IW #1317/FF #276
10/27/23

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AN EQUAL OPPORTUNITY EMPLOYER - M - F

# STORMWATER MANAGEMENT REPORT 10/13/23

*Including:*

*2, 5, 10, 25, and 100-Year Storms*

**Prepared for:**

**Mount Southington Limited Partnership**
426 Mount Vernon Road
Southington, CT

James N. Sakonchick

James N. Sakonchick, P.E.

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## EXECUTIVE SUMMARY

This report summarizes the hydrologic changes and management of stormwater associated with the construction of processed stone parking area. The existing land coverage consists of grass, a processed stone driveway and building. Inland wetlands are located on the west side of the site. The proposed development will consist of a processed stone parking area on the east side of the site. The Stormwater Management Plan will include measures to control increases in runoff and address water quality concerns associated with the development of the site.

### *Watershed Description*

In the pre-development condition, the site is described by one watershed: "EX-1" draining easterly toward the wetland area (See Sheet WS-1). In the post-development condition, the site is described by two watersheds "PR-1" for the developed area directed to the rain garden and "PR-2" for the developed area directed to the stormwater basin.(See Sheet WS-2). Hydrologic routing has been performed to compare the stormwater conditions for the total pre- and post-development combined watersheds.

ZIRO (Zero Increase in Peak Discharge Runoff Rates) is achieved through the 100-year storm event each of the watershed areas.

### *Erosions and Sedimentation Control*

The goal of the erosion and sedimentation controls on the site is to maintain water quality to runoff and to minimize erosion to areas both on and off site. In order to accomplish these goals, several erosion control measures are proposed. The plans have been developed in accordance with the 2004 Sedimentation and Erosion Control Guidelines and the Stormwater Quality Manual.

Water quality of the runoff will be provided through the use of **Best Management Practice (BMP)** erosion controls during construction. A detailed construction sequence and erosion control measures have been included with the plans. Silt fences are proposed down slope of areas proposed to be disturbed. Inlet protection devices will be installed around all catch basins during construction.

### *Model Formulation*

Pre-development and post-development hydrographs were developed using the Rational Method. C values were derived based on land cover and the hydrologic soil groups. Time of concentration values were computed using the TR-55 method which takes into account length of flow-path, basin slope and curve number. Storm routing was performed for the 2-year, 10-year, 25-year, 50-year, and 100-year storm events.

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## Summary of Peak Discharge Rates

### WATERSHEDS

**Values shown are in Runoff Volumes in Cubic Feet per Second (CFS)**

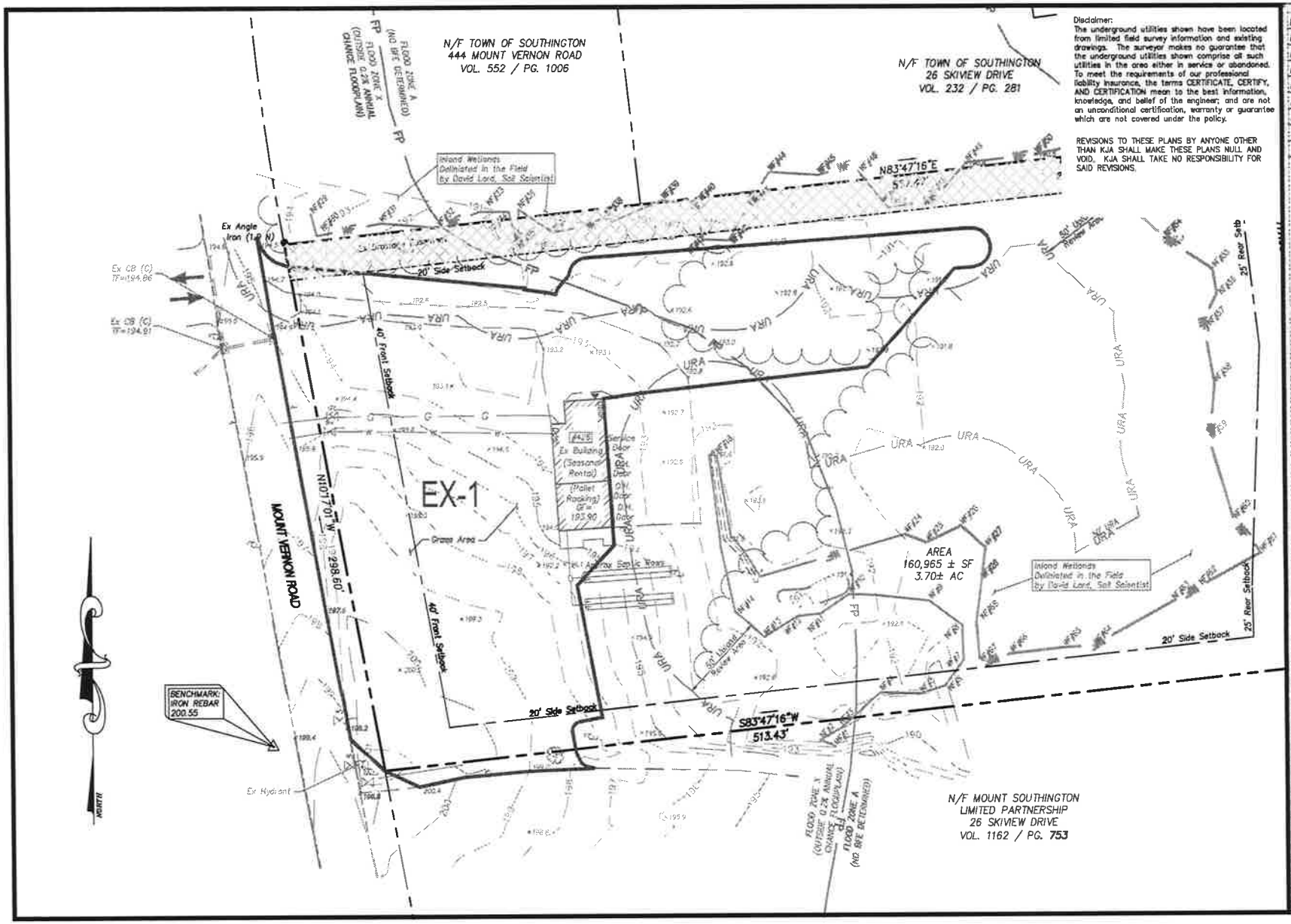
| Storm Event | Pre-Development (EX-1) | Post-Development (ROUTED PR-1 & PR-2) | Δ (%) |
|---|---|---|---|
| **2-year** | 1.41 | 0.00 | **-1.41 (-100%)** |
| **5-year** | 1.81 | 0.07 | **-1.74 (-96%)** |
| **10-year** | 2.13 | 0.21 | **-1.92 (-90%)** |
| **25-year** | 2.58 | 0.54 | **- 2.04 (-79%)** |
| **100-year** | 3.28 | 1.90 | **-1.38 (-42%)** |

**Project No. 223042** **MOUNT SOUTHINGTON**

**#426 MOUNT VERNON ROAD SOUTHINGTON, CT**

***COMPOSITE 'C' CALCULATIONS:***

| | | AREAS (Acres) | | |
|---|---|---|---|---|
| | | PRE-DEVELOPMENT | POST-DEVELOPMENT | |
| ***COVERAGE AND SOIL TYPE*** | **C** | **EX #1** | **PR #1** | **PR #2** |
| Open space (lawns, fields) Good condition - Type A/B Soil - Average Slope | 0.35 | 1.18 | 0.05 | 0.49 |
| Processed Stone | 0.75 | 0.10 | 0.10 | 0.62 |
| Impervious Areas (Homes, Drives, Roads) | 0.95 | 0.06 | 0.00 | 0.09 |
| **Area (Ac.)*** | | **1.34** | **0.14** | **1.20** |
| **'C' WEIGHTED** | | **0.41** | **0.62** | **0.60** |




REVISION-7:
REVISION-6:
REVISION-5:
REVISION-4:
REVISION-3:
REVISION-2:
REVISION-1:
PROJECT:
DR:--- SR:--- DR:---
SEAL:

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# PRE-DEVELOPMENT WATERSHED MAP

for

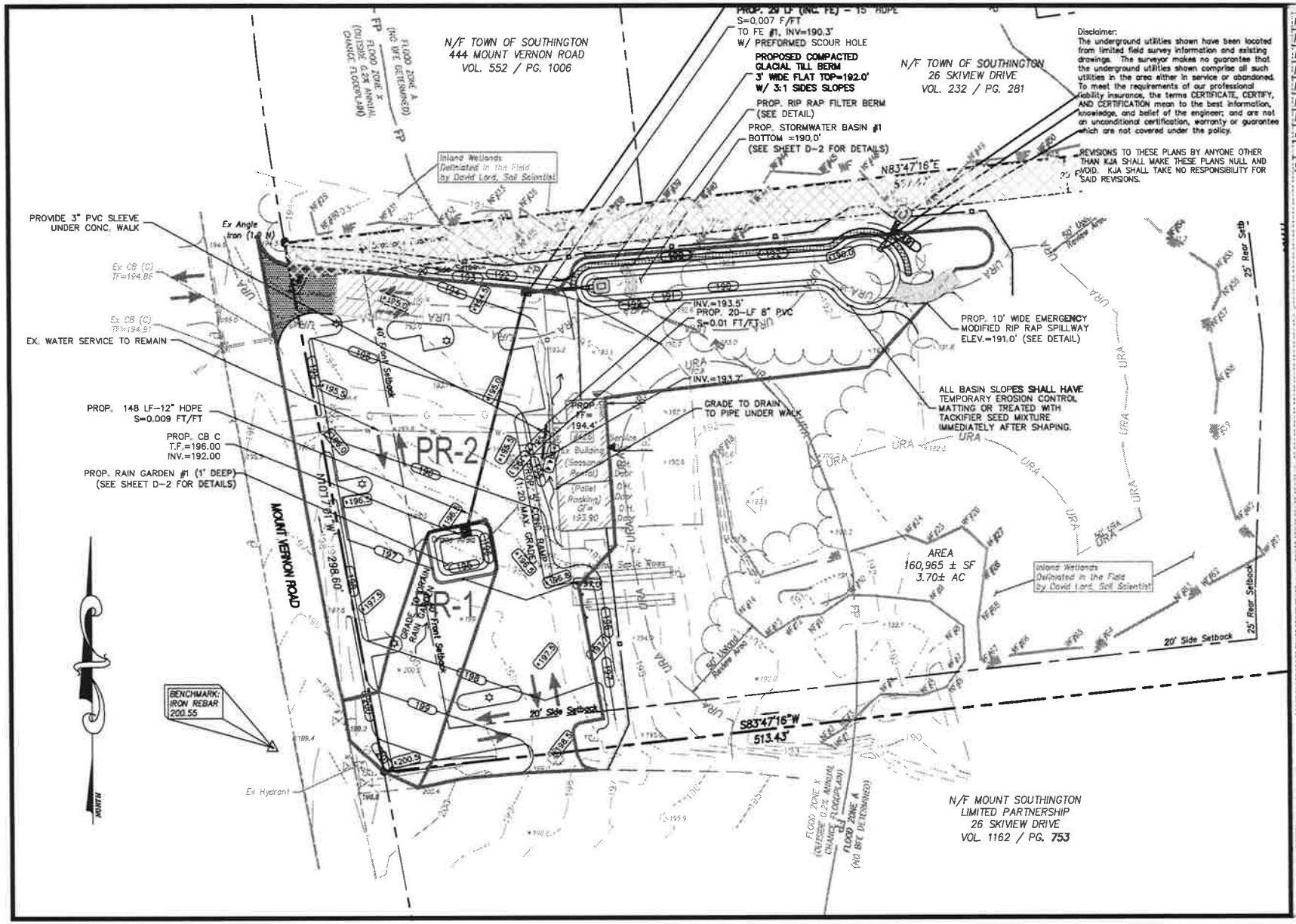
MOUNT SOUTHINGTON LIMITED PARTNERSHIP

#426 MOUNT VERNON RD.
SOUTHINGTON, CT

SCALE: 1" = 50'
DATE: OCTOBER 6, 2023

HALF ONE INCH
INCHES ON ORIGINAL

KJA FILE NO.: 223-042
DRAWING NO.: WS-1




REVISION-7:
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REVISION-4:
REVISION-3:
REVISION-2:
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PROJECT:
DR:---- SR:---- DR:----
SEAL:

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# POST-DEVELOPMENT WATERSHED MAP

for

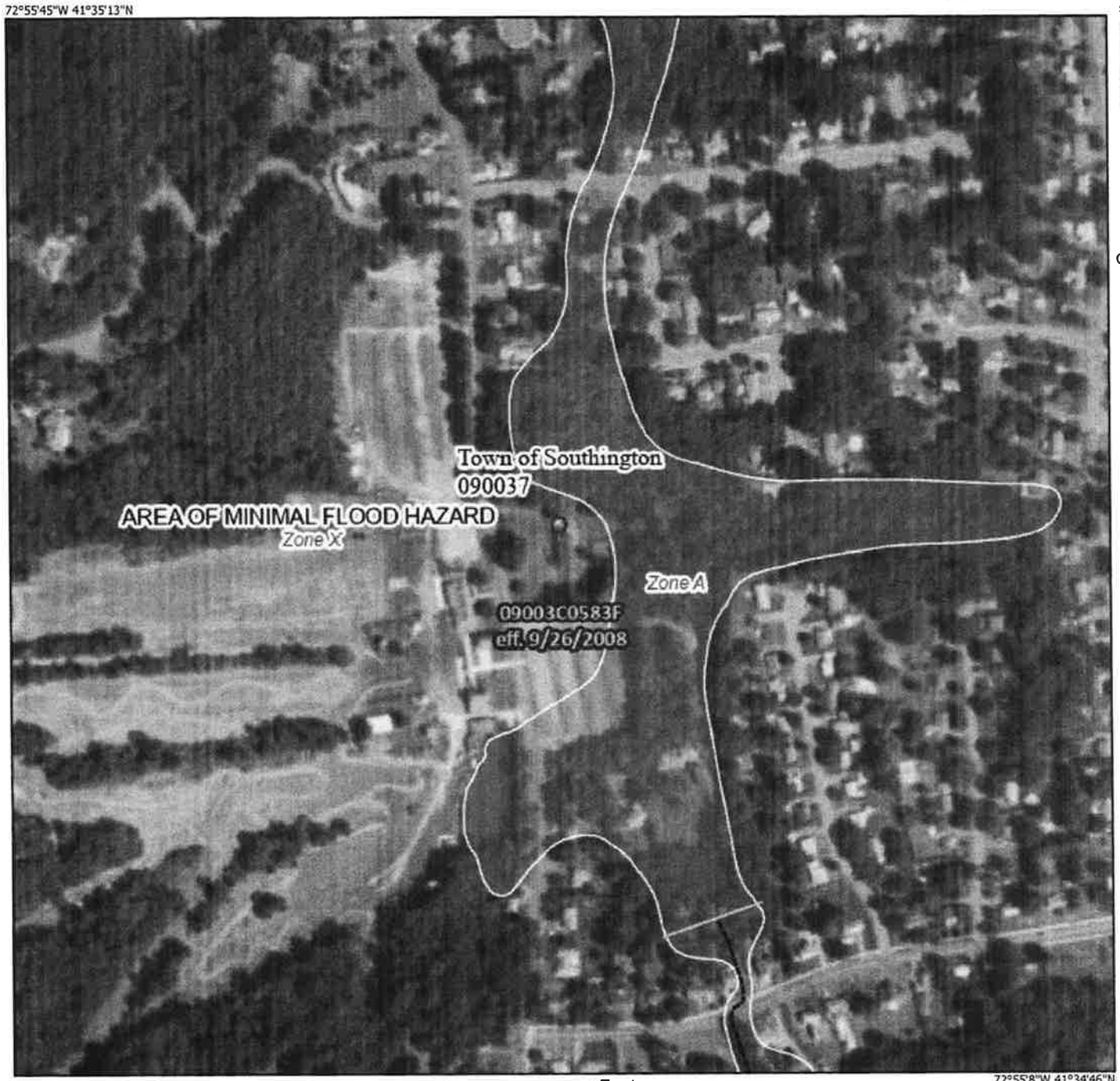
MOUNT SOUTHINGTON LIMITED PARTNERSHIP

#426 MOUNT VERNON RD
SOUTHINGTON, CT

SCALE: 1" = 50'
DATE: OCTOBER 6, 2023
HALF ONE INCH
INCHES ON ORIGINAL
KJA FILE NO.: 223-042
DRAWING NO.: WS-2

# National Flood Hazard Layer FIRMette

FEMA




*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
- 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

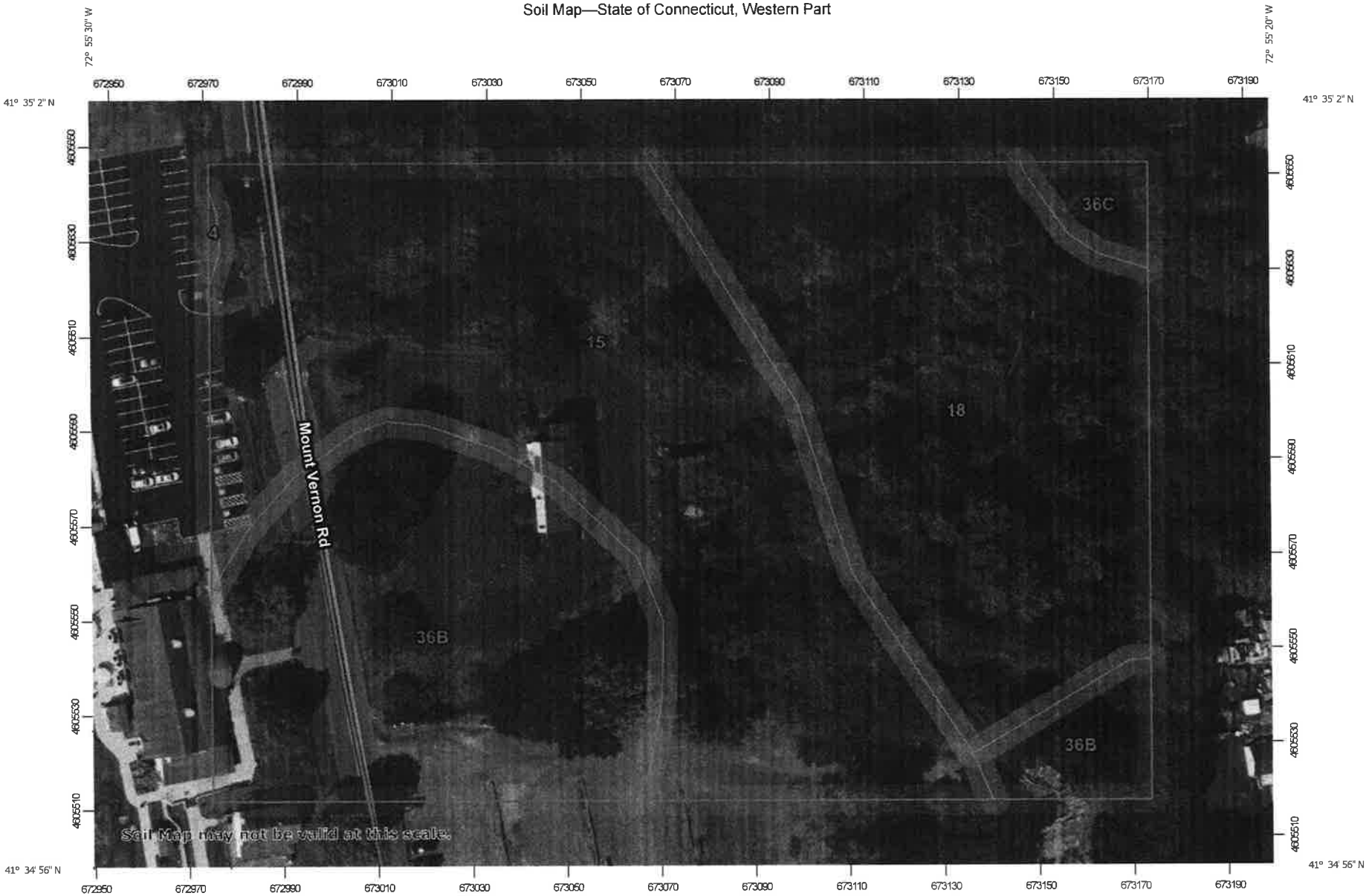
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 10/11/2023 at 11:14 AM 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.

# Soil Map—State of Connecticut, Western Part




Map Scale: 1:1,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**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 1:12,000.

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: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 4 | Leicester fine sandy loam | 0.0 | 0.1% |
| 15 | Scarboro muck, 0 to 3 percent slopes | 2.7 | 41.3% |
| 18 | Catden and Freetown soils, 0 to 2 percent slopes | 2.0 | 30.3% |
| 36B | Windsor loamy sand, 3 to 8 percent slopes | 1.8 | 26.8% |
| 36C | Windsor loamy sand, 8 to 15 percent slopes | 0.1 | 1.5% |
| **Totals for Area of Interest** | | **6.6** | **100.0%** |

# Hydraflow Table of Contents

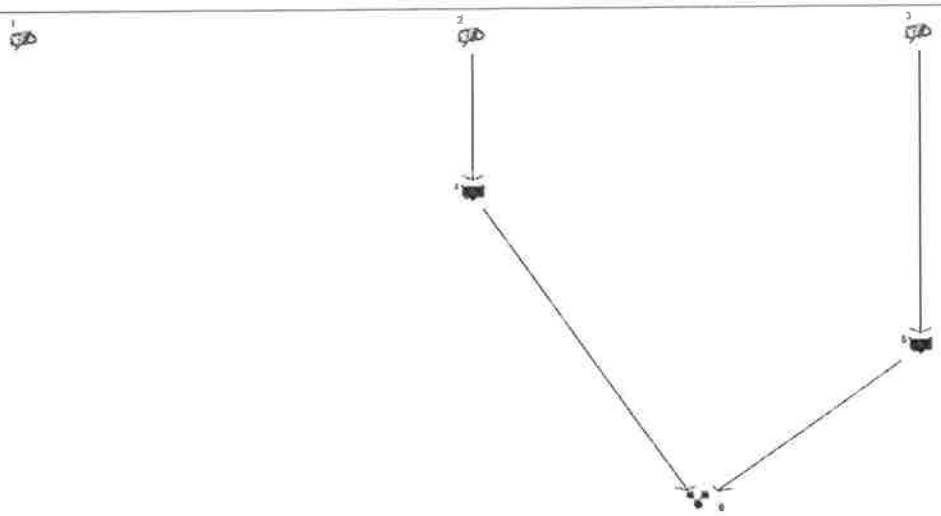
MT SOUTHINGTON-RATIONAL.gpw

Hydraflow Hydrographs by Intelisolve v9.1

Friday, Oct 20, 2023

# Watershed Model Schematic





**Legend**

| Hyd. | Origin | Description |
|---|---|---|
| 1 | Rational | EX #1 |
| 2 | Rational | PR#1 |
| 3 | Rational | PR#2 |
| 4 | Reservoir | RAIN GARDEN ROUTING |
| 5 | Reservoir | STORM BASIN ROUTING |
| 6 | Combine | PR #1 TOTAL |

# 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 | Rational | ------- | ------- | 1.406 | ------- | 1.807 | 2.133 | 2.580 | ------- | 3.275 | EX #1 |
| 2 | Rational | ------- | ------- | 0.428 | ------- | 0.548 | 0.648 | 0.786 | ------- | 0.998 | PR#1 |
| 3 | Rational | ------- | ------- | 3.549 | ------- | 4.547 | 5.377 | 6.518 | ------- | 8.278 | PR#2 |
| 4 | Reservoir | 2 | ------- | 0.000 | ------- | 0.000 | 0.000 | 0.000 | ------- | 0.000 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 3 | ------- | 0.000 | ------- | 0.068 | 0.214 | 0.536 | ------- | 1.904 | STORM BASIN ROUTING |
| 6 | Combine | 4, 5 | ------- | 0.000 | ------- | 0.068 | 0.214 | 0.536 | ------- | 1.904 | PR #1 TOTAL |

# 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 | Rational | 1.406 | 1 | 18 | 2,277 | ---- | ------ | ------ | EX #1 |
| 2 | Rational | 0.428 | 1 | 5 | 193 | ---- | ------ | ------ | PR#1 |
| 3 | Rational | 3.549 | 1 | 5 | 1,597 | ---- | ------ | ------ | PR#2 |
| 4 | Reservoir | 0.000 | 1 | n/a | 0 | 2 | 195.41 | 193 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 0.000 | 1 | n/a | 0 | 3 | 190.58 | 1,597 | STORM BASIN ROUTING |
| 6 | Combine | 0.000 | 1 | n/a | 0 | 4, 5 | ------ | ------ | PR #1 TOTAL |

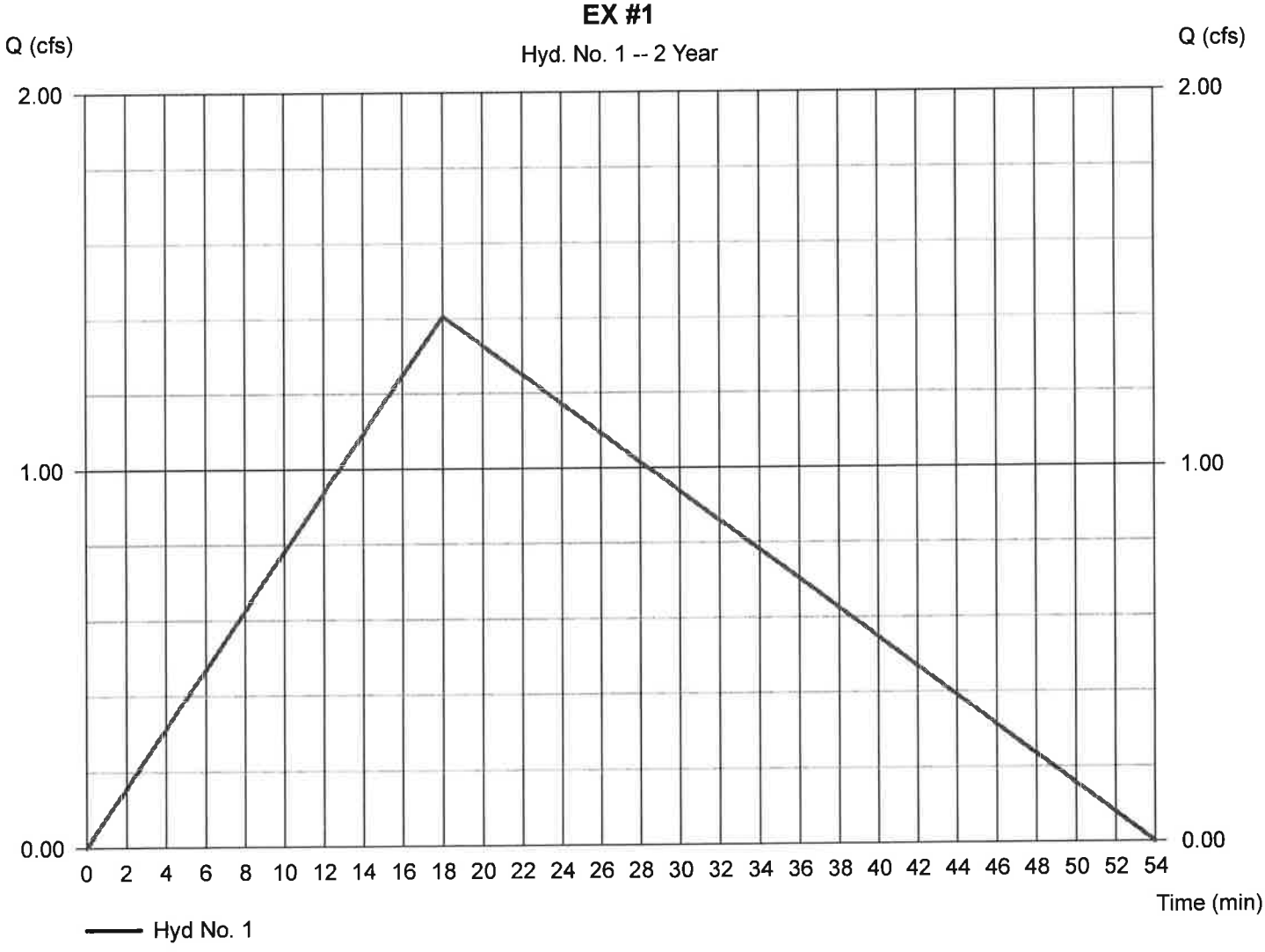
# Hydrograph Report



## Hyd. No. 1

EX #1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 1.406 cfs |
| Storm frequency | = 2 yrs | Time to peak | = 18 min |
| Time interval | = 1 min | Hyd. volume | = 2,277 cuft |
| Drainage area | = 1.340 ac | Runoff coeff. | = 0.41 |
| Intensity | = 2.558 in/hr | Tc by TR55 | = 18.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# TR55 Tc Worksheet



## Hyd. No. 1

EX #1

| Description | A | B | C | Totals |
|---|---|---|---|---|
| **Sheet Flow** | | | | |
| Manning's n-value | = 0.240 | 0.240 | 0.240 | |
| Flow length (ft) | = 44.0 | 23.0 | 37.0 | |
| Two-year 24-hr precip. (in) | = 3.40 | 3.42 | 3.42 | |
| Land slope (%) | = 2.20 | 5.90 | 1.80 | |
| **Travel Time (min)** | **= 6.91** + | **2.76** + | **6.50** = | **16.17** |
| **Shallow Concentrated Flow** | | | | |
| Flow length (ft) | = 89.00 | 45.00 | 74.00 | |
| Watercourse slope (%) | = 2.20 | 5.90 | 1.80 | |
| Surface description | = Unpaved | Unpaved | Unpaved | |
| Average velocity (ft/s) | = 2.39 | 3.92 | 2.16 | |
| **Travel Time (min)** | **= 0.62** + | **0.19** + | **0.57** = | **1.38** |
| **Channel Flow** | | | | |
| X sectional flow area (sqft) | = 0.00 | 0.00 | 0.00 | |
| Wetted perimeter (ft) | = 0.00 | 0.00 | 0.00 | |
| Channel slope (%) | = 0.00 | 0.00 | 0.00 | |
| Manning's n-value | = 0.015 | 0.015 | 0.015 | |
| Velocity (ft/s) | = 0.00 | 0.00 | 0.00 | |
| Flow length (ft) | = 0.0 | 0.0 | 0.0 | |
| **Travel Time (min)** | **= 0.00** + | **0.00** + | **0.00** = | **0.00** |

**Total Travel Time, Tc** ..... **18.00 min**

# Hydrograph Report



## Hyd. No. 2

PR#1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 0.428 cfs |
| Storm frequency | = 2 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 193 cuft |
| Drainage area | = 0.140 ac | Runoff coeff. | = 0.62 |
| Intensity | = 4.930 in/hr | Tc by User | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |

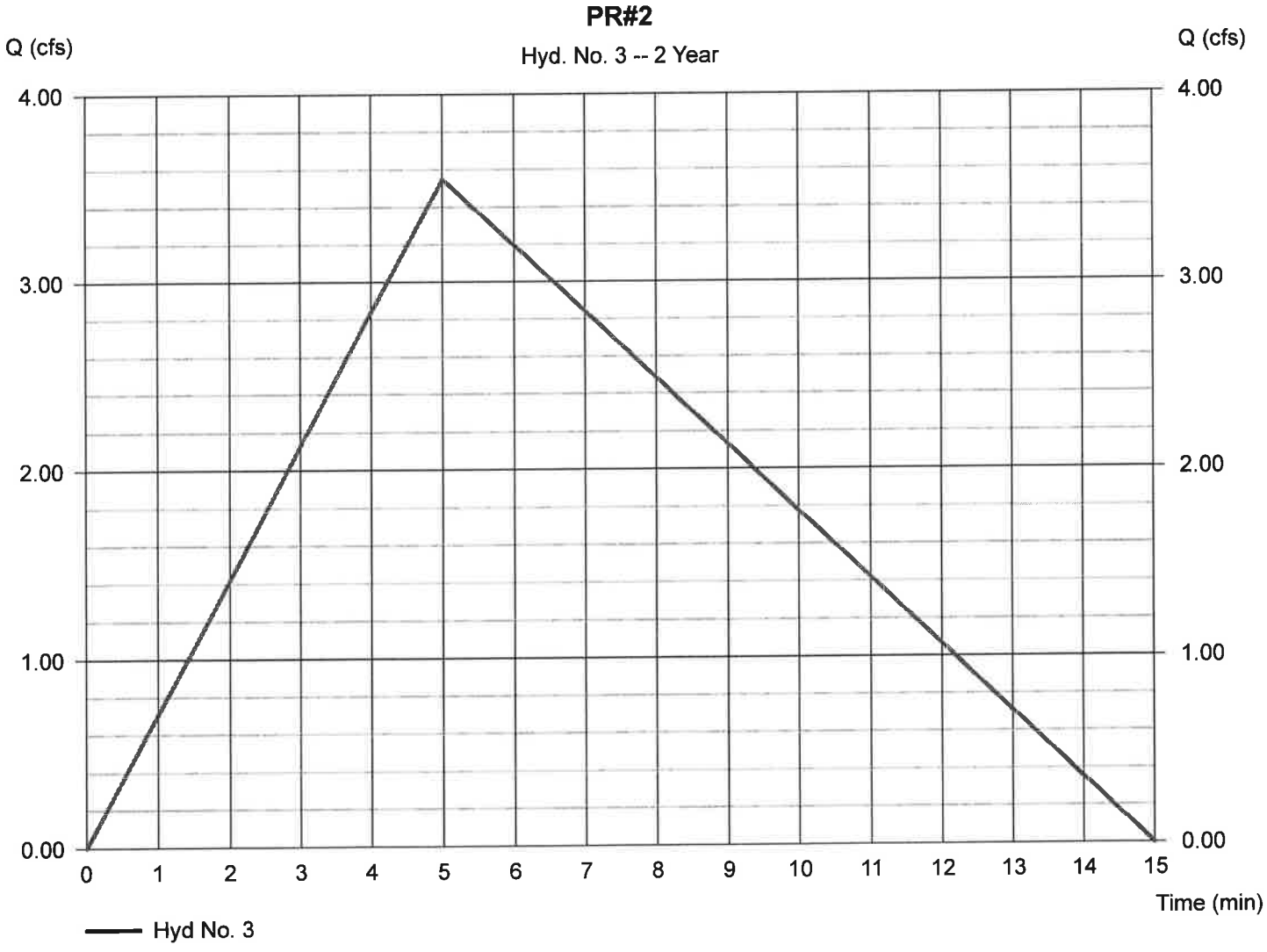
# Hydrograph Report



## Hyd. No. 3

PR#2

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 3.549 cfs |
| Storm frequency | = 2 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 1,597 cuft |
| Drainage area | = 1.200 ac | Runoff coeff. | = 0.6 |
| Intensity | = 4.930 in/hr | Tc by TR55 | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# TR55 Tc Worksheet



## Hyd. No. 3

PR#2

| Description | A | B | C | Totals |
|---|---|---|---|---|
| **Sheet Flow** | | | | |
| Manning's n-value | = 0.025 | 0.240 | 0.011 | |
| Flow length (ft) | = 65.0 | 0.0 | 0.0 | |
| Two-year 24-hr precip. (in) | = 3.40 | 0.00 | 0.00 | |
| Land slope (%) | = 1.80 | 0.00 | 0.00 | |
| **Travel Time (min)** | **= 1.68 +** | **0.00 +** | **0.00 =** | **1.68** |
| **Shallow Concentrated Flow** | | | | |
| Flow length (ft) | = 130.00 | 236.00 | 0.00 | |
| Watercourse slope (%) | = 1.80 | 1.20 | 0.00 | |
| Surface description | = Unpaved | Unpaved | Paved | |
| Average velocity (ft/s) | = 2.16 | 1.77 | 0.00 | |
| **Travel Time (min)** | **= 1.00 +** | **2.23 +** | **0.00 =** | **3.23** |
| **Channel Flow** | | | | |
| X sectional flow area (sqft) | = 0.00 | 0.00 | 0.00 | |
| Wetted perimeter (ft) | = 0.00 | 0.00 | 0.00 | |
| Channel slope (%) | = 0.00 | 0.00 | 0.00 | |
| Manning's n-value | = 0.015 | 0.015 | 0.015 | |
| Velocity (ft/s) | = 0.00 | 0.00 | 0.00 | |
| Flow length (ft) | = 0.0 | 0.0 | 0.0 | |
| **Travel Time (min)** | **= 0.00 +** | **0.00 +** | **0.00 =** | **0.00** |

**Total Travel Time, Tc ..... 5.00 min**

# Hydrograph Report

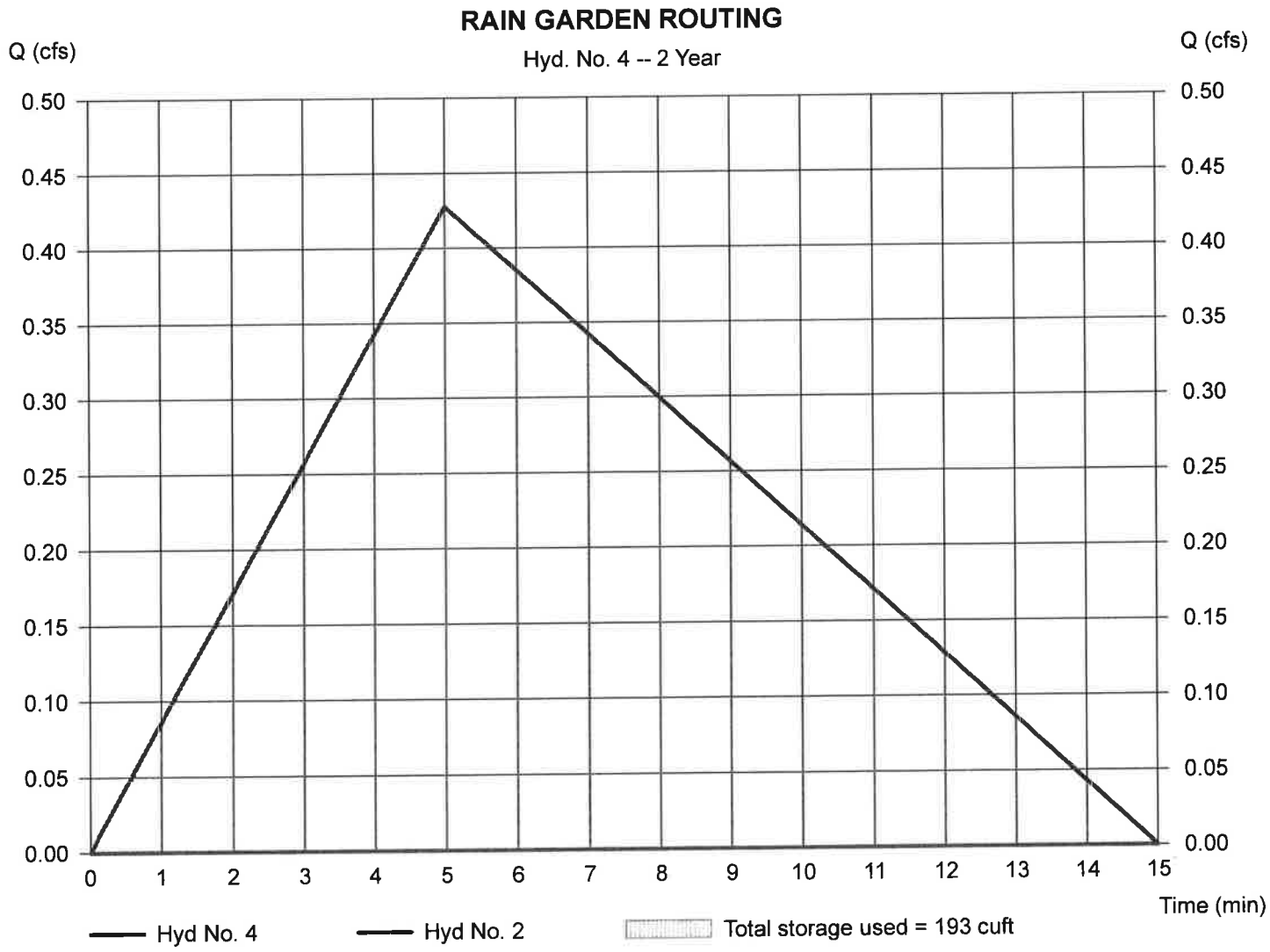


## Hyd. No. 4

RAIN GARDEN ROUTING

| | | | |
|---|---|---|---|
| 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. | = 2 - PR#1 | Max. Elevation | = 195.41 ft |
| Reservoir name | = RAIN GARDEN #1 | Max. Storage | = 193 cuft |

Storage Indication method used.



# Pond Report



## Pond No. 2 - RAIN GARDEN #1

### Pond Data

**Contours** - User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 195.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 195.00 | 349 | 0 | 0 |
| 1.00 | 196.00 | 595 | 466 | 466 |
| 1.50 | 196.50 | 938 | 380 | 846 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| Rise (in) | = 12.00 | 0.00 | 0.00 | 0.00 |
| Span (in) | = 12.00 | 0.00 | 0.00 | 0.00 |
| No. Barrels | = 1 | 0 | 0 | 0 |
| Invert El. (ft) | = 196.00 | 0.00 | 0.00 | 0.00 |
| Length (ft) | = 148.00 | 0.00 | 0.00 | 0.00 |
| Slope (%) | = 0.90 | 0.00 | 0.00 | n/a |
| N-Value | = .013 | .013 | .013 | n/a |
| Orifice Coeff. | = 0.60 | 0.60 | 0.60 | 0.60 |
| Multi-Stage | = n/a | No | No | No |

### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| Crest Len (ft) | = 34.00 | 0.00 | 0.00 | 0.00 |
| Crest El. (ft) | = 196.50 | 0.00 | 0.00 | 0.00 |
| Weir Coeff. | = 2.60 | 3.33 | 3.33 | 3.33 |
| Weir Type | = Broad | --- | --- | --- |
| Multi-Stage | = No | No | No | No |

Exfil.(in/hr) = 0.000 (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).

### Stage / Storage / Discharge Table

| Stage ft | Storage cuft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | PrfRsr cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | User cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0 | 195.00 | 0.00 | --- | --- | --- | 0.00 | --- | --- | --- | --- | --- | 0.00 |
| 1.00 | 466 | 196.00 | 0.00 | --- | --- | --- | 0.00 | --- | --- | --- | --- | --- | 0.00 |
| 1.50 | 846 | 196.50 | 0.95 ic | --- | --- | --- | 0.00 | --- | --- | --- | --- | --- | 0.95 |

# Hydrograph Report

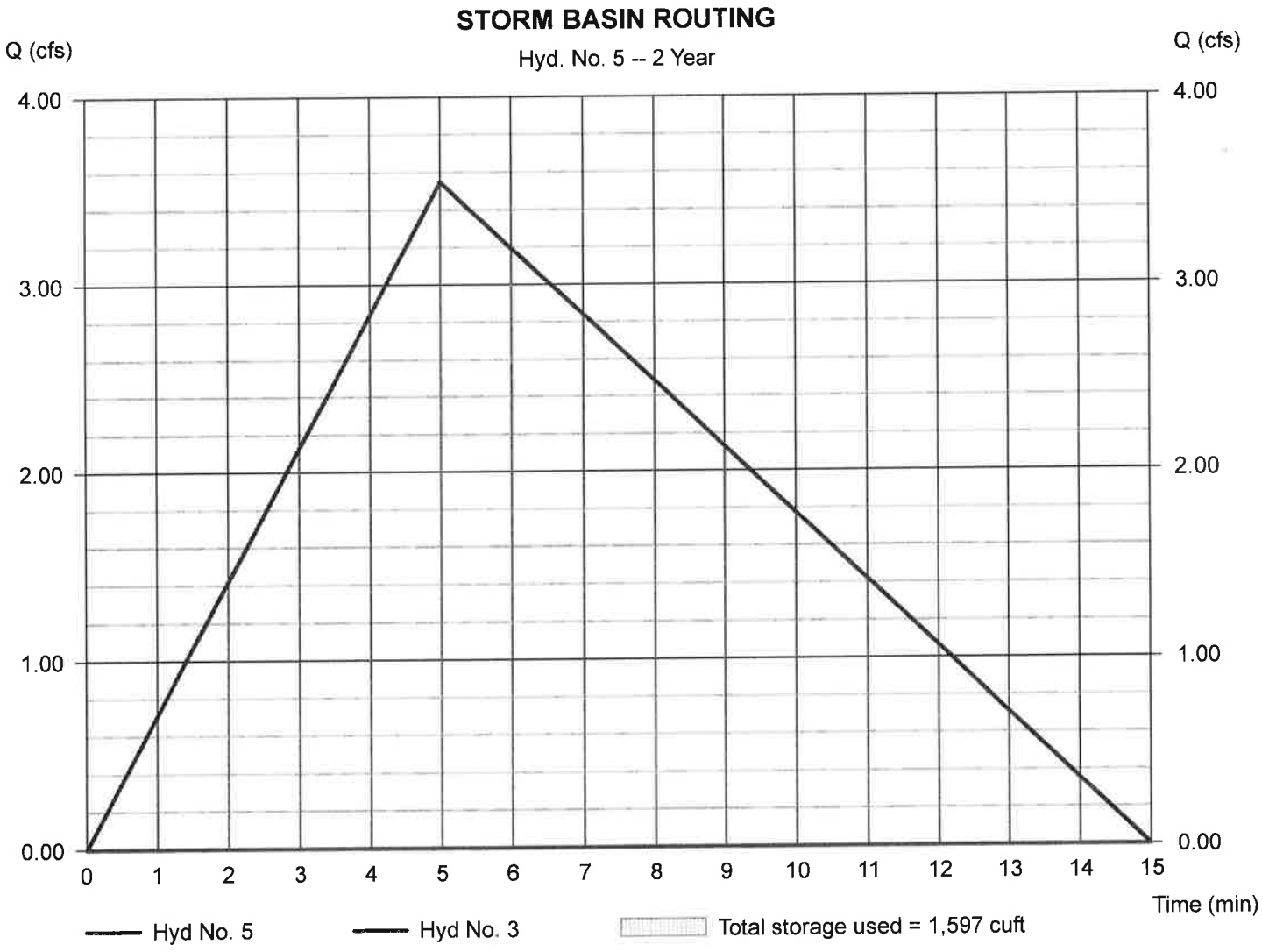


## Hyd. No. 5

STORM BASIN ROUTING

| | | | |
|---|---|---|---|
| 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. | = 3 - PR#2 | Max. Elevation | = 190.58 ft |
| Reservoir name | = STORMWATER BASIN #1 | Max. Storage | = 1,597 cuft |

Storage Indication method used.



# Pond Report



## Pond No. 1 - STORMWATER BASIN #1

### Pond Data

**Contours -** User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 190.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 190.00 | 2,219 | 0 | 0 |
| 1.00 | 191.00 | 3,374 | 2,776 | 2,776 |
| 2.00 | 192.00 | 5,189 | 4,249 | 7,025 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| Rise (in) | = 8.00 | 0.00 | 0.00 | 0.00 |
| Span (in) | = 8.00 | 0.00 | 0.00 | 0.00 |
| No. Barrels | = 1 | 0 | 0 | 0 |
| Invert El. (ft) | = 190.60 | 0.00 | 0.00 | 0.00 |
| Length (ft) | = 15.00 | 0.00 | 0.00 | 0.00 |
| Slope (%) | = 1.33 | 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) | = 10.00 | 0.00 | 0.00 | 0.00 |
| Crest El. (ft) | = 191.00 | 0.00 | 0.00 | 0.00 |
| Weir Coeff. | = 3.33 | 3.33 | 3.33 | 3.33 |
| Weir Type | = Broad | --- | --- | --- |
| 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).

### Stage / Storage / Discharge Table

| Stage ft | Storage cuft | Elevation ft | Clv A cfs | Clv B cfs | Clv C cfs | PrfRsr cfs | Wr A cfs | Wr B cfs | Wr C cfs | Wr D cfs | Exfil cfs | User cfs | Total cfs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0 | 190.00 | 0.00 | --- | --- | --- | 0.00 | --- | --- | --- | --- | --- | 0.00 |
| 1.00 | 2,776 | 191.00 | 0.47 ic | --- | --- | --- | 0.00 | --- | --- | --- | --- | --- | 0.47 |
| 2.00 | 7,025 | 192.00 | 1.74 ic | --- | --- | --- | 33.30 | --- | --- | --- | --- | --- | 35.04 |

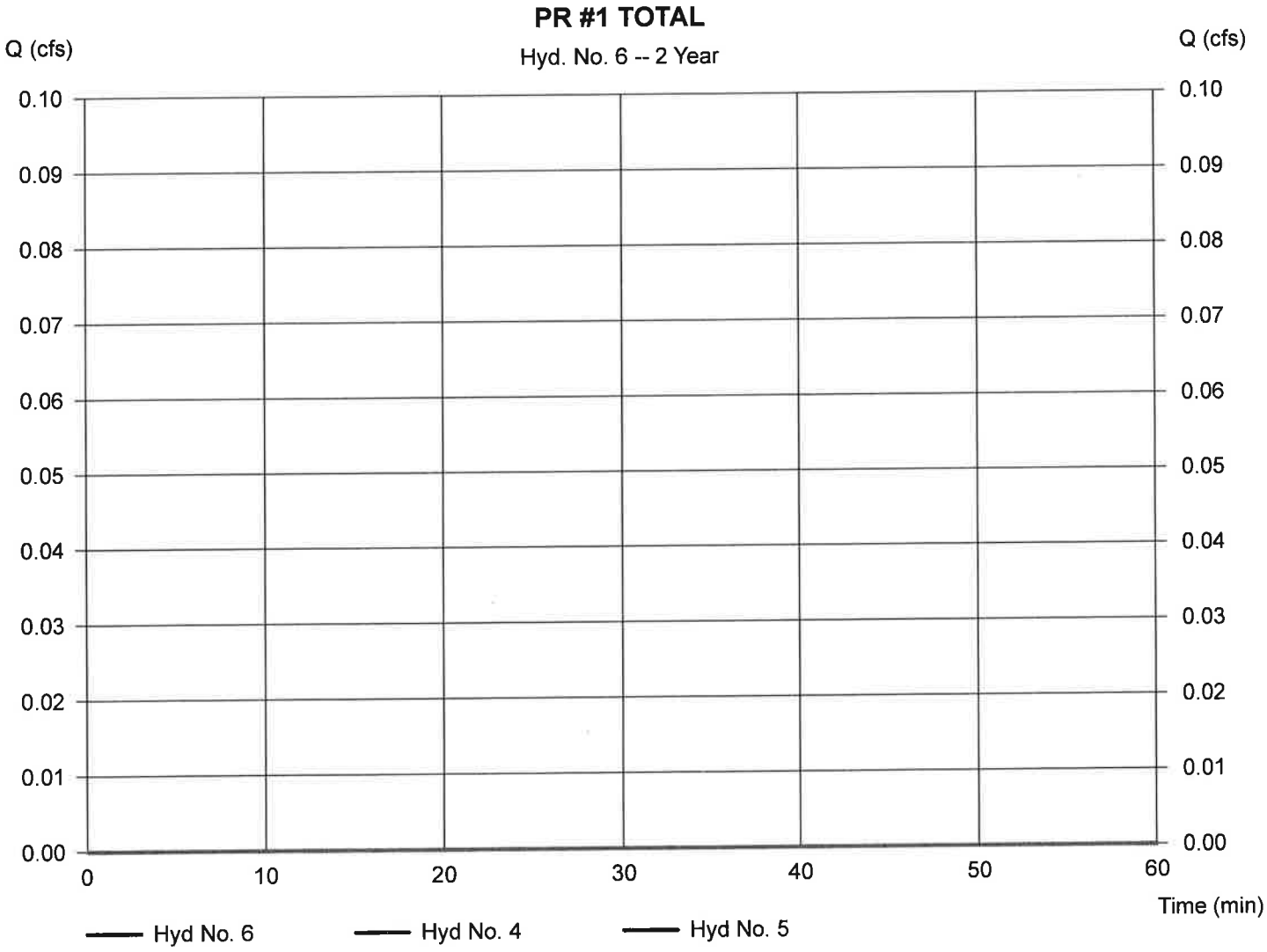
# Hydrograph Report



## Hyd. No. 6

PR #1 TOTAL

| | | | |
|---|---|---|---|
| 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. | = 4, 5 | 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 | Rational | 1.807 | 1 | 18 | 2,928 | ---- | ------ | ------ | EX #1 |
| 2 | Rational | 0.548 | 1 | 5 | 247 | ---- | ------ | ------ | PR#1 |
| 3 | Rational | 4.547 | 1 | 5 | 2,046 | ---- | ------ | ------ | PR#2 |
| 4 | Reservoir | 0.000 | 1 | n/a | 0 | 2 | 195.53 | 247 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 0.068 | 1 | 15 | 373 | 3 | 190.73 | 2,034 | STORM BASIN ROUTING |
| 6 | Combine | 0.068 | 1 | 15 | 373 | 4, 5 | ------ | ------ | PR #1 TOTAL |

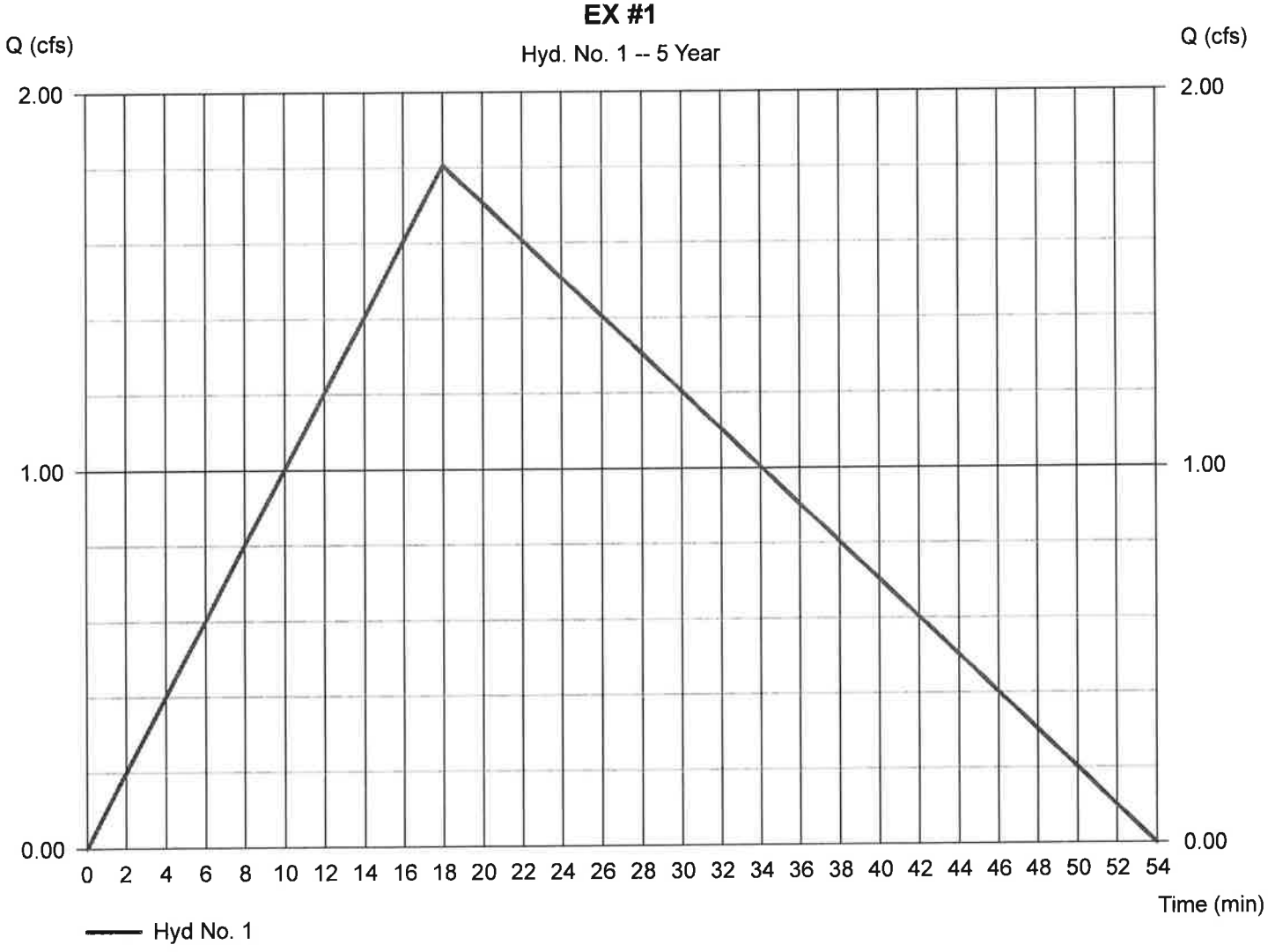
# Hydrograph Report



## Hyd. No. 1

EX #1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 1.807 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 18 min |
| Time interval | = 1 min | Hyd. volume | = 2,928 cuft |
| Drainage area | = 1.340 ac | Runoff coeff. | = 0.41 |
| Intensity | = 3.290 in/hr | Tc by TR55 | = 18.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



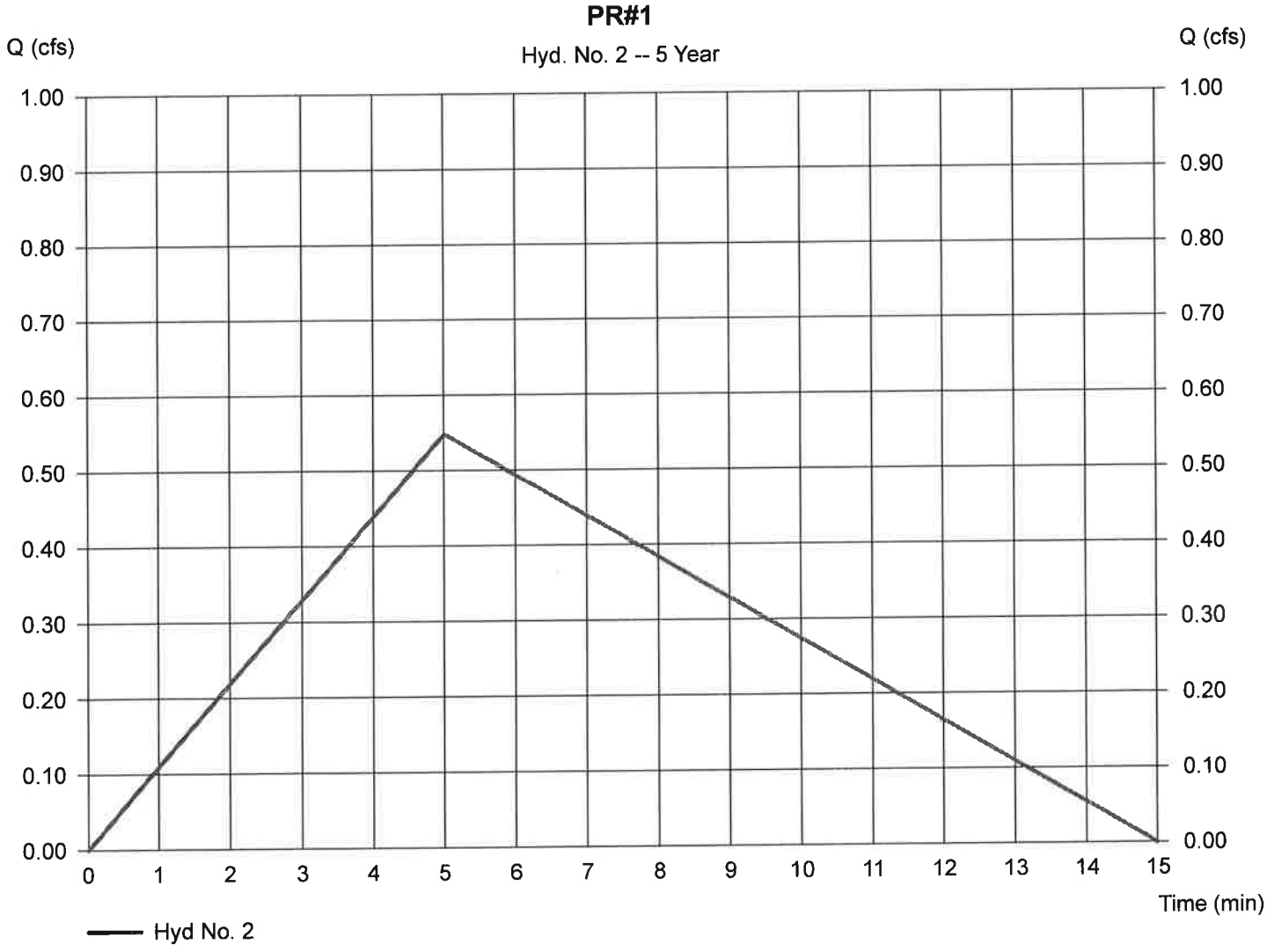
# Hydrograph Report



## Hyd. No. 2

PR#1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 0.548 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 247 cuft |
| Drainage area | = 0.140 ac | Runoff coeff. | = 0.62 |
| Intensity | = 6.315 in/hr | Tc by User | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



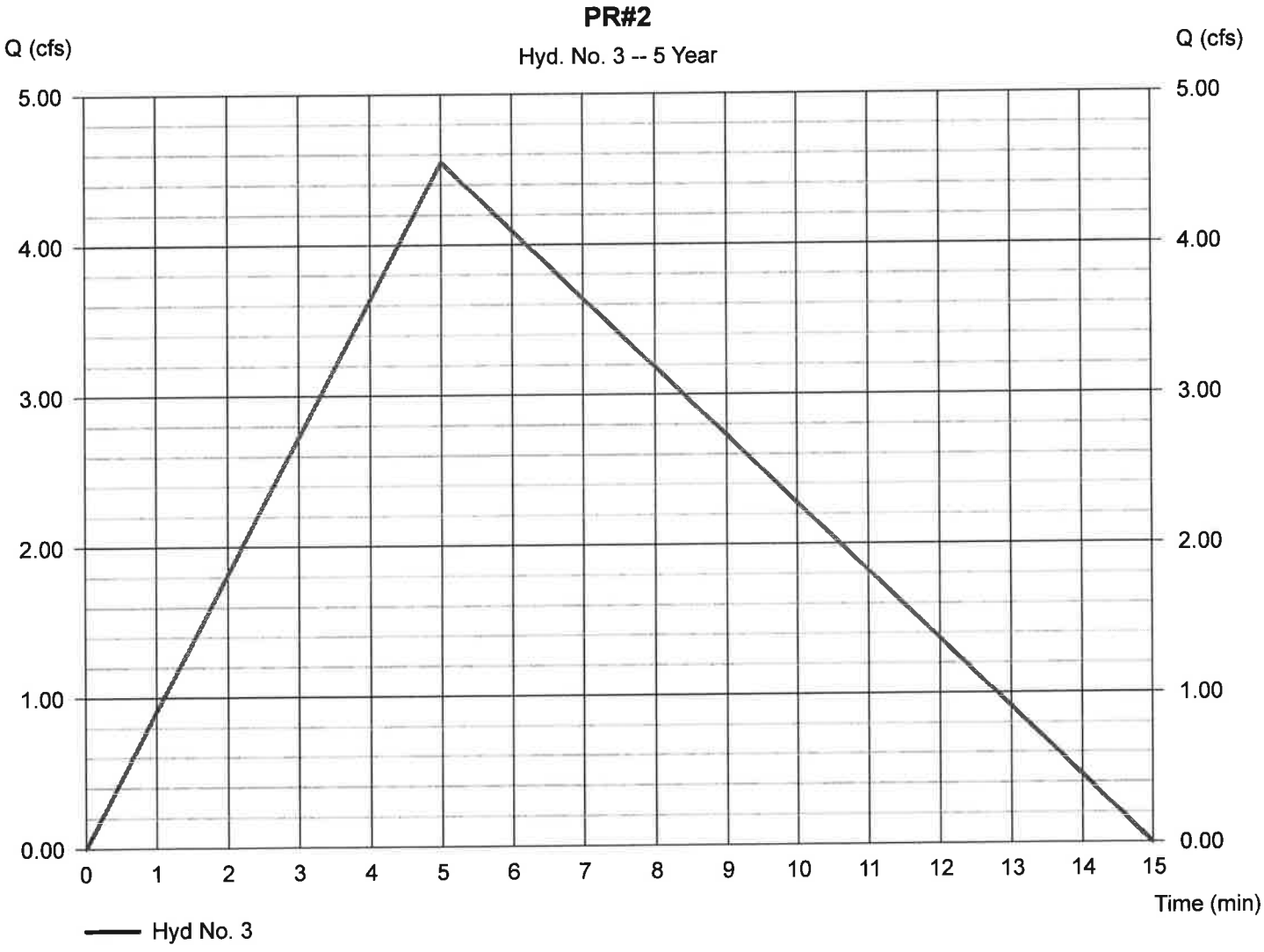
# Hydrograph Report



## Hyd. No. 3

PR#2

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 4.547 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 2,046 cuft |
| Drainage area | = 1.200 ac | Runoff coeff. | = 0.6 |
| Intensity | = 6.315 in/hr | Tc by TR55 | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1

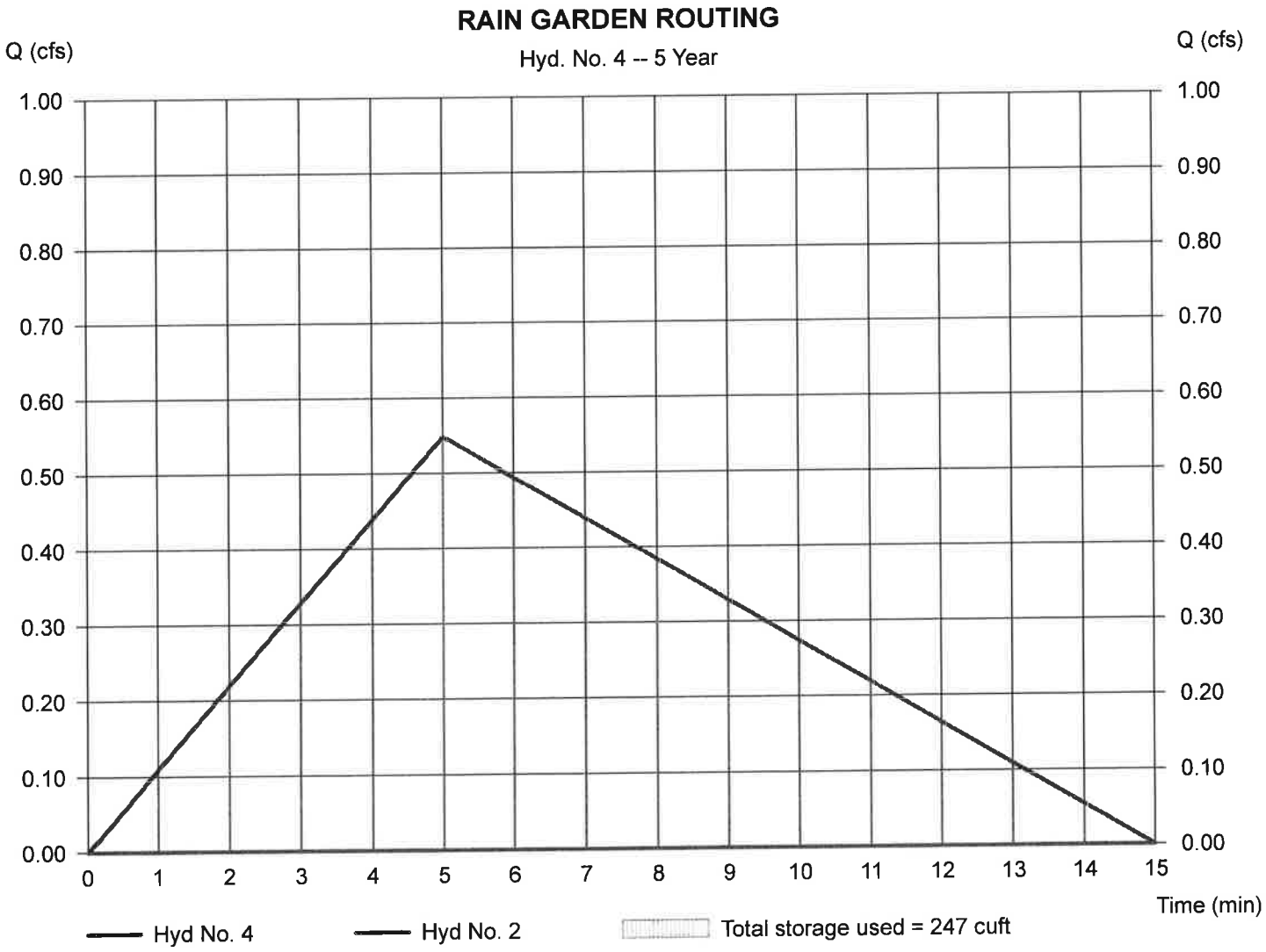
Friday, Oct 20, 2023

## Hyd. No. 4

RAIN GARDEN ROUTING

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.000 cfs |
| Storm frequency | = 5 yrs | Time to peak | = n/a |
| Time interval | = 1 min | Hyd. volume | = 0 cuft |
| Inflow hyd. No. | = 2 - PR#1 | Max. Elevation | = 195.53 ft |
| Reservoir name | = RAIN GARDEN #1 | Max. Storage | = 247 cuft |

Storage Indication method used.



# Hydrograph Report

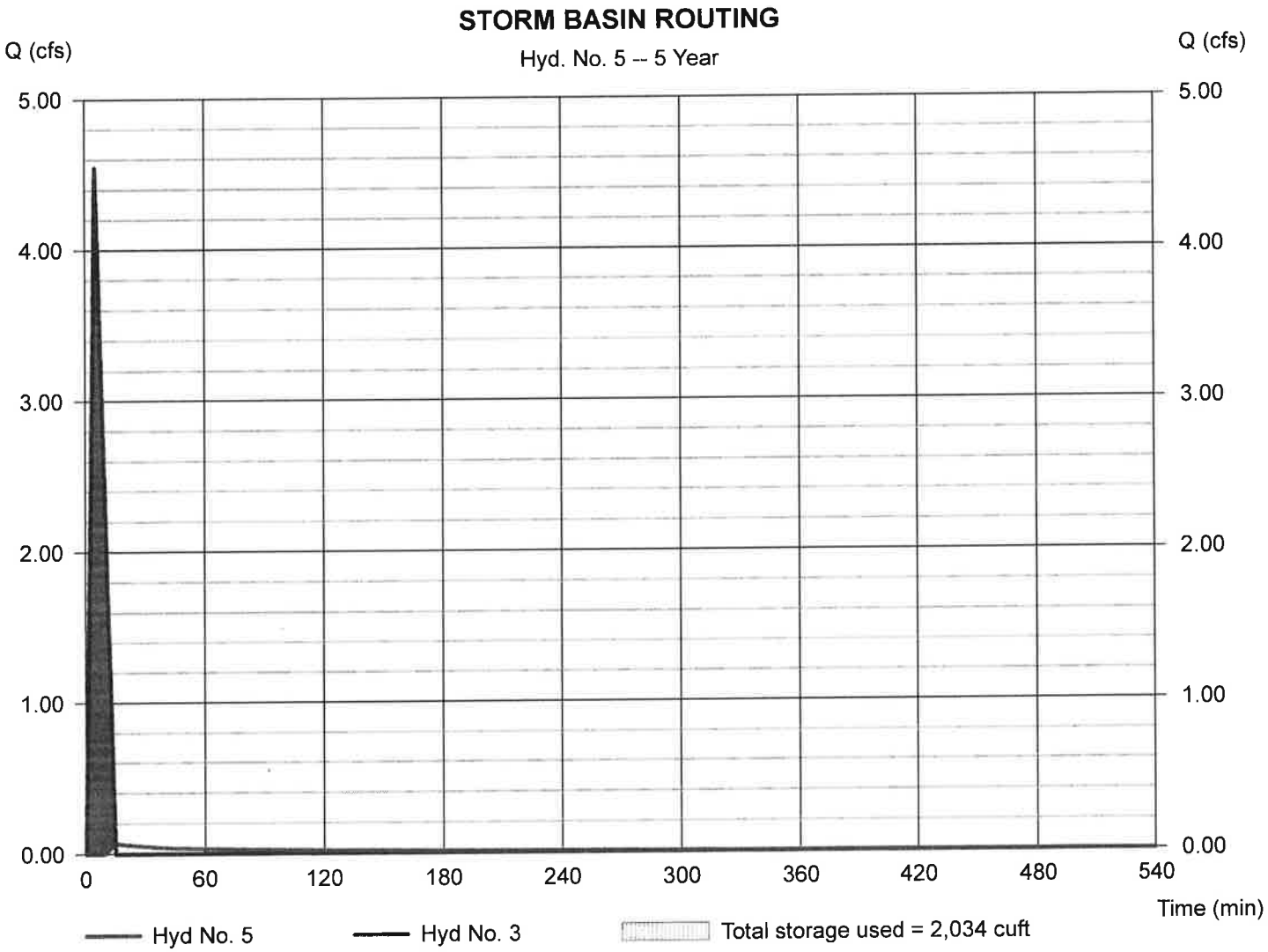


## Hyd. No. 5

STORM BASIN ROUTING

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.068 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 15 min |
| Time interval | = 1 min | Hyd. volume | = 373 cuft |
| Inflow hyd. No. | = 3 - PR#2 | Max. Elevation | = 190.73 ft |
| Reservoir name | = STORMWATER BASIN #1 | Max. Storage | = 2,034 cuft |

Storage Indication method used.



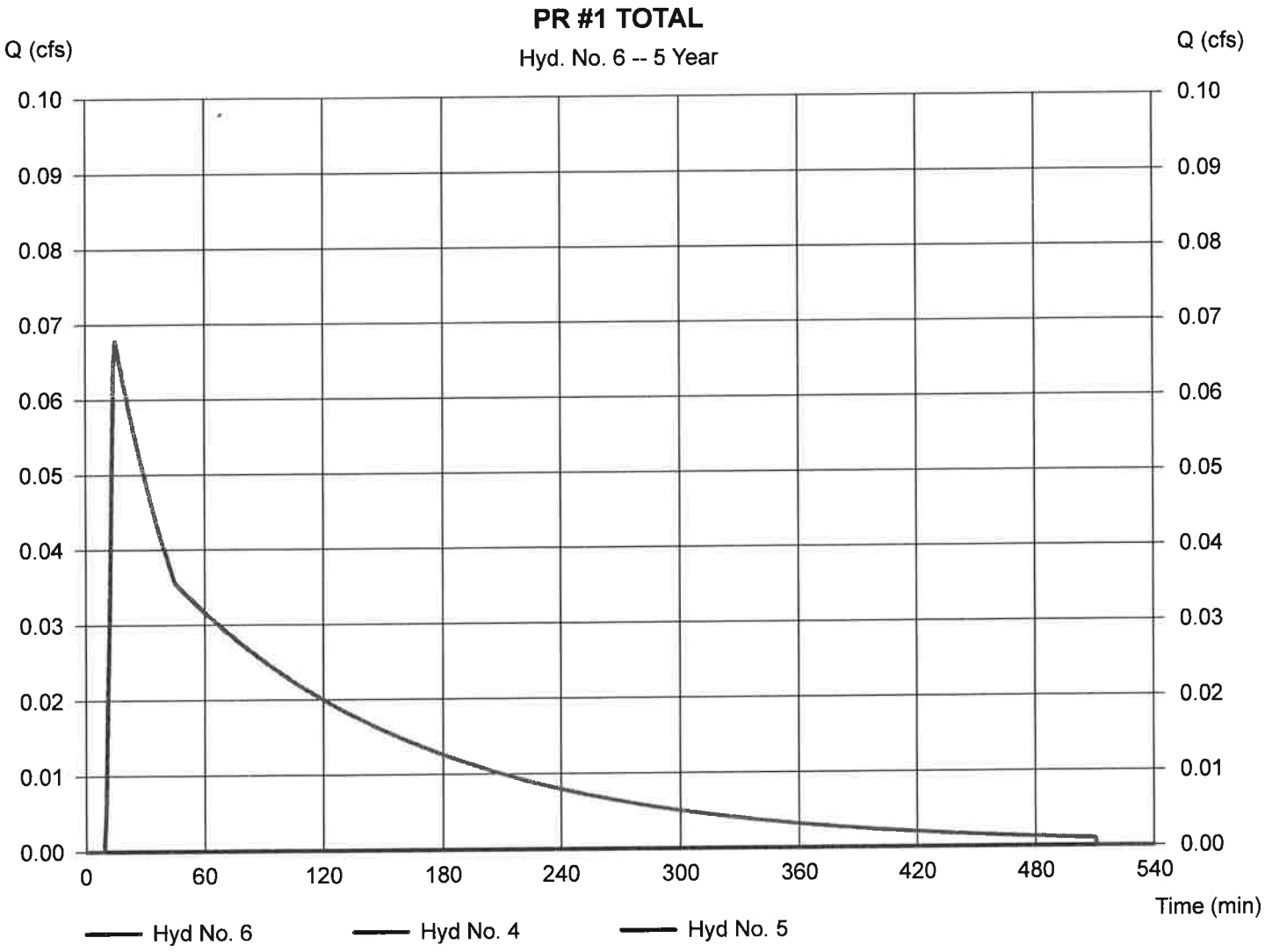
# Hydrograph Report



## Hyd. No. 6

PR #1 TOTAL

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.068 cfs |
| Storm frequency | = 5 yrs | Time to peak | = 15 min |
| Time interval | = 1 min | Hyd. volume | = 373 cuft |
| Inflow hyds. | = 4, 5 | 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 | Rational | 2.133 | 1 | 18 | 3,456 | ---- | ------ | ------ | EX #1 |
| 2 | Rational | 0.648 | 1 | 5 | 292 | ---- | ------ | ------ | PR#1 |
| 3 | Rational | 5.377 | 1 | 5 | 2,419 | ---- | ------ | ------ | PR#2 |
| 4 | Reservoir | 0.000 | 1 | n/a | 0 | 2 | 195.63 | 292 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 0.214 | 1 | 15 | 746 | 3 | 190.86 | 2,368 | STORM BASIN ROUTING |
| 6 | Combine | 0.214 | 1 | 15 | 746 | 4, 5 | ------ | ------ | PR #1 TOTAL |

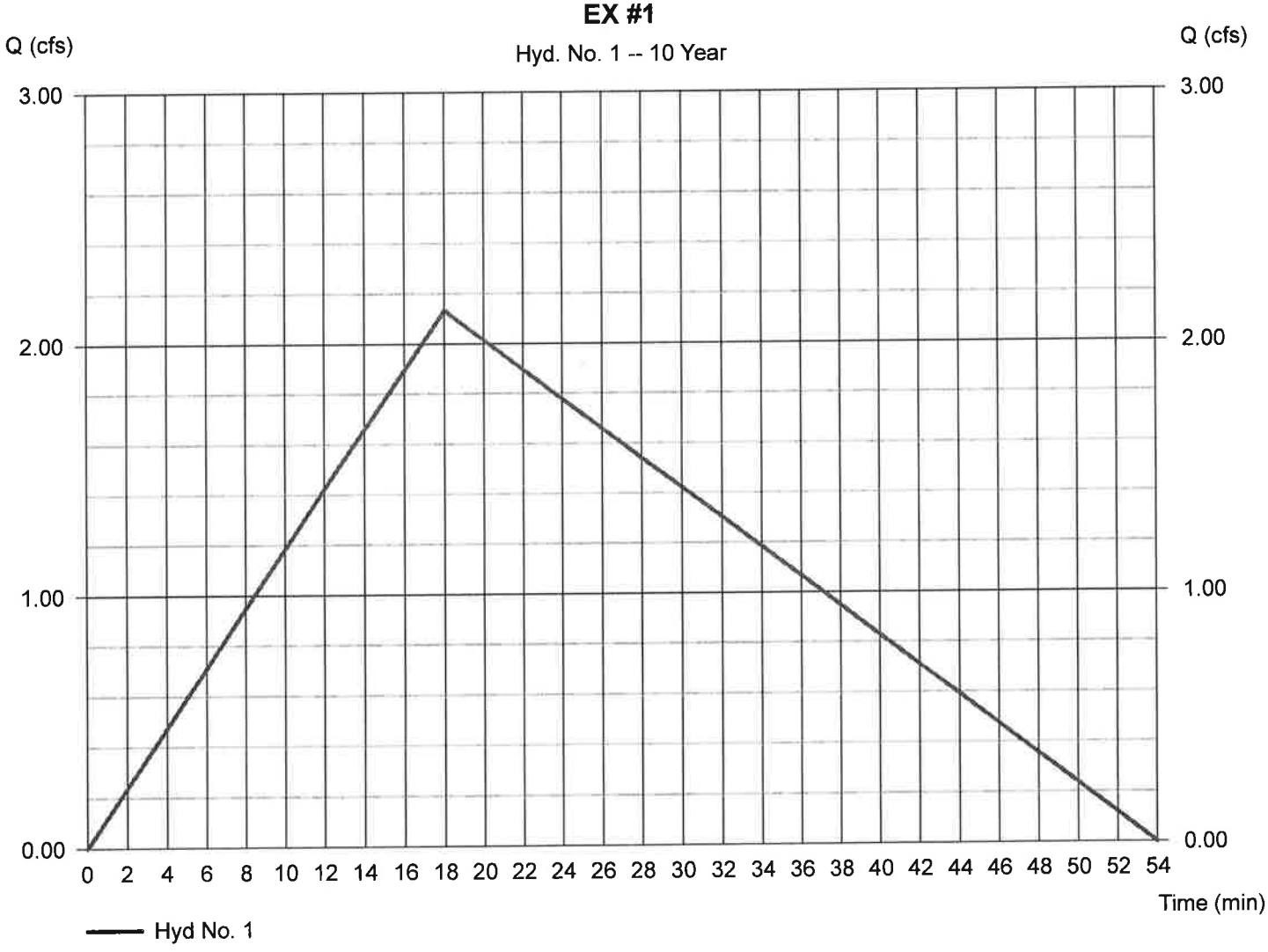
# Hydrograph Report



## Hyd. No. 1

EX #1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 2.133 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 18 min |
| Time interval | = 1 min | Hyd. volume | = 3,456 cuft |
| Drainage area | = 1.340 ac | Runoff coeff. | = 0.41 |
| Intensity | = 3.883 in/hr | Tc by TR55 | = 18.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



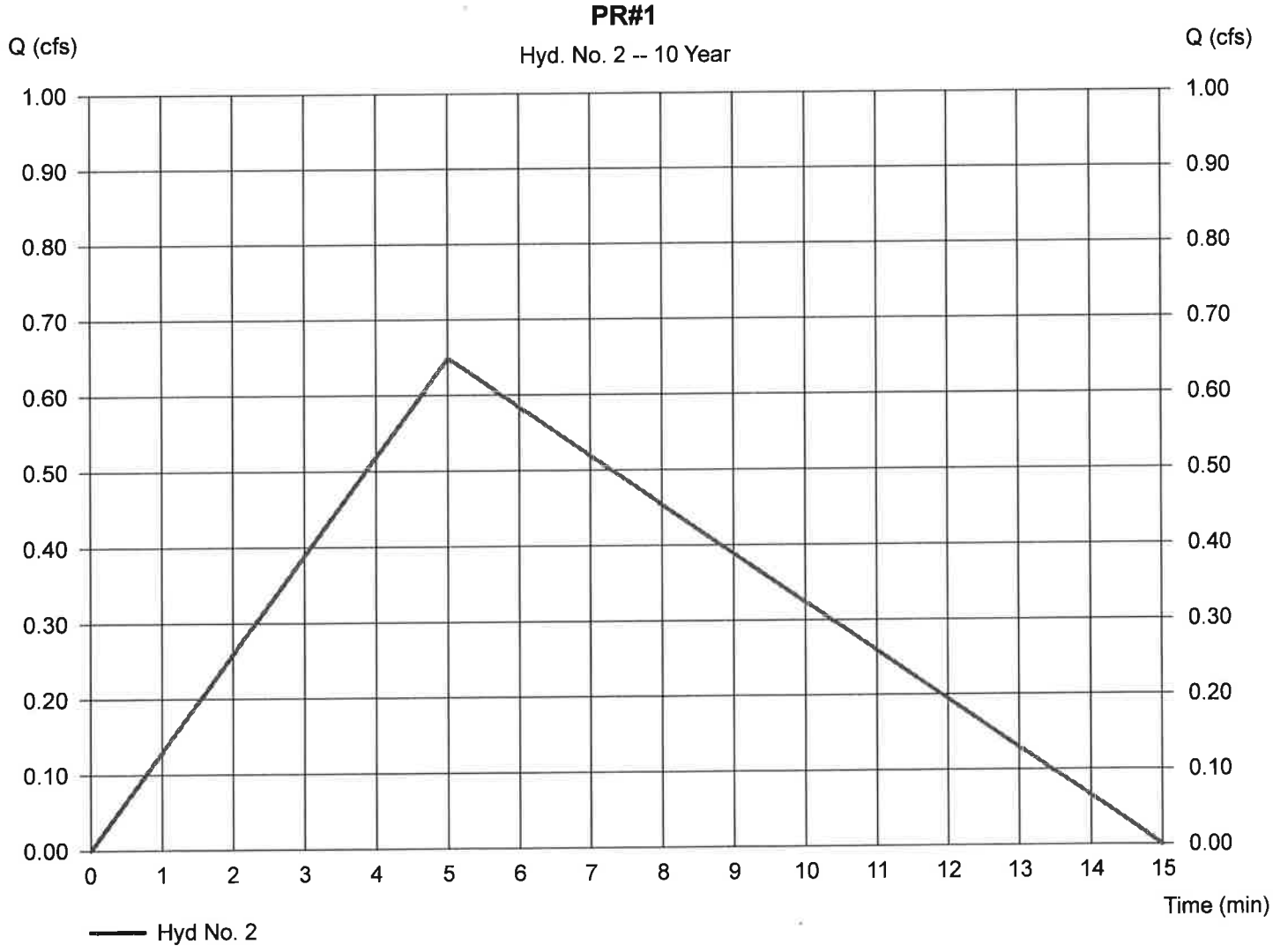
# Hydrograph Report



## Hyd. No. 2

PR#1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 0.648 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 292 cuft |
| Drainage area | = 0.140 ac | Runoff coeff. | = 0.62 |
| Intensity | = 7.468 in/hr | Tc by User | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



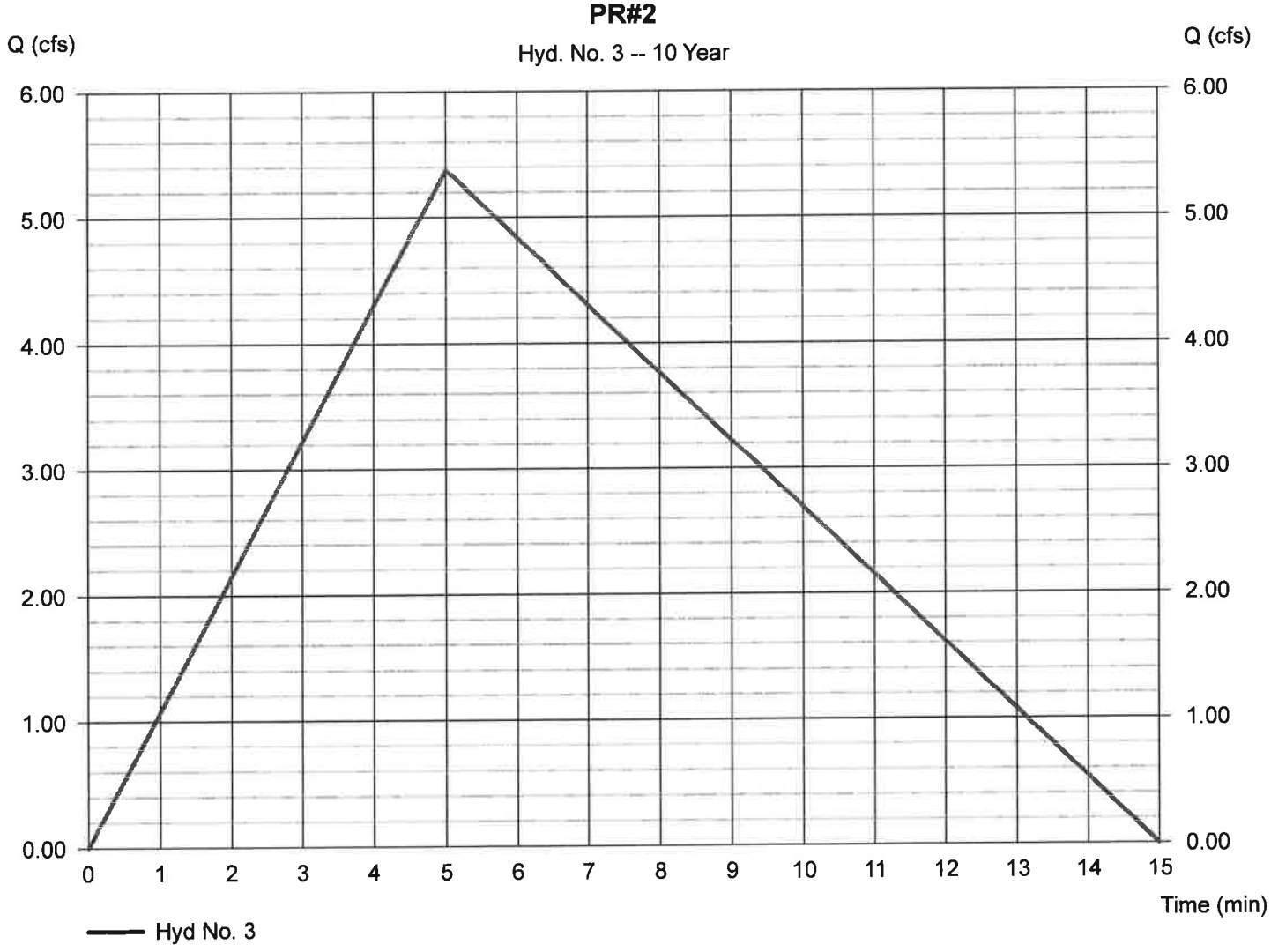
# Hydrograph Report



## Hyd. No. 3

PR#2

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 5.377 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 2,419 cuft |
| Drainage area | = 1.200 ac | Runoff coeff. | = 0.6 |
| Intensity | = 7.468 in/hr | Tc by TR55 | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# Hydrograph Report

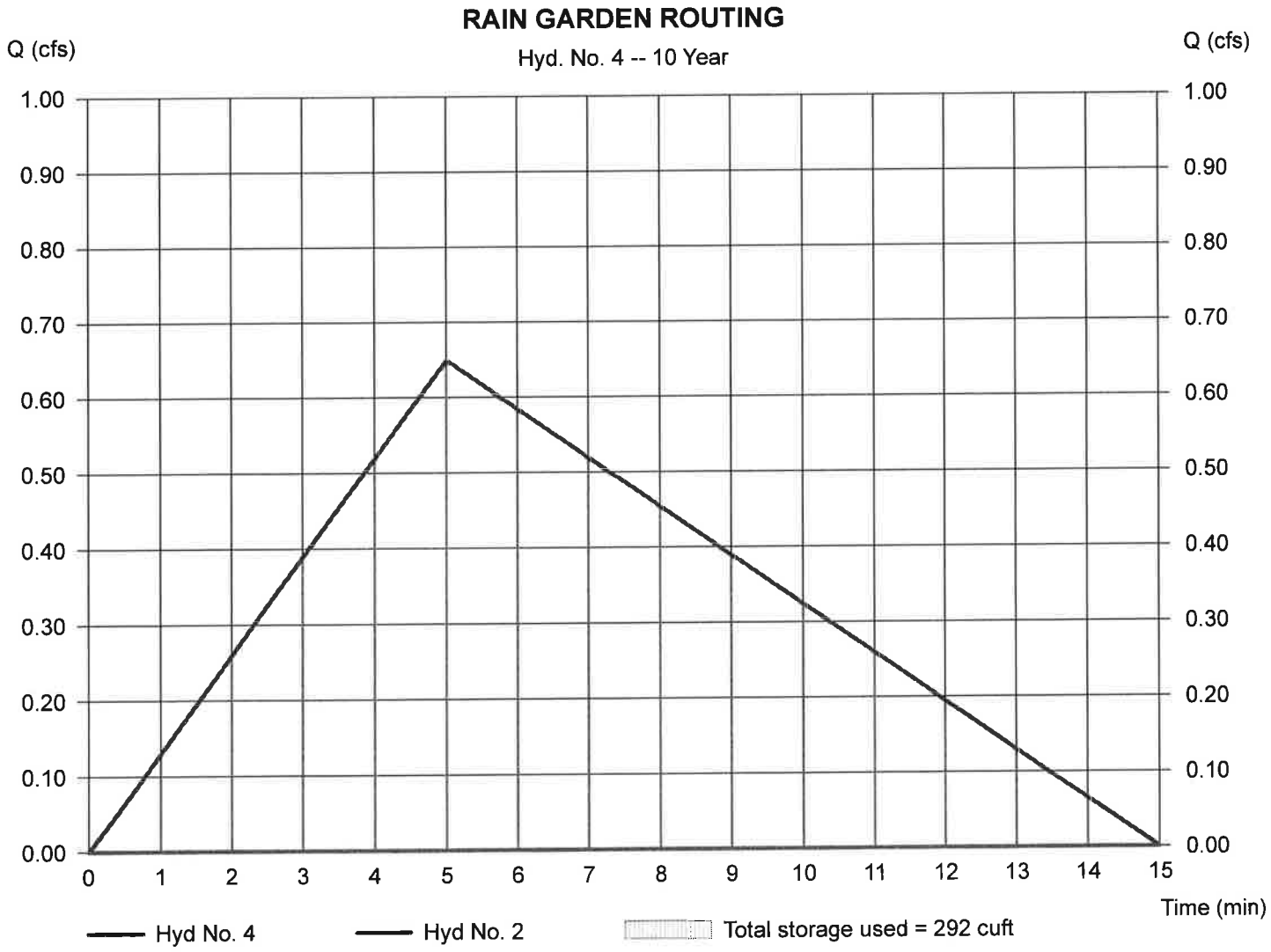


## Hyd. No. 4

RAIN GARDEN ROUTING

| | | | |
|---|---|---|---|
| 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. | = 2 - PR#1 | Max. Elevation | = 195.63 ft |
| Reservoir name | = RAIN GARDEN #1 | Max. Storage | = 292 cuft |

Storage Indication method used.



# Hydrograph Report

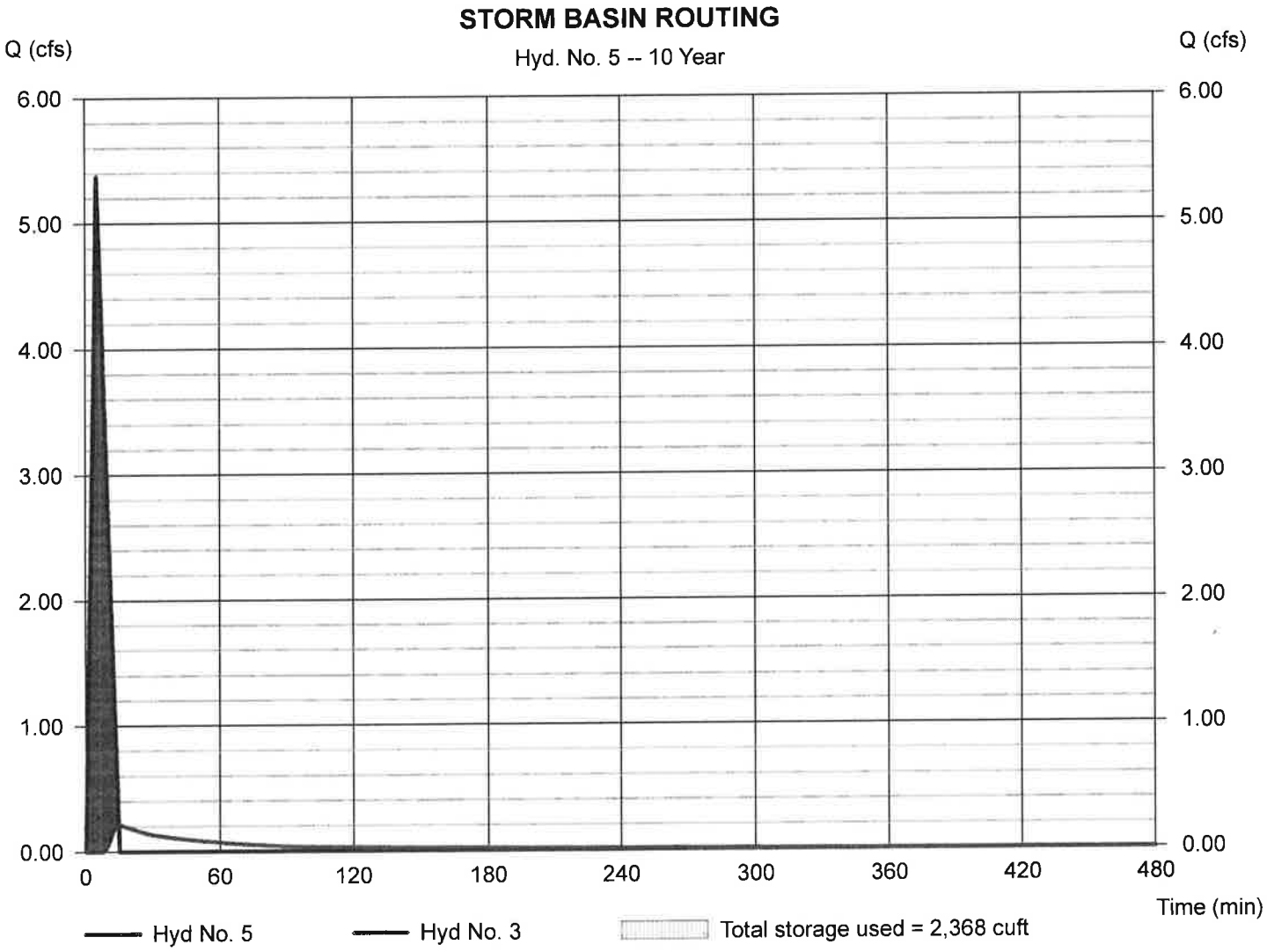


## Hyd. No. 5

STORM BASIN ROUTING

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.214 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 15 min |
| Time interval | = 1 min | Hyd. volume | = 746 cuft |
| Inflow hyd. No. | = 3 - PR#2 | Max. Elevation | = 190.86 ft |
| Reservoir name | = STORMWATER BASIN #1 | Max. Storage | = 2,368 cuft |

Storage Indication method used.



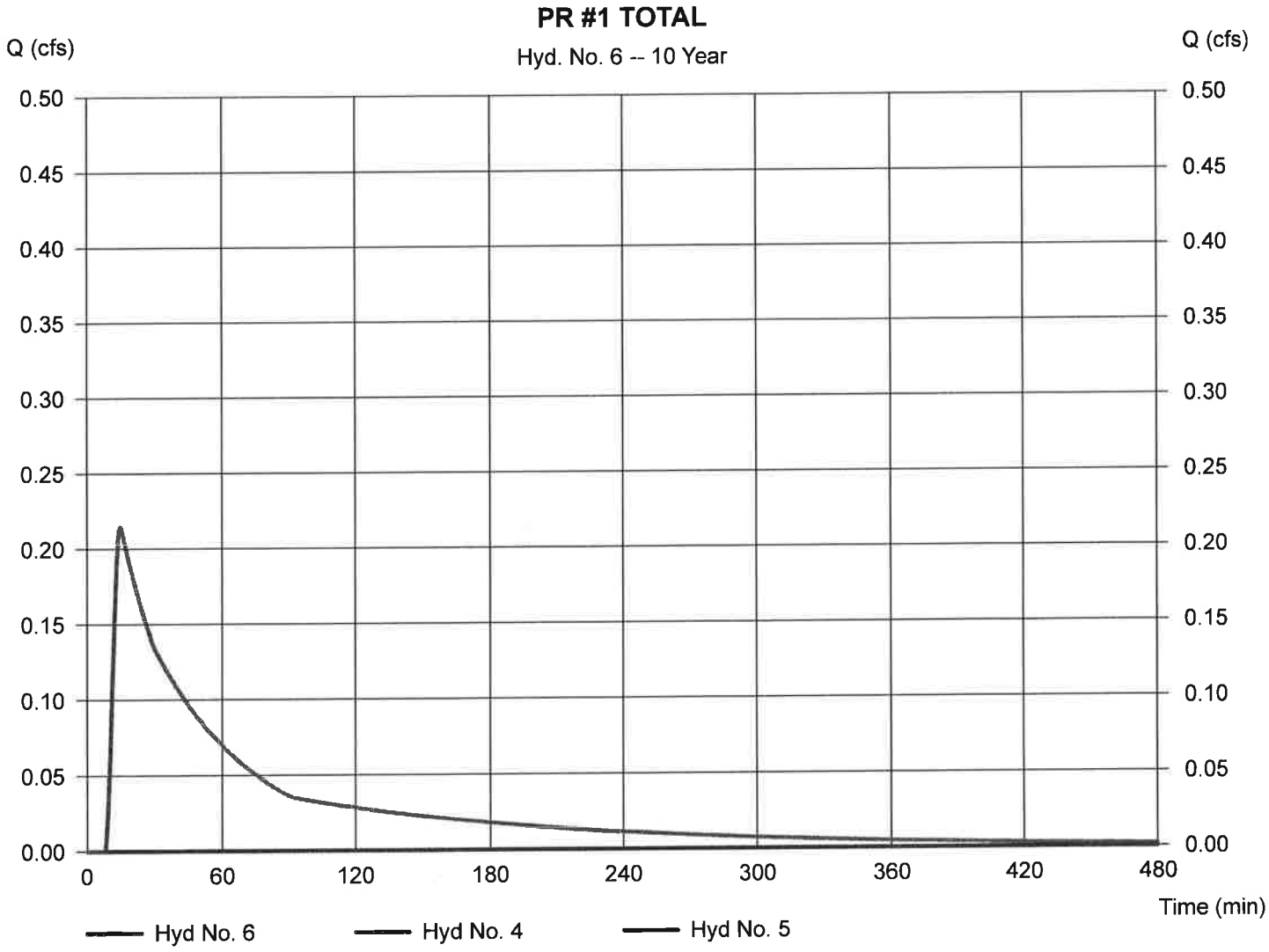
# Hydrograph Report



## Hyd. No. 6

PR #1 TOTAL

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.214 cfs |
| Storm frequency | = 10 yrs | Time to peak | = 15 min |
| Time interval | = 1 min | Hyd. volume | = 746 cuft |
| Inflow hyds. | = 4, 5 | 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 | Rational | 2.580 | 1 | 18 | 4,180 | ---- | ------ | ------ | EX #1 |
| 2 | Rational | 0.786 | 1 | 5 | 354 | ---- | ------ | ------ | PR#1 |
| 3 | Rational | 6.518 | 1 | 5 | 2,933 | ---- | ------ | ------ | PR#2 |
| 4 | Reservoir | 0.000 | 1 | n/a | 0 | 2 | 195.76 | 354 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 0.536 | 1 | 14 | 1,260 | 3 | 191.01 | 2,798 | STORM BASIN ROUTING |
| 6 | Combine | 0.536 | 1 | 14 | 1,260 | 4, 5 | ------ | ------ | PR #1 TOTAL |

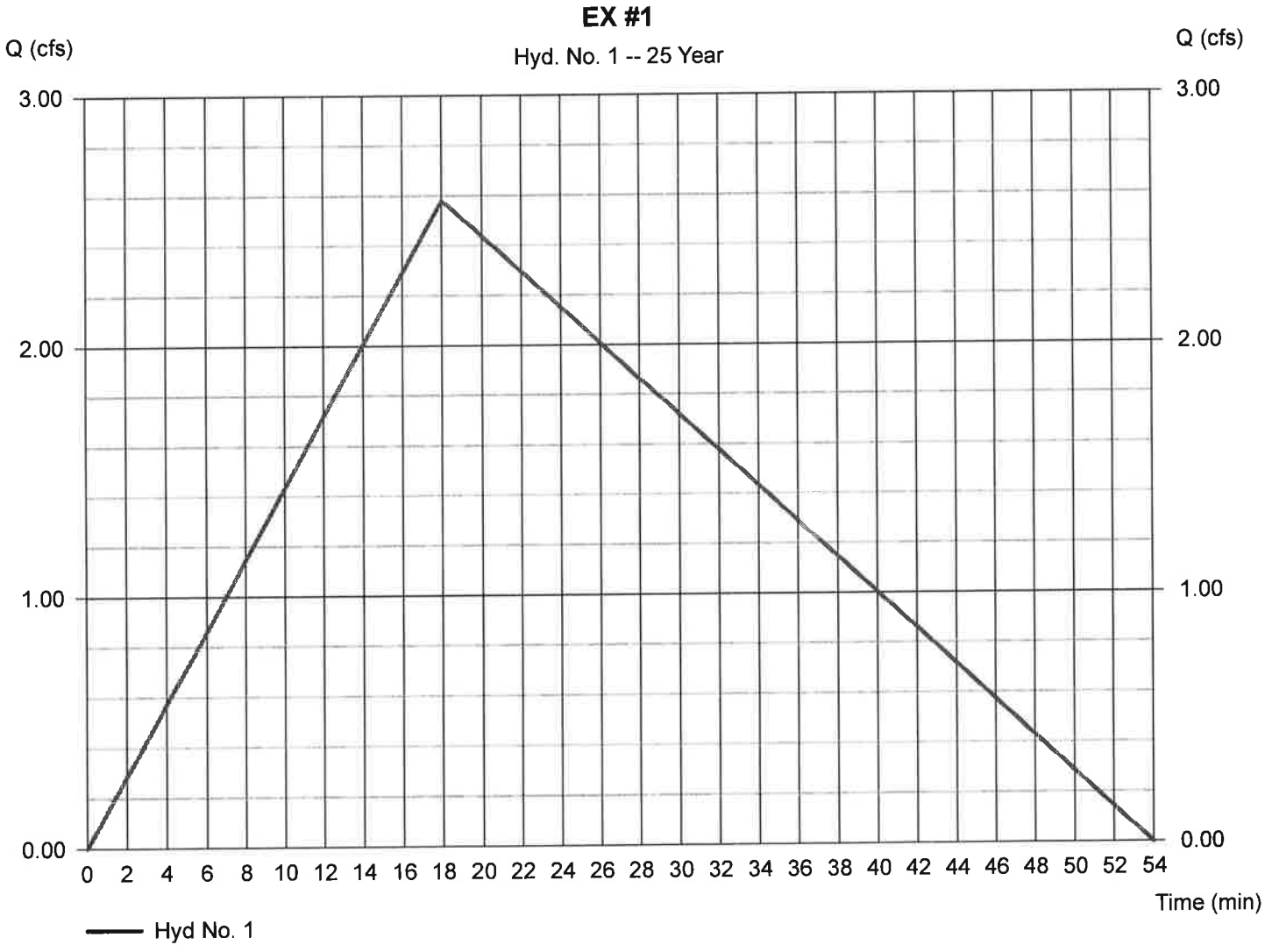
# Hydrograph Report



## Hyd. No. 1

EX #1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 2.580 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 18 min |
| Time interval | = 1 min | Hyd. volume | = 4,180 cuft |
| Drainage area | = 1.340 ac | Runoff coeff. | = 0.41 |
| Intensity | = 4.697 in/hr | Tc by TR55 | = 18.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



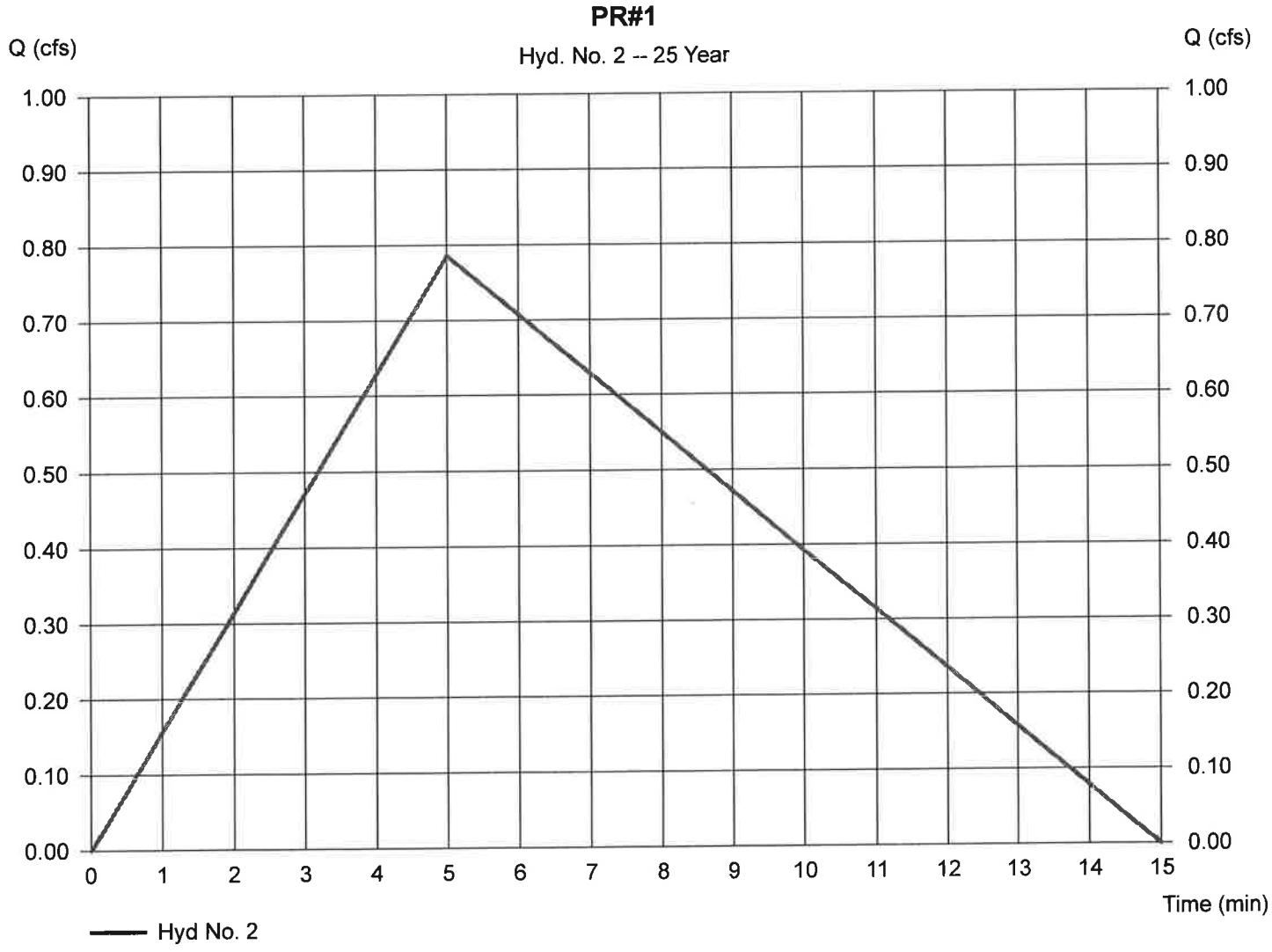
# Hydrograph Report



## Hyd. No. 2

PR#1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 0.786 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 354 cuft |
| Drainage area | = 0.140 ac | Runoff coeff. | = 0.62 |
| Intensity | = 9.053 in/hr | Tc by User | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



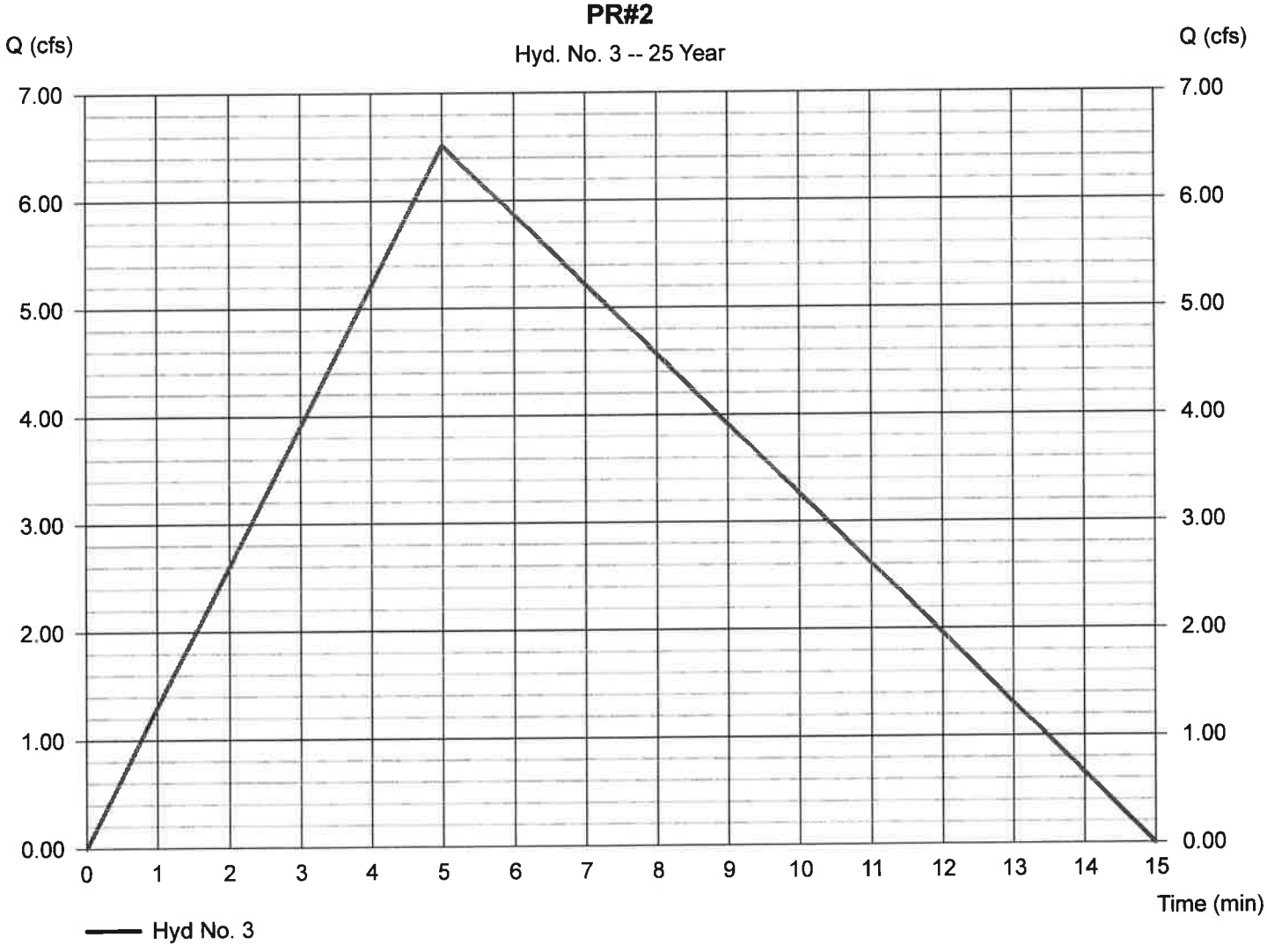
# Hydrograph Report



## Hyd. No. 3

PR#2

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 6.518 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 2,933 cuft |
| Drainage area | = 1.200 ac | Runoff coeff. | = 0.6 |
| Intensity | = 9.053 in/hr | Tc by TR55 | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# Hydrograph Report

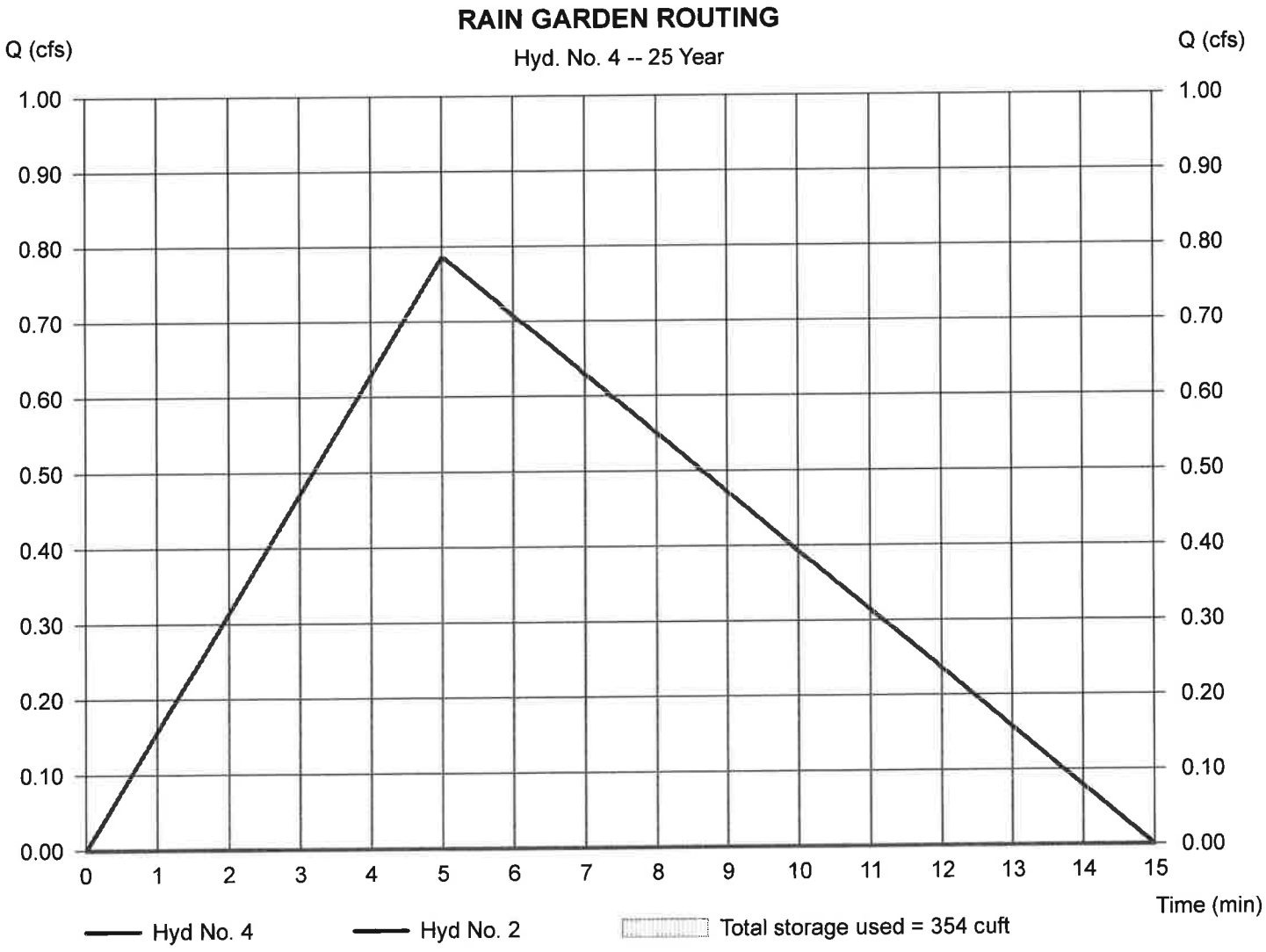


## Hyd. No. 4

RAIN GARDEN ROUTING

| | | | |
|---|---|---|---|
| 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. | = 2 - PR#1 | Max. Elevation | = 195.76 ft |
| Reservoir name | = RAIN GARDEN #1 | Max. Storage | = 354 cuft |

Storage Indication method used.



# Hydrograph Report

Hydraflow Hydrographs by Intelisolve v9.1

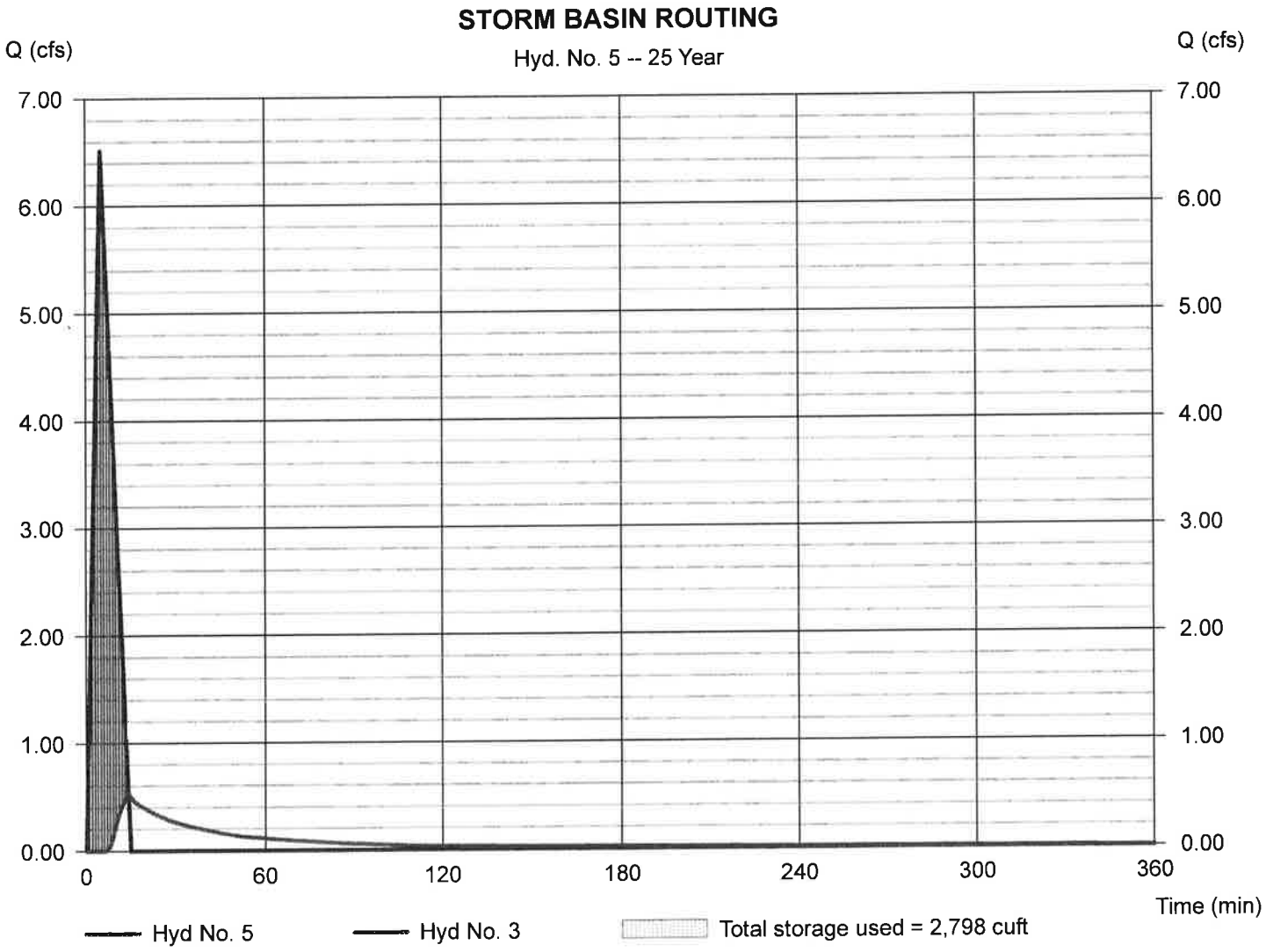
Friday, Oct 20, 2023

## Hyd. No. 5

STORM BASIN ROUTING

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 0.536 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 14 min |
| Time interval | = 1 min | Hyd. volume | = 1,260 cuft |
| Inflow hyd. No. | = 3 - PR#2 | Max. Elevation | = 191.01 ft |
| Reservoir name | = STORMWATER BASIN #1 | Max. Storage | = 2,798 cuft |

Storage Indication method used.



# 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 | Rational | 3.275 | 1 | 18 | 5,306 | ---- | ------ | ------ | EX #1 |
| 2 | Rational | 0.998 | 1 | 5 | 449 | ---- | ------ | ------ | PR#1 |
| 3 | Rational | 8.278 | 1 | 5 | 3,725 | ---- | ------ | ------ | PR#2 |
| 4 | Reservoir | 0.000 | 1 | n/a | 0 | 2 | 195.96 | 449 | RAIN GARDEN ROUTING |
| 5 | Reservoir | 1.904 | 1 | 13 | 2,052 | 3 | 191.11 | 3,237 | STORM BASIN ROUTING |
| 6 | Combine | 1.904 | 1 | 13 | 2,052 | 4, 5 | ------ | ------ | PR #1 TOTAL |

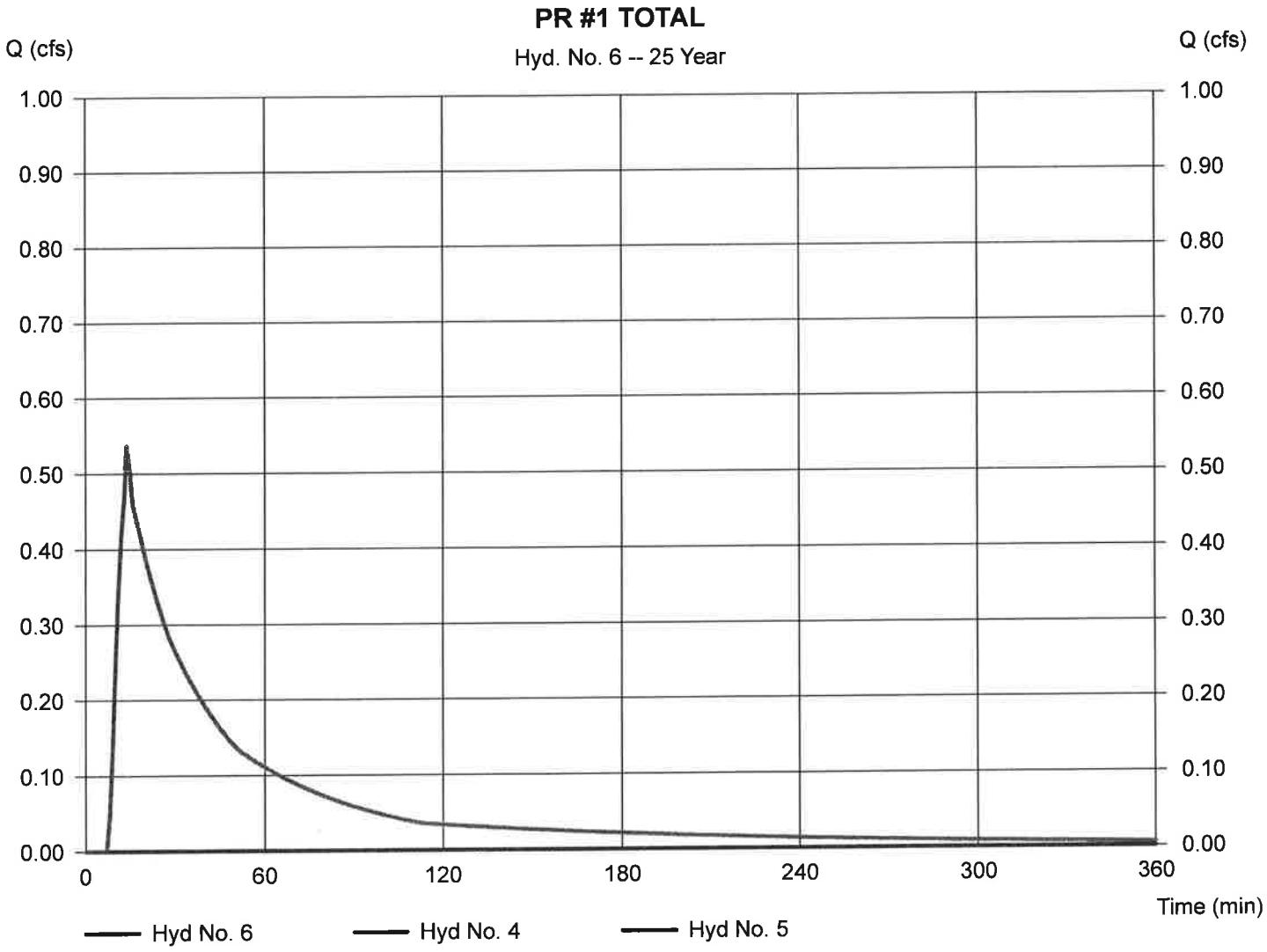
# Hydrograph Report



## Hyd. No. 6

PR #1 TOTAL

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 0.536 cfs |
| Storm frequency | = 25 yrs | Time to peak | = 14 min |
| Time interval | = 1 min | Hyd. volume | = 1,260 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 0.000 ac |



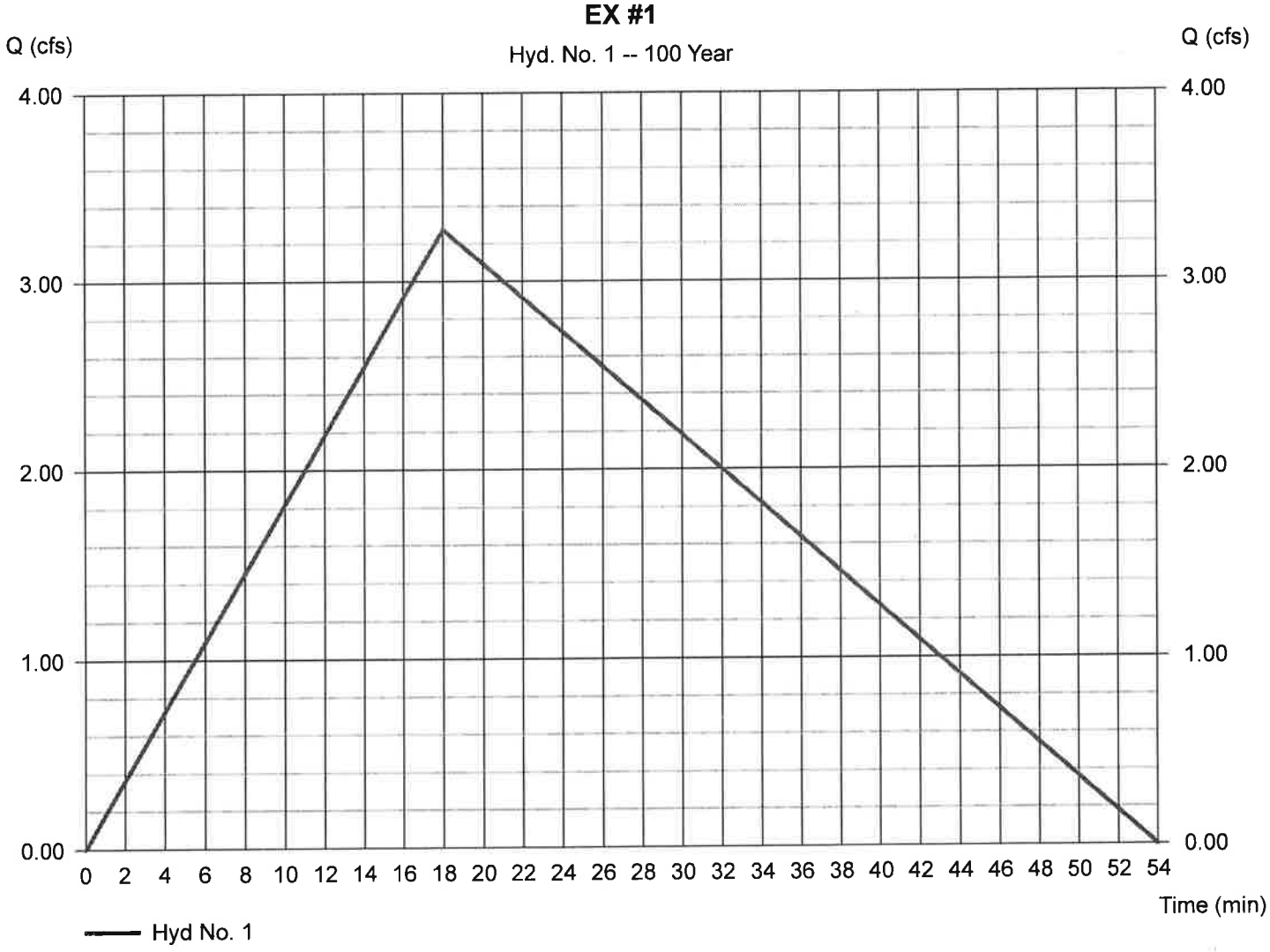
# Hydrograph Report



## Hyd. No. 1

EX #1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 3.275 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 18 min |
| Time interval | = 1 min | Hyd. volume | = 5,306 cuft |
| Drainage area | = 1.340 ac | Runoff coeff. | = 0.41 |
| Intensity | = 5.962 in/hr | Tc by TR55 | = 18.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



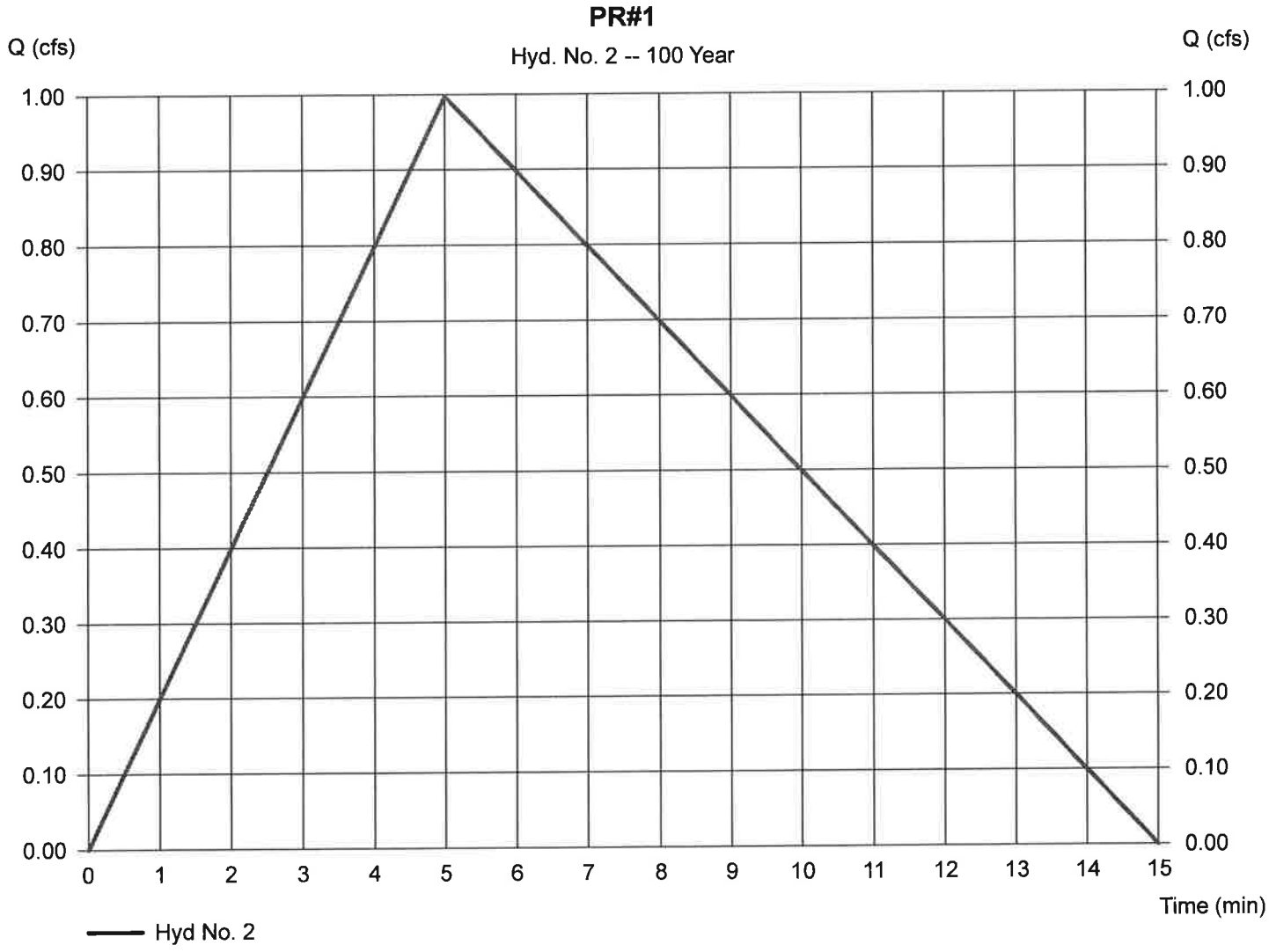
# Hydrograph Report



## Hyd. No. 2

PR#1

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 0.998 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 449 cuft |
| Drainage area | = 0.140 ac | Runoff coeff. | = 0.62 |
| Intensity | = 11.497 in/hr | Tc by User | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



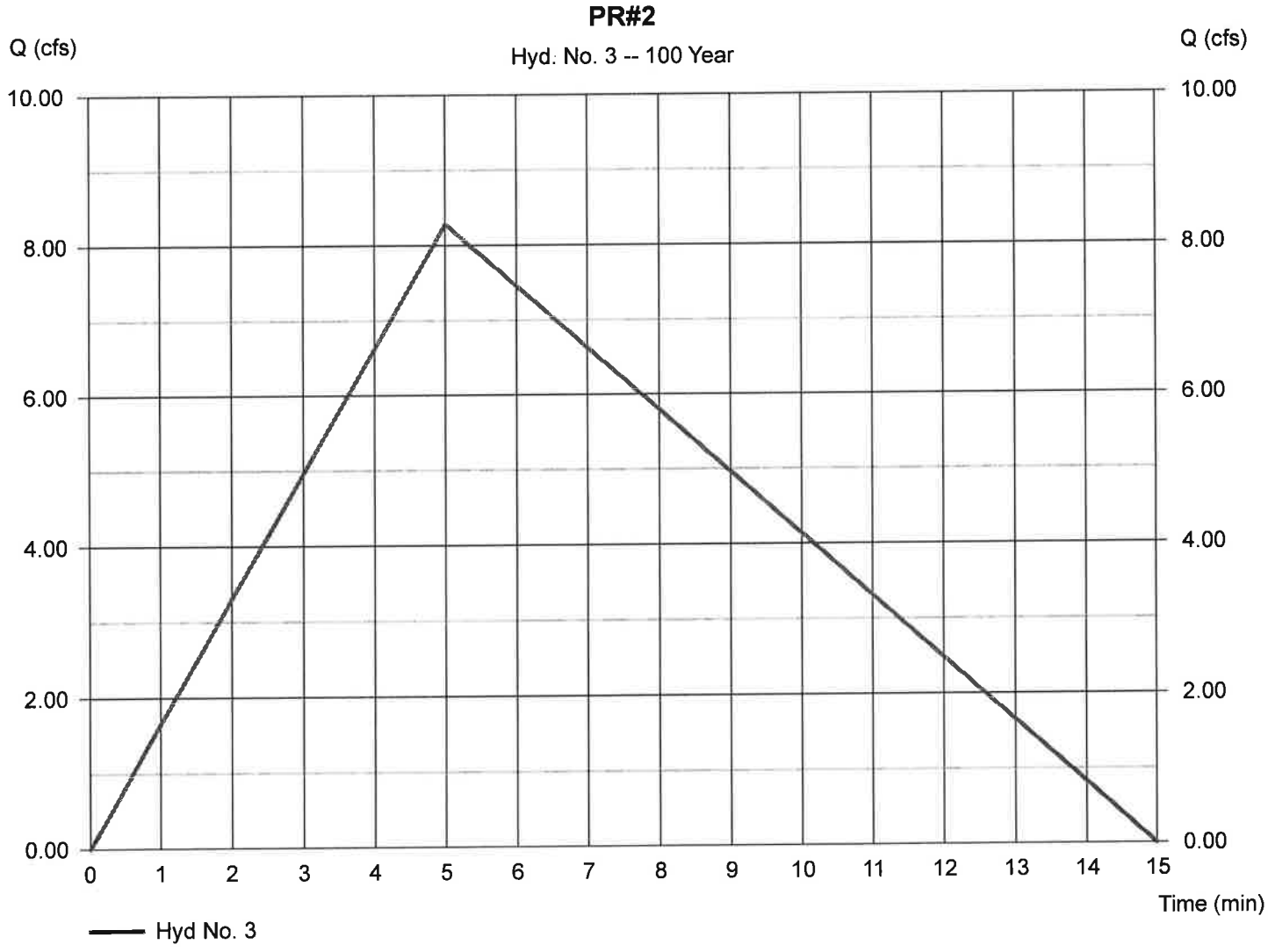
# Hydrograph Report



## Hyd. No. 3

PR#2

| | | | |
|---|---|---|---|
| Hydrograph type | = Rational | Peak discharge | = 8.278 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 5 min |
| Time interval | = 1 min | Hyd. volume | = 3,725 cuft |
| Drainage area | = 1.200 ac | Runoff coeff. | = 0.6 |
| Intensity | = 11.497 in/hr | Tc by TR55 | = 5.00 min |
| IDF Curve | = NOAA-SOUTHINGTON.IDF | Asc/Rec limb fact | = 1/2 |



# Hydrograph Report

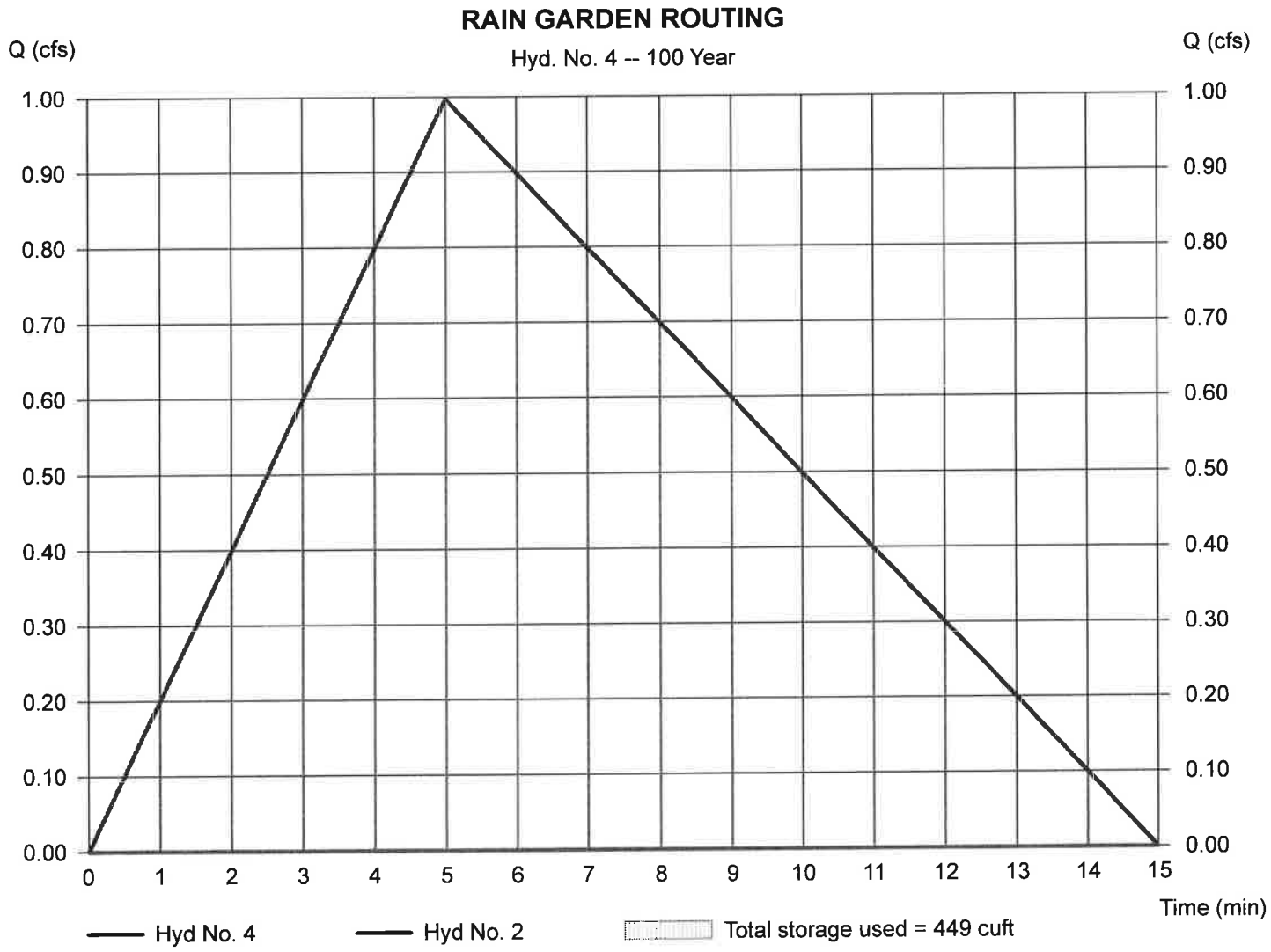


## Hyd. No. 4

RAIN GARDEN ROUTING

| | | | |
|---|---|---|---|
| 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. | = 2 - PR#1 | Max. Elevation | = 195.96 ft |
| Reservoir name | = RAIN GARDEN #1 | Max. Storage | = 449 cuft |

Storage Indication method used.



# Hydrograph Report

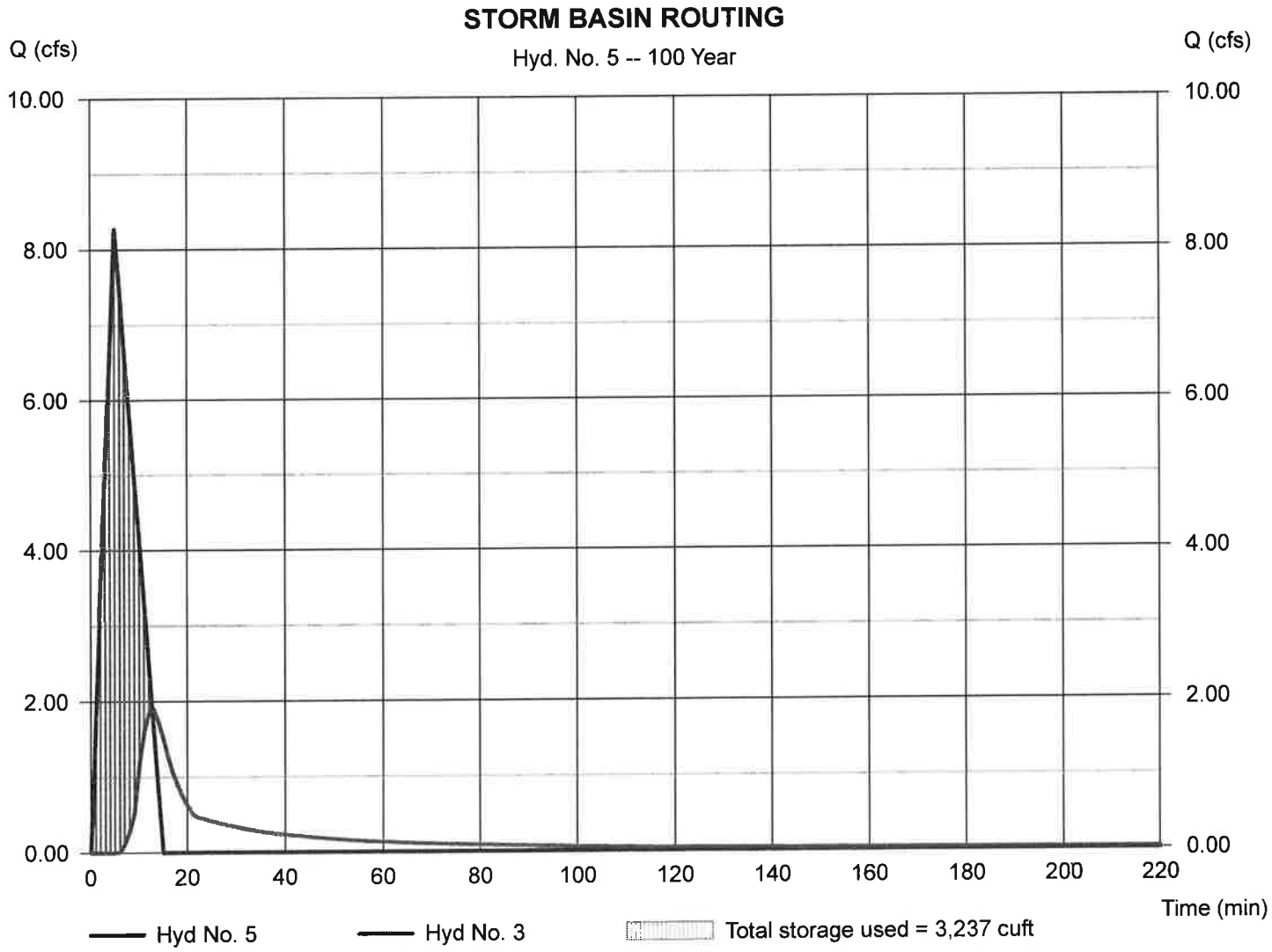


## Hyd. No. 5

STORM BASIN ROUTING

| | | | |
|---|---|---|---|
| Hydrograph type | = Reservoir | Peak discharge | = 1.904 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 13 min |
| Time interval | = 1 min | Hyd. volume | = 2,052 cuft |
| Inflow hyd. No. | = 3 - PR#2 | Max. Elevation | = 191.11 ft |
| Reservoir name | = STORMWATER BASIN #1 | Max. Storage | = 3,237 cuft |

Storage Indication method used.



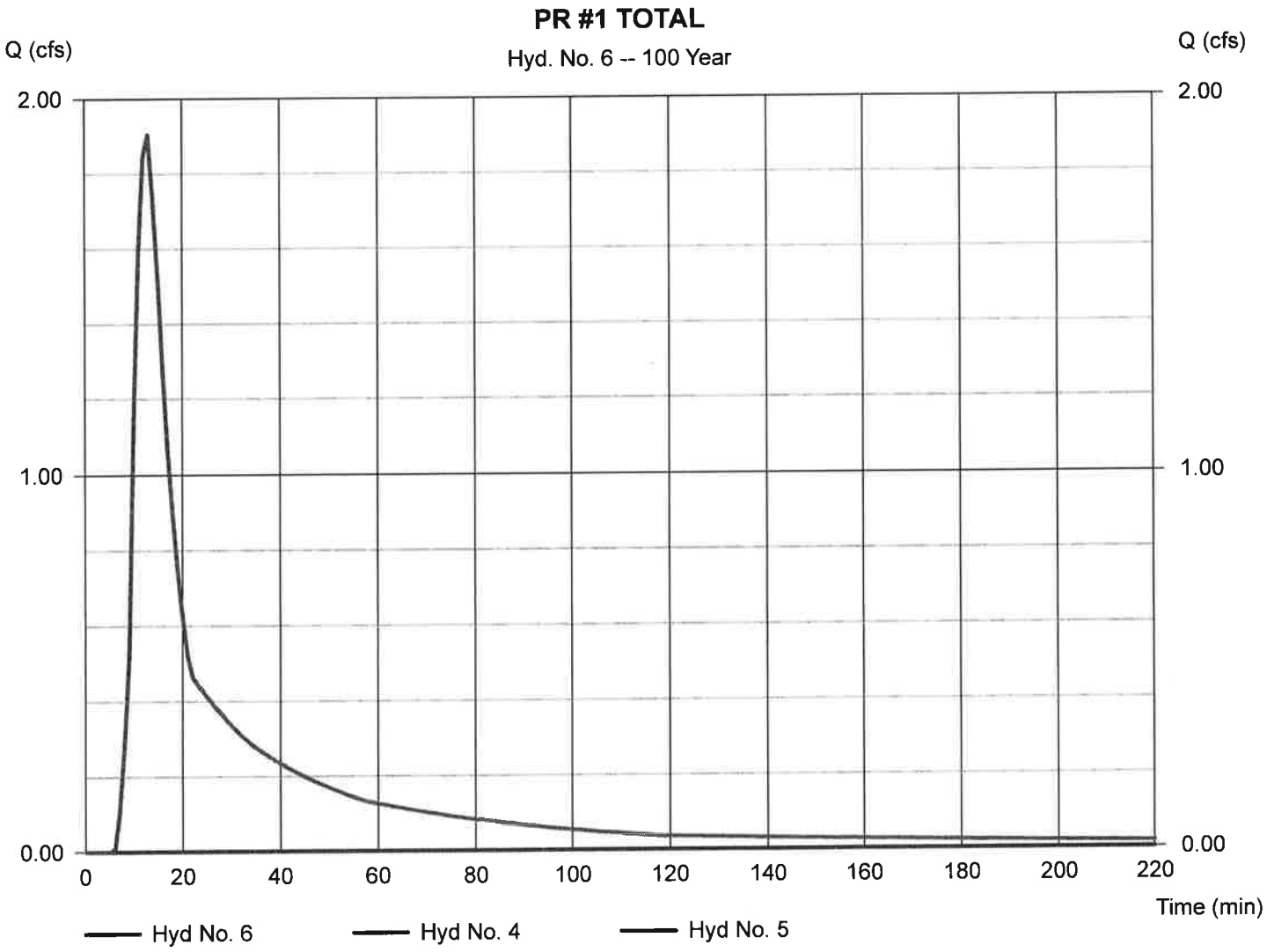
# Hydrograph Report



## Hyd. No. 6

PR #1 TOTAL

| | | | |
|---|---|---|---|
| Hydrograph type | = Combine | Peak discharge | = 1.904 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 13 min |
| Time interval | = 1 min | Hyd. volume | = 2,052 cuft |
| Inflow hyds. | = 4, 5 | Contrib. drain. area | = 0.000 ac |



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 19.5355 | 3.9000 | 0.7174 | -------- |
| 2 | 22.3728 | 3.5000 | 0.7068 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 30.1622 | 3.8000 | 0.7190 | -------- |
| 10 | 35.8238 | 3.8000 | 0.7210 | -------- |
| 25 | 43.6468 | 3.8000 | 0.7233 | -------- |
| 50 | 49.5764 | 3.8000 | 0.7237 | -------- |
| 100 | 55.5061 | 3.8000 | 0.7239 | -------- |

File name: NOAA-SOUTHINGTON.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 | 4.07 | 2.96 | 2.37 | 2.00 | 1.75 | 1.56 | 1.41 | 1.30 | 1.20 | 1.12 | 1.05 | 0.99 |
| 2 | 4.93 | 3.55 | 2.85 | 2.40 | 2.10 | 1.87 | 1.69 | 1.55 | 1.44 | 1.34 | 1.26 | 1.19 |
| 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 | 6.32 | 4.57 | 3.66 | 3.09 | 2.69 | 2.40 | 2.17 | 1.99 | 1.84 | 1.72 | 1.61 | 1.52 |
| 10 | 7.47 | 5.40 | 4.32 | 3.64 | 3.18 | 2.83 | 2.56 | 2.35 | 2.17 | 2.02 | 1.90 | 1.79 |
| 25 | 9.05 | 6.54 | 5.23 | 4.41 | 3.84 | 3.42 | 3.10 | 2.84 | 2.62 | 2.44 | 2.29 | 2.16 |
| 50 | 10.27 | 7.42 | 5.93 | 5.00 | 4.36 | 3.88 | 3.51 | 3.22 | 2.97 | 2.77 | 2.60 | 2.45 |
| 100 | 11.50 | 8.30 | 6.64 | 5.59 | 4.87 | 4.34 | 3.93 | 3.60 | 3.33 | 3.10 | 2.91 | 2.74 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: NOAA-SOUTHINGTON (SO END RD).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 | 2.77 | 3.42 | 0.00 | 4.49 | 5.38 | 6.61 | 7.55 | 8.50 |
| SCS 6-Hr | 1.91 | 2.30 | 0.00 | 2.93 | 3.45 | 4.17 | 4.73 | 5.28 |
| Huff-1st | 0.00 | 1.55 | 0.00 | 2.75 | 4.00 | 5.38 | 6.50 | 8.00 |
| 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 | 1.55 | 0.00 | 2.75 | 4.00 | 5.38 | 6.50 | 8.00 |
| Custom | 0.00 | 1.75 | 0.00 | 2.80 | 3.90 | 5.25 | 6.00 | 7.10 |