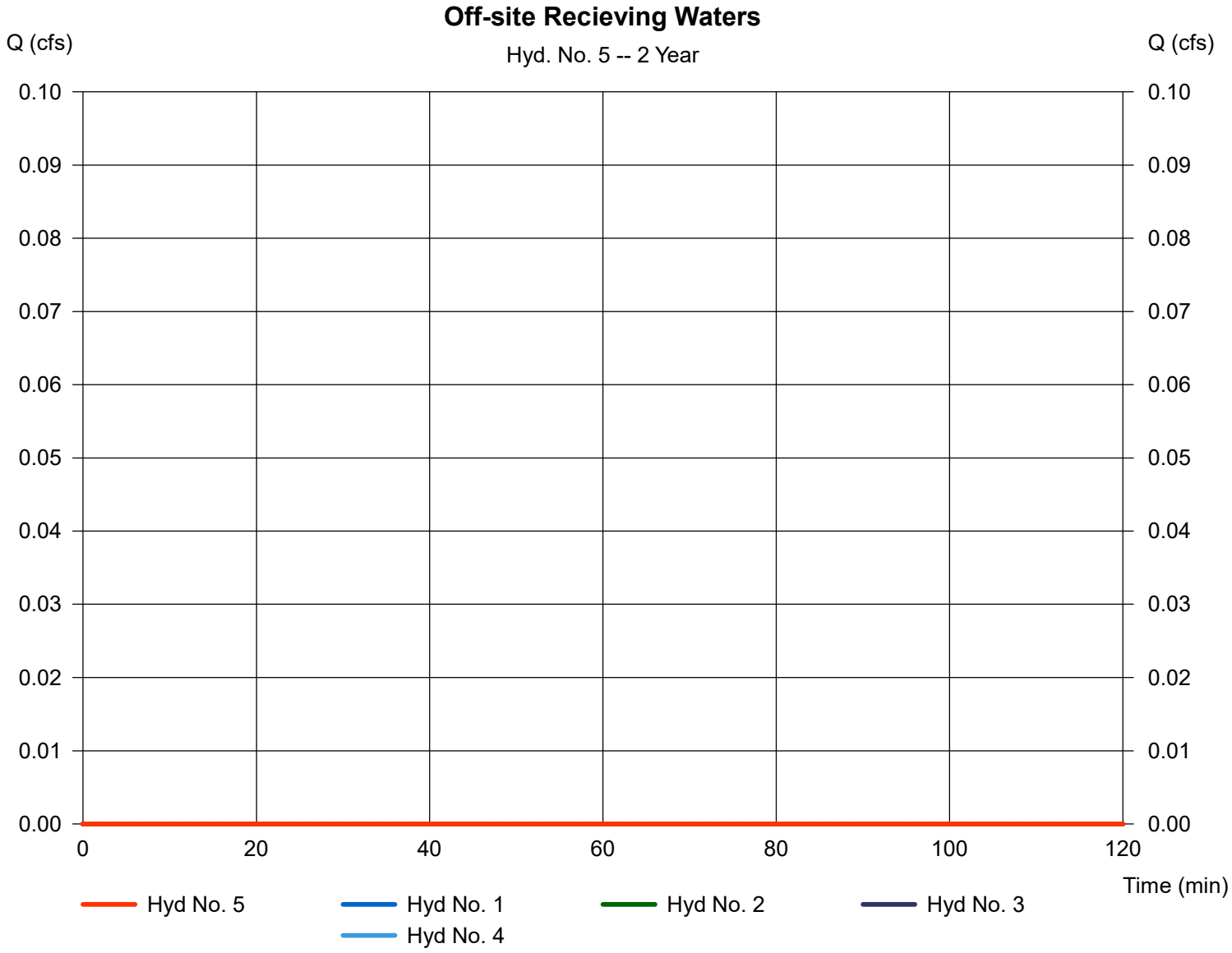
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

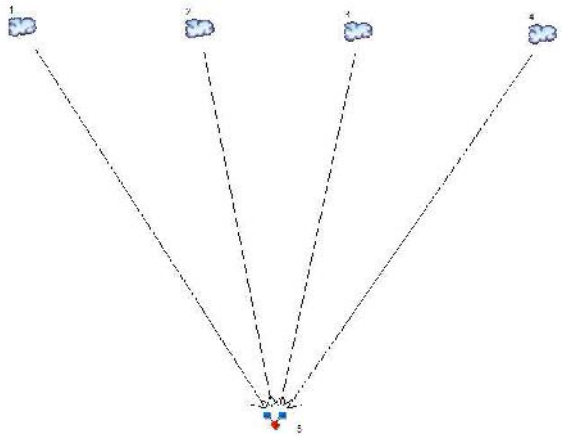
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |

# Watershed Model Schematic





## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.010 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.019 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.011 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.004 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | 0.044 | ------- | ------- | ------- | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.010 | 2 | 1440 | 156 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.019 | 2 | 1440 | 299 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.011 | 2 | 1440 | 169 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.004 | 2 | 1440 | 70 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.044 | 2 | 1440 | 694 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

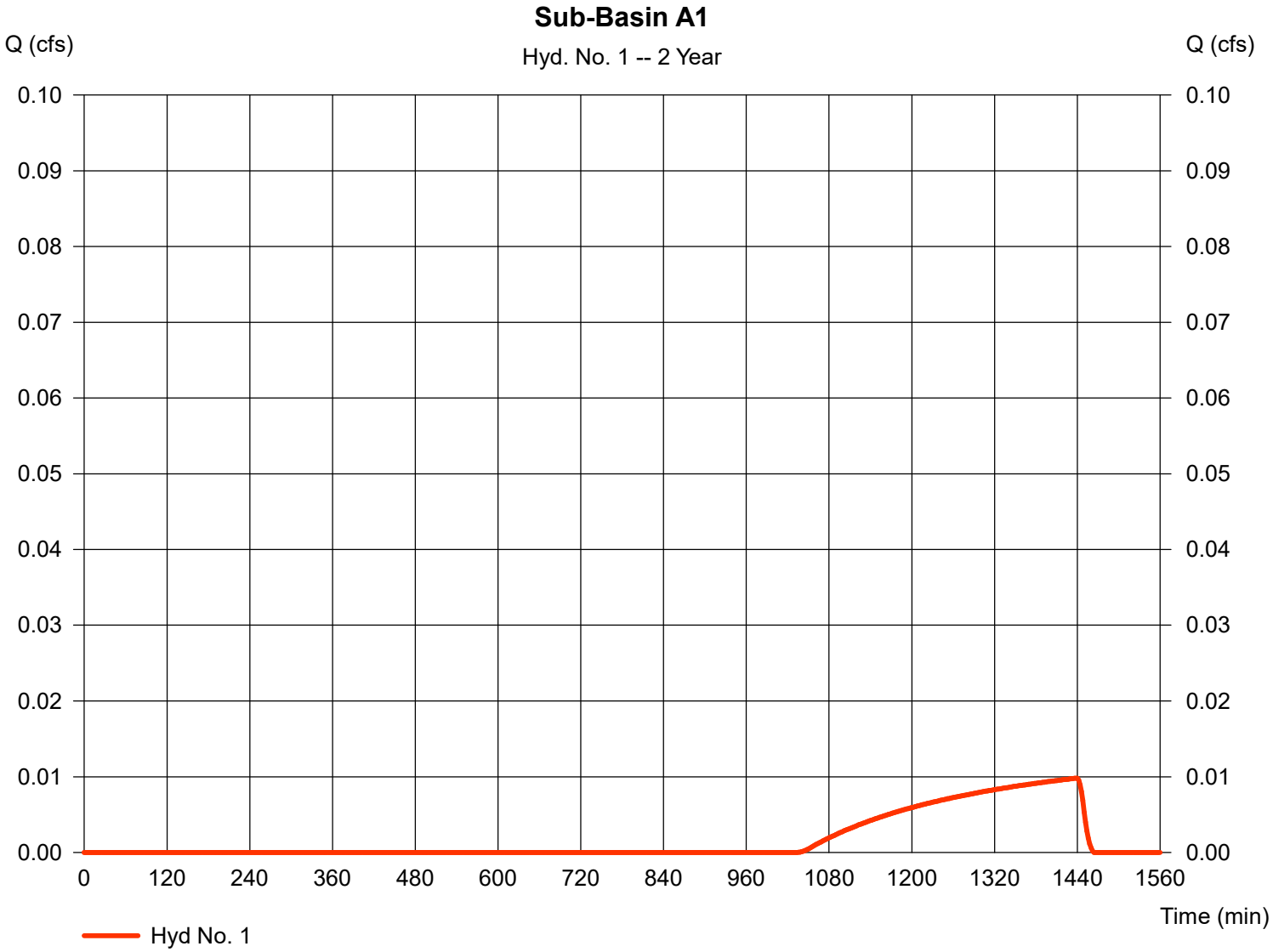
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.010 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1440 min |
| Time interval | = | 2 min | Hyd. volume | = | 156 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



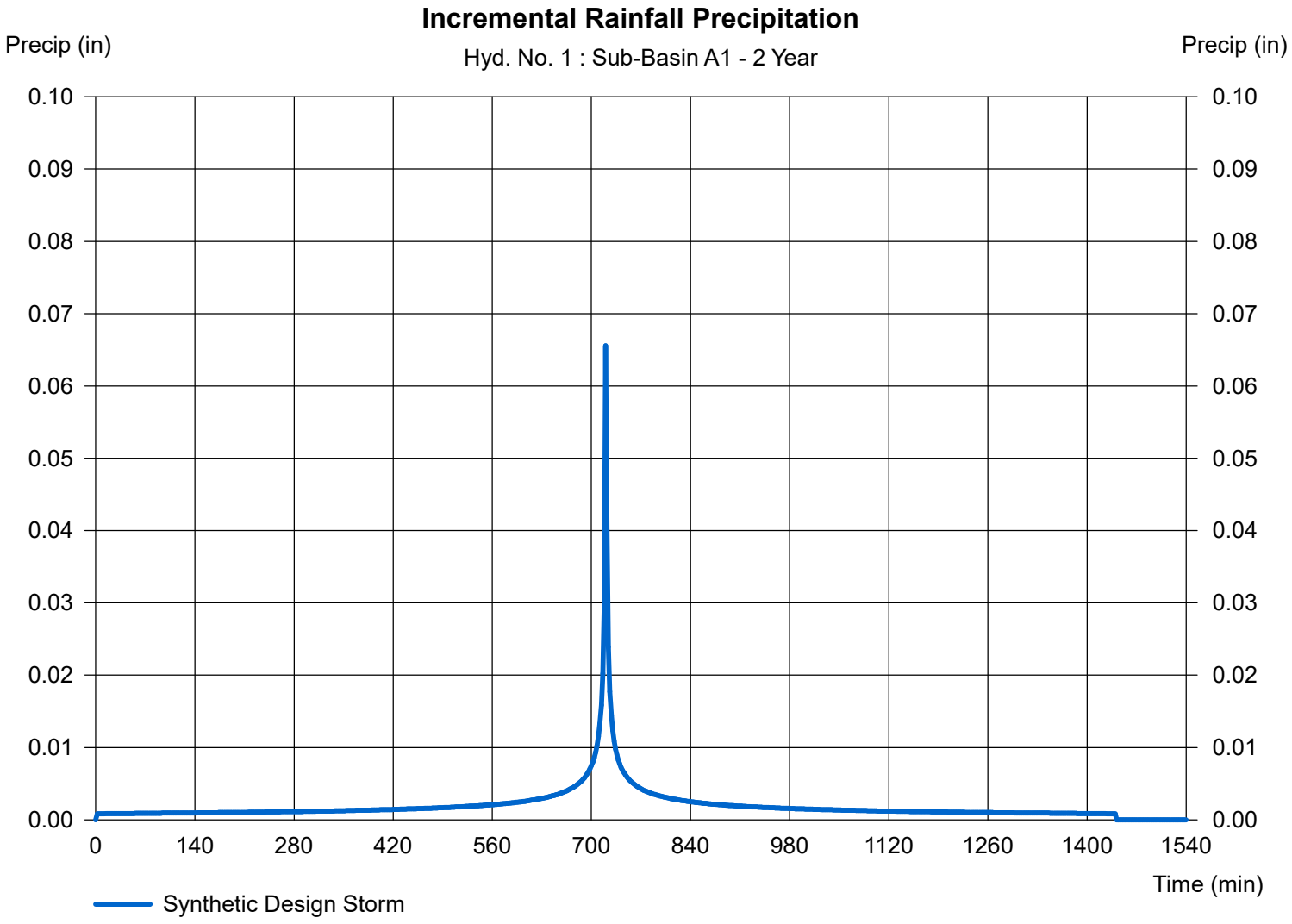
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



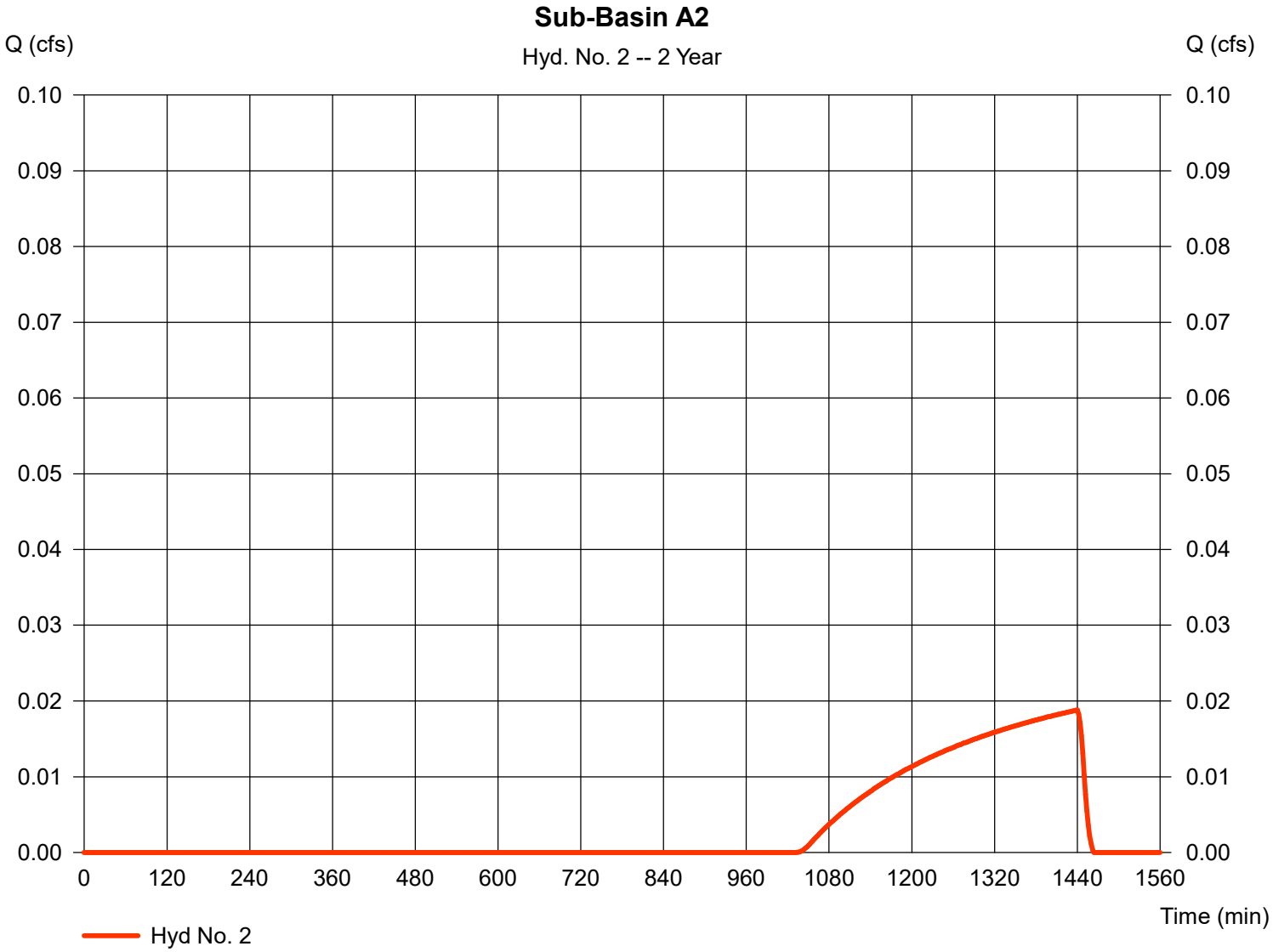
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.019 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1440 min |
| Time interval | = | 2 min | Hyd. volume | = | 299 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



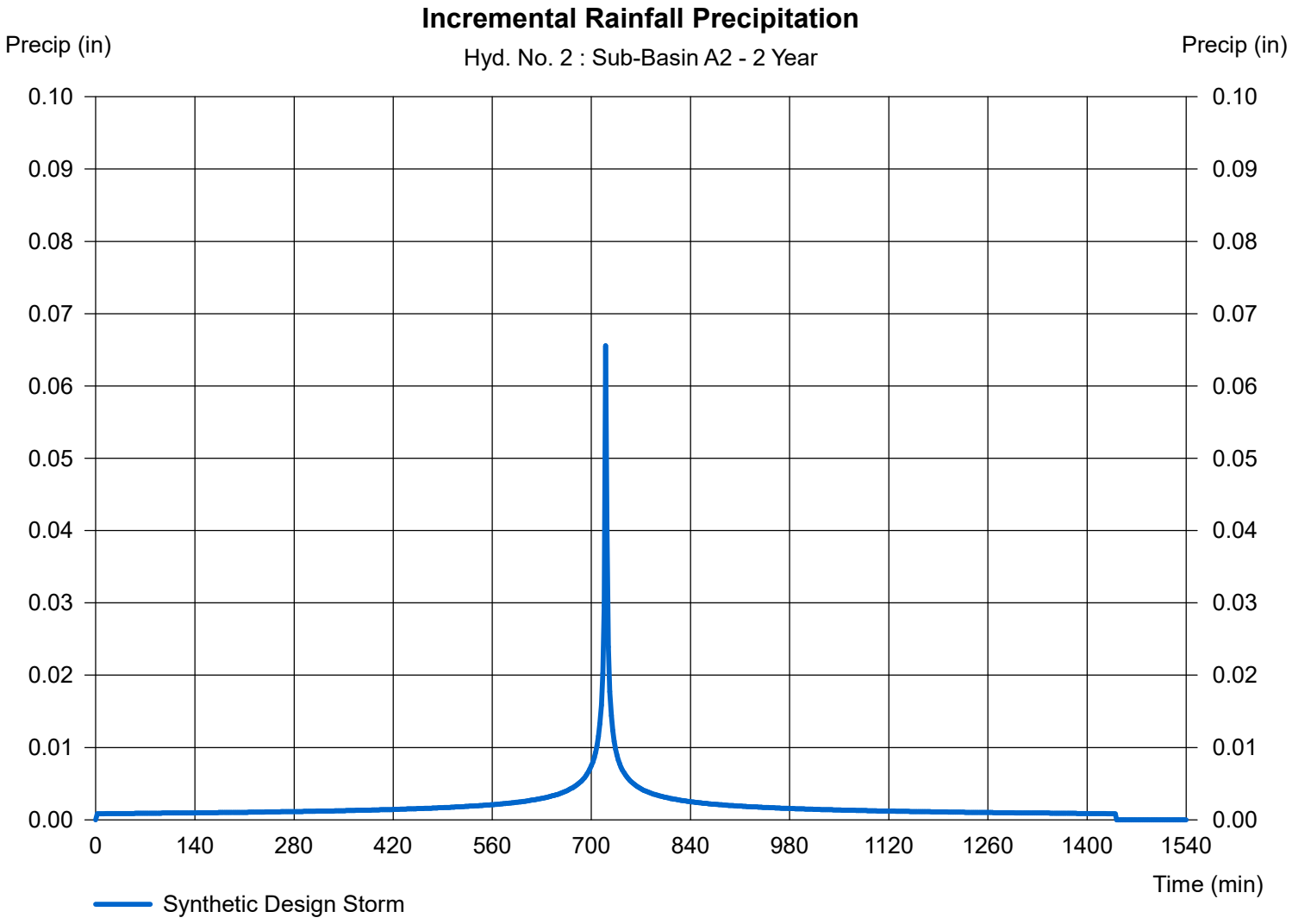
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



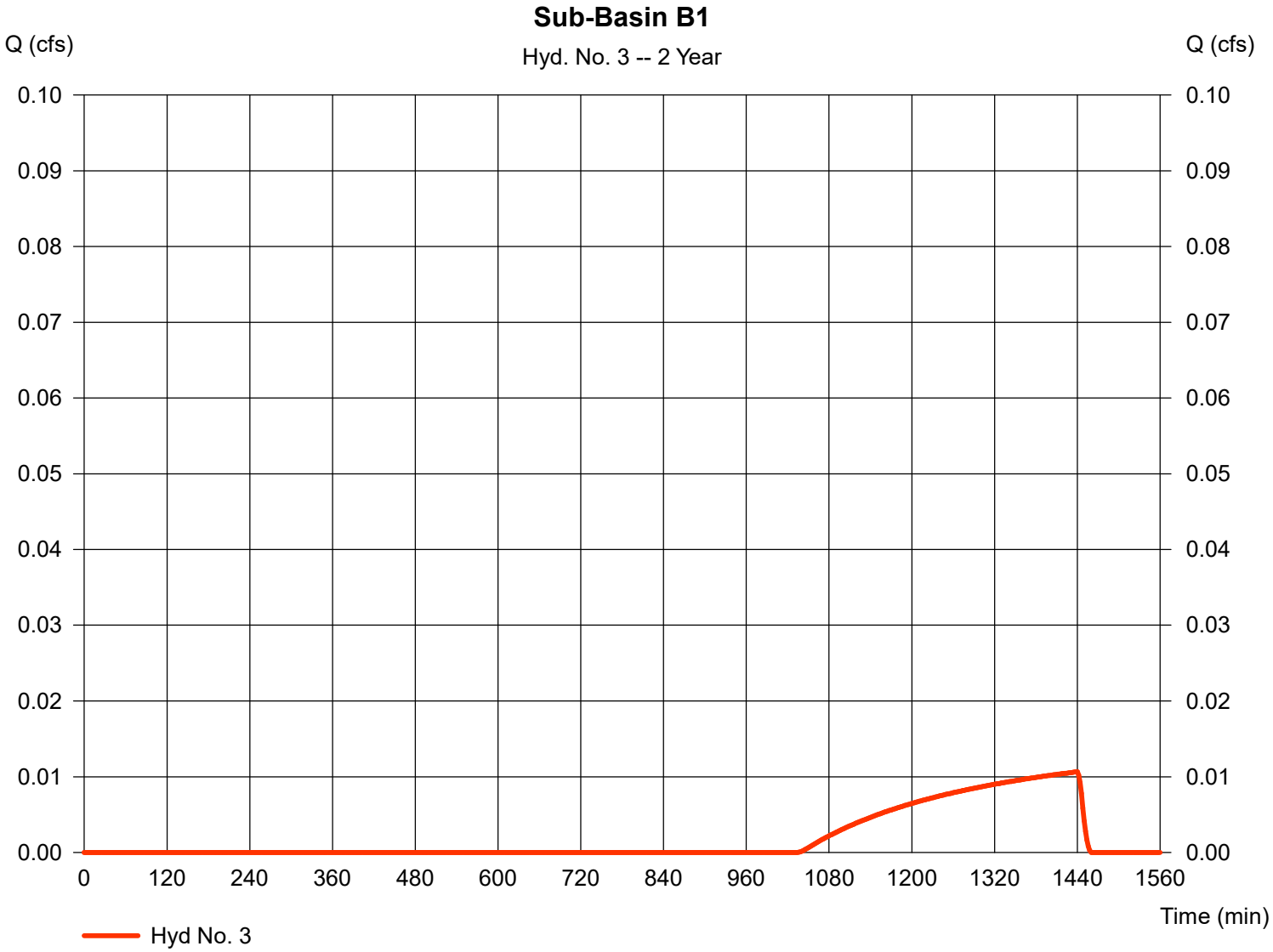
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.011 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1440 min |
| Time interval | = | 2 min | Hyd. volume | = | 169 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



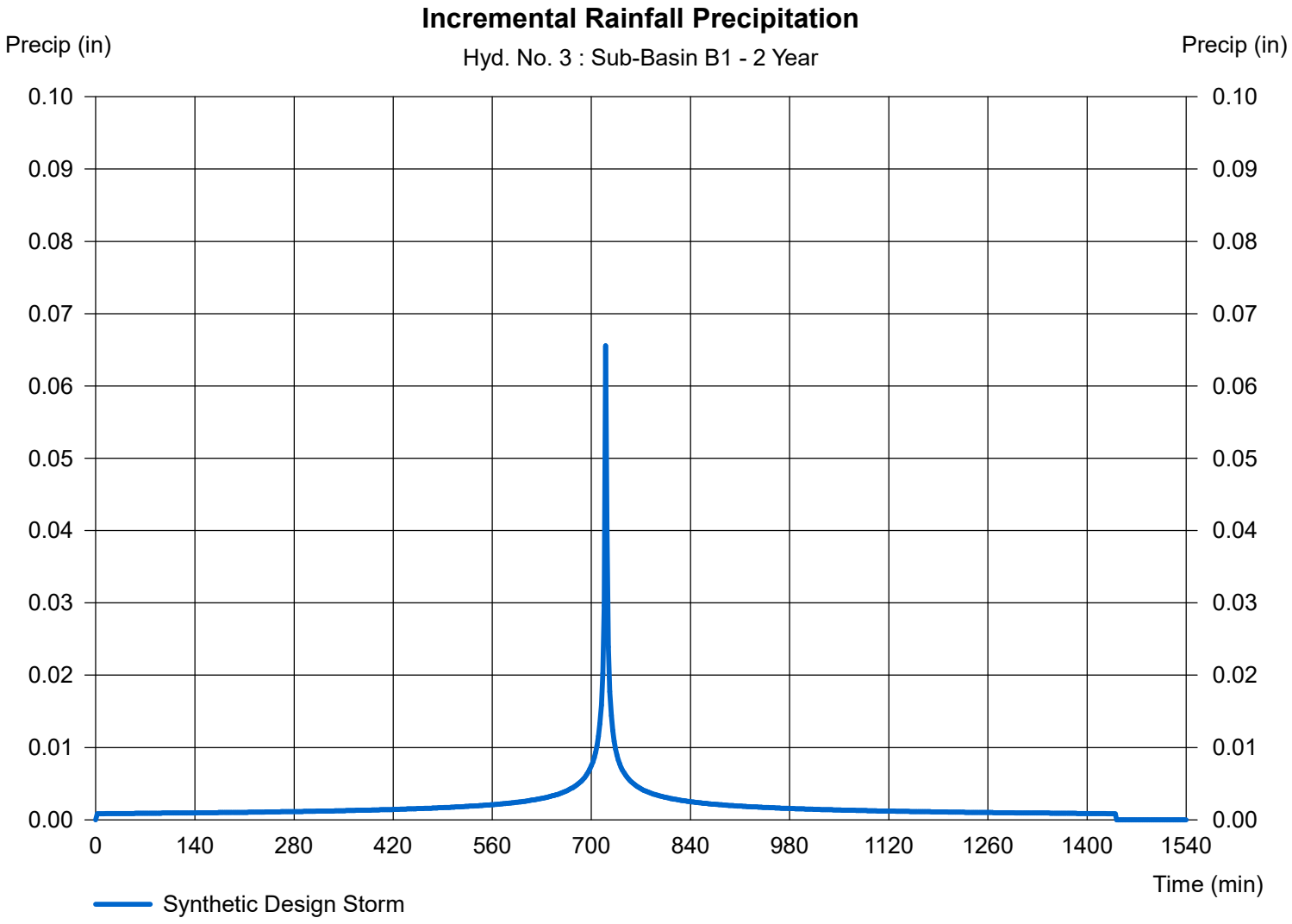
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



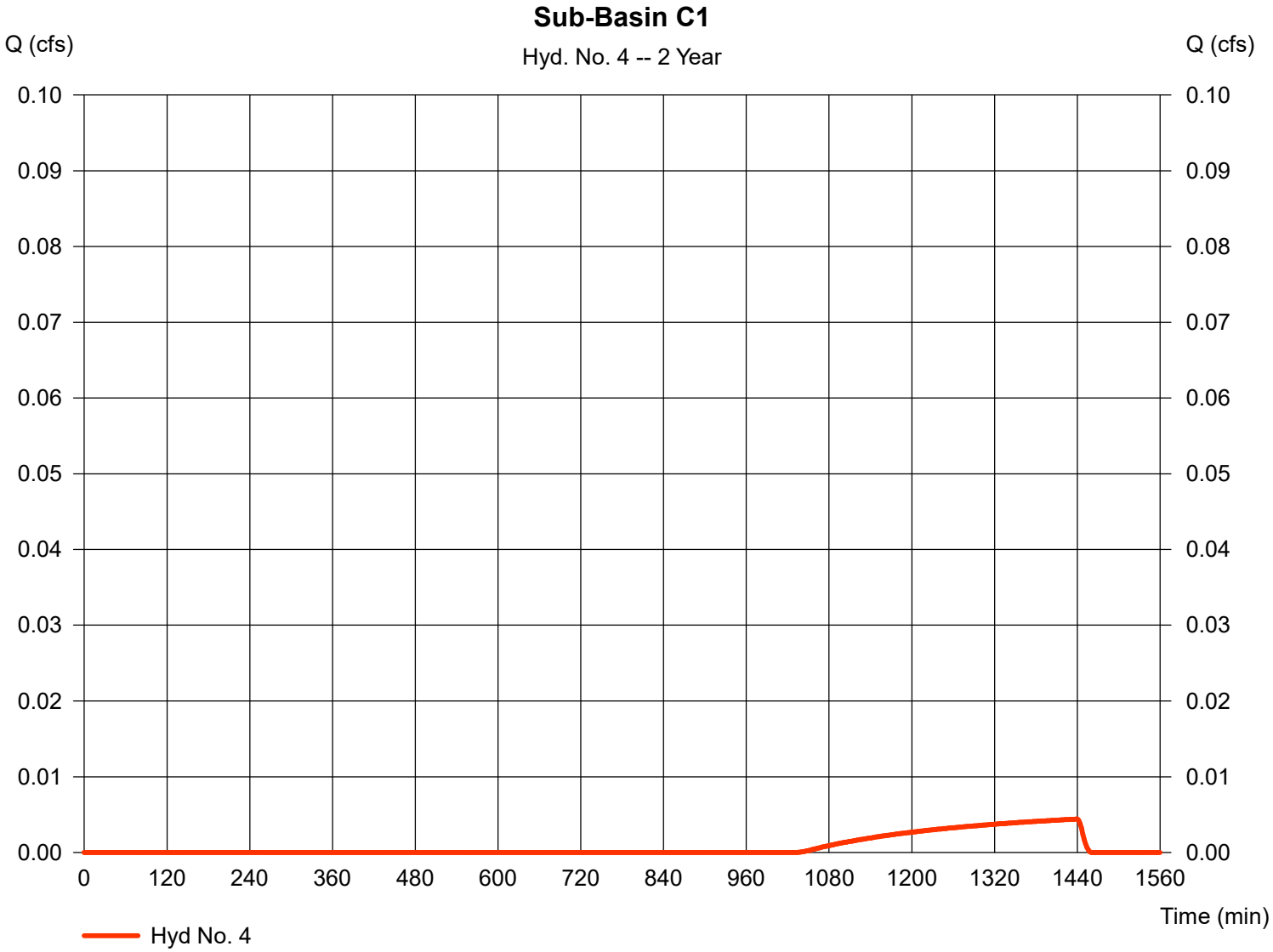
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.004 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1440 min |
| Time interval | = | 2 min | Hyd. volume | = | 70 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 60.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



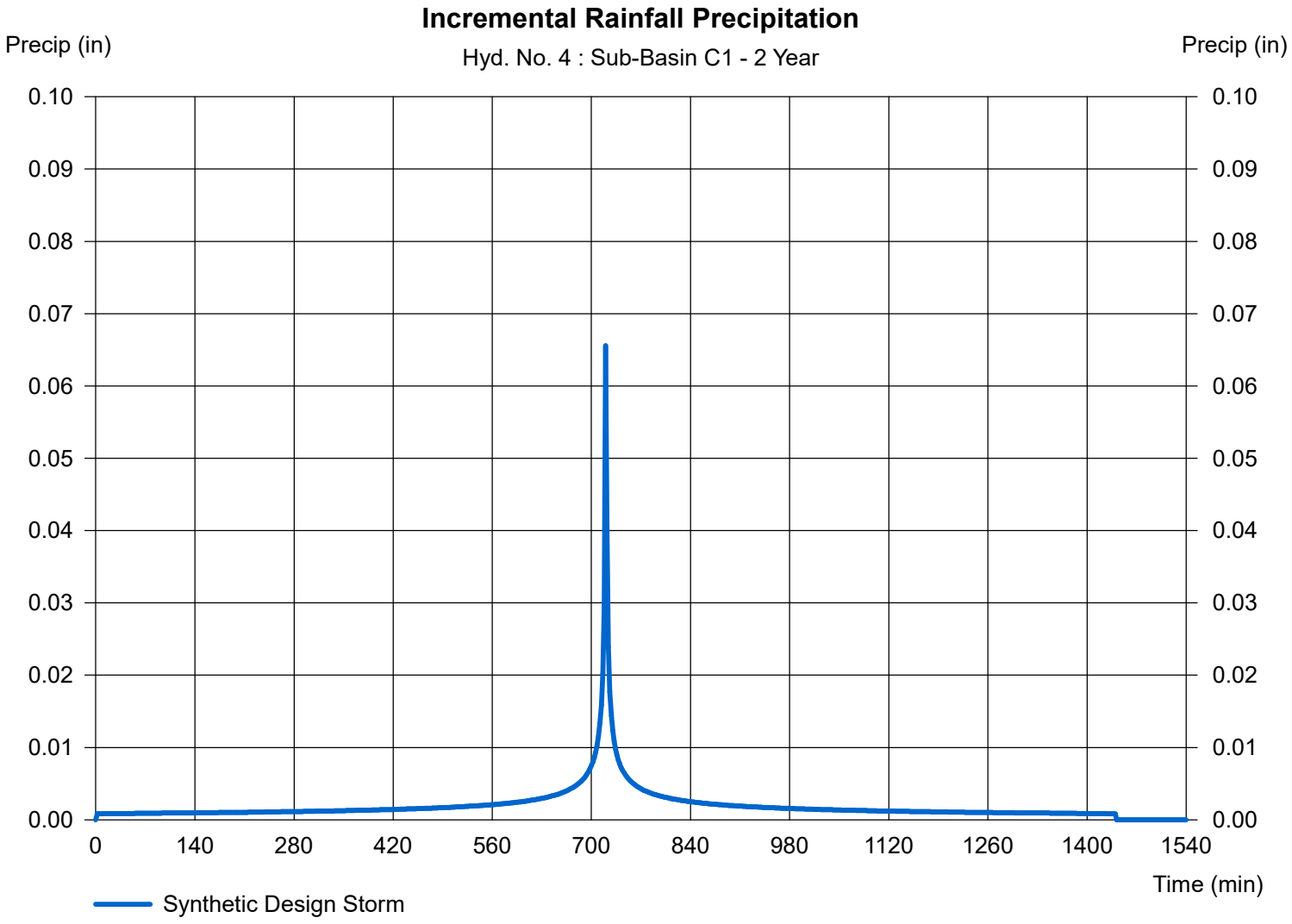
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



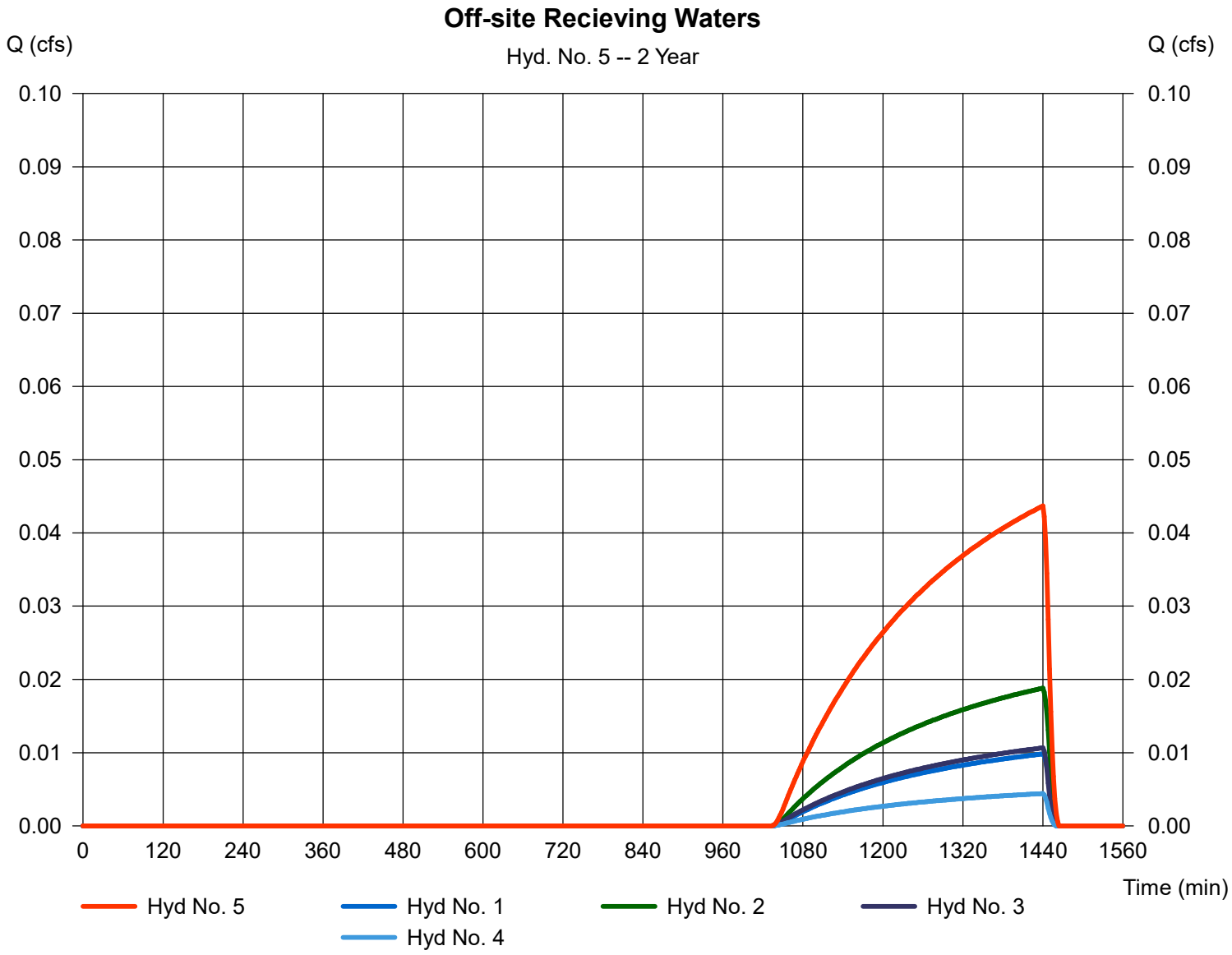
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.044 cfs |
| Storm frequency | = 2 yrs | Time to peak | = 1440 min |
| Time interval | = 2 min | Hyd. volume | = 694 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |

## 5.3.b. 10 Year Storm Event– Pre-Developed Conditions

5.3.b.1 15 Min Duration

5.3.b.2 30 Min Duration

5.3.b.3 1 Hour Duration

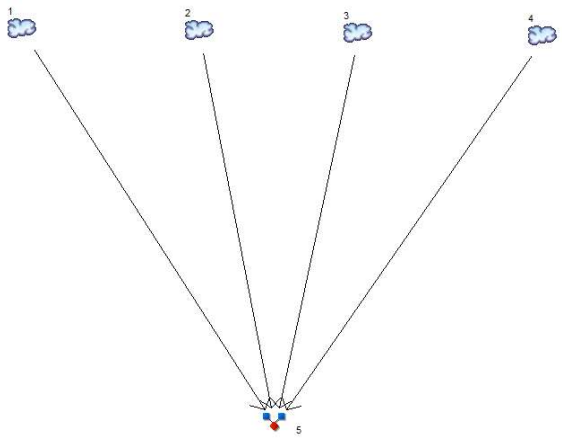
5.3.b.4 3 Hour Duration

5.3.b.5 6 Hour Duration

5.3.b.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

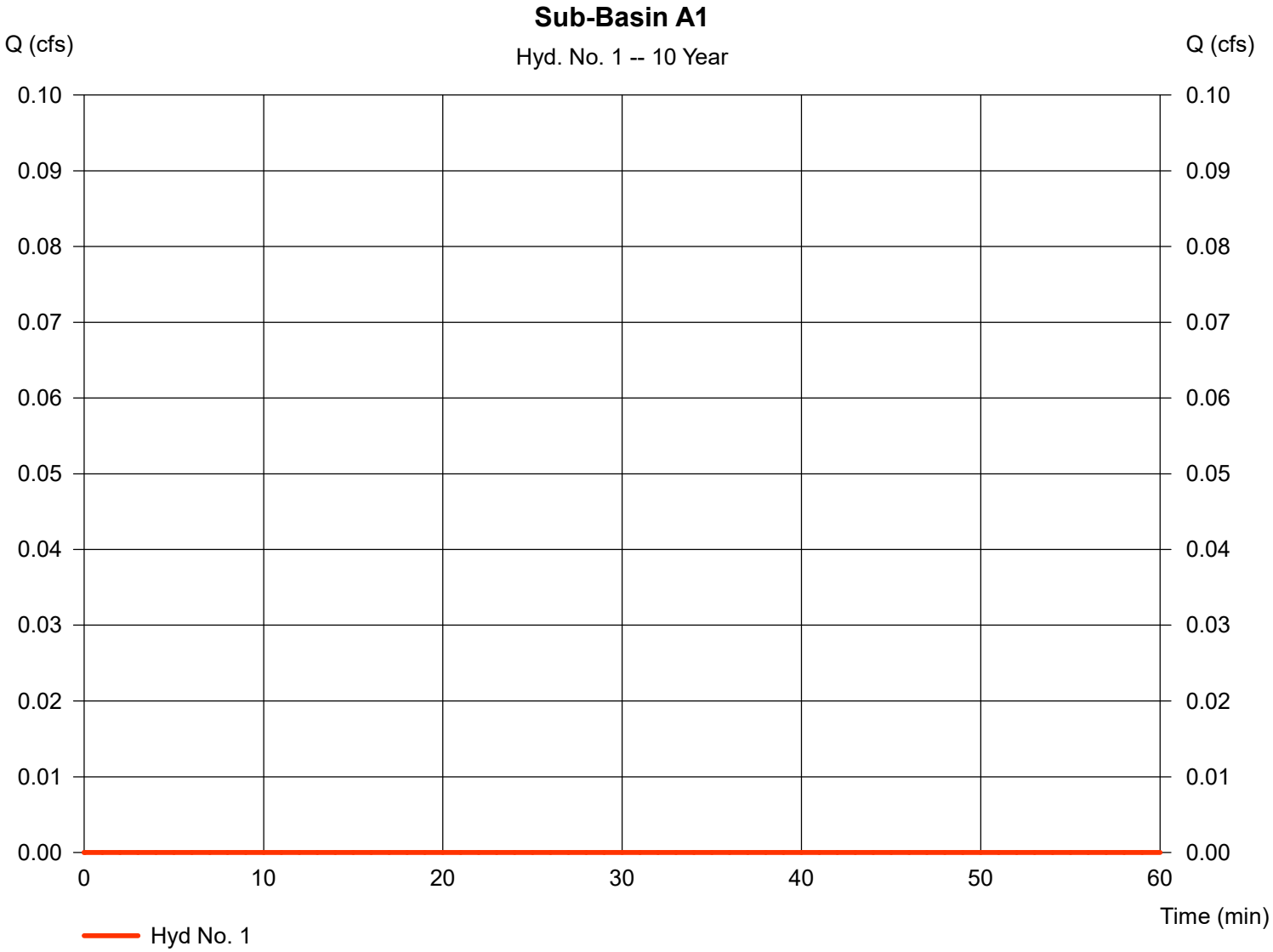
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.30 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



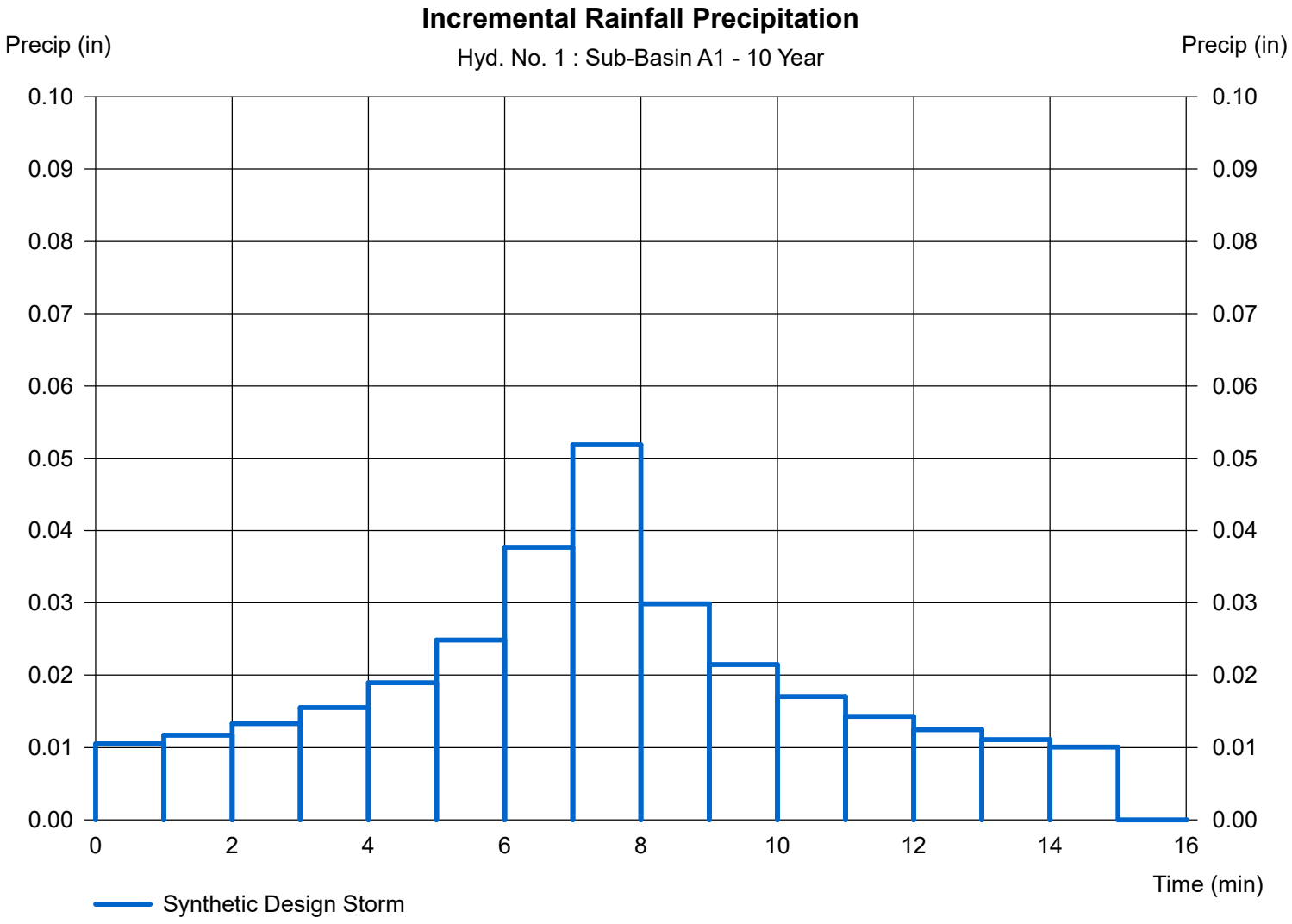
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3008 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



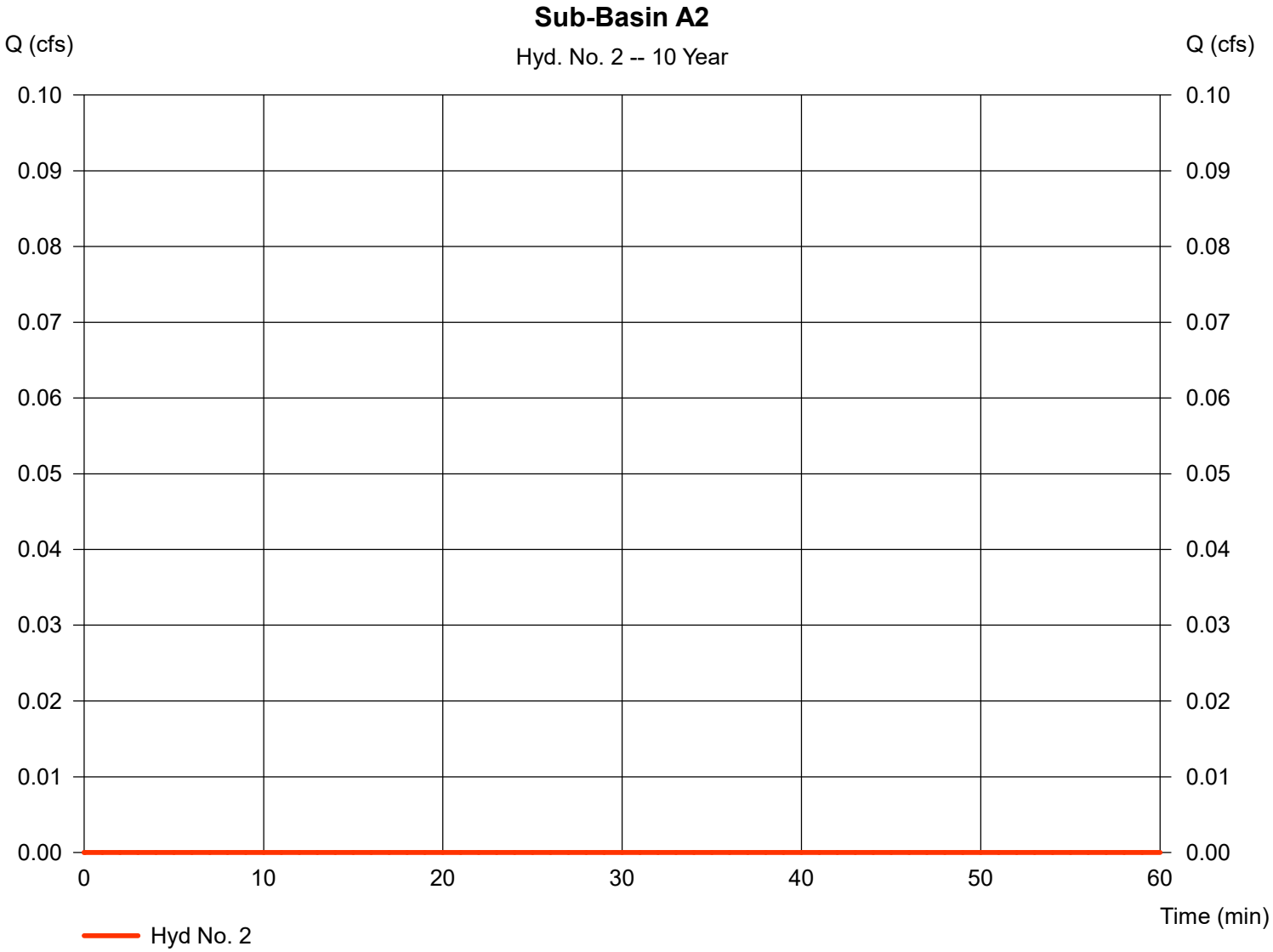
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.30 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



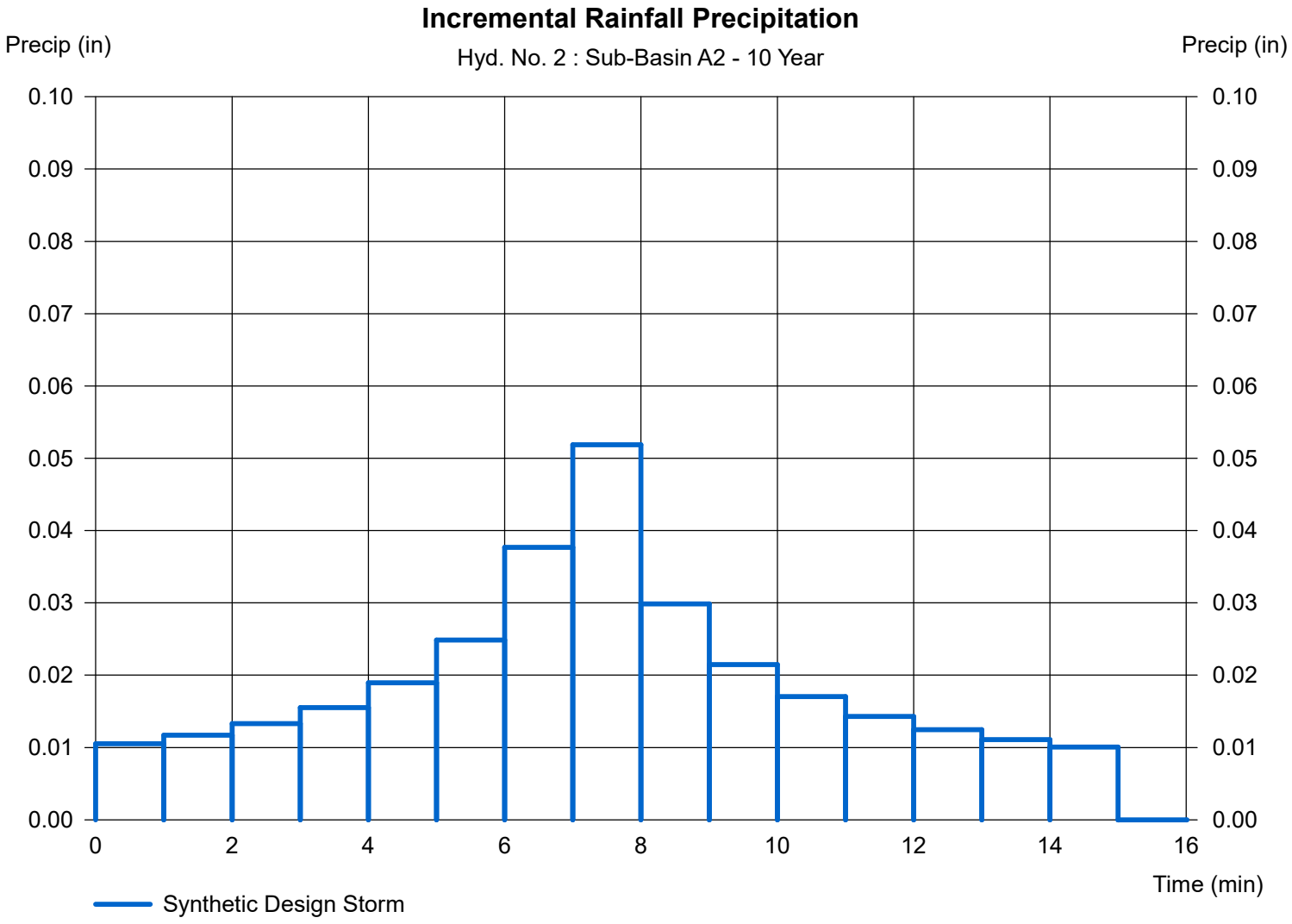
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3008 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



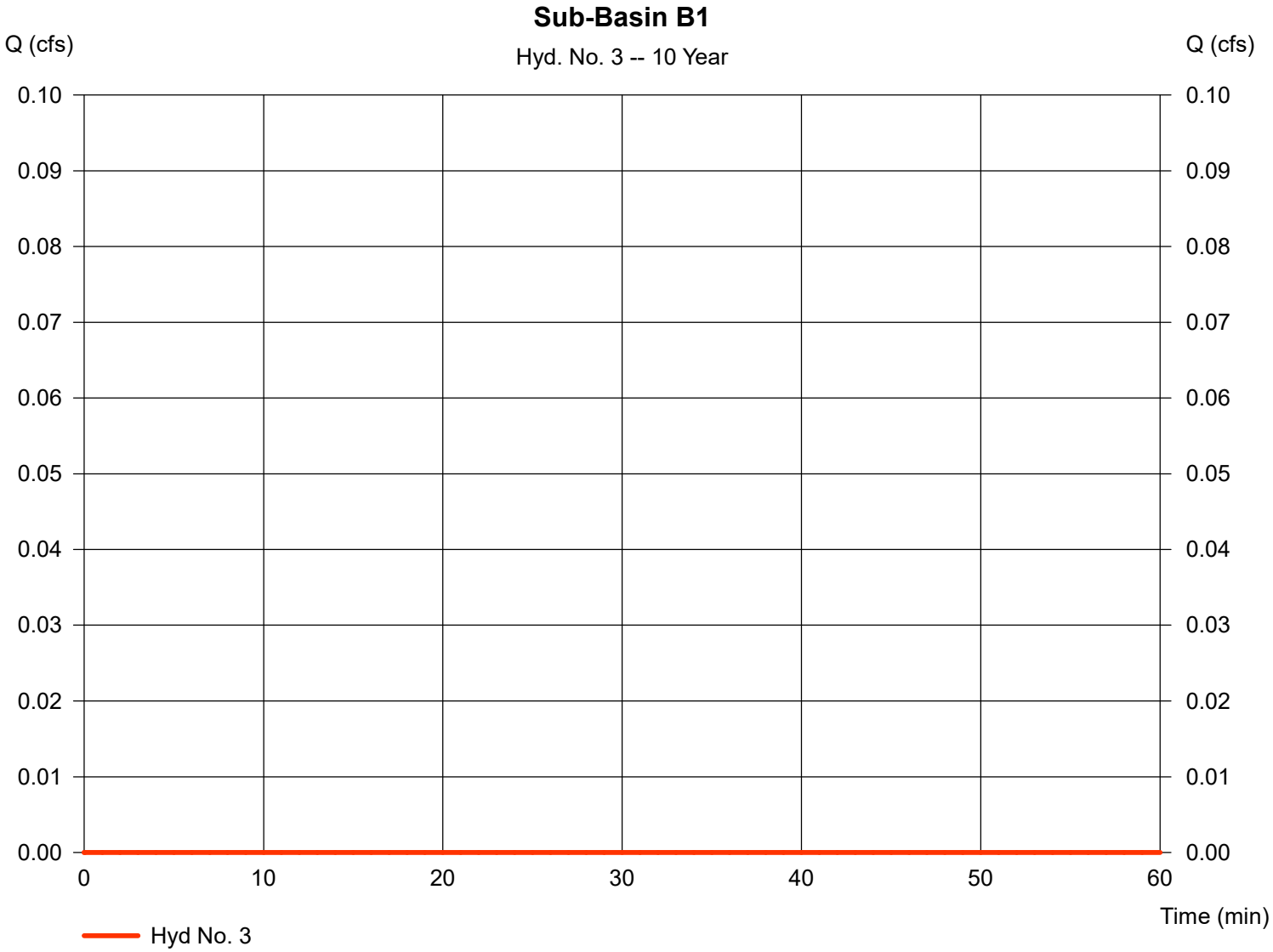
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.30 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



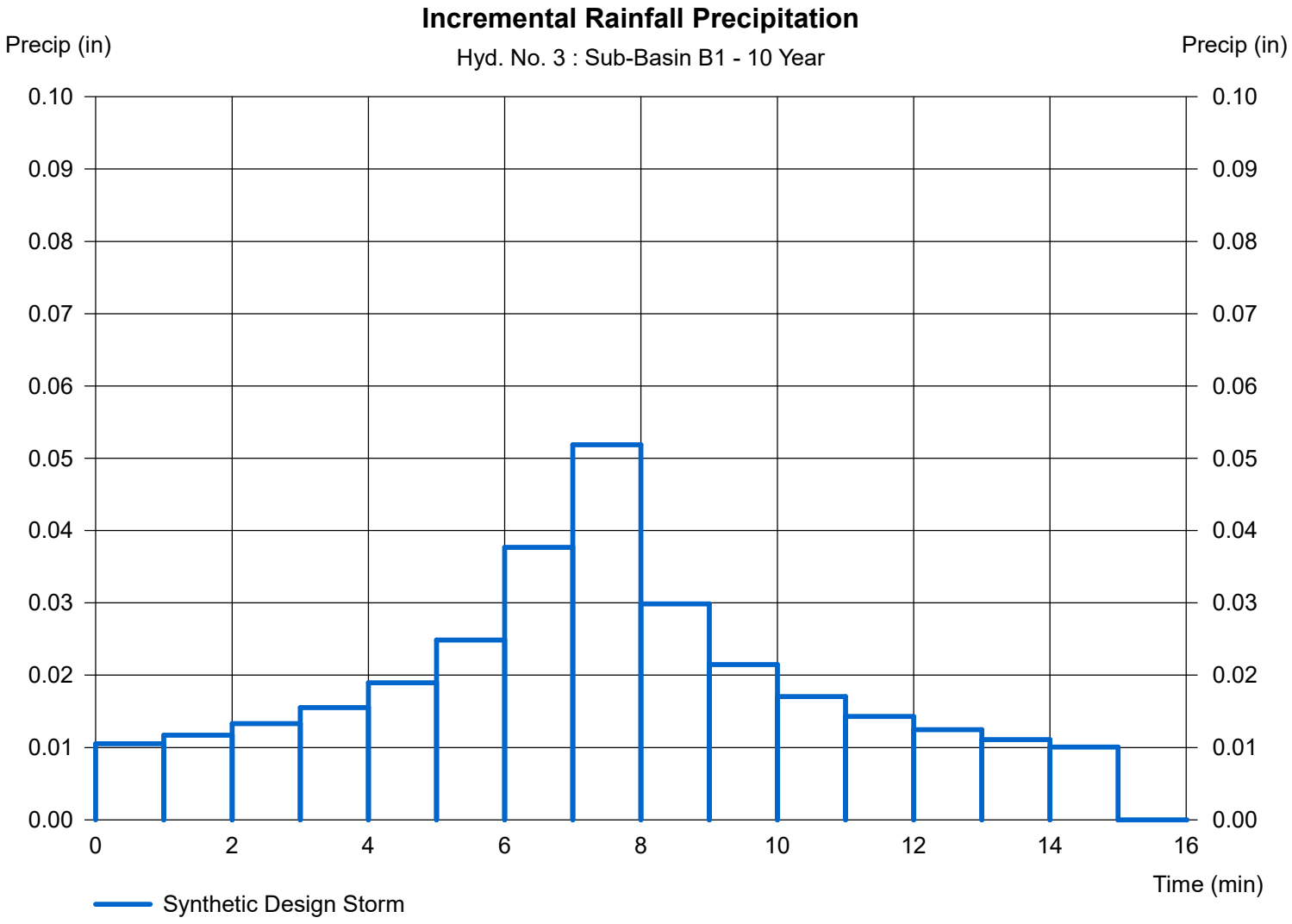
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3008 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



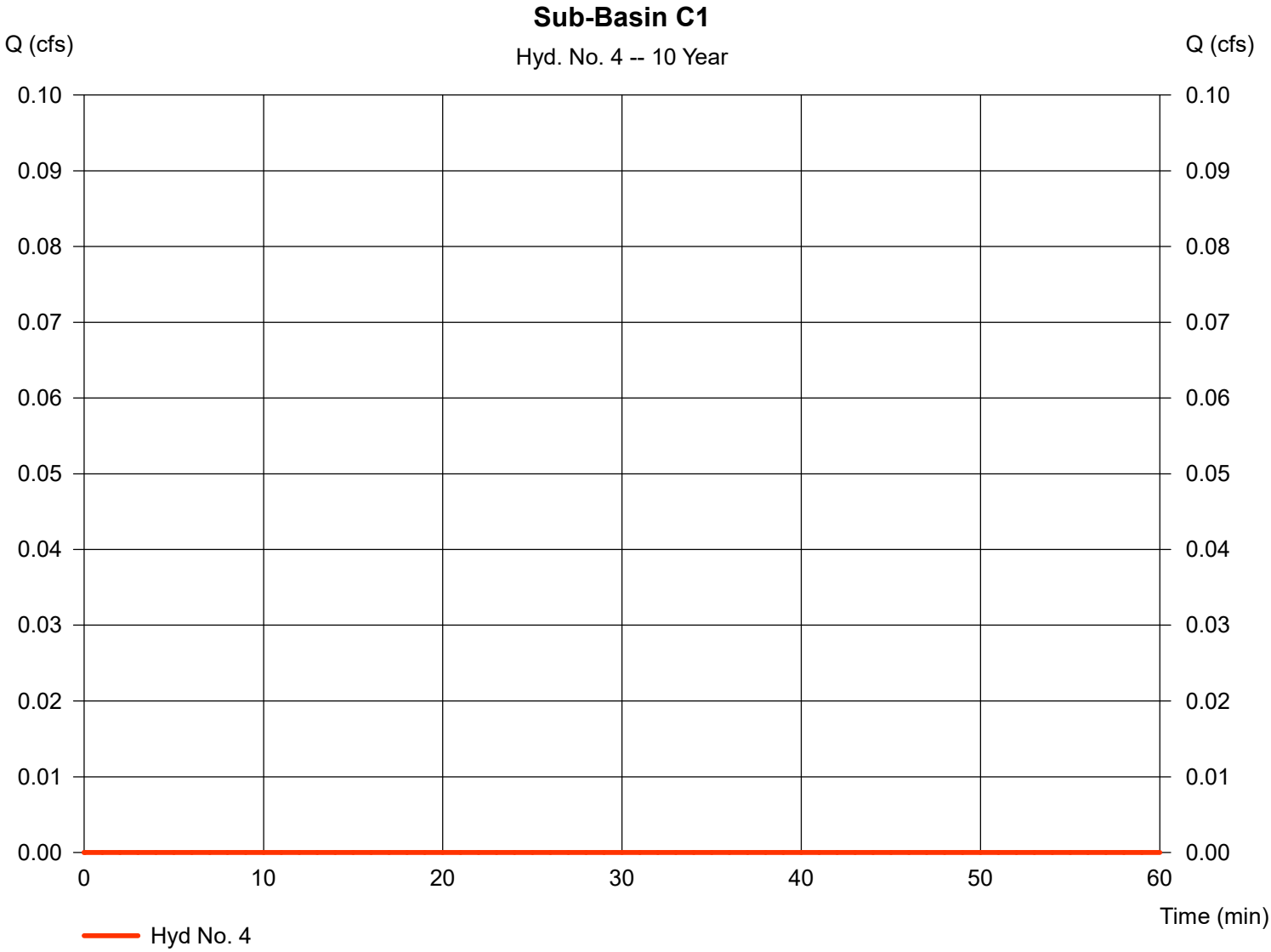
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.30 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



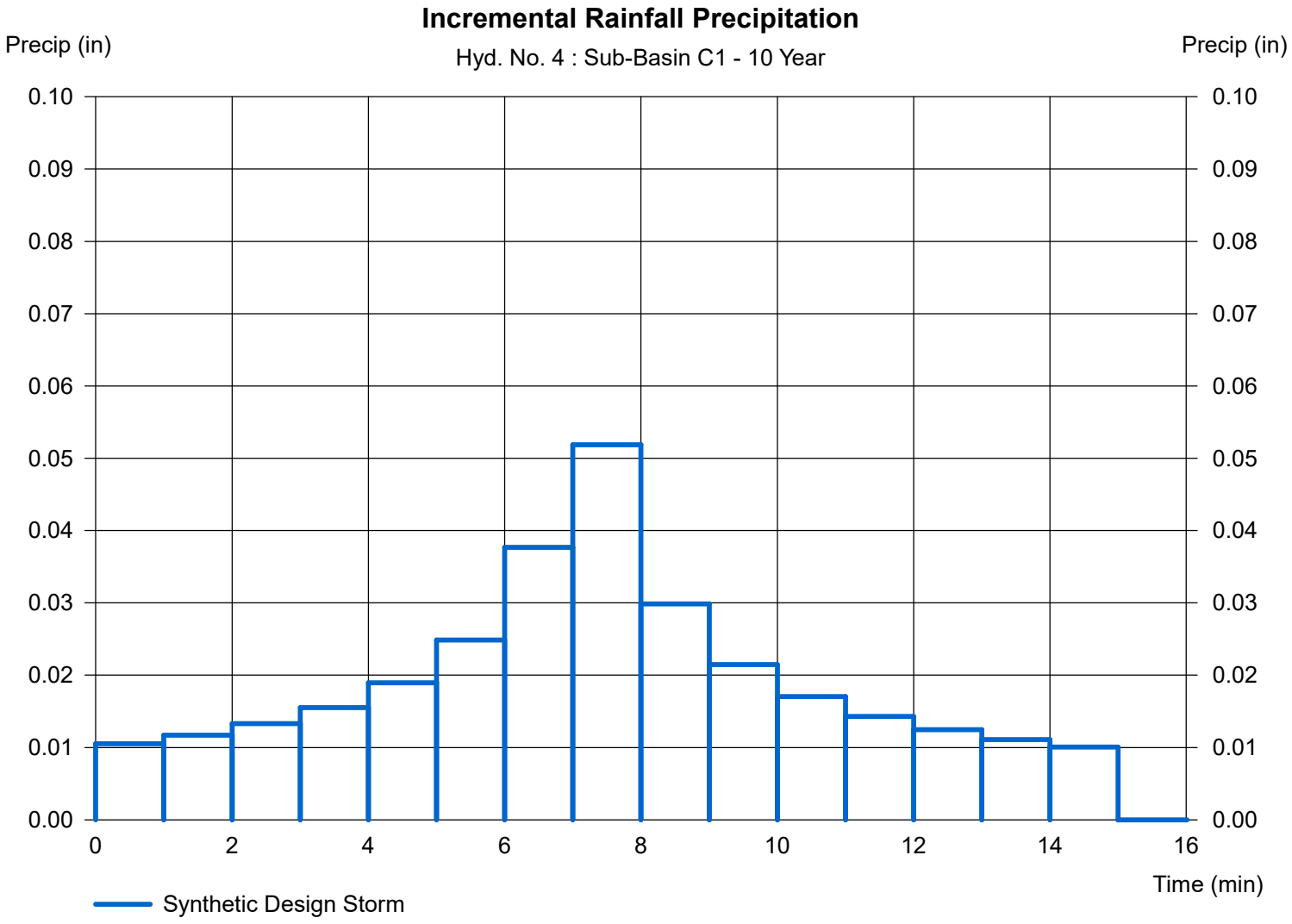
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3008 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



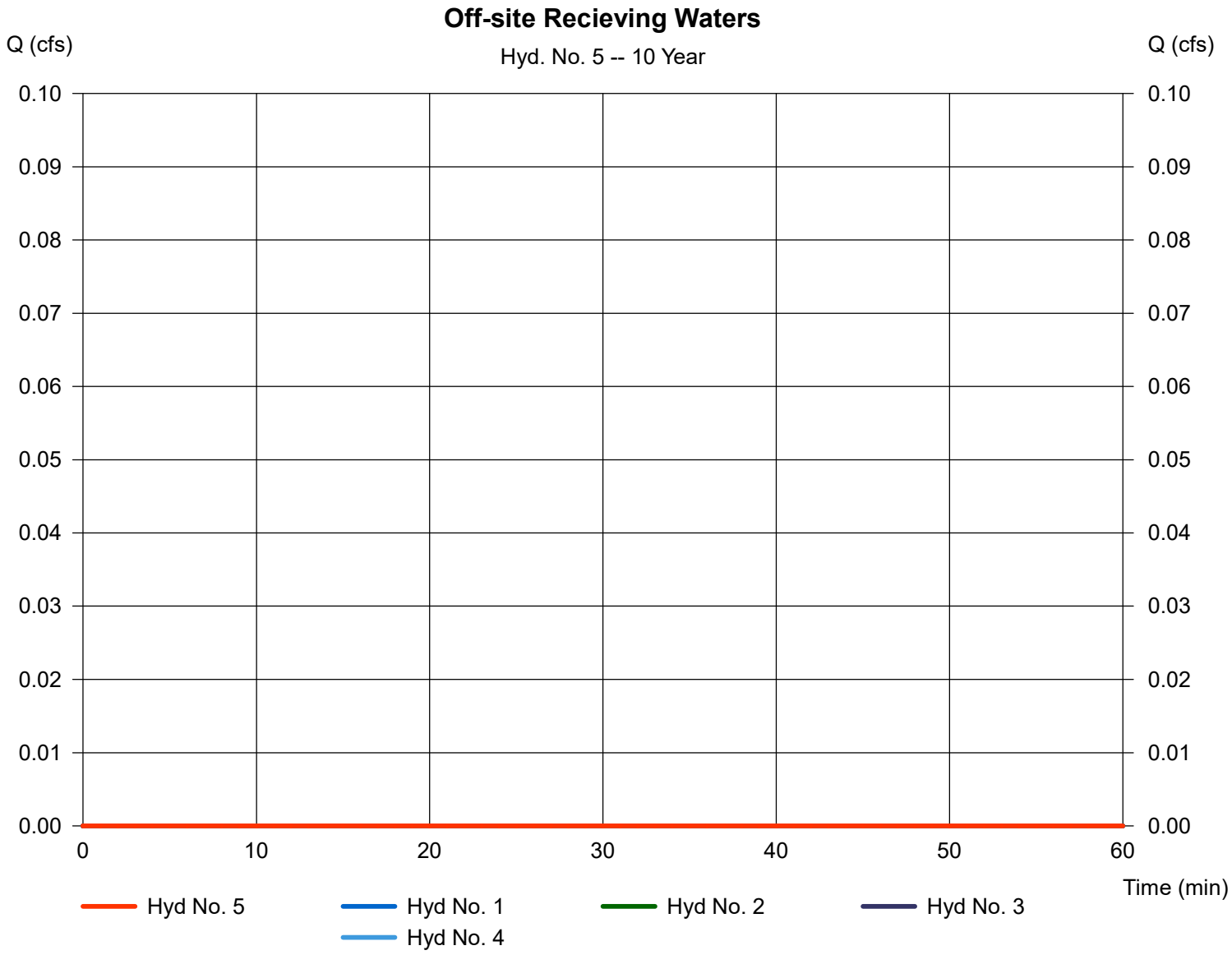
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

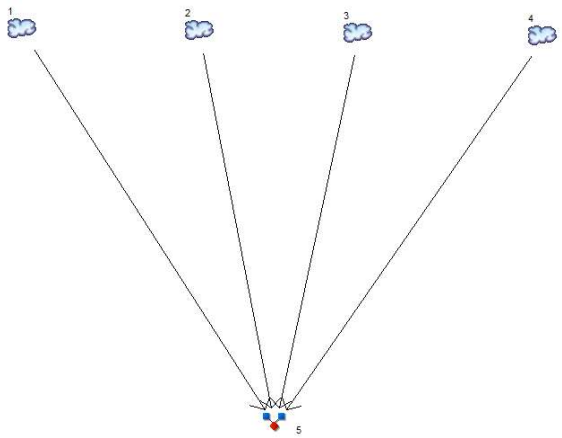
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.29 | 0.35 | 0.00 | 0.45 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

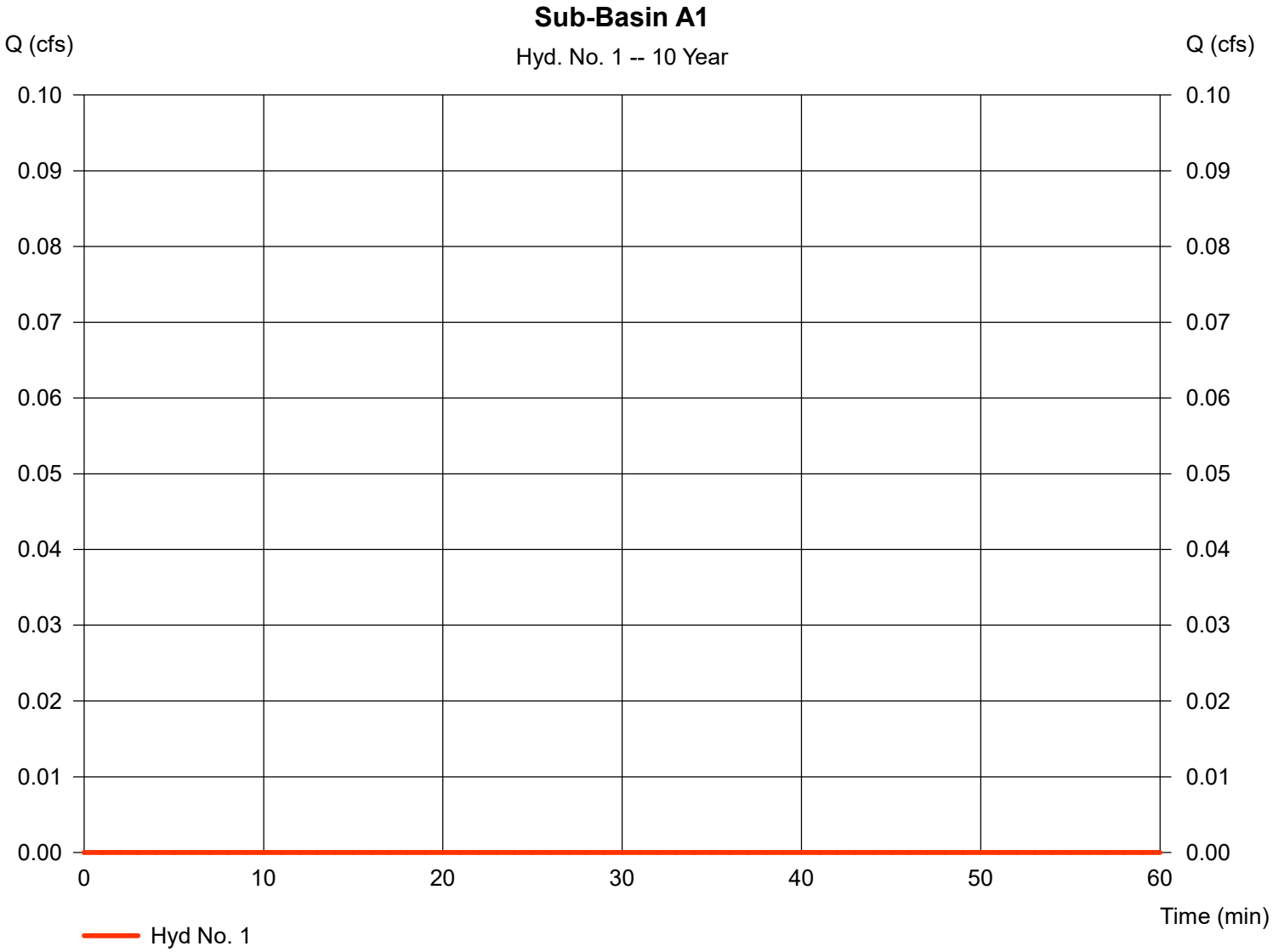
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.42 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



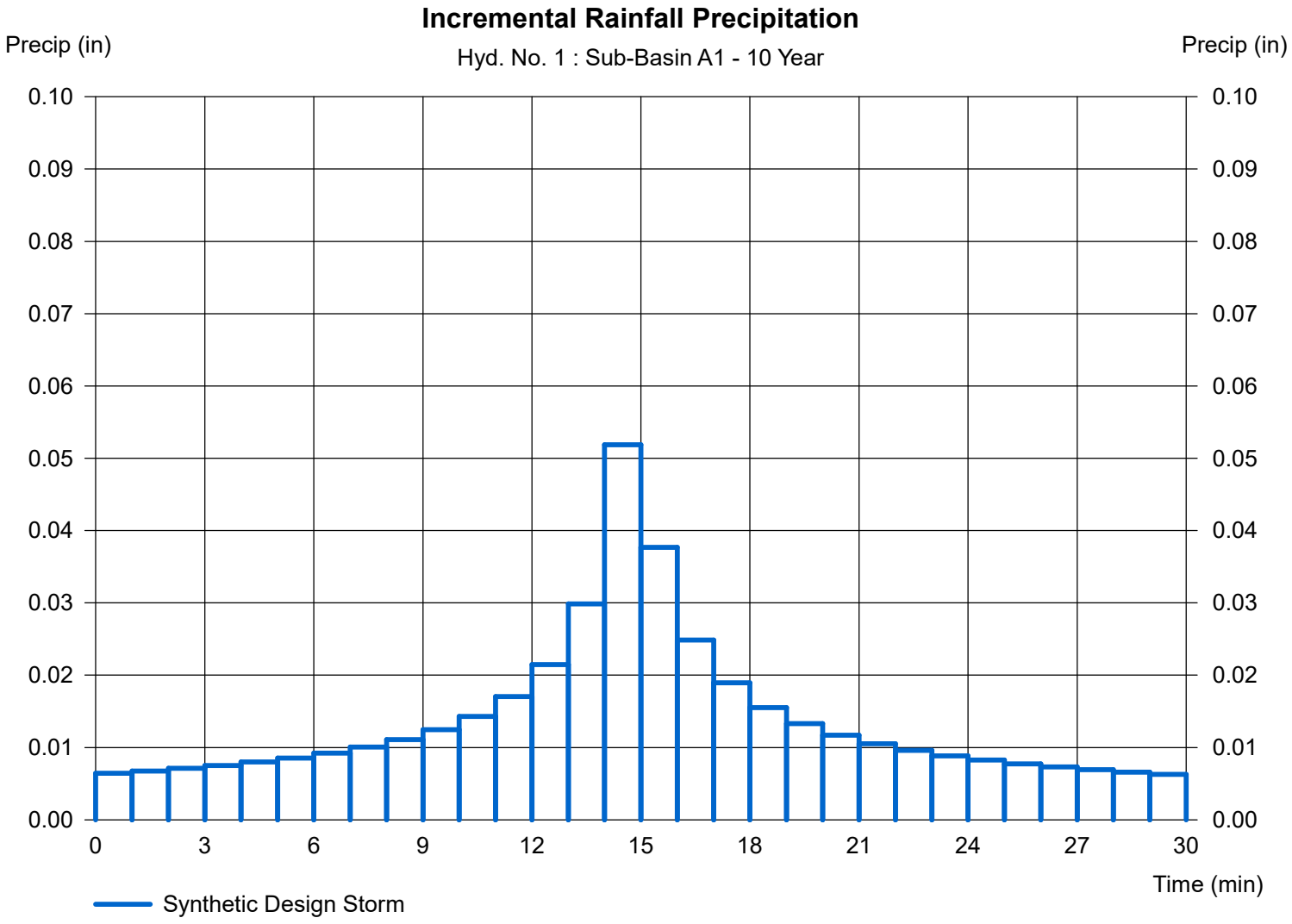
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.4160 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



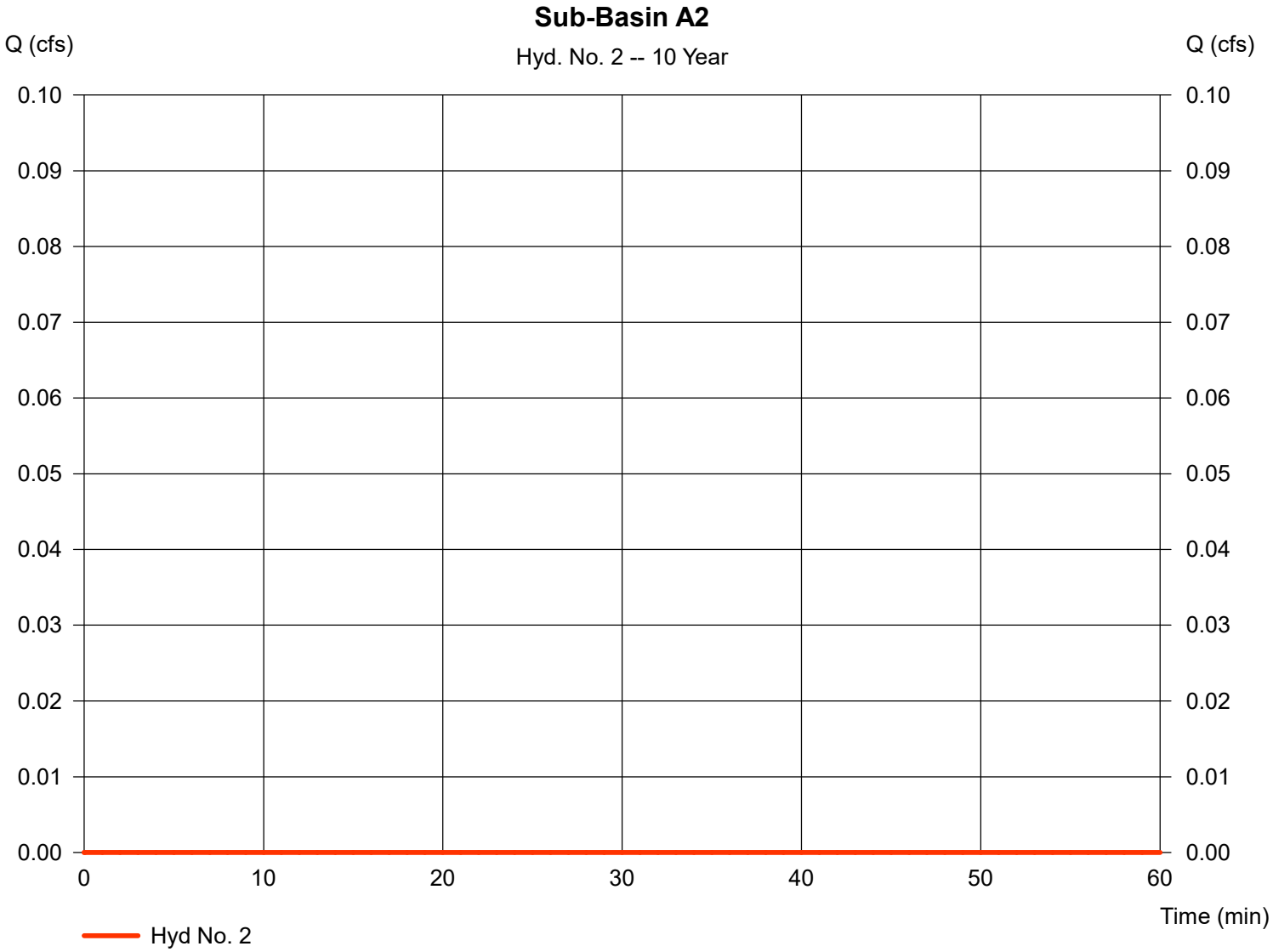
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.42 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



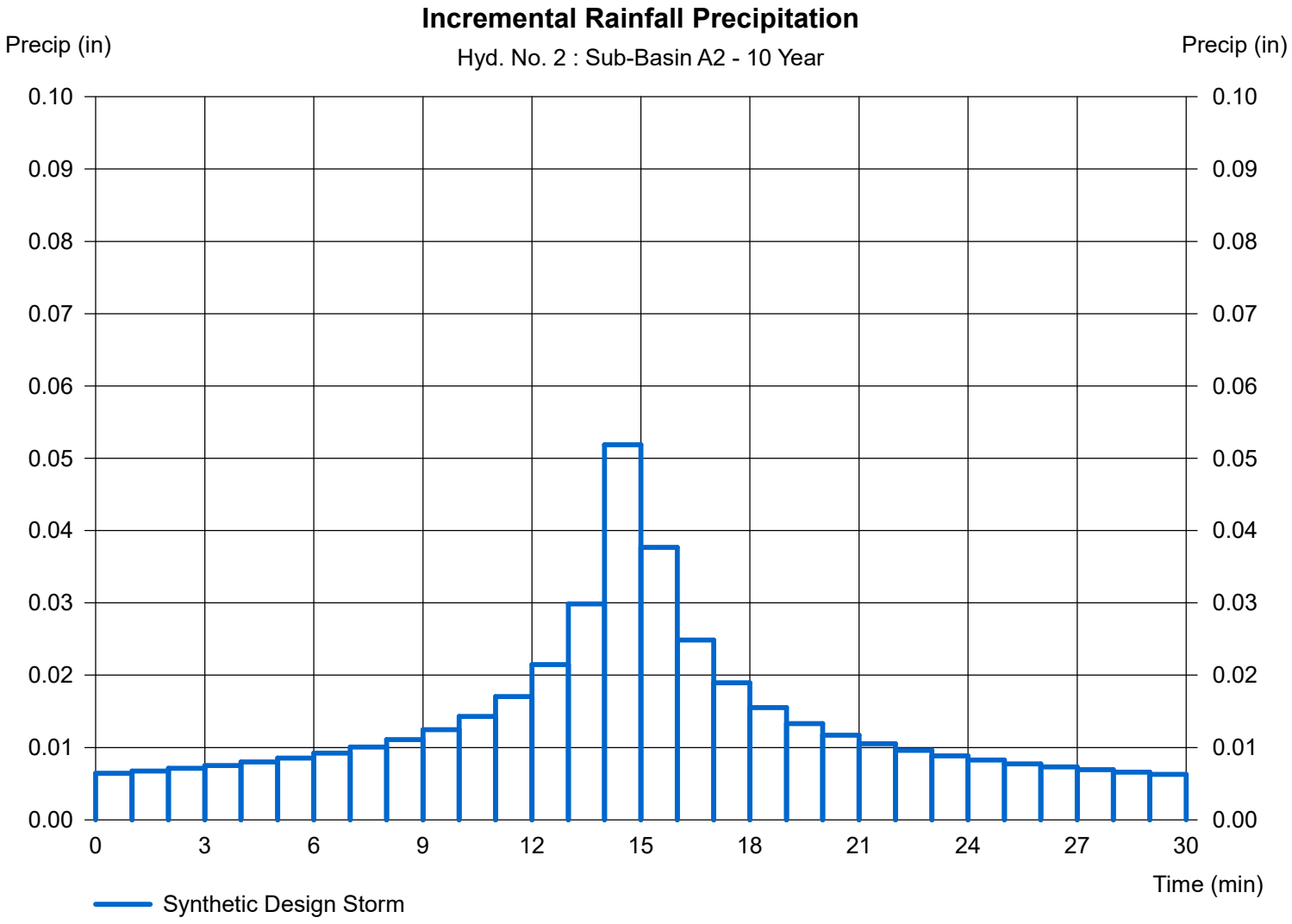
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.4160 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



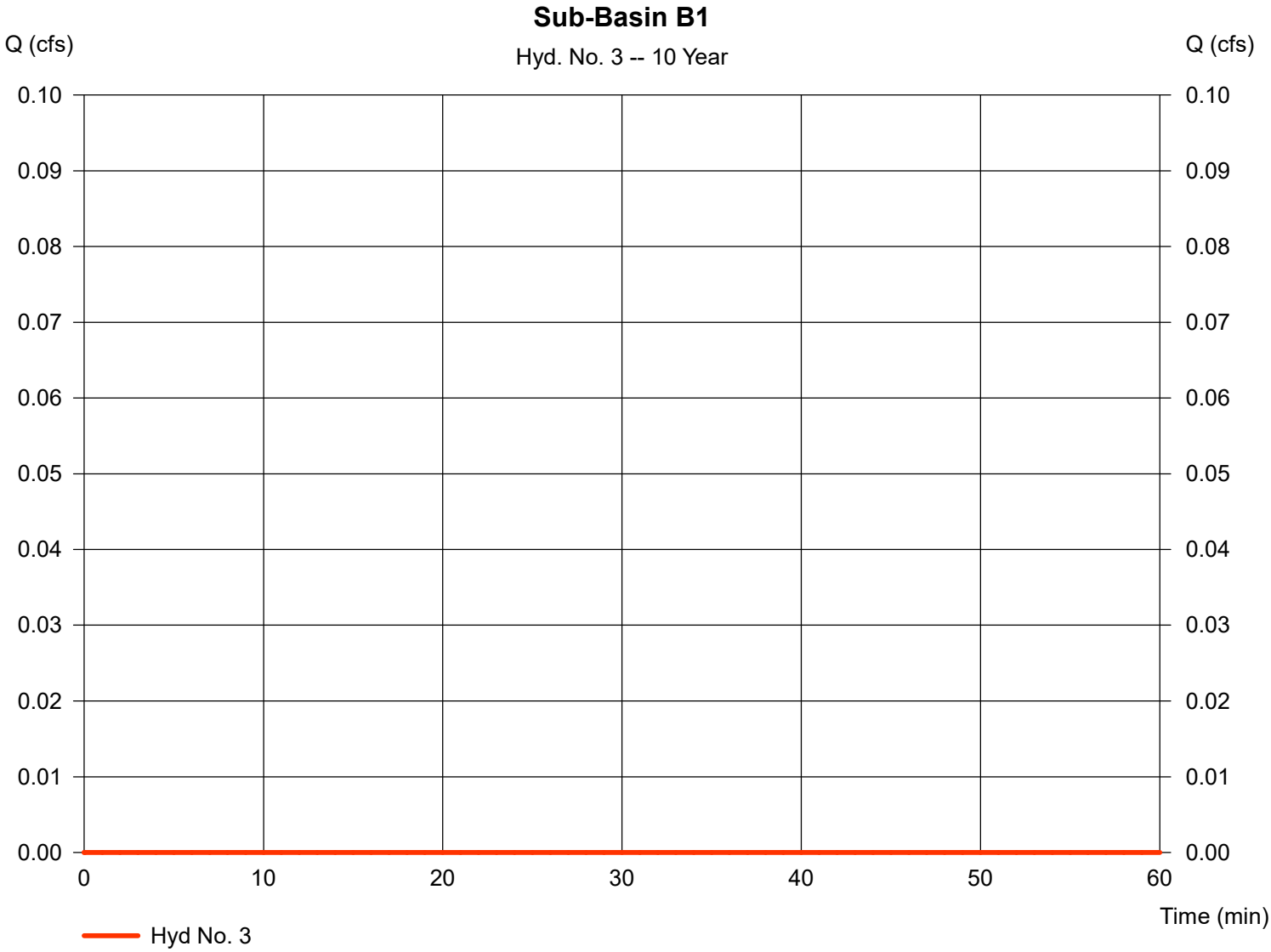
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.42 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



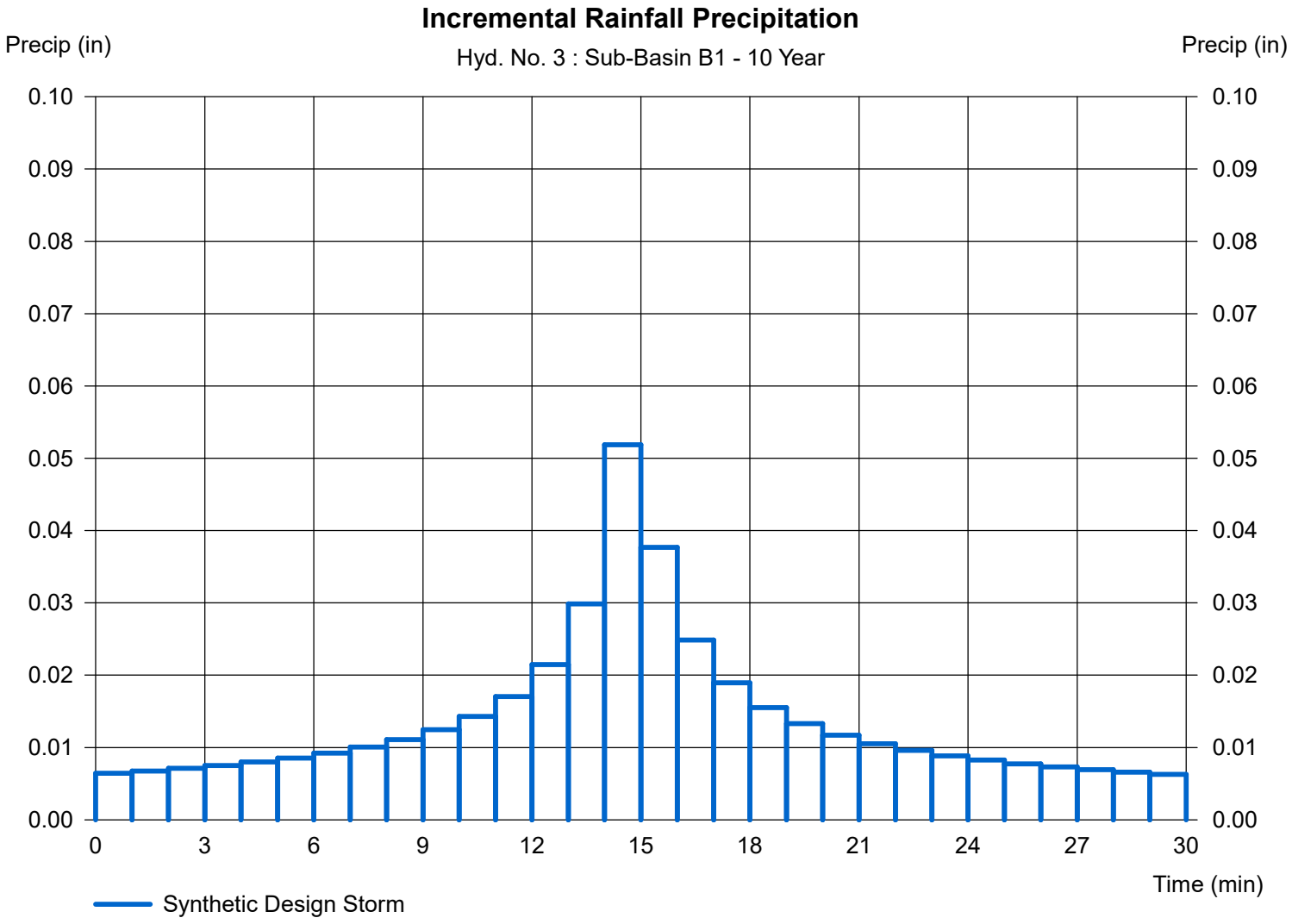
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.4160 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



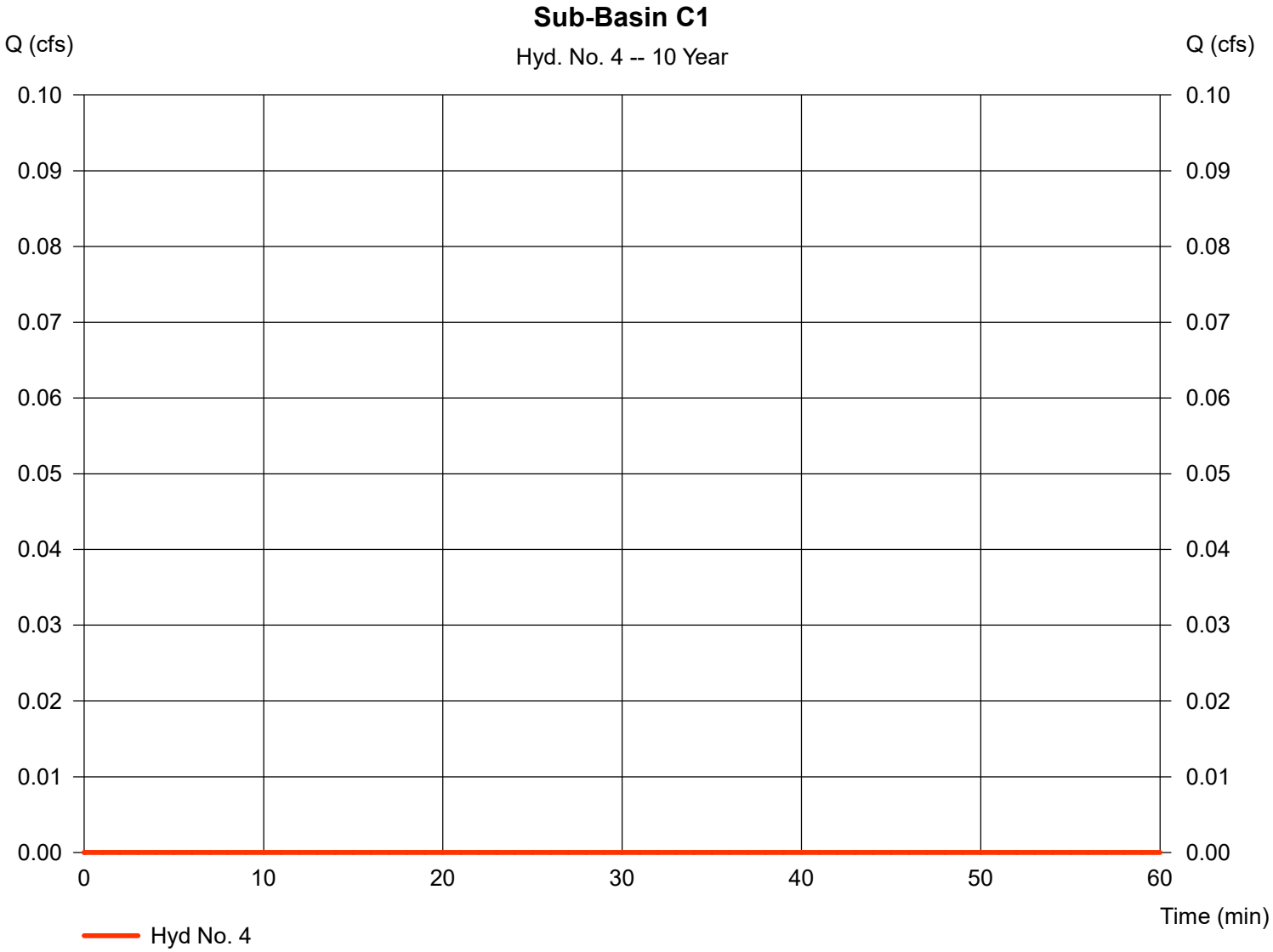
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.42 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



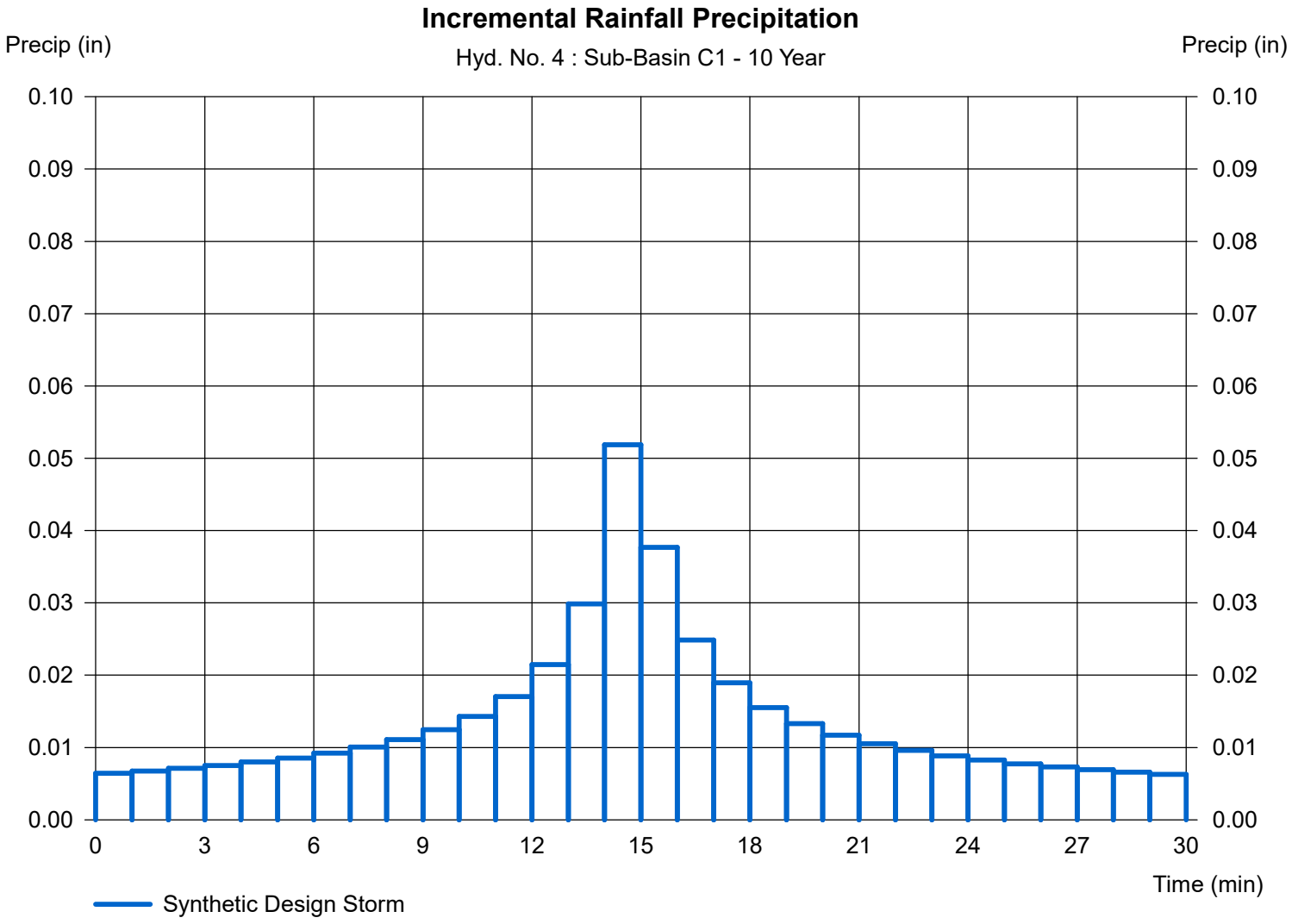
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.4160 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



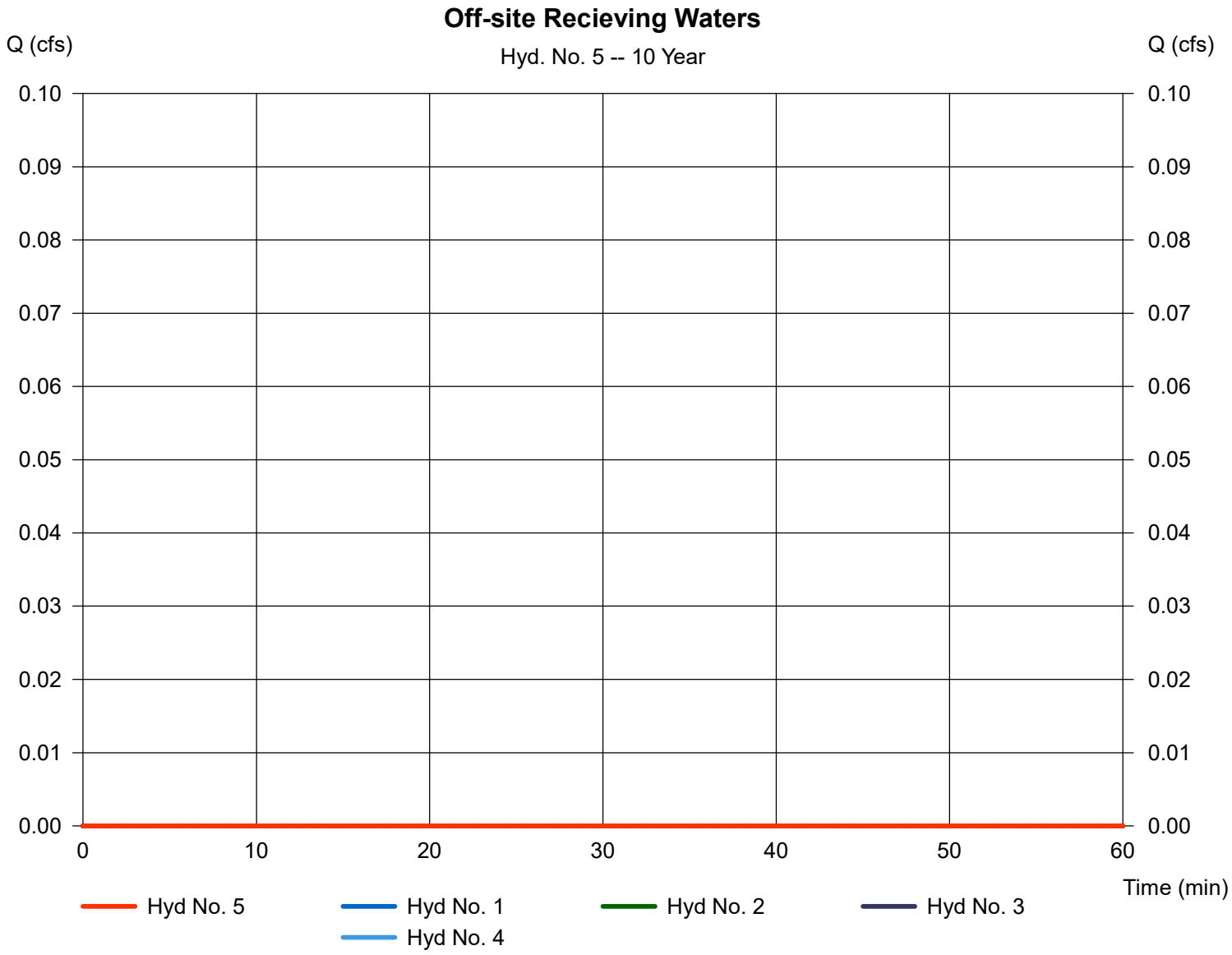
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

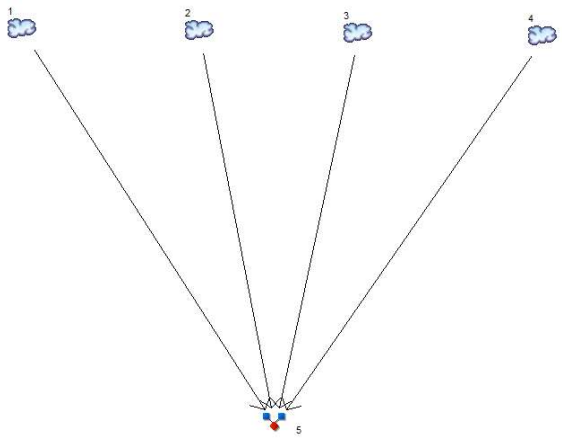
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.42 | 0.51 | 0.00 | 0.65 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap



| 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 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 2 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

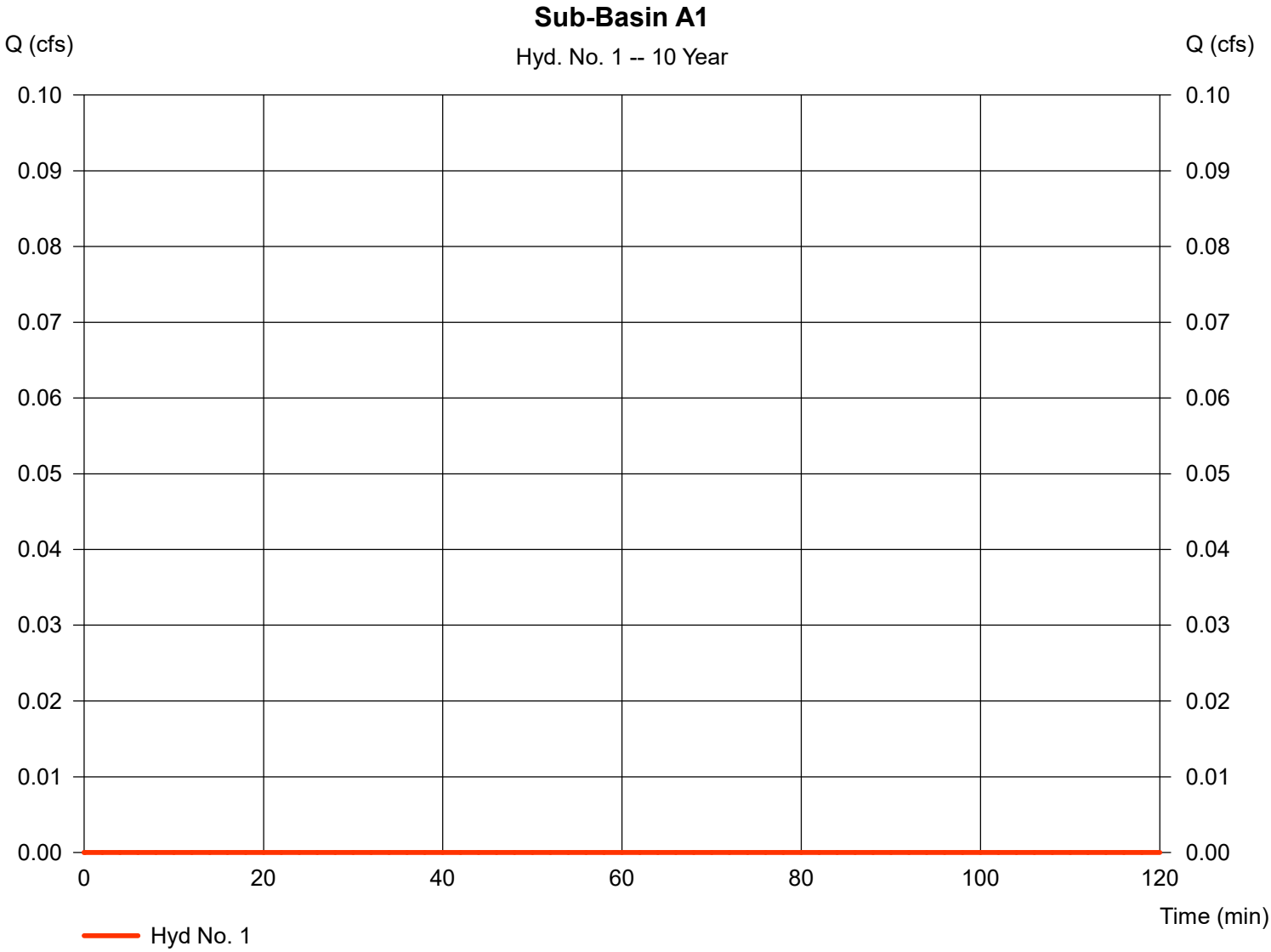
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.56 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



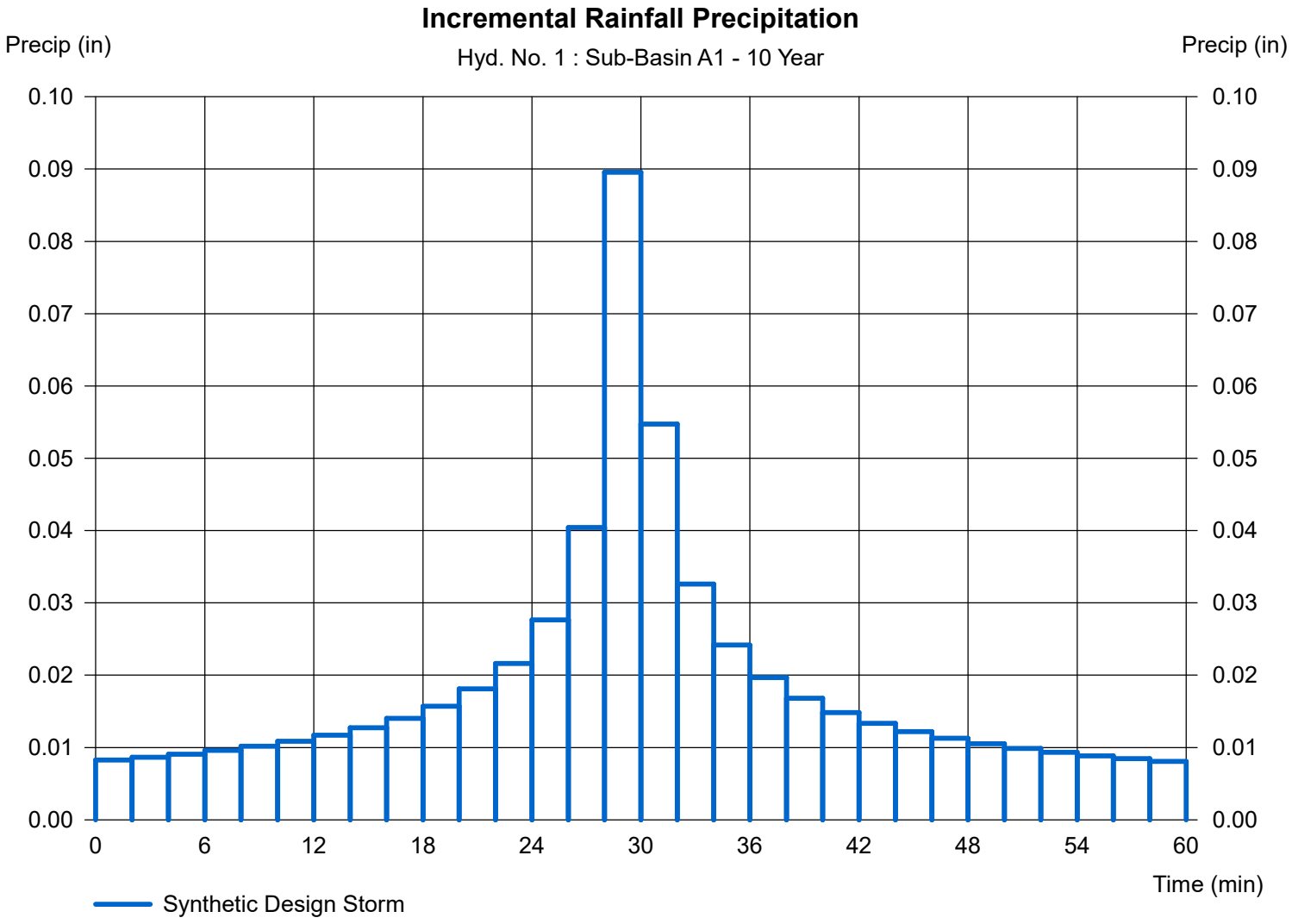
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.5630 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



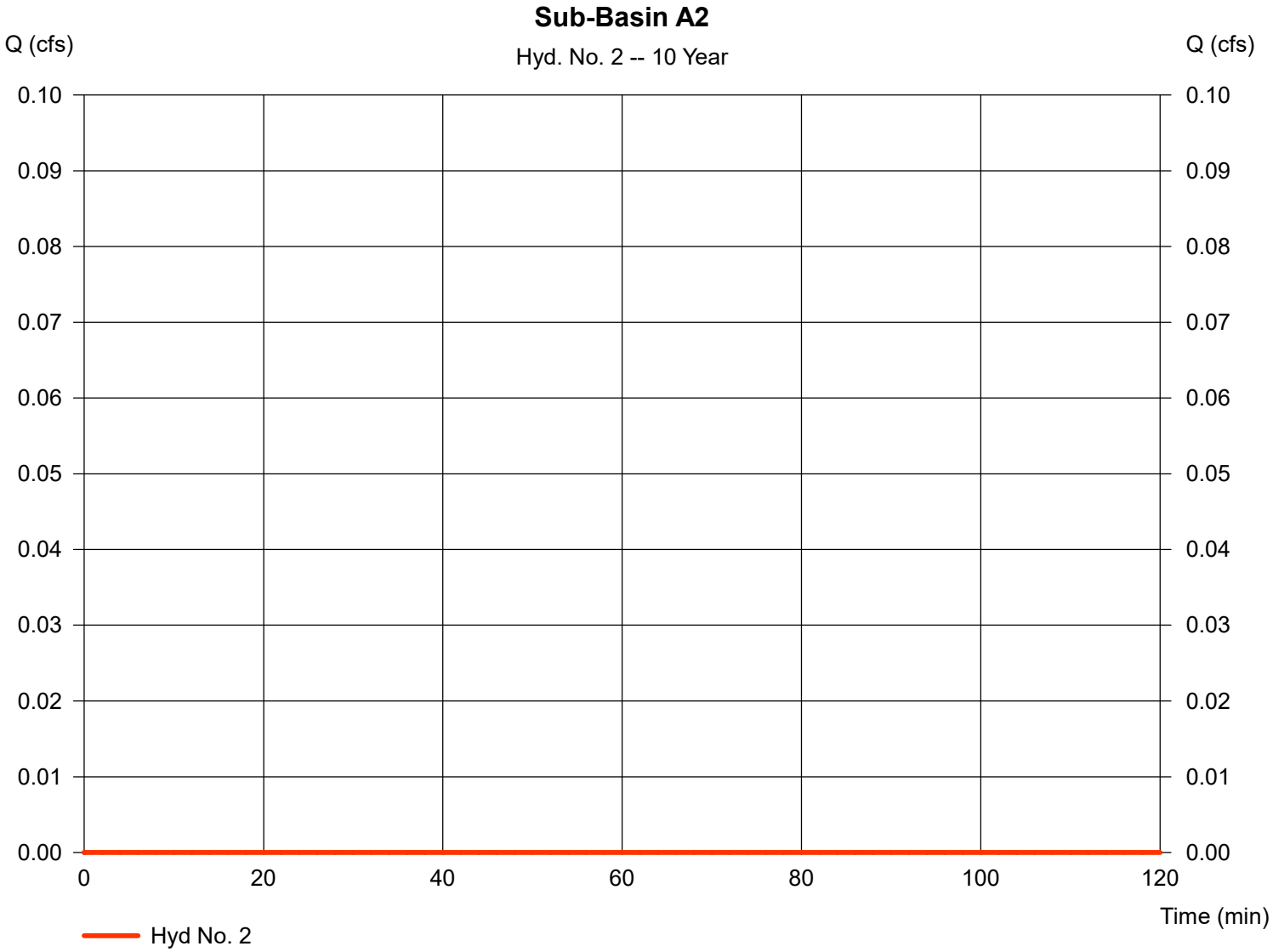
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.56 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



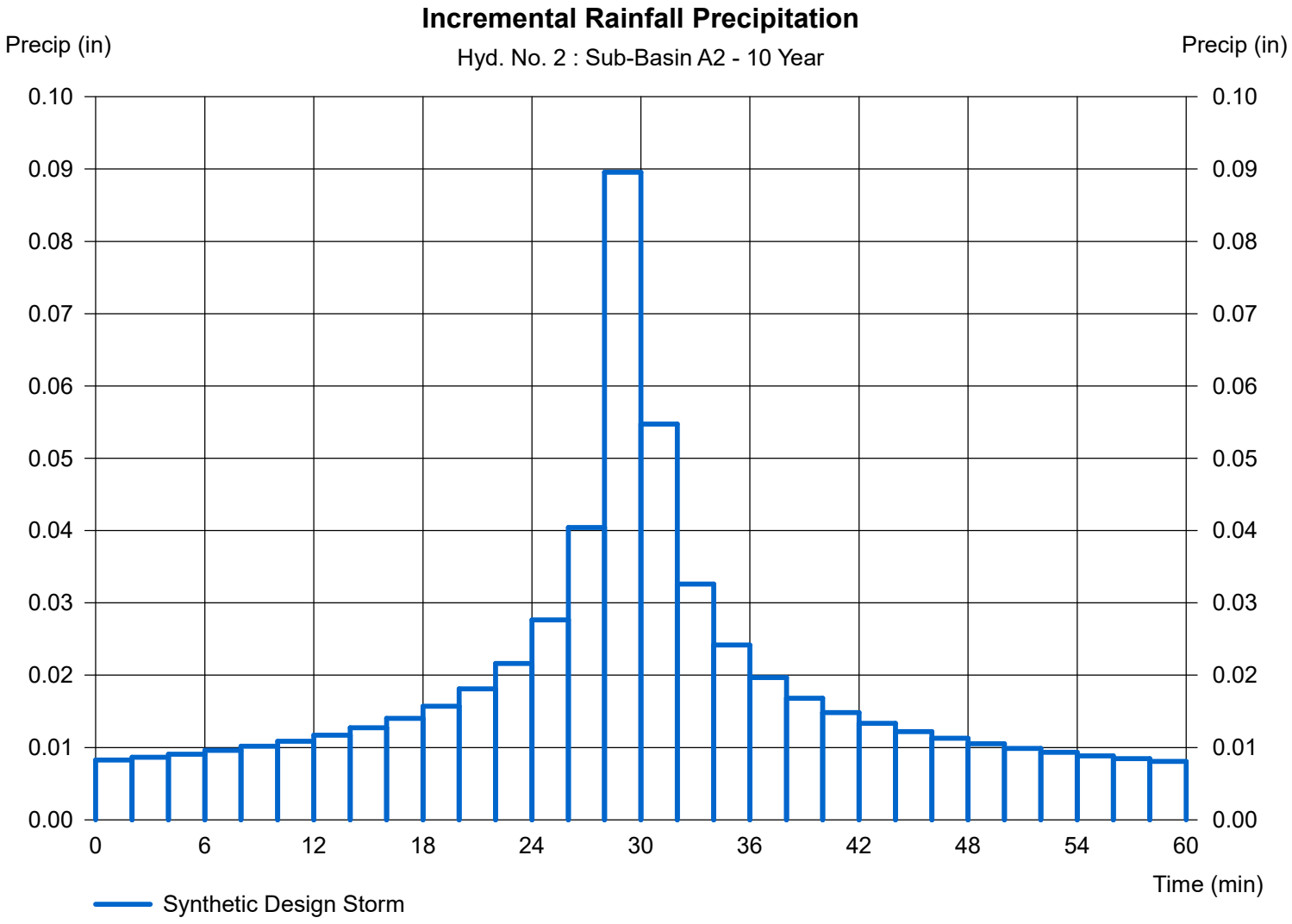
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.5630 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



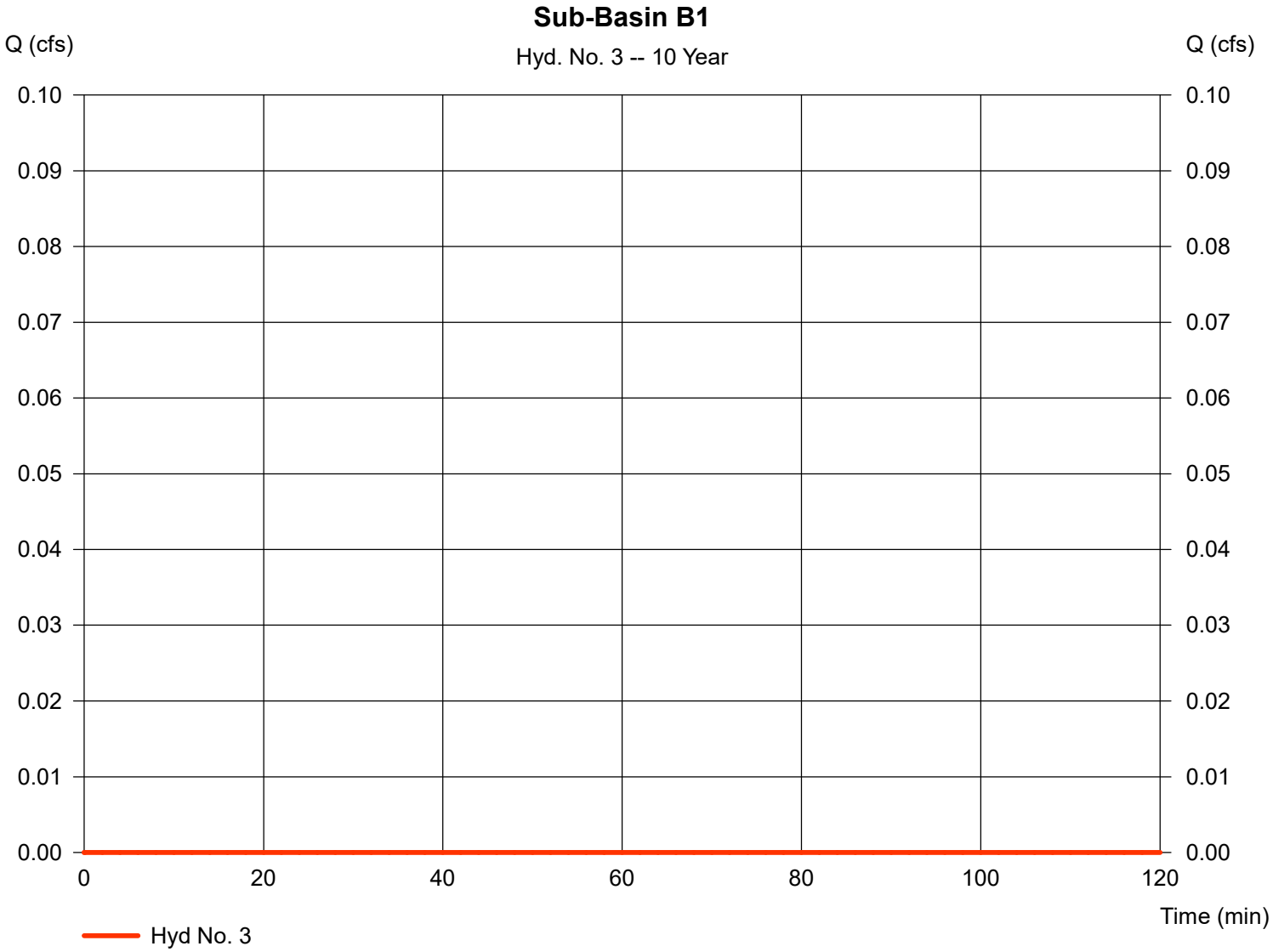
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.56 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



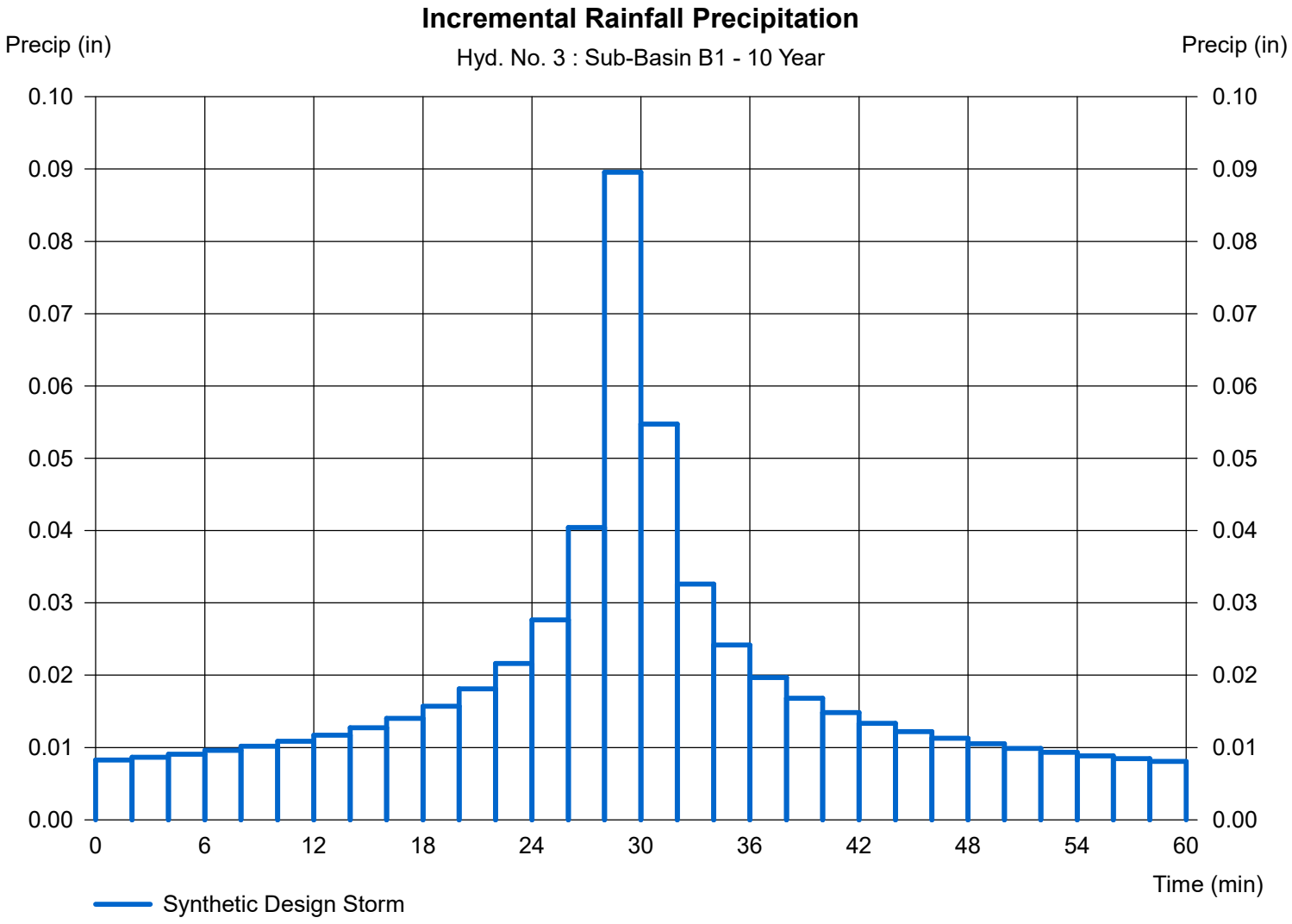
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.5630 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



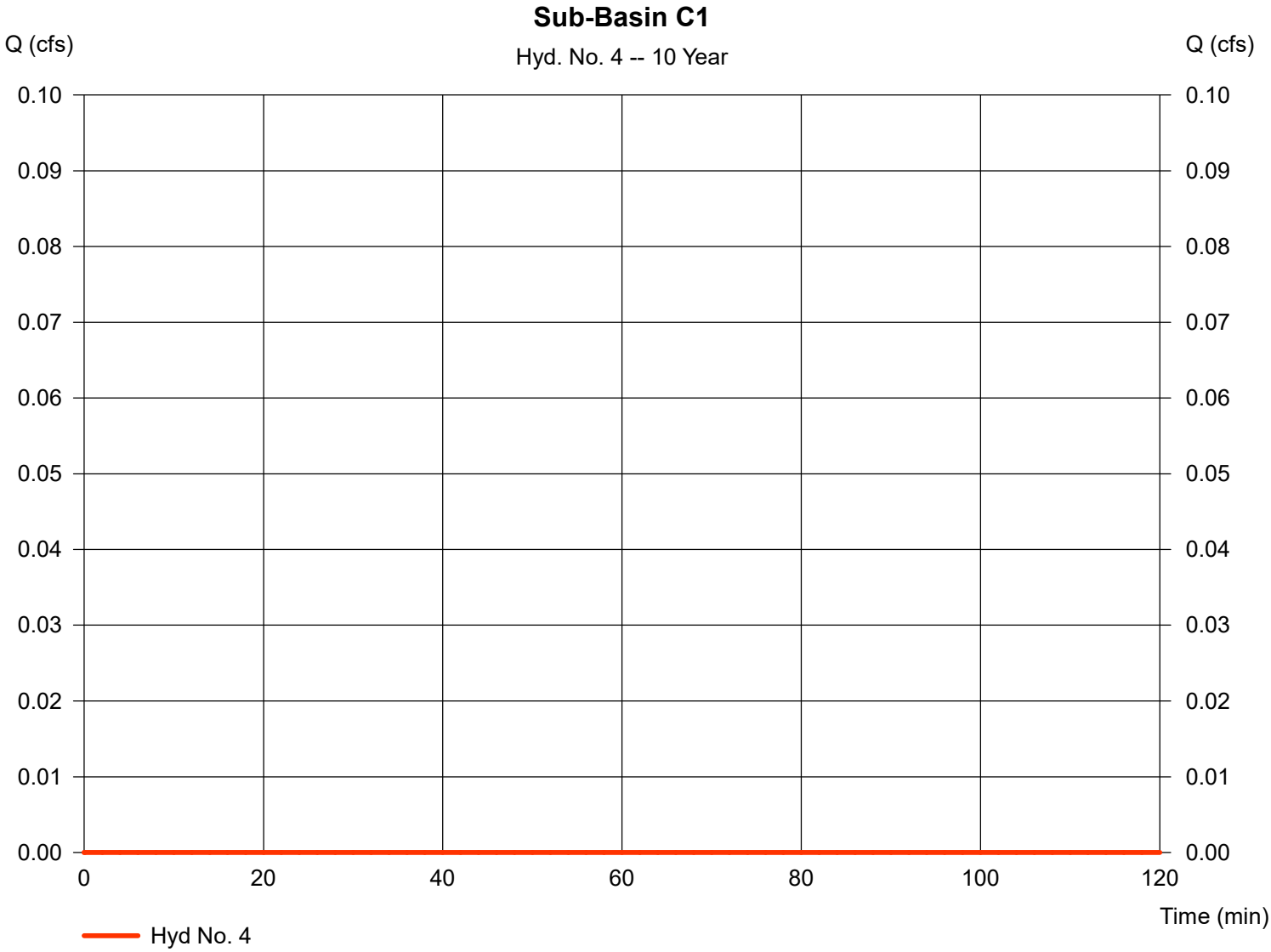
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.56 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



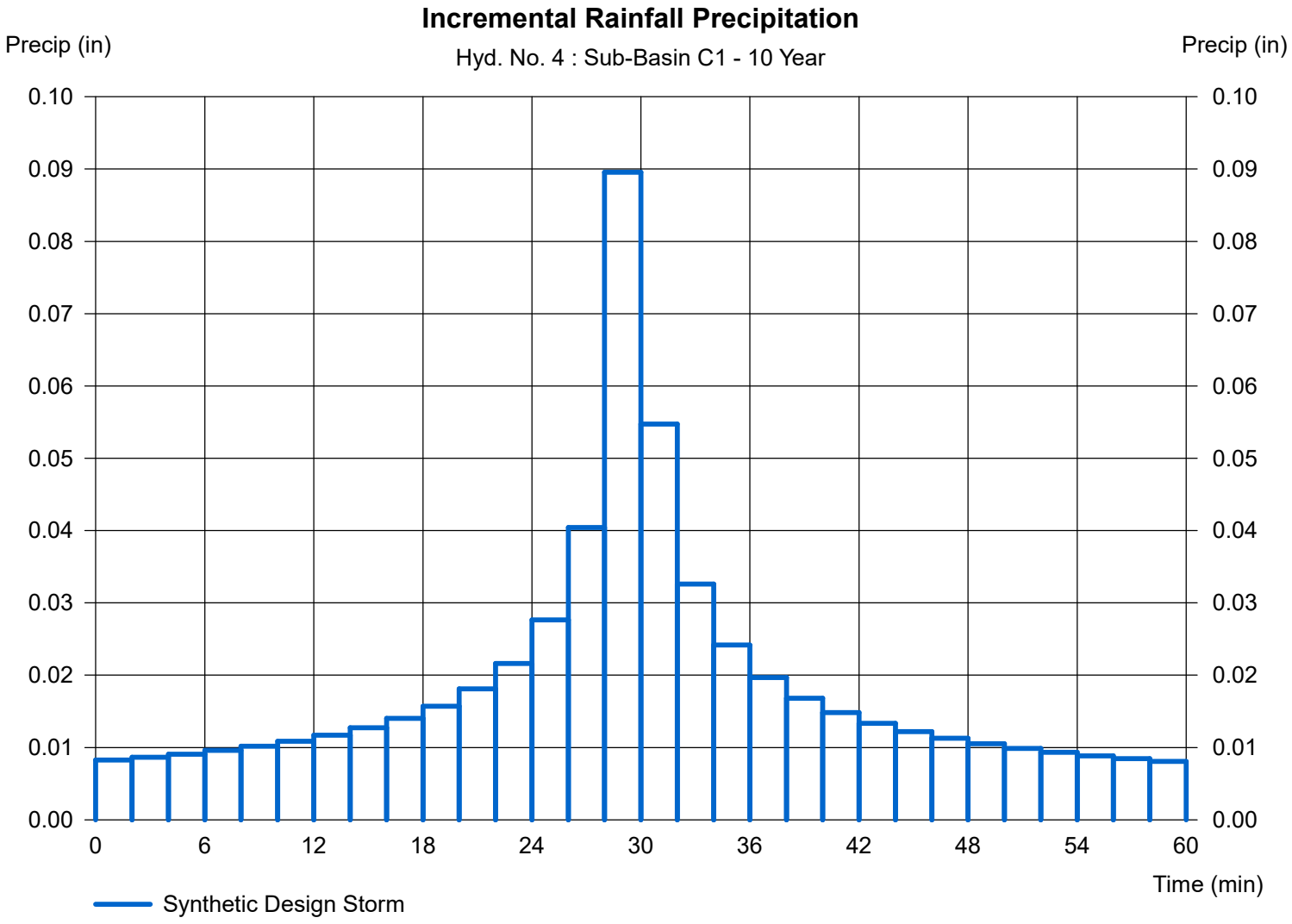
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.5630 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



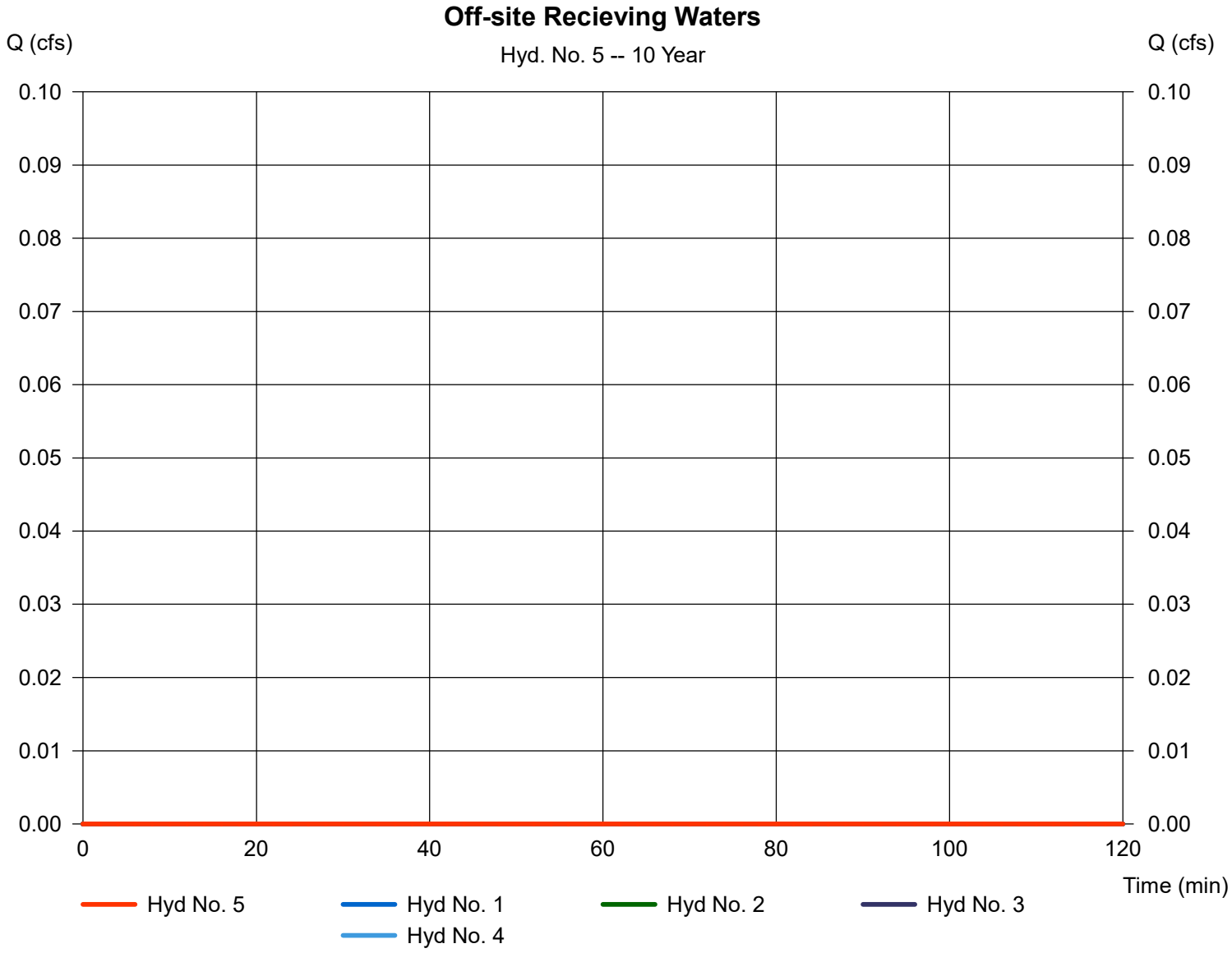
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

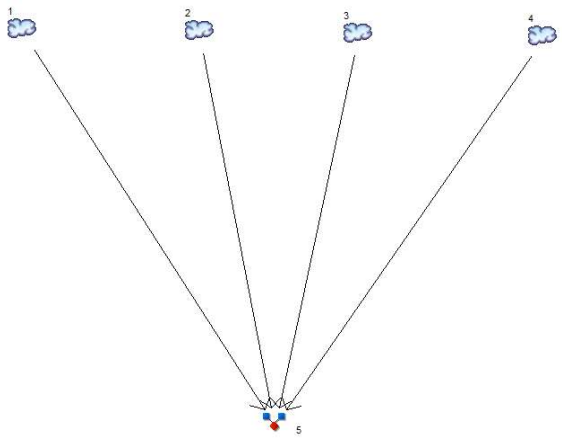
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.56 | 0.69 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.154 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.295 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.167 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.069 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 0.684 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.154 | 2 | 140 | 737 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.295 | 2 | 140 | 1,411 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.167 | 2 | 138 | 798 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.069 | 2 | 138 | 331 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.684 | 2 | 138 | 3,277 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

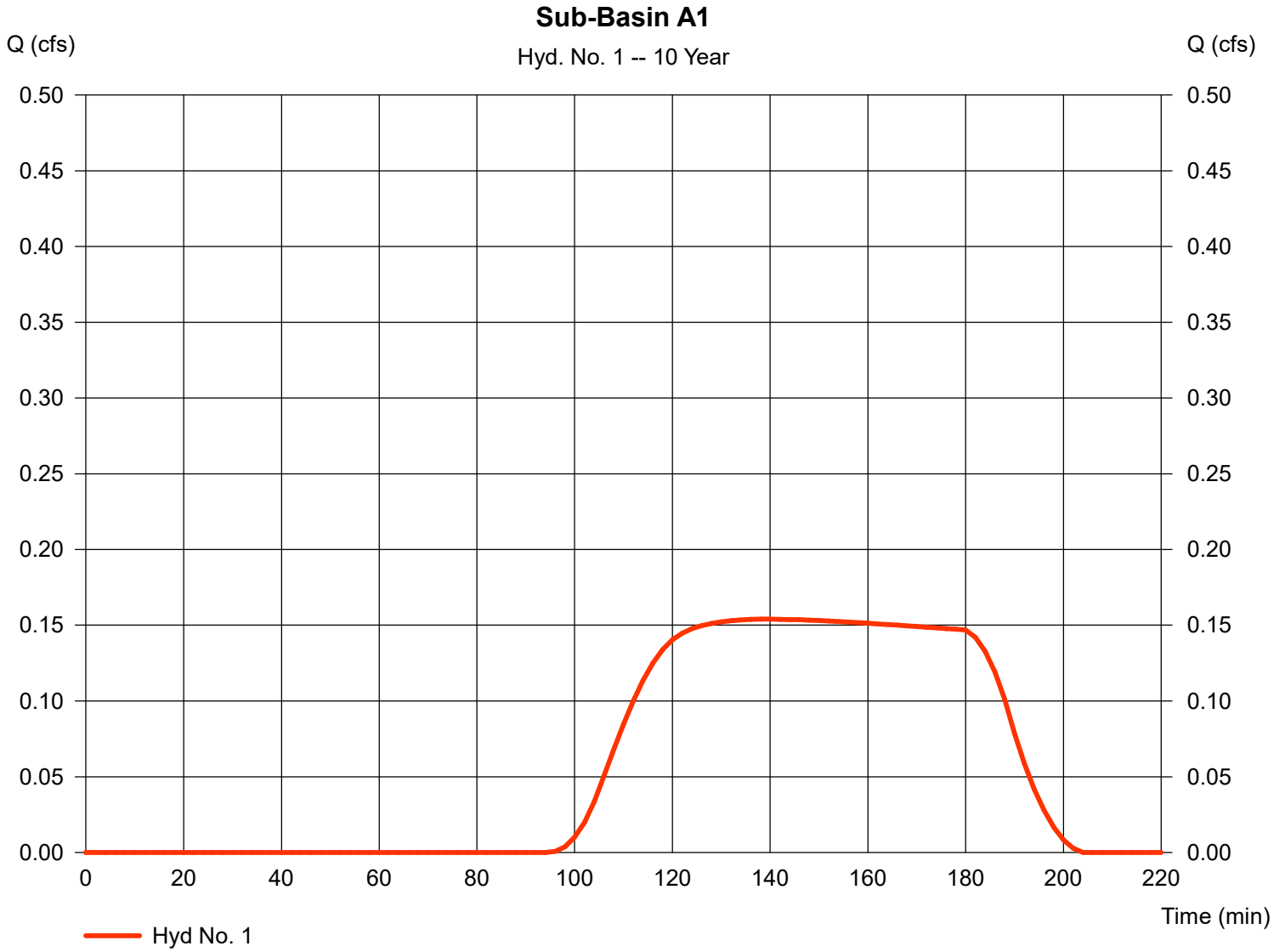
# Hydrograph Report



## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.154 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 140 min |
| Time interval | = | 2 min | Hyd. volume | = | 737 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.89 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



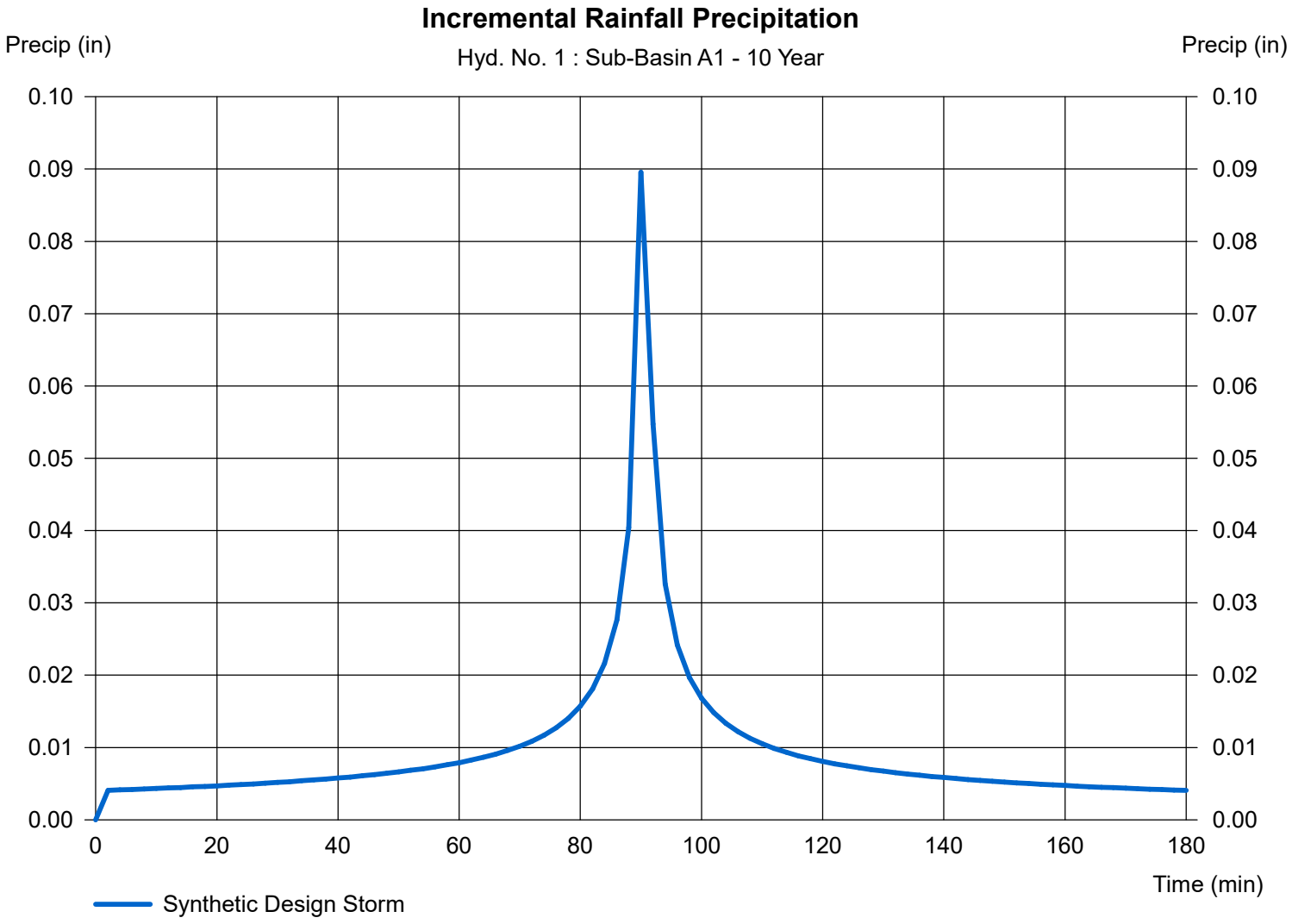
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.8899 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



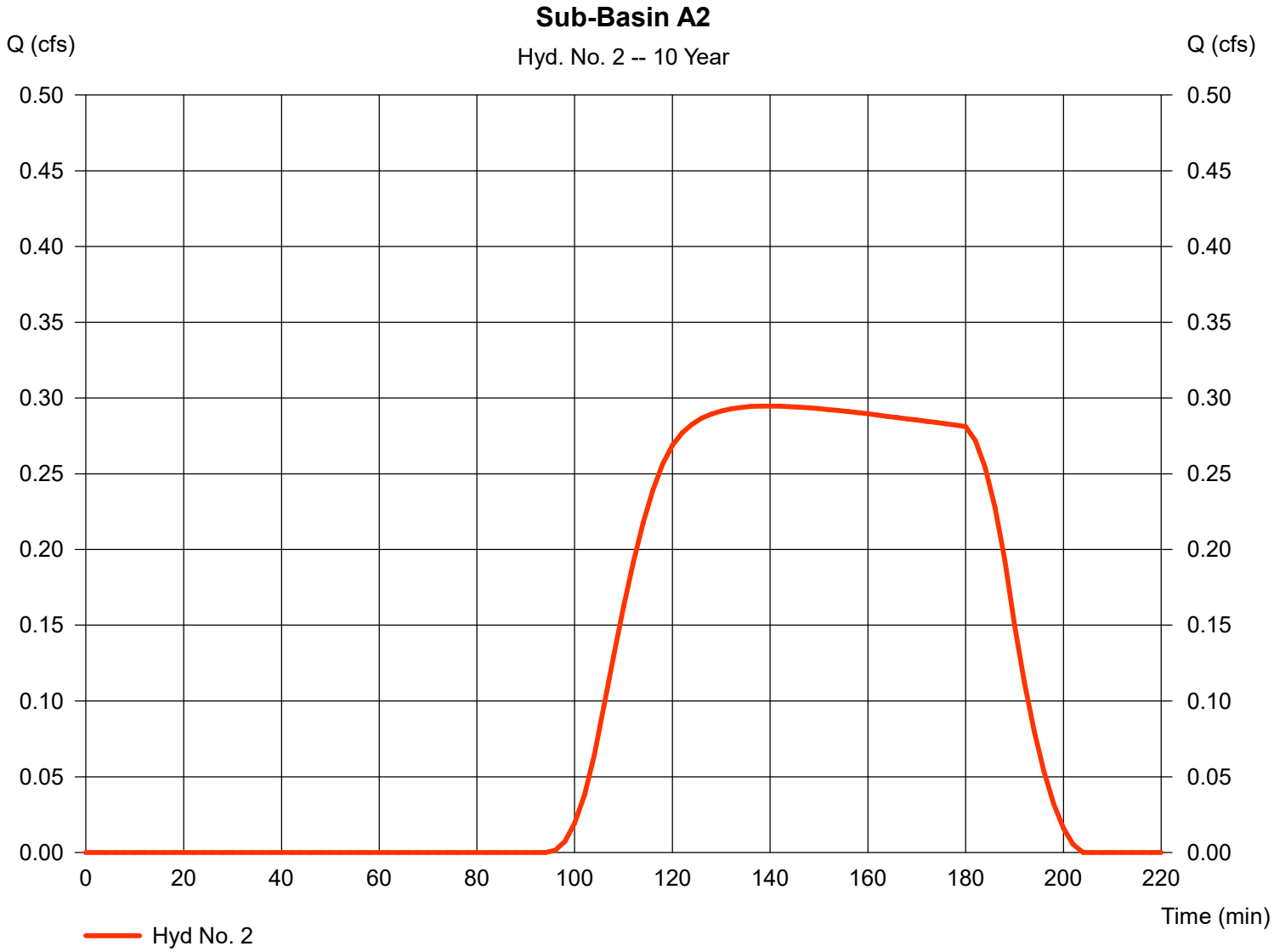
# Hydrograph Report



## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.295 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 140 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,411 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.89 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



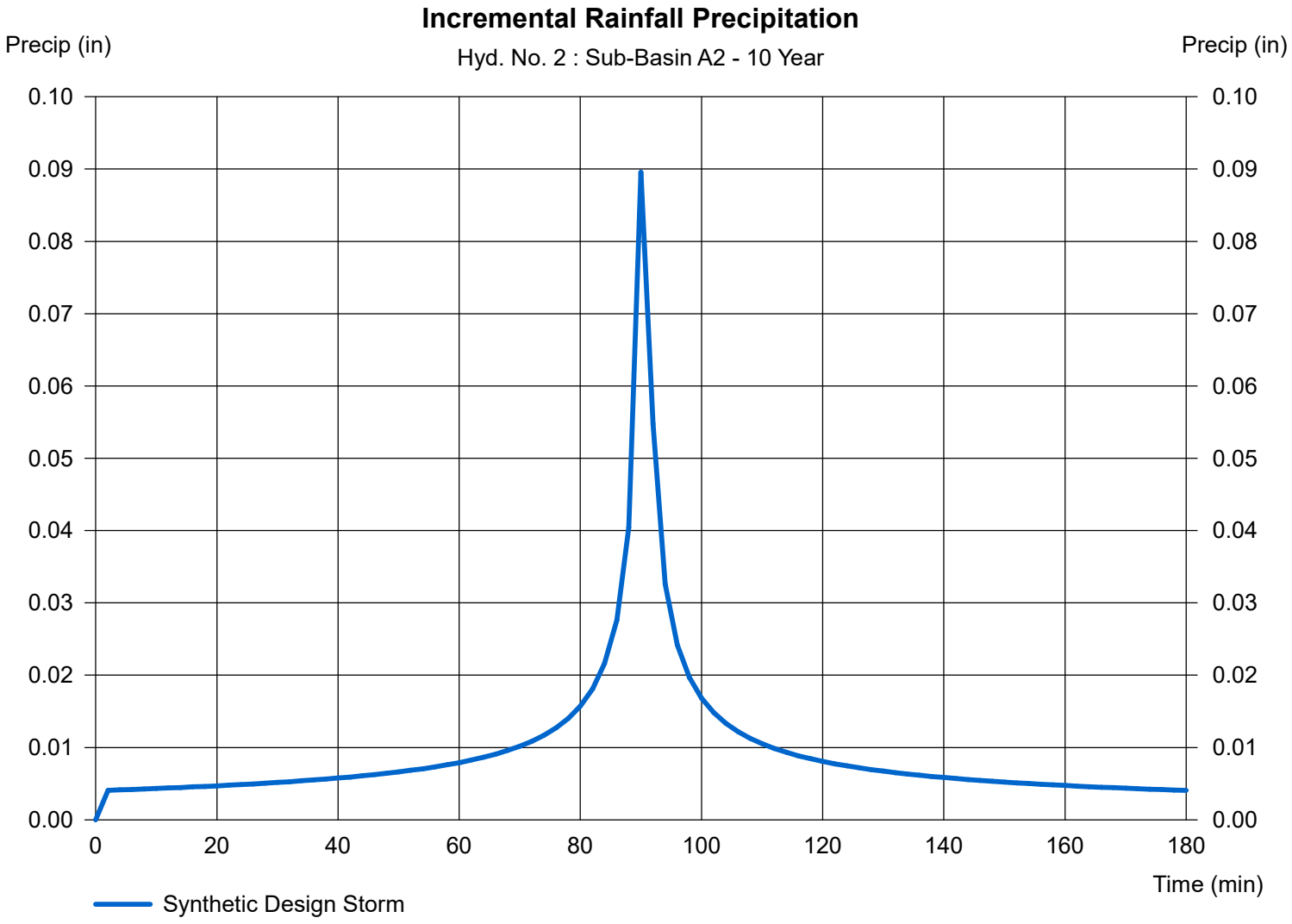
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.8899 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



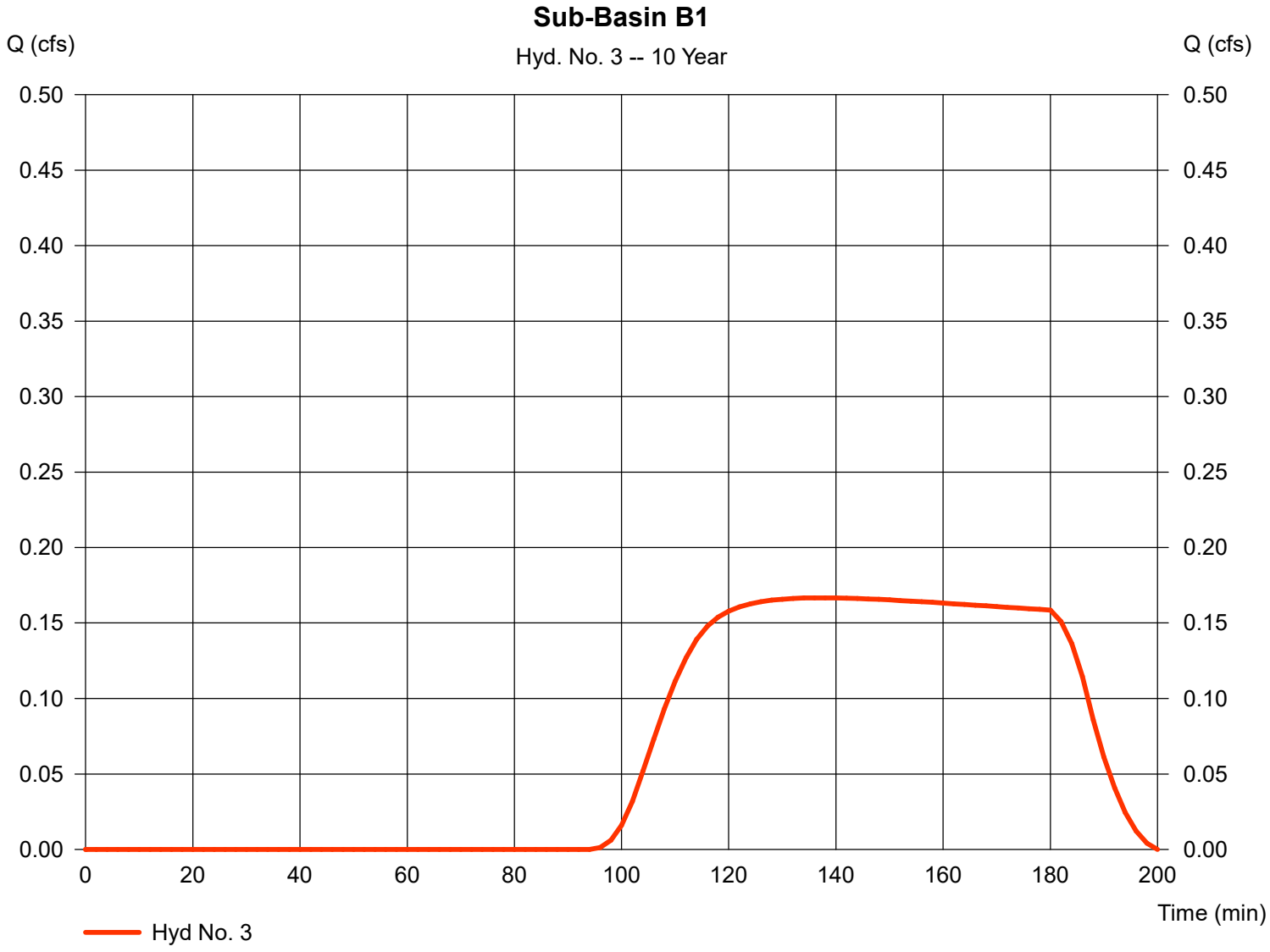
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 0.167 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 138 min |
| Time interval | = 2 min | Hyd. volume | = 798 cuft |
| Drainage area | = 6.320 ac | Curve number | = 78 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 12.80 min |
| Total precip. | = 0.89 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | Shape factor | = 484 |



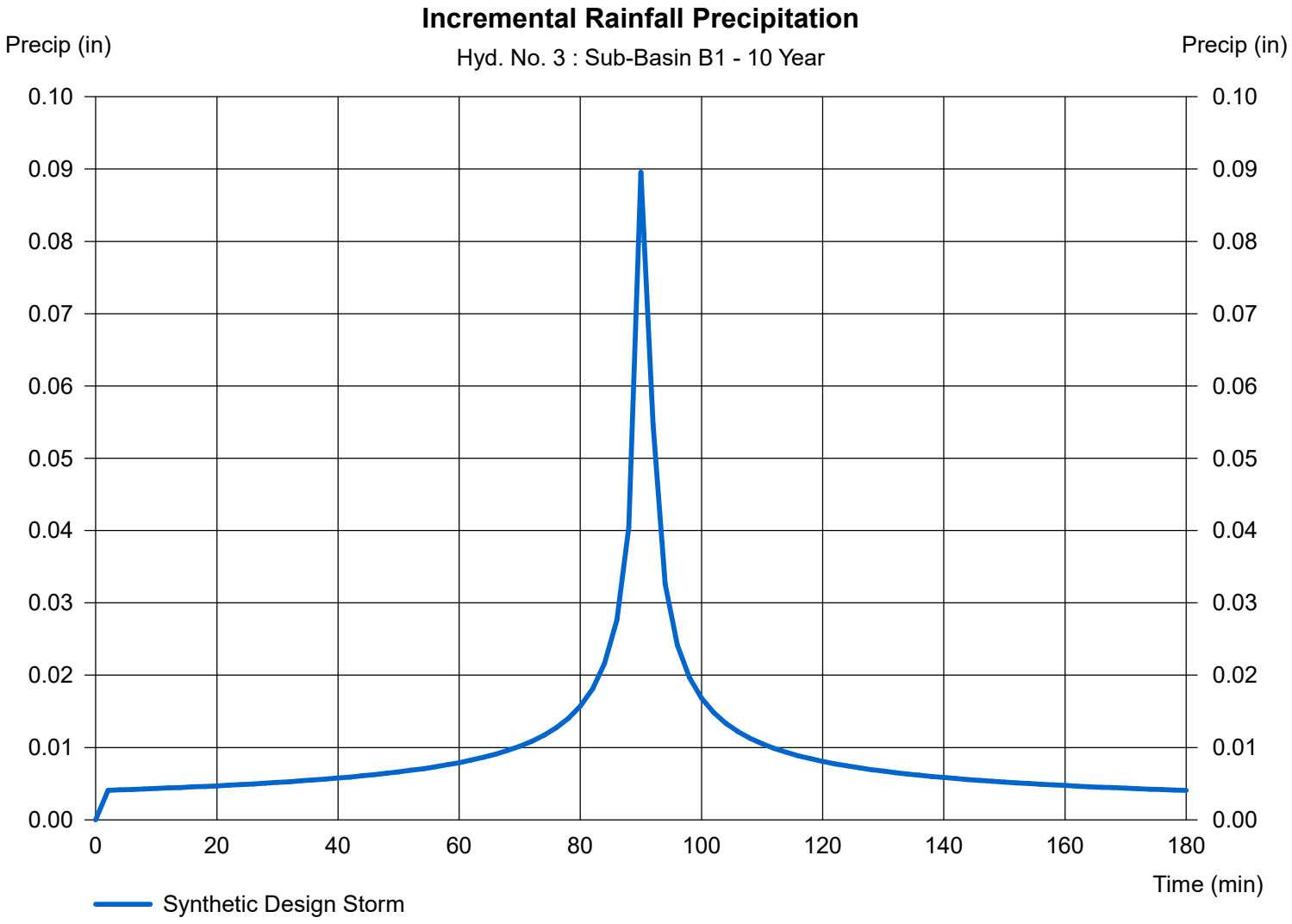
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.8899 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



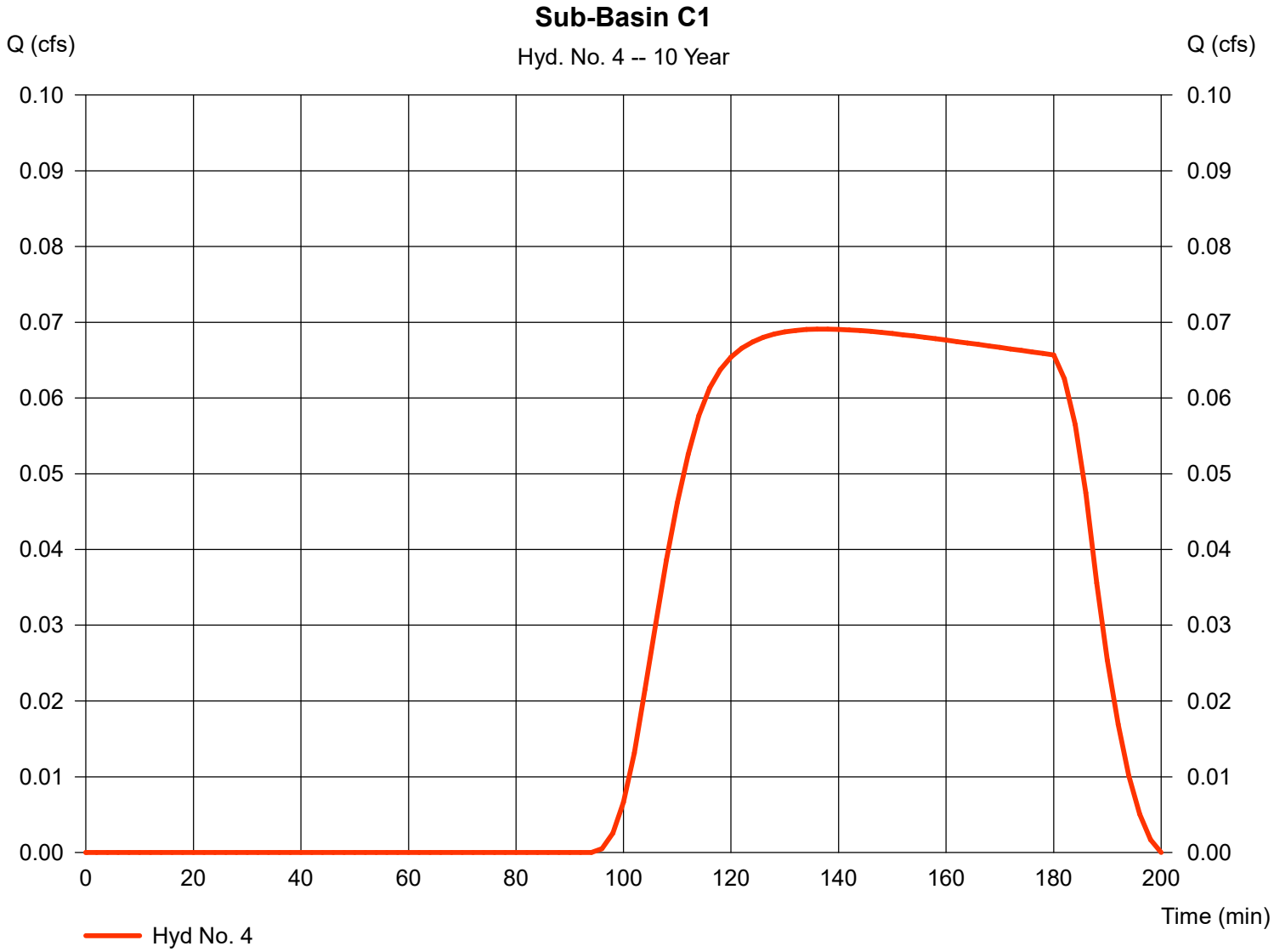
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.069 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 138 min |
| Time interval | = | 2 min | Hyd. volume | = | 331 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.89 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



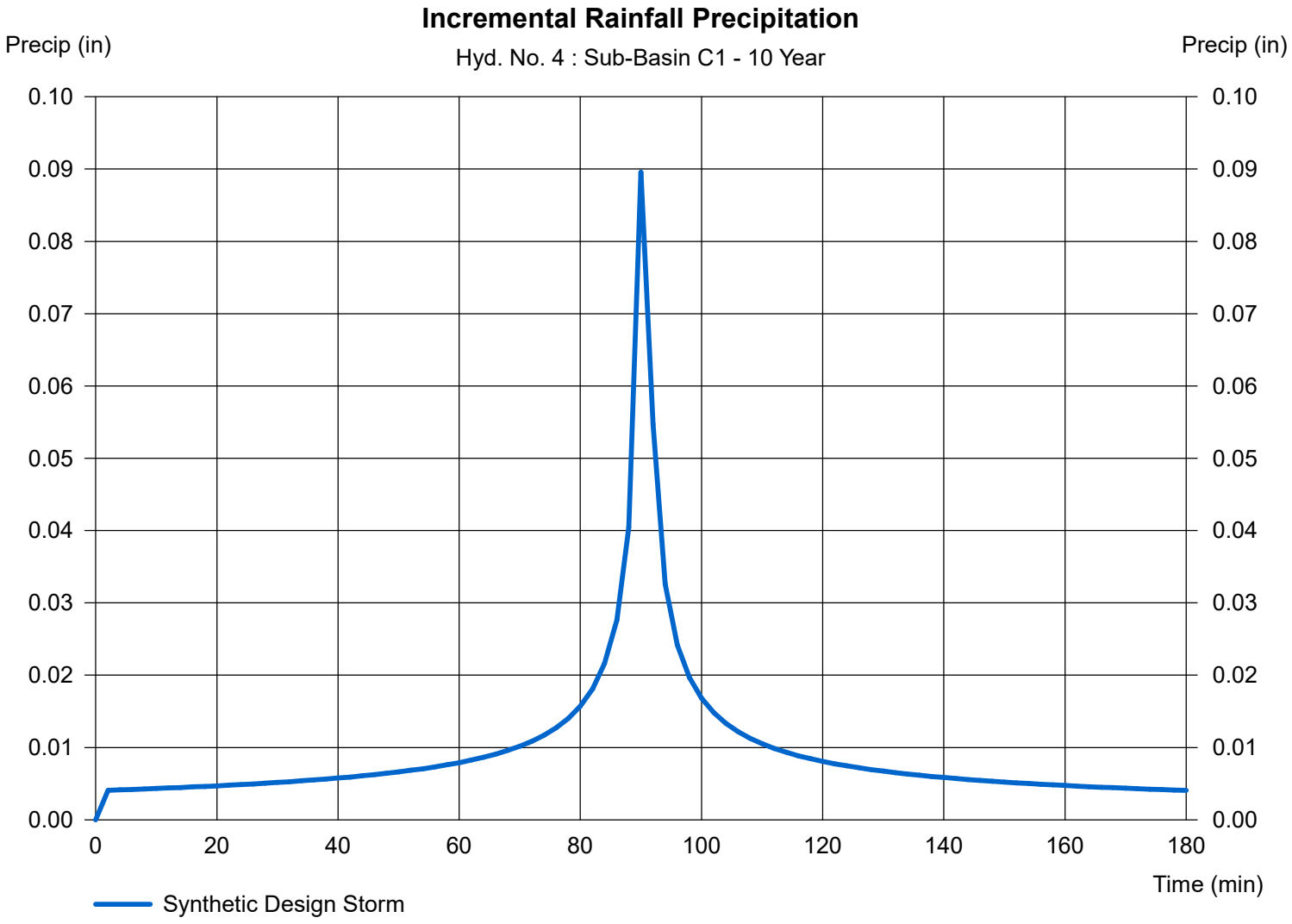
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.8899 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



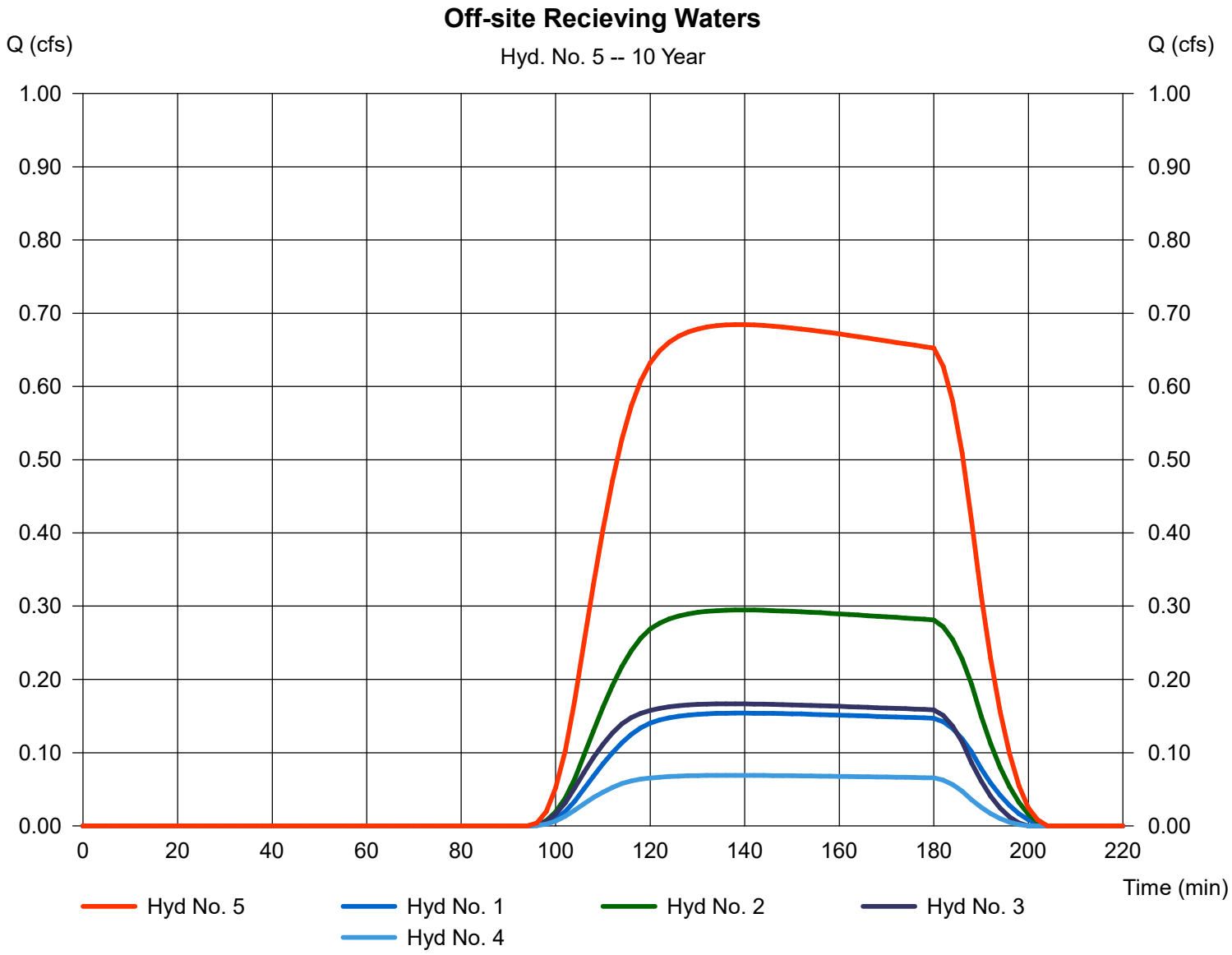
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.684 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 138 min |
| Time interval | = 2 min | Hyd. volume | = 3,277 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

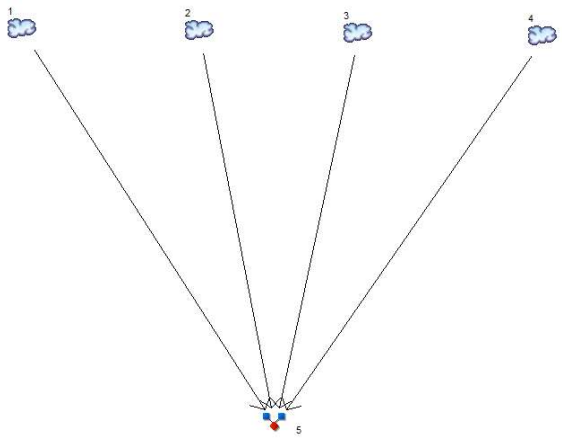
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 0.88 | 1.06 | 0.00 | 1.33 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.372 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.712 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.417 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.173 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 1.658 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.372 | 2 | 200 | 2,406 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.712 | 2 | 200 | 4,606 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.417 | 2 | 196 | 2,604 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.173 | 2 | 196 | 1,079 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 1.658 | 2 | 198 | 10,695 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

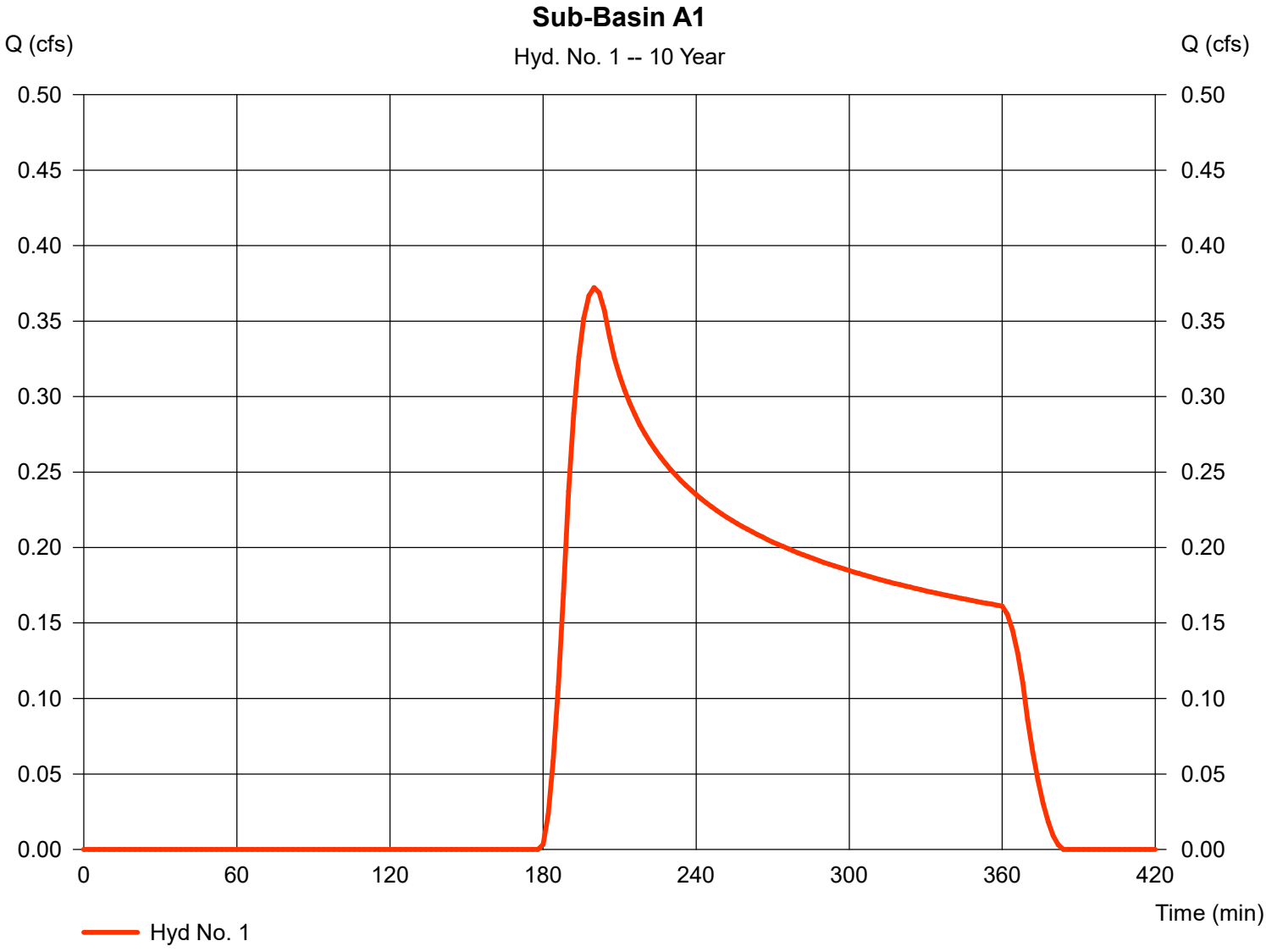
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.372 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 200 min |
| Time interval | = | 2 min | Hyd. volume | = | 2,406 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 1.18 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



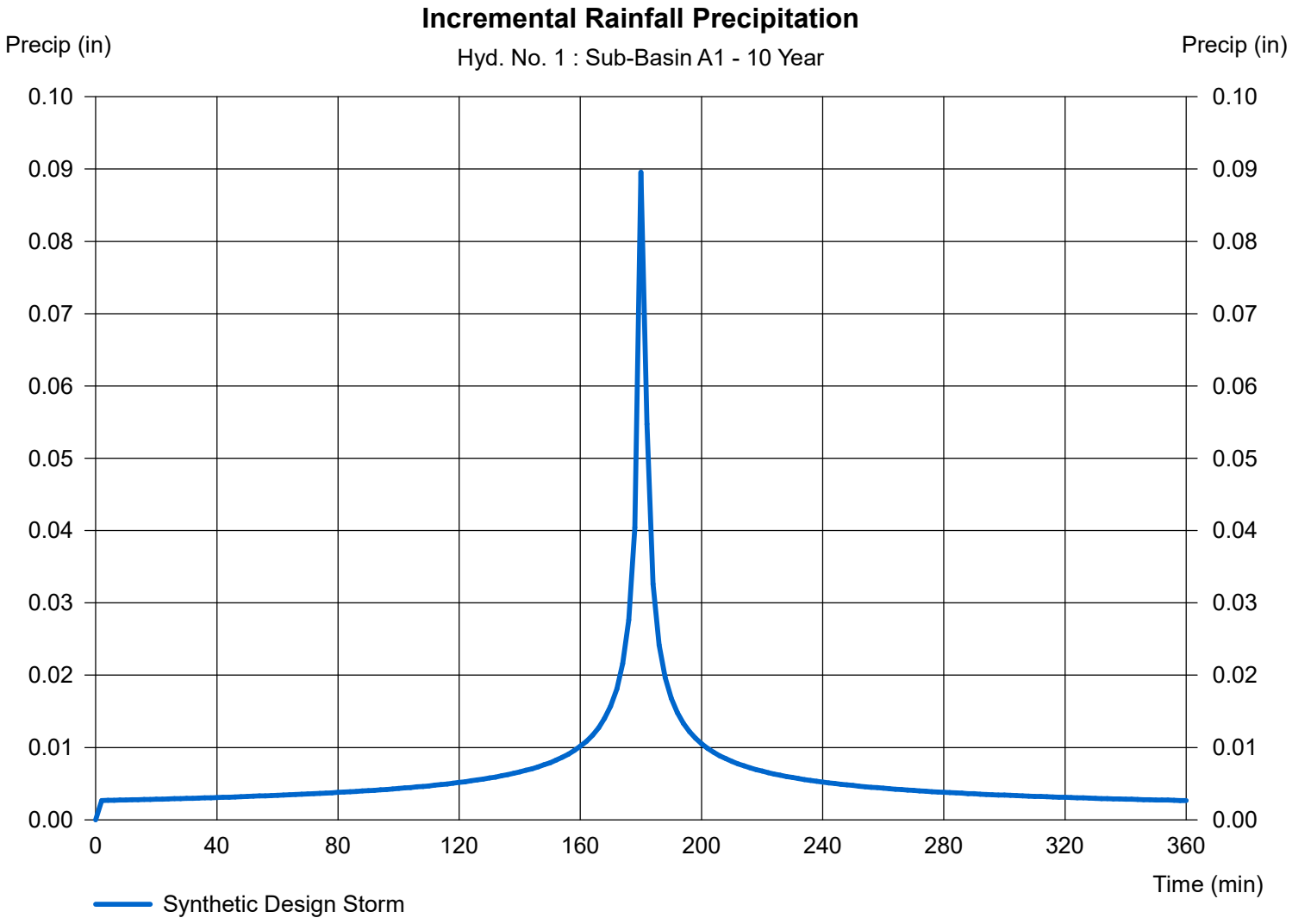
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.1804 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



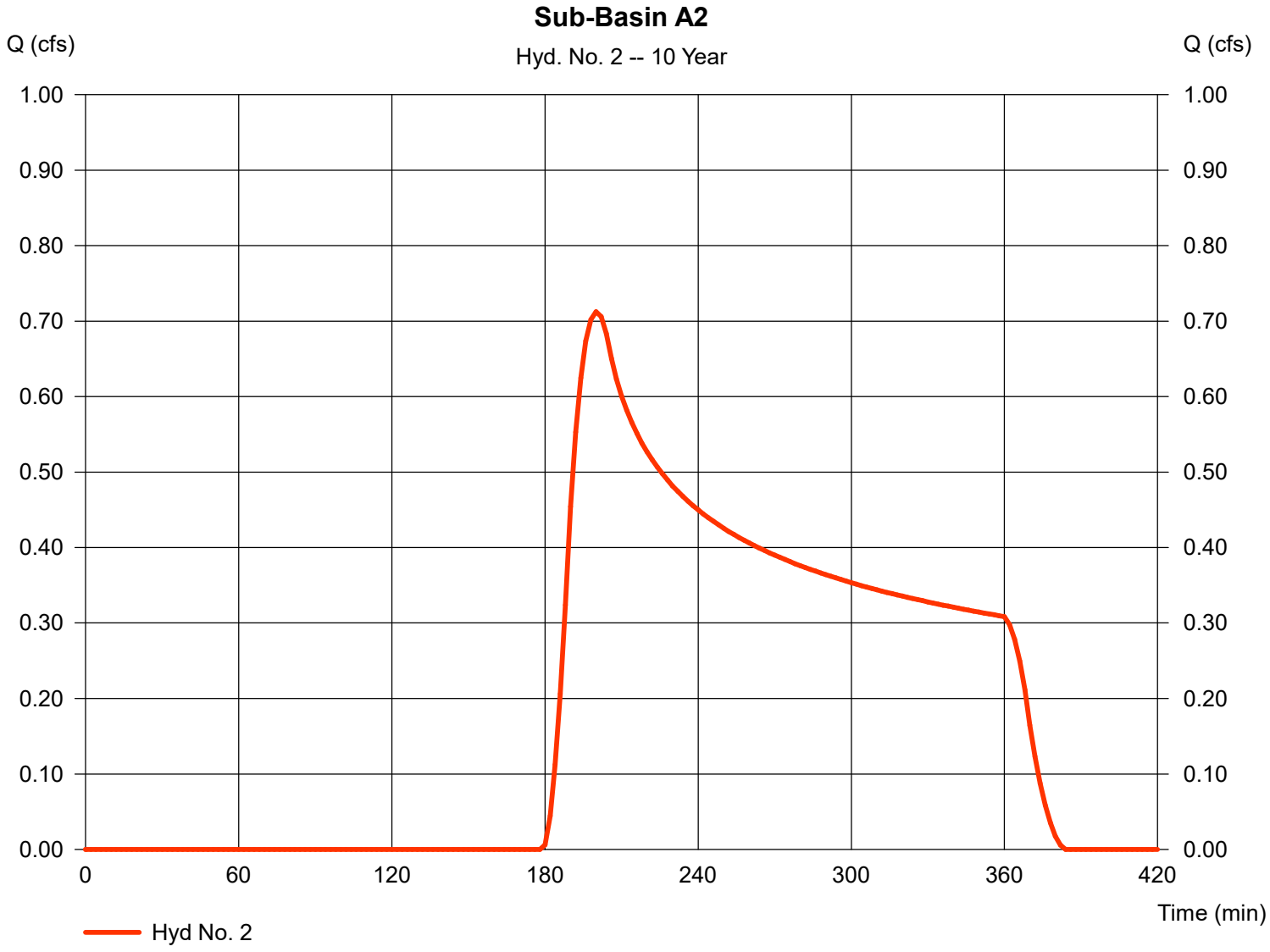
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.712 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 200 min |
| Time interval | = | 2 min | Hyd. volume | = | 4,606 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 1.18 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



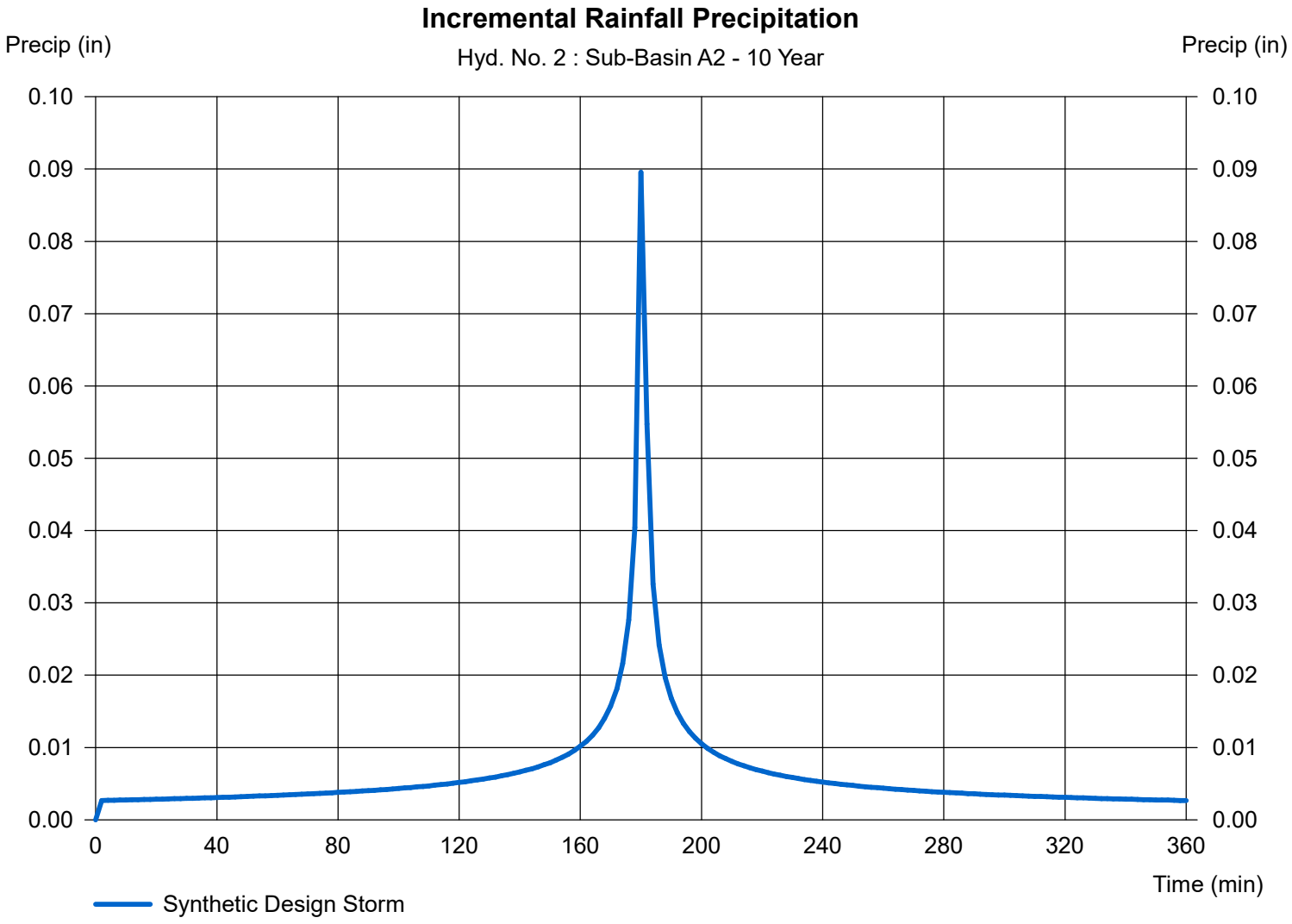
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.1804 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



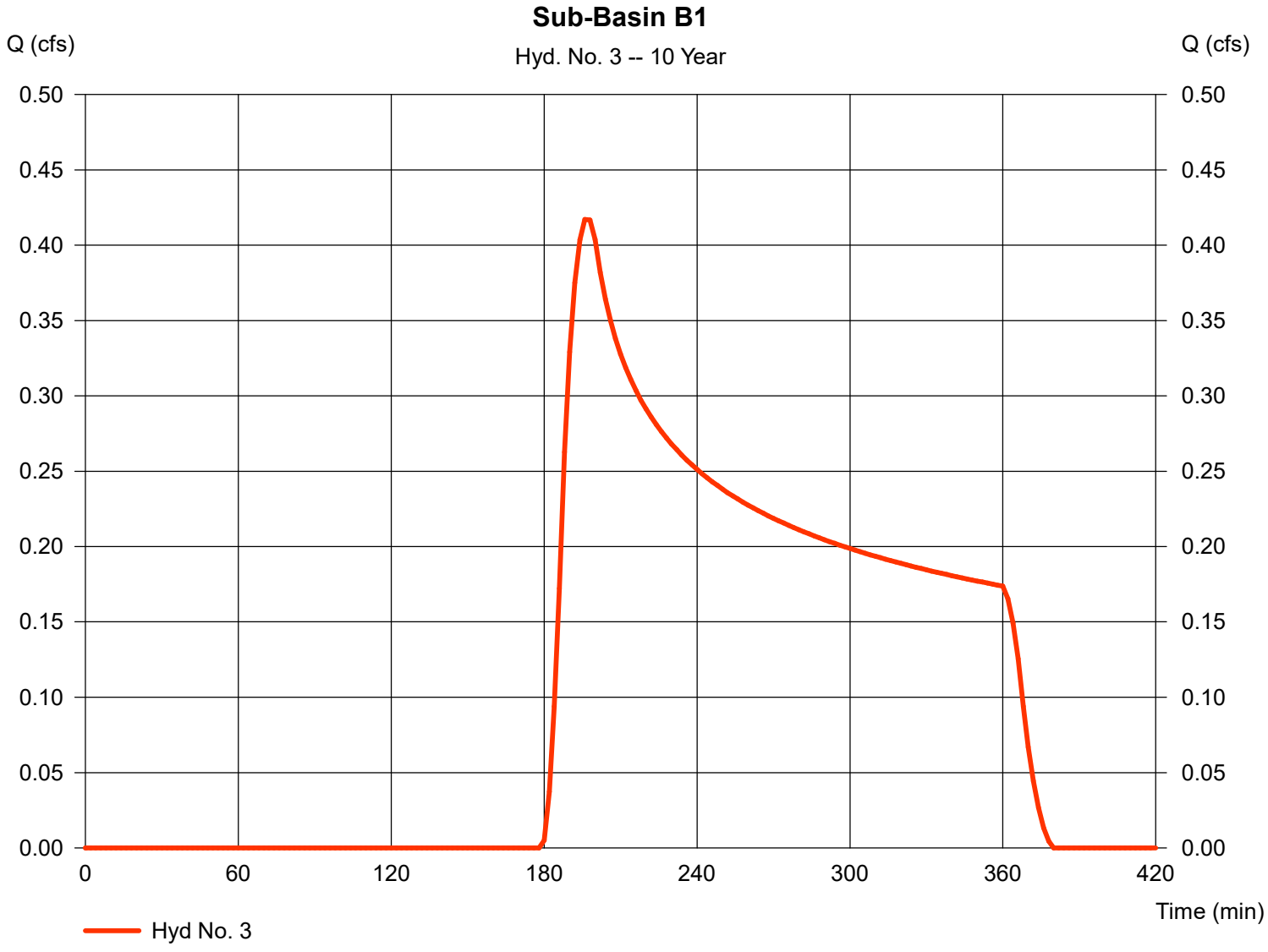
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.417 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 196 min |
| Time interval | = | 2 min | Hyd. volume | = | 2,604 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 1.18 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



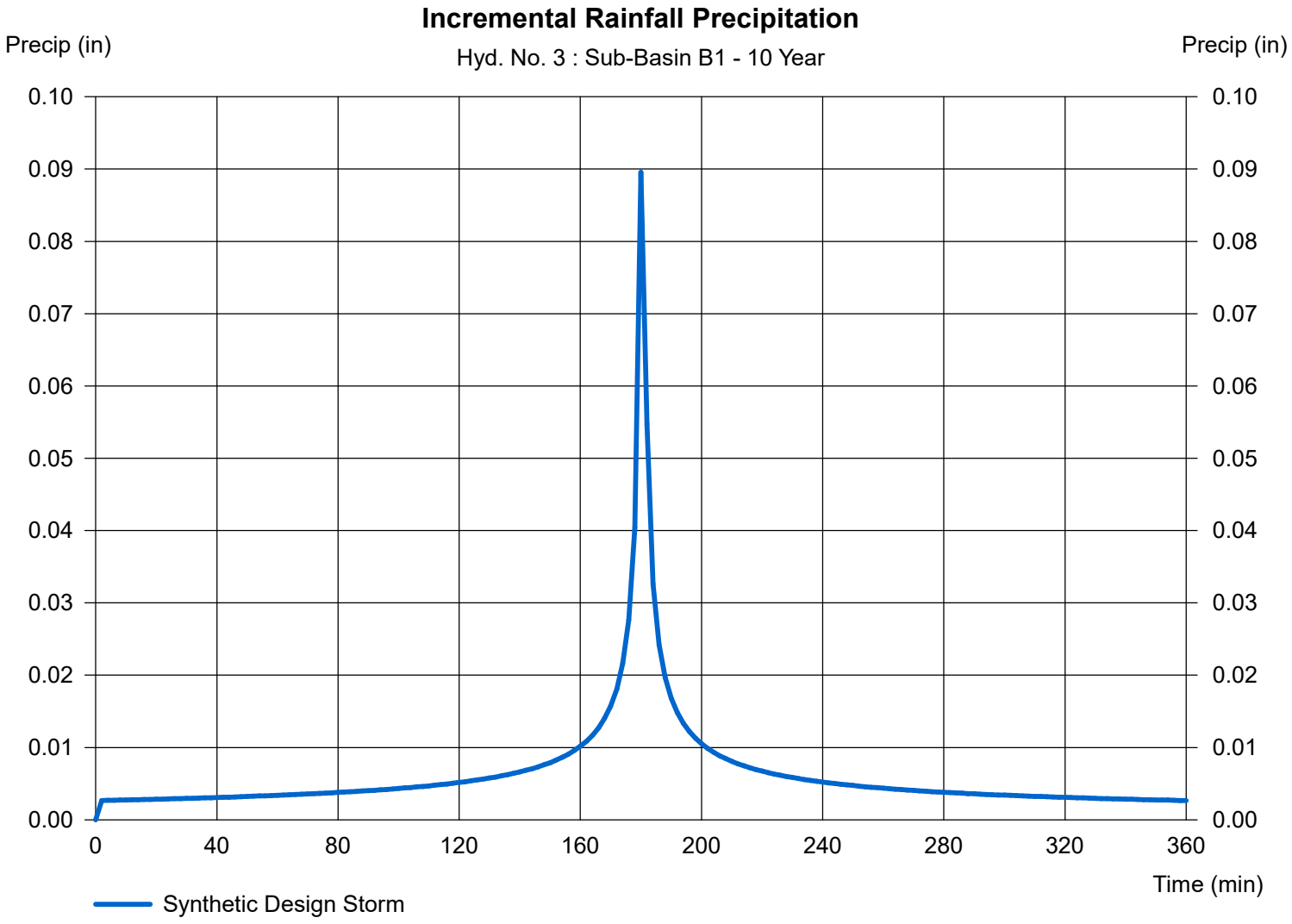
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.1804 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



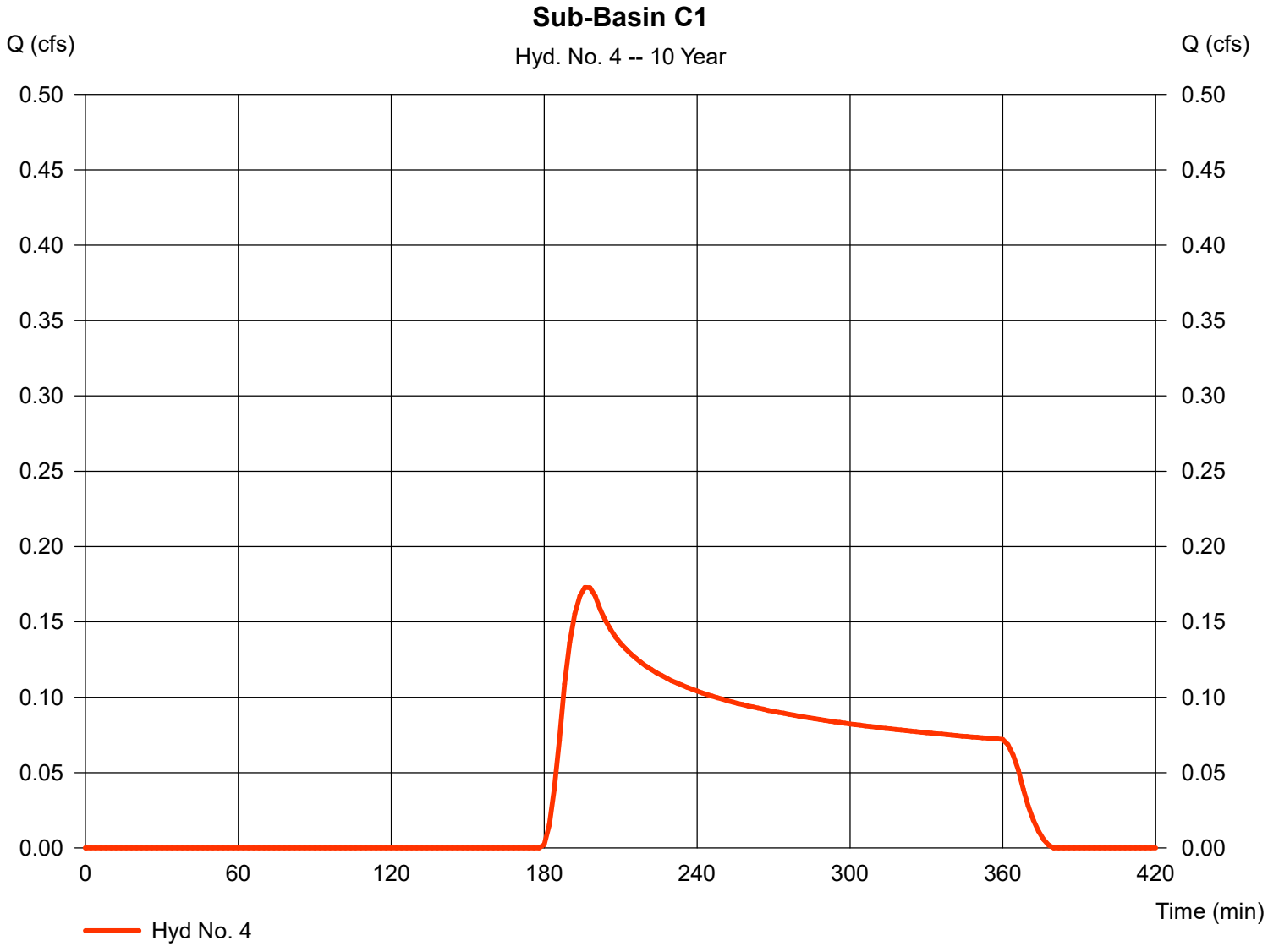
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.173 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 196 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,079 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 1.18 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



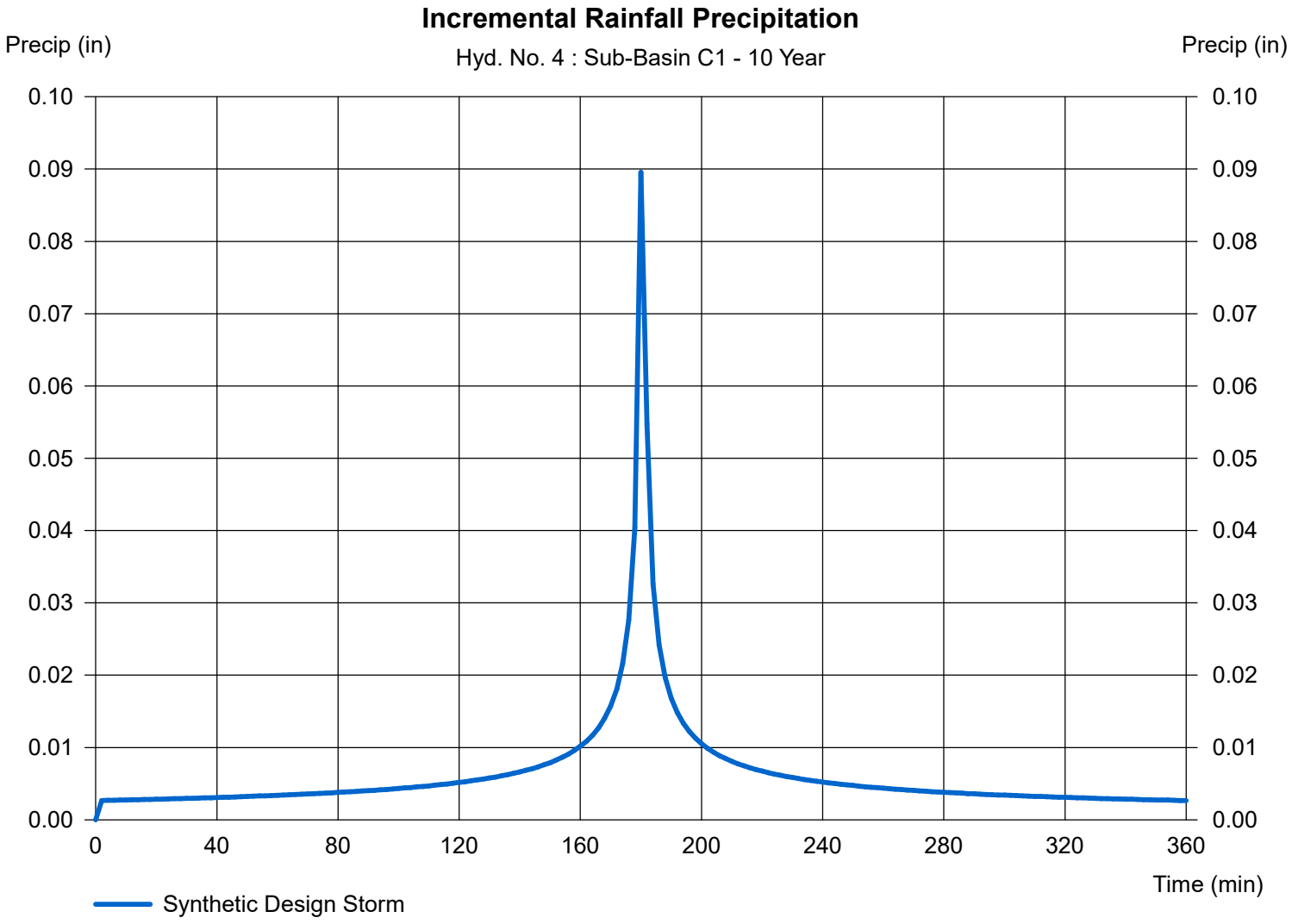
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.1804 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



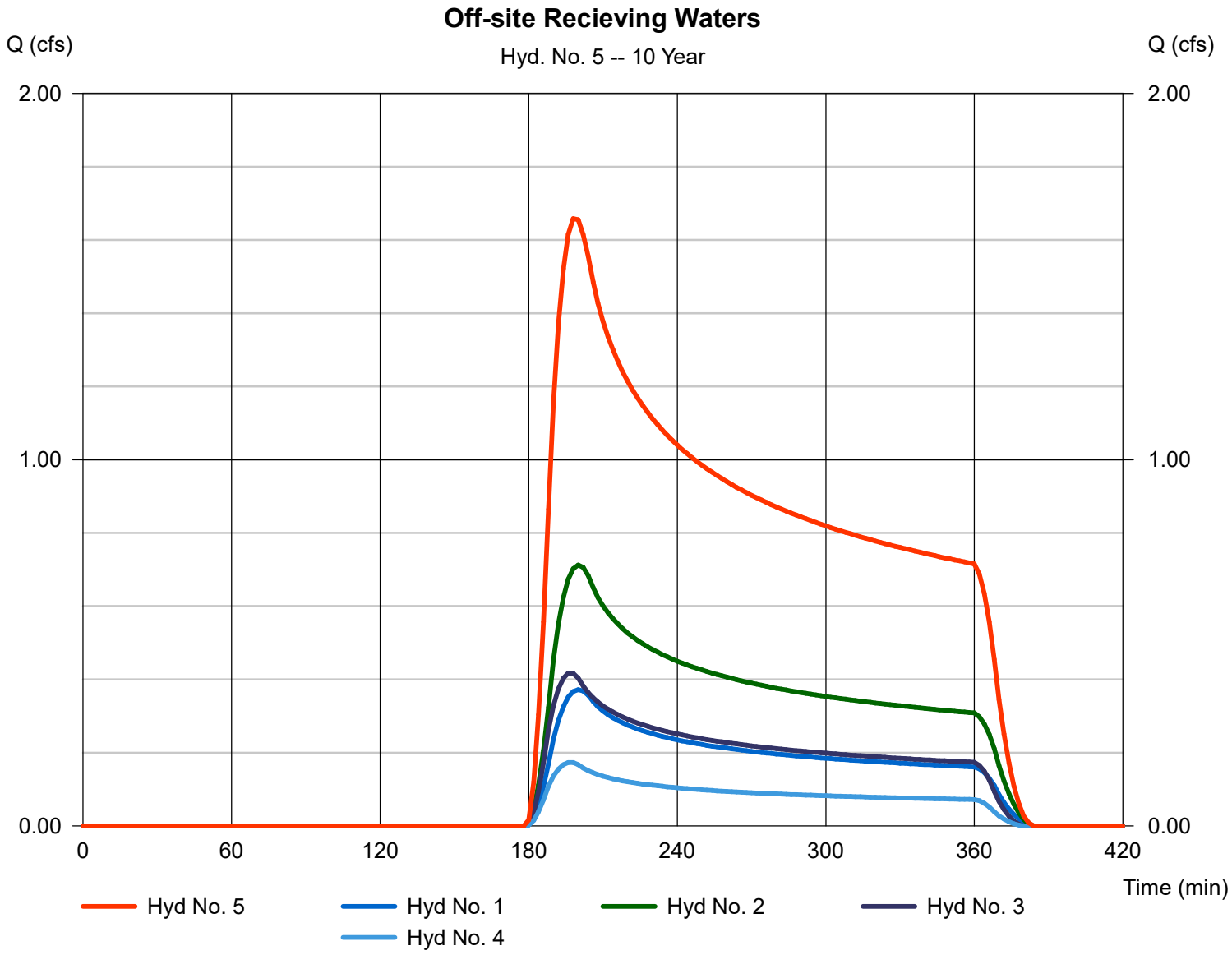
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 1.658 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 198 min |
| Time interval | = 2 min | Hyd. volume | = 10,695 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

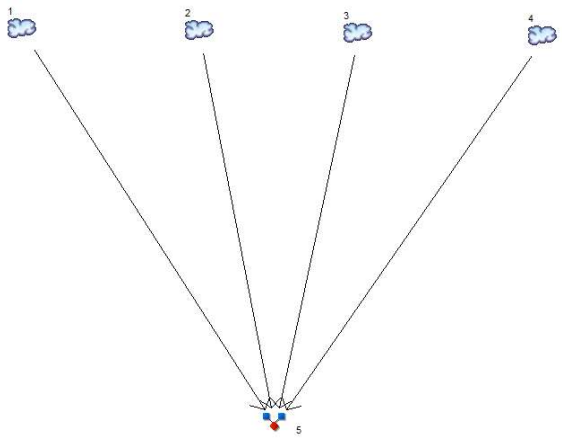
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 1.885 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 3.608 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 2.209 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.915 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | 8.529 | ------- | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 1.885 | 2 | 730 | 11,408 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 3.608 | 2 | 730 | 21,835 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 2.209 | 2 | 728 | 12,344 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.915 | 2 | 728 | 5,116 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 8.529 | 2 | 730 | 50,703 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

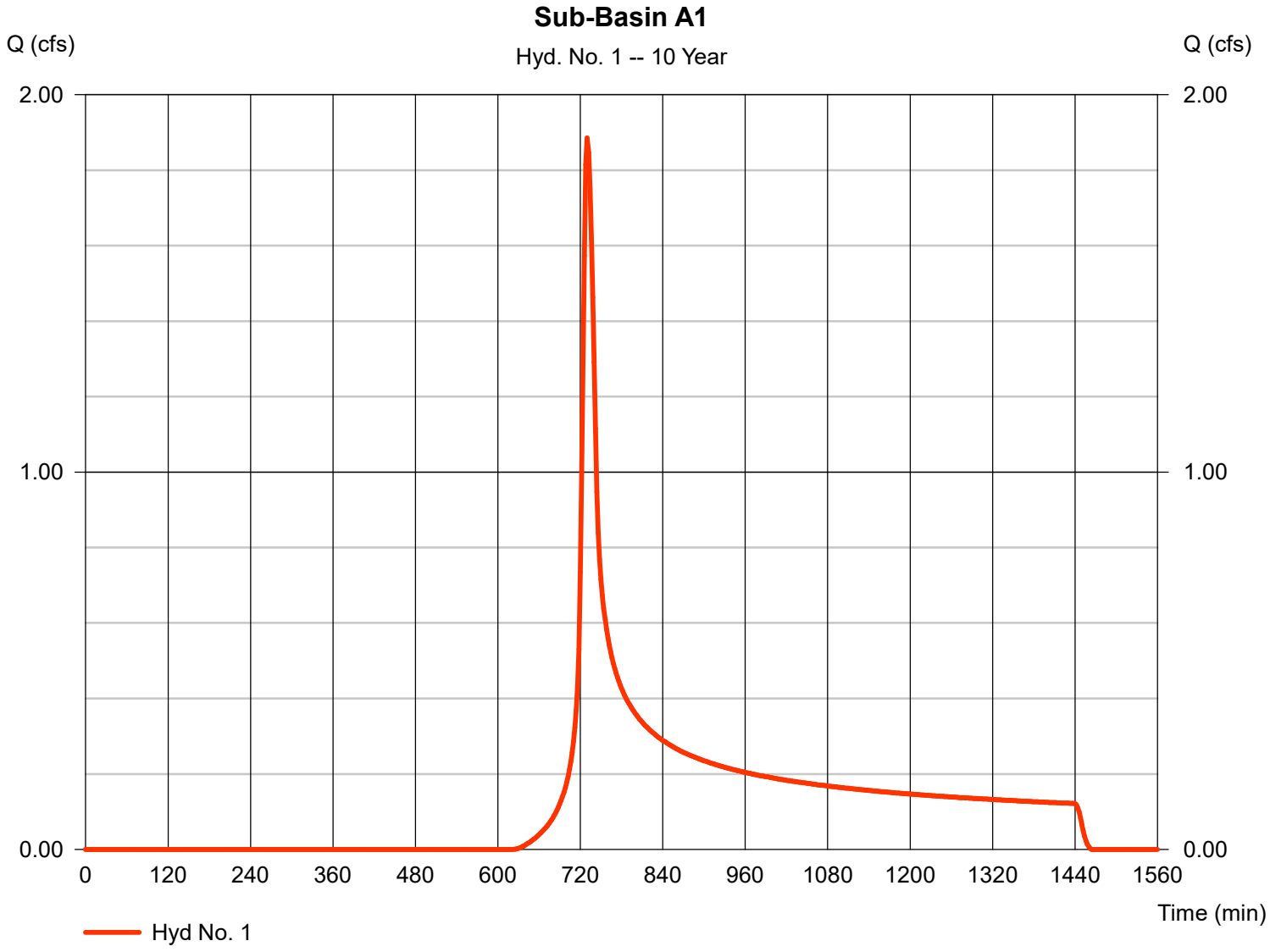
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.885 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 11,408 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 2.07 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



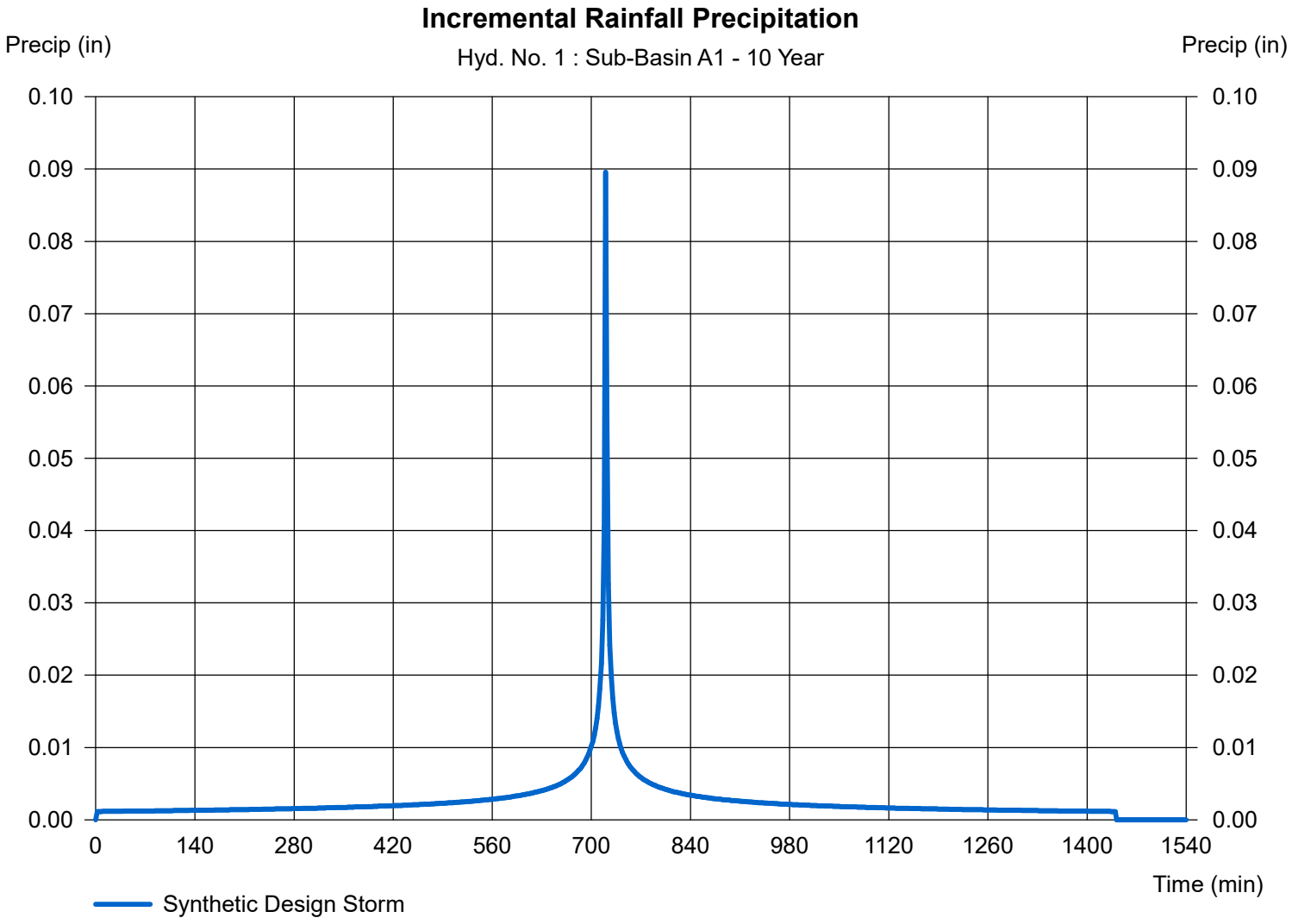
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.0658 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



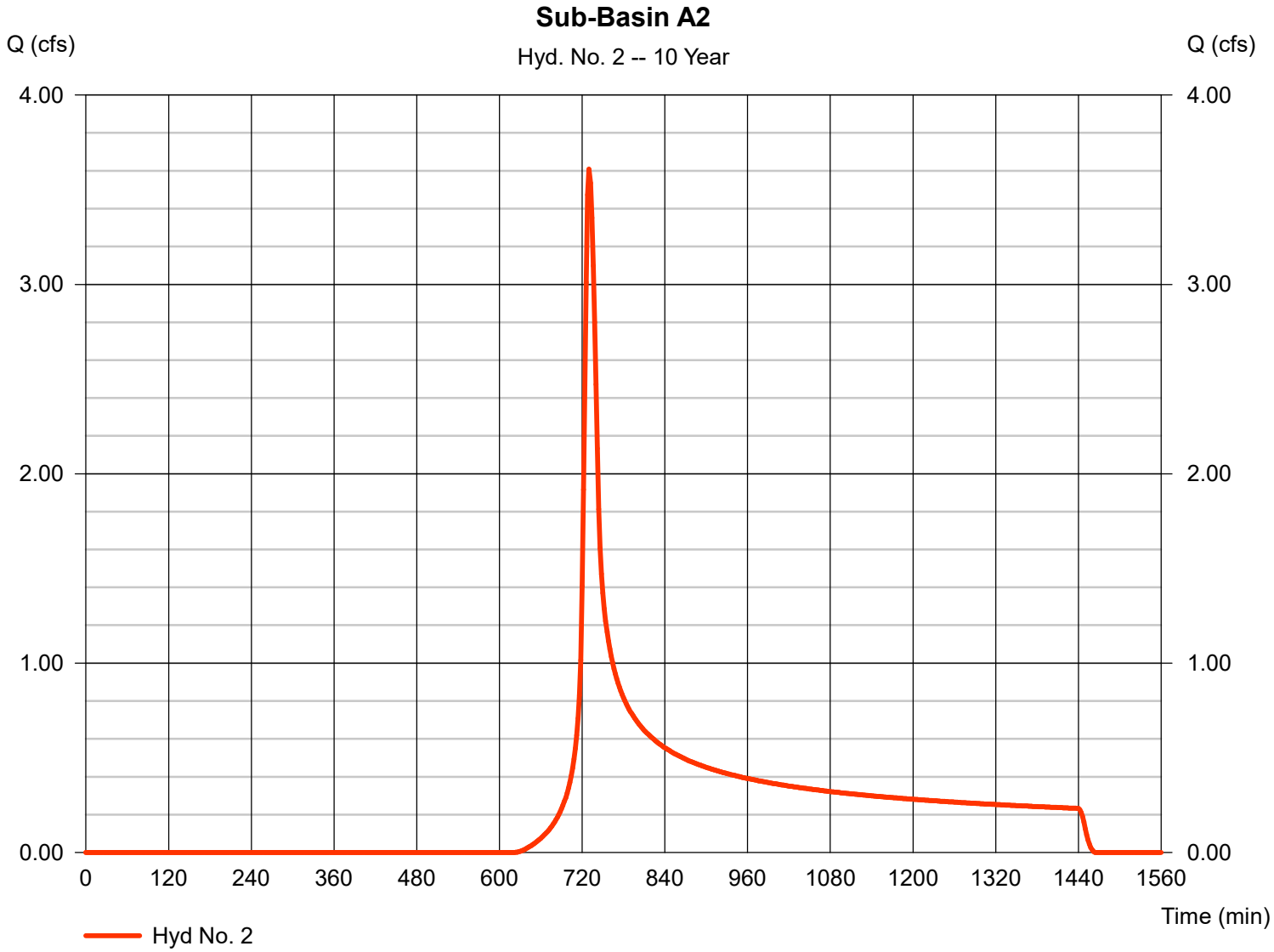
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.608 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 21,835 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 2.07 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



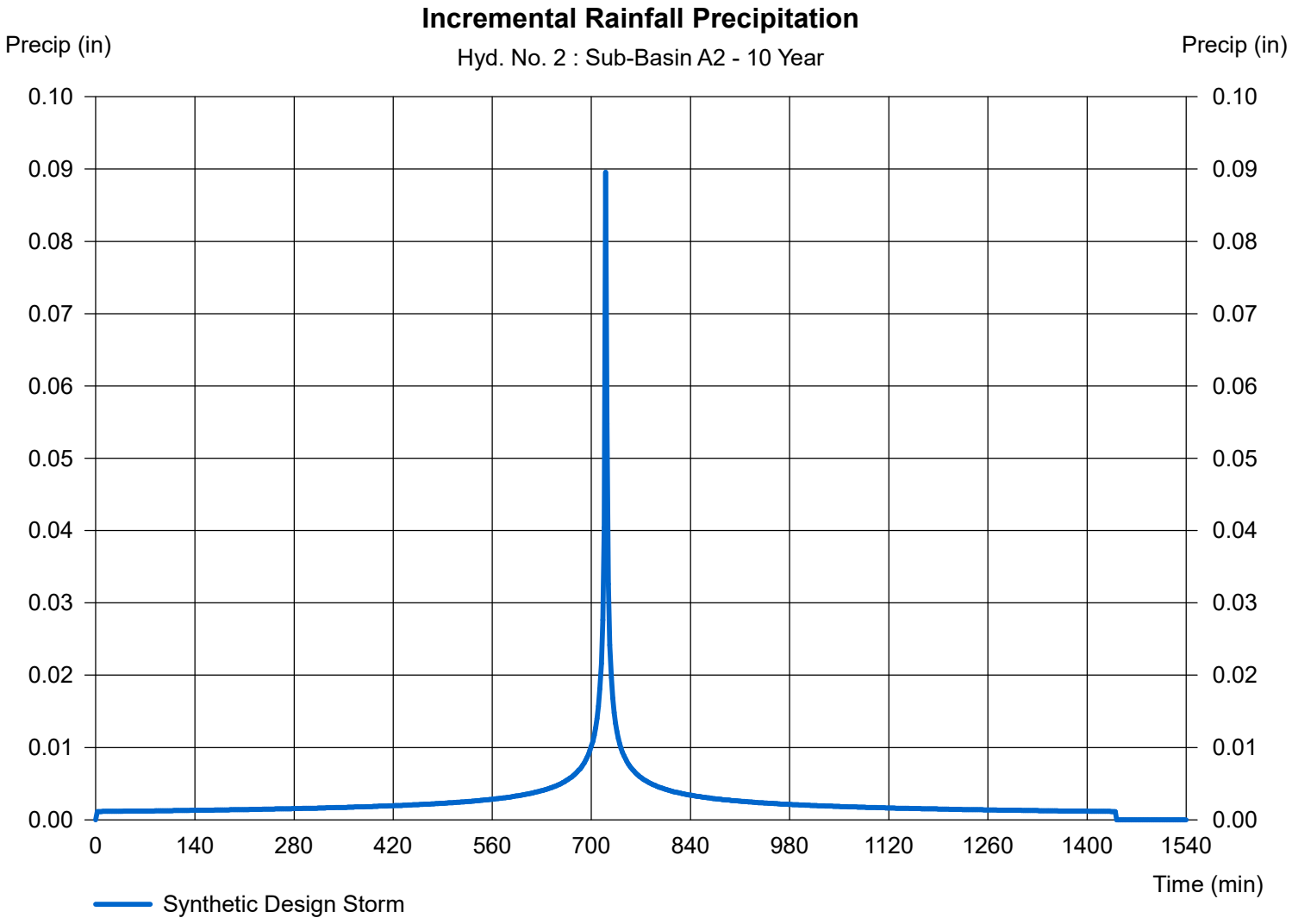
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.0658 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



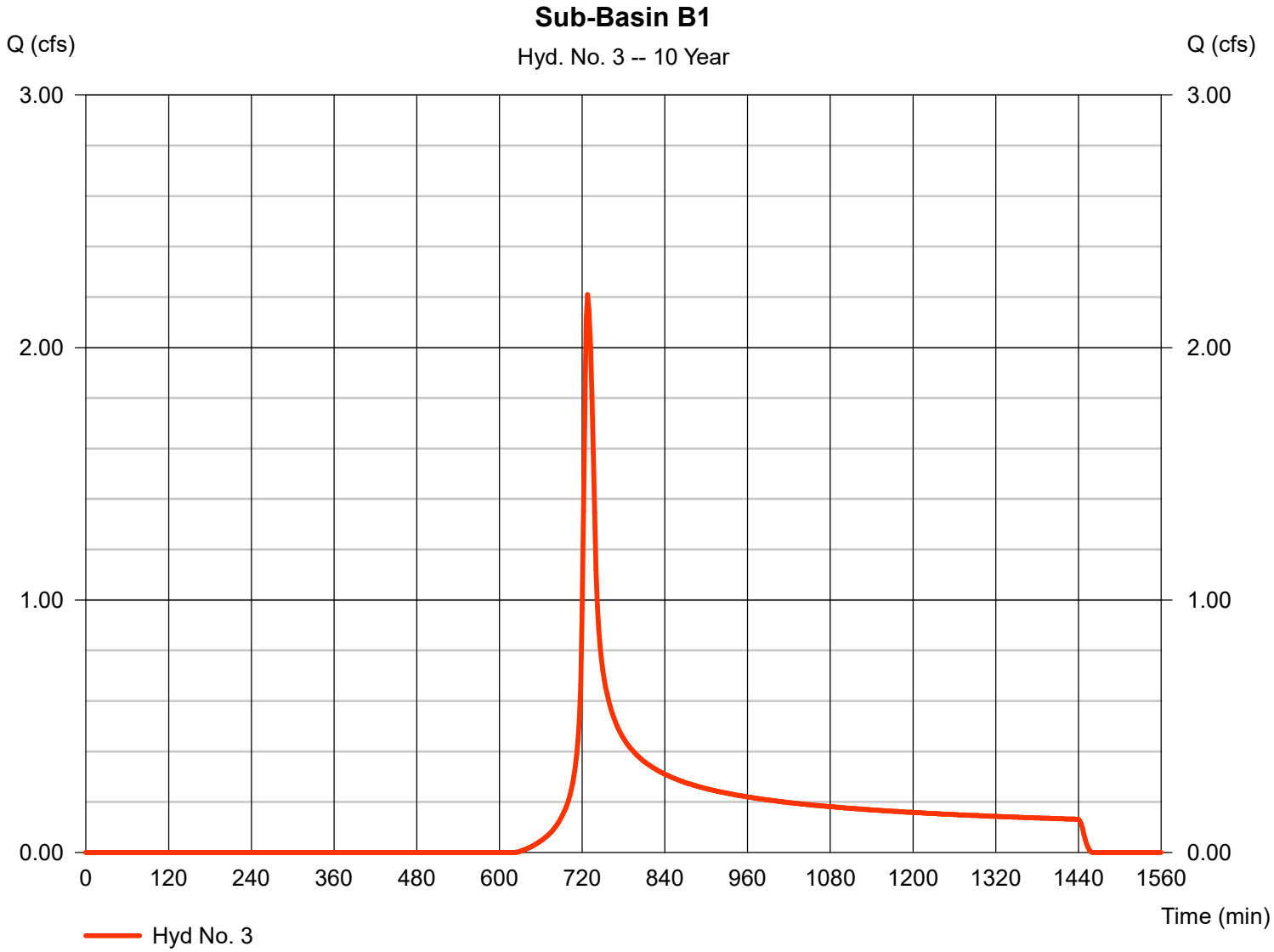
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.209 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 12,344 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 2.07 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



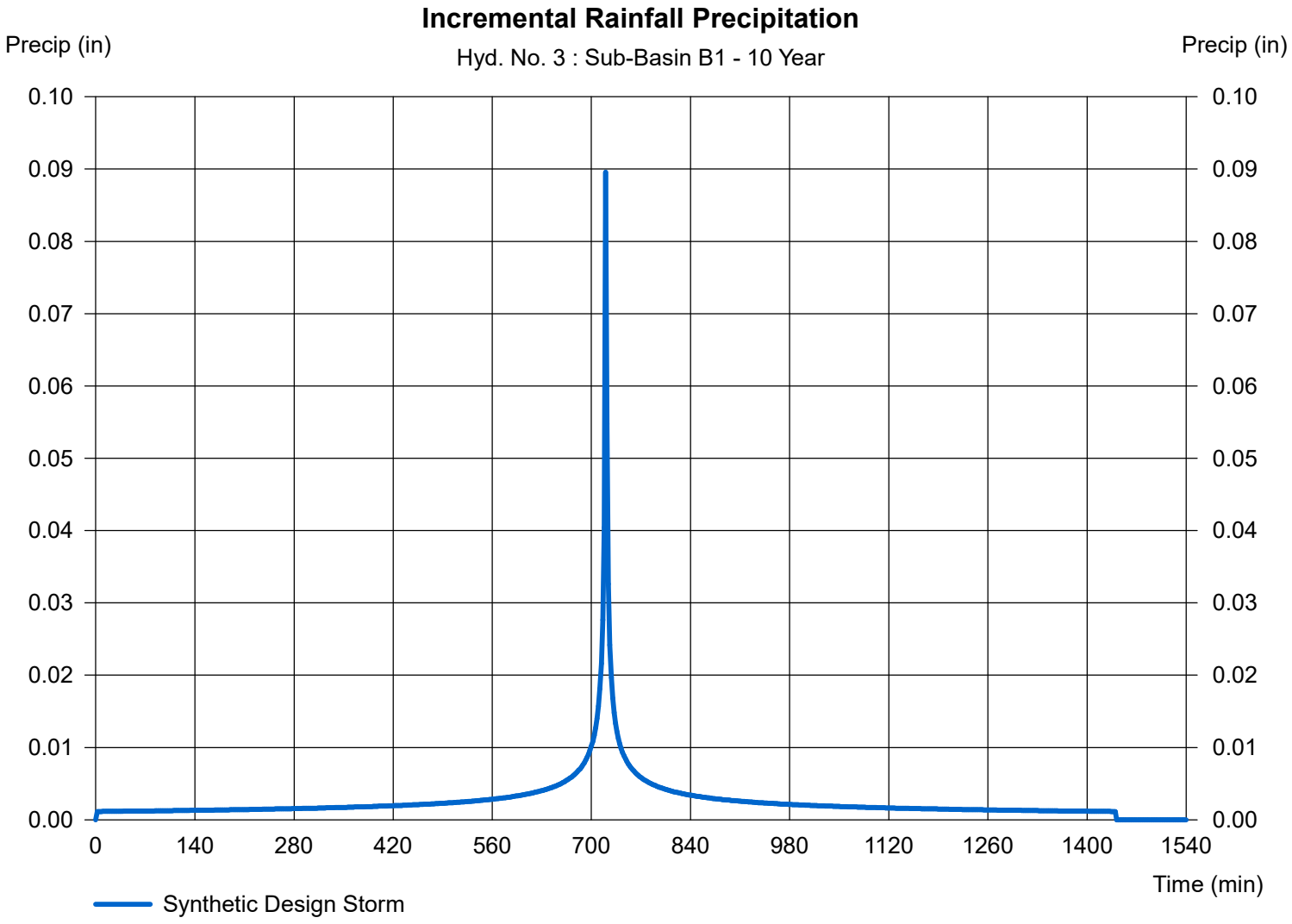
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.0658 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



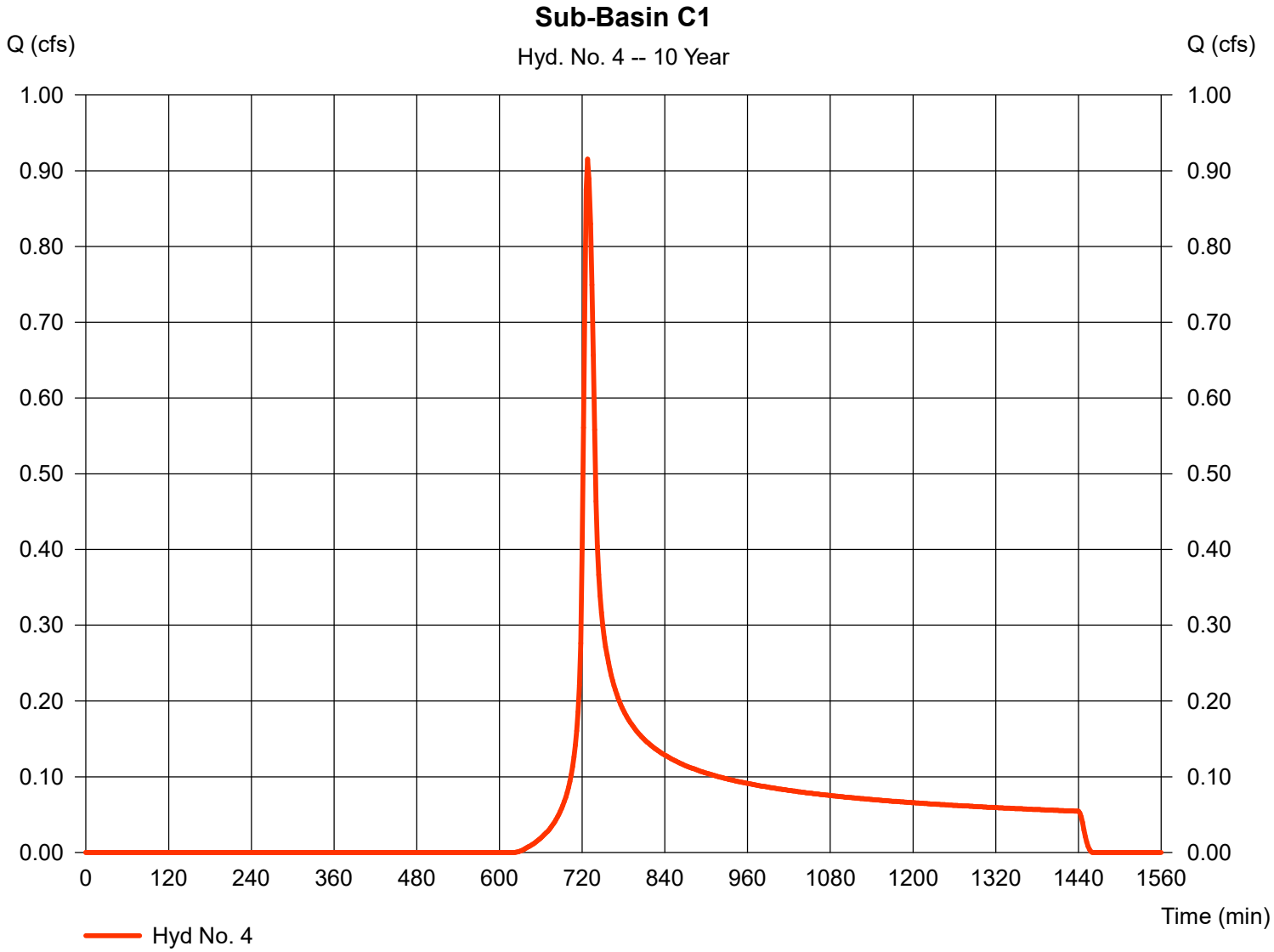
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.915 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 5,116 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 2.07 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



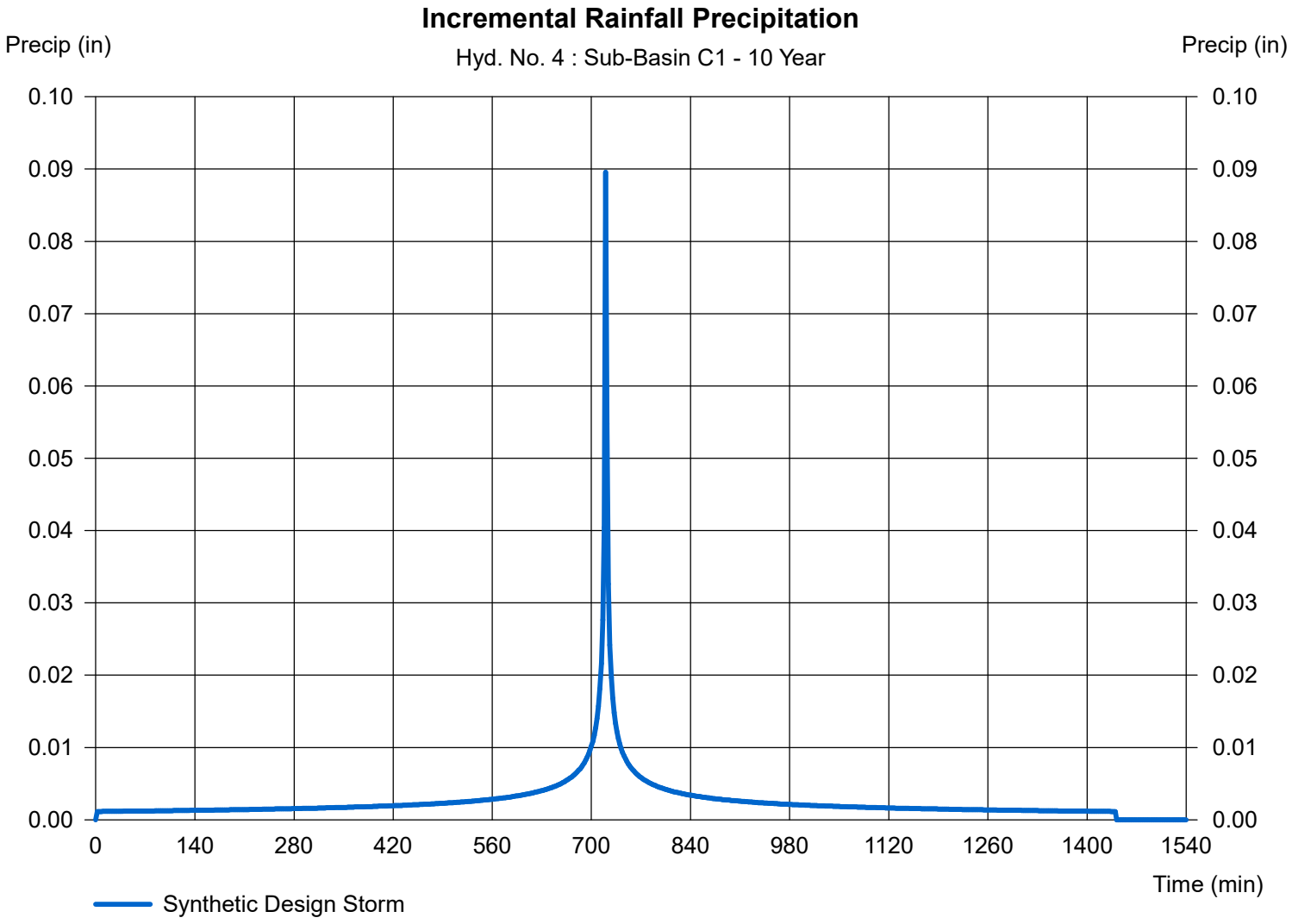
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.0658 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



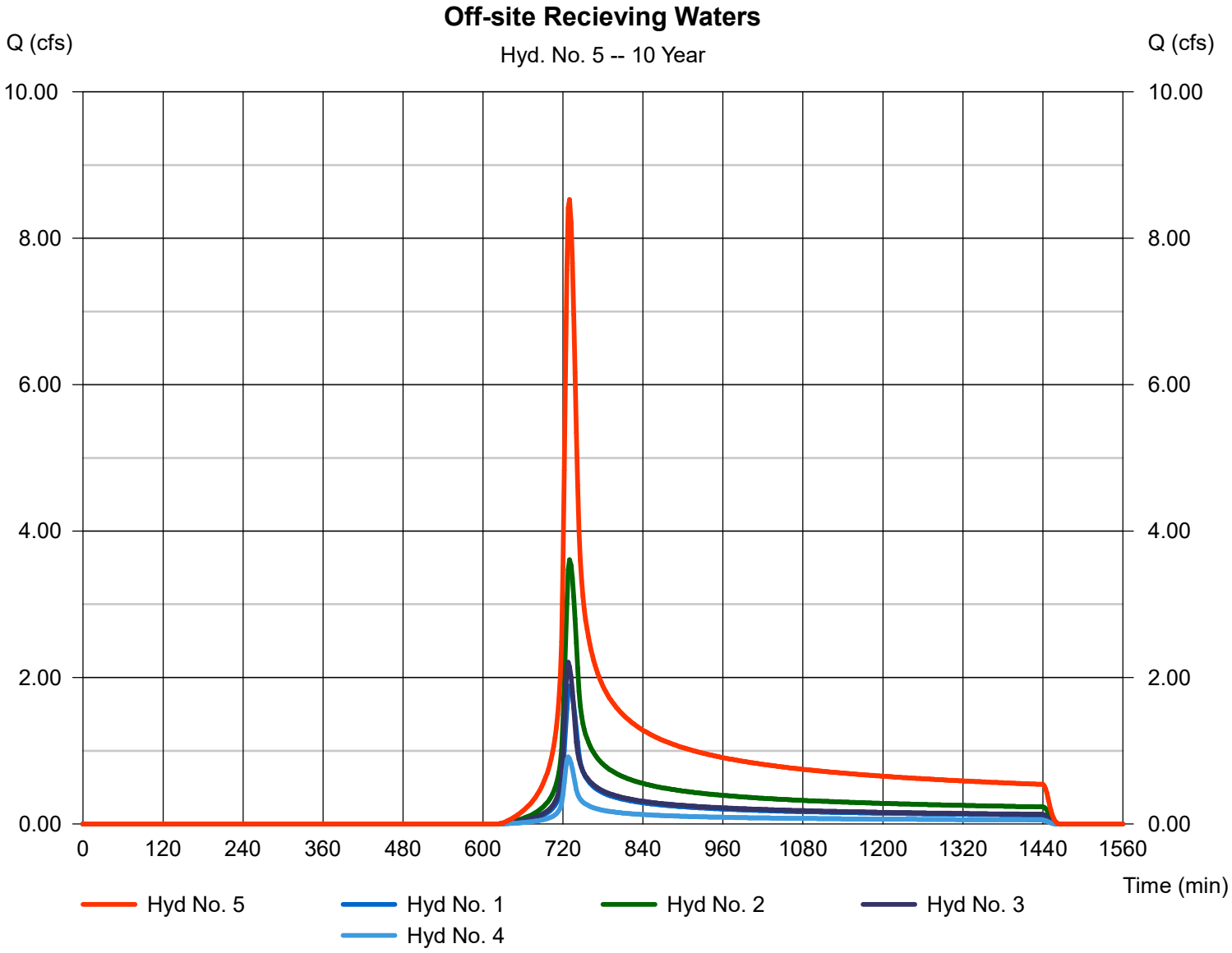
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 8.529 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 730 min |
| Time interval | = 2 min | Hyd. volume | = 50,703 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |

## 5.3.c. 25 Year Storm Event– Pre-Developed Conditions

5.3.c.1 15 Min Duration

5.3.c.2 30 Min Duration

5.3.c.3 1 Hour Duration

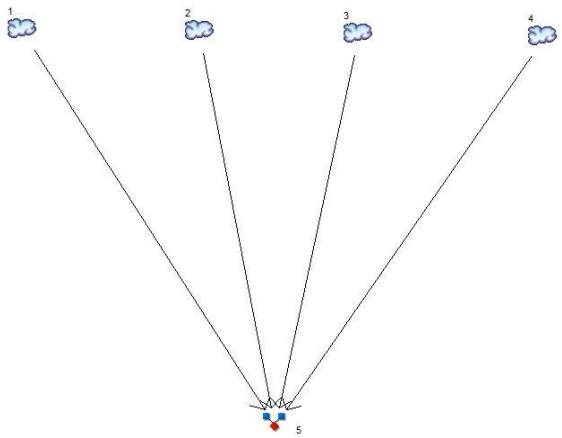
5.3.c.4 3 Hour Duration

5.3.c.5 6 Hour Duration

5.3.c.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

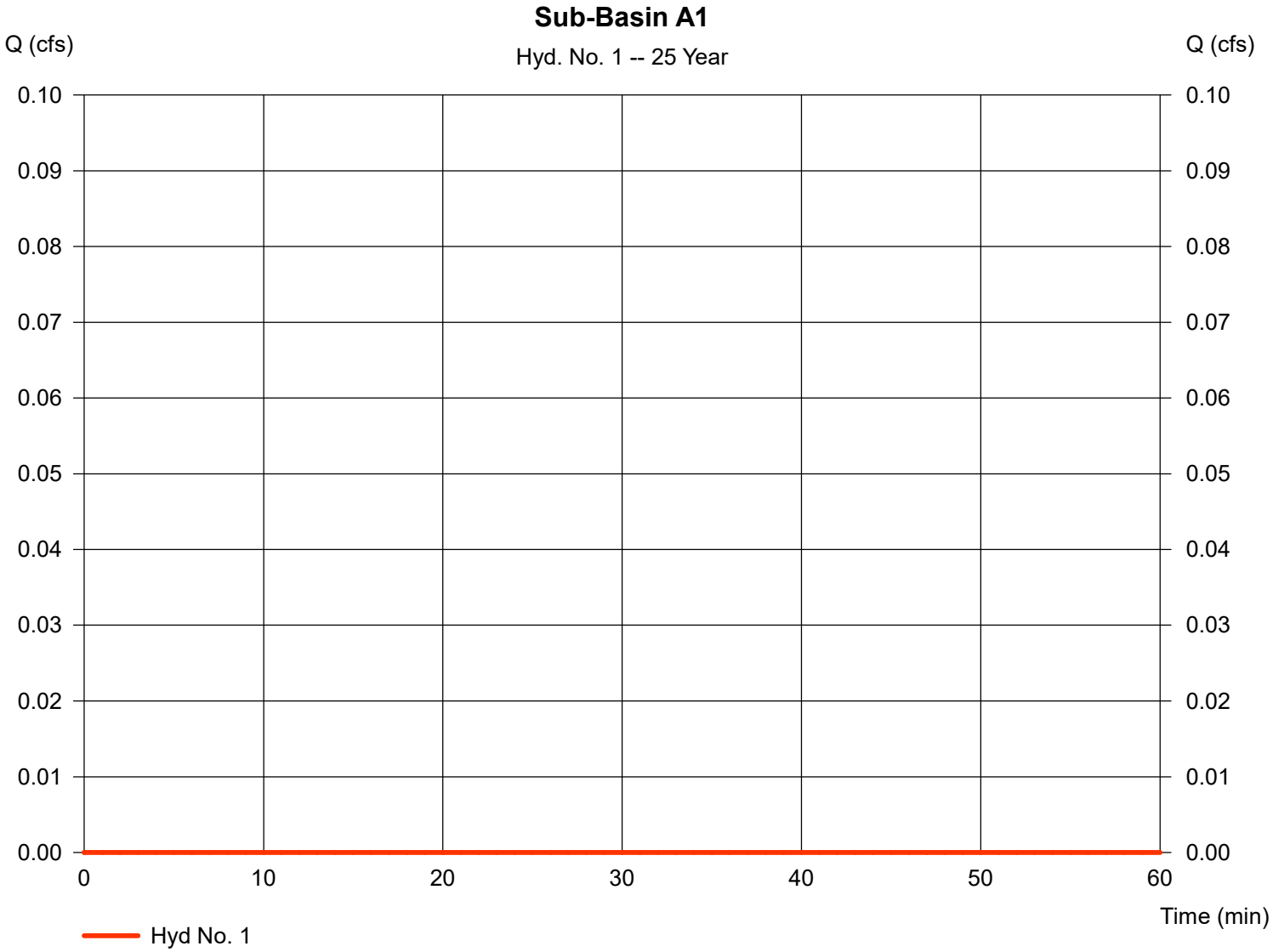
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



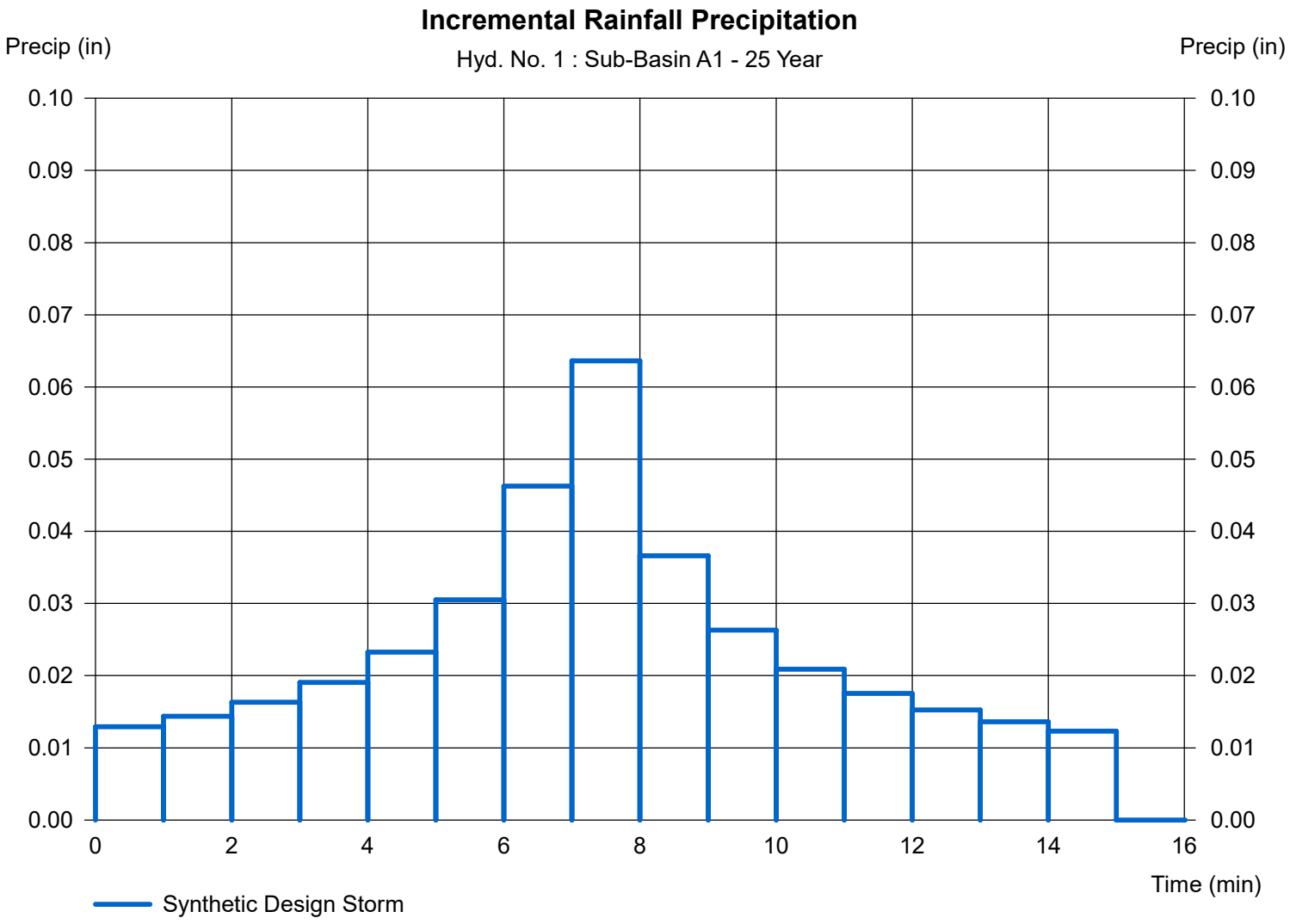
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



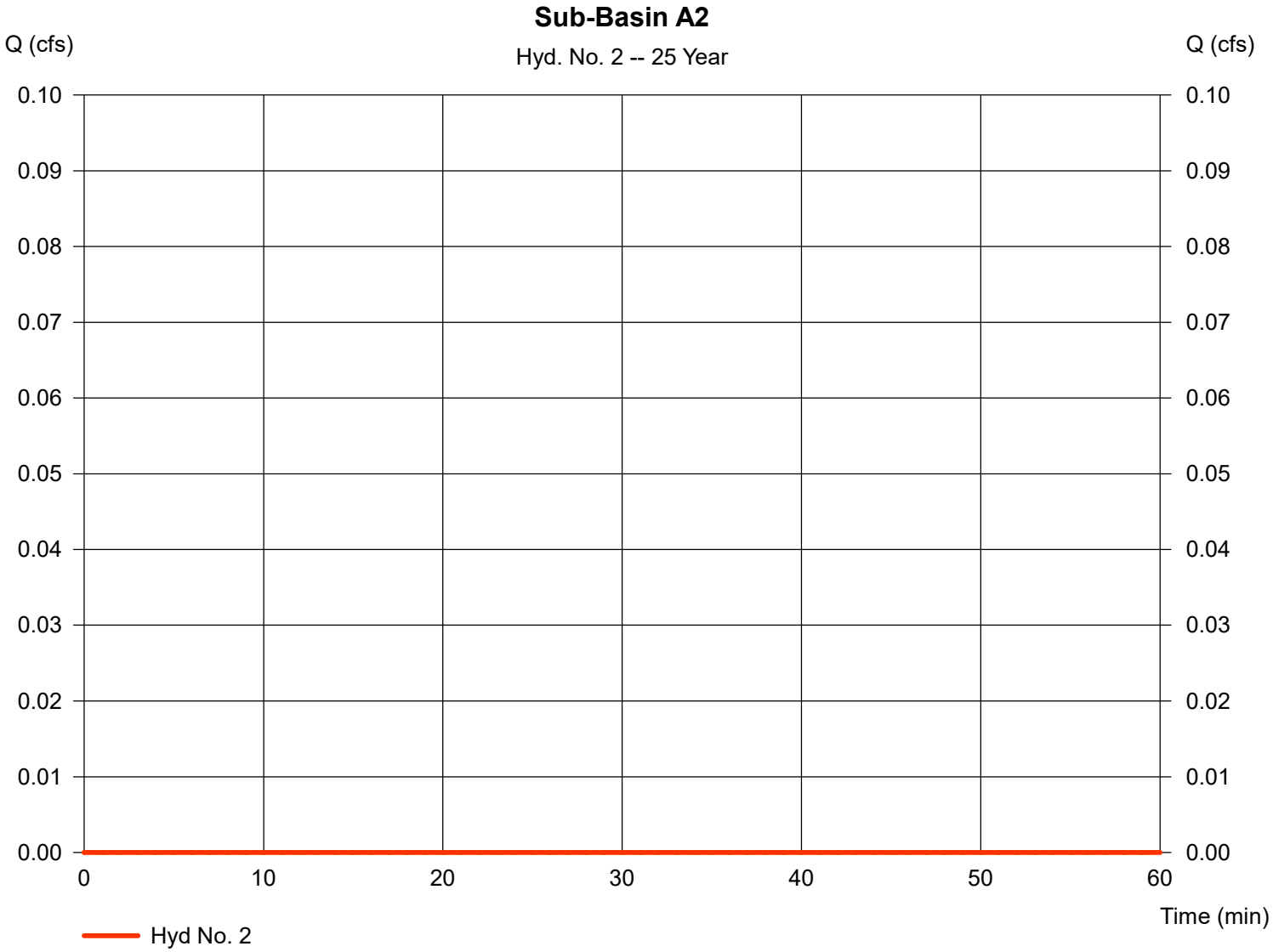
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



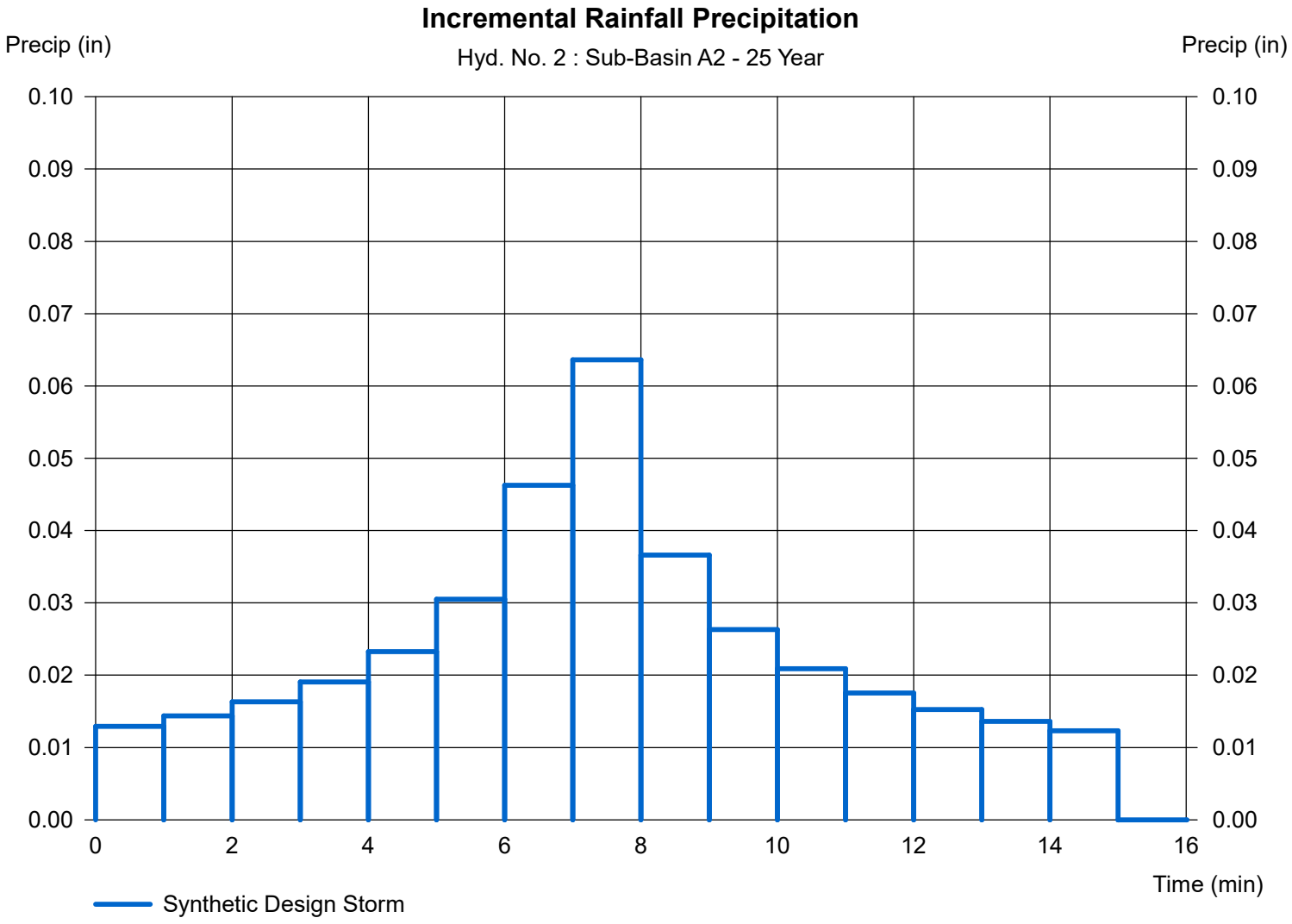
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



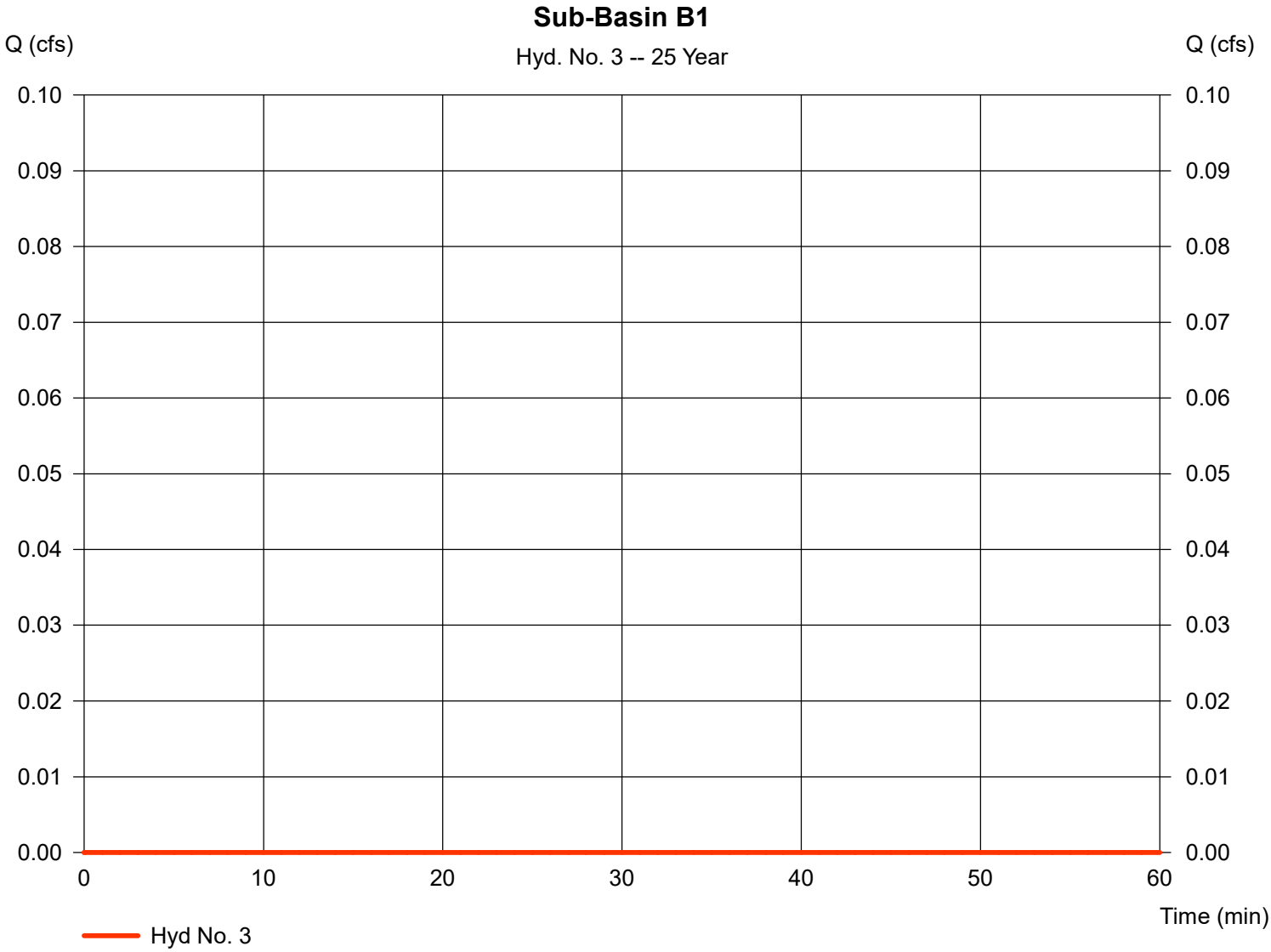
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



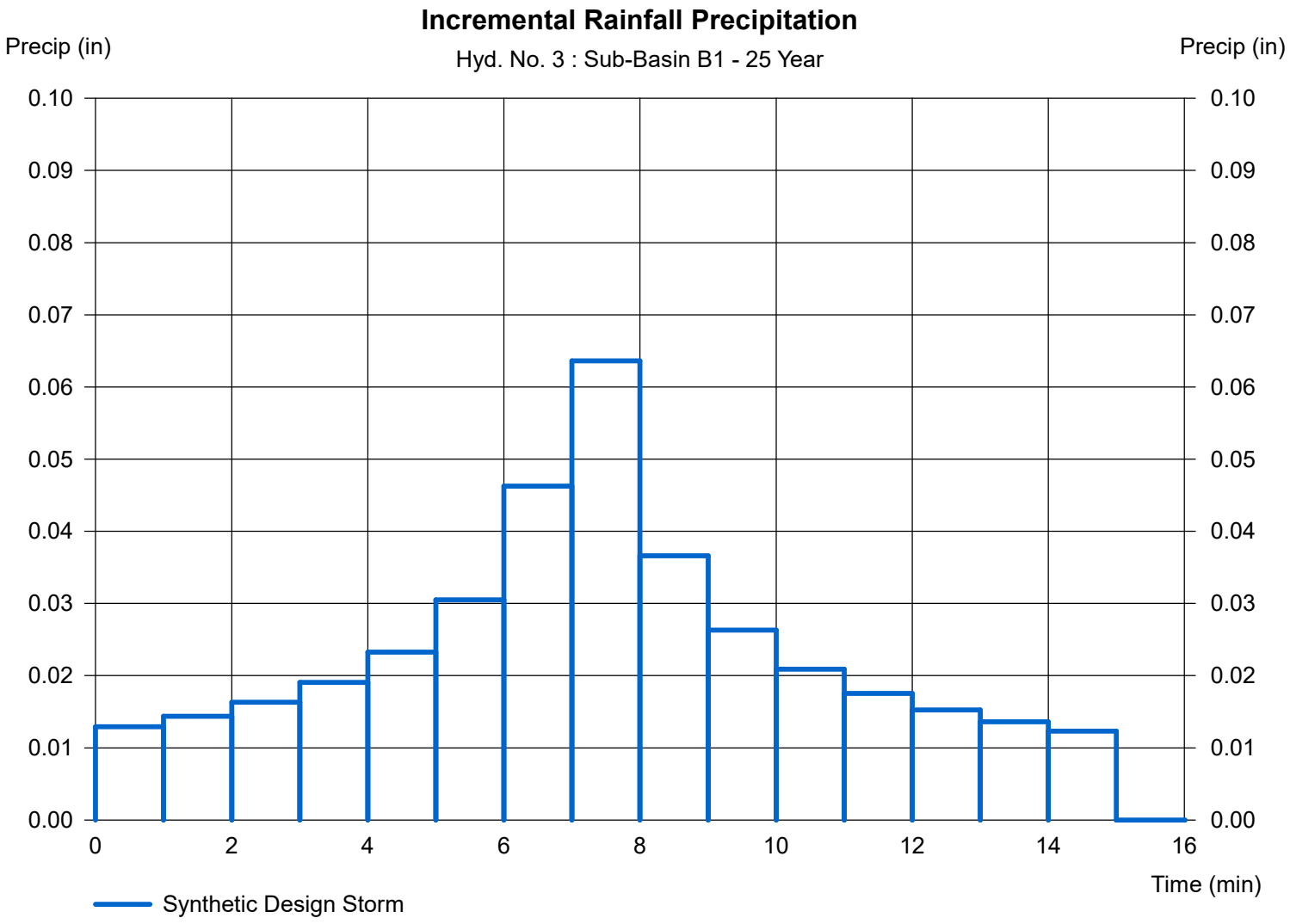
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



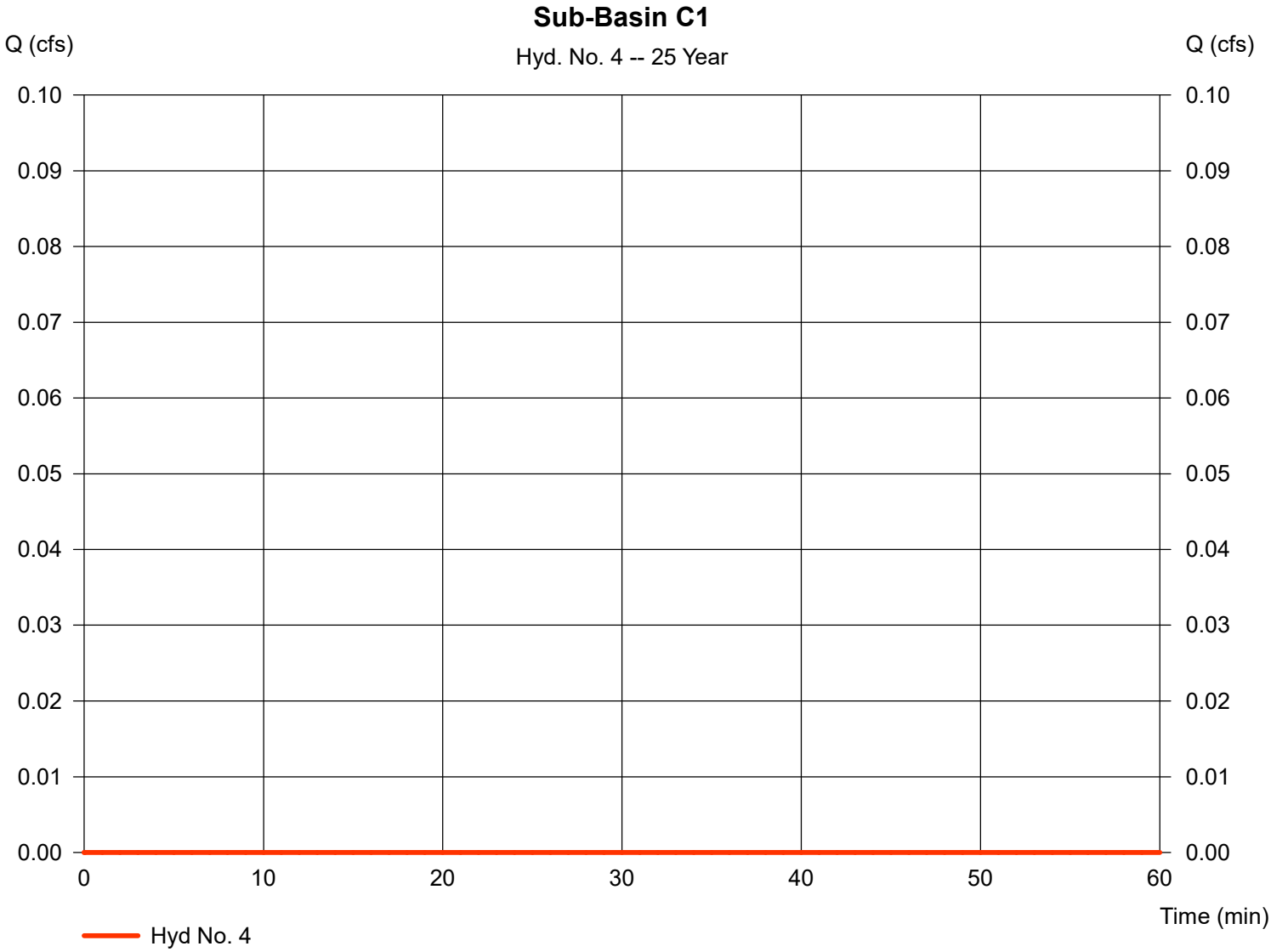
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



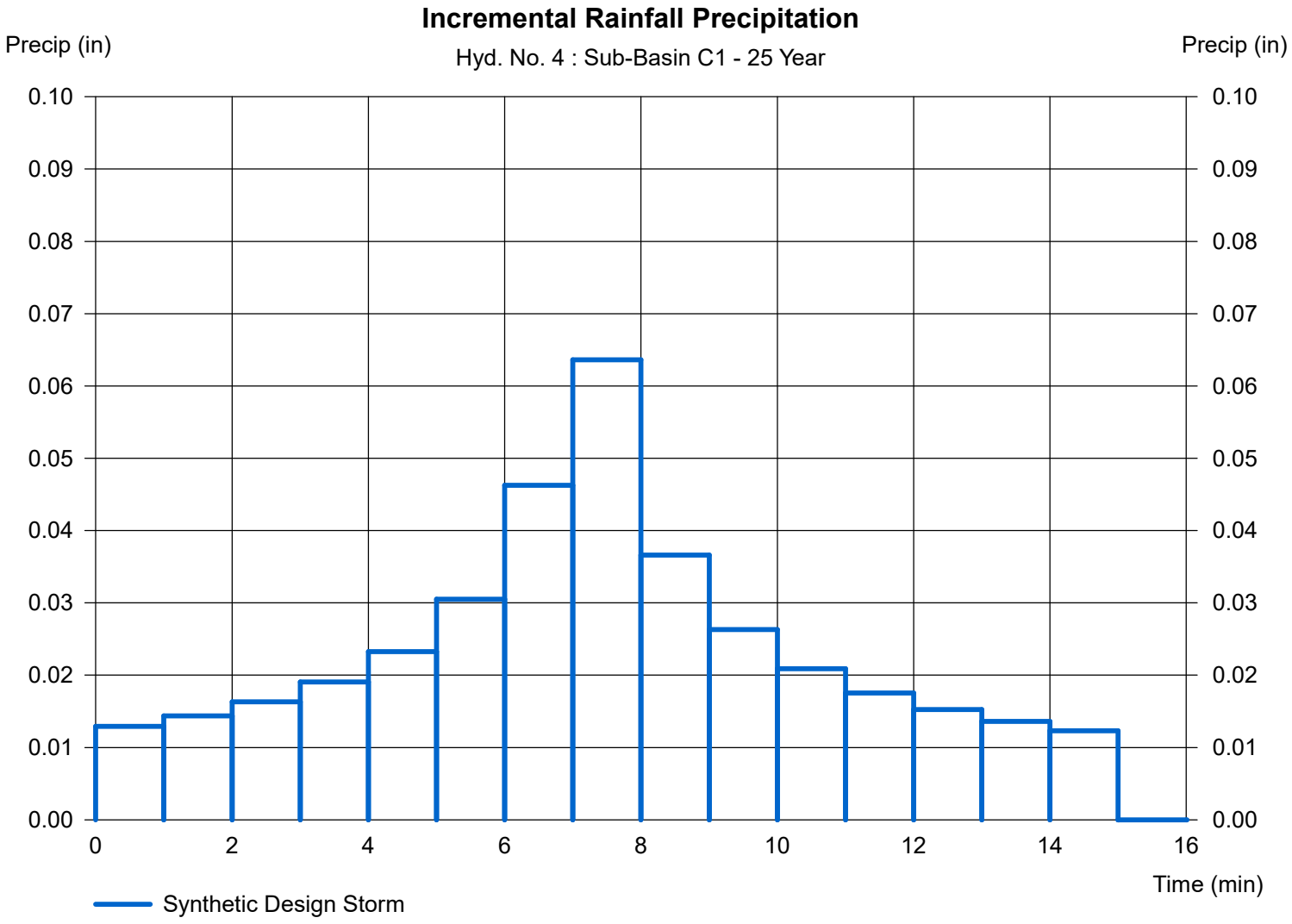
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



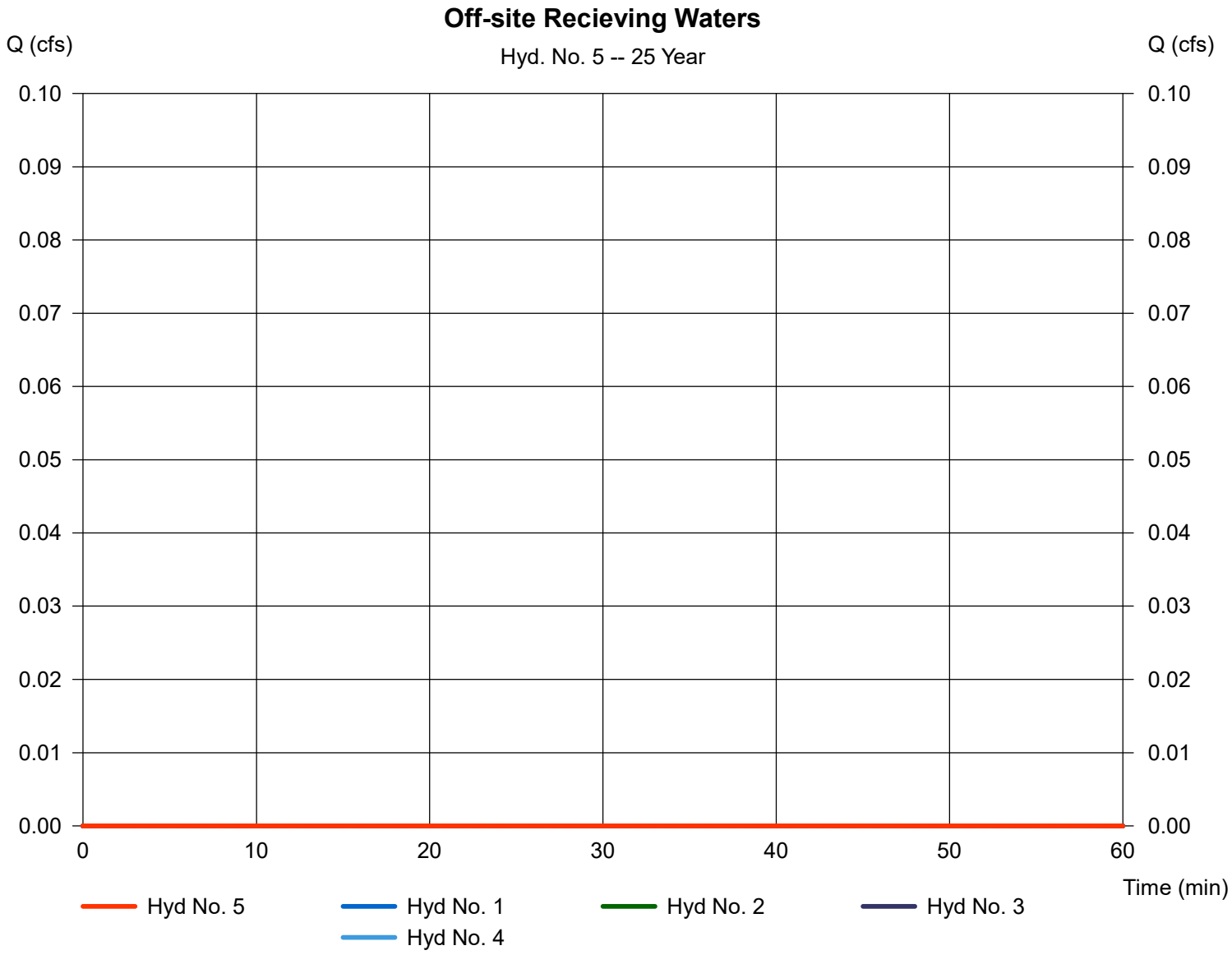
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 1, 2, 3, 4 | Contrib. drain. area | = | 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

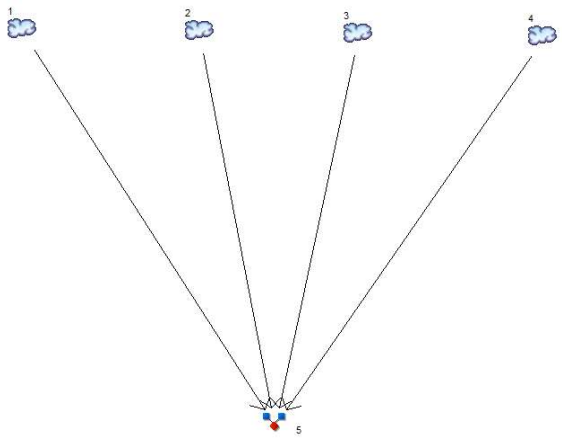
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.29 | 0.35 | 0.00 | 0.45 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.000 | 1 | n/a | 0 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

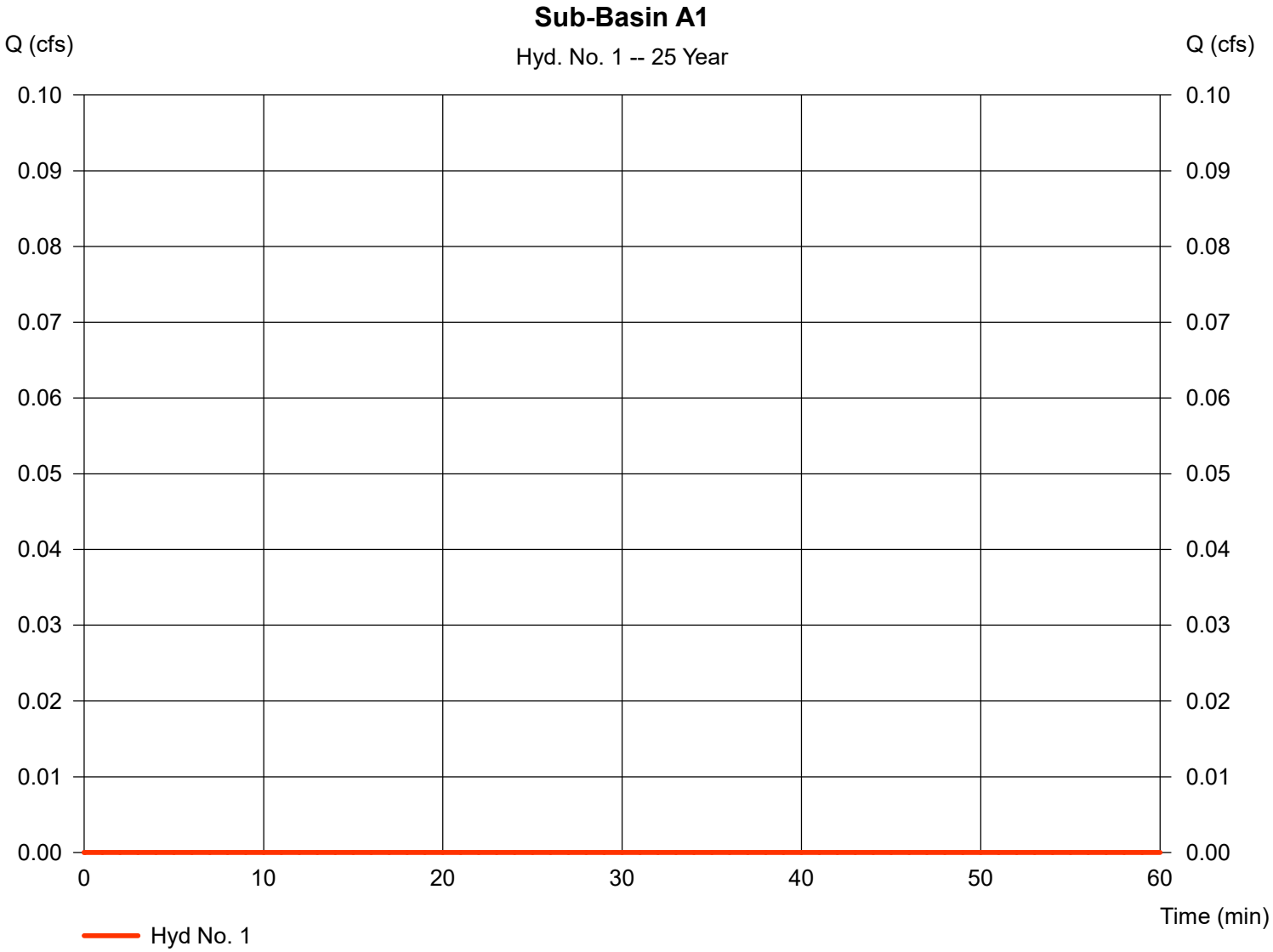
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



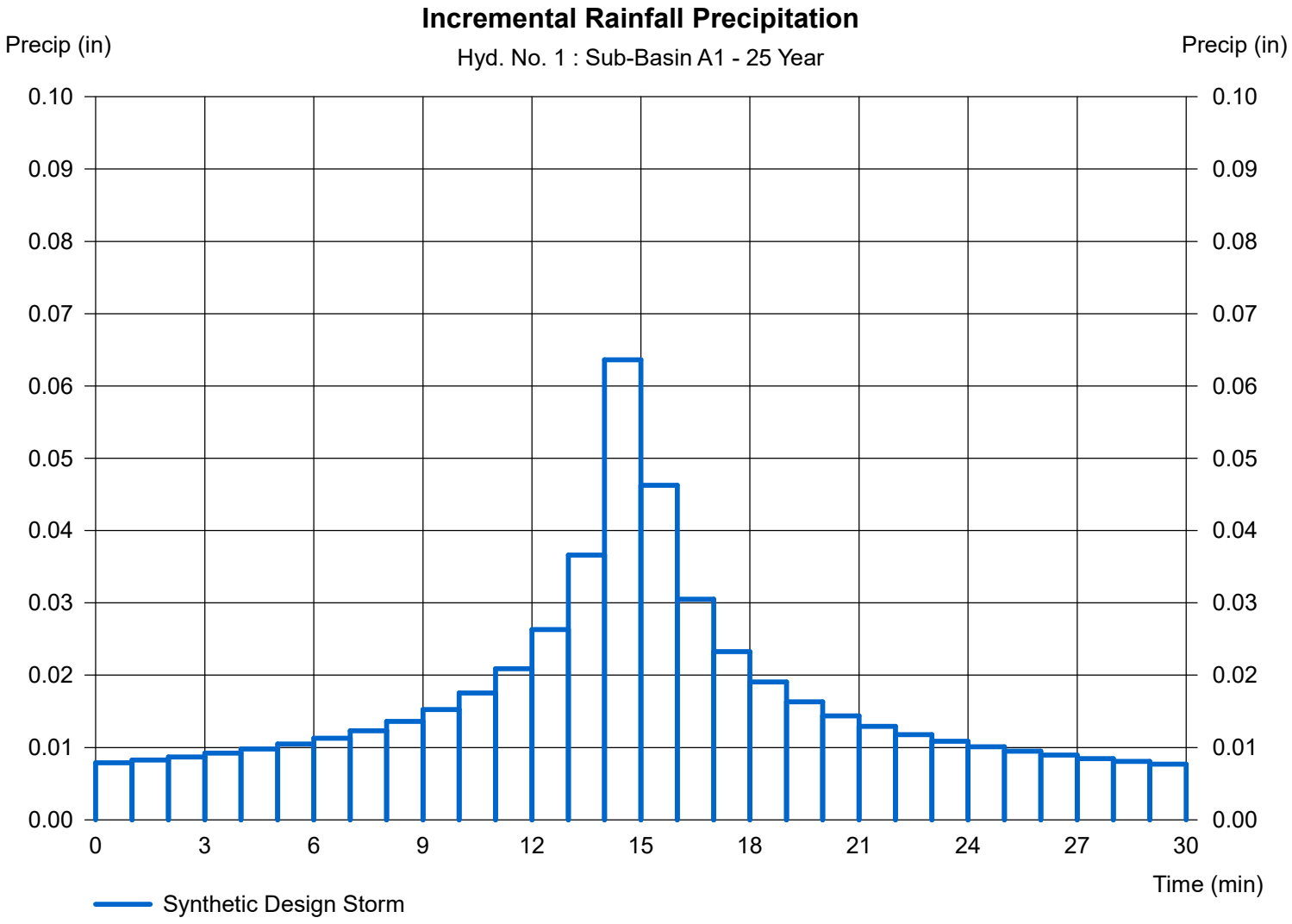
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



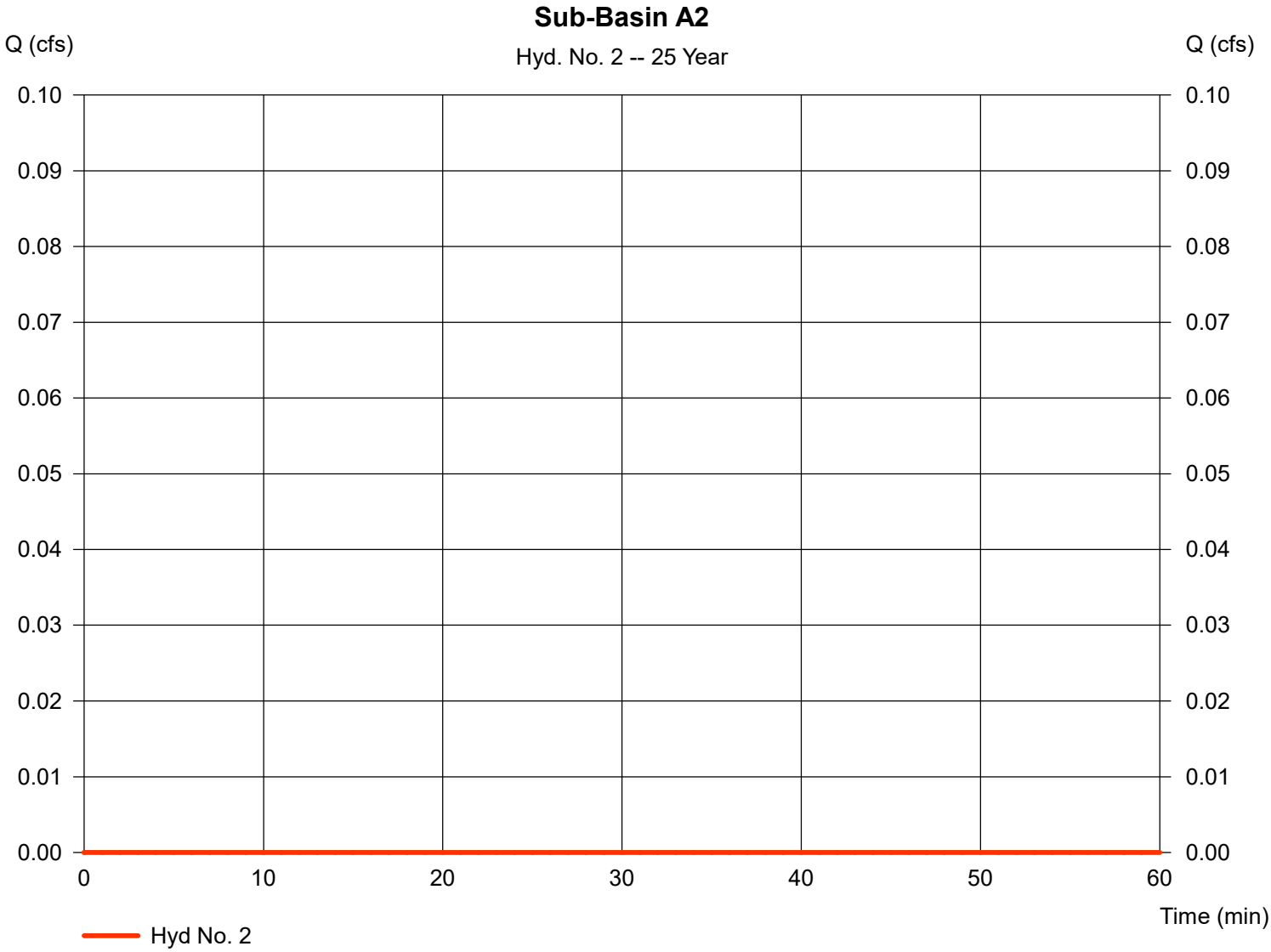
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



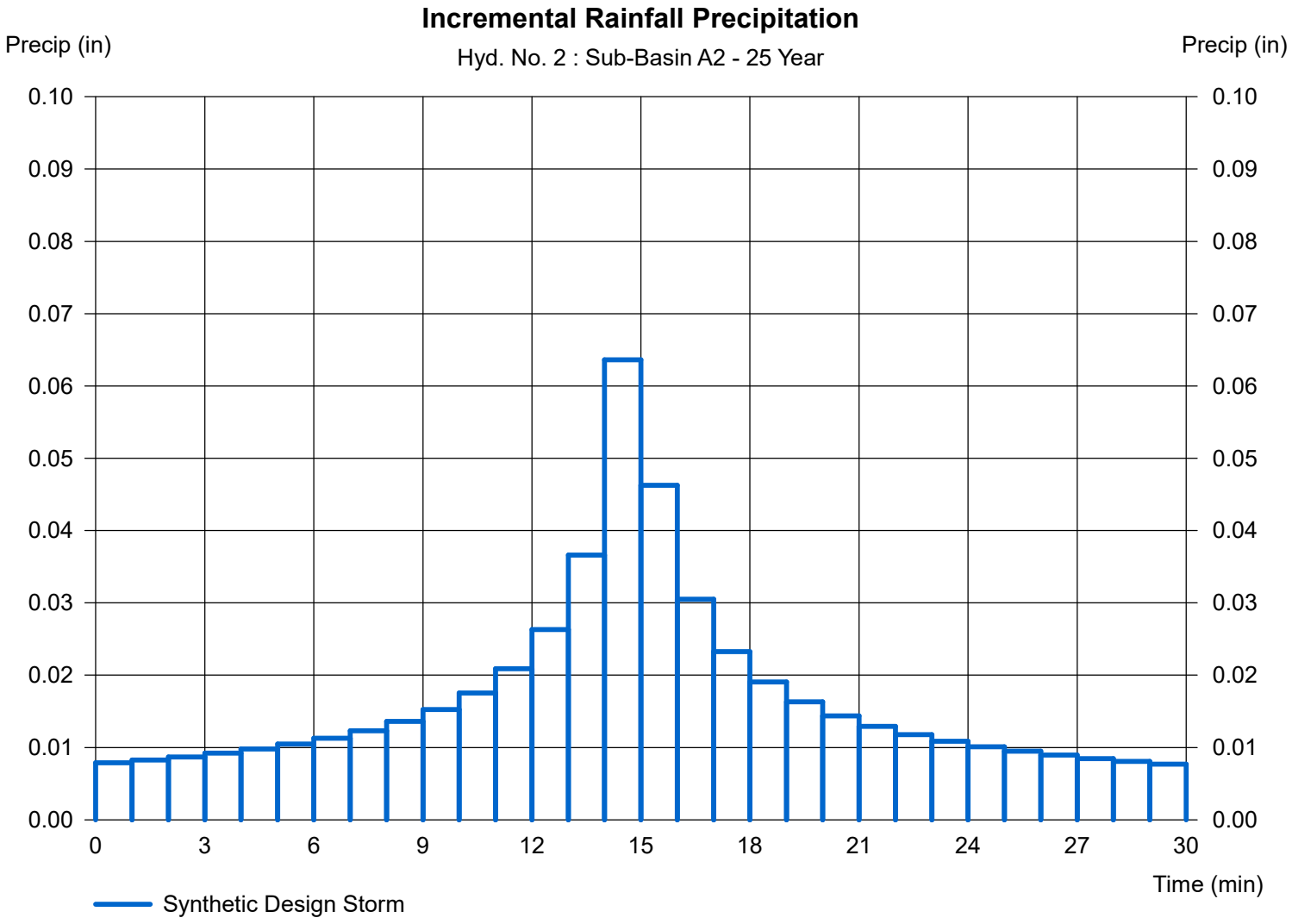
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



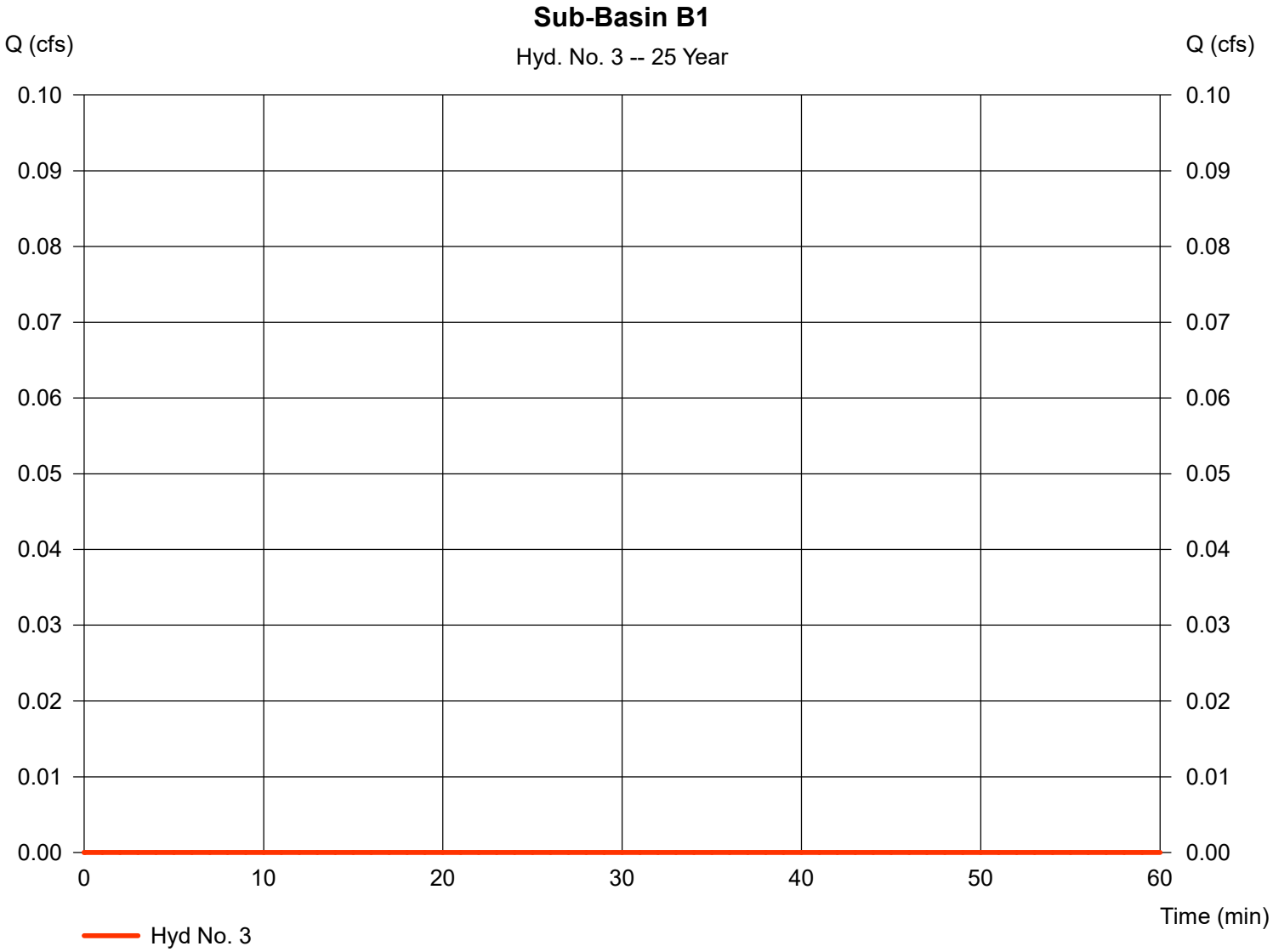
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



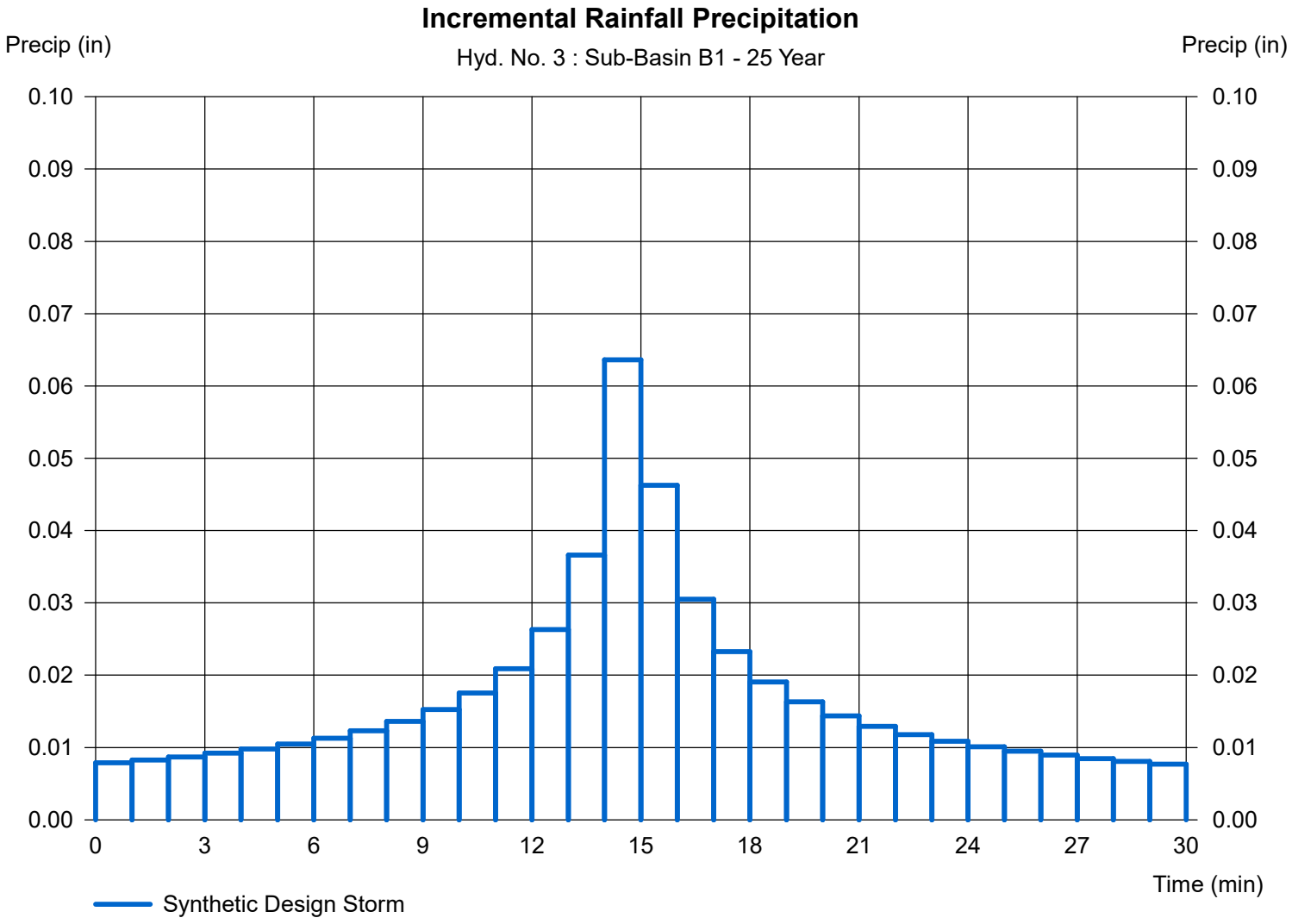
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



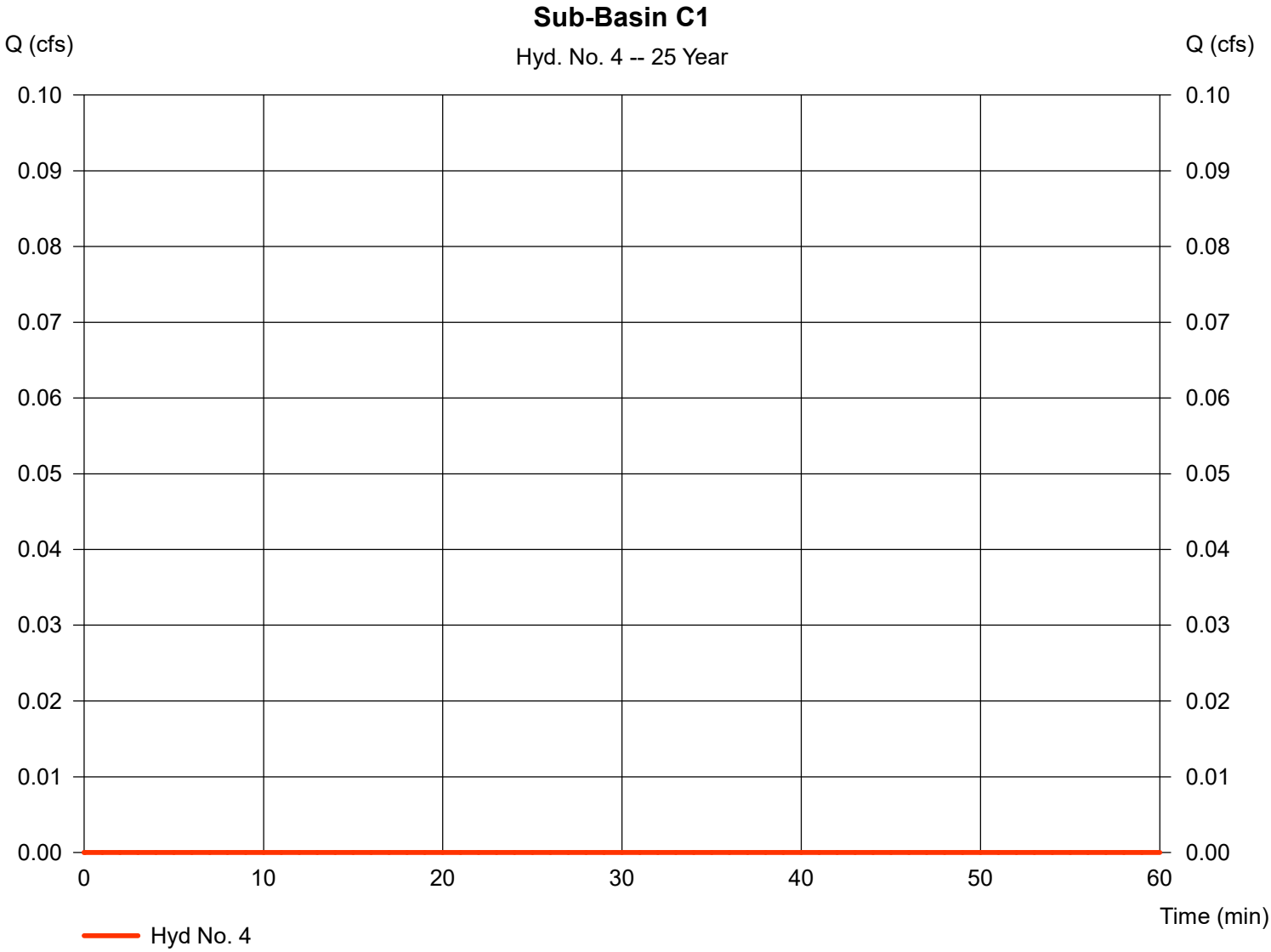
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



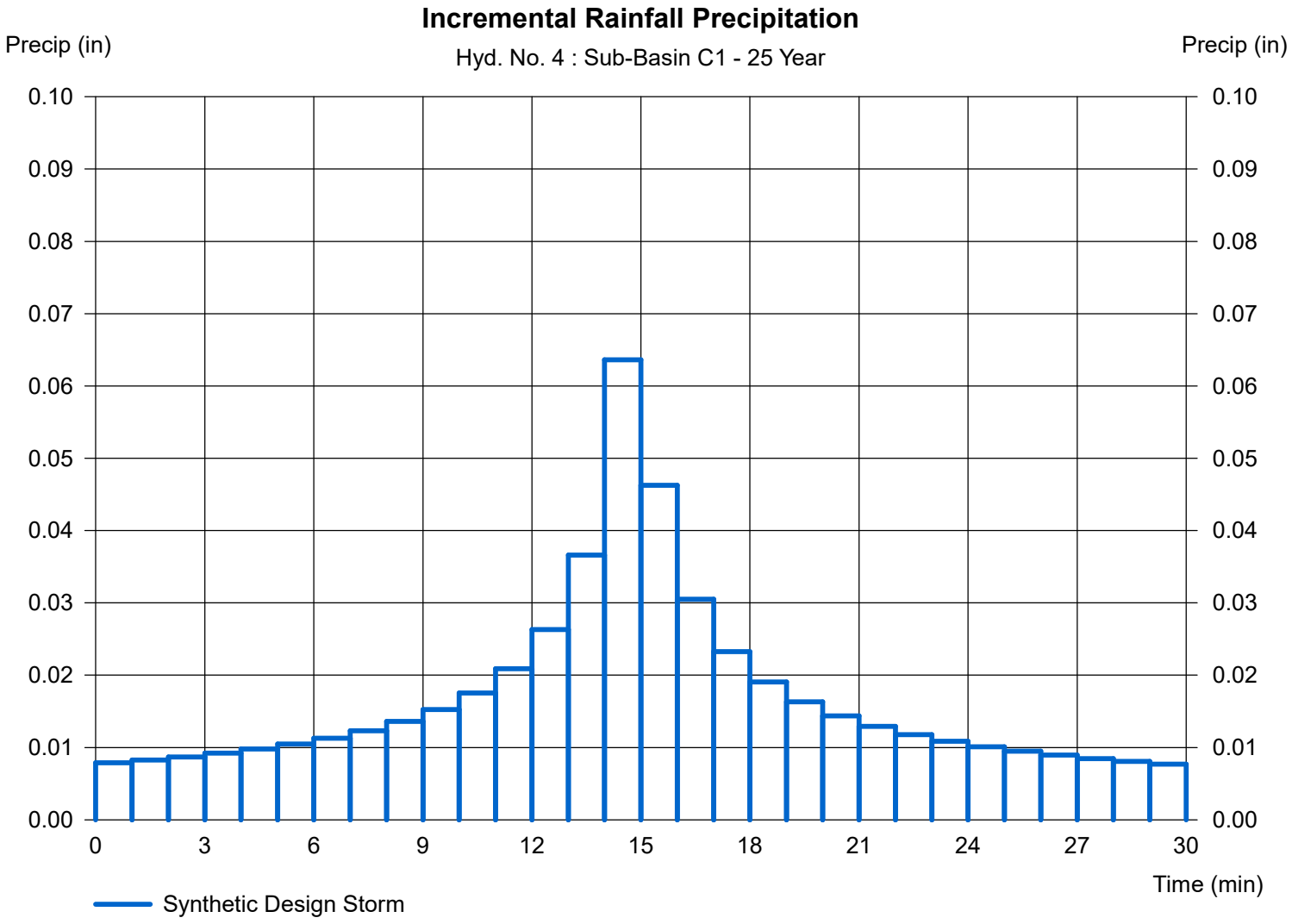
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



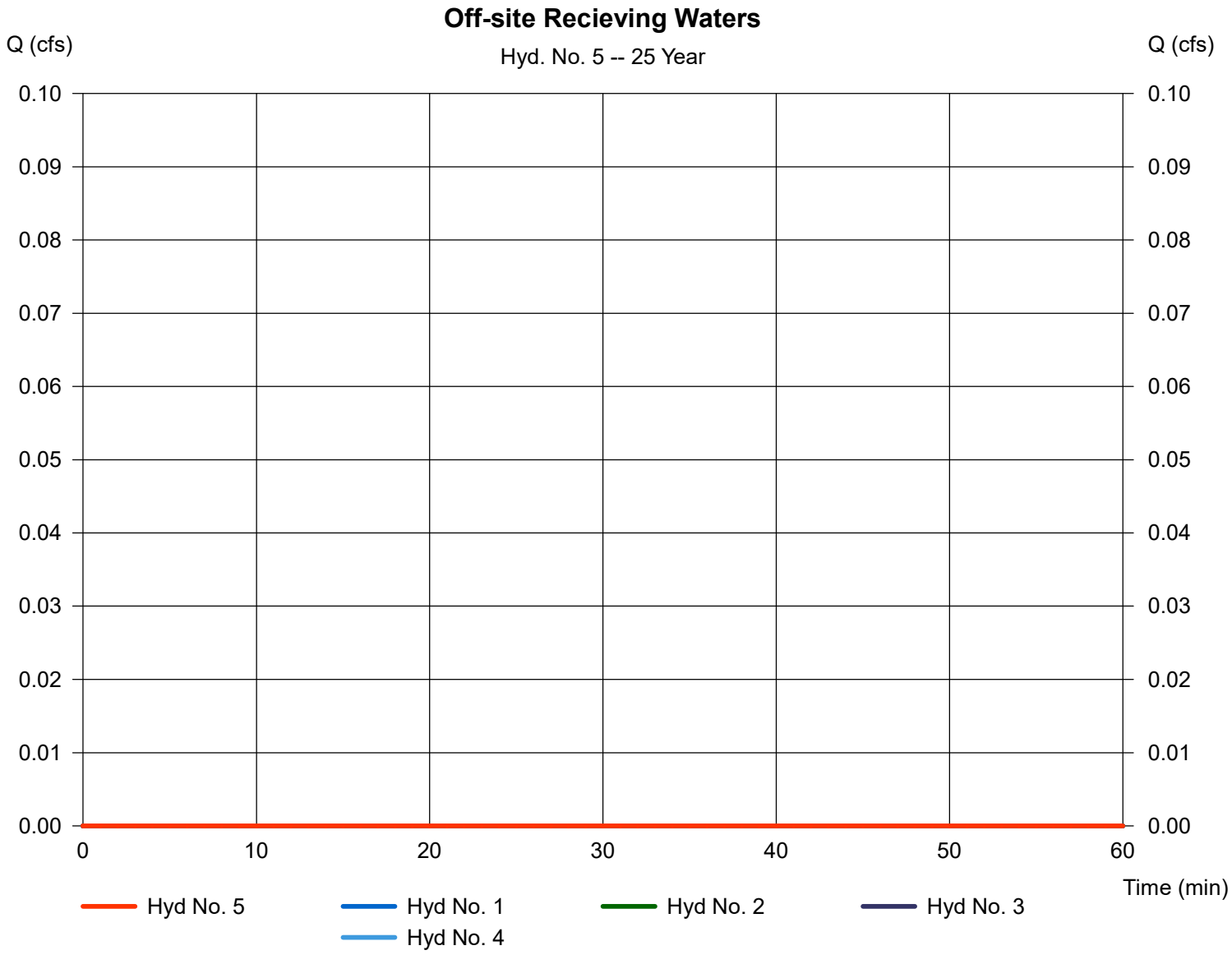
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 1, 2, 3, 4 | Contrib. drain. area | = | 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

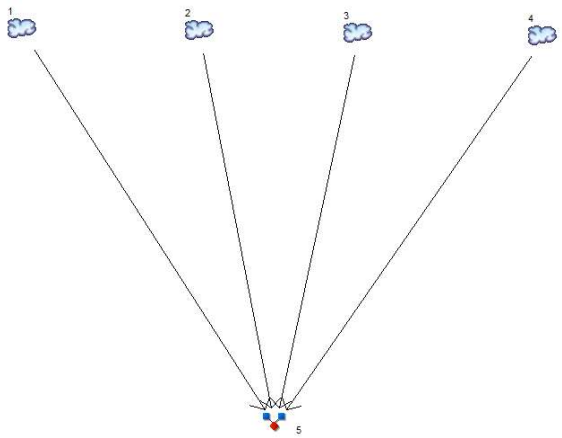
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.42 | 0.51 | 0.00 | 0.65 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.104 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.200 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.123 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.051 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 0.472 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.104 | 2 | 64 | 117 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.200 | 2 | 64 | 225 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.123 | 2 | 62 | 127 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.051 | 2 | 62 | 53 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 0.472 | 2 | 62 | 522 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

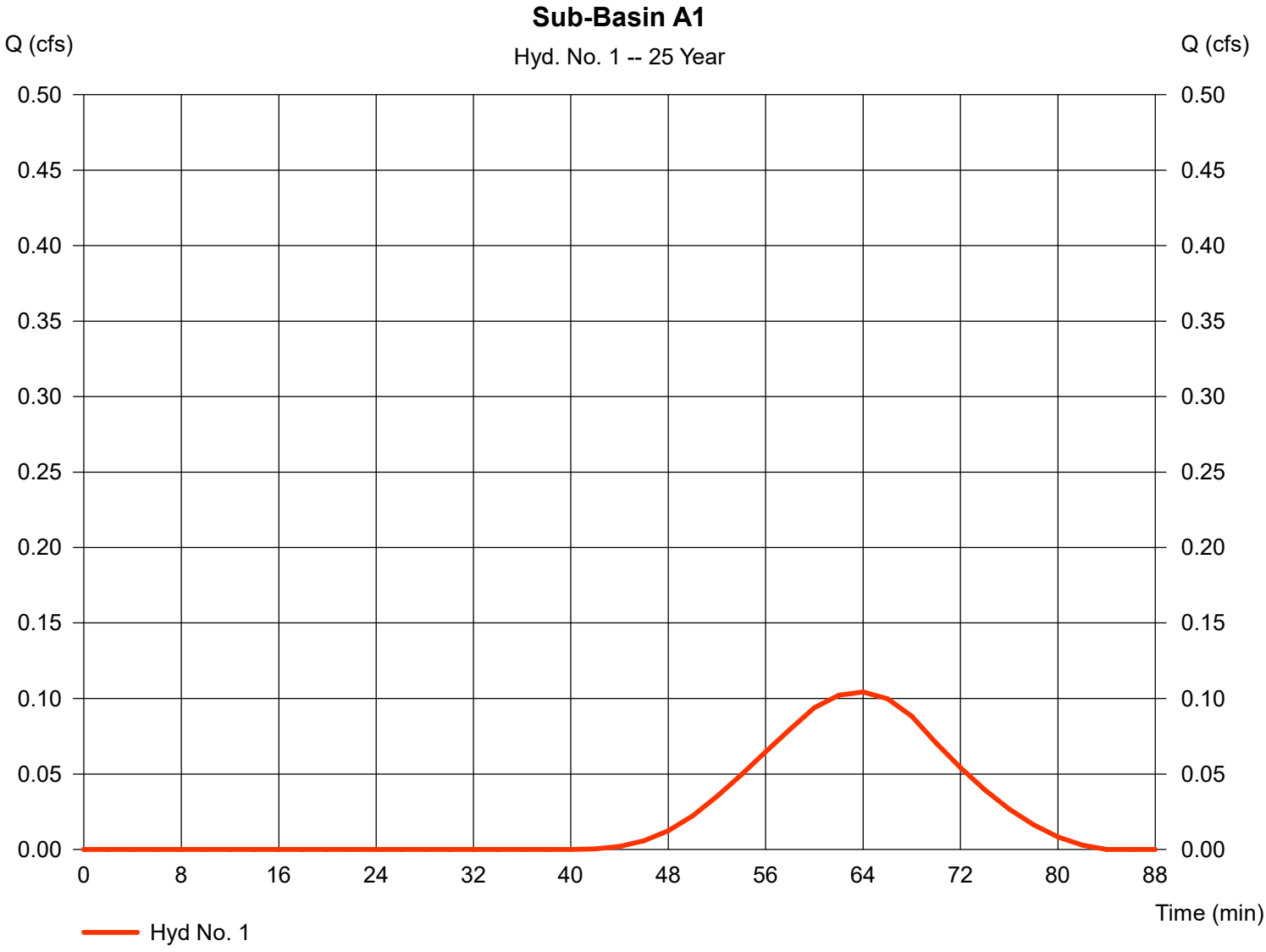
# Hydrograph Report



## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.104 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 64 min |
| Time interval | = | 2 min | Hyd. volume | = | 117 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



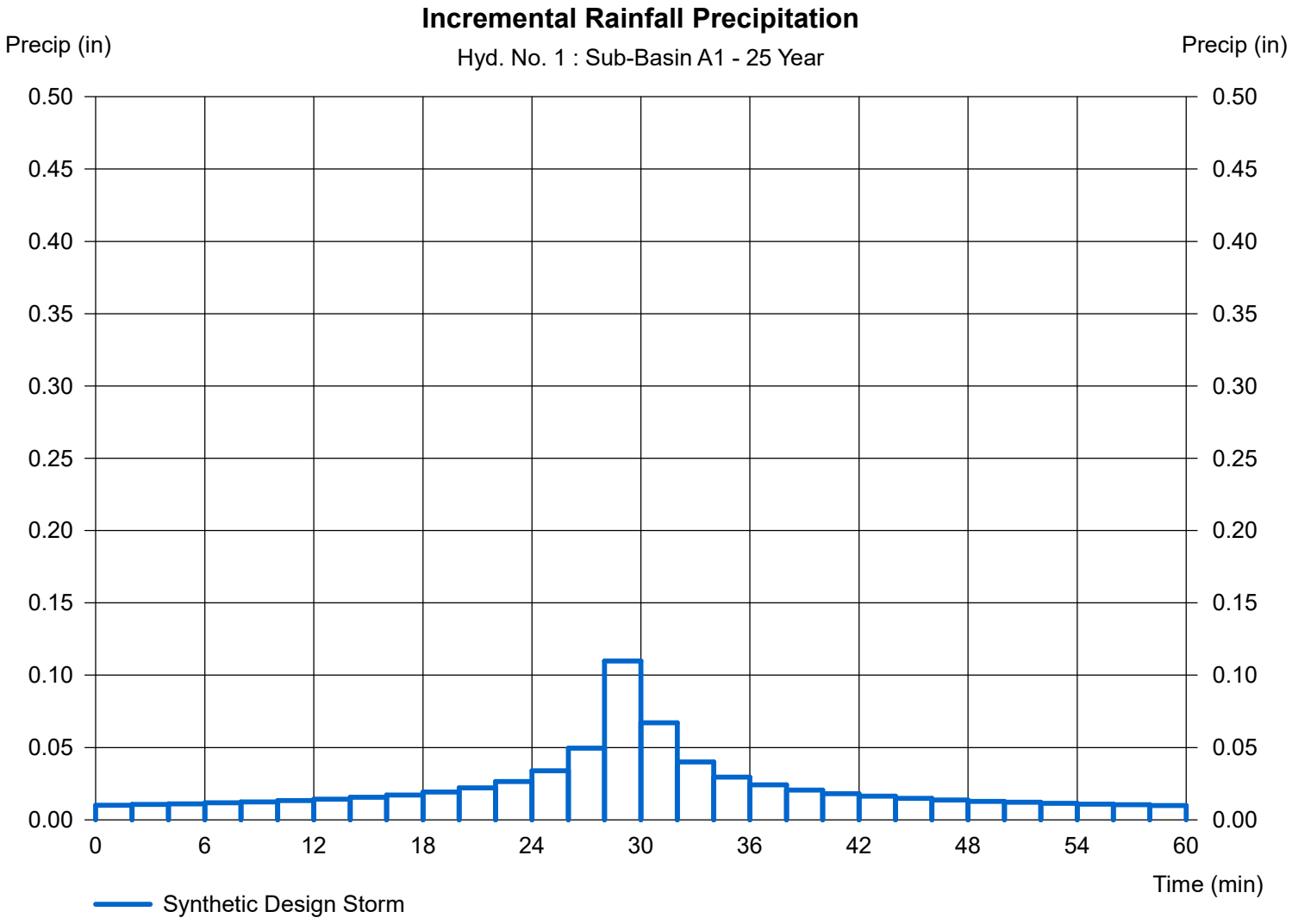
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



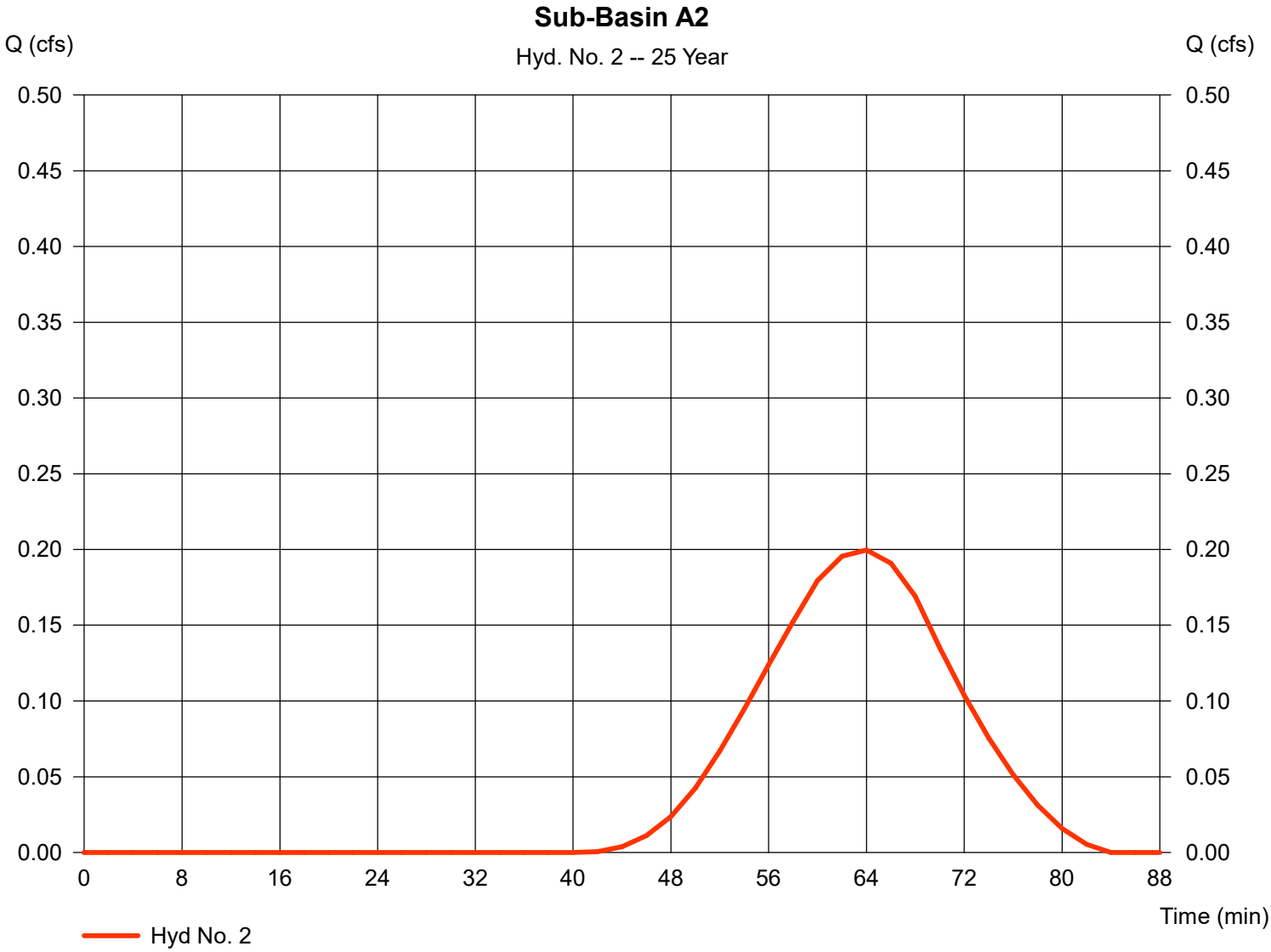
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.200 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 64 min |
| Time interval | = | 2 min | Hyd. volume | = | 225 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



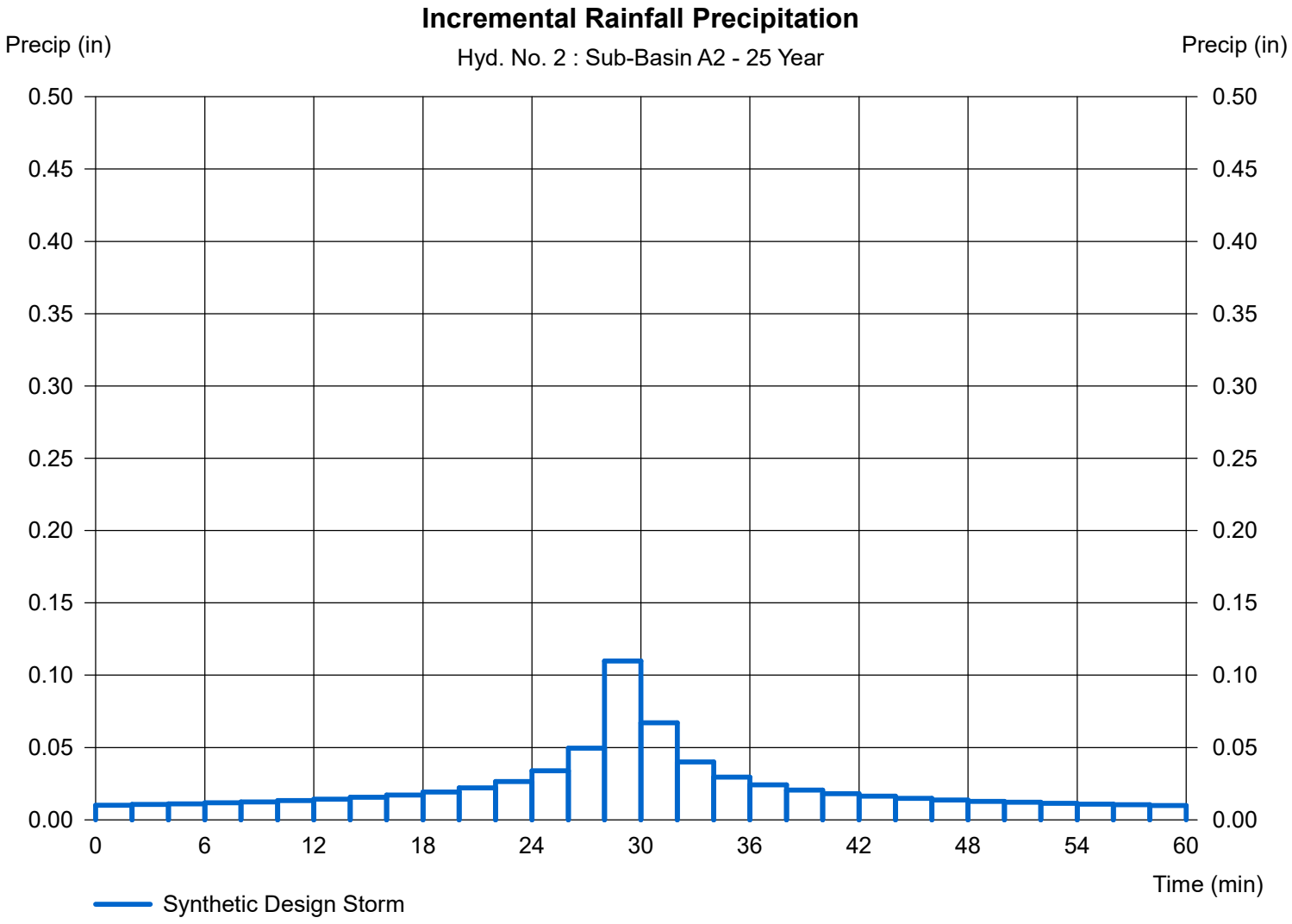
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



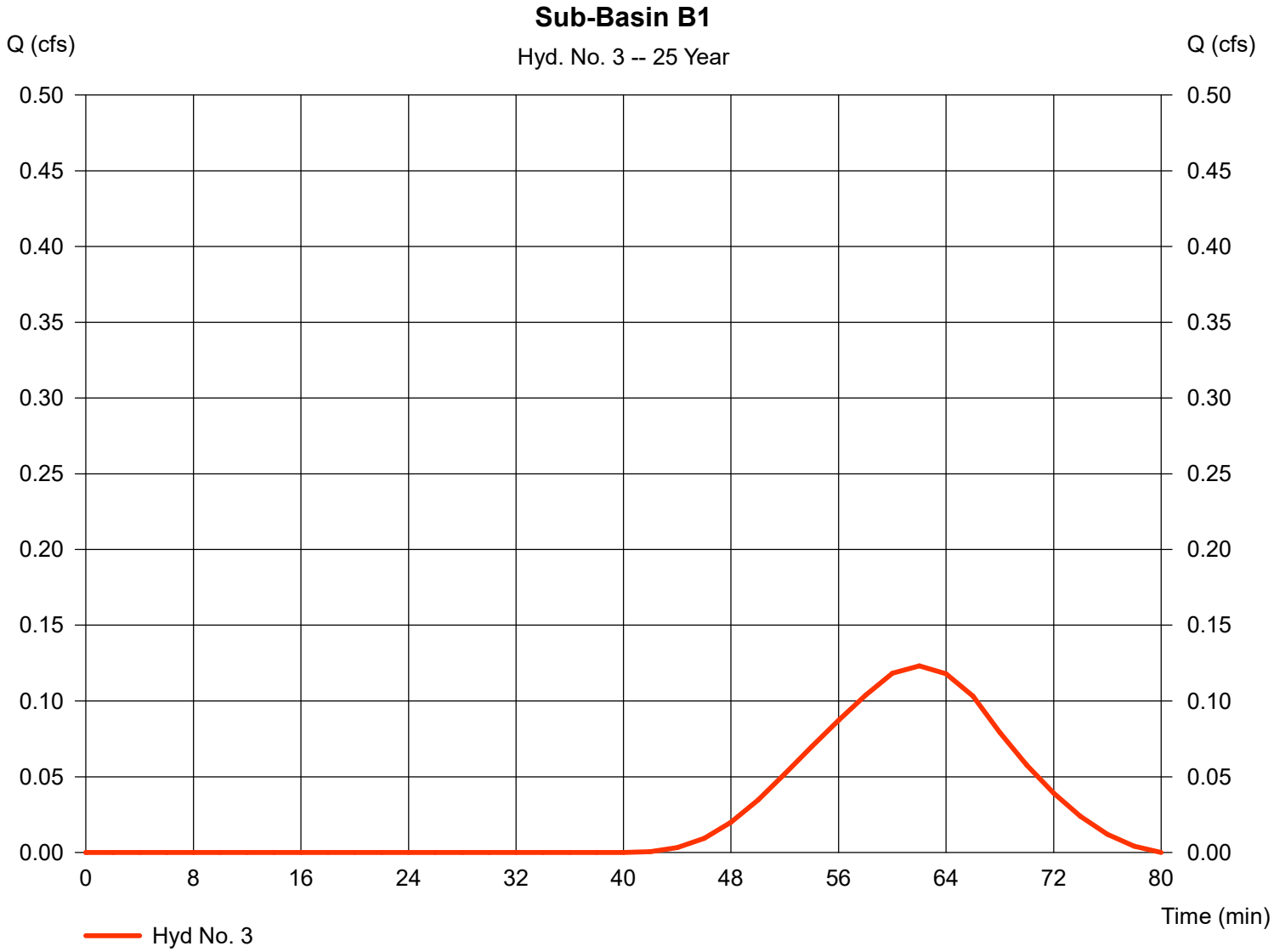
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.123 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 62 min |
| Time interval | = | 2 min | Hyd. volume | = | 127 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



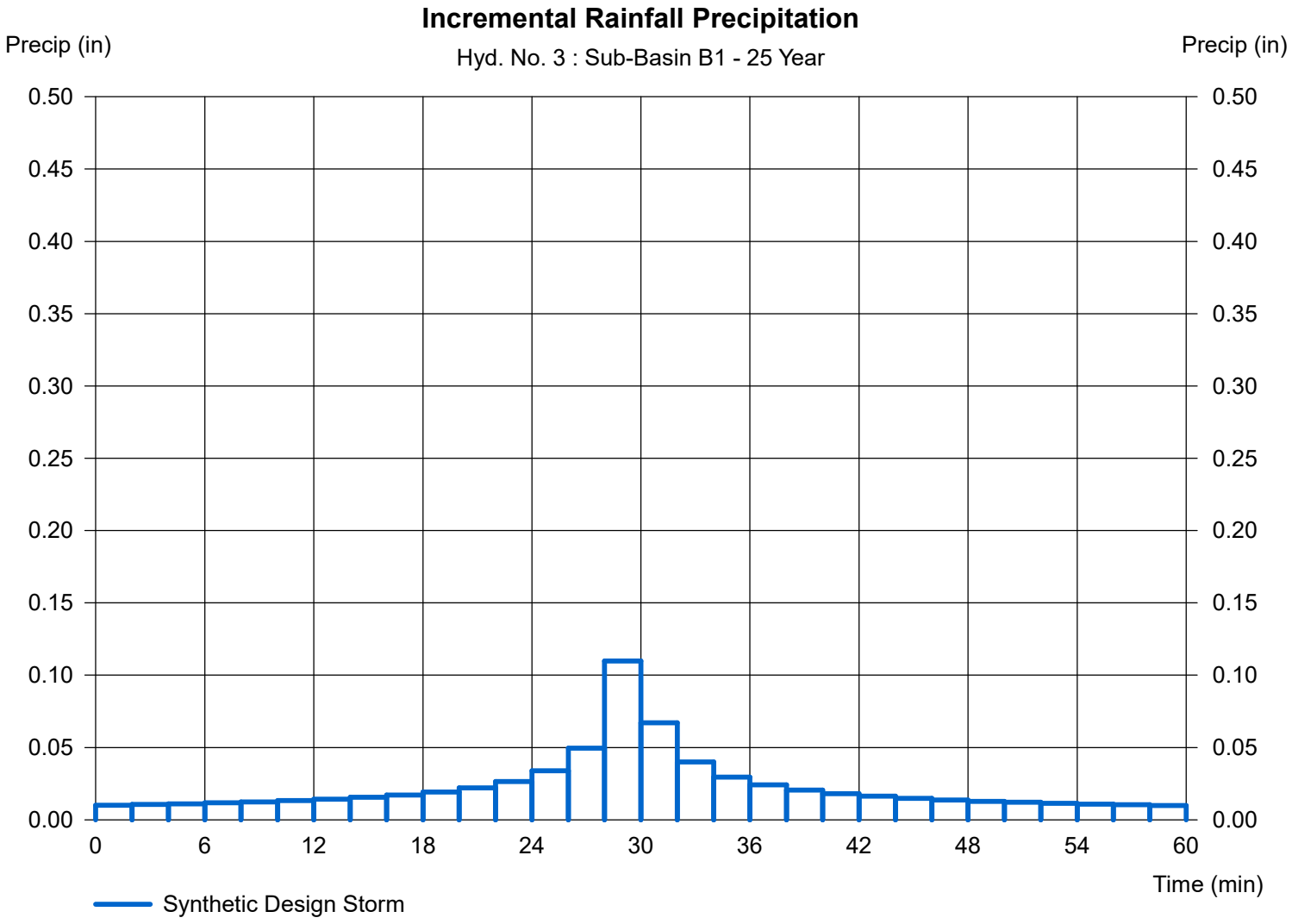
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



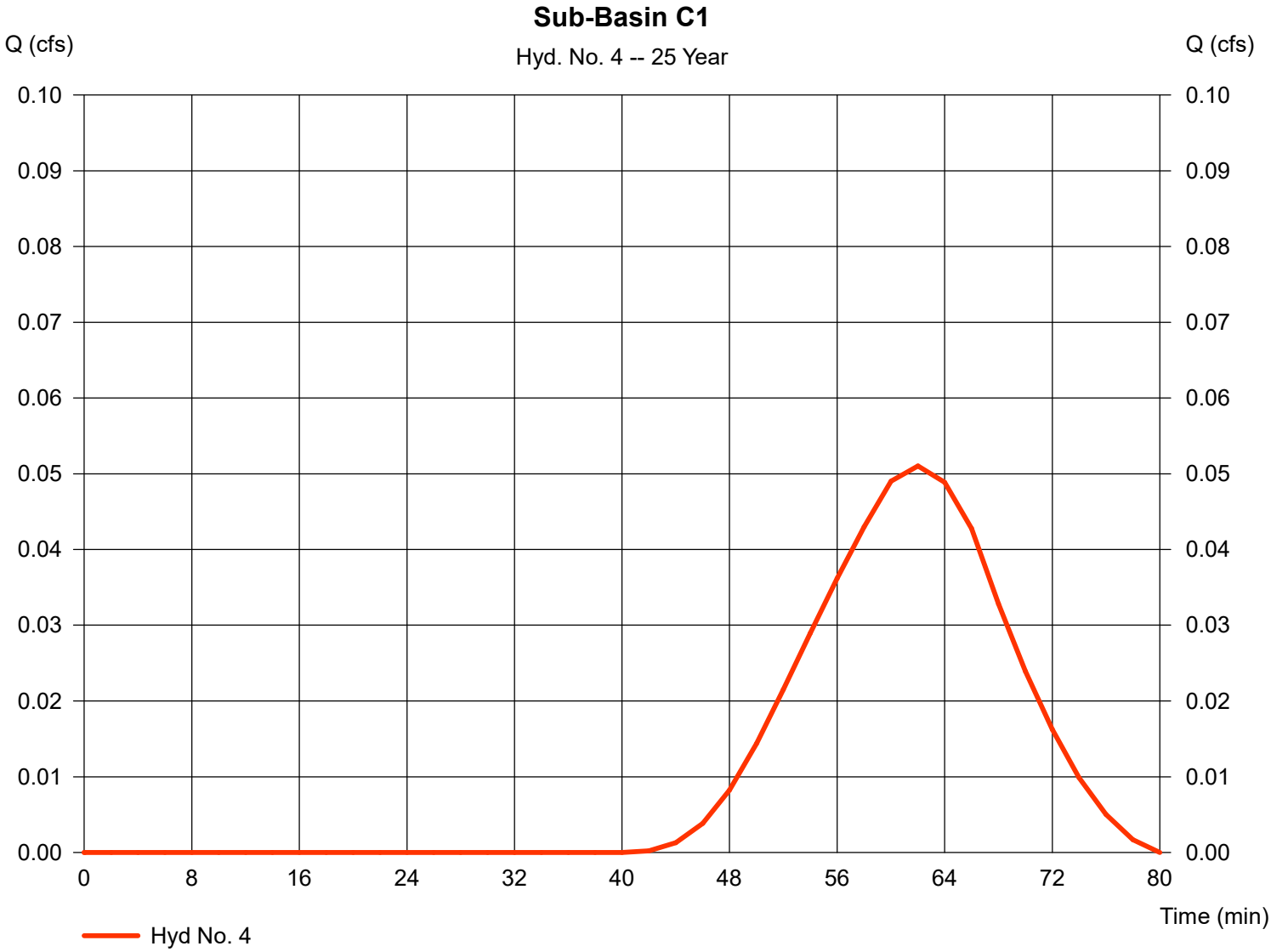
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.051 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 62 min |
| Time interval | = | 2 min | Hyd. volume | = | 53 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



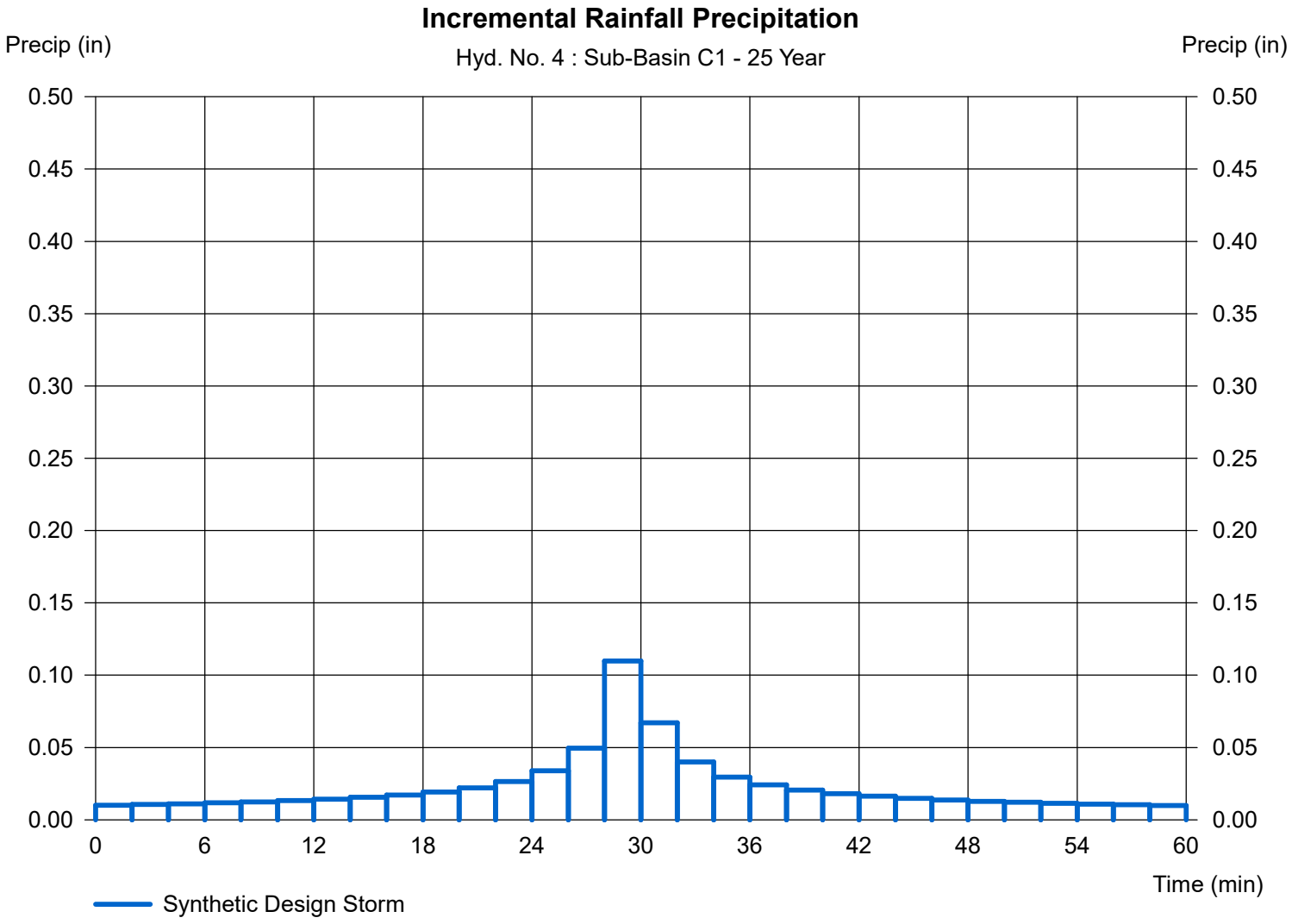
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



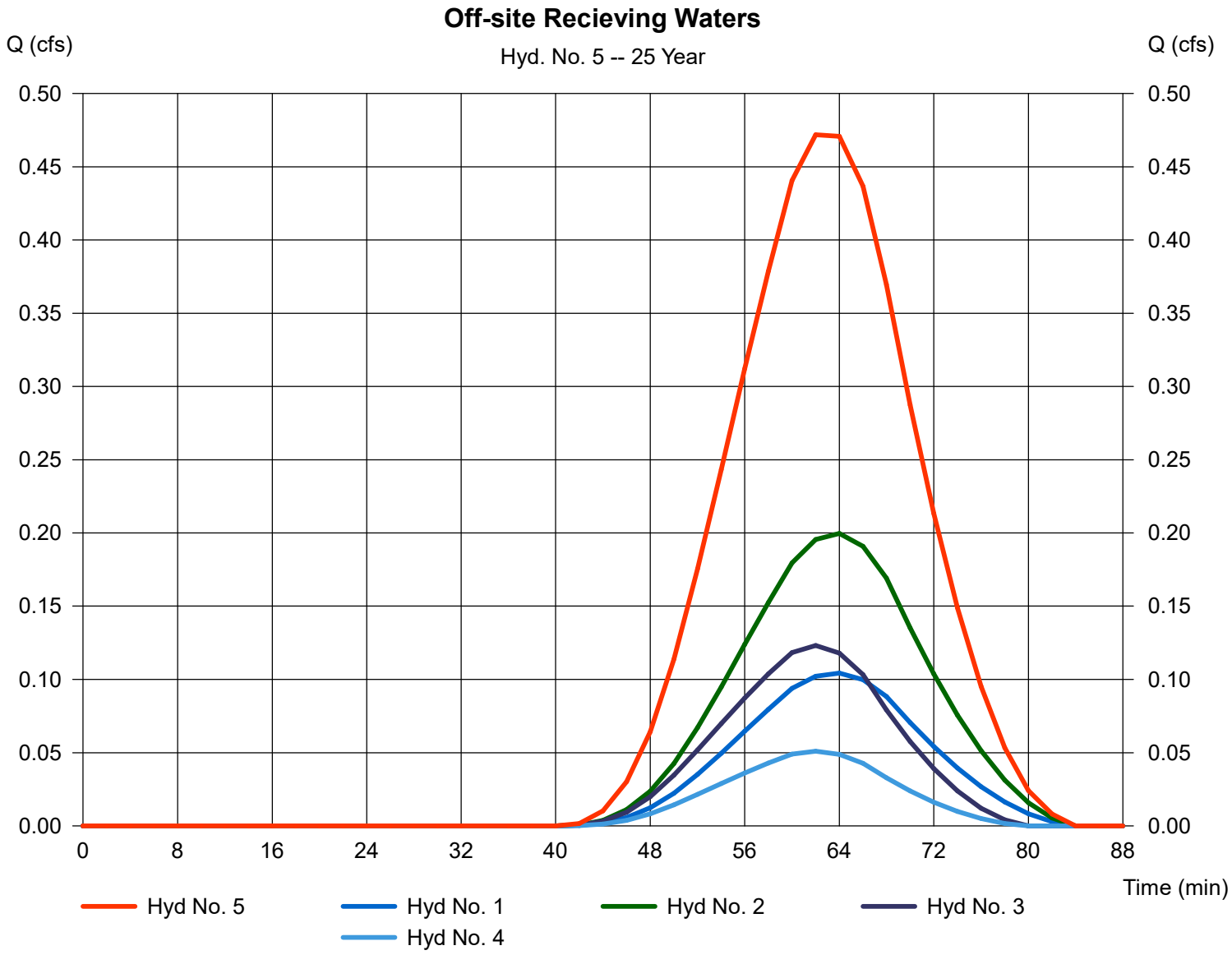
# Hydrograph Report



## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.472 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 62 min |
| Time interval | = 2 min | Hyd. volume | = 522 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

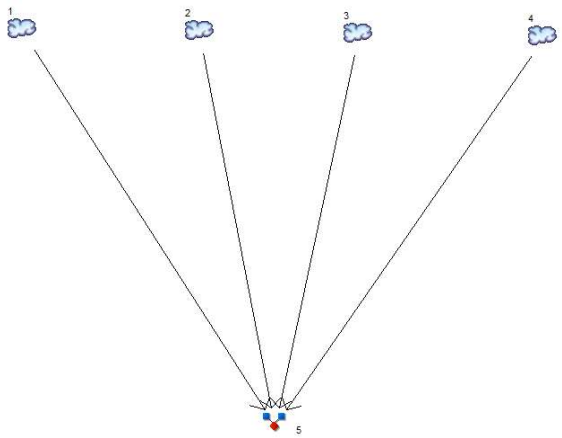
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.56 | 0.69 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.424 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.812 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.471 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.195 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 1.885 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.424 | 2 | 112 | 1,806 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.812 | 2 | 112 | 3,456 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.471 | 2 | 110 | 1,954 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.195 | 2 | 110 | 810 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 1.885 | 2 | 112 | 8,025 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

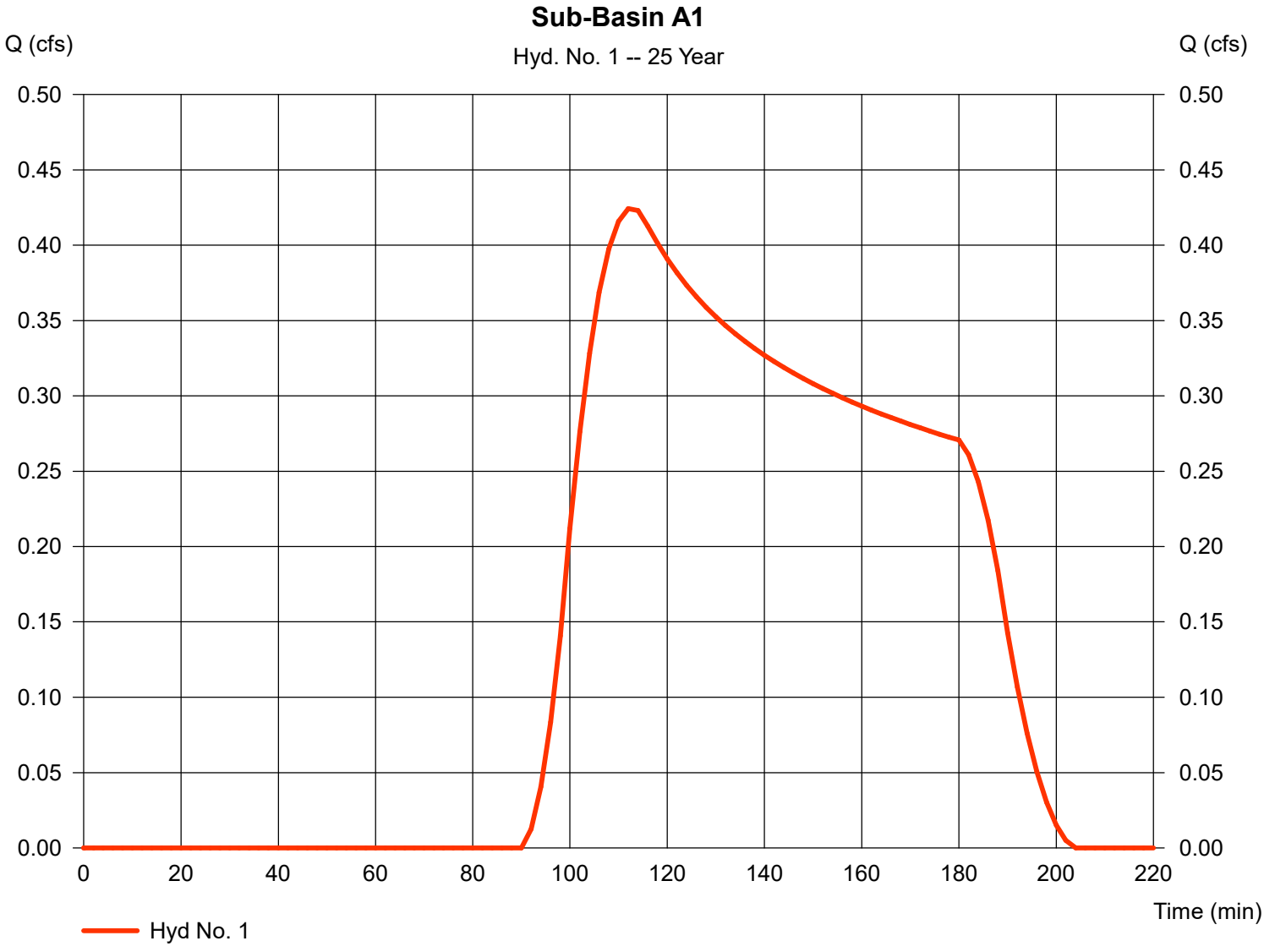
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.424 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 112 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,806 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



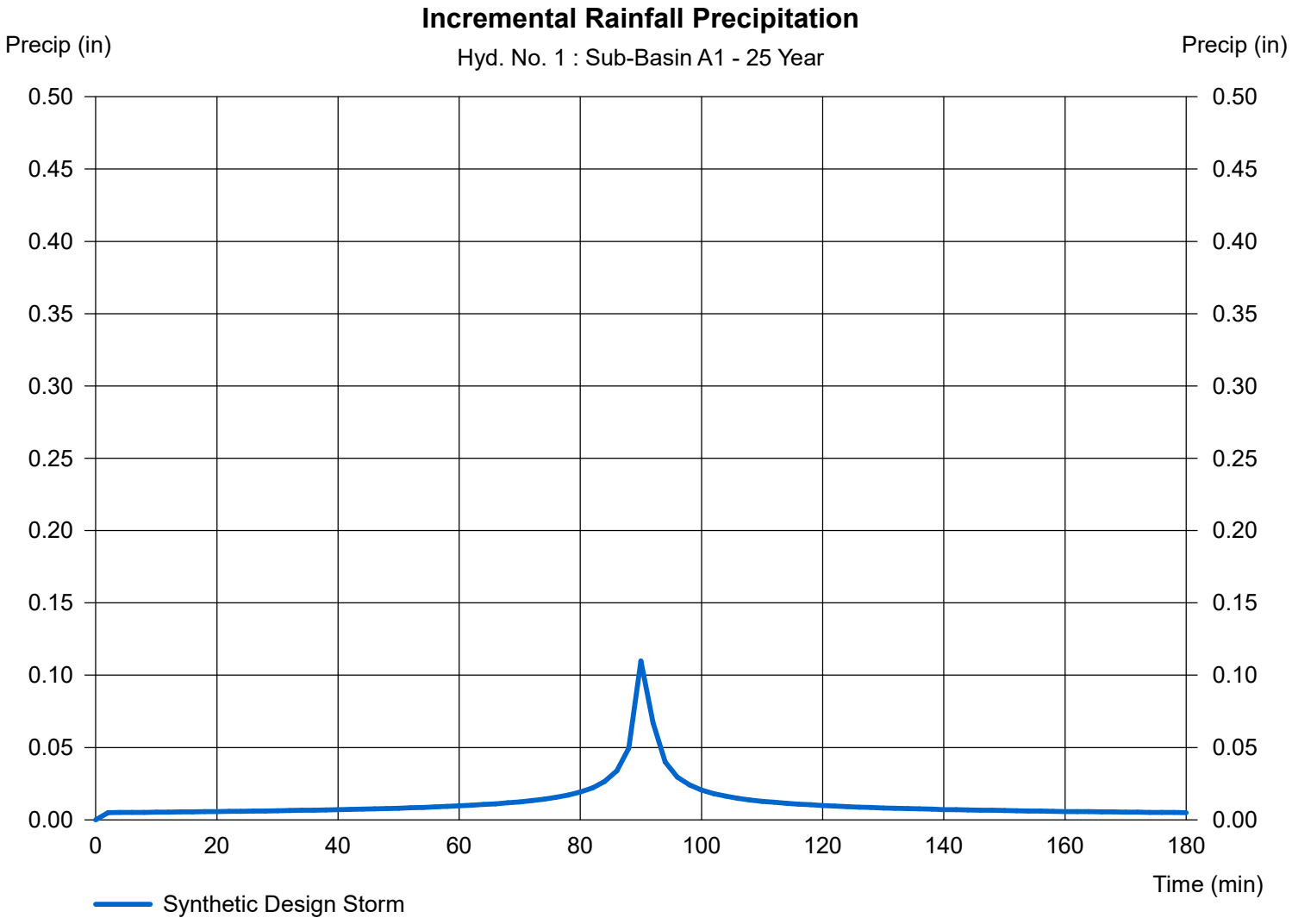
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



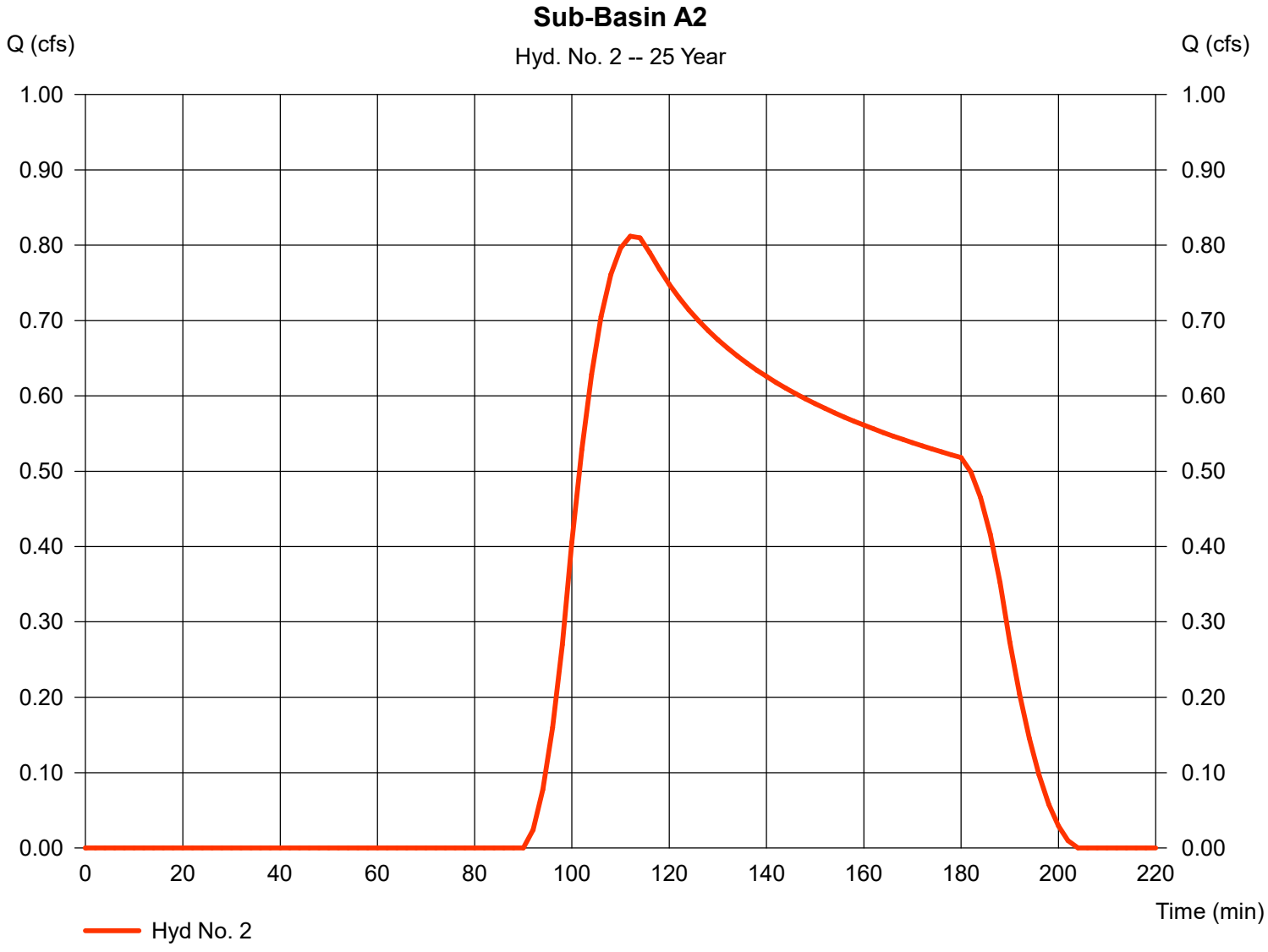
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.812 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 112 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,456 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



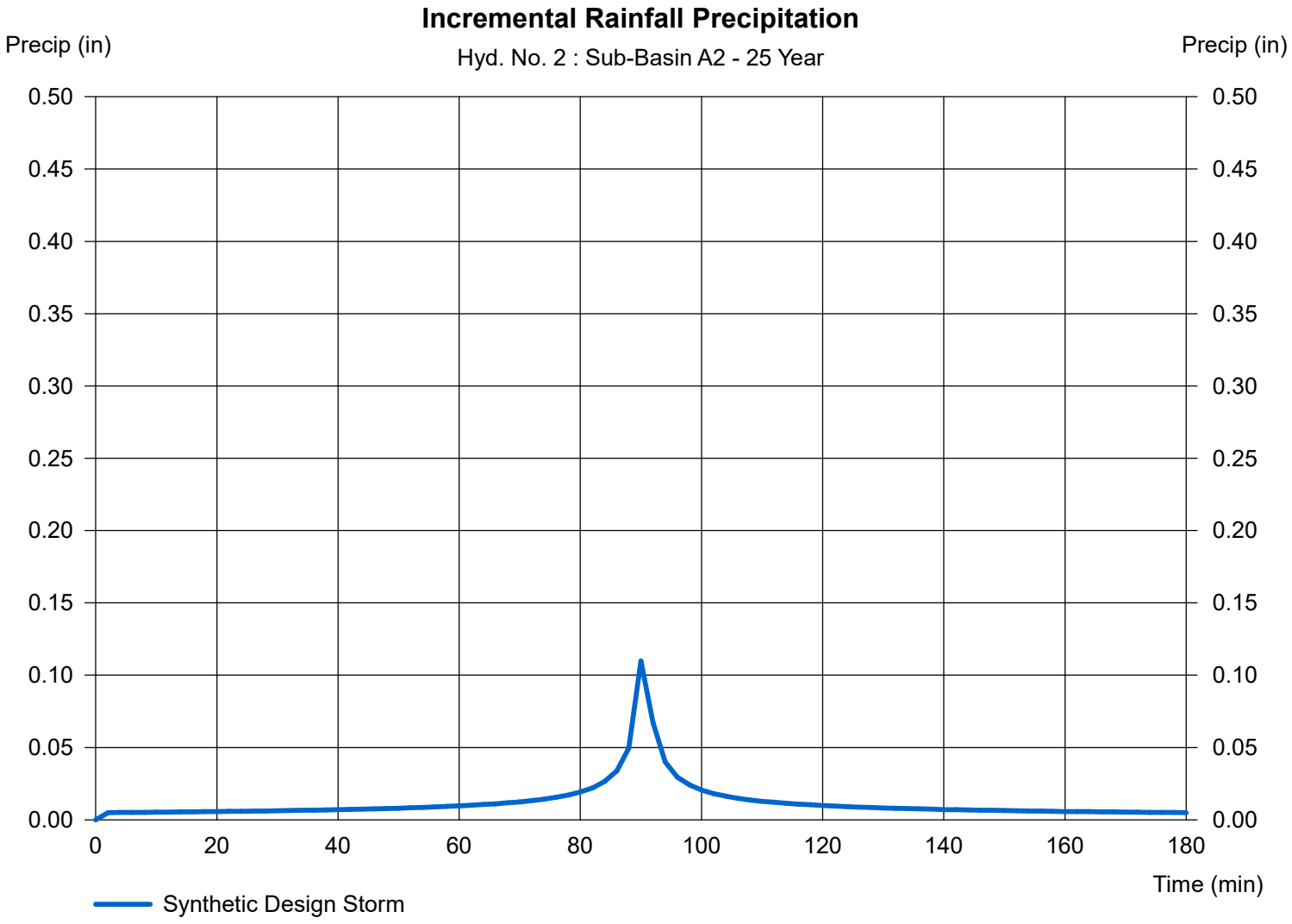
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



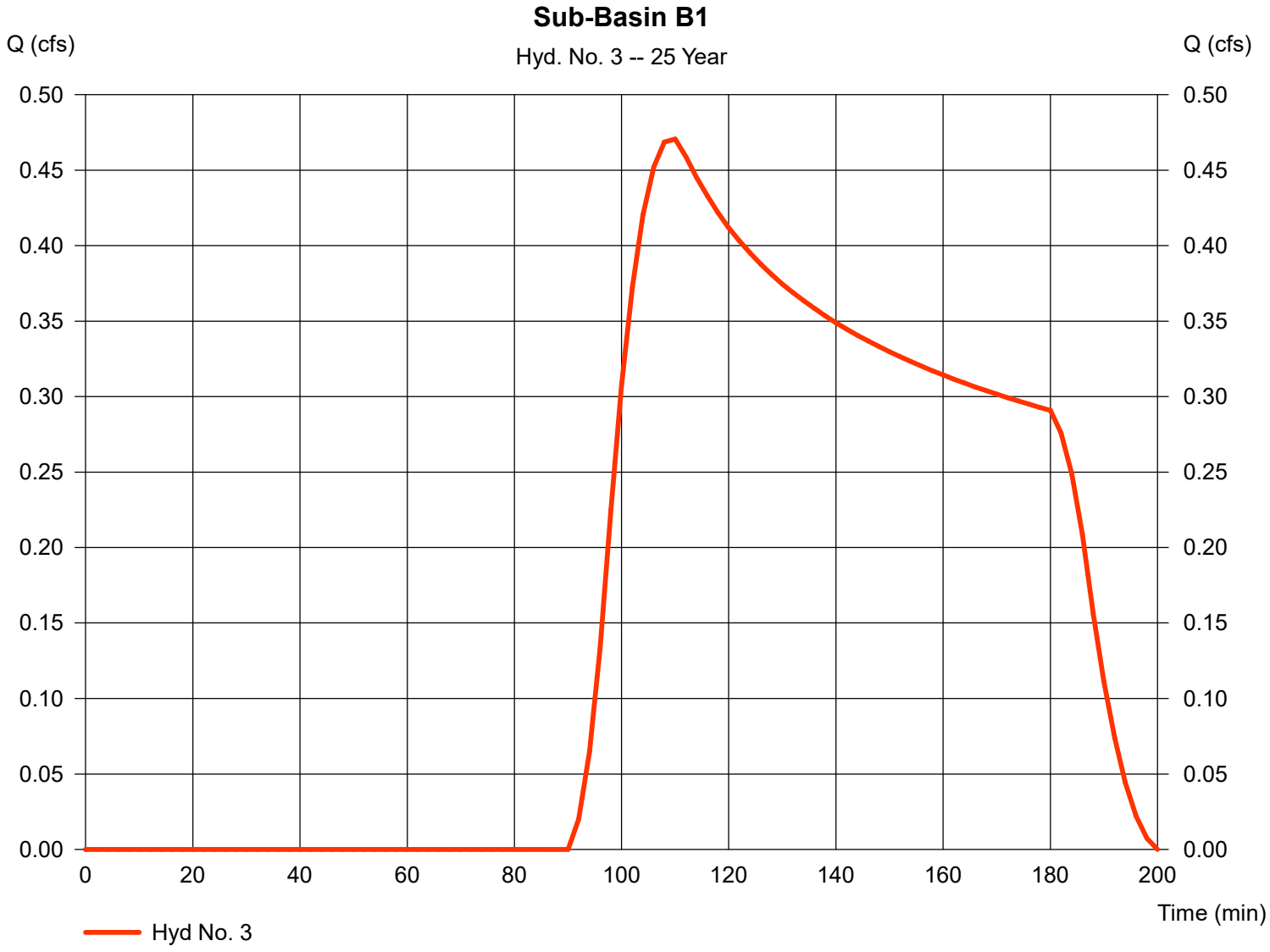
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.471 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 110 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,954 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



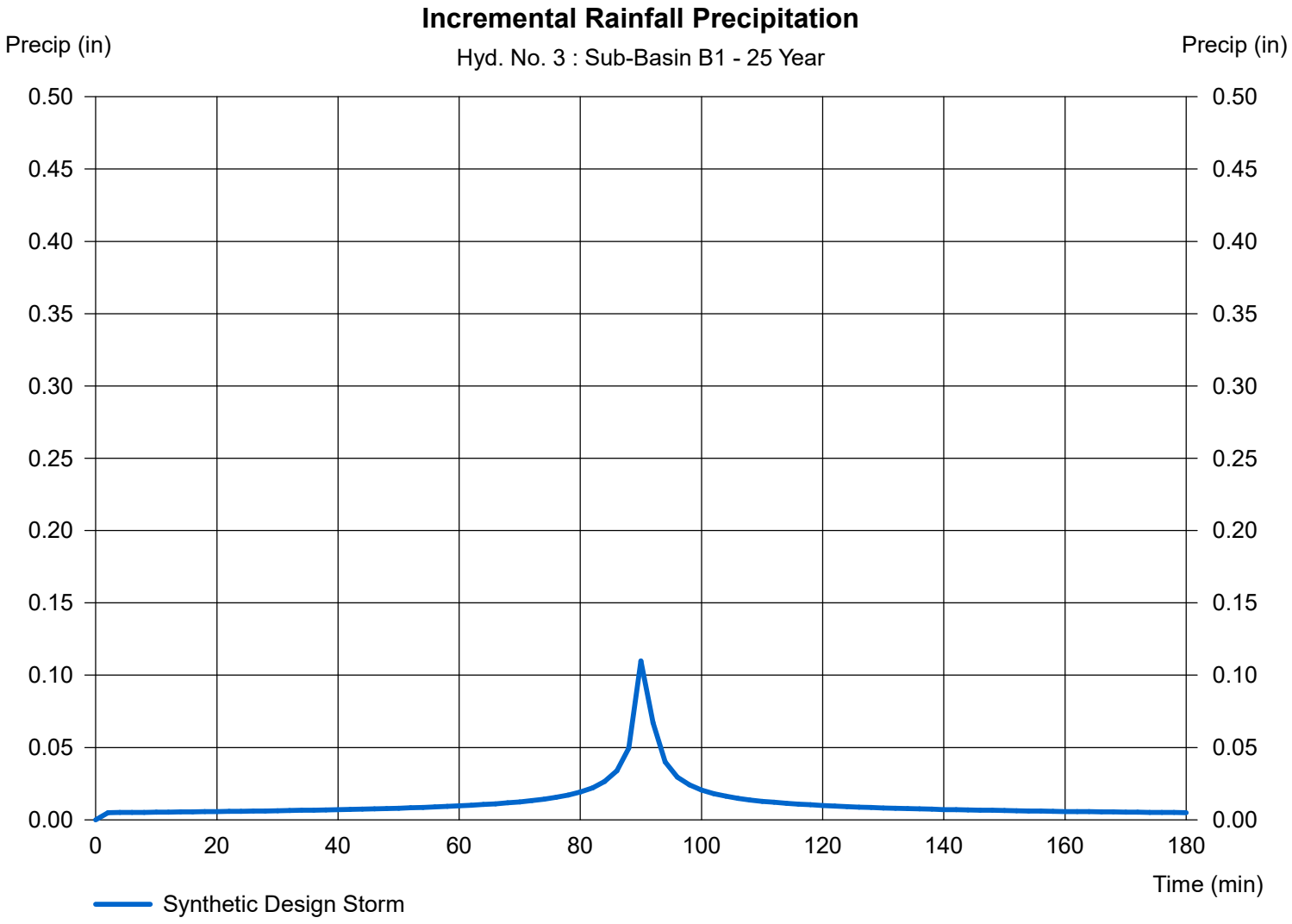
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



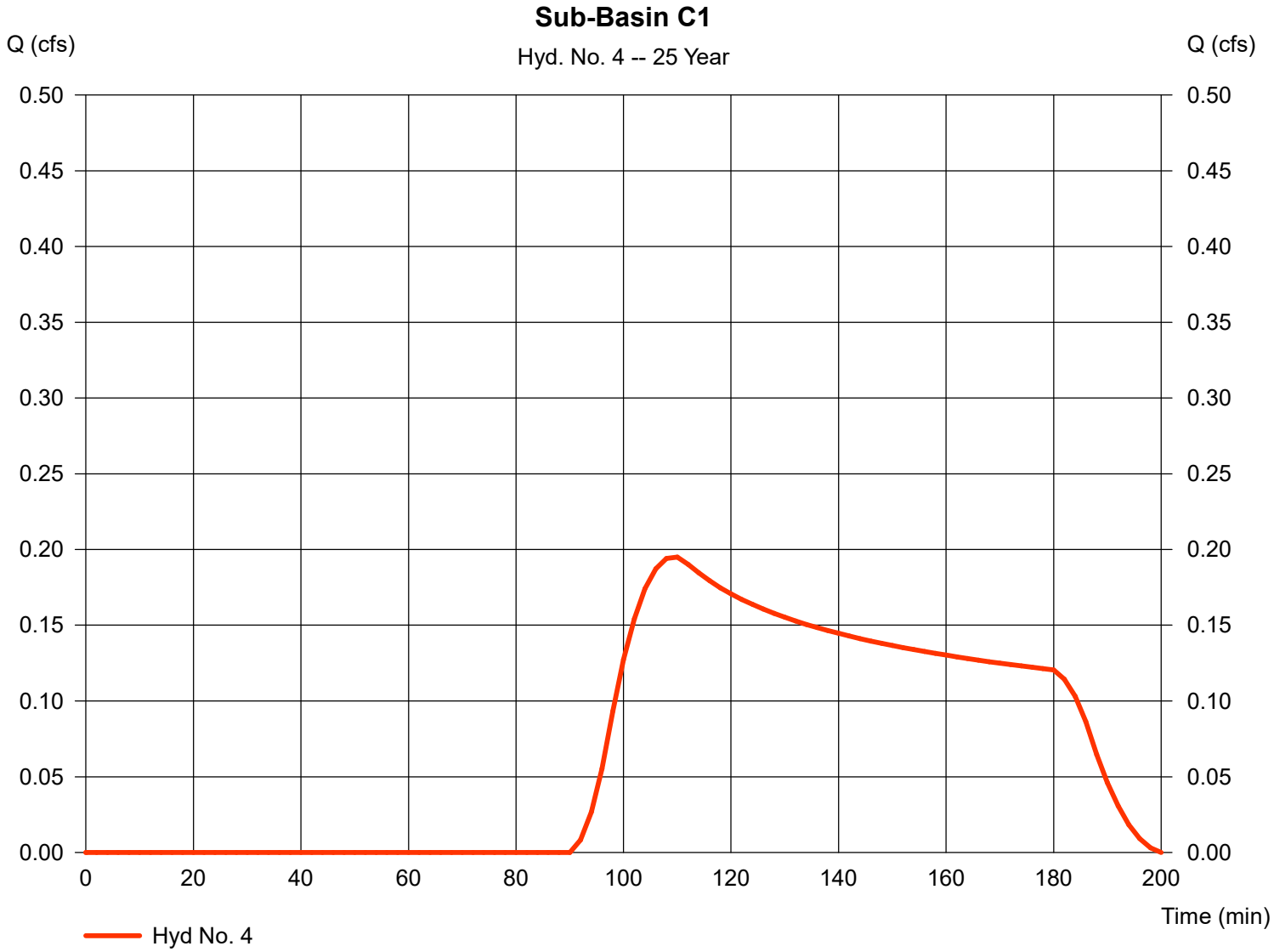
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.195 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 110 min |
| Time interval | = | 2 min | Hyd. volume | = | 810 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



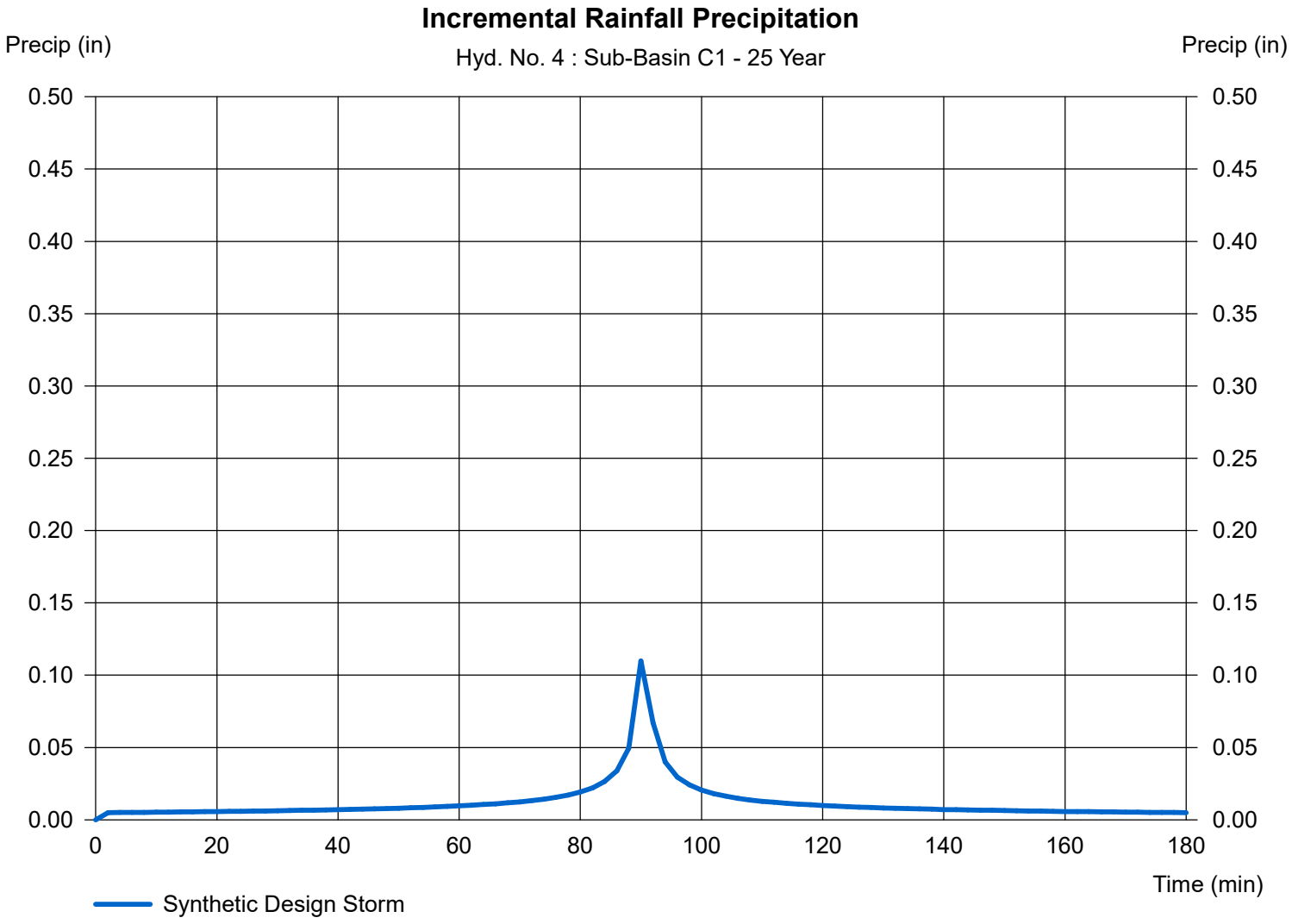
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



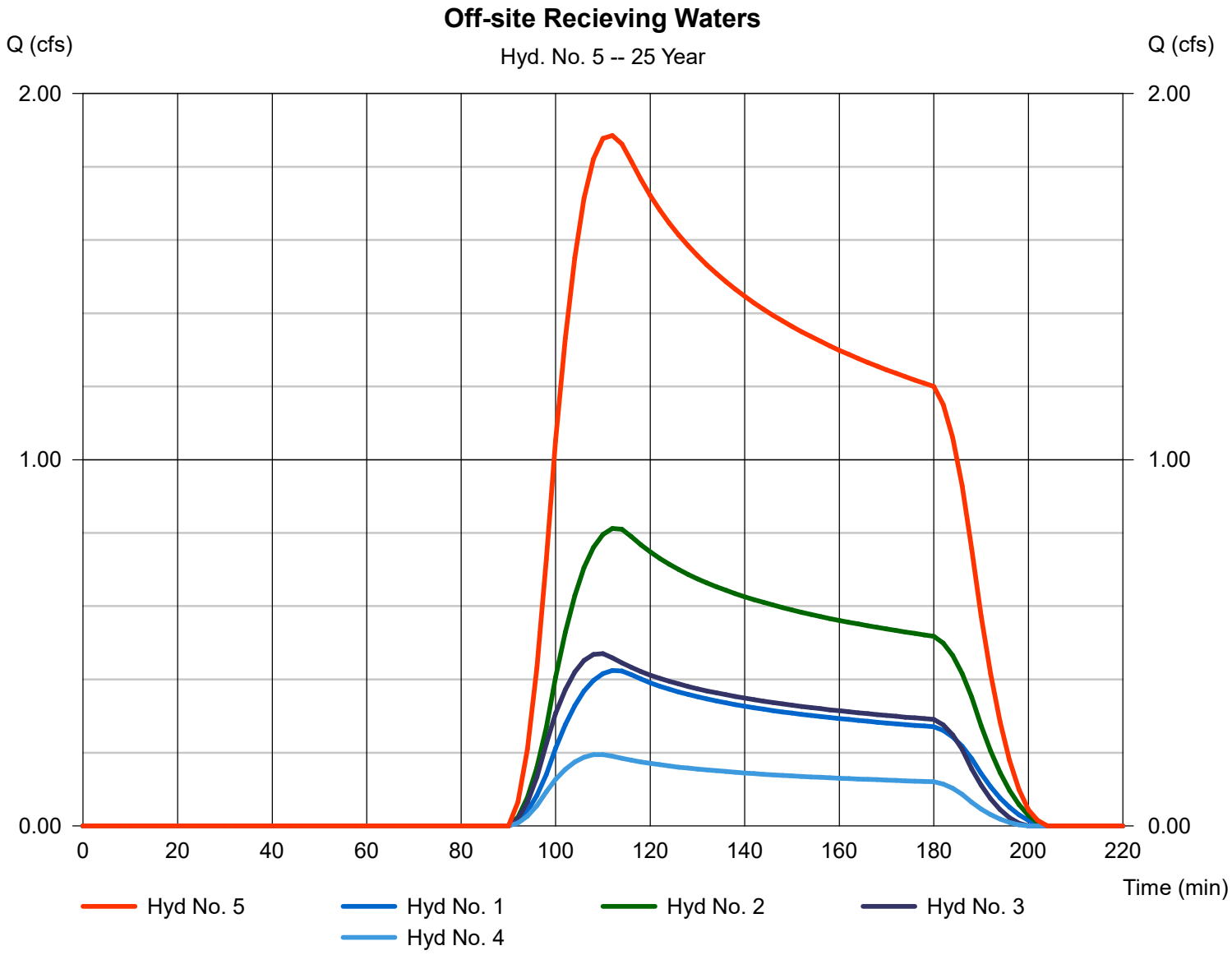
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 1.885 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 112 min |
| Time interval | = 2 min | Hyd. volume | = 8,025 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

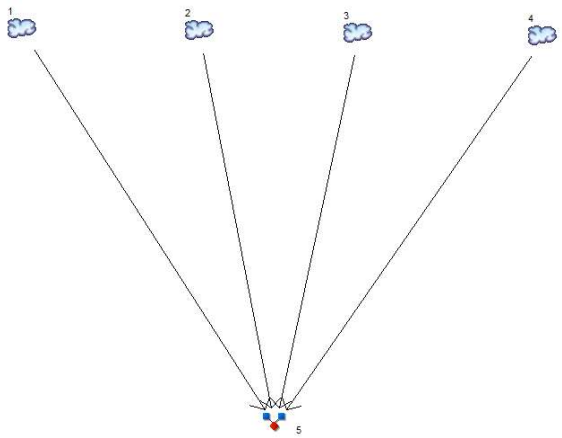
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 0.88 | 1.06 | 0.00 | 1.33 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.989 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.893 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.148 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.476 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 4.475 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.989 | 2 | 194 | 4,588 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 1.893 | 2 | 194 | 8,781 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 1.148 | 2 | 192 | 4,964 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.476 | 2 | 192 | 2,057 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 4.475 | 2 | 194 | 20,390 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

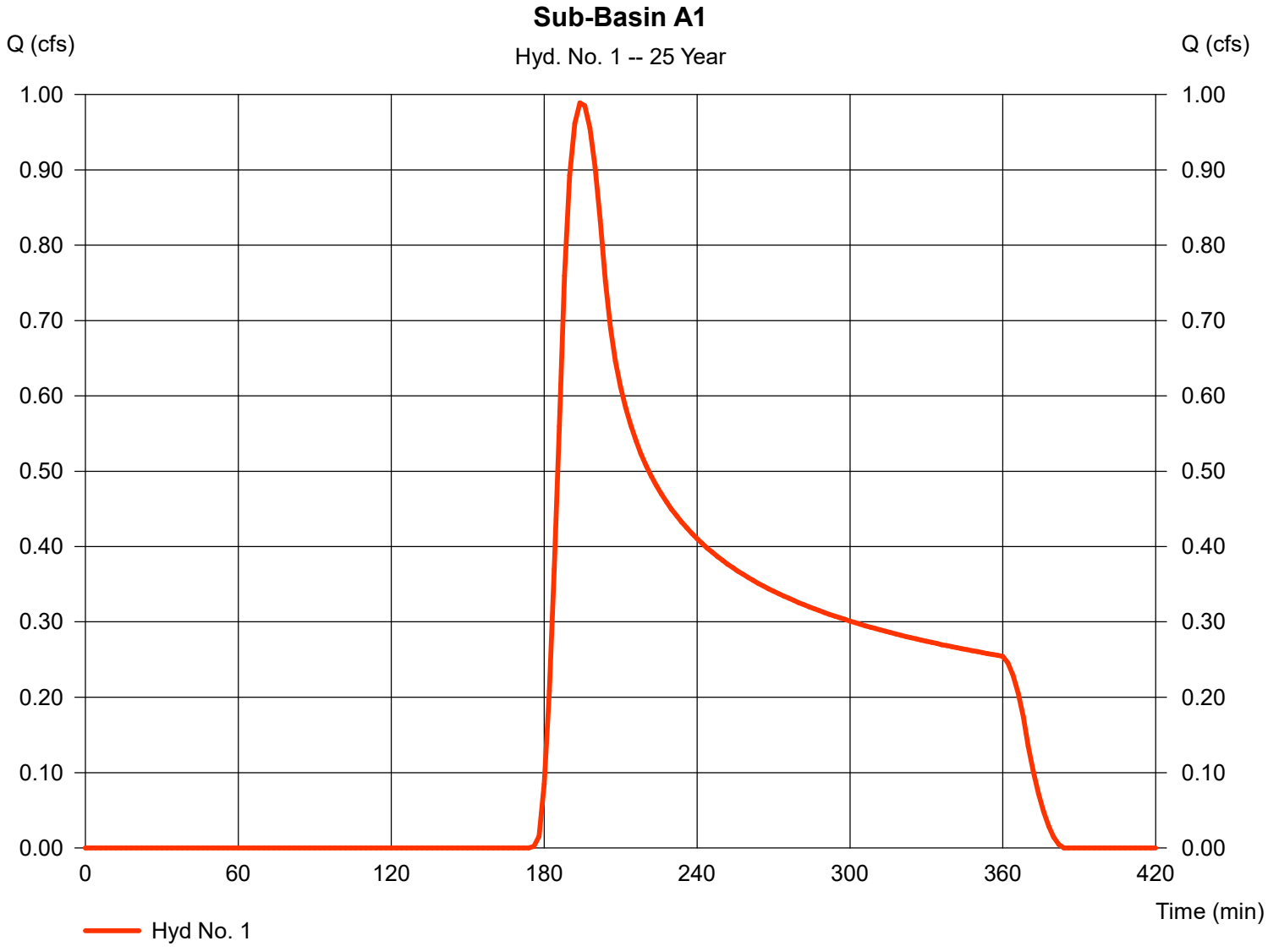
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 0.989 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 194 min |
| Time interval | = 2 min | Hyd. volume | = 4,588 cuft |
| Drainage area | = 6.178 ac | Curve number | = 78 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 13.70 min |
| Total precip. | = 1.45 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



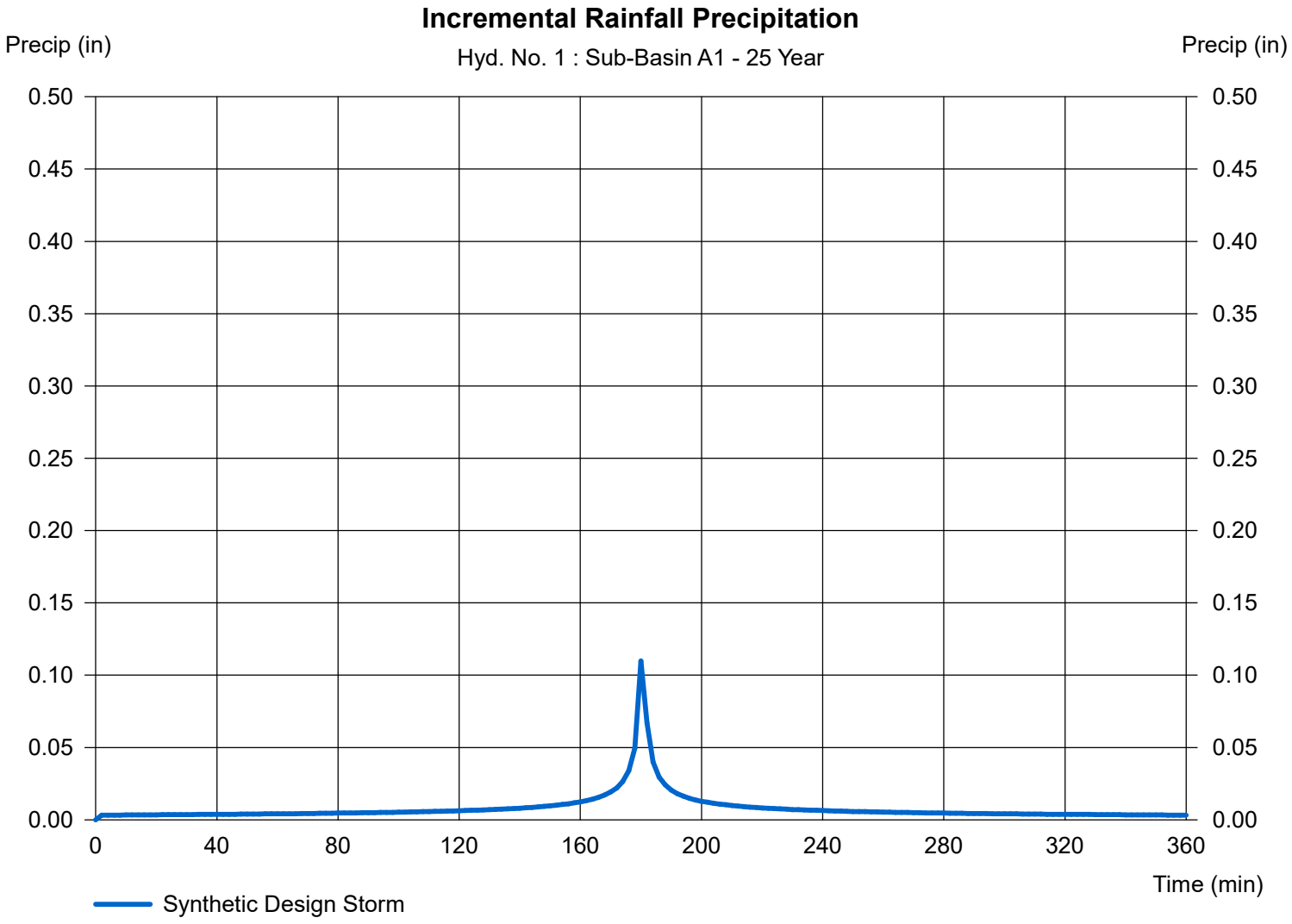
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



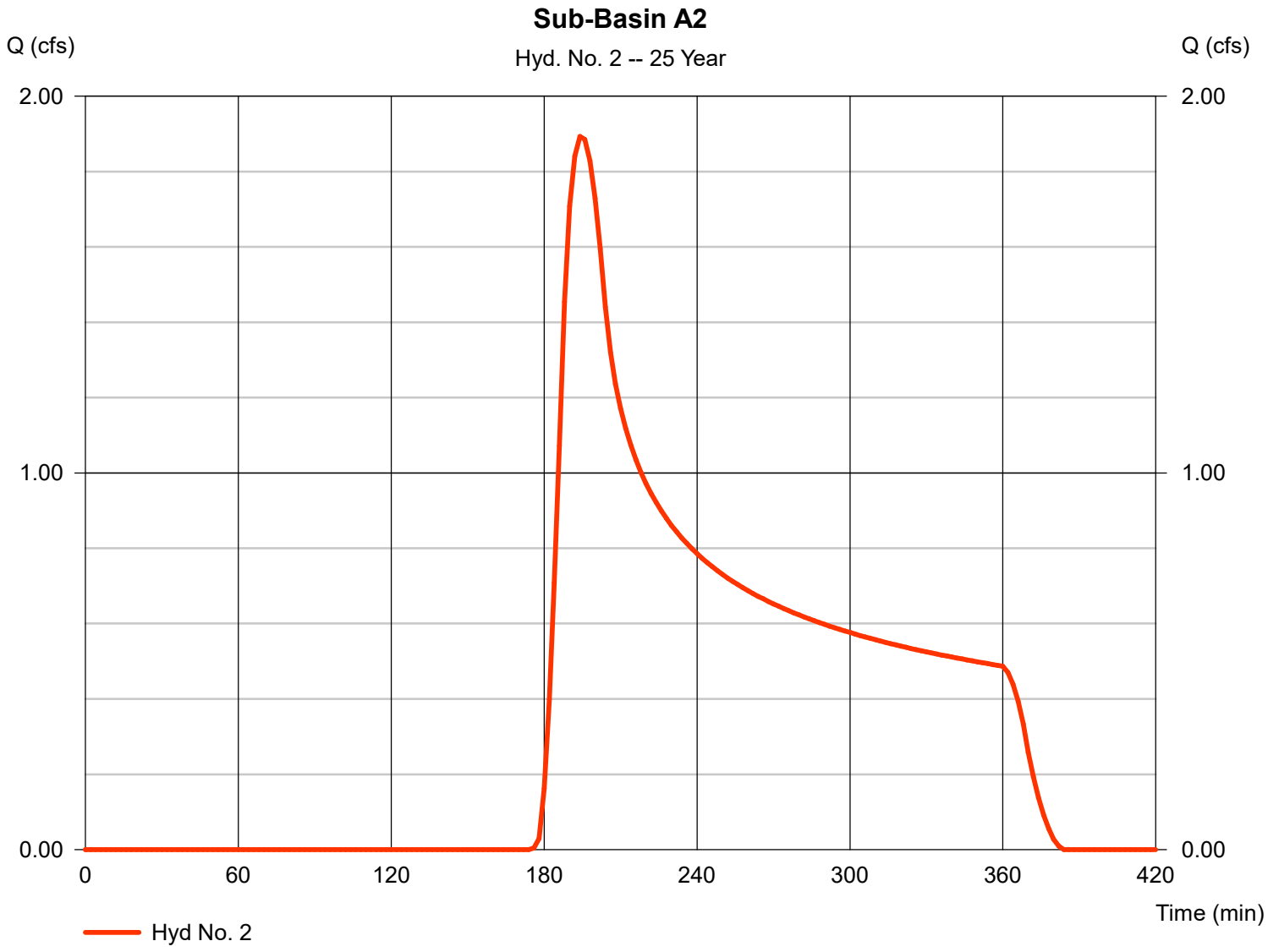
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.893 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 194 min |
| Time interval | = | 2 min | Hyd. volume | = | 8,781 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 1.45 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



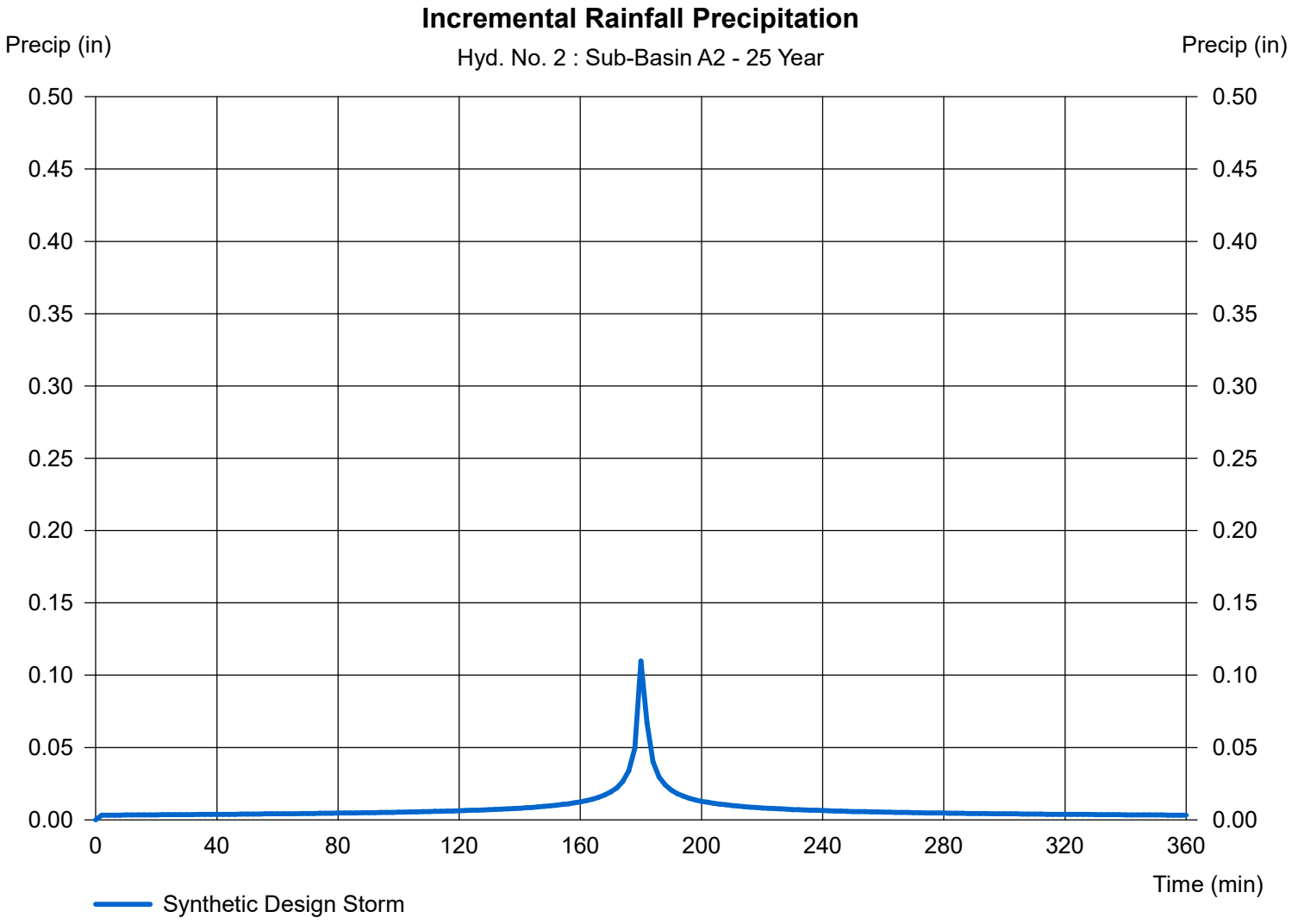
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



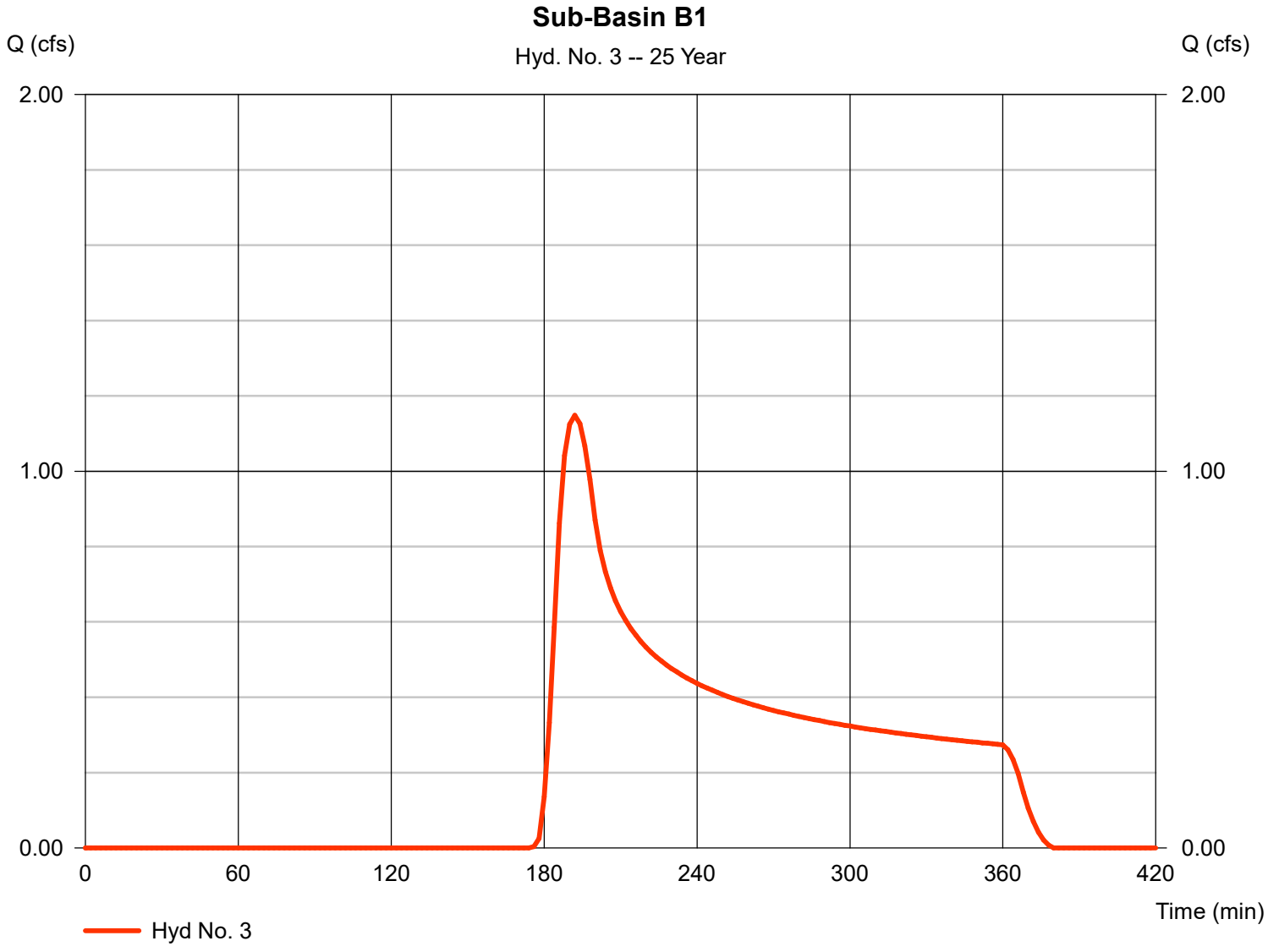
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 1.148 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 192 min |
| Time interval | = 2 min | Hyd. volume | = 4,964 cuft |
| Drainage area | = 6.320 ac | Curve number | = 78 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 12.80 min |
| Total precip. | = 1.45 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



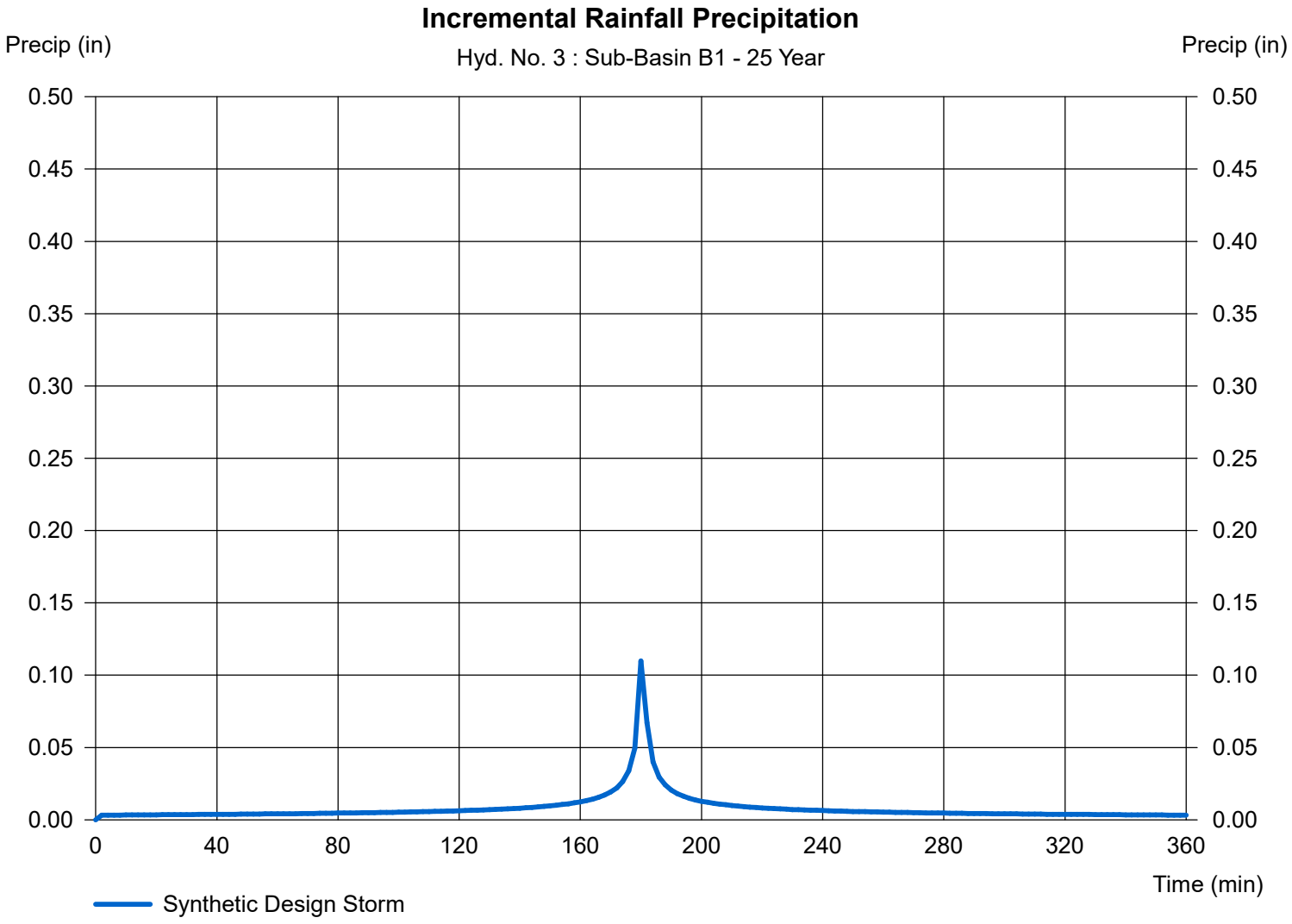
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



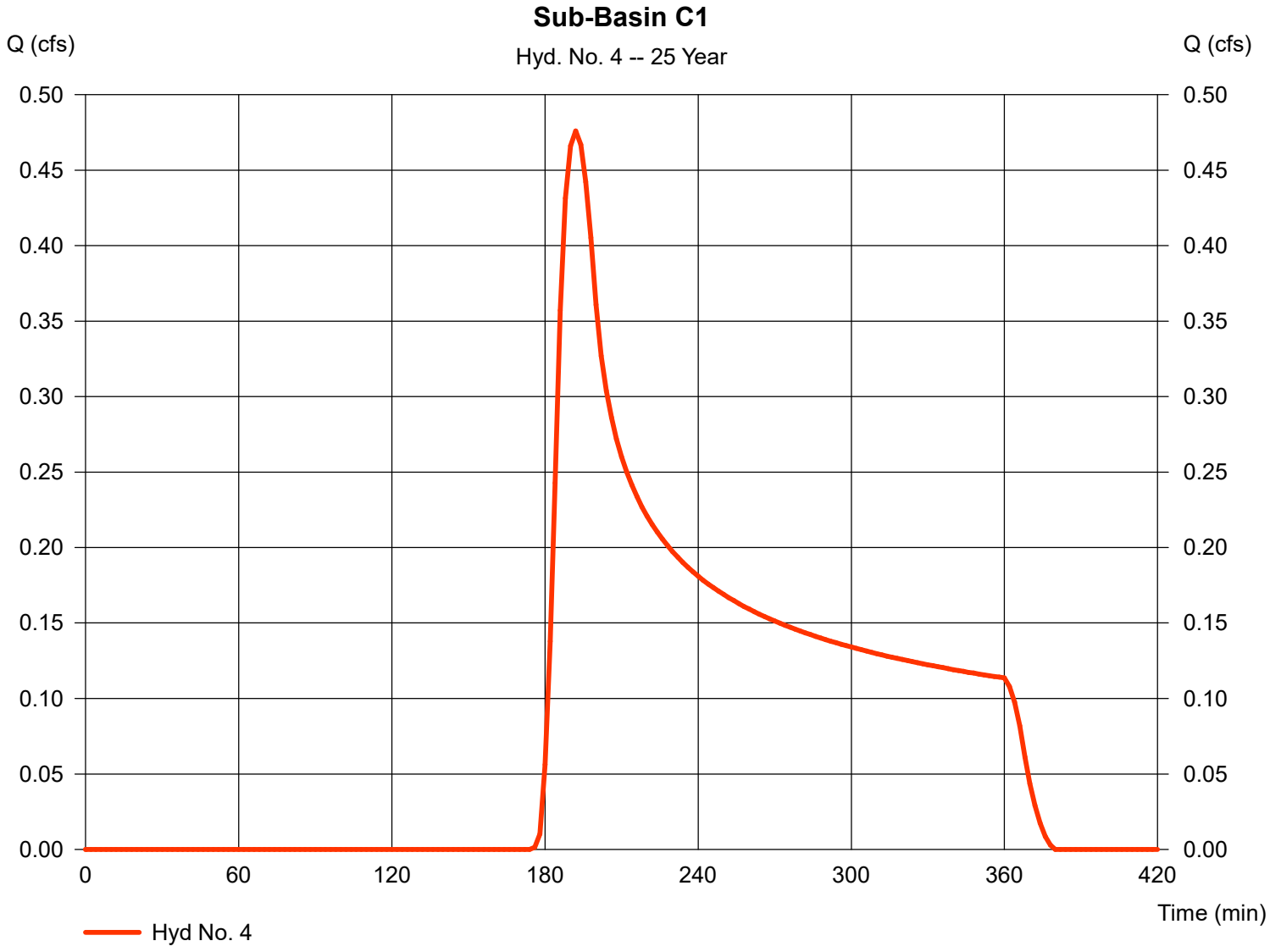
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 0.476 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 192 min |
| Time interval | = 2 min | Hyd. volume | = 2,057 cuft |
| Drainage area | = 2.619 ac | Curve number | = 78 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 10.80 min |
| Total precip. | = 1.45 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



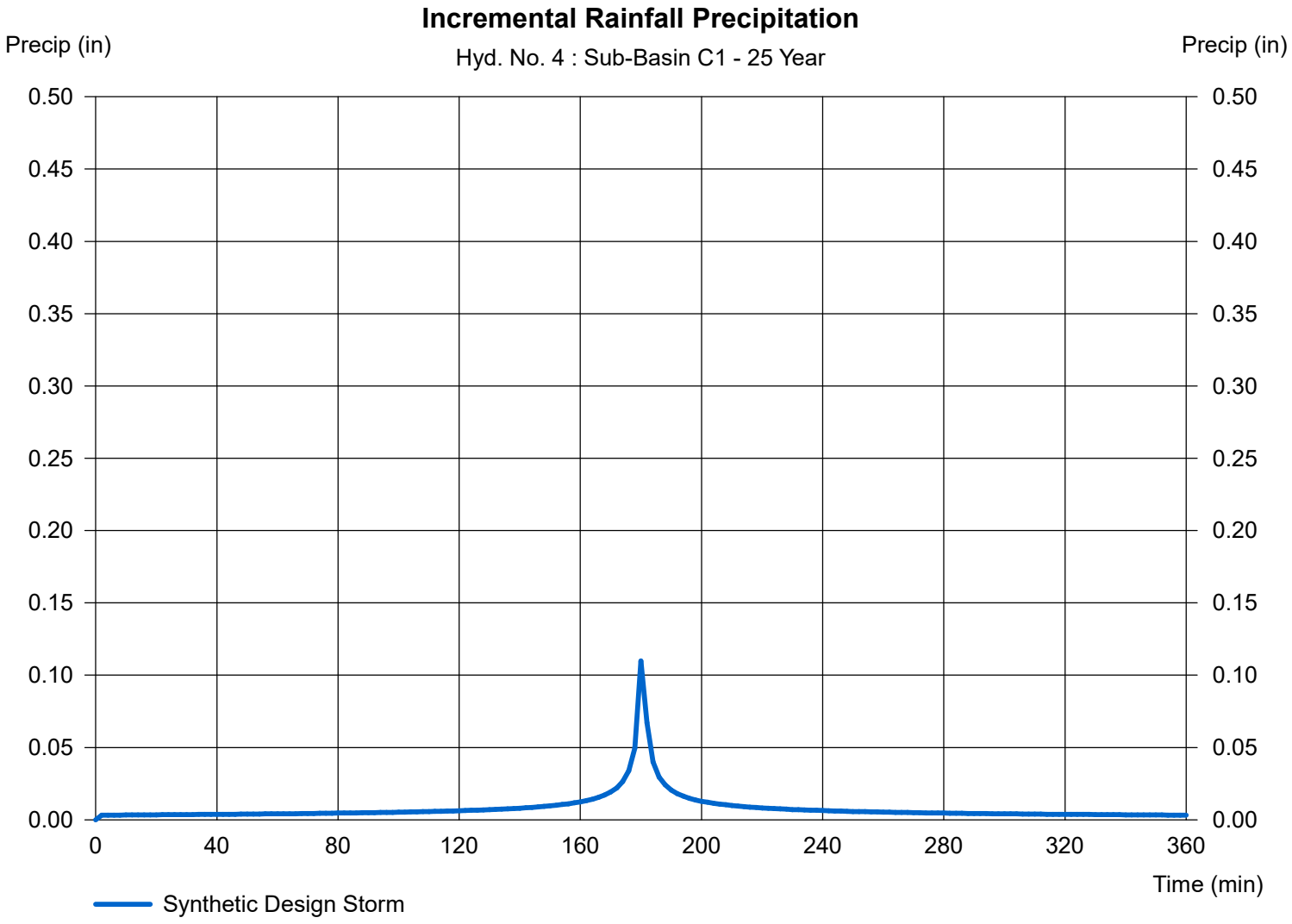
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



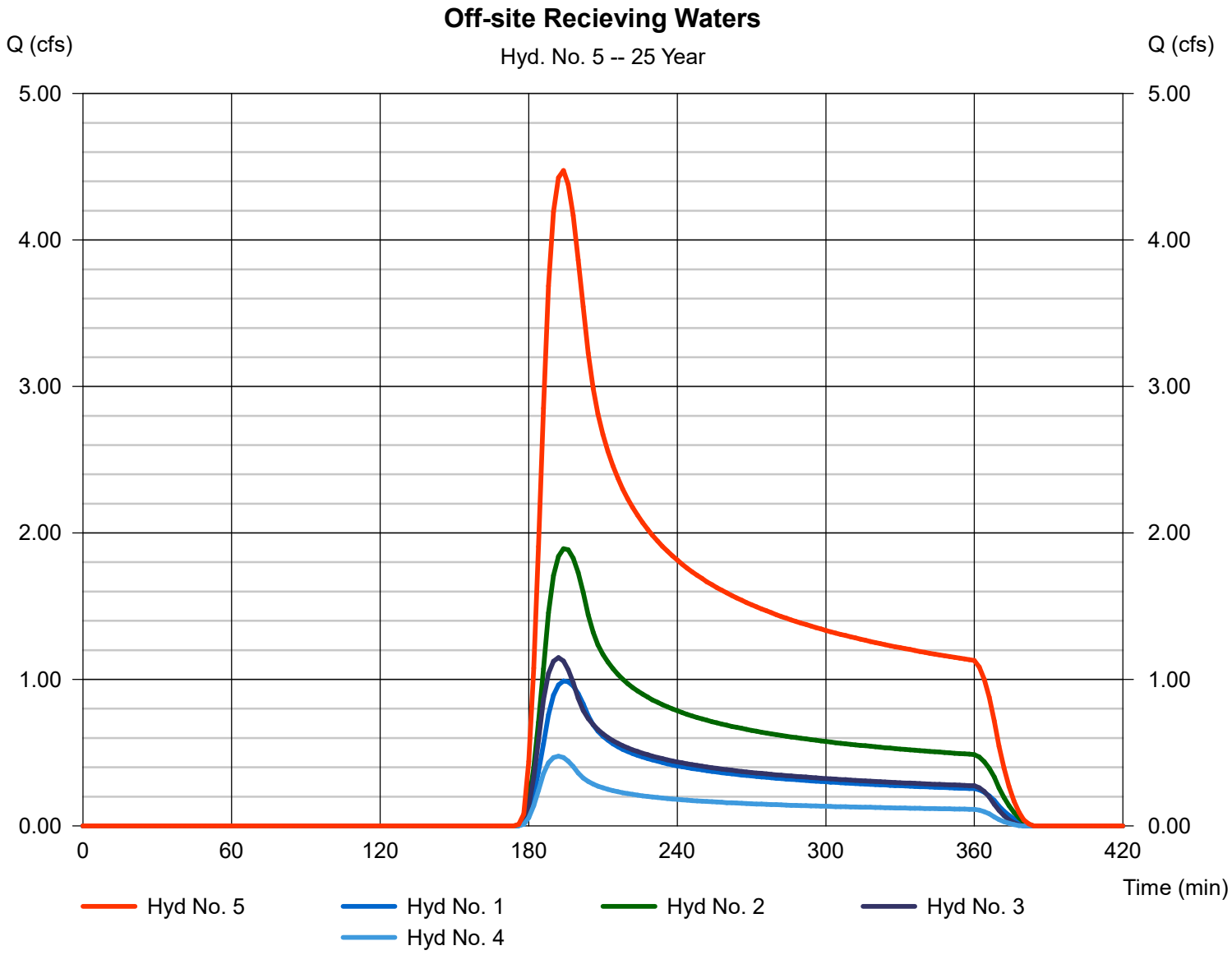
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 4.475 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 194 min |
| Time interval | = 2 min | Hyd. volume | = 20,390 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

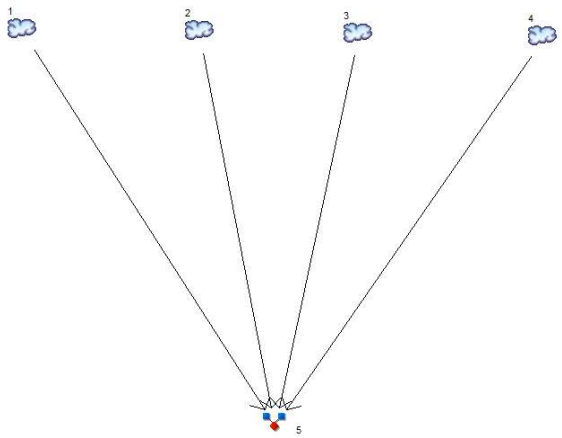
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 3.131 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 5.992 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 3.669 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.520 | ------- | ------- | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | 14.12 | ------- | ------- | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 3.131 | 2 | 730 | 17,626 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 5.992 | 2 | 730 | 33,736 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 3.669 | 2 | 728 | 19,072 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 1.520 | 2 | 728 | 7,904 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 14.12 | 2 | 730 | 78,339 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

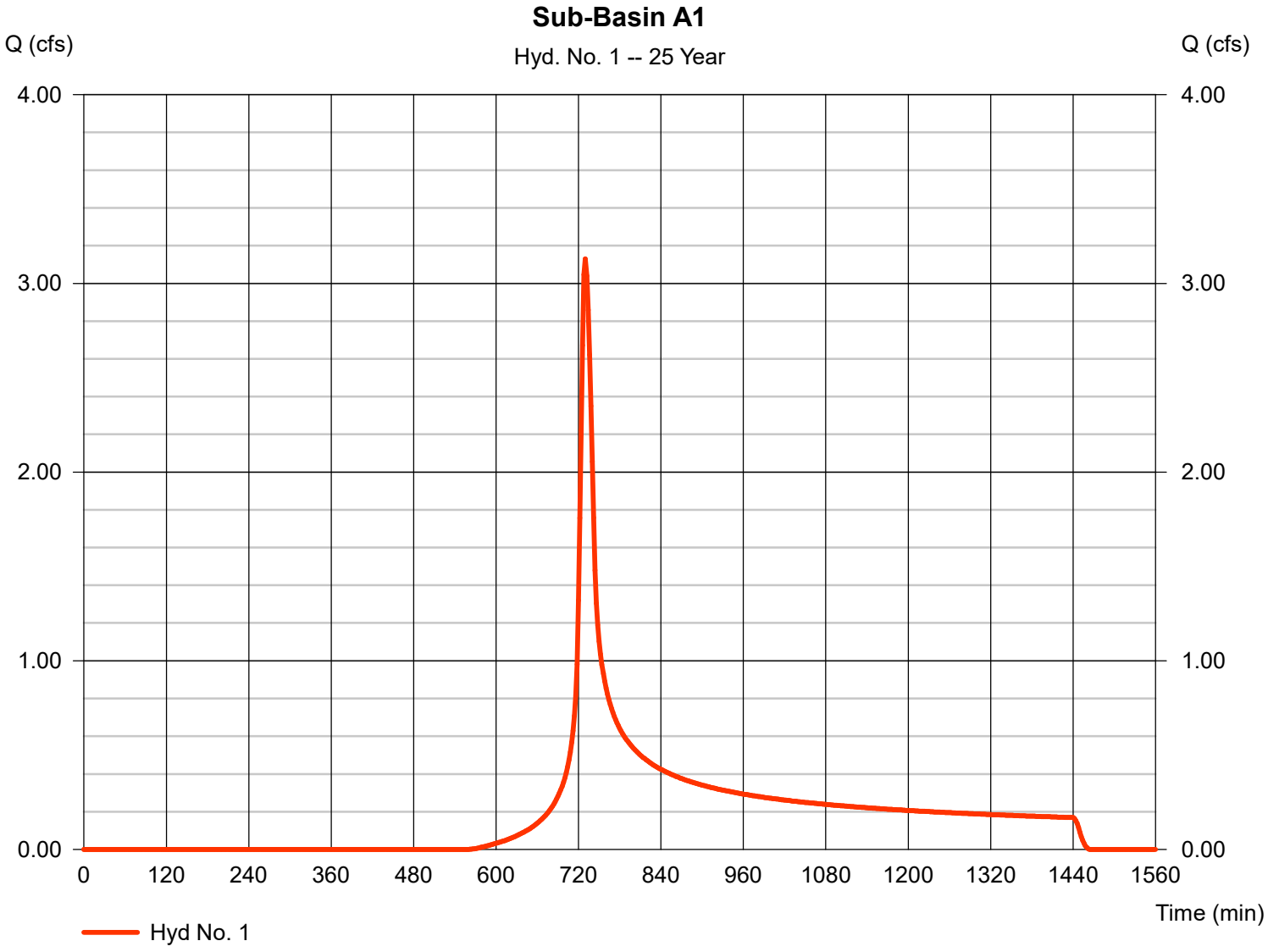
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.131 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 17,626 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



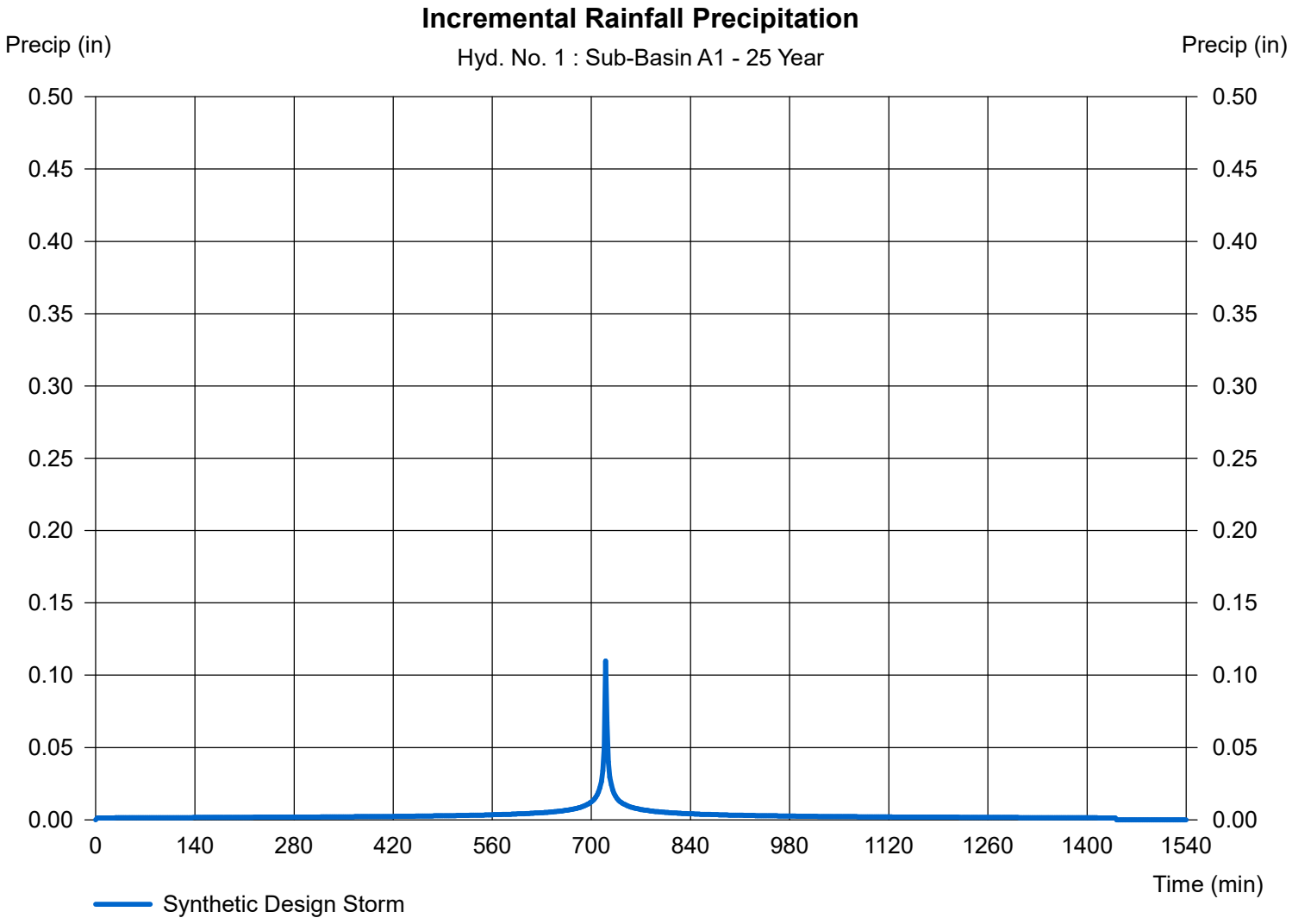
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



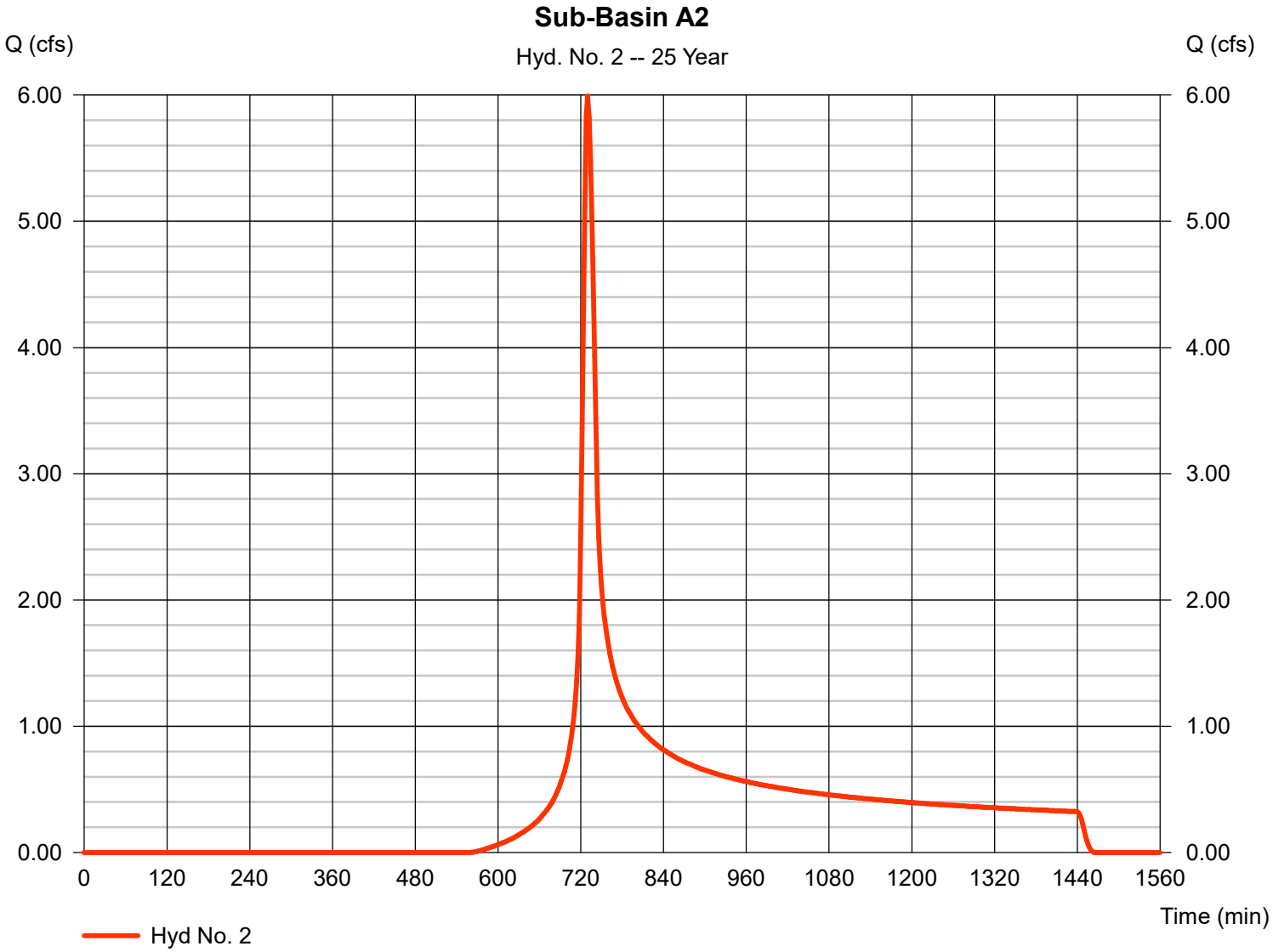
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 5.992 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 33,736 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



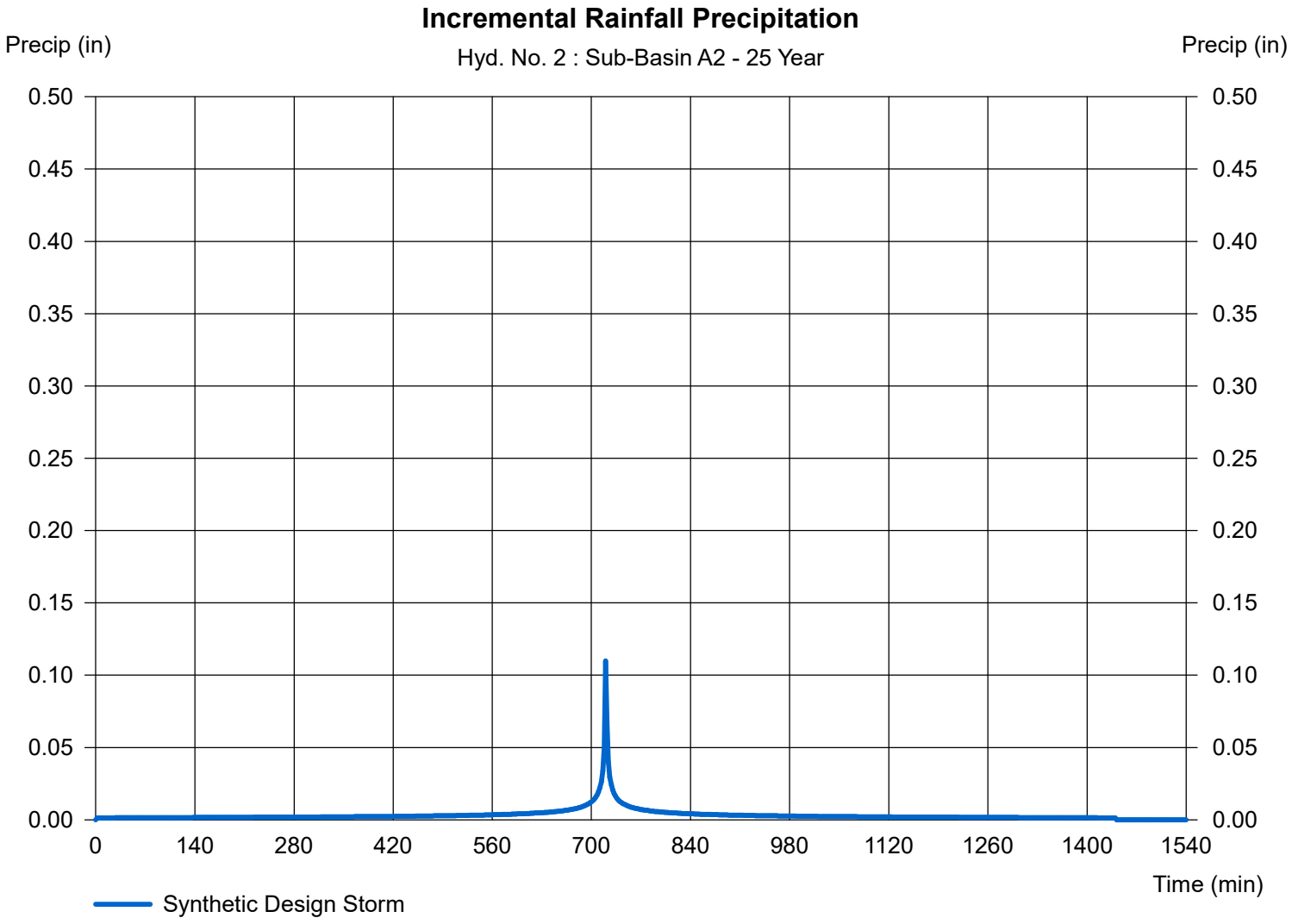
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



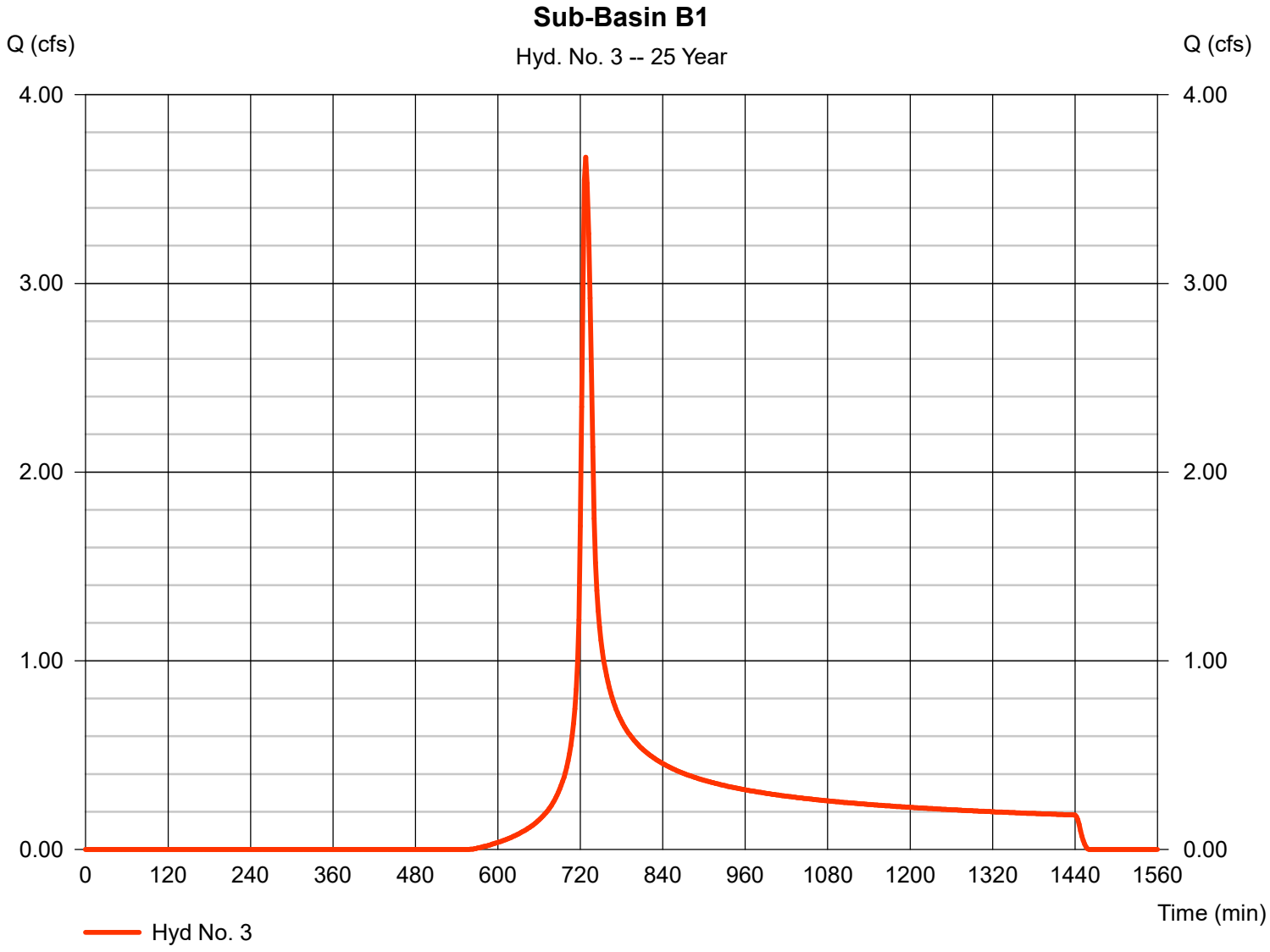
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.669 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 19,072 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



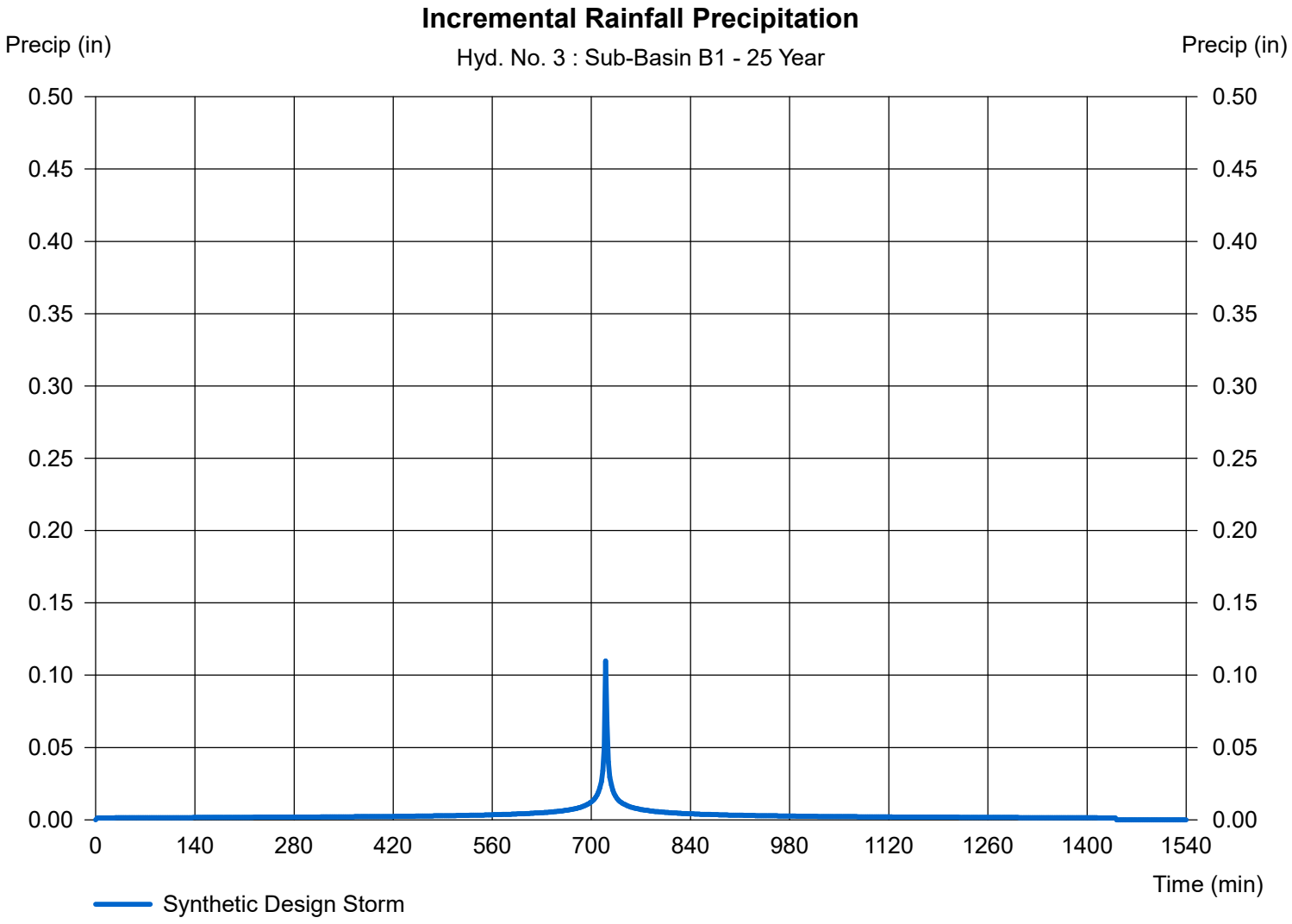
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



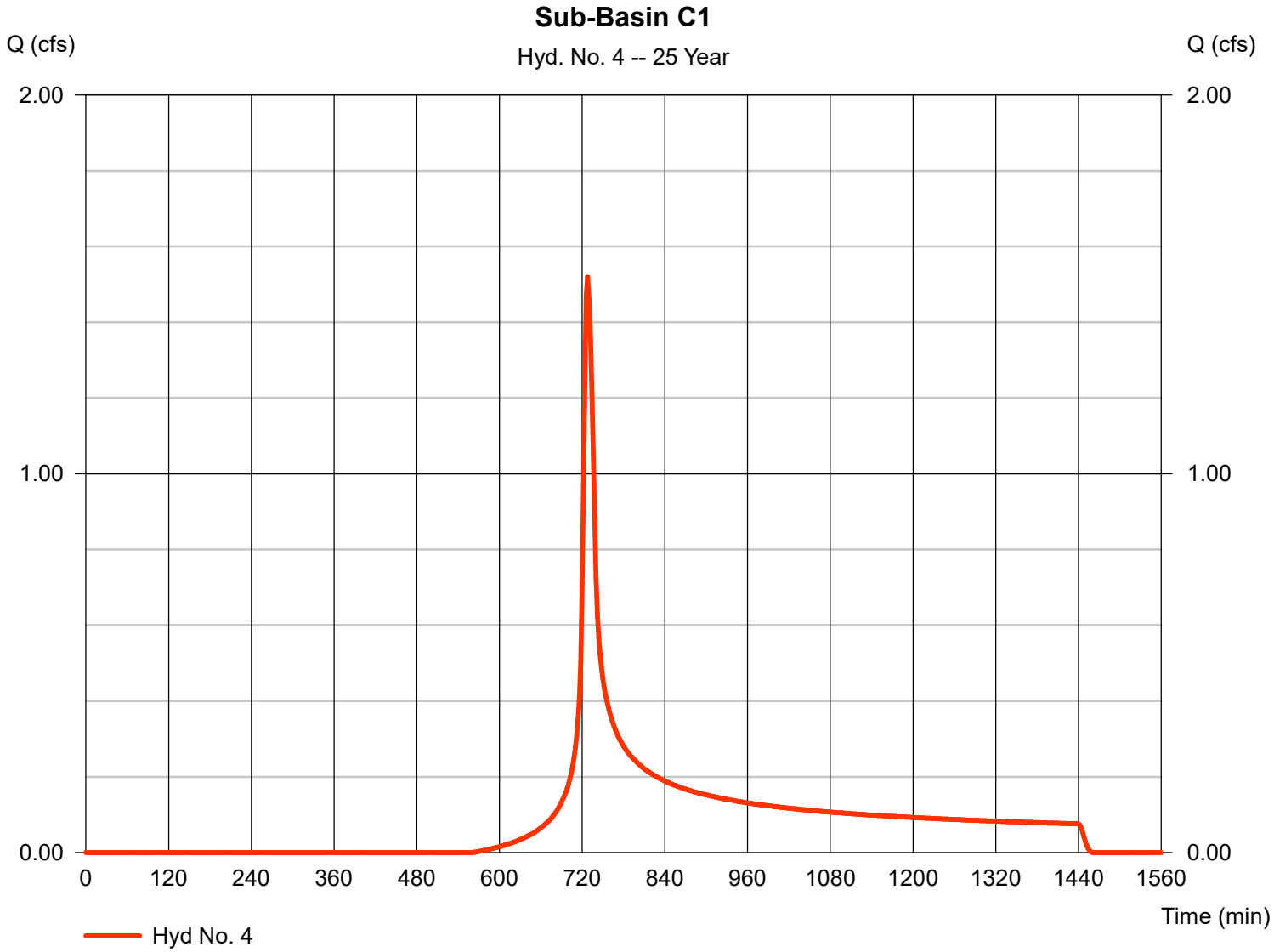
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.520 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 7,904 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 78 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



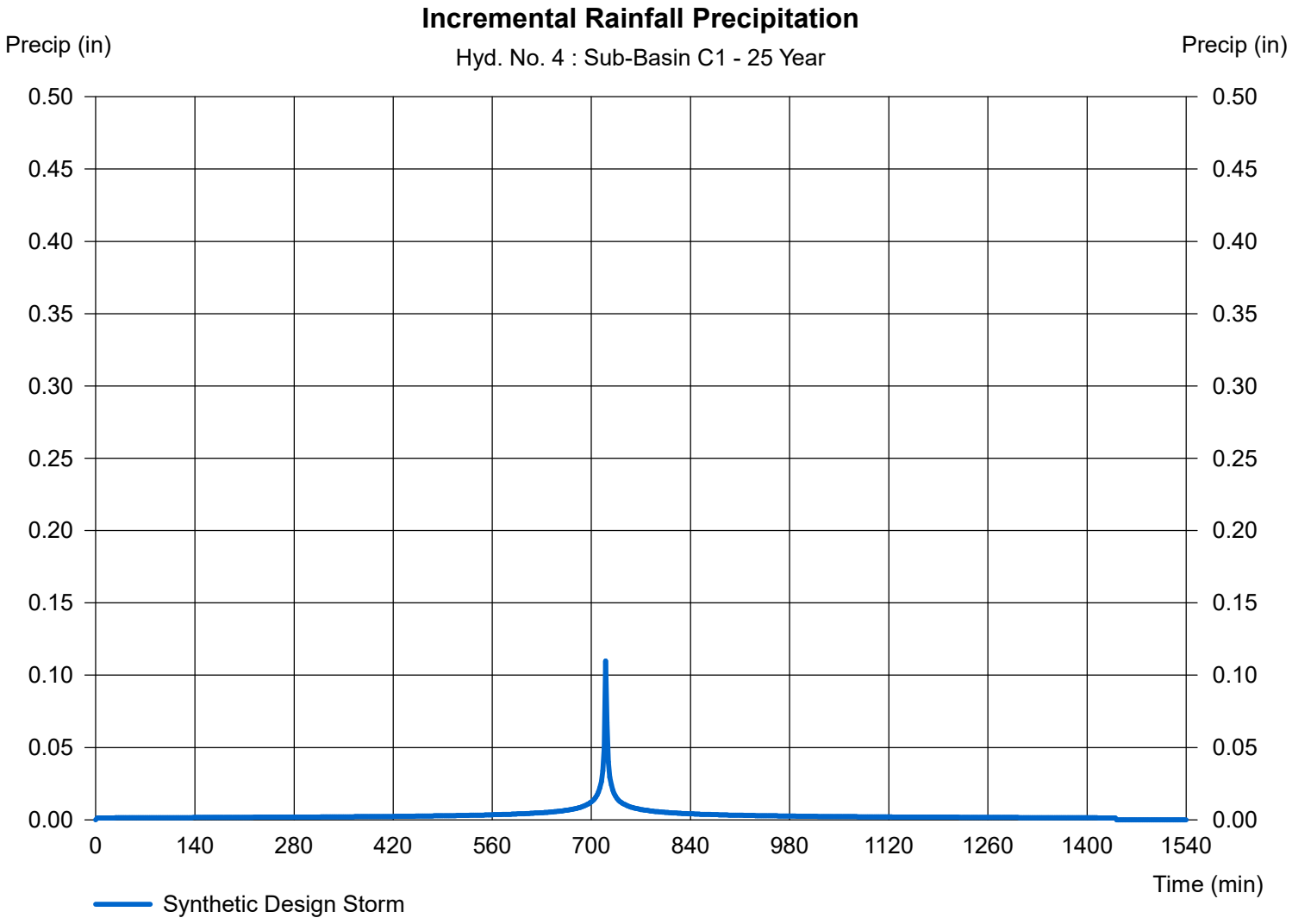
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



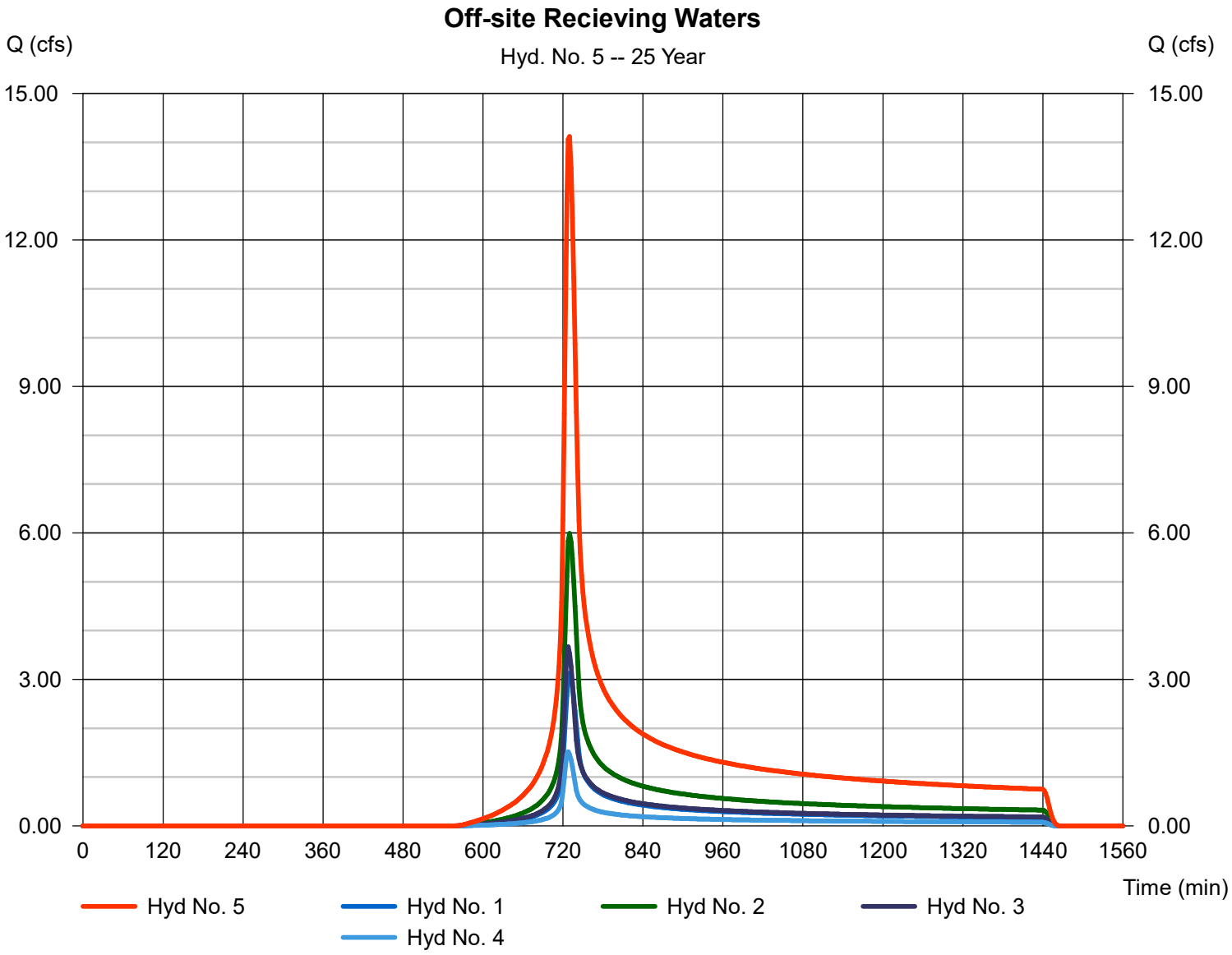
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 14.12 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 730 min |
| Time interval | = 2 min | Hyd. volume | = 78,339 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |

## 5.3.d. 100 Year Storm Event– Pre-Developed Conditions

5.3.d.1 15 Min Duration

5.3.d.2 30 Min Duration

5.3.d.3 1 Hour Duration

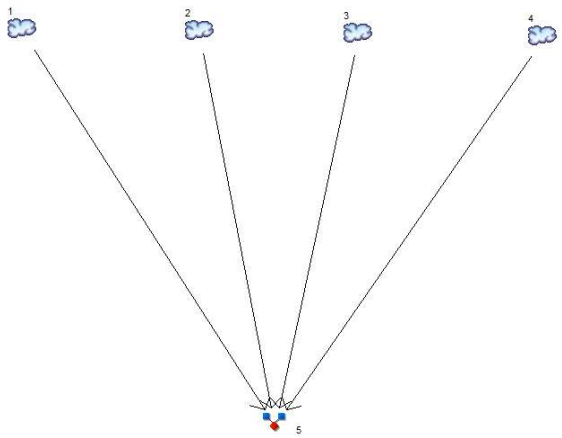
5.3.d.4 3 Hour Duration

5.3.d.5 6 Hour Duration

5.3.d.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3.124 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 5.416 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3.196 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 1.325 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 13.05 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 3.124 | 1 | 17 | 2,035 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 5.416 | 1 | 18 | 3,965 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 3.196 | 1 | 17 | 2,082 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 1.325 | 1 | 17 | 863 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 13.05 | 1 | 17 | 8,945 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

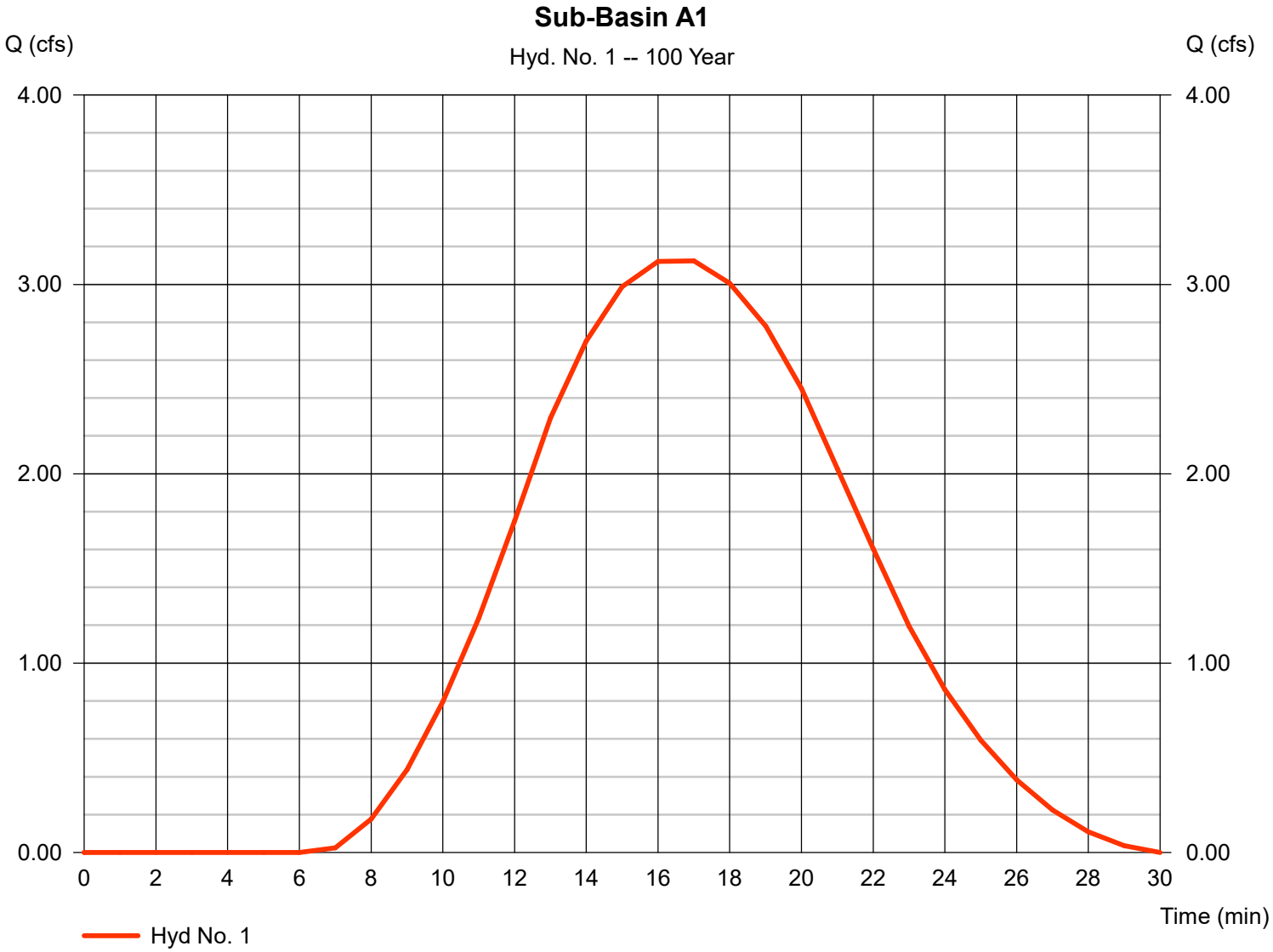
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 3.124 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 17 min |
| Time interval | = 1 min | Hyd. volume | = 2,035 cuft |
| Drainage area | = 6.178 ac | Curve number | = 92.8 |
| Basin Slope | = 7.9 % | Hydraulic length | = 957 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.90 min |
| Total precip. | = 0.47 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | Shape factor | = 484 |



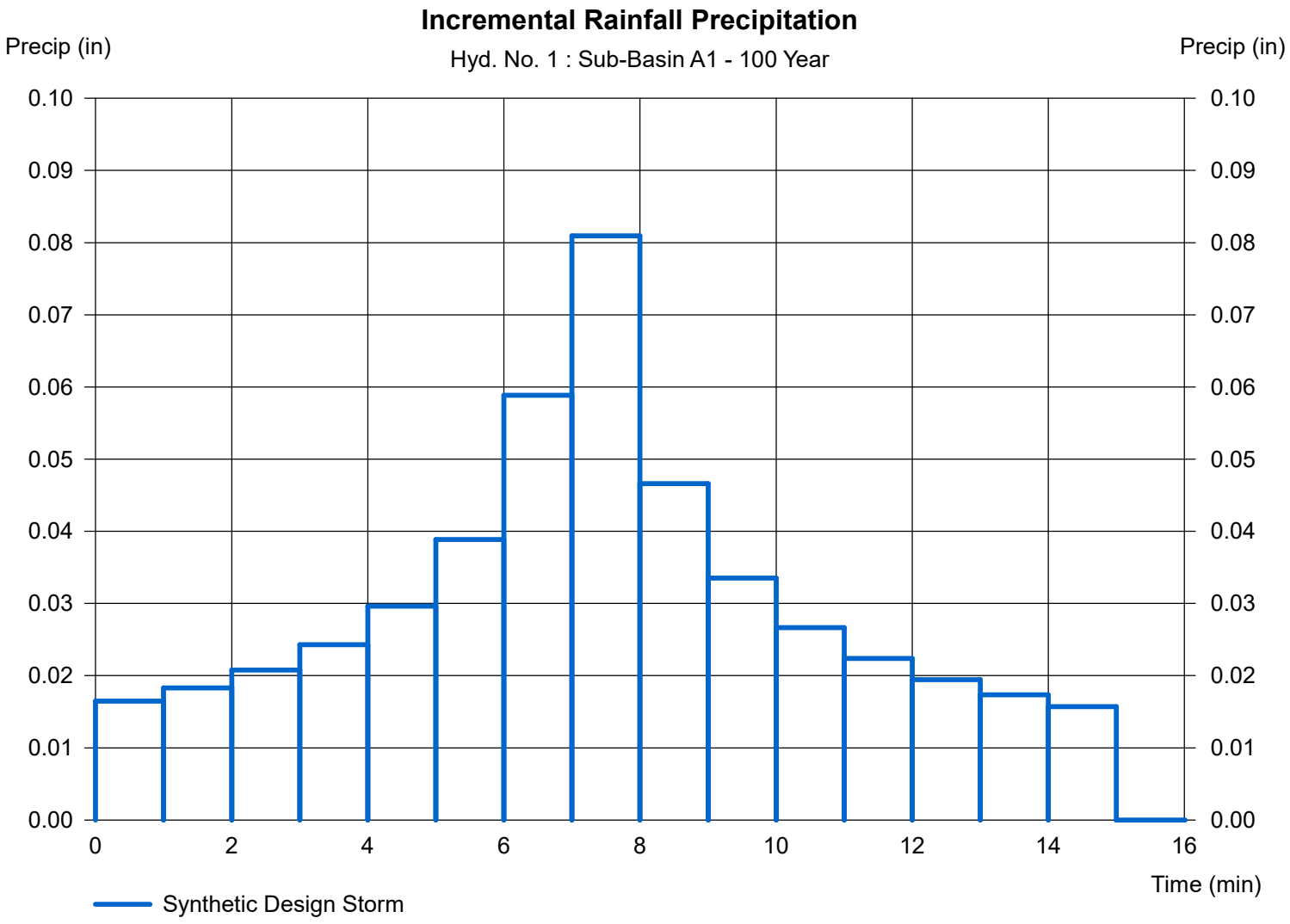
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.4699 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



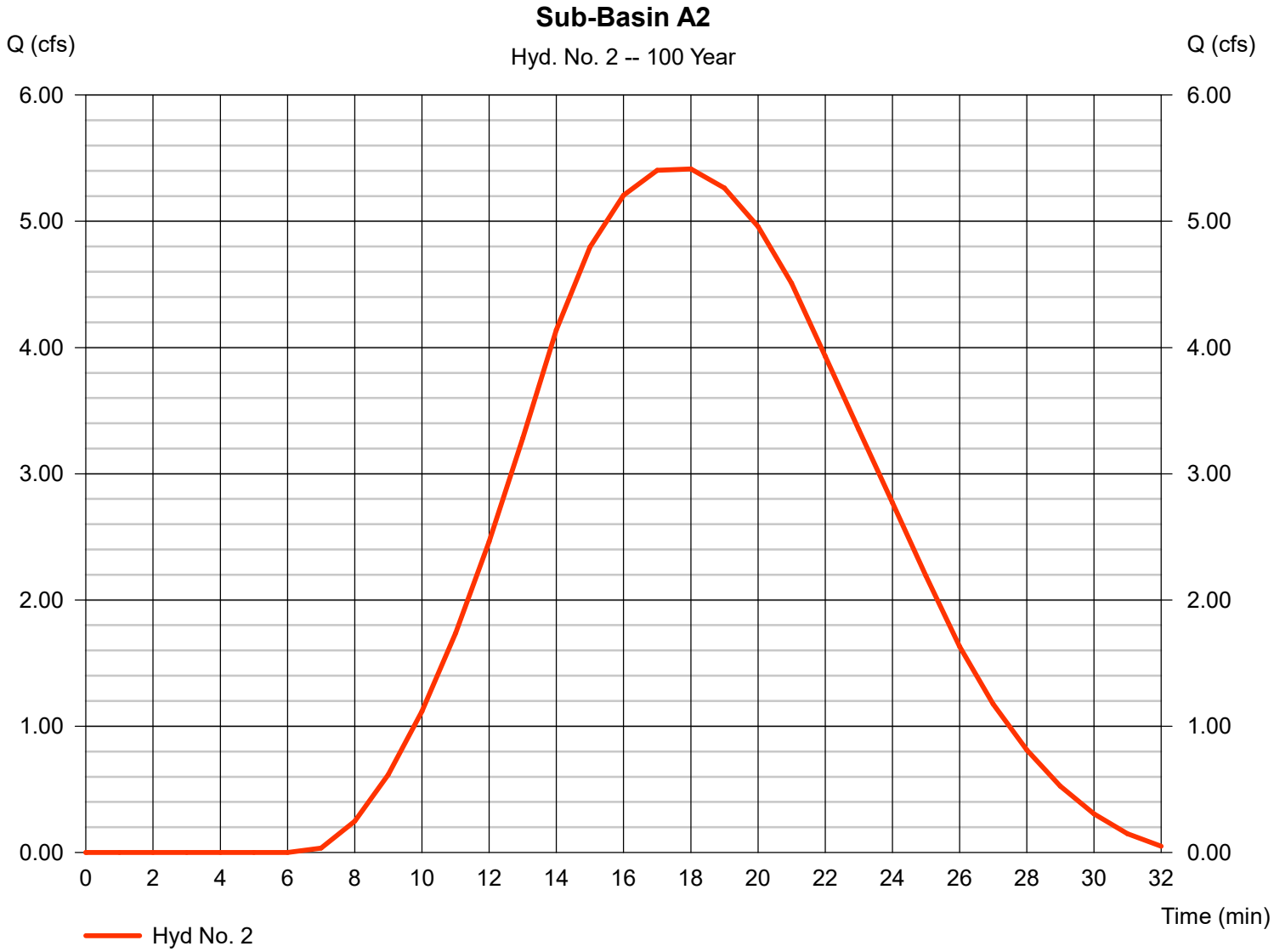
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 5.416 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 18 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,965 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.4 % | Hydraulic length | = | 1010 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.00 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



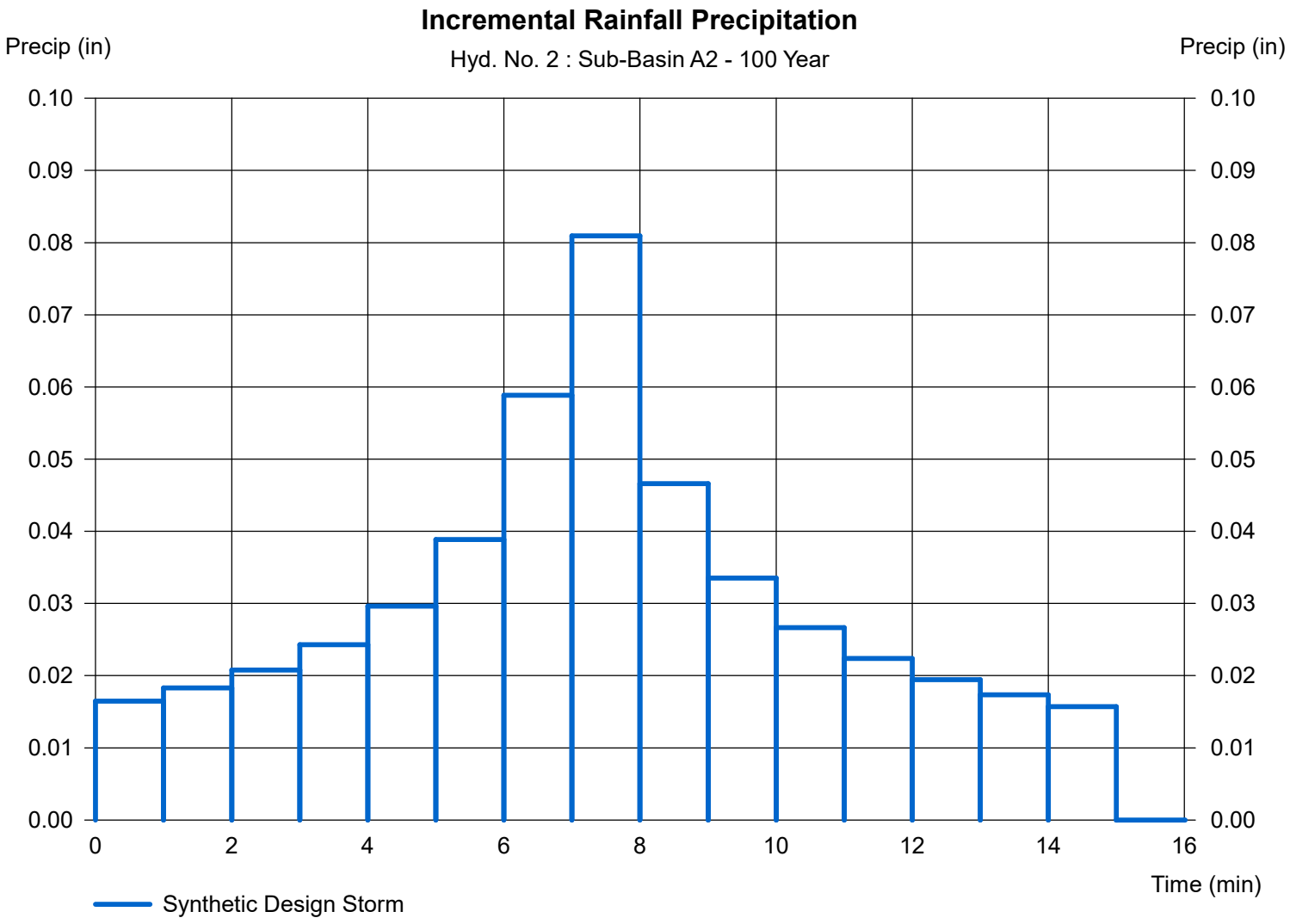
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.4699 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



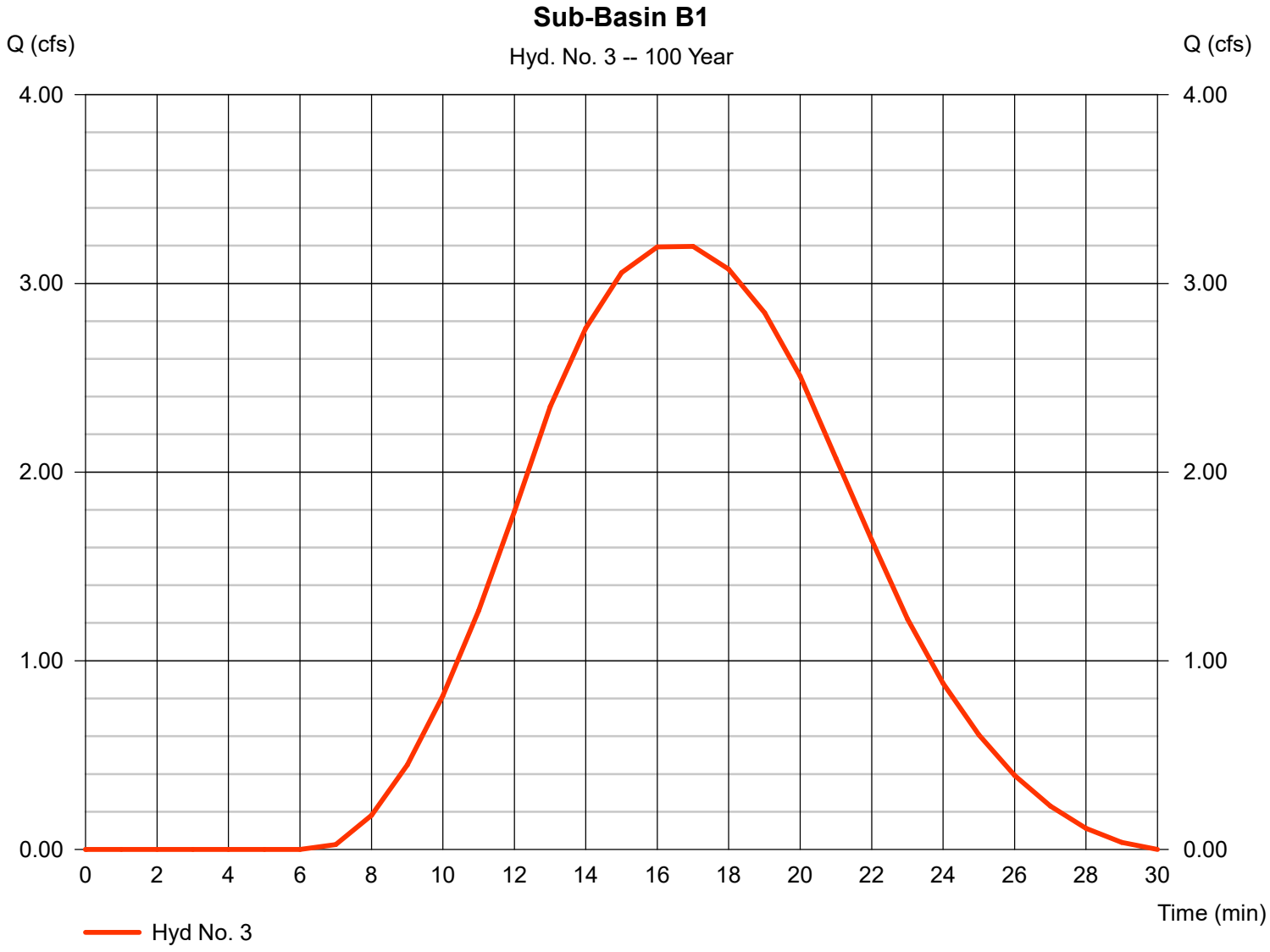
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.196 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 17 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,082 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.8 % | Hydraulic length | = | 847 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.90 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



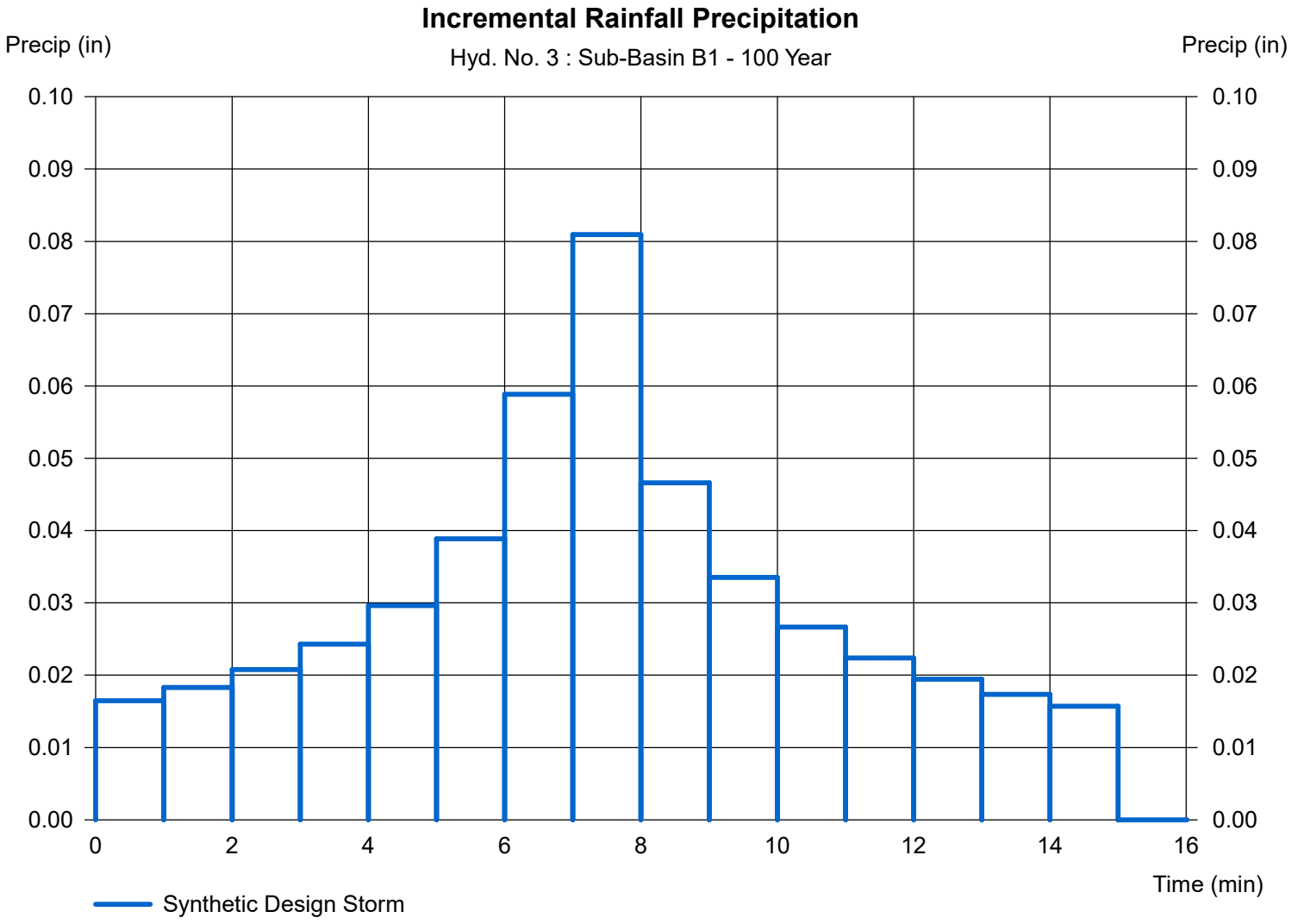
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.4699 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



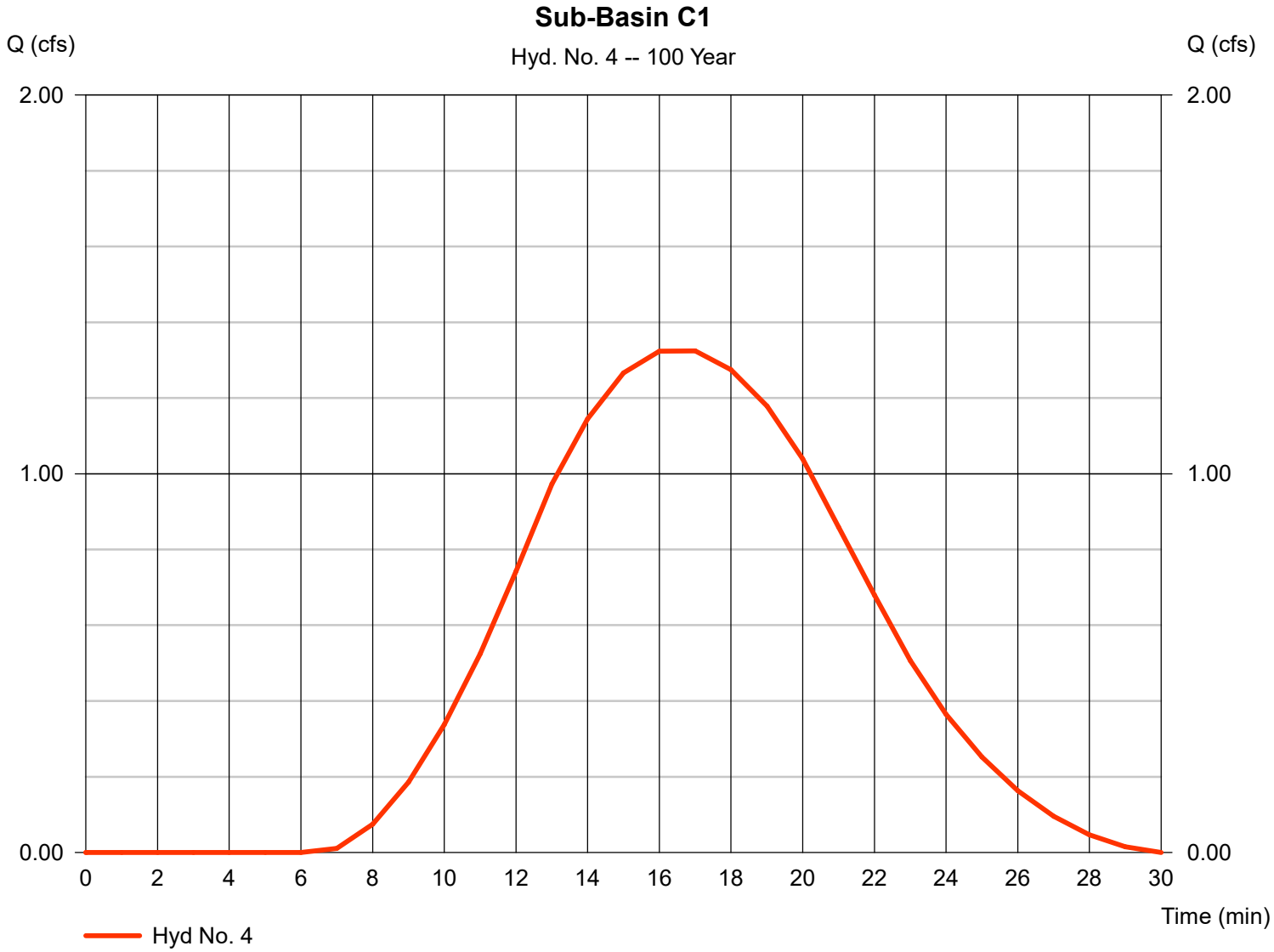
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.325 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 17 min |
| Time interval | = | 1 min | Hyd. volume | = | 863 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 92.8 |
| Basin Slope | = | 7.8 % | Hydraulic length | = | 522 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 8.80 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



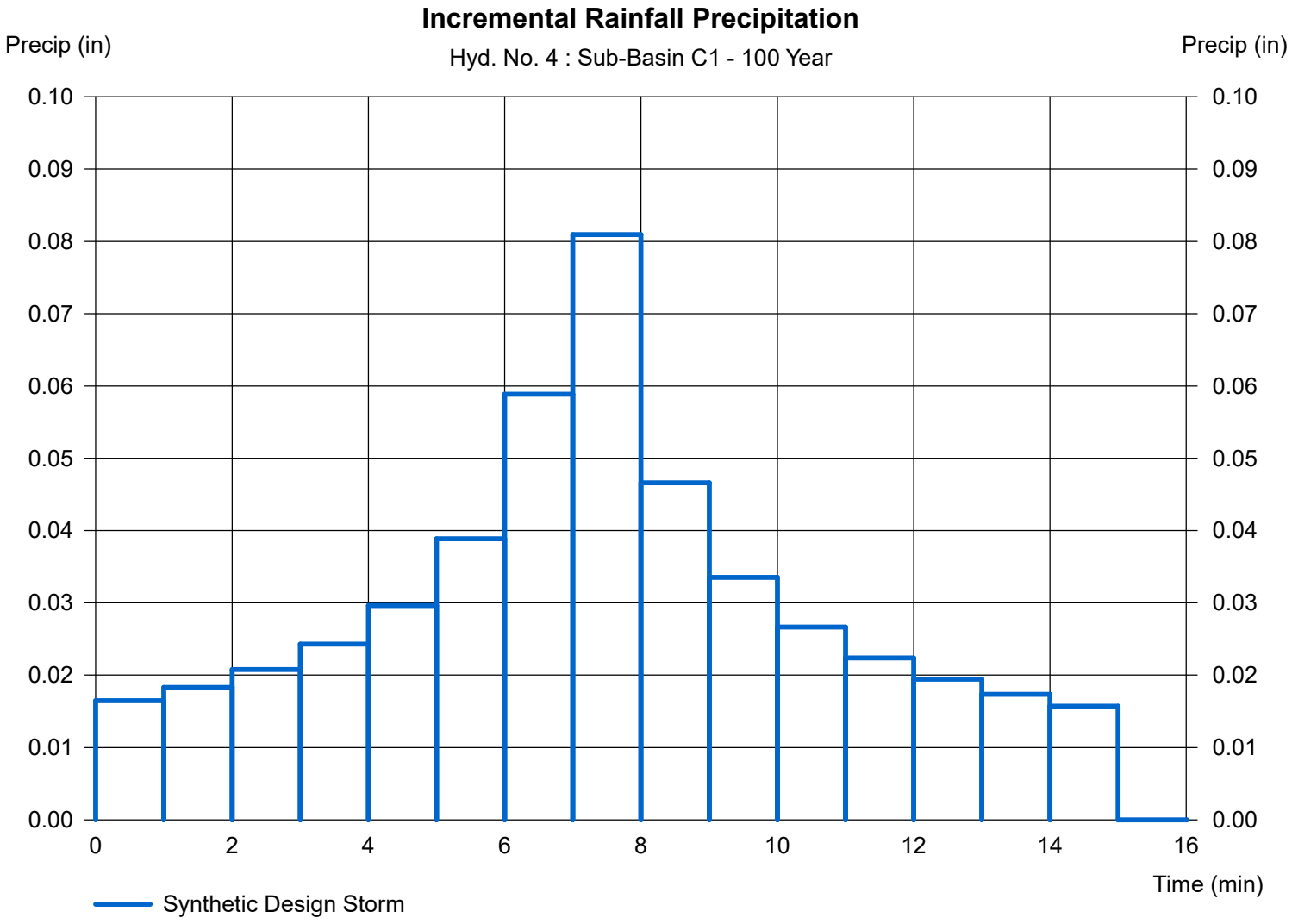
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.4699 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



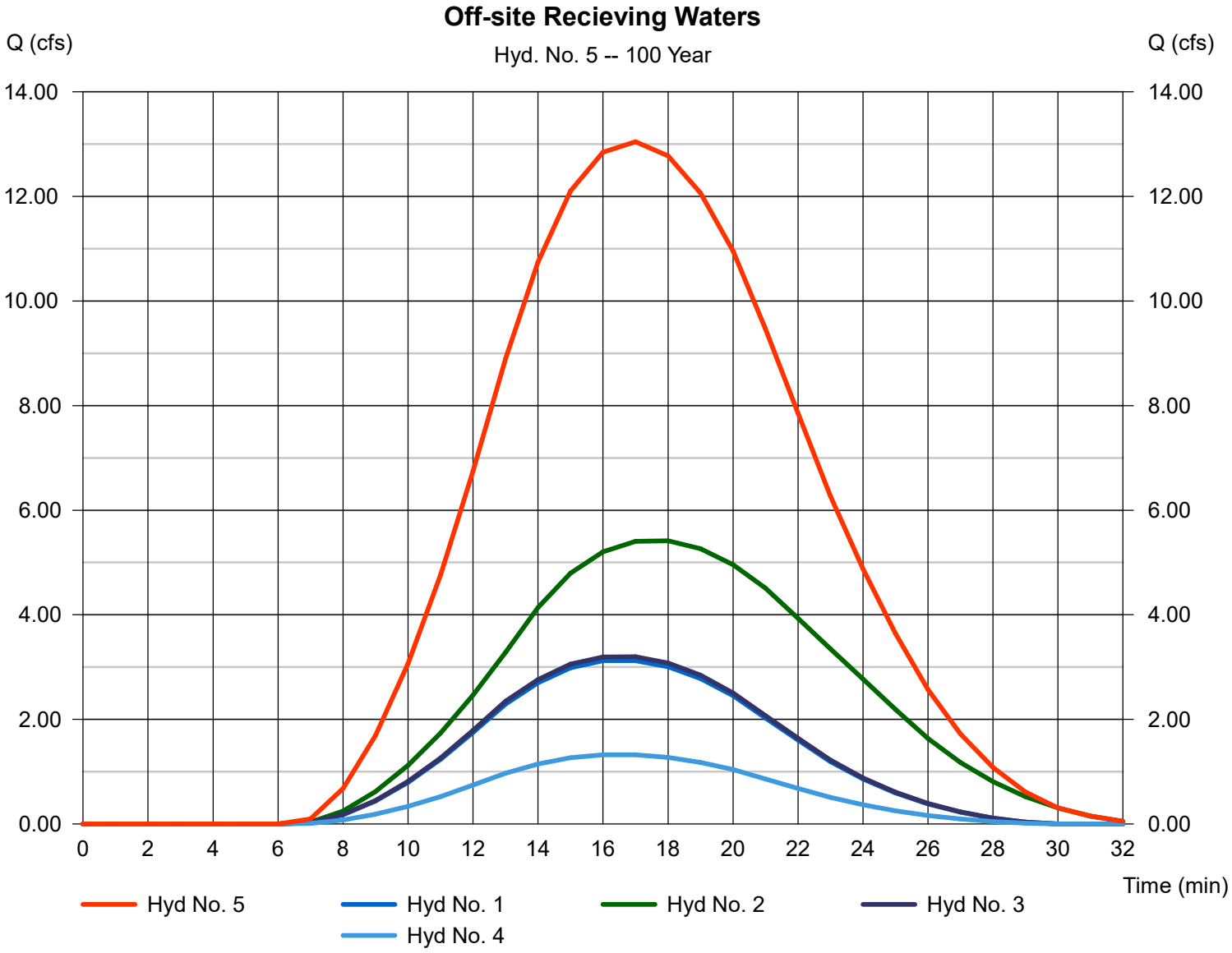
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 13.05 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 17 min |
| Time interval | = 1 min | Hyd. volume | = 8,945 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

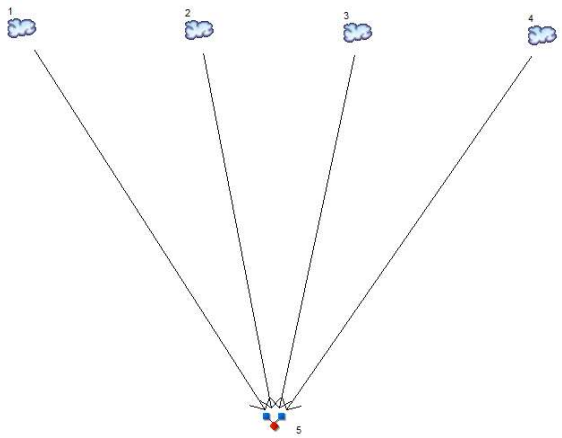
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.705 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 8.416 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.813 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 1.995 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 19.79 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 4.705 | 1 | 24 | 4,321 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 8.416 | 1 | 26 | 8,418 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 4.813 | 1 | 24 | 4,420 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 1.995 | 1 | 24 | 1,832 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 19.79 | 1 | 24 | 18,991 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

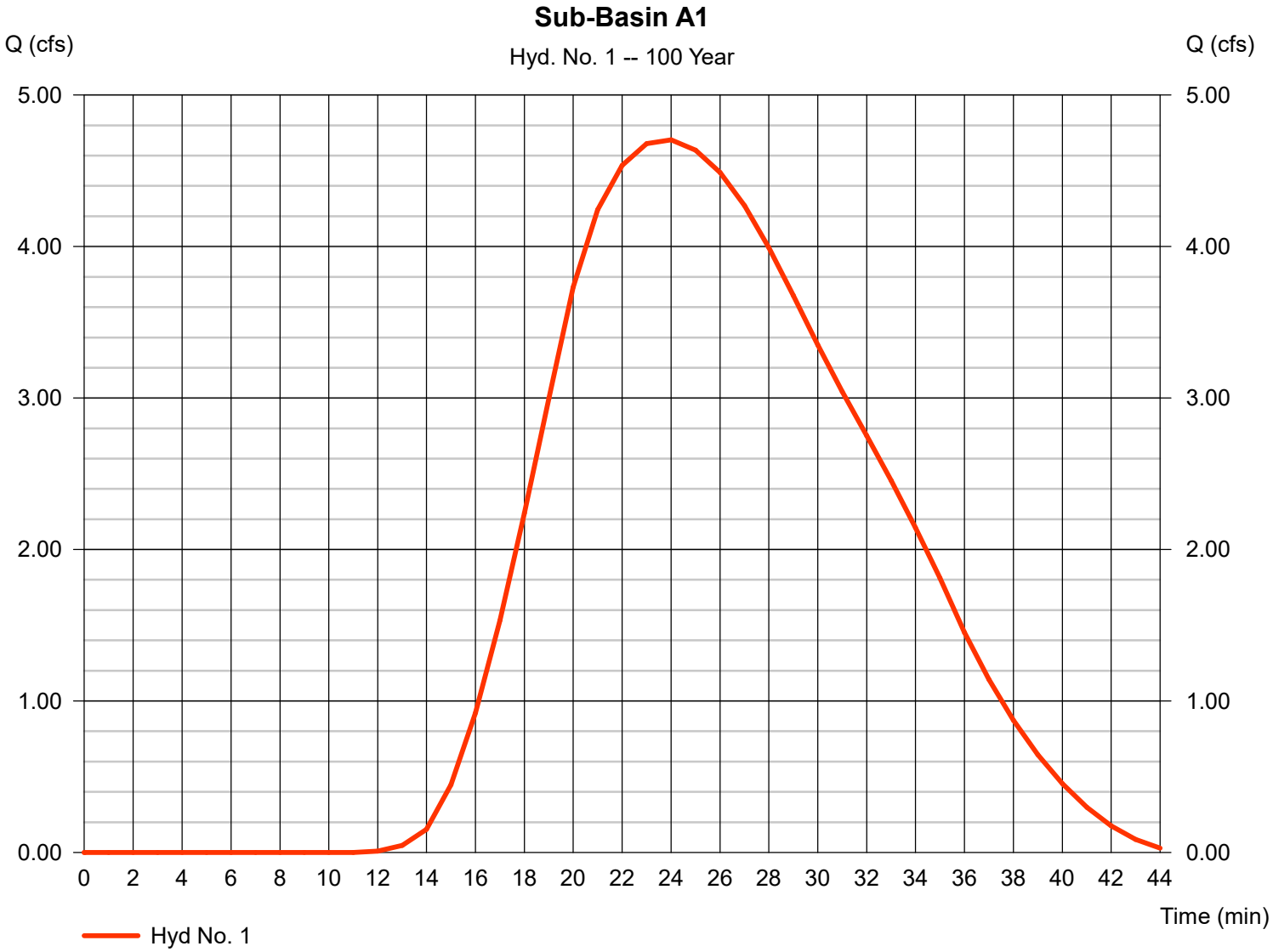
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 4.705 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 24 min |
| Time interval | = 1 min | Hyd. volume | = 4,321 cuft |
| Drainage area | = 6.178 ac | Curve number | = 92.8 |
| Basin Slope | = 7.9 % | Hydraulic length | = 957 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.90 min |
| Total precip. | = 0.65 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | Shape factor | = 484 |



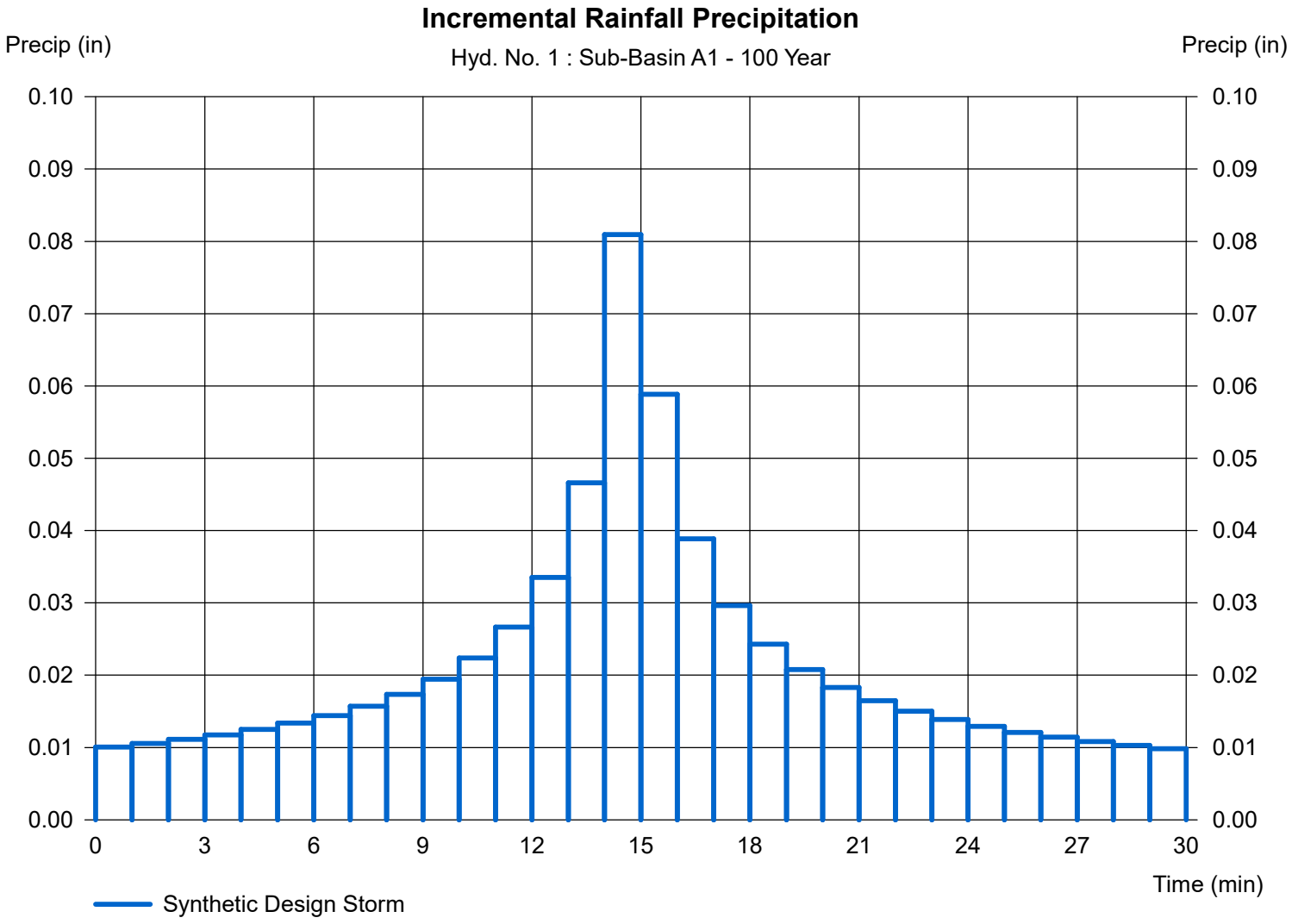
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



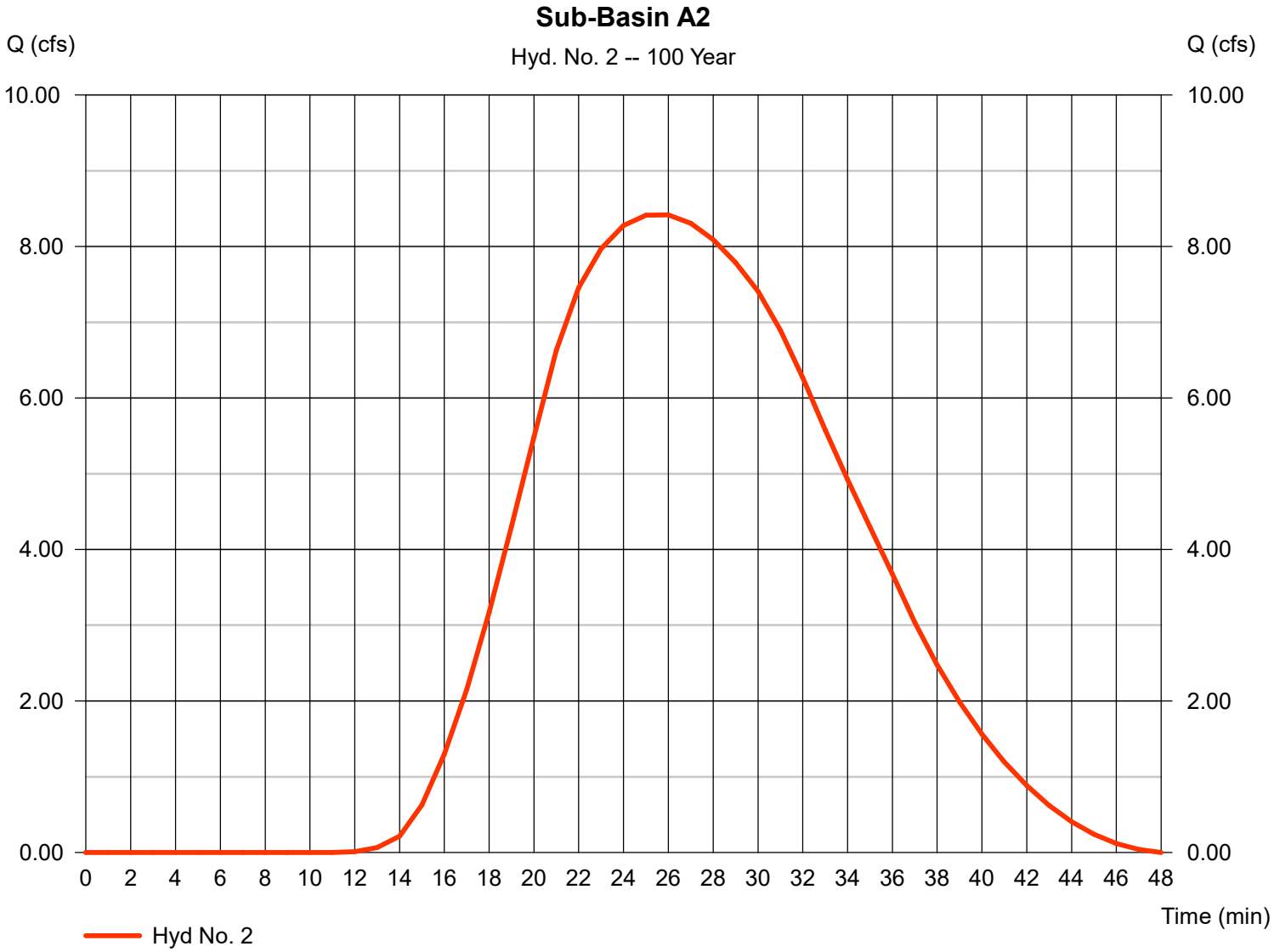
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 8.416 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 26 min |
| Time interval | = | 1 min | Hyd. volume | = | 8,418 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.4 % | Hydraulic length | = | 1010 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.00 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



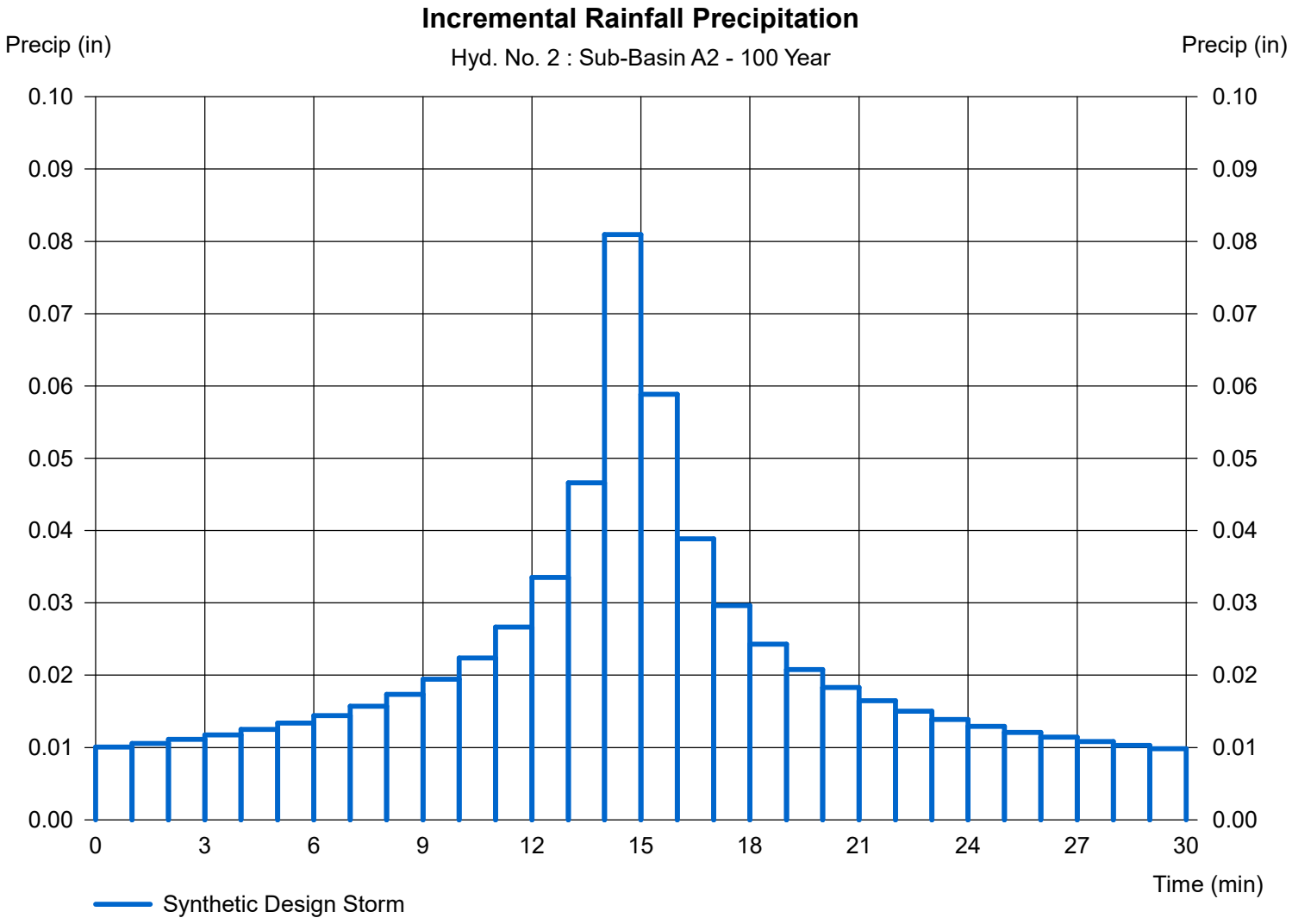
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



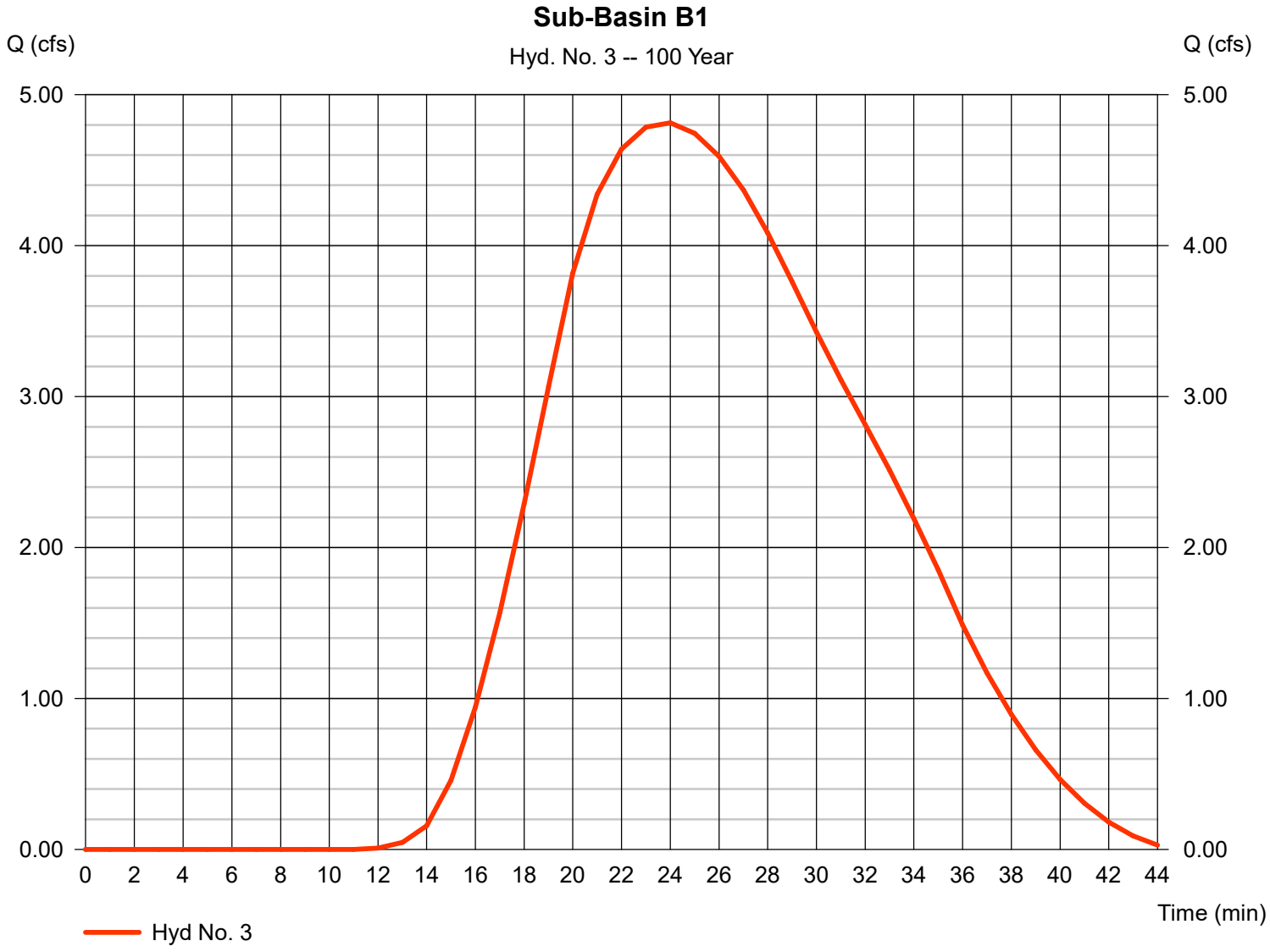
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 4.813 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 24 min |
| Time interval | = 1 min | Hyd. volume | = 4,420 cuft |
| Drainage area | = 6.320 ac | Curve number | = 92.8 |
| Basin Slope | = 8.8 % | Hydraulic length | = 847 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.90 min |
| Total precip. | = 0.65 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | Shape factor | = 484 |



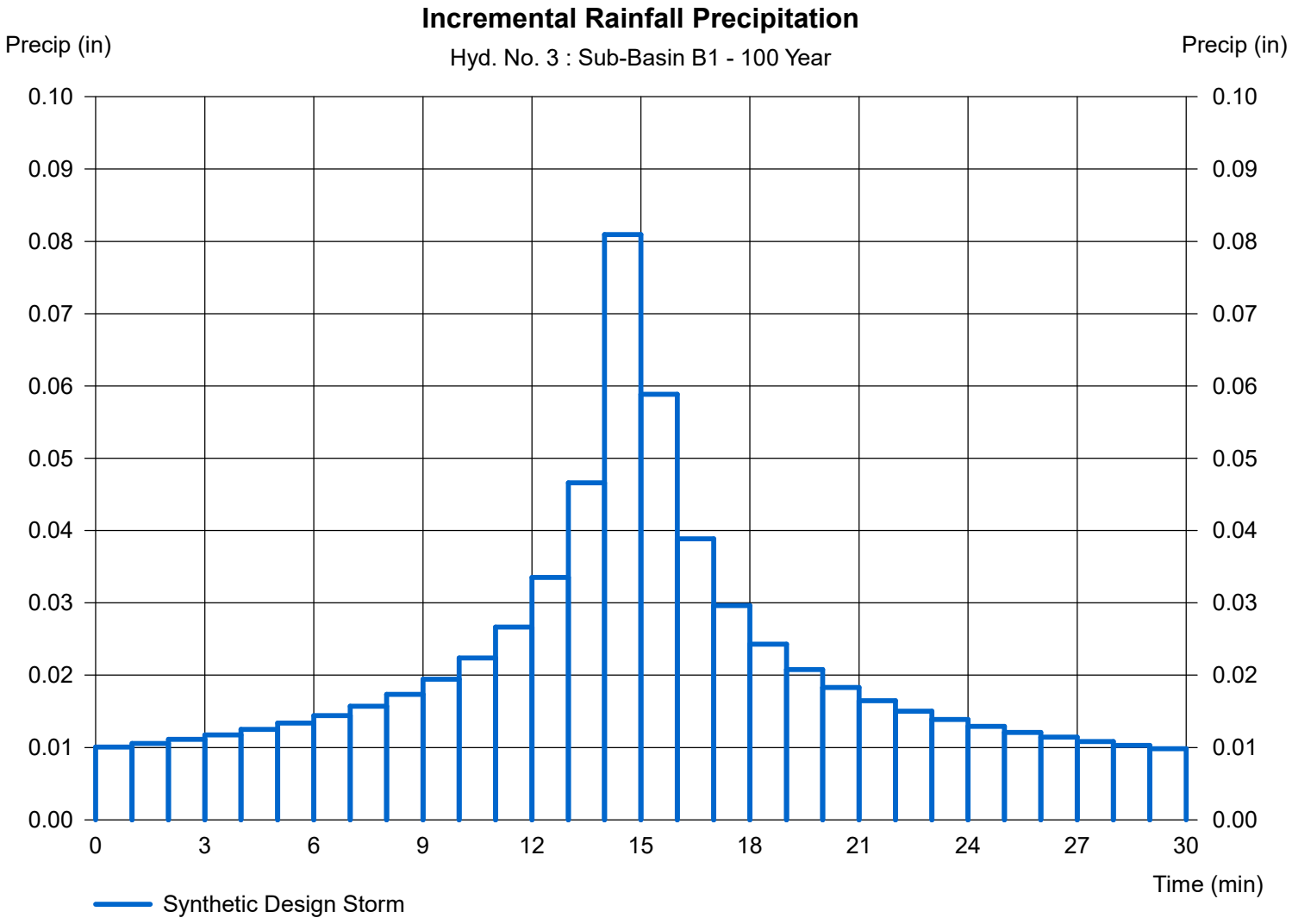
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



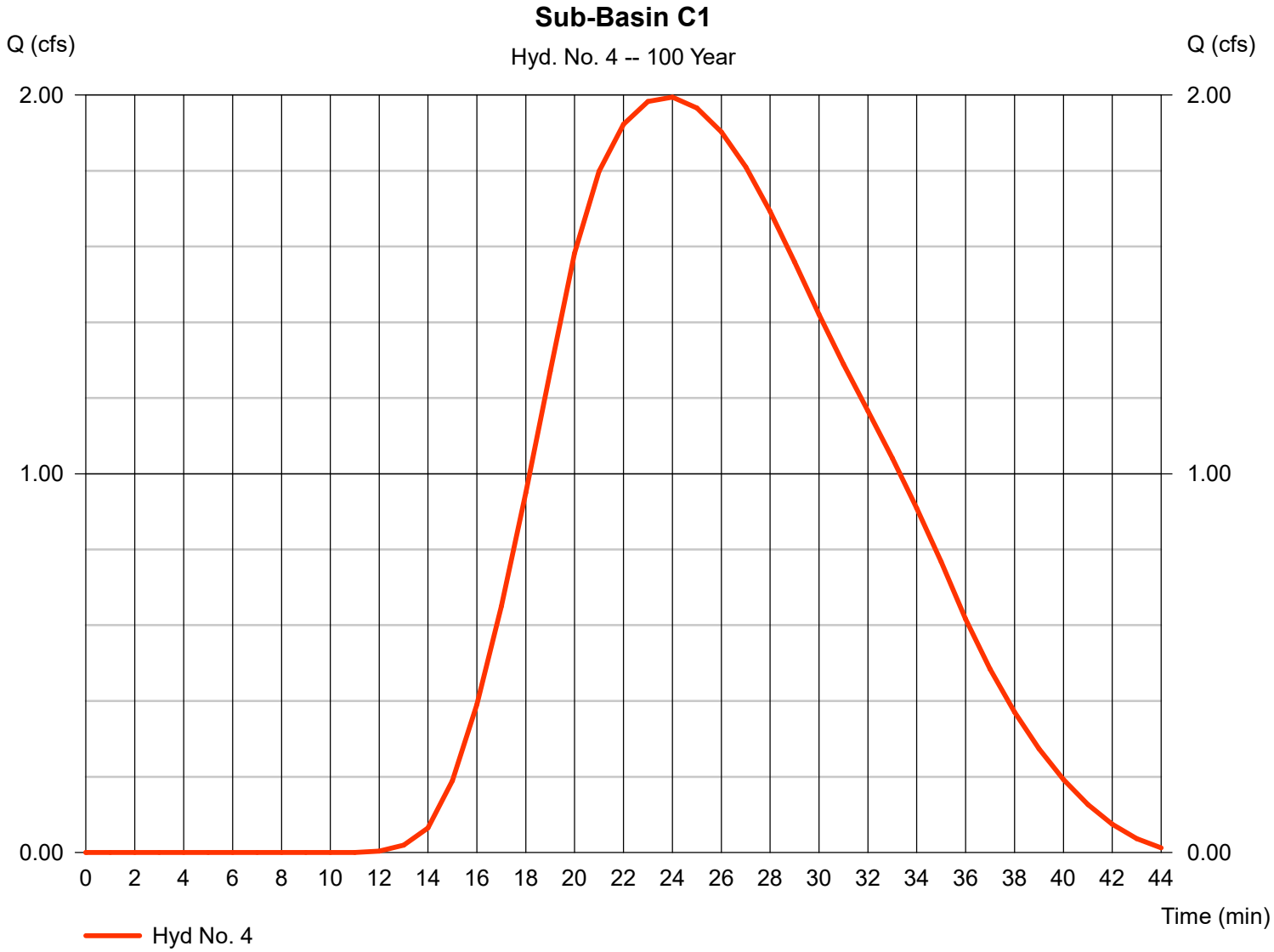
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.995 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 24 min |
| Time interval | = | 1 min | Hyd. volume | = | 1,832 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 92.8 |
| Basin Slope | = | 7.8 % | Hydraulic length | = | 522 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 8.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



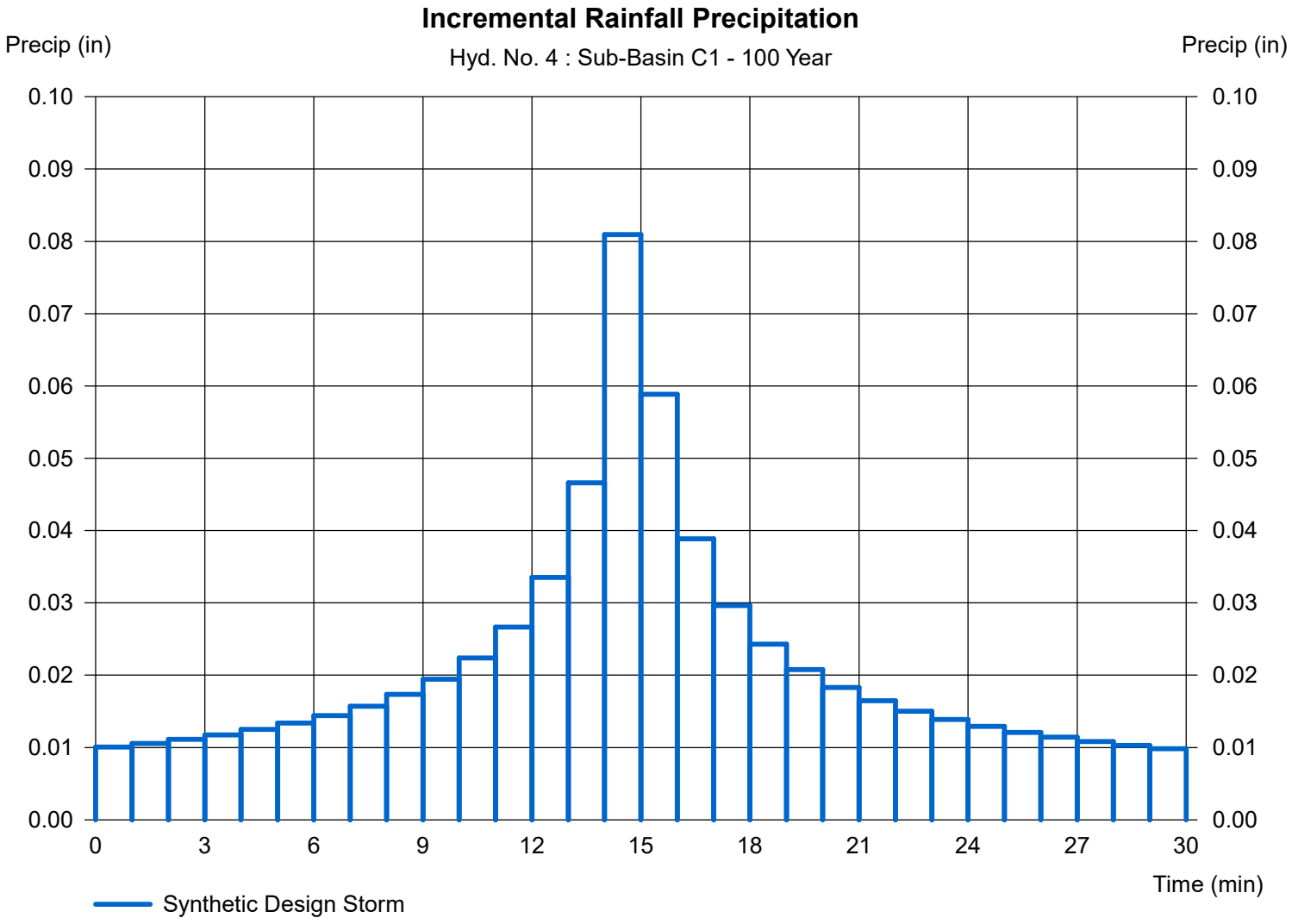
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



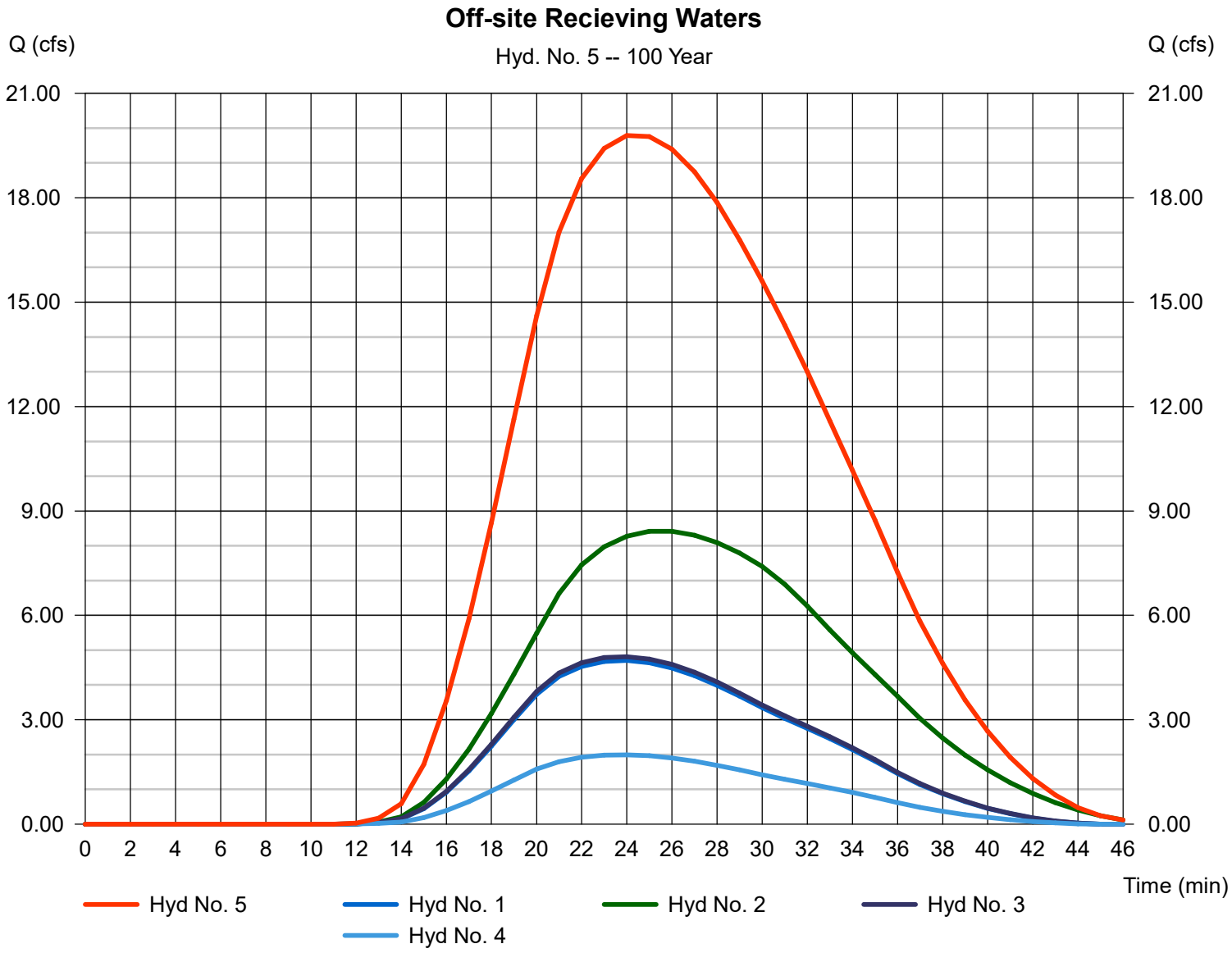
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 19.79 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 24 min |
| Time interval | = 1 min | Hyd. volume | = 18,991 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

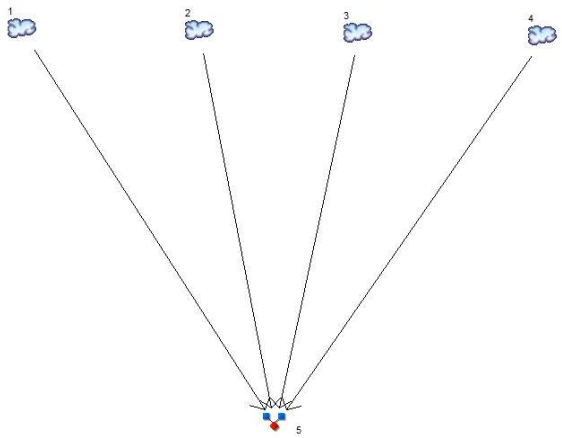
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.42 | 0.51 | 0.00 | 0.65 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 5.654 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 10.82 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 5.784 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 2.748 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 24.68 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 5.654 | 2 | 40 | 8,095 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 10.82 | 2 | 40 | 15,494 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 5.784 | 2 | 40 | 8,281 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 2.748 | 2 | 36 | 3,328 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 24.68 | 2 | 40 | 35,198 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

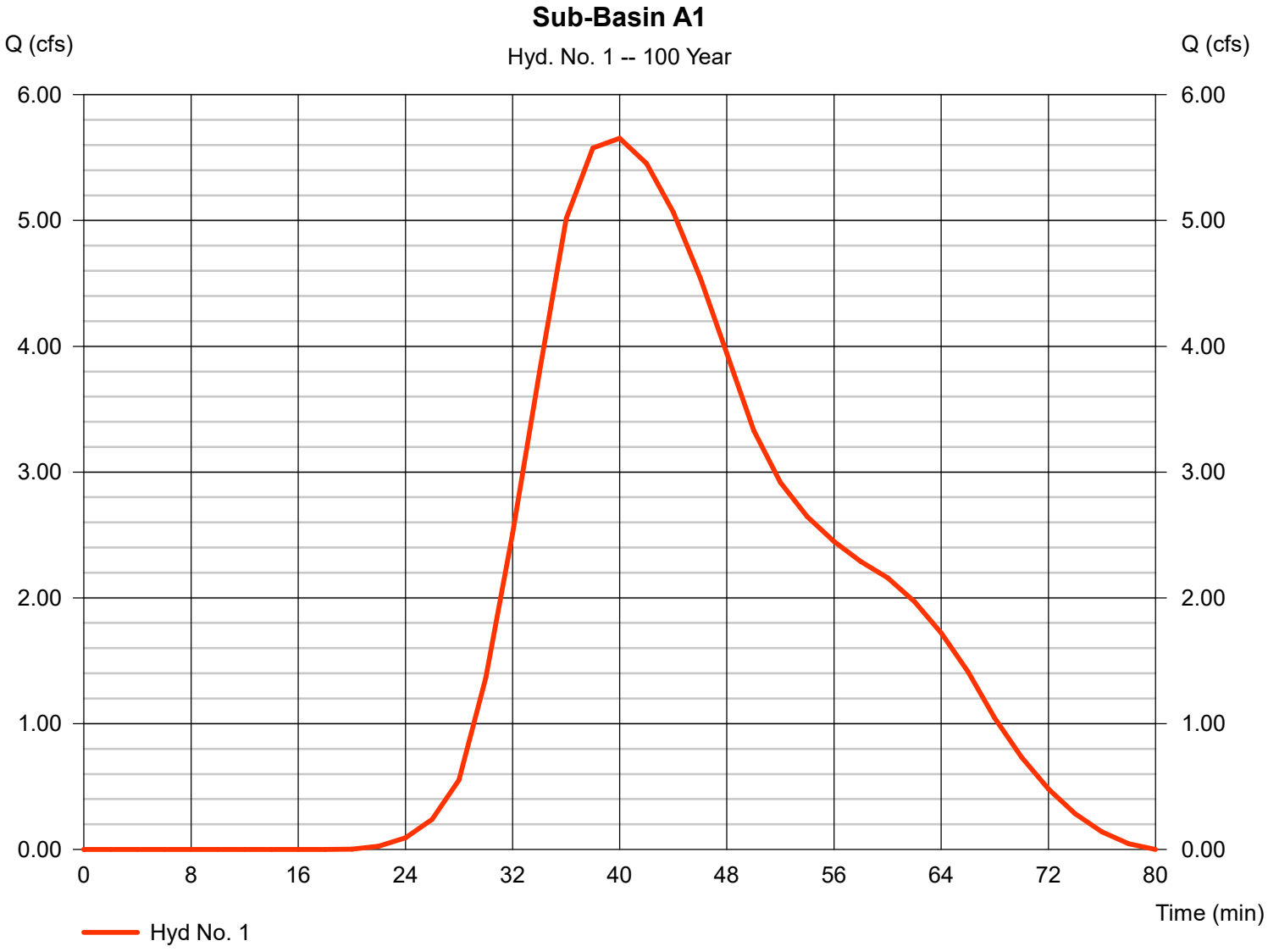
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 5.654 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 40 min |
| Time interval | = 2 min | Hyd. volume | = 8,095 cuft |
| Drainage area | = 6.178 ac | Curve number | = 92.8 |
| Basin Slope | = 7.9 % | Hydraulic length | = 957 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.90 min |
| Total precip. | = 0.88 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | Shape factor | = 484 |



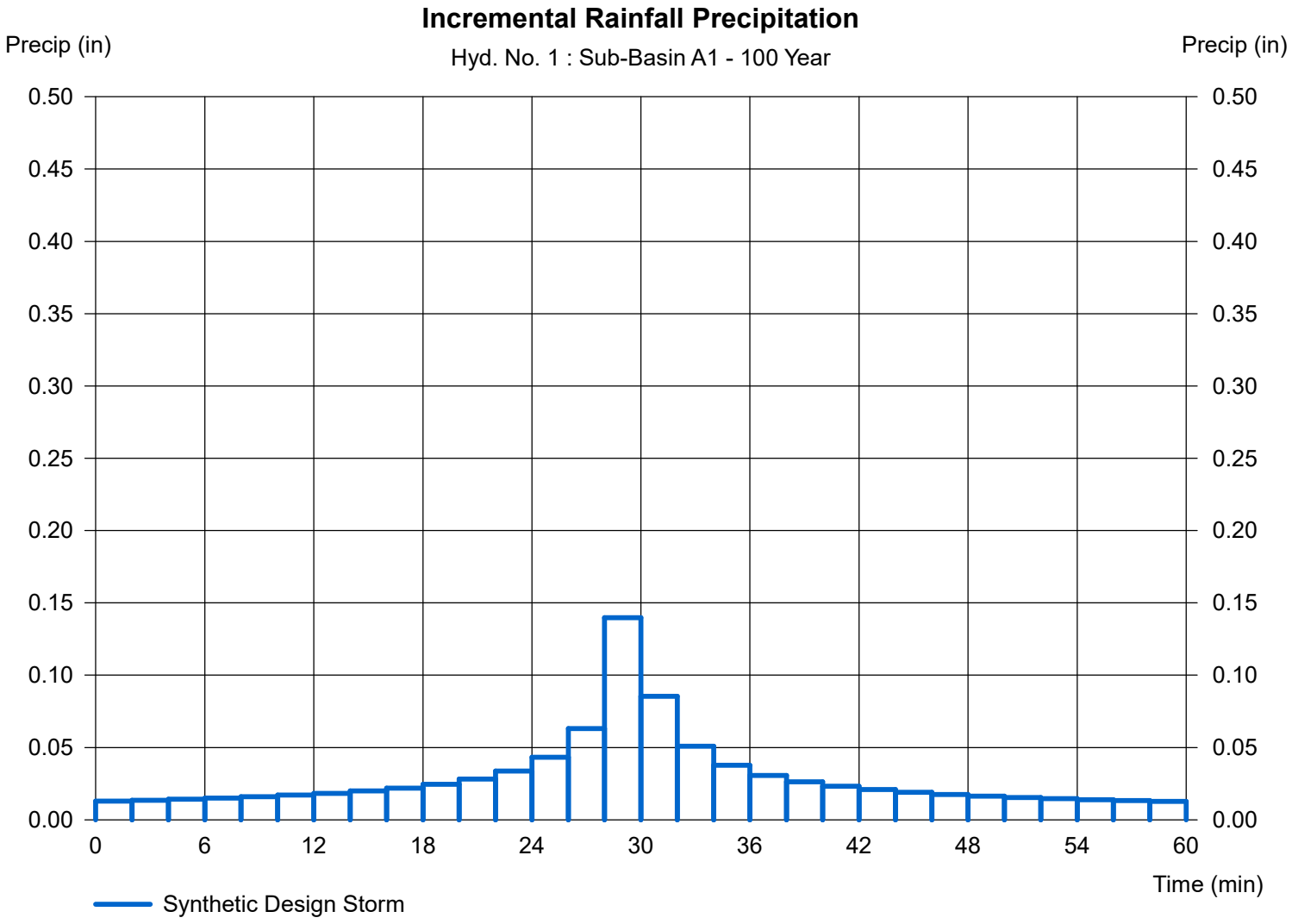
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 0.8800 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



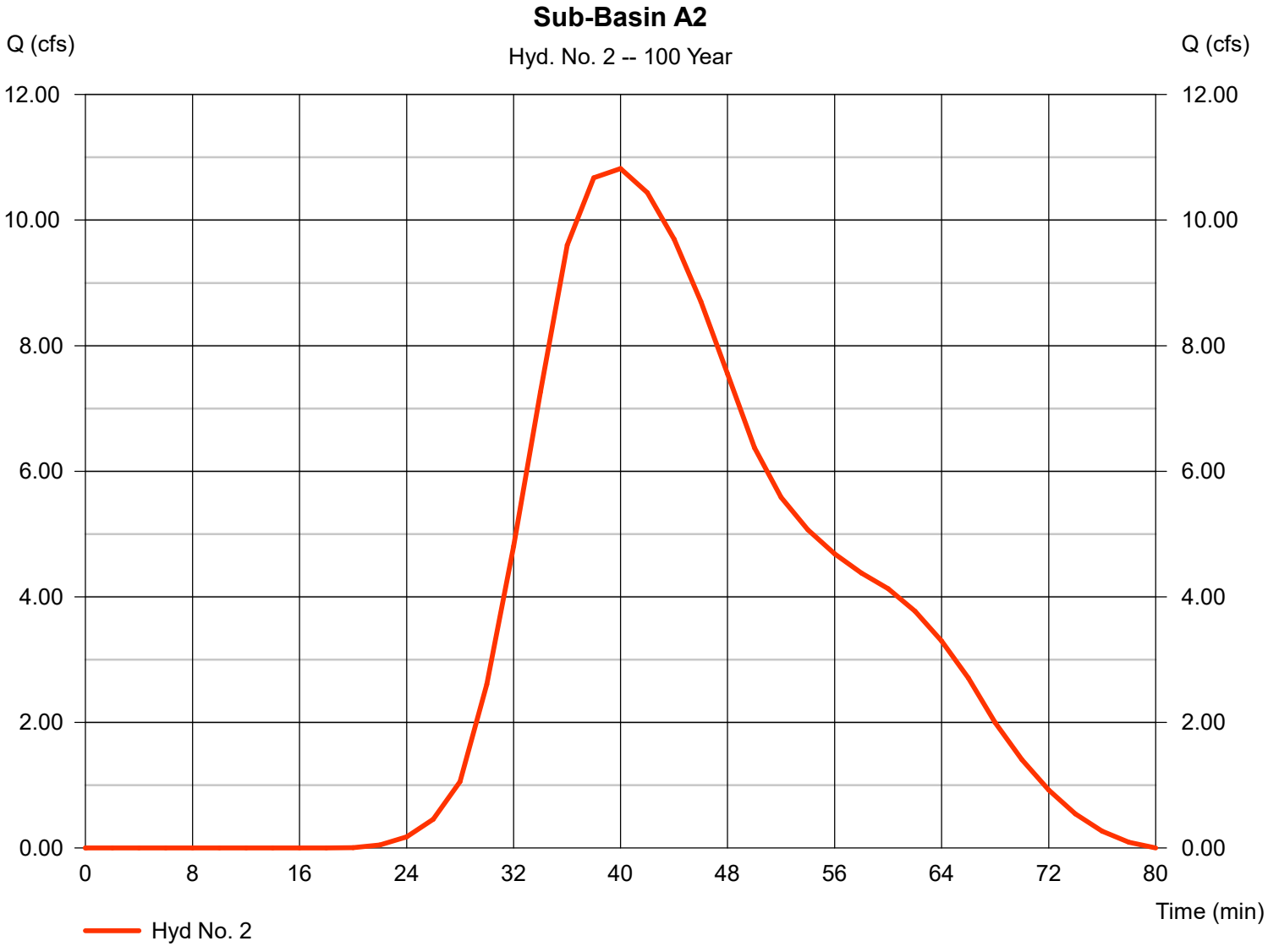
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 10.82 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 40 min |
| Time interval | = | 2 min | Hyd. volume | = | 15,494 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.4 % | Hydraulic length | = | 1010 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.00 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



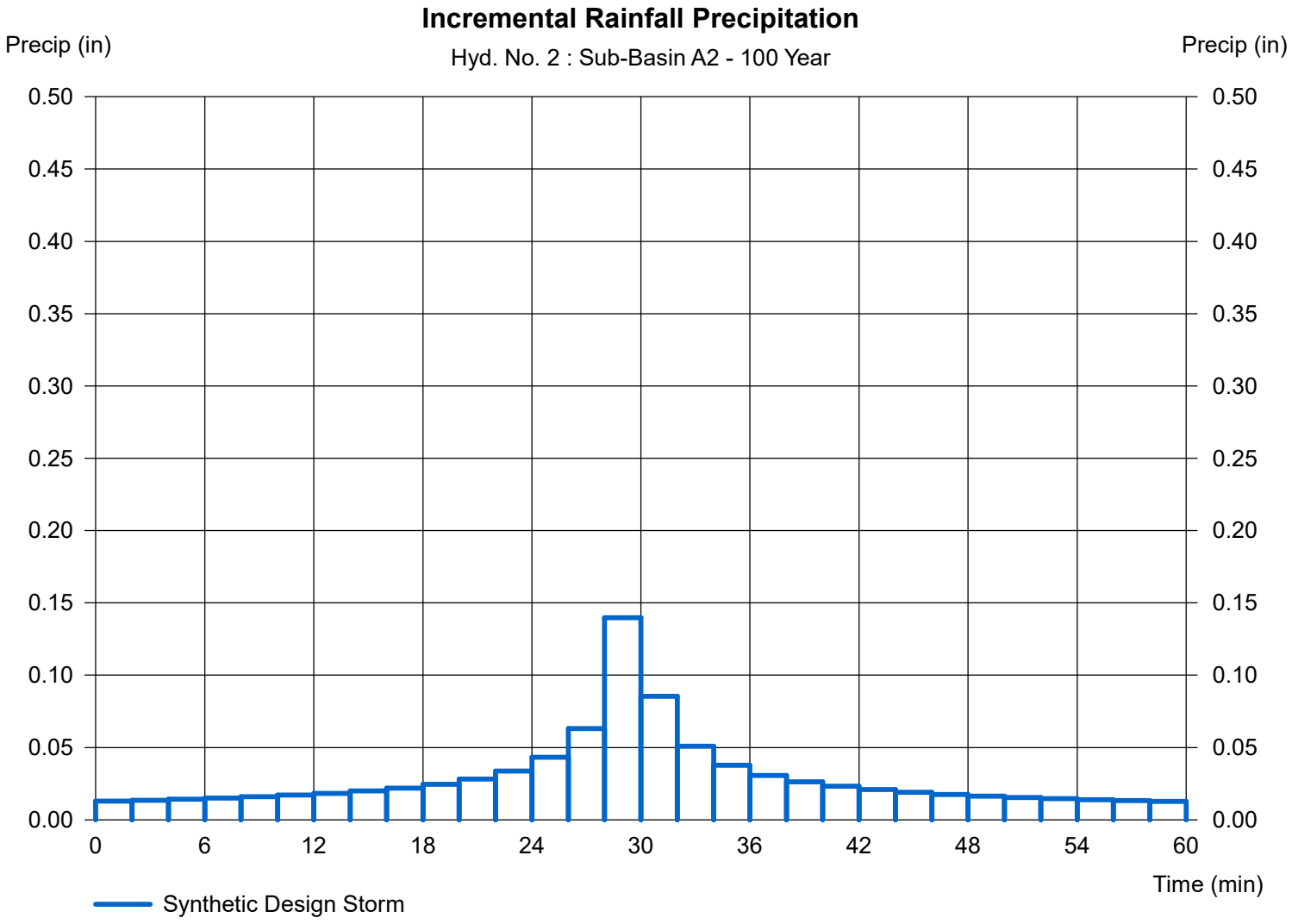
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 0.8800 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



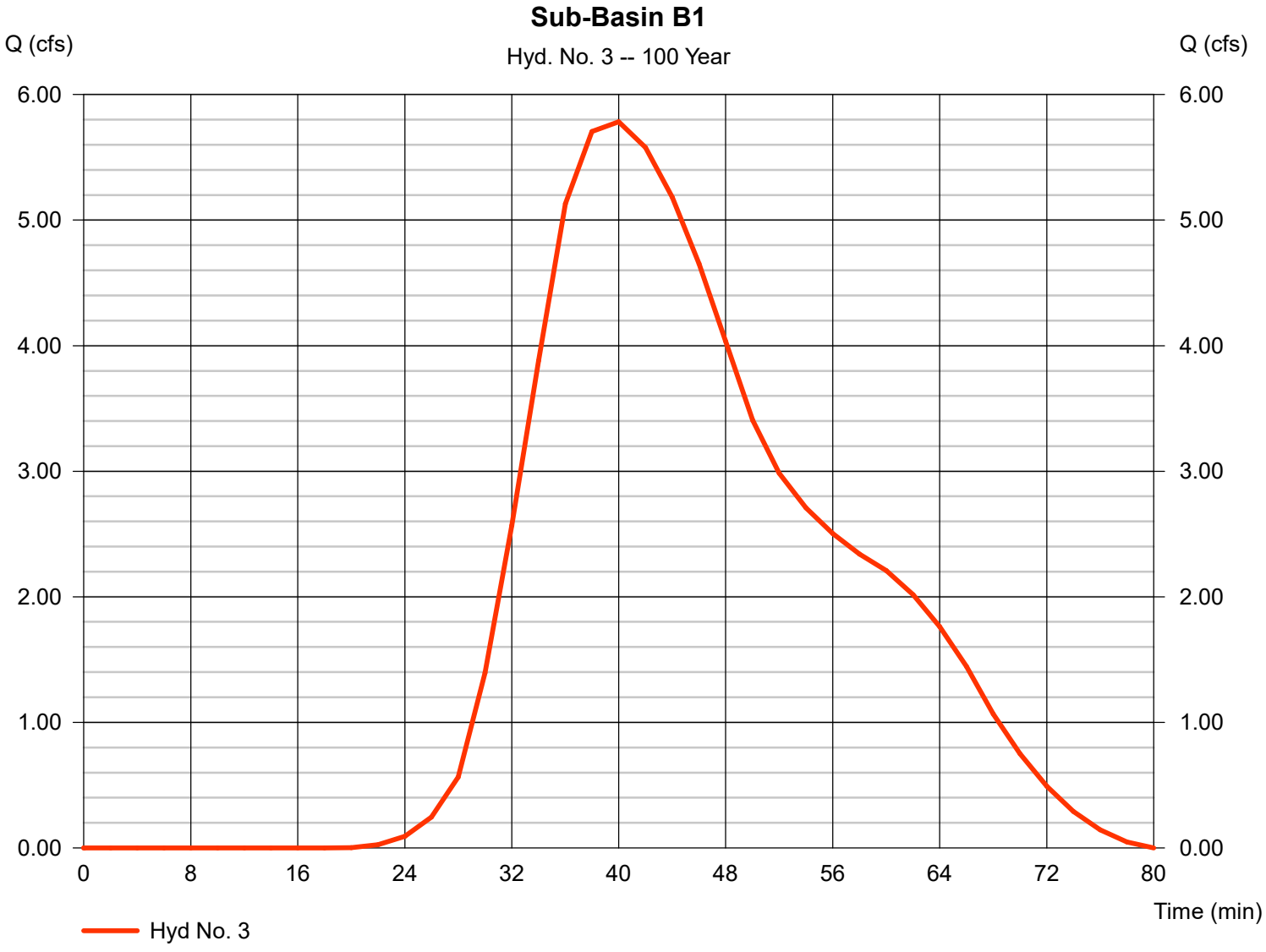
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 5.784 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 40 min |
| Time interval | = | 2 min | Hyd. volume | = | 8,281 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.8 % | Hydraulic length | = | 847 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.90 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



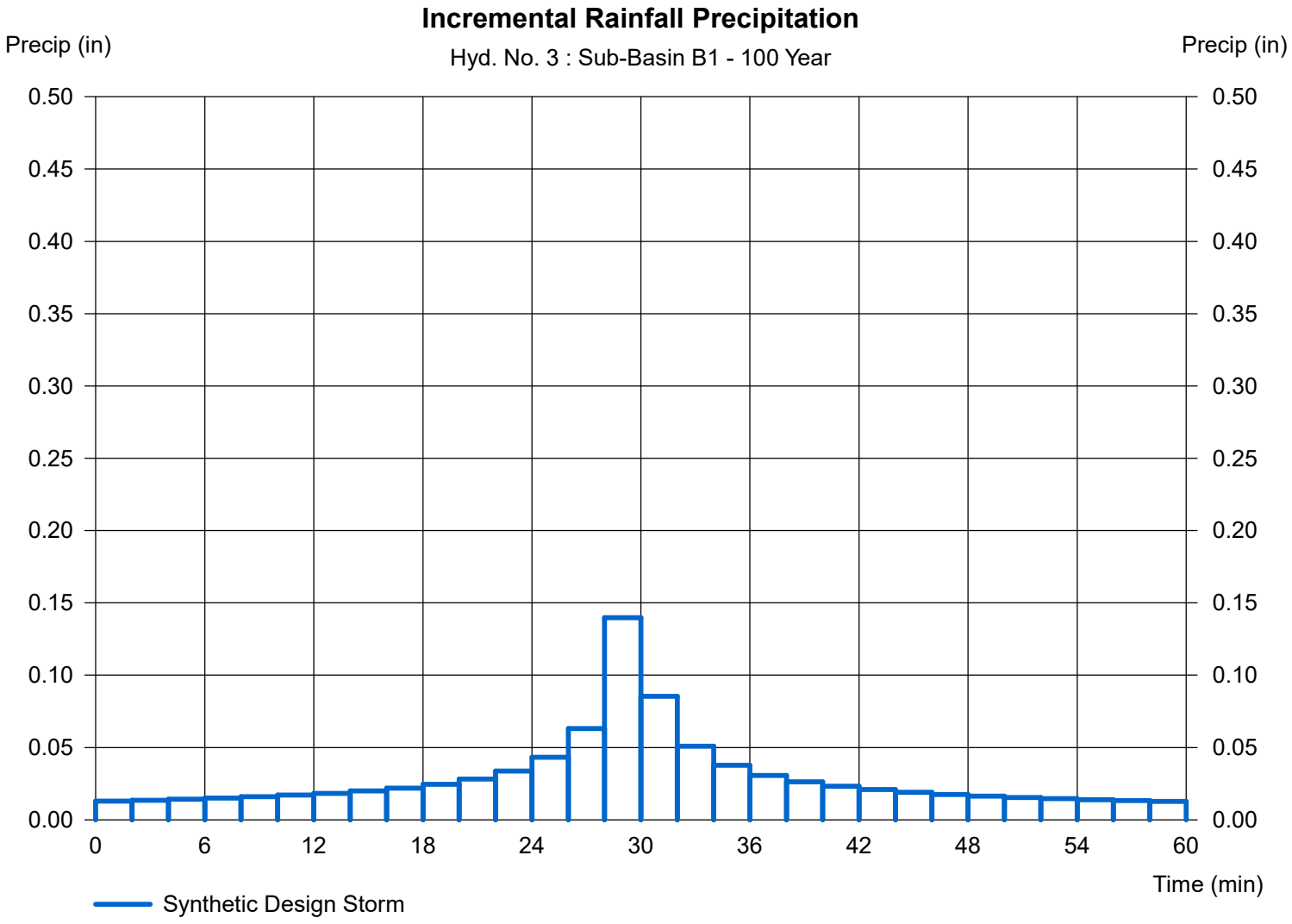
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 0.8800 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



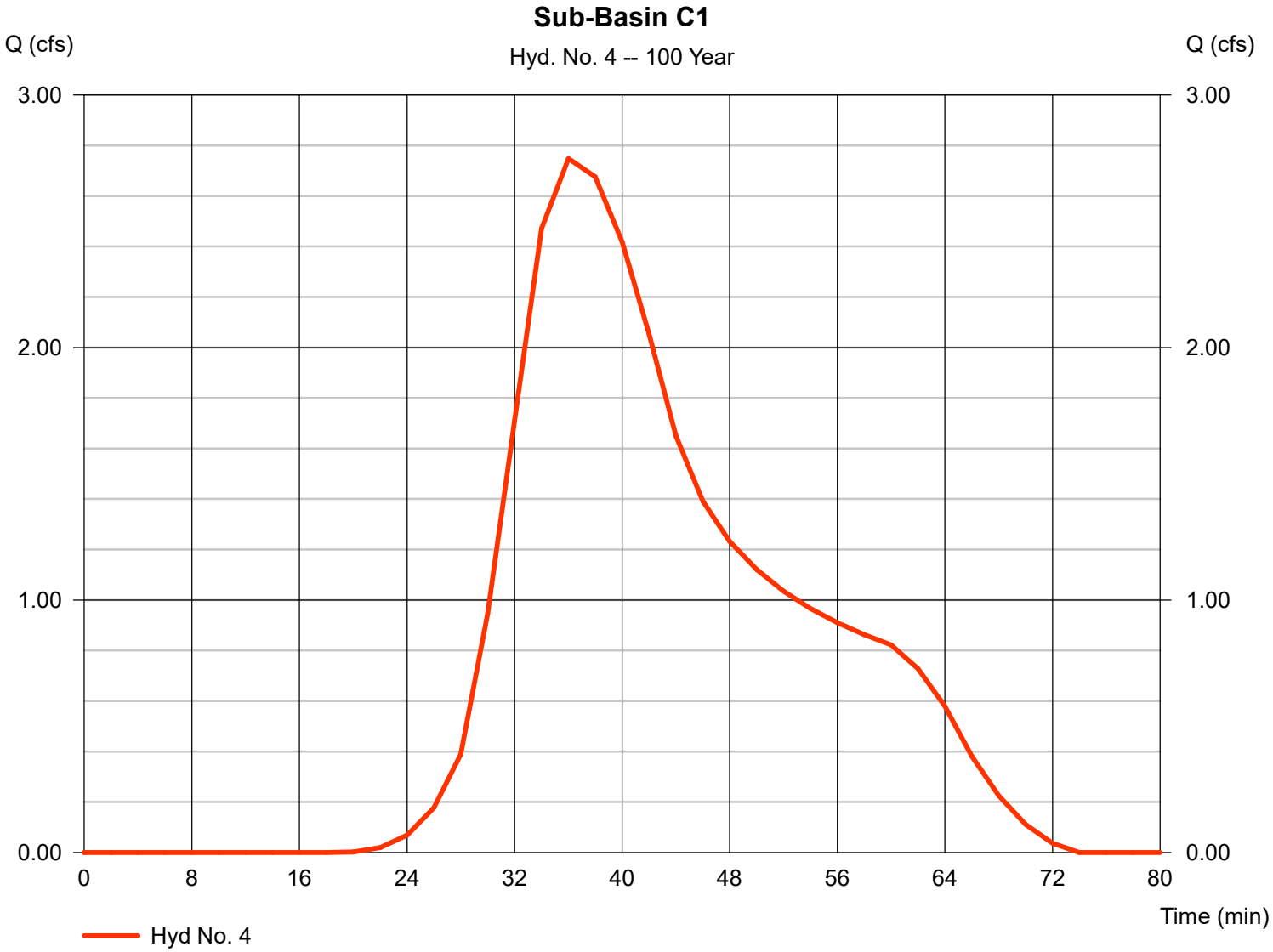
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.748 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 36 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,328 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 92.8 |
| Basin Slope | = | 7.8 % | Hydraulic length | = | 522 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 8.80 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



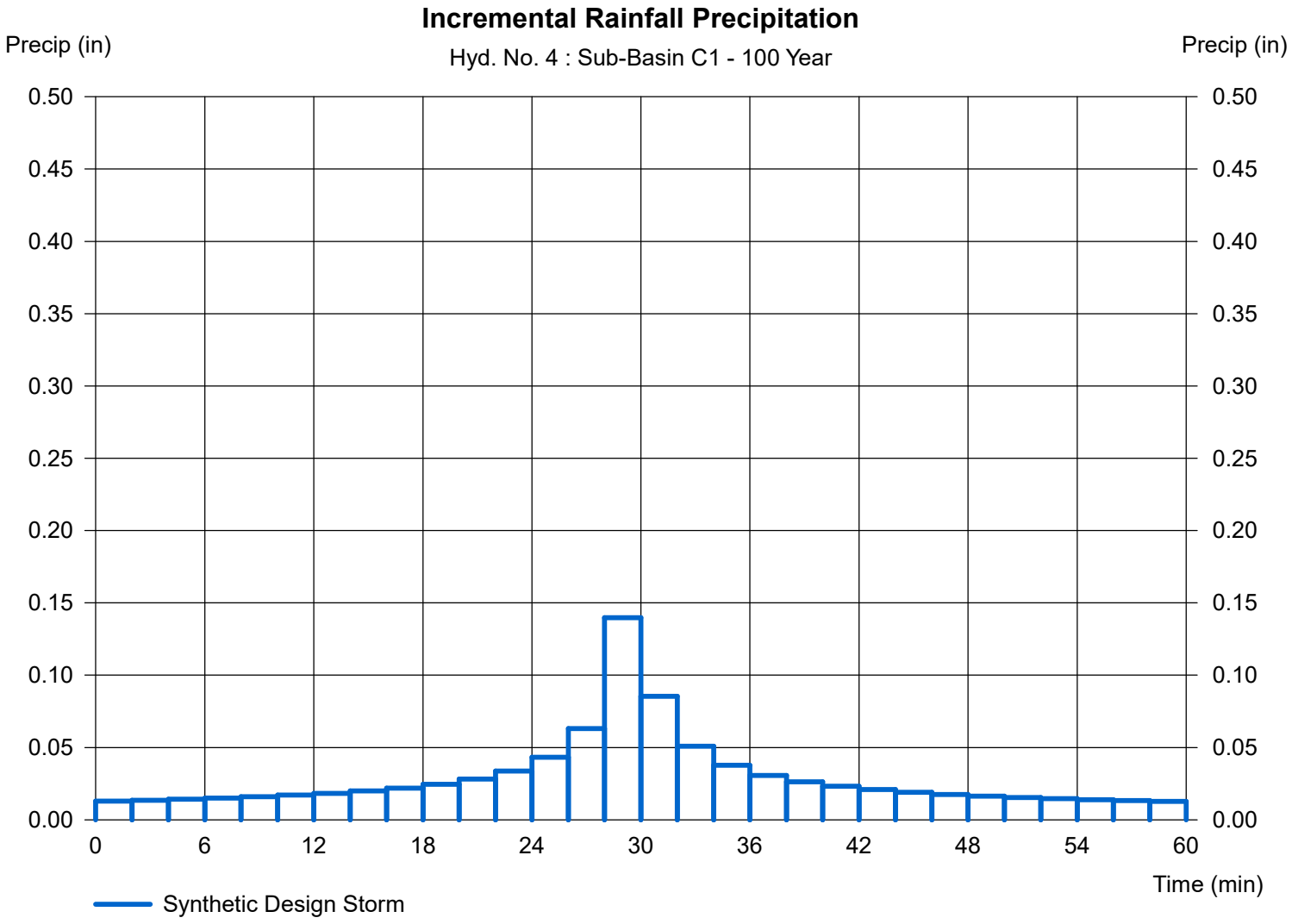
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 0.8800 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



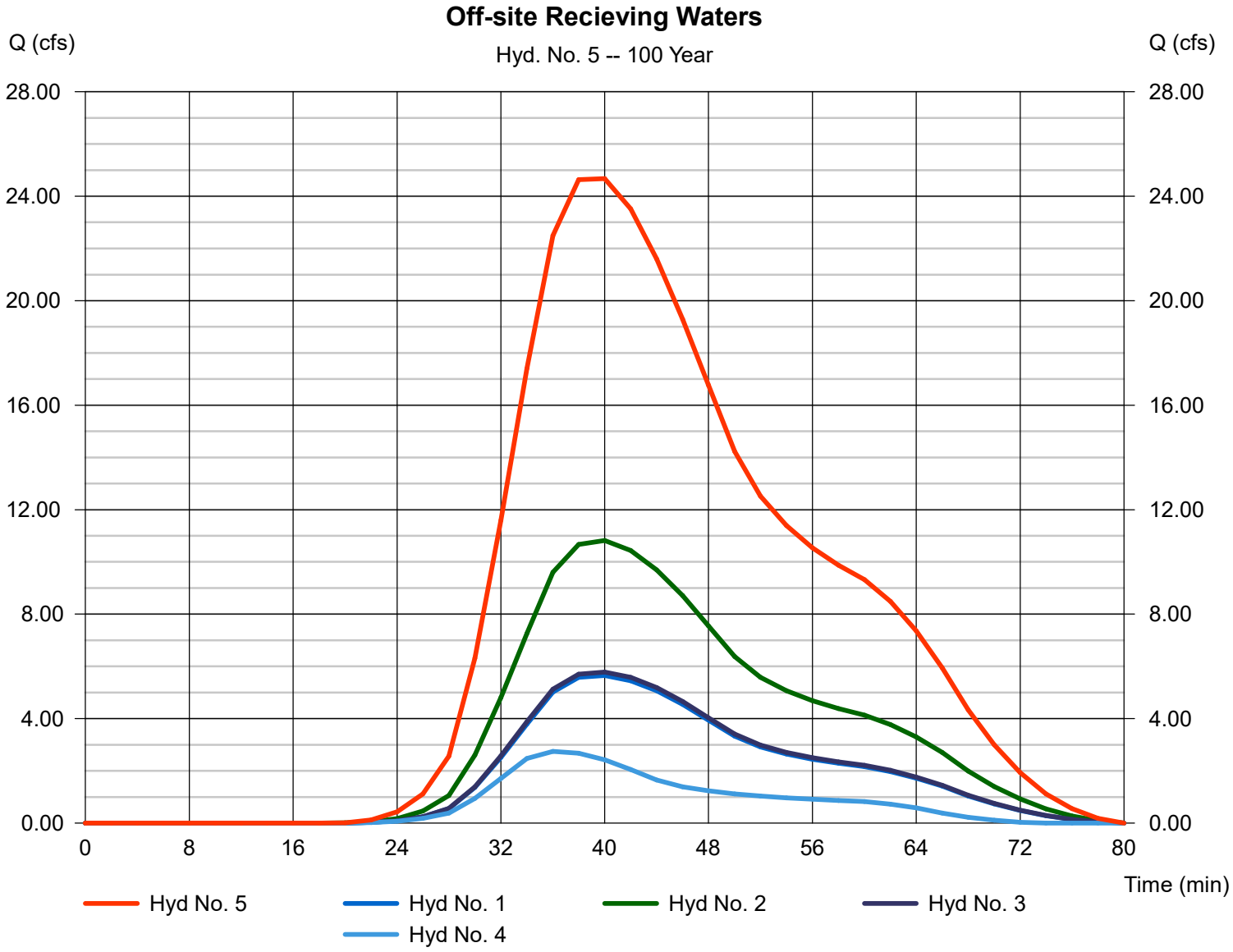
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 24.68 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 40 min |
| Time interval | = 2 min | Hyd. volume | = 35,198 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

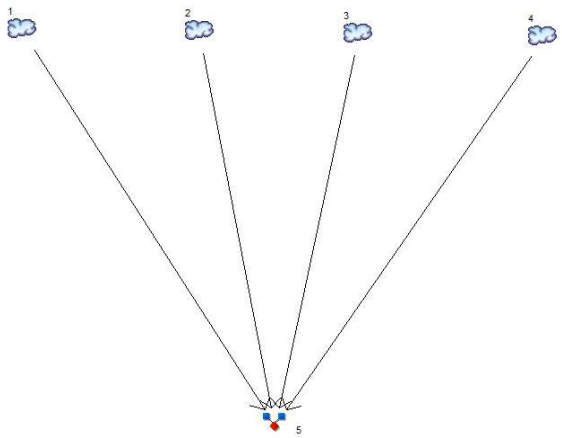
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.56 | 0.69 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 8.218 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 15.73 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 8.407 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3.935 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 35.98 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 8.218 | 2 | 98 | 17,571 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 15.73 | 2 | 98 | 33,630 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 8.407 | 2 | 98 | 17,975 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 3.935 | 2 | 96 | 7,224 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 35.98 | 2 | 98 | 76,401 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

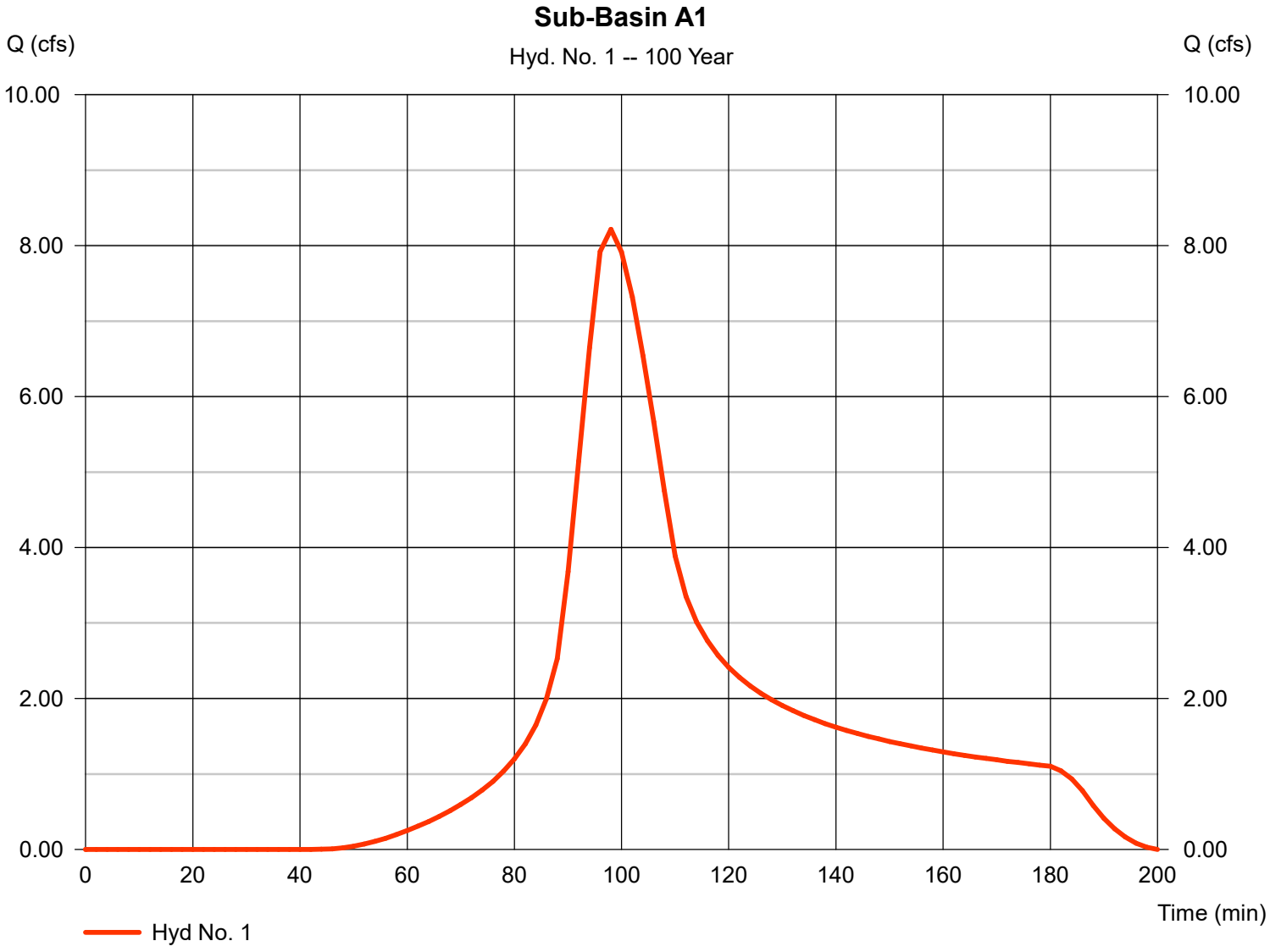
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 8.218 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 17,571 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 92.8 |
| Basin Slope | = | 7.9 % | Hydraulic length | = | 957 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.90 min |
| Total precip. | = | 1.39 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



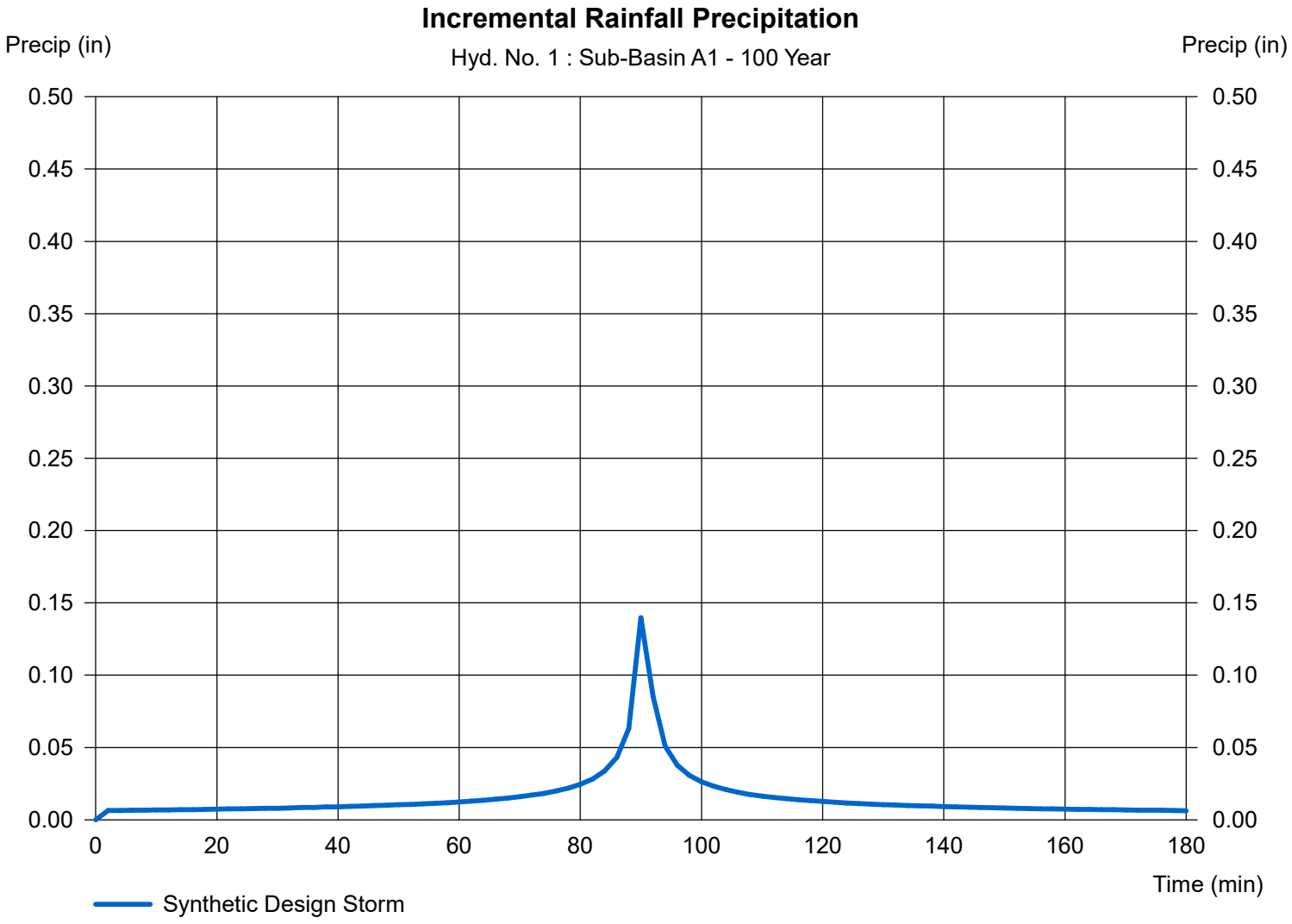
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.3917 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



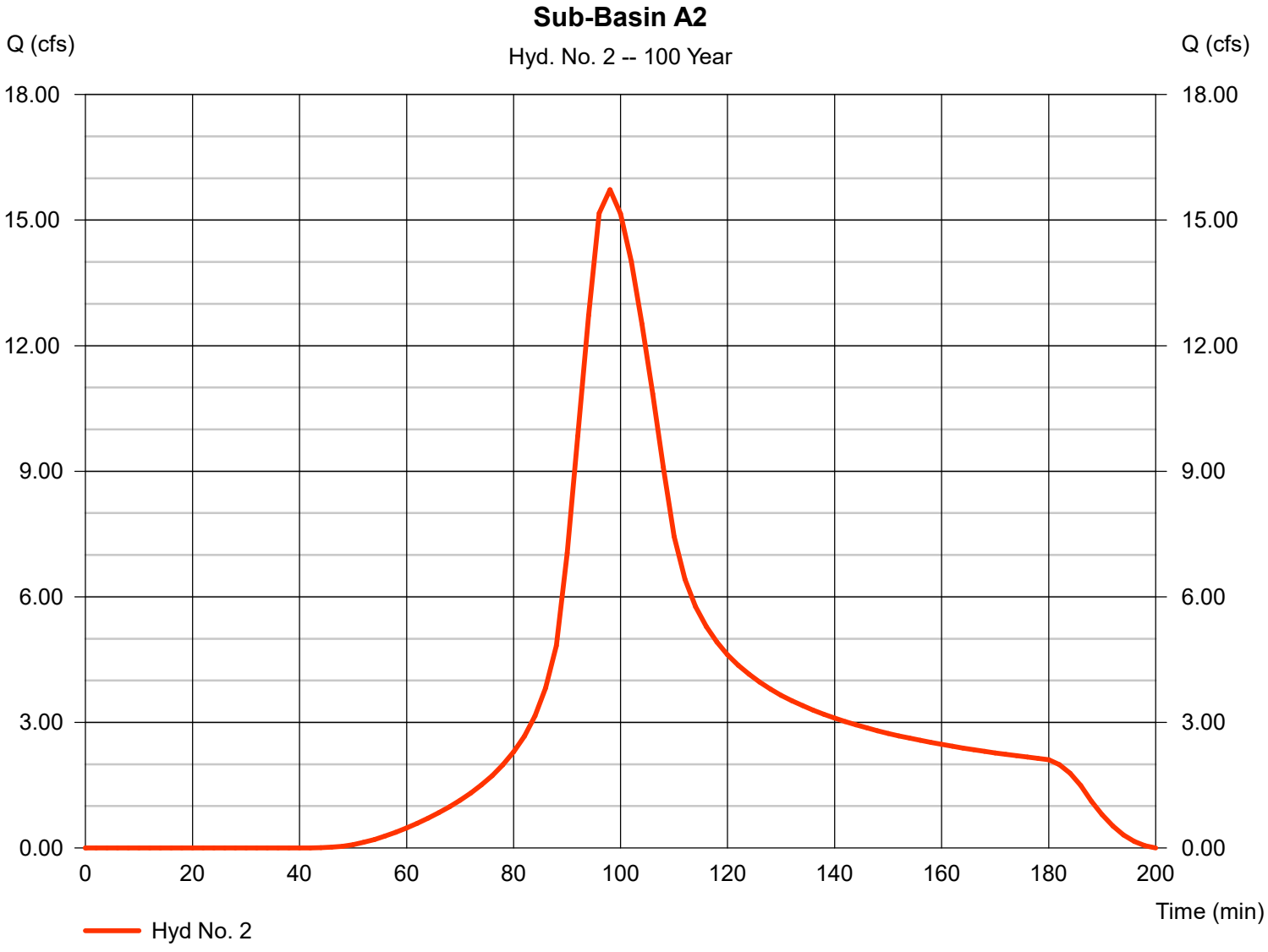
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 15.73 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 33,630 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.4 % | Hydraulic length | = | 1010 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.00 min |
| Total precip. | = | 1.39 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



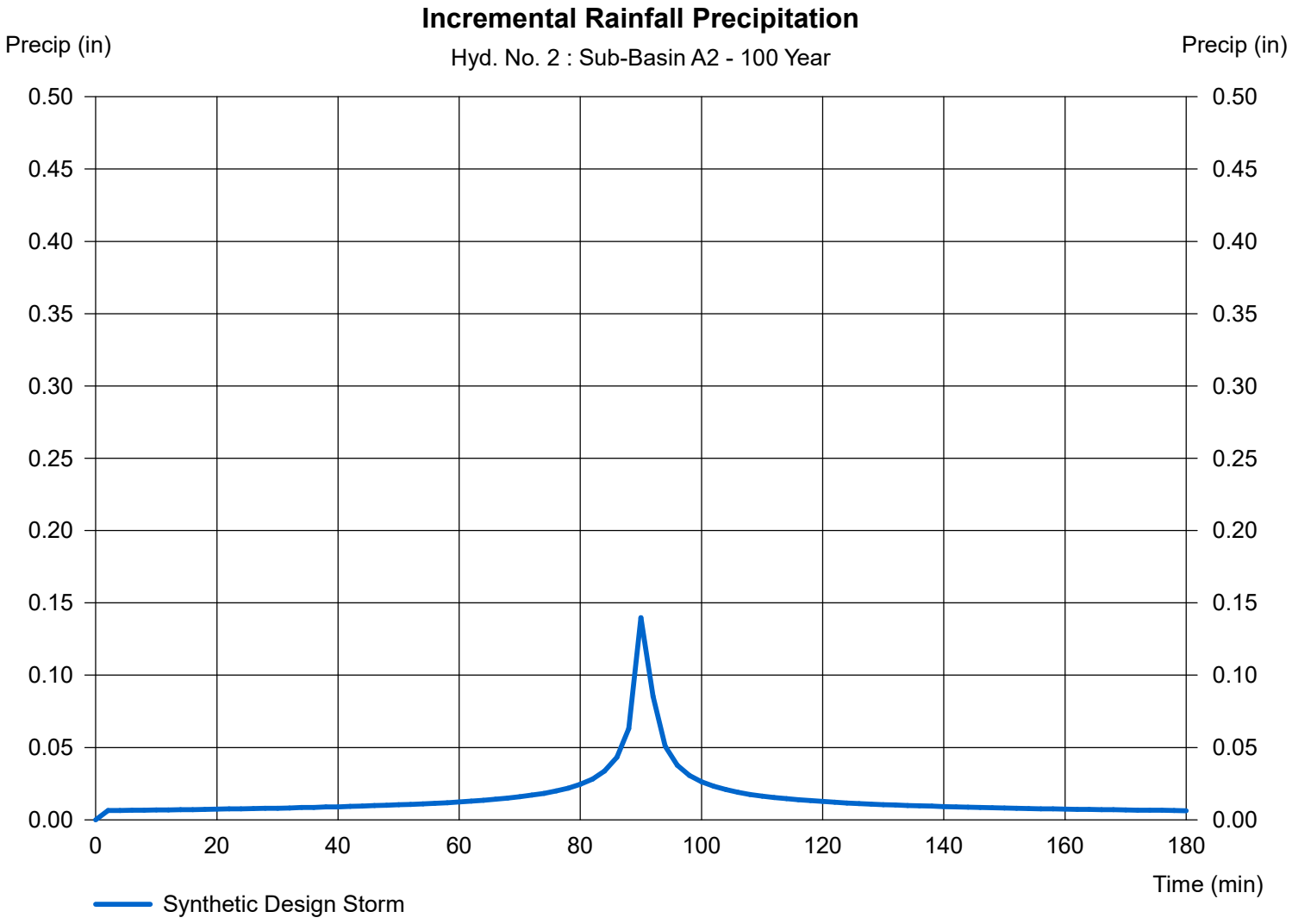
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.3917 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



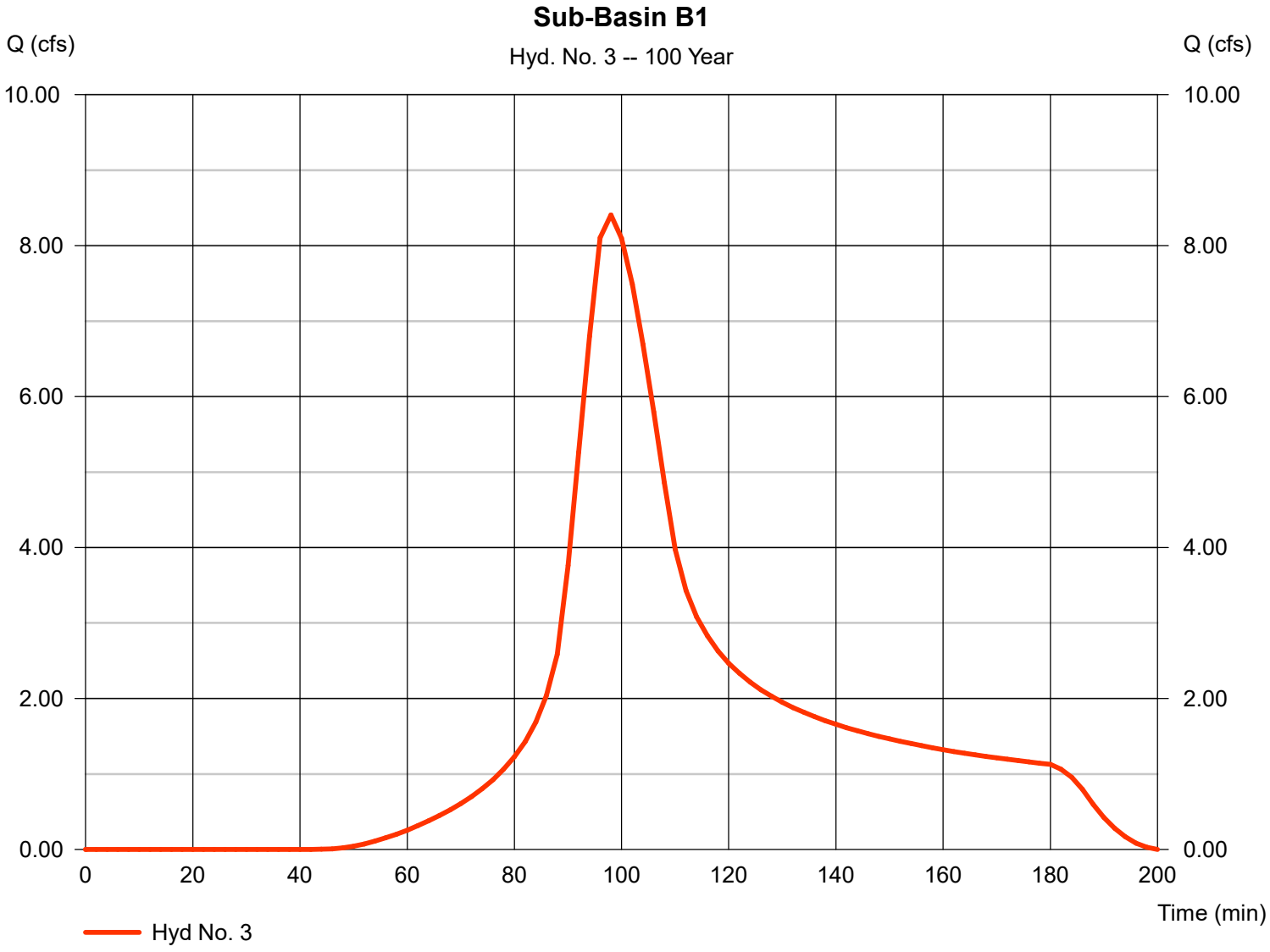
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 8.407 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 17,975 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 92.8 |
| Basin Slope | = | 8.8 % | Hydraulic length | = | 847 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.90 min |
| Total precip. | = | 1.39 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



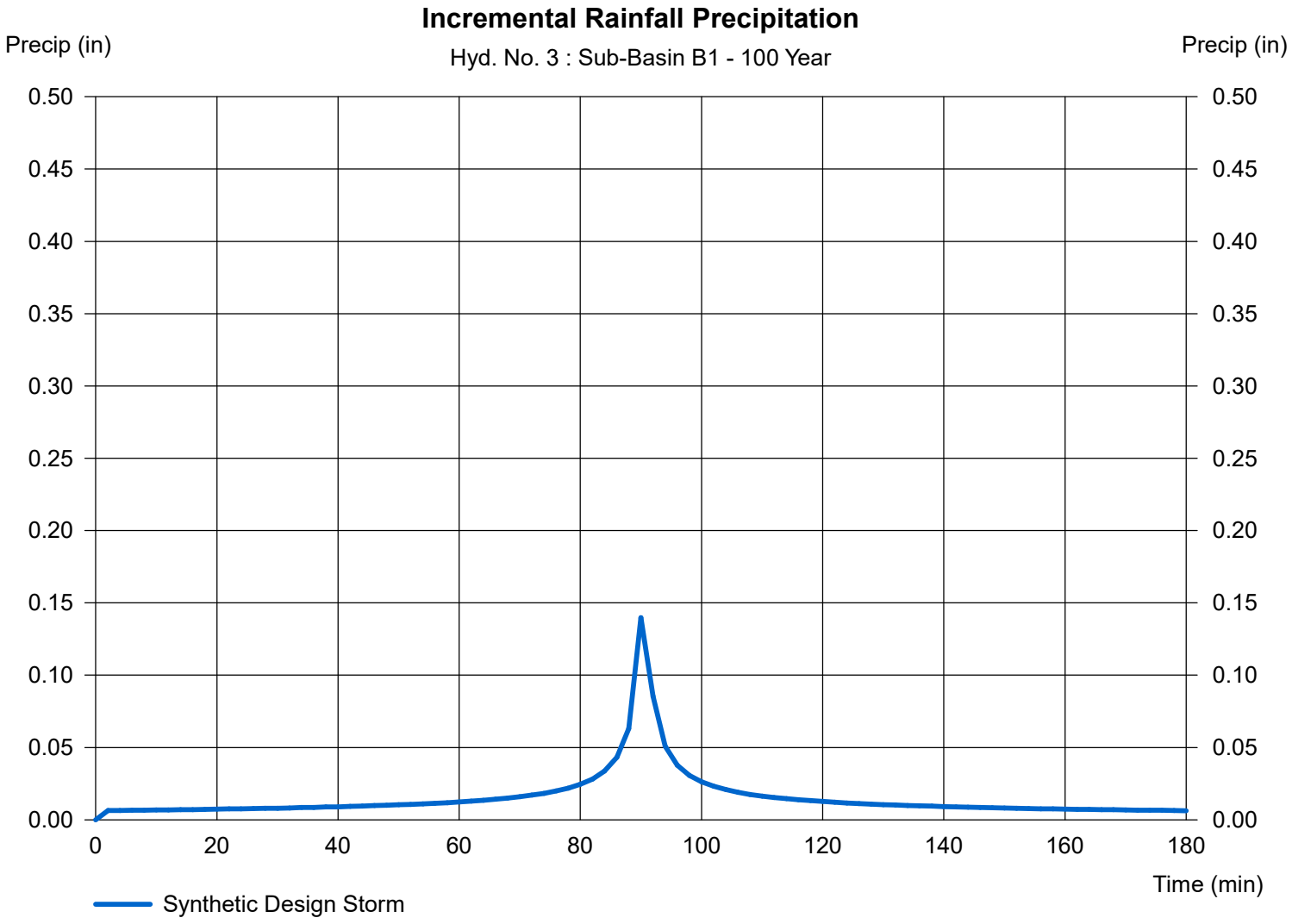
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.3917 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



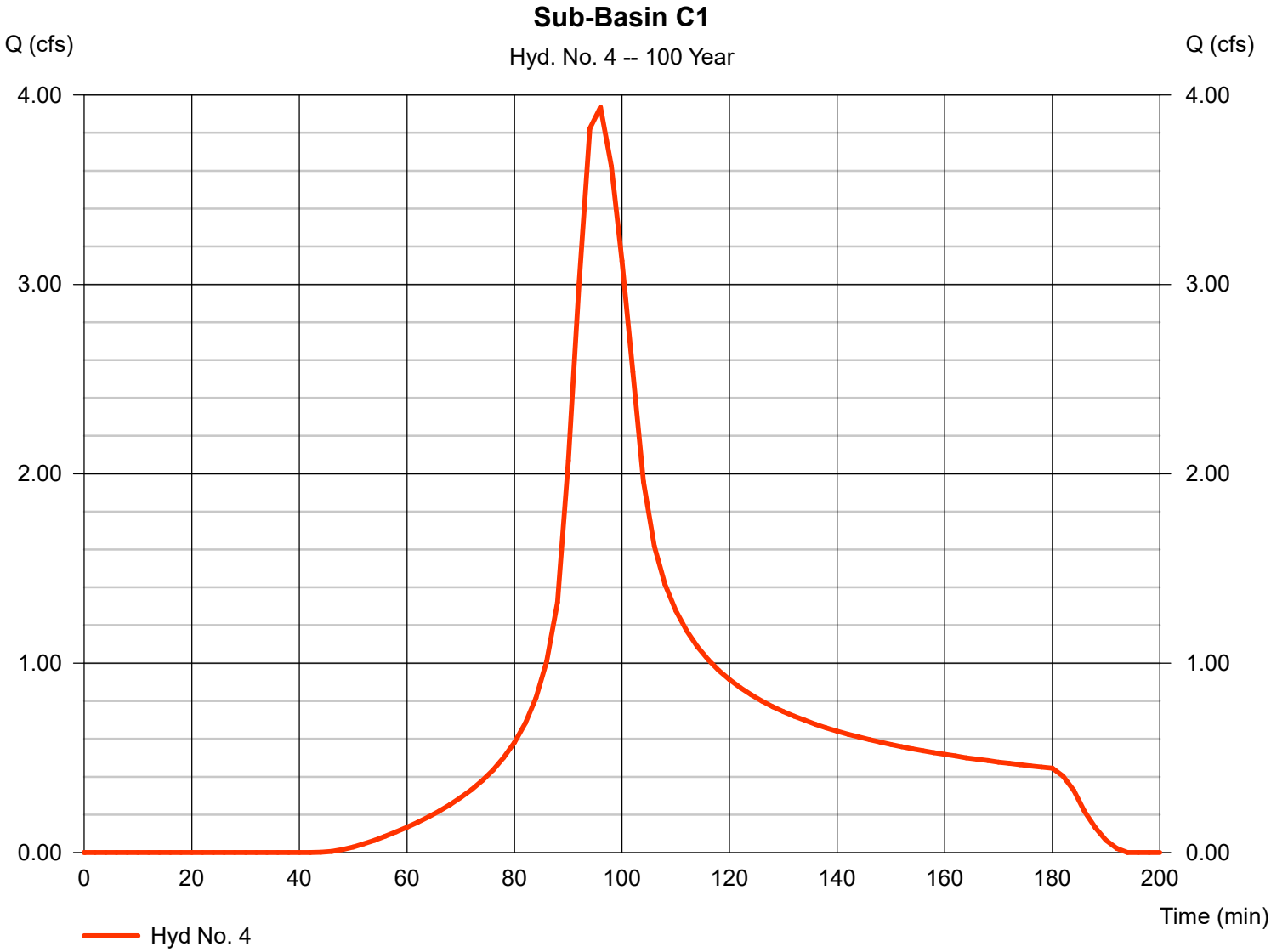
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.935 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 96 min |
| Time interval | = | 2 min | Hyd. volume | = | 7,224 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 92.8 |
| Basin Slope | = | 7.8 % | Hydraulic length | = | 522 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 8.80 min |
| Total precip. | = | 1.39 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



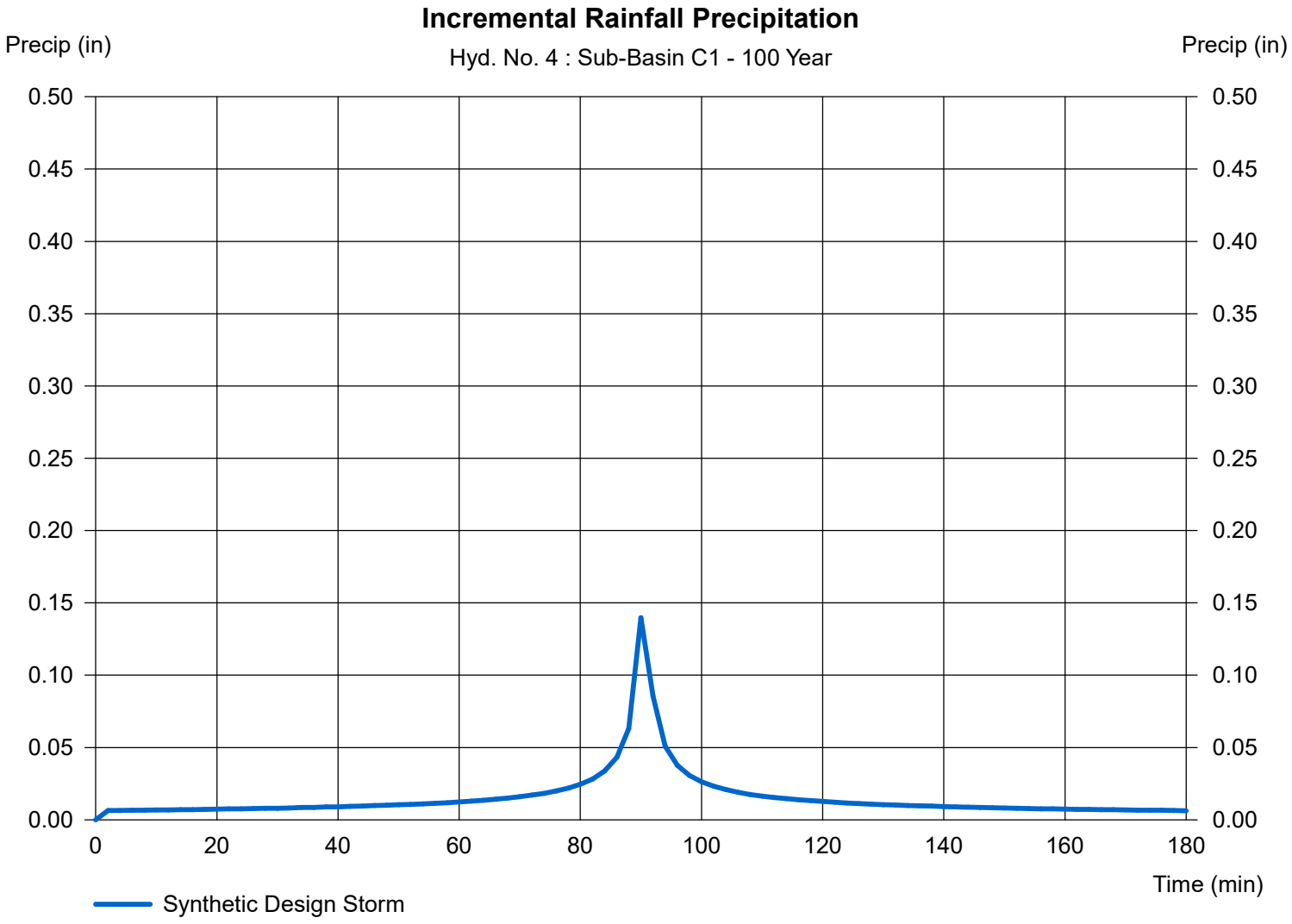
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.3917 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



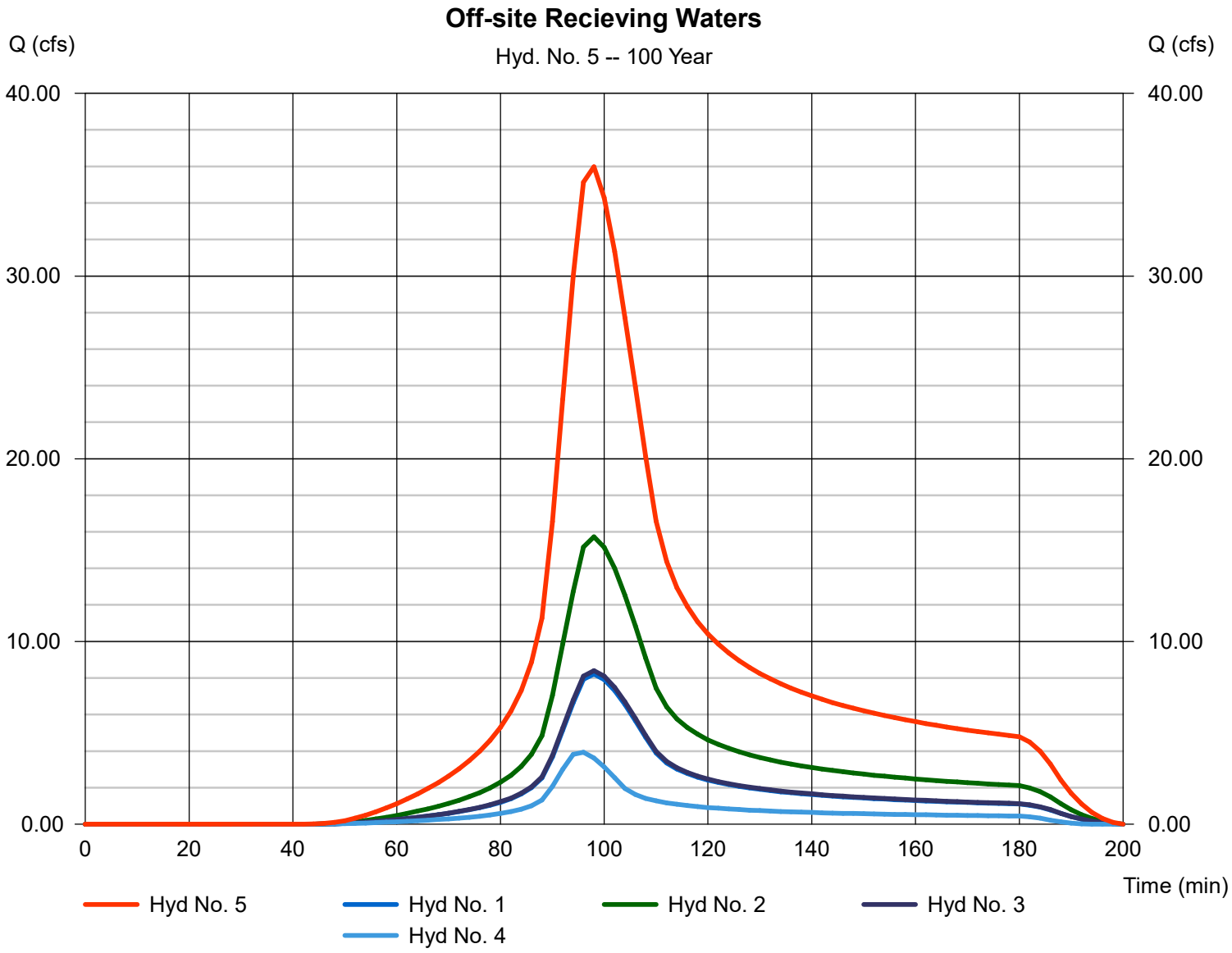
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 35.98 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 98 min |
| Time interval | = 2 min | Hyd. volume | = 76,401 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

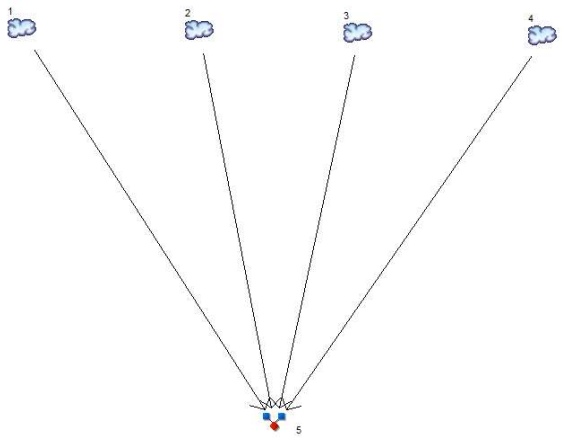
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 0.88 | 1.06 | 0.00 | 1.33 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 8.295 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 15.88 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 9.726 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.031 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 37.57 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 8.295 | 2 | 190 | 25,356 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 15.88 | 2 | 190 | 48,531 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 9.726 | 2 | 188 | 27,436 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 4.031 | 2 | 188 | 11,370 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 37.57 | 2 | 188 | 112,693 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

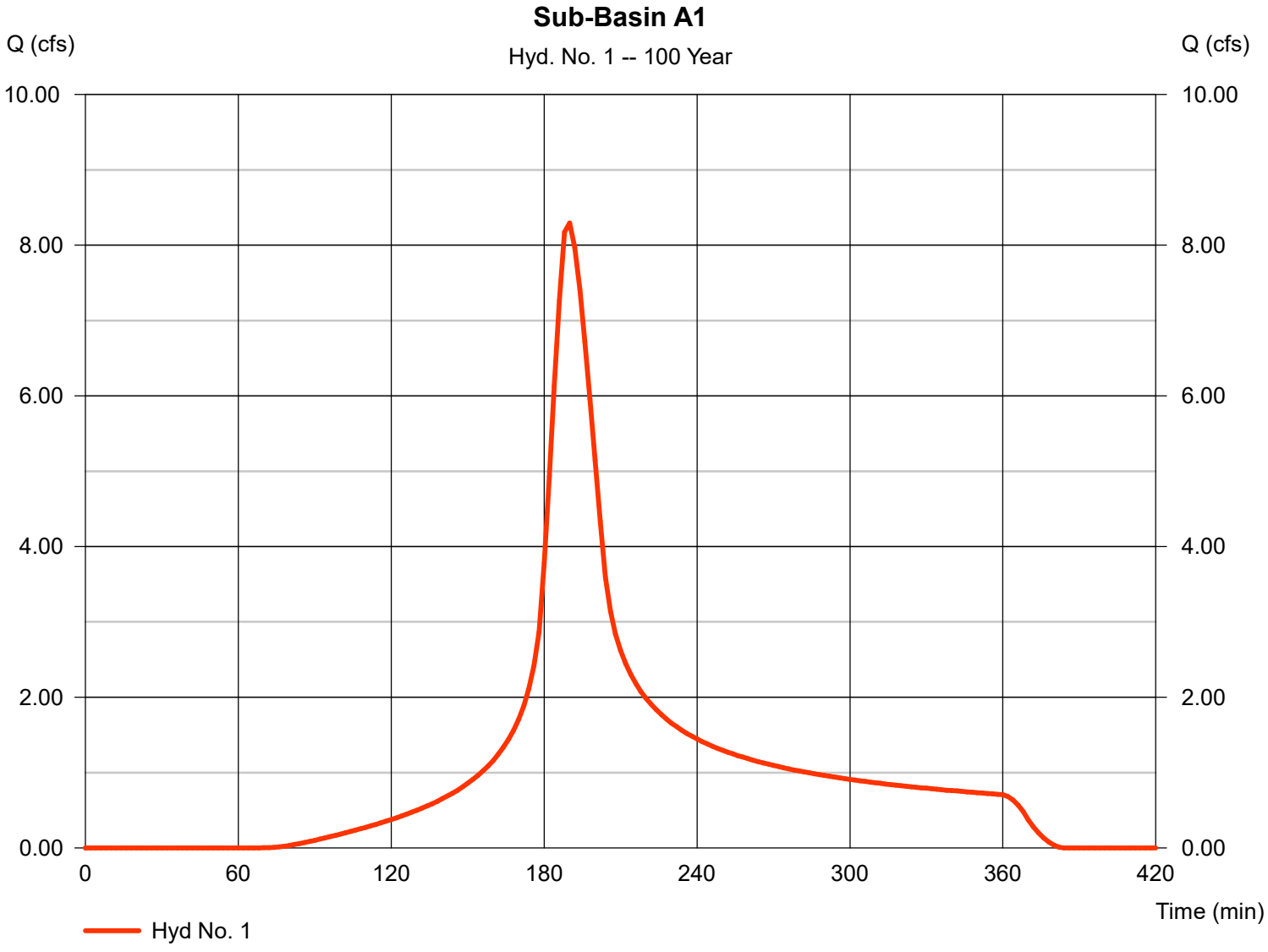
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 8.295 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 25,356 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.70 min |
| Total precip. | = | 1.85 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



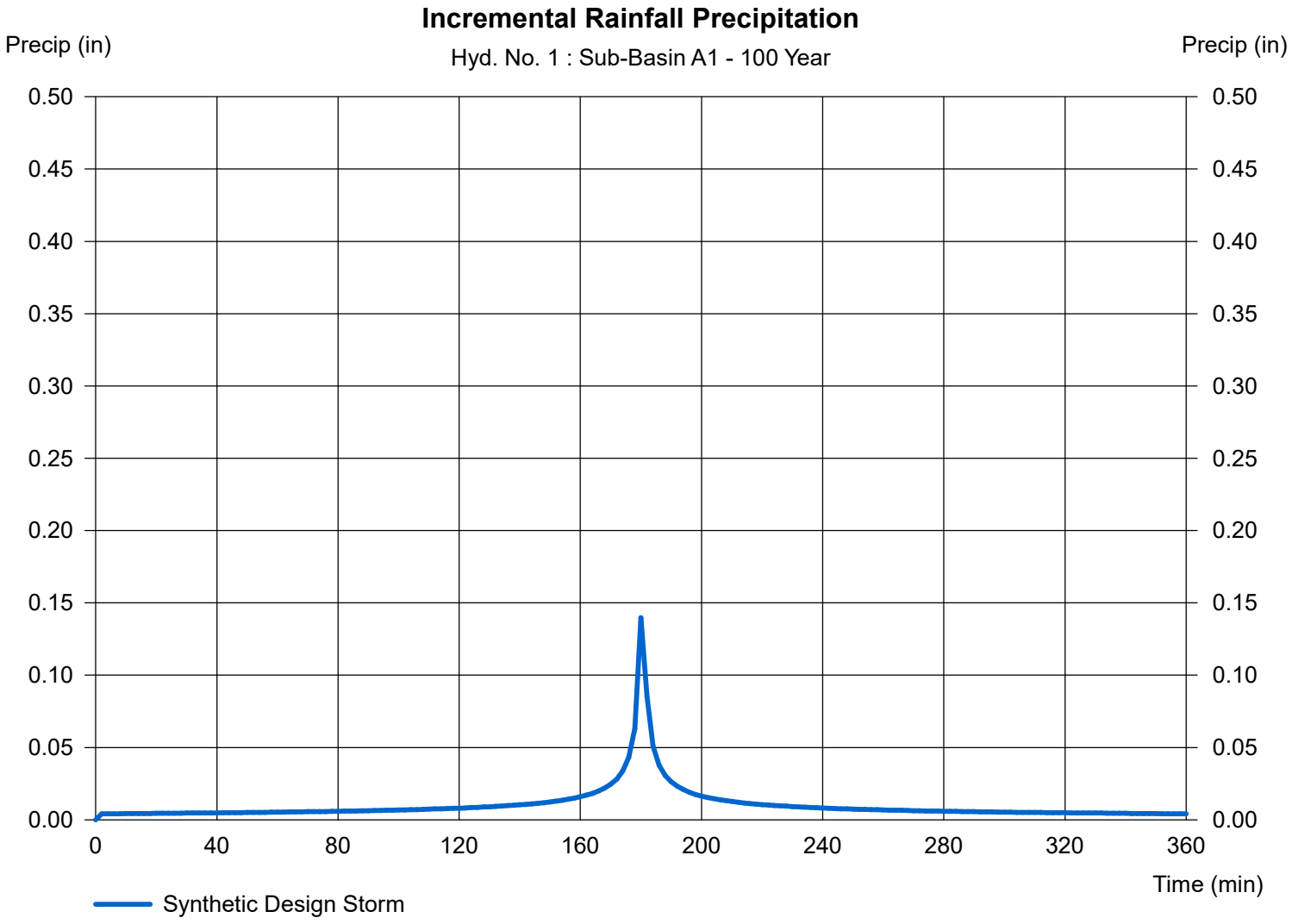
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.8468 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



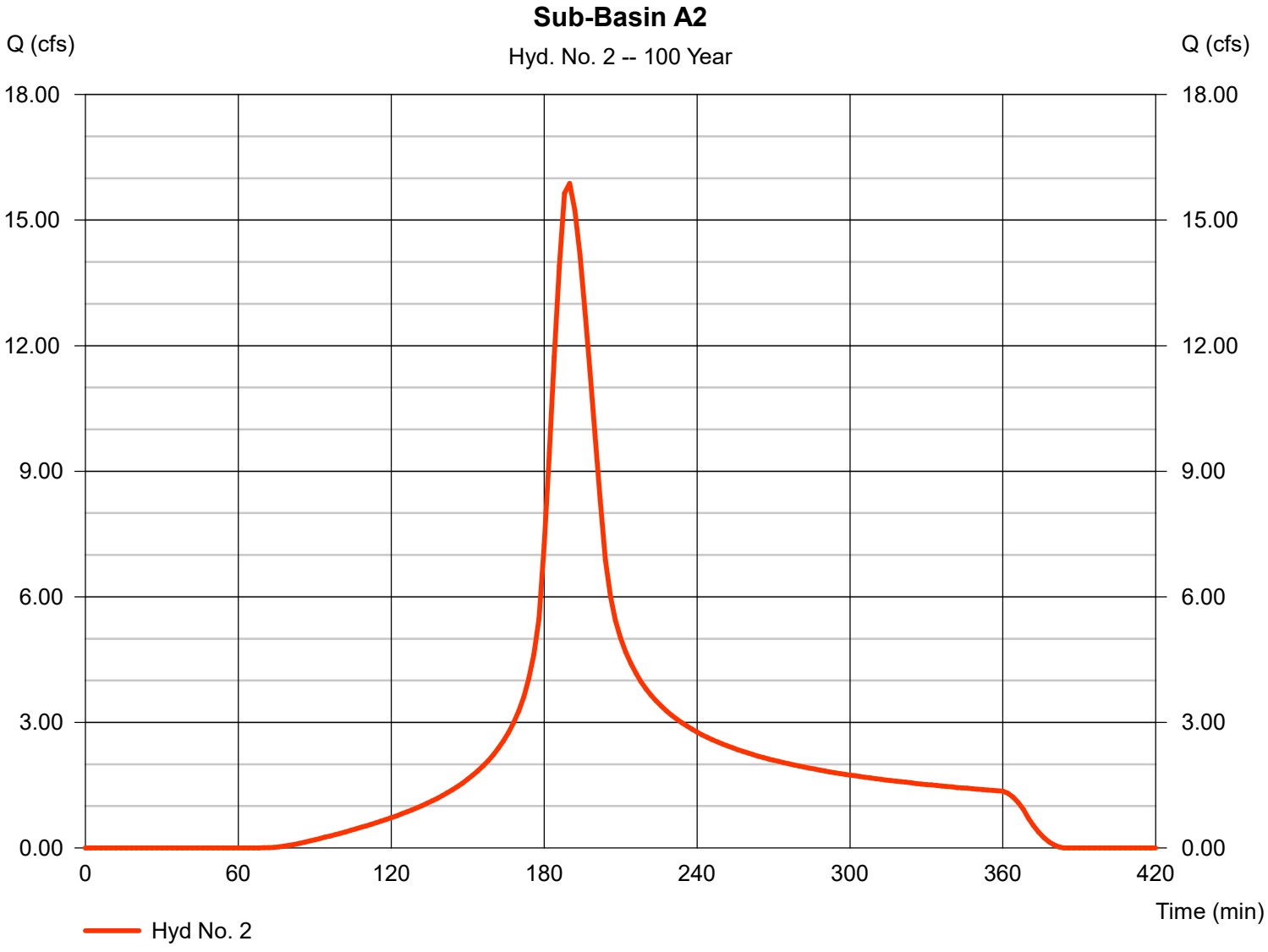
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 15.88 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 48,531 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 1.85 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



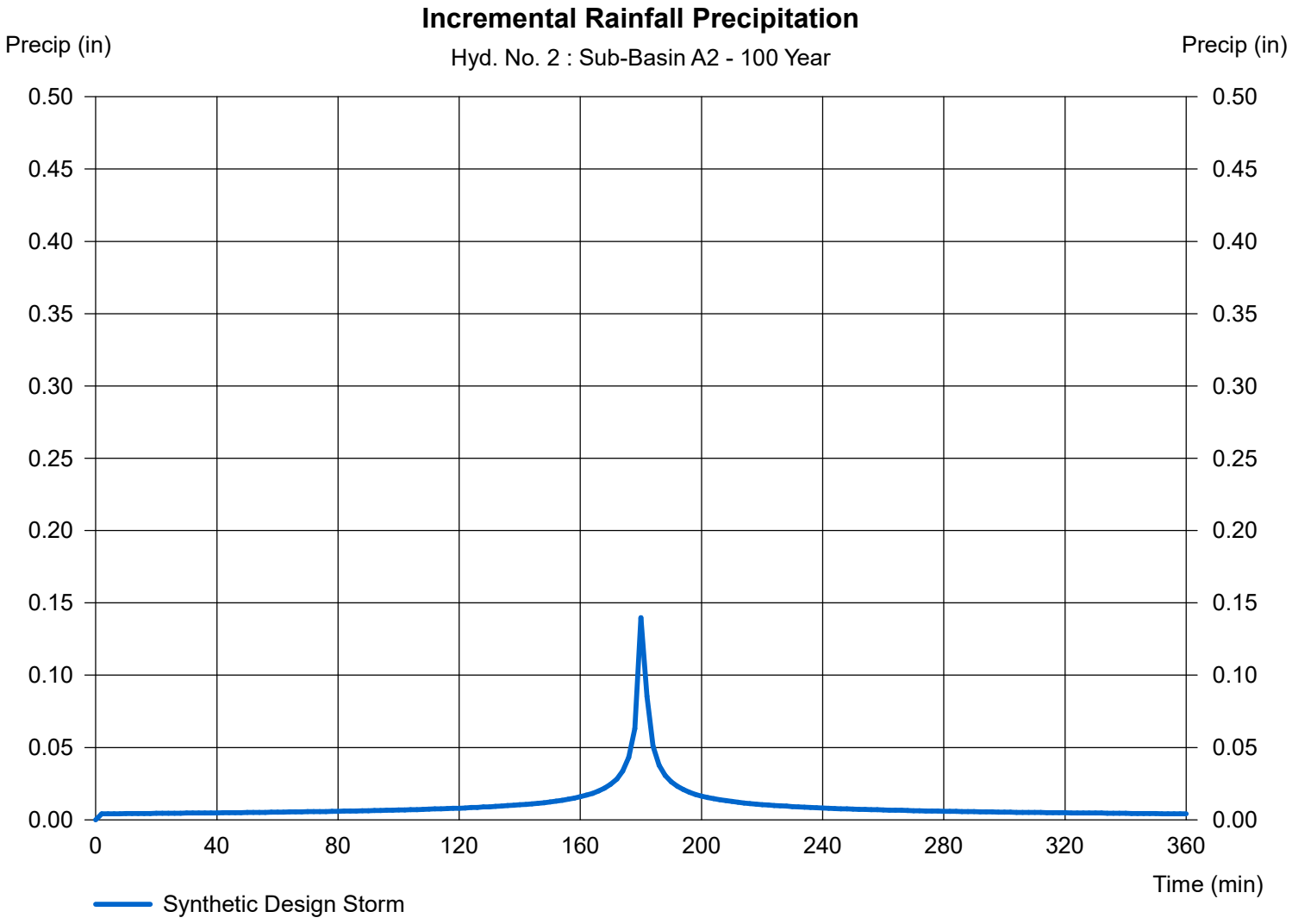
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.8468 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



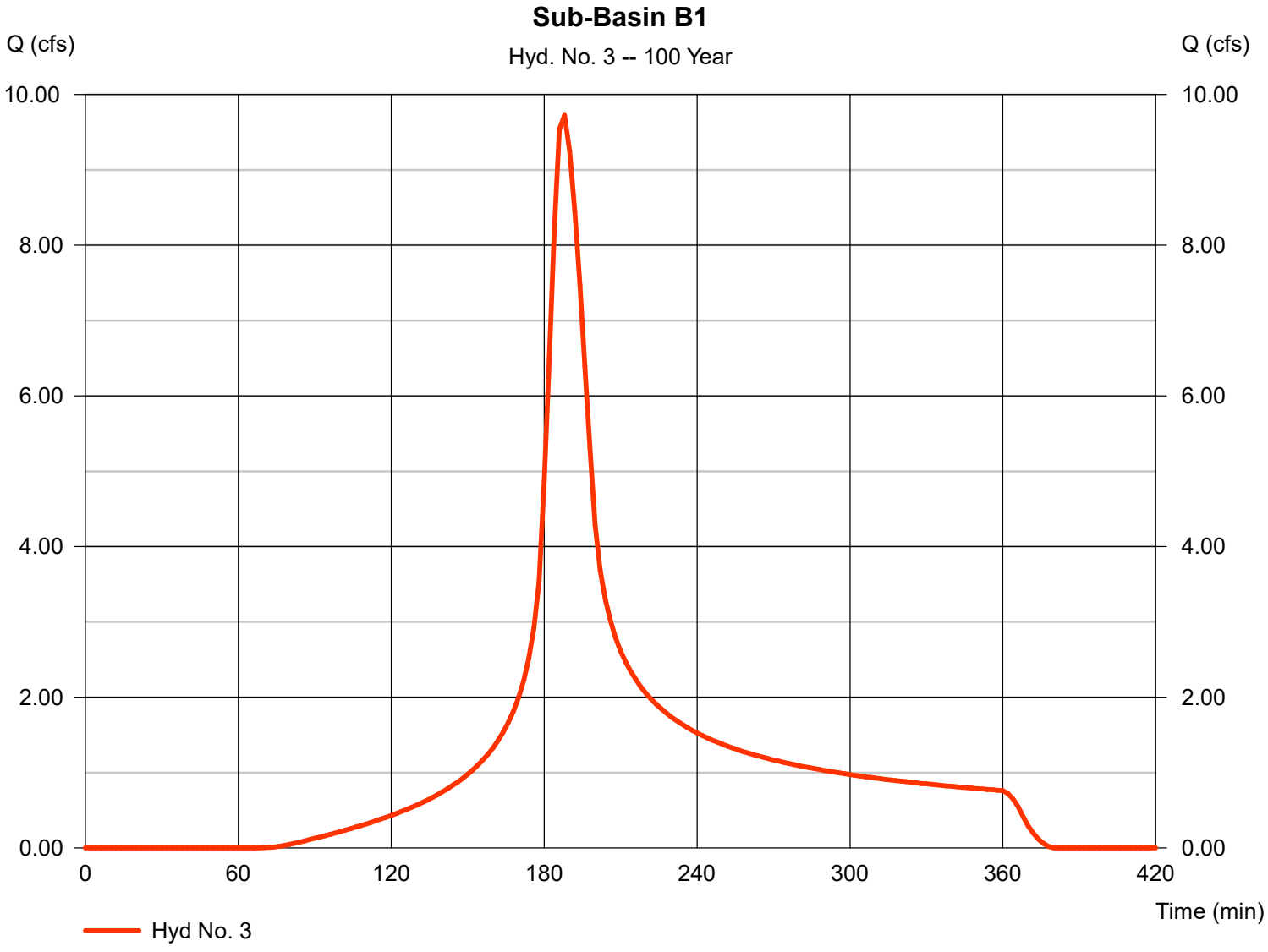
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 9.726 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 27,436 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 1.85 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



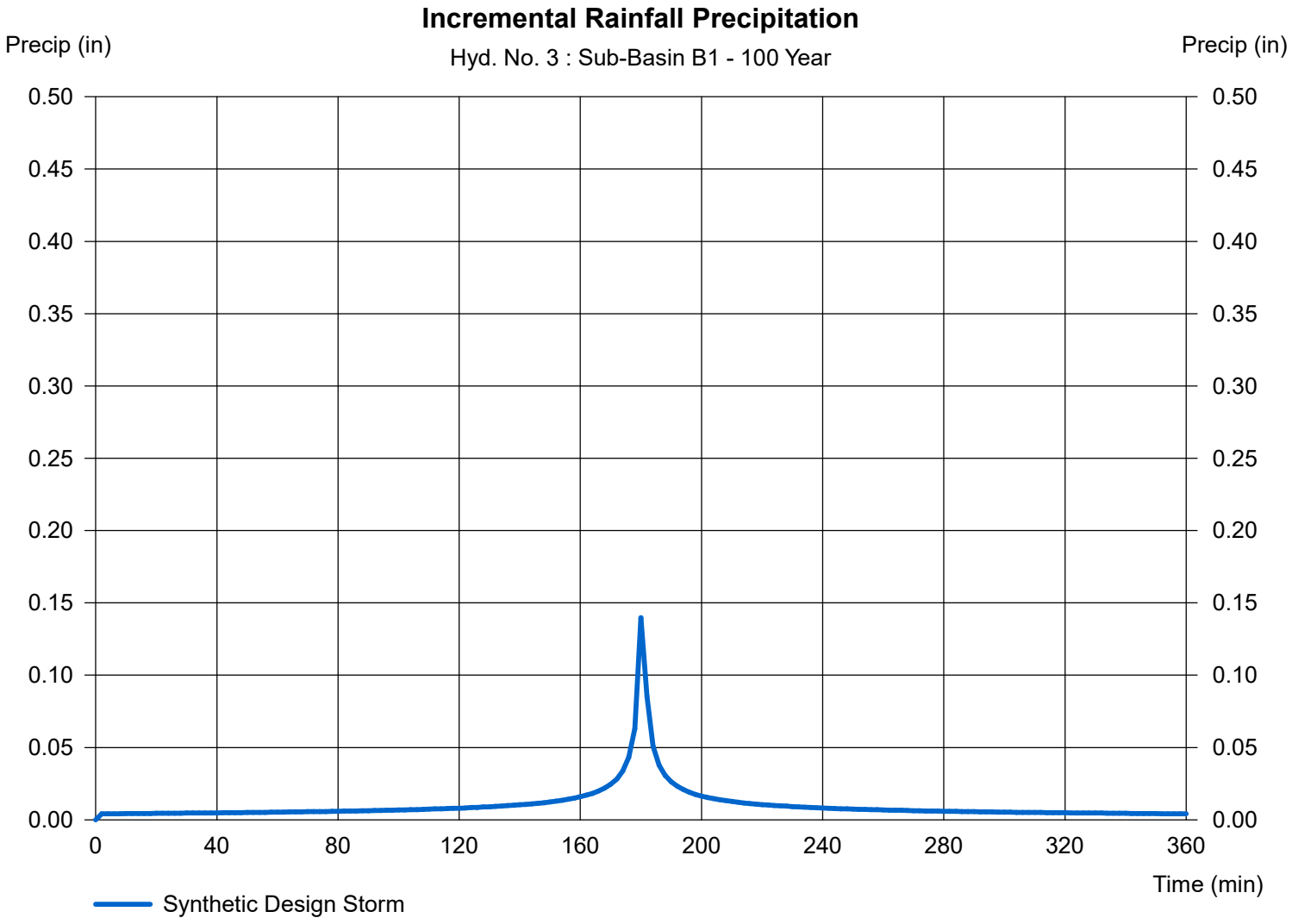
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.8468 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



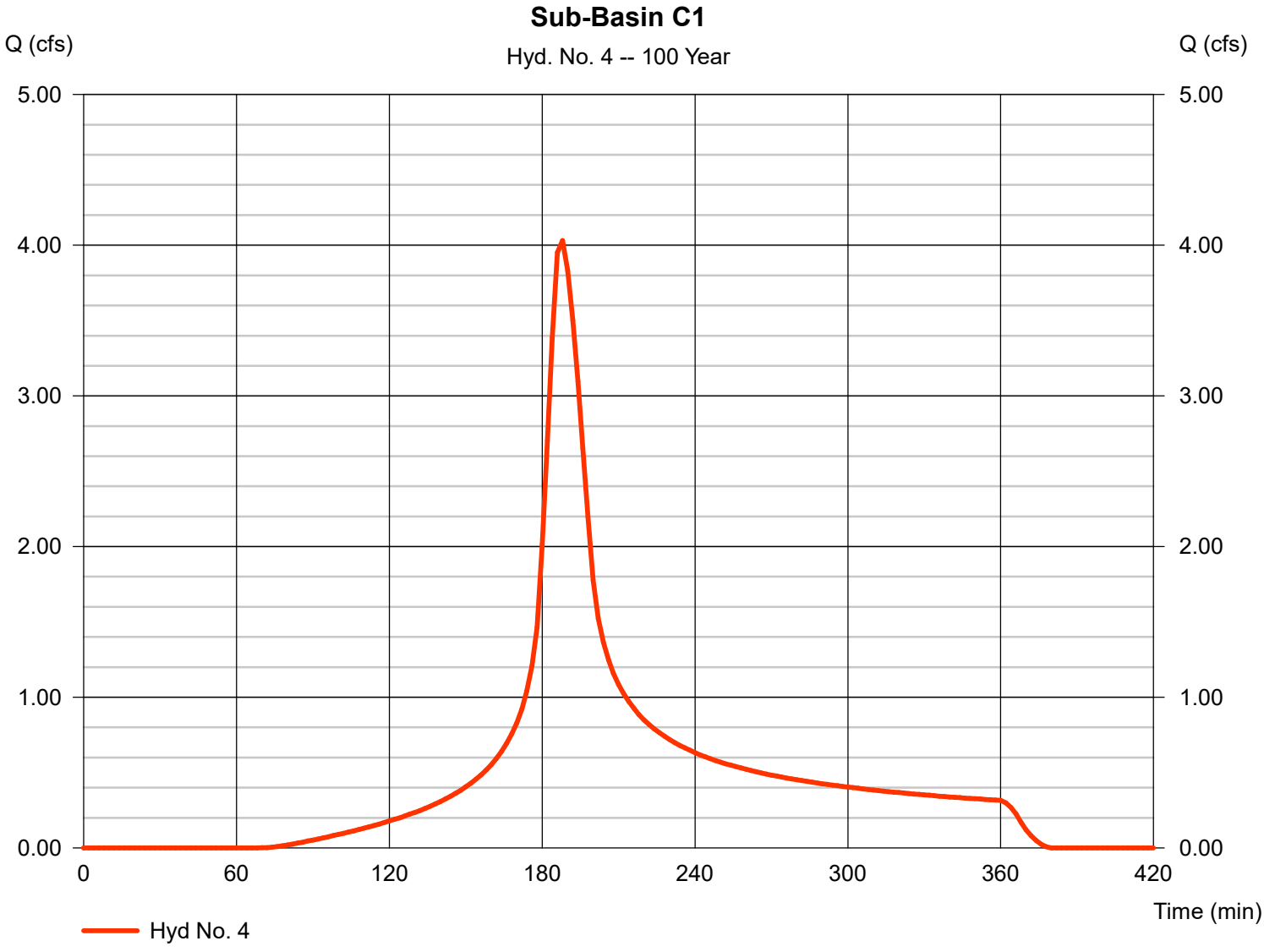
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 4.031 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 188 min |
| Time interval | = 2 min | Hyd. volume | = 11,370 cuft |
| Drainage area | = 2.619 ac | Curve number | = 92.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 10.80 min |
| Total precip. | = 1.85 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



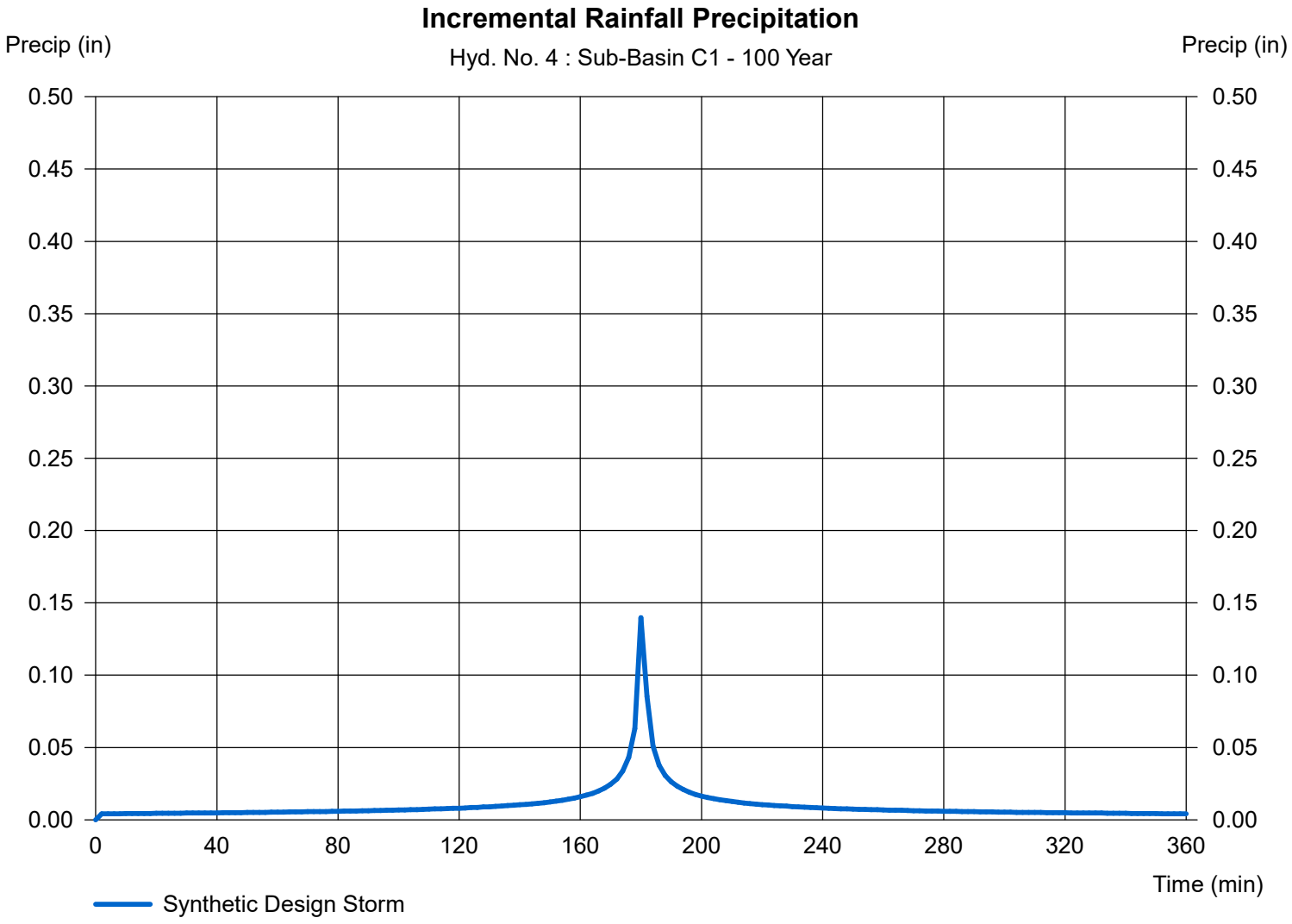
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.8468 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



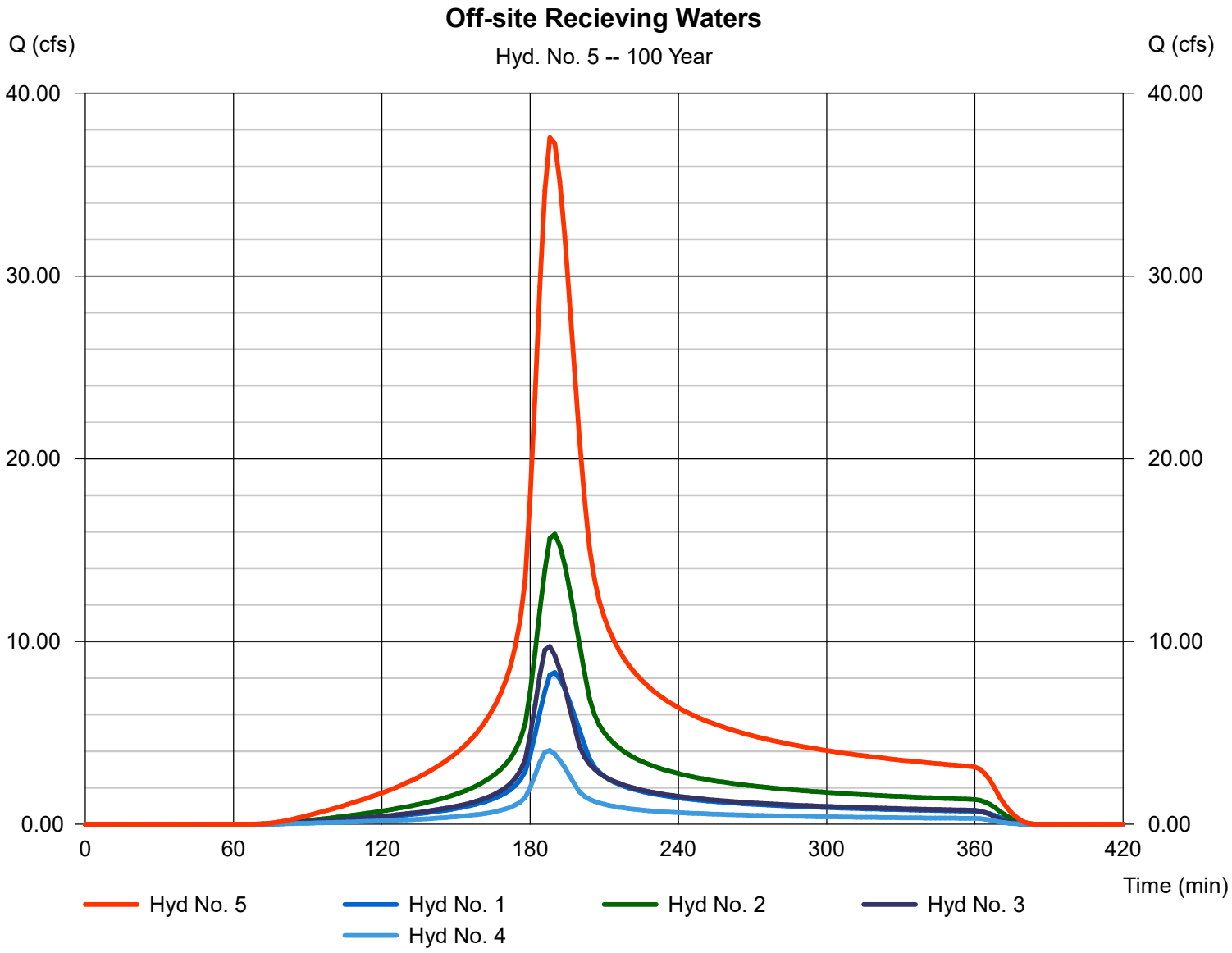
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 37.57 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 188 min |
| Time interval | = 2 min | Hyd. volume | = 112,693 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

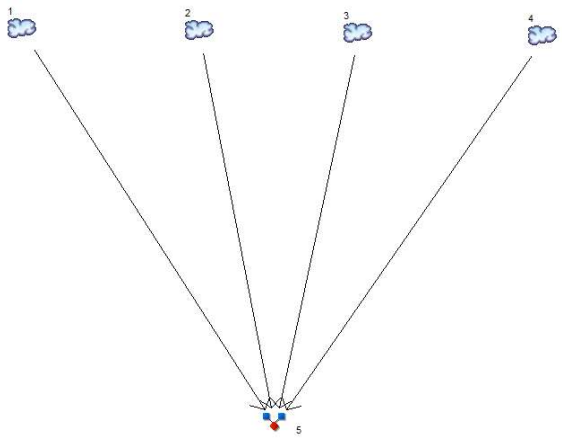
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap



| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 9.837 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 18.83 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 11.52 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.776 | Sub-Basin C1 |
| 5 | Combine | 1, 2, 3, 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 44.88 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 9.837 | 2 | 730 | 53,780 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 18.83 | 2 | 730 | 102,932 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 11.52 | 2 | 728 | 58,191 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 4.776 | 2 | 728 | 24,115 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Combine | 44.88 | 2 | 728 | 239,017 | 1, 2, 3, 4 | ------ | ------ | Off-site Recieving Waters |

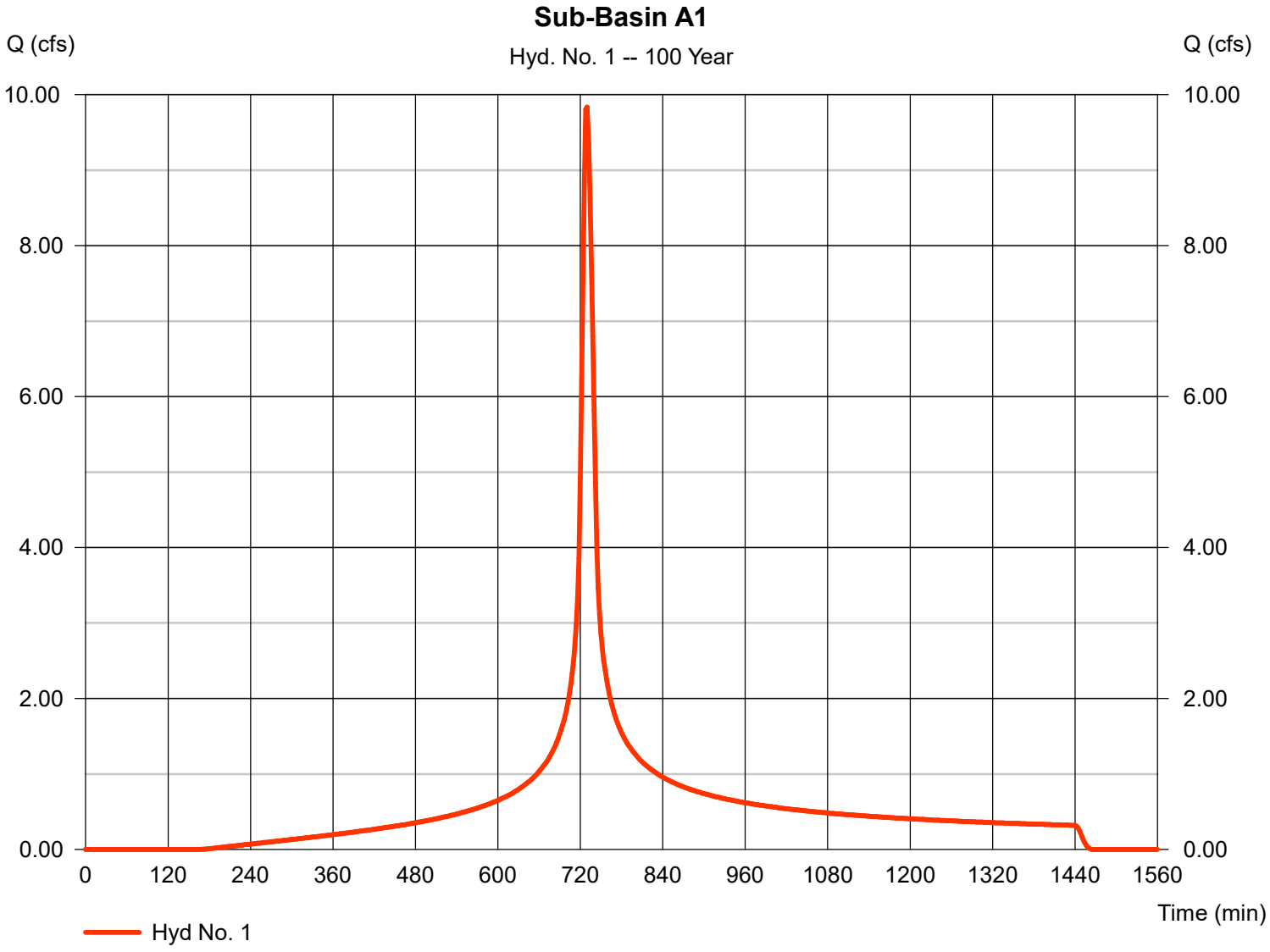
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 9.837 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 730 min |
| Time interval | = 2 min | Hyd. volume | = 53,780 cuft |
| Drainage area | = 6.178 ac | Curve number | = 92.8 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 13.70 min |
| Total precip. | = 3.23 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | Shape factor | = 484 |



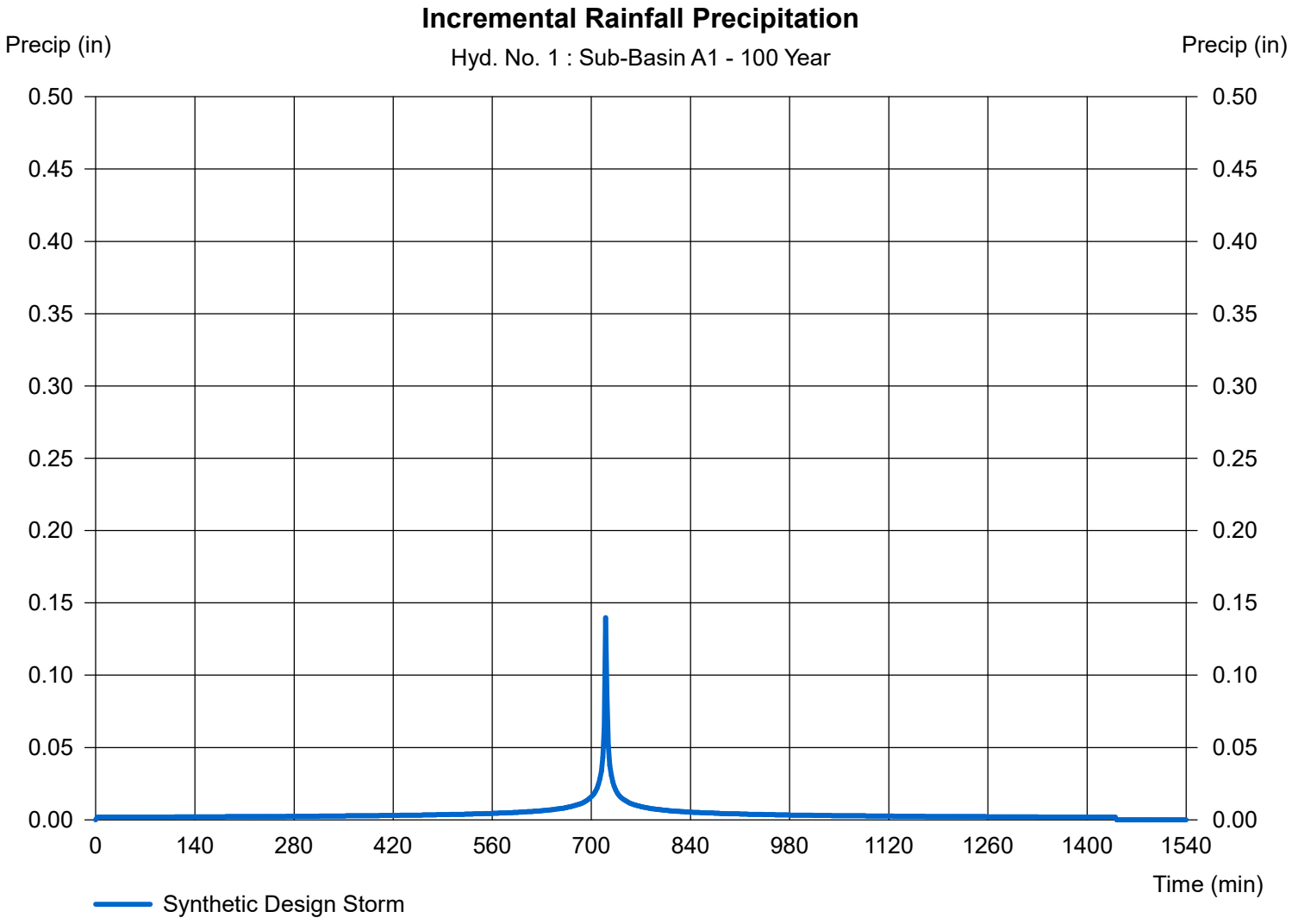
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 3.2345 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



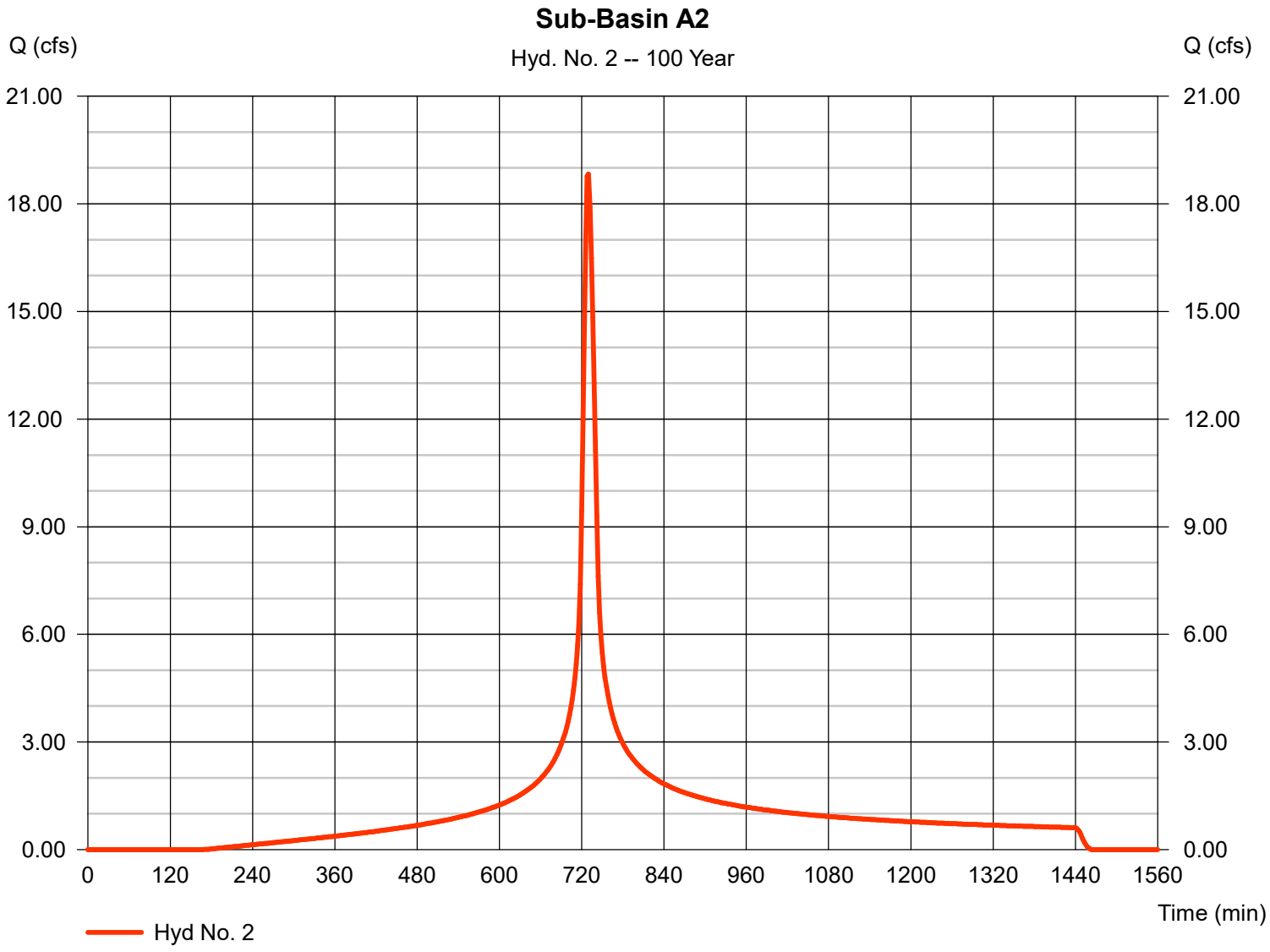
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 18.83 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 102,932 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 3.23 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



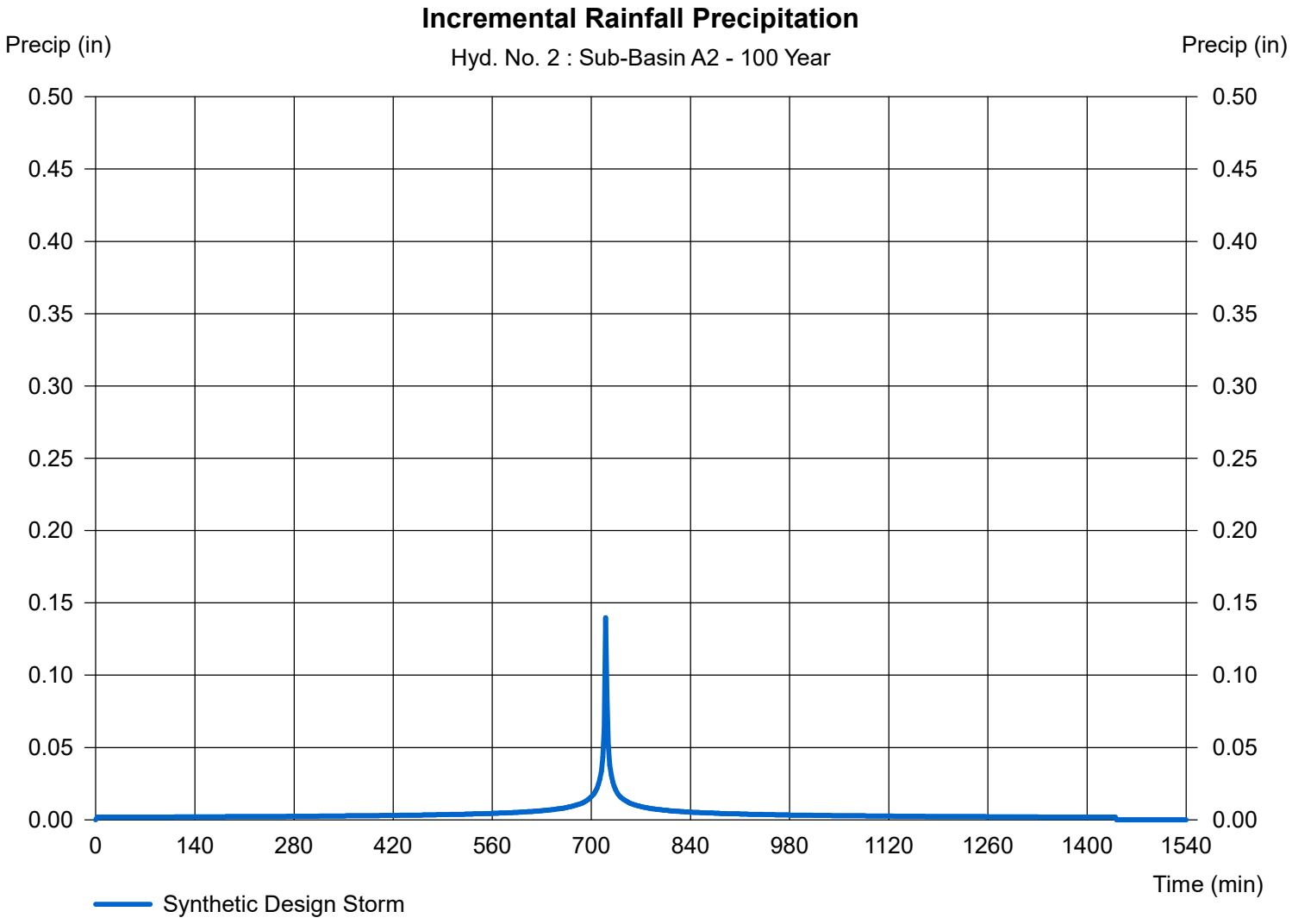
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 3.2345 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



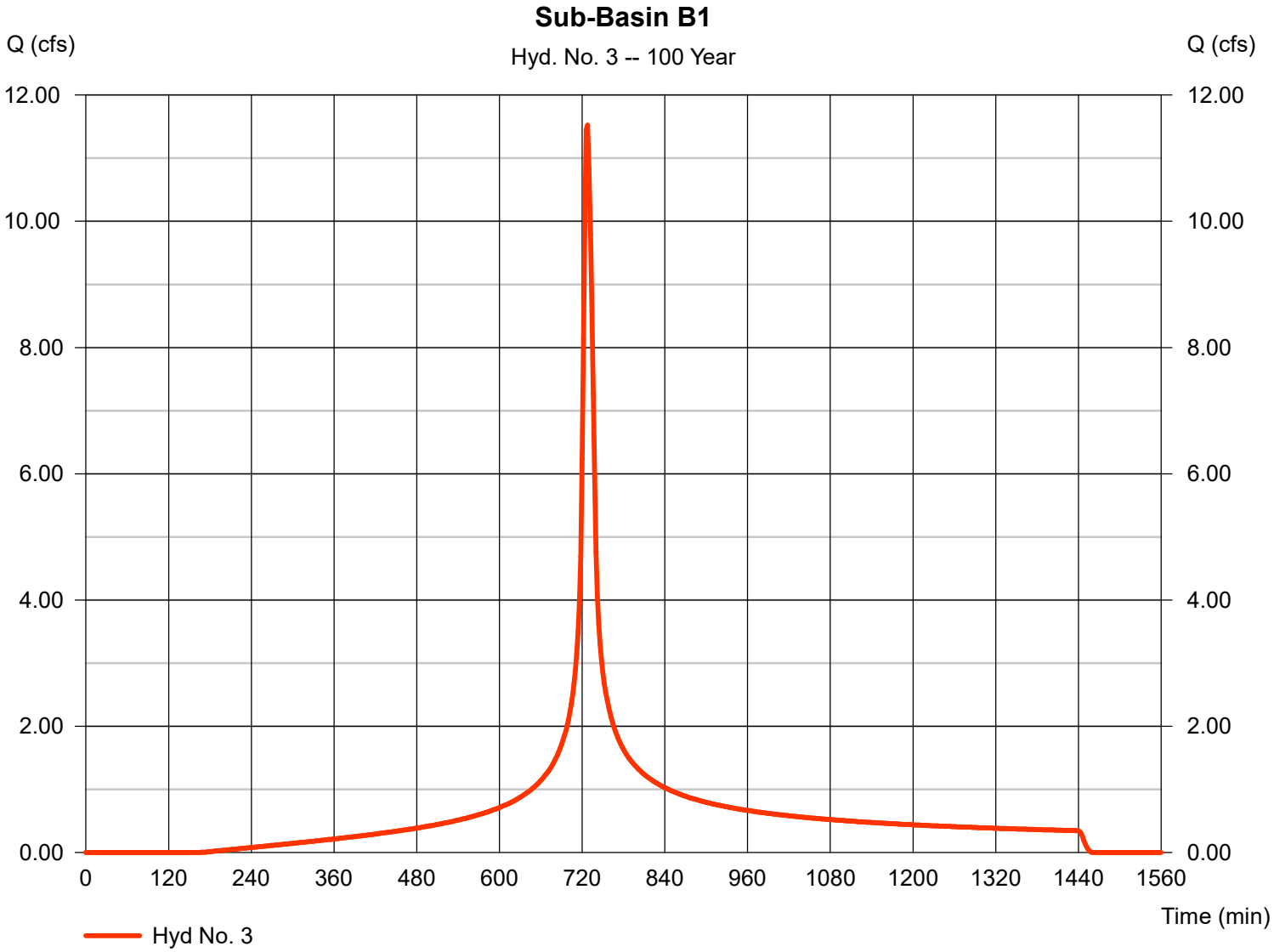
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Friday, Feb 28, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 11.52 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 58,191 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 12.80 min |
| Total precip. | = | 3.23 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



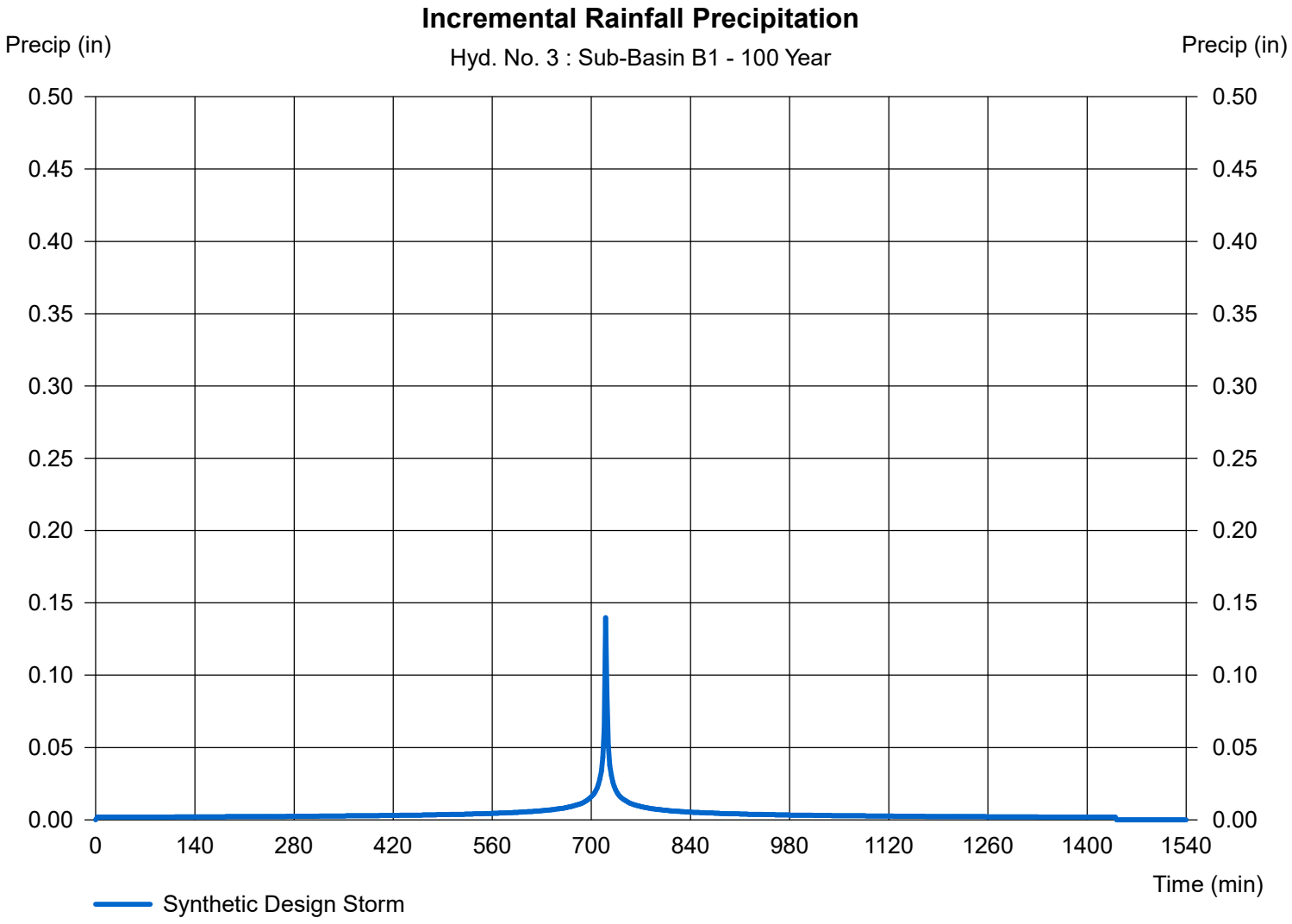
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 3.2345 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



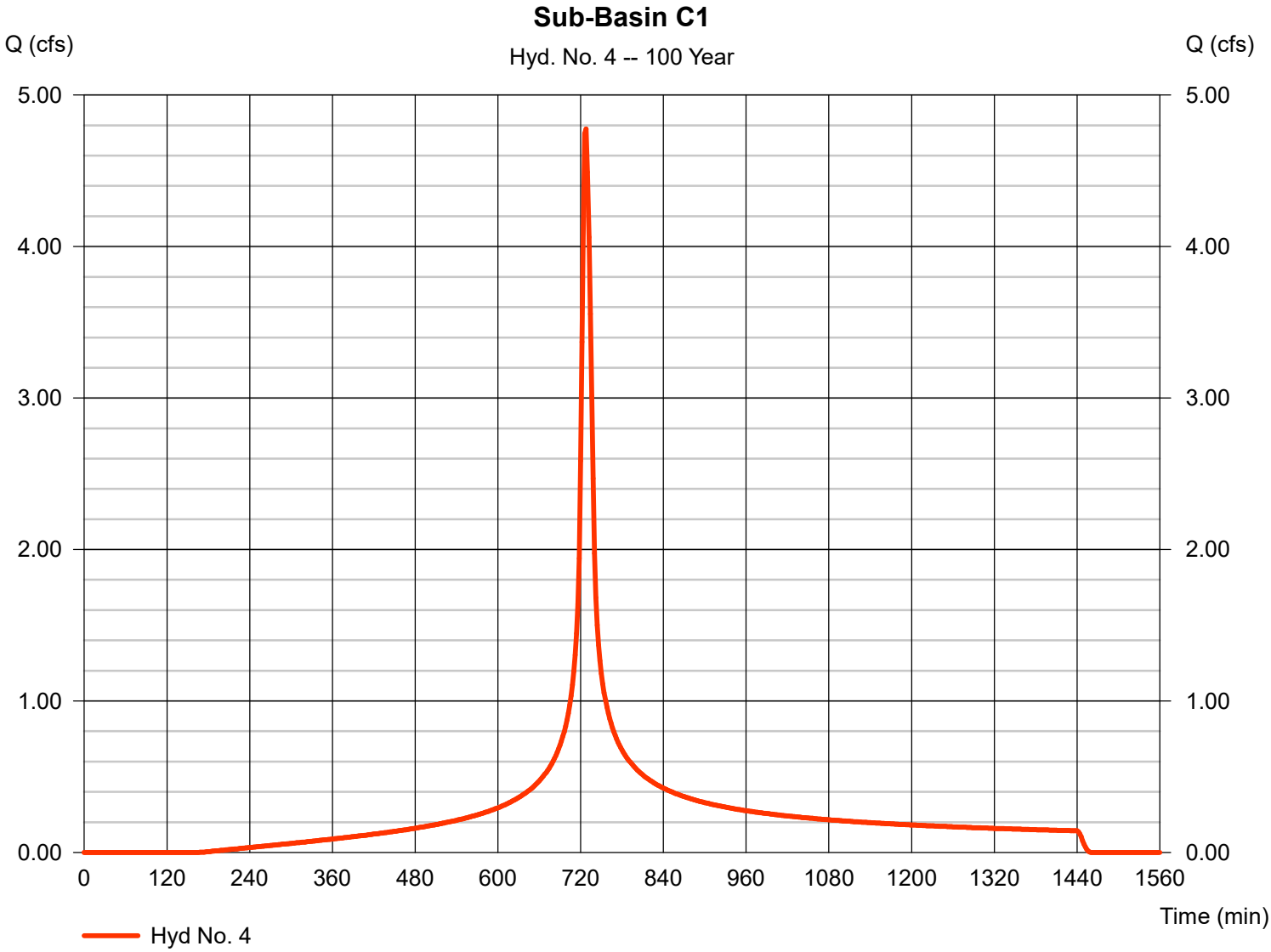
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.776 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 24,115 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 3.23 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



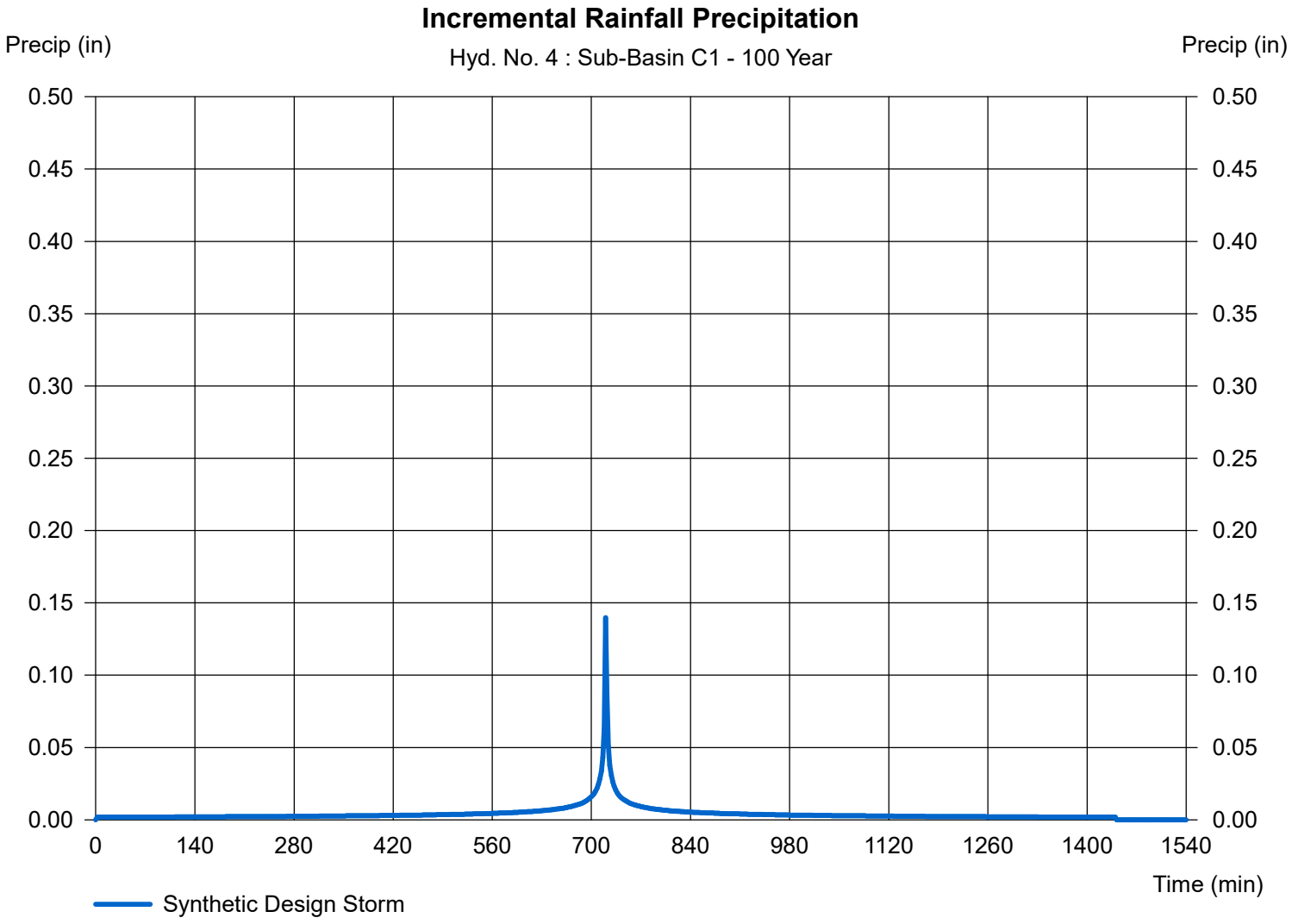
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 3.2345 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



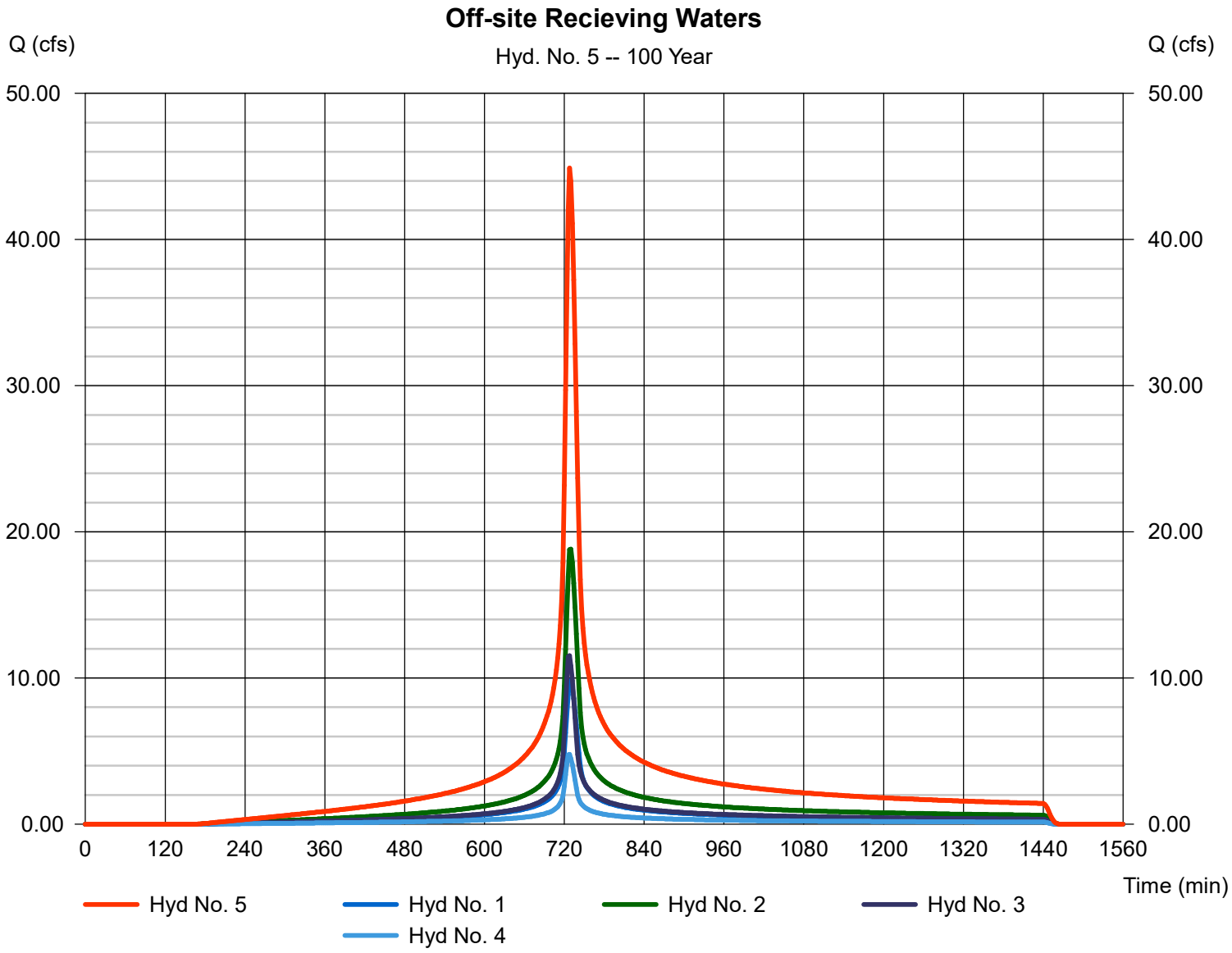
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Friday, Feb 28, 2025

## Hyd. No. 5

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 44.88 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 239,017 cuft |
| Inflow hyds. | = 1, 2, 3, 4 | Contrib. drain. area | = 26.941 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 25 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 10.4452 | 2.6000 | 0.5980 | -------- |

File name: OMYA_Pre_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 25 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.98 | 0.92 | 0.88 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.15 | 1.40 | 0.00 | 1.74 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.00 | 2.49 | 0.00 | 3.19 |

## 5.4. Post-Developed Conditions Runoff and Basin Routing Calculations

5.4.a. 2 Year Storm Event
5.4.b. 10 Year Storm Event
5.4.c. 25 Year Storm Event
5.4.d. 100 Year Storm Event

## 5.4.a. 2 Year Storm Event– Post-Developed Conditions

5.4.a.1 15 Min Duration

5.4.a.2 30 Min Duration

5.4.a.3 1 Hour Duration

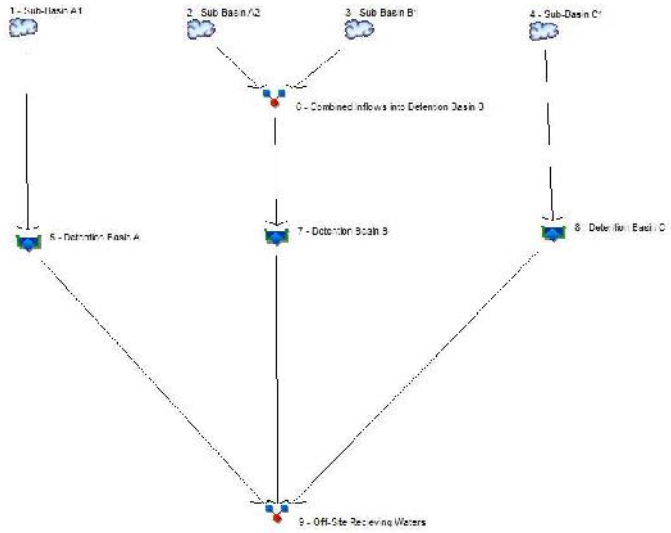
5.4.a.4 3 Hour Duration

5.4.a.5 6 Hour Duration

5.4.a.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

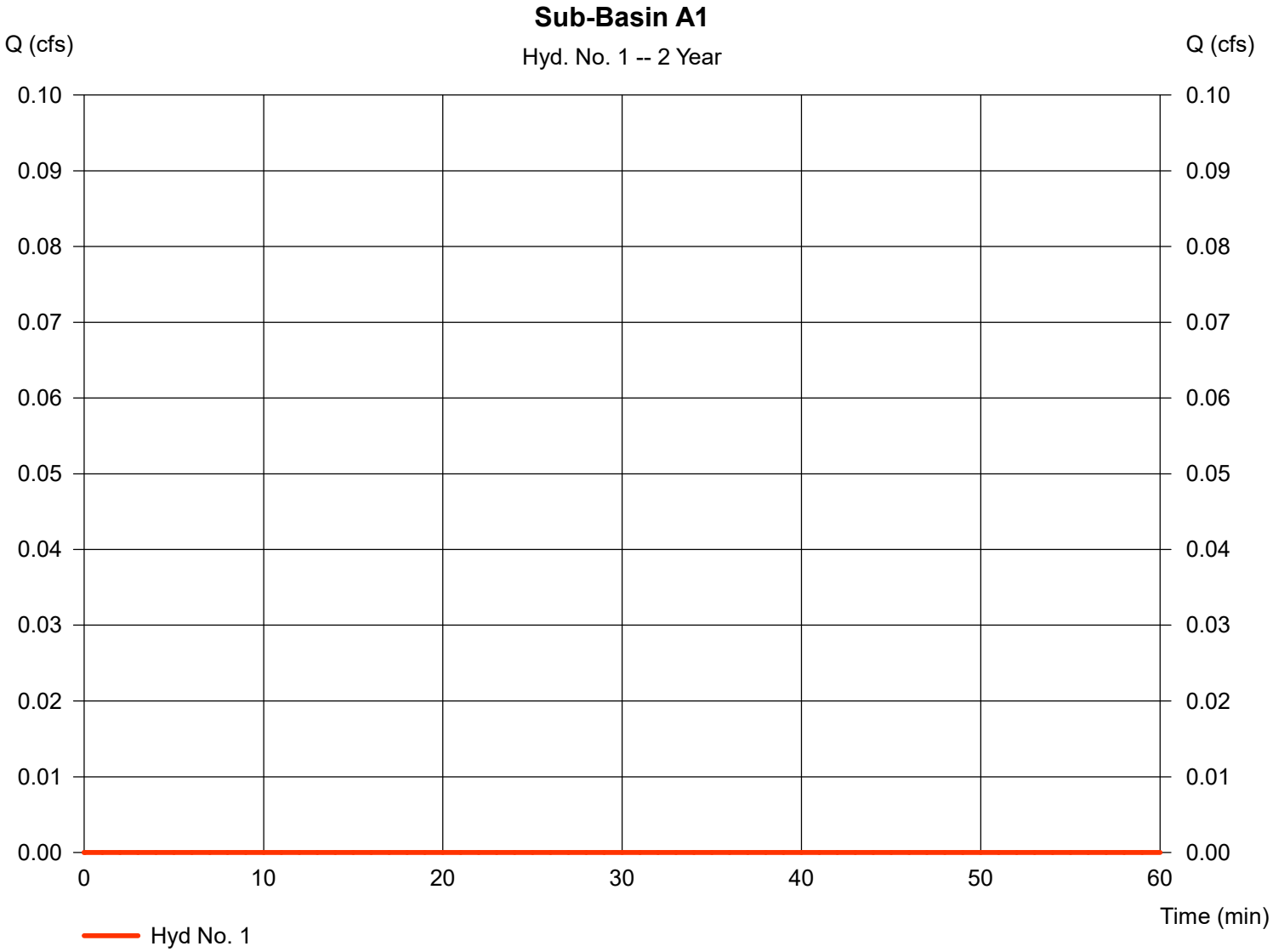
# Hydrograph Report



## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



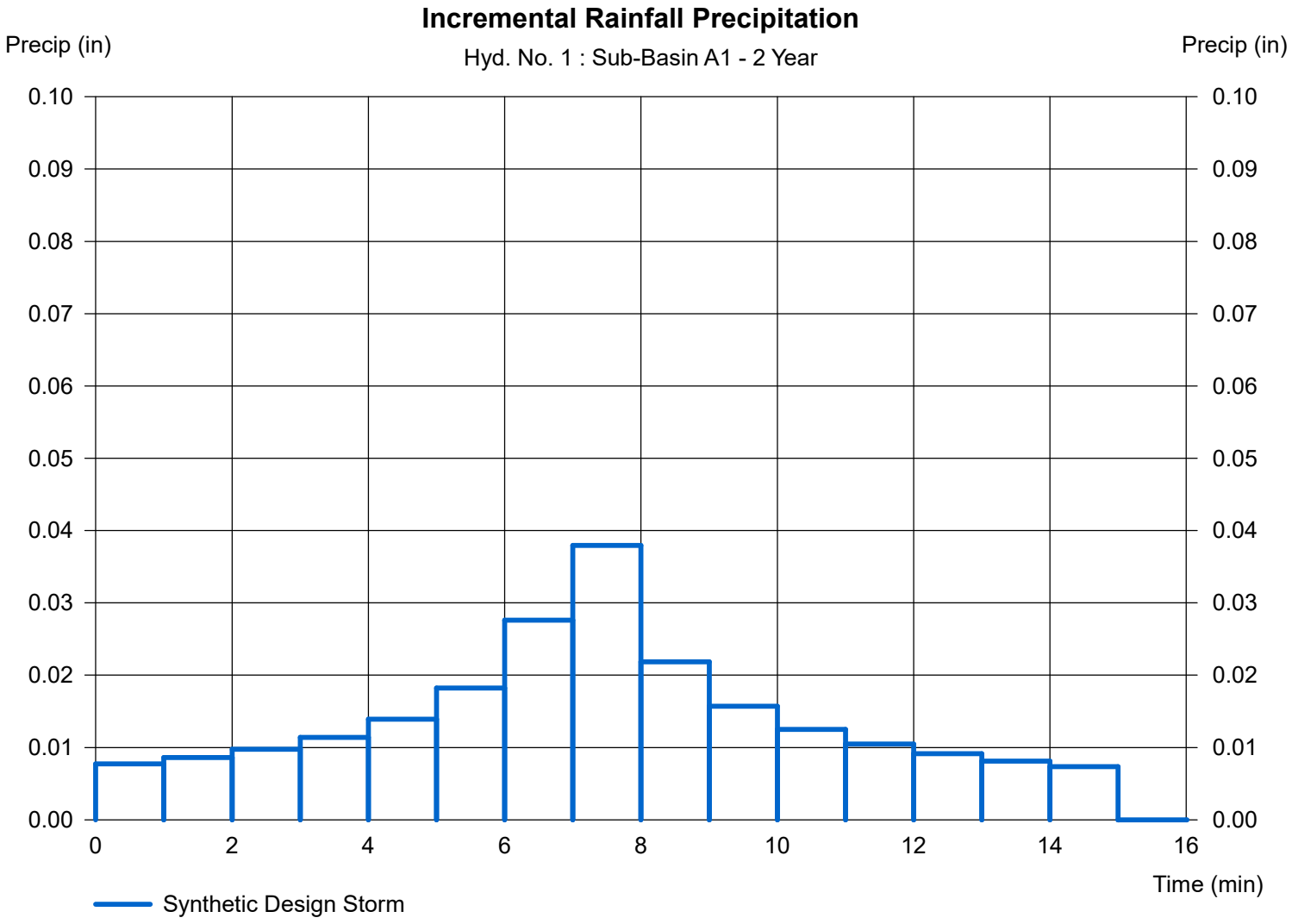
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



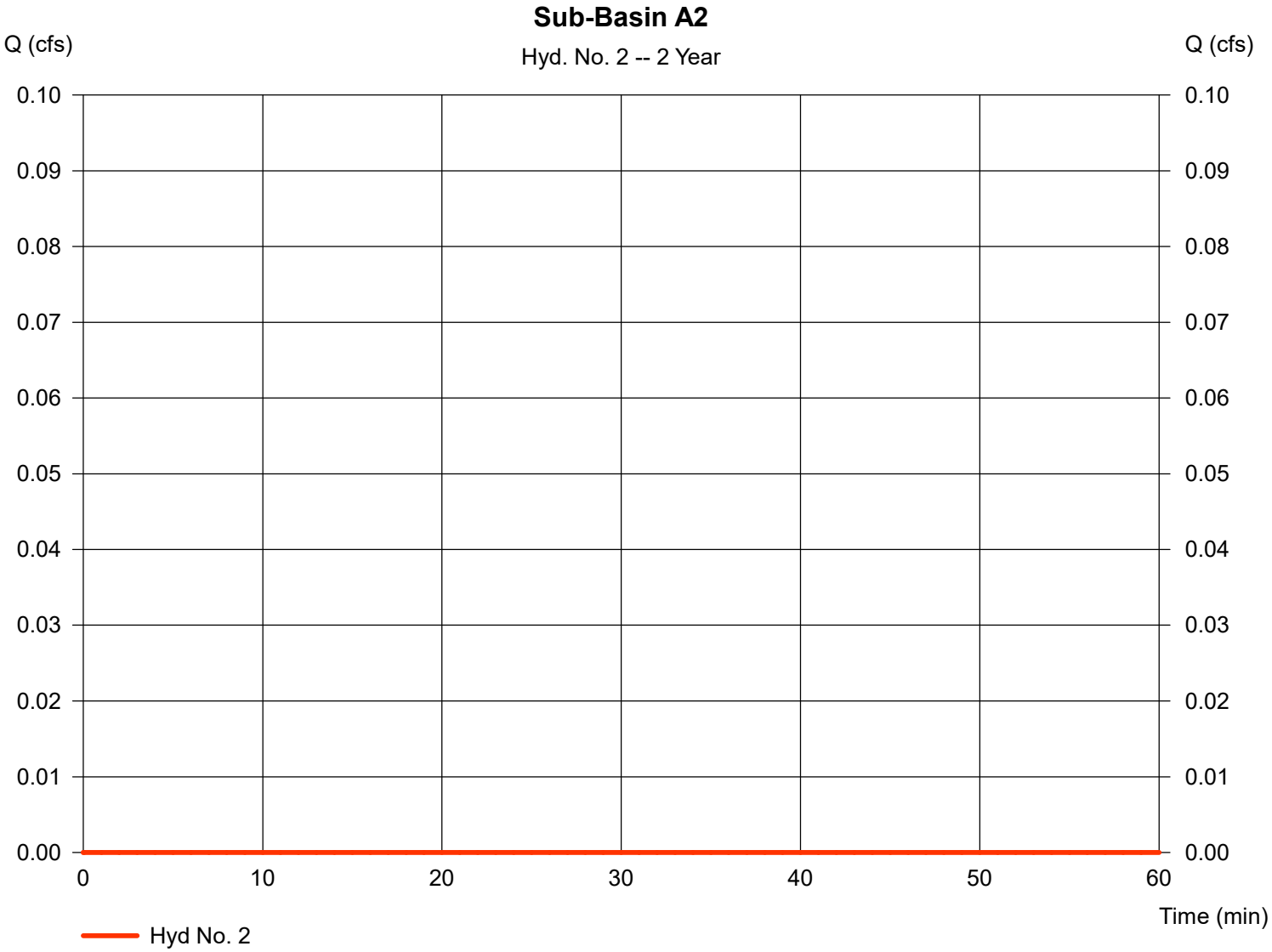
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



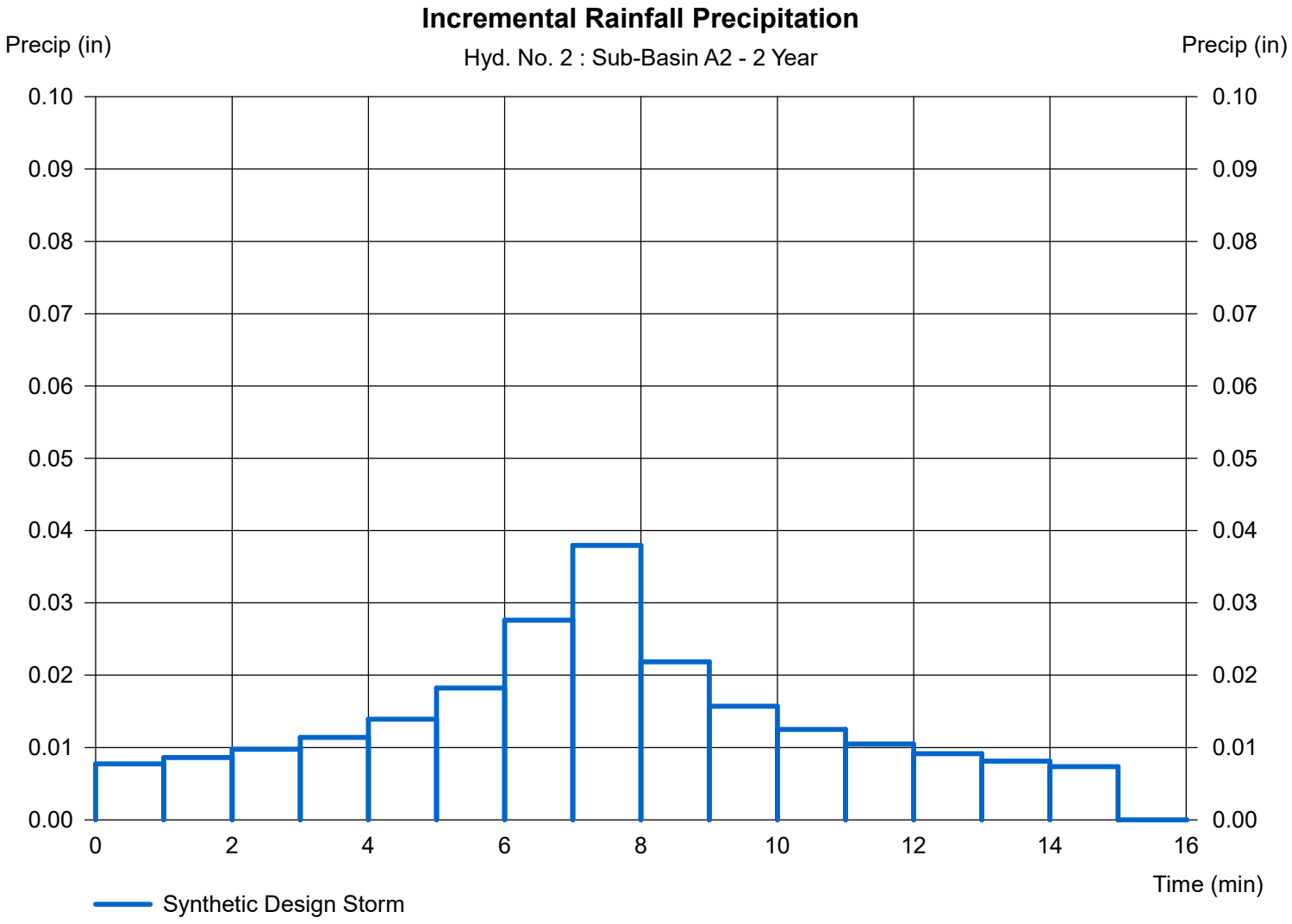
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



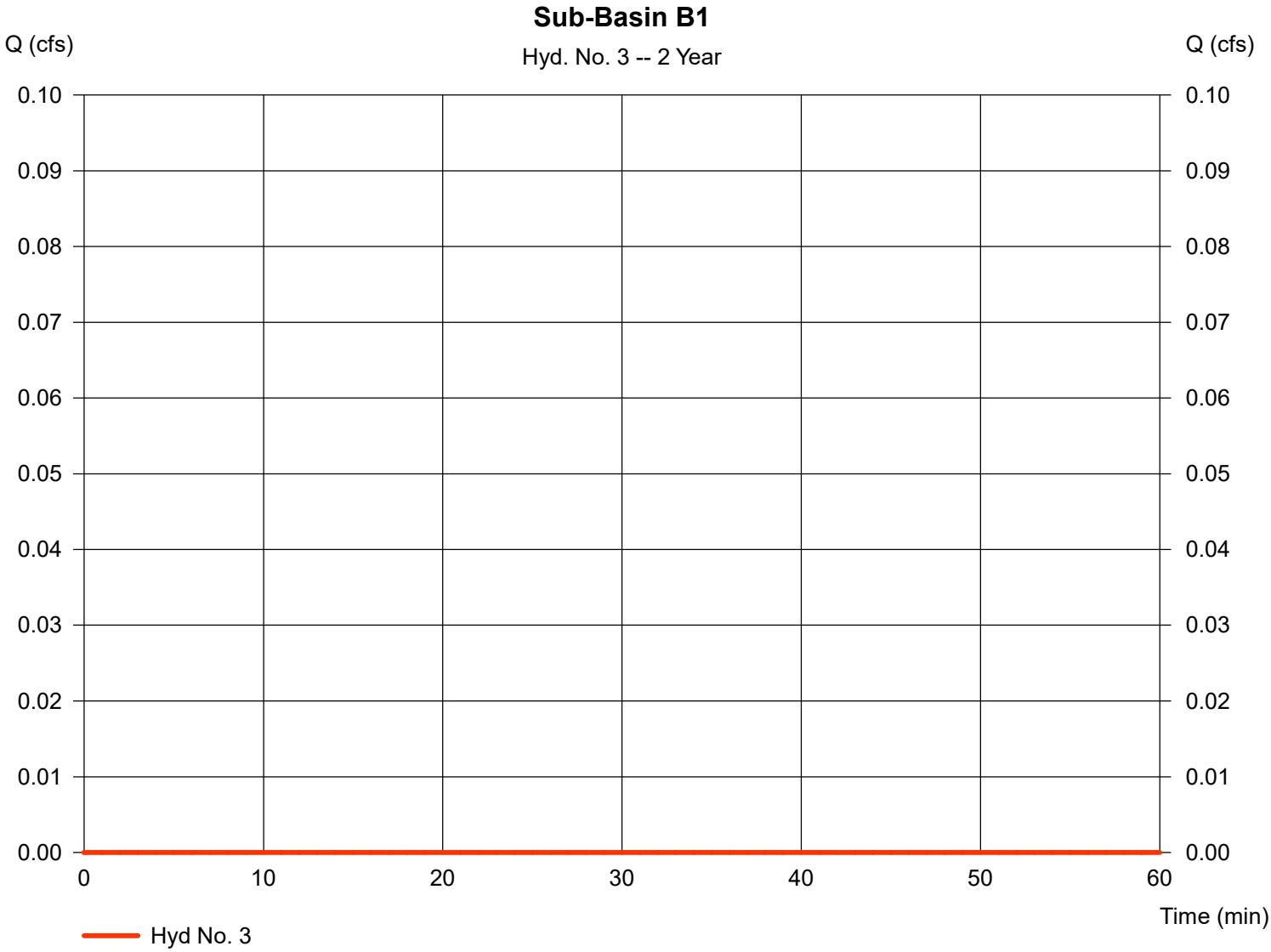
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



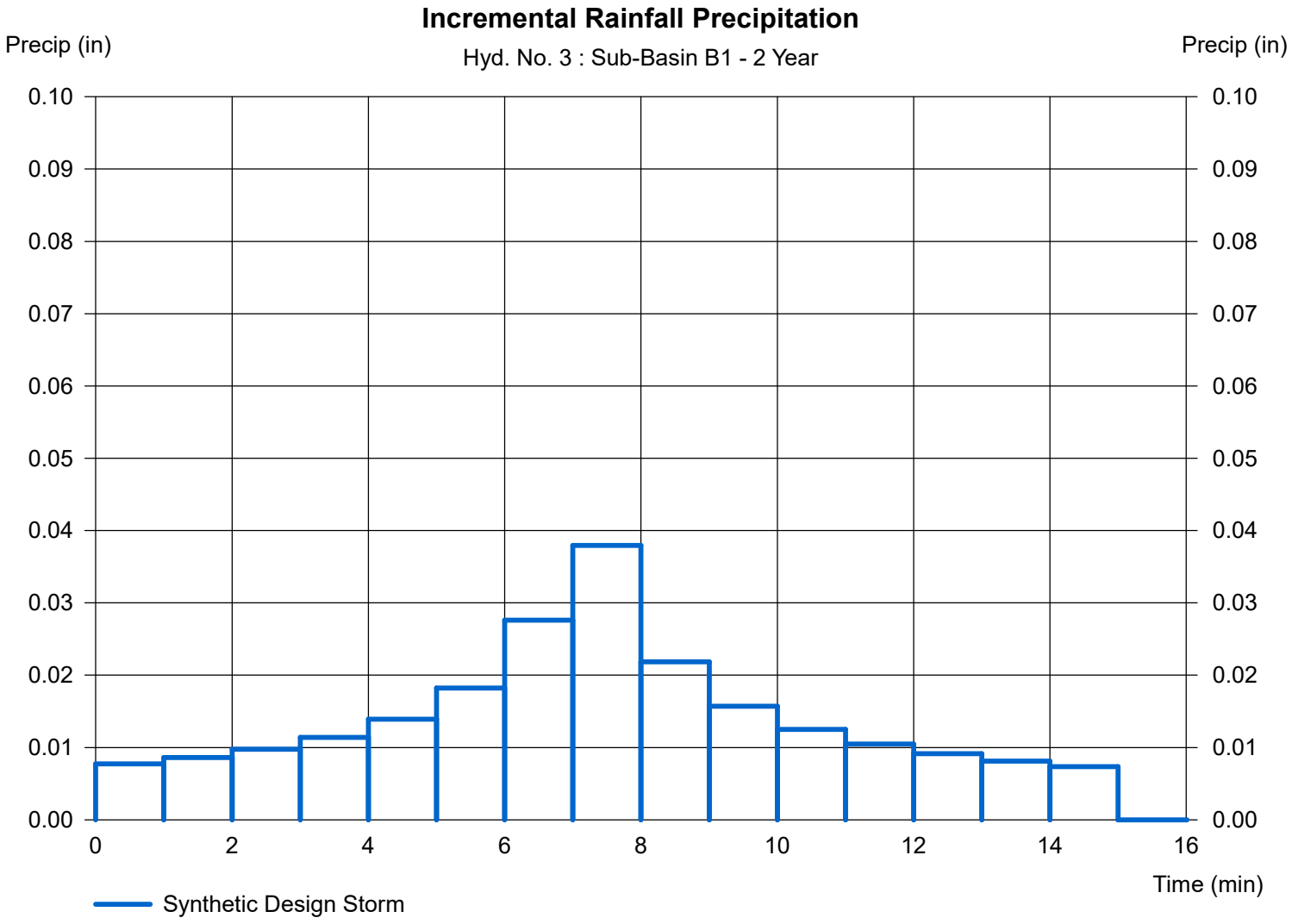
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



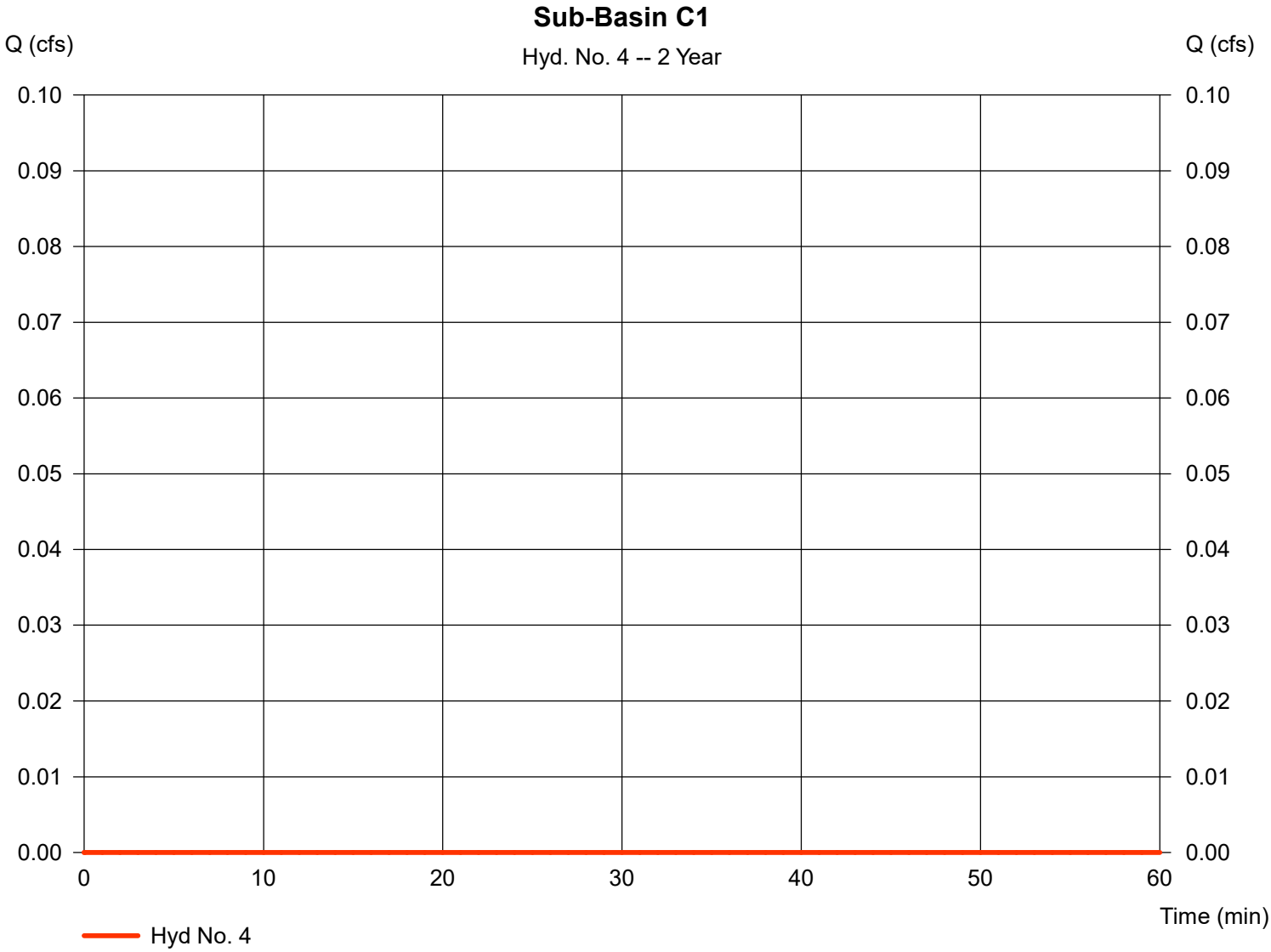
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.22 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



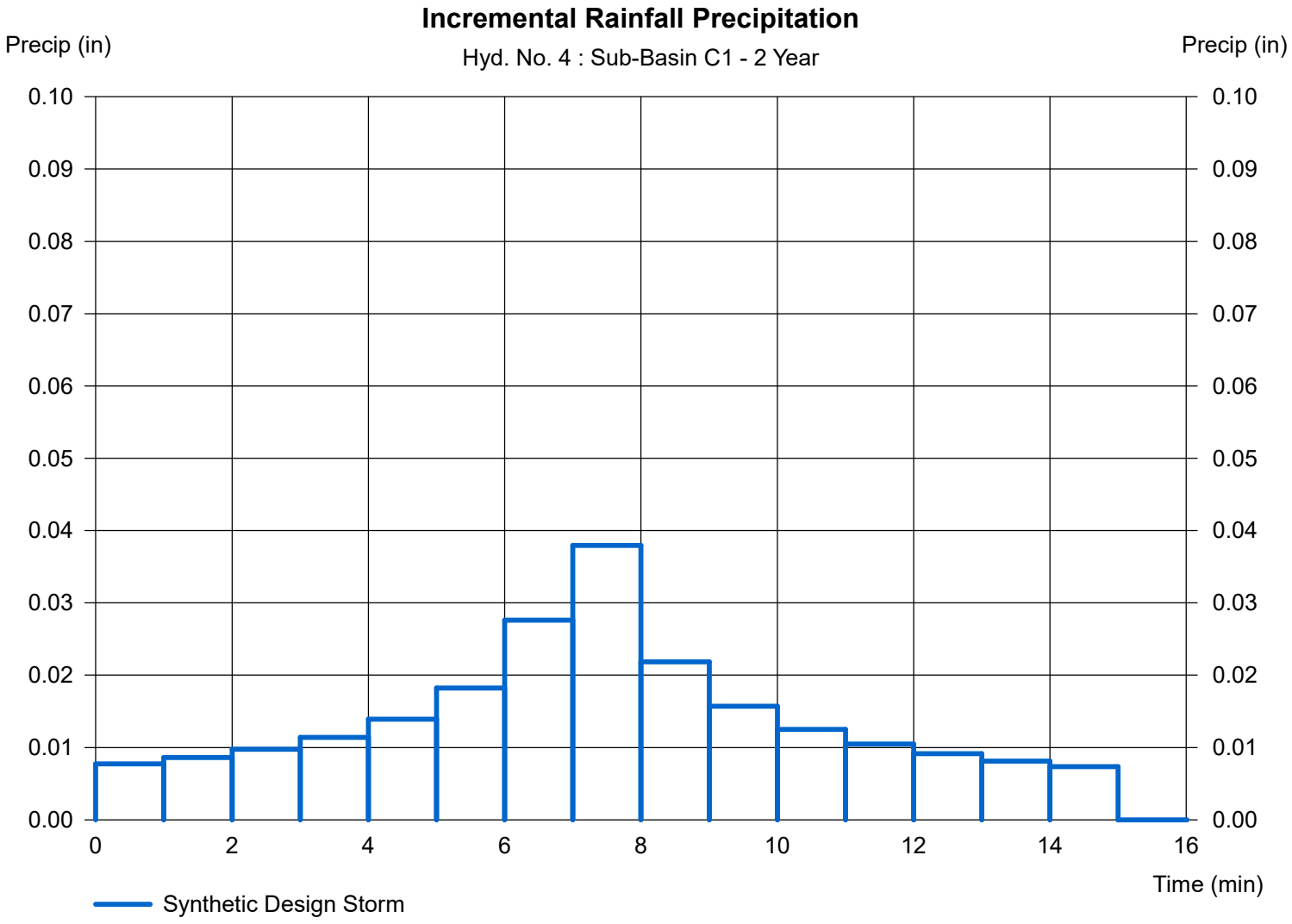
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.2204 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



# Hydrograph Report

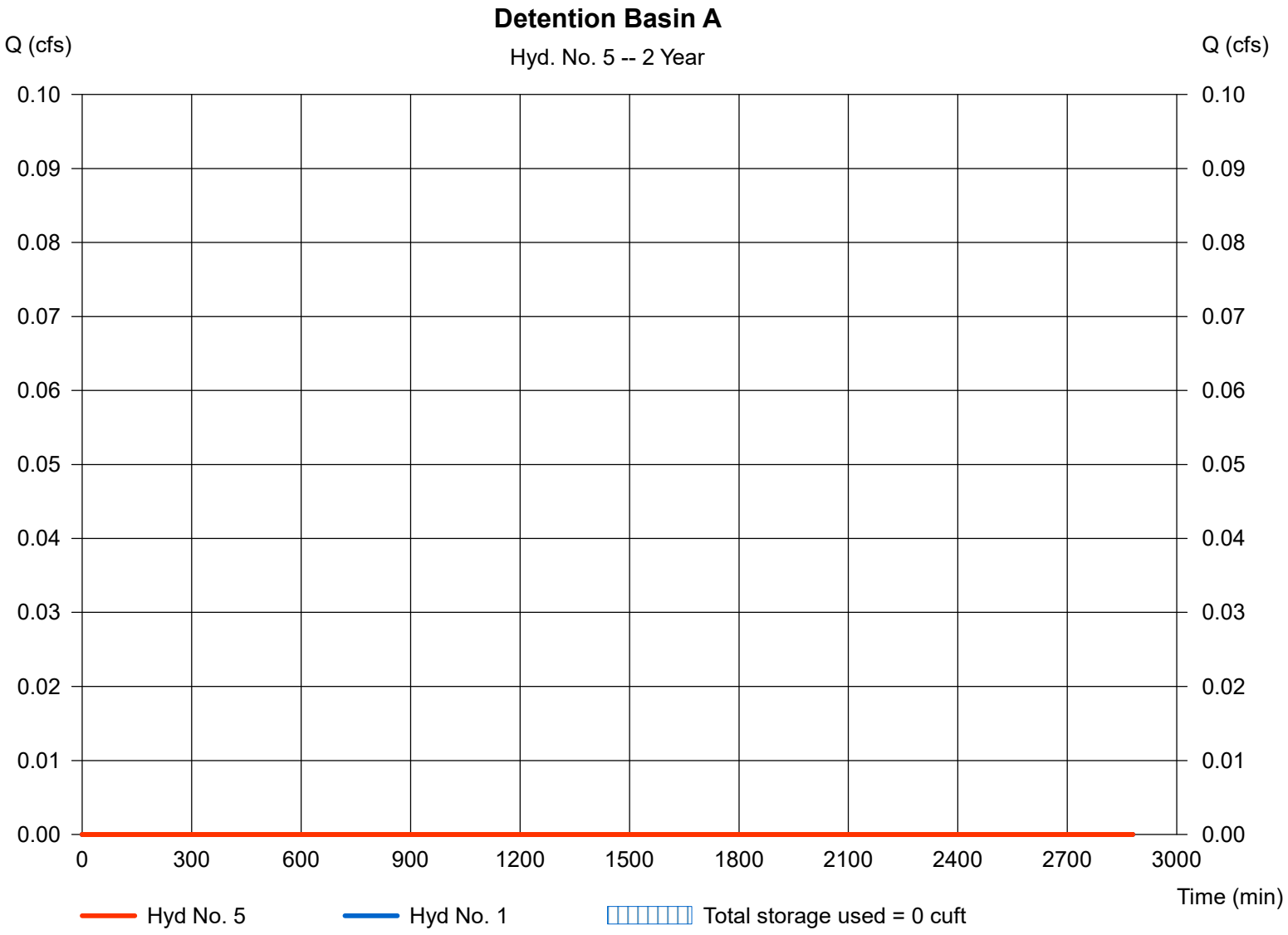
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

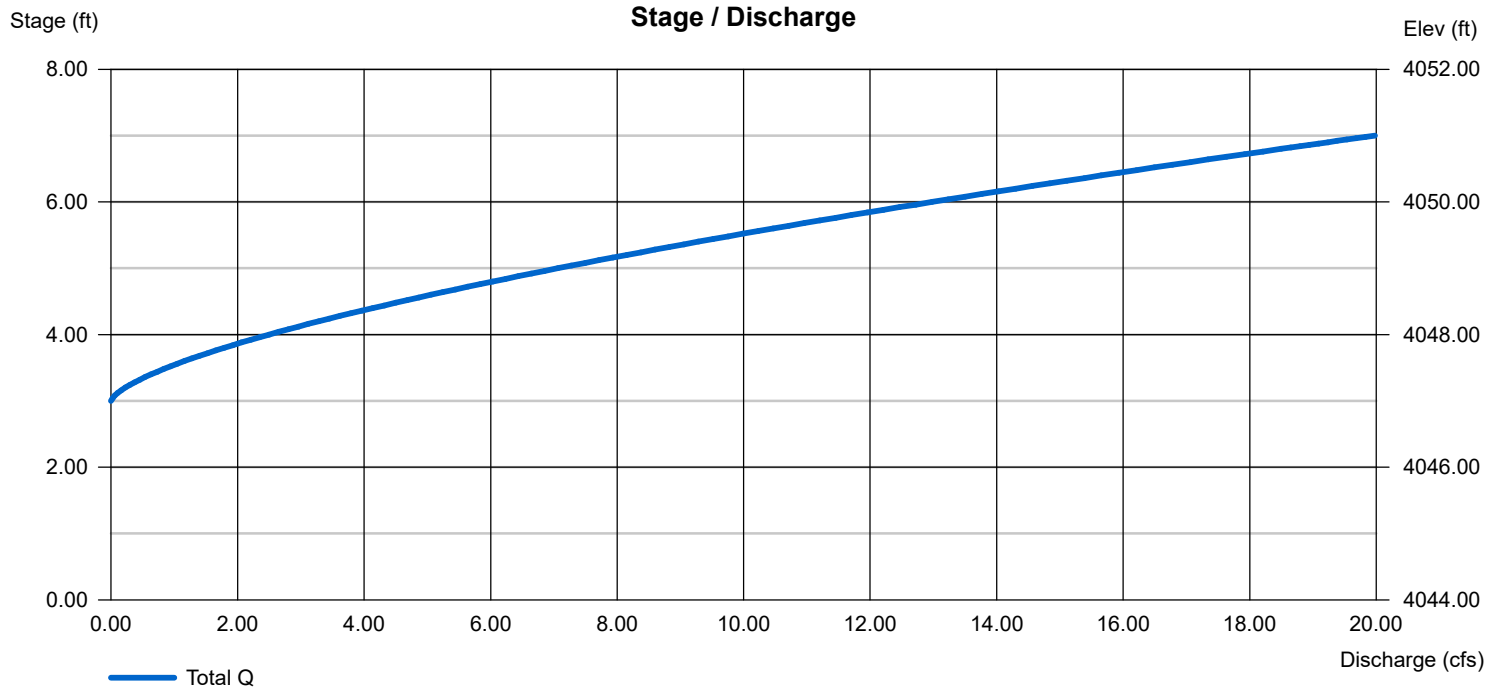
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



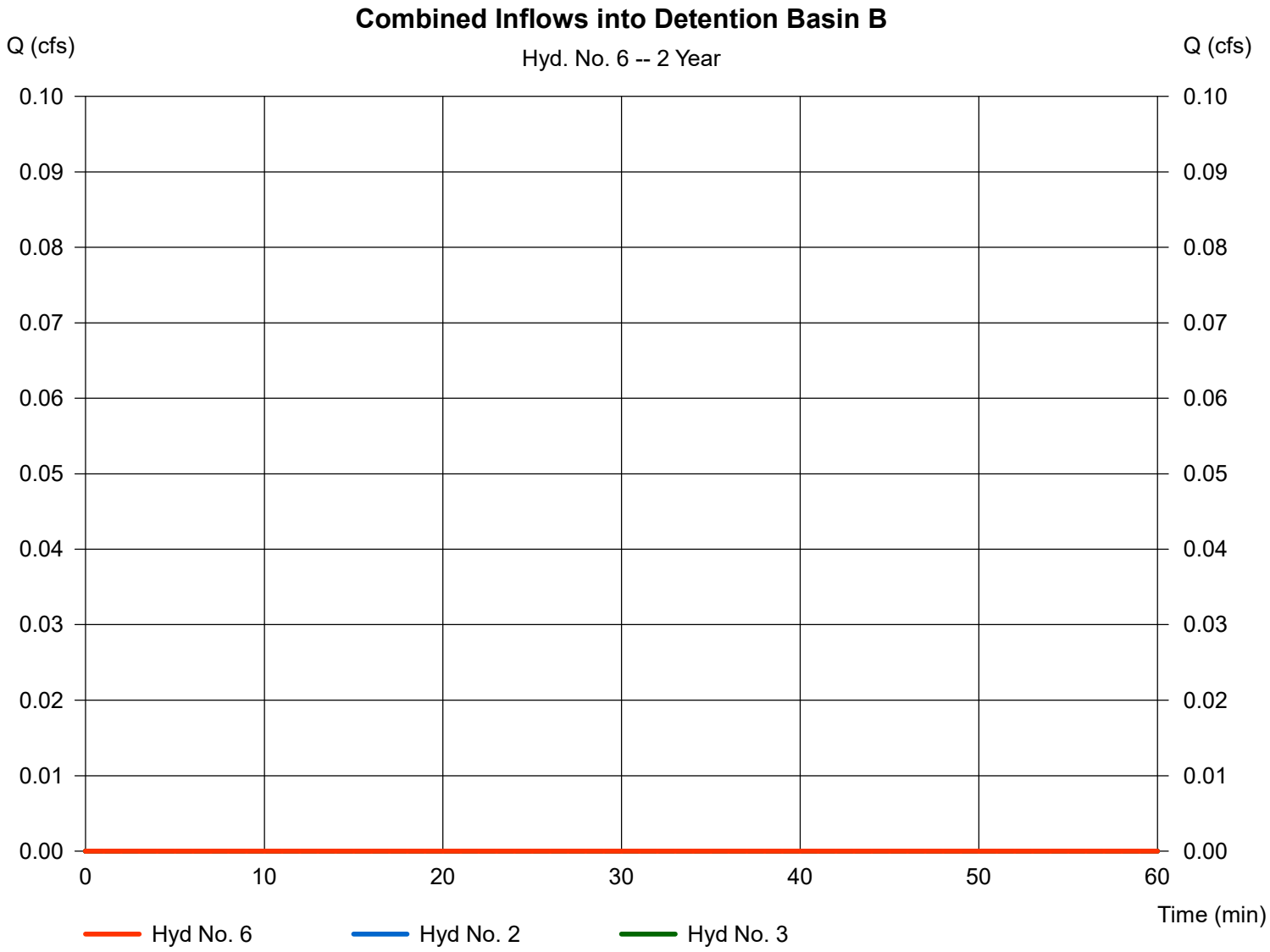
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

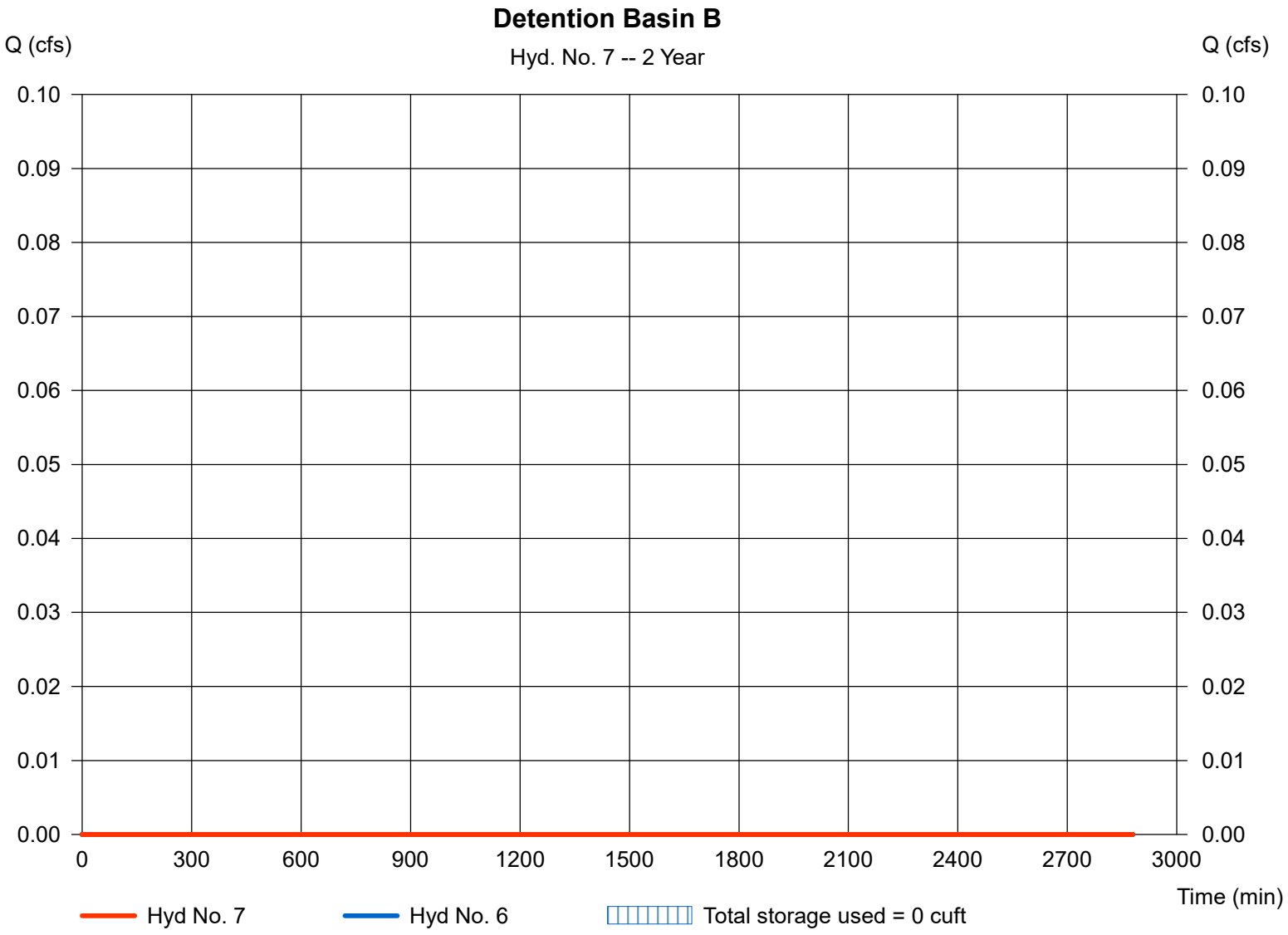
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

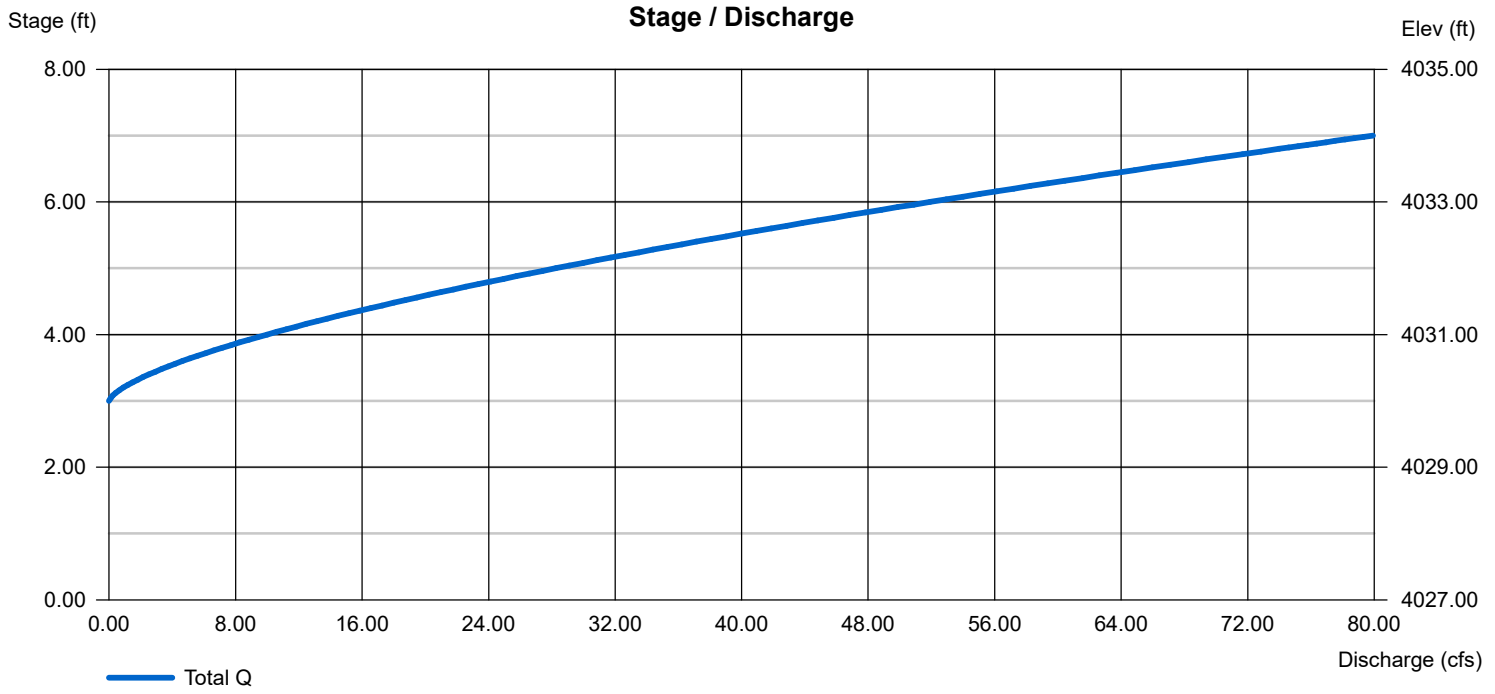
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

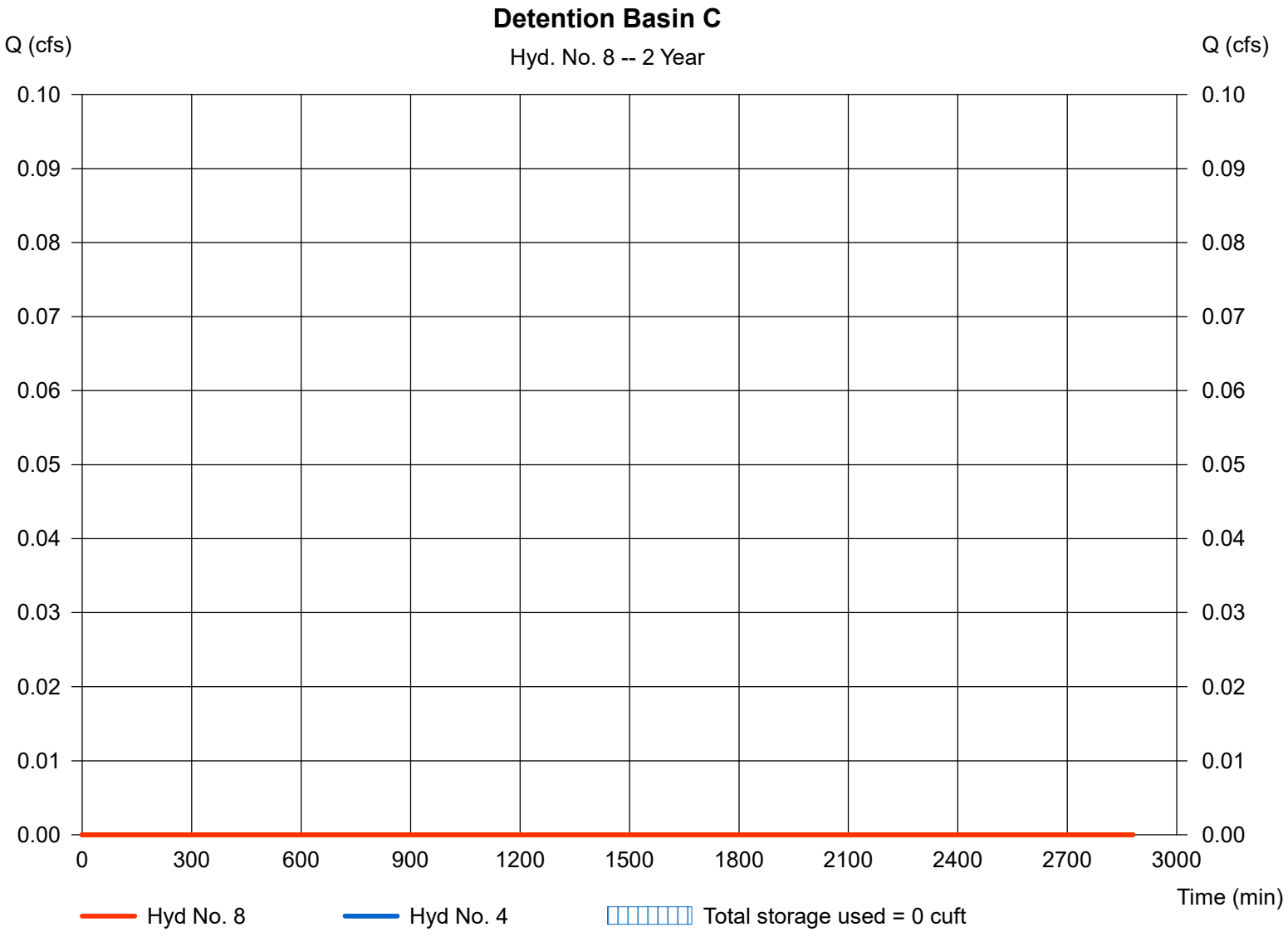
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

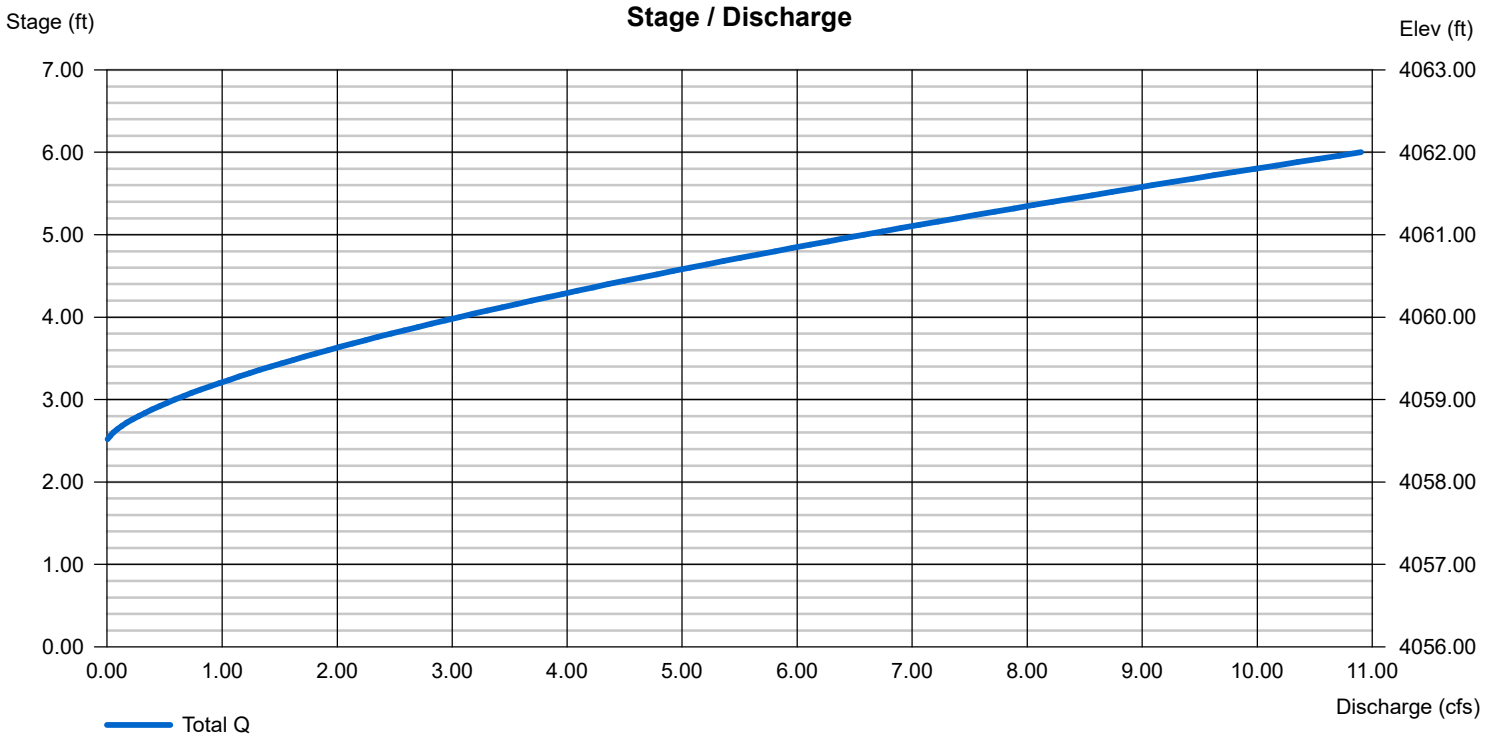
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



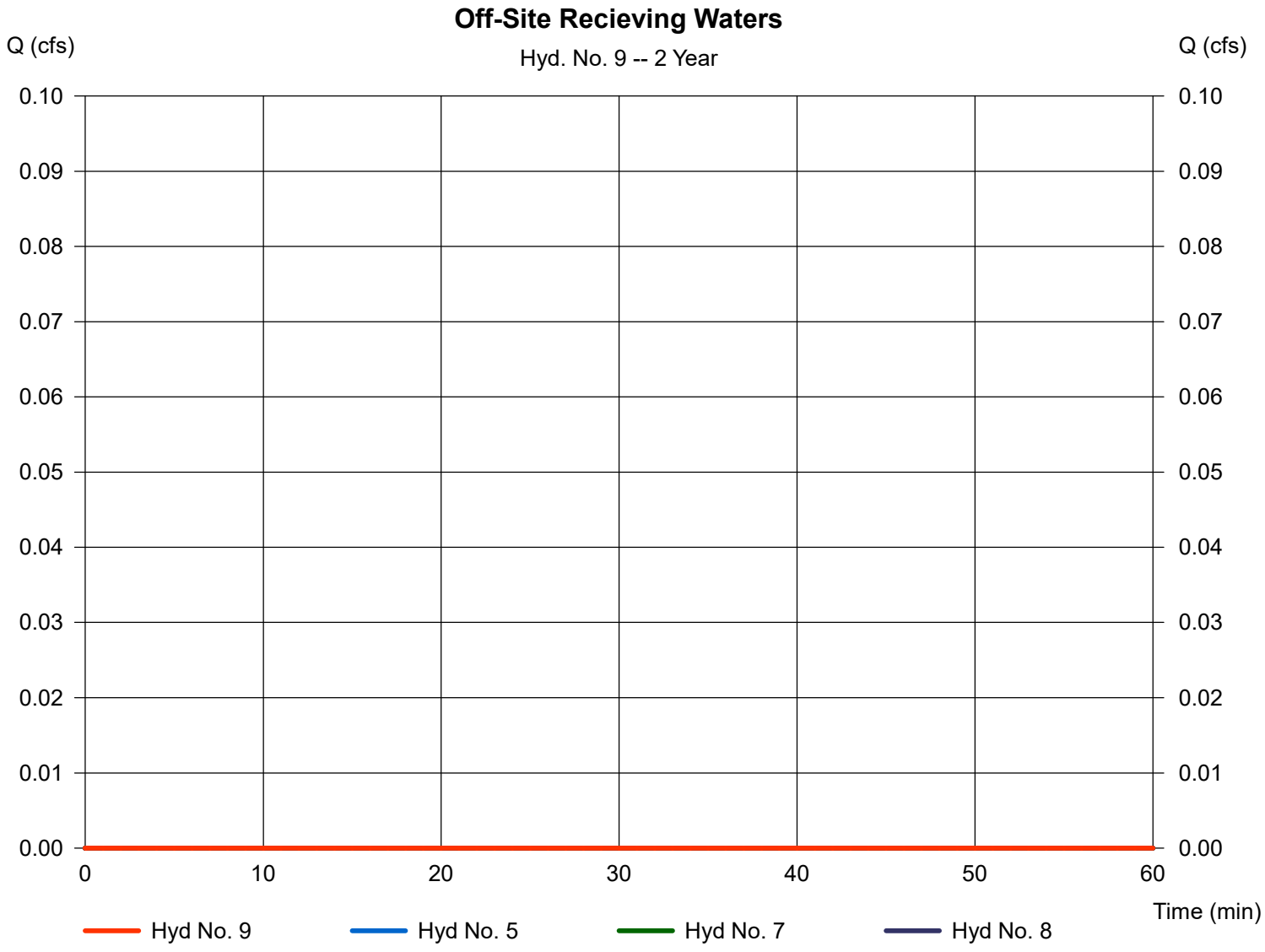
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

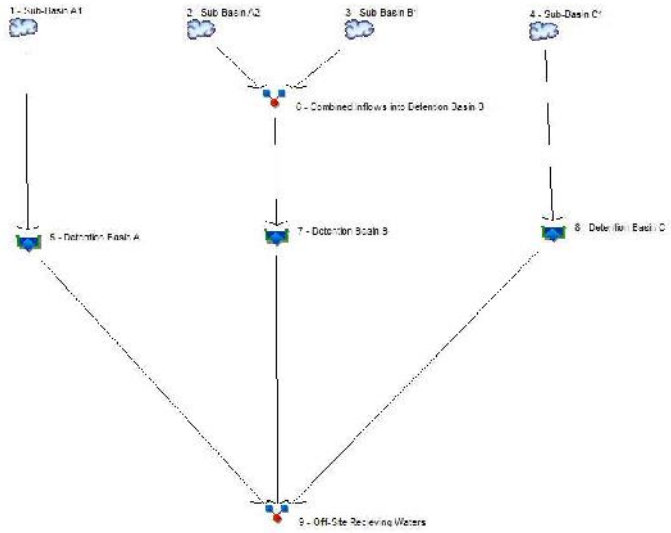
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.35 | 0.45 | 0.00 | 0.61 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | 0.000 | 0.000 | ------- | 0.000 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

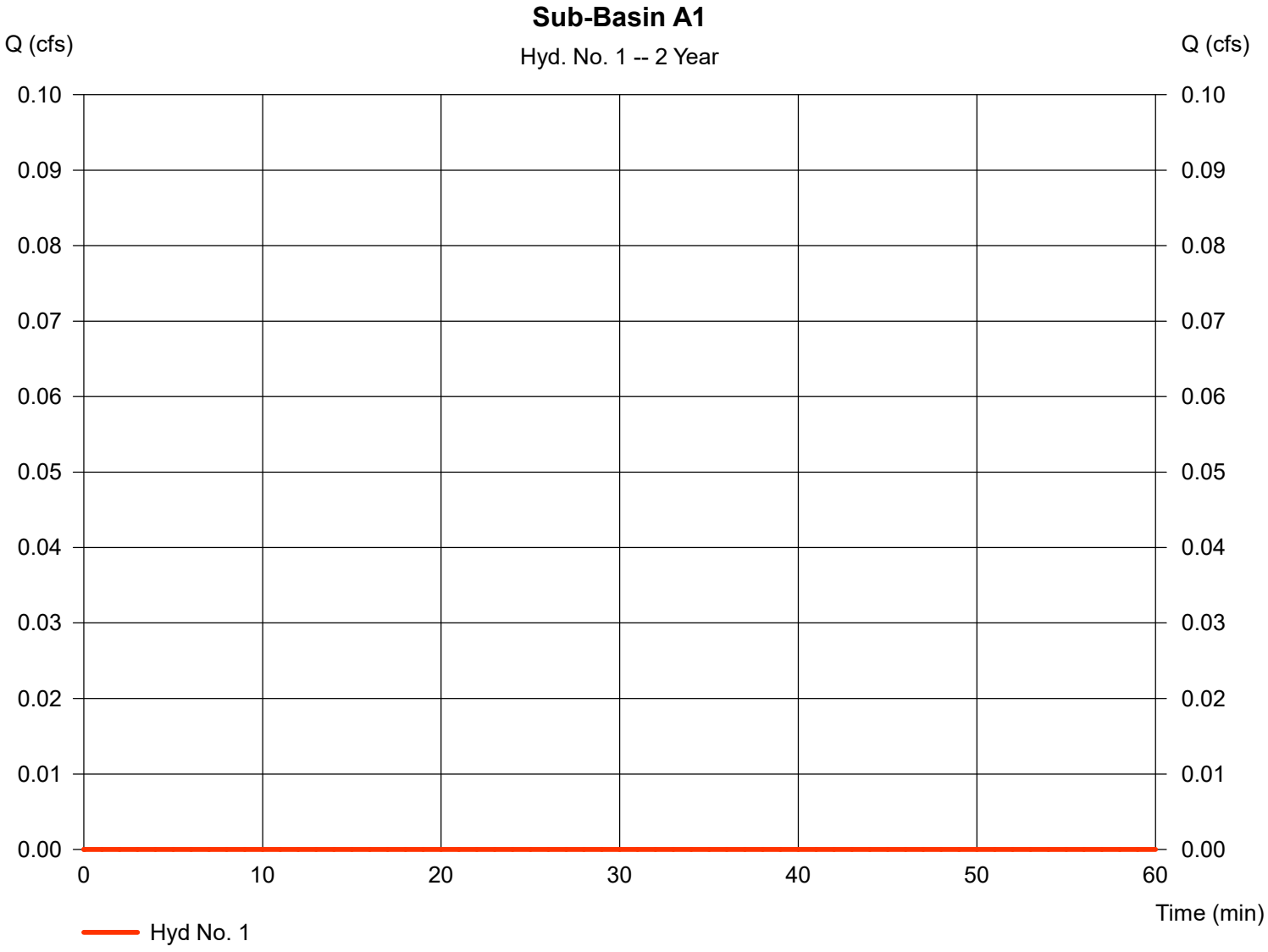
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



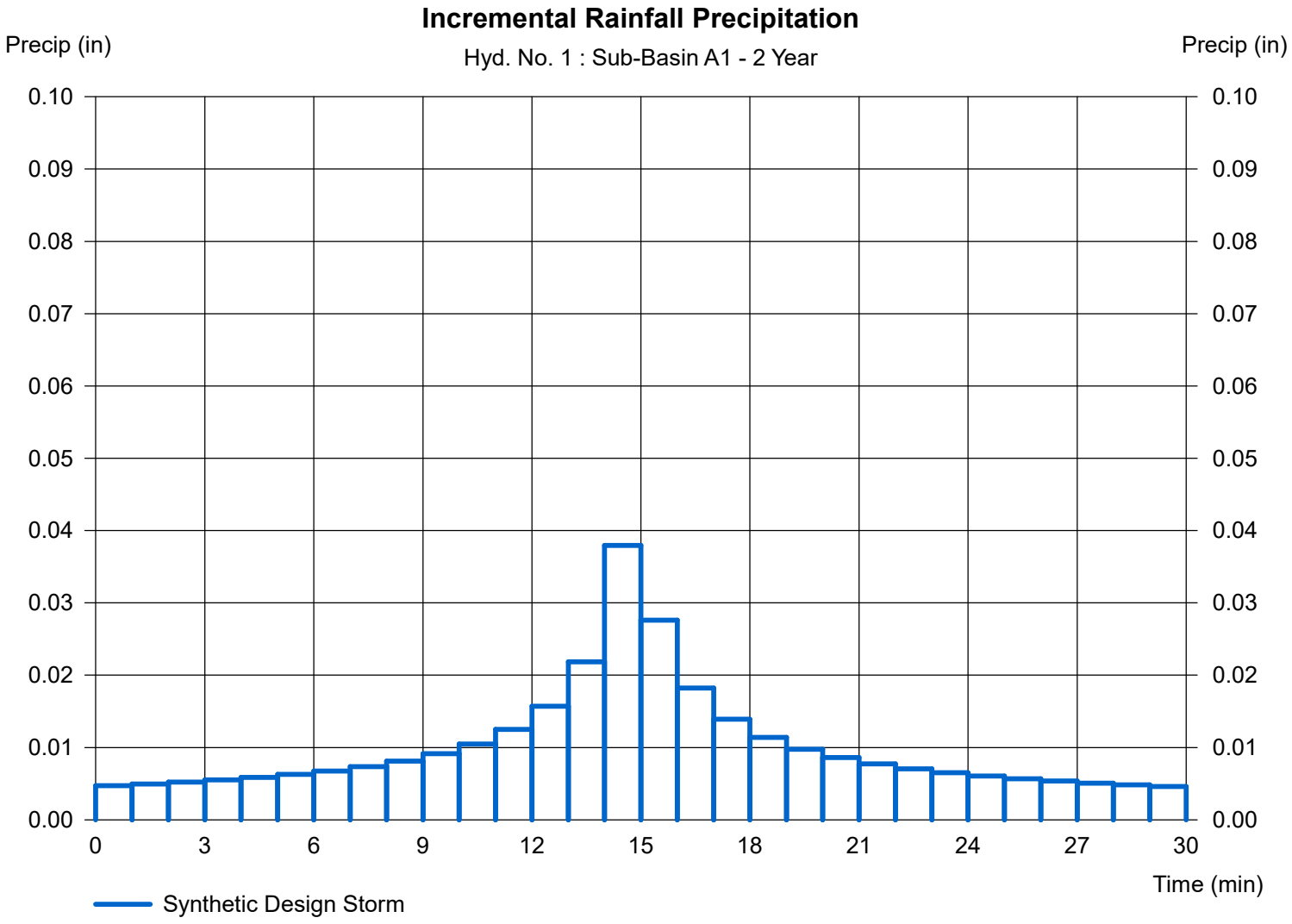
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



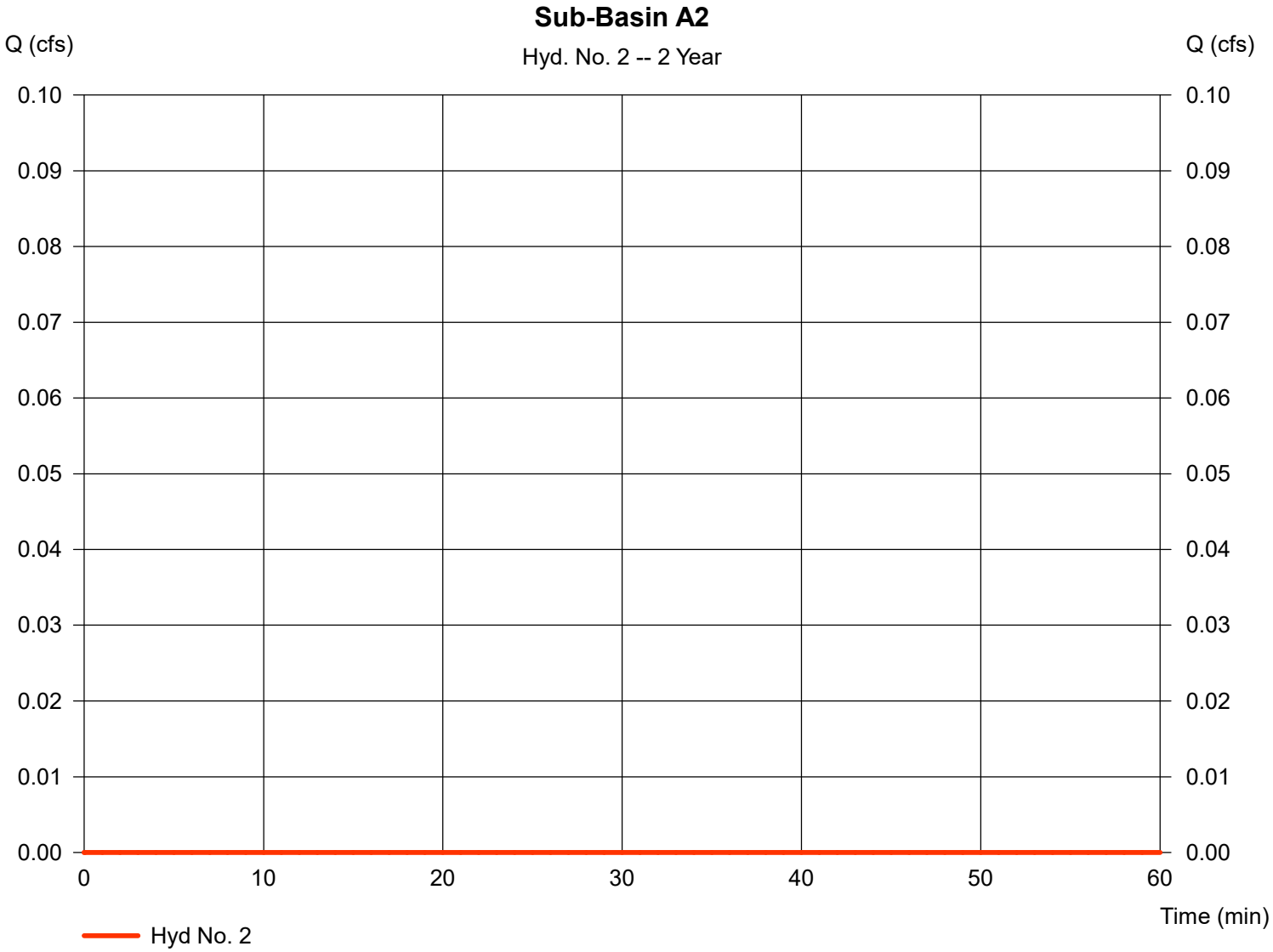
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



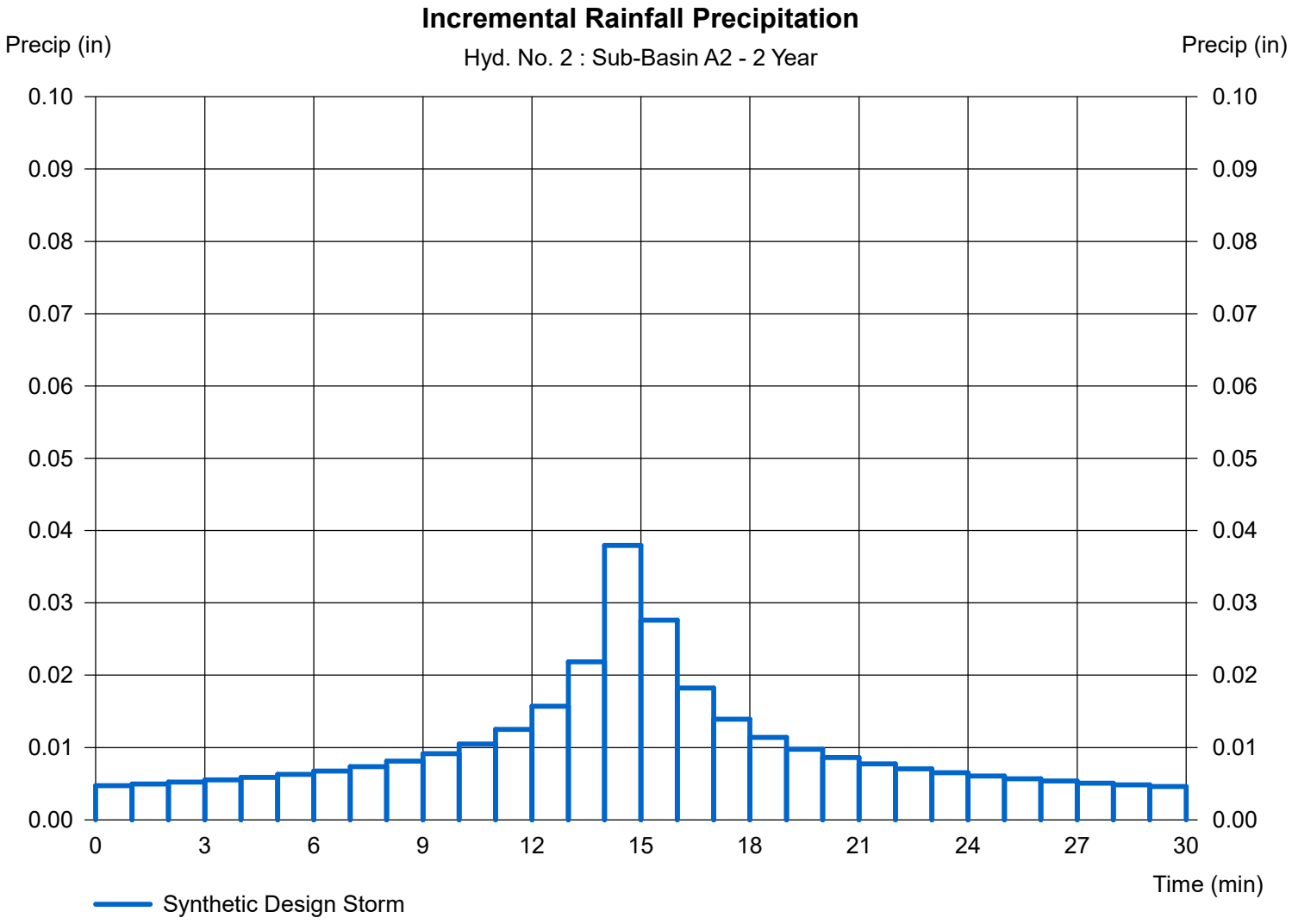
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



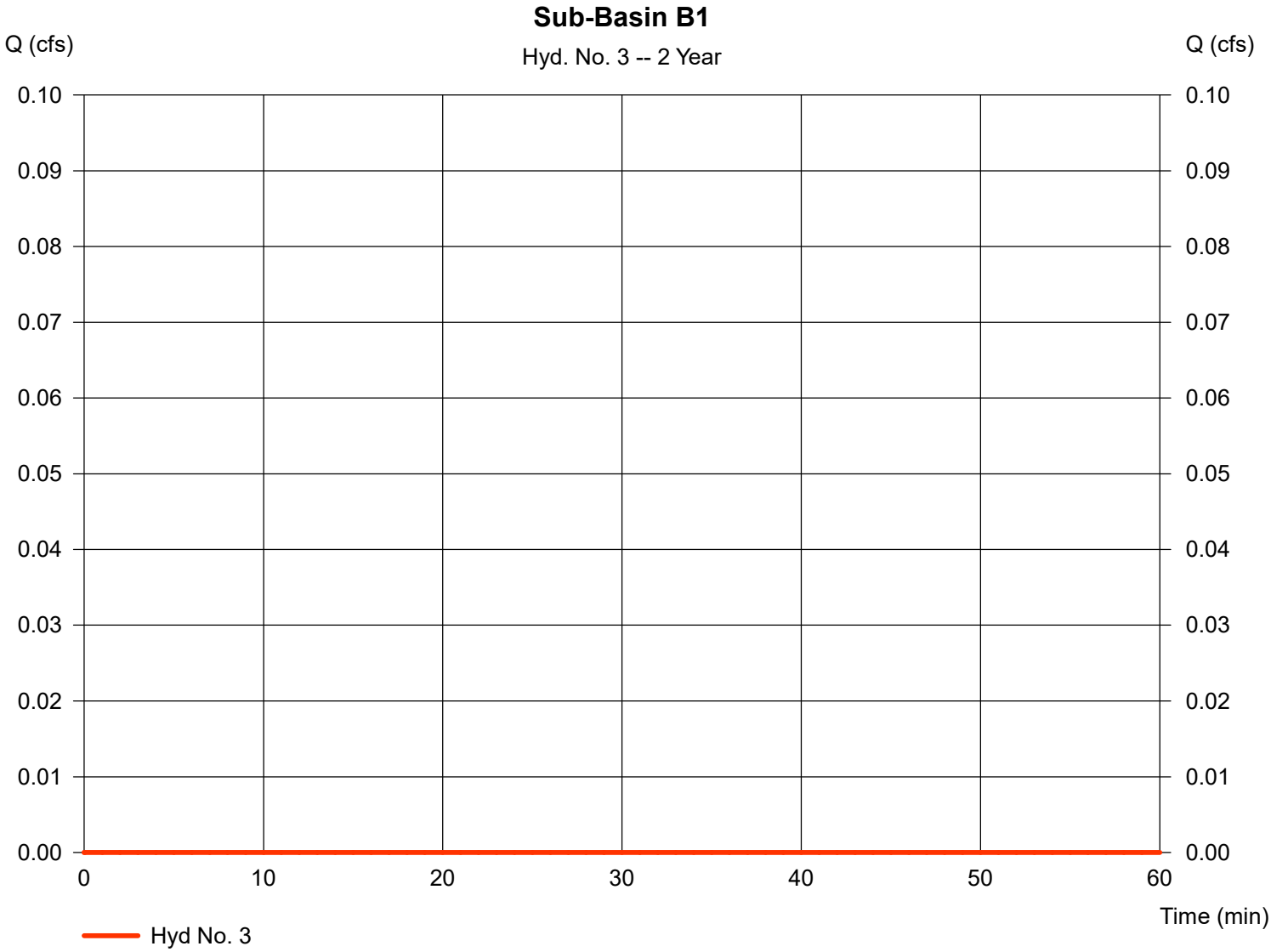
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



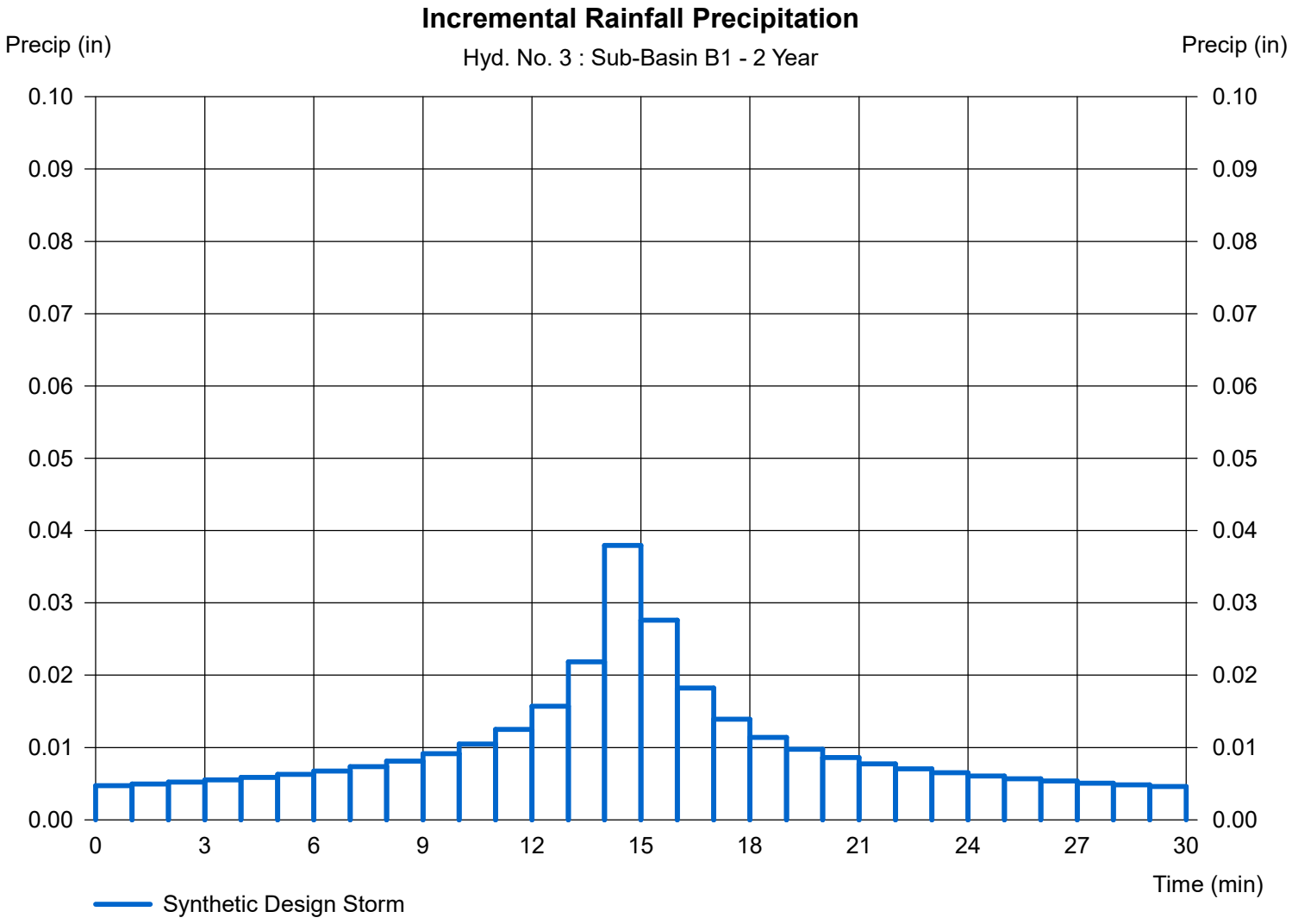
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



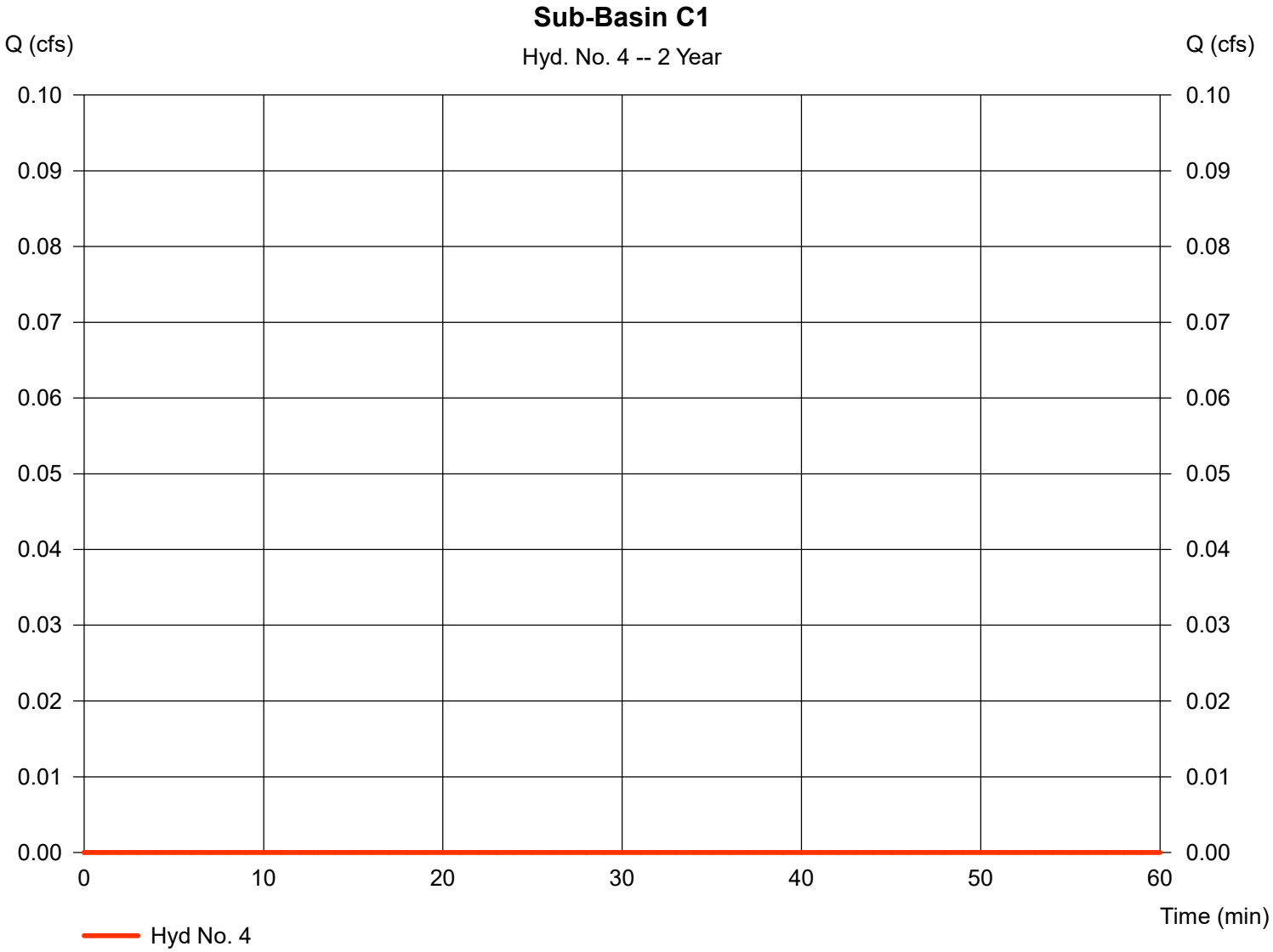
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.31 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



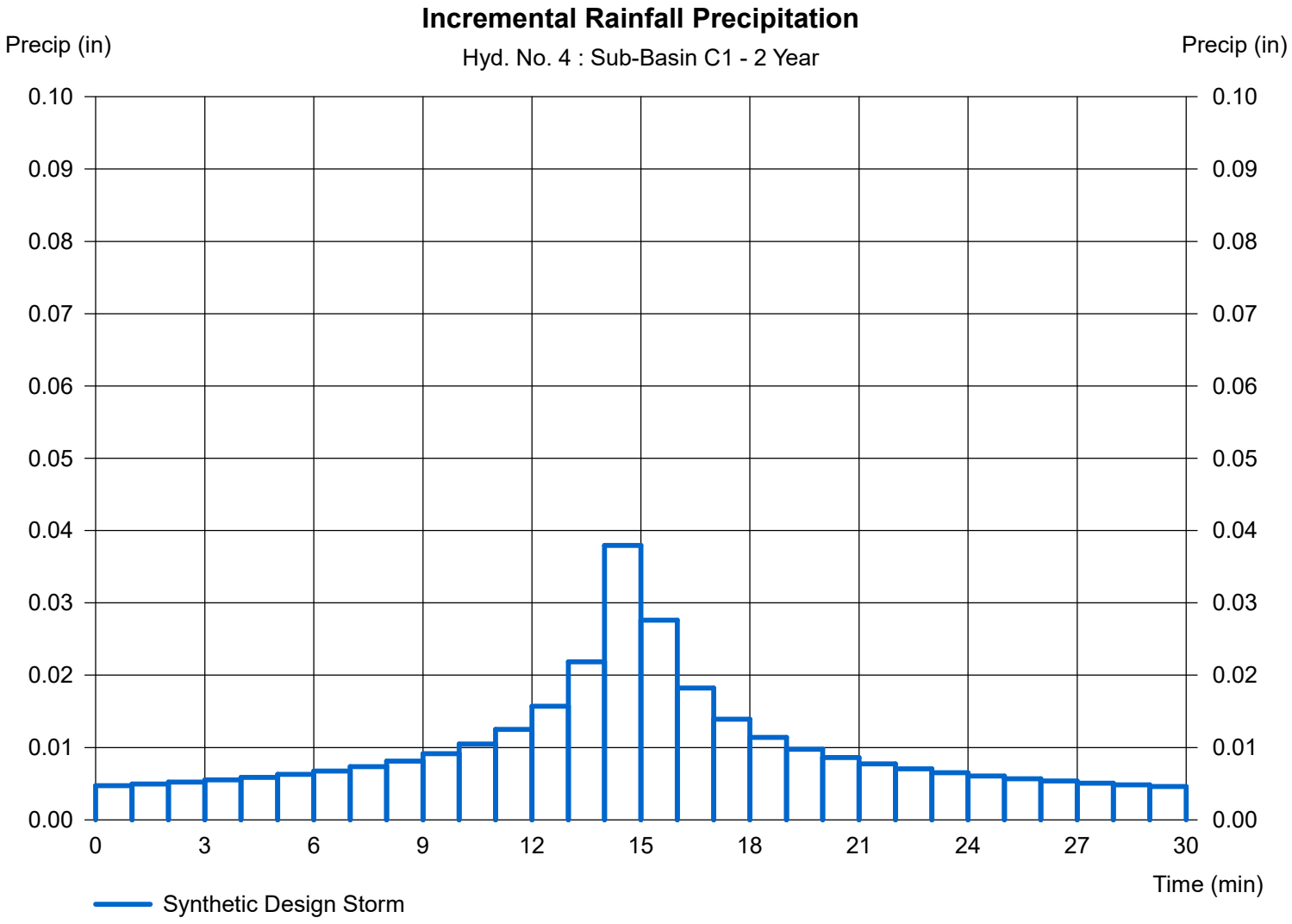
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 1 min |
| Total precip. | = 0.3050 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

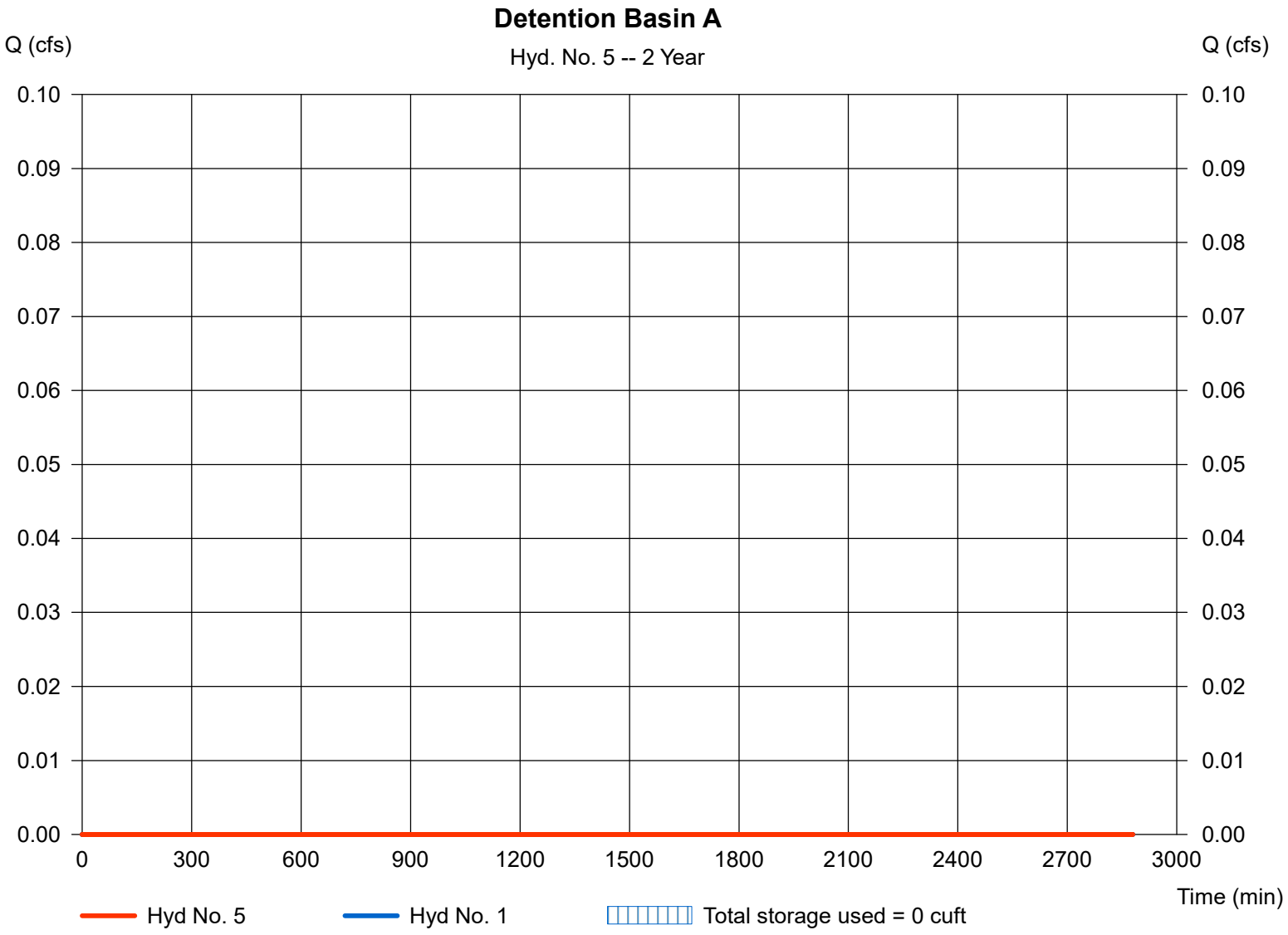
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

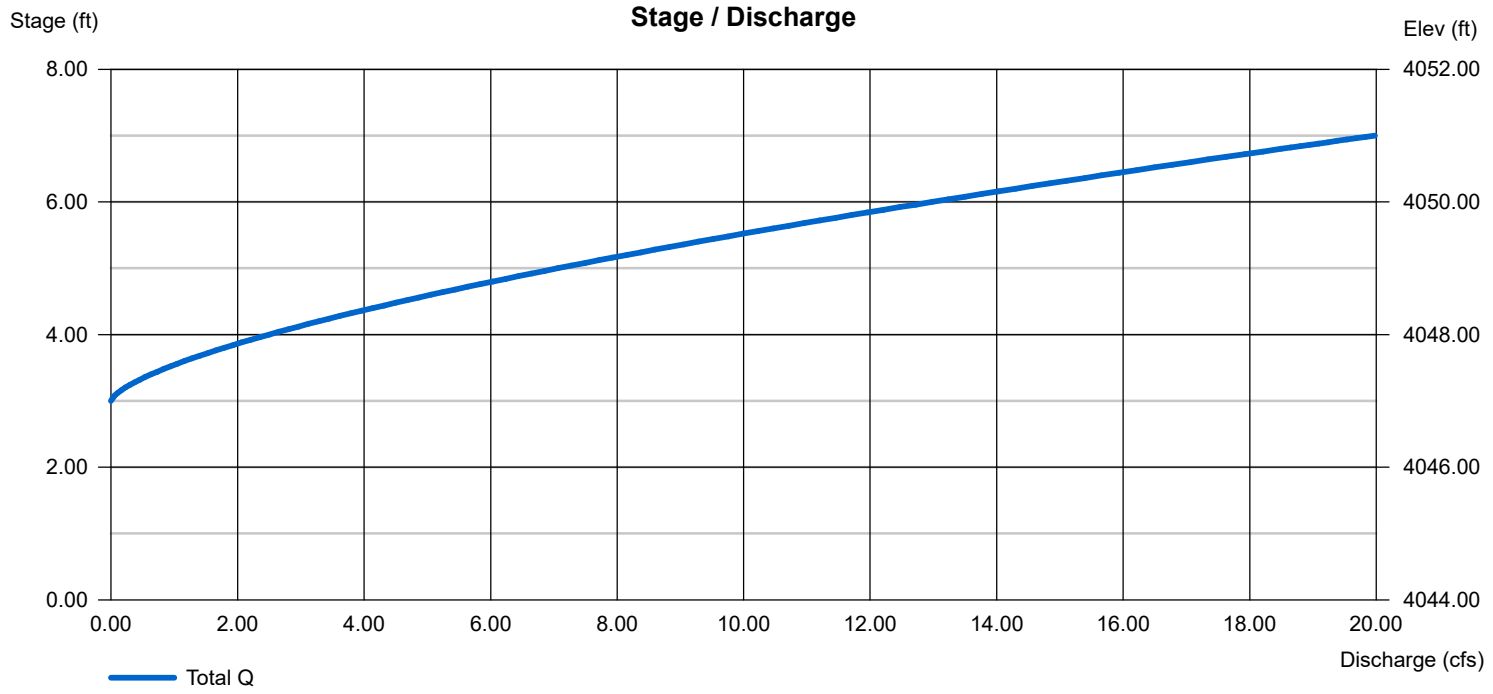
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



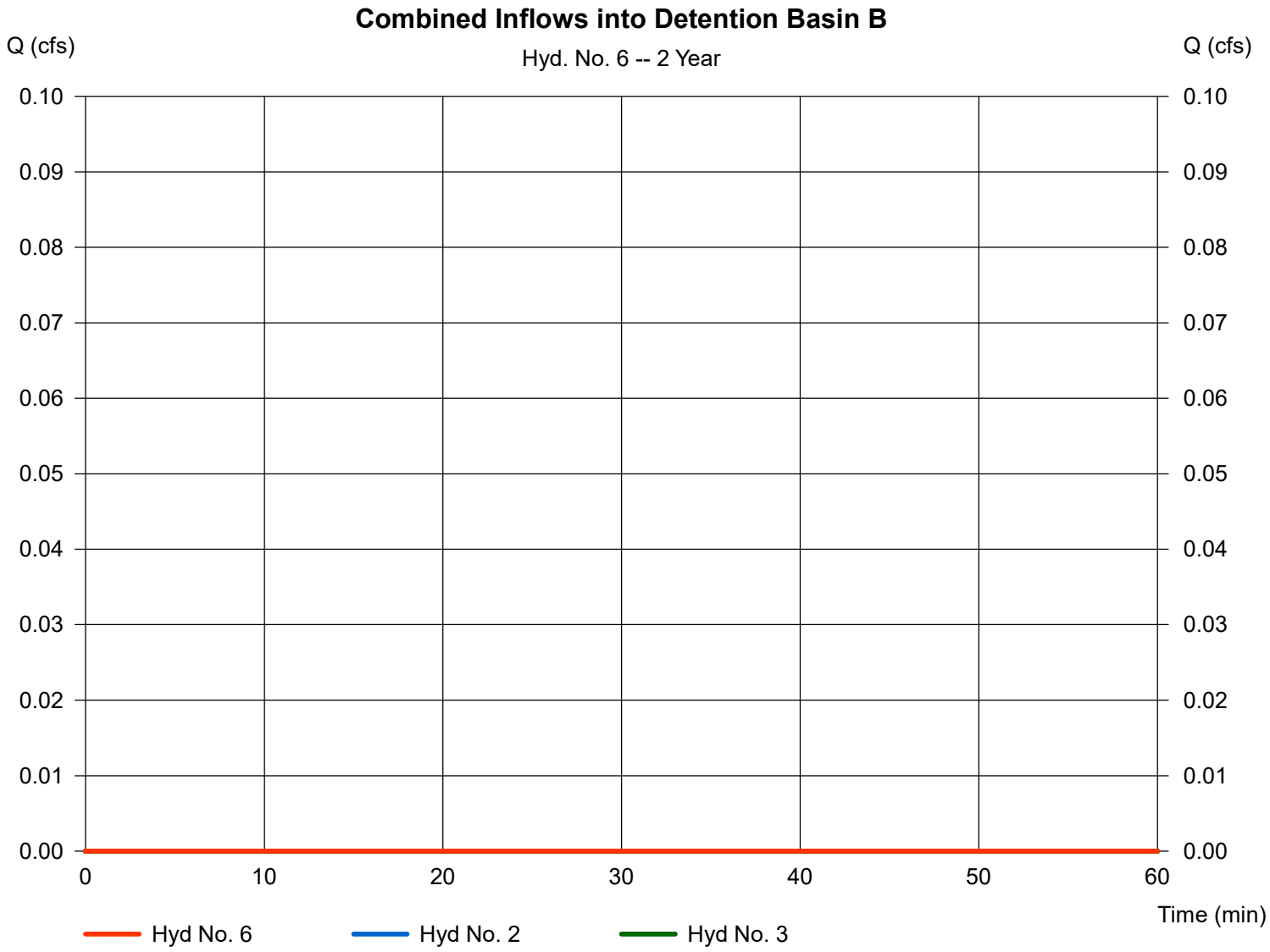
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

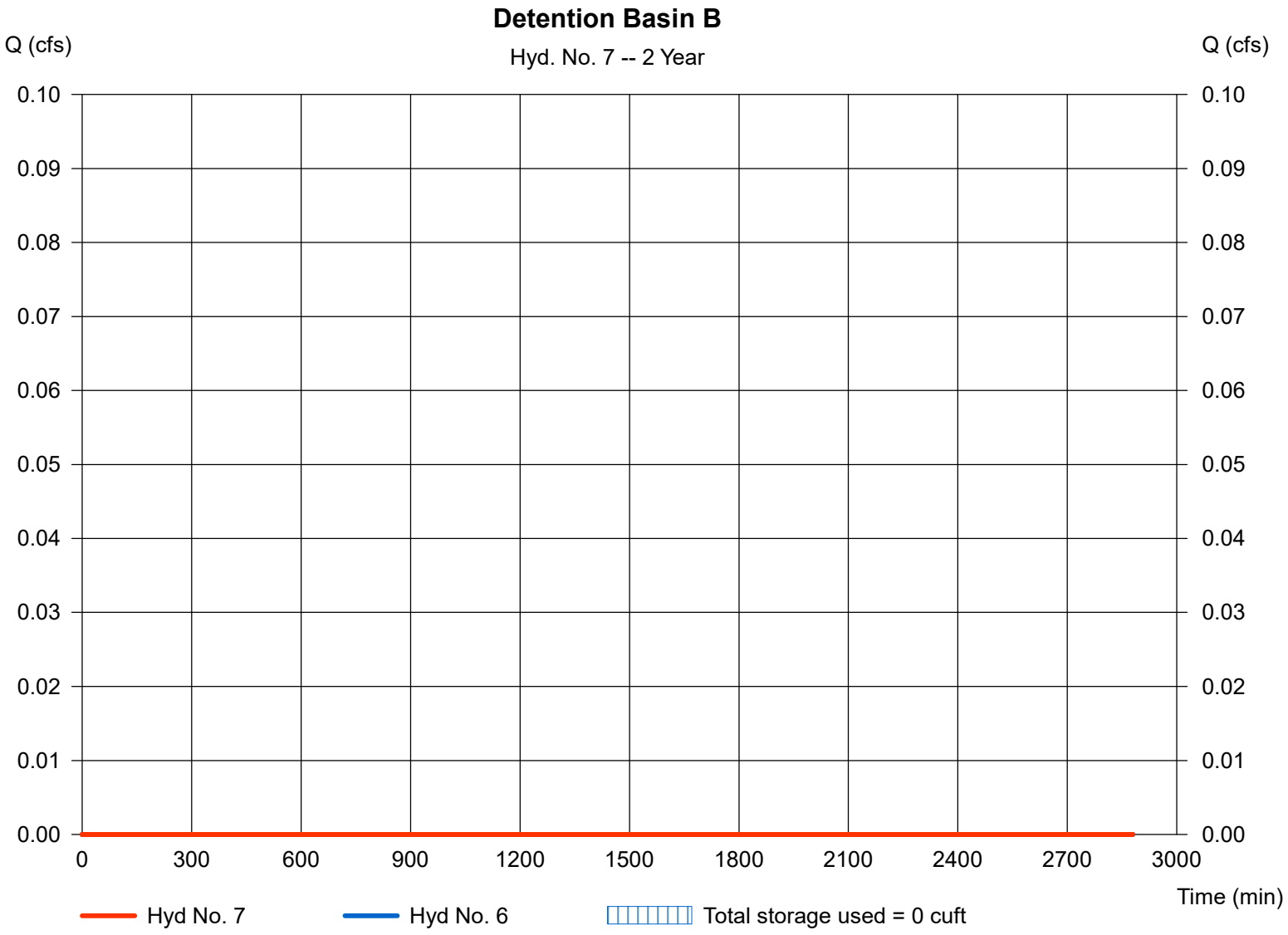
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

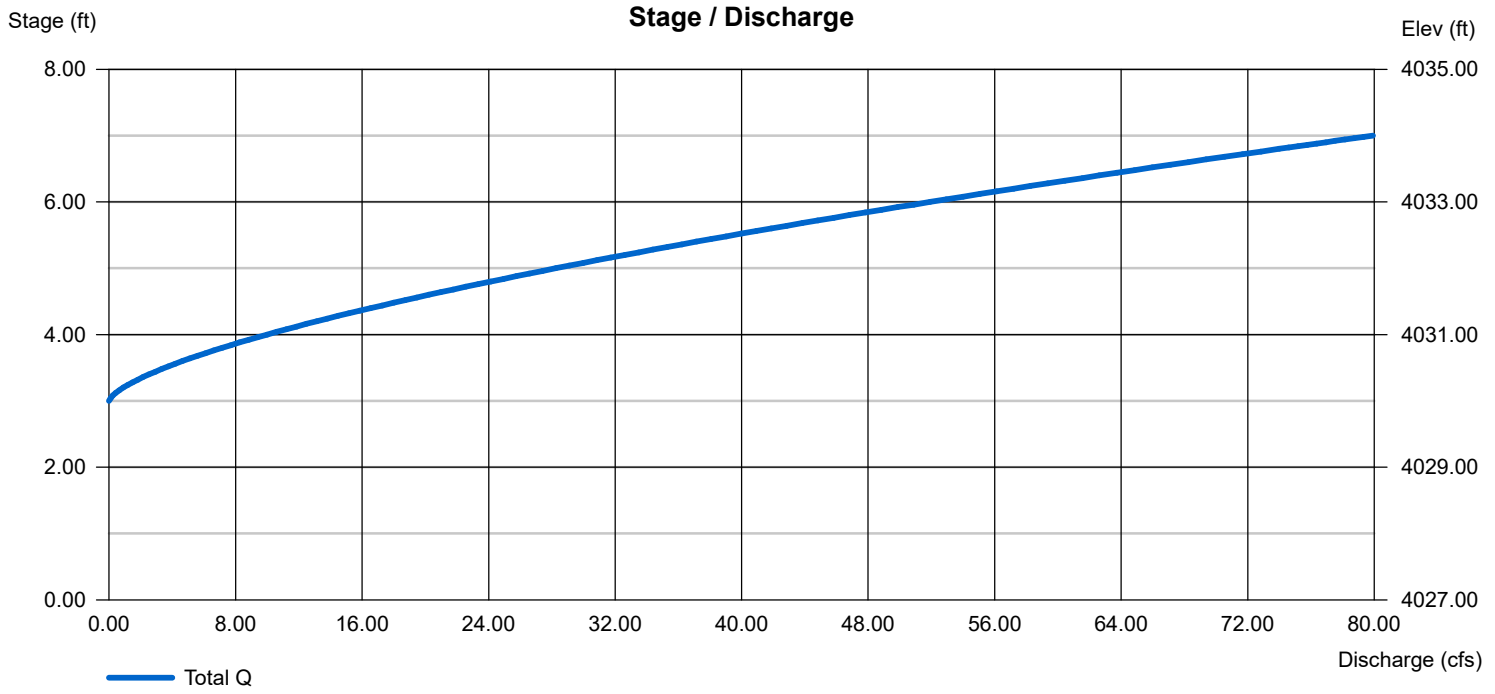
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

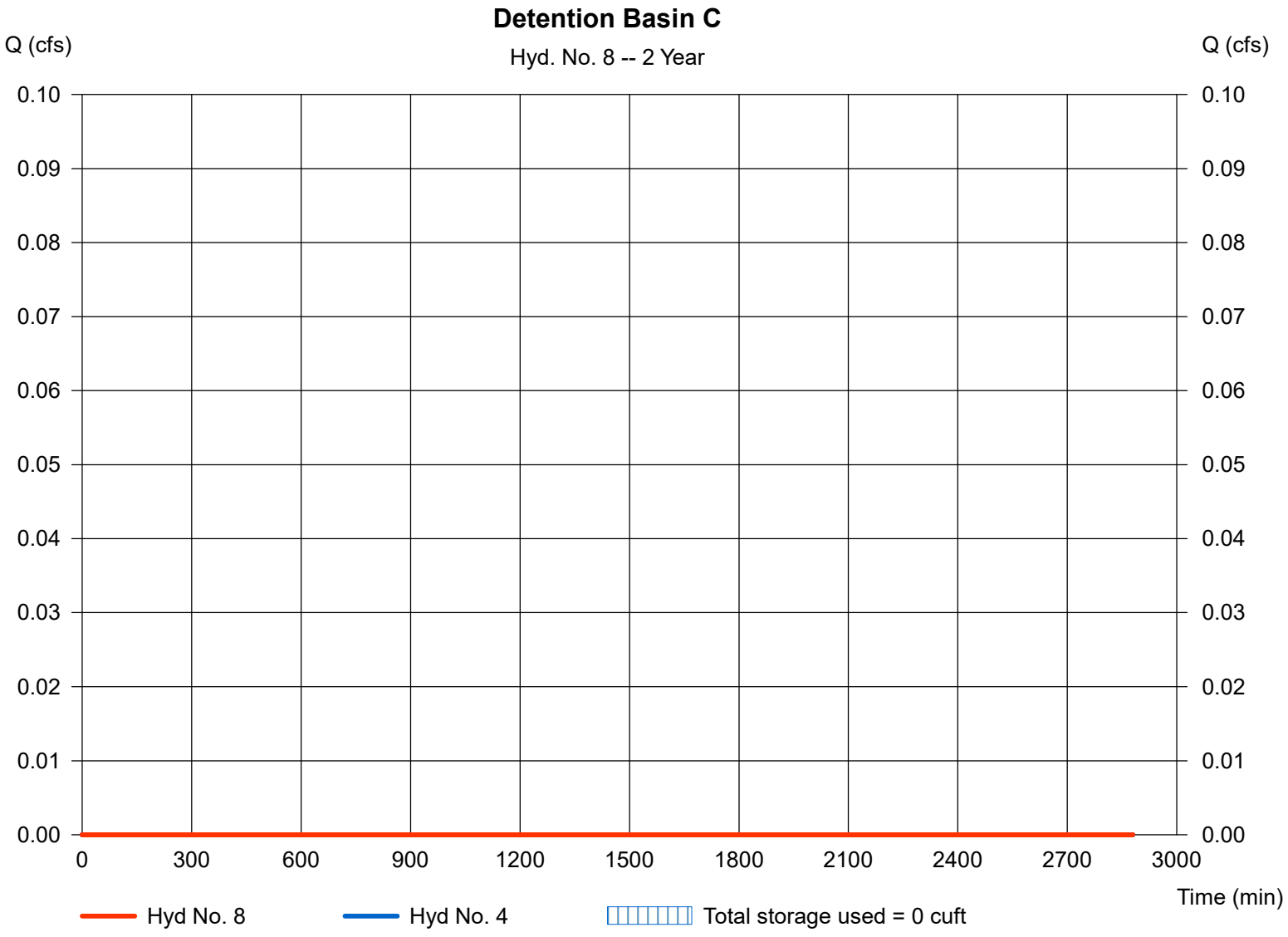
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

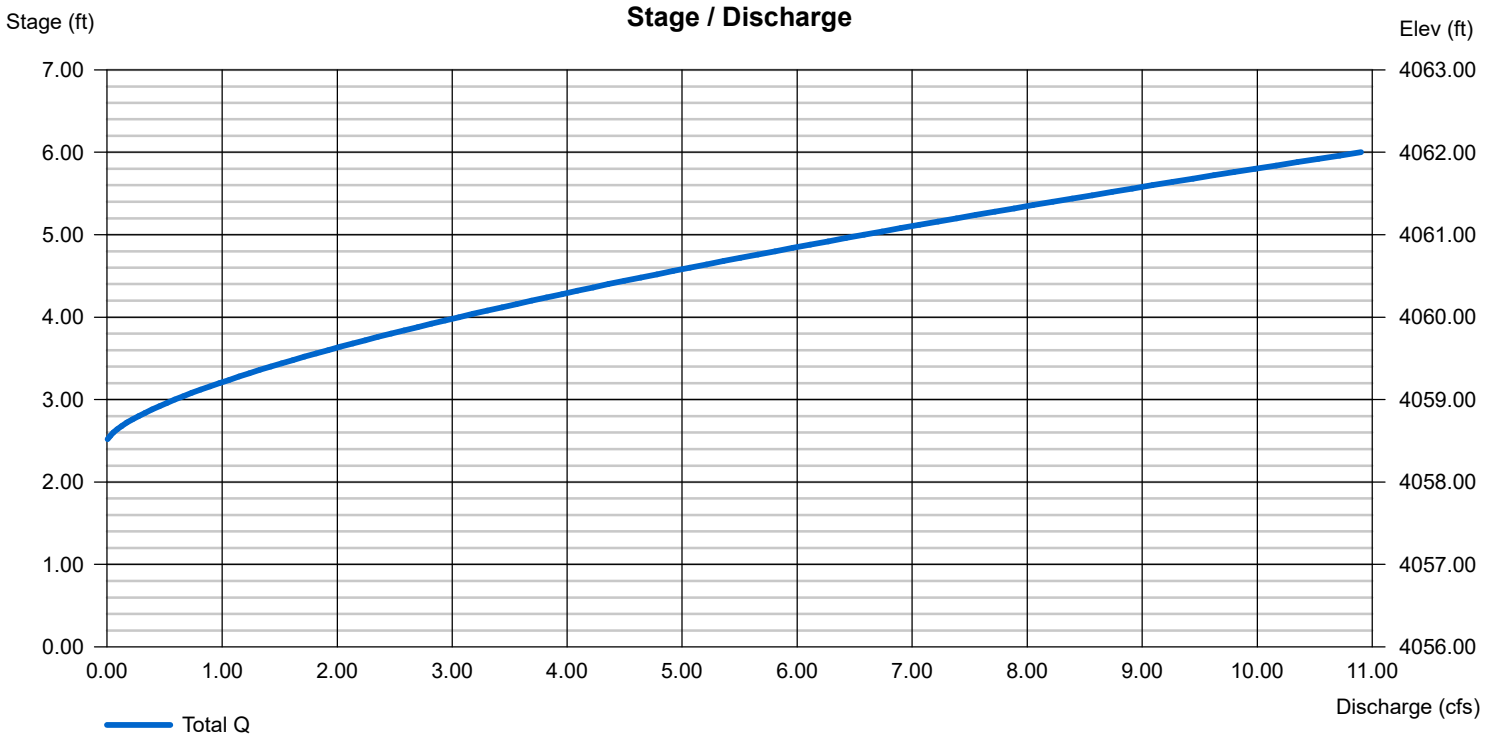
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



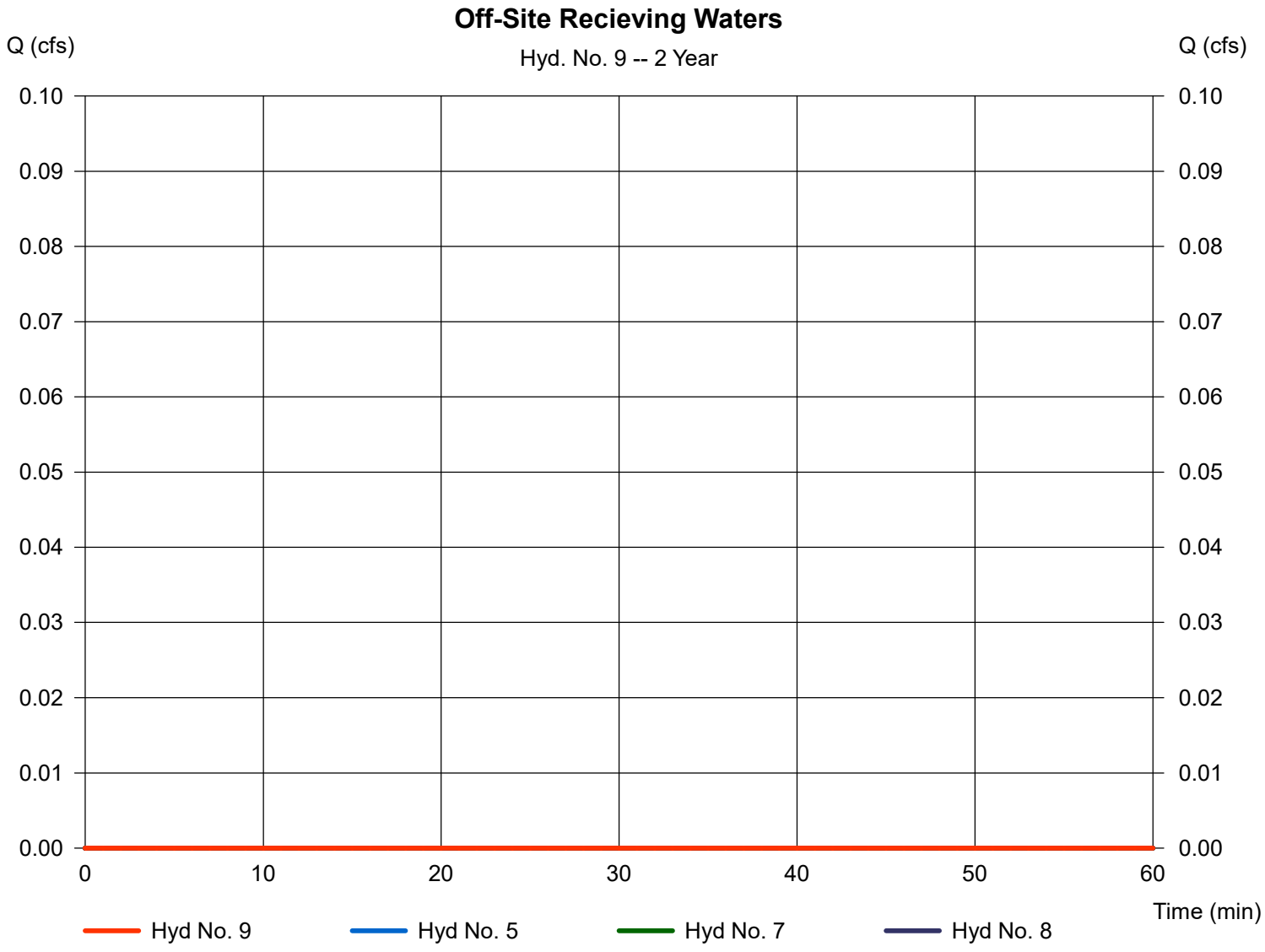
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

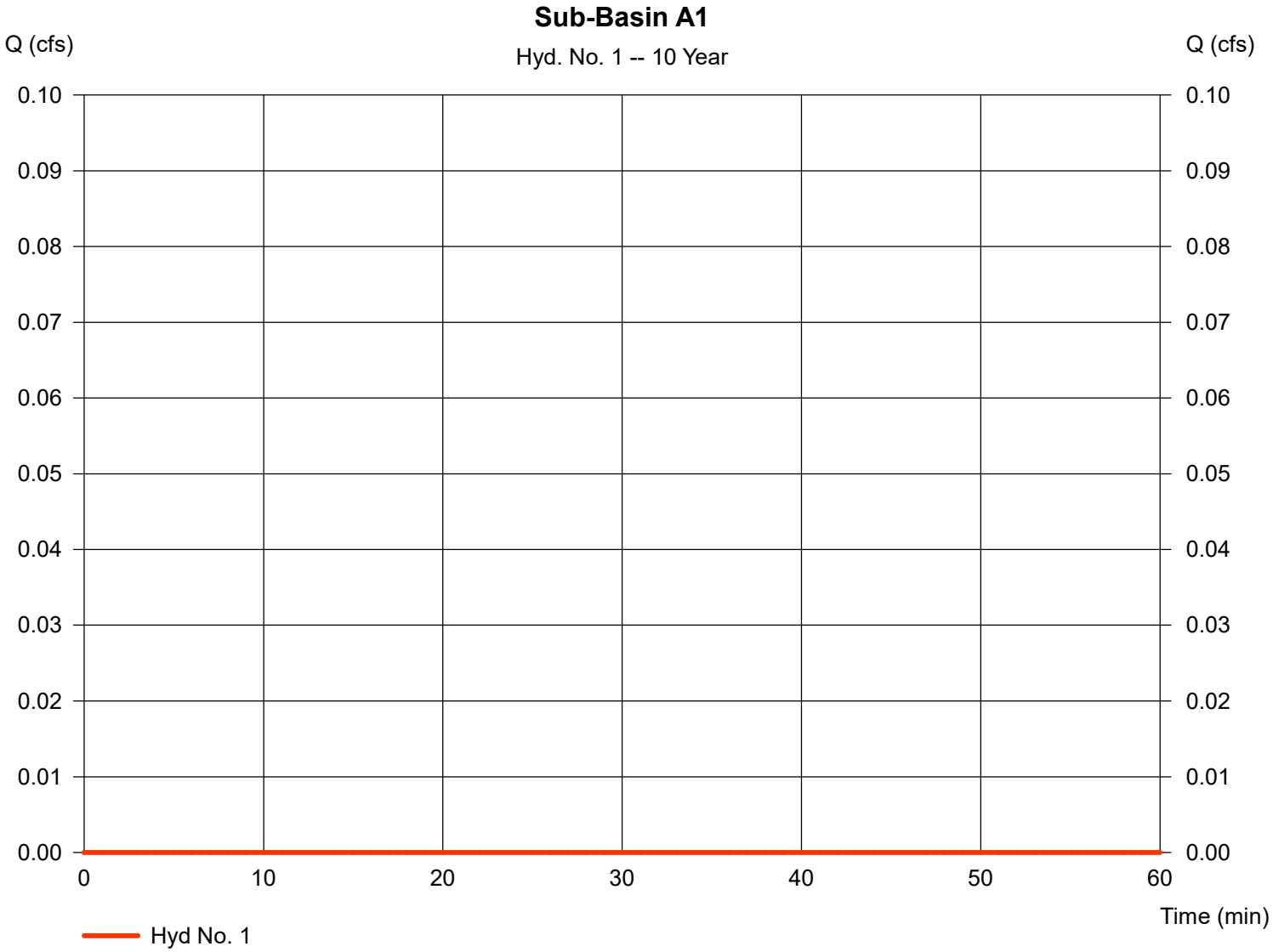
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



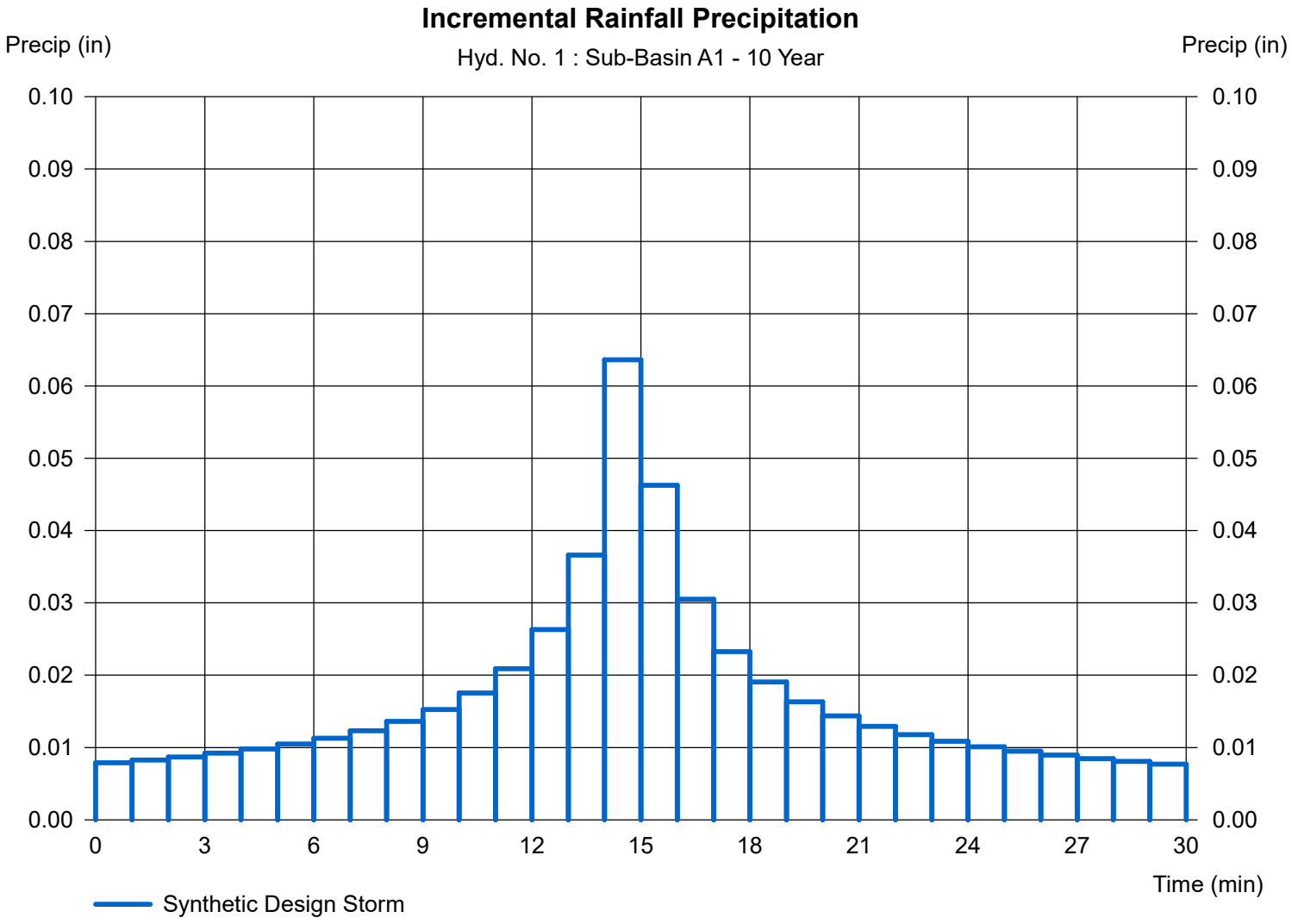
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



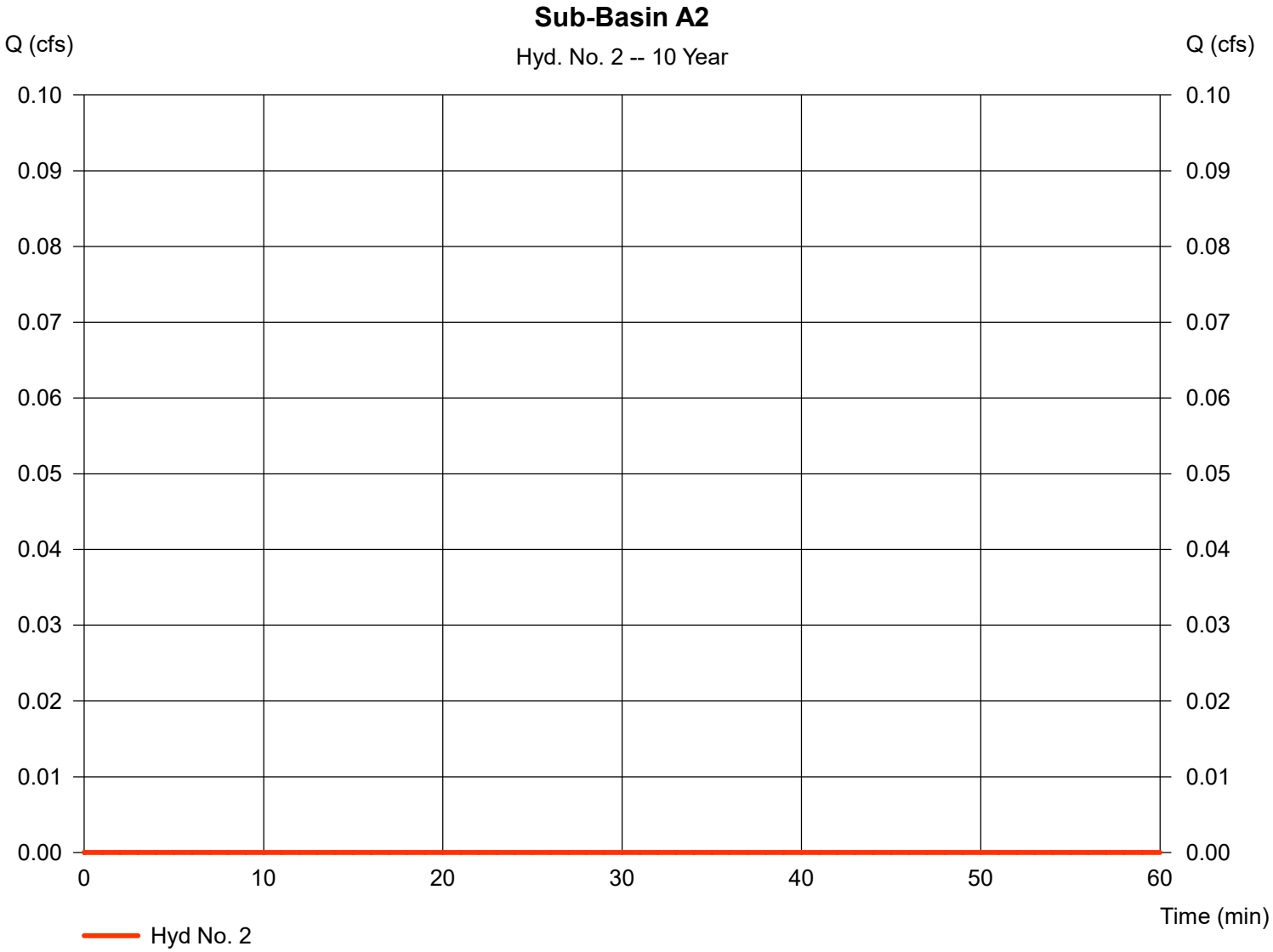
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



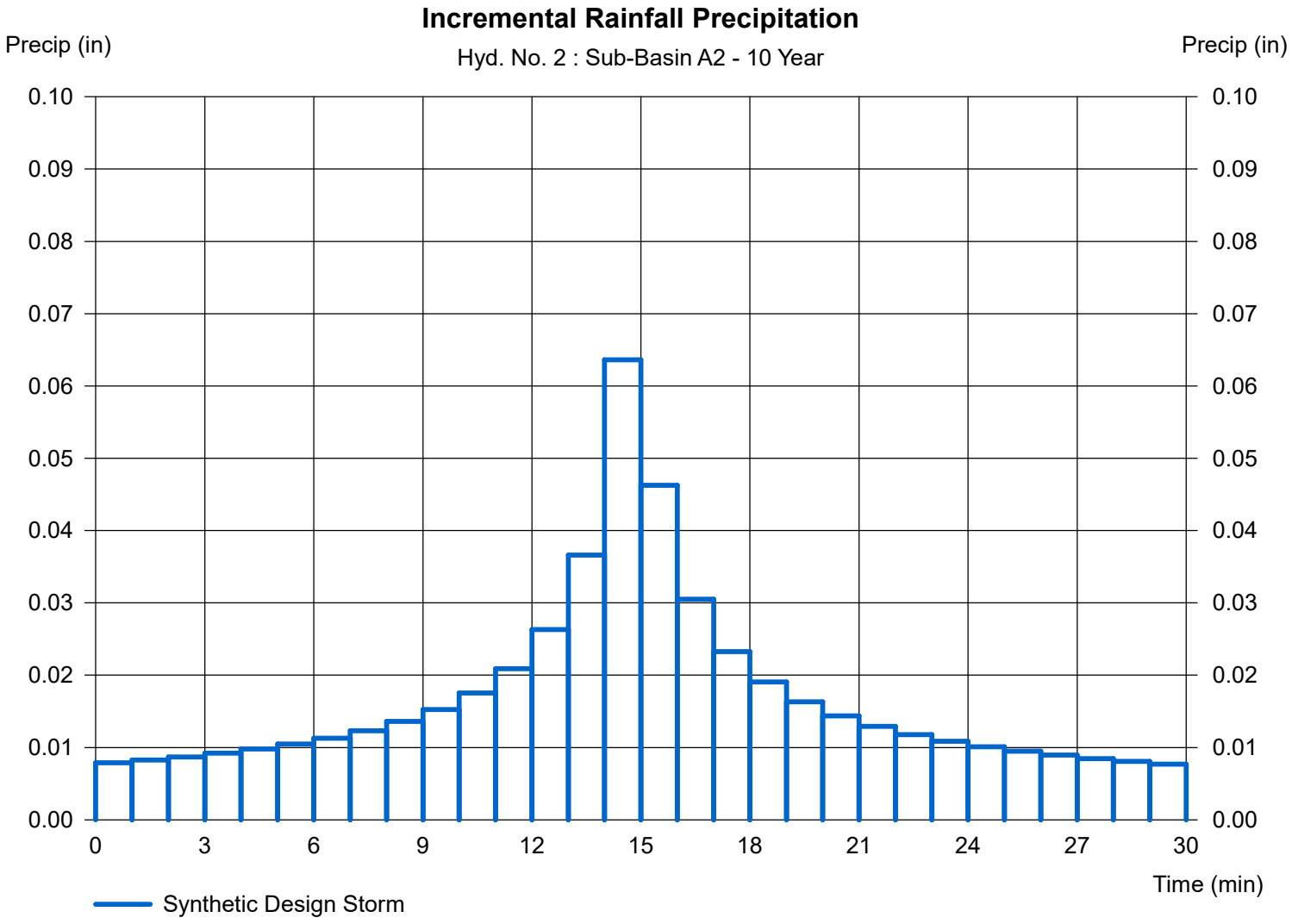
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



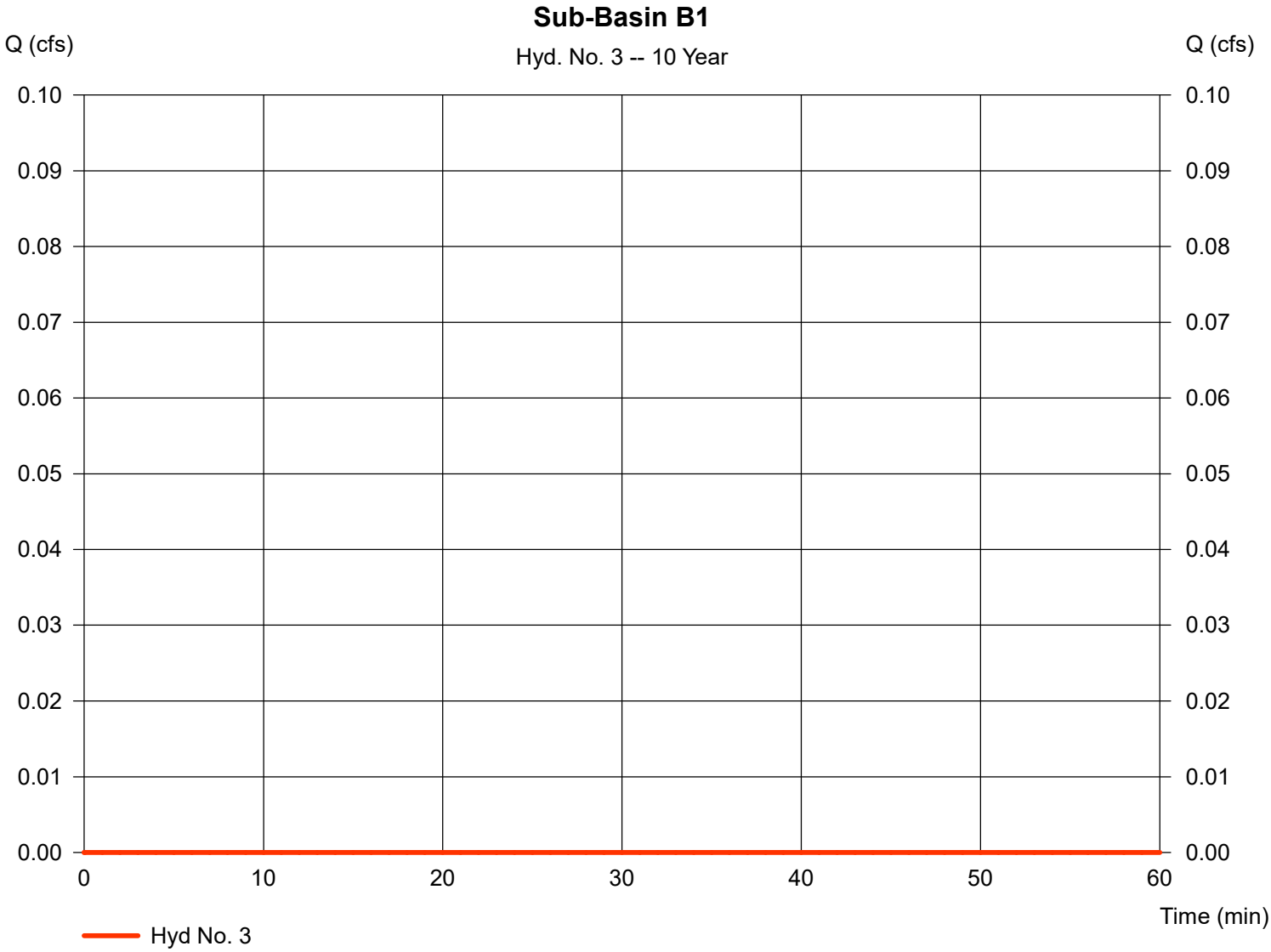
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



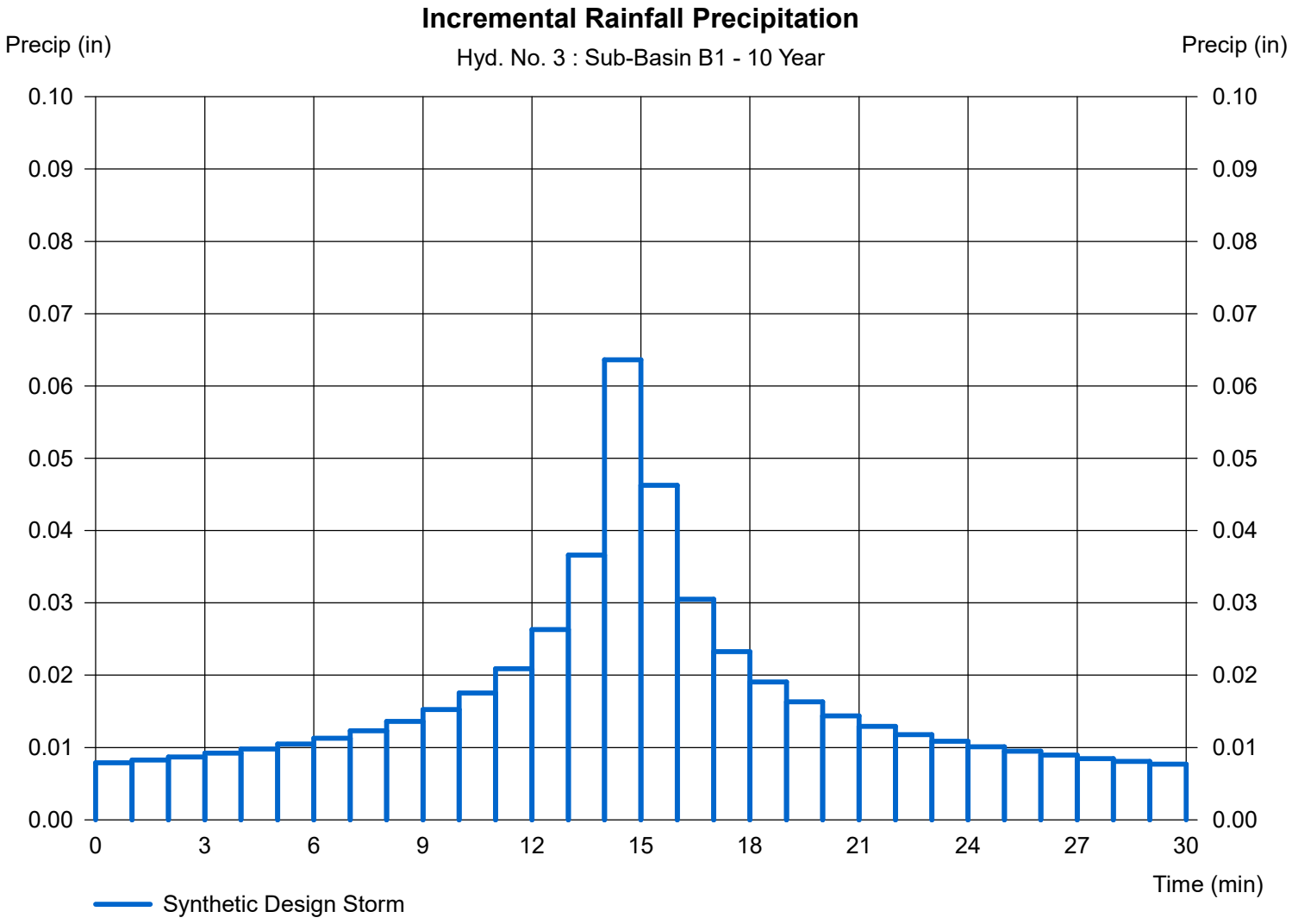
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



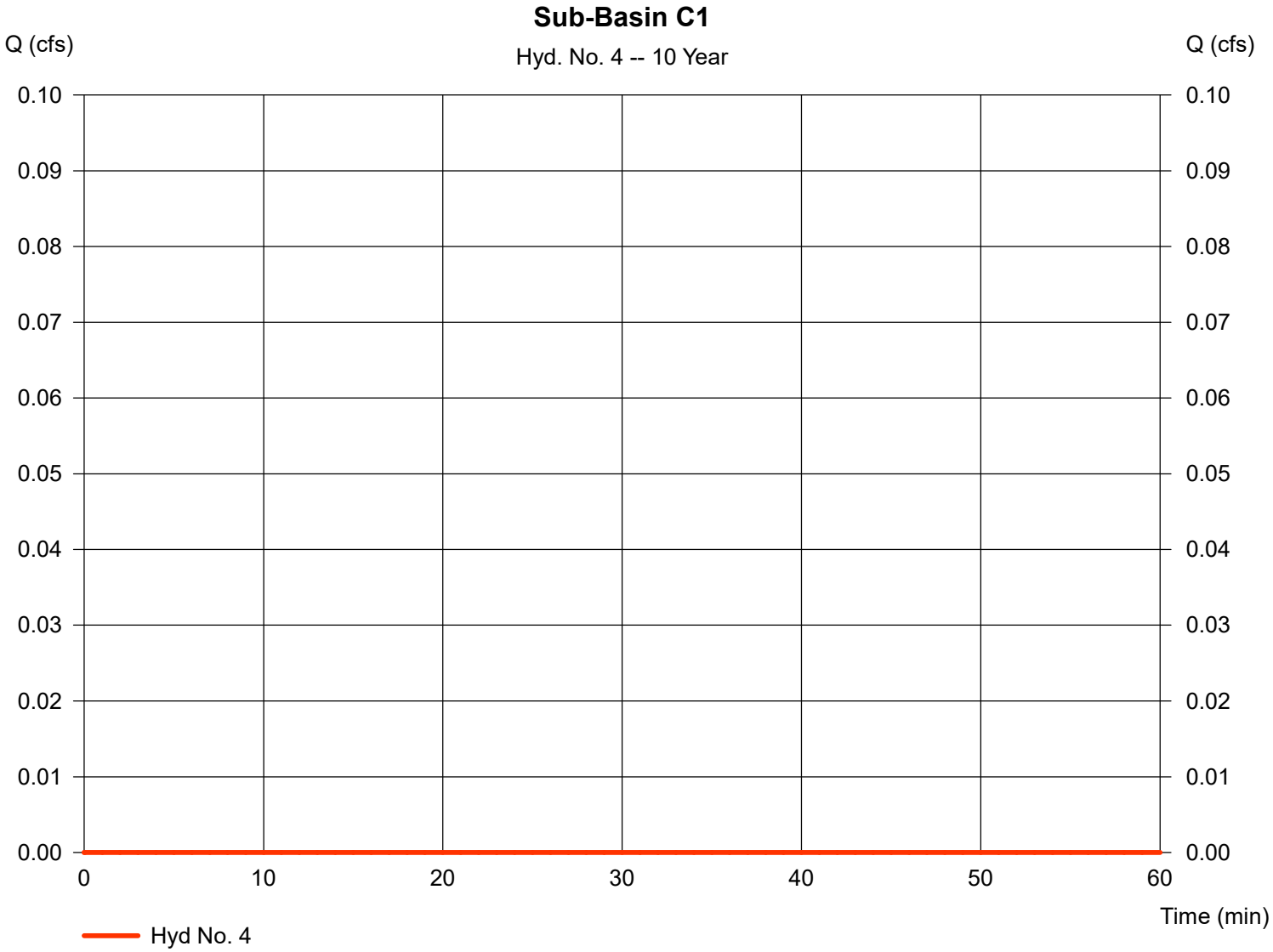
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



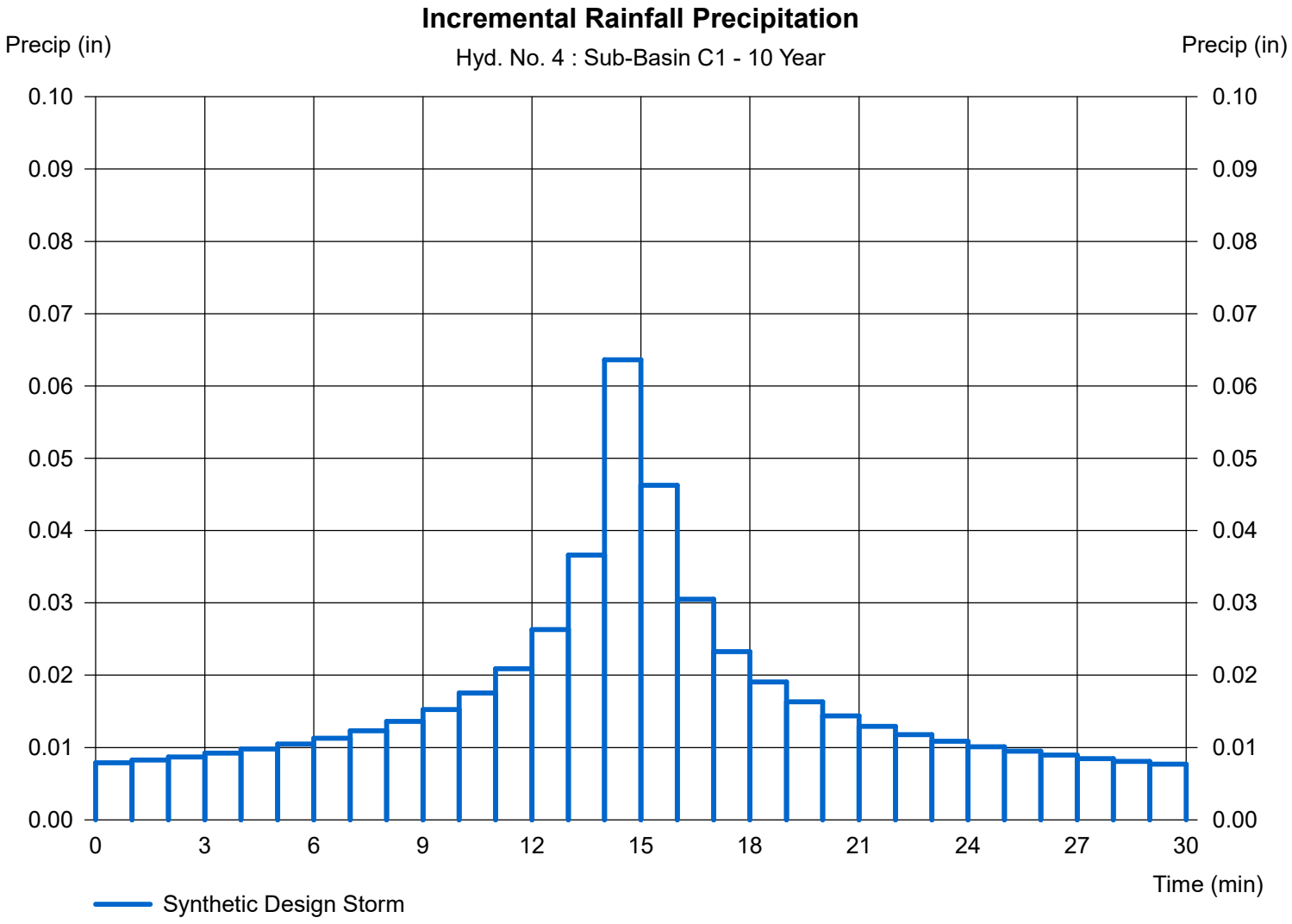
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

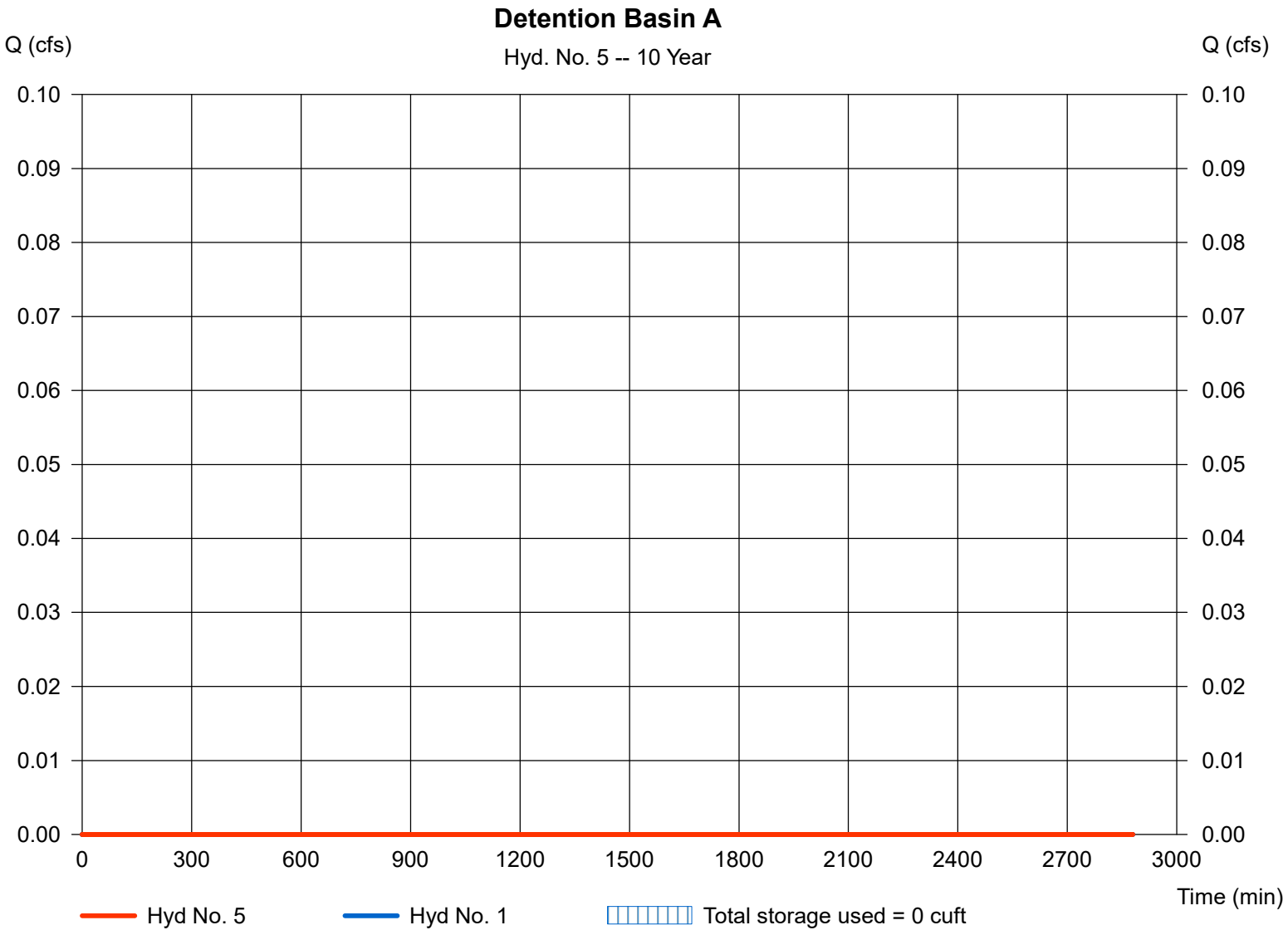
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



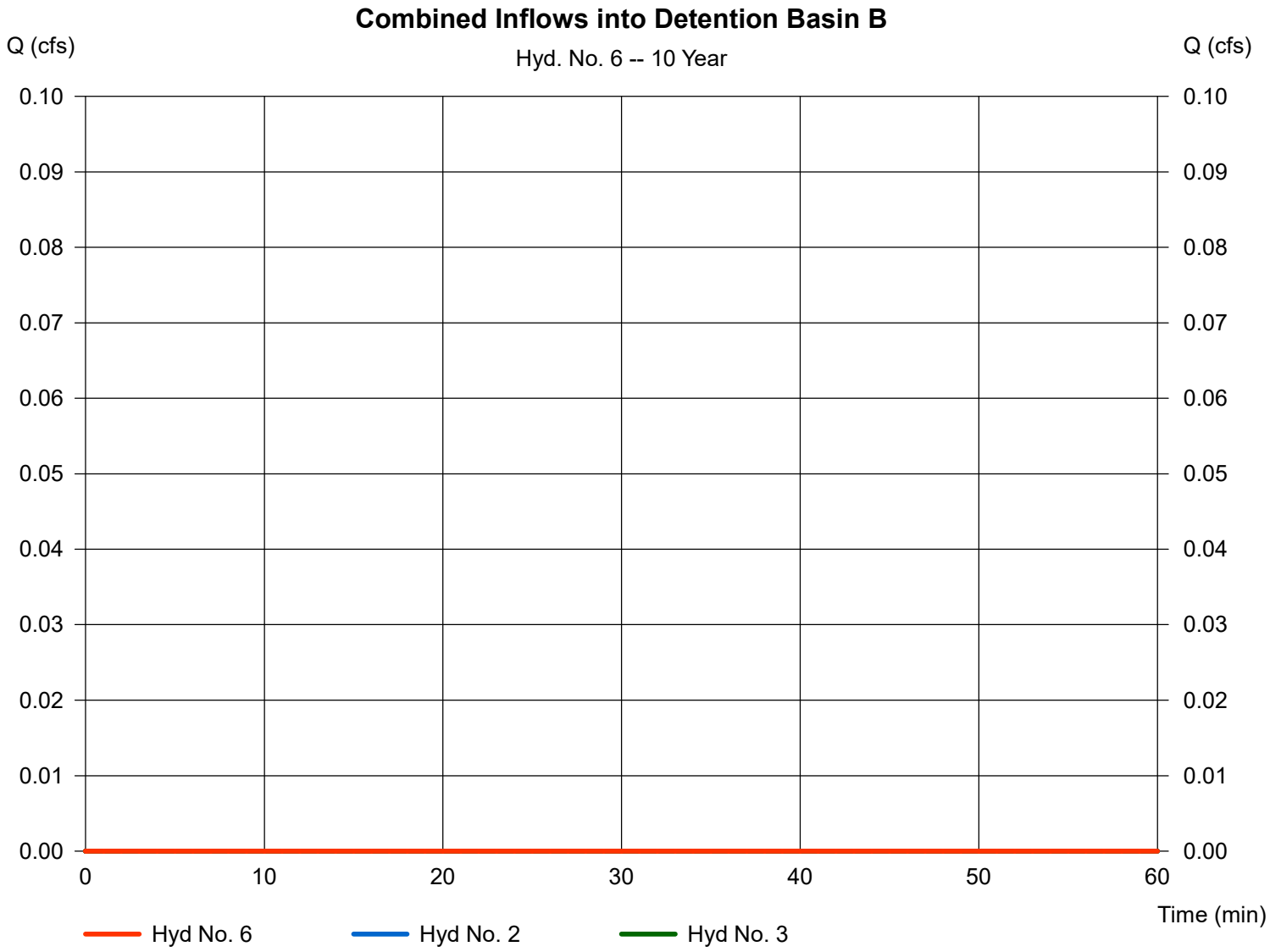
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

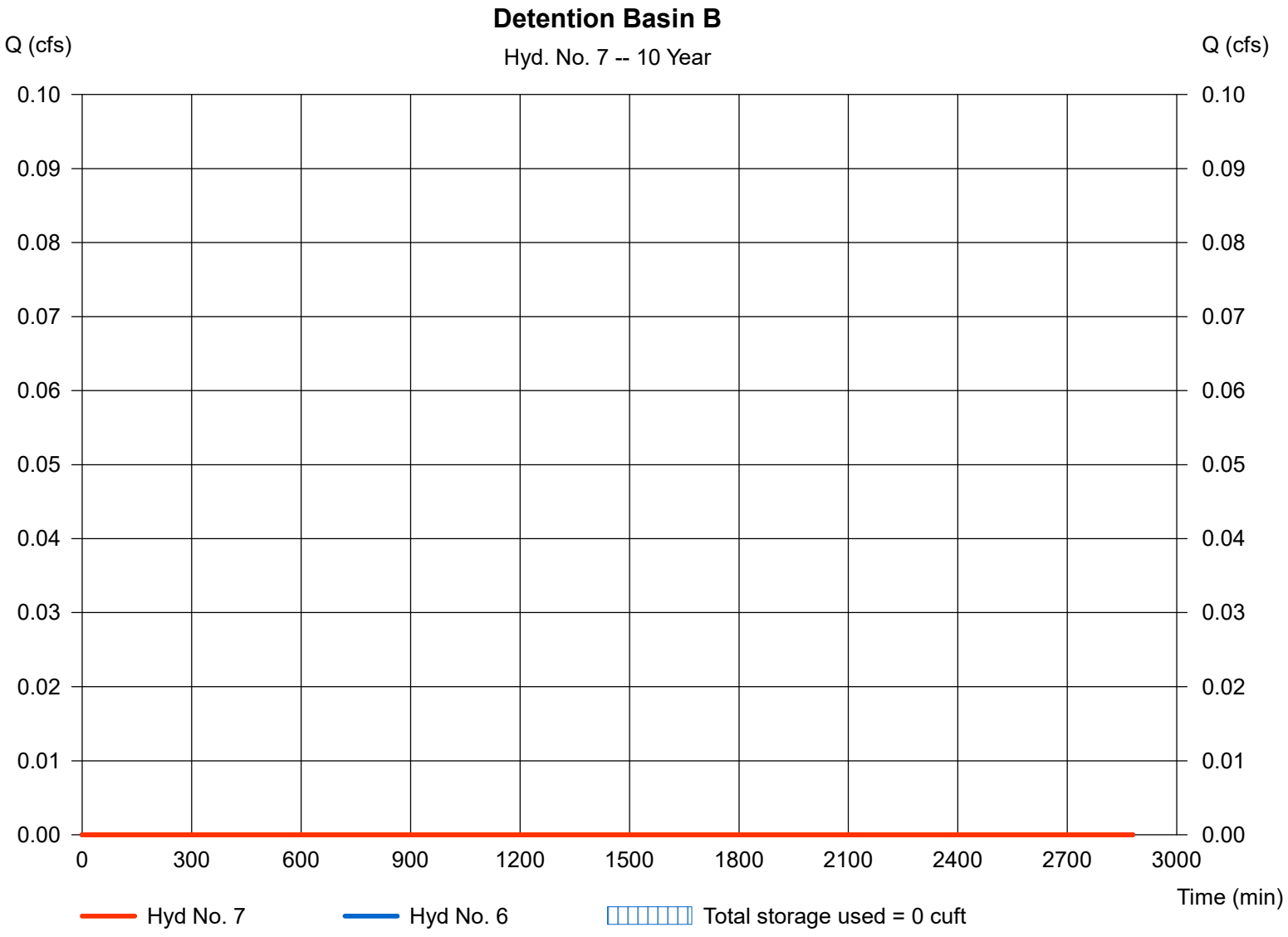
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Hydrograph Report

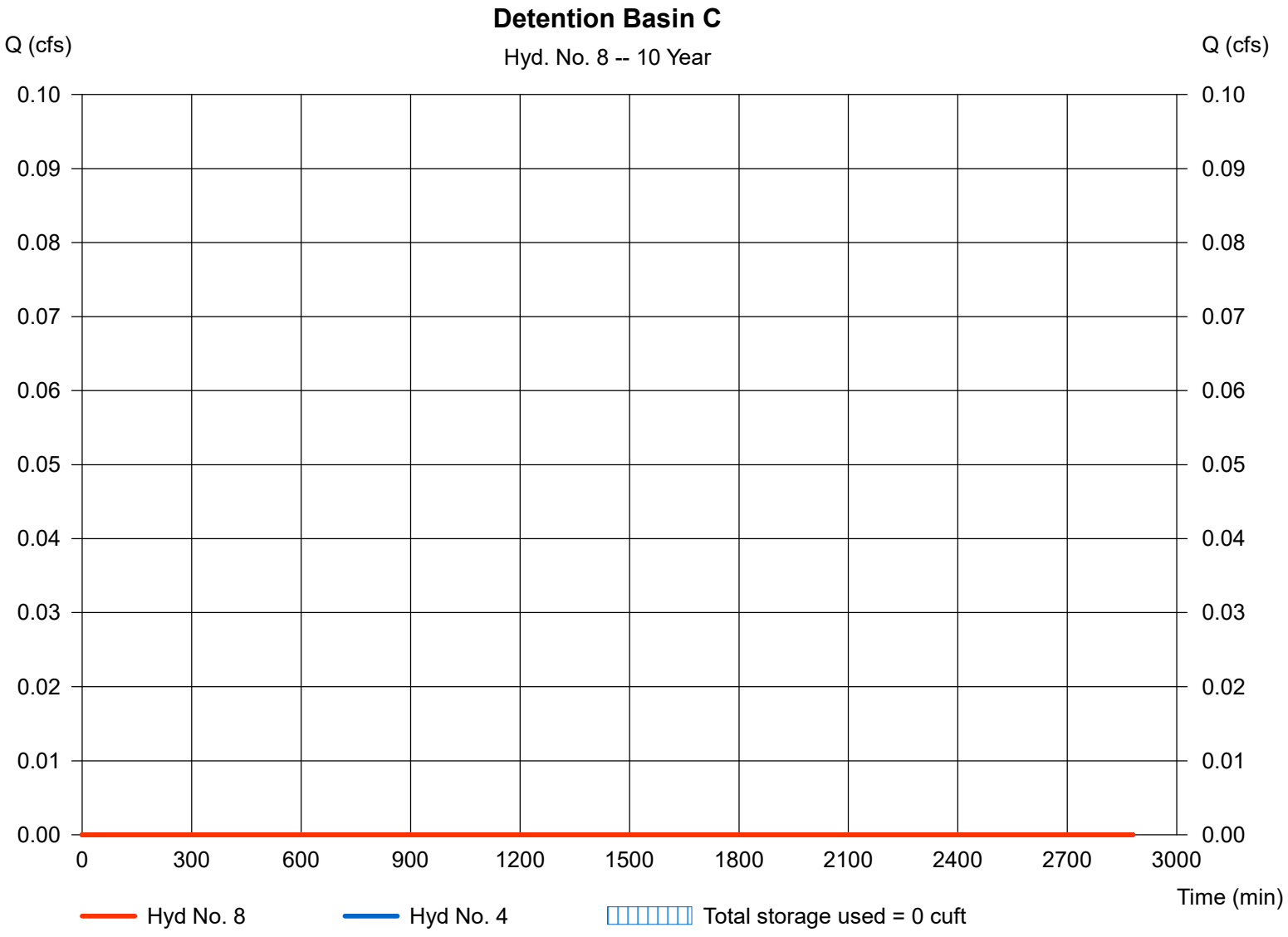
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



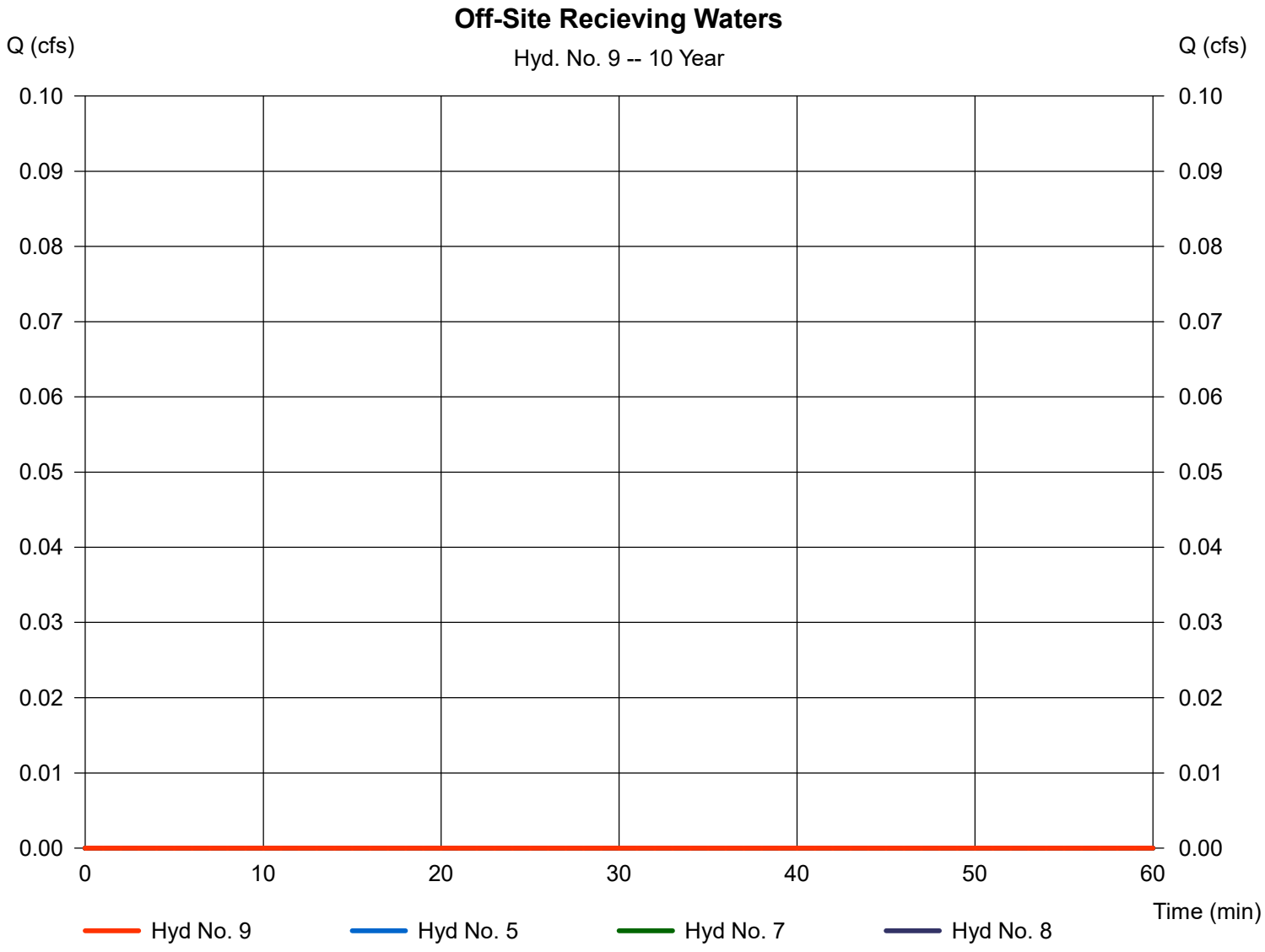
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

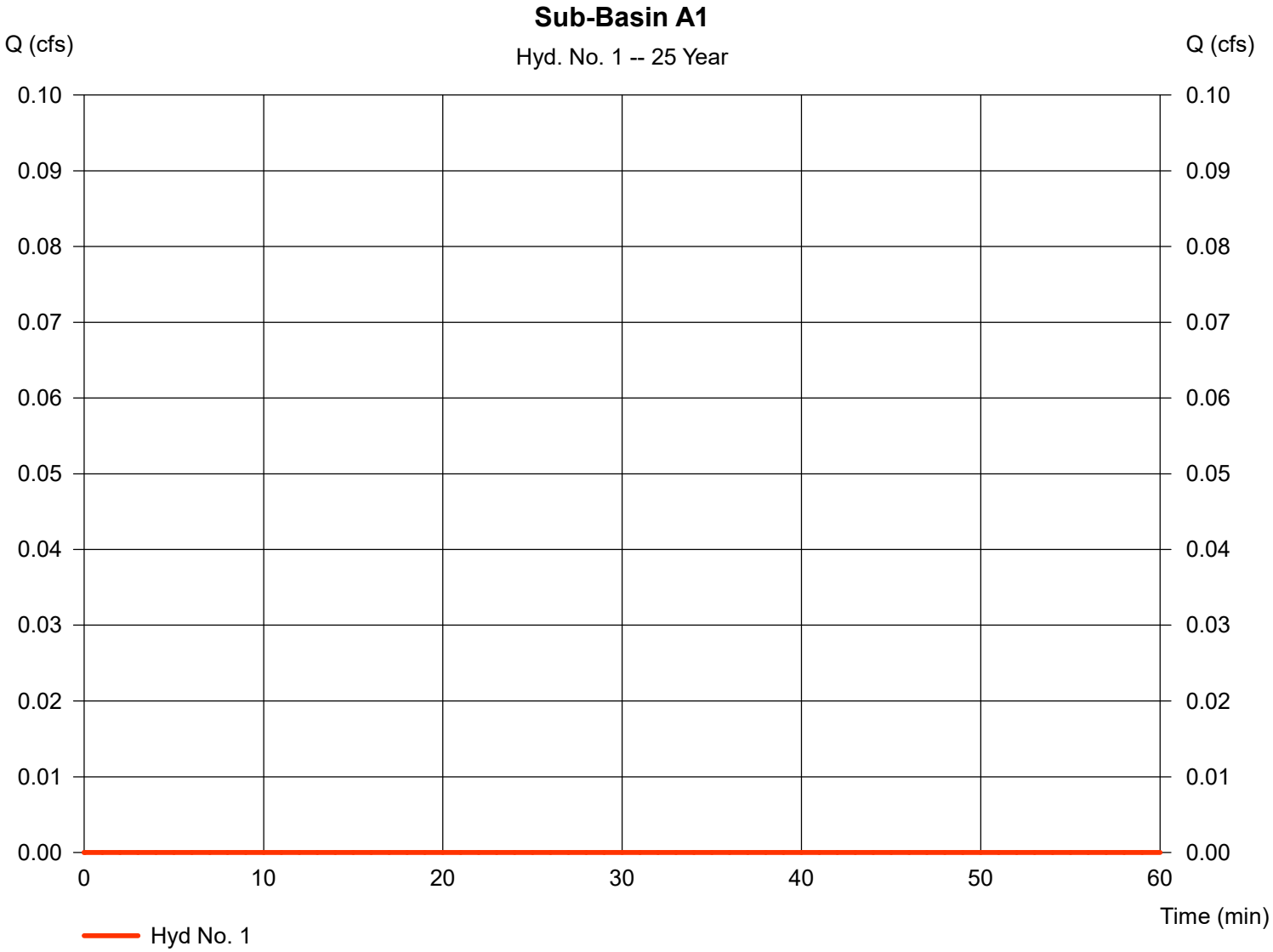
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



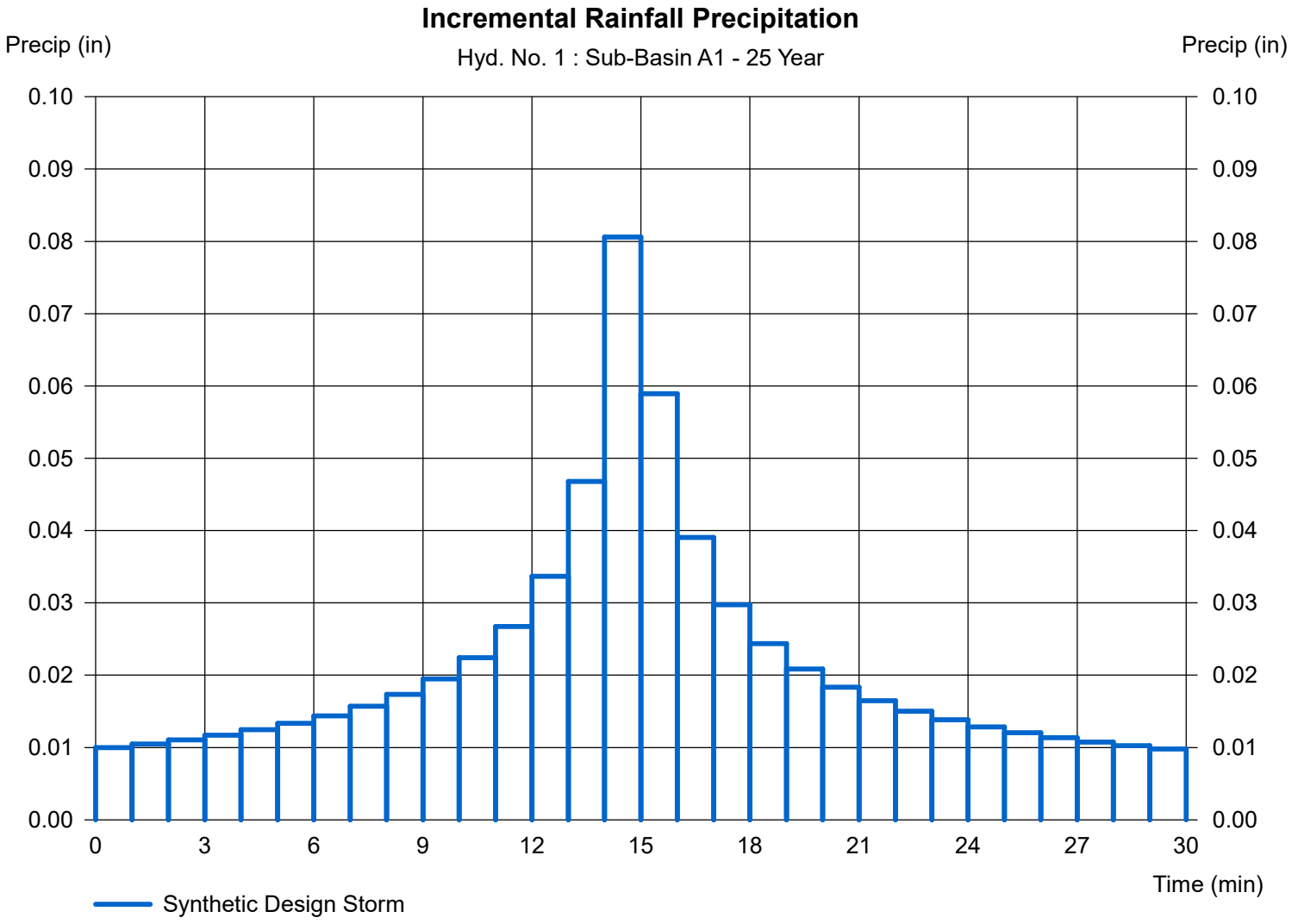
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



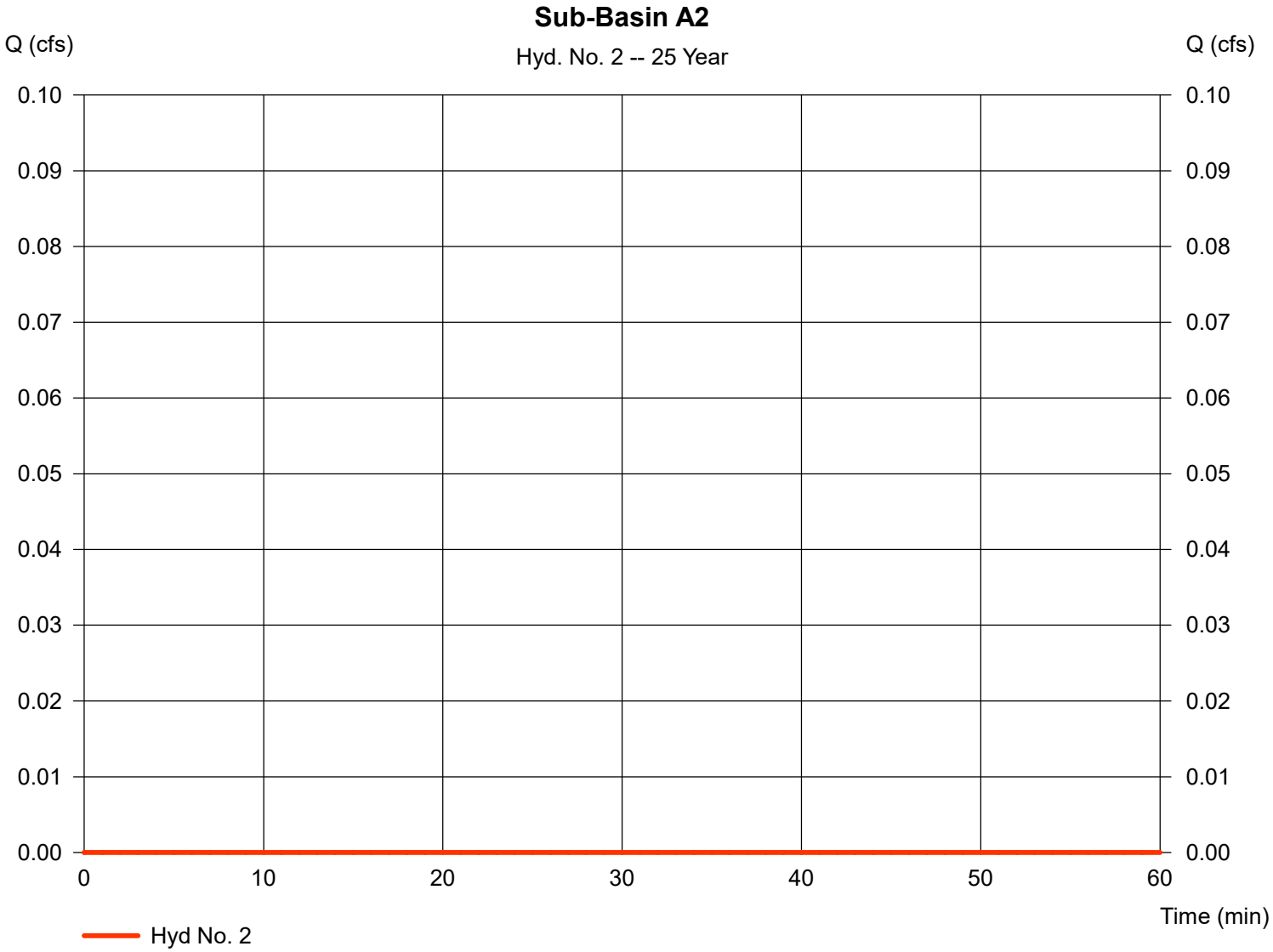
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



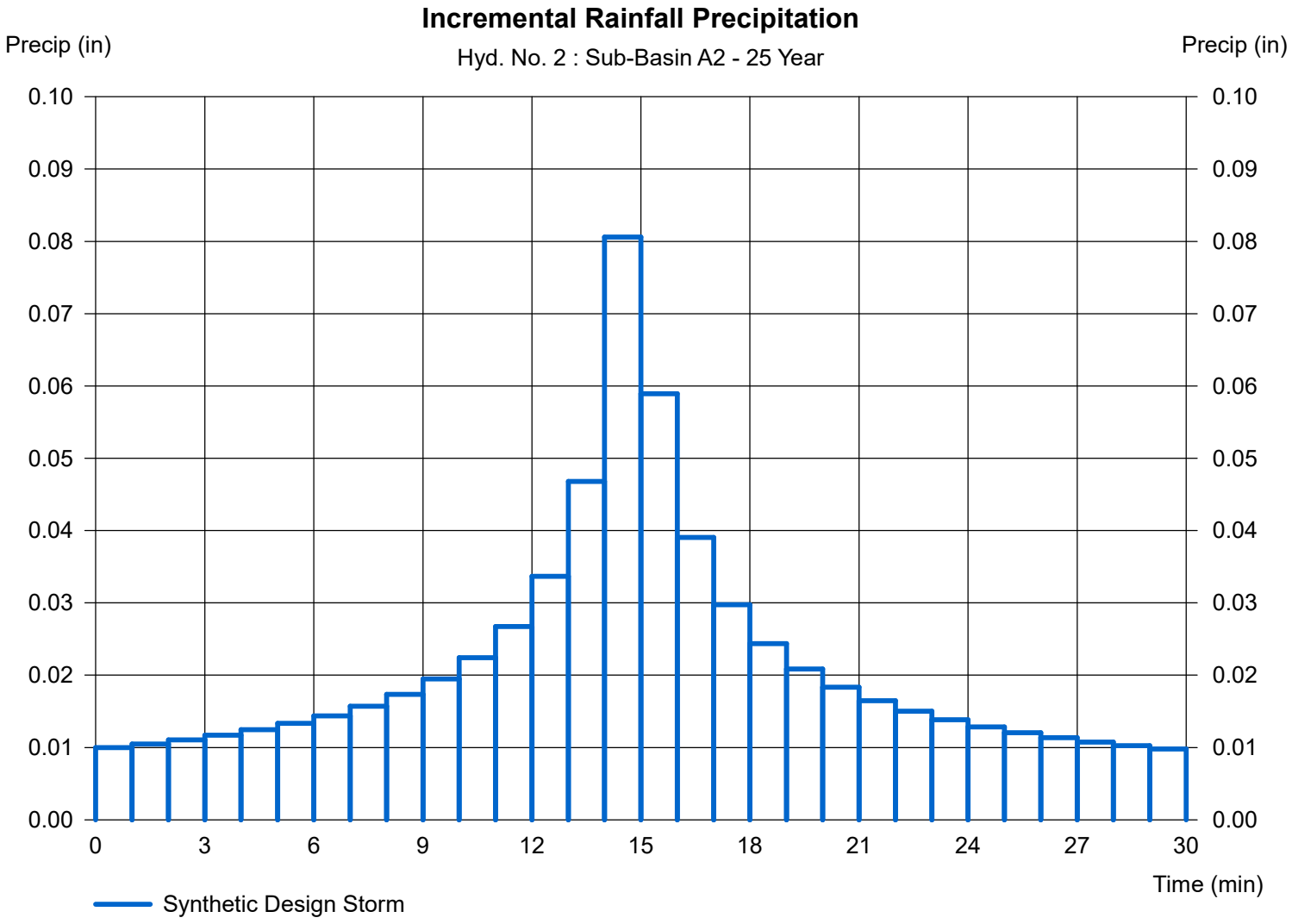
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



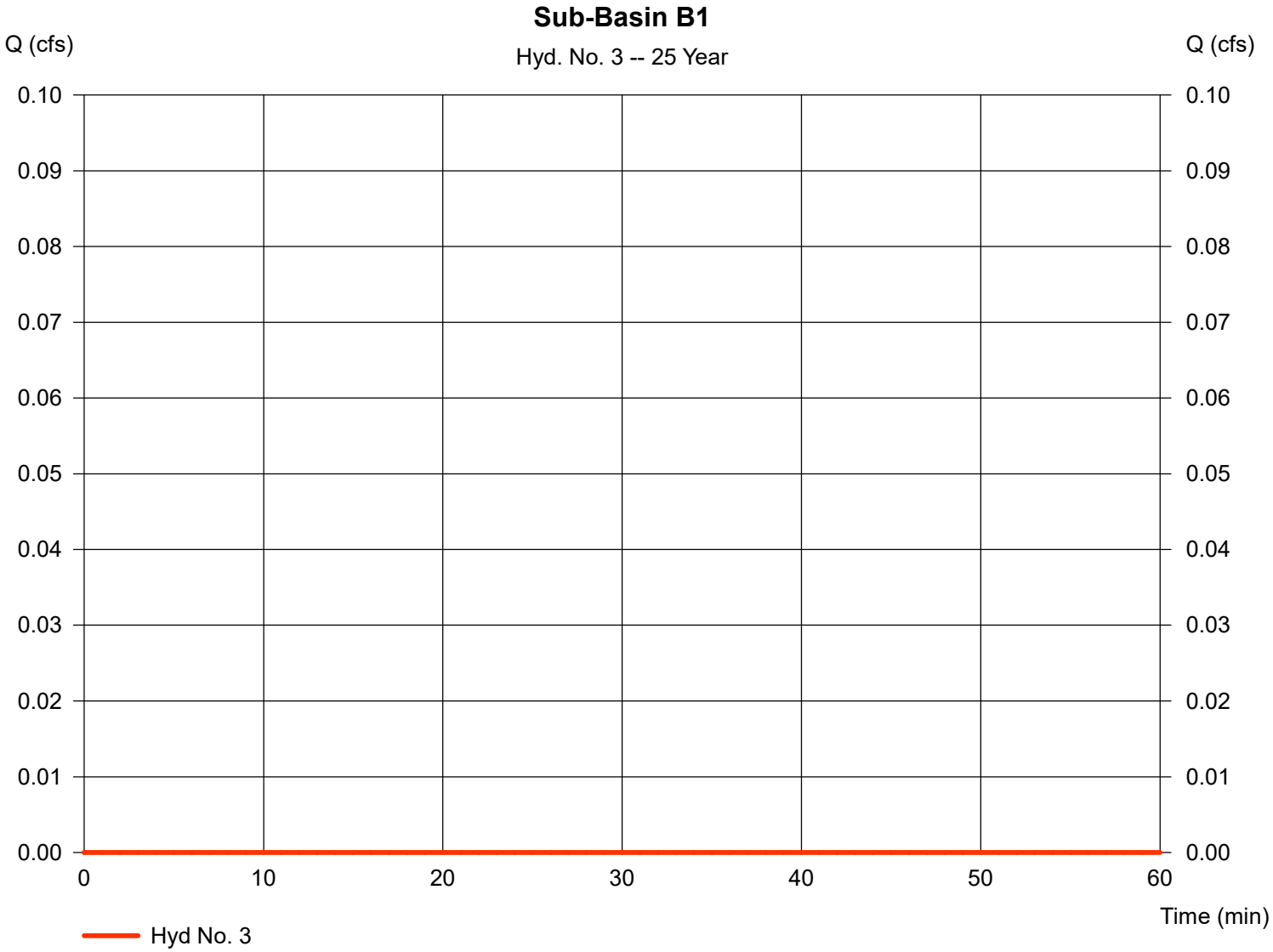
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



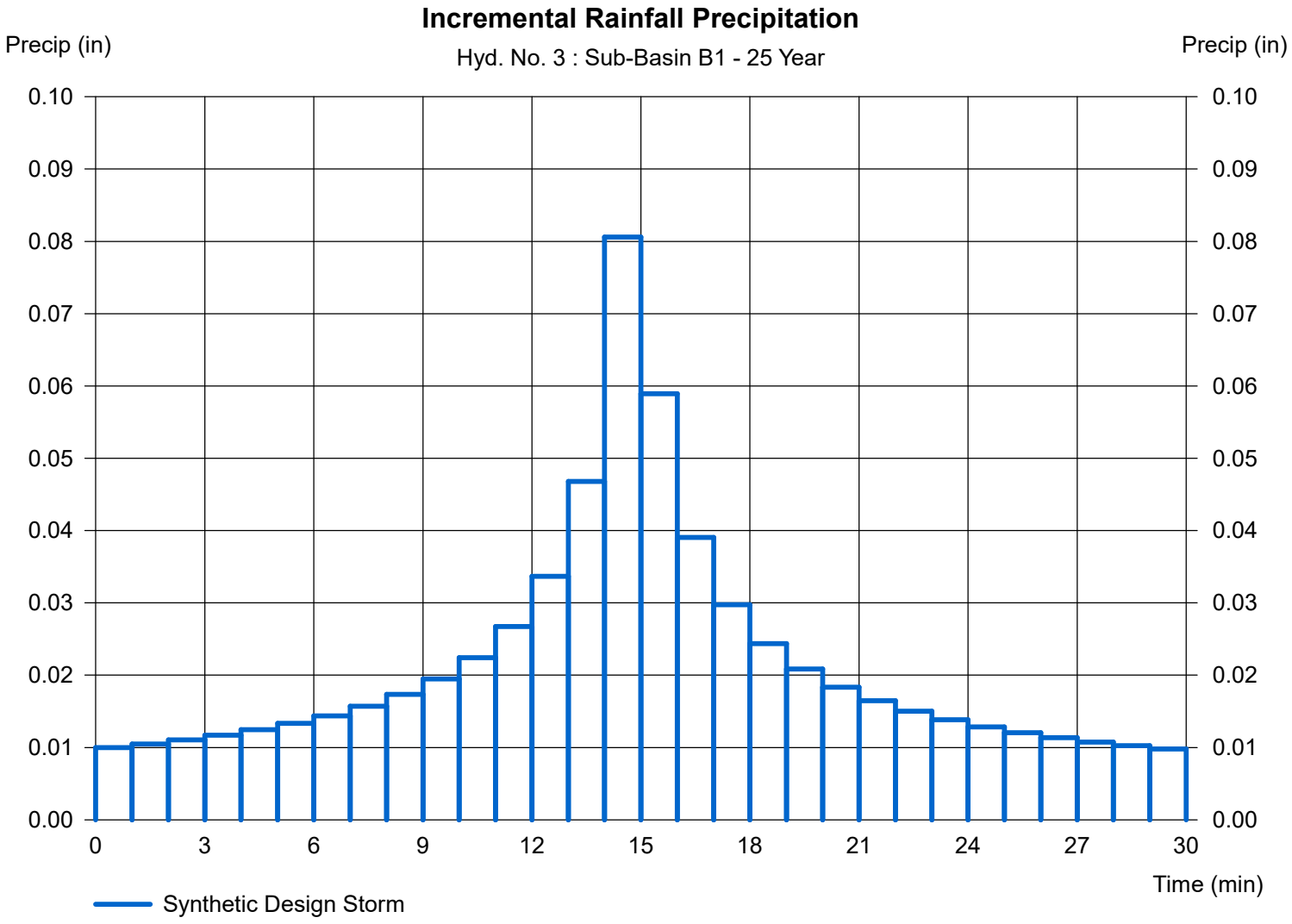
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



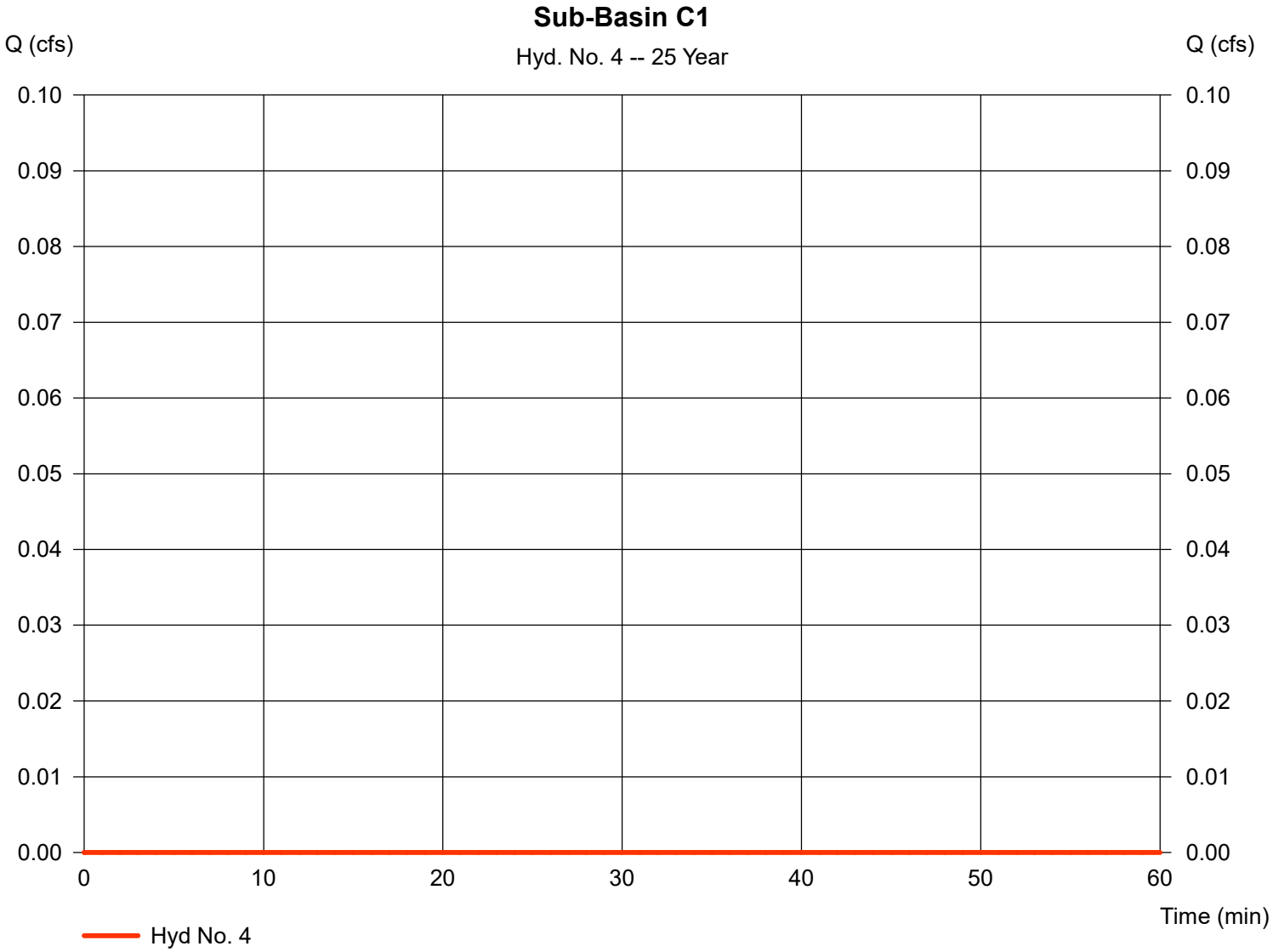
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



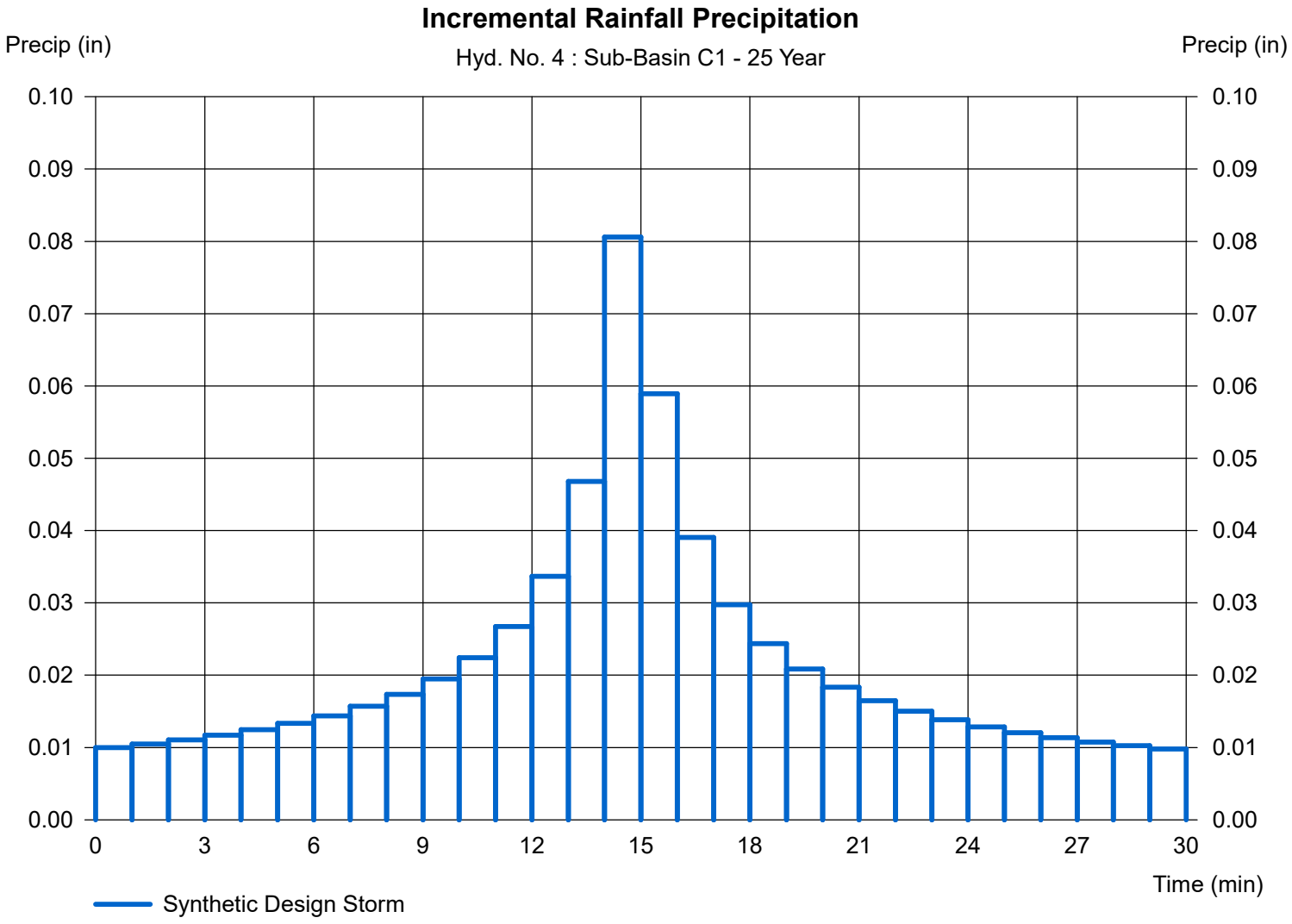
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

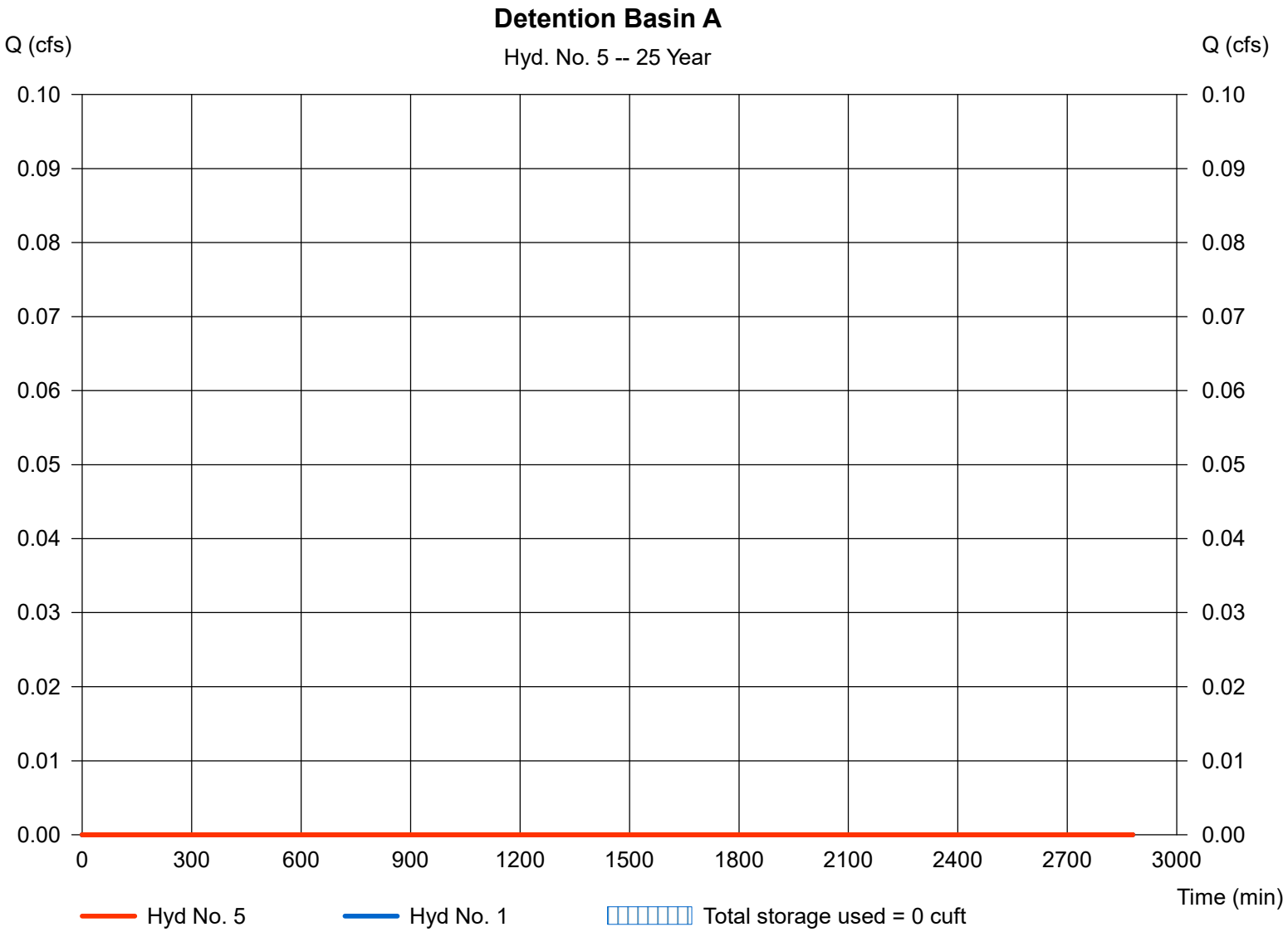
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



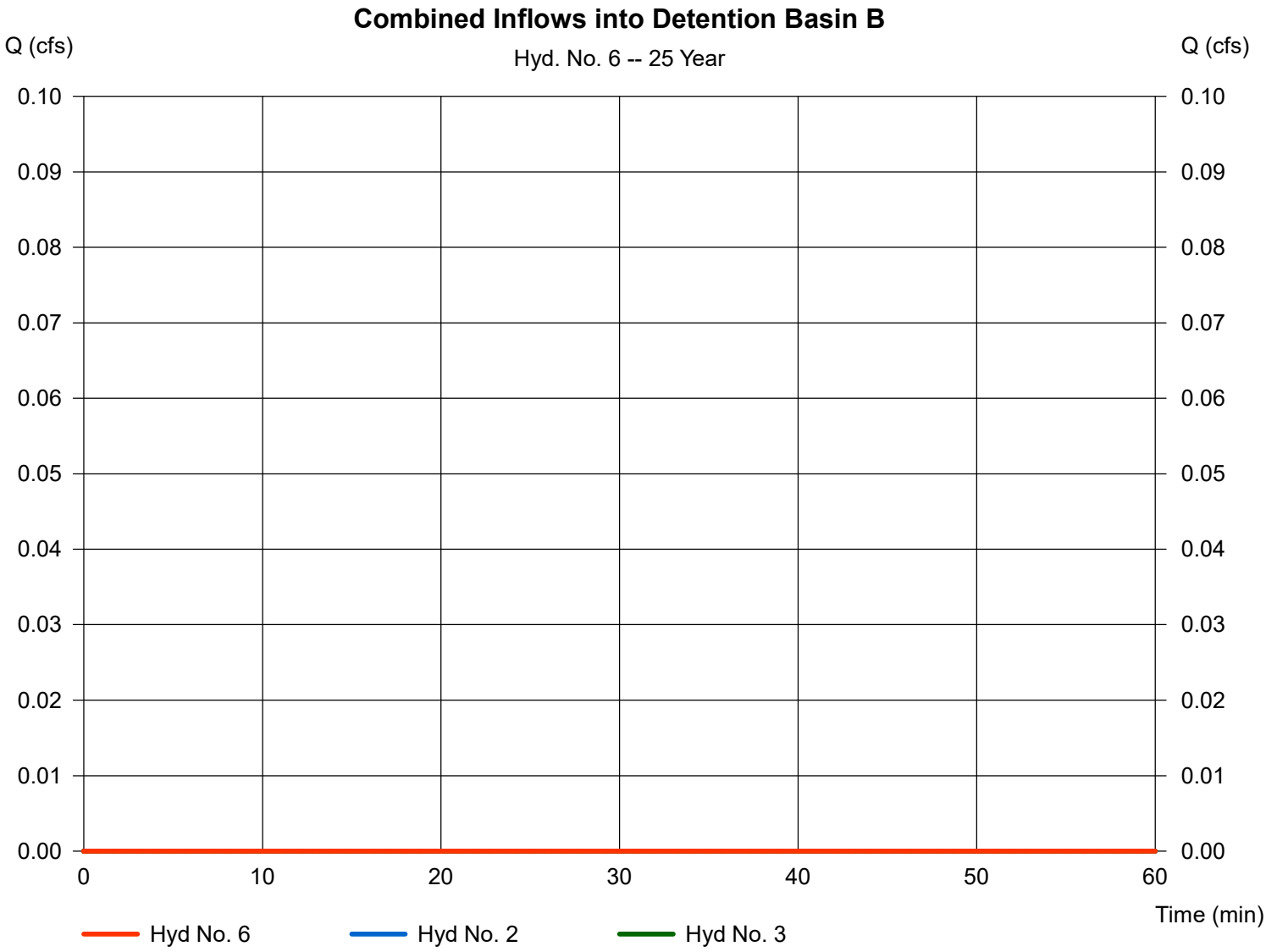
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

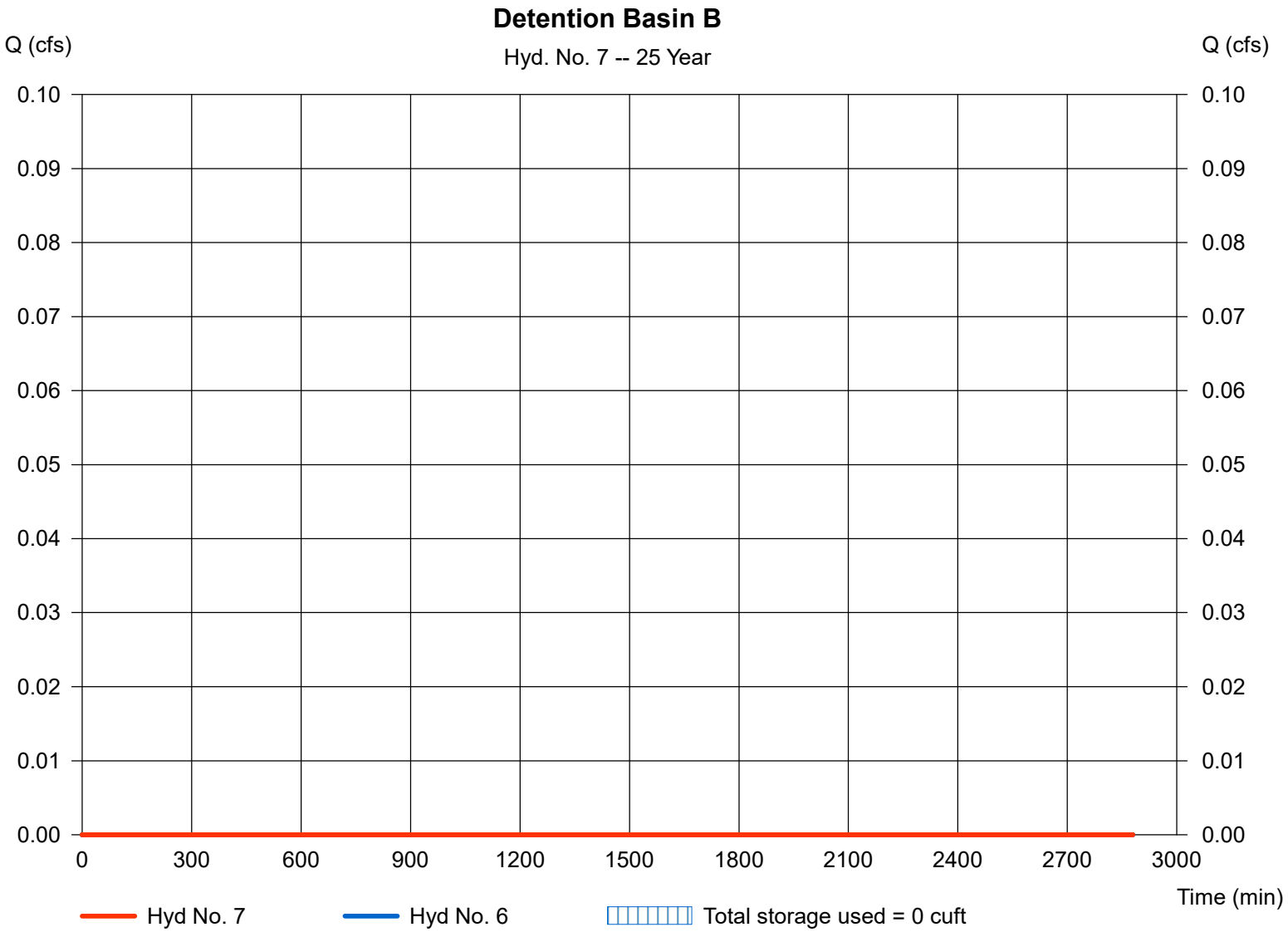
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Hydrograph Report

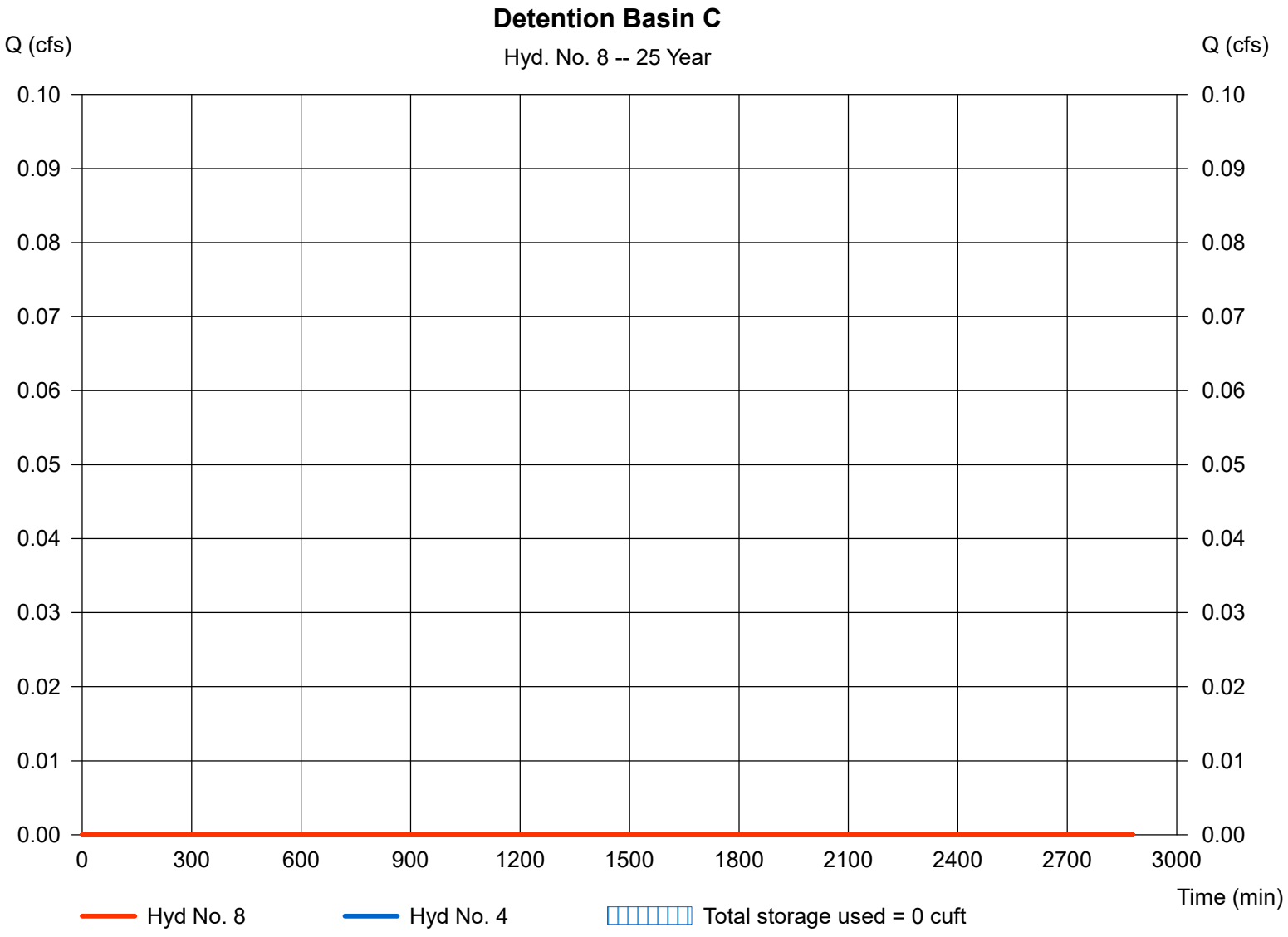
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



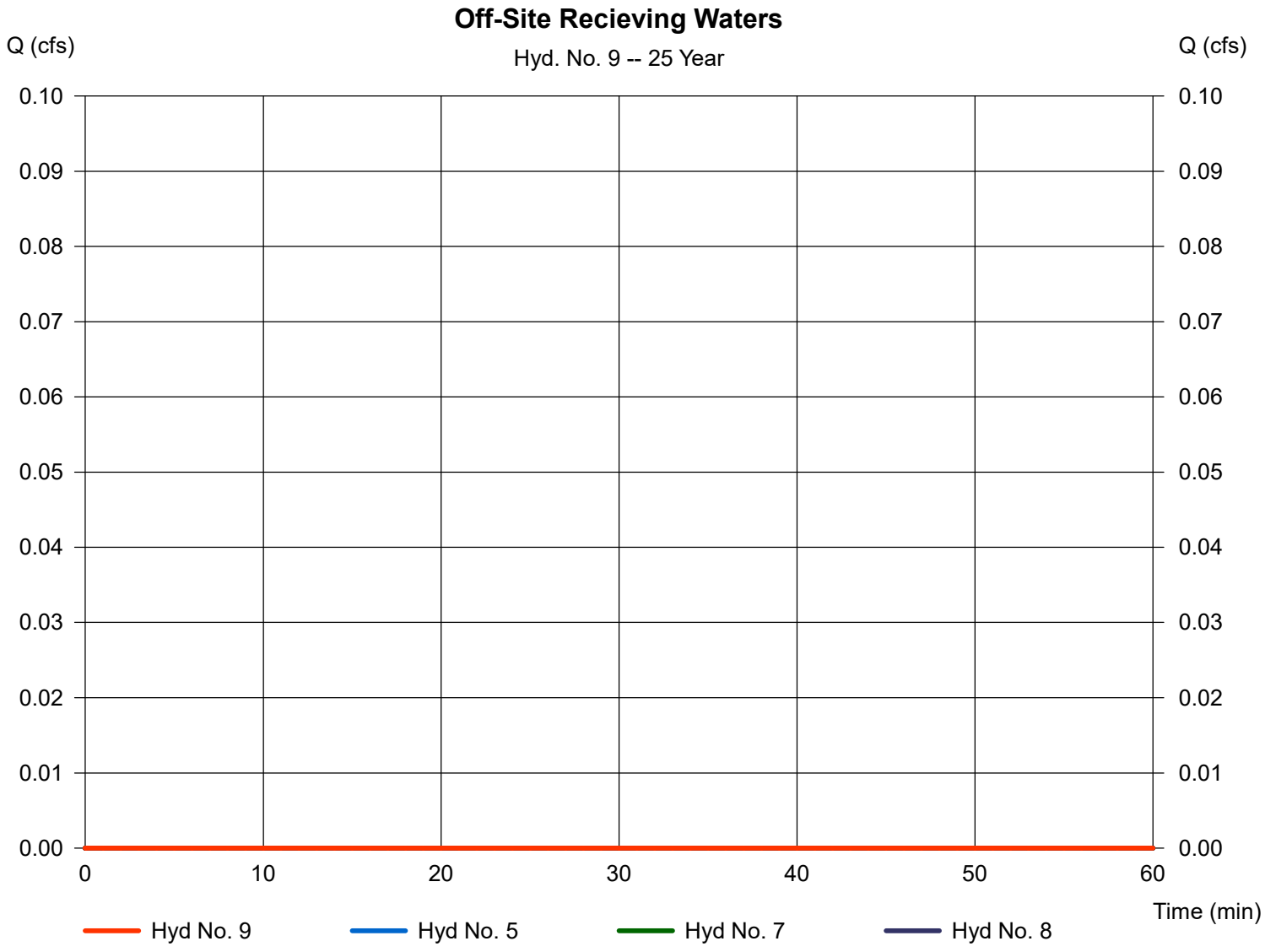
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

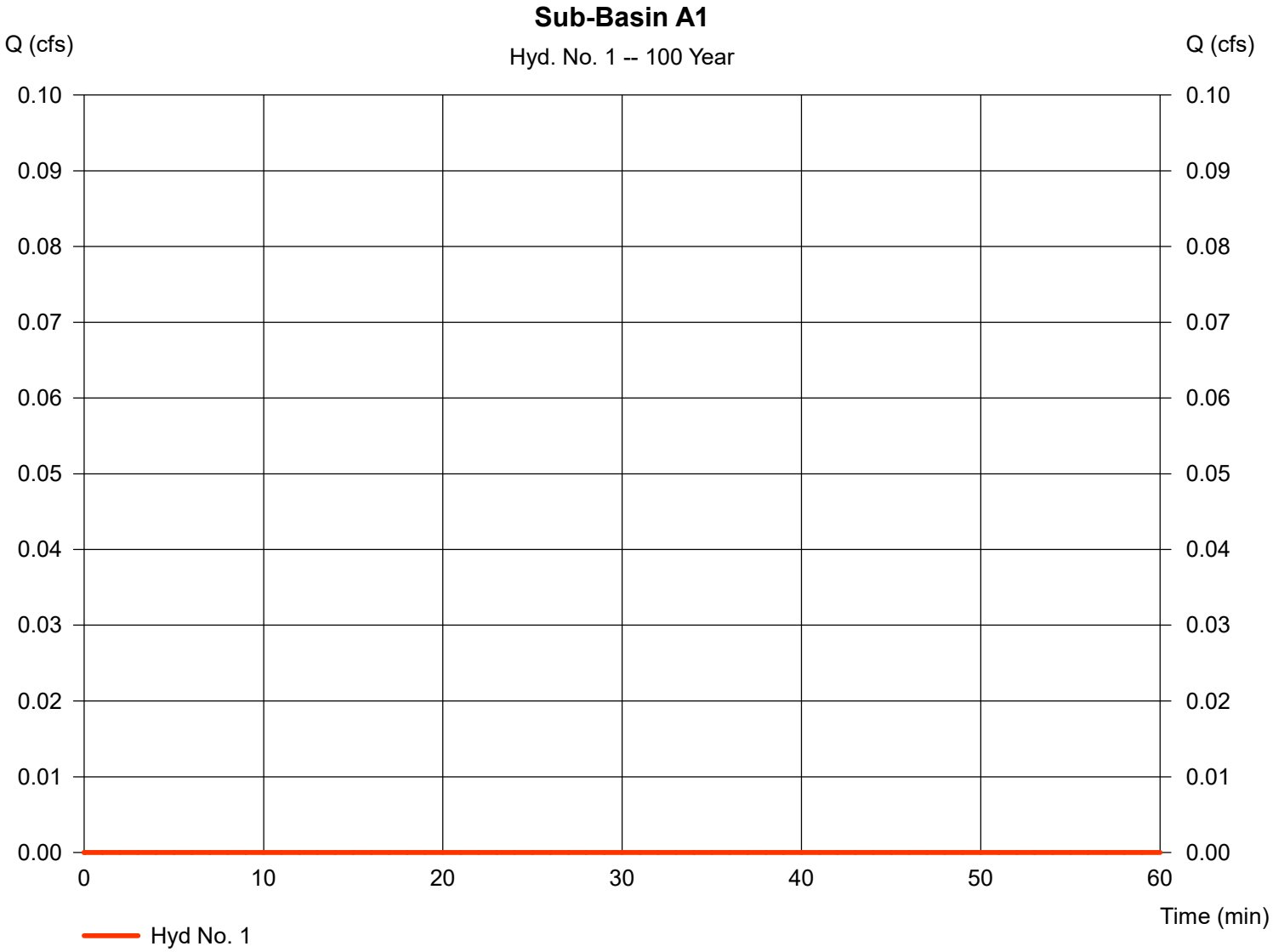
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



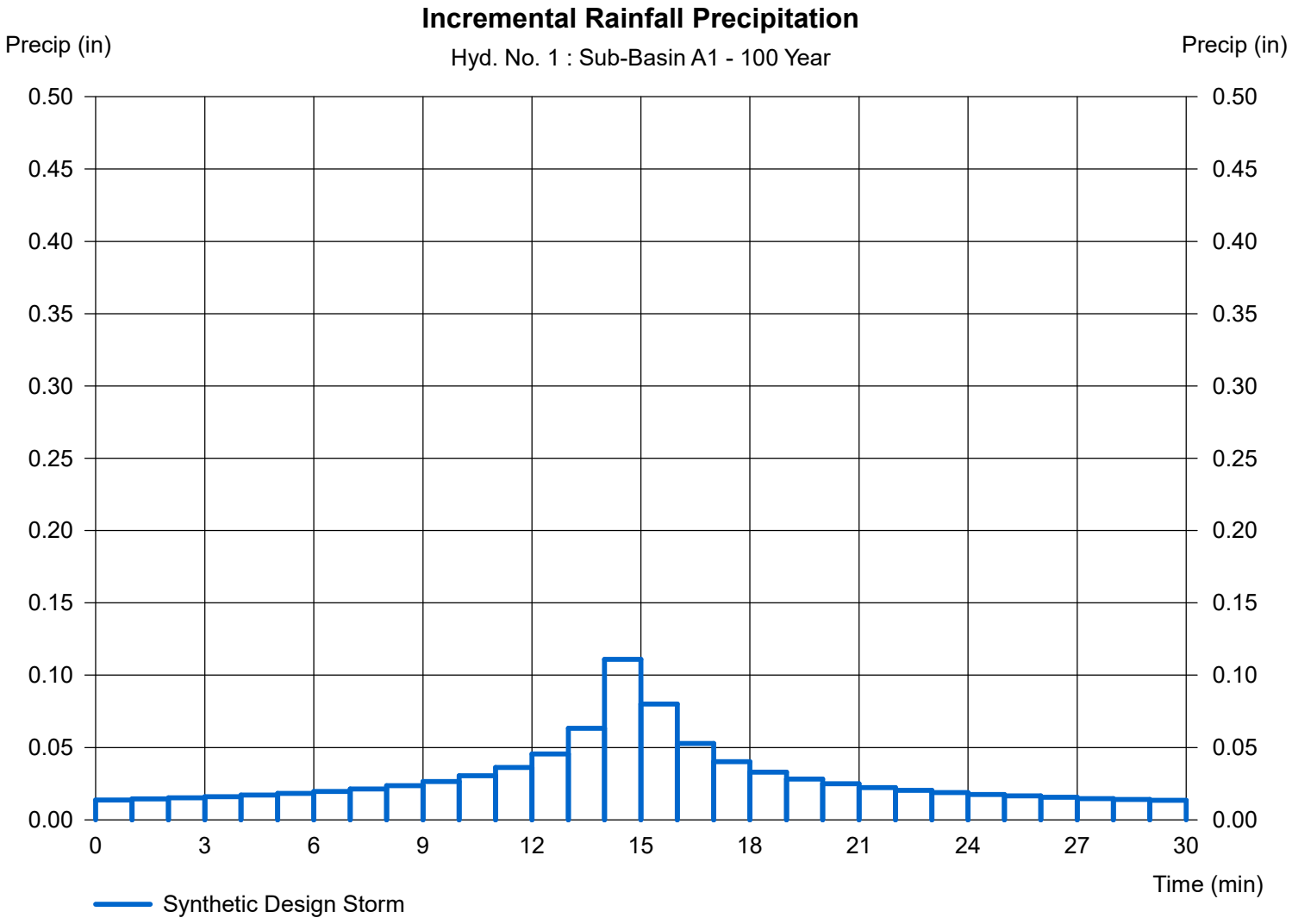
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



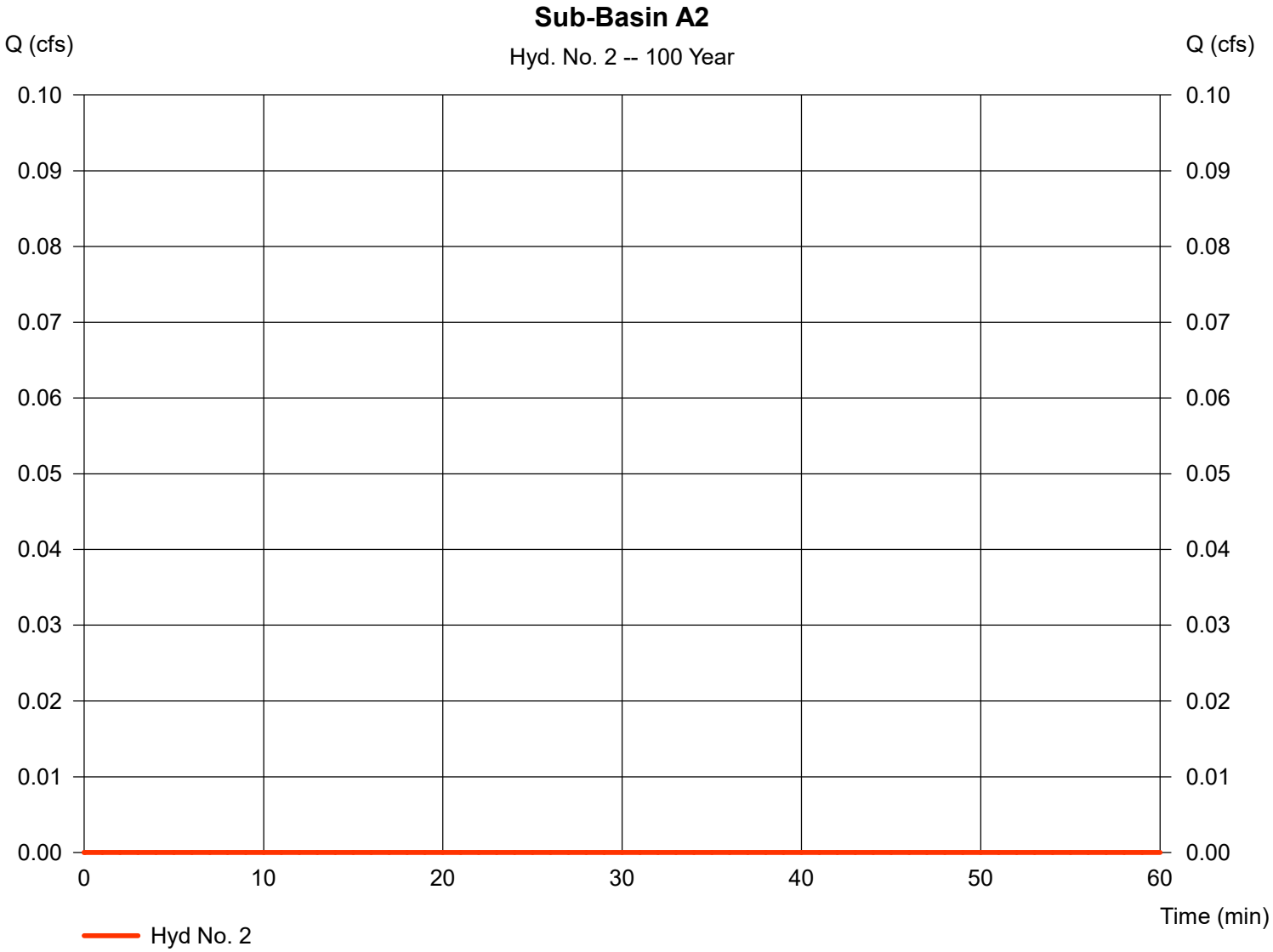
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



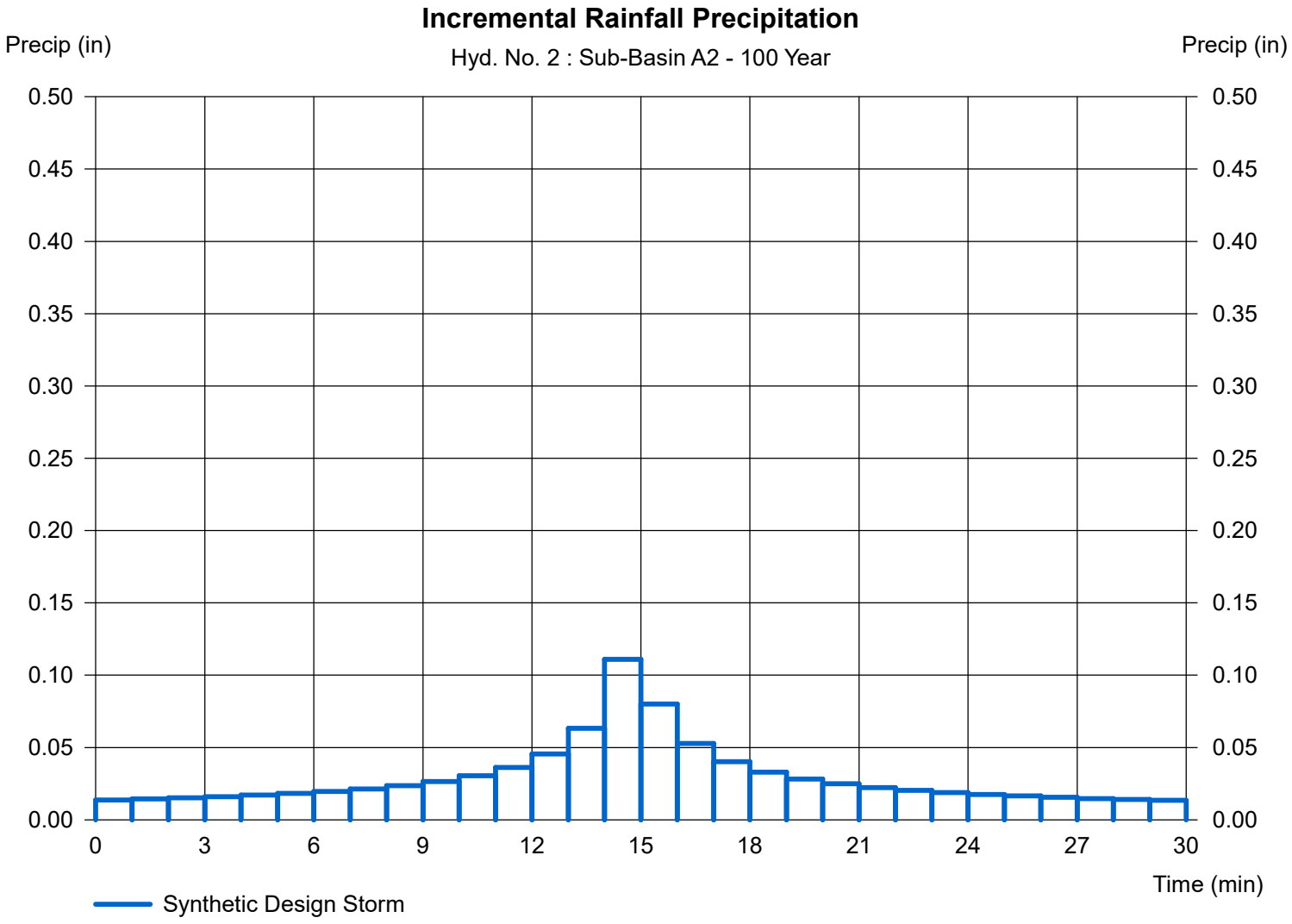
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



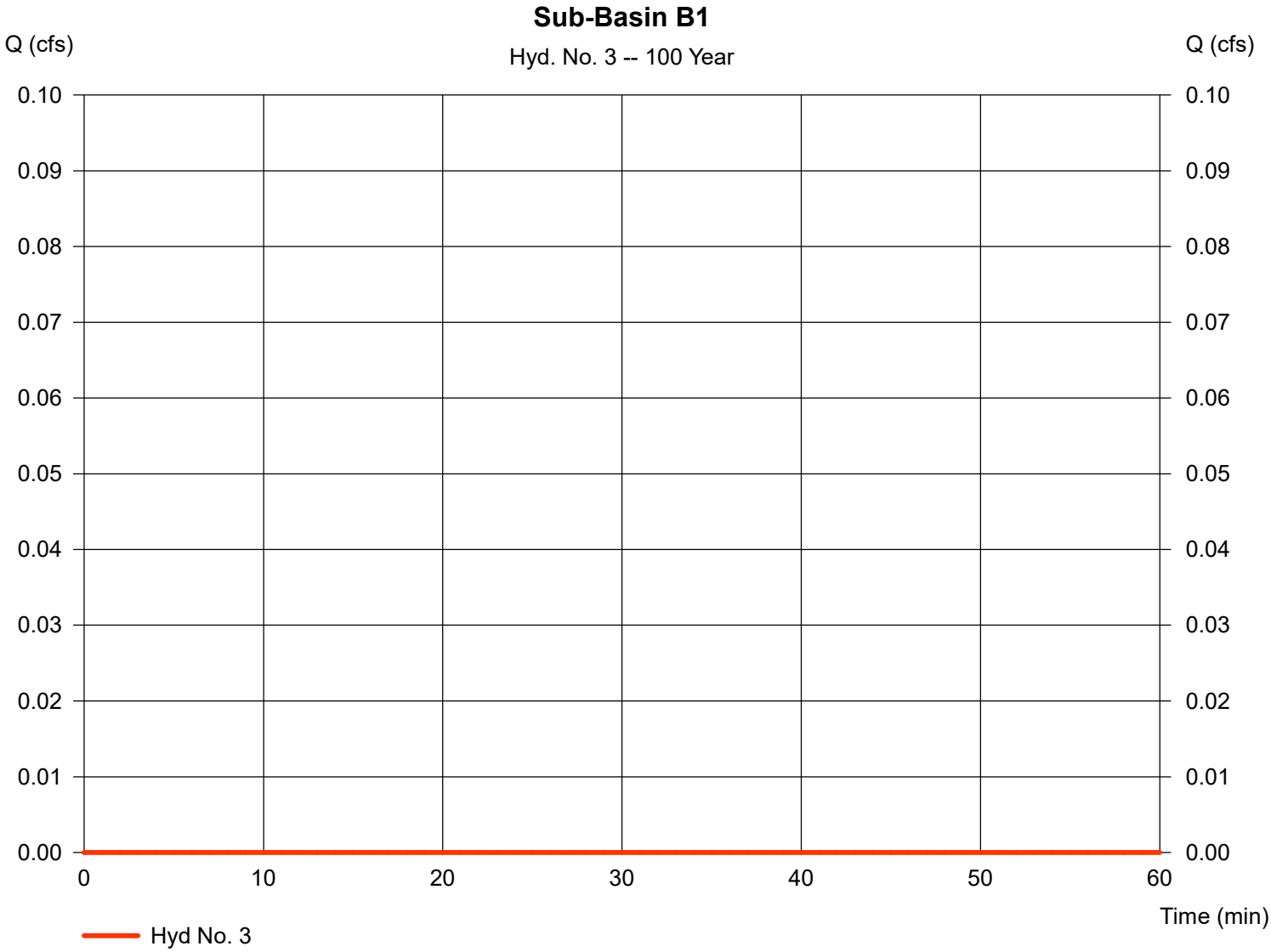
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



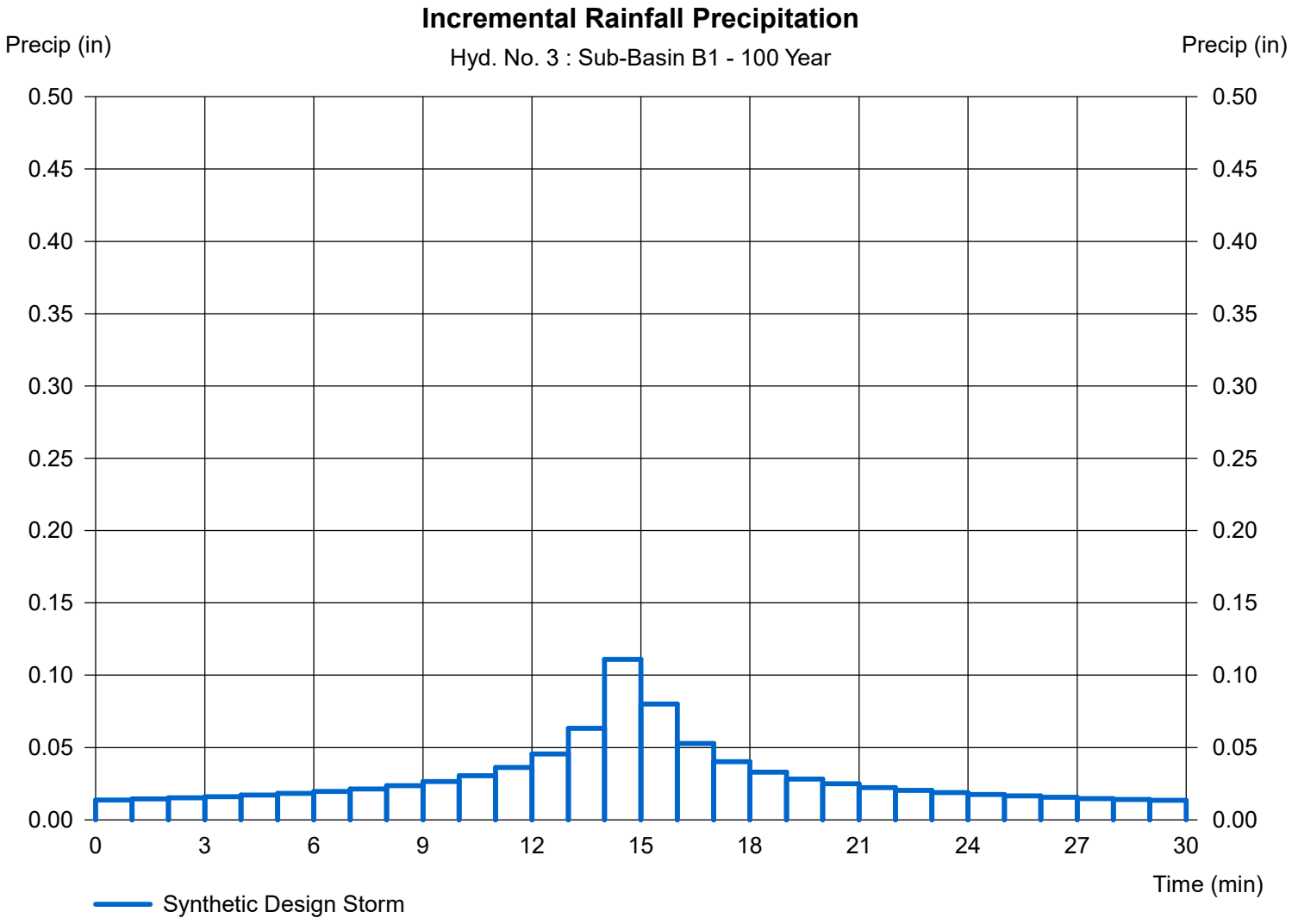
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



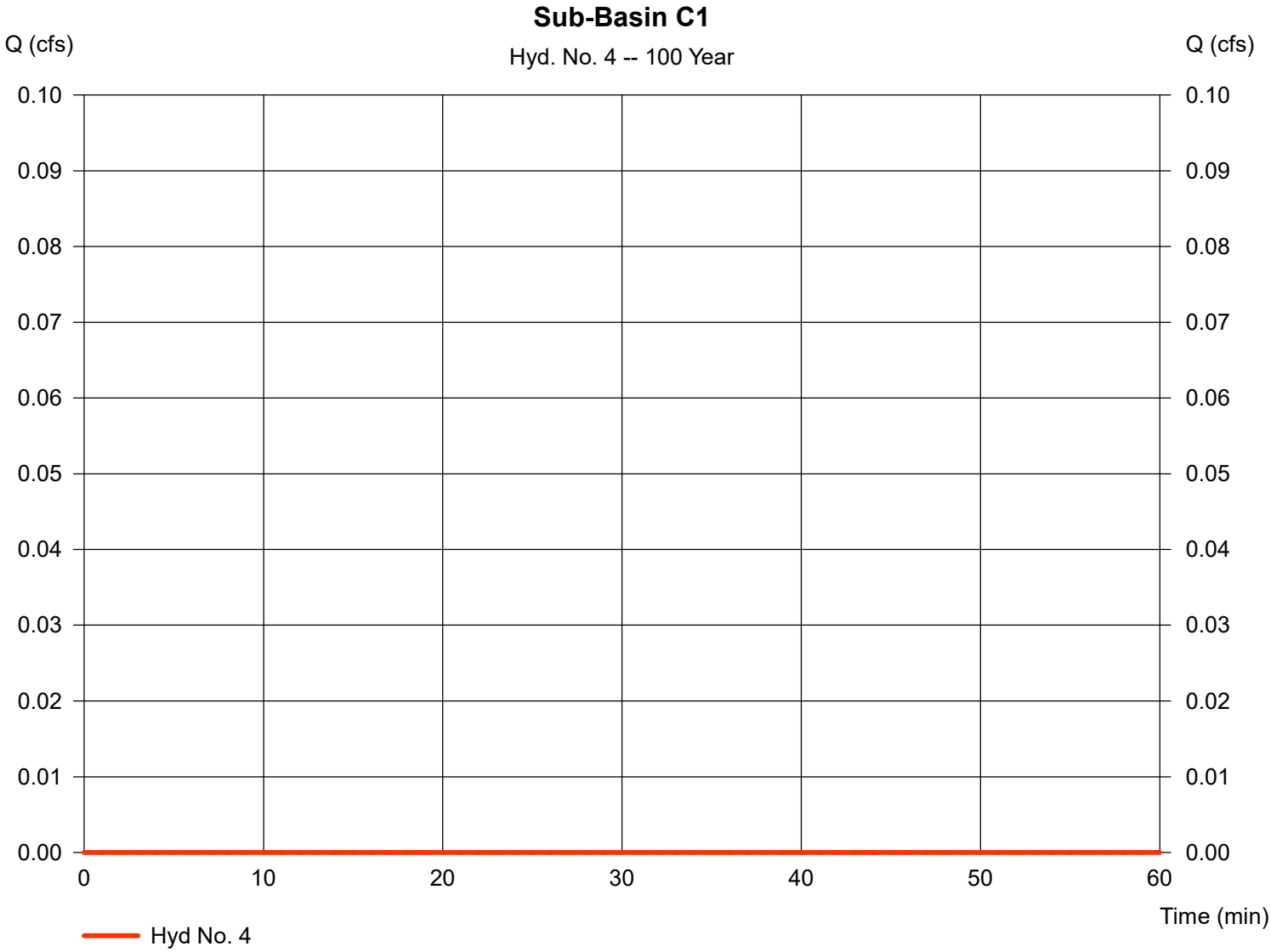
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



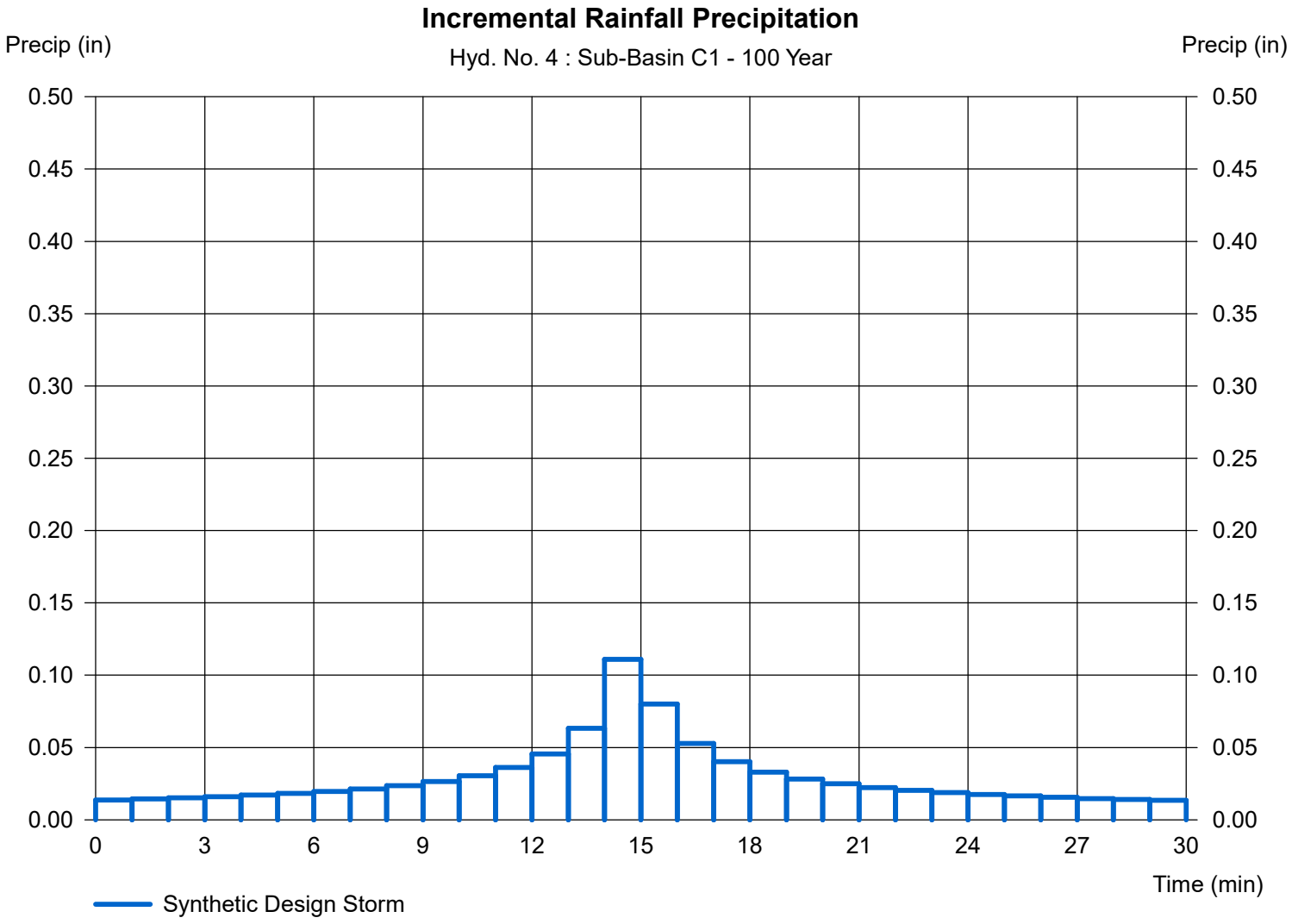
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

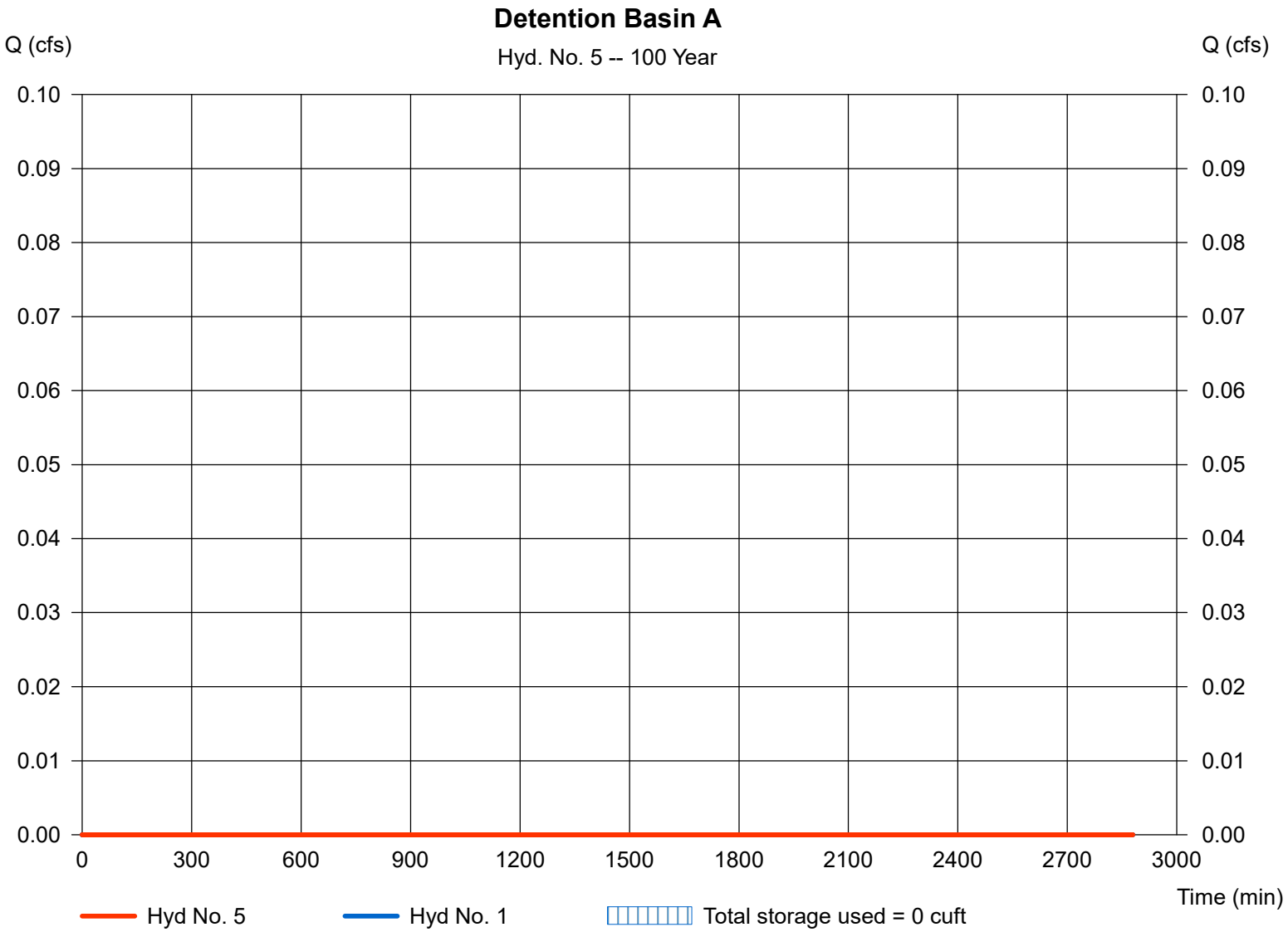
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



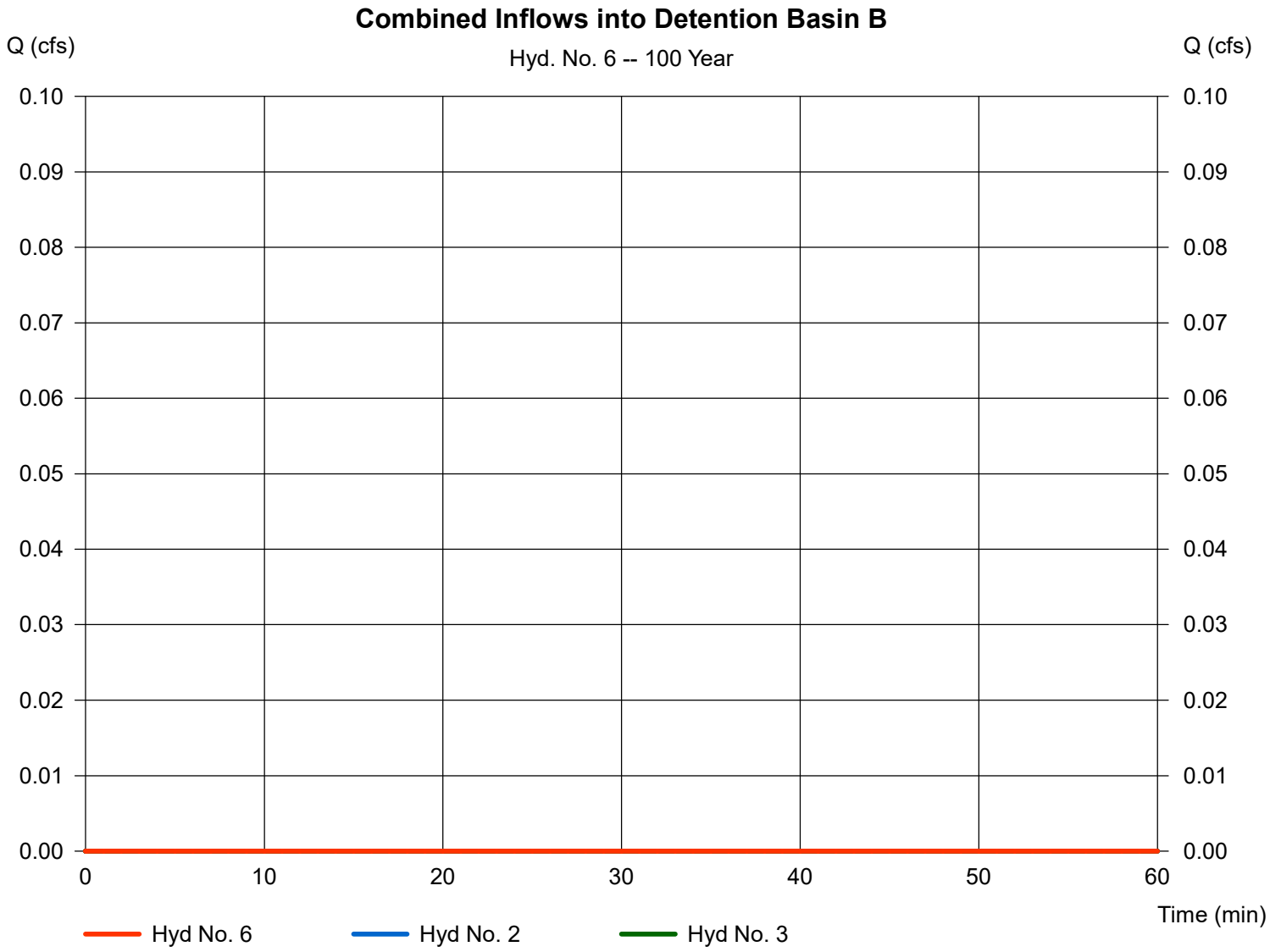
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

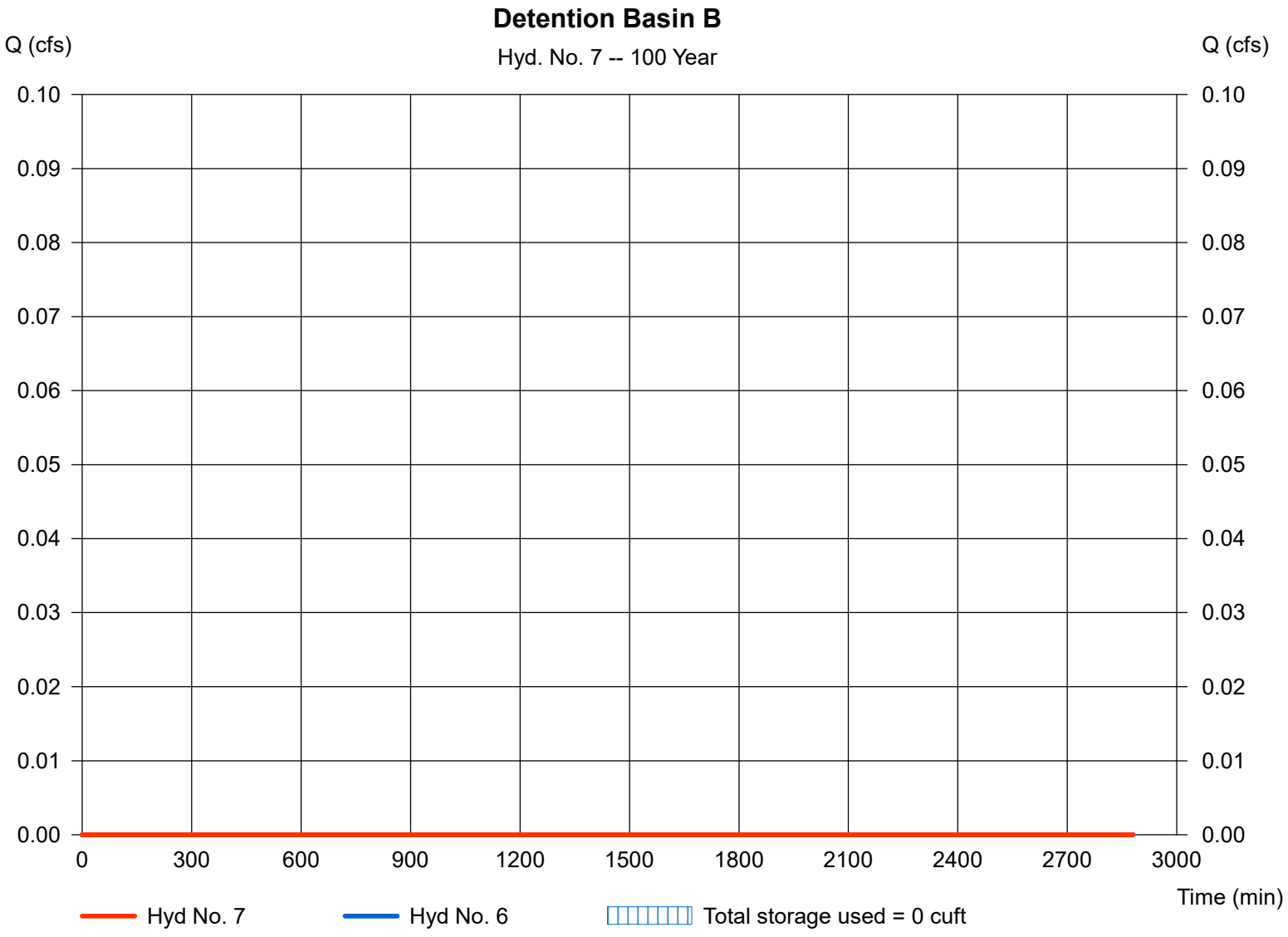
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Hydrograph Report

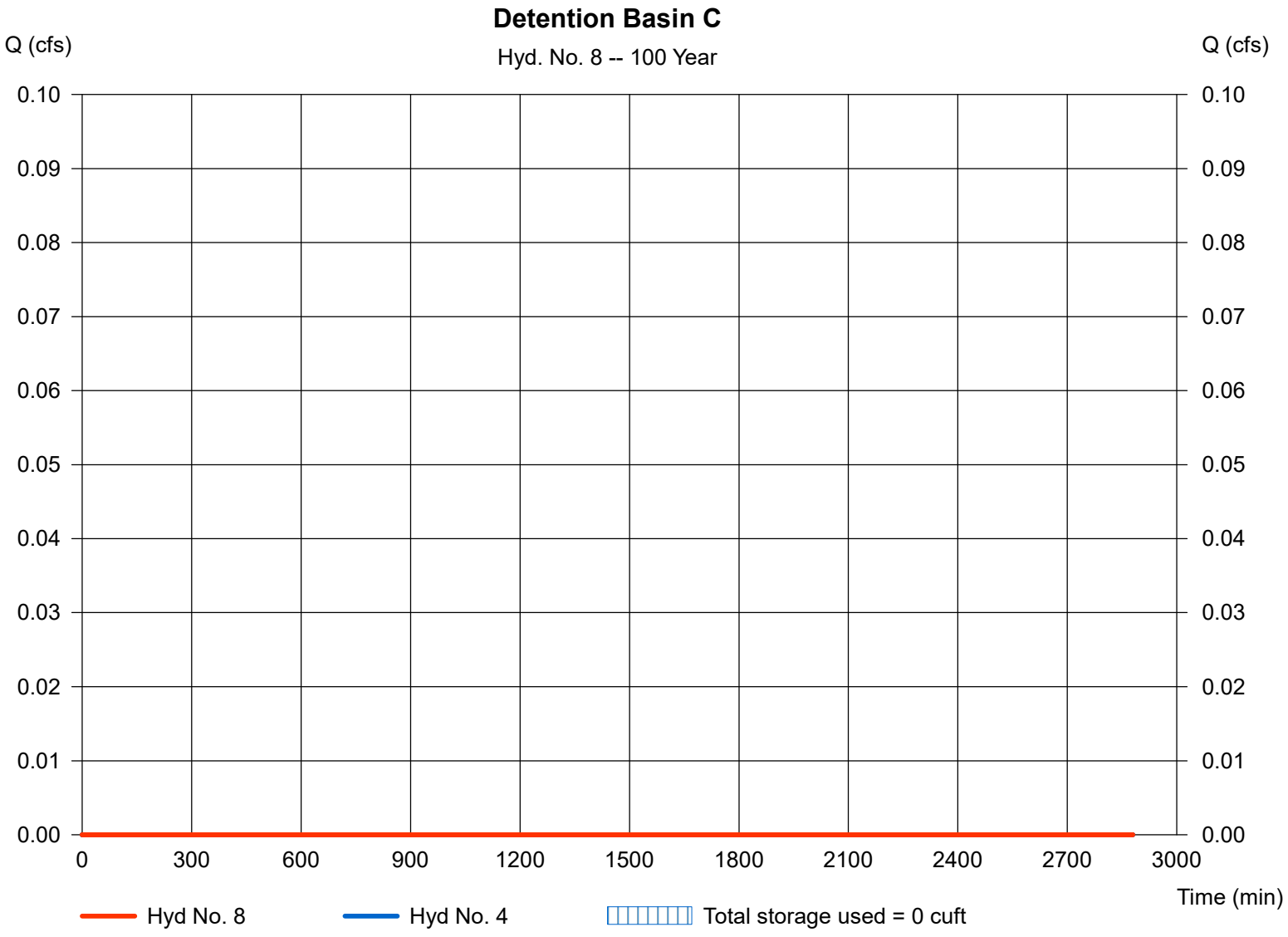
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



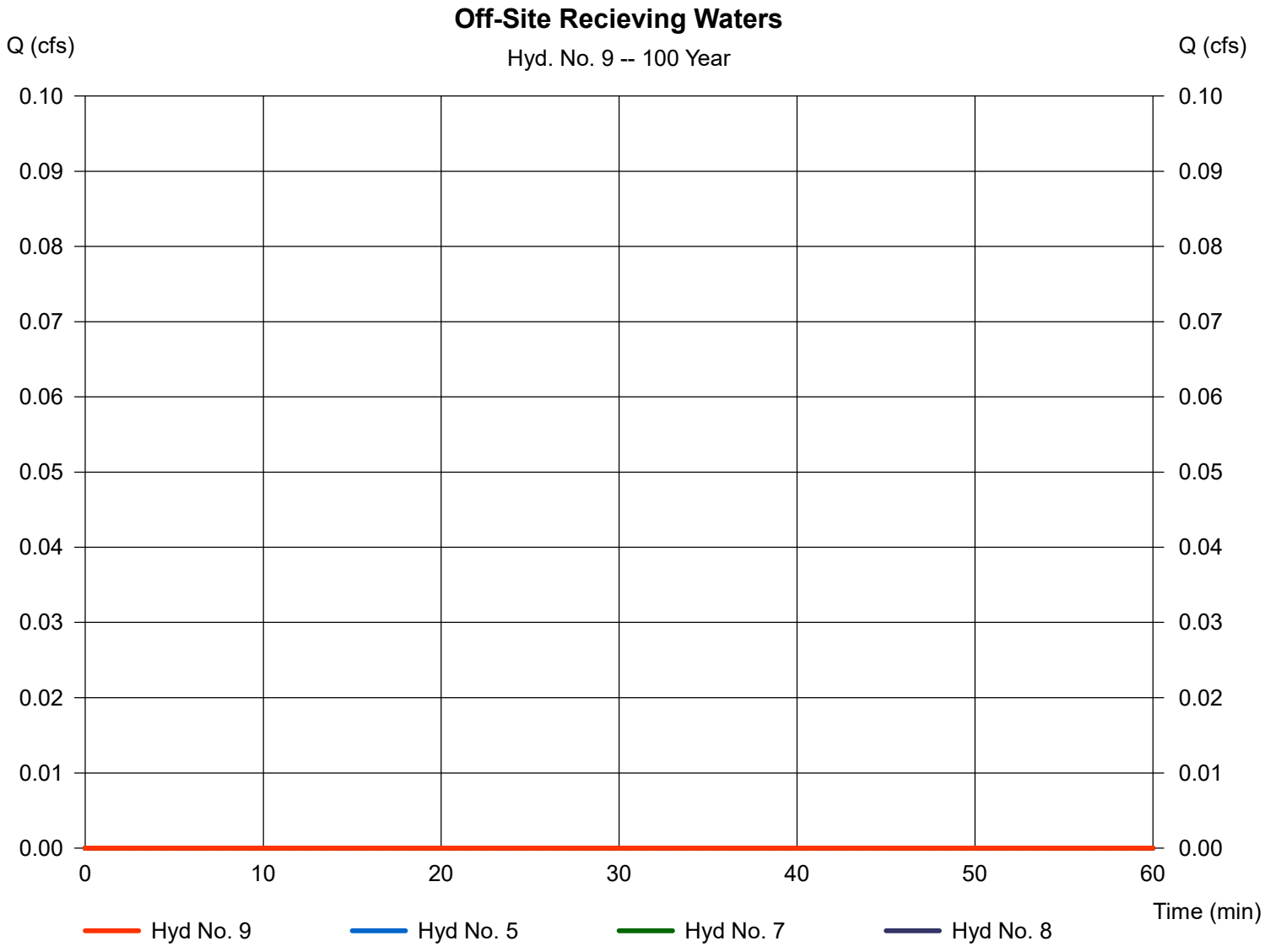
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 100 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

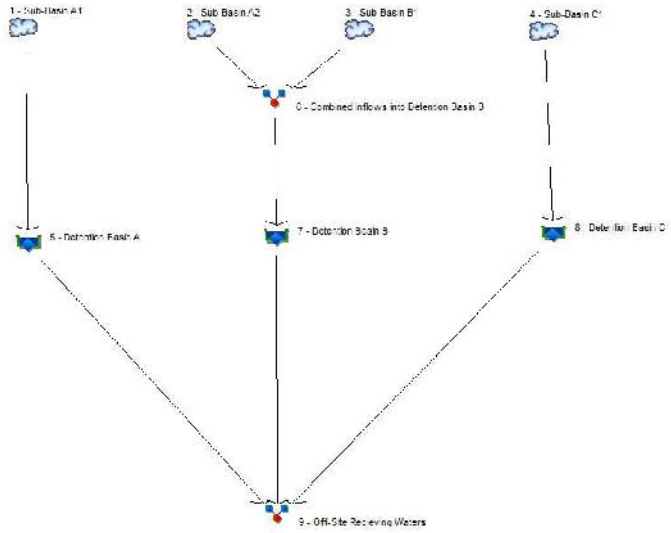
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.51 | 0.65 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 2 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

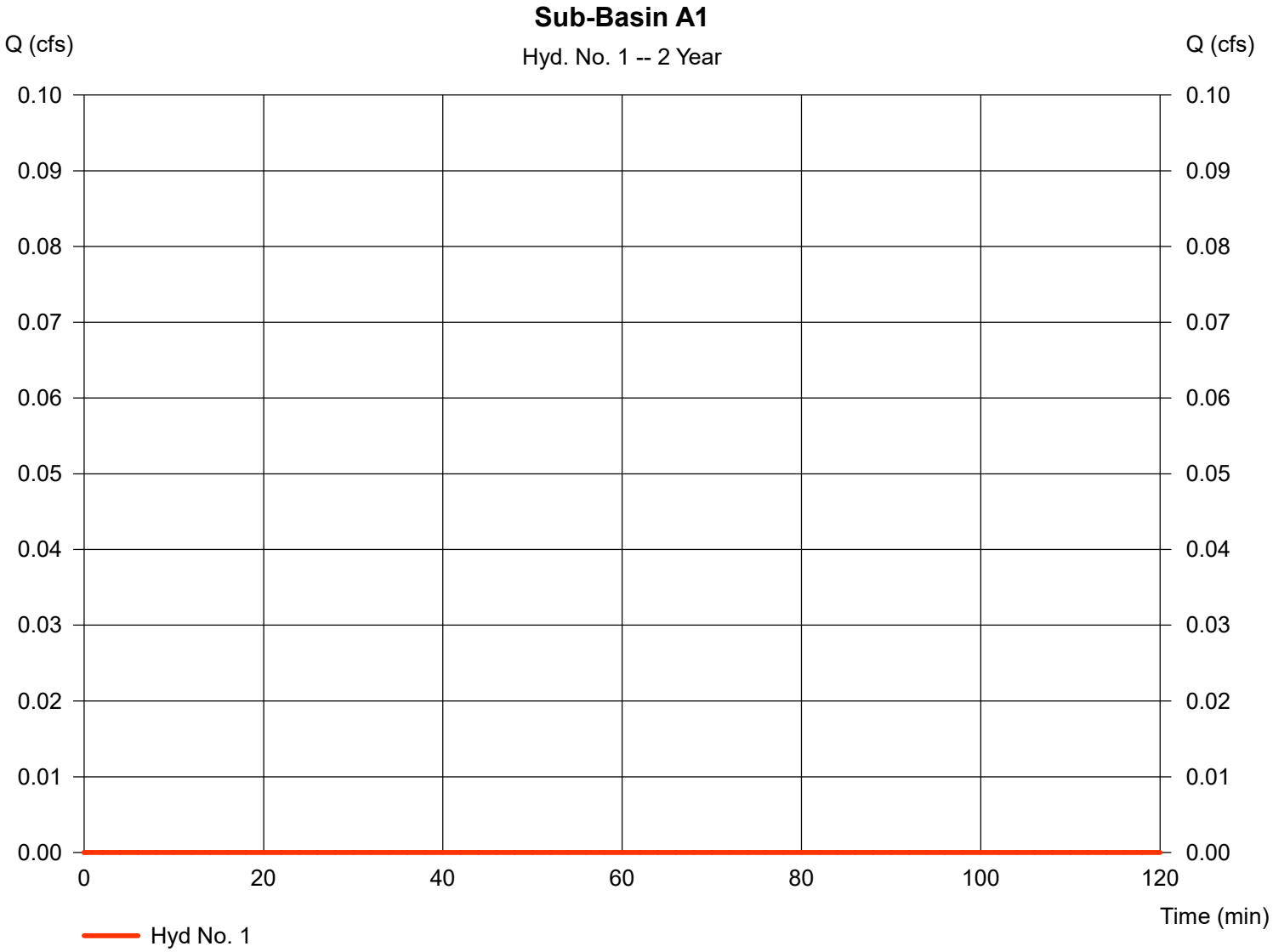
# Hydrograph Report



## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



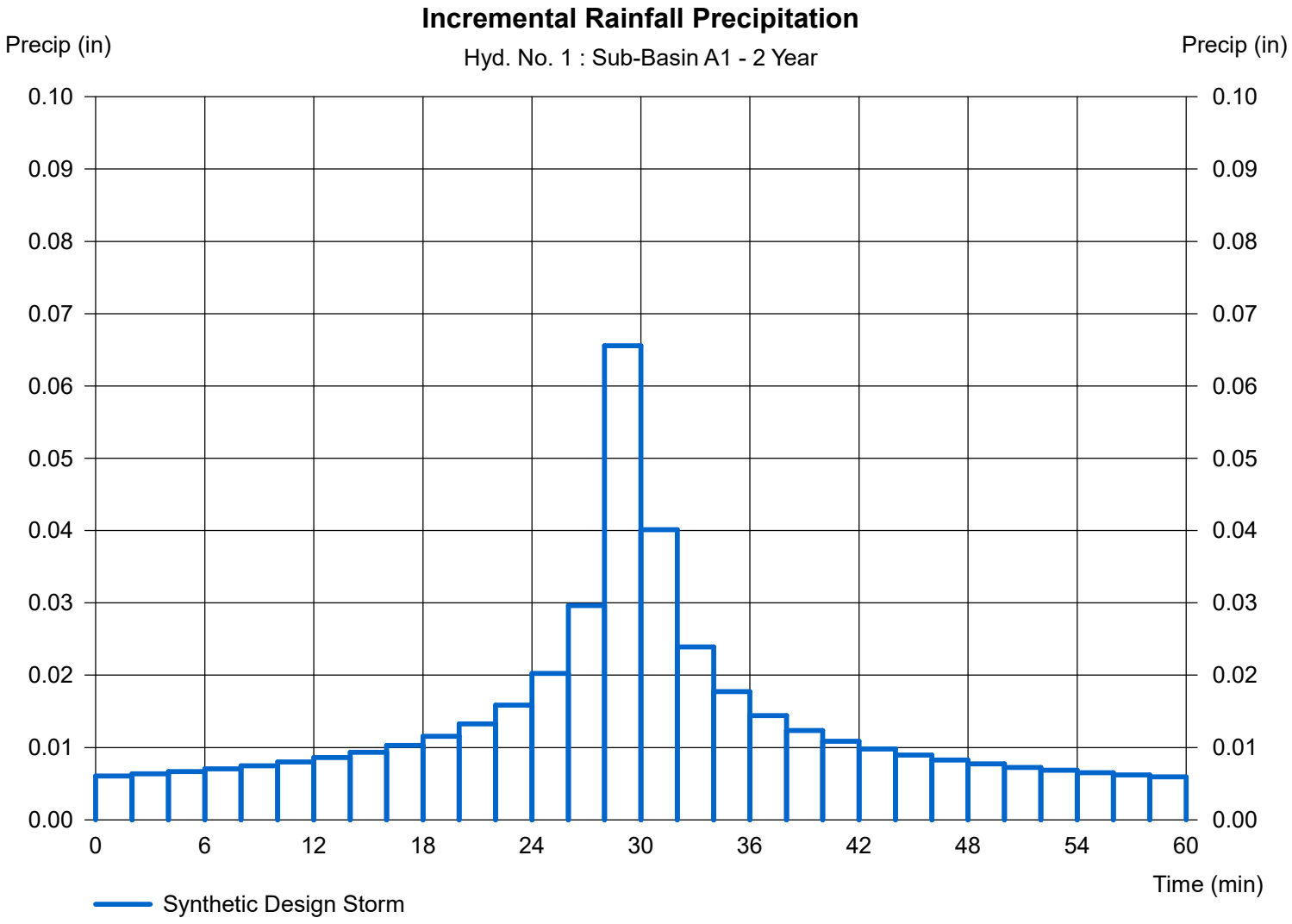
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



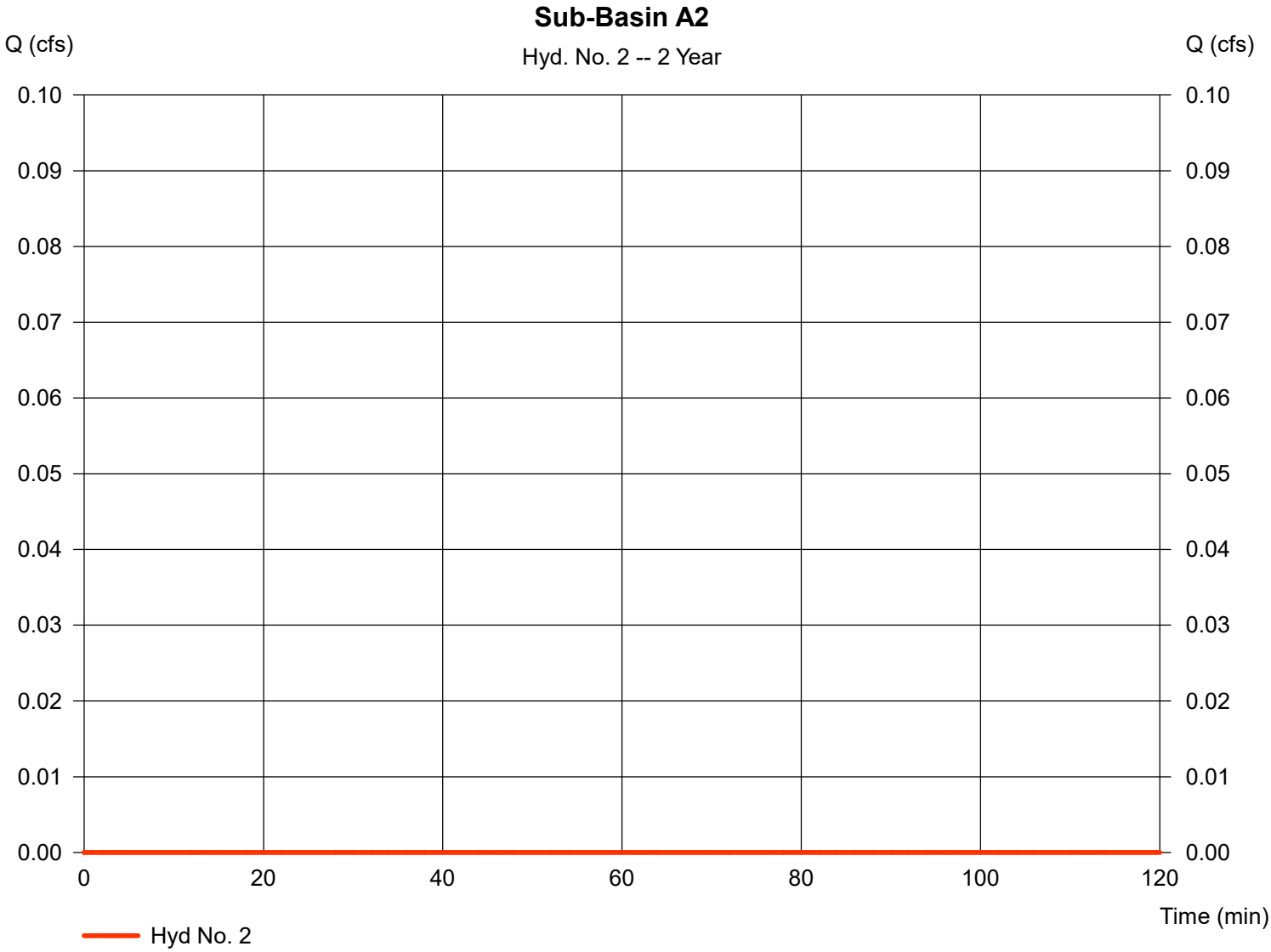
# Hydrograph Report



## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



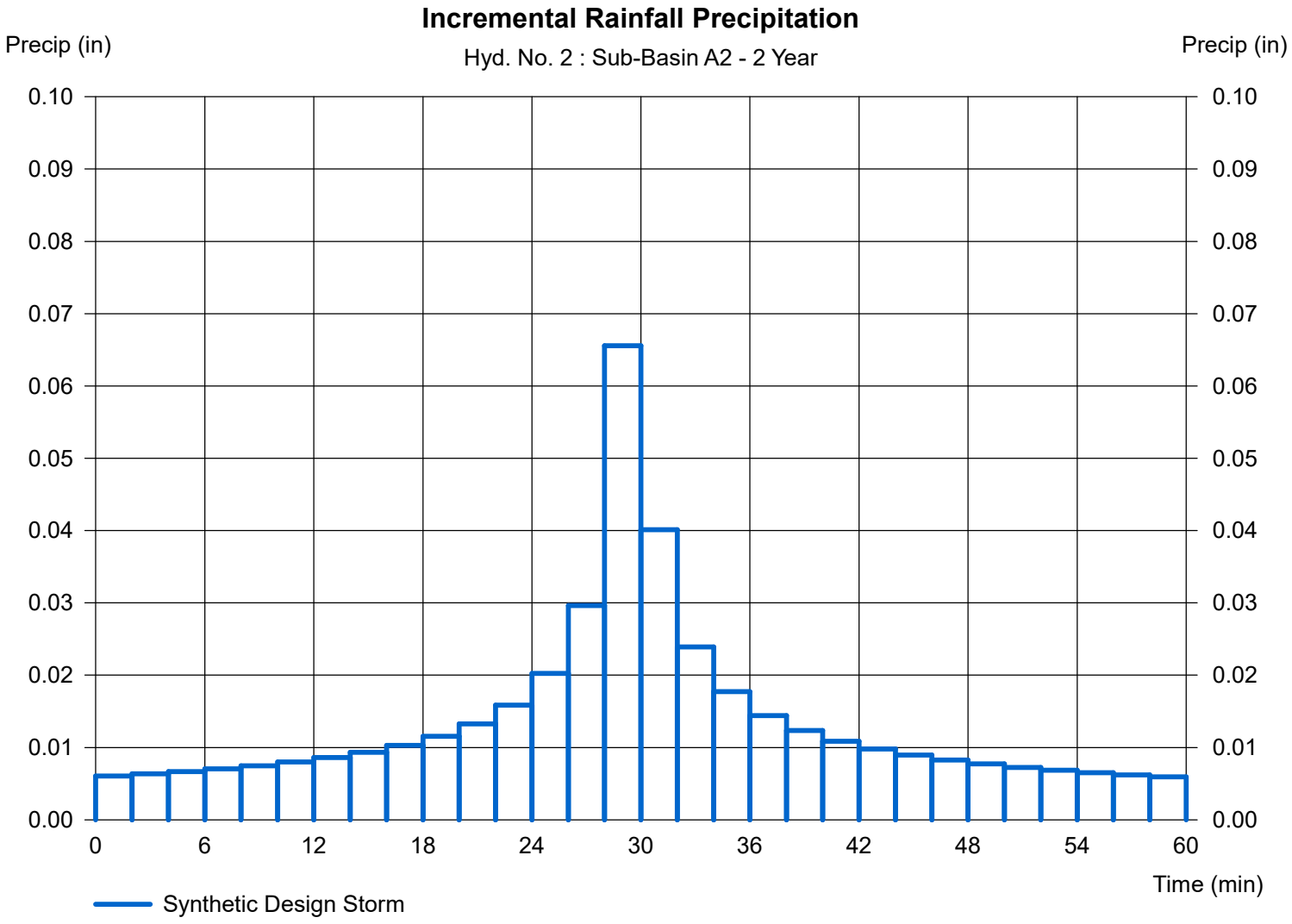
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



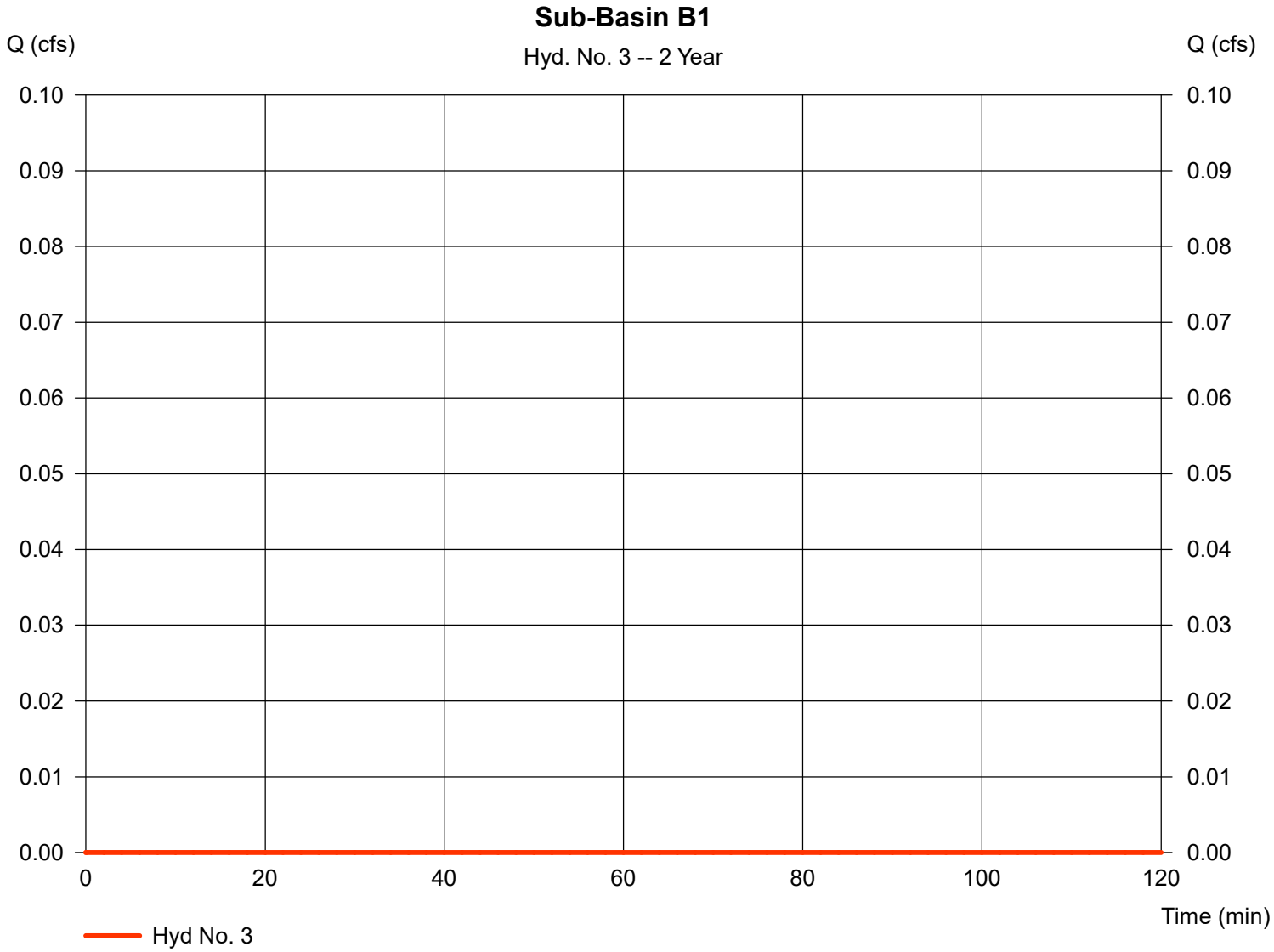
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



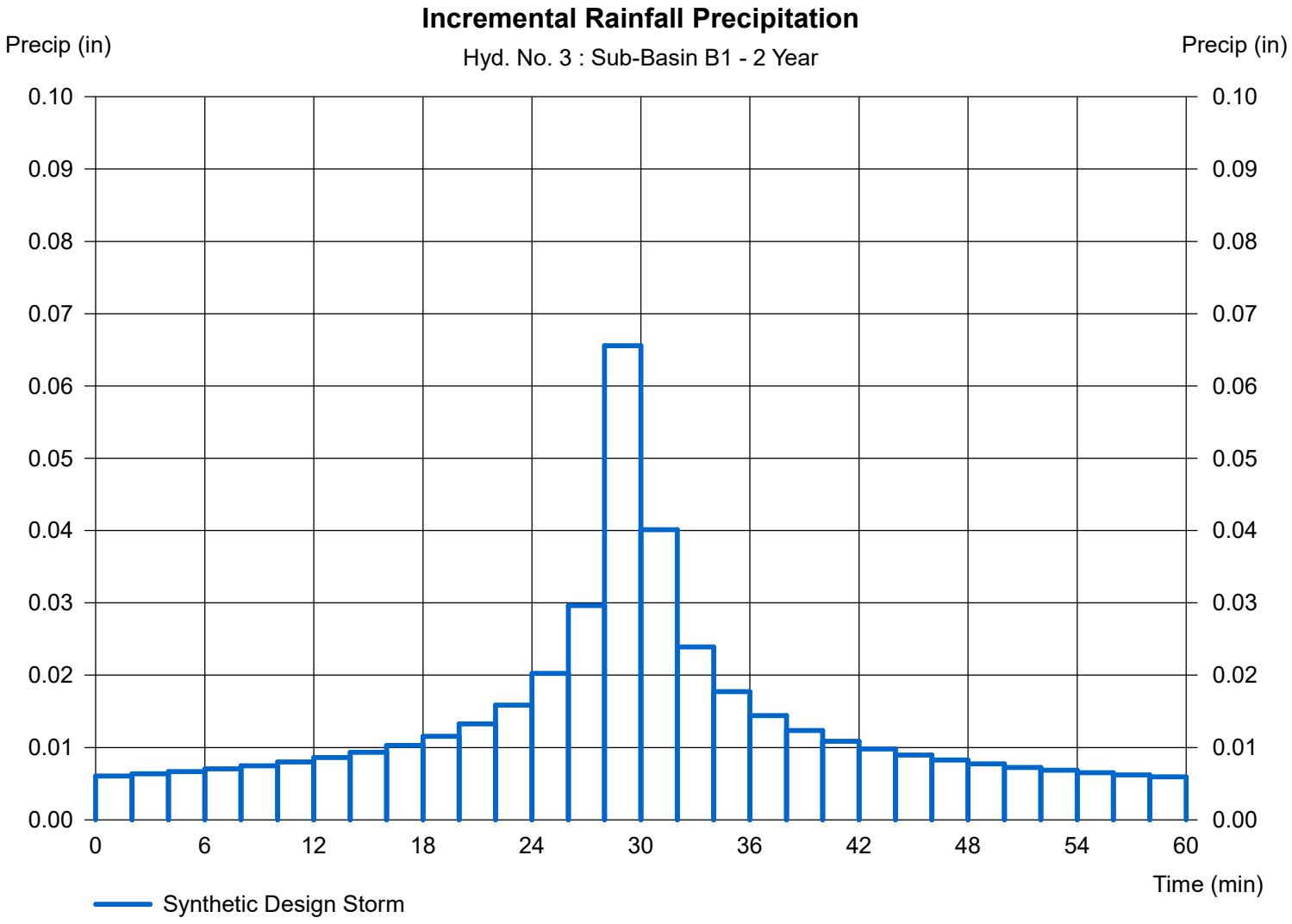
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



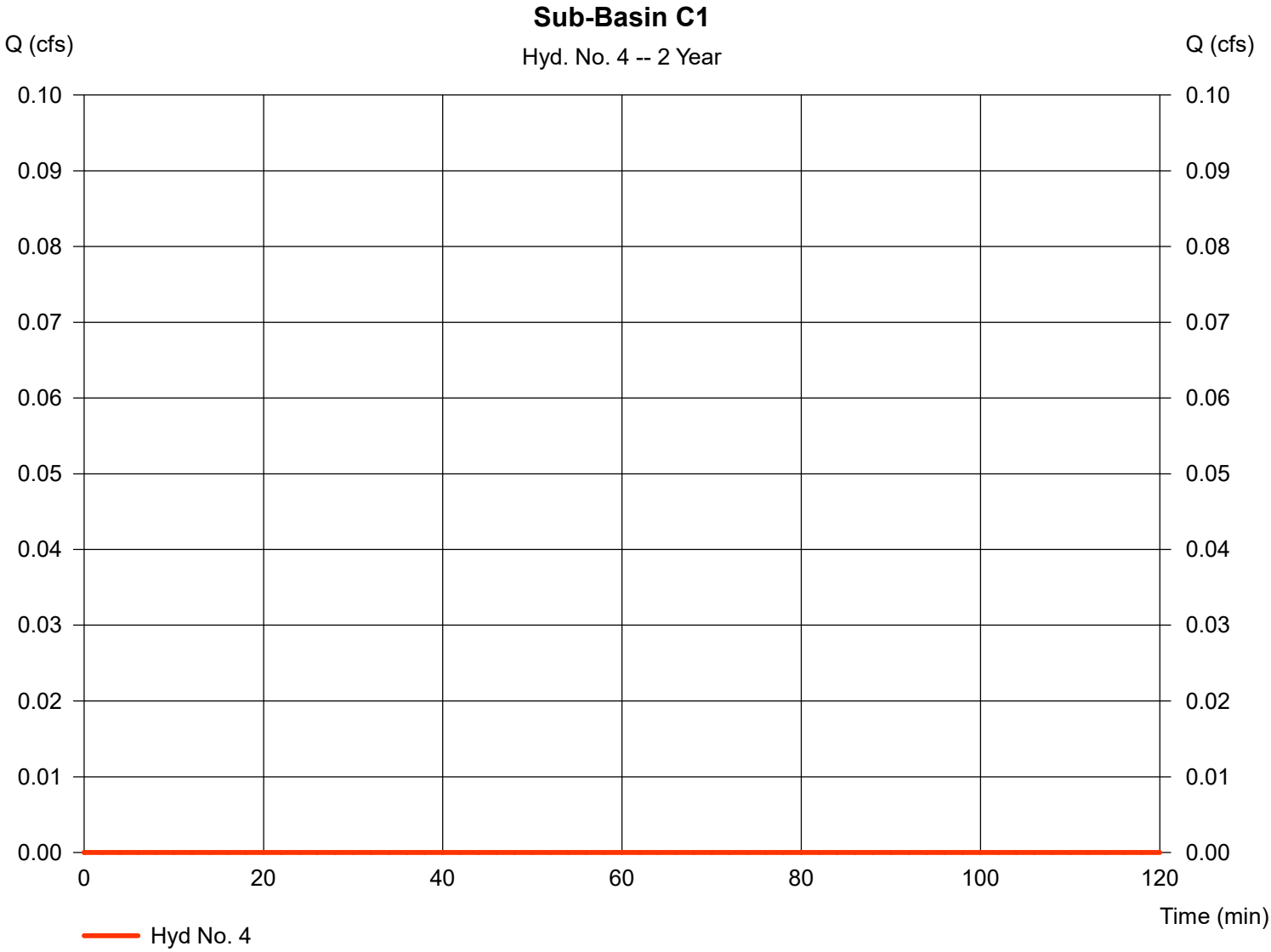
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.41 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



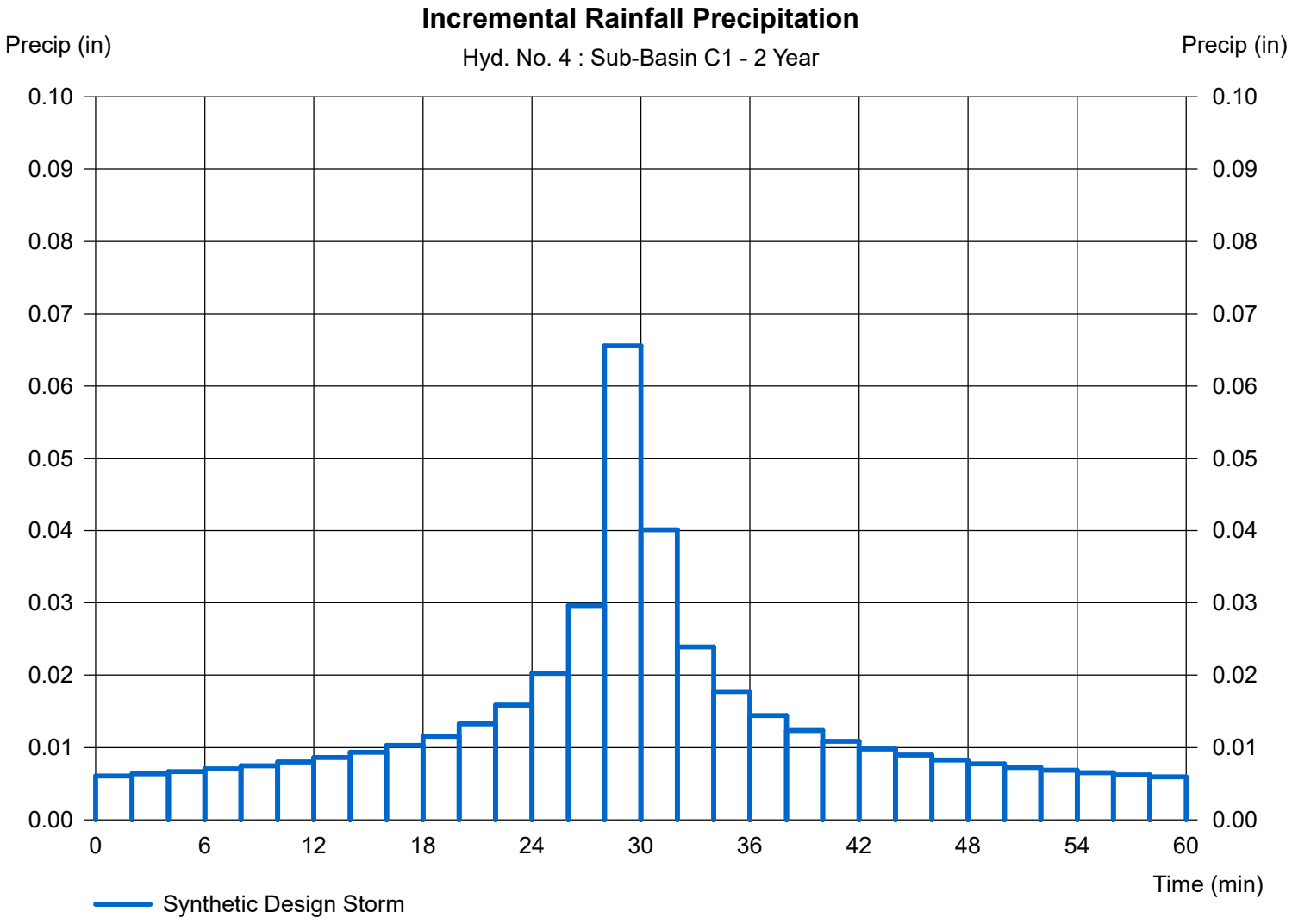
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.4130 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



# Hydrograph Report

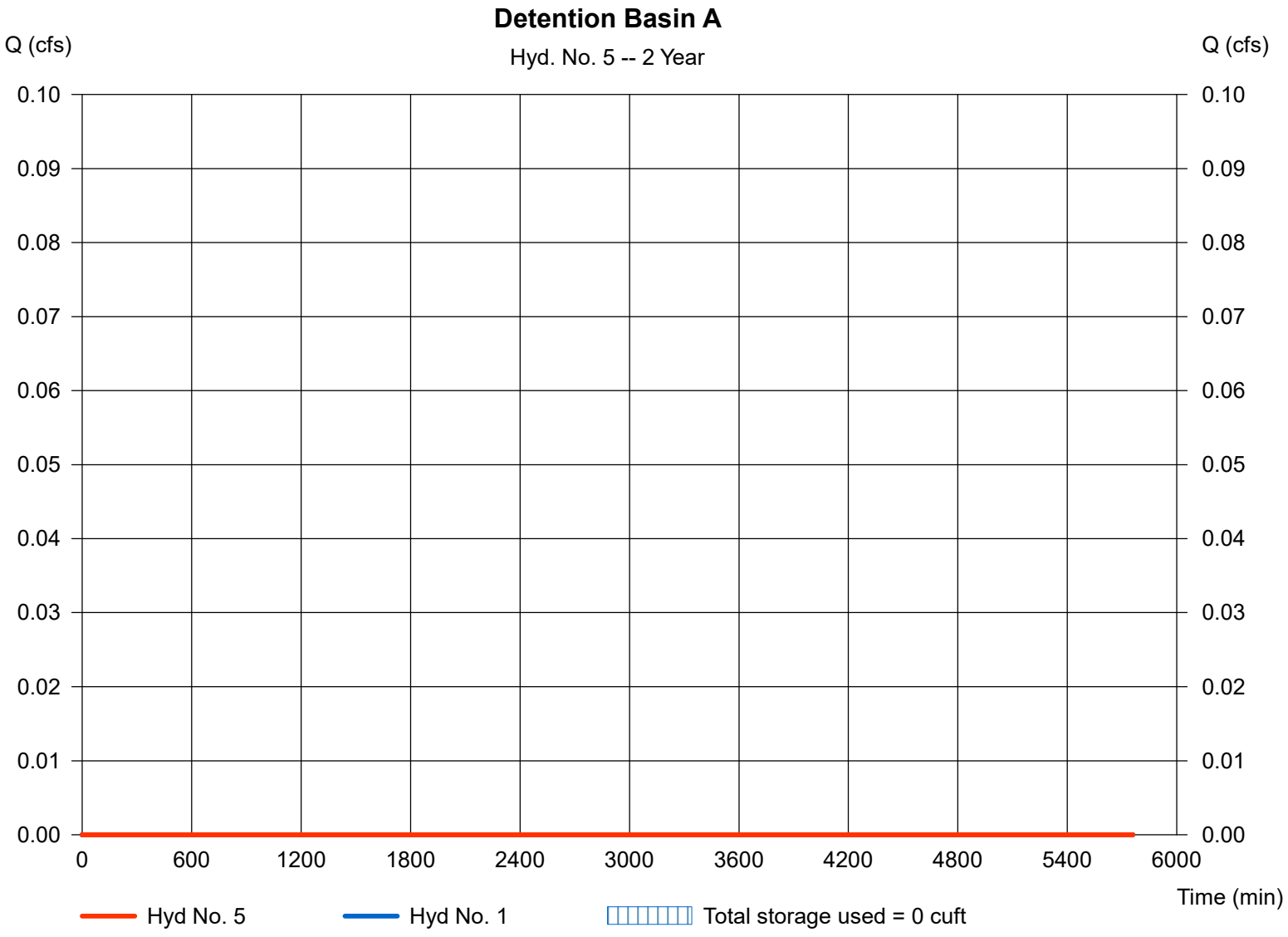
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

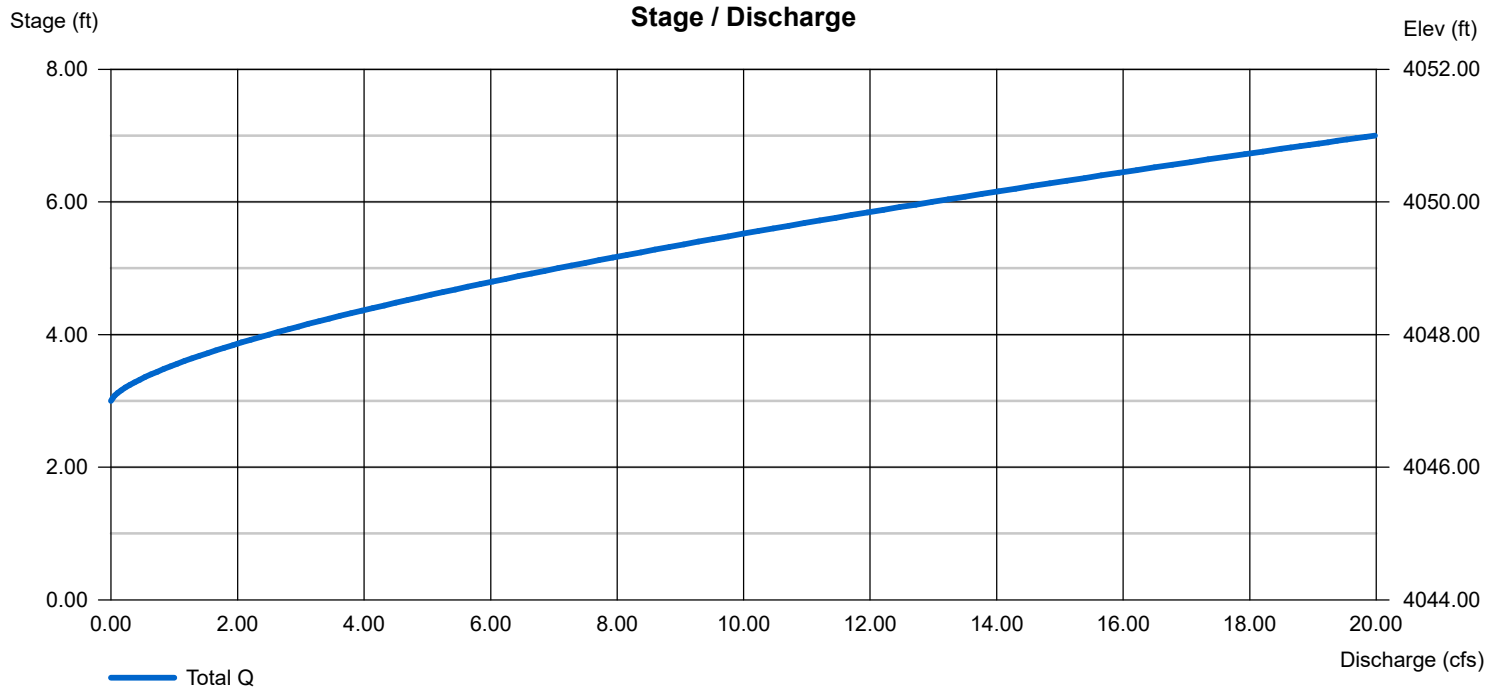
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



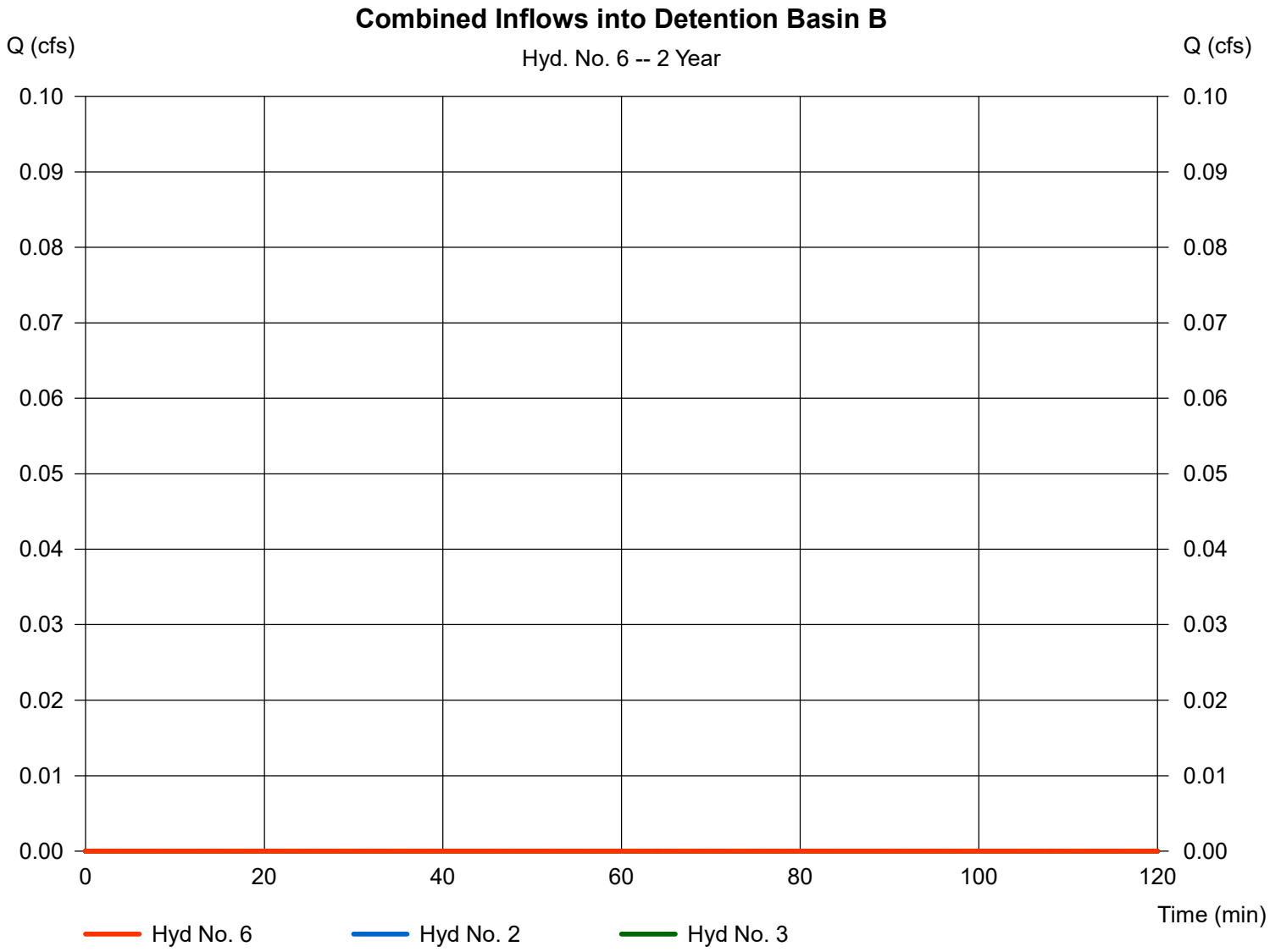
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

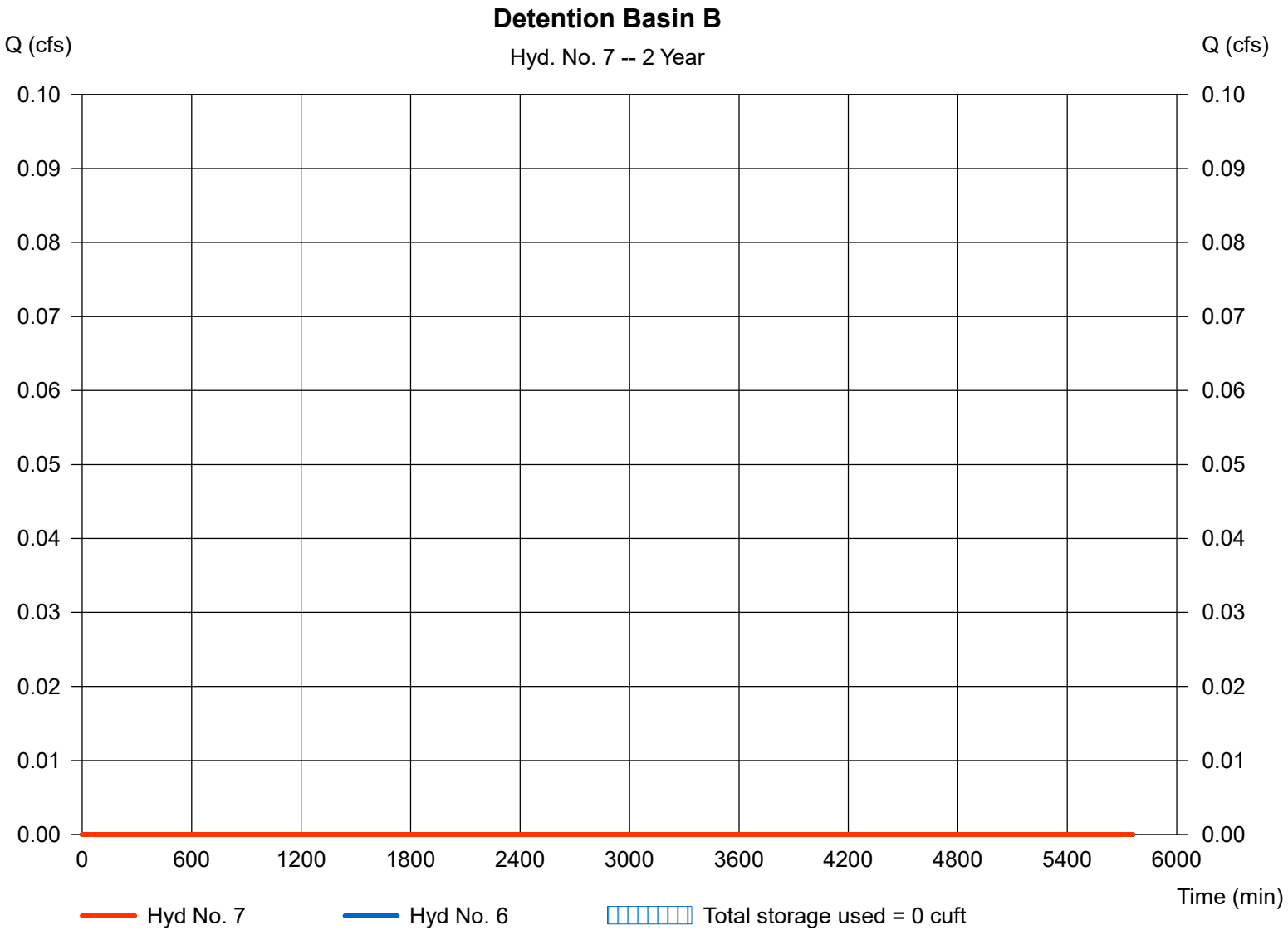
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

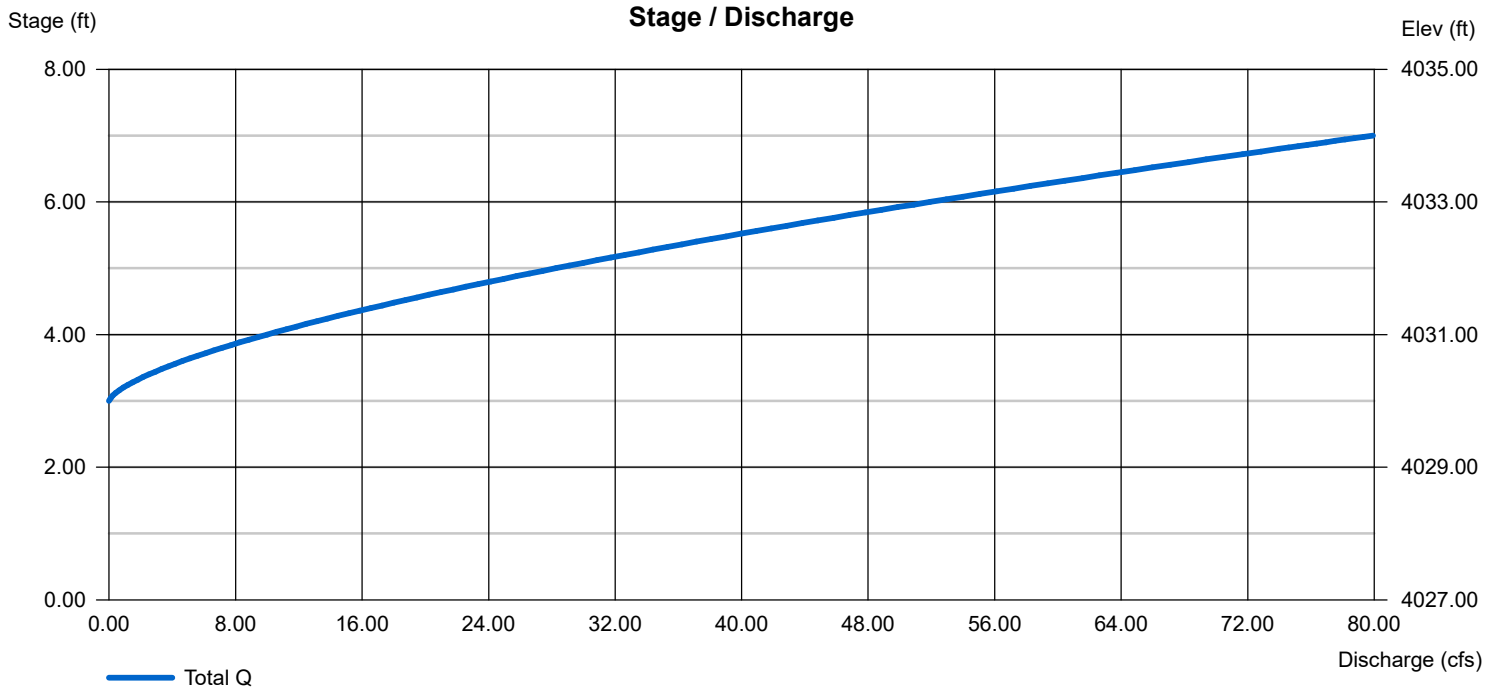
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

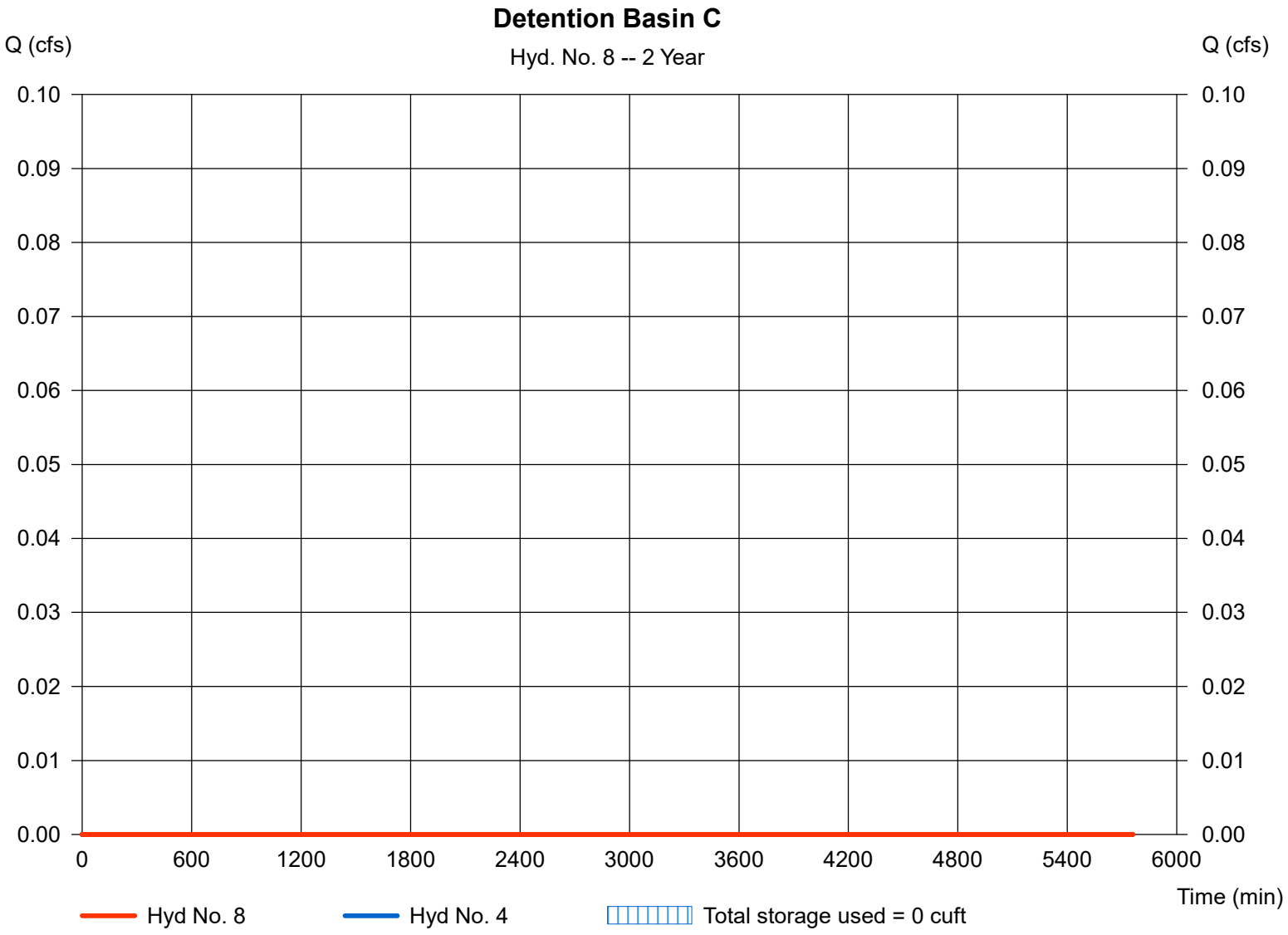
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

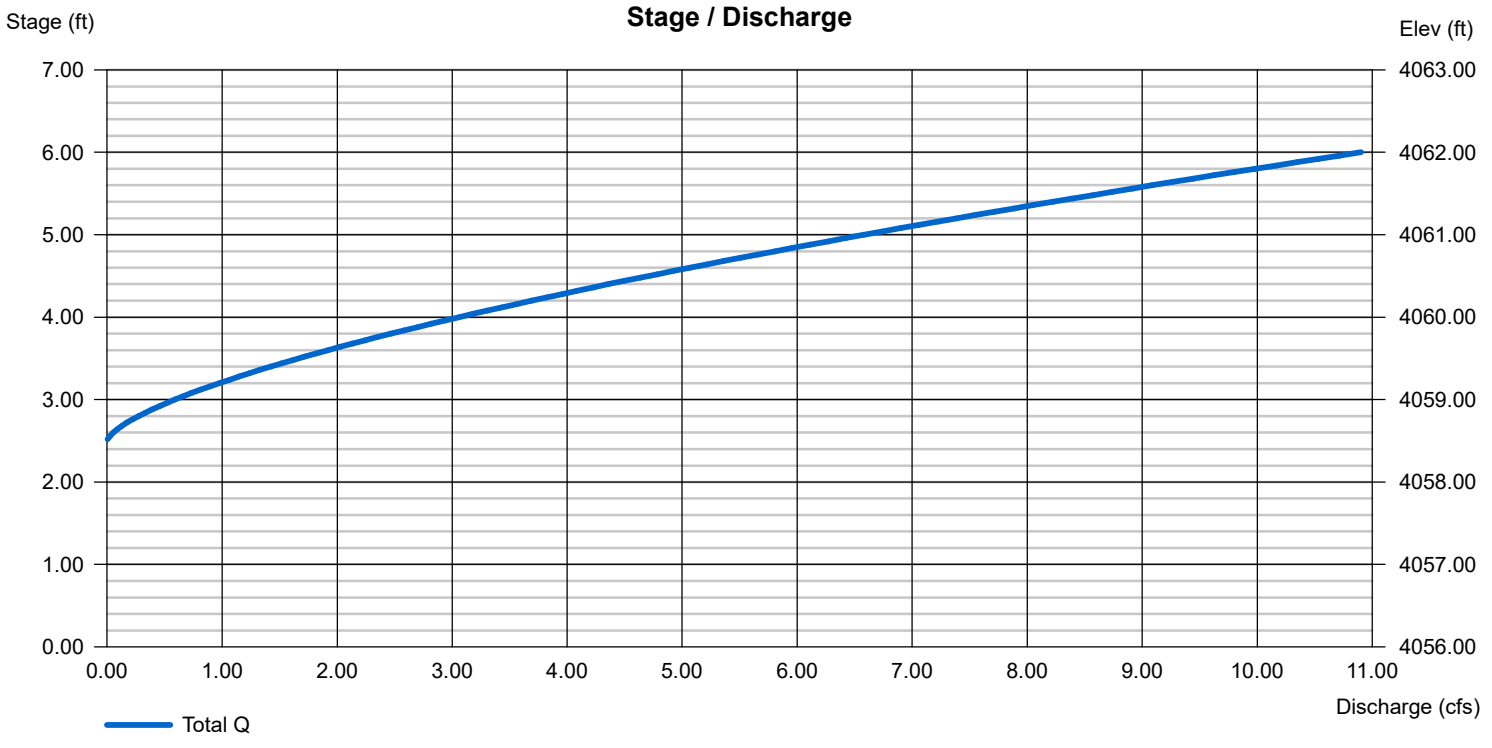
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



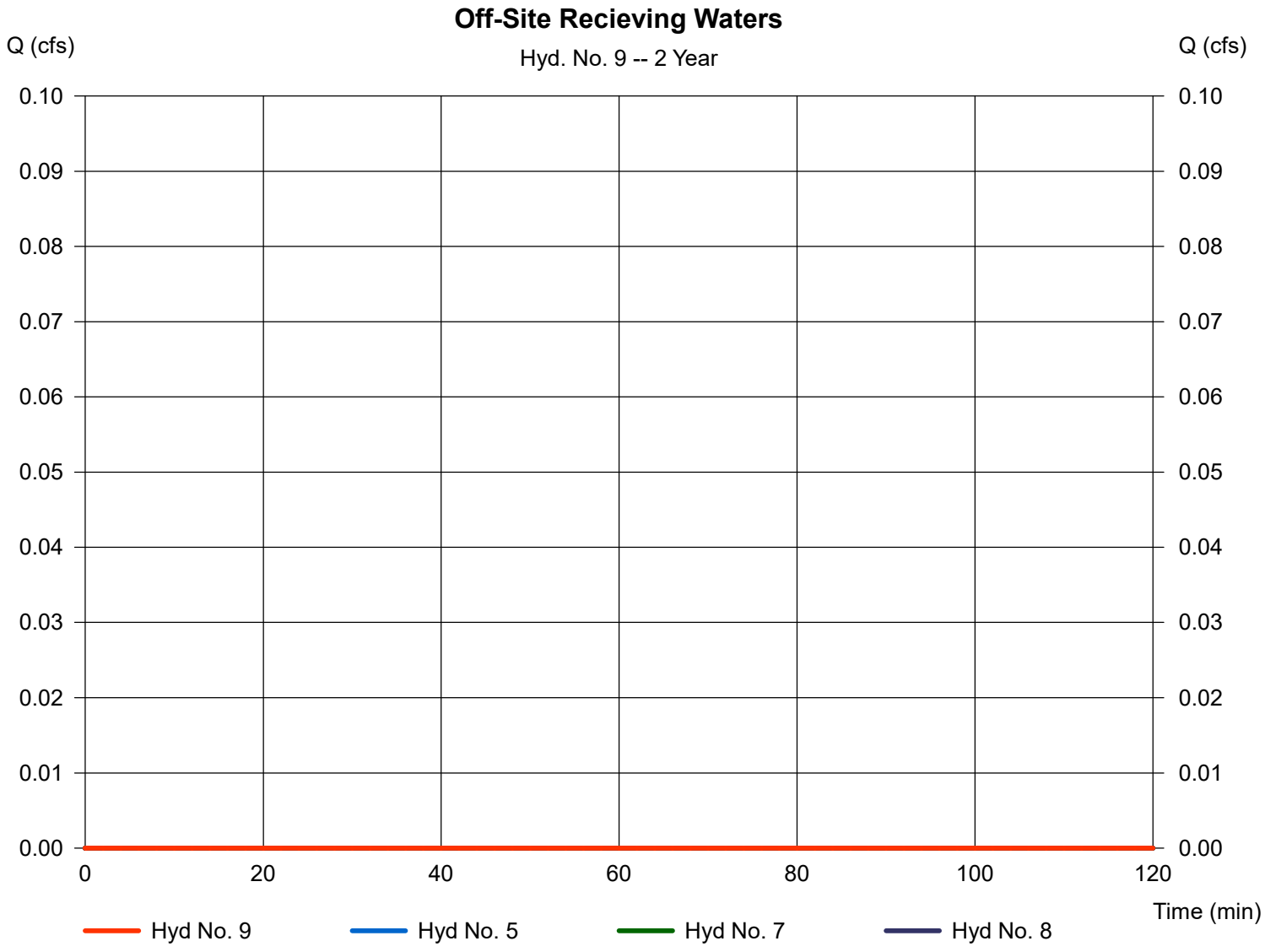
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

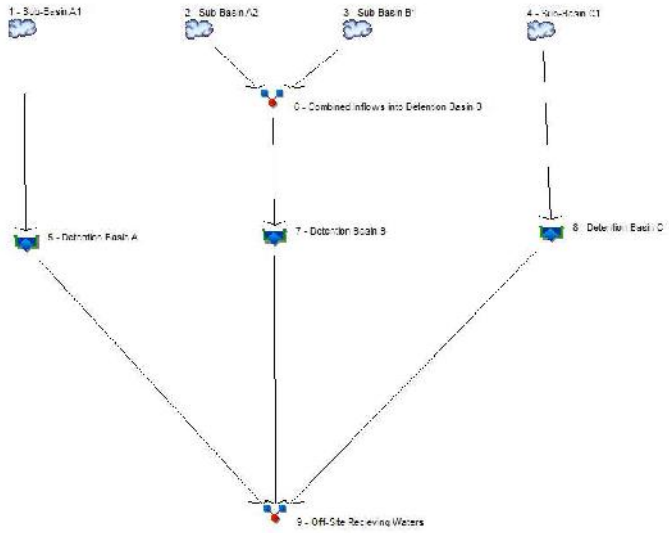
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.69 | 0.88 | 0.00 | 1.20 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 2 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

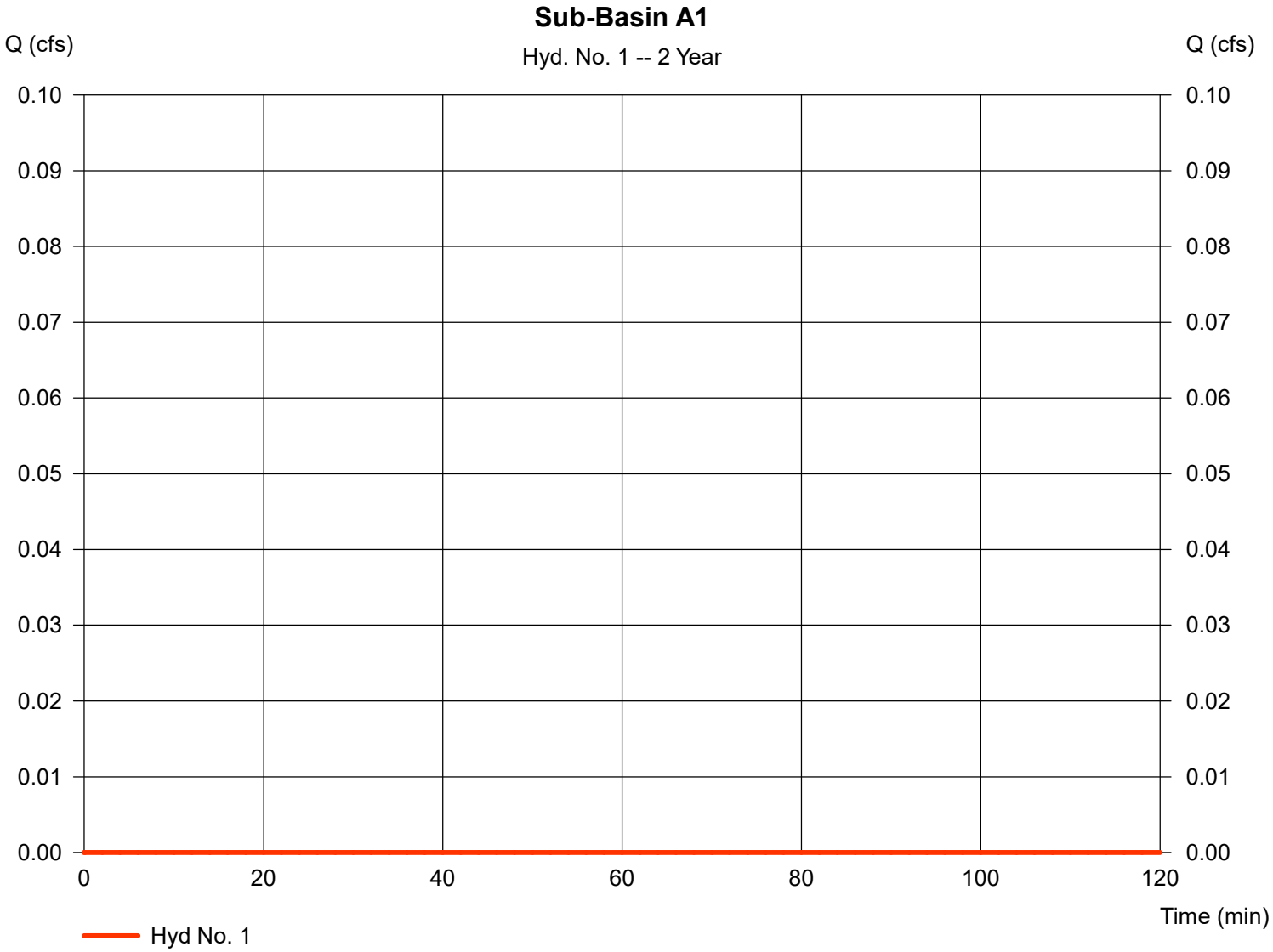
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



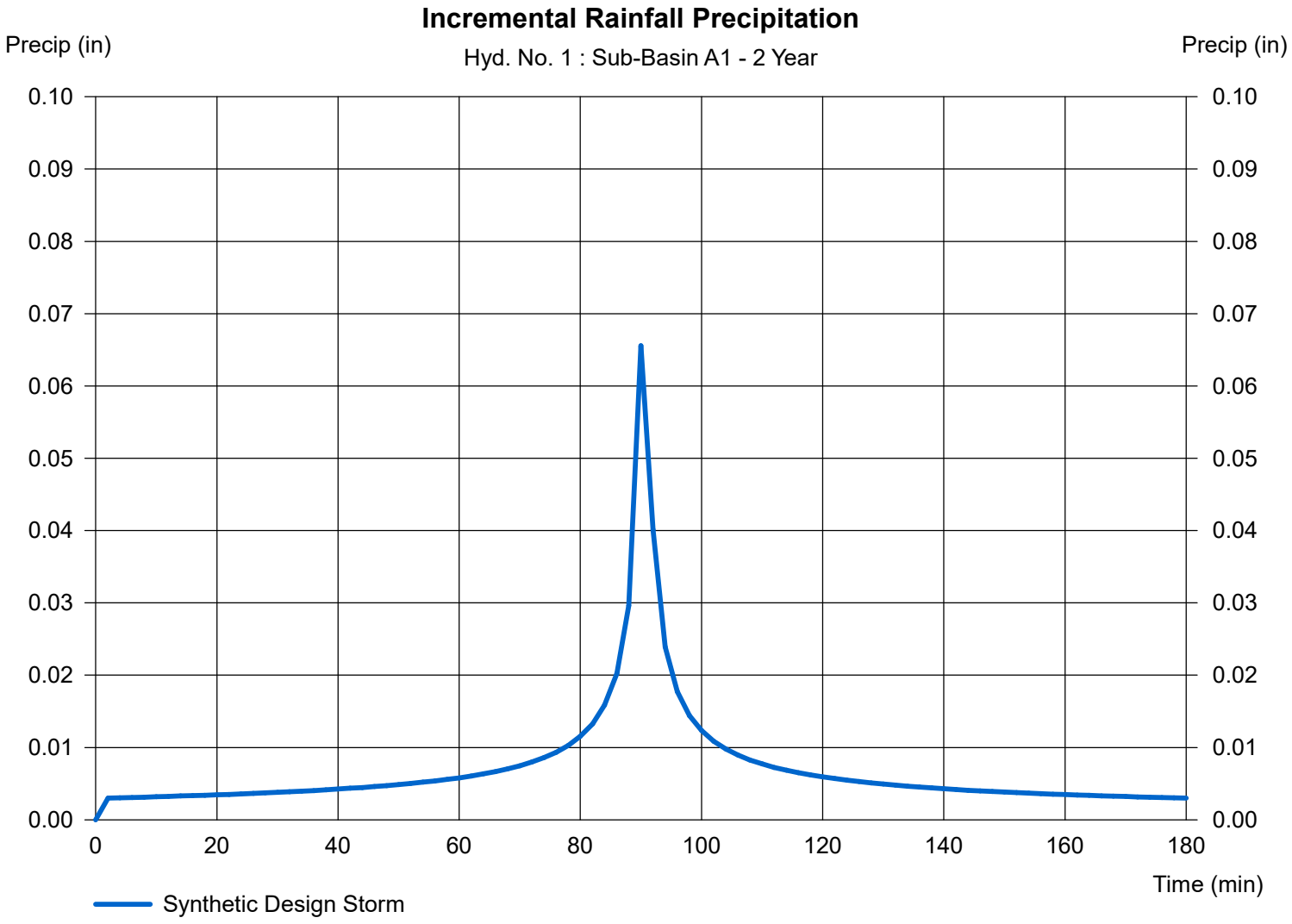
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



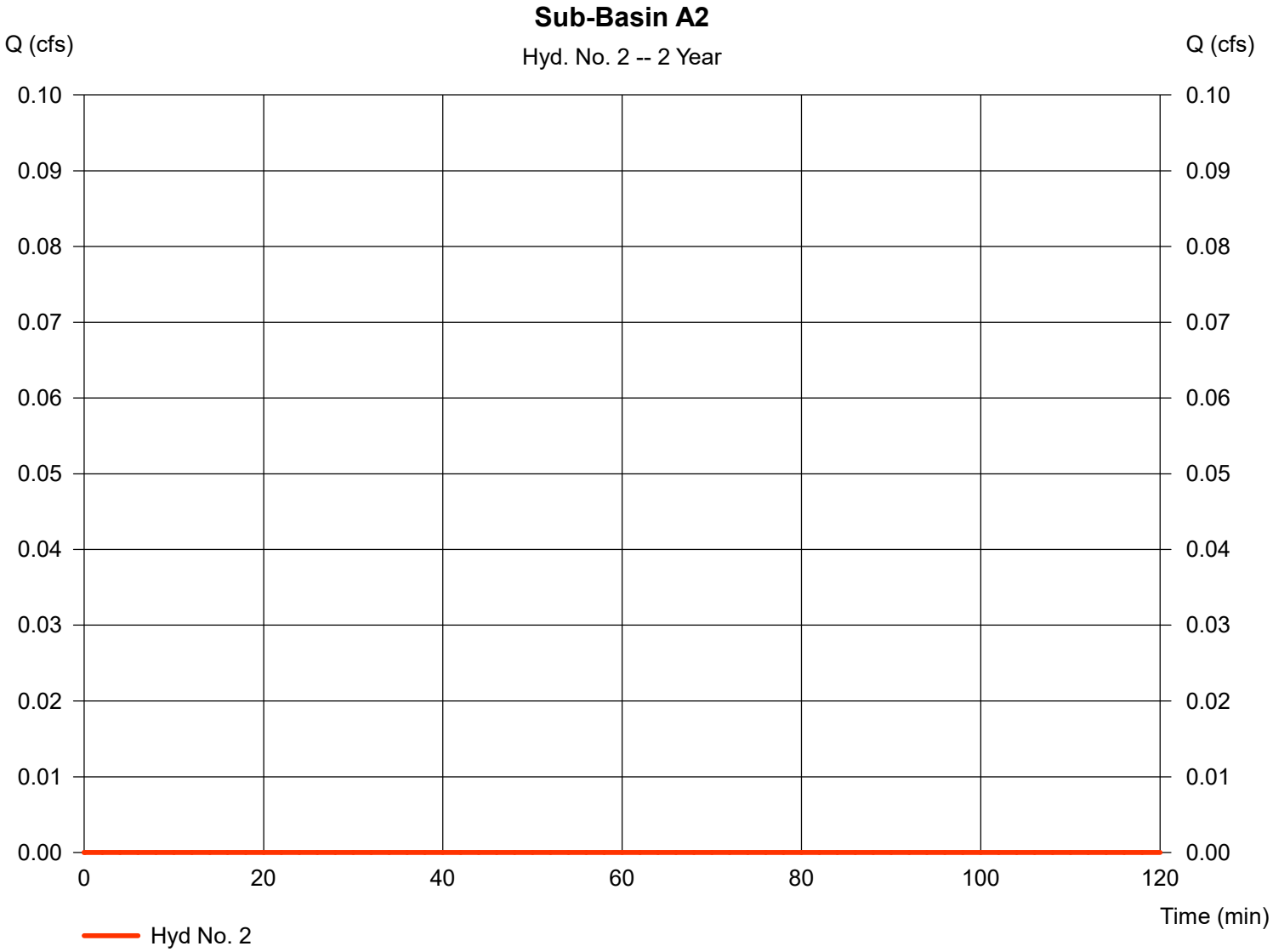
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



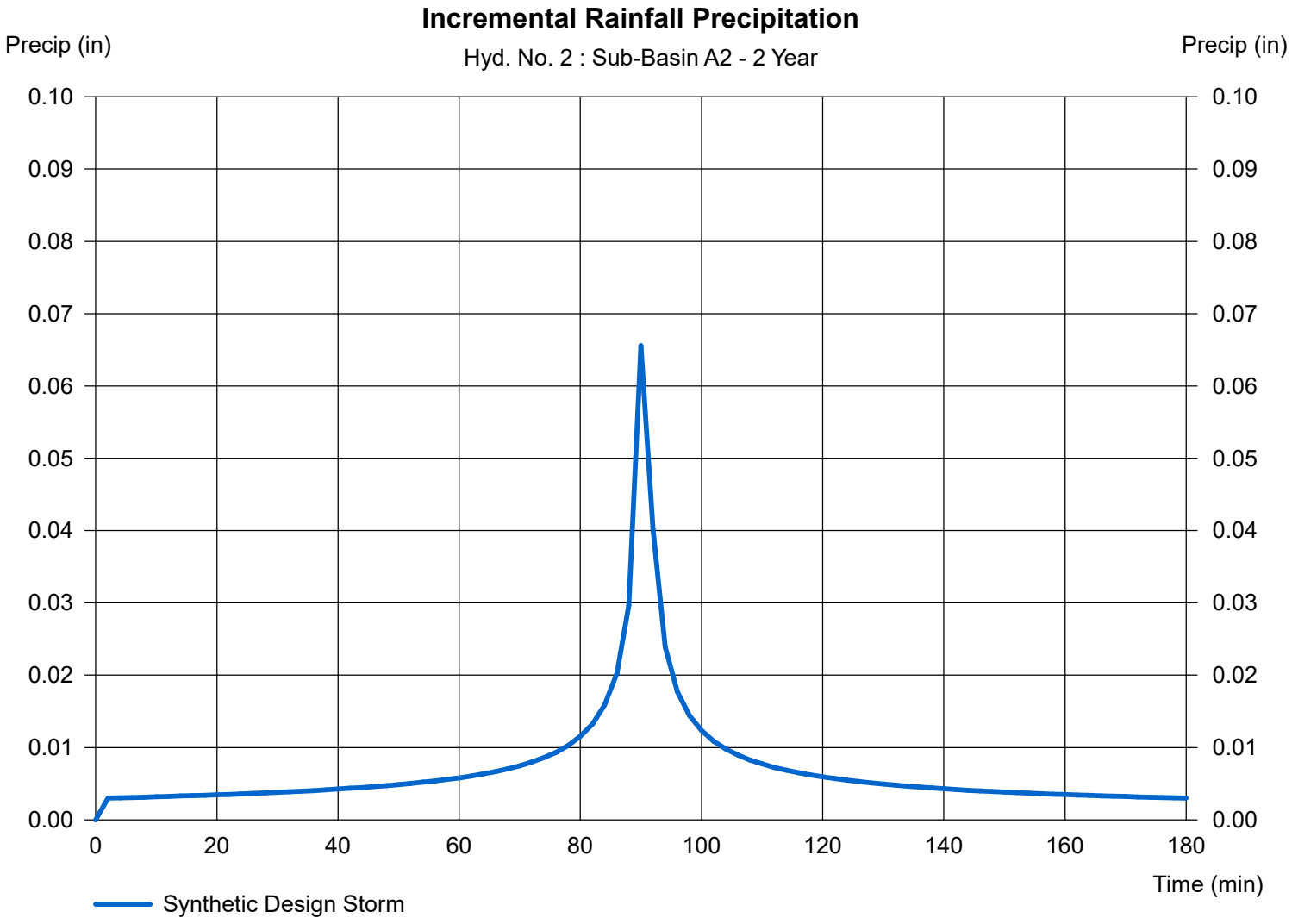
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



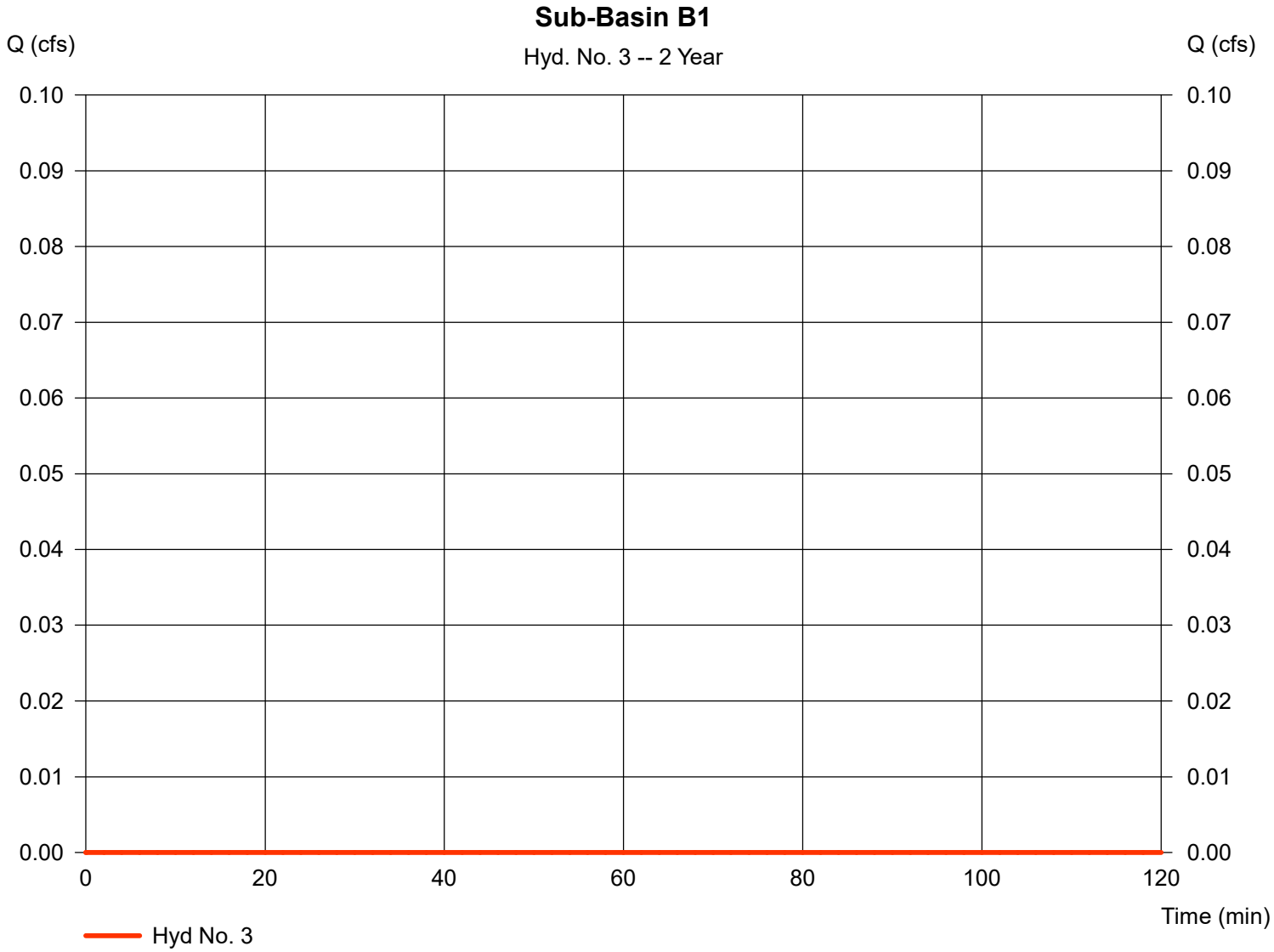
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



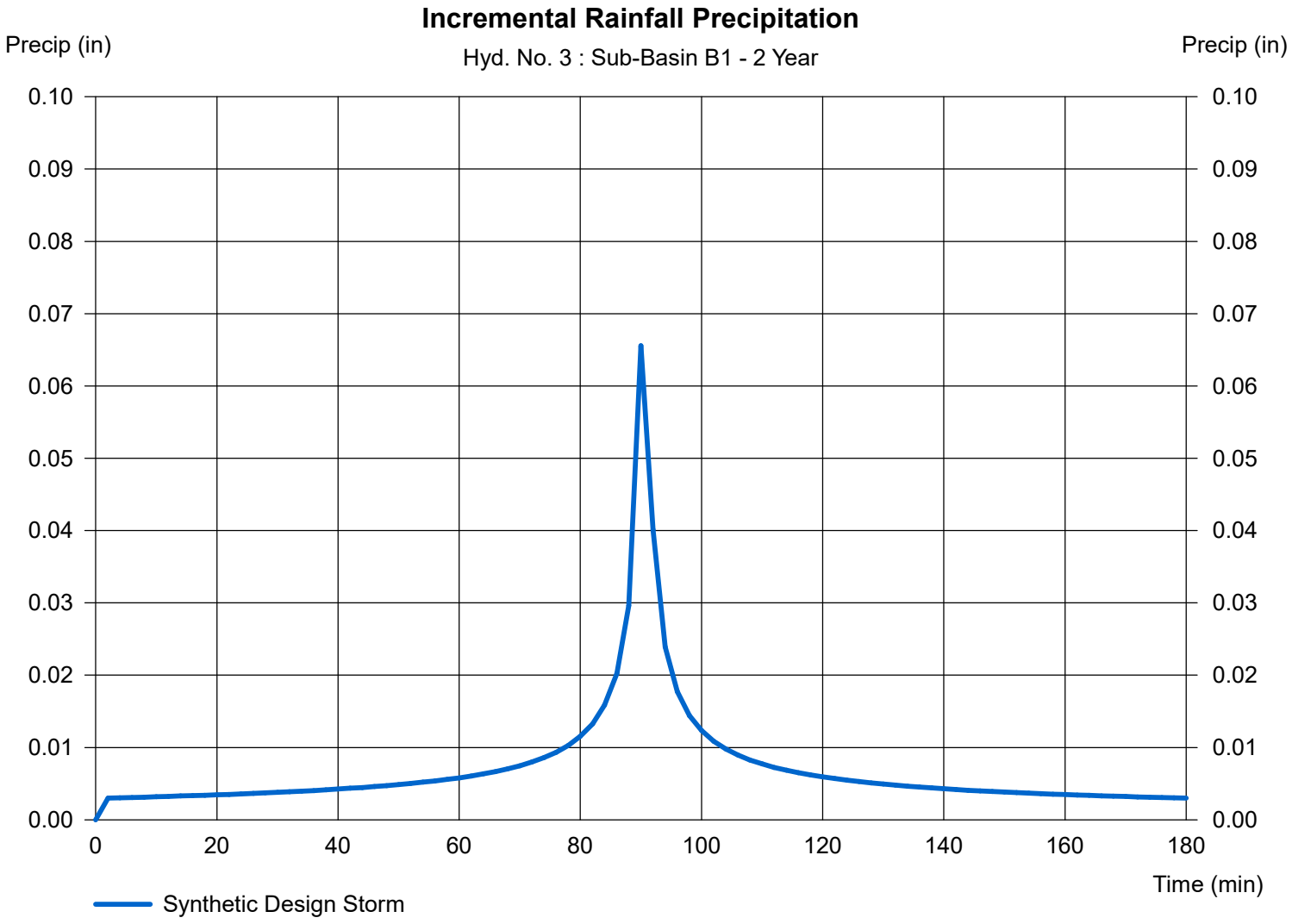
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



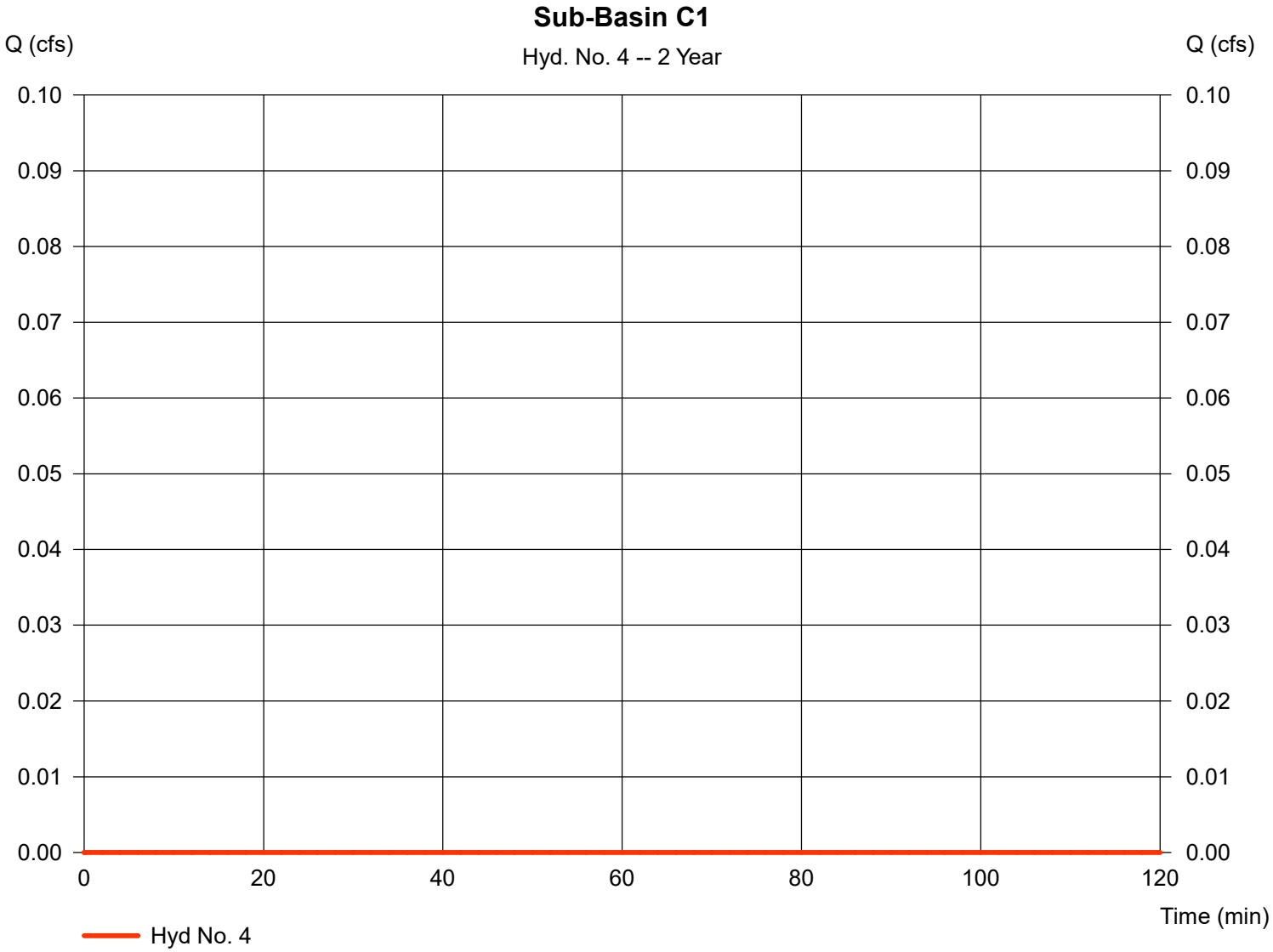
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



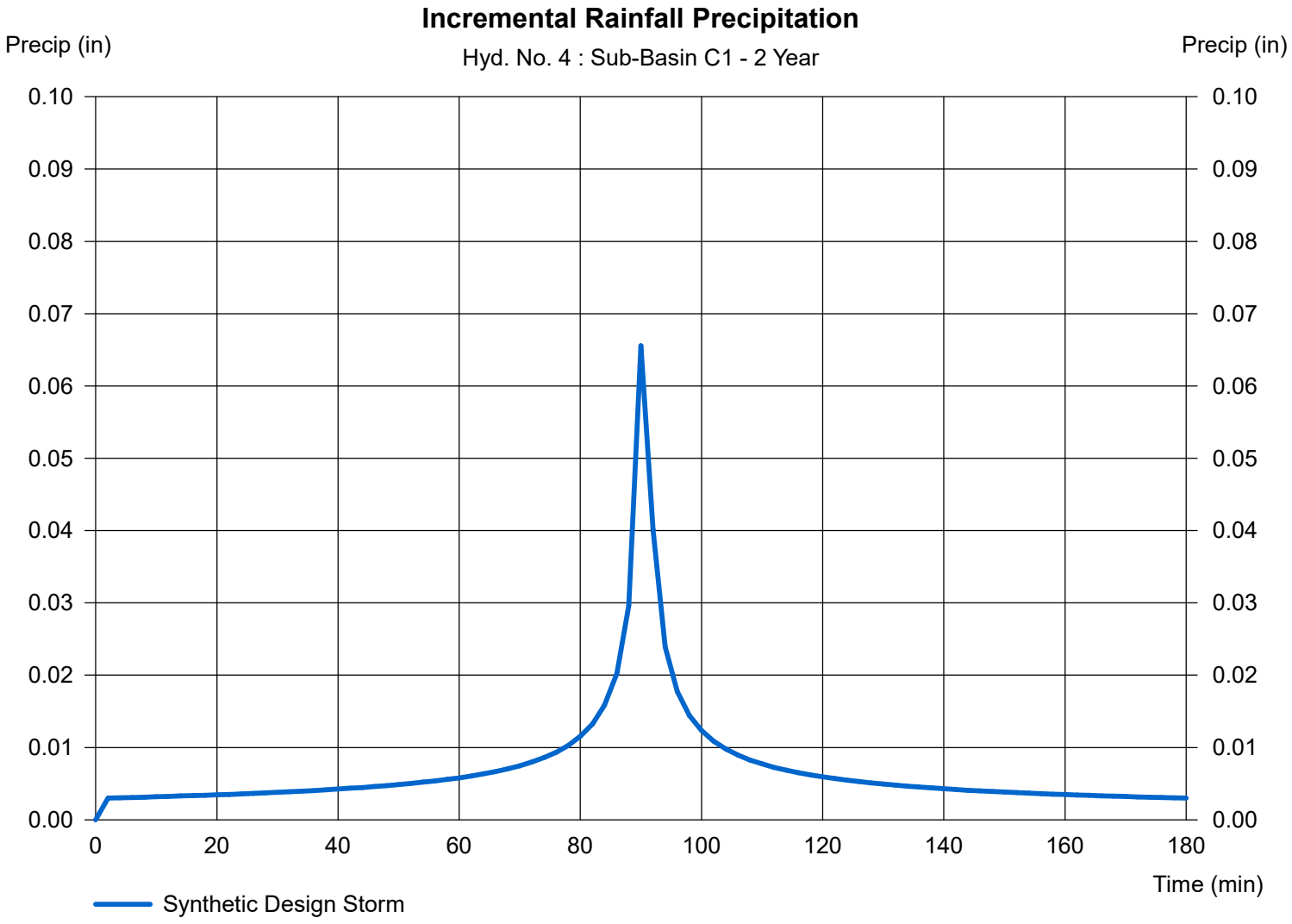
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.6534 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



# Hydrograph Report

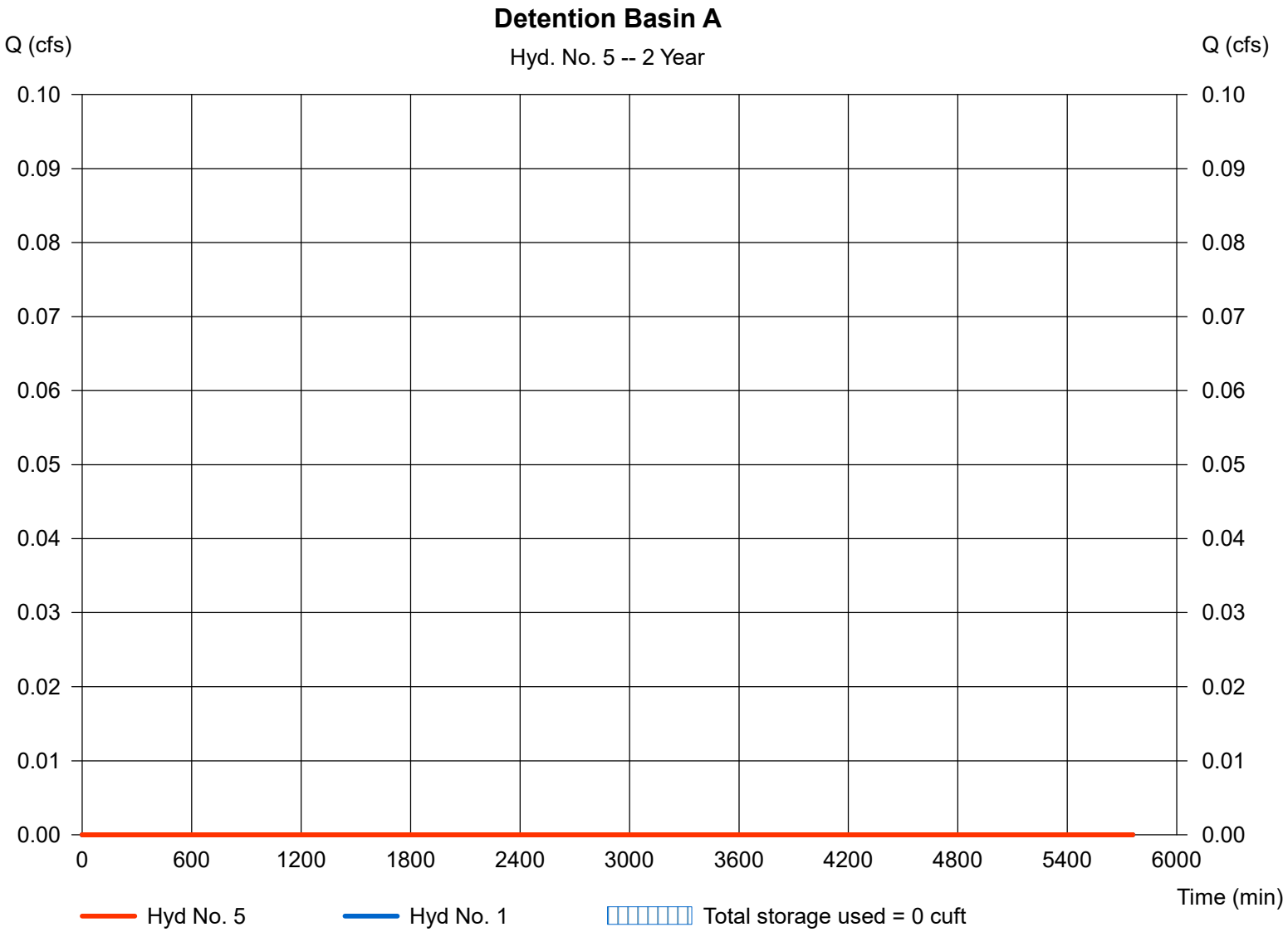
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

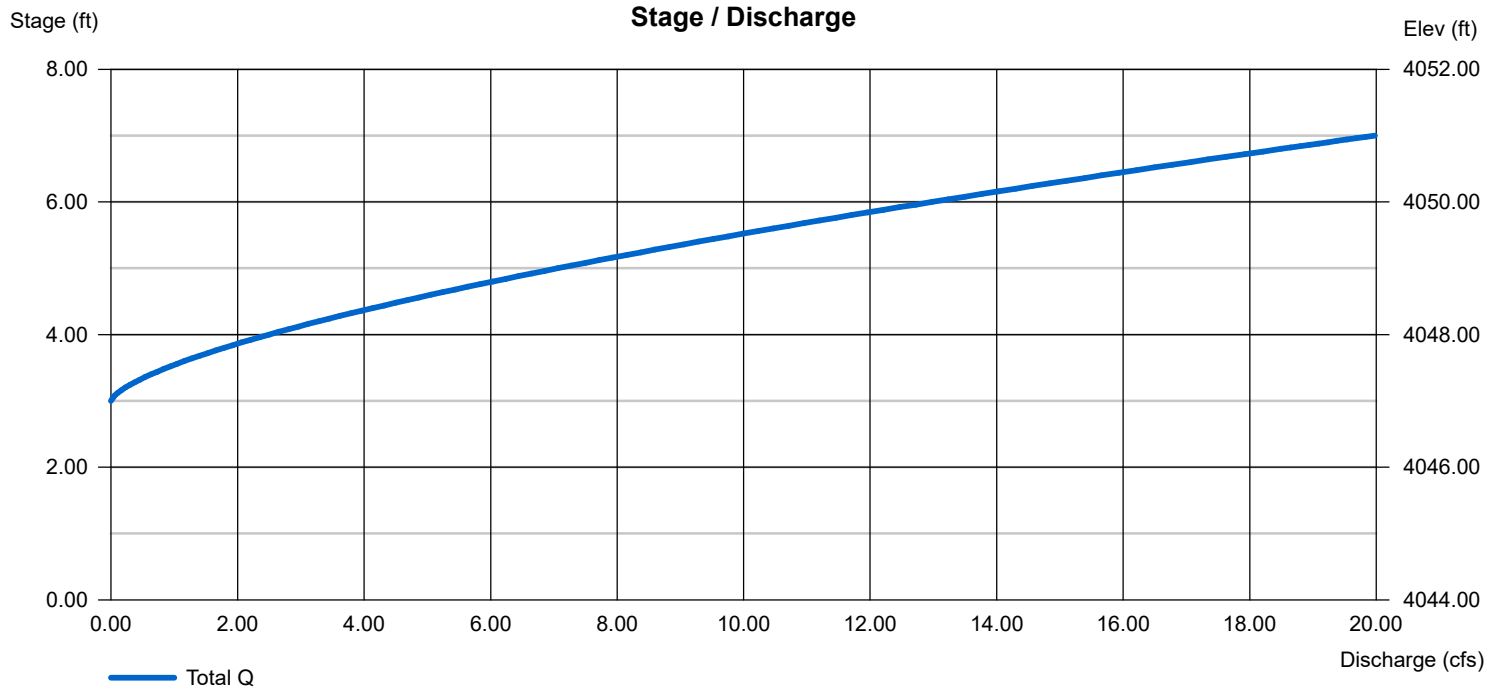
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



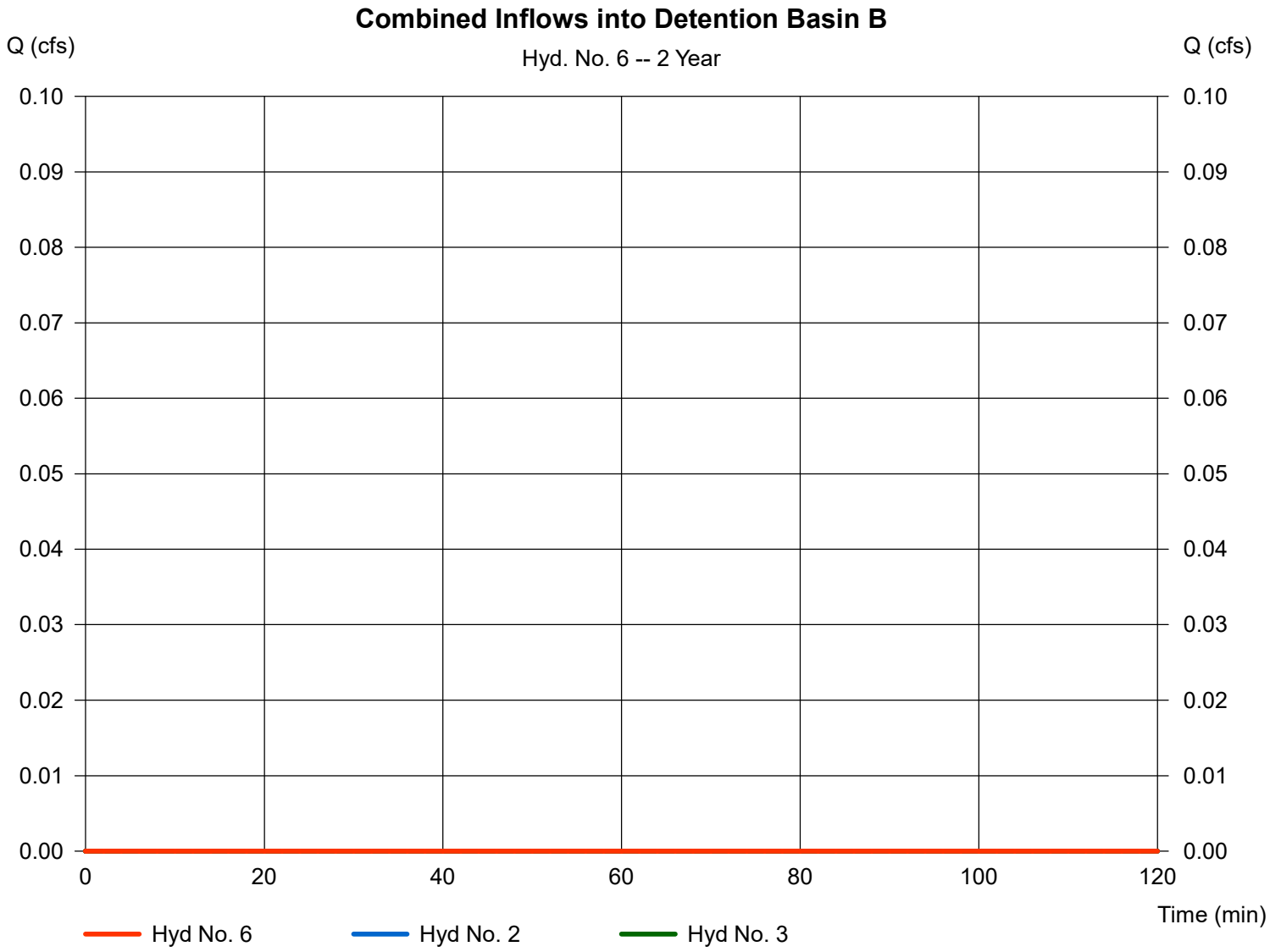
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

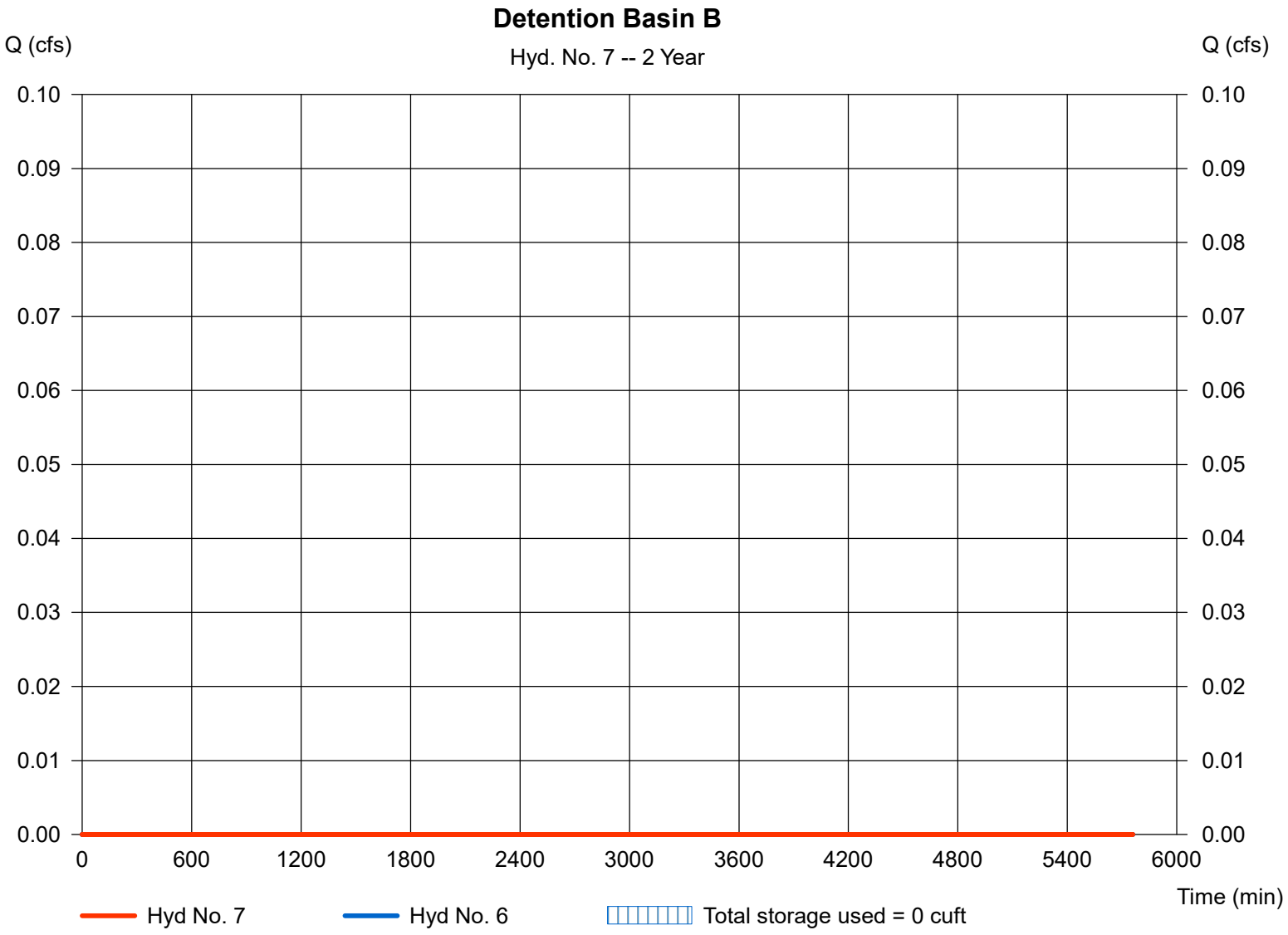
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

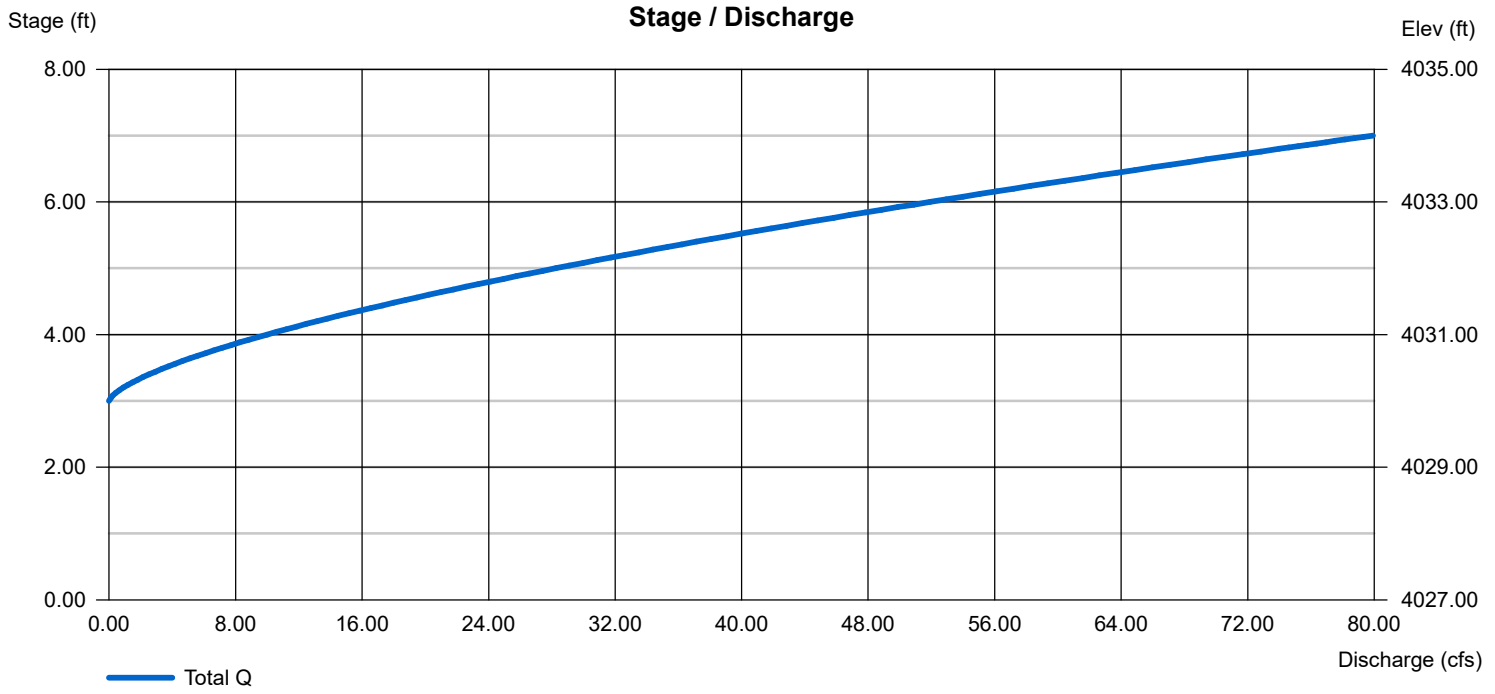
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

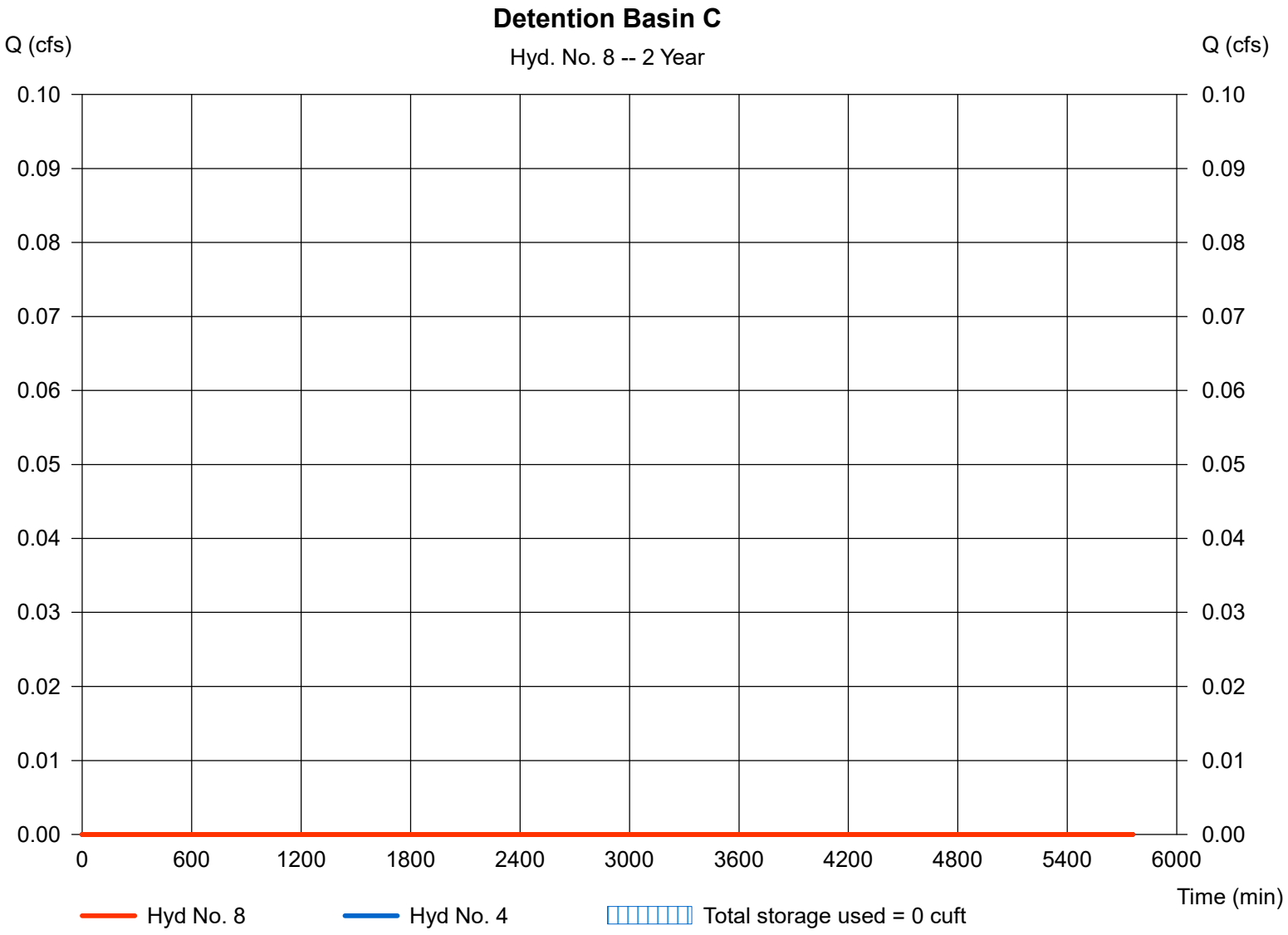
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

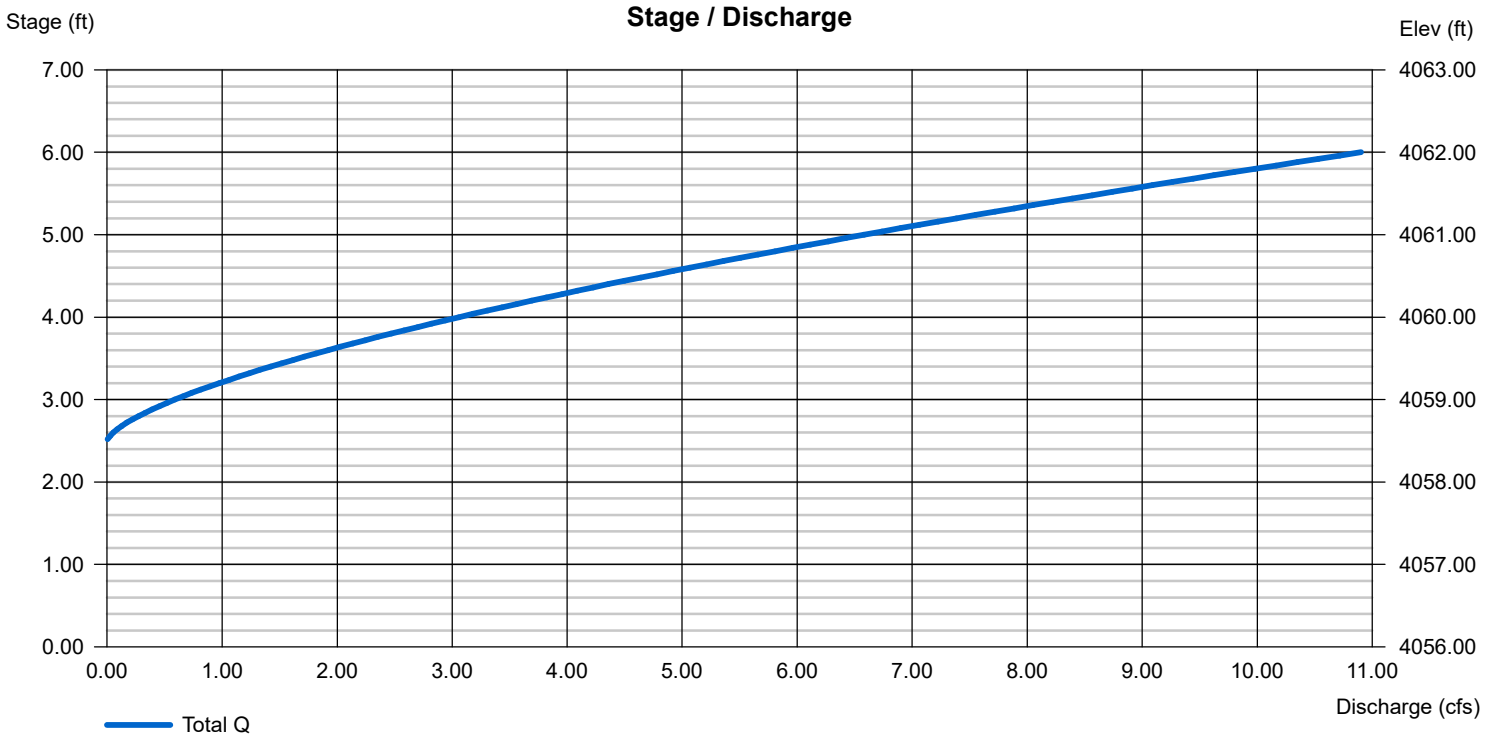
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



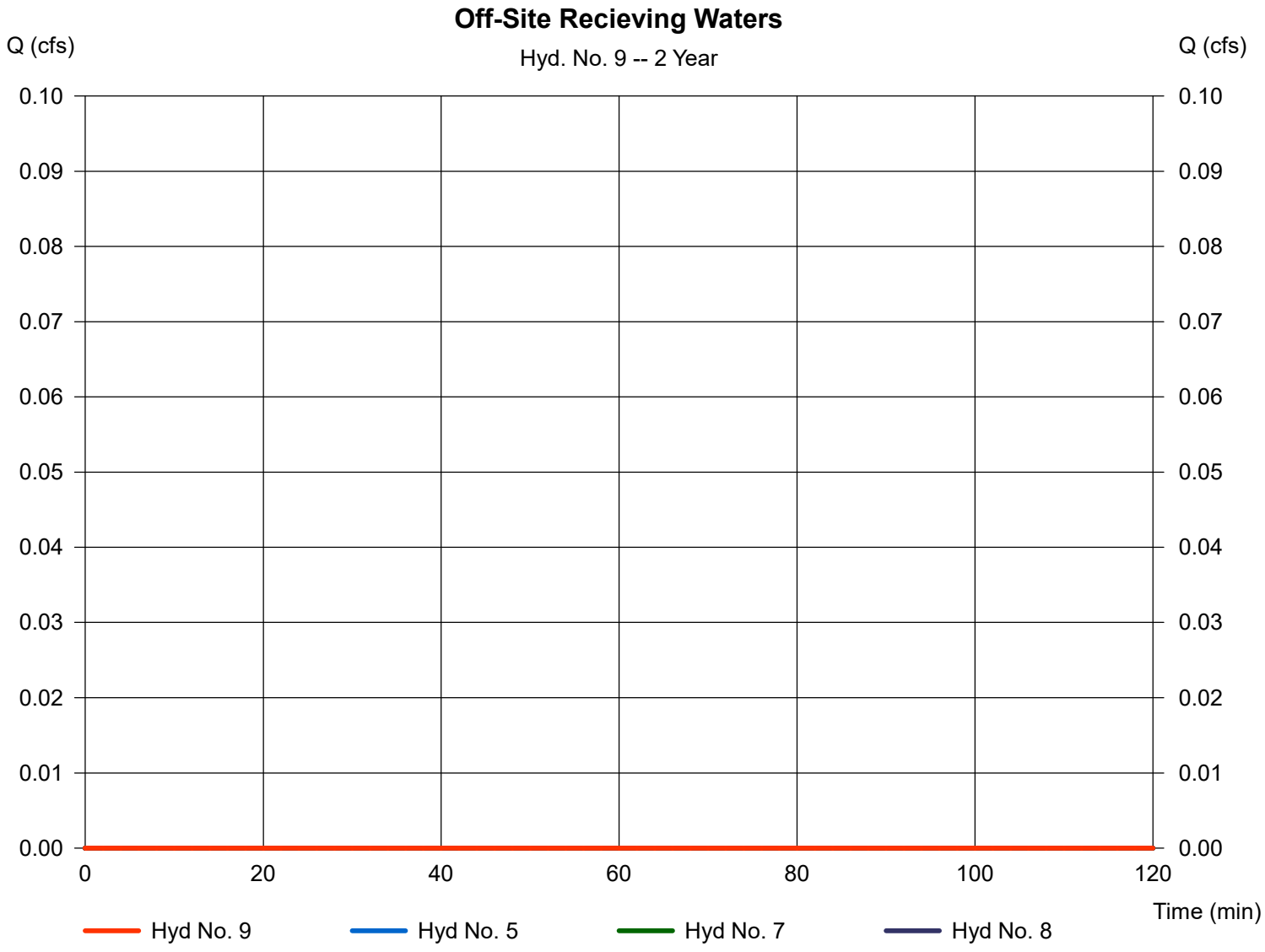
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

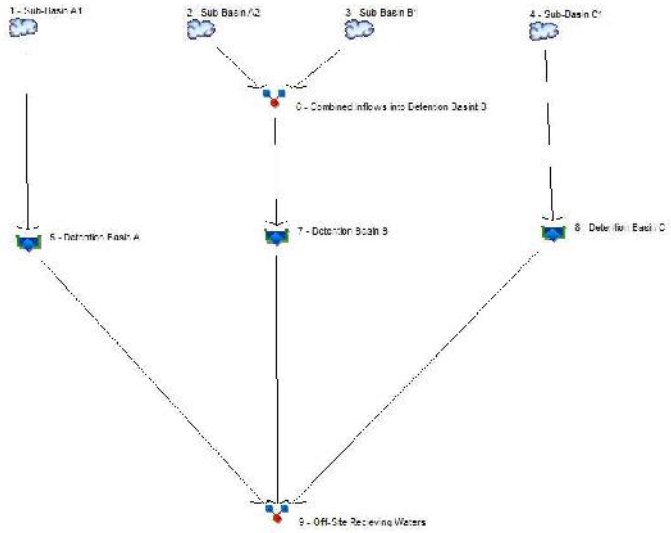
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 1.06 | 1.33 | 0.00 | 1.78 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basint B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 2 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 2 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

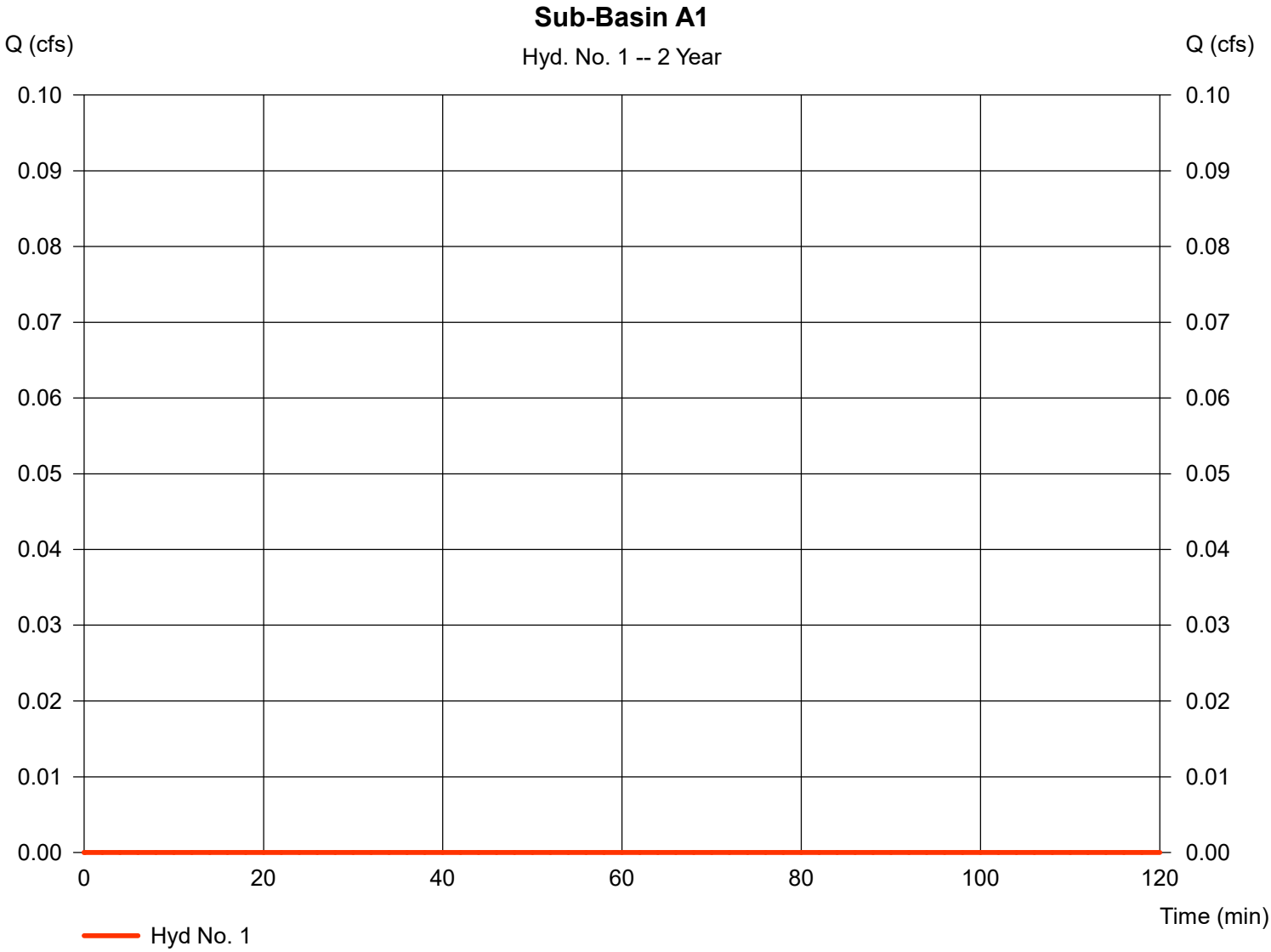
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



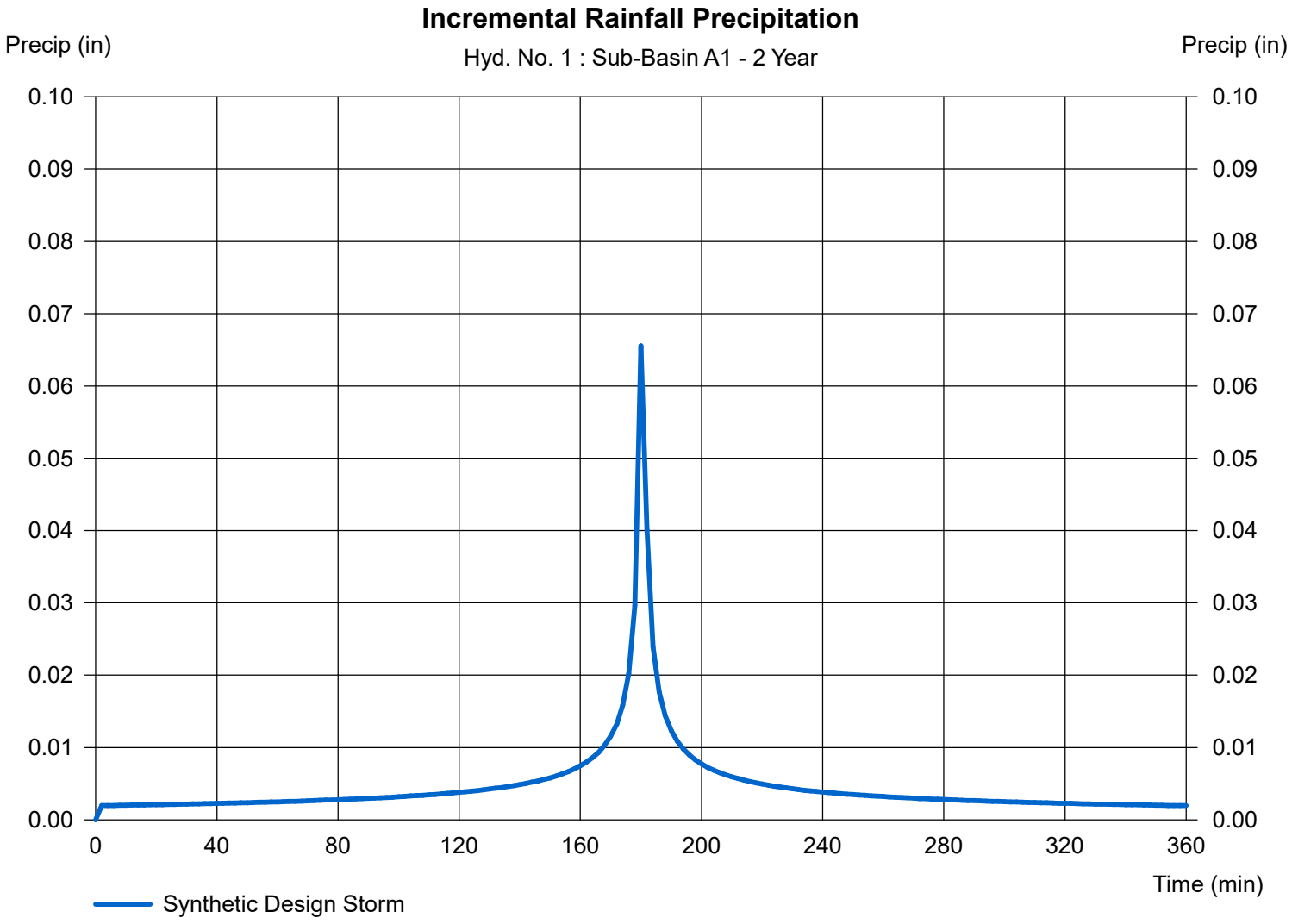
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



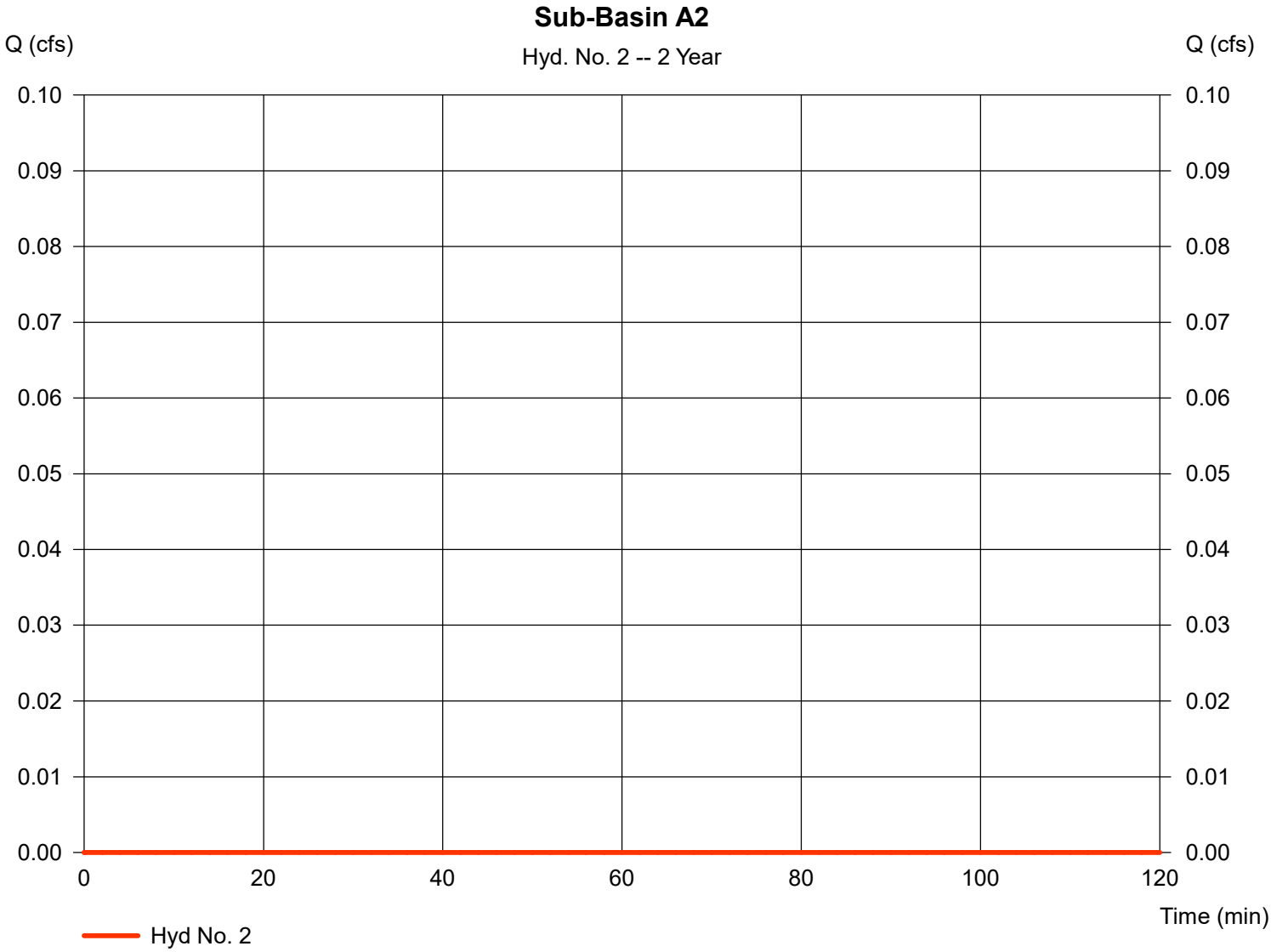
# Hydrograph Report



## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



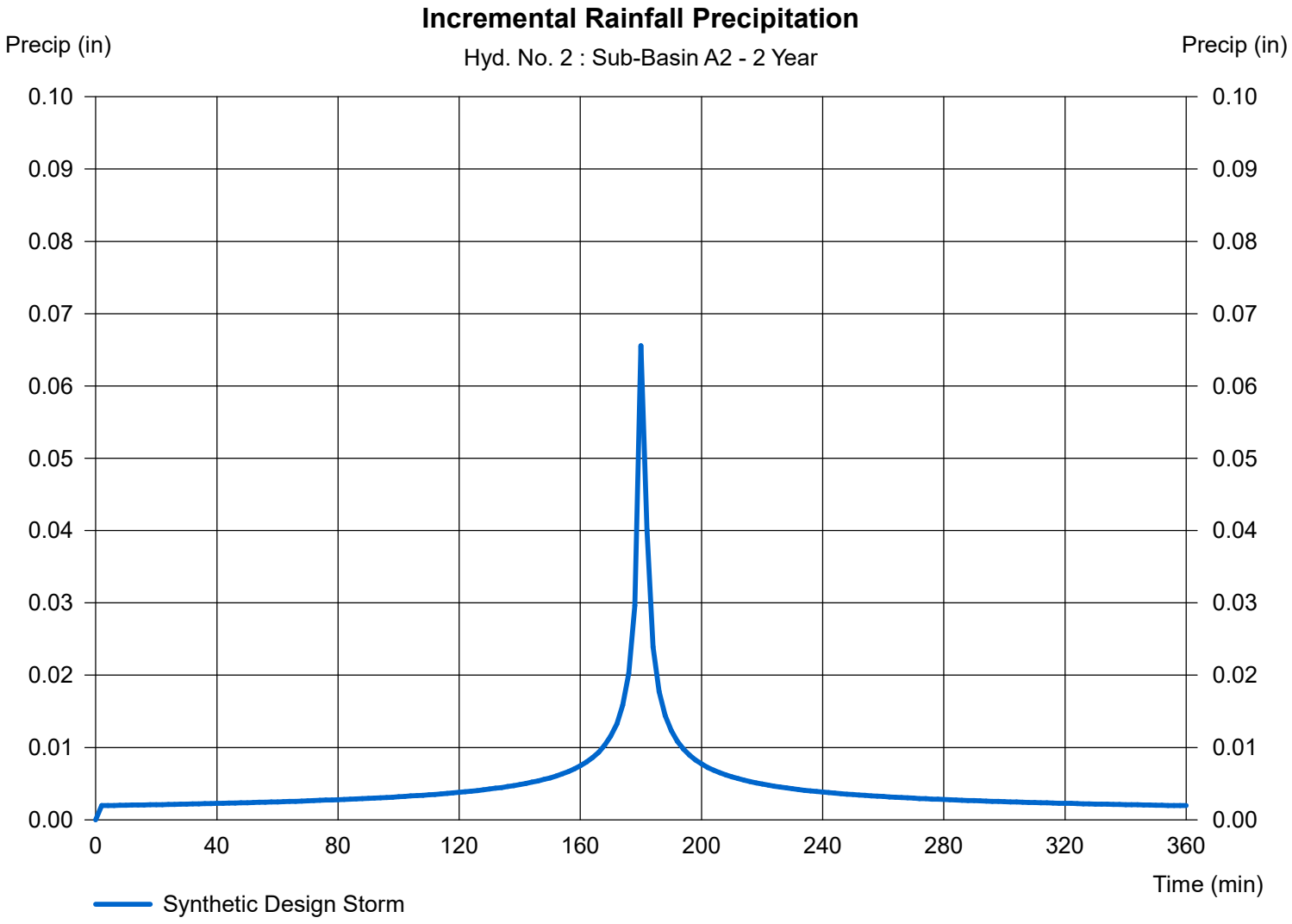
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



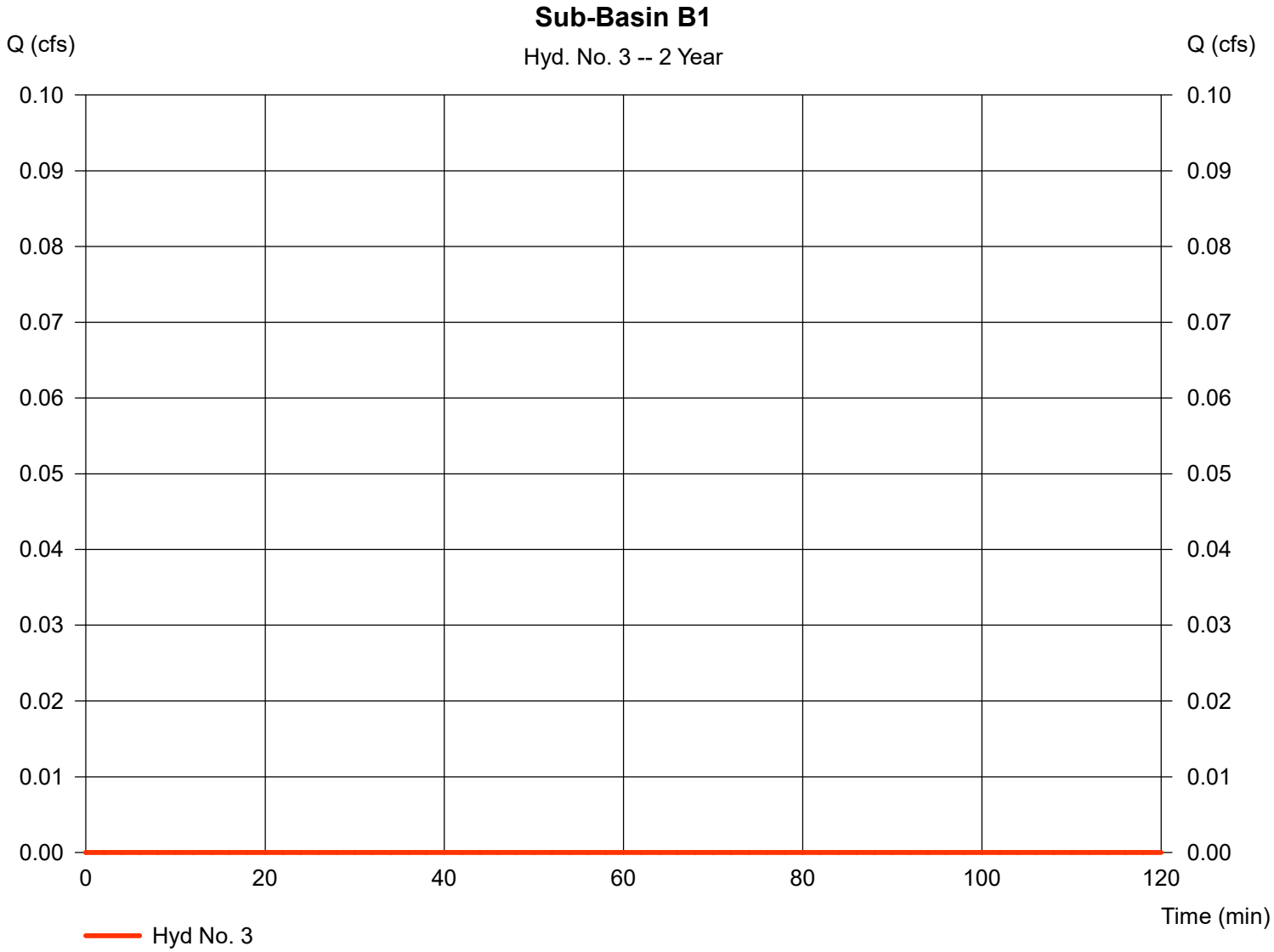
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



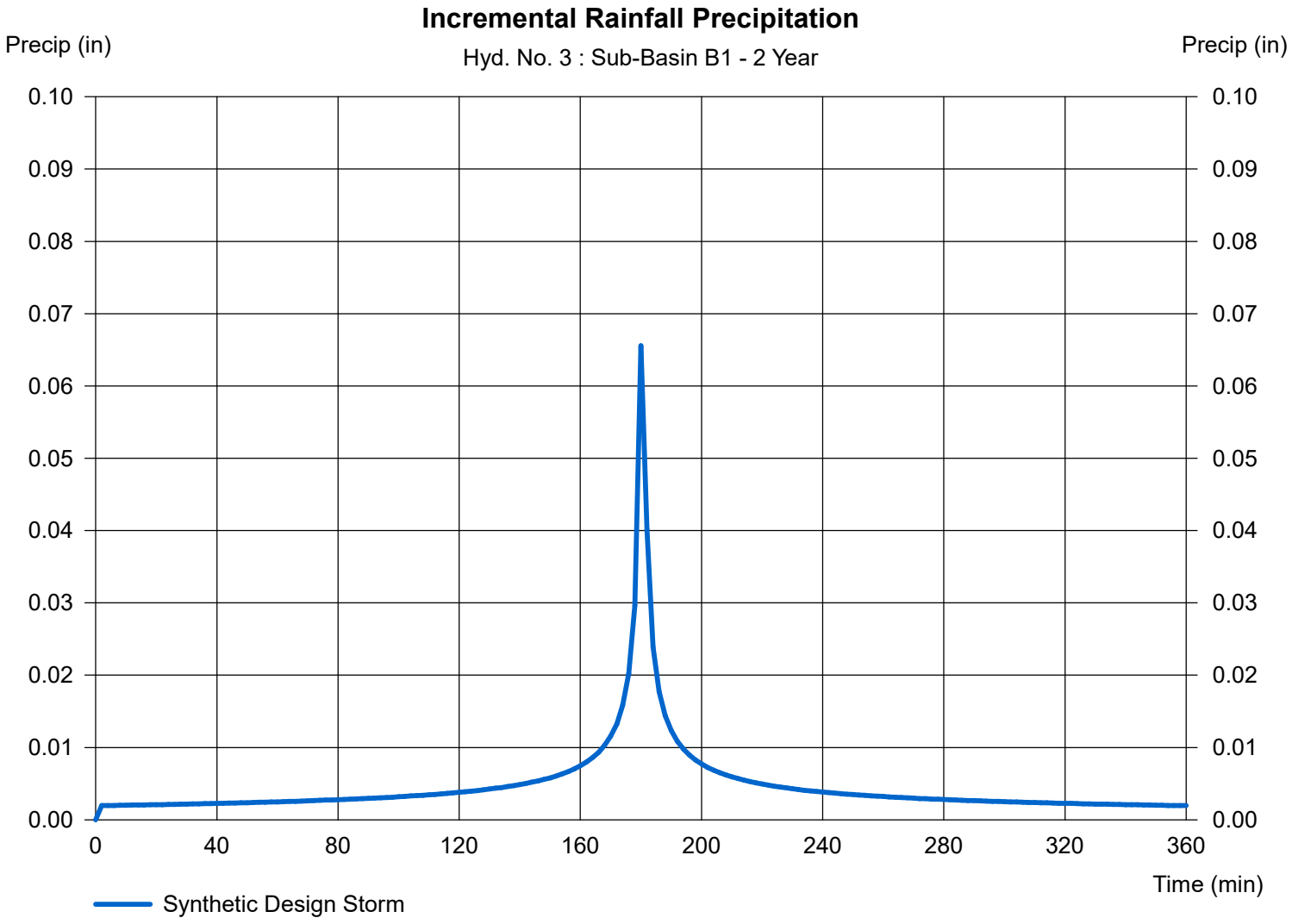
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



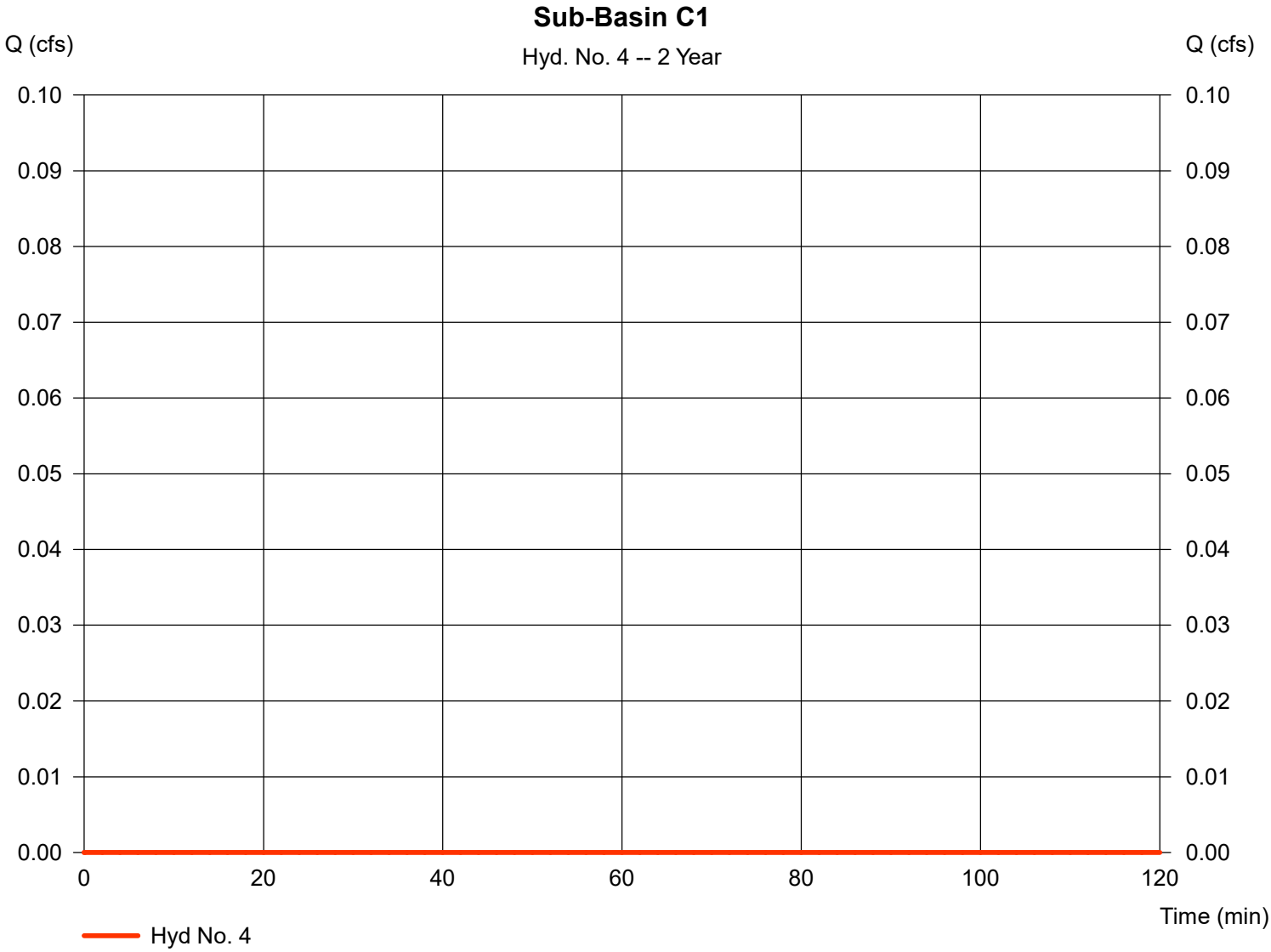
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.87 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



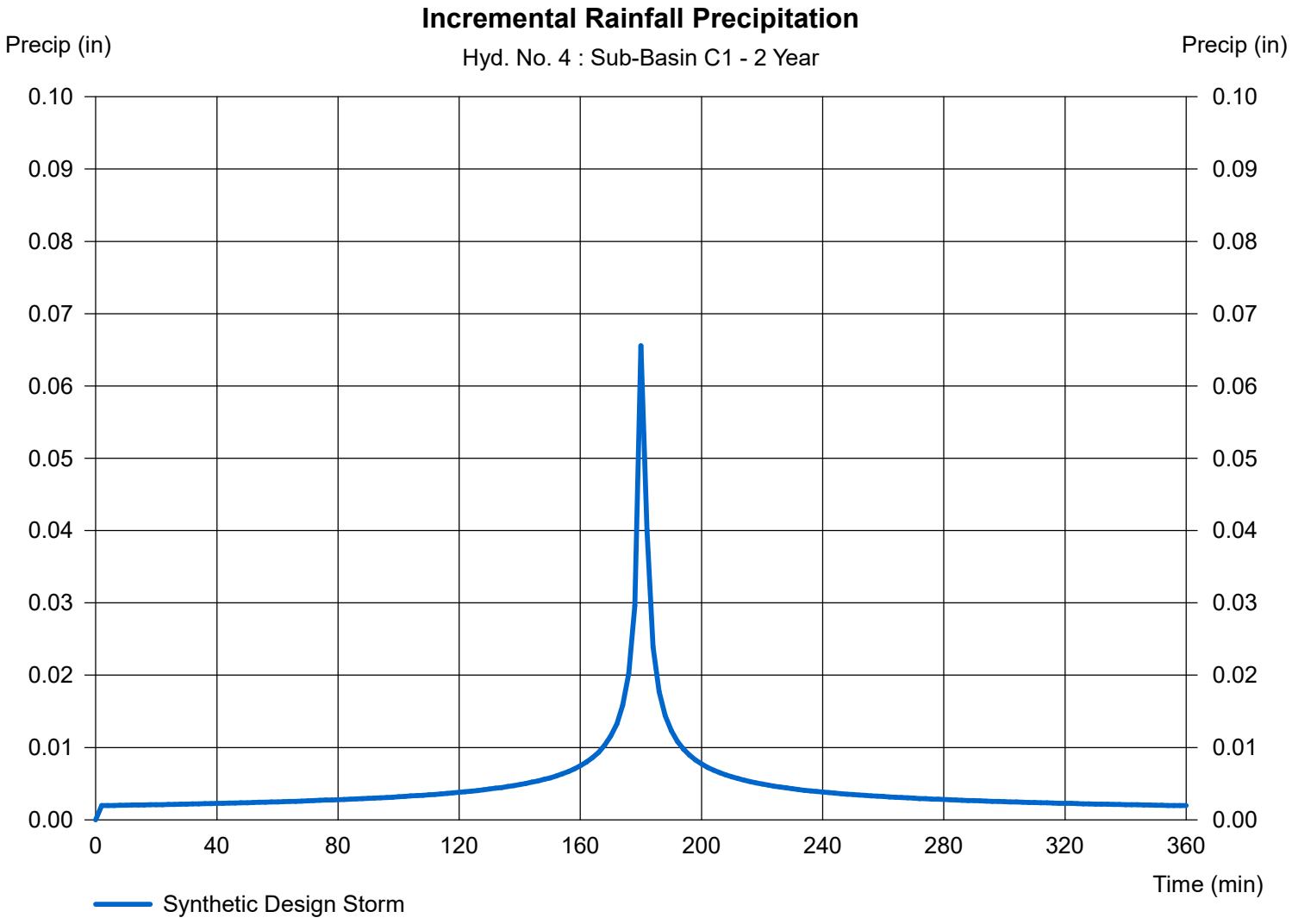
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 0.8672 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



# Hydrograph Report

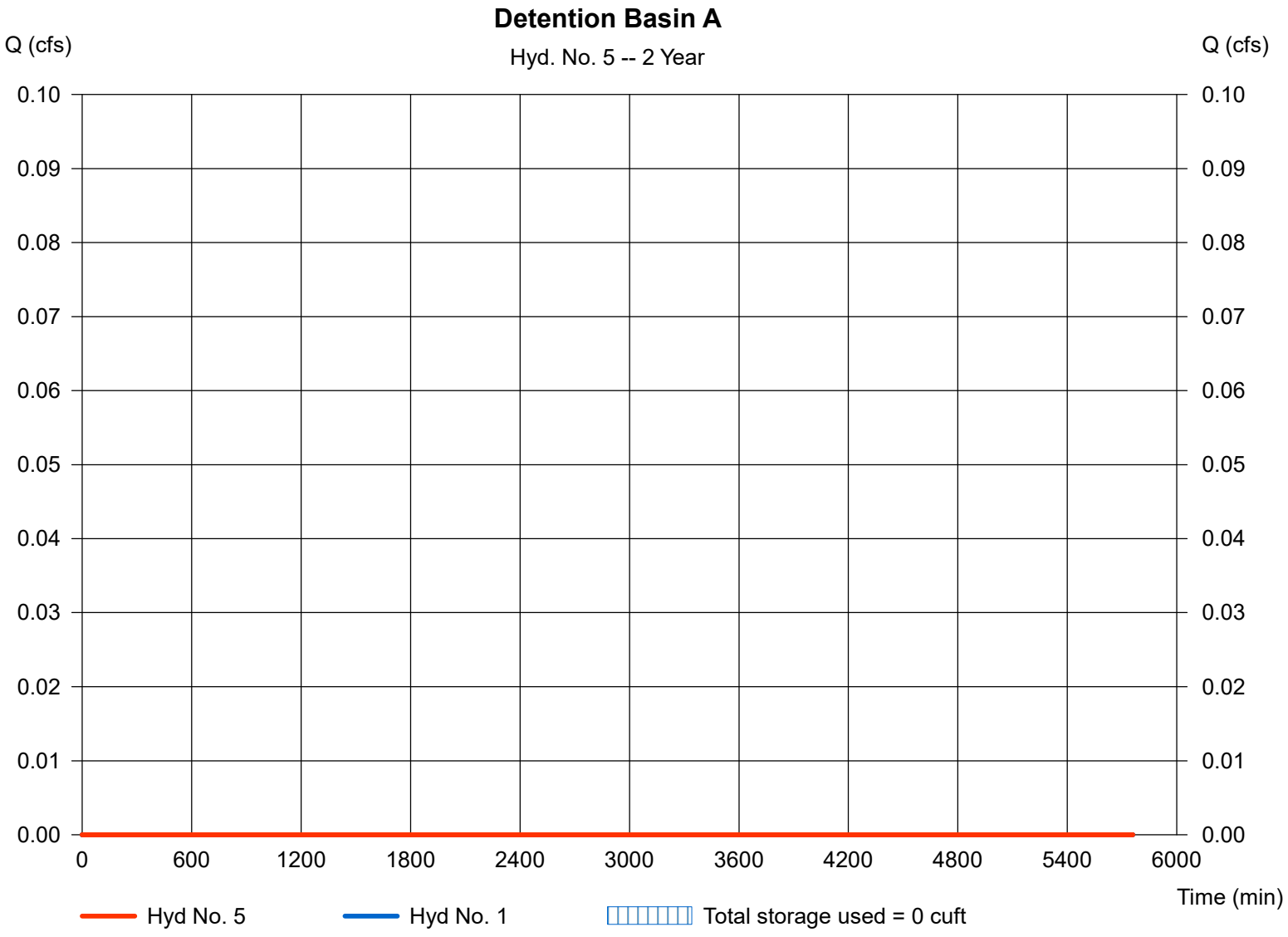
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

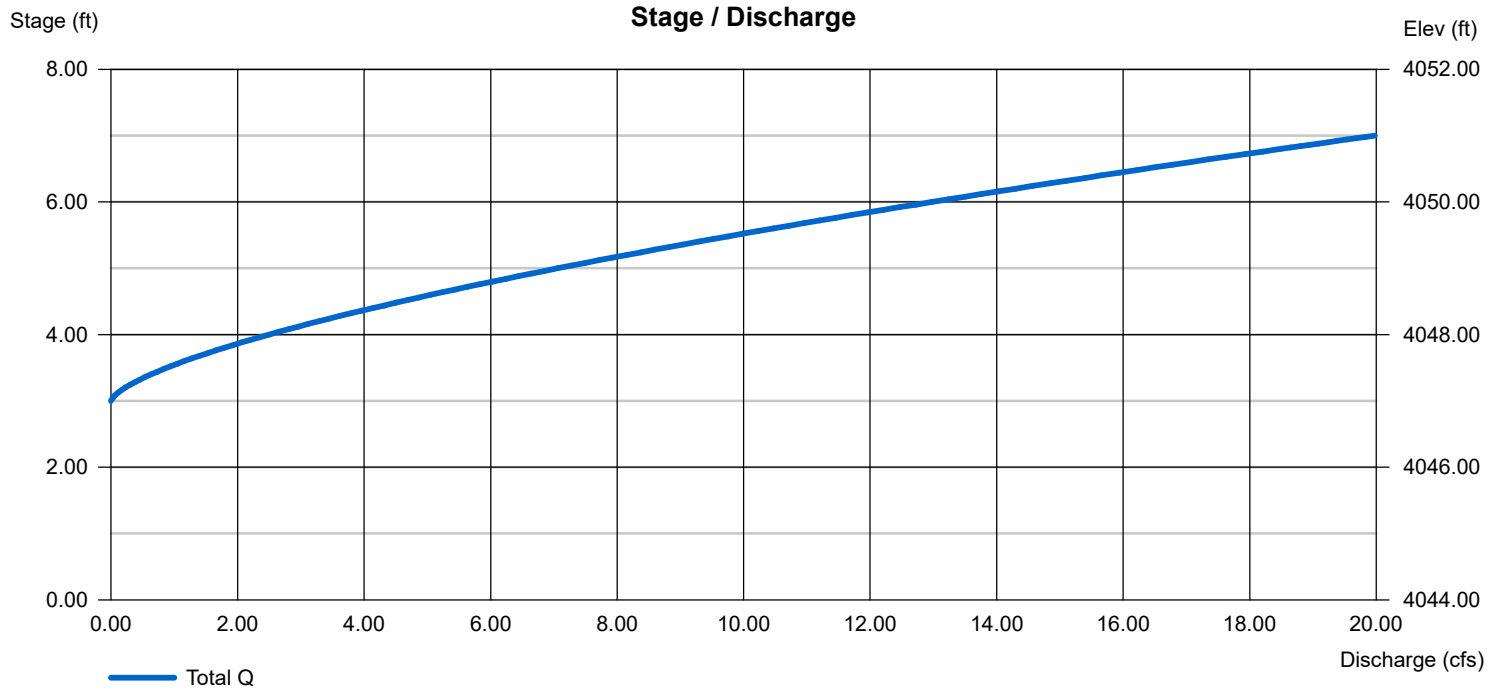
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



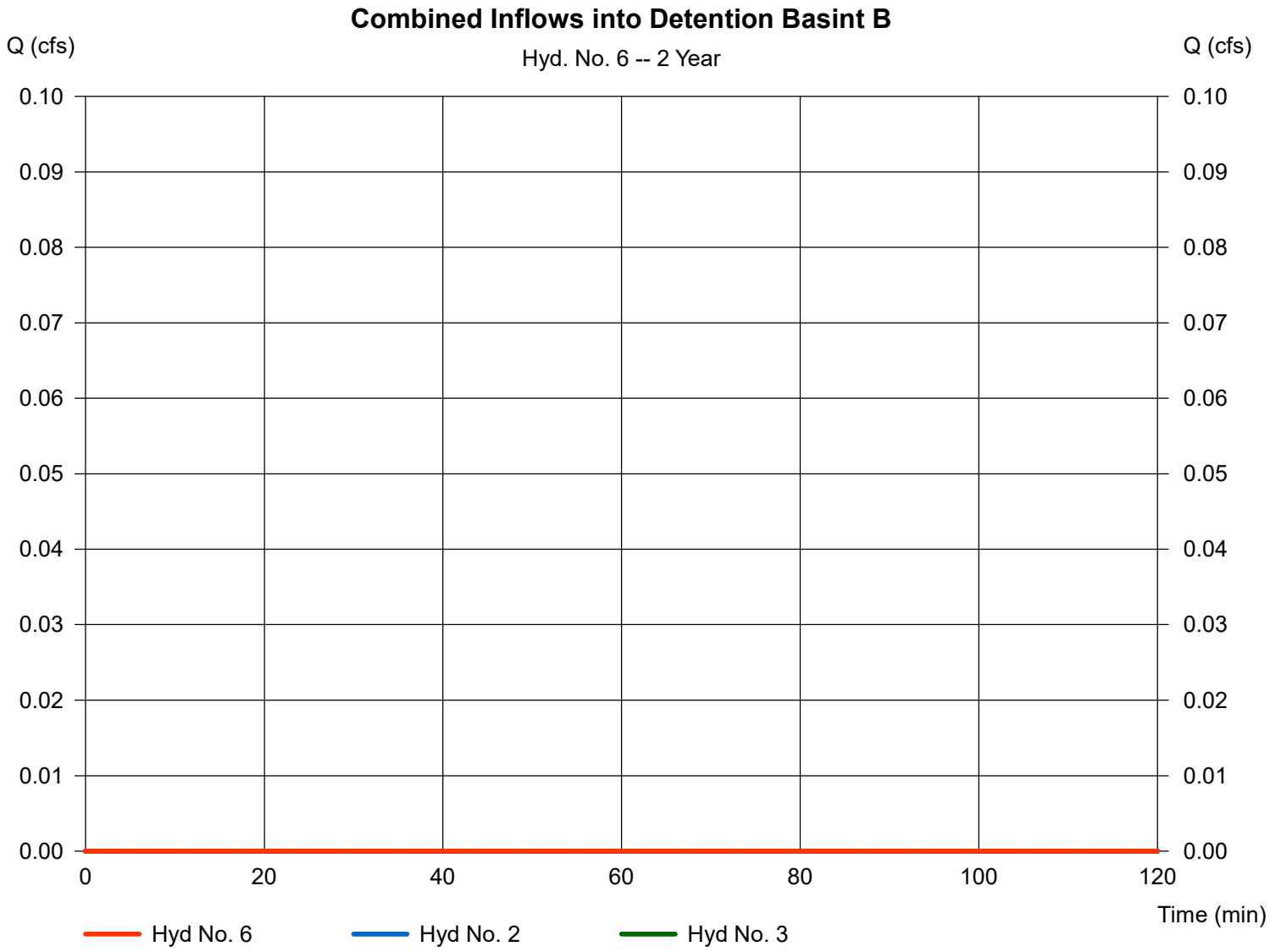
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basint B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

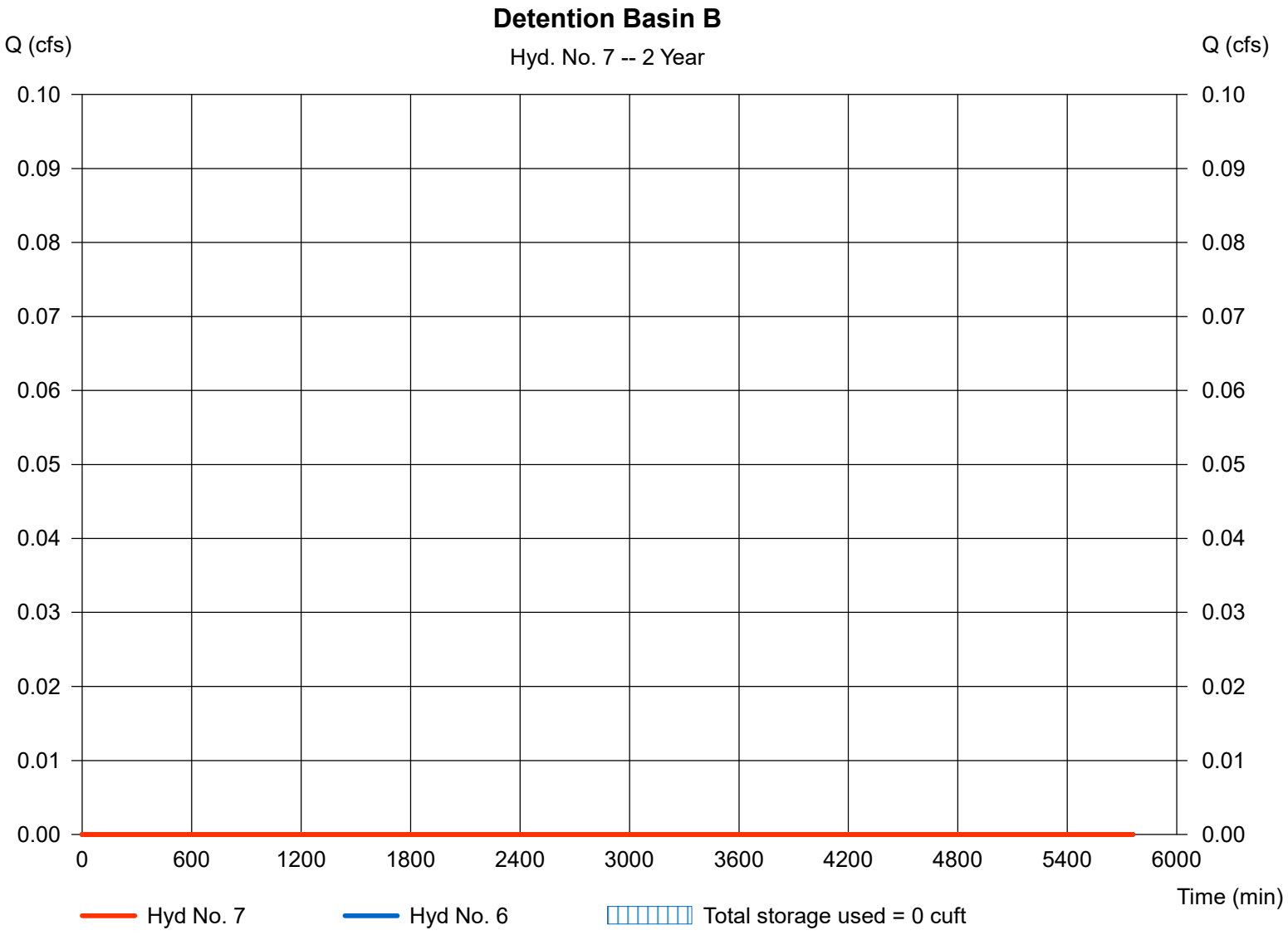
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basint B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basint B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basint B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

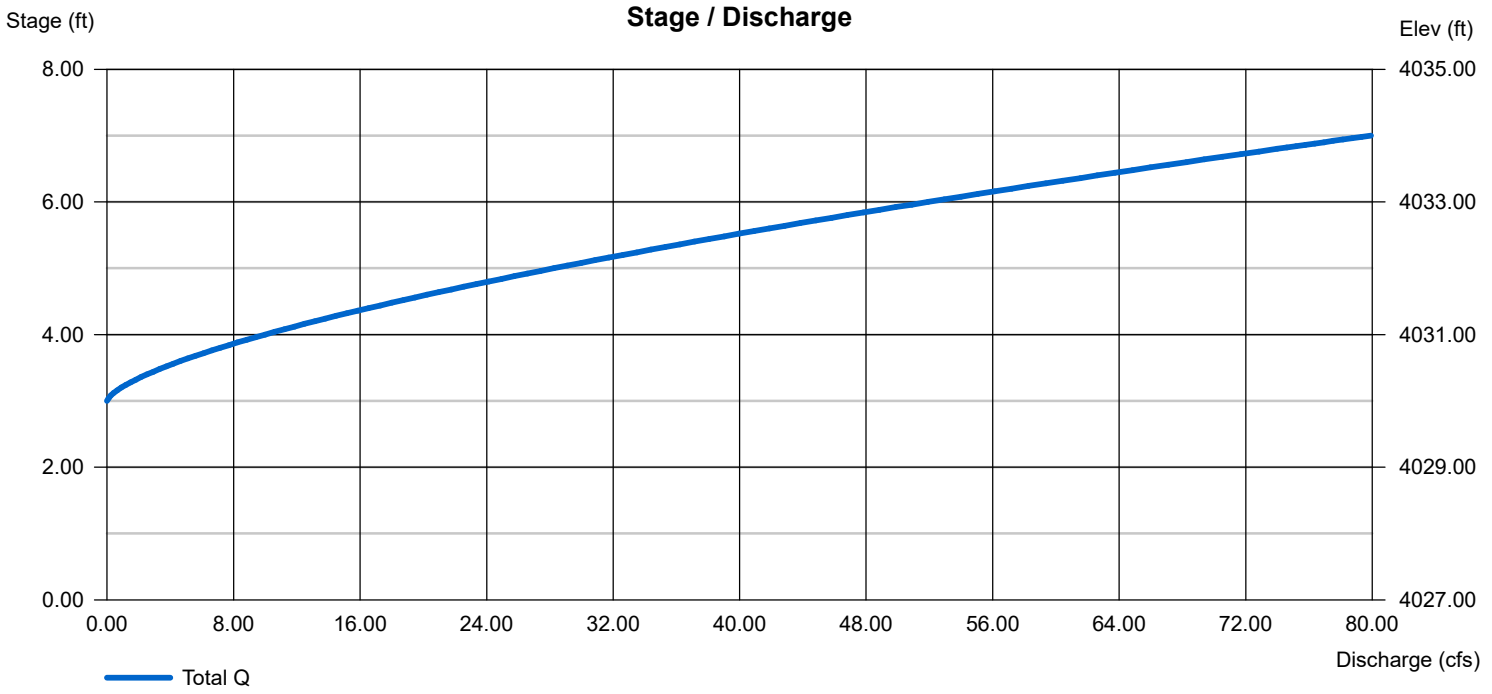
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

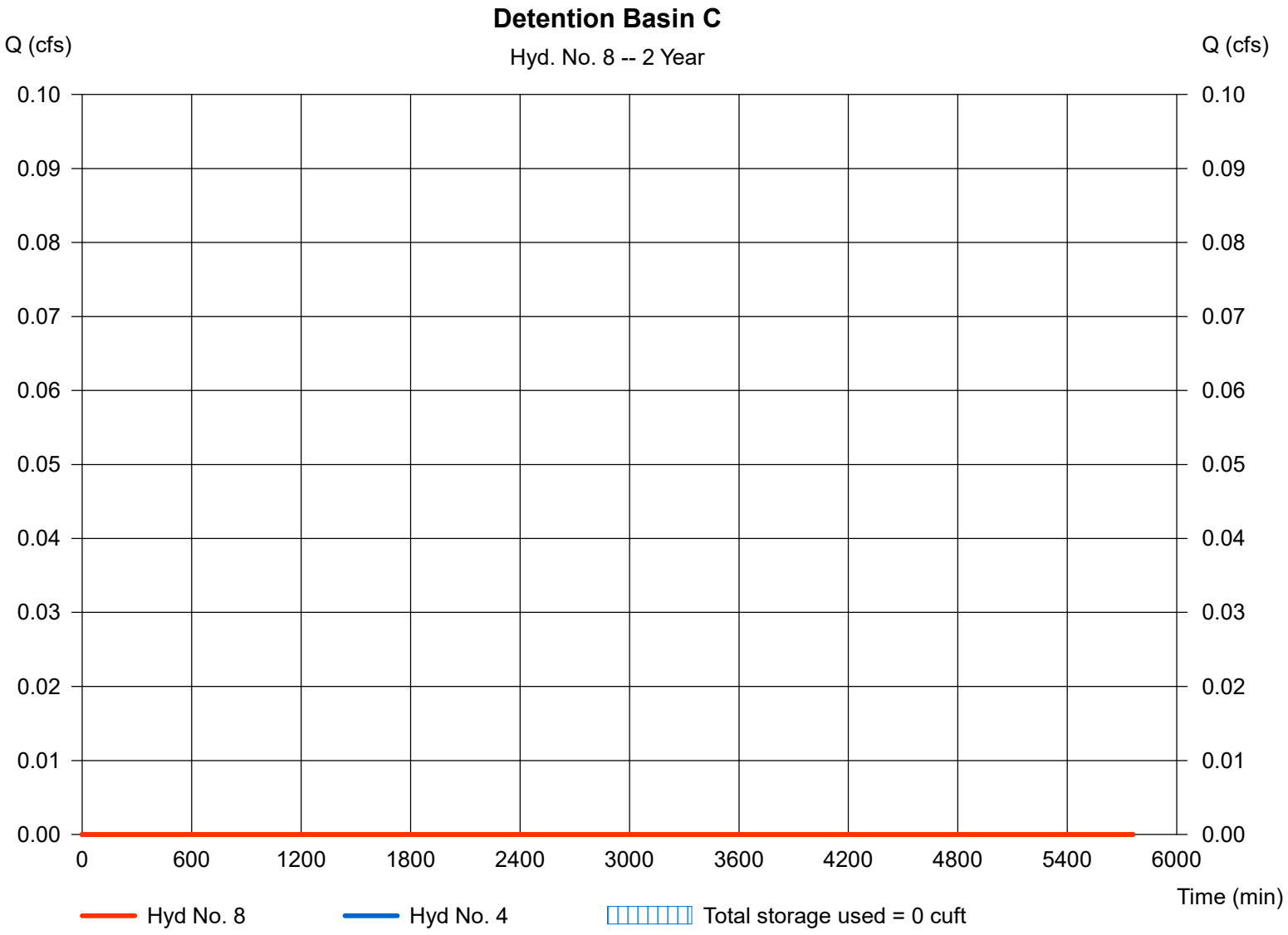
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

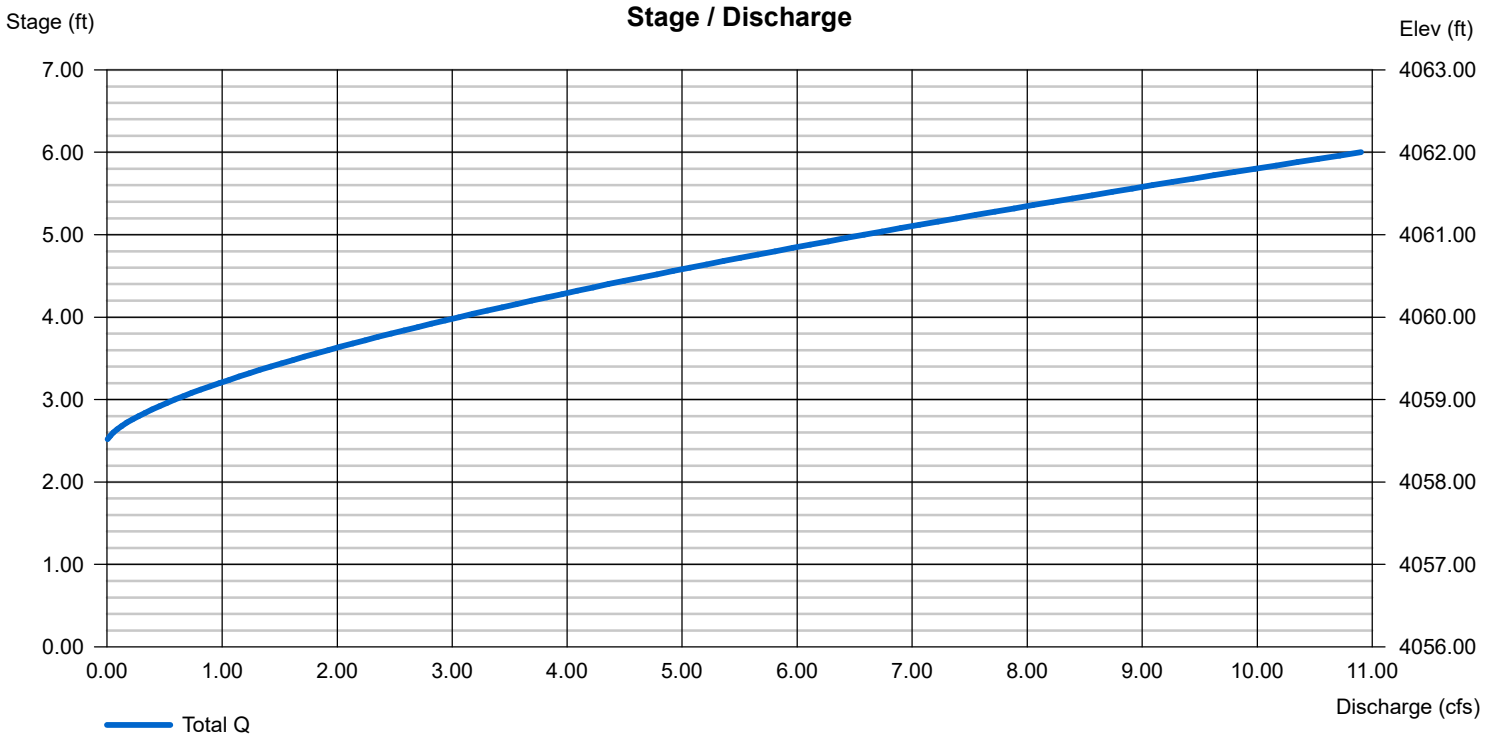
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



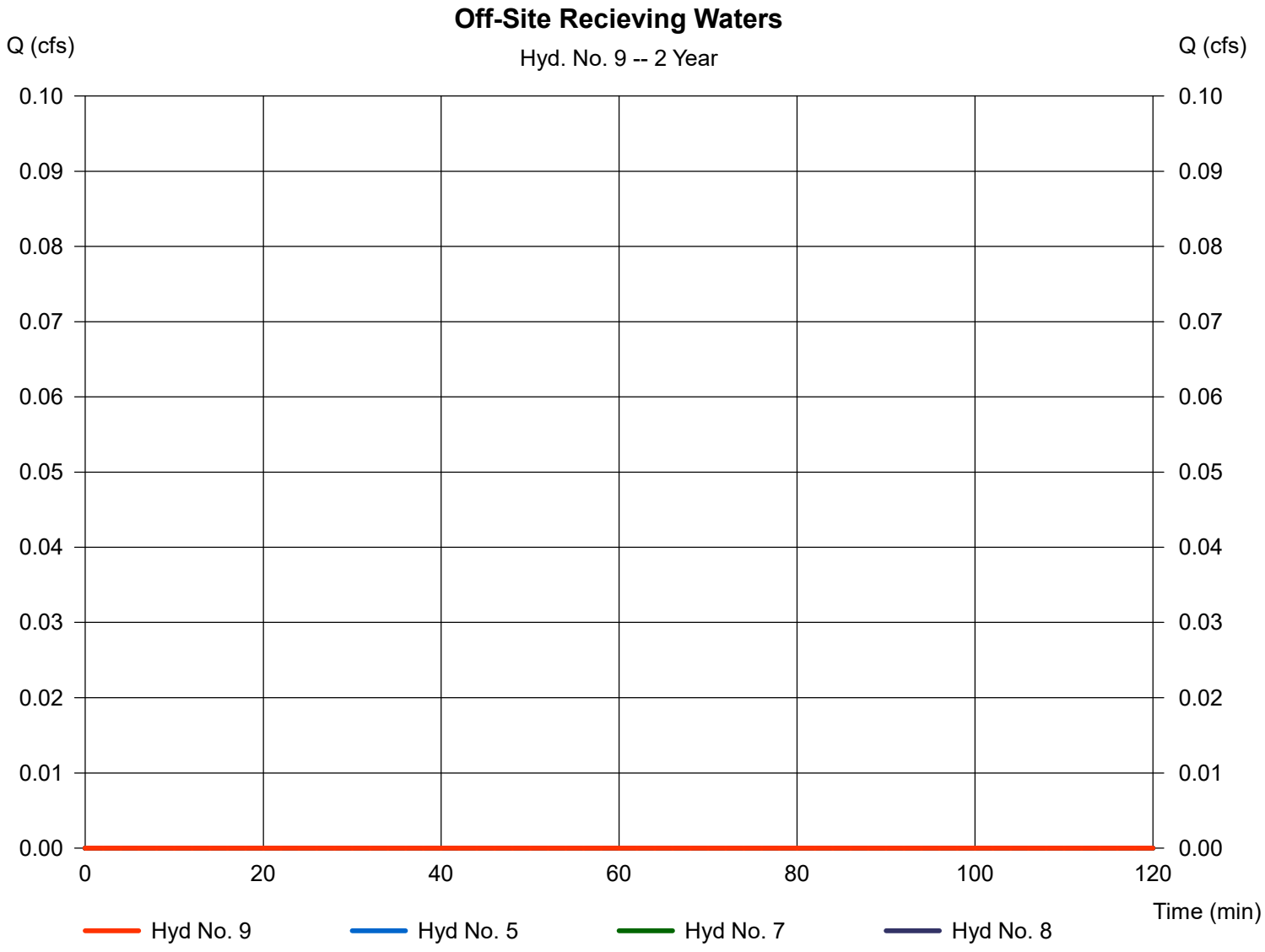
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

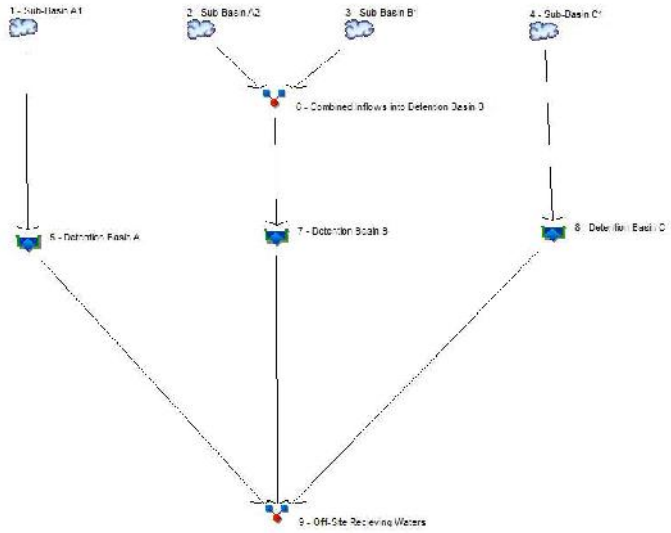
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | 0.038 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | 0.084 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | 0.034 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | 0.012 | ------- | ------- | ------- | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | 0.116 | ------- | ------- | ------- | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | 0.000 | ------- | ------- | ------- | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.038 | 2 | 950 | 1,463 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.084 | 2 | 868 | 3,225 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.034 | 2 | 1044 | 1,312 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.012 | 2 | 1136 | 468 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.71 | 1,463 | Detention Basin A |
| 6 | Combine | 0.116 | 2 | 918 | 4,537 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.71 | 4,537 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.23 | 468 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

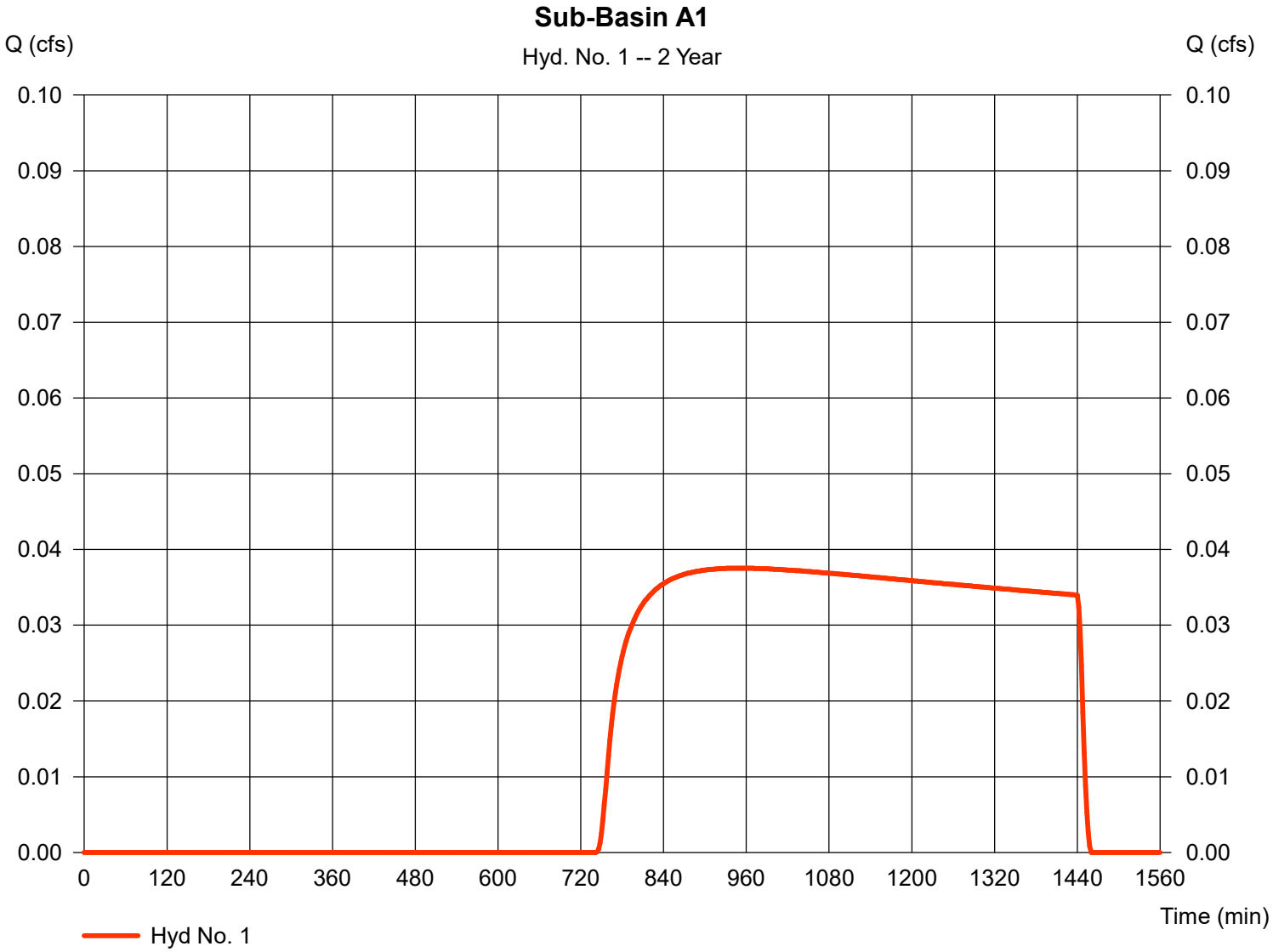
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.038 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 950 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,463 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 68 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



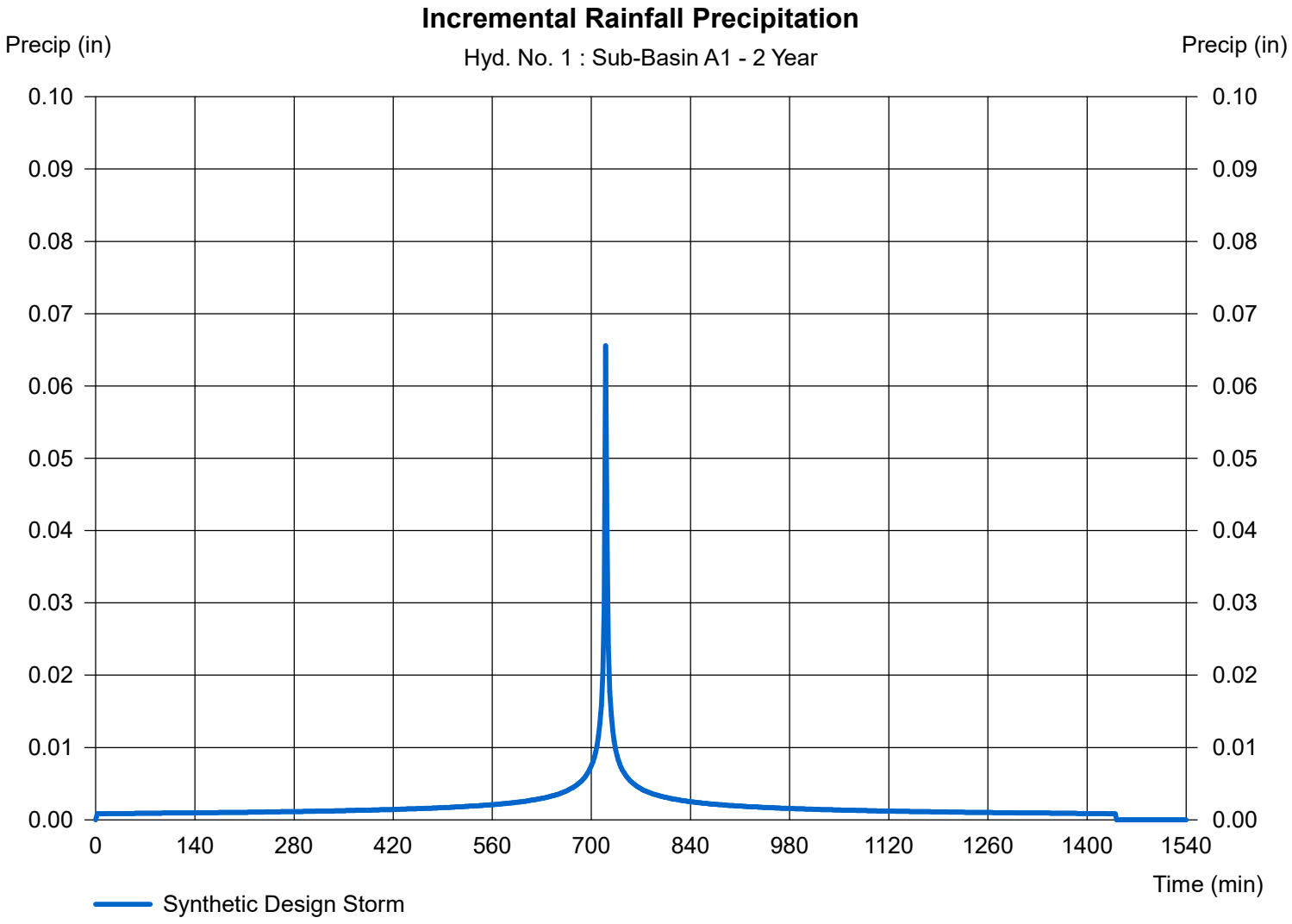
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



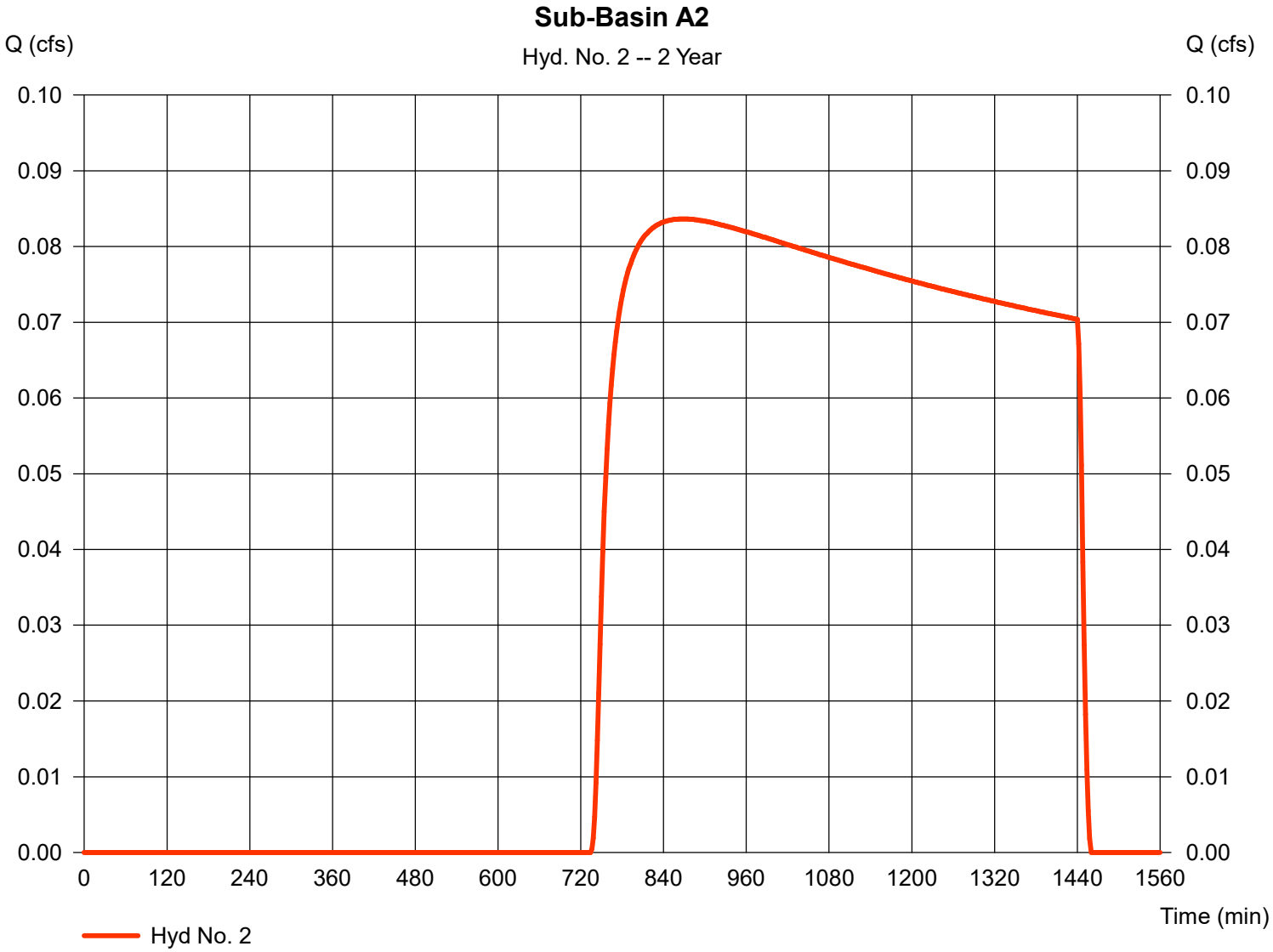
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.084 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 868 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,225 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 68.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



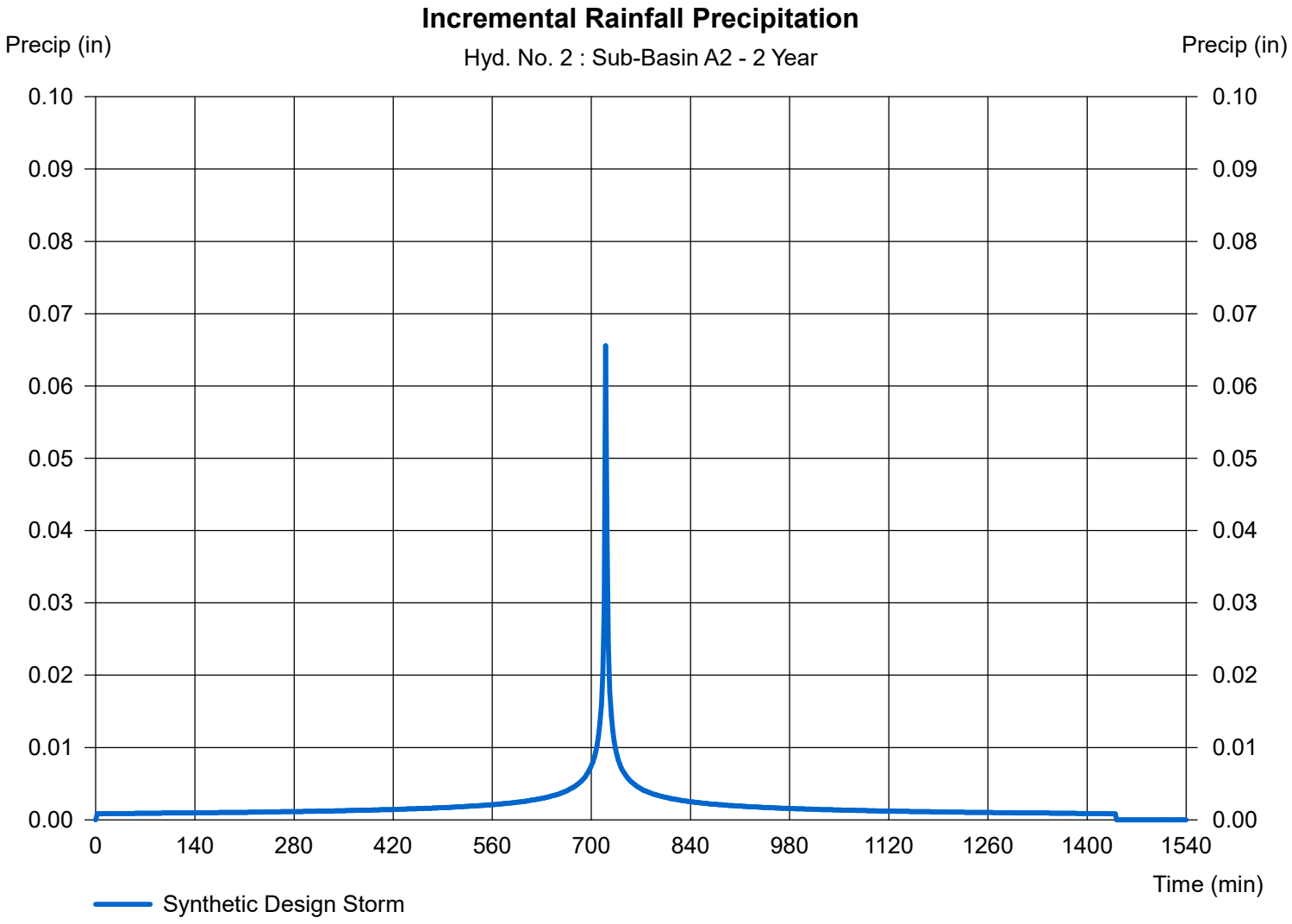
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



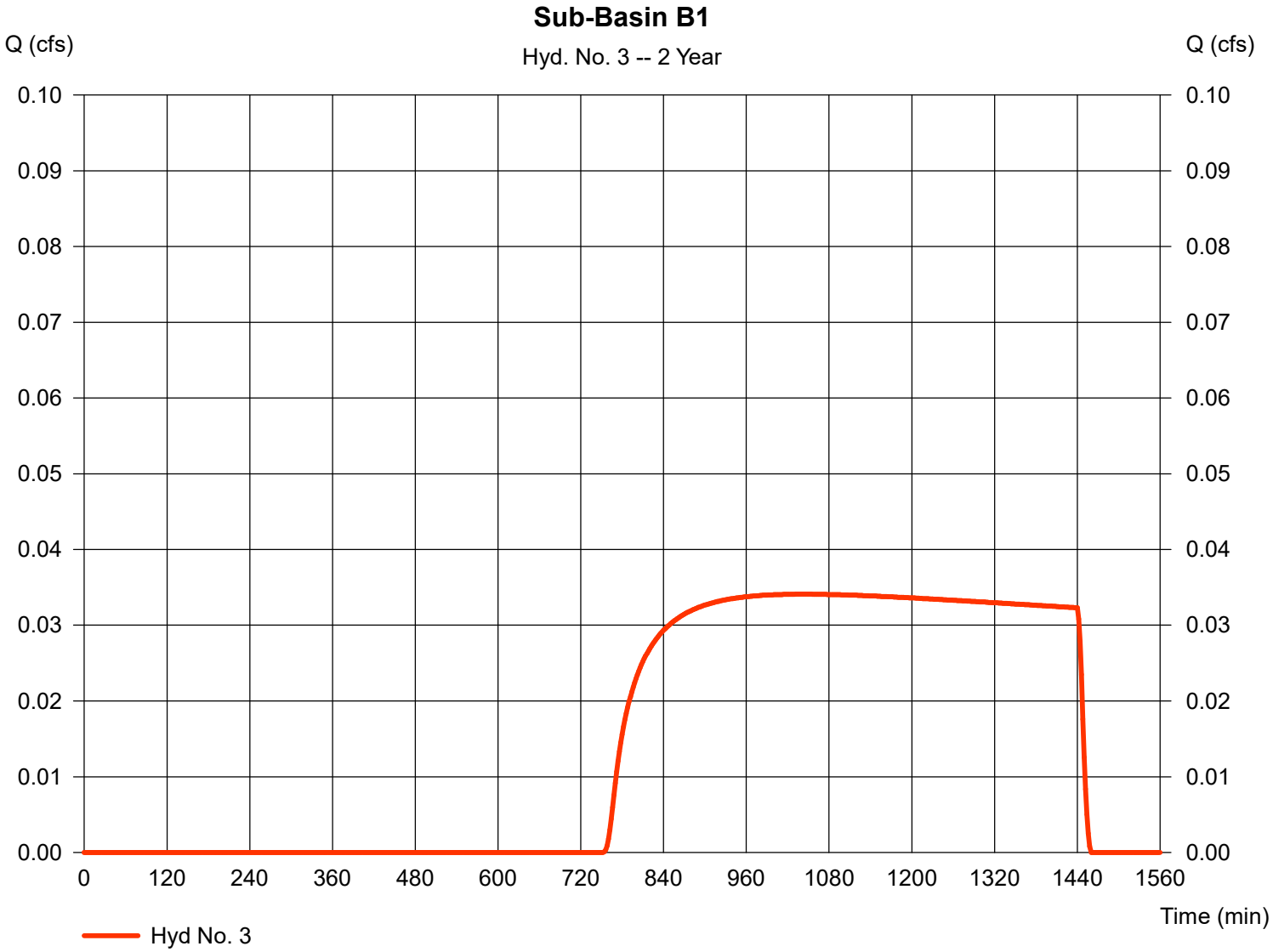
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.034 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1044 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,312 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 67.3 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



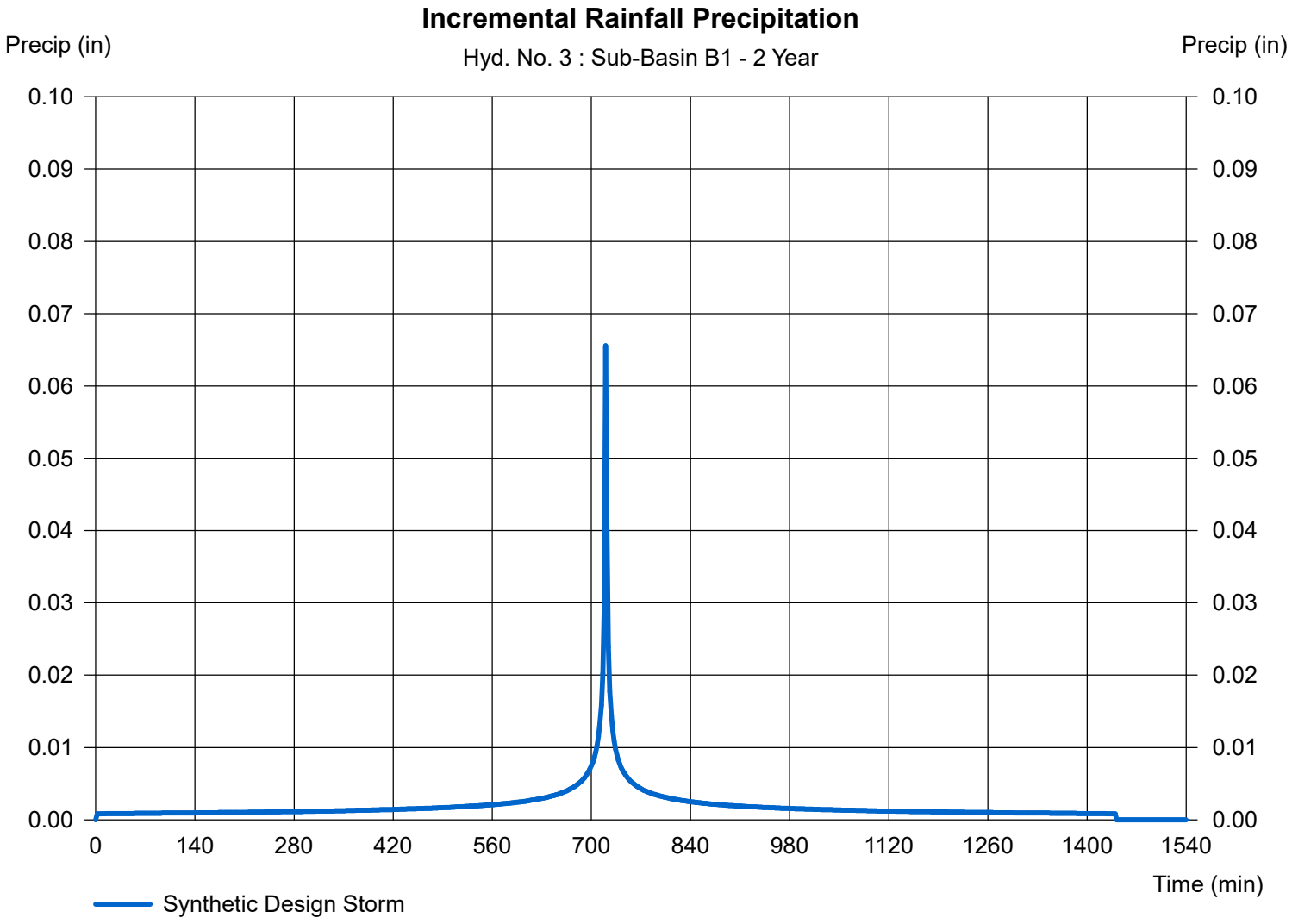
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



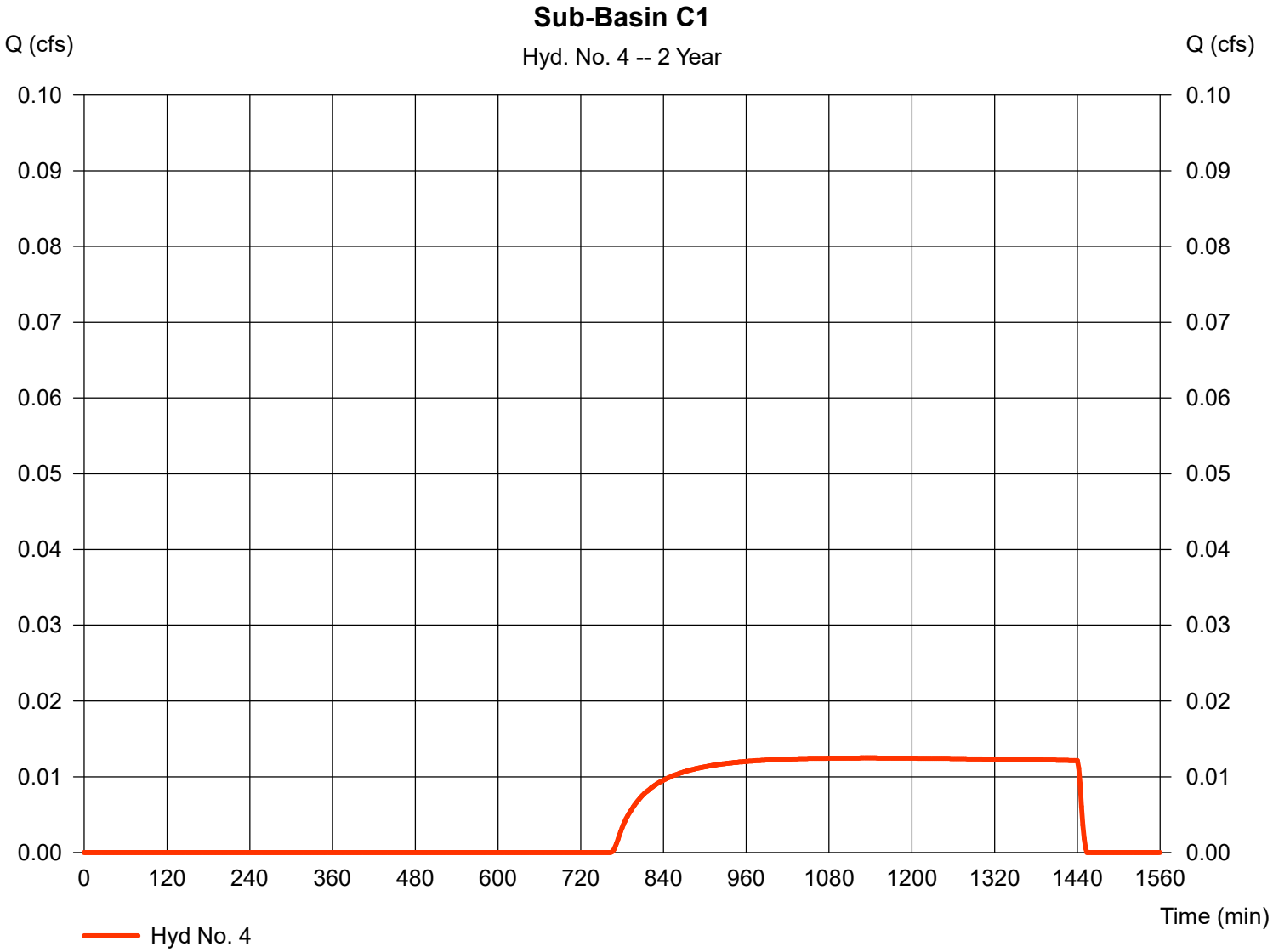
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.012 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 1136 min |
| Time interval | = | 2 min | Hyd. volume | = | 468 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 66.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.52 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



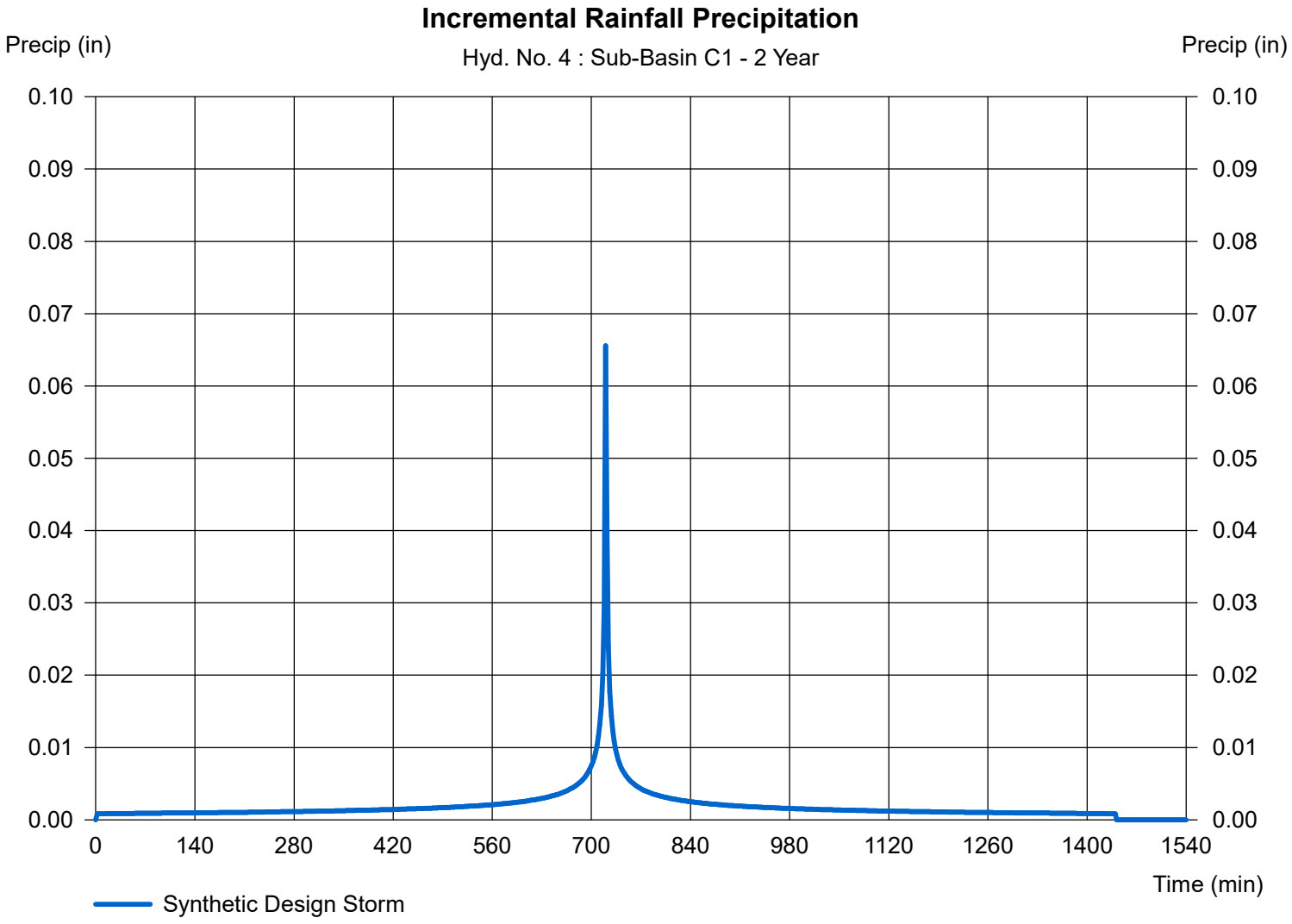
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 2 yrs | Time interval | = 2 min |
| Total precip. | = 1.5194 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



# Hydrograph Report

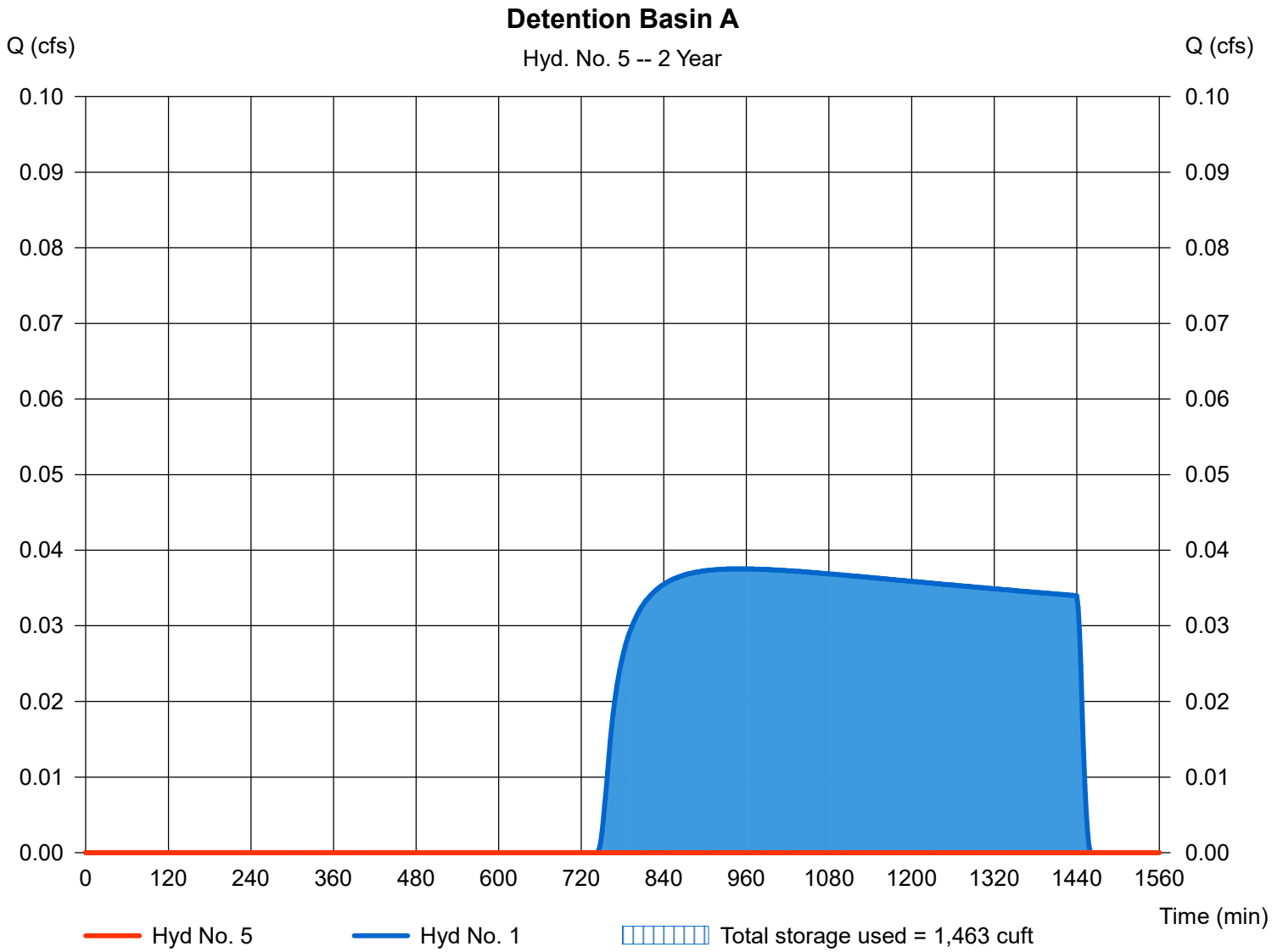
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.71 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 1,463 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

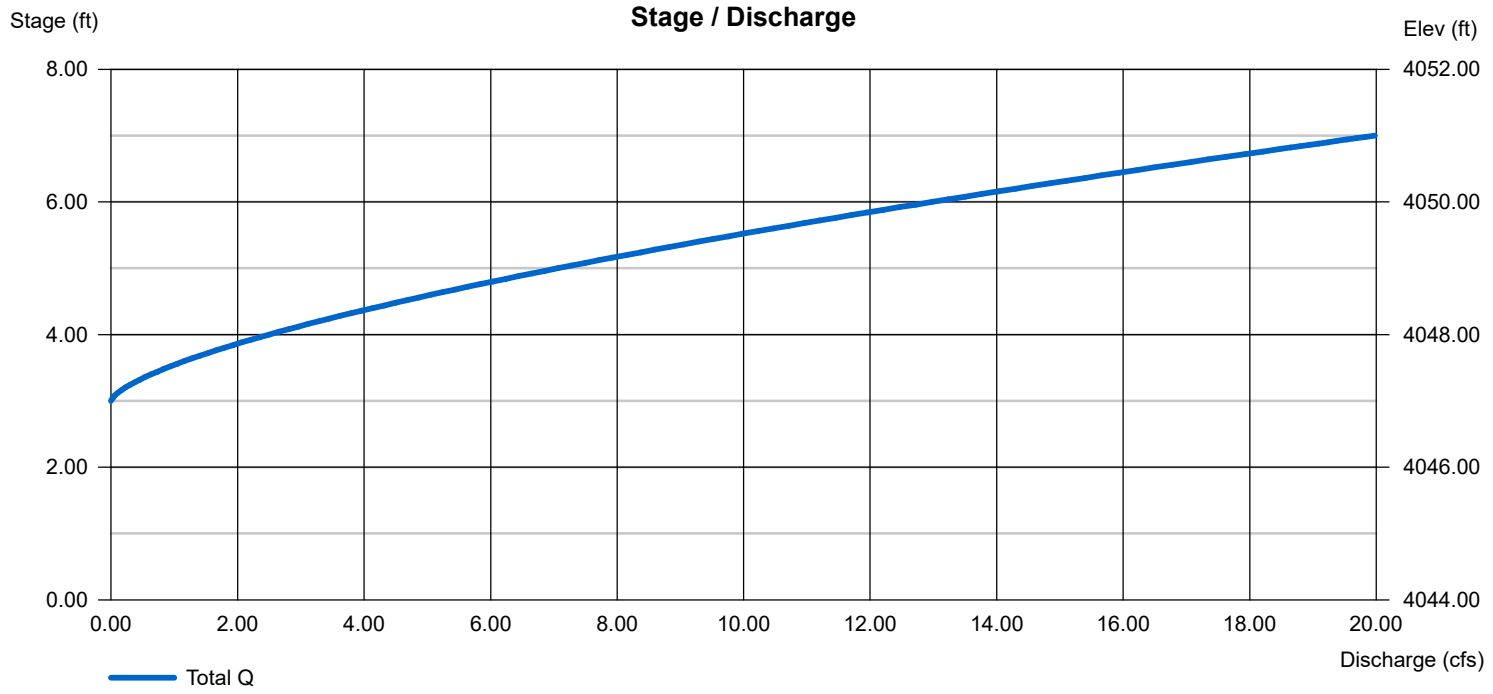
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



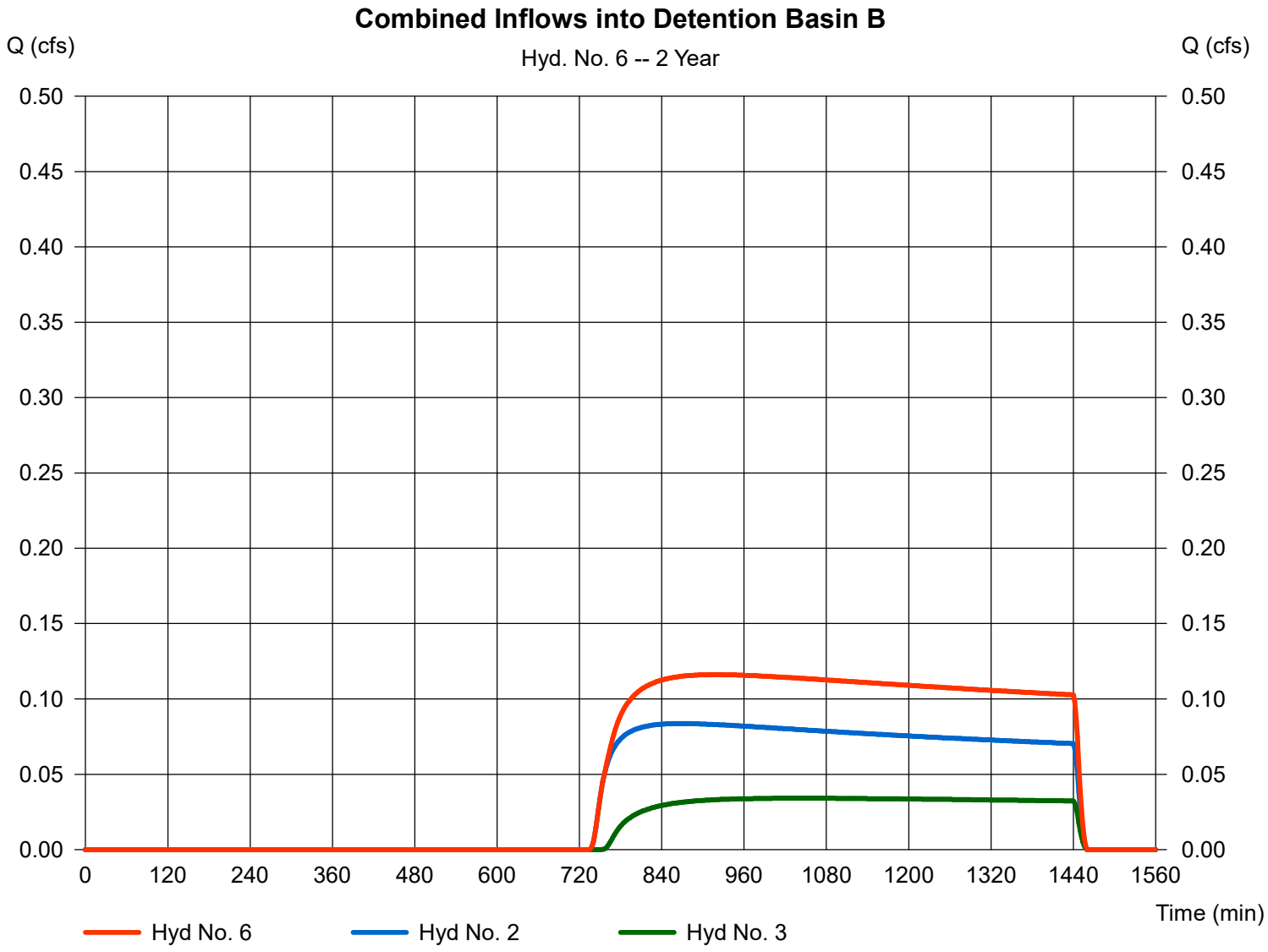
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.116 cfs |
| Storm frequency | = 2 yrs | Time to peak | = 918 min |
| Time interval | = 2 min | Hyd. volume | = 4,537 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

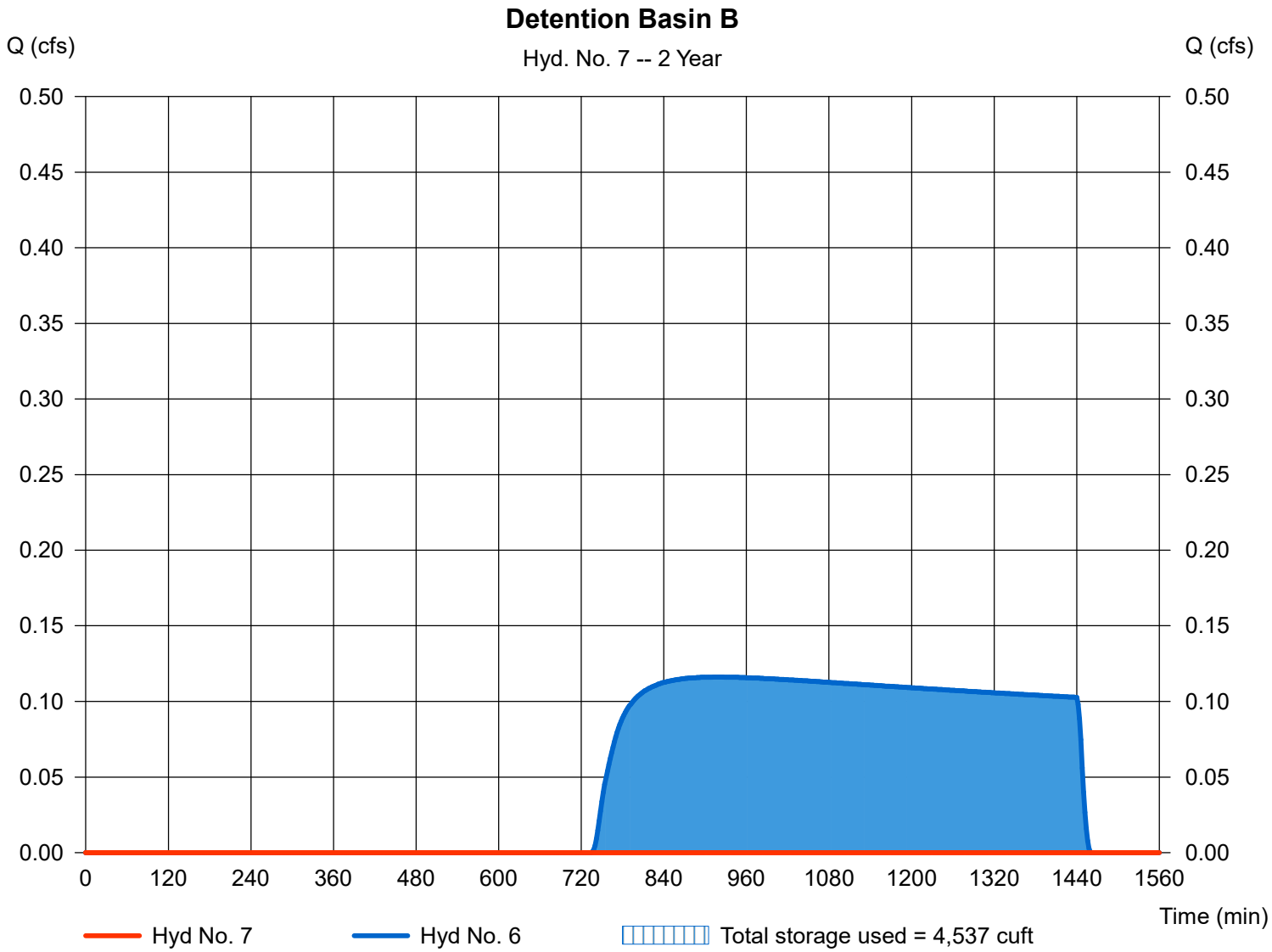
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.71 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 4,537 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

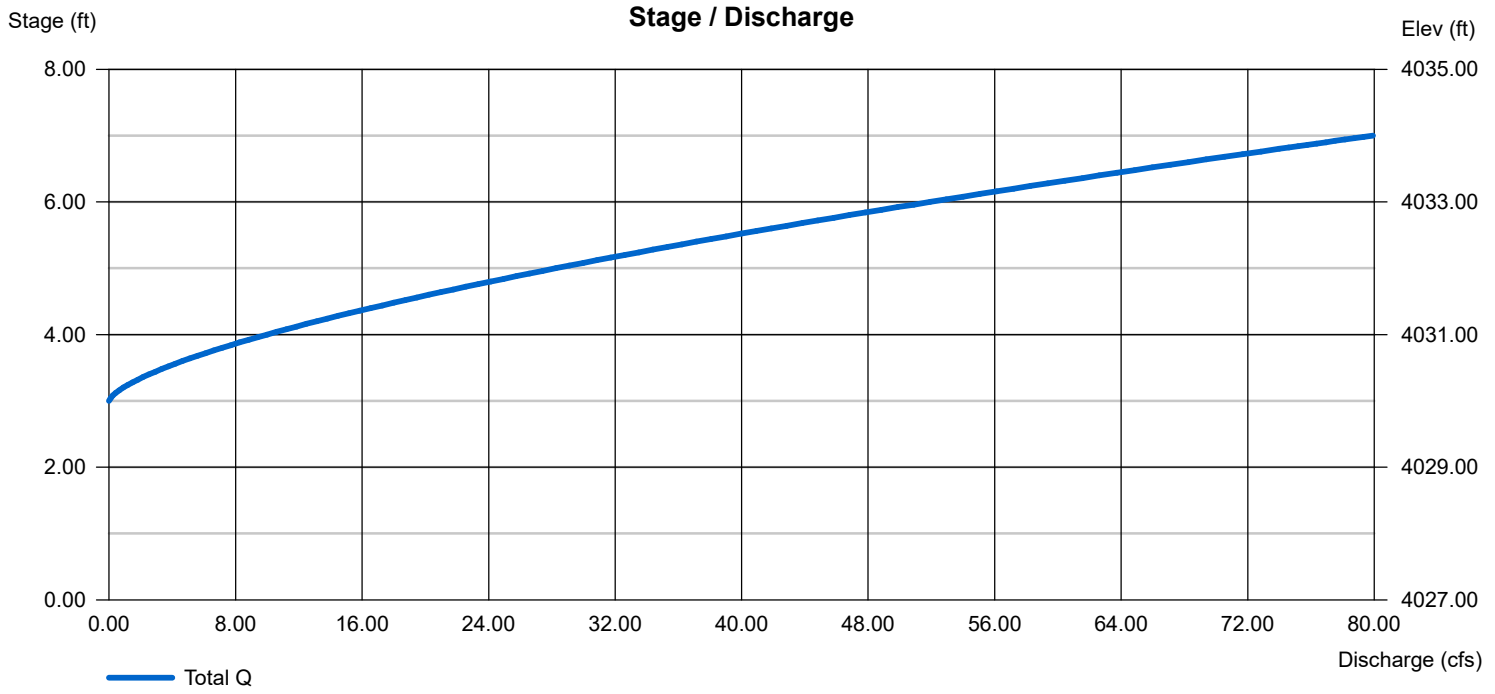
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

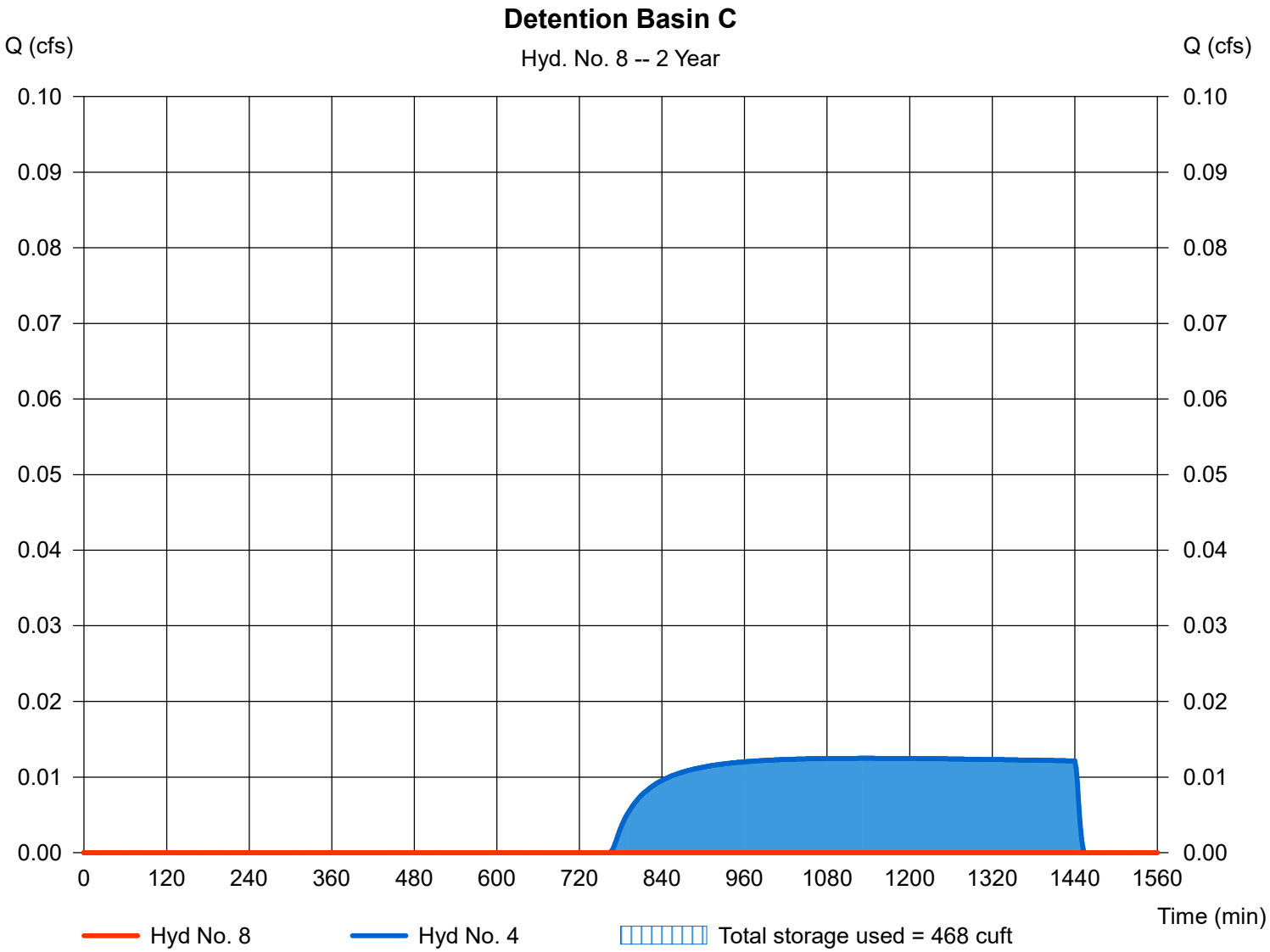
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.23 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 468 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

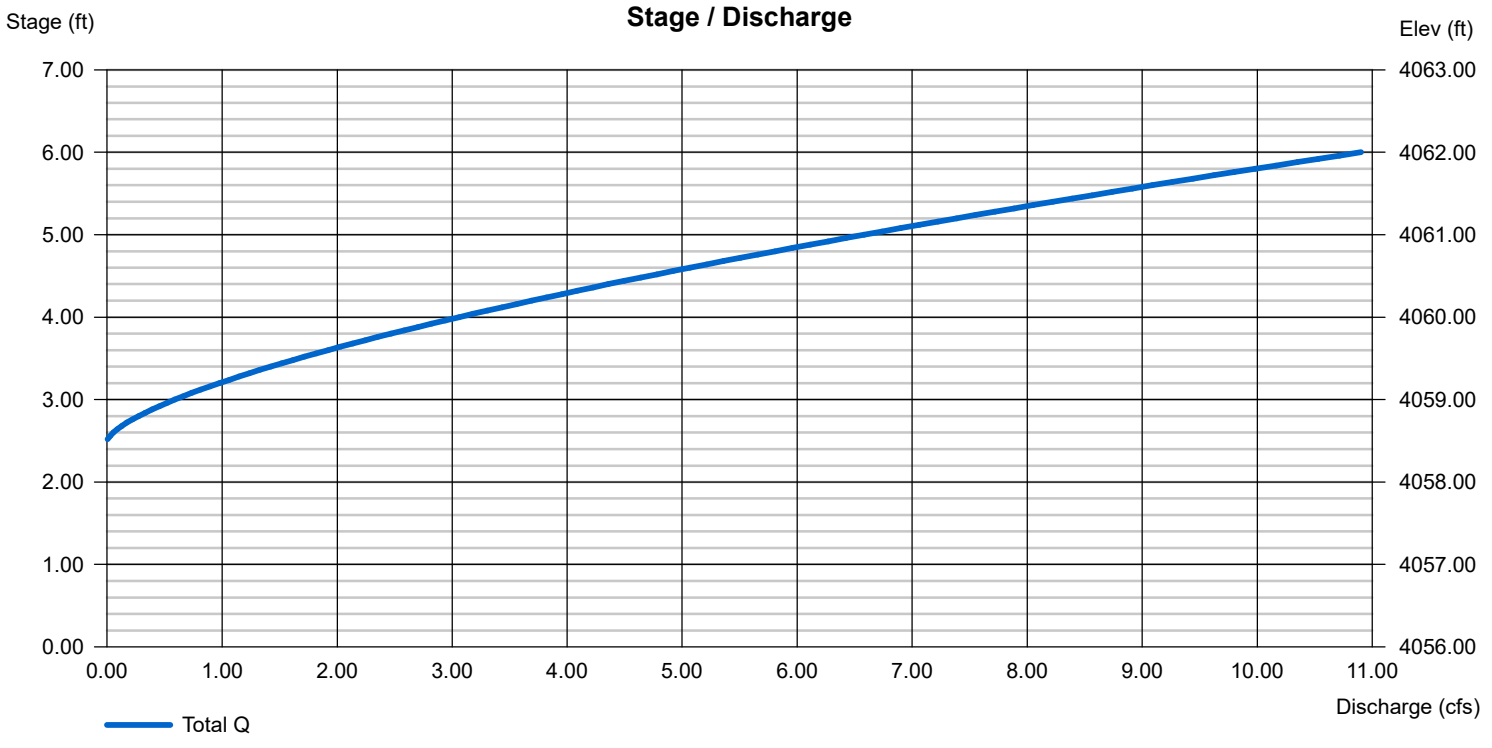
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



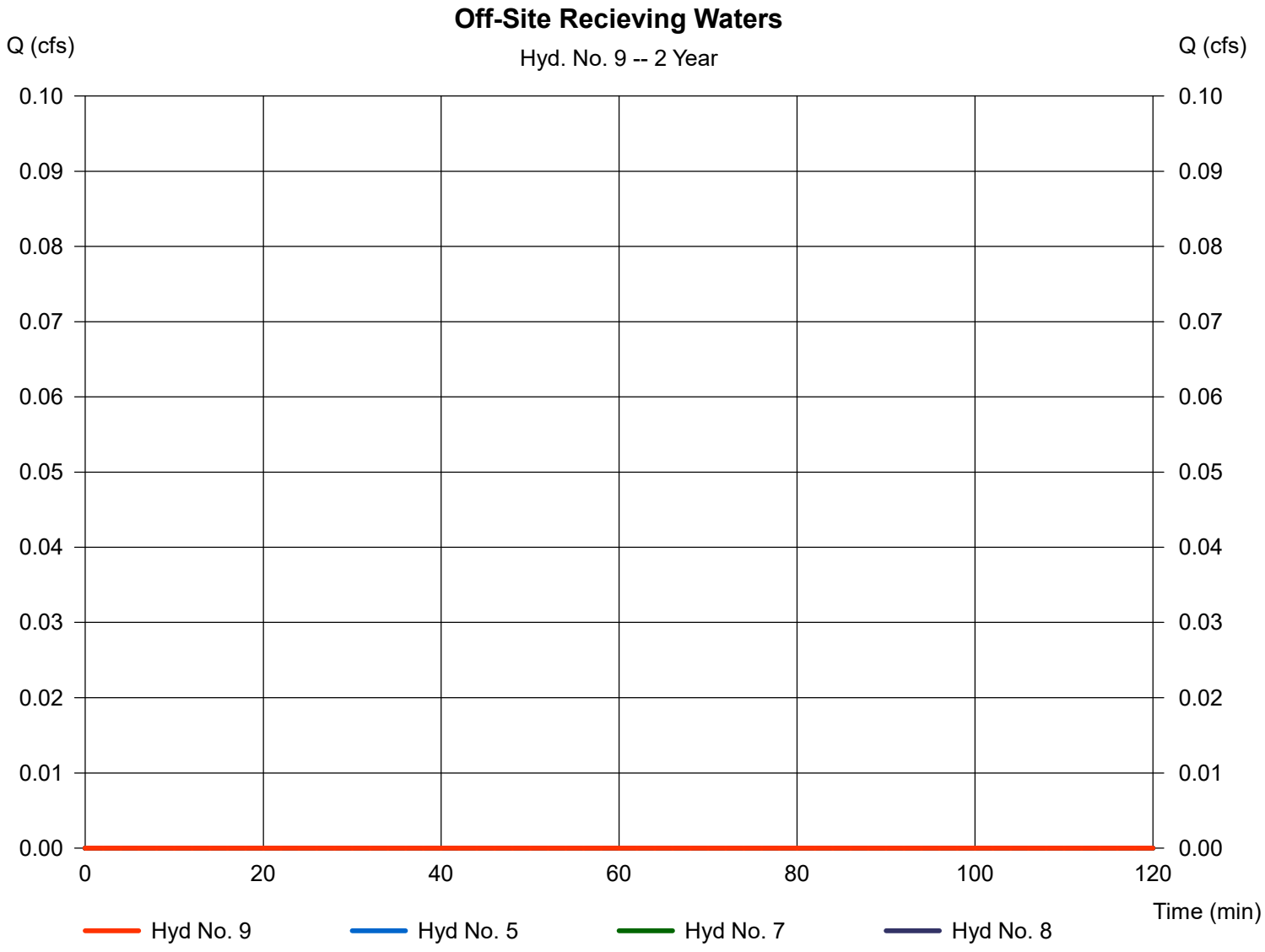
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 2 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |

## 5.4.b. 10 Year Storm Event– Post-Developed Conditions

5.4.b.1 15 Min Duration

5.4.b.2 30 Min Duration

5.4.b.3 1 Hour Duration

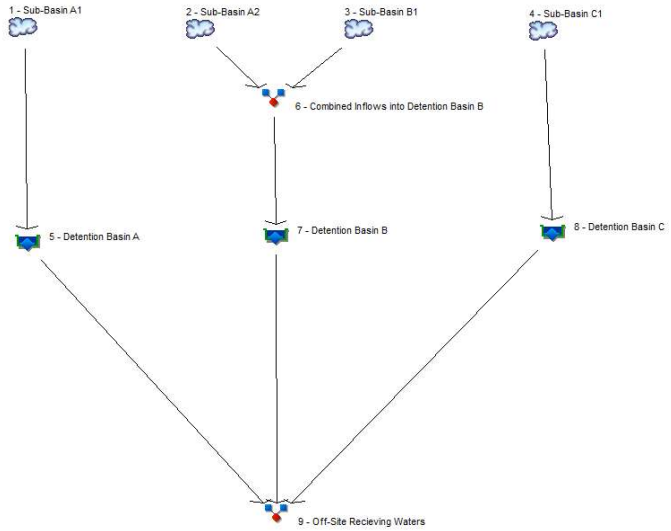
5.4.b.4 3 Hour Duration

5.4.b.5 6 Hour Duration

5.4.b.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 0.000 | Detention Basin A |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 0.000 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

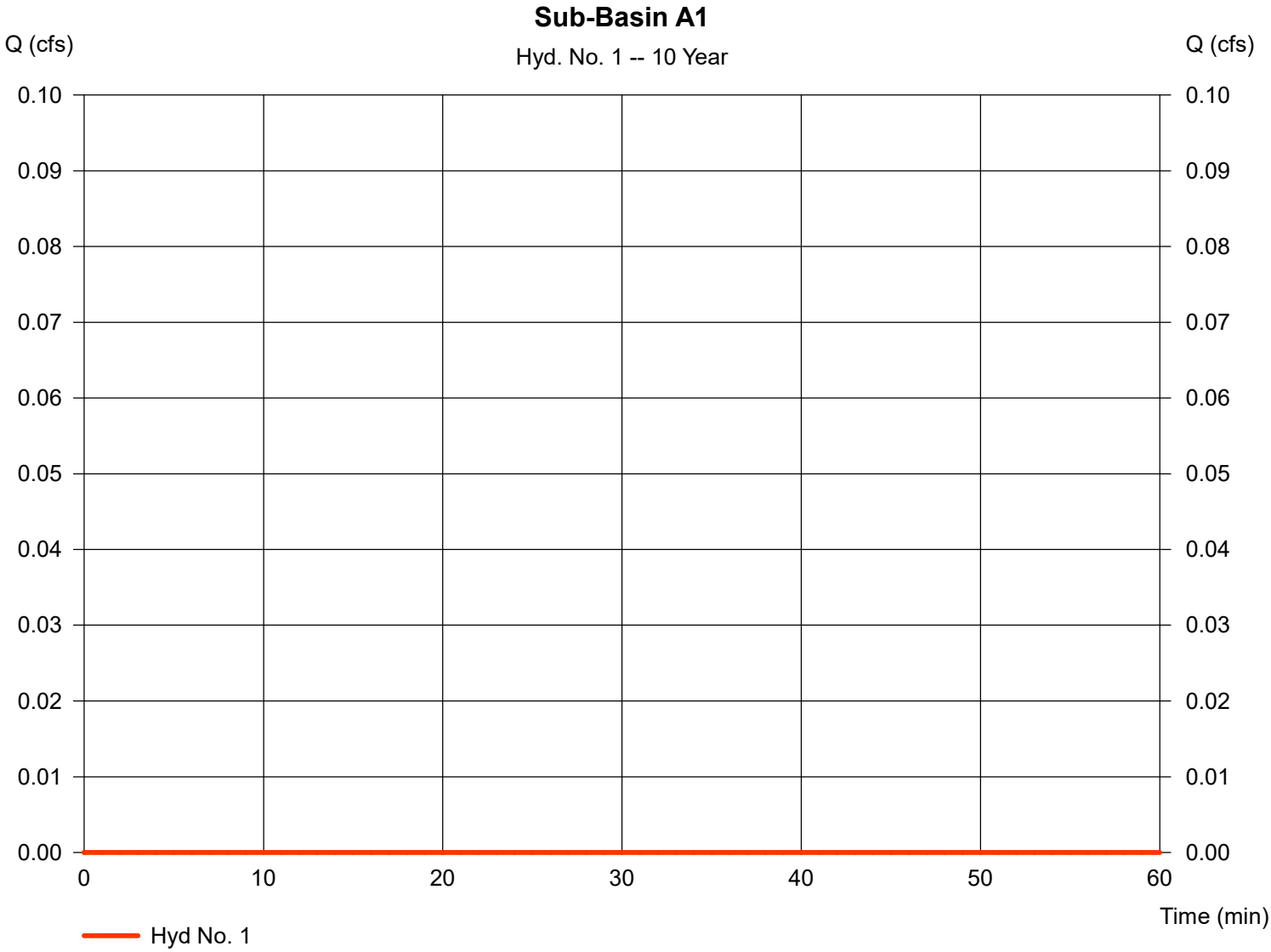
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



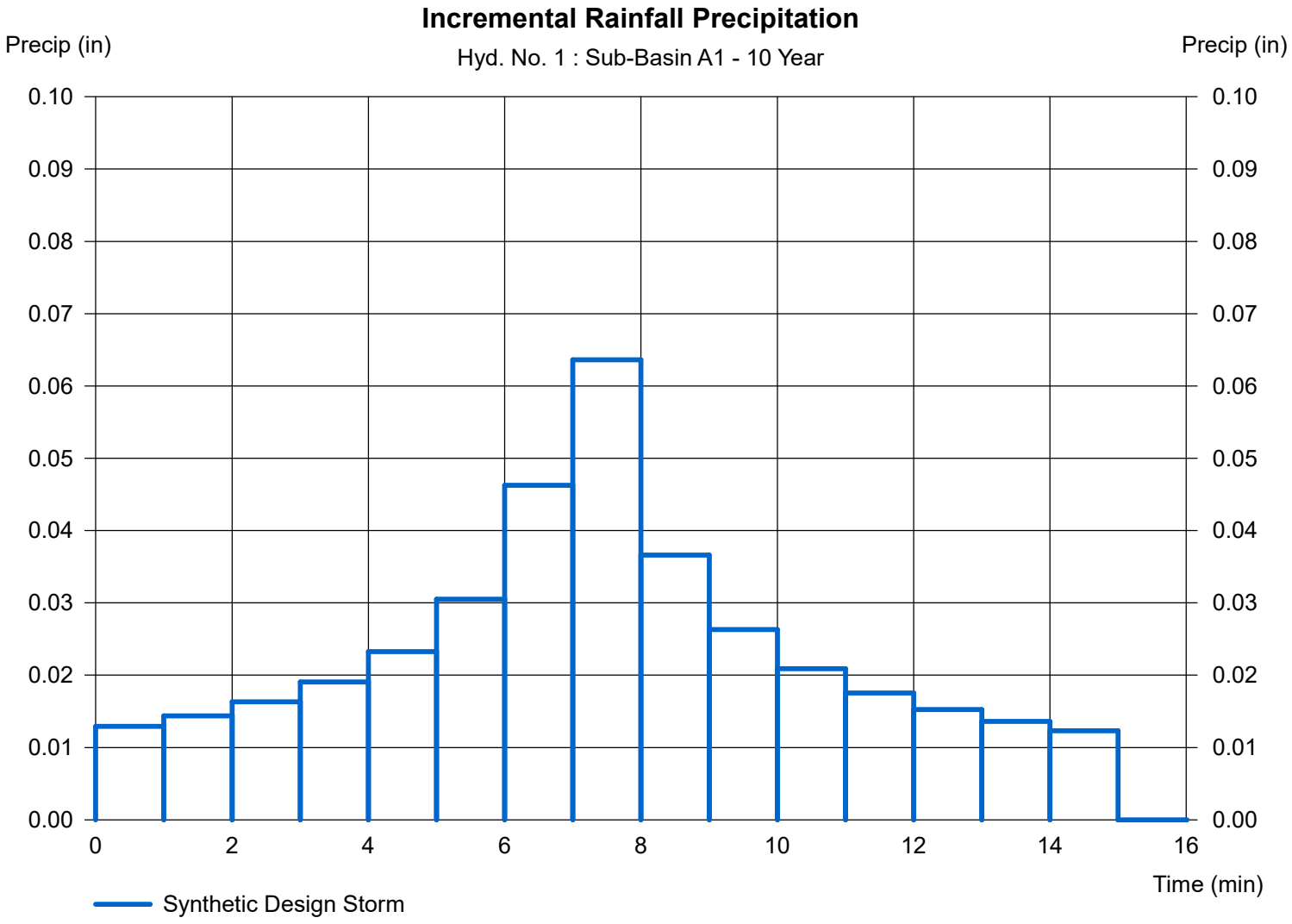
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



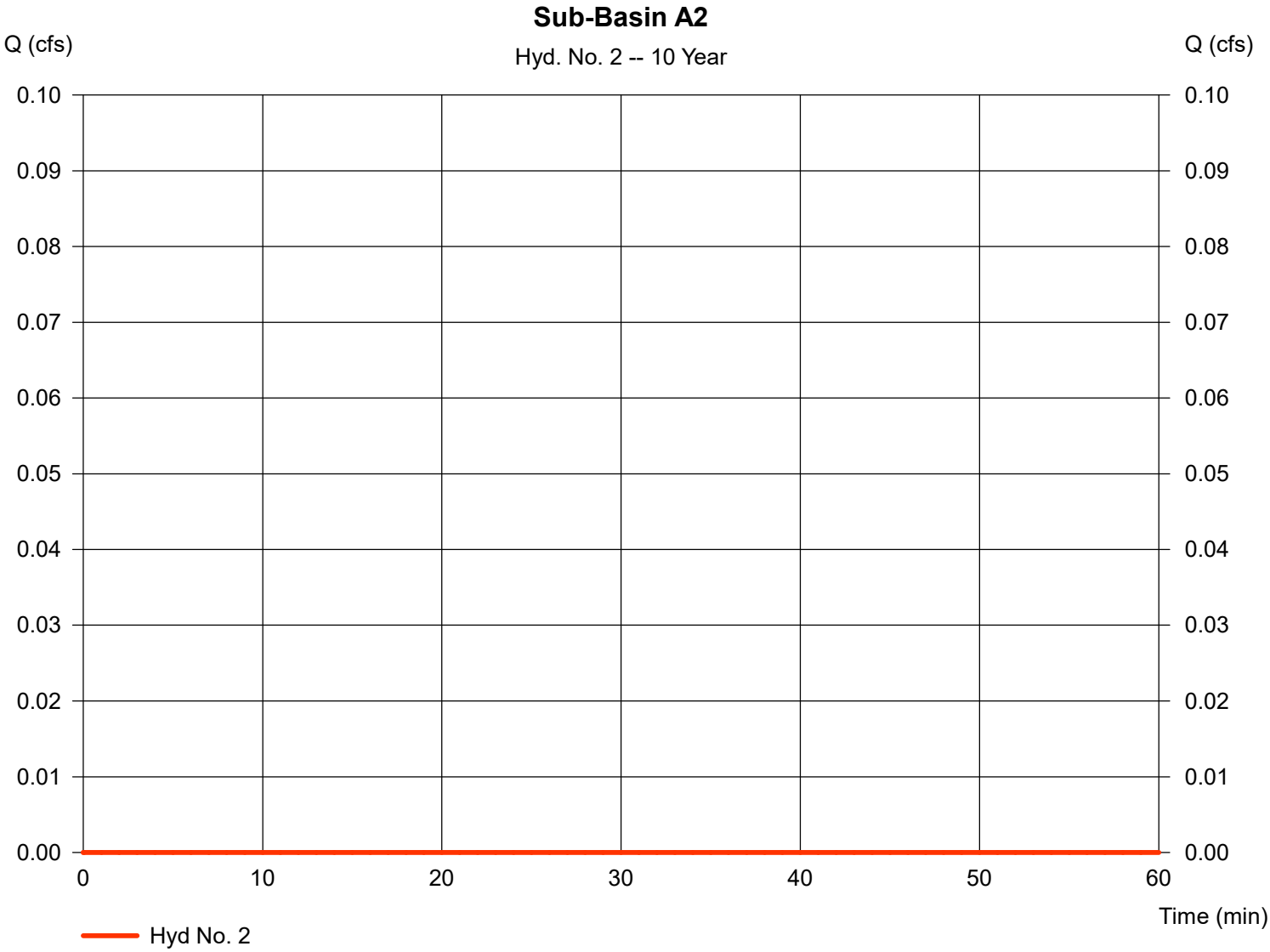
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



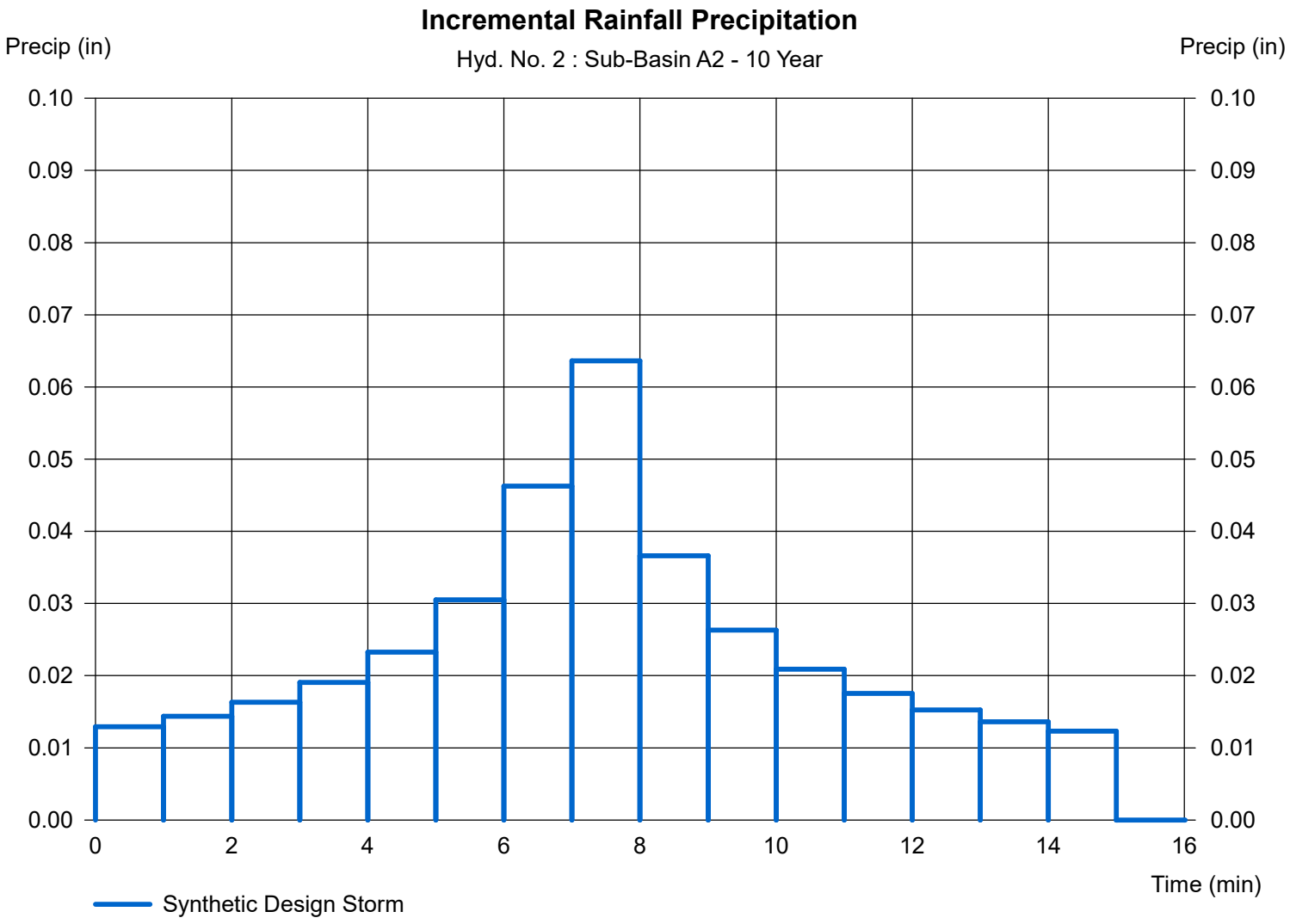
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



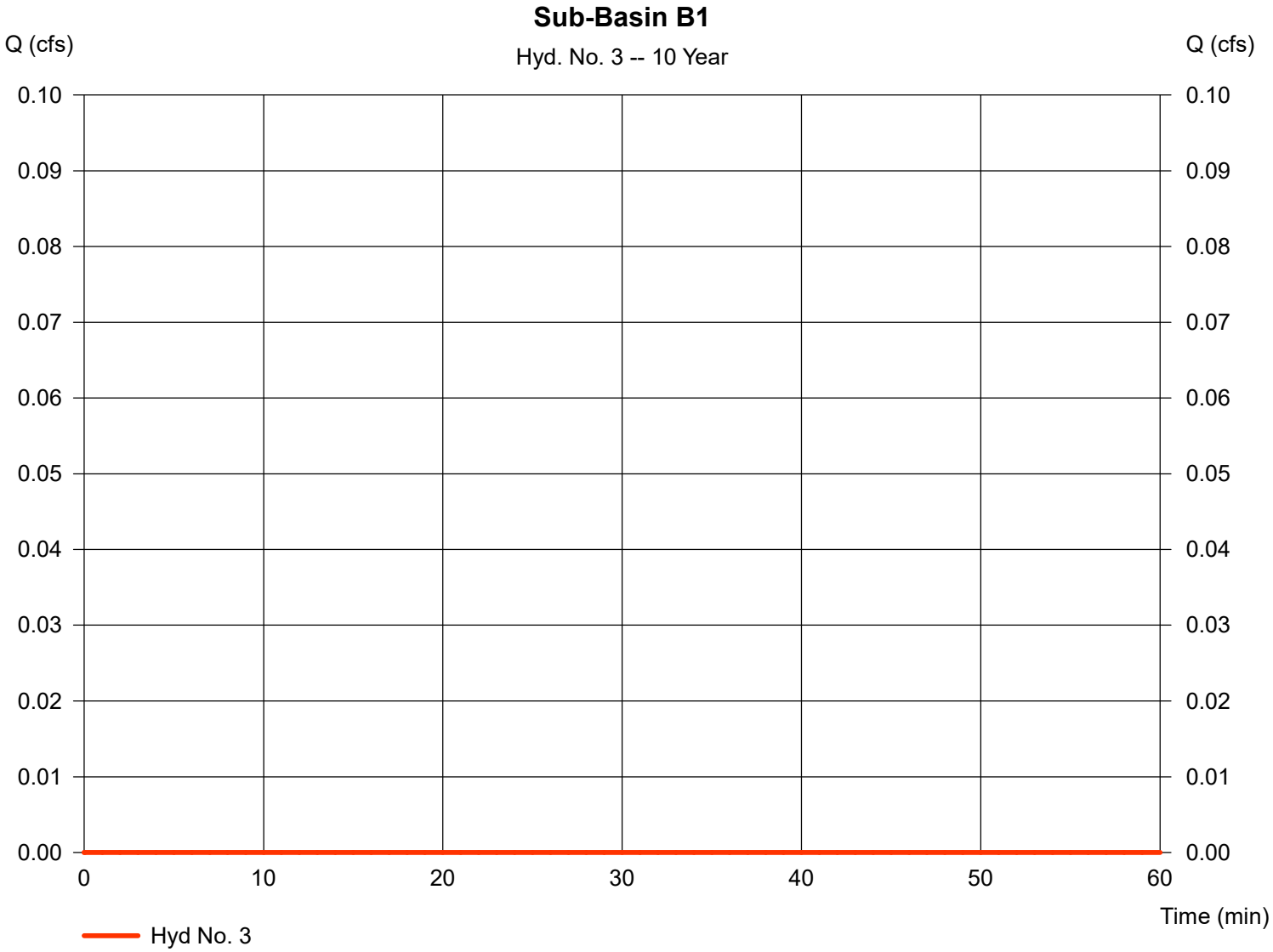
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



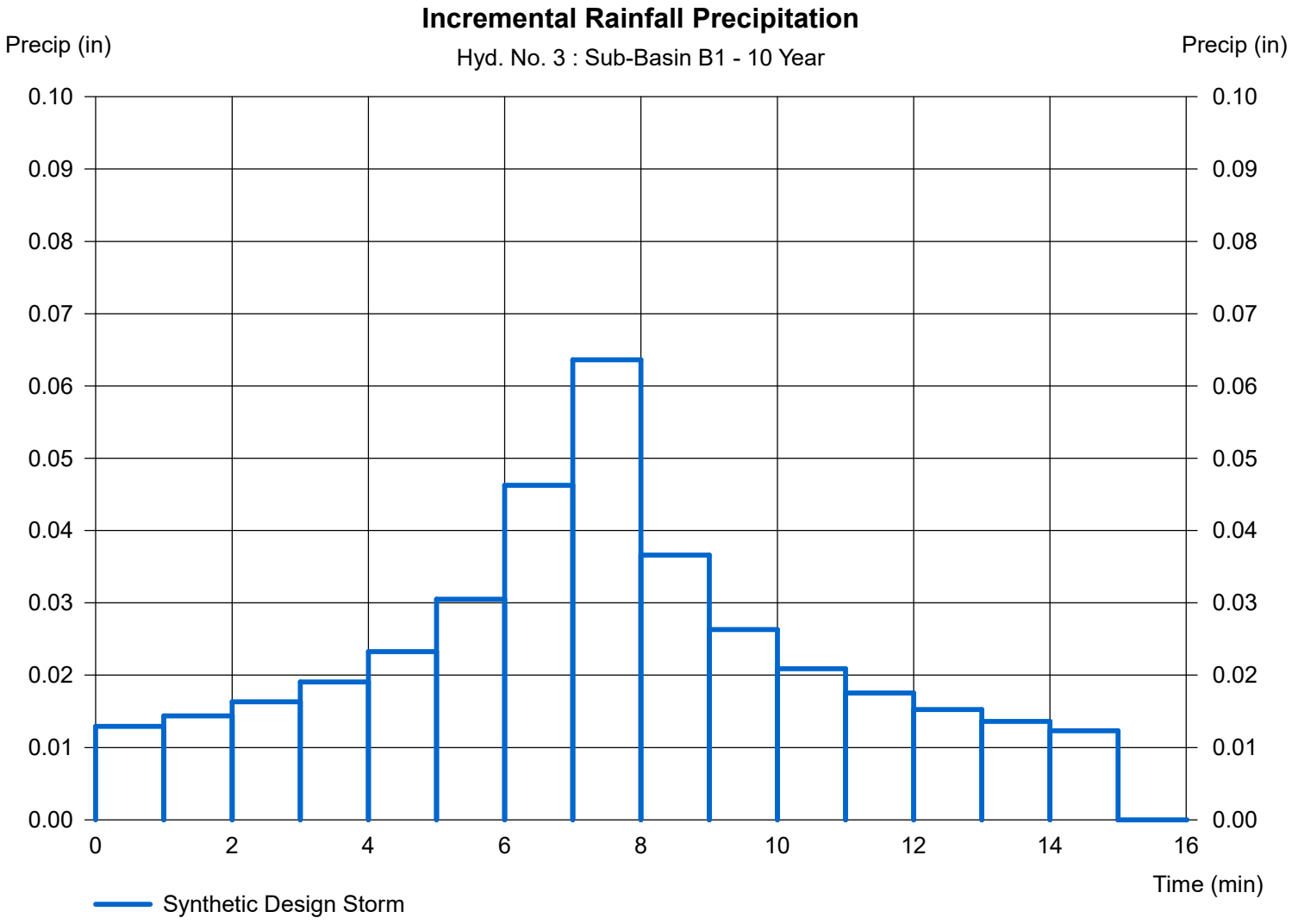
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



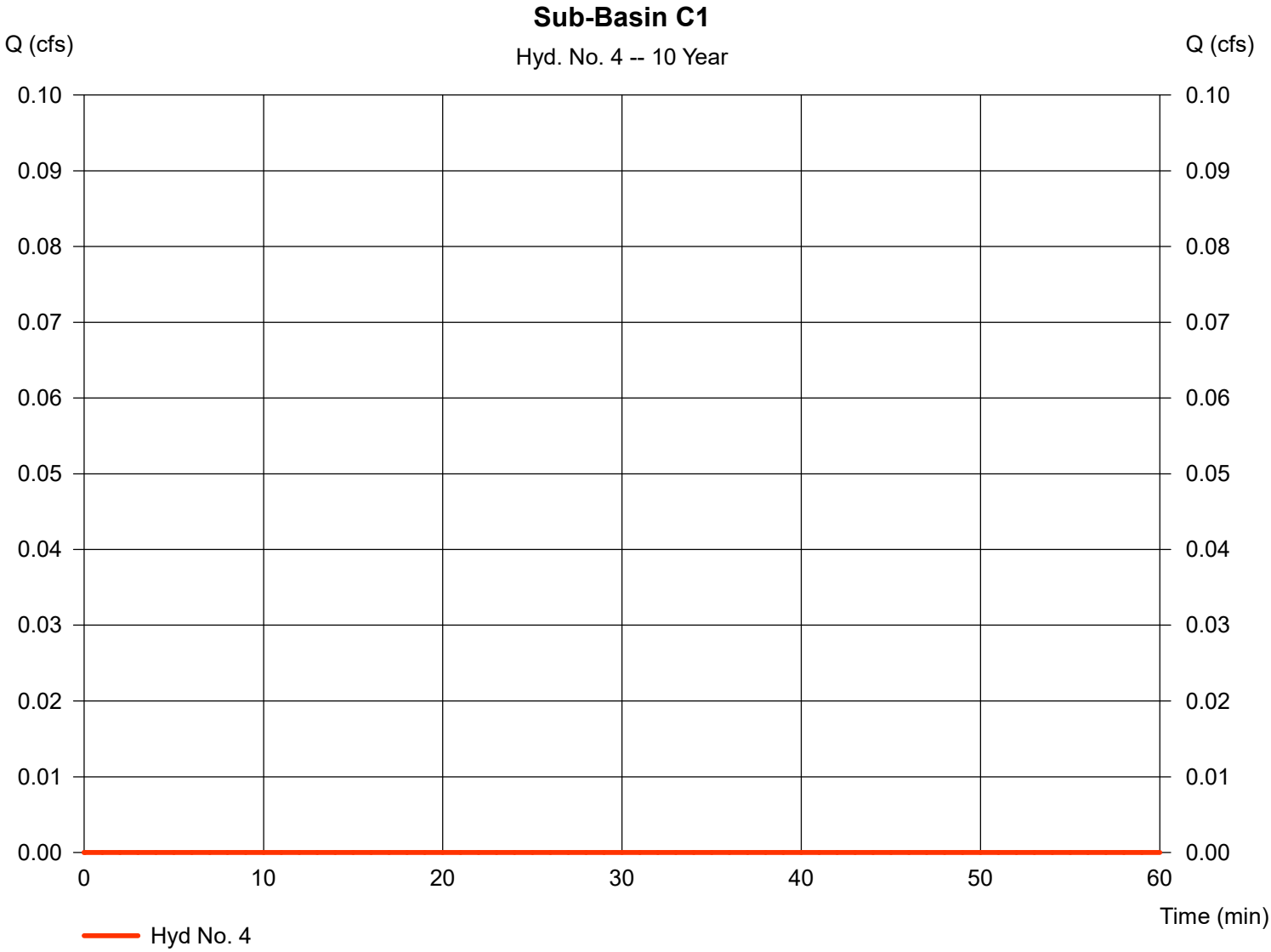
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.37 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



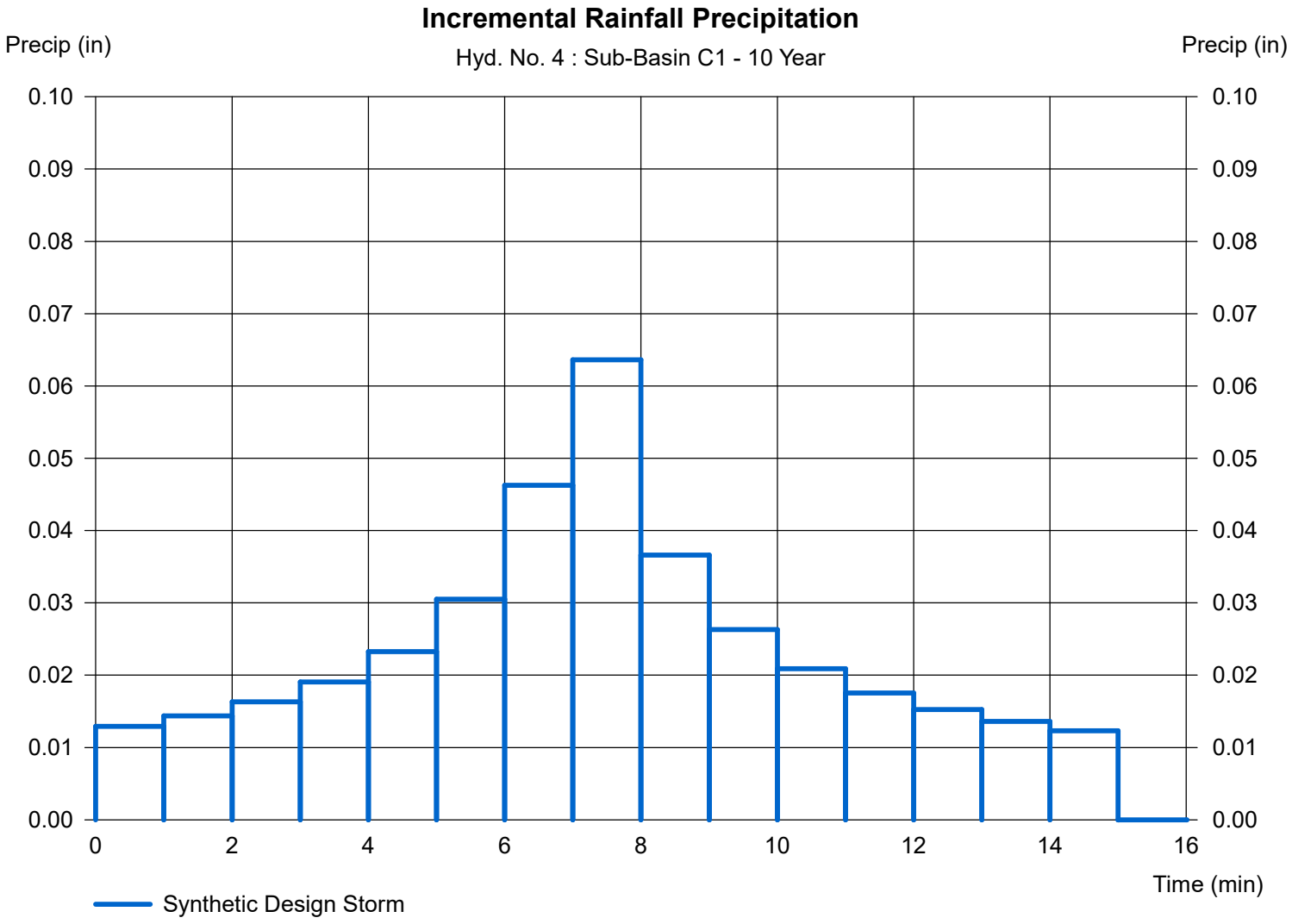
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.3689 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



# Hydrograph Report

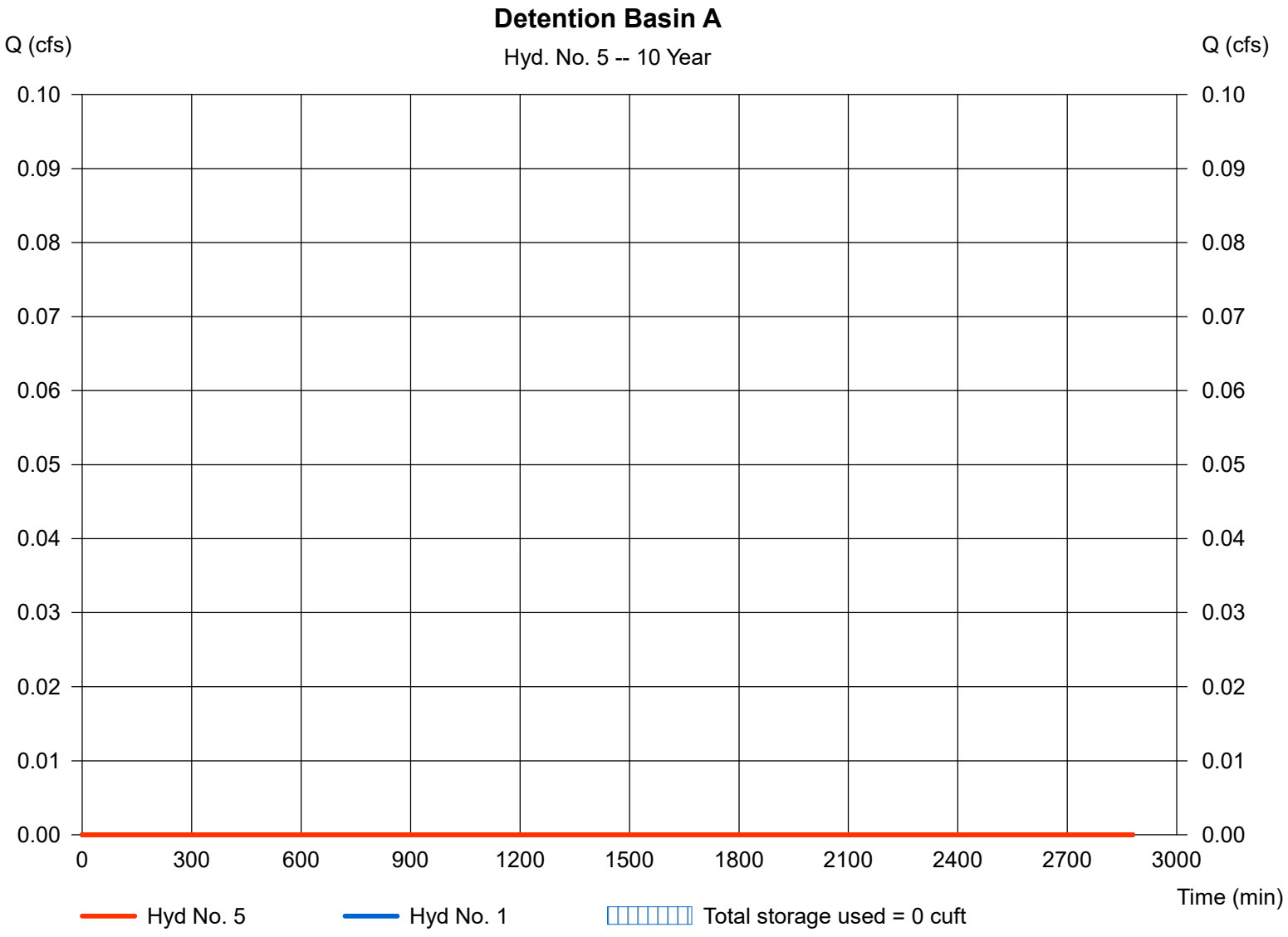
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

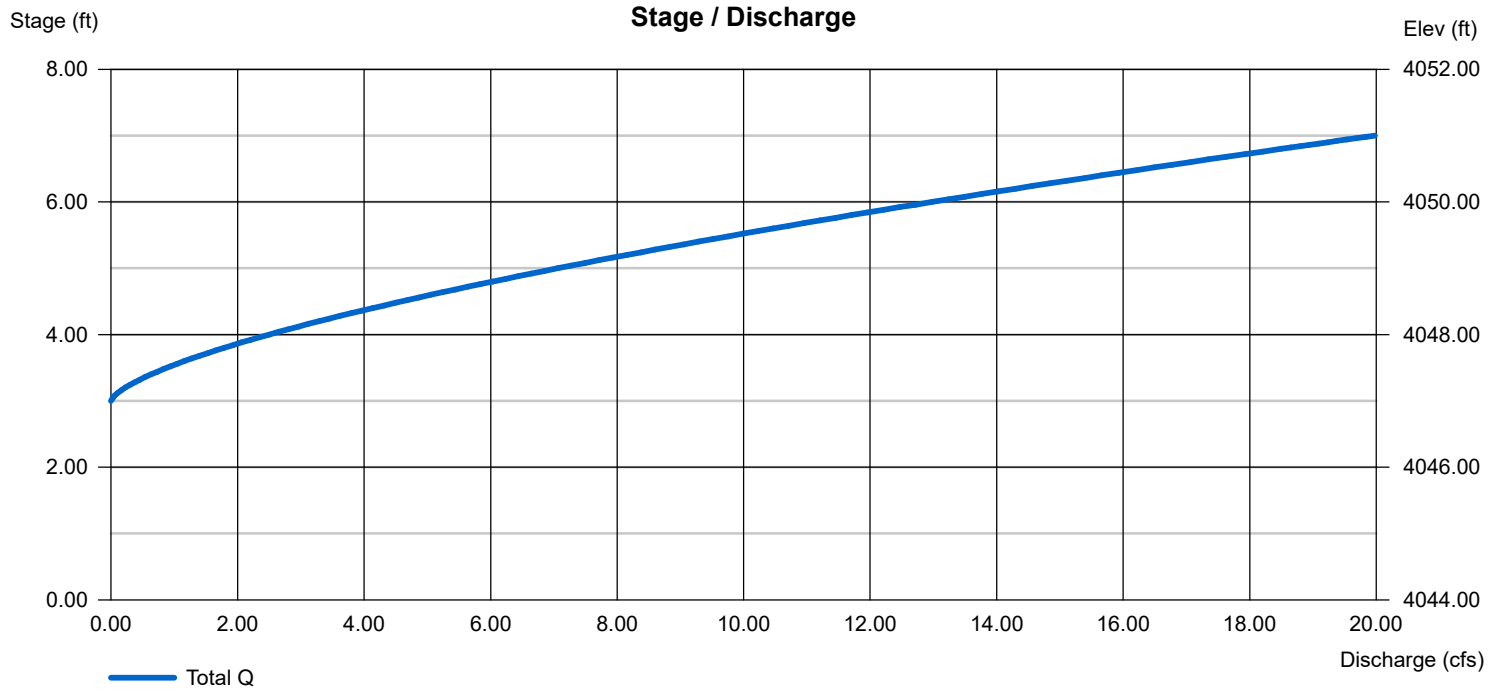
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



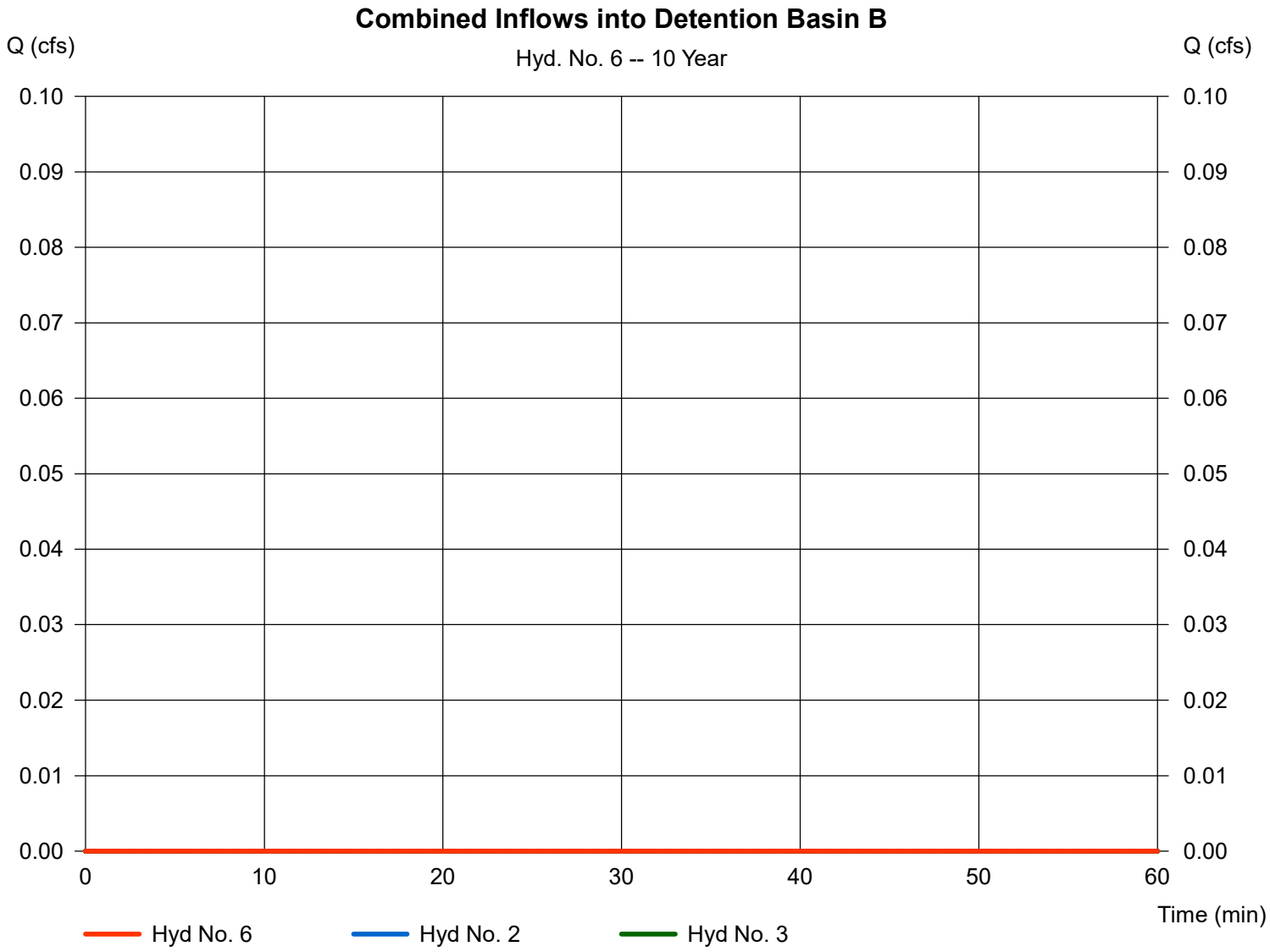
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

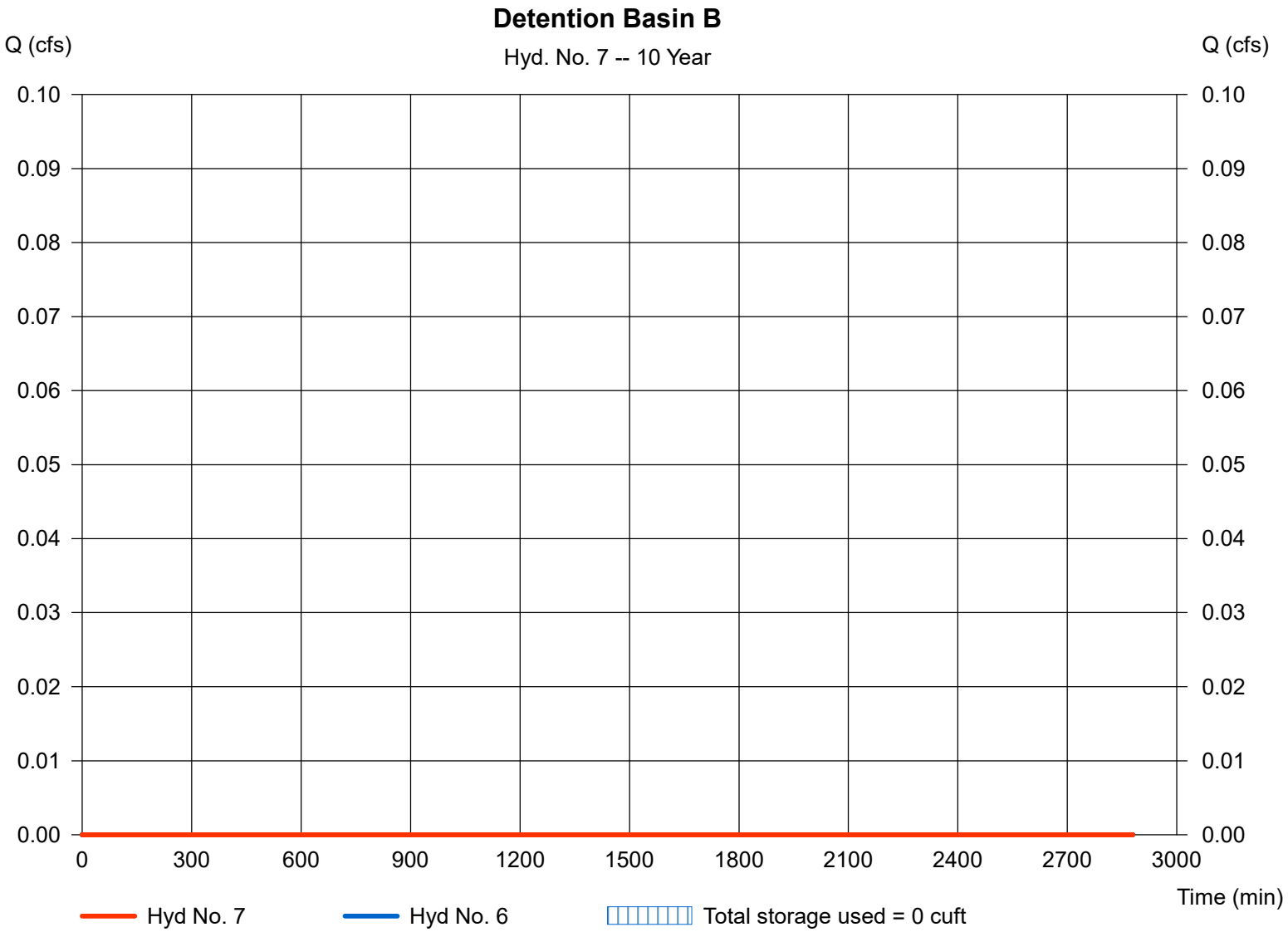
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

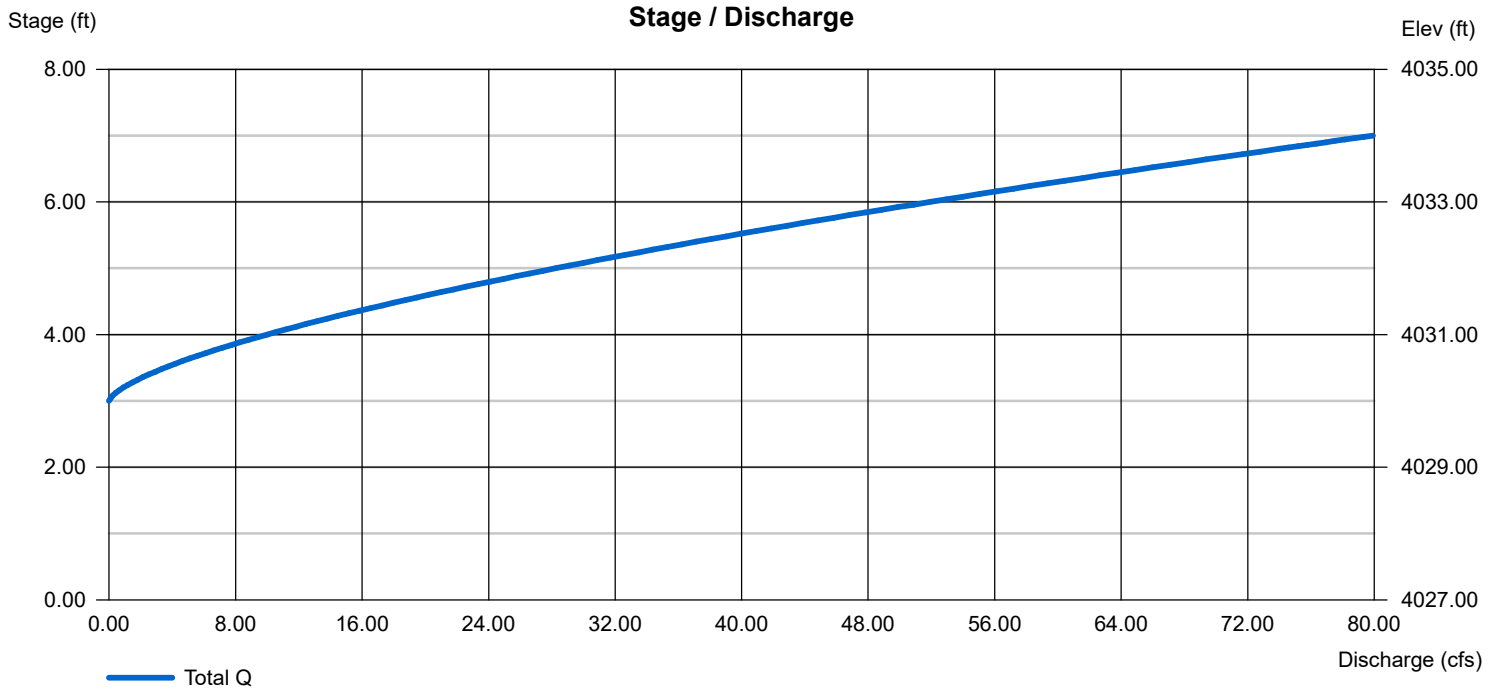
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

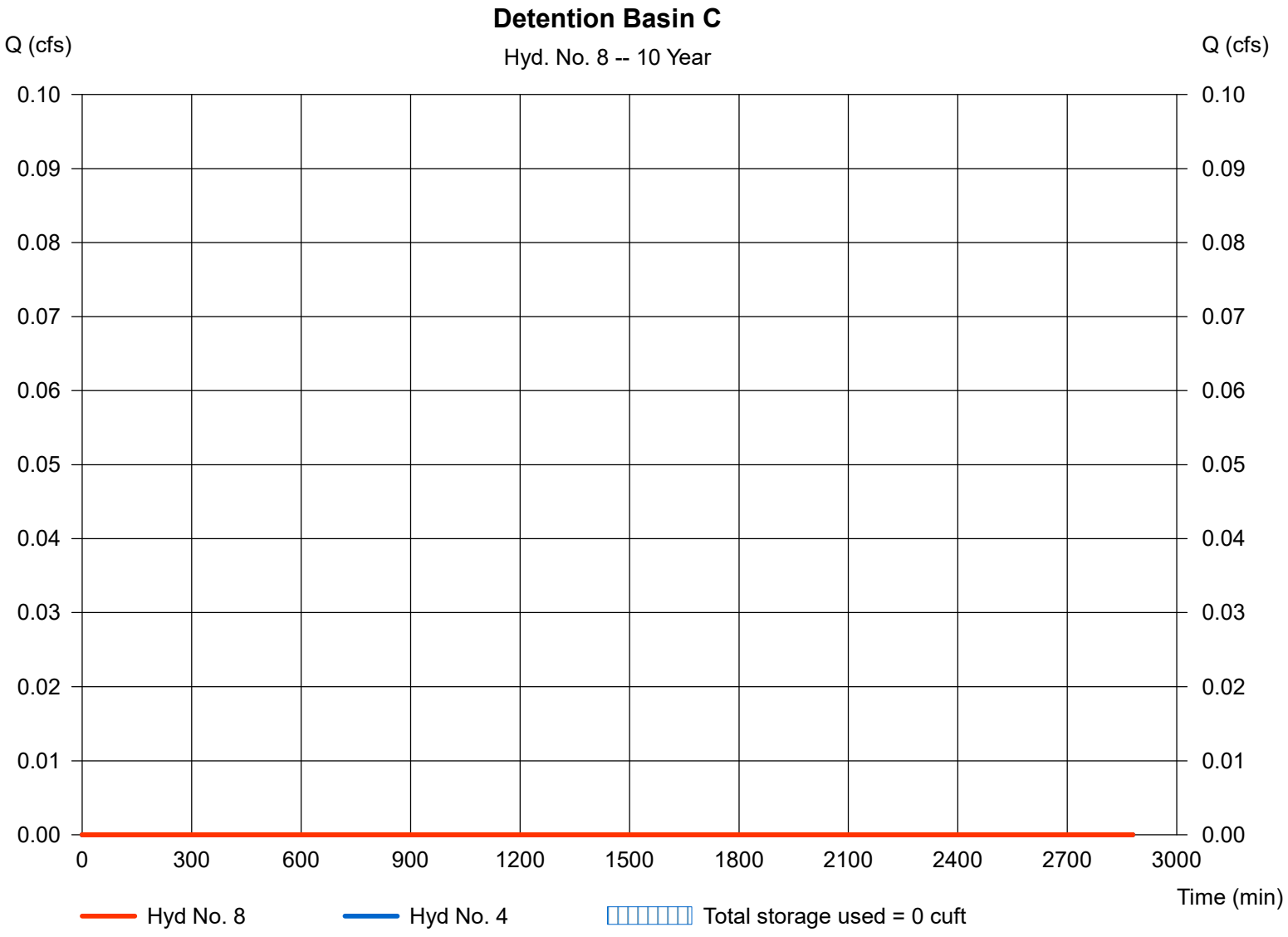
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

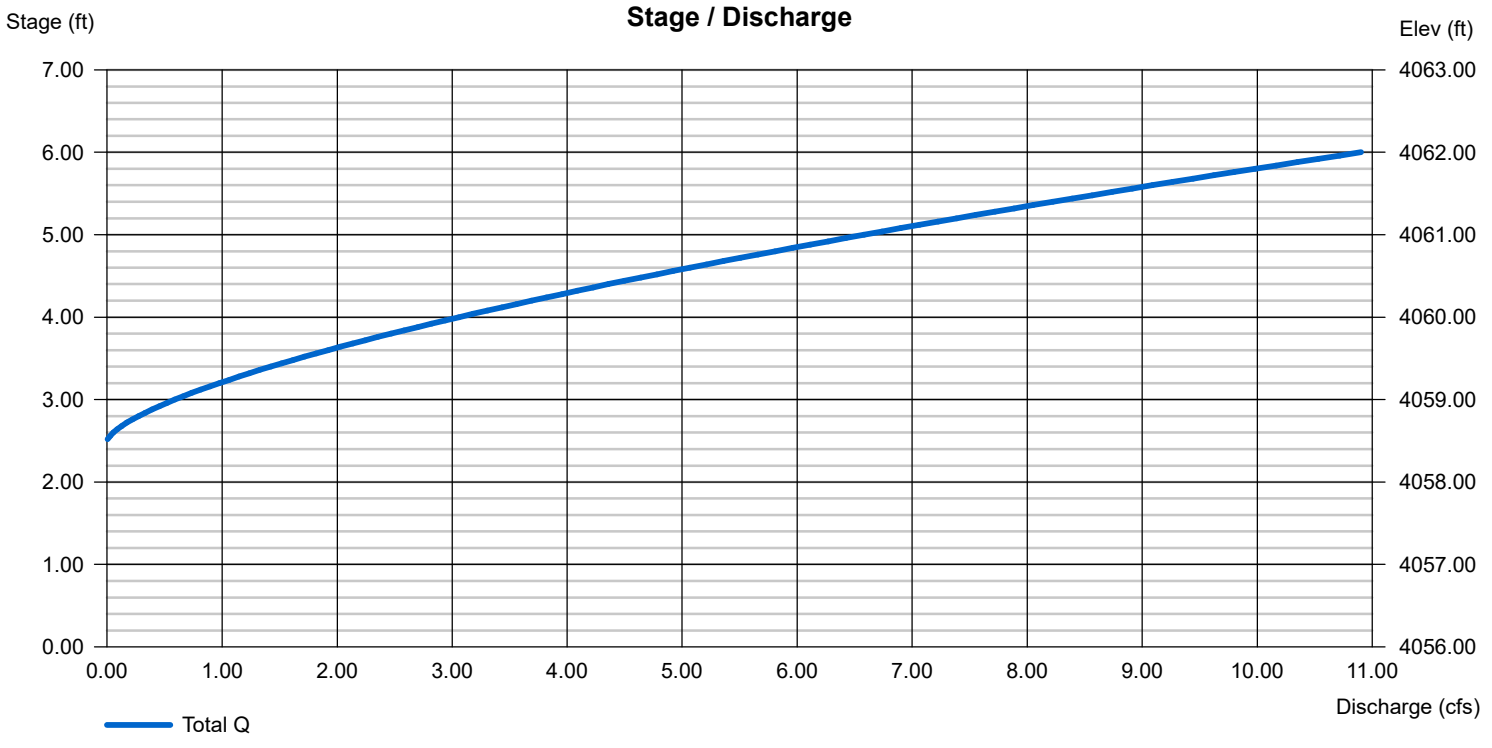
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



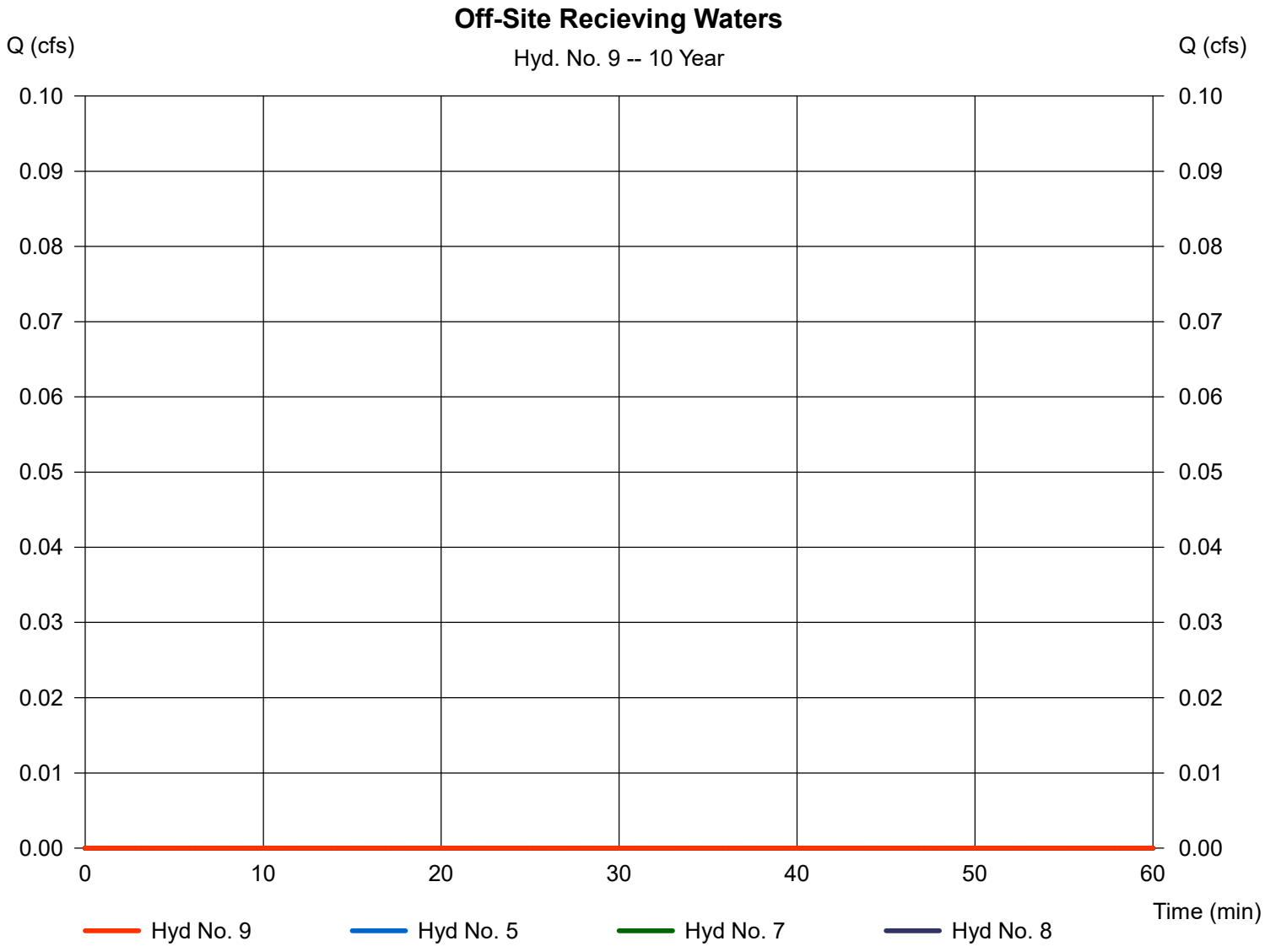
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

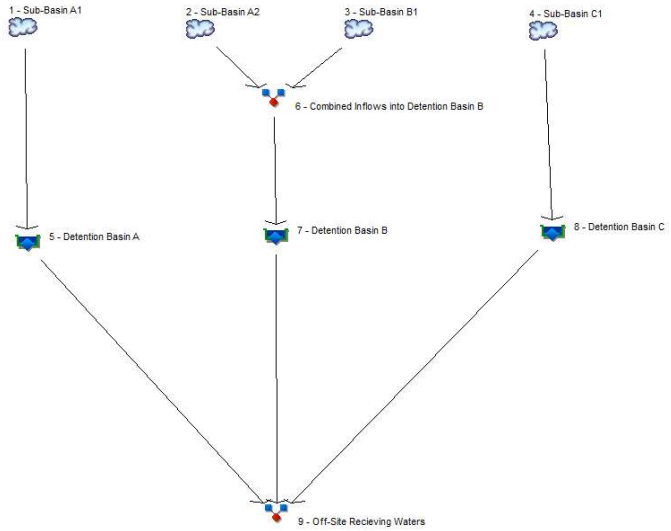
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.35 | 0.45 | 0.00 | 0.61 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.046 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.155 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.034 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.012 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 0.189 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.046 | 1 | 36 | 33 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.155 | 1 | 35 | 106 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.034 | 1 | 35 | 22 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.012 | 1 | 34 | 7 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.02 | 33.0 | Detention Basin A |
| 6 | Combine | 0.189 | 1 | 35 | 128 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.02 | 128 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 6.64 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

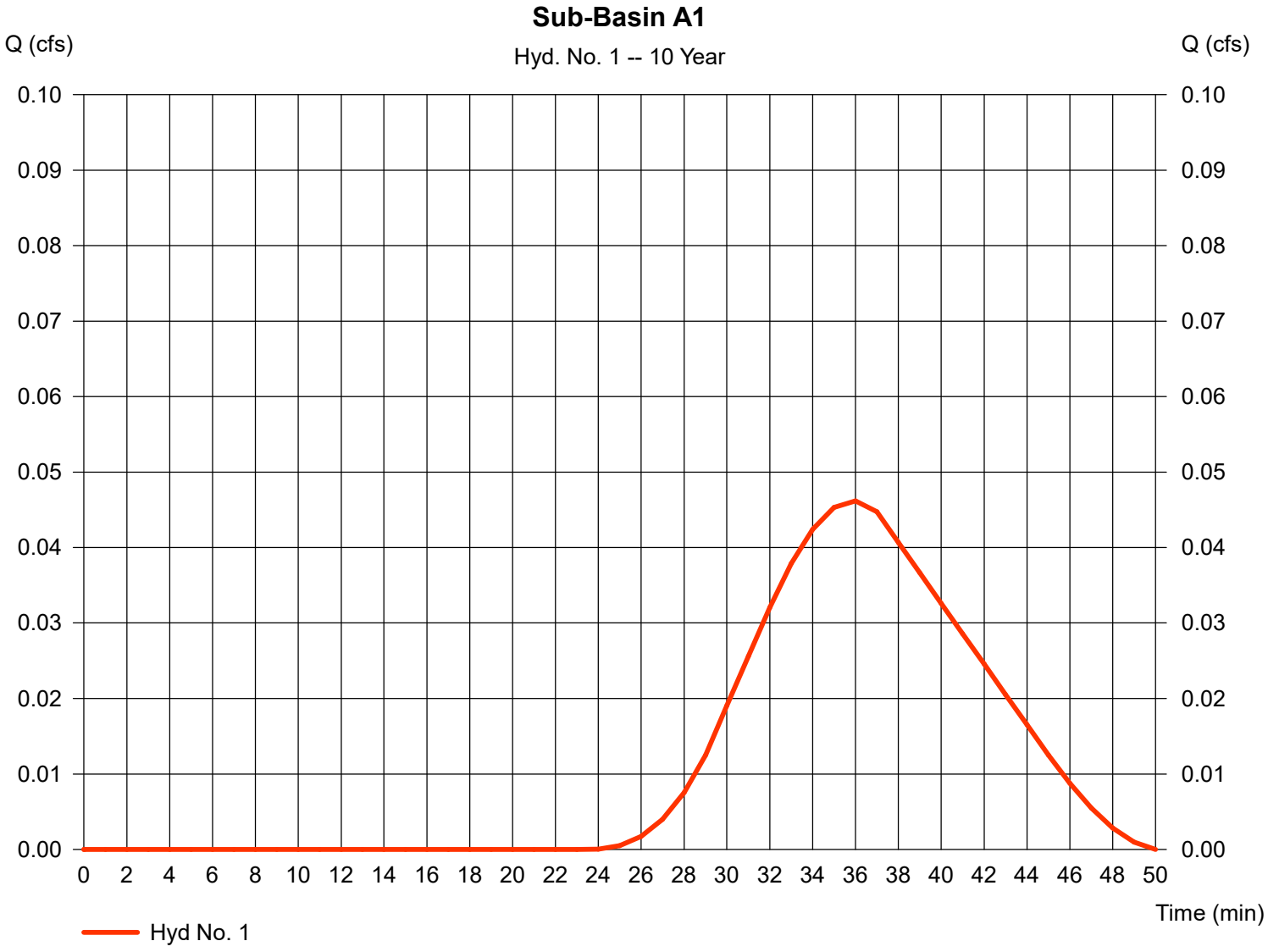
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.046 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 36 min |
| Time interval | = | 1 min | Hyd. volume | = | 33 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



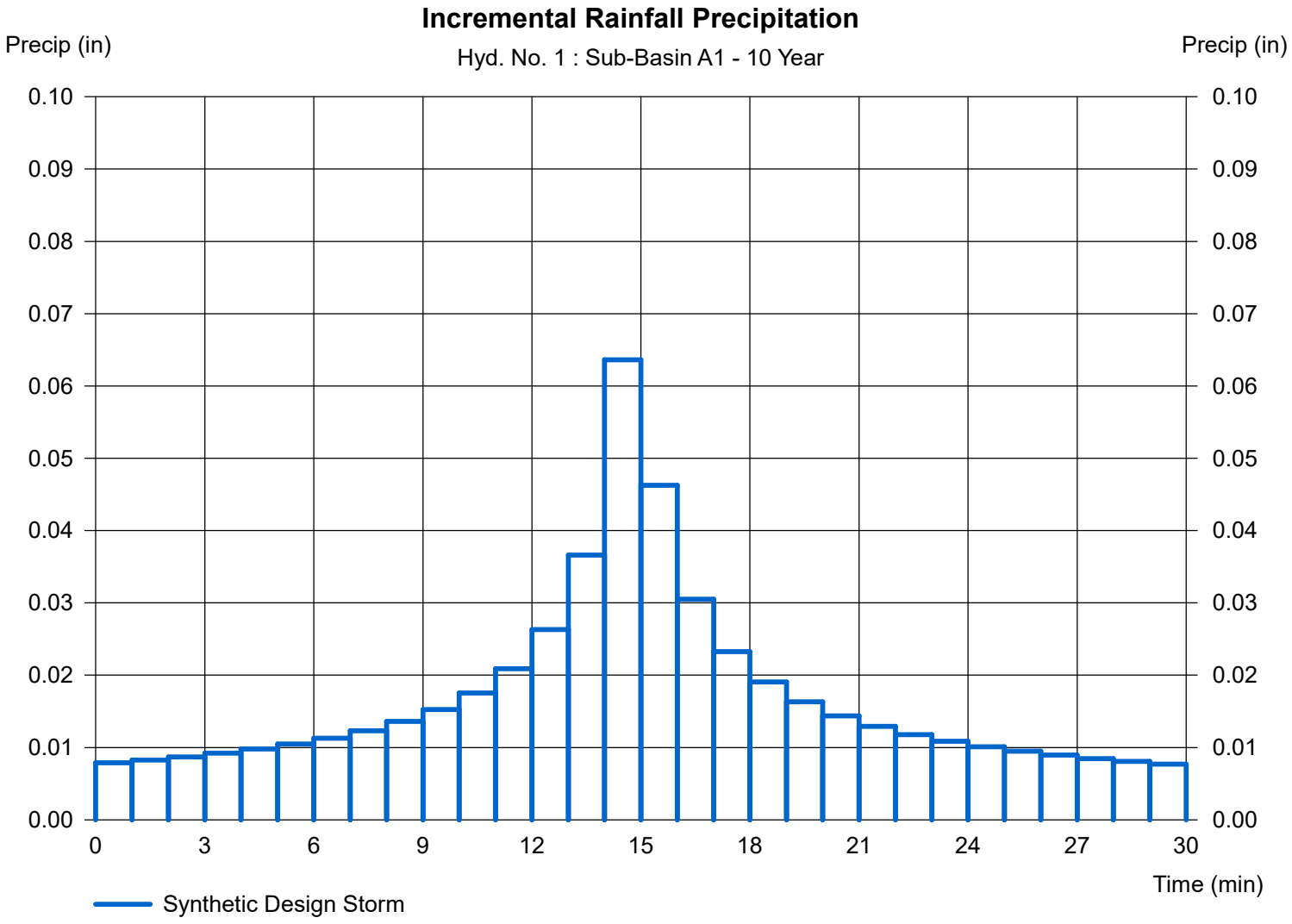
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



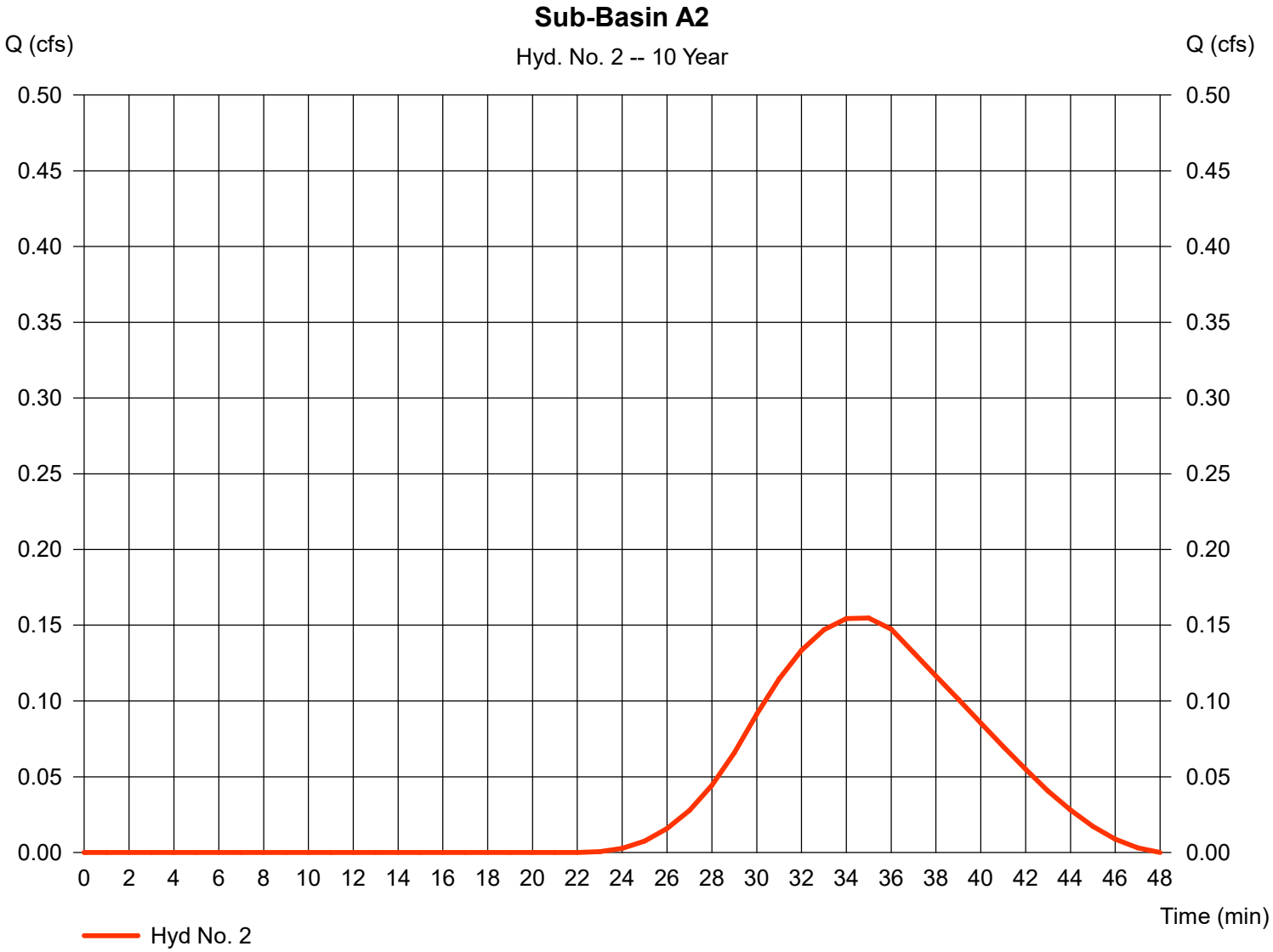
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.155 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 35 min |
| Time interval | = | 1 min | Hyd. volume | = | 106 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



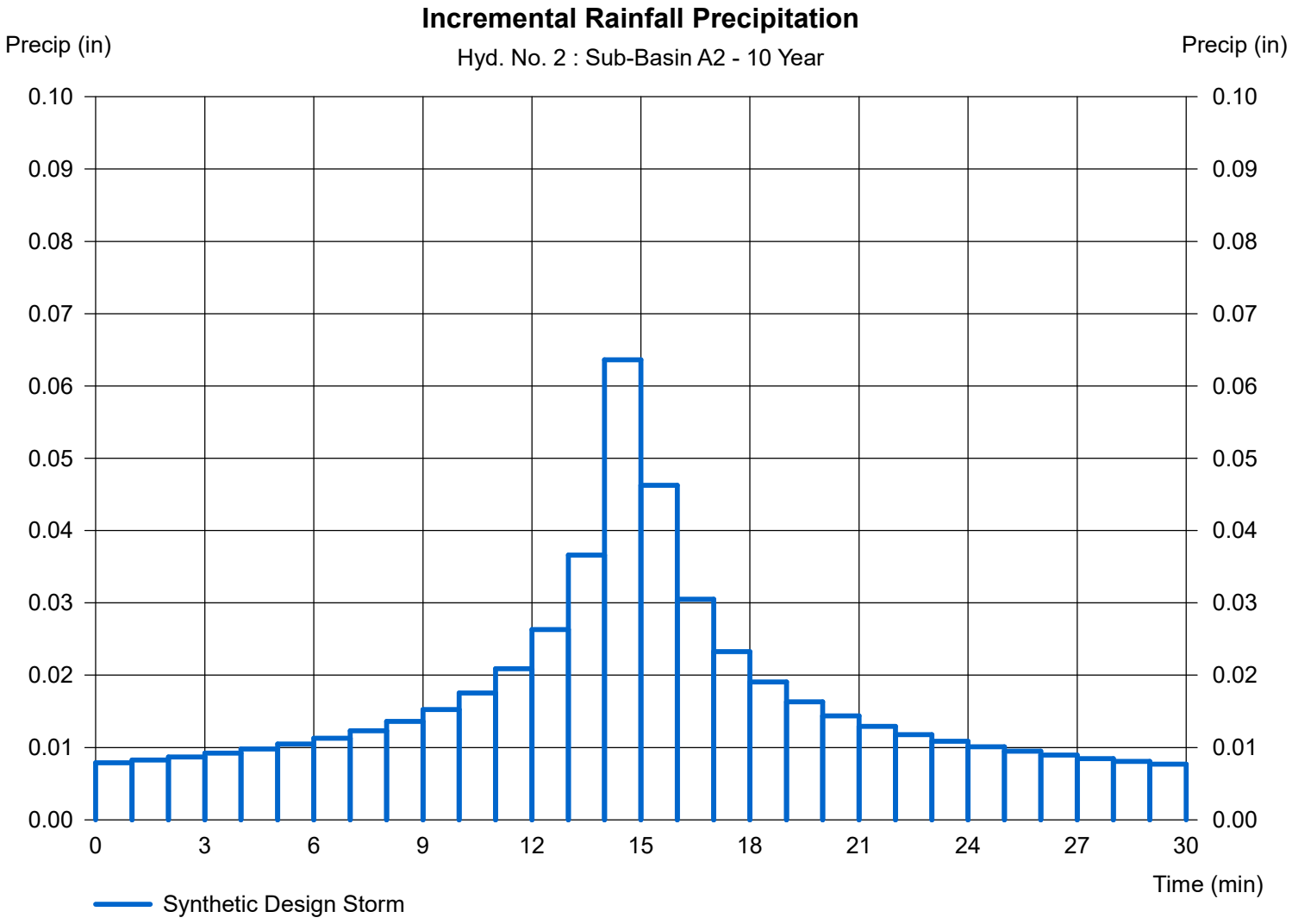
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



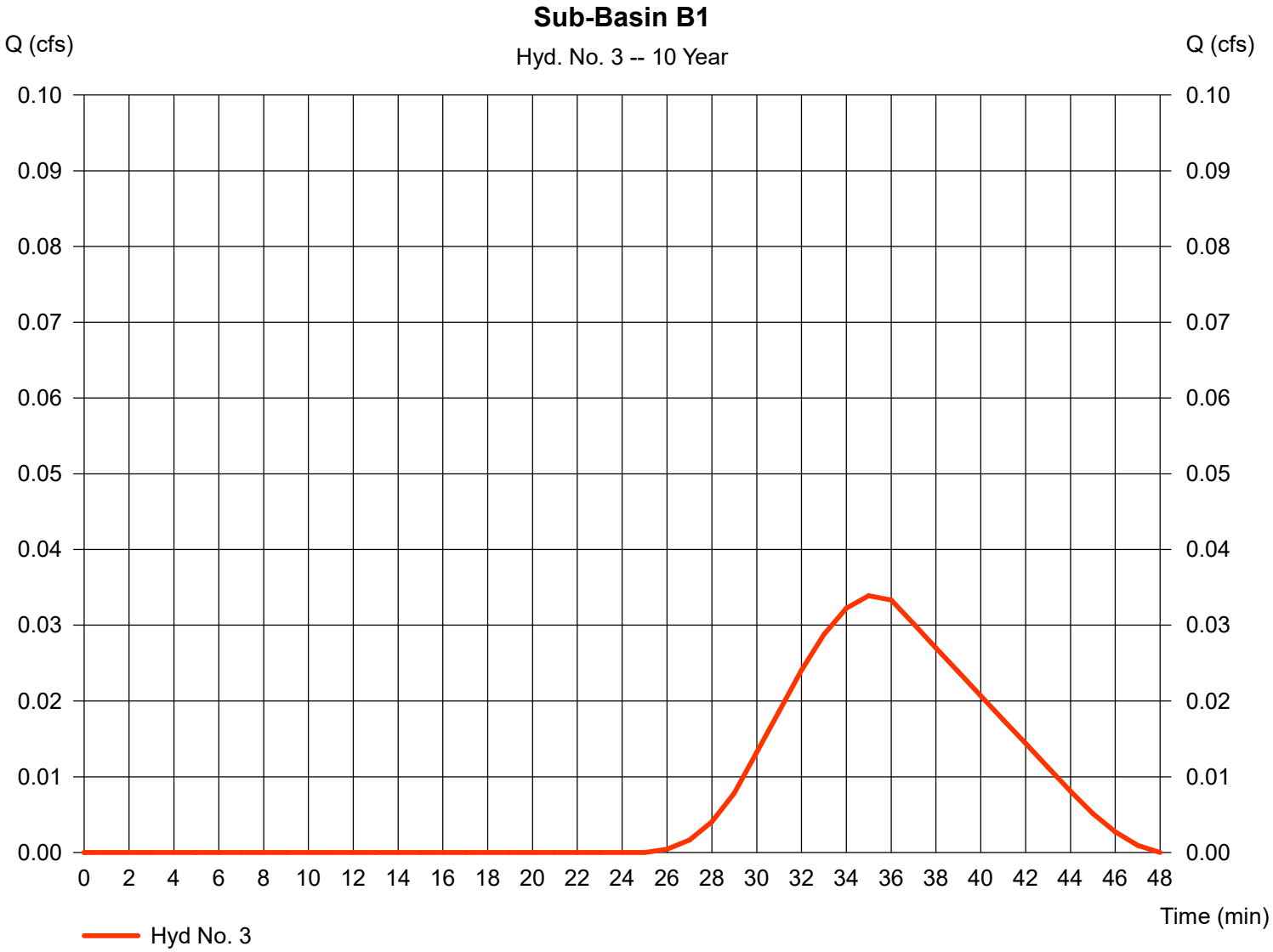
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.034 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 35 min |
| Time interval | = | 1 min | Hyd. volume | = | 22 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



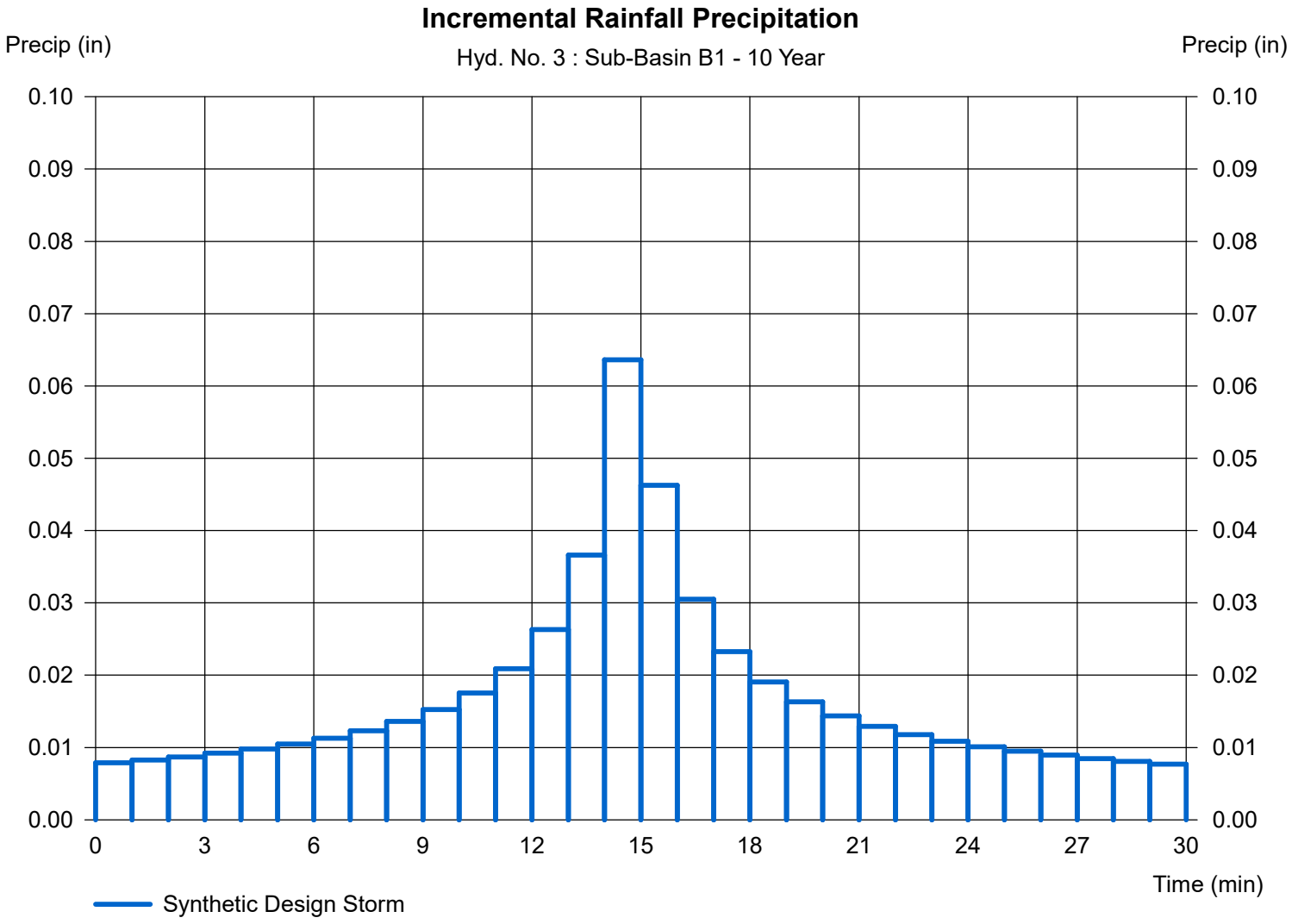
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



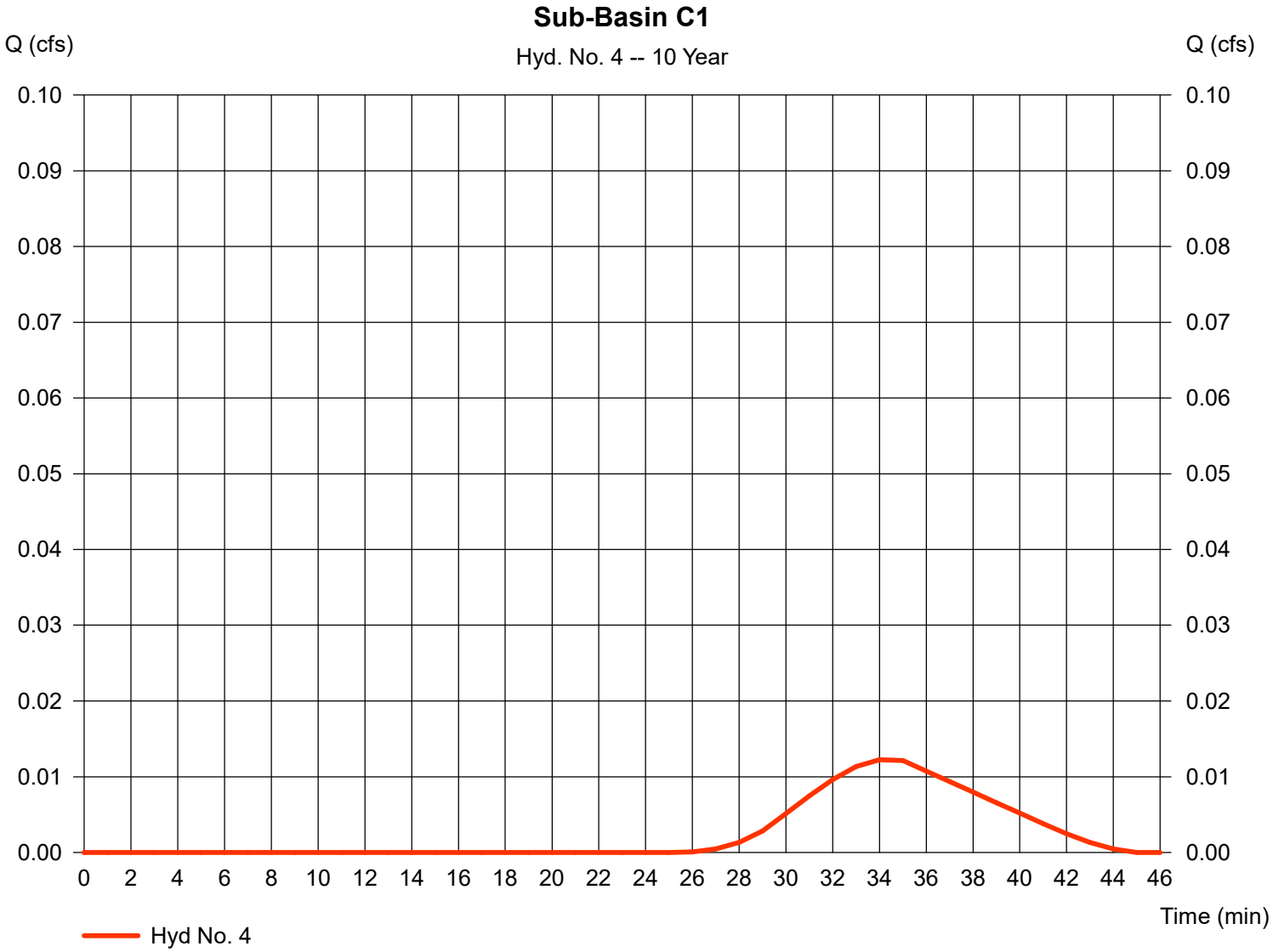
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.012 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 34 min |
| Time interval | = | 1 min | Hyd. volume | = | 7 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.51 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



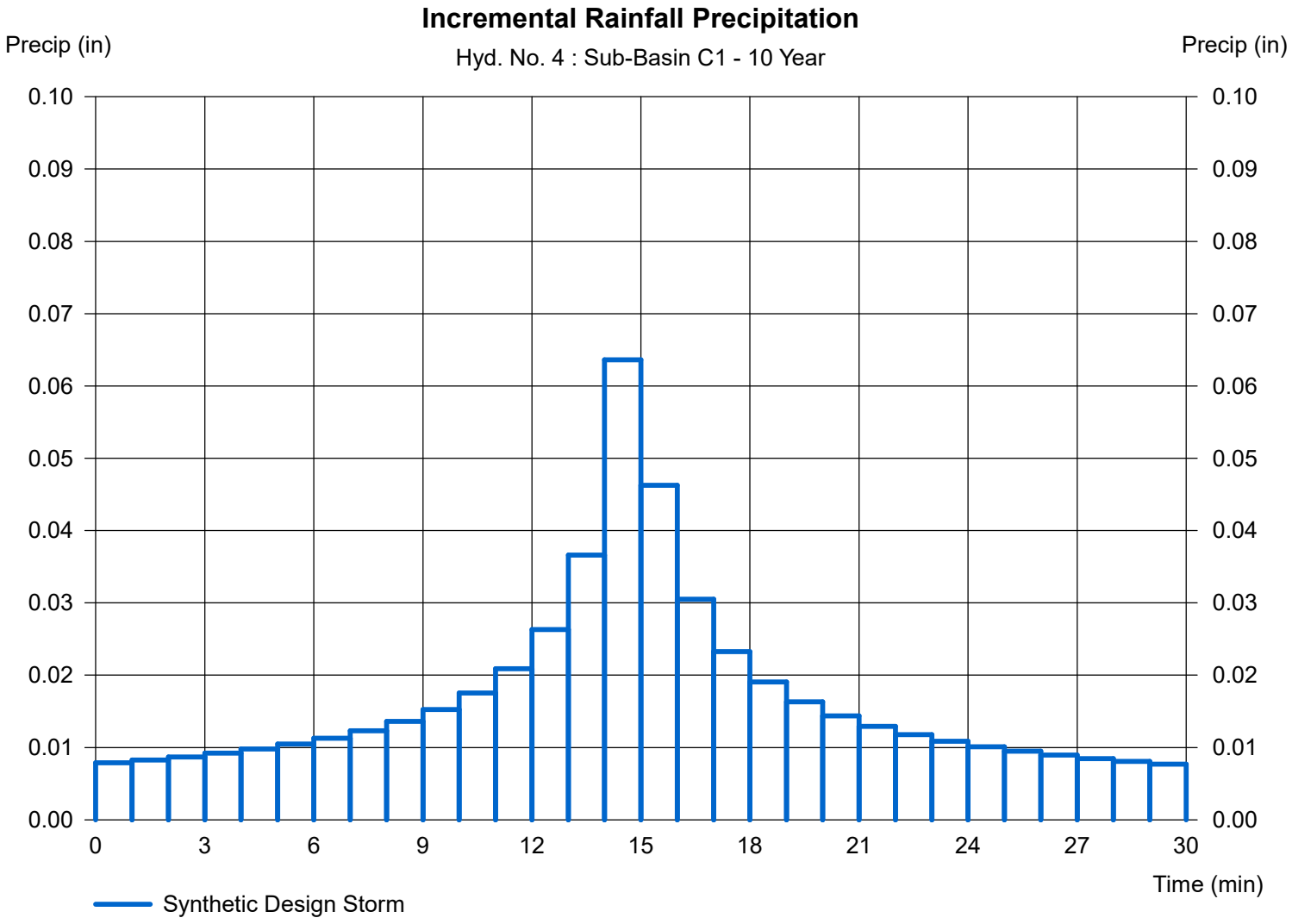
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 1 min |
| Total precip. | = 0.5100 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

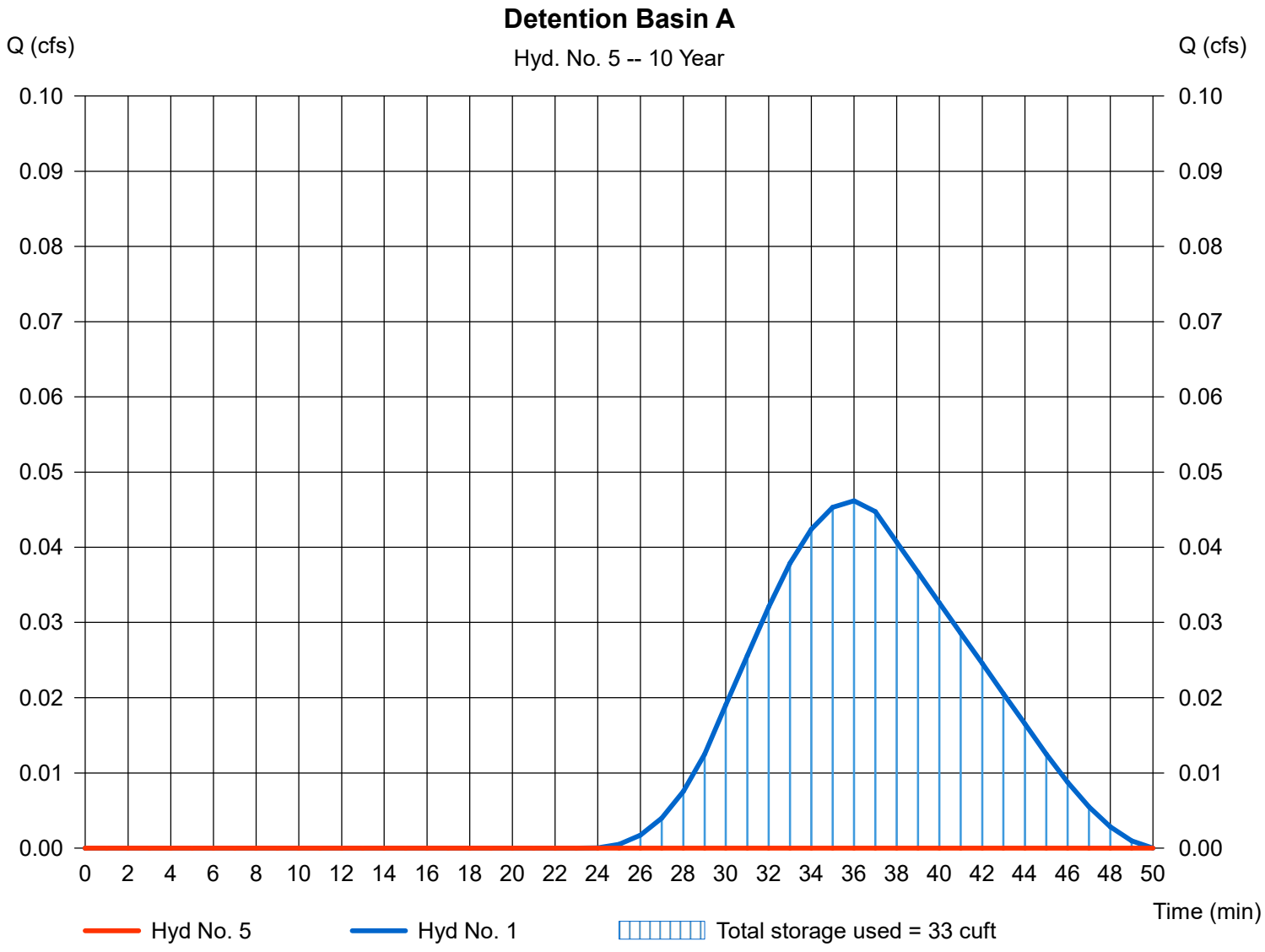
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.02 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 33 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

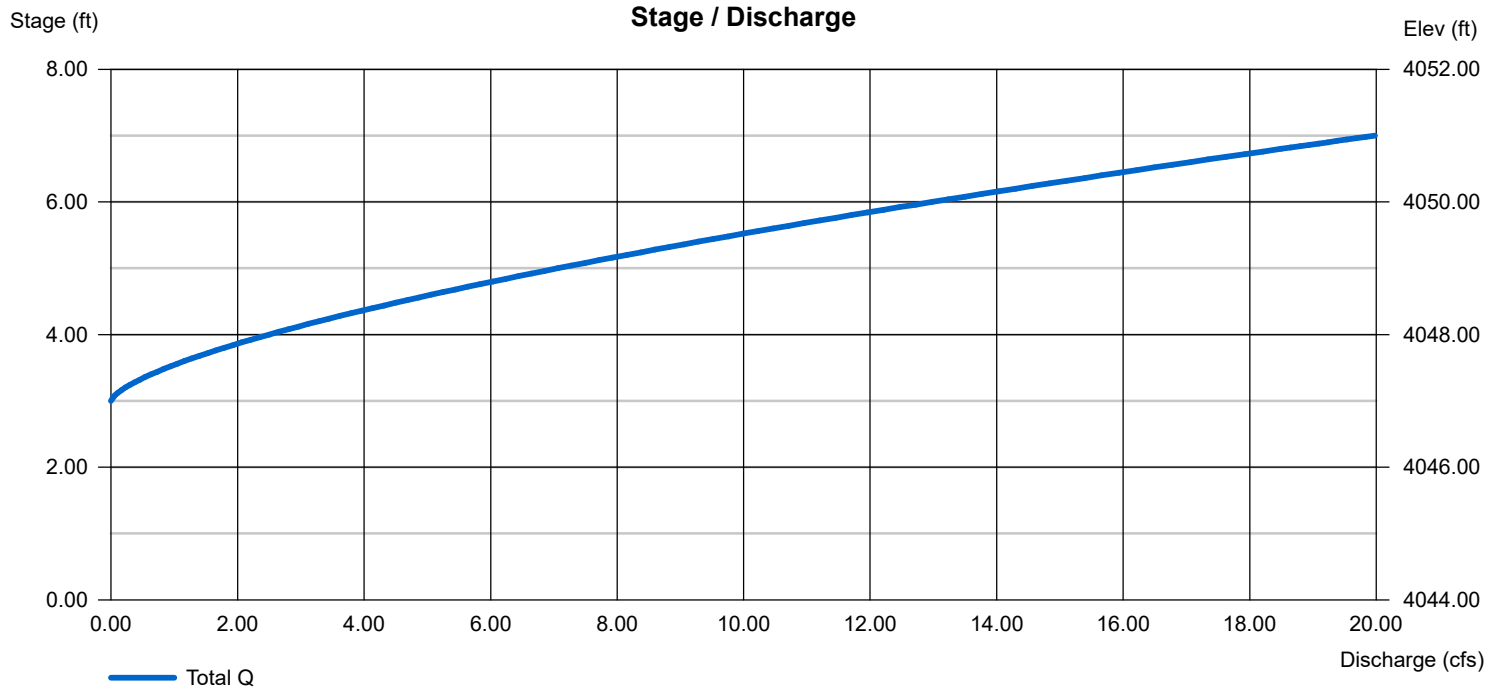
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



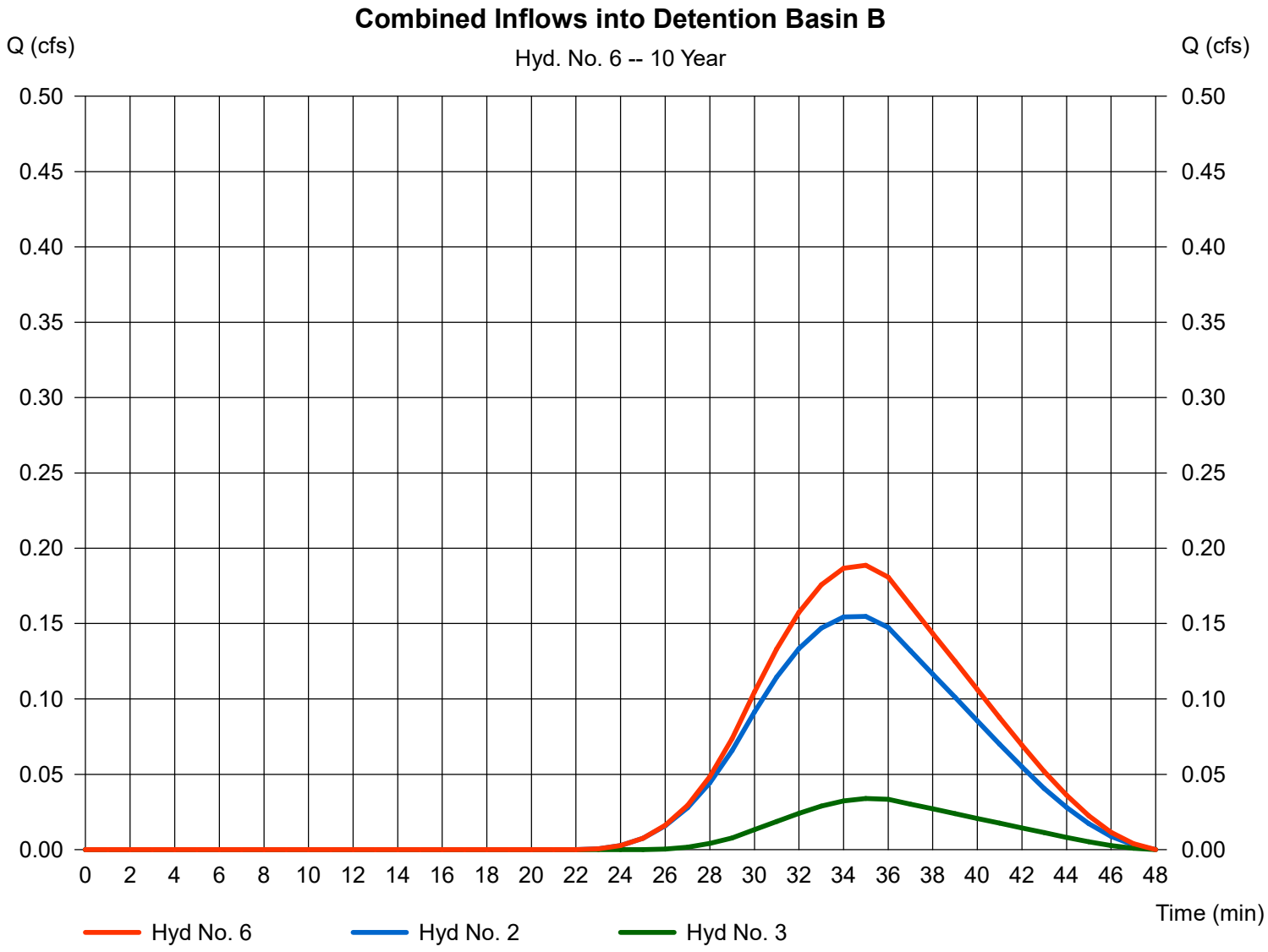
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.189 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 35 min |
| Time interval | = 1 min | Hyd. volume | = 128 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

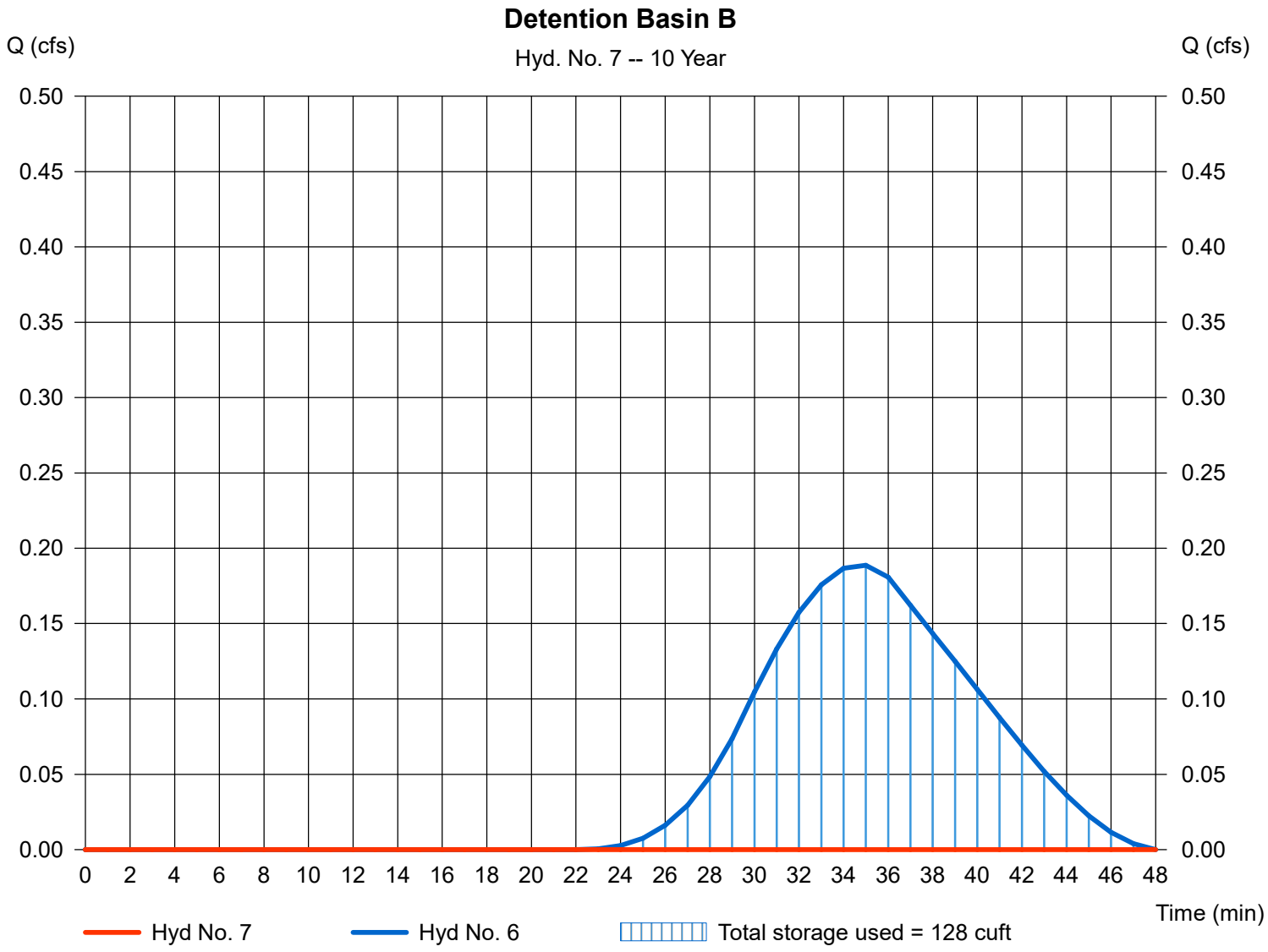
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.02 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 128 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

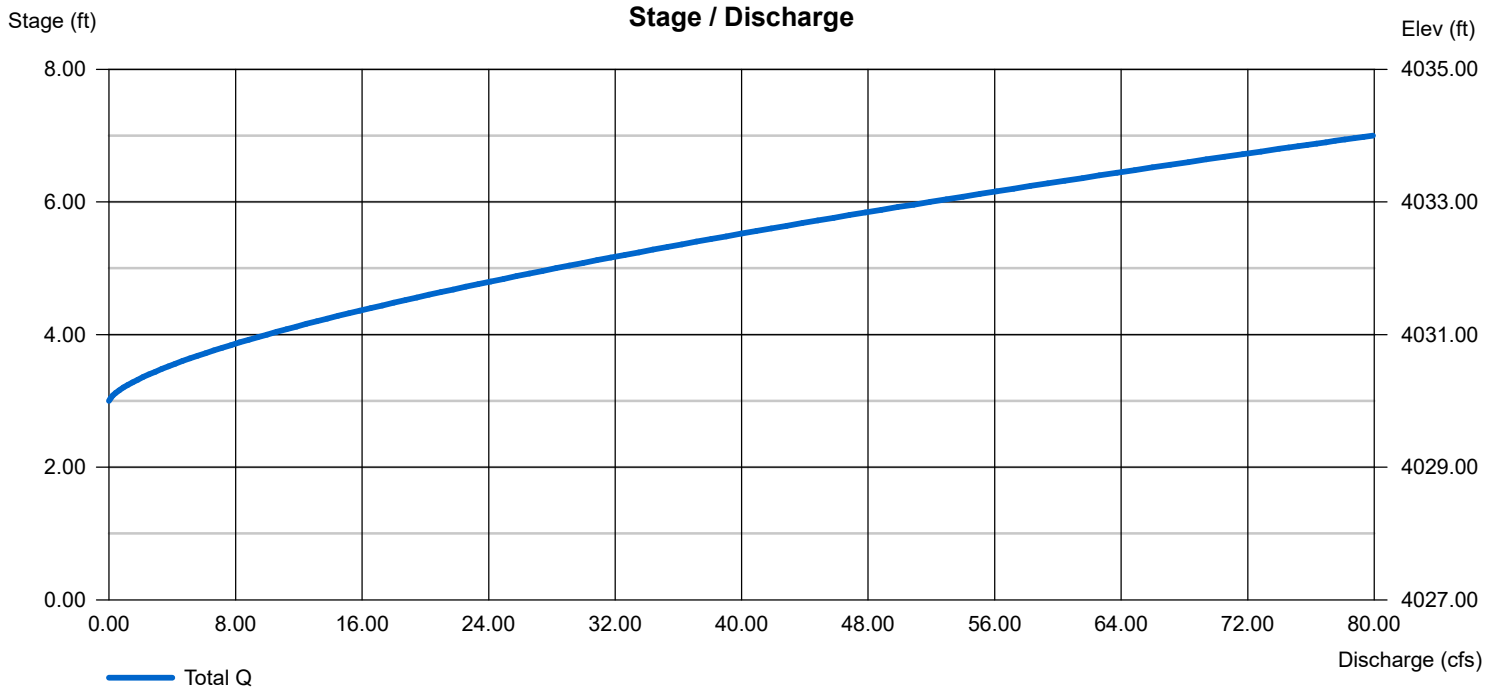
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

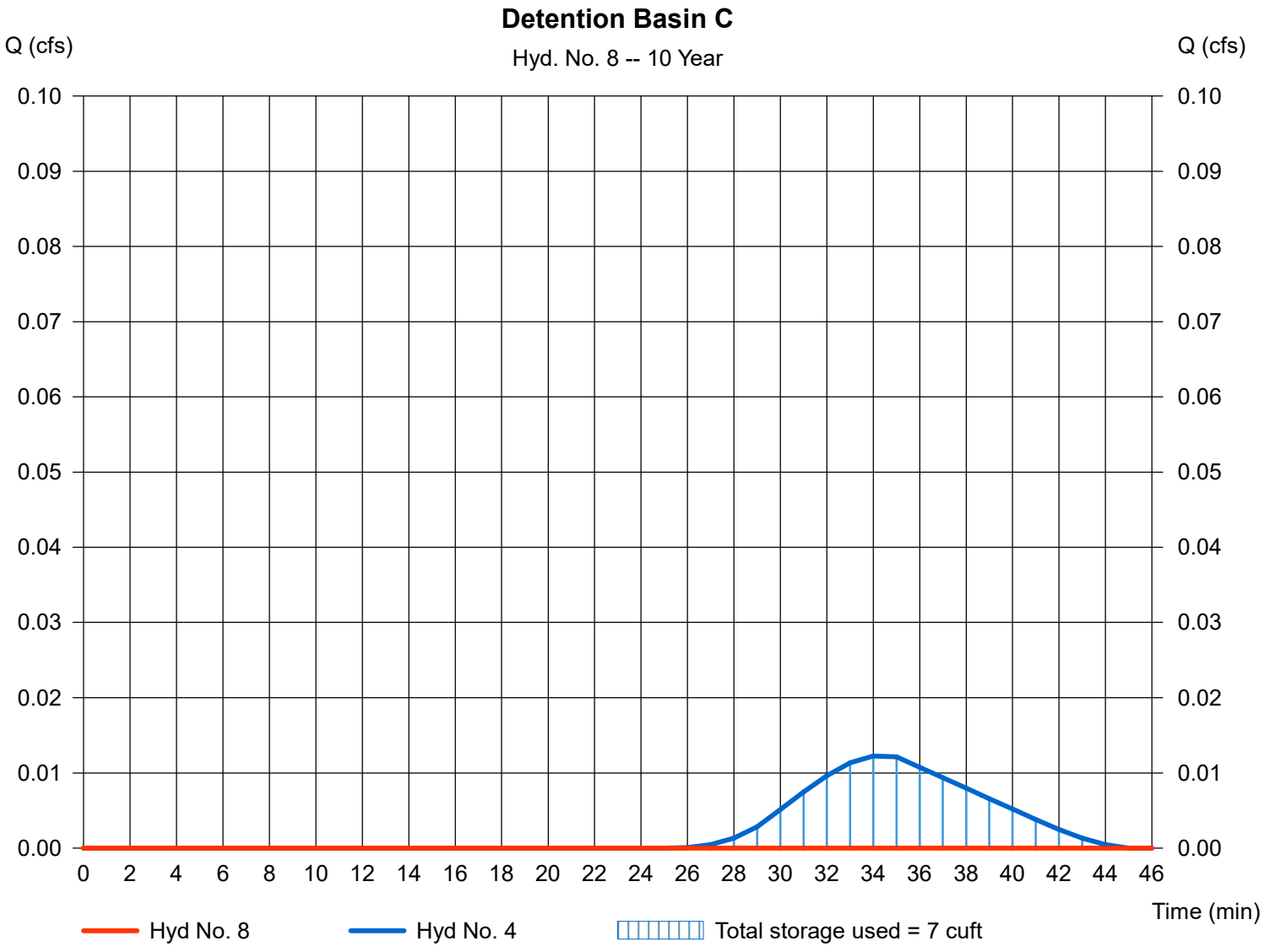
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 7 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

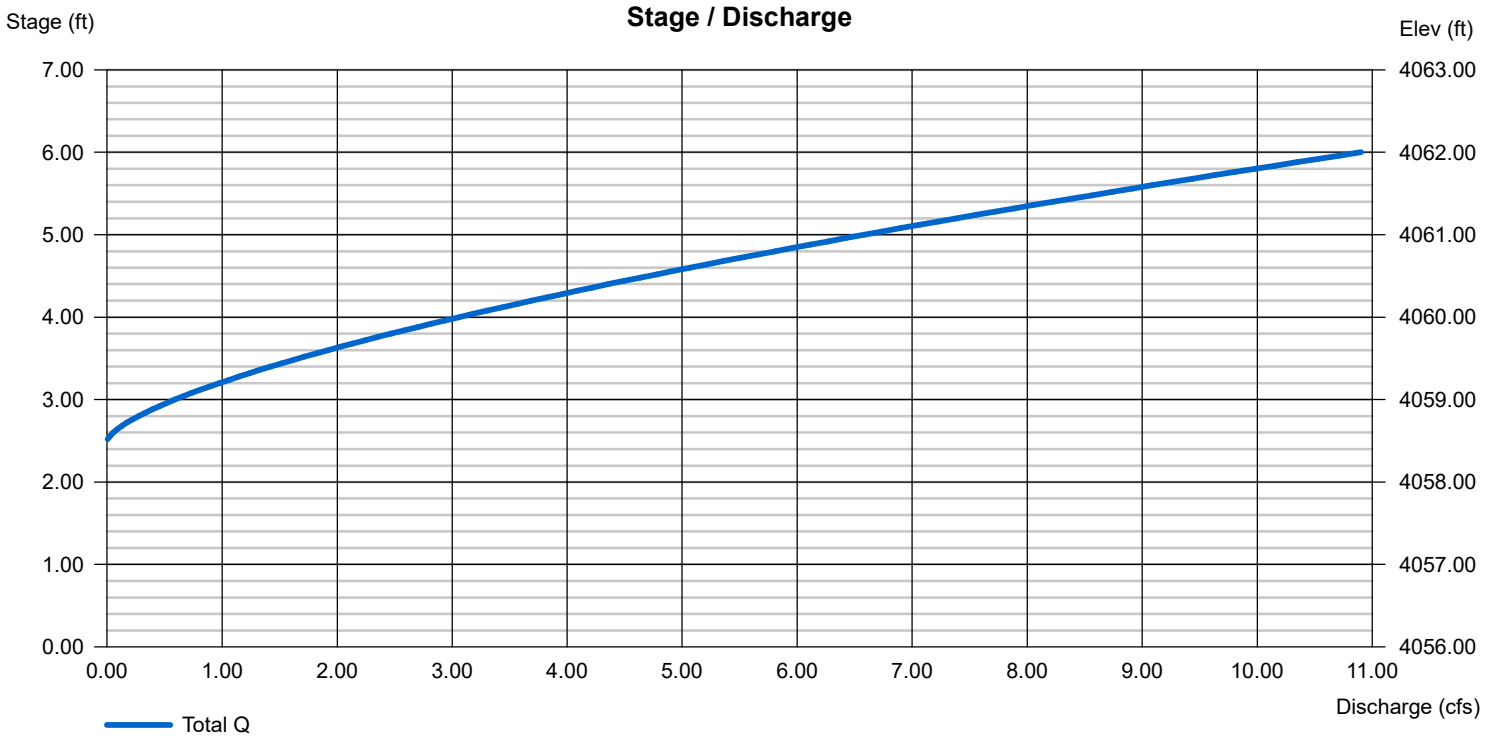
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



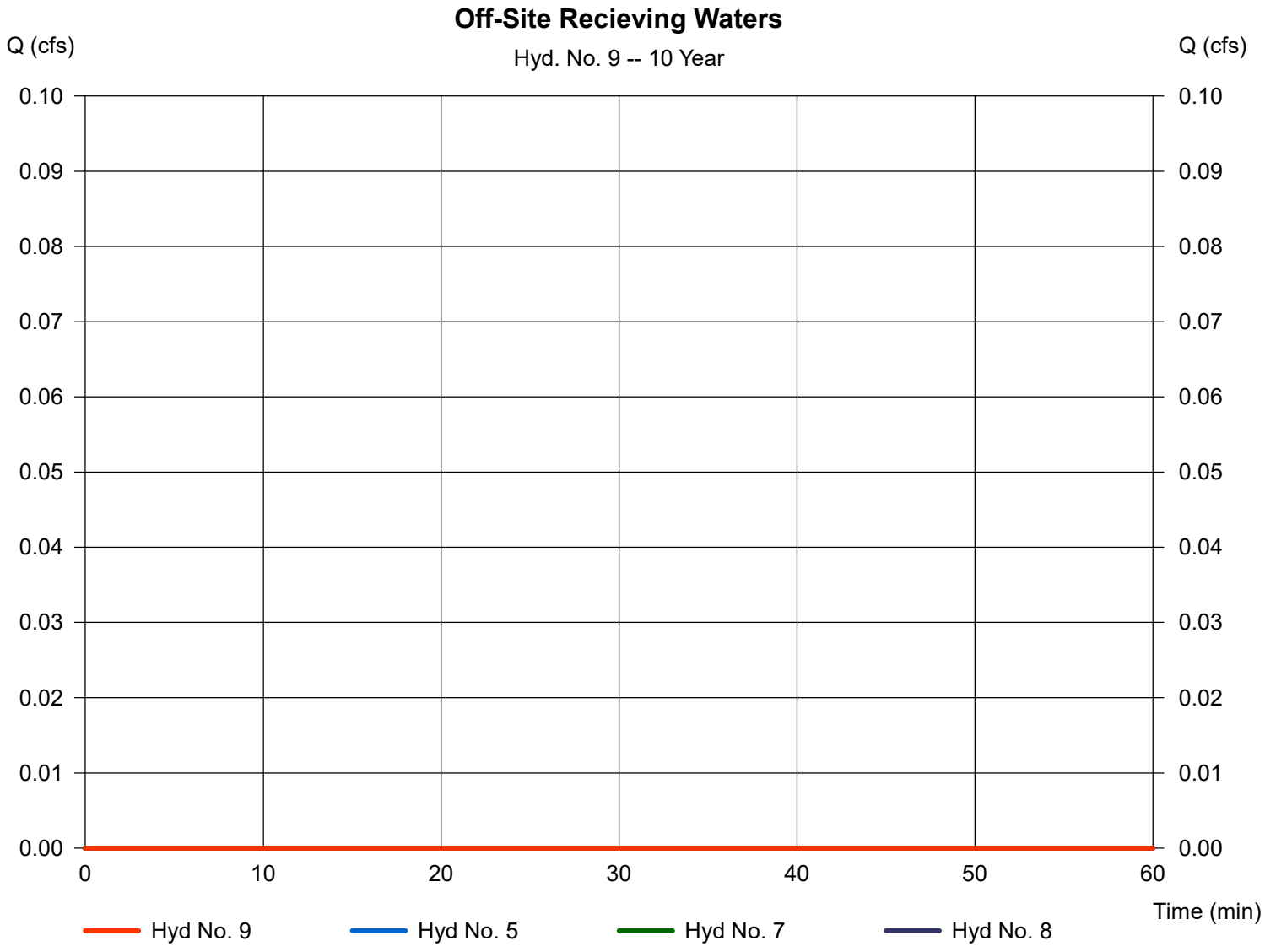
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

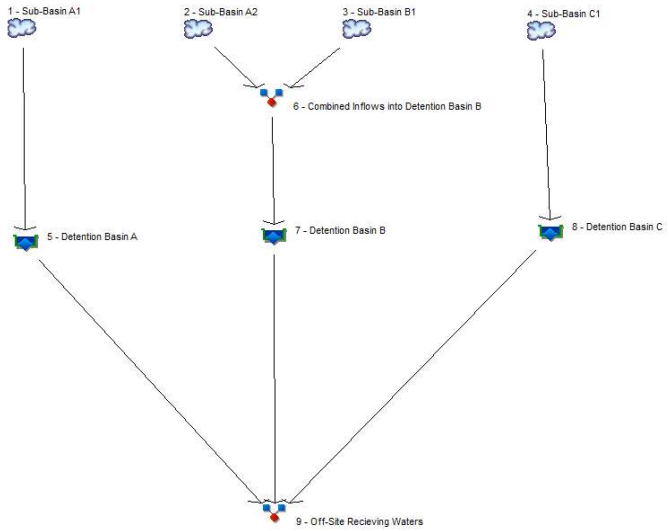
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.51 | 0.65 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 0.347 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.739 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.326 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.127 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 1.062 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.347 | 2 | 60 | 529 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.739 | 2 | 56 | 1,171 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.326 | 2 | 60 | 476 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.127 | 2 | 60 | 180 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.30 | 529 | Detention Basin A |
| 6 | Combine | 1.062 | 2 | 58 | 1,647 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.28 | 1,647 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.09 | 180 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

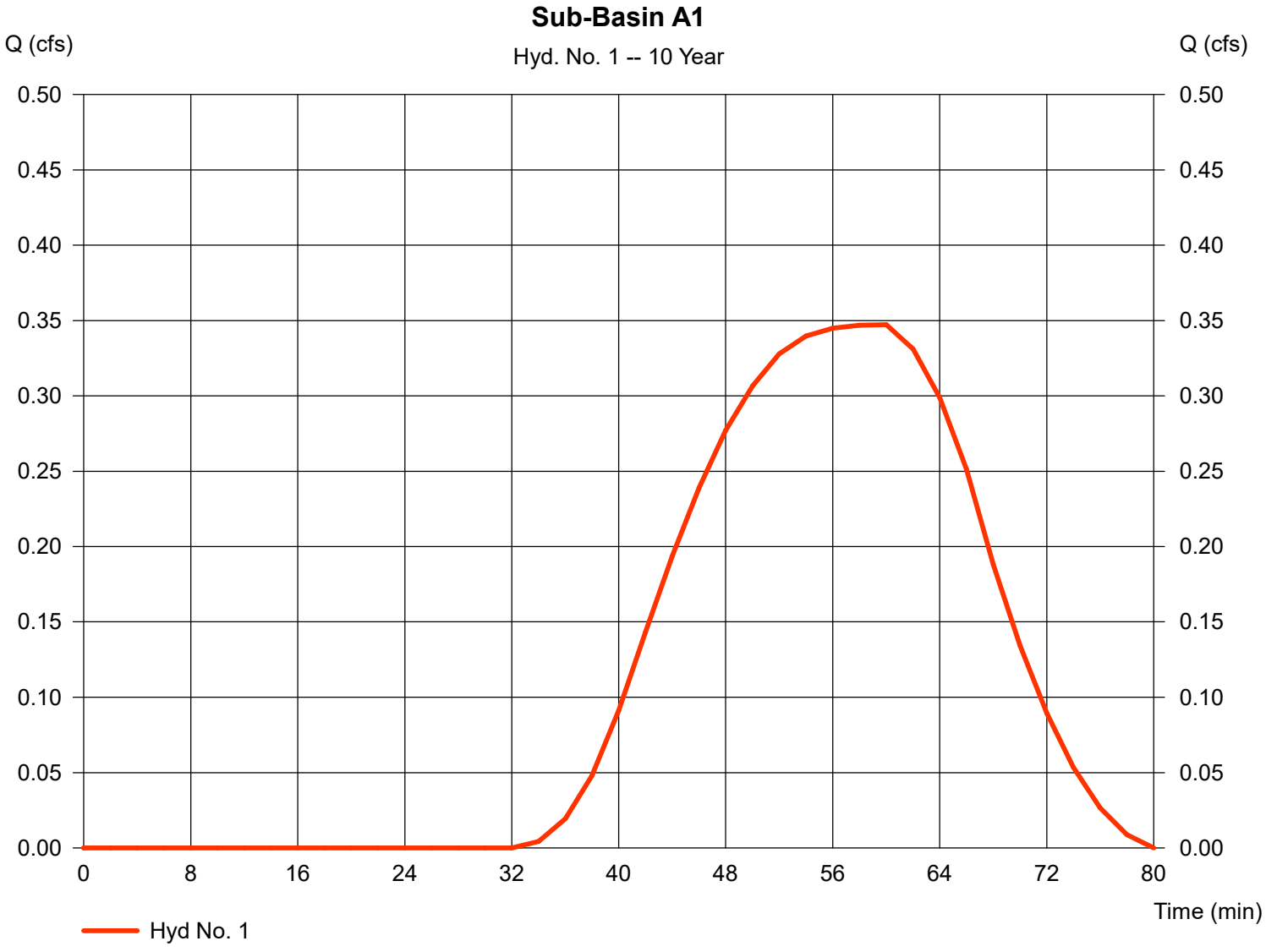
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.347 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 60 min |
| Time interval | = | 2 min | Hyd. volume | = | 529 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



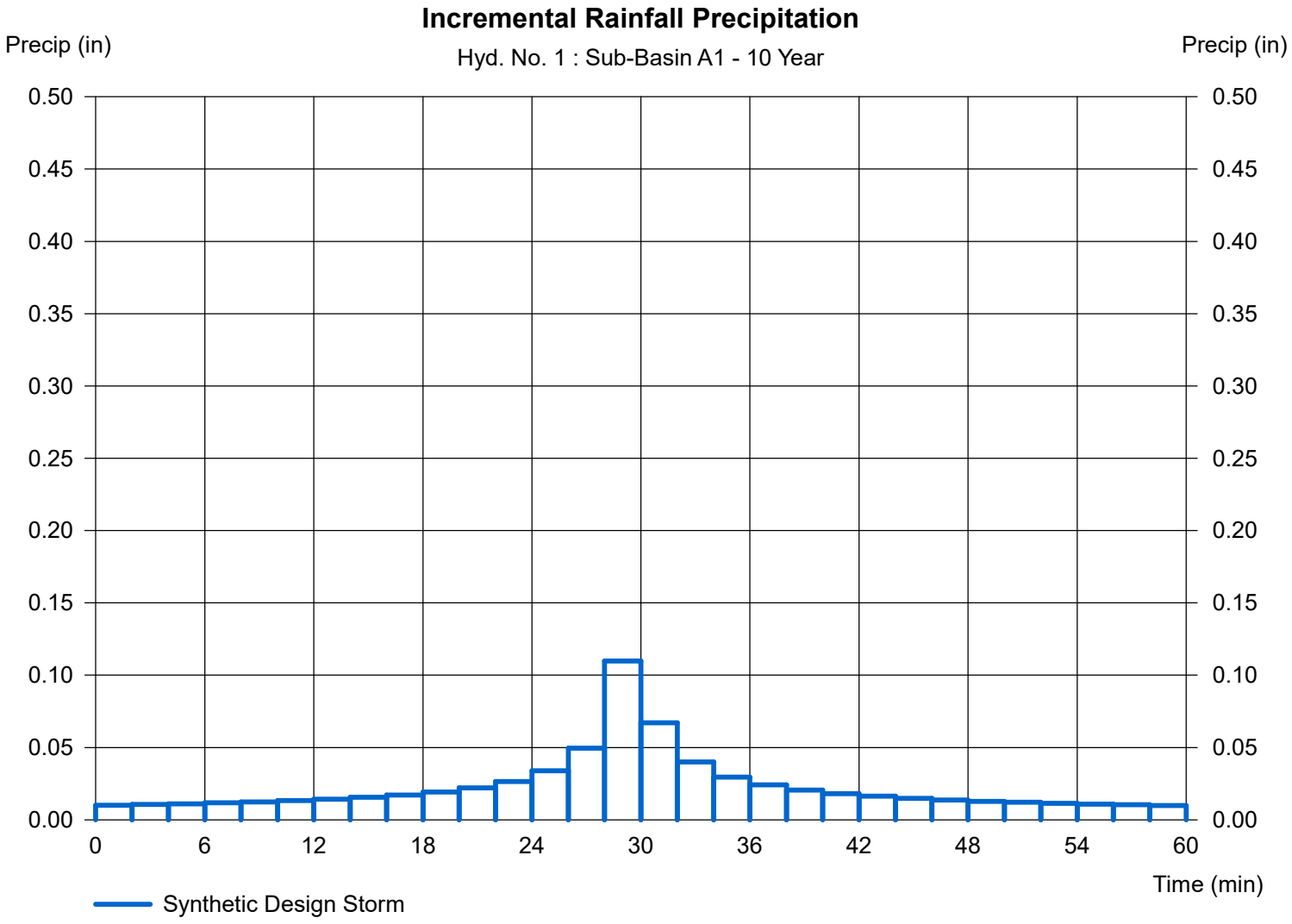
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



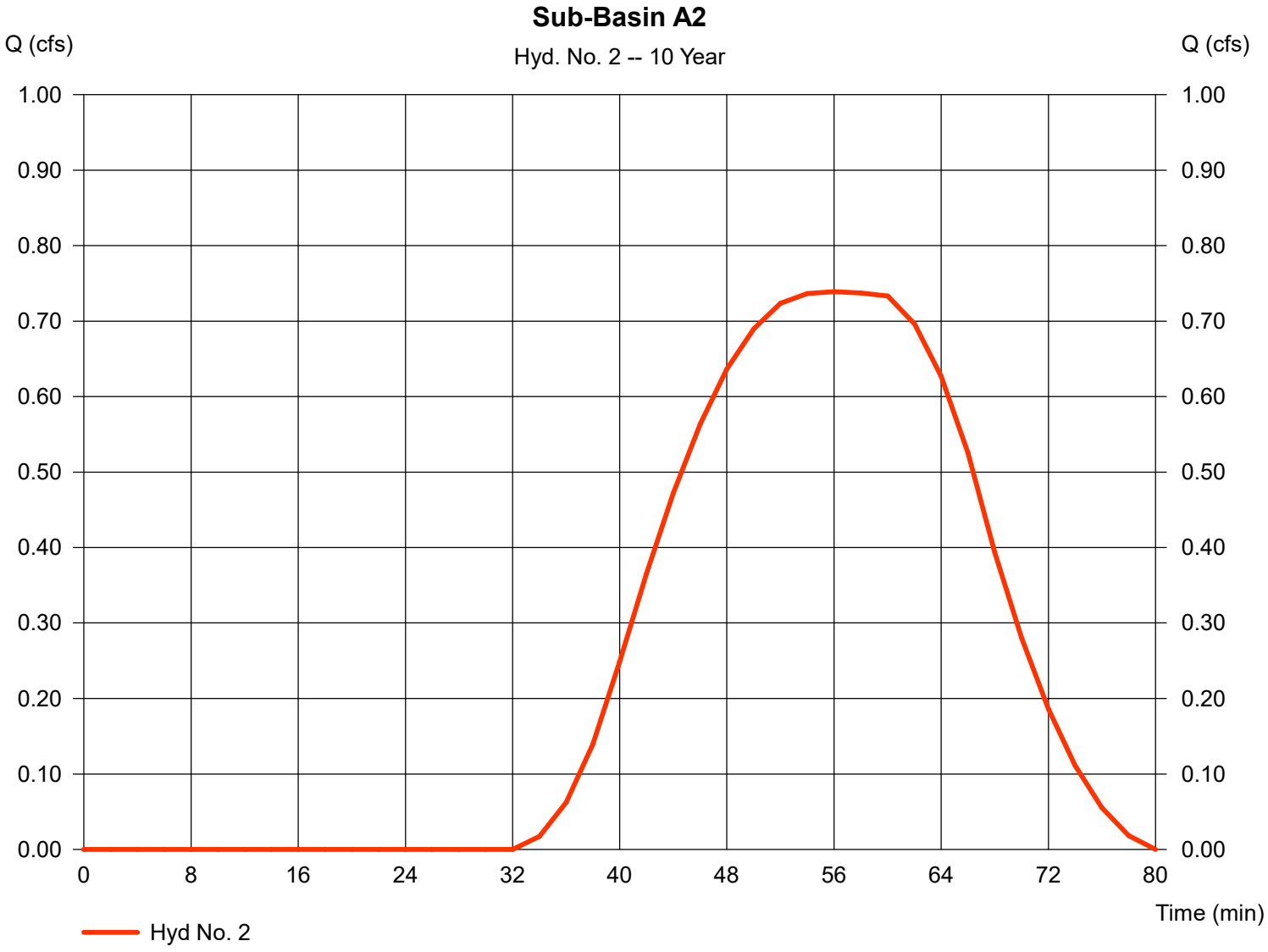
# Hydrograph Report



## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.739 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 56 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,171 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



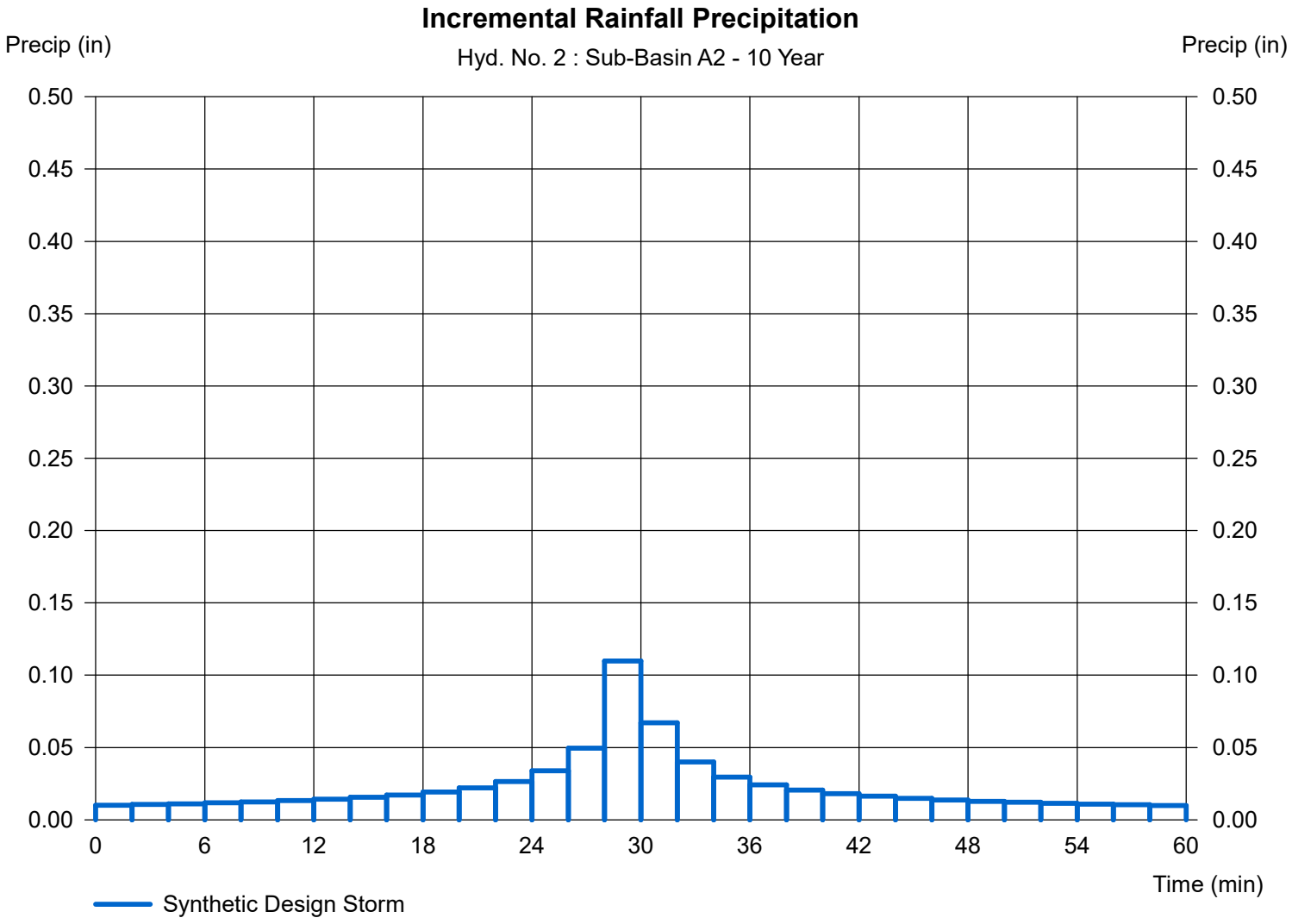
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



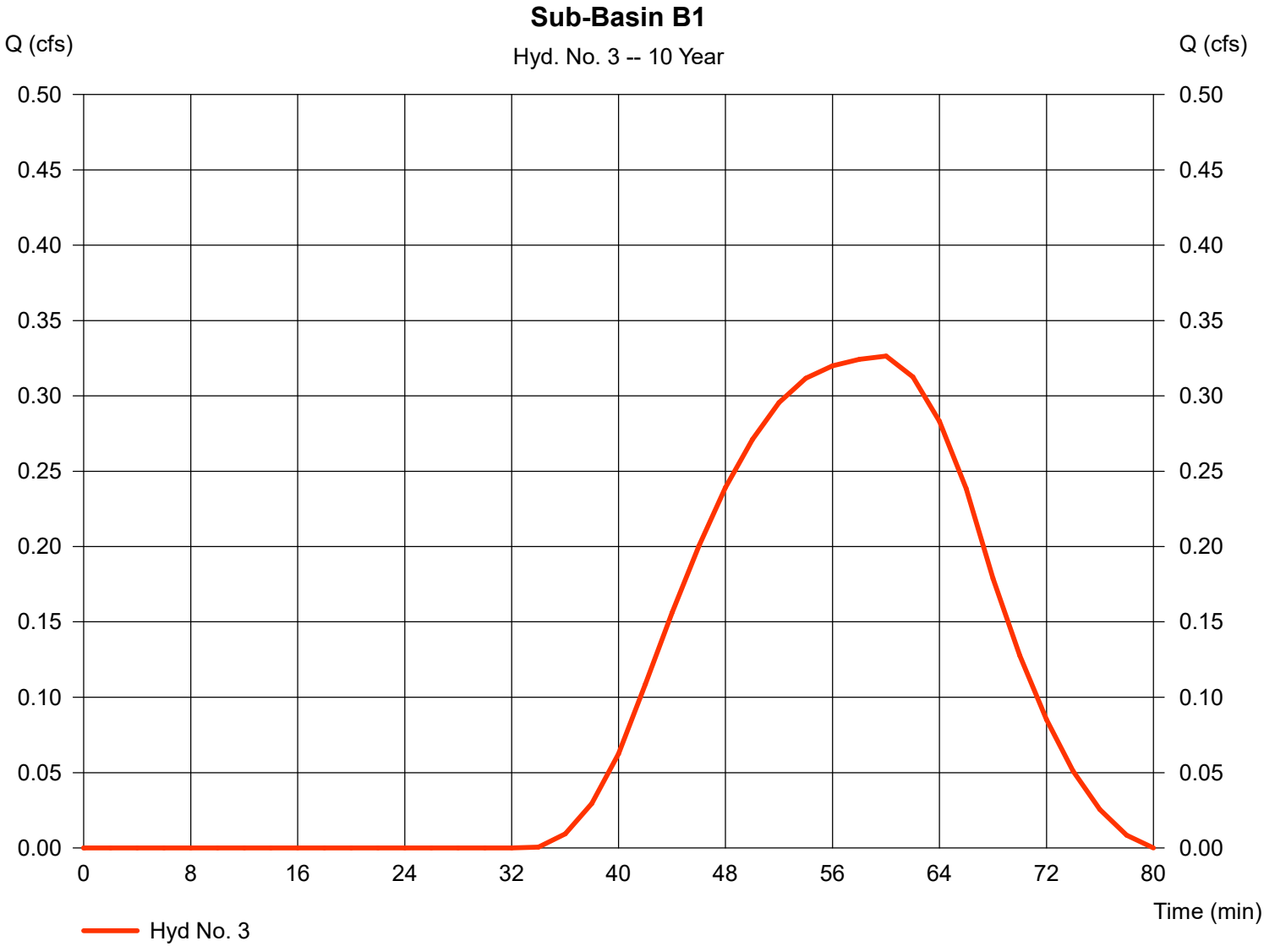
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.326 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 60 min |
| Time interval | = | 2 min | Hyd. volume | = | 476 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



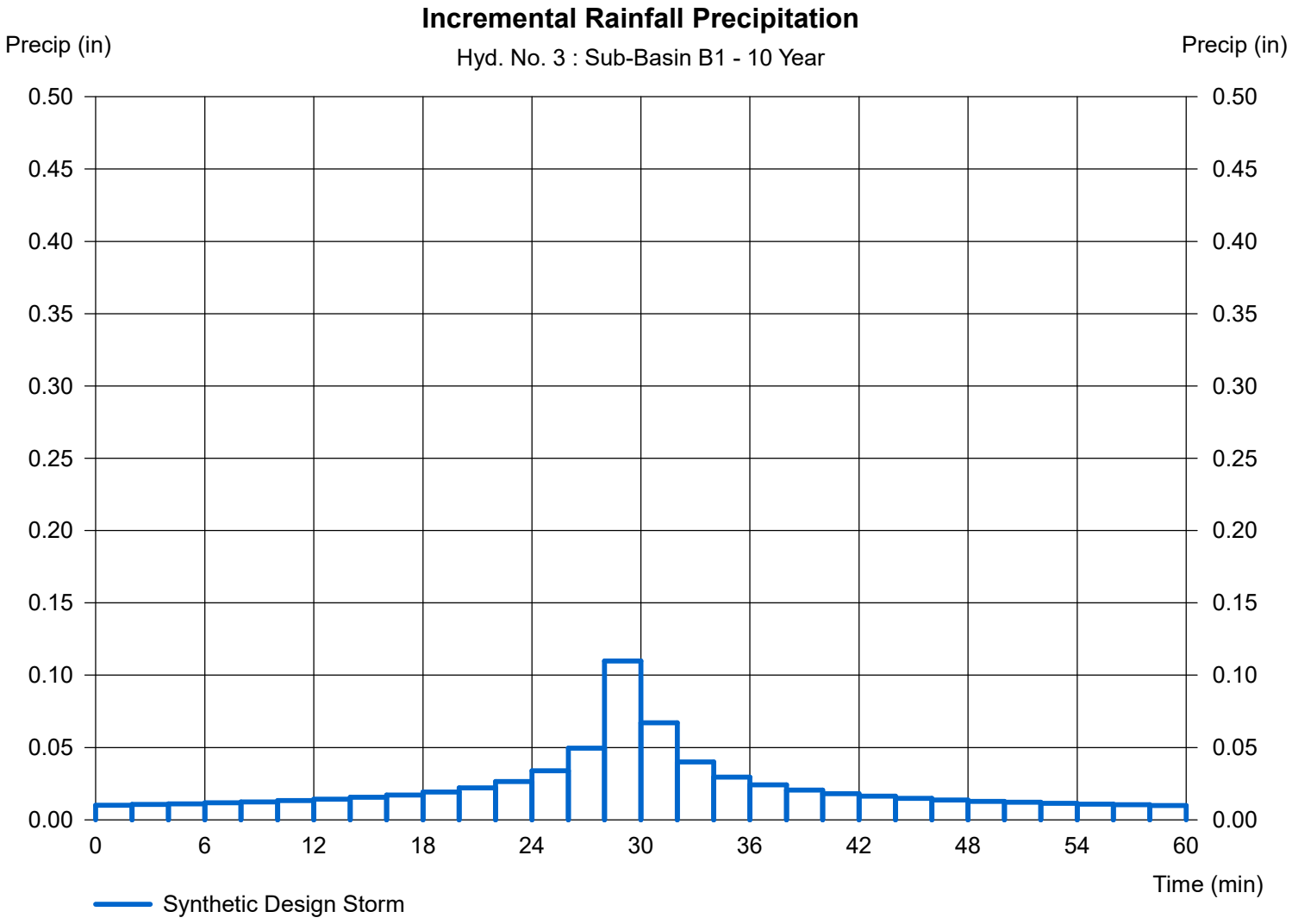
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



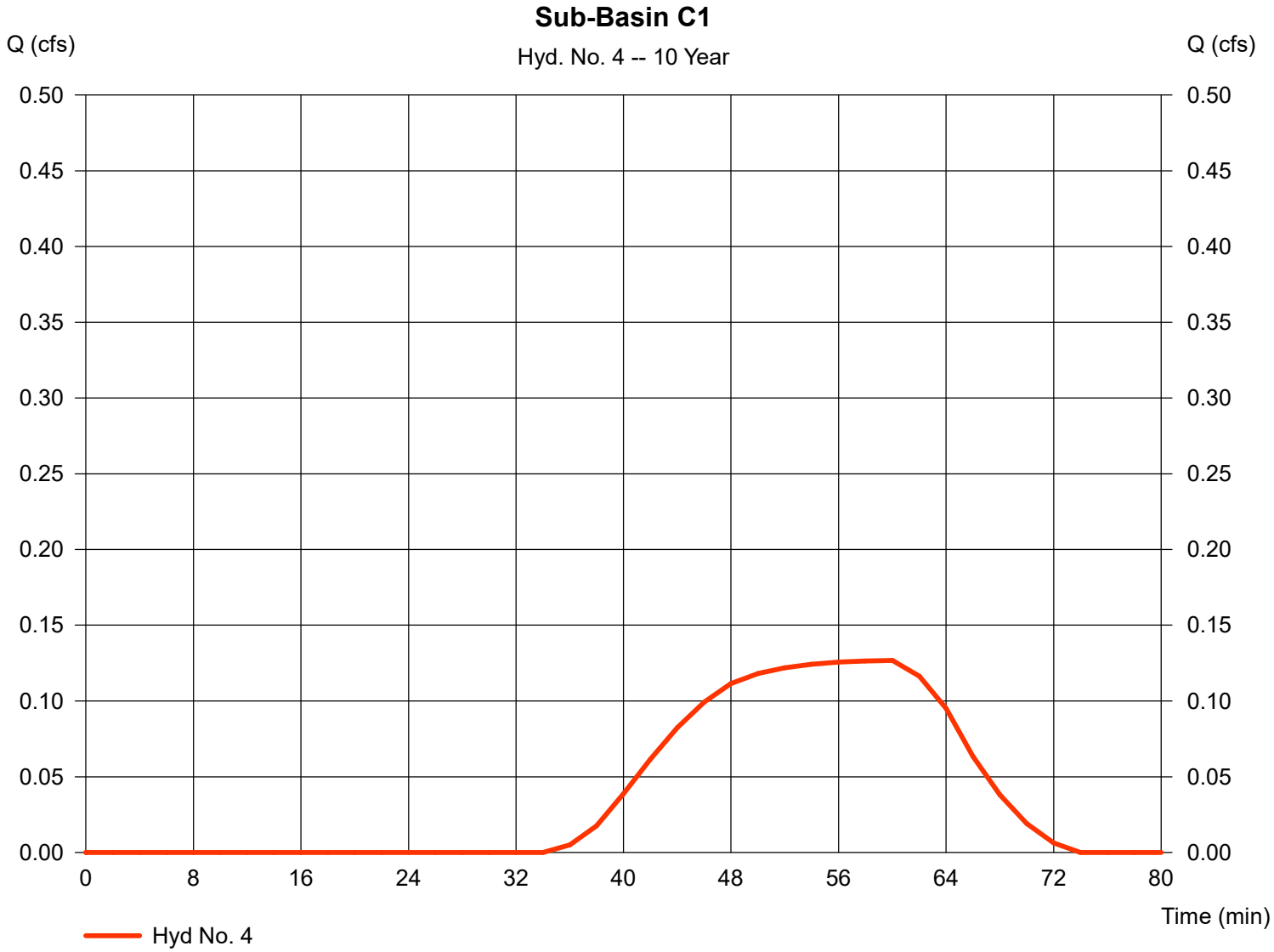
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.127 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 60 min |
| Time interval | = | 2 min | Hyd. volume | = | 180 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.69 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



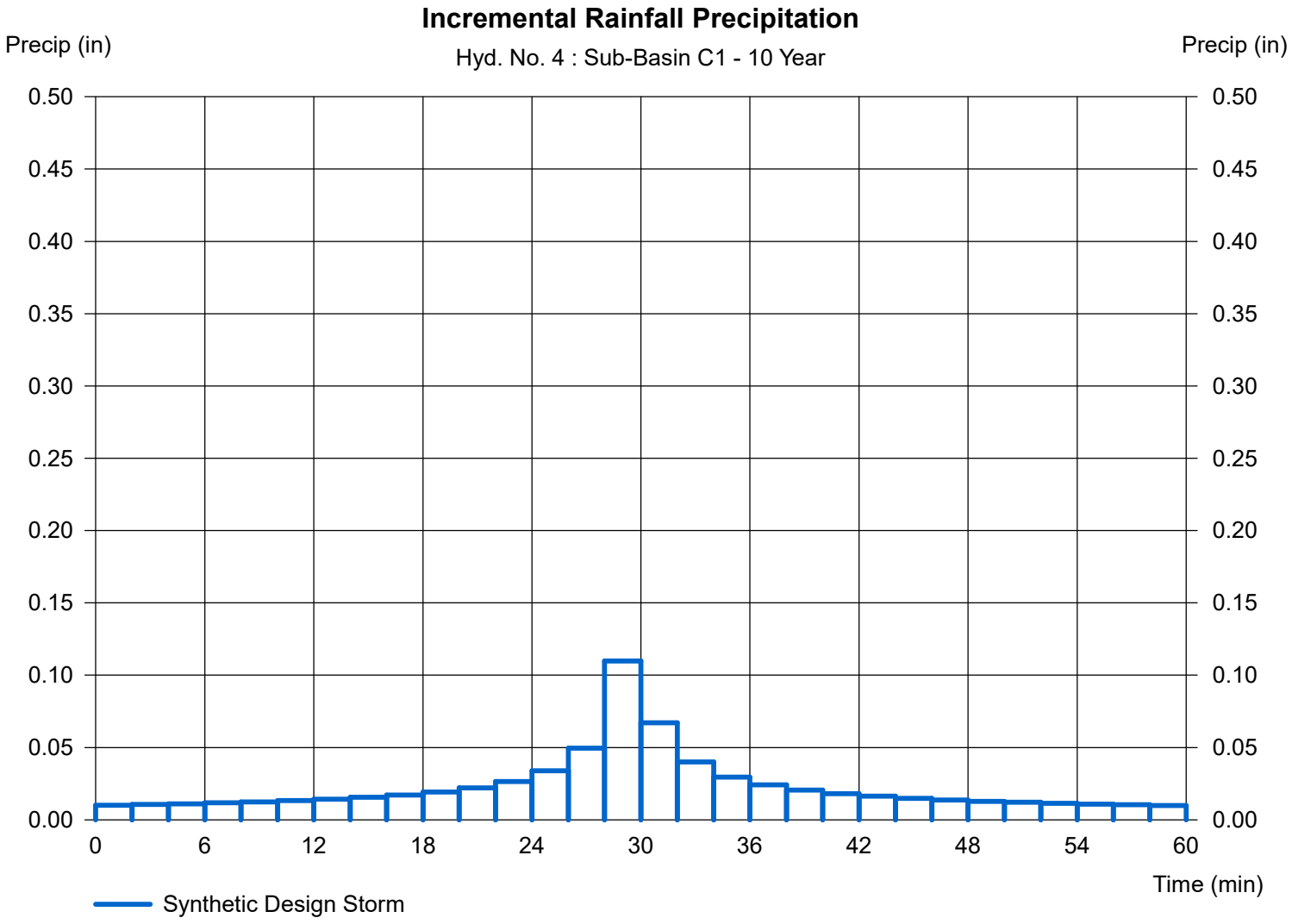
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 0.6900 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



# Hydrograph Report

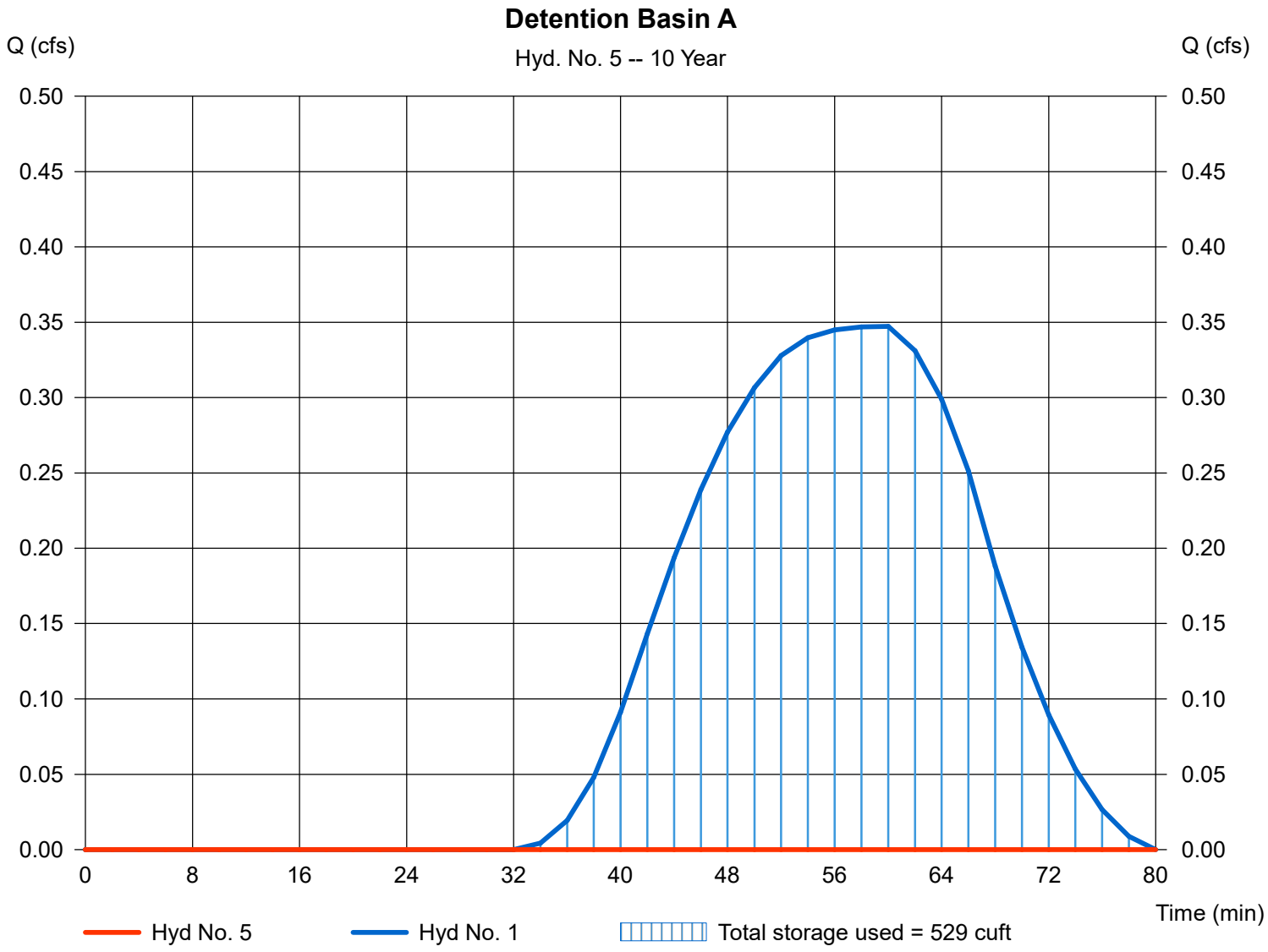
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.30 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 529 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

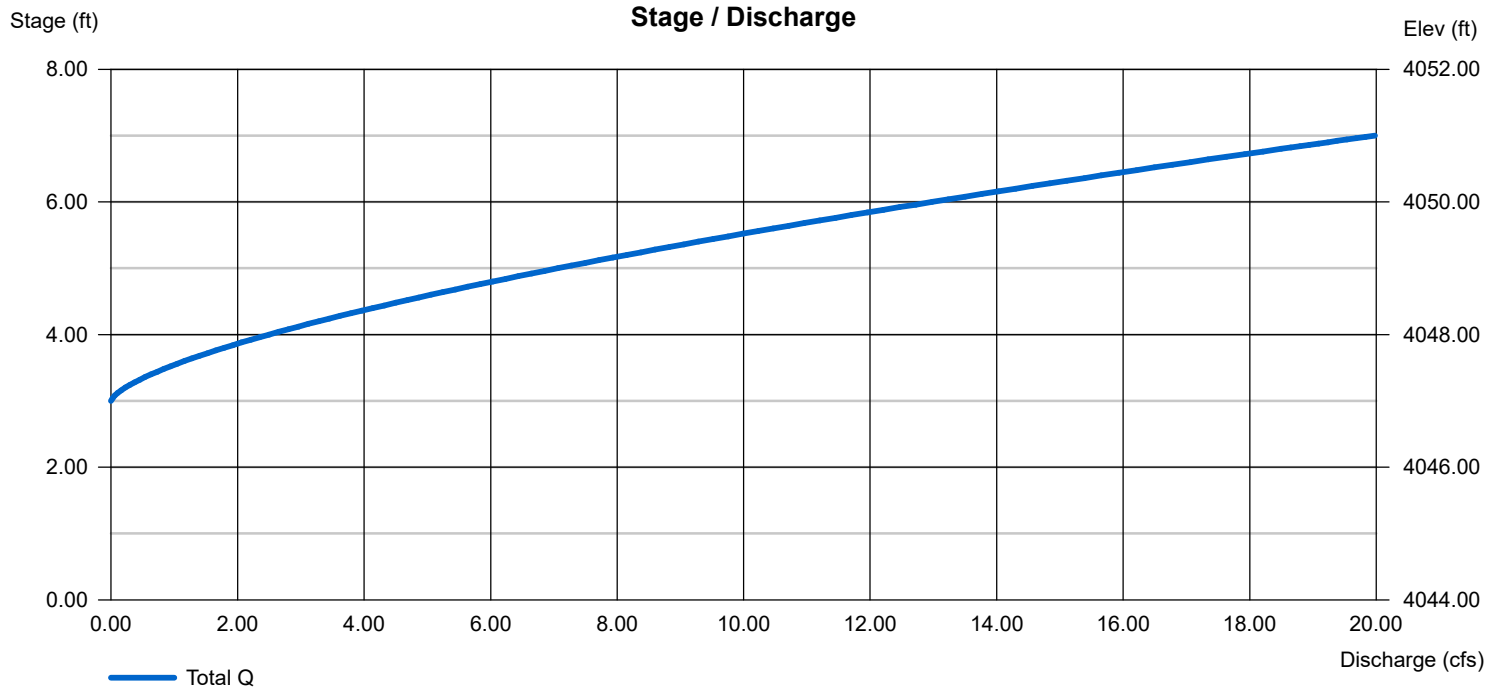
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



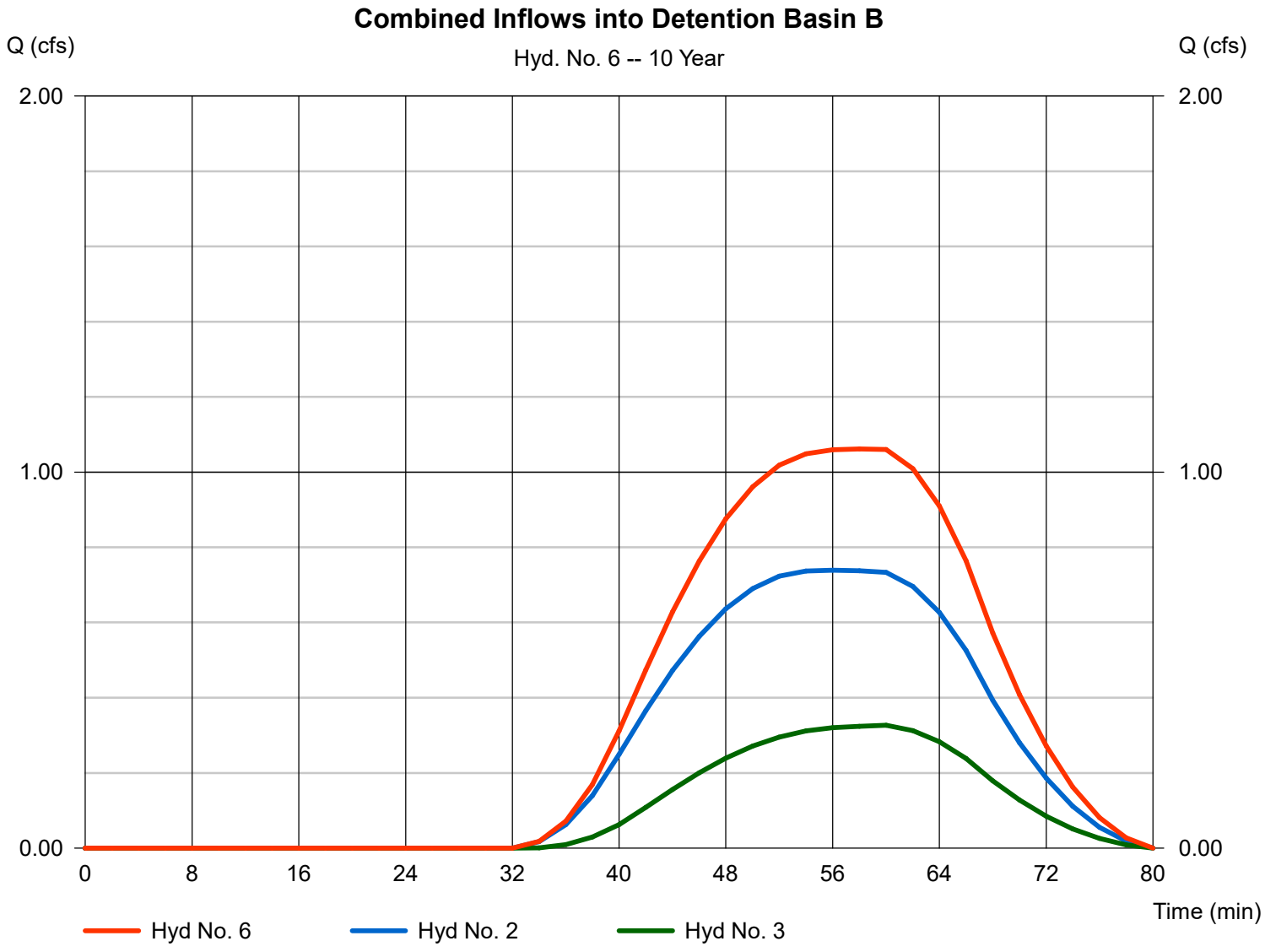
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 1.062 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 58 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,647 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

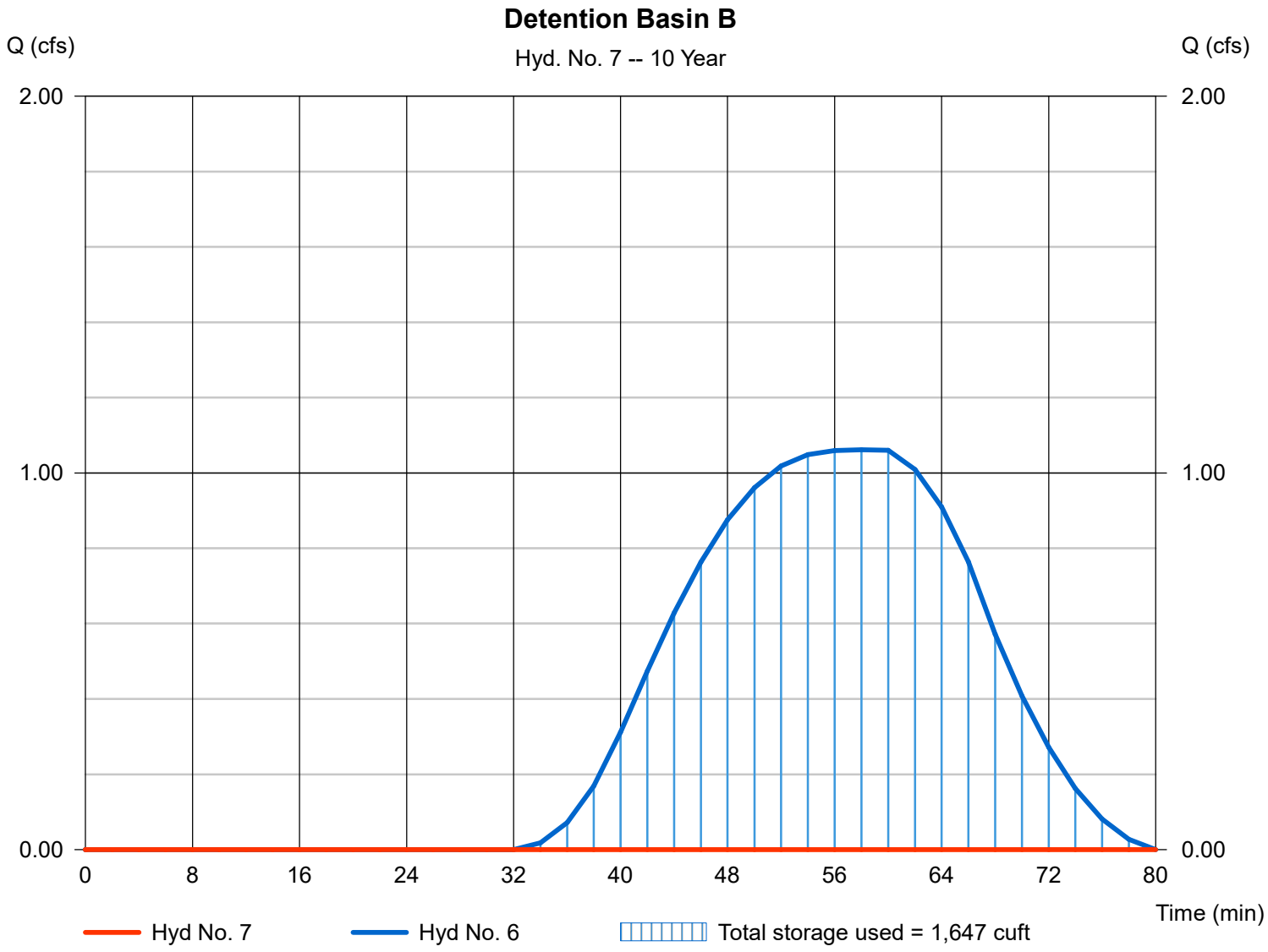
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.28 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 1,647 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

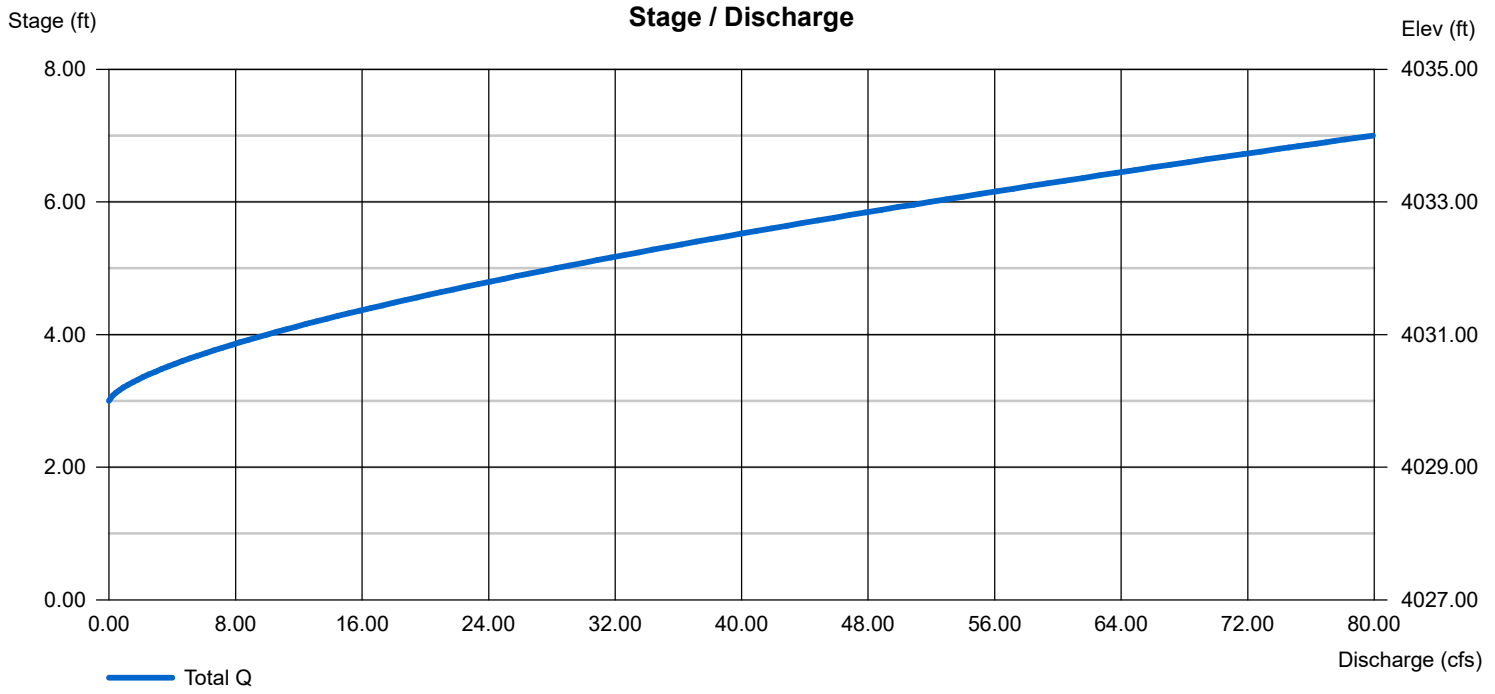
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

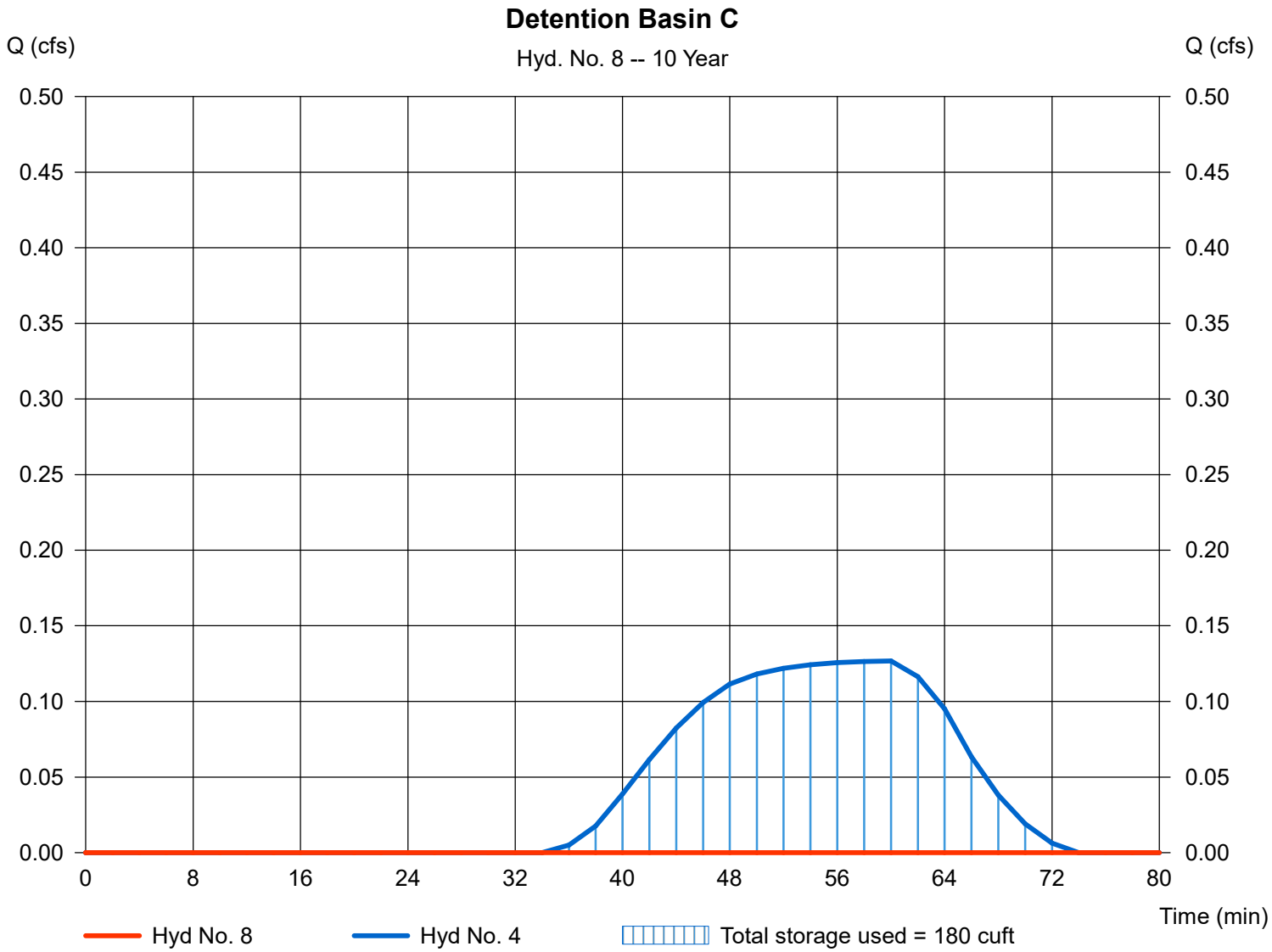
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.09 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 180 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

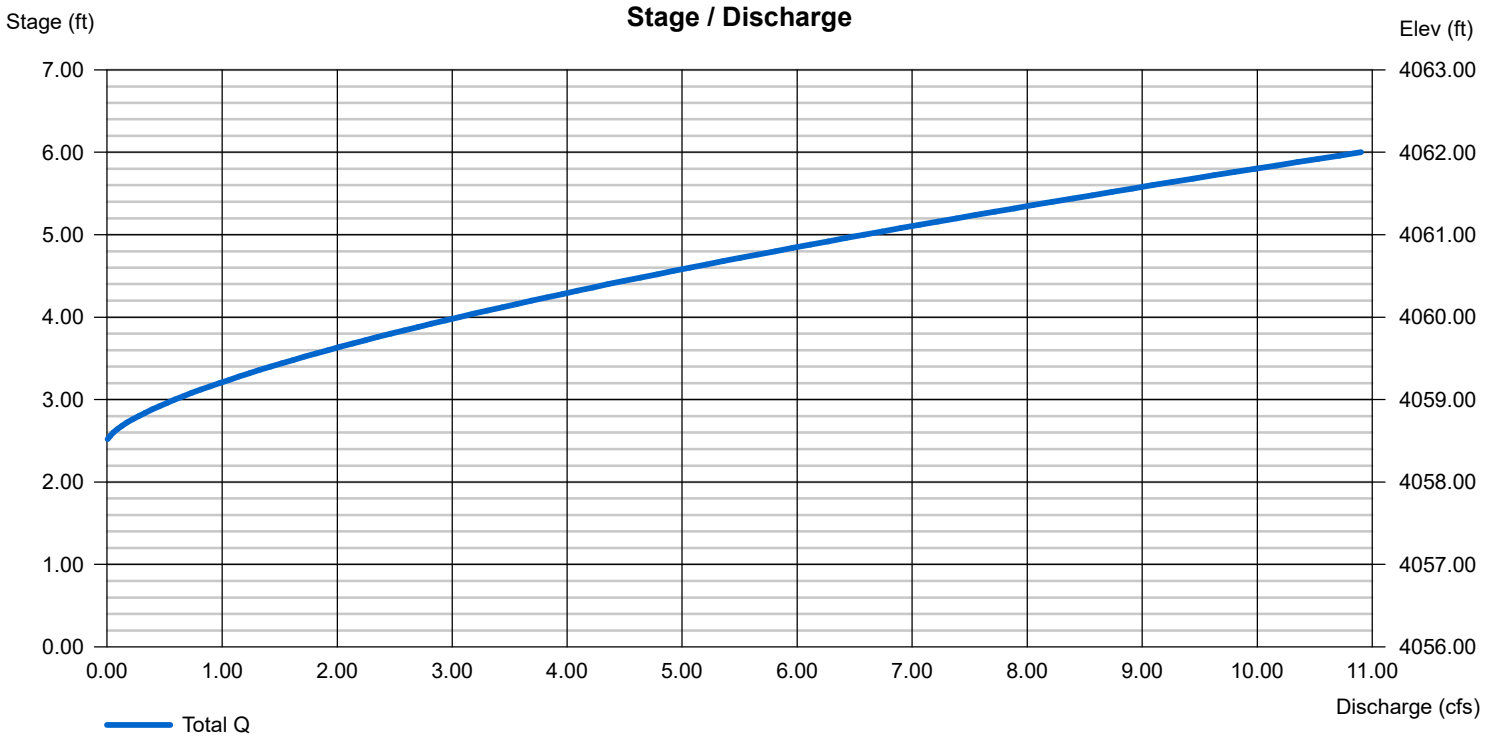
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



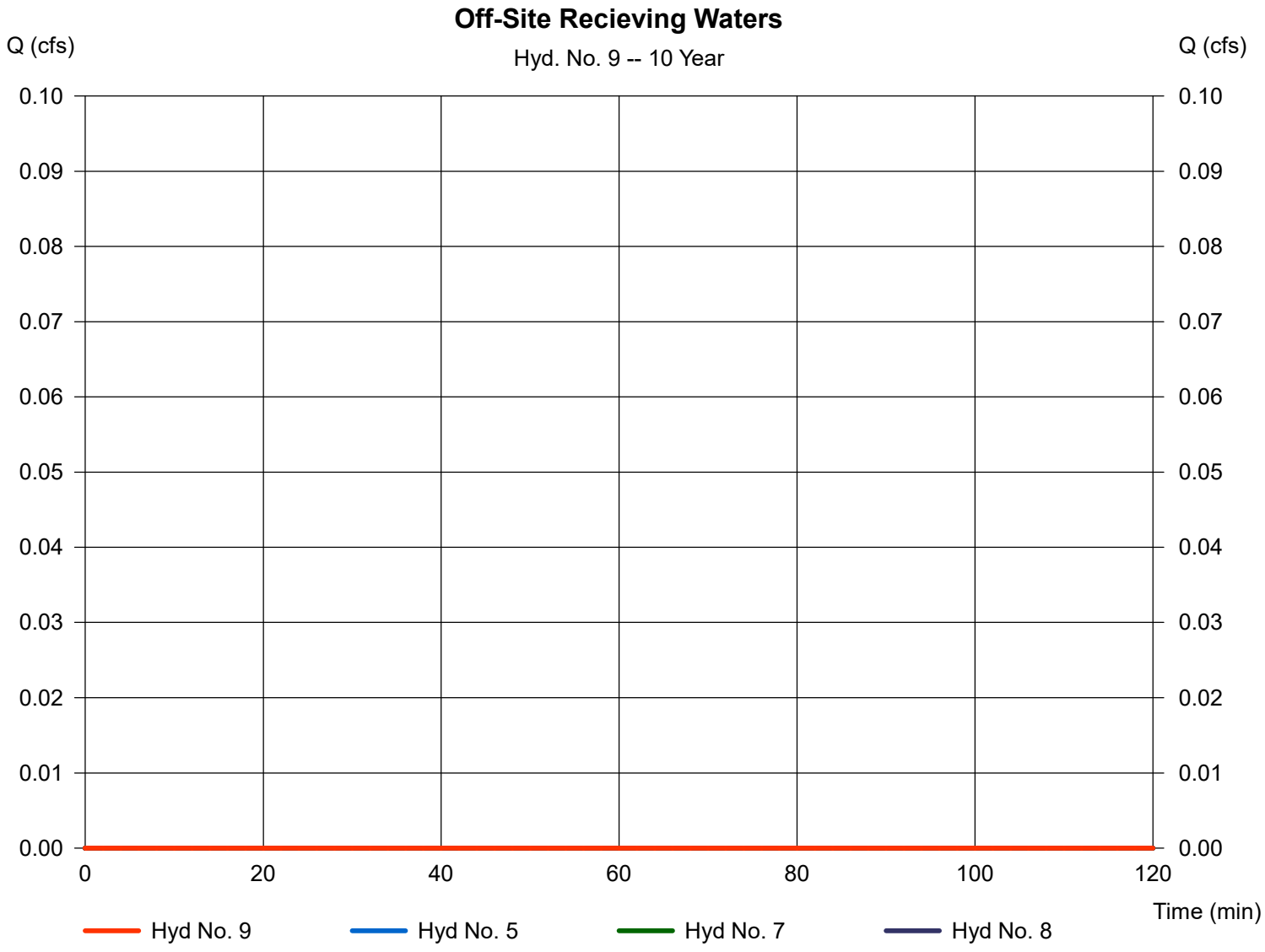
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

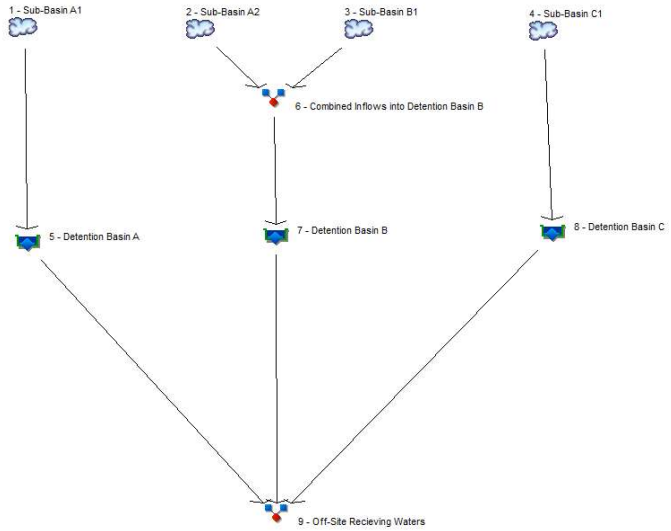
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.69 | 0.88 | 0.00 | 1.20 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 1.013 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 2.138 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.955 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.411 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 3.094 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 1.013 | 2 | 104 | 3,260 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 2.138 | 2 | 104 | 6,674 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.955 | 2 | 104 | 3,161 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.411 | 2 | 100 | 1,236 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4045.29 | 3,260 | Detention Basin A |
| 6 | Combine | 3.094 | 2 | 104 | 9,835 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4028.32 | 9,835 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.56 | 1,236 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

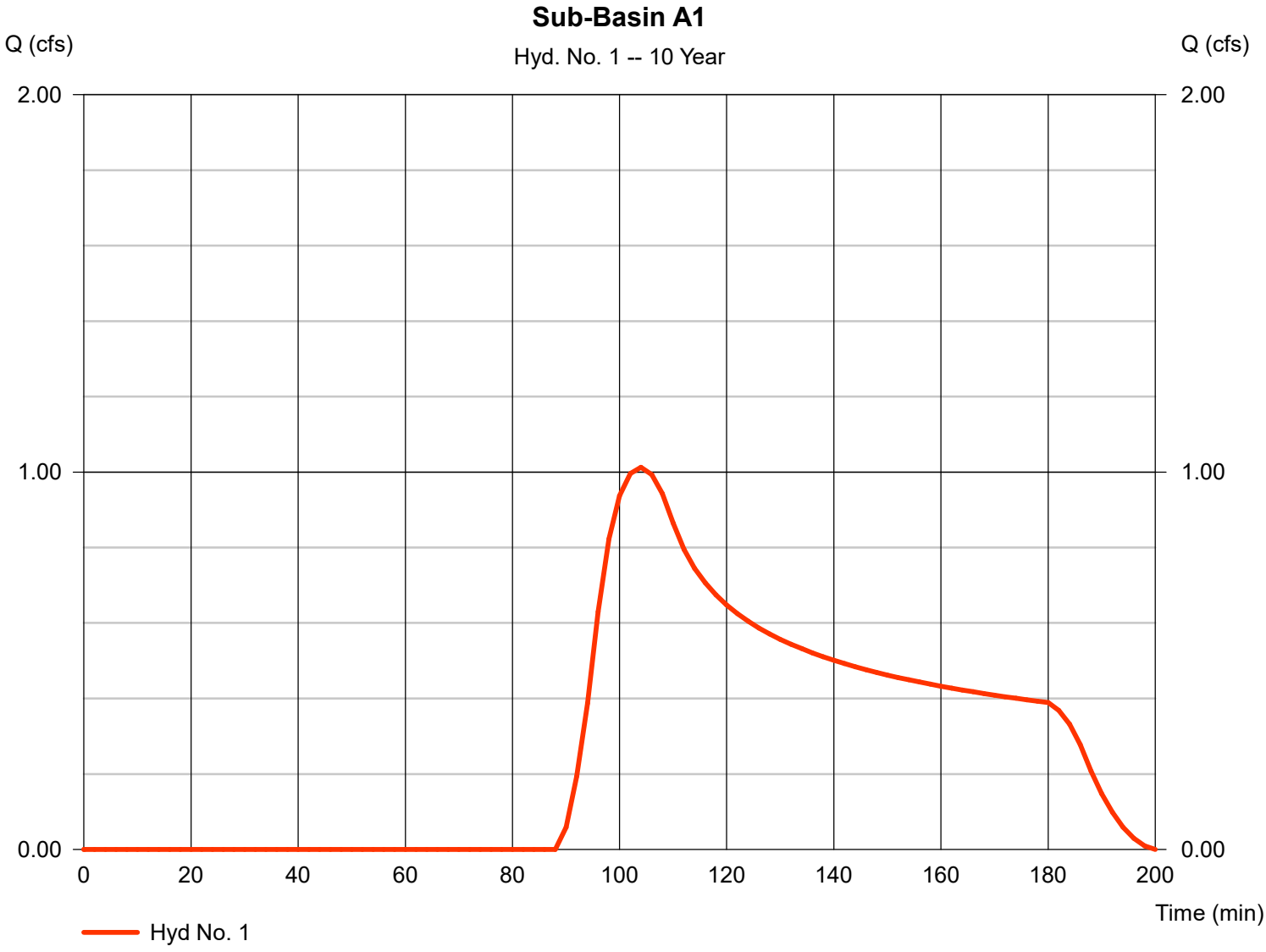
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.013 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 104 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,260 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



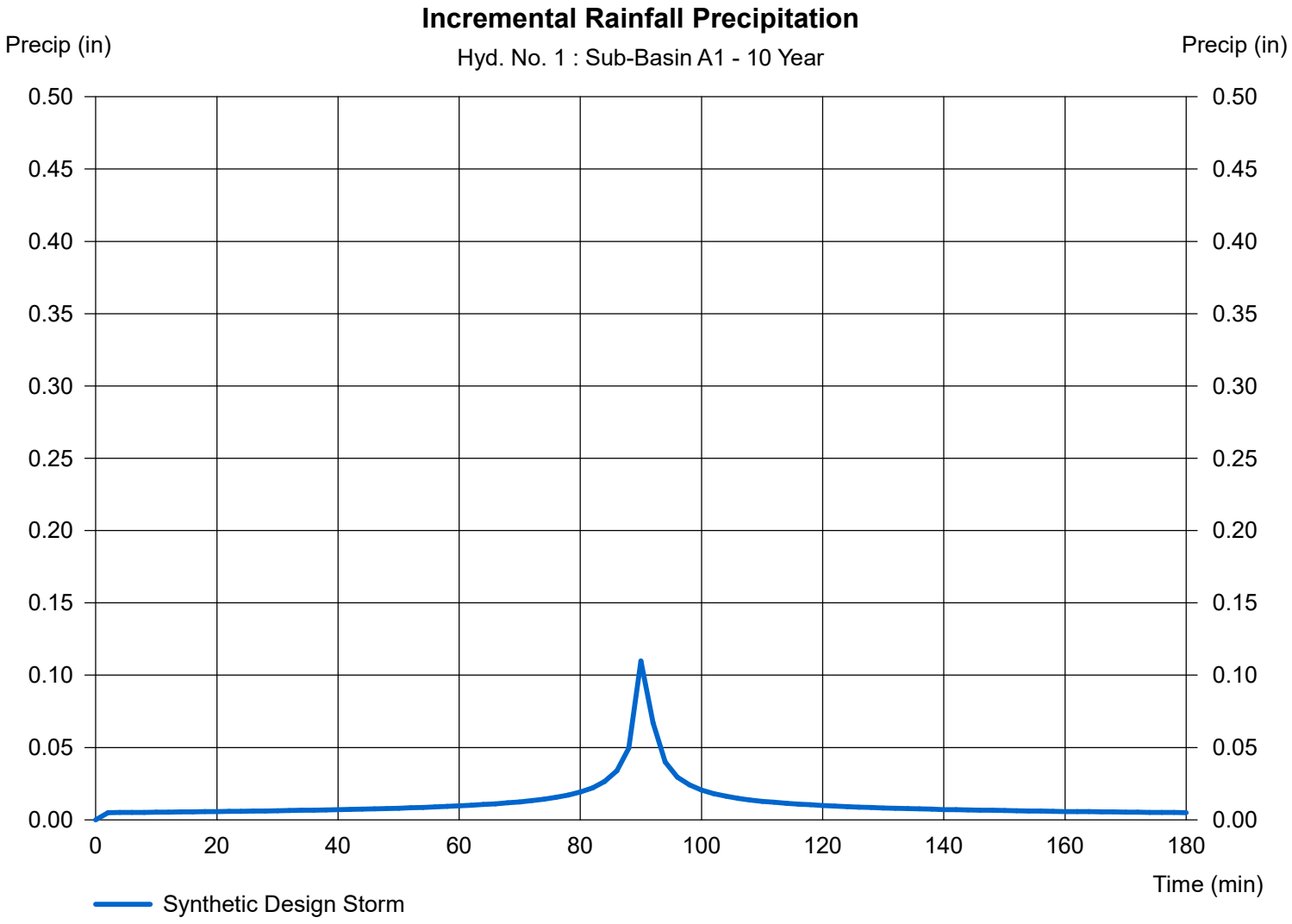
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



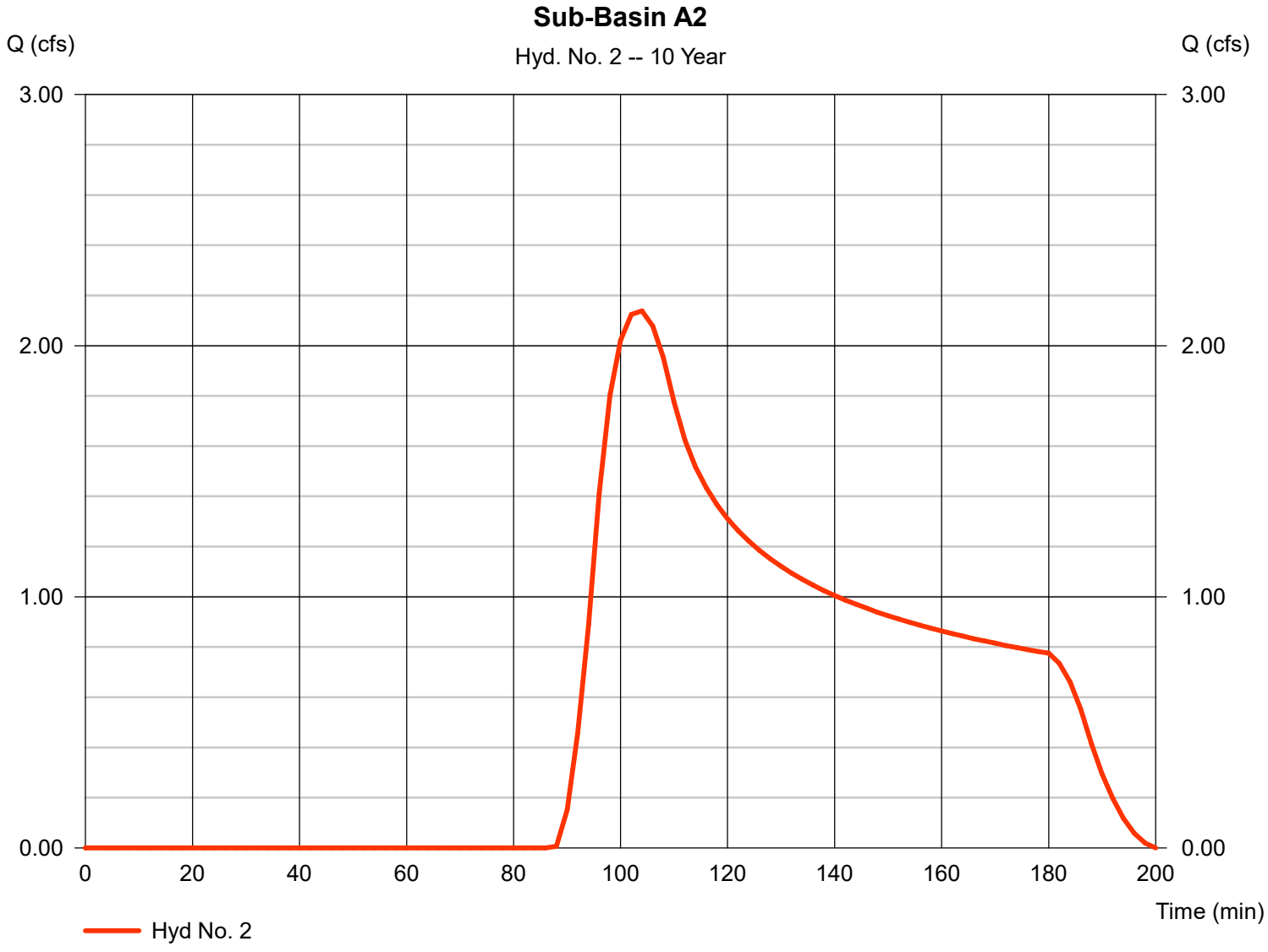
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.138 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 104 min |
| Time interval | = | 2 min | Hyd. volume | = | 6,674 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



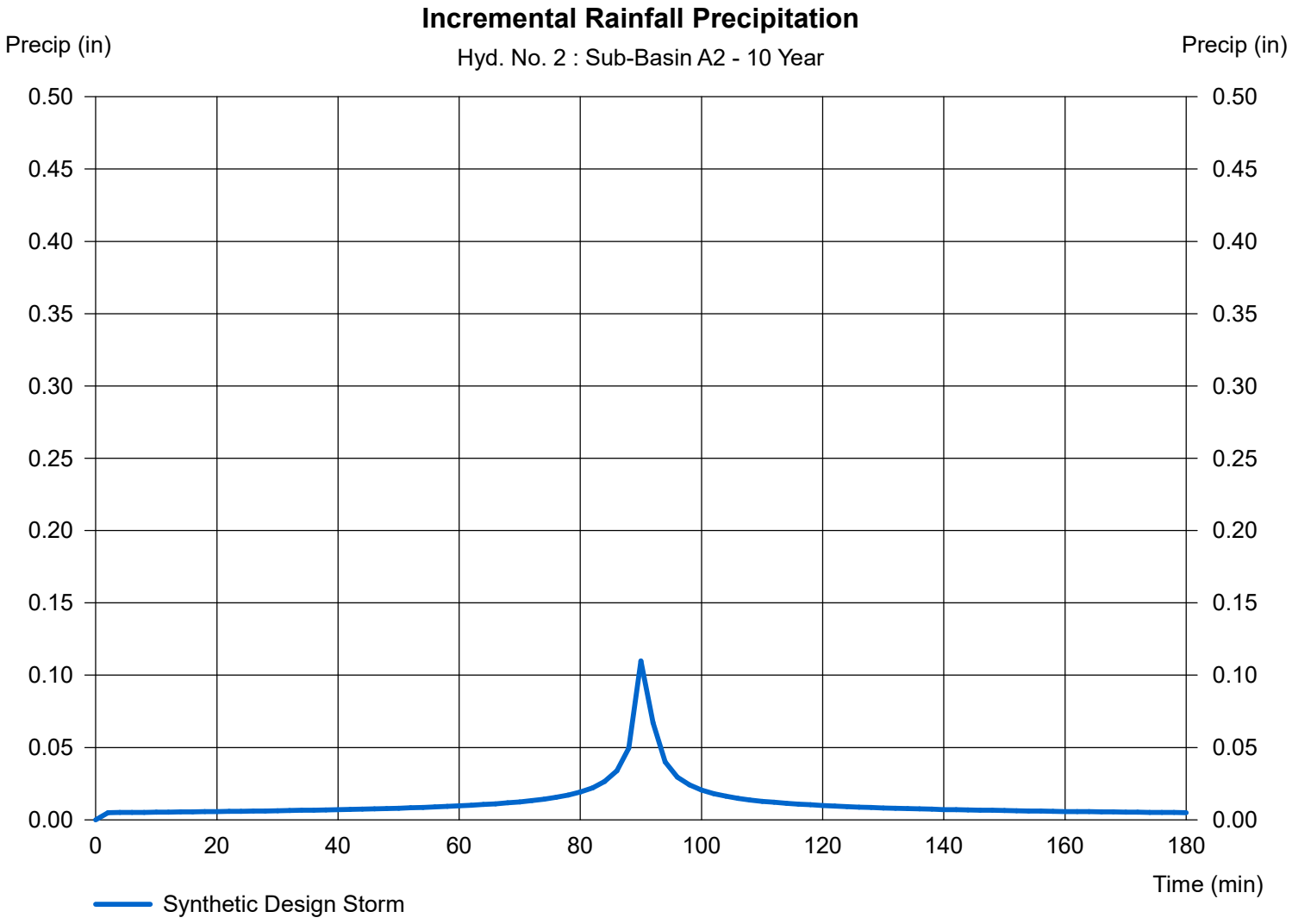
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



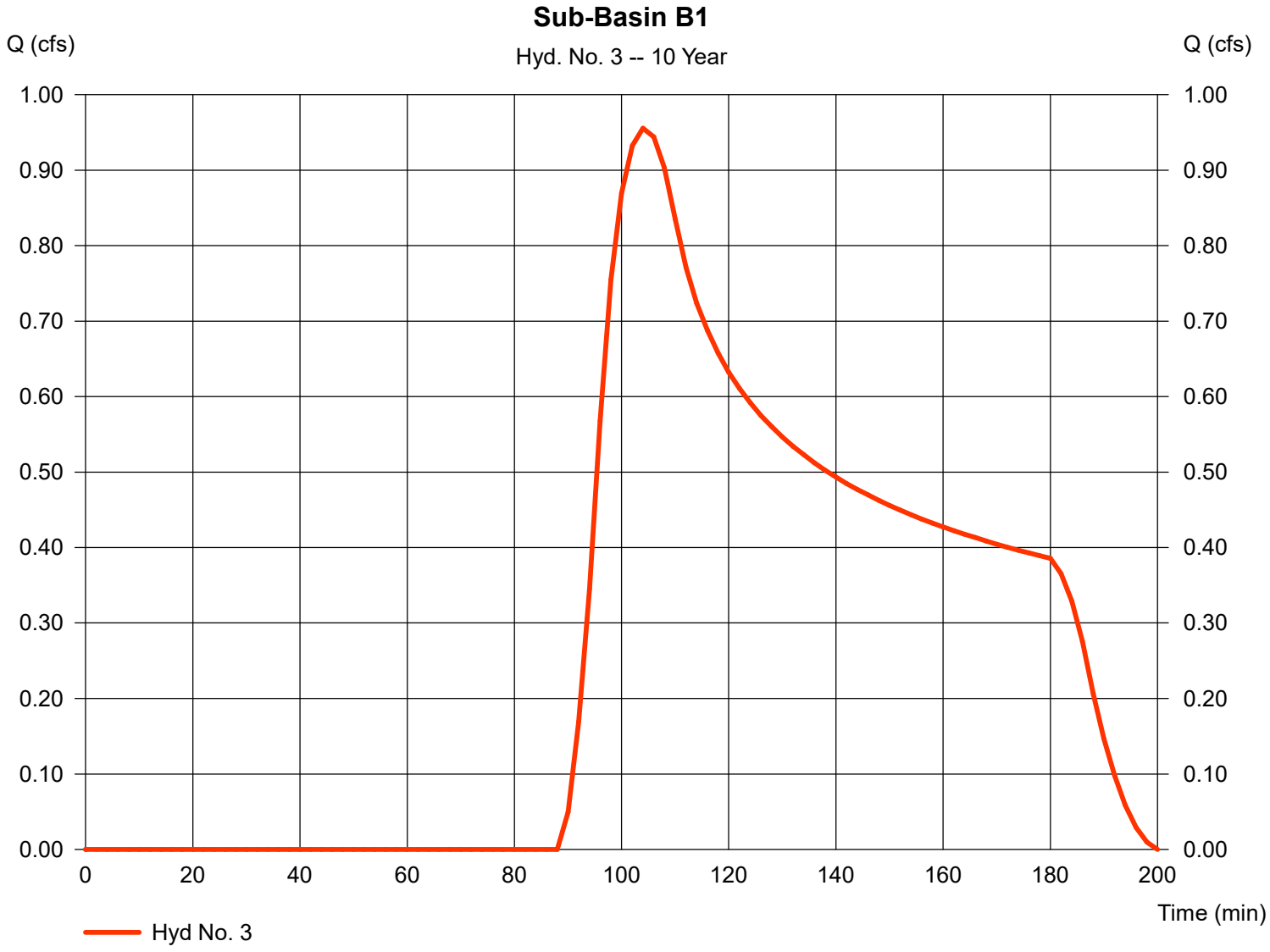
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.955 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 104 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,161 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



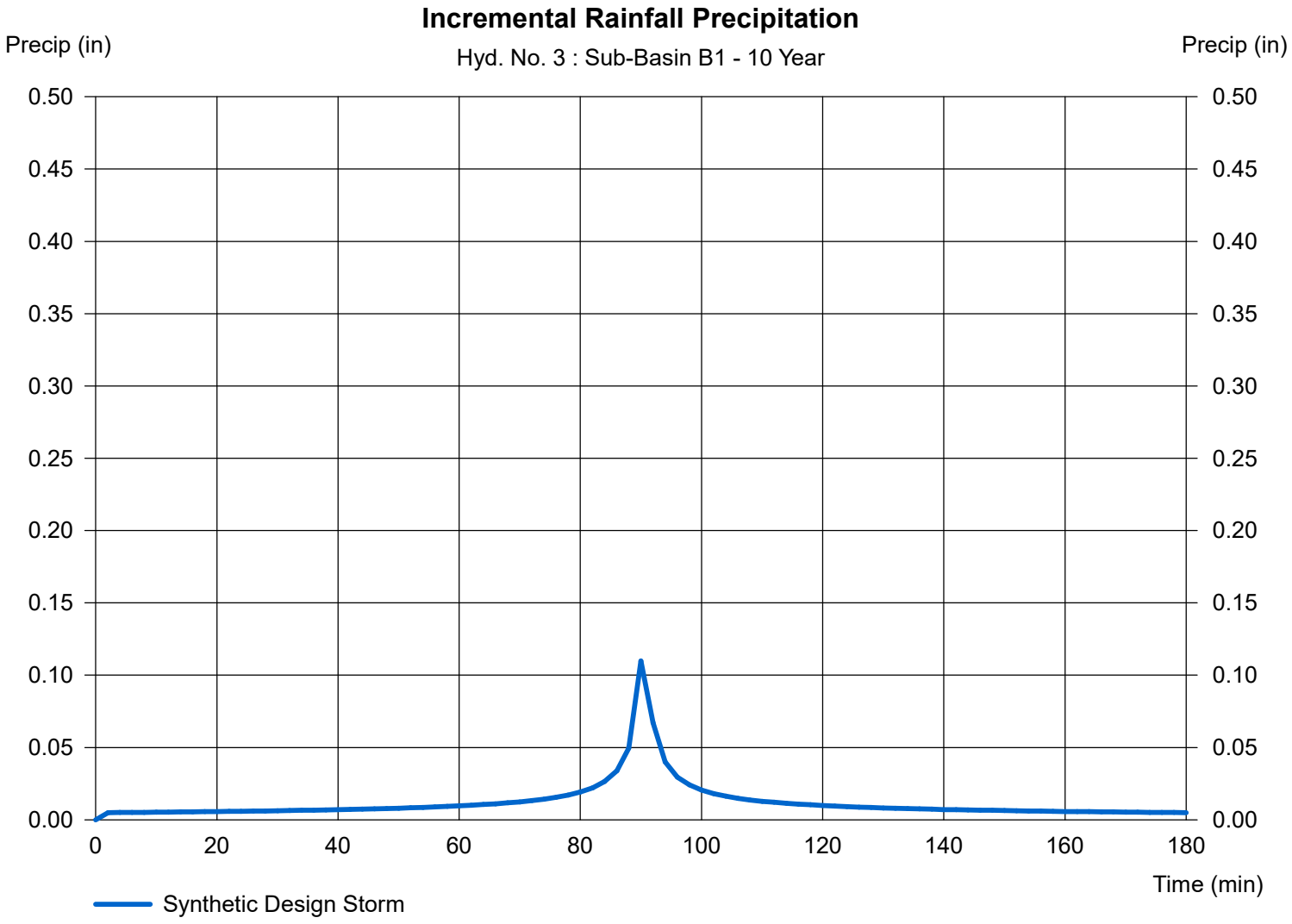
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



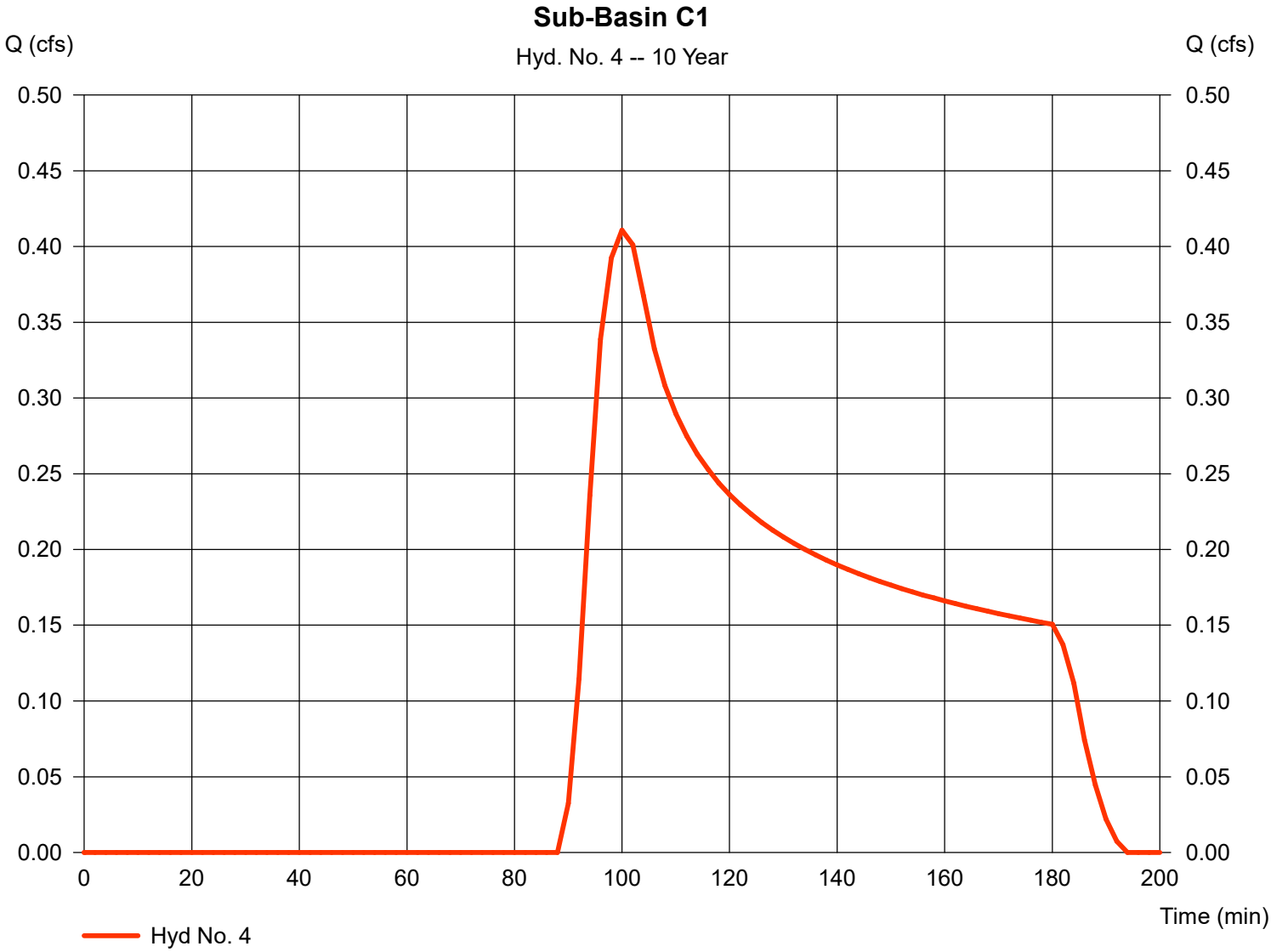
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.411 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 100 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,236 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.09 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



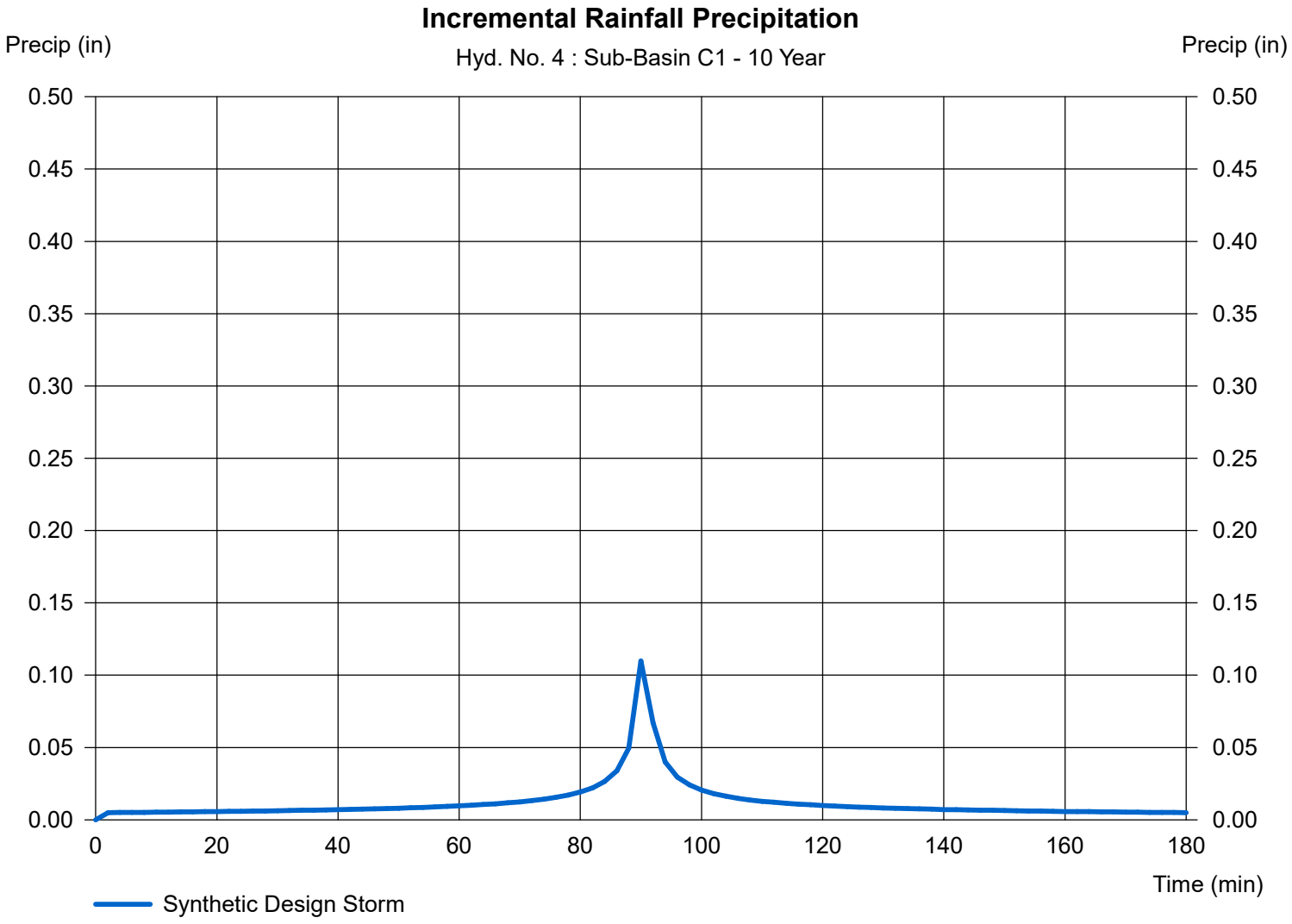
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.0900 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



# Hydrograph Report

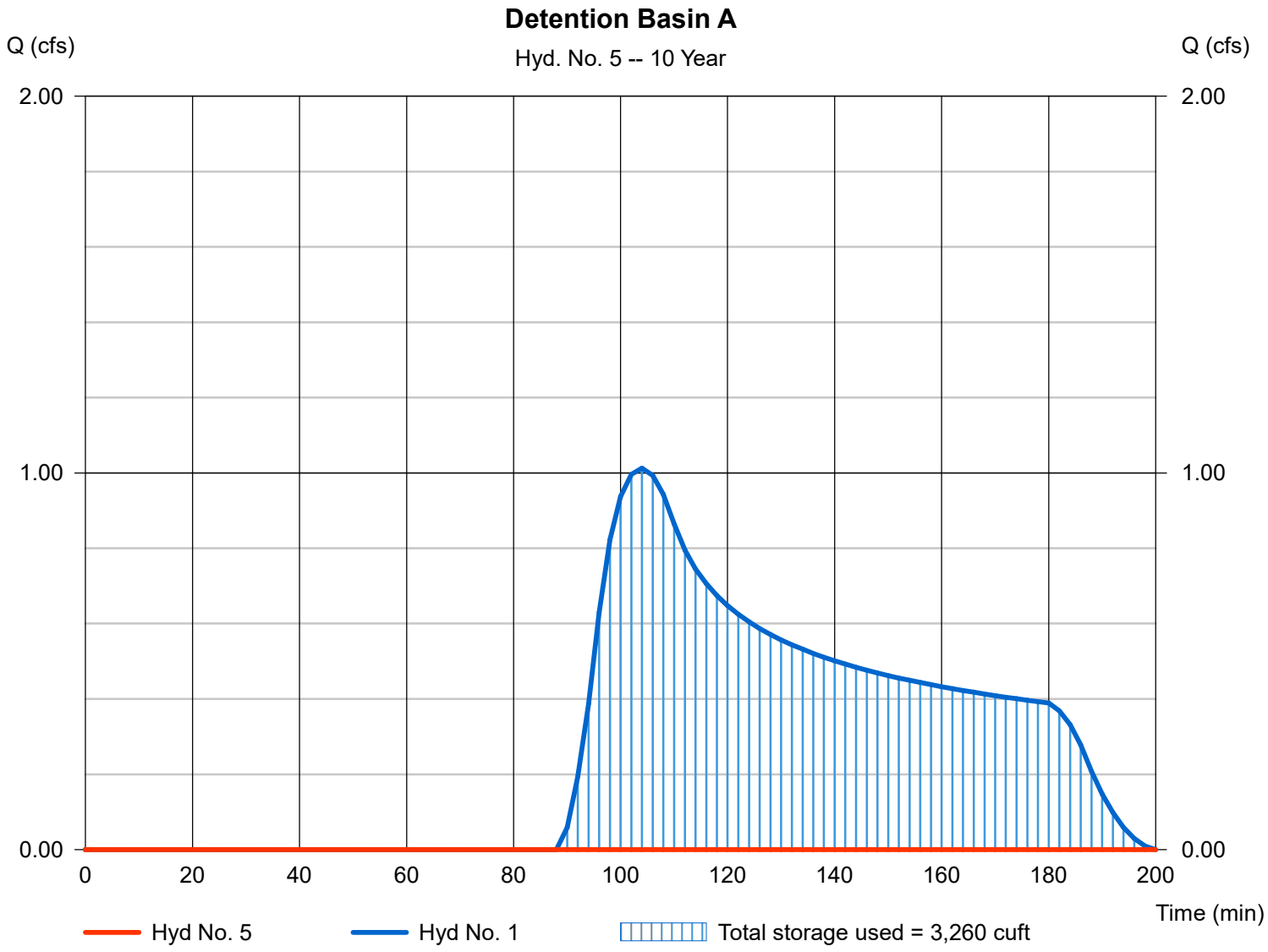
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4045.29 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 3,260 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

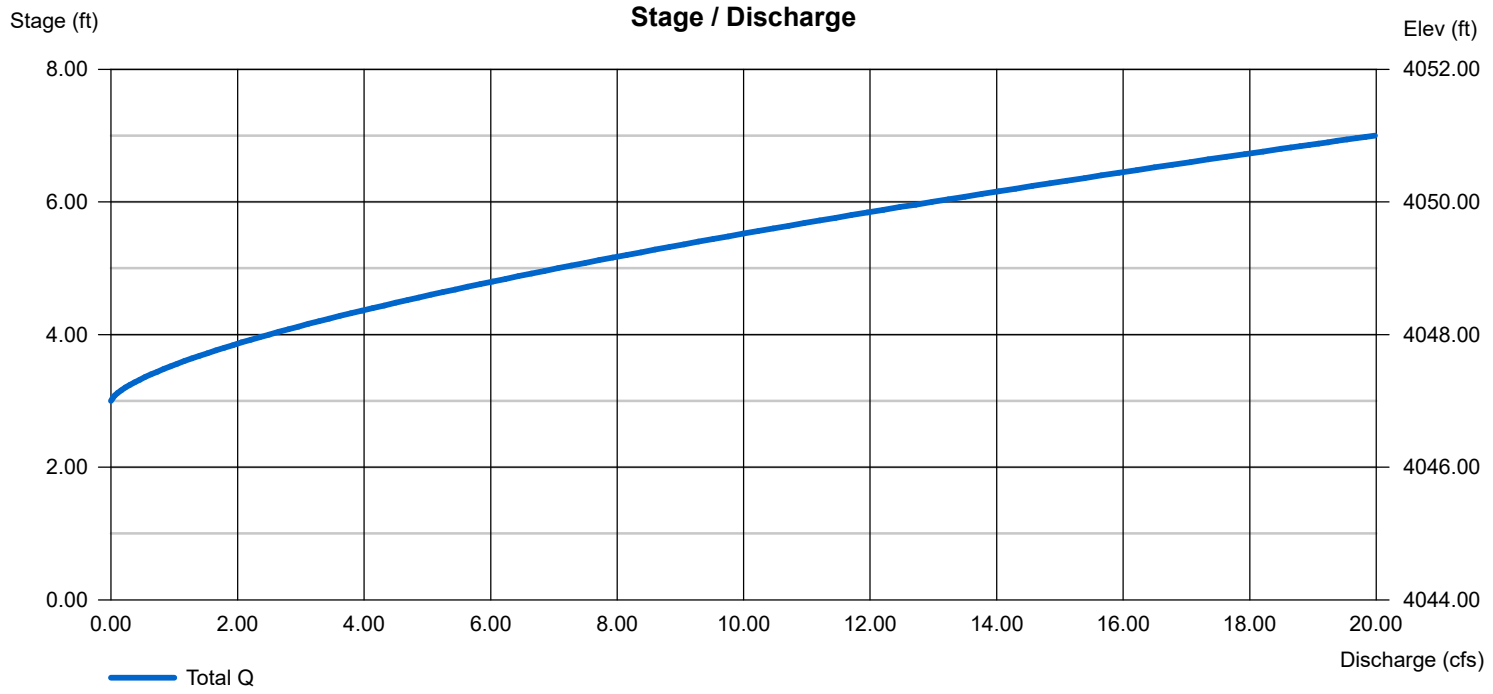
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



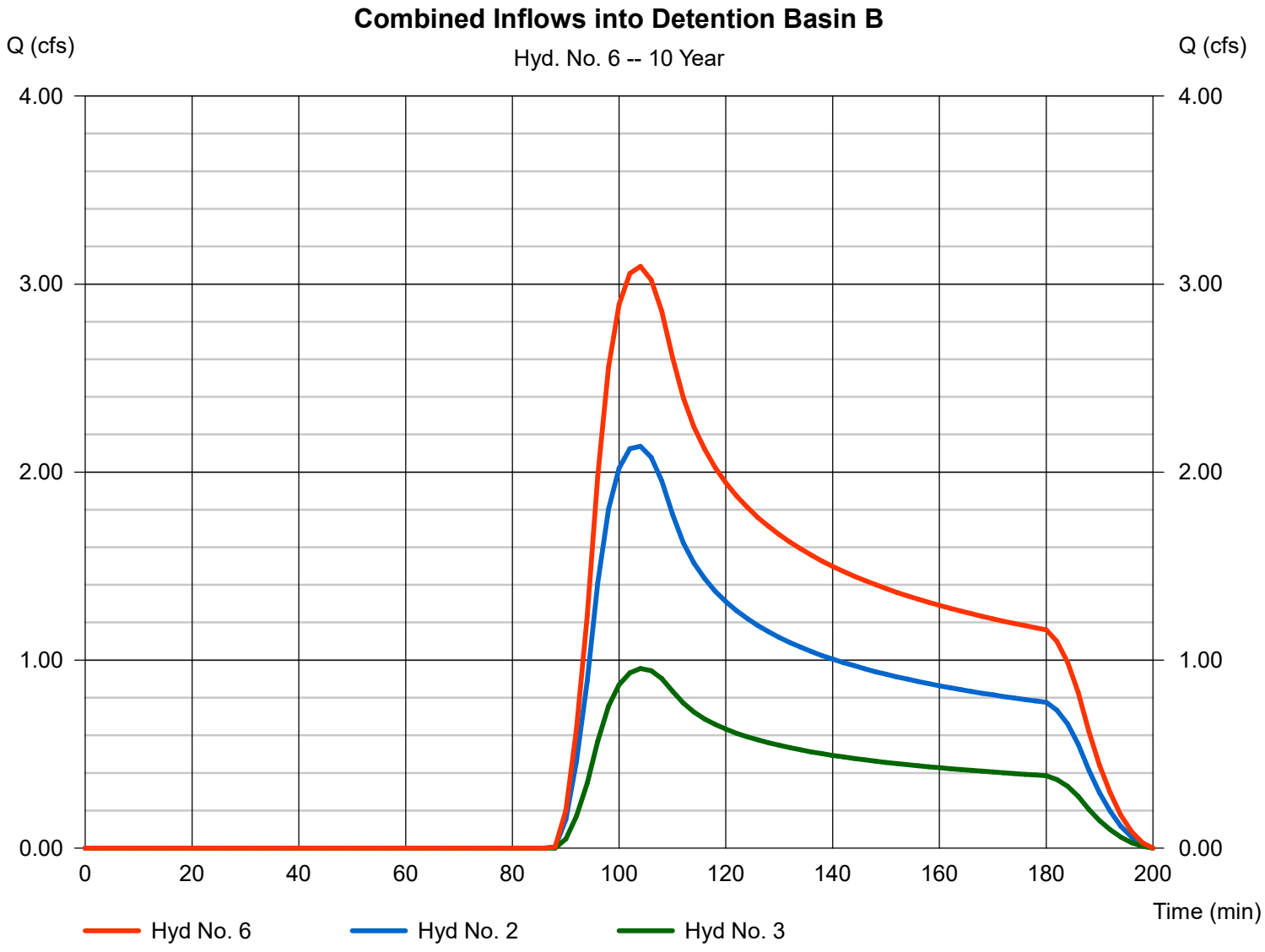
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 3.094 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 104 min |
| Time interval | = 2 min | Hyd. volume | = 9,835 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

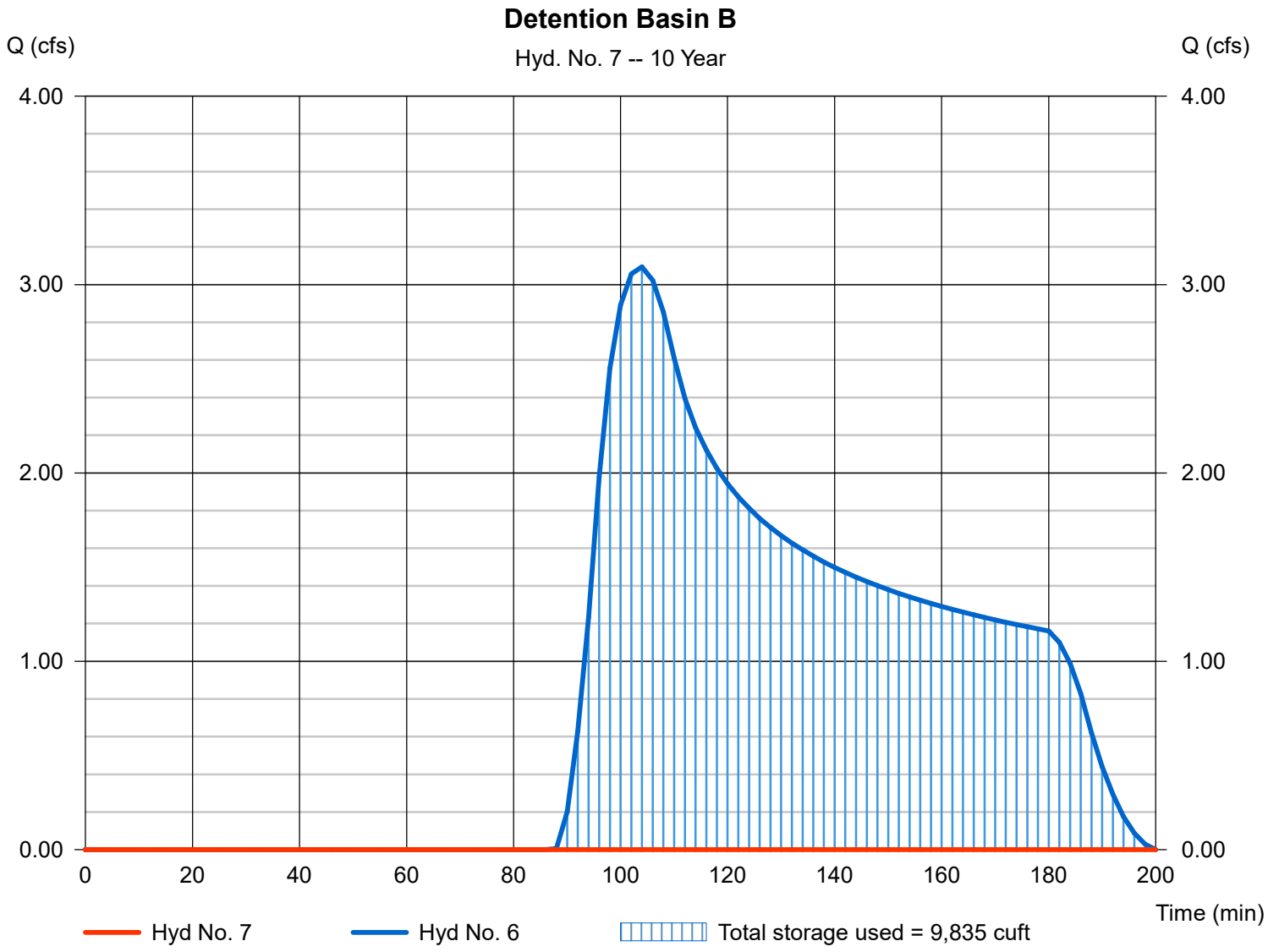
Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4028.32 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 9,835 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

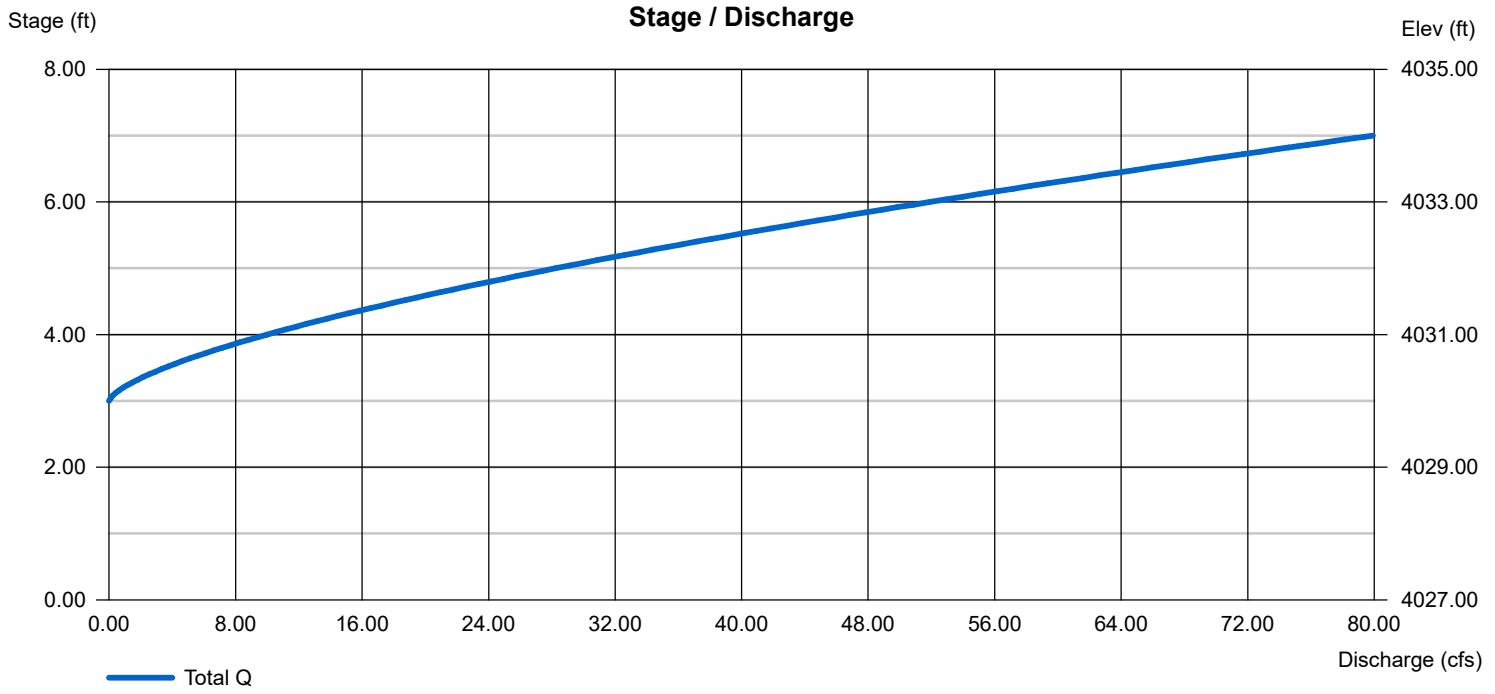
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

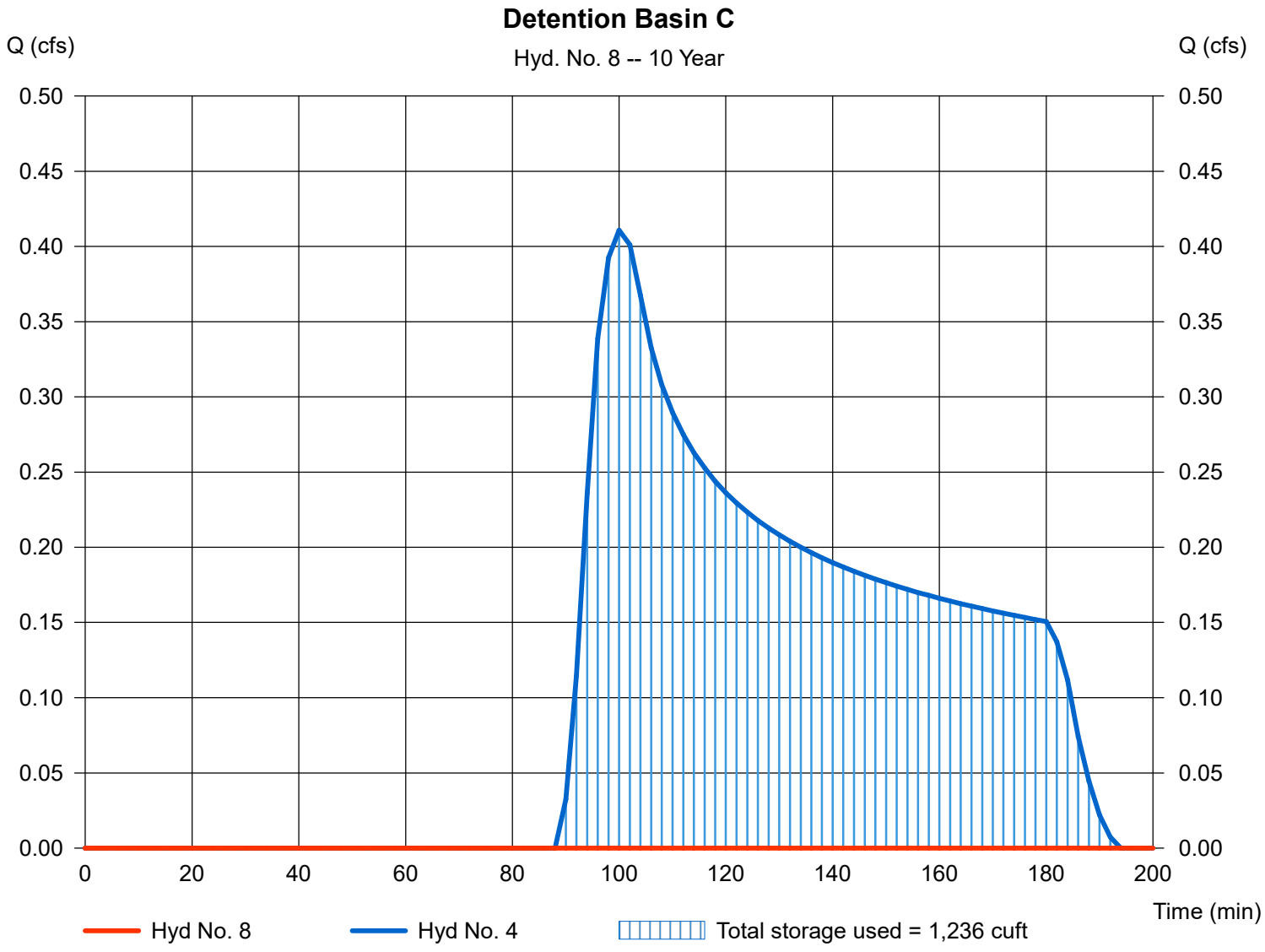
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.56 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 1,236 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

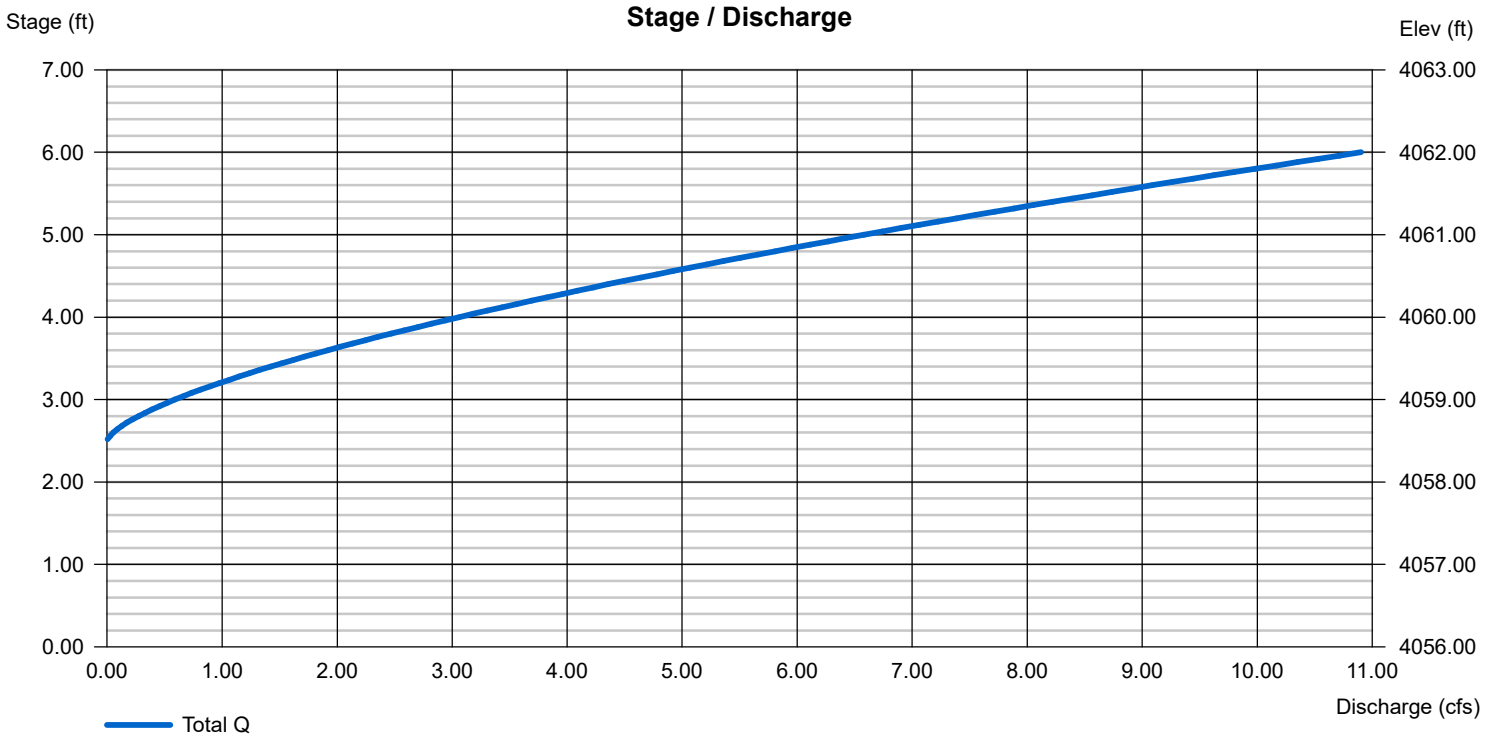
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



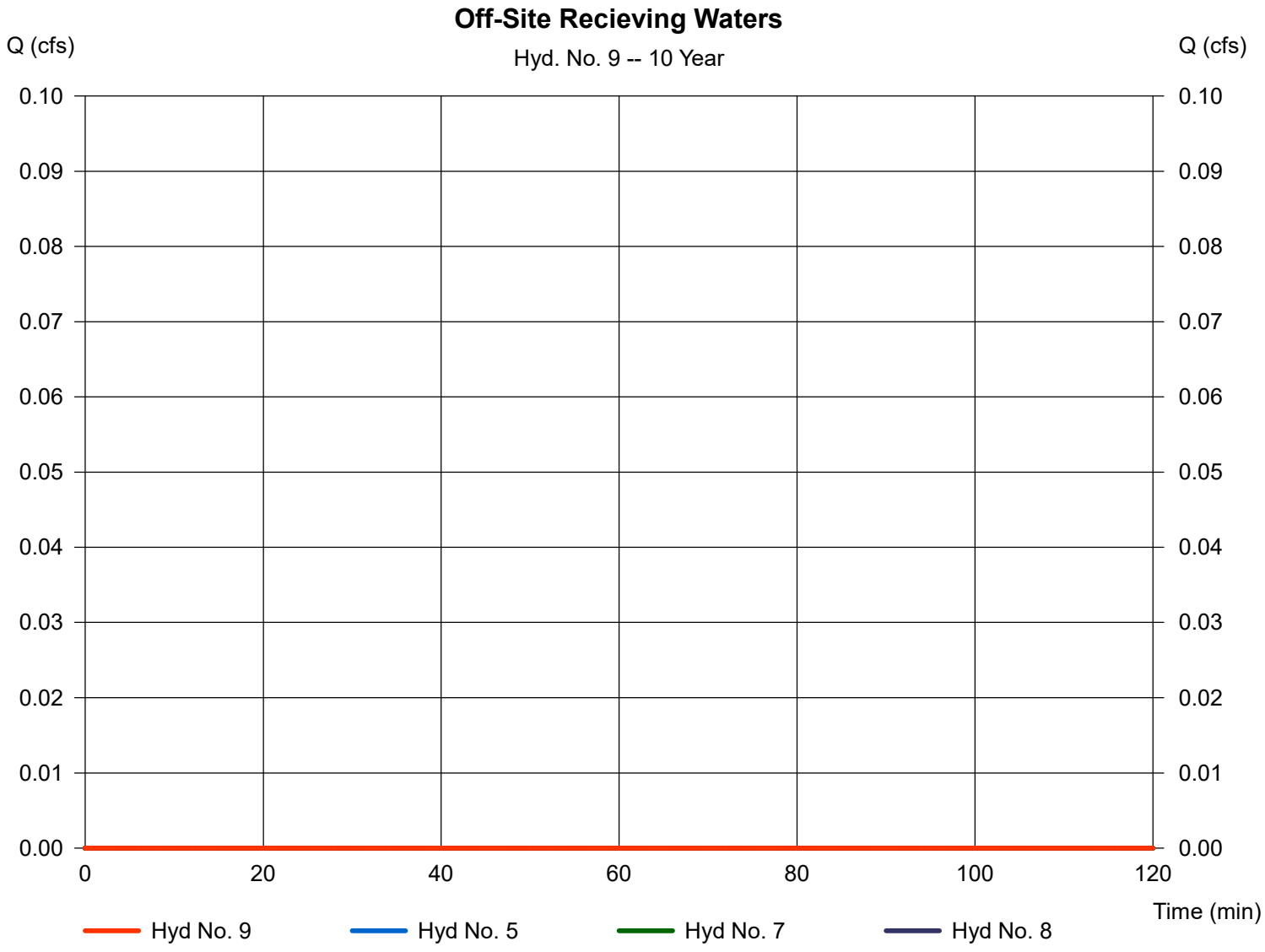
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

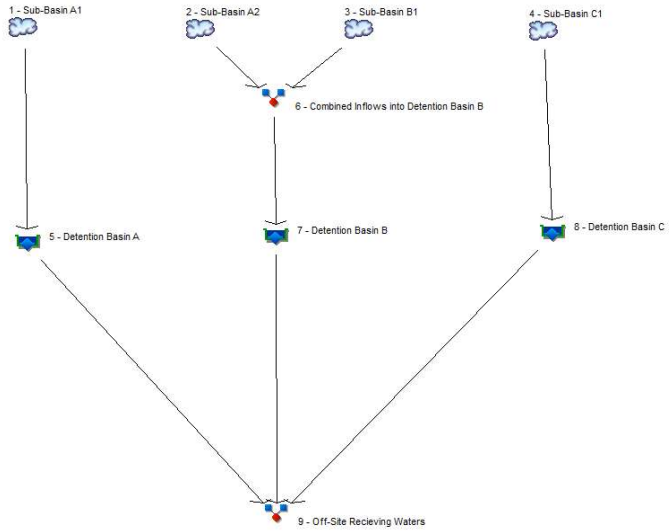
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 1.06 | 1.33 | 0.00 | 1.78 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 2.035 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 4.172 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 1.966 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 0.891 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 6.138 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 2.035 | 2 | 190 | 7,038 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 4.172 | 2 | 190 | 14,138 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 1.966 | 2 | 190 | 6,924 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.891 | 2 | 186 | 2,728 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4046.14 | 7,038 | Detention Basin A |
| 6 | Combine | 6.138 | 2 | 190 | 21,062 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4029.29 | 21,062 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4057.10 | 2,728 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

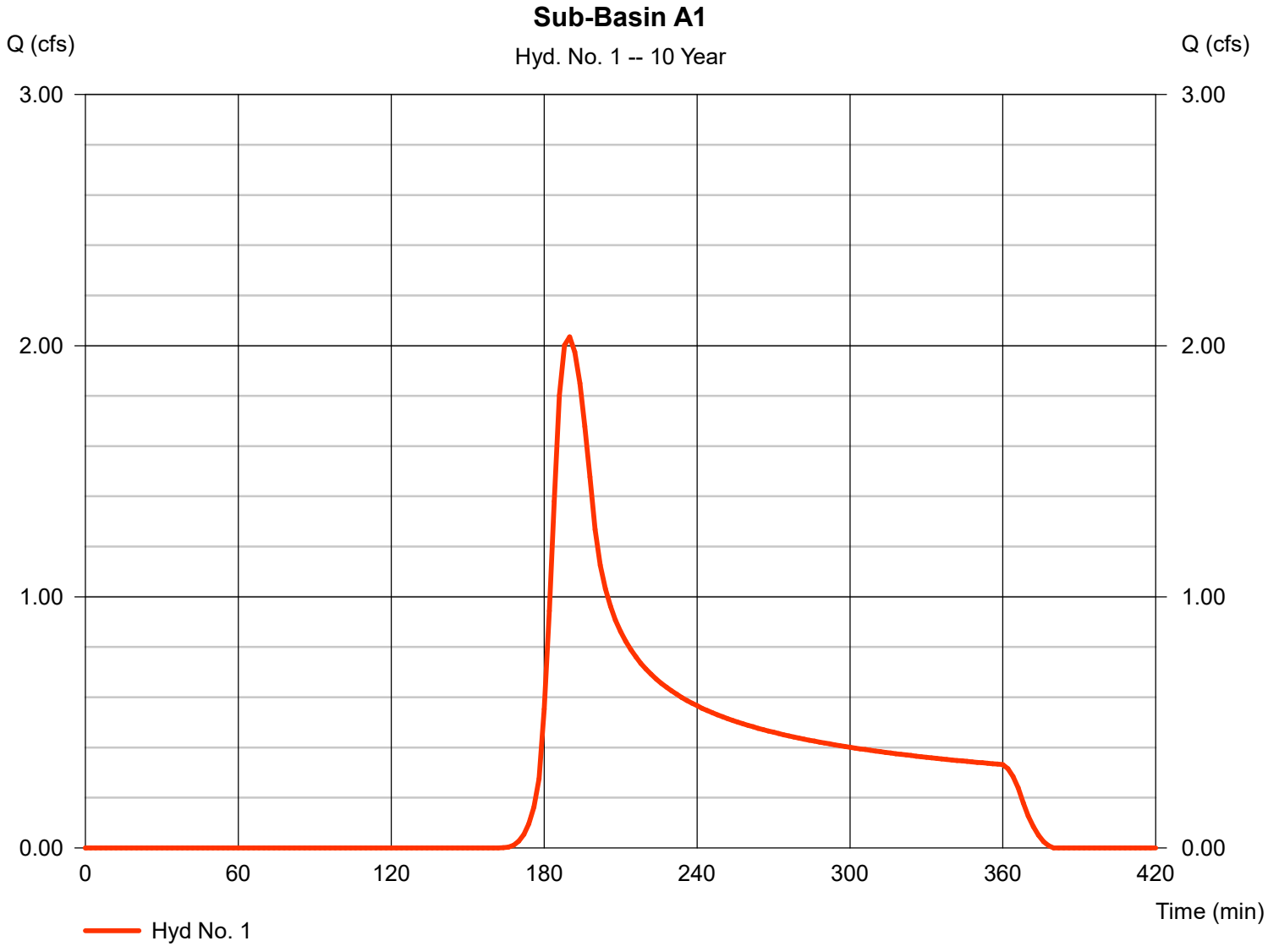
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.035 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 7,038 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 1.45 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



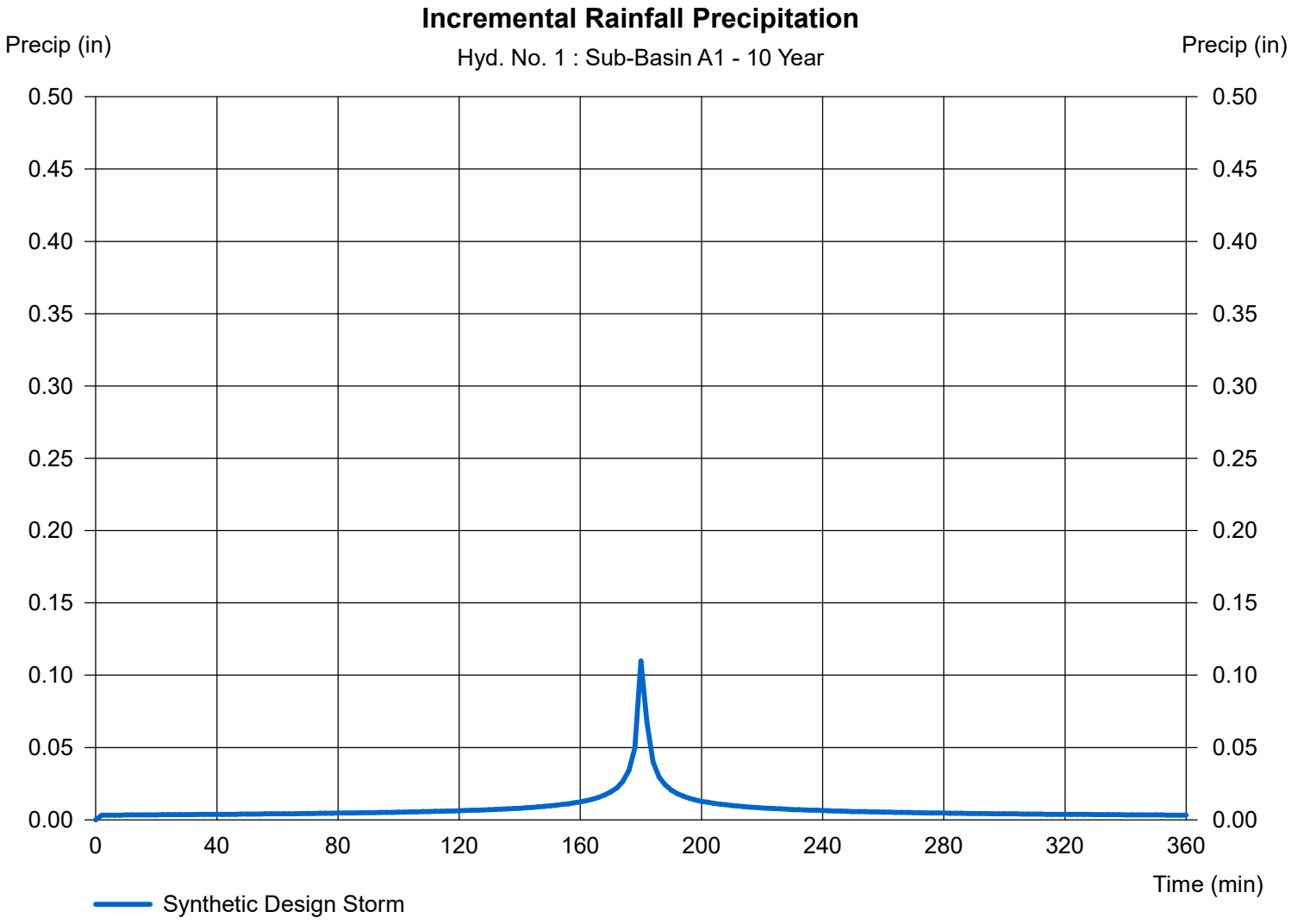
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



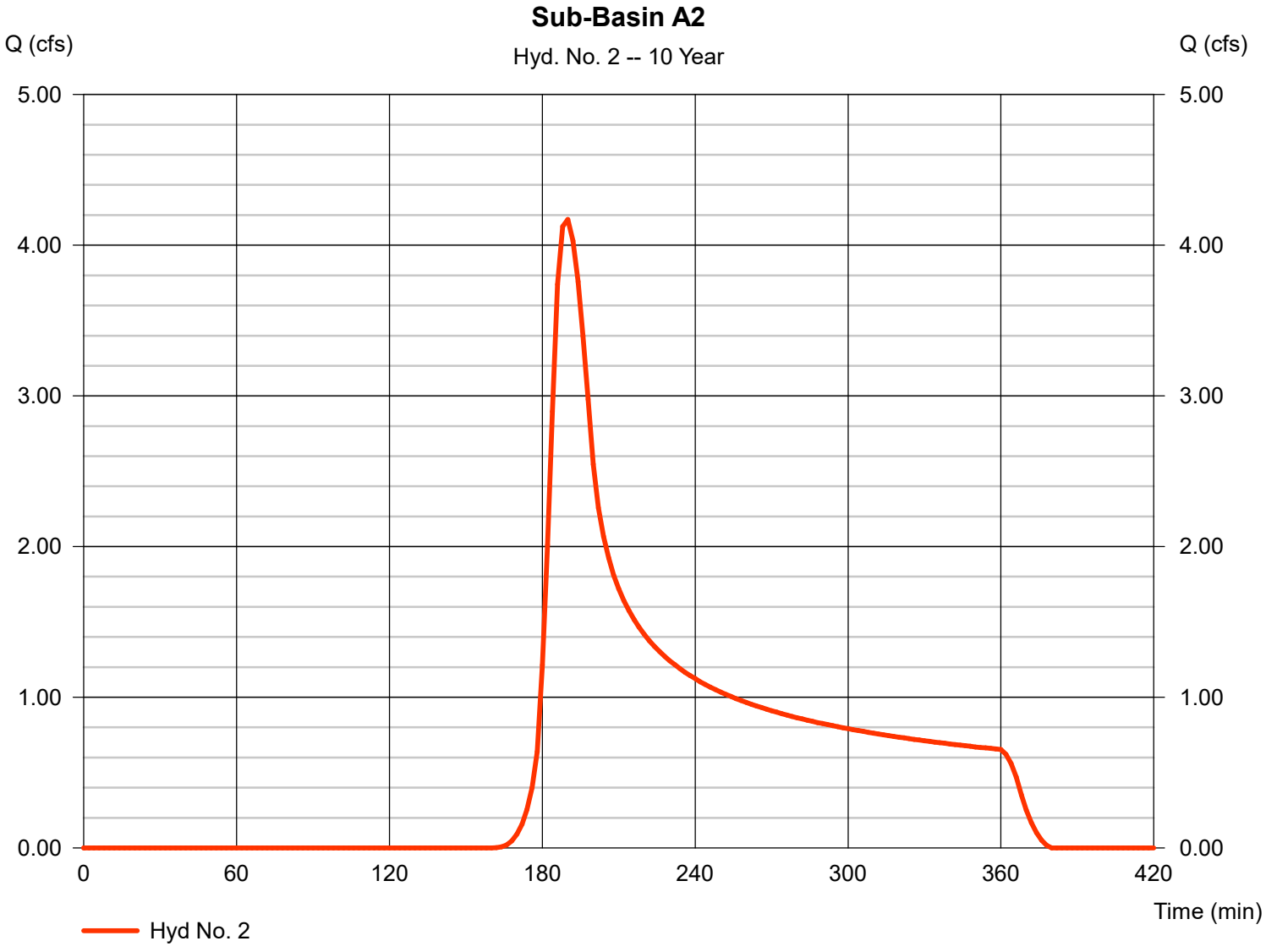
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.172 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 14,138 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.45 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



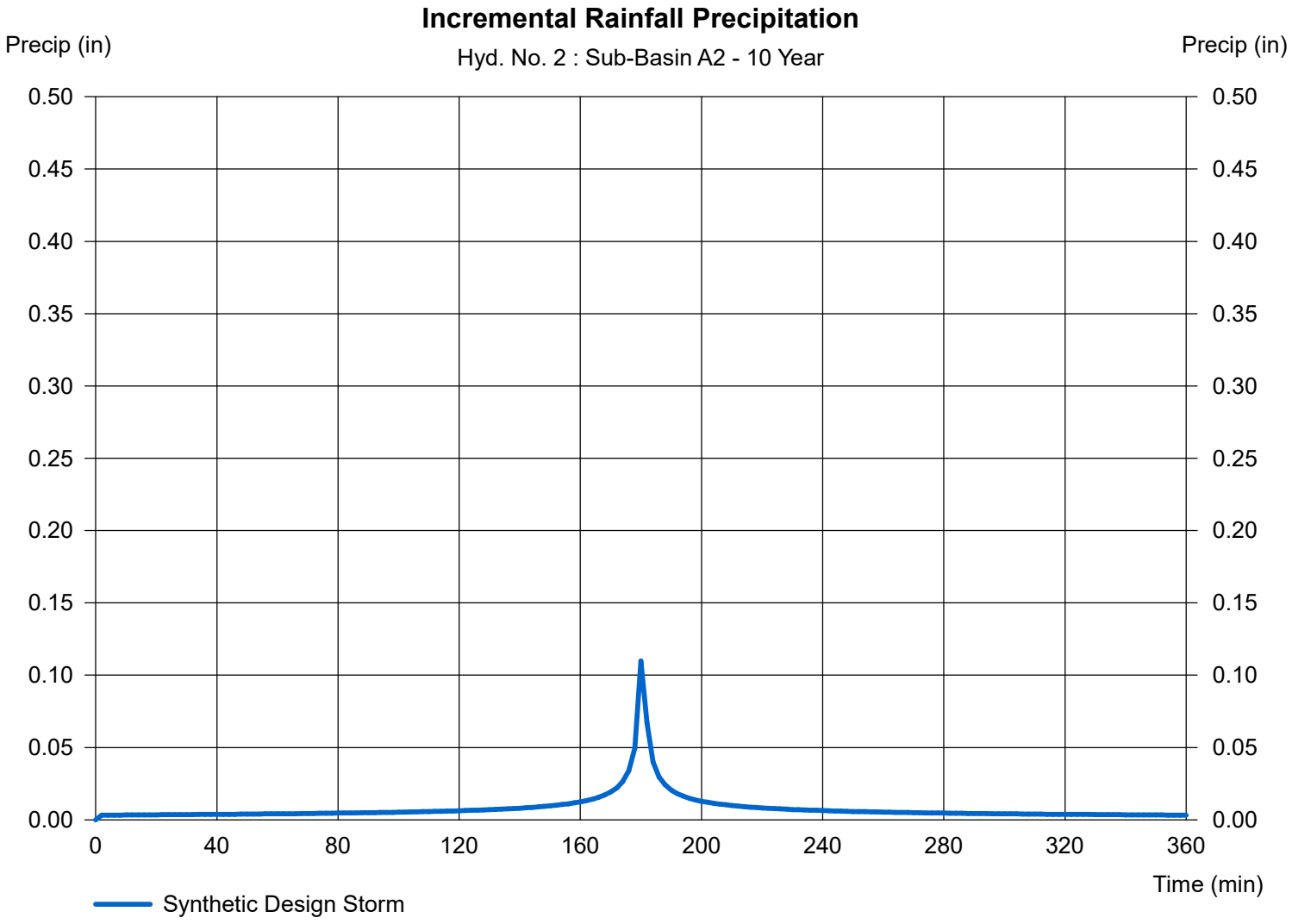
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



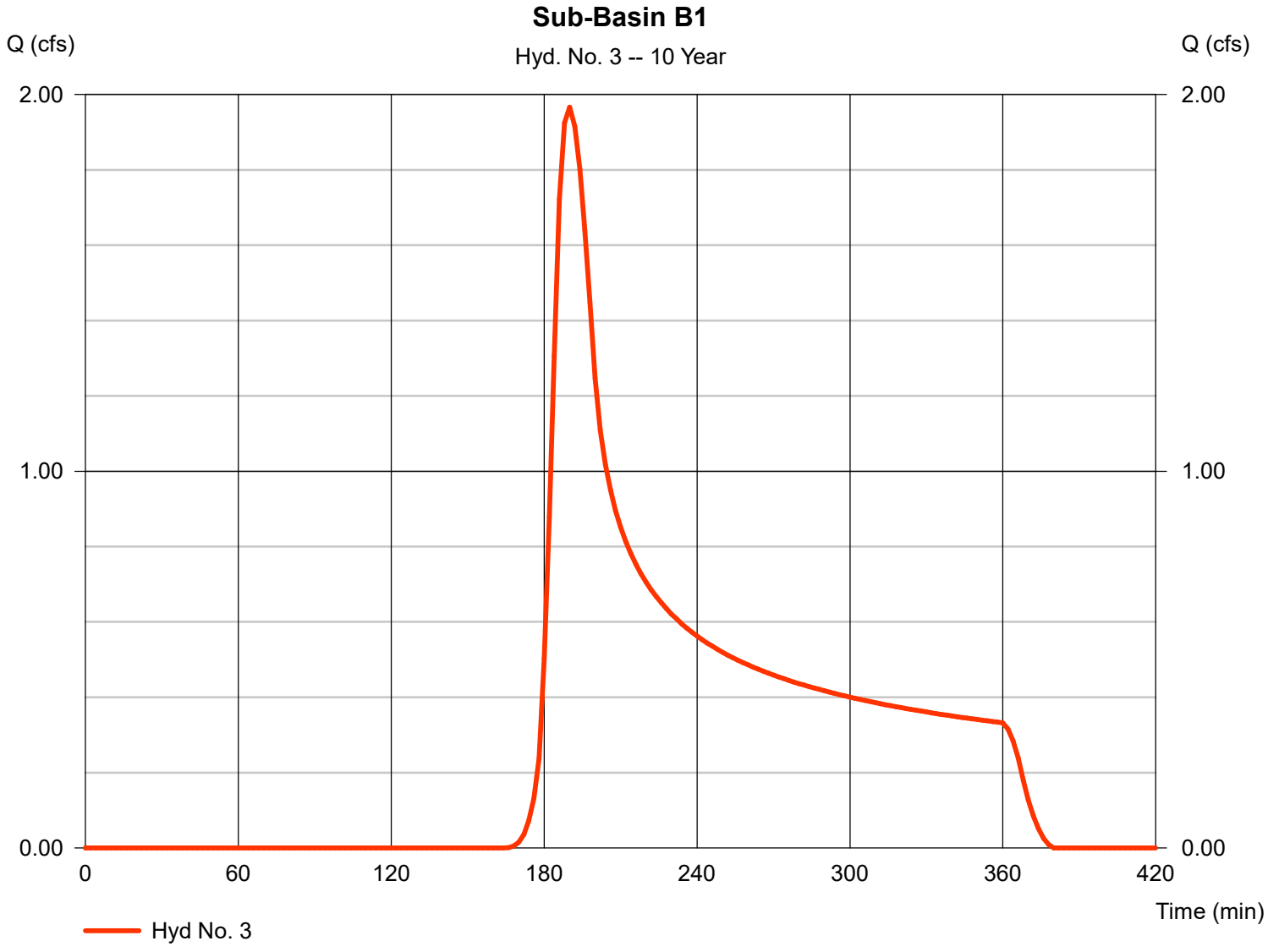
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.966 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 6,924 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 1.45 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



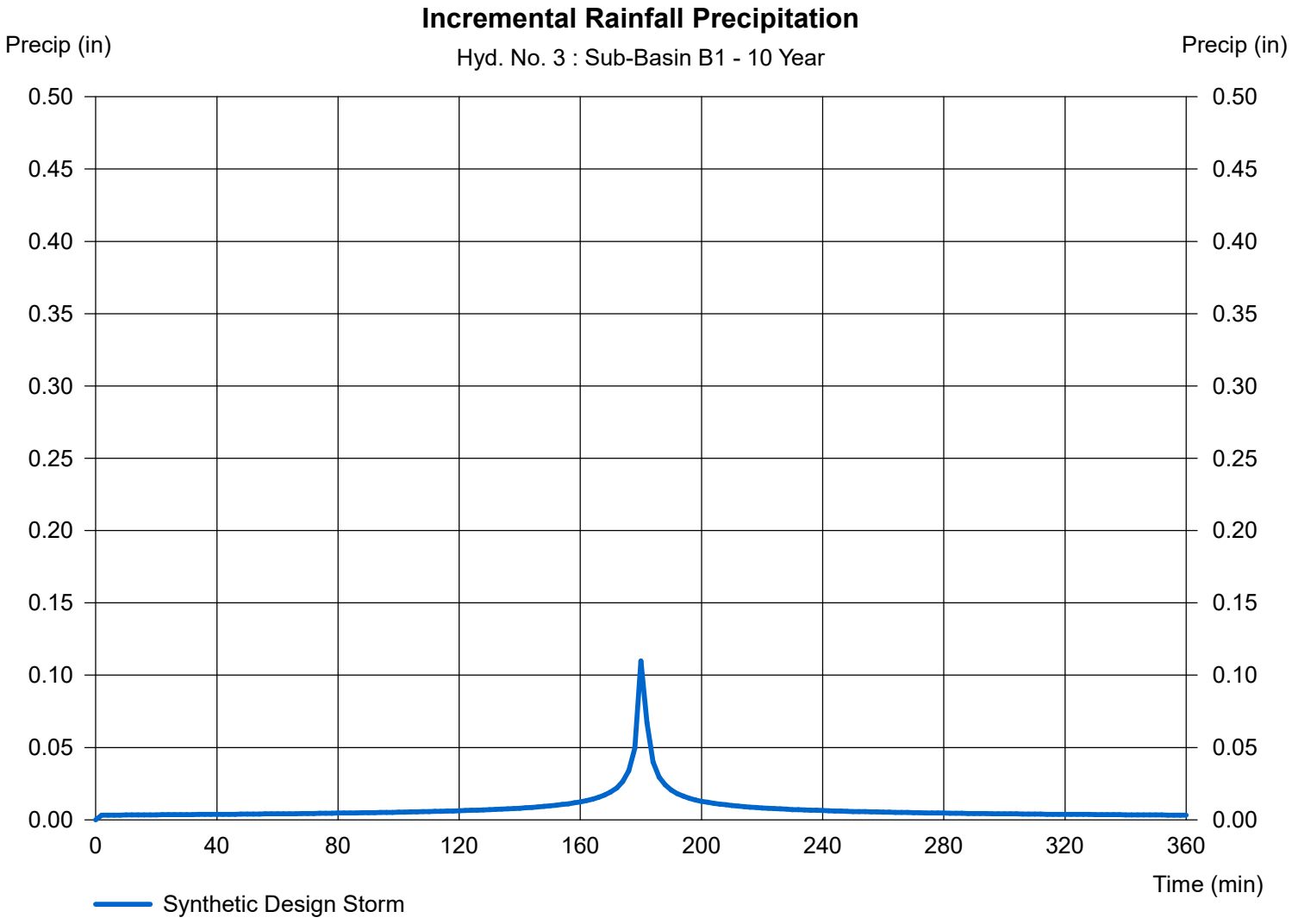
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



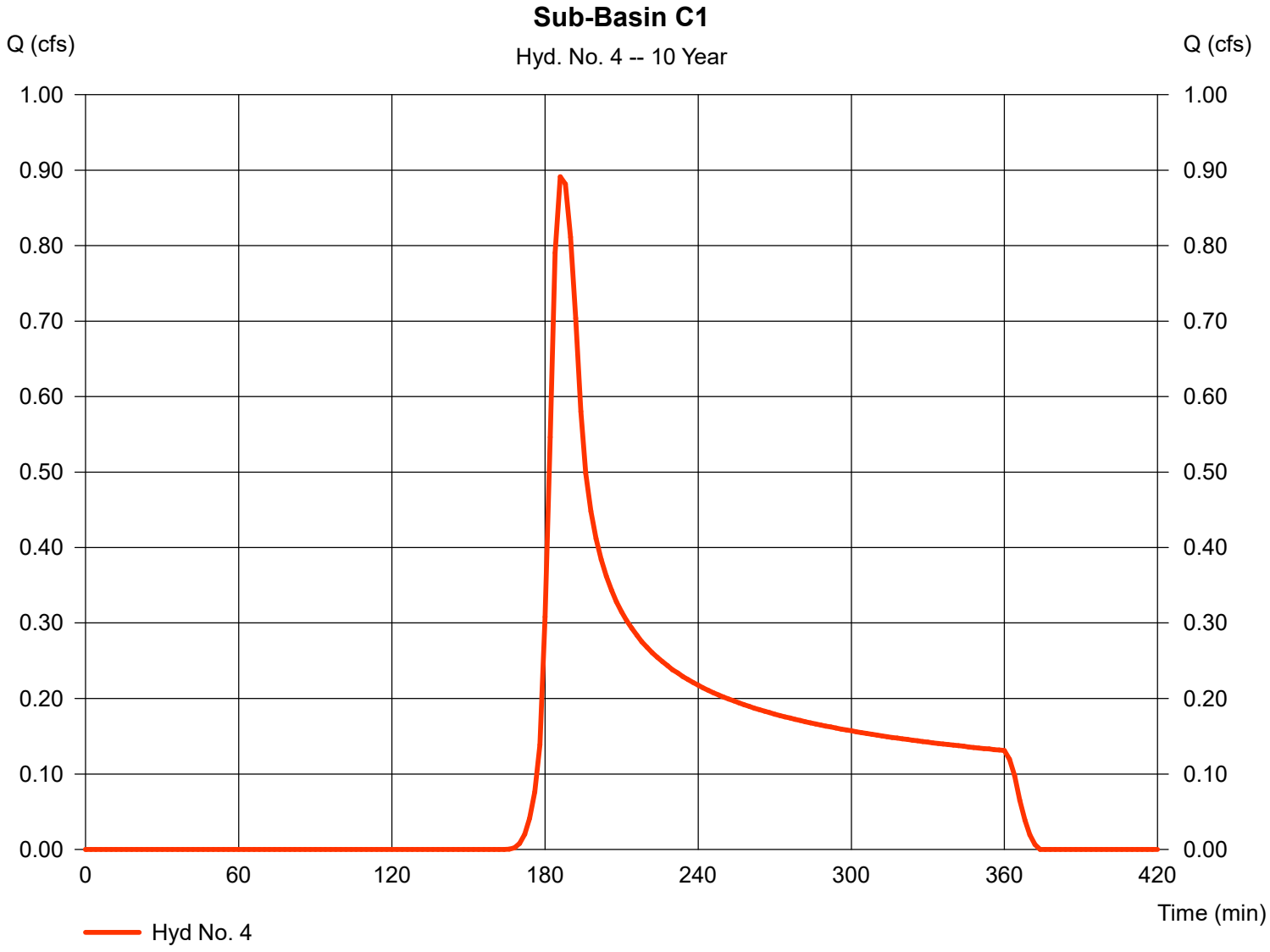
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.891 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 186 min |
| Time interval | = | 2 min | Hyd. volume | = | 2,728 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.45 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



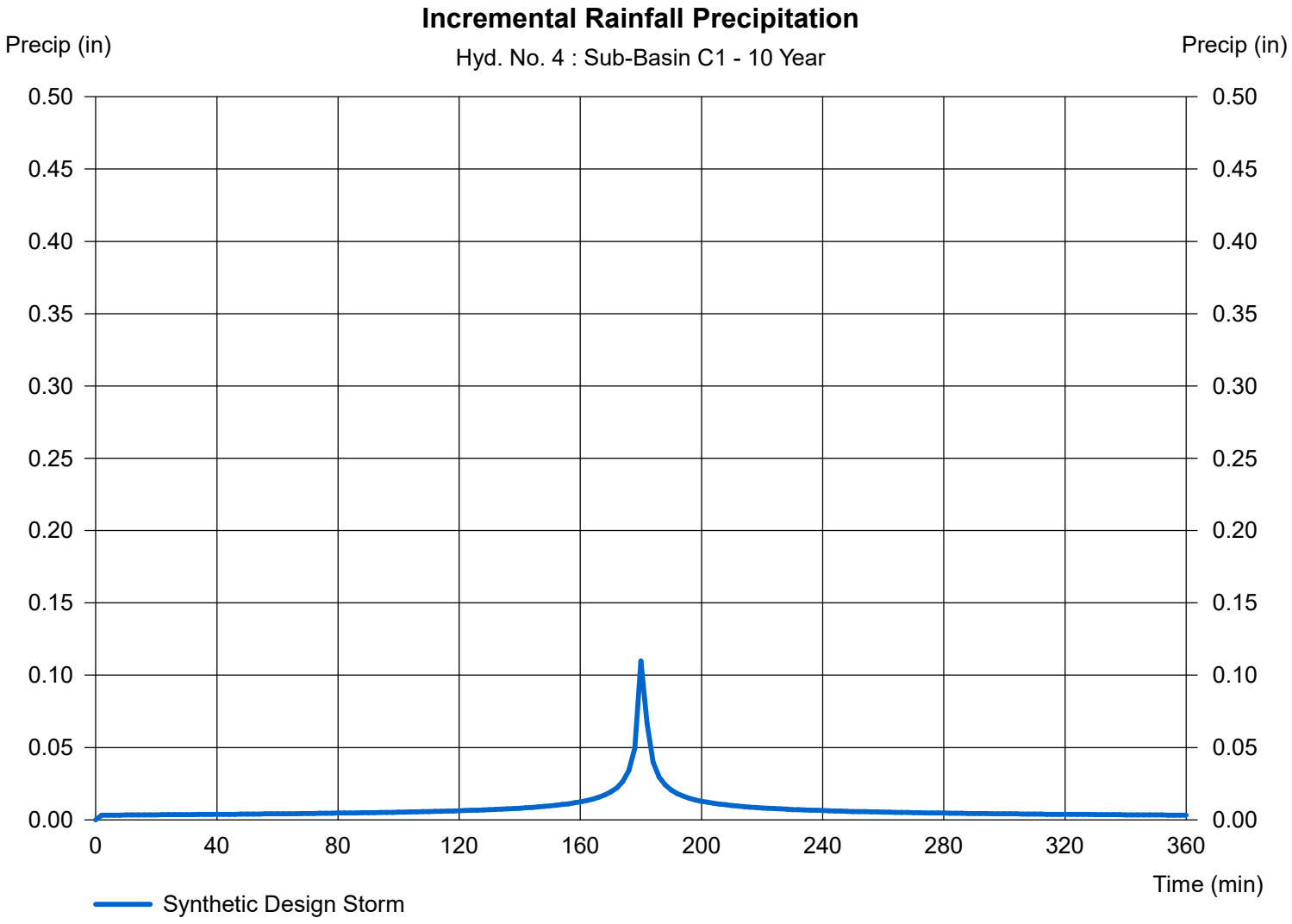
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 1.4454 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



# Hydrograph Report

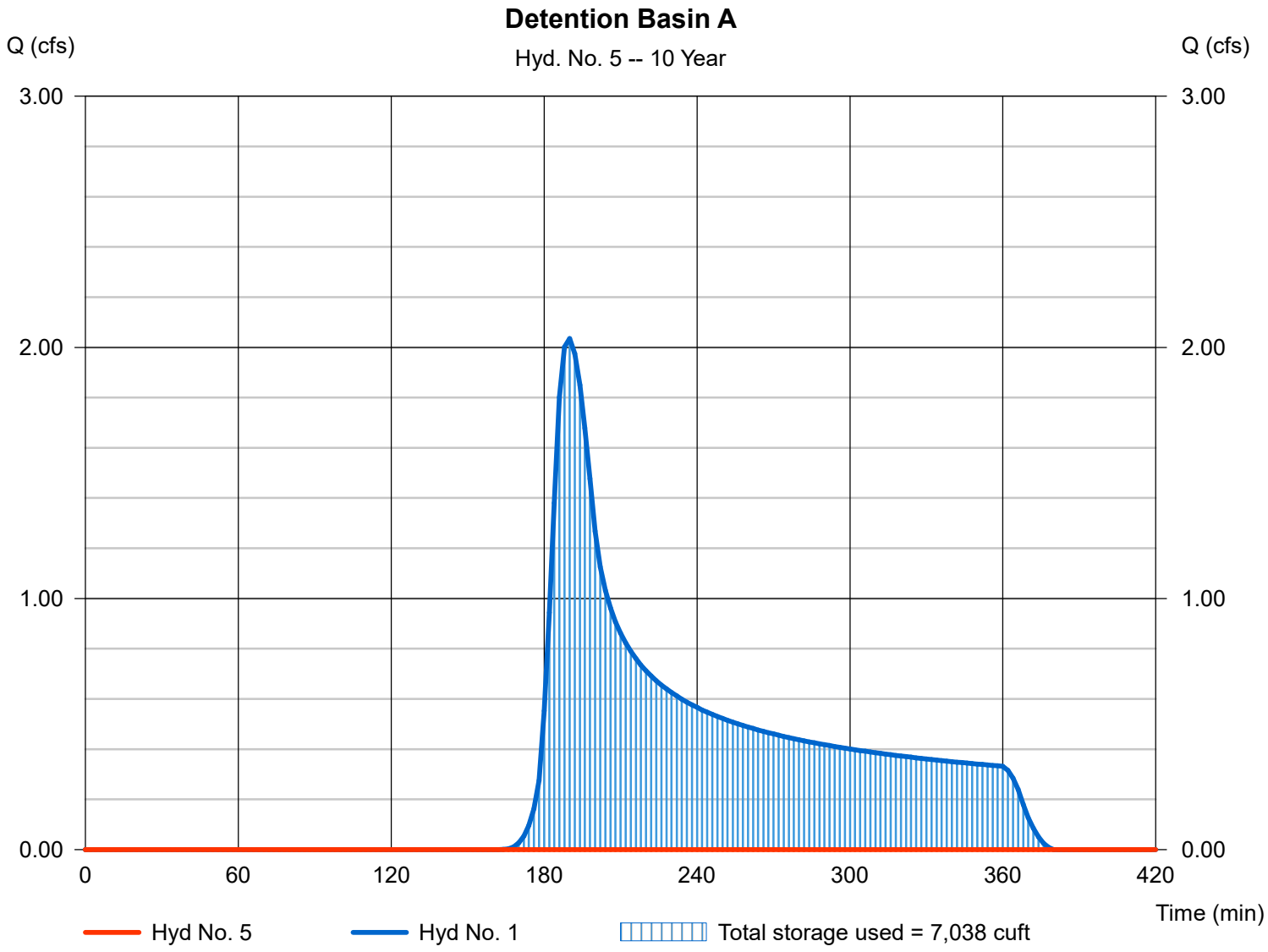
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4046.14 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 7,038 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

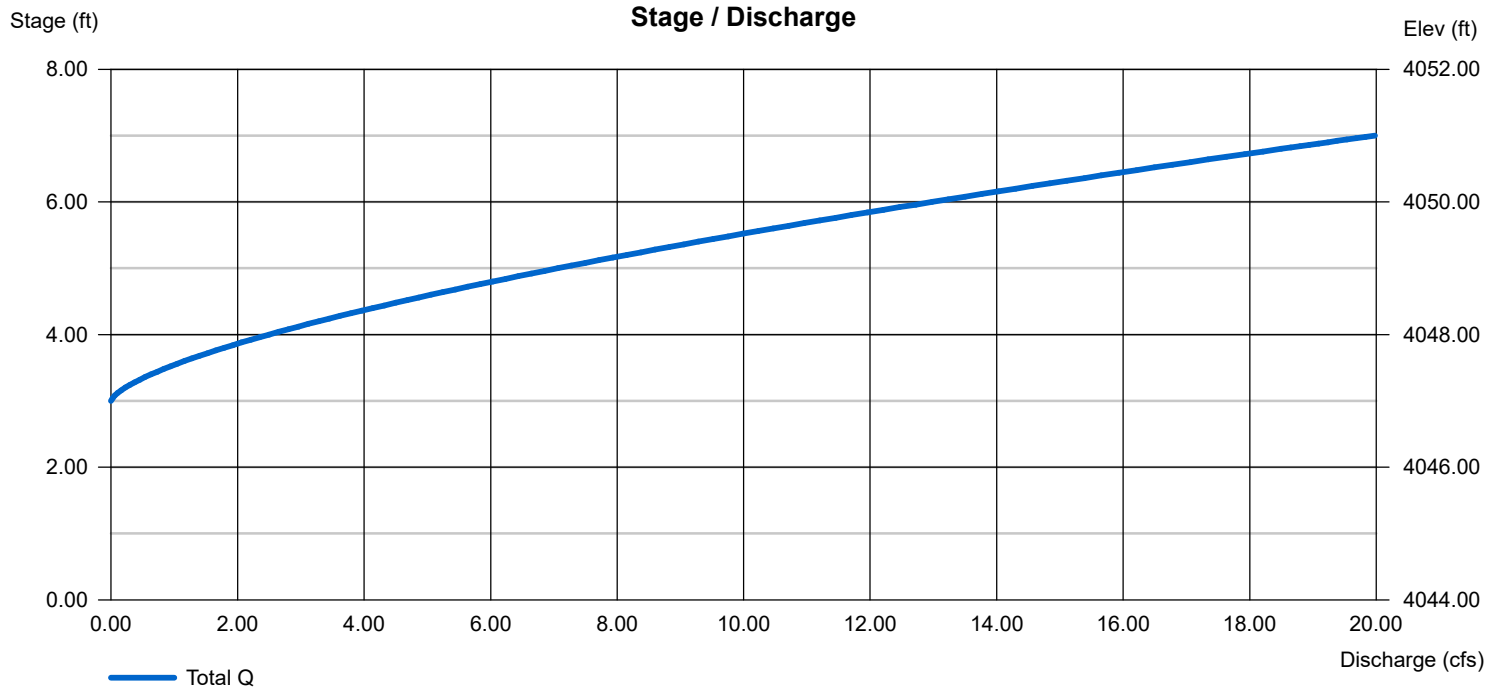
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



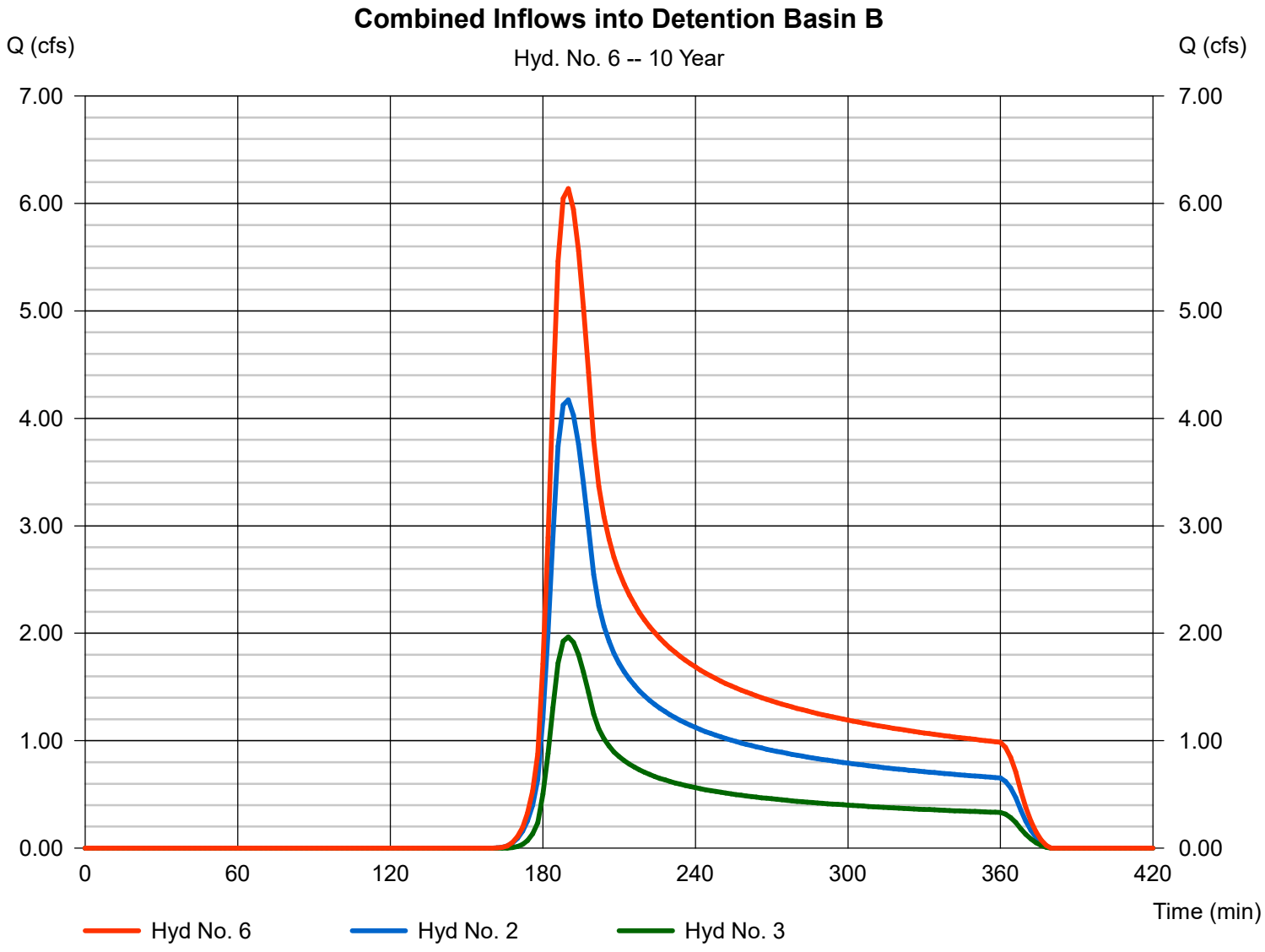
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 6.138 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 190 min |
| Time interval | = | 2 min | Hyd. volume | = | 21,062 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

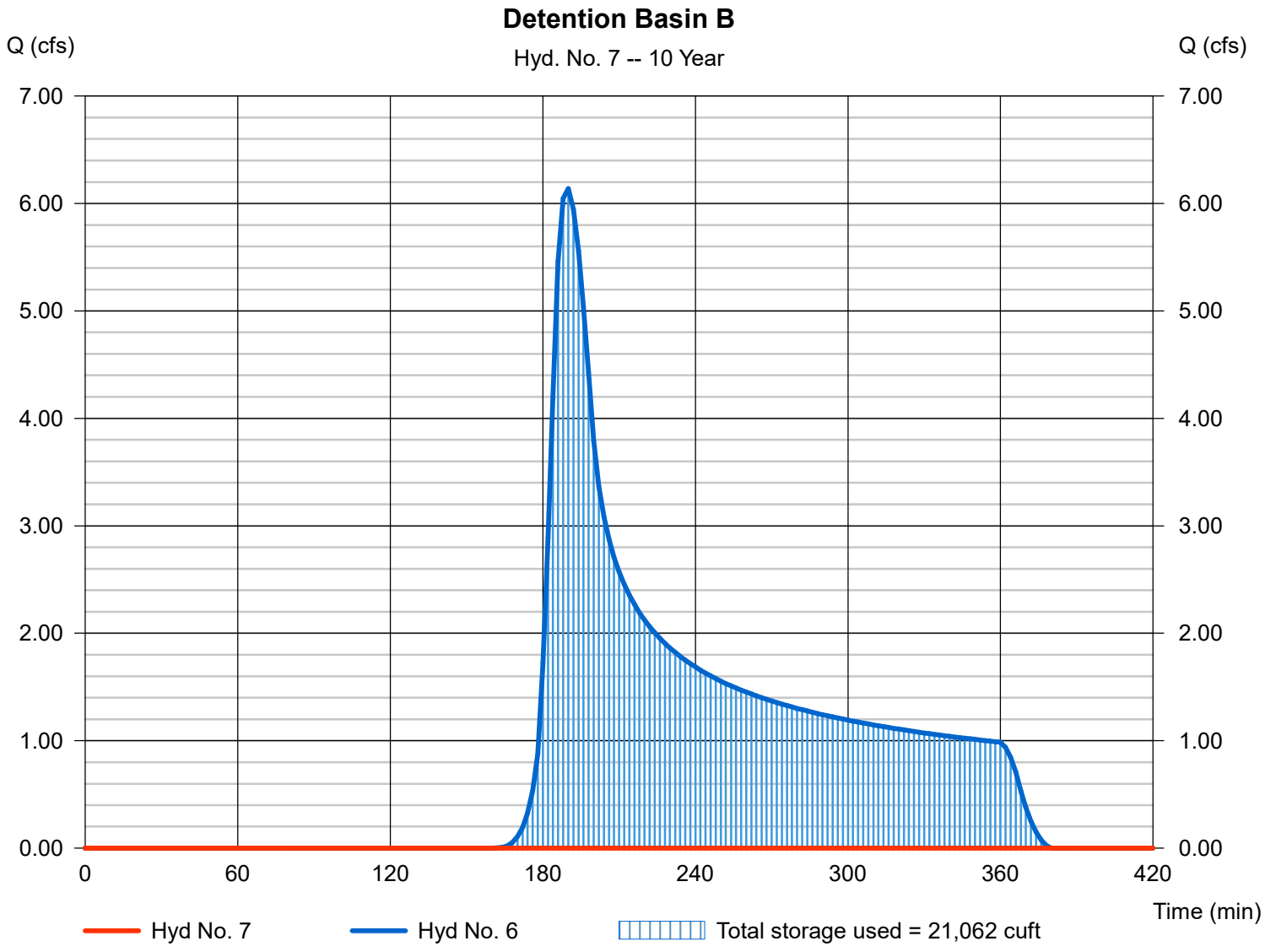
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4029.29 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 21,062 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

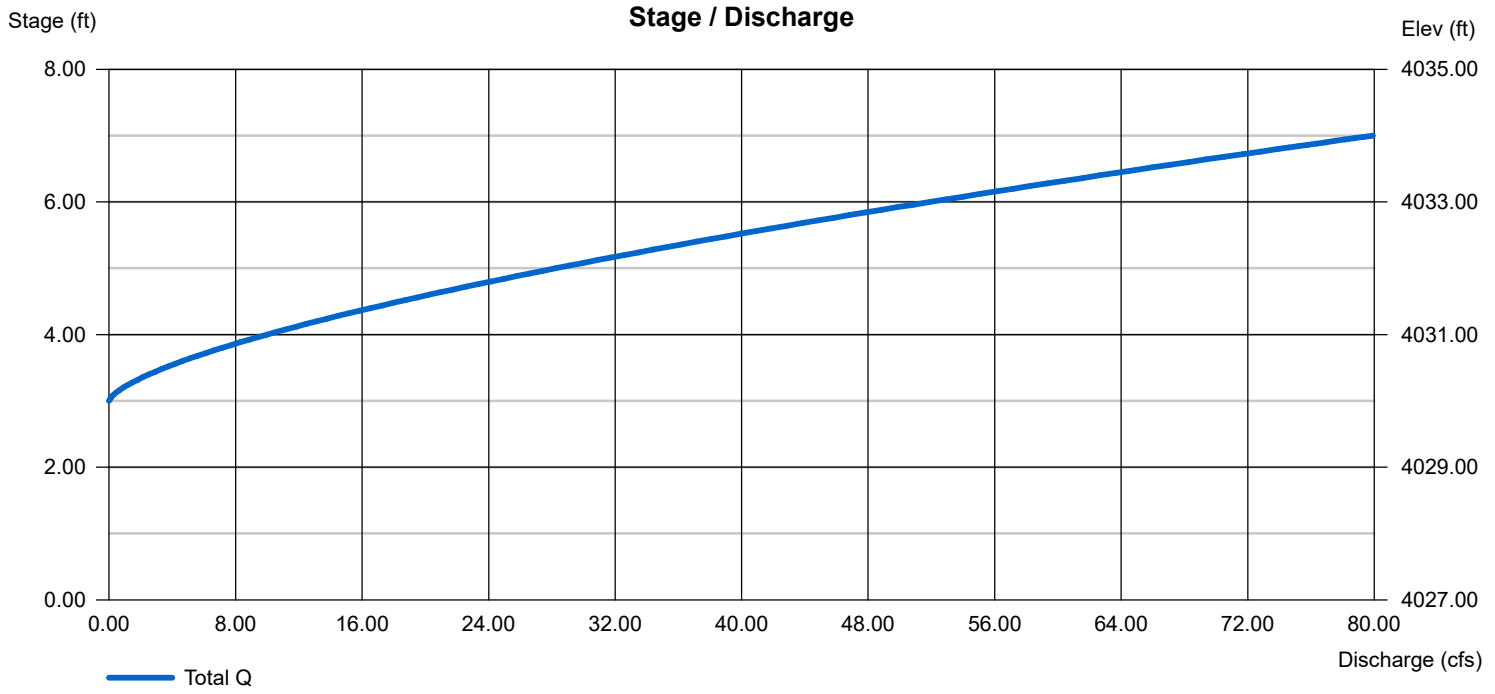
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

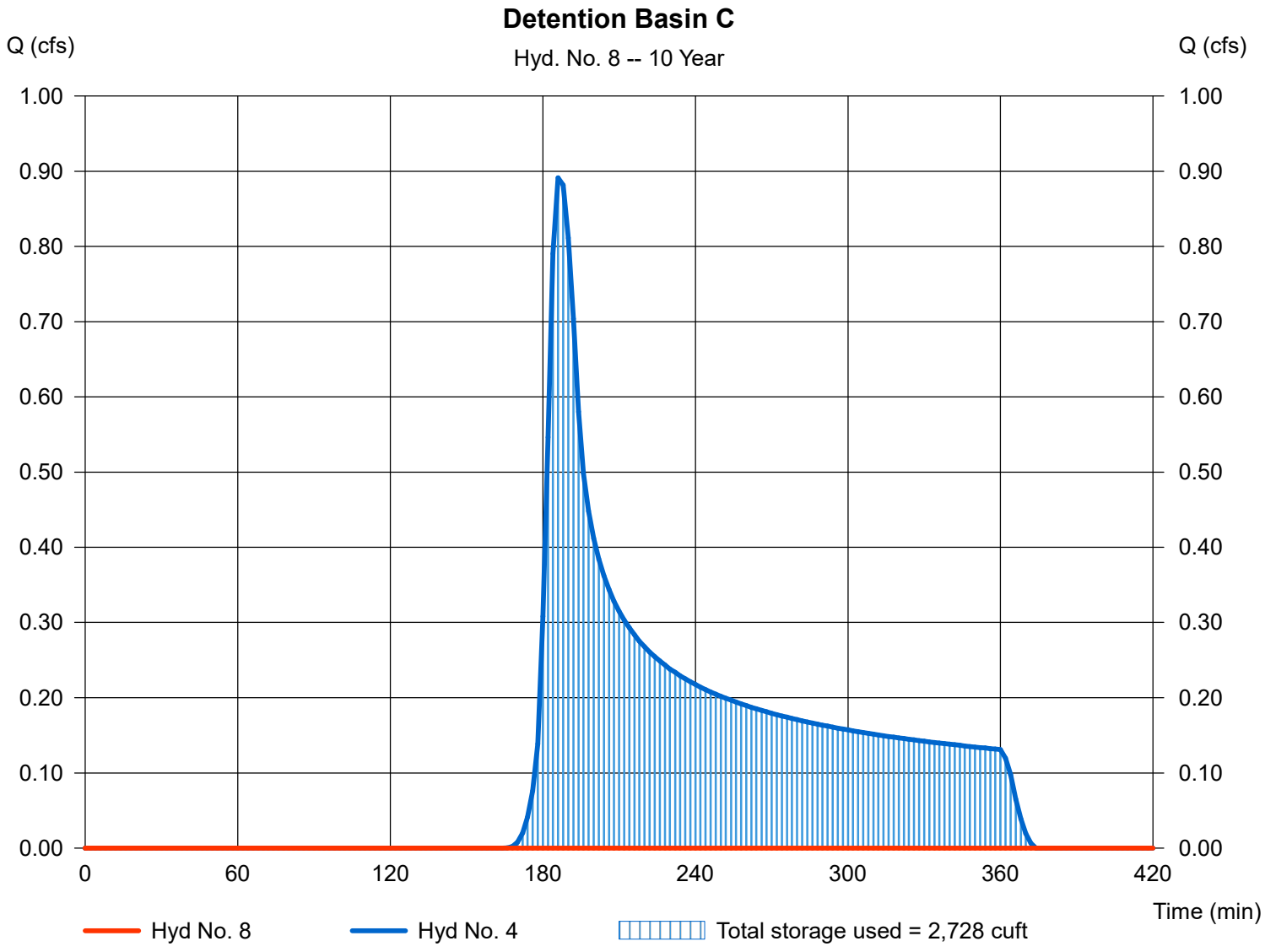
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4057.10 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 2,728 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

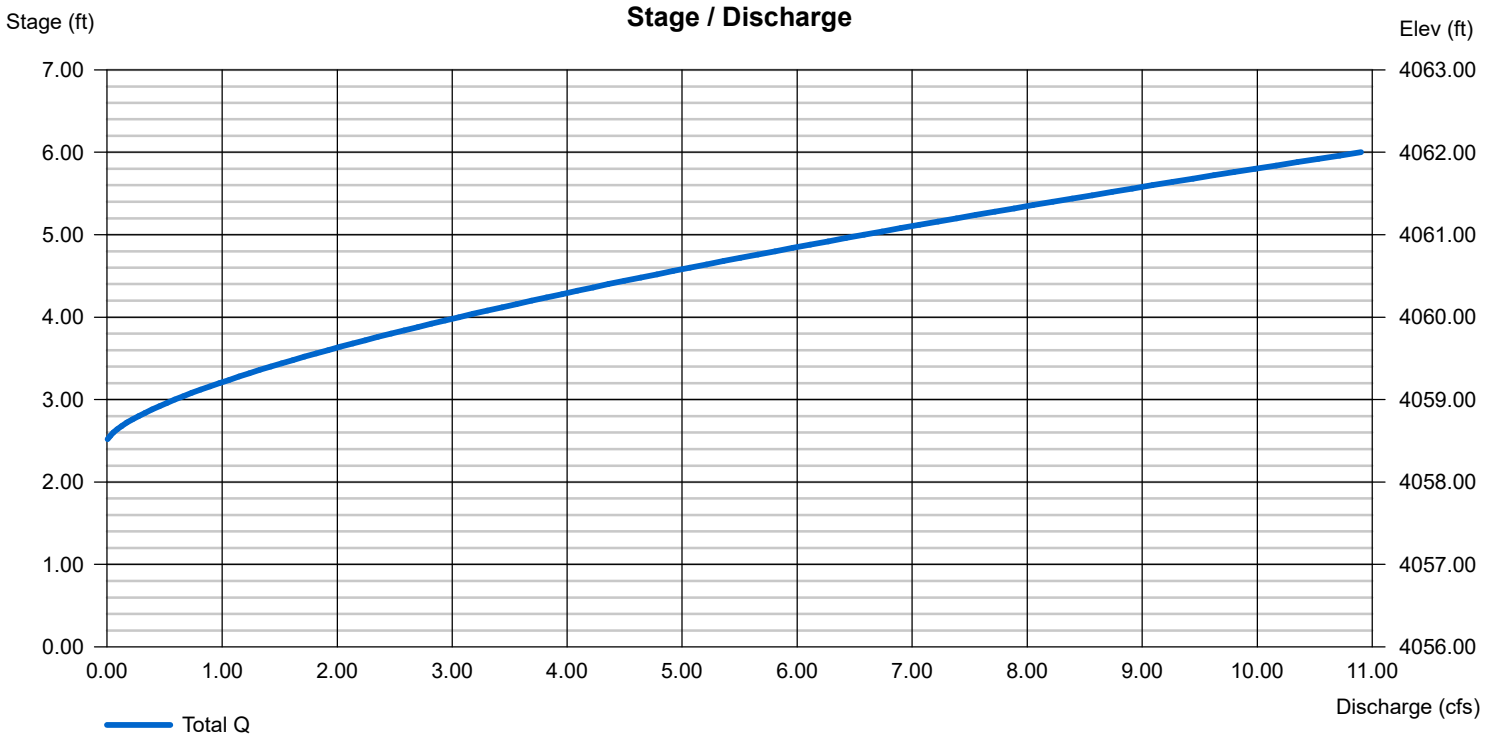
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



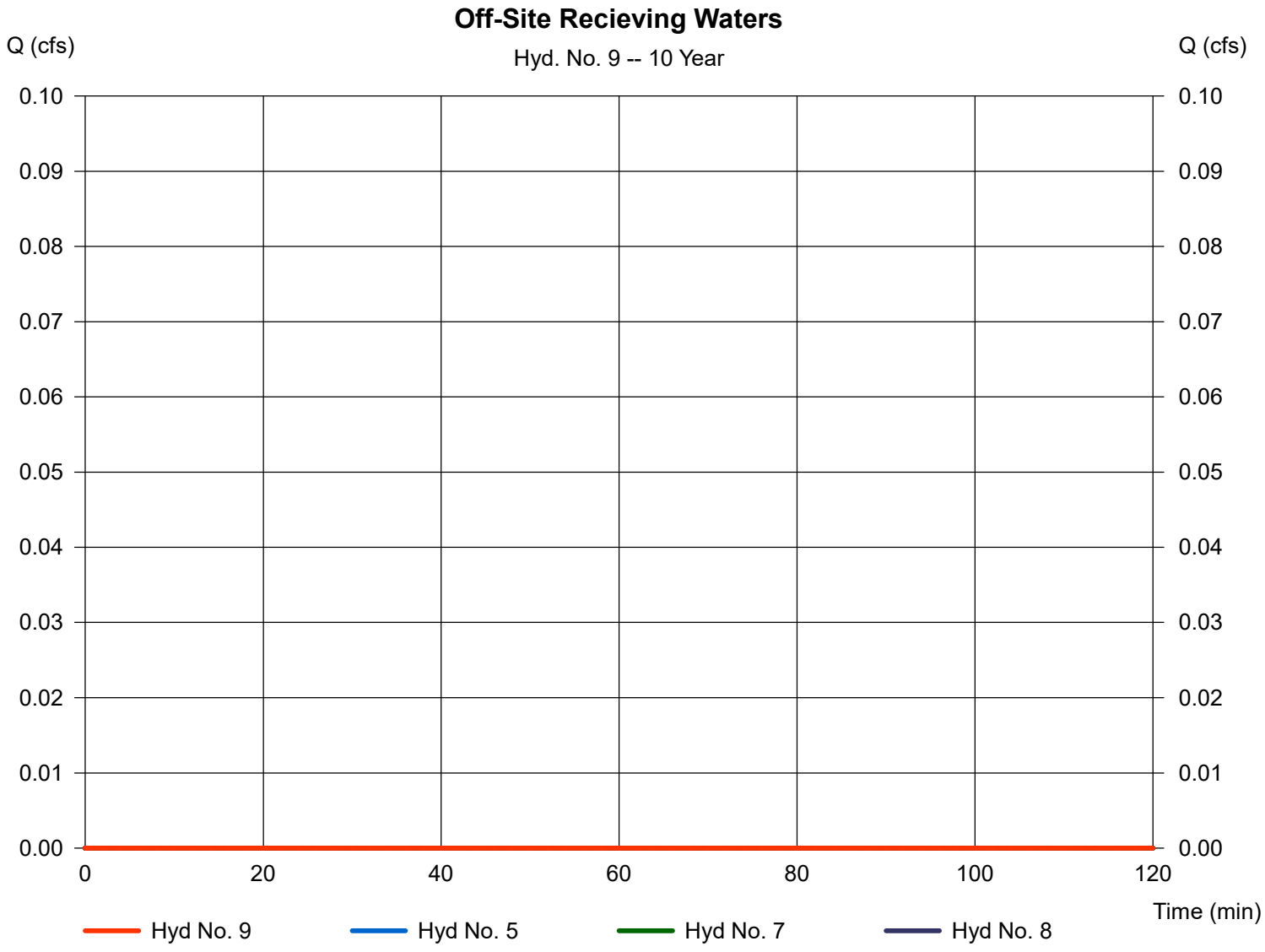
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 10 yrs | Time to peak | = n/a |
| Time interval | = 2 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

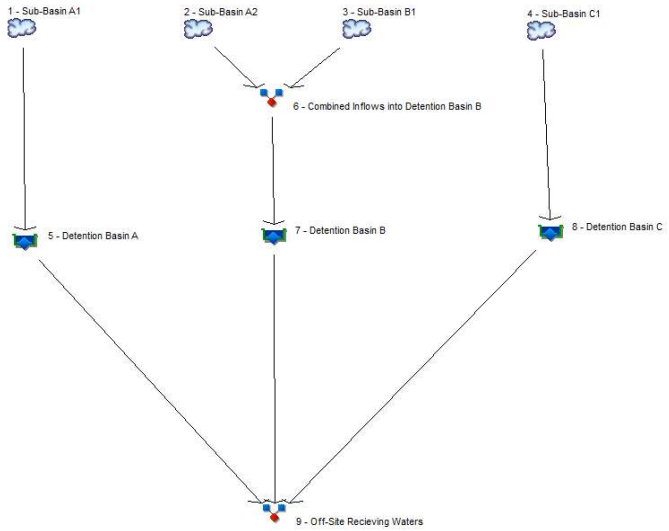
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | 4.609 | ------- | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 9.108 | ------- | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 4.593 | ------- | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | 2.110 | ------- | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | 0.296 | ------- | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | 13.70 | ------- | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | 1.310 | ------- | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | 0.051 | ------- | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | 1.432 | ------- | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 4.609 | 2 | 728 | 23,031 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 9.108 | 2 | 728 | 45,341 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 4.593 | 2 | 728 | 23,031 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 2.110 | 2 | 726 | 9,150 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.296 | 2 | 1060 | 10,138 | 1 | 4047.24 | 14,914 | Detention Basin A |
| 6 | Combine | 13.70 | 2 | 728 | 68,372 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 1.310 | 2 | 880 | 36,956 | 6 | 4030.26 | 35,586 | Detention Basin B |
| 8 | Reservoir | 0.051 | 2 | 1444 | 801 | 4 | 4058.60 | 8,907 | Detention Basin C |
| 9 | Combine | 1.432 | 2 | 920 | 47,896 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

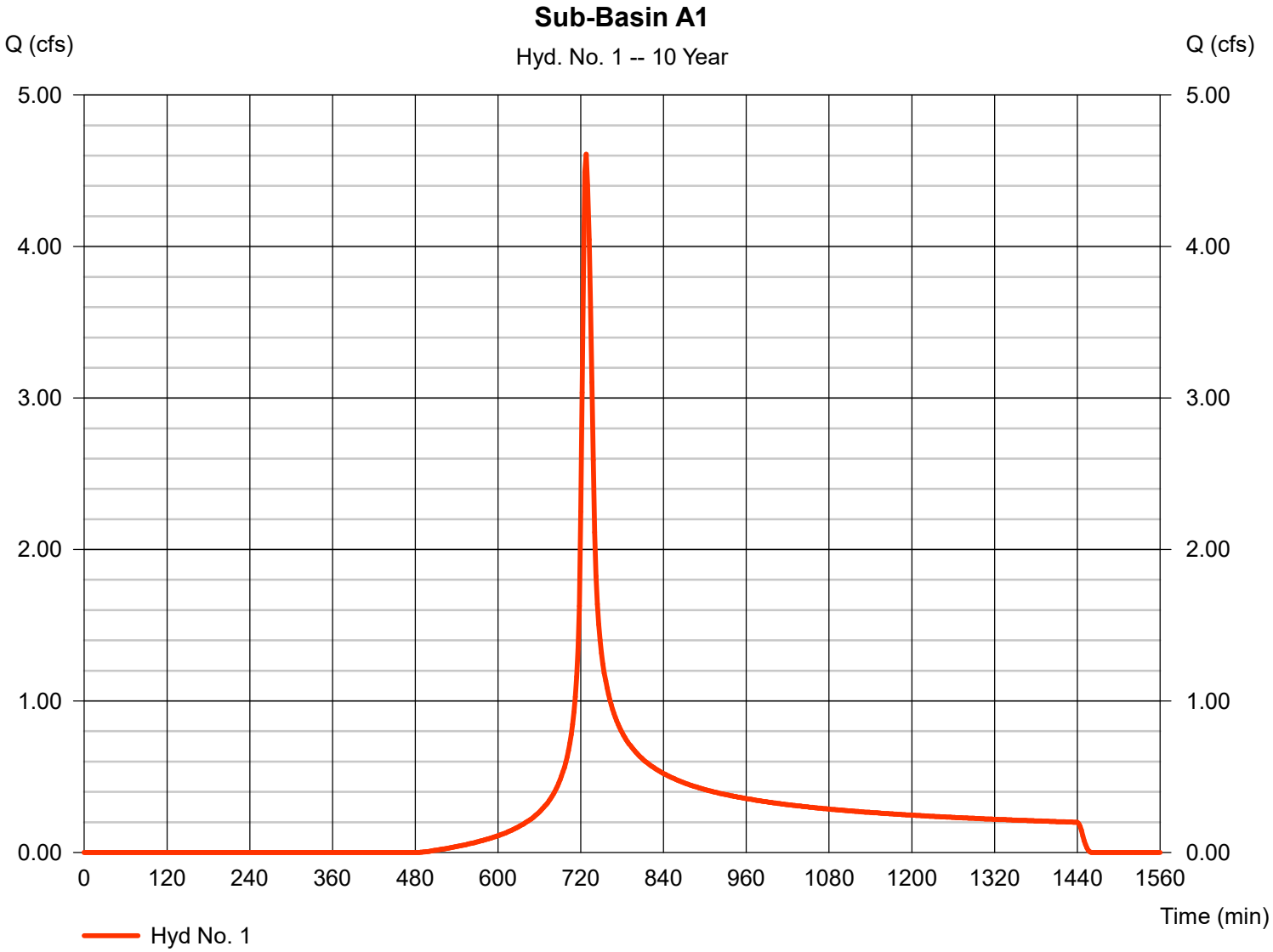
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.609 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 23,031 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



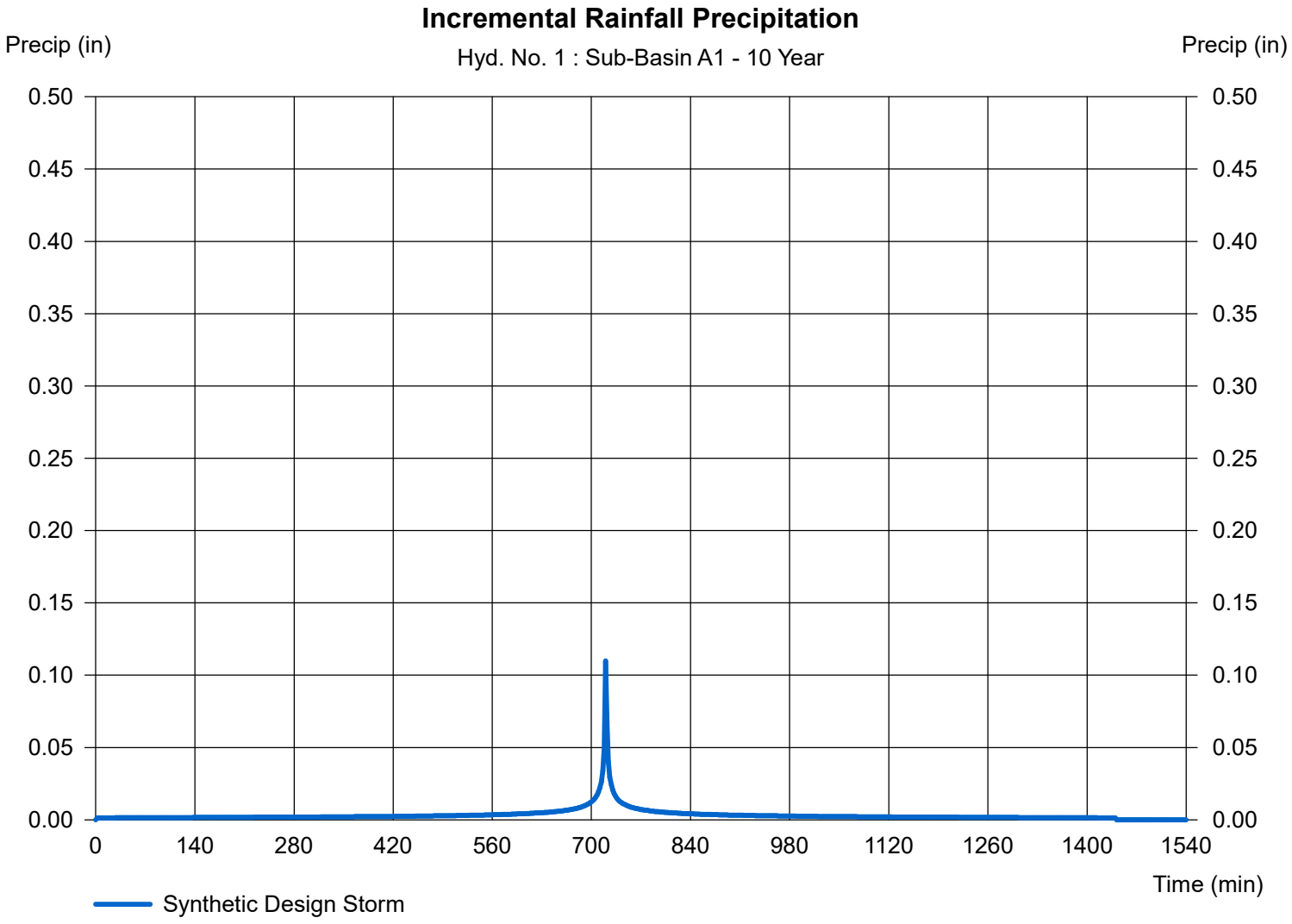
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



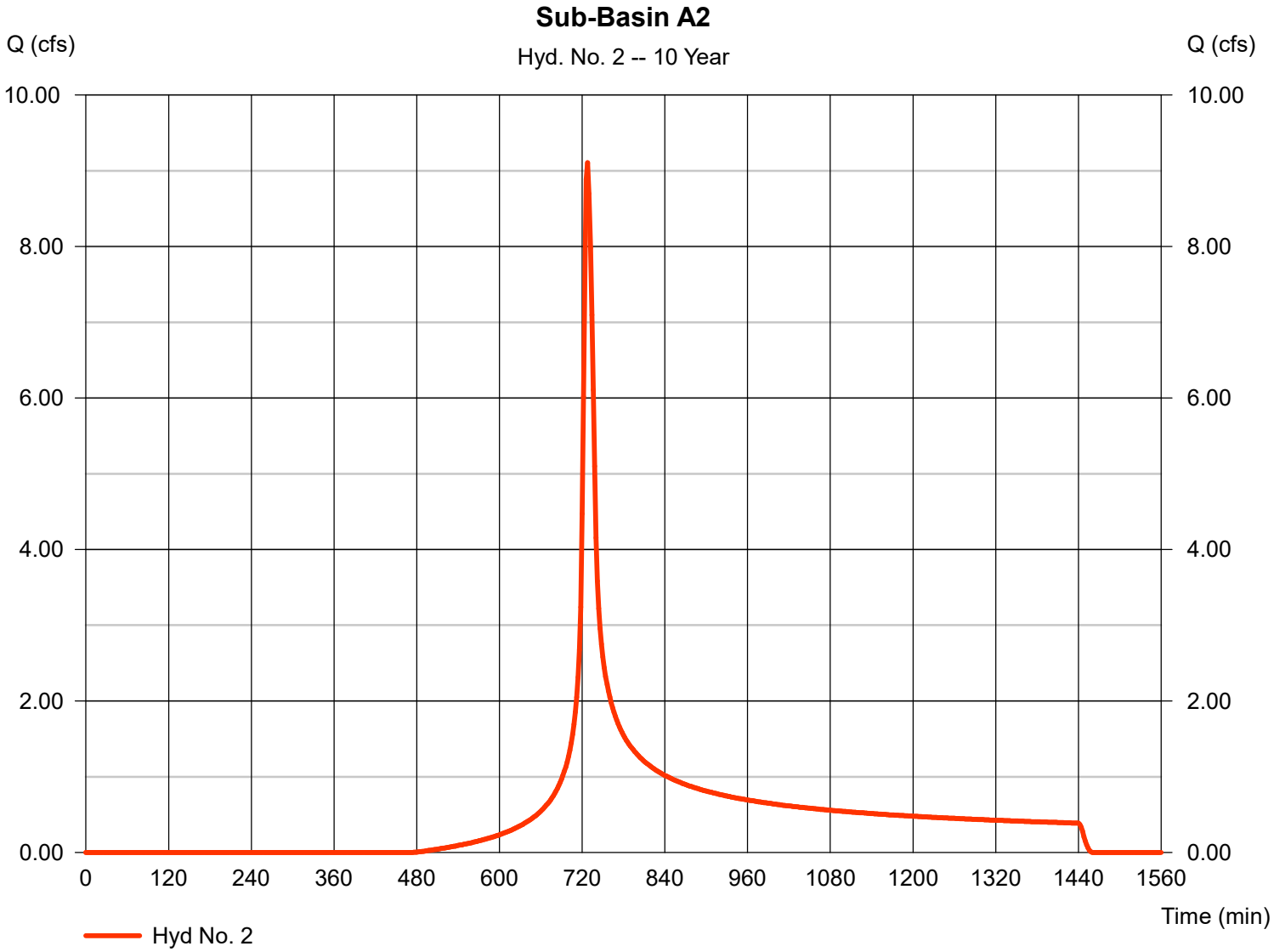
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 9.108 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 45,341 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



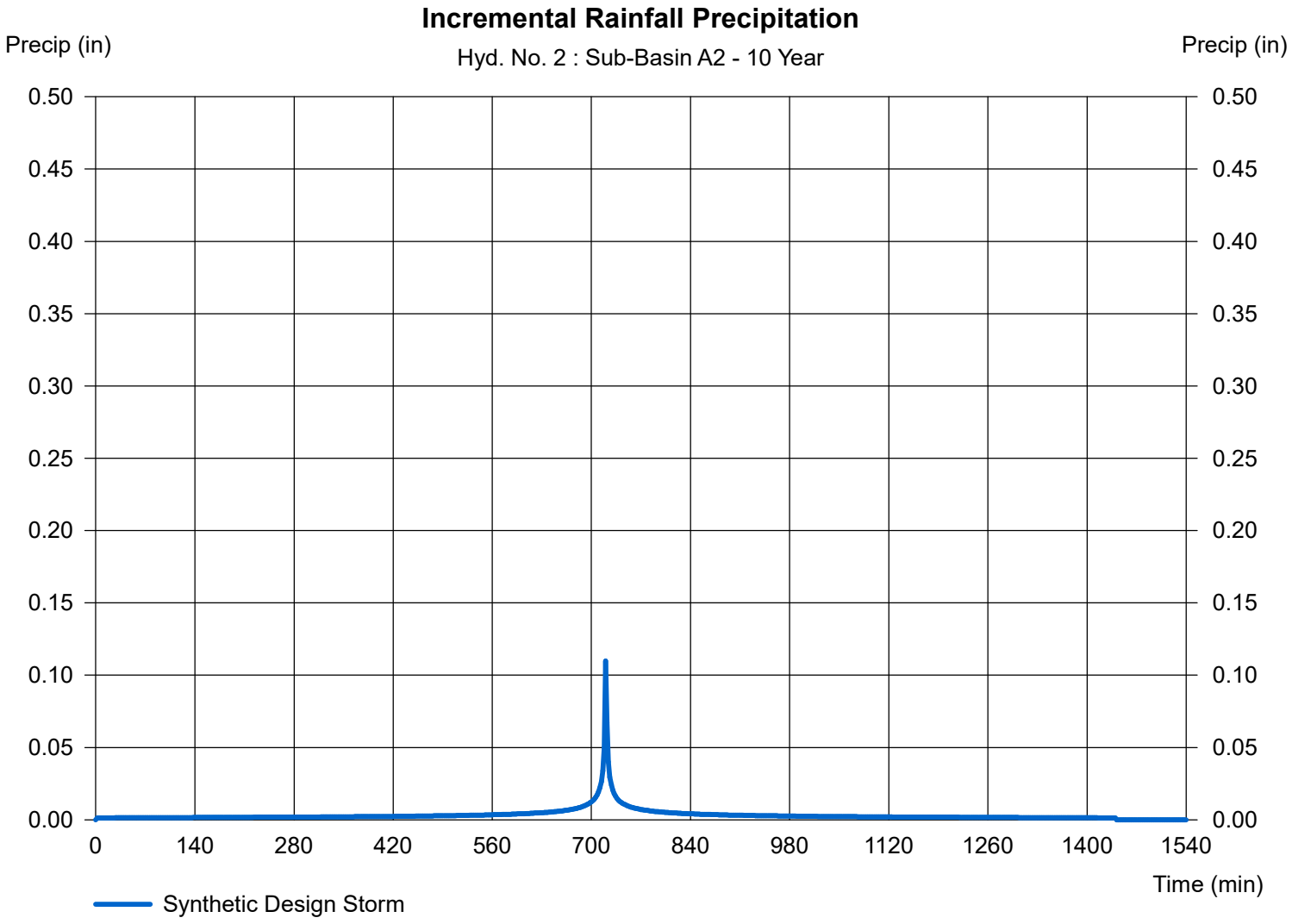
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



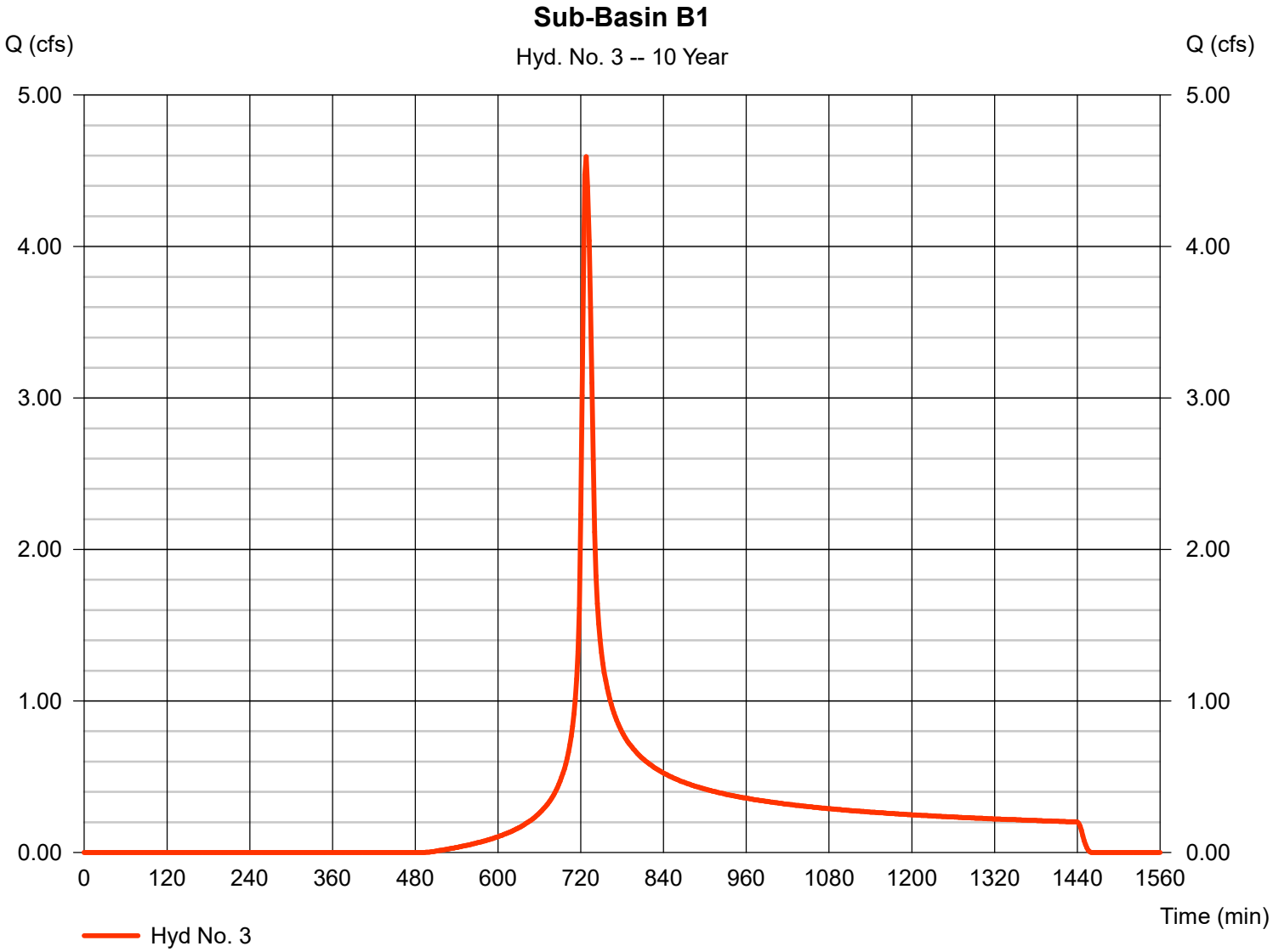
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.593 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 23,031 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



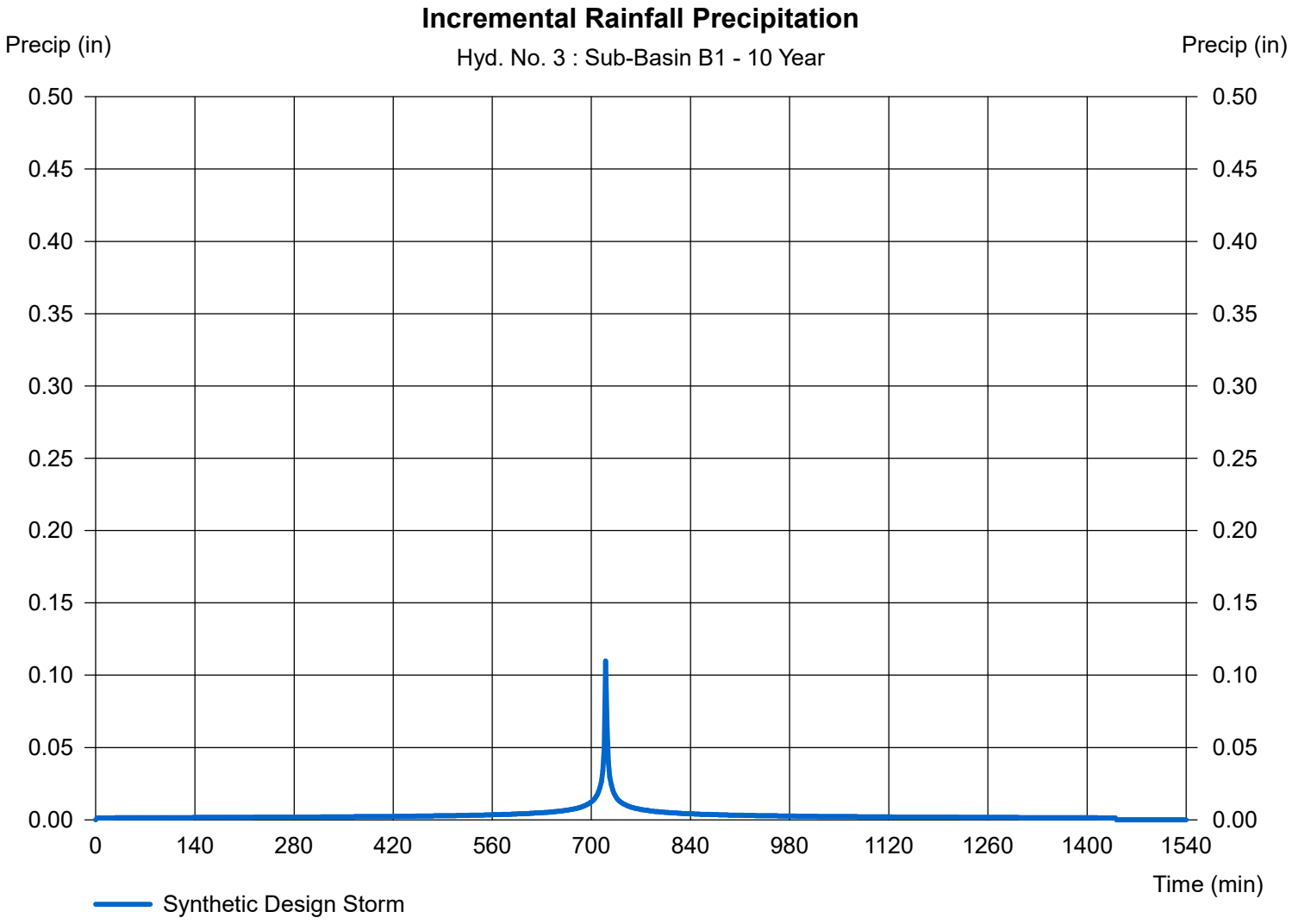
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



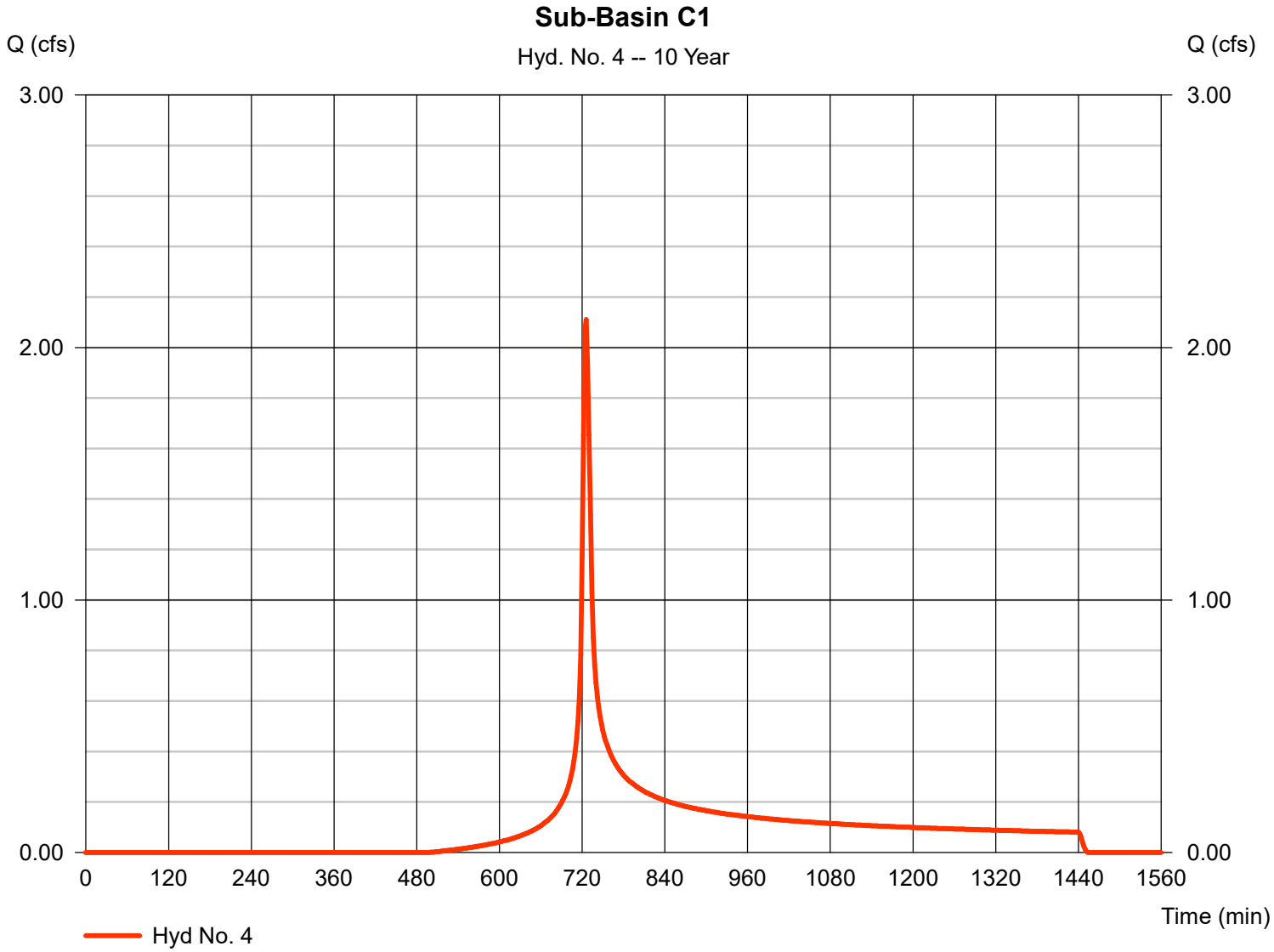
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.110 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 726 min |
| Time interval | = | 2 min | Hyd. volume | = | 9,150 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



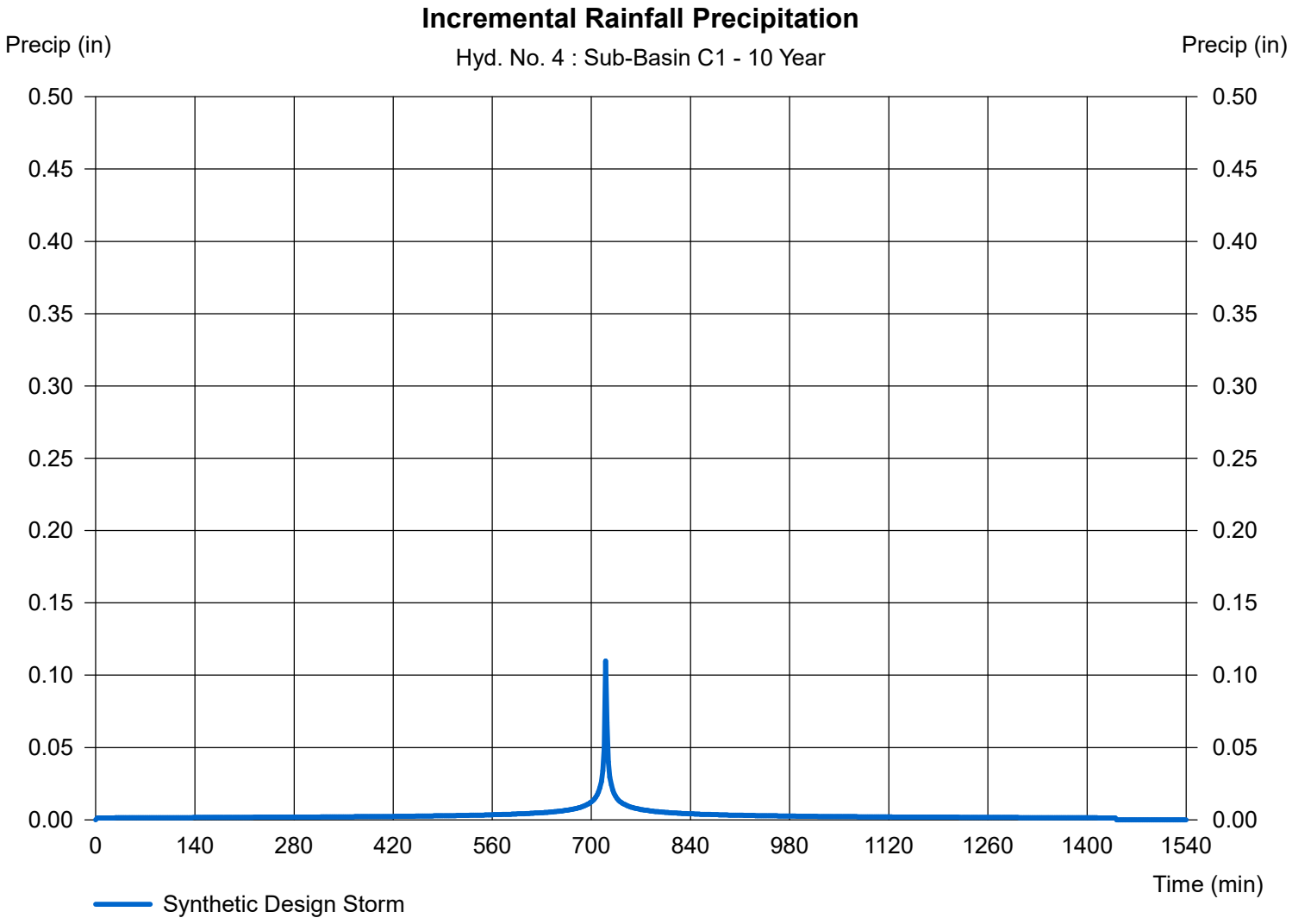
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 10 yrs | Time interval | = 2 min |
| Total precip. | = 2.5280 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



# Hydrograph Report

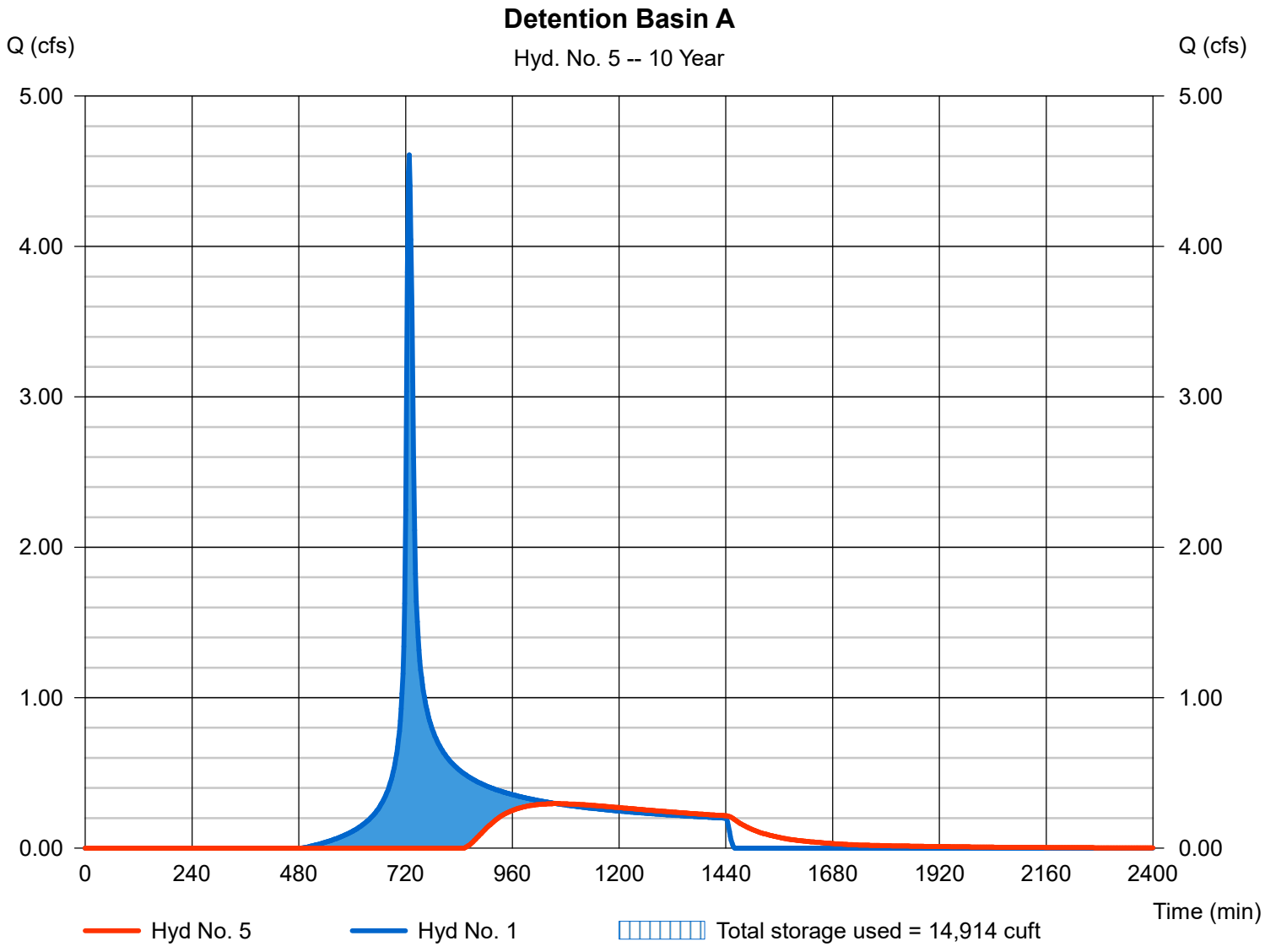
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.296 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 1060 min |
| Time interval | = | 2 min | Hyd. volume | = | 10,138 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4047.24 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 14,914 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

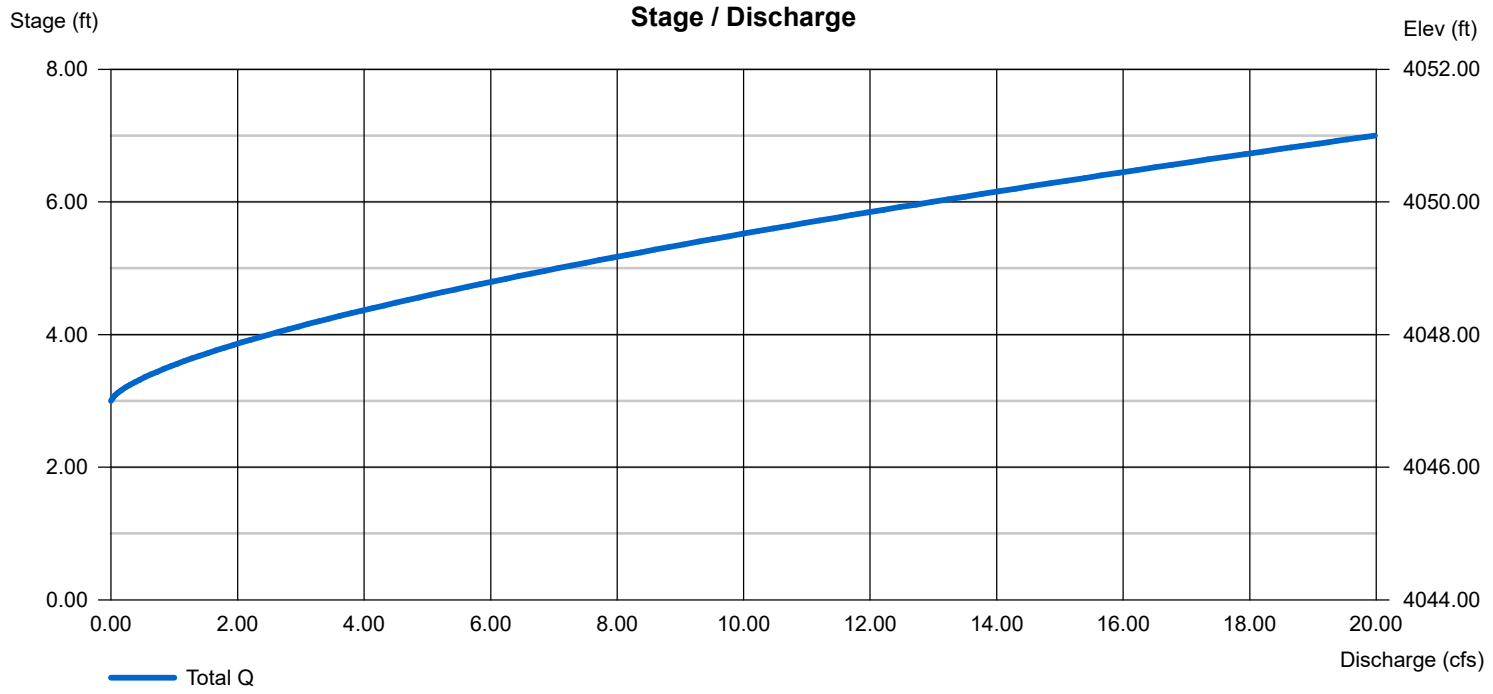
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



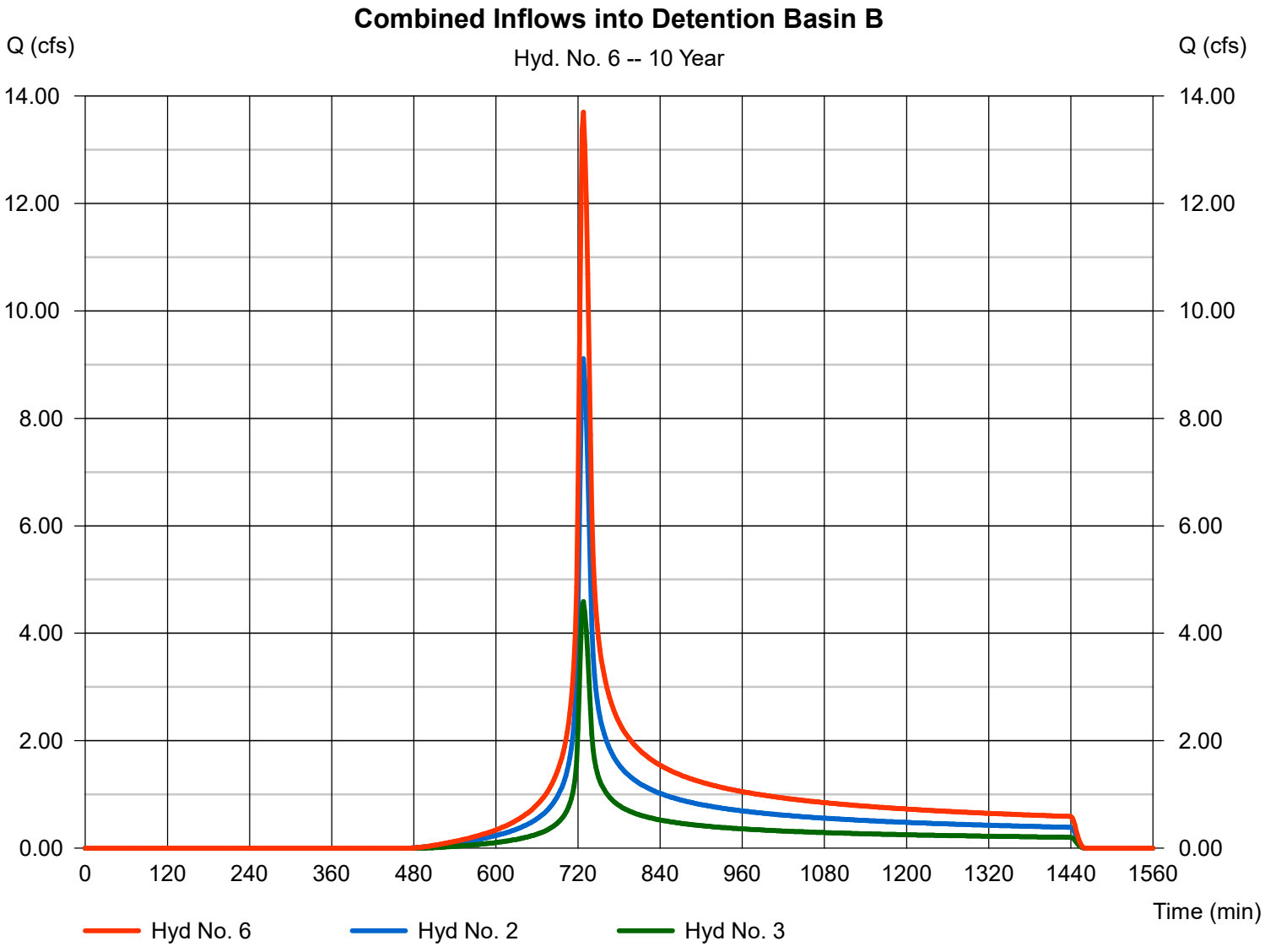
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 13.70 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 728 min |
| Time interval | = 2 min | Hyd. volume | = 68,372 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

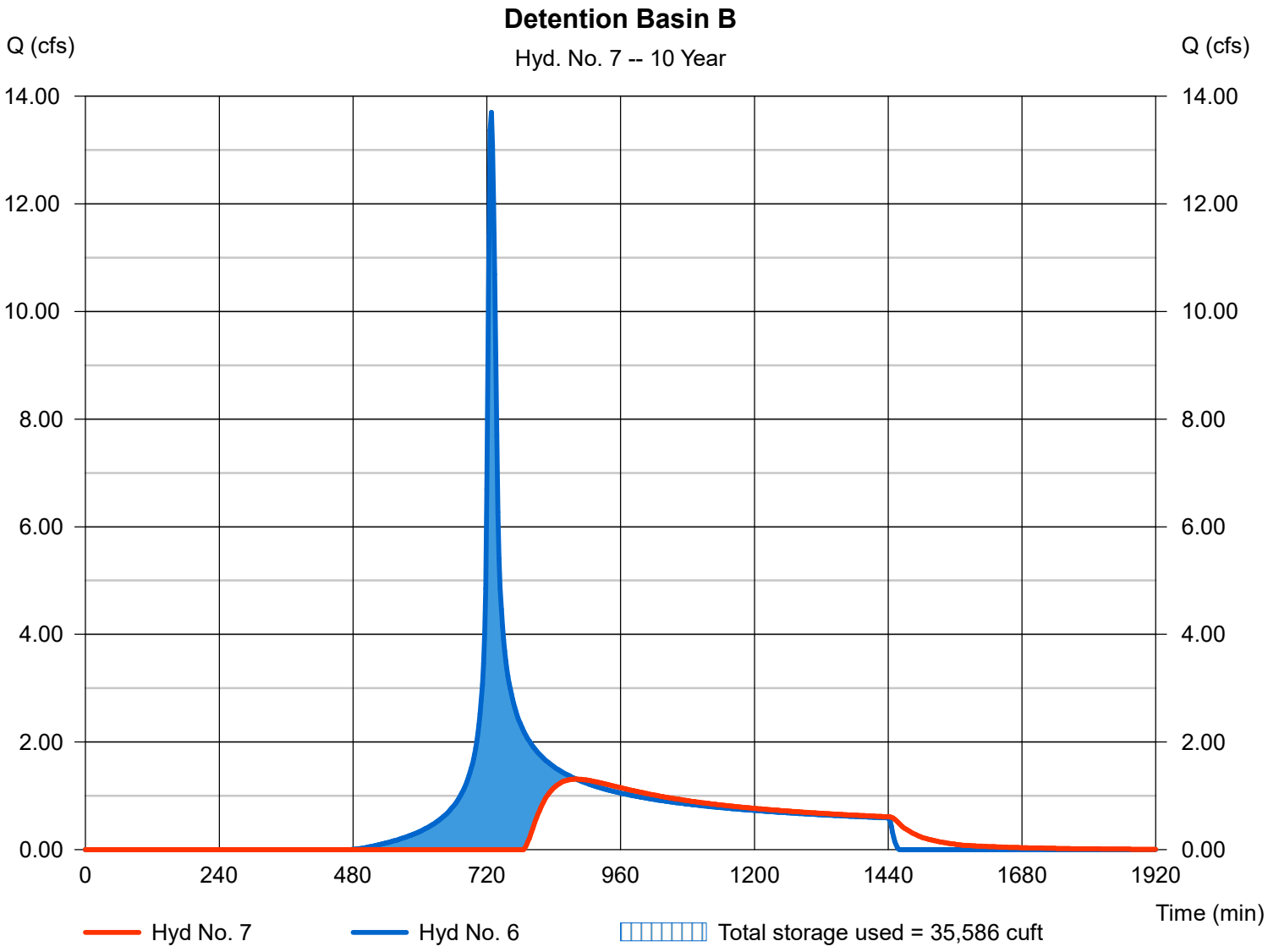
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.310 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 880 min |
| Time interval | = | 2 min | Hyd. volume | = | 36,956 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4030.26 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 35,586 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

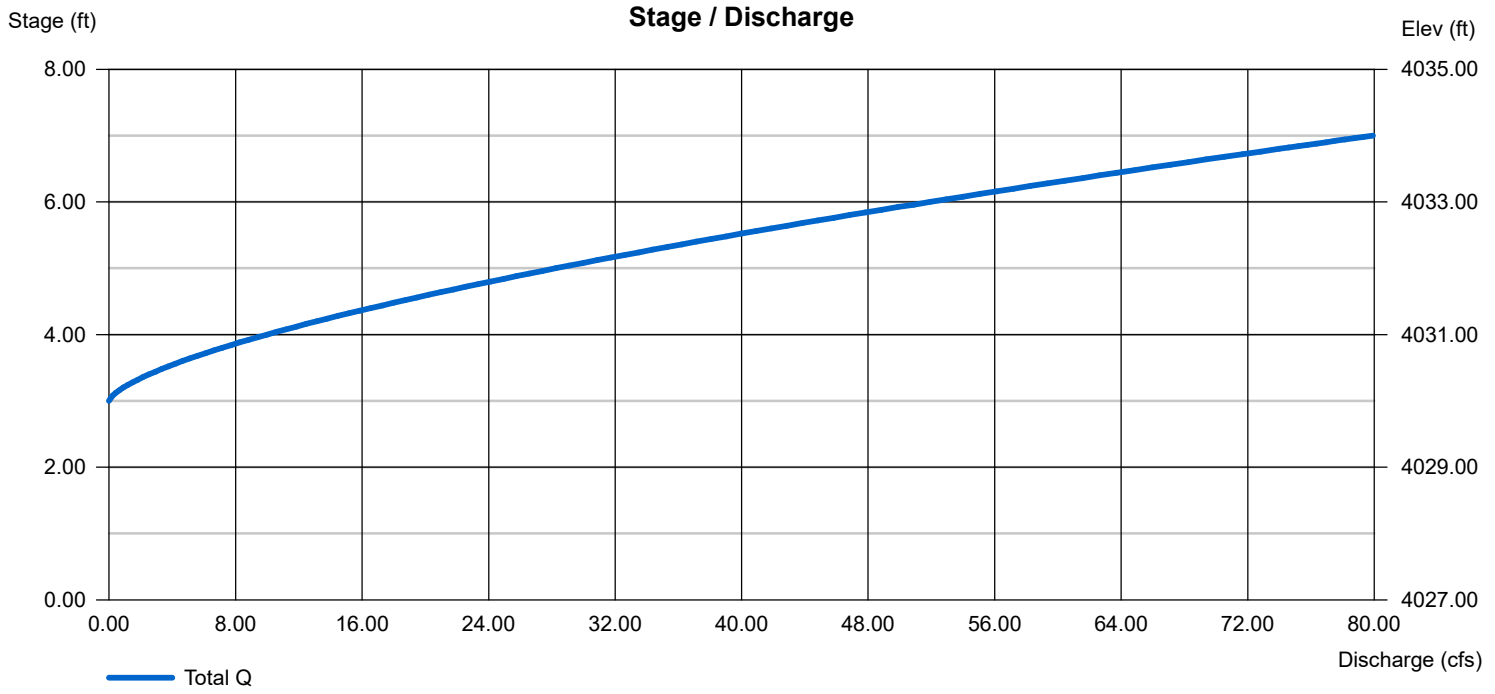
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

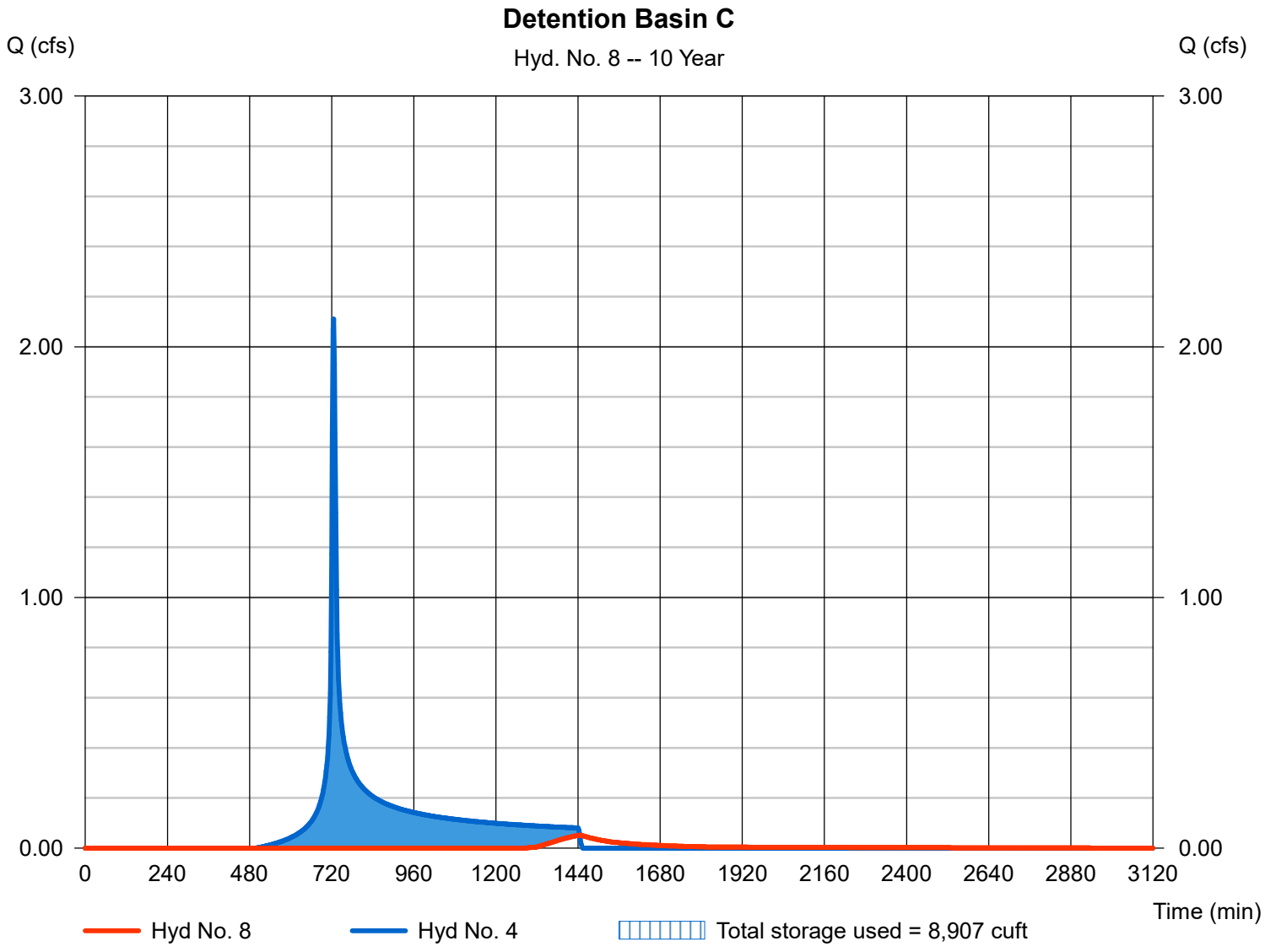
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.051 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 1444 min |
| Time interval | = | 2 min | Hyd. volume | = | 801 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4058.60 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 8,907 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

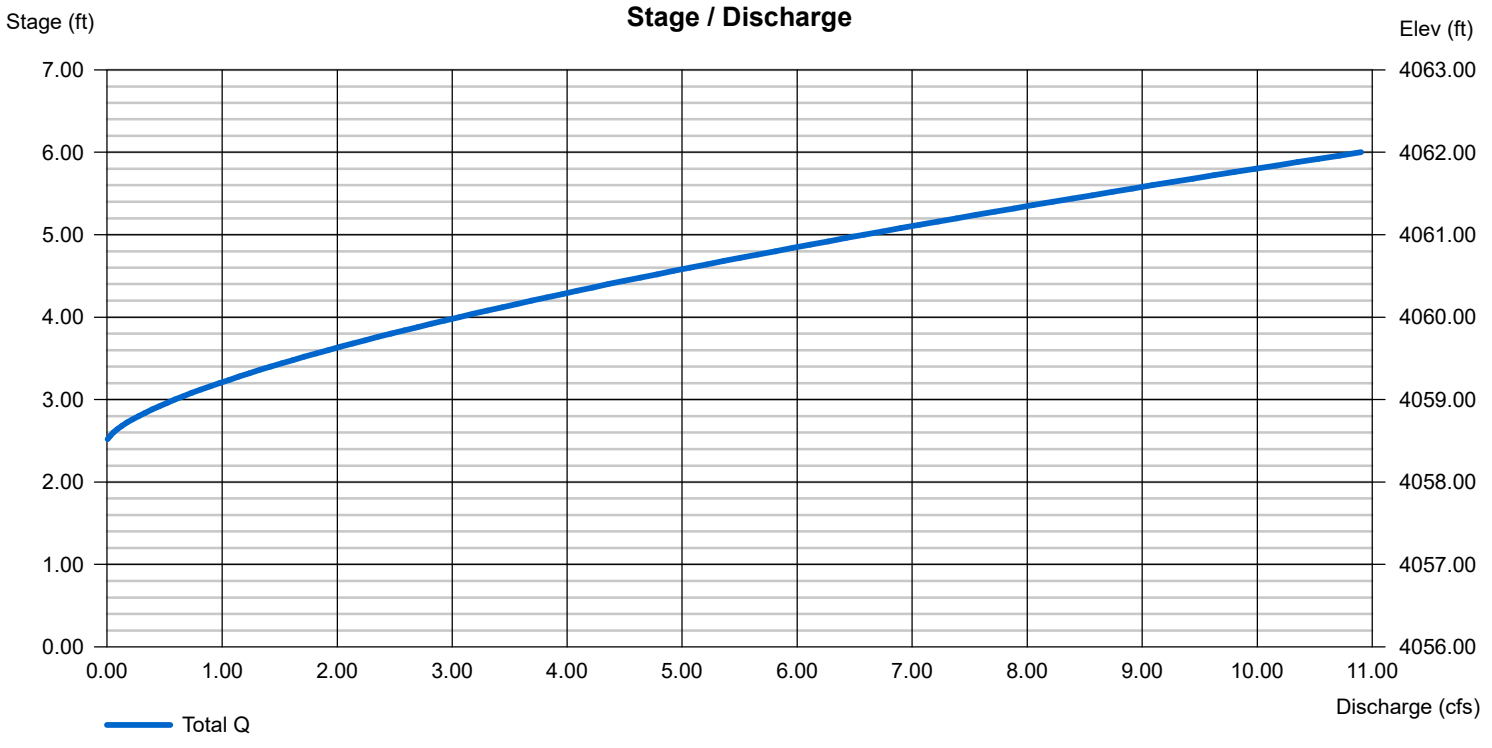
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



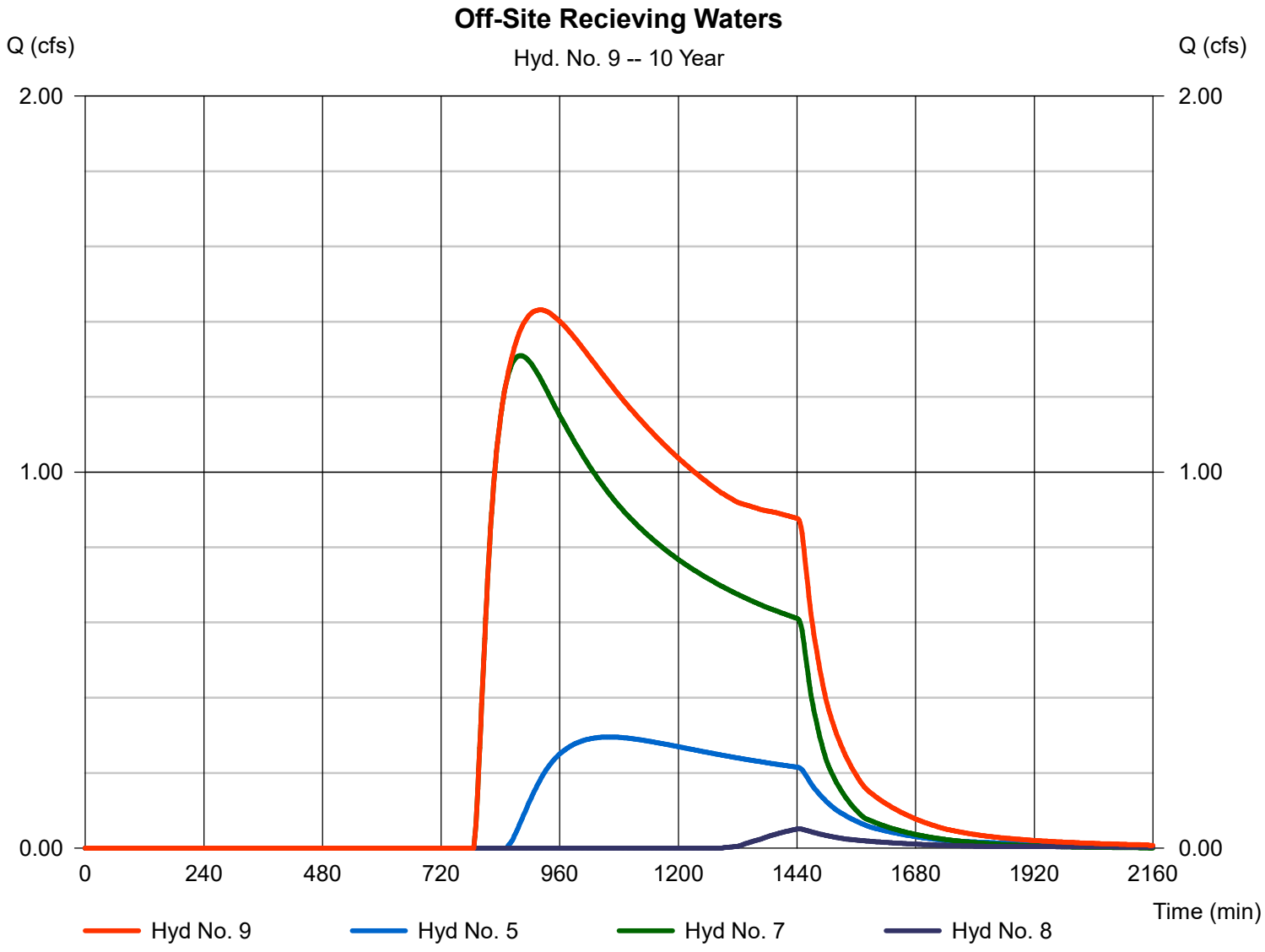
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 1.432 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 920 min |
| Time interval | = 2 min | Hyd. volume | = 47,896 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |

## 5.4.c. 25 Year Storm Event– Post-Developed Conditions

5.4.c.1 15 Min Duration

5.4.c.2 30 Min Duration

5.4.c.3 1 Hour Duration

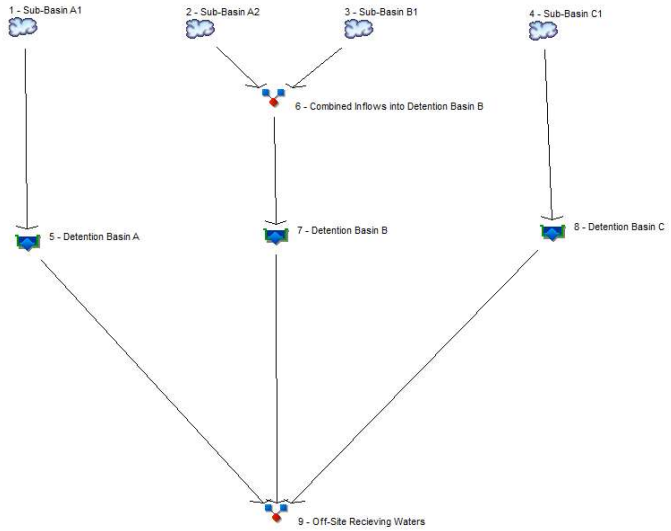
5.4.c.4 3 Hour Duration

5.4.c.5 6 Hour Duration

5.4.c.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.006 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.040 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 0.040 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.006 | 1 | 22 | 4 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 0.040 | 1 | 21 | 23 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.000 | 1 | n/a | 0 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.00 | 3.57 | Detention Basin A |
| 6 | Combine | 0.040 | 1 | 21 | 23 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.00 | 23.4 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.00 | 0.000 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

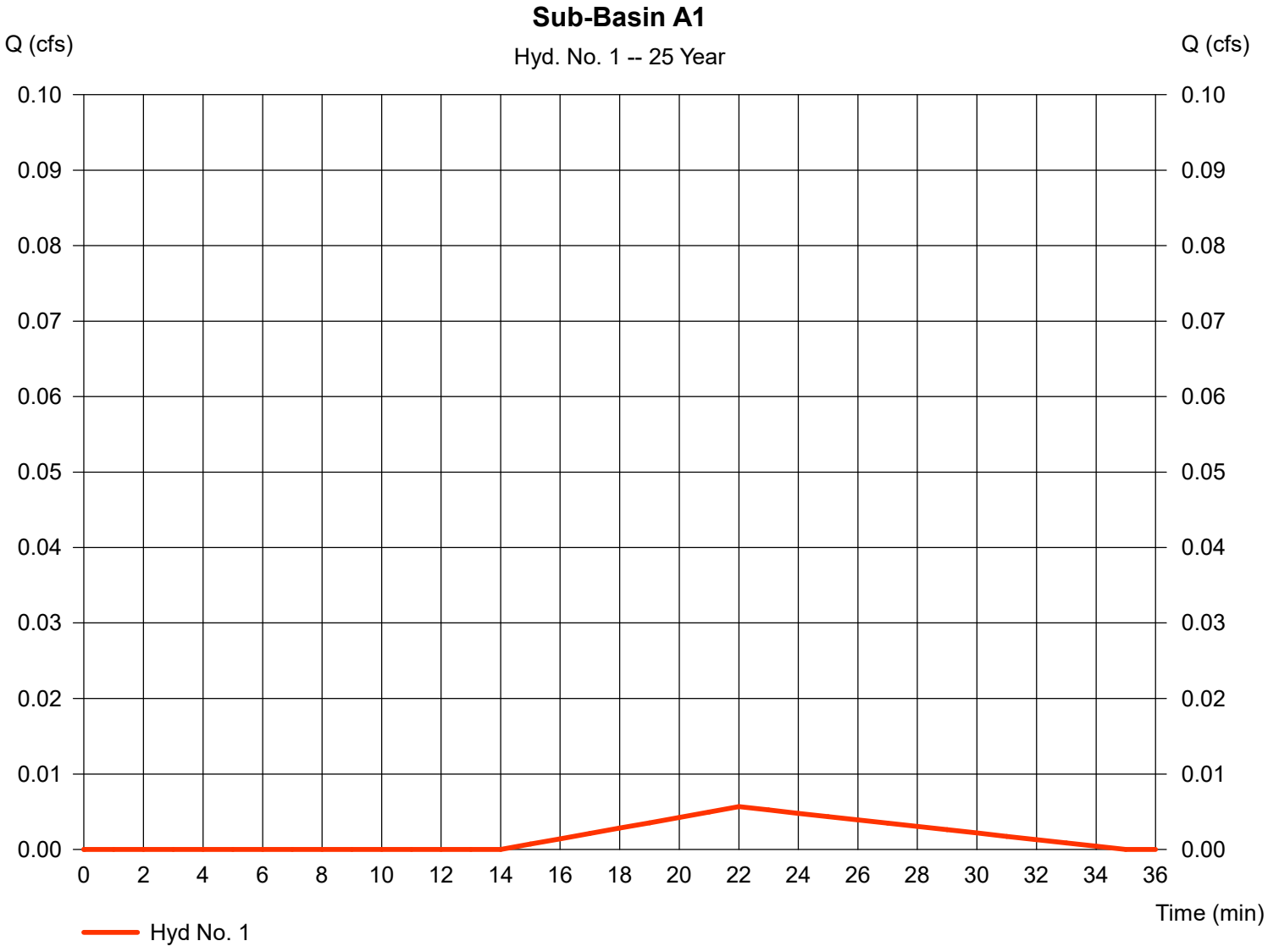
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.006 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 22 min |
| Time interval | = | 1 min | Hyd. volume | = | 4 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



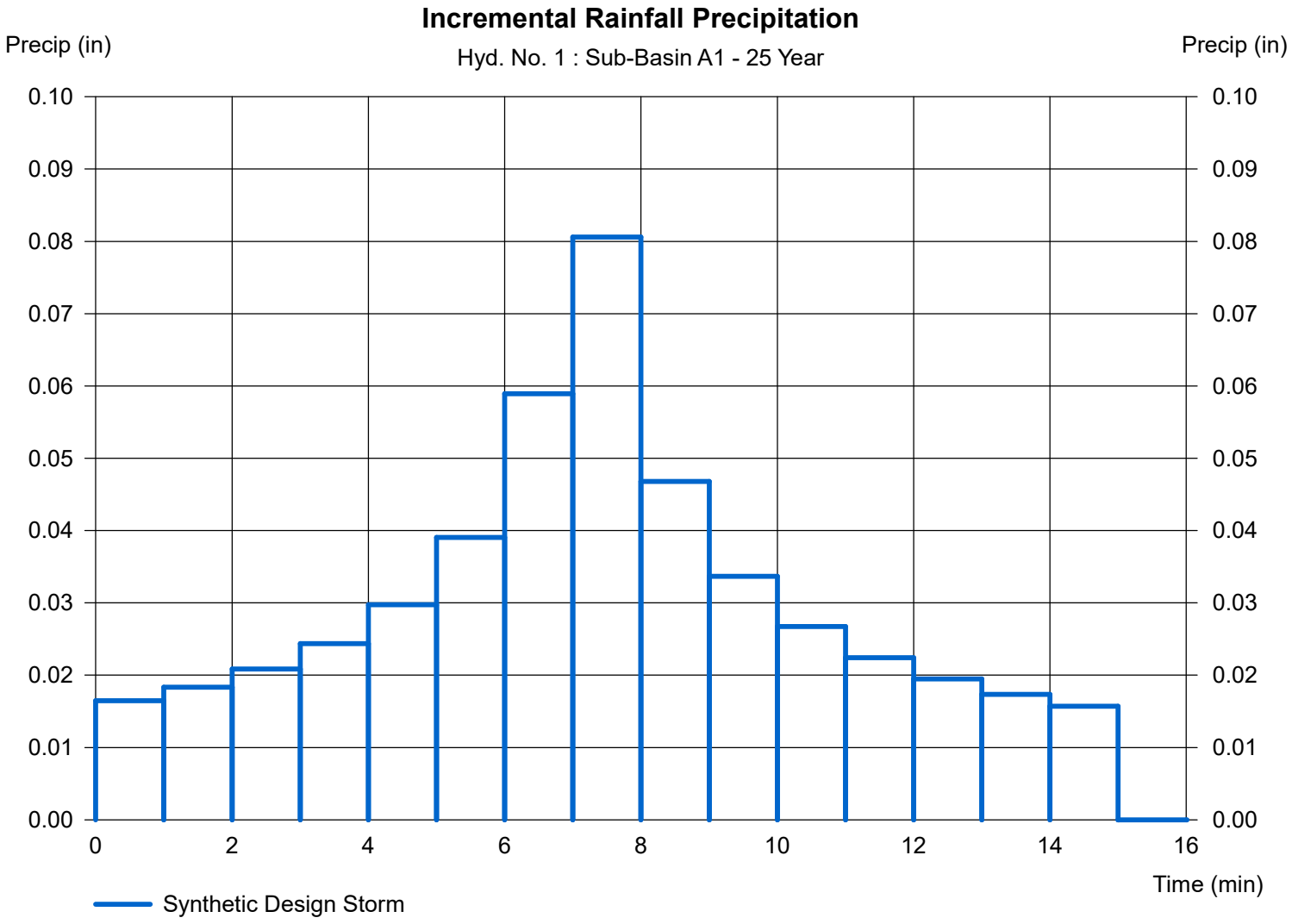
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.4705 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



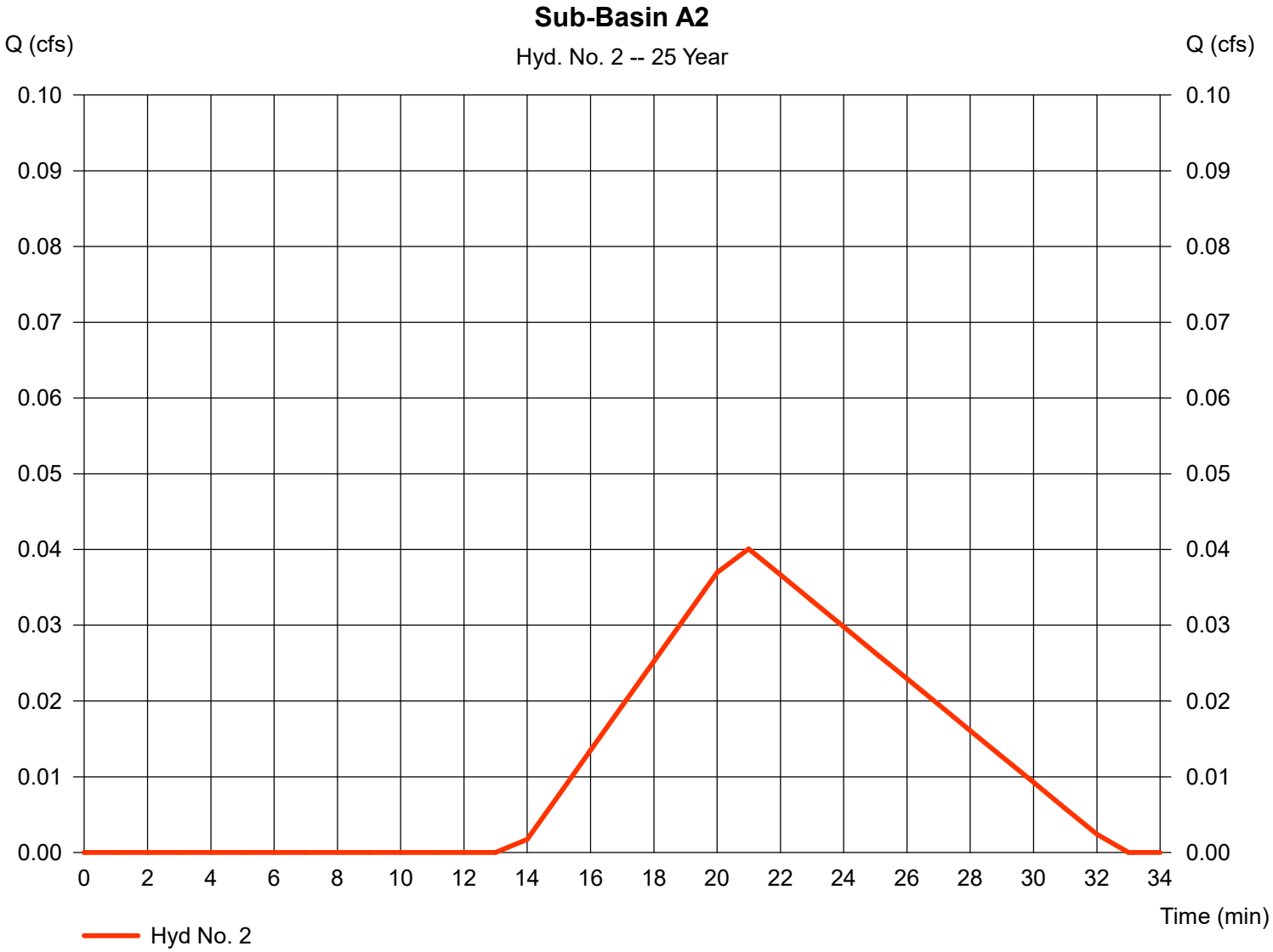
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.040 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 21 min |
| Time interval | = | 1 min | Hyd. volume | = | 23 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



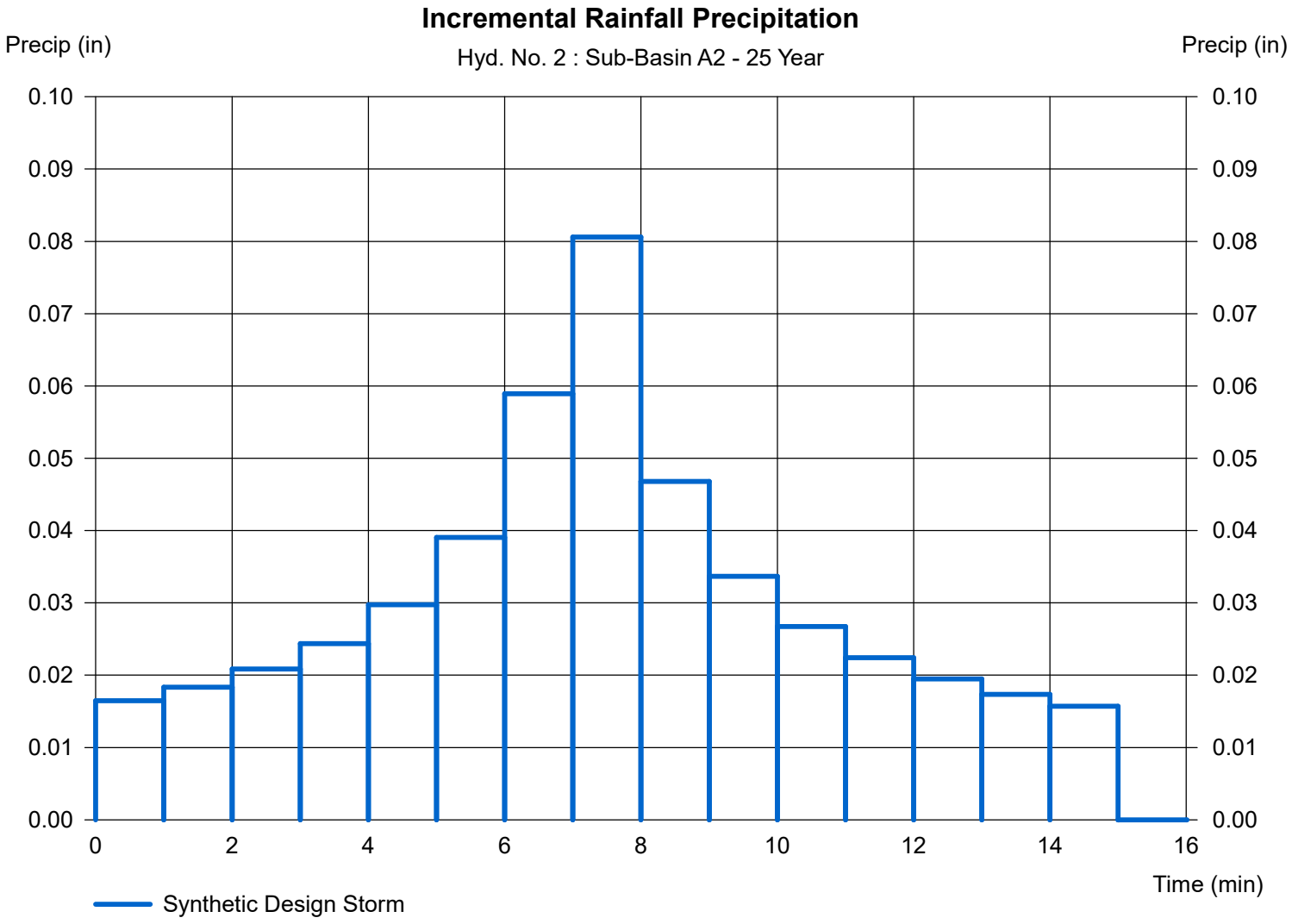
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.4705 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



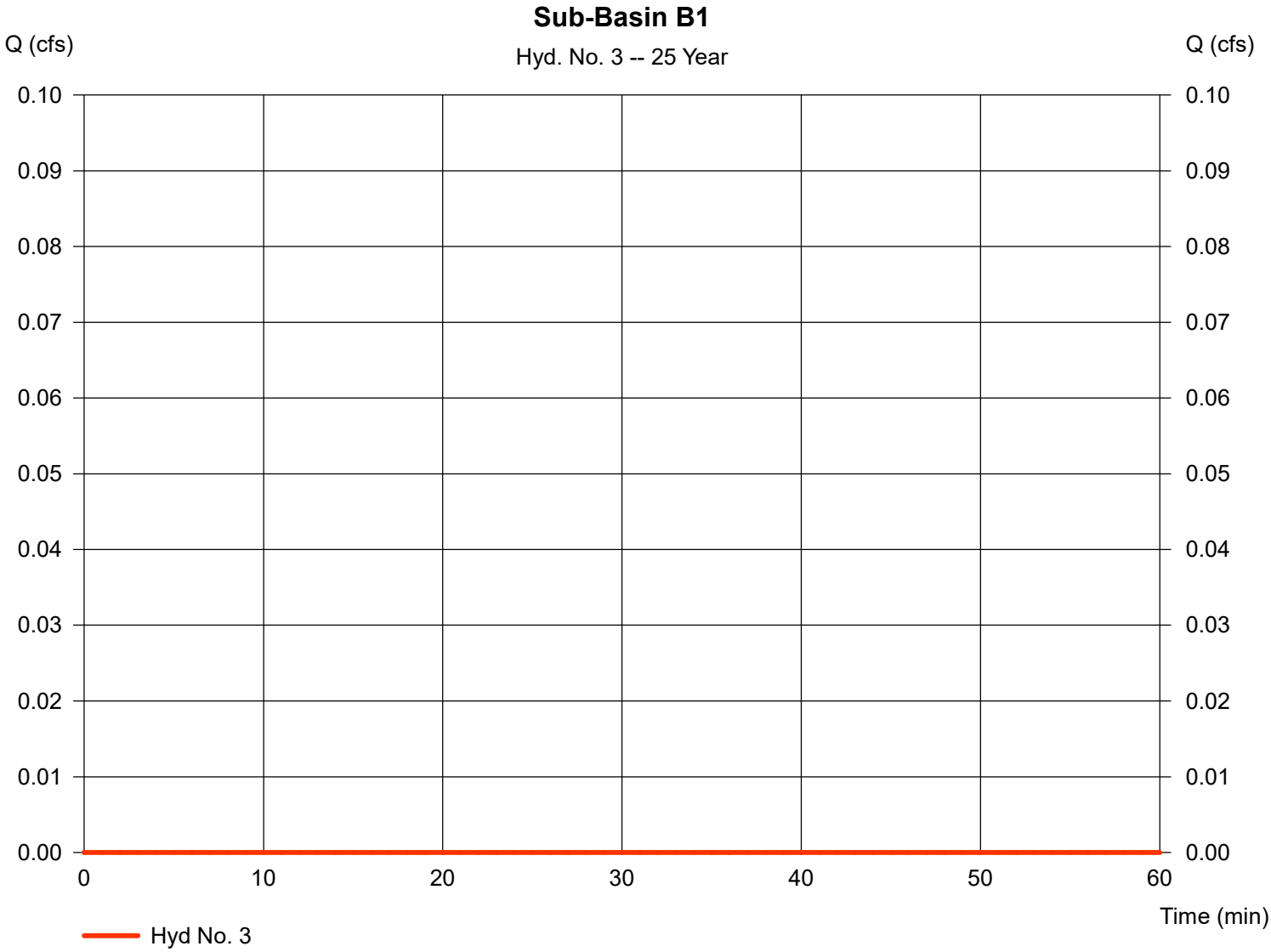
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



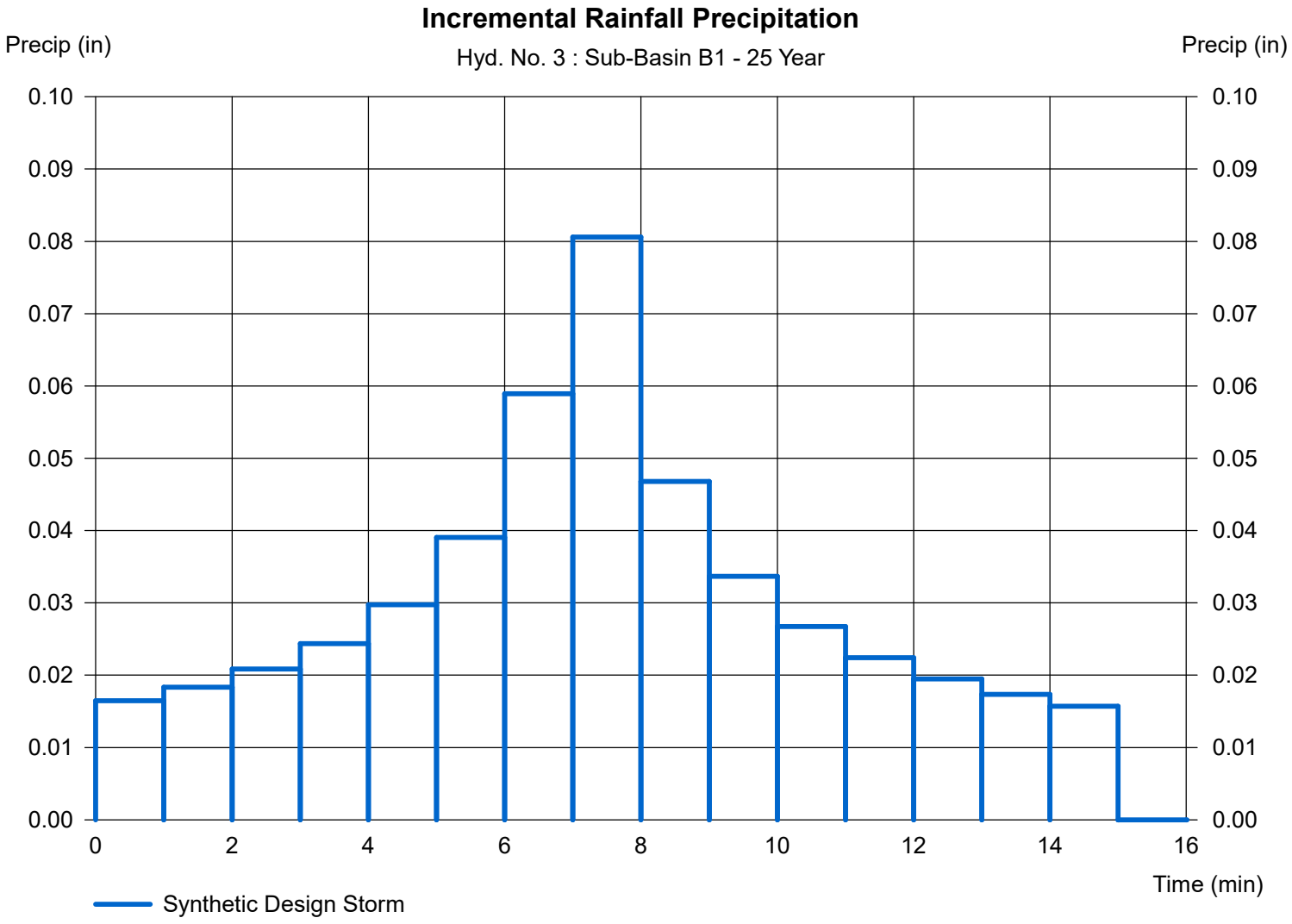
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.4705 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



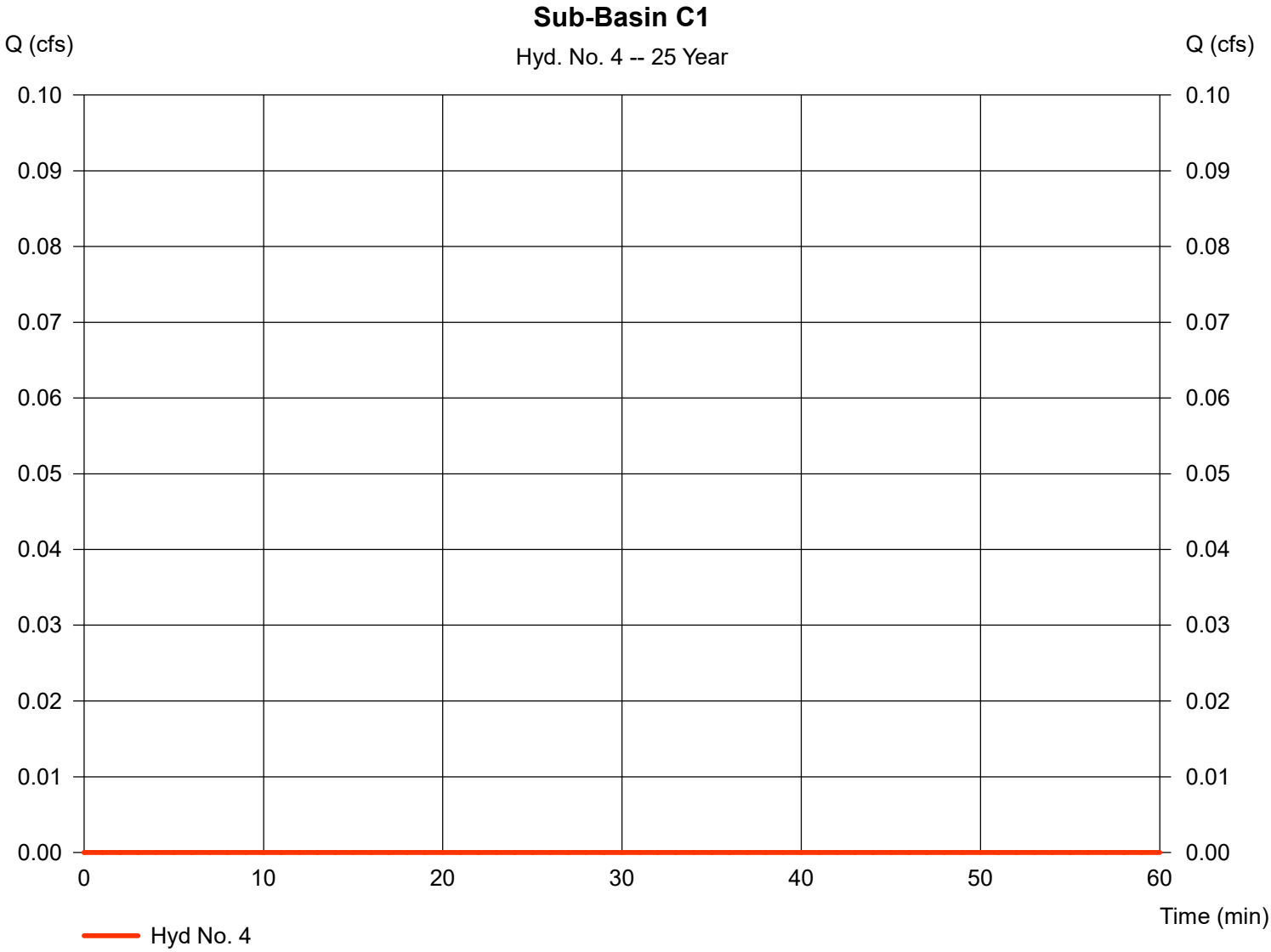
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.47 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



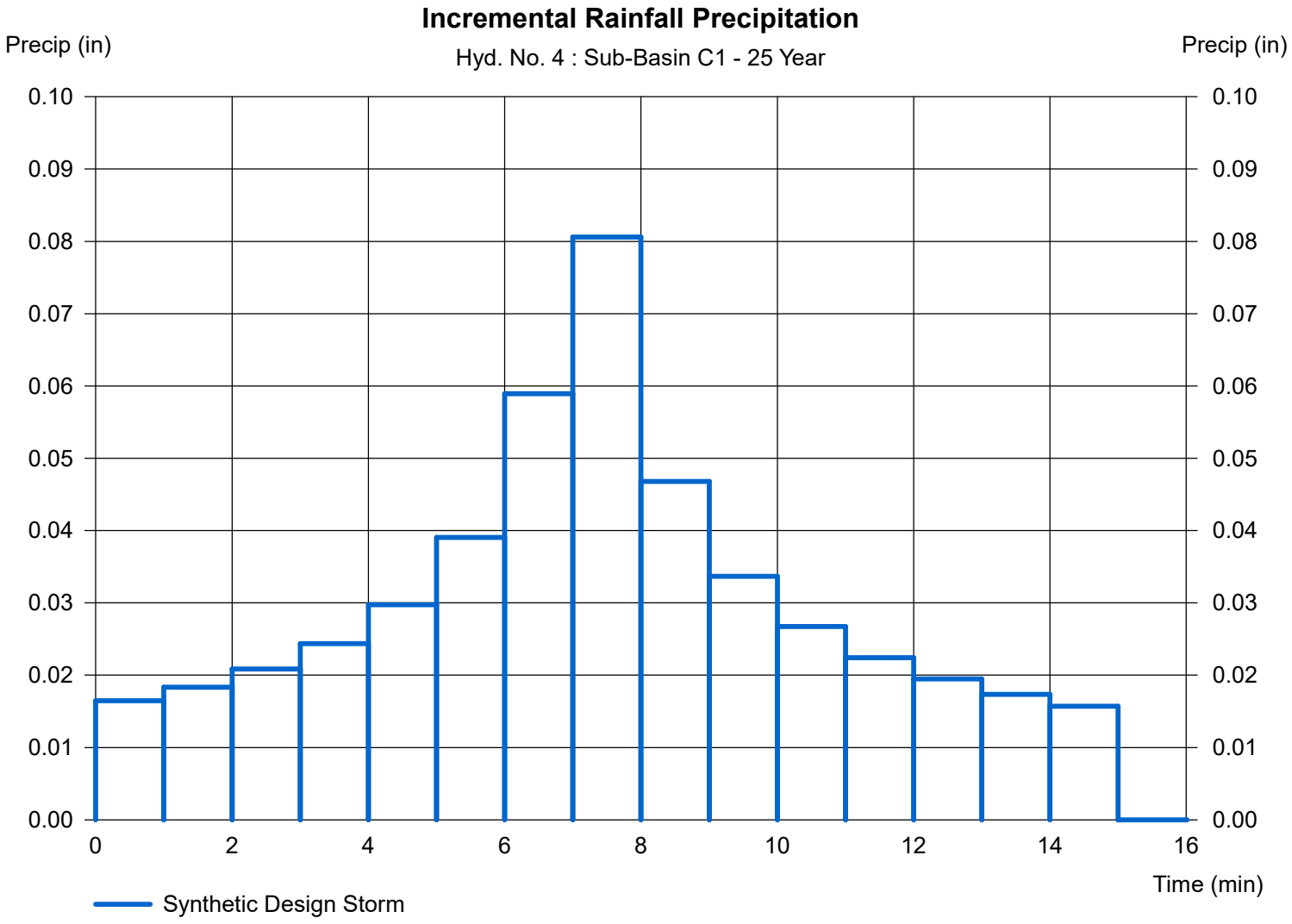
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.4705 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



# Hydrograph Report

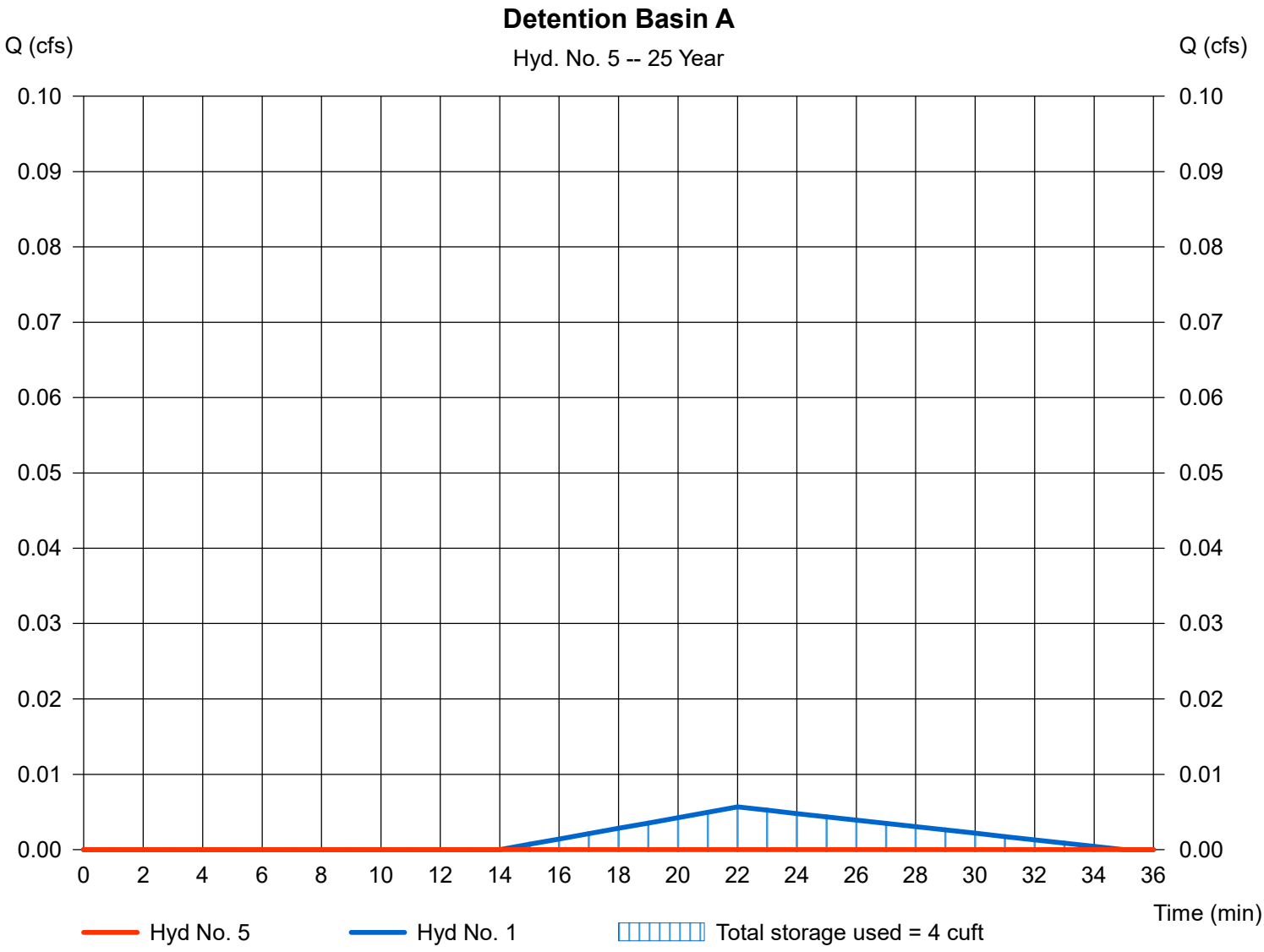
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.00 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 4 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

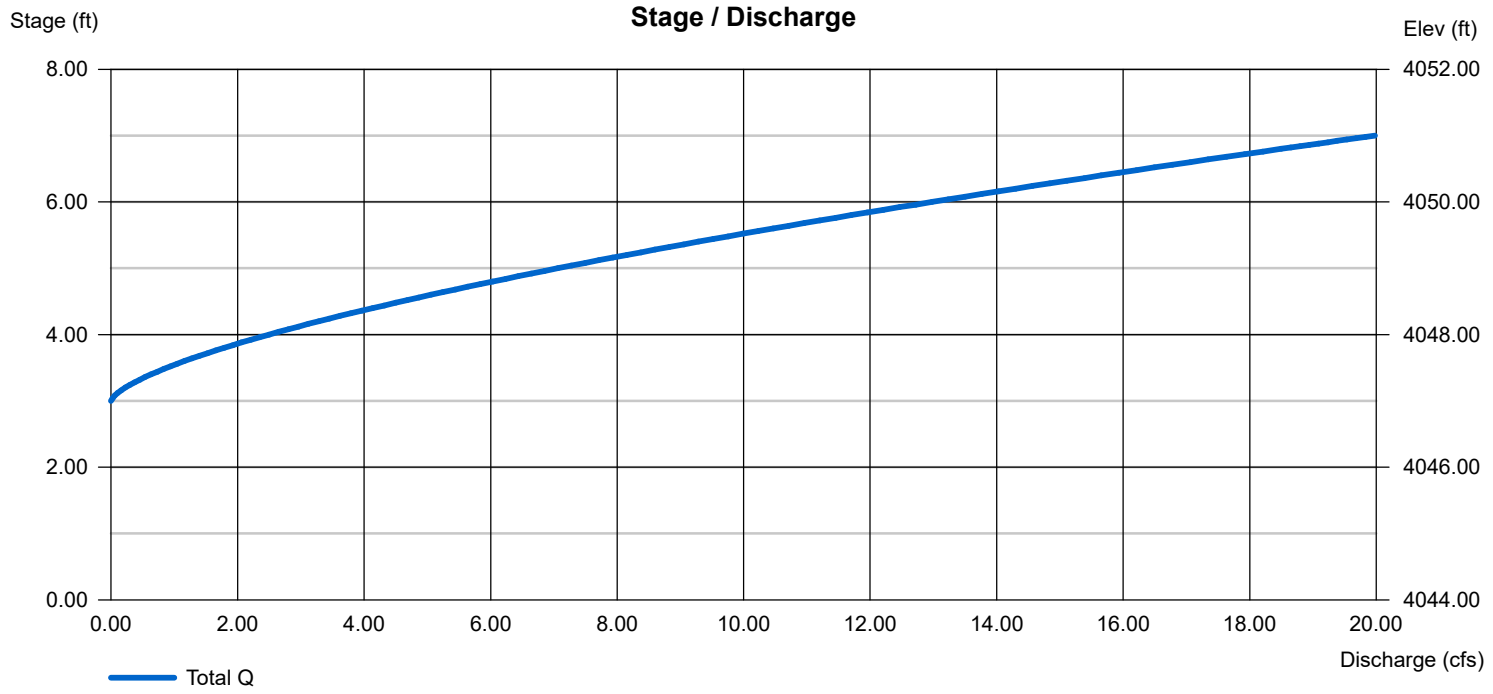
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



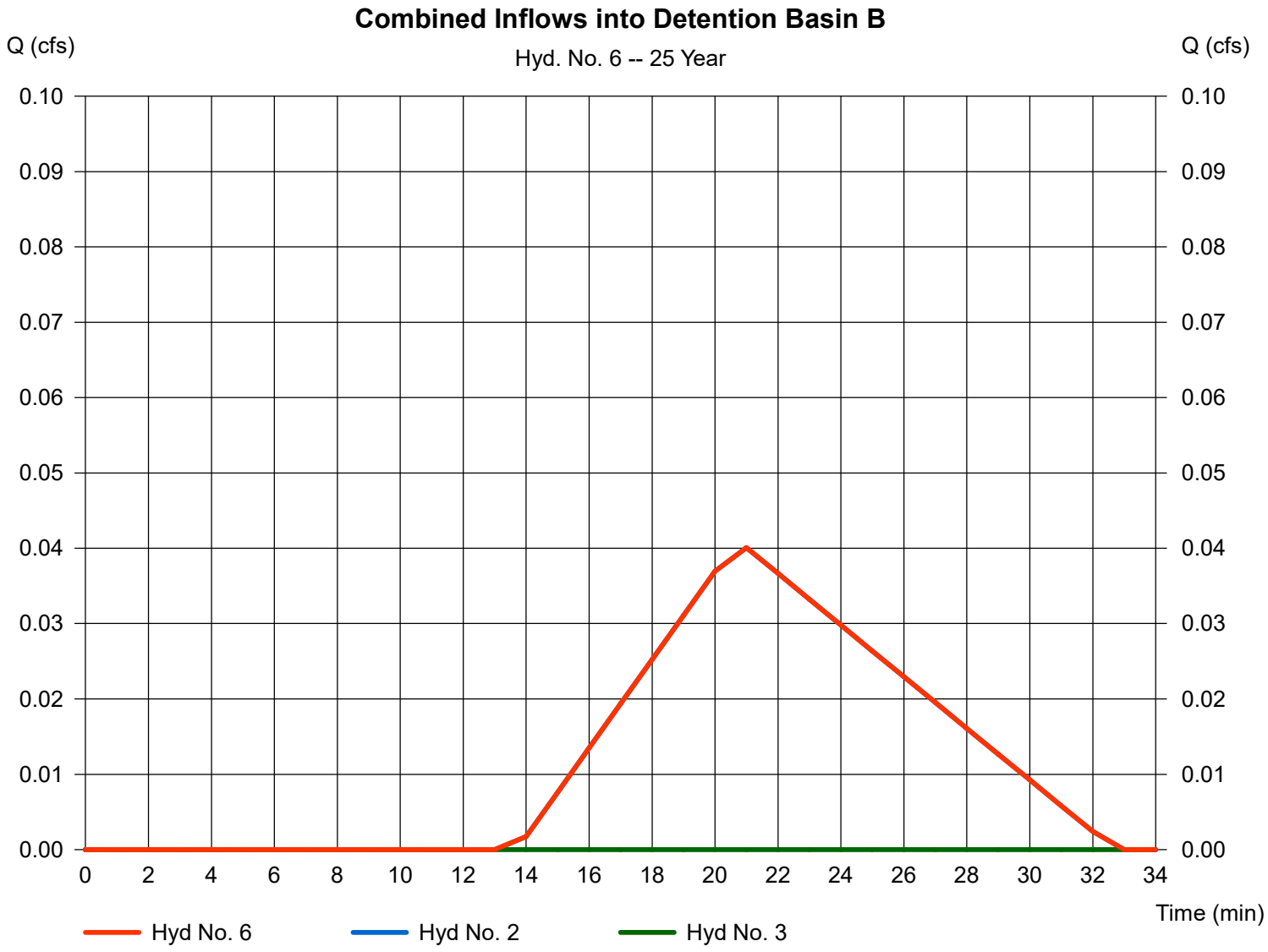
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.040 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 21 min |
| Time interval | = | 1 min | Hyd. volume | = | 23 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

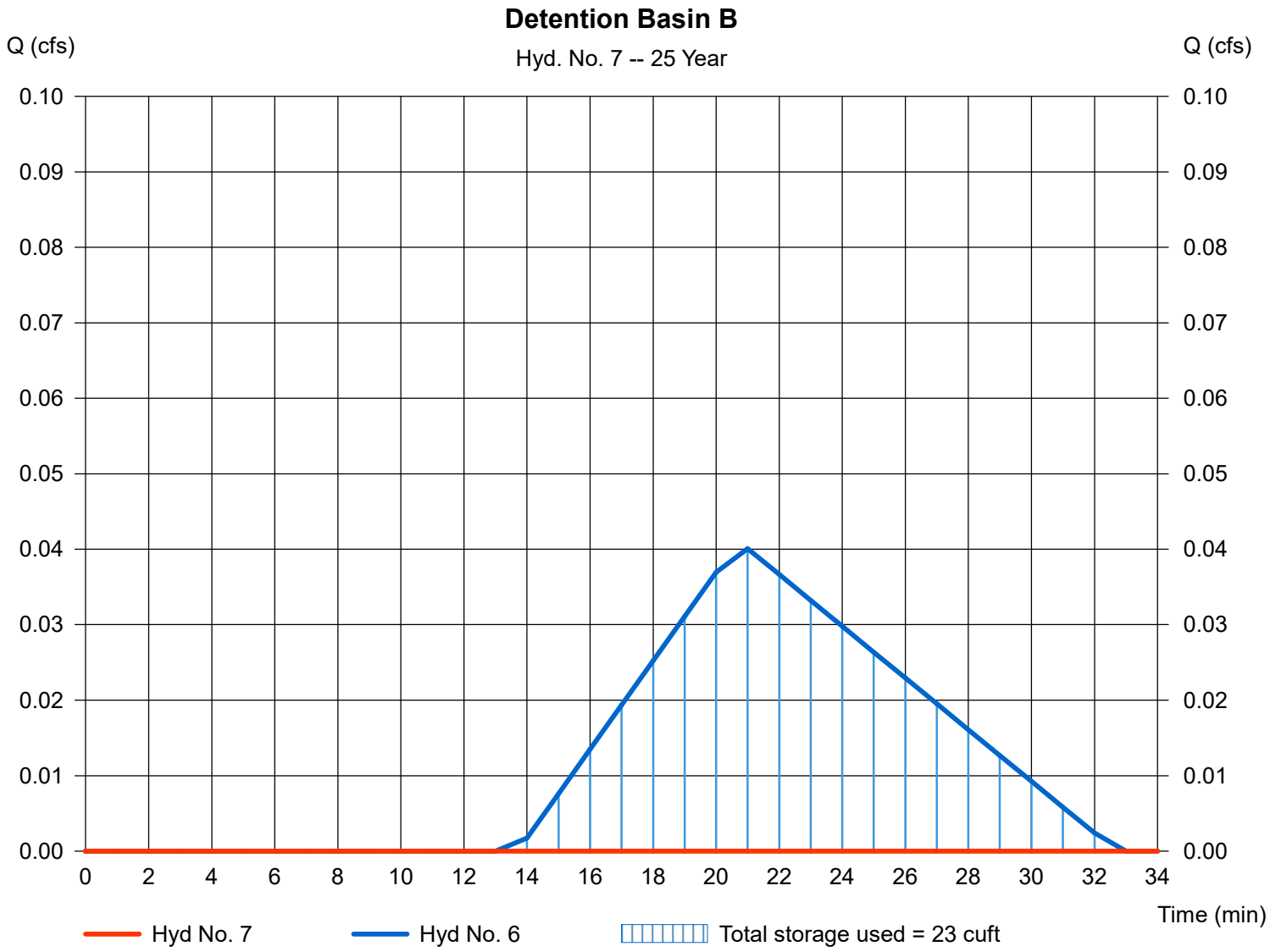
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.00 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 23 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

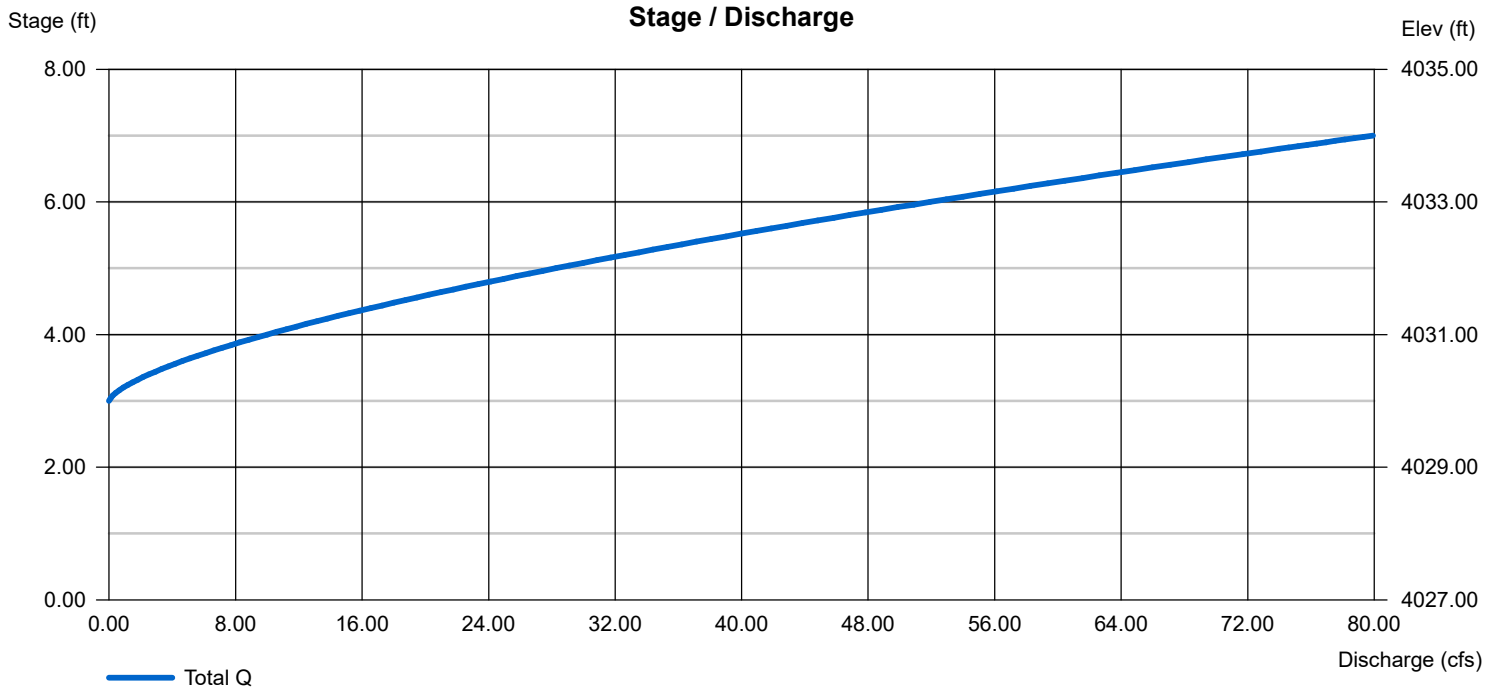
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

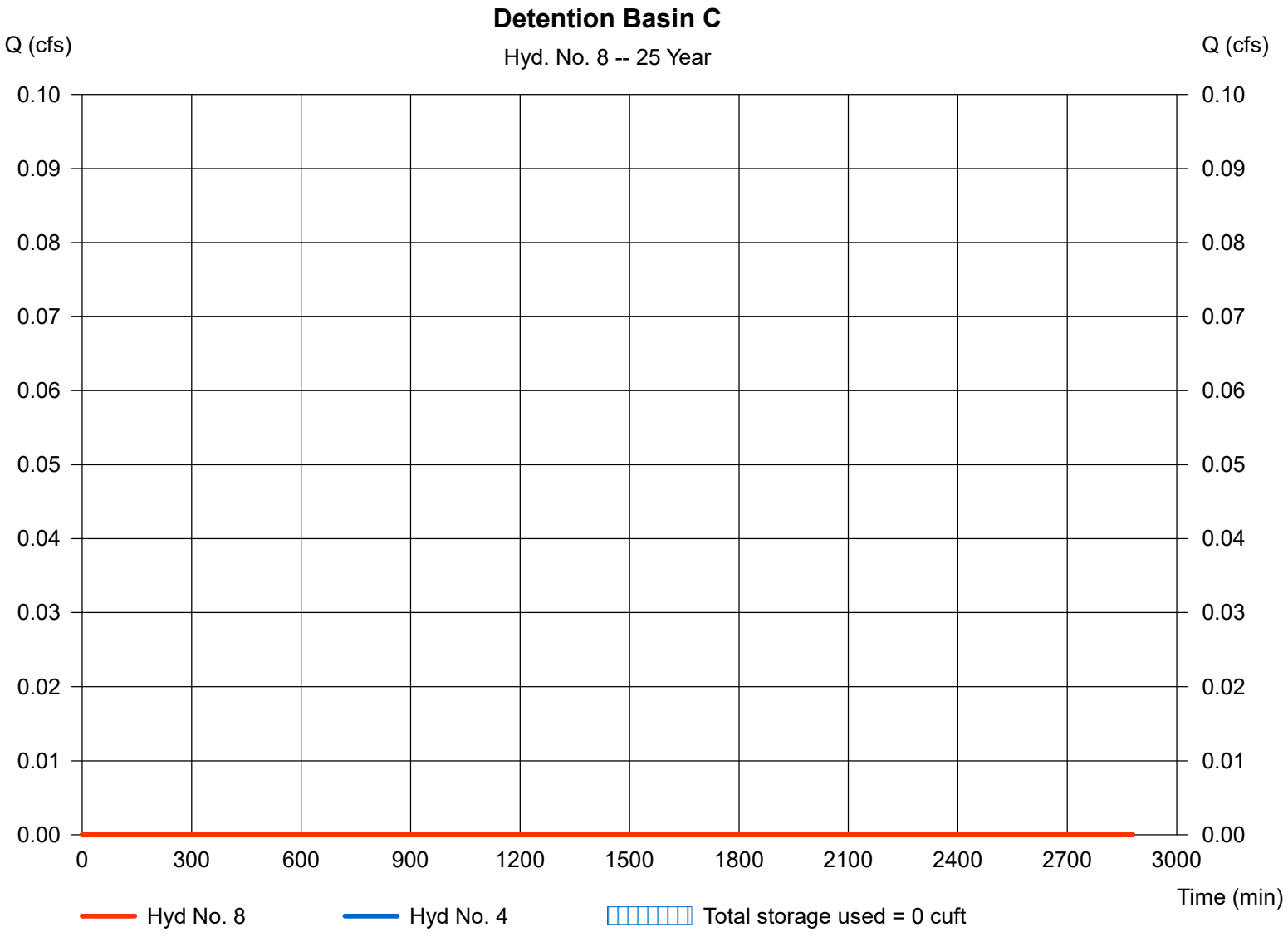
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 0 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

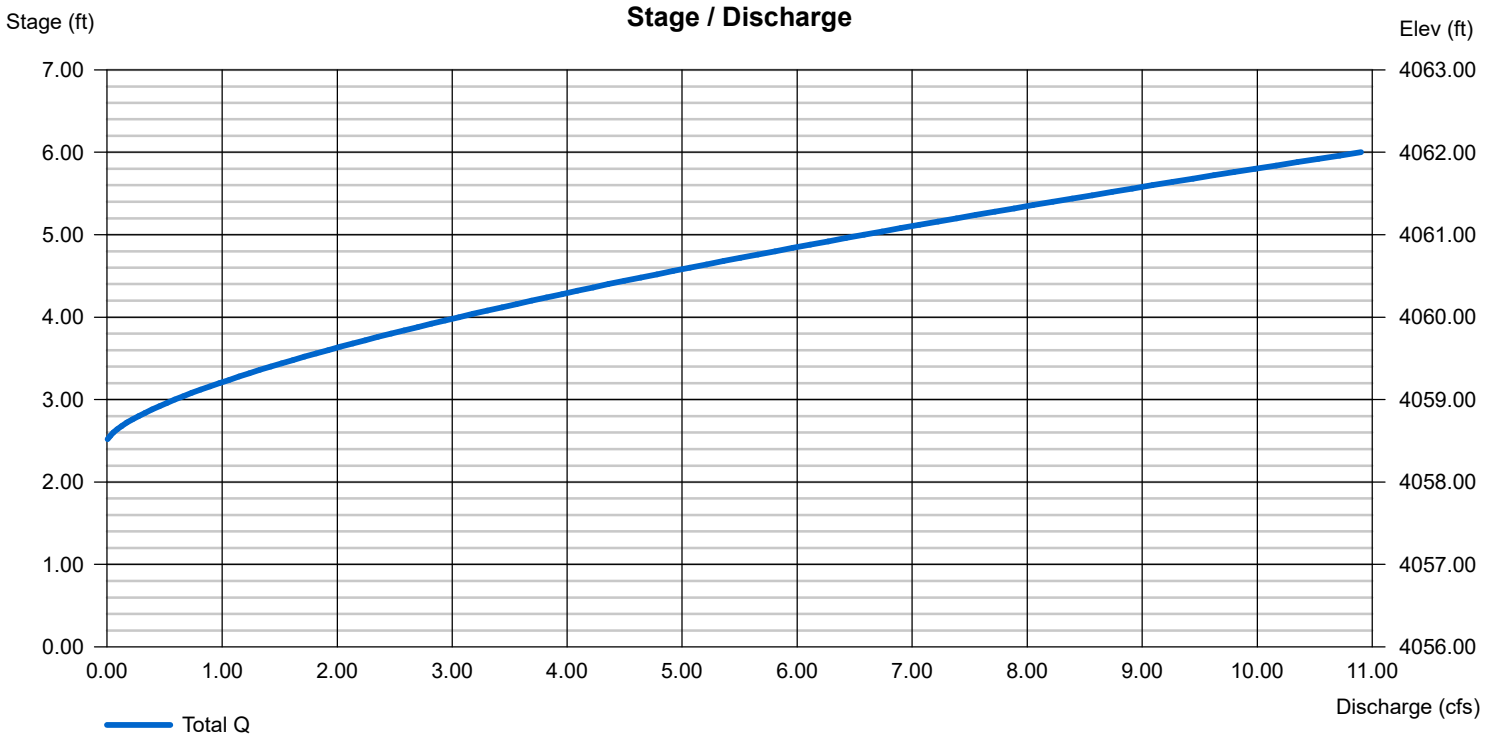
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



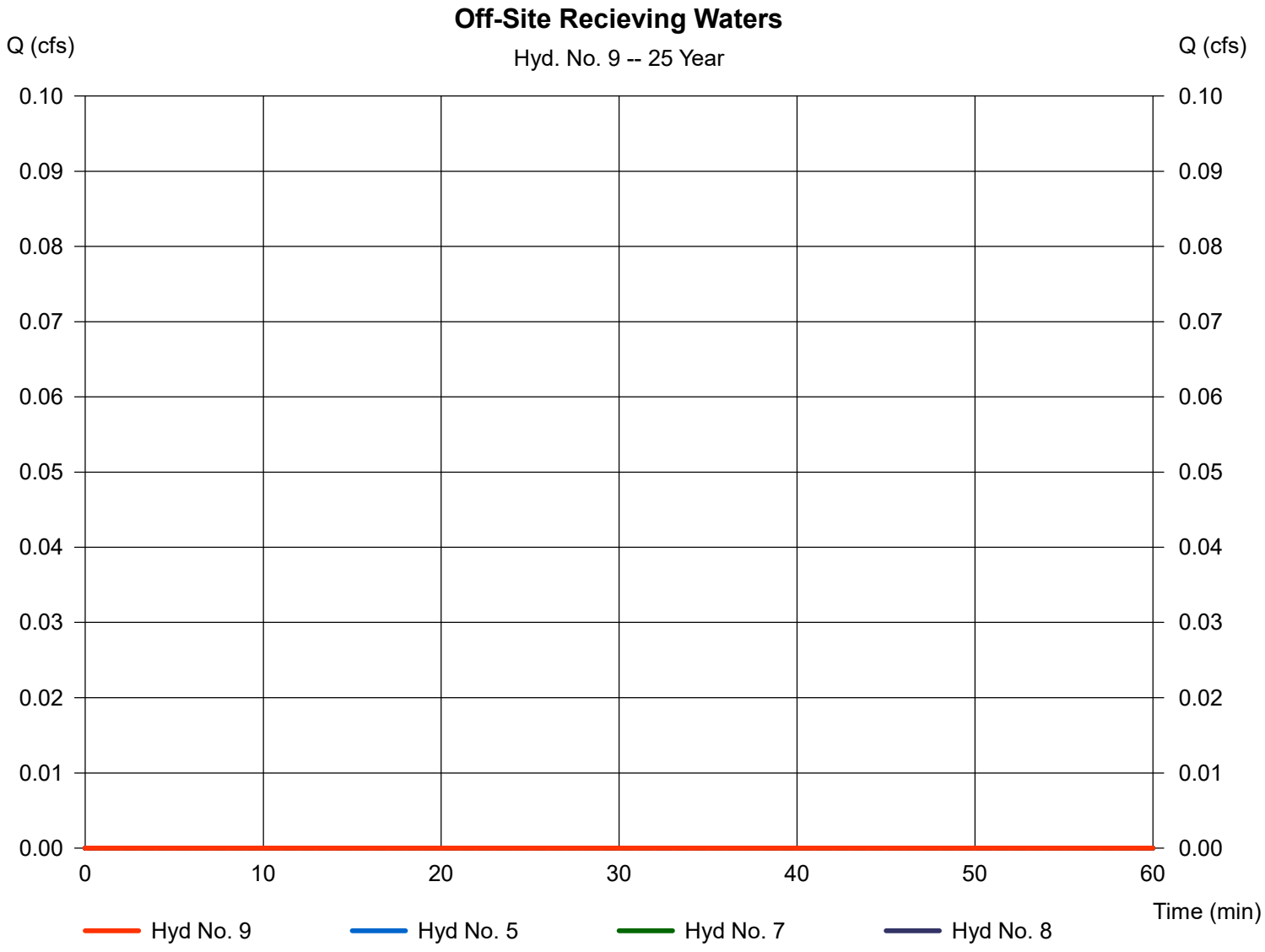
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

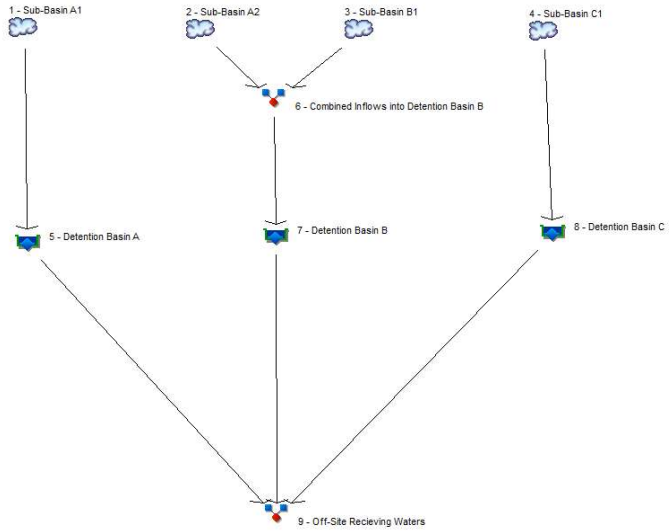
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.35 | 0.45 | 0.00 | 0.61 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.412 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.005 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.408 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.171 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 1.410 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.412 | 1 | 33 | 356 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 1.005 | 1 | 32 | 834 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.408 | 1 | 33 | 325 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.171 | 1 | 32 | 123 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4044.20 | 356 | Detention Basin A |
| 6 | Combine | 1.410 | 1 | 32 | 1,159 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4027.20 | 1,159 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.06 | 123 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

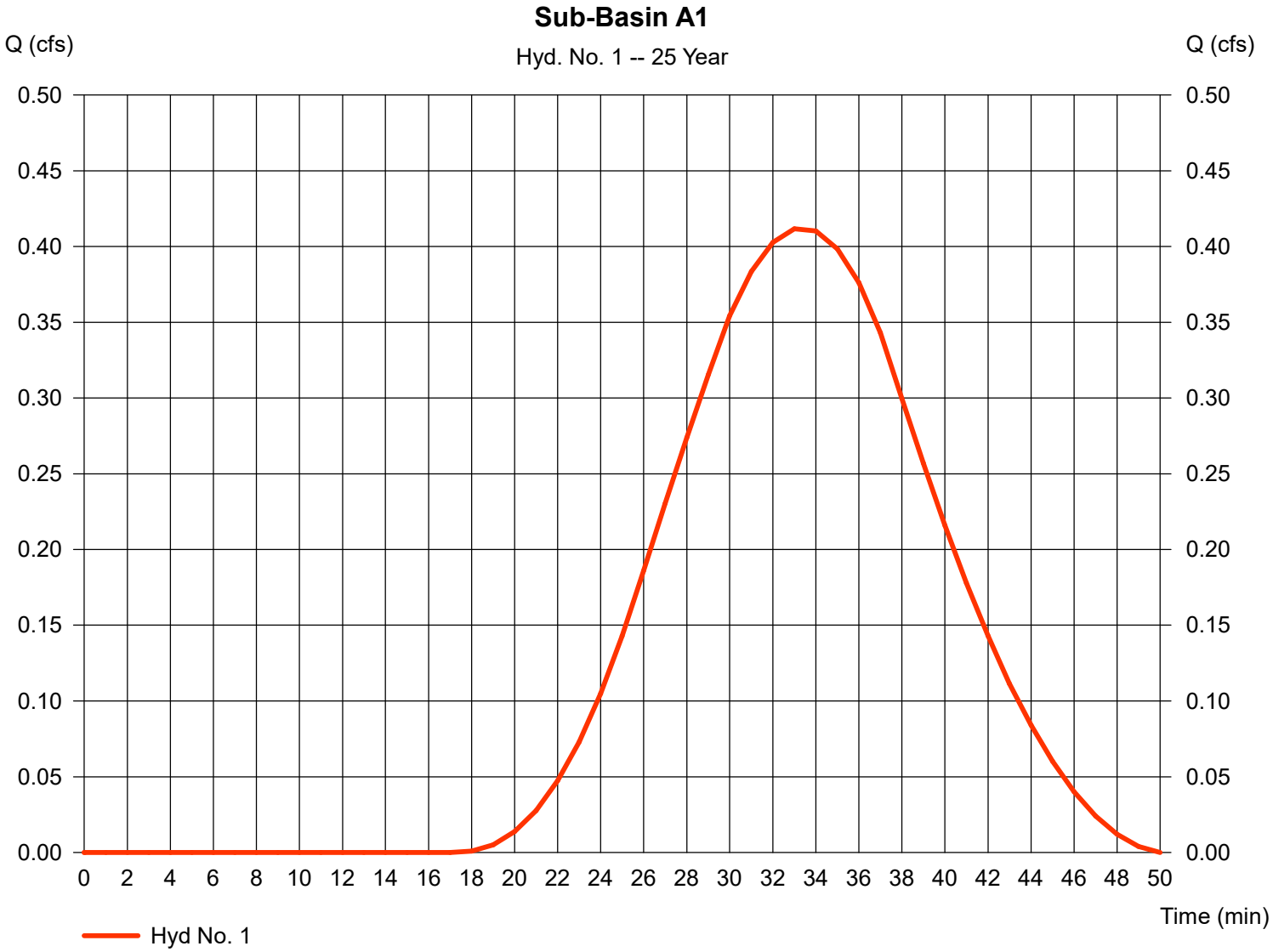
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.412 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 356 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



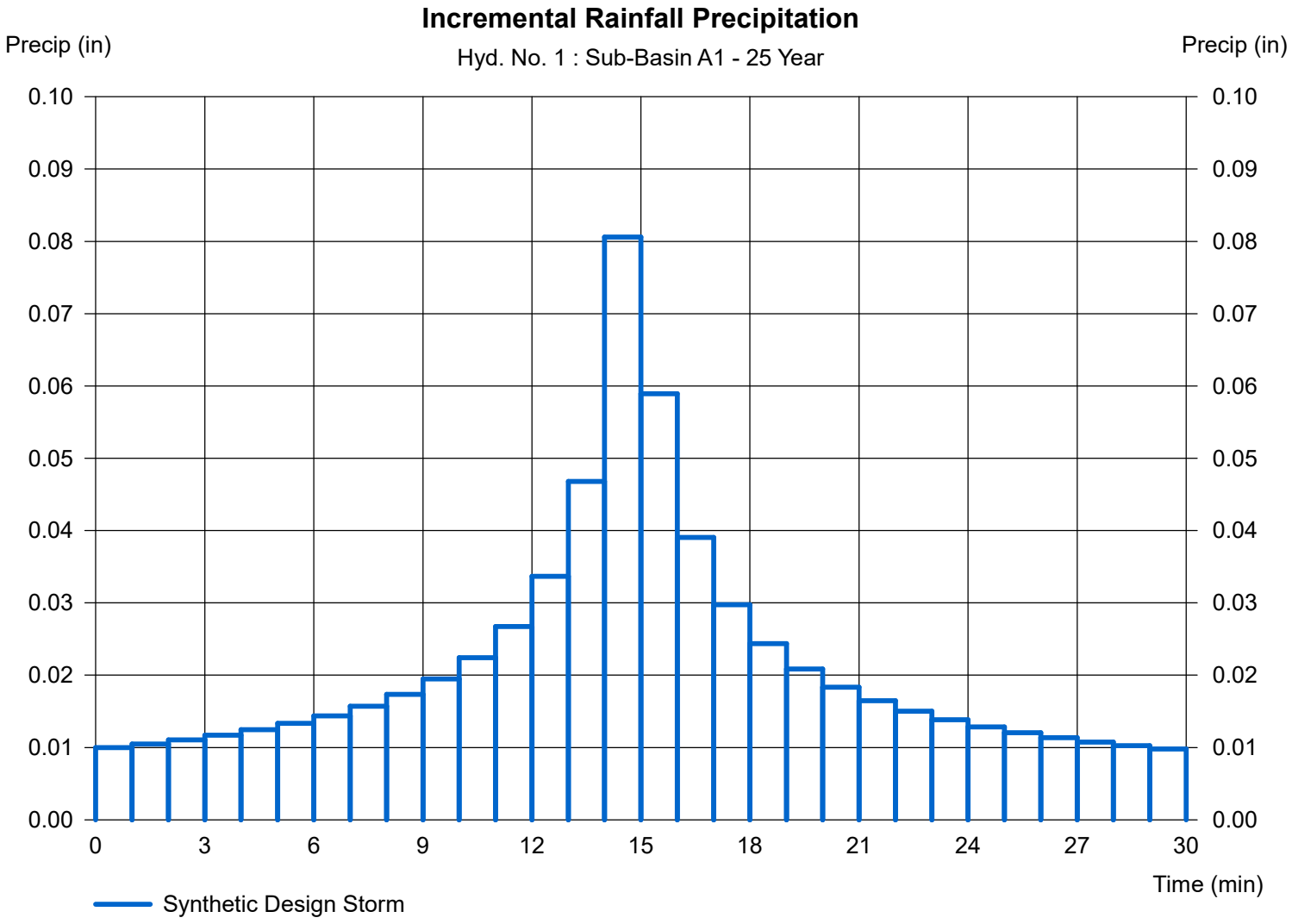
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



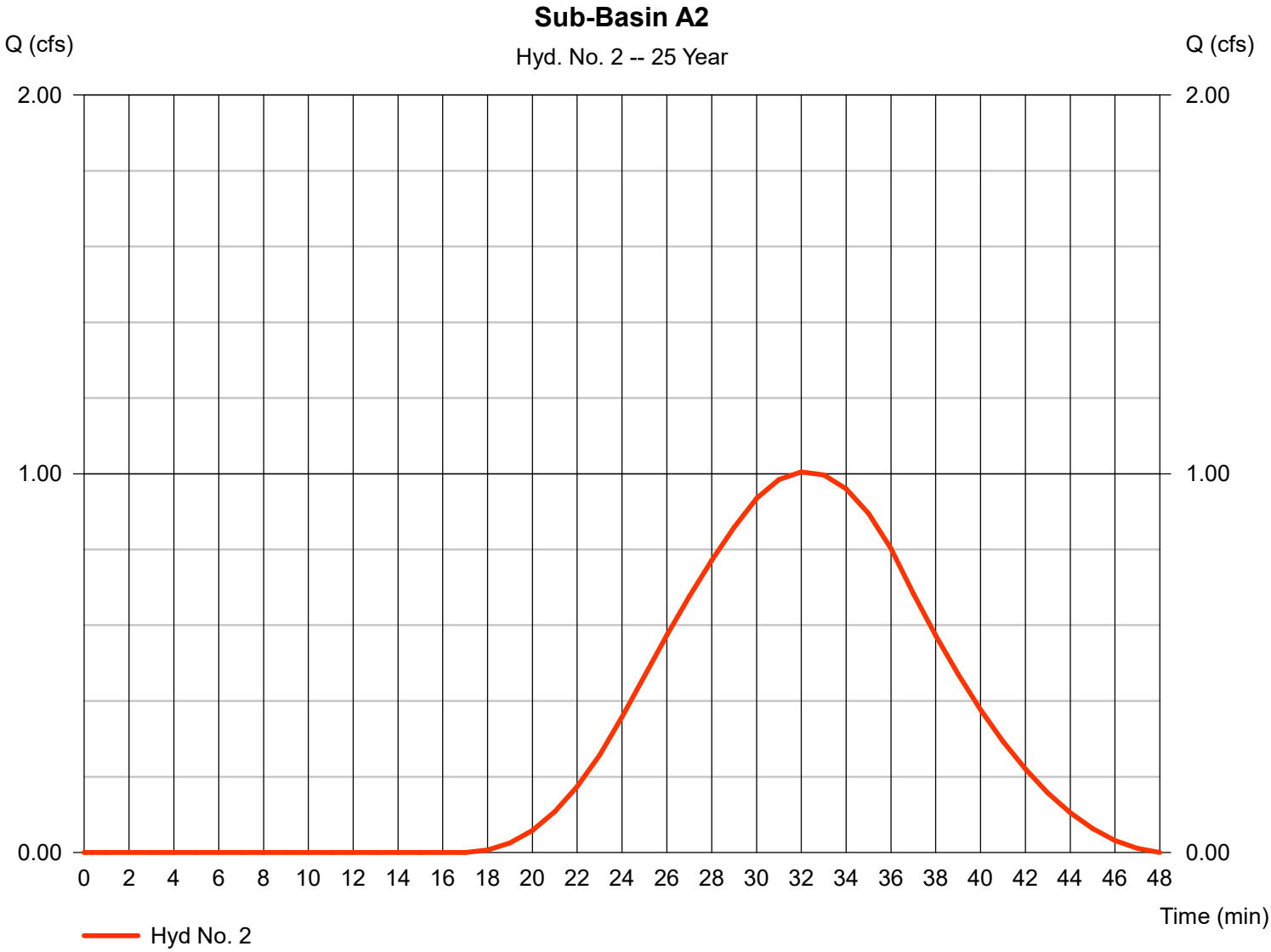
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.005 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 834 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



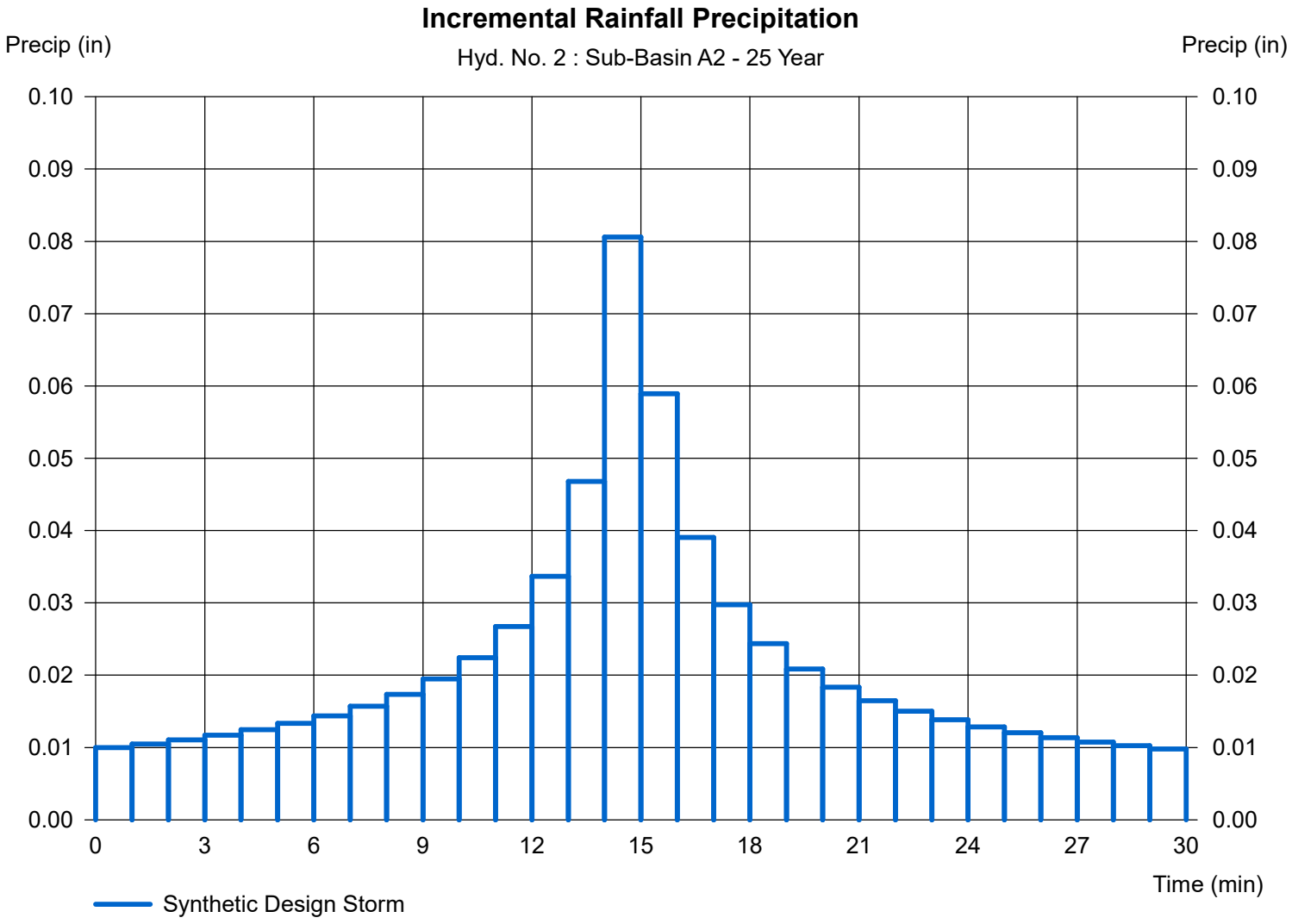
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



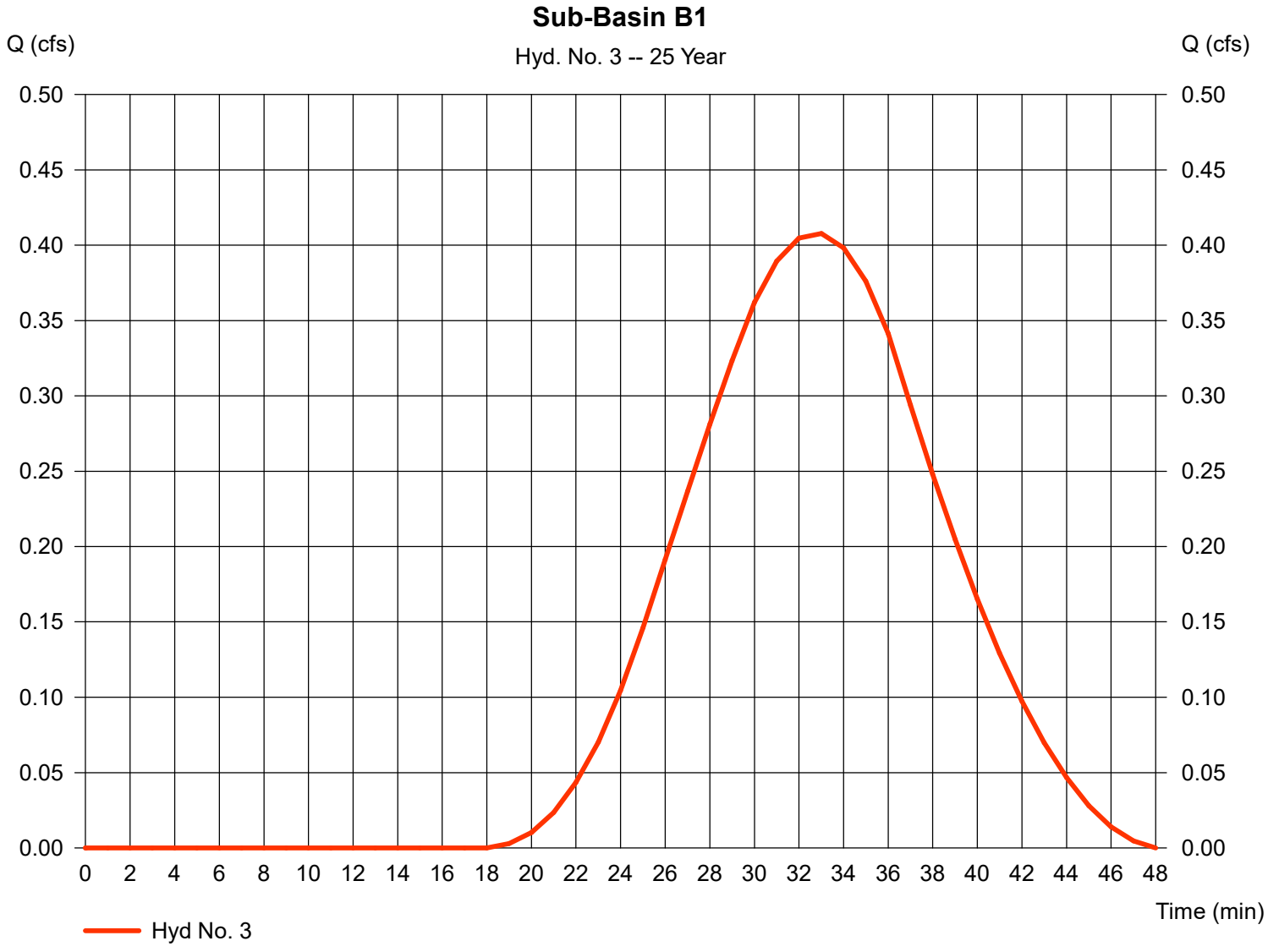
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.408 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 325 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



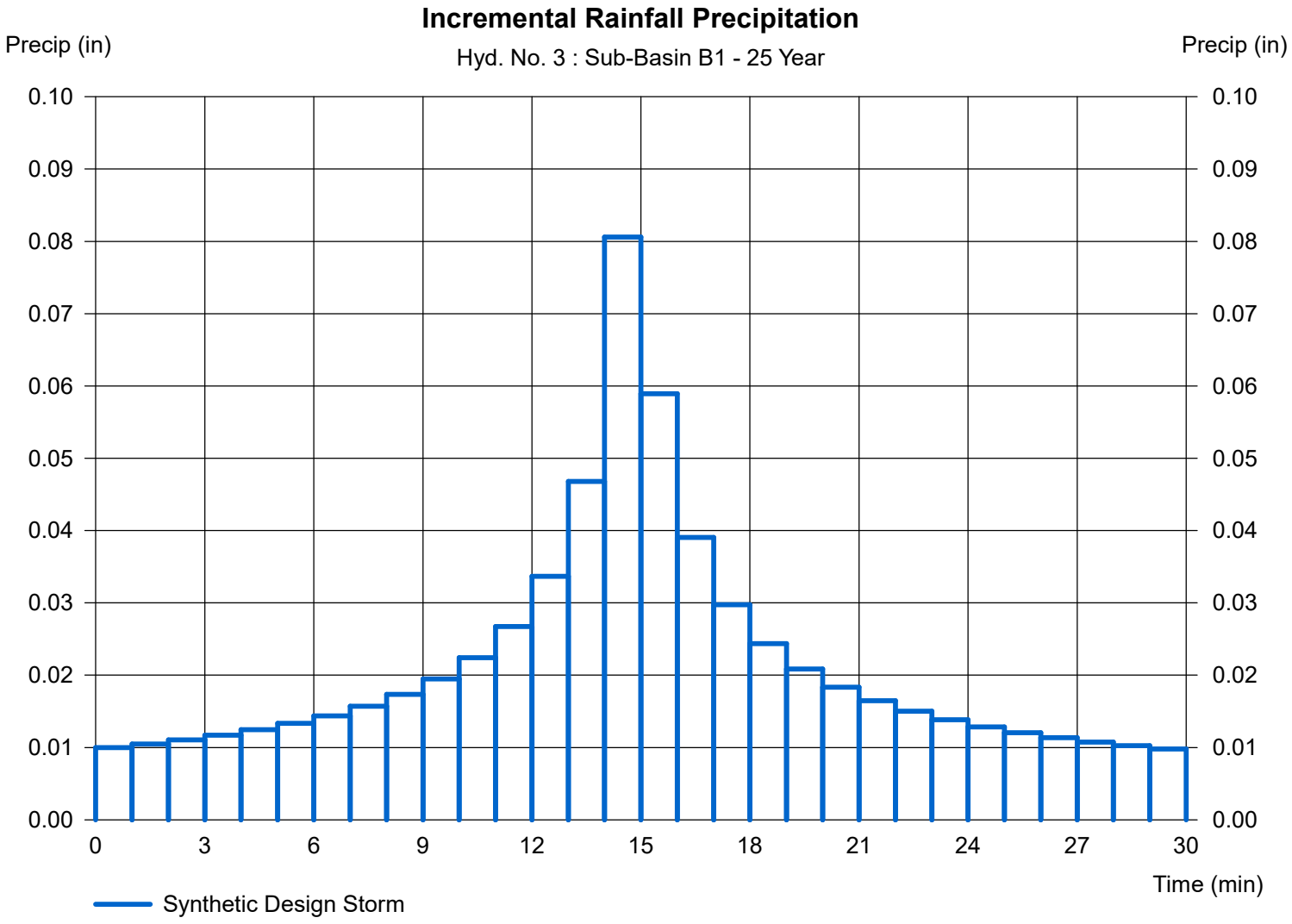
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



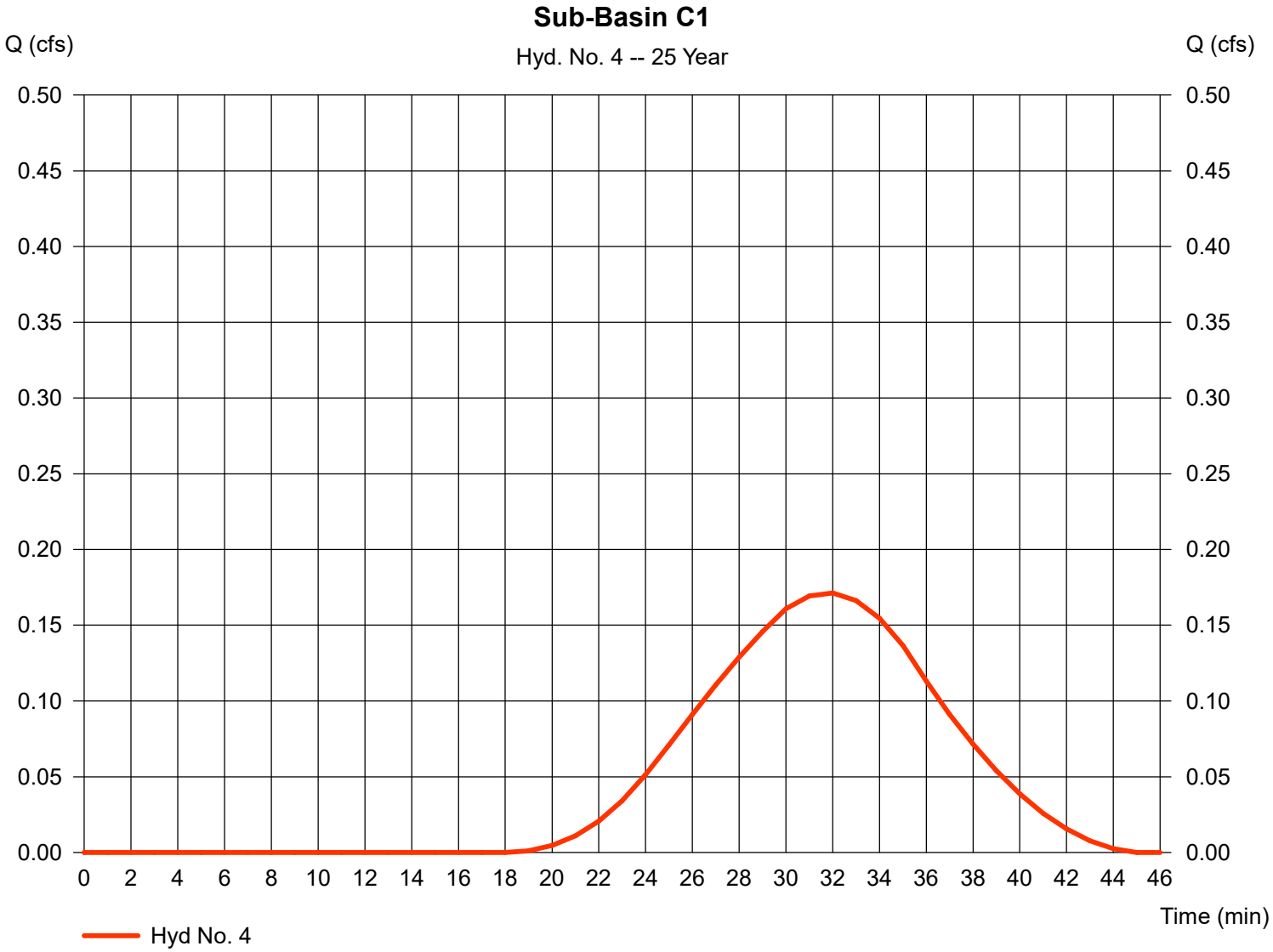
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.171 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 123 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.65 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



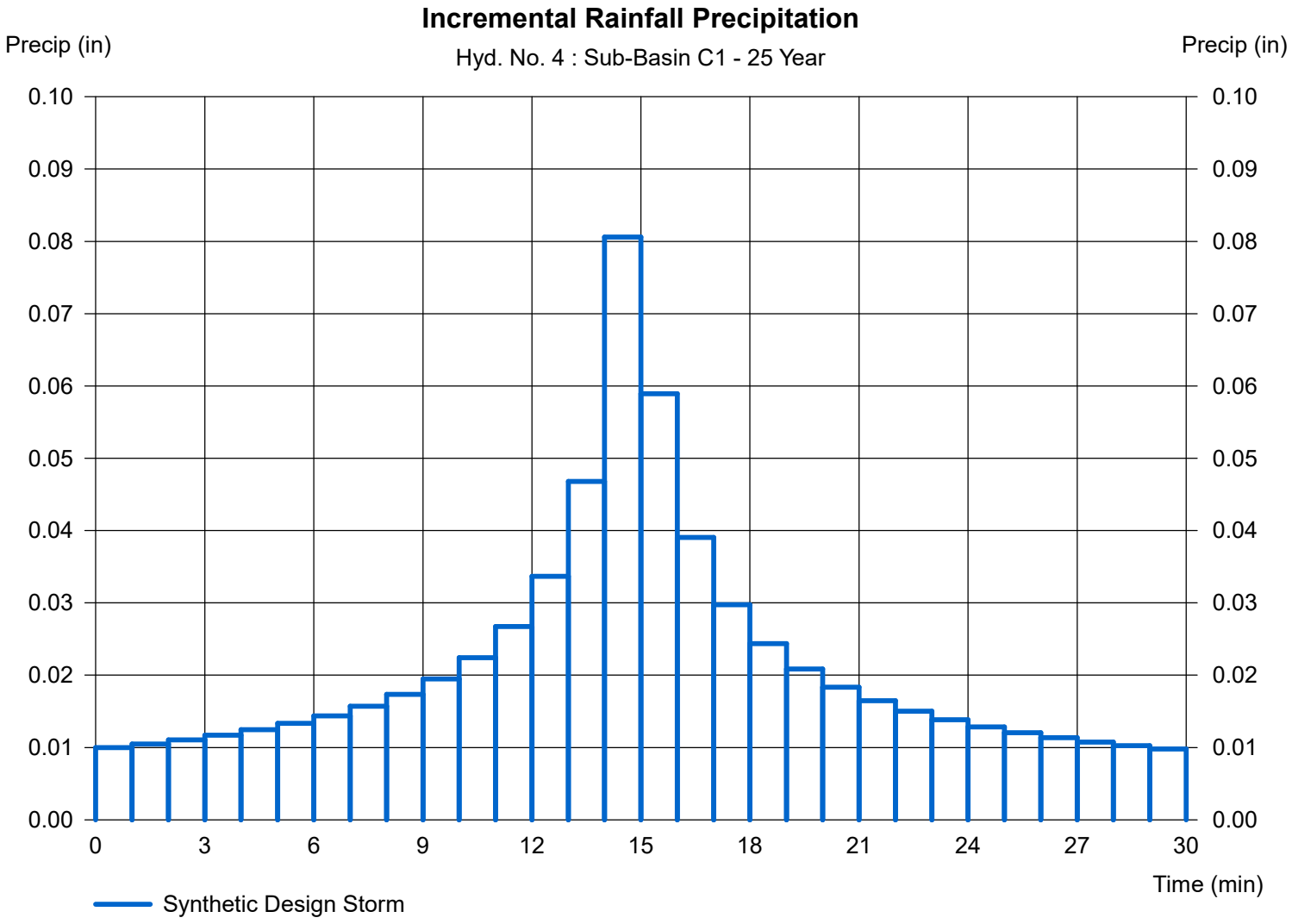
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 1 min |
| Total precip. | = 0.6500 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

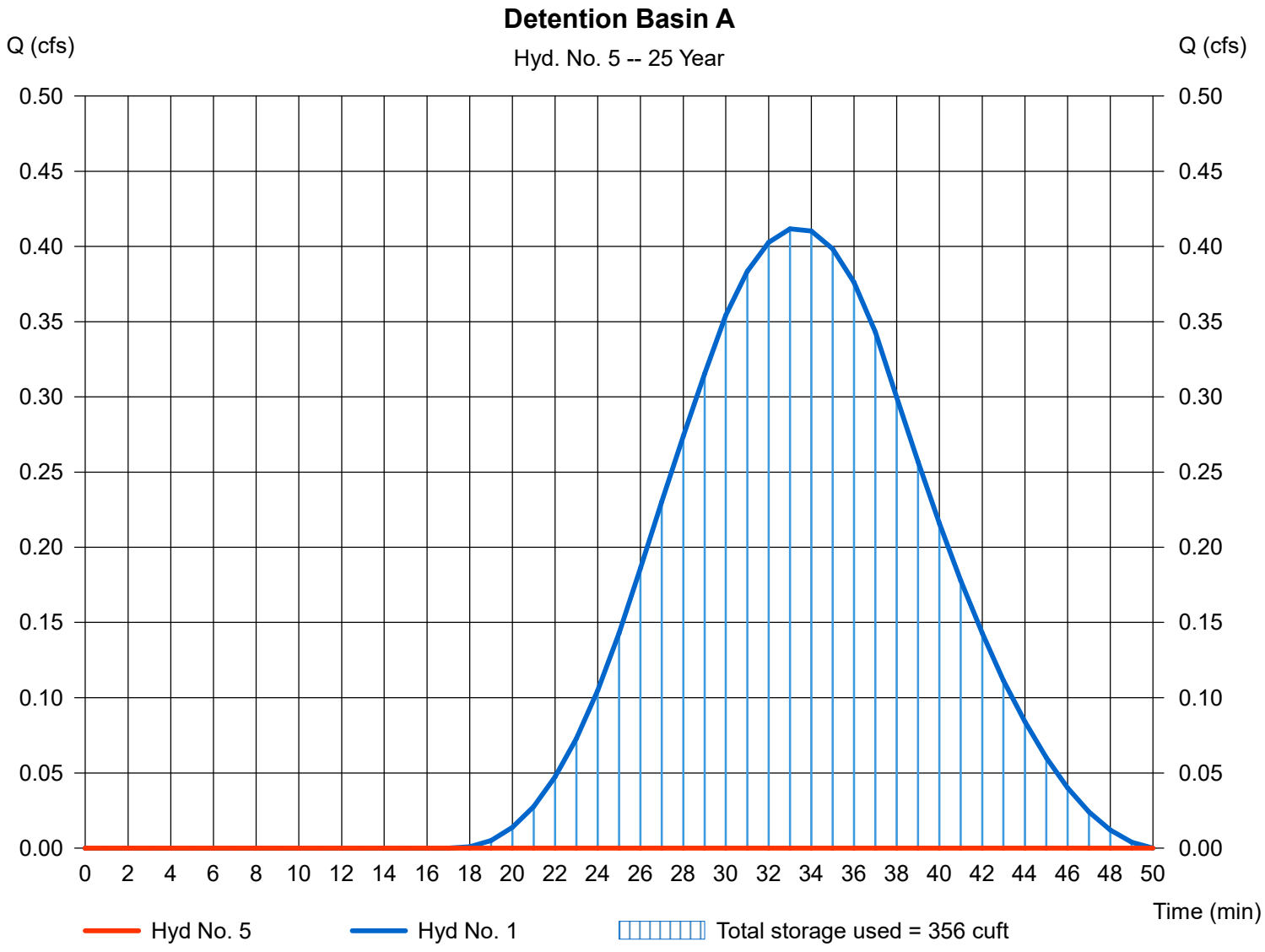
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.20 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 356 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

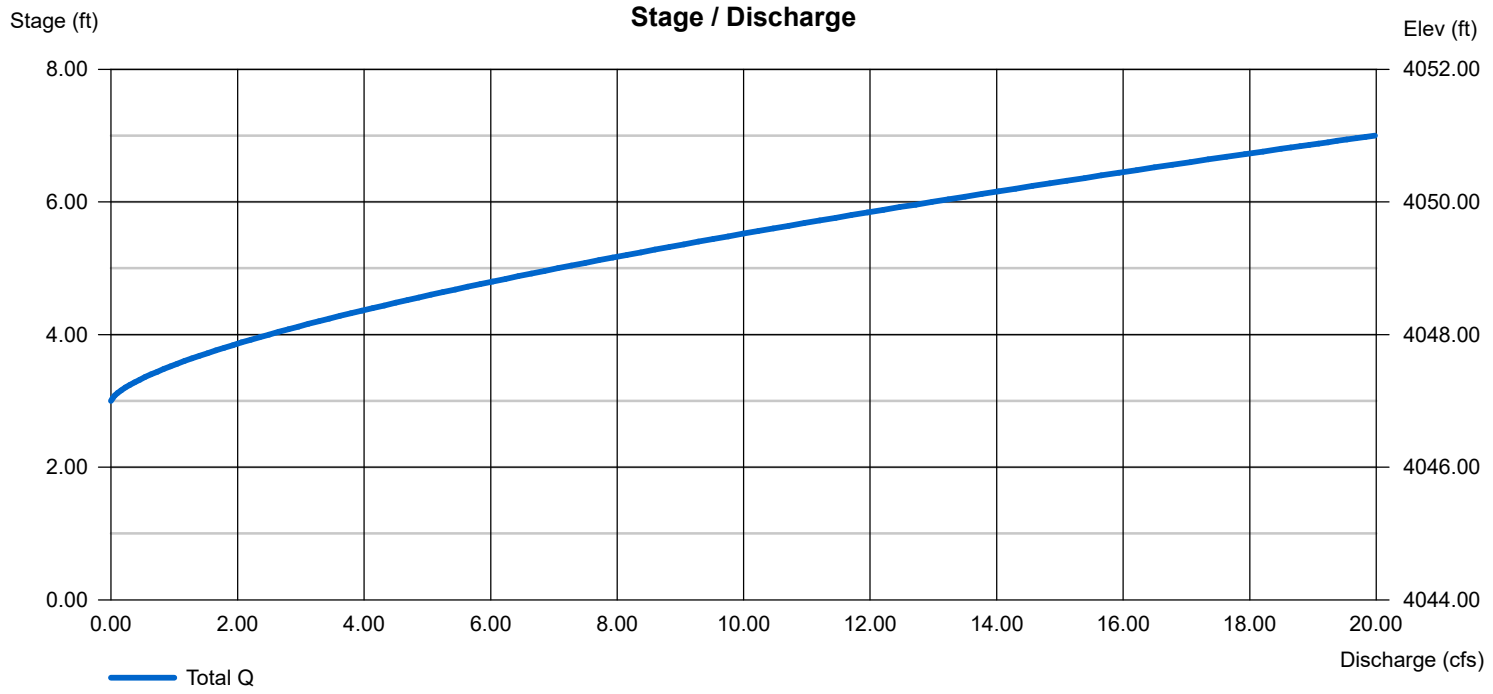
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



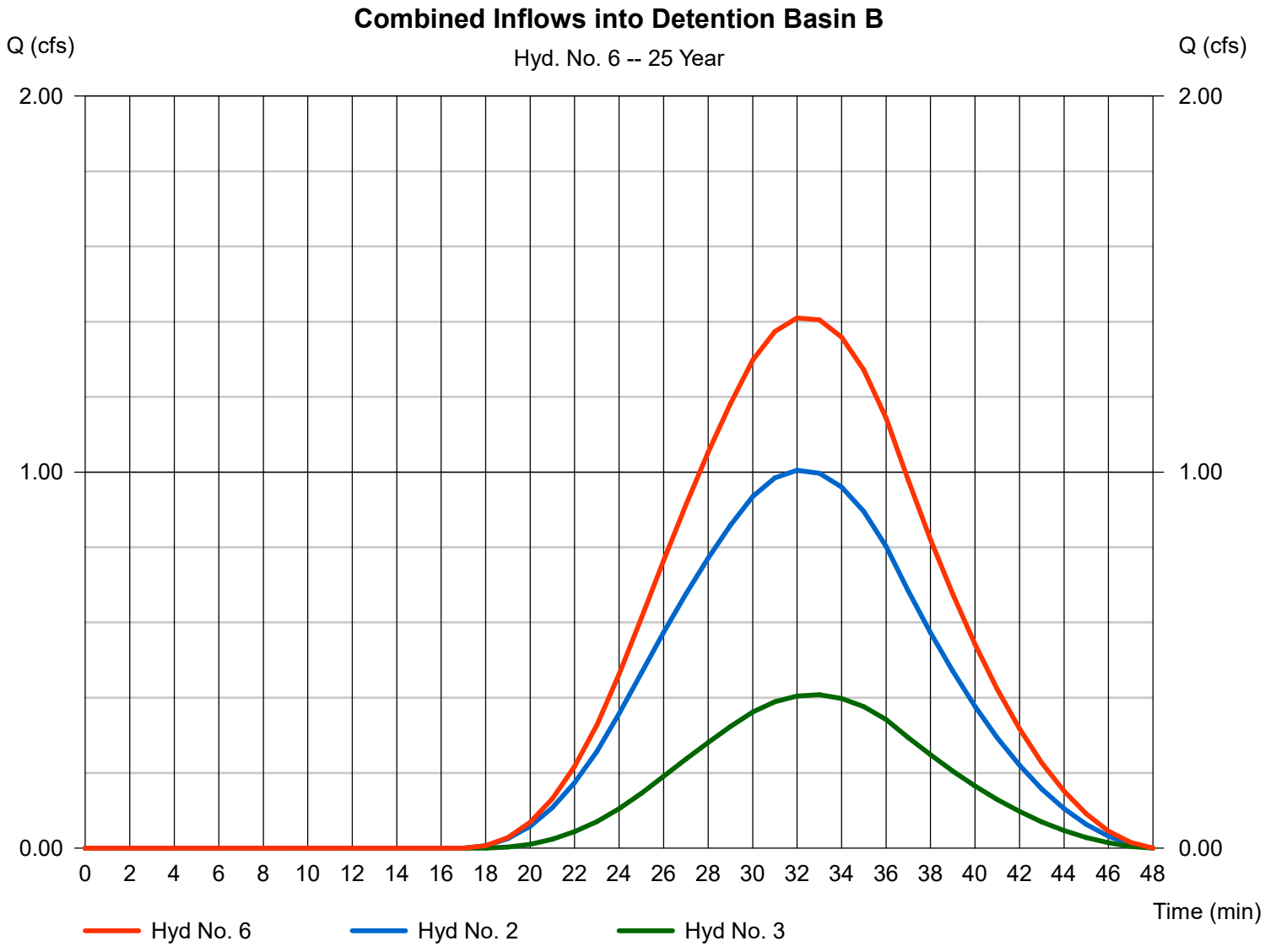
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 1.410 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 1,159 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

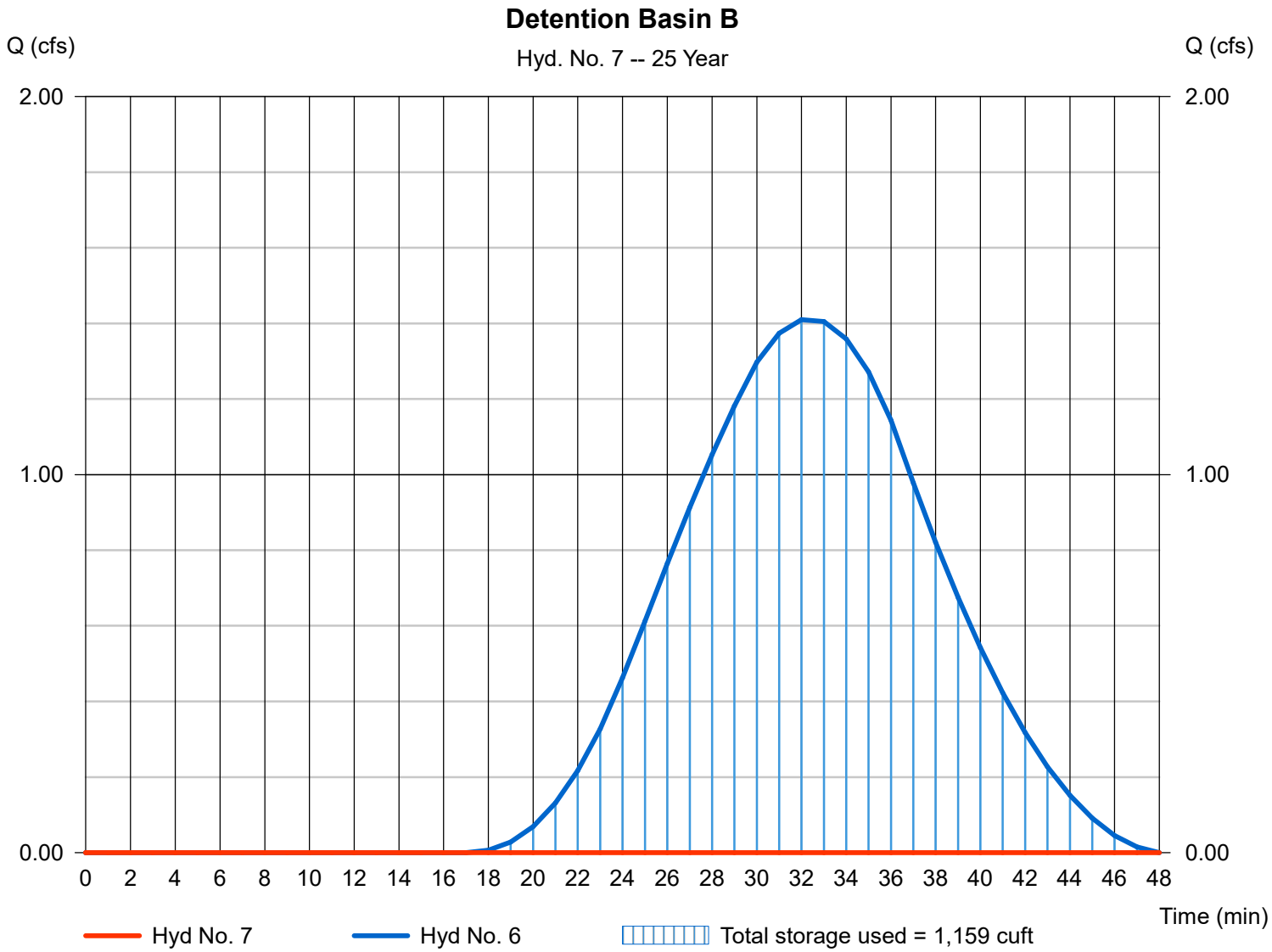
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.20 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 1,159 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

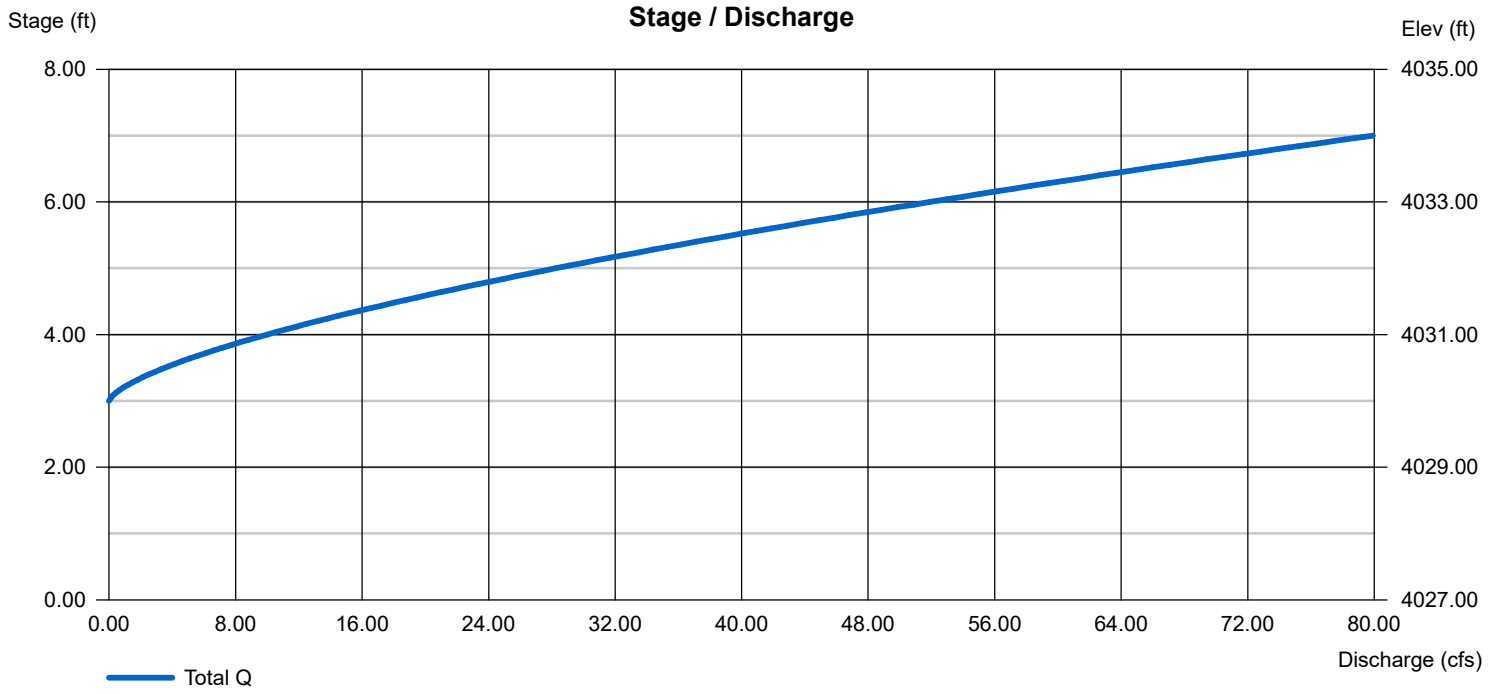
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

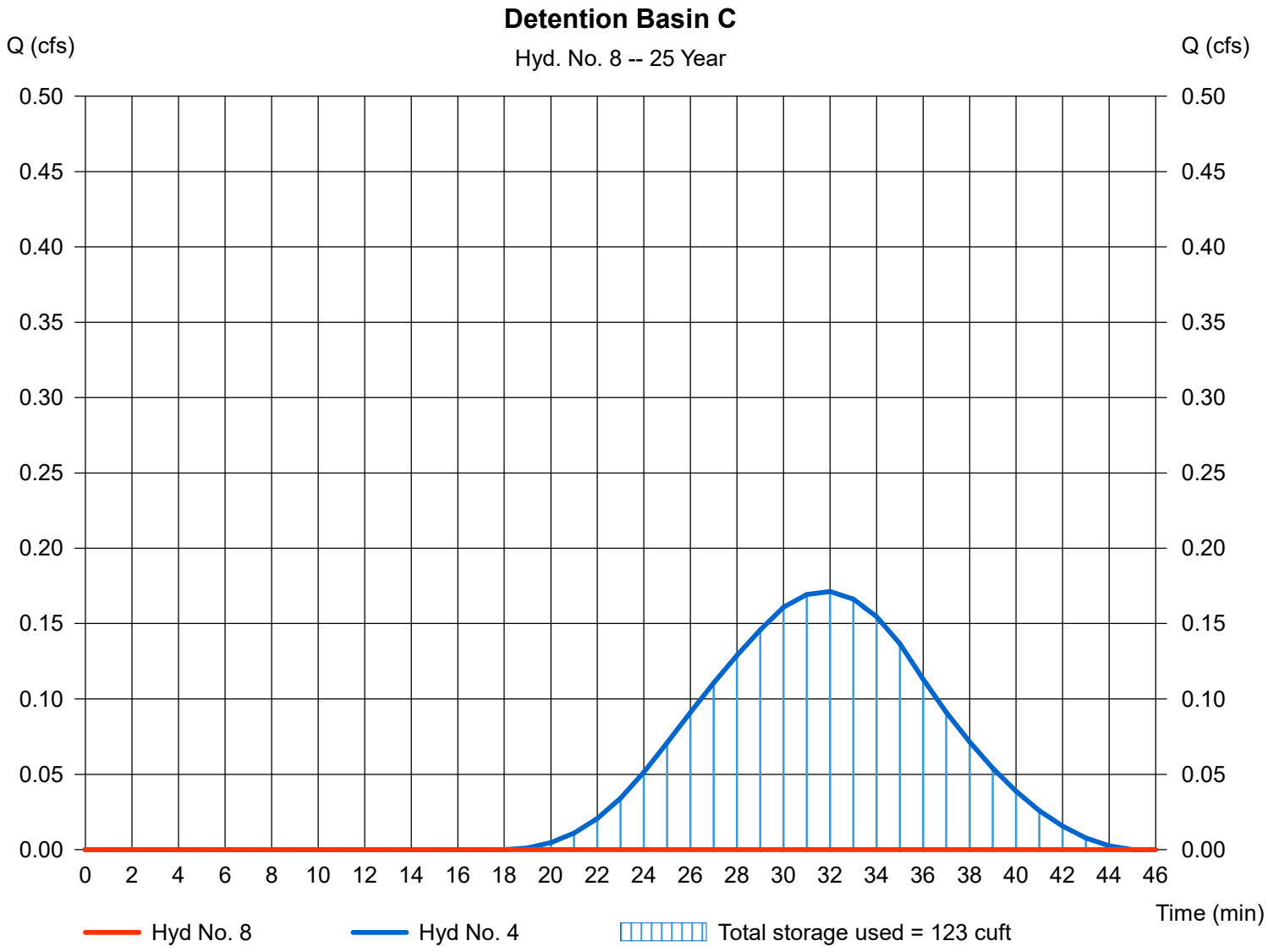
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.06 ft |
| Reservoir name | = | Detention Basint C | Max. Storage | = | 123 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basint C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

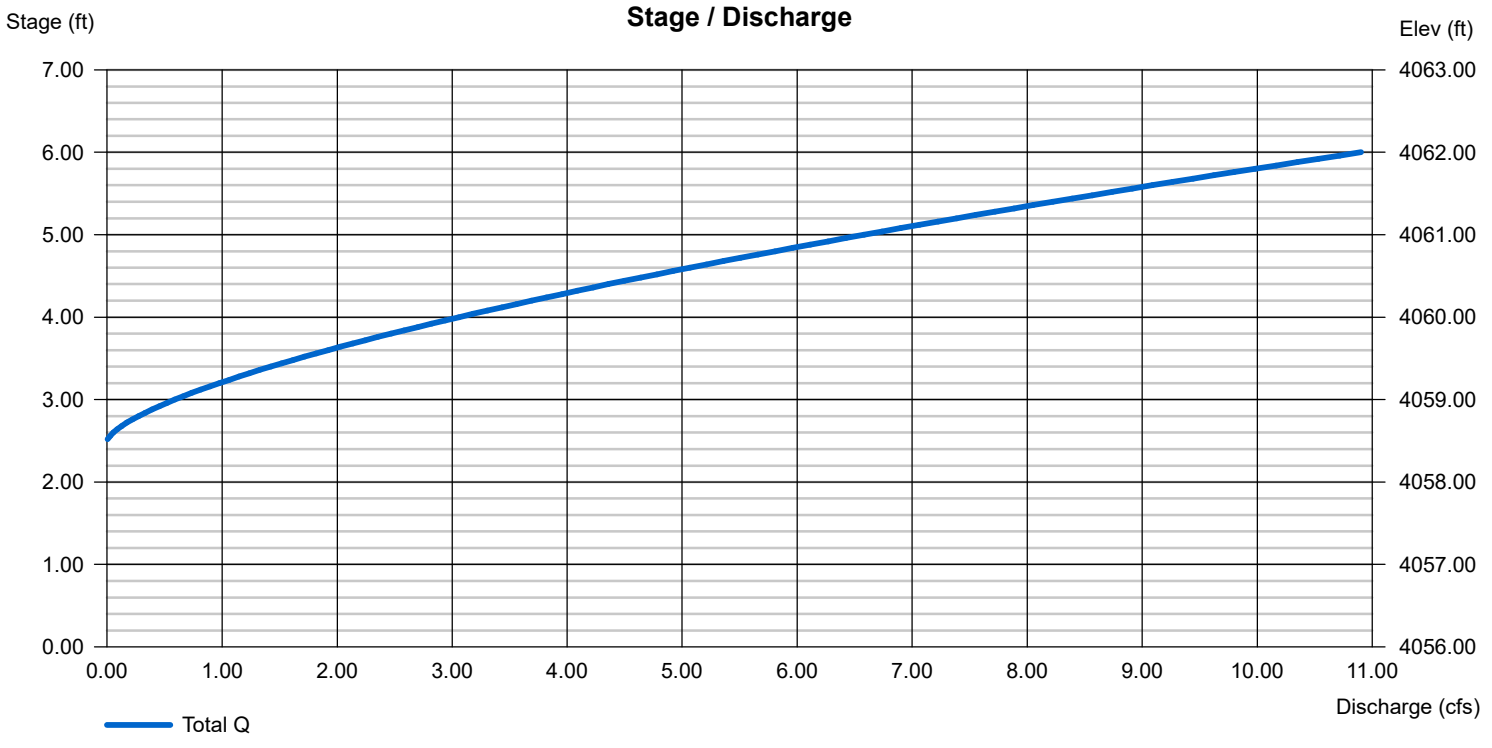
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



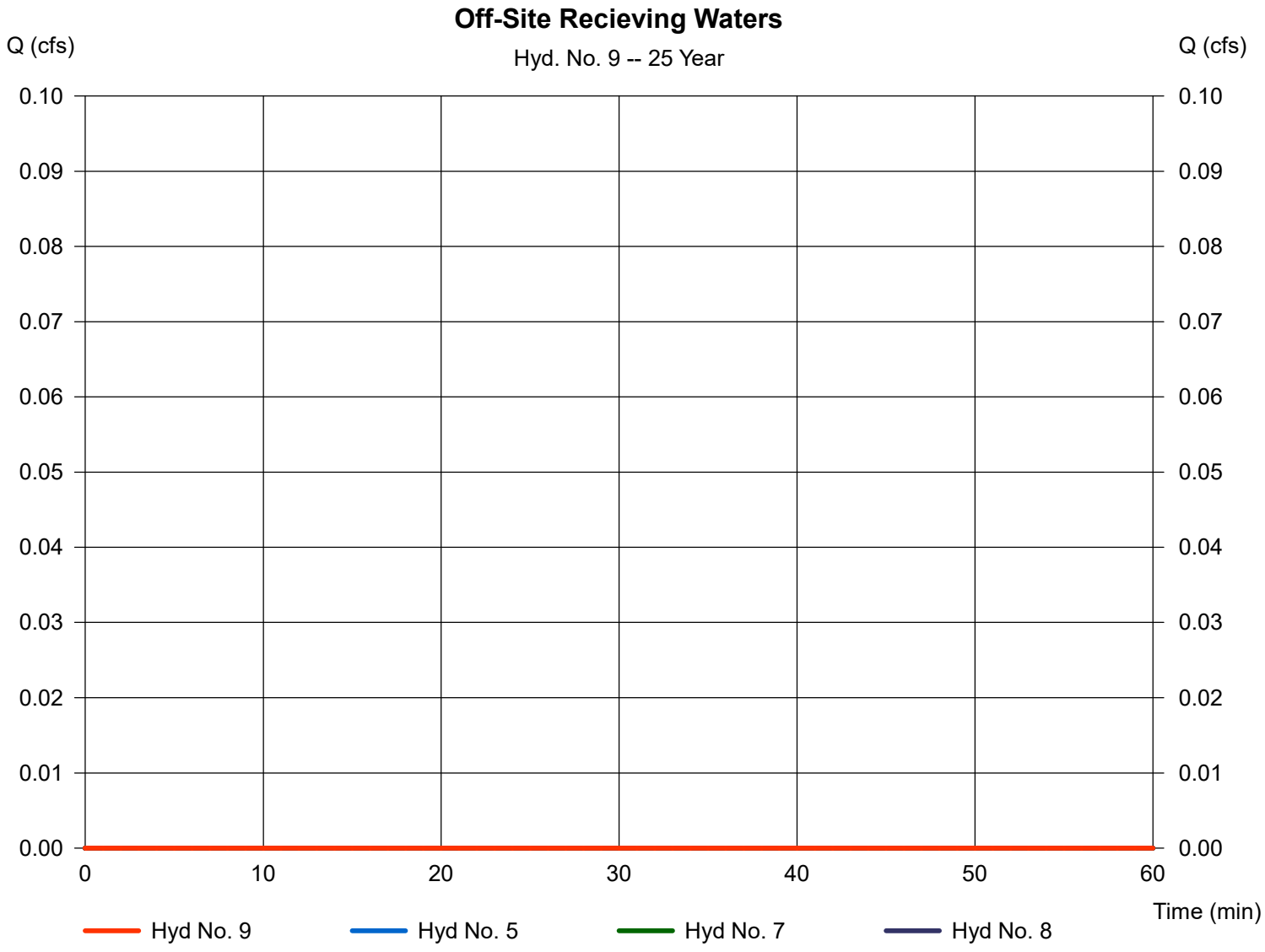
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

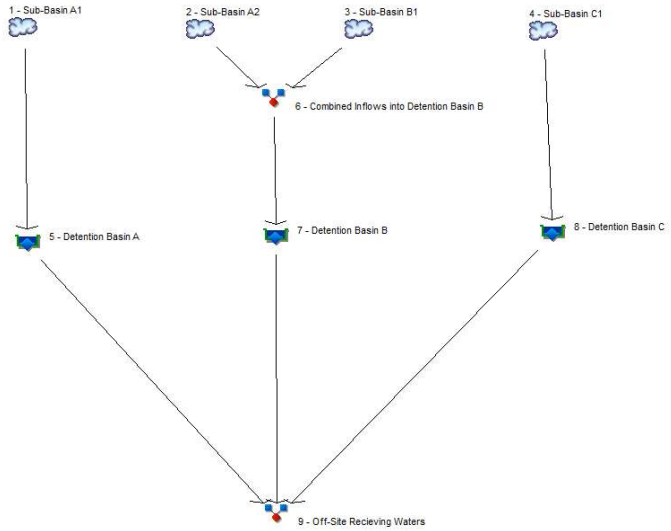
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.51 | 0.65 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 0.927 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.940 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.878 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 0.359 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 2.818 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 0.927 | 2 | 48 | 1,564 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 1.940 | 2 | 48 | 3,258 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 0.878 | 2 | 48 | 1,489 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 0.359 | 2 | 44 | 576 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4044.75 | 1,564 | Detention Basin A |
| 6 | Combine | 2.818 | 2 | 48 | 4,746 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4027.74 | 4,746 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4056.28 | 576 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

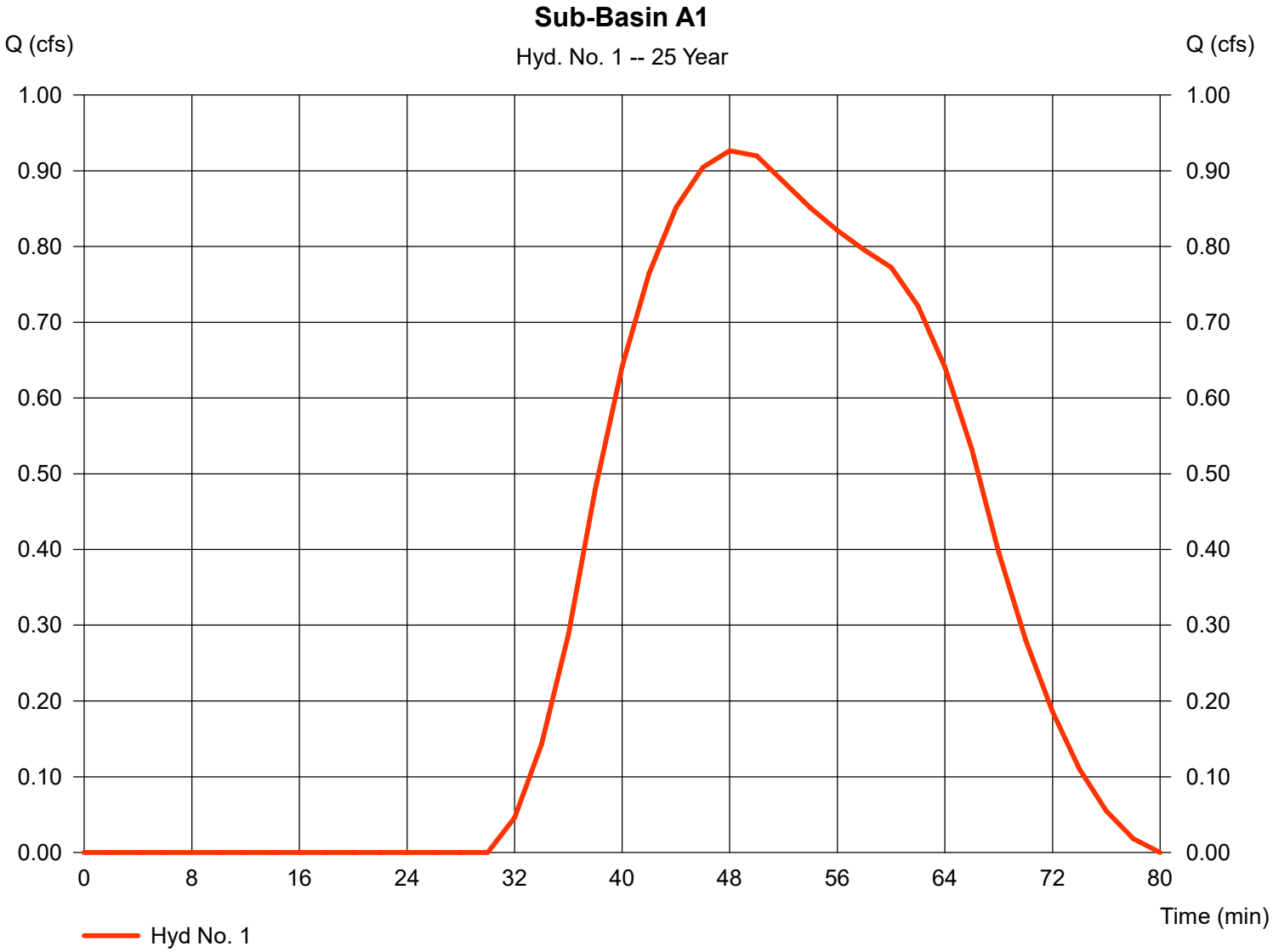
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.927 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 48 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,564 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



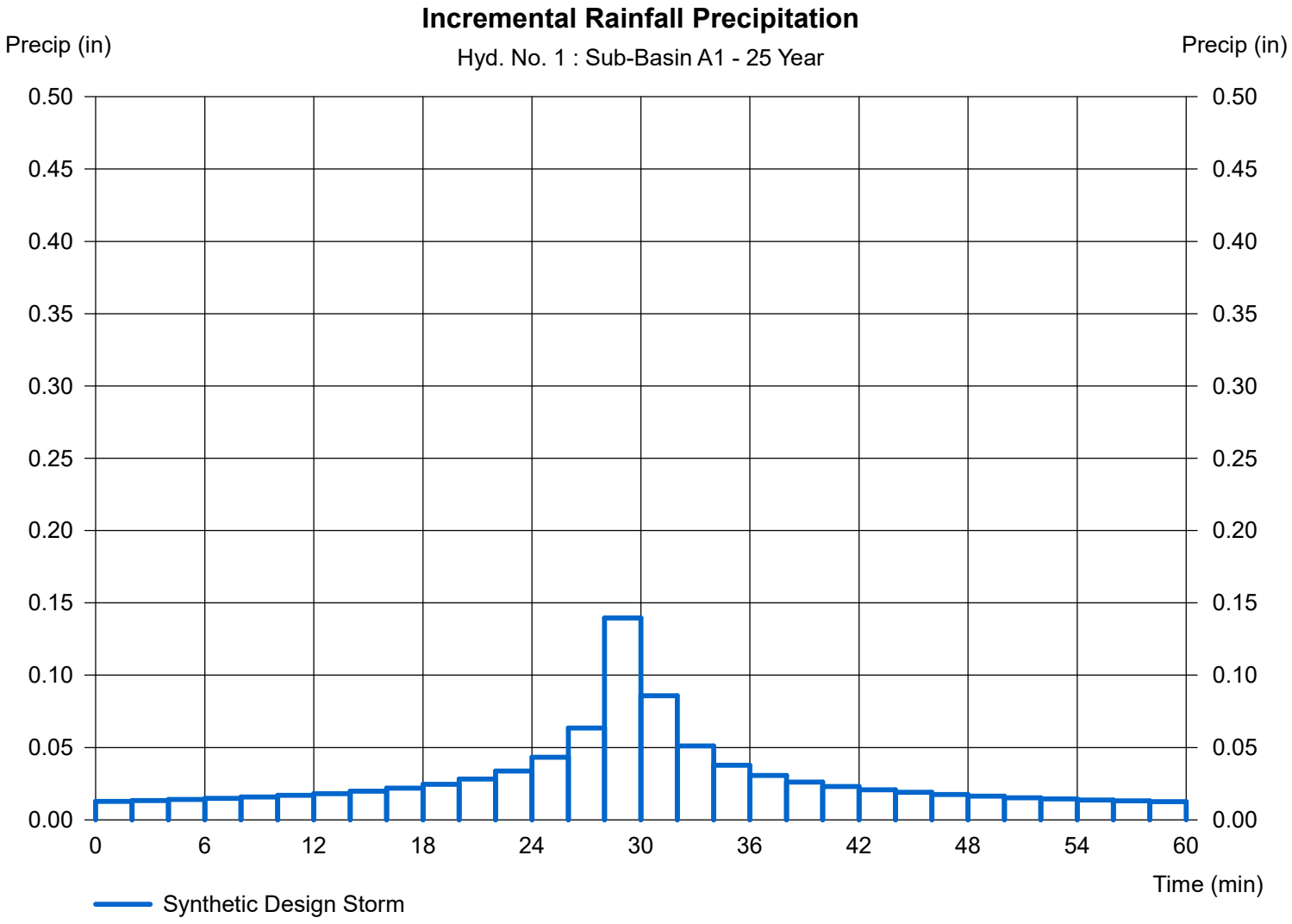
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.8780 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



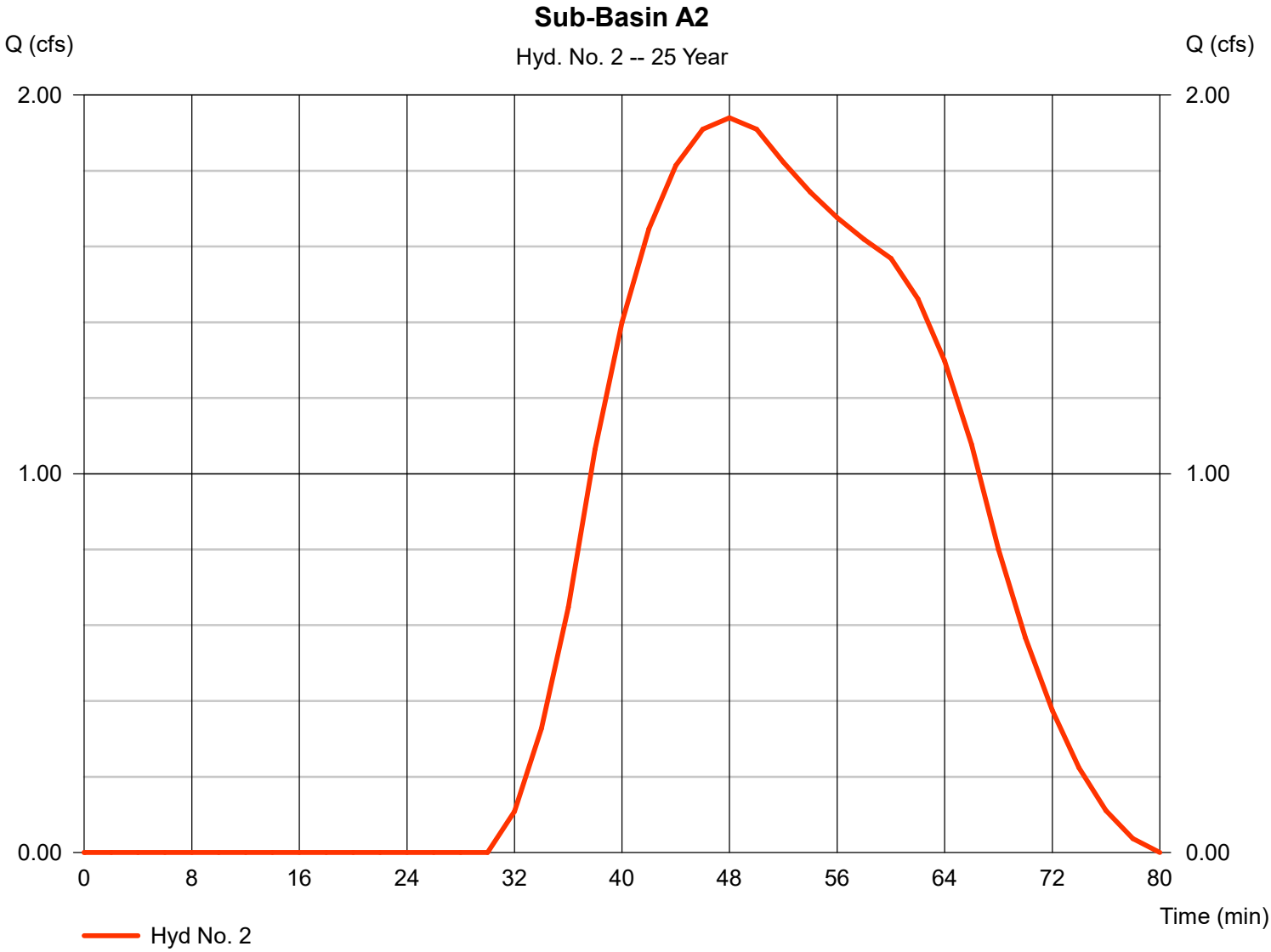
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.940 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 48 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,258 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



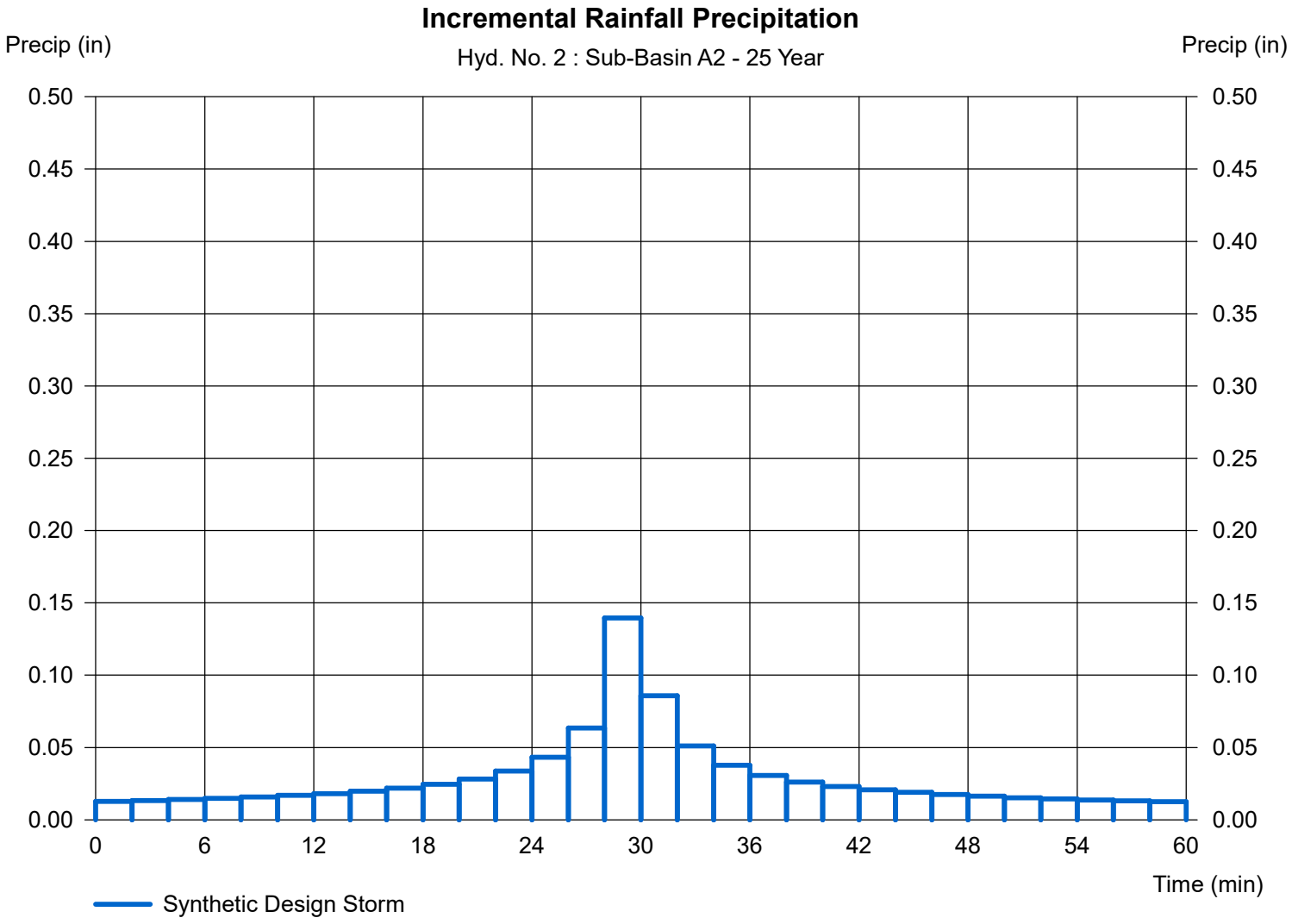
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.8780 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



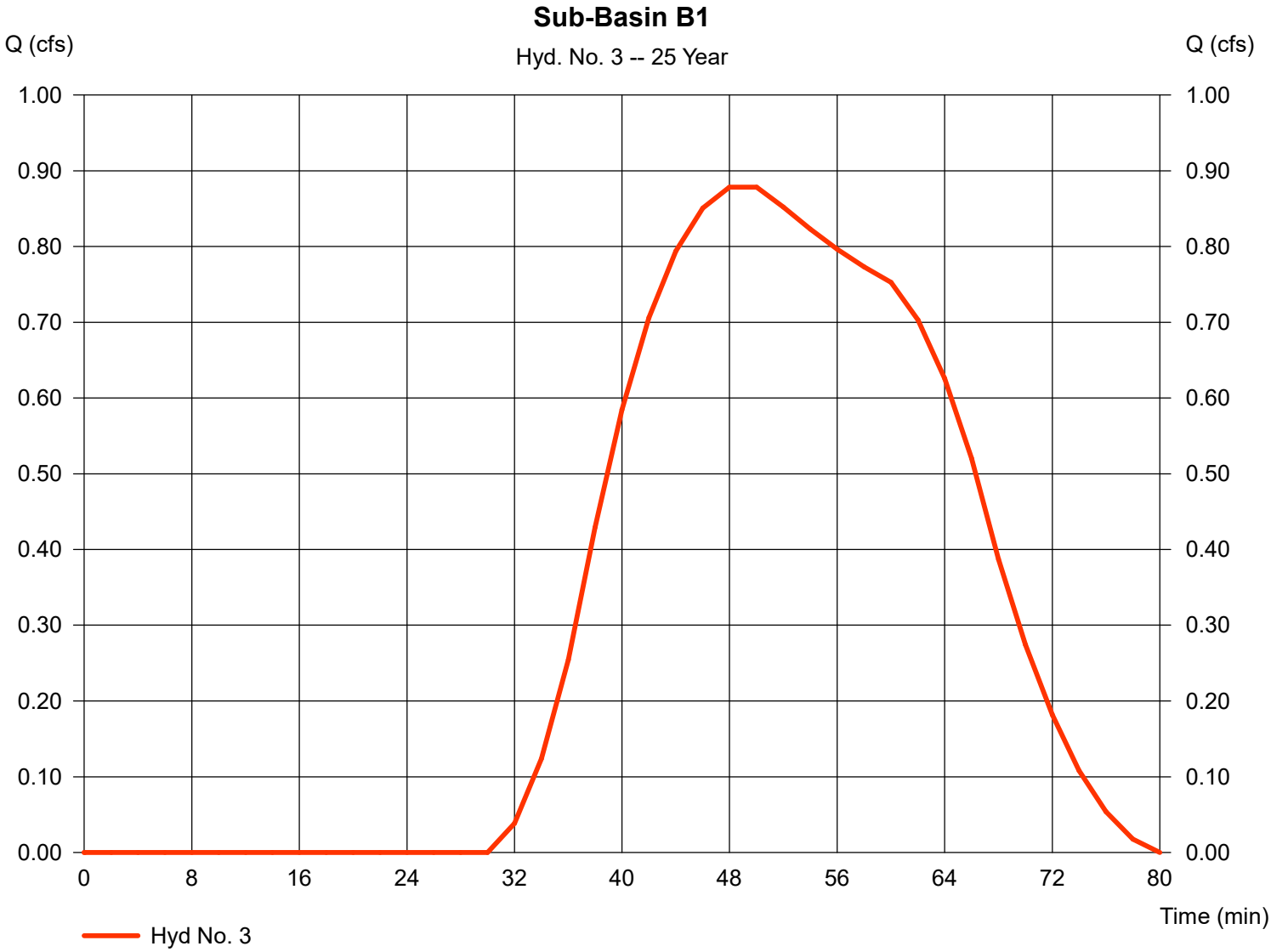
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.878 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 48 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,489 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



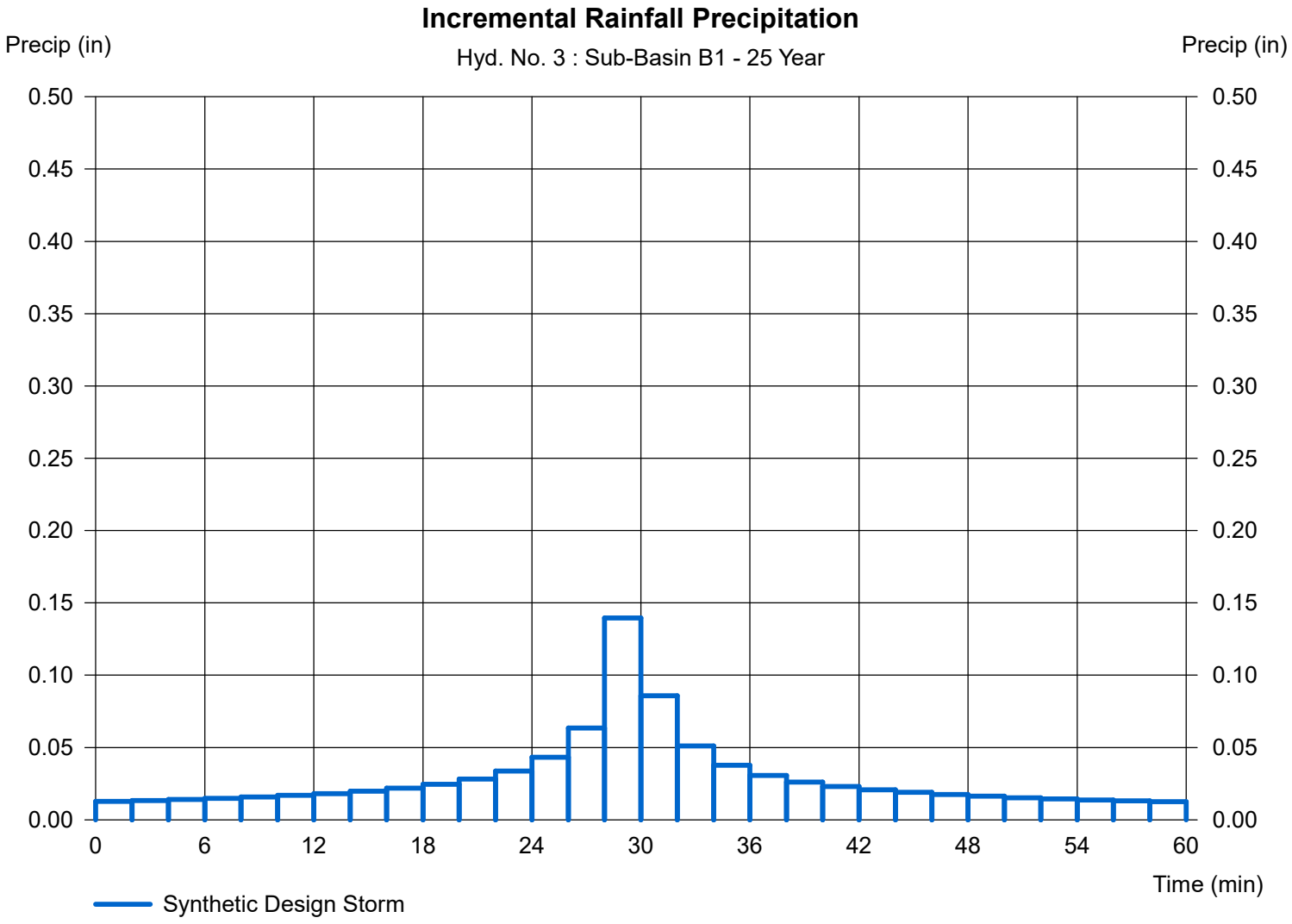
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.8780 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



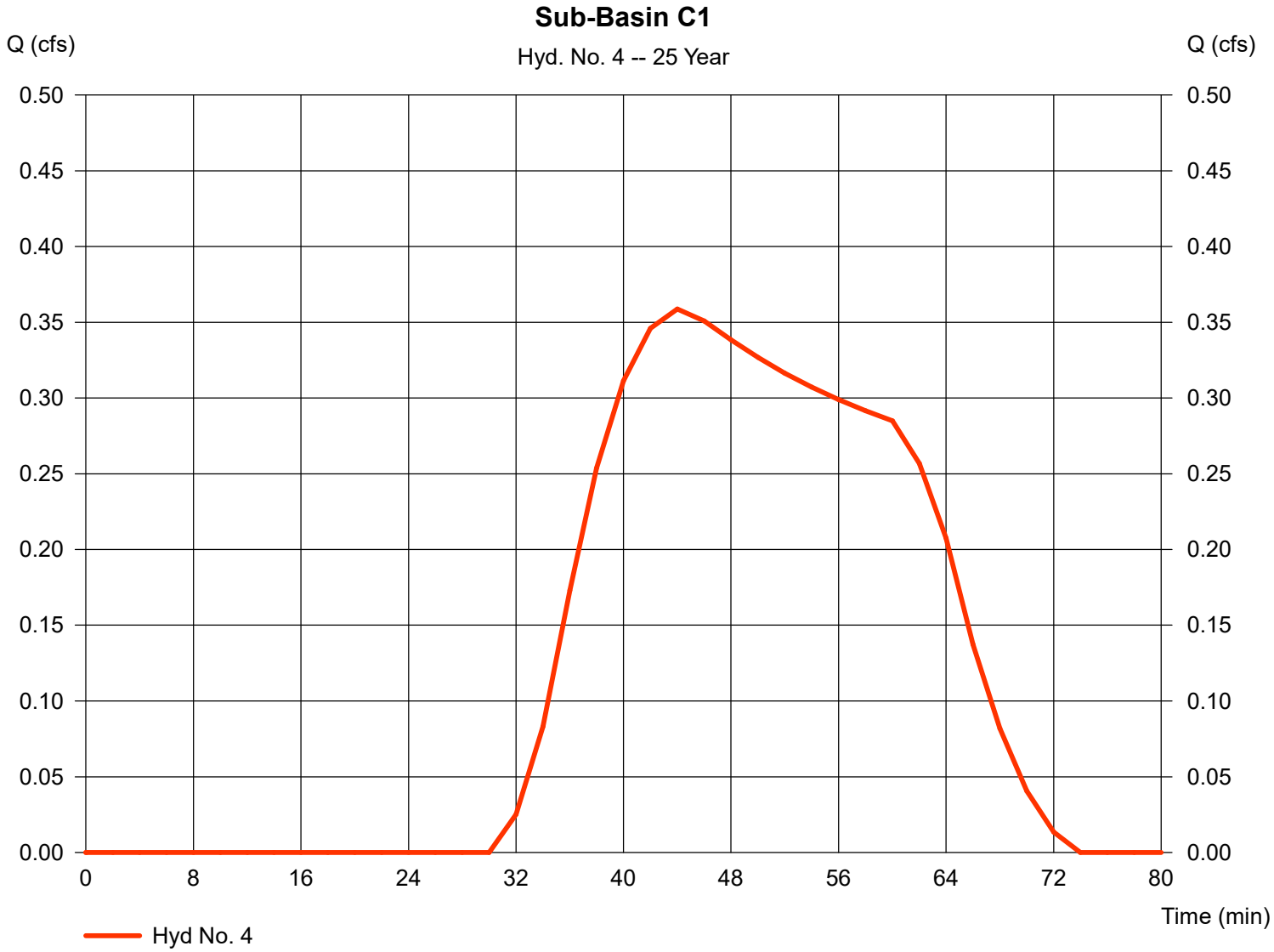
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 0.359 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 44 min |
| Time interval | = | 2 min | Hyd. volume | = | 576 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



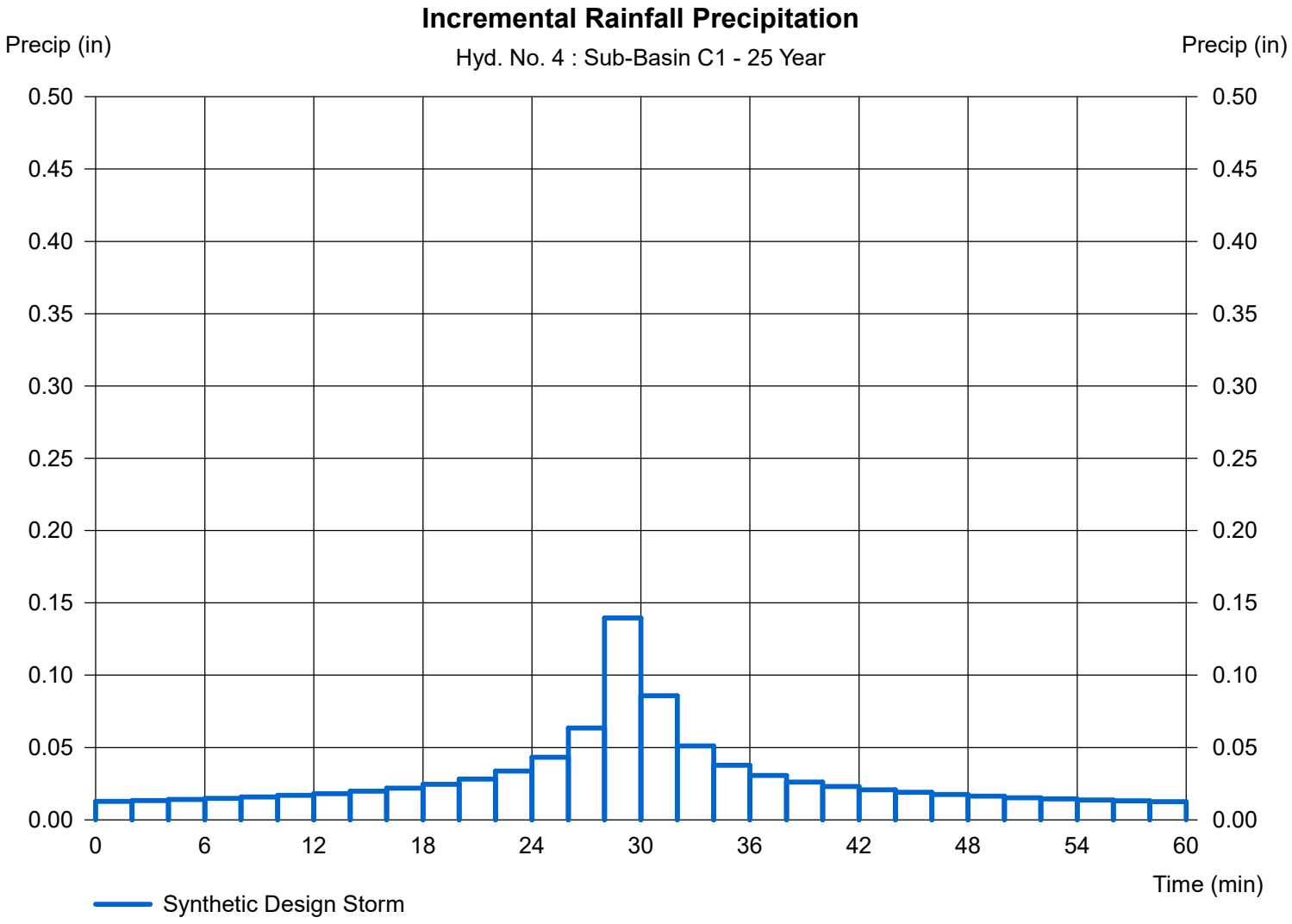
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 0.8780 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



# Hydrograph Report

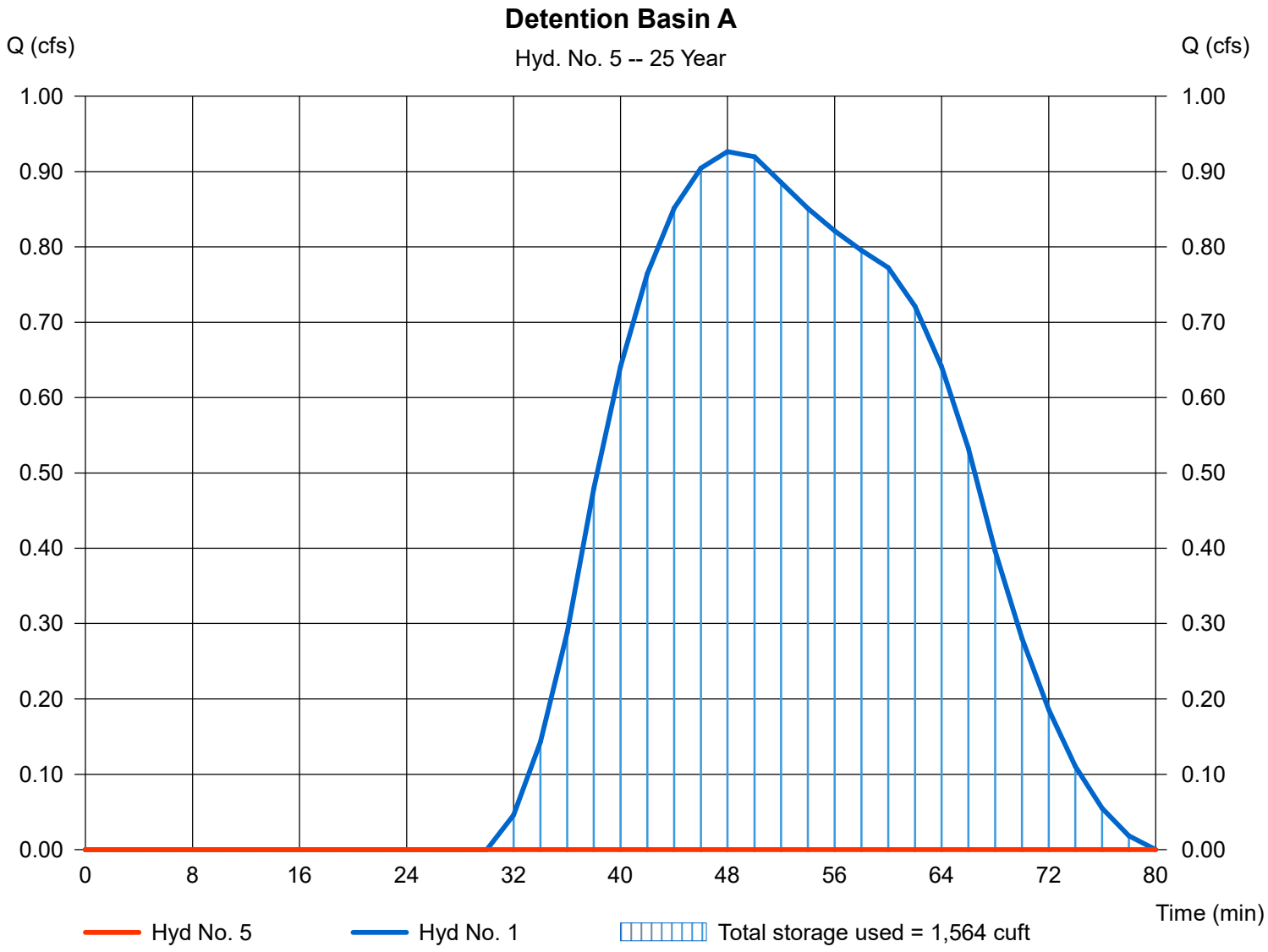
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4044.75 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 1,564 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

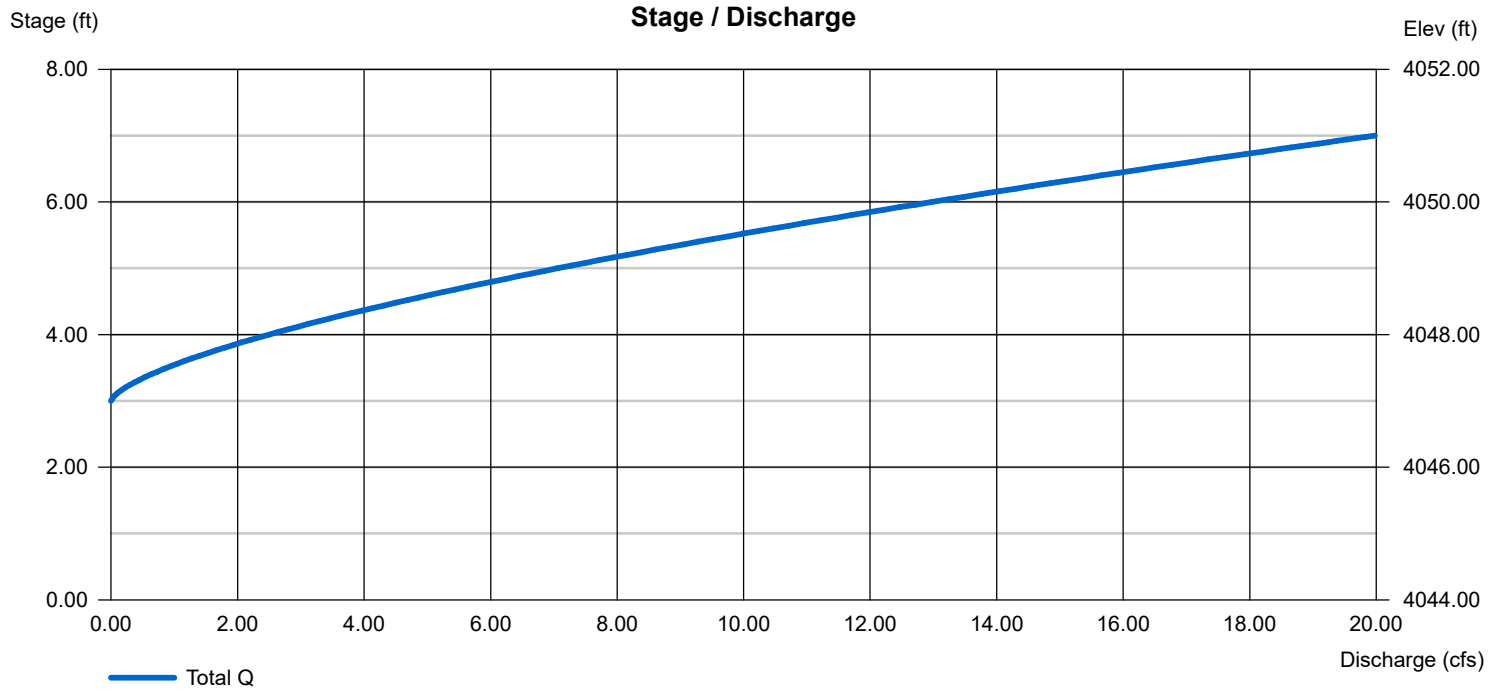
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



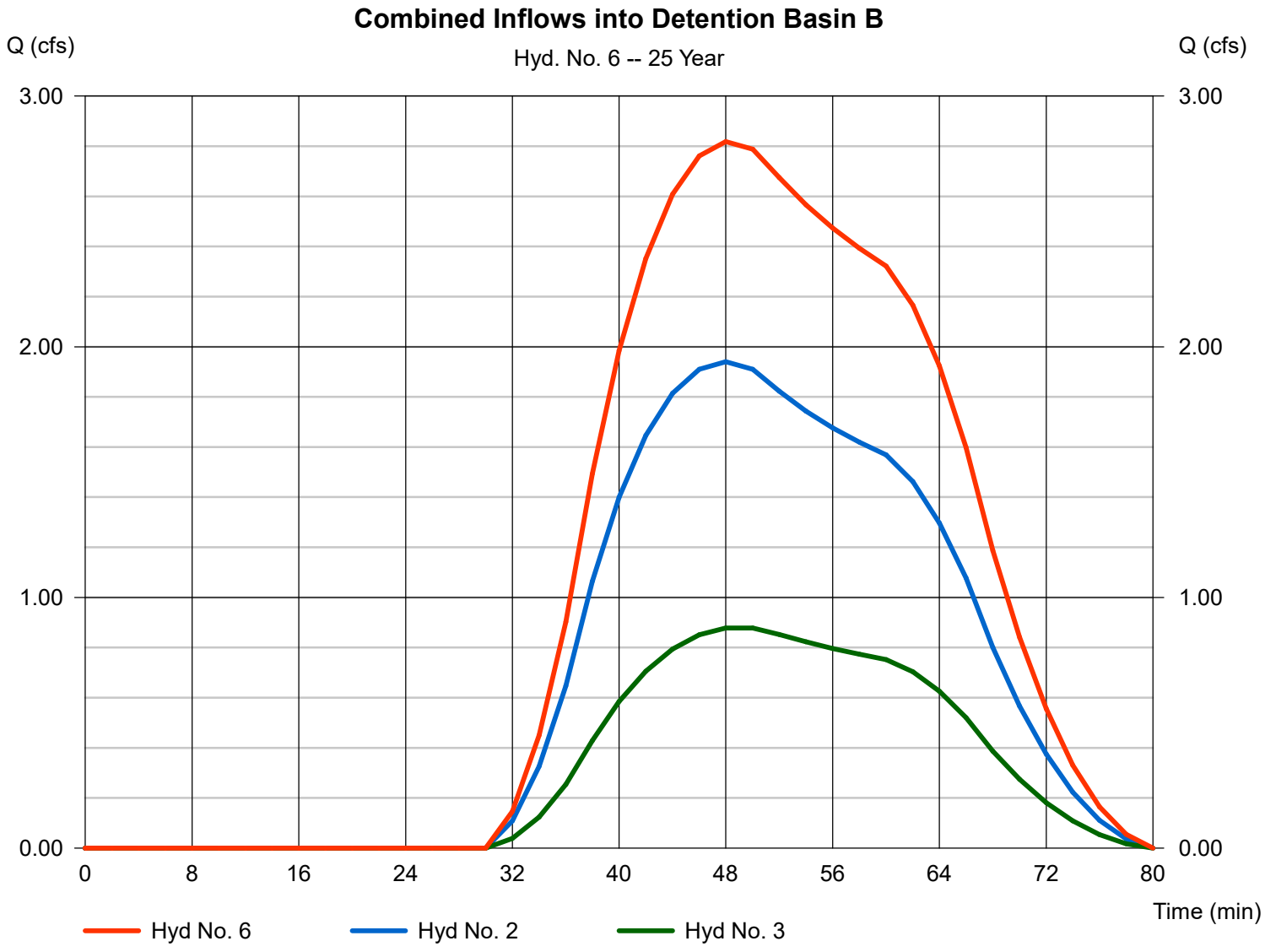
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 2.818 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 48 min |
| Time interval | = 2 min | Hyd. volume | = 4,746 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

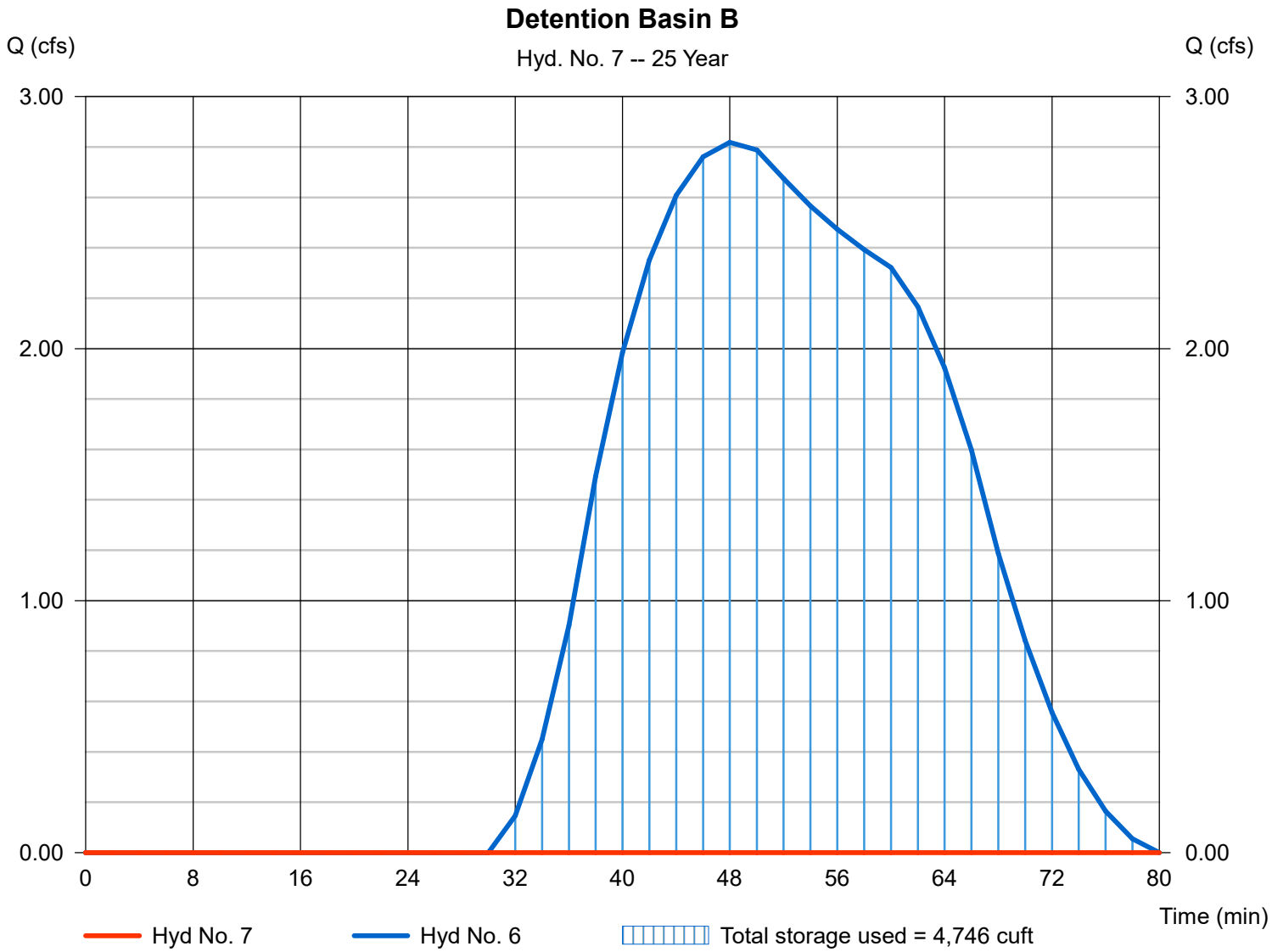
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4027.74 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 4,746 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

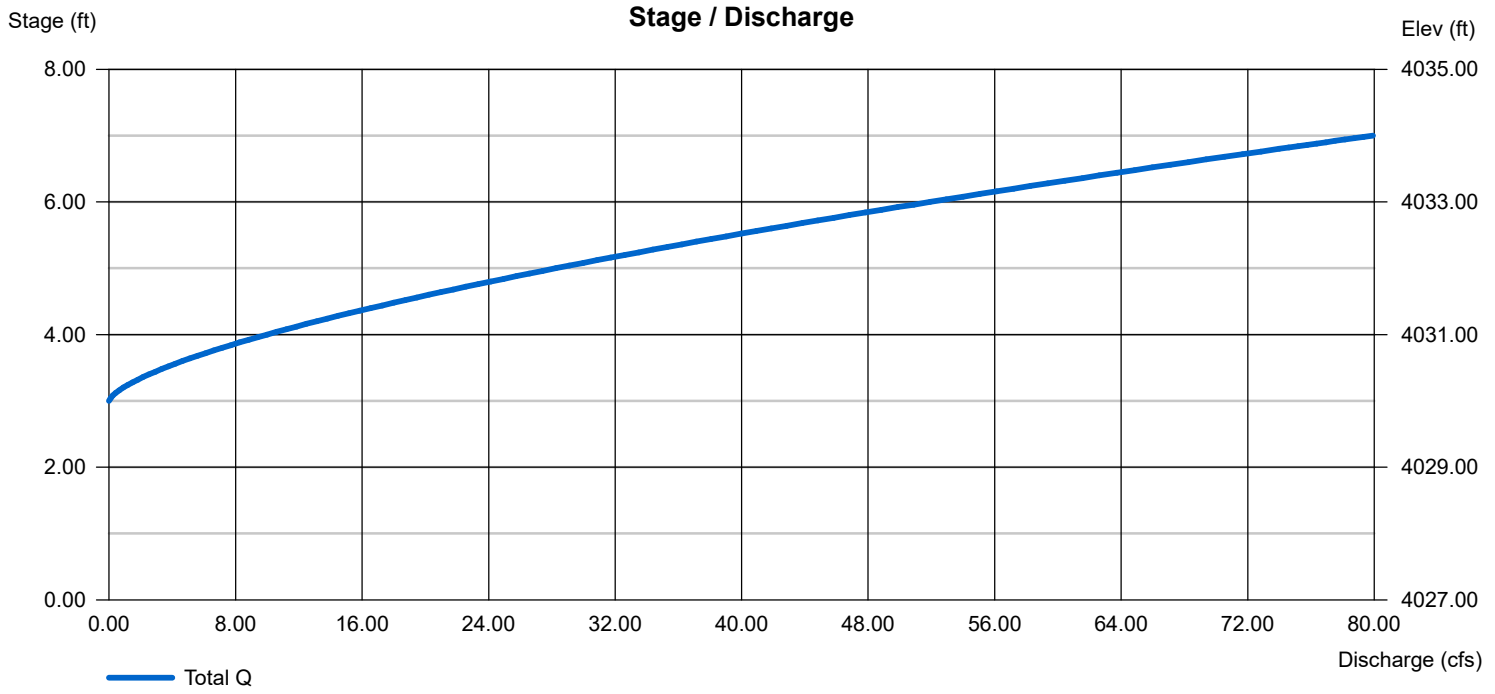
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

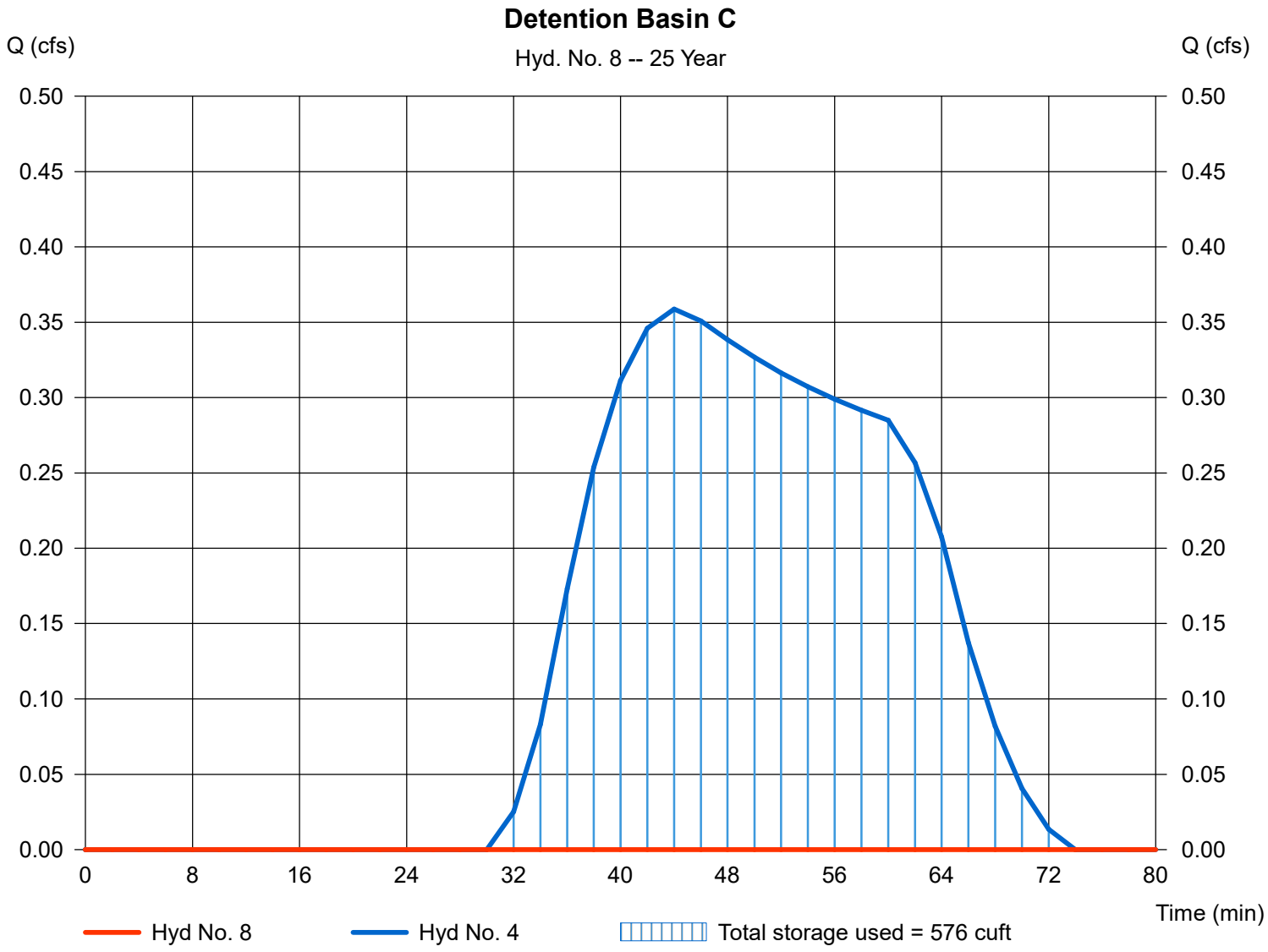
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.28 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 576 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

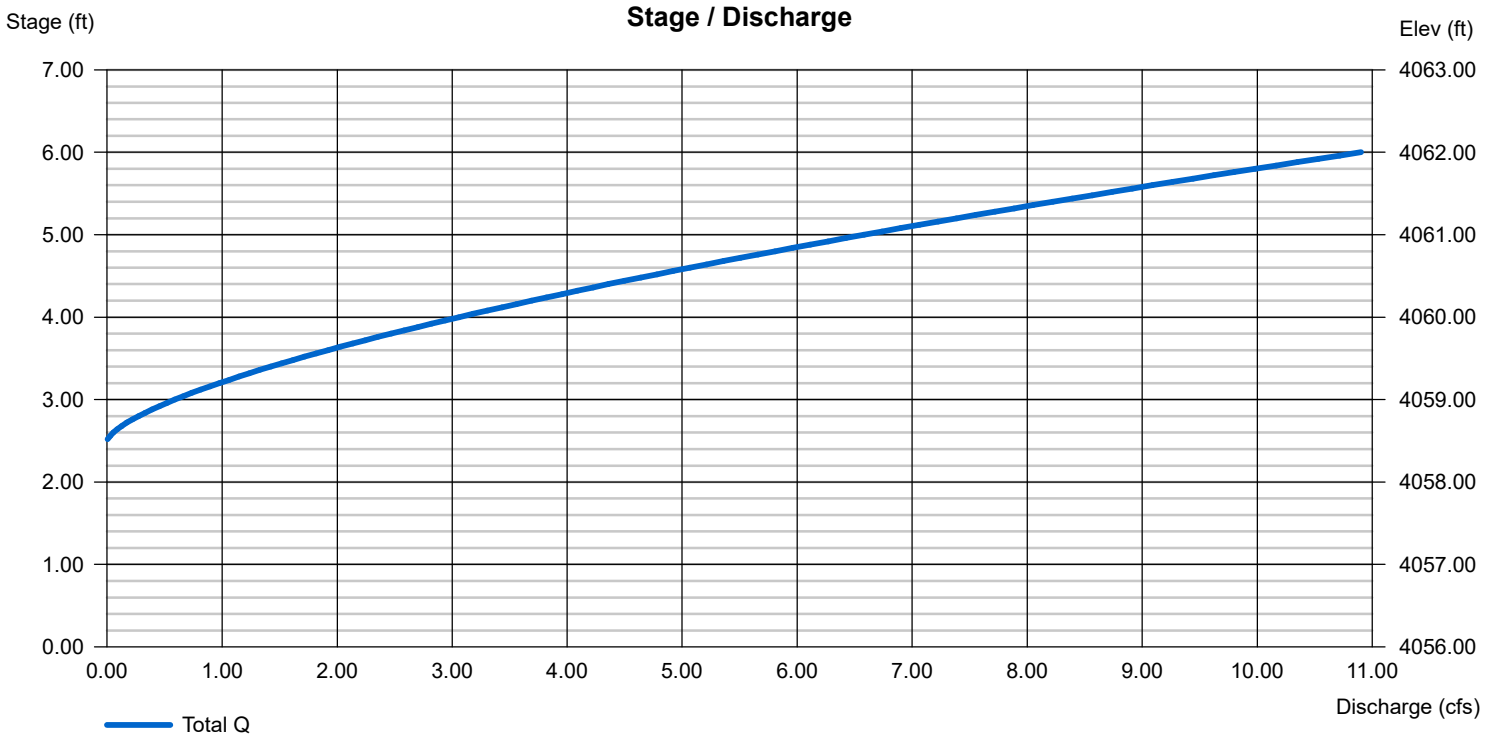
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



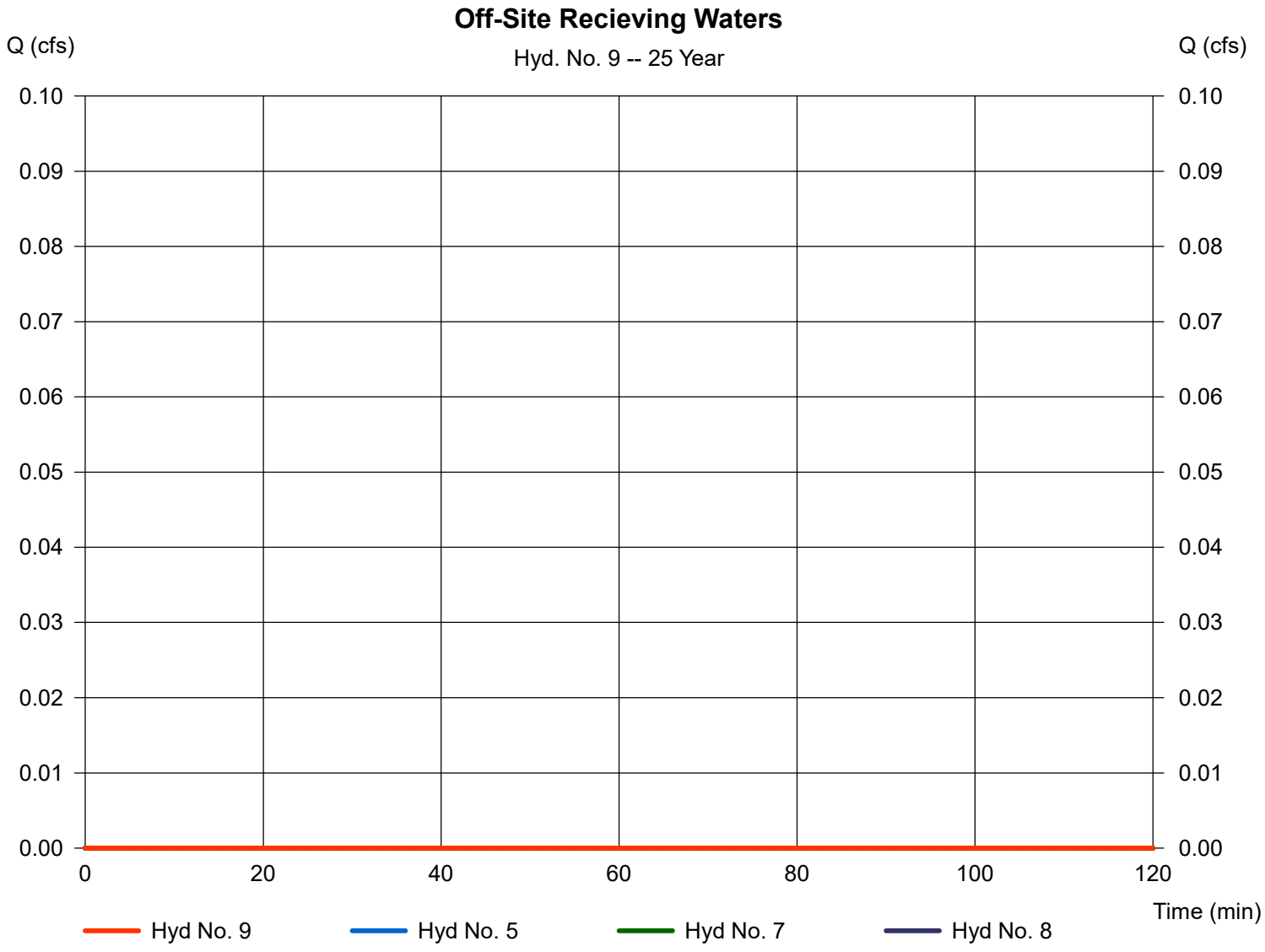
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

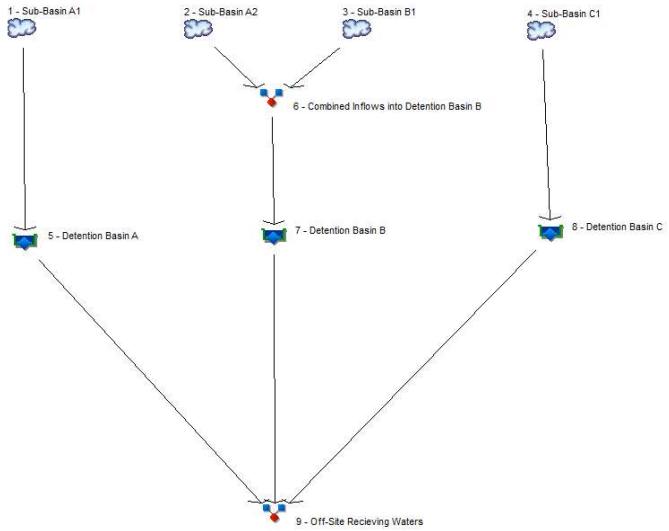
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.69 | 0.88 | 0.00 | 1.20 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 2.379 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 4.899 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 2.300 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.046 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 7.188 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 2.379 | 2 | 100 | 6,295 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 4.899 | 2 | 100 | 12,673 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 2.300 | 2 | 102 | 6,179 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 1.046 | 2 | 98 | 2,432 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4046.01 | 6,295 | Detention Basin A |
| 6 | Combine | 7.188 | 2 | 100 | 18,853 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 2 | n/a | 0 | 6 | 4029.12 | 18,853 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4057.00 | 2,432 | Detention Basin C |
| 9 | Combine | 0.000 | 2 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

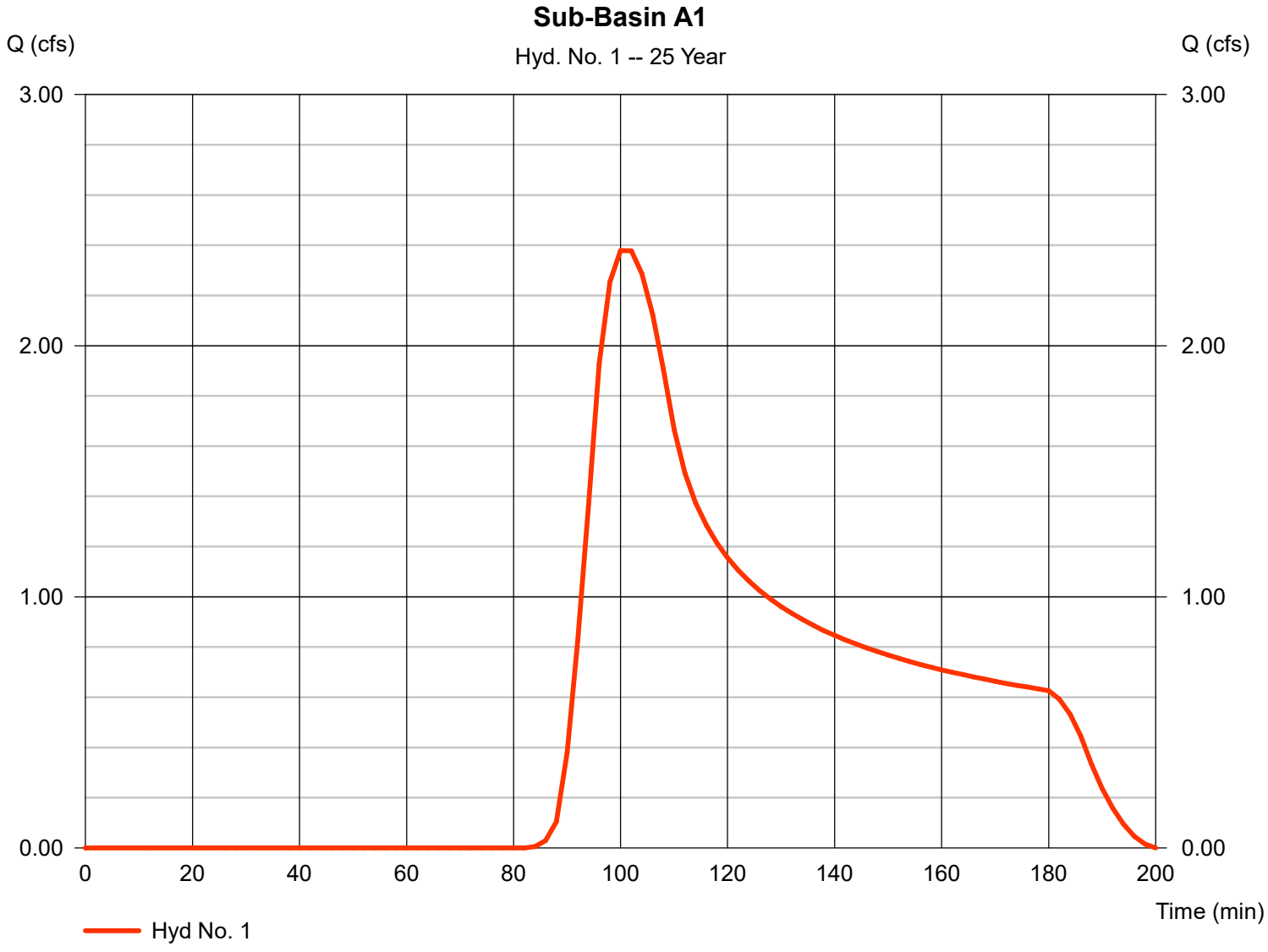
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 2.379 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 100 min |
| Time interval | = 2 min | Hyd. volume | = 6,295 cuft |
| Drainage area | = 6.178 ac | Curve number | = 81.6 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 11.80 min |
| Total precip. | = 1.38 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | Shape factor | = 484 |



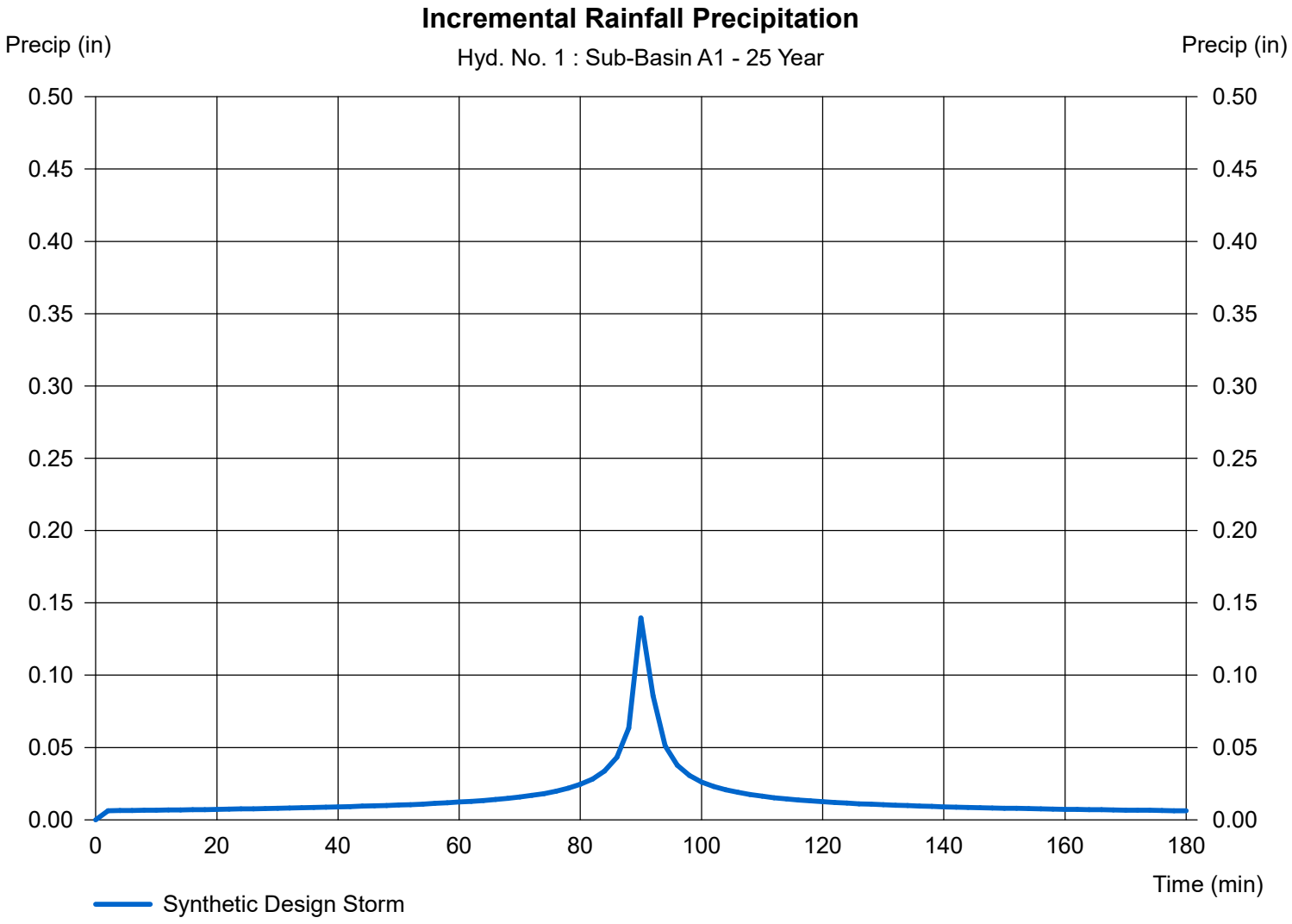
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.3823 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



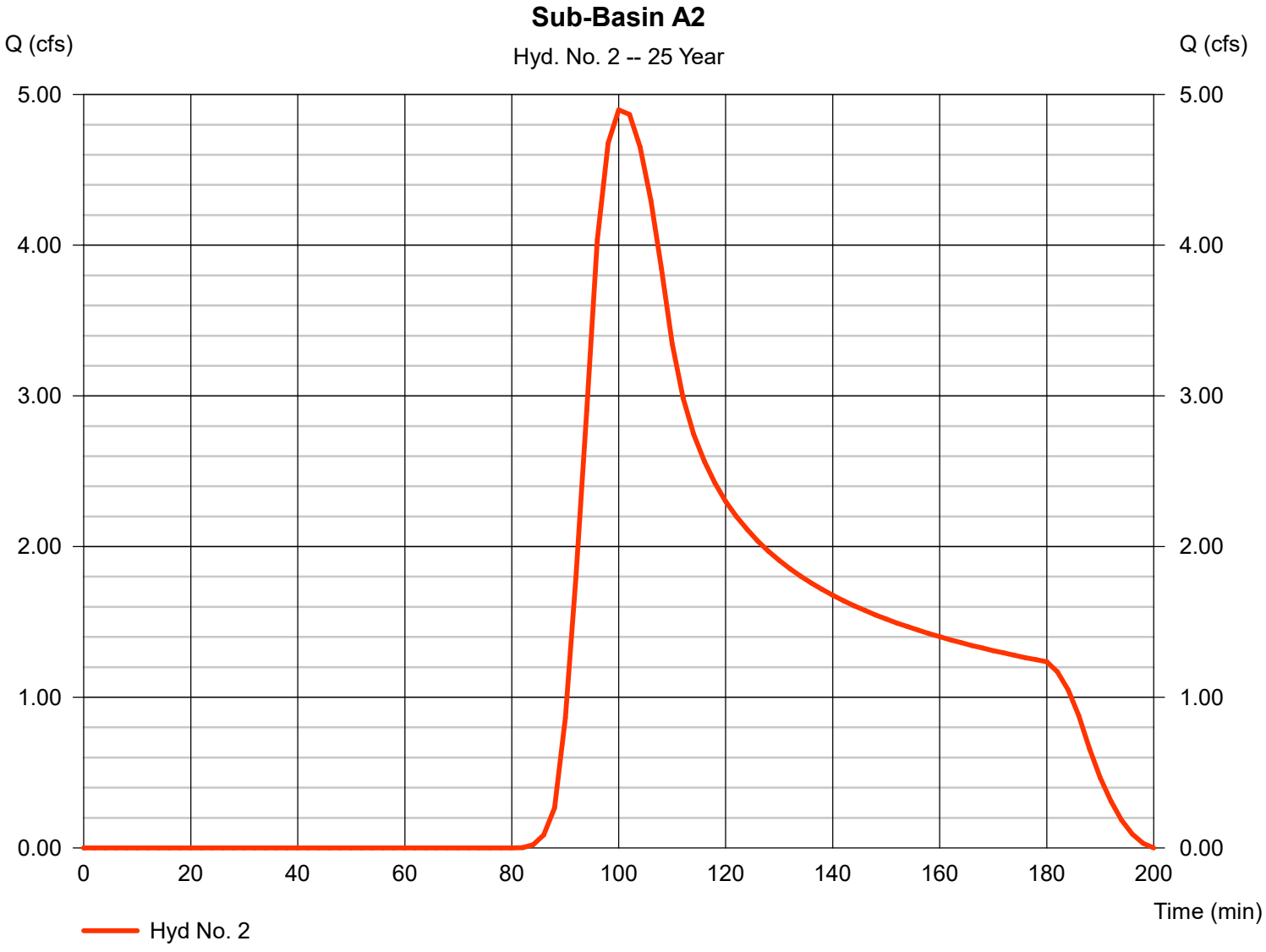
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.899 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 100 min |
| Time interval | = | 2 min | Hyd. volume | = | 12,673 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.38 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



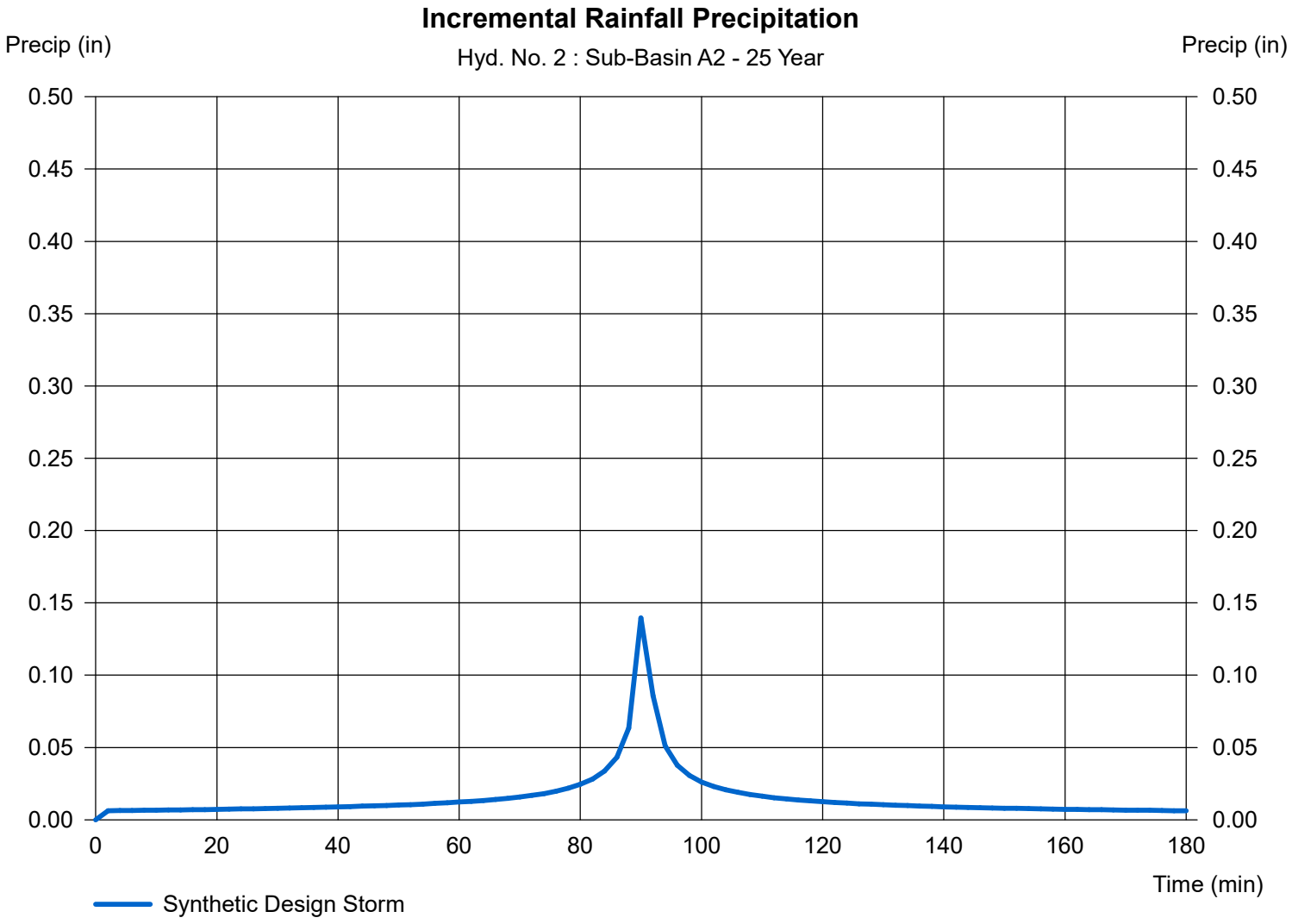
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.3823 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



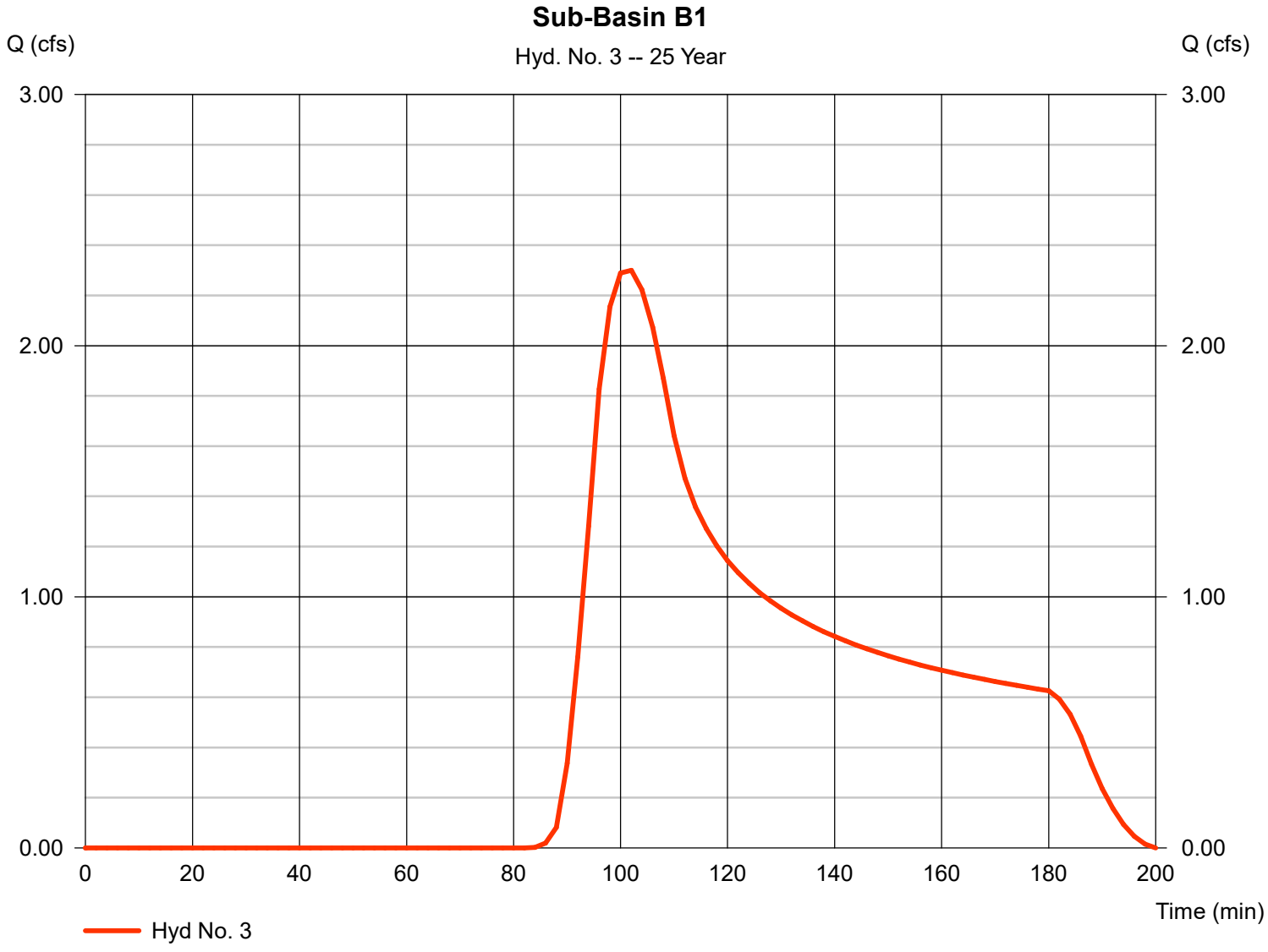
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.300 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 102 min |
| Time interval | = | 2 min | Hyd. volume | = | 6,179 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 1.38 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



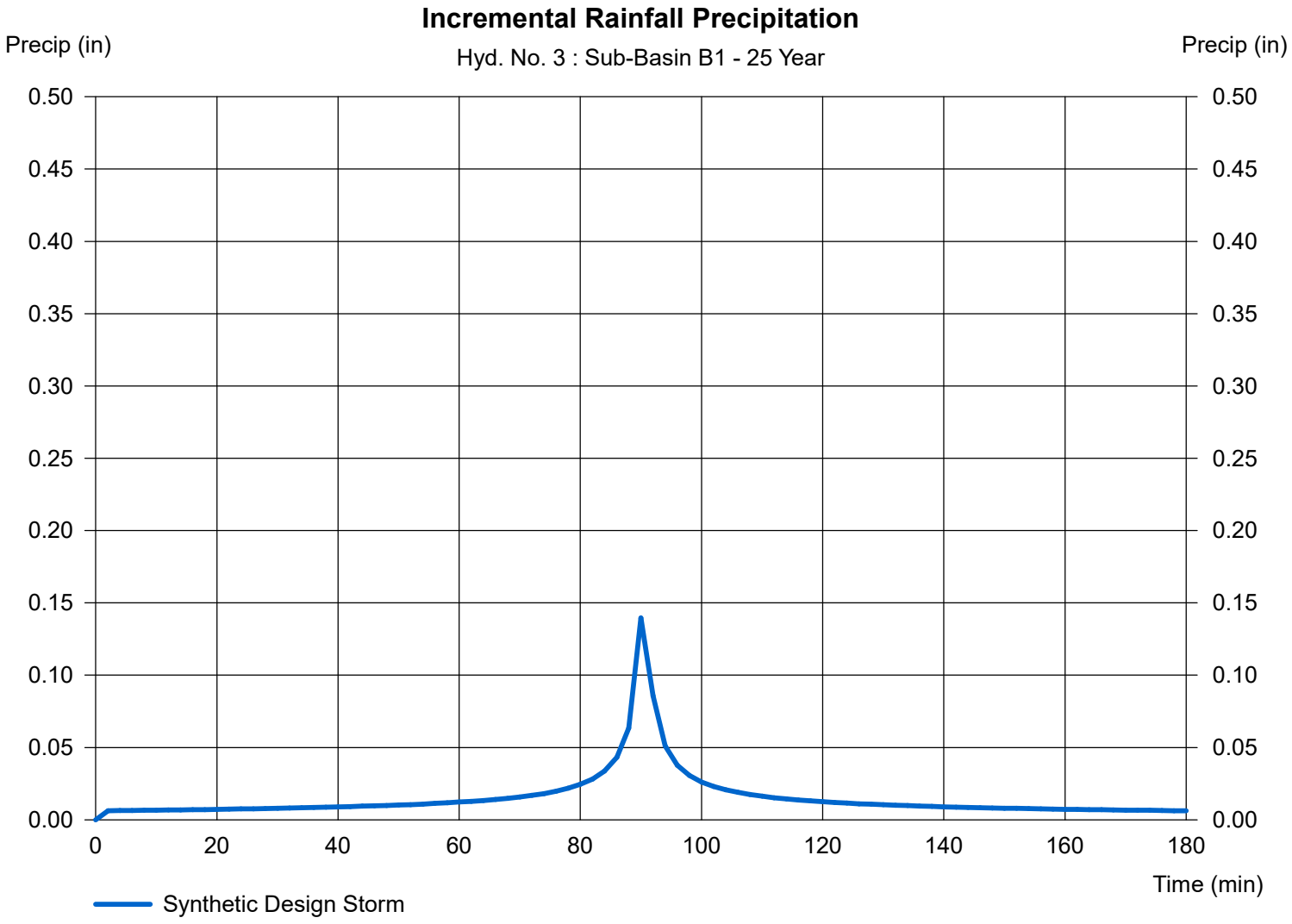
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.3823 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



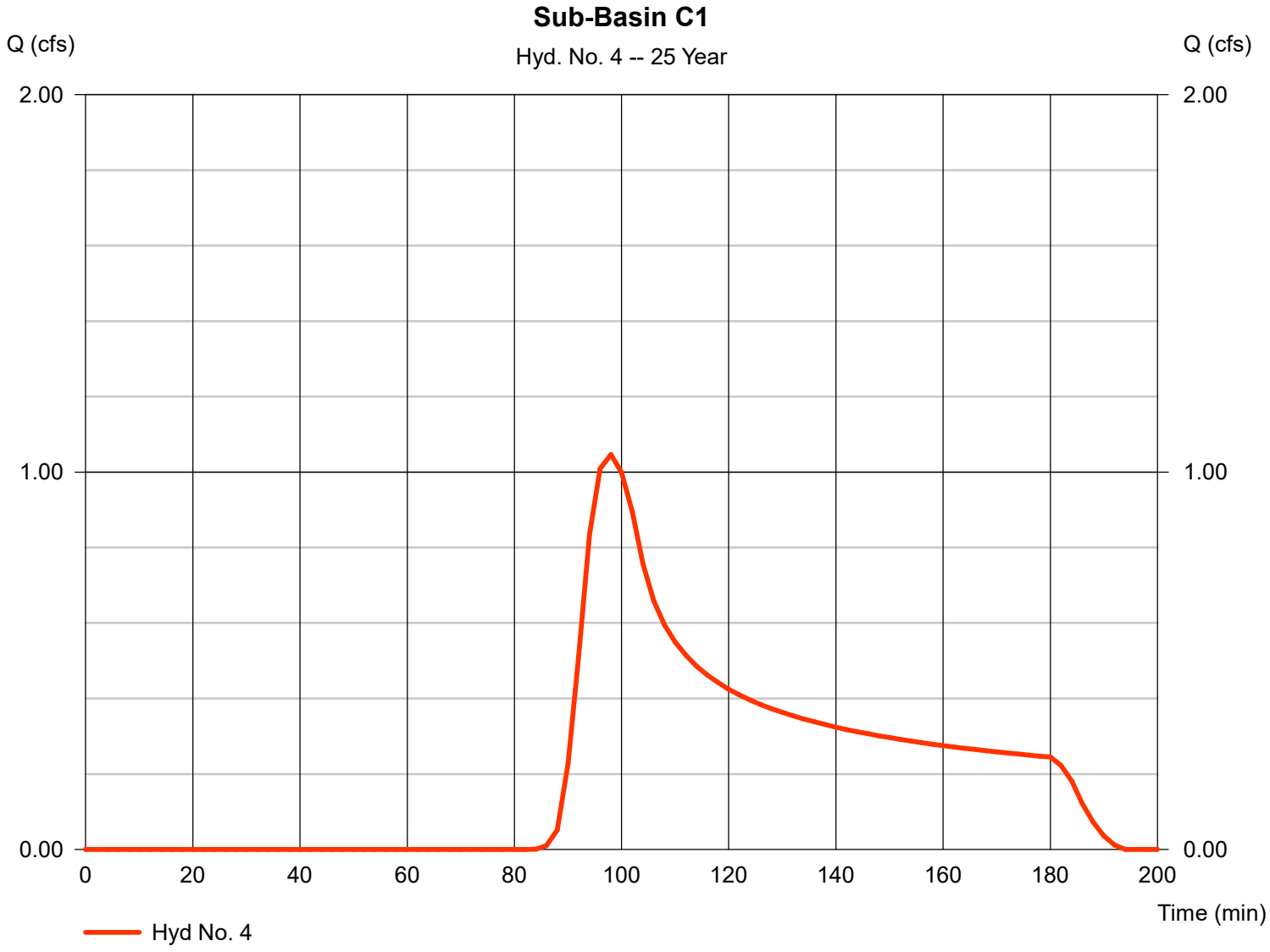
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.046 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 2,432 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.38 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



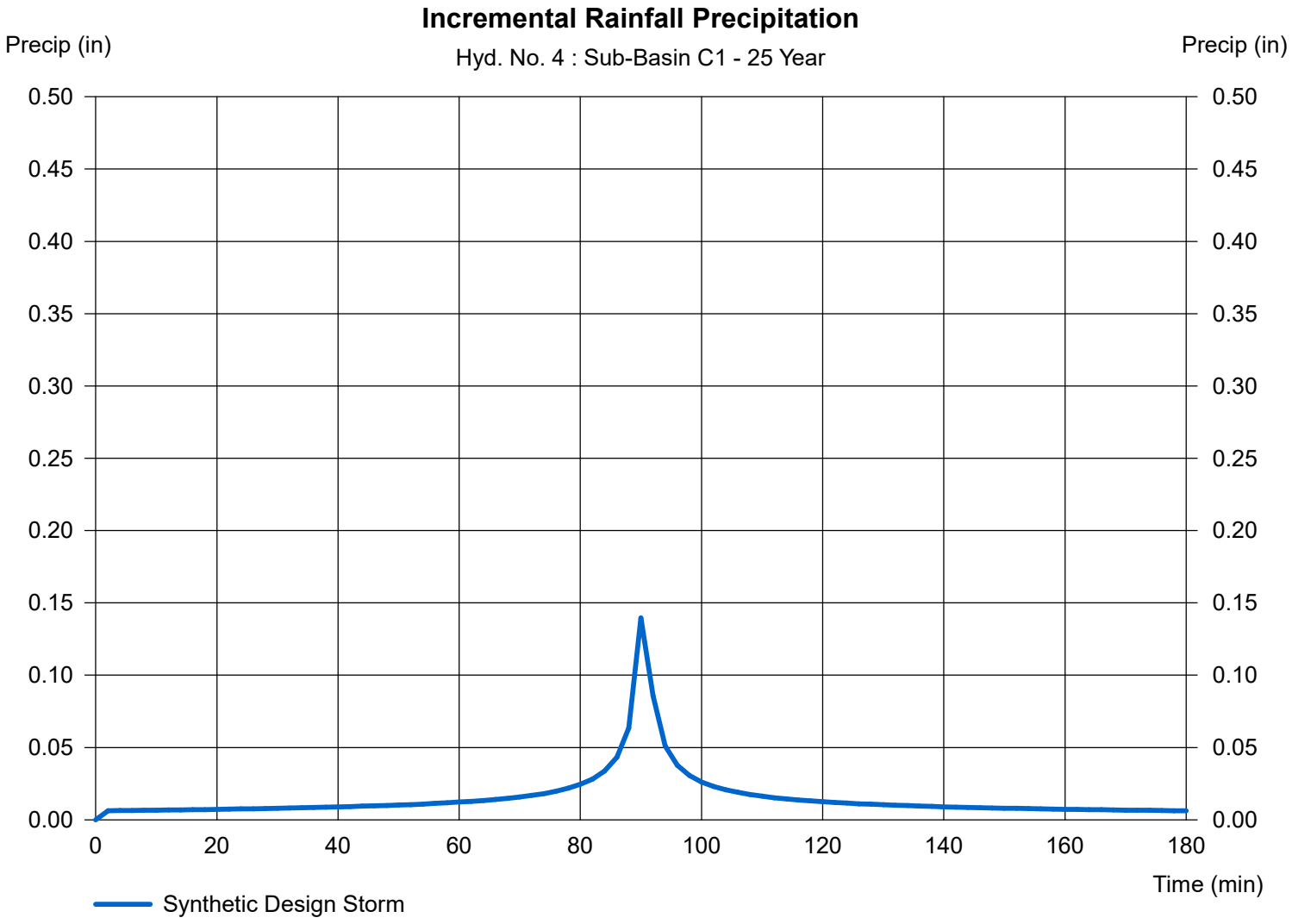
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.3823 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



# Hydrograph Report

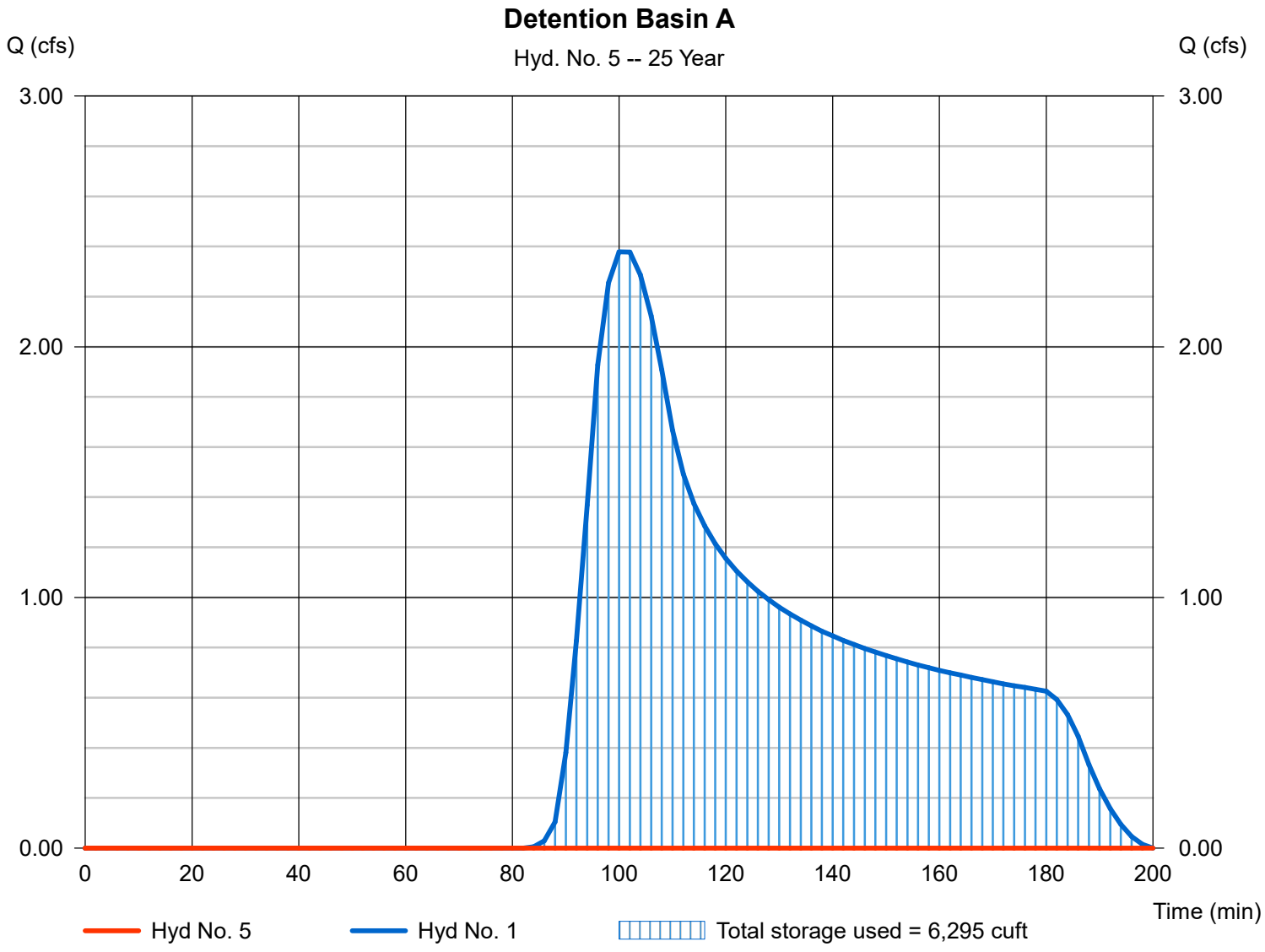
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4046.01 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 6,295 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

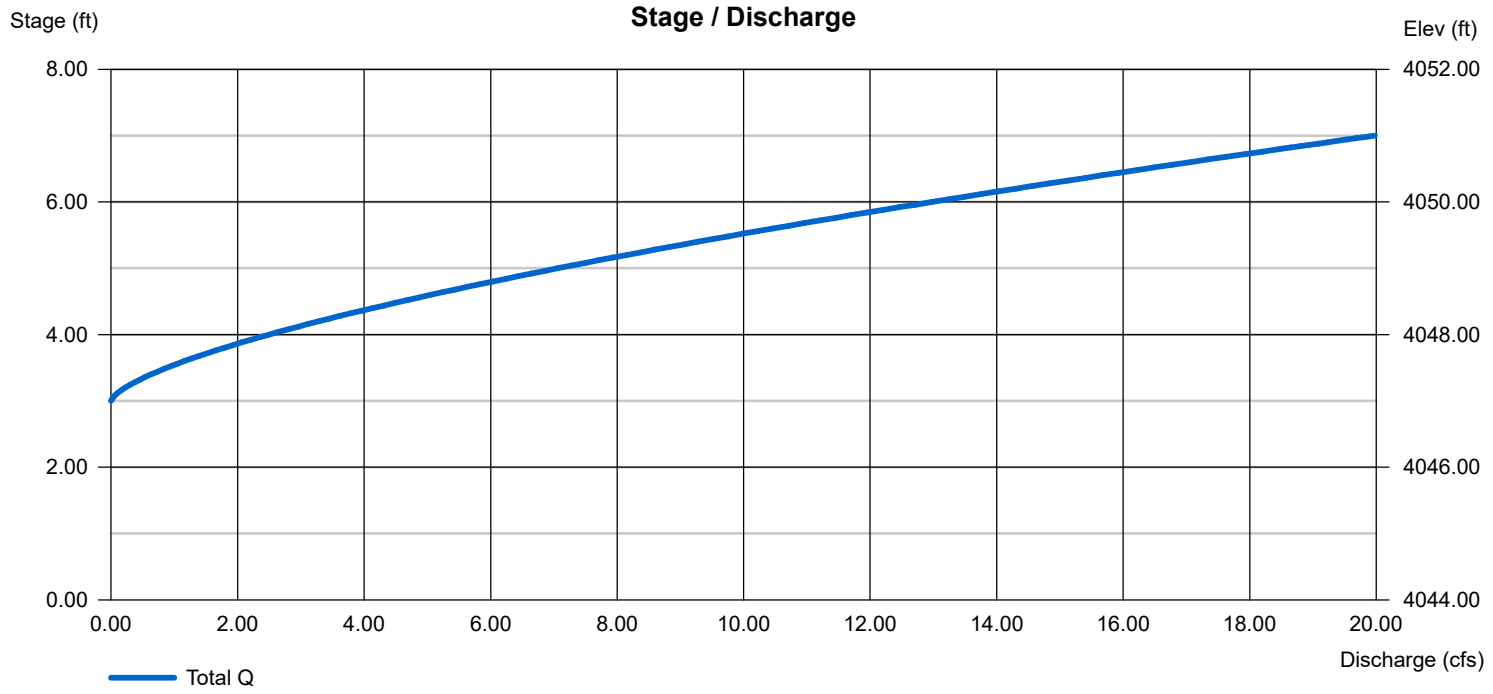
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



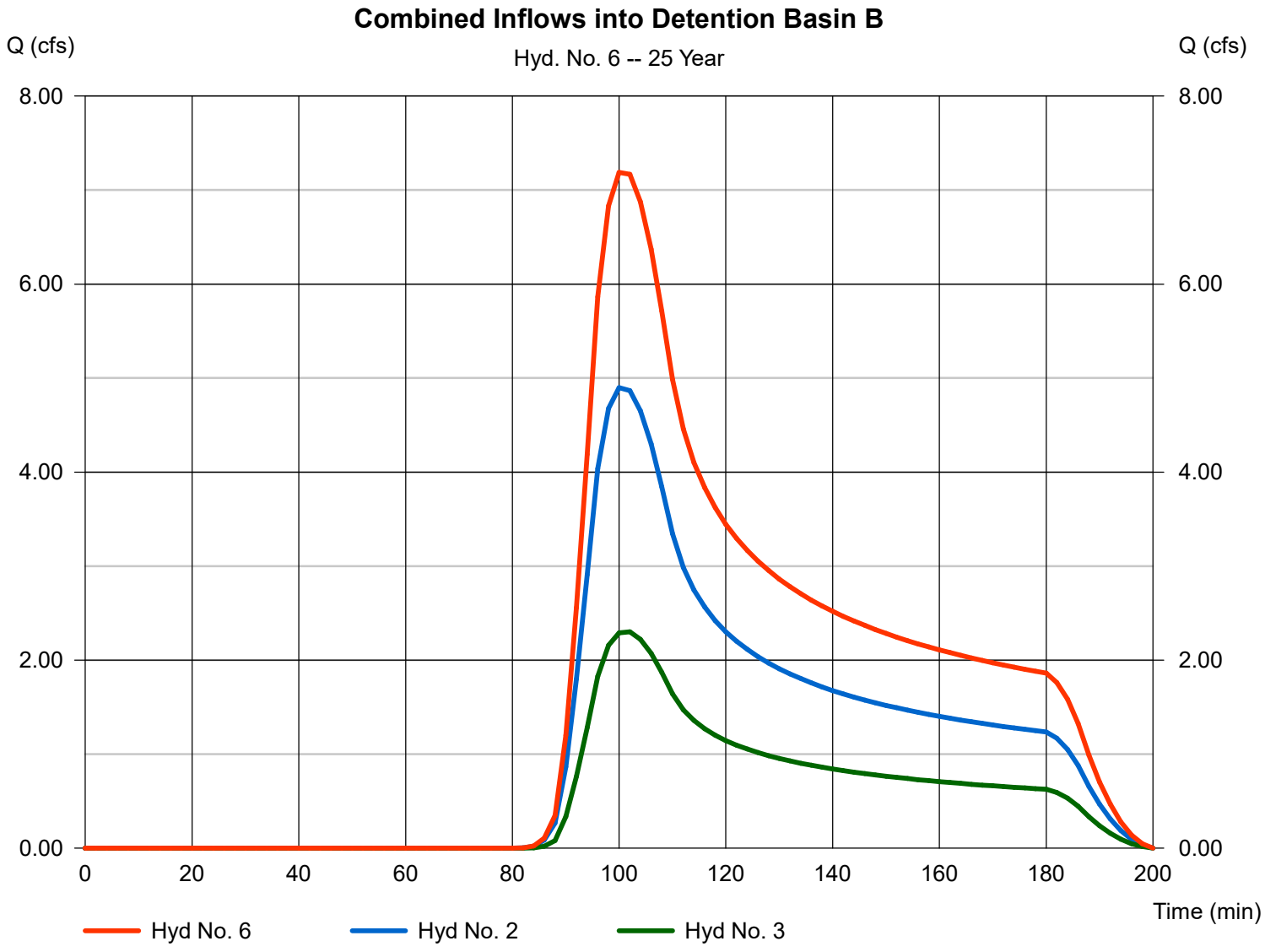
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 7.188 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 100 min |
| Time interval | = | 2 min | Hyd. volume | = | 18,853 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

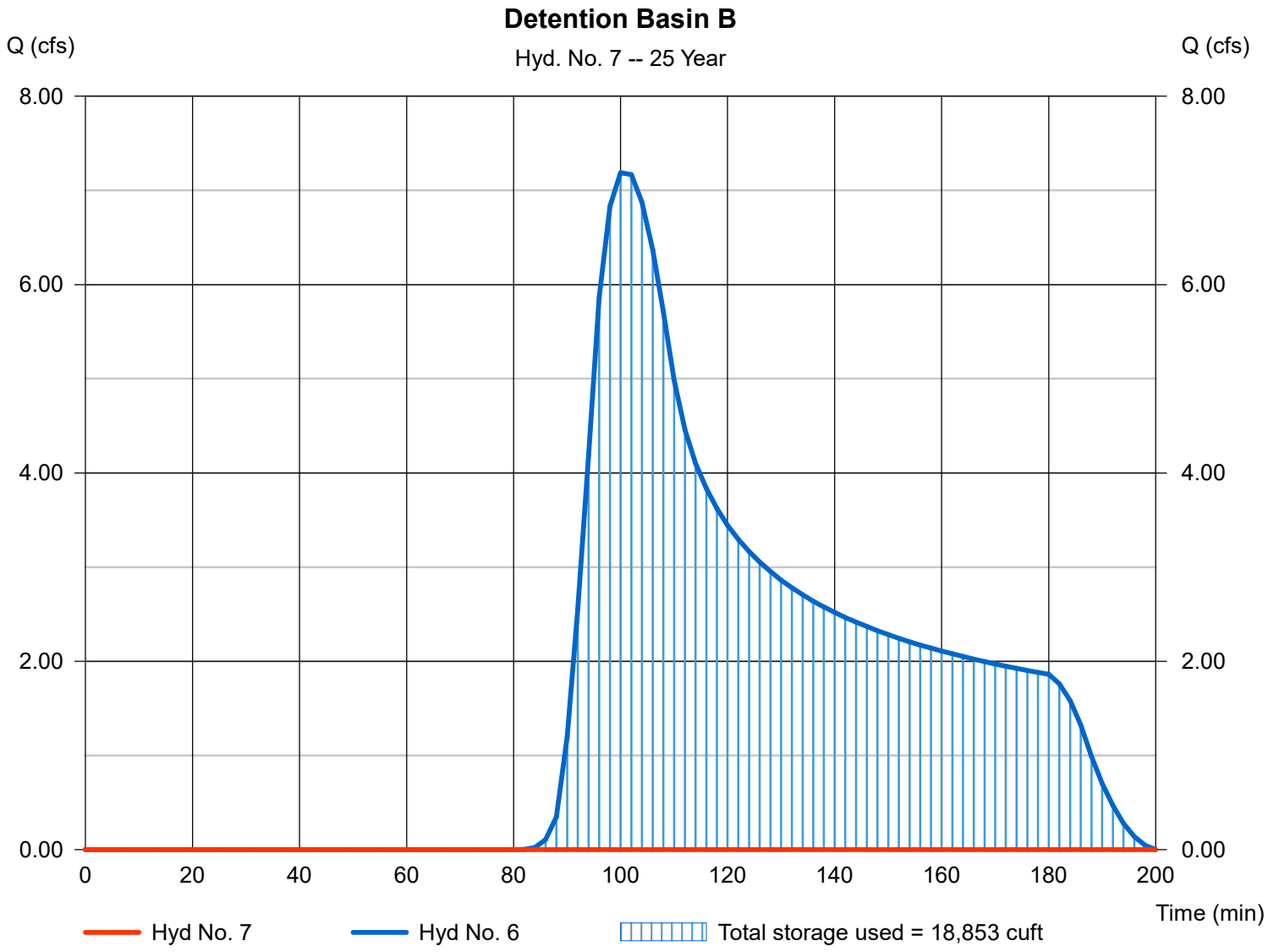
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4029.12 ft |
| Reservoir name | = | Detention Basint B | Max. Storage | = | 18,853 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basint B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

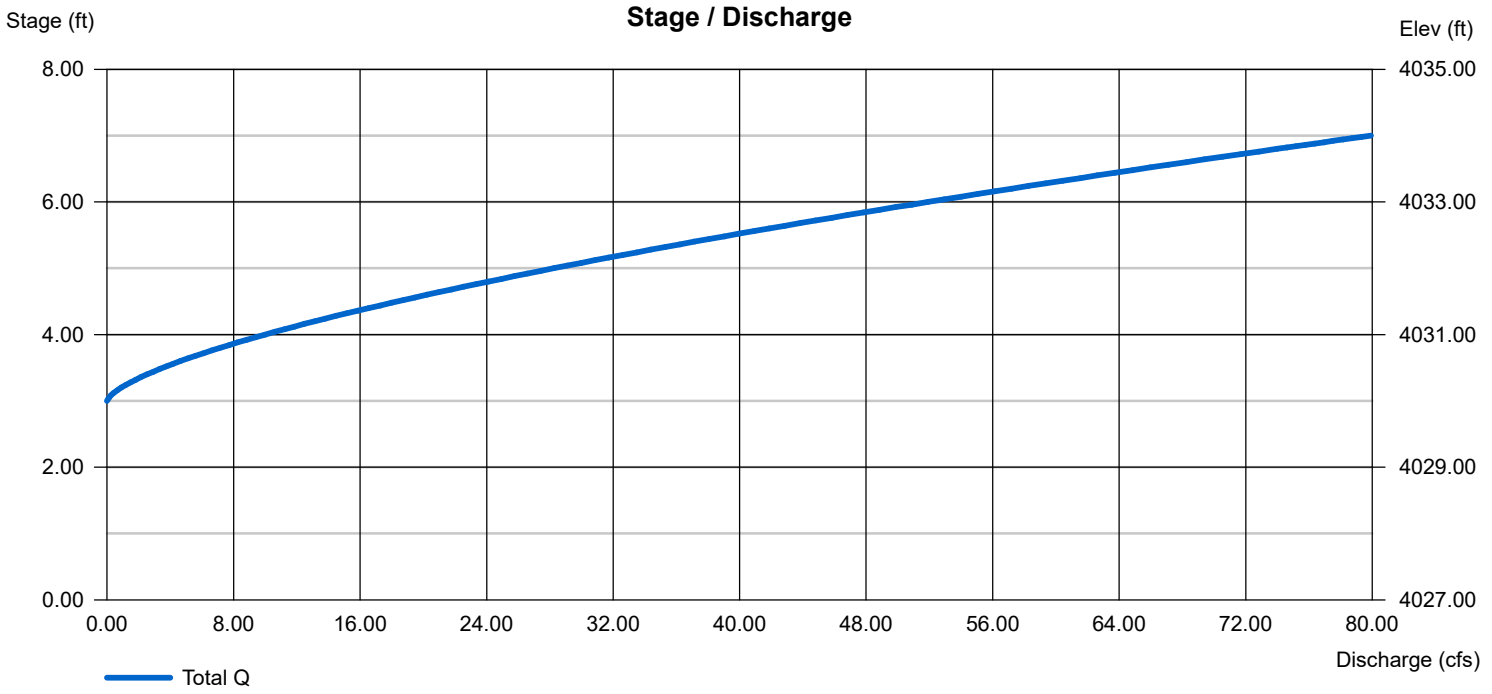
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

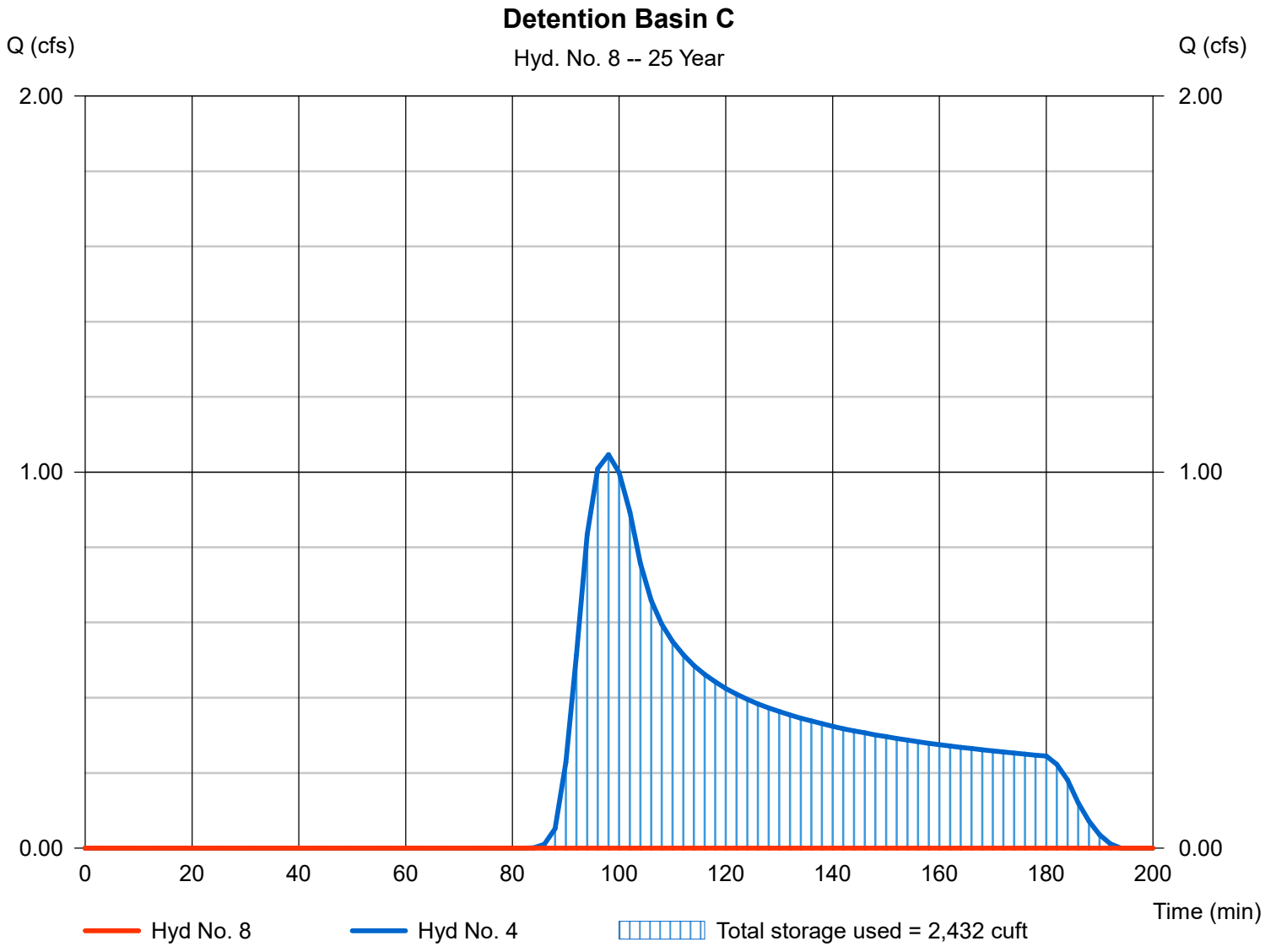
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4057.00 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 2,432 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

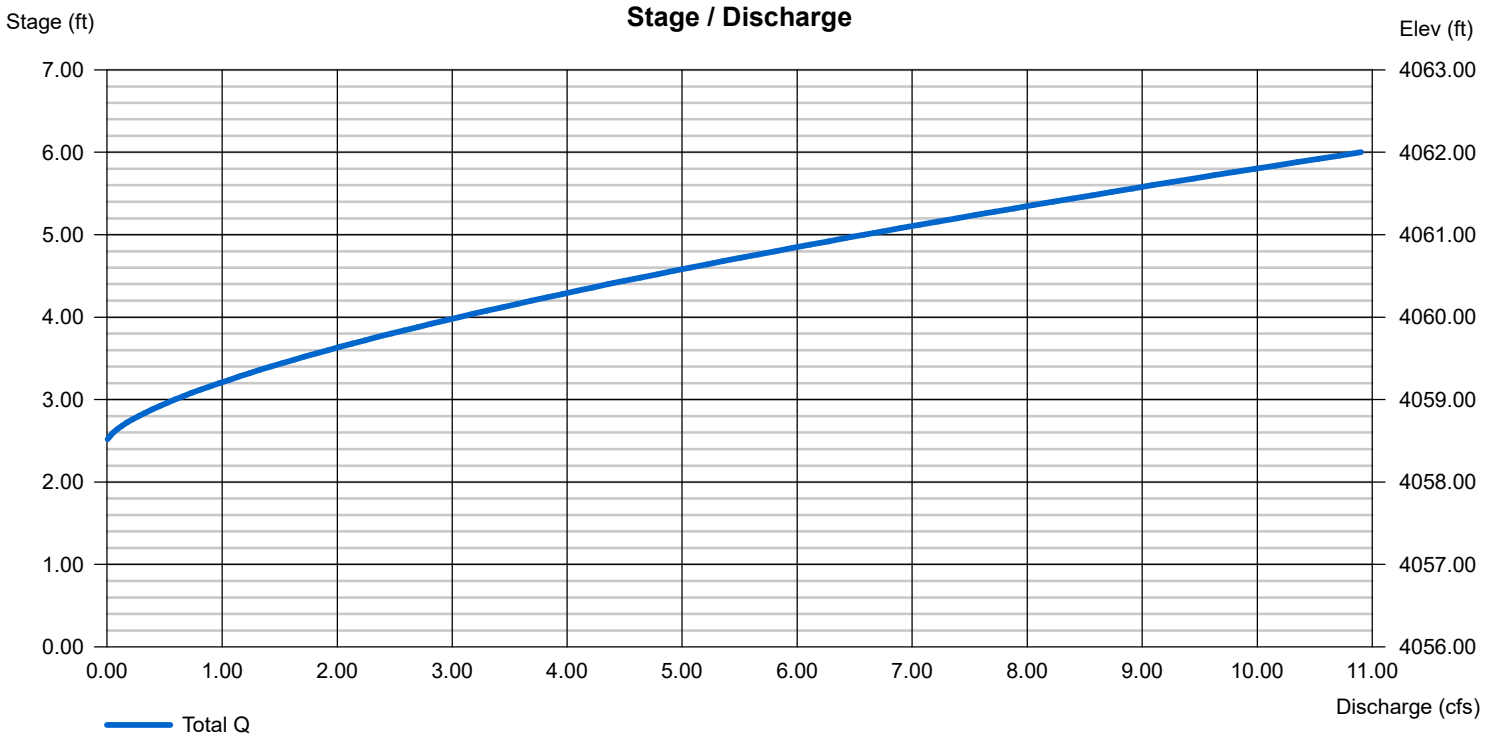
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



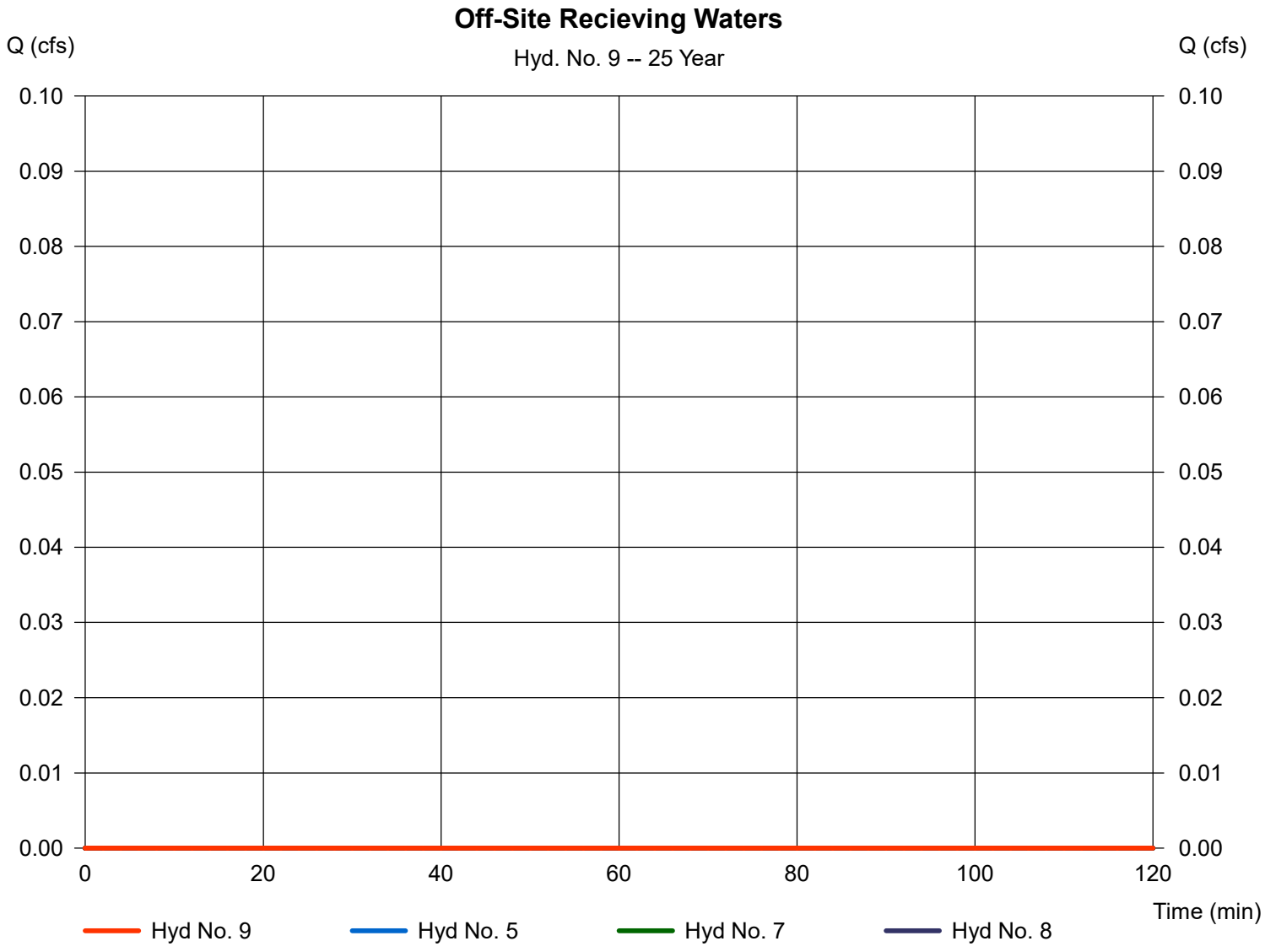
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyds. | = | 5, 7, 8 | Contrib. drain. area | = | 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

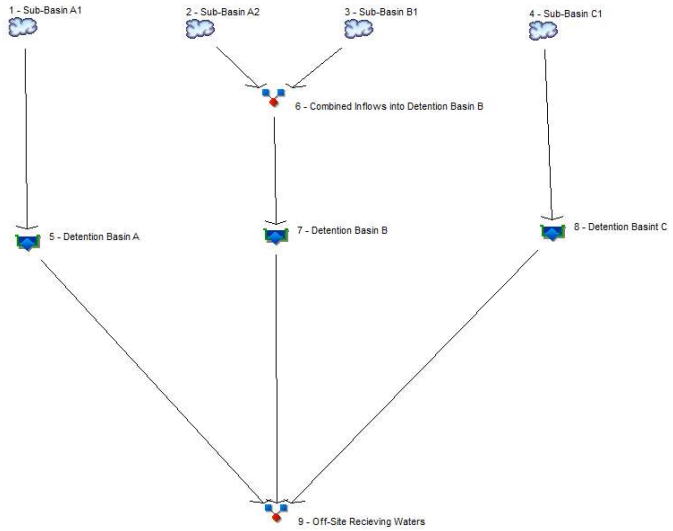
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 1.06 | 1.33 | 0.00 | 1.78 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basint C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 3.932 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 7.905 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 3.862 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 1.788 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 11.77 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 0.852 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.000 | ------- | ------- | Detention Basint C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 0.852 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 3.932 | 2 | 188 | 12,080 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 7.905 | 2 | 188 | 24,018 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 3.862 | 2 | 188 | 11,983 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 1.788 | 2 | 186 | 4,741 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 2 | n/a | 0 | 1 | 4046.90 | 12,080 | Detention Basin A |
| 6 | Combine | 11.77 | 2 | 188 | 36,001 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.852 | 2 | 368 | 4,585 | 6 | 4030.19 | 34,480 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4057.67 | 4,741 | Detention Basint C |
| 9 | Combine | 0.852 | 2 | 368 | 4,585 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

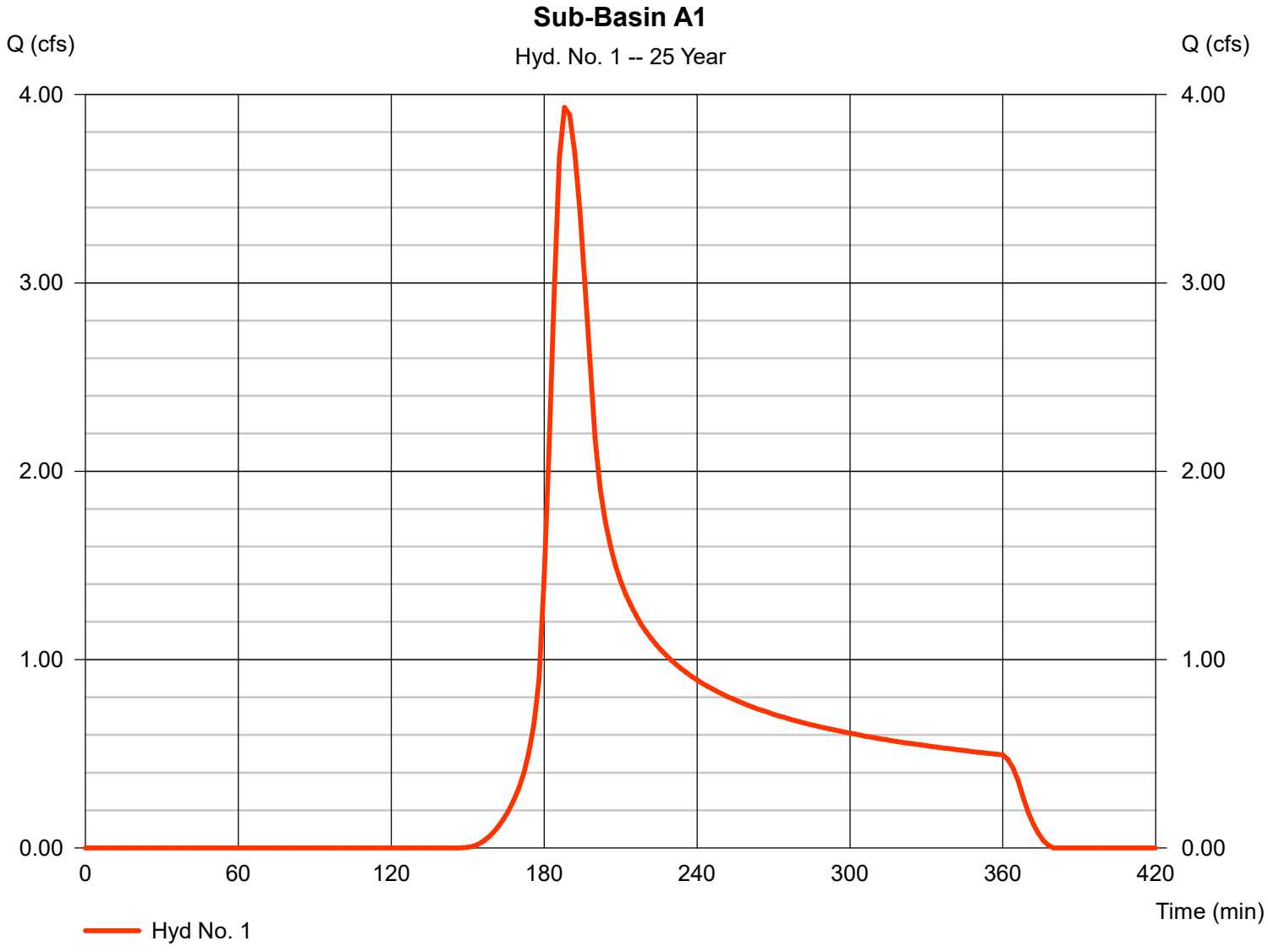
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 3.932 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 188 min |
| Time interval | = 2 min | Hyd. volume | = 12,080 cuft |
| Drainage area | = 6.178 ac | Curve number | = 81.6 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 11.80 min |
| Total precip. | = 1.83 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



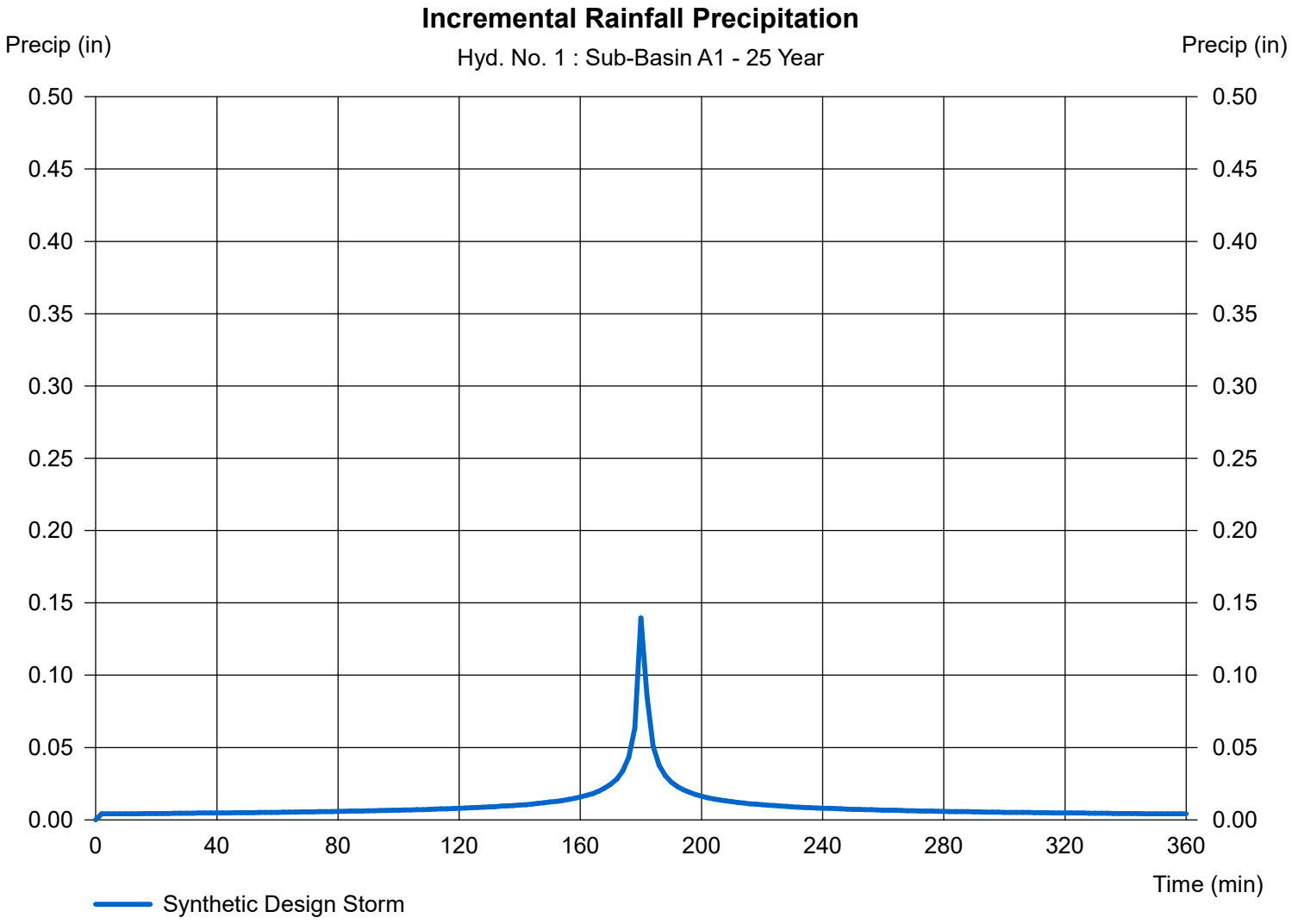
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.8284 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



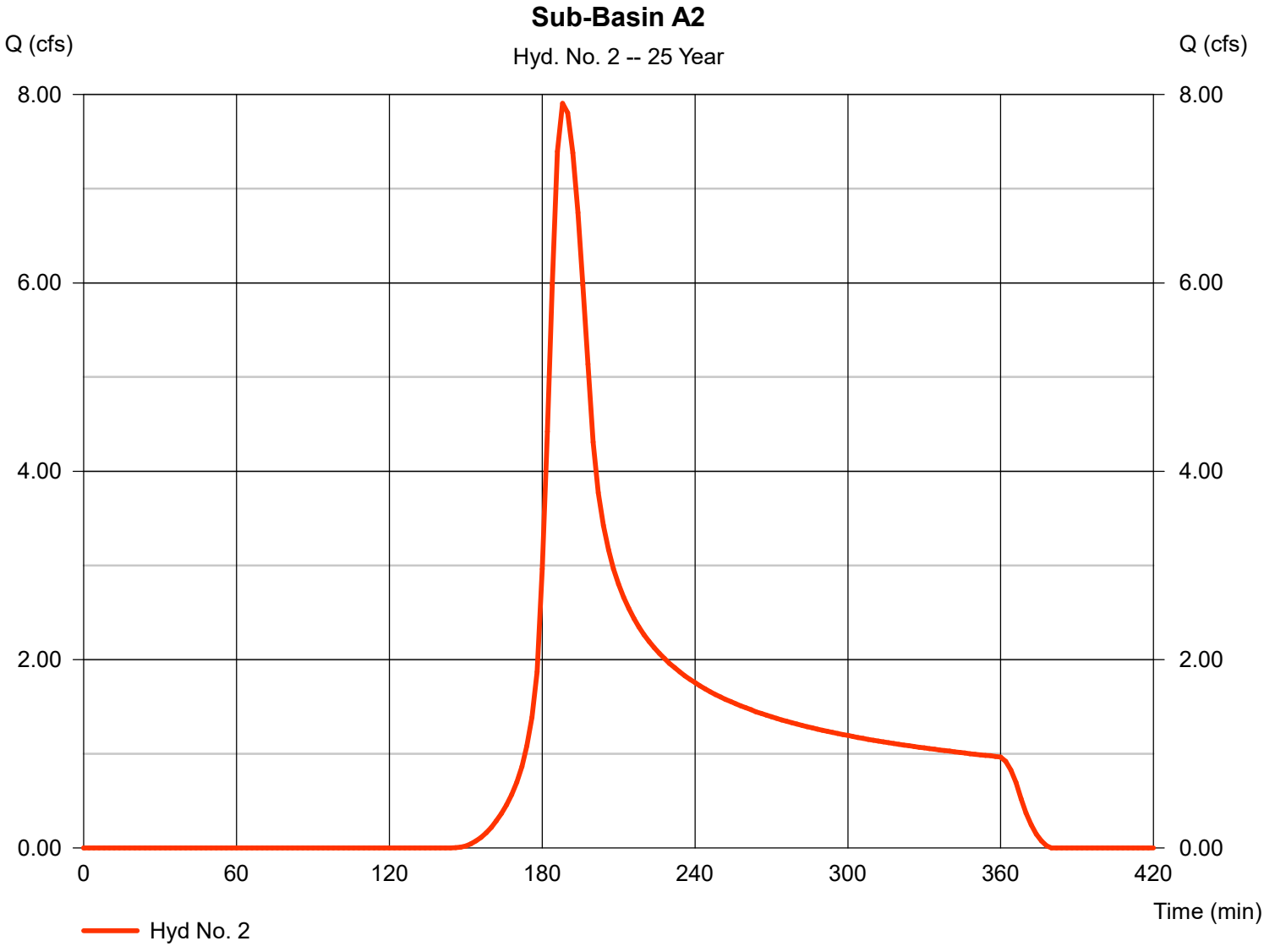
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 7.905 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 24,018 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.83 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



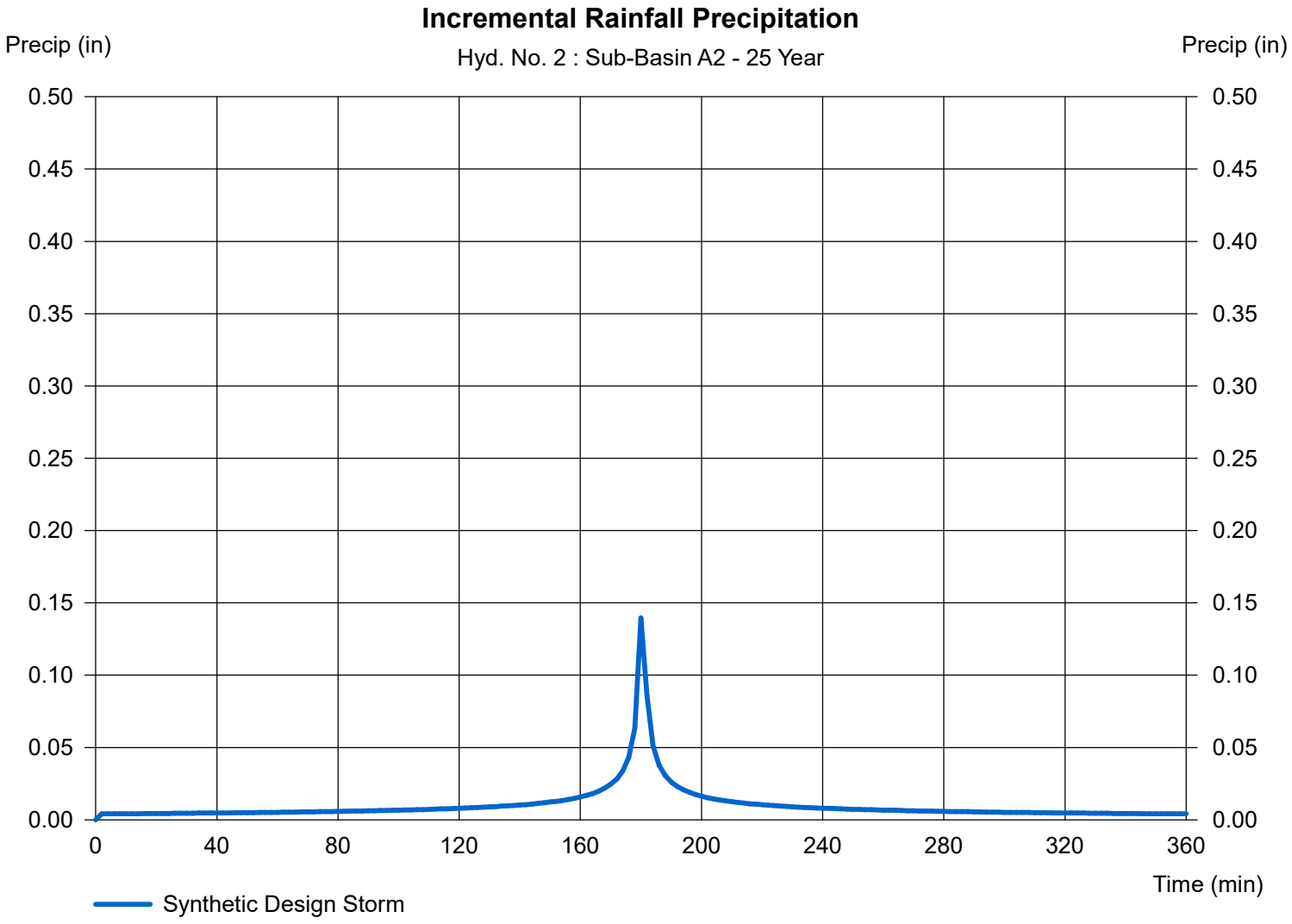
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.8284 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



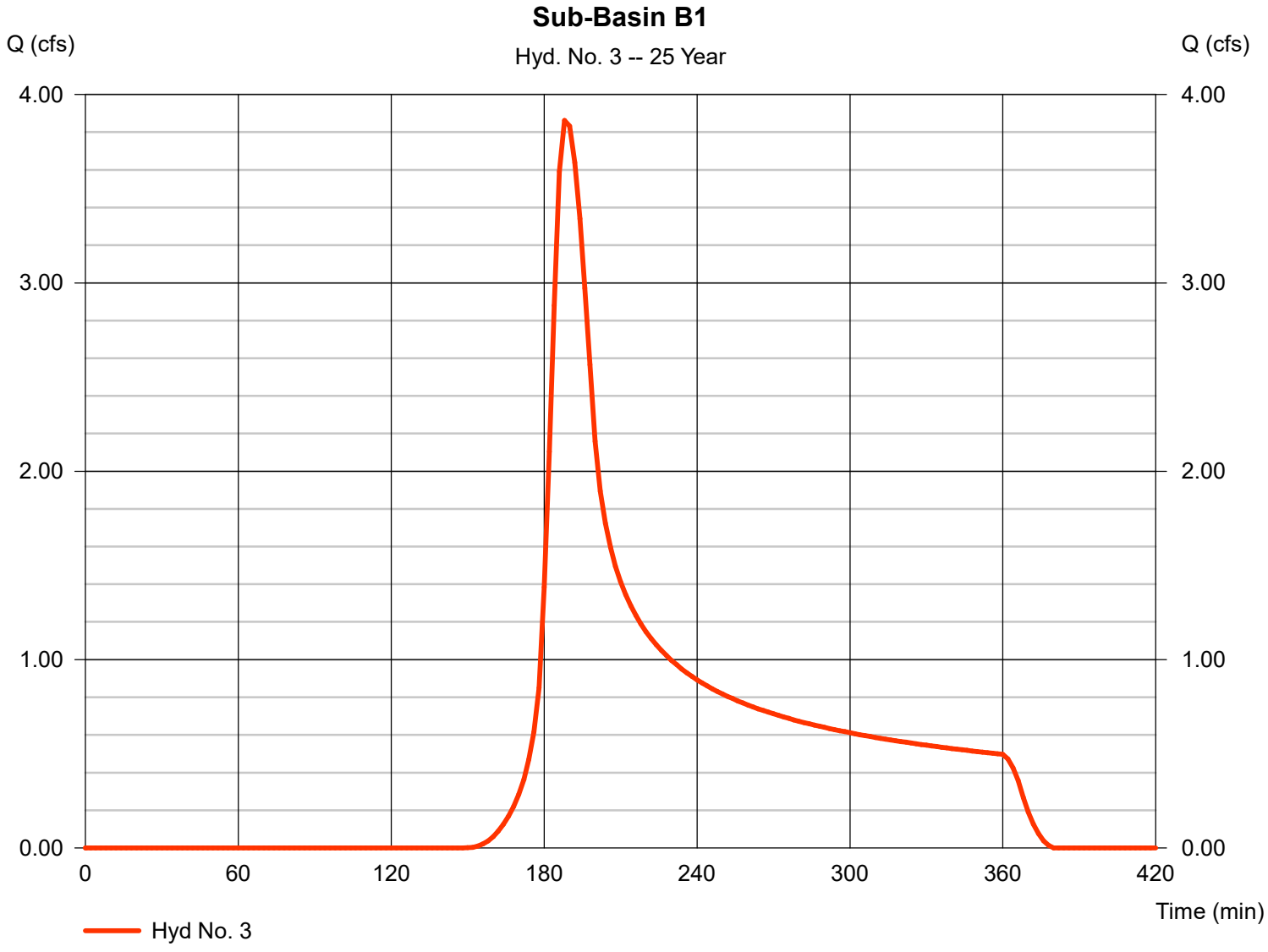
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 3.862 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 188 min |
| Time interval | = 2 min | Hyd. volume | = 11,983 cuft |
| Drainage area | = 6.320 ac | Curve number | = 81.2 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 11.20 min |
| Total precip. | = 1.83 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



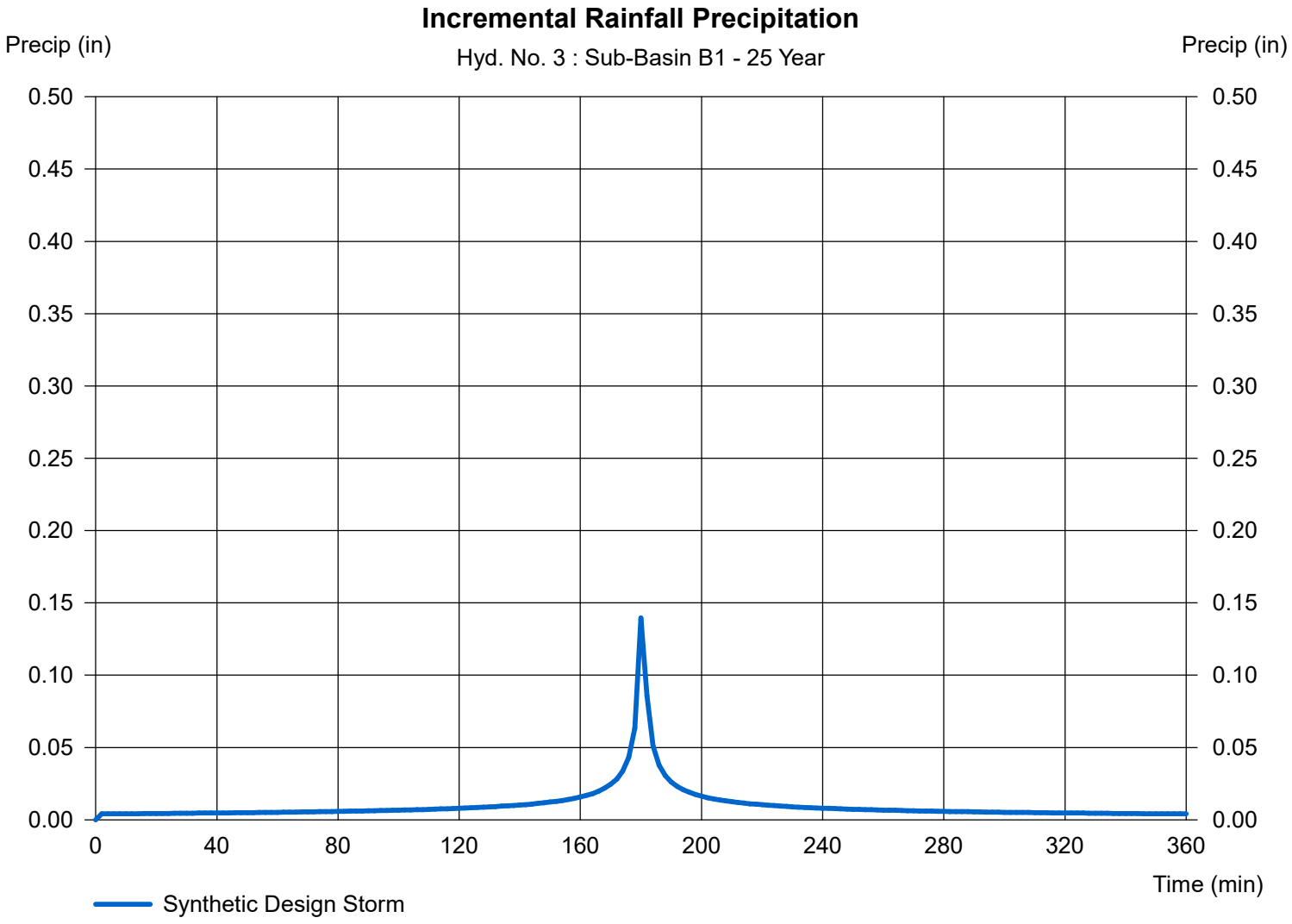
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.8284 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



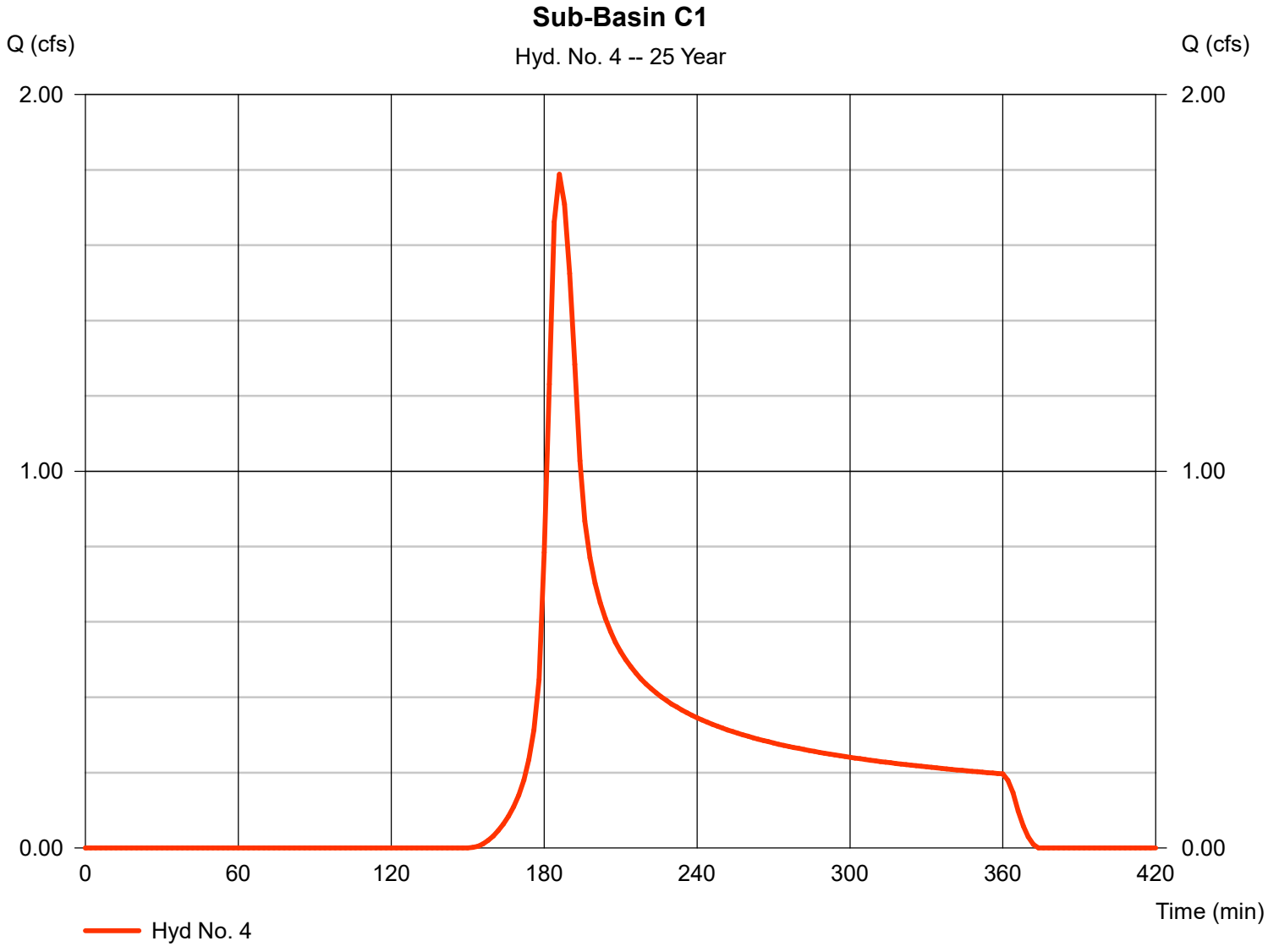
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 1.788 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 186 min |
| Time interval | = | 2 min | Hyd. volume | = | 4,741 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.83 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



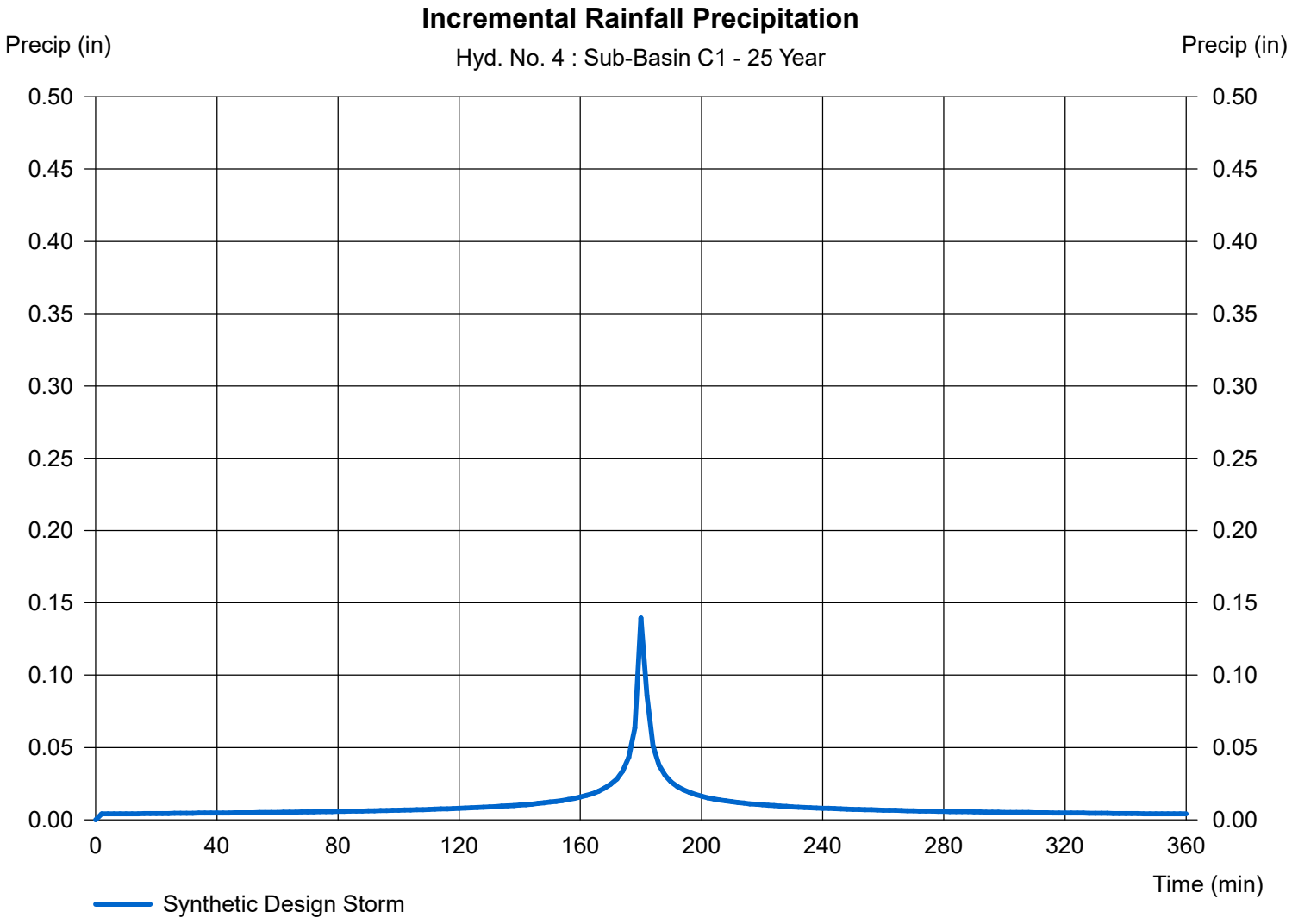
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 1.8284 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



# Hydrograph Report

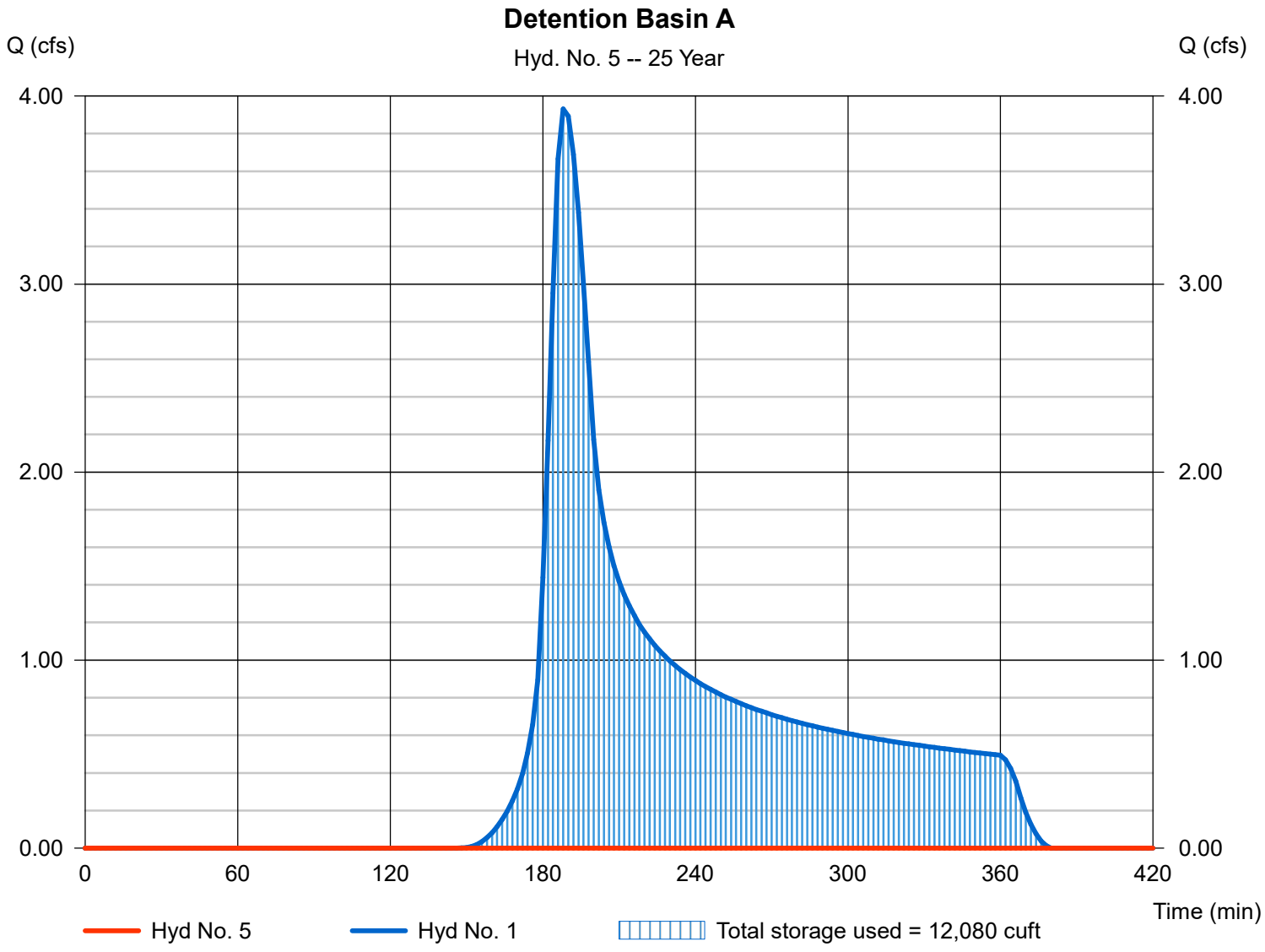
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4046.90 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 12,080 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

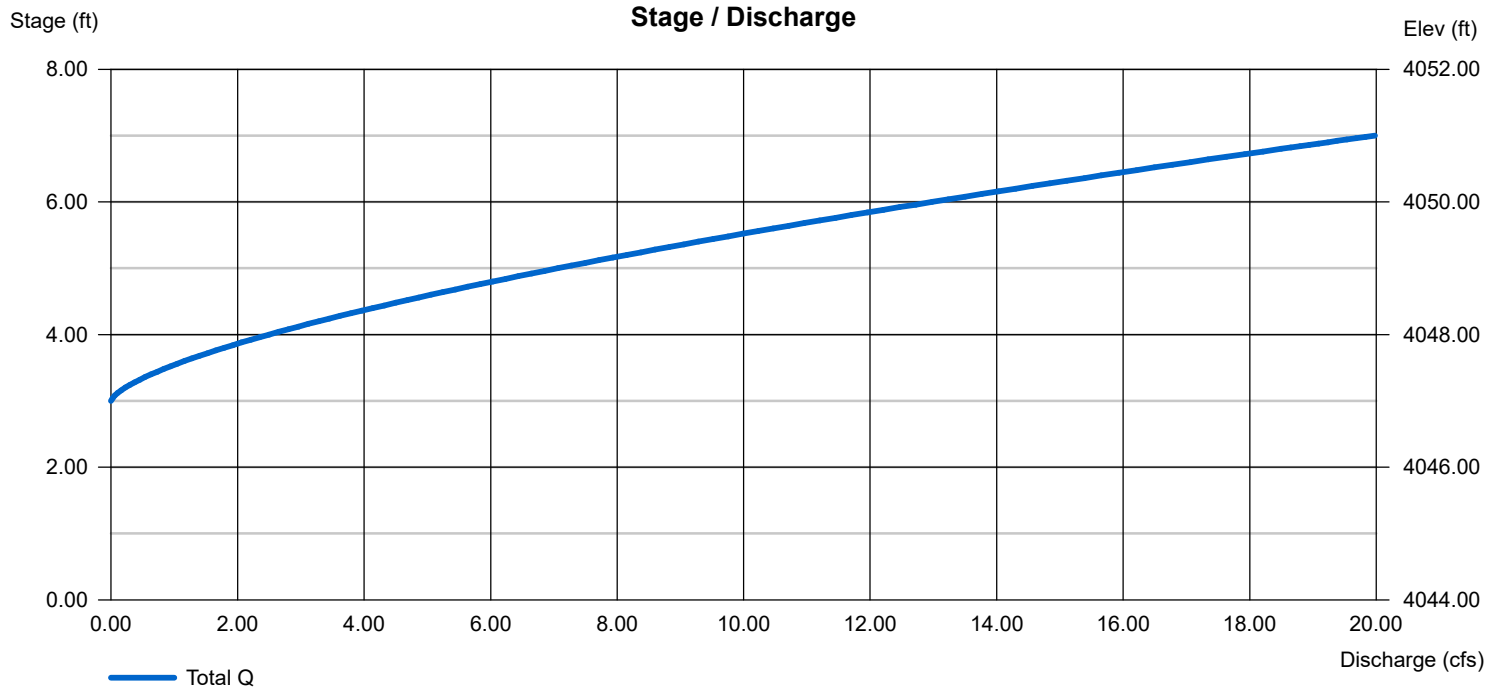
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



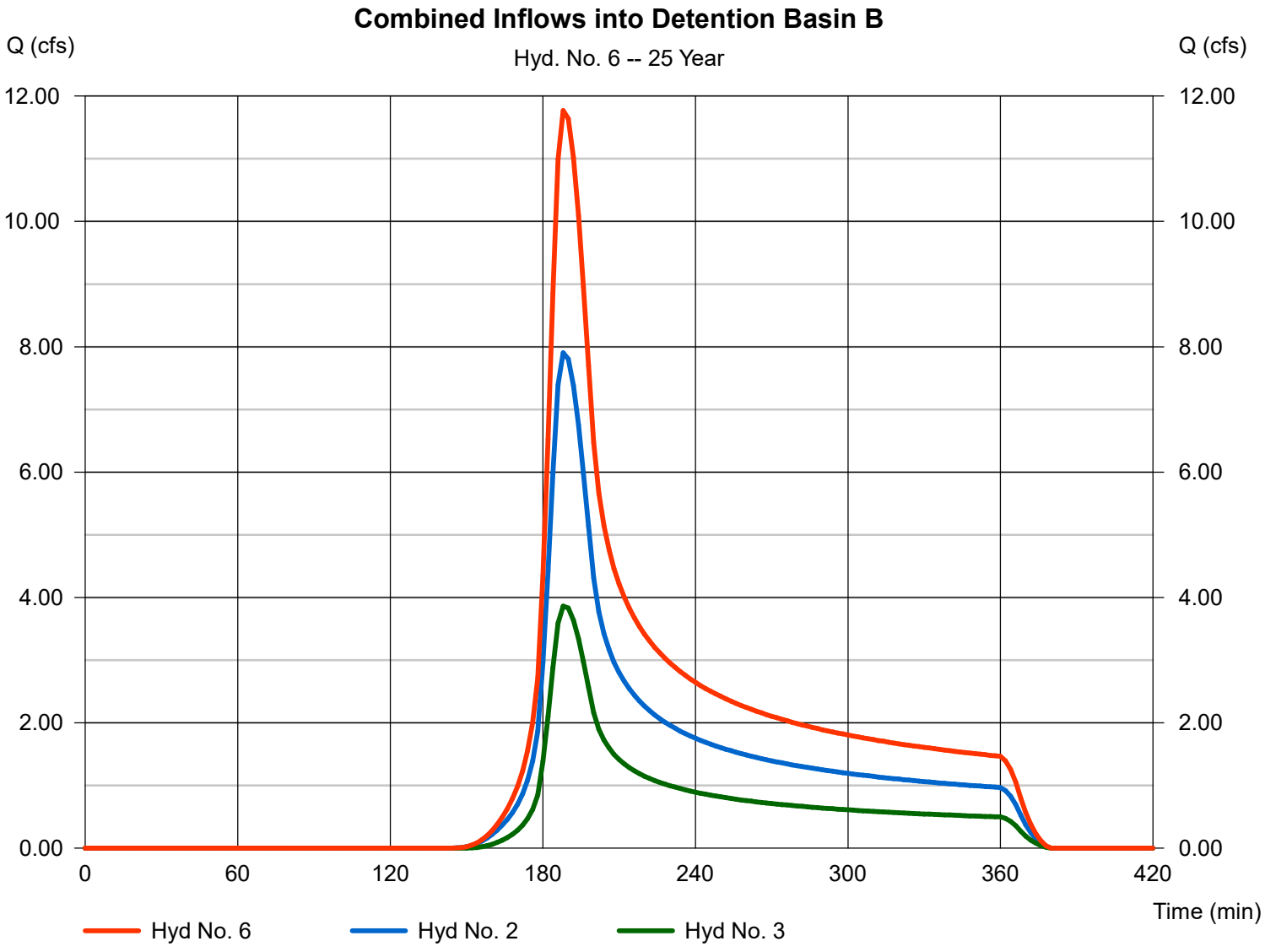
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 11.77 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 36,001 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

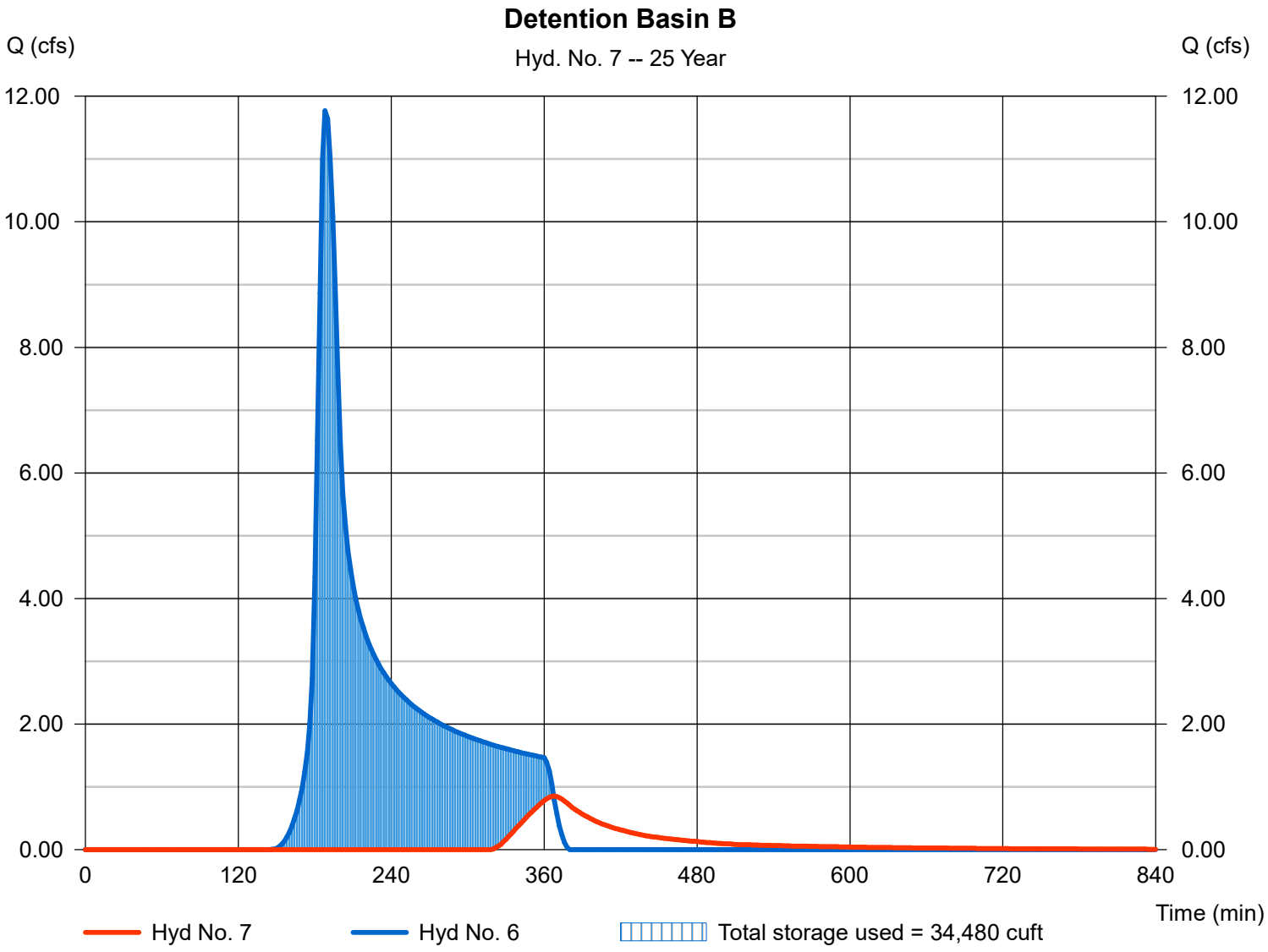
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.852 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 368 min |
| Time interval | = | 2 min | Hyd. volume | = | 4,585 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4030.19 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 34,480 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

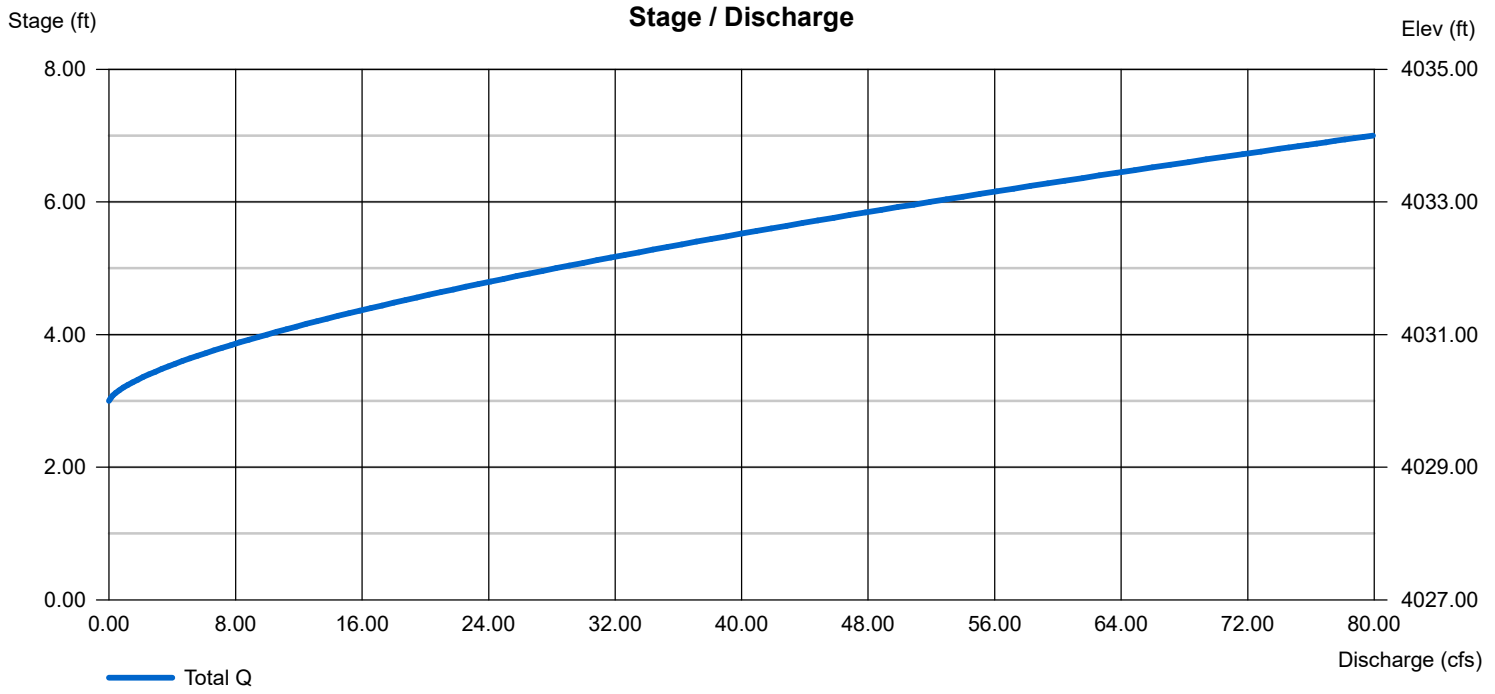
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

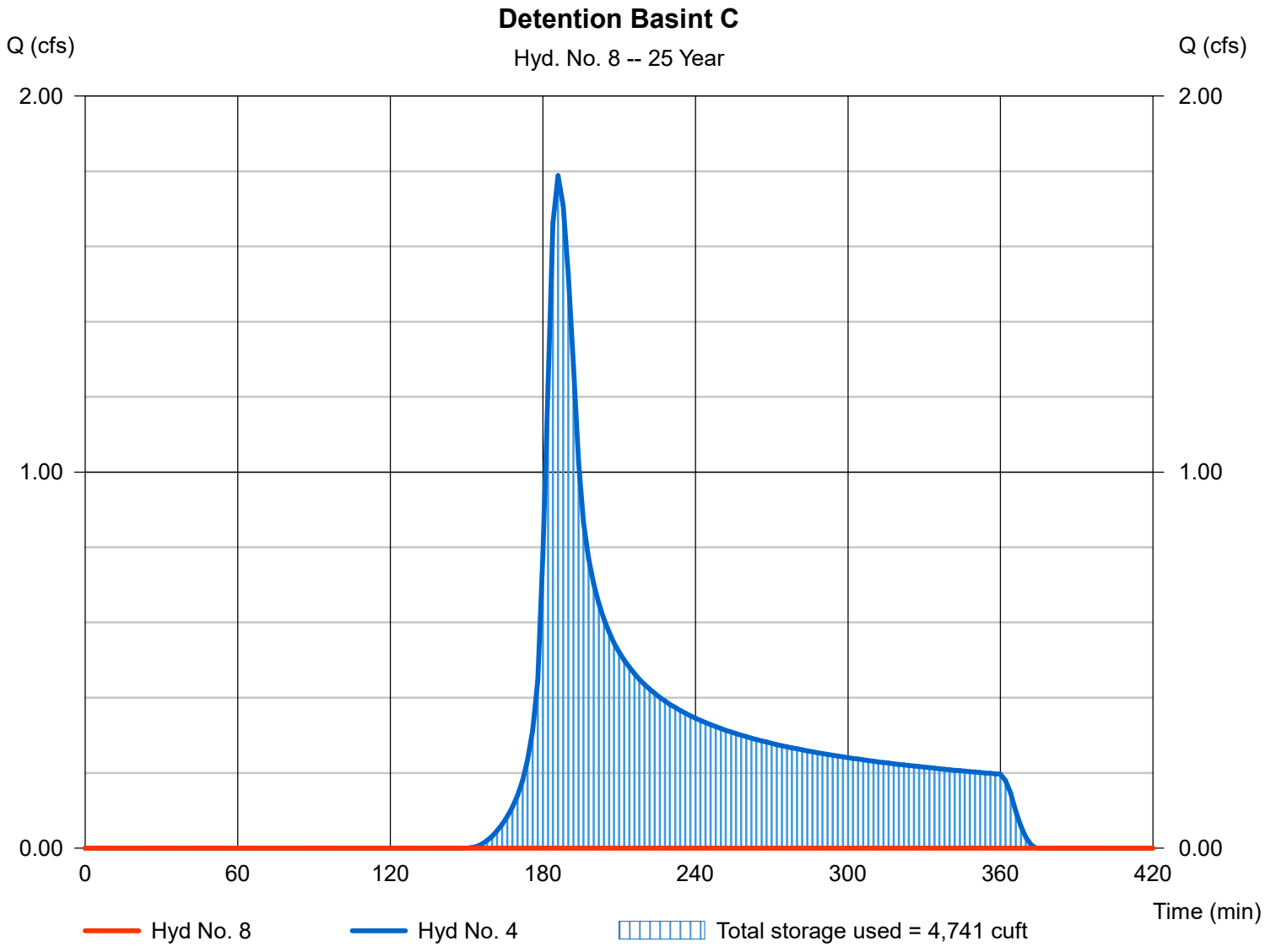
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basint C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4057.67 ft |
| Reservoir name | = | Detention Basint C | Max. Storage | = | 4,741 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basint C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

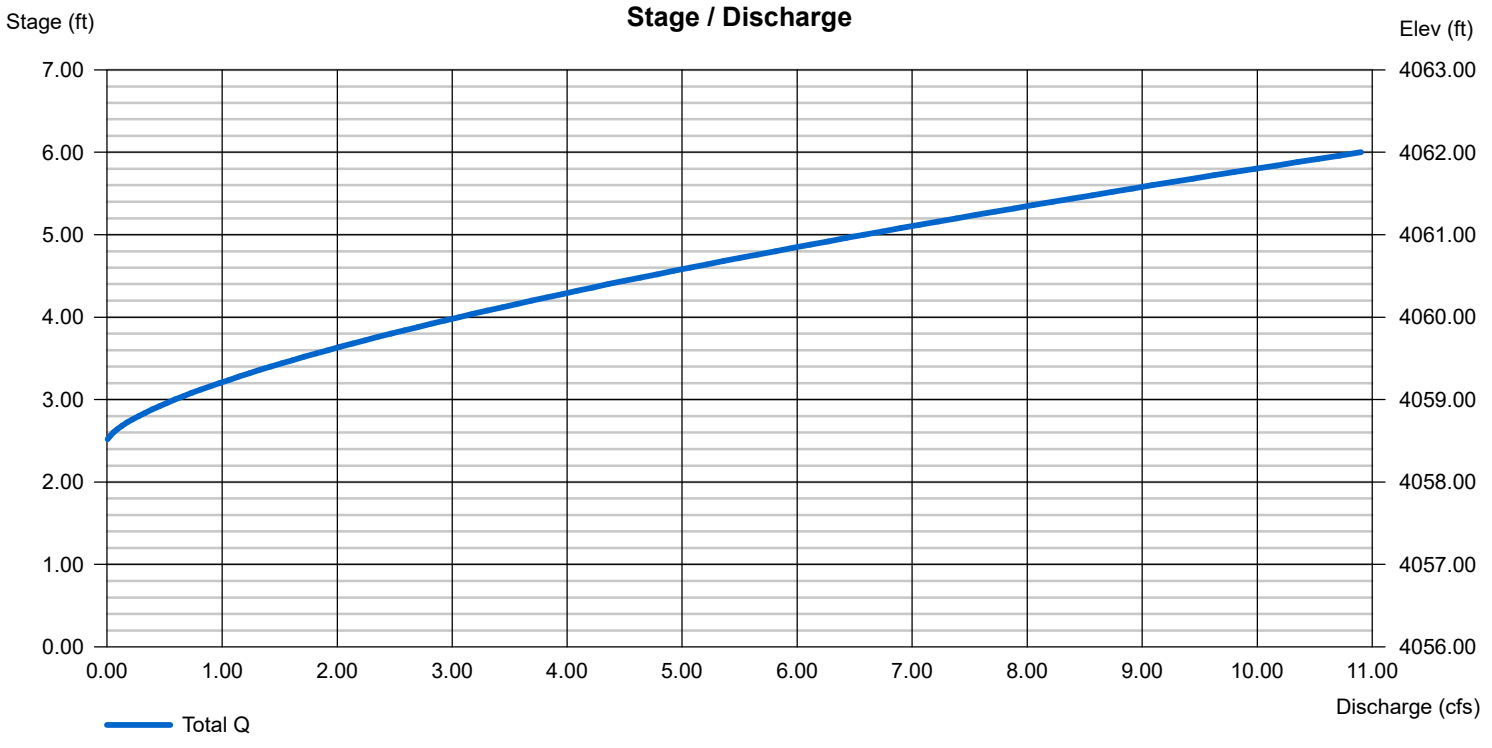
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



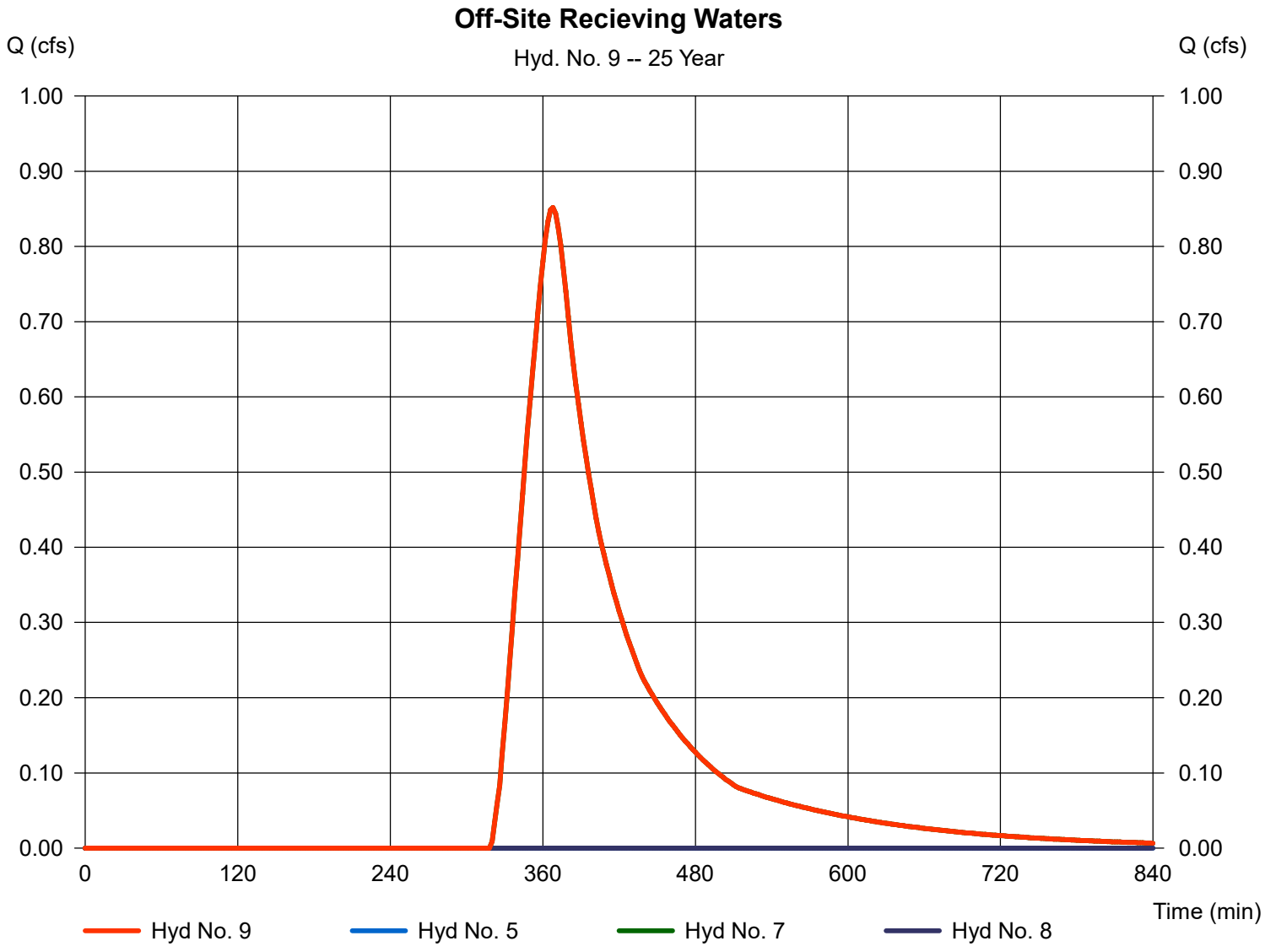
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.852 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 368 min |
| Time interval | = 2 min | Hyd. volume | = 4,585 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

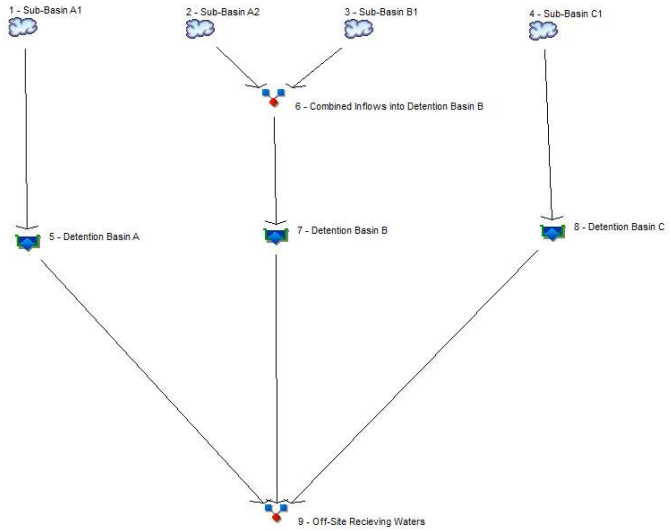
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | 7.146 | ------- | ------- | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 12.24 | ------- | ------- | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 7.167 | ------- | ------- | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | 3.297 | ------- | ------- | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | 0.740 | ------- | ------- | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | 19.22 | ------- | ------- | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | 3.681 | ------- | ------- | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | 0.164 | ------- | ------- | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | 4.173 | ------- | ------- | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 7.146 | 2 | 728 | 34,585 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 12.24 | 2 | 730 | 64,036 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 7.167 | 2 | 728 | 34,731 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 3.297 | 2 | 726 | 13,828 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.740 | 2 | 840 | 21,692 | 1 | 4047.44 | 16,832 | Detention Basin A |
| 6 | Combine | 19.22 | 2 | 728 | 98,767 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 3.681 | 2 | 772 | 67,352 | 6 | 4030.51 | 40,030 | Detention Basin B |
| 8 | Reservoir | 0.164 | 2 | 1066 | 5,479 | 4 | 4058.71 | 9,490 | Detention Basin C |
| 9 | Combine | 4.173 | 2 | 778 | 94,522 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

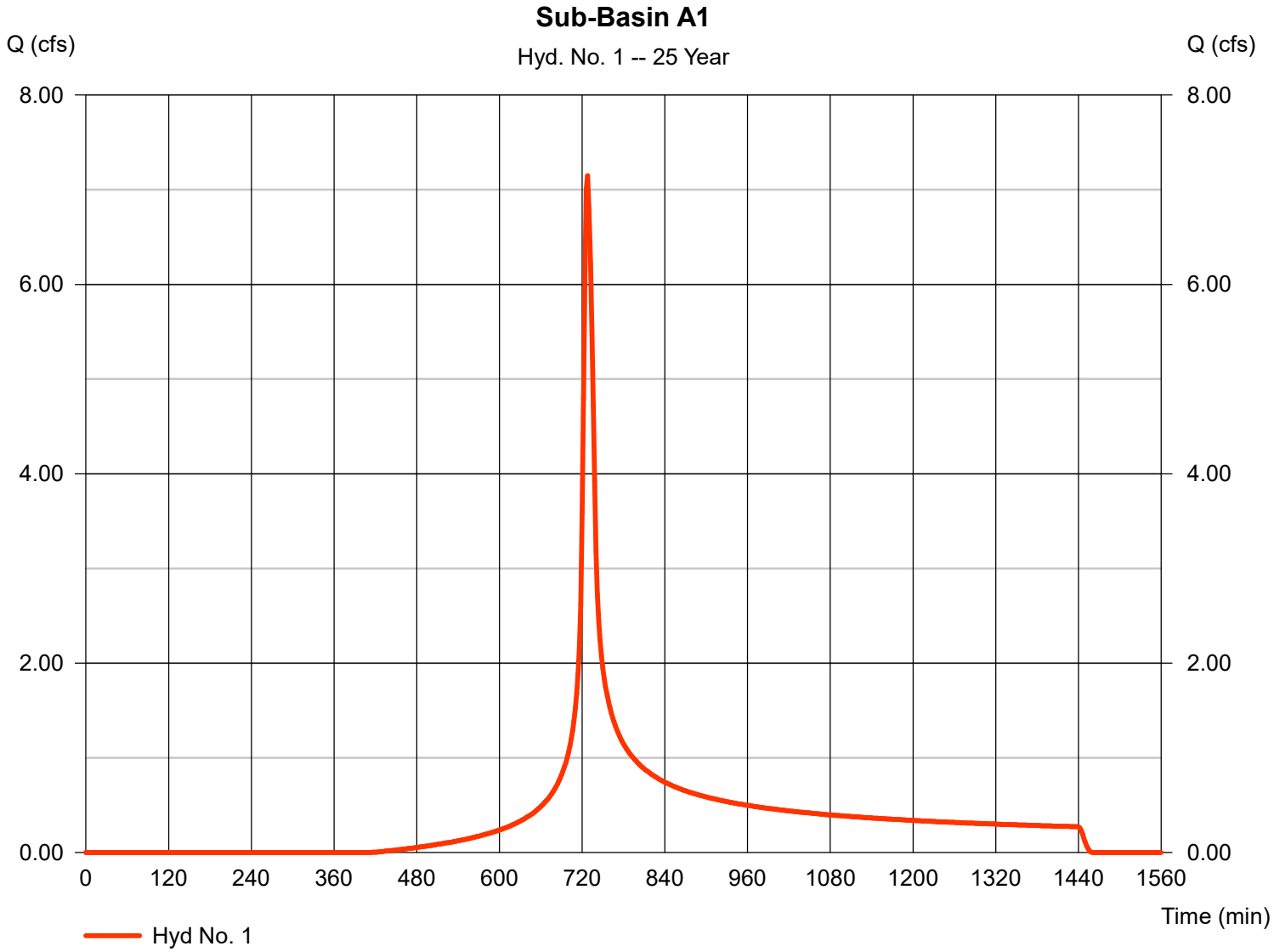
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 7.146 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 34,585 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 81.6 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 3.18 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



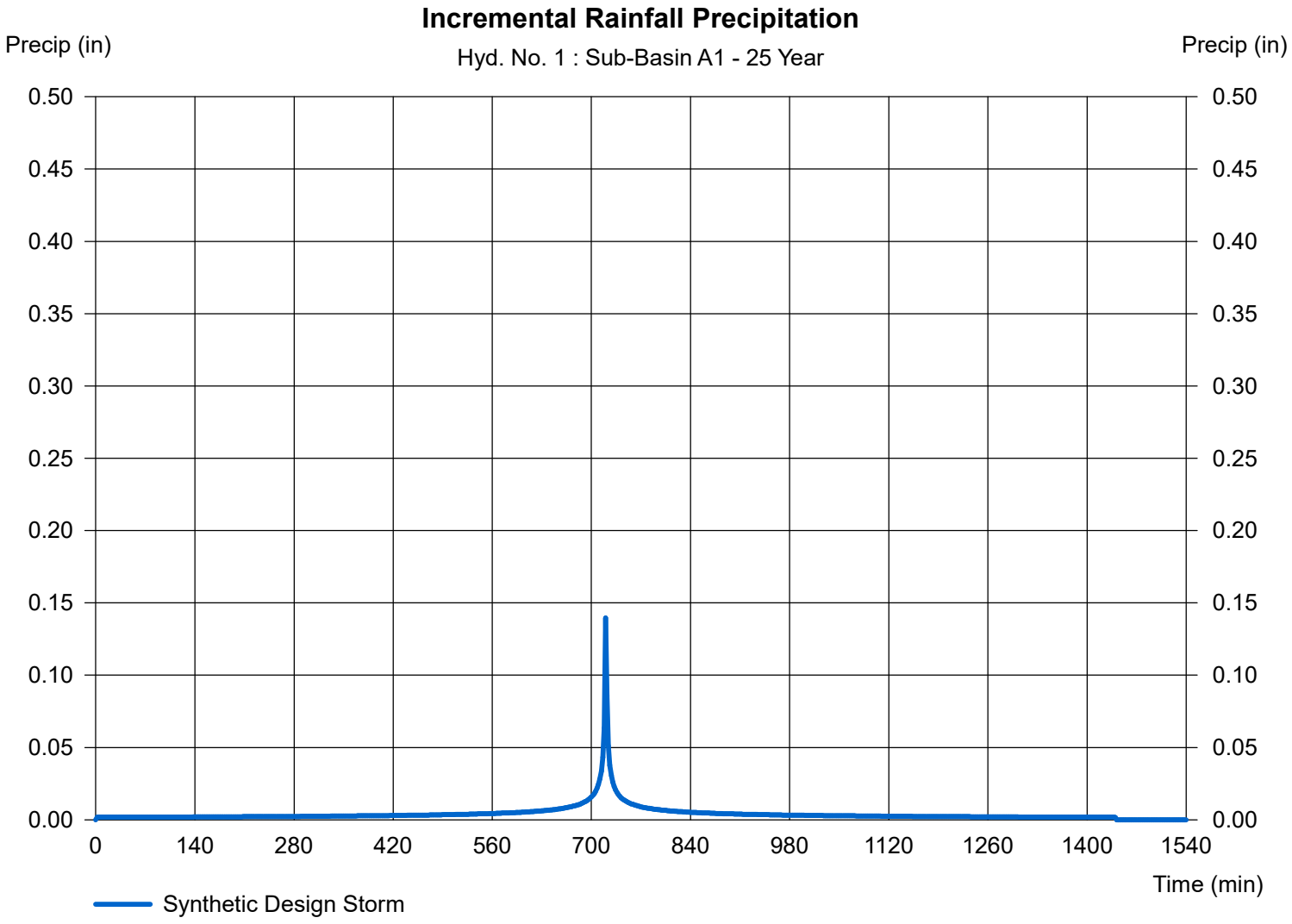
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 3.1815 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



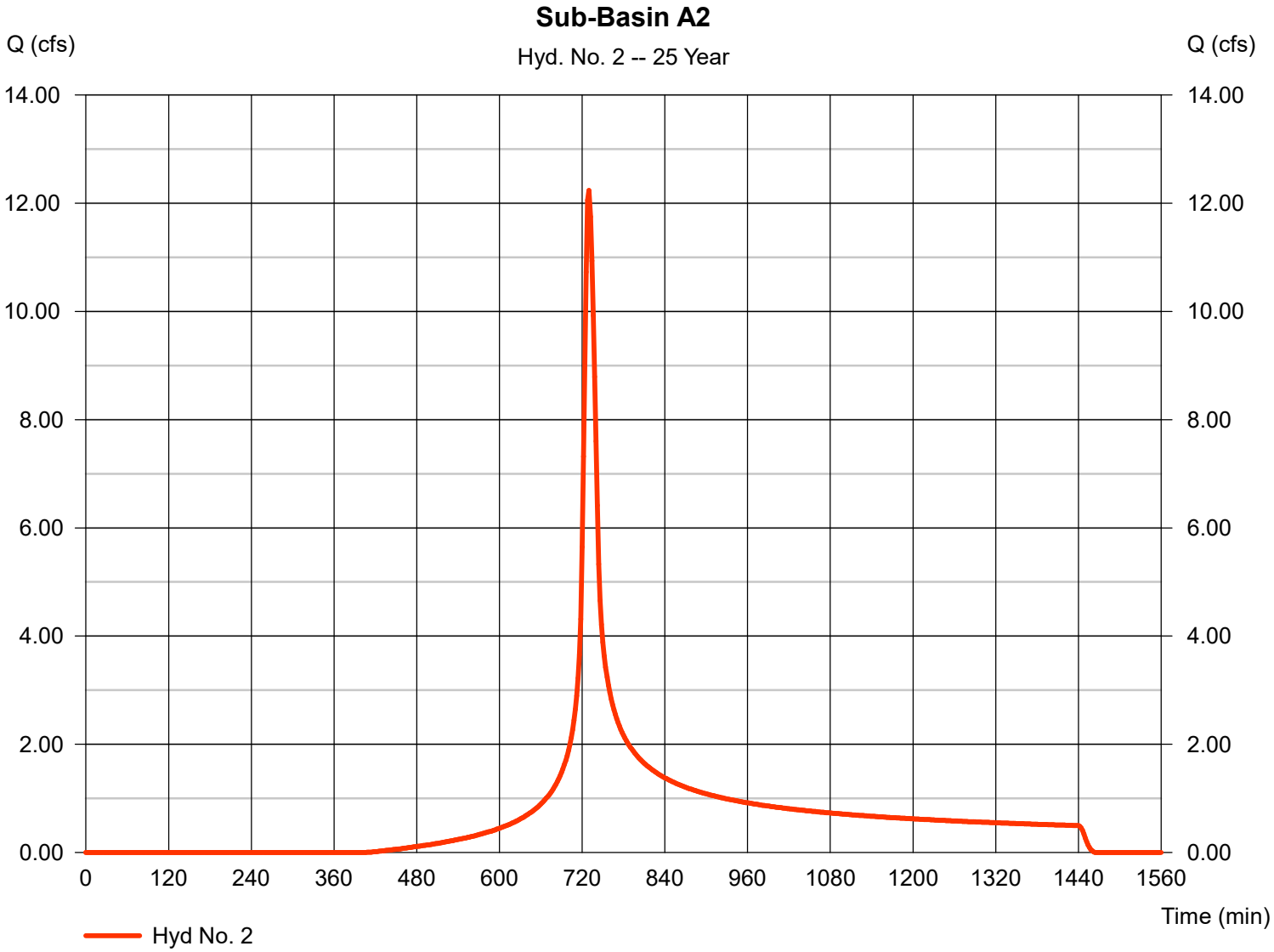
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 12.24 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 64,036 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 82.1 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 13.90 min |
| Total precip. | = | 3.18 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



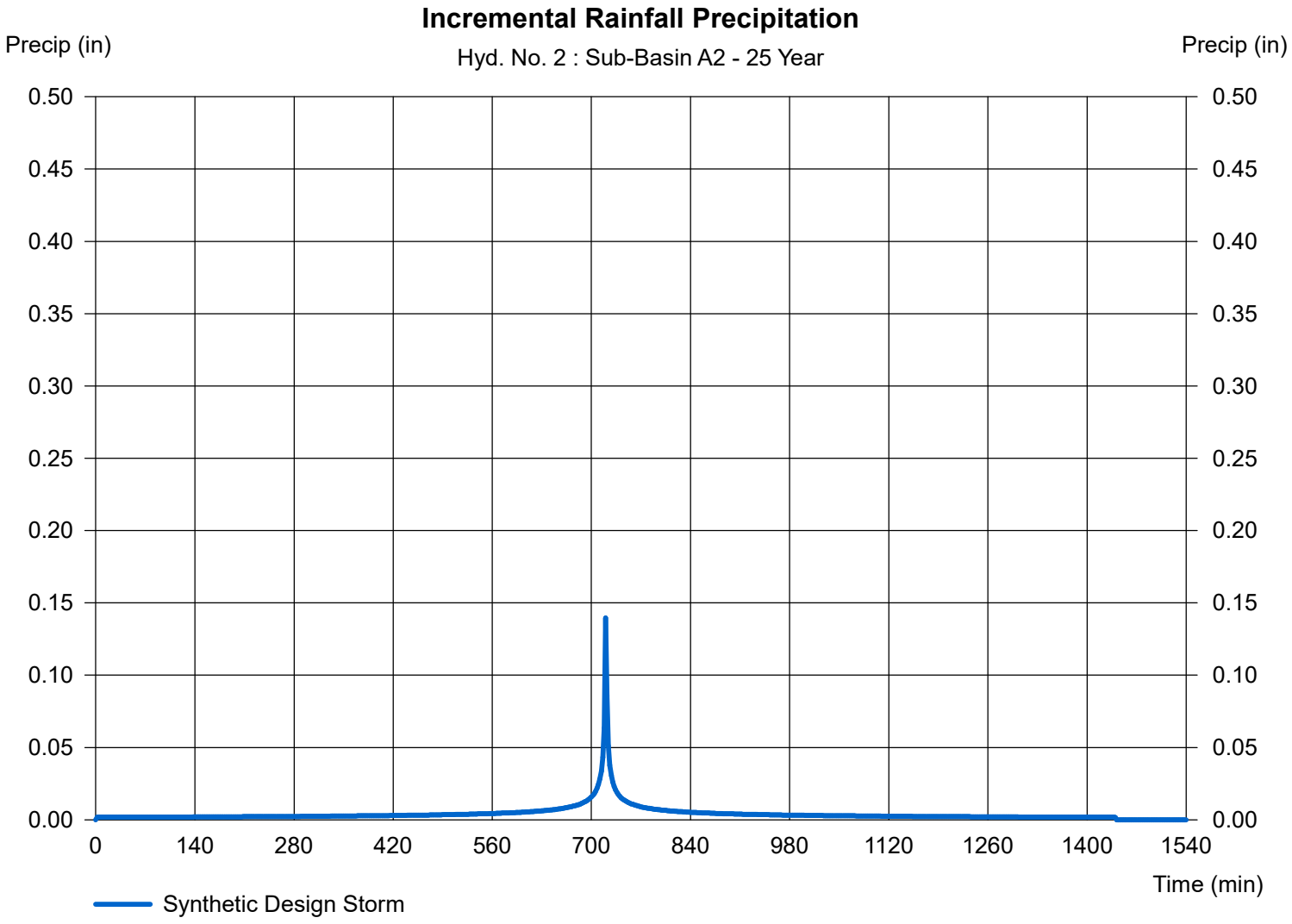
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 3.1815 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



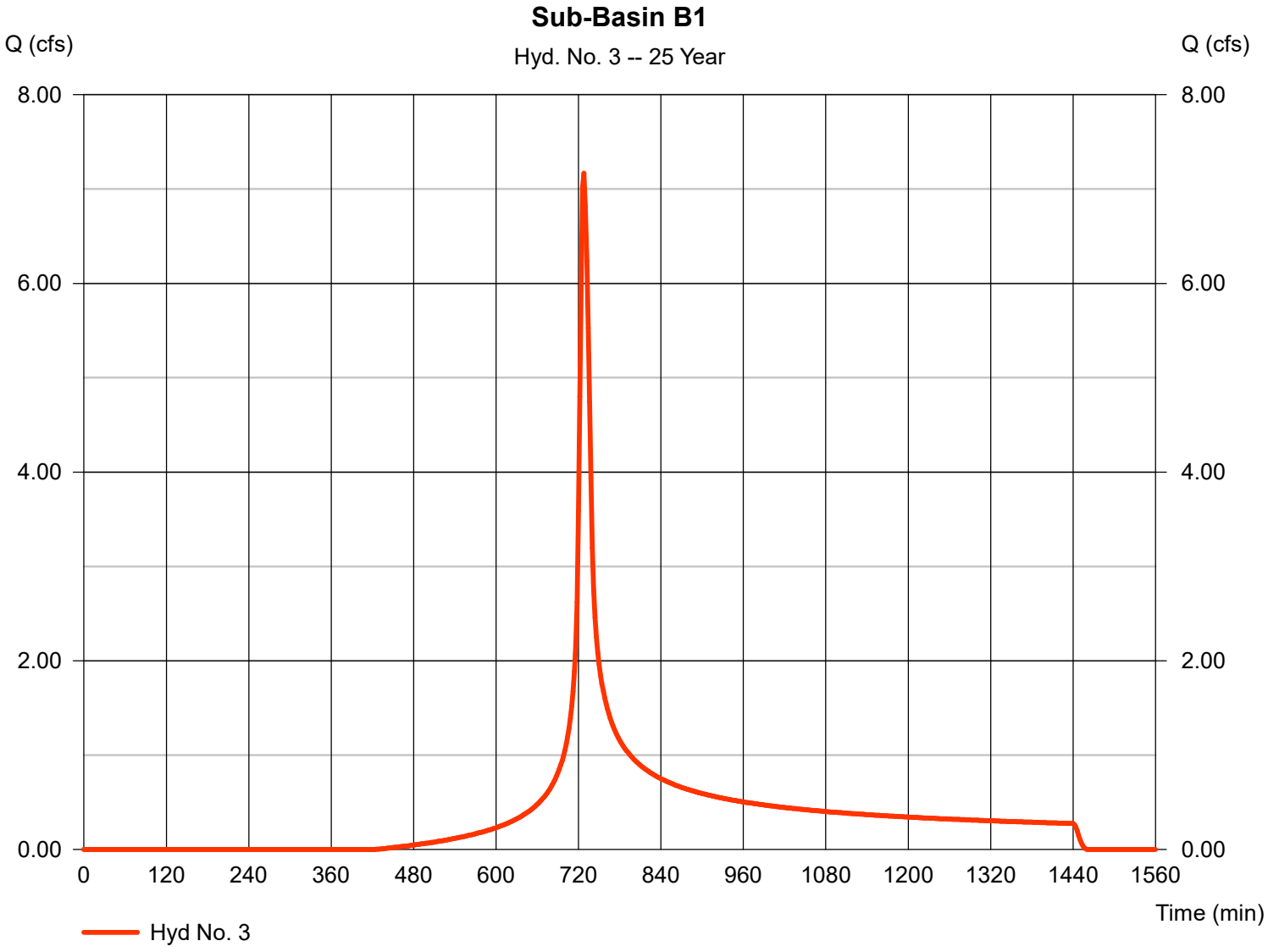
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 7.167 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 34,731 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 81.2 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 3.18 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



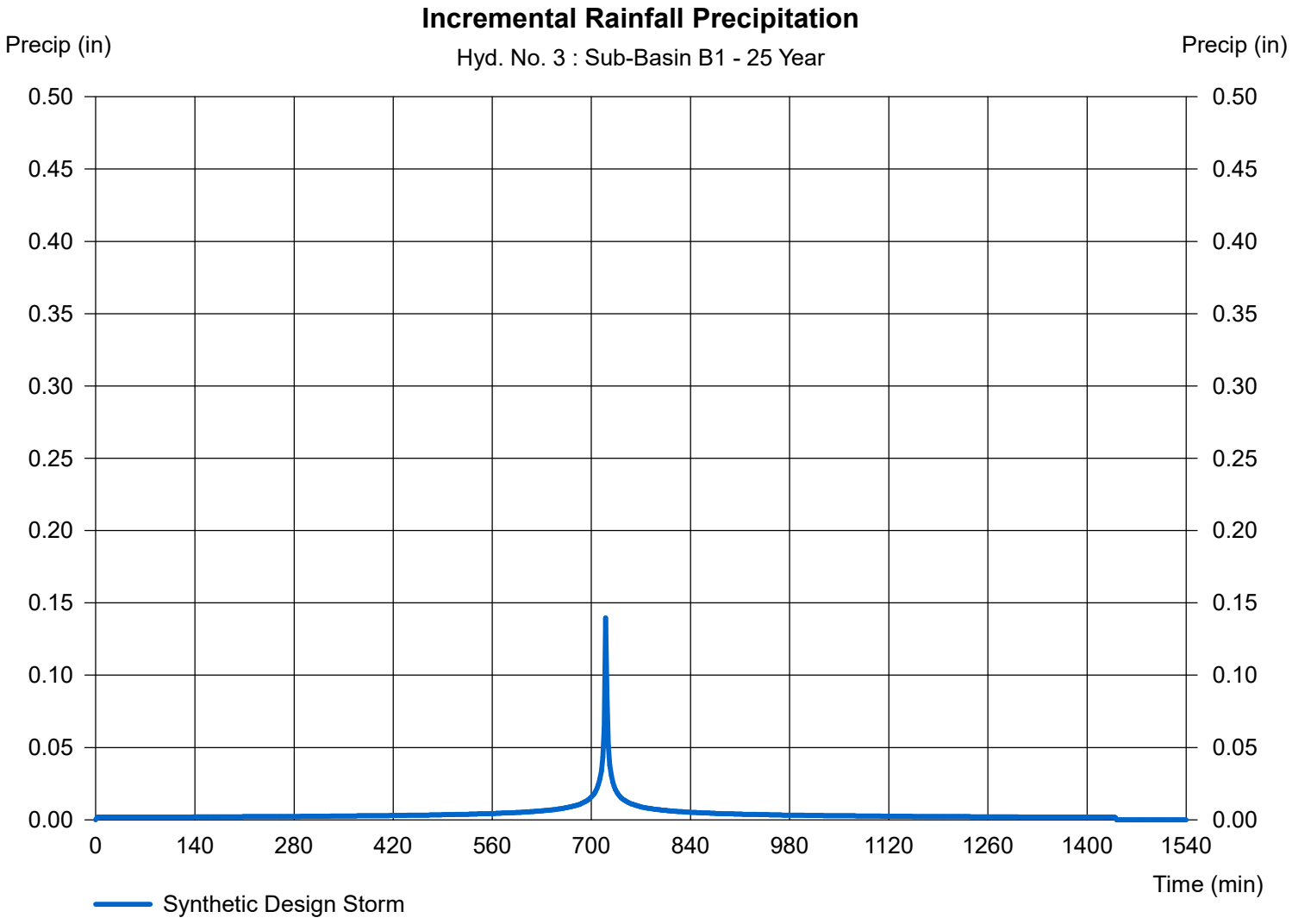
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 3.1815 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



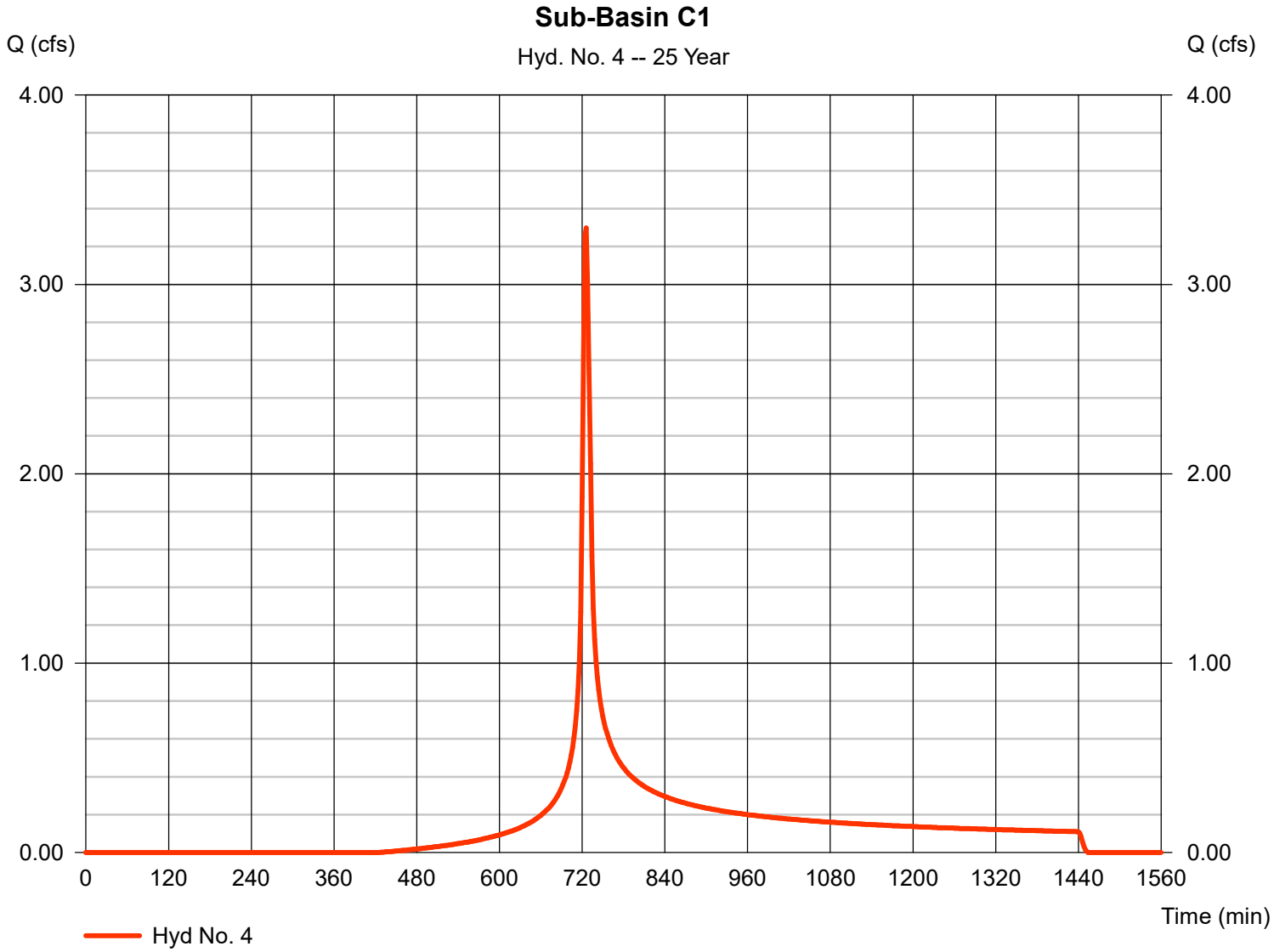
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 3.297 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 726 min |
| Time interval | = | 2 min | Hyd. volume | = | 13,828 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 81 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 3.18 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



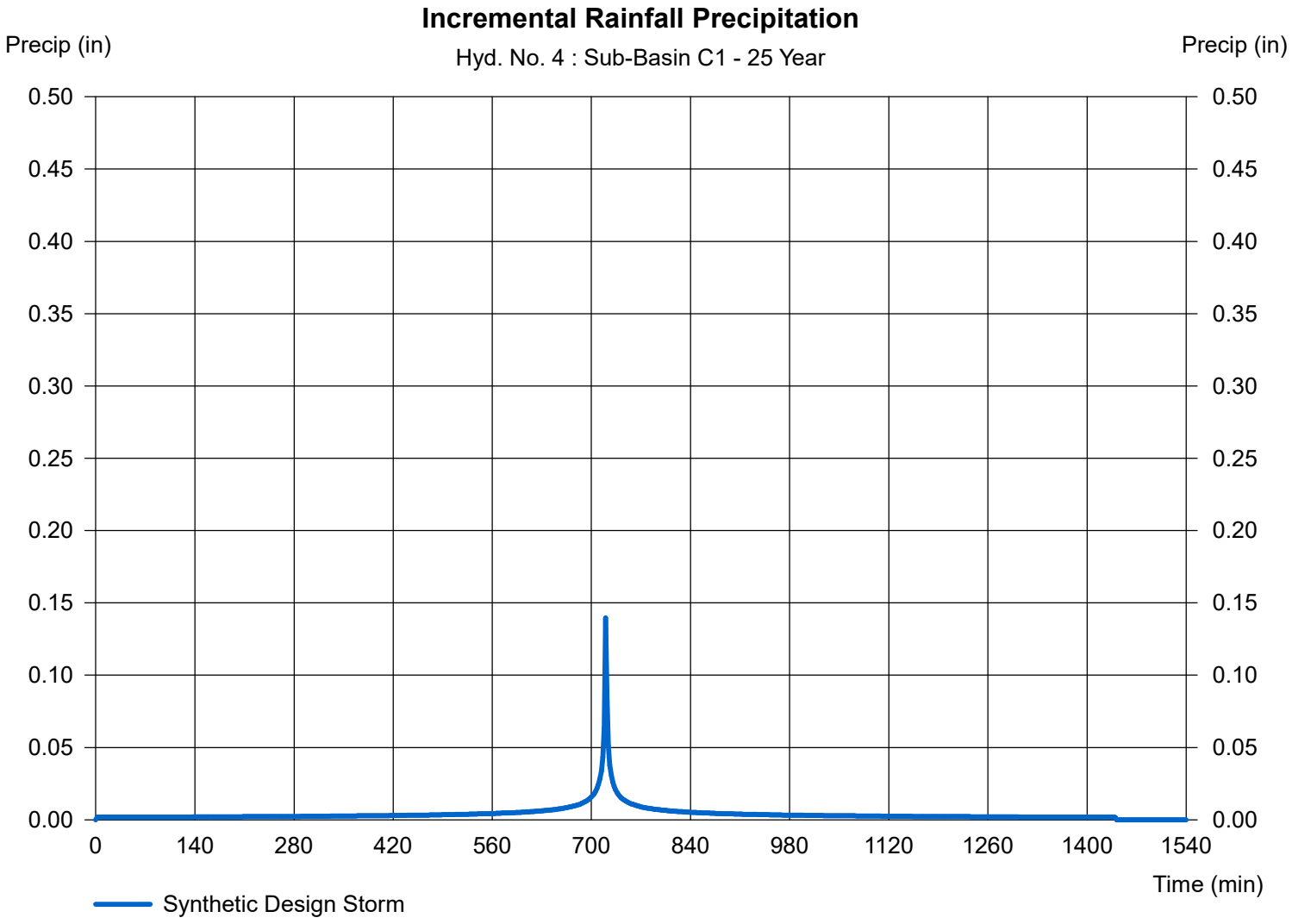
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 25 yrs | Time interval | = 2 min |
| Total precip. | = 3.1815 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



# Hydrograph Report

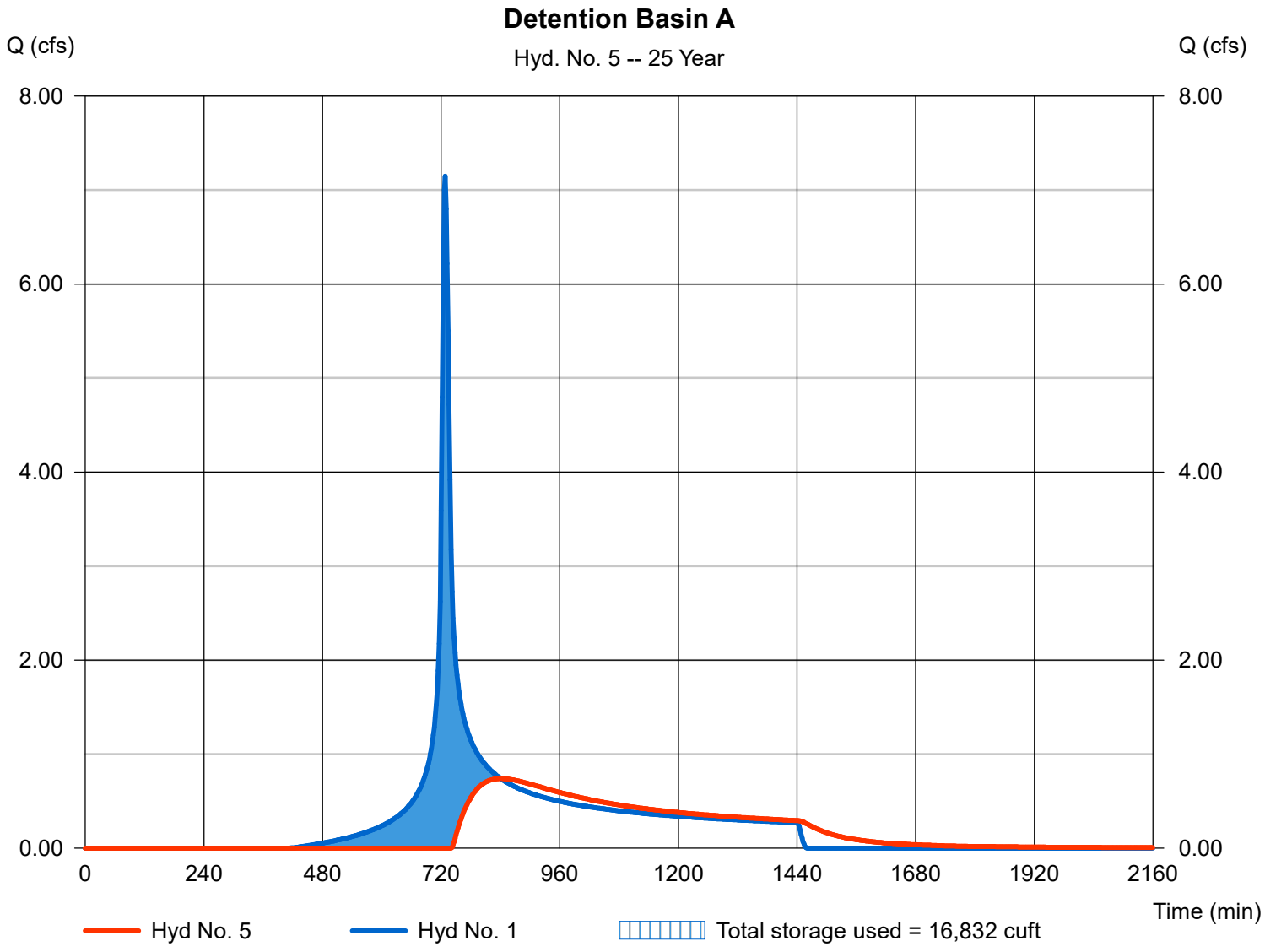
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.740 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 840 min |
| Time interval | = | 2 min | Hyd. volume | = | 21,692 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4047.44 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 16,832 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

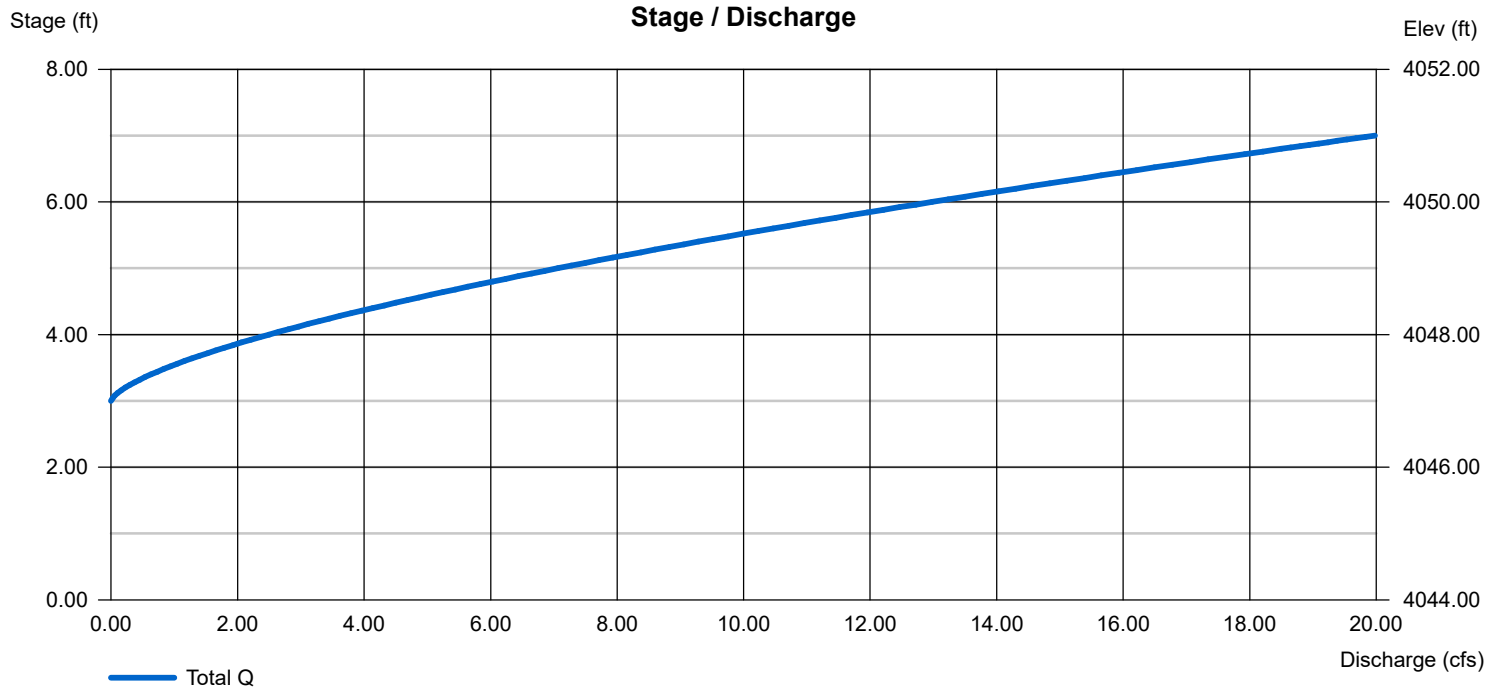
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



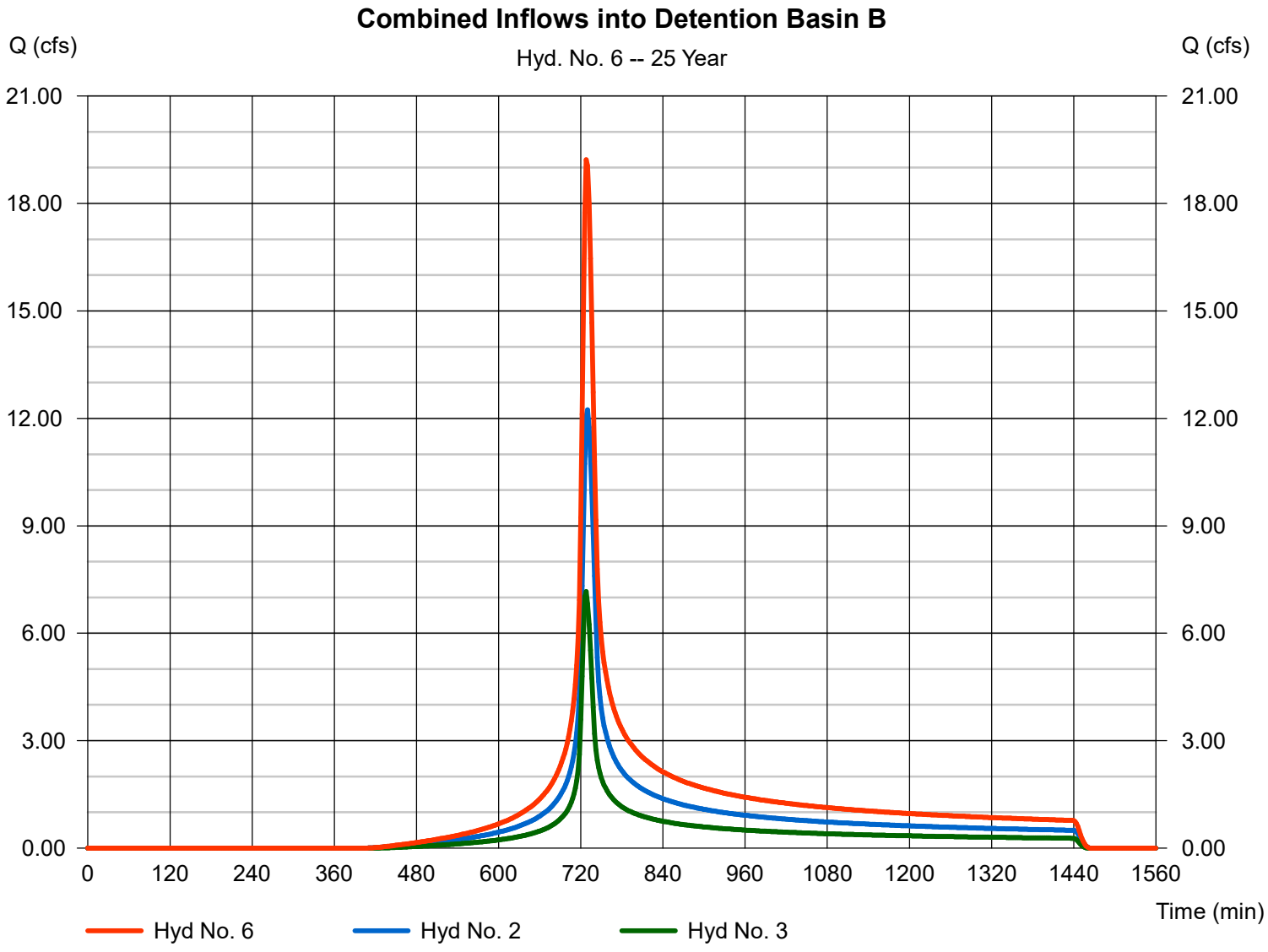
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 19.22 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 98,767 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

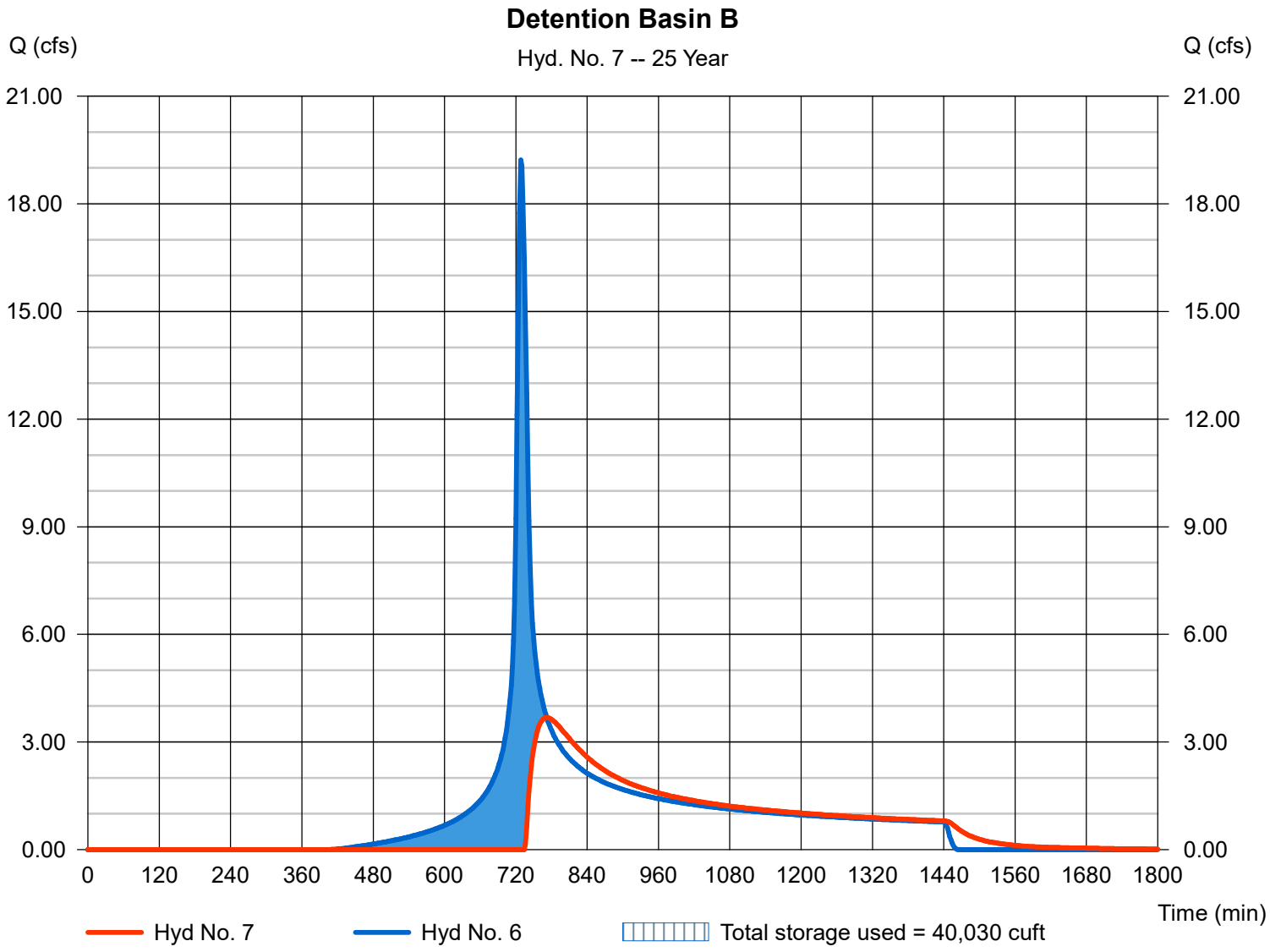
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 3.681 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 772 min |
| Time interval | = | 2 min | Hyd. volume | = | 67,352 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4030.51 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 40,030 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

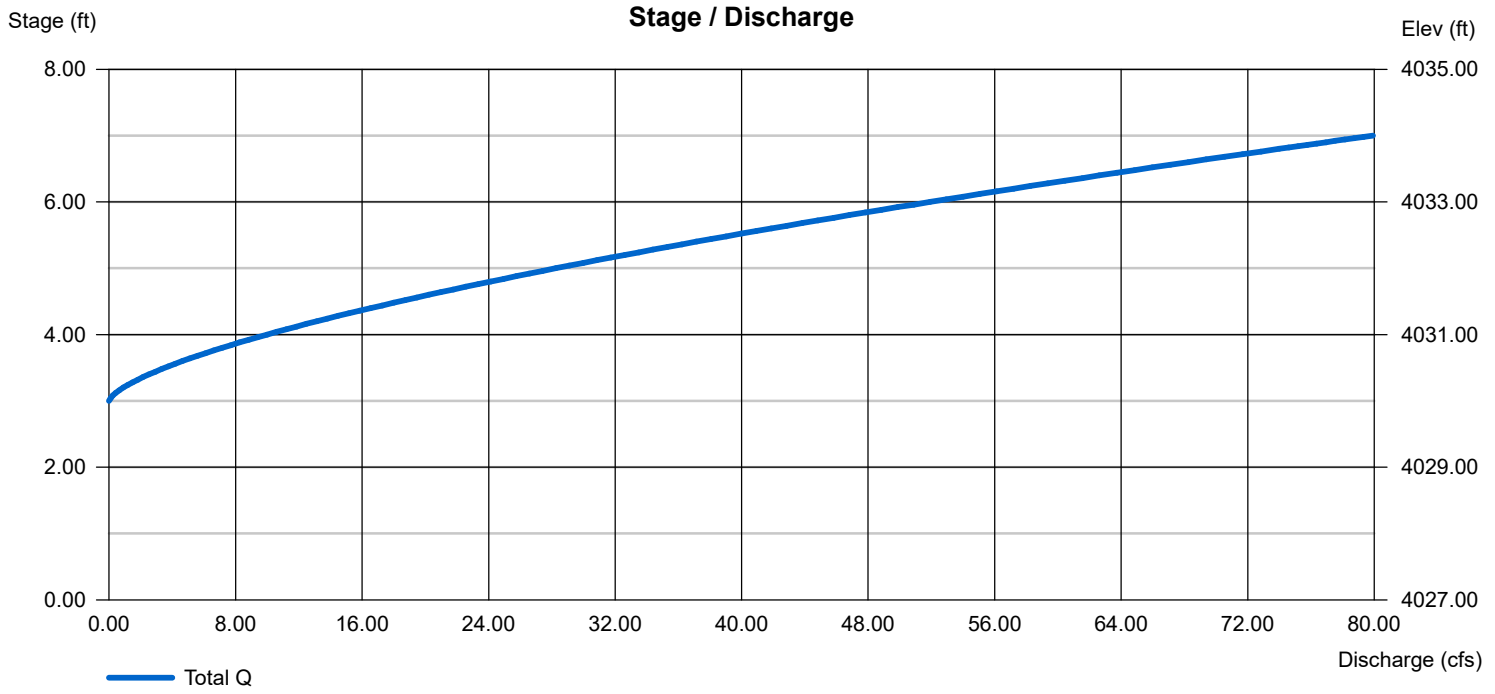
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

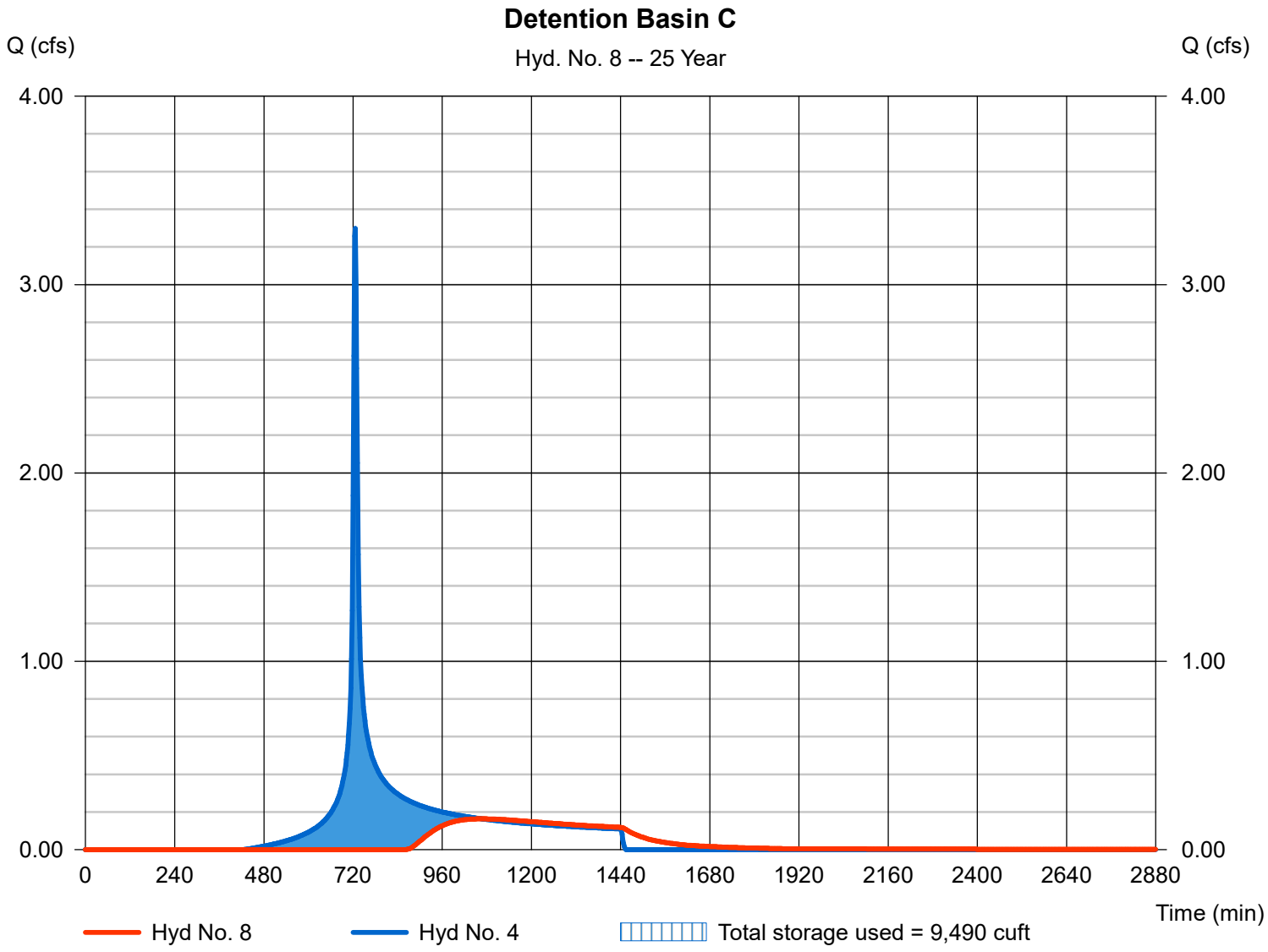
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.164 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 1066 min |
| Time interval | = | 2 min | Hyd. volume | = | 5,479 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4058.71 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 9,490 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

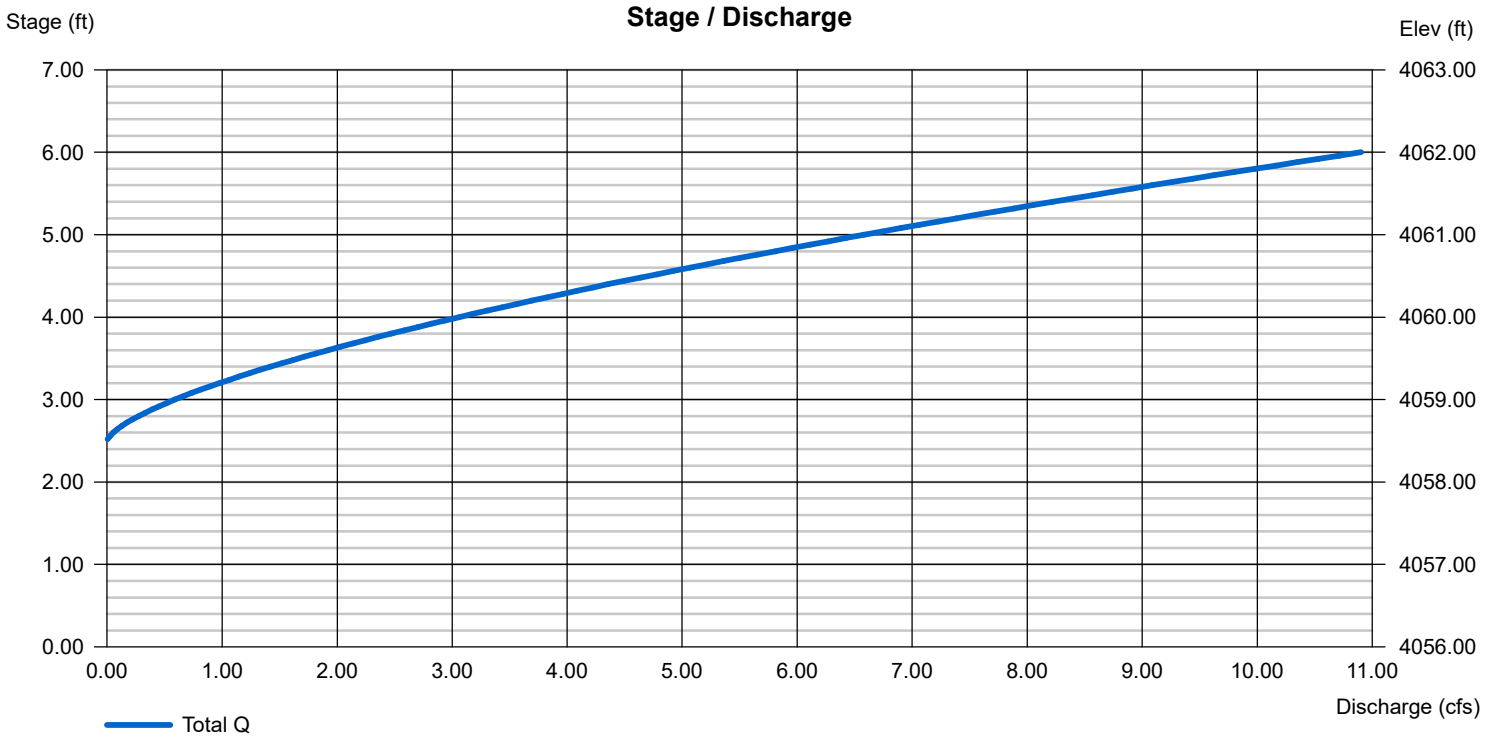
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



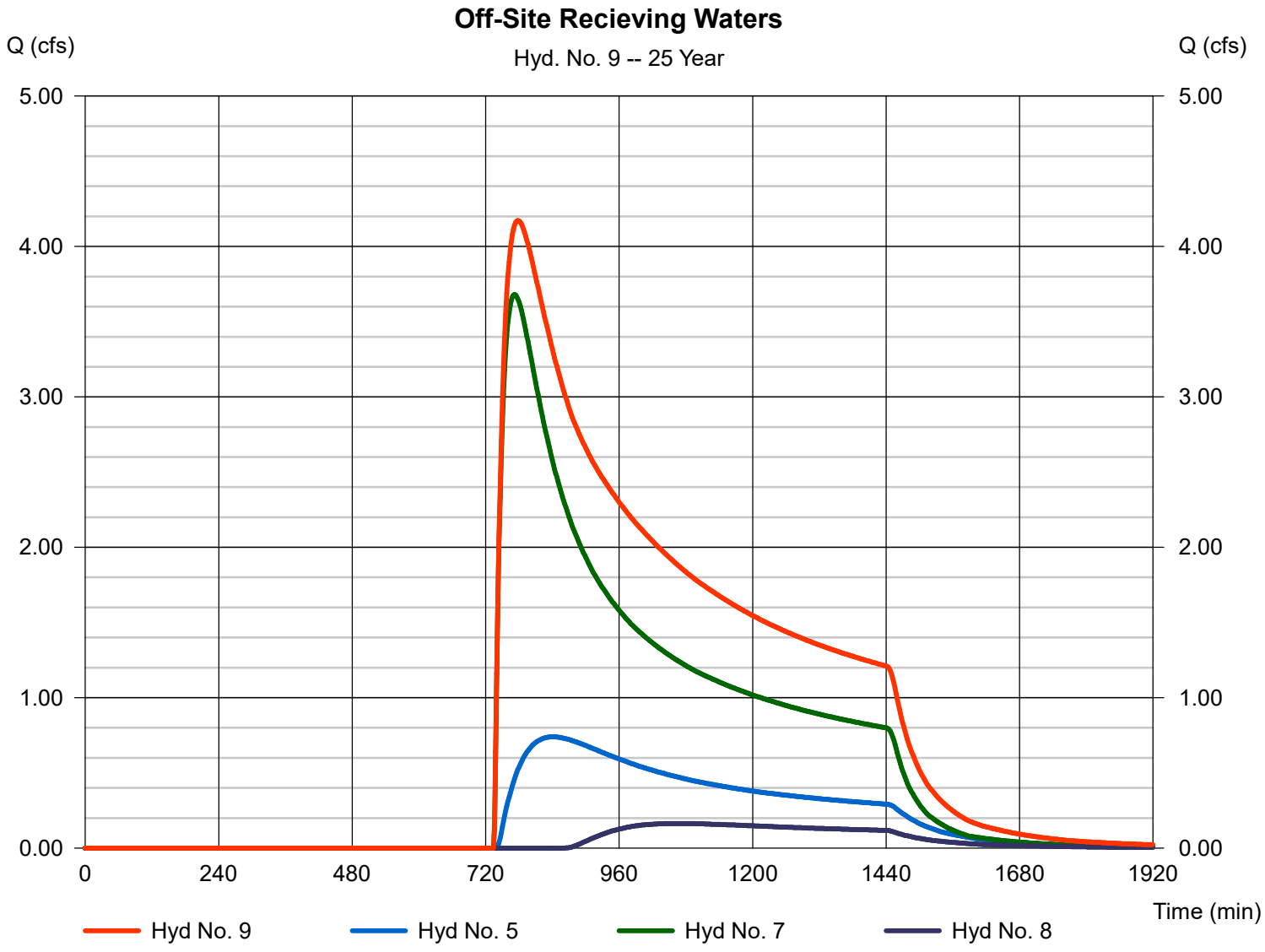
# Hydrograph Report



## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 4.173 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 778 min |
| Time interval | = 2 min | Hyd. volume | = 94,522 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |

## 5.4.d. 100 Year Storm Event– Post-Developed Conditions

5.4.d.1 15 Min Duration

5.4.d.2 30 Min Duration

5.4.d.3 1 Hour Duration

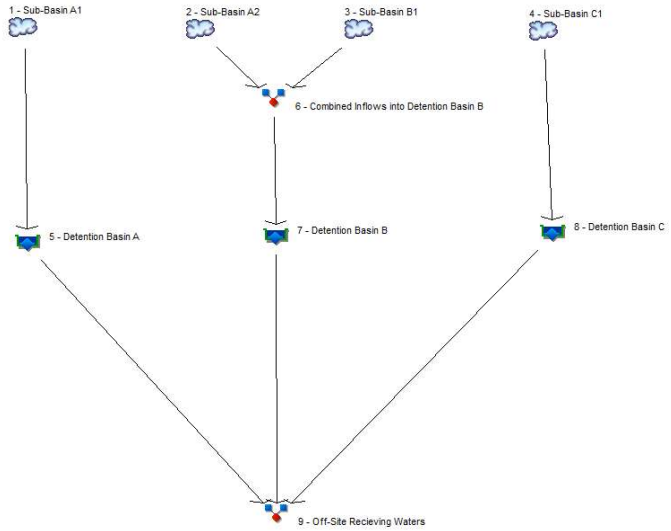
5.4.d.4 3 Hour Duration

5.4.d.5 6 Hour Duration

5.4.d.3 24 Hour Duration

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 5.798 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 12.71 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 6.583 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 2.958 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 19.30 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 5.798 | 1 | 18 | 4,618 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 12.71 | 1 | 17 | 9,445 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 6.583 | 1 | 17 | 4,885 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 2.958 | 1 | 16 | 1,956 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4045.64 | 4,618 | Detention Basin A |
| 6 | Combine | 19.30 | 1 | 17 | 14,330 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4028.74 | 14,330 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4056.84 | 1,956 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

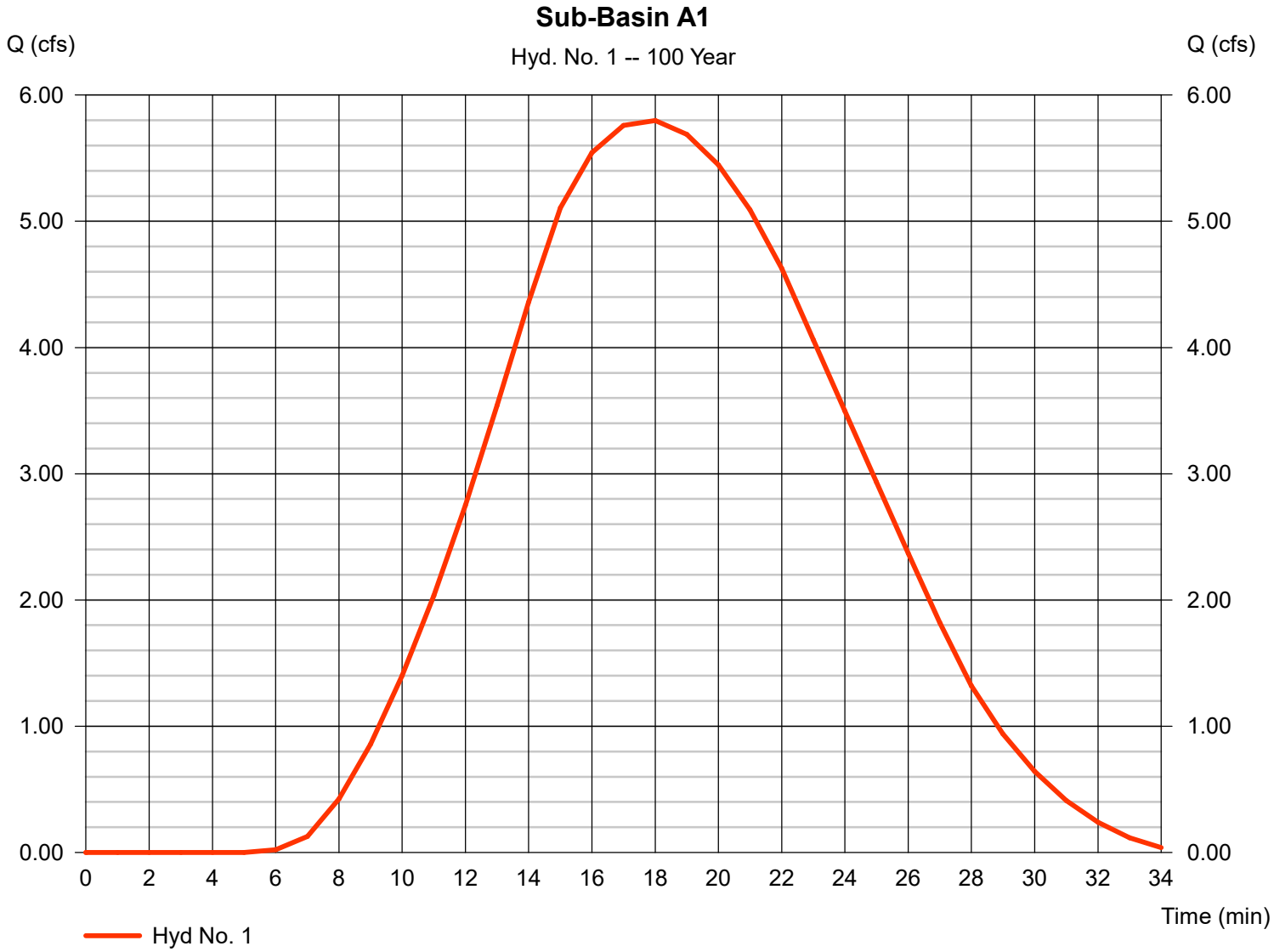
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 5.798 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 18 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,618 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.64 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



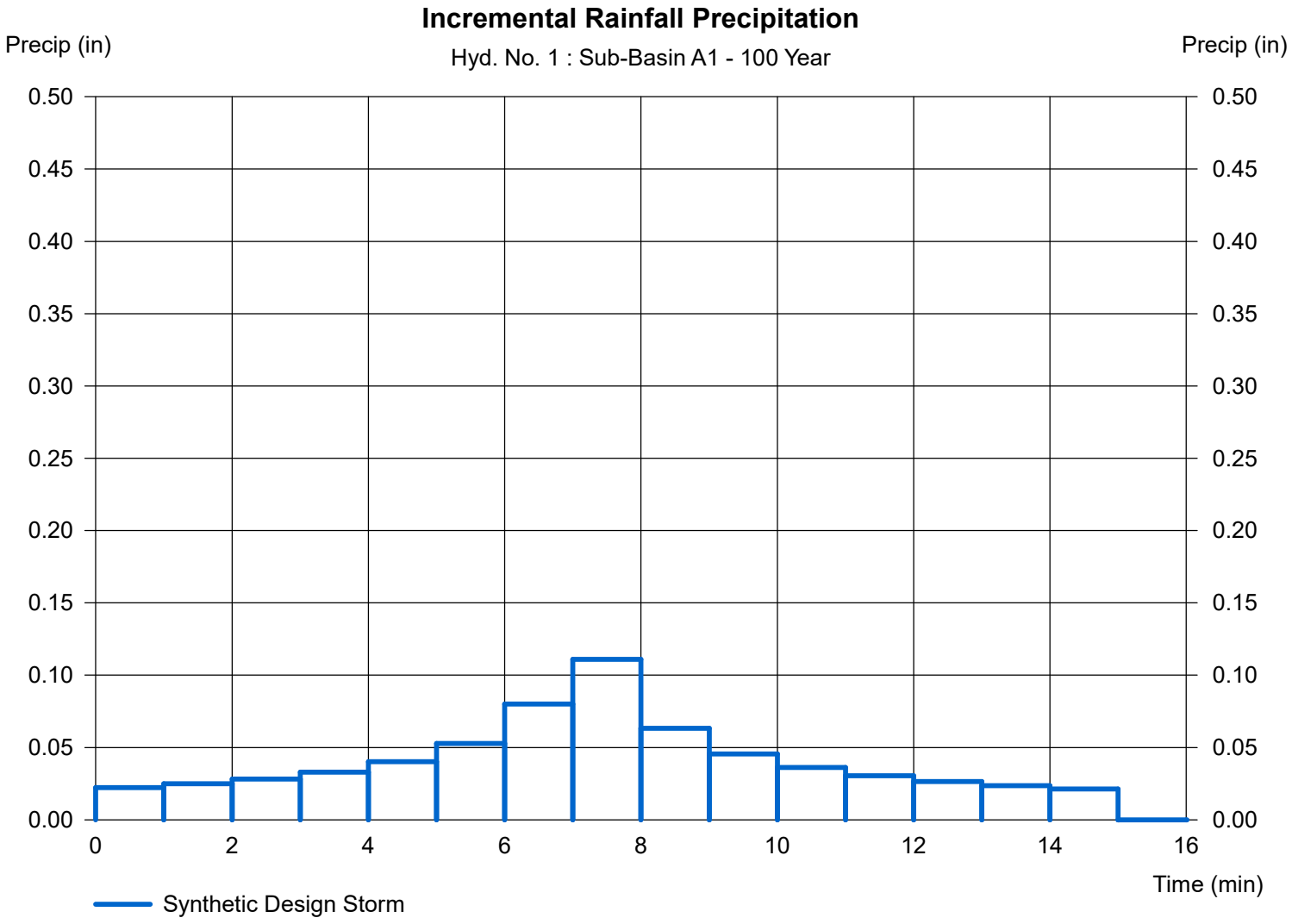
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6393 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



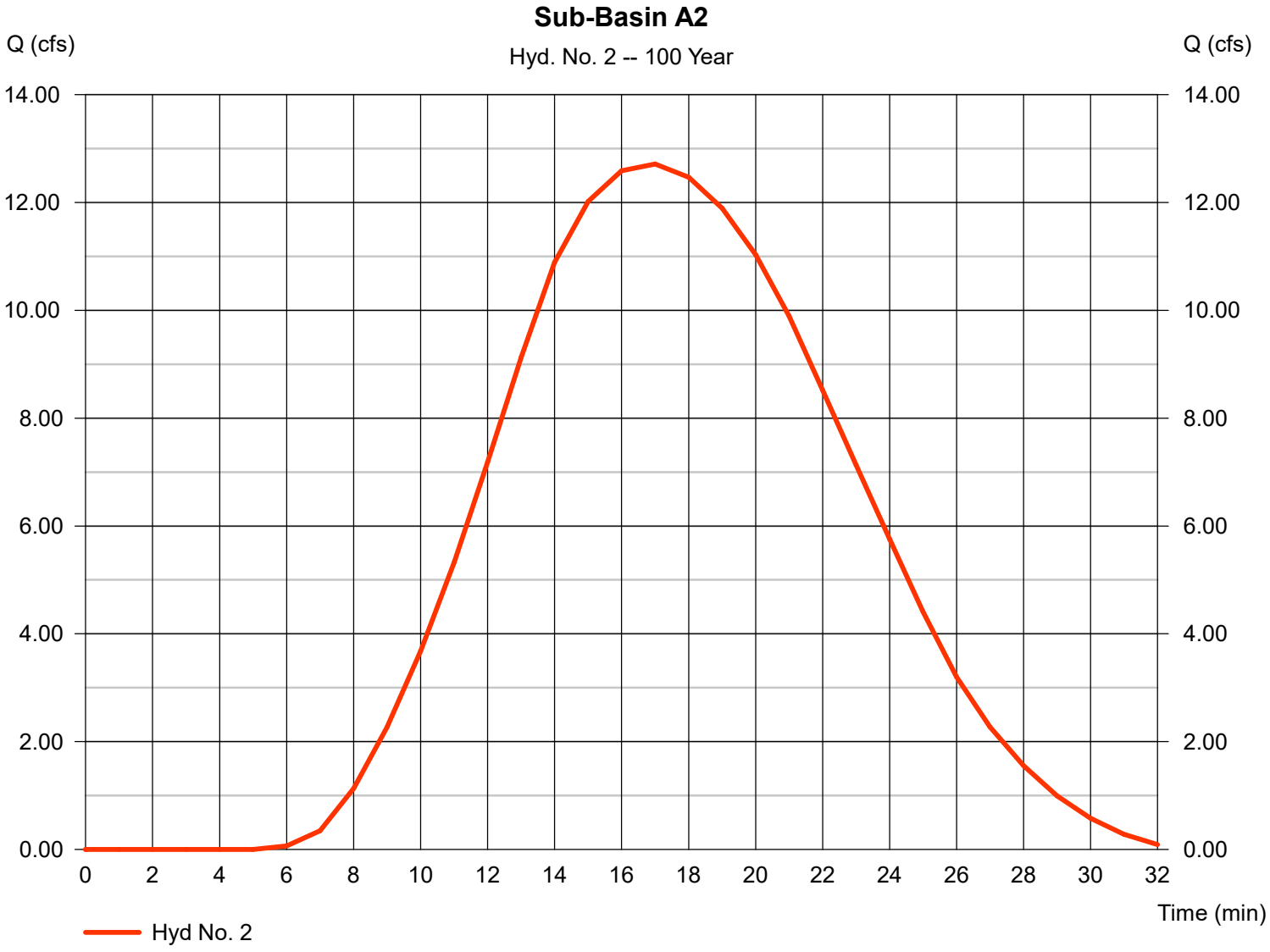
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 12.71 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 17 min |
| Time interval | = | 1 min | Hyd. volume | = | 9,445 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.64 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



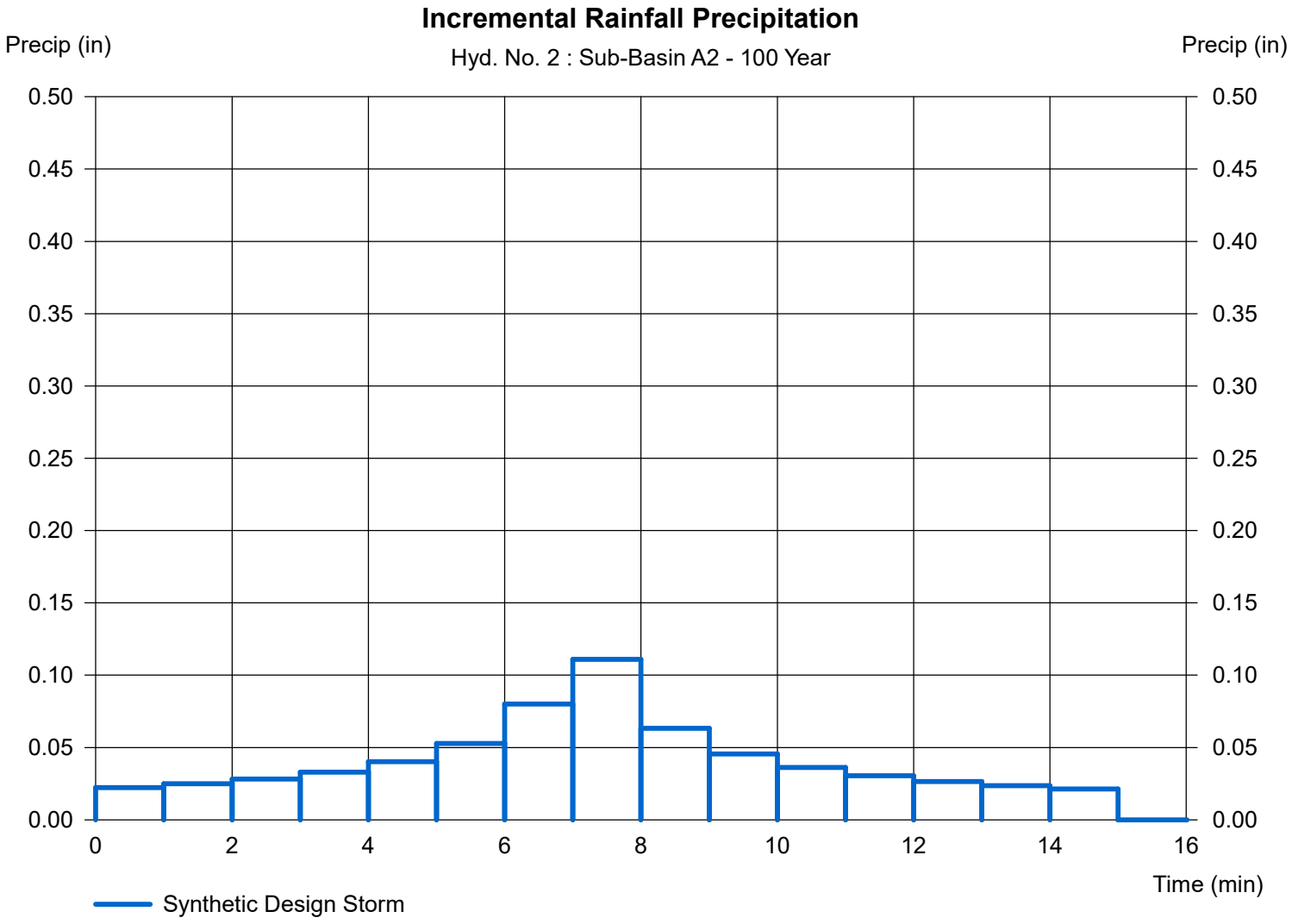
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6393 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



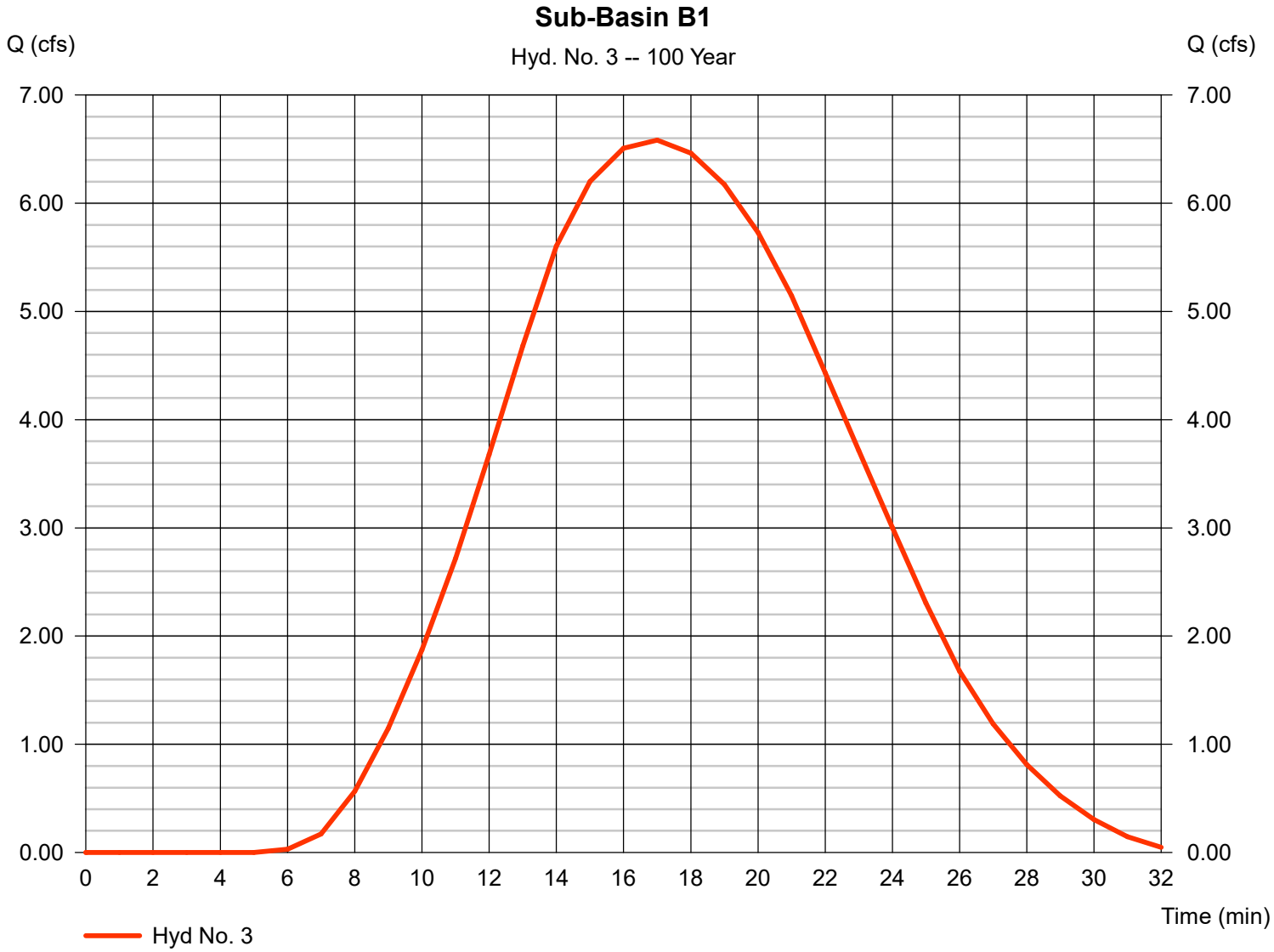
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 6.583 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 17 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,885 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.64 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



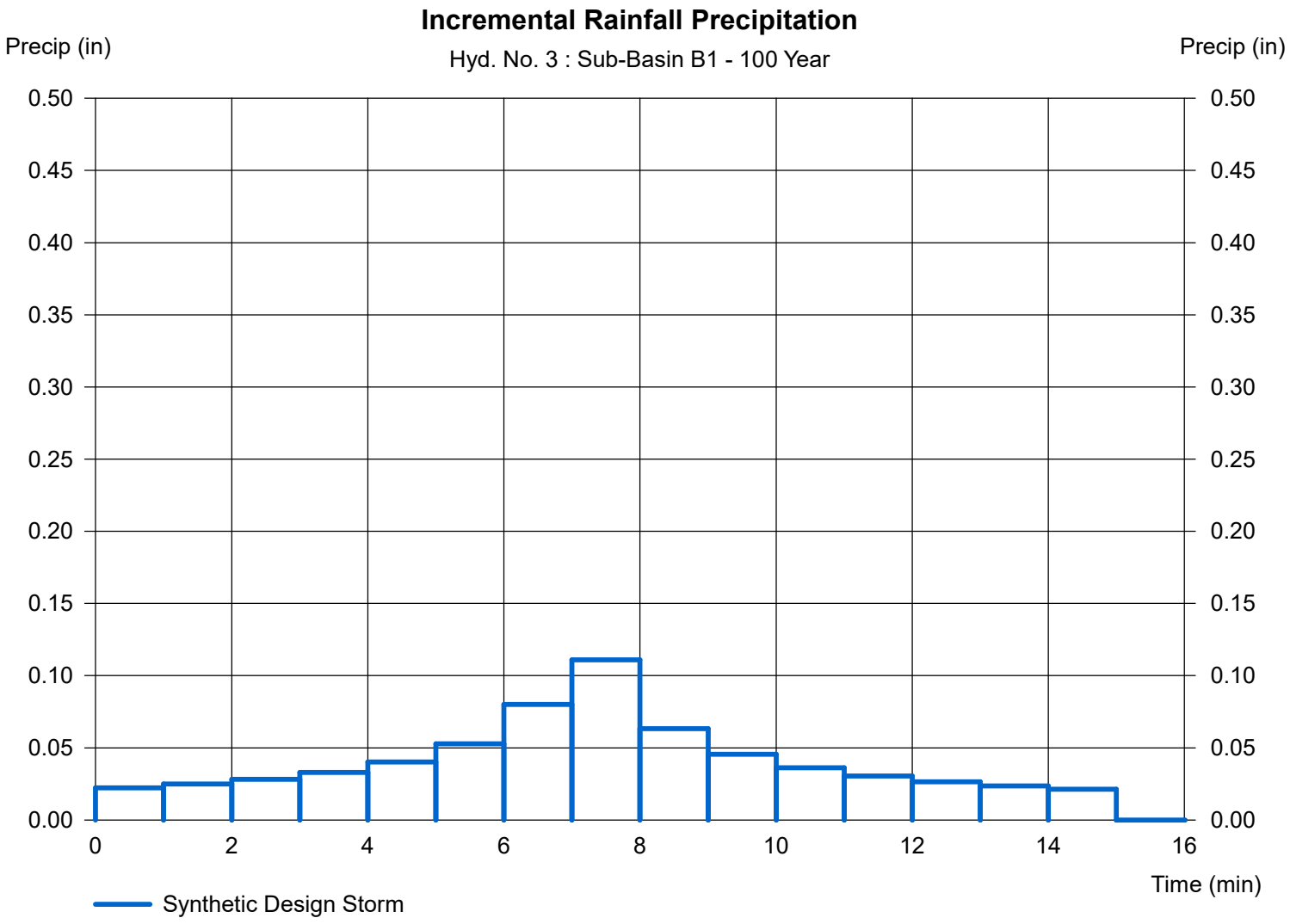
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6393 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



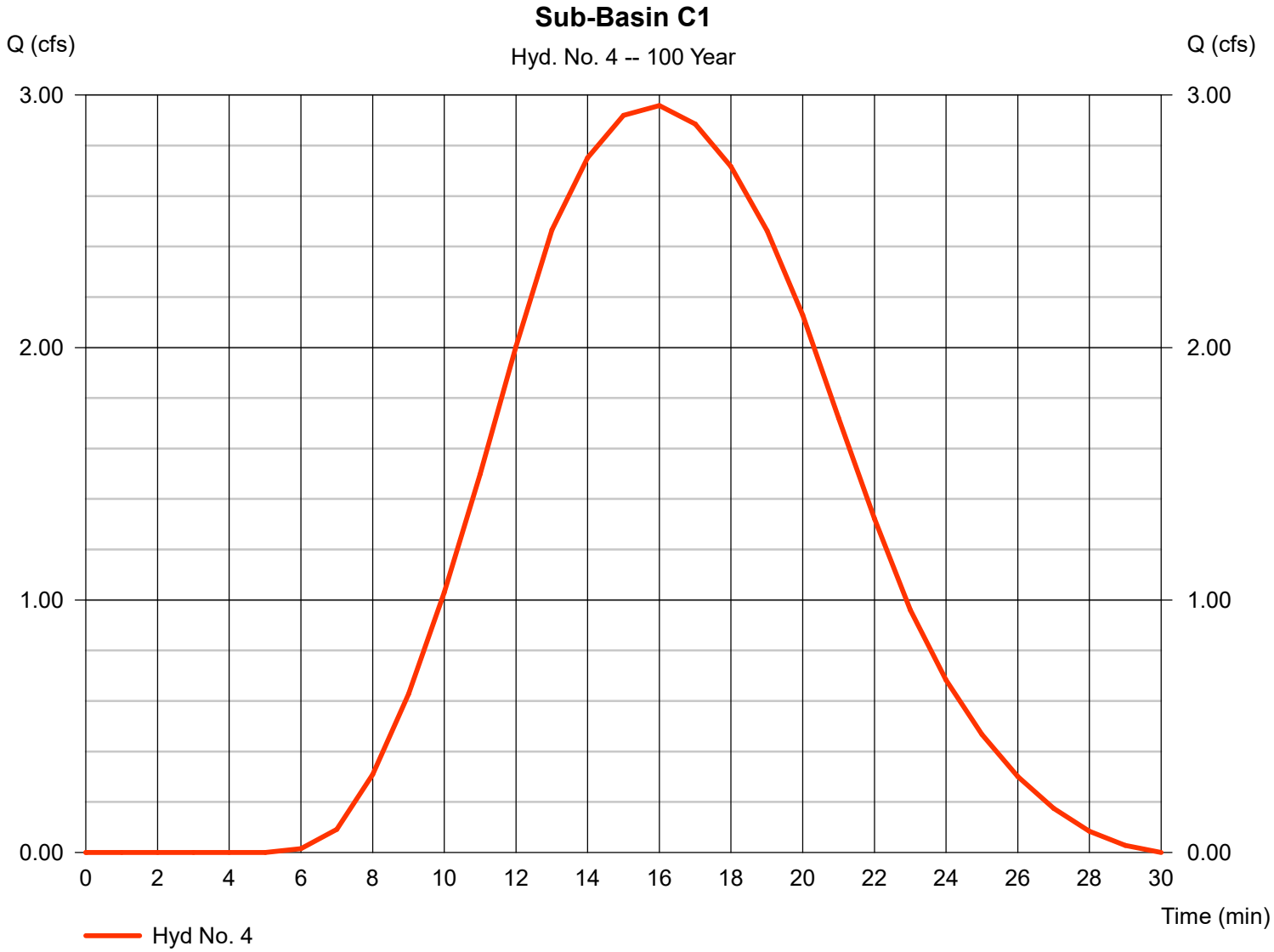
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 2.958 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 16 min |
| Time interval | = | 1 min | Hyd. volume | = | 1,956 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 93.4 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 0.64 in | Distribution | = | Synthetic |
| Storm duration | = | 0.25 hrs | Shape factor | = | 484 |



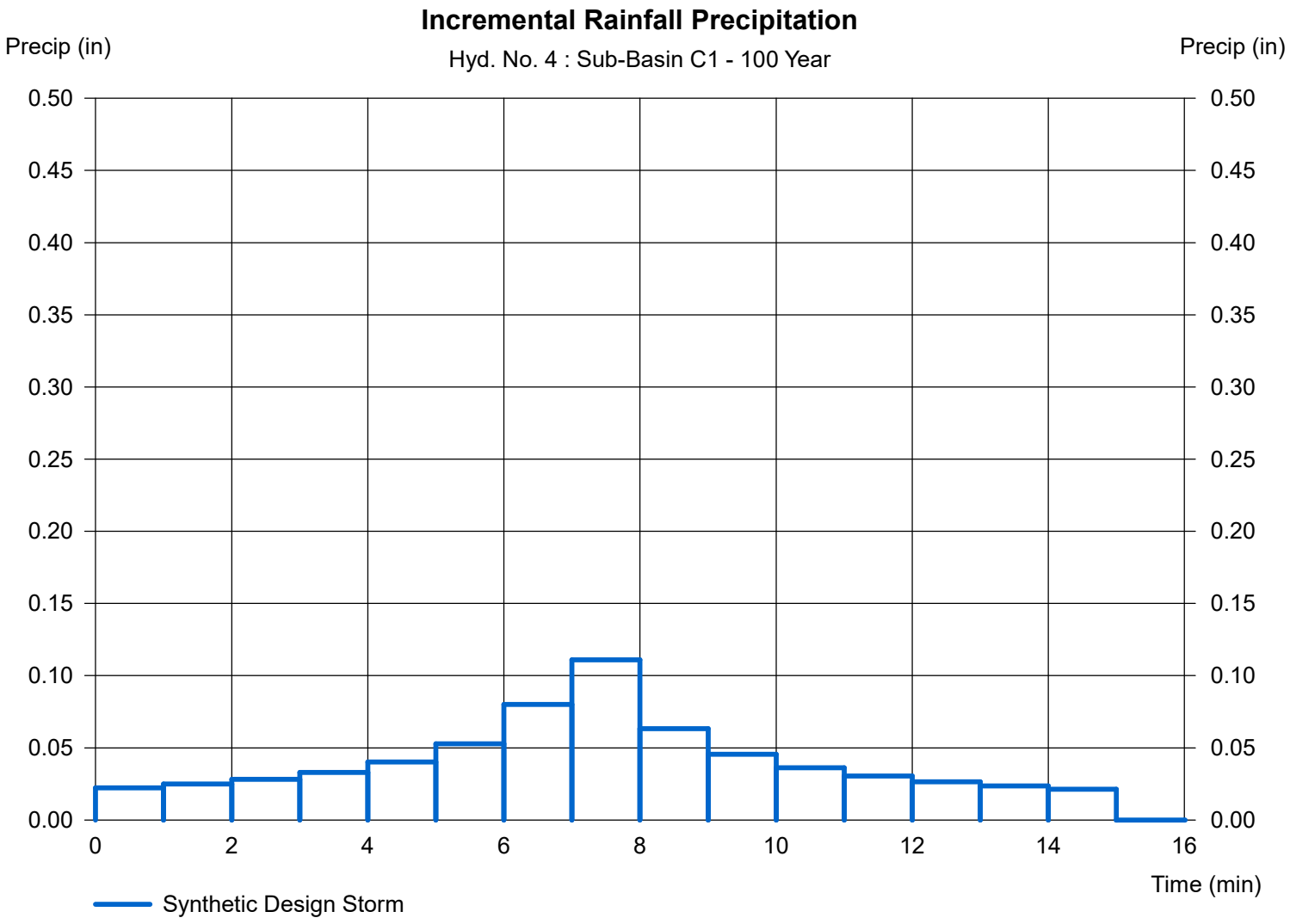
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.6393 in | Distribution | = Synthetic |
| Storm duration | = 0.25 hrs | | |



# Hydrograph Report

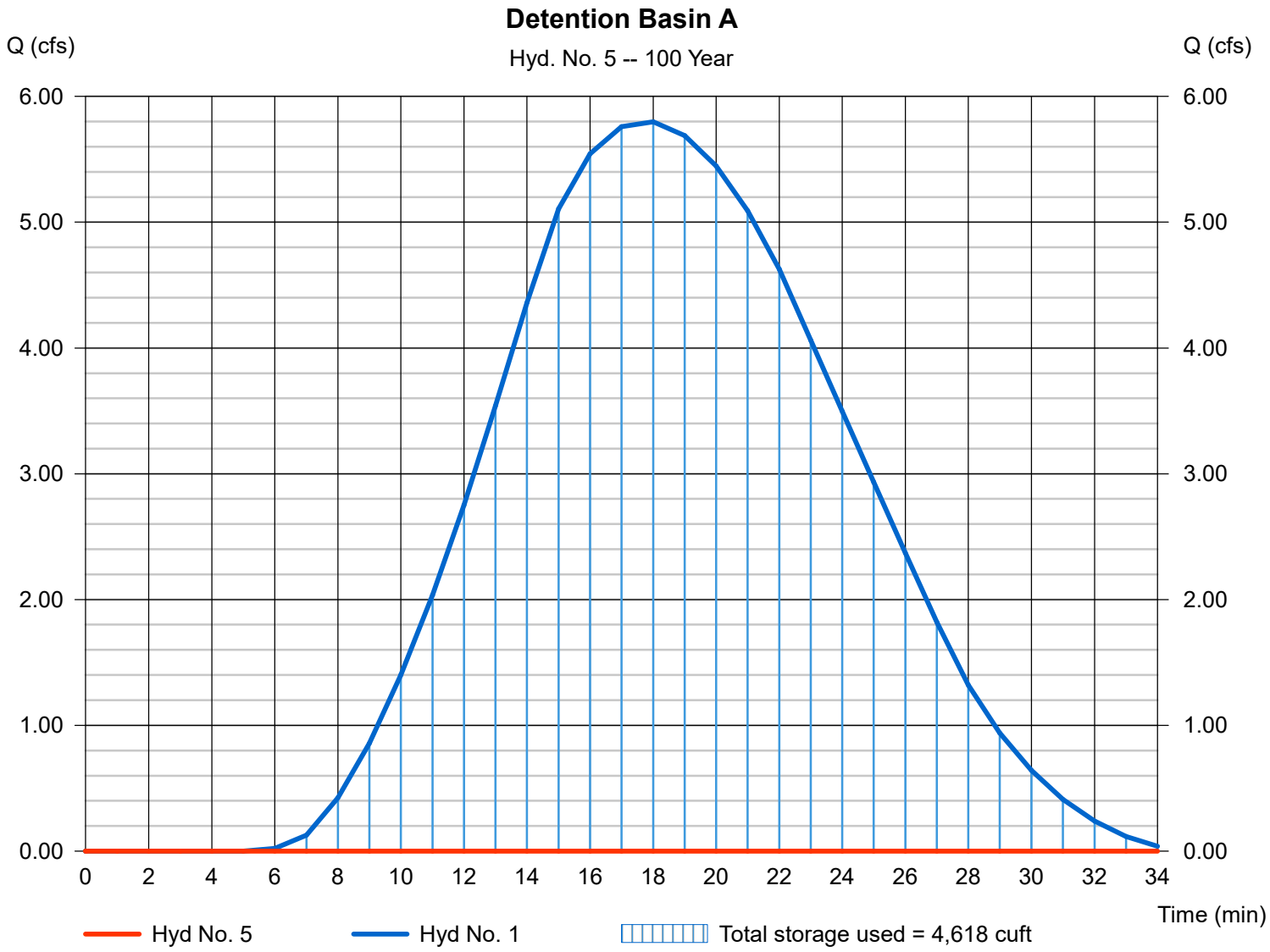
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4045.64 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 4,618 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

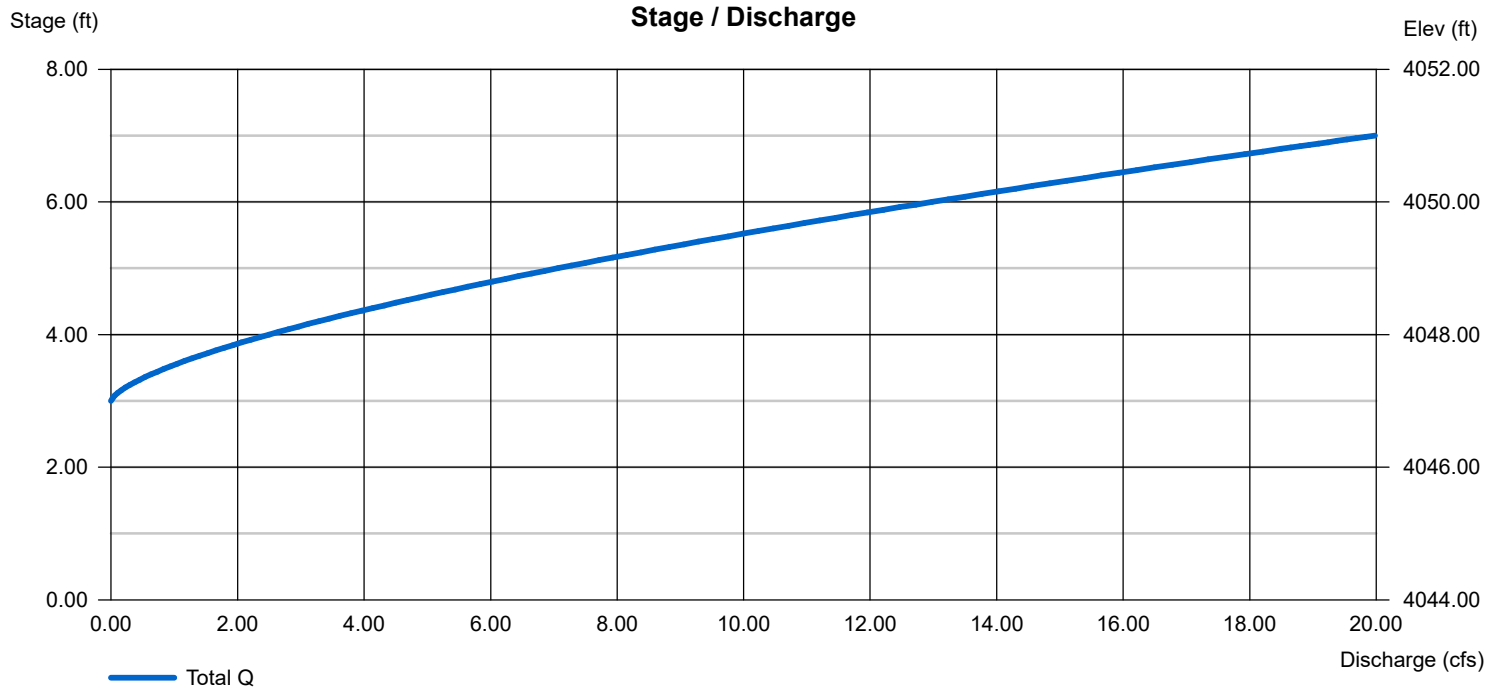
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



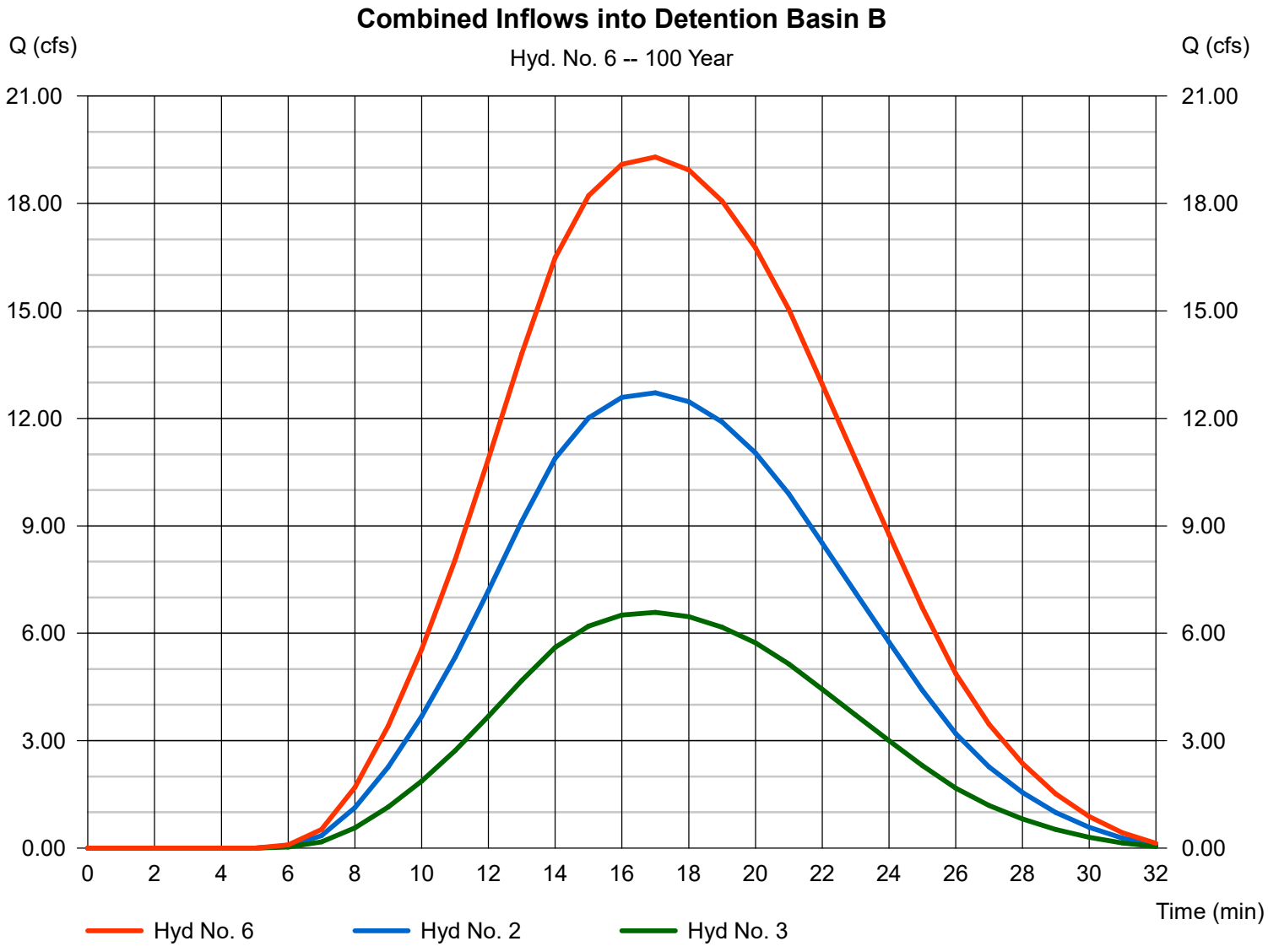
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 19.30 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 17 min |
| Time interval | = 1 min | Hyd. volume | = 14,330 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

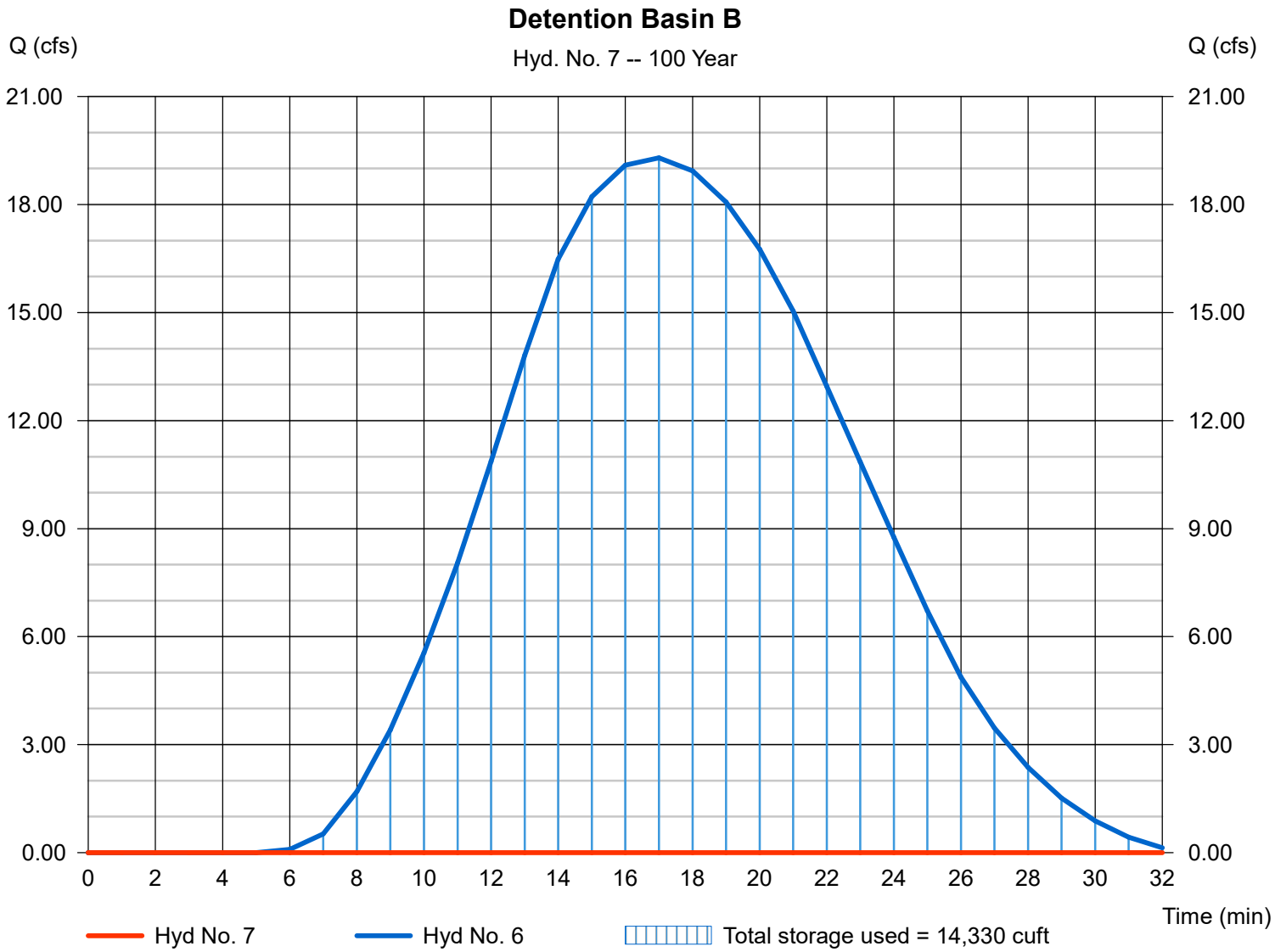
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4028.74 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 14,330 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

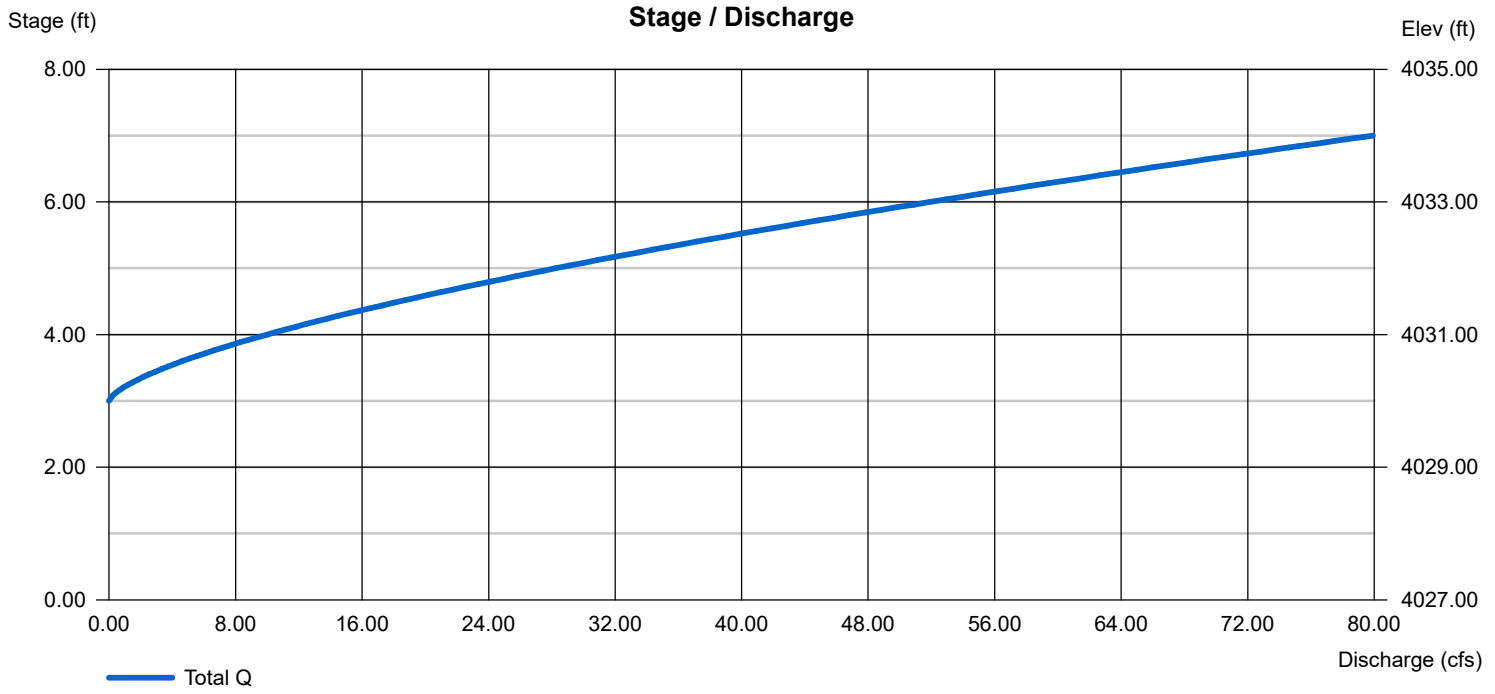
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

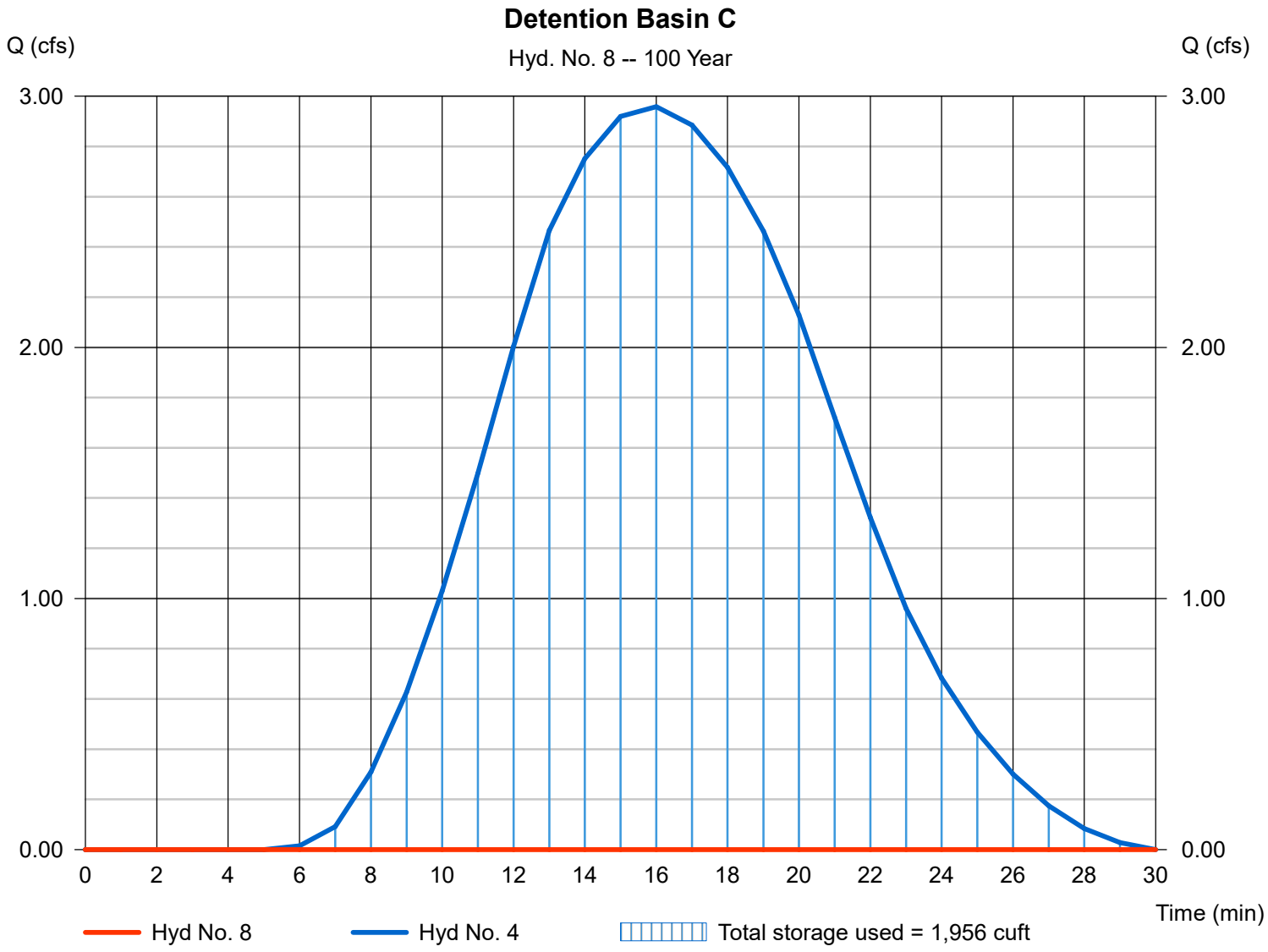
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4056.84 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 1,956 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

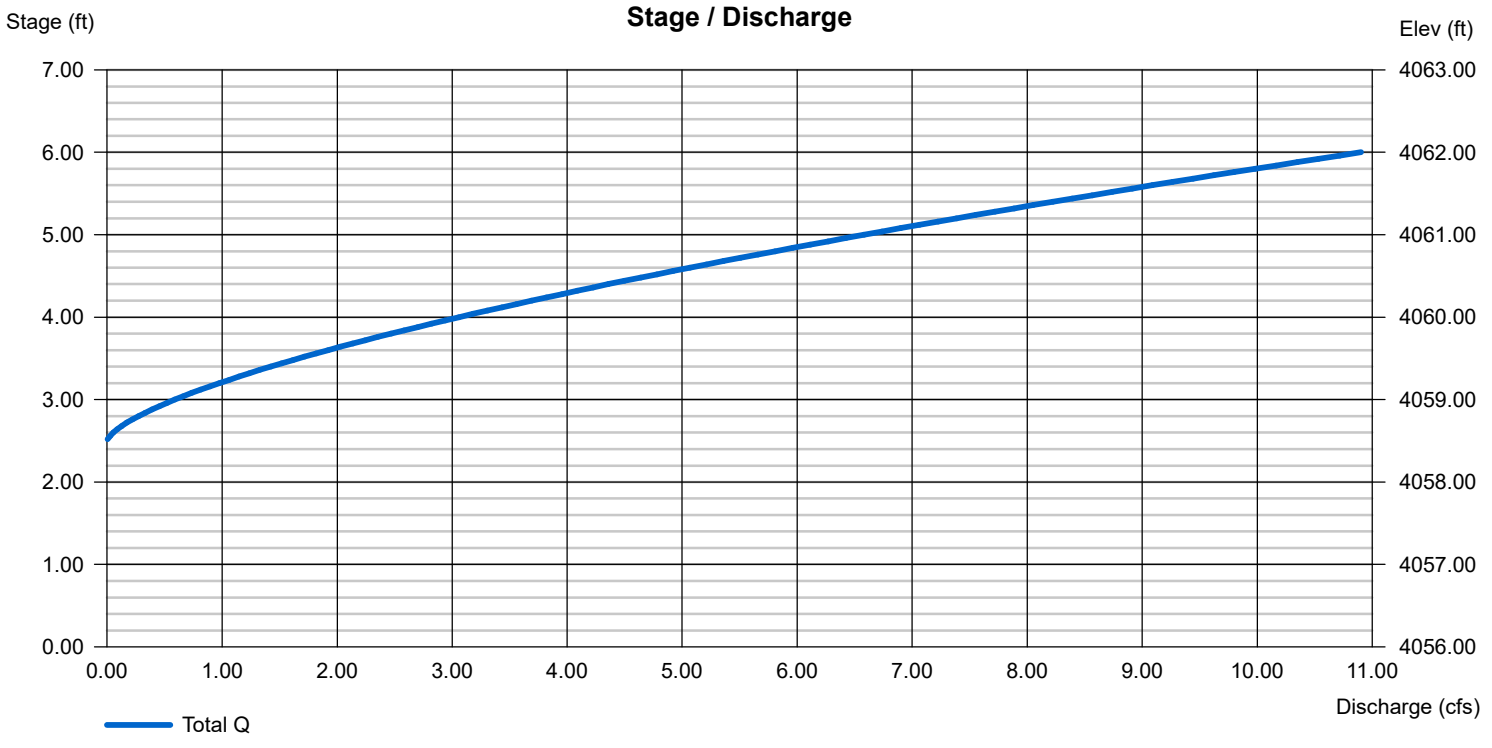
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



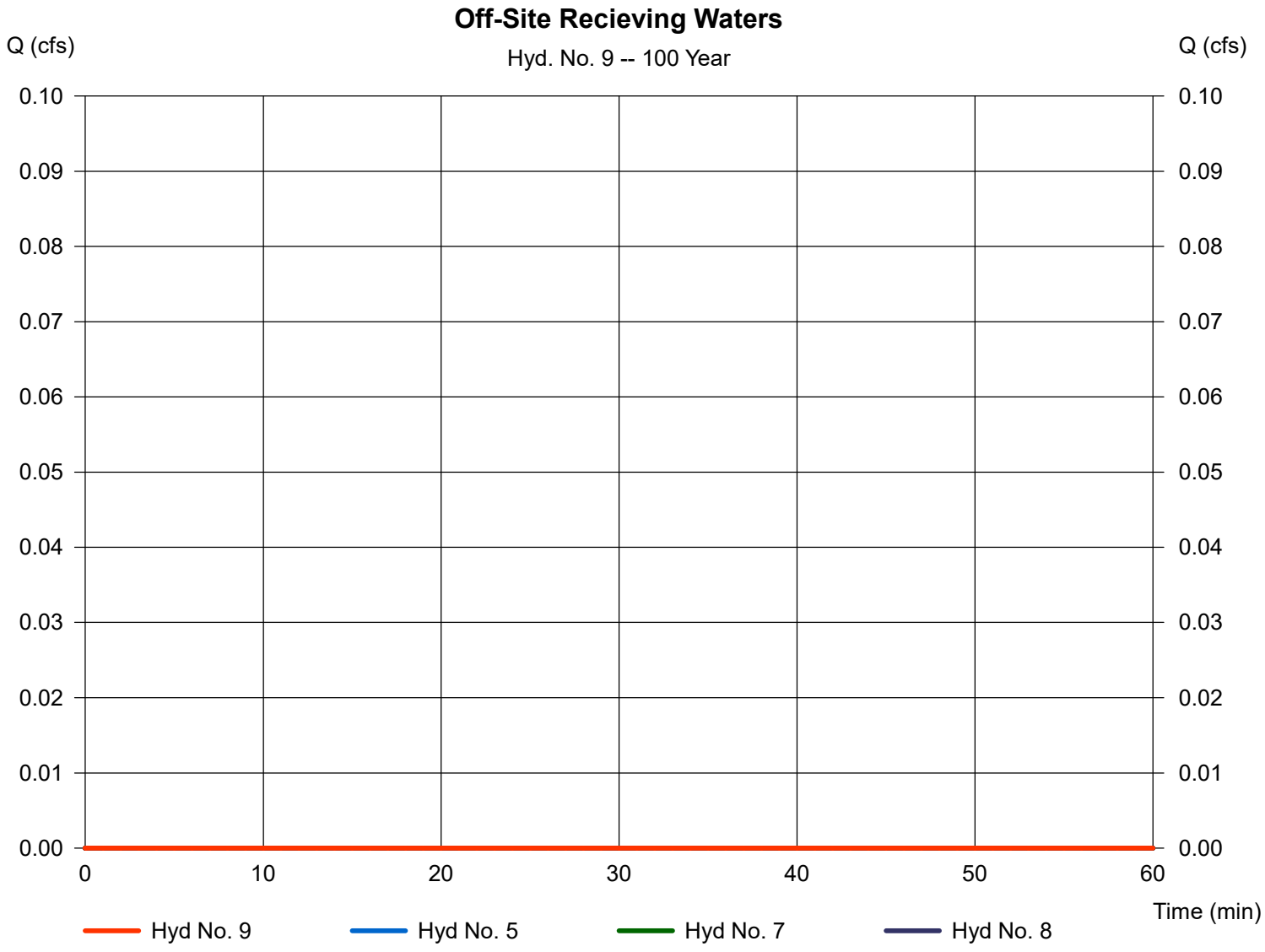
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 100 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

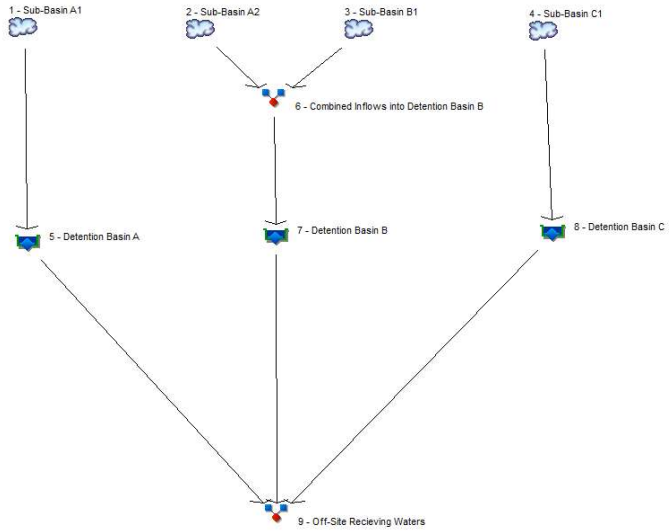
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_15 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.21 | 0.00 | 0.00 | 0.35 | 0.45 | 0.00 | 0.61 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 8.191 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 17.51 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 9.119 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.015 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 26.63 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 8.191 | 1 | 25 | 8,523 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 17.51 | 1 | 24 | 17,295 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 9.119 | 1 | 24 | 9,016 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 4.015 | 1 | 23 | 3,625 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 1 | 4046.41 | 8,523 | Detention Basin A |
| 6 | Combine | 26.63 | 1 | 24 | 26,311 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 0.000 | 1 | n/a | 0 | 6 | 4029.67 | 26,311 | Detention Basin B |
| 8 | Reservoir | 0.000 | 1 | n/a | 0 | 4 | 4057.37 | 3,625 | Detention Basin C |
| 9 | Combine | 0.000 | 1 | n/a | 0 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

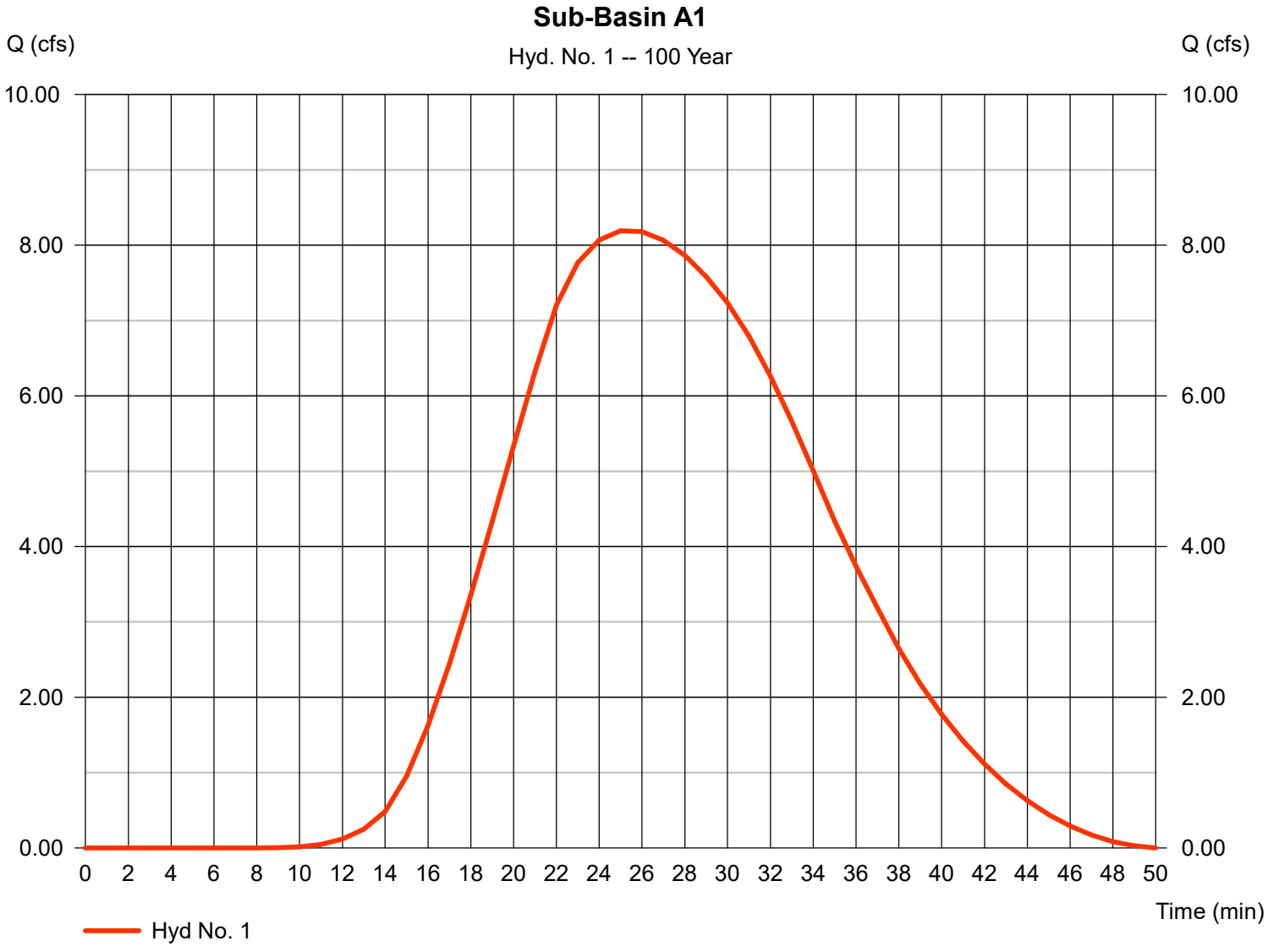
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 8.191 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 25 min |
| Time interval | = | 1 min | Hyd. volume | = | 8,523 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



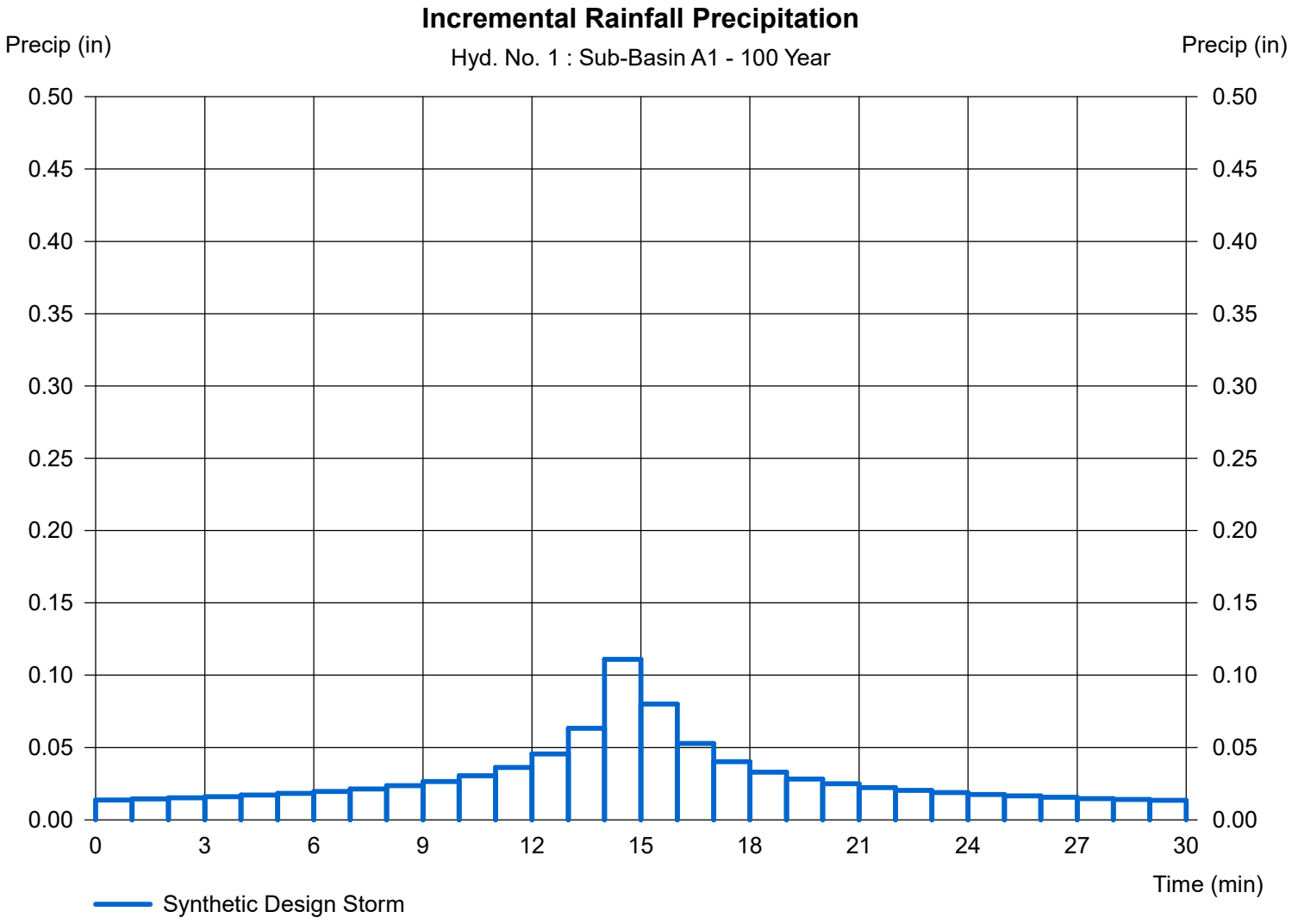
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



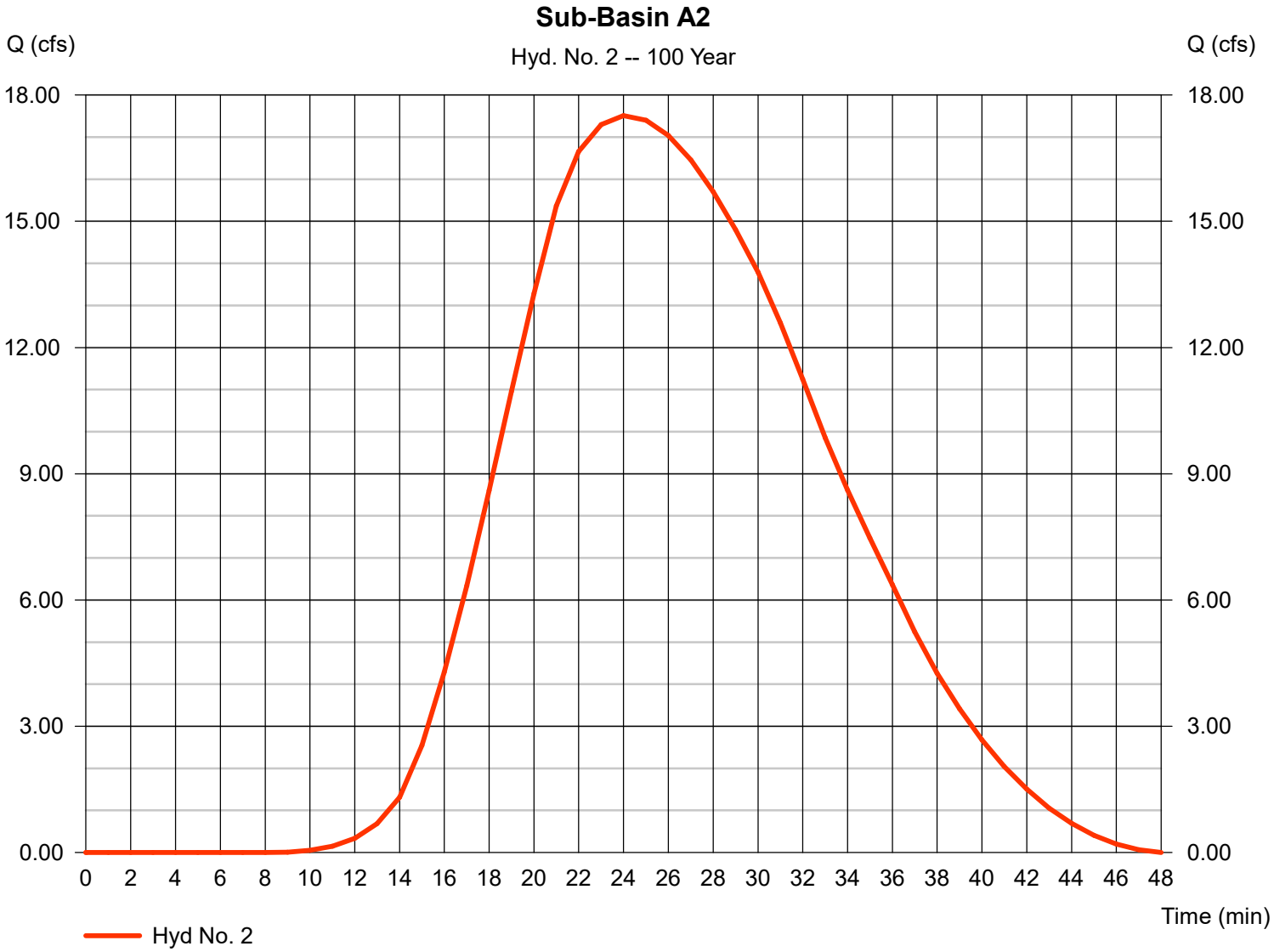
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 17.51 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 24 min |
| Time interval | = | 1 min | Hyd. volume | = | 17,295 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



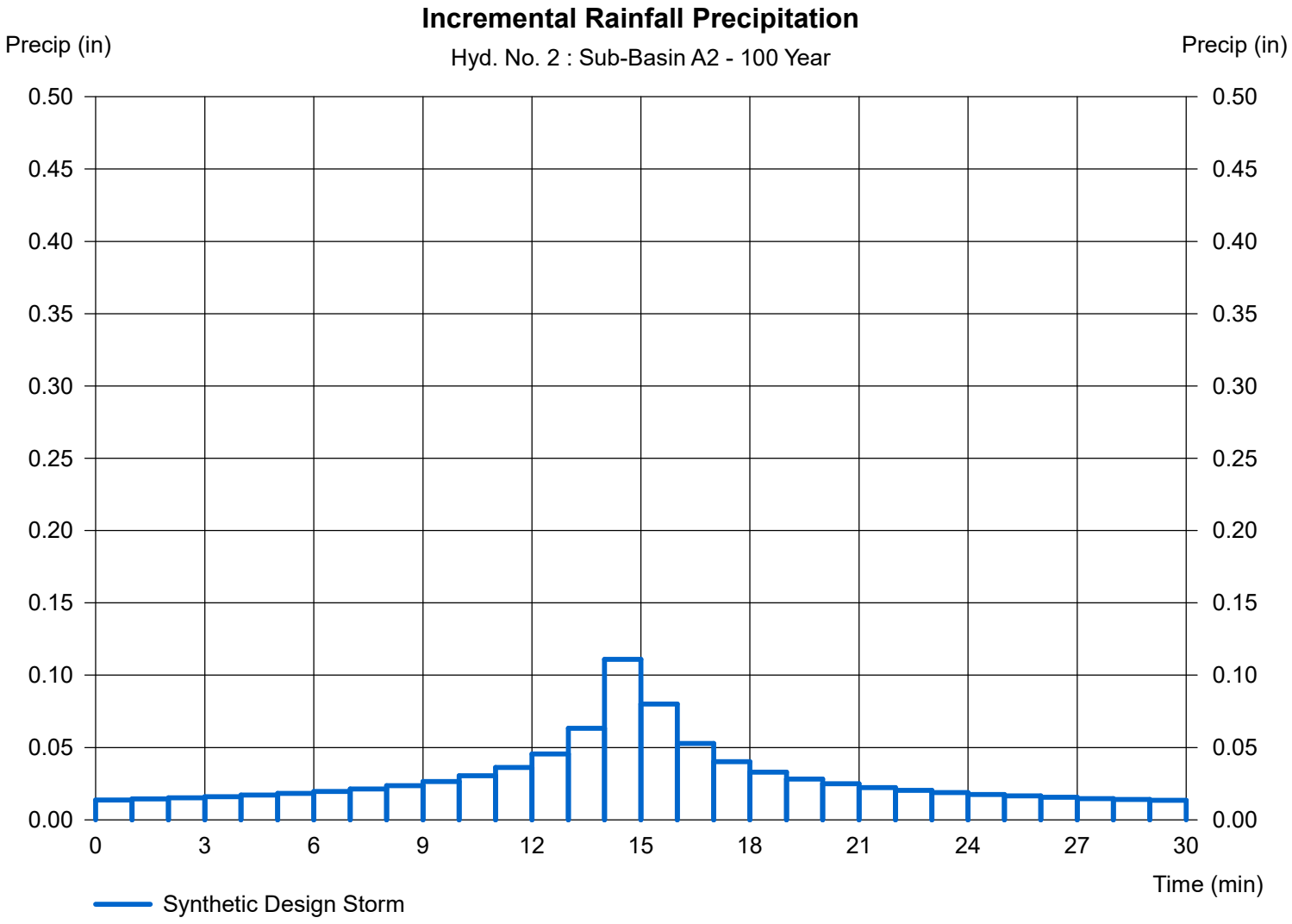
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



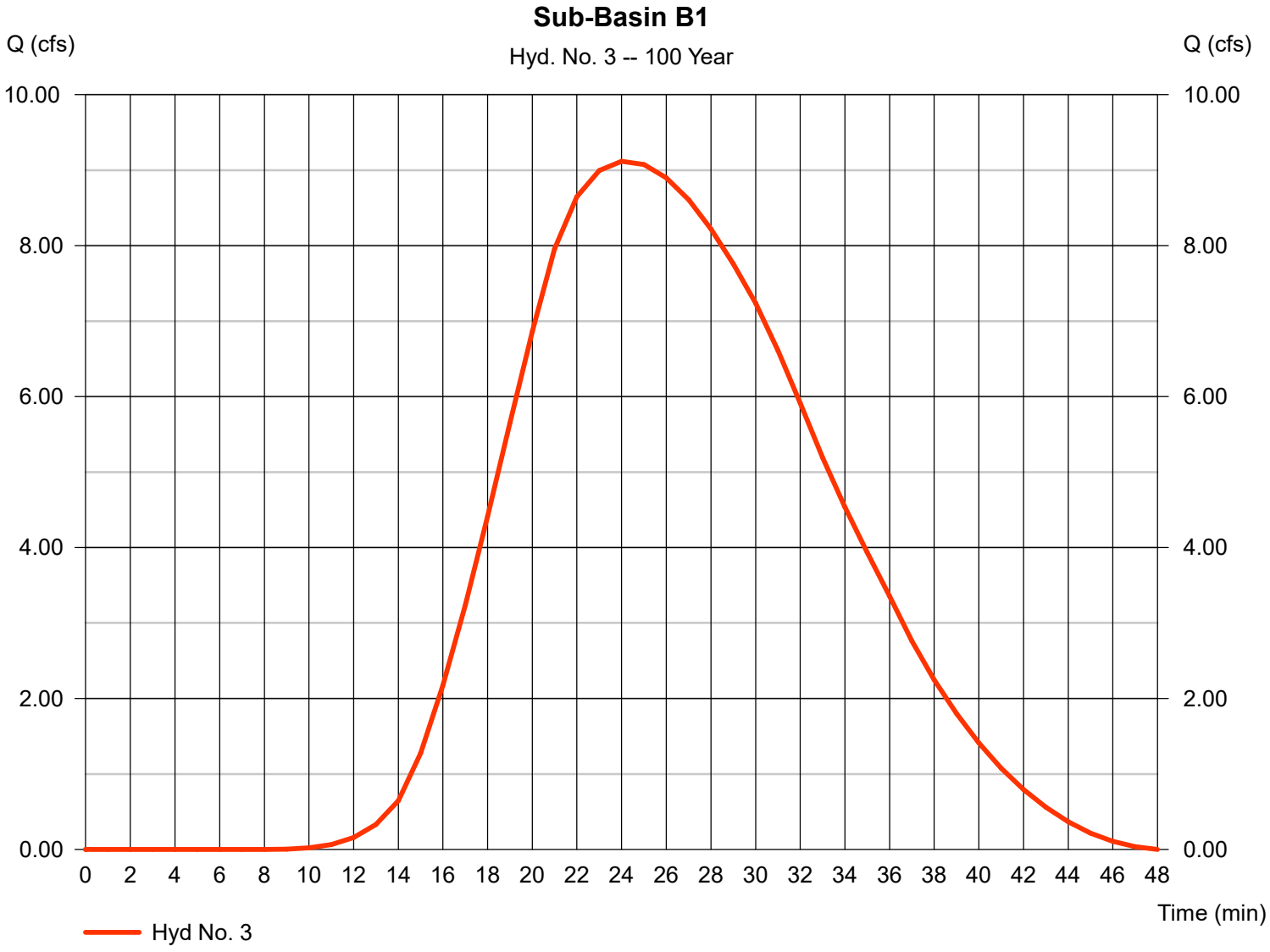
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 9.119 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 24 min |
| Time interval | = | 1 min | Hyd. volume | = | 9,016 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



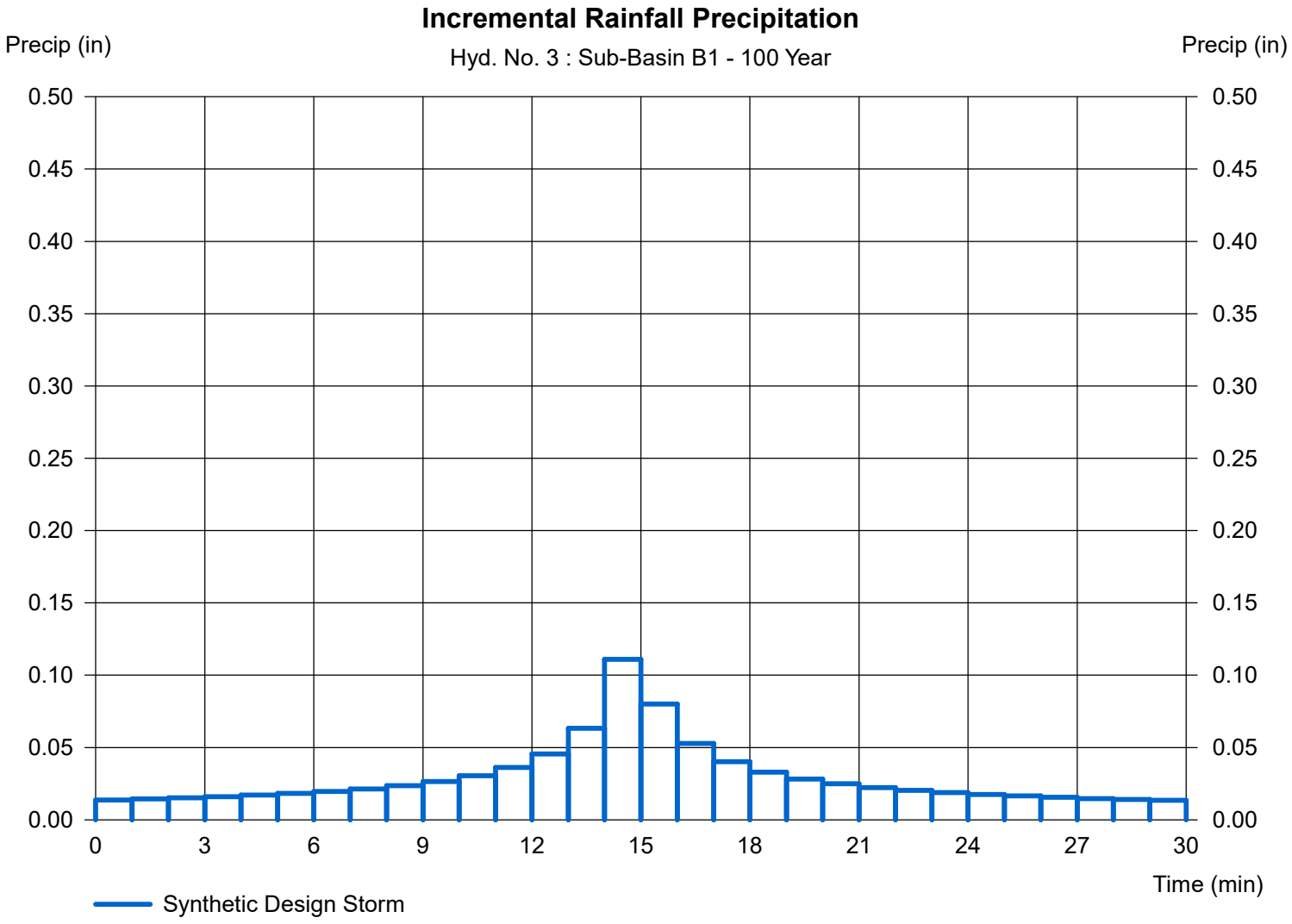
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



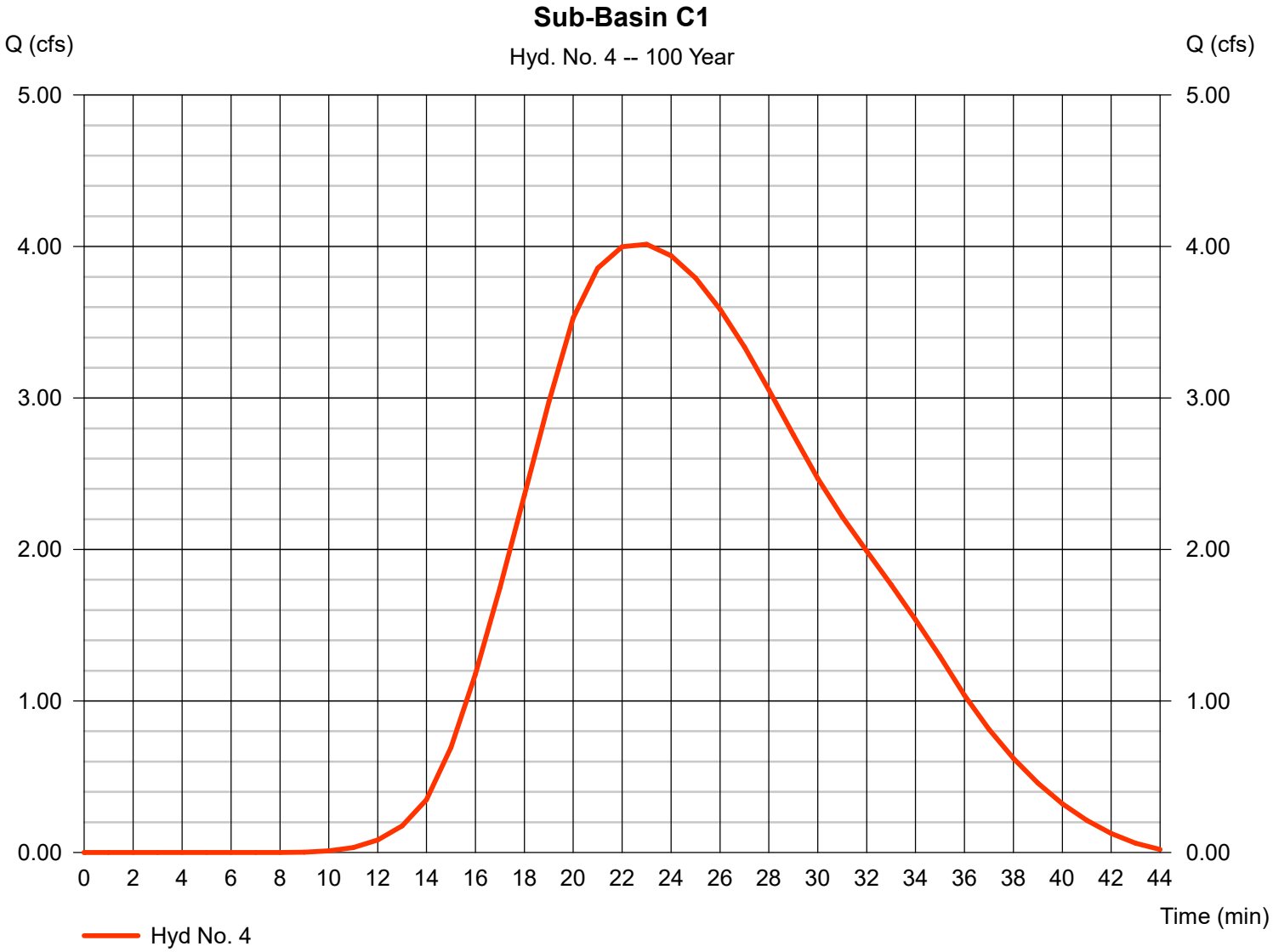
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 4.015 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 23 min |
| Time interval | = 1 min | Hyd. volume | = 3,625 cuft |
| Drainage area | = 2.619 ac | Curve number | = 93.4 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.10 min |
| Total precip. | = 0.88 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | Shape factor | = 484 |



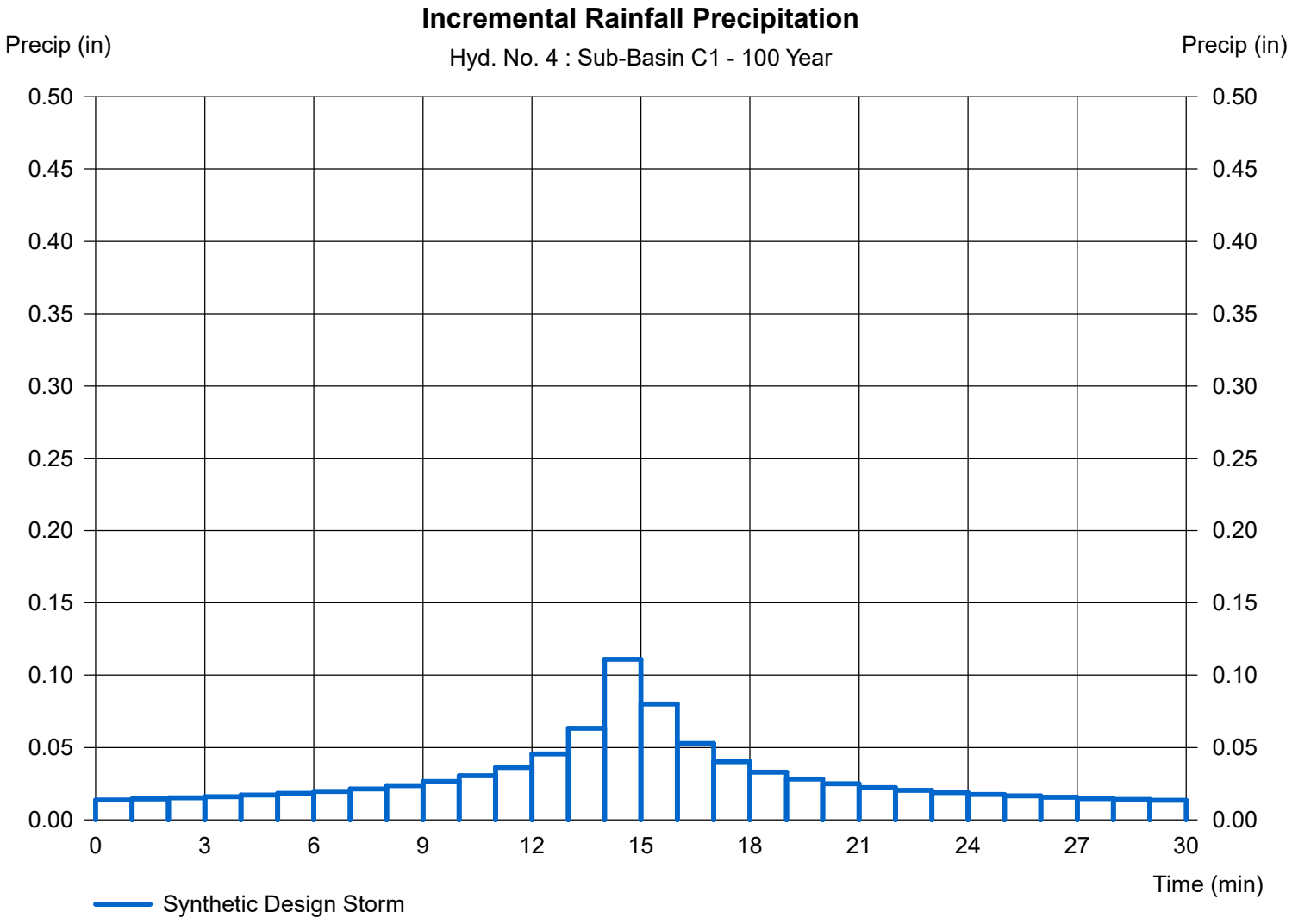
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 1 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

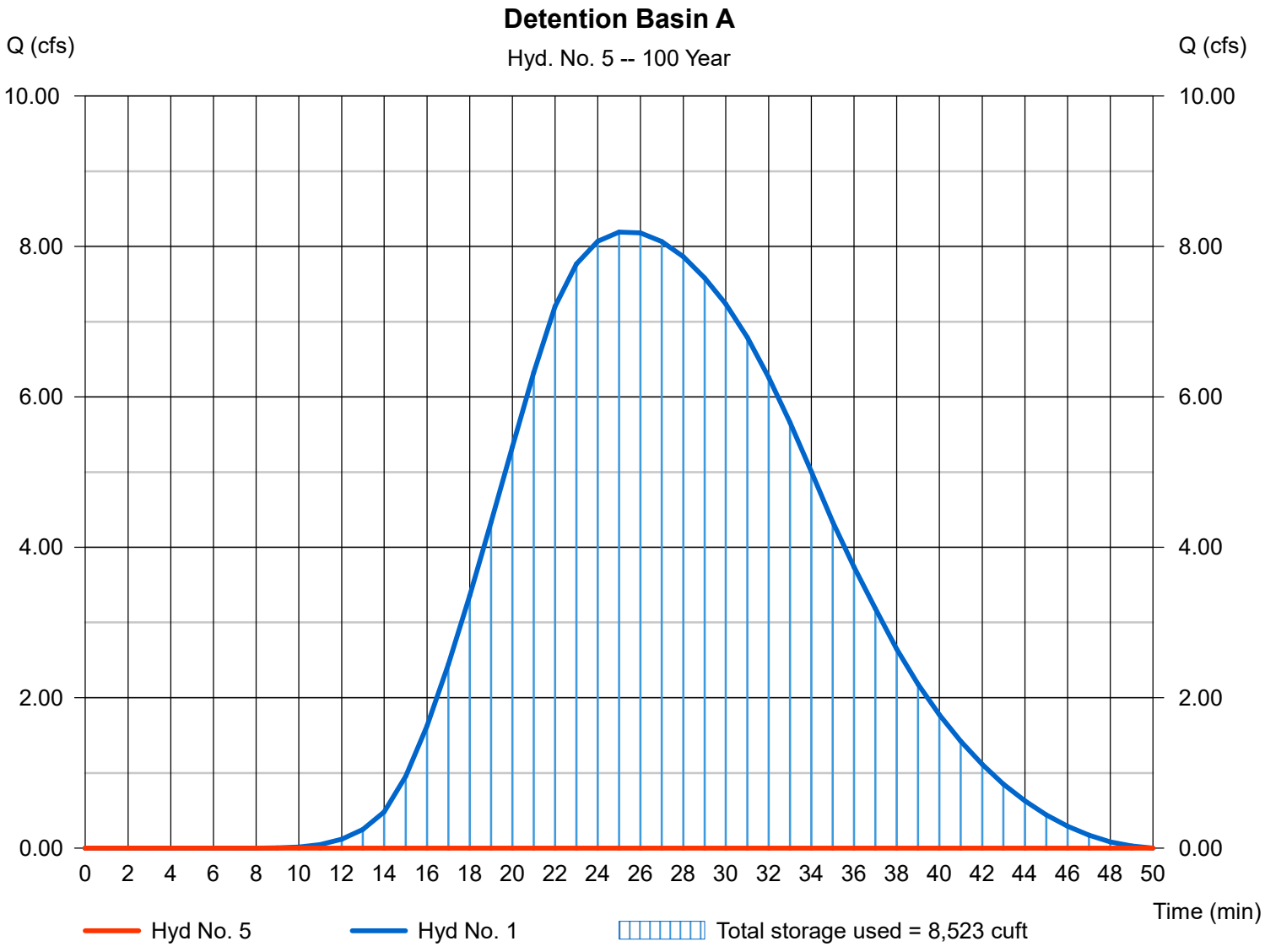
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4046.41 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 8,523 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

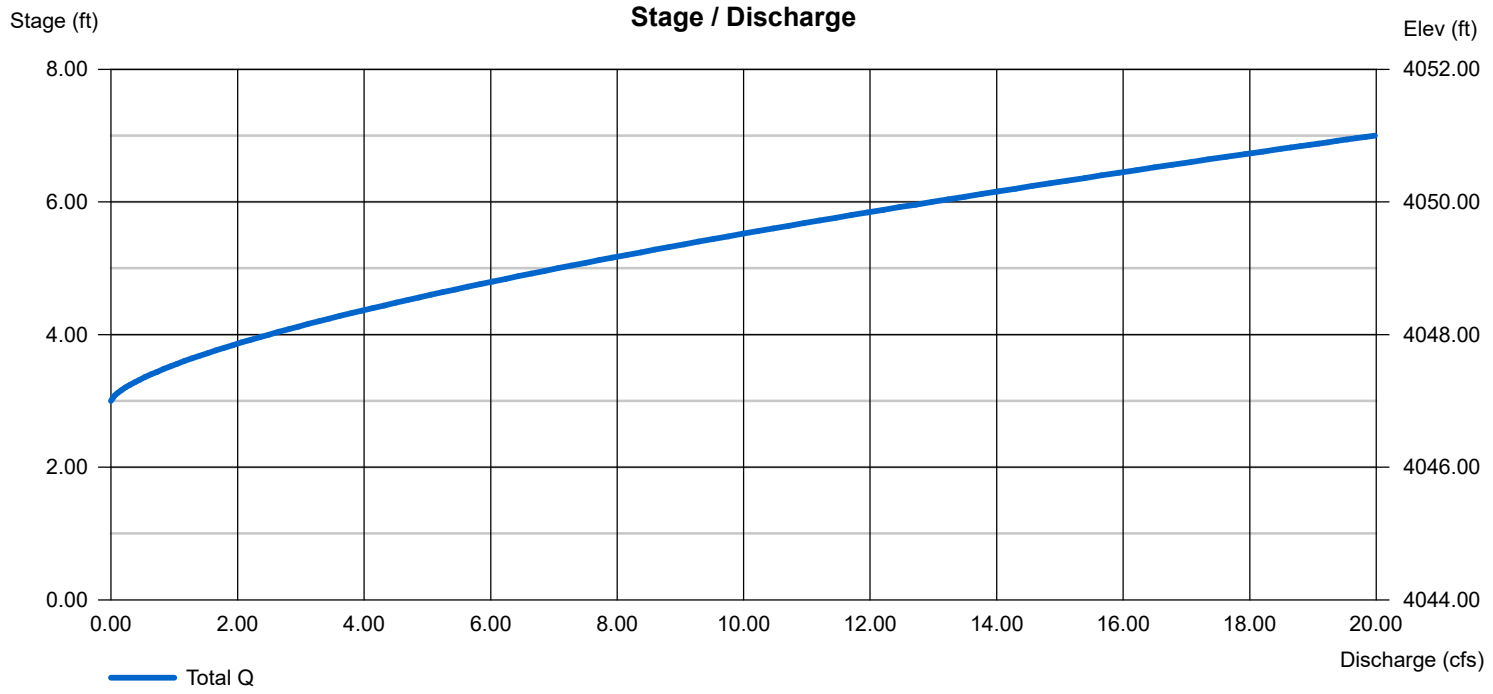
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



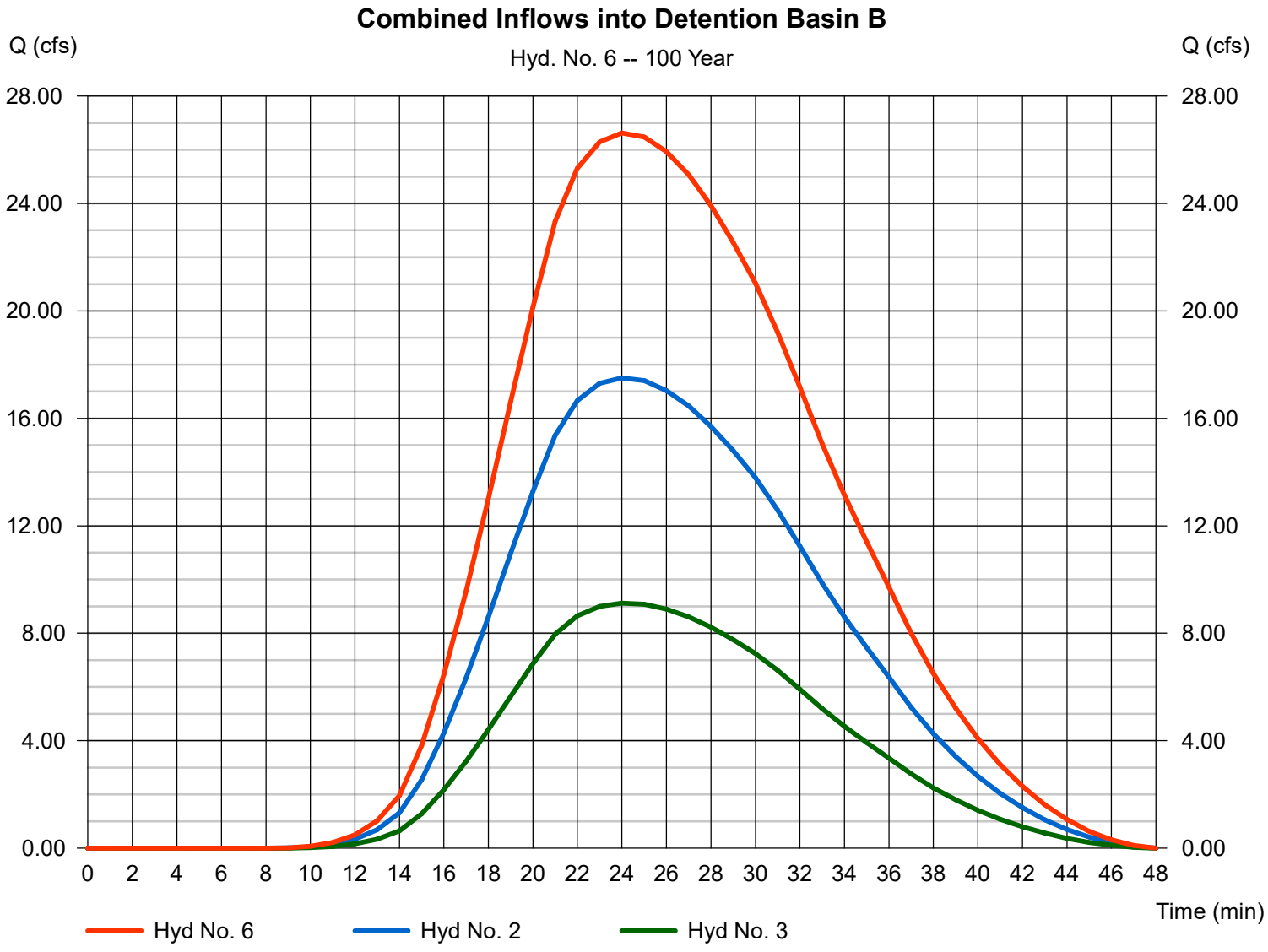
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 26.63 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 24 min |
| Time interval | = 1 min | Hyd. volume | = 26,311 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

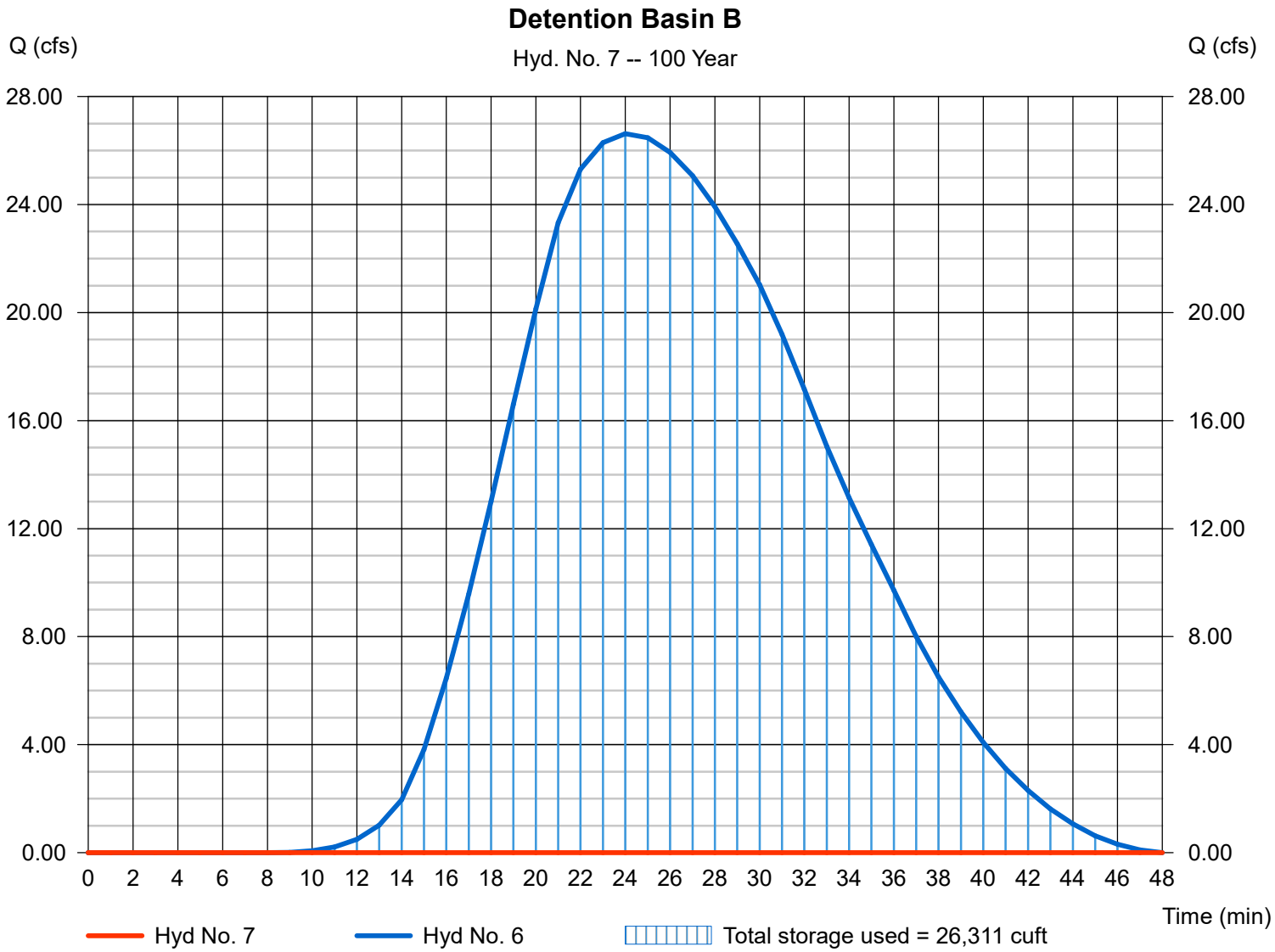
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4029.67 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 26,311 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

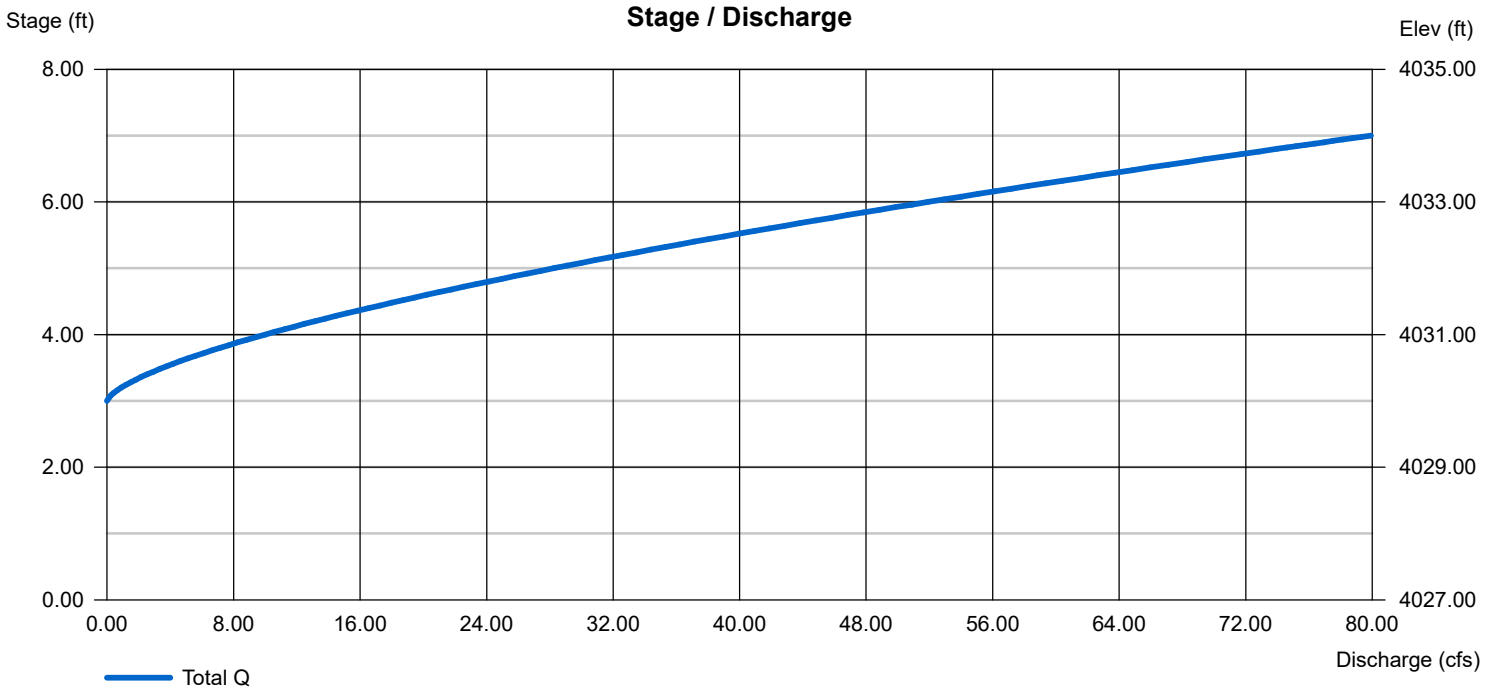
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

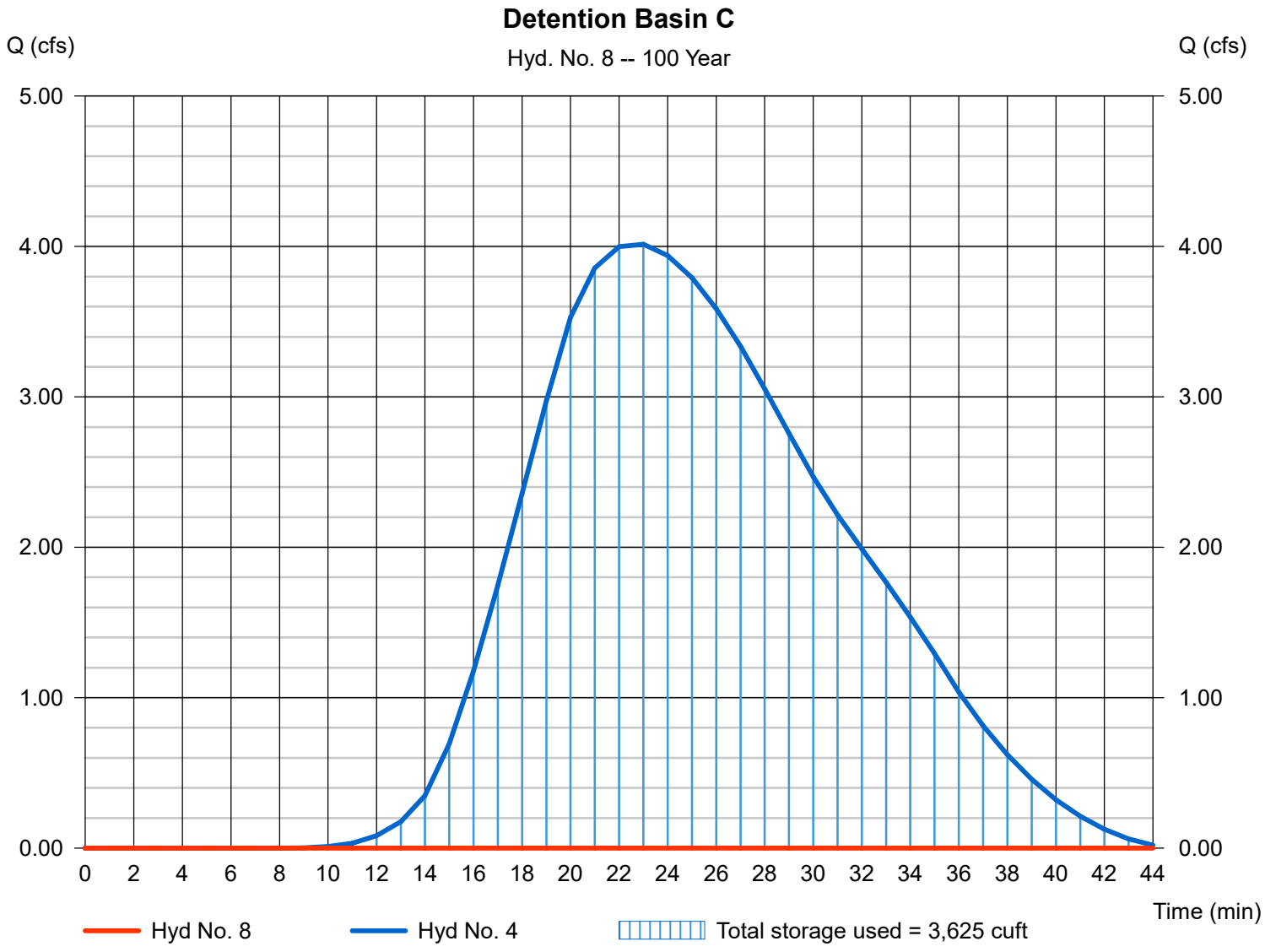
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 1 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4057.37 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 3,625 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

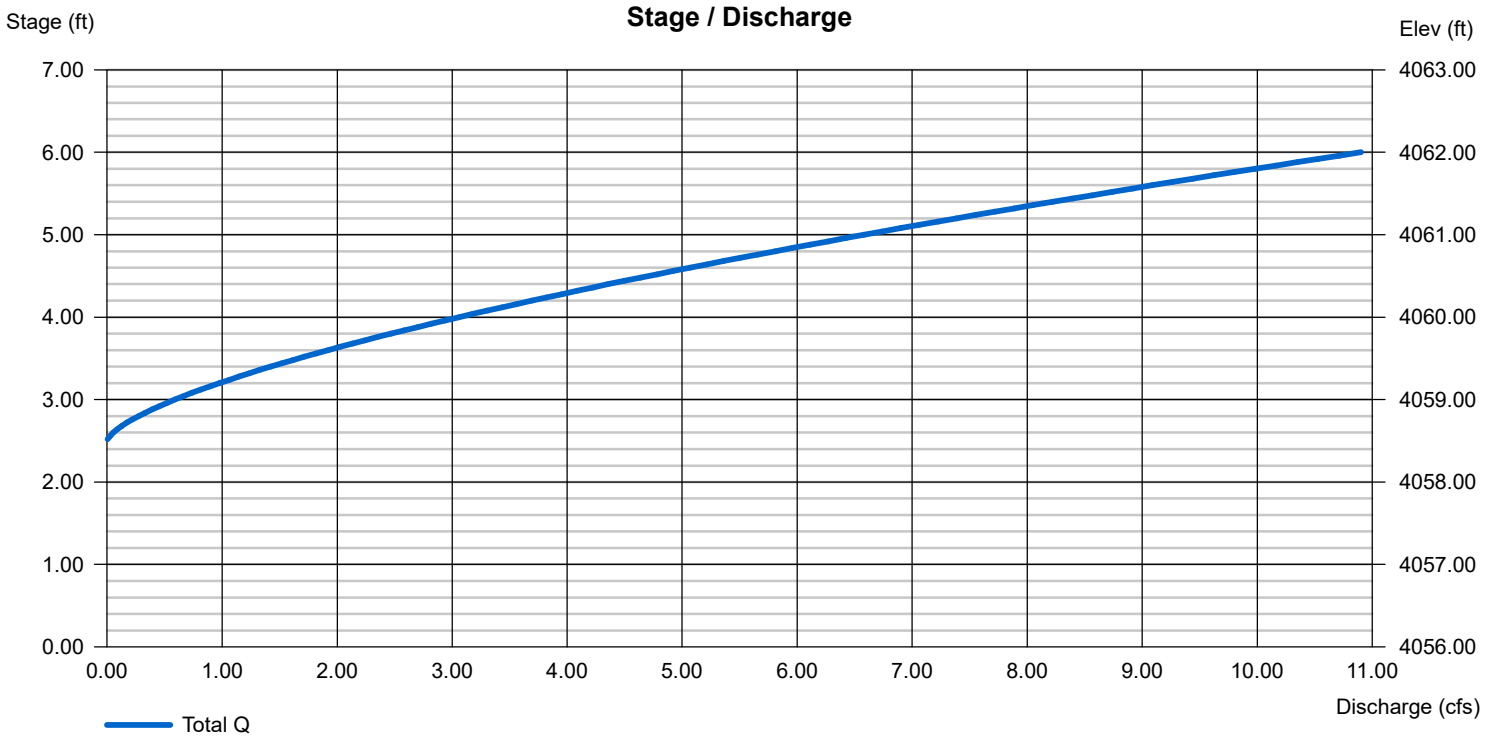
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



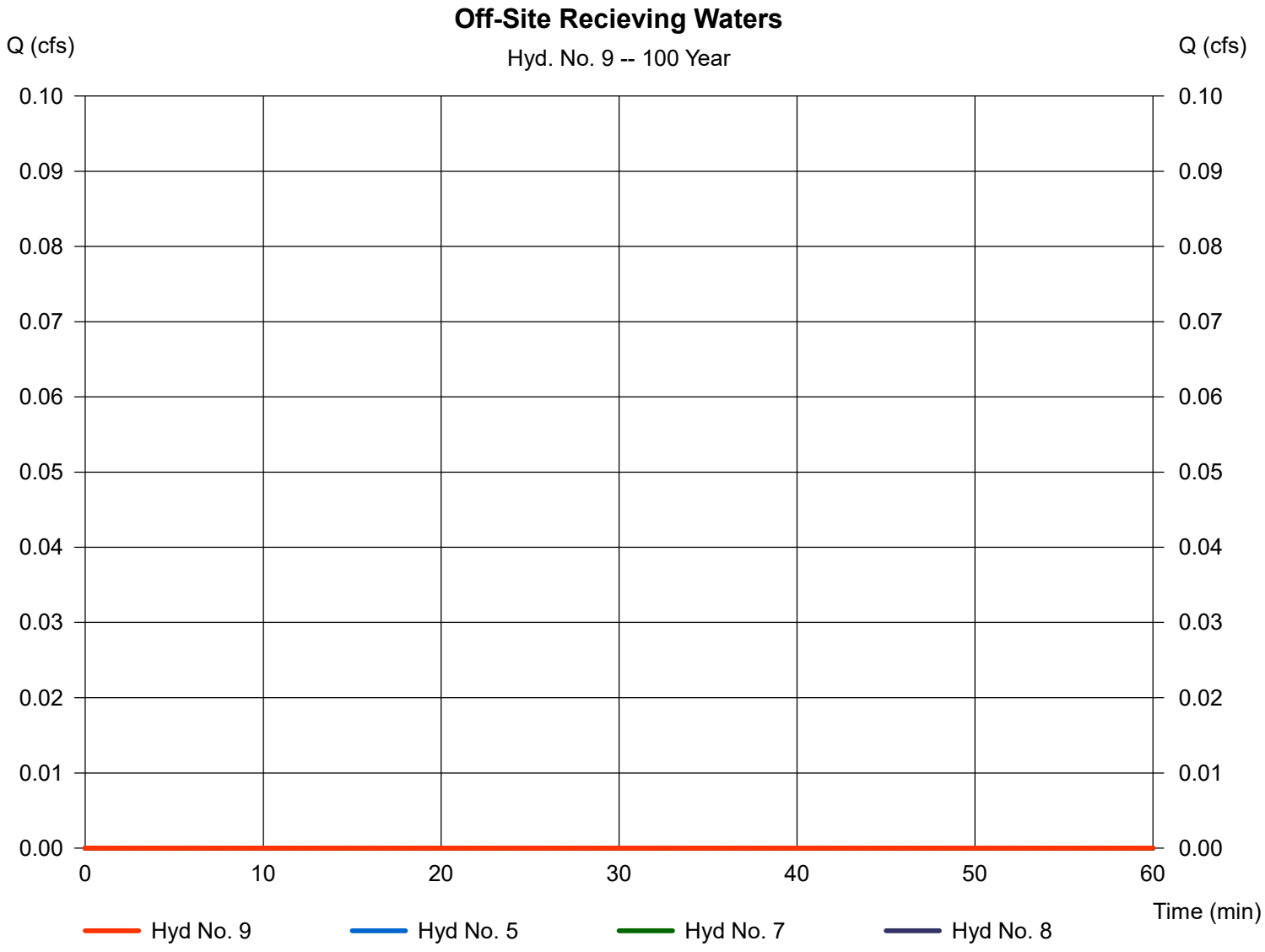
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.000 cfs |
| Storm frequency | = 100 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

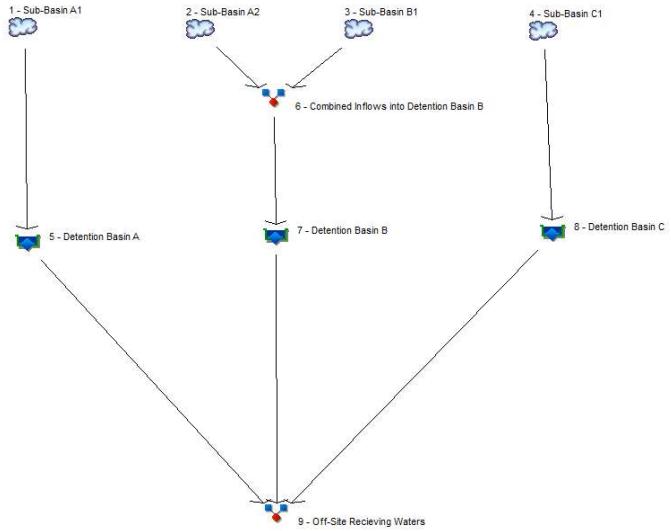
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_30 min Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.31 | 0.00 | 0.00 | 0.51 | 0.65 | 0.00 | 0.88 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 12.15 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 20.67 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 12.42 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 4.033 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.175 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 32.37 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3.796 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.000 | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 3.958 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 12.15 | 2 | 36 | 14,372 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 20.67 | 2 | 38 | 28,907 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 12.42 | 2 | 36 | 14,703 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 4.033 | 2 | 22 | 3,625 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 0.175 | 2 | 72 | 1,479 | 1 | 4047.17 | 14,272 | Detention Basin A |
| 6 | Combine | 32.37 | 2 | 38 | 43,610 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 3.796 | 2 | 68 | 12,194 | 6 | 4030.53 | 40,214 | Detention Basin B |
| 8 | Reservoir | 0.000 | 2 | n/a | 0 | 4 | 4057.37 | 3,625 | Detention Basin C |
| 9 | Combine | 3.958 | 2 | 68 | 13,673 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

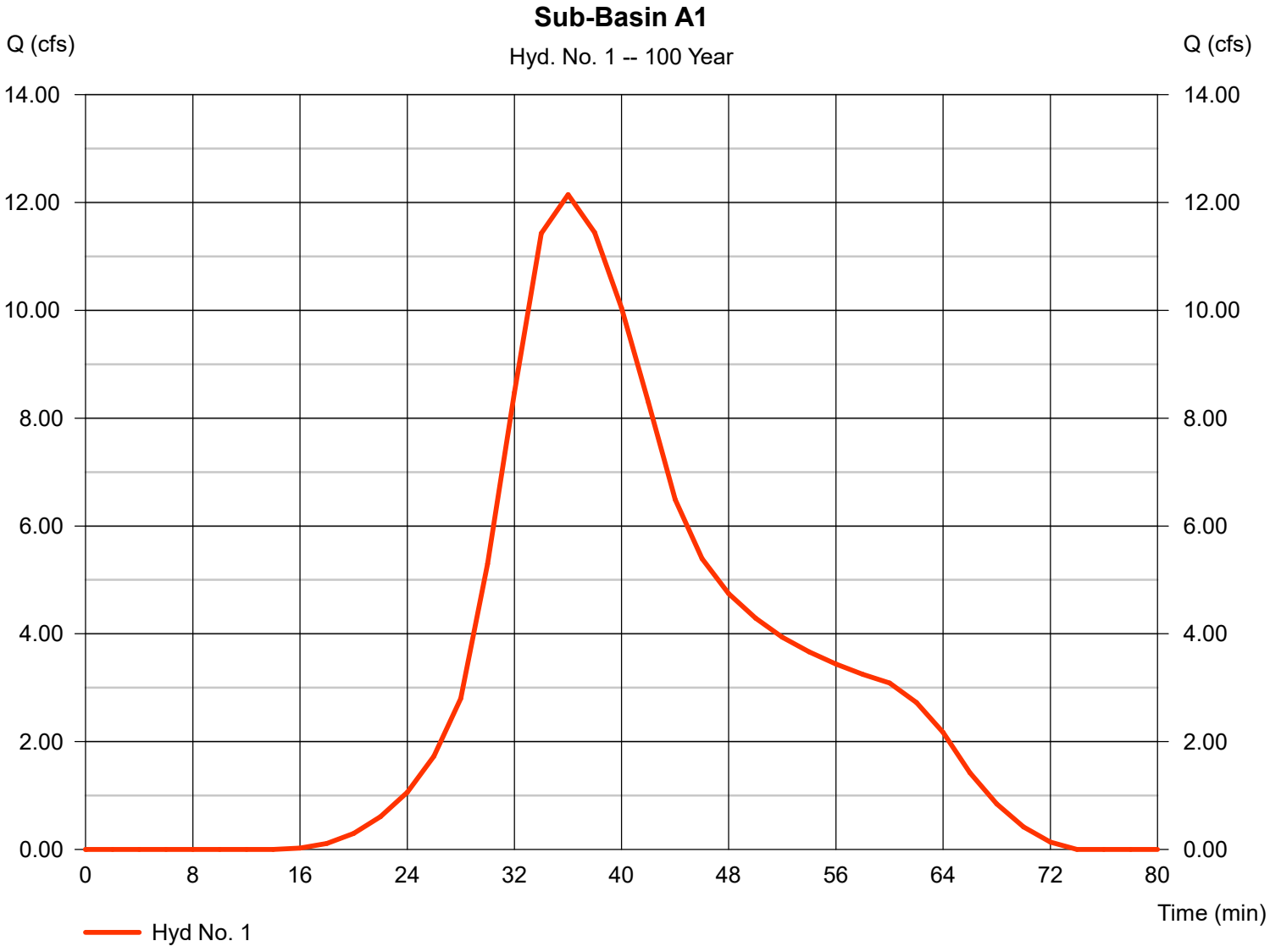
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 12.15 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 36 min |
| Time interval | = | 2 min | Hyd. volume | = | 14,372 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 93.5 |
| Basin Slope | = | 7.9 % | Hydraulic length | = | 957 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.70 min |
| Total precip. | = | 1.20 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



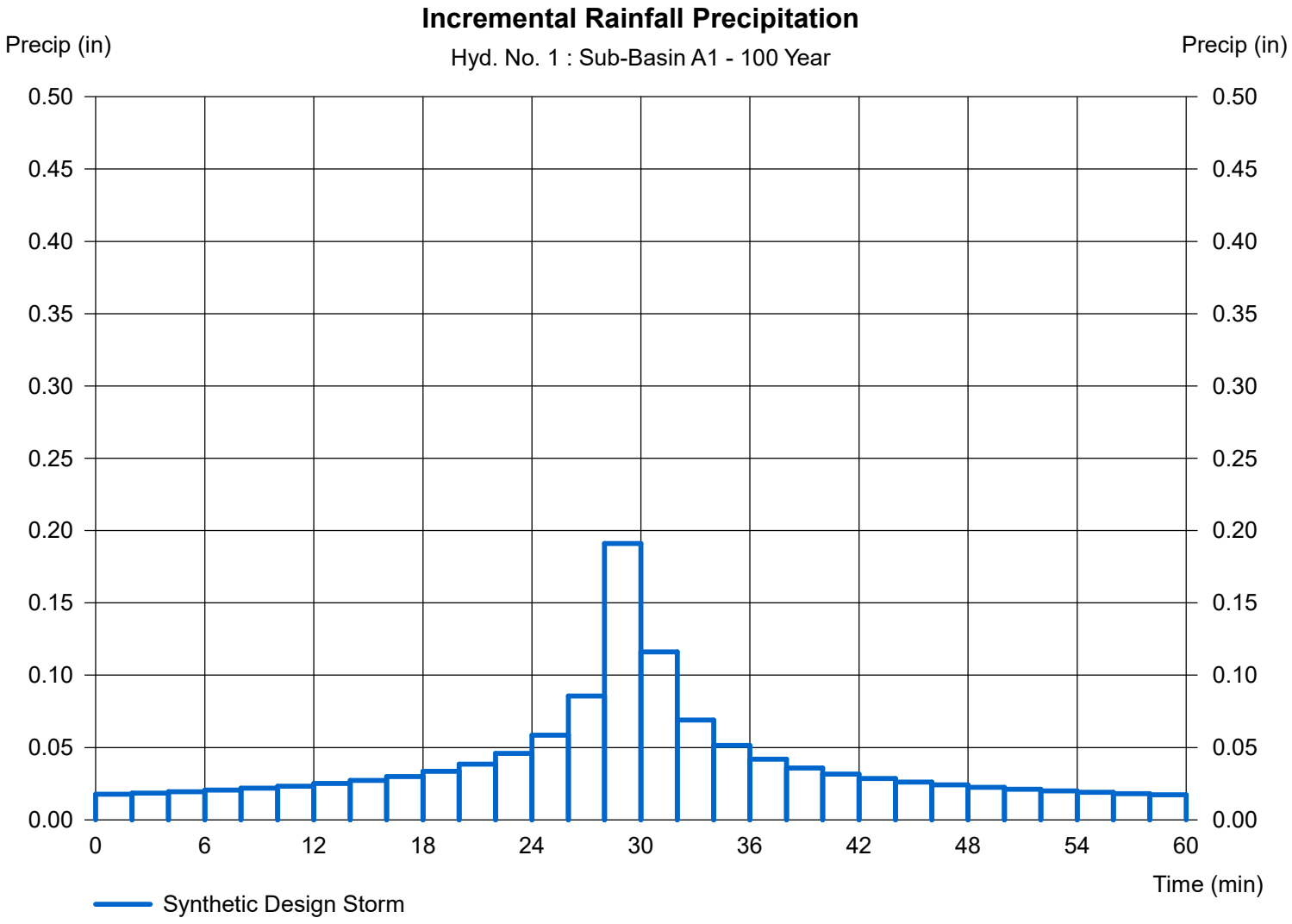
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.2000 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



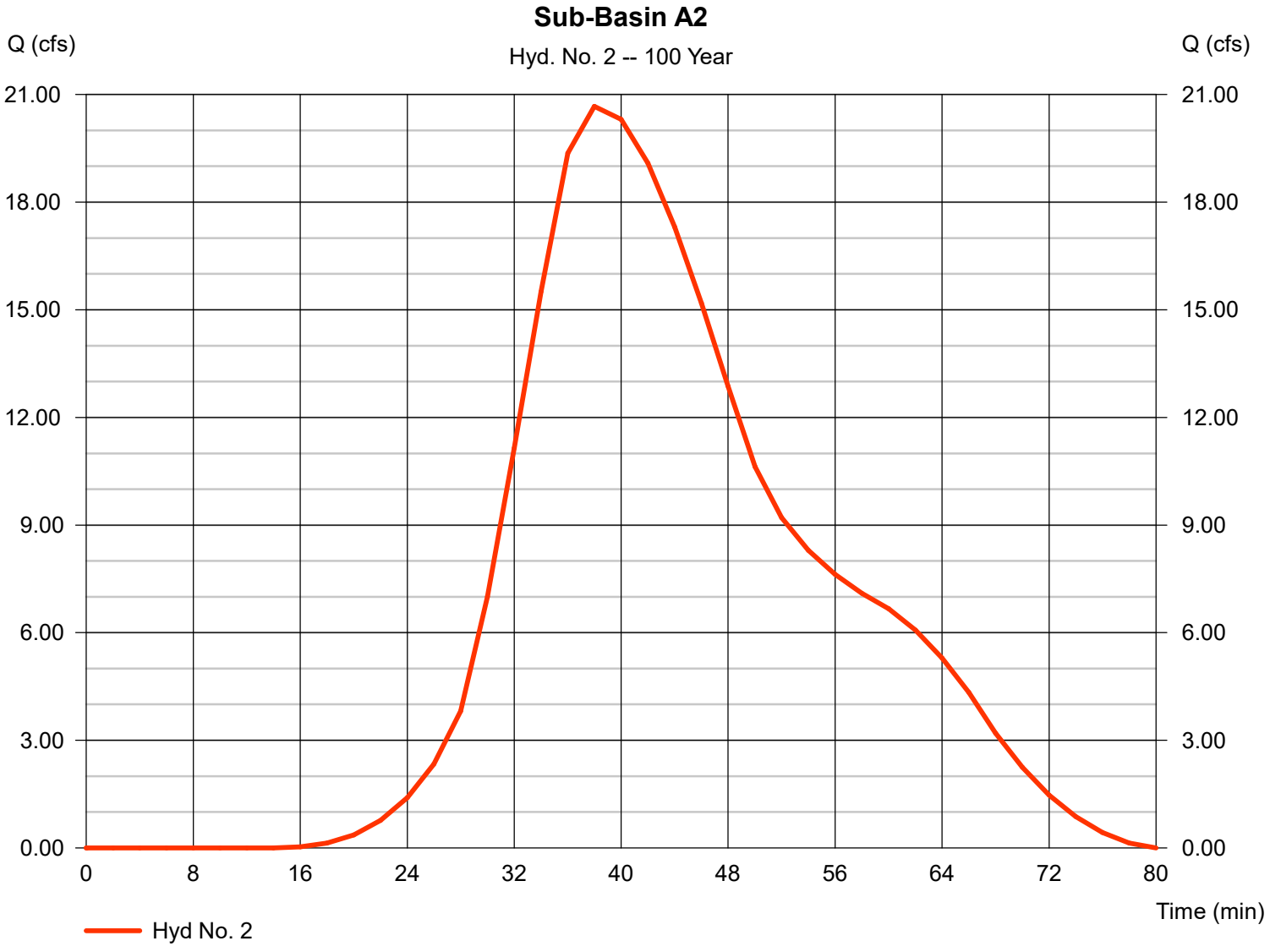
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 20.67 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 38 min |
| Time interval | = | 2 min | Hyd. volume | = | 28,907 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 8.4 % | Hydraulic length | = | 1010 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 10.80 min |
| Total precip. | = | 1.20 in | Distribution | = | Synthetic |
| Storm duration | = | 1.00 hrs | Shape factor | = | 484 |



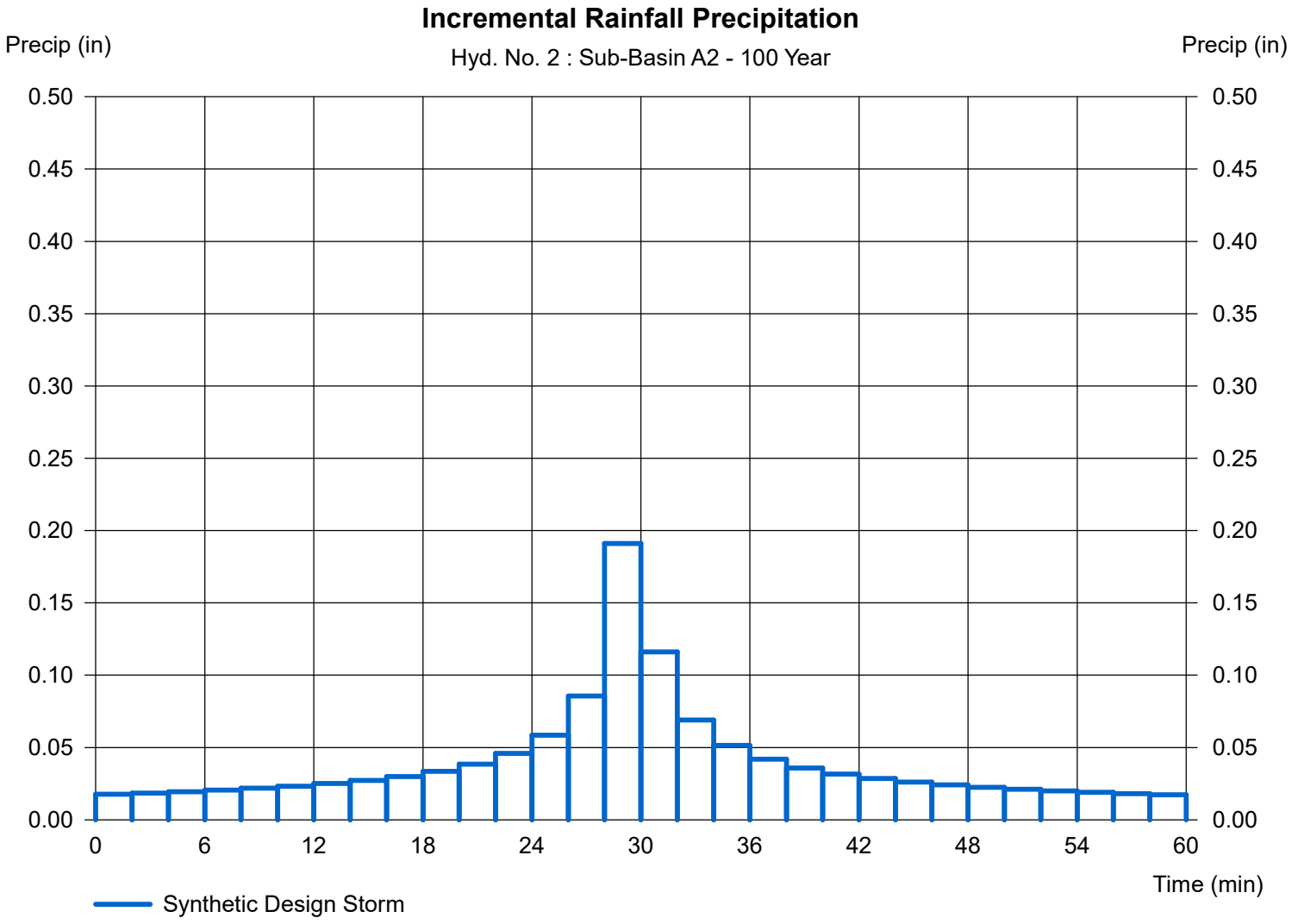
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.2000 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



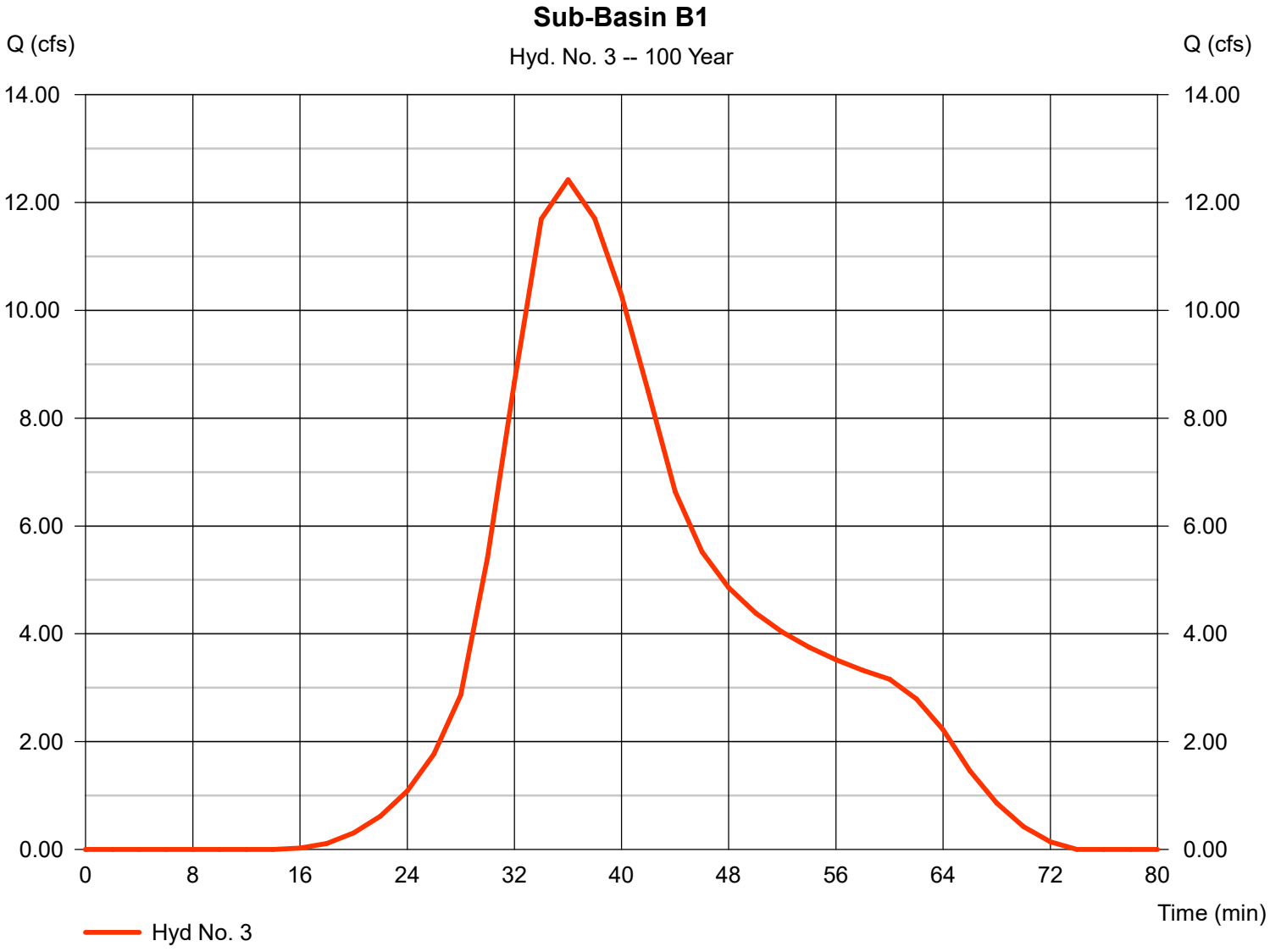
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 12.42 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 36 min |
| Time interval | = 2 min | Hyd. volume | = 14,703 cuft |
| Drainage area | = 6.320 ac | Curve number | = 93.5 |
| Basin Slope | = 8.8 % | Hydraulic length | = 847 ft |
| Tc method | = USER | Time of conc. (Tc) | = 9.80 min |
| Total precip. | = 1.20 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | Shape factor | = 484 |



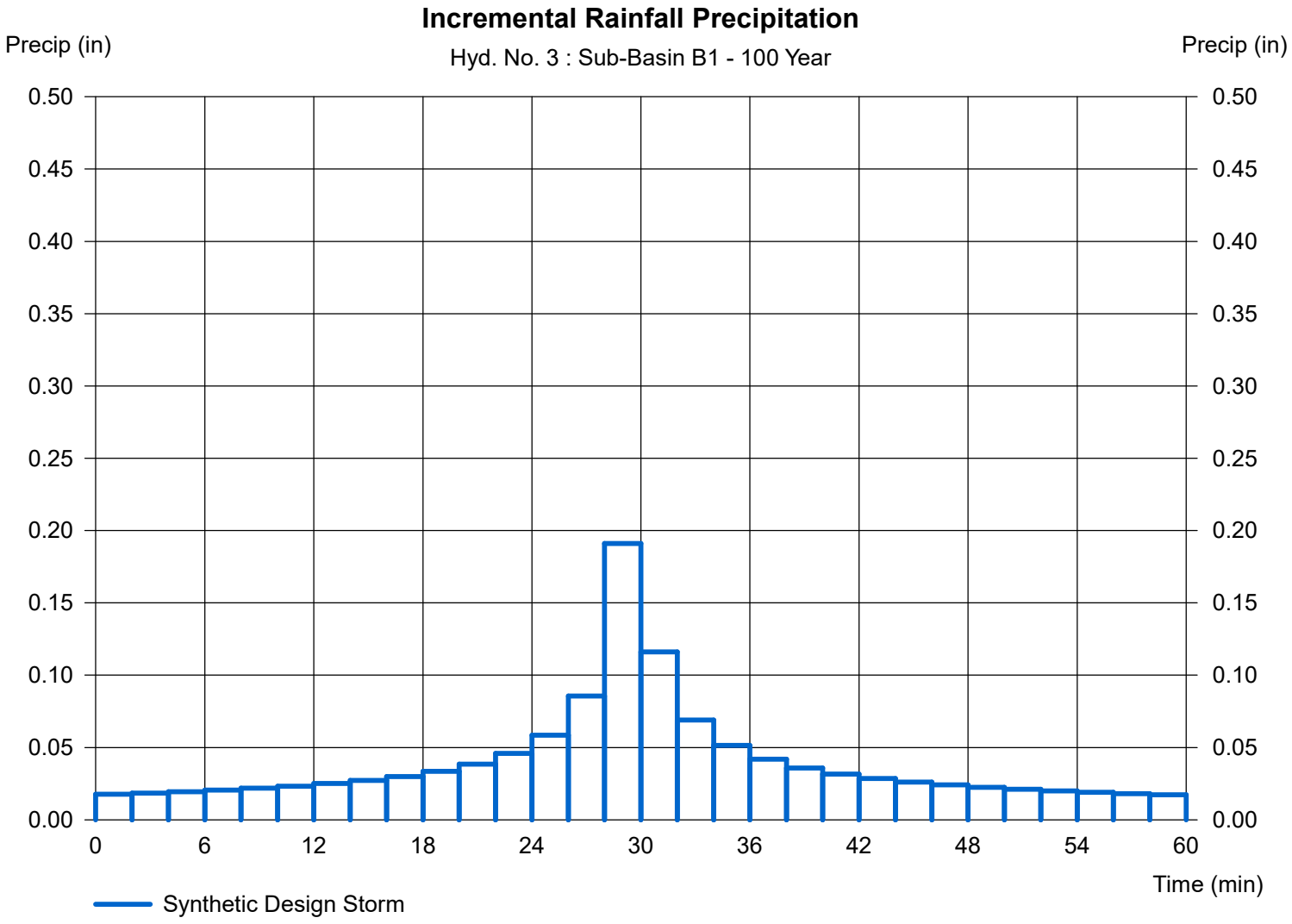
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.2000 in | Distribution | = Synthetic |
| Storm duration | = 1.00 hrs | | |



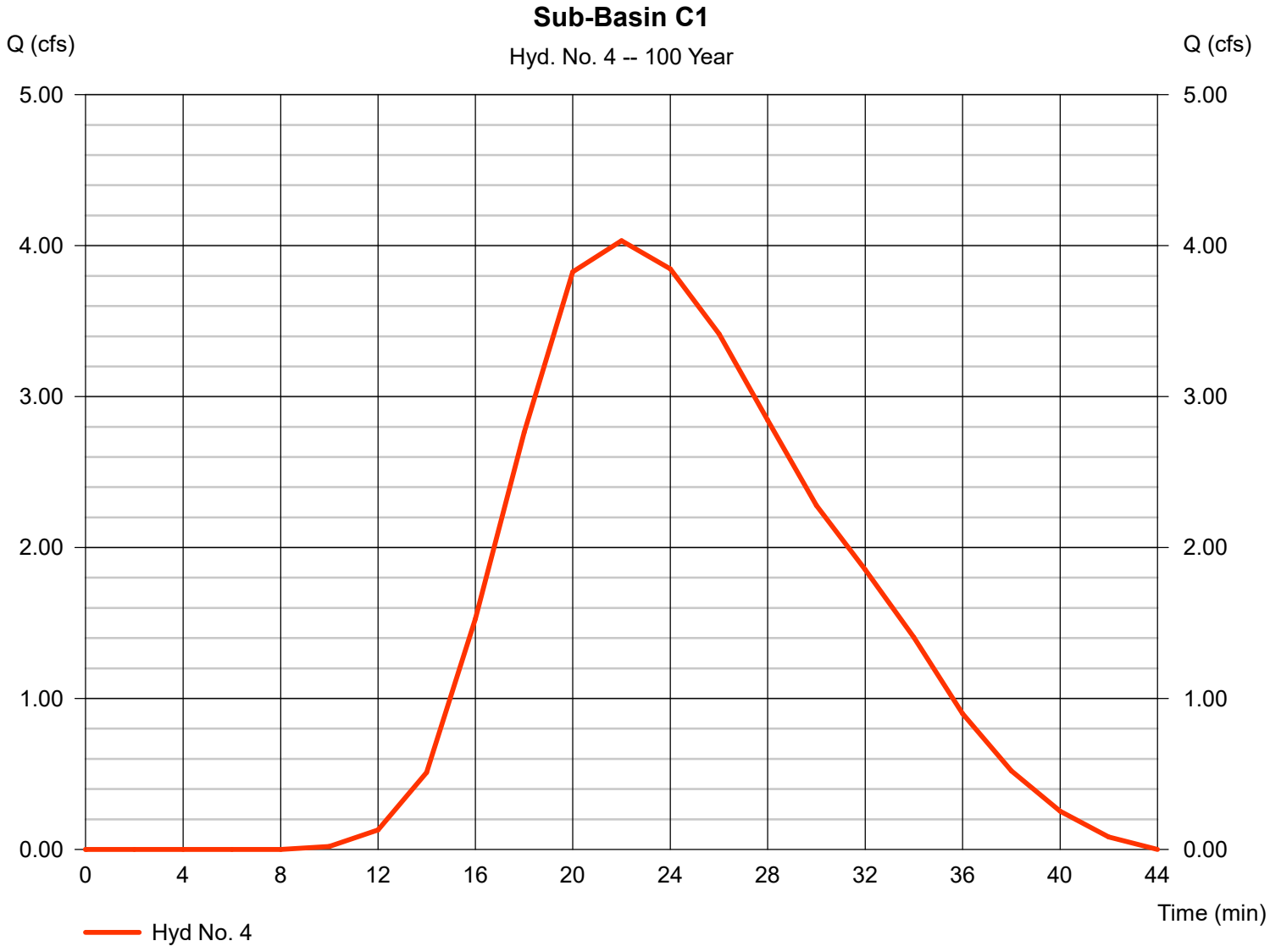
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 4.033 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 22 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,625 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 93.4 |
| Basin Slope | = | 7.8 % | Hydraulic length | = | 522 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 8.50 min |
| Total precip. | = | 0.88 in | Distribution | = | Synthetic |
| Storm duration | = | 0.50 hrs | Shape factor | = | 484 |



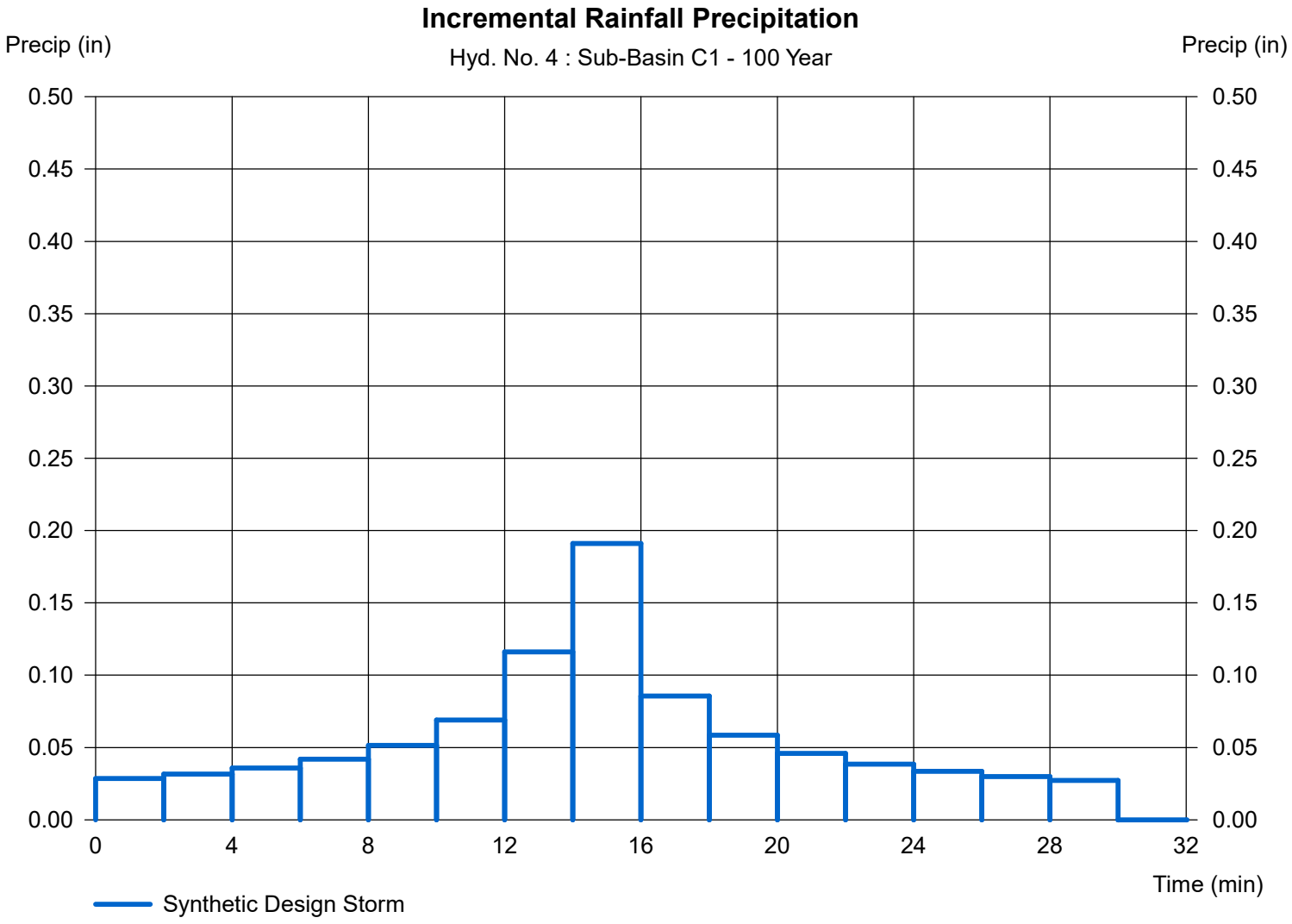
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 0.8850 in | Distribution | = Synthetic |
| Storm duration | = 0.50 hrs | | |



# Hydrograph Report

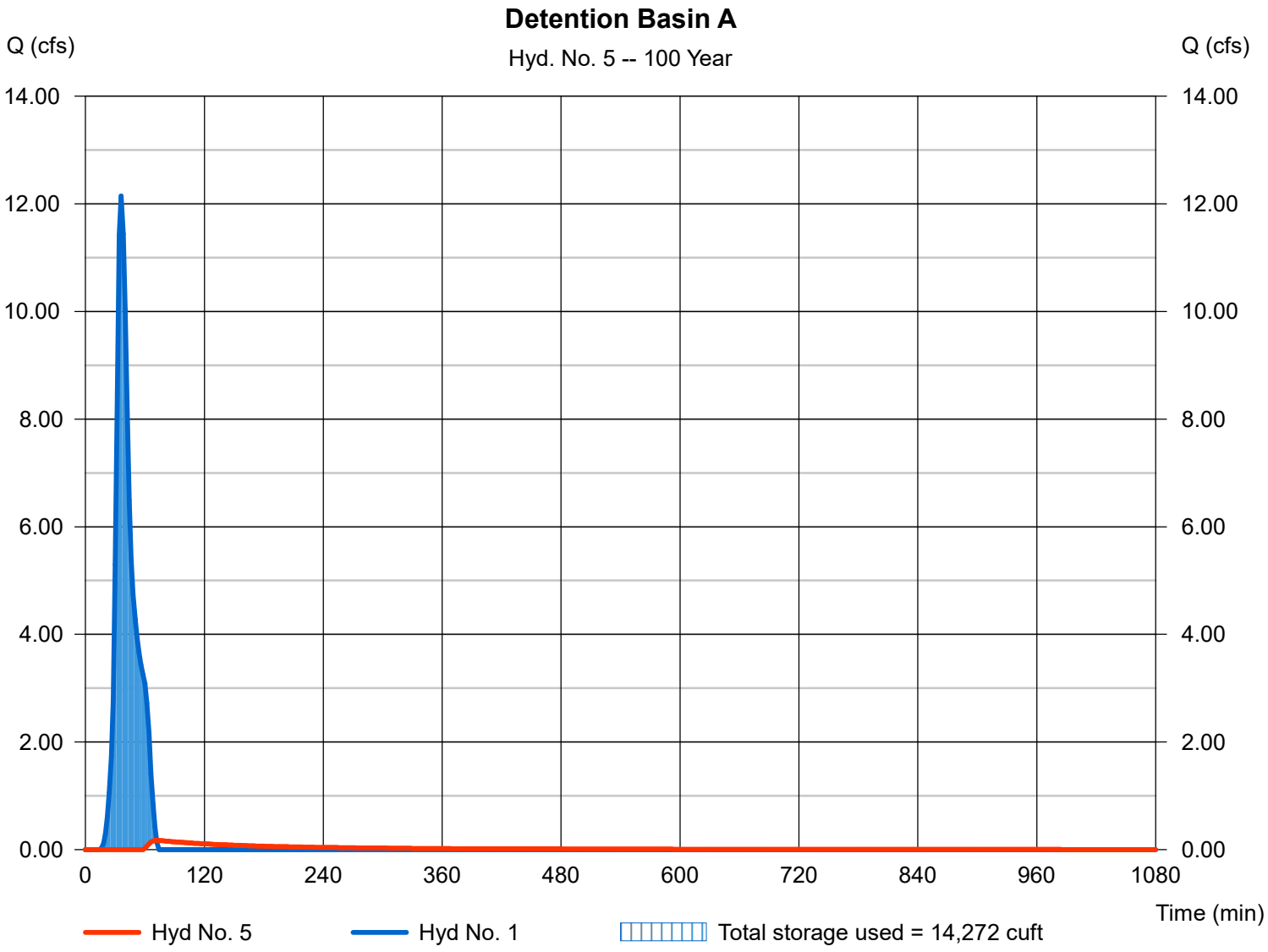
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.175 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 72 min |
| Time interval | = | 2 min | Hyd. volume | = | 1,479 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4047.17 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 14,272 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

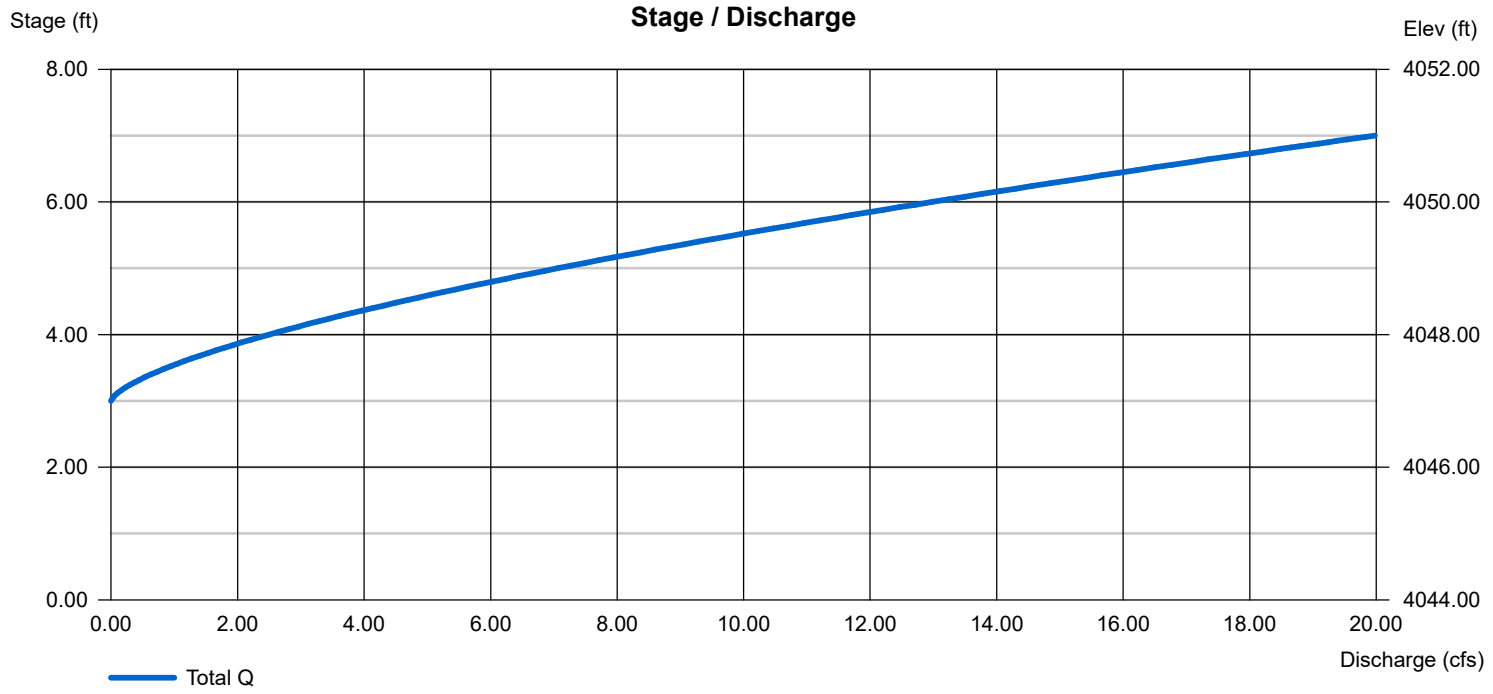
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



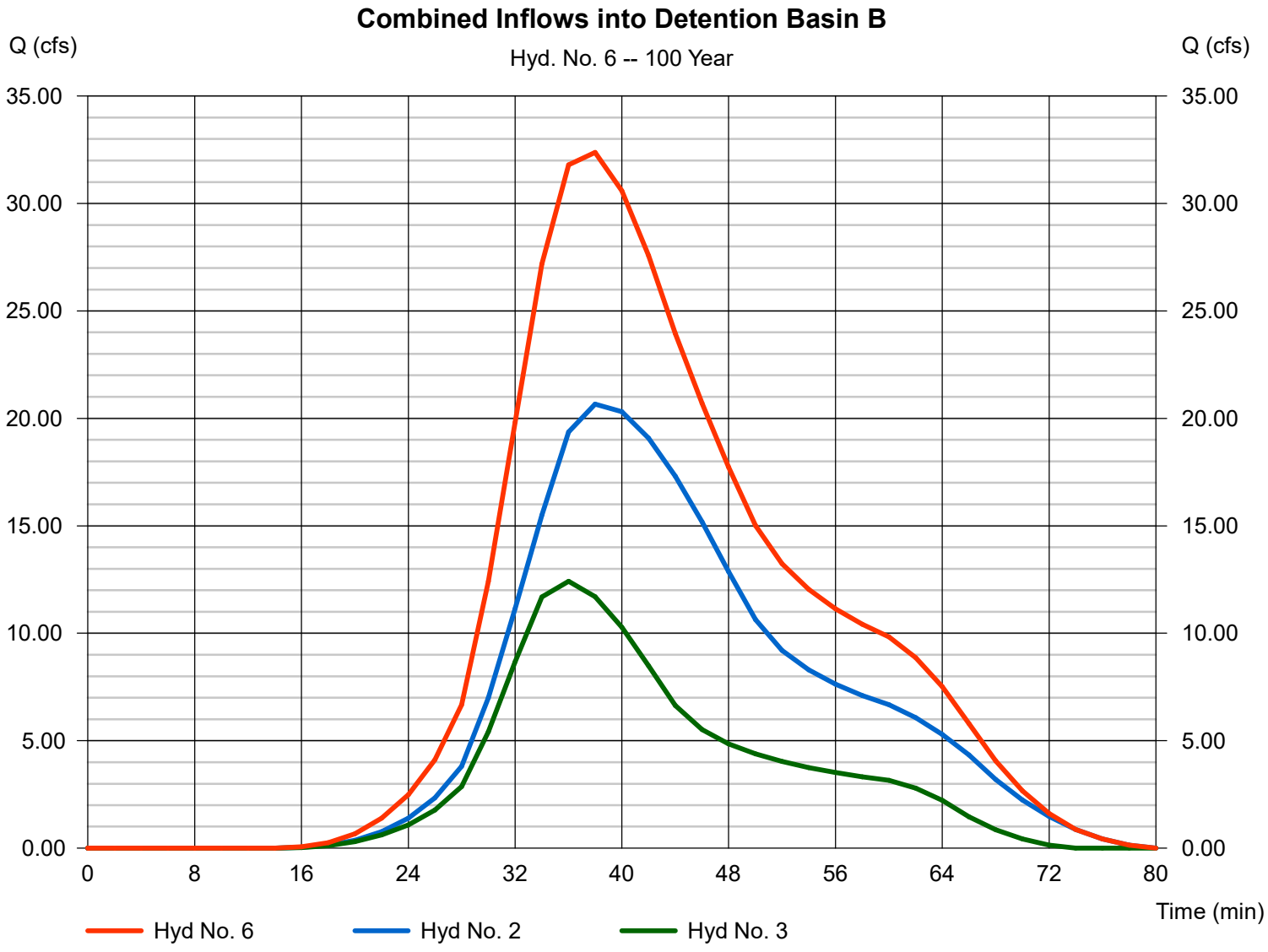
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 32.37 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 38 min |
| Time interval | = 2 min | Hyd. volume | = 43,610 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

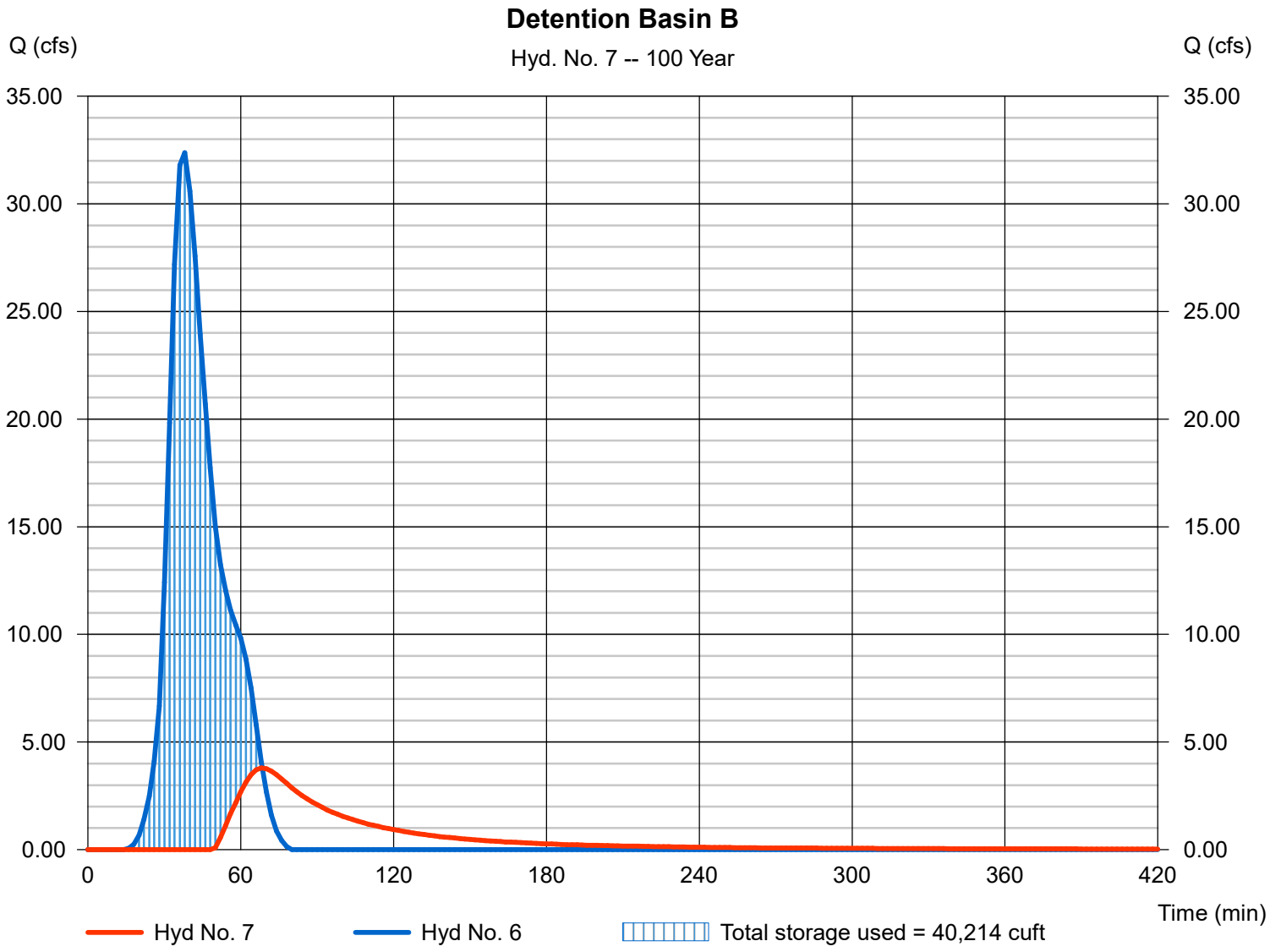
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 3.796 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 68 min |
| Time interval | = | 2 min | Hyd. volume | = | 12,194 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4030.53 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 40,214 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

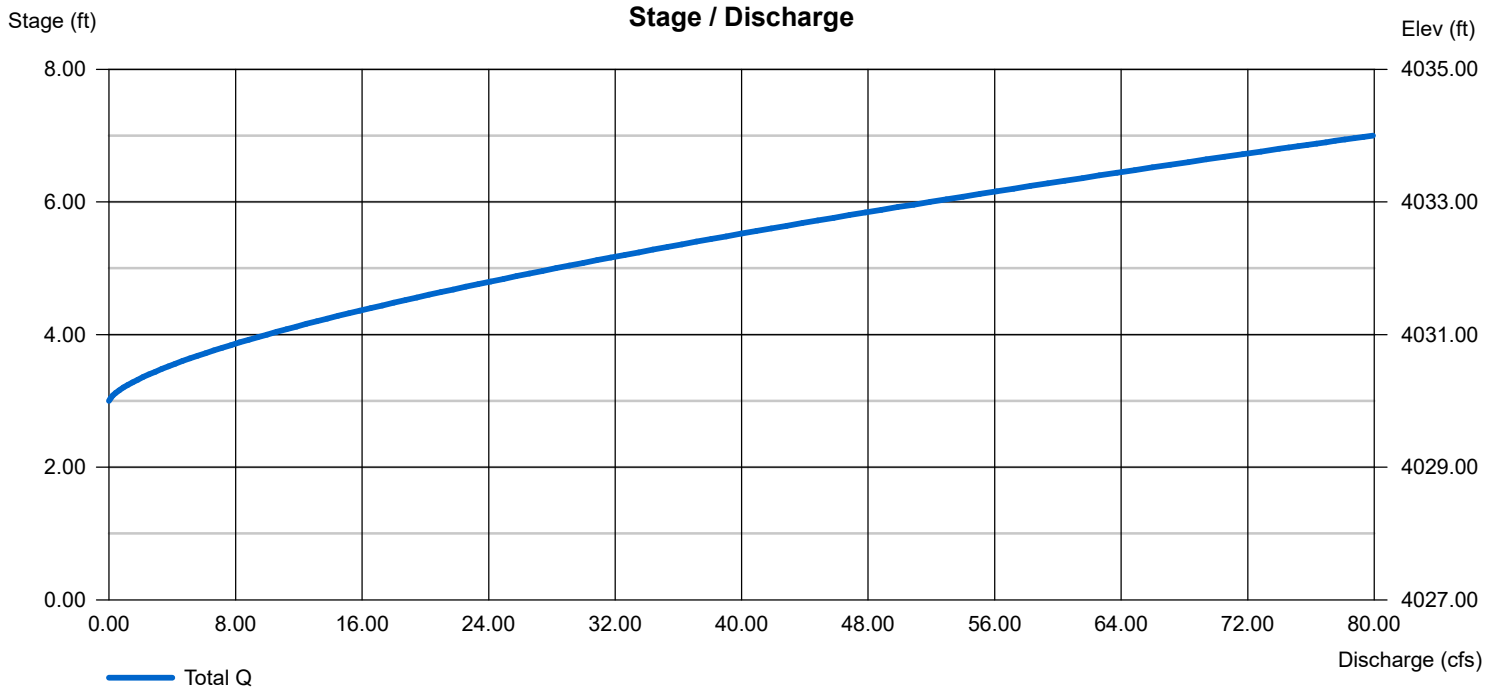
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

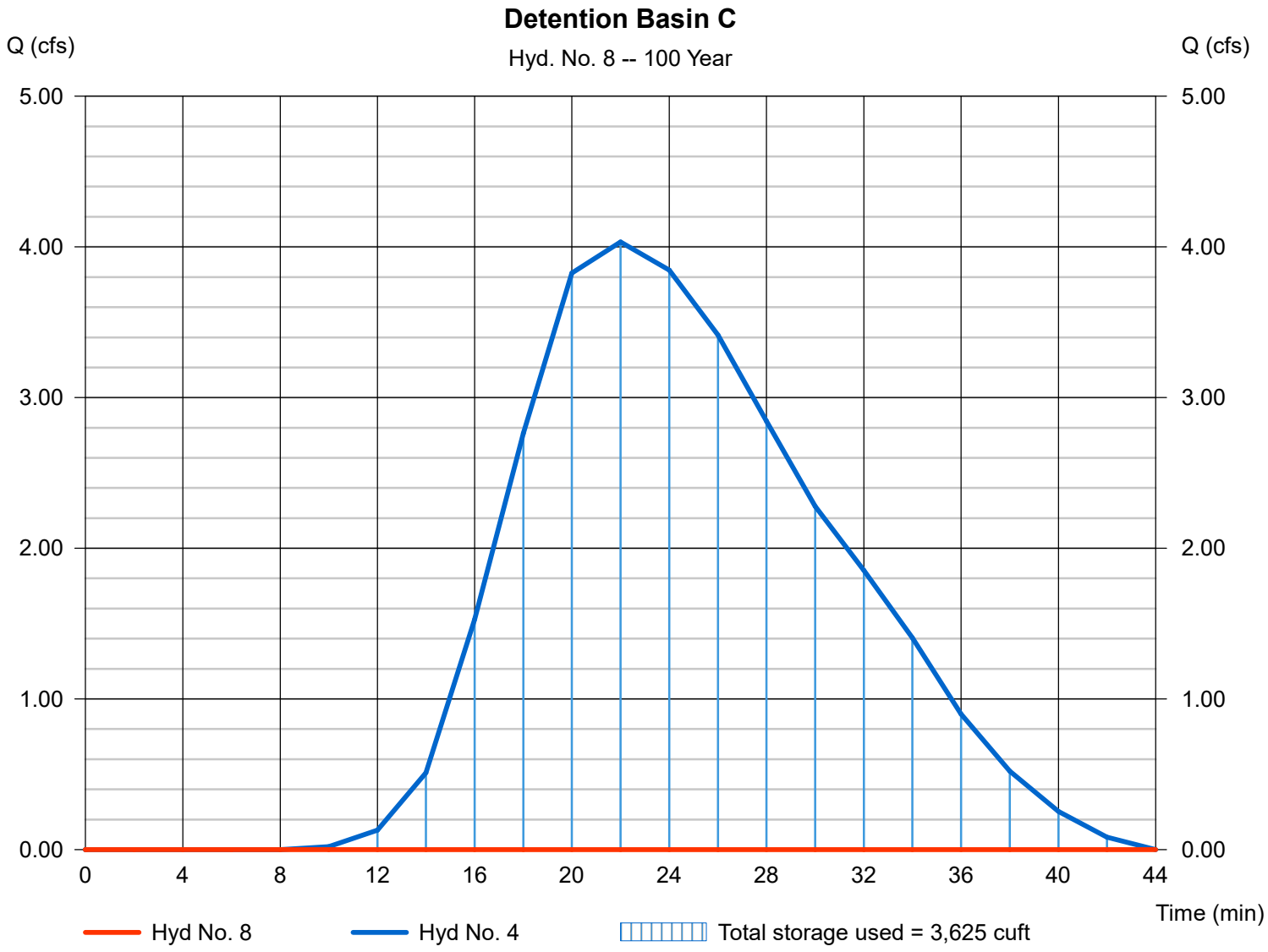
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.000 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | n/a |
| Time interval | = | 2 min | Hyd. volume | = | 0 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4057.37 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 3,625 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

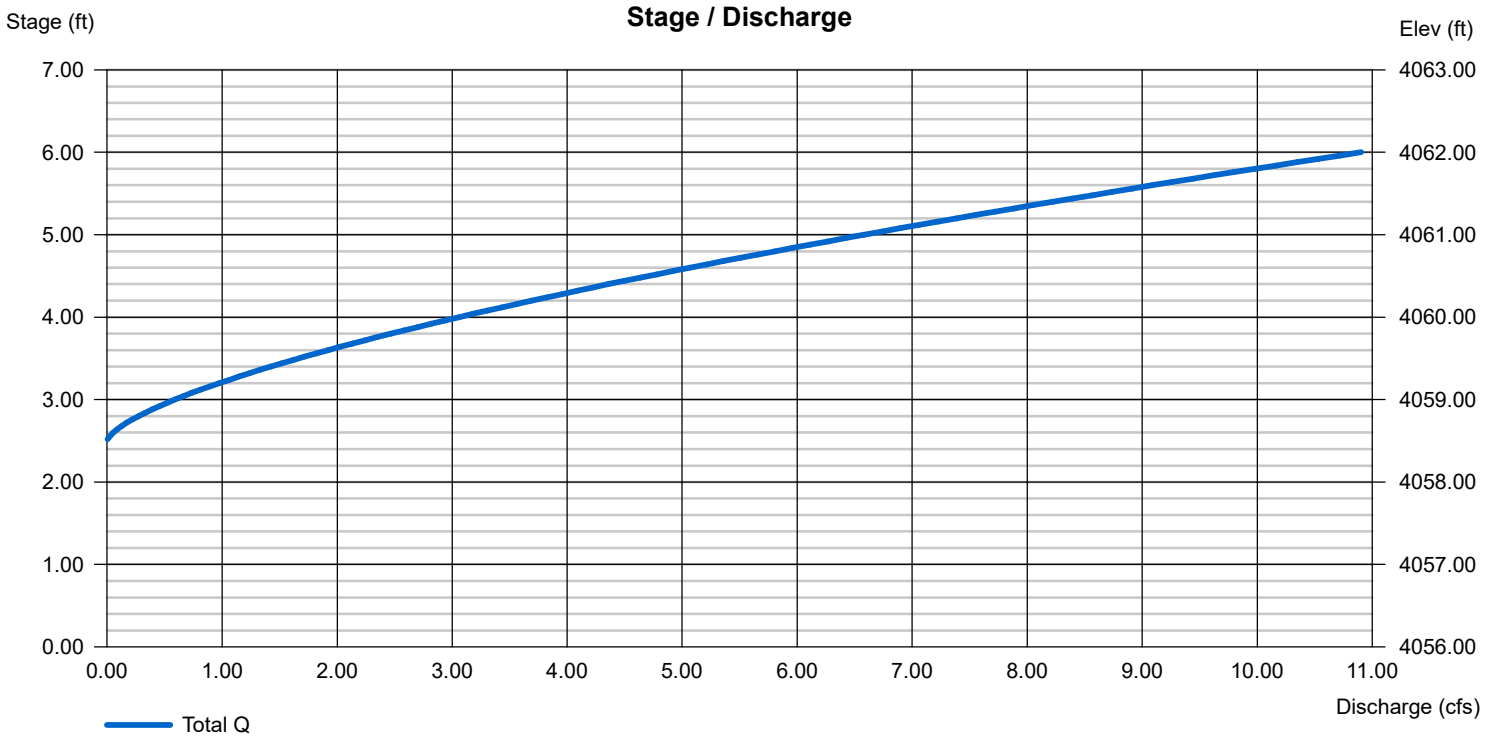
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



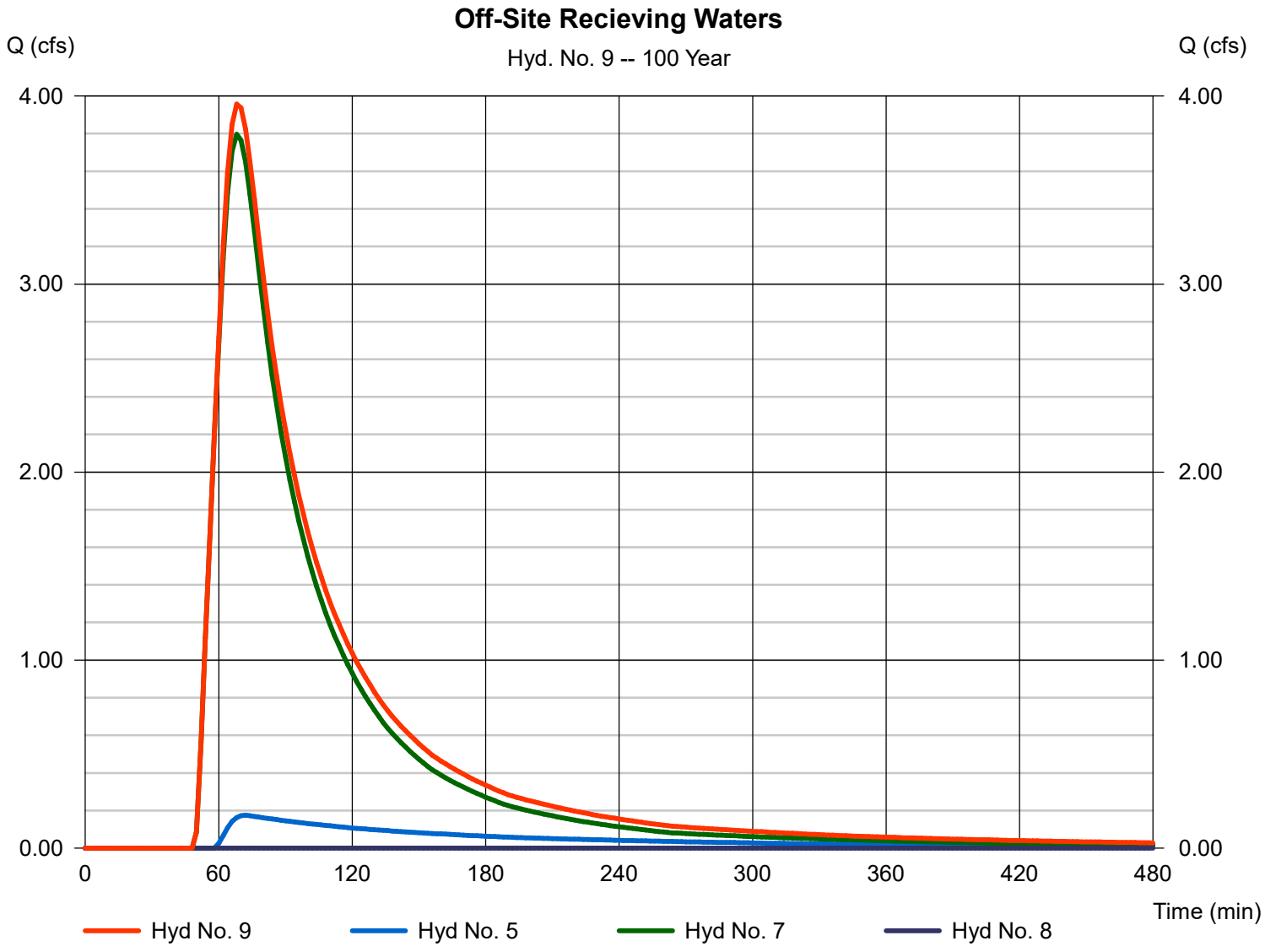
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 3.958 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 68 min |
| Time interval | = 2 min | Hyd. volume | = 13,673 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

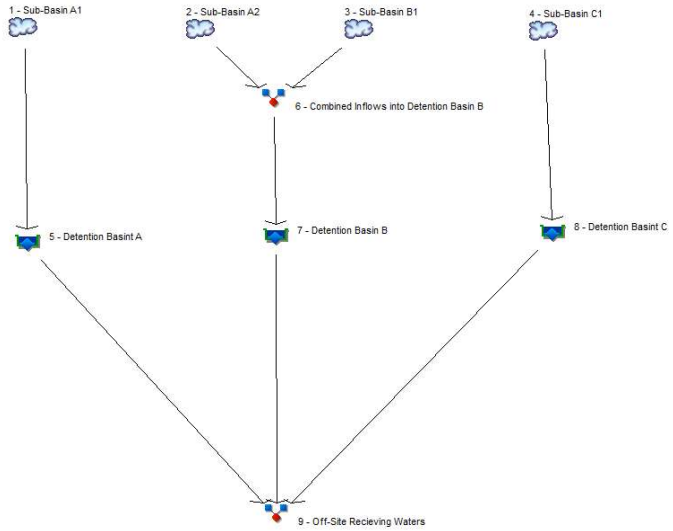
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_1 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.41 | 0.00 | 0.00 | 0.69 | 0.88 | 0.00 | 1.20 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basint A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basint C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 13.56 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 26.26 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 13.88 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 6.428 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 1.974 | Detention Basint A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 40.14 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 10.77 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.477 | Detention Basint C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 12.29 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 13.56 | 2 | 98 | 29,286 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 26.26 | 2 | 98 | 56,764 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 13.88 | 2 | 98 | 29,960 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 6.428 | 2 | 96 | 11,964 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 1.974 | 2 | 158 | 16,393 | 1 | 4047.85 | 20,992 | Detention Basint A |
| 6 | Combine | 40.14 | 2 | 98 | 86,724 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 10.77 | 2 | 120 | 55,308 | 6 | 4031.05 | 50,113 | Detention Basin B |
| 8 | Reservoir | 0.477 | 2 | 184 | 3,615 | 4 | 4058.93 | 10,742 | Detention Basint C |
| 9 | Combine | 12.29 | 2 | 124 | 75,316 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

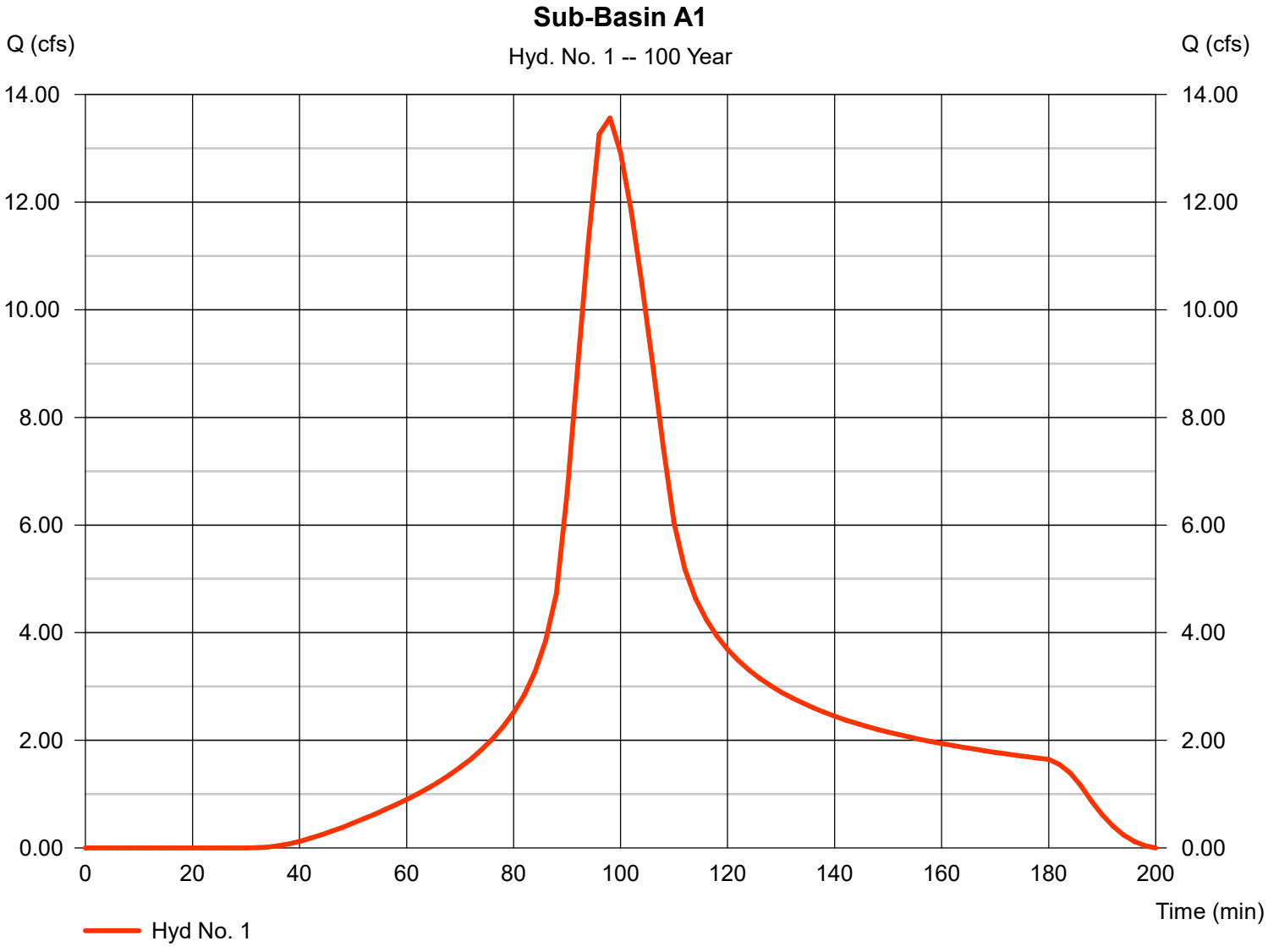
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 13.56 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 29,286 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 1.90 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



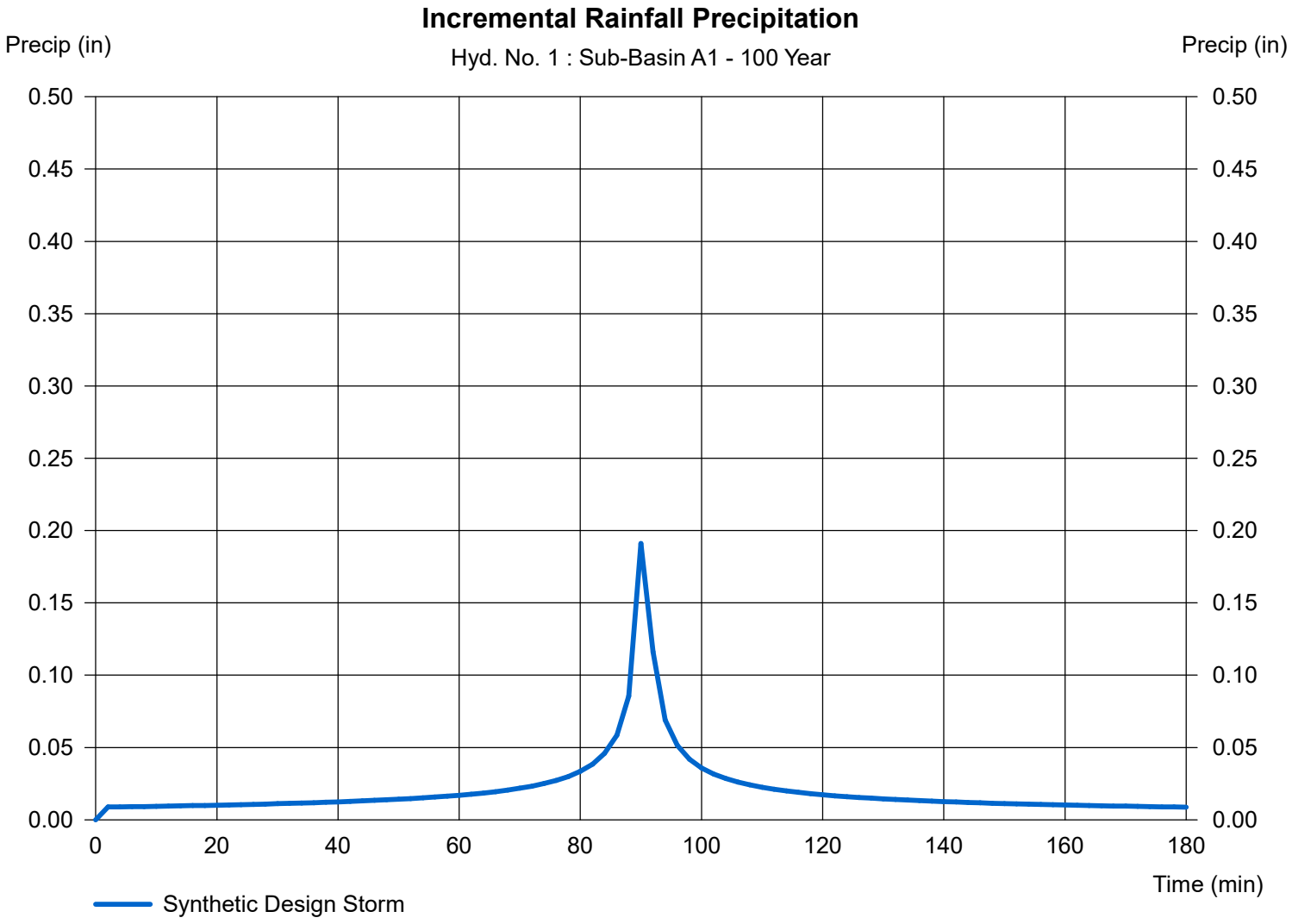
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.9042 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



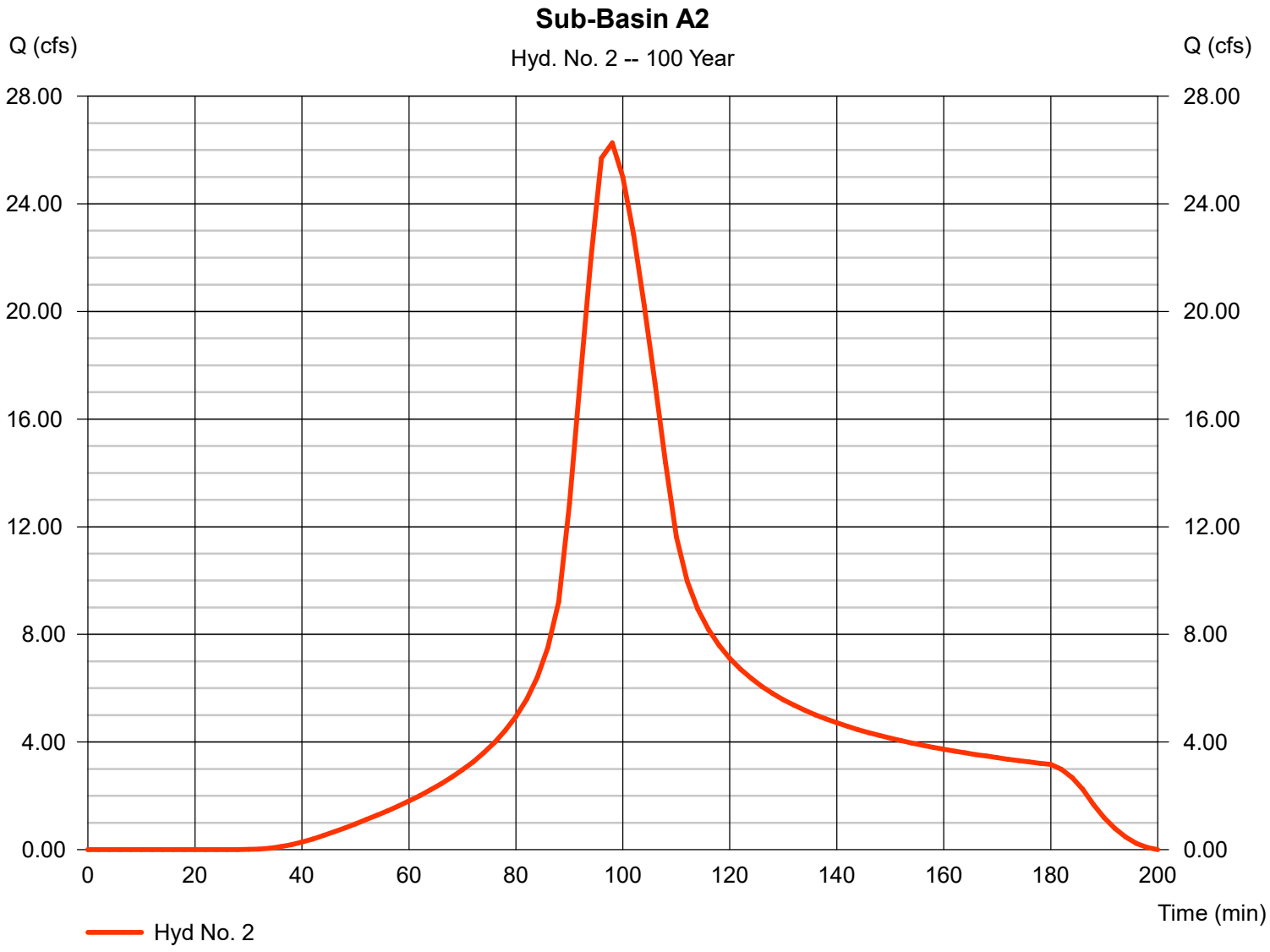
# Hydrograph Report



## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 26.26 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 56,764 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 1.90 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



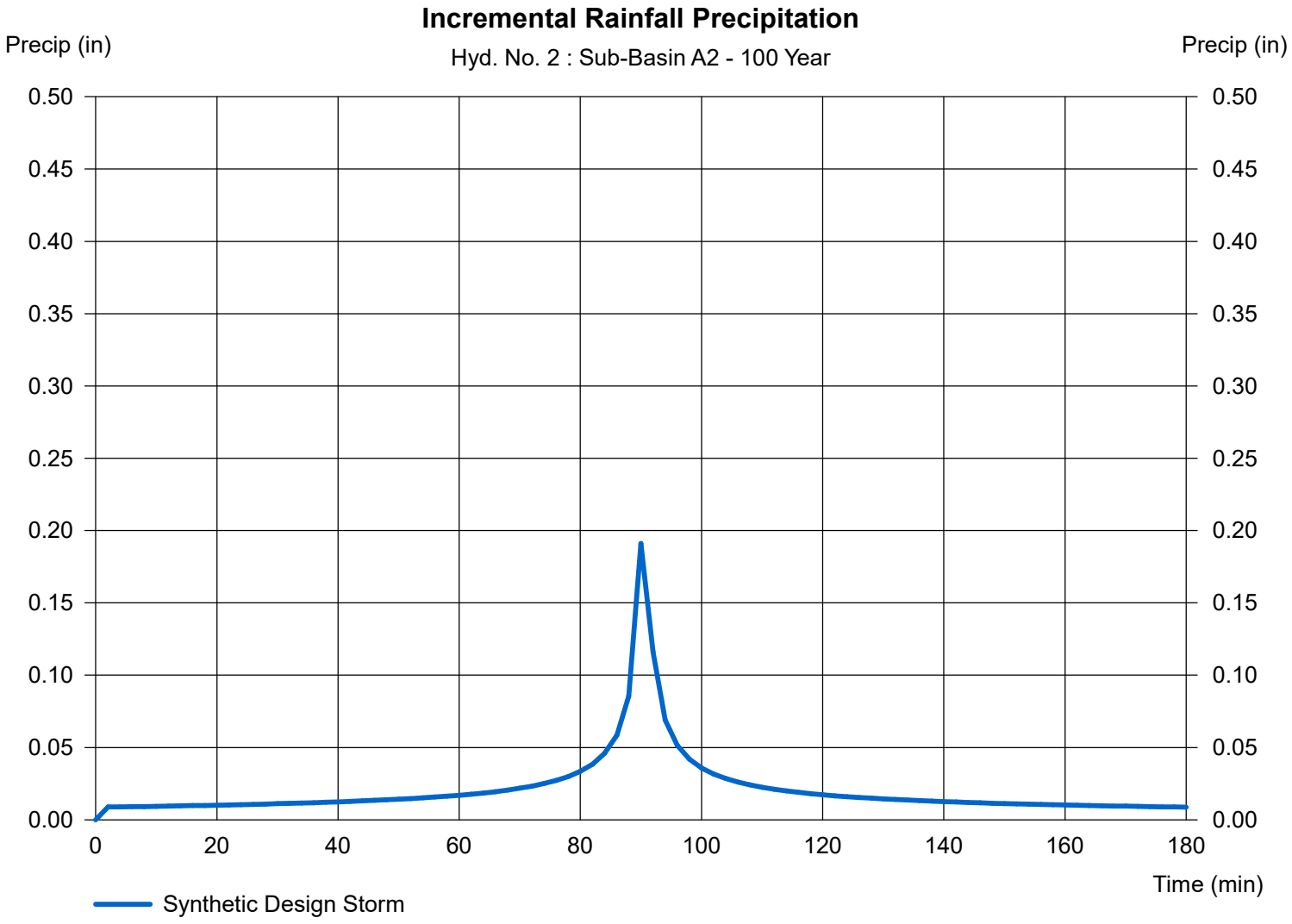
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.9042 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



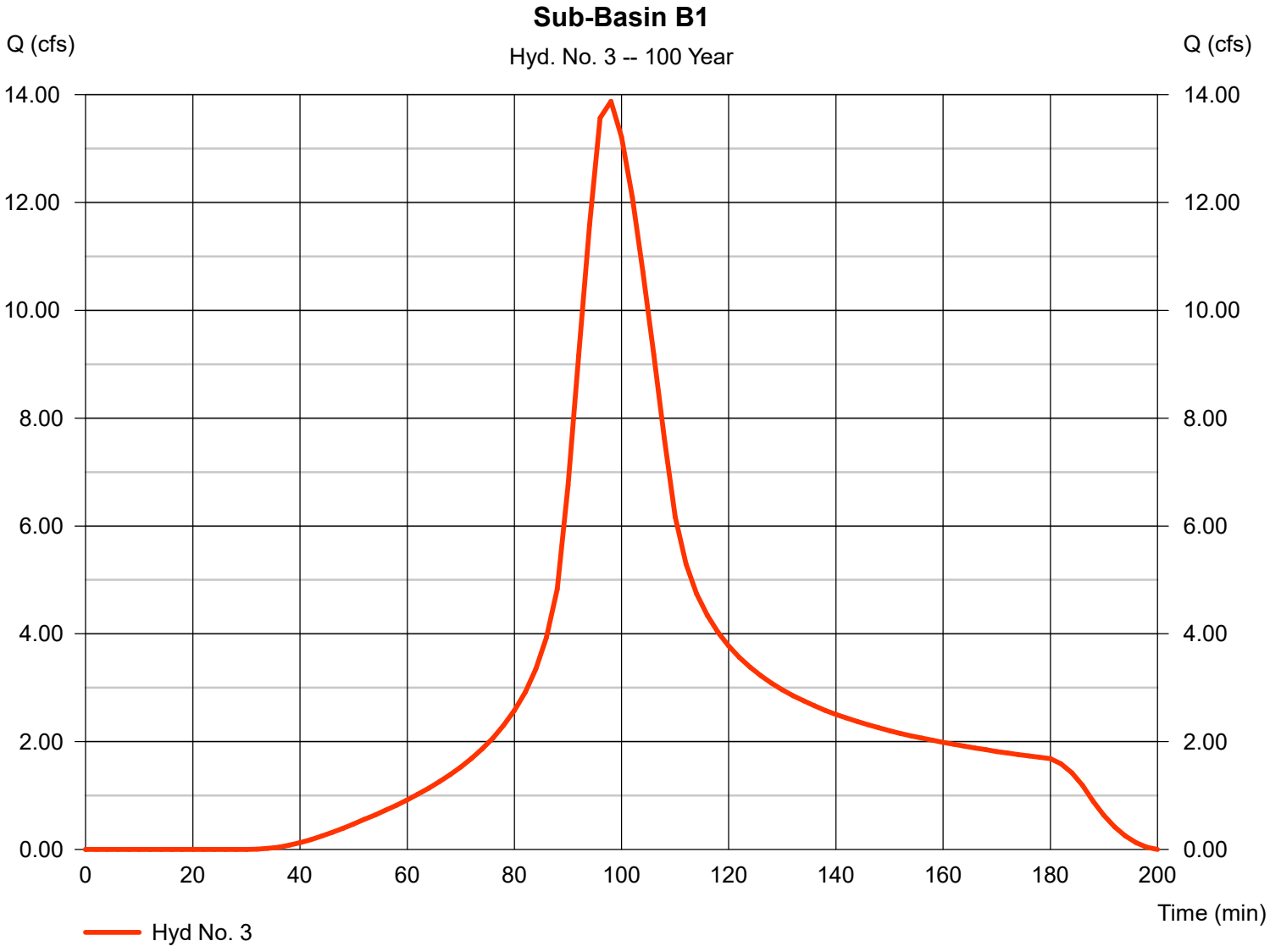
# Hydrograph Report



## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 13.88 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 98 min |
| Time interval | = | 2 min | Hyd. volume | = | 29,960 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 1.90 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



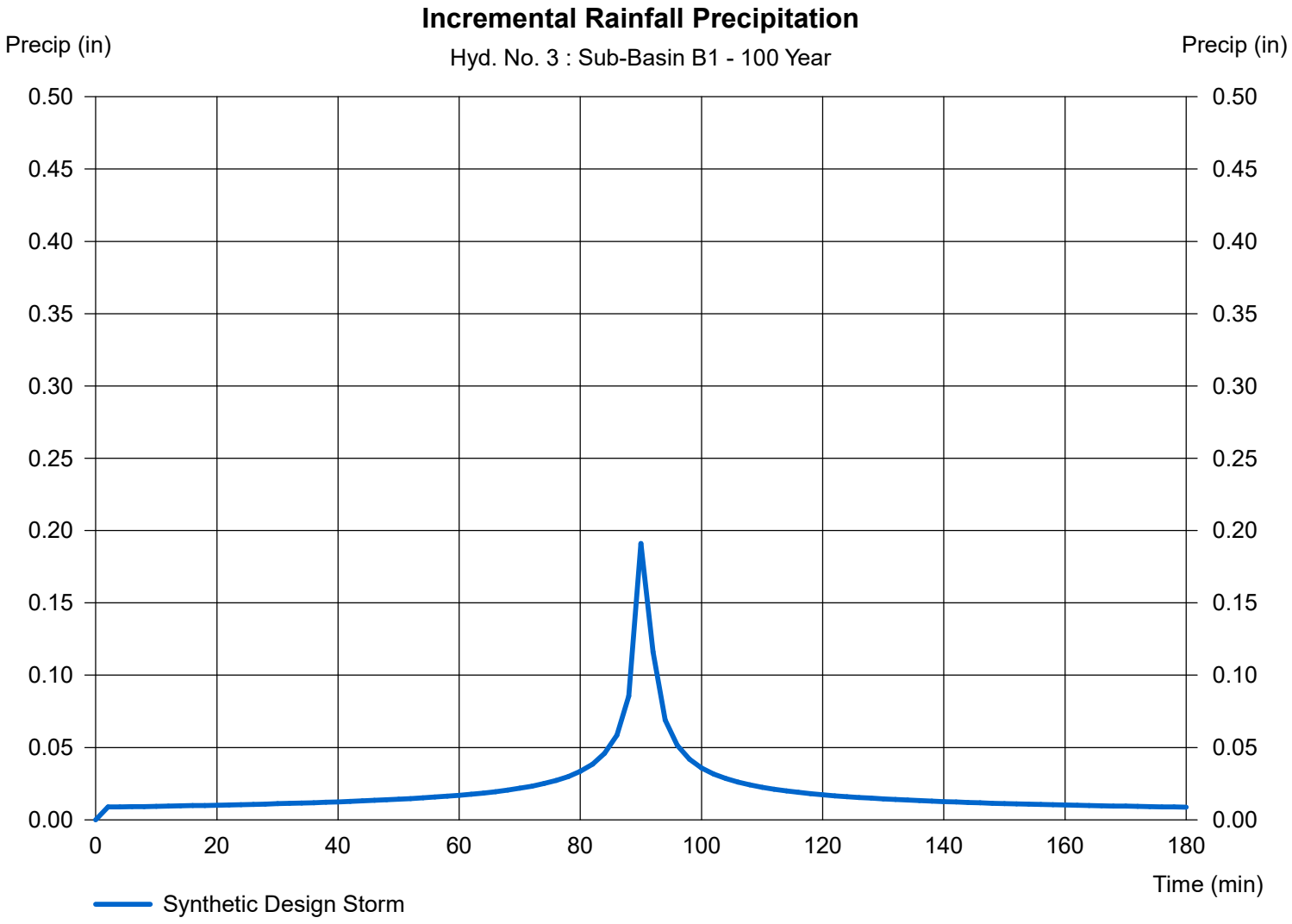
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.9042 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



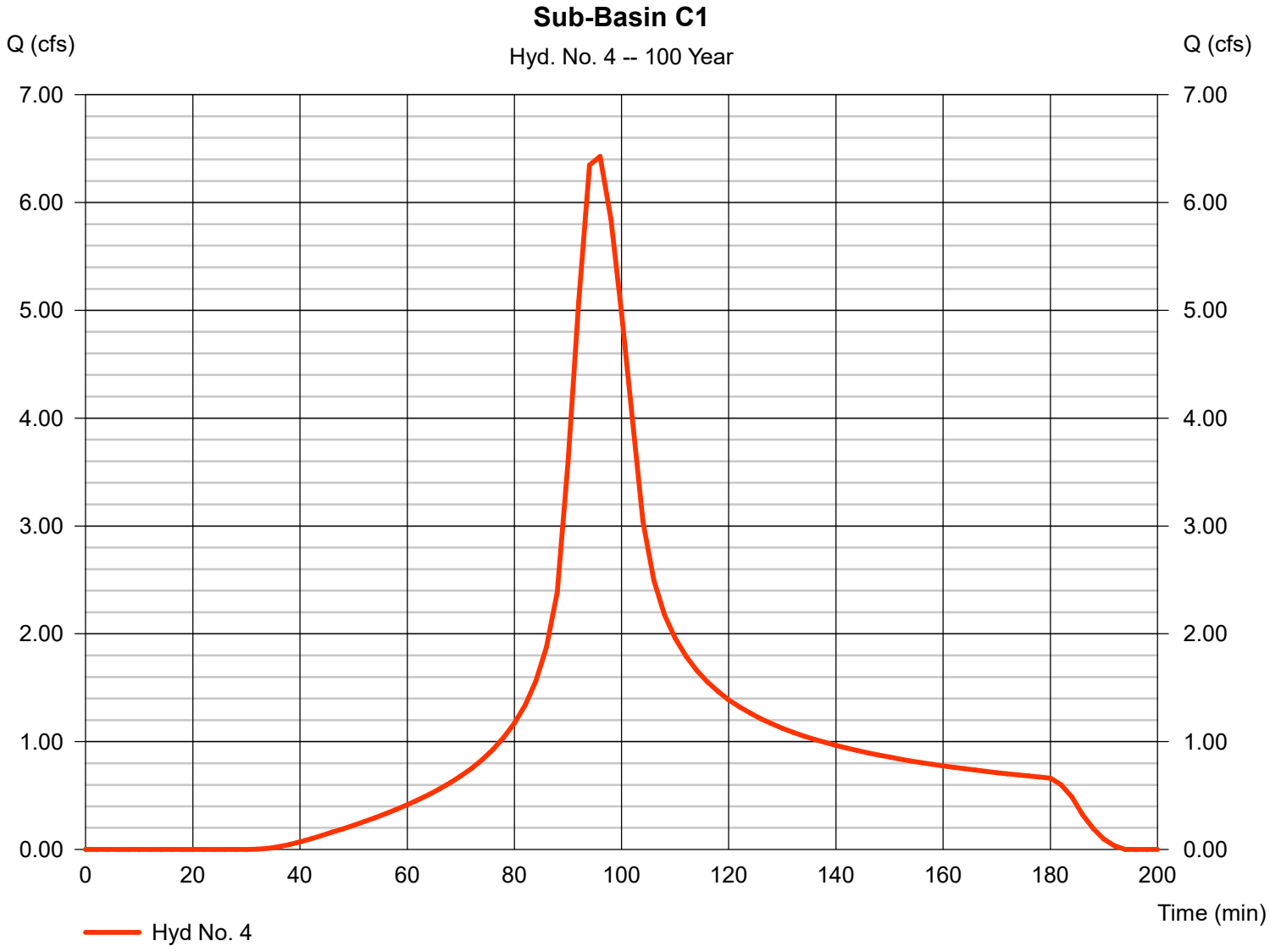
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 6.428 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 96 min |
| Time interval | = | 2 min | Hyd. volume | = | 11,964 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 93.4 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 1.90 in | Distribution | = | Synthetic |
| Storm duration | = | 3.00 hrs | Shape factor | = | 484 |



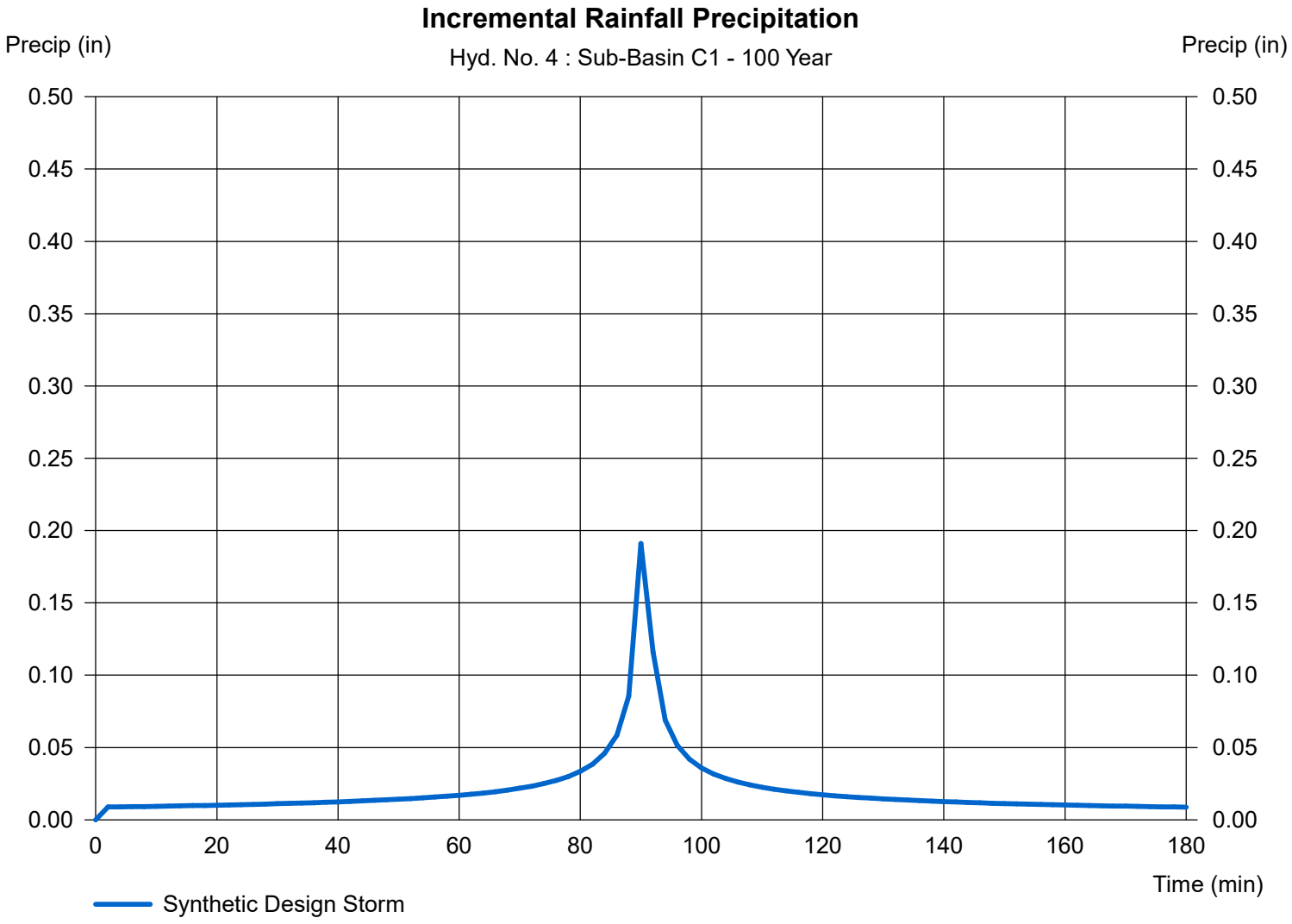
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 1.9042 in | Distribution | = Synthetic |
| Storm duration | = 3.00 hrs | | |



# Hydrograph Report

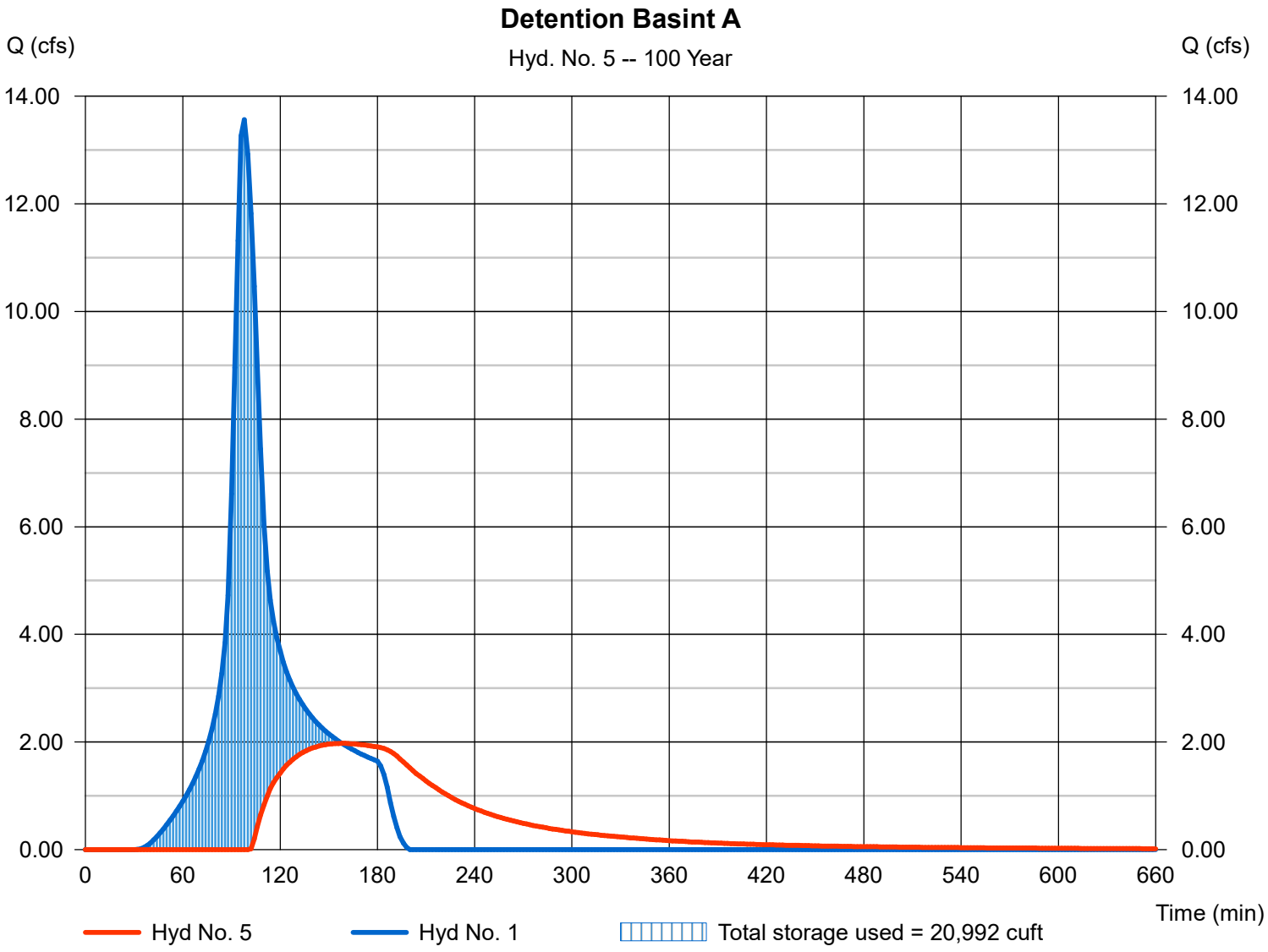
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basint A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.974 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 158 min |
| Time interval | = | 2 min | Hyd. volume | = | 16,393 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4047.85 ft |
| Reservoir name | = | Detention Basint A | Max. Storage | = | 20,992 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basint A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

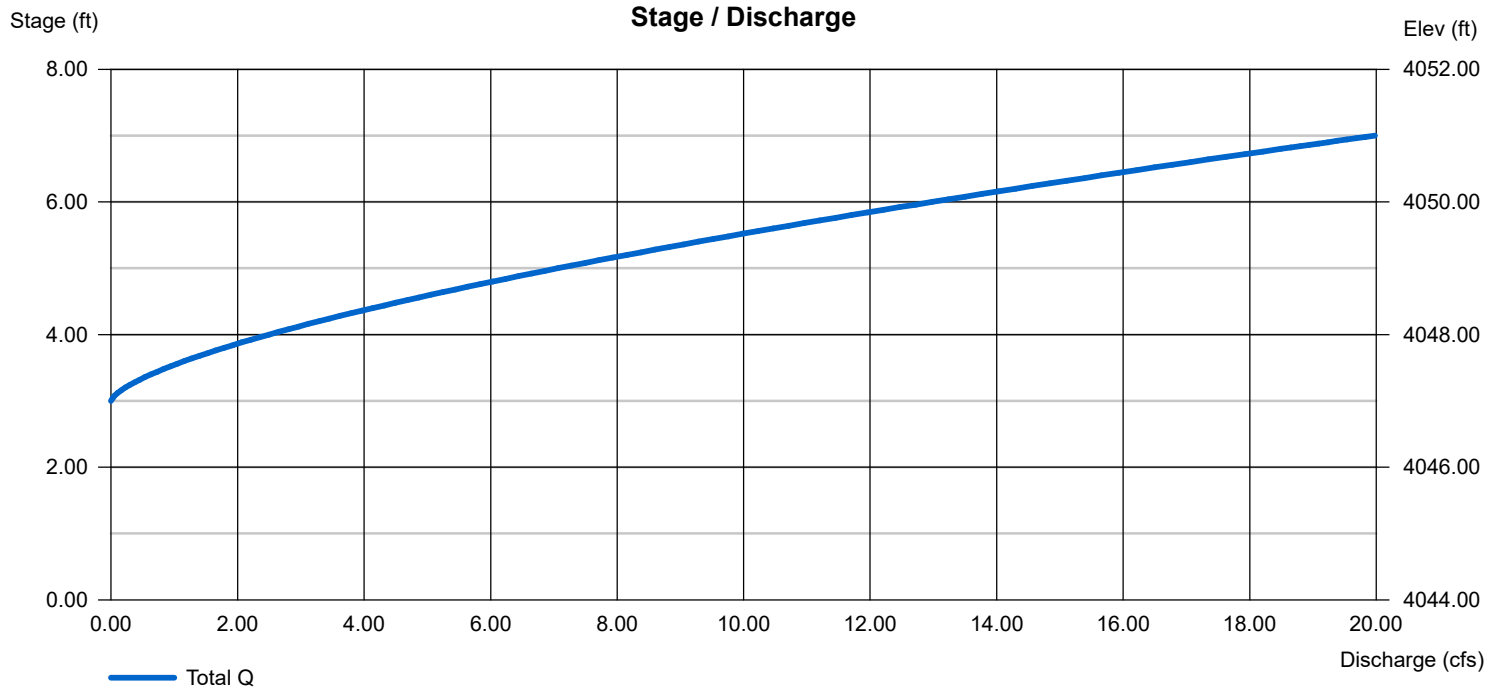
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



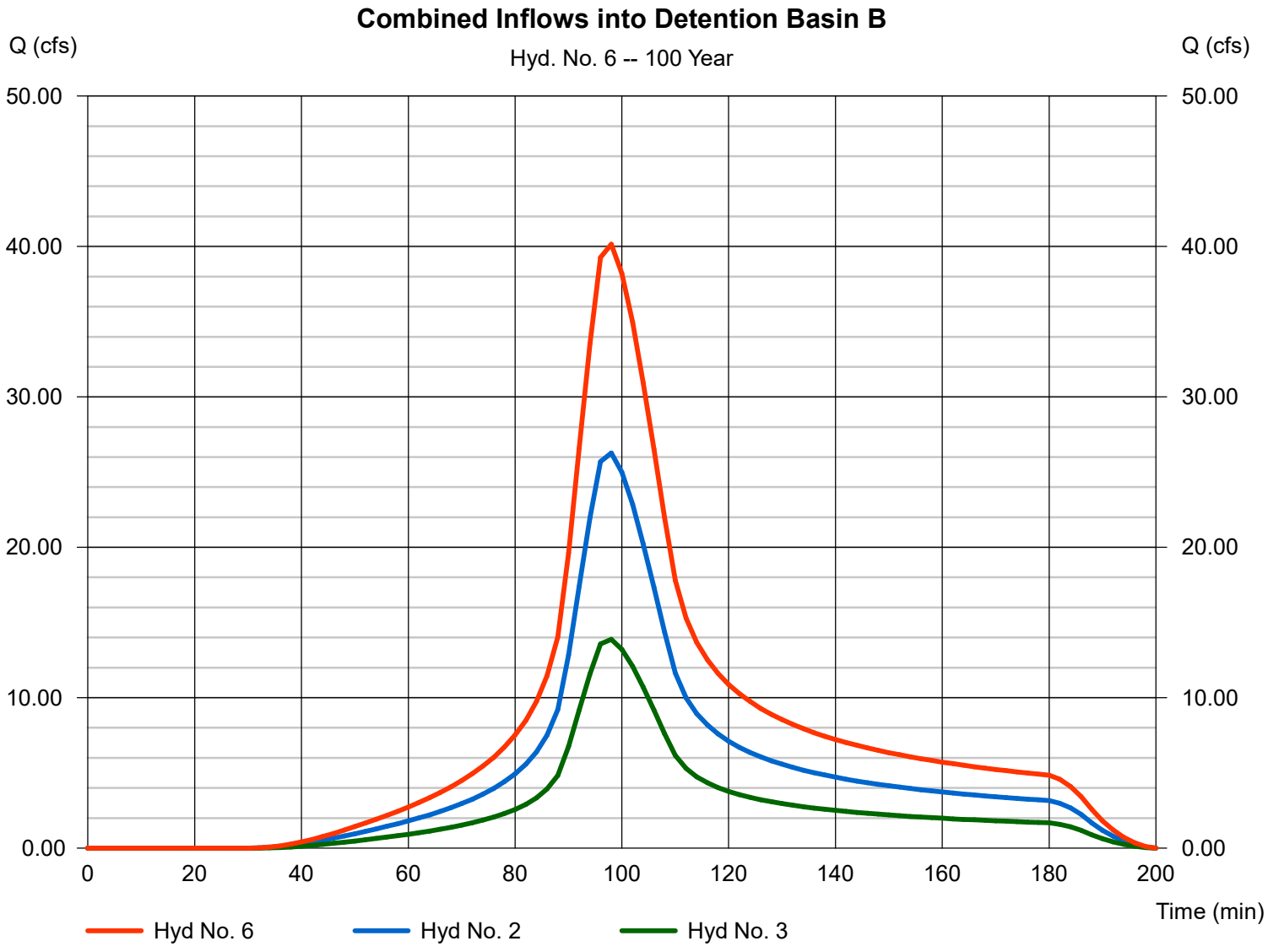
# Hydrograph Report



## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 40.14 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 98 min |
| Time interval | = 2 min | Hyd. volume | = 86,724 cuft |
| Inflow hyds. | = 2, 3 | Contrib. drain. area | = 18.144 ac |



# Hydrograph Report

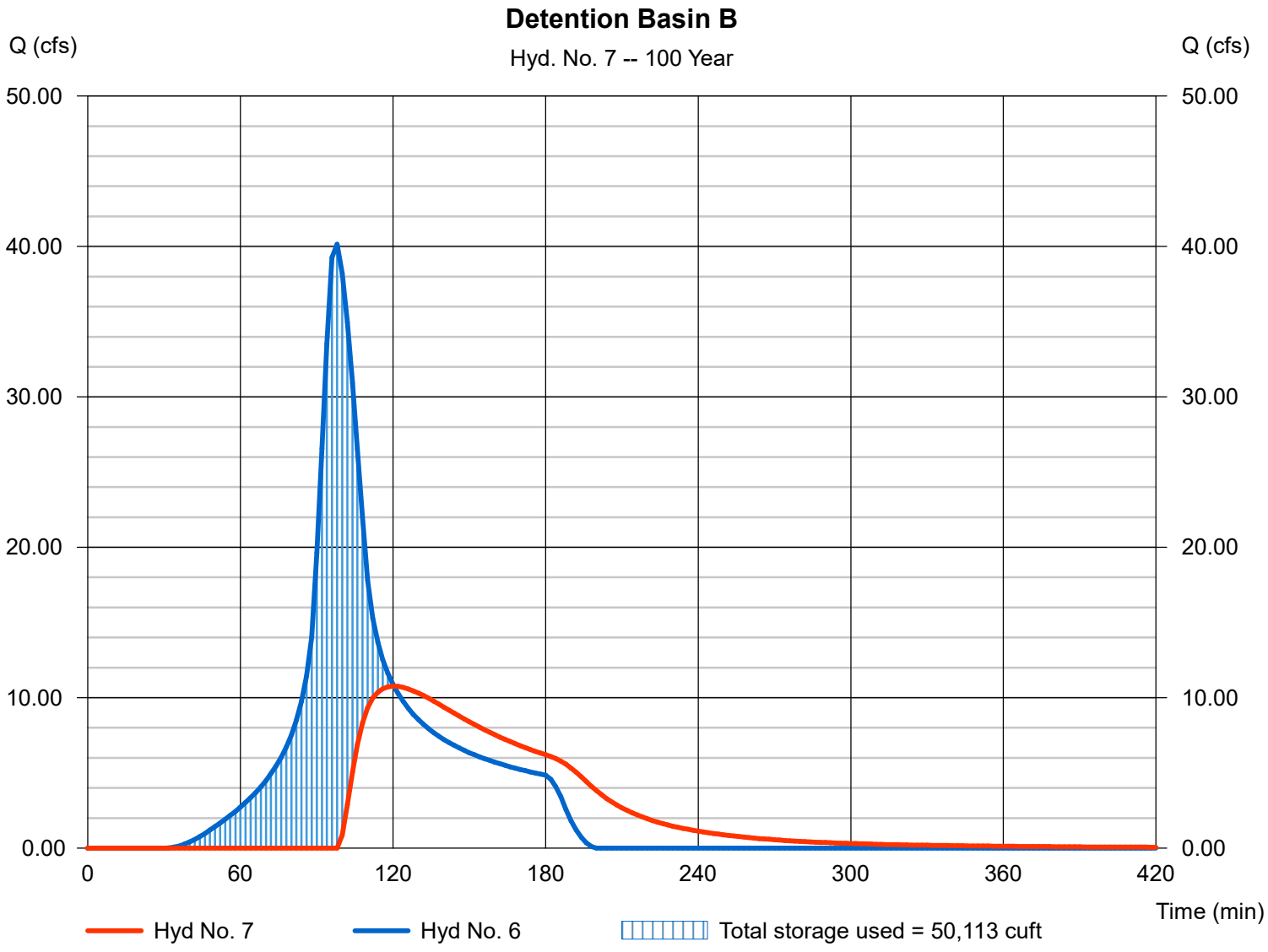
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 10.77 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 120 min |
| Time interval | = | 2 min | Hyd. volume | = | 55,308 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4031.05 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 50,113 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

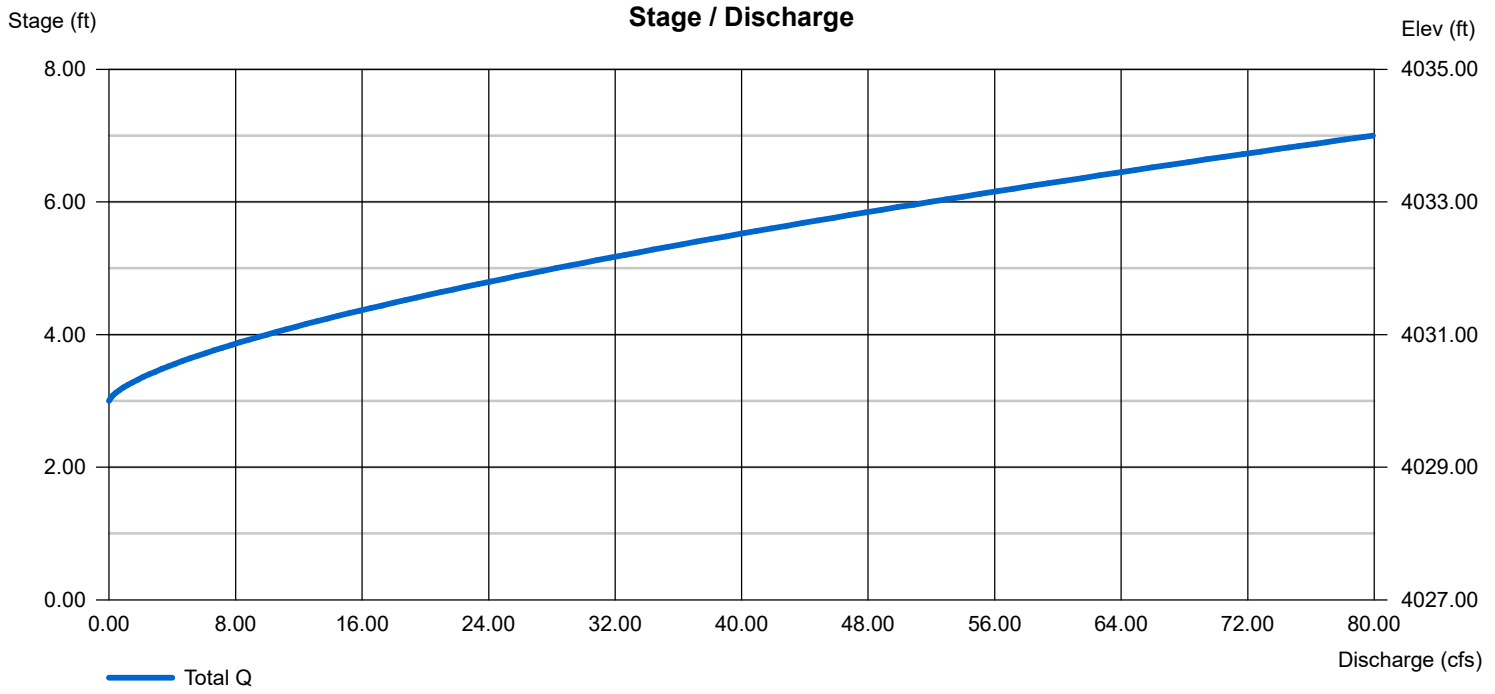
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

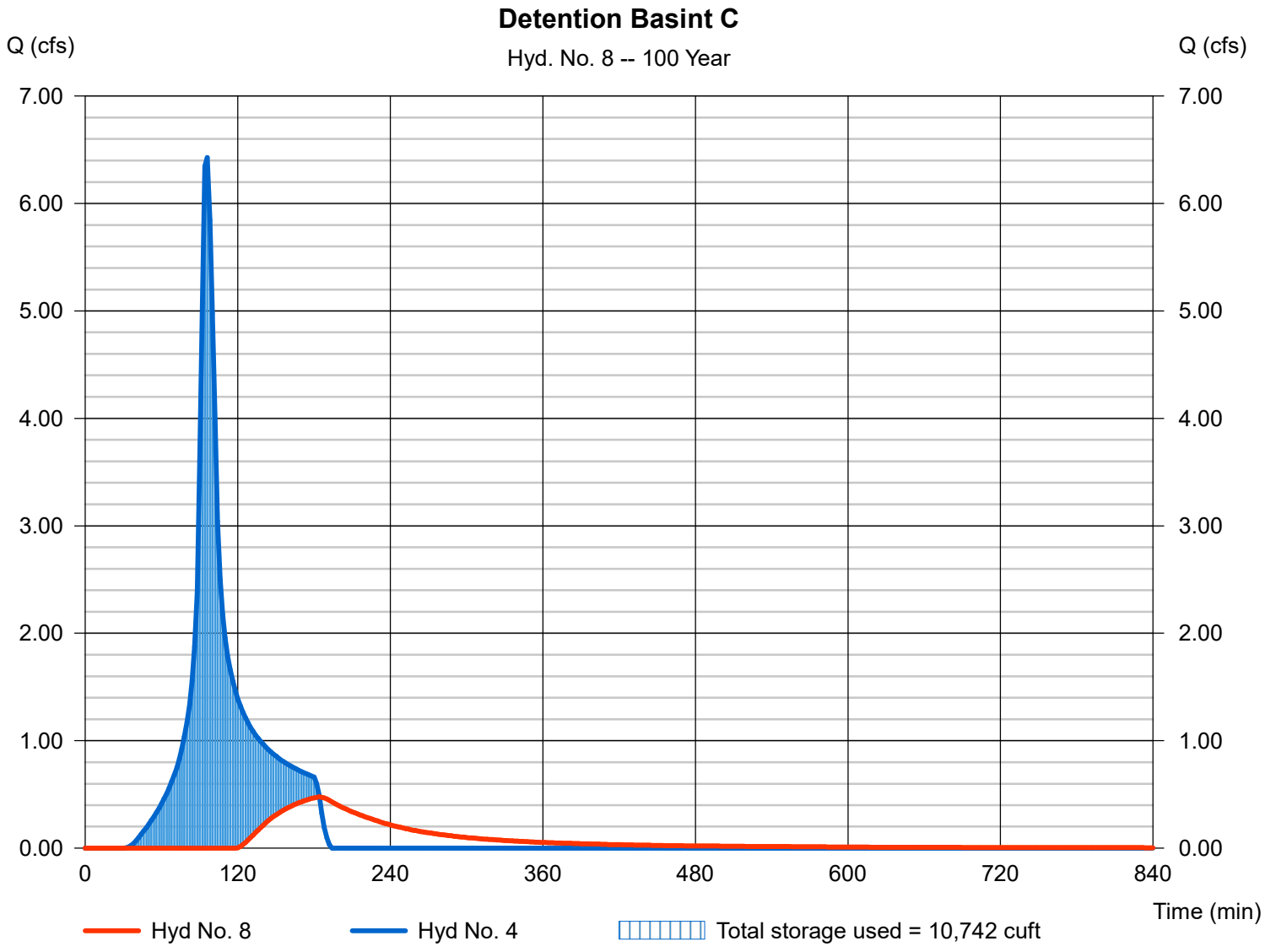
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basint C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.477 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 184 min |
| Time interval | = | 2 min | Hyd. volume | = | 3,615 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4058.93 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 10,742 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

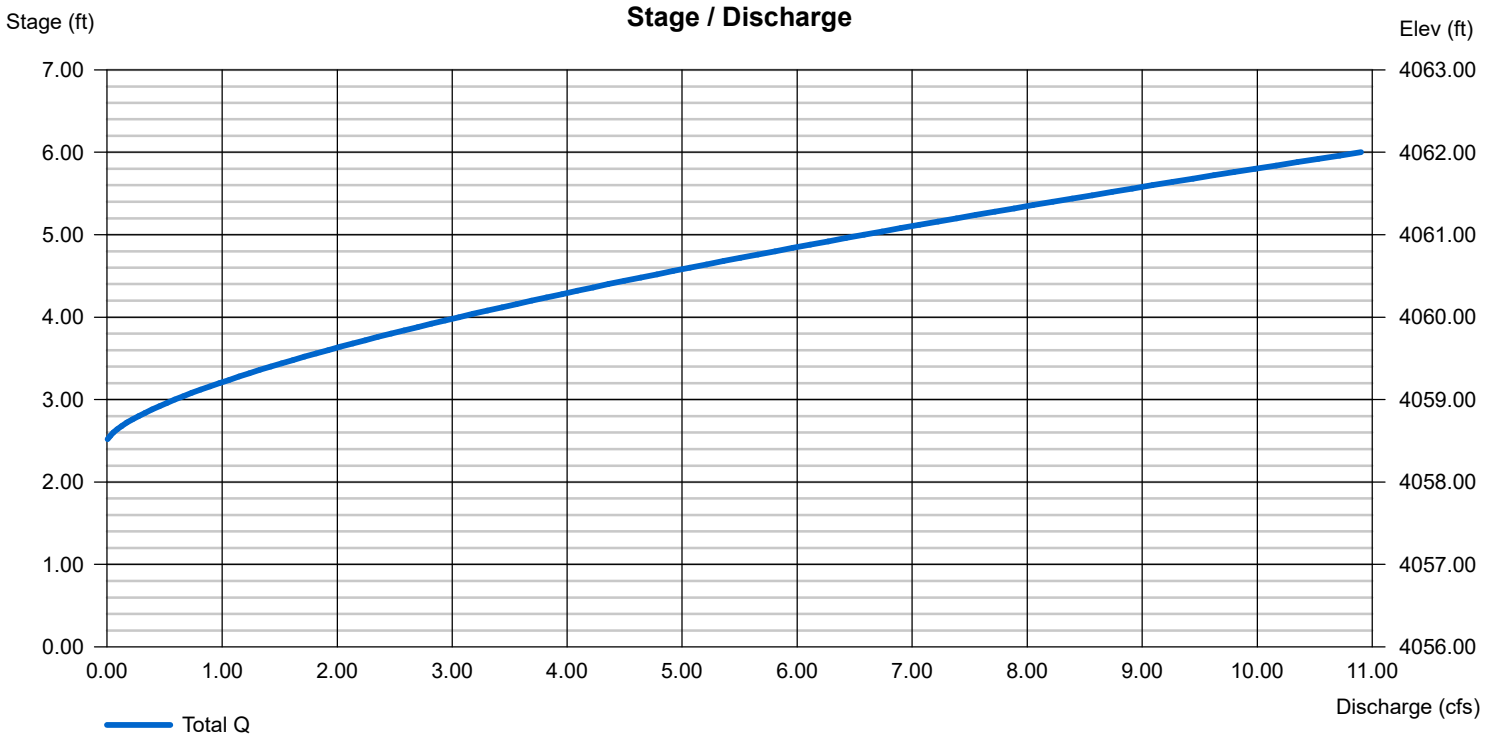
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



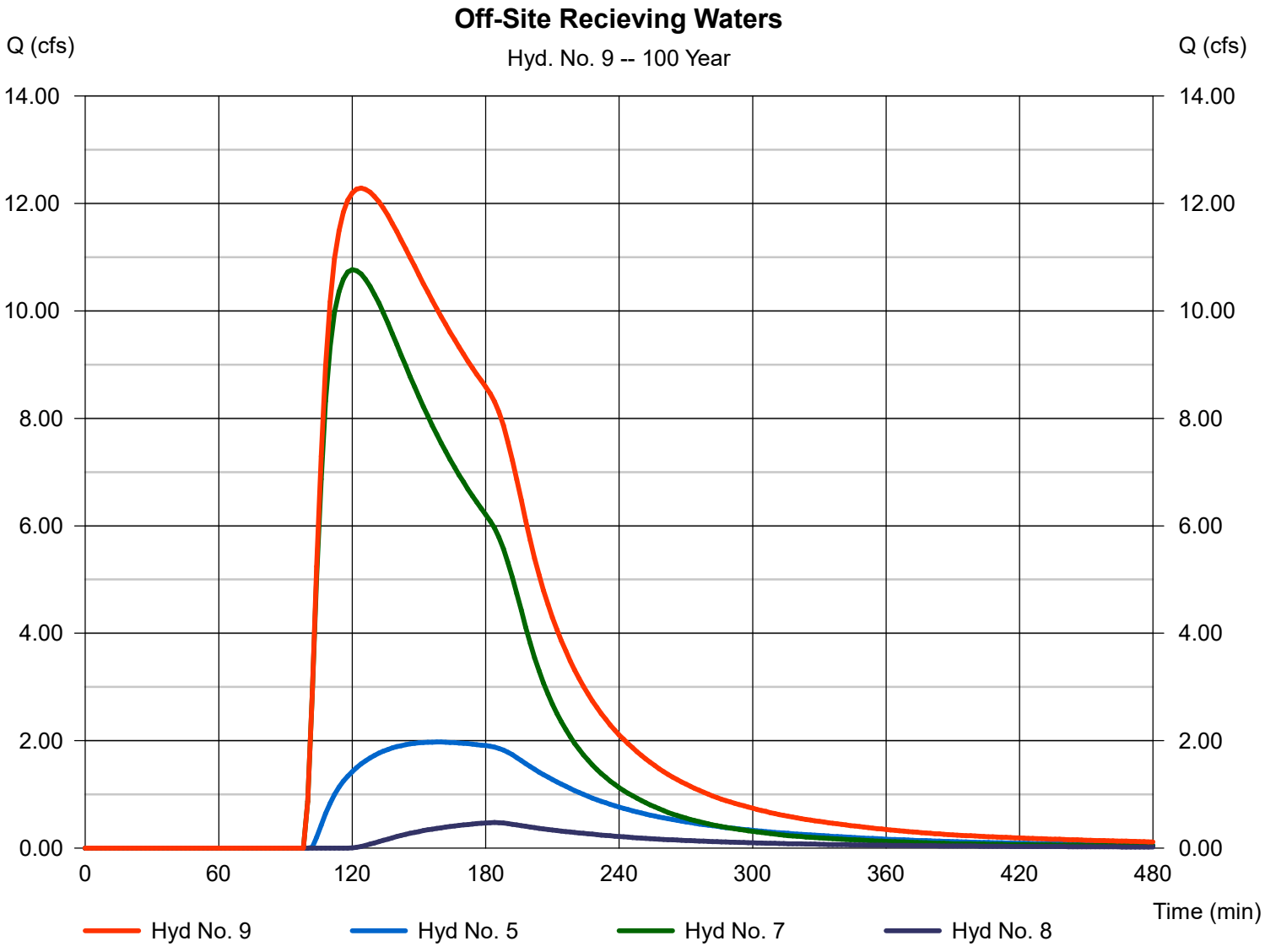
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 12.29 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 124 min |
| Time interval | = 2 min | Hyd. volume | = 75,316 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

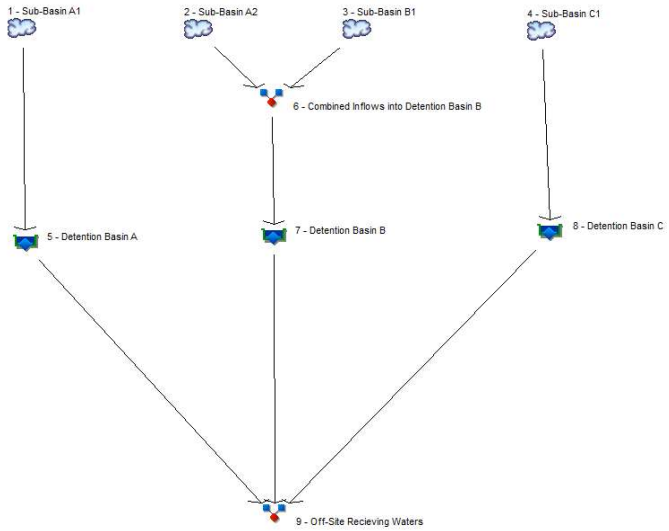
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_3 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.66 | 0.00 | 0.00 | 1.06 | 1.33 | 0.00 | 1.78 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basin C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 14.83 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 28.61 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 15.17 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 7.007 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 2.980 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 43.78 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 17.96 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 0.754 | Detention Basin C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 20.87 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 14.83 | 2 | 188 | 42,899 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 28.61 | 2 | 188 | 82,909 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 15.17 | 2 | 188 | 43,886 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 7.007 | 2 | 186 | 17,550 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 2.980 | 2 | 220 | 30,006 | 1 | 4048.13 | 24,026 | Detention Basin A |
| 6 | Combine | 43.78 | 2 | 188 | 126,795 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 17.96 | 2 | 200 | 95,379 | 6 | 4031.48 | 58,930 | Detention Basin B |
| 8 | Reservoir | 0.754 | 2 | 256 | 9,201 | 4 | 4059.09 | 11,677 | Detention Basin C |
| 9 | Combine | 20.87 | 2 | 202 | 134,586 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

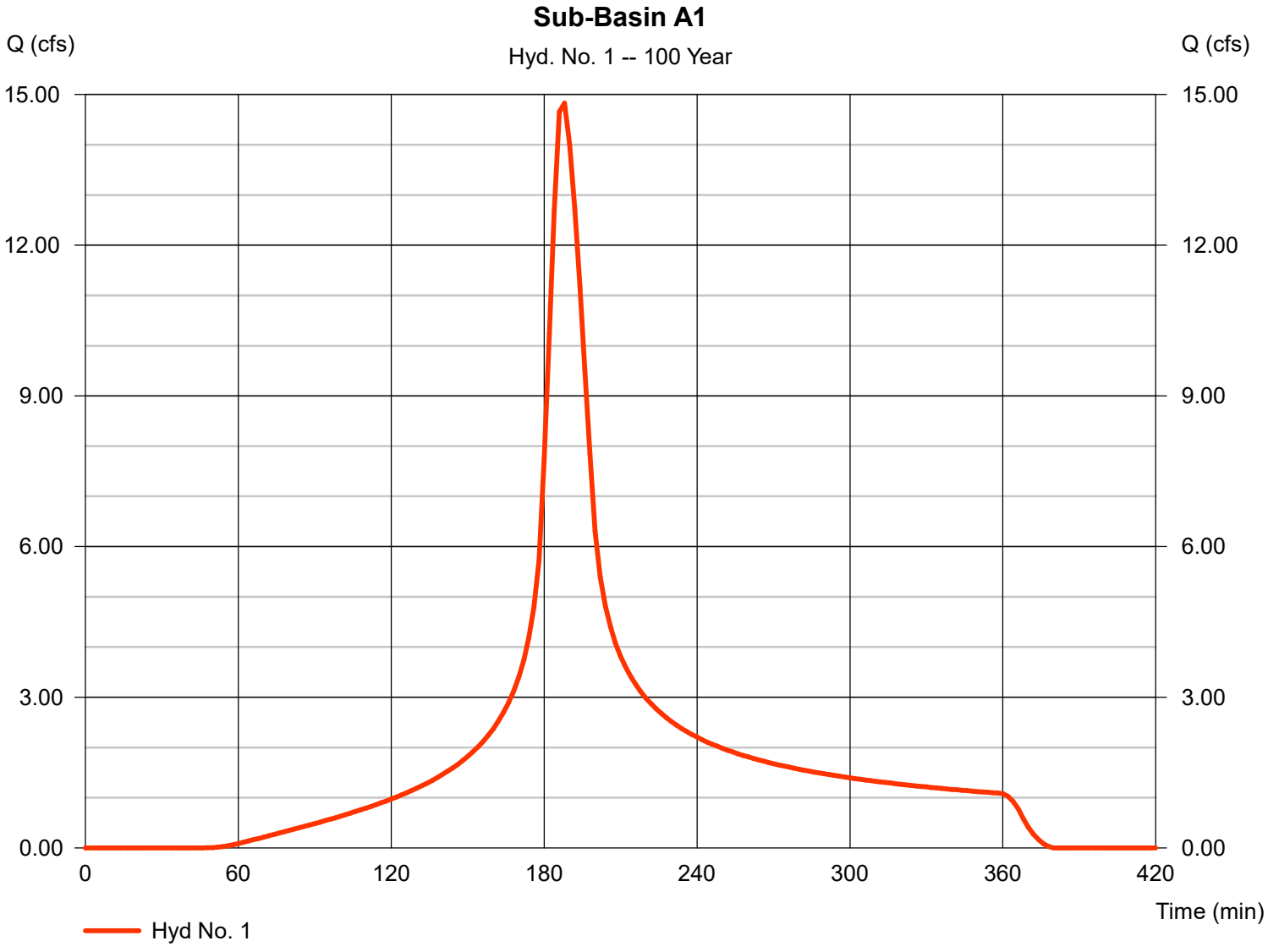
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Hydrograph type | = SCS Runoff | Peak discharge | = 14.83 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 188 min |
| Time interval | = 2 min | Hyd. volume | = 42,899 cuft |
| Drainage area | = 6.178 ac | Curve number | = 93.5 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = USER | Time of conc. (Tc) | = 11.80 min |
| Total precip. | = 2.53 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | Shape factor | = 484 |



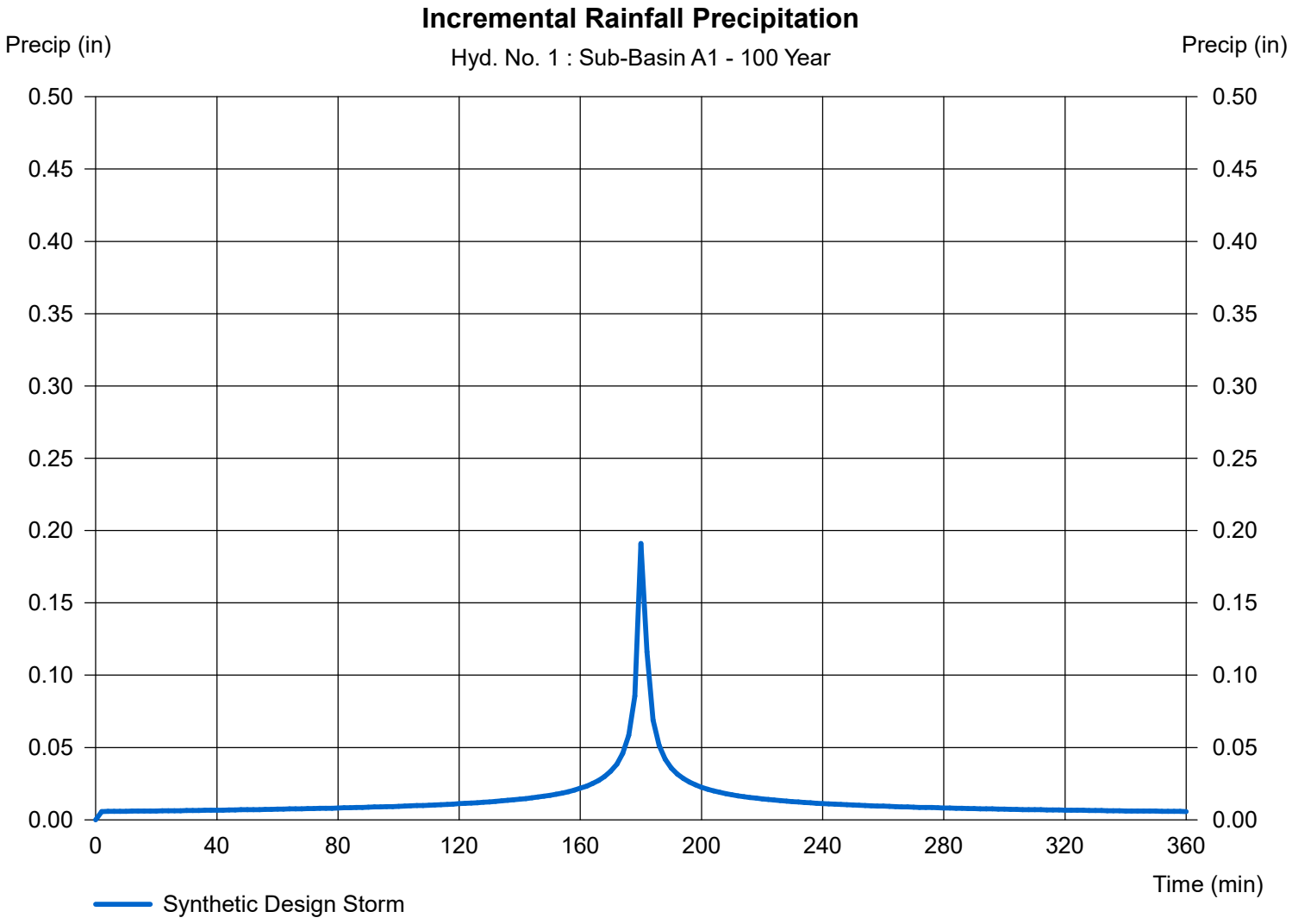
# Precipitation Report



## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 2.5328 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



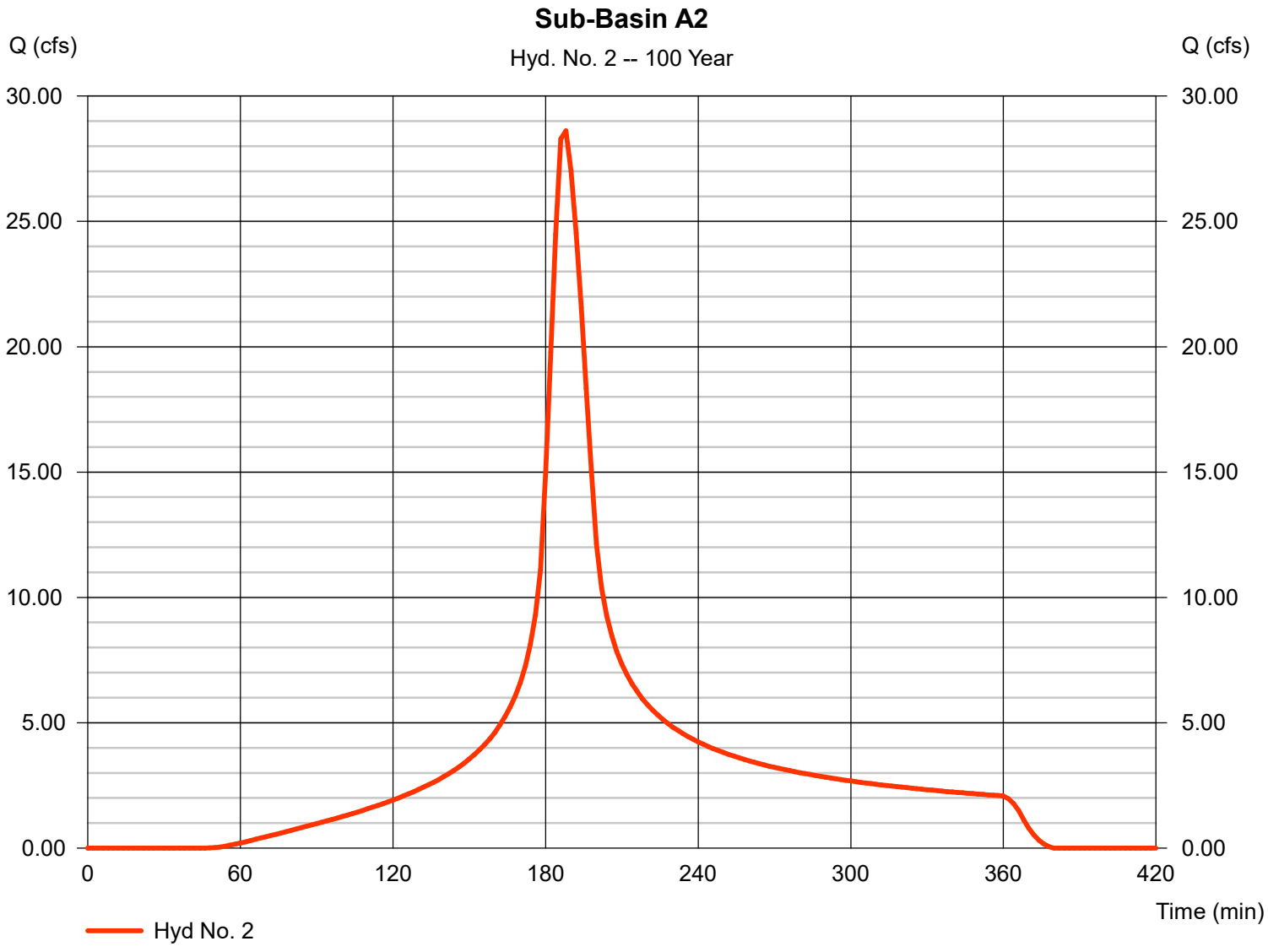
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 28.61 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 82,909 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



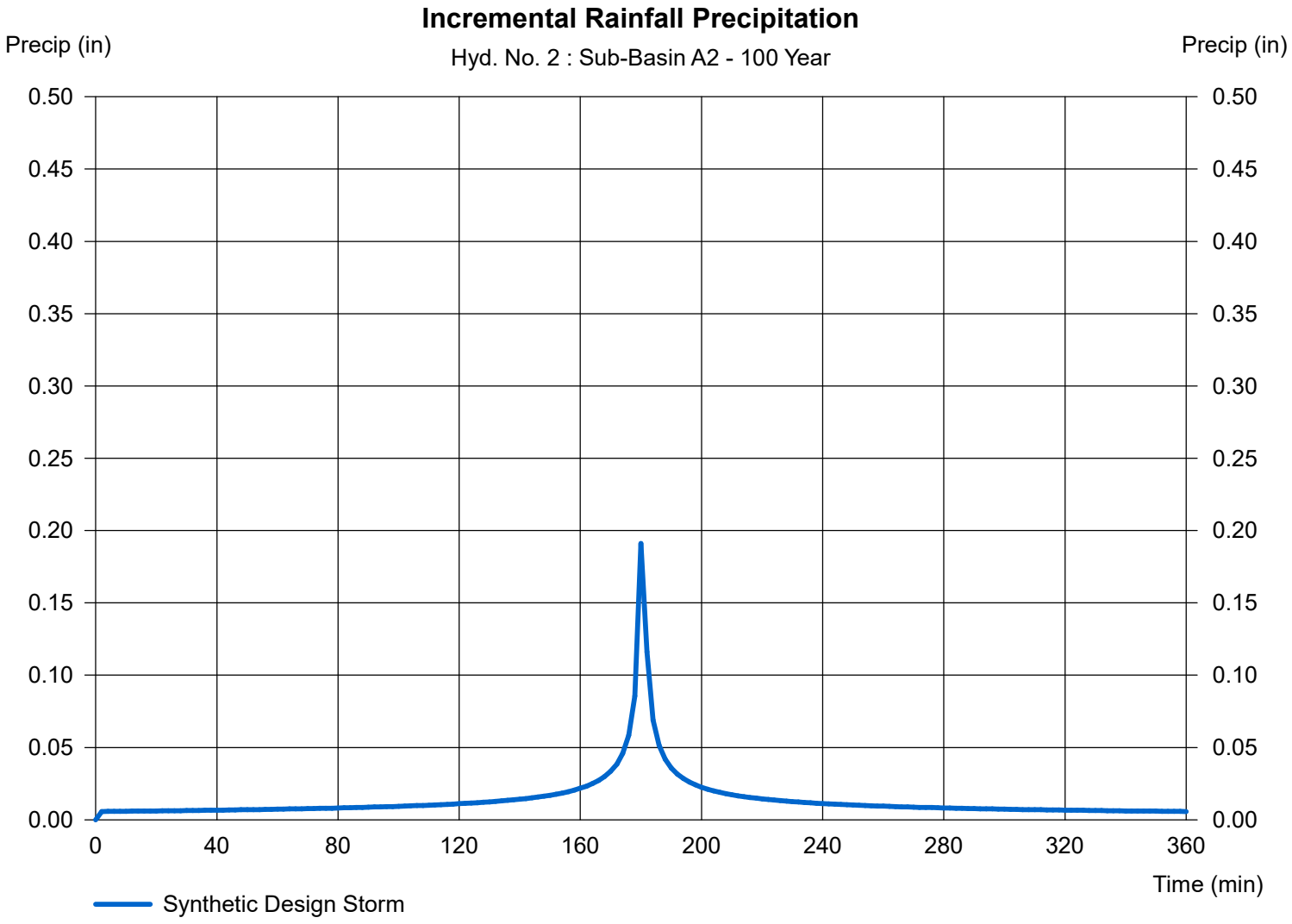
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 2.5328 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



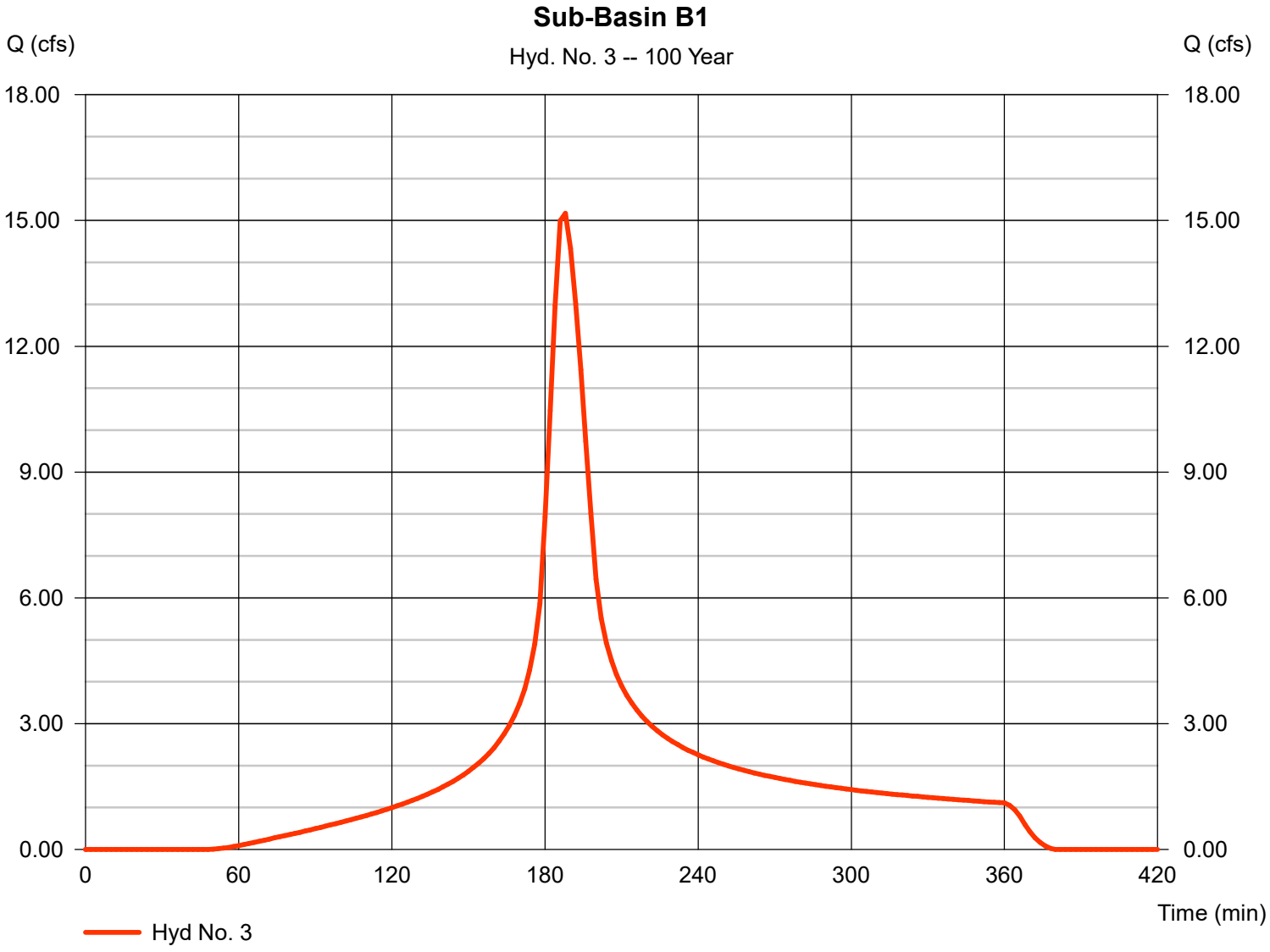
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 15.17 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 43,886 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



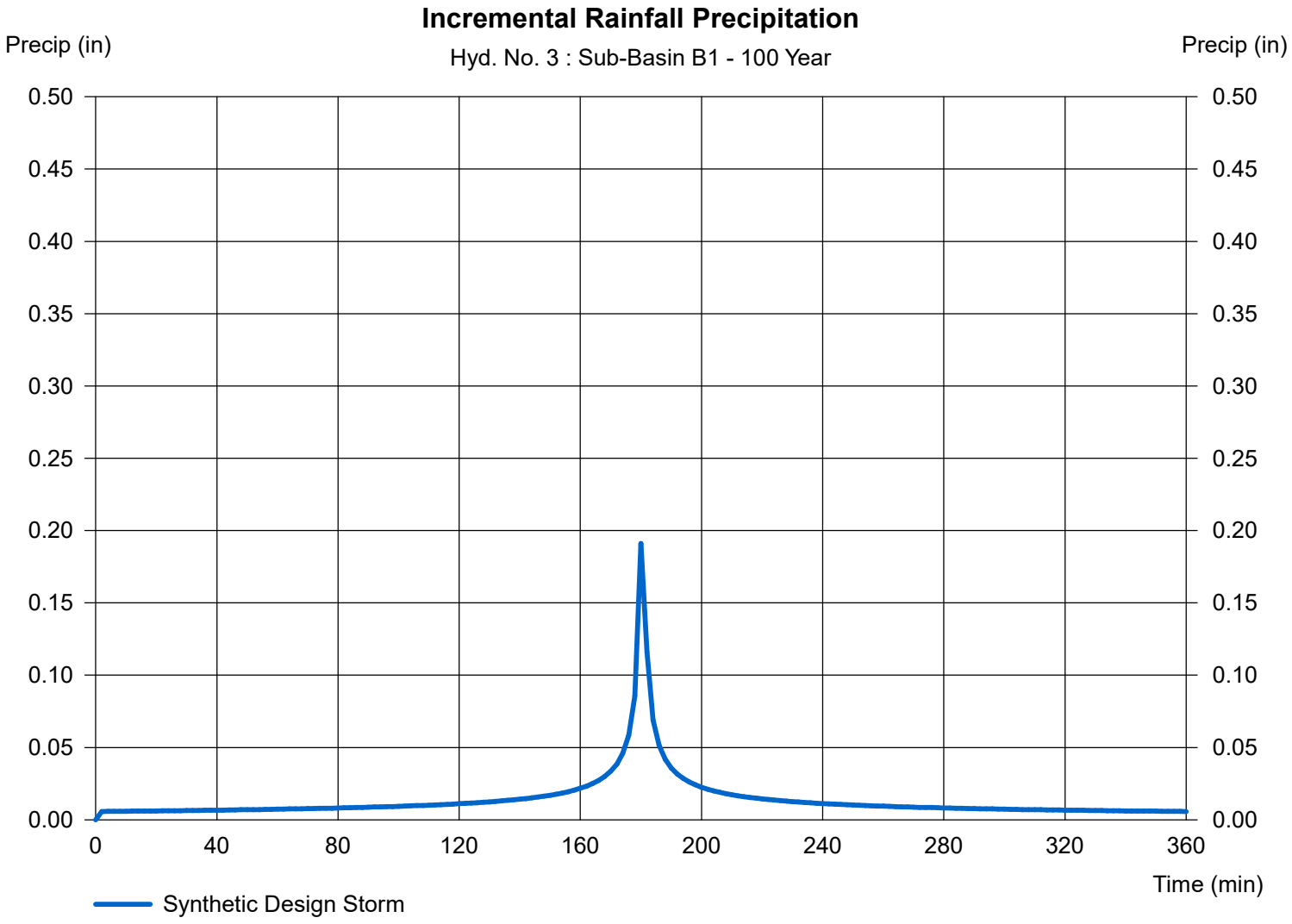
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 2.5328 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



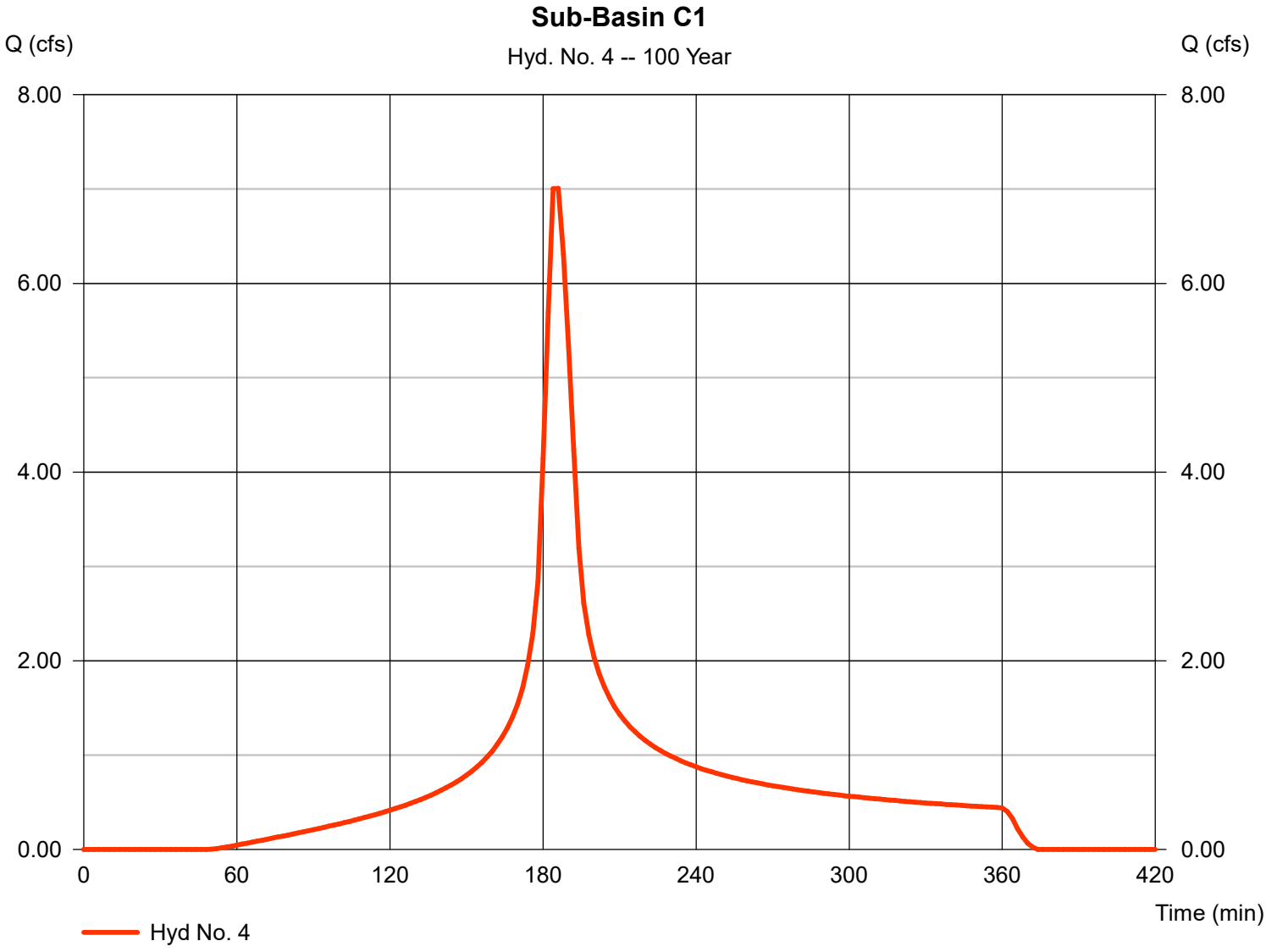
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 7.007 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 186 min |
| Time interval | = | 2 min | Hyd. volume | = | 17,550 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 93.4 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 2.53 in | Distribution | = | Synthetic |
| Storm duration | = | 6.00 hrs | Shape factor | = | 484 |



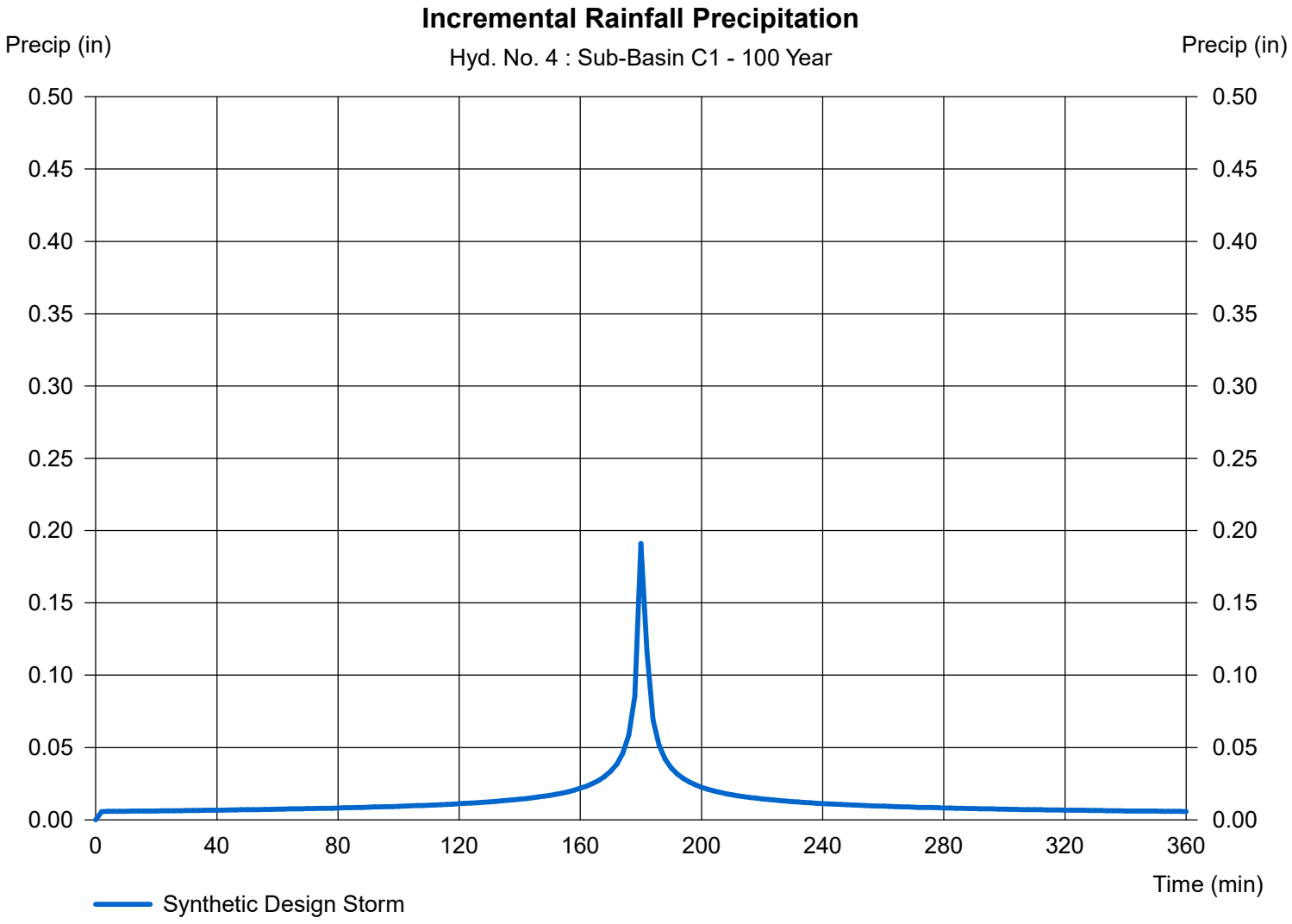
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 2.5328 in | Distribution | = Synthetic |
| Storm duration | = 6.00 hrs | | |



# Hydrograph Report

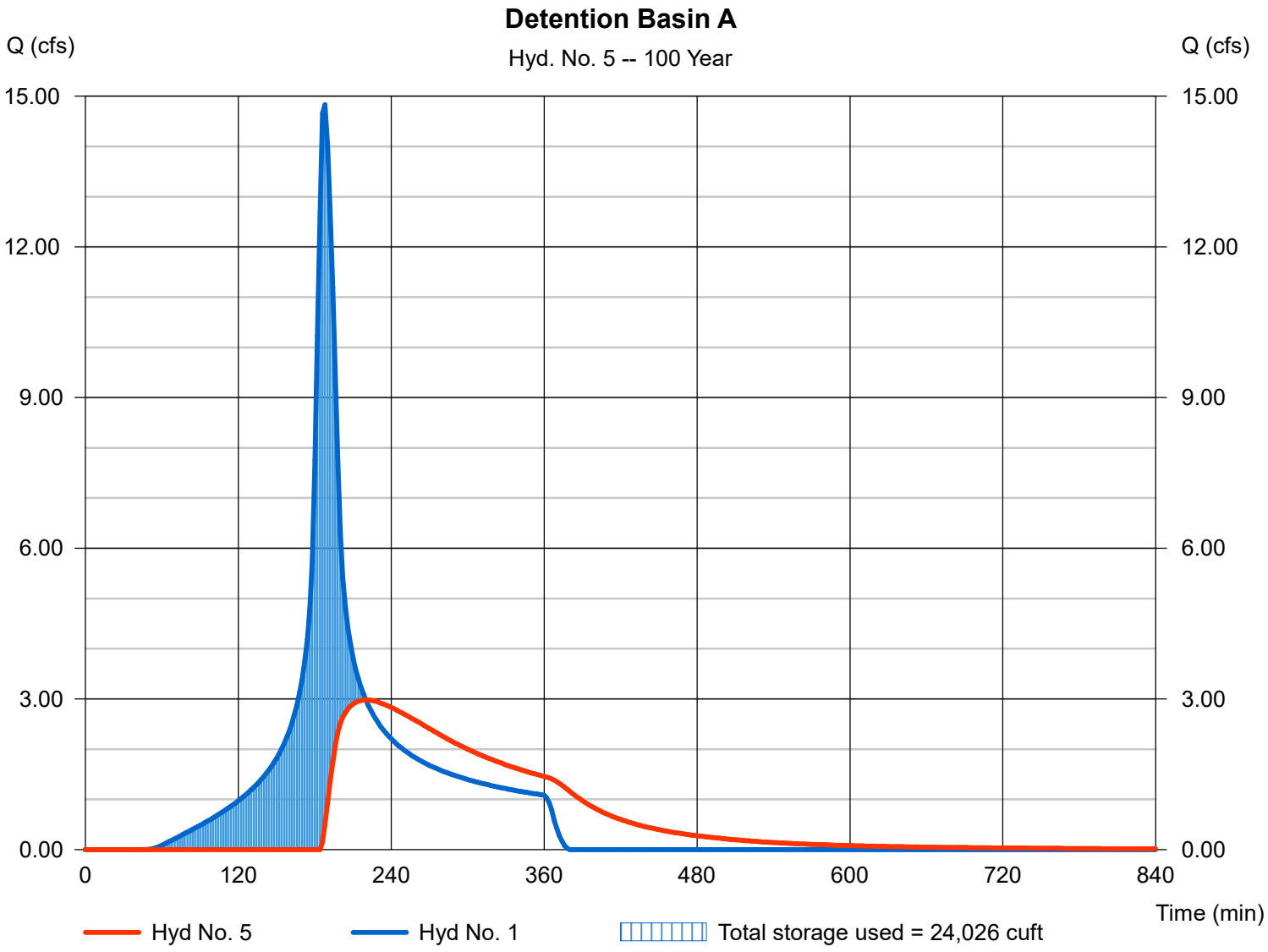
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.980 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 220 min |
| Time interval | = | 2 min | Hyd. volume | = | 30,006 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4048.13 ft |
| Reservoir name | = | Detention Basint A | Max. Storage | = | 24,026 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basint A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

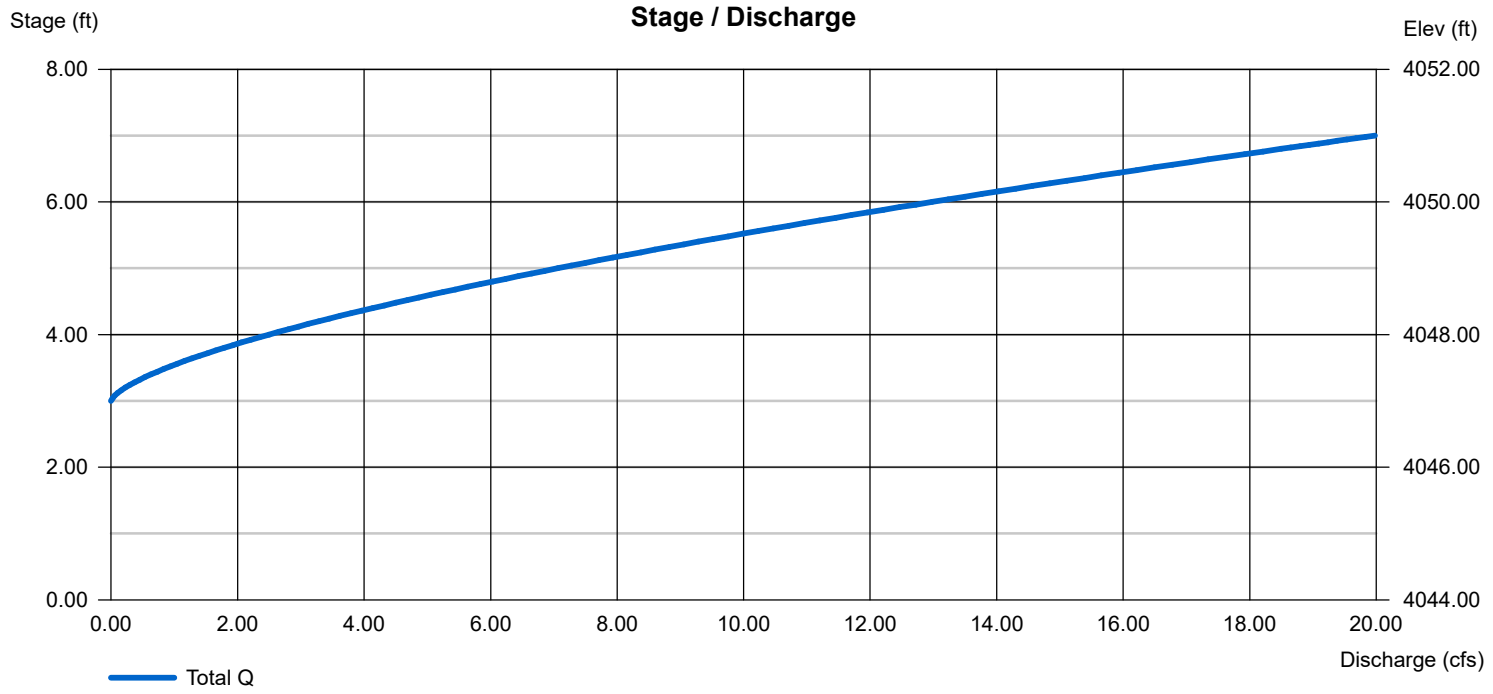
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



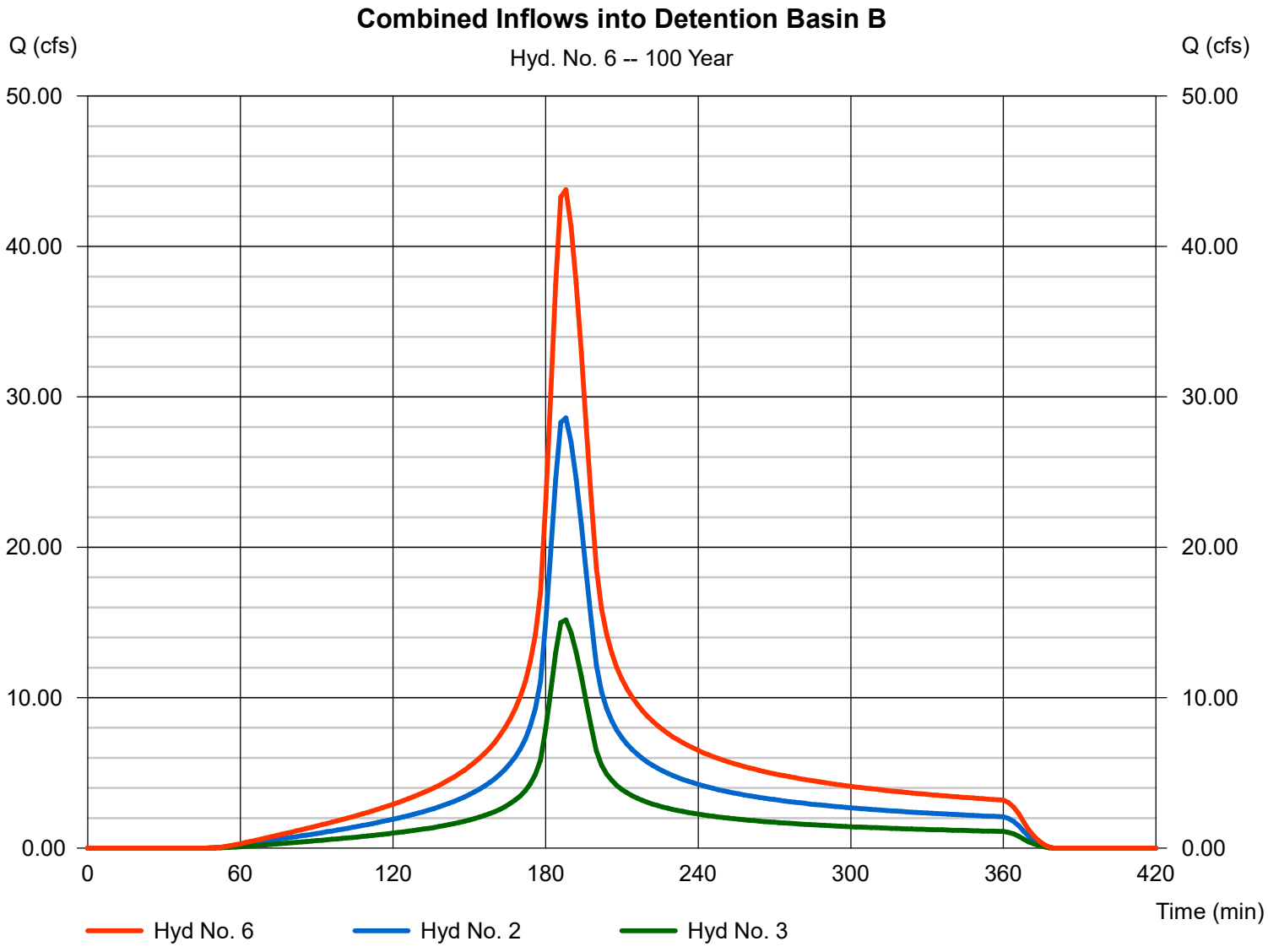
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 43.78 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 188 min |
| Time interval | = | 2 min | Hyd. volume | = | 126,795 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

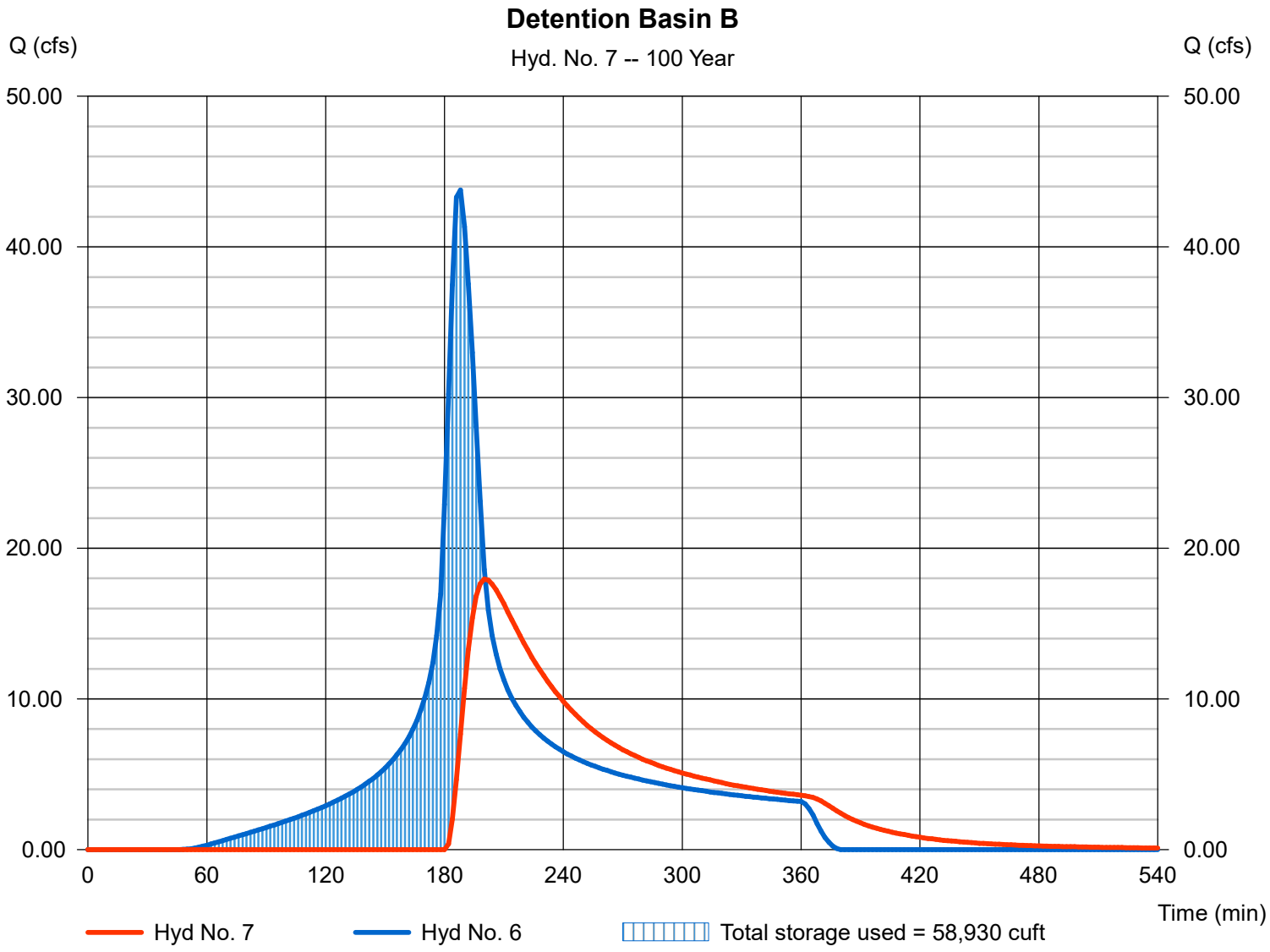
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 17.96 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 200 min |
| Time interval | = | 2 min | Hyd. volume | = | 95,379 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4031.48 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 58,930 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

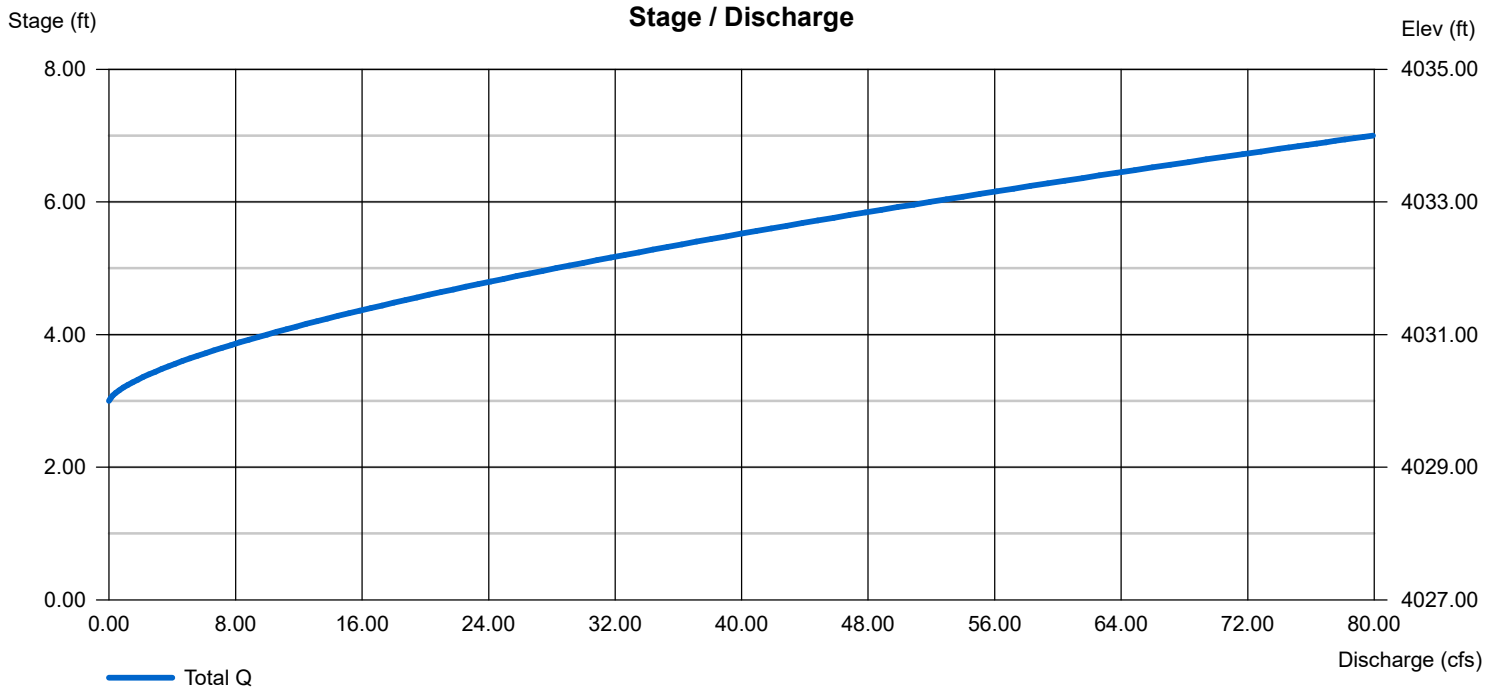
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

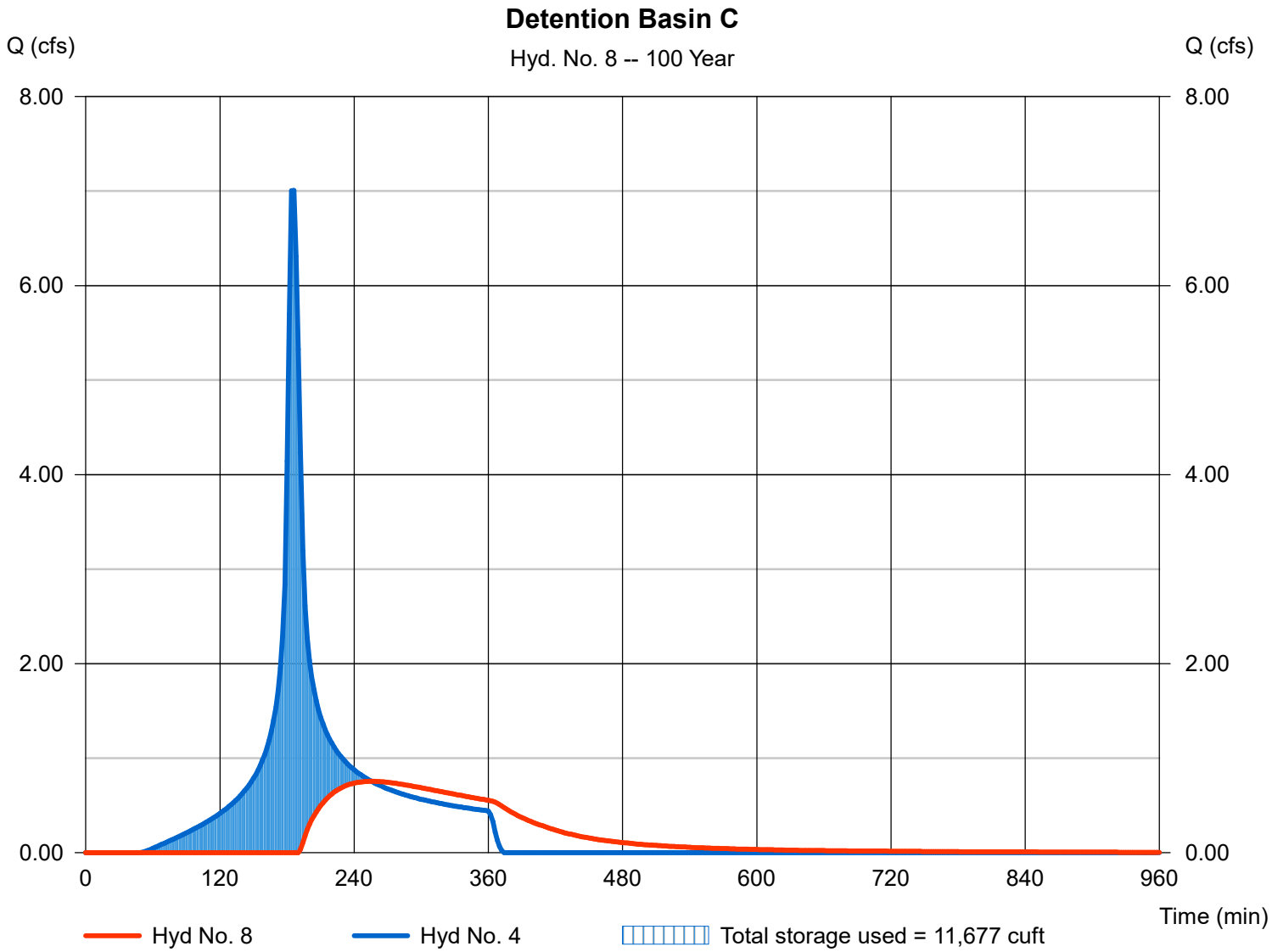
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basin C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 0.754 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 256 min |
| Time interval | = | 2 min | Hyd. volume | = | 9,201 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4059.09 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 11,677 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

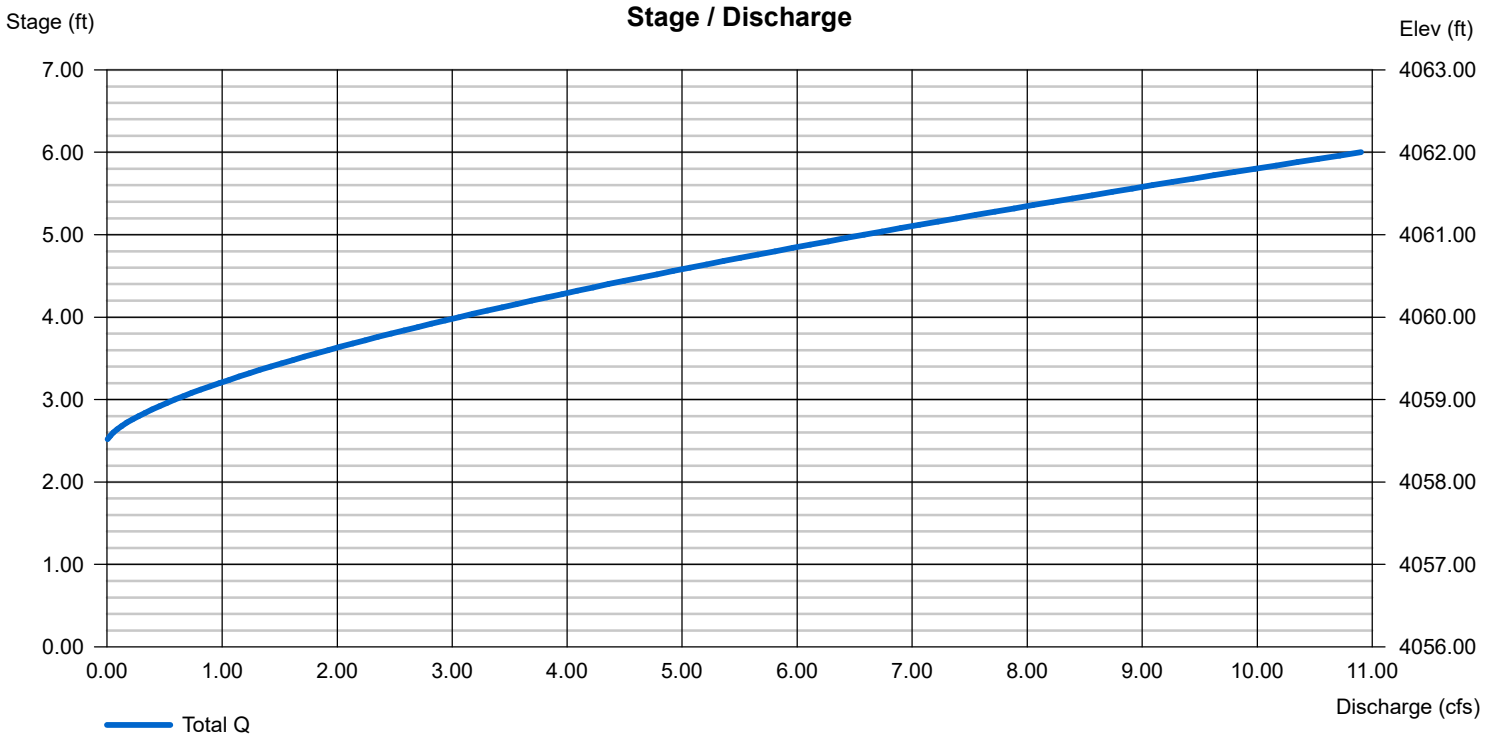
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



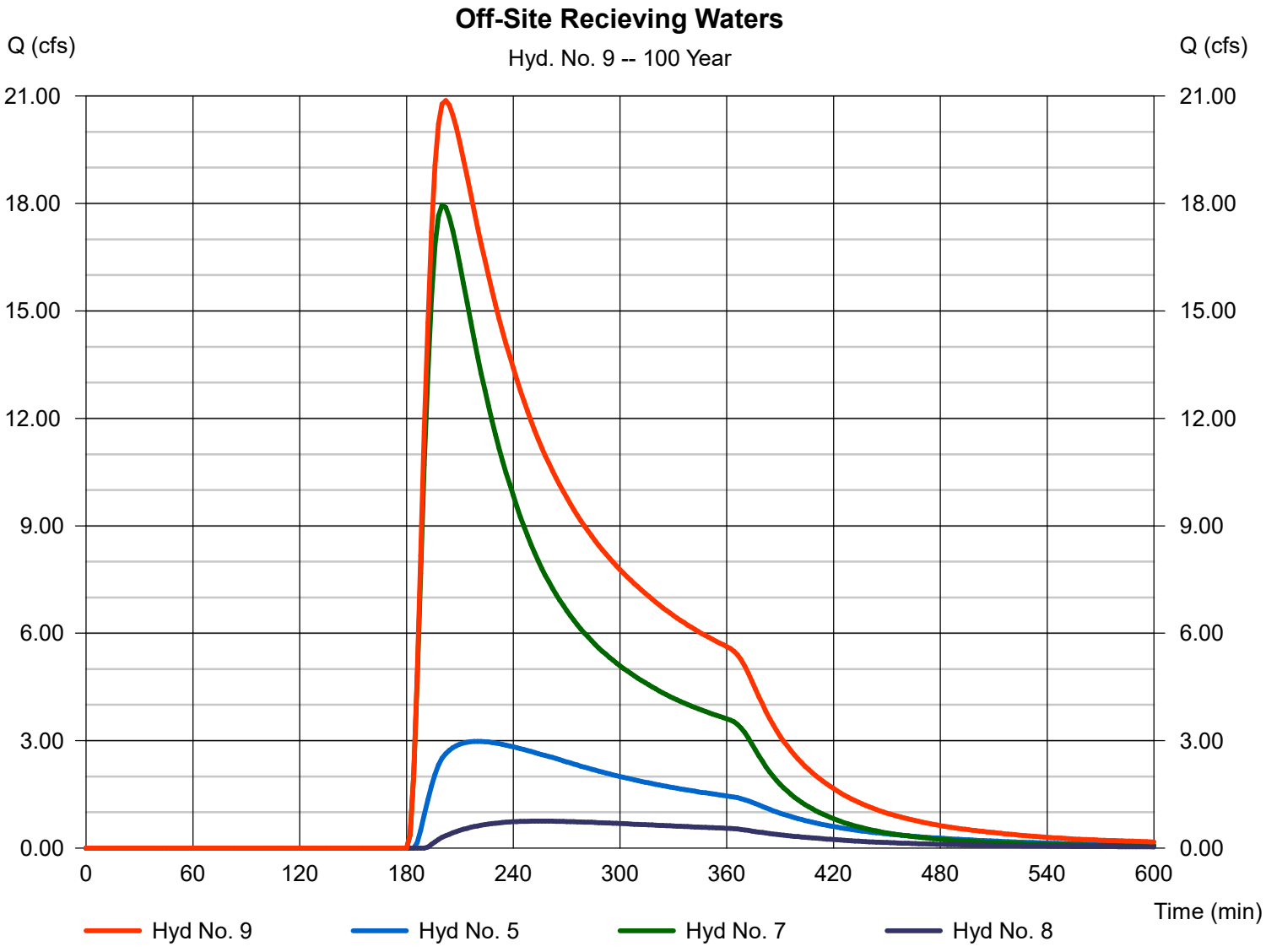
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 20.87 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 202 min |
| Time interval | = 2 min | Hyd. volume | = 134,586 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

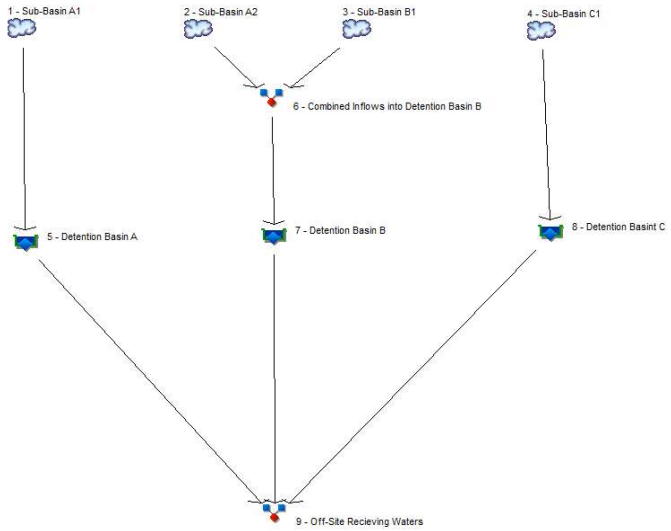
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_6 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Sub-Basin A1 |
| 2 | SCS Runoff | Sub-Basin A2 |
| 3 | SCS Runoff | Sub-Basin B1 |
| 4 | SCS Runoff | Sub-Basin C1 |
| 5 | Reservoir | Detention Basin A |
| 6 | Combine | Combined Inflows into Detention Basin B |
| 7 | Reservoir | Detention Basin B |
| 8 | Reservoir | Detention Basint C |
| 9 | Combine | Off-Site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 16.35 | Sub-Basin A1 |
| 2 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 31.40 | Sub-Basin A2 |
| 3 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 16.72 | Sub-Basin B1 |
| 4 | SCS Runoff | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 7.787 | Sub-Basin C1 |
| 5 | Reservoir | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 5.975 | Detention Basin A |
| 6 | Combine | 2, 3, | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 48.13 | Combined Inflows into Detention Basi |
| 7 | Reservoir | 6 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 27.55 | Detention Basin B |
| 8 | Reservoir | 4 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 2.069 | Detention Basint C |
| 9 | Combine | 5, 7, 8 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 35.49 | Off-Site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 16.35 | 2 | 728 | 86,038 | ---- | ------ | ------ | Sub-Basin A1 |
| 2 | SCS Runoff | 31.40 | 2 | 728 | 165,624 | ---- | ------ | ------ | Sub-Basin A2 |
| 3 | SCS Runoff | 16.72 | 2 | 728 | 88,017 | ---- | ------ | ------ | Sub-Basin B1 |
| 4 | SCS Runoff | 7.787 | 2 | 724 | 35,269 | ---- | ------ | ------ | Sub-Basin C1 |
| 5 | Reservoir | 5.975 | 2 | 742 | 73,145 | 1 | 4048.79 | 32,616 | Detention Basin A |
| 6 | Combine | 48.13 | 2 | 728 | 253,641 | 2, 3, | ------ | ------ | Combined Inflows into Detention Basi |
| 7 | Reservoir | 27.55 | 2 | 736 | 222,225 | 6 | 4031.97 | 69,930 | Detention Basin B |
| 8 | Reservoir | 2.069 | 2 | 740 | 26,920 | 4 | 4059.66 | 16,003 | Detention Basint C |
| 9 | Combine | 35.49 | 2 | 738 | 322,289 | 5, 7, 8 | ------ | ------ | Off-Site Recieving Waters |

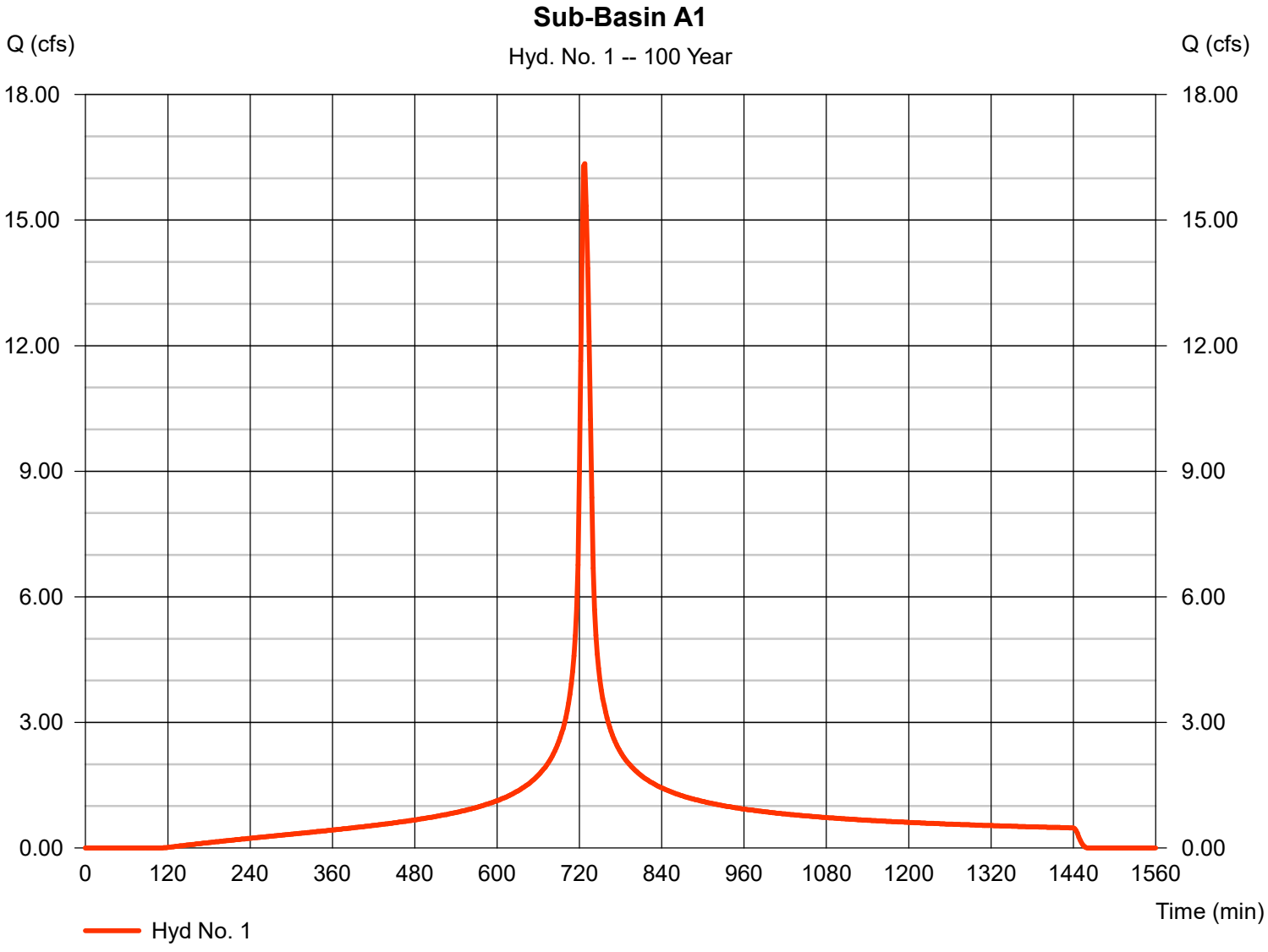
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 16.35 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 86,038 cuft |
| Drainage area | = | 6.178 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.80 min |
| Total precip. | = | 4.46 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



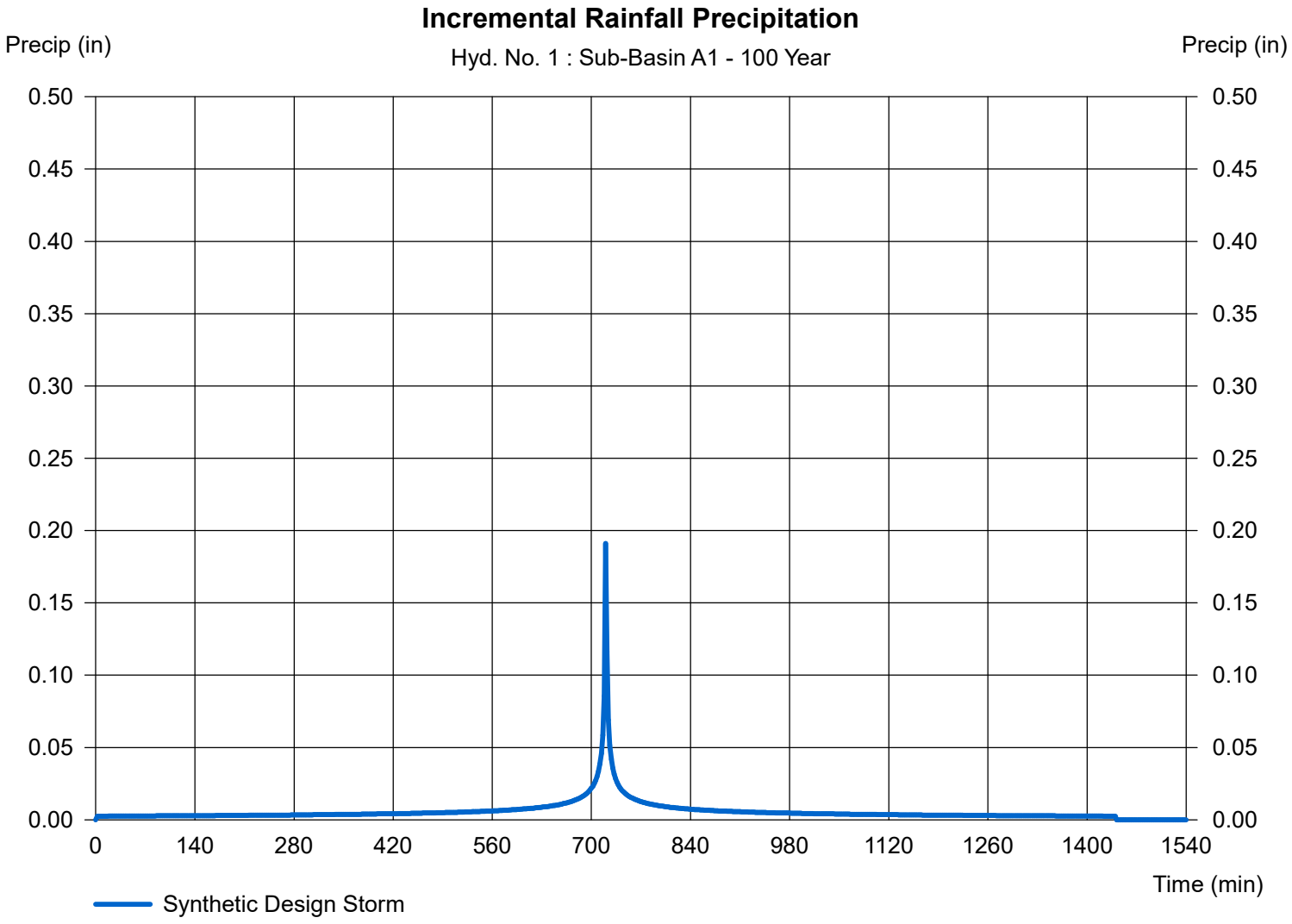
# Precipitation Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 1

Sub-Basin A1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 4.4582 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



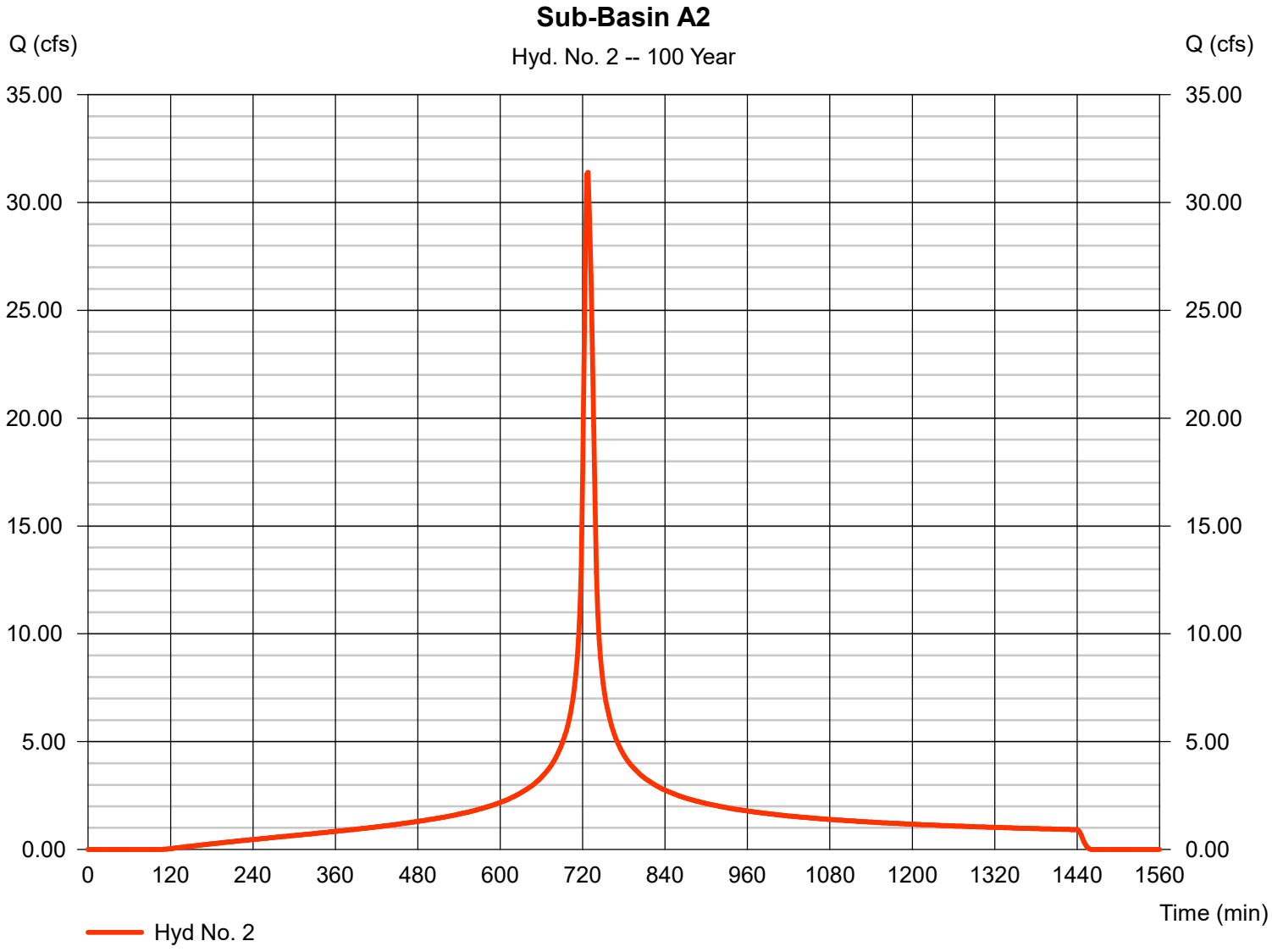
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 2

Sub-Basin A2

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 31.40 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 165,624 cuft |
| Drainage area | = | 11.824 ac | Curve number | = | 93.7 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.60 min |
| Total precip. | = | 4.46 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



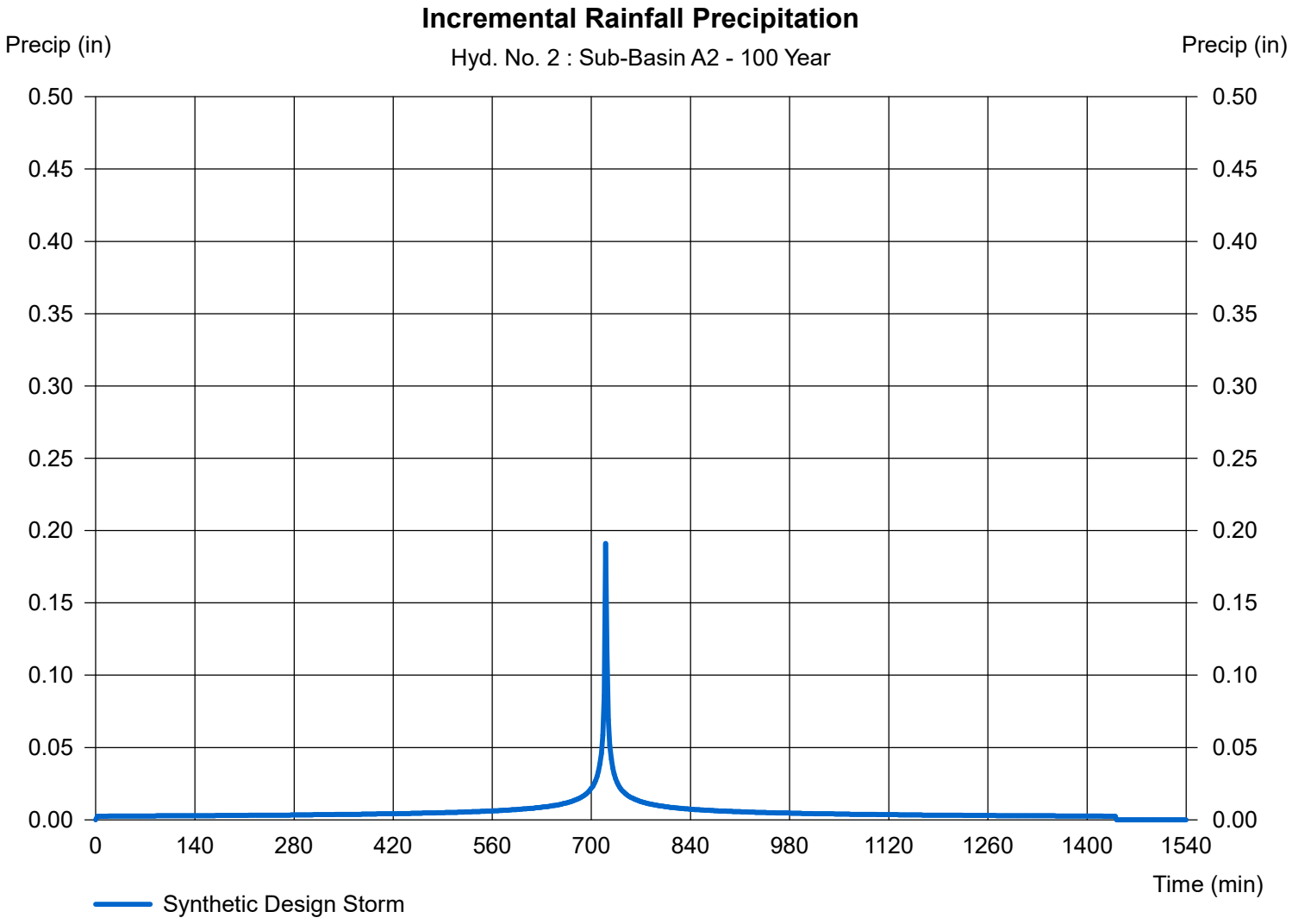
# Precipitation Report



## Hyd. No. 2

Sub-Basin A2

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 4.4582 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



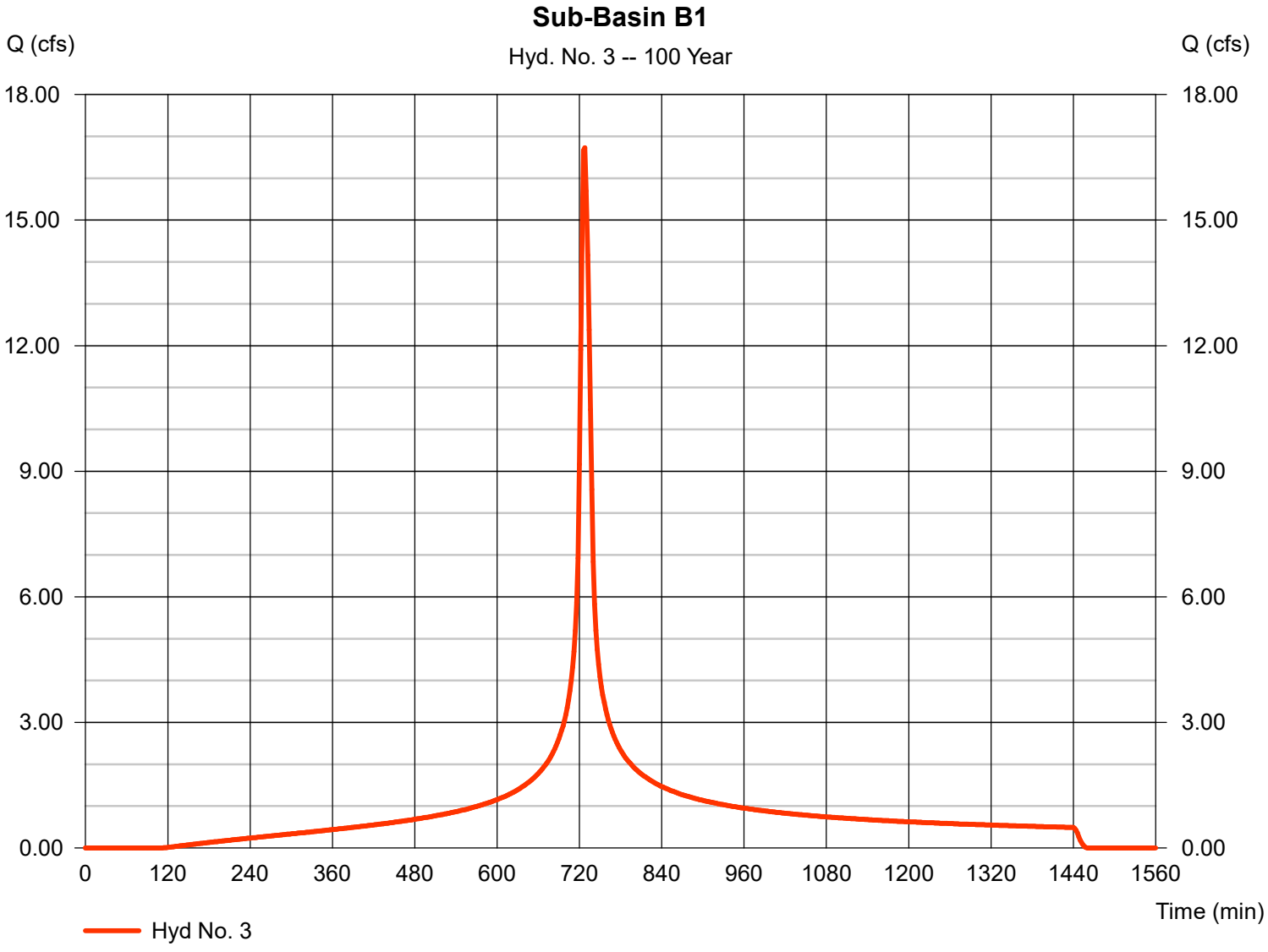
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 3

Sub-Basin B1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 16.72 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 88,017 cuft |
| Drainage area | = | 6.320 ac | Curve number | = | 93.5 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 11.20 min |
| Total precip. | = | 4.46 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



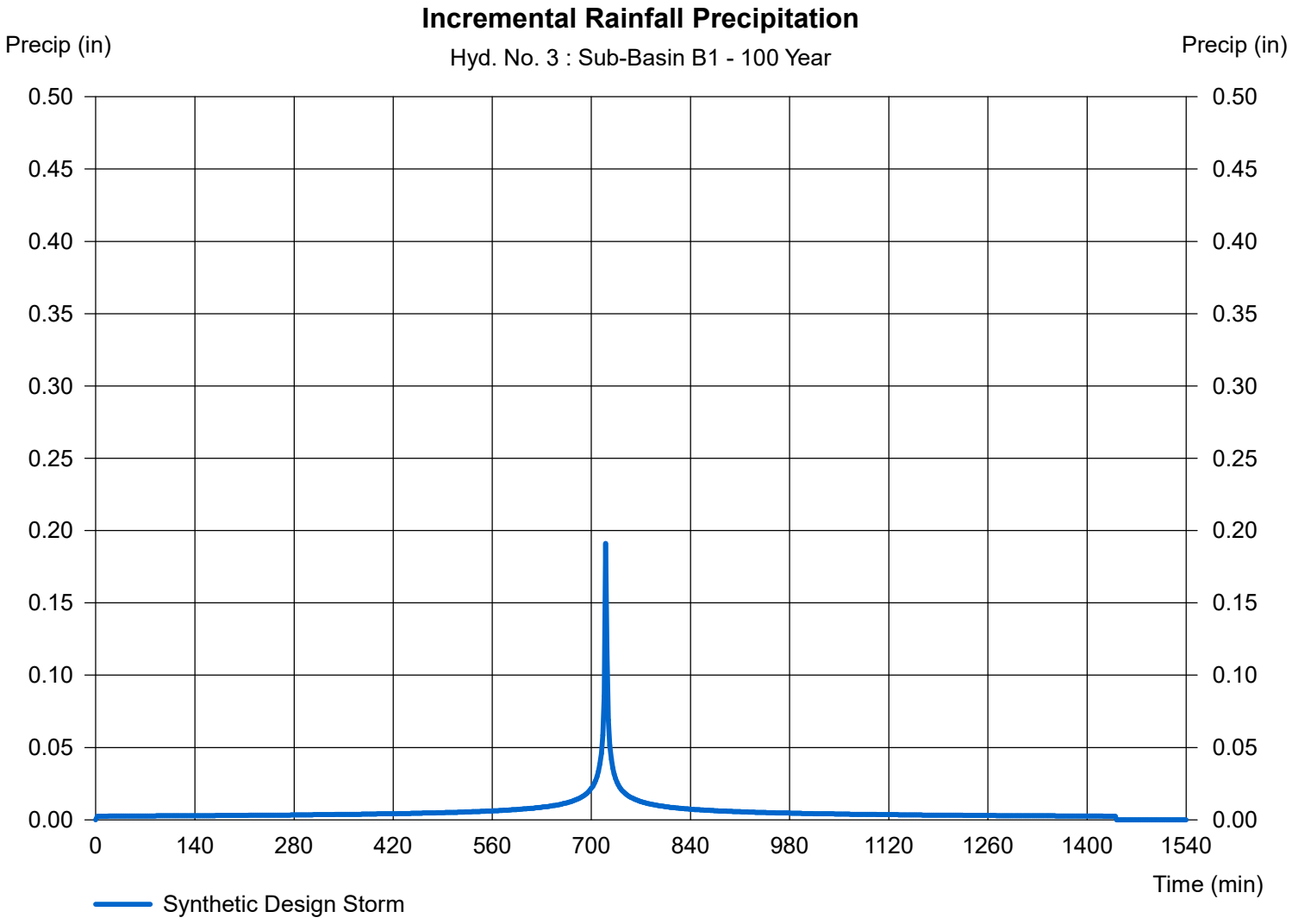
# Precipitation Report



## Hyd. No. 3

Sub-Basin B1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 4.4582 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



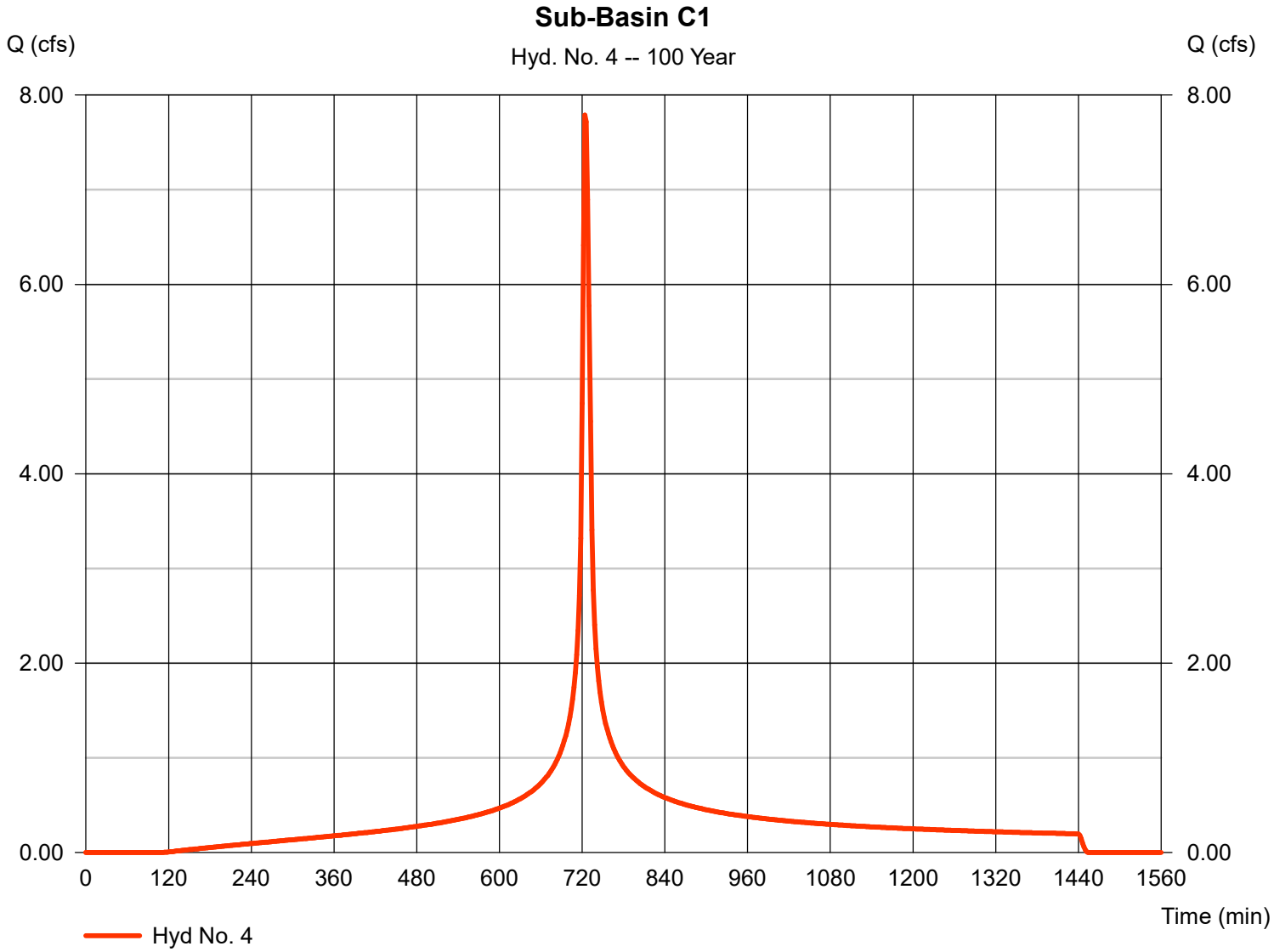
# Hydrograph Report



## Hyd. No. 4

Sub-Basin C1

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 7.787 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 724 min |
| Time interval | = | 2 min | Hyd. volume | = | 35,269 cuft |
| Drainage area | = | 2.619 ac | Curve number | = | 93.4 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 9.10 min |
| Total precip. | = | 4.46 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



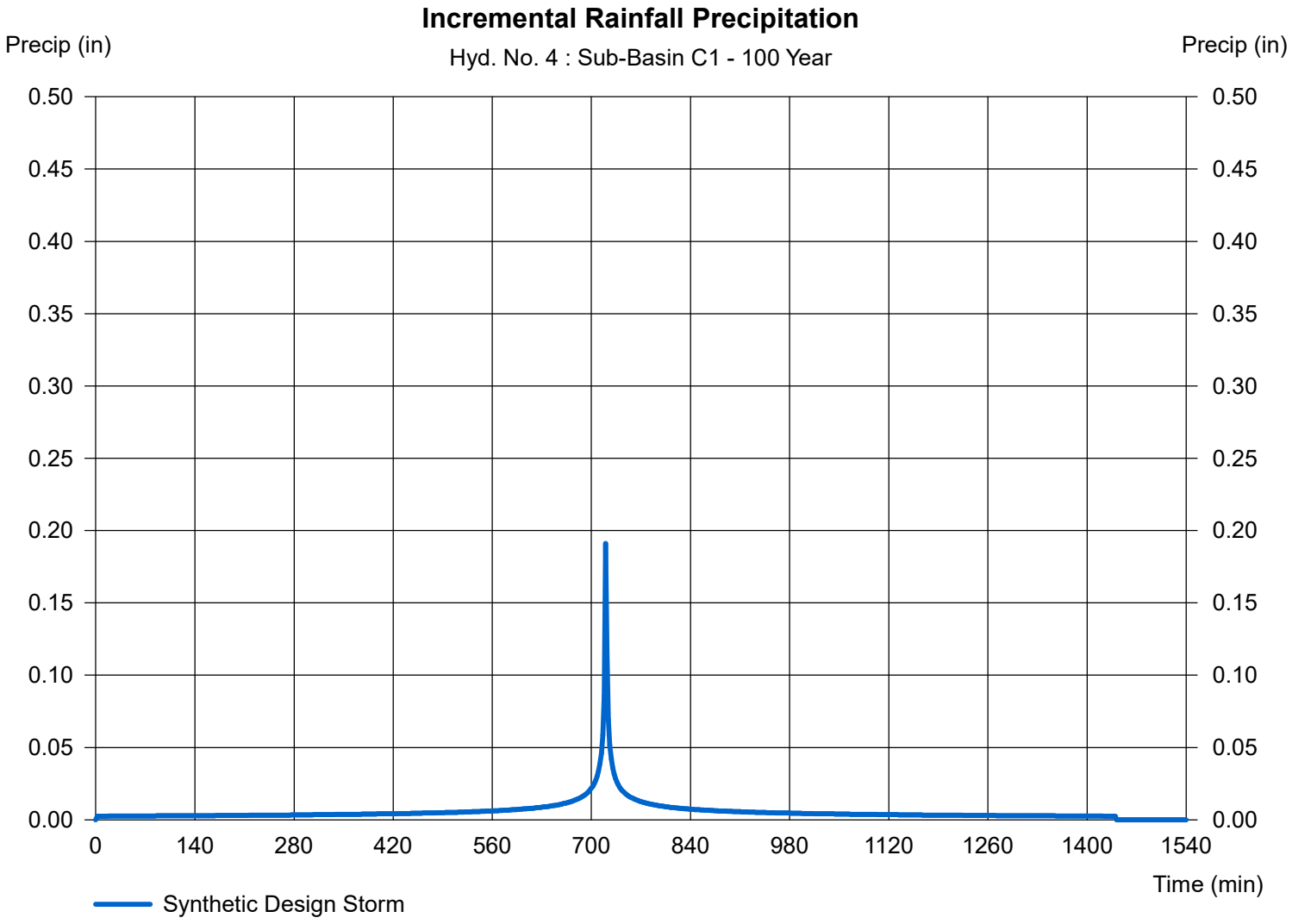
# Precipitation Report



## Hyd. No. 4

Sub-Basin C1

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 4.4582 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



# Hydrograph Report

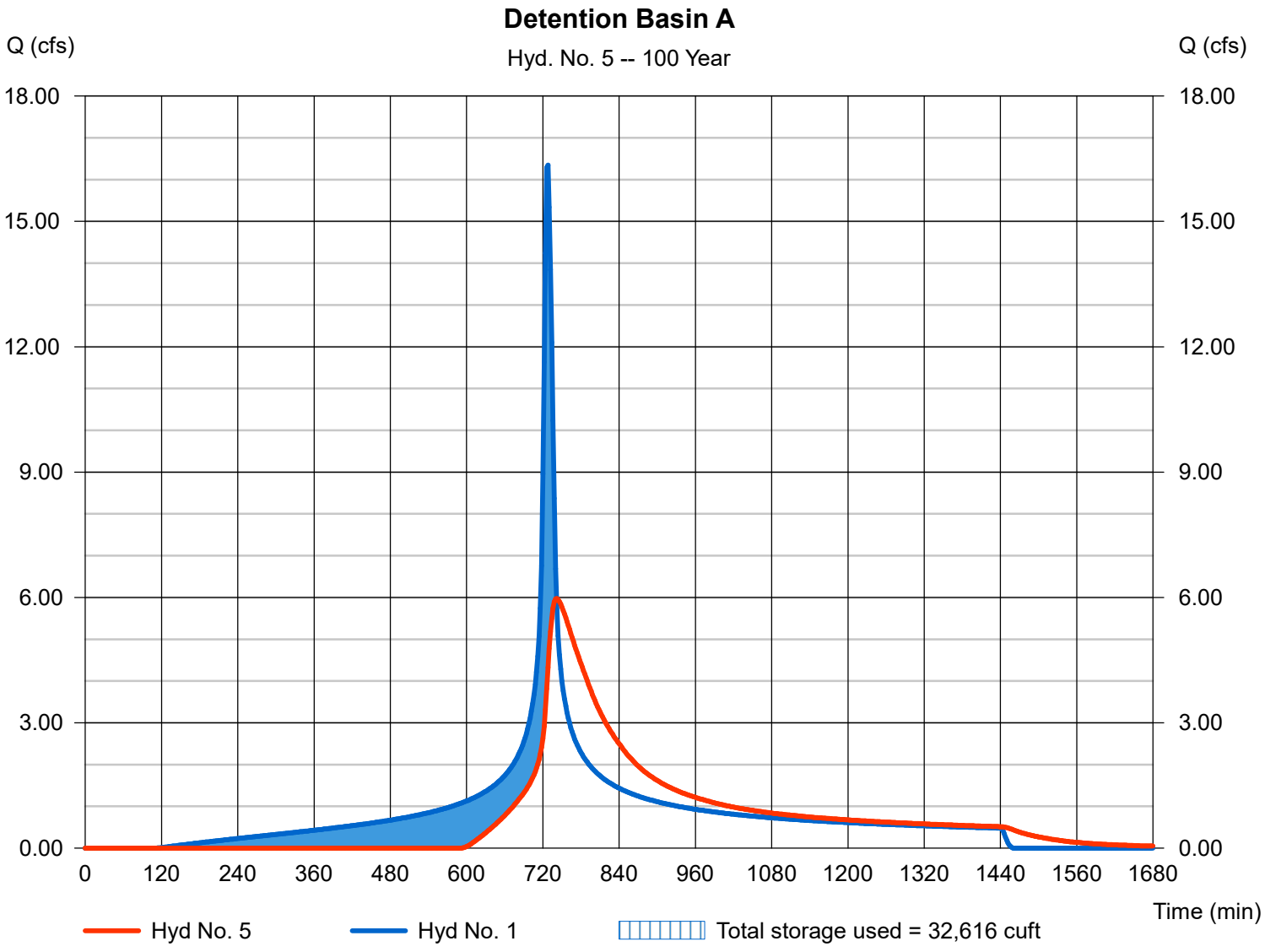
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 5

Detention Basin A

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 5.975 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 742 min |
| Time interval | = | 2 min | Hyd. volume | = | 73,145 cuft |
| Inflow hyd. No. | = | 1 - Sub-Basin A1 | Max. Elevation | = | 4048.79 ft |
| Reservoir name | = | Detention Basin A | Max. Storage | = | 32,616 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 1 - Detention Basin A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

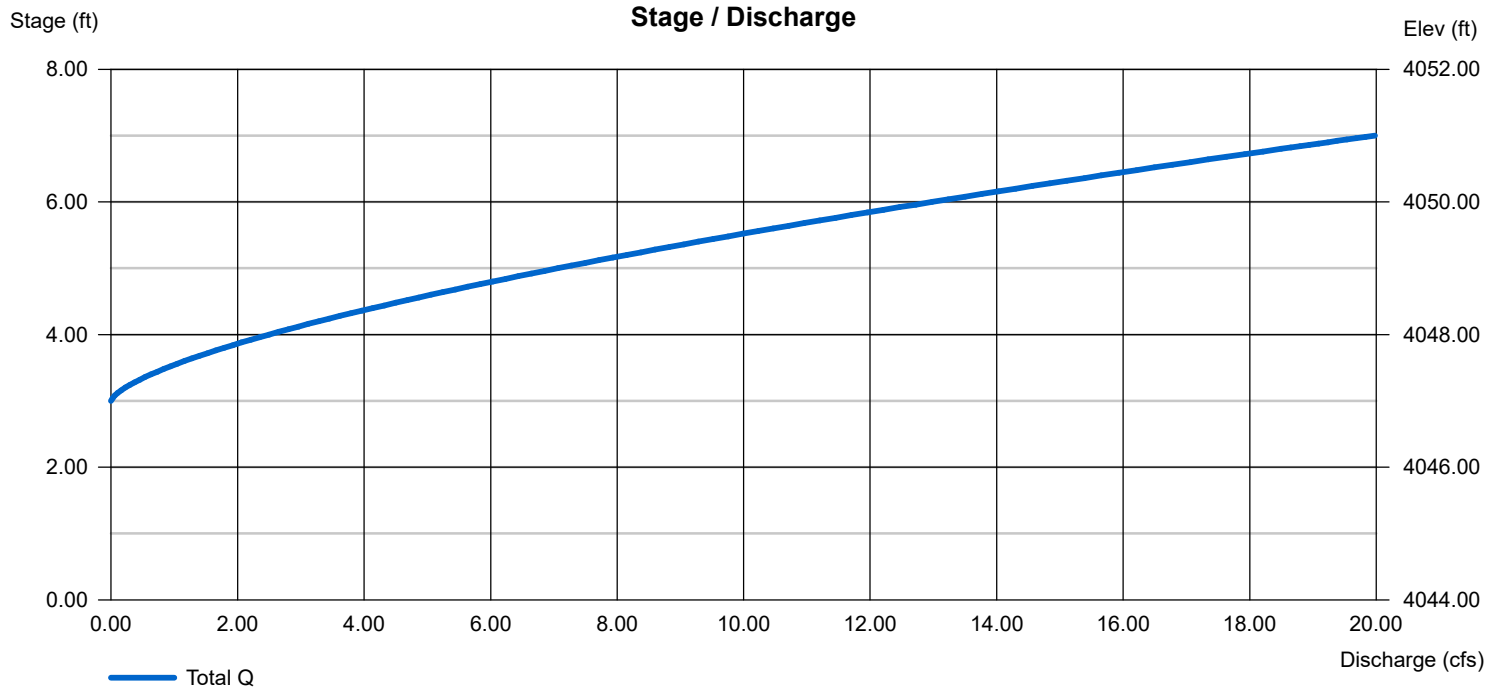
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



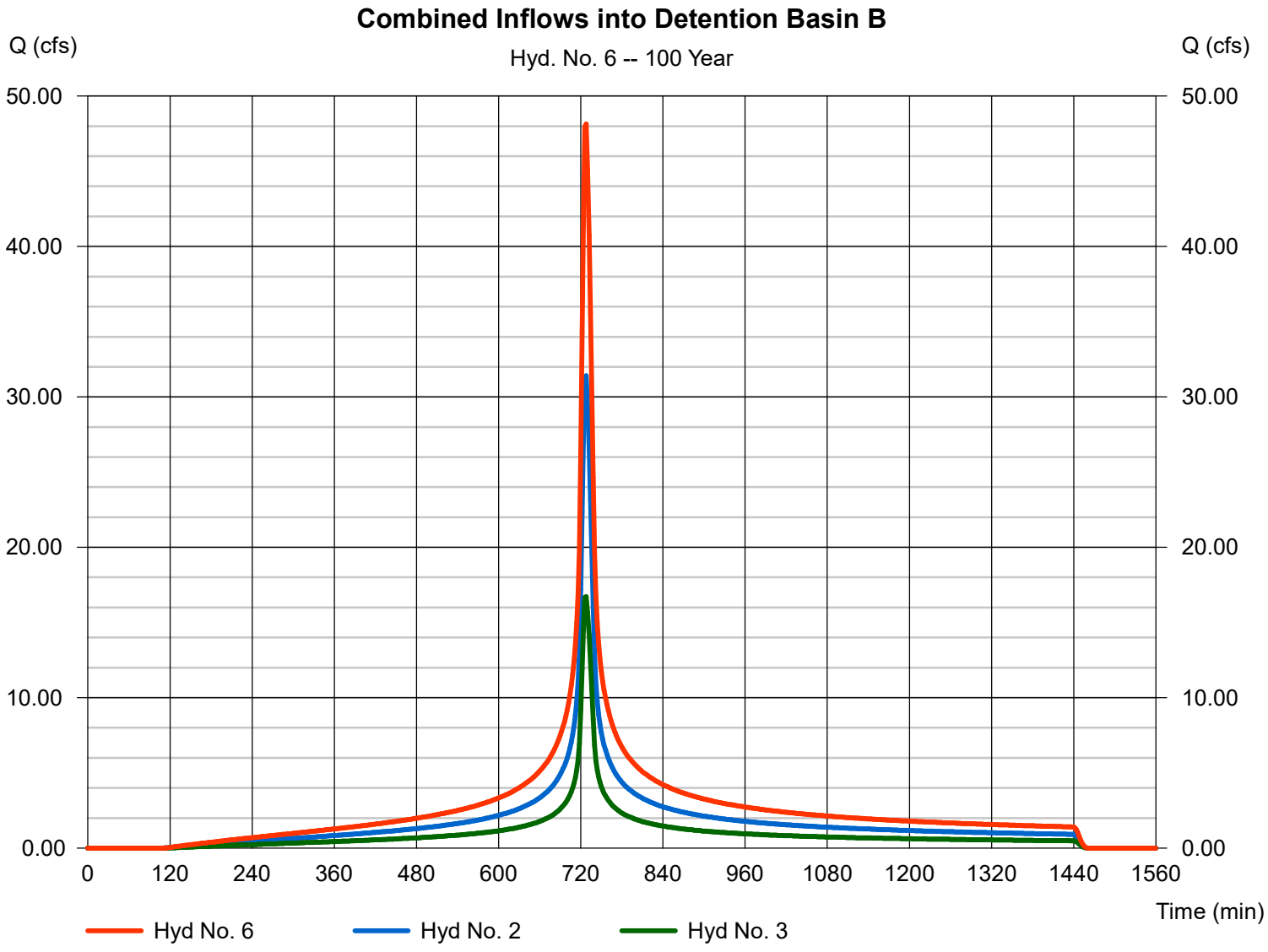
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 6

Combined Inflows into Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Combine | Peak discharge | = | 48.13 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 728 min |
| Time interval | = | 2 min | Hyd. volume | = | 253,641 cuft |
| Inflow hyds. | = | 2, 3 | Contrib. drain. area | = | 18.144 ac |



# Hydrograph Report

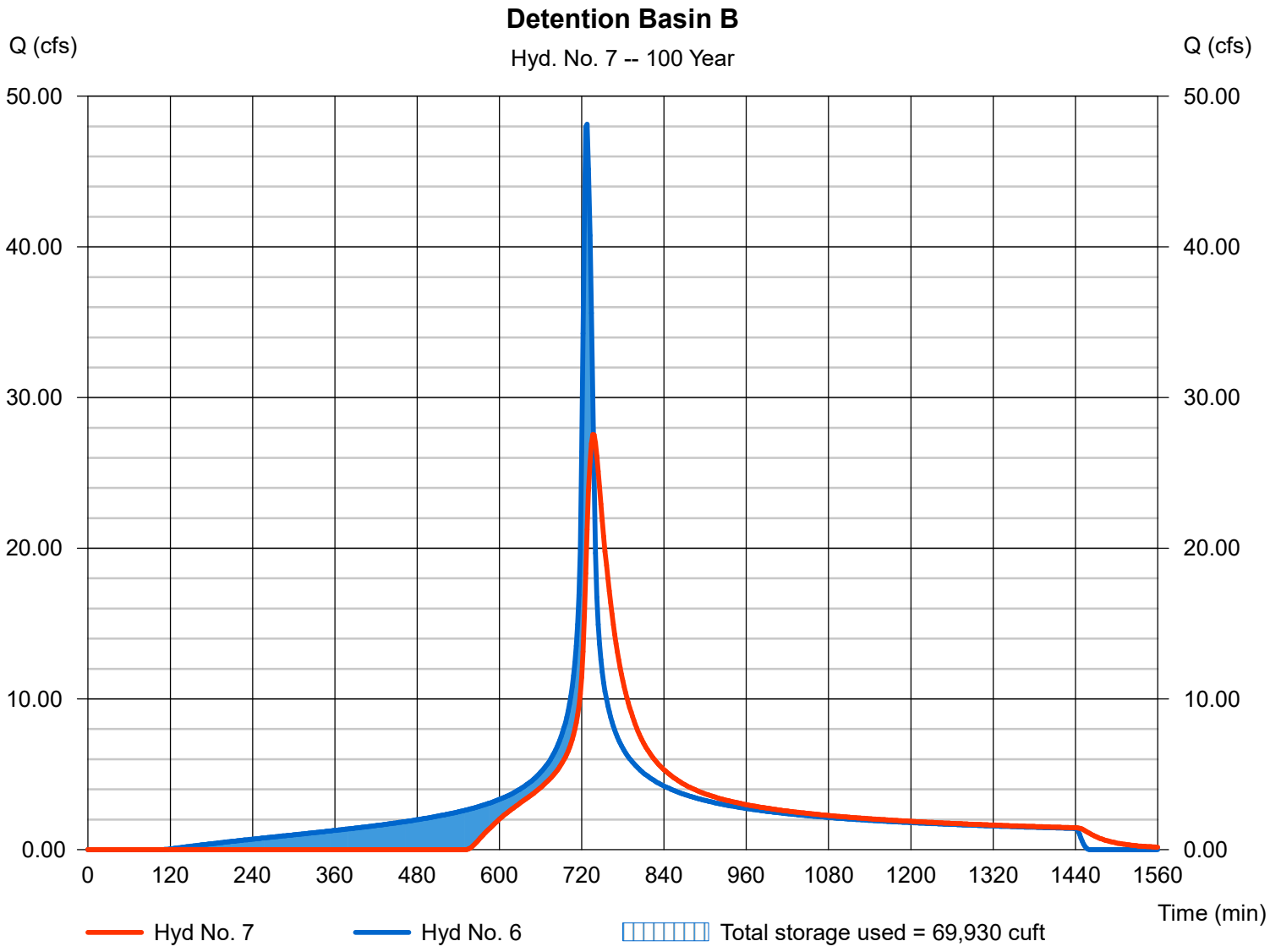
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 7

Detention Basin B

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 27.55 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 736 min |
| Time interval | = | 2 min | Hyd. volume | = | 222,225 cuft |
| Inflow hyd. No. | = | 6 - Combined Inflows into Detention Basin B | Max. Elevation | = | 4031.97 ft |
| Reservoir name | = | Detention Basin B | Max. Storage | = | 69,930 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 2 - Detention Basin B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

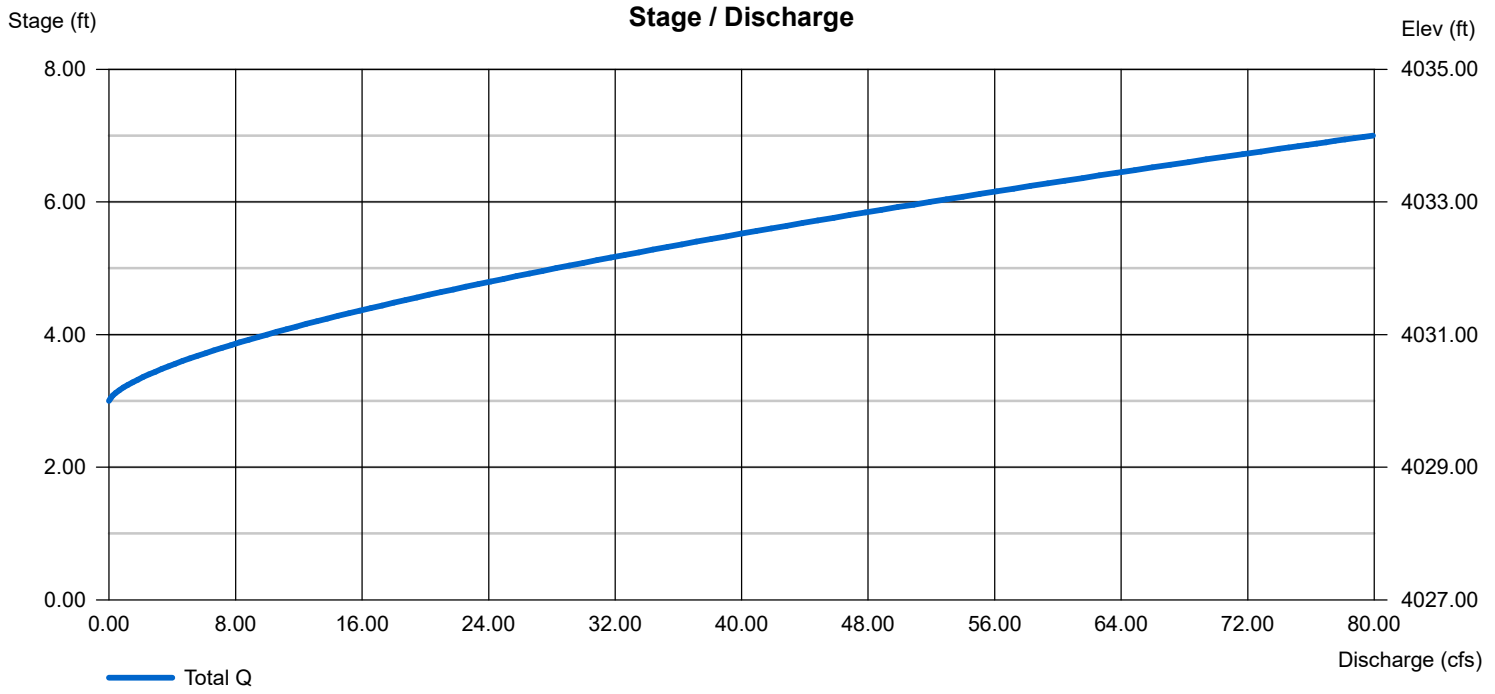
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



# Hydrograph Report

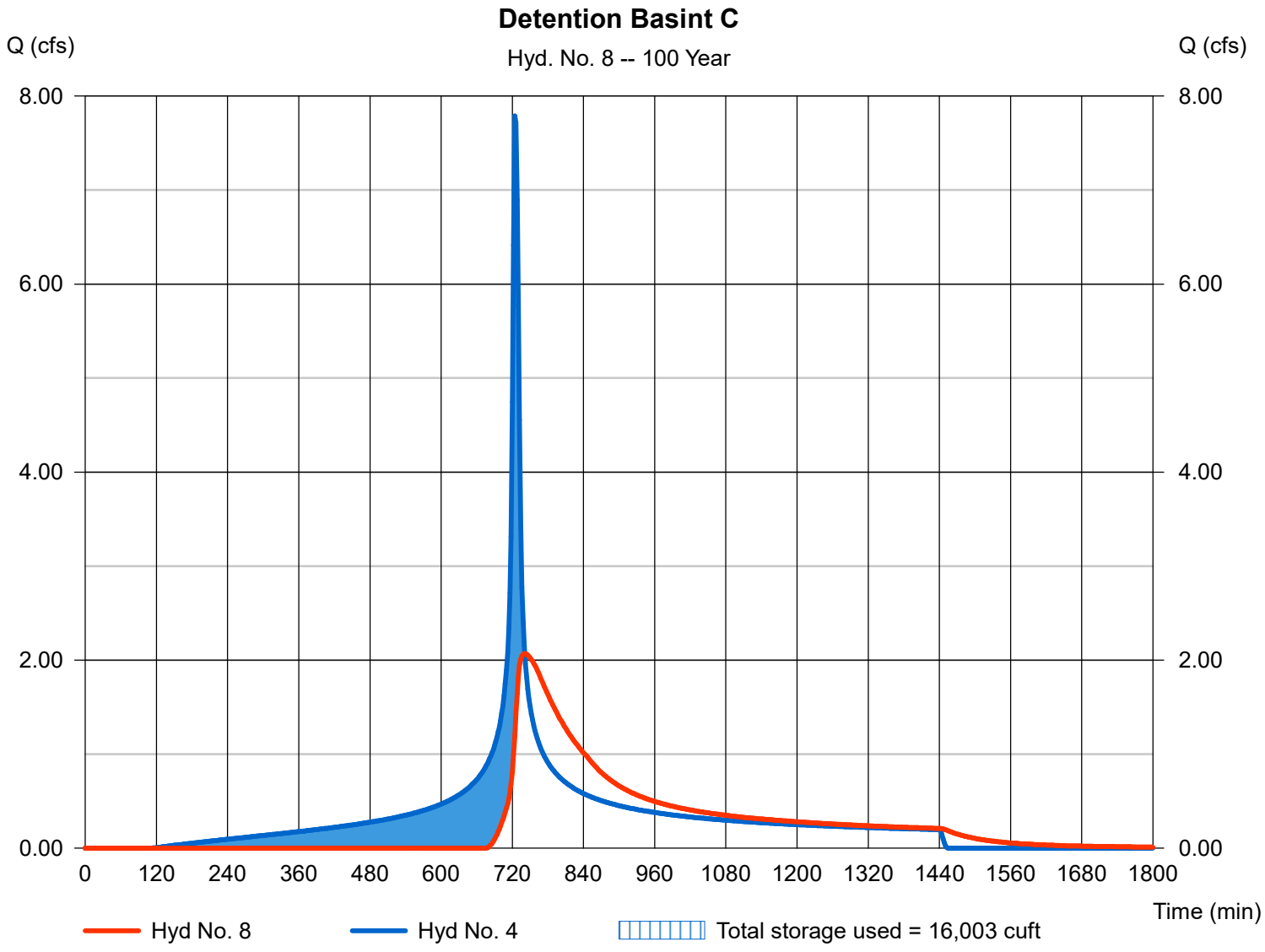
Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 8

Detention Basint C

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.069 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 740 min |
| Time interval | = | 2 min | Hyd. volume | = | 26,920 cuft |
| Inflow hyd. No. | = | 4 - Sub-Basin C1 | Max. Elevation | = | 4059.66 ft |
| Reservoir name | = | Detention Basin C | Max. Storage | = | 16,003 cuft |

Storage Indication method used.



# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Monday, Mar 3, 2025

## Pond No. 3 - Detention Basin C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

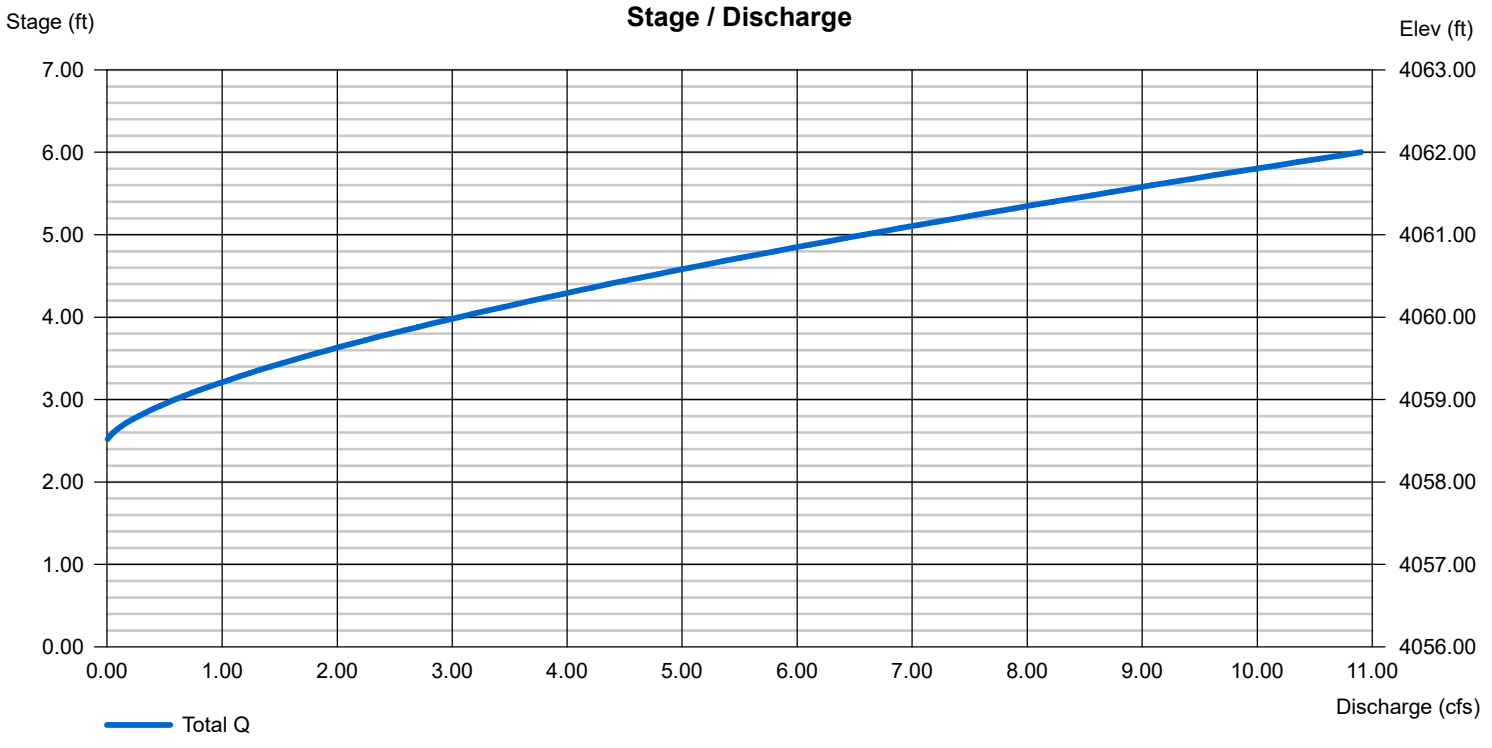
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



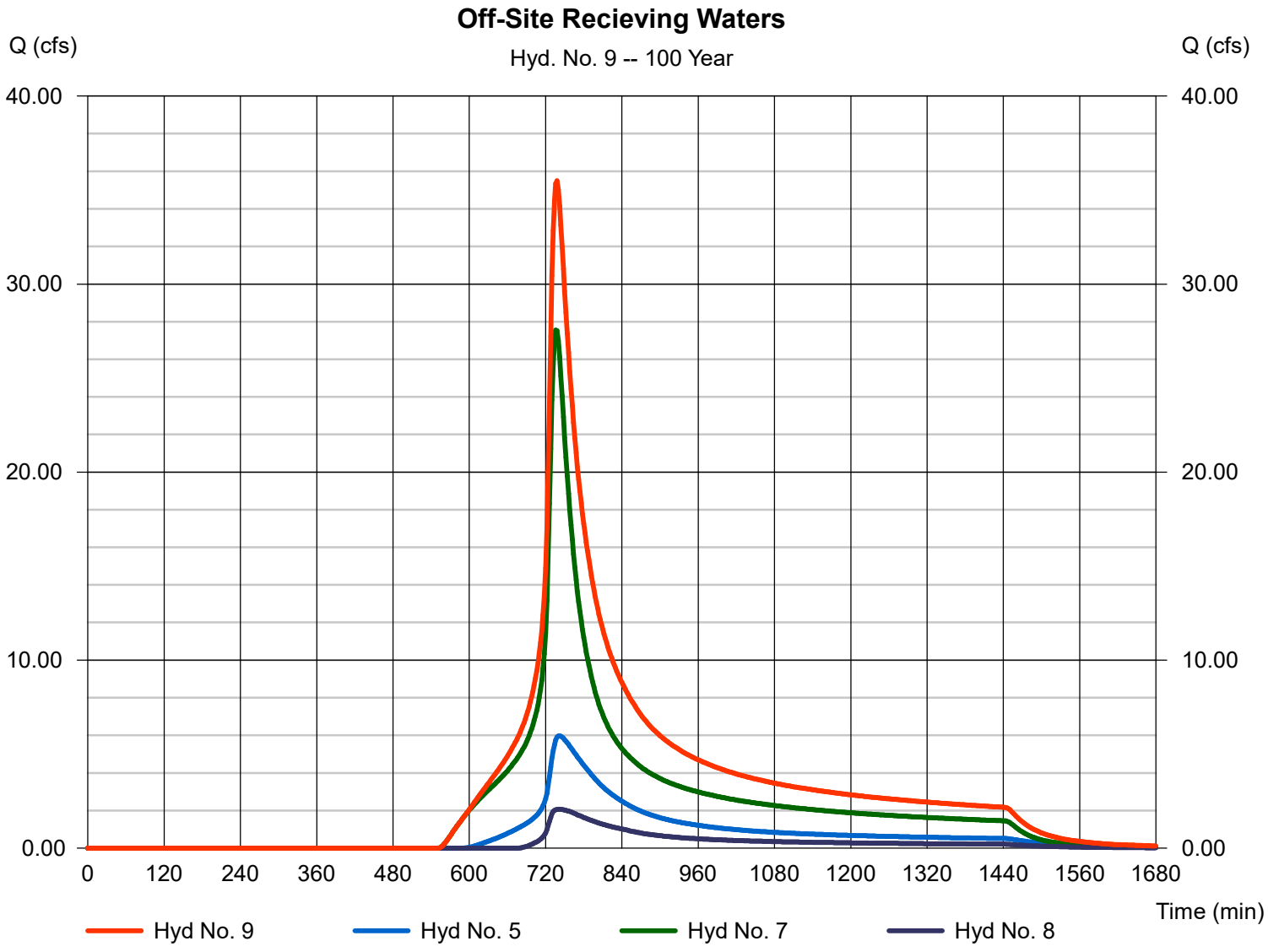
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

## Hyd. No. 9

Off-Site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 35.49 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 738 min |
| Time interval | = 2 min | Hyd. volume | = 322,289 cuft |
| Inflow hyds. | = 5, 7, 8 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Monday, Mar 3, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.7561 | 2.8000 | 0.6041 | -------- |
| 2 | 4.8964 | 2.6000 | 0.5978 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 6.6976 | 2.6000 | 0.5986 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 11.9878 | 2.4000 | 0.5938 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Post_Frequency Data.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.66 | 0.57 | 0.50 | 0.46 | 0.42 | 0.39 | 0.36 | 0.34 | 0.32 | 0.31 |
| 2 | 1.46 | 1.08 | 0.88 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.49 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 1.99 | 1.47 | 1.20 | 1.04 | 0.92 | 0.83 | 0.76 | 0.71 | 0.66 | 0.62 | 0.59 | 0.56 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 3.65 | 2.69 | 2.20 | 1.89 | 1.68 | 1.52 | 1.40 | 1.30 | 1.21 | 1.14 | 1.08 | 1.03 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Post_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.87 | 0.00 | 0.00 | 1.40 | 1.74 | 0.00 | 2.31 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |

## 5.5. Stage-Storage profile with Drawdown Analysis, Stage-Discharge profile & Basin Information Form

5.5.a. Detention Basin A
5.5.b. Detention Basin B
5.5.c. Detention Basin C

## 5.5.a. Detention Basin A

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

PROPOSED CATCHMENT "A"

**ENGINEER:** TECTONIC ENGINEERING

I. Enter the hydrograph unit interval duration (**minutes)** 2 min.

2. Enter total number of basin depth-versus-outflow values (maximum of 20). 19

3. Enter basin outflow (cfs) and storage volume (AF) for each basin depth value in the following table. Enter values in order of increasing outflow basin depth:

| Entry No. | Water Surface Elevation (Ft) | Basin Depth (Ft) | Basin Storage (AF) | Basin Outflow (CFS) | |
|---|---|---|---|---|---|
| 1 | 4044.00 | 0.00 | 0.000 | 0.00 | |
| 2 | 4044.40 | 0.40 | 0.016 | 0.00 | |
| 3 | 4044.80 | 0.80 | 0.039 | 0.00 | |
| 4 | 4045.20 | 1.20 | 0.067 | 0.00 | |
| 5 | 4045.60 | 1.60 | 0.102 | 0.00 | |
| 6 | 4046.00 | 2.00 | 0.143 | 0.00 | |
| 7 | 4046.40 | 2.40 | 0.194 | 0.00 | |
| 8 | 4046.80 | 2.80 | 0.258 | 0.00 | |
| 9 | 4047.20 | 3.20 | 0.334 | 0.22 | |
| 10 | 4047.60 | 3.60 | 0.420 | 1.16 | |
| 11 | 4048.00 | 4.00 | 0.517 | 2.50 | |
| 12 | 4048.40 | 4.40 | 0.627 | 4.14 | |
| 13 | 4048.80 | 4.80 | 0.752 | 6.03 | ← HWL (4048.80) |
| 14 | 4049.20 | 5.20 | 0.893 | 8.15 | |
| 15 | 4049.60 | 5.60 | 1.051 | 10.47 | |
| 16 | 4050.00 | 6.00 | 1.227 | 12.98 | |
| 17 | 4050.40 | 6.40 | 1.420 | 15.66 | |
| 18 | 4050.80 | 6.80 | 1.631 | 18.50 | |
| 19 | 4051.00 | 7.00 | 1.744 | 19.98 | |
| 20 | | | | | |

4. Enter assumed initial depth (feet) of water in detention basin 0.00

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**DETENTION INFORMATION INFORMATION FORM**

Figure F-8

## PROPOSED CATCHMENT STAGE-STORAGE PROFILE

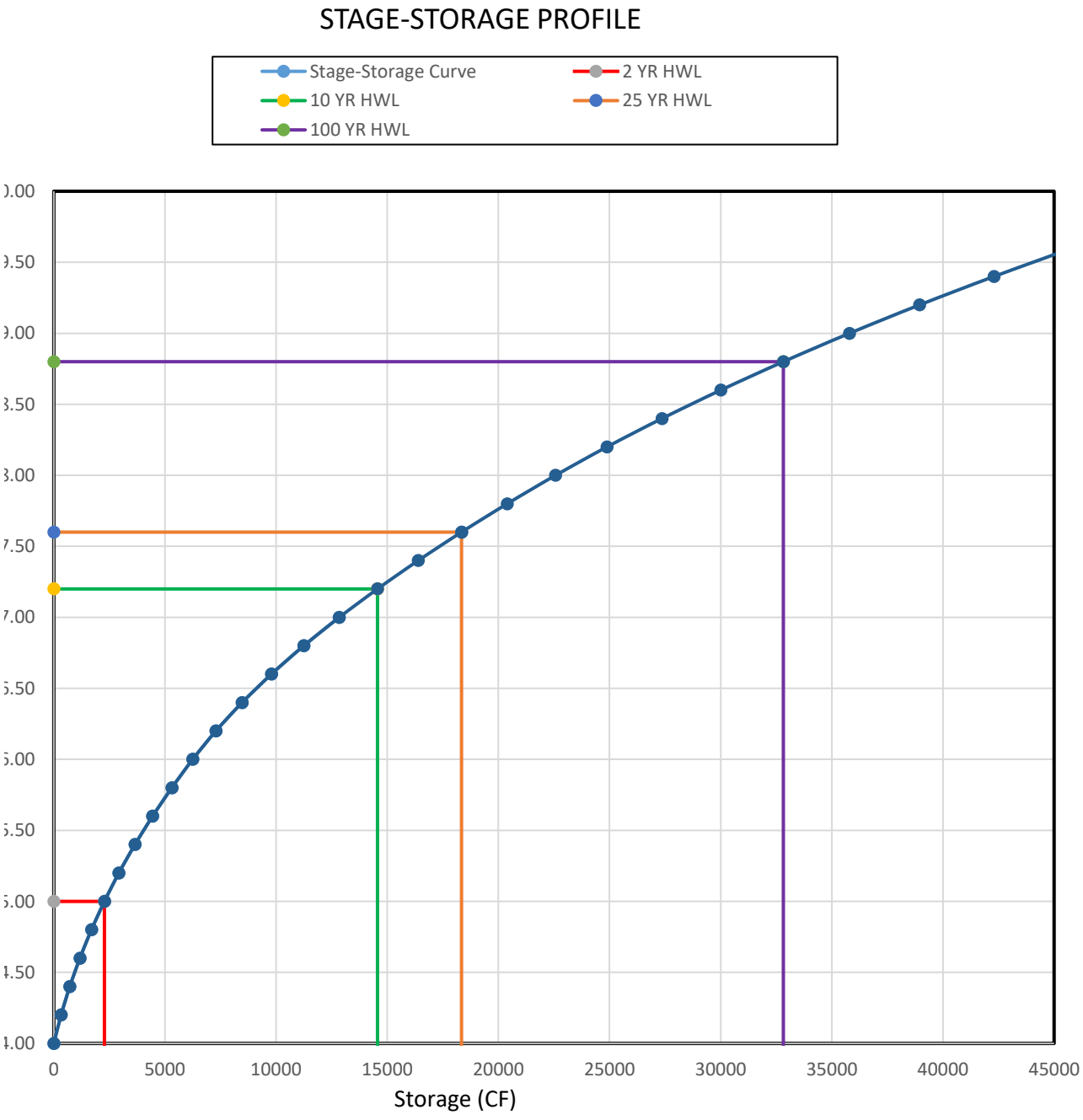
| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| | Catchment A |

| | | |
|---|---|---|
| STORMWATER PRACTICE TYPE: | Infiltration Basin | |
| RUNOFF VOLUME RETAINED IN CATCHMENT | 12842.7645 | CF |
| SURFACE AREA AT TOP OF BANK | 24986.9164 | SF |
| PERIMETER AT TOP OF BANK | 584.5337 | LF |
| SLOPE OF BANKS (Horz:Vert) | 3 | :1 |
| MIN. TOP OF BANK ELEVATION | 4050.00 | |
| PEAK STAGE OF THE 100 YR - 24 HR EVENT | 4048.80 | |
| DESIGN WATER LEVEL ELEVATION | 4047.00 | (WEIR INVERT) |
| INSIDE TOE OF SLOPE ELEVATION | 4044.00 | |
| MAX. SEASONAL HIGH WATER TABLE ELEV. | 4042.00 | |
| CORRELATED AVERAGE INFILTRATION RATE | 4.5600 | In/Hr |

| STAGE ELEVATION | SURFACE AREA AT ELEV (SF)** | CHANGE IN VOLUME (CF)** | TOTAL VOLUME (CF) * |
|---|---|---|---|
| 4044.00 | 1476.8892 | 0.0000 | 0.0000 |
| 4044.20 | 1796.7807 | 327.3670 | 327.3670 |
| 4044.40 | 2116.6722 | 391.3453 | 718.7123 |
| 4044.60 | 2436.5638 | 455.3236 | 1174.0359 |
| 4044.80 | 2756.4553 | 519.3019 | 1693.3378 |
| 4045.00 | 3076.3468 | 583.2802 | 2276.6180 |
| 4045.20 | 3434.9195 | 651.1266 | 2927.7446 |
| 4045.40 | 3793.4923 | 722.8412 | 3650.5858 |
| 4045.60 | 4152.0650 | 794.5557 | 4445.1415 |
| 4045.80 | 4510.6378 | 866.2703 | 5311.4118 |
| 4046.00 | 4869.2105 | 937.9848 | 6249.3966 |
| 4046.20 | 5558.8734 | 1042.8084 | 7292.2050 |
| 4046.40 | 6248.5364 | 1180.7410 | 8472.9460 |
| 4046.60 | 6938.1993 | 1318.6736 | 9791.6196 |
| 4046.80 | 7627.8623 | 1456.6062 | 11248.2258 |
| 4047.00 | 8317.5252 | 1594.5387 | 12842.7645 |
| 4047.20 | 8882.9080 | 1720.0433 | 14562.8078 |
| 4047.40 | 9448.2908 | 1833.1199 | 16395.9277 |
| 4047.60 | 10013.6735 | 1946.1964 | 18342.1241 |
| 4047.80 | 10579.0563 | 2059.2730 | 20401.3971 |
| 4048.00 | 11144.4391 | 2172.3495 | 22573.7466 |
| 4048.20 | 11976.2070 | 2312.0646 | 24885.8113 |
| 4048.40 | 12807.9749 | 2478.4182 | 27364.2294 |
| 4048.60 | 13639.7427 | 2644.7718 | 30009.0012 |
| 4048.80 | 14471.5106 | 2811.1253 | 32820.1265 |
| 4049.00 | 15303.2785 | 2977.4789 | 35797.6054 |
| 4049.20 | 16257.9597 | 3156.1238 | 38953.7293 |
| 4049.40 | 17212.6409 | 3347.0601 | 42300.7893 |
| 4049.60 | 18167.3221 | 3537.9963 | 45838.7856 |
| 4049.80 | 19122.0033 | 3728.9325 | 49567.7182 |
| 4050.00 | 20076.6845 | 3919.8688 | 53487.5869 |
| 4050.20 | 21058.7309 | 4113.5415 | 57601.1285 |
| 4050.40 | 22040.7773 | 4309.9508 | 61911.0793 |
| 4050.60 | 23022.8236 | 4506.3601 | 66417.4394 |
| 4050.80 | 24004.8700 | 4702.7694 | 71120.2088 |
| 4051.00 | 24986.9164 | 4899.1786 | 76019.3874 |

## PROPOSED CATCHMENT STAGE-STORAGE PROFILE

| SITE NAME: | OMYA Solar Plant |
|---|---|
| | Catchment A |



## PROPOSED CATCHMENT DRAWDOWN ANALYSIS

**SITE NAME:** OMYA Solar Plant
Catchment A

**DRAWDOWN ANALYSIS BASED ON DARCY'S LAW FOR FLOW THROUGH A POROUS MATERIAL**

INFILTRATION BASIN

| | | | | |
|---|---|---|---|---|
| CORRELATED AVERAGE INFILTRATION RATE | 32.1730 | µ/SEC | (Micrometers/Sec) = | 4.5599 IN/HR |
| DE-RATING FACTOR | 0.5 | | | |
| EFFECTIVE HYDRAULIC CONDUCTIVITY | 0.1899977 | FT/HR | (Value adjusted with derating factor) | |
| WEIR INVERT ELEVATION (DWL) | 4047.00 | | | |
| BOTTOM OF CATCHMENT ELEVATION | 4044.00 | | | |
| TRAVEL DEPTH TO WATER TABLE | 2.00 | ft (BOT-->SHWT, 2 FT MIN.) | | |
| INITIAL HYDRAULIC HEAD | 5.00 | ft (DWL- SHWT) | | |
| SURFACE AREA AT BOTTOM OF CATCHMENT | 1476.89 | SF | | |

| ELEV. | TOTAL HEAD (FT) | CHANGE IN HEAD (FT) | CHANGE IN VOLUME (CF) | TOTAL VOLUME (CF) | MAX. FLOW LENGTH (FT) | MIN FLOW LENGTH (FT) | AVG. FLOW LENGTH (FT) | HYDRAULIC GRADIENT (H/L) | FILTER AREA (SF) | FLOW RATE (CF/HR) | AVG FLOW RATE (CF/HR) | CHANGE IN TIME (HR) | TOTAL TIME (HR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4047.00 | 5.00 | | | 12842.76 | 2.00 | 2.00 | 2.00 | 2.500 | 8317.53 | 3950.78 | | | 0.000 |
| | | 0.2 | 1594.54 | | | | | | | | 3714.52 | 0.429 | |
| 4046.80 | 4.80 | | | 11248.23 | 2.00 | 2.00 | 2.00 | 2.400 | 7627.86 | 3478.26 | | | 0.429 |
| | | 0.2 | 1456.61 | | | | | | | | 3255.11 | 0.447 | |
| 4046.60 | 4.60 | | | 9791.62 | 2.00 | 2.00 | 2.00 | 2.300 | 6938.20 | 3031.96 | | | 0.877 |
| | | 0.2 | 1318.67 | | | | | | | | 2821.91 | 0.467 | |
| 4046.40 | 4.40 | | | 8472.95 | 2.00 | 2.00 | 2.00 | 2.200 | 6248.54 | 2611.86 | | | 1.344 |
| | | 0.2 | 1180.74 | | | | | | | | 2414.91 | 0.489 | |
| 4046.20 | 4.20 | | | 7292.21 | 2.00 | 2.00 | 2.00 | 2.100 | 5558.87 | 2217.96 | | | 1.833 |
| | | 0.2 | 1042.81 | | | | | | | | 2034.12 | 0.513 | |
| 4046.00 | 4.00 | | | 6249.40 | 2.00 | 2.00 | 2.00 | 2.000 | 4869.21 | 1850.28 | | | 2.346 |
| | | 0.2 | 937.98 | | | | | | | | 1739.30 | 0.539 | |
| 4045.80 | 3.80 | | | 5311.41 | 2.00 | 2.00 | 2.00 | 1.900 | 4510.64 | 1628.32 | | | 2.885 |
| | | 0.2 | 866.27 | | | | | | | | 1524.15 | 0.568 | |
| 4045.60 | 3.60 | | | 4445.14 | 2.00 | 2.00 | 2.00 | 1.800 | 4152.07 | 1419.99 | | | 3.453 |
| | | 0.2 | 794.56 | | | | | | | | 1322.64 | 0.601 | |
| 4045.40 | 3.40 | | | 3650.59 | 2.00 | 2.00 | 2.00 | 1.700 | 3793.49 | 1225.28 | | | 4.054 |
| | | 0.2 | 722.84 | | | | | | | | 1134.74 | 0.637 | |
| 4045.20 | 3.20 | | | 2927.74 | 2.00 | 2.00 | 2.00 | 1.600 | 3434.92 | 1044.20 | | | 4.691 |
| | | 0.2 | 651.13 | | | | | | | | 960.48 | 0.678 | |
| 4045.00 | 3.00 | | | 2276.62 | 2.00 | 2.00 | 2.00 | 1.500 | 3076.35 | 876.75 | | | 5.369 |
| | | 0.2 | 583.28 | | | | | | | | 804.98 | 0.725 | |
| 4044.80 | 2.80 | | | 1693.34 | 2.00 | 2.00 | 2.00 | 1.400 | 2756.46 | 733.21 | | | 6.094 |
| | | 0.2 | 519.30 | | | | | | | | 667.52 | 0.778 | |
| 4044.60 | 2.60 | | | 1174.04 | 2.00 | 2.00 | 2.00 | 1.300 | 2436.56 | 601.82 | | | 6.872 |
| | | 0.2 | 455.32 | | | | | | | | 542.21 | 0.840 | |
| 4044.40 | 2.40 | | | 718.71 | 2.00 | 2.00 | 2.00 | 1.200 | 2116.67 | 482.60 | | | 7.711 |
| | | 0.2 | 391.35 | | | | | | | | 429.06 | 0.912 | |
| 4044.20 | 2.20 | | | 327.37 | 2.00 | 2.00 | 2.00 | 1.100 | 1796.78 | 375.52 | | | 8.623 |
| | | 0.2 | 327.37 | | | | | | | | 328.06 | 0.998 | |
| 4044.00 | 2.00 | | | 0.00 | 2.00 | 2.00 | 2.00 | 1.000 | 1476.89 | 280.61 | | | 9.621 |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL DRAWDOWN VOLUME | 12842.76 | CF | RUNOFF REDUCTION VOLUME IN CATCHMENT | 12842.76 | CF |
| TOTAL DRAWDOWN TIME | 9.621 | HR | MAXIMUM DRAWDOWN TIME | 24 | HR |

# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Tuesday, Jul 30, 2024

## Pond No. 1 - Catchment A

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4044.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4044.00 | 1,477 | 0 | 0 |
| 0.40 | 4044.40 | 2,117 | 715 | 715 |
| 0.80 | 4044.80 | 2,756 | 972 | 1,687 |
| 1.20 | 4045.20 | 3,435 | 1,236 | 2,922 |
| 1.60 | 4045.60 | 4,152 | 1,515 | 4,437 |
| 2.00 | 4046.00 | 4,869 | 1,802 | 6,239 |
| 2.40 | 4046.40 | 6,249 | 2,218 | 8,457 |
| 2.80 | 4046.80 | 7,628 | 2,770 | 11,227 |
| 3.20 | 4047.20 | 8,883 | 3,299 | 14,526 |
| 3.60 | 4047.60 | 10,014 | 3,777 | 18,303 |
| 4.00 | 4048.00 | 11,144 | 4,229 | 22,532 |
| 4.40 | 4048.40 | 12,808 | 4,786 | 27,318 |
| 4.80 | 4048.80 | 14,472 | 5,452 | 32,770 |
| 5.20 | 4049.20 | 16,258 | 6,142 | 38,912 |
| 5.60 | 4049.60 | 18,167 | 6,881 | 45,793 |
| 6.00 | 4050.00 | 20,077 | 7,645 | 53,438 |
| 6.40 | 4050.40 | 22,041 | 8,420 | 61,857 |
| 6.80 | 4050.80 | 24,005 | 9,205 | 71,063 |
| 7.00 | 4051.00 | 24,987 | 4,898 | 75,961 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

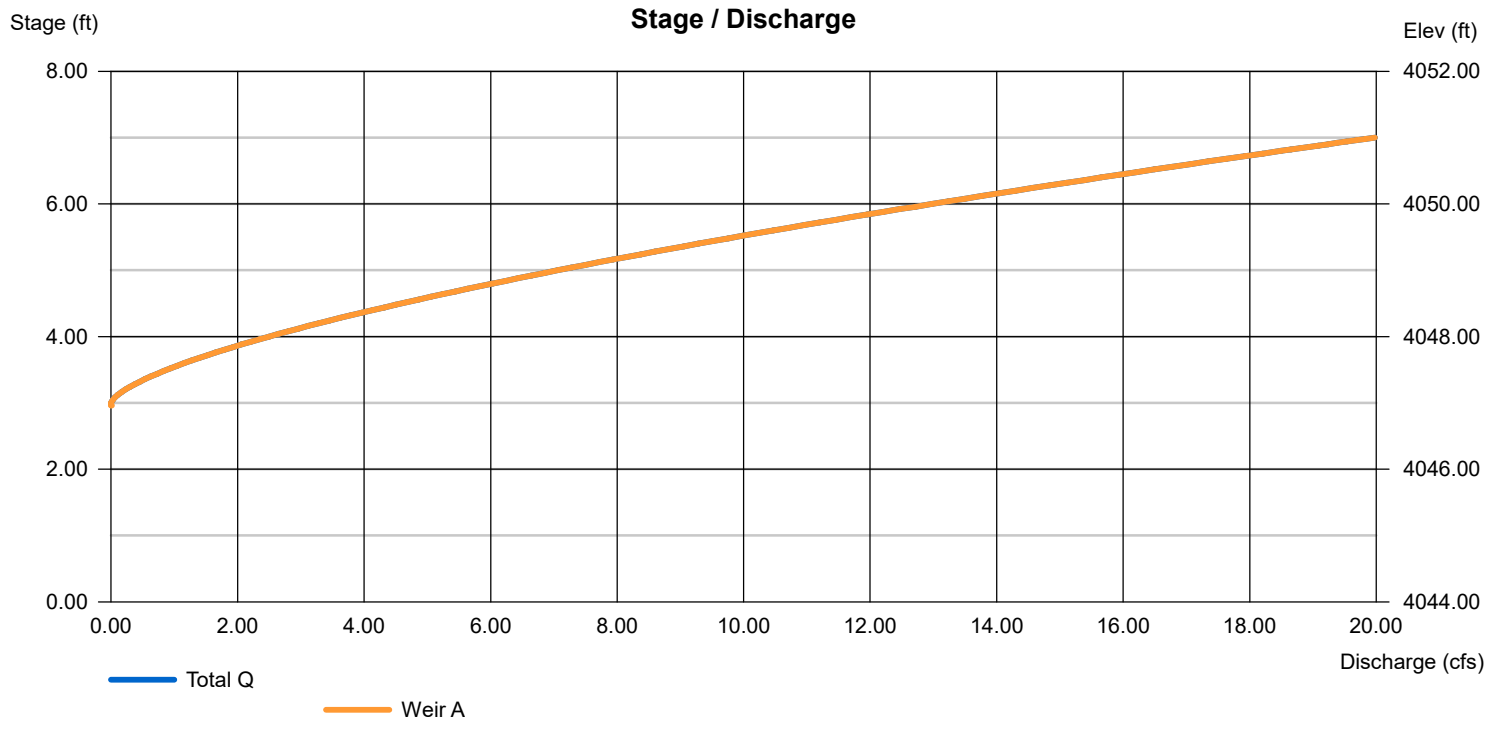
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.75 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4047.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (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).



## 5.5.b. Detention Basin B

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

PROPOSED CATCHMENT "B"

**ENGINEER:** TECTONIC ENGINEERING

I. Enter the hydrograph unit interval duration (**minutes)** 2 min.

2. Enter total number of basin depth-versus-outflow values (maximum of 20). 19

3. Enter basin outflow (cfs) and storage volume (AF) for each basin depth value in the following table. Enter values in order of increasing outflow basin depth:

| Entry No. | Water Surface Elevation (Ft) | Basin Depth (Ft) | Basin Storage (AF) | Basin Outflow (CFS) | |
|---|---|---|---|---|---|
| 1 | 4027.00 | 0.00 | 0.000 | 0.00 | |
| 2 | 4027.40 | 0.40 | 0.053 | 0.00 | |
| 3 | 4027.80 | 0.80 | 0.120 | 0.00 | |
| 4 | 4028.20 | 1.20 | 0.199 | 0.00 | |
| 5 | 4028.60 | 1.60 | 0.291 | 0.00 | |
| 6 | 4029.00 | 2.00 | 0.397 | 0.00 | |
| 7 | 4029.40 | 2.40 | 0.516 | 0.00 | |
| 8 | 4029.80 | 2.80 | 0.648 | 0.00 | |
| 9 | 4030.20 | 3.20 | 0.794 | 0.89 | |
| 10 | 4030.60 | 3.60 | 0.953 | 4.64 | |
| 11 | 4031.00 | 4.00 | 1.127 | 9.99 | |
| 12 | 4031.40 | 4.40 | 1.314 | 16.55 | |
| 13 | 4031.80 | 4.80 | 1.514 | 24.13 | |
| 14 | 4032.20 | 5.20 | 1.734 | 32.60 | ← HWL (4031.99) |
| 15 | 4032.60 | 5.60 | 1.980 | 41.88 | |
| 16 | 4033.00 | 6.00 | 2.258 | 51.91 | |
| 17 | 4033.40 | 6.40 | 2.563 | 62.63 | |
| 18 | 4033.80 | 6.80 | 2.891 | 74.00 | |
| 19 | 4034.00 | 7.00 | 3.064 | 79.92 | |
| 20 | | | | | |

4. Enter assumed initial depth (feet) of water in detention basin 0.00

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**DETENTION INFORMATION INFORMATION FORM**

Figure F-8

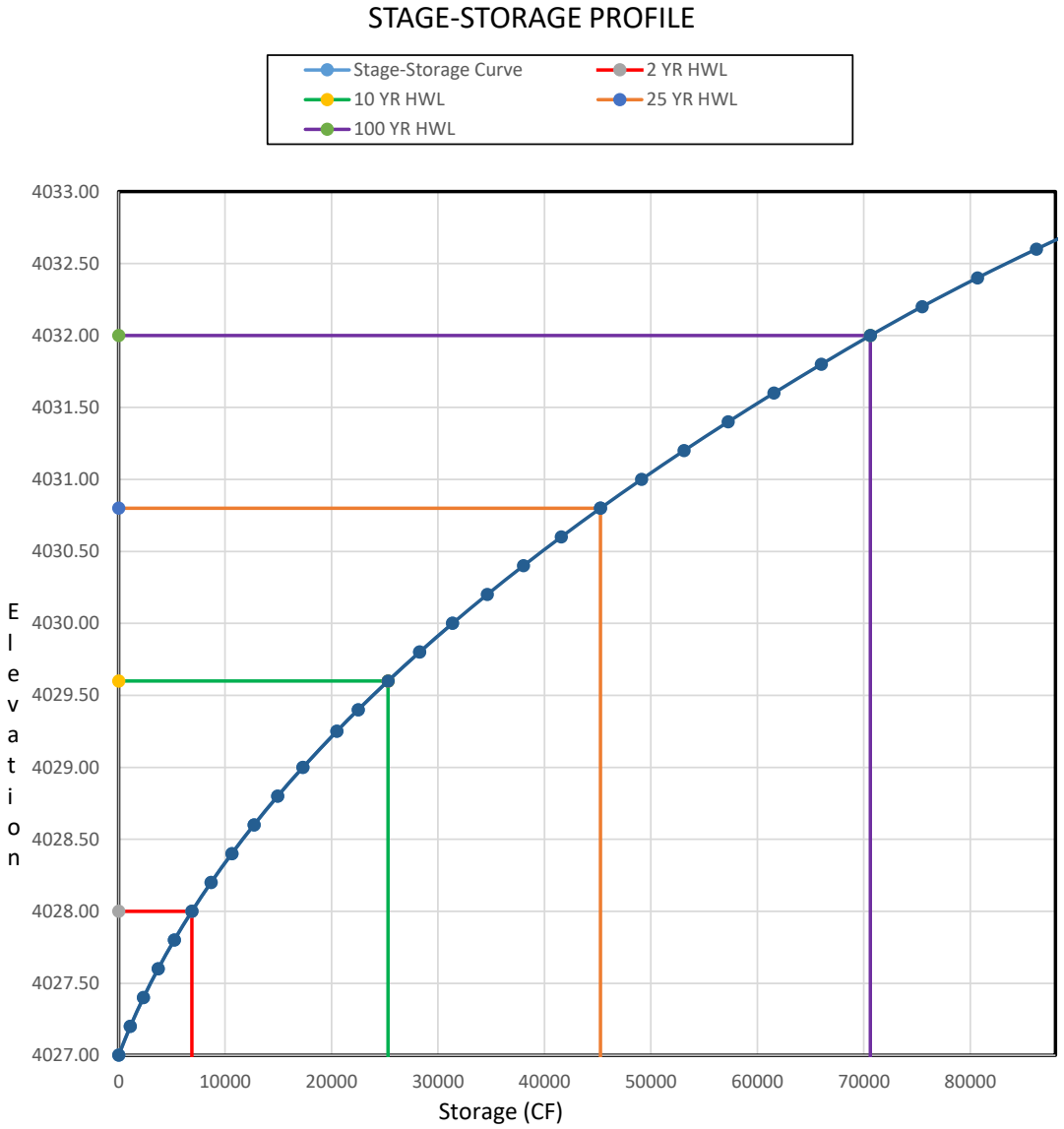
## PROPOSED CATCHMENT STAGE-STORAGE PROFILE

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| | Catchment B |

| | | |
|---|---|---|
| STORMWATER PRACTICE TYPE: | Infiltration Basin | O-1 |
| RUNOFF VOLUME RETAINED IN CATCHMENT | 31362.3556 | CF |
| SURFACE AREA AT TOP OF BANK | 19605.7464 | SF |
| PERIMETER AT TOP OF BANK | 584.5337 | LF |
| SLOPE OF BANKS (Horz:Vert) | 3 | :1 |
| MIN. TOP OF BANK ELEVATION | 4034.00 | |
| PEAK STAGE OF THE 100 YR - 24 HR EVENT | 4032.00 | |
| DESIGN WATER LEVEL ELEVATION | 4030.00 | (WEIR INVERT) |
| TOE OF SLOPE ELEVATION | 4027.00 | |
| MAX. SEASONAL HIGH WATER TABLE ELEV. | 4025.00 | |
| CORRELATED AVERAGE INFILTRATION RATE | 4.5600 | In/Hr |

| STAGE ELEVATION | SURFACE AREA AT ELEV (SF)** | CHANGE IN VOLUME (CF)** | TOTAL VOLUME (CF) * |
|---|---|---|---|
| 4027.00 | 5118.4353 | 0.0000 | 0.0000 |
| 4027.20 | 5822.3091 | 1094.0744 | 1094.0744 |
| 4027.40 | 6526.1830 | 1234.8492 | 2328.9237 |
| 4027.60 | 7230.0568 | 1375.6240 | 3704.5476 |
| 4027.80 | 7933.9307 | 1516.3987 | 5220.9464 |
| 4028.00 | 8637.8045 | 1657.1735 | 6878.1199 |
| 4028.20 | 9355.1304 | 1799.2935 | 8677.4134 |
| 4028.40 | 10072.4563 | 1942.7587 | 10620.1721 |
| 4028.60 | 10789.7821 | 2086.2238 | 12706.3959 |
| 4028.80 | 11507.1080 | 2229.6890 | 14936.0849 |
| 4029.00 | 12224.4339 | 2373.1542 | 17309.2391 |
| 4029.25 | 13138.7752 | 3170.4011 | 20479.6402 |
| 4029.40 | 13687.3799 | 2011.9616 | 22491.6019 |
| 4029.60 | 14418.8530 | 2810.6233 | 25302.2252 |
| 4029.80 | 15150.3260 | 2956.9179 | 28259.1431 |
| 4030.00 | 15881.7990 | 3103.2125 | 31362.3556 |
| 4030.20 | 16626.5885 | 3250.8387 | 34613.1943 |
| 4030.40 | 17371.3780 | 3399.7966 | 38012.9909 |
| 4030.60 | 18116.1674 | 3548.7545 | 41561.7455 |
| 4030.80 | 18860.9569 | 3697.7124 | 45259.4579 |
| 4031.00 | 19605.7464 | 3846.6703 | 49106.1282 |
| 4031.20 | 20364.2295 | 3996.9976 | 53103.1258 |
| 4031.40 | 21122.7126 | 4148.6942 | 57251.8200 |
| 4031.60 | 21881.1956 | 4300.3908 | 61552.2109 |
| 4031.80 | 22639.6787 | 4452.0874 | 66004.2983 |
| 4032.00 | 23398.1618 | 4603.7841 | 70608.0823 |
| 4032.20 | 25123.3657 | 4852.1527 | 75460.2351 |
| 4032.40 | 26848.5696 | 5197.1935 | 80657.4286 |
| 4032.60 | 28573.7735 | 5542.2343 | 86199.6629 |
| 4032.80 | 30298.9774 | 5887.2751 | 92086.9380 |
| 4033.00 | 32024.1813 | 6232.3159 | 98319.2539 |
| 4033.20 | 33256.1988 | 6528.0380 | 104847.2919 |
| 4033.40 | 34488.2164 | 6774.4415 | 111621.7334 |
| 4033.60 | 35720.2339 | 7020.8450 | 118642.5785 |
| 4033.80 | 36952.2515 | 7267.2485 | 125909.8270 |
| 4034.00 | 38184.2690 | 7513.6520 | 133423.4790 |

| PROPOSED CATCHMENT STAGE-STORAGE PROFILE | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| | Catchment B |



## PROPOSED CATCHMENT DRAWDOWN ANALYSIS

**SITE NAME:** OMYA Solar Plant
Catchment B

**DRAWDOWN ANALYSIS BASED ON DARCY'S LAW FOR FLOW THROUGH A POROUS MATERIAL**

INFILTRATION BASIN

| | | | | |
|---|---|---|---|---|
| CORRELATED AVERAGE INFILTRATION RATE | 32.1730 | µ/SEC | (Micrometers/Sec) = | 4.5599 IN/HR |
| DE-RATING FACTOR | 0.5 | | | |
| EFFECTIVE HYDRAULIC CONDUCTIVITY | 0.1899977 | FT/HR | (Value adjusted with derating factor) | |
| WEIR INVERT ELEVATION (DWL) | 4030.00 | | | |
| BOTTOM OF CATCHMENT ELEVATION | 4027.00 | | | |
| TRAVEL DEPTH TO WATER TABLE | 2 | ft (BOT-->SHWT, 2 FT MIN.) | | |
| INITIAL HYDRAULIC HEAD | 5.00 | ft (DWL- SHWT) | | |
| SURFACE AREA AT BOTTOM OF CATCHMENT | 5118.44 | SF | | |

| ELEV. | TOTAL HEAD (FT) | CHANGE IN HEAD (FT) | CHANGE IN VOLUME (CF) | TOTAL VOLUME (CF) | MAX. FLOW LENGTH (FT) | MIN FLOW LENGTH (FT) | AVG. FLOW LENGTH (FT) | HYDRAULIC GRADIENT (H/L) | FILTER AREA (SF) | FLOW RATE (CF/HR) | AVG FLOW RATE (CF/HR) | CHANGE IN TIME (HR) | TOTAL TIME (HR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4030.00 | 5.00 | | | 31362.36 | 2.00 | 2.00 | 2.00 | 2.500 | 15881.80 | 7543.76 | | | 0.000 |
| | | 0.2 | 3103.21 | | | | | | | | 7226.11 | 0.429 | |
| 4029.80 | 4.80 | | | 28259.14 | 2.00 | 2.00 | 2.00 | 2.400 | 15150.33 | 6908.46 | | | 0.429 |
| | | 0.2 | 2956.92 | | | | | | | | 6604.71 | 0.448 | |
| 4029.60 | 4.60 | | | 25302.23 | 2.00 | 2.00 | 2.00 | 2.300 | 14418.85 | 6300.96 | | | 0.877 |
| | | 0.2 | 2810.62 | | | | | | | | 6011.11 | 0.468 | |
| 4029.40 | 4.40 | | | 22491.60 | 2.00 | 2.00 | 2.00 | 2.200 | 13687.38 | 5721.25 | | | 1.345 |
| | | 0.2 | 2011.96 | | | | | | | | 5481.78 | 0.367 | |
| 4029.20 | 4.20 | | | 20479.64 | 2.00 | 2.00 | 2.00 | 2.100 | 13138.78 | 5242.31 | | | 1.712 |
| | | 0.2 | 3170.40 | | | | | | | | 4943.77 | 0.641 | |
| 4029.00 | 4.00 | | | 17309.24 | 2.00 | 2.00 | 2.00 | 2.000 | 12224.43 | 4645.23 | | | 2.353 |
| | | 0.2 | 2373.15 | | | | | | | | 4399.62 | 0.539 | |
| 4028.80 | 3.80 | | | 14936.08 | 2.00 | 2.00 | 2.00 | 1.900 | 11507.11 | 4154.01 | | | 2.892 |
| | | 0.2 | 2229.69 | | | | | | | | 3922.04 | 0.569 | |
| 4028.60 | 3.60 | | | 12706.40 | 2.00 | 2.00 | 2.00 | 1.800 | 10789.78 | 3690.06 | | | 3.461 |
| | | 0.2 | 2086.22 | | | | | | | | 3471.71 | 0.601 | |
| 4028.40 | 3.40 | | | 10620.17 | 2.00 | 2.00 | 2.00 | 1.700 | 10072.46 | 3253.36 | | | 4.062 |
| | | 0.2 | 1942.76 | | | | | | | | 3048.64 | 0.637 | |
| 4028.20 | 3.20 | | | 8677.41 | 2.00 | 2.00 | 2.00 | 1.600 | 9355.13 | 2843.92 | | | 4.699 |
| | | 0.2 | 1799.29 | | | | | | | | 2652.83 | 0.678 | |
| 4028.00 | 3.00 | | | 6878.12 | 2.00 | 2.00 | 2.00 | 1.500 | 8637.80 | 2461.74 | | | 5.377 |
| | | 0.2 | 1657.17 | | | | | | | | 2286.07 | 0.725 | |
| 4027.80 | 2.80 | | | 5220.95 | 2.00 | 2.00 | 2.00 | 1.400 | 7933.93 | 2110.40 | | | 6.102 |
| | | 0.2 | 1516.40 | | | | | | | | 1948.10 | 0.778 | |
| 4027.60 | 2.60 | | | 3704.55 | 2.00 | 2.00 | 2.00 | 1.300 | 7230.06 | 1785.80 | | | 6.881 |
| | | 0.2 | 1375.62 | | | | | | | | 1636.88 | 0.840 | |
| 4027.40 | 2.40 | | | 2328.92 | 2.00 | 2.00 | 2.00 | 1.200 | 6526.18 | 1487.95 | | | 7.721 |
| | | 0.2 | 1234.85 | | | | | | | | 1352.40 | 0.913 | |
| 4027.20 | 2.20 | | | 1094.07 | 2.00 | 2.00 | 2.00 | 1.100 | 5822.31 | 1216.85 | | | 8.634 |
| | | 0.2 | 1094.07 | | | | | | | | 1094.67 | 0.999 | |
| 4027.00 | 2.00 | | | 0.00 | 2.00 | 2.00 | 2.00 | 1.000 | 5118.44 | 972.49 | | | 9.634 |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL DRAWDOWN VOLUME | 31362.36 | CF | RUNOFF REDUCTION VOLUME IN CATCHMENT | 31362.36 | CF |
| TOTAL DRAWDOWN TIME | 9.634 | HR | MAXIMUM DRAWDOWN TIME | 24 | HR |

# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Tuesday, Jul 30, 2024

## Pond No. 2 - Catchment B

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4027.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4027.00 | 5,118 | 0 | 0 |
| 0.40 | 4027.40 | 6,526 | 2,323 | 2,323 |
| 0.80 | 4027.80 | 7,934 | 2,887 | 5,210 |
| 1.20 | 4028.20 | 9,355 | 3,454 | 8,664 |
| 1.60 | 4028.60 | 10,790 | 4,025 | 12,689 |
| 2.00 | 4029.00 | 12,224 | 4,599 | 17,288 |
| 2.40 | 4029.40 | 13,687 | 5,179 | 22,467 |
| 2.80 | 4029.80 | 15,150 | 5,764 | 28,232 |
| 3.20 | 4030.20 | 16,627 | 6,352 | 34,584 |
| 3.60 | 4030.60 | 18,116 | 6,946 | 41,530 |
| 4.00 | 4031.00 | 19,606 | 7,542 | 49,072 |
| 4.40 | 4031.40 | 21,123 | 8,143 | 57,215 |
| 4.80 | 4031.80 | 22,640 | 8,750 | 65,965 |
| 5.20 | 4032.20 | 25,123 | 9,547 | 75,512 |
| 5.60 | 4032.60 | 28,574 | 10,731 | 86,243 |
| 6.00 | 4033.00 | 32,024 | 12,112 | 98,355 |
| 6.40 | 4033.40 | 34,488 | 13,298 | 111,653 |
| 6.80 | 4033.80 | 36,952 | 14,284 | 125,937 |
| 7.00 | 4034.00 | 38,184 | 7,513 | 133,449 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

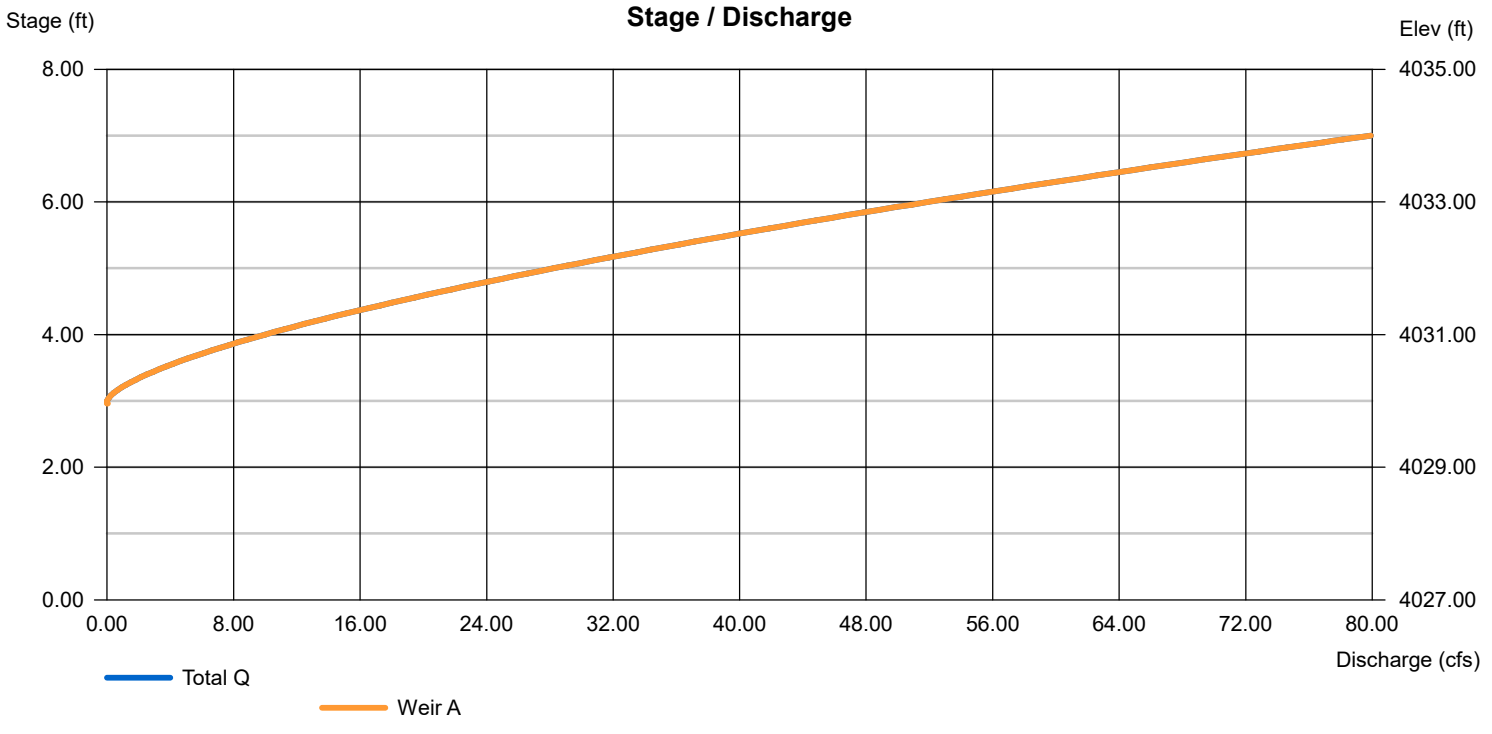
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 3.00 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4030.00 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



## 5.5.c. Detention Basin C

**PROJECT:** OMYA SOLAR PLANT **DATE:** 07/22/2024

PROPOSED CATCHMENT "C"

**ENGINEER:** TECTONIC ENGINEERING

I. Enter the hydrograph unit interval duration (**minutes)** 2 min.

2. Enter total number of basin depth-versus-outflow values (maximum of 20). 16

3. Enter basin outflow (cfs) and storage volume (AF) for each basin depth value in the following table. Enter values in order of increasing outflow basin depth:

| Entry No. | Water Surface Elevation (Ft) | Basin Depth (Ft) | Basin Storage (AF) | Basin Outflow (CFS) | |
|---|---|---|---|---|---|
| 1 | 4056.00 | 0.00 | 0.000 | 0.00 | |
| 2 | 4056.40 | 0.40 | 0.019 | 0.00 | |
| 3 | 4056.80 | 0.80 | 0.042 | 0.00 | |
| 4 | 4057.20 | 1.20 | 0.070 | 0.00 | |
| 5 | 4057.60 | 1.60 | 0.102 | 0.00 | |
| 6 | 4058.00 | 2.00 | 0.139 | 0.00 | |
| 7 | 4058.40 | 2.40 | 0.181 | 0.00 | |
| 8 | 4058.80 | 2.80 | 0.228 | 0.27 | |
| 9 | 4059.20 | 3.20 | 0.283 | 0.98 | |
| 10 | 4059.60 | 3.60 | 0.355 | 1.92 | |
| 11 | 4060.00 | 4.00 | 0.446 | 3.06 | ← HWL (4059.69) |
| 12 | 4060.40 | 4.40 | 0.553 | 4.36 | |
| 13 | 4060.80 | 4.80 | 0.668 | 5.81 | |
| 14 | 4061.20 | 5.20 | 0.793 | 7.39 | |
| 15 | 4061.60 | 5.60 | 0.928 | 9.09 | |
| 16 | 4062.00 | 6.00 | 1.073 | 10.90 | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

4. Enter assumed initial depth (feet) of water in detention basin 0.00

**SAN BERNARDINO COUNTY**
**HYDROLOGY MANUAL**

**DETENTION INFORMATION INFORMATION FORM**

Figure F-8

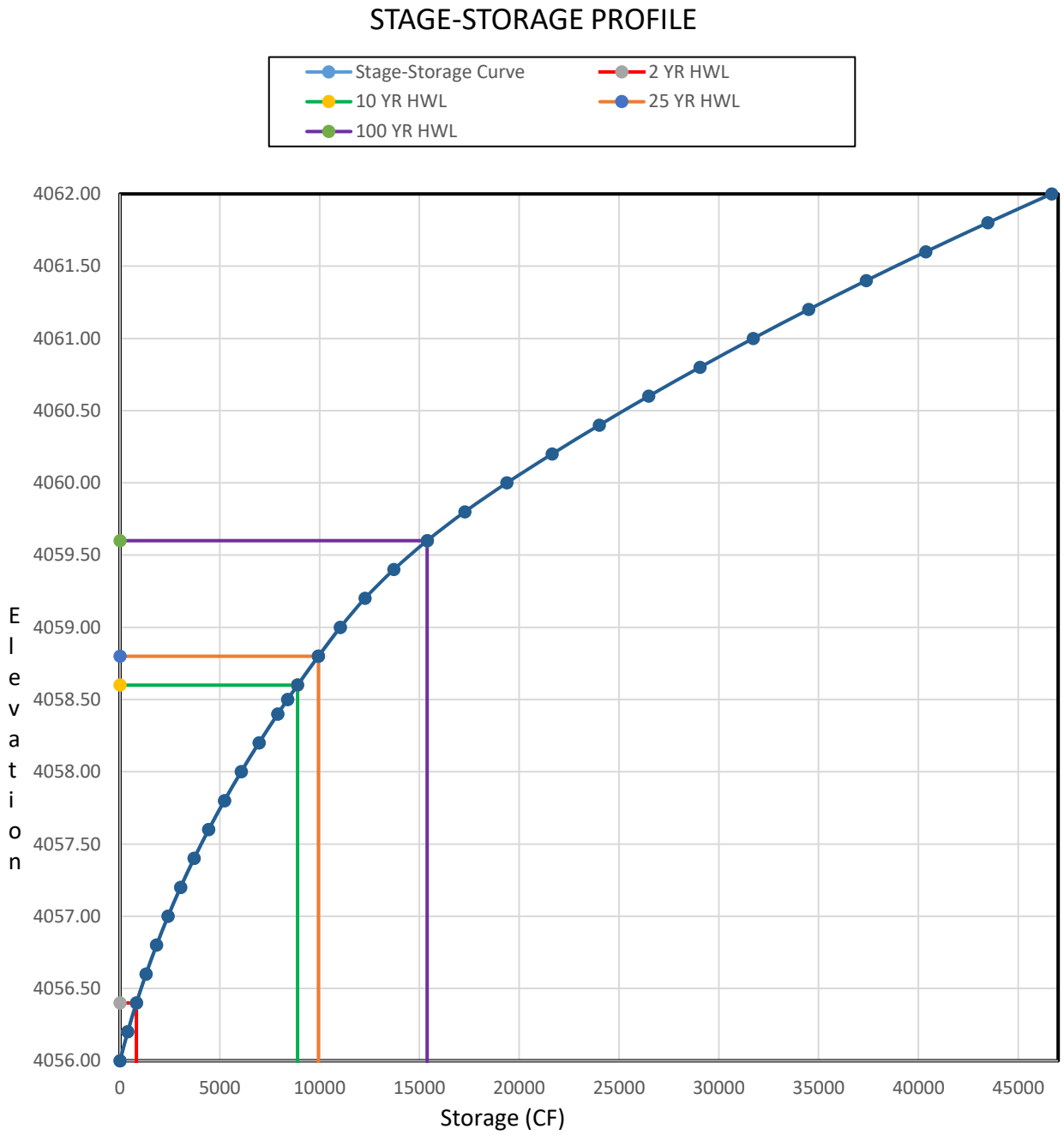
## PROPOSED CATCHMENT STAGE-STORAGE PROFILE

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| | Catchment C |

| | | |
|---|---|---|
| STORMWATER PRACTICE TYPE: | Infiltration Basin | O-1 |
| RUNOFF VOLUME RETAINED IN CATCHMENT | 8394.4187 | CF |
| SURFACE AREA AT TOP OF BANK | 11078.7982 | SF |
| PERIMETER AT TOP OF BANK | 584.5337 | LF |
| SLOPE OF BANKS (Horz:Vert) | 3 | :1 |
| MIN. TOP OF BANK ELEVATION | 4062.00 | |
| DESIGN WATER LEVEL ELEVATION | 4058.50 | (WEIR INVERT) |
| TOE OF SLOPE ELEVATION | 4056.00 | |
| MAX. SEASONAL HIGH WATER TABLE ELEV. | 728.00 | |
| CORRELATED AVERAGE INFILTRATION RATE | 3.05 | In/Hr |

| STAGE ELEVATION | SURFACE AREA AT ELEV (SF)** | CHANGE IN VOLUME (CF)** | TOTAL VOLUME (CF) * |
|---|---|---|---|
| 4056.00 | 1823.7000 | 0.0000 | 0.0000 |
| 4056.20 | 2057.6236 | 388.1324 | 388.1324 |
| 4056.40 | 2291.5473 | 434.9171 | 823.0495 |
| 4056.60 | 2525.4709 | 481.7018 | 1304.7513 |
| 4056.80 | 2759.3946 | 528.4865 | 1833.2378 |
| 4057.00 | 2993.3182 | 575.2713 | 2408.5091 |
| 4057.20 | 3260.5128 | 625.3831 | 3033.8922 |
| 4057.40 | 3527.7074 | 678.8220 | 3712.7142 |
| 4057.60 | 3794.9019 | 732.2609 | 4444.9751 |
| 4057.80 | 4062.0965 | 785.6998 | 5230.6750 |
| 4058.00 | 4329.2911 | 839.1388 | 6069.8137 |
| 4058.20 | 4585.2262 | 891.4517 | 6961.2655 |
| 4058.40 | 4841.1613 | 942.6387 | 7903.9042 |
| 4058.50 | 4969.1289 | 490.5145 | 8394.4187 |
| 4058.60 | 5097.0964 | 503.3113 | 8897.7300 |
| 4058.80 | 5353.0315 | 1045.0128 | 9942.7428 |
| 4059.00 | 5608.9666 | 1096.1998 | 11038.9426 |
| 4059.20 | 6702.9329 | 1231.1900 | 12270.1326 |
| 4059.40 | 7796.8992 | 1449.9832 | 13720.1158 |
| 4059.60 | 8890.8656 | 1668.7765 | 15388.8922 |
| 4059.80 | 9984.8319 | 1887.5697 | 17276.4620 |
| 4060.00 | 11078.7982 | 2106.3630 | 19382.8250 |
| 4060.20 | 11584.7082 | 2266.3506 | 21649.1756 |
| 4060.40 | 12090.6182 | 2367.5326 | 24016.7083 |
| 4060.60 | 12596.5282 | 2468.7146 | 26485.4229 |
| 4060.80 | 13102.4382 | 2569.8966 | 29055.3196 |
| 4061.00 | 13608.3482 | 2671.0786 | 31726.3982 |
| 4061.20 | 14142.5756 | 2775.0924 | 34501.4906 |
| 4061.40 | 14676.8031 | 2881.9379 | 37383.4285 |
| 4061.60 | 15211.0305 | 2988.7834 | 40372.2118 |
| 4061.80 | 15745.2580 | 3095.6288 | 43467.8407 |
| 4062.00 | 16279.4854 | 3202.4743 | 46670.3150 |

| PROPOSED CATCHMENT STAGE-STORAGE PROFILE | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| | Catchment C |



## PROPOSED CATCHMENT DRAWDOWN ANALYSIS

**SITE NAME:** OMYA Solar Plant
Catchment C

**DRAWDOWN ANALYSIS BASED ON DARCY'S LAW FOR FLOW THROUGH A POROUS MATERIAL**

INFILTRATION BASIN

| | | | | |
|---|---|---|---|---|
| CORRELATED AVERAGE INFILTRATION RATE | 21.5190 | µ/SEC | (Micrometers/Sec) = | 3.0499 IN/HR |
| DE-RATING FACTOR | 0.5 | | | |
| EFFECTIVE HYDRAULIC CONDUCTIVITY | 0.1270805 | FT/HR | (Value adjusted with derating factor) | |
| WEIR INVERT ELEVATION (DWL) | 4058.50 | | | |
| BOTTOM OF CATCHMENT ELEVATION | 4056.00 | | | |
| TRAVEL DEPTH TO WATER TABLE | 2 | ft (BOT-->SHWT, 2 FT MIN.) | | |
| INITIAL HYDRAULIC HEAD | 4.50 | ft (DWL- SHWT) | | |
| SURFACE AREA AT BOTTOM OF CATCHMENT | 1823.70 | SF | | |

| ELEV. | TOTAL HEAD (FT) | CHANGE IN HEAD (FT) | CHANGE IN VOLUME (CF) | TOTAL VOLUME (CF) | MAX. FLOW LENGTH (FT) | MIN FLOW LENGTH (FT) | AVG. FLOW LENGTH (FT) | HYDRAULIC GRADIENT (H/L) | FILTER AREA (SF) | FLOW RATE (CF/HR) | AVG FLOW RATE (CF/HR) | CHANGE IN TIME (HR) | TOTAL TIME (HR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4058.50 | 4.50 | | | 8394.42 | 2.00 | 2.00 | 2.00 | 2.250 | 4841.16 | 1384.24 | | | 0.000 |
| | | 0.1 | 490.51 | | | | | | | | 1333.08 | 0.368 | |
| 4058.40 | 4.40 | | | 7903.90 | 2.00 | 2.00 | 2.00 | 2.200 | 4585.23 | 1281.92 | | | 0.368 |
| | | 0.2 | 942.64 | | | | | | | | 1218.64 | 0.774 | |
| 4058.20 | 4.20 | | | 6961.27 | 2.00 | 2.00 | 2.00 | 2.100 | 4329.29 | 1155.35 | | | 1.141 |
| | | 0.2 | 891.45 | | | | | | | | 1093.89 | 0.815 | |
| 4058.00 | 4.00 | | | 6069.81 | 2.00 | 2.00 | 2.00 | 2.000 | 4062.10 | 1032.43 | | | 1.956 |
| | | 0.2 | 839.14 | | | | | | | | 974.36 | 0.861 | |
| 4057.80 | 3.80 | | | 5230.67 | 2.00 | 2.00 | 2.00 | 1.900 | 3794.90 | 916.29 | | | 2.818 |
| | | 0.2 | 785.70 | | | | | | | | 861.62 | 0.912 | |
| 4057.60 | 3.60 | | | 4444.98 | 2.00 | 2.00 | 2.00 | 1.800 | 3527.71 | 806.94 | | | 3.730 |
| | | 0.2 | 732.26 | | | | | | | | 755.67 | 0.969 | |
| 4057.40 | 3.40 | | | 3712.71 | 2.00 | 2.00 | 2.00 | 1.700 | 3260.51 | 704.39 | | | 4.699 |
| | | 0.2 | 678.82 | | | | | | | | 656.51 | 1.034 | |
| 4057.20 | 3.20 | | | 3033.89 | 2.00 | 2.00 | 2.00 | 1.600 | 2993.32 | 608.63 | | | 5.733 |
| | | 0.2 | 625.38 | | | | | | | | 567.31 | 1.102 | |
| 4057.00 | 3.00 | | | 2408.51 | 2.00 | 2.00 | 2.00 | 1.500 | 2759.39 | 526.00 | | | 6.835 |
| | | 0.2 | 575.27 | | | | | | | | 487.66 | 1.180 | |
| 4056.80 | 2.80 | | | 1833.24 | 2.00 | 2.00 | 2.00 | 1.400 | 2525.47 | 449.31 | | | 8.015 |
| | | 0.2 | 528.49 | | | | | | | | 413.94 | 1.277 | |
| 4056.60 | 2.60 | | | 1304.75 | 2.00 | 2.00 | 2.00 | 1.300 | 2291.55 | 378.57 | | | 9.291 |
| | | 0.2 | 481.70 | | | | | | | | 346.18 | 1.391 | |
| 4056.40 | 2.40 | | | 823.05 | 2.00 | 2.00 | 2.00 | 1.200 | 2057.62 | 313.78 | | | 10.683 |
| | | 0.2 | 434.92 | | | | | | | | 300.71 | 1.446 | |
| 4056.20 | 2.20 | | | 388.13 | 2.00 | 2.00 | 2.00 | 1.100 | 2057.62 | 287.63 | | | 12.129 |
| | | 0.2 | 388.13 | | | | | | | | 4773.47 | 0.081 | |
| 4056.00 | 2.00 | | | 0.00 | 2.00 | 2.00 | 2.00 | 1.000 | 2057.62 | 9259.31 | | | 12.210 |

| | | | |
|---|---|---|---|
| TOTAL DRAWDOWN VOLUME | 8394.42 CF | RUNOFF REDUCTION VOLUME IN SWALE | 8394.42 CF |
| TOTAL DRAWDOWN TIME | 12.129 HR | MAXIMUM DRAWDOWN TIME | 24 HR |

# Pond Report

Hydraflow Hydrographs by Intelisolve v9.1 — Tuesday, Jul 30, 2024

## Pond No. 3 - Catchment C

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 4056.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 4056.00 | 1,824 | 0 | 0 |
| 0.40 | 4056.40 | 2,292 | 821 | 821 |
| 0.80 | 4056.80 | 2,759 | 1,009 | 1,830 |
| 1.20 | 4057.20 | 3,261 | 1,202 | 3,032 |
| 1.60 | 4057.60 | 3,795 | 1,410 | 4,442 |
| 2.00 | 4058.00 | 4,329 | 1,624 | 6,065 |
| 2.40 | 4058.40 | 4,841 | 1,833 | 7,898 |
| 2.80 | 4058.80 | 5,353 | 2,038 | 9,936 |
| 3.20 | 4059.20 | 6,703 | 2,406 | 12,342 |
| 3.60 | 4059.60 | 8,891 | 3,108 | 15,450 |
| 4.00 | 4060.00 | 11,079 | 3,986 | 19,436 |
| 4.40 | 4060.40 | 12,091 | 4,632 | 24,068 |
| 4.80 | 4060.80 | 13,102 | 5,037 | 29,104 |
| 5.20 | 4061.20 | 14,143 | 5,447 | 34,552 |
| 5.60 | 4061.60 | 15,211 | 5,869 | 40,420 |
| 6.00 | 4062.00 | 16,279 | 6,296 | 46,717 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Span (in)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 0 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 0.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.00 | 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 |

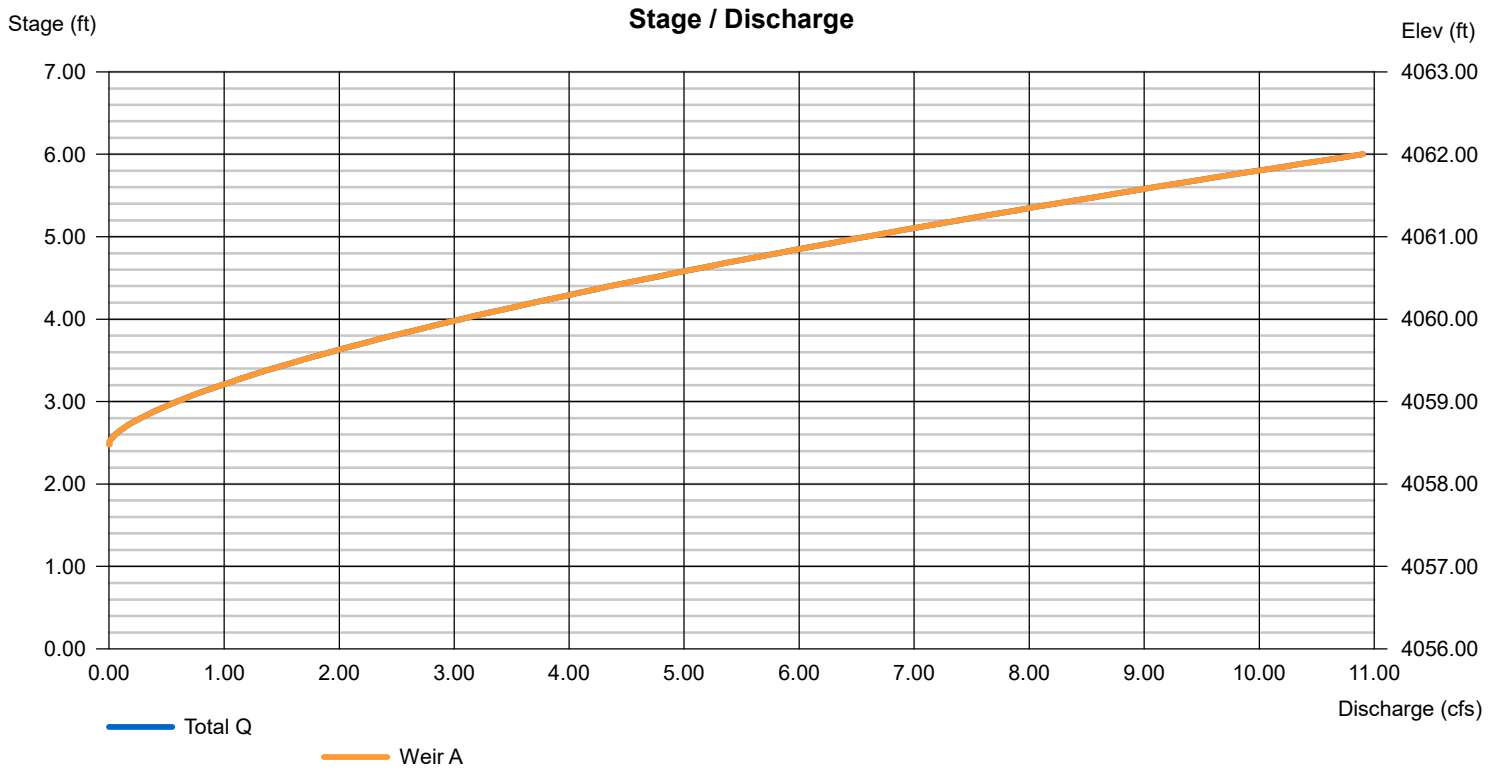
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 0.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 4058.50 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 3.33 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Rect | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**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).



## 5.6. Tabulated Modeling Results

### 5.6.a. Peak Runoff Rate and Volume Summary Tables

# RESULTS SUMMARY

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| **DESIGN STORM:** | 100-YEAR |

| **Pre Developed Conditions:** | | | | | | |
|---|---|---|---|---|---|---|
| **100 Yr Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.450 | 0.649 | 0.878 | 1.330 | 1.740 | 3.190 |
| **Sub-Basin A-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-A1}$ (cfs) | 3.124 | 4.705 | 5.654 | 8.218 | 8.295 | 9.837 |
| Pre-developed Runoff Volume (cf) | 2,035.00 | 4,321.00 | 8,095.00 | 17,571.00 | 25,356.00 | 53,780.00 |
| **Sub-Basin A-2** | | | | | | |
| Peak Discharge Rate $Q_{pre-A2}$ (cfs) | 5.416 | 8.416 | 10.820 | 15.730 | 15.880 | 18.830 |
| Pre-developed Runoff Volume (cf) | 3,965.00 | 8,418.00 | 15,494.00 | 33,630.00 | 48,531.00 | 102,932.00 |
| **Sub-Basin B-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-B1}$ (cfs) | 3.196 | 4.813 | 5.784 | 8.407 | 9.726 | 11.520 |
| Pre-developed Runoff Volume (cf) | 2,082.00 | 4,420.00 | 8,281.00 | 17,975.00 | 27,436.00 | 58,191.00 |
| **Sub-Basin C-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-C1}$ (cfs) | 1.325 | 1.995 | 2.748 | 3.935 | 4.031 | 4.776 |
| Pre-developed Runoff Volume (cf) | 863.00 | 1,832.00 | 3,328.00 | 7,224.00 | 11,370.00 | 24,115.00 |
| **Summary of Results: Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C)** | | | | | | |
| **100 Yr Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.450 | 0.649 | 0.878 | 1.330 | 1.740 | 3.190 |
| Peak Discharge Rate $Q_{pre-Total}$ (cfs) * | 13.050 | 19.790 | 24.680 | 35.980 | 37.570 | 44.880 |
| Pre-developed Runoff Volume (cf)* | 8,945.00 | 18,991.00 | 35,198.00 | 76,400.00 | 112,693.00 | 239,018.00 |
| Design Rainfall Depth (in) | 0.613 | 0.884 | 1.200 | 1.780 | 2.310 | 4.340 |
| Pre-developed Runoff Volume (cf)** | 19,175.00 | 34,338.00 | 58,256.00 | 117,730.00 | 174,196.00 | 354,272.00 |

* Indicates values calculated using Rainfall Depths as prescribed by the SBC Hydrology Manual for Flow Mitigation
** Indicates values calculated using Rainfall Depths as prescribed by the SBC Hydrology Manual for Volume Mitigation

| **Post Developed Conditions:** | | | | | | |
|---|---|---|---|---|---|---|
| **100 Yr Design Storm Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.613 | 0.884 | 1.200 | 1.780 | 2.310 | 4.340 |
| **Detention Basin A (Sub-basin A-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-A}$ (cfs) | 0.000 | 0.000 | 0.175 | 1.974 | 2.980 | 5.975 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 1,479.00 | 16,393.00 | 30,006.00 | 73,145.00 |
| Peak Stage Elevation | 4045.64 | 4046.41 | 4047.17 | 4047.85 | 4048.13 | 4048.79 |
| **Detention Basin B (Sub-basins A-2 & B-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-B}$ (cfs) | 0.000 | 0.000 | 3.796 | 10.770 | 17.960 | 27.550 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 12,194.00 | 55,308.00 | 95,379.00 | 222,225.00 |
| Peak Stage Elevation | 4028.74 | 4029.67 | 4030.53 | 4031.05 | 4031.48 | 4031.97 |
| **Detention Basin C (Sub-basin C-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-C}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.477 | 0.754 | 2.069 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 0.00 | 3,615.00 | 9,201.00 | 26,920.00 |
| Peak Stage Elevation | 4056.84 | 4057.37 | 4057.37 | 4058.93 | 4059.09 | 4059.66 |
| **Summary of Results: Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C)** | | | | | | |
| **Use 1 min time interval for 15 and 30 min.** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.613 | 0.884 | 1.200 | 1.780 | 2.310 | 4.340 |
| Peak Discharge Rate $Q_{post}$ (cfs) | 0.000 | 0.000 | 3.958 | 12.290 | 20.870 | 35.490 |
| Post-developed Runoff Volume (cf) | 0.00 | 0.00 | 13,673.00 | 75,316.00 | 134,586.00 | 322,289.00 |

## NOTES: (San Bernandino County Stormwater Design Criteria)

Use 1 min time interval for 15 and 30 min. duration events, use 2 min time interval for all other durations.
Use Synthetic Unit Hydrograph distribution for 15 min thru 24 Hr duration events
Use NRCS Time of Concentration Equation (kinematic equation)
Use AMC III for 100 Yr Events
Use AMC II for 10 Yr and 25 yr events
Use AMC I for 2 Yr Event
Predeveloped 100 Yr event uses 25 Yr rainfall depth/intensity values (For $Q_P$ Only)
Predeveloped 25 Yr event uses 10 Yr rainfall depth/intensity values (For $Q_P$ Only)
Predeveloped 10 Yr event uses 5 Yr rainfall depth/intensity values (For $Q_P$ Only)
Post developed Peak flows <= to 90% of Predeveloped flows
Post developed Catchment Freeboard: 2 ft above 100 Yr HWL
Post Developed Discharge Volume, $V_{Post-100YR}$ < Pre-Developed Runoff Volume, $V_{Pre-100YR}$

# RESULTS SUMMARY

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| **DESIGN STORM:** | 25-YEAR |

**Pre Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.353 | 0.510 | 0.690 | 1.060 | 1.400 | 2.490 |
| **Sub-Basin A-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-A1}$ (cfs) | 0.000 | 0.000 | 0.104 | 0.424 | 0.989 | 3.131 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 117.00 | 1,806.00 | 4,588.00 | 17,626.00 |
| **Sub-Basin A-2** | | | | | | |
| Peak Discharge Rate $Q_{pre-A2}$ (cfs) | 0.000 | 0.000 | 0.200 | 0.812 | 1.893 | 5.992 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 225.00 | 3,456.00 | 8,781.00 | 33,736.00 |
| **Sub-Basin B-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-B1}$ (cfs) | 0.000 | 0.000 | 0.123 | 0.471 | 1.148 | 3.669 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 127.00 | 1,954.00 | 4,964.00 | 19,072.00 |
| **Sub-Basin C-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-C1}$ (cfs) | 0.000 | 0.000 | 0.051 | 0.195 | 0.476 | 1.520 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 52.70 | 810.00 | 2,057.00 | 7,904.00 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.353 | 0.510 | 0.690 | 1.060 | 1.400 | 2.490 |
| Peak Discharge Rate $Q_{pre-Total}$ (cfs) | 0.000 | 0.000 | 0.472 | 1.885 | 4.475 | 14.120 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 522.00 | 8,026.00 | 20,390.00 | 78,338.00 |

**Post Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.450 | 0.649 | 0.878 | 1.330 | 1.740 | 3.190 |
| **Detention Basin A (Sub-basin A-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-A}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.740 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 21,692.00 |
| Peak Stage Elevation | 4044.00 | 4044.20 | 4044.75 | 4046.01 | 4046.90 | 4047.44 |
| **Detention Basin B (Sub-basins A-2 & B-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-B}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.852 | 3.681 |
| Detention Basin A (Sub-basin A-1) | 0.00 | 0.00 | 0.00 | 0.00 | 4,585.00 | 67,352.00 |
| High Water Level Elevation | 4027.00 | 4027.20 | 4027.74 | 4029.12 | 4030.19 | 4030.51 |
| **Detention Basin C (Sub-basin C-1)** | | | | | | 73,145.00 |
| Peak Discharge Rate $Q_{post-C}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.164 |
| Detention Basin B (Sub-basins A-2 & B-1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5,479.00 |
| High Water Level Elevation | 4056.00 | 4056.06 | 4056.28 | 4057.00 | 4057.67 | 4058.73 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event - 24 Hr** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Detention Basin C (Sub-basin C-1) | 0.450 | 0.649 | 0.878 | 1.330 | 1.740 | 3.190 |
| Peak Discharge Rate $Q_{post}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.852 | 4.171 |
| Post-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 4,585.00 | 94,523.00 |

## NOTES: (San Bernandino County Stormwater Design Criteria)

Use 1 min time interval for 15 and 30 min. duration events, use 2 min time interval for all other durations.
Use Synthetic Hydrograph distribution for 15 min thru 3 Hr duration events
Use NRCS 6 Hr Unit Hydrograph Distribution for 6 Hr duration events
Use NRCS Type I Unit Hydrograph Distribution for 24 hr duration events
Use NRCS Time of Concentration (kinematic equation)
Use AMC III for 100 Yr Events
Use AMC II for 10 Yr and 25 yr events
Use AMC I for 2 Yr Event
Predeveloped 100 Yr event uses 25 Yr rainfall depth/intensity values
Predeveloped 25 Yr event uses 10 Yr rainfall depth/intensity values
Predeveloped 10 Yr event uses 5 Yr rainfall depth/intensity values
Post developed Peak flows <= to 90% of Predeveloped flows
Post developed Catchment Freeboard: 2 ft above 100 Yr HWL

# RESULTS SUMMARY

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| **DESIGN STORM:** | 10-YEAR |

**Pre Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.288 | 0.416 | 0.563 | 0.877 | 1.150 | 2.000 |
| **Sub-Basin A-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-A1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.154 | 0.372 | 1.885 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 737.00 | 2,406.00 | 11,408.00 |
| **Sub-Basin A-2** | | | | | | |
| Peak Discharge Rate $Q_{pre-A2}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.295 | 0.712 | 3.608 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 1,411.00 | 4,606.00 | 21,835.00 |
| **Sub-Basin B-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-B1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.167 | 0.417 | 2.209 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 798.00 | 2,604.00 | 12,344.00 |
| **Sub-Basin C-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-C1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.069 | 0.173 | 0.915 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 331.00 | 1,079.00 | 5,116.00 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.288 | 0.416 | 0.563 | 0.877 | 1.150 | 2.000 |
| Peak Discharge Rate $Q_{pre-Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.684 | 1.658 | 8.529 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 3,277.00 | 10,695.00 | 50,703.00 |

**Post Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.353 | 0.510 | 0.690 | 1.060 | 1.400 | 2.490 |
| **Detention Basin A (Sub-basin A-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-A}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.296 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10,138.00 |
| Peak Stage Elevation | 4044.00 | 4044.02 | 4044.30 | 4045.29 | 4046.14 | 4047.24 |
| **Detention Basin B (Sub-basins A-2 & B-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-B}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.310 |
| Detention Basin A (Sub-basin A-1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 36,956.00 |
| High Water Level Elevation | 4027.00 | 4027.02 | 4027.28 | 4027.32 | 4029.29 | 4030.26 |
| **Detention Basin C (Sub-basin C-1)** | | | | | | 73,145.00 |
| Peak Discharge Rate $Q_{post-C}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.051 |
| Detention Basin B (Sub-basins A-2 & B-1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 801.00 |
| High Water Level Elevation | 4056.00 | 4056.00 | 4056.09 | 4056.56 | 4057.10 | 4058.60 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event - 24 Hr** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Detention Basin C (Sub-basin C-1) | 0.353 | 0.510 | 0.690 | 1.060 | 1.400 | 2.490 |
| Peak Discharge Rate $Q_{post}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.432 |
| Post-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 47,895.00 |

## NOTES: (San Bernandino County Stormwater Design Criteria)

Use 1 min time interval for 15 and 30 min. duration events, use 2 min time interval for all other durations.
Use Synthetic Hydrograph distribution for 15 min thru 3 Hr duration events
Use NRCS 6 Hr Unit Hydrograph Distribution for 6 Hr duration events
Use NRCS Type I Unit Hydrograph Distribution for 24 hr duration events
Use NRCS Time of Concentration (kinematic equation)
Use AMC III for 100 Yr Events
Use AMC II for 10 Yr and 25 yr events
Use AMC I for 2 Yr Event
Predeveloped 100 Yr event uses 25 Yr rainfall depth/intensity values
Predeveloped 25 Yr event uses 10 Yr rainfall depth/intensity values
Predeveloped 10 Yr event uses 5 Yr rainfall depth/intensity values
Post developed Peak flows <= to 90% of Predeveloped flows
Post developed Catchment Freeboard: 2 ft above 100 Yr HWL

# RESULTS SUMMARY

| | |
|---|---|
| **SITE NAME:** | OMYA Solar Plant |
| **DESIGN STORM:** | 2-YEAR |

**Pre Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.211 | 0.305 | 0.413 | 0.659 | 0.869 | 1.420 |
| **Sub-Basin A-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-A1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 165.00 |
| **Sub-Basin A-2** | | | | | | |
| Peak Discharge Rate $Q_{pre-A2}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.019 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 299.00 |
| **Sub-Basin B-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-B1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.011 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 169.00 |
| **Sub-Basin C-1** | | | | | | |
| Peak Discharge Rate $Q_{pre-C1}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 70.00 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Design Rainfall Depth (in) | 0.211 | 0.305 | 0.413 | 0.659 | 0.869 | 1.420 |
| Peak Discharge Rate $Q_{pre-Total}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.044 |
| Pre-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 703.00 |

**Post Developed Conditions:**

| **Design Storm Event Duration** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
|---|---|---|---|---|---|---|
| Design Rainfall Depth (in) | 0.211 | 0.305 | 0.413 | 0.659 | 0.869 | 1.420 |
| **Detention Basin A (Sub-basin A-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-A}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Total Discharge Outflow Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Peak Stage Elevation | 4044.00 | 4044.00 | 4044.00 | 4044.00 | 4044.00 | 4044.71 |
| **Detention Basin B (Sub-basins A-2 & B-1)** | | | | | | |
| Peak Discharge Rate $Q_{post-B}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Detention Basin A (Sub-basin A-1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| High Water Level Elevation | 4027.00 | 4027.00 | 4027.00 | 4027.00 | 4027.00 | 4027.71 |
| **Detention Basin C (Sub-basin C-1)** | | | | | | 73,145.00 |
| Peak Discharge Rate $Q_{post-C}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Detention Basin B (Sub-basins A-2 & B-1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| High Water Level Elevation | 4056.00 | 4056.00 | 4056.00 | 4056.00 | 4056.00 | 4056.23 |
| **Summary of Results:** Receiving Waters (Runoff From Pre-developed Basins A-1, A-2, B, and C) | | | | | | |
| **Design Storm Event - 24 Hr** | **15 min** | **30 min** | **1 hr** | **3 hr** | **6 hr** | **24 hr** |
| Detention Basin C (Sub-basin C-1) | 0.211 | 0.305 | 0.413 | 0.659 | 0.869 | 1.420 |
| Peak Discharge Rate $Q_{post}$ (cfs) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Post-developed Runoff Volume (cf) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## NOTES: (San Bernandino County Stormwater Design Criteria)

Use 1 min time interval for 15 and 30 min. duration events, use 2 min time interval for all other durations.
Use Synthetic Hydrograph distribution for 15 min thru 3 Hr duration events
Use NRCS 6 Hr Unit Hydrograph Distribution for 6 Hr duration events
Use NRCS Type I Unit Hydrograph Distribution for 24 hr duration events
Use NRCS Time of Concentration (kinematic equation)
Use AMC III for 100 Yr Events
Use AMC II for 10 Yr and 25 yr events
Use AMC I for 2 Yr Event
Predeveloped 100 Yr event uses 25 Yr rainfall depth/intensity values
Predeveloped 25 Yr event uses 10 Yr rainfall depth/intensity values
Predeveloped 10 Yr event uses 5 Yr rainfall depth/intensity values
Post developed Peak flows <= to 90% of Predeveloped flows
Post developed Catchment Freeboard: 2 ft above 100 Yr HWL

## 5.7. Off-site Contributing Area Calculations and Modeling Results

5.7.a. TR-55 Calculations
5.7.b. Time of Concentration Calculations
5.7.c. Peak Runoff Rate and Volume Modeling Results (100 Yr/24 Hr)

5.7.a. TR-55 Calculations

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Offsite Contributing Basin: | | | |
| **Design Storm:** | 2-Year | 1.42 in | 24 hrs | AMC I |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 1,612,722.12 | SF | 37.0230 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 1,612,722.12 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 94.80 |
| Desert Brush @ 50% cover (HSG A) | 1,612,722.12 | SF ** | 100.00% | CN= 60.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 65.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{PRE}$ | 1,612,722.12 | | 60.6000 | |

**Post-Developed Conditions: (No Change From Pre-Developed Conditions)**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 1,612,722.12 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 94.80 |
| Solar Panel Array Area (30% Imperv.) | 0.00 | SF | 0.00% | CN= 69.90 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 79.80 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 70.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 68.60 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 38.00 |
| Desert Brush @ 50% cover (HSG A) | 1,612,722.12 | SF ** | 100.00% | CN= 60.60 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 45.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 68.60 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 49.80 |
| Weighted Curve Number: $CN'_{POST}$ | 1,612,722.12 | | 60.6000 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

*** Per San Bernadino County, Solar Array Area (perimeter edge area) is considered as 30% impervious.**

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC I conditions.**

| | | | | |
|---|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 19.38 | Min. | | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 15.50 | Min. | | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 19.38 | Min. | | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 15.50 | Min. | | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% | |
| Proposed Conditions Impervious Coverage | 0.00 | SF * | 0.00% | |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Offsite Contributing Basin: | | | |
| **Design Storm:** | 10-Year | 2.49 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 78.0000 | |

**Post-Developed Conditions: (No Change From Pre-Developed Conditions)**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 0.00 | SF | 0.00% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 78.0000 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 17.26 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 13.81 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 17.26 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 13.81 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 0.00 | SF * | 0.00% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Offsite Contributing Basin: | | | |
| **Design Storm:** | 25-Year | 3.19 in | 24 hrs | AMC II |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 98 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 78 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 82 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 78.0000 | |

**Post-Developed Conditions: (No Change From Pre-Developed Conditions)**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 98 |
| Solar Panel Array Area (30% Imperv.) | 0.00 | SF | 0.00% | CN= 82.50 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 91 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 85 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 84 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 58 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 78 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 65 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 84 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 69 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 78.0000 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

**** Base Curve Numbers based on AMC II conditions.**

| | | | |
|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 16.49 | Min. | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 13.19 | Min. | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 16.49 | Min. | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 13.19 | Min. | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% |
| Proposed Conditions Impervious Coverage | 0.00 | SF | 0.00% |

# Stormwater Runoff Volume Calculations

| | | | | |
|---|---|---|---|---|
| **SITE NAME:** | OMYA Solar Plant | | | |
| | Offsite Contributing Basin: | | | |
| **Design Storm:** | 100-Year | 4.34 in | 24 hrs | AMC III |

| | | | | |
|---|---|---|---|---|
| Total Basin Area: | 269,104.77 | SF | 6.1778 | Ac |

**Pre-Developed Conditions:**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete/Asphalt Area | 0.00 | SF | 0.00% | CN= 99.60 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 92.80 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Woods/Grass Combo (HSG D-Fair) | 0.00 | SF | 0.00% | CN= 95.20 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 83.00 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{PRE}$ | 269,104.77 | | 92.8000 | |

**Post-Developed Conditions: (No Change From Pre-Developed Conditions)**

| | | | | |
|---|---|---|---|---|
| Total Basin Area | 269,104.77 | SF | 100.00% | |
| Building Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Concrete Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Asphalt Coverage | 0.00 | SF | 0.00% | CN= 99.60 |
| Solar Panel Array Area (30% Imperv.) | 0.00 | SF | 0.00% | CN= 93.70 |
| Gravel Access Drive (HSG A) | 0.00 | SF | 0.00% | CN= 98.20 |
| Gravel Equipment Area (HSG A) | 0.00 | SF | 0.00% | CN= 97.00 |
| Staging Area (HSG A) | 0.00 | SF | 0.00% | CN= 96.40 |
| Row Crops (SR) Area (HSG A) | 0.00 | SF | 0.00% | CN= 77.40 |
| Desert Brush @ 50% cover (HSG A) | 269,104.77 | SF ** | 100.00% | CN= 92.80 |
| Woods/Grass Combo (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 77.40 |
| Pasture/Range Land (HSG D -Fair) | 0.00 | SF | 0.00% | CN= 96.40 |
| Pasture/Range Land (HSG B-Fair) | 0.00 | SF | 0.00% | CN= 86.20 |
| Weighted Curve Number: $CN'_{POST}$ | 269,104.77 | | 92.8000 | |

| | | | | |
|---|---|---|---|---|
| Primary Soil Type | HSG "A" | | 100.00% | |
| Correlated Infiltration Rate "K" | 32.173 | µ/sec | 4.5600 | In/Hr |

(Established From Geotech Report by Terracon on 5/7/24)

**** Base Curve Numbers interpolated from San Bernadino Stormwater Manual, Table C.1. for AMC III conditions.**

| | | | | |
|---|---|---|---|---|
| Pre-Developed Time of Concentration: $T_{C\text{-}Pre}$ = | 15.67 | Min. | | |
| Pre-Developed Lag Time: $T_{Lag\text{-}Pre} = T_{C\text{-}Pre} \times 0.8$ = | 12.53 | Min. | | |
| Post-Developed Time of Concentration: $T_{C\text{-}Post}$ = | 15.67 | Min. | | |
| Post-Developed Lag Time: $T_{Lag\text{-}Post} = T_{C\text{-}Post} \times 0.8$ = | 12.53 | Min. | | |
| Existing Conditions Impervious Coverage | 0.00 | SF | 0.00% | |
| Proposed Conditions Impervious Coverage | 0.00 | SF * | 0.00% | |

# 5.7.b. Time of Concentration Calculations

| TIME OF CONCENTRATION AND TRAVEL TIME | |
|---|---|
| PROJECT NAME | OMYA Solar Plant |
| SUB-BASIN : | Offsite Contributing Basin: |
| EXISTING | CONDITIONS |

| FLOW TYPE | LENGTH (feet) | SLOPE (ft./ft.) | SURFACE a | MANNINGS "N" | AREA (sq.ft.) | WP (feet) | VELOCITY (ft./sec.) | TRAVEL TIME (Hrs) |
|---|---|---|---|---|---|---|---|---|
| SHEET | 100 | 0.07480 | e | 0.150 | n/a | n/a | n/a | 0.0827 |
| | | | | | | | | |
| SHALLOW CONCENTRATED | 3081.3 | 0.08844 | u | n/a | n/a | n/a | 4.79812737 | 0.1784 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| SHALLOW CONCENTRATED | | | | n/a | n/a | n/a | ---------- | 0.0000 |
| | | | | | | | | |
| OPEN CHANNEL | | | | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| OPEN CHANNEL | | | n/a | | | | ---------- | 0.0000 |
| | | | | | | | | |
| TIME OF CONCENTRATION, $T_{Conc} = \sum(T_1+T_2+...T_t)$: | | | | | | | | 0.2611 hrs |
| | | | | | | | | 15.6670 min. |

Sheet Flow Surface Codes

| | |
|---|---|
| a Smooth Surface | f grass, dense |
| b fallow (no residue) | g grass, bermuda |
| c cultivated < 20% Res. | h woods, light |
| d cultivated > 20% Res. | i woods, dense |
| e grass - range, short | j range, natural |
| | k gravel, firm |

| Hydraulic Path Input Data: | | | | |
|---|---|---|---|---|
| Flow Type: | Length (ft): | Upstream | Dwnstream | Gradient |
| Overall | 3181.30 | 4400.00 | 4120.00 | 0.08801 |
| Sheetflow | 100.00 | 4400.00 | 4392.50 | 0.07500 |
| Shallow Conc. | 3081.30 | 4392.50 | 4120.00 | 0.08844 |

Shallow Concentrated Surface Codes

| | |
|---|---|
| u unpaved surface | $V_U = 16.1345 \times S_2^{0.5}$ |
| p paved surface | $V_P = 20.3282 \times S_2^{0.5}$ |

| Methodology #1: NRCS - Manning's Kinematic Solution: | | | | |
|---|---|---|---|---|
| Overland Travel Time (NRCS): | $T_1 = [0.007 \times (n \times L_1)^{0.8}/P^{0.5} \times S_1^{0.4}]$ | | | |
| Manning's Roughness Coefficient: | n | 0.150 | | |
| Design Storm Rainfall depth (in): | P | 4.34 | | |
| Travel Length Sheet Flow (ft): | $L_1$ | 100.00 | | |
| Gradient/Slope for Sheet Flow: | $S_1$ | 7.500% | | |
| Shallow Concentrated Travel Time | $T_2 = L_2/(3600 \times V_U)$ | | | |
| Travel Length Shallow Conc. Flow (ft): | $L_2$ | 3081.30 | | |
| Gradient/Slope for Sheet Flow: | $S_2$ | 8.844% | | |
| Overland Lag Time | $T_{Lag} = 0.8\ T_{Conc}$ | = | 12.5336 | min. |
| Time of Concentration | $T_{conc} = \sum(T_1+T_2)$ | = | 15.6670 | min. |

| Methodology #2: Kirpich Lag Time Equation: | | | | |
|---|---|---|---|---|
| Kirpich Lag Time Equation: | $T_{Lag} = 24 \times \tilde{n} \times (L \times L_{CA}/S^{0.5})^{0.38}$ | | | |
| Basin Factor "ñ" from Fig E-2 | ñ | 0.030 | 0.030 | |
| Length of Longest Watercourse | L | 3181.3 | 0.603 | miles |
| Length along Hydraulic Path | $L_{CA}$ | 841.5 | 0.159 | miles |
| Elevation Differential | $\Delta H$ | 280.00 | 280.000 | |
| Slope of Longest Watercourse | S | 8.801% | 464.716 | ft/mile |
| Overland Lag Time | $T_{Lag}$ | = | 5.5211 | min. |
| Time of Concentration: | $T_{conc} = T_{Lag}/0.8$ | = | 6.9014 | min. |

Notes; Hydraulic length exceeds 1,000 ft and as such SBC $T_C$ Nomograph methodology could not be used. Methodology #2 results appear to be too short based on typical flow patterns and subsequent velocities. Results from Methodology #1 are utilized in the flow analysis for the off-site contributing basin.

5. 7.c. Peak Runoff Rate and Volume Modeling Results (100 Yr/ 24 Hr)

# Watershed Model Schematic






## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | SCS Runoff | Off-site Basin |
| 2 | Combine | Off-site Recieving Waters |

# Hydrograph Return Period Recap

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 84.48 | Off-site Basin |
| 2 | Combine | 1 | ------- | ------- | ------- | ------- | ------- | ------- | ------- | 84.48 | Off-site Recieving Waters |

# Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.1

| 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 | 84.48 | 2 | 730 | 477,708 | ---- | ------ | ------ | Off-site Basin |
| 2 | Combine | 84.48 | 2 | 730 | 477,708 | 1 | ------ | ------ | Off-site Recieving Waters |

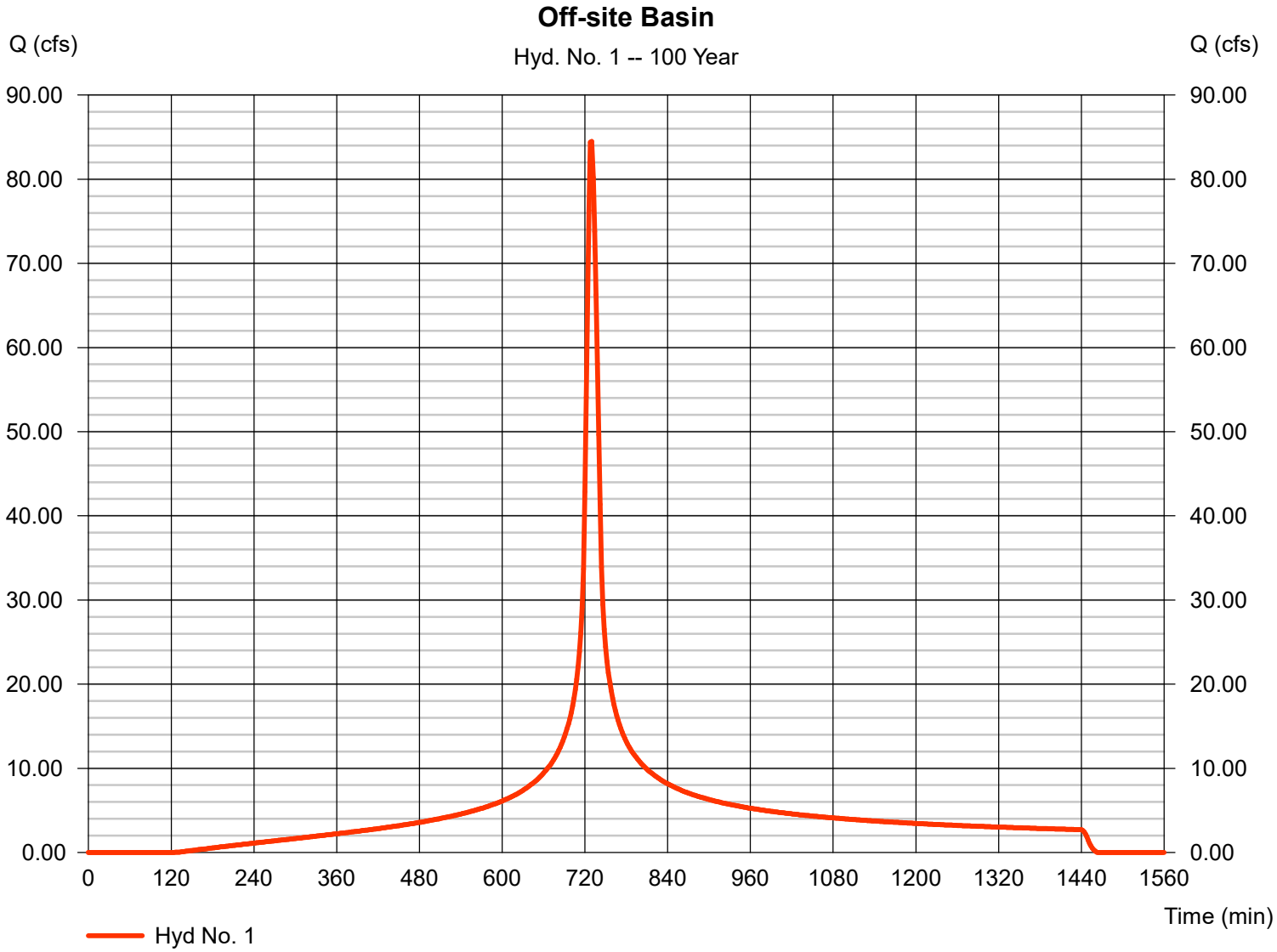
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Wednesday, Mar 5, 2025

## Hyd. No. 1

Off-site Basin

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | SCS Runoff | Peak discharge | = | 84.48 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 730 min |
| Time interval | = | 2 min | Hyd. volume | = | 477,708 cuft |
| Drainage area | = | 37.023 ac | Curve number | = | 92.8 |
| Basin Slope | = | 0.0 % | Hydraulic length | = | 0 ft |
| Tc method | = | USER | Time of conc. (Tc) | = | 15.70 min |
| Total precip. | = | 4.46 in | Distribution | = | Synthetic |
| Storm duration | = | 24.00 hrs | Shape factor | = | 484 |



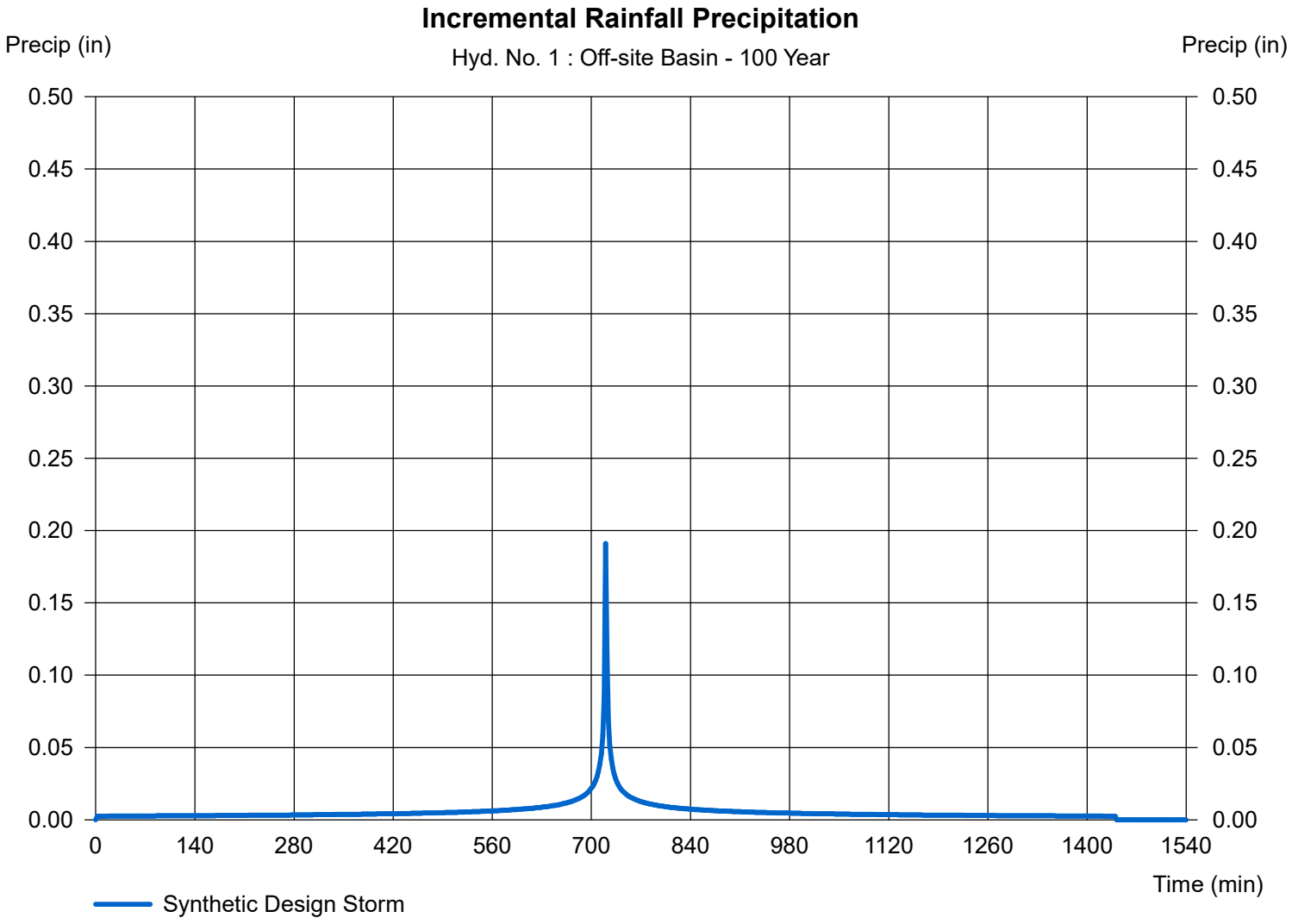
# Precipitation Report



## Hyd. No. 1

Off-site Basin

| | | | |
|---|---|---|---|
| Storm Frequency | = 100 yrs | Time interval | = 2 min |
| Total precip. | = 4.4582 in | Distribution | = Synthetic |
| Storm duration | = 24.00 hrs | | |



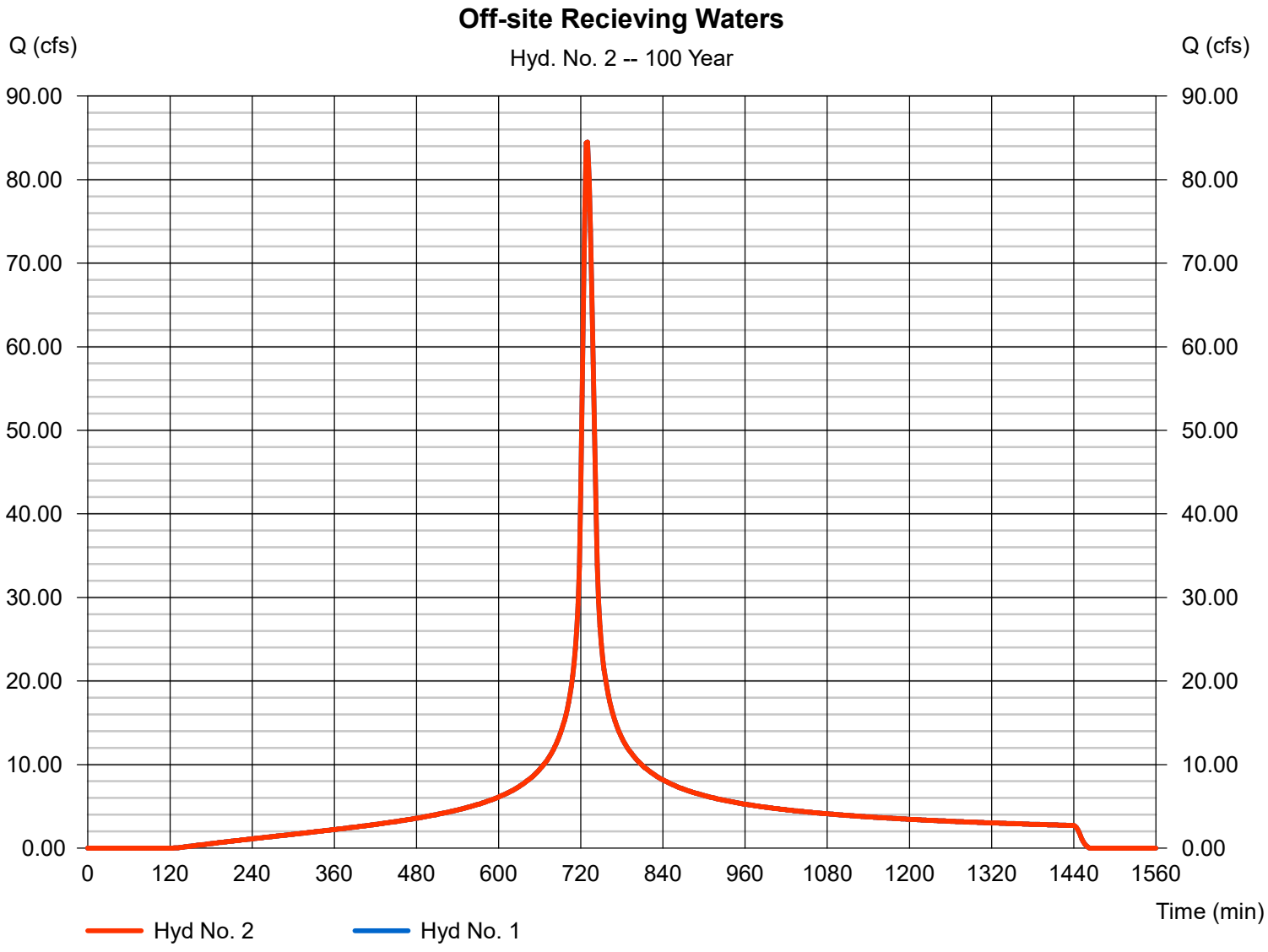
# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1 Wednesday, Mar 5, 2025

## Hyd. No. 2

Off-site Recieving Waters

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 84.48 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 730 min |
| Time interval | = 2 min | Hyd. volume | = 477,708 cuft |
| Inflow hyds. | = 1 | Contrib. drain. area | = 37.023 ac |



# Hydraflow Rainfall Report

Hydraflow Hydrographs by Intelisolve v9.1 Wednesday, Mar 5, 2025

| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 3.9122 | 3.1000 | 0.6117 | -------- |
| 2 | 5.2280 | 3.0000 | 0.6144 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 8.2248 | 2.6000 | 0.5991 | -------- |
| 25 | 10.6426 | 2.7000 | 0.6029 | -------- |
| 50 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 100 | 14.0137 | 2.5000 | 0.5943 | -------- |

File name: OMYA_Pre_Frequency Data_For Volume.IDF

### Intensity = B / (Tc + D)^E

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 1.09 | 0.81 | 0.67 | 0.57 | 0.51 | 0.46 | 0.42 | 0.39 | 0.37 | 0.34 | 0.33 | 0.31 |
| 2 | 1.46 | 1.08 | 0.89 | 0.76 | 0.67 | 0.61 | 0.56 | 0.52 | 0.48 | 0.46 | 0.43 | 0.41 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 2.44 | 1.80 | 1.48 | 1.27 | 1.13 | 1.02 | 0.94 | 0.87 | 0.81 | 0.77 | 0.73 | 0.69 |
| 25 | 3.11 | 2.30 | 1.88 | 1.62 | 1.44 | 1.30 | 1.19 | 1.11 | 1.04 | 0.97 | 0.92 | 0.88 |
| 50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 4.23 | 3.12 | 2.56 | 2.20 | 1.95 | 1.77 | 1.63 | 1.51 | 1.41 | 1.33 | 1.26 | 1.20 |

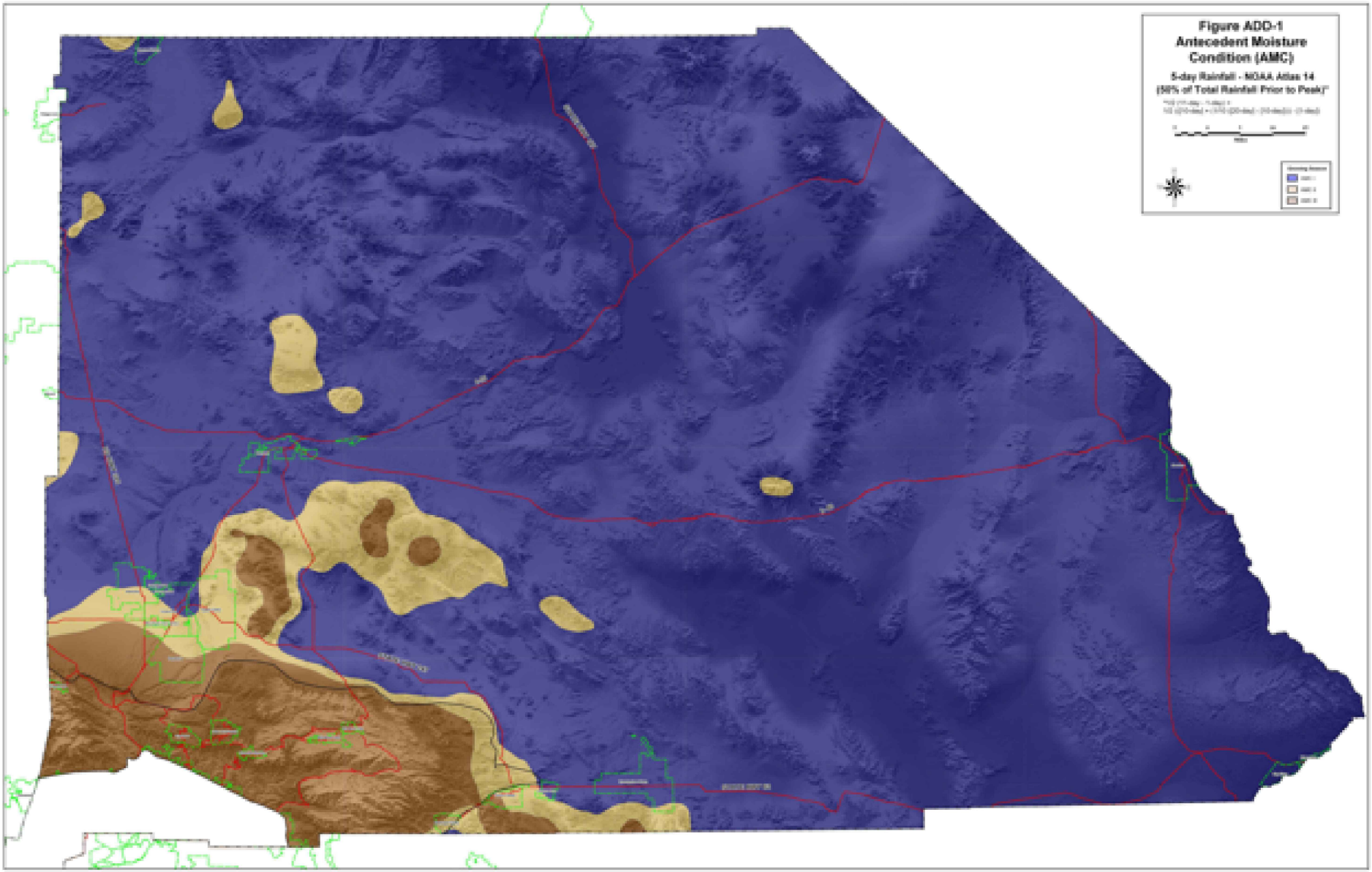
Tc = time in minutes. Values may exceed 60.

Precip. file name: OMYA Pre_24 Hr Duration_custom.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 1.42 | 0.00 | 0.00 | 2.49 | 3.19 | 0.00 | 4.34 |
| SCS 6-Hr | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# APPENDIX A

# ANTECEDENT MOISTURE CONDITIONS MAP (FIGURE ADD-1)


Figure ADD-1
Antecedent Moisture Condition (AMC)
5-day Rainfall - NOAA Atlas 14
(50% of Total Rainfall Prior to Peak)"

# APPENDIX B

# NOAA ATLAS 14 Datasheets

**NOAA Atlas 14, Volume 6, Version 2**
**Location name: Lucerne Valley, California, USA***
**Latitude: 34.3824°, Longitude: -116.9419°**
**Elevation: 3901 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | **1.09** (0.900-1.33) | **1.46** (1.21-1.79) | **1.99** (1.64-2.45) | **2.45** (1.99-3.02) | **3.11** (2.46-3.98) | **3.66** (2.83-4.78) | **4.24** (3.20-5.68) | **4.86** (3.58-6.68) | **5.75** (4.06-8.24) | **6.47** (4.40-9.60) |
| 10-min | **0.780** (0.648-0.954) | **1.05** (0.864-1.28) | **1.43** (1.18-1.75) | **1.75** (1.43-2.17) | **2.23** (1.76-2.86) | **2.62** (2.03-3.42) | **3.04** (2.29-4.07) | **3.49** (2.56-4.79) | **4.12** (2.90-5.90) | **4.64** (3.16-6.88) |
| 15-min | **0.632** (0.520-0.772) | **0.844** (0.696-1.04) | **1.15** (0.948-1.41) | **1.41** (1.15-1.75) | **1.80** (1.42-2.30) | **2.11** (1.64-2.76) | **2.45** (1.85-3.28) | **2.81** (2.06-3.86) | **3.32** (2.34-4.76) | **3.74** (2.55-5.55) |
| 30-min | **0.456** (0.376-0.556) | **0.610** (0.504-0.748) | **0.832** (0.684-1.02) | **1.02** (0.832-1.26) | **1.30** (1.03-1.66) | **1.52** (1.18-1.99) | **1.77** (1.34-2.37) | **2.03** (1.49-2.79) | **2.40** (1.69-3.44) | **2.70** (1.84-4.00) |
| 60-min | **0.308** (0.255-0.377) | **0.413** (0.341-0.506) | **0.563** (0.463-0.691) | **0.690** (0.564-0.855) | **0.878** (0.694-1.12) | **1.03** (0.798-1.35) | **1.20** (0.904-1.60) | **1.37** (1.01-1.89) | **1.62** (1.14-2.33) | **1.83** (1.24-2.71) |
| 2-hr | **0.210** (0.173-0.256) | **0.276** (0.228-0.338) | **0.370** (0.305-0.455) | **0.450** (0.368-0.558) | **0.566** (0.447-0.724) | **0.660** (0.511-0.862) | **0.759** (0.573-1.02) | **0.862** (0.633-1.19) | **1.00** (0.709-1.44) | **1.12** (0.761-1.66) |
| 3-hr | **0.167** (0.138-0.204) | **0.219** (0.181-0.268) | **0.292** (0.240-0.358) | **0.354** (0.289-0.438) | **0.443** (0.350-0.567) | **0.516** (0.399-0.674) | **0.591** (0.446-0.791) | **0.671** (0.493-0.924) | **0.780** (0.550-1.12) | **0.864** (0.588-1.28) |
| 6-hr | **0.110** (0.091-0.135) | **0.145** (0.119-0.177) | **0.192** (0.158-0.236) | **0.232** (0.190-0.288) | **0.290** (0.229-0.372) | **0.337** (0.261-0.440) | **0.385** (0.291-0.516) | **0.437** (0.320-0.601) | **0.507** (0.357-0.727) | **0.561** (0.382-0.833) |
| 12-hr | **0.067** (0.055-0.082) | **0.091** (0.075-0.111) | **0.124** (0.102-0.152) | **0.152** (0.124-0.188) | **0.192** (0.151-0.246) | **0.224** (0.173-0.293) | **0.258** (0.194-0.345) | **0.293** (0.215-0.403) | **0.342** (0.241-0.490) | **0.380** (0.259-0.564) |
| 24-hr | **0.042** (0.037-0.048) | **0.059** (0.052-0.068) | **0.083** (0.073-0.096) | **0.103** (0.090-0.120) | **0.132** (0.112-0.159) | **0.156** (0.129-0.192) | **0.181** (0.146-0.227) | **0.207** (0.163-0.268) | **0.245** (0.185-0.330) | **0.275** (0.201-0.384) |
| 2-day | **0.024** (0.021-0.028) | **0.035** (0.031-0.040) | **0.050** (0.044-0.057) | **0.062** (0.054-0.073) | **0.080** (0.068-0.097) | **0.095** (0.079-0.117) | **0.110** (0.089-0.139) | **0.127** (0.100-0.165) | **0.151** (0.114-0.204) | **0.171** (0.125-0.238) |
| 3-day | **0.017** (0.015-0.020) | **0.025** (0.022-0.029) | **0.036** (0.032-0.042) | **0.045** (0.040-0.053) | **0.059** (0.050-0.071) | **0.069** (0.058-0.086) | **0.081** (0.066-0.102) | **0.094** (0.074-0.121) | **0.112** (0.084-0.151) | **0.127** (0.093-0.177) |
| 4-day | **0.013** (0.012-0.015) | **0.019** (0.017-0.022) | **0.028** (0.025-0.033) | **0.036** (0.032-0.042) | **0.047** (0.040-0.057) | **0.056** (0.046-0.069) | **0.065** (0.053-0.083) | **0.076** (0.060-0.098) | **0.091** (0.069-0.123) | **0.103** (0.075-0.144) |
| 7-day | **0.008** (0.007-0.009) | **0.012** (0.010-0.014) | **0.018** (0.016-0.021) | **0.023** (0.020-0.027) | **0.030** (0.026-0.037) | **0.036** (0.030-0.045) | **0.043** (0.034-0.054) | **0.049** (0.039-0.064) | **0.059** (0.045-0.080) | **0.067** (0.049-0.094) |
| 10-day | **0.006** (0.005-0.007) | **0.009** (0.008-0.010) | **0.013** (0.012-0.015) | **0.017** (0.015-0.020) | **0.023** (0.019-0.028) | **0.028** (0.023-0.034) | **0.033** (0.026-0.041) | **0.038** (0.030-0.049) | **0.046** (0.034-0.062) | **0.052** (0.038-0.072) |
| 20-day | **0.003** (0.002-0.003) | **0.005** (0.004-0.005) | **0.008** (0.007-0.009) | **0.010** (0.009-0.012) | **0.014** (0.012-0.017) | **0.017** (0.014-0.021) | **0.020** (0.016-0.026) | **0.024** (0.019-0.031) | **0.028** (0.021-0.039) | **0.032** (0.023-0.045) |
| 30-day | **0.002** (0.002-0.002) | **0.003** (0.003-0.004) | **0.006** (0.005-0.007) | **0.008** (0.007-0.009) | **0.011** (0.009-0.013) | **0.013** (0.011-0.016) | **0.016** (0.013-0.020) | **0.018** (0.014-0.024) | **0.022** (0.017-0.030) | **0.025** (0.018-0.035) |
| 45-day | **0.001** (0.001-0.002) | **0.002** (0.002-0.003) | **0.004** (0.004-0.005) | **0.006** (0.005-0.007) | **0.008** (0.007-0.010) | **0.010** (0.008-0.013) | **0.012** (0.010-0.016) | **0.015** (0.011-0.019) | **0.018** (0.013-0.024) | **0.020** (0.014-0.028) |
| 60-day | **0.001** (0.001-0.001) | **0.002** (0.002-0.002) | **0.003** (0.003-0.004) | **0.005** (0.004-0.006) | **0.007** (0.006-0.008) | **0.009** (0.007-0.011) | **0.010** (0.008-0.013) | **0.012** (0.010-0.016) | **0.015** (0.011-0.020) | **0.017** (0.012-0.024) |

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

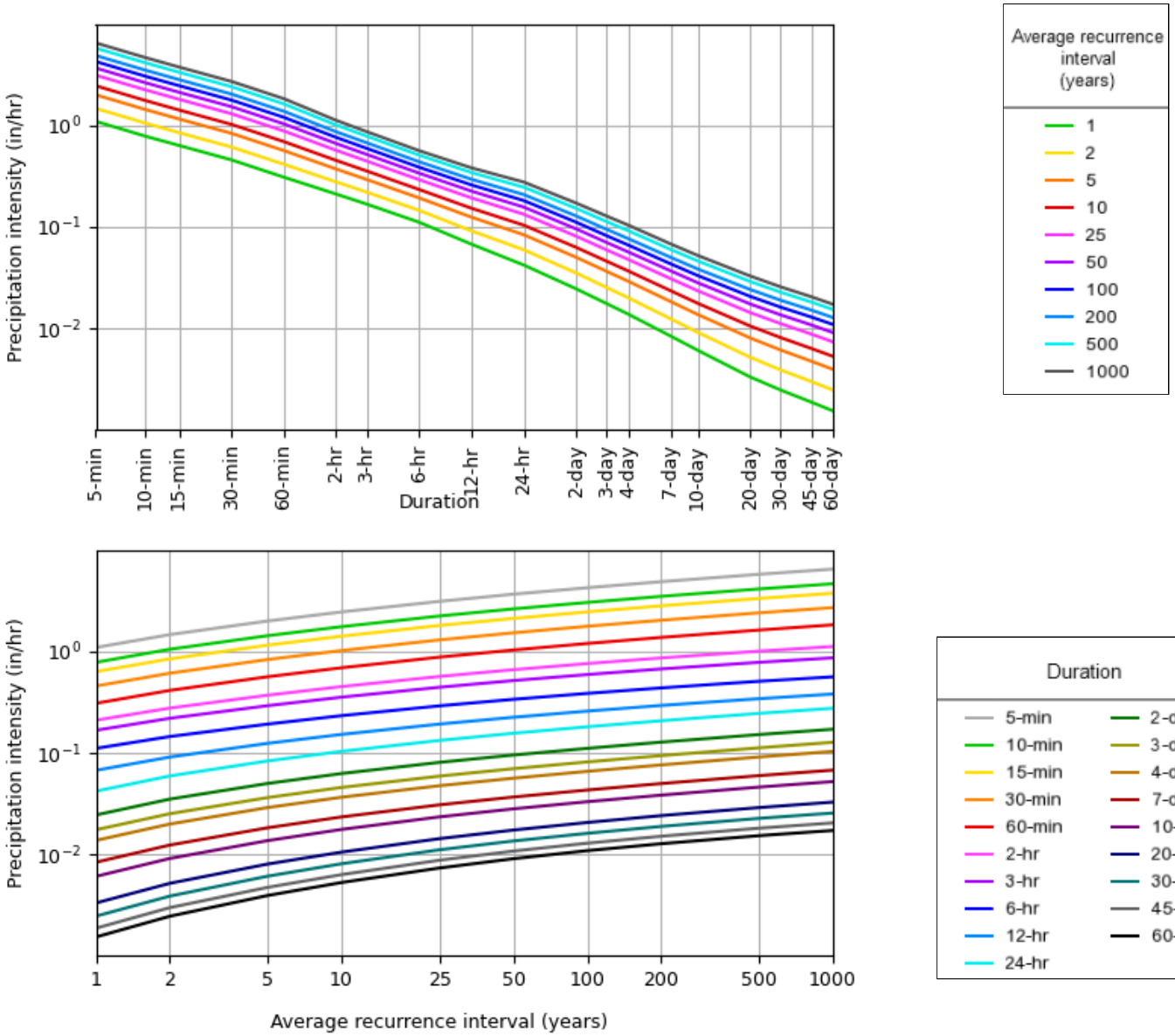
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

## PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 34.3824°, Longitude: -116.9419°




NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Mon Jul 8 11:29:35 2024

Back to Top

## Maps & aerials

**Small scale terrain**

**NOAA Atlas 14, Volume 6, Version 2**
**Location name: Lucerne Valley, California, USA***
**Latitude: 34.3824°, Longitude: -116.9419°**
**Elevation: 3901 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.091 (0.075-0.111) | 0.122 (0.101-0.149) | 0.166 (0.137-0.204) | 0.204 (0.166-0.252) | 0.259 (0.205-0.332) | 0.305 (0.236-0.398) | 0.353 (0.267-0.473) | 0.405 (0.298-0.557) | 0.479 (0.338-0.687) | 0.539 (0.367-0.800) |
| 10-min | 0.130 (0.108-0.159) | 0.175 (0.144-0.214) | 0.238 (0.196-0.292) | 0.292 (0.239-0.362) | 0.372 (0.294-0.476) | 0.437 (0.338-0.570) | 0.506 (0.382-0.678) | 0.581 (0.427-0.799) | 0.687 (0.484-0.984) | 0.773 (0.527-1.15) |
| 15-min | 0.158 (0.130-0.193) | 0.211 (0.174-0.259) | 0.288 (0.237-0.353) | 0.353 (0.288-0.437) | 0.450 (0.355-0.575) | 0.528 (0.409-0.690) | 0.613 (0.462-0.819) | 0.703 (0.516-0.966) | 0.831 (0.585-1.19) | 0.935 (0.637-1.39) |
| 30-min | 0.228 (0.188-0.278) | 0.305 (0.252-0.374) | 0.416 (0.342-0.510) | 0.510 (0.416-0.631) | 0.649 (0.513-0.830) | 0.762 (0.590-0.996) | 0.884 (0.668-1.18) | 1.01 (0.745-1.40) | 1.20 (0.845-1.72) | 1.35 (0.919-2.00) |
| 60-min | 0.308 (0.255-0.377) | 0.413 (0.341-0.506) | 0.563 (0.463-0.691) | 0.690 (0.564-0.855) | 0.878 (0.694-1.12) | 1.03 (0.798-1.35) | 1.20 (0.904-1.60) | 1.37 (1.01-1.89) | 1.62 (1.14-2.33) | 1.83 (1.24-2.71) |
| 2-hr | 0.420 (0.347-0.513) | 0.553 (0.456-0.677) | 0.741 (0.610-0.910) | 0.901 (0.736-1.12) | 1.13 (0.895-1.45) | 1.32 (1.02-1.72) | 1.52 (1.15-2.03) | 1.72 (1.27-2.37) | 2.01 (1.42-2.88) | 2.24 (1.52-3.31) |
| 3-hr | 0.502 (0.415-0.615) | 0.659 (0.544-0.807) | 0.877 (0.721-1.08) | 1.06 (0.868-1.32) | 1.33 (1.05-1.70) | 1.55 (1.20-2.02) | 1.78 (1.34-2.38) | 2.02 (1.48-2.78) | 2.34 (1.65-3.36) | 2.60 (1.77-3.85) |
| 6-hr | 0.664 (0.549-0.812) | 0.869 (0.717-1.06) | 1.15 (0.948-1.41) | 1.40 (1.14-1.73) | 1.74 (1.38-2.23) | 2.02 (1.56-2.64) | 2.31 (1.74-3.09) | 2.62 (1.92-3.60) | 3.04 (2.14-4.36) | 3.36 (2.29-4.99) |
| 12-hr | 0.812 (0.670-0.992) | 1.10 (0.906-1.34) | 1.50 (1.23-1.84) | 1.84 (1.50-2.27) | 2.32 (1.83-2.97) | 2.70 (2.09-3.53) | 3.11 (2.35-4.16) | 3.54 (2.60-4.87) | 4.12 (2.91-5.91) | 4.58 (3.12-6.80) |
| 24-hr | 1.01 (0.894-1.16) | 1.42 (1.26-1.64) | 2.00 (1.77-2.31) | 2.49 (2.18-2.90) | 3.19 (2.70-3.84) | 3.75 (3.11-4.61) | 4.34 (3.52-5.47) | 4.98 (3.93-6.45) | 5.89 (4.45-7.94) | 6.61 (4.84-9.23) |
| 2-day | 1.18 (1.04-1.35) | 1.68 (1.49-1.94) | 2.40 (2.12-2.78) | 3.01 (2.64-3.51) | 3.88 (3.29-4.67) | 4.58 (3.80-5.63) | 5.33 (4.32-6.71) | 6.14 (4.84-7.94) | 7.29 (5.51-9.83) | 8.22 (6.01-11.5) |
| 3-day | 1.26 (1.12-1.45) | 1.82 (1.61-2.09) | 2.62 (2.31-3.02) | 3.29 (2.88-3.84) | 4.26 (3.61-5.12) | 5.04 (4.18-6.19) | 5.87 (4.76-7.40) | 6.78 (5.34-8.78) | 8.09 (6.12-10.9) | 9.17 (6.71-12.8) |
| 4-day | 1.32 (1.17-1.52) | 1.92 (1.70-2.21) | 2.78 (2.46-3.22) | 3.52 (3.08-4.10) | 4.56 (3.87-5.50) | 5.41 (4.49-6.65) | 6.33 (5.13-7.97) | 7.32 (5.77-9.48) | 8.76 (6.63-11.8) | 9.94 (7.27-13.9) |
| 7-day | 1.41 (1.25-1.62) | 2.08 (1.84-2.40) | 3.08 (2.72-3.56) | 3.94 (3.45-4.59) | 5.18 (4.39-6.24) | 6.18 (5.13-7.60) | 7.25 (5.87-9.12) | 8.40 (6.62-10.9) | 10.0 (7.60-13.5) | 11.4 (8.32-15.9) |
| 10-day | 1.46 (1.29-1.68) | 2.19 (1.94-2.53) | 3.29 (2.90-3.80) | 4.24 (3.71-4.94) | 5.63 (4.77-6.78) | 6.75 (5.61-8.30) | 7.94 (6.44-10.0) | 9.22 (7.27-11.9) | 11.1 (8.37-14.9) | 12.5 (9.17-17.5) |
| 20-day | 1.60 (1.42-1.84) | 2.50 (2.21-2.88) | 3.86 (3.41-4.47) | 5.07 (4.44-5.90) | 6.87 (5.82-8.27) | 8.35 (6.93-10.3) | 9.92 (8.04-12.5) | 11.6 (9.14-15.0) | 13.9 (10.5-18.8) | 15.7 (11.5-22.0) |
| 30-day | 1.78 (1.58-2.05) | 2.80 (2.48-3.23) | 4.40 (3.89-5.09) | 5.84 (5.12-6.80) | 8.01 (6.79-9.65) | 9.78 (8.12-12.0) | 11.6 (9.44-14.7) | 13.6 (10.7-17.6) | 16.4 (12.4-22.1) | 18.4 (13.5-25.7) |
| 45-day | 2.03 (1.80-2.33) | 3.24 (2.86-3.73) | 5.12 (4.52-5.92) | 6.84 (5.99-7.97) | 9.48 (8.03-11.4) | 11.7 (9.69-14.3) | 14.0 (11.3-17.6) | 16.3 (12.9-21.1) | 19.6 (14.8-26.5) | 22.1 (16.2-30.9) |
| 60-day | 2.22 (1.96-2.55) | 3.55 (3.14-4.09) | 5.68 (5.02-6.56) | 7.63 (6.68-8.89) | 10.6 (8.98-12.8) | 13.1 (10.9-16.1) | 15.7 (12.7-19.8) | 18.4 (14.5-23.8) | 22.1 (16.7-29.8) | 24.8 (18.2-34.7) |

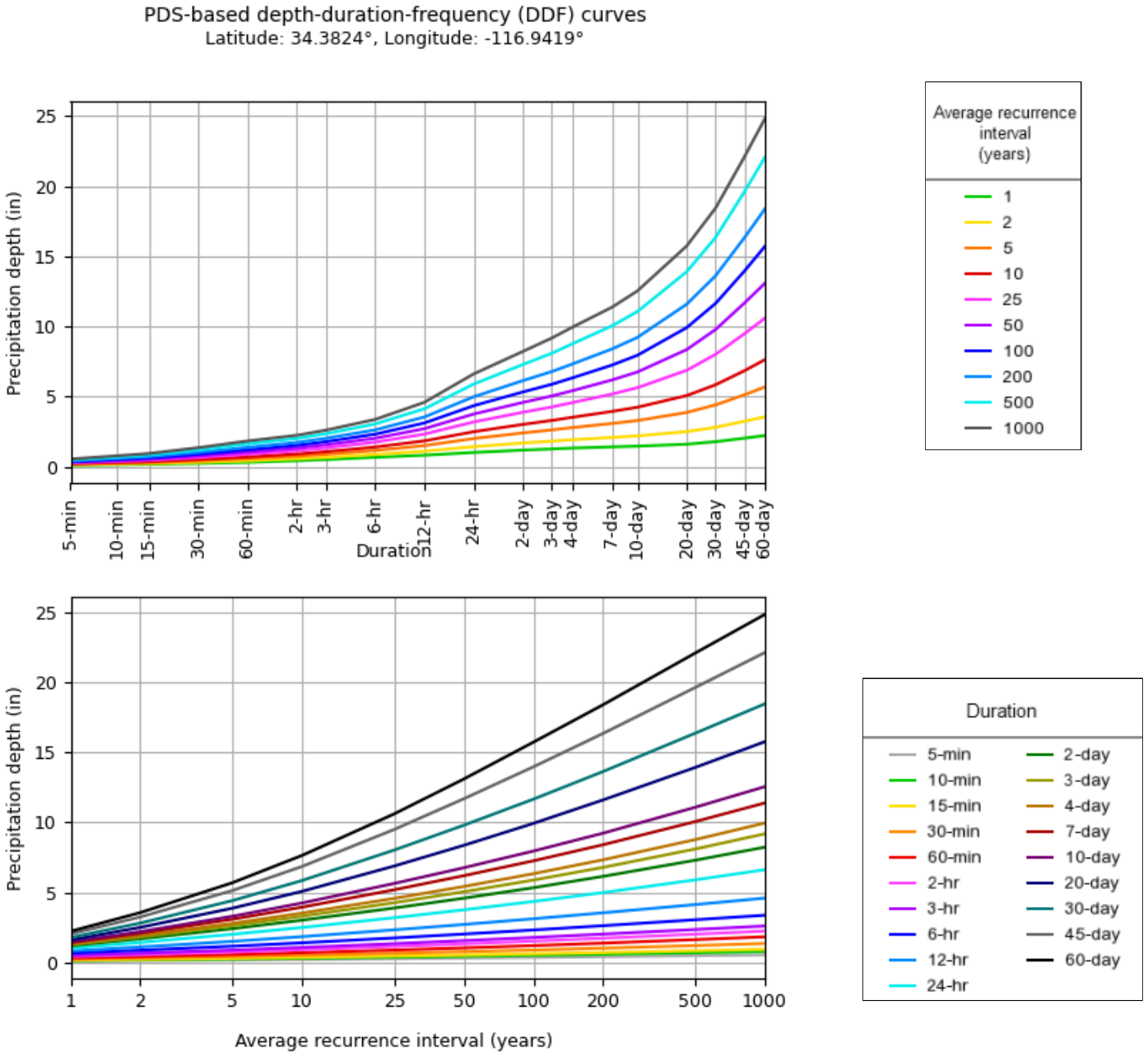
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

## PF graphical




NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Mon Jul 8 11:26:05 2024

Back to Top

## Maps & aerials

**Small scale terrain**

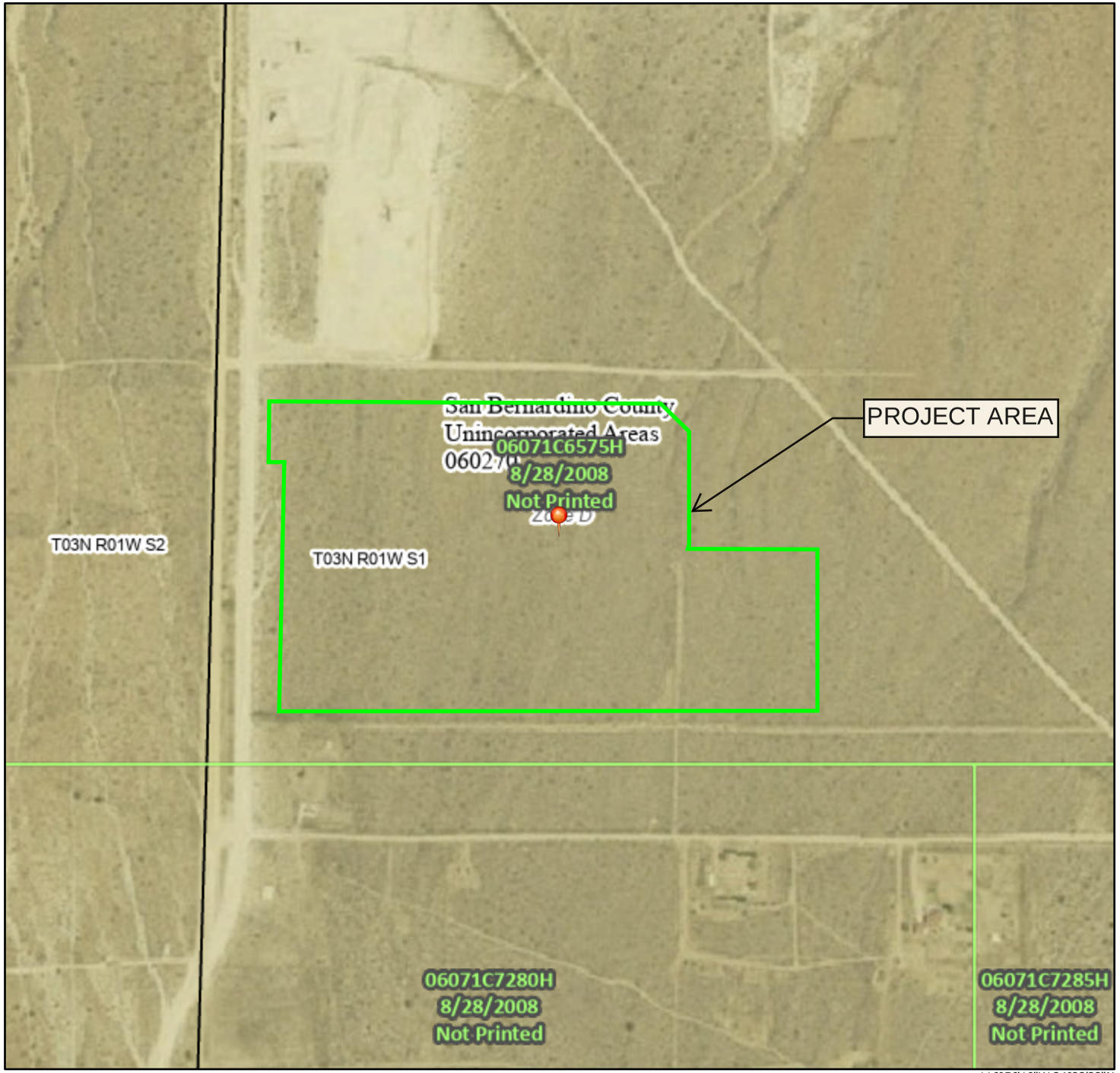
# APPENDIX C

# FEMA FIRM PANEL

# National Flood Hazard Layer FIRMette

FEMA

116°56'48"W 34°22'51"N




0 250 500 1,000 1,500 2,000 Feet

1:6,000

116°56'10"W 34°22'22"N

*Basemap Imagery Source: USGS National Map 2023*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/18/2024 at 2:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

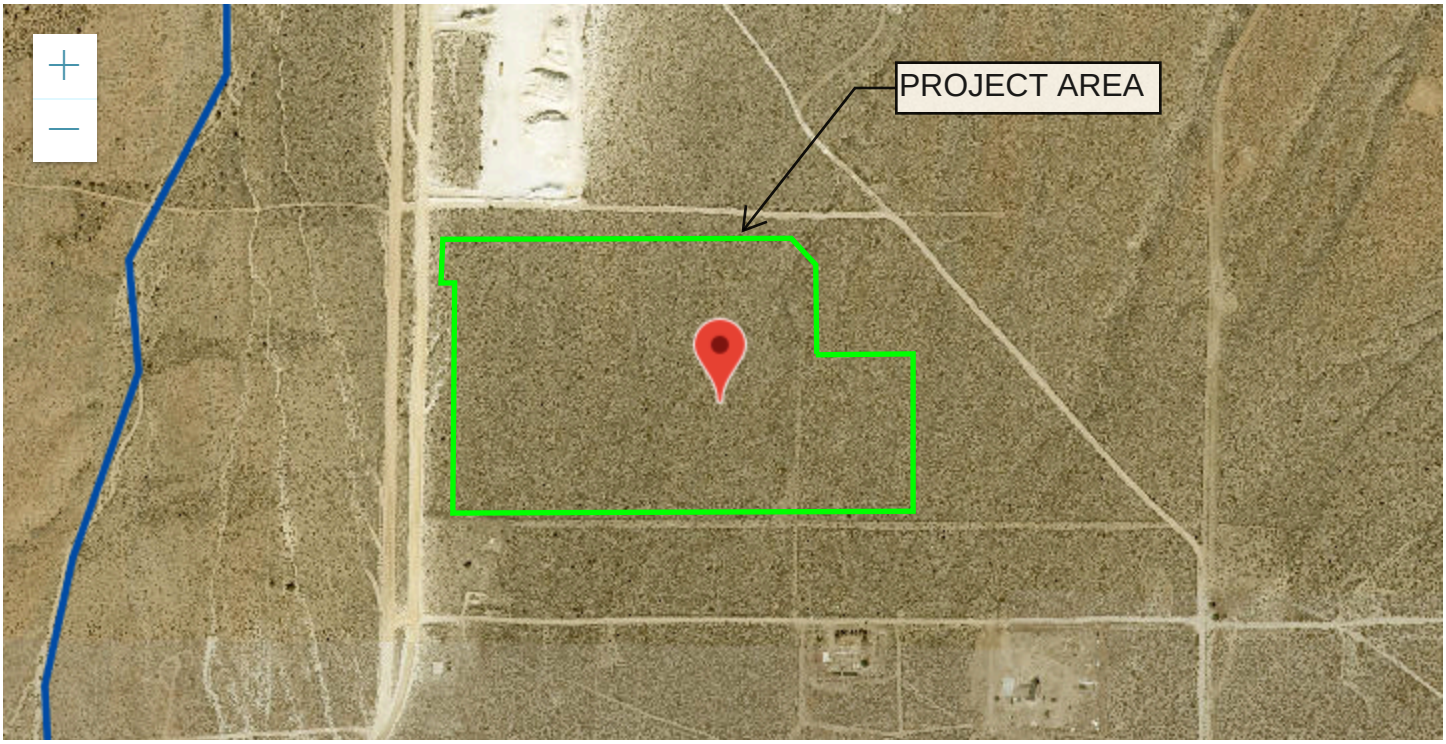
# APPENDIX D

# DWR BAM FLOODPLAIN MAP

CALIFORNIA DEPARTMENT OF
**WATER RESOURCES**

# Floodplain Information

Latitude: 34.37975, Longitude: -116.93832



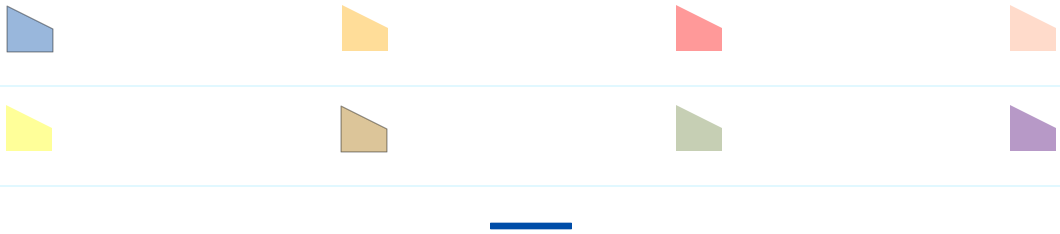

County of San Bernardino, Maxar | Esri, HERE, Garmin, iPC Powered by Esri

County: San Bernardino (34.37975, -116.93832)

| Floodplain Layer | 100-YR | 200-YR | 500-YR |
|---|---|---|---|
| FEMA Effective | N✓ | N/A | N✓ |
| DWR Awareness | N✓ | N/A | N/A |
| Regional/Special Studies | N✓ | N/A | N✓ |
| USACE Comp. Study | N✓ | N✓ | N✓ |

Y: The location is within the floodplain
N: The location is not within the floodplain
N/A: Data not available
✓ = Active Layer(s)

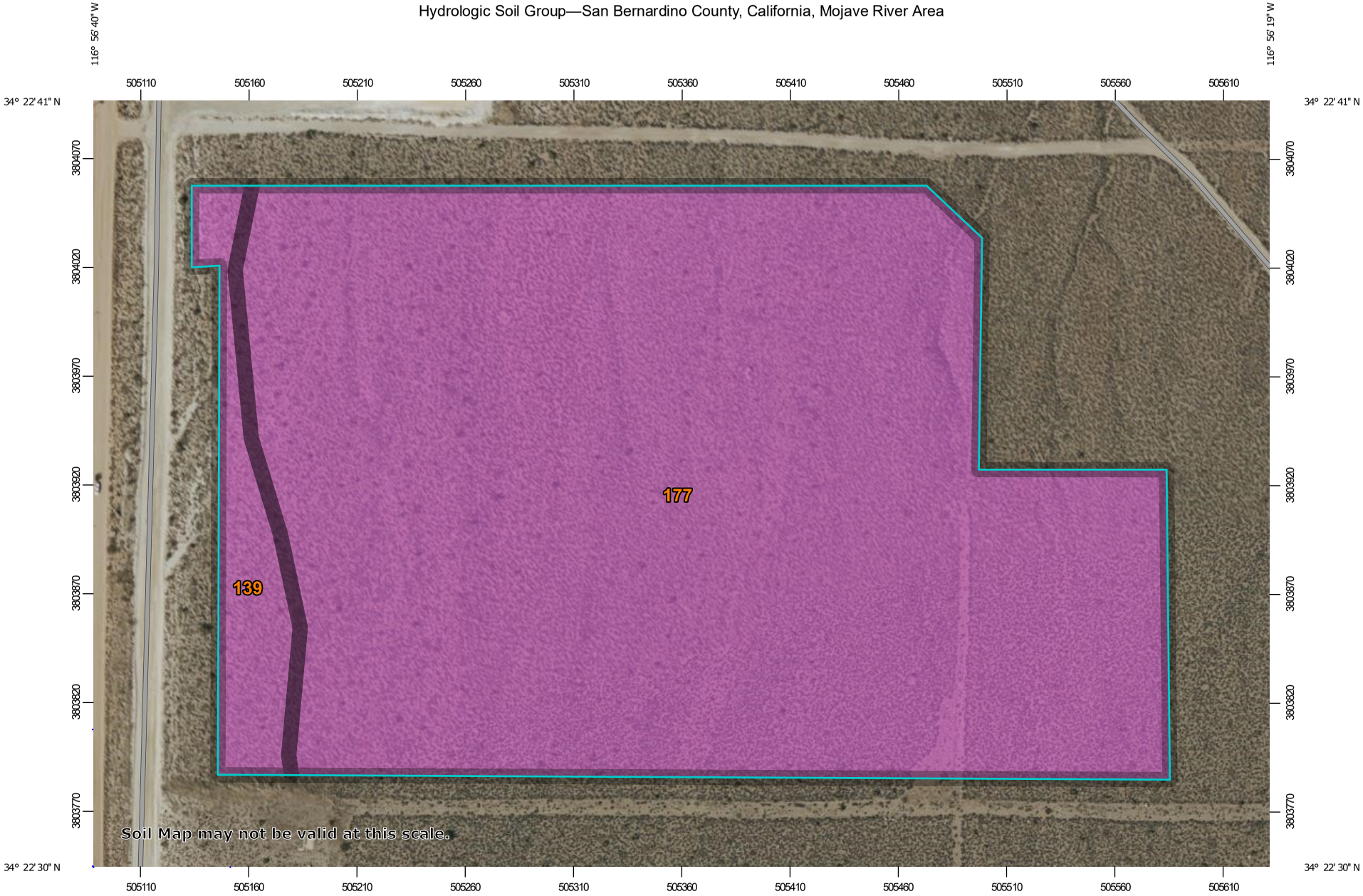
Floodplains are displayed using semi transparent colors. When viewing overlapping floodplains, the combination of multiple semi transparent colors will not match the legend colors. For accurate color representation, view floodplains individually.



# APPENDIX E

# NRCS SOILS MAP AND REPORT

# Hydrologic Soil Group—San Bernardino County, California, Mojave River Area




Map Scale: 1:2,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Lines**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Points**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 15, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2021—May 27, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Hydrologic Soil Group

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| 139 | KIMBERLINA GRAVELLY SANDY LOAM, COOL, 2 TO 5 PERCENT SLOPES | A | 1.6 | 6.0% |
| 177 | YERMO-KIMBERLINA, COOL, ASSOCIATION, SLOPING* | A | 25.2 | 94.0% |
| **Totals for Area of Interest** | | | **26.8** | **100.0%** |

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

# APPENDIX F

# RIP-RAP CALCULATIONS

# Rip-Rap Sizing Calculations

**SITE NAME:** OMYA Solar Plant
Sub-basin A2

Mannings Formula

$Q = (1.486/n) \times A \times R_h^{2/3} \times S^{1/2}$

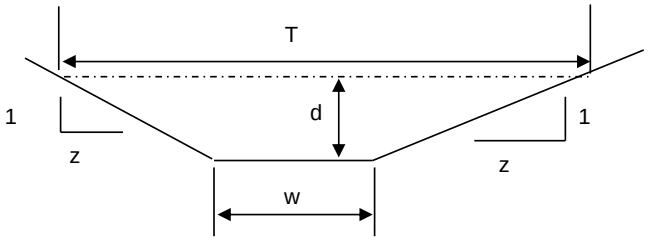
R = A/P

A = cross sectional area

P= wetted perimeter

S = slope of channel

n = Manning's roughness coefficient




$V = (1.49/n) \times R_h^{2/3} \times S^{1/2}$

Q = V x A

| INPUT | |
|---|---|
| z (sideslope) = | 2 |
| z (sideslope) = | 2 |
| b (btm width, ft) = | 8 |
| d (depth, ft) = | 0.5174 |
| S (slope, ft/ft) = | 0.0268 |
| $n_{low}$ = | 0.024 |
| $n_{high}$ = | 0.024 |
| $Q_{Max}$ (cfs) = | 27.95 |

| | | | | Low N | | High N | | | |
|---|---|---|---|---|---|---|---|---|---|
| Depth, ft | Area, sf | Wetted Perimeter, ft | Hydraulic Radius, ft | Velocity, fps | Flow, cfs | Velocity, fps | Flow, cfs | | |
| 0.5174 | 4.67 | 10.31 | 0.45 | 5.98008194 | 27.9545241 | 5.98008194 | 27.9545241 | | |
| | | | | Sc low = | 0.0112 | Sc high = | 0.0112 | | |
| | | | | .7 Sc | 1.3 Sc | .7 Sc | 1.3 Sc | T = | 10.0696 |
| | | | | 0.0078 | 0.0145 | 0.0078 | 0.0145 | $d_m$ = | 0.4642 |

$s_c$ = critical slope ft / ft

T = top width of the stream

$d_m$ = a/T = mean depth of flow

Weight $W_{min}$ (Minimum Weight of Rip-rap)

$W_{min} = 0.00002 \times V^6 \times SG \times \sin^3(\rho - \alpha) / (SG - 1)^3$

| | | | | |
|---|---|---|---|---|
| $\rho$ | Riprap angle of repose for randomly placed roack | $70^o$ | 70.00 | deg |
| $\alpha$ | Embankment face slope (Horz / Vert) | 2 :1 | 26.57 | deg |
| SG | Specific Gravity of stones | | 2.65 | |
| V | Stream Velocity to which rip-rap is exposed | | 5.98 | ft/sec |
| W | Minimum Weight of stone with no damage | | 1.660 | lbs |

Size $D_{50}$ (Median Stone Diameter)

$D_{50} = V^2/[2 \times g \times C^2 \times (SG-1)]$

| | | | |
|---|---|---|---|
| C | Isbasch Constant | 1.20 | |
| SG | Specific Gravity of Stone/Rock | 2.65 | |
| V | Stream Velocity to which rip-rap is exposed | 5.98 | ft/sec |
| $D_{50}$ | | 0.234 | ft |

Layer Thickness:

$T_{Layer} = 1.875 \times D_{50}$ 0.439 ft

$T_{min.}$ (Backing #3 Stone per CALTRANS) 0.750 ft