

## **STORMWATER MANAGEMENT REPORT**

FOR

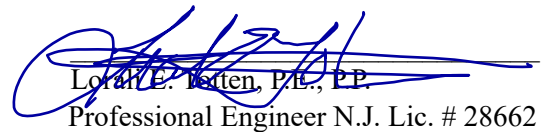
### ***THE PEDDIE SCHOOL – STADIUM RENOVATION PROJECT***

Lot 1.02, Block 53  
Etra Road/East Ward Street  
Borough of Hightstown  
Mercer County, New Jersey

September 18, 2025

**File N-1900**

Prepared by:

  
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Professional Engineer N.J. Lic. # 28662

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# 1 INTRODUCTION

## 1.1 PROJECT LOCATION

The project is located within the campus of Peddie School, Borough of Hightstown, Mercer County, Lot 1.02 in Block 53 per the Tax Maps of the Borough of Hightstown. While the Peddie School Facility in Hightstown Borough is relatively large, containing 57 acres in this particular lot, the proposed improvements are generally located in an area of about 4.69 acre as in and around the Football stadium located to the north of the Athletic facility with access from Etra Road (County Route 571)

## 1.2 PROJECT DESCRIPTION

This project has two goals:

1. Reconfigure the current football field and track to permit the playing field to become an athletic field that can support multiple sports played by both boys and girls including soccer, lacrosse, field hockey and football while maintaining a 400 meter track and associated track and field event locations as well as create a playing surface that has a consistent playing surface of synthetic turf., with all weather capability.
2. Increase the viewing capacity for these sports and the tennis courts without adding any permanent seating, but by adding the concrete walkway along the Peddie Lake side of the stadium and the installation of athletic field lighting to permit night events including practice in the winter season during reduced hours of daylight.

The proposed reconfiguration of the Football Field and Track as depicted on the Site Plan will occur within between the edge of the tennis courts and the outside edge of the stadium seating from the edge of the existing drive accessing the maintenance building rear of the athletic center to the edge of the children's play area. The renovation project is wholly located within the Peddie School facility.

As part of the renovation:

1. The track will be replaced with a similar type of track.
2. The grass field will be replaced with synthetic turf.
3. A retaining wall will be constructed at the edge of the tennis courts replacing a steeper slope down to the tennis courts to provide the width needed for the athletic fields as well as create a viewing area for the tennis courts and the athletic field.
4. For conservatism in stormwater management design, the synthetic turf will be considered impervious, (it is NOT). The increase of impervious due to this assumption as well as the added concrete walk way is mitigated with an under ground detention system.
5. Field lighting will be installed.

The area of the renovation about 4.69 acres of the 57.09 acre campus in Hightstown Borough. Including the synthetic turf as an impervious surface, the imperviousness cover increases from 1.63 to 4.13 acres.

## 1.3 EXISTING CONDITIONS – SOILS & TOPOGRAPHY

### Topography

The the property to the south of the football field/track contains existing sports fields not to be disturbed and slopes gently from Etra Road to the stadium seating area. At the station seating, the property slopes more steeply at 4:1 slope down to the track. The track and field slope from the middle of the field and the outside of the track to channel drains along the field track interface which outlet to the existing stormwater system. The general slope of the track and field area is 2 percent. Between the track and the tennis courts, the property again slopes more steeply at 4:1 down to the tennis courts. The entire project site drains to the Peddie Lake via overland flow and through the stormwater system ending in two outfalls to the Lake for this area of the site.

### Soils

The USDA Web Soil Survey for Mercer County indicates that the project site contains two mapping units:

**UdstB—Udorthents**, stratified substratum, 0 to 8 percent slopes

#### **Map Unit Setting**

- *National map unit symbol:* 4jq2
- *Elevation:* 30 to 1,500 feet
- *Mean annual precipitation:* 28 to 59 inches
- *Mean annual air temperature:* 46 to 79 degrees F
- *Frost-free period:* 161 to 231 days
- *Farmland classification:* Not prime farmland

#### **Map Unit Composition**

- *Udorthents, stratified substratum, and similar soils:* 95 percent
- *Minor components:* 5 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Udorthents, Stratified Substratum**

##### **Setting**

- *Landform:* Low hills
- *Down-slope shape:* Linear
- *Across-slope shape:* Linear
- *Parent material:* Loamy lateral spread deposits over gravelly lateral spread deposits

##### **Typical profile**

- *A - 0 to 10 inches:* sand
- *C - 10 to 72 inches:* gravelly coarse sand

##### **Properties and qualities**

- *Slope:* 0 to 8 percent
- *Depth to restrictive feature:* More than 80 inches
- *Drainage class:* Well drained
- *Runoff class:* Very low
- *Capacity of the most limiting layer to transmit water (Ksat):* High to very high (6.00 to 20.00 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Very low (about 2.4 inches)

##### **Interpretive groups**

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 3w



- *Hydrologic Soil Group: D*
- *Hydric soil rating: No*

**GKAWOB—Glassboro and Woodstown** sandy loams, 0 to 5 percent slopes

**Map Unit Setting**

- *National map unit symbol: 1jg7f*
- *Elevation: 0 to 150 feet*
- *Mean annual precipitation: 28 to 59 inches*
- *Mean annual air temperature: 46 to 79 degrees F*
- *Frost-free period: 161 to 231 days*
- *Farmland classification: All areas are prime farmland*

**Map Unit Composition**

- *Glassboro and similar soils: 45 percent*
- *Woodstown and similar soils: 40 percent*
- *Minor components: 15 percent*
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Glassboro**

**Setting**

- *Landform: Flats*
- *Down-slope shape: Linear*
- *Across-slope shape: Linear*
- *Parent material: Loamy fluviomarine deposits*

**Typical profile**

- *A - 0 to 10 inches: sandy loam*
- *BA - 10 to 13 inches: sandy loam*
- *Bg - 13 to 18 inches: sandy loam*
- *Btg - 18 to 26 inches: sandy loam*
- *C - 26 to 60 inches: gravelly sandy loam*

**Properties and qualities**

- *Slope: 0 to 5 percent*
- *Depth to restrictive feature: More than 80 inches*
- *Drainage class: Somewhat poorly drained*
- *Runoff class: Very high*
- *Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)*
- *Depth to water table: About 6 to 18 inches*
- *Frequency of flooding: None*
- *Frequency of ponding: None*
- *Available water supply, 0 to 60 inches: Low (about 5.5 inches)*

**Interpretive groups**

- *Land capability classification (irrigated): None specified*
- *Land capability classification (nonirrigated): 2w*
- *Hydrologic Soil Group: A/D*
- *Ecological site: F149AY130NJ - Moist Loamy Upland*
- *Hydric soil rating: No*

**Description of Woodstown**

**Setting**

- *Landform: Drainageways*
- *Landform position (two-dimensional): Toeslope*
- *Landform position (three-dimensional): Base slope*
- *Down-slope shape: Linear*
- *Across-slope shape: Concave*
- *Parent material: Old alluvium and/or sandy marine deposits*

**Typical profile**

- *Ap - 0 to 11 inches: sandy loam*
- *BA - 11 to 17 inches: sandy loam*
- *Bt - 17 to 23 inches: sandy loam*
- *BC - 23 to 30 inches: sandy loam*

- *C - 30 to 48 inches: sandy loam*
- *2C - 48 to 60 inches: stratified loamy sand to sandy loam*
- **Properties and qualities**
- *Slope: 0 to 5 percent*
- *Depth to restrictive feature: More than 80 inches*
- *Drainage class: Moderately well drained*
- *Runoff class: Very low*
- *Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)*
- *Depth to water table: About 18 to 42 inches*
- *Frequency of flooding: None*
- *Frequency of ponding: None*
- *Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)*
- **Interpretive groups**
- *Land capability classification (irrigated): None specified*
- *Land capability classification (nonirrigated): 2w*
- *Hydrologic Soil Group: B*
- *Ecological site: F149AY130NJ - Moist Loamy Upland*
- *Hydric soil rating: No*
- **Minor Components**
- **Mullica, rarely flooded**
- *Percent of map unit: 5 percent*
- *Landform: Drainageways, depressions, flood plains*
- *Landform position (two-dimensional): Toeslope*
- *Landform position (three-dimensional): Base slope*
- *Down-slope shape: Linear, concave*
- *Across-slope shape: Concave, linear*
- *Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp*
- *Hydric soil rating: Yes*
- **Downer**
- *Percent of map unit: 5 percent*
- *Landform: Low hills, knolls*
- *Landform position (three-dimensional): Interfluve, nose slope*
- *Down-slope shape: Linear, convex*
- *Across-slope shape: Linear*
- *Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland*
- *Hydric soil rating: No*
- **Fallsington**
- *Percent of map unit: 5 percent*
- *Landform: Depressions*
- *Landform position (two-dimensional): Toeslope*
- *Landform position (three-dimensional): Base slope*
- *Down-slope shape: Concave*
- *Across-slope shape: Concave*
- *Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp*
- *Hydric soil rating: Yes*

## 1.4 STORMWATER MANAGEMENT PLAN

As a result of the proposed improvement, there will be an increase in impervious area. The majority of the project area is a new synthetic grass turf athletic field which is constructed atop a layer of course clean stone and a network of perforated underdrains. The synthetic turf is permeable, but conservatively taken as impervious in the hydraulic modeling. As part of the development there will be a small reduction in motor vehicle surface and no new motor vehicle surface is proposed. Thus, all new impervious surface is designated as “clean” surface.

In compliance with the Hightstown Borough Land Use Ordinance and the NJDEP stormwater management regulations, it is proposed to minimize the impact of development in the following manner.

A series of yard drains collects stormwater runoff from the soccer fields to the south, and carries the runoff under the football field via an old clay pipe. These yard drains will be replaced with higher capacity “E” inlets to better collect runoff, and the old clay pipe will be replaced.

The majority of the runoff from the soccer fields to the south will be collected in these drains and routed into the existing storm sewer system on site.

The remaining runoff from the fields, and the runoff from the project area will be collected into a below-ground stormwater detention system. The detention system, a CULTEC 360HD, is designed to control the stormwater runoff and meet the required 50%, 75% and 80% reductions for the 2, 10, and 100 year storm events for both 2020 and projected 2050 rainfall data.

The CULTEC detention system is also designed to retain enough stormwater to reduce peak runoff rates to the existing storm sewer network below existing conditions at every connection point.

## 1.5 METHODOLOGY

The pre-development (existing conditions) and post development peak runoff rates are calculated using the computer software “HydroCAD Stormwater Modeling System Version 1020-6a” by HydroCAD Software Solutions LLC. HydroCAD employs one of the most widely utilized methodologies developed by the U.S. Department of Agriculture Soil Conservation Service known as SCS Unit Hydrograph (SCS-UH) as was developed in the Technical Release 20, (TR20) as well as Technical Release 55.

Times of concentration are calculated for the drainage areas, shown on the drainage area maps and included in the HydroCAD output. The maximum sheet flow length is 100 feet or the McCuen-Spiess equation, whichever is shorter. In accordance with the N.J.A.C. 7:8, adopted July 2023, the NOAA rainfalls with the conversion to 2020 and 2050 year rainfalls via the mandated percentage increase are utilized in this design.

### Hydraulic Calculations for Storm Sewer Sizing

The Rational Method,  $Q=CiA$  is used to calculate the required size of the storm sewers servicing this project. We have utilized the following criteria:

Use of the 25 year storm for all storm sewer system designs except where flows from a detention basin were modeled using HydroCAD software. In these cases the results from HydroCAD were used for the storm sewer sizing.

## 1.6 CONCLUSION

### Water Quantity

Water quantity requirements have been analyzed for the site and the discharge point, Peddie Lake,

Pursuant to N.J.A.C. 7.8-5.6, Stormwater Runoff Quantity Standards have been satisfied by meeting the post-construction, or developed conditions, peak rates of runoff reduction requirements of the pre-Construction, or existing conditions, peak rates of runoff.

As shown in the summary table of the peak rates of runoff for present and developed conditions, the developed conditions peak rates of runoff are less than 50%, 75% and 80% of the existing conditions peak rate of runoff for the 2020- 2 year, 10 year and 100 year storm events, as well as the 2050- 2 year, 10 year and 100 year storm events, respectively.

Therefore, the design meets the water quantity requirements specified in NJAC 7:8, as adopted on July 17, 2023.

### Water Quality

NJDEP regulations require water quality treatment to be provided for stormwater management for the net increase in motor vehicle surface when the net increase is 0.25 acres or more since 2004. The water quality standards require storm water management measures to be designed to reduce the post-construction load of total suspended solids (TSS) in storm water runoff generated from the water quality design storm by 80% of the anticipated load from the developed site, expressed as an annual average.

There is a **reduction** in motor vehicle surface of 430 square feet in the stadium renovation area, and no new motor vehicle surface proposed for this project, therefore water quality treatment is **not required**.

Despite not being required, water quality is provided by a series of eight sumps in the proposed channel drain outside the running track, seven more immediately adjacent to the proposed concrete retaining wall, and one adjacent to the donor plaza. All project related channel drain sumps remove solid particulates from the stormwater runoff before the runoff travels to the underground stormwater management structures. Finally, water runoff quality is also enhanced with the application of permeable synthetic turf. A three-ply turf backing also filters vertical runoff through the turf surface and into the stormwater management system. By replacing the natural grass athletic field with a synthetic turf field we are eliminating the need to apply any fertilizers, herbicides, fungicides, or insecticides to the athletic field surface. As a result, water quality is enhanced through the development of this project.

### Annual Ground Water Recharge

Requirements:

- Maintain 100% of the average annual pre-construction groundwater recharge volume for the site.

or

- Infiltrate the increase of stormwater runoff volume from pre- to post-construction for the 2 year storm.

The recharge calculations were performed using the New Jersey Geological Survey Report (GSR-32), a method for evaluating groundwater recharge areas in New Jersey. A groundwater recharge spreadsheet has been prepared for the infiltration basins. The total recharge volume is greater than the pre-developed conditions recharge. Therefore, the project is in compliance with the groundwater recharge requirements.

The soils are mostly "D" hydrologic group (poorly drained) with little to no infiltration with a small area of "A" hydrologic group (well drained) near the existing maintenance building. The proposed project creates a small ground water recharge deficit. The synthetic turf is the best management practice for ground water recharge. The cross section is similar to porous pavement and operates in a similar fashion. The top 2.5 inches consists of the turf and a cushion layer which are permeable, similar to porous pavement. The stormwater drains straight down through this layer into a minimum of 6 inches of stone. The stone is underlain by soil except where the underground culvert structures are located. As the calculations indicate, only a very small area of the synthetic turf (155 SF) is required to meet the recharge. Therefore, more stormwater will be recharged than does under existing conditions.

For mounding analysis, an area in the middle of the field of 150 by 60 feet or 9000 sf is utilized

155 sf of the available 76342 sf of turf not overlaying culvert systems is required, therefore significant ground water recharge is available.

#### Groundwater Mounding Analysis

The Hantush Groundwater analysis spread sheet has been utilized to calculate the maximum expected height of ground water mounding resulting from the infiltration of the ground water deficit through the synthetic turf. See Section 8B for the calculations.

The results show the maximum height of groundwater mounding, 1.53 ft, that will occur at the end of the duration of infiltration period. Since the SHWT is 2.0 ft below the bottom of the stone storage bed, the temporarily elevated groundwater table, located at 1.53 ft above the SHWT elevation of 98.6 or 100.13, will not reach the bottom of the stone bed under the synthetic turf of 103.2+/-.

Therefore, the assessment shows no adverse hydraulic impact to the groundwater table from the proposed infiltration BMP below the synthetic turf section. As calculated above, the porous pavement now needs only 13.8 hour to drain. Since the drain time is well within 72 hours, the design of the proposed infiltration BMP in the form of synthetic turf meets the design criteria set forth in the BMP manual.

#### Soil Erosion and Sediment Control

The plans have been designed in accordance with NJ Standards of Soil Erosion and Sediment Control and are being submitted to Mercer County Soil Conservation District for certification.

## 2. PEAK FLOW SUMMARY TABLES

The Peddie School – Football Renovation Project  
Borough of Hightstown, New Jersey  
File N-1900  
Date: 9/18/25

### PEAK RUNOFF RATE SUMMARY STORMWATER MANAGEMENT PLAN CURRENT OR 2020 NOAA RAINFALL

**TABLE 1**

To STUDY POINT.....Node 500P

Total Runoff including onsite and offsite areas.

|                | A                                              | B                                              | C                     | D                   | F           |
|----------------|------------------------------------------------|------------------------------------------------|-----------------------|---------------------|-------------|
| STORM<br>EVENT | EXISTING<br>Disturbed and Undisturbed<br>(CFS) | PROPOSED<br>Disturbed and Undisturbed<br>(CFS) | REQUIRED<br>REDUCTION | ACTUAL<br>REDUCTION | REMARKS     |
|                |                                                |                                                | (FROM TABLE 2)        | ( A - B )           | ( D > C )   |
| <b>2 YR.</b>   | 20.85                                          | 15.65                                          | 5.00                  | 5.20                | <b>O.K.</b> |
| <b>10 YR.</b>  | 36.37                                          | 24.90                                          | 4.24                  | 11.47               | <b>O.K.</b> |
| <b>100 YR.</b> | 69.26                                          | 47.90                                          | 6.23                  | 21.36               | <b>O.K.</b> |

**TABLE 2**

To STUDY POINT.....Node 500P

Contribution of Runoff from Onsite areas only.

|                | A                      | B                    | C                       | D                                |
|----------------|------------------------|----------------------|-------------------------|----------------------------------|
| STORM<br>EVENT | EXISTING FLOW<br>(CFS) | REQUIRED REDUCTION % | TARGET PEAK<br>FLOW (Q) | REQUIRED<br>REDUCTION<br>IN FLOW |
|                |                        |                      | ( A x B )               | ( A – C )                        |
| <b>2 YR.</b>   | 10.00                  | 0.50                 | 5.00                    | 5.00                             |
| <b>10 YR.</b>  | 16.96                  | 0.75                 | 12.72                   | 4.24                             |
| <b>100 YR.</b> | 31.16                  | 0.80                 | 24.93                   | 6.23                             |

The Peddie School – Football Renovation Project  
 Borough of Hightstown, New Jersey  
 File N-1900  
 Date: 9/18/25

**PEAK RUNOFF RATE SUMMARY**  
**STORMWATER MANAGEMENT PLAN**  
 FUTURE OR 2050 NOAA RAINFALL

**TABLE 1**  
**To STUDY POINT.....Node 500P**  
**Total Runoff including onsite and offsite areas.**

|                | A                                              | B                                              | C                     | D                   | F           |
|----------------|------------------------------------------------|------------------------------------------------|-----------------------|---------------------|-------------|
| STORM EVENT    | EXISTING<br>Disturbed and Undisturbed<br>(CFS) | PROPOSED<br>Disturbed and Undisturbed<br>(CFS) | REQUIRED<br>REDUCTION | ACTUAL<br>REDUCTION | REMARKS     |
|                |                                                |                                                | (FROM TABLE 2)        | ( A - B )           | ( D > C )   |
| <b>2 YR.</b>   | 25.58                                          | 18.37                                          | 6.11                  | 7.21                | <b>O.K.</b> |
| <b>10 YR.</b>  | 44.11                                          | 29.42                                          | 5.10                  | 14.69               | <b>O.K.</b> |
| <b>100 YR.</b> | 96.39                                          | 73.73                                          | 8.56                  | 22.66               | <b>O.K.</b> |

**TABLE 2**  
**To STUDY POINT.....Node 500P**  
**Contribution of Runoff from Onsite areas only.**

|                | A                      | B                    | C                       | D                                    |
|----------------|------------------------|----------------------|-------------------------|--------------------------------------|
| STORM EVENT    | EXISTING FLOW<br>(CFS) | REQUIRED REDUCTION % | TARGET PEAK<br>FLOW (Q) | REQUIRED<br>REDUCTION<br>IN FLOW (Q) |
|                |                        |                      | ( A x B )               | ( A – C )                            |
| <b>2 YR.</b>   | 12.21                  | 0.5                  | 6.11                    | 6.11                                 |
| <b>10 YR.</b>  | 20.40                  | 0.75                 | 15.30                   | 5.10                                 |
| <b>100 YR.</b> | 42.79                  | 0.80                 | 34.23                   | 8.56                                 |

**EX INLET 100  
NODE 100 E/P**

| <b>EVENT</b> | <b>EXISTING<br/>Q (cfs)</b> | <b>PROPOSED<br/>Q (cfs)</b> | <b>RESULT</b> |
|--------------|-----------------------------|-----------------------------|---------------|
| <b>2020</b>  |                             |                             |               |
| 2            | 3.06                        | 2.7                         | LESS          |
| 10           | 5.83                        | 5.25                        | LESS          |
| 25           | 7.86                        | 7.13                        | LESS          |
| 100          | 12.99                       | 11.91                       | LESS          |
| <b>2050</b>  |                             |                             |               |
| 2            | 3.73                        | 3.31                        | LESS          |
| 10           | 7.3                         | 7.13                        | LESS          |
| 100          | 19.23                       | 17.75                       | LESS          |

**EX INLET 200  
NODE 200 E/P**

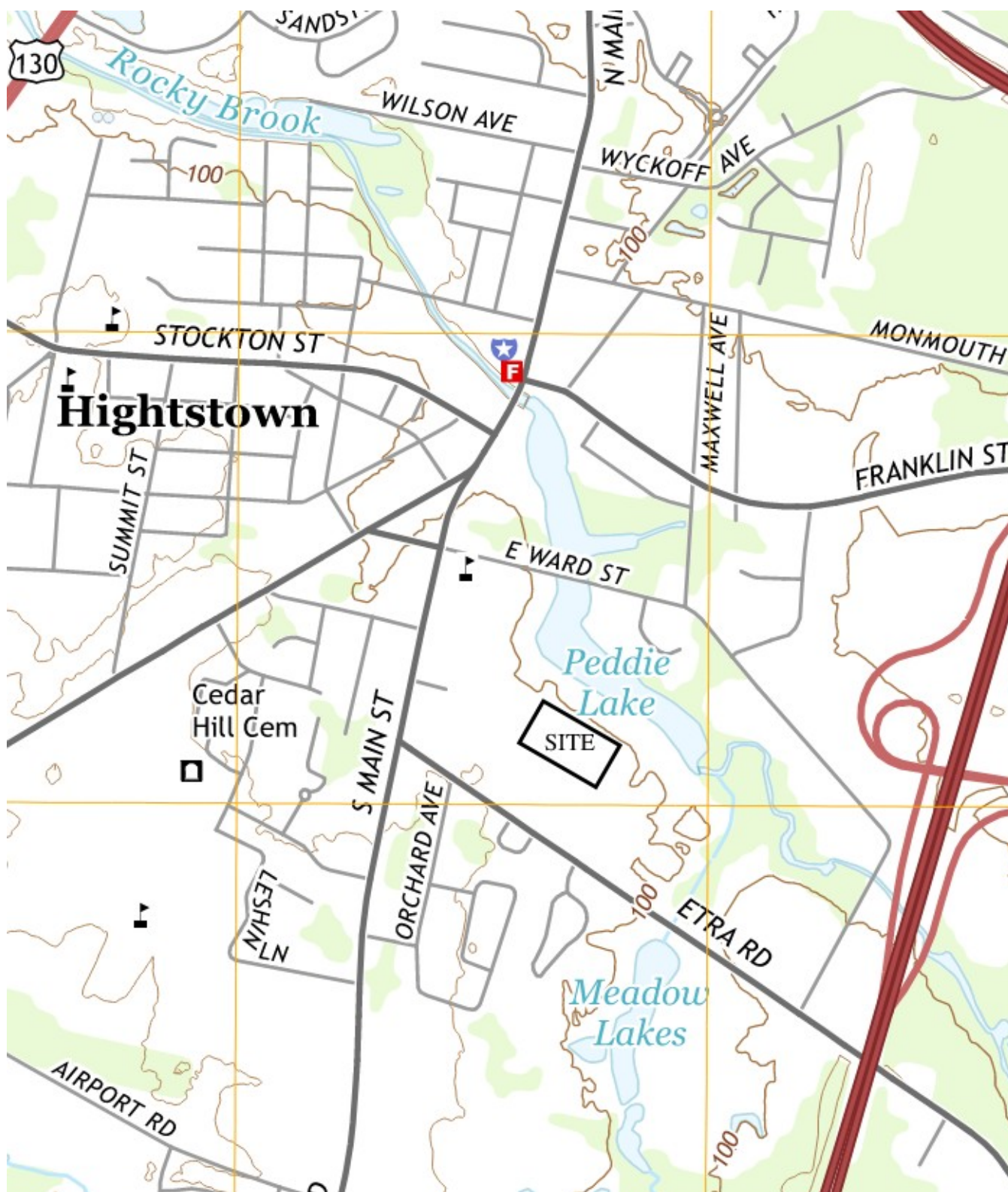
| <b>EVENT</b> | <b>EXISTING<br/>Q (cfs)</b> | <b>PROPOSED<br/>Q (cfs)</b> | <b>RESULT</b> |
|--------------|-----------------------------|-----------------------------|---------------|
| <b>2020</b>  |                             |                             |               |
| 2            | 8.07                        | 7.98                        | LESS          |
| 10           | 13.89                       | 12.91                       | LESS          |
| 25           | 17.41                       | 15.8                        | LESS          |
| 100          | 25.48                       | 25.04                       | LESS          |
| <b>2050</b>  |                             |                             |               |
| 2            | 9.87                        | 9.49                        | LESS          |
| 10           | 16.61                       | 15.06                       | LESS          |
| 100          | 34.59                       | 33.86                       | LESS          |

**EX INLET 300  
NODE 300 E/P**

| <b>EVENT</b> | <b>EXISTING<br/>Q (cfs)</b> | <b>PROPOSED<br/>Q (cfs)</b> | <b>RESULT</b> |
|--------------|-----------------------------|-----------------------------|---------------|
| <b>2020</b>  |                             |                             |               |
| 2            | 8.32                        | 5.52                        | LESS          |
| 10           | 14.65                       | 7.95                        | LESS          |
| 25           | 18.59                       | 9.46                        | LESS          |
| 100          | 27.49                       | 13.87                       | LESS          |
| <b>2050</b>  |                             |                             |               |
| 2            | 10.28                       | 6.26                        | LESS          |
| 10           | 17.68                       | 9.11                        | LESS          |
| 100          | 37.73                       | 26.28                       | LESS          |



3. USGS QUADRANGLE MAP



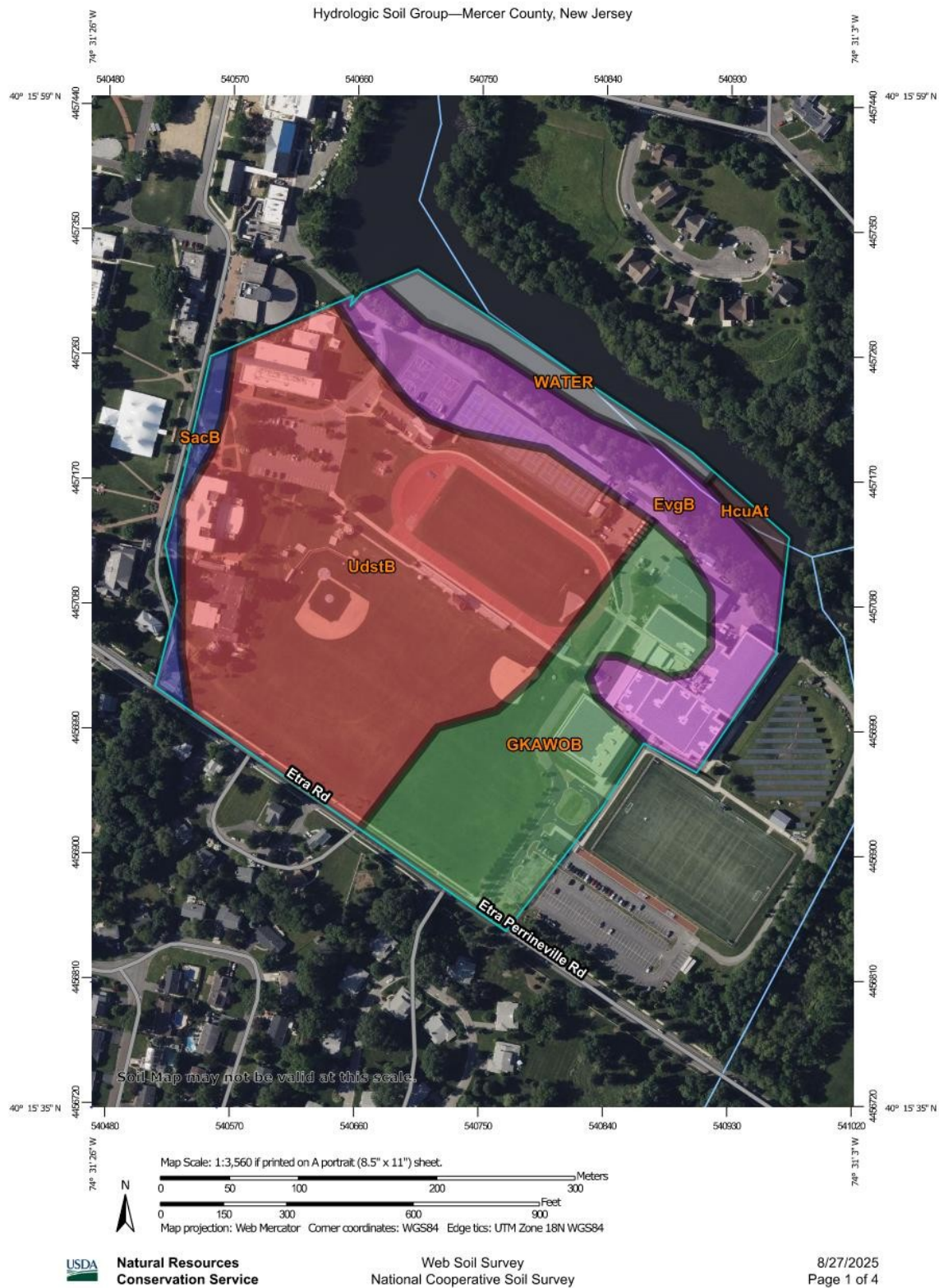
USGS Map,

High Quadrangle

Not to Scale

#### 4. USDA SOILS MAP

Q:



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- 5. STORM SEWER DESIGN CALCULATIONS
  - 5A. Pipe Conduit Hydraulic Calculations
  - 5B. Rational Method Time of Concentration Calculations



|              |                       |
|--------------|-----------------------|
| PROJECT NAME | Peddie School Stadium |
| DESIGN EVENT | Renovation            |
| "C" PAVED    | 25 – Year             |
| "C" LAWN     | 0.99                  |
|              | 0.65 "D" Soils        |

DATE 09/18/25

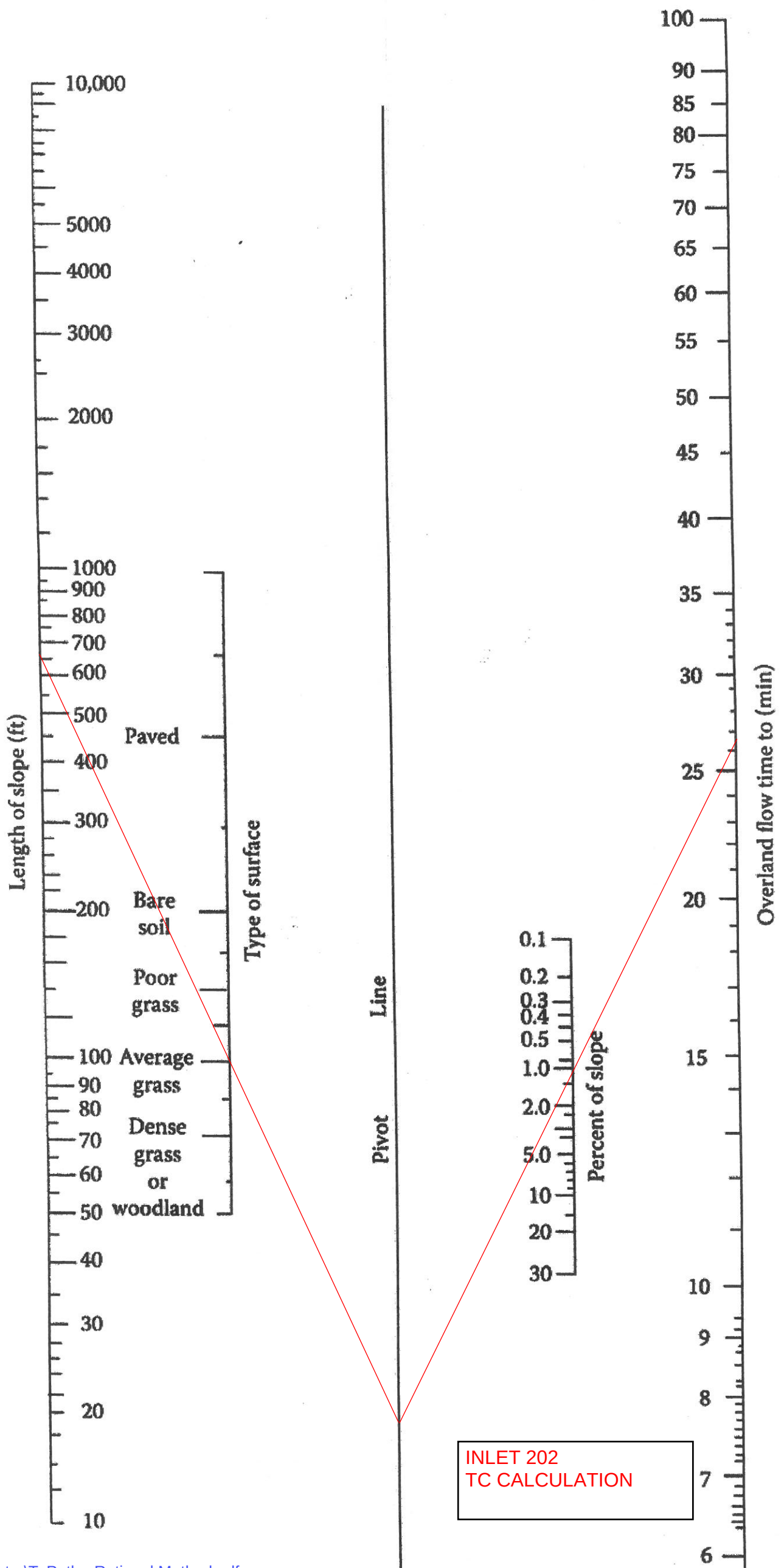
JOB NO. 1900

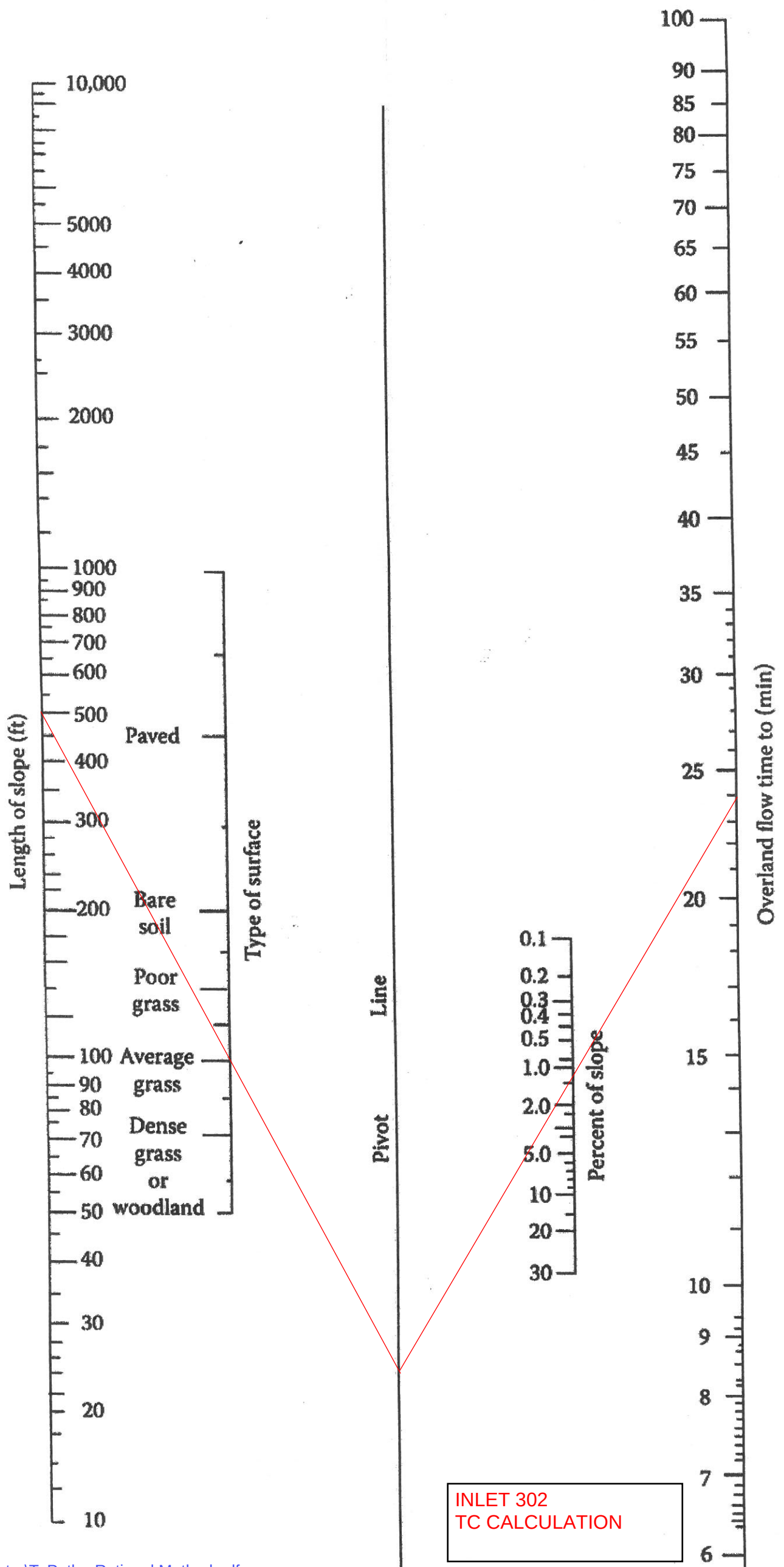
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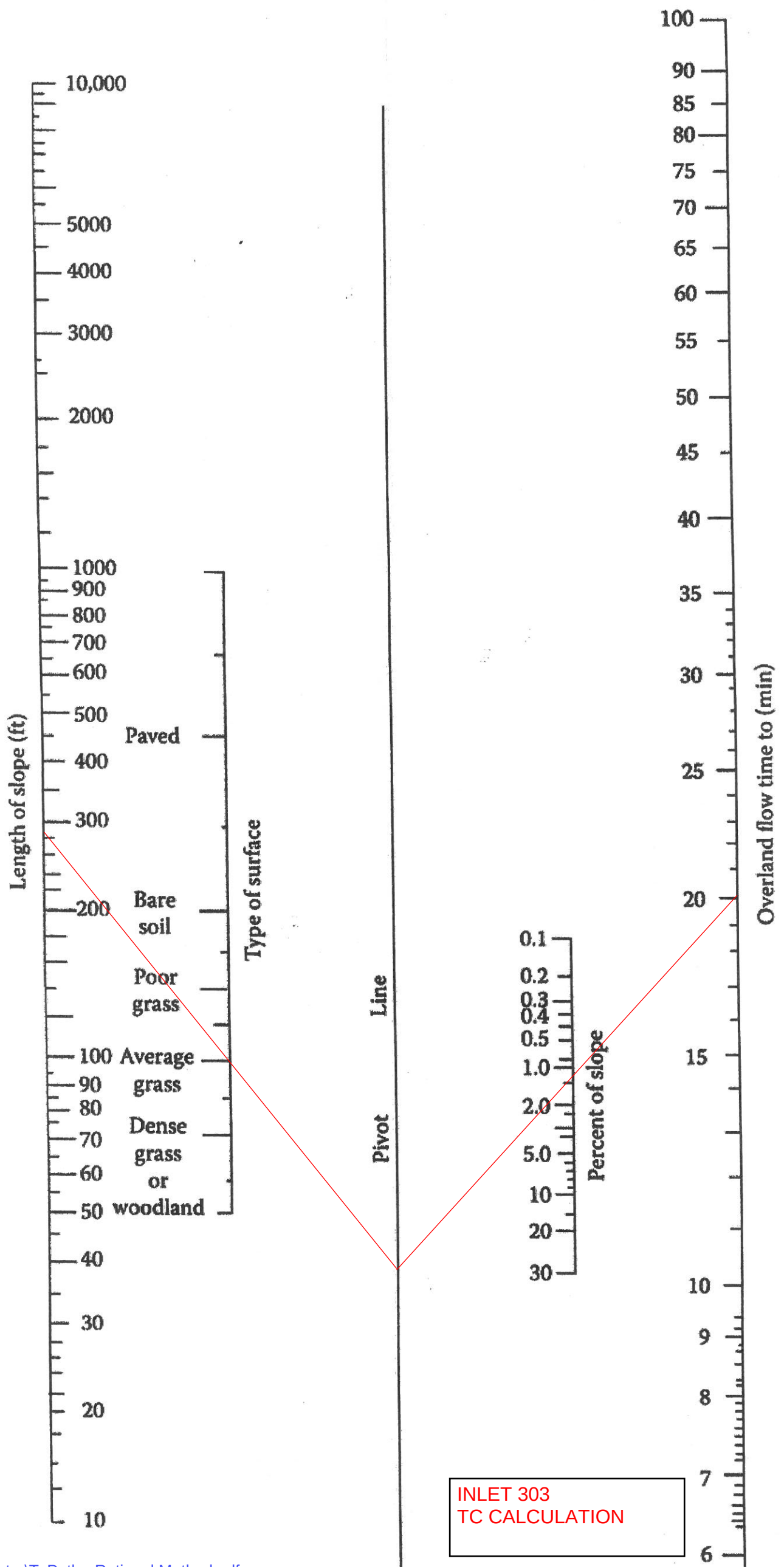
100 Rike Drive  
Millstone, NJ 08535  
Ph 609-448-5550 Fax 609-448-2157  
[www.CRESTengineering.net](http://www.CRESTengineering.net)

[illegible]





INLET 302  
TC CALCULATION



INLET 303  
TC CALCULATION



NOAA Atlas 14, Volume 2, Version 3  
Location name: Hightstown, New Jersey, USA\*  
Latitude: 40.2581°, Longitude: -74.5259°  
Elevation: 128 ft\*\*  
\* source: ESRI Maps  
\*\* source: USGS



## POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M. Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

### PF tabular

| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) <sup>1</sup> |                                     |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Duration                                                                                                      | Average recurrence interval (years) |                        |                        |                        |                        |                        |                        |                        |                        |                        |
|                                                                                                               | 1                                   | 2                      | 5                      | 10                     | 25                     | 50                     | 100                    | 200                    | 500                    | 1000                   |
| 5-min                                                                                                         | 4.07<br>(3.67-4.52)                 | 4.86<br>(4.40-5.40)    | 5.77<br>(5.22-6.41)    | 6.44<br>(5.81-7.14)    | 7.27<br>(6.53-8.05)    | 7.87<br>(7.03-8.71)    | 8.48<br>(7.54-9.40)    | 9.05<br>(7.98-10.0)    | 9.74<br>(8.52-10.9)    | 10.3<br>(8.92-11.5)    |
| 10-min                                                                                                        | 3.25<br>(2.93-3.61)                 | 3.89<br>(3.52-4.32)    | 4.63<br>(4.18-5.13)    | 5.15<br>(4.65-5.71)    | 5.80<br>(5.20-6.42)    | 6.27<br>(5.60-6.94)    | 6.74<br>(5.98-7.46)    | 7.17<br>(6.33-7.96)    | 7.70<br>(6.74-8.62)    | 8.10<br>(7.02-9.09)    |
| 15-min                                                                                                        | 2.71<br>(2.44-3.01)                 | 3.26<br>(2.95-3.62)    | 3.90<br>(3.52-4.32)    | 4.35<br>(3.92-4.82)    | 4.90<br>(4.40-5.42)    | 5.29<br>(4.72-5.86)    | 5.68<br>(5.04-6.29)    | 6.03<br>(5.32-6.70)    | 6.47<br>(5.65-7.23)    | 6.78<br>(5.88-7.61)    |
| 30-min                                                                                                        | 1.86<br>(1.68-2.06)                 | 2.25<br>(2.04-2.50)    | 2.77<br>(2.50-3.07)    | 3.15<br>(2.84-3.49)    | 3.63<br>(3.25-4.02)    | 3.99<br>(3.56-4.41)    | 4.35<br>(3.86-4.82)    | 4.69<br>(4.14-5.21)    | 5.15<br>(4.50-5.75)    | 5.49<br>(4.76-6.16)    |
| 60-min                                                                                                        | 1.16<br>(1.04-1.28)                 | 1.41<br>(1.28-1.57)    | 1.78<br>(1.60-1.97)    | 2.05<br>(1.85-2.27)    | 2.42<br>(2.17-2.67)    | 2.70<br>(2.41-2.99)    | 2.99<br>(2.66-3.32)    | 3.29<br>(2.90-3.66)    | 3.69<br>(3.23-4.13)    | 4.00<br>(3.47-4.50)    |
| 2-hr                                                                                                          | 0.707<br>(0.637-0.786)              | 0.861<br>(0.777-0.956) | 1.09<br>(0.986-1.21)   | 1.27<br>(1.14-1.41)    | 1.52<br>(1.36-1.68)    | 1.72<br>(1.52-1.90)    | 1.92<br>(1.70-2.13)    | 2.13<br>(1.87-2.37)    | 2.43<br>(2.11-2.71)    | 2.66<br>(2.29-2.99)    |
| 3-hr                                                                                                          | 0.518<br>(0.465-0.579)              | 0.632<br>(0.568-0.705) | 0.802<br>(0.720-0.897) | 0.935<br>(0.838-1.04)  | 1.12<br>(0.999-1.25)   | 1.27<br>(1.13-1.42)    | 1.43<br>(1.26-1.60)    | 1.60<br>(1.39-1.79)    | 1.83<br>(1.57-2.06)    | 2.02<br>(1.72-2.28)    |
| 6-hr                                                                                                          | 0.329<br>(0.295-0.371)              | 0.400<br>(0.357-0.450) | 0.506<br>(0.451-0.568) | 0.594<br>(0.527-0.665) | 0.719<br>(0.633-0.805) | 0.824<br>(0.722-0.921) | 0.937<br>(0.813-1.05)  | 1.06<br>(0.908-1.19)   | 1.24<br>(1.04-1.39)    | 1.38<br>(1.15-1.56)    |
| 12-hr                                                                                                         | 0.198<br>(0.176-0.226)              | 0.240<br>(0.213-0.274) | 0.306<br>(0.271-0.348) | 0.362<br>(0.320-0.411) | 0.446<br>(0.390-0.504) | 0.518<br>(0.450-0.586) | 0.598<br>(0.512-0.675) | 0.686<br>(0.580-0.777) | 0.819<br>(0.678-0.931) | 0.932<br>(0.759-1.06)  |
| 24-hr                                                                                                         | 0.114<br>(0.103-0.126)              | 0.138<br>(0.125-0.153) | 0.177<br>(0.161-0.197) | 0.211<br>(0.191-0.234) | 0.263<br>(0.236-0.290) | 0.307<br>(0.273-0.339) | 0.358<br>(0.315-0.394) | 0.413<br>(0.360-0.456) | 0.498<br>(0.427-0.550) | 0.572<br>(0.483-0.633) |
| 2-day                                                                                                         | 0.065<br>(0.059-0.073)              | 0.080<br>(0.072-0.088) | 0.103<br>(0.093-0.114) | 0.122<br>(0.110-0.135) | 0.151<br>(0.135-0.167) | 0.176<br>(0.157-0.194) | 0.203<br>(0.180-0.224) | 0.234<br>(0.204-0.258) | 0.279<br>(0.240-0.310) | 0.318<br>(0.270-0.354) |
| 3-day                                                                                                         | 0.046<br>(0.042-0.051)              | 0.056<br>(0.051-0.062) | 0.072<br>(0.066-0.079) | 0.085<br>(0.078-0.093) | 0.105<br>(0.095-0.115) | 0.121<br>(0.109-0.133) | 0.140<br>(0.125-0.153) | 0.160<br>(0.141-0.175) | 0.190<br>(0.165-0.208) | 0.215<br>(0.185-0.237) |
| 4-day                                                                                                         | 0.036<br>(0.034-0.040)              | 0.044<br>(0.041-0.048) | 0.057<br>(0.052-0.062) | 0.067<br>(0.061-0.073) | 0.082<br>(0.075-0.089) | 0.094<br>(0.086-0.102) | 0.108<br>(0.097-0.117) | 0.123<br>(0.110-0.133) | 0.145<br>(0.128-0.158) | 0.163<br>(0.143-0.178) |
| 7-day                                                                                                         | 0.024<br>(0.022-0.026)              | 0.029<br>(0.027-0.032) | 0.037<br>(0.034-0.040) | 0.043<br>(0.040-0.047) | 0.052<br>(0.048-0.057) | 0.060<br>(0.055-0.065) | 0.068<br>(0.062-0.074) | 0.077<br>(0.069-0.083) | 0.090<br>(0.080-0.098) | 0.101<br>(0.089-0.110) |
| 10-day                                                                                                        | 0.019<br>(0.018-0.021)              | 0.023<br>(0.022-0.025) | 0.029<br>(0.027-0.031) | 0.033<br>(0.031-0.036) | 0.040<br>(0.037-0.043) | 0.045<br>(0.041-0.048) | 0.050<br>(0.046-0.054) | 0.056<br>(0.051-0.061) | 0.065<br>(0.058-0.070) | 0.072<br>(0.064-0.078) |
| 20-day                                                                                                        | 0.013<br>(0.012-0.014)              | 0.015<br>(0.014-0.016) | 0.019<br>(0.017-0.020) | 0.021<br>(0.020-0.022) | 0.025<br>(0.023-0.026) | 0.027<br>(0.026-0.029) | 0.030<br>(0.028-0.032) | 0.033<br>(0.031-0.035) | 0.037<br>(0.034-0.039) | 0.040<br>(0.036-0.043) |
| 30-day                                                                                                        | 0.011<br>(0.010-0.011)              | 0.013<br>(0.012-0.013) | 0.015<br>(0.014-0.016) | 0.017<br>(0.016-0.018) | 0.019<br>(0.018-0.020) | 0.021<br>(0.020-0.022) | 0.023<br>(0.021-0.024) | 0.025<br>(0.023-0.026) | 0.027<br>(0.025-0.029) | 0.029<br>(0.027-0.031) |
| 45-day                                                                                                        | 0.009<br>(0.008-0.009)              | 0.011<br>(0.010-0.011) | 0.012<br>(0.012-0.013) | 0.014<br>(0.013-0.014) | 0.015<br>(0.015-0.016) | 0.017<br>(0.016-0.018) | 0.018<br>(0.017-0.019) | 0.019<br>(0.018-0.020) | 0.021<br>(0.019-0.022) | 0.022<br>(0.020-0.023) |
| 60-day                                                                                                        | 0.008<br>(0.008-0.008)              | 0.009<br>(0.009-0.010) | 0.011<br>(0.010-0.011) | 0.012<br>(0.011-0.013) | 0.013<br>(0.013-0.014) | 0.014<br>(0.014-0.015) | 0.015<br>(0.015-0.016) | 0.016<br>(0.015-0.017) | 0.017<br>(0.016-0.018) | 0.018<br>(0.017-0.019) |

<sup>1</sup> 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.

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### PF graphical



6. CURRENT PRECIPITATION ANALYSIS (RAINFALL -YEAR 2020)

6A. Pre-Development Conditions

Schematic Diagram

2-Year Storm Frequency Hydrologic Output w/ TC and CN

10-Year Storm Frequency Hydrologic Output w/ TC and CN

100-Year Storm Frequency Hydrologic Output w/ TC and CN

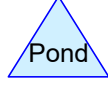
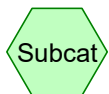
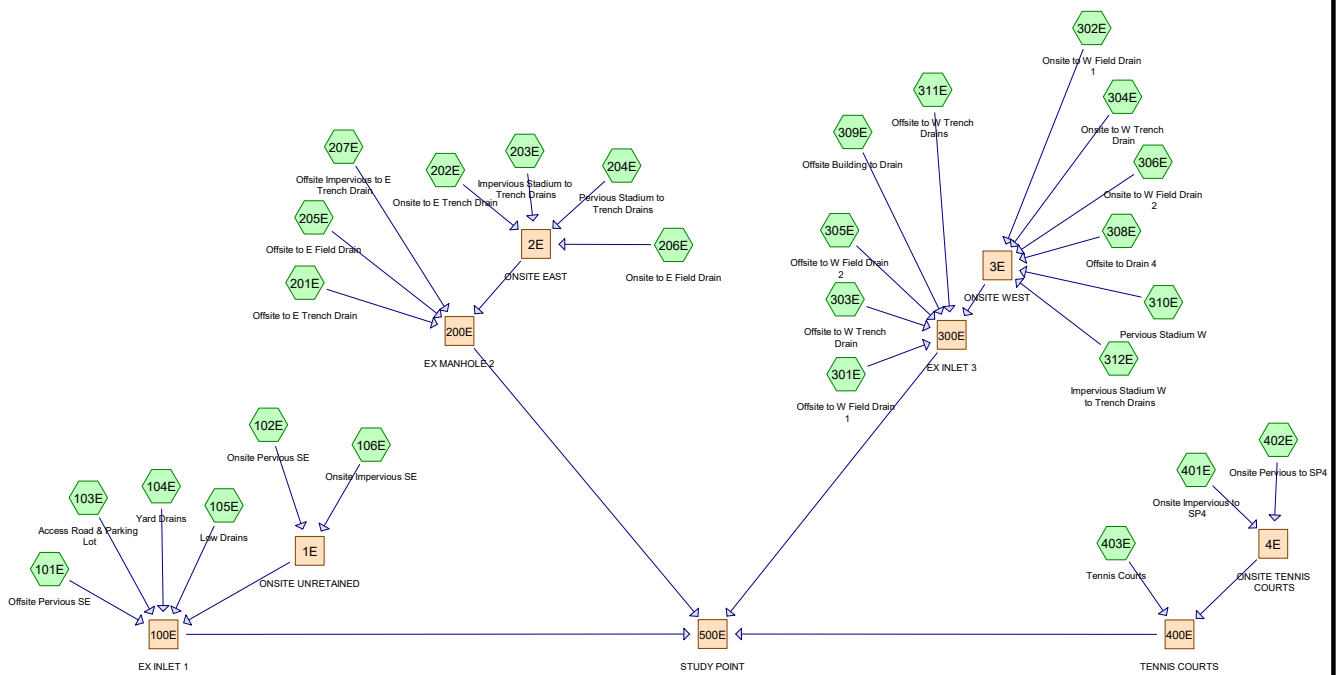
6B. Post-Development Conditions

Schematic Diagram

2-Year Storm Frequency Hydrologic Output w/ TC and CN

10-Year Storm Frequency Hydrologic Output w/ TC and CN

100-Year Storm Frequency Hydrologic Output w/ TC and CN



**Routing Diagram for EXISTING PEDDIE FOOTBALL**  
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## EXISTING PEDDIE FOOTBALL

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### Rainfall Events Listing (selected events)

| Event# | Event<br>Name | Storm Type | Curve | Mode    | Duration<br>(hours) | B/B | Depth<br>(inches) | AMC | P2<br>(inches) |
|--------|---------------|------------|-------|---------|---------------------|-----|-------------------|-----|----------------|
| 1      | 2-Year-2020   | NOAA 24-hr | C     | Default | 24.00               | 1   | 3.34              | 2   | 3.34           |
| 2      | 10-Year-2020  | NOAA 24-hr | C     | Default | 24.00               | 1   | 5.11              | 2   | 3.34           |
| 3      | 100-Year-2020 | NOAA 24-hr | C     | Default | 24.00               | 1   | 8.66              | 2   | 3.34           |

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>0.32"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=0.22 cfs 1,885 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>0.32"  
Flow Length=476' Tc=10.7 min CN=56 Runoff=0.05 cfs 338 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>2.58"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=2.33 cfs 6,265 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.14"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.00 cfs 51 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.26"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=0.03 cfs 288 cf

**Subcatchment 106E: Onsite Impervious SE** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=0.70 cfs 2,033 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=0.49 cfs 1,564 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.13 cfs 326 cf

**Subcatchment 203E: Impervious Stadium** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98 Runoff=1.28 cfs 3,703 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>2.20"  
Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=89 Runoff=2.61 cfs 8,782 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>2.20"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=4.99 cfs 22,226 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>2.20"  
Flow Length=504' Tc=12.2 min CN=89 Runoff=0.41 cfs 1,430 cf

**Subcatchment 207E: Offsite Impervious to** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.28 cfs 805 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>1.79"  
Flow Length=973' Tc=18.4 min CN=84 Runoff=1.94 cfs 7,965 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=541' Tc=9.4 min CN=84 Runoff=0.19 cfs 582 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>1.79"  
Flow Length=574' Tc=13.2 min CN=84 Runoff=1.25 cfs 4,463 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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|                                                     |                                                                                                |                                                         |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Subcatchment 304E: Onsite to W Trench</b>        | Runoff Area=2,363 sf 2.75% Impervious<br>Flow Length=287' Tc=9.8 min CN=84                     | Runoff Depth>1.80"<br>Runoff=0.11 cfs 354 cf            |
| <b>Subcatchment 305E: Offsite to W Field</b>        | Runoff Area=13,314 sf 0.00% Impervious<br>Flow Length=467' Tc=13.0 min CN=84                   | Runoff Depth>1.79"<br>Runoff=0.56 cfs 1,990 cf          |
| <b>Subcatchment 306E: Onsite to W Field Drain 2</b> | Runoff Area=425 sf 0.00% Impervious<br>Flow Length=299' Tc=5.5 min CN=84                       | Runoff Depth>1.80"<br>Runoff=0.02 cfs 64 cf             |
| <b>Subcatchment 308E: Offsite to Drain 4</b>        | Runoff Area=1,066 sf 20.92% Impervious<br>Flow Length=22' Slope=0.0100 '/' Tc=1.7 min CN=87    | Runoff Depth>2.04"<br>Runoff=0.07 cfs 181 cf            |
| <b>Subcatchment 309E: Offsite Building to</b>       | Runoff Area=8,251 sf 81.26% Impervious<br>Flow Length=168' Tc=4.5 min CN=95                    | Runoff Depth>2.78"<br>Runoff=0.67 cfs 1,911 cf          |
| <b>Subcatchment 310E: Pervious Stadium W</b>        | Runoff Area=38,673 sf 0.00% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=84  | Runoff Depth>1.79"<br>Runoff=1.75 cfs 5,784 cf          |
| <b>Subcatchment 311E: Offsite to W Trench</b>       | Runoff Area=2,514 sf 20.92% Impervious<br>Flow Length=63' Tc=6.2 min UI Adjusted CN=85         | Runoff Depth>1.87"<br>Runoff=0.14 cfs 393 cf            |
| <b>Subcatchment 312E: Impervious Stadium</b>        | Runoff Area=35,388 sf 92.50% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=97 | Runoff Depth>2.99"<br>Runoff=2.39 cfs 8,815 cf          |
| <b>Subcatchment 401E: Onsite Impervious</b>         | Runoff Area=11,975 sf 100.00% Impervious<br>Flow Length=179' Tc=1.9 min CN=98                  | Runoff Depth>3.11"<br>Runoff=1.07 cfs 3,099 cf          |
| <b>Subcatchment 402E: Onsite Pervious to SP4</b>    | Runoff Area=17,454 sf 0.00% Impervious<br>Flow Length=151' Tc=2.5 min CN=84                    | Runoff Depth>1.80"<br>Runoff=1.07 cfs 2,617 cf          |
| <b>Subcatchment 403E: Tennis Courts</b>             | Runoff Area=25,671 sf 100.00% Impervious<br>Flow Length=116' Slope=0.0100 '/' Tc=1.7 min CN=98 | Runoff Depth>3.11"<br>Runoff=2.29 cfs 6,645 cf          |
| <b>Reach 1E: ONSITE UNRETAINED</b>                  |                                                                                                | Inflow=0.71 cfs 2,371 cf<br>Outflow=0.71 cfs 2,371 cf   |
| <b>Reach 2E: ONSITE EAST</b>                        |                                                                                                | Inflow=3.63 cfs 14,242 cf<br>Outflow=3.63 cfs 14,242 cf |
| <b>Reach 3E: ONSITE WEST</b>                        |                                                                                                | Inflow=4.47 cfs 15,780 cf<br>Outflow=4.47 cfs 15,780 cf |
| <b>Reach 4E: ONSITE TENNIS COURTS</b>               |                                                                                                | Inflow=2.13 cfs 5,716 cf<br>Outflow=2.13 cfs 5,716 cf   |
| <b>Reach 100E: EX INLET 1</b>                       |                                                                                                | Inflow=3.06 cfs 10,861 cf<br>Outflow=3.06 cfs 10,861 cf |
| <b>Reach 200E: EX MANHOLE 2</b>                     |                                                                                                | Inflow=8.07 cfs 38,837 cf<br>Outflow=8.07 cfs 38,837 cf |

## EXISTING PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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### Reach 300E: EX INLET 3

Inflow=8.32 cfs 32,502 cf

Outflow=8.32 cfs 32,502 cf

### Reach 400E: TENNIS COURTS

Inflow=4.43 cfs 12,361 cf

Outflow=4.43 cfs 12,361 cf

### Reach 500E: STUDY POINT

Inflow=20.85 cfs 94,561 cf

Outflow=20.85 cfs 94,561 cf

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 0.22 cfs @ 12.41 hrs, Volume= 1,885 cf, Depth> 0.32"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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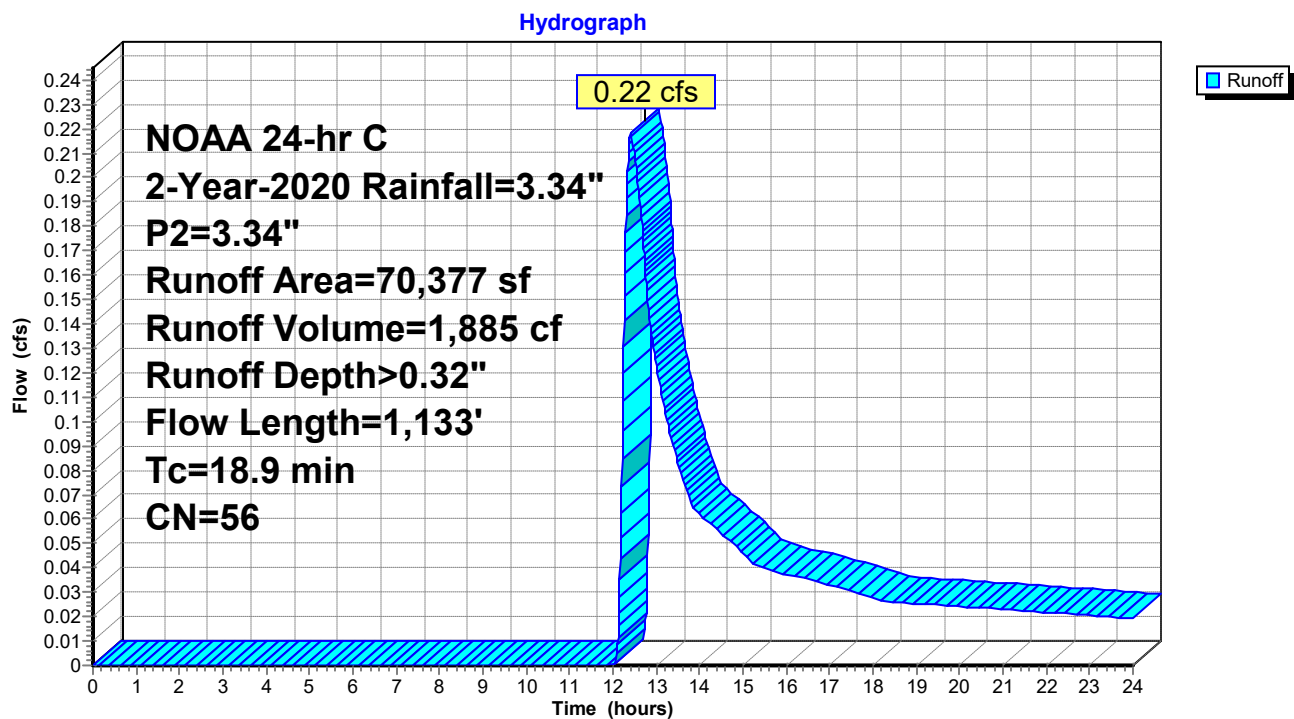
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 101E: Offsite Pervious SE





**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 0.05 cfs @ 12.25 hrs, Volume= 338 cf, Depth> 0.32"  
 Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.7     | 476           | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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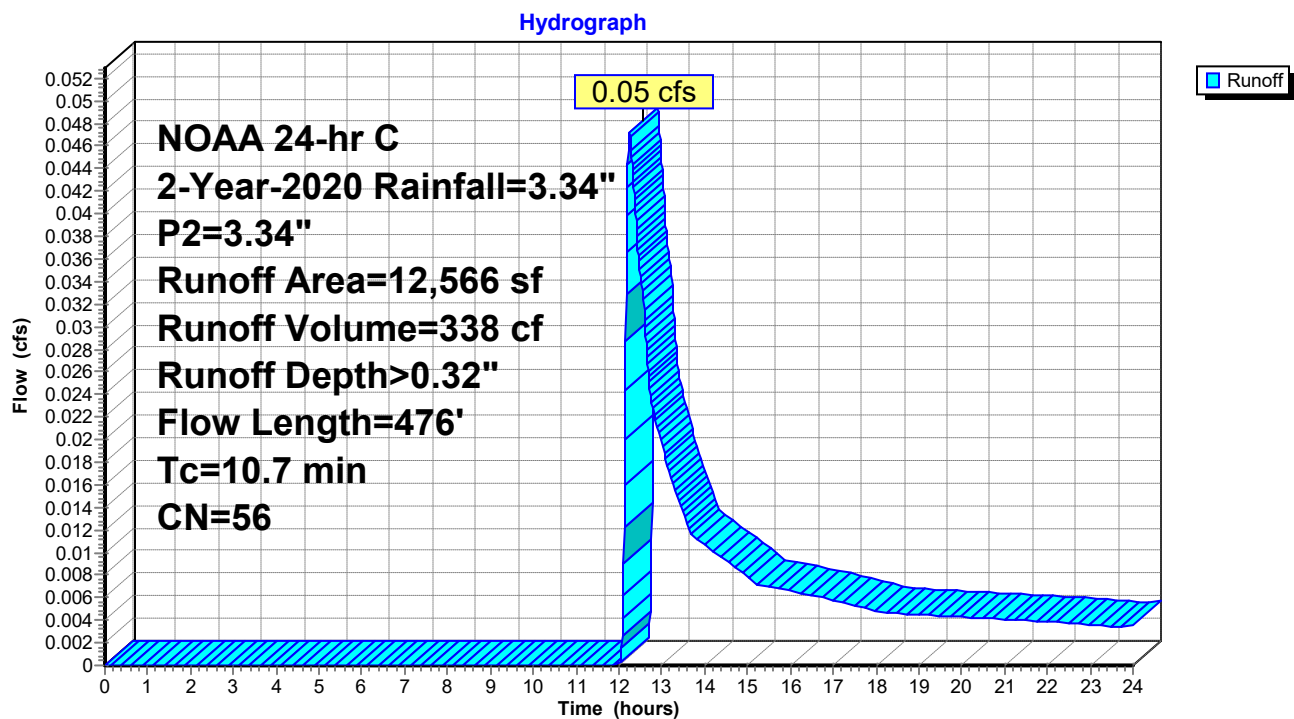
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## Subcatchment 102E: Onsite Pervious SE



**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

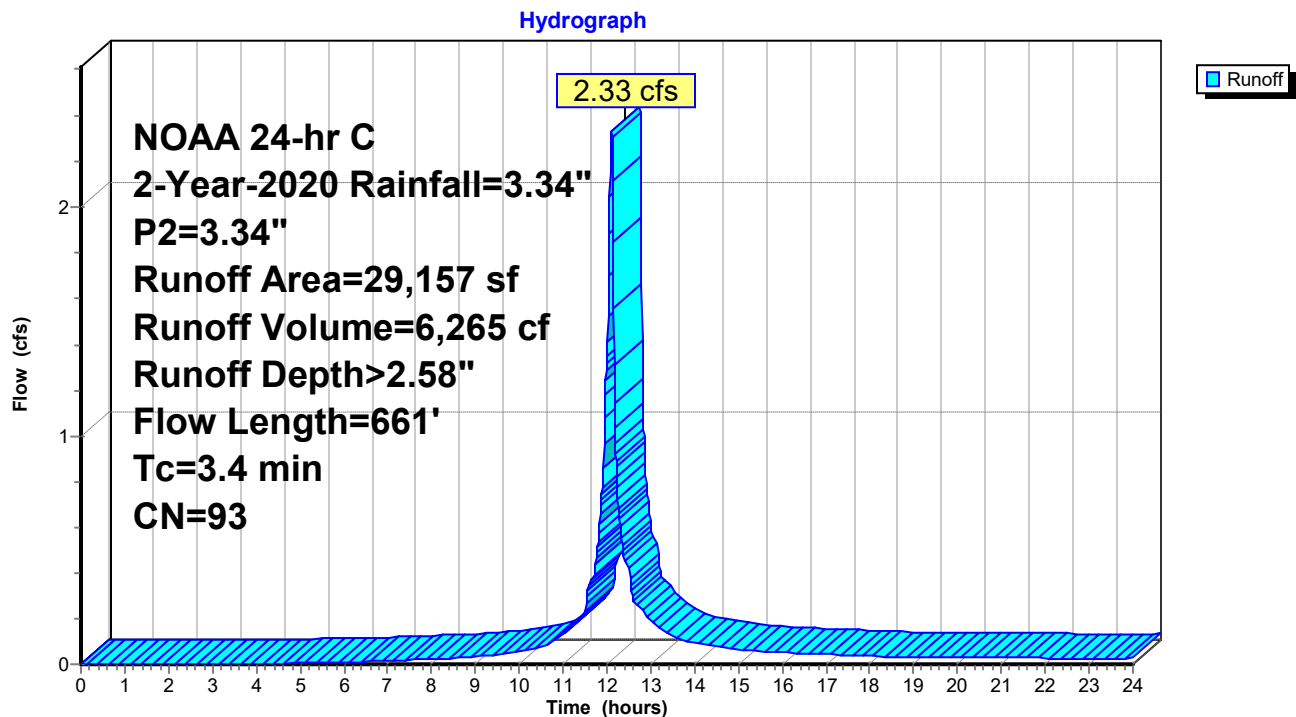
Runoff = 2.33 cfs @ 12.11 hrs, Volume= 6,265 cf, Depth> 2.58"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 104E: Yard Drains**

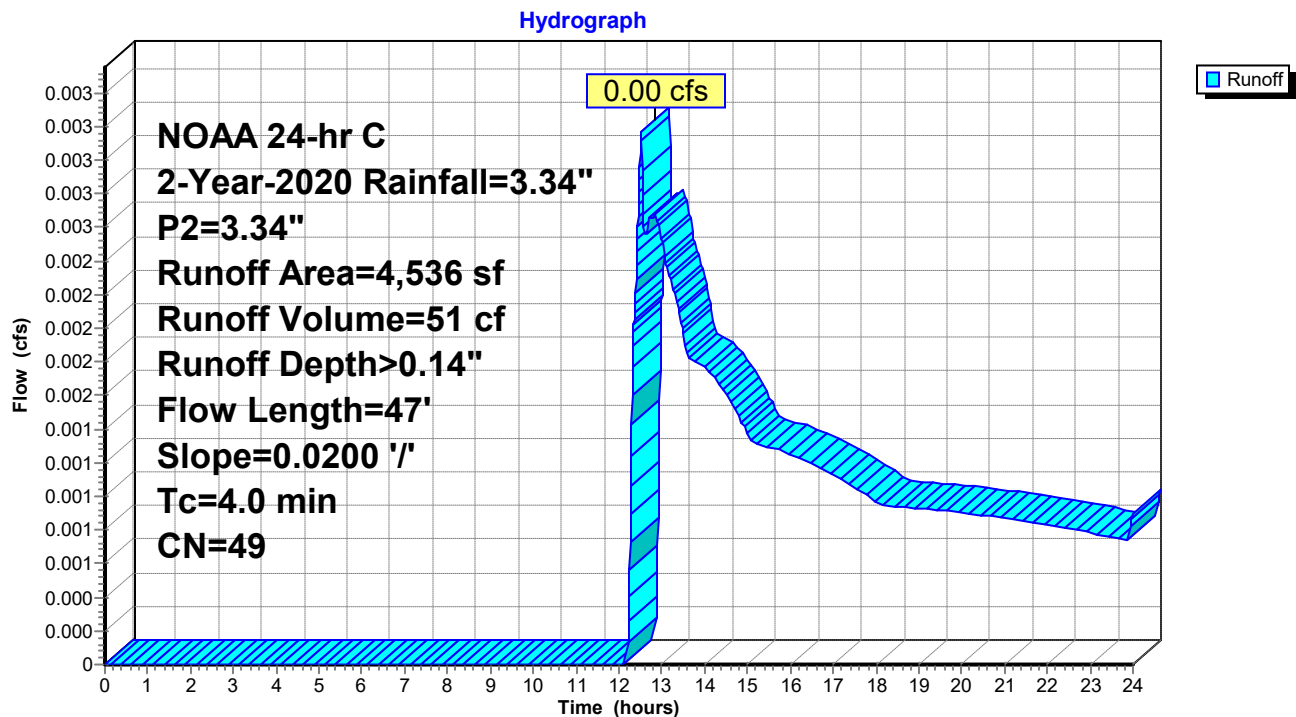
Runoff = 0.00 cfs @ 12.52 hrs, Volume= 51 cf, Depth> 0.14"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 0.03 cfs @ 12.17 hrs, Volume= 288 cf, Depth> 0.26"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

# EXISTING PEDDIE FOOTBALL

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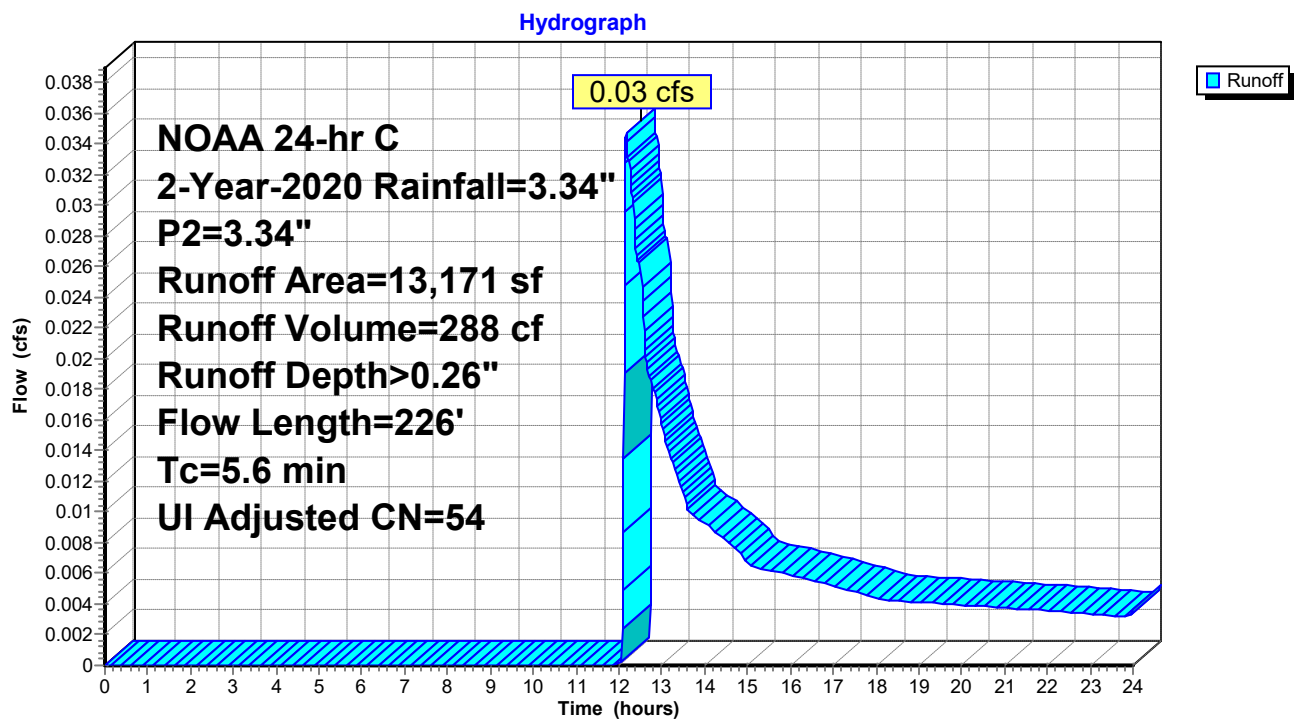
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 105E: Low Drains



**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 106E: Onsite Impervious SE**

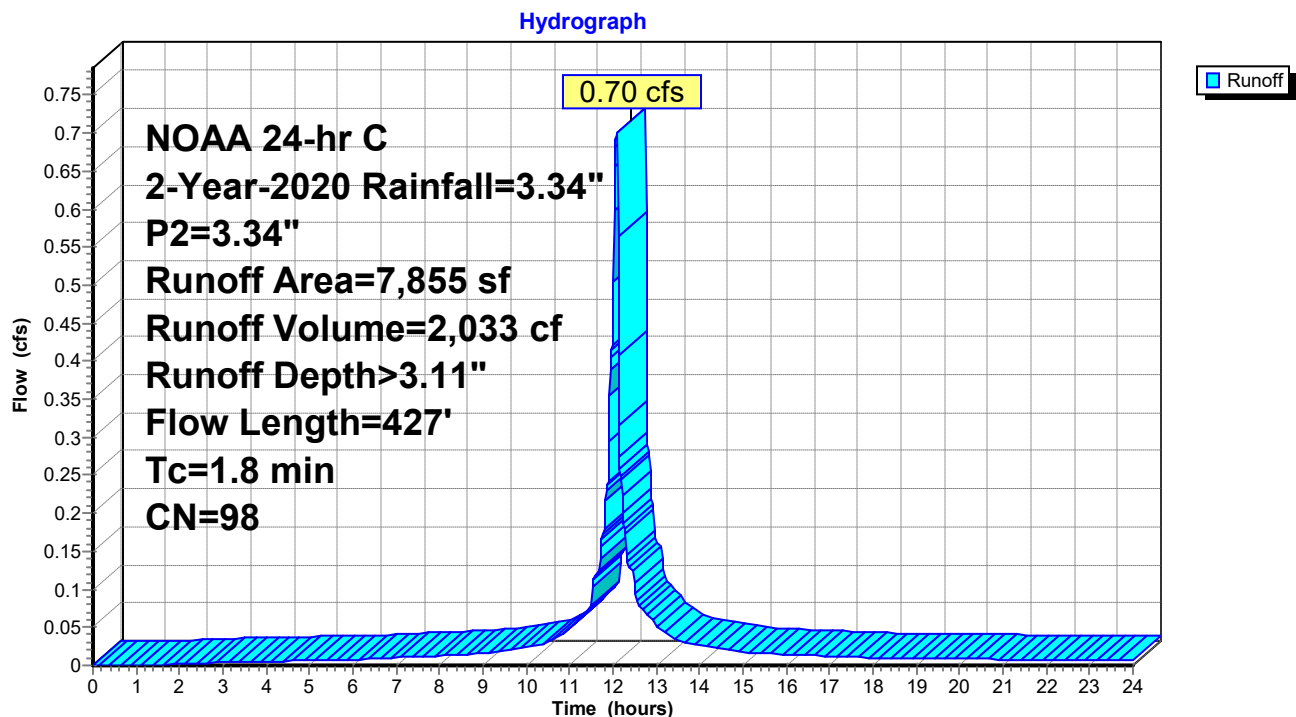
Runoff = 0.70 cfs @ 12.10 hrs, Volume= 2,033 cf, Depth> 3.11"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

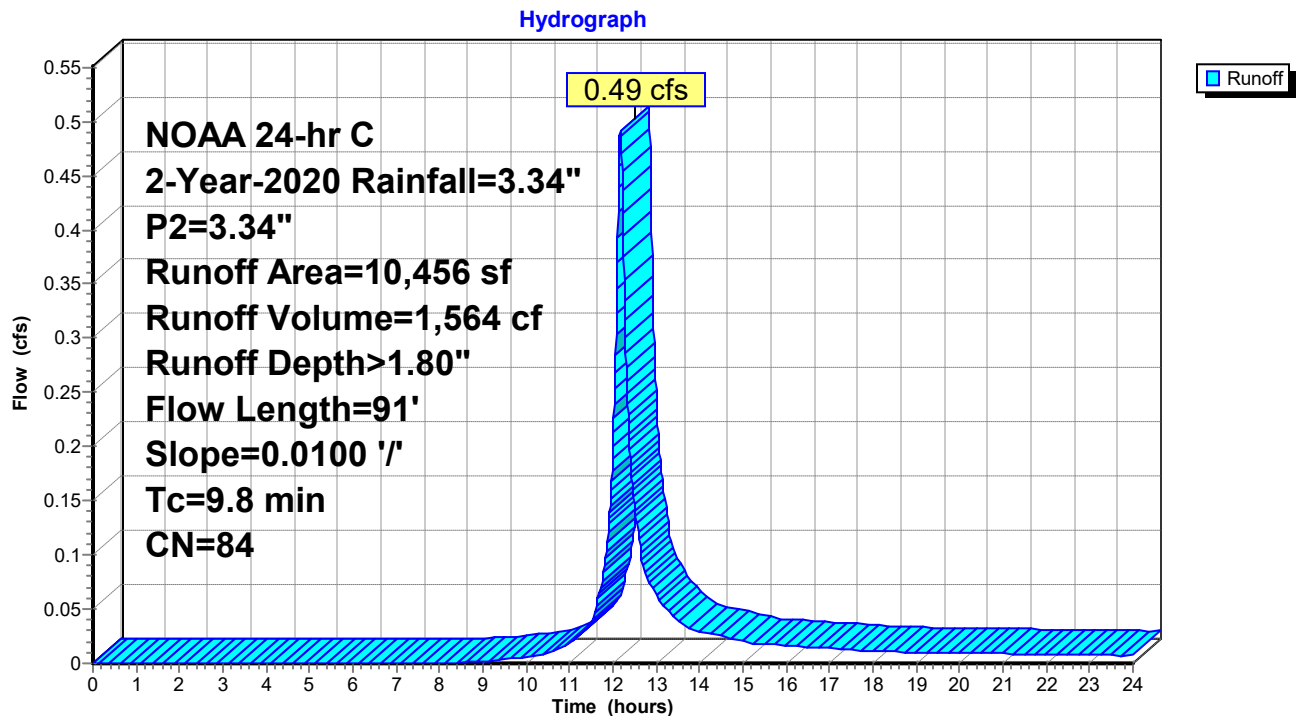
Runoff = 0.49 cfs @ 12.17 hrs, Volume= 1,564 cf, Depth> 1.80"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

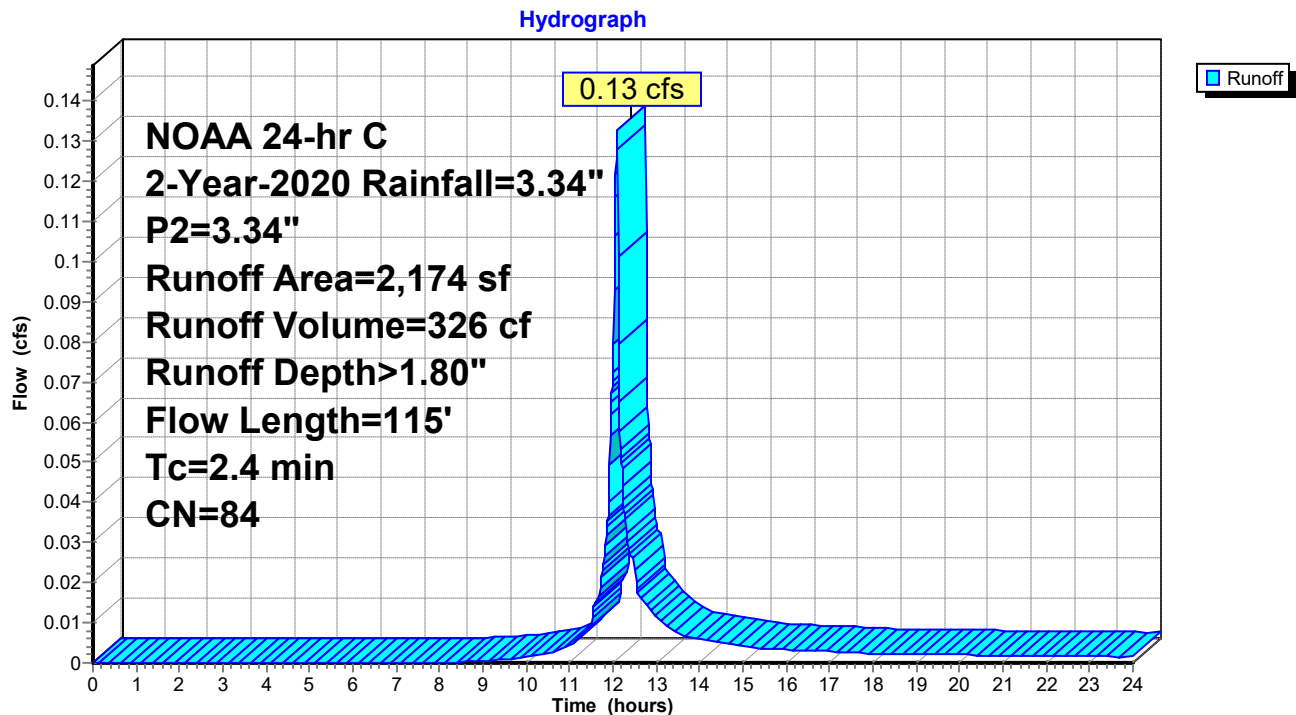
Runoff = 0.13 cfs @ 12.10 hrs, Volume= 326 cf, Depth> 1.80"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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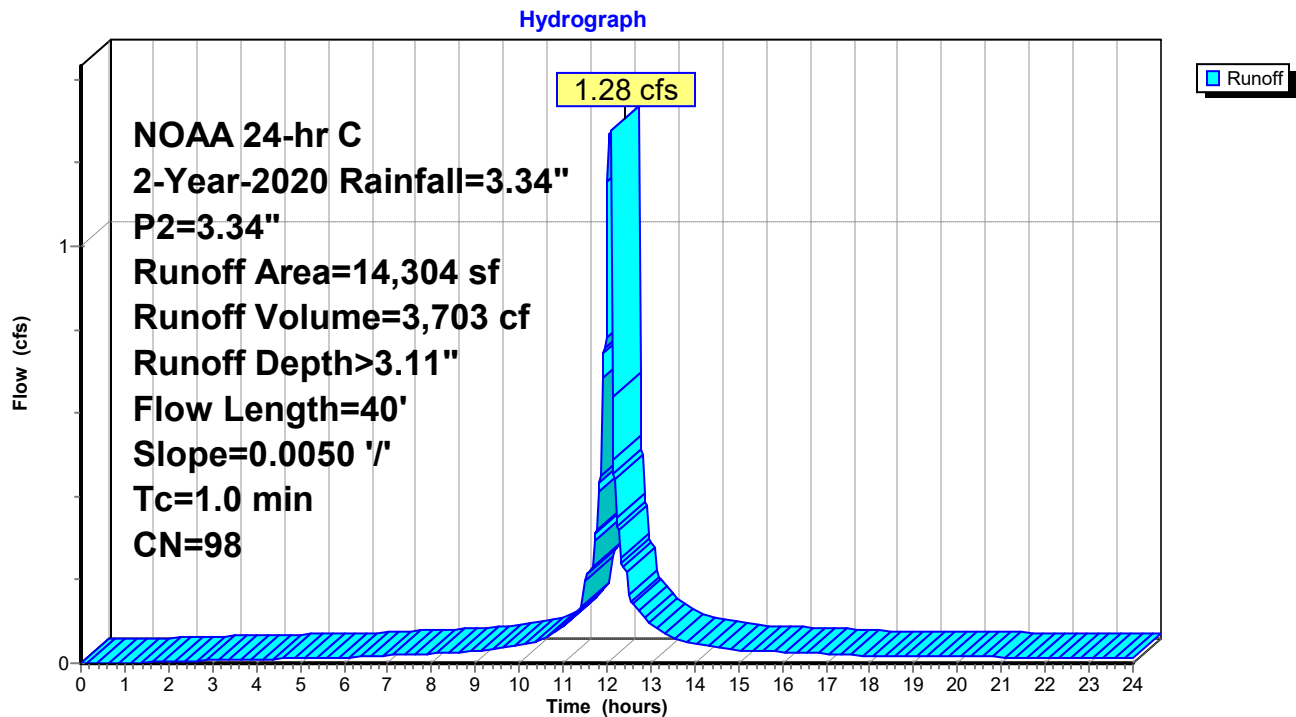
**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

Runoff = 1.28 cfs @ 12.09 hrs, Volume= 3,703 cf, Depth> 3.11"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                             |
|-------------|------------------|------------------|----------------------|-------------------|---------------------------------------------------------|
| 1.0         | 40               | 0.0050           | 0.67                 |                   | Sheet Flow, Sheet<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

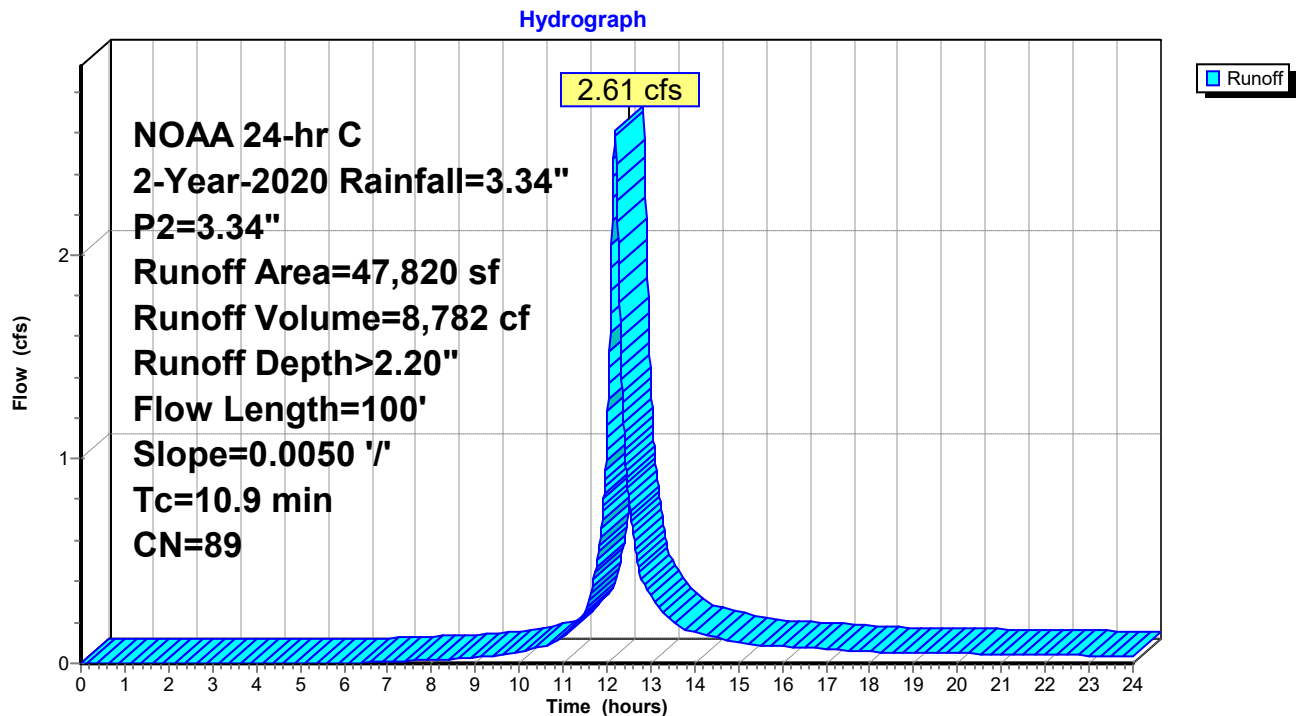
Runoff = 2.61 cfs @ 12.18 hrs, Volume= 8,782 cf, Depth> 2.20"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.9     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 4.99 cfs @ 12.32 hrs, Volume= 22,226 cf, Depth> 2.20"  
 Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                  |

# EXISTING PEDDIE FOOTBALL

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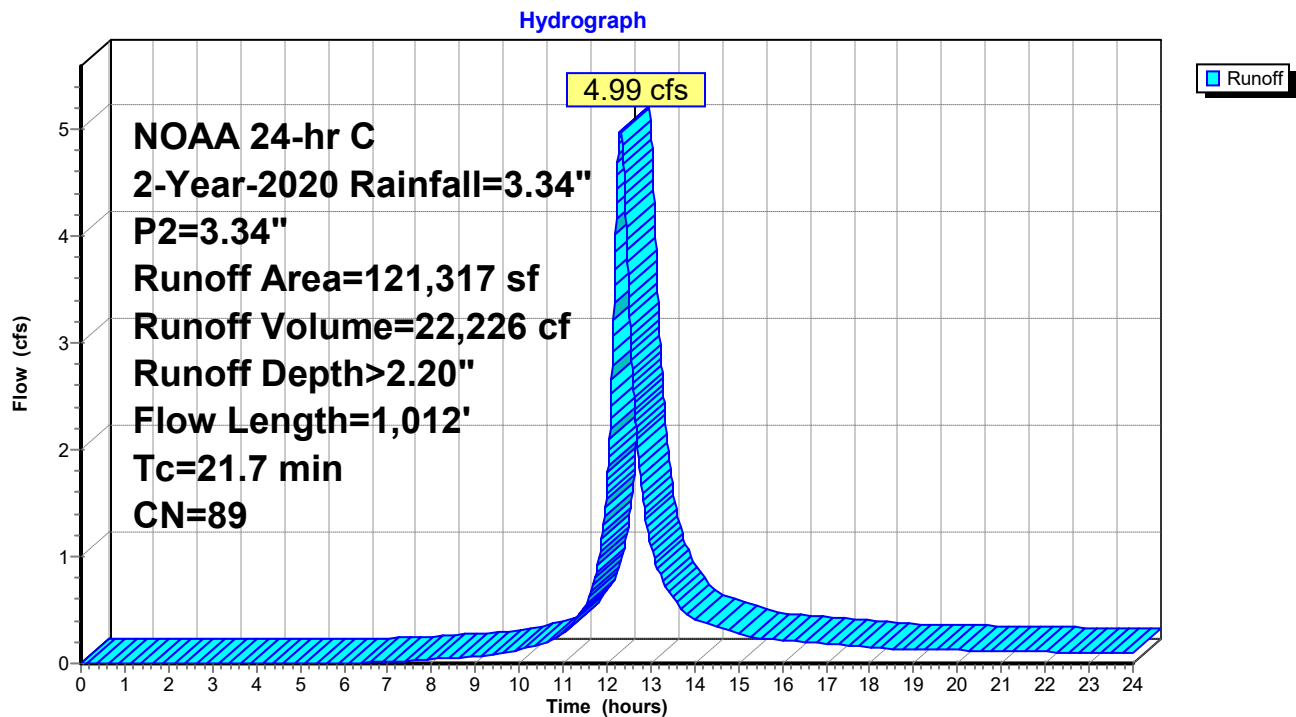
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 205E: Offsite to E Field Drain



**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

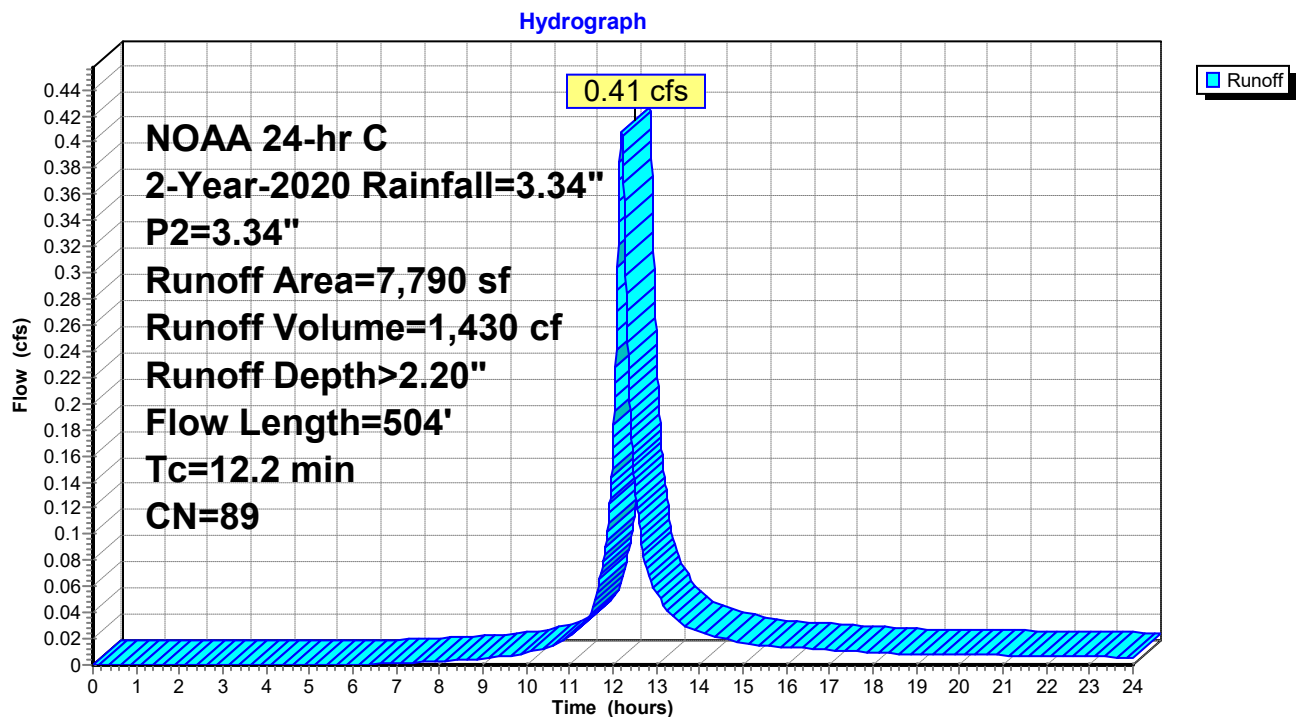
Runoff = 0.41 cfs @ 12.20 hrs, Volume= 1,430 cf, Depth> 2.20"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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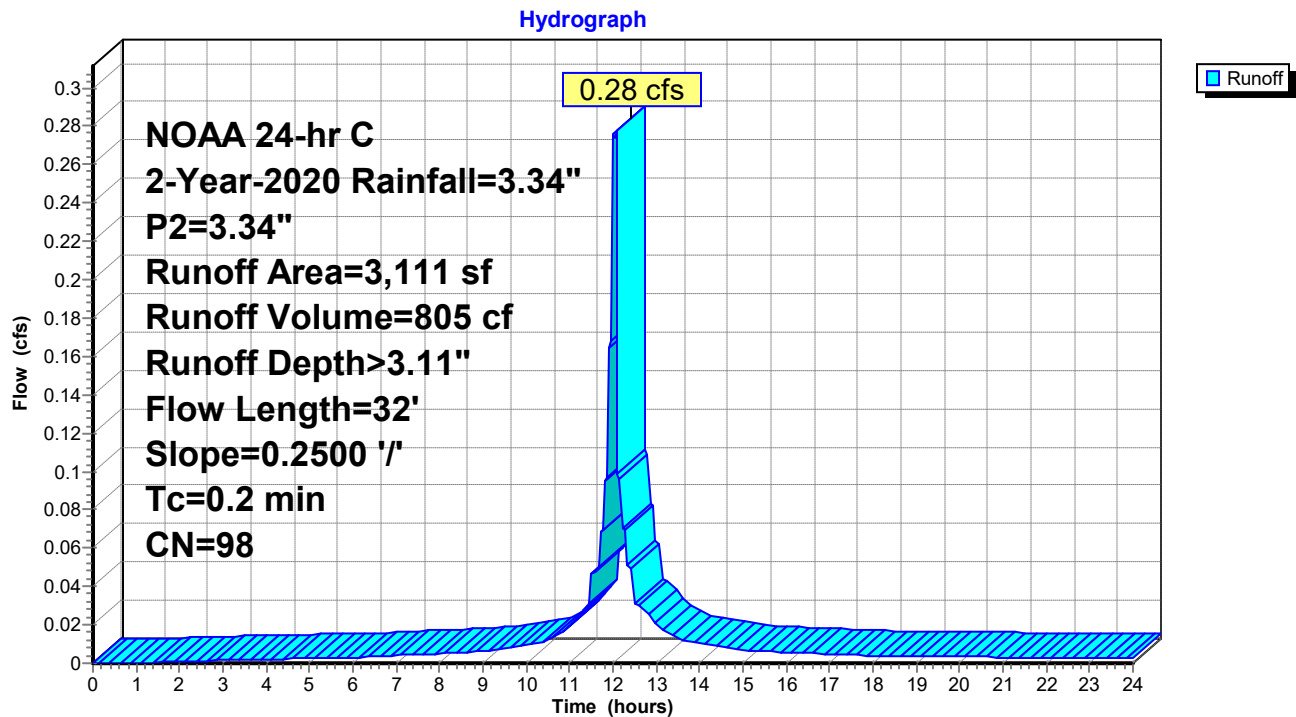
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.28 cfs @ 12.09 hrs, Volume= 805 cf, Depth> 3.11"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

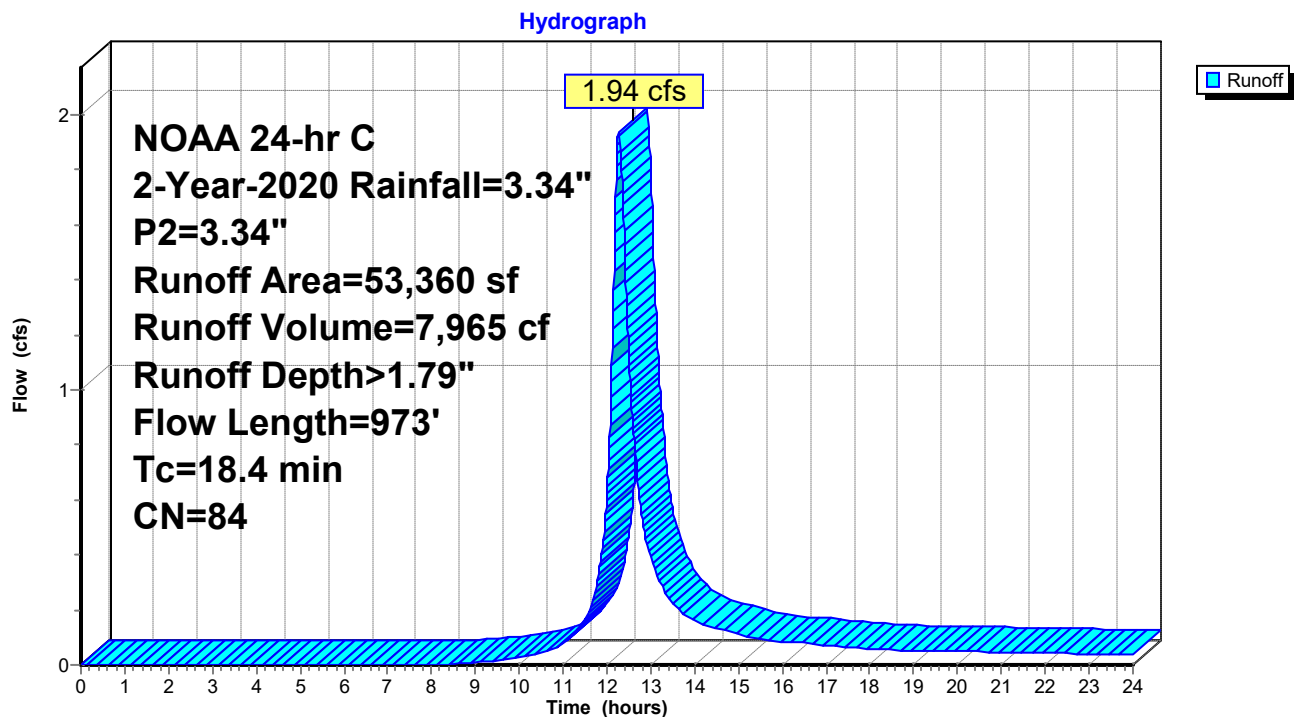
Runoff = 1.94 cfs @ 12.27 hrs, Volume= 7,965 cf, Depth> 1.79"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 18.4     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

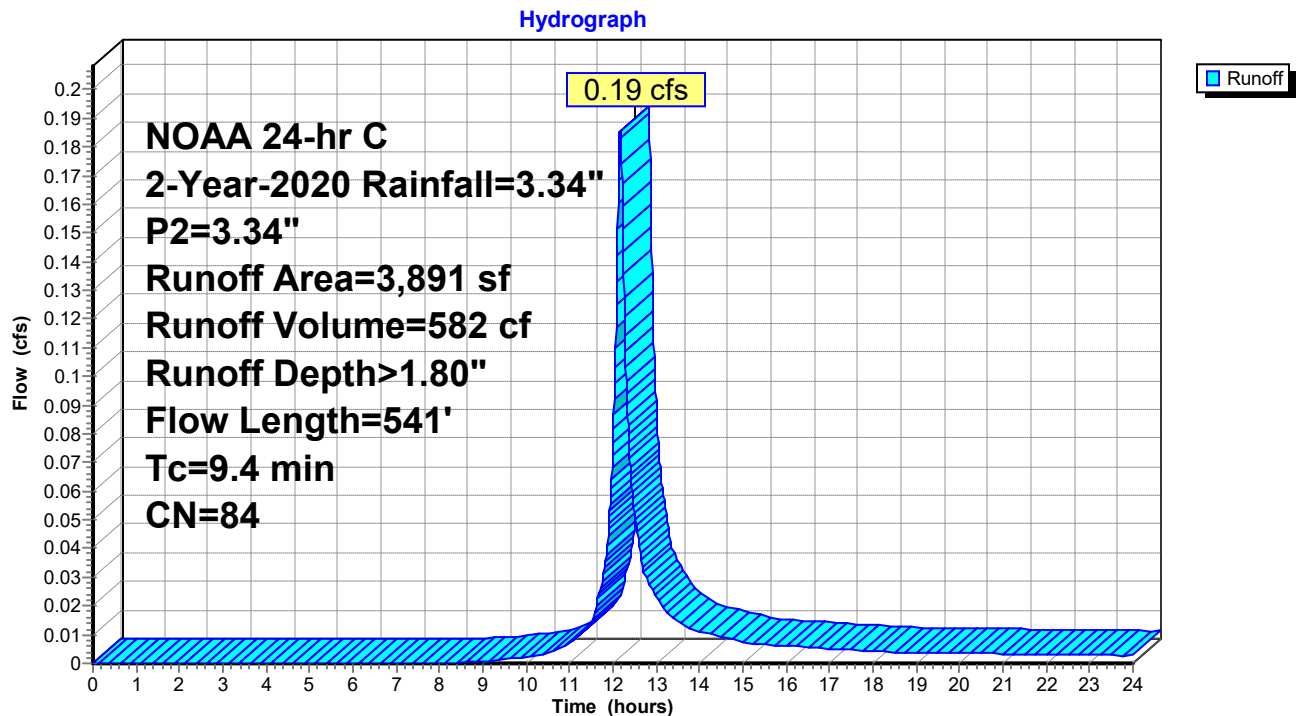
Runoff = 0.19 cfs @ 12.17 hrs, Volume= 582 cf, Depth> 1.80"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 9.4      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

Runoff = 1.25 cfs @ 12.21 hrs, Volume= 4,463 cf, Depth> 1.79"  
 Routed to Reach 300E : EX INLET 3

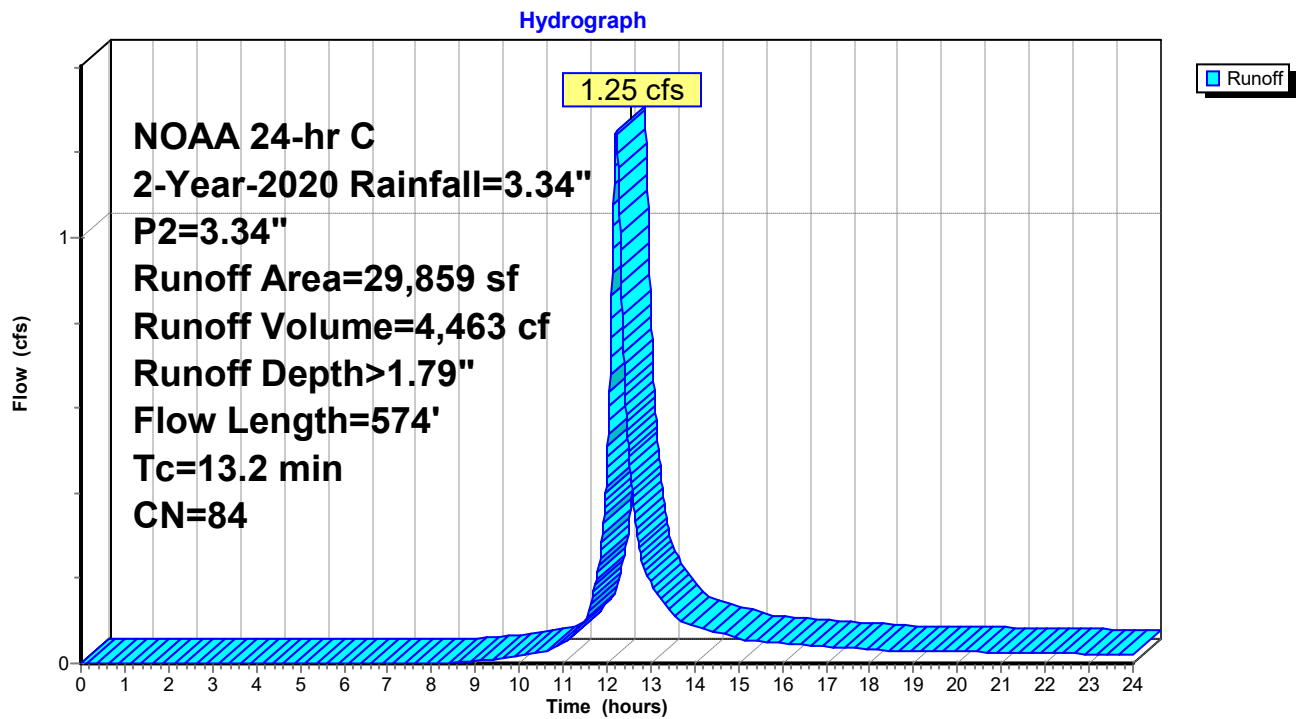
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 13.2     | 574           | Total         |                   |                |                                                                                        |

**Subcatchment 303E: Offsite to W Trench Drain**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

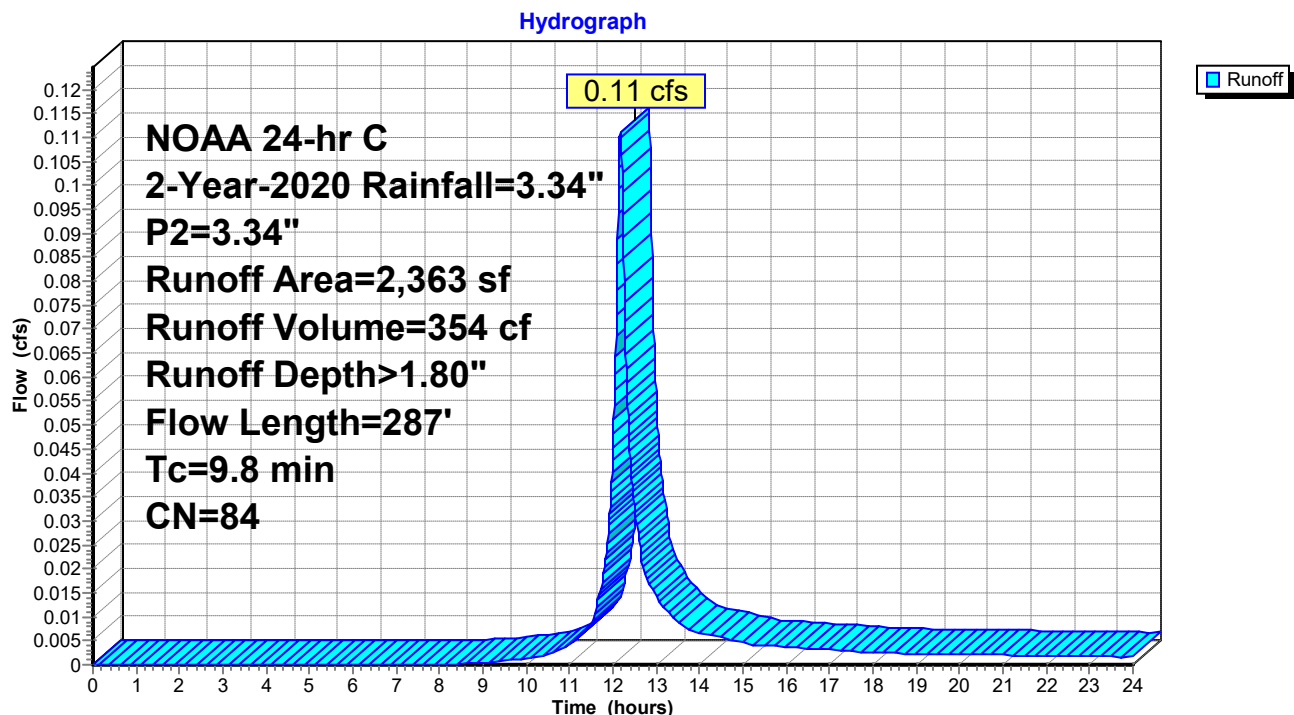
Runoff = 0.11 cfs @ 12.17 hrs, Volume= 354 cf, Depth> 1.80"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.8      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

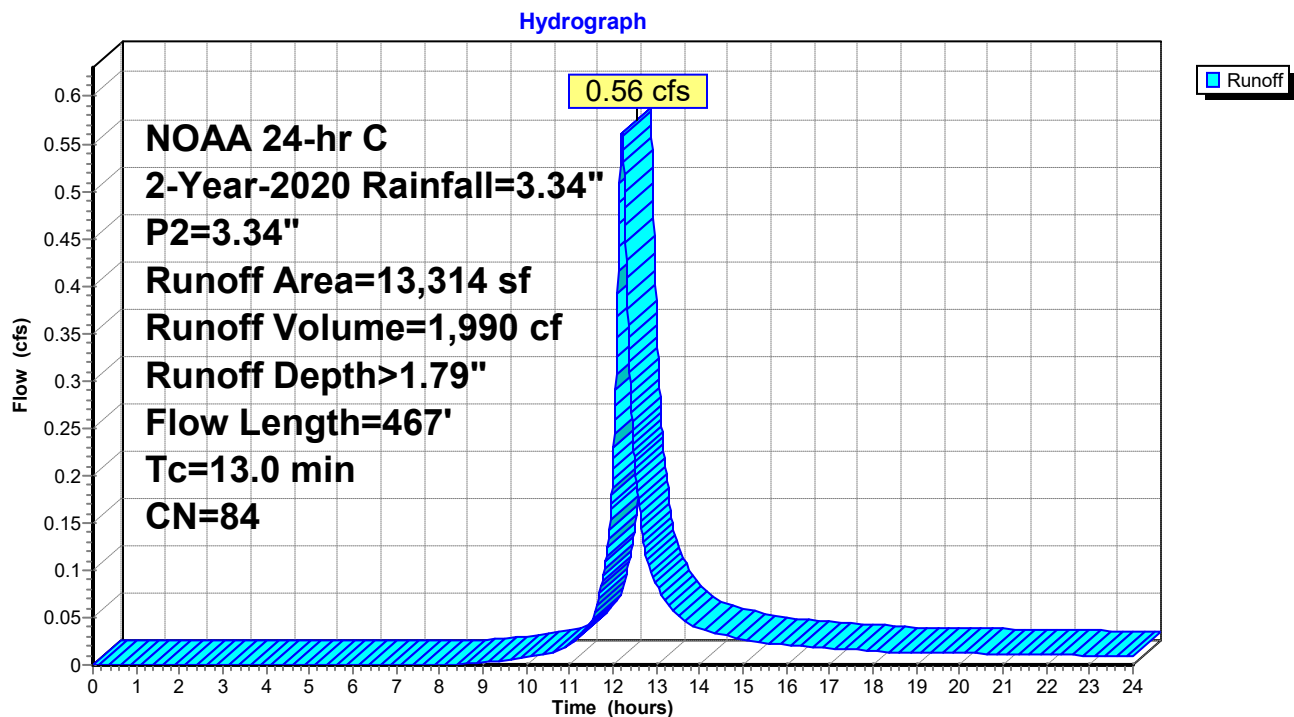
Runoff = 0.56 cfs @ 12.21 hrs, Volume= 1,990 cf, Depth> 1.79"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

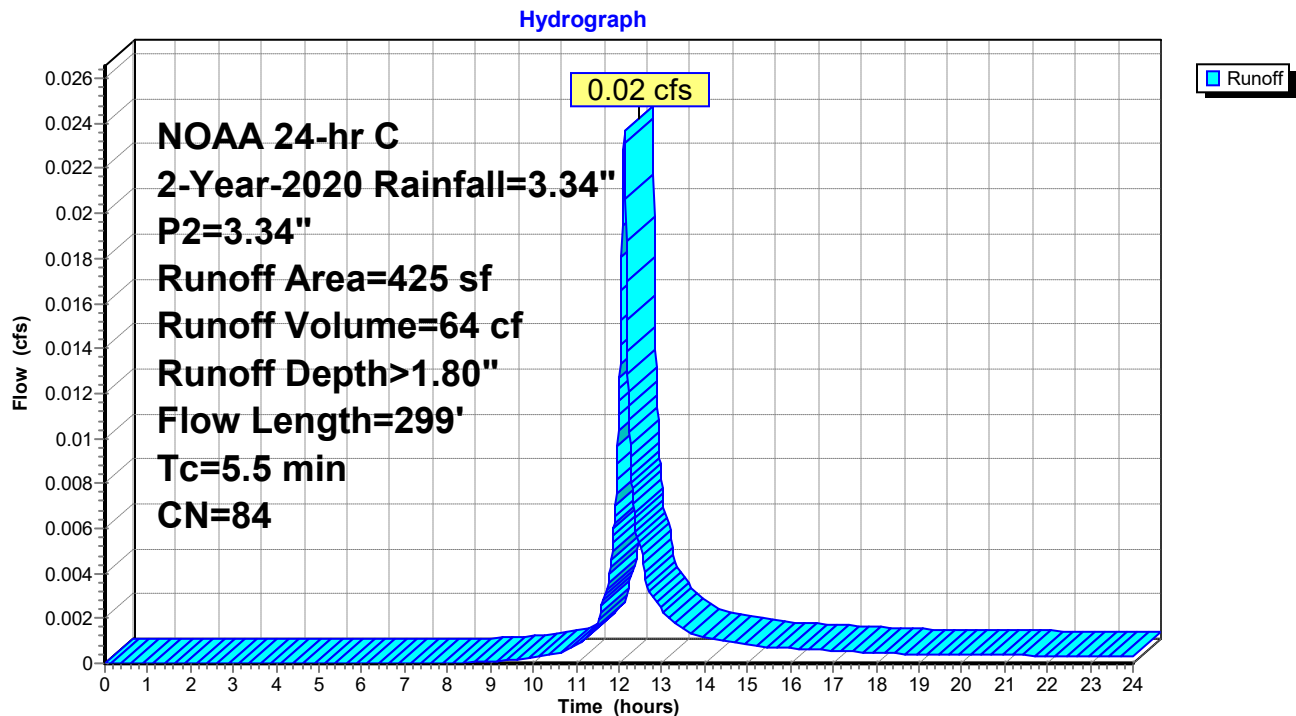
Runoff = 0.02 cfs @ 12.13 hrs, Volume= 64 cf, Depth> 1.80"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.5      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 308E: Offsite to Drain 4**

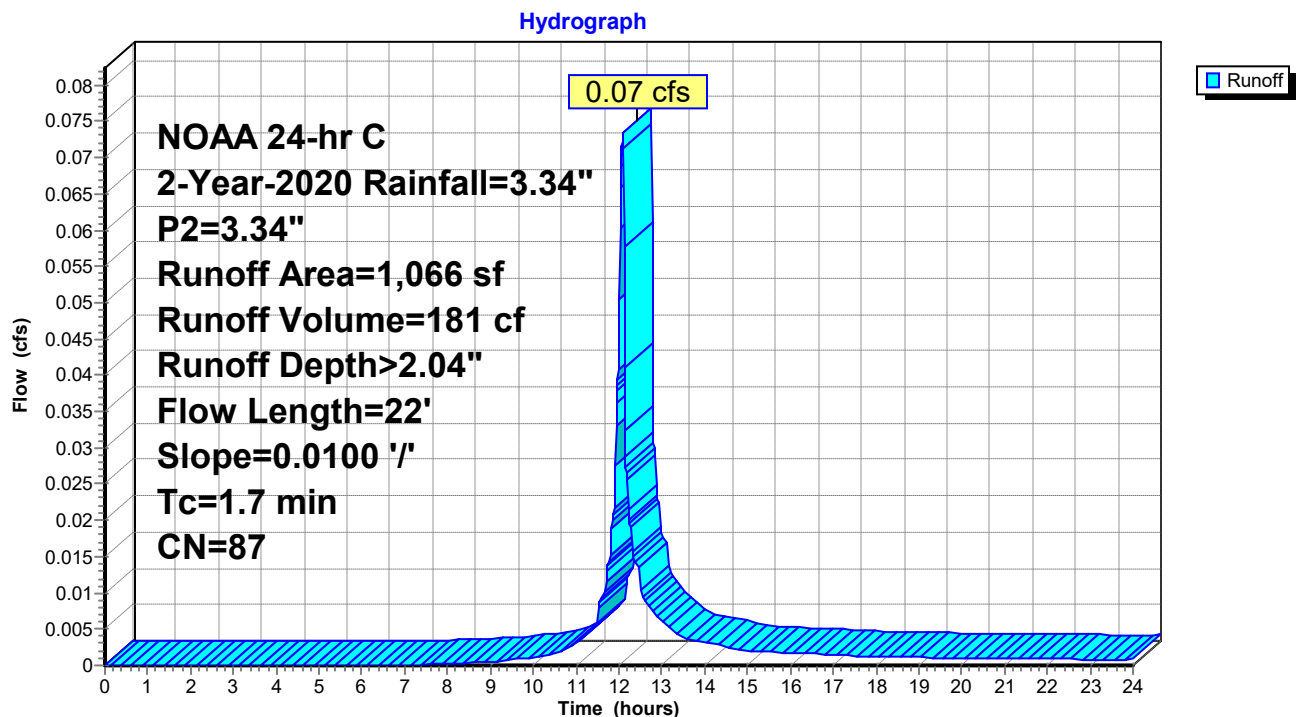
Runoff = 0.07 cfs @ 12.10 hrs, Volume= 181 cf, Depth> 2.04"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.7      | 22            | Total         |                   |                |                                       |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

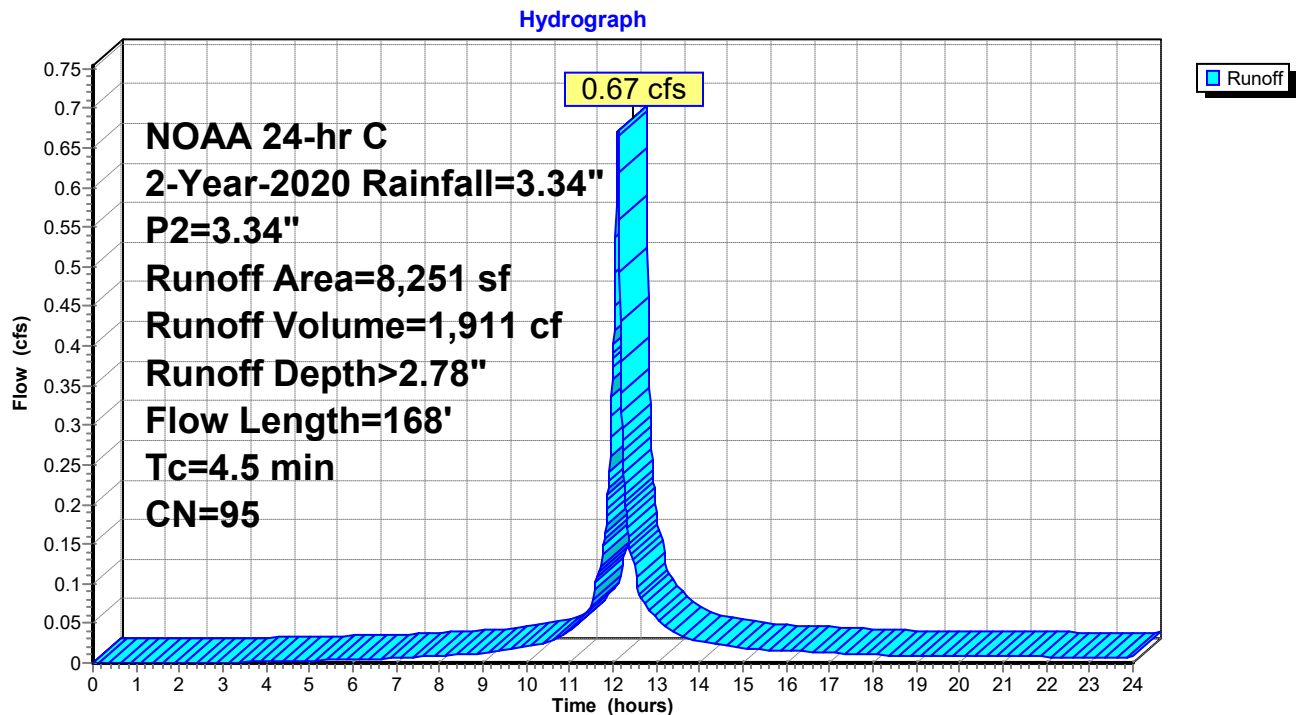
Runoff = 0.67 cfs @ 12.12 hrs, Volume= 1,911 cf, Depth> 2.78"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 310E: Pervious Stadium W**

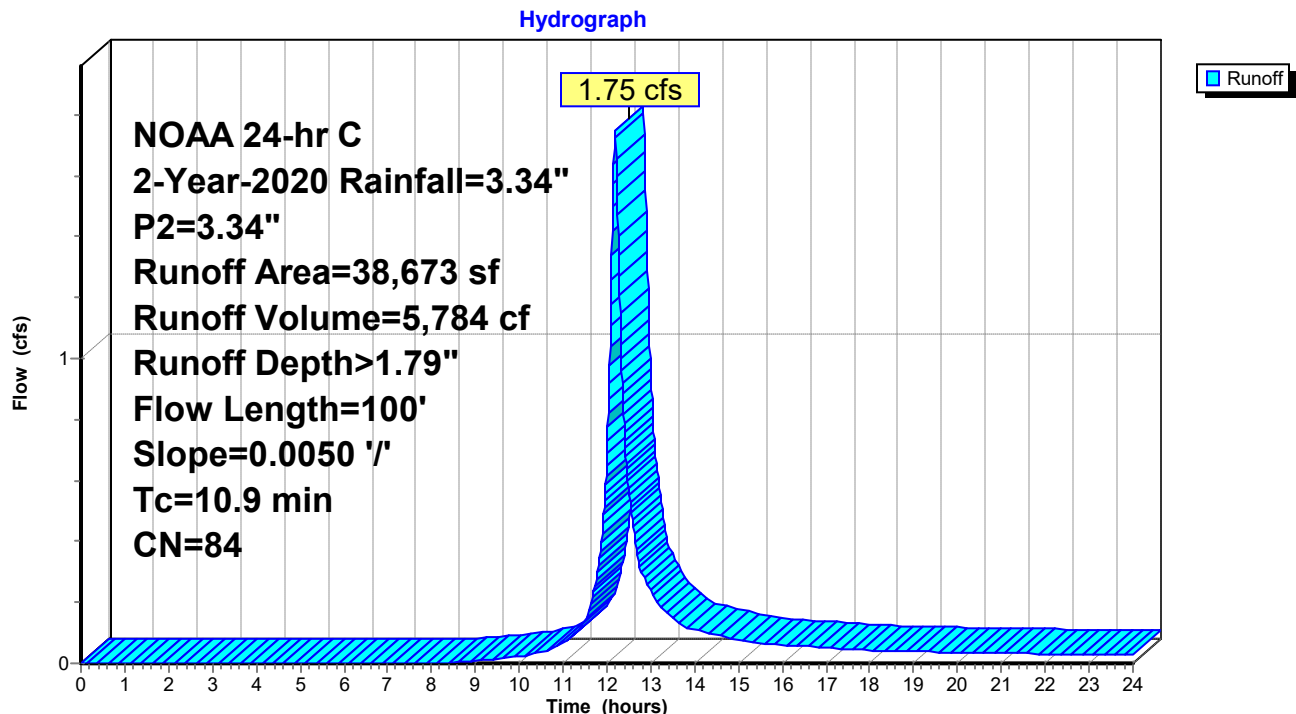
Runoff = 1.75 cfs @ 12.19 hrs, Volume= 5,784 cf, Depth> 1.79"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

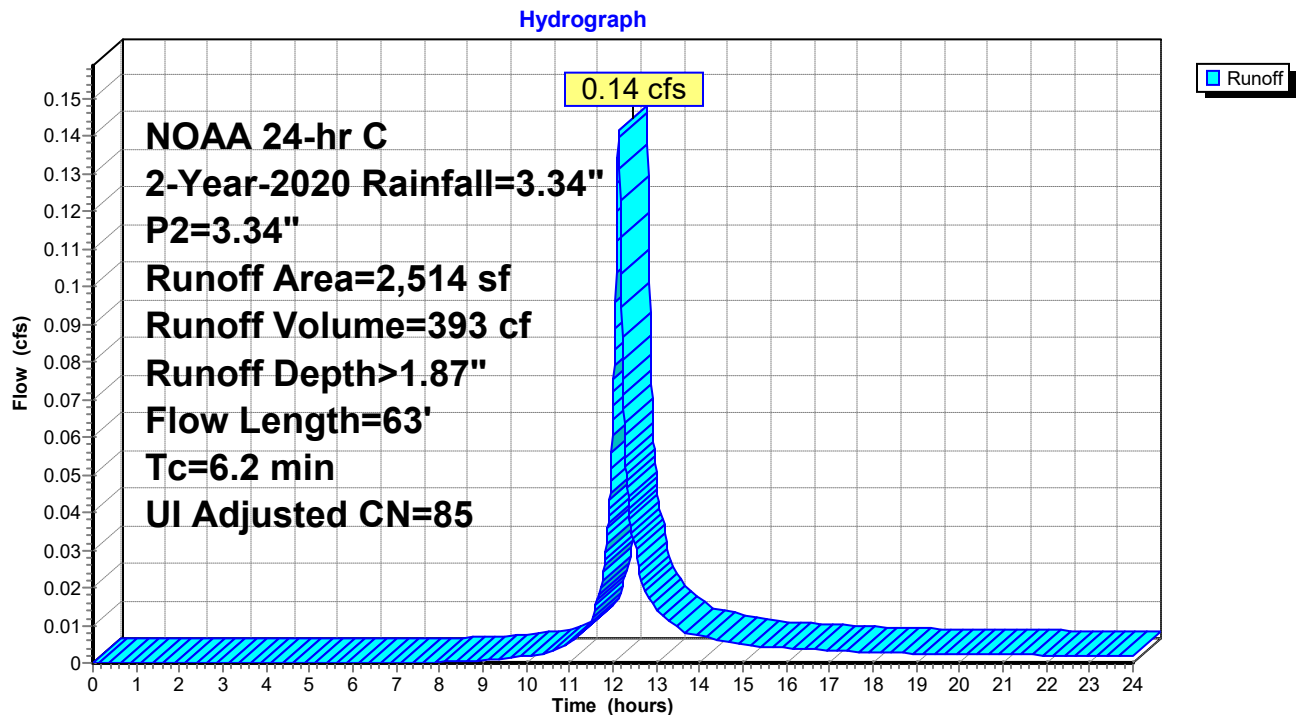
Runoff = 0.14 cfs @ 12.13 hrs, Volume= 393 cf, Depth> 1.87"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 6.0      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 6.2      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

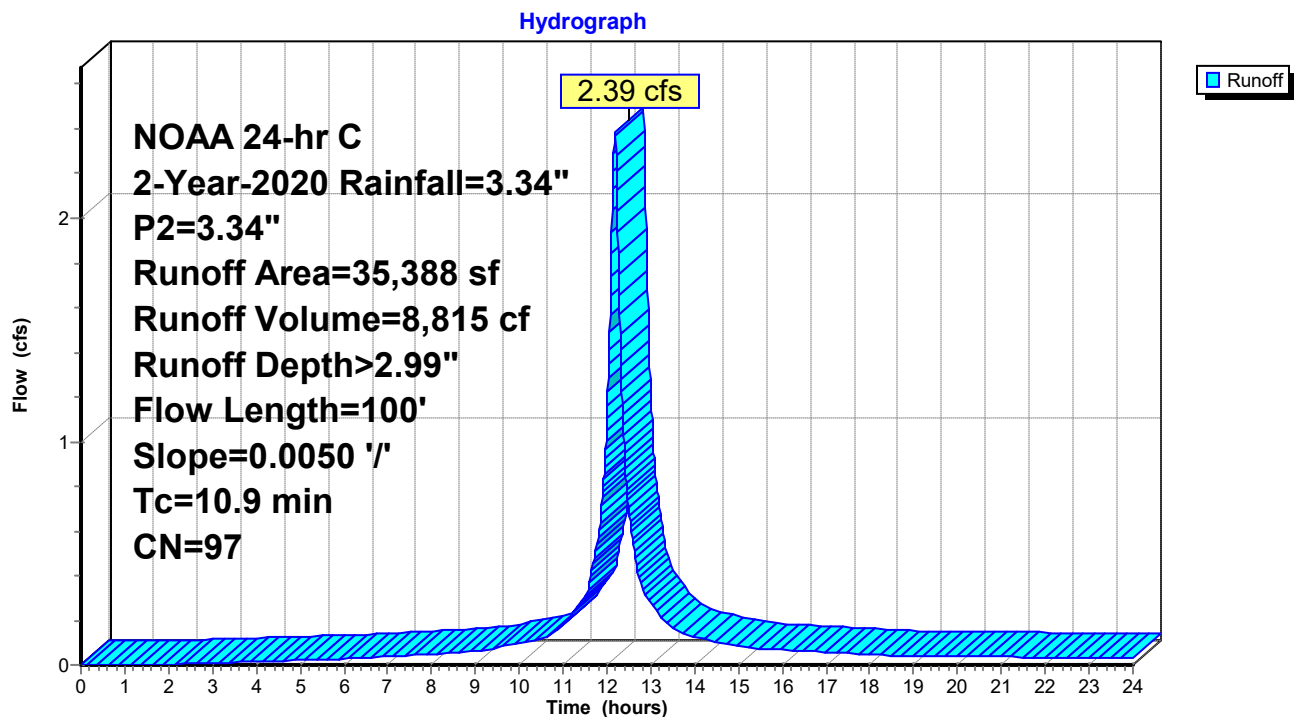
Runoff = 2.39 cfs @ 12.18 hrs, Volume= 8,815 cf, Depth> 2.99"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

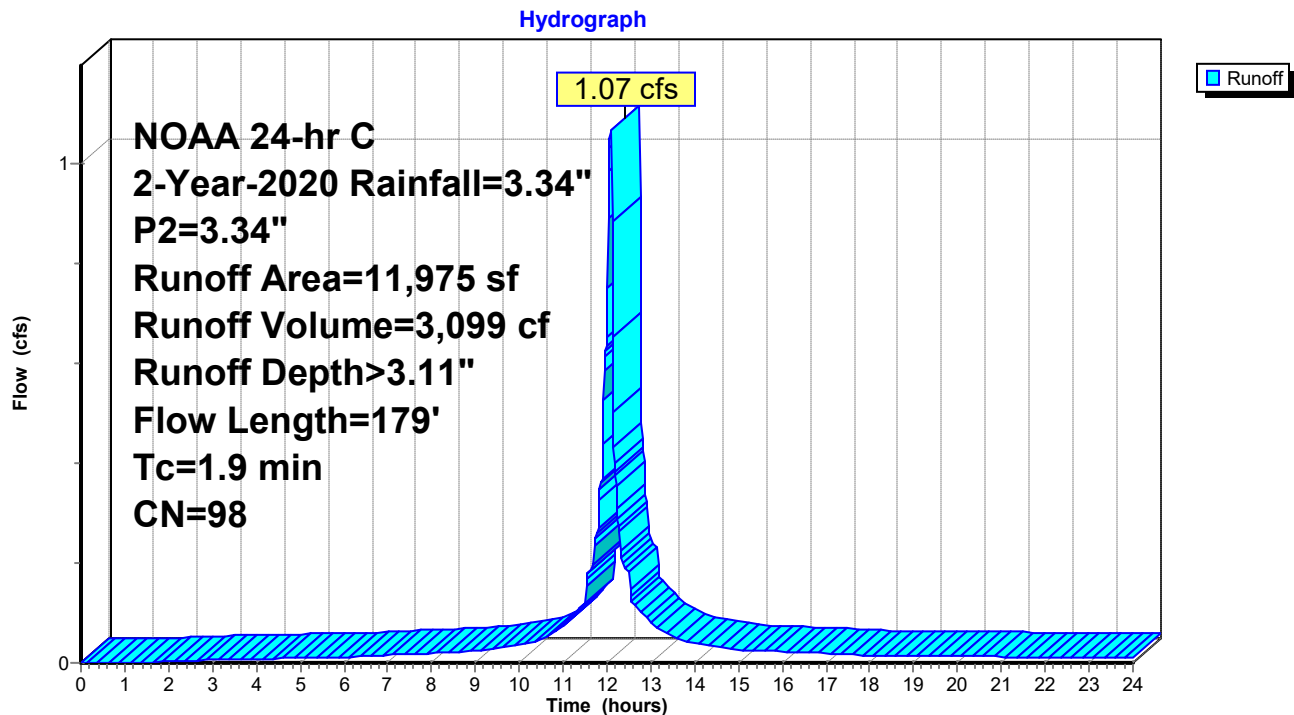
Runoff = 1.07 cfs @ 12.10 hrs, Volume= 3,099 cf, Depth> 3.11"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.63              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

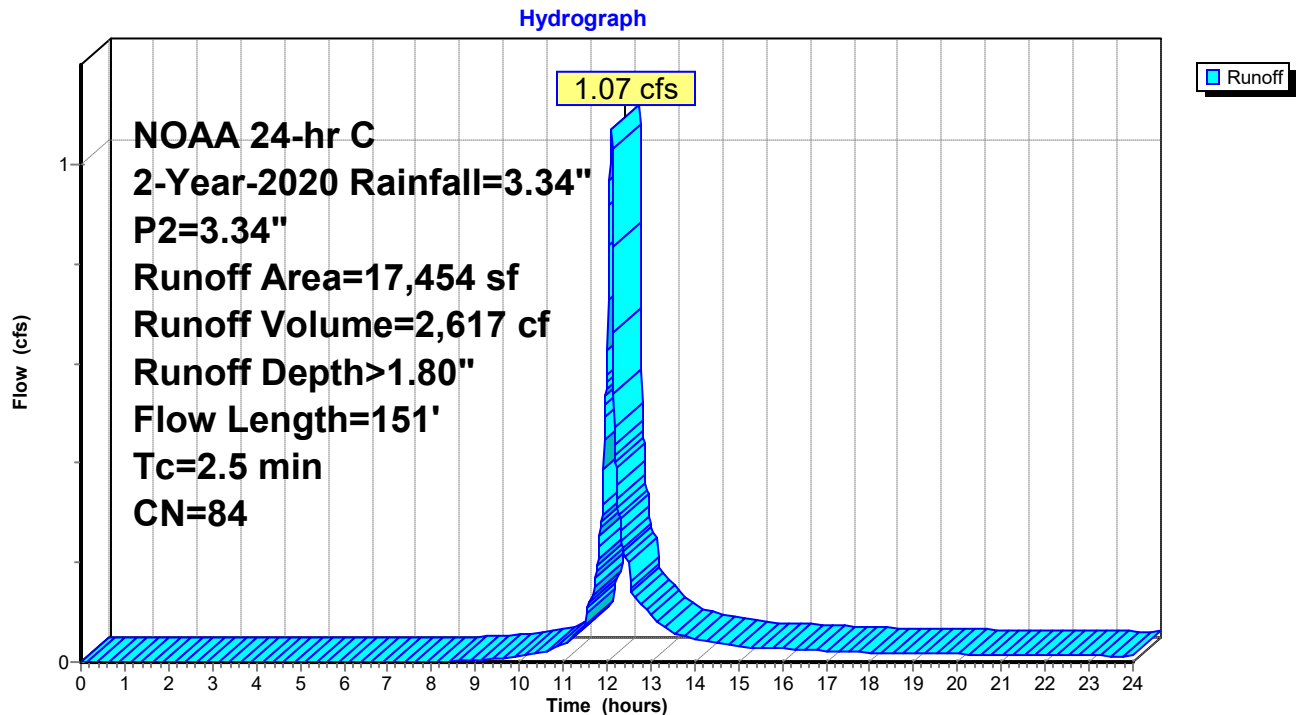
Runoff = 1.07 cfs @ 12.11 hrs, Volume= 2,617 cf, Depth> 1.80"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.5      | 35            | 0.2500        | 0.39              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.5      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.34"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 403E: Tennis Courts**

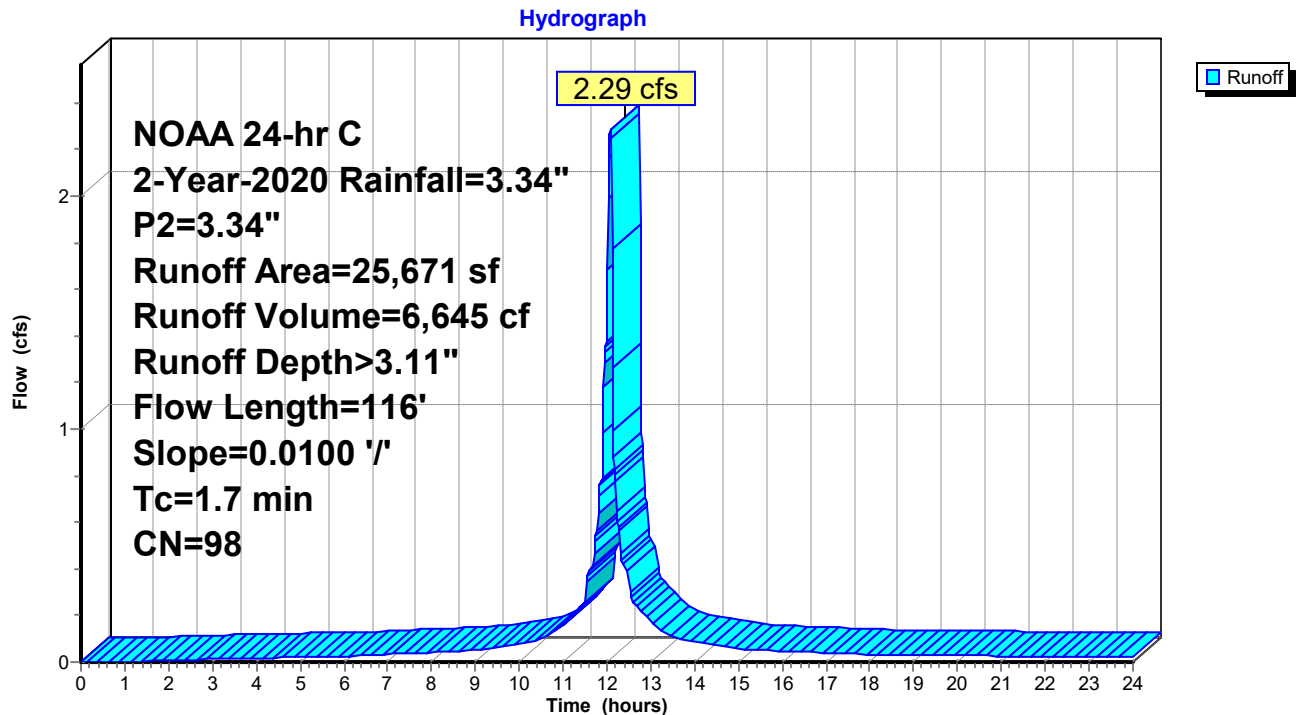
Runoff = 2.29 cfs @ 12.10 hrs, Volume= 6,645 cf, Depth> 3.11"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

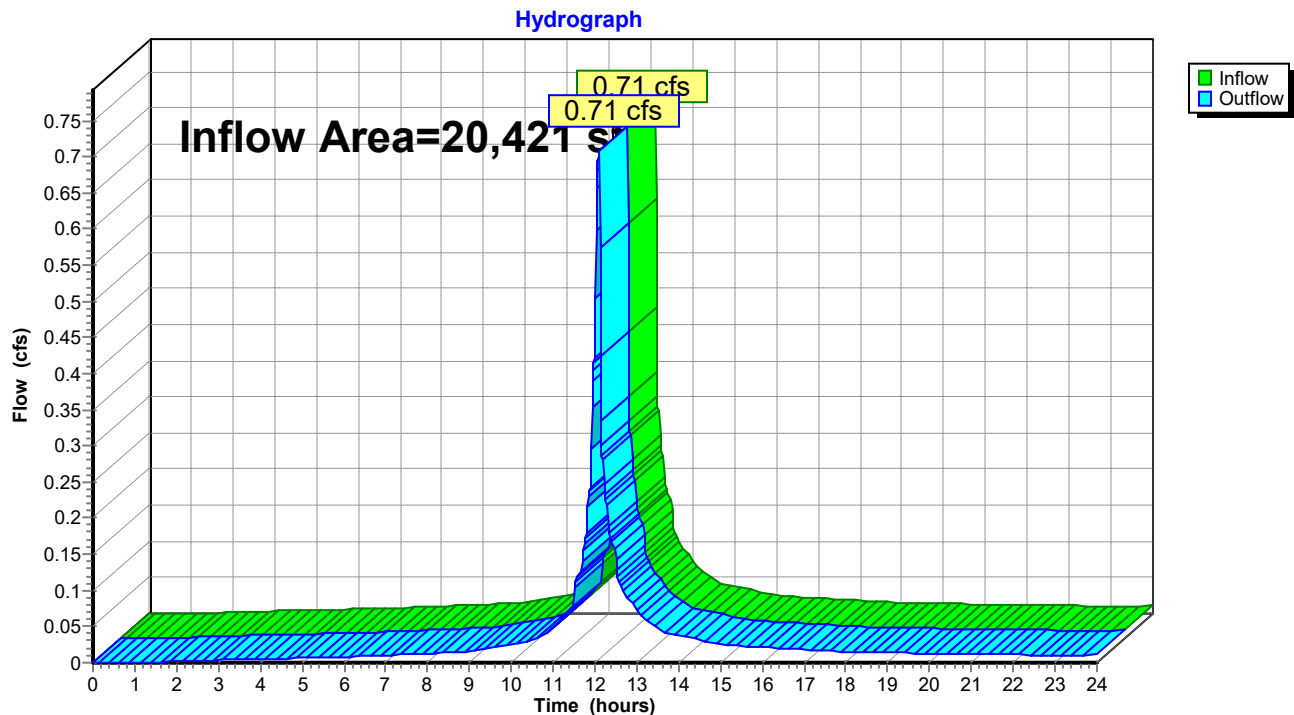
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 1.39" for 2-Year-2020 event  
 Inflow = 0.71 cfs @ 12.10 hrs, Volume= 2,371 cf  
 Outflow = 0.71 cfs @ 12.10 hrs, Volume= 2,371 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

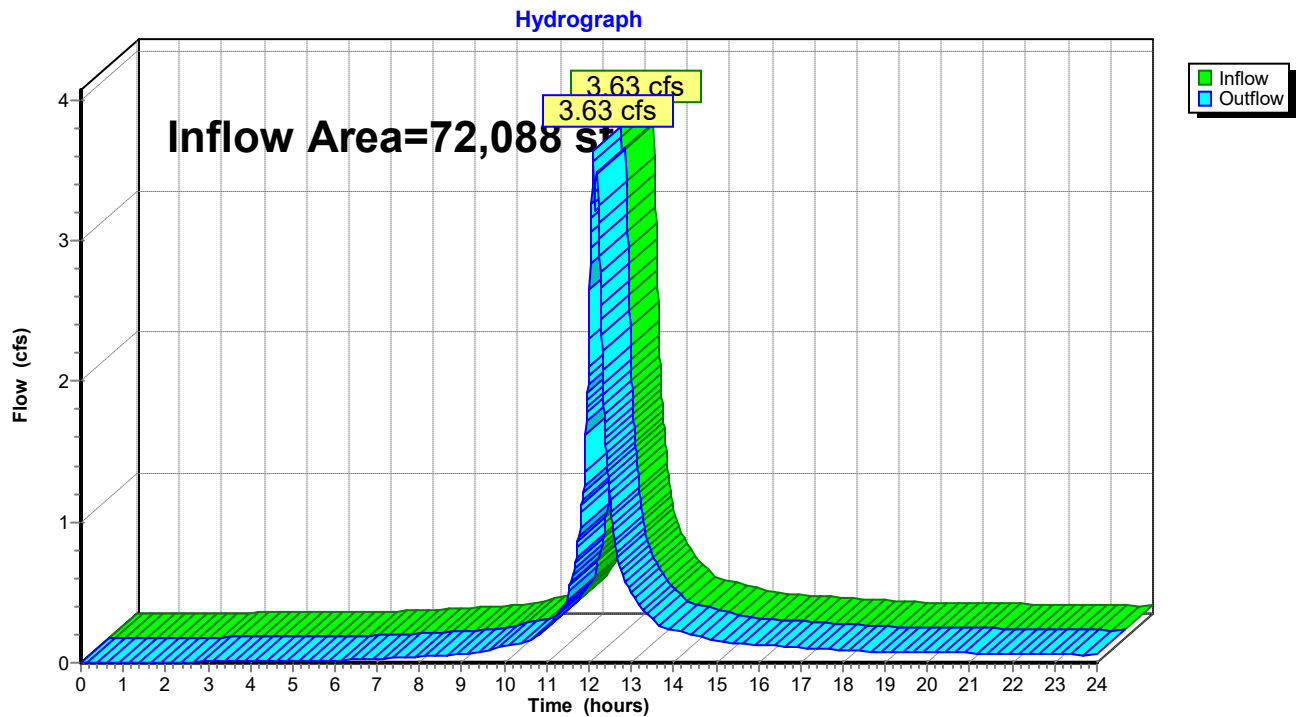


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 2.37" for 2-Year-2020 event  
 Inflow = 3.63 cfs @ 12.10 hrs, Volume= 14,242 cf  
 Outflow = 3.63 cfs @ 12.10 hrs, Volume= 14,242 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST



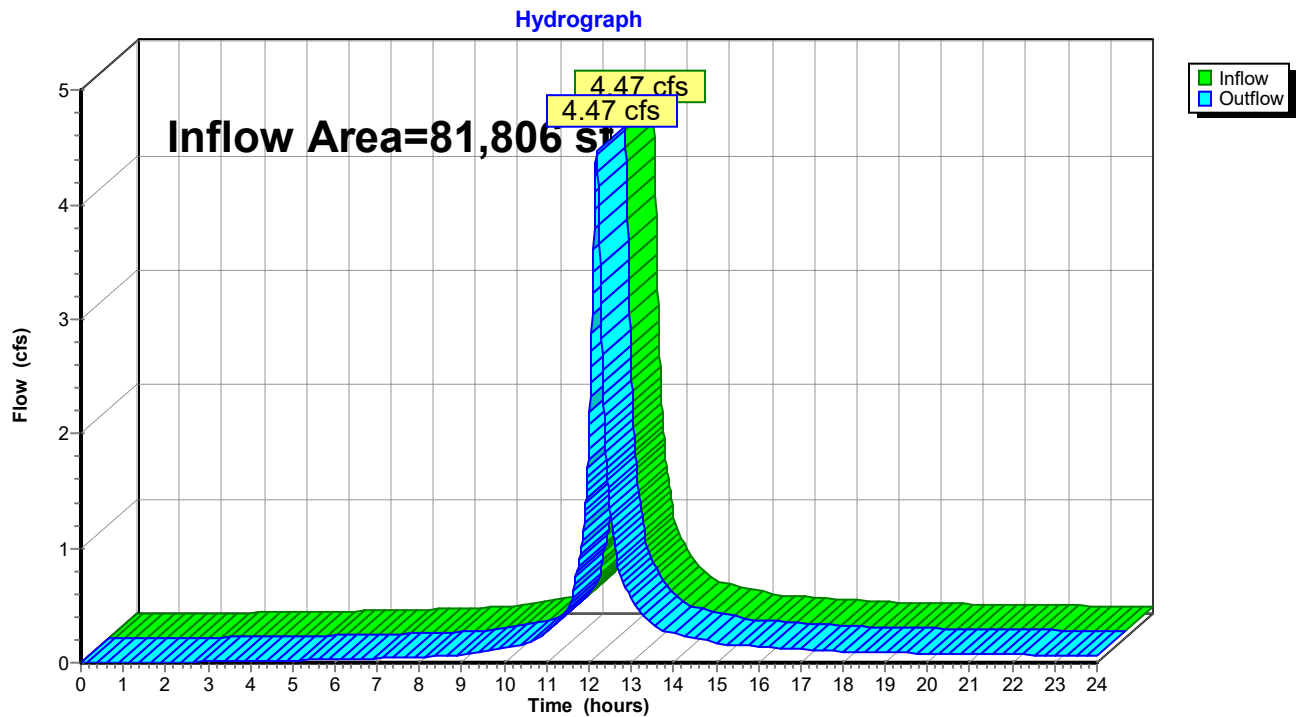


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 2.31" for 2-Year-2020 event  
 Inflow = 4.47 cfs @ 12.18 hrs, Volume= 15,780 cf  
 Outflow = 4.47 cfs @ 12.18 hrs, Volume= 15,780 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

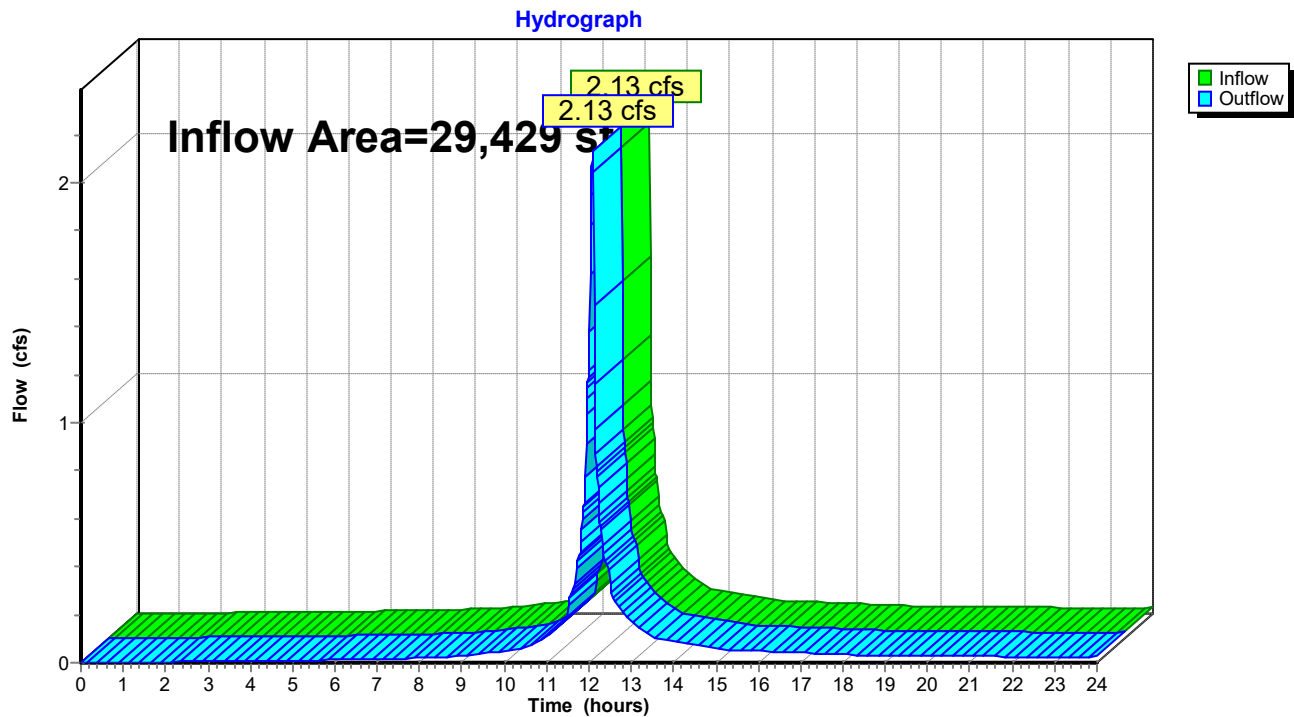


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 2.33" for 2-Year-2020 event  
 Inflow = 2.13 cfs @ 12.10 hrs, Volume= 5,716 cf  
 Outflow = 2.13 cfs @ 12.10 hrs, Volume= 5,716 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

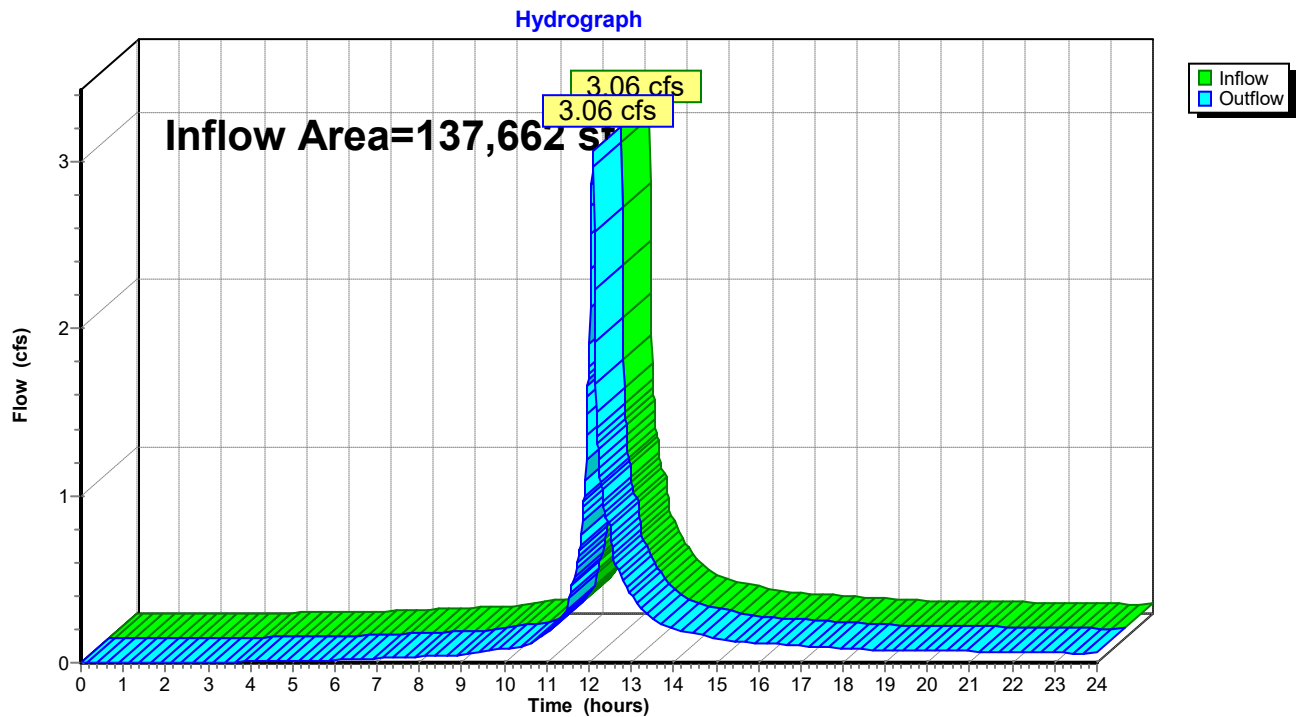


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 0.95" for 2-Year-2020 event  
 Inflow = 3.06 cfs @ 12.11 hrs, Volume= 10,861 cf  
 Outflow = 3.06 cfs @ 12.11 hrs, Volume= 10,861 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100E: EX INLET 1

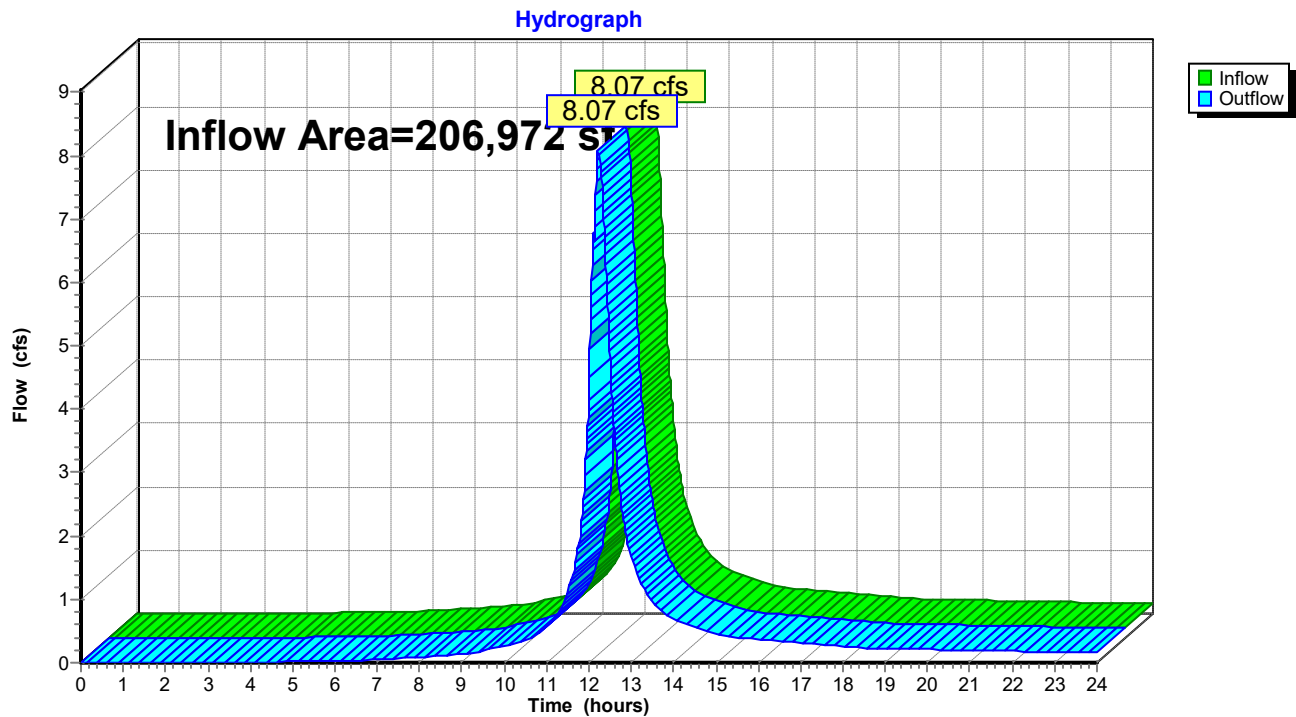


### Summary for Reach 200E: EX MANHOLE 2

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 2.25" for 2-Year-2020 event  
 Inflow = 8.07 cfs @ 12.21 hrs, Volume= 38,837 cf  
 Outflow = 8.07 cfs @ 12.21 hrs, Volume= 38,837 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200E: EX MANHOLE 2

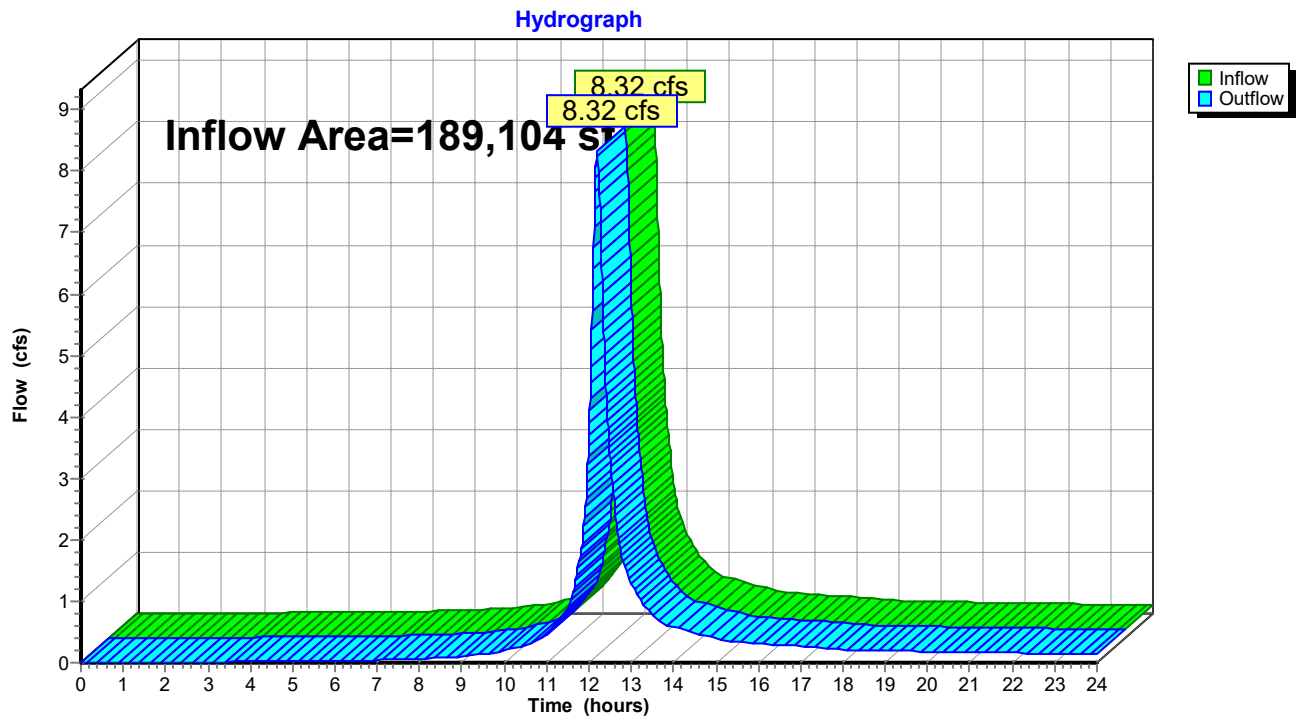


### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 2.06" for 2-Year-2020 event  
 Inflow = 8.32 cfs @ 12.19 hrs, Volume= 32,502 cf  
 Outflow = 8.32 cfs @ 12.19 hrs, Volume= 32,502 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300E: EX INLET 3

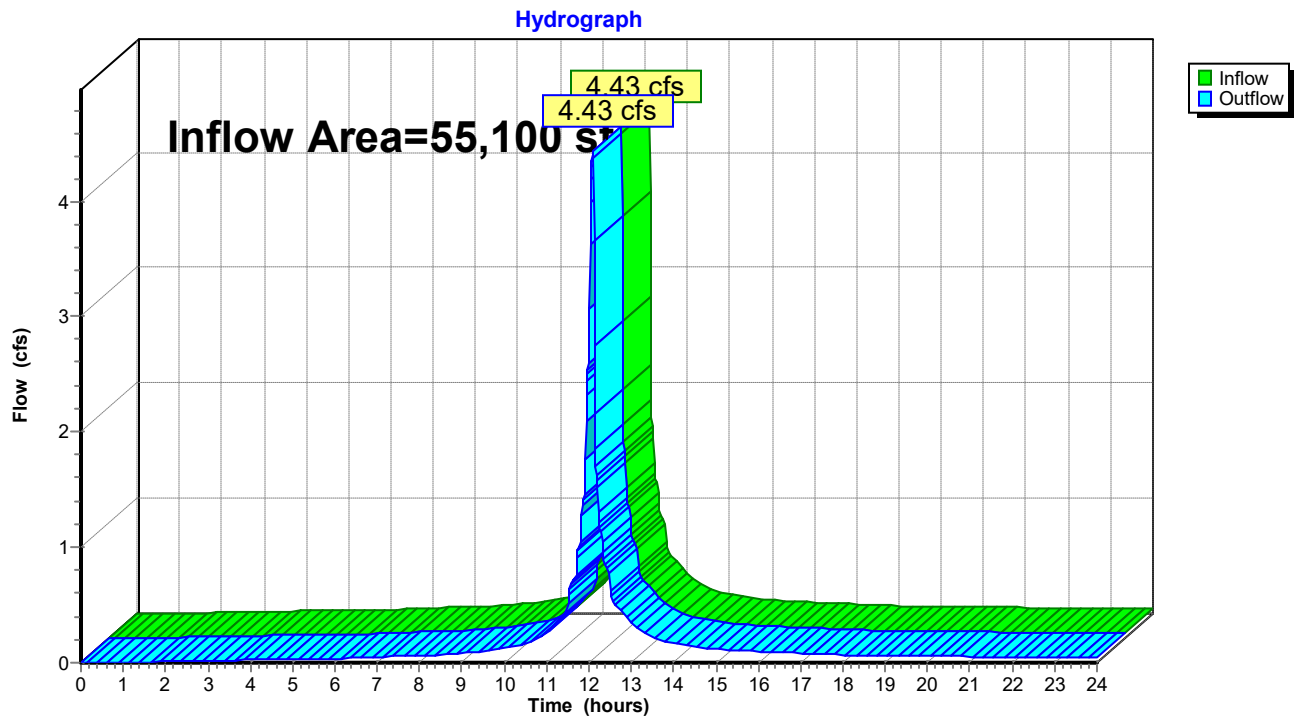


### Summary for Reach 400E: TENNIS COURTS

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 2.69" for 2-Year-2020 event  
 Inflow = 4.43 cfs @ 12.10 hrs, Volume= 12,361 cf  
 Outflow = 4.43 cfs @ 12.10 hrs, Volume= 12,361 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

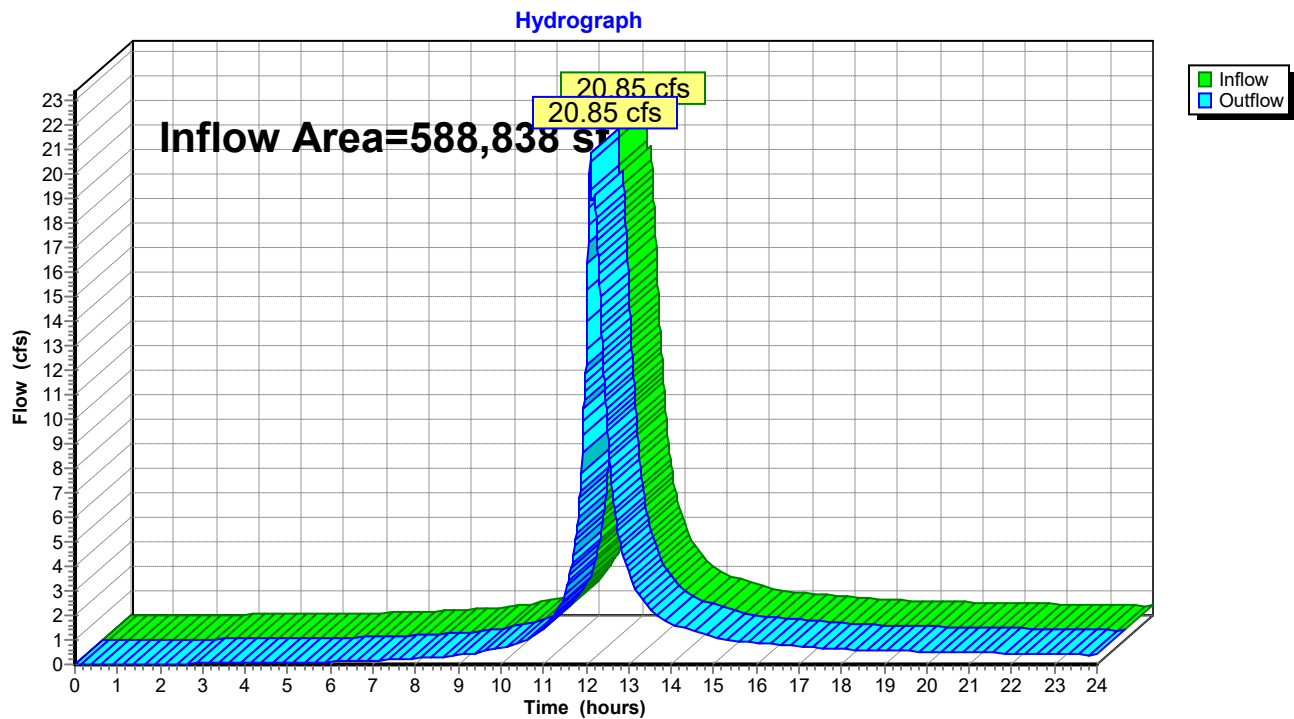
### Reach 400E: TENNIS COURTS



**Summary for Reach 500E: STUDY POINT**

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 1.93" for 2-Year-2020 event  
Inflow = 20.85 cfs @ 12.11 hrs, Volume= 94,561 cf  
Outflow = 20.85 cfs @ 12.11 hrs, Volume= 94,561 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 500E: STUDY POINT**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>1.09"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=1.30 cfs 6,393 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>1.09"  
Flow Length=476' Tc=10.7 min CN=56 Runoff=0.30 cfs 1,145 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>4.30"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=3.76 cfs 10,455 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.68"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.07 cfs 257 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.97"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=0.34 cfs 1,065 cf

**Subcatchment 106E: Onsite Impervious SE** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>4.87"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=1.08 cfs 3,189 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>3.36"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=0.91 cfs 2,930 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>3.37"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.24 cfs 610 cf

**Subcatchment 203E: Impervious Stadium** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>4.87"  
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98 Runoff=1.97 cfs 5,808 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>3.87"  
Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=89 Runoff=4.46 cfs 15,414 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>3.86"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=8.56 cfs 39,016 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>3.87"  
Flow Length=504' Tc=12.2 min CN=89 Runoff=0.70 cfs 2,510 cf

**Subcatchment 207E: Offsite Impervious to** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>4.87"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.43 cfs 1,263 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>3.36"  
Flow Length=973' Tc=18.4 min CN=84 Runoff=3.60 cfs 14,925 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>3.36"  
Flow Length=541' Tc=9.4 min CN=84 Runoff=0.34 cfs 1,091 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>3.36"  
Flow Length=574' Tc=13.2 min CN=84 Runoff=2.31 cfs 8,362 cf



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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|                                                     |                                                                                                |                                                           |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Subcatchment 304E: Onsite to W Trench</b>        | Runoff Area=2,363 sf 2.75% Impervious<br>Flow Length=287' Tc=9.8 min CN=84                     | Runoff Depth>3.36"<br>Runoff=0.21 cfs 662 cf              |
| <b>Subcatchment 305E: Offsite to W Field</b>        | Runoff Area=13,314 sf 0.00% Impervious<br>Flow Length=467' Tc=13.0 min CN=84                   | Runoff Depth>3.36"<br>Runoff=1.04 cfs 3,729 cf            |
| <b>Subcatchment 306E: Onsite to W Field Drain 2</b> | Runoff Area=425 sf 0.00% Impervious<br>Flow Length=299' Tc=5.5 min CN=84                       | Runoff Depth>3.37"<br>Runoff=0.04 cfs 119 cf              |
| <b>Subcatchment 308E: Offsite to Drain 4</b>        | Runoff Area=1,066 sf 20.92% Impervious<br>Flow Length=22' Slope=0.0100 '/' Tc=1.7 min CN=87    | Runoff Depth>3.67"<br>Runoff=0.13 cfs 326 cf              |
| <b>Subcatchment 309E: Offsite Building to</b>       | Runoff Area=8,251 sf 81.26% Impervious<br>Flow Length=168' Tc=4.5 min CN=95                    | Runoff Depth>4.52"<br>Runoff=1.06 cfs 3,111 cf            |
| <b>Subcatchment 310E: Pervious Stadium W</b>        | Runoff Area=38,673 sf 0.00% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=84  | Runoff Depth>3.36"<br>Runoff=3.22 cfs 10,835 cf           |
| <b>Subcatchment 311E: Offsite to W Trench</b>       | Runoff Area=2,514 sf 20.92% Impervious<br>Flow Length=63' Tc=6.2 min UI Adjusted CN=85         | Runoff Depth>3.46"<br>Runoff=0.26 cfs 726 cf              |
| <b>Subcatchment 312E: Impervious Stadium</b>        | Runoff Area=35,388 sf 92.50% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=97 | Runoff Depth>4.75"<br>Runoff=3.71 cfs 13,999 cf           |
| <b>Subcatchment 401E: Onsite Impervious</b>         | Runoff Area=11,975 sf 100.00% Impervious<br>Flow Length=179' Tc=1.9 min CN=98                  | Runoff Depth>4.87"<br>Runoff=1.64 cfs 4,861 cf            |
| <b>Subcatchment 402E: Onsite Pervious to SP4</b>    | Runoff Area=17,454 sf 0.00% Impervious<br>Flow Length=151' Tc=2.5 min CN=84                    | Runoff Depth>3.37"<br>Runoff=1.94 cfs 4,900 cf            |
| <b>Subcatchment 403E: Tennis Courts</b>             | Runoff Area=25,671 sf 100.00% Impervious<br>Flow Length=116' Slope=0.0100 '/' Tc=1.7 min CN=98 | Runoff Depth>4.87"<br>Runoff=3.53 cfs 10,422 cf           |
| <b>Reach 1E: ONSITE UNRETAINED</b>                  |                                                                                                | Inflow=1.25 cfs 4,334 cf<br>Outflow=1.25 cfs 4,334 cf     |
| <b>Reach 2E: ONSITE EAST</b>                        |                                                                                                | Inflow=6.08 cfs 24,342 cf<br>Outflow=6.08 cfs 24,342 cf   |
| <b>Reach 3E: ONSITE WEST</b>                        |                                                                                                | Inflow=7.55 cfs 27,032 cf<br>Outflow=7.55 cfs 27,032 cf   |
| <b>Reach 4E: ONSITE TENNIS COURTS</b>               |                                                                                                | Inflow=3.58 cfs 9,762 cf<br>Outflow=3.58 cfs 9,762 cf     |
| <b>Reach 100E: EX INLET 1</b>                       |                                                                                                | Inflow=5.83 cfs 22,505 cf<br>Outflow=5.83 cfs 22,505 cf   |
| <b>Reach 200E: EX MANHOLE 2</b>                     |                                                                                                | Inflow=13.89 cfs 67,552 cf<br>Outflow=13.89 cfs 67,552 cf |

## EXISTING PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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### Reach 300E: EX INLET 3

Inflow=14.65 cfs 57,884 cf  
Outflow=14.65 cfs 57,884 cf

### Reach 400E: TENNIS COURTS

Inflow=7.11 cfs 20,183 cf  
Outflow=7.11 cfs 20,183 cf

### Reach 500E: STUDY POINT

Inflow=36.37 cfs 168,125 cf  
Outflow=36.37 cfs 168,125 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 1.30 cfs @ 12.32 hrs, Volume= 6,393 cf, Depth> 1.09"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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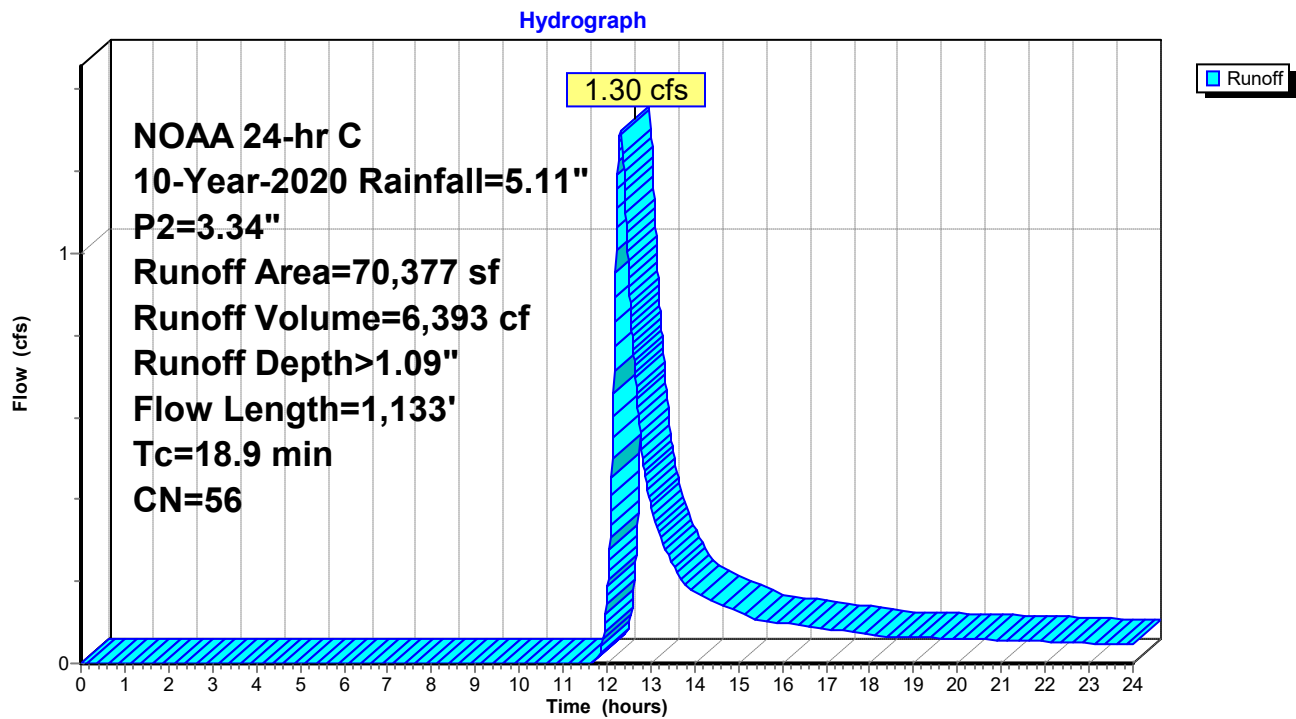
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NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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## Subcatchment 101E: Offsite Pervious SE



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 0.30 cfs @ 12.20 hrs, Volume= 1,145 cf, Depth> 1.09"  
 Routed to Reach 1E : ONSITE UNRETAINED

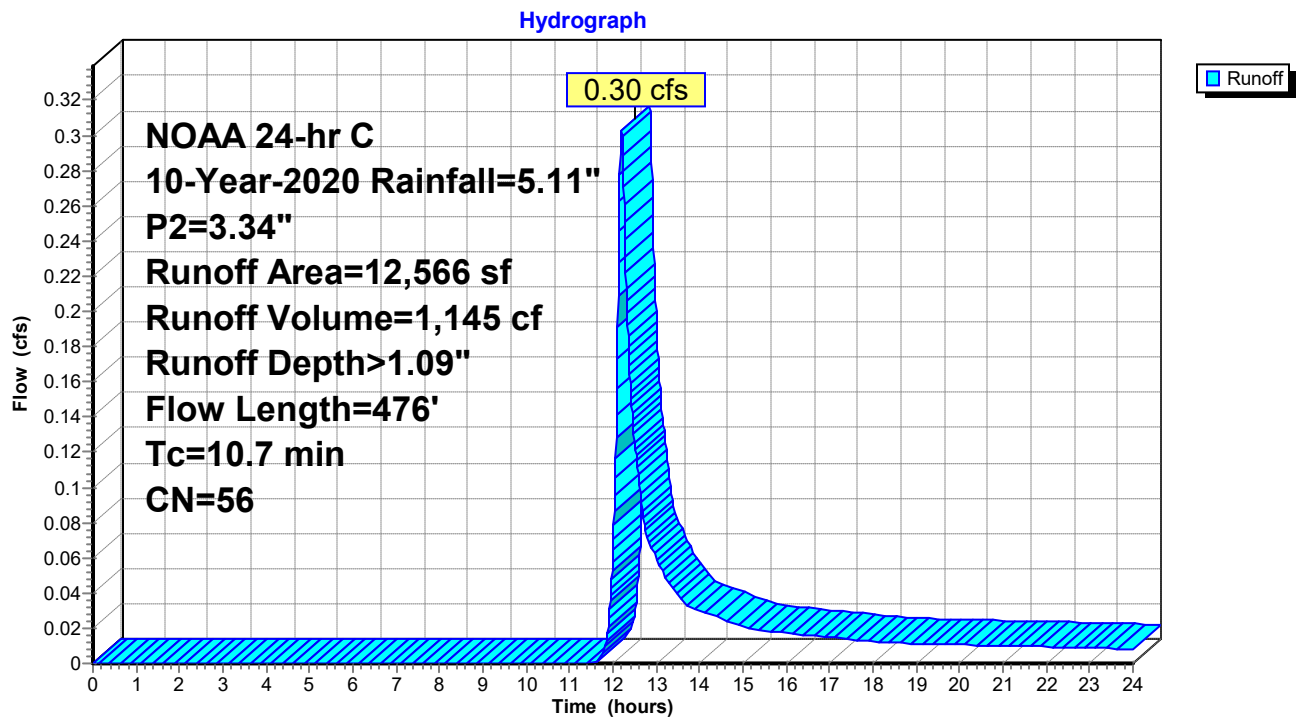
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.7     | 476           | Total         |                   |                |                                                                                                     |

**Subcatchment 102E: Onsite Pervious SE**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

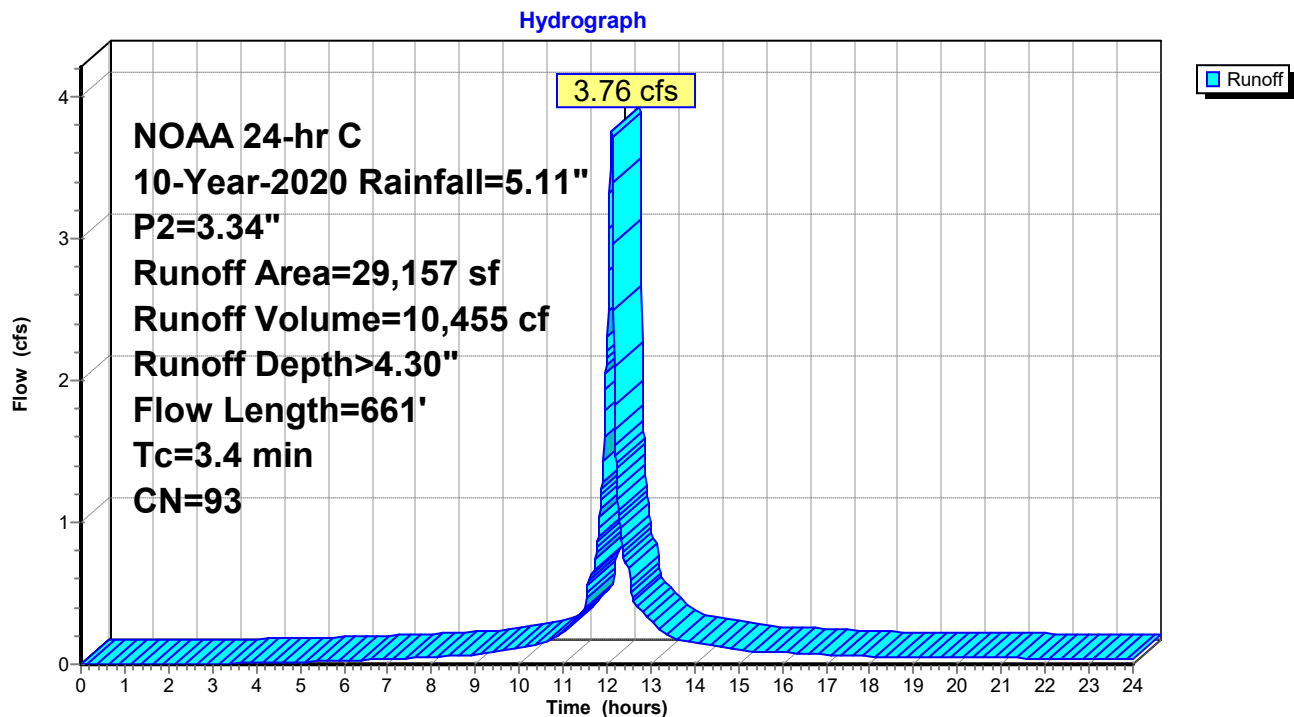
Runoff = 3.76 cfs @ 12.11 hrs, Volume= 10,455 cf, Depth> 4.30"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 104E: Yard Drains**

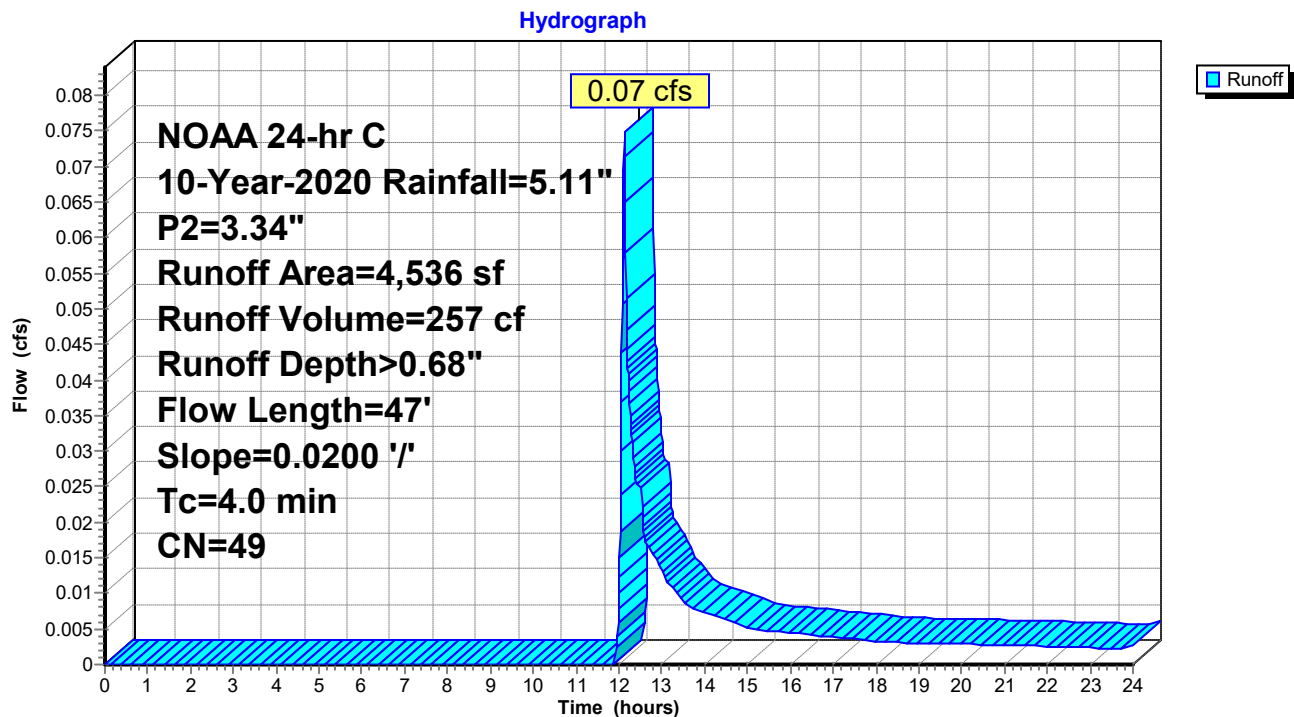
Runoff = 0.07 cfs @ 12.13 hrs, Volume= 257 cf, Depth> 0.68"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 0.34 cfs @ 12.14 hrs, Volume= 1,065 cf, Depth> 0.97"  
 Routed to Reach 100E : EX INLET 1

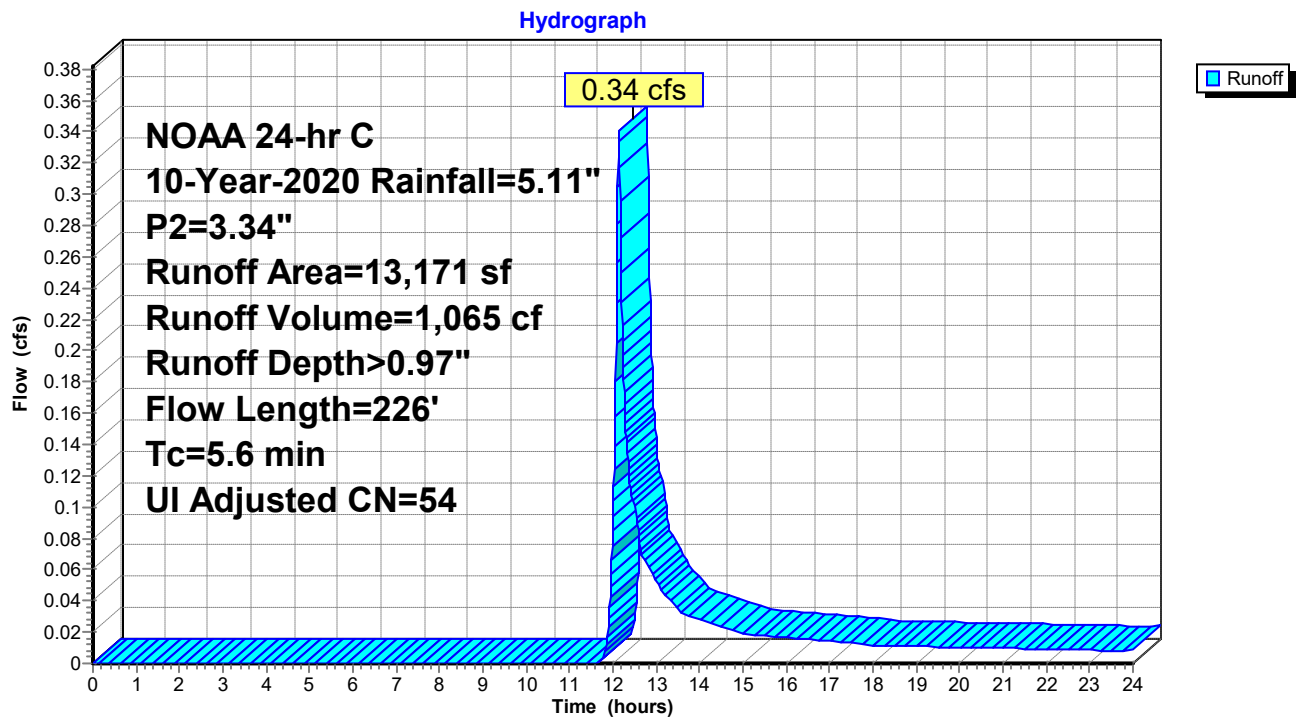
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

**Subcatchment 105E: Low Drains**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 106E: Onsite Impervious SE**

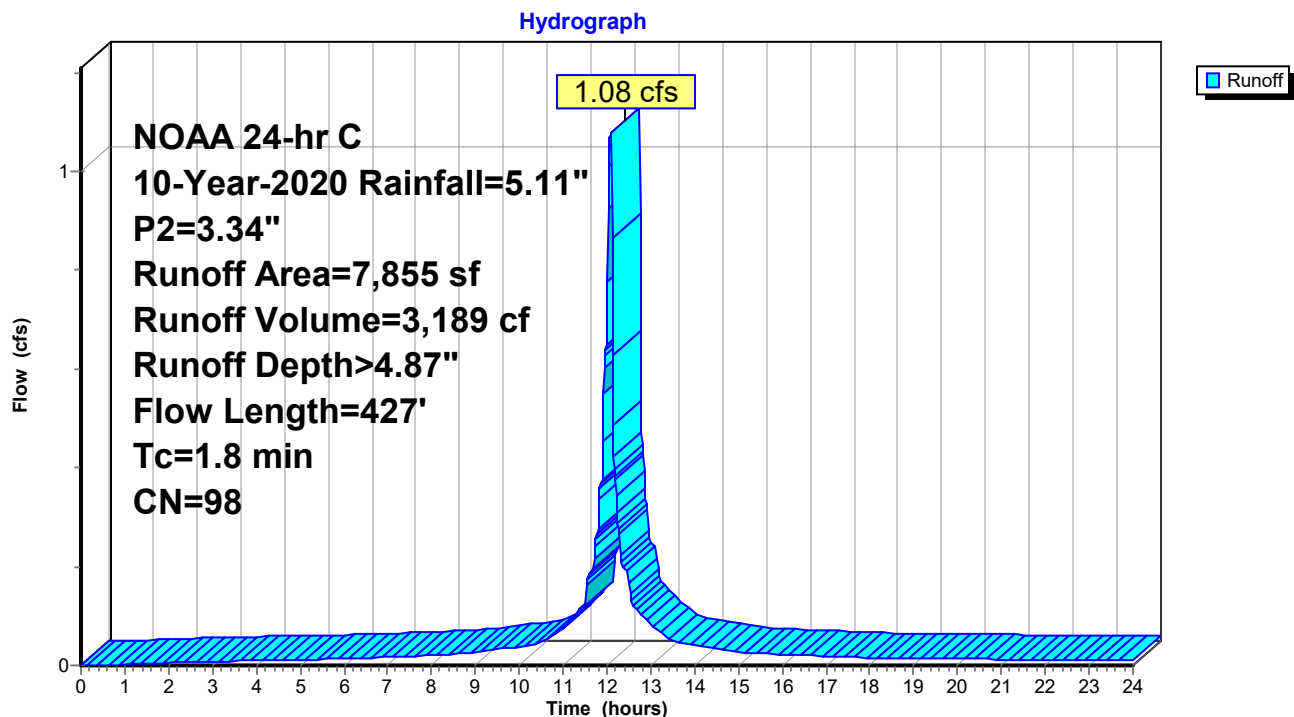
Runoff = 1.08 cfs @ 12.10 hrs, Volume= 3,189 cf, Depth> 4.87"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

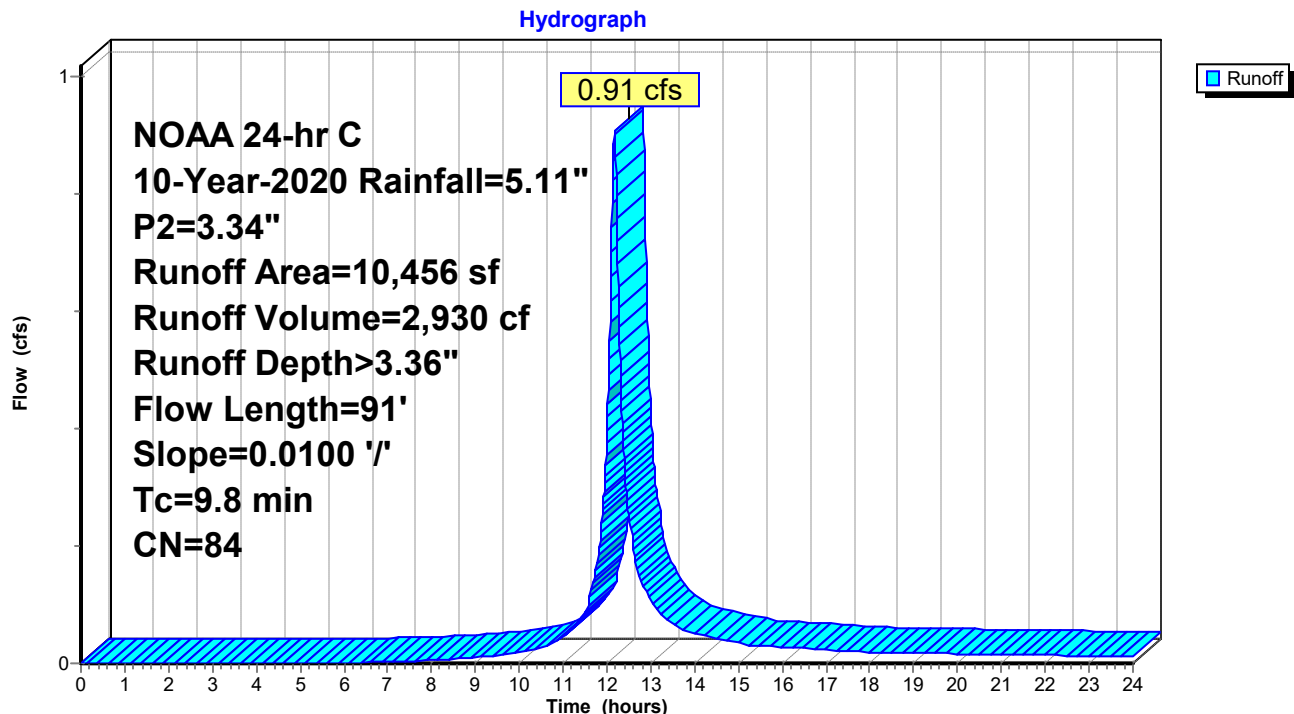
Runoff = 0.91 cfs @ 12.17 hrs, Volume= 2,930 cf, Depth> 3.36"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

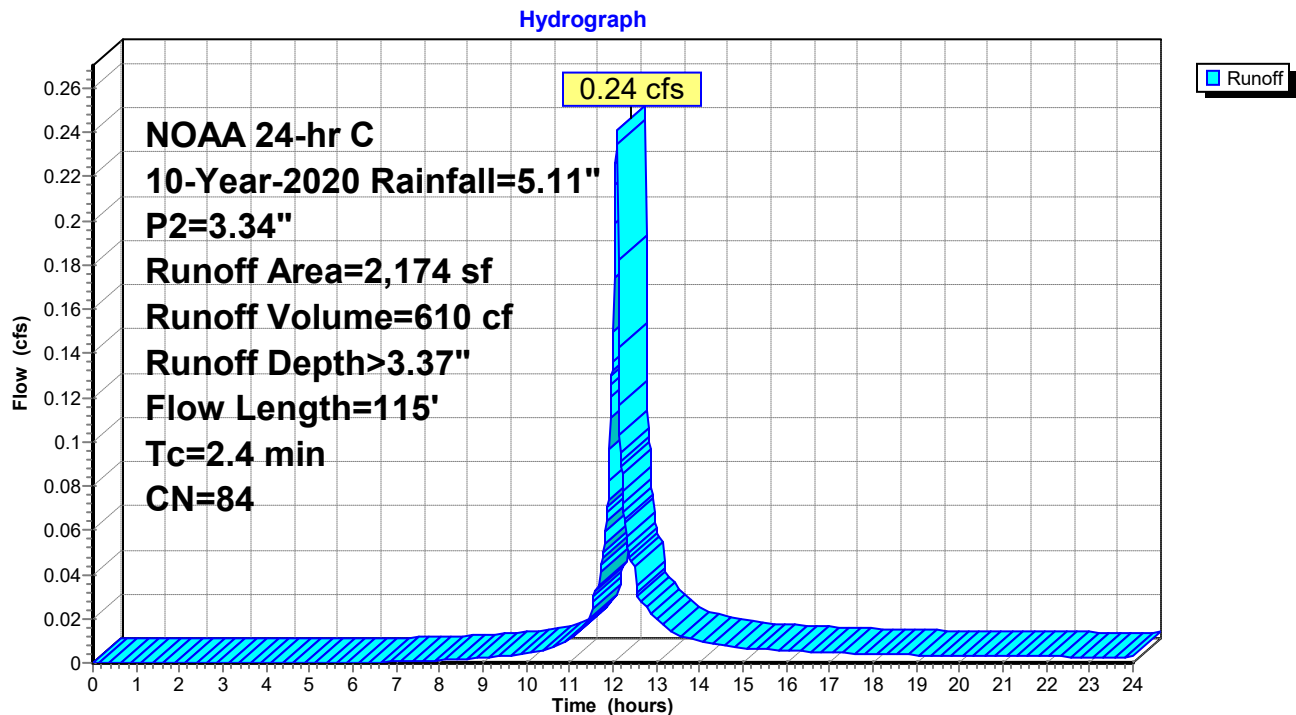
Runoff = 0.24 cfs @ 12.10 hrs, Volume= 610 cf, Depth> 3.37"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

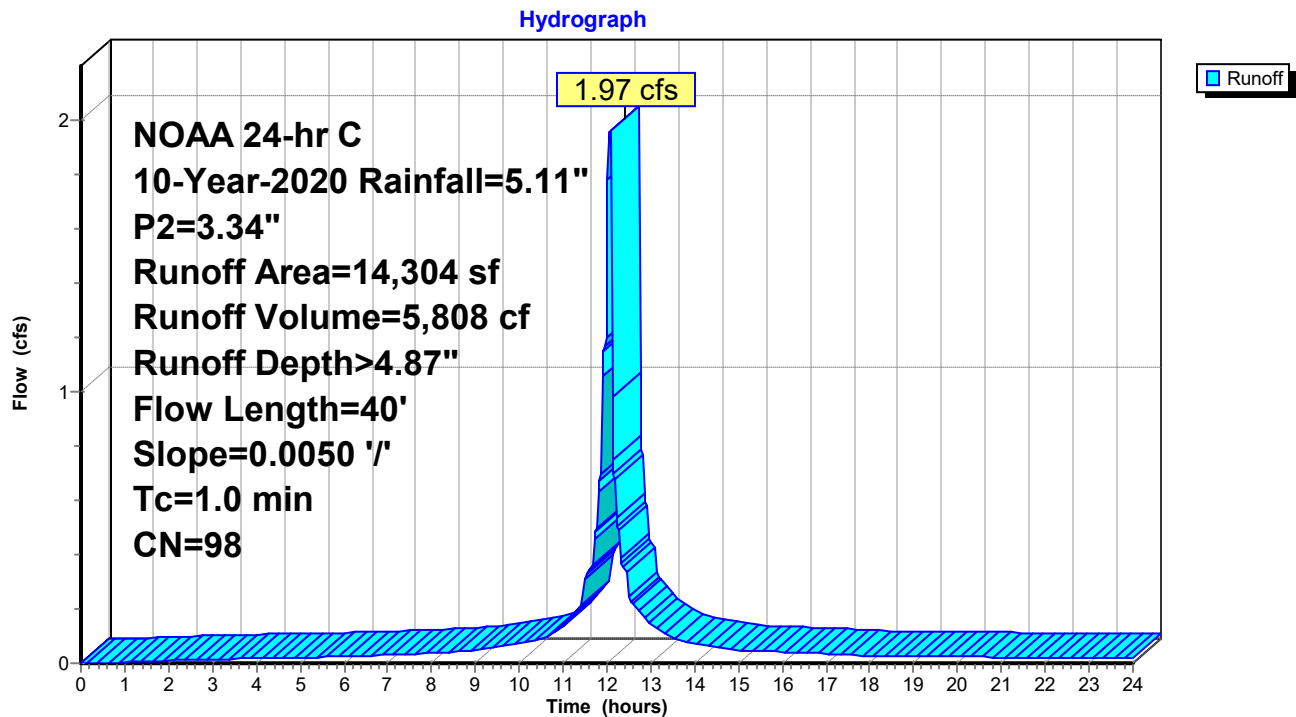
Runoff = 1.97 cfs @ 12.09 hrs, Volume= 5,808 cf, Depth&gt; 4.87"

Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                             |
|-------------|------------------|------------------|----------------------|-------------------|---------------------------------------------------------|
| 1.0         | 40               | 0.0050           | 0.67                 |                   | Sheet Flow, Sheet<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

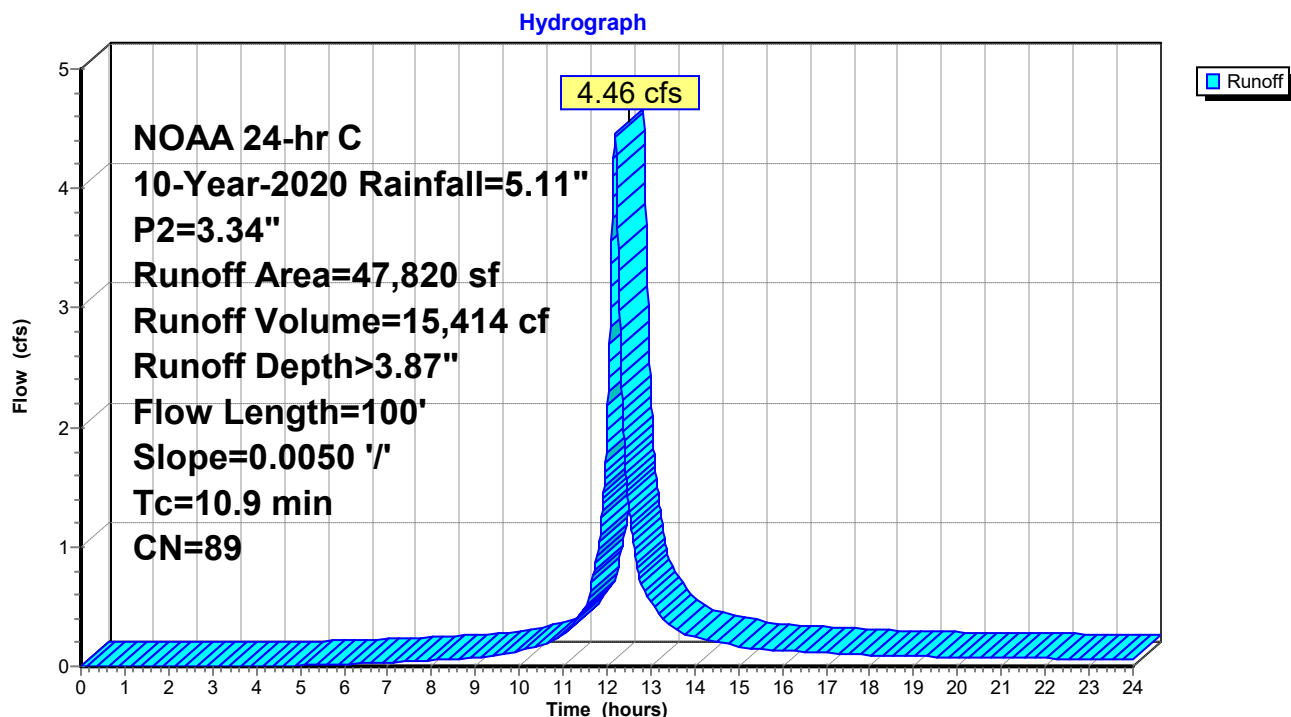
Runoff = 4.46 cfs @ 12.18 hrs, Volume= 15,414 cf, Depth> 3.87"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.9     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 8.56 cfs @ 12.31 hrs, Volume= 39,016 cf, Depth> 3.86"  
 Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                  |



# EXISTING PEDDIE FOOTBALL

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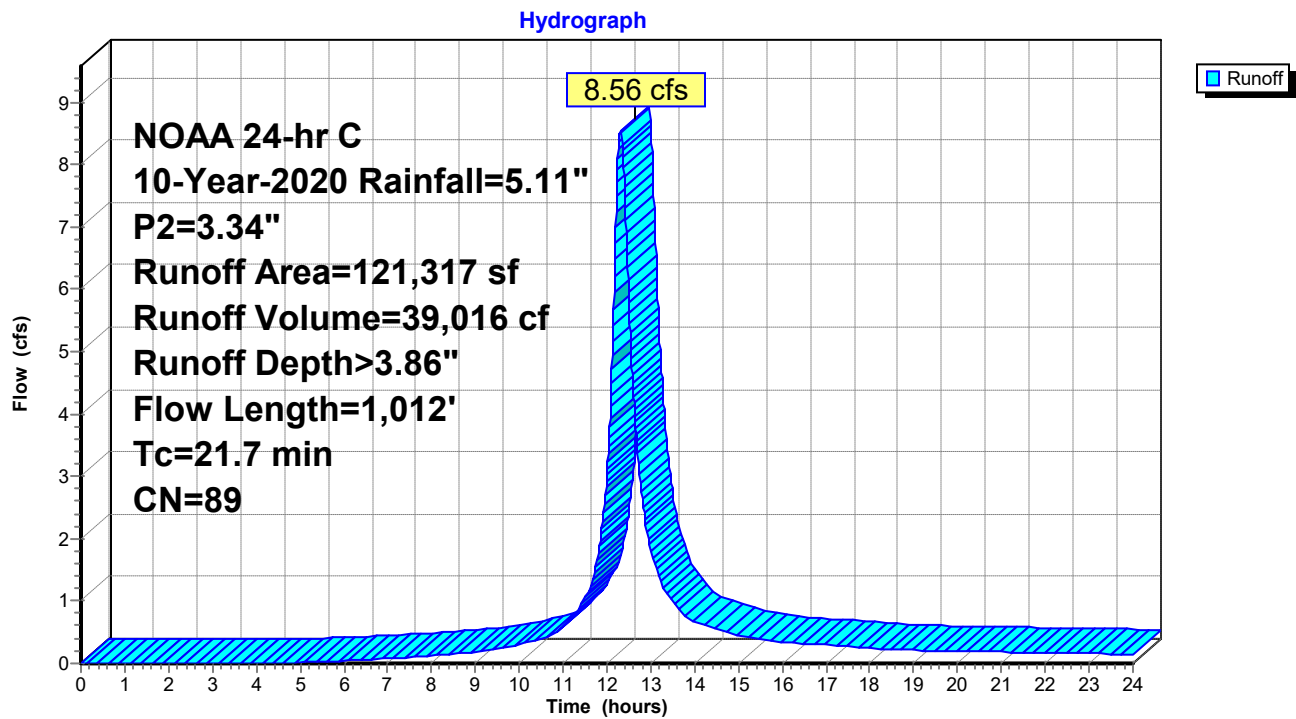
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NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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## Subcatchment 205E: Offsite to E Field Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

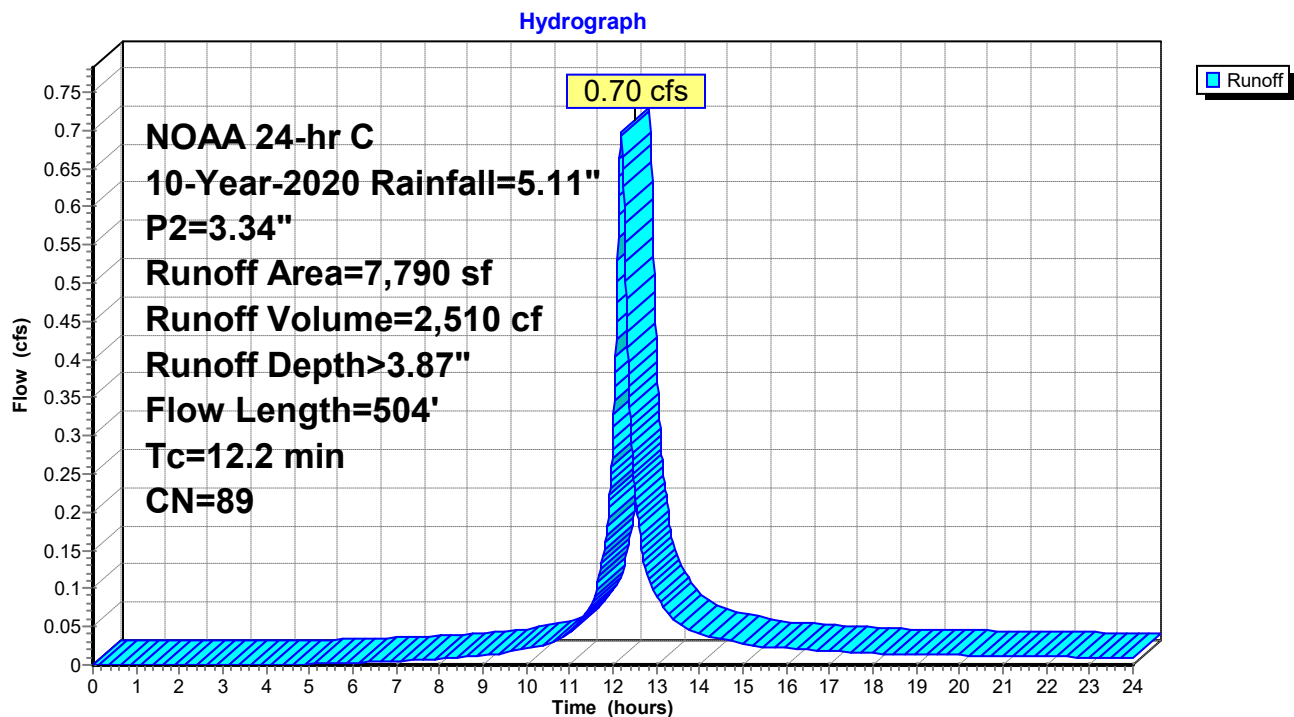
Runoff = 0.70 cfs @ 12.19 hrs, Volume= 2,510 cf, Depth> 3.87"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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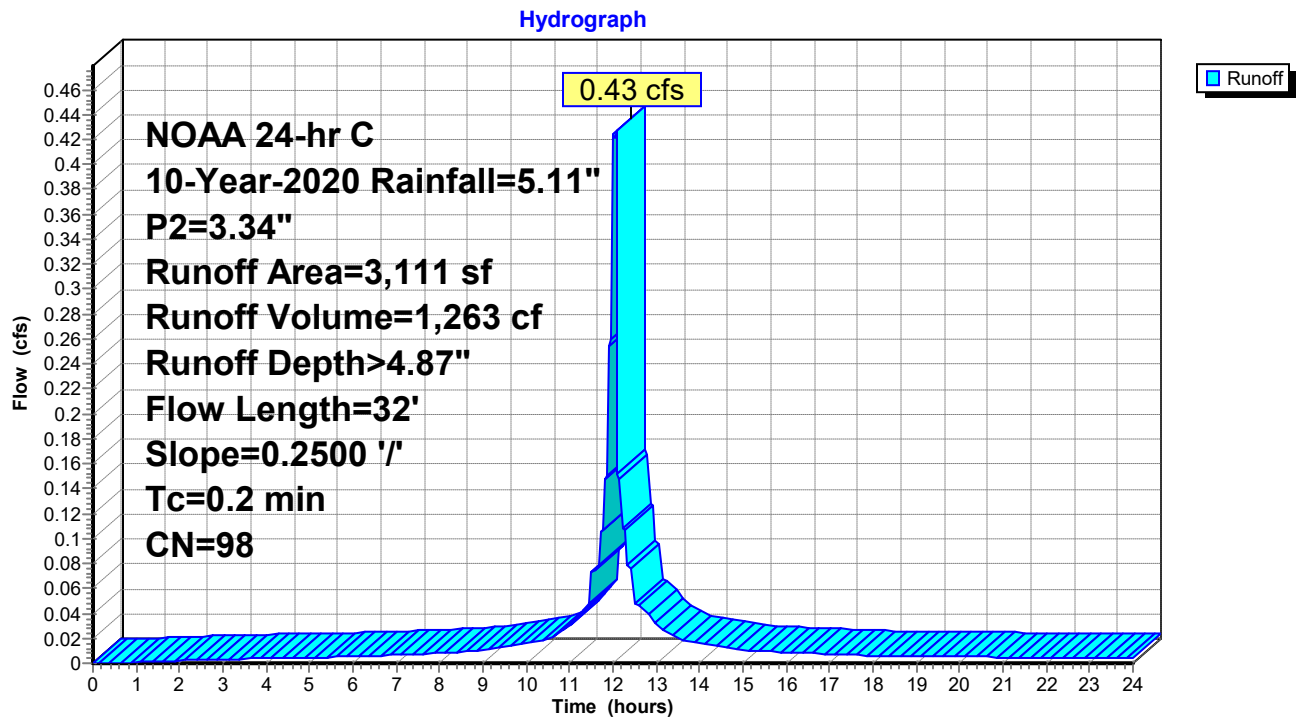
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.43 cfs @ 12.09 hrs, Volume= 1,263 cf, Depth> 4.87"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

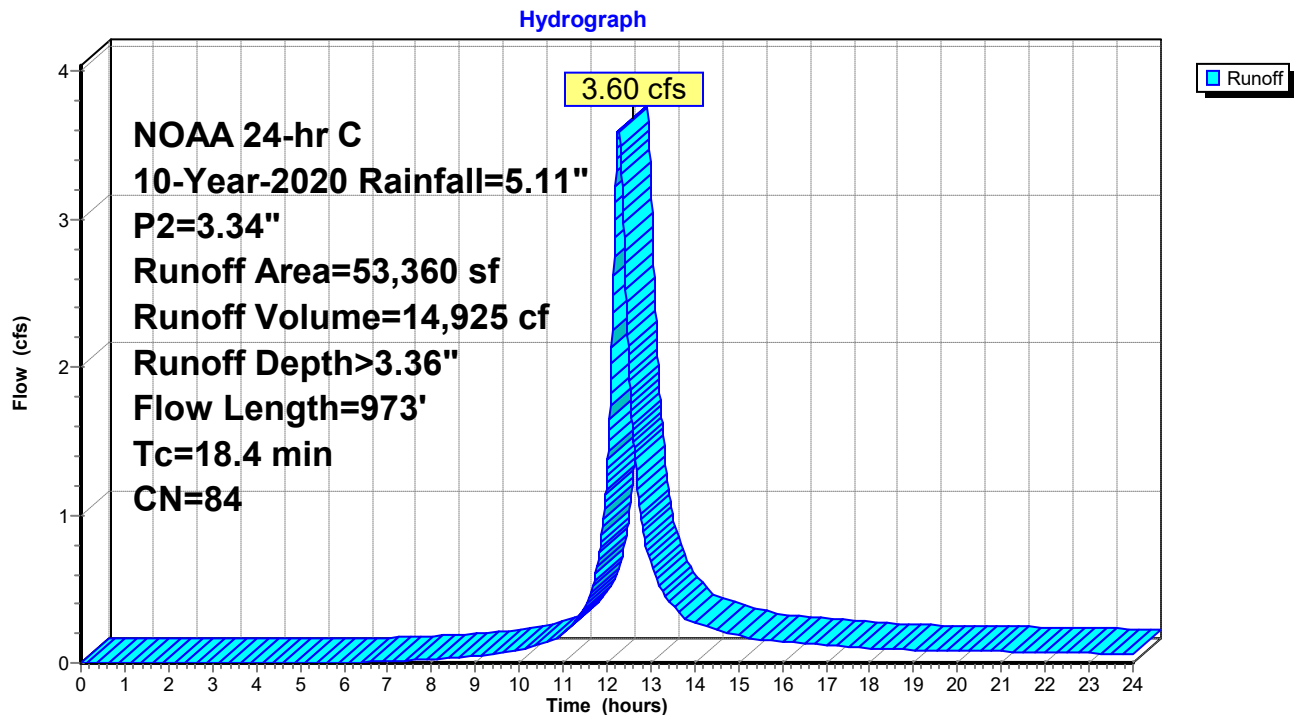
Runoff = 3.60 cfs @ 12.27 hrs, Volume= 14,925 cf, Depth> 3.36"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 18.4     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

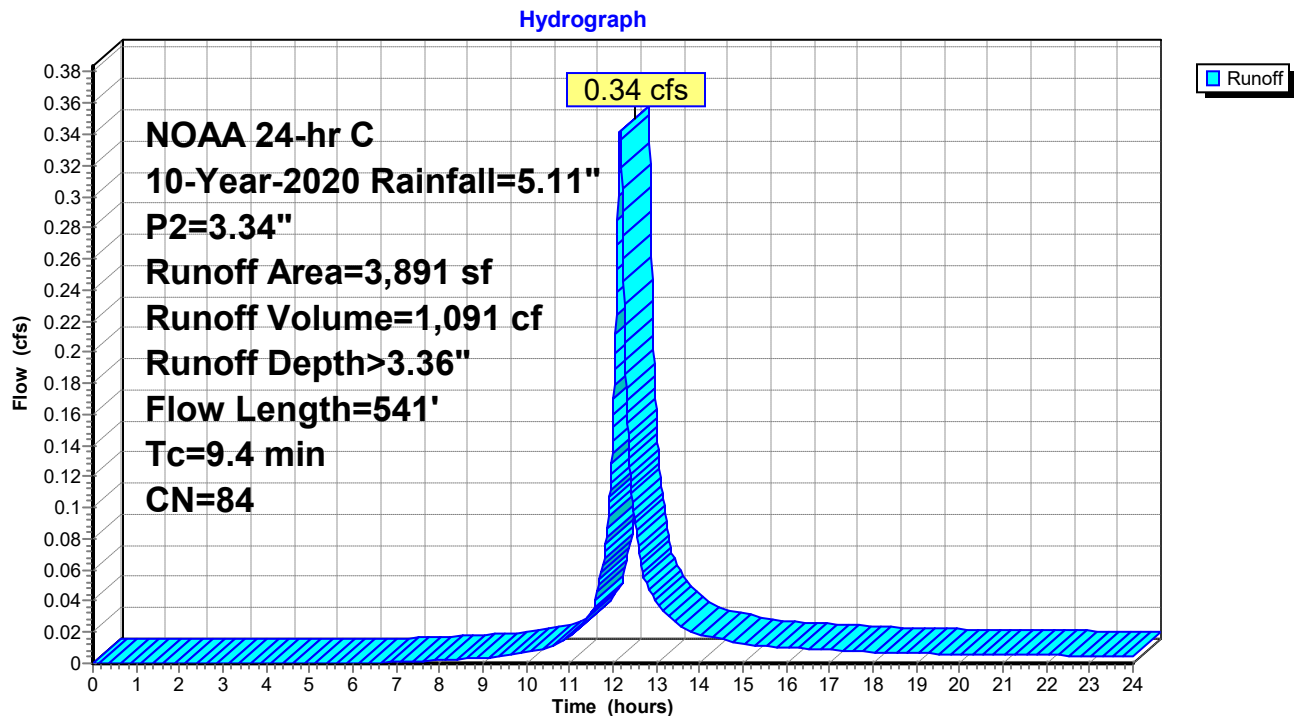
Runoff = 0.34 cfs @ 12.17 hrs, Volume= 1,091 cf, Depth> 3.36"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 9.4      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

Runoff = 2.31 cfs @ 12.21 hrs, Volume= 8,362 cf, Depth> 3.36"  
 Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 13.2     | 574           | Total         |                   |                |                                                                                        |

# EXISTING PEDDIE FOOTBALL

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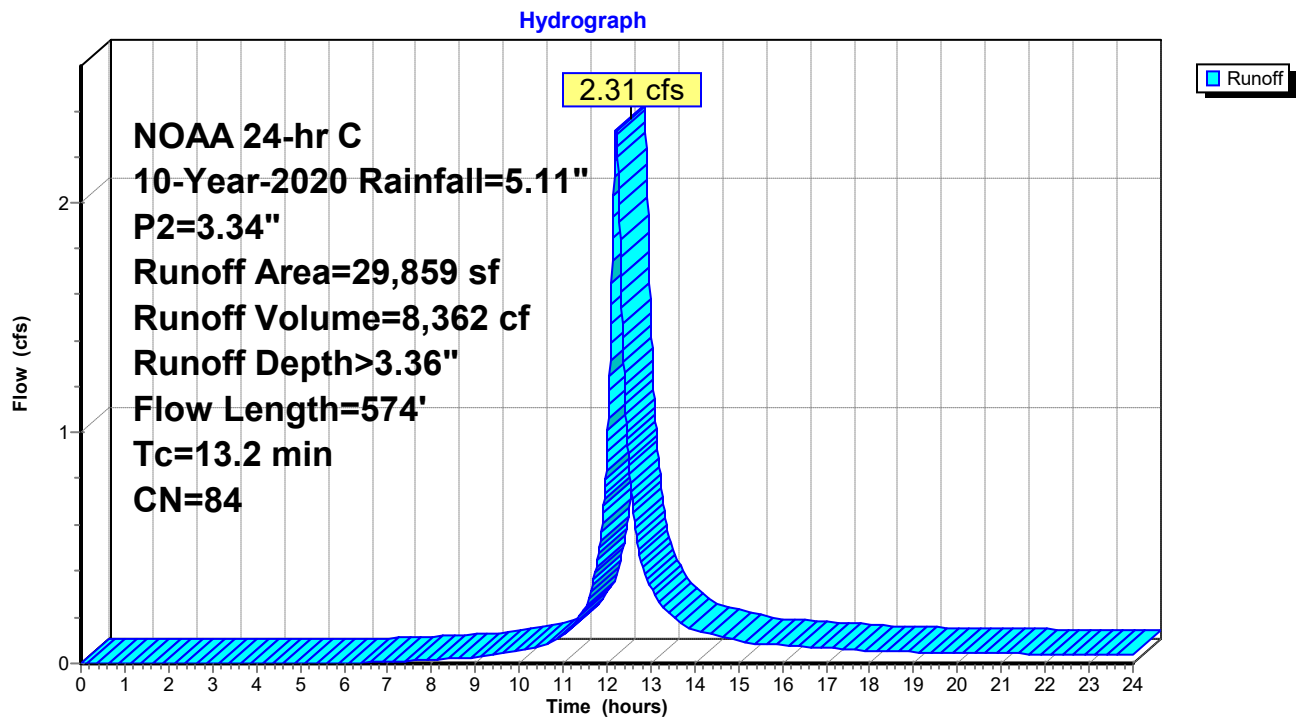
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NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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## Subcatchment 303E: Offsite to W Trench Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

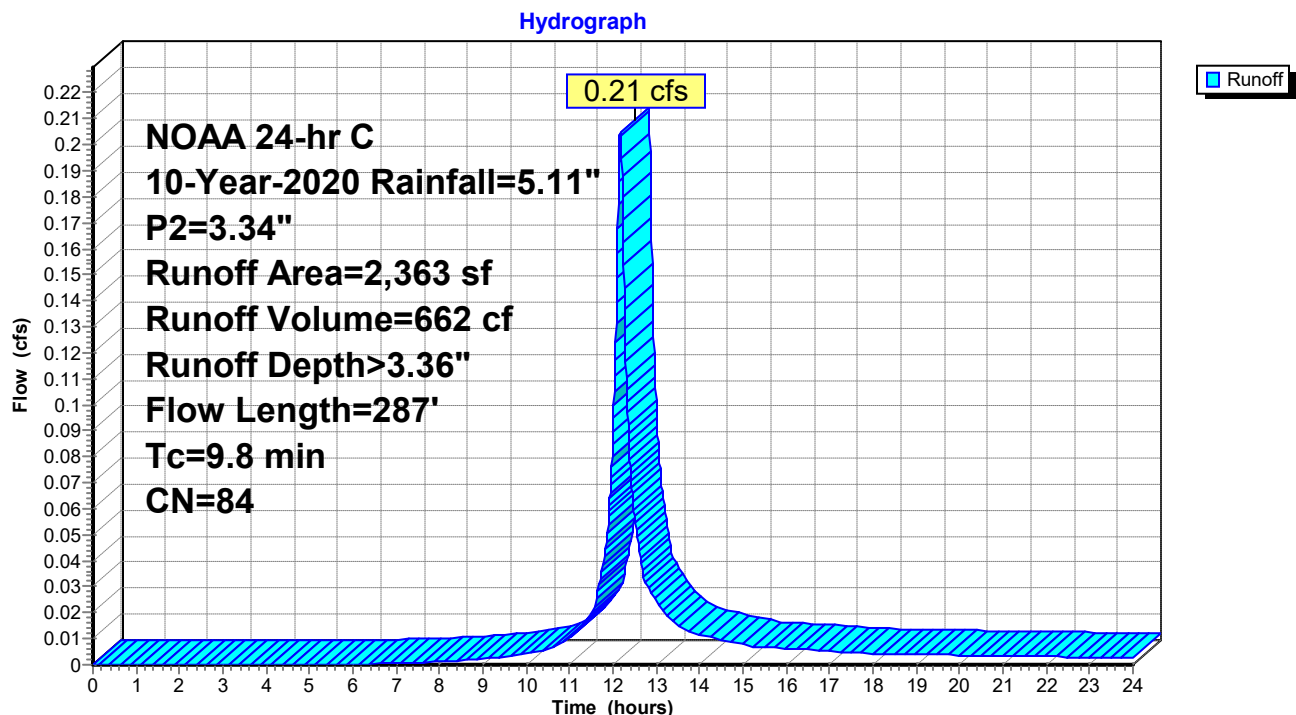
Runoff = 0.21 cfs @ 12.17 hrs, Volume= 662 cf, Depth> 3.36"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.8      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

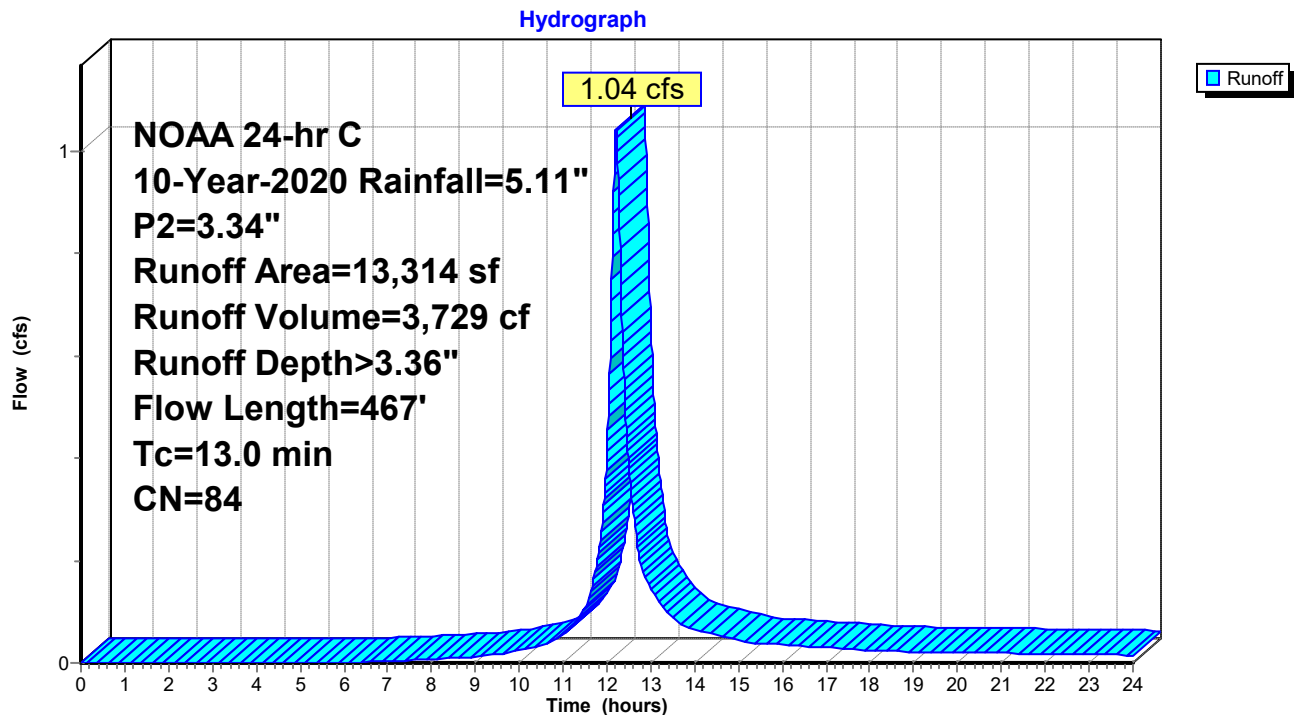
Runoff = 1.04 cfs @ 12.21 hrs, Volume= 3,729 cf, Depth> 3.36"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

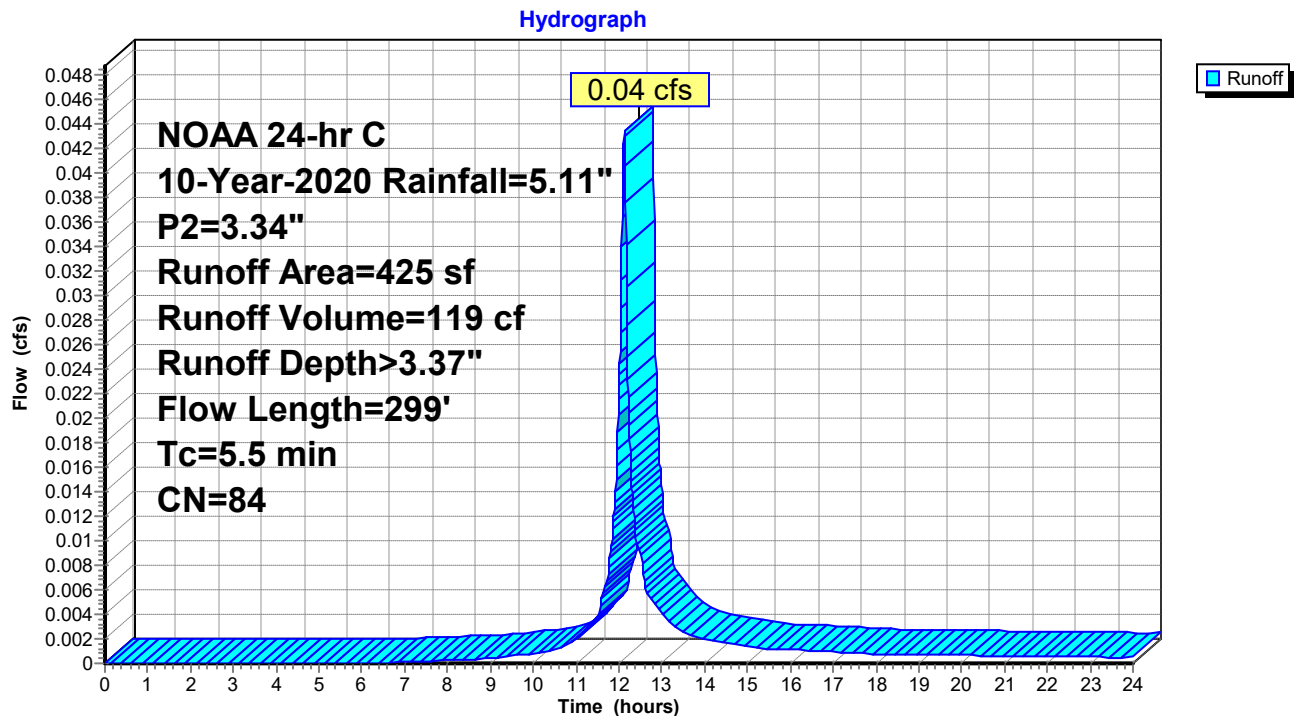
Runoff = 0.04 cfs @ 12.13 hrs, Volume= 119 cf, Depth> 3.37"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.5      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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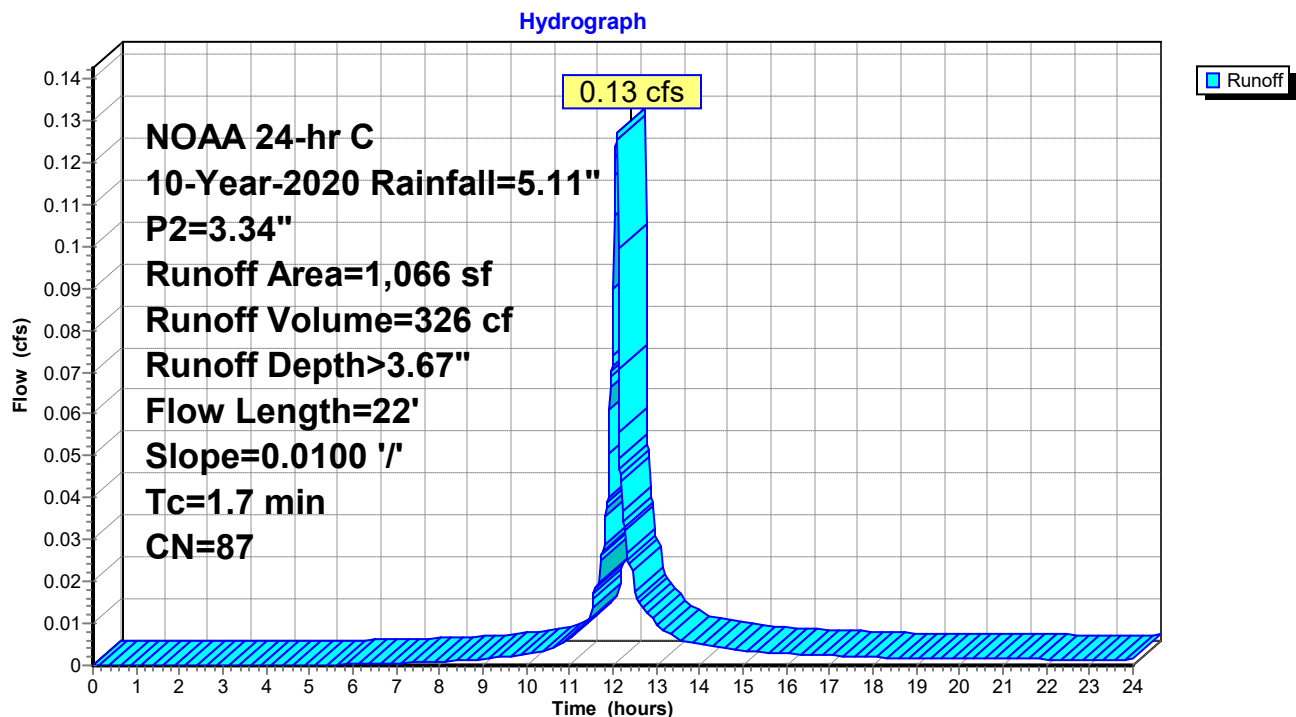
**Summary for Subcatchment 308E: Offsite to Drain 4**

Runoff = 0.13 cfs @ 12.10 hrs, Volume= 326 cf, Depth> 3.67"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.7      | 22            | Total         |                   |                |                                       |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

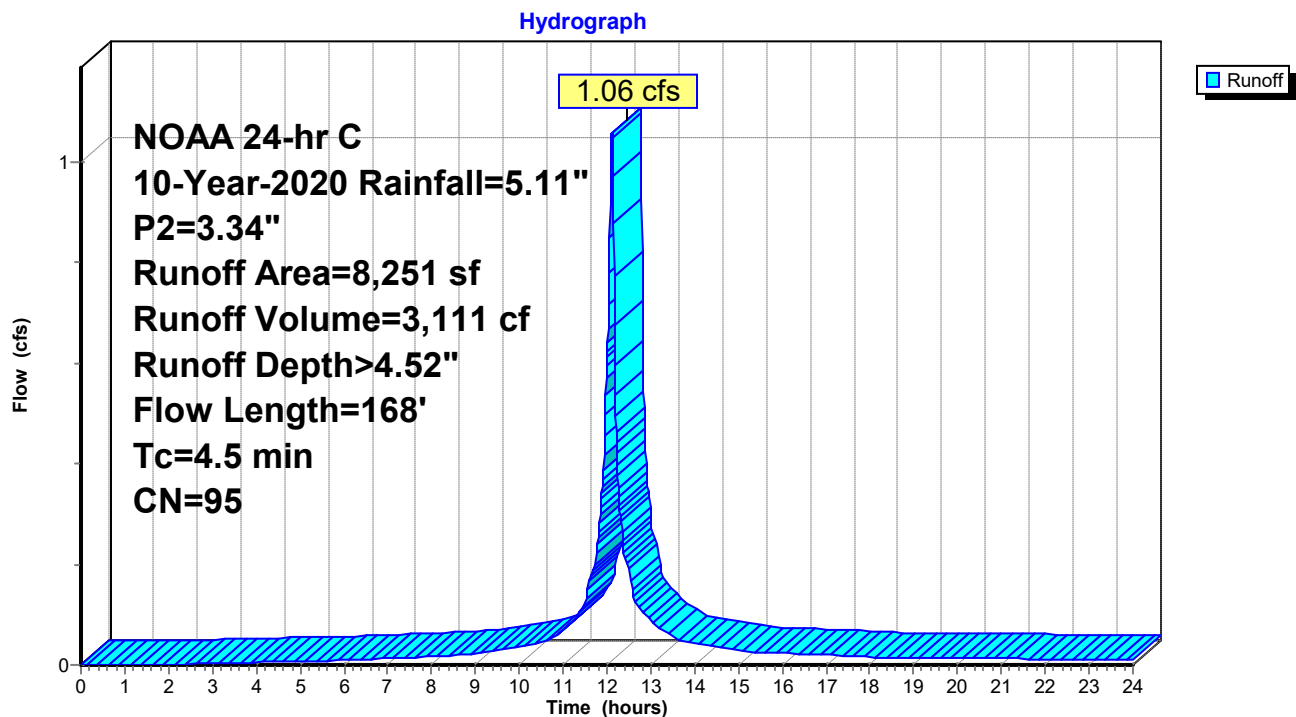
Runoff = 1.06 cfs @ 12.12 hrs, Volume= 3,111 cf, Depth> 4.52"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 310E: Pervious Stadium W**

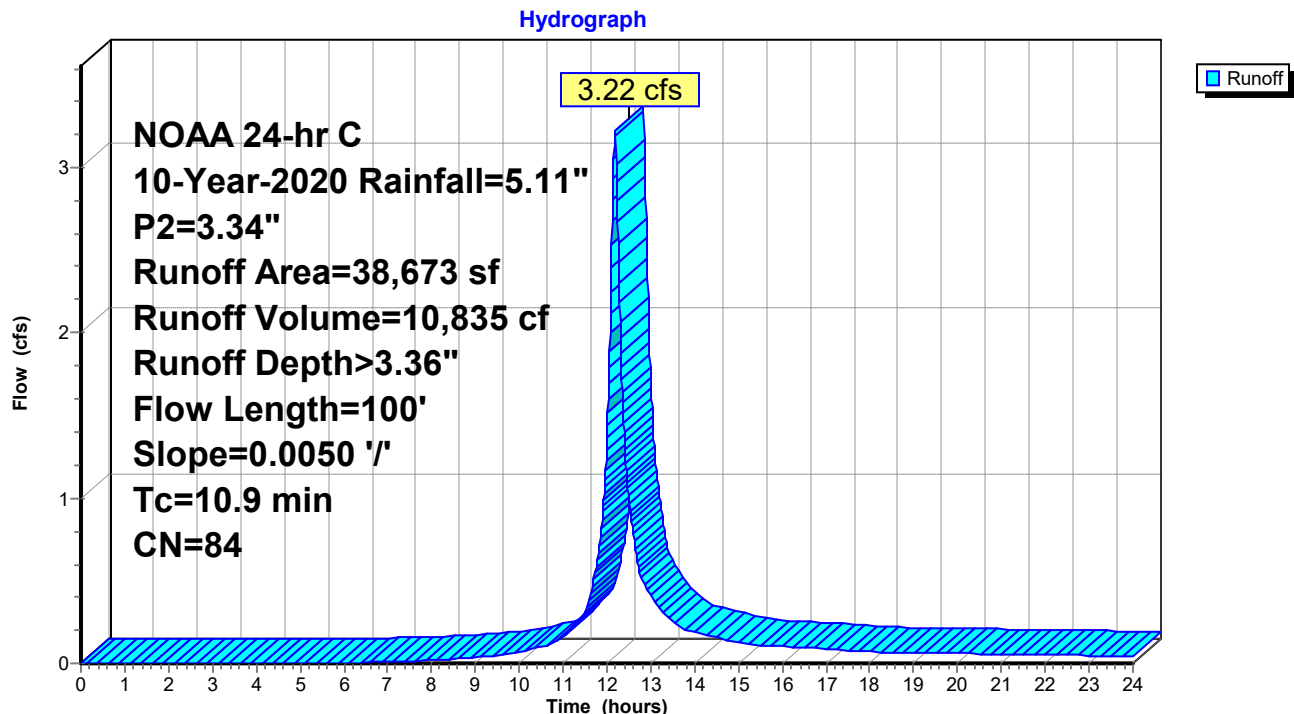
Runoff = 3.22 cfs @ 12.18 hrs, Volume= 10,835 cf, Depth> 3.36"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

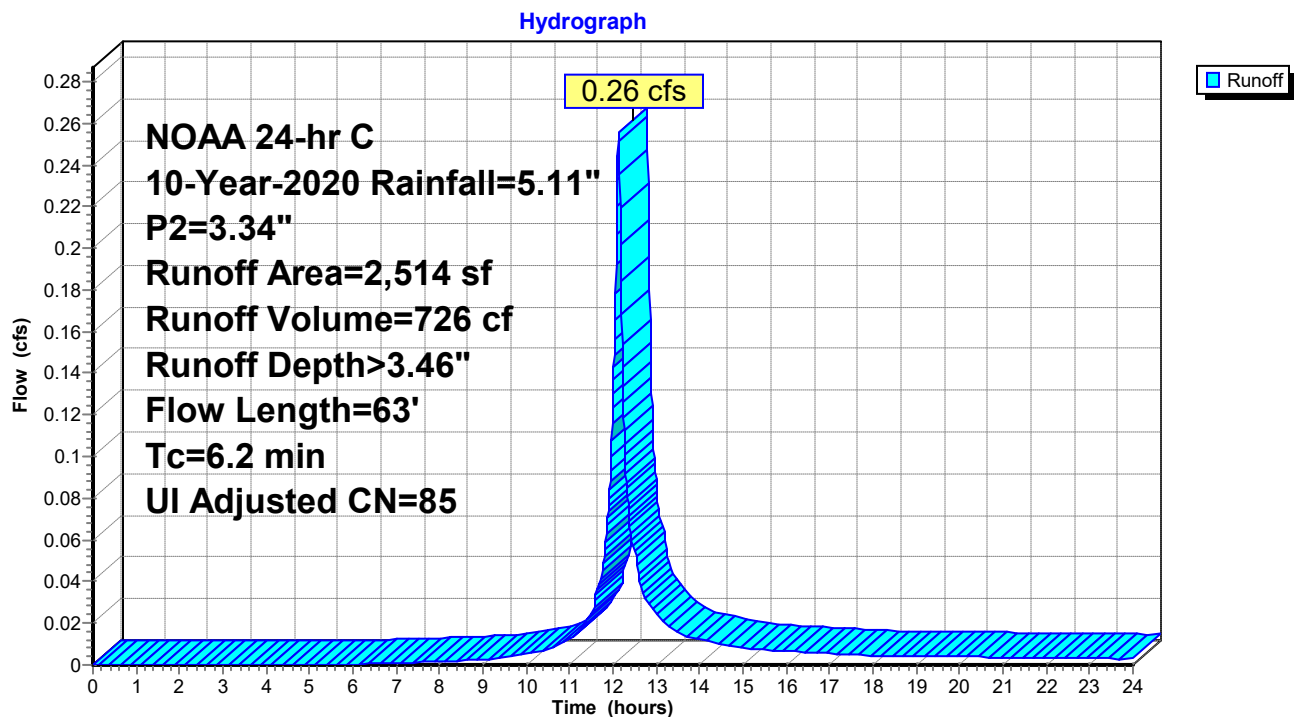
Runoff = 0.26 cfs @ 12.13 hrs, Volume= 726 cf, Depth> 3.46"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 6.0      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 6.2      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

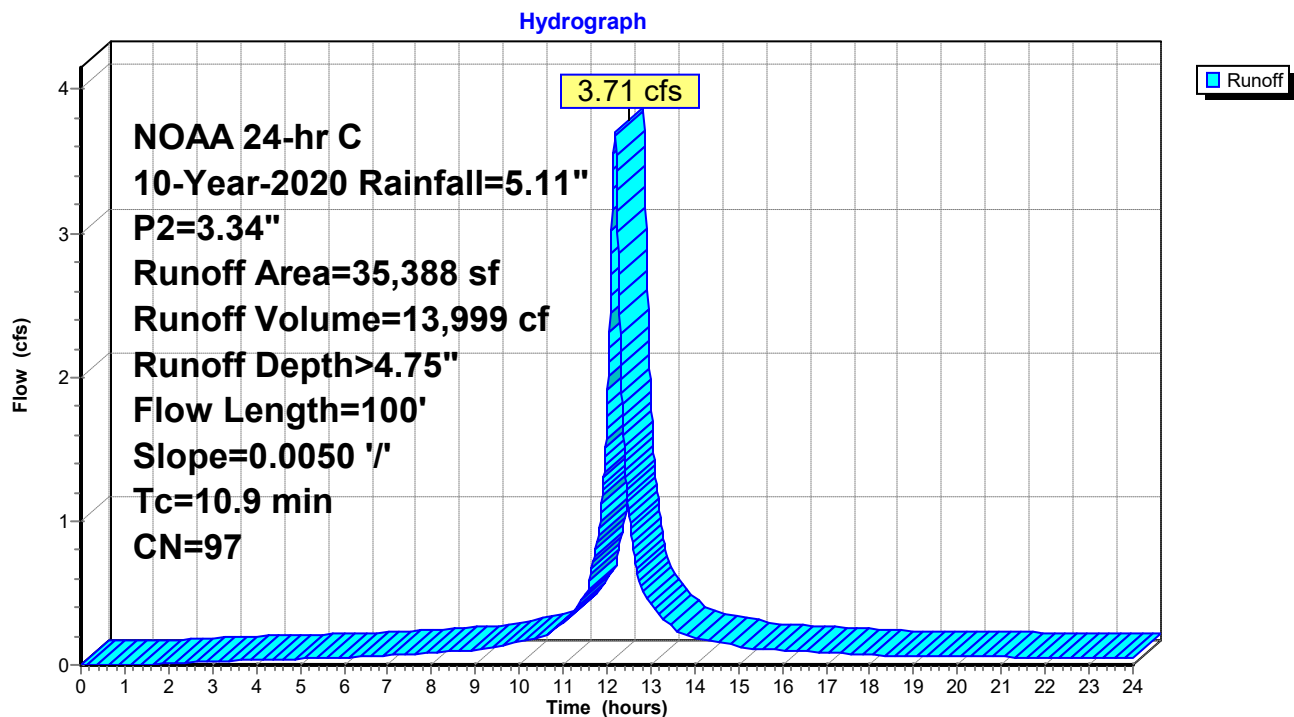
Runoff = 3.71 cfs @ 12.18 hrs, Volume= 13,999 cf, Depth> 4.75"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

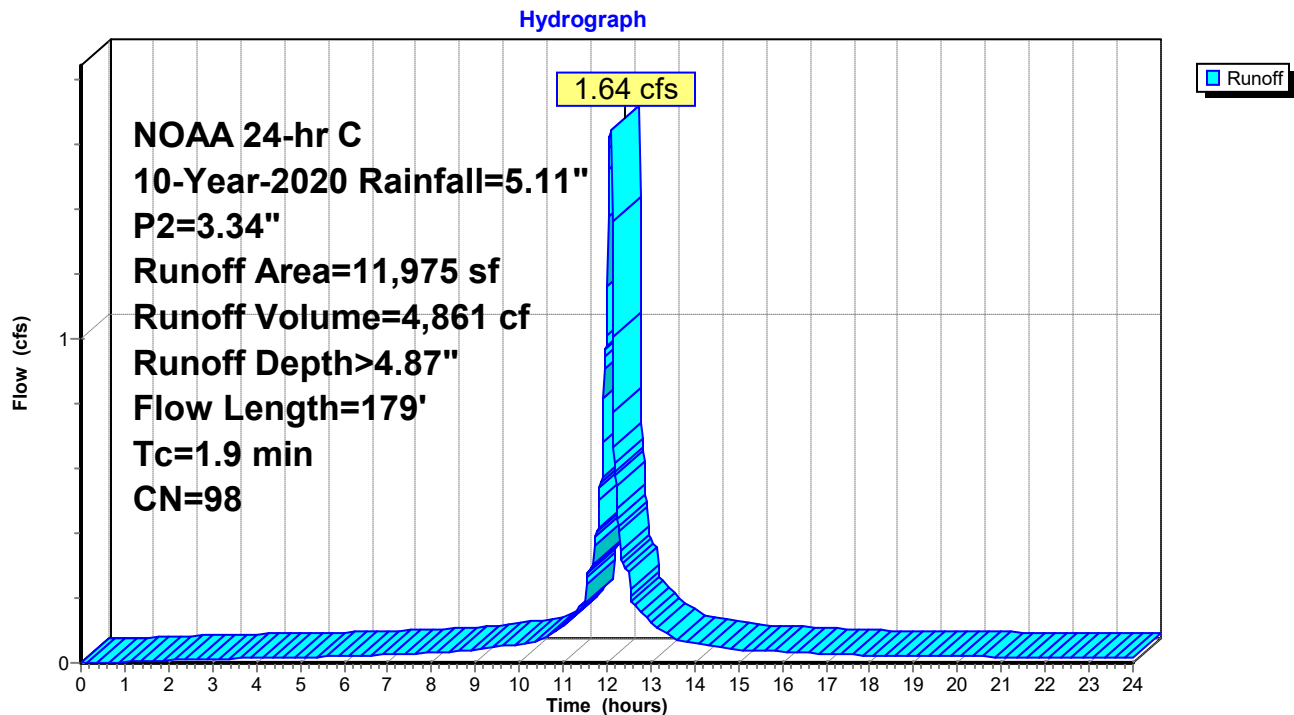
Runoff = 1.64 cfs @ 12.10 hrs, Volume= 4,861 cf, Depth> 4.87"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.63              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

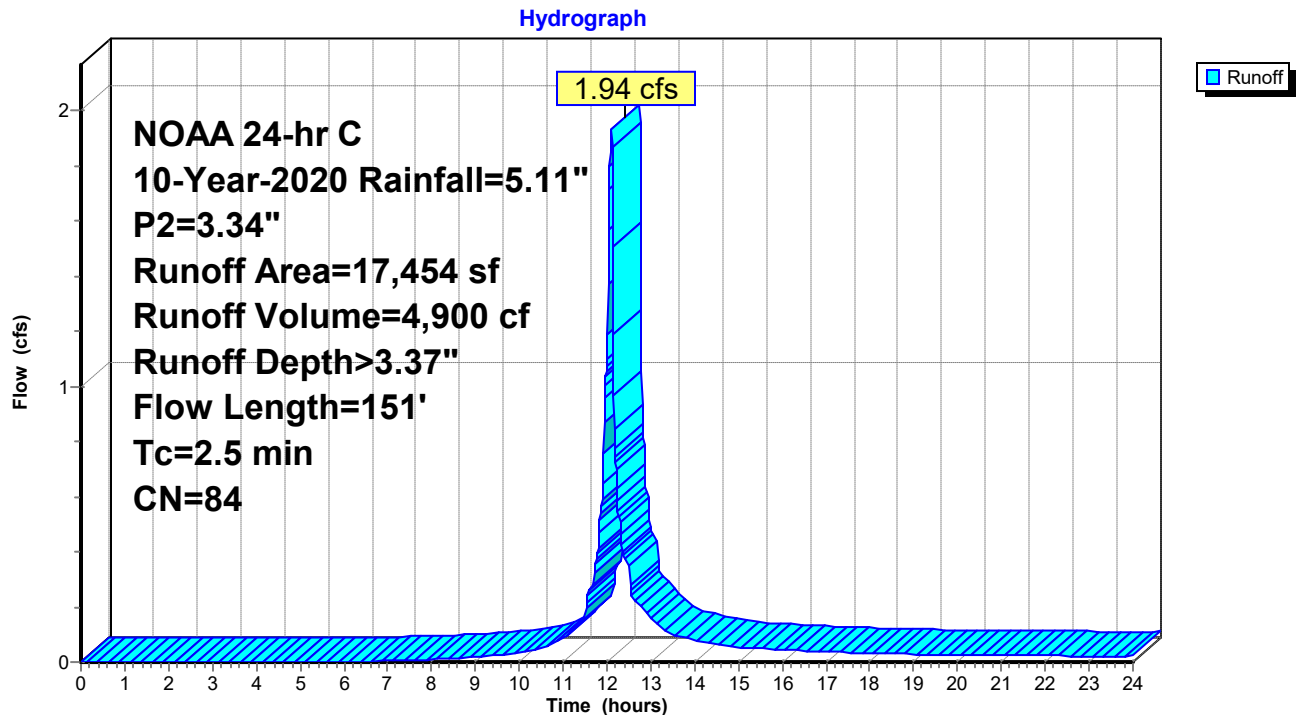
Runoff = 1.94 cfs @ 12.10 hrs, Volume= 4,900 cf, Depth> 3.37"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.5      | 35            | 0.2500        | 0.39              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.5      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.34"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 403E: Tennis Courts**

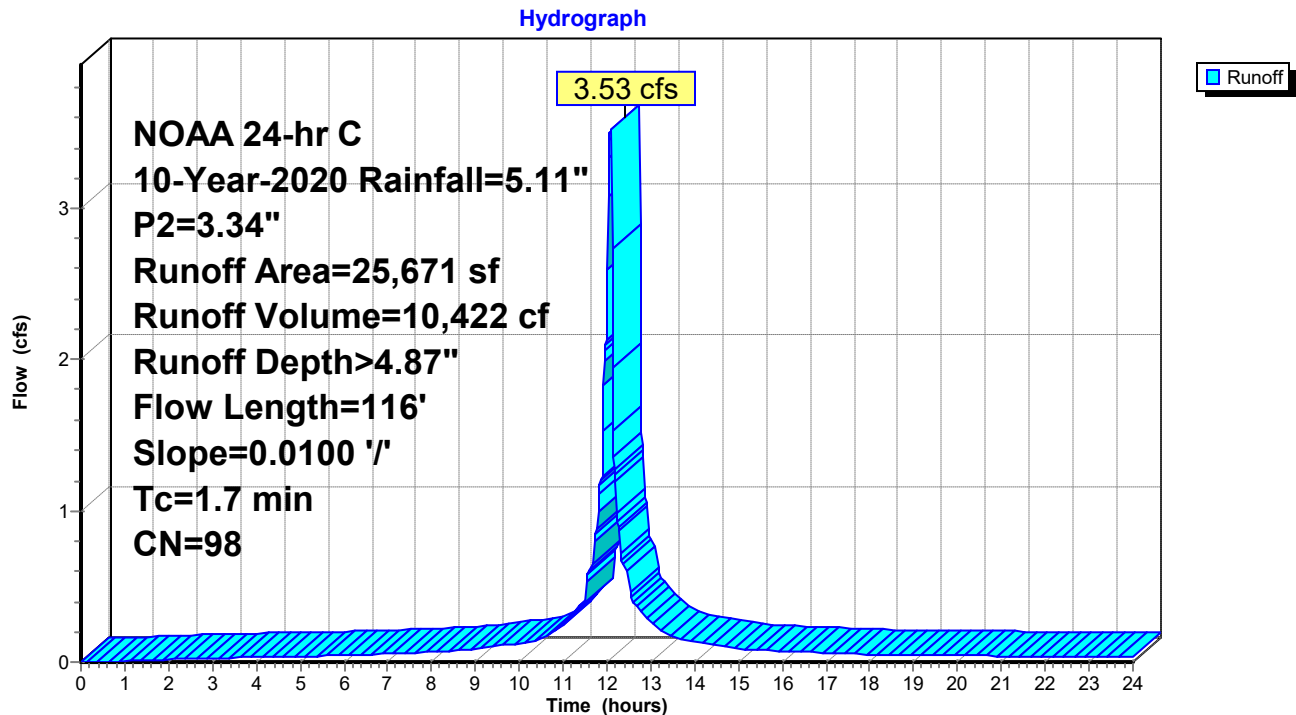
Runoff = 3.53 cfs @ 12.10 hrs, Volume= 10,422 cf, Depth> 4.87"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

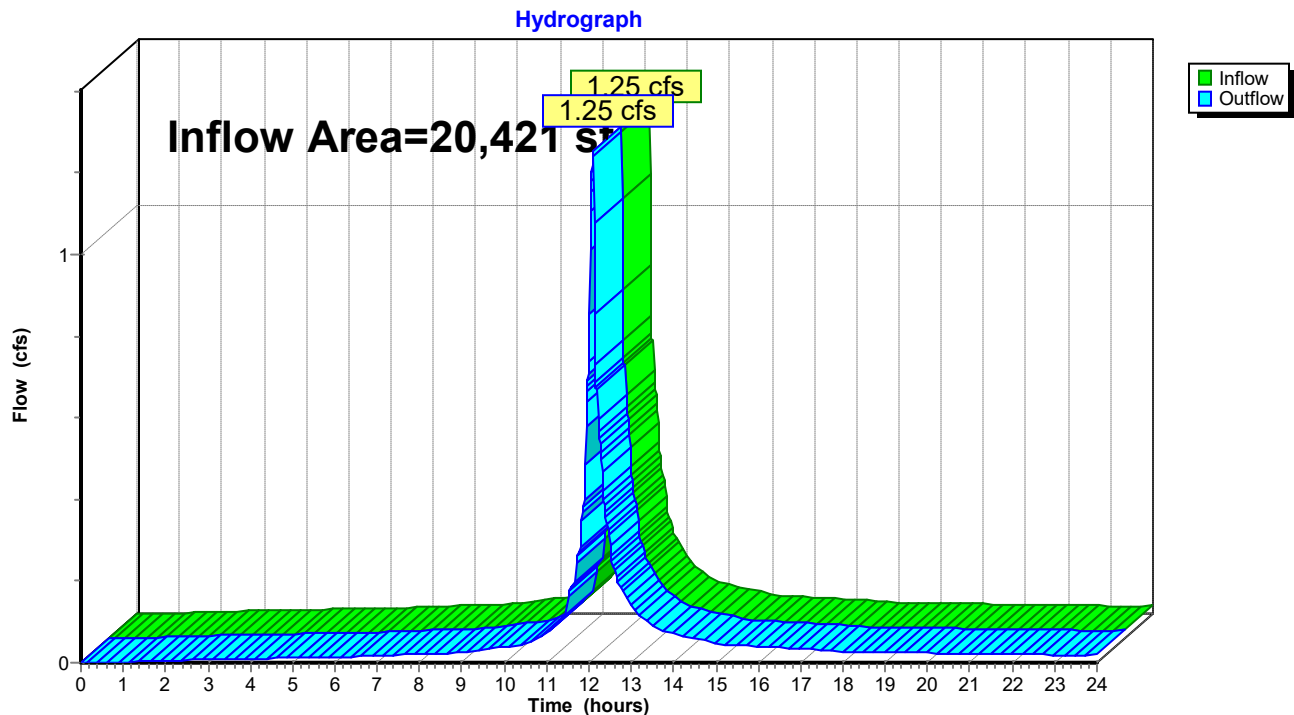
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 2.55" for 10-Year-2020 event  
 Inflow = 1.25 cfs @ 12.10 hrs, Volume= 4,334 cf  
 Outflow = 1.25 cfs @ 12.10 hrs, Volume= 4,334 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

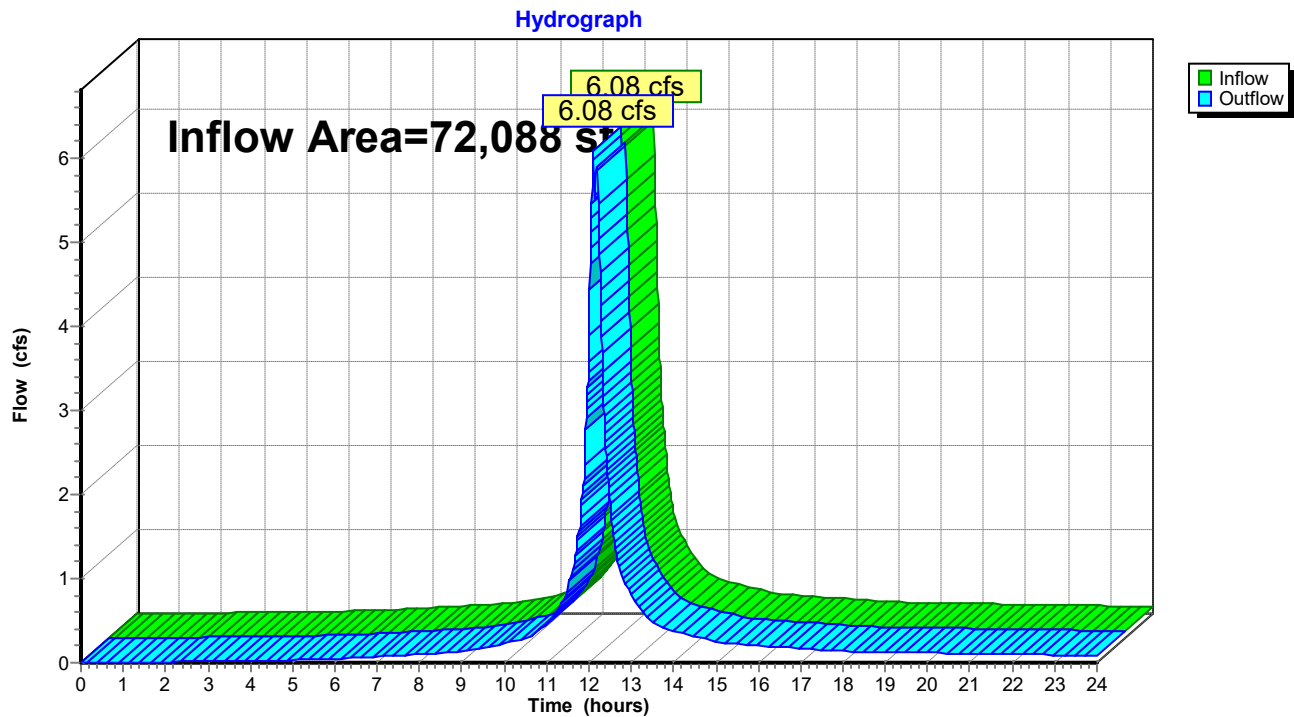


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 4.05" for 10-Year-2020 event  
 Inflow = 6.08 cfs @ 12.10 hrs, Volume= 24,342 cf  
 Outflow = 6.08 cfs @ 12.10 hrs, Volume= 24,342 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST

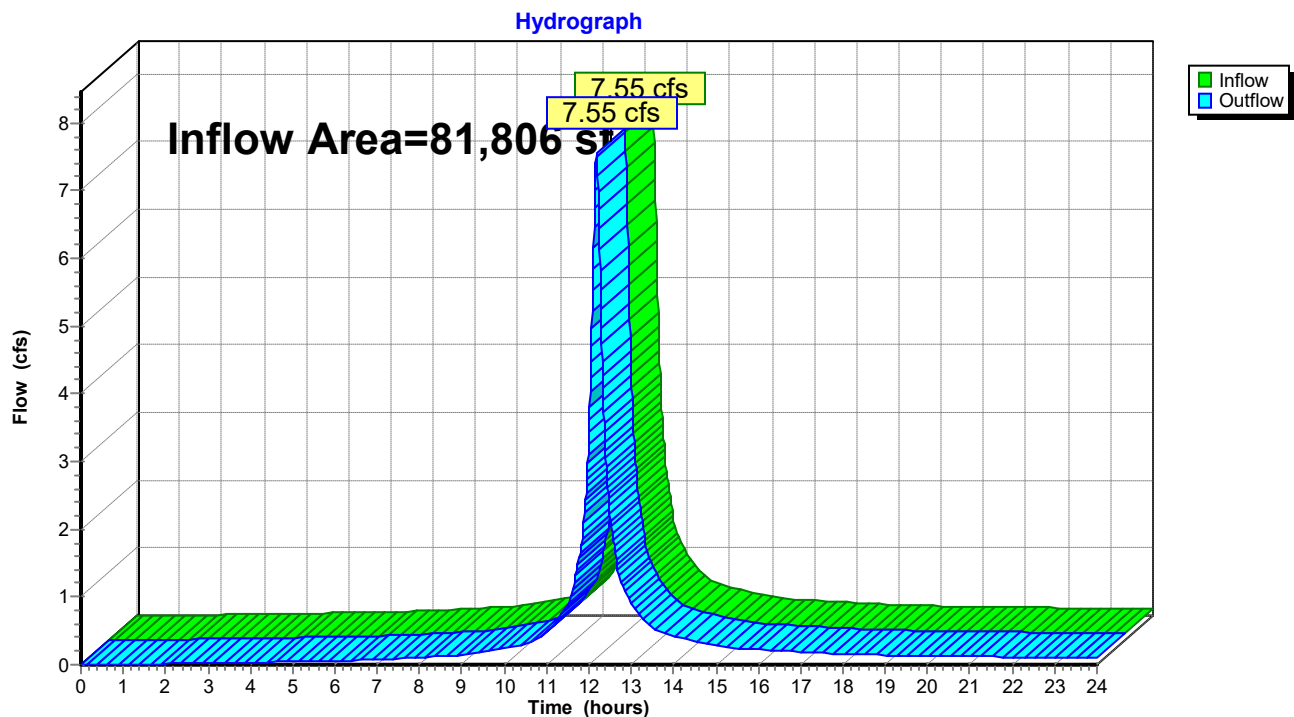


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 3.97" for 10-Year-2020 event  
 Inflow = 7.55 cfs @ 12.18 hrs, Volume= 27,032 cf  
 Outflow = 7.55 cfs @ 12.18 hrs, Volume= 27,032 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

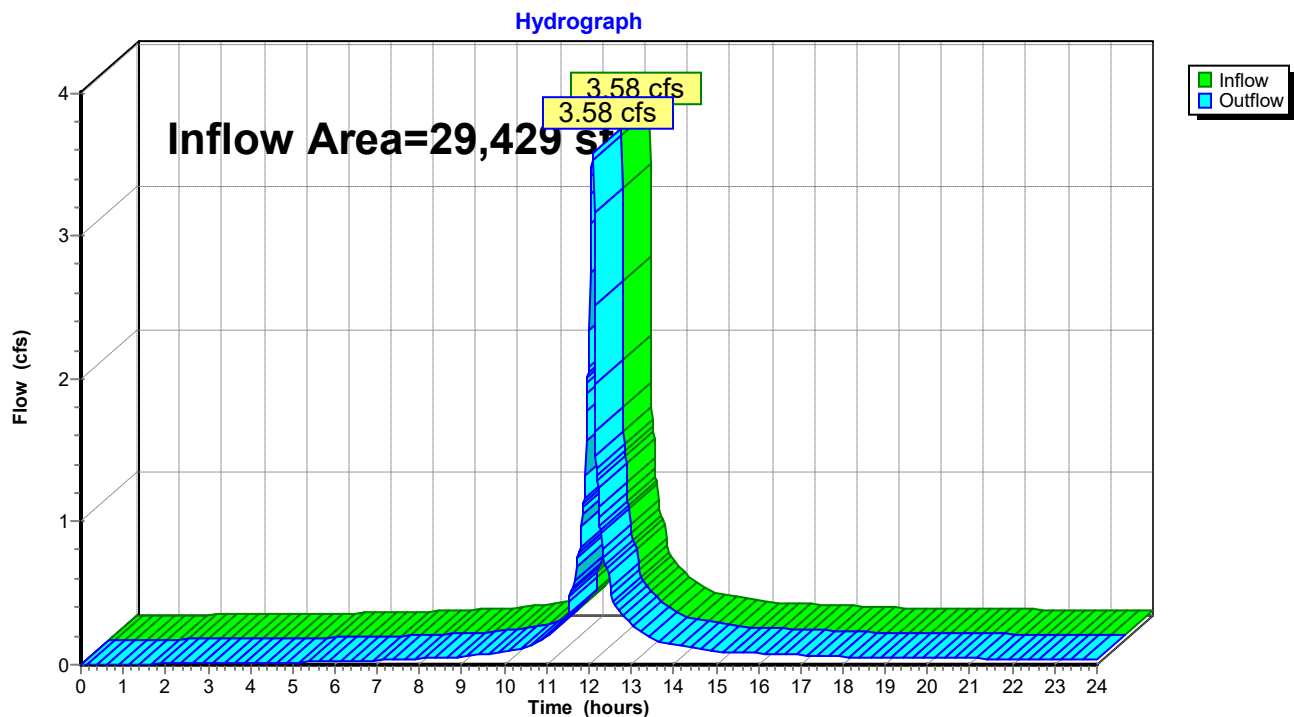


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 3.98" for 10-Year-2020 event  
 Inflow = 3.58 cfs @ 12.10 hrs, Volume= 9,762 cf  
 Outflow = 3.58 cfs @ 12.10 hrs, Volume= 9,762 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

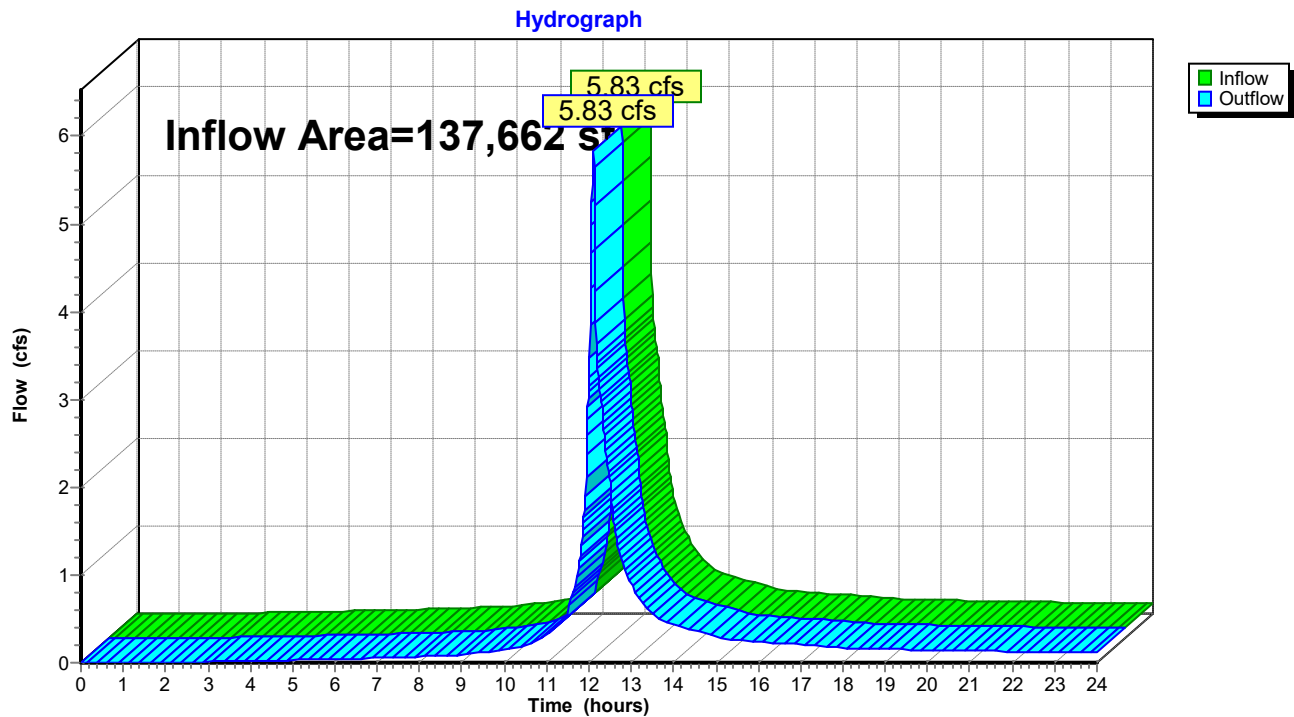


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 1.96" for 10-Year-2020 event  
 Inflow = 5.83 cfs @ 12.11 hrs, Volume= 22,505 cf  
 Outflow = 5.83 cfs @ 12.11 hrs, Volume= 22,505 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100E: EX INLET 1

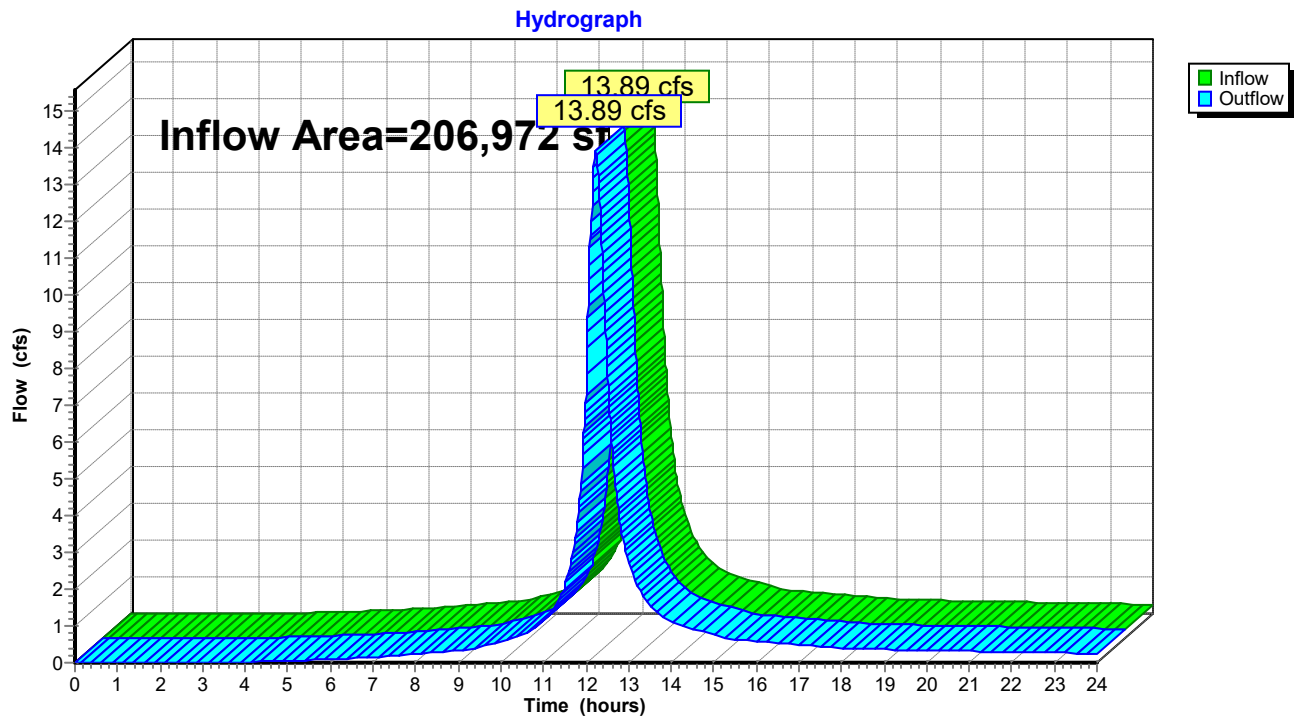


### Summary for Reach 200E: EX MANHOLE 2

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 3.92" for 10-Year-2020 event  
 Inflow = 13.89 cfs @ 12.21 hrs, Volume= 67,552 cf  
 Outflow = 13.89 cfs @ 12.21 hrs, Volume= 67,552 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200E: EX MANHOLE 2



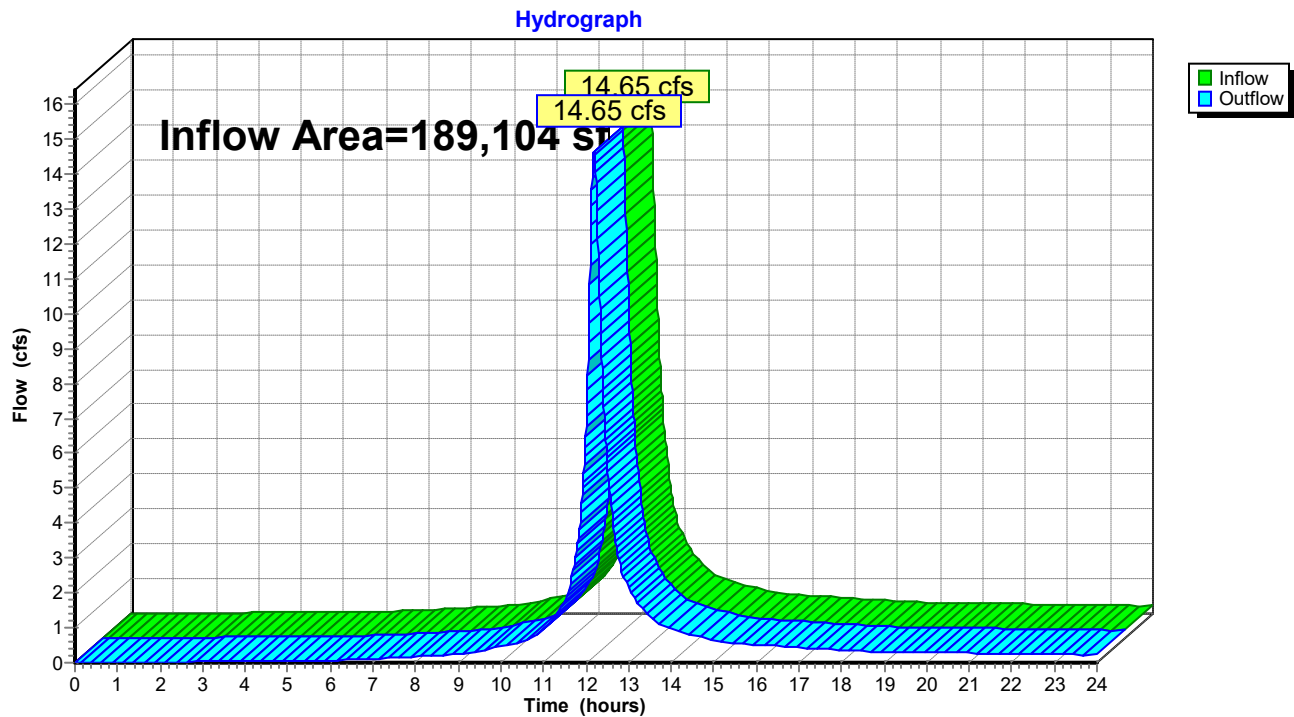


### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 3.67" for 10-Year-2020 event  
 Inflow = 14.65 cfs @ 12.19 hrs, Volume= 57,884 cf  
 Outflow = 14.65 cfs @ 12.19 hrs, Volume= 57,884 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300E: EX INLET 3

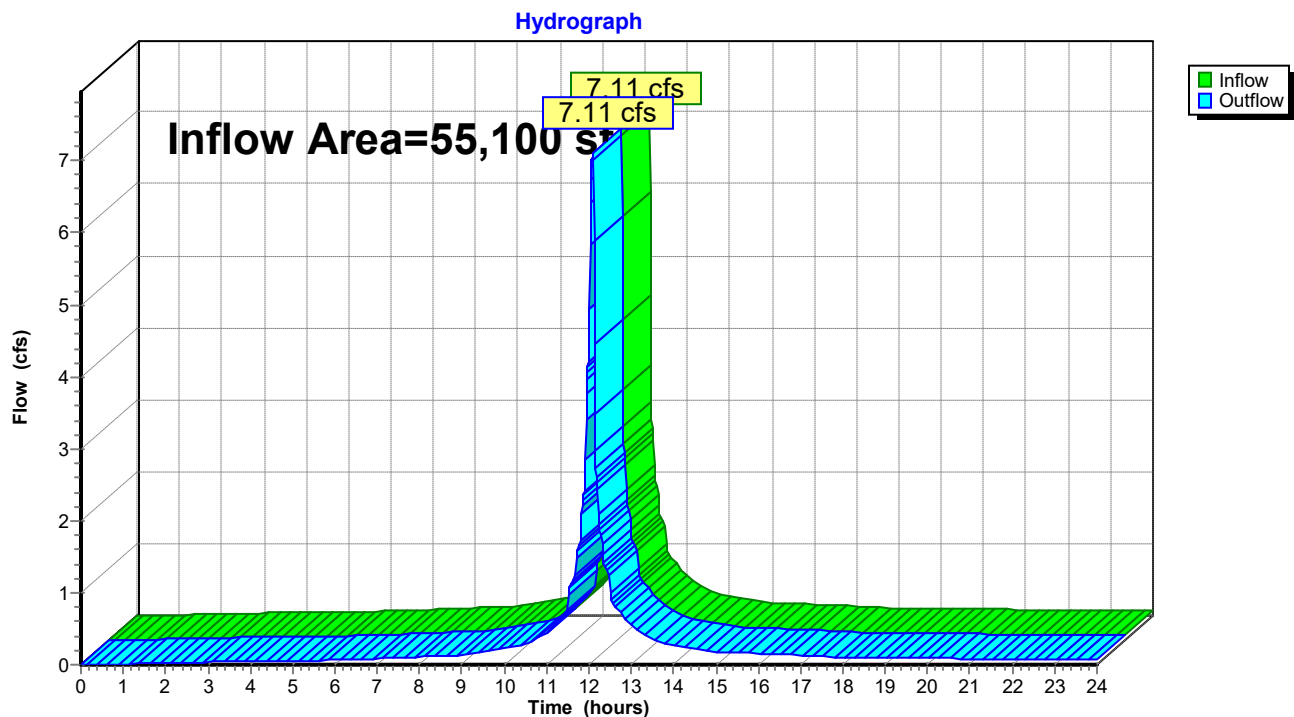


### Summary for Reach 400E: TENNIS COURTS

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 4.40" for 10-Year-2020 event  
 Inflow = 7.11 cfs @ 12.10 hrs, Volume= 20,183 cf  
 Outflow = 7.11 cfs @ 12.10 hrs, Volume= 20,183 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400E: TENNIS COURTS

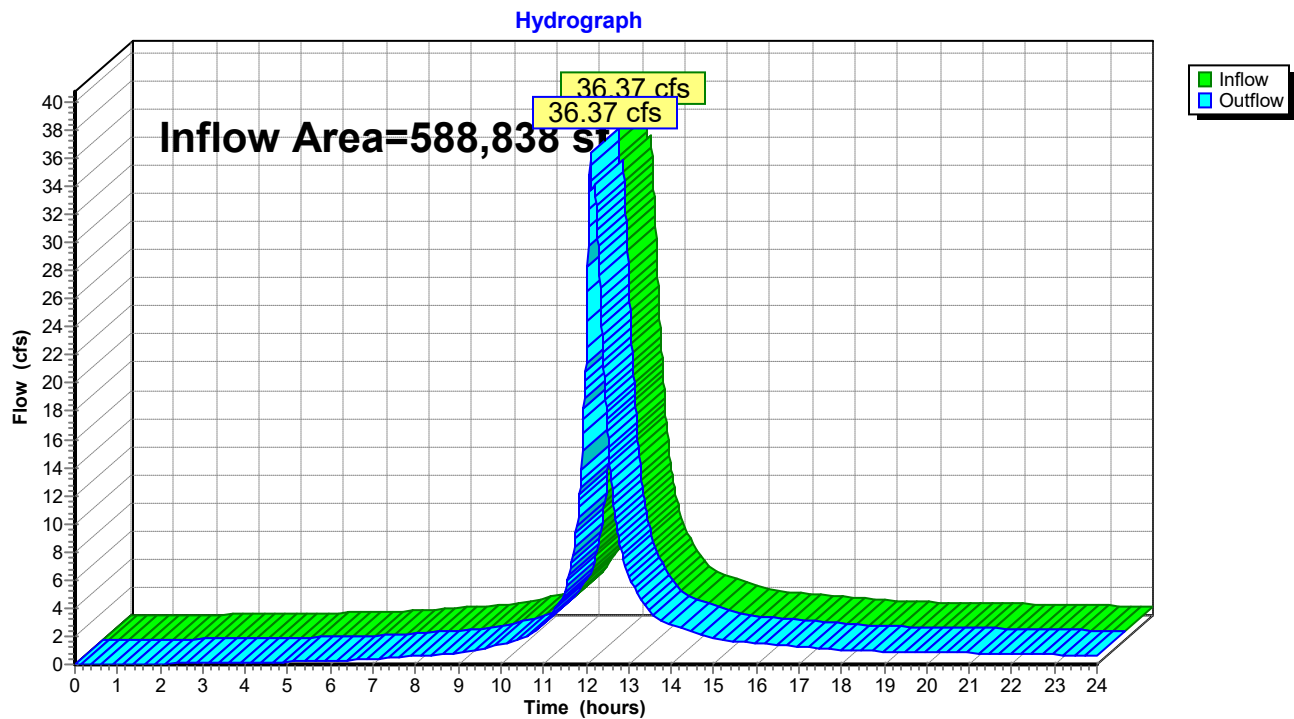


### Summary for Reach 500E: STUDY POINT

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 3.43" for 10-Year-2020 event  
 Inflow = 36.37 cfs @ 12.11 hrs, Volume= 168,125 cf  
 Outflow = 36.37 cfs @ 12.11 hrs, Volume= 168,125 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500E: STUDY POINT



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>3.34"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=4.62 cfs 19,599 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>3.35"  
Flow Length=476' Tc=10.7 min CN=56 Runoff=1.06 cfs 3,508 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>7.81"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=6.57 cfs 18,983 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>2.54"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.37 cfs 962 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>3.12"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=1.26 cfs 3,425 cf

**Subcatchment 106E: Onsite Impervious SE** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>8.42"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=1.83 cfs 5,510 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>6.72"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=1.75 cfs 5,852 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>6.73"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.46 cfs 1,219 cf

**Subcatchment 203E: Impervious Stadium** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>8.42"  
Flow Length=40' Slope=0.0050 '/' Tc=1.0 min CN=98 Runoff=3.34 cfs 10,035 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>7.32"  
Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=89 Runoff=8.14 cfs 29,165 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>7.30"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=15.66 cfs 73,840 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>7.32"  
Flow Length=504' Tc=12.2 min CN=89 Runoff=1.27 cfs 4,750 cf

**Subcatchment 207E: Offsite Impervious to** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>8.42"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.73 cfs 2,183 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>6.70"  
Flow Length=973' Tc=18.4 min CN=84 Runoff=6.99 cfs 29,812 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>6.72"  
Flow Length=541' Tc=9.4 min CN=84 Runoff=0.66 cfs 2,178 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>6.71"  
Flow Length=574' Tc=13.2 min CN=84 Runoff=4.48 cfs 16,699 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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|                                                     |                                                                                                |                                                             |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Subcatchment 304E: Onsite to W Trench</b>        | Runoff Area=2,363 sf 2.75% Impervious<br>Flow Length=287' Tc=9.8 min CN=84                     | Runoff Depth>6.72"<br>Runoff=0.40 cfs 1,322 cf              |
| <b>Subcatchment 305E: Offsite to W Field</b>        | Runoff Area=13,314 sf 0.00% Impervious<br>Flow Length=467' Tc=13.0 min CN=84                   | Runoff Depth>6.71"<br>Runoff=2.01 cfs 7,447 cf              |
| <b>Subcatchment 306E: Onsite to W Field Drain 2</b> | Runoff Area=425 sf 0.00% Impervious<br>Flow Length=299' Tc=5.5 min CN=84                       | Runoff Depth>6.72"<br>Runoff=0.08 cfs 238 cf                |
| <b>Subcatchment 308E: Offsite to Drain 4</b>        | Runoff Area=1,066 sf 20.92% Impervious<br>Flow Length=22' Slope=0.0100 '/' Tc=1.7 min CN=87    | Runoff Depth>7.09"<br>Runoff=0.23 cfs 630 cf                |
| <b>Subcatchment 309E: Offsite Building to</b>       | Runoff Area=8,251 sf 81.26% Impervious<br>Flow Length=168' Tc=4.5 min CN=95                    | Runoff Depth>8.05"<br>Runoff=1.83 cfs 5,536 cf              |
| <b>Subcatchment 310E: Pervious Stadium W</b>        | Runoff Area=38,673 sf 0.00% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=84  | Runoff Depth>6.71"<br>Runoff=6.23 cfs 21,639 cf             |
| <b>Subcatchment 311E: Offsite to W Trench</b>       | Runoff Area=2,514 sf 20.92% Impervious<br>Flow Length=63' Tc=6.2 min UI Adjusted CN=85         | Runoff Depth>6.84"<br>Runoff=0.49 cfs 1,433 cf              |
| <b>Subcatchment 312E: Impervious Stadium</b>        | Runoff Area=35,388 sf 92.50% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=97 | Runoff Depth>8.28"<br>Runoff=6.33 cfs 24,426 cf             |
| <b>Subcatchment 401E: Onsite Impervious</b>         | Runoff Area=11,975 sf 100.00% Impervious<br>Flow Length=179' Tc=1.9 min CN=98                  | Runoff Depth>8.42"<br>Runoff=2.80 cfs 8,400 cf              |
| <b>Subcatchment 402E: Onsite Pervious to SP4</b>    | Runoff Area=17,454 sf 0.00% Impervious<br>Flow Length=151' Tc=2.5 min CN=84                    | Runoff Depth>6.73"<br>Runoff=3.69 cfs 9,784 cf              |
| <b>Subcatchment 403E: Tennis Courts</b>             | Runoff Area=25,671 sf 100.00% Impervious<br>Flow Length=116' Slope=0.0100 '/' Tc=1.7 min CN=98 | Runoff Depth>8.42"<br>Runoff=6.00 cfs 18,007 cf             |
| <b>Reach 1E: ONSITE UNRETAINED</b>                  |                                                                                                | Inflow=2.56 cfs 9,018 cf<br>Outflow=2.56 cfs 9,018 cf       |
| <b>Reach 2E: ONSITE EAST</b>                        |                                                                                                | Inflow=10.97 cfs 45,169 cf<br>Outflow=10.97 cfs 45,169 cf   |
| <b>Reach 3E: ONSITE WEST</b>                        |                                                                                                | Inflow=13.74 cfs 50,434 cf<br>Outflow=13.74 cfs 50,434 cf   |
| <b>Reach 4E: ONSITE TENNIS COURTS</b>               |                                                                                                | Inflow=6.49 cfs 18,184 cf<br>Outflow=6.49 cfs 18,184 cf     |
| <b>Reach 100E: EX INLET 1</b>                       |                                                                                                | Inflow=12.99 cfs 51,987 cf<br>Outflow=12.99 cfs 51,987 cf   |
| <b>Reach 200E: EX MANHOLE 2</b>                     |                                                                                                | Inflow=25.48 cfs 127,043 cf<br>Outflow=25.48 cfs 127,043 cf |

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Reach 300E: EX INLET 3**Inflow=27.49 cfs 111,361 cf  
Outflow=27.49 cfs 111,361 cf**Reach 400E: TENNIS COURTS**Inflow=12.48 cfs 36,191 cf  
Outflow=12.48 cfs 36,191 cf**Reach 500E: STUDY POINT**Inflow=69.26 cfs 326,583 cf  
Outflow=69.26 cfs 326,583 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 4.62 cfs @ 12.29 hrs, Volume= 19,599 cf, Depth> 3.34"  
 Routed to Reach 100E : EX INLET 1

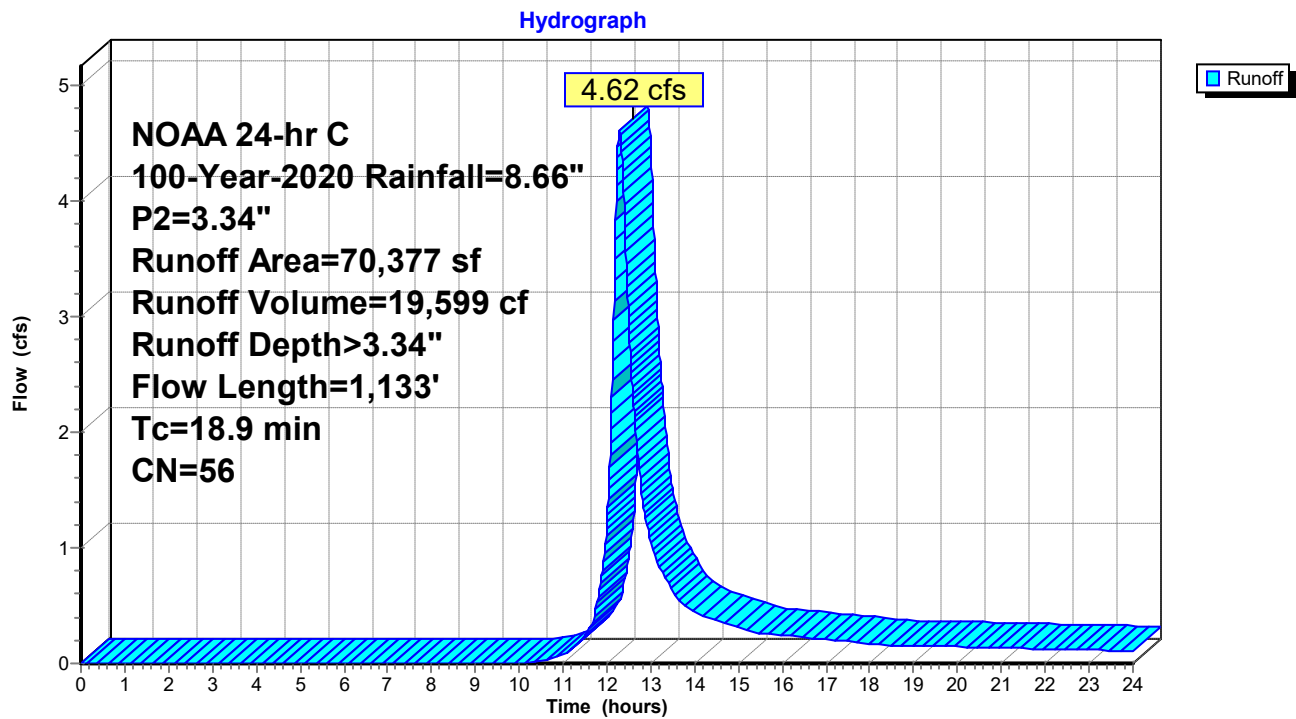
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

**Subcatchment 101E: Offsite Pervious SE**





**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 1.06 cfs @ 12.19 hrs, Volume= 3,508 cf, Depth> 3.35"  
 Routed to Reach 1E : ONSITE UNRETAINED

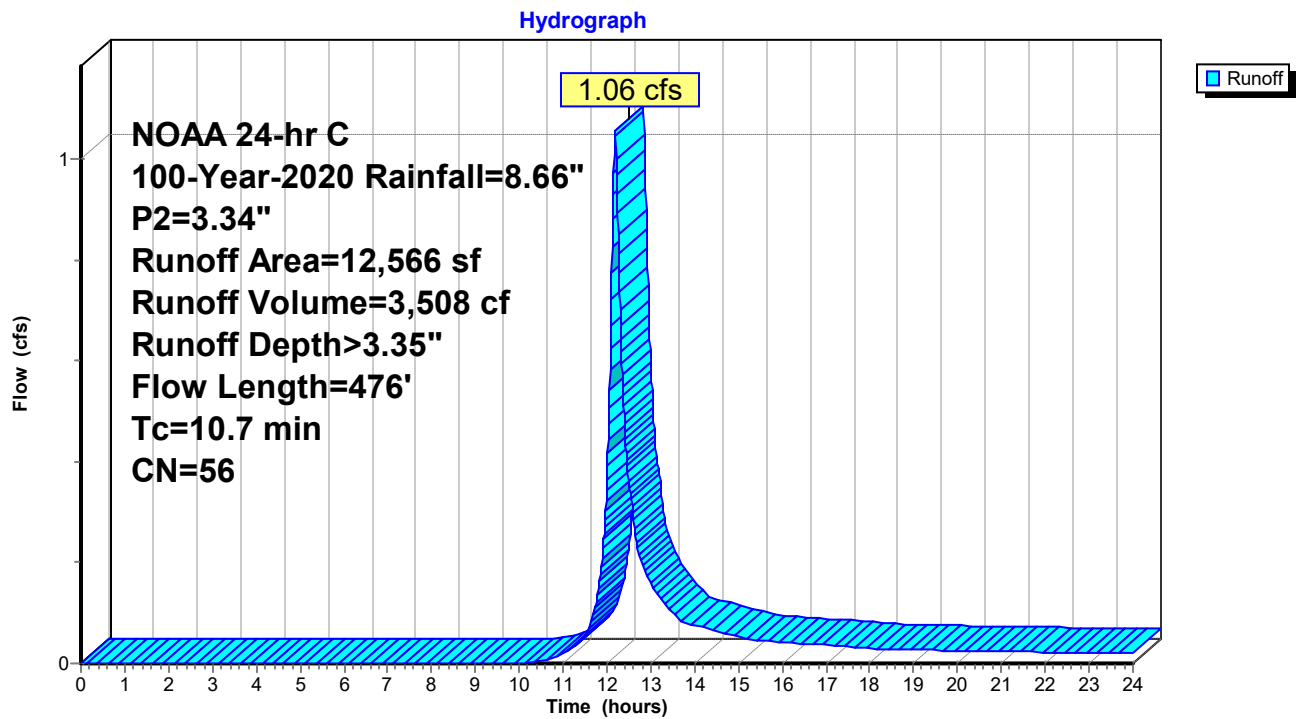
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.7     | 476           | Total         |                   |                |                                                                                                     |

**Subcatchment 102E: Onsite Pervious SE**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

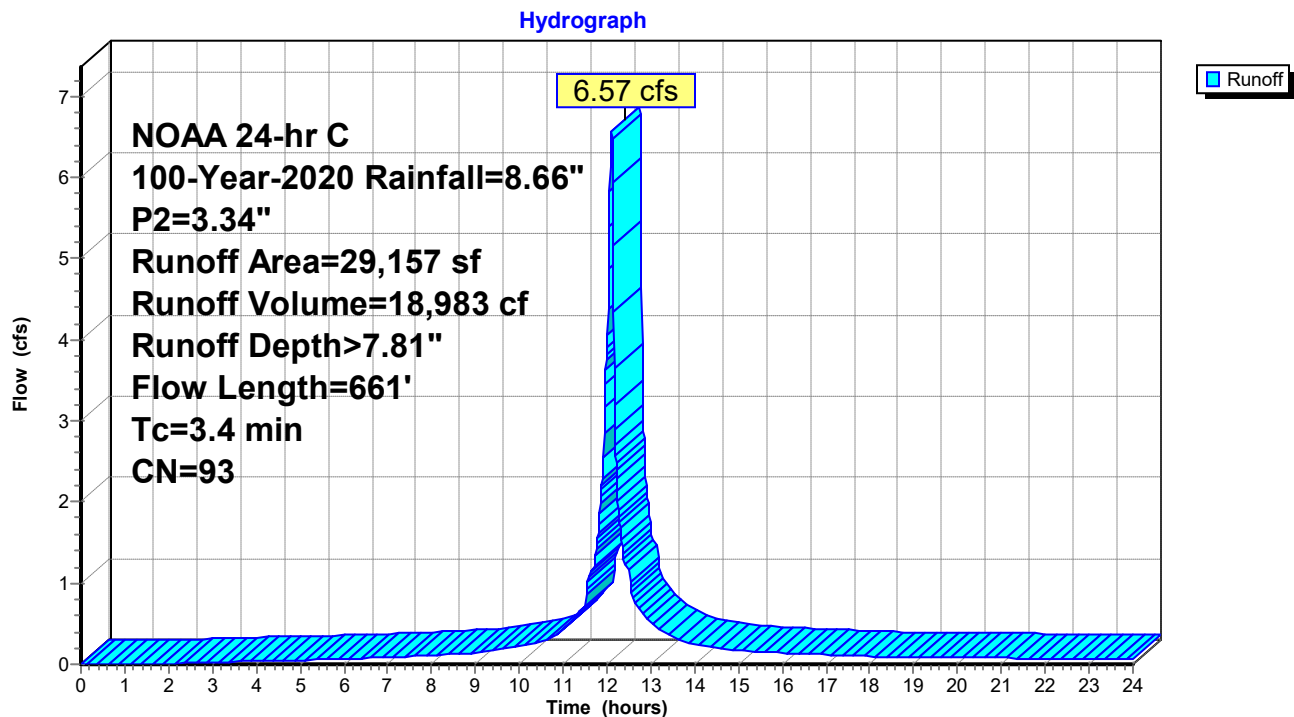
Runoff = 6.57 cfs @ 12.11 hrs, Volume= 18,983 cf, Depth> 7.81"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 104E: Yard Drains**

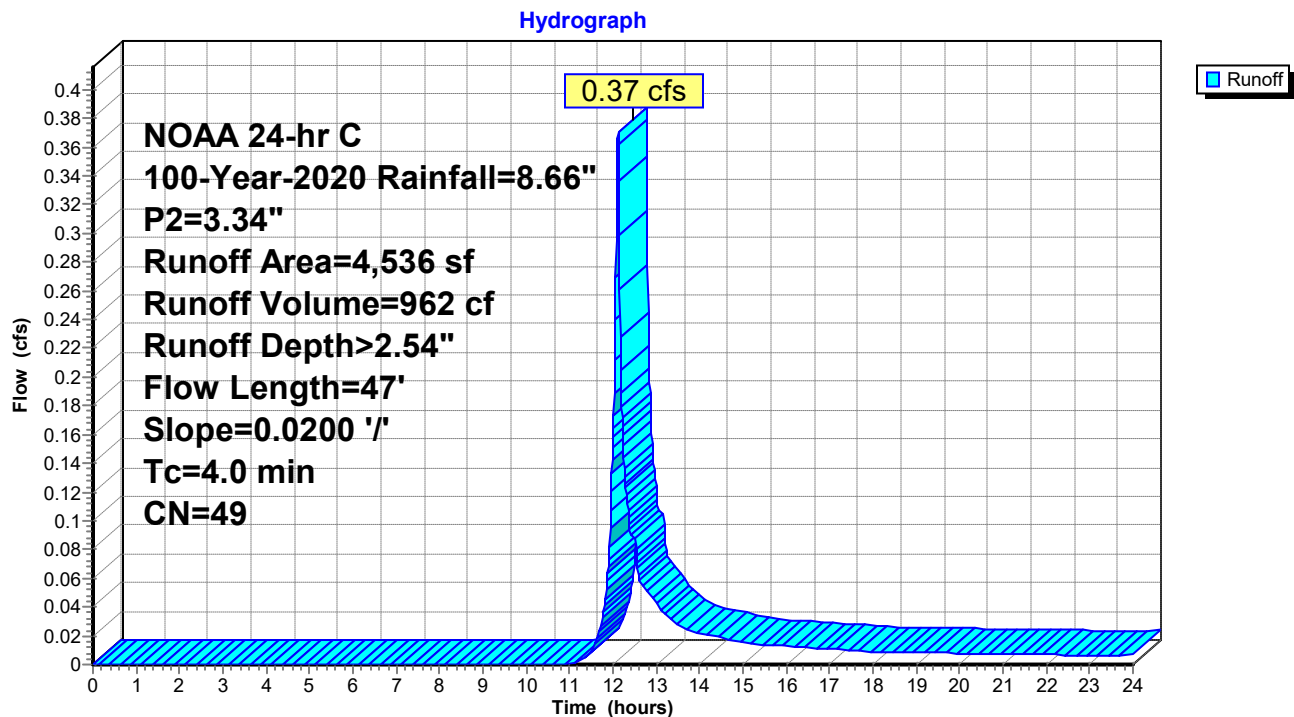
Runoff = 0.37 cfs @ 12.12 hrs, Volume= 962 cf, Depth> 2.54"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 1.26 cfs @ 12.13 hrs, Volume= 3,425 cf, Depth> 3.12"  
 Routed to Reach 100E : EX INLET 1

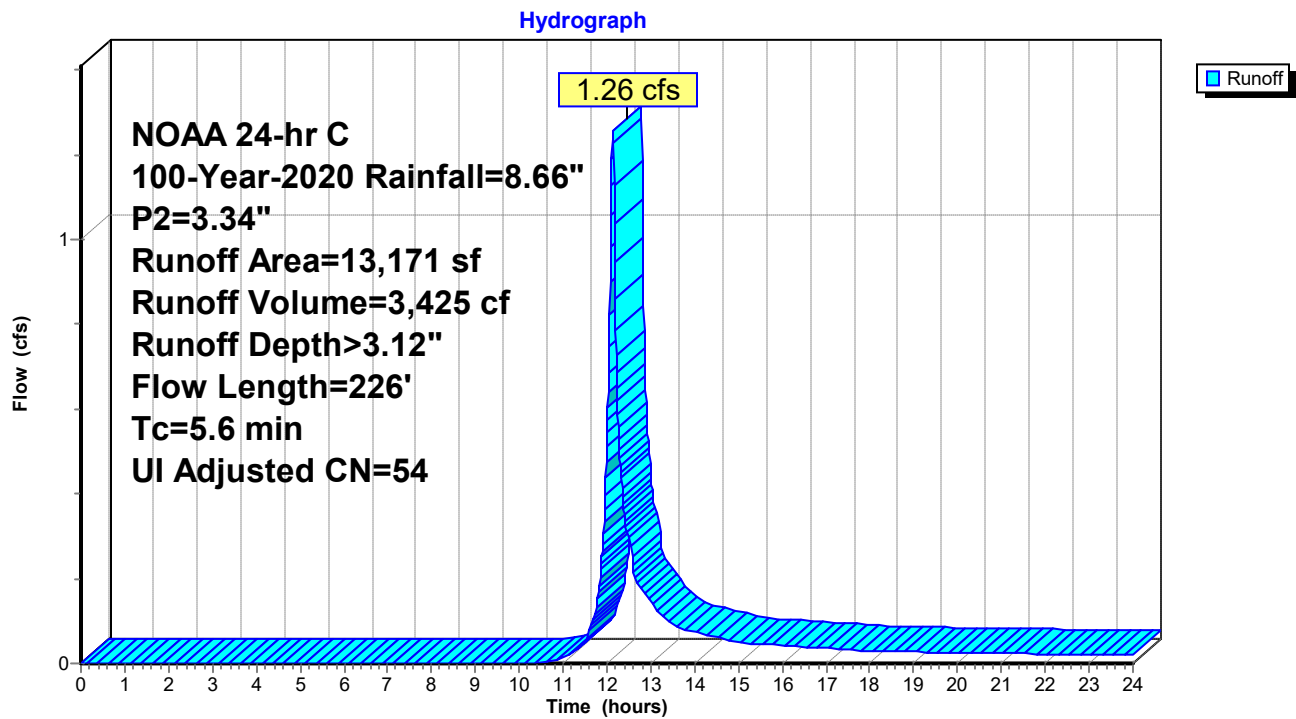
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

**Subcatchment 105E: Low Drains**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 106E: Onsite Impervious SE**

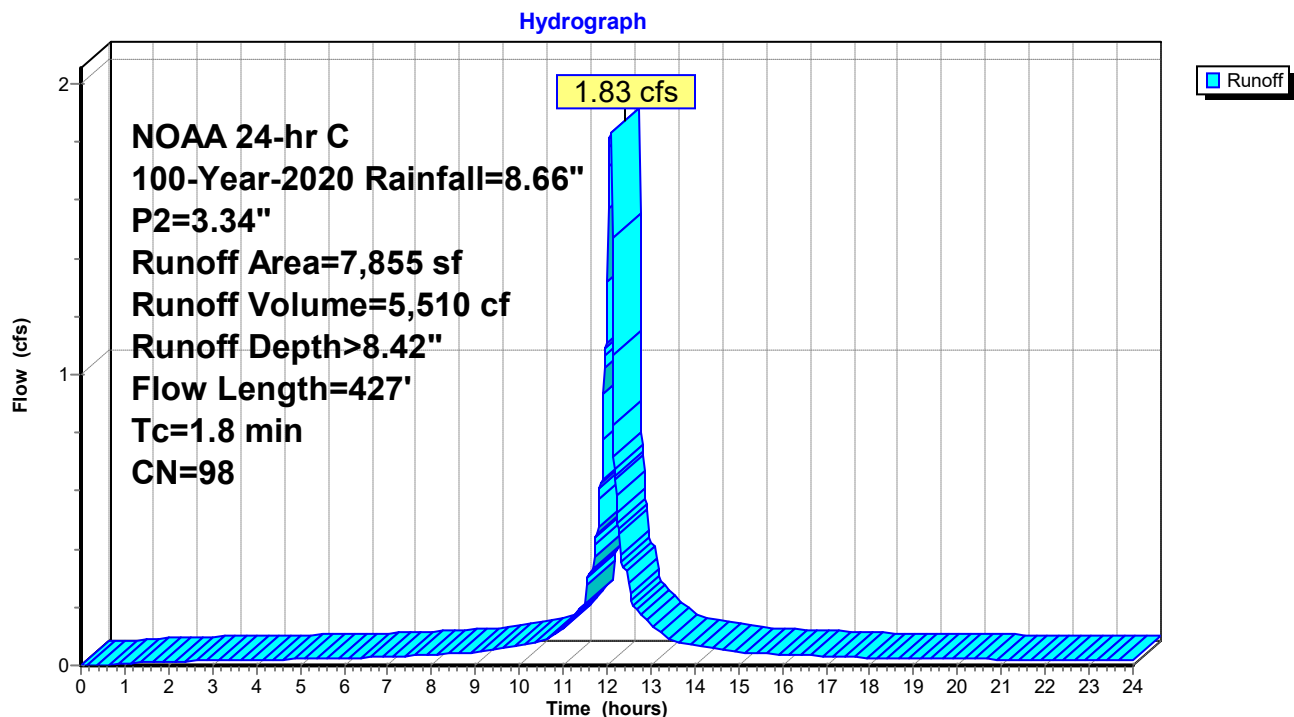
Runoff = 1.83 cfs @ 12.10 hrs, Volume= 5,510 cf, Depth> 8.42"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

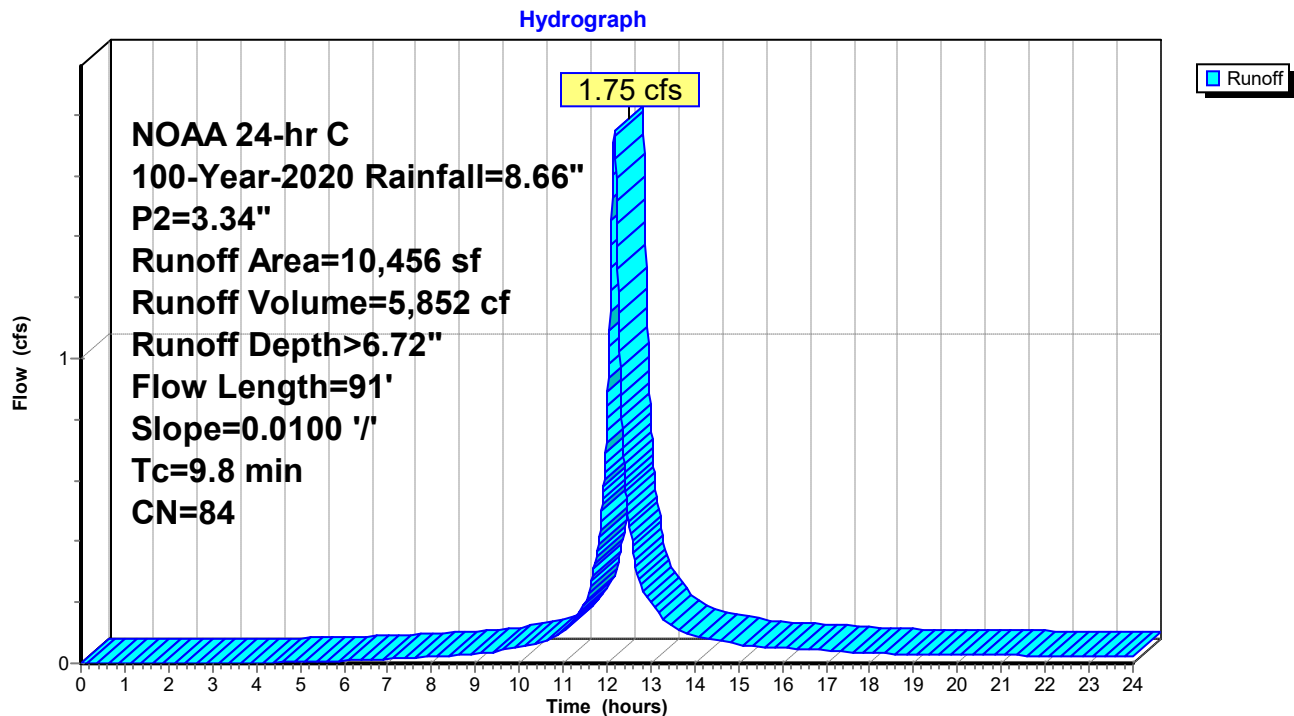
Runoff = 1.75 cfs @ 12.17 hrs, Volume= 5,852 cf, Depth> 6.72"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

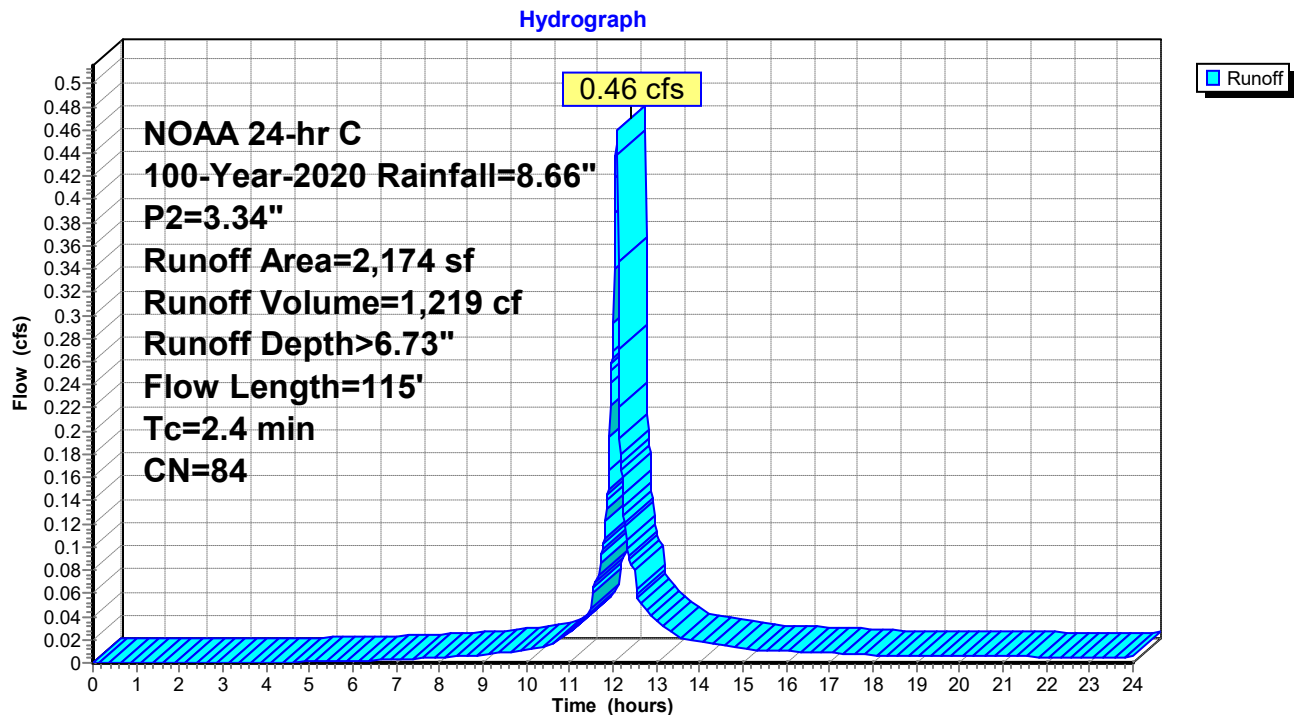
Runoff = 0.46 cfs @ 12.10 hrs, Volume= 1,219 cf, Depth> 6.73"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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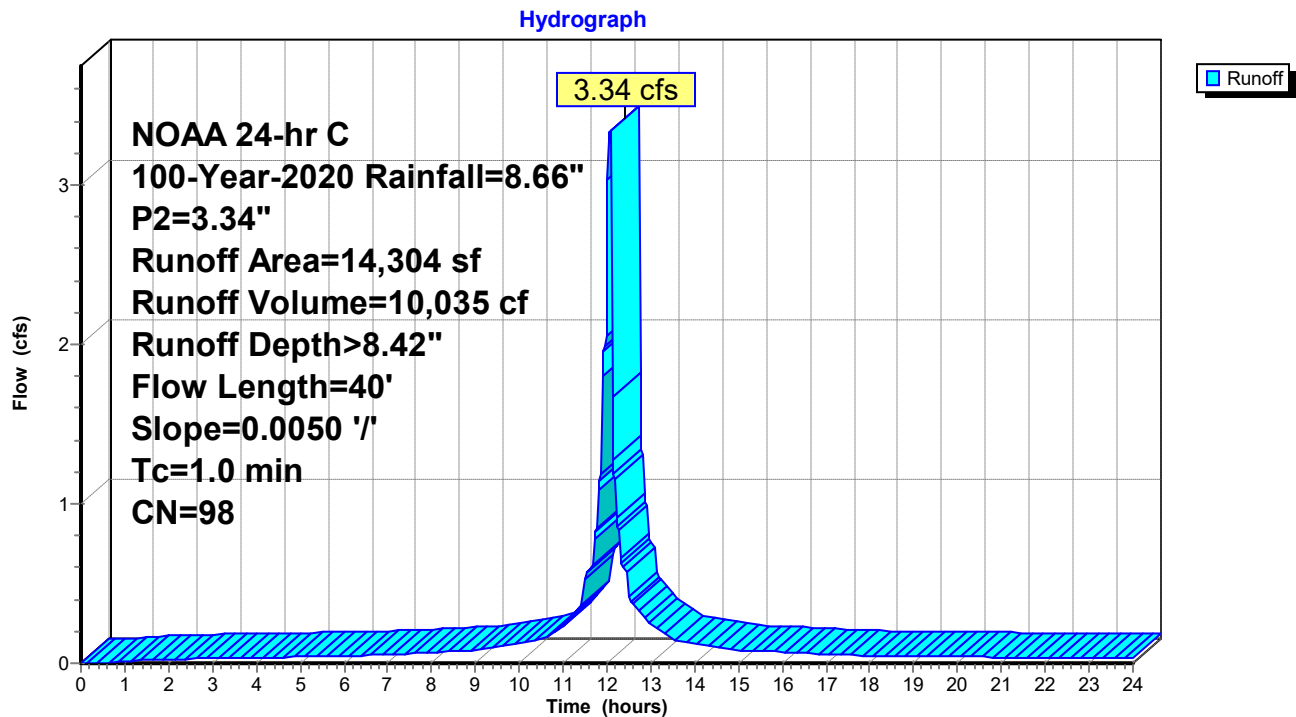
**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

Runoff = 3.34 cfs @ 12.09 hrs, Volume= 10,035 cf, Depth> 8.42"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 1.0                                | 40            | 0.0050        | 0.67              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

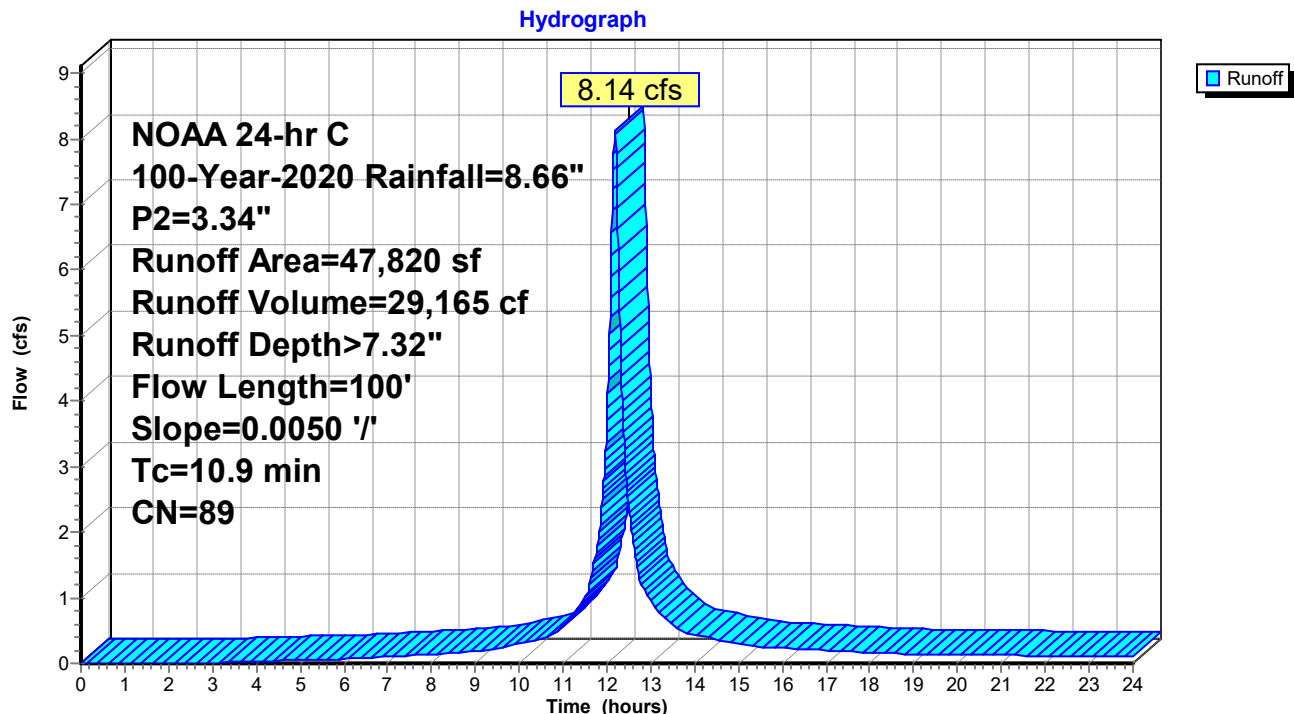
Runoff = 8.14 cfs @ 12.18 hrs, Volume= 29,165 cf, Depth> 7.32"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.9     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 15.66 cfs @ 12.30 hrs, Volume= 73,840 cf, Depth> 7.30"  
 Routed to Reach 200E : EX MANHOLE 2

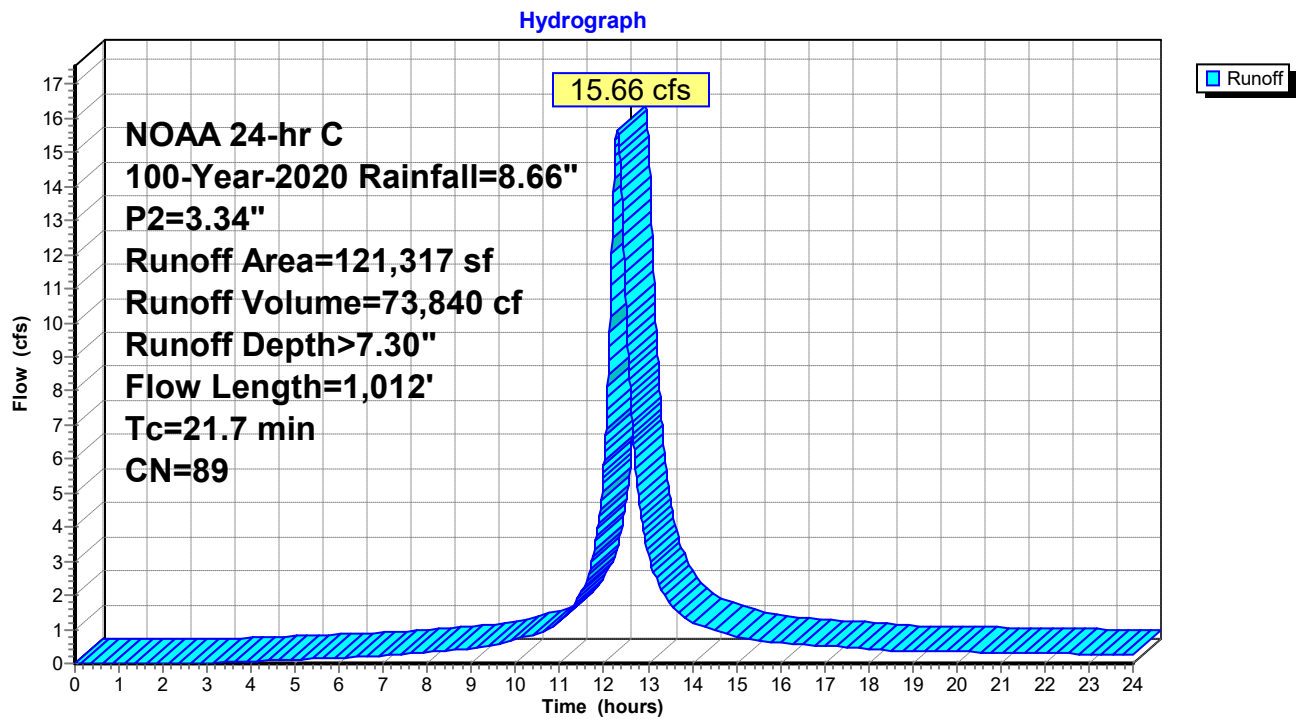
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                  |

**Subcatchment 205E: Offsite to E Field Drain**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

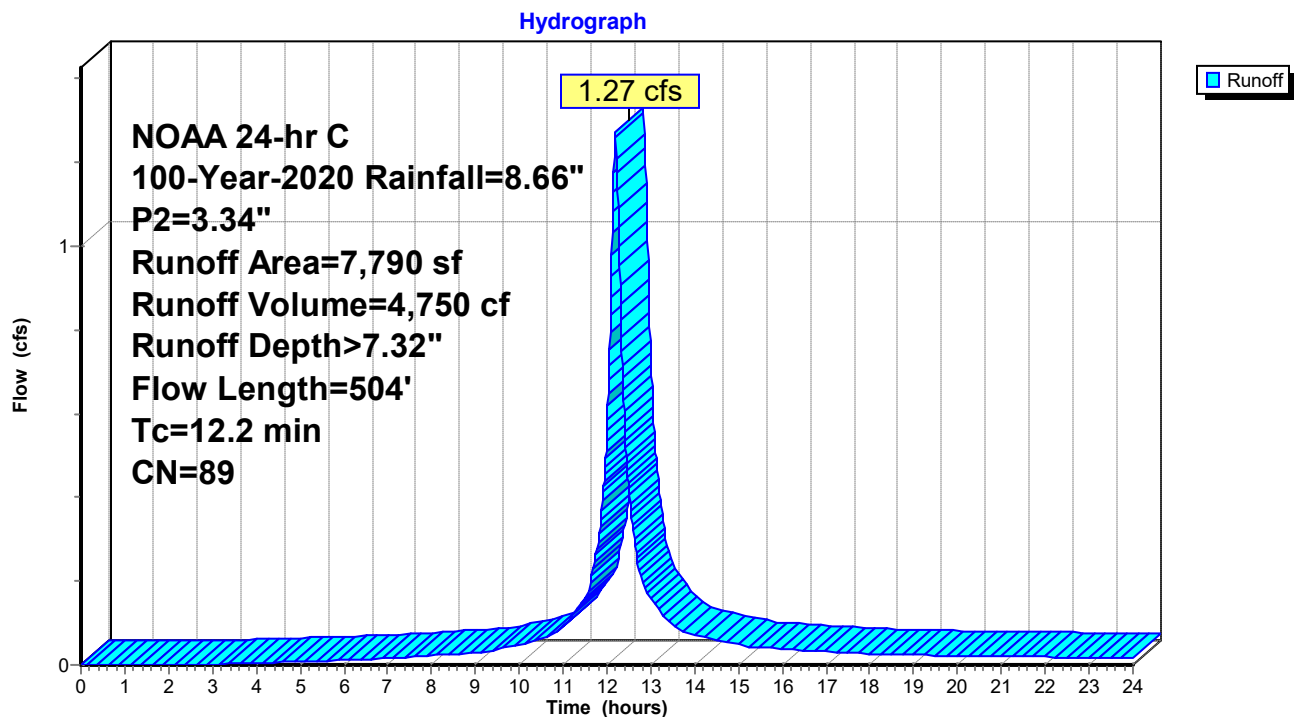
Runoff = 1.27 cfs @ 12.19 hrs, Volume= 4,750 cf, Depth> 7.32"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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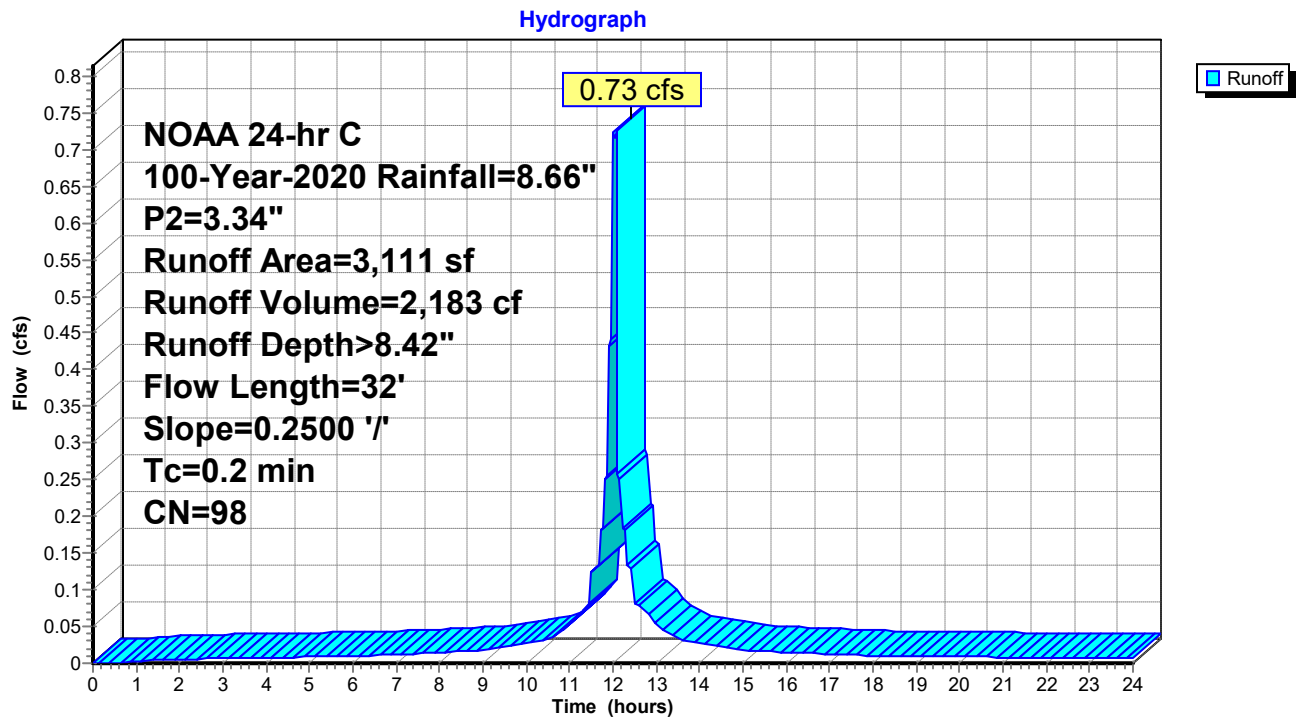
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.73 cfs @ 12.09 hrs, Volume= 2,183 cf, Depth> 8.42"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

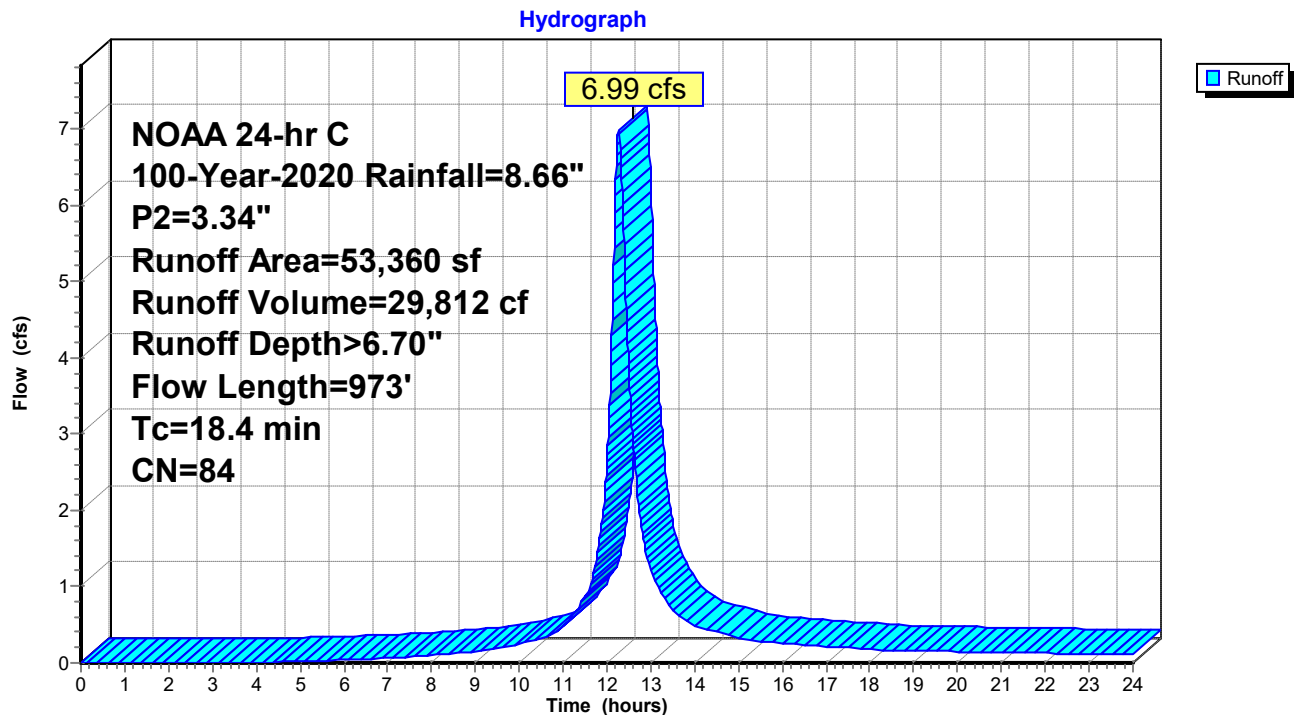
Runoff = 6.99 cfs @ 12.27 hrs, Volume= 29,812 cf, Depth> 6.70"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 18.4     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**



**EXISTING PEDDIE FOOTBALL**

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

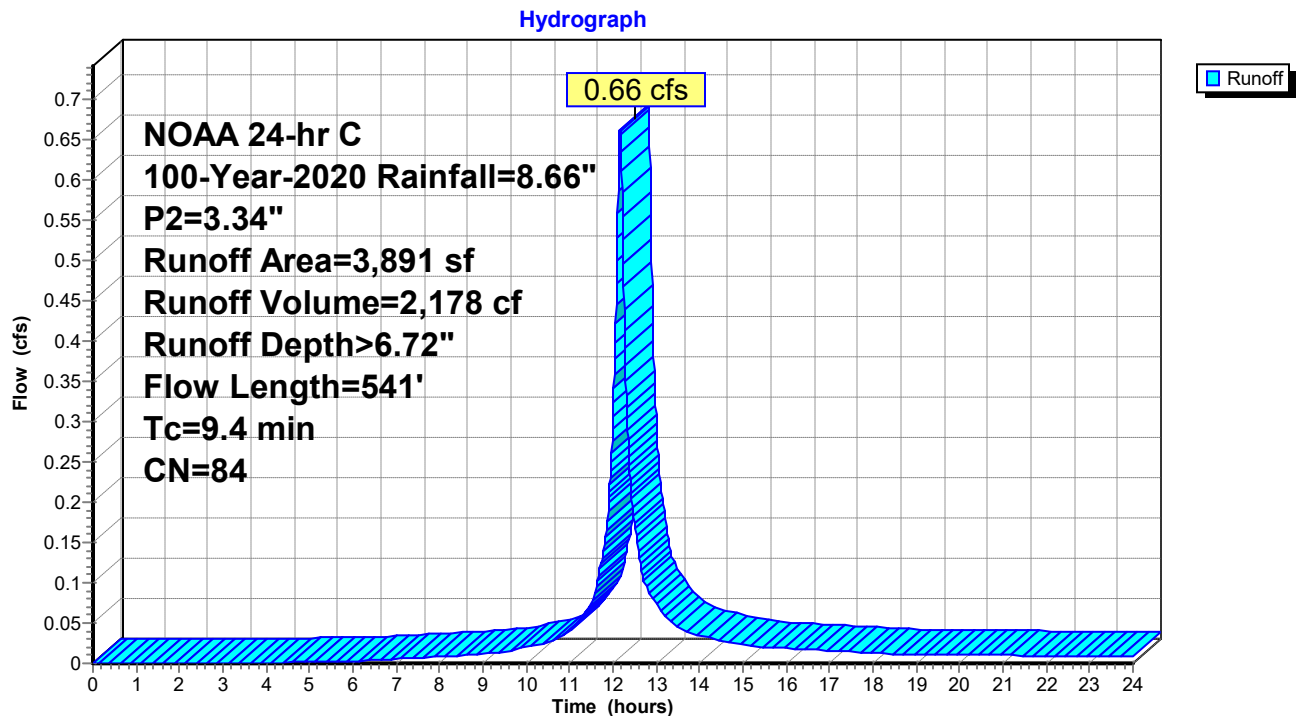
Runoff = 0.66 cfs @ 12.17 hrs, Volume= 2,178 cf, Depth> 6.72"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 9.4      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

Runoff = 4.48 cfs @ 12.21 hrs, Volume= 16,699 cf, Depth> 6.71"  
 Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 13.2     | 574           | Total         |                   |                |                                                                                        |

# EXISTING PEDDIE FOOTBALL

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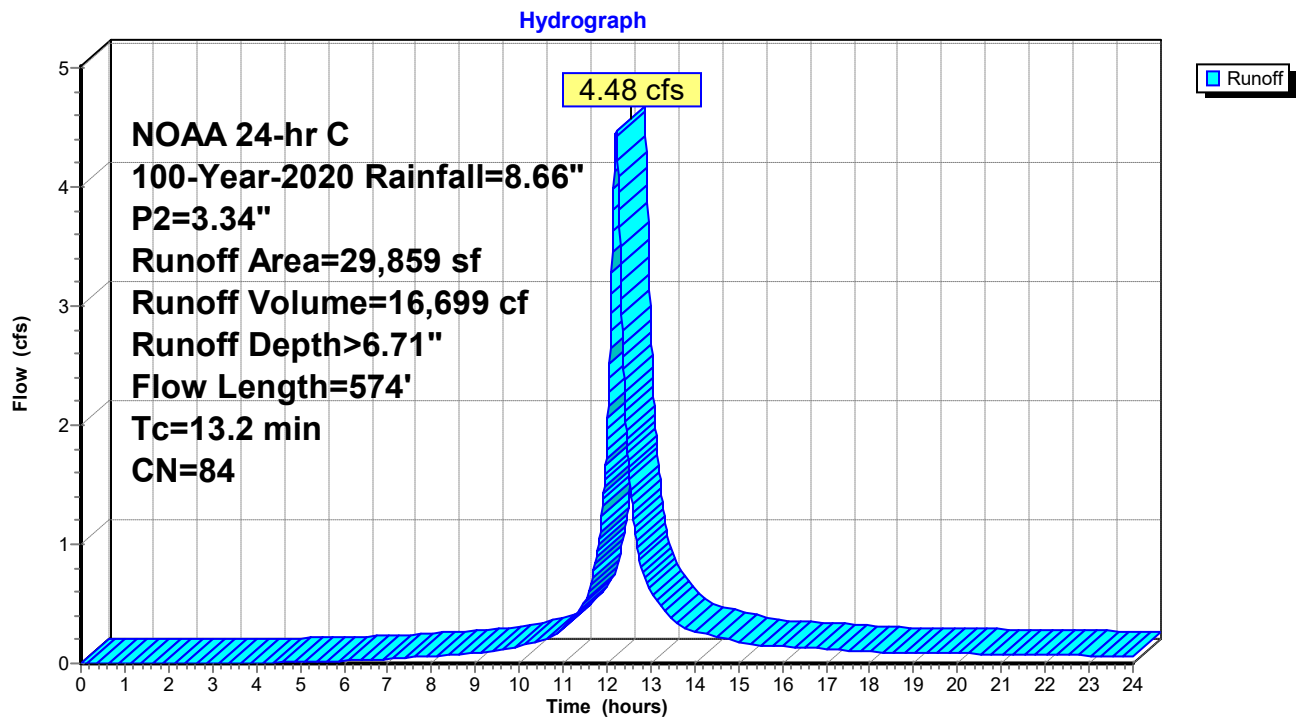
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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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## Subcatchment 303E: Offsite to W Trench Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

Runoff = 0.40 cfs @ 12.17 hrs, Volume= 1,322 cf, Depth> 6.72"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

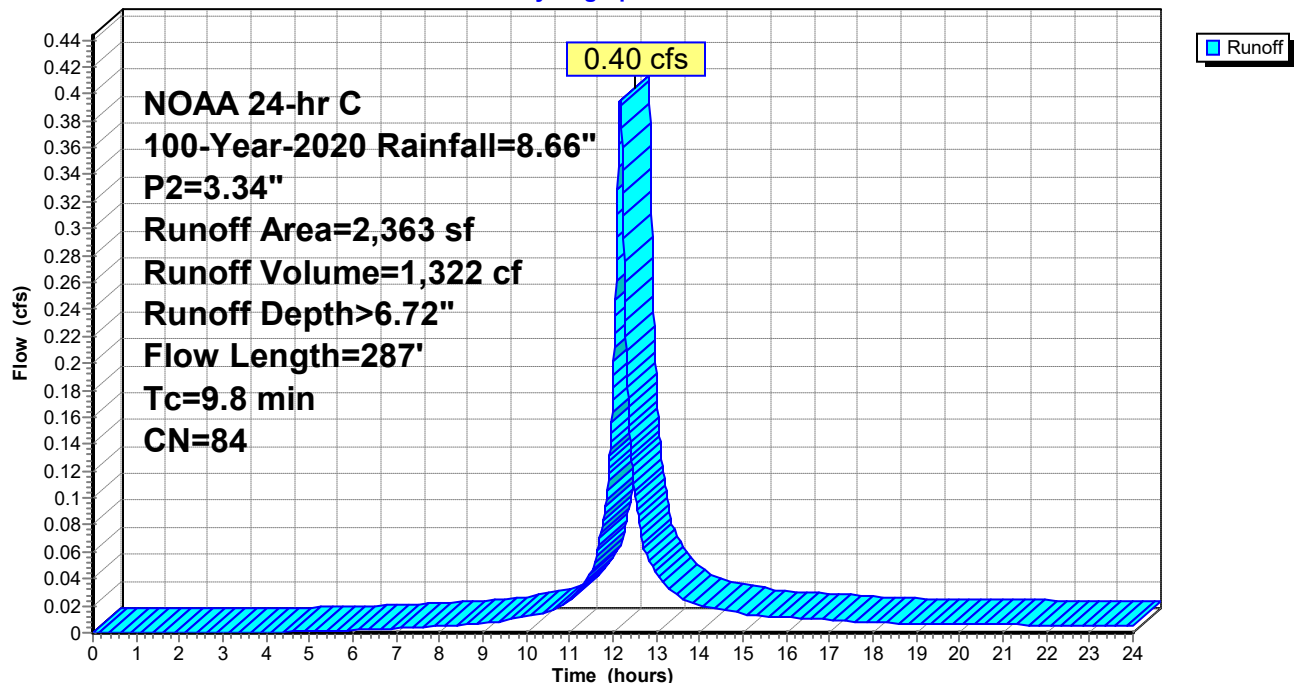
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.8      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**

Hydrograph



**EXISTING PEDDIE FOOTBALL**

Prepared by Crest Engineering

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

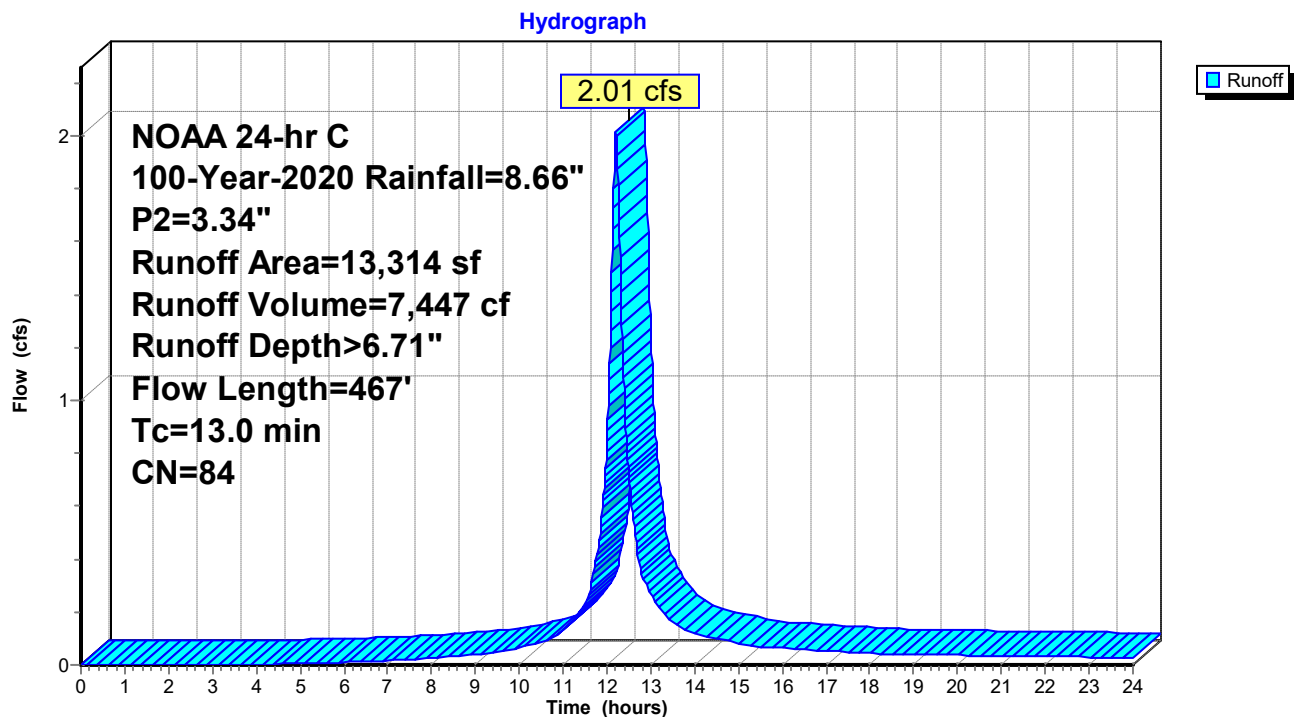
Runoff = 2.01 cfs @ 12.20 hrs, Volume= 7,447 cf, Depth> 6.71"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

Runoff = 0.08 cfs @ 12.13 hrs, Volume= 238 cf, Depth> 6.72"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

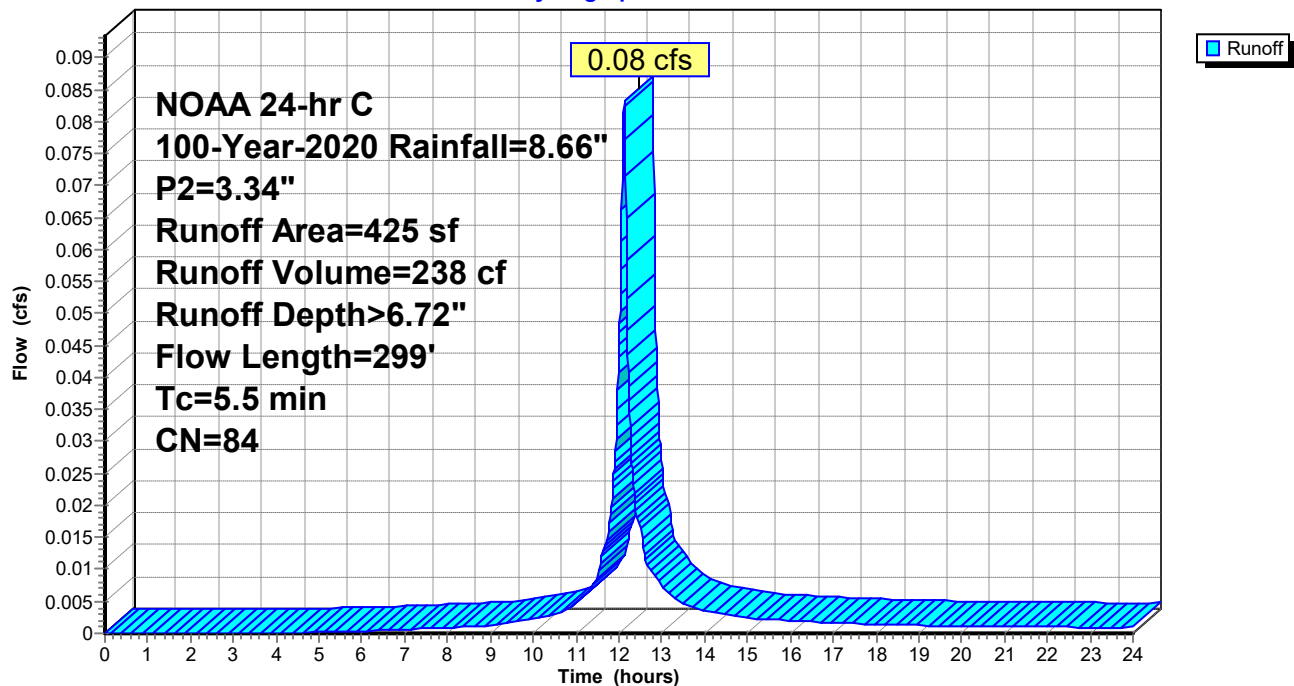
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.5      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

Hydrograph



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 308E: Offsite to Drain 4**

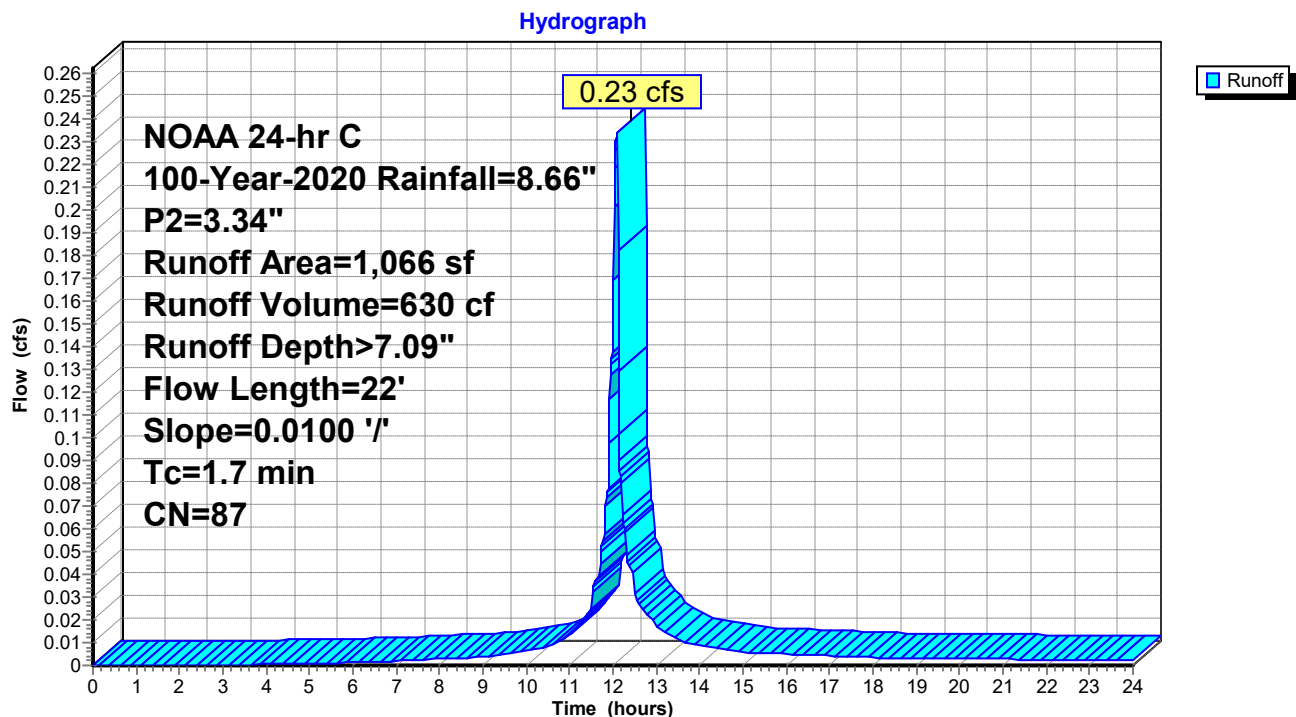
Runoff = 0.23 cfs @ 12.10 hrs, Volume= 630 cf, Depth> 7.09"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"         |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.7      | 22            | Total         |                   |                |                                                                          |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

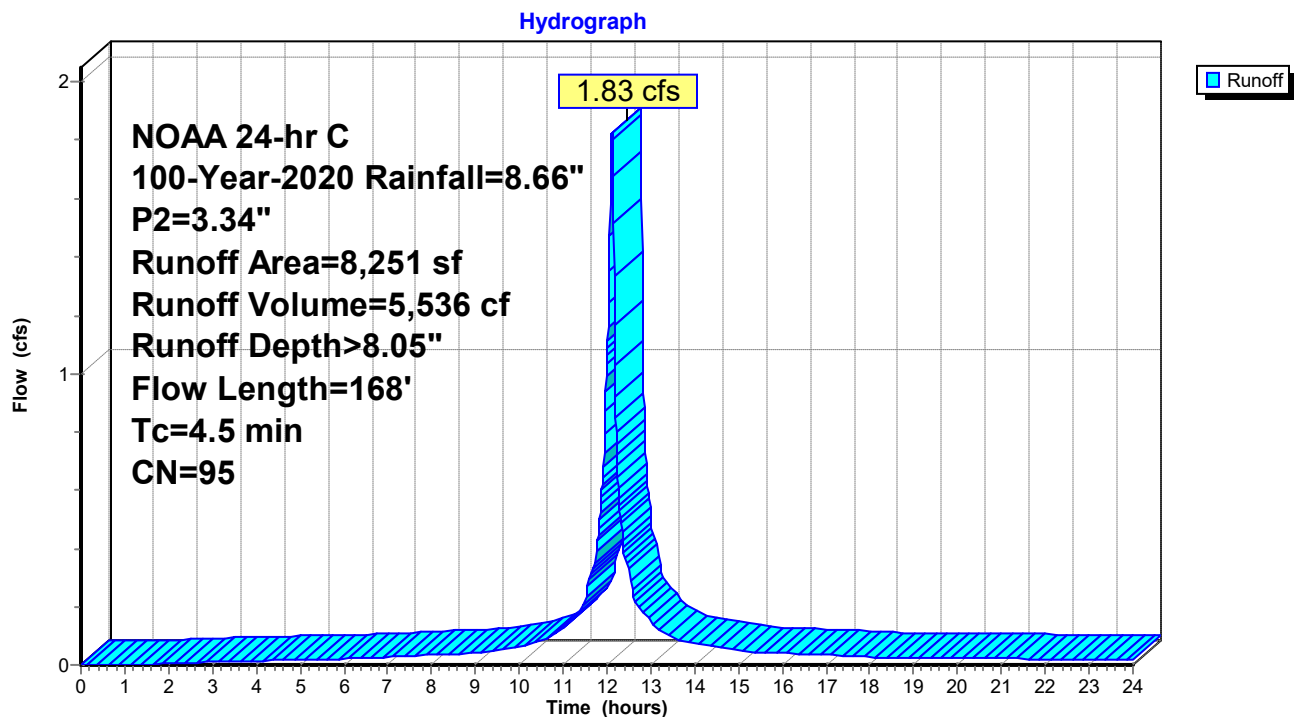
Runoff = 1.83 cfs @ 12.12 hrs, Volume= 5,536 cf, Depth> 8.05"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 310E: Pervious Stadium W**

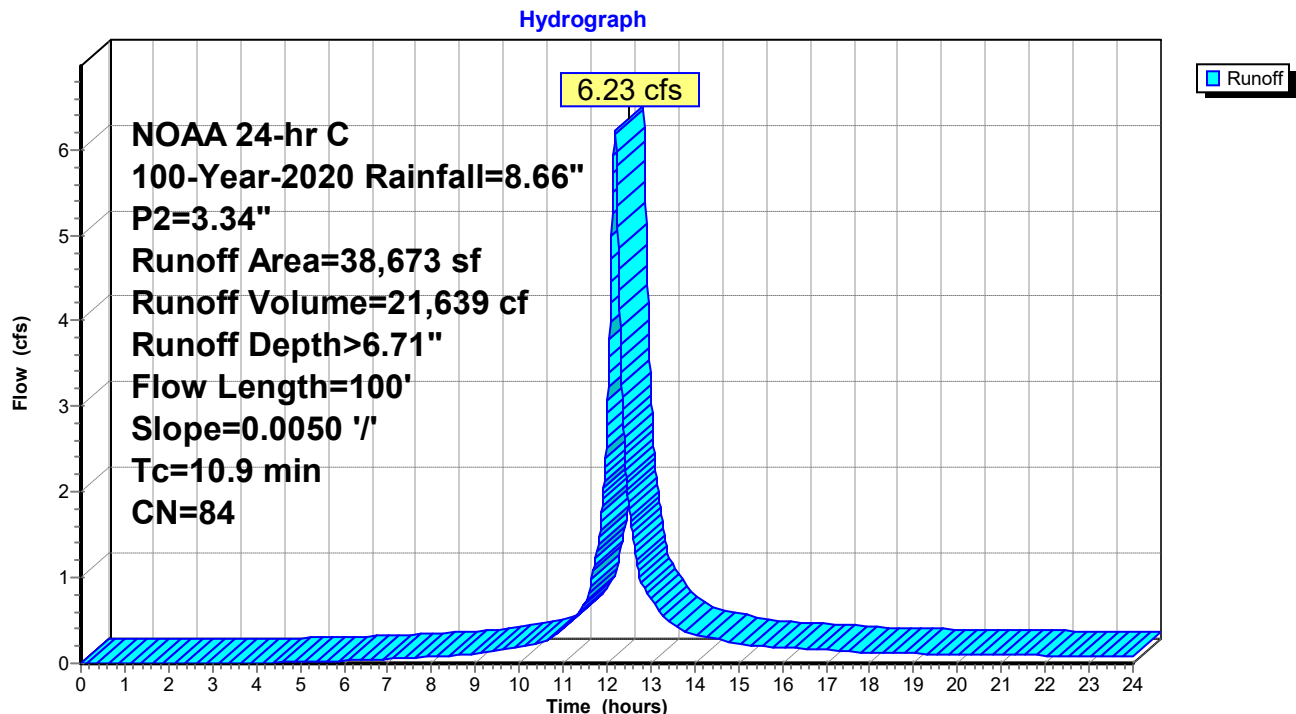
Runoff = 6.23 cfs @ 12.18 hrs, Volume= 21,639 cf, Depth> 6.71"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

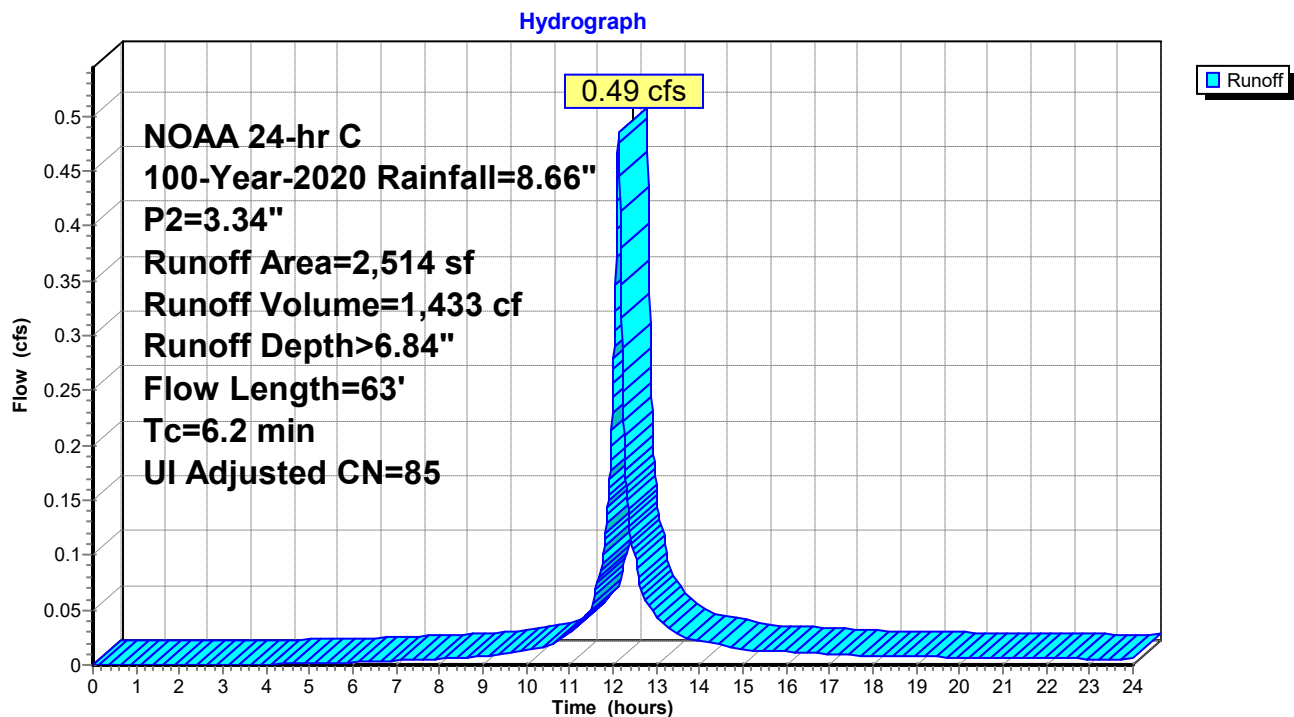
Runoff = 0.49 cfs @ 12.13 hrs, Volume= 1,433 cf, Depth> 6.84"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 6.0      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 6.2      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

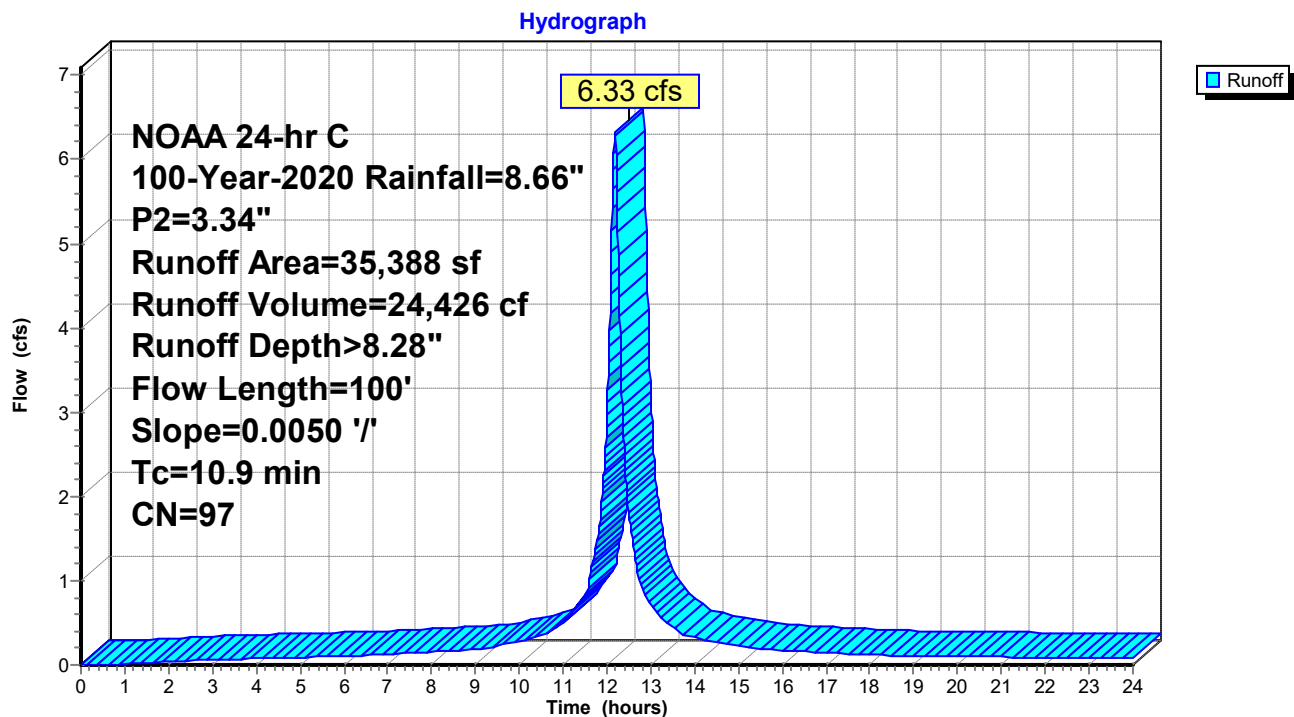
Runoff = 6.33 cfs @ 12.18 hrs, Volume= 24,426 cf, Depth> 8.28"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

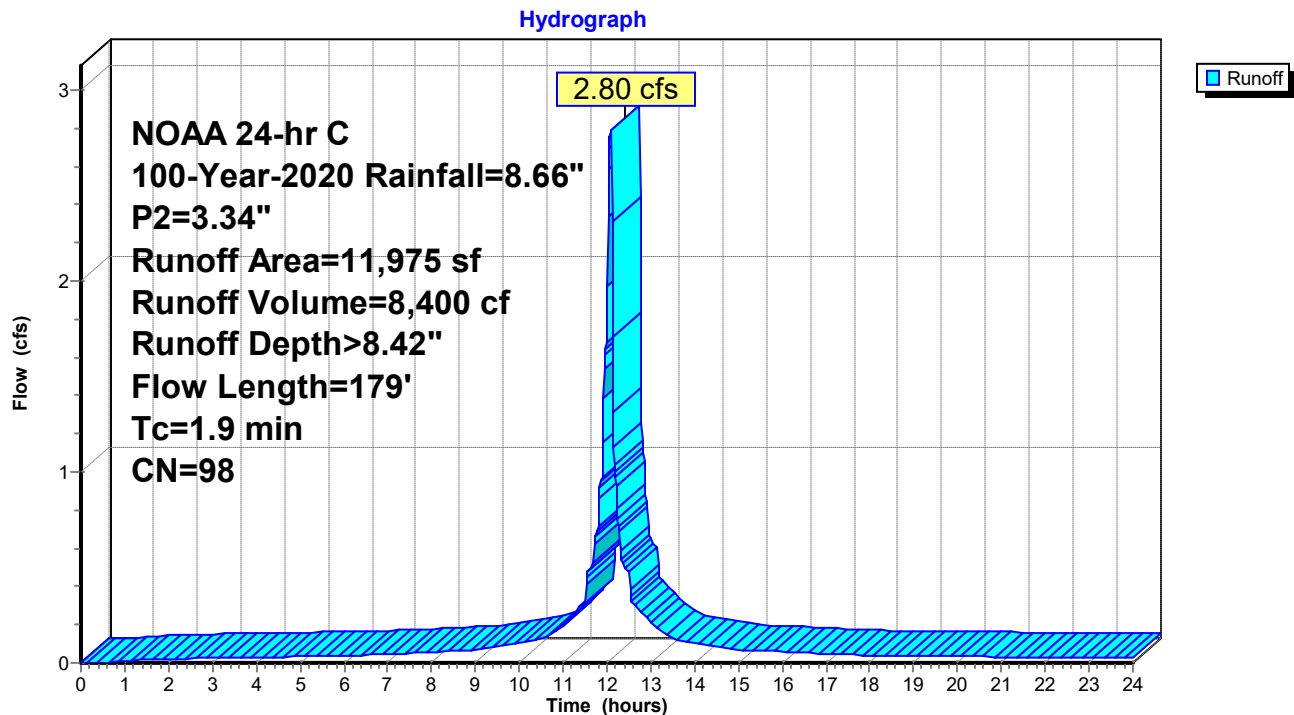
Runoff = 2.80 cfs @ 12.10 hrs, Volume= 8,400 cf, Depth> 8.42"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.63              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

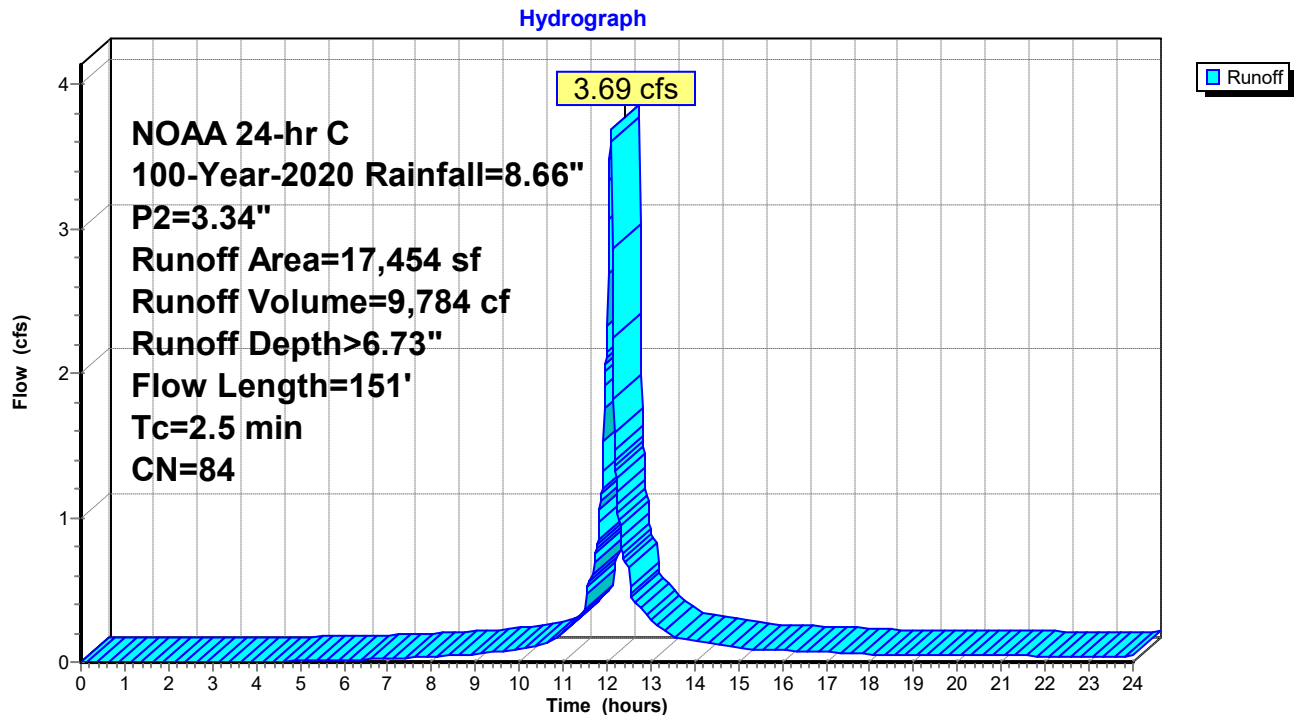
Runoff = 3.69 cfs @ 12.10 hrs, Volume= 9,784 cf, Depth> 6.73"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.5      | 35            | 0.2500        | 0.39              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.5      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.34"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 403E: Tennis Courts**

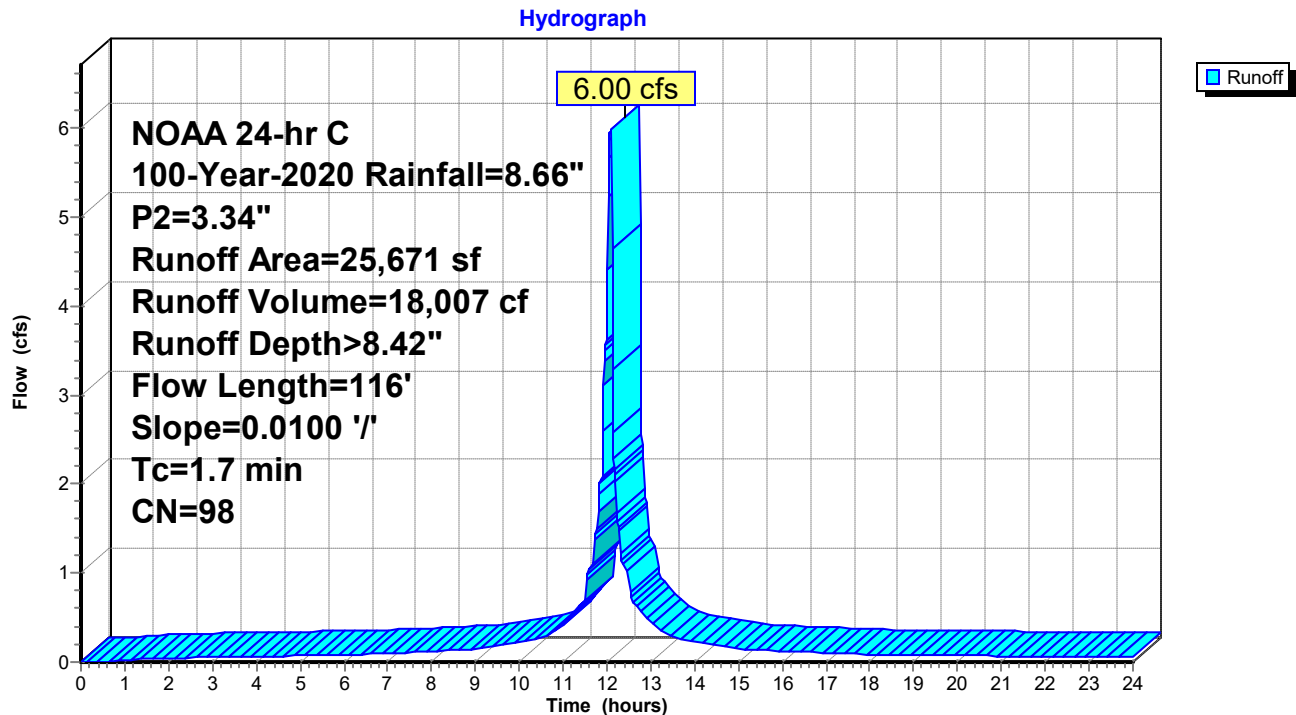
Runoff = 6.00 cfs @ 12.09 hrs, Volume= 18,007 cf, Depth> 8.42"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

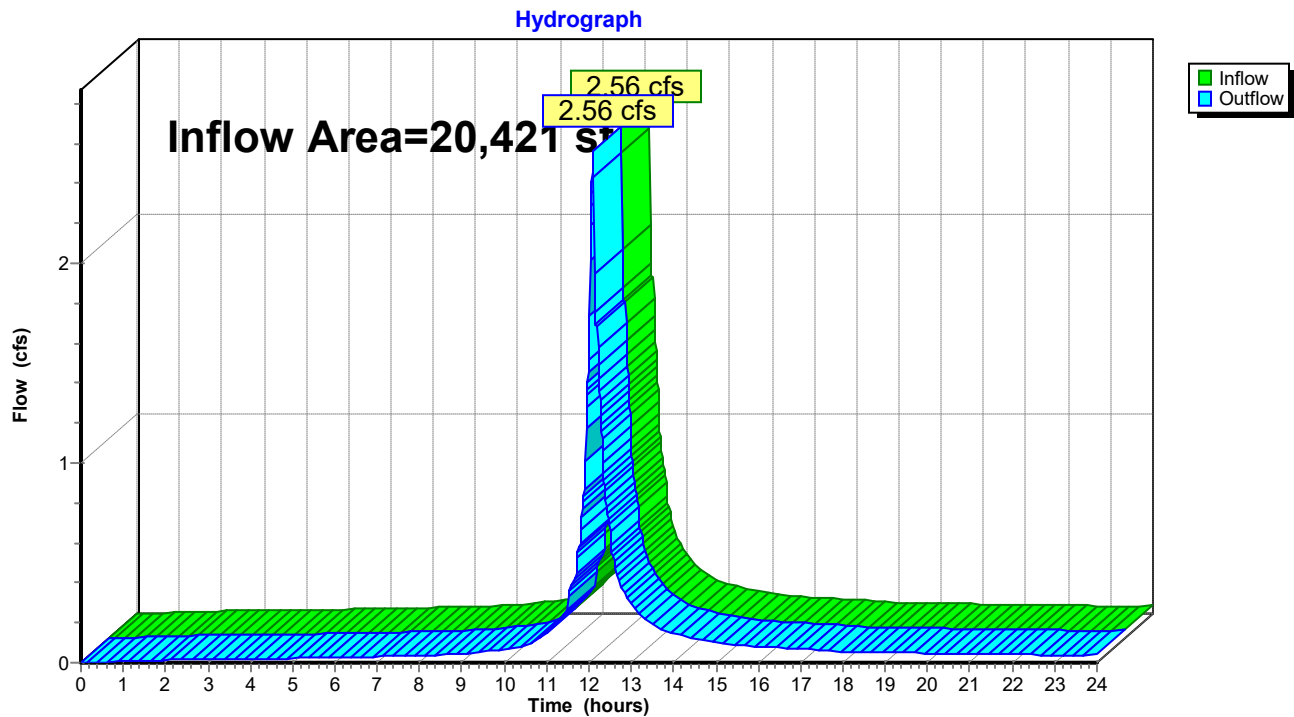
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 5.30" for 100-Year-2020 event  
 Inflow = 2.56 cfs @ 12.10 hrs, Volume= 9,018 cf  
 Outflow = 2.56 cfs @ 12.10 hrs, Volume= 9,018 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

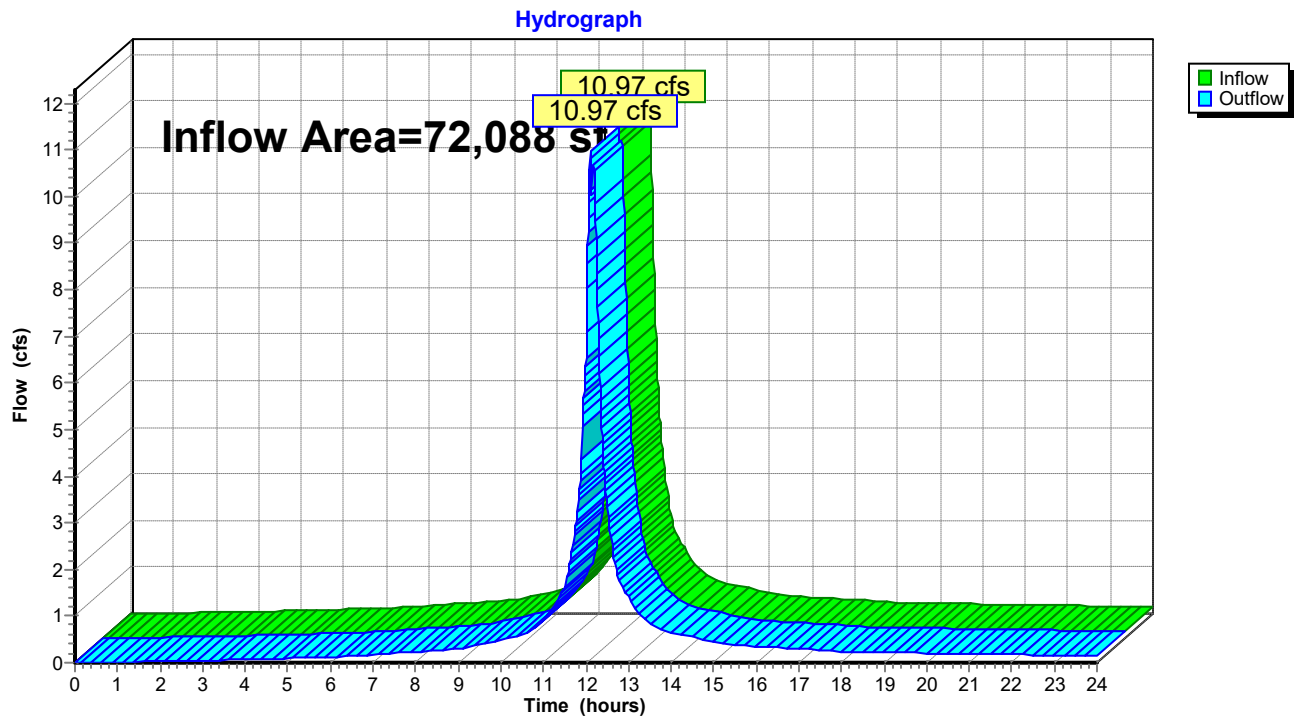


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 7.52" for 100-Year-2020 event  
 Inflow = 10.97 cfs @ 12.10 hrs, Volume= 45,169 cf  
 Outflow = 10.97 cfs @ 12.10 hrs, Volume= 45,169 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST



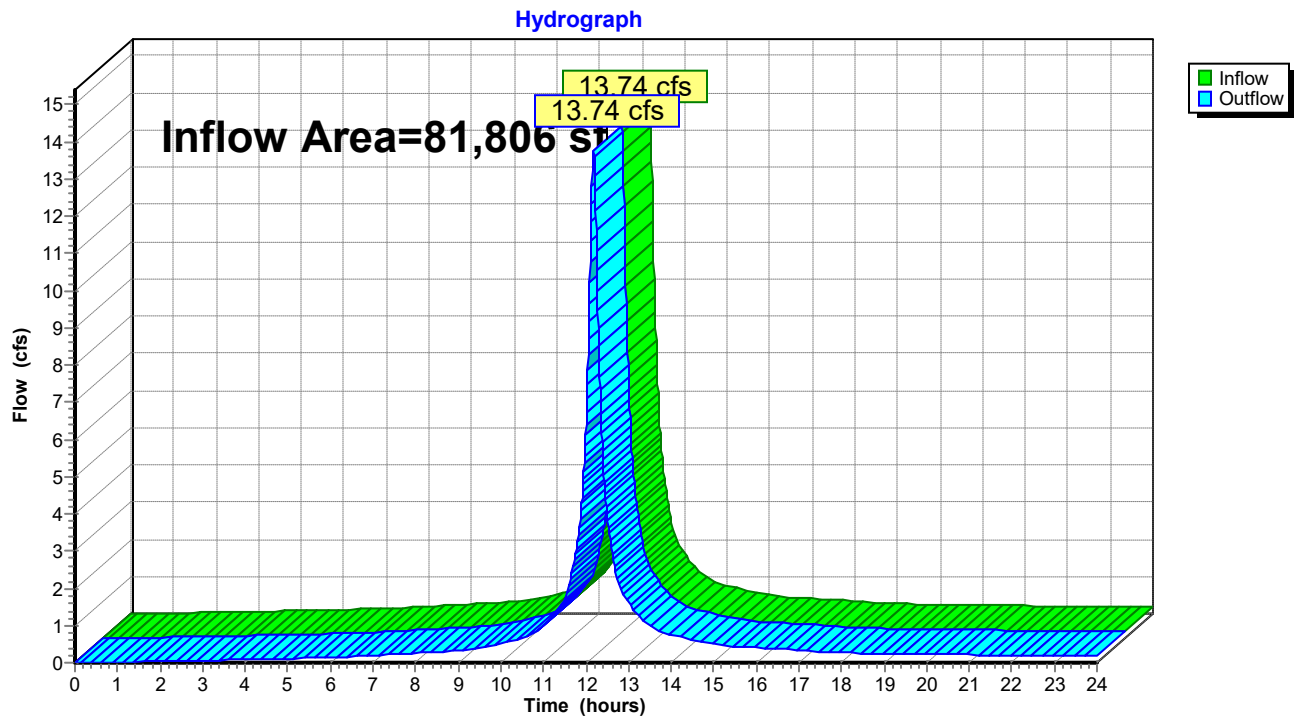


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 7.40" for 100-Year-2020 event  
 Inflow = 13.74 cfs @ 12.18 hrs, Volume= 50,434 cf  
 Outflow = 13.74 cfs @ 12.18 hrs, Volume= 50,434 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

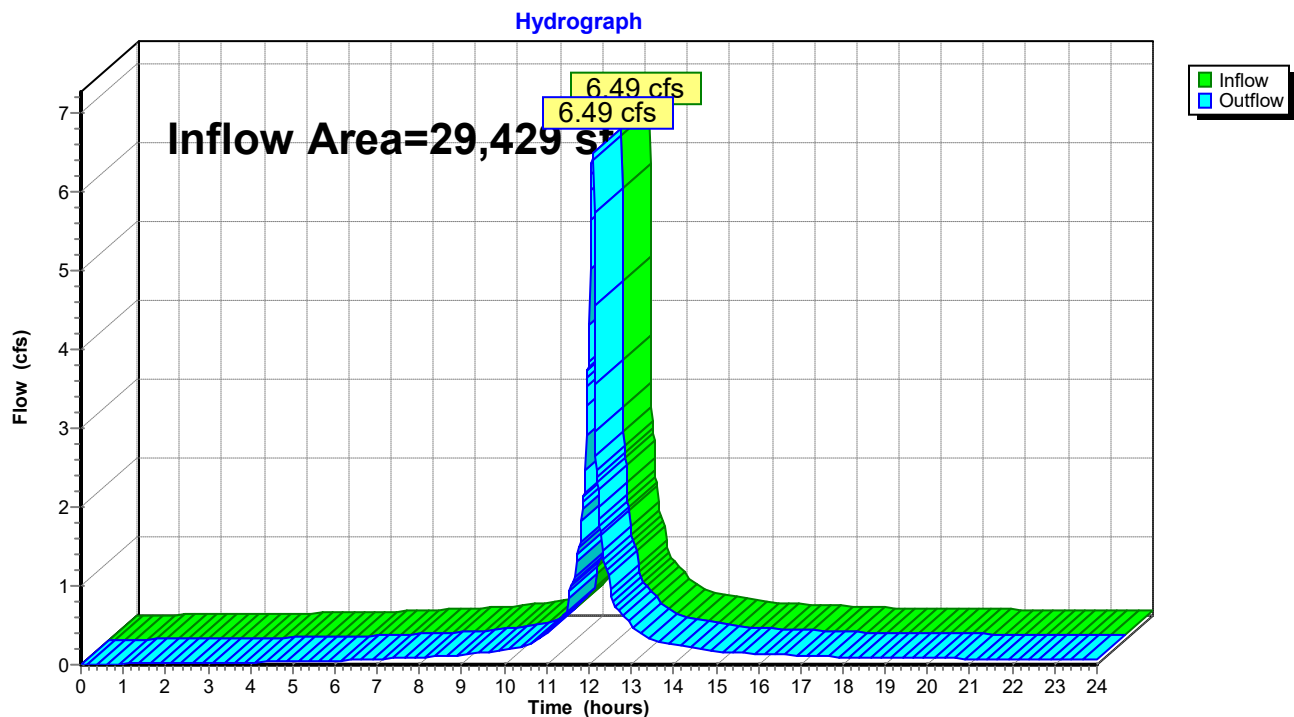


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 7.41" for 100-Year-2020 event  
 Inflow = 6.49 cfs @ 12.10 hrs, Volume= 18,184 cf  
 Outflow = 6.49 cfs @ 12.10 hrs, Volume= 18,184 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

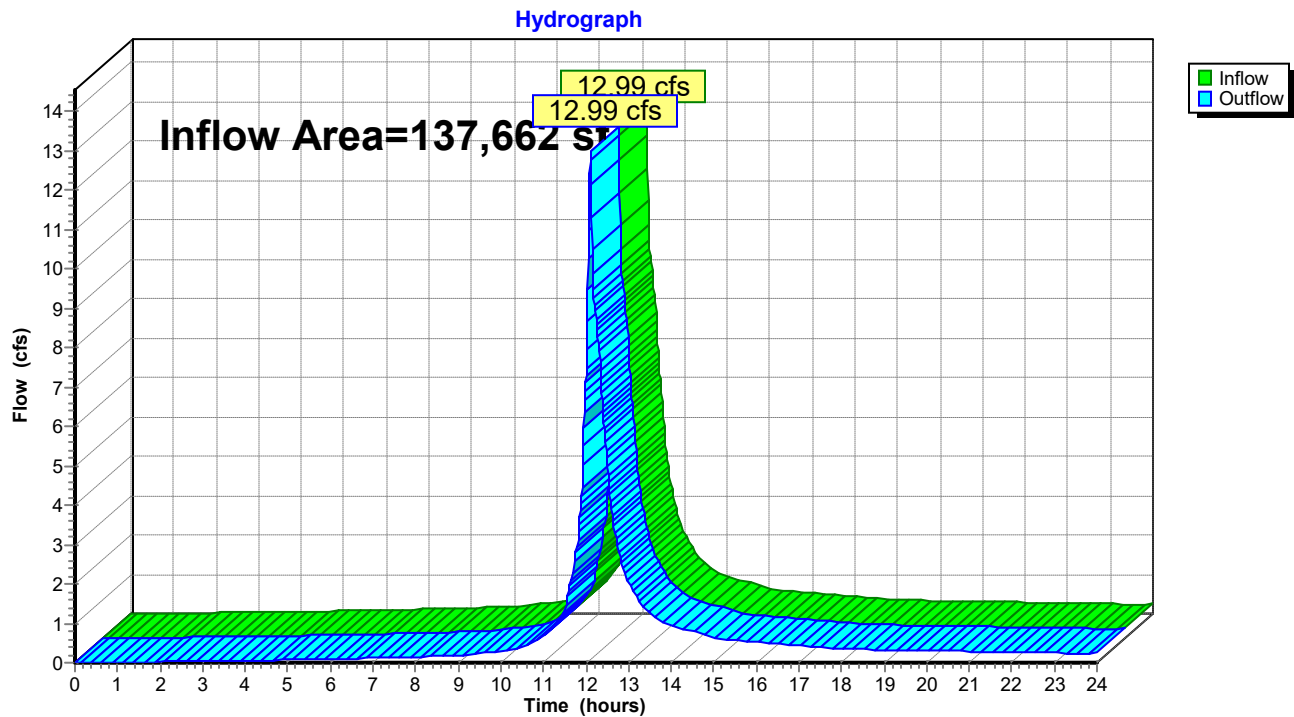


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 4.53" for 100-Year-2020 event  
 Inflow = 12.99 cfs @ 12.11 hrs, Volume= 51,987 cf  
 Outflow = 12.99 cfs @ 12.11 hrs, Volume= 51,987 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100E: EX INLET 1

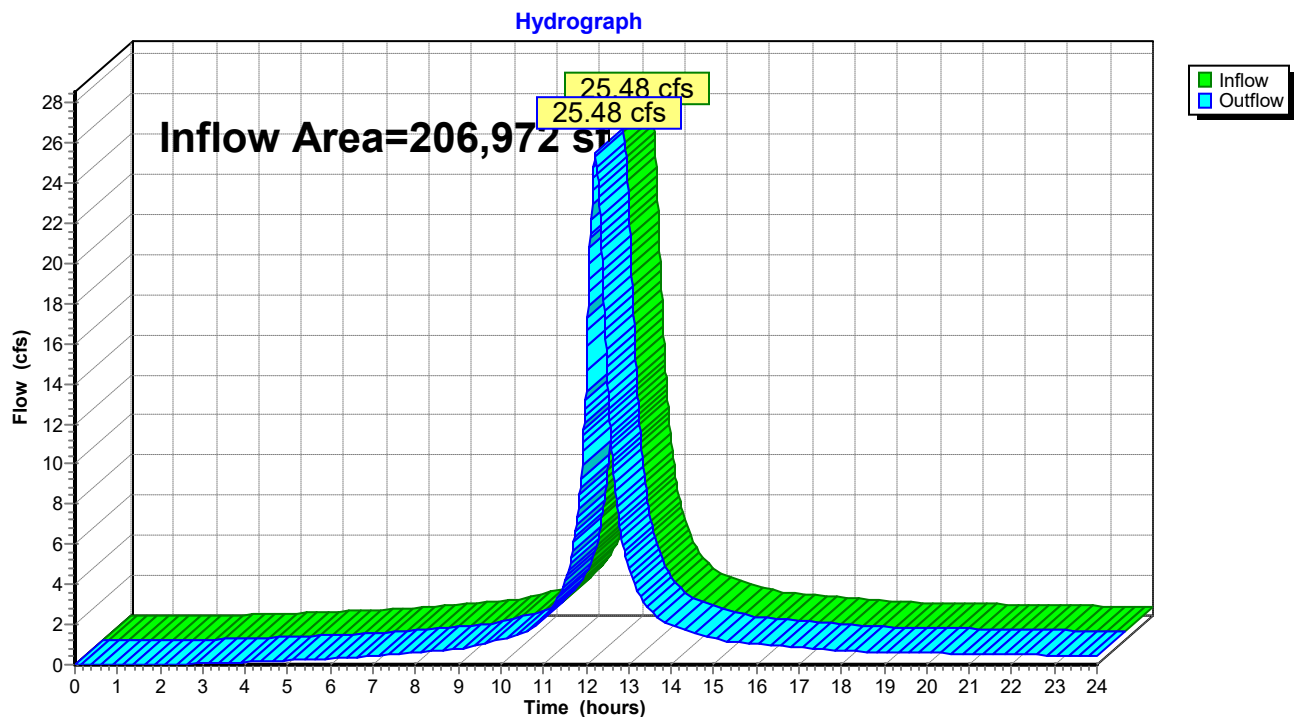


### Summary for Reach 200E: EX MANHOLE 2

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 7.37" for 100-Year-2020 event  
 Inflow = 25.48 cfs @ 12.21 hrs, Volume= 127,043 cf  
 Outflow = 25.48 cfs @ 12.21 hrs, Volume= 127,043 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200E: EX MANHOLE 2

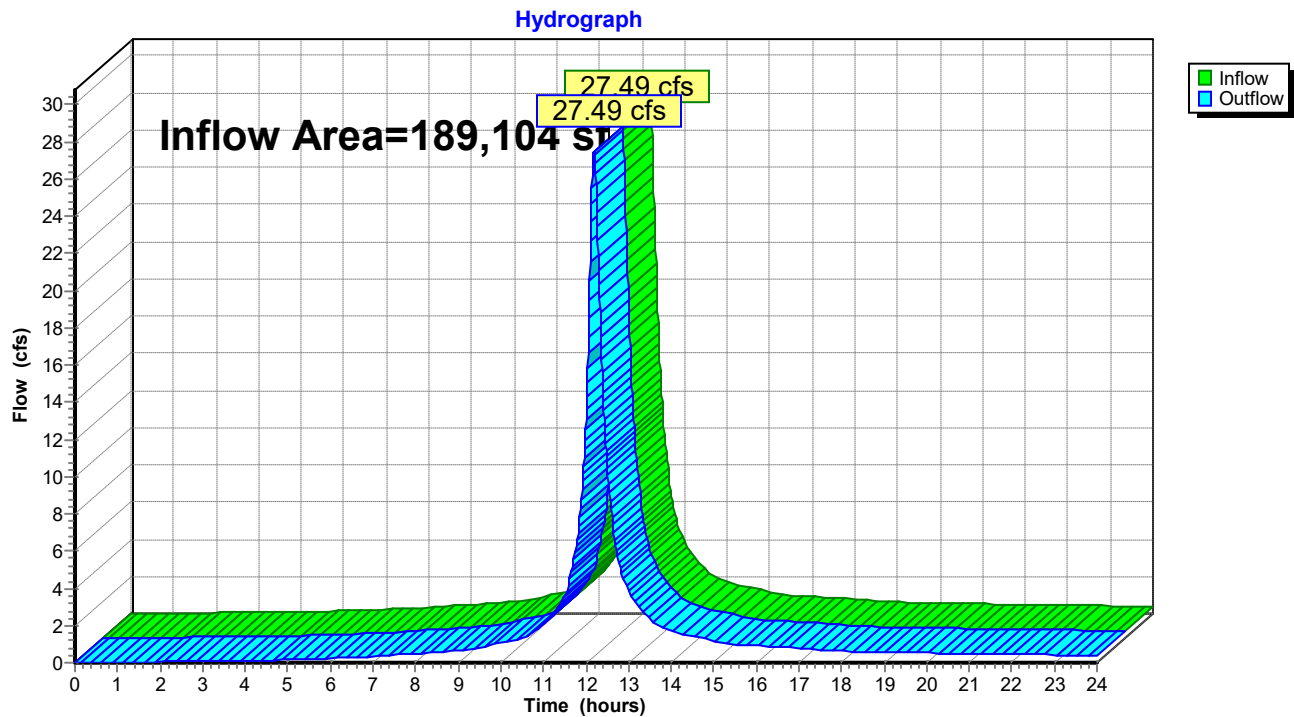


### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 7.07" for 100-Year-2020 event  
 Inflow = 27.49 cfs @ 12.19 hrs, Volume= 111,361 cf  
 Outflow = 27.49 cfs @ 12.19 hrs, Volume= 111,361 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300E: EX INLET 3

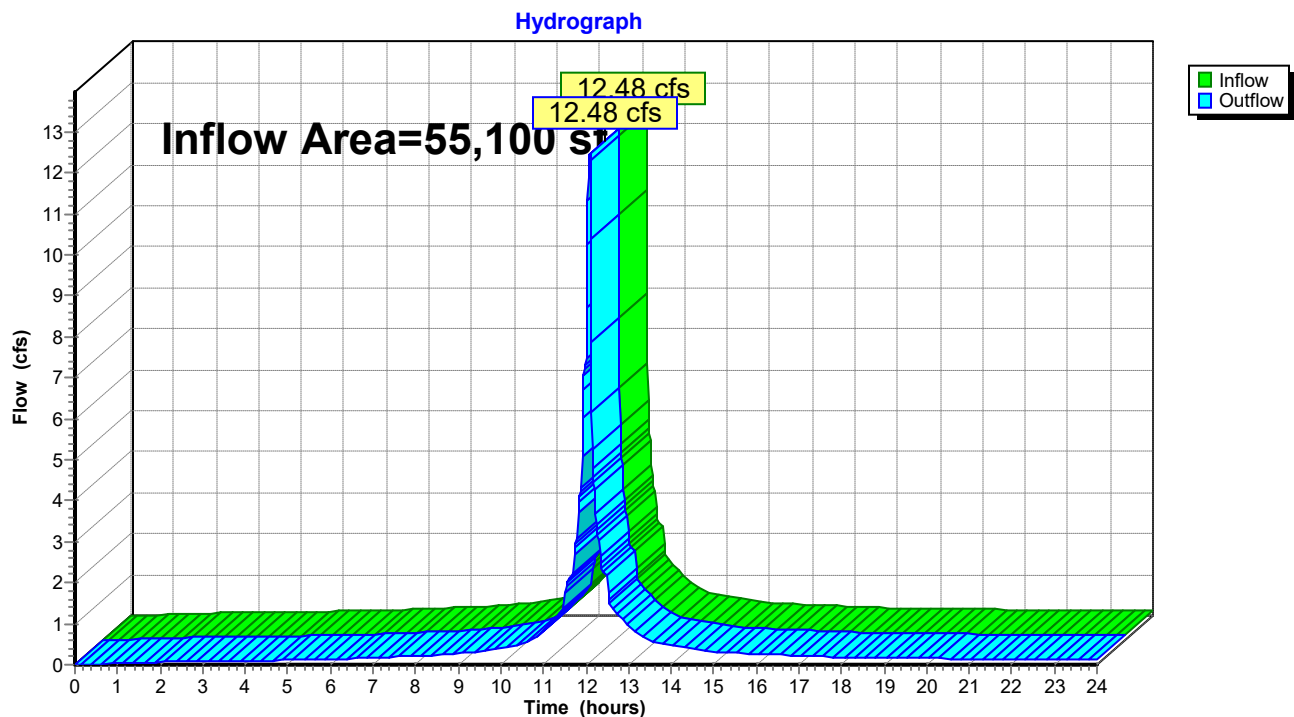


### Summary for Reach 400E: TENNIS COURTS

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 7.88" for 100-Year-2020 event  
 Inflow = 12.48 cfs @ 12.10 hrs, Volume= 36,191 cf  
 Outflow = 12.48 cfs @ 12.10 hrs, Volume= 36,191 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400E: TENNIS COURTS

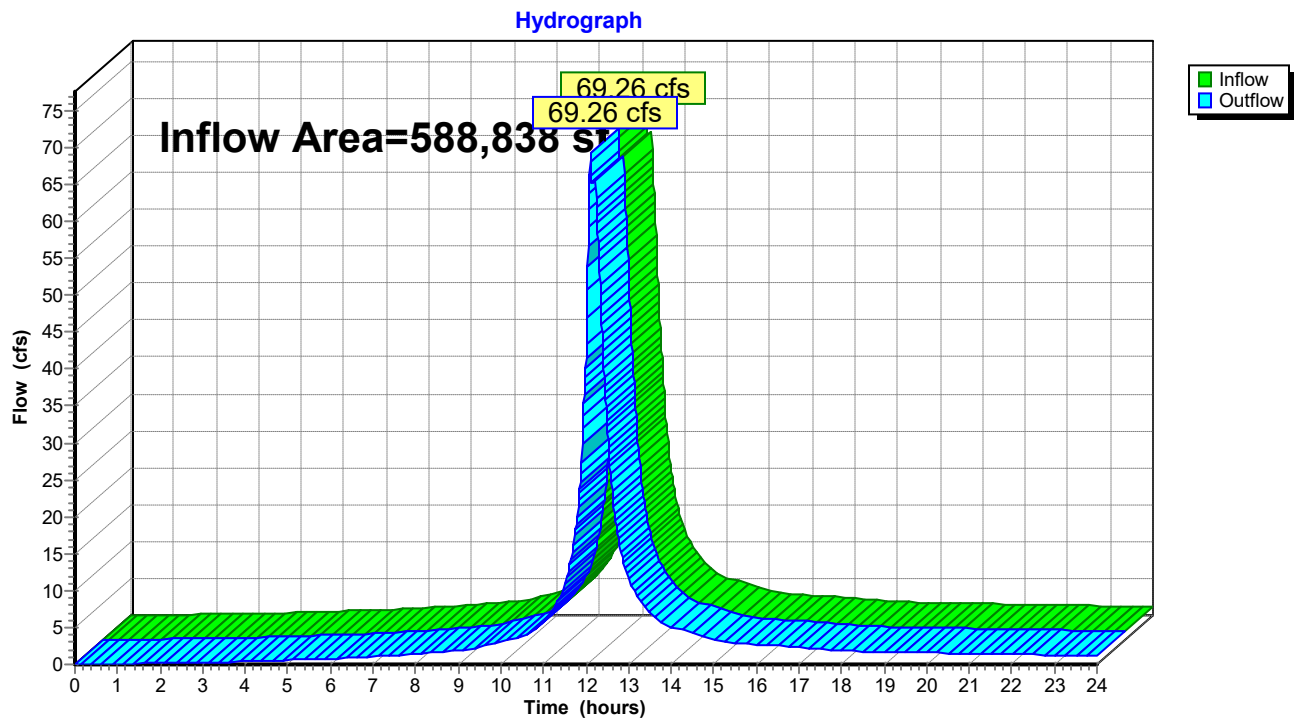


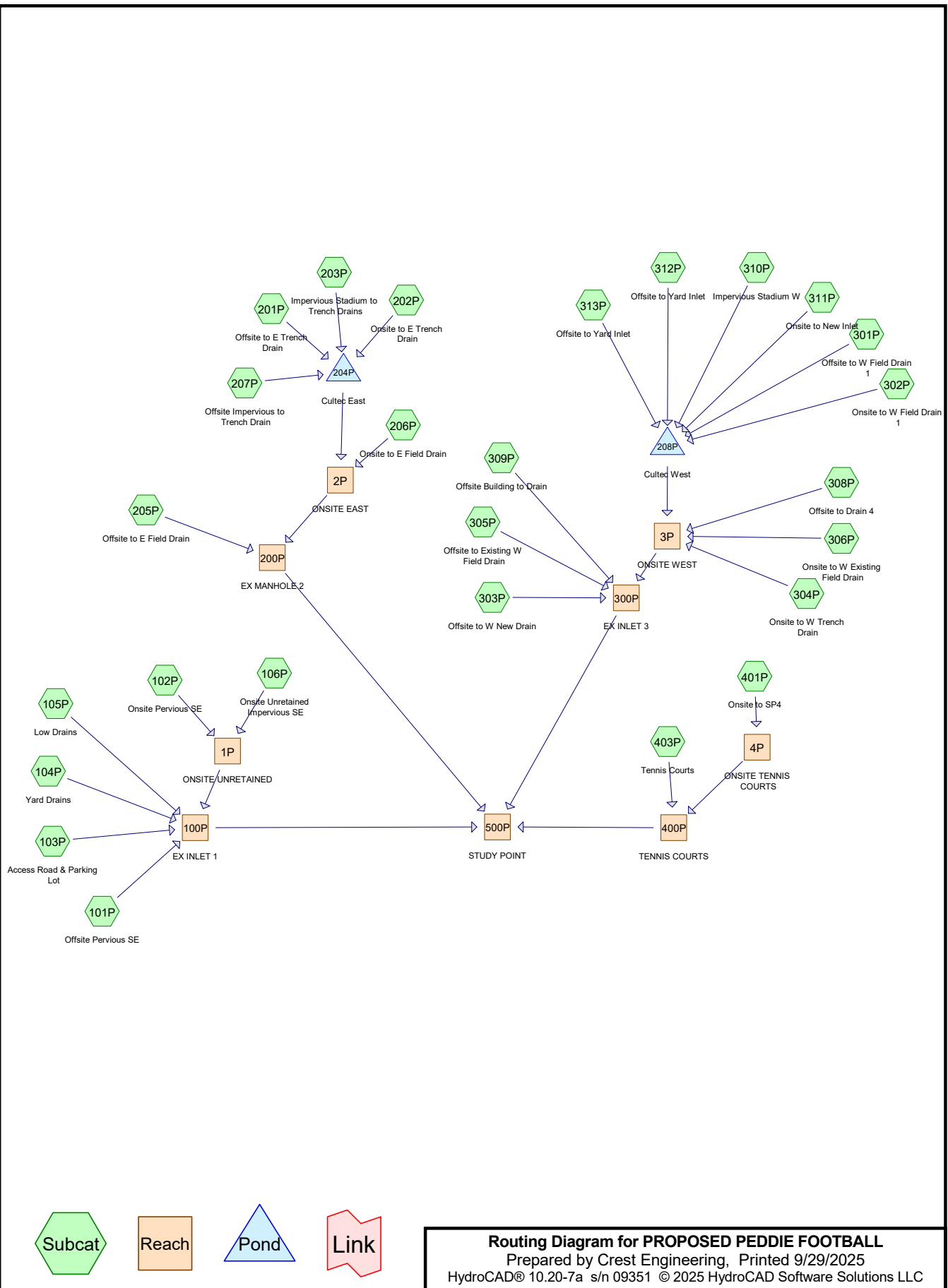
### Summary for Reach 500E: STUDY POINT

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 6.66" for 100-Year-2020 event  
 Inflow = 69.26 cfs @ 12.11 hrs, Volume= 326,583 cf  
 Outflow = 69.26 cfs @ 12.11 hrs, Volume= 326,583 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500E: STUDY POINT







## PROPOSED PEDDIE FOOTBALL

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### Rainfall Events Listing (selected events)

| Event# | Event Name    | Storm Type | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC | P2 (inches) |
|--------|---------------|------------|-------|---------|------------------|-----|----------------|-----|-------------|
| 1      | 2-Year-2020   | NOAA 24-hr | C     | Default | 24.00            | 1   | 3.34           | 2   | 3.34        |
| 2      | 10-Year-2020  | NOAA 24-hr | C     | Default | 24.00            | 1   | 5.11           | 2   | 3.34        |
| 3      | 100-Year-2020 | NOAA 24-hr | C     | Default | 24.00            | 1   | 8.66           | 2   | 3.34        |

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>0.32"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=0.22 cfs 1,884 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>0.32"  
Flow Length=186' Tc=10.1 min CN=56 Runoff=0.04 cfs 253 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>2.58"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=2.33 cfs 6,265 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.14"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.00 cfs 51 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.26"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=0.03 cfs 288 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=0.35 cfs 1,012 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=0.50 cfs 1,576 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.14 cfs 350 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>3.11"  
Flow Length=100' Slope=0.0050 '/' Tc=2.1 min CN=98 Runoff=7.20 cfs 20,882 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>2.20"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=4.92 cfs 21,906 cf

**Subcatchment 206P: Onsite to E Field Drain** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>2.29"  
Flow Length=504' Tc=12.2 min UI Adjusted CN=90 Runoff=0.37 cfs 1,314 cf

**Subcatchment 207P: Offsite Impervious to** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.27 cfs 789 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>1.79"  
Flow Length=686' Tc=18.0 min CN=84 Runoff=2.07 cfs 8,426 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>1.95"  
Flow Length=62' Slope=0.0100 '/' Tc=8.6 min UI Adjusted CN=86 Runoff=0.35 cfs 1,055 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>1.79"  
Flow Length=654' Tc=13.0 min CN=84 Runoff=1.10 cfs 3,888 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=370' Tc=9.6 min CN=84 Runoff=0.09 cfs 281 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Subcatchment 305P: Offsite to Existing W** Runoff Area=13,621 sf 2.35% Impervious Runoff Depth>1.79"  
Flow Length=467' Tc=13.0 min CN=84 Runoff=0.58 cfs 2,036 cf

**Subcatchment 306P: Onsite to W Existing** Runoff Area=425 sf 0.00% Impervious Runoff Depth>1.80"  
Flow Length=32' Slope=0.0100 '/' Tc=5.1 min CN=84 Runoff=0.02 cfs 64 cf

**Subcatchment 308P: Offsite to Drain 4** Runoff Area=1,297 sf 38.55% Impervious Runoff Depth>2.21"  
Flow Length=22' Slope=0.0100 '/' Tc=1.7 min CN=89 Runoff=0.10 cfs 239 cf

**Subcatchment 309P: Offsite Building to** Runoff Area=8,251 sf 81.26% Impervious Runoff Depth>2.78"  
Flow Length=168' Tc=4.5 min CN=95 Runoff=0.67 cfs 1,911 cf

**Subcatchment 310P: Impervious Stadium** Runoff Area=81,430 sf 98.43% Impervious Runoff Depth>3.10"  
Flow Length=100' Slope=0.0050 '/' Tc=10.9 min CN=98 Runoff=5.57 cfs 21,040 cf

**Subcatchment 311P: Onsite to New Inlet** Runoff Area=4,364 sf 24.15% Impervious Runoff Depth>1.95"  
Flow Length=100' Slope=0.0050 '/' Tc=10.9 min UI Adjusted CN=86 Runoff=0.21 cfs 710 cf

**Subcatchment 312P: Offsite to Yard Inlet** Runoff Area=3,440 sf 20.73% Impervious Runoff Depth>1.87"  
Flow Length=48' Tc=5.6 min UI Adjusted CN=85 Runoff=0.20 cfs 537 cf

**Subcatchment 313P: Offsite to Yard Inlet** Runoff Area=7,395 sf 51.36% Impervious Runoff Depth>2.39"  
Flow Length=46' Tc=5.3 min CN=91 Runoff=0.53 cfs 1,471 cf

**Subcatchment 401P: Onsite to SP4** Runoff Area=3,978 sf 83.13% Impervious Runoff Depth>2.89"  
Flow Length=22' Slope=0.1100 '/' Tc=0.2 min CN=96 Runoff=0.35 cfs 957 cf

**Subcatchment 403P: Tennis Courts** Runoff Area=25,671 sf 100.00% Impervious Runoff Depth>3.11"  
Flow Length=116' Slope=0.0100 '/' Tc=1.7 min CN=98 Runoff=2.29 cfs 6,645 cf

**Reach 1P: ONSITE UNRETAINED** Inflow=0.35 cfs 1,265 cf  
Outflow=0.35 cfs 1,265 cf

**Reach 2P: ONSITE EAST** Inflow=3.23 cfs 23,948 cf  
Outflow=3.23 cfs 23,948 cf

**Reach 3P: ONSITE WEST** Inflow=3.80 cfs 33,806 cf  
Outflow=3.80 cfs 33,806 cf

**Reach 4P: ONSITE TENNIS COURTS** Inflow=0.35 cfs 957 cf  
Outflow=0.35 cfs 957 cf

**Reach 100P: EX INLET 1** Inflow=2.71 cfs 9,754 cf  
Outflow=2.71 cfs 9,754 cf

**Reach 200P: EX MANHOLE 2** Inflow=7.98 cfs 45,853 cf  
Outflow=7.98 cfs 45,853 cf

**Reach 300P: EX INLET 3** Inflow=5.52 cfs 41,641 cf  
Outflow=5.52 cfs 41,641 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Reach 400P: TENNIS COURTS**

Inflow=2.64 cfs 7,602 cf

Outflow=2.64 cfs 7,602 cf

**Reach 500P: STUDY POINT**

Inflow=15.65 cfs 104,850 cf

Outflow=15.65 cfs 104,850 cf

**Pond 204P: Cultec East**

Peak Elev=100.27' Storage=7,198 cf Inflow=7.95 cfs 23,598 cf

Outflow=2.86 cfs 22,634 cf

**Pond 208P: Cultec West**

Peak Elev=99.68' Storage=4,802 cf Inflow=8.32 cfs 33,240 cf

Outflow=3.75 cfs 33,222 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 0.22 cfs @ 12.41 hrs, Volume= 1,884 cf, Depth> 0.32"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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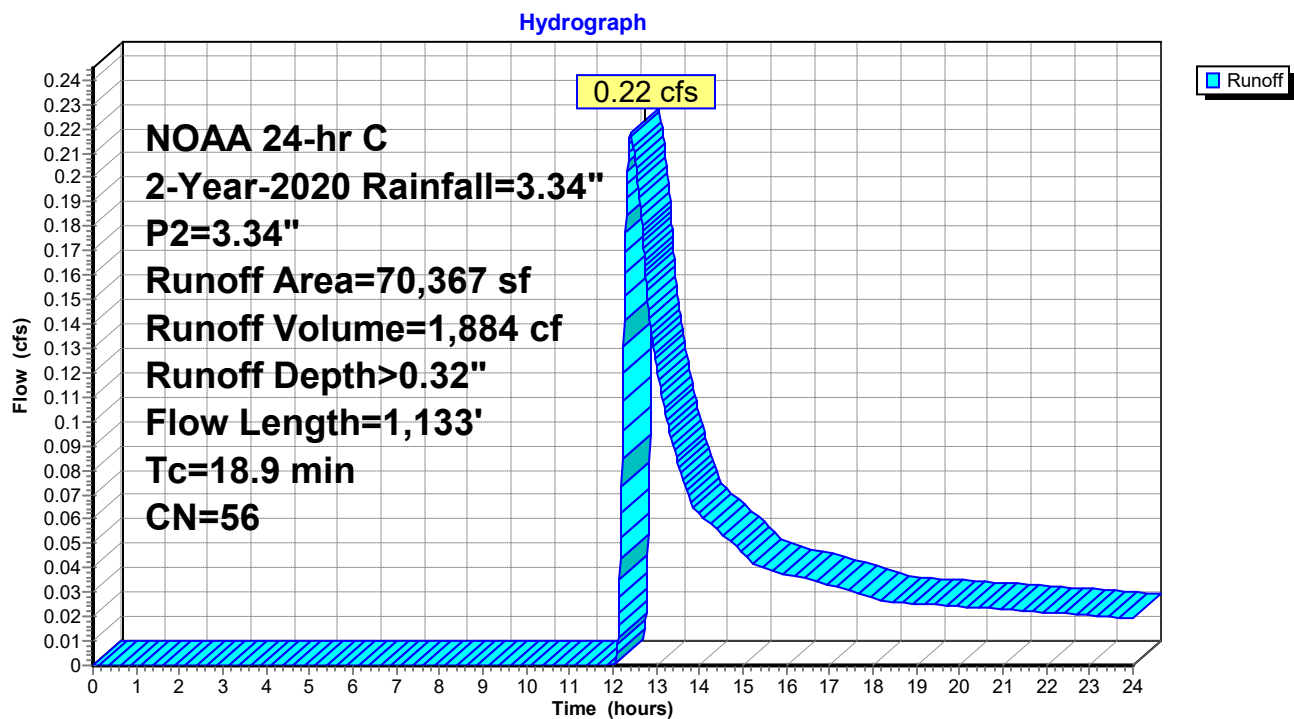
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 101P: Offsite Pervious SE



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

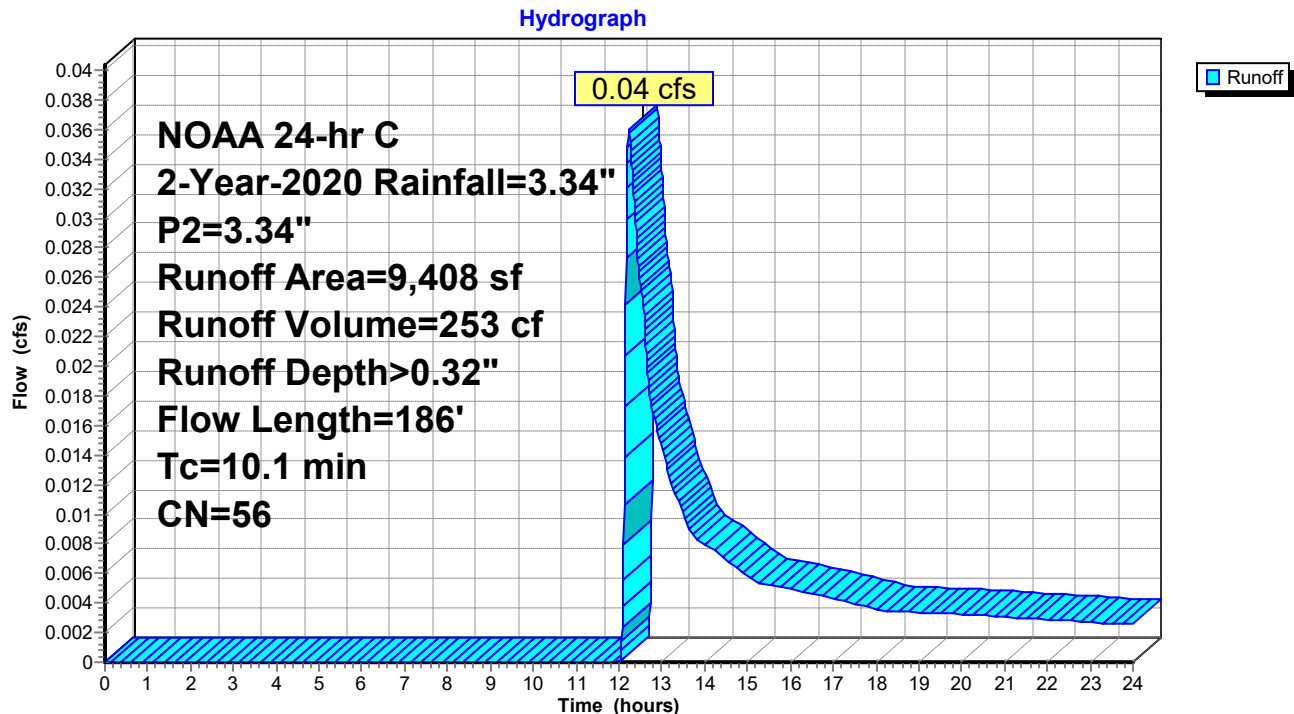
Runoff = 0.04 cfs @ 12.24 hrs, Volume= 253 cf, Depth> 0.32"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 10.1     | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

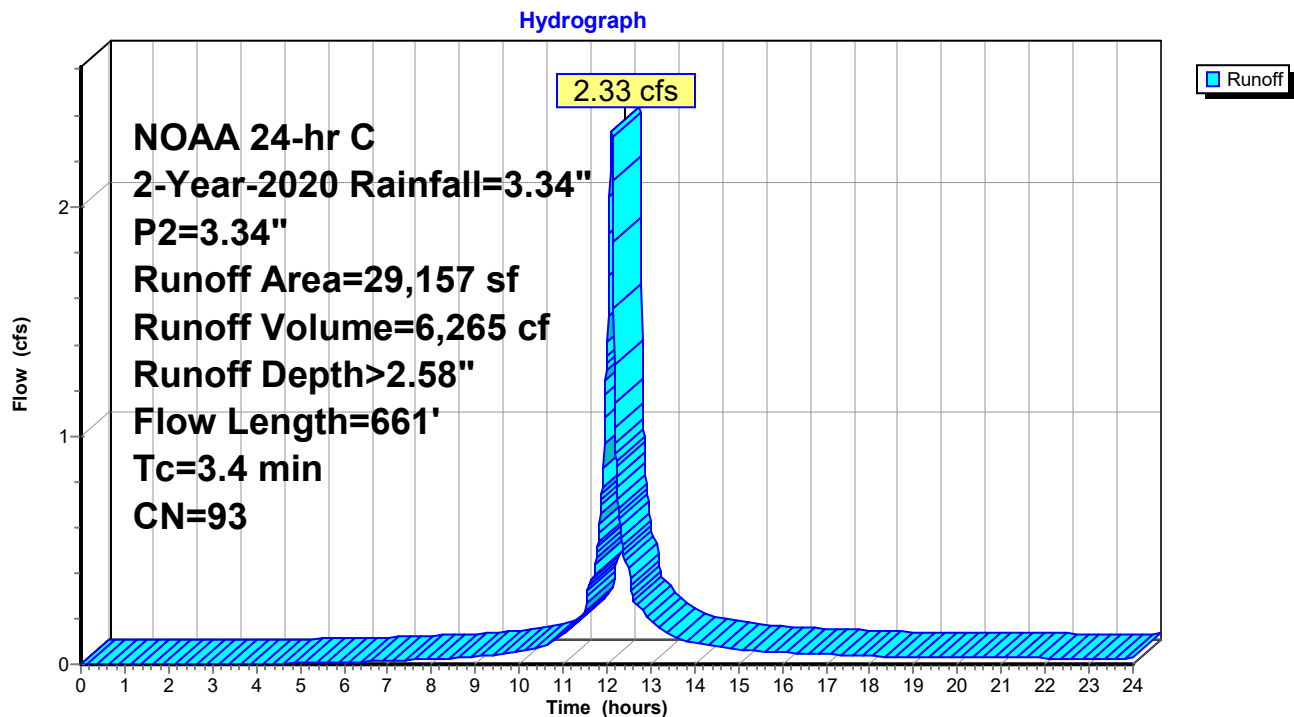
Runoff = 2.33 cfs @ 12.11 hrs, Volume= 6,265 cf, Depth> 2.58"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 104P: Yard Drains**

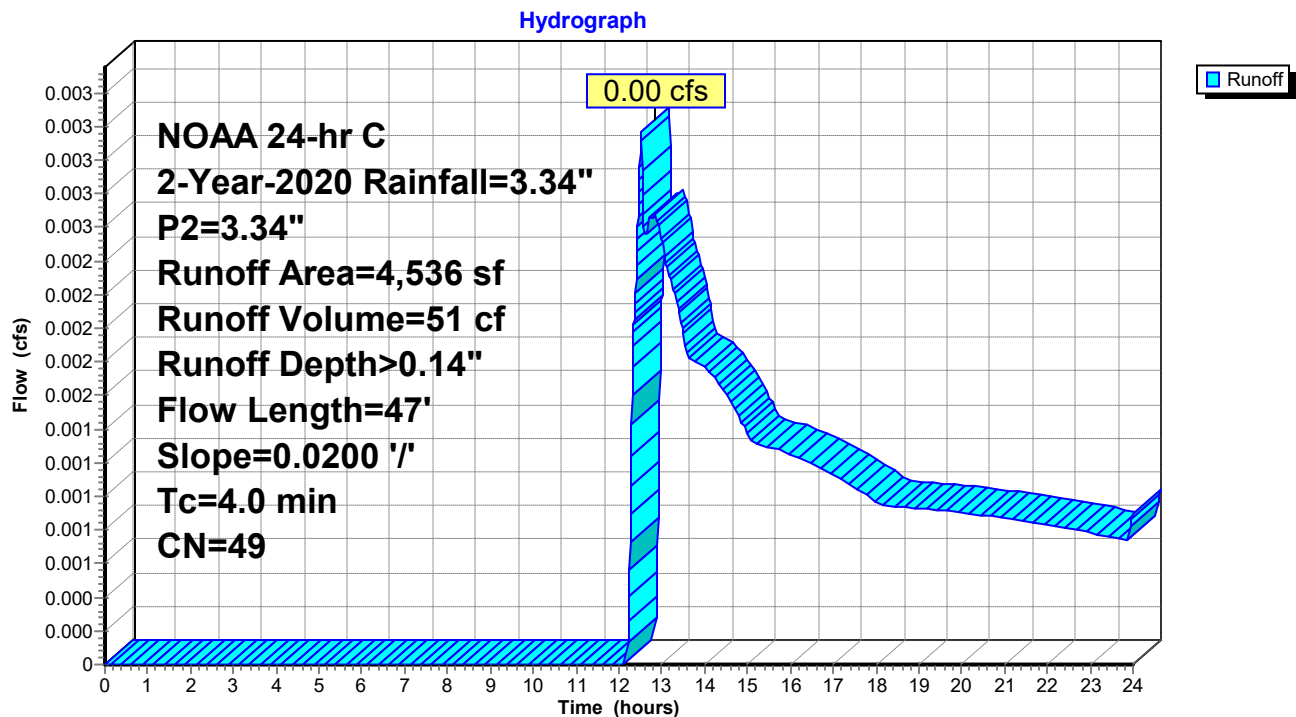
Runoff = 0.00 cfs @ 12.52 hrs, Volume= 51 cf, Depth> 0.14"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 0.03 cfs @ 12.17 hrs, Volume= 288 cf, Depth> 0.26"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

# PROPOSED PEDDIE FOOTBALL

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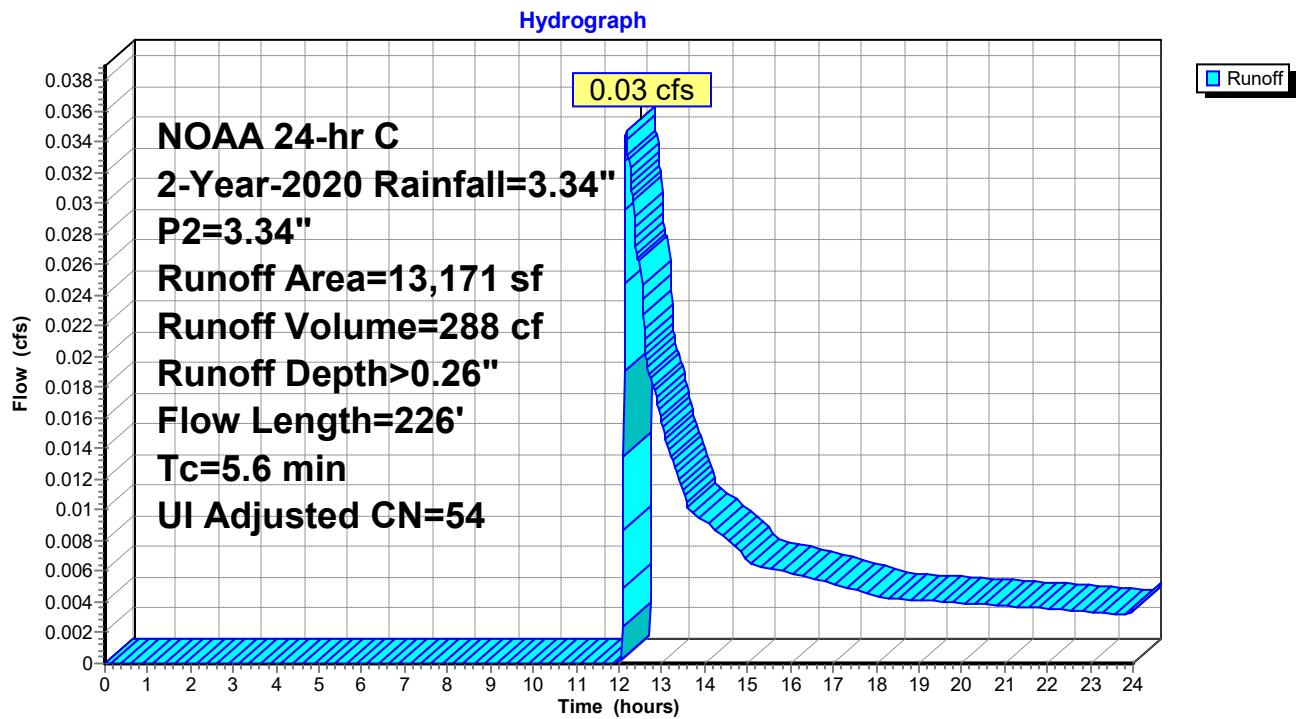
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 105P: Low Drains



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

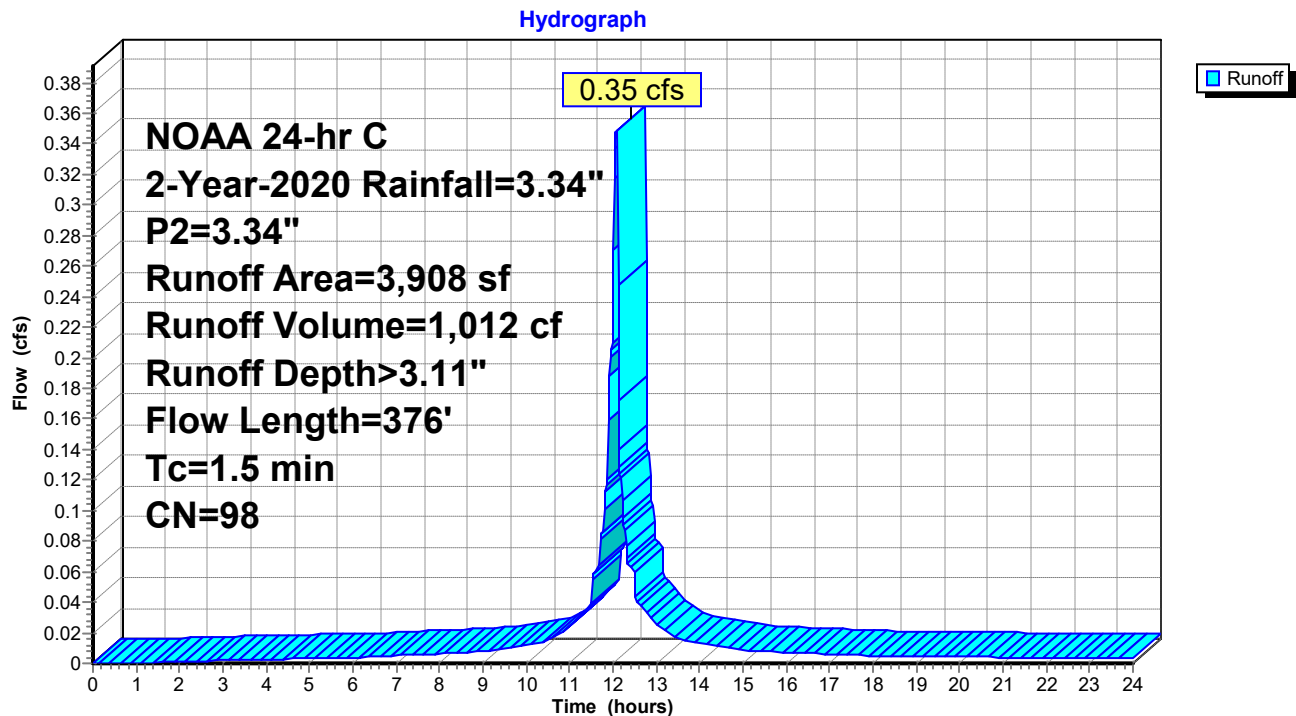
Runoff = 0.35 cfs @ 12.10 hrs, Volume= 1,012 cf, Depth> 3.11"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

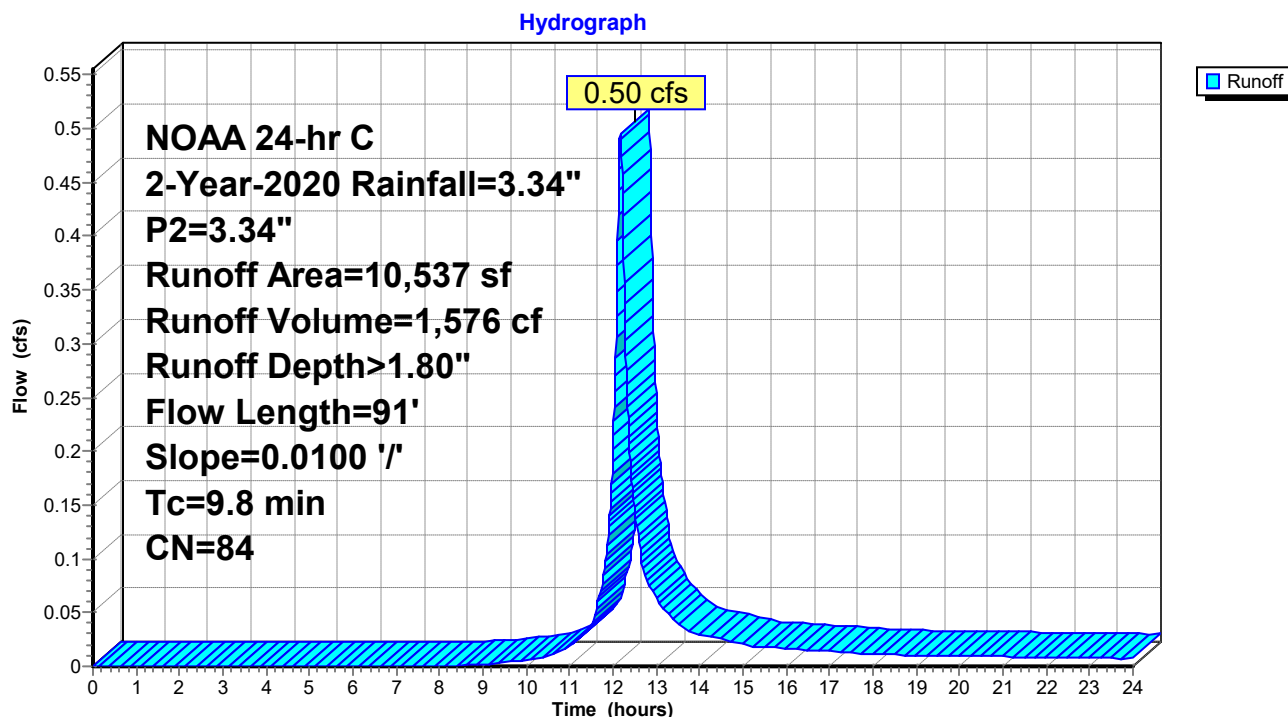
Runoff = 0.50 cfs @ 12.17 hrs, Volume= 1,576 cf, Depth> 1.80"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

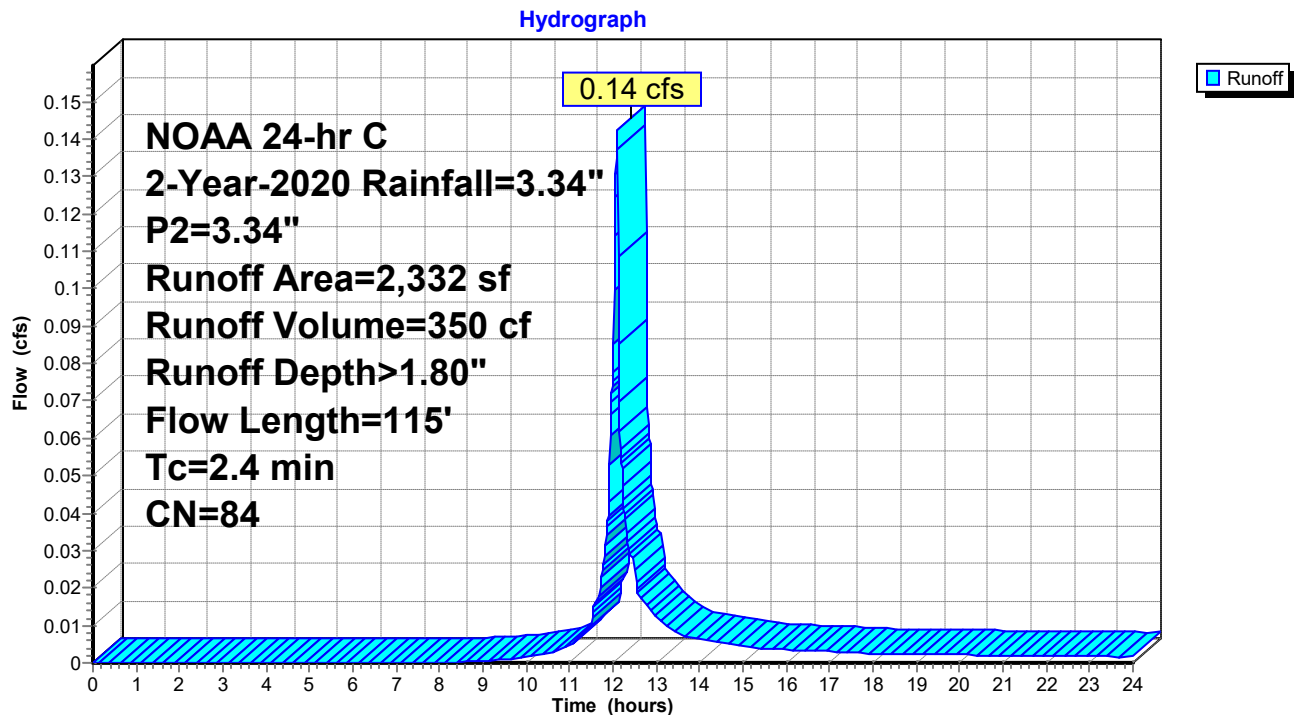
Runoff = 0.14 cfs @ 12.10 hrs, Volume= 350 cf, Depth> 1.80"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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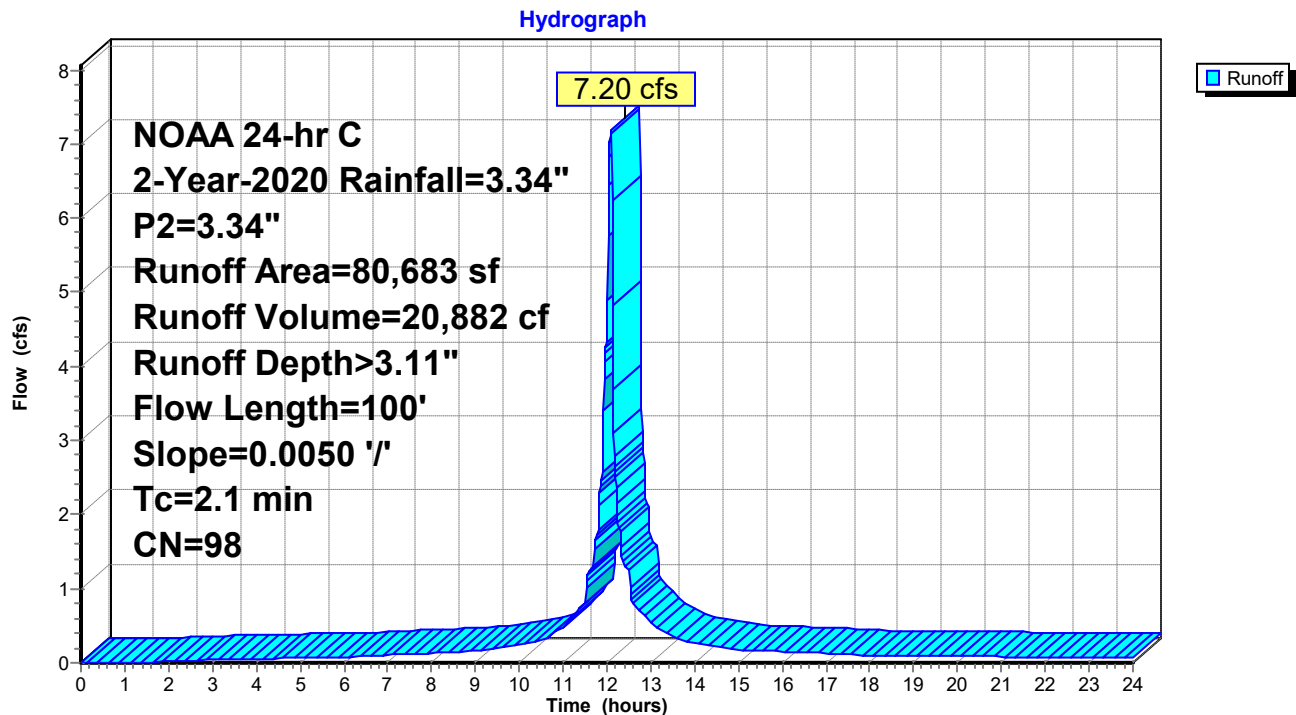
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 7.20 cfs @ 12.10 hrs, Volume= 20,882 cf, Depth> 3.11"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 2.1                                | 100           | 0.0050        | 0.81              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 4.92 cfs @ 12.32 hrs, Volume= 21,906 cf, Depth> 2.20"  
 Routed to Reach 200P : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                |



# PROPOSED PEDDIE FOOTBALL

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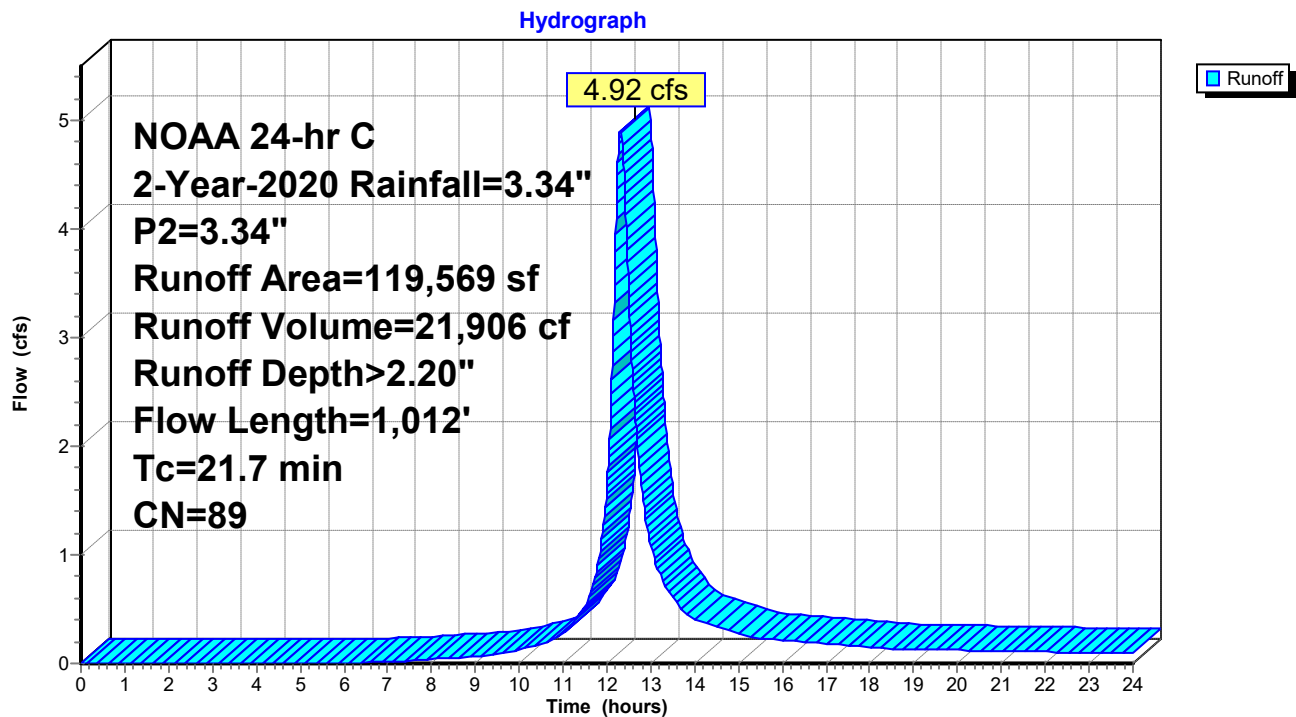
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## Subcatchment 205P: Offsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 0.37 cfs @ 12.20 hrs, Volume= 1,314 cf, Depth> 2.29"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

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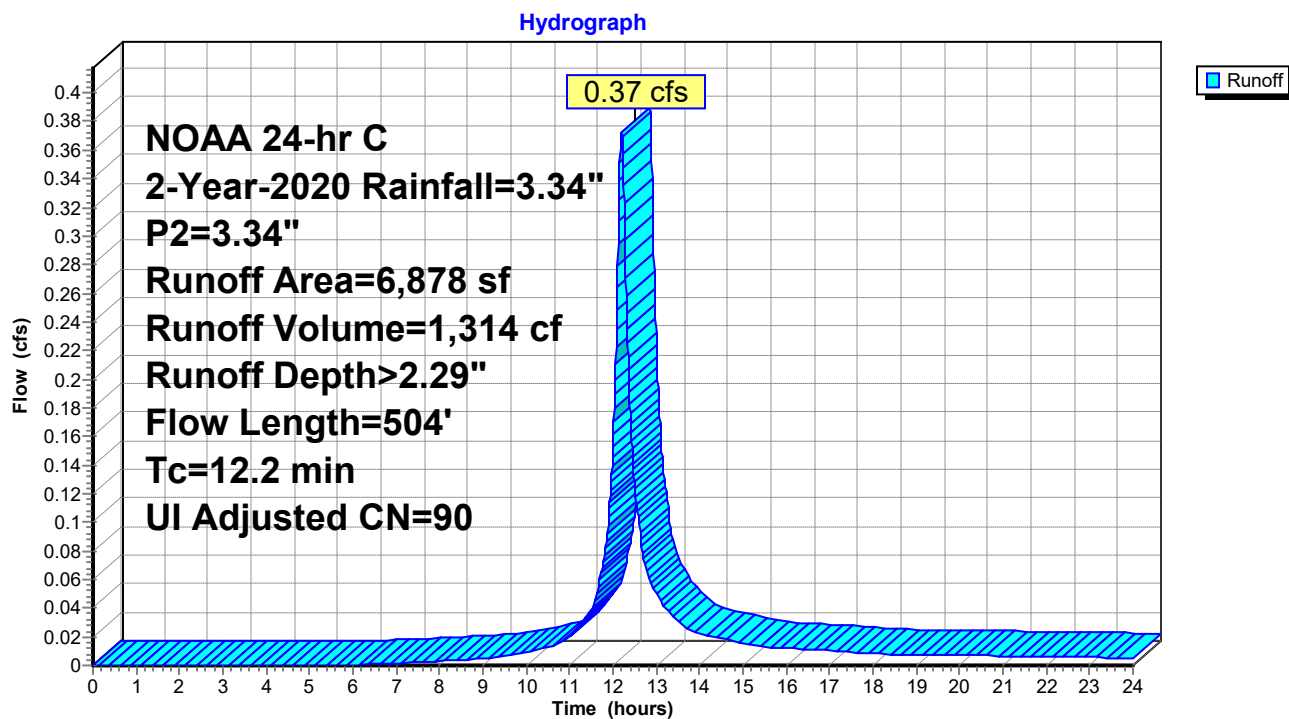
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Subcatchment 206P: Onsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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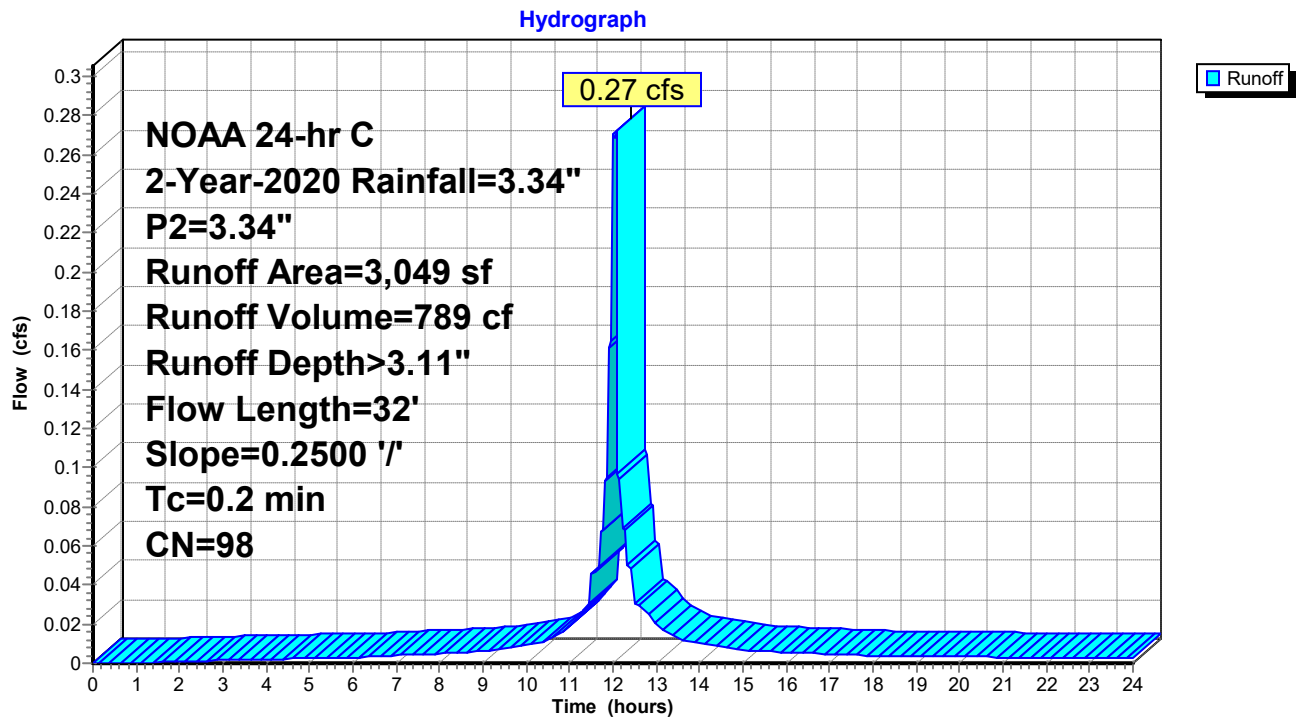
**Summary for Subcatchment 207P: Offsite Impervious to Trench Drain**

Runoff = 0.27 cfs @ 12.09 hrs, Volume= 789 cf, Depth> 3.11"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.2                                | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

**Subcatchment 207P: Offsite Impervious to Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 2.07 cfs @ 12.27 hrs, Volume= 8,426 cf, Depth> 1.79"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 18.0     | 686           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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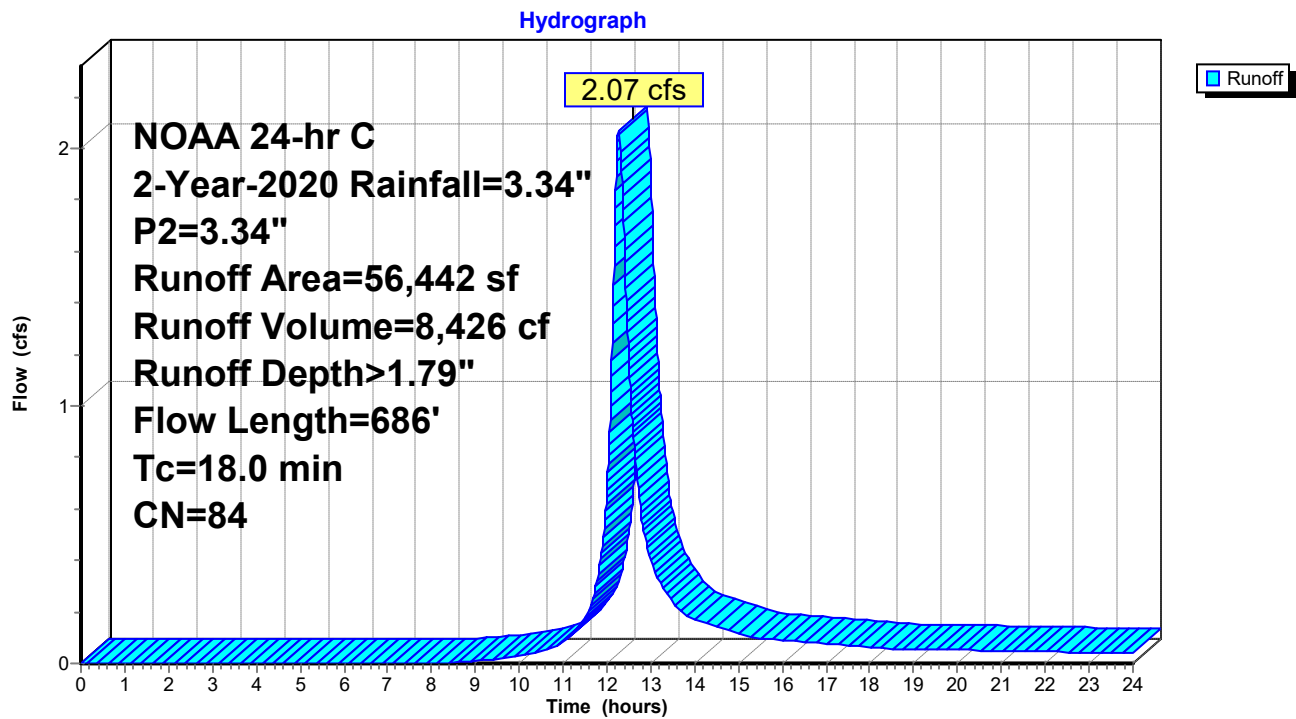
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## Subcatchment 301P: Offsite to W Field Drain 1



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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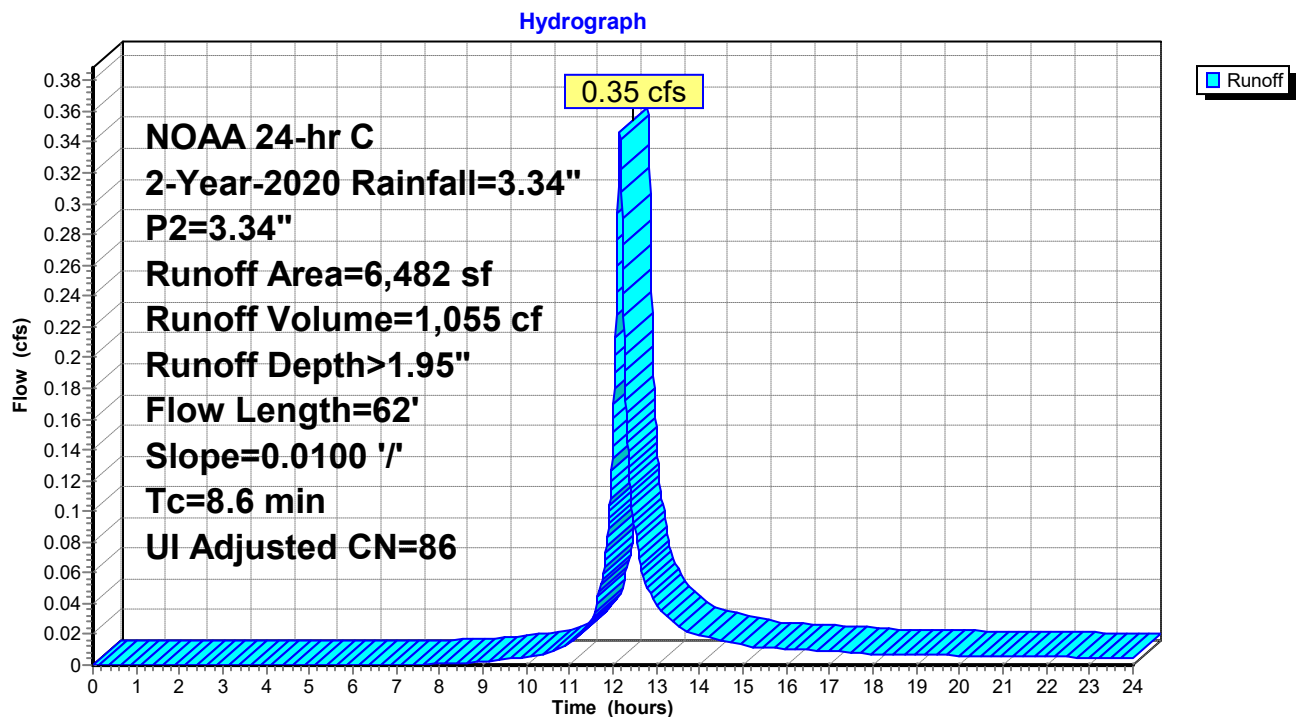
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 0.35 cfs @ 12.16 hrs, Volume= 1,055 cf, Depth> 1.95"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 302P: Onsite to W Field Drain 1**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 1.10 cfs @ 12.21 hrs, Volume= 3,888 cf, Depth> 1.79"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 13.0     | 654           | Total         |                   |                |                                                                                        |



# PROPOSED PEDDIE FOOTBALL

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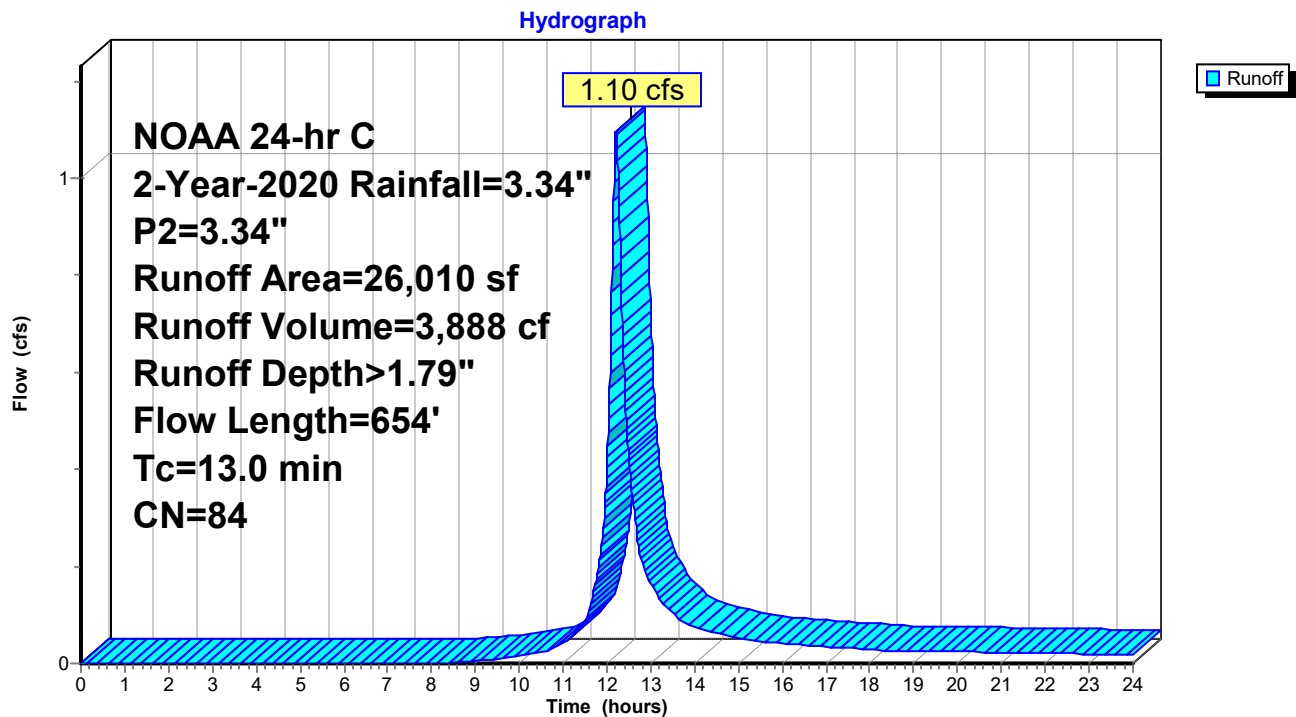
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## Subcatchment 303P: Offsite to W New Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

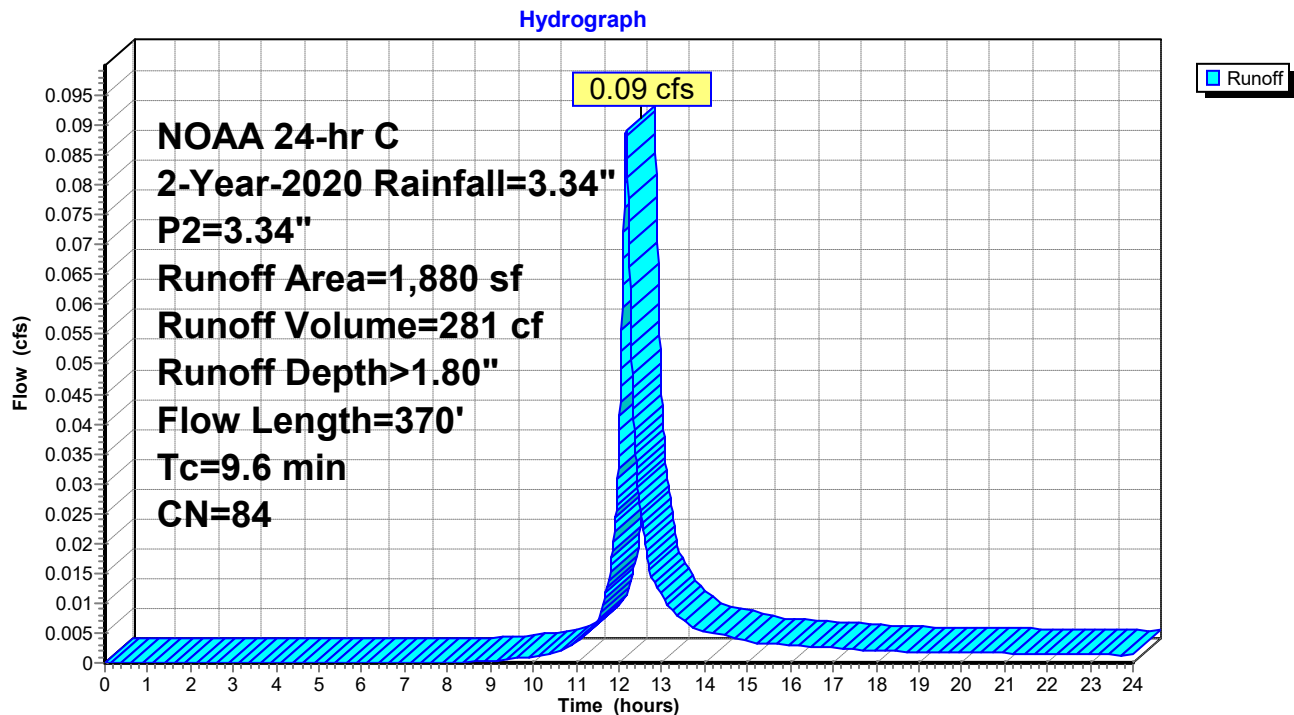
Runoff = 0.09 cfs @ 12.17 hrs, Volume= 281 cf, Depth> 1.80"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.6      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 0.58 cfs @ 12.21 hrs, Volume= 2,036 cf, Depth> 1.79"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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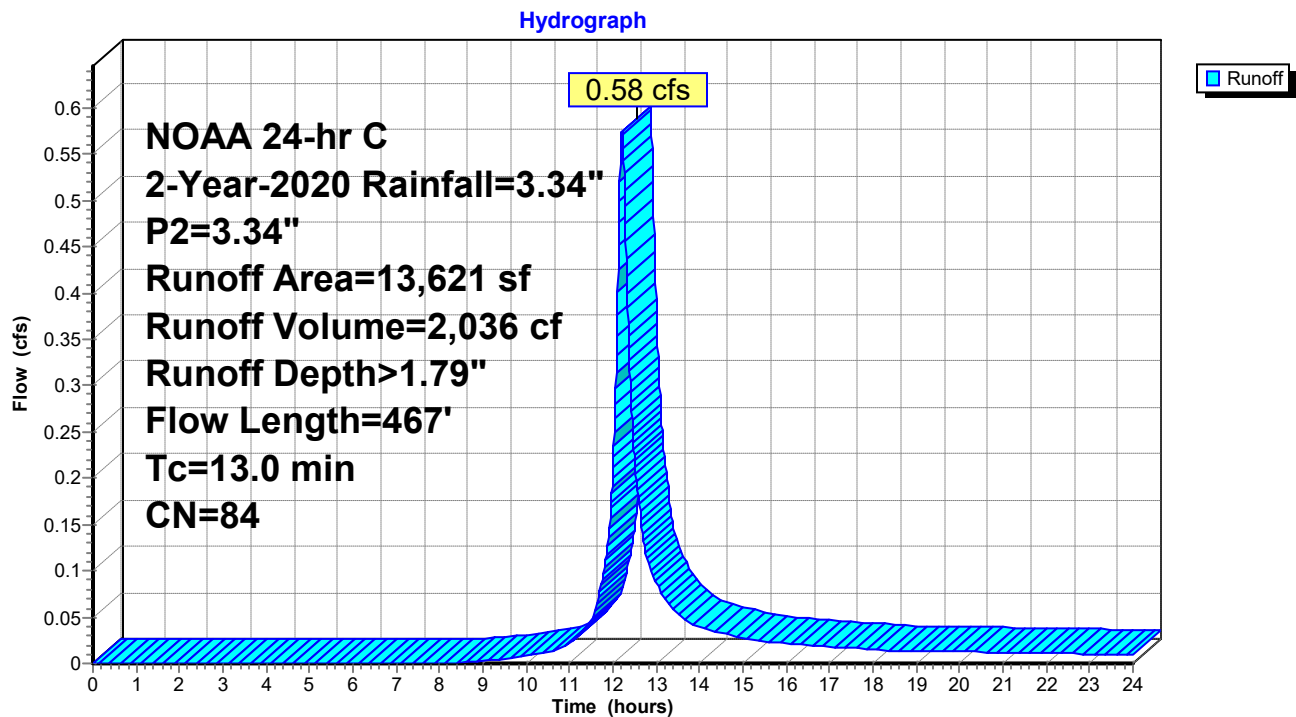
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## Subcatchment 305P: Offsite to Existing W Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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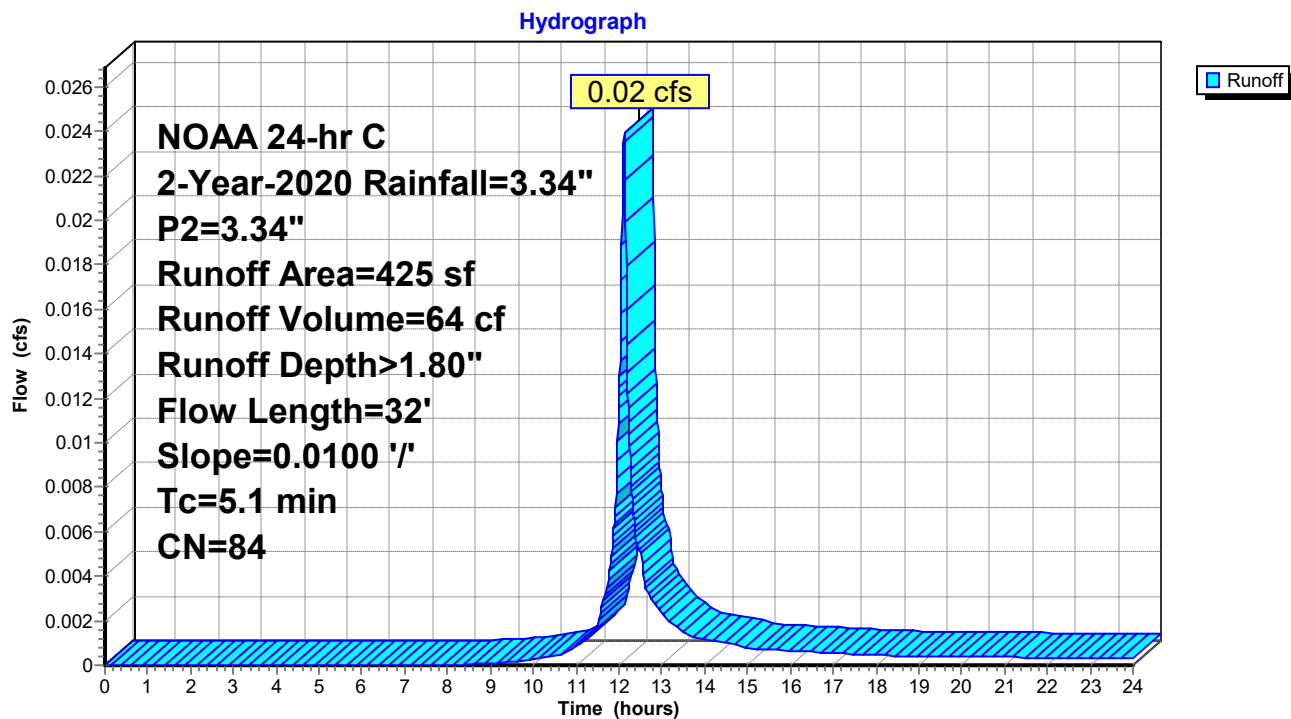
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.02 cfs @ 12.12 hrs, Volume= 64 cf, Depth> 1.80"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 308P: Offsite to Drain 4**

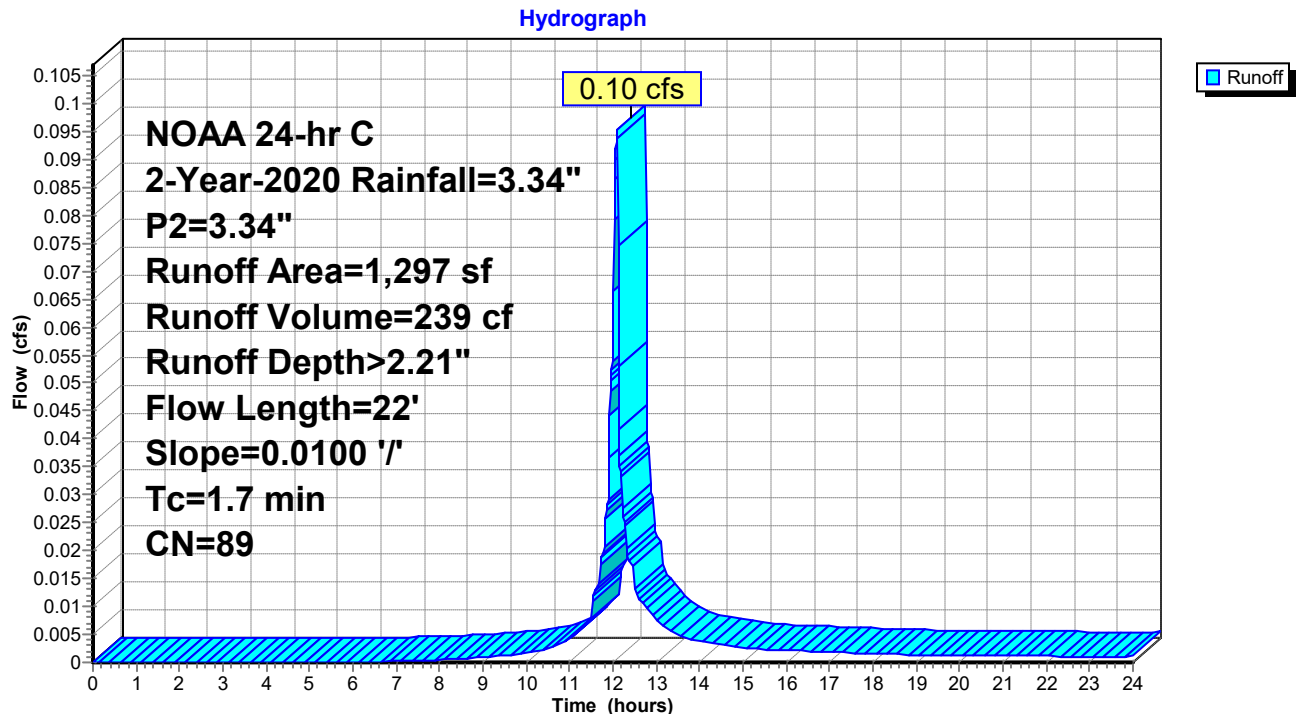
Runoff = 0.10 cfs @ 12.10 hrs, Volume= 239 cf, Depth> 2.21"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.7      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

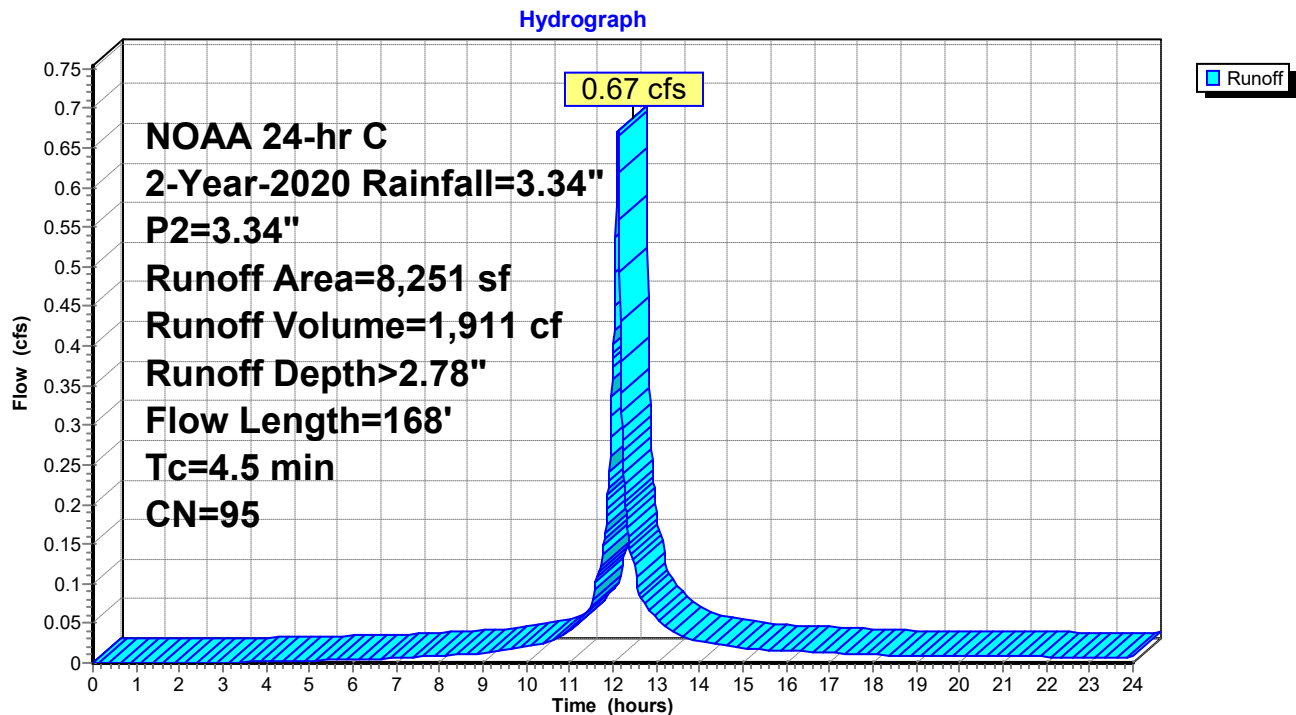
Runoff = 0.67 cfs @ 12.12 hrs, Volume= 1,911 cf, Depth> 2.78"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 310P: Impervious Stadium W**

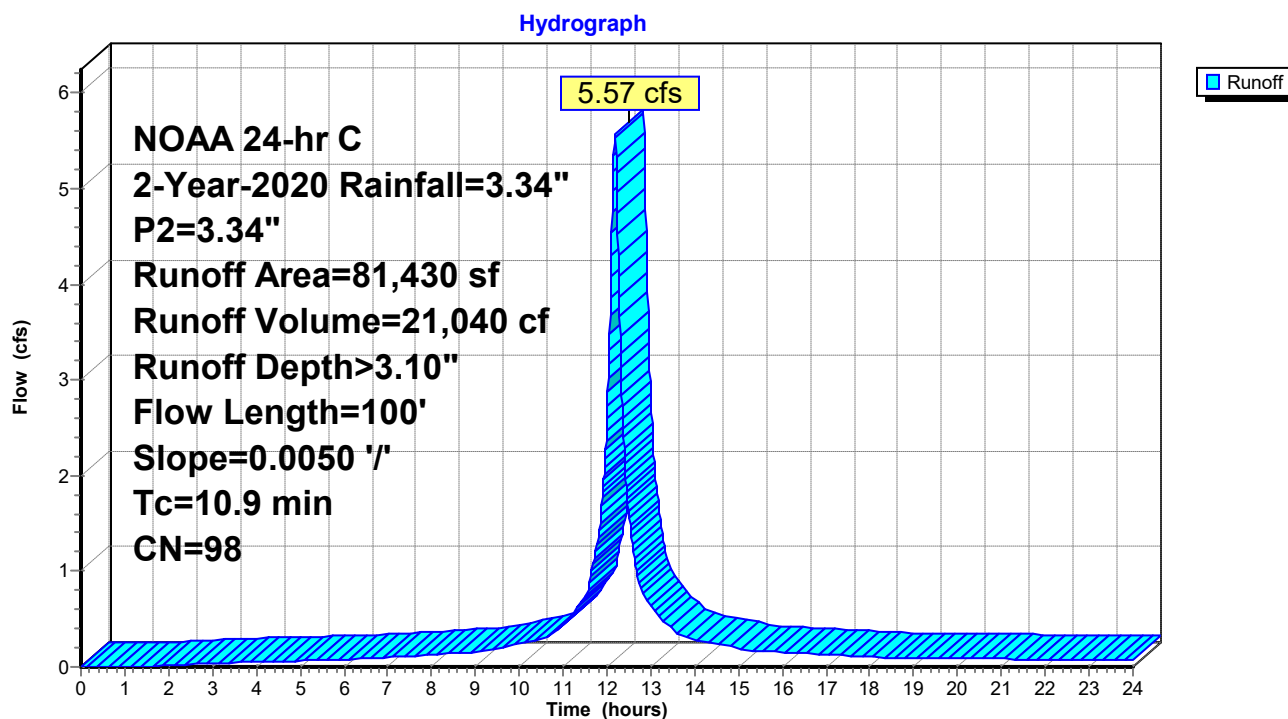
Runoff = 5.57 cfs @ 12.18 hrs, Volume= 21,040 cf, Depth> 3.10"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

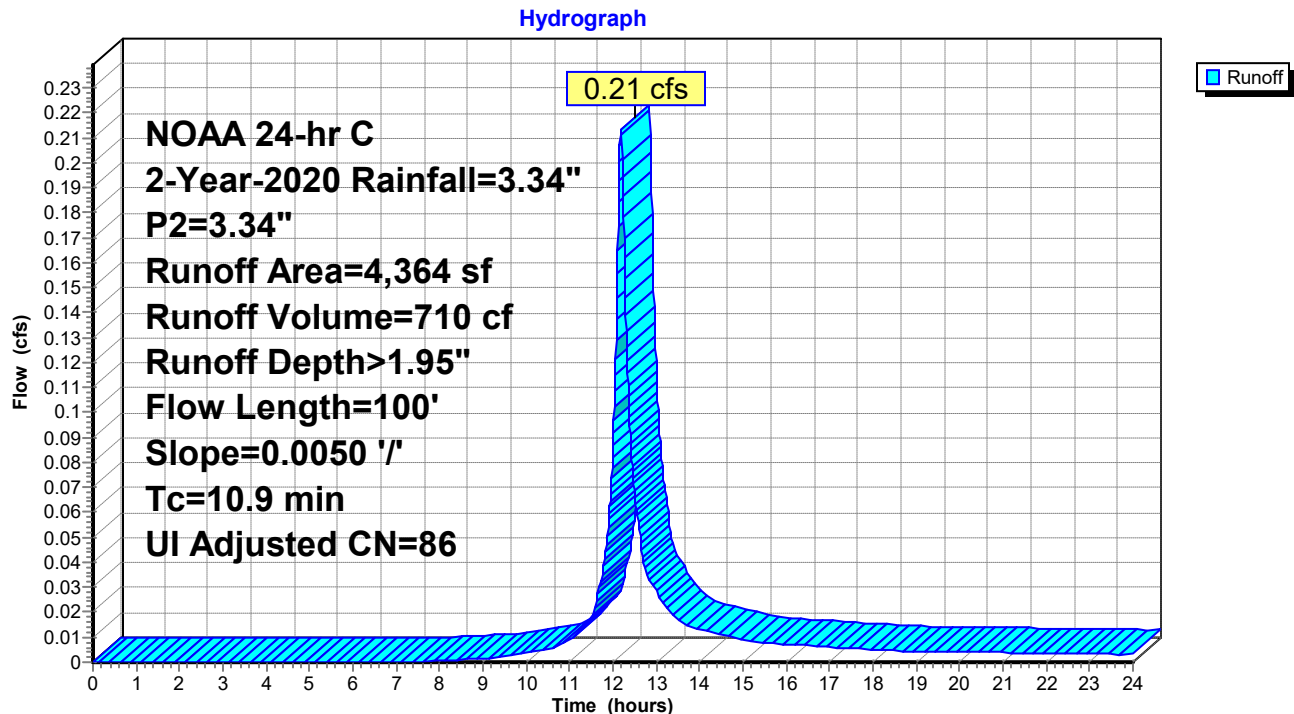
Runoff = 0.21 cfs @ 12.19 hrs, Volume= 710 cf, Depth> 1.95"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

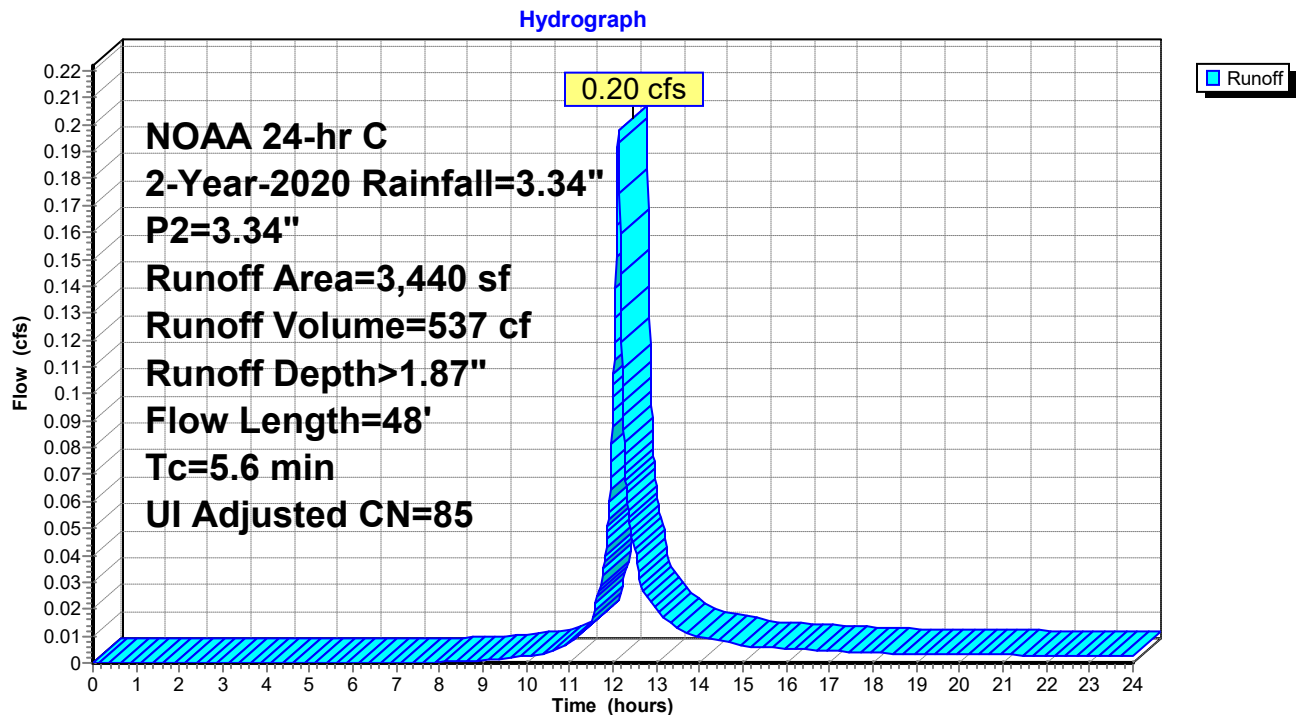
Runoff = 0.20 cfs @ 12.13 hrs, Volume= 537 cf, Depth> 1.87"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.6      | 28            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 5.6      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

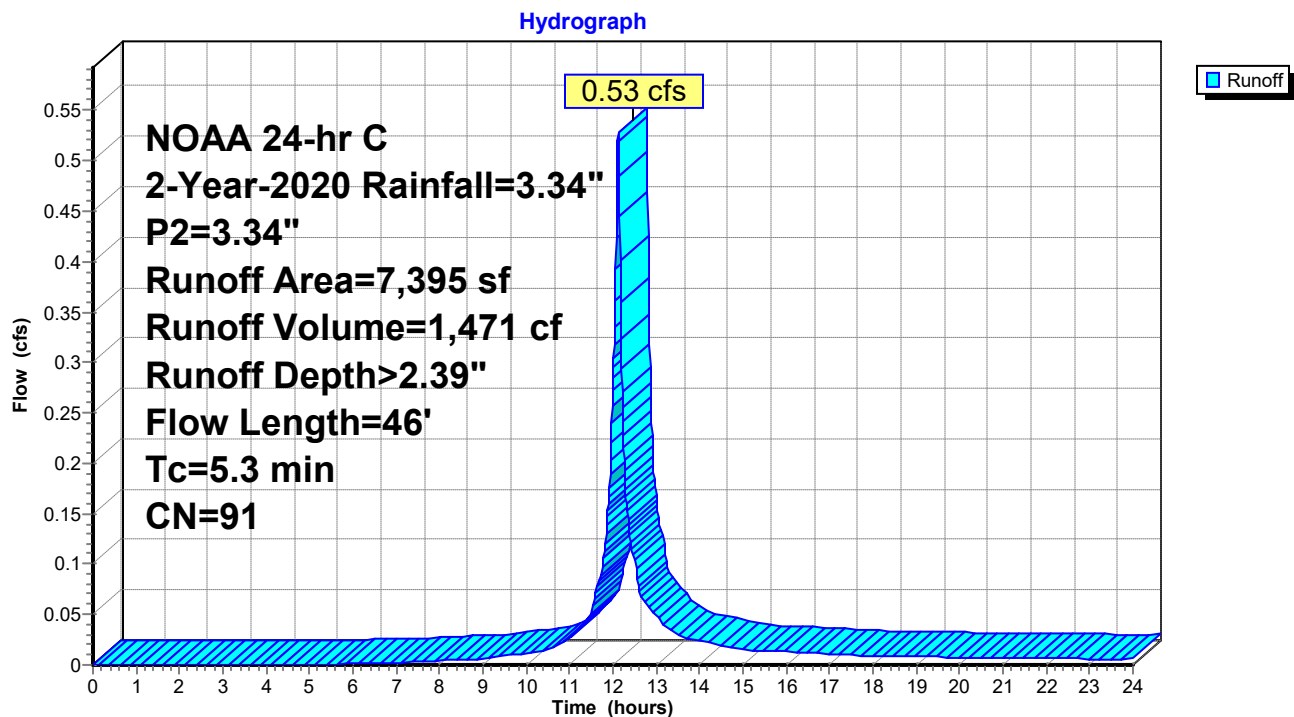
Runoff = 0.53 cfs @ 12.12 hrs, Volume= 1,471 cf, Depth> 2.39"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 4.3      | 26            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"      |
| 5.3      | 46            | Total         |                   |                |                                                                  |

**Subcatchment 313P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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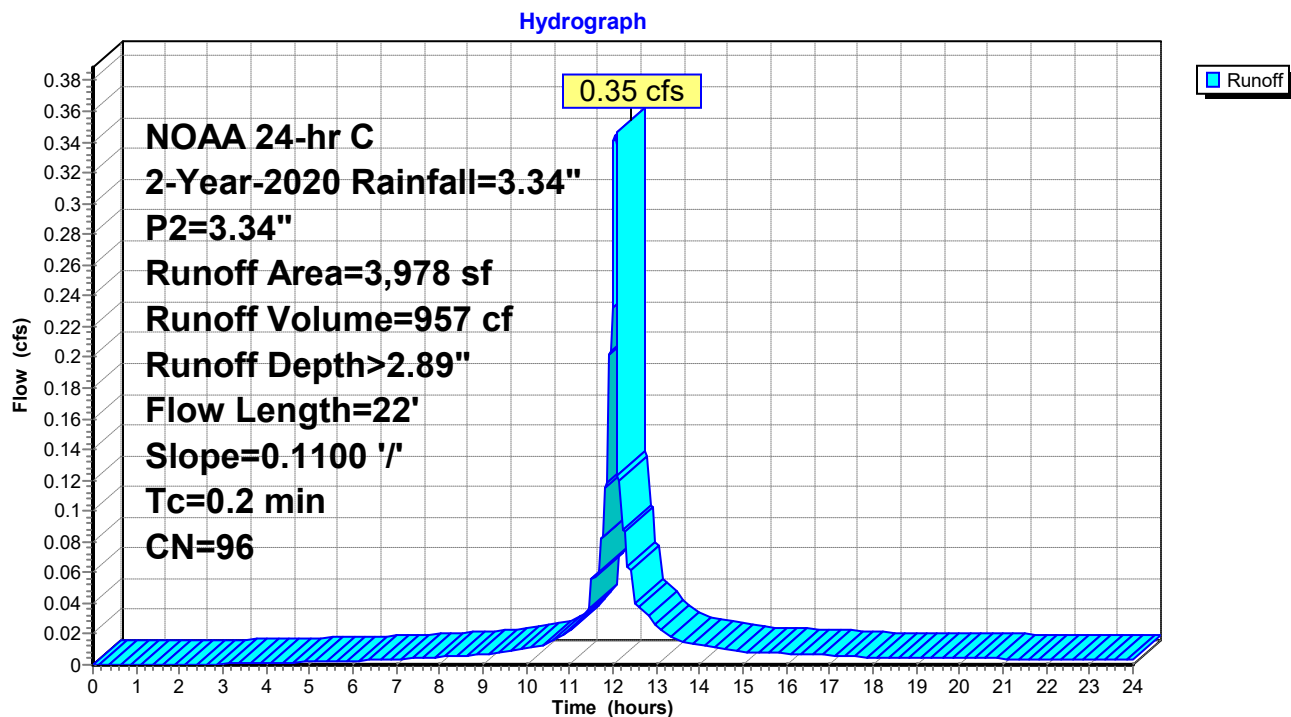
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 0.35 cfs @ 12.09 hrs, Volume= 957 cf, Depth> 2.89"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description            |
|------------------------------------|---------------|---------------|-------------------|----------------|------------------------|
| 0.2                                | 22            | 0.1100        | 2.05              |                | Sheet Flow, Sheet Flow |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                        |

**Subcatchment 401P: Onsite to SP4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Subcatchment 403P: Tennis Courts**

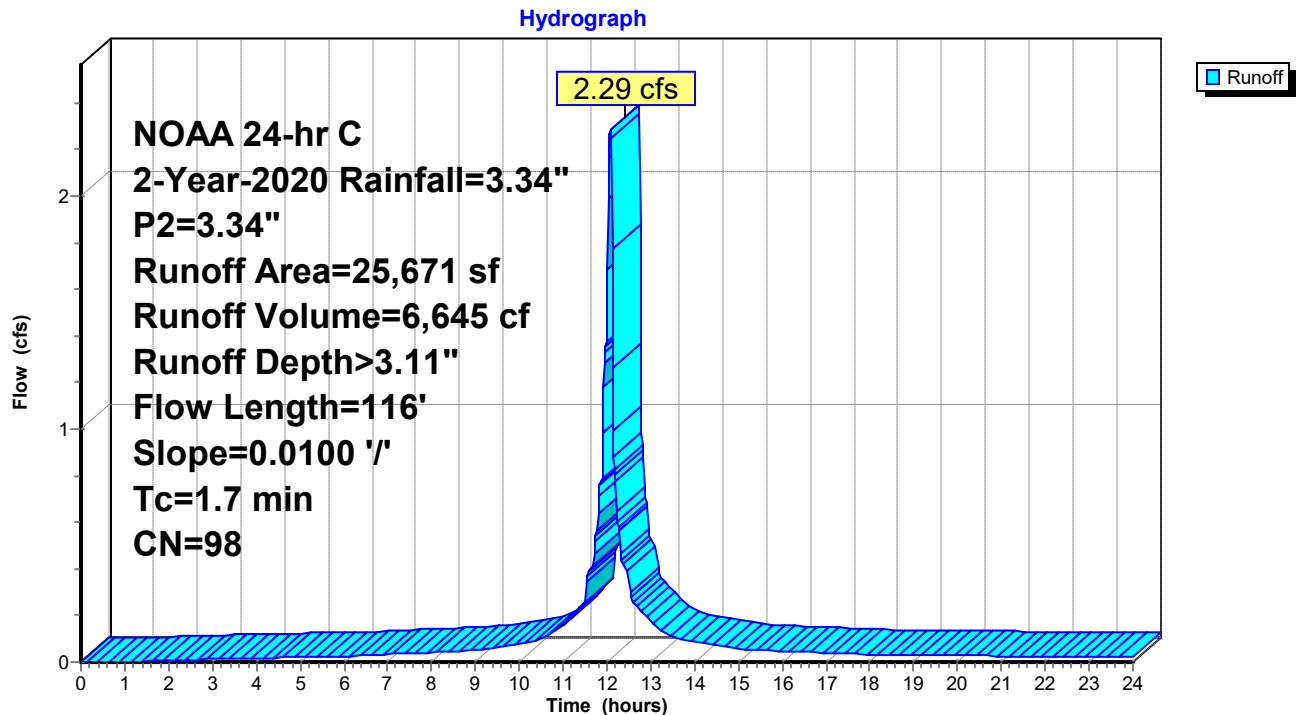
Runoff = 2.29 cfs @ 12.10 hrs, Volume= 6,645 cf, Depth> 3.11"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

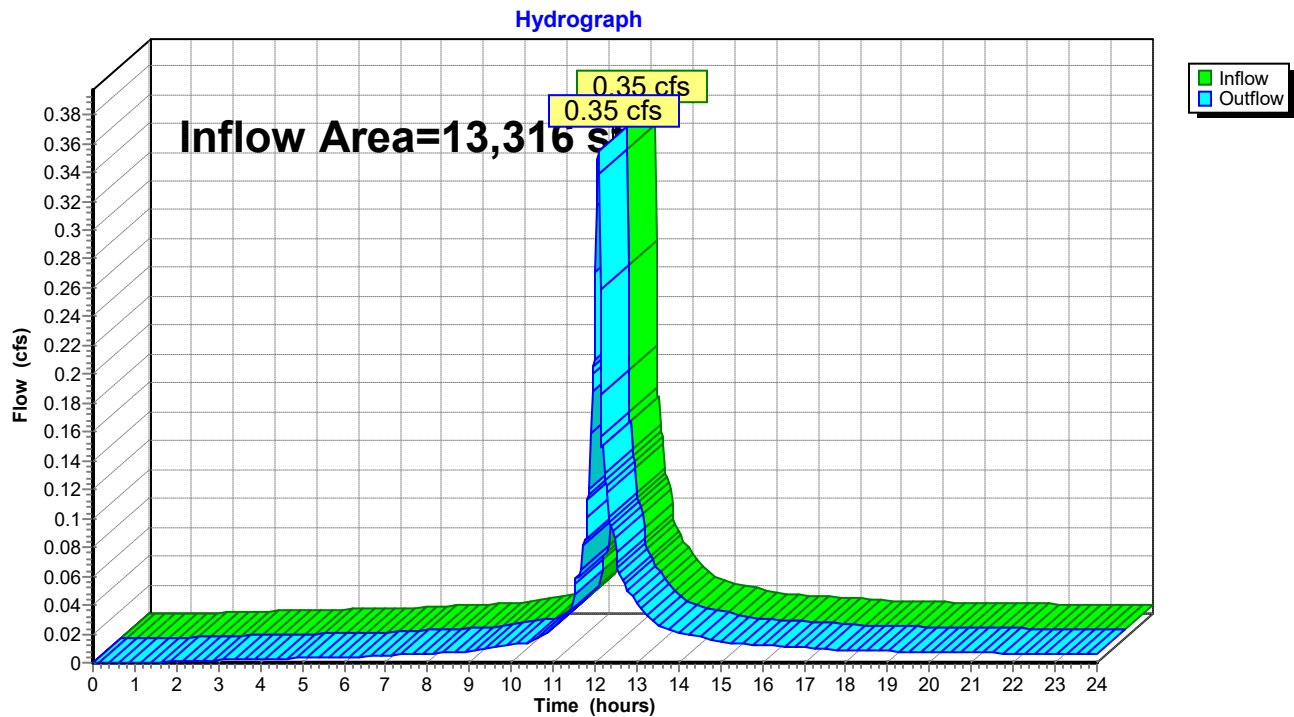
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 1.14" for 2-Year-2020 event  
 Inflow = 0.35 cfs @ 12.10 hrs, Volume= 1,265 cf  
 Outflow = 0.35 cfs @ 12.10 hrs, Volume= 1,265 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED



## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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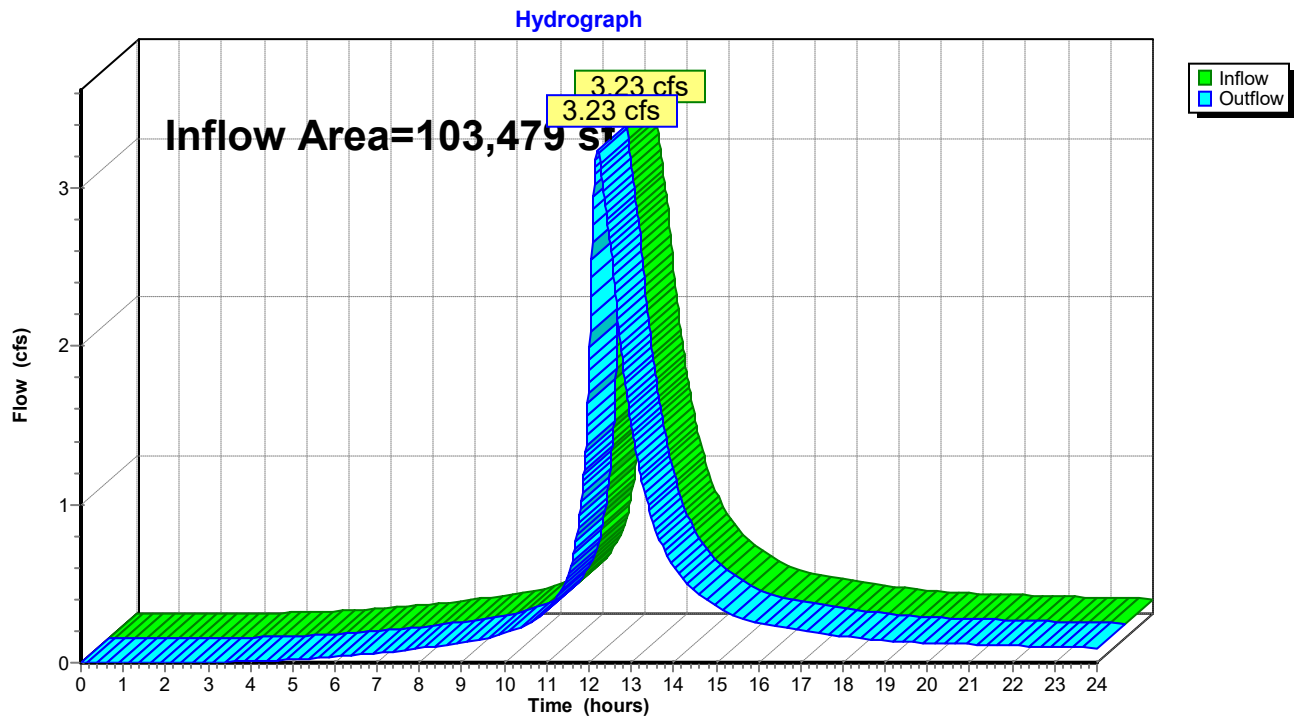
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### Summary for Reach 2P: ONSITE EAST

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 2.78" for 2-Year-2020 event  
Inflow = 3.23 cfs @ 12.21 hrs, Volume= 23,948 cf  
Outflow = 3.23 cfs @ 12.21 hrs, Volume= 23,948 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2P: ONSITE EAST



## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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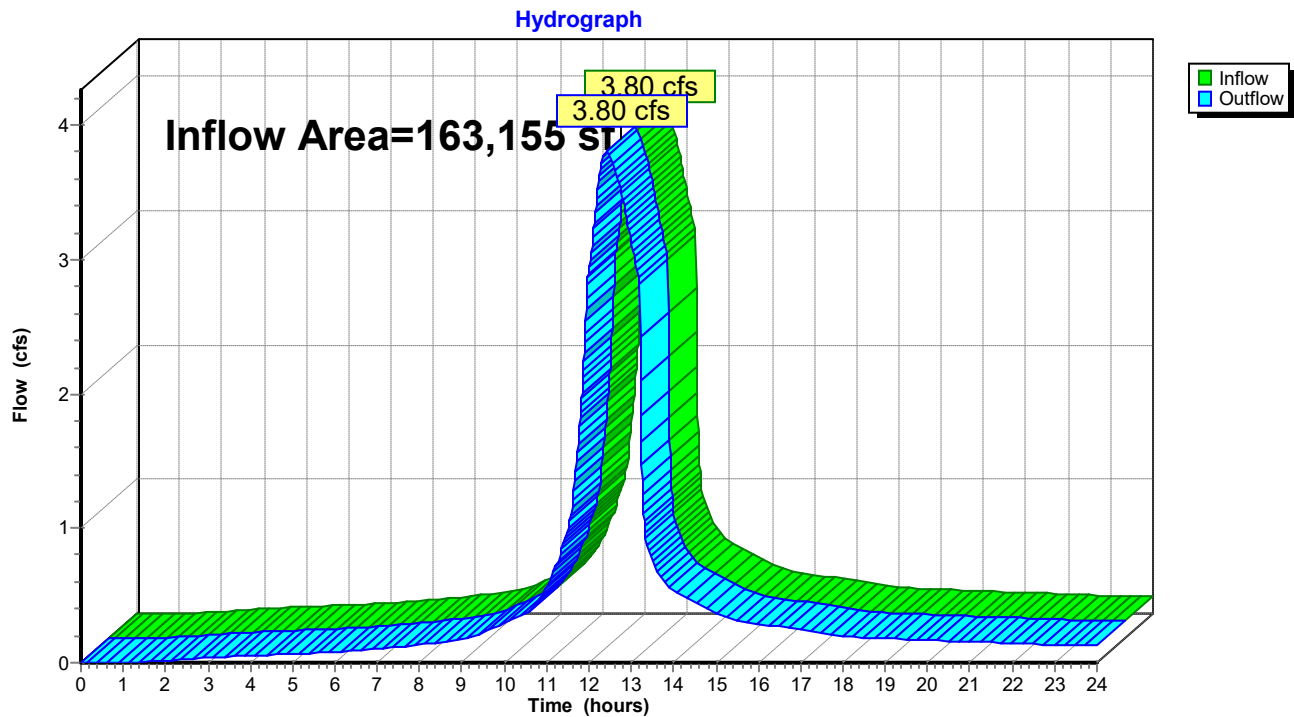
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### Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 2.49" for 2-Year-2020 event  
Inflow = 3.80 cfs @ 12.42 hrs, Volume= 33,806 cf  
Outflow = 3.80 cfs @ 12.42 hrs, Volume= 33,806 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3P: ONSITE WEST



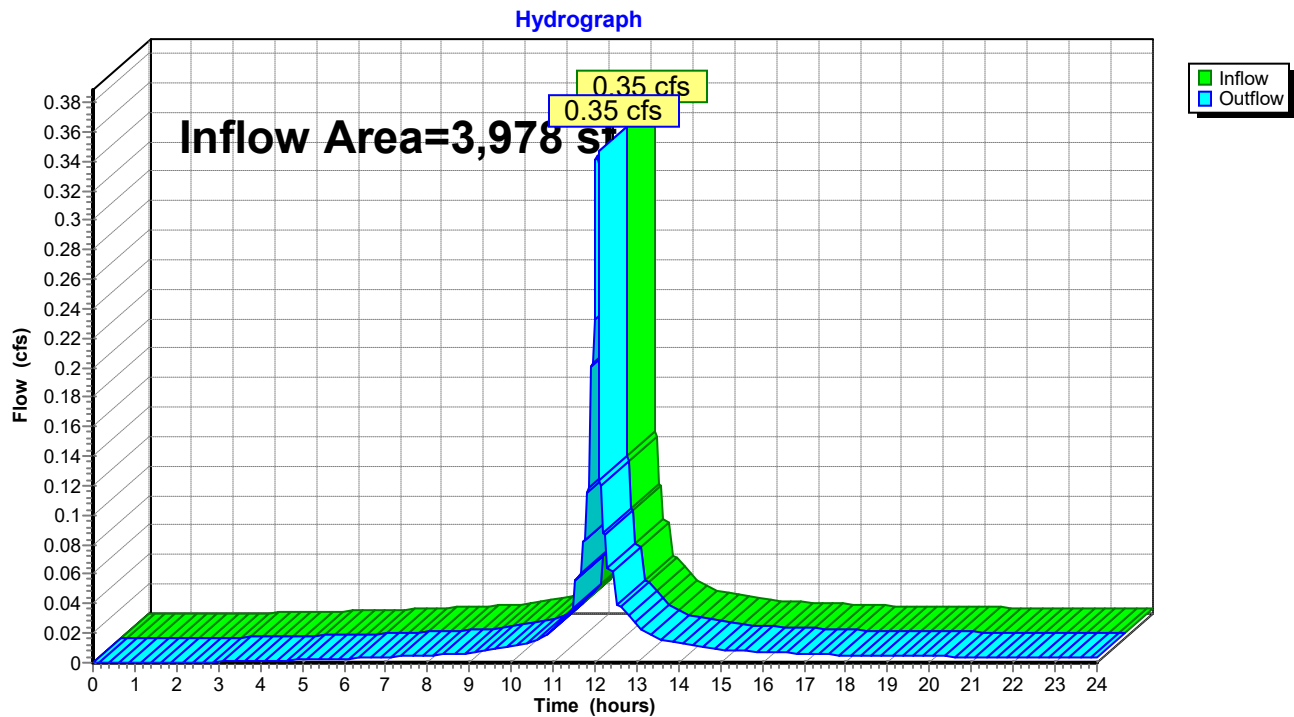


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 2.89" for 2-Year-2020 event  
 Inflow = 0.35 cfs @ 12.09 hrs, Volume= 957 cf  
 Outflow = 0.35 cfs @ 12.09 hrs, Volume= 957 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4P: ONSITE TENNIS COURTS

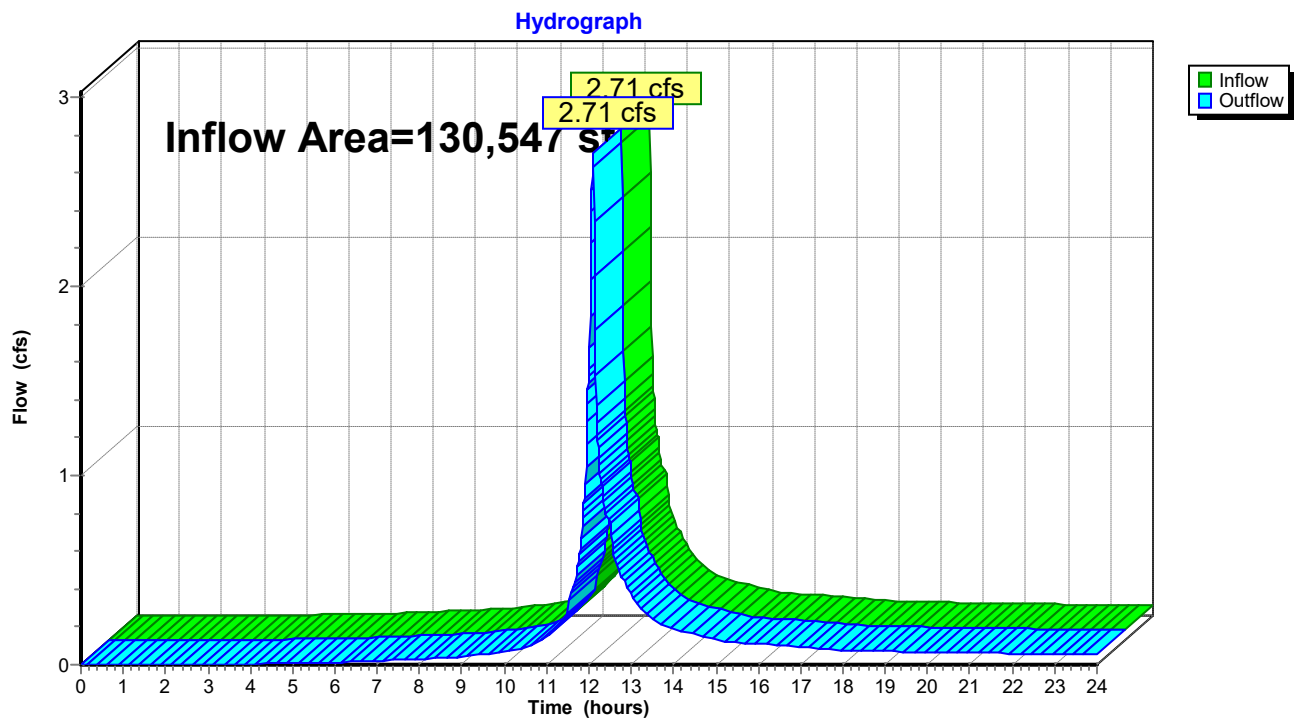


### Summary for Reach 100P: EX INLET 1

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 0.90" for 2-Year-2020 event  
 Inflow = 2.71 cfs @ 12.11 hrs, Volume= 9,754 cf  
 Outflow = 2.71 cfs @ 12.11 hrs, Volume= 9,754 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100P: EX INLET 1



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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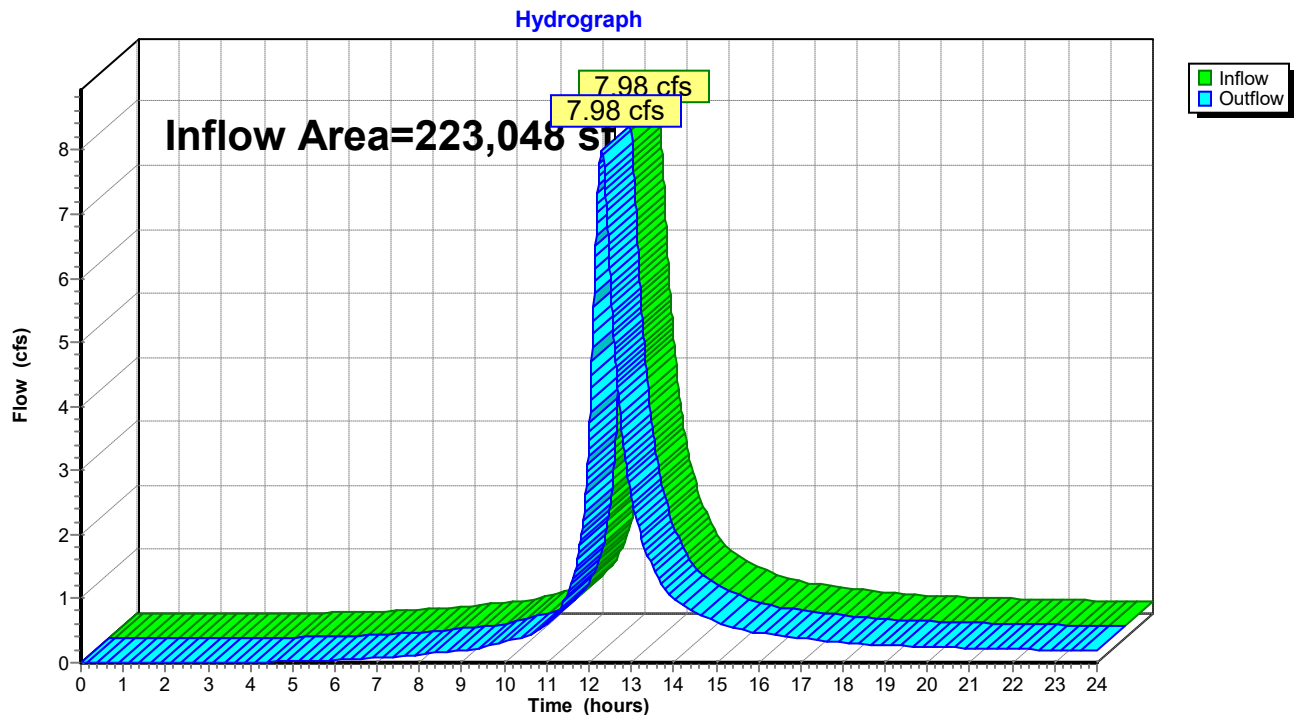
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## Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 2.47" for 2-Year-2020 event  
Inflow = 7.98 cfs @ 12.30 hrs, Volume= 45,853 cf  
Outflow = 7.98 cfs @ 12.30 hrs, Volume= 45,853 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 200P: EX MANHOLE 2



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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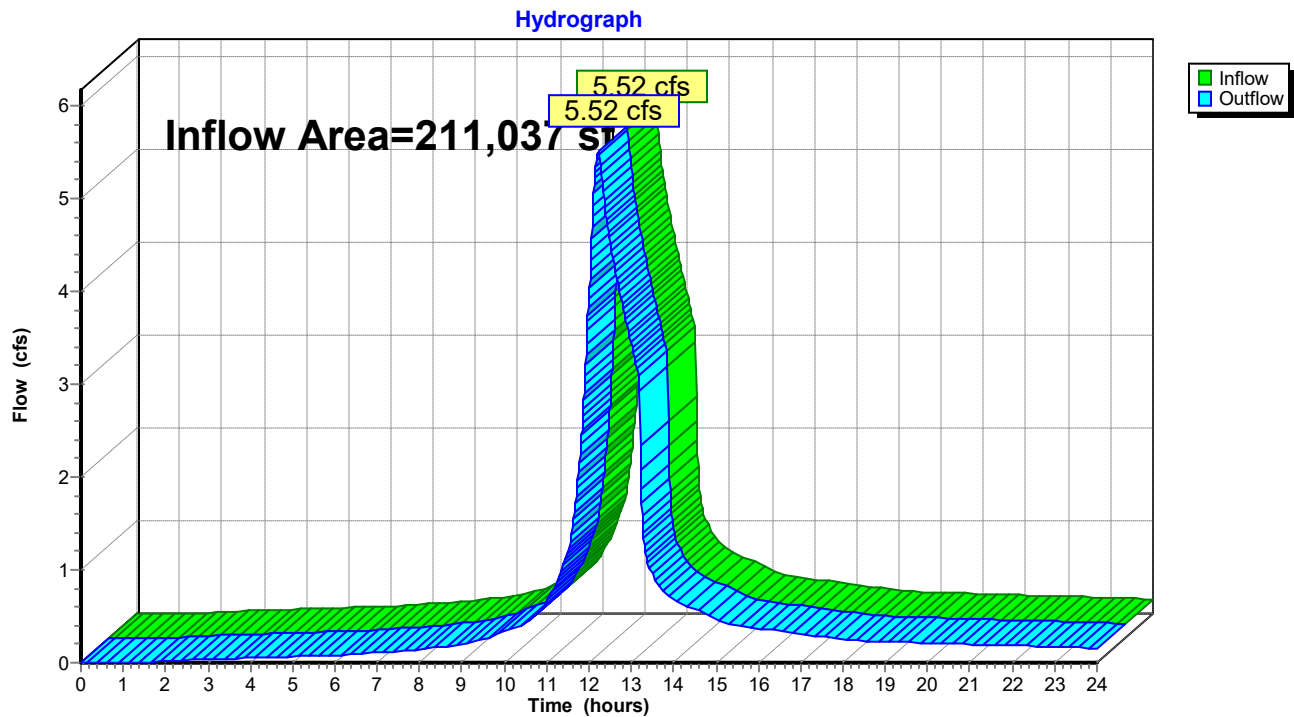
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## Summary for Reach 300P: EX INLET 3

Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 2.37" for 2-Year-2020 event  
Inflow = 5.52 cfs @ 12.22 hrs, Volume= 41,641 cf  
Outflow = 5.52 cfs @ 12.22 hrs, Volume= 41,641 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 300P: EX INLET 3



## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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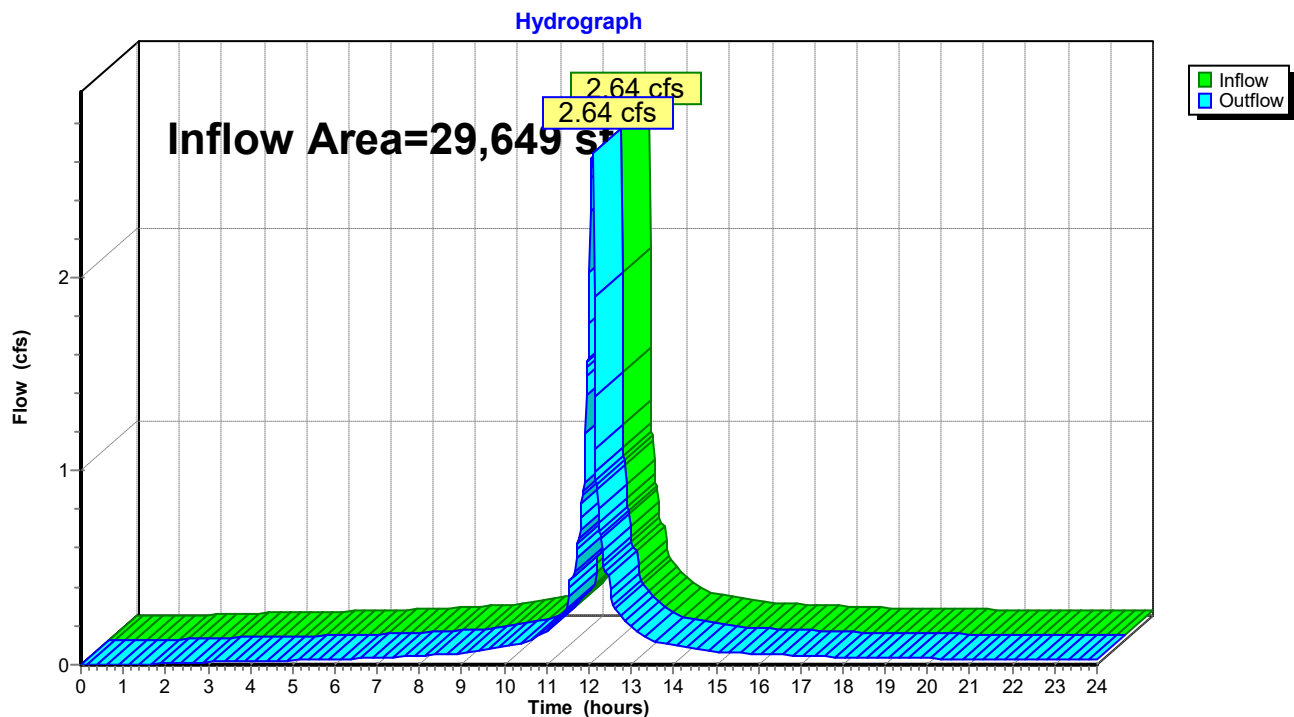
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### Summary for Reach 400P: TENNIS COURTS

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 3.08" for 2-Year-2020 event  
Inflow = 2.64 cfs @ 12.09 hrs, Volume= 7,602 cf  
Outflow = 2.64 cfs @ 12.09 hrs, Volume= 7,602 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400P: TENNIS COURTS



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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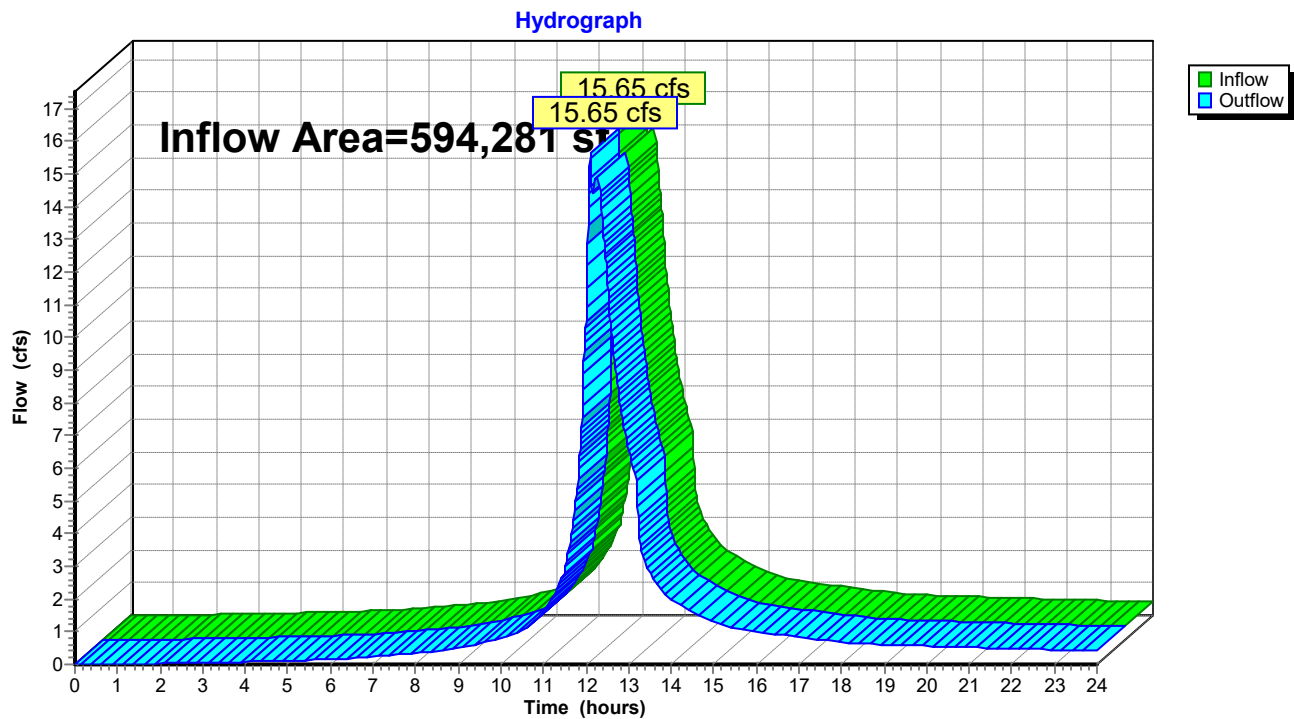
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## Summary for Reach 500P: STUDY POINT

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 2.12" for 2-Year-2020 event  
Inflow = 15.65 cfs @ 12.11 hrs, Volume= 104,850 cf  
Outflow = 15.65 cfs @ 12.11 hrs, Volume= 104,850 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 500P: STUDY POINT



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 2.93" for 2-Year-2020 event  
 Inflow = 7.95 cfs @ 12.10 hrs, Volume= 23,598 cf  
 Outflow = 2.86 cfs @ 12.22 hrs, Volume= 22,634 cf, Atten= 64%, Lag= 7.3 min  
 Primary = 2.86 cfs @ 12.22 hrs, Volume= 22,634 cf  
 Routed to Reach 2P : ONSITE EAST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 100.27' @ 12.22 hrs Surf.Area= 8,044 sf Storage= 7,198 cf

Plug-Flow detention time= 81.3 min calculated for 22,624 cf (96% of inflow)  
 Center-of-Mass det. time= 56.5 min ( 815.6 - 759.1 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=2.86 cfs @ 12.22 hrs HW=100.27' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 2.86 cfs @ 3.64 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

# PROPOSED PEDDIE FOOTBALL

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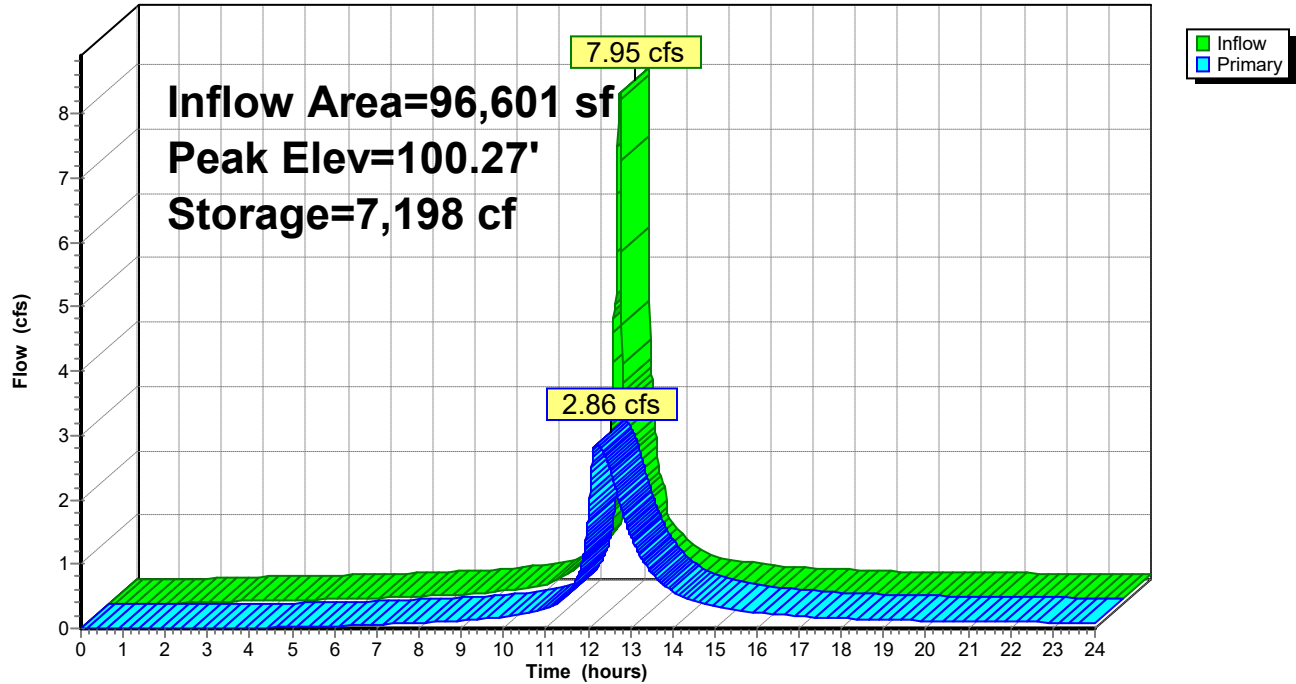
NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Pond 204P: Cultec East

Hydrograph





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 2.50" for 2-Year-2020 event  
 Inflow = 8.32 cfs @ 12.18 hrs, Volume= 33,240 cf  
 Outflow = 3.75 cfs @ 12.43 hrs, Volume= 33,222 cf, Atten= 55%, Lag= 15.0 min  
 Primary = 3.75 cfs @ 12.43 hrs, Volume= 33,222 cf  
 Routed to Reach 3P : ONSITE WEST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 99.68' @ 12.43 hrs Surf.Area= 11,650 sf Storage= 4,802 cf

Plug-Flow detention time= 7.7 min calculated for 33,208 cf (100% of inflow)  
 Center-of-Mass det. time= 7.4 min ( 793.7 - 786.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD x 528 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=3.75 cfs @ 12.43 hrs HW=99.68' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 3.75 cfs @ 4.78 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

# PROPOSED PEDDIE FOOTBALL

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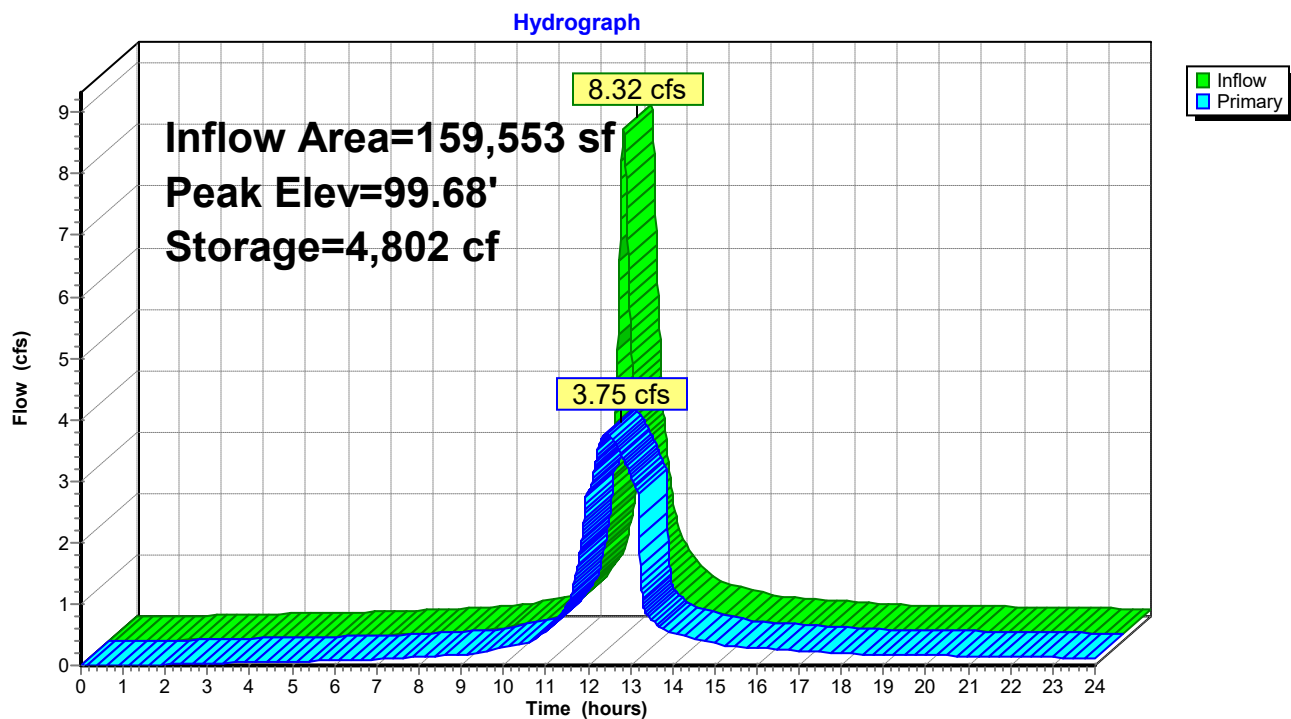
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NOAA 24-hr C 2-Year-2020 Rainfall=3.34", P2=3.34"

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## Pond 208P: Cultec West



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>1.09"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=1.30 cfs 6,393 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>1.09"  
Flow Length=186' Tc=10.1 min CN=56 Runoff=0.23 cfs 858 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>4.30"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=3.76 cfs 10,455 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.68"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.07 cfs 257 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.97"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=0.34 cfs 1,065 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>4.87"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=0.54 cfs 1,587 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>3.36"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=0.91 cfs 2,953 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>3.37"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.26 cfs 655 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>4.87"  
Flow Length=100' Slope=0.0050 '/' Tc=2.1 min CN=98 Runoff=11.07 cfs 32,752 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>3.86"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=8.43 cfs 38,454 cf

**Subcatchment 206P: Onsite to E Field Drain** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>3.97"  
Flow Length=504' Tc=12.2 min UI Adjusted CN=90 Runoff=0.63 cfs 2,277 cf

**Subcatchment 207P: Offsite Impervious to** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>4.87"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.42 cfs 1,238 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>3.36"  
Flow Length=686' Tc=18.0 min CN=84 Runoff=3.85 cfs 15,789 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>3.56"  
Flow Length=62' Slope=0.0100 '/' Tc=8.6 min UI Adjusted CN=86 Runoff=0.62 cfs 1,924 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>3.36"  
Flow Length=654' Tc=13.0 min CN=84 Runoff=2.03 cfs 7,284 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>3.36"  
Flow Length=370' Tc=9.6 min CN=84 Runoff=0.16 cfs 527 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Subcatchment 305P: Offsite to Existing W**    Runoff Area=13,621 sf    2.35% Impervious    Runoff Depth>3.36"  
Flow Length=467'    Tc=13.0 min    CN=84    Runoff=1.07 cfs    3,815 cf

**Subcatchment 306P: Onsite to W Existing**    Runoff Area=425 sf    0.00% Impervious    Runoff Depth>3.37"  
Flow Length=32'    Slope=0.0100 '/'    Tc=5.1 min    CN=84    Runoff=0.04 cfs    119 cf

**Subcatchment 308P: Offsite to Drain 4**    Runoff Area=1,297 sf    38.55% Impervious    Runoff Depth>3.88"  
Flow Length=22'    Slope=0.0100 '/'    Tc=1.7 min    CN=89    Runoff=0.16 cfs    419 cf

**Subcatchment 309P: Offsite Building to**    Runoff Area=8,251 sf    81.26% Impervious    Runoff Depth>4.52"  
Flow Length=168'    Tc=4.5 min    CN=95    Runoff=1.06 cfs    3,111 cf

**Subcatchment 310P: Impervious Stadium**    Runoff Area=81,430 sf    98.43% Impervious    Runoff Depth>4.86"  
Flow Length=100'    Slope=0.0050 '/'    Tc=10.9 min    CN=98    Runoff=8.59 cfs    33,001 cf

**Subcatchment 311P: Onsite to New Inlet**    Runoff Area=4,364 sf    24.15% Impervious    Runoff Depth>3.56"  
Flow Length=100'    Slope=0.0050 '/'    Tc=10.9 min    UI Adjusted CN=86    Runoff=0.38 cfs    1,295 cf

**Subcatchment 312P: Offsite to Yard Inlet**    Runoff Area=3,440 sf    20.73% Impervious    Runoff Depth>3.47"  
Flow Length=48'    Tc=5.6 min    UI Adjusted CN=85    Runoff=0.36 cfs    993 cf

**Subcatchment 313P: Offsite to Yard Inlet**    Runoff Area=7,395 sf    51.36% Impervious    Runoff Depth>4.08"  
Flow Length=46'    Tc=5.3 min    CN=91    Runoff=0.88 cfs    2,517 cf

**Subcatchment 401P: Onsite to SP4**    Runoff Area=3,978 sf    83.13% Impervious    Runoff Depth>4.64"  
Flow Length=22'    Slope=0.1100 '/'    Tc=0.2 min    CN=96    Runoff=0.54 cfs    1,539 cf

**Subcatchment 403P: Tennis Courts**    Runoff Area=25,671 sf    100.00% Impervious    Runoff Depth>4.87"  
Flow Length=116'    Slope=0.0100 '/'    Tc=1.7 min    CN=98    Runoff=3.53 cfs    10,422 cf

**Reach 1P: ONSITE UNRETAINED**    Inflow=0.68 cfs    2,444 cf  
Outflow=0.68 cfs    2,444 cf

**Reach 2P: ONSITE EAST**    Inflow=4.67 cfs    38,679 cf  
Outflow=4.67 cfs    38,679 cf

**Reach 3P: ONSITE WEST**    Inflow=4.93 cfs    56,556 cf  
Outflow=4.93 cfs    56,556 cf

**Reach 4P: ONSITE TENNIS COURTS**    Inflow=0.54 cfs    1,539 cf  
Outflow=0.54 cfs    1,539 cf

**Reach 100P: EX INLET 1**    Inflow=5.25 cfs    20,614 cf  
Outflow=5.25 cfs    20,614 cf

**Reach 200P: EX MANHOLE 2**    Inflow=12.91 cfs    77,133 cf  
Outflow=12.91 cfs    77,133 cf

**Reach 300P: EX INLET 3**    Inflow=7.96 cfs    70,765 cf  
Outflow=7.96 cfs    70,765 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Reach 400P: TENNIS COURTS**

Inflow=4.07 cfs 11,960 cf

Outflow=4.07 cfs 11,960 cf

**Reach 500P: STUDY POINT**

Inflow=24.90 cfs 180,473 cf

Outflow=24.90 cfs 180,473 cf

**Pond 204P: Cultec East**

Peak Elev=100.85' Storage=10,831 cf Inflow=12.44 cfs 37,598 cf

Outflow=4.06 cfs 36,402 cf

**Pond 208P: Cultec West**

Peak Elev=100.35' Storage=11,163 cf Inflow=13.63 cfs 55,519 cf

Outflow=4.85 cfs 55,491 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 1.30 cfs @ 12.32 hrs, Volume= 6,393 cf, Depth> 1.09"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

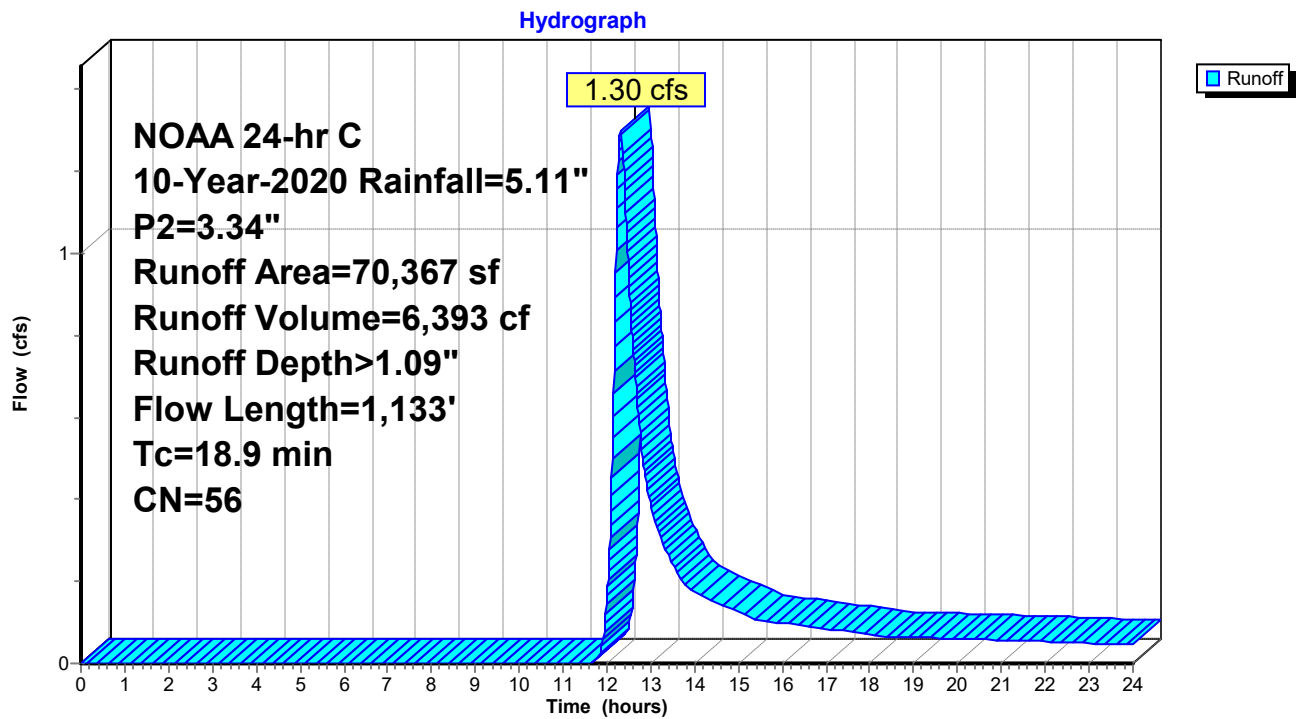
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## Subcatchment 101P: Offsite Pervious SE



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

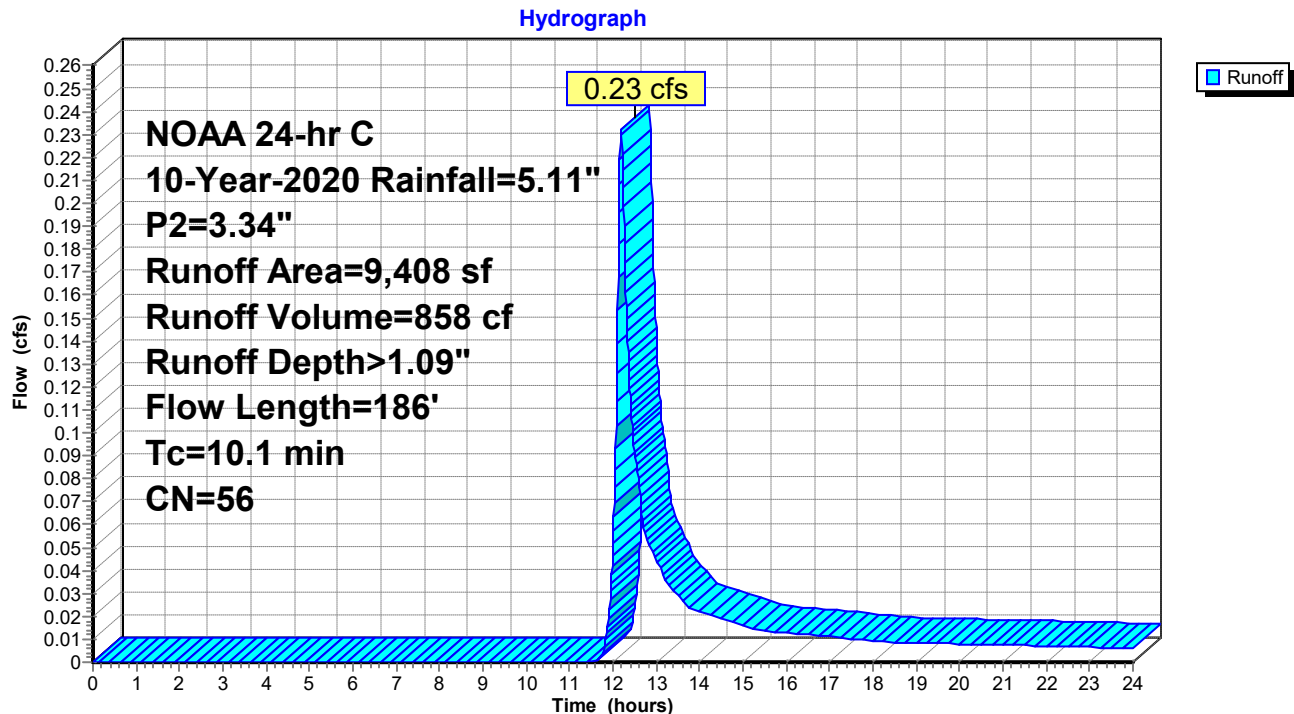
Runoff = 0.23 cfs @ 12.19 hrs, Volume= 858 cf, Depth> 1.09"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 10.1     | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

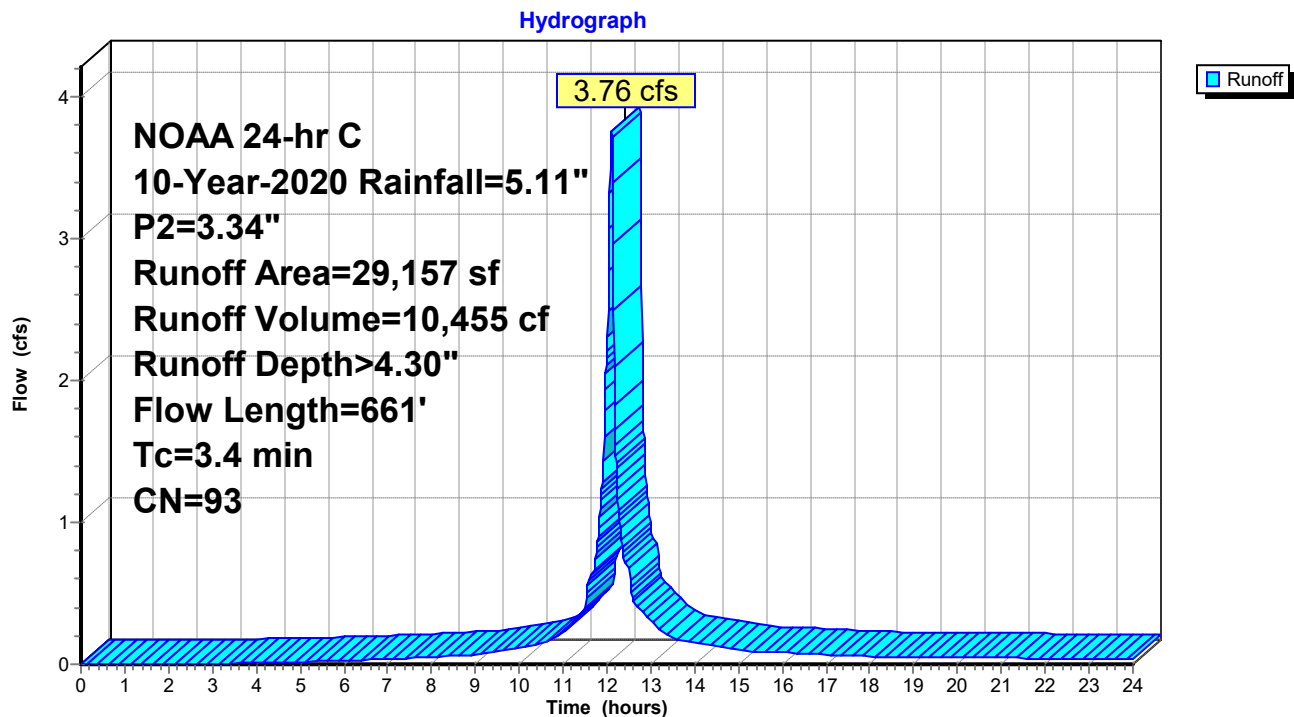
Runoff = 3.76 cfs @ 12.11 hrs, Volume= 10,455 cf, Depth> 4.30"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 104P: Yard Drains**

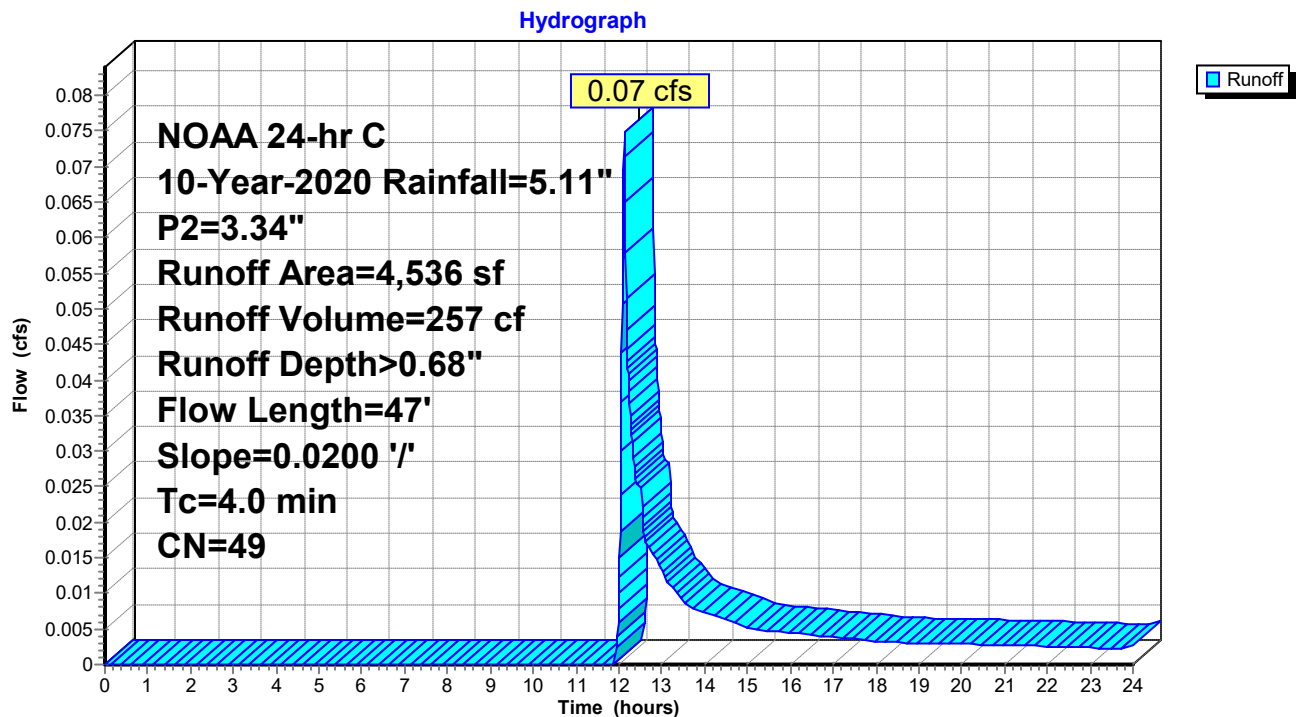
Runoff = 0.07 cfs @ 12.13 hrs, Volume= 257 cf, Depth> 0.68"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 0.34 cfs @ 12.14 hrs, Volume= 1,065 cf, Depth> 0.97"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

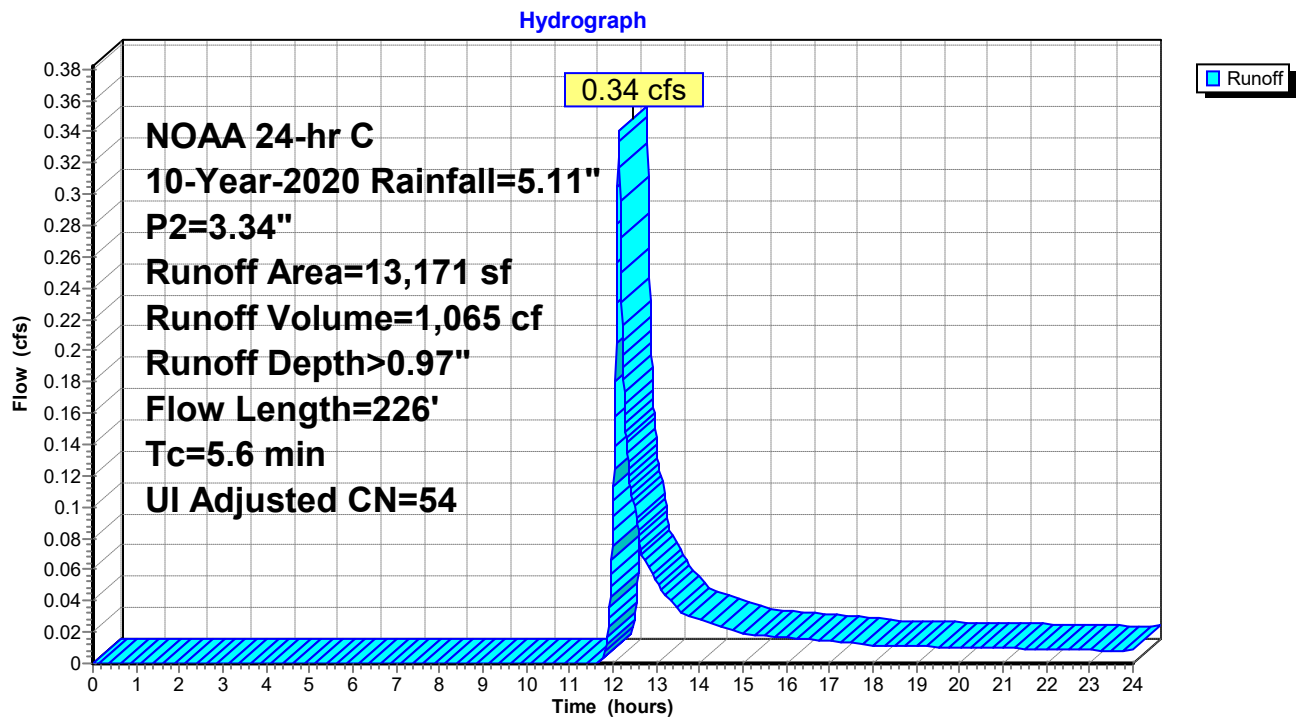
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## Subcatchment 105P: Low Drains



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

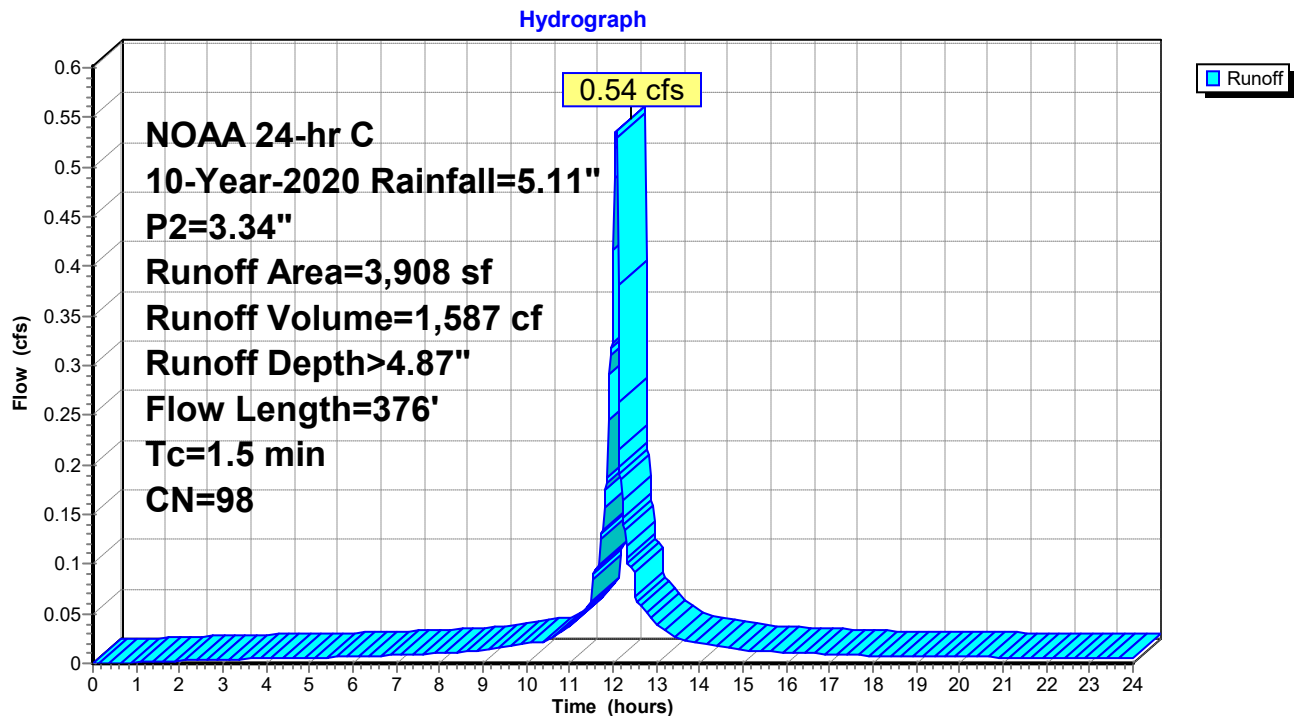
Runoff = 0.54 cfs @ 12.09 hrs, Volume= 1,587 cf, Depth> 4.87"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

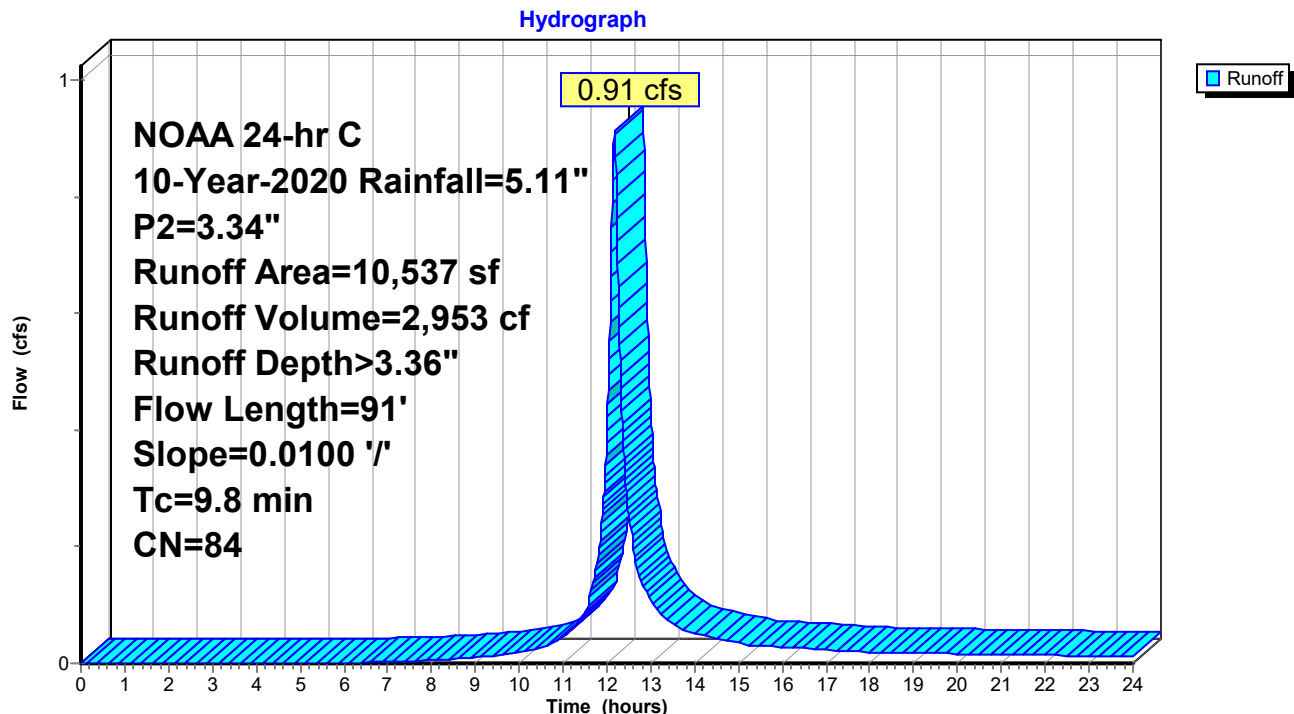
Runoff = 0.91 cfs @ 12.17 hrs, Volume= 2,953 cf, Depth> 3.36"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

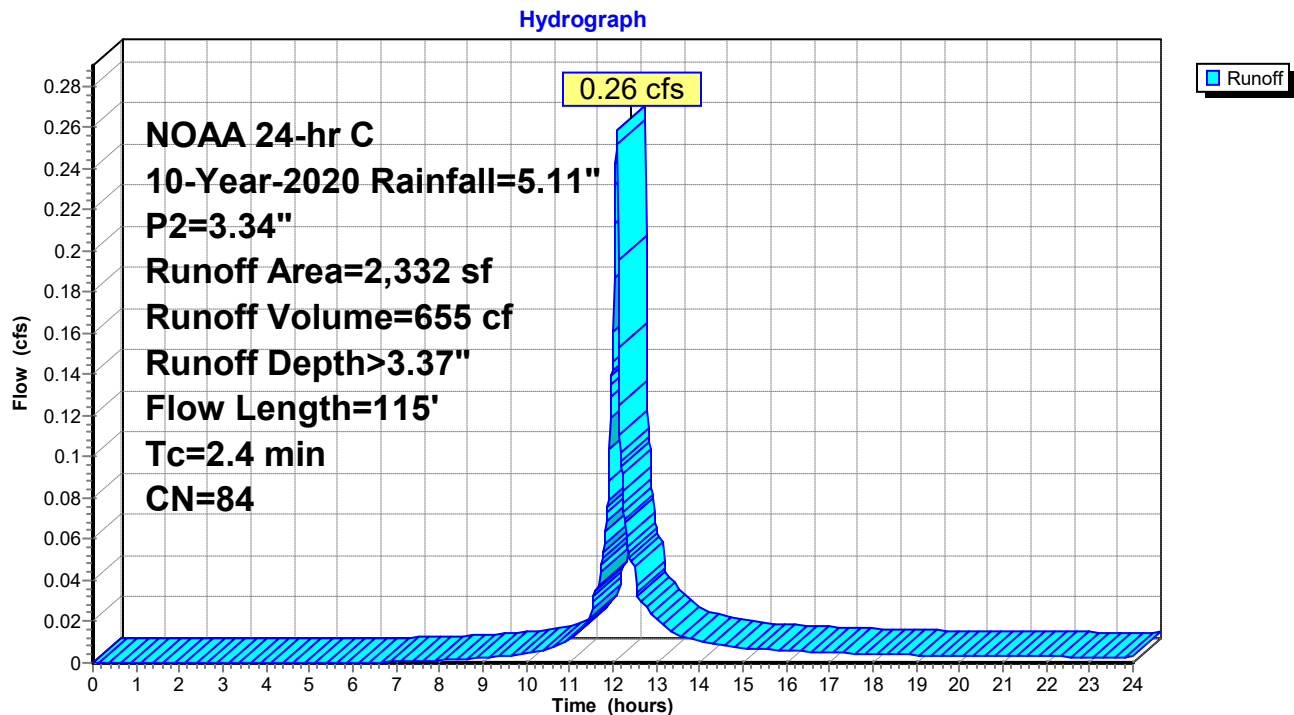
Runoff = 0.26 cfs @ 12.10 hrs, Volume= 655 cf, Depth> 3.37"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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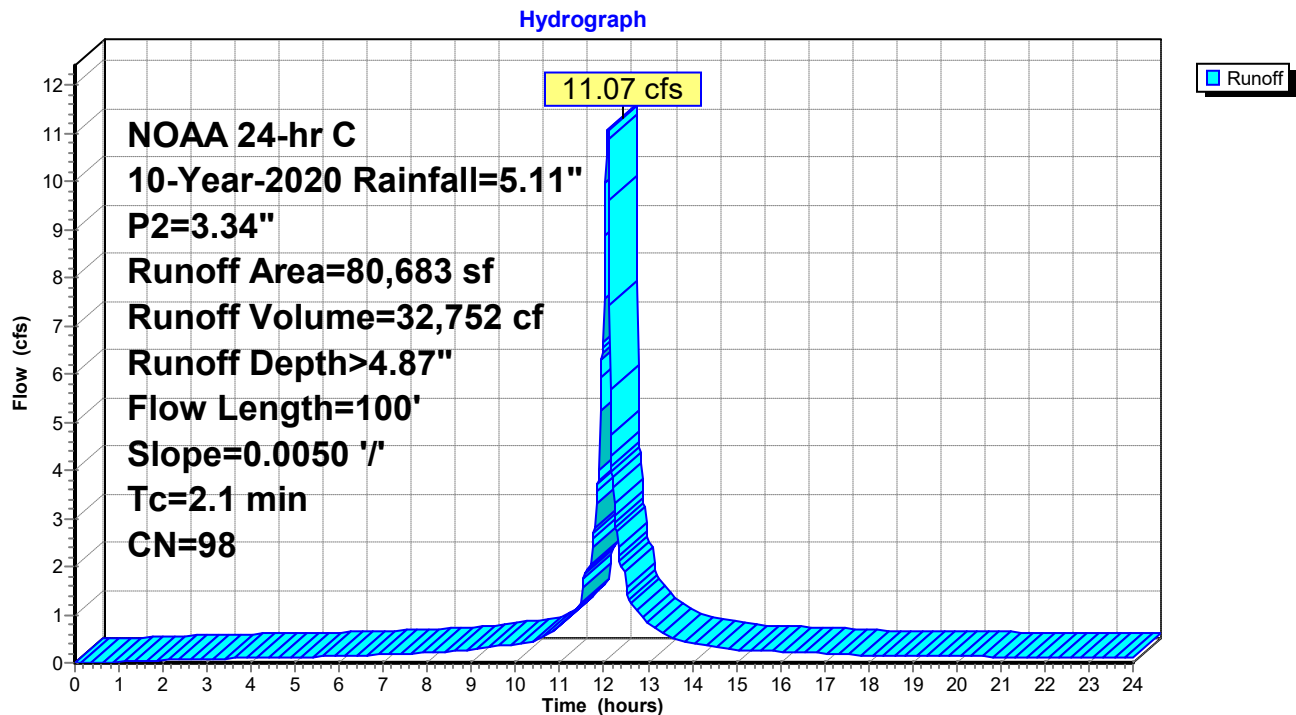
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 11.07 cfs @ 12.10 hrs, Volume= 32,752 cf, Depth> 4.87"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 2.1                                | 100           | 0.0050        | 0.81              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 8.43 cfs @ 12.31 hrs, Volume= 38,454 cf, Depth> 3.86"  
 Routed to Reach 200P : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

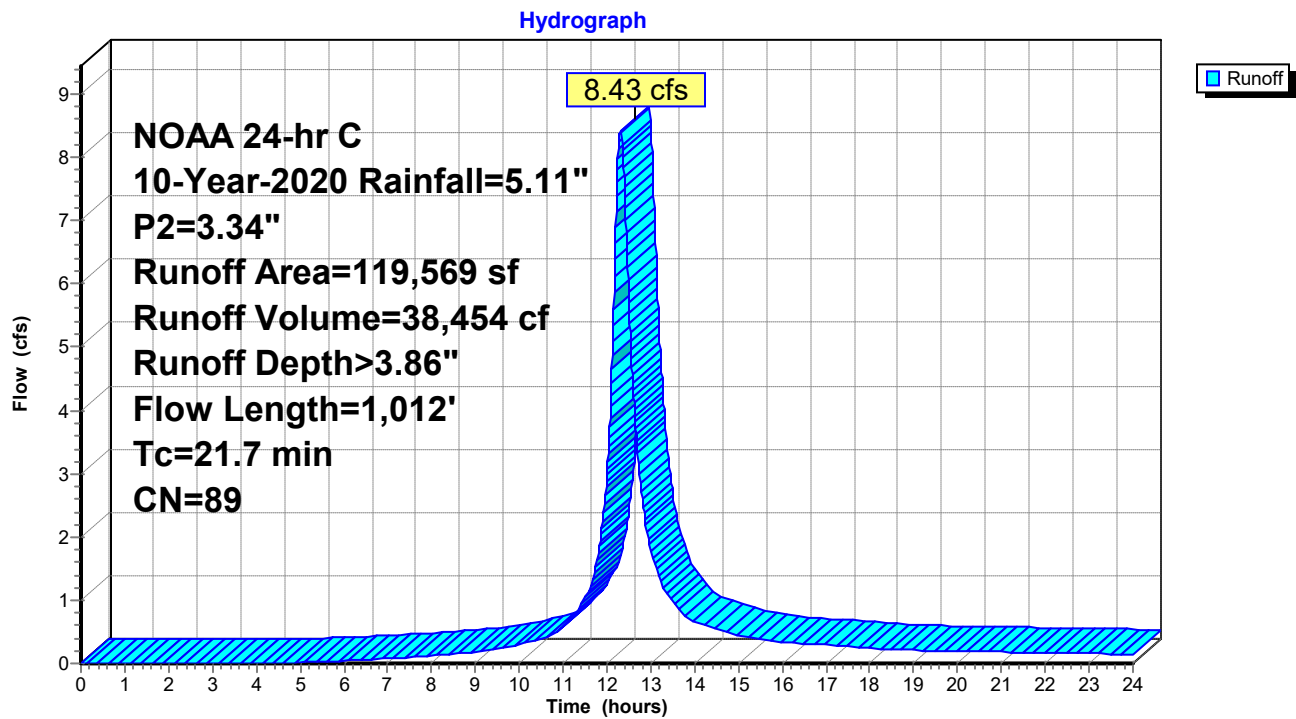
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## Subcatchment 205P: Offsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 0.63 cfs @ 12.19 hrs, Volume= 2,277 cf, Depth> 3.97"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

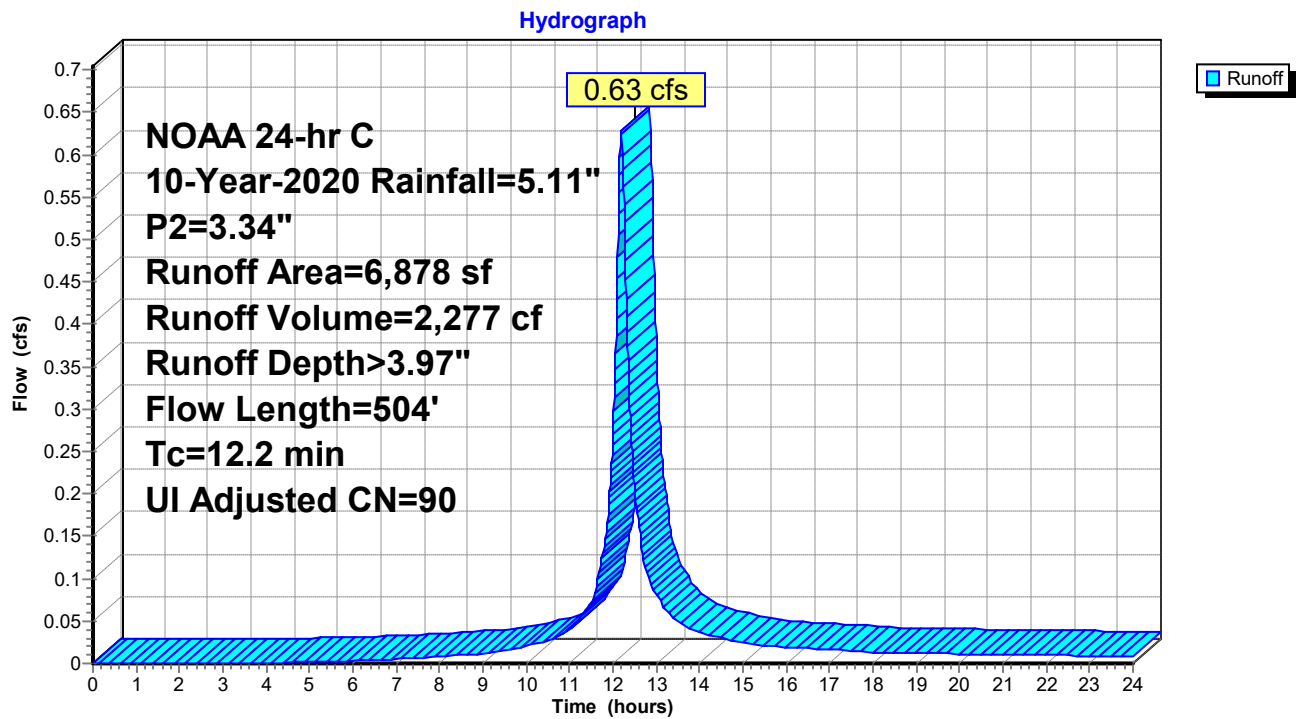
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## Subcatchment 206P: Onsite to E Field Drain



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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## Summary for Subcatchment 207P: Offsite Impervious to Trench Drain

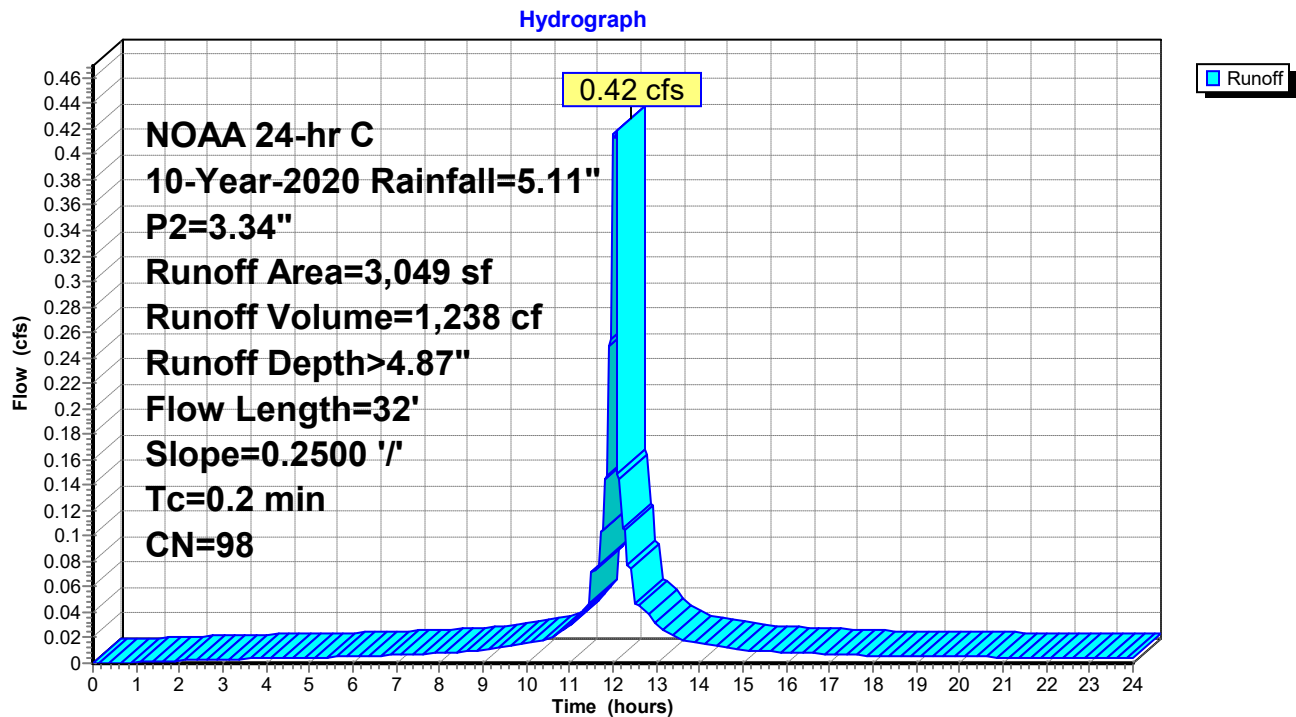
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 1,238 cf, Depth> 4.87"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.2                                | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

## Subcatchment 207P: Offsite Impervious to Trench Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 3.85 cfs @ 12.26 hrs, Volume= 15,789 cf, Depth> 3.36"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 18.0     | 686           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

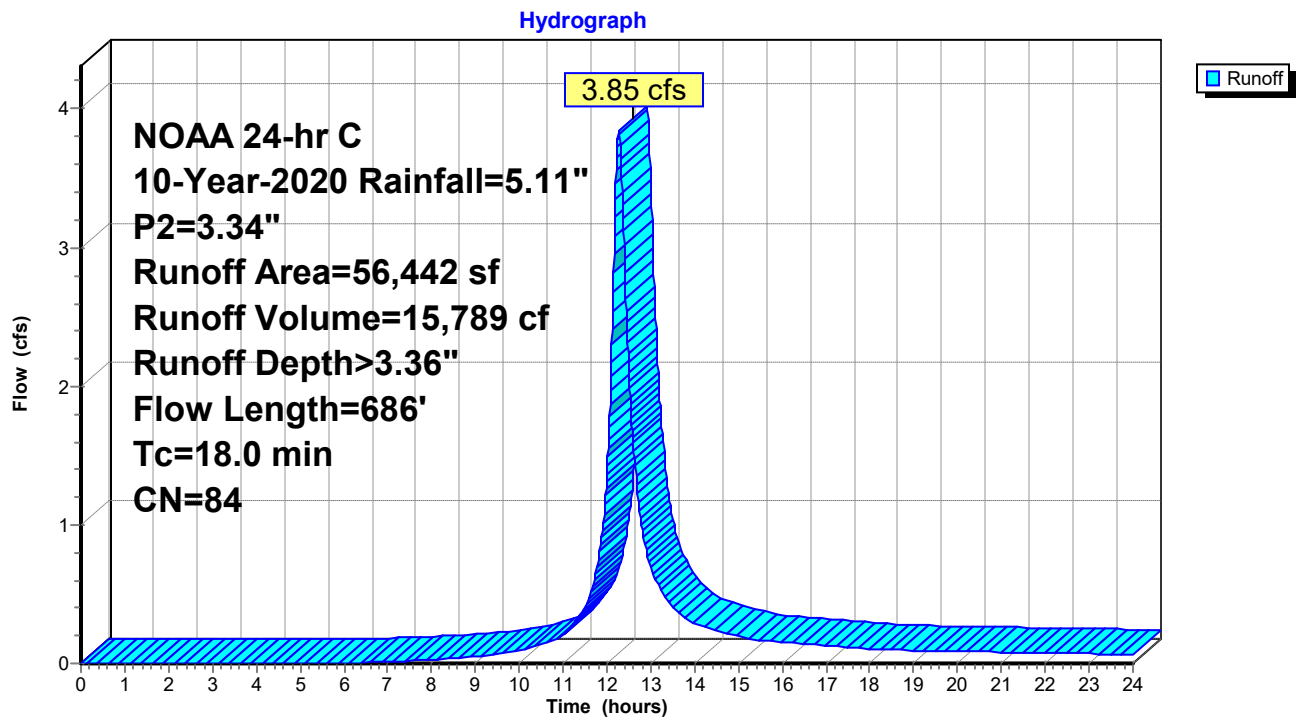
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## Subcatchment 301P: Offsite to W Field Drain 1



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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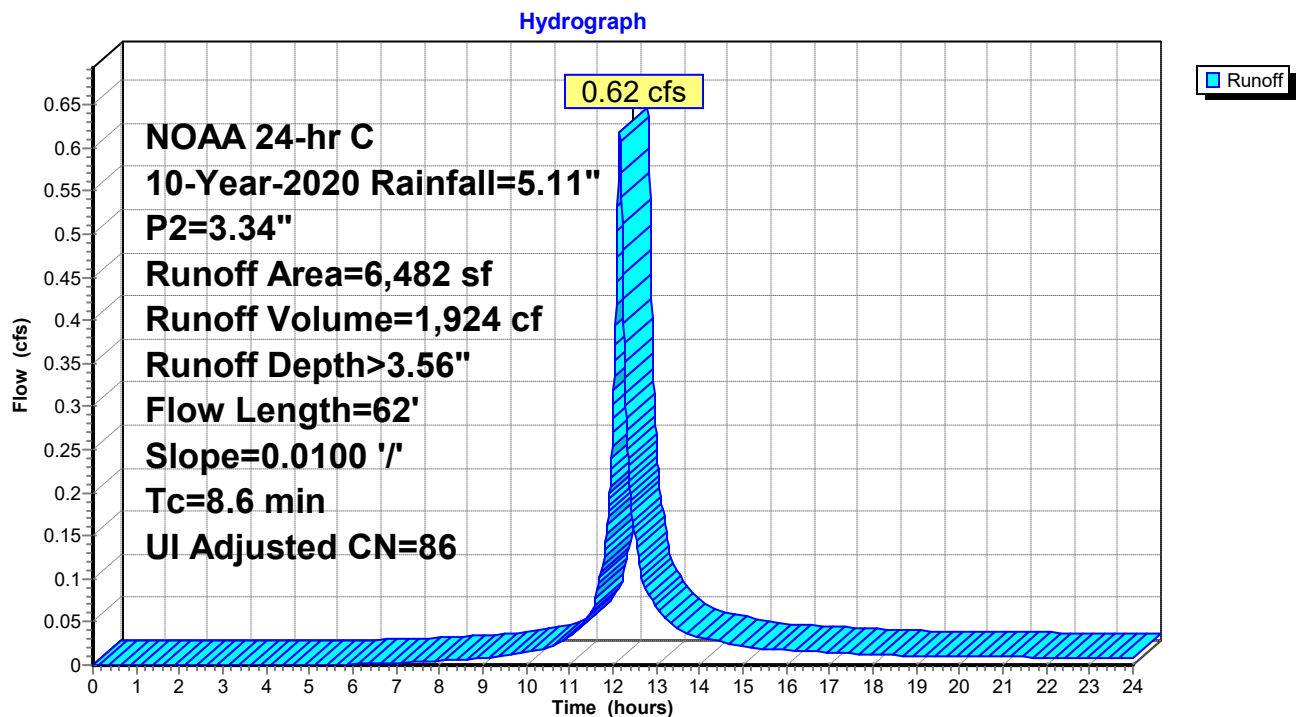
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 0.62 cfs @ 12.16 hrs, Volume= 1,924 cf, Depth> 3.56"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 302P: Onsite to W Field Drain 1**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 2.03 cfs @ 12.21 hrs, Volume= 7,284 cf, Depth> 3.36"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 13.0     | 654           | Total         |                   |                |                                                                                        |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

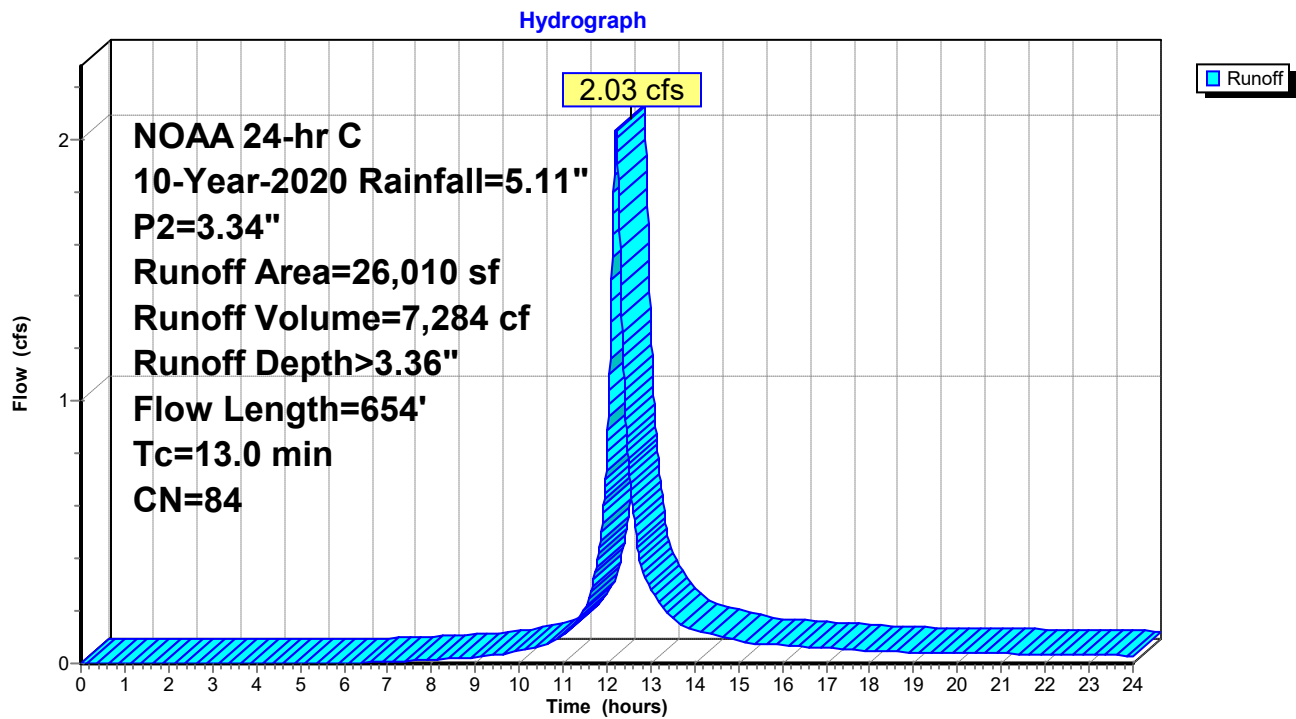
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## Subcatchment 303P: Offsite to W New Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

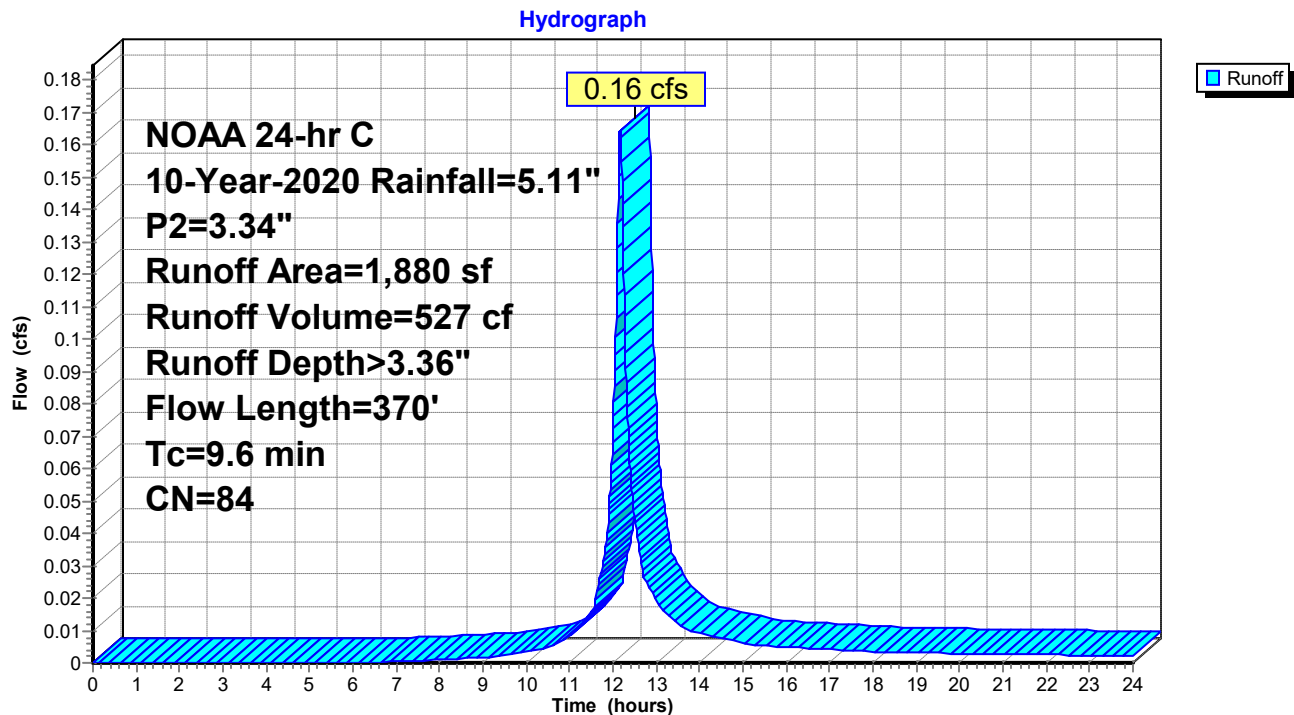
Runoff = 0.16 cfs @ 12.17 hrs, Volume= 527 cf, Depth> 3.36"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.6      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 1.07 cfs @ 12.21 hrs, Volume= 3,815 cf, Depth> 3.36"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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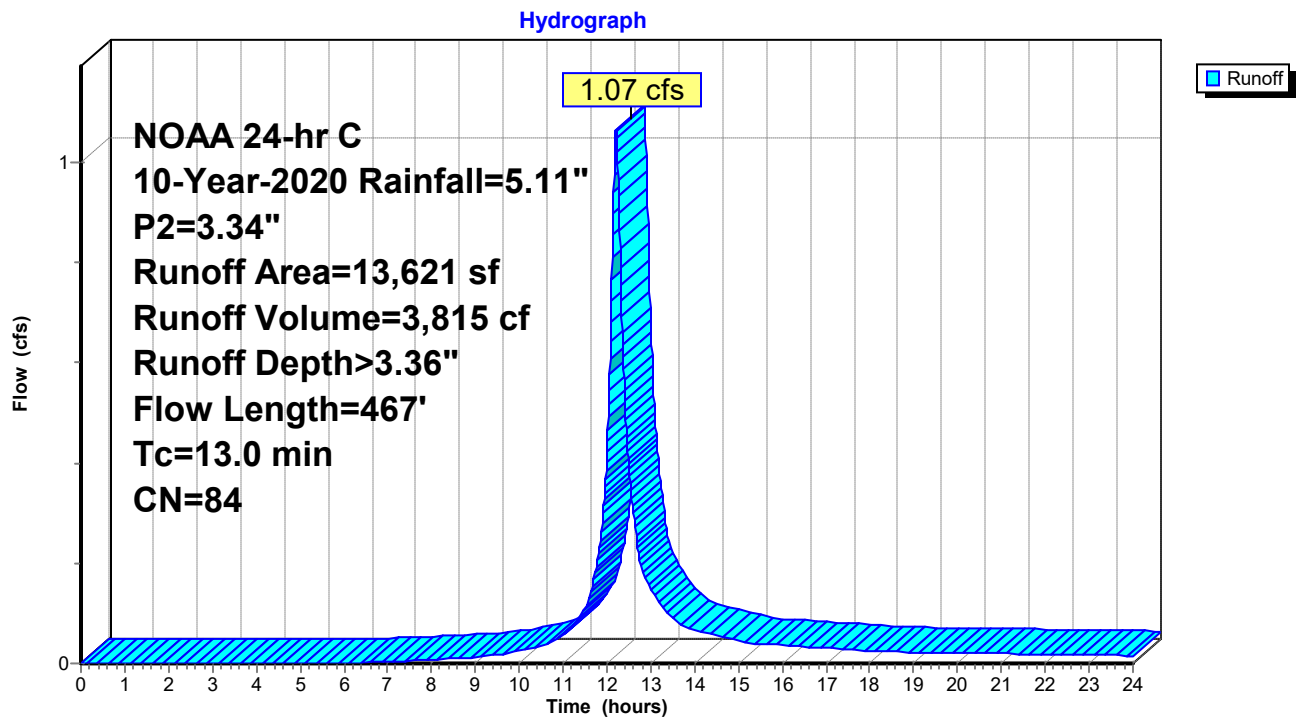
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NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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## Subcatchment 305P: Offsite to Existing W Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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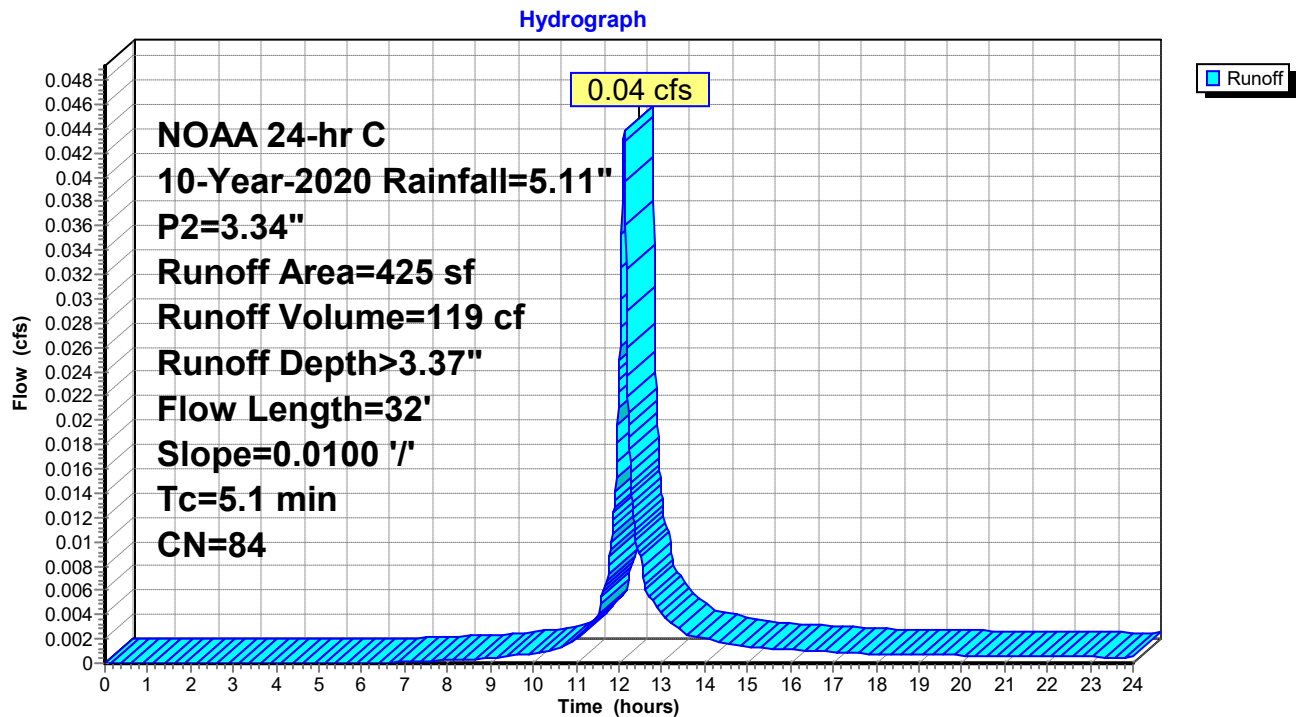
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.04 cfs @ 12.12 hrs, Volume= 119 cf, Depth> 3.37"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 308P: Offsite to Drain 4**

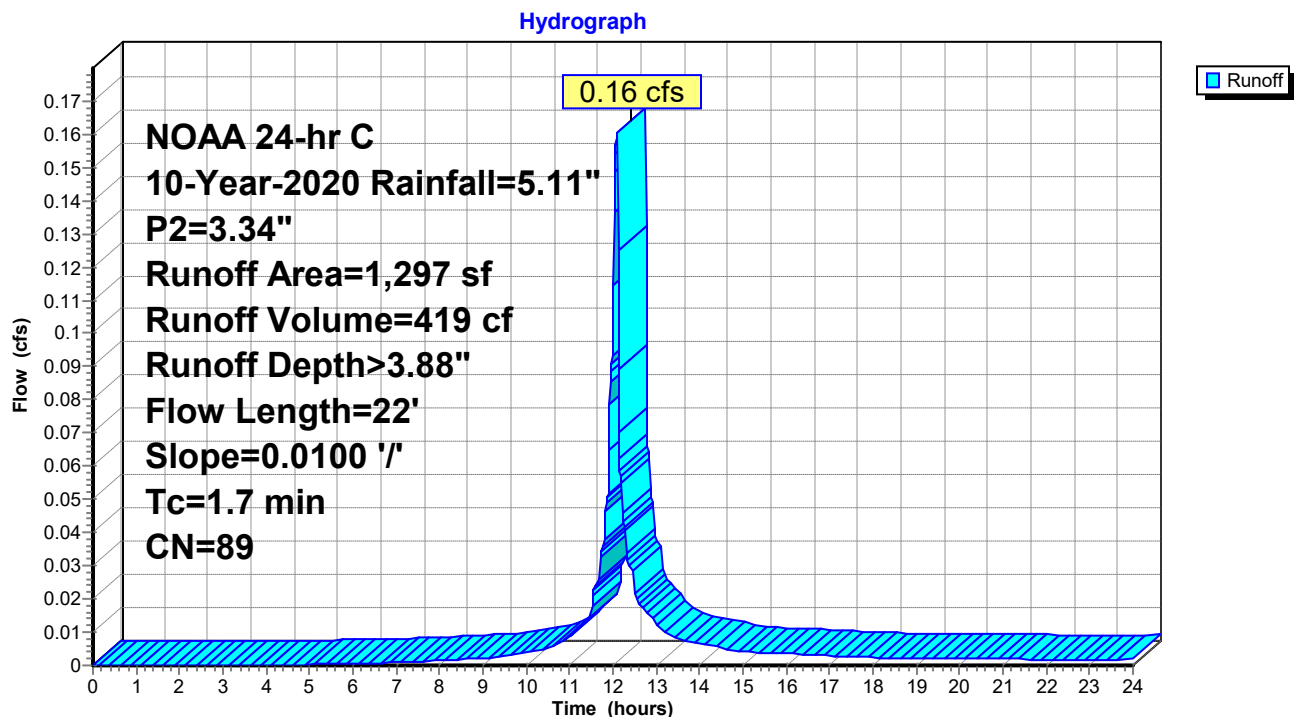
Runoff = 0.16 cfs @ 12.10 hrs, Volume= 419 cf, Depth> 3.88"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.7      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

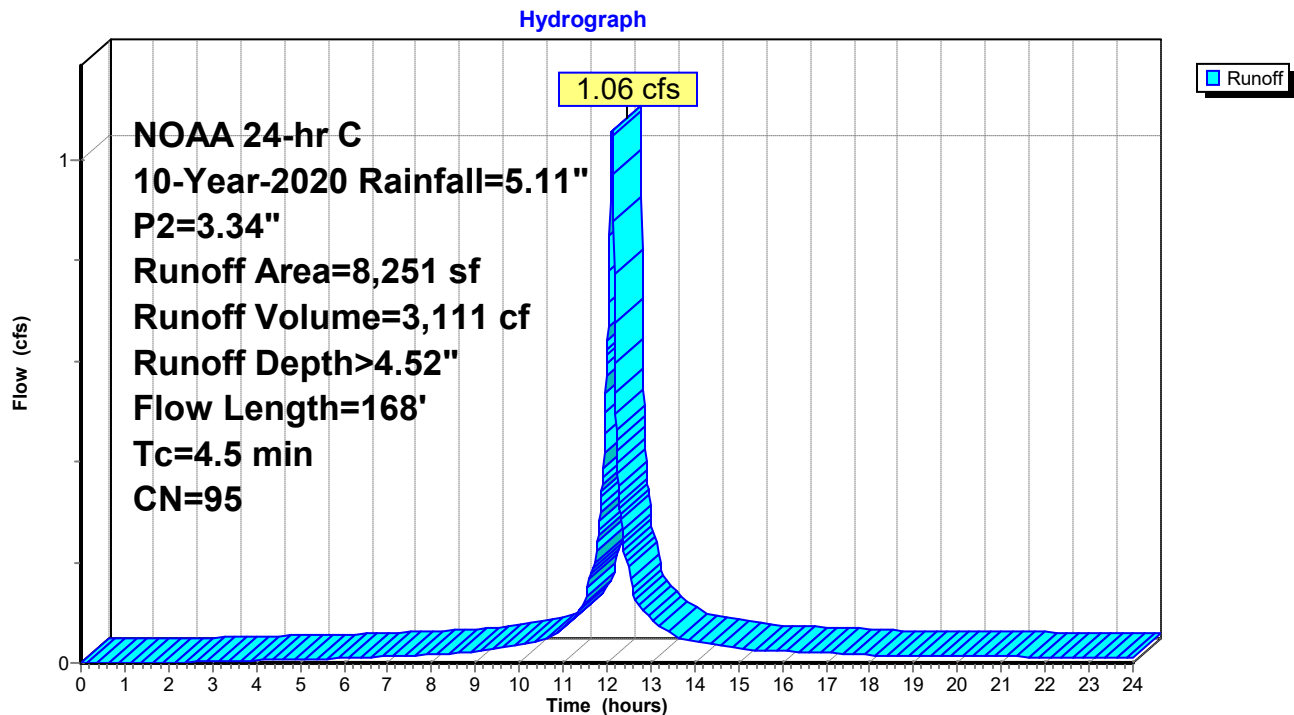
Runoff = 1.06 cfs @ 12.12 hrs, Volume= 3,111 cf, Depth> 4.52"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 310P: Impervious Stadium W**

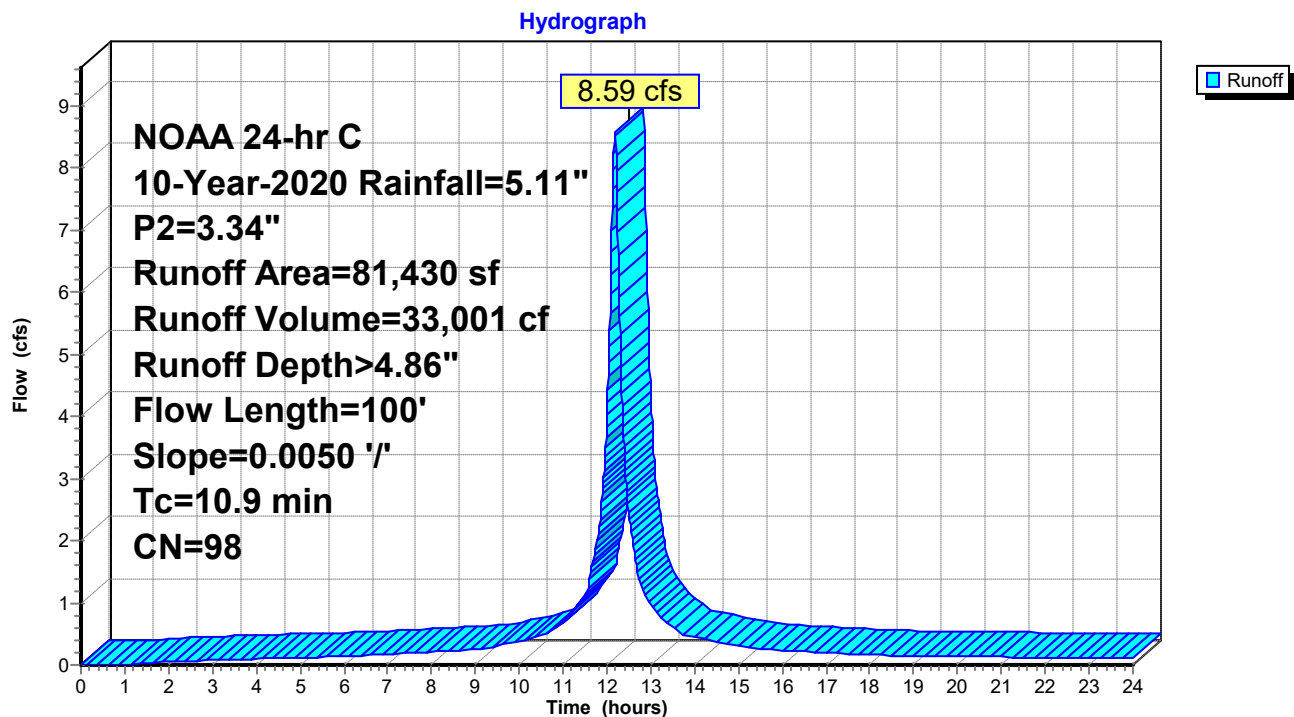
Runoff = 8.59 cfs @ 12.18 hrs, Volume= 33,001 cf, Depth> 4.86"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

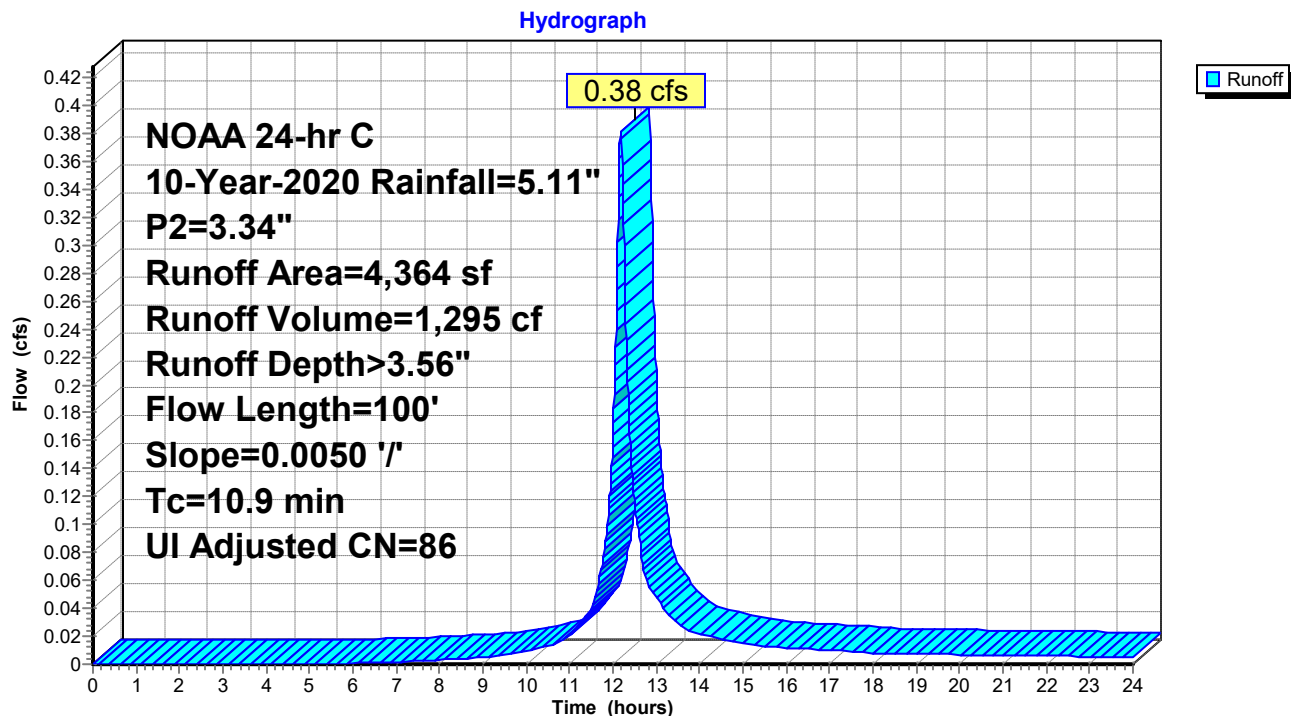
Runoff = 0.38 cfs @ 12.18 hrs, Volume= 1,295 cf, Depth> 3.56"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

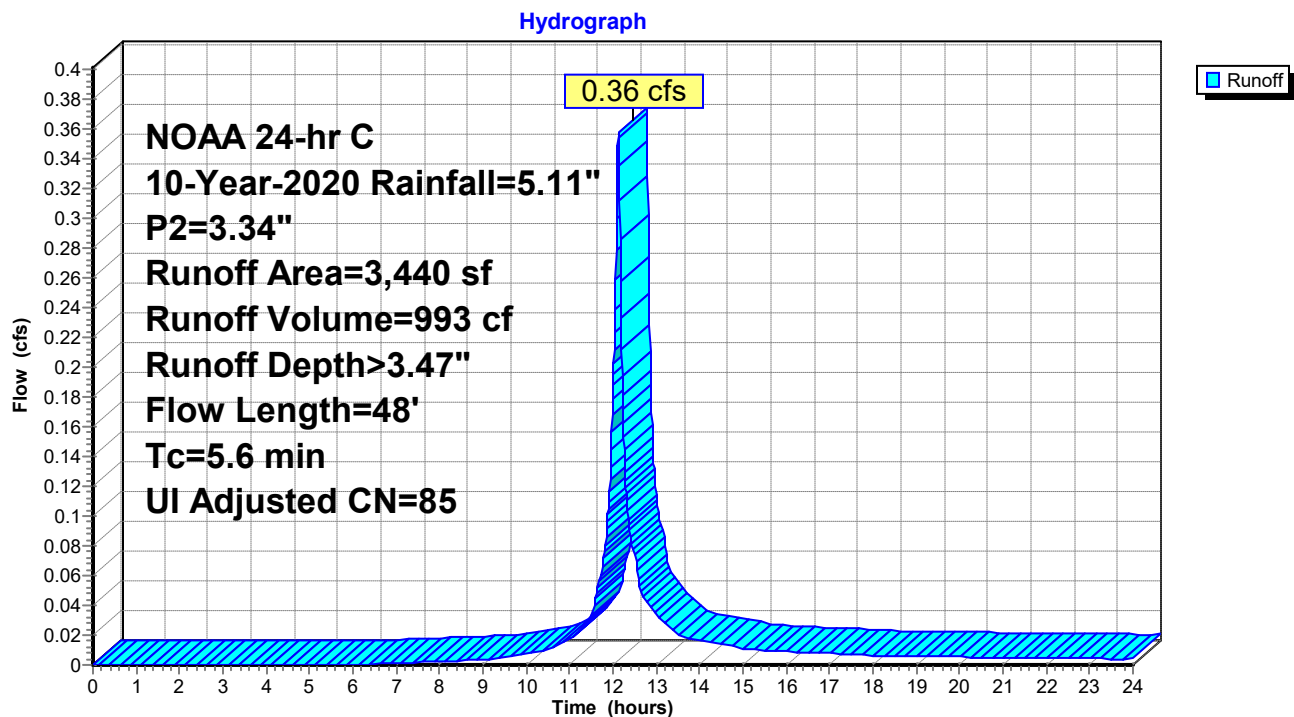
Runoff = 0.36 cfs @ 12.13 hrs, Volume= 993 cf, Depth> 3.47"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.6      | 28            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 5.6      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

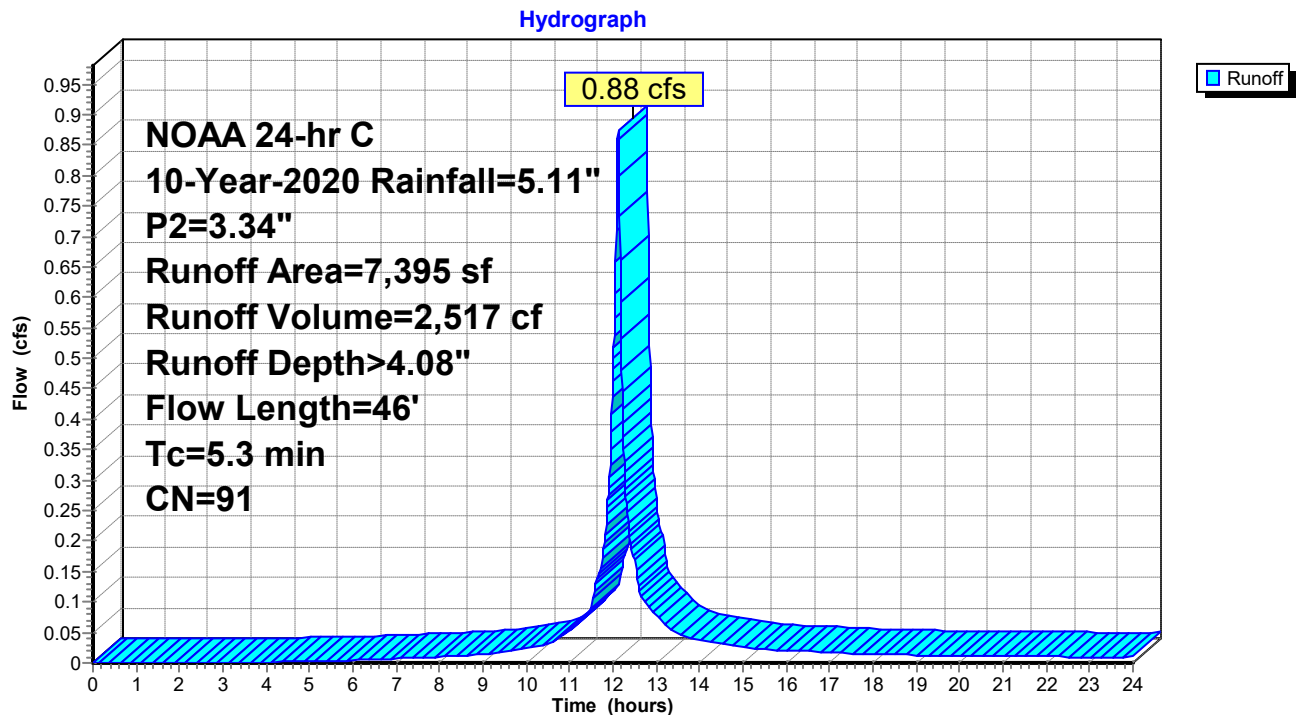
Runoff = 0.88 cfs @ 12.12 hrs, Volume= 2,517 cf, Depth> 4.08"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.3      | 26            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 5.3      | 46            | Total         |                   |                |                                 |

**Subcatchment 313P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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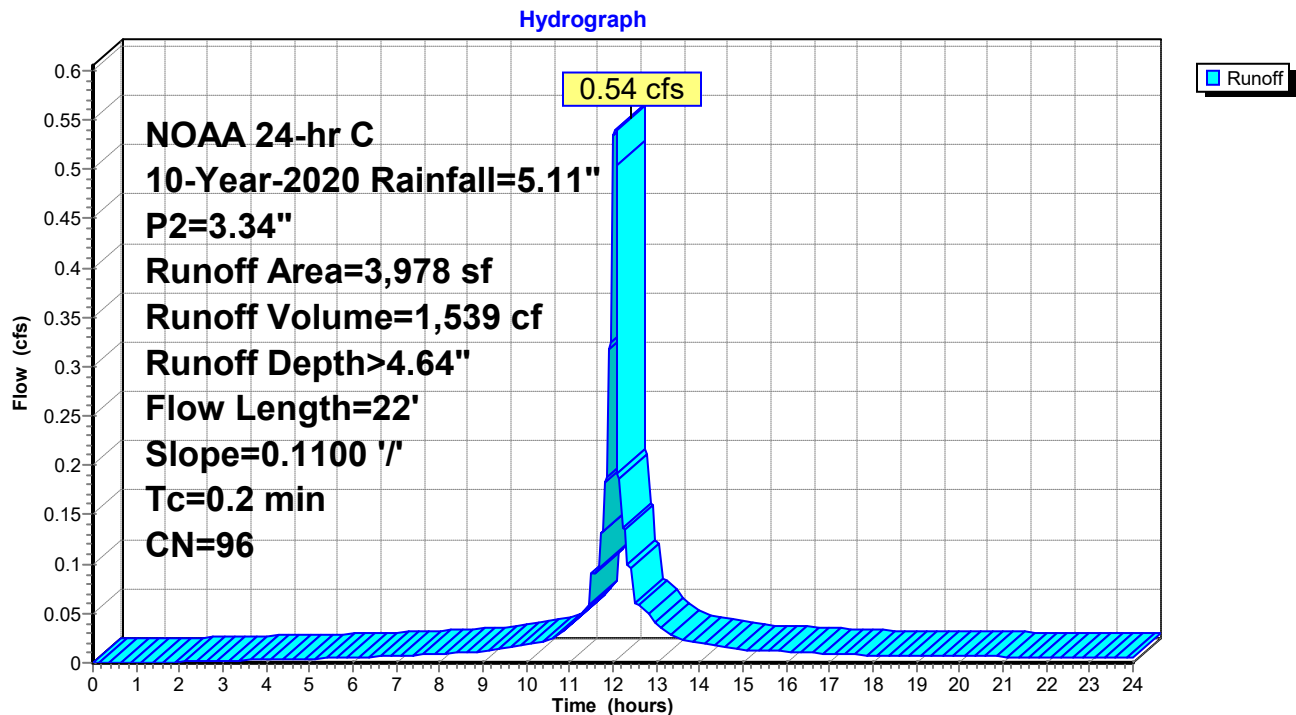
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 0.54 cfs @ 12.09 hrs, Volume= 1,539 cf, Depth> 4.64"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description            |
|------------------------------------|---------------|---------------|-------------------|----------------|------------------------|
| 0.2                                | 22            | 0.1100        | 2.05              |                | Sheet Flow, Sheet Flow |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                        |

**Subcatchment 401P: Onsite to SP4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Subcatchment 403P: Tennis Courts**

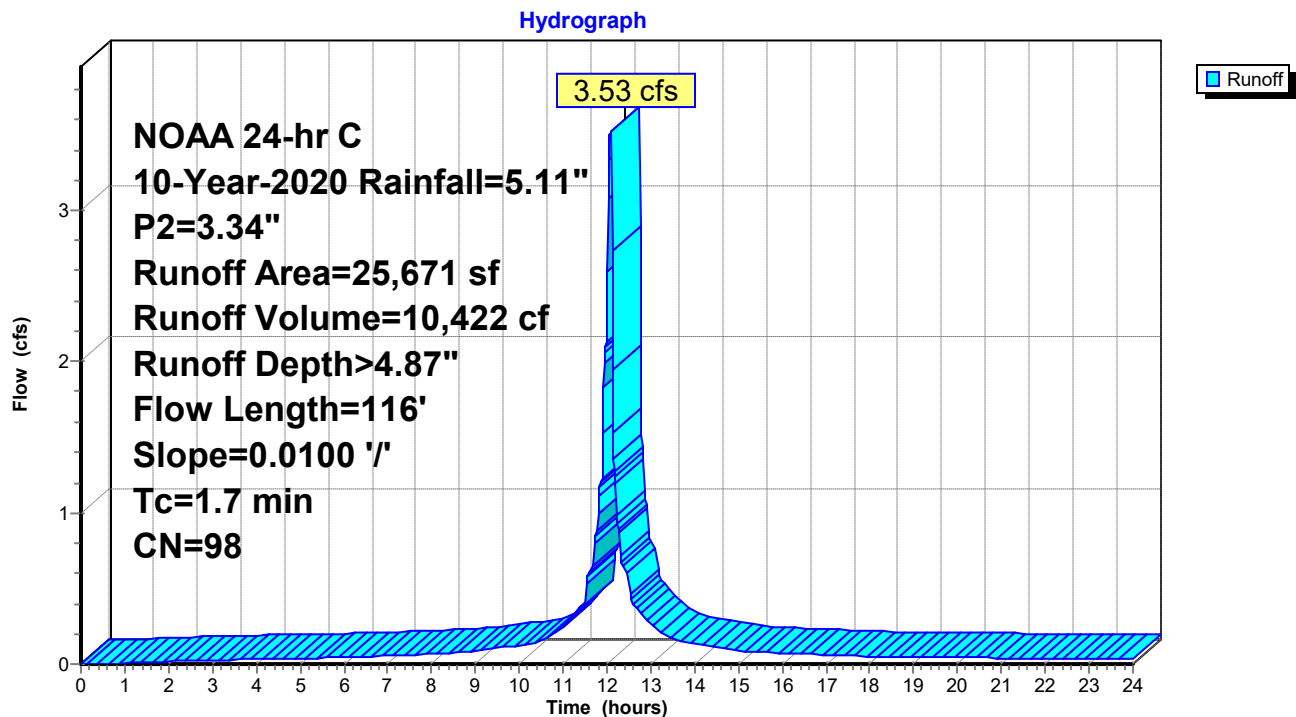
Runoff = 3.53 cfs @ 12.10 hrs, Volume= 10,422 cf, Depth> 4.87"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

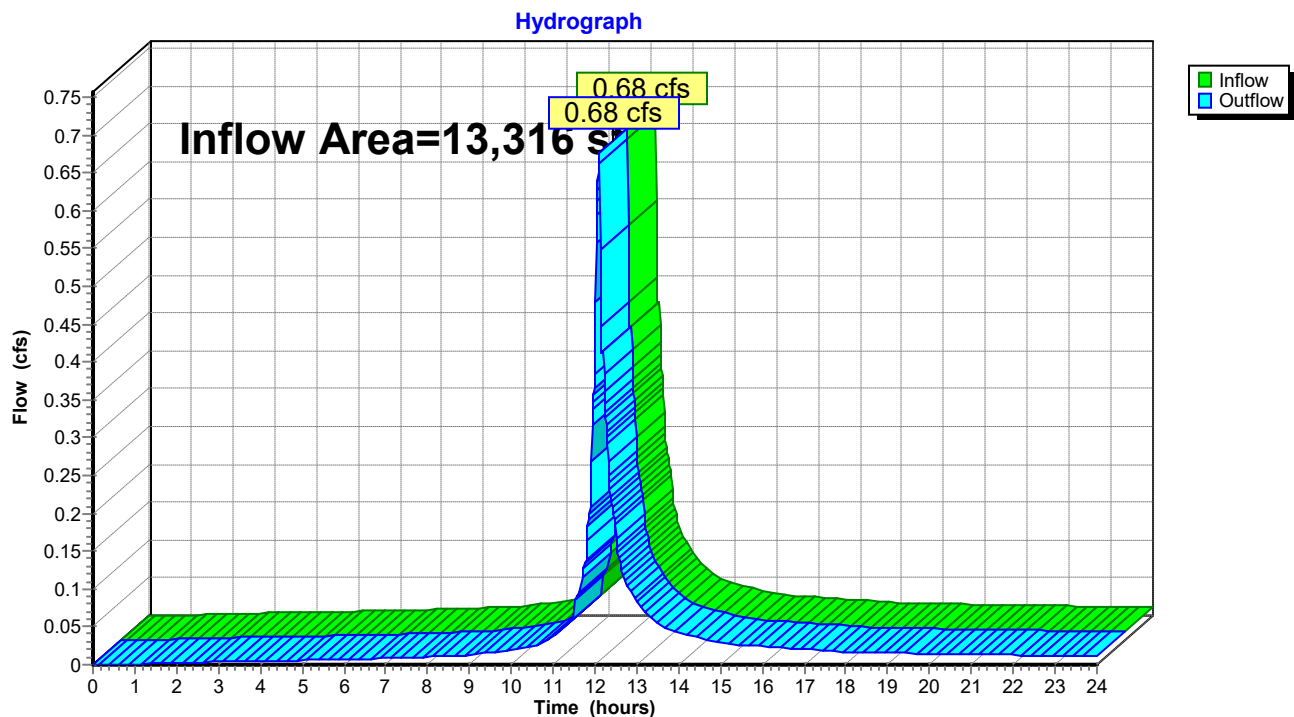
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 2.20" for 10-Year-2020 event  
 Inflow = 0.68 cfs @ 12.10 hrs, Volume= 2,444 cf  
 Outflow = 0.68 cfs @ 12.10 hrs, Volume= 2,444 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED

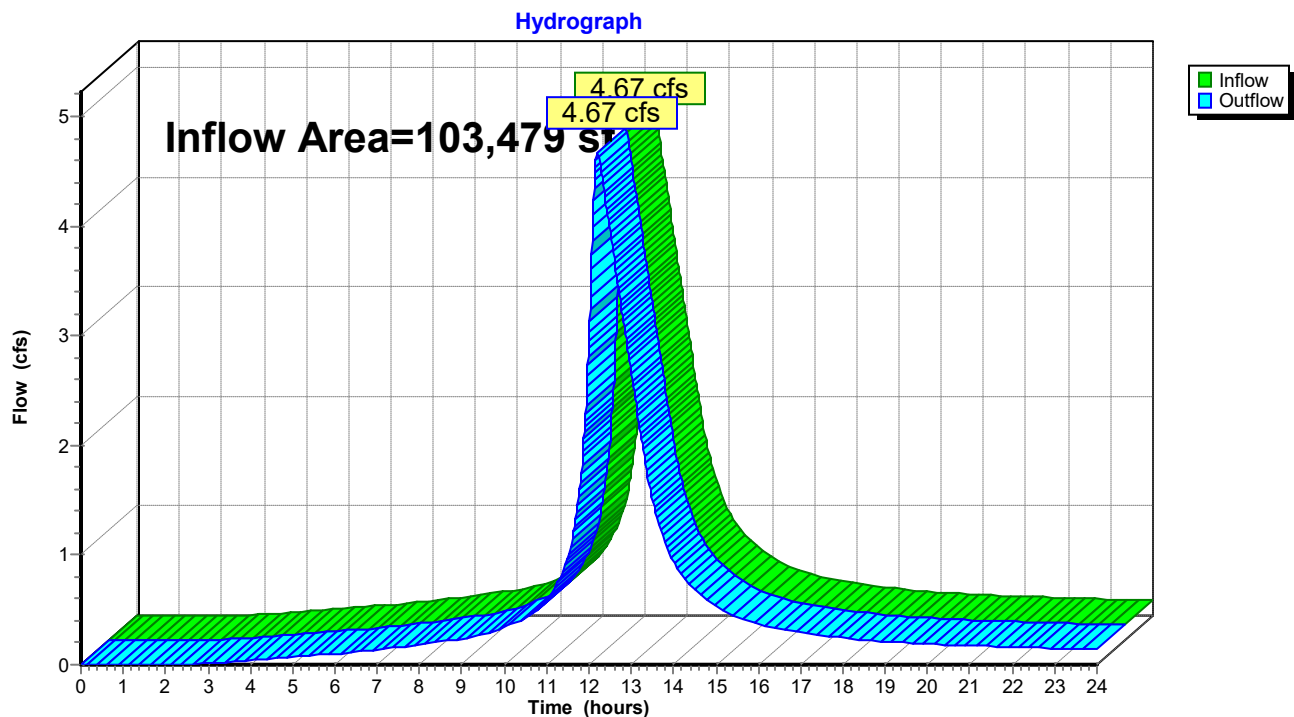


### Summary for Reach 2P: ONSITE EAST

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 4.49" for 10-Year-2020 event  
 Inflow = 4.67 cfs @ 12.21 hrs, Volume= 38,679 cf  
 Outflow = 4.67 cfs @ 12.21 hrs, Volume= 38,679 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2P: ONSITE EAST



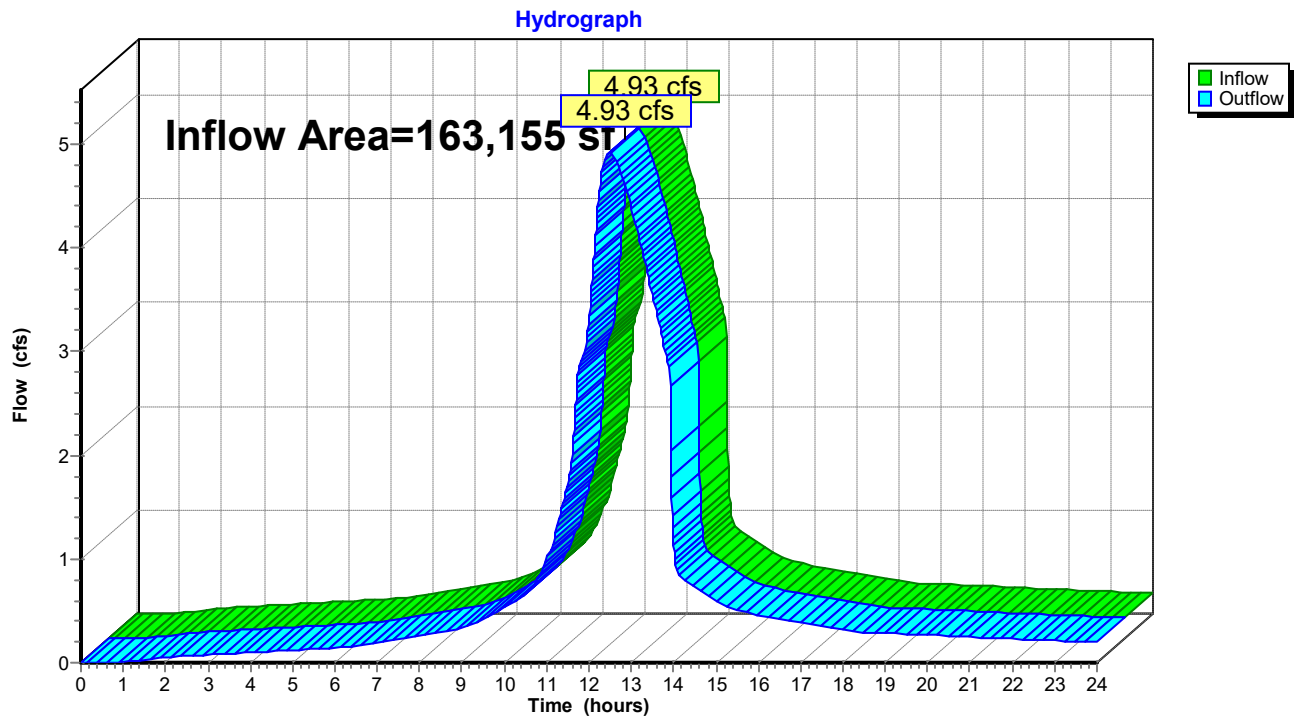


### Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 4.16" for 10-Year-2020 event  
 Inflow = 4.93 cfs @ 12.50 hrs, Volume= 56,556 cf  
 Outflow = 4.93 cfs @ 12.50 hrs, Volume= 56,556 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3P: ONSITE WEST

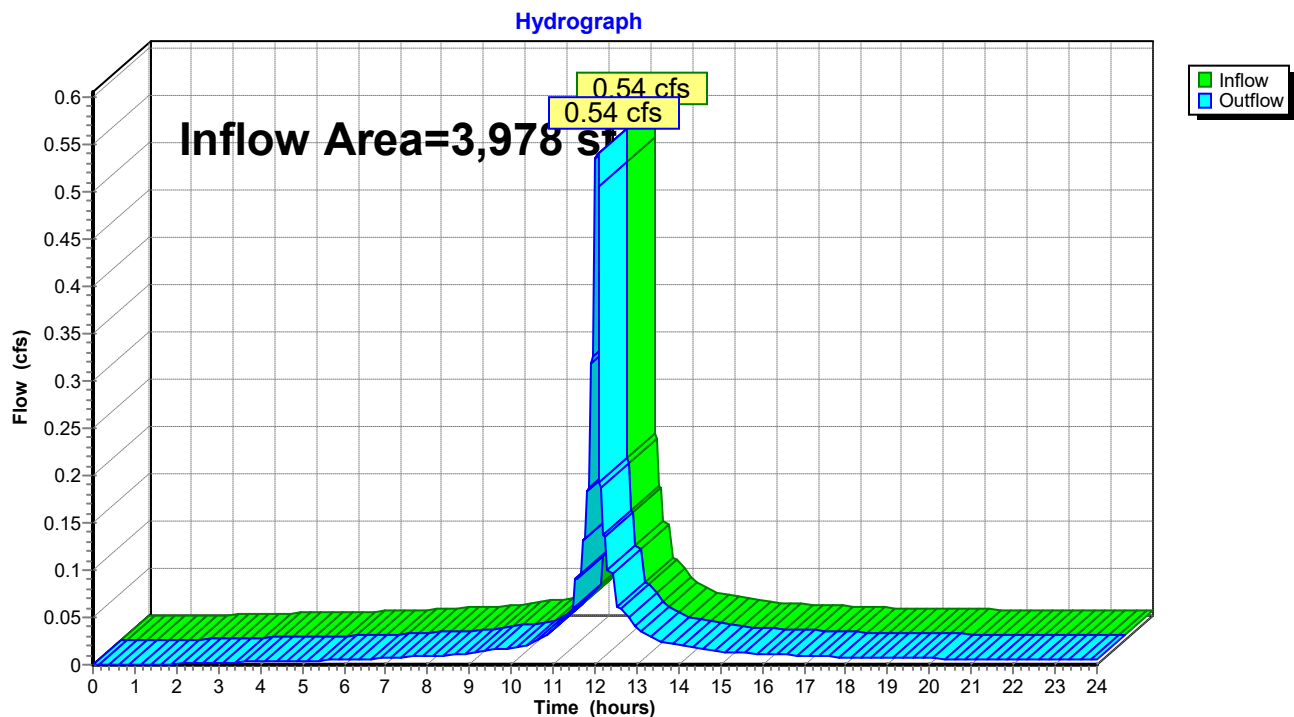


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 4.64" for 10-Year-2020 event  
 Inflow = 0.54 cfs @ 12.09 hrs, Volume= 1,539 cf  
 Outflow = 0.54 cfs @ 12.09 hrs, Volume= 1,539 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

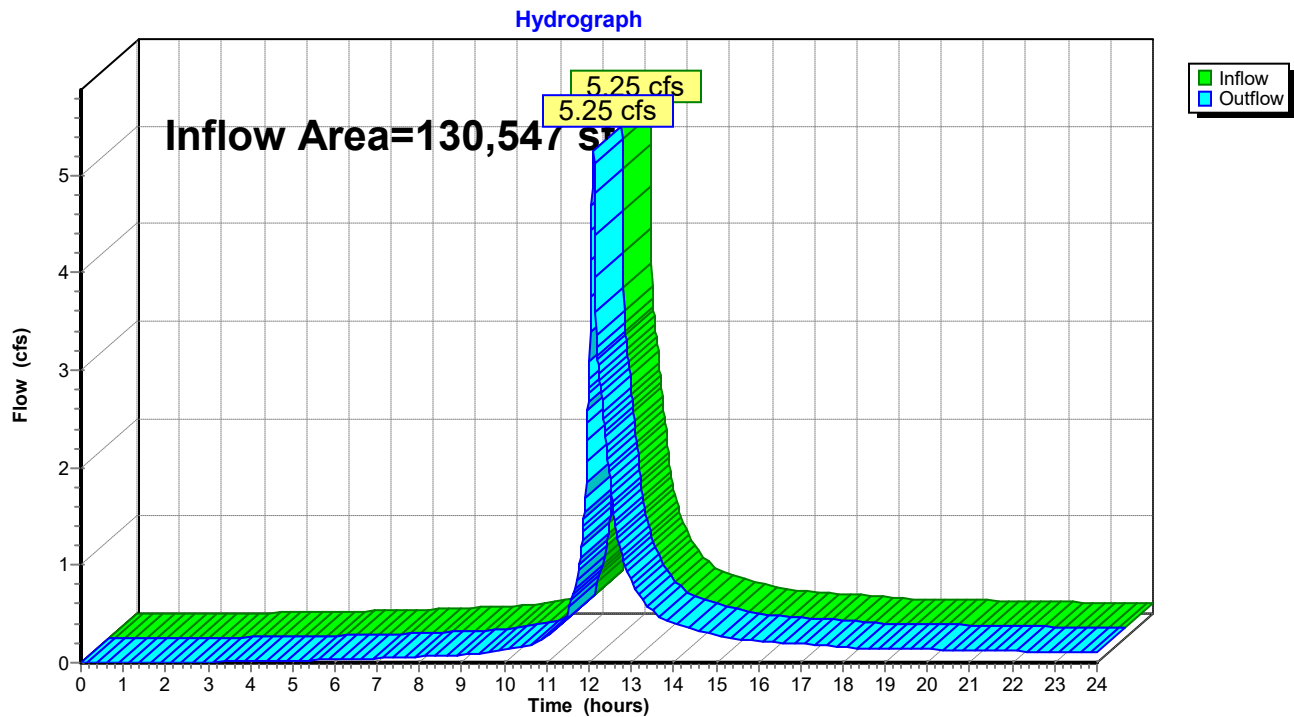
### Reach 4P: ONSITE TENNIS COURTS



**Summary for Reach 100P: EX INLET 1**

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 1.89" for 10-Year-2020 event  
Inflow = 5.25 cfs @ 12.11 hrs, Volume= 20,614 cf  
Outflow = 5.25 cfs @ 12.11 hrs, Volume= 20,614 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

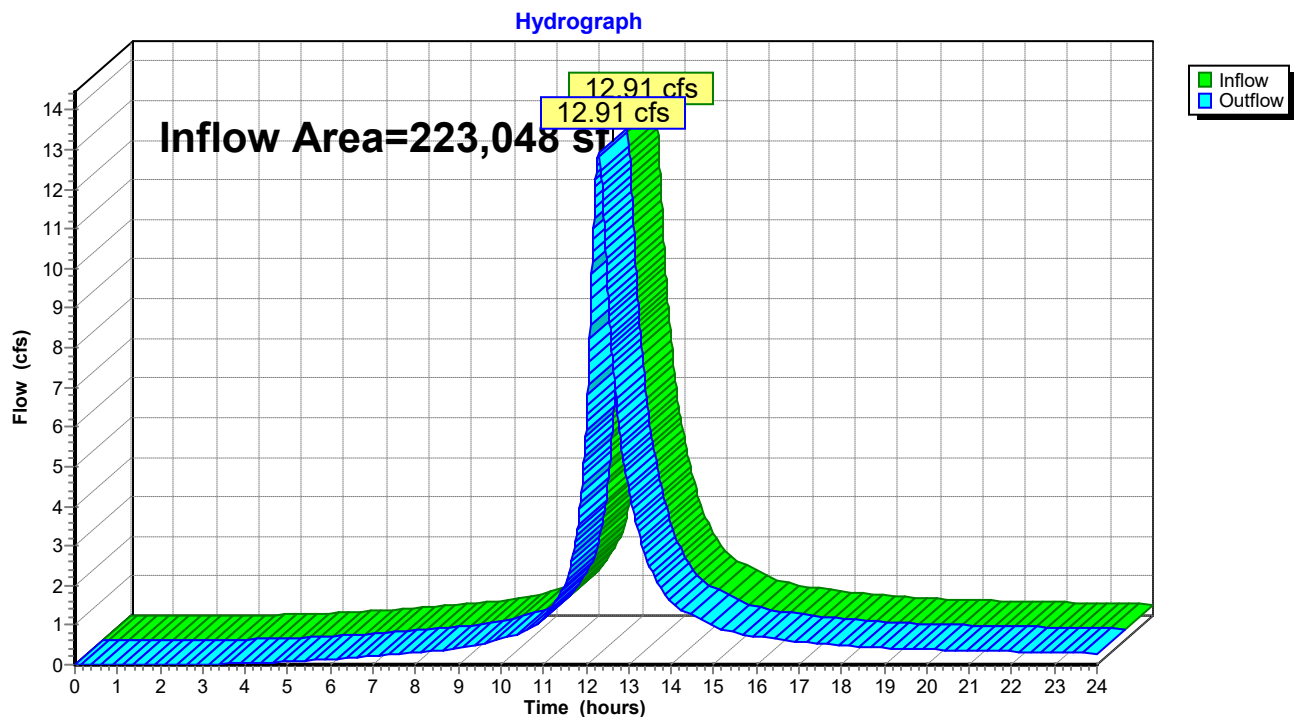
**Reach 100P: EX INLET 1**

### Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 4.15" for 10-Year-2020 event  
 Inflow = 12.91 cfs @ 12.30 hrs, Volume= 77,133 cf  
 Outflow = 12.91 cfs @ 12.30 hrs, Volume= 77,133 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200P: EX MANHOLE 2

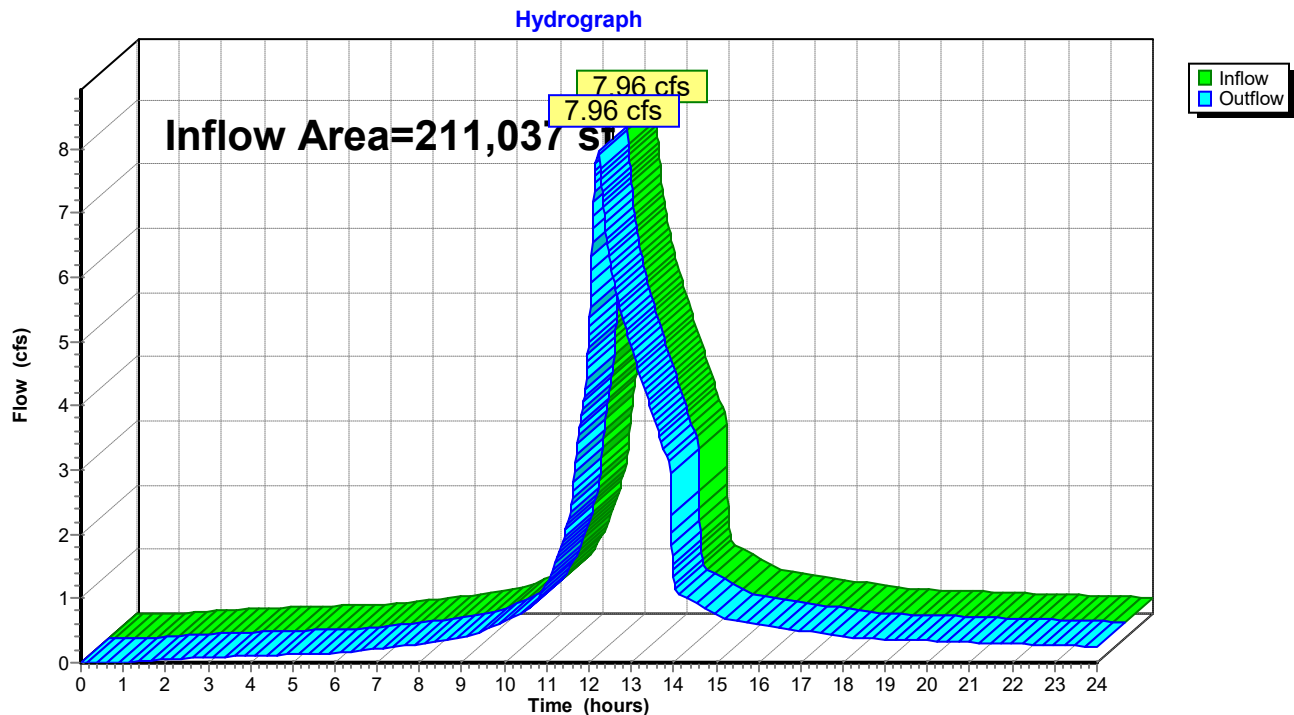


### Summary for Reach 300P: EX INLET 3

Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 4.02" for 10-Year-2020 event  
 Inflow = 7.96 cfs @ 12.21 hrs, Volume= 70,765 cf  
 Outflow = 7.96 cfs @ 12.21 hrs, Volume= 70,765 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300P: EX INLET 3

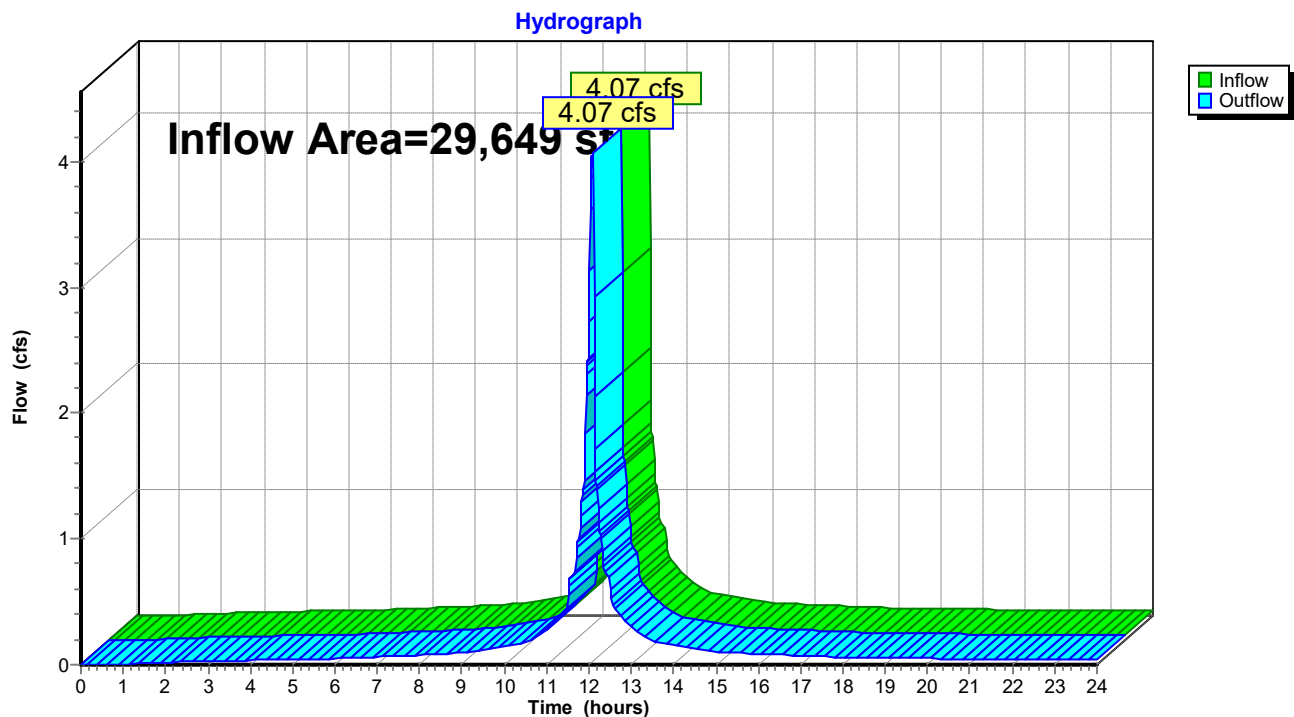


### Summary for Reach 400P: TENNIS COURTS

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 4.84" for 10-Year-2020 event  
 Inflow = 4.07 cfs @ 12.09 hrs, Volume= 11,960 cf  
 Outflow = 4.07 cfs @ 12.09 hrs, Volume= 11,960 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400P: TENNIS COURTS

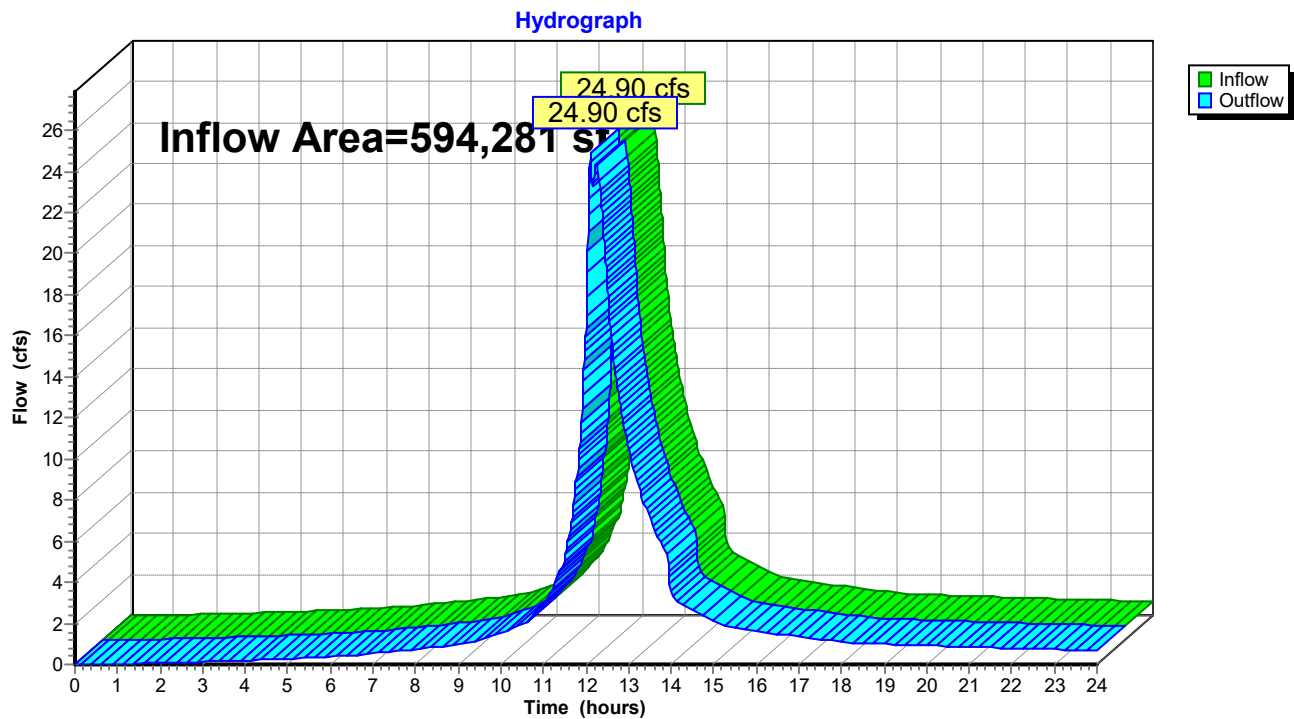


### Summary for Reach 500P: STUDY POINT

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 3.64" for 10-Year-2020 event  
 Inflow = 24.90 cfs @ 12.11 hrs, Volume= 180,473 cf  
 Outflow = 24.90 cfs @ 12.11 hrs, Volume= 180,473 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500P: STUDY POINT



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 4.67" for 10-Year-2020 event  
 Inflow = 12.44 cfs @ 12.10 hrs, Volume= 37,598 cf  
 Outflow = 4.06 cfs @ 12.24 hrs, Volume= 36,402 cf, Atten= 67%, Lag= 8.5 min  
 Primary = 4.06 cfs @ 12.24 hrs, Volume= 36,402 cf  
 Routed to Reach 2P : ONSITE EAST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 100.85' @ 12.24 hrs Surf.Area= 8,044 sf Storage= 10,831 cf

Plug-Flow detention time= 70.2 min calculated for 36,402 cf (97% of inflow)  
 Center-of-Mass det. time= 50.2 min ( 801.3 - 751.2 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

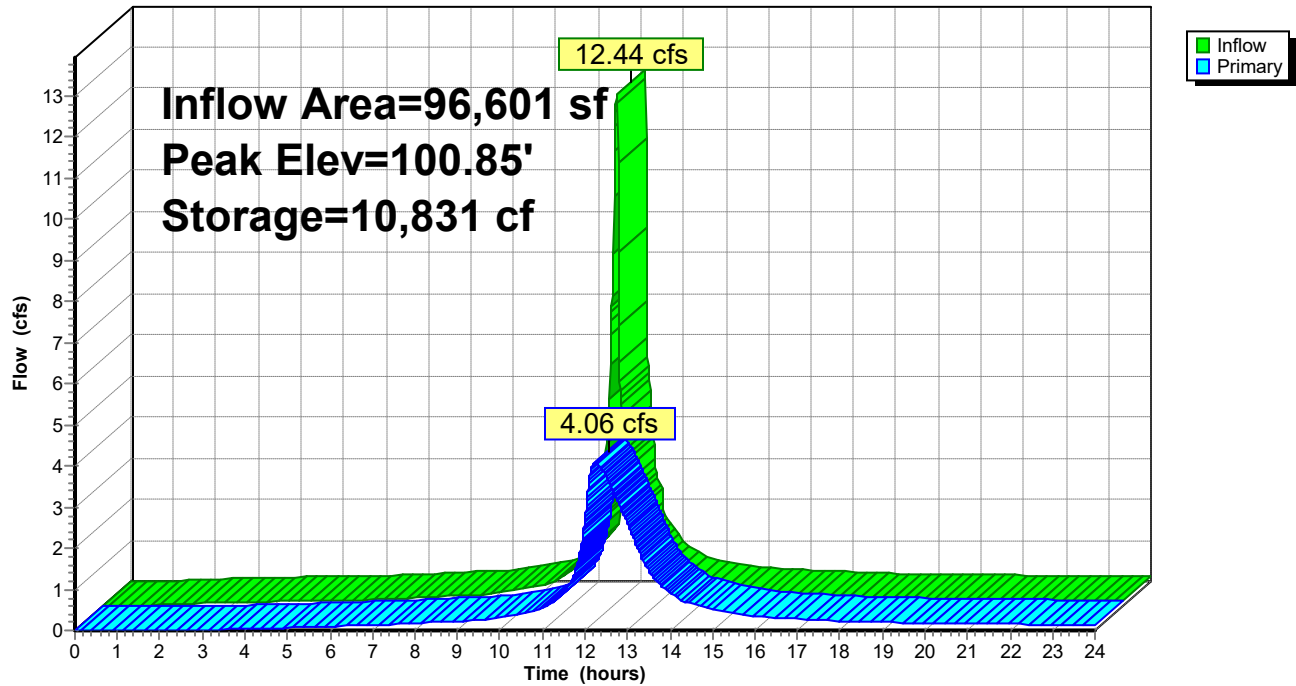
**Primary OutFlow** Max=4.05 cfs @ 12.24 hrs HW=100.85' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 4.05 cfs @ 5.16 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)



**Pond 204P: Cultec East**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2020 Rainfall=5.11", P2=3.34"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 4.18" for 10-Year-2020 event  
 Inflow = 13.63 cfs @ 12.18 hrs, Volume= 55,519 cf  
 Outflow = 4.85 cfs @ 12.51 hrs, Volume= 55,491 cf, Atten= 64%, Lag= 20.0 min  
 Primary = 4.85 cfs @ 12.51 hrs, Volume= 55,491 cf  
 Routed to Reach 3P : ONSITE WEST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 100.35' @ 12.51 hrs Surf.Area= 11,650 sf Storage= 11,163 cf

Plug-Flow detention time= 14.8 min calculated for 55,468 cf (100% of inflow)  
 Center-of-Mass det. time= 14.5 min ( 791.8 - 777.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD x 528 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

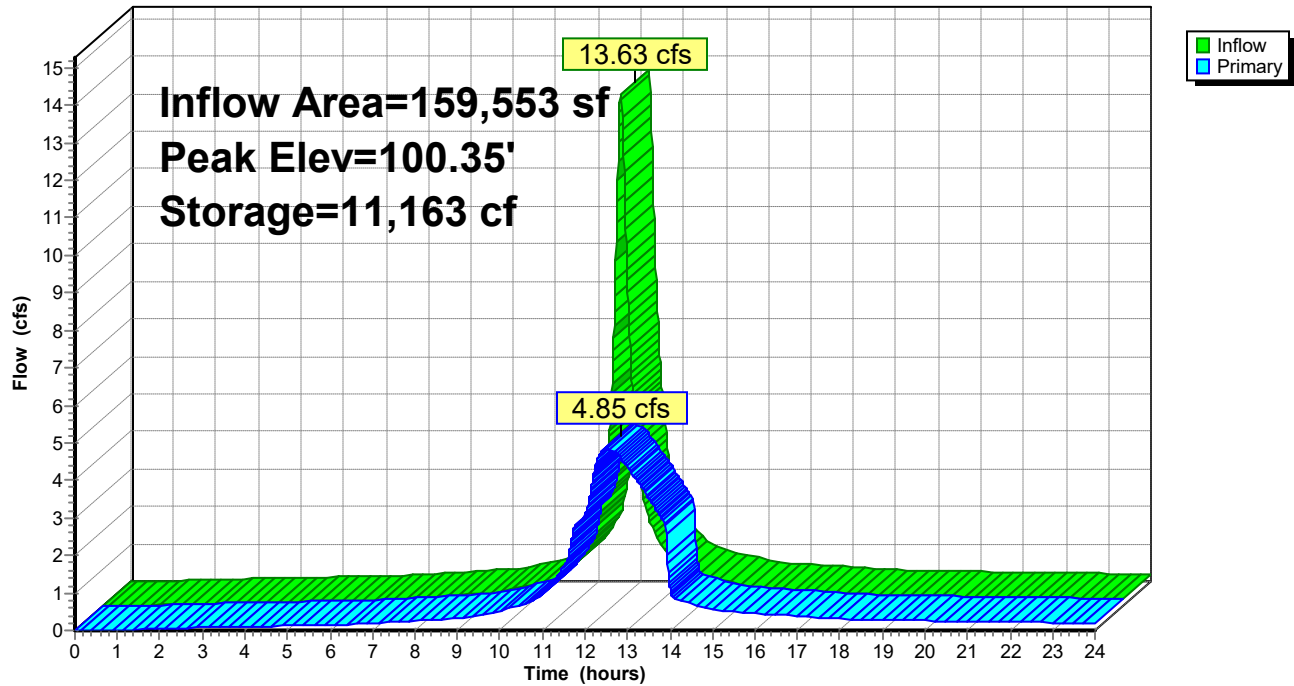
| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=4.85 cfs @ 12.51 hrs HW=100.35' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 4.85 cfs @ 6.18 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 208P: Cultec West**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>3.34"  
Flow Length=1,133' Tc=18.9 min CN=56 Runoff=4.62 cfs 19,596 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>3.35"  
Flow Length=186' Tc=10.1 min CN=56 Runoff=0.81 cfs 2,627 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>7.81"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=6.57 cfs 18,983 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>2.54"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.37 cfs 962 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>3.12"  
Flow Length=226' Tc=5.6 min UI Adjusted CN=54 Runoff=1.26 cfs 3,425 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>8.42"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=0.91 cfs 2,741 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>6.72"  
Flow Length=91' Slope=0.0100 '/' Tc=9.8 min CN=84 Runoff=1.76 cfs 5,897 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>6.73"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.49 cfs 1,307 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>8.42"  
Flow Length=100' Slope=0.0050 '/' Tc=2.1 min CN=98 Runoff=18.82 cfs 56,591 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>7.30"  
Flow Length=1,012' Tc=21.7 min CN=89 Runoff=15.43 cfs 72,776 cf

**Subcatchment 206P: Onsite to E Field Drain** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>7.44"  
Flow Length=504' Tc=12.2 min UI Adjusted CN=90 Runoff=1.13 cfs 4,263 cf

**Subcatchment 207P: Offsite Impervious to** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>8.42"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.71 cfs 2,139 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>6.70"  
Flow Length=686' Tc=18.0 min CN=84 Runoff=7.47 cfs 31,536 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>6.96"  
Flow Length=62' Slope=0.0100 '/' Tc=8.6 min UI Adjusted CN=86 Runoff=1.16 cfs 3,759 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>6.71"  
Flow Length=654' Tc=13.0 min CN=84 Runoff=3.94 cfs 14,547 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>6.72"  
Flow Length=370' Tc=9.6 min CN=84 Runoff=0.32 cfs 1,052 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Subcatchment 305P: Offsite to Existing W**    Runoff Area=13,621 sf    2.35% Impervious    Runoff Depth>6.71"  
Flow Length=467'    Tc=13.0 min    CN=84    Runoff=2.06 cfs    7,618 cf

**Subcatchment 306P: Onsite to W Existing**    Runoff Area=425 sf    0.00% Impervious    Runoff Depth>6.72"  
Flow Length=32'    Slope=0.0100 '/'    Tc=5.1 min    CN=84    Runoff=0.08 cfs    238 cf

**Subcatchment 308P: Offsite to Drain 4**    Runoff Area=1,297 sf    38.55% Impervious    Runoff Depth>7.33"  
Flow Length=22'    Slope=0.0100 '/'    Tc=1.7 min    CN=89    Runoff=0.29 cfs    793 cf

**Subcatchment 309P: Offsite Building to**    Runoff Area=8,251 sf    81.26% Impervious    Runoff Depth>8.05"  
Flow Length=168'    Tc=4.5 min    CN=95    Runoff=1.83 cfs    5,536 cf

**Subcatchment 310P: Impervious Stadium**    Runoff Area=81,430 sf    98.43% Impervious    Runoff Depth>8.40"  
Flow Length=100'    Slope=0.0050 '/'    Tc=10.9 min    CN=98    Runoff=14.60 cfs    57,023 cf

**Subcatchment 311P: Onsite to New Inlet**    Runoff Area=4,364 sf    24.15% Impervious    Runoff Depth>6.96"  
Flow Length=100'    Slope=0.0050 '/'    Tc=10.9 min    UI Adjusted CN=86    Runoff=0.72 cfs    2,530 cf

**Subcatchment 312P: Offsite to Yard Inlet**    Runoff Area=3,440 sf    20.73% Impervious    Runoff Depth>6.84"  
Flow Length=48'    Tc=5.6 min    UI Adjusted CN=85    Runoff=0.68 cfs    1,962 cf

**Subcatchment 313P: Offsite to Yard Inlet**    Runoff Area=7,395 sf    51.36% Impervious    Runoff Depth>7.57"  
Flow Length=46'    Tc=5.3 min    CN=91    Runoff=1.56 cfs    4,664 cf

**Subcatchment 401P: Onsite to SP4**    Runoff Area=3,978 sf    83.13% Impervious    Runoff Depth>8.18"  
Flow Length=22'    Slope=0.1100 '/'    Tc=0.2 min    CN=96    Runoff=0.93 cfs    2,711 cf

**Subcatchment 403P: Tennis Courts**    Runoff Area=25,671 sf    100.00% Impervious    Runoff Depth>8.42"  
Flow Length=116'    Slope=0.0100 '/'    Tc=1.7 min    CN=98    Runoff=6.00 cfs    18,007 cf

**Reach 1P: ONSITE UNRETAINED**    Inflow=1.48 cfs    5,368 cf  
Outflow=1.48 cfs    5,368 cf

**Reach 2P: ONSITE EAST**    Inflow=10.64 cfs    68,636 cf  
Outflow=10.64 cfs    68,636 cf

**Reach 3P: ONSITE WEST**    Inflow=10.57 cfs    103,508 cf  
Outflow=10.57 cfs    103,508 cf

**Reach 4P: ONSITE TENNIS COURTS**    Inflow=0.93 cfs    2,711 cf  
Outflow=0.93 cfs    2,711 cf

**Reach 100P: EX INLET 1**    Inflow=11.91 cfs    48,334 cf  
Outflow=11.91 cfs    48,334 cf

**Reach 200P: EX MANHOLE 2**    Inflow=25.04 cfs    141,412 cf  
Outflow=25.04 cfs    141,412 cf

**Reach 300P: EX INLET 3**    Inflow=13.87 cfs    131,210 cf  
Outflow=13.87 cfs    131,210 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Reach 400P: TENNIS COURTS**

Inflow=6.92 cfs 20,718 cf

Outflow=6.92 cfs 20,718 cf

**Reach 500P: STUDY POINT**

Inflow=47.90 cfs 341,675 cf

Outflow=47.90 cfs 341,675 cf

**Pond 204P: Cultec East**

Peak Elev=102.00' Storage=16,929 cf Inflow=21.39 cfs 65,935 cf

Outflow=9.54 cfs 64,373 cf

**Pond 208P: Cultec West**

Peak Elev=101.84' Storage=23,673 cf Inflow=24.33 cfs 101,473 cf

Outflow=10.41 cfs 101,425 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 4.62 cfs @ 12.29 hrs, Volume= 19,596 cf, Depth> 3.34"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 76            | 0.0130        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.9     | 1,133         | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

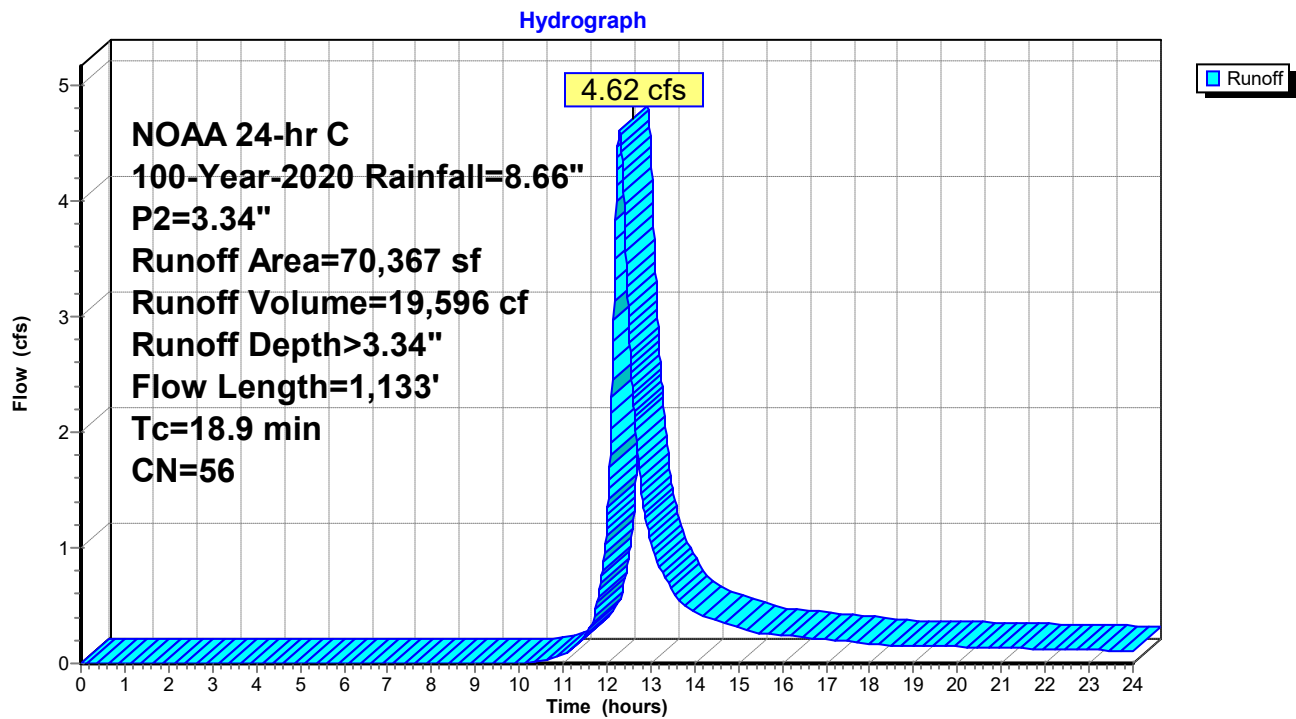
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## Subcatchment 101P: Offsite Pervious SE





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

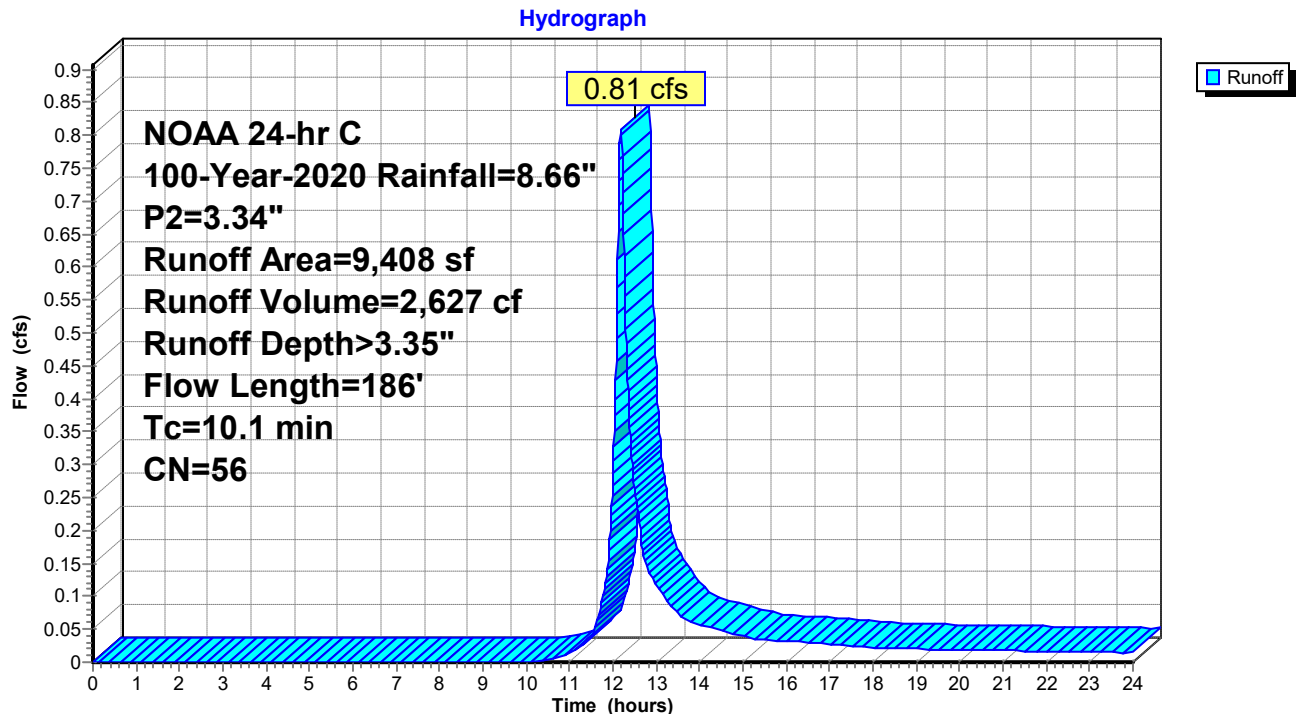
Runoff = 0.81 cfs @ 12.18 hrs, Volume= 2,627 cf, Depth> 3.35"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 10.1     | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

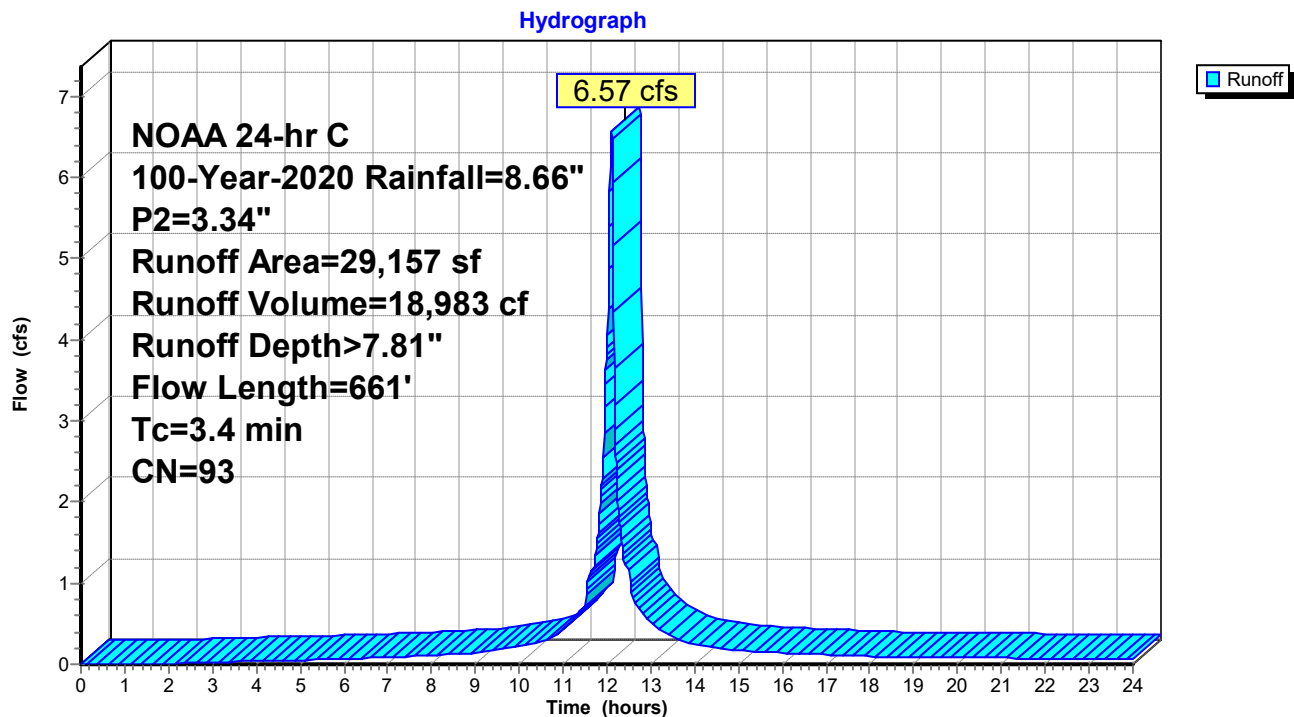
Runoff = 6.57 cfs @ 12.11 hrs, Volume= 18,983 cf, Depth> 7.81"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.71              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 104P: Yard Drains**

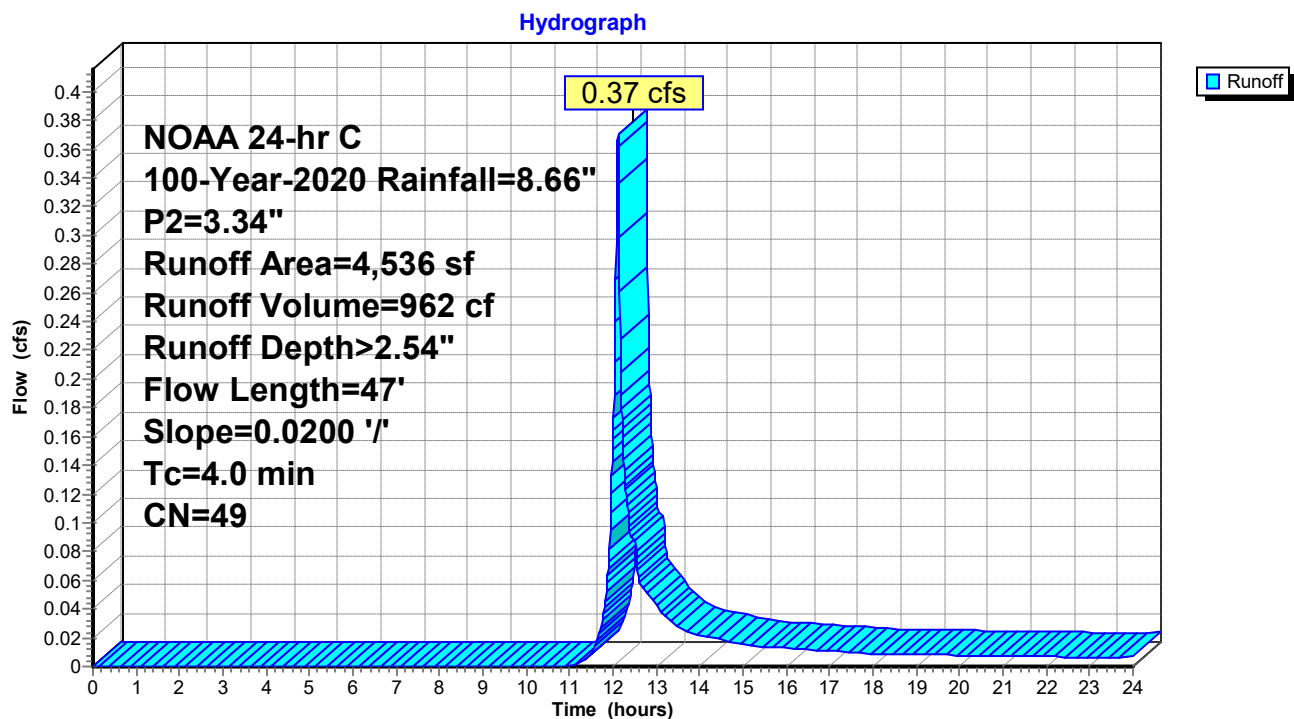
Runoff = 0.37 cfs @ 12.12 hrs, Volume= 962 cf, Depth> 2.54"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.21              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.34" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 1.26 cfs @ 12.13 hrs, Volume= 3,425 cf, Depth> 3.12"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.6      | 28            | 0.0100        | 0.83              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                                                         |
| 3.8      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.6      | 226           | Total         |                   |                |                                                                                                                             |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

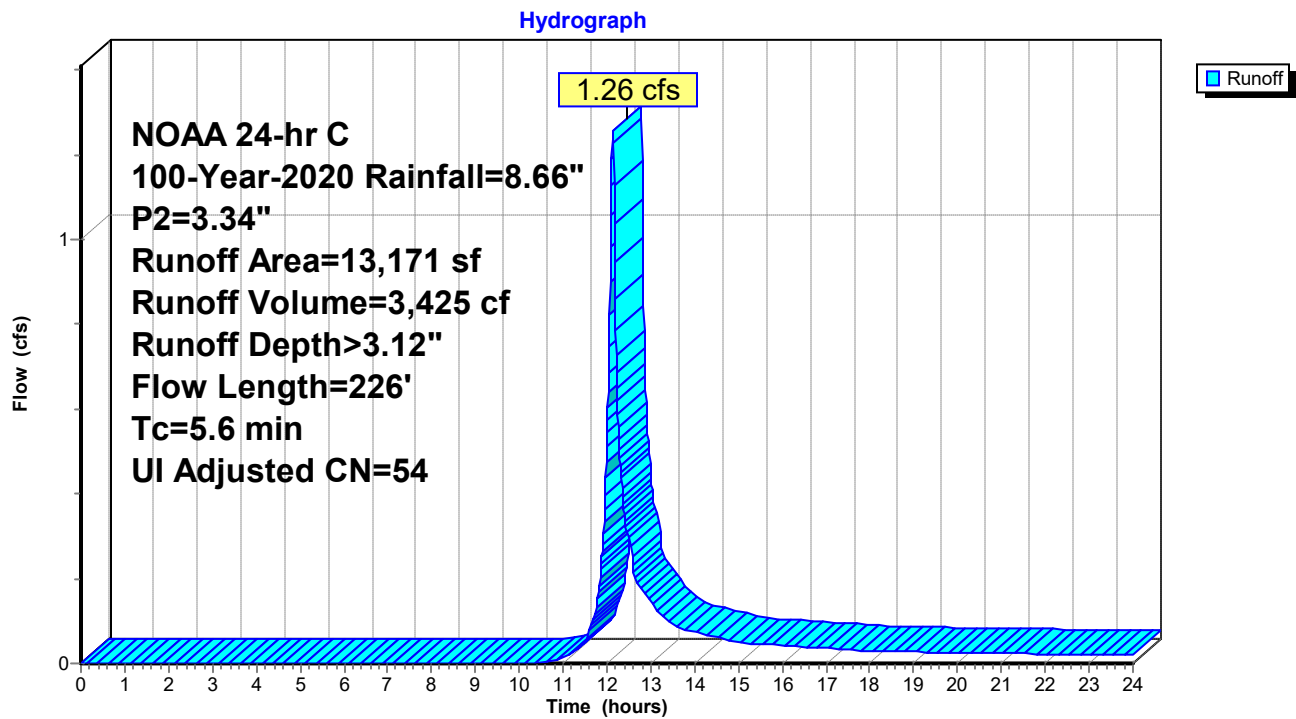
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## Subcatchment 105P: Low Drains



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

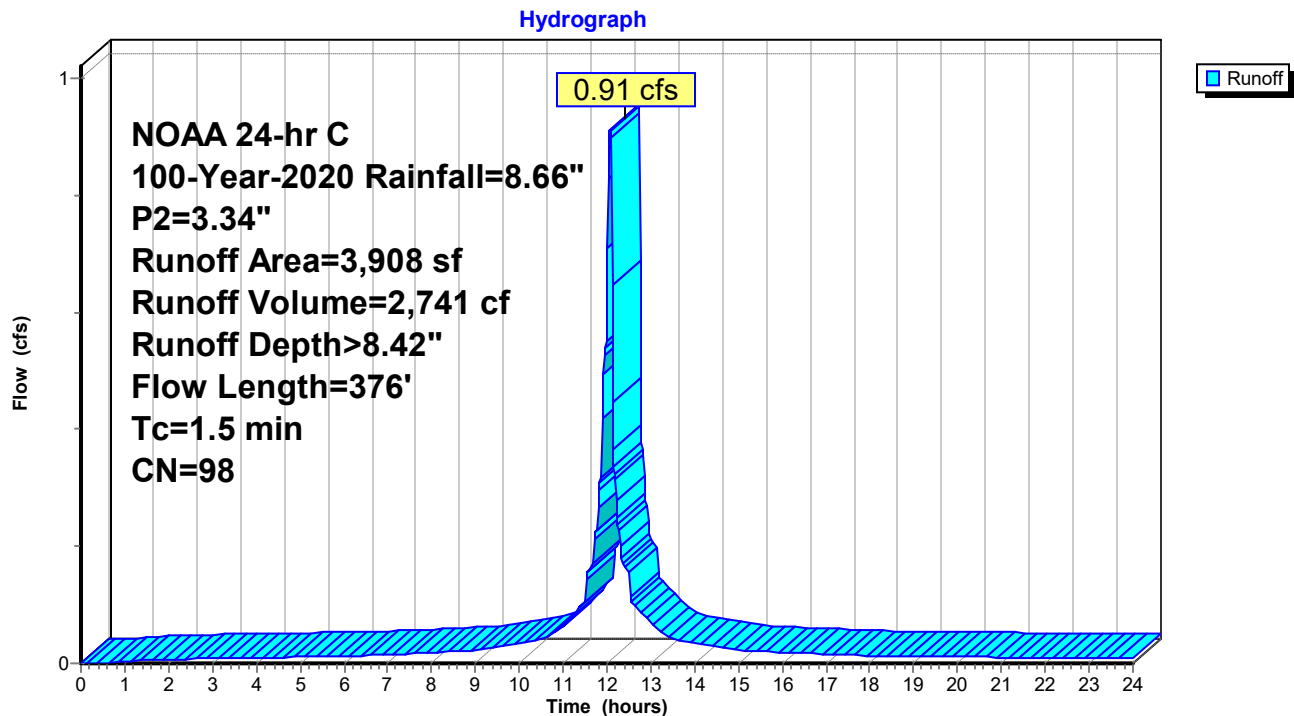
Runoff = 0.91 cfs @ 12.09 hrs, Volume= 2,741 cf, Depth> 8.42"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.54              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

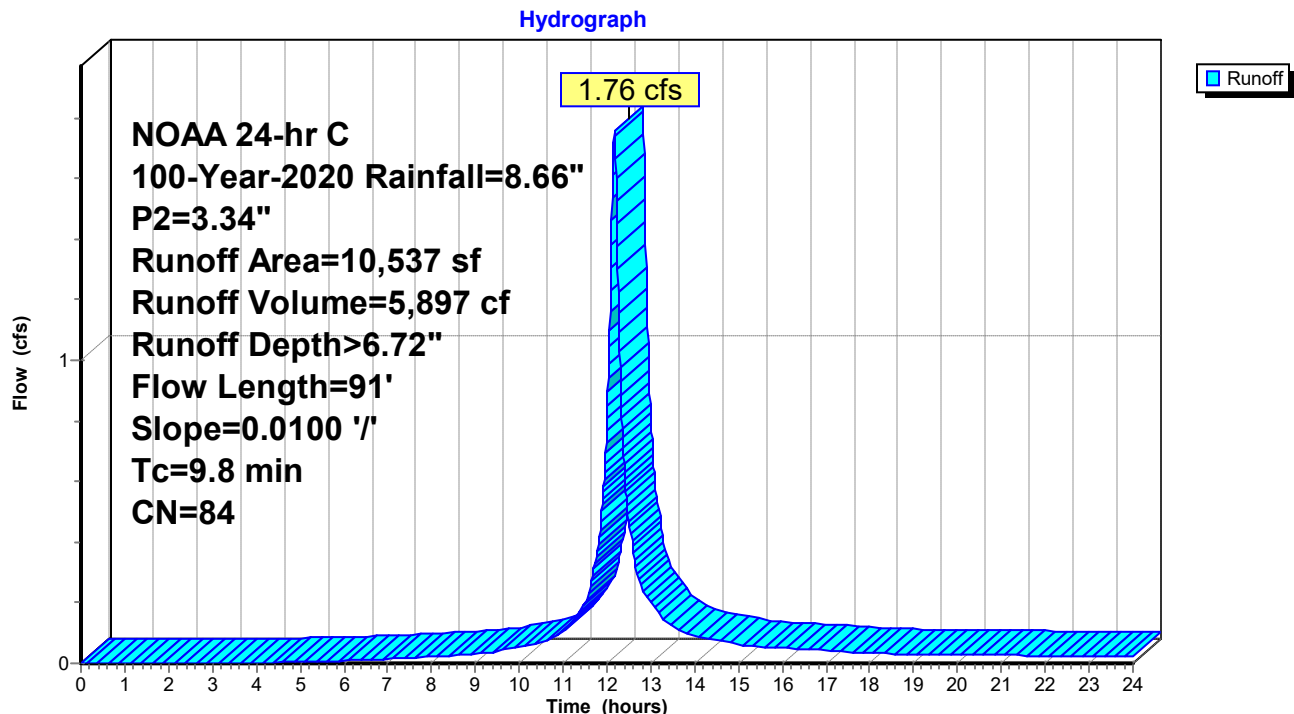
Runoff = 1.76 cfs @ 12.17 hrs, Volume= 5,897 cf, Depth> 6.72"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.8      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

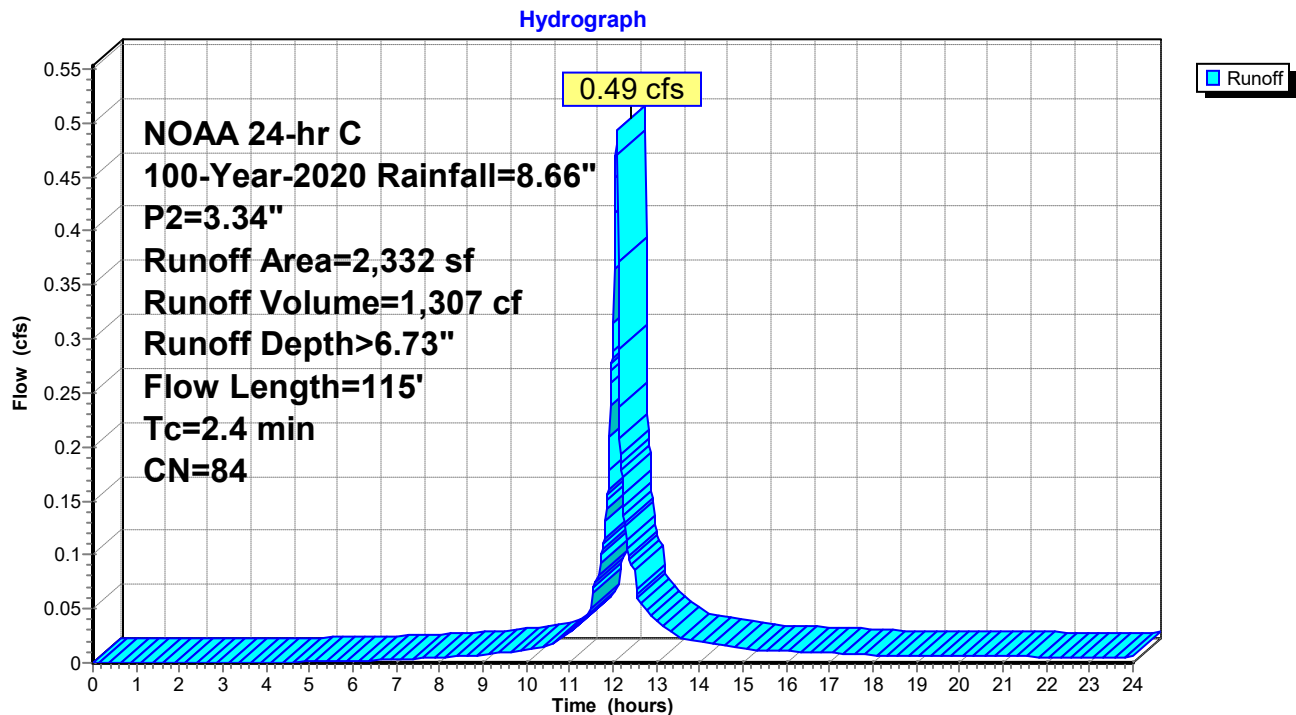
Runoff = 0.49 cfs @ 12.10 hrs, Volume= 1,307 cf, Depth> 6.73"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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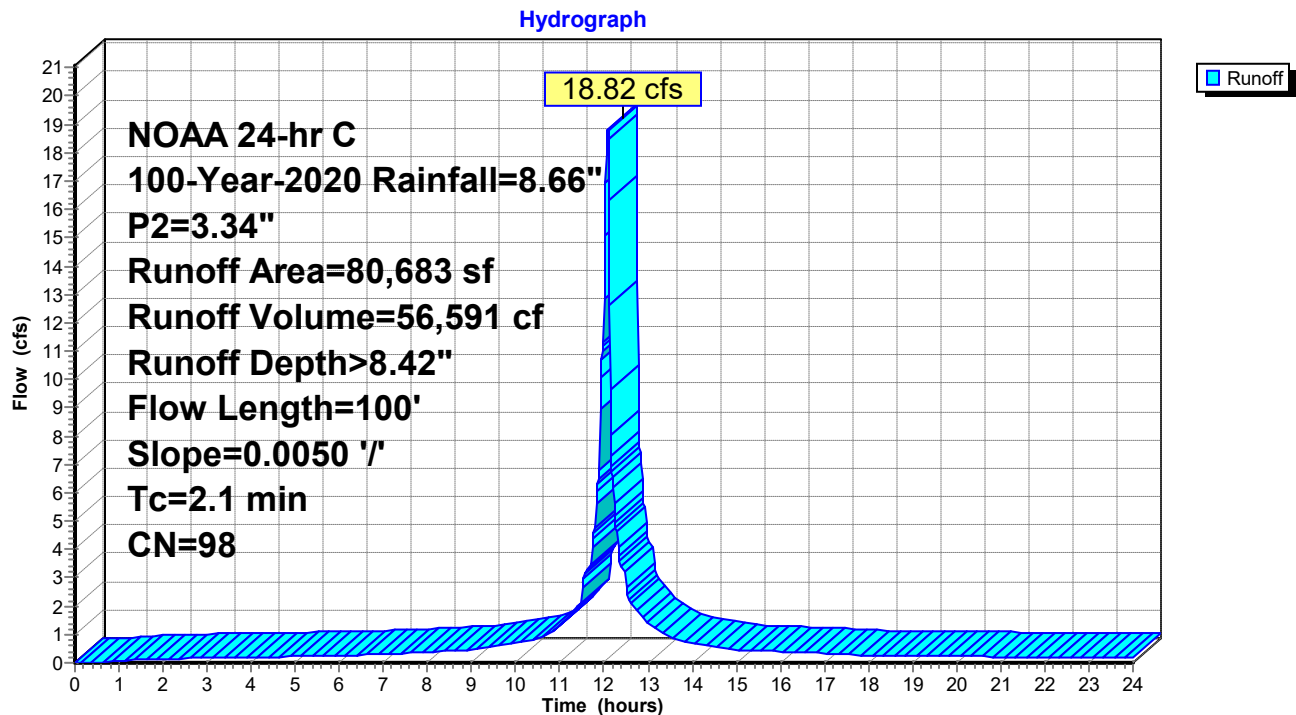
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 18.82 cfs @ 12.10 hrs, Volume= 56,591 cf, Depth> 8.42"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 2.1                                | 100           | 0.0050        | 0.81              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 15.43 cfs @ 12.30 hrs, Volume= 72,776 cf, Depth> 7.30"  
 Routed to Reach 200P : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.1      | 84            | 0.0160        | 0.15              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.7     | 1,012         | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

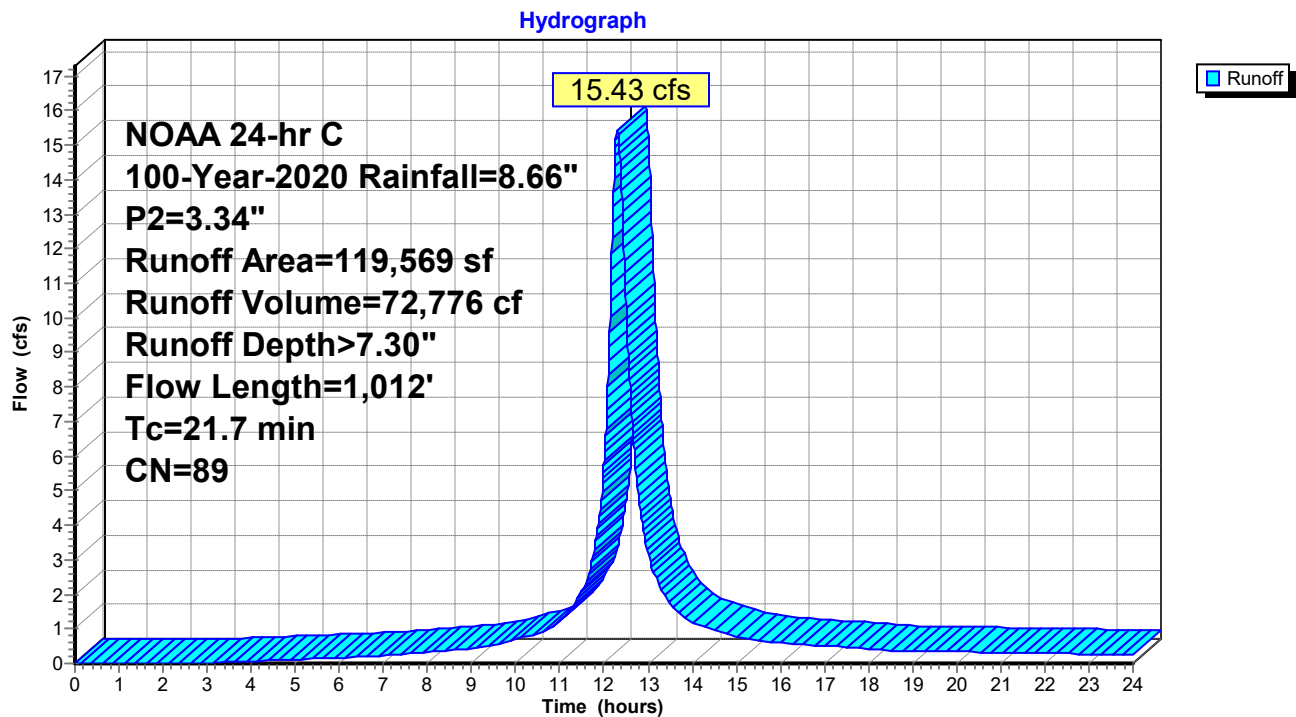
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## Subcatchment 205P: Offsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 1.13 cfs @ 12.19 hrs, Volume= 4,263 cf, Depth> 7.44"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 12.2     | 504           | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

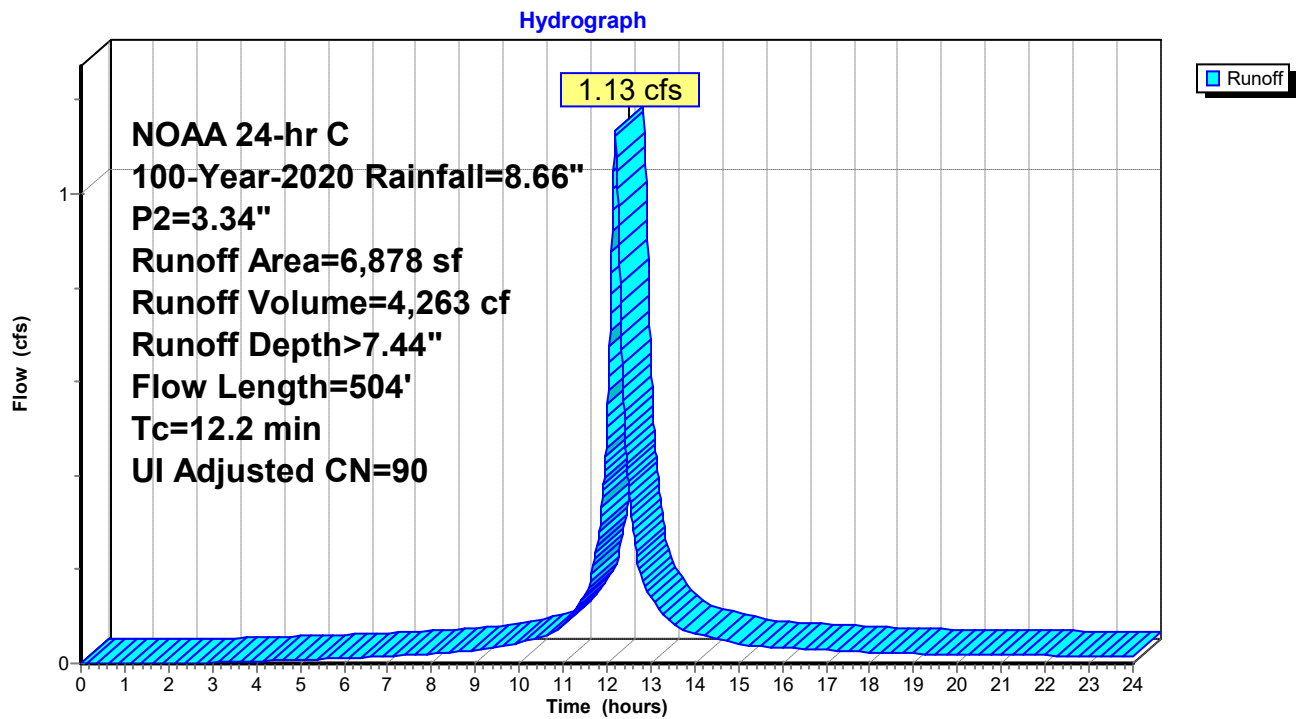
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## Subcatchment 206P: Onsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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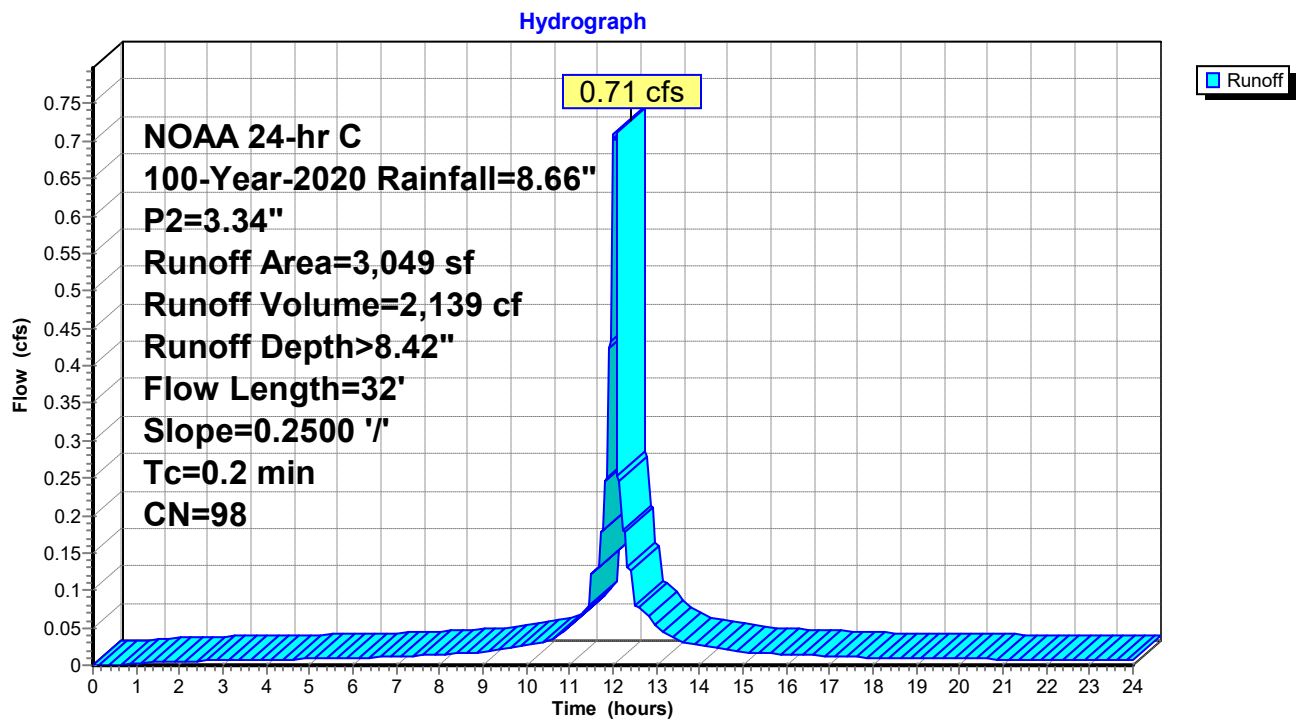
**Summary for Subcatchment 207P: Offsite Impervious to Trench Drain**

Runoff = 0.71 cfs @ 12.09 hrs, Volume= 2,139 cf, Depth> 8.42"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                             |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.07              |                | Sheet Flow, Sheet<br>Smooth surfaces n= 0.011 P2= 3.34" |

**Subcatchment 207P: Offsite Impervious to Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 7.47 cfs @ 12.26 hrs, Volume= 31,536 cf, Depth> 6.70"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 79            | 0.0140        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 18.0     | 686           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

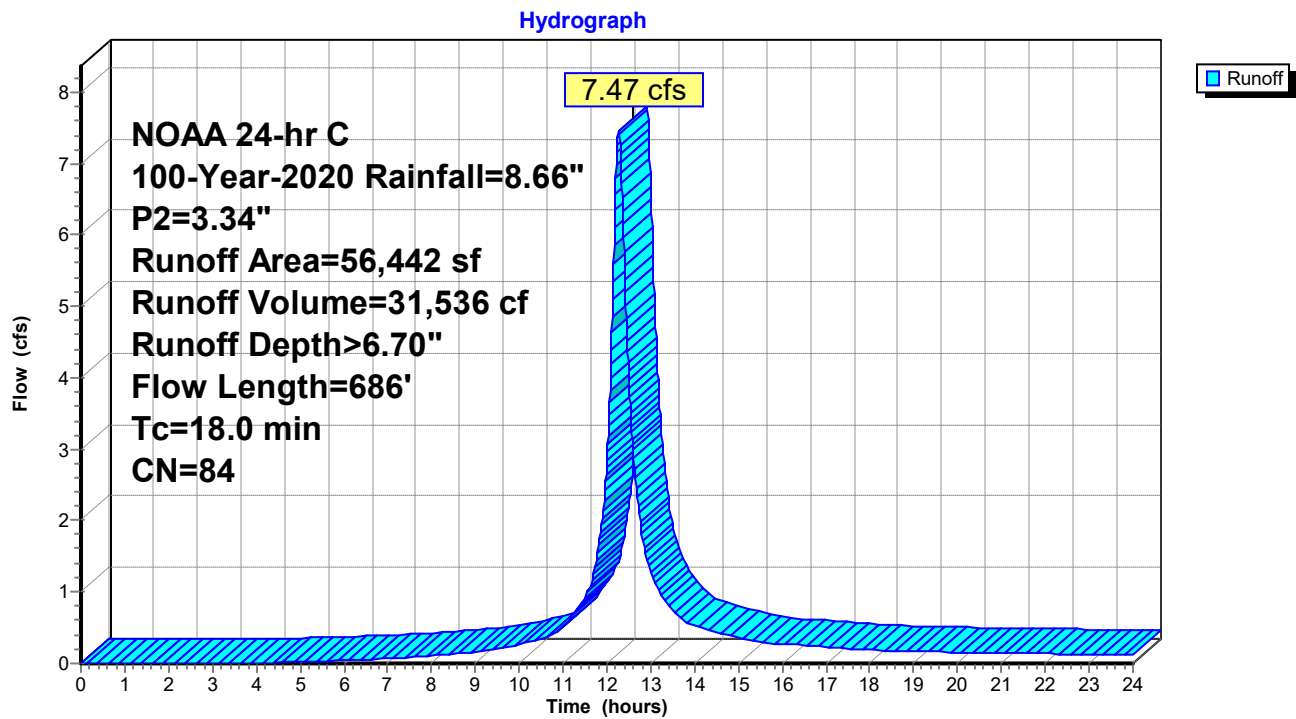
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## Subcatchment 301P: Offsite to W Field Drain 1





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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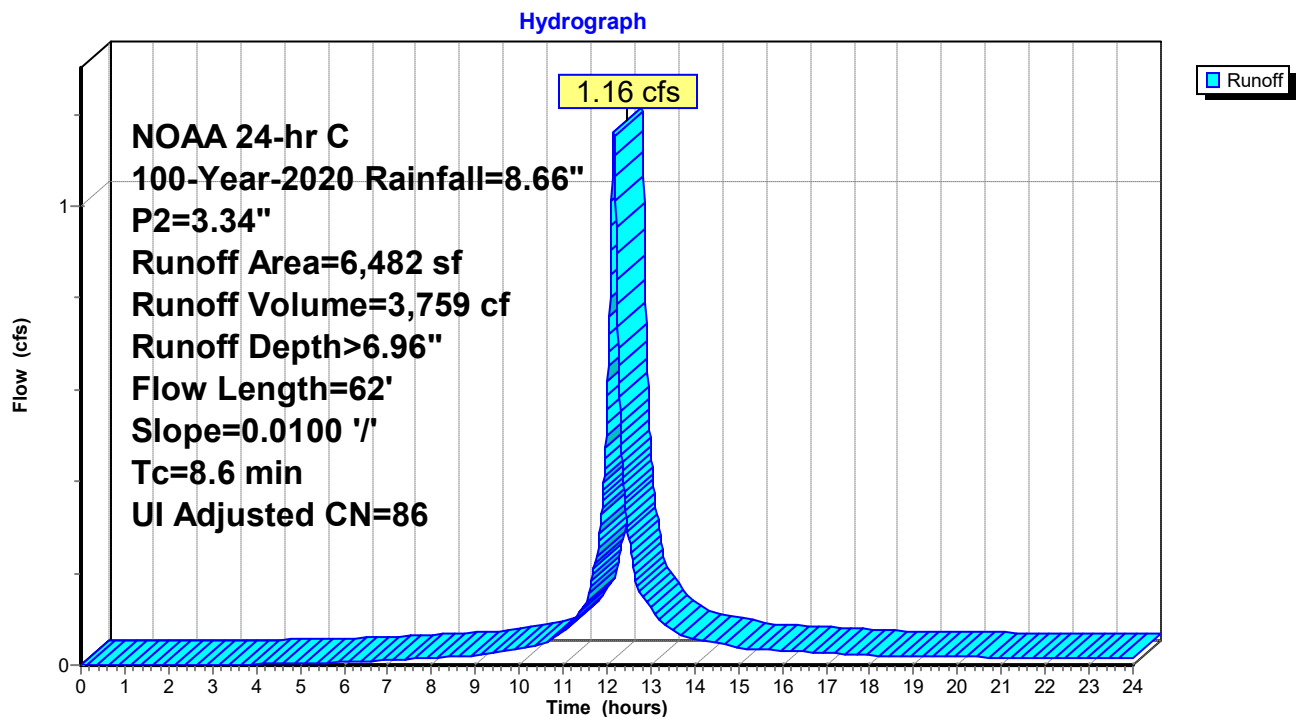
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 1.16 cfs @ 12.16 hrs, Volume= 3,759 cf, Depth> 6.96"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 8.6      | 62            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 302P: Onsite to W Field Drain 1**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 3.94 cfs @ 12.20 hrs, Volume= 14,547 cf, Depth> 6.71"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 7.3      | 62            | 0.0150        | 0.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 13.0     | 654           | Total         |                   |                |                                                                                        |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

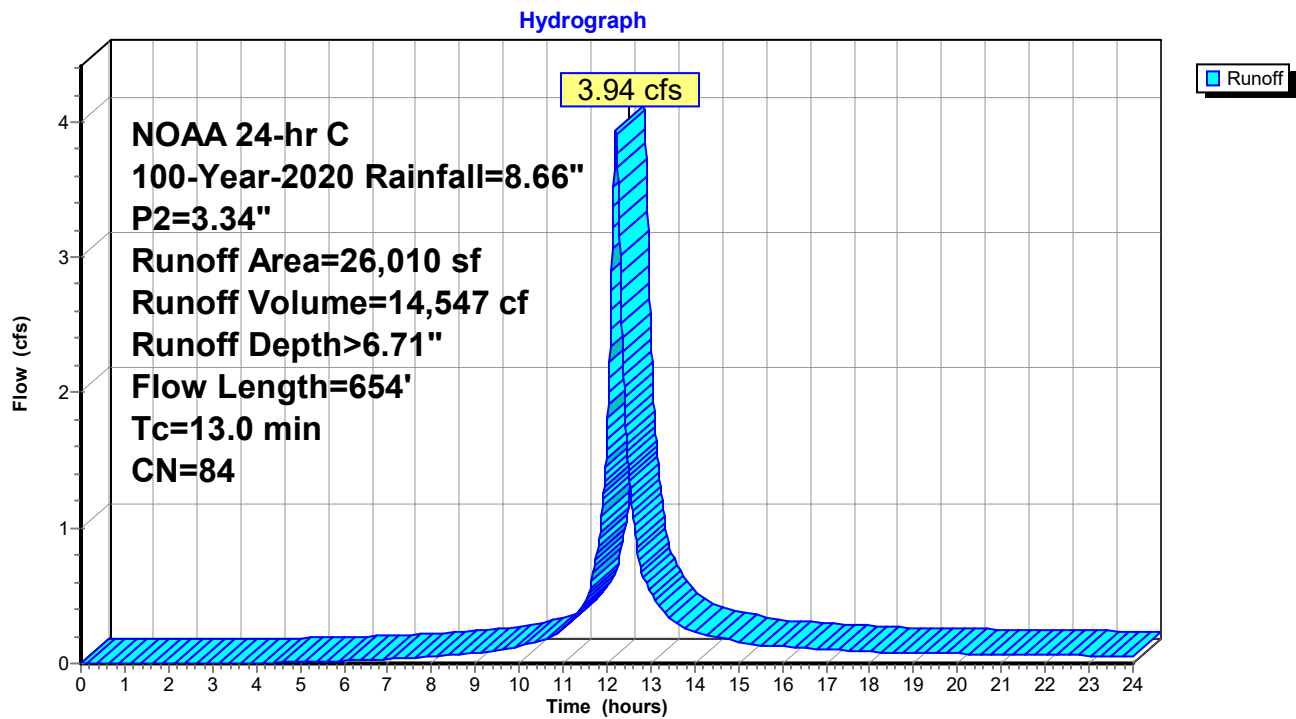
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## Subcatchment 303P: Offsite to W New Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

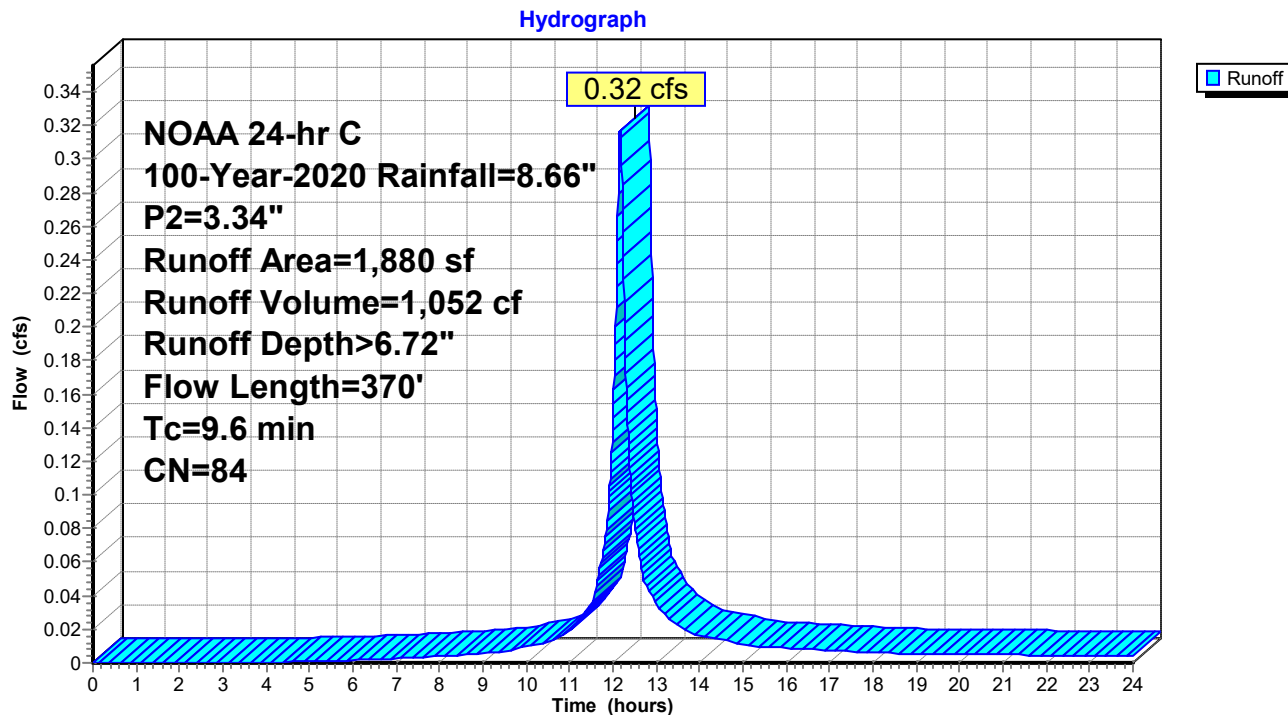
Runoff = 0.32 cfs @ 12.17 hrs, Volume= 1,052 cf, Depth> 6.72"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 67            | 0.0100        | 0.12              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.6      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 2.06 cfs @ 12.20 hrs, Volume= 7,618 cf, Depth> 6.71"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.2      | 56            | 0.0070        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 13.0     | 467           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

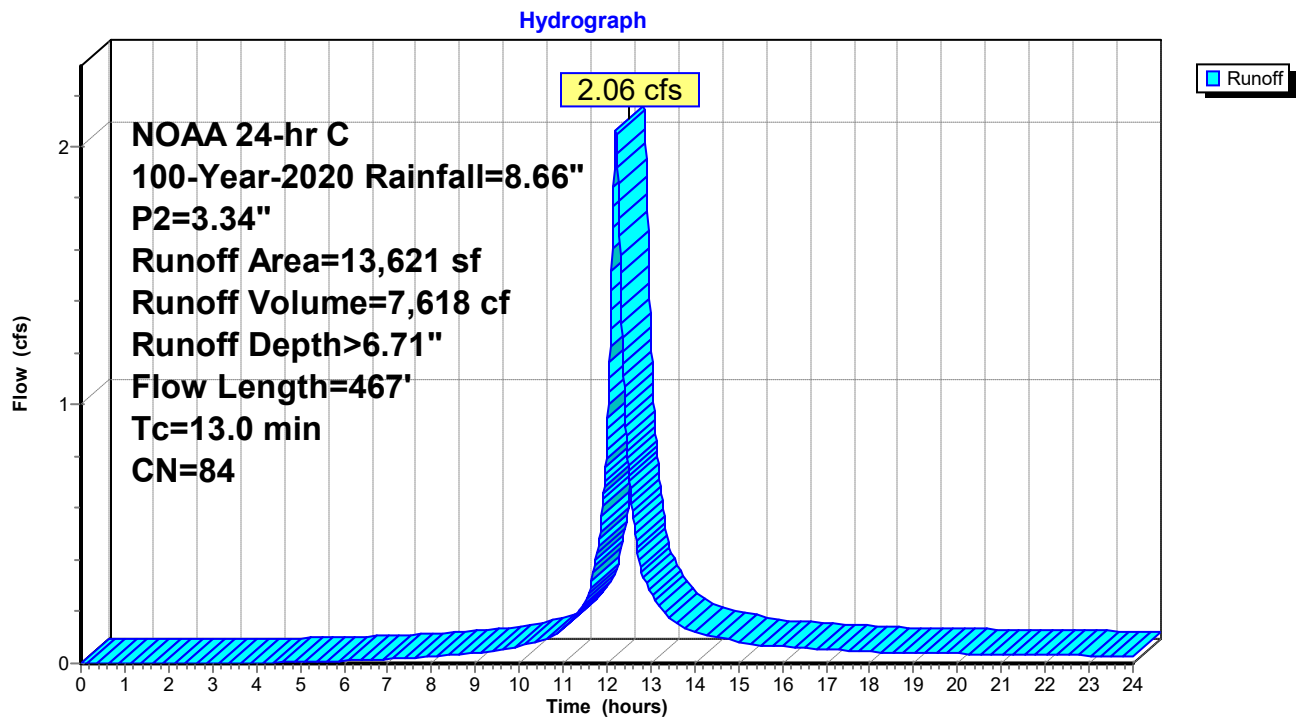
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## Subcatchment 305P: Offsite to Existing W Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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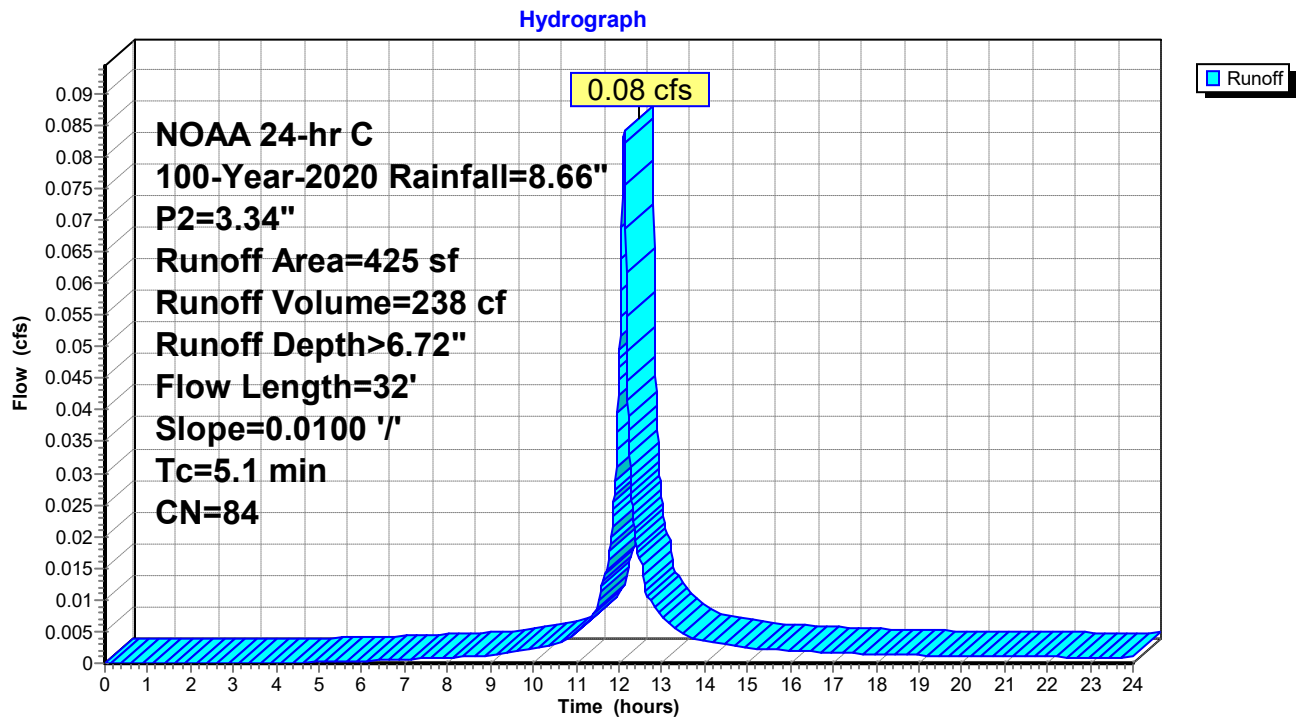
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.08 cfs @ 12.12 hrs, Volume= 238 cf, Depth> 6.72"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 5.1      | 32            | 0.0100        | 0.10              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.34" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 308P: Offsite to Drain 4**

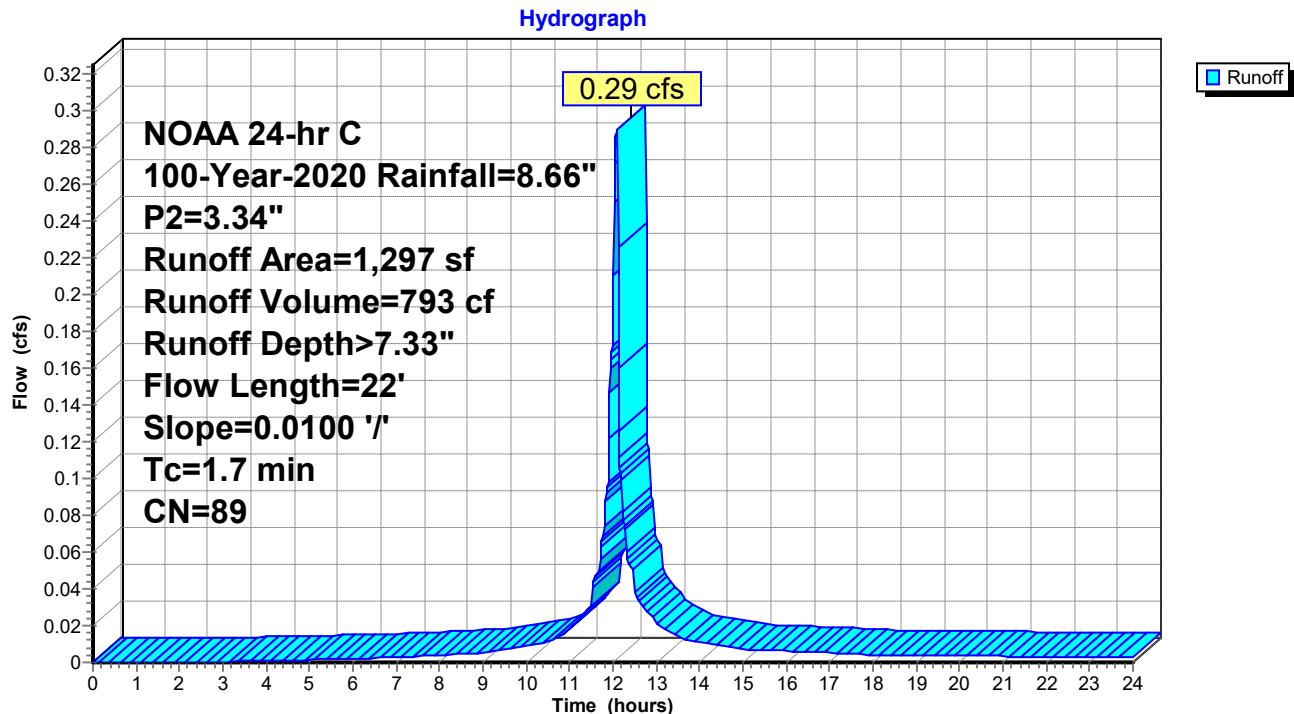
Runoff = 0.29 cfs @ 12.10 hrs, Volume= 793 cf, Depth> 7.33"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.3      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.7      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

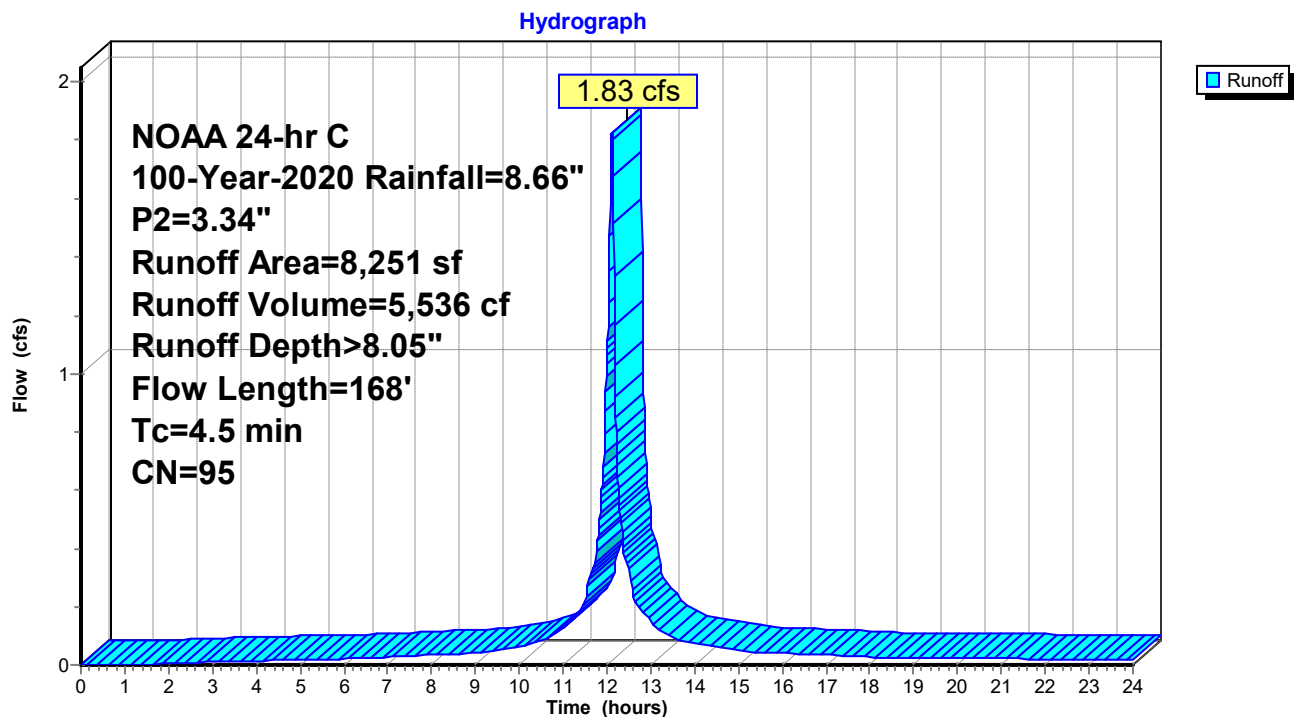
Runoff = 1.83 cfs @ 12.12 hrs, Volume= 5,536 cf, Depth> 8.05"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.9      | 18            | 0.2500        | 0.34              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.5      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 310P: Impervious Stadium W**

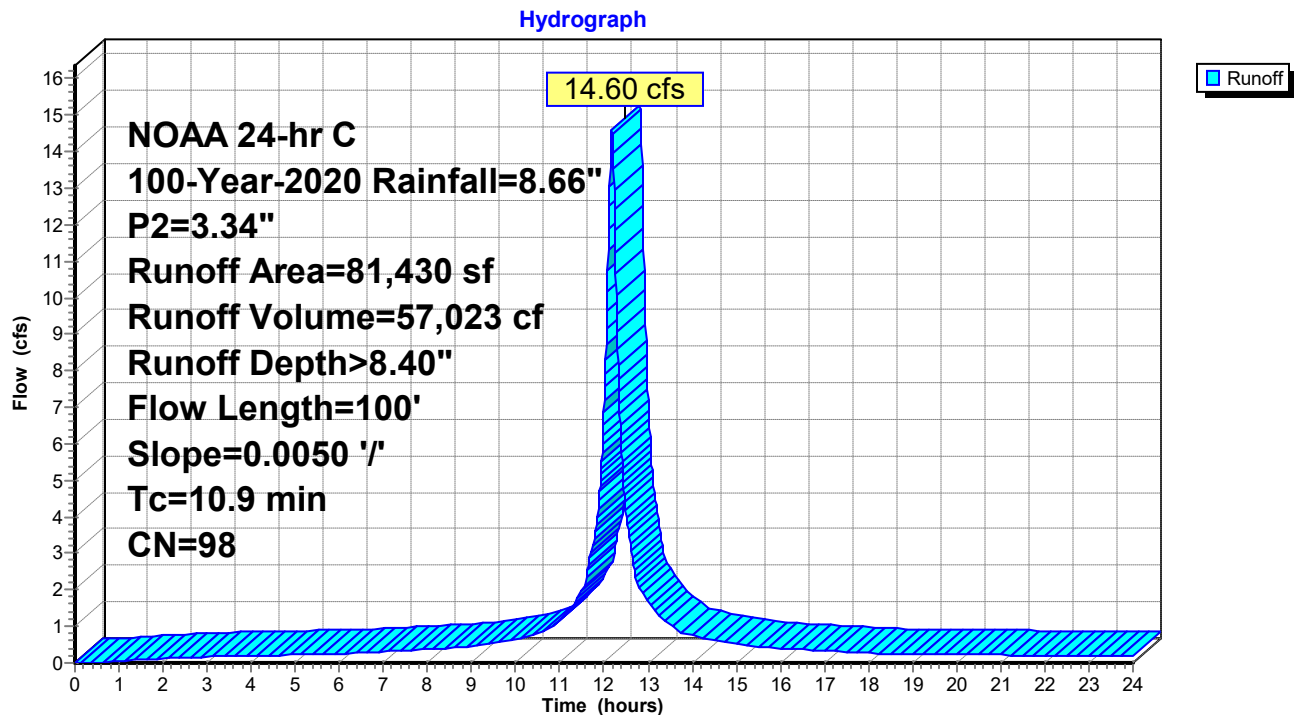
Runoff = 14.60 cfs @ 12.18 hrs, Volume= 57,023 cf, Depth> 8.40"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

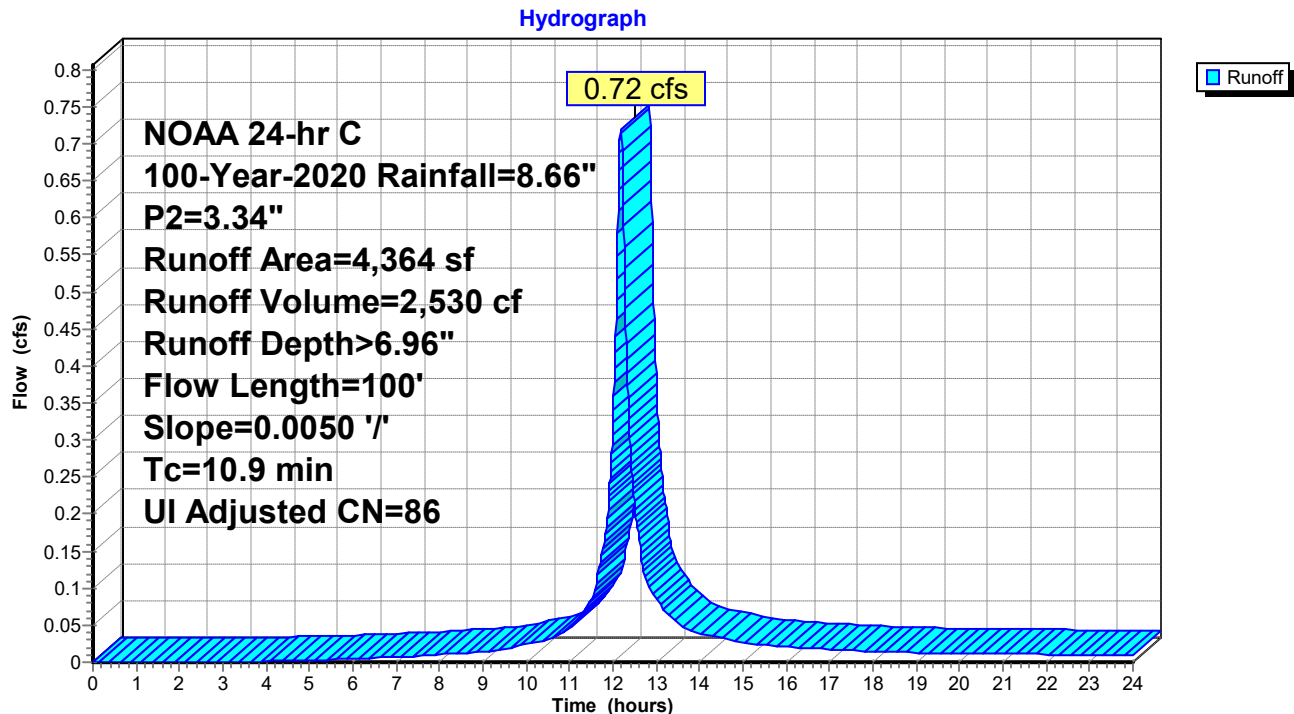
Runoff = 0.72 cfs @ 12.18 hrs, Volume= 2,530 cf, Depth> 6.96"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 9.1      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.34"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.9     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

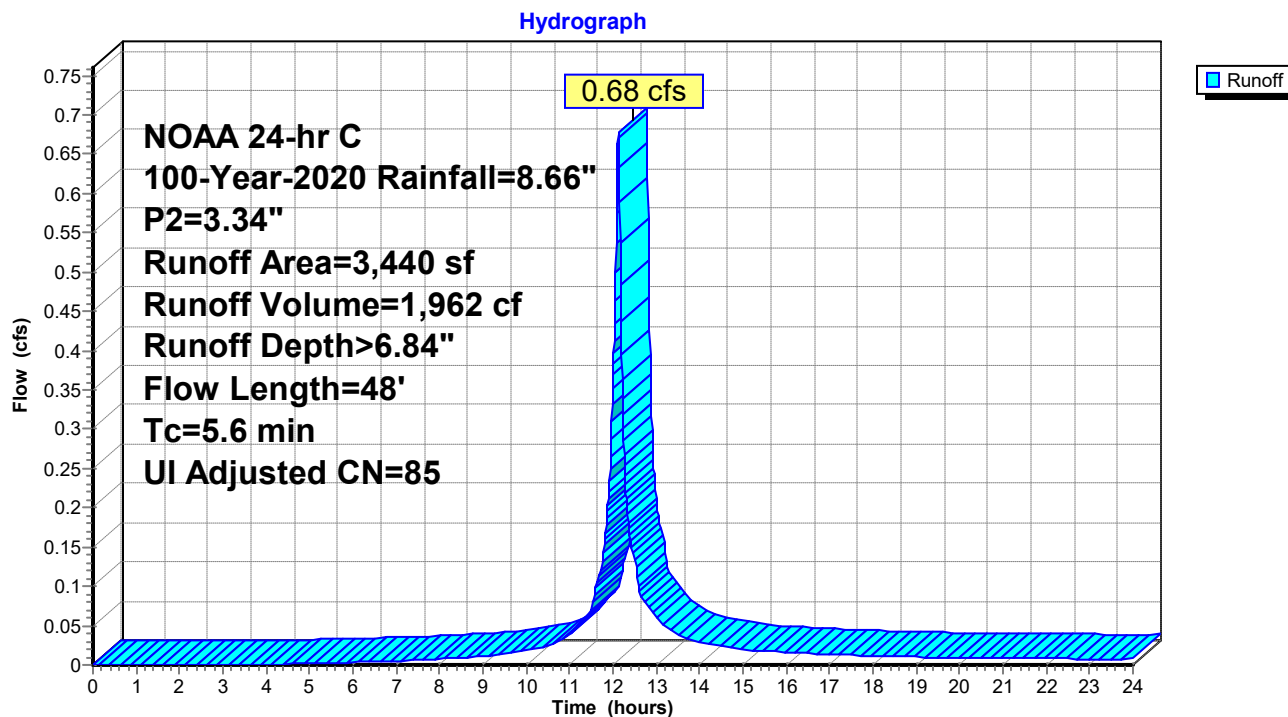
Runoff = 0.68 cfs @ 12.13 hrs, Volume= 1,962 cf, Depth> 6.84"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.6      | 28            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 5.6      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

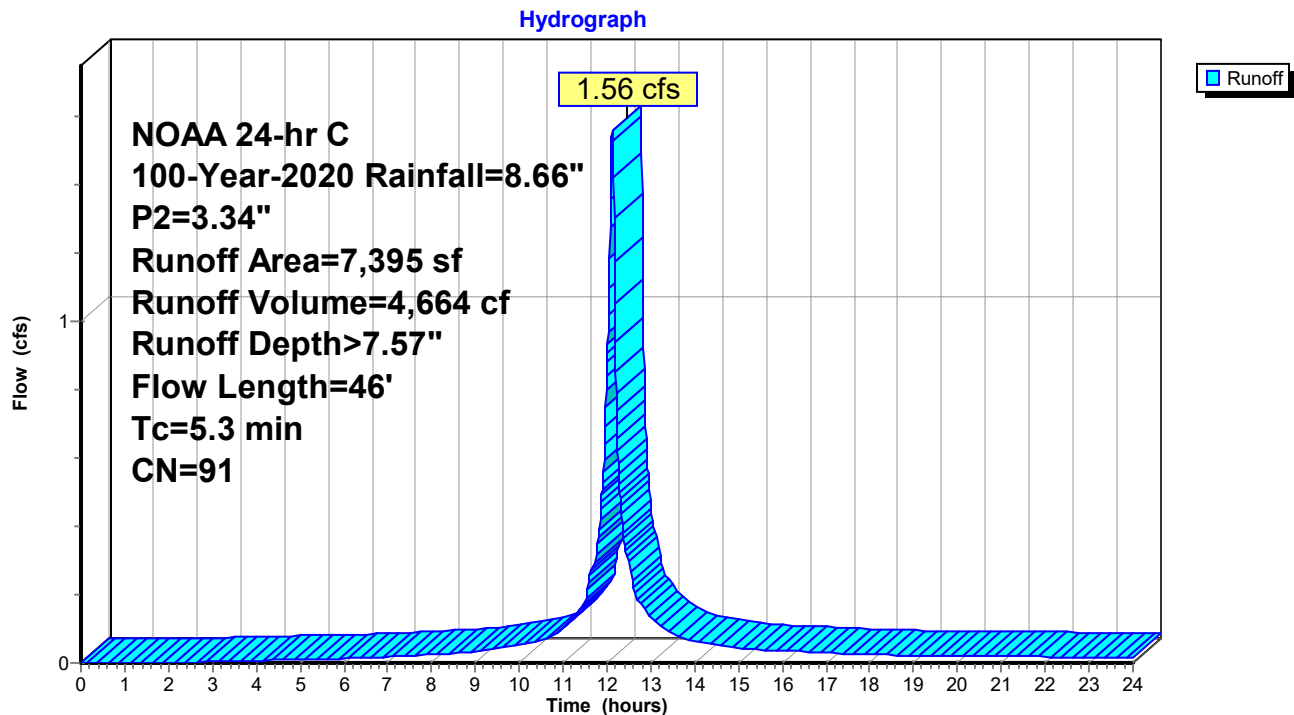
Runoff = 1.56 cfs @ 12.12 hrs, Volume= 4,664 cf, Depth> 7.57"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.3      | 26            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 1.0      | 20            | 0.2500        | 0.35              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.34" |
| 5.3      | 46            | Total         |                   |                |                                 |

**Subcatchment 313P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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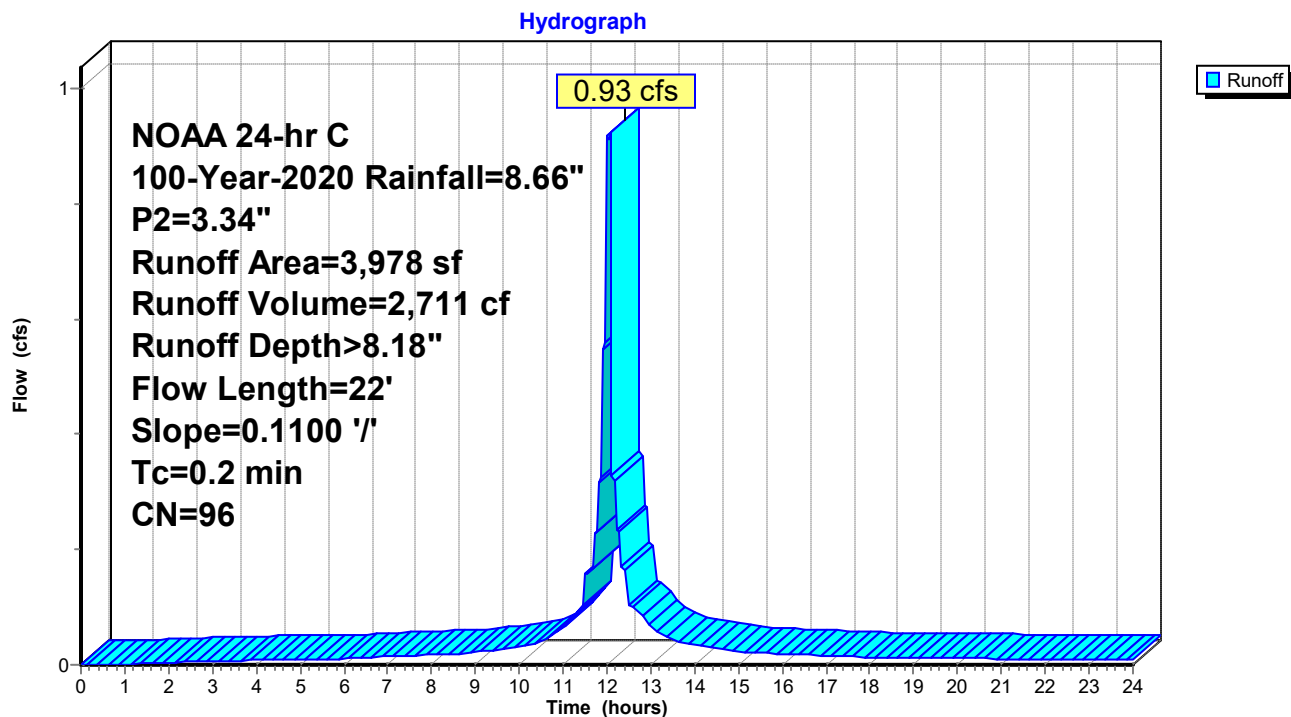
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 0.93 cfs @ 12.09 hrs, Volume= 2,711 cf, Depth> 8.18"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description            |
|------------------------------------|---------------|---------------|-------------------|----------------|------------------------|
| 0.2                                | 22            | 0.1100        | 2.05              |                | Sheet Flow, Sheet Flow |
| Smooth surfaces n= 0.011 P2= 3.34" |               |               |                   |                |                        |

**Subcatchment 401P: Onsite to SP4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Subcatchment 403P: Tennis Courts**

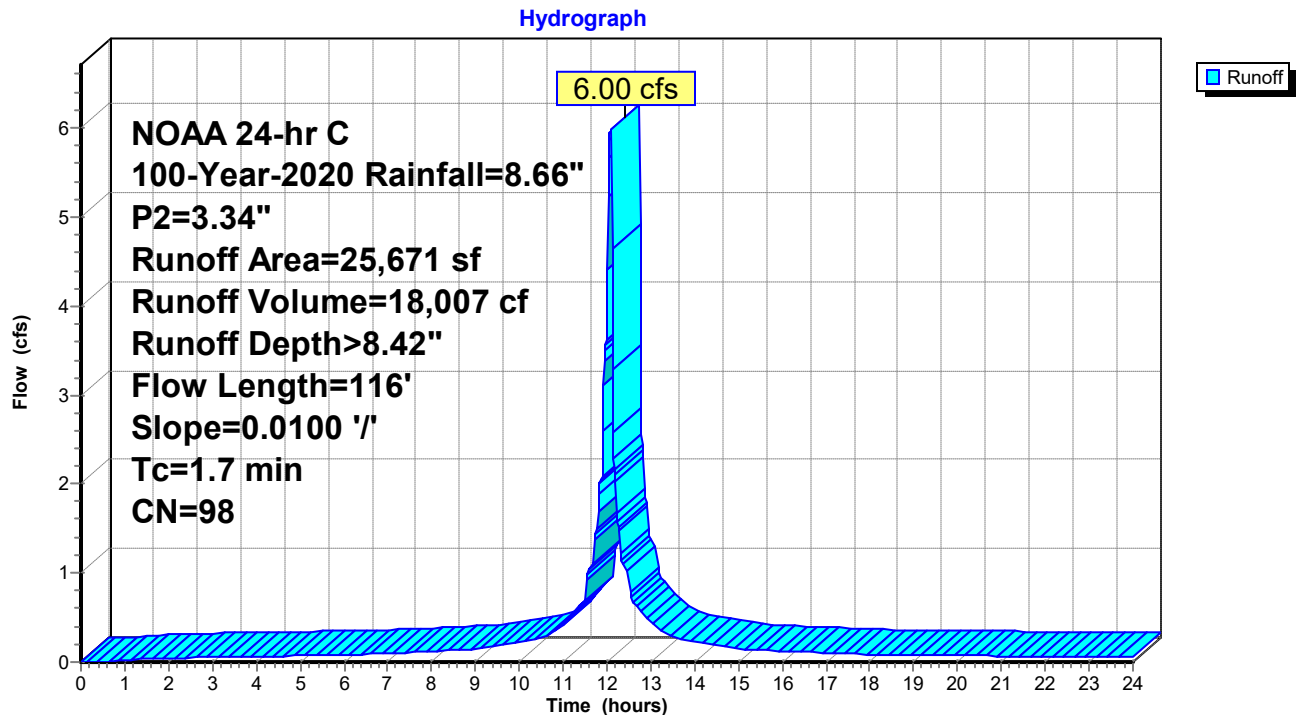
Runoff = 6.00 cfs @ 12.09 hrs, Volume= 18,007 cf, Depth> 8.42"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.6      | 100           | 0.0100        | 1.07              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.34" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.7      | 116           | Total         |                   |                |                                                                     |

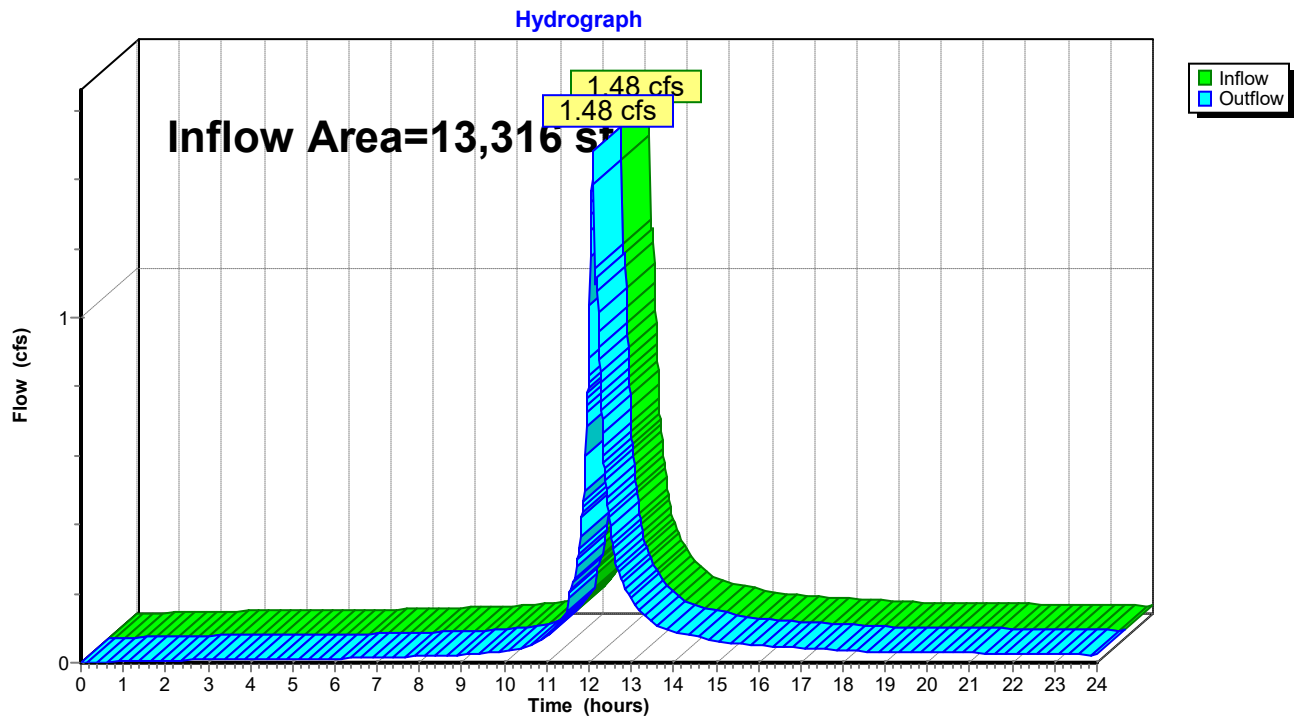
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 4.84" for 100-Year-2020 event  
 Inflow = 1.48 cfs @ 12.10 hrs, Volume= 5,368 cf  
 Outflow = 1.48 cfs @ 12.10 hrs, Volume= 5,368 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED

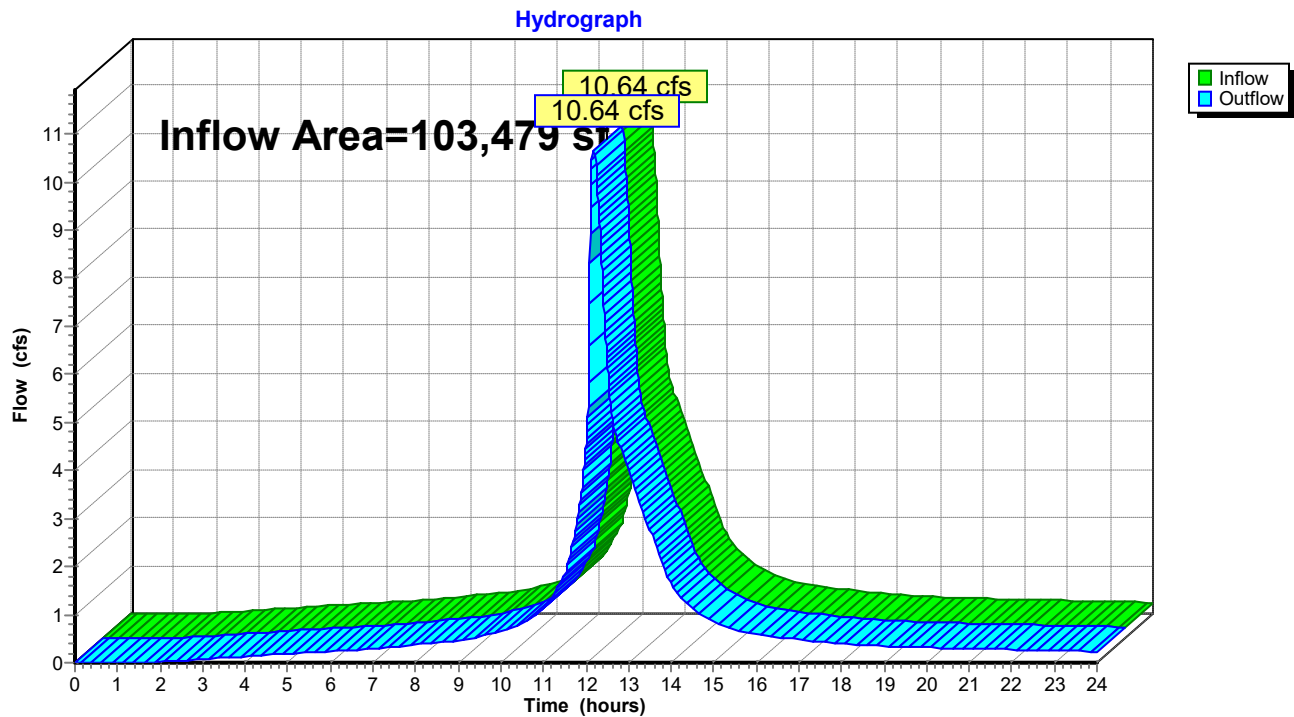




**Summary for Reach 2P: ONSITE EAST**

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 7.96" for 100-Year-2020 event  
Inflow = 10.64 cfs @ 12.17 hrs, Volume= 68,636 cf  
Outflow = 10.64 cfs @ 12.17 hrs, Volume= 68,636 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

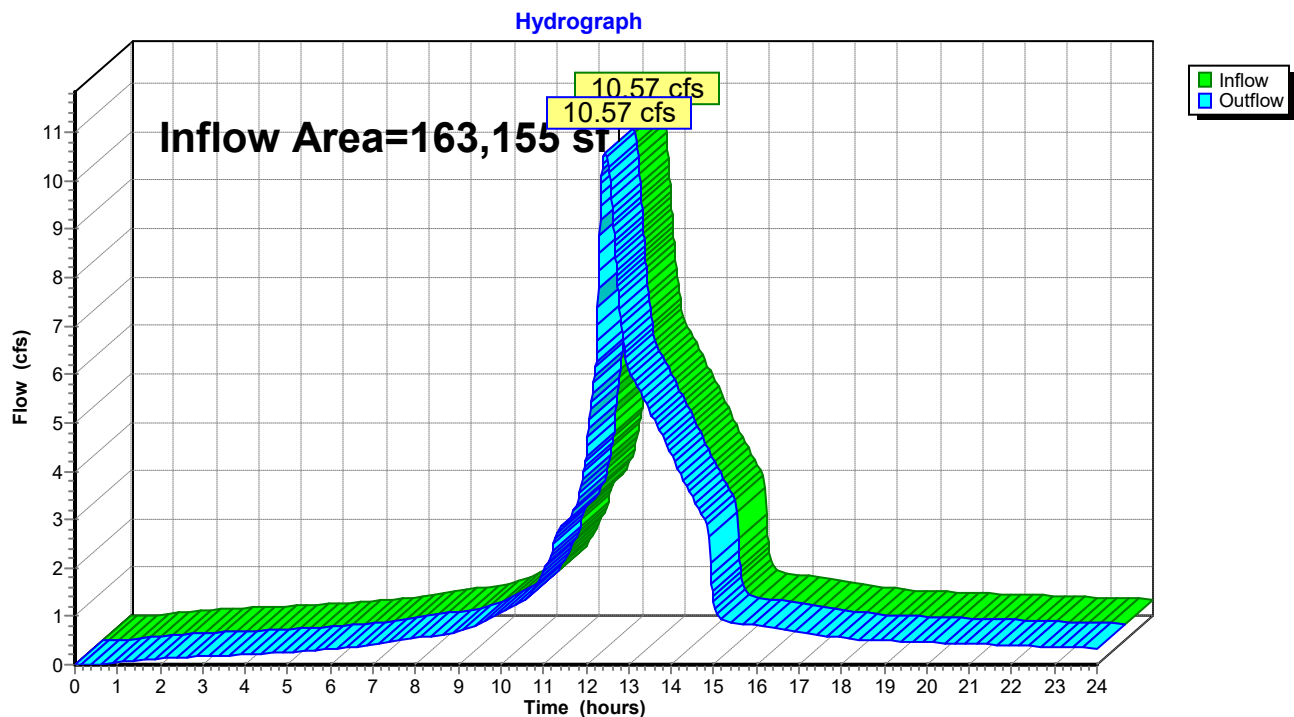
**Reach 2P: ONSITE EAST**

### Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 7.61" for 100-Year-2020 event  
 Inflow = 10.57 cfs @ 12.45 hrs, Volume= 103,508 cf  
 Outflow = 10.57 cfs @ 12.45 hrs, Volume= 103,508 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3P: ONSITE WEST

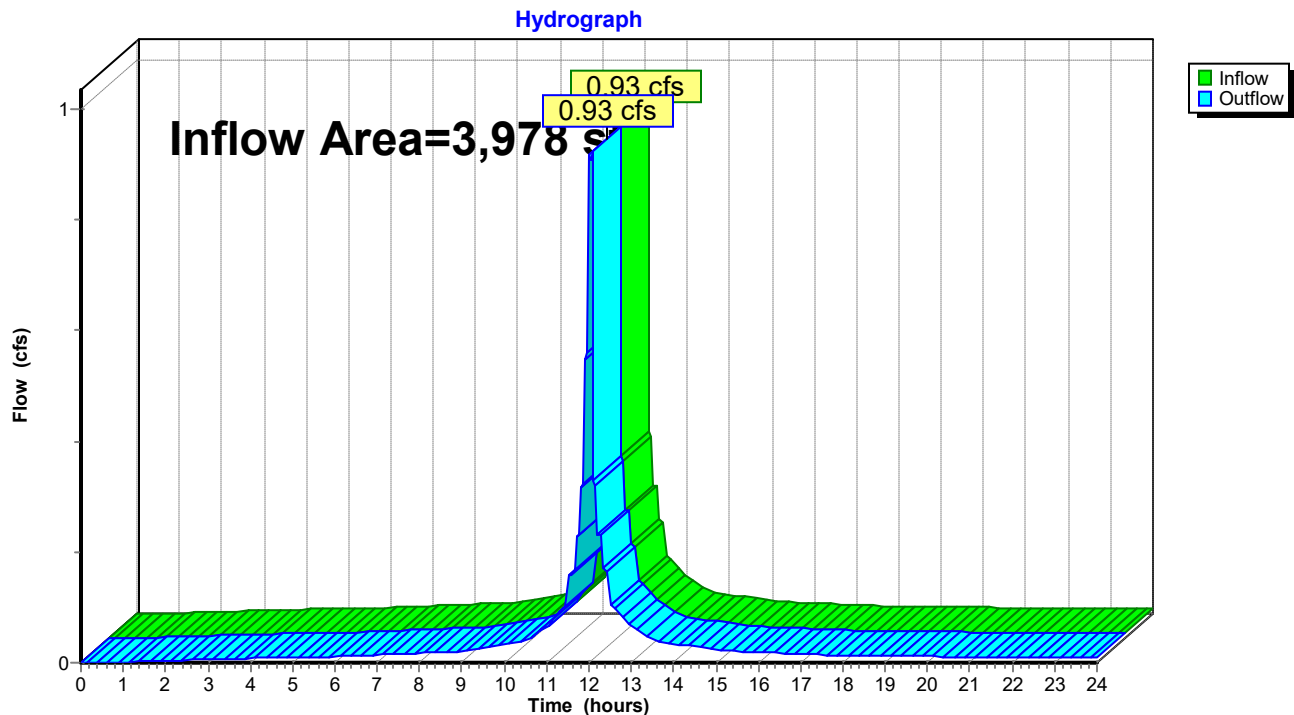


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 8.18" for 100-Year-2020 event  
 Inflow = 0.93 cfs @ 12.09 hrs, Volume= 2,711 cf  
 Outflow = 0.93 cfs @ 12.09 hrs, Volume= 2,711 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4P: ONSITE TENNIS COURTS

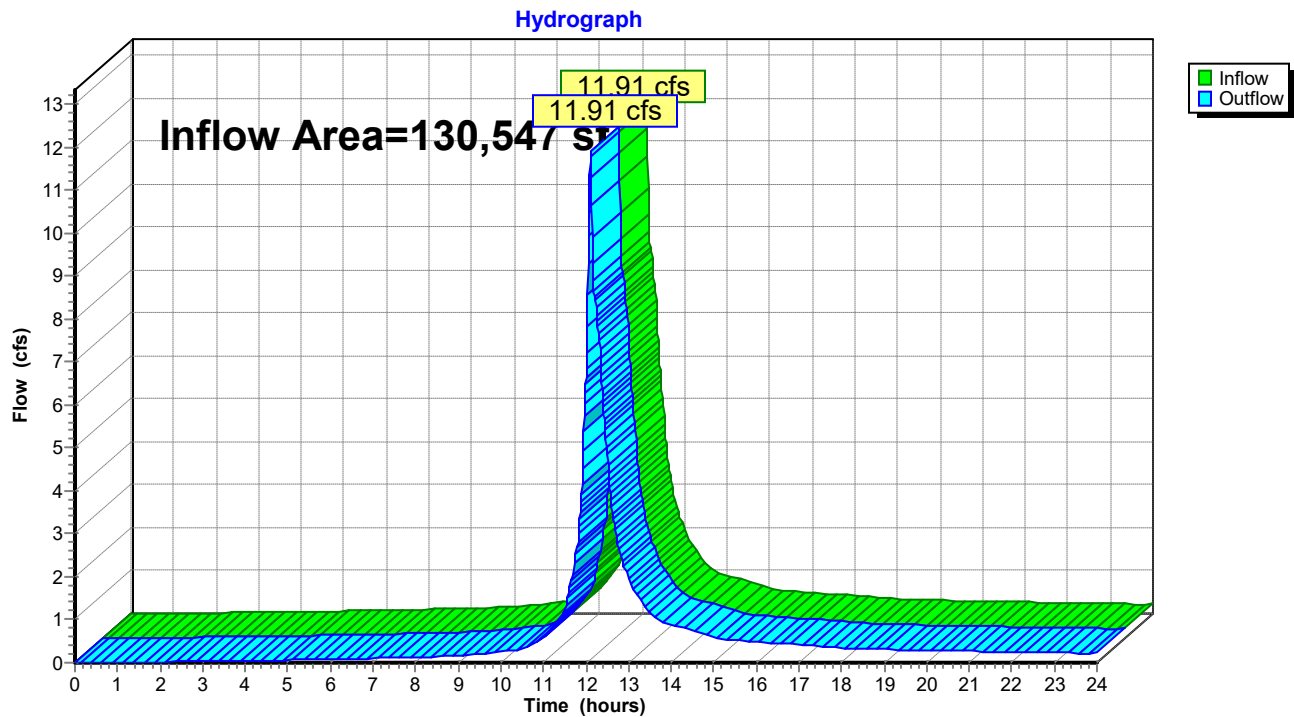


### Summary for Reach 100P: EX INLET 1

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 4.44" for 100-Year-2020 event  
 Inflow = 11.91 cfs @ 12.11 hrs, Volume= 48,334 cf  
 Outflow = 11.91 cfs @ 12.11 hrs, Volume= 48,334 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100P: EX INLET 1

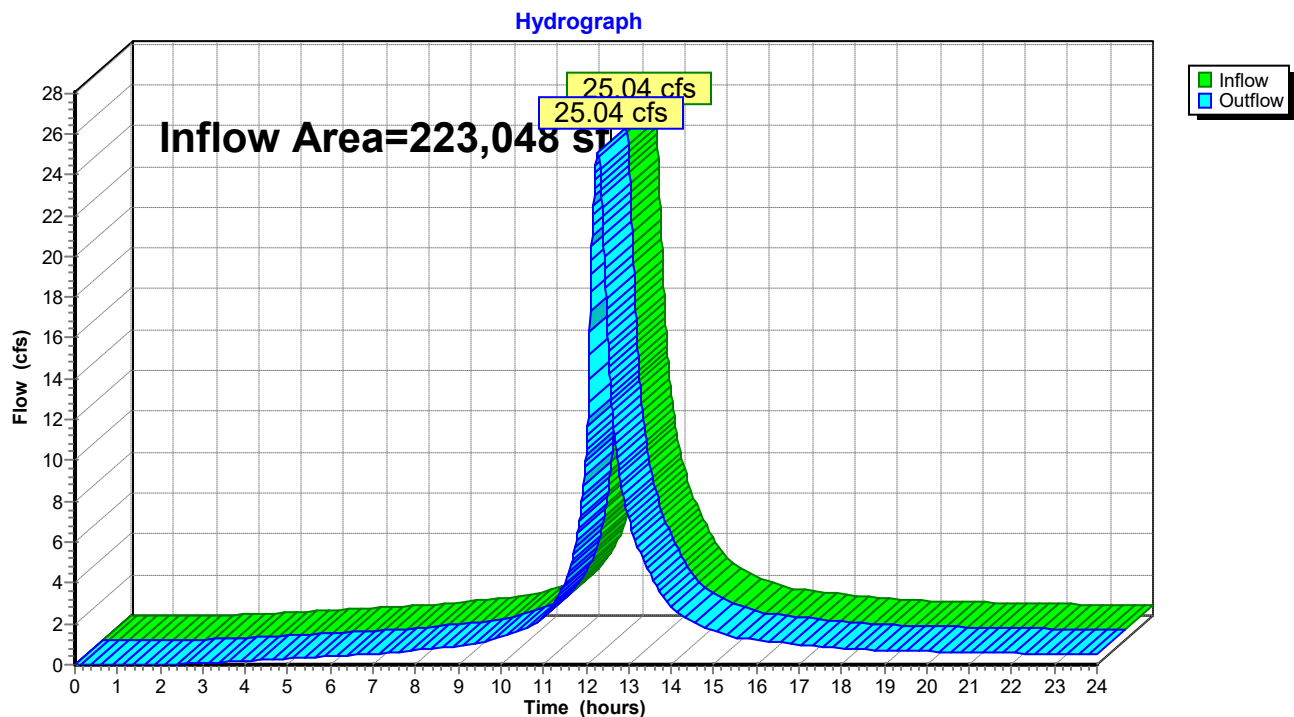


### Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 7.61" for 100-Year-2020 event  
 Inflow = 25.04 cfs @ 12.27 hrs, Volume= 141,412 cf  
 Outflow = 25.04 cfs @ 12.27 hrs, Volume= 141,412 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200P: EX MANHOLE 2



**Summary for Reach 300P: EX INLET 3**

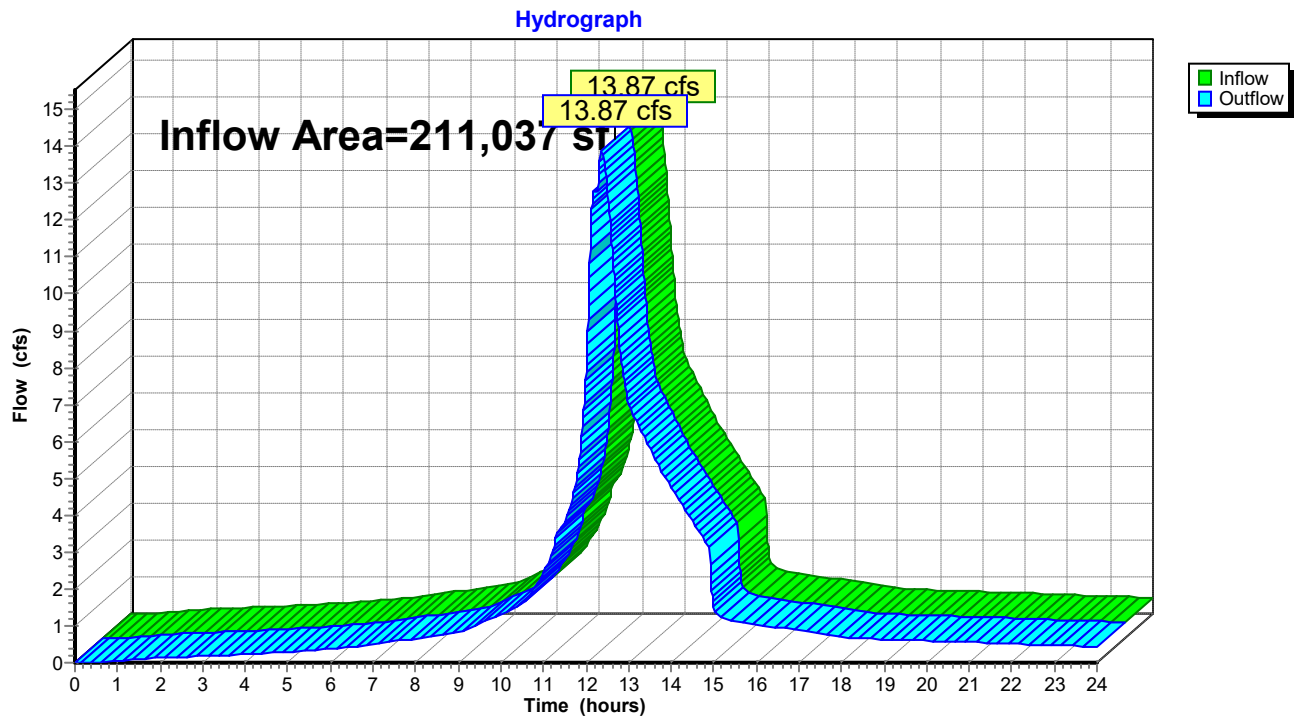
Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 7.46" for 100-Year-2020 event

Inflow = 13.87 cfs @ 12.37 hrs, Volume= 131,210 cf

Outflow = 13.87 cfs @ 12.37 hrs, Volume= 131,210 cf, Atten= 0%, Lag= 0.0 min

Routed to Reach 500P : STUDY POINT

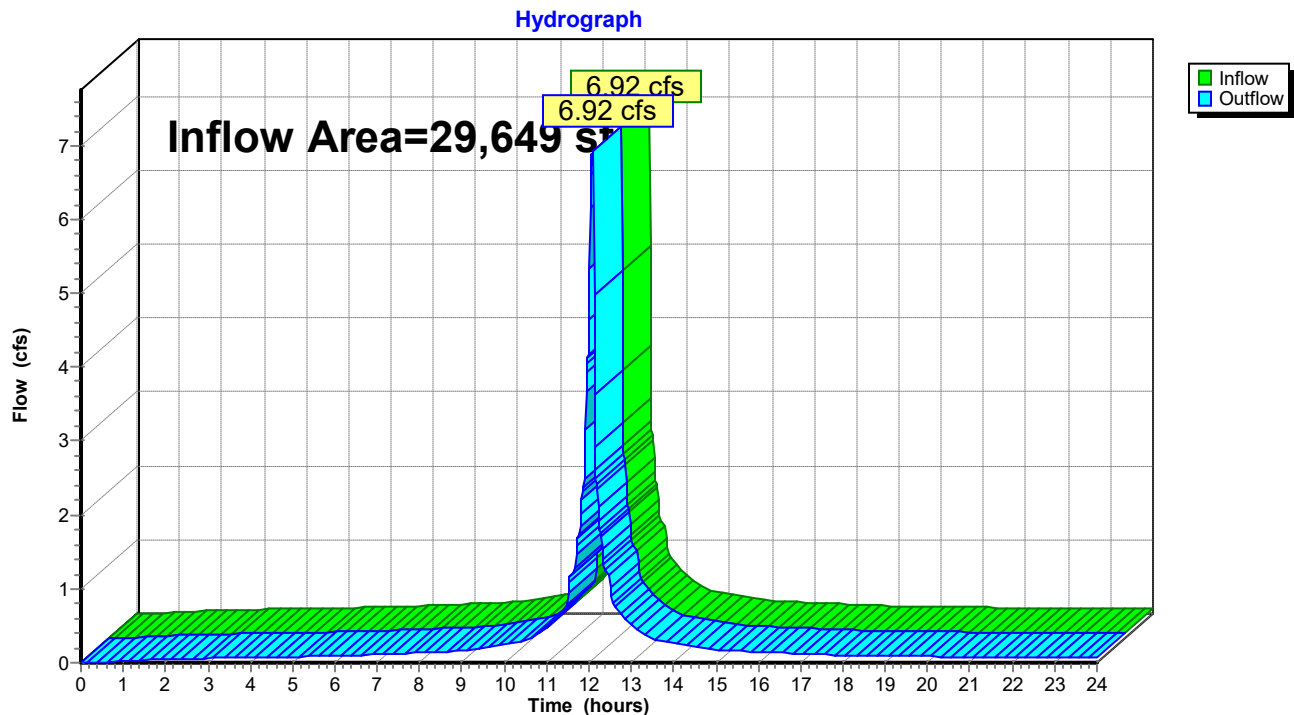
Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 300P: EX INLET 3**

**Summary for Reach 400P: TENNIS COURTS**

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 8.39" for 100-Year-2020 event  
Inflow = 6.92 cfs @ 12.09 hrs, Volume= 20,718 cf  
Outflow = 6.92 cfs @ 12.09 hrs, Volume= 20,718 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

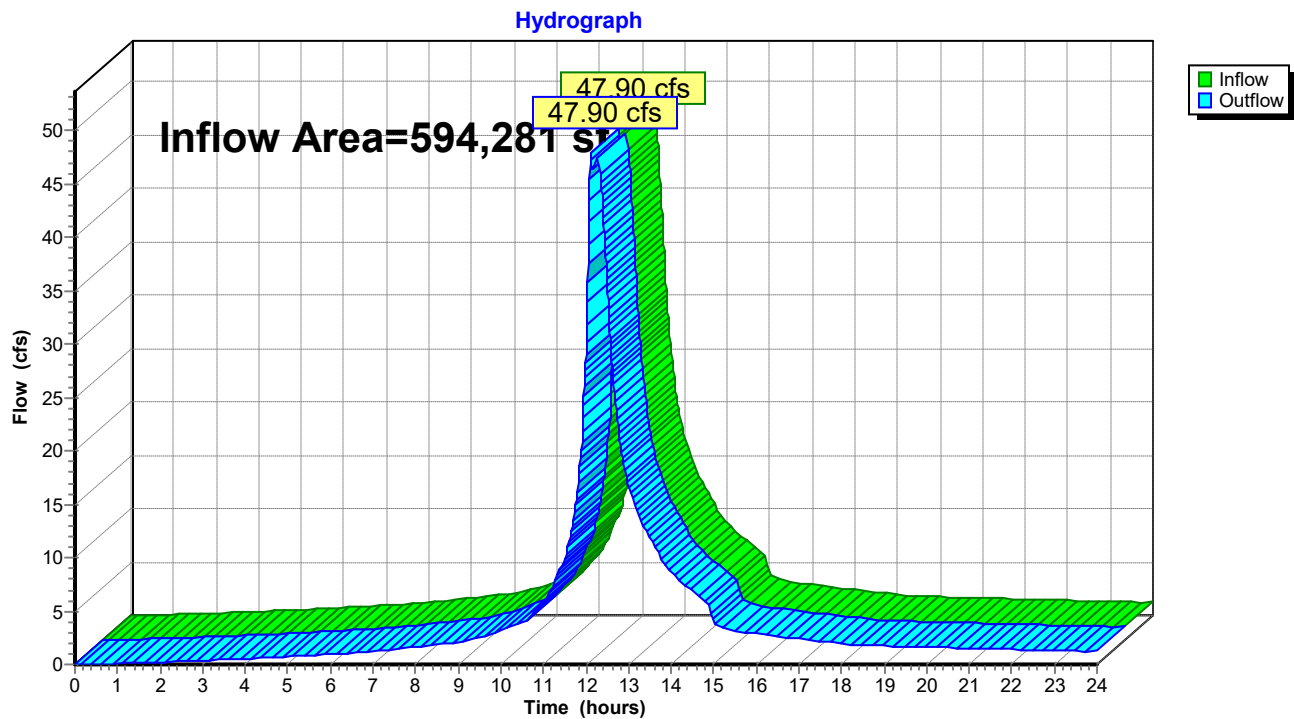
**Reach 400P: TENNIS COURTS**

### Summary for Reach 500P: STUDY POINT

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 6.90" for 100-Year-2020 event  
 Inflow = 47.90 cfs @ 12.11 hrs, Volume= 341,675 cf  
 Outflow = 47.90 cfs @ 12.11 hrs, Volume= 341,675 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500P: STUDY POINT





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 8.19" for 100-Year-2020 event  
 Inflow = 21.39 cfs @ 12.10 hrs, Volume= 65,935 cf  
 Outflow = 9.54 cfs @ 12.16 hrs, Volume= 64,373 cf, Atten= 55%, Lag= 3.9 min  
 Primary = 9.54 cfs @ 12.16 hrs, Volume= 64,373 cf  
 Routed to Reach 2P : ONSITE EAST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 102.00' @ 12.16 hrs Surf.Area= 8,044 sf Storage= 16,929 cf

Plug-Flow detention time= 57.9 min calculated for 64,347 cf (98% of inflow)  
 Center-of-Mass det. time= 42.5 min ( 785.6 - 743.1 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

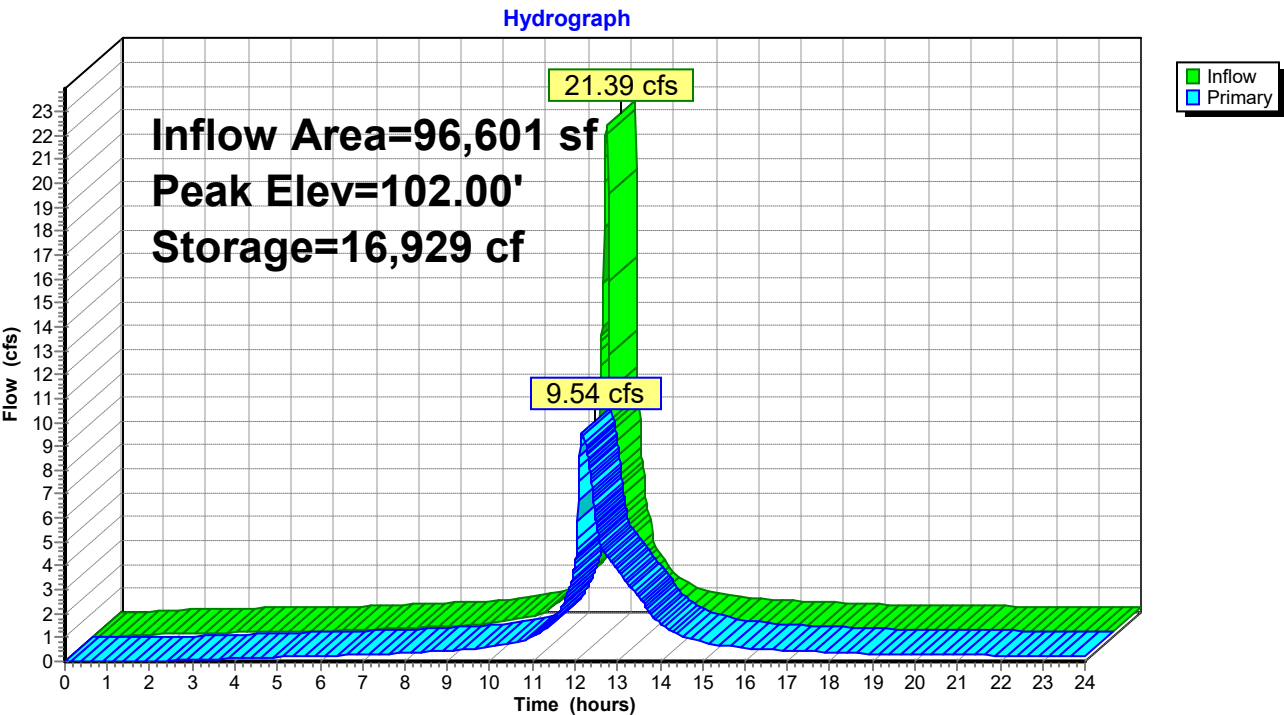
Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=9.54 cfs @ 12.16 hrs HW=102.00' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 5.73 cfs @ 7.30 fps)
- 2=Orifice/Grate (Orifice Controls 3.81 cfs @ 3.81 fps)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

Pond 204P: Cultec East



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2020 Rainfall=8.66", P2=3.34"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 7.63" for 100-Year-2020 event  
 Inflow = 24.33 cfs @ 12.18 hrs, Volume= 101,473 cf  
 Outflow = 10.41 cfs @ 12.45 hrs, Volume= 101,425 cf, Atten= 57%, Lag= 16.2 min  
 Primary = 10.41 cfs @ 12.45 hrs, Volume= 101,425 cf  
 Routed to Reach 3P : ONSITE WEST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 101.84' @ 12.45 hrs Surf.Area= 11,650 sf Storage= 23,673 cf

Plug-Flow detention time= 22.9 min calculated for 101,383 cf (100% of inflow)  
 Center-of-Mass det. time= 22.6 min ( 789.3 - 766.8 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD</b> x 528 Inside #1<br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

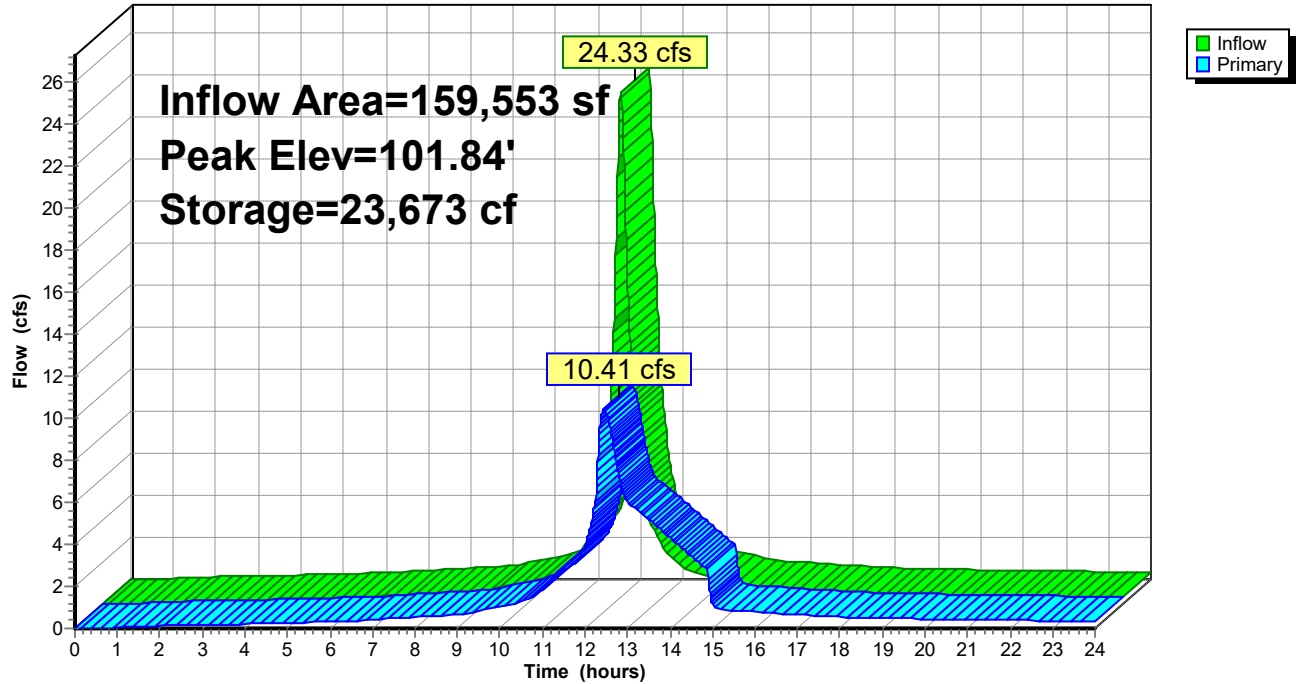
| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=10.41 cfs @ 12.45 hrs HW=101.84' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 6.70 cfs @ 8.54 fps)
- 2=Orifice/Grate (Orifice Controls 3.70 cfs @ 2.96 fps)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 208P: Cultec West**

Hydrograph



7. FUTURE PRECIPITATION ANALYSIS – (RAINFALL -YEAR 2100)

7A. Pre-Development Conditions

Schematic Diagram

2-Year Storm Frequency Hydrologic Output w/ TC and CN

10-Year Storm Frequency Hydrologic Output w/ TC and CN

100-Year Storm Frequency Hydrologic Output w/ TC and CN

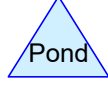
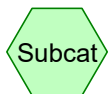
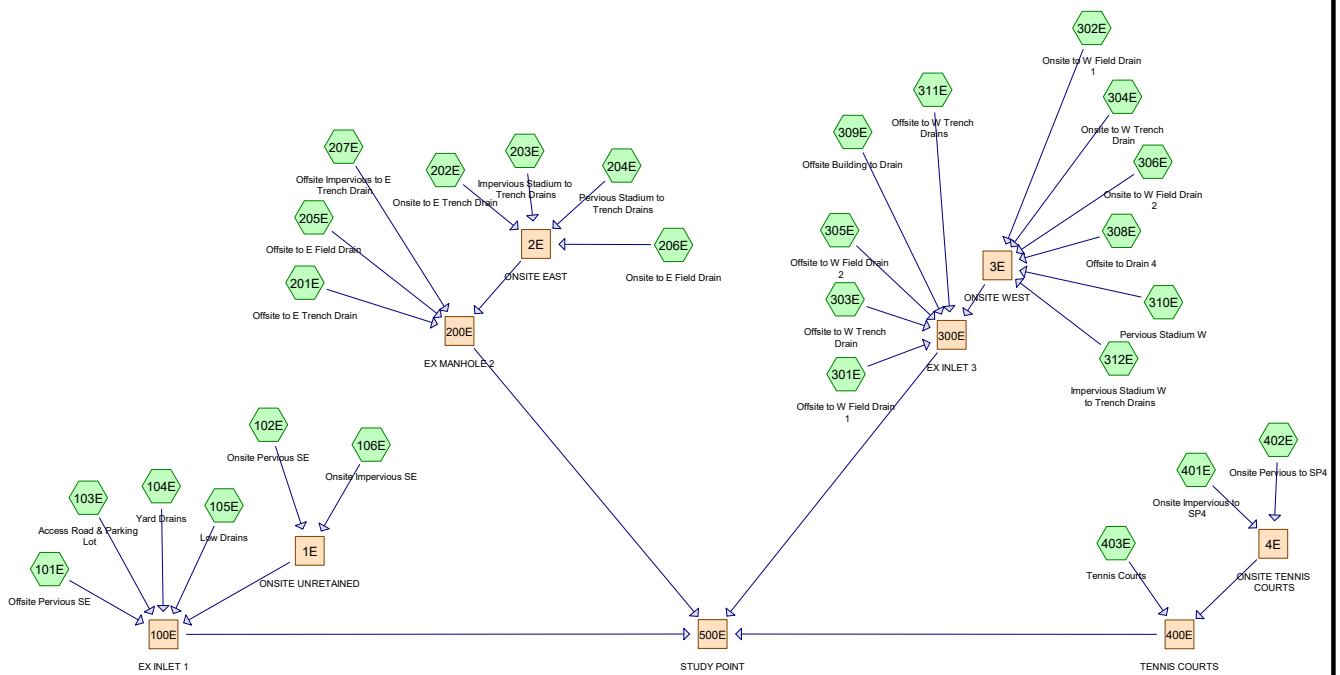
7B. Post-Development Conditions

Schematic Diagram

2-Year Storm Frequency Hydrologic Output w/ TC and CN

10-Year Storm Frequency Hydrologic Output w/ TC and CN

100-Year Storm Frequency Hydrologic Output w/ TC and CN



## EXISTING PEDDIE FOOTBALL

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### Rainfall Events Listing (selected events)

| Event# | Event Name    | Storm Type | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC | P2 (inches) |
|--------|---------------|------------|-------|---------|------------------|-----|----------------|-----|-------------|
| 1      | 2-Year-2050   | NOAA 24-hr | C     | Default | 24.00            | 1   | 3.84           | 2   | 3.84        |
| 2      | 10-Year-2050  | NOAA 24-hr | C     | Default | 24.00            | 1   | 5.86           | 2   | 3.84        |
| 3      | 100-Year-2050 | NOAA 24-hr | C     | Default | 24.00            | 1   | 11.33          | 2   | 3.84        |

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>0.50"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=0.46 cfs 2,953 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>0.51"  
Flow Length=476' Tc=10.1 min CN=56 Runoff=0.11 cfs 529 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>3.06"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=2.74 cfs 7,440 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.25"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.01 cfs 96 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.43"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=0.11 cfs 469 cf

**Subcatchment 106E: Onsite Impervious SE** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>3.60"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=0.81 cfs 2,359 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=0.62 cfs 1,939 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.16 cfs 404 cf

**Subcatchment 203E: Impervious Stadium** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>3.61"  
Flow Length=40' Slope=0.0050 '/' Tc=0.9 min CN=98 Runoff=1.47 cfs 4,297 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>2.67"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=89 Runoff=3.20 cfs 10,627 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>2.66"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=6.08 cfs 26,895 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>2.67"  
Flow Length=504' Tc=11.6 min CN=89 Runoff=0.50 cfs 1,731 cf

**Subcatchment 207E: Offsite Impervious to** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>3.61"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.32 cfs 935 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>2.22"  
Flow Length=973' Tc=17.7 min CN=84 Runoff=2.44 cfs 9,874 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=541' Tc=8.9 min CN=84 Runoff=0.23 cfs 722 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>2.22"  
Flow Length=574' Tc=12.7 min CN=84 Runoff=1.57 cfs 5,532 cf



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Subcatchment 304E: Onsite to W Trench**      Runoff Area=2,363 sf   2.75% Impervious   Runoff Depth>2.23"  
Flow Length=287'   Tc=9.2 min   CN=84   Runoff=0.14 cfs   438 cf

**Subcatchment 305E: Offsite to W Field**      Runoff Area=13,314 sf   0.00% Impervious   Runoff Depth>2.22"  
Flow Length=467'   Tc=12.4 min   CN=84   Runoff=0.71 cfs   2,467 cf

**Subcatchment 306E: Onsite to W Field Drain 2**      Runoff Area=425 sf   0.00% Impervious   Runoff Depth>2.23"  
Flow Length=299'   Tc=5.1 min   CN=84   Runoff=0.03 cfs   79 cf

**Subcatchment 308E: Offsite to Drain 4**      Runoff Area=1,066 sf   20.92% Impervious   Runoff Depth>2.49"  
Flow Length=22'   Slope=0.0100 '/'   Tc=1.6 min   CN=87   Runoff=0.09 cfs   221 cf

**Subcatchment 309E: Offsite Building to**      Runoff Area=8,251 sf   81.26% Impervious   Runoff Depth>3.27"  
Flow Length=168'   Tc=4.4 min   CN=95   Runoff=0.78 cfs   2,249 cf

**Subcatchment 310E: Pervious Stadium W**      Runoff Area=38,673 sf   0.00% Impervious   Runoff Depth>2.22"  
Flow Length=100'   Slope=0.0050 '/'   Tc=10.3 min   CN=84   Runoff=2.21 cfs   7,169 cf

**Subcatchment 311E: Offsite to W Trench**      Runoff Area=2,514 sf   20.92% Impervious   Runoff Depth>2.31"  
Flow Length=63'   Tc=5.8 min   UI Adjusted CN=85   Runoff=0.18 cfs   484 cf

**Subcatchment 312E: Impervious Stadium**      Runoff Area=35,388 sf   92.50% Impervious   Runoff Depth>3.49"  
Flow Length=100'   Slope=0.0050 '/'   Tc=10.3 min   CN=97   Runoff=2.82 cfs   10,278 cf

**Subcatchment 401E: Onsite Impervious**      Runoff Area=11,975 sf   100.00% Impervious   Runoff Depth>3.60"  
Flow Length=179'   Tc=1.9 min   CN=98   Runoff=1.23 cfs   3,597 cf

**Subcatchment 402E: Onsite Pervious to SP4**      Runoff Area=17,454 sf   0.00% Impervious   Runoff Depth>2.23"  
Flow Length=151'   Tc=2.4 min   CN=84   Runoff=1.31 cfs   3,243 cf

**Subcatchment 403E: Tennis Courts**      Runoff Area=25,671 sf   100.00% Impervious   Runoff Depth>3.60"  
Flow Length=116'   Slope=0.0100 '/'   Tc=1.6 min   CN=98   Runoff=2.64 cfs   7,711 cf

**Reach 1E: ONSITE UNRETAINED**      Inflow=0.85 cfs   2,889 cf  
Outflow=0.85 cfs   2,889 cf

**Reach 2E: ONSITE EAST**      Inflow=4.44 cfs   17,058 cf  
Outflow=4.44 cfs   17,058 cf

**Reach 3E: ONSITE WEST**      Inflow=5.45 cfs   18,907 cf  
Outflow=5.45 cfs   18,907 cf

**Reach 4E: ONSITE TENNIS COURTS**      Inflow=2.54 cfs   6,839 cf  
Outflow=2.54 cfs   6,839 cf

**Reach 100E: EX INLET 1**      Inflow=3.73 cfs   13,846 cf  
Outflow=3.73 cfs   13,846 cf

**Reach 200E: EX MANHOLE 2**      Inflow=9.87 cfs   46,827 cf  
Outflow=9.87 cfs   46,827 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Reach 300E: EX INLET 3**Inflow=10.28 cfs 39,513 cf  
Outflow=10.28 cfs 39,513 cf**Reach 400E: TENNIS COURTS**Inflow=5.18 cfs 14,550 cf  
Outflow=5.18 cfs 14,550 cf**Reach 500E: STUDY POINT**Inflow=25.58 cfs 114,737 cf  
Outflow=25.58 cfs 114,737 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 0.46 cfs @ 12.35 hrs, Volume= 2,953 cf, Depth> 0.50"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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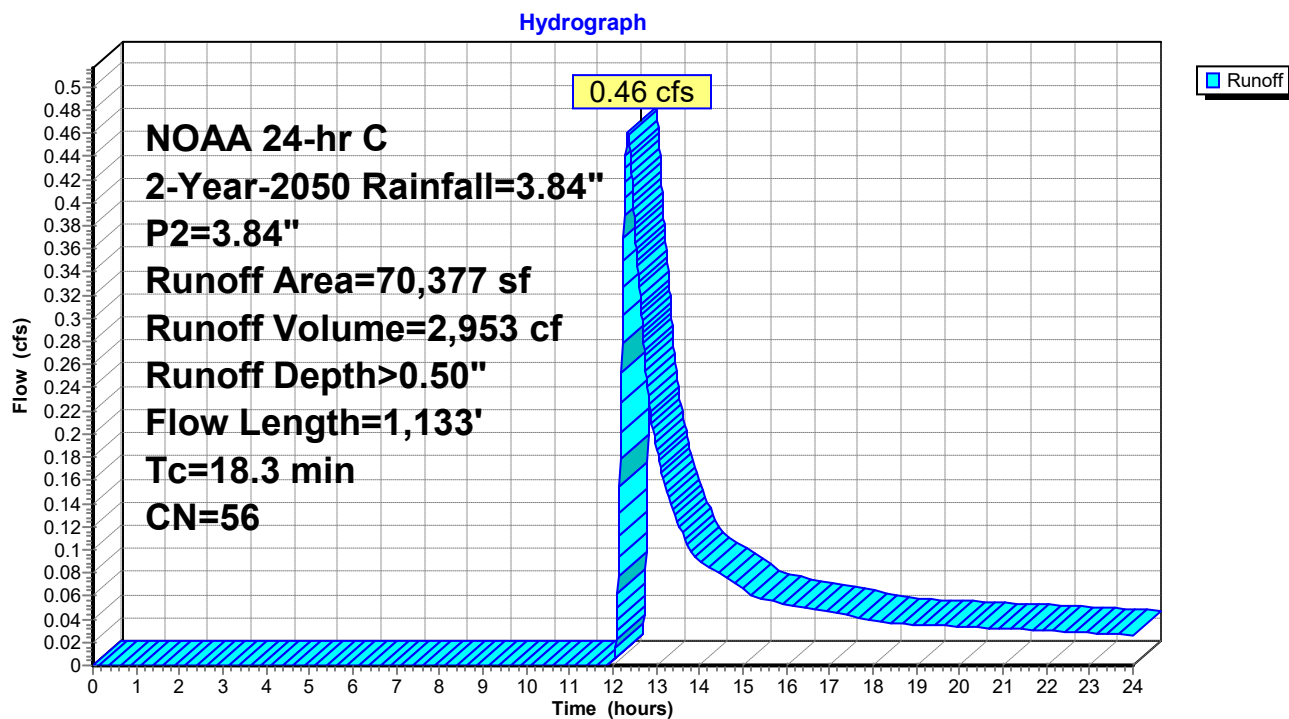
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## Subcatchment 101E: Offsite Pervious SE



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 0.11 cfs @ 12.21 hrs, Volume= 529 cf, Depth> 0.51"  
 Routed to Reach 1E : ONSITE UNRETAINED

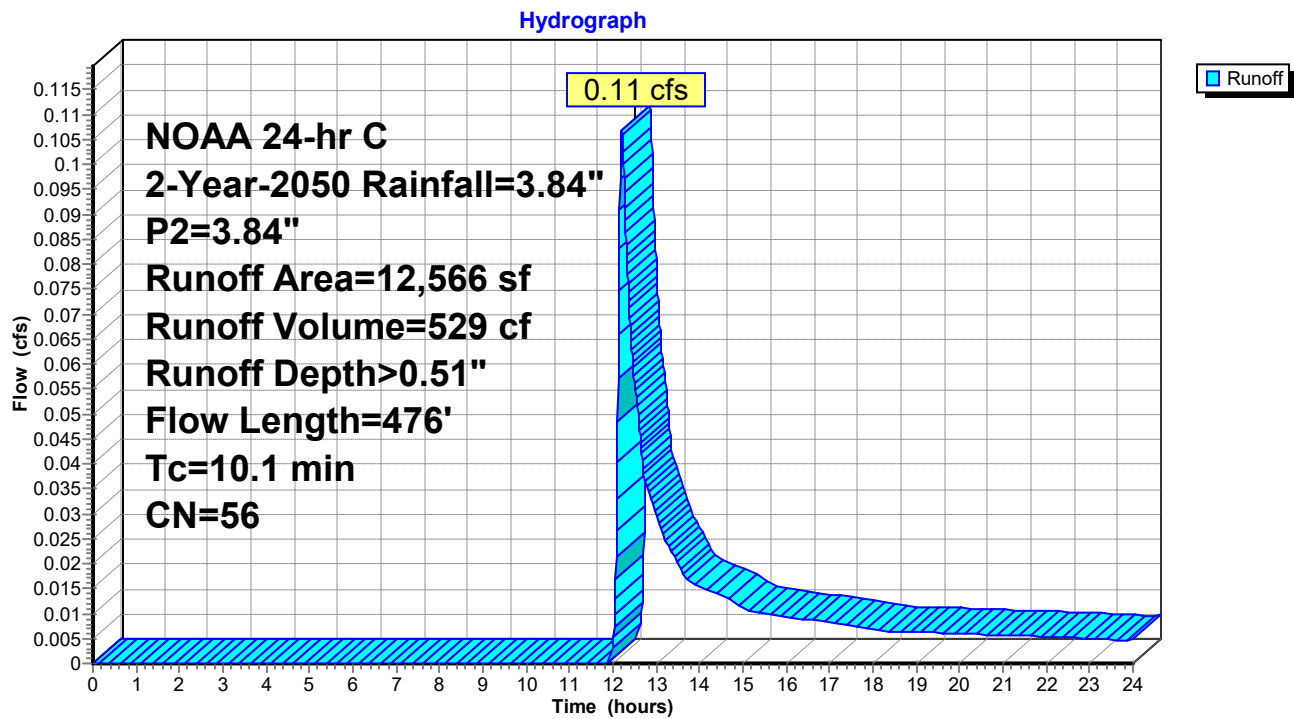
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.1     | 476           | Total         |                   |                |                                                                                                     |

## Subcatchment 102E: Onsite Pervious SE



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

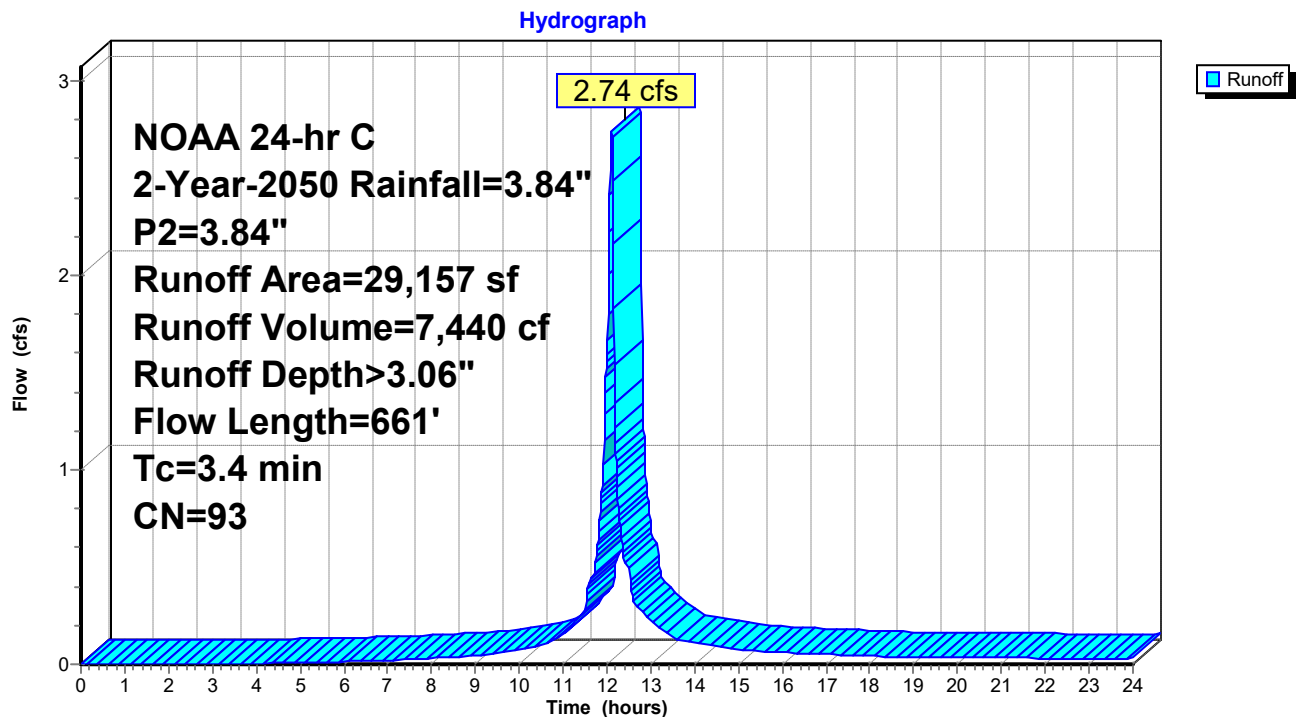
Runoff = 2.74 cfs @ 12.11 hrs, Volume= 7,440 cf, Depth> 3.06"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 104E: Yard Drains**

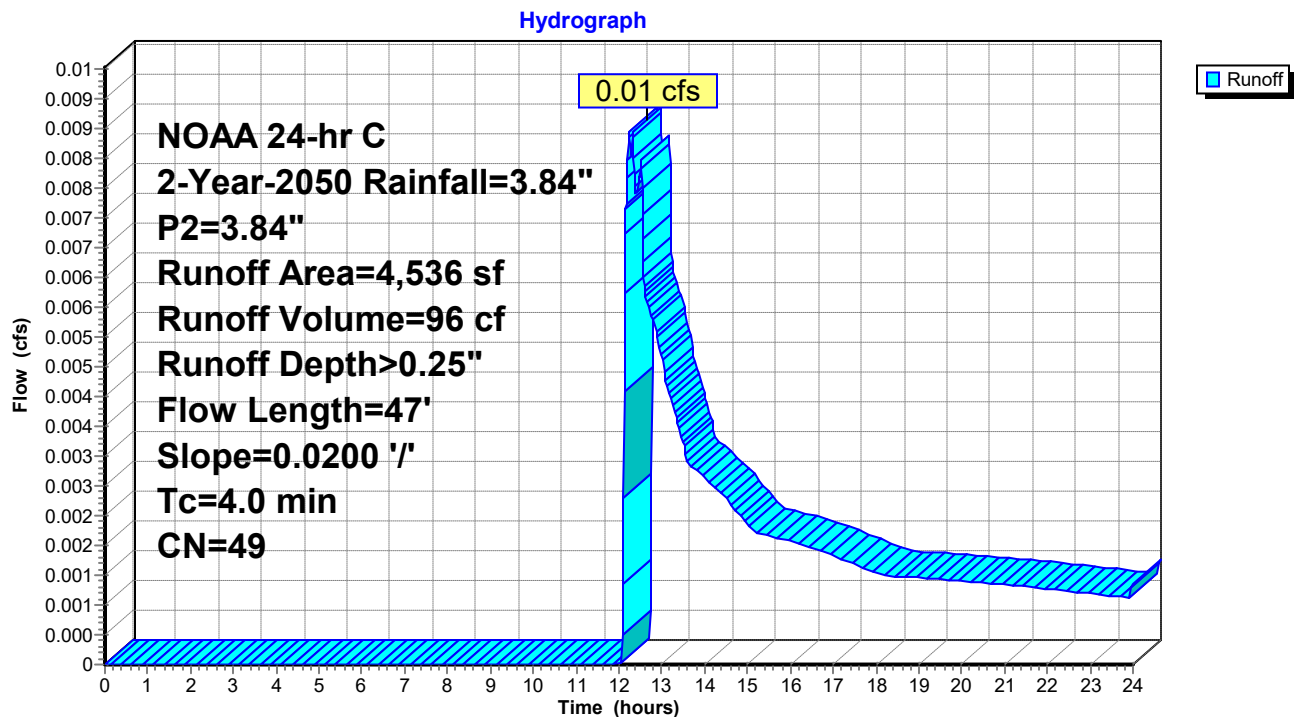
Runoff = 0.01 cfs @ 12.32 hrs, Volume= 96 cf, Depth> 0.25"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 0.11 cfs @ 12.14 hrs, Volume= 469 cf, Depth> 0.43"  
 Routed to Reach 100E : EX INLET 1

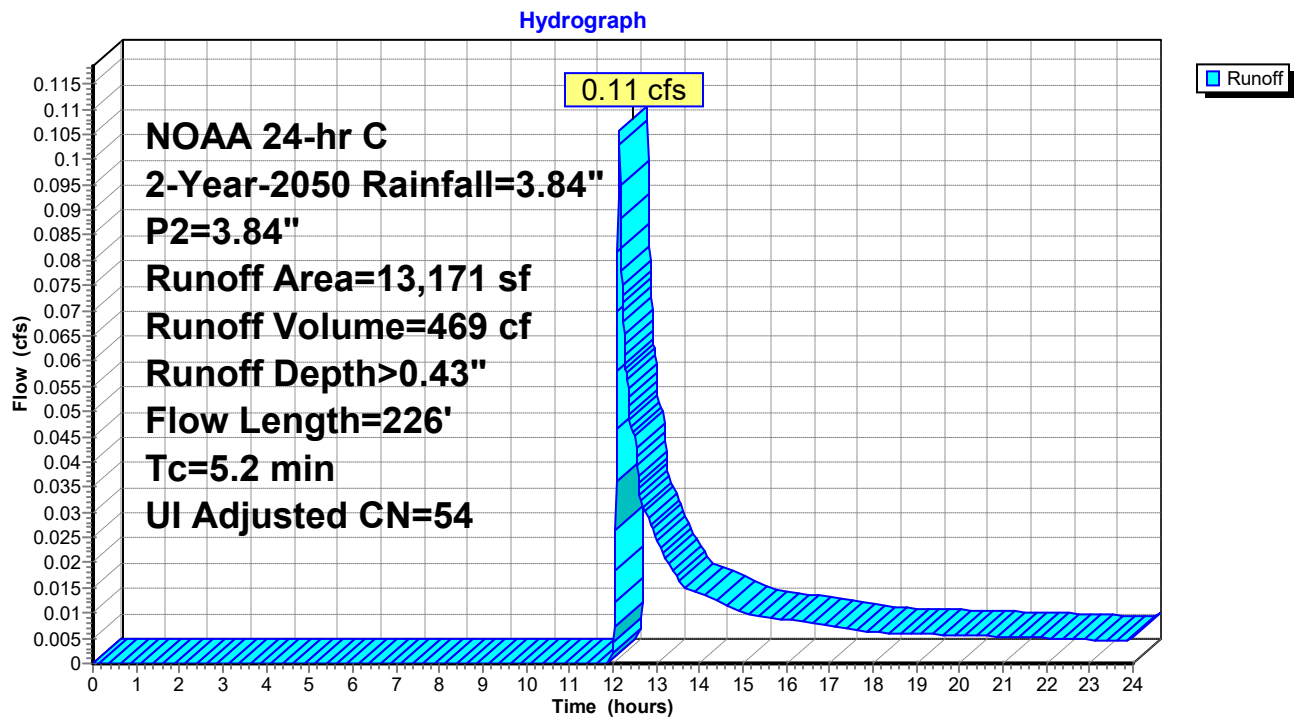
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |

## Subcatchment 105E: Low Drains



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 106E: Onsite Impervious SE**

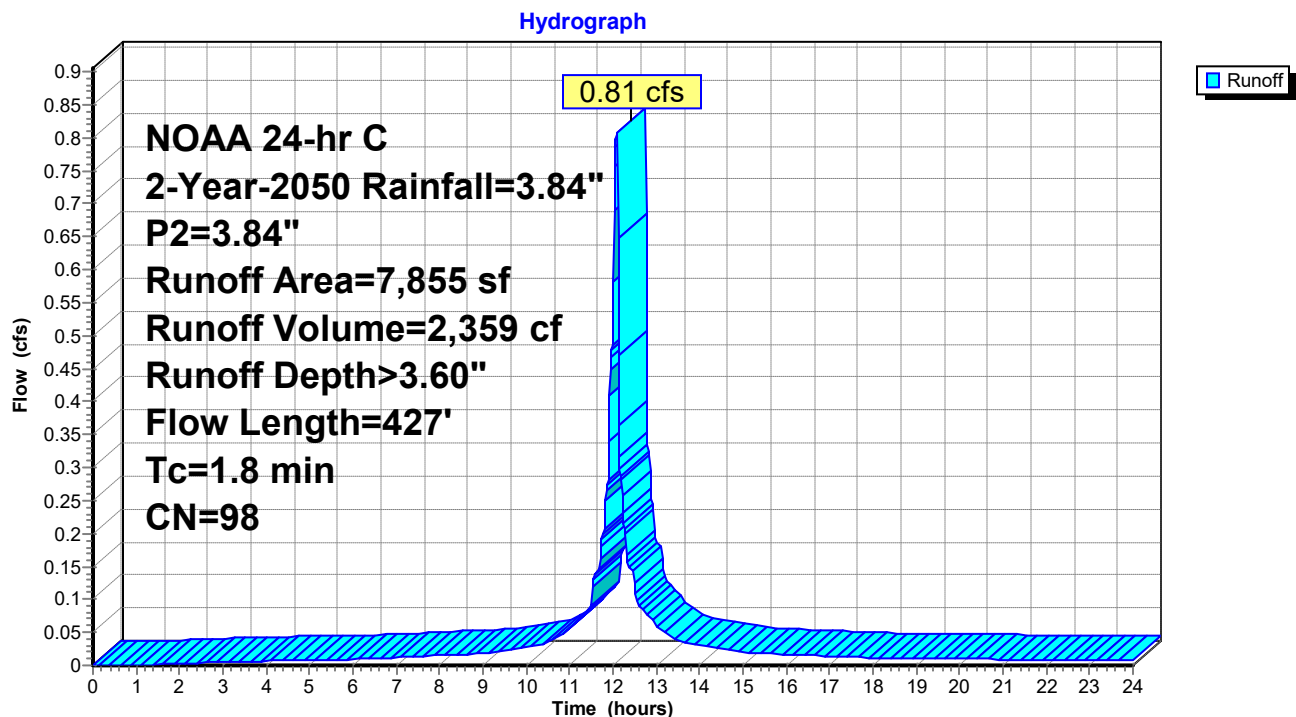
Runoff = 0.81 cfs @ 12.10 hrs, Volume= 2,359 cf, Depth> 3.60"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

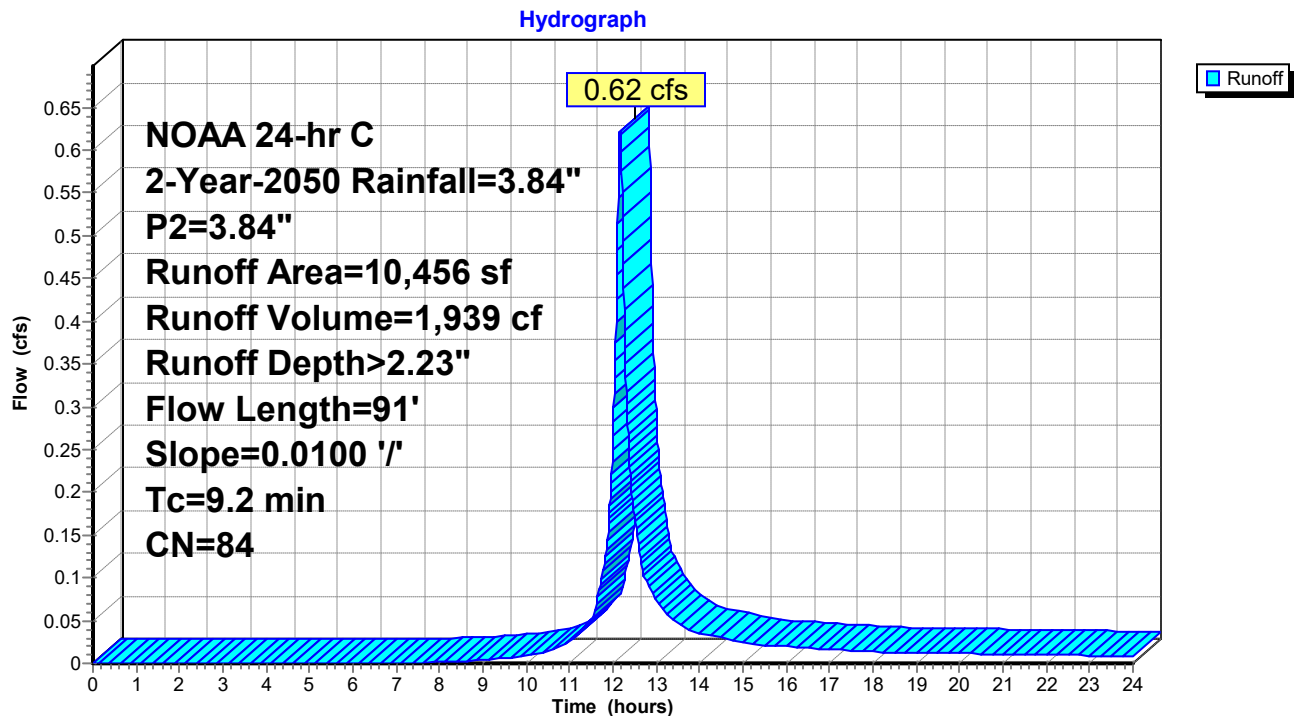
Runoff = 0.62 cfs @ 12.17 hrs, Volume= 1,939 cf, Depth> 2.23"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

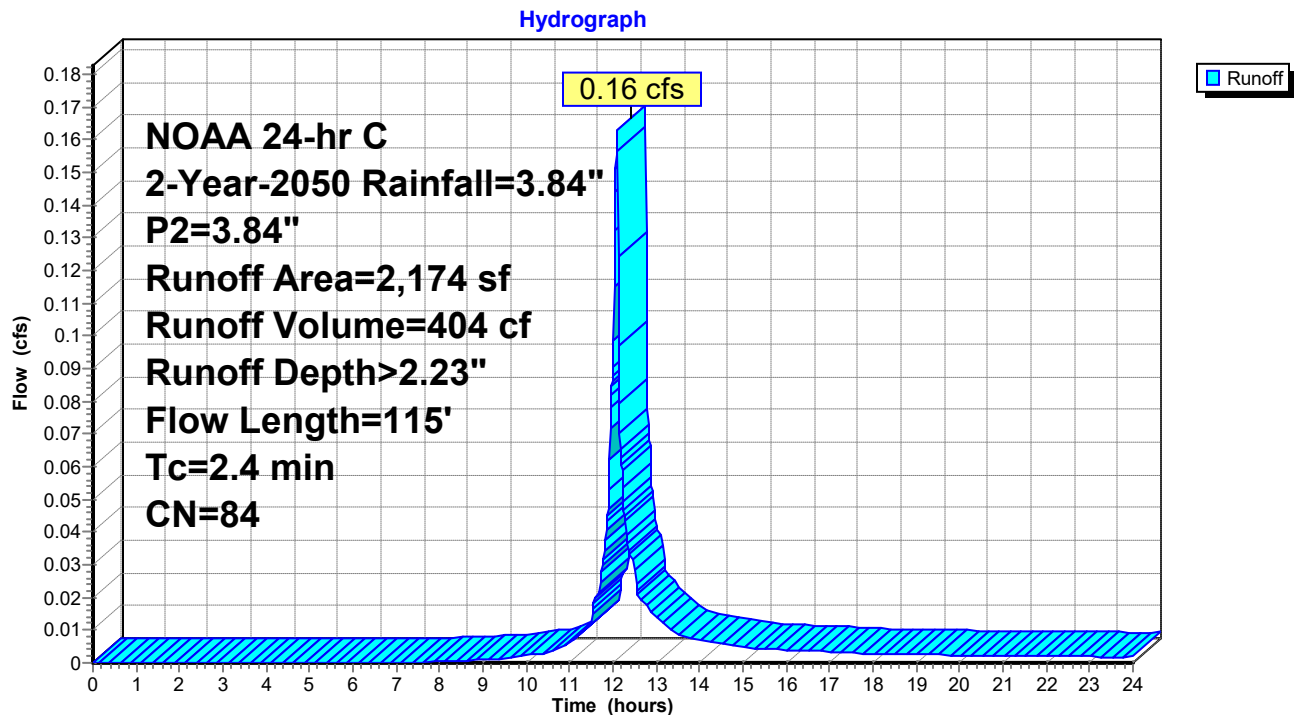
Runoff = 0.16 cfs @ 12.10 hrs, Volume= 404 cf, Depth> 2.23"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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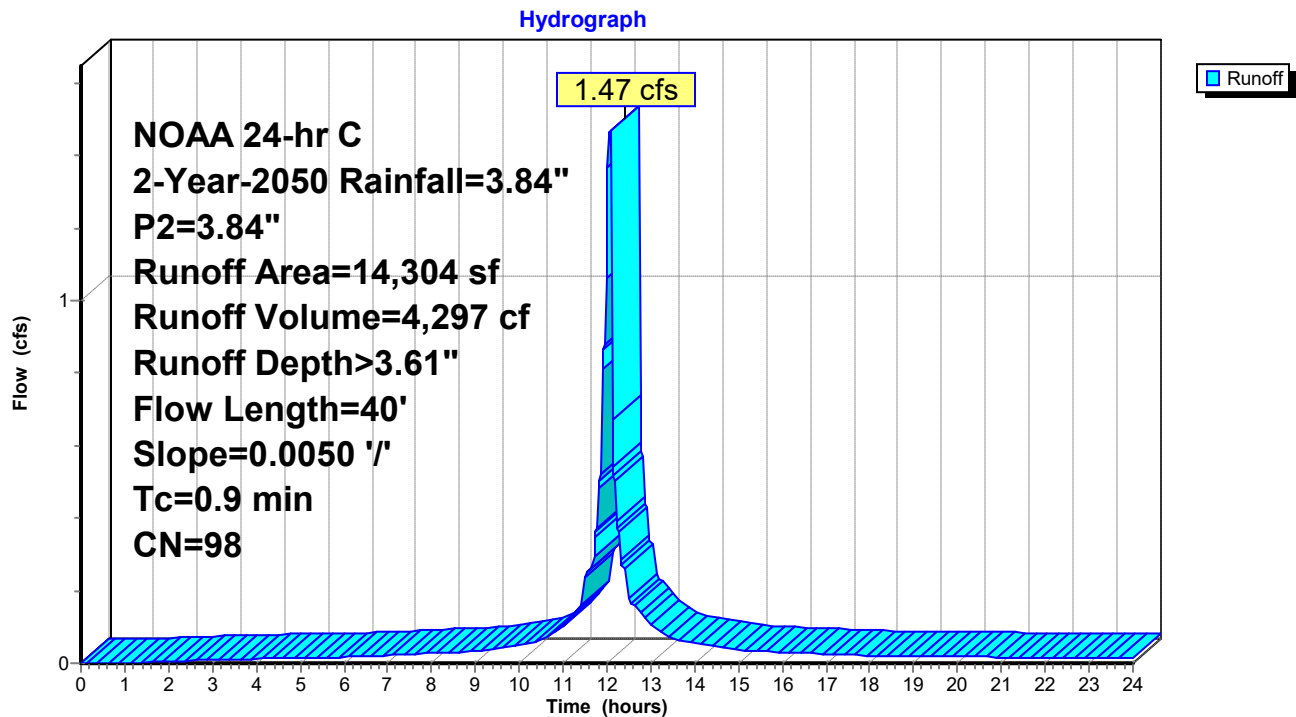
**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

Runoff = 1.47 cfs @ 12.09 hrs, Volume= 4,297 cf, Depth> 3.61"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.9                                | 40            | 0.0050        | 0.72              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

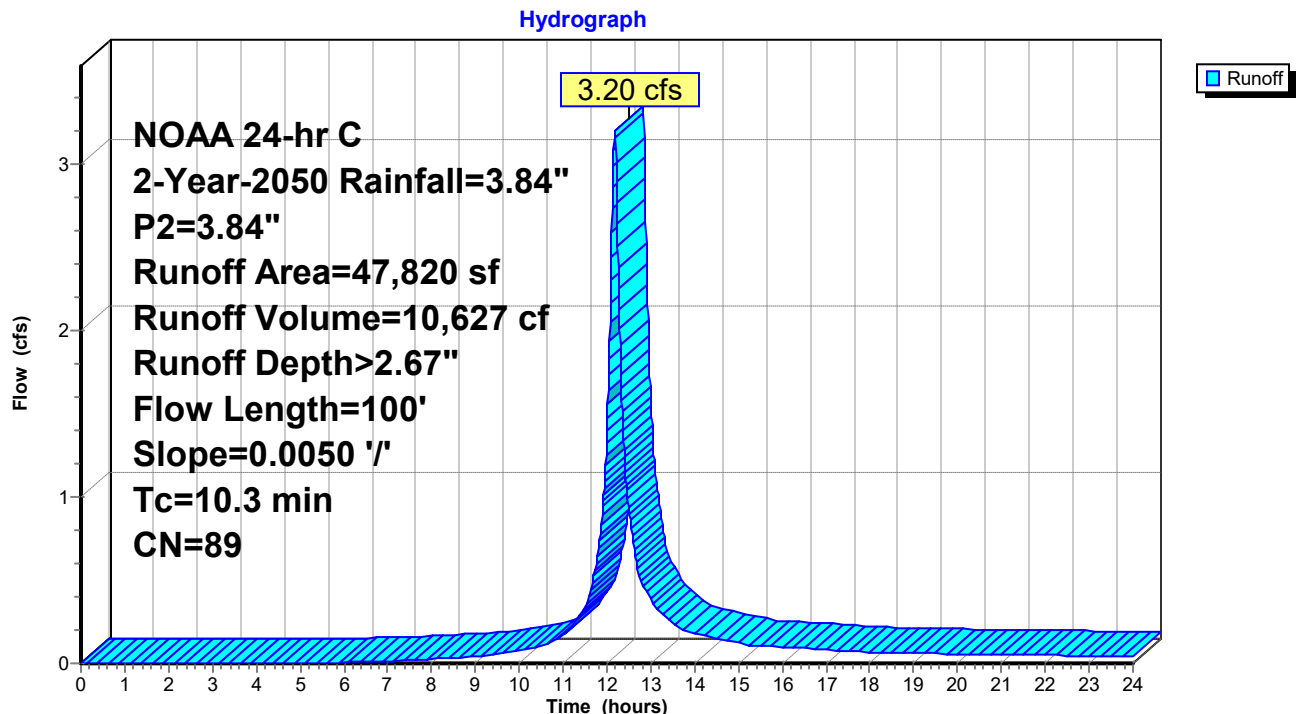
Runoff = 3.20 cfs @ 12.18 hrs, Volume= 10,627 cf, Depth> 2.67"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.3     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 6.08 cfs @ 12.31 hrs, Volume= 26,895 cf, Depth> 2.66"  
 Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                  |



# EXISTING PEDDIE FOOTBALL

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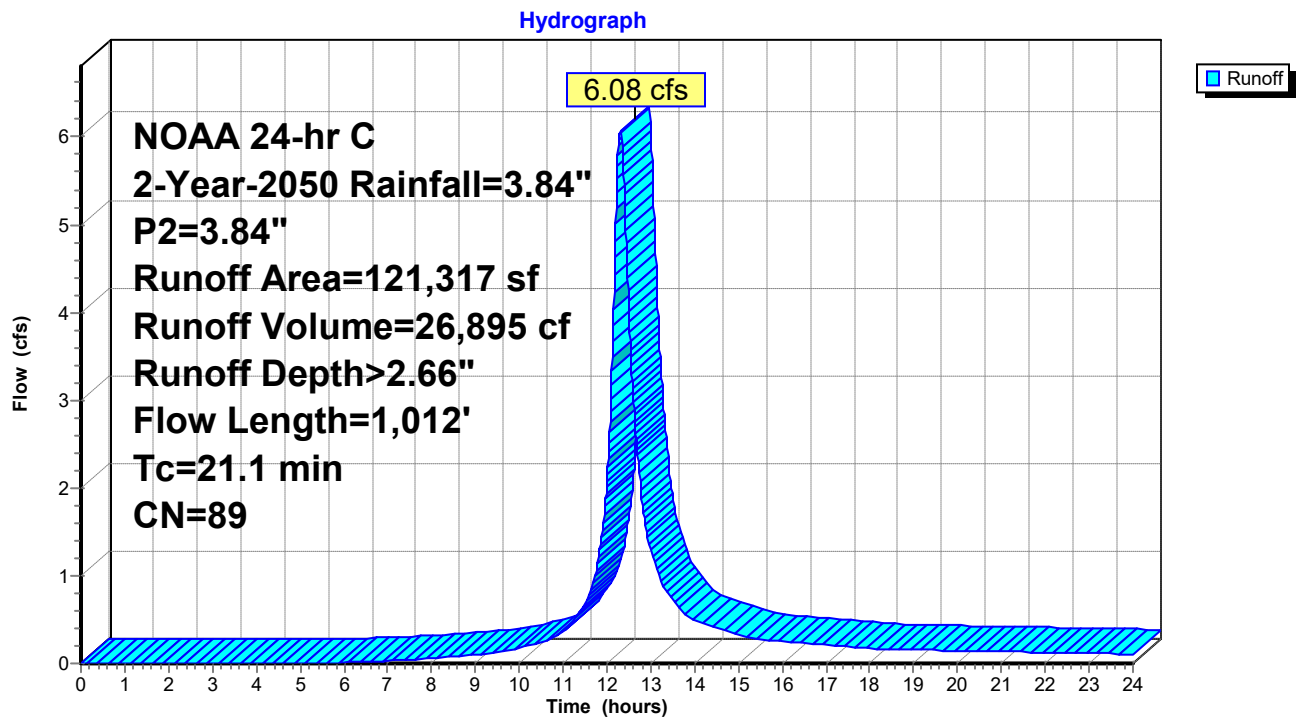
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 205E: Offsite to E Field Drain



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

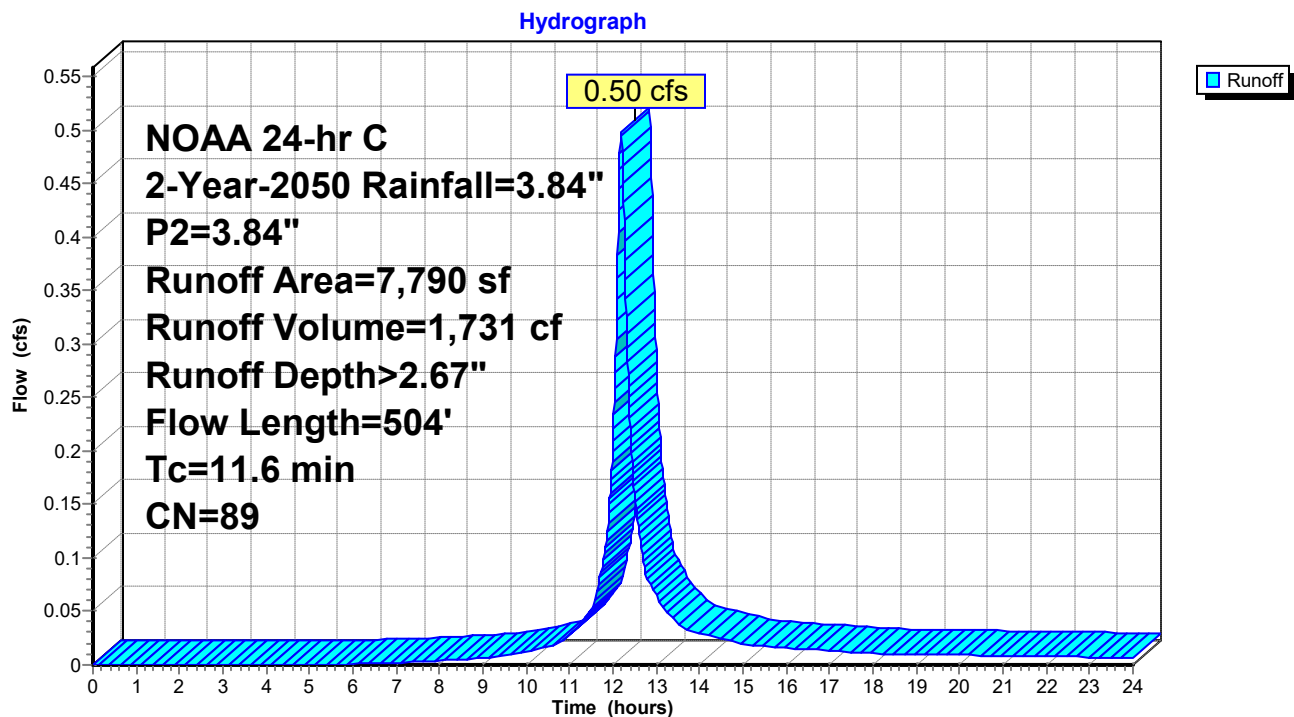
Runoff = 0.50 cfs @ 12.19 hrs, Volume= 1,731 cf, Depth> 2.67"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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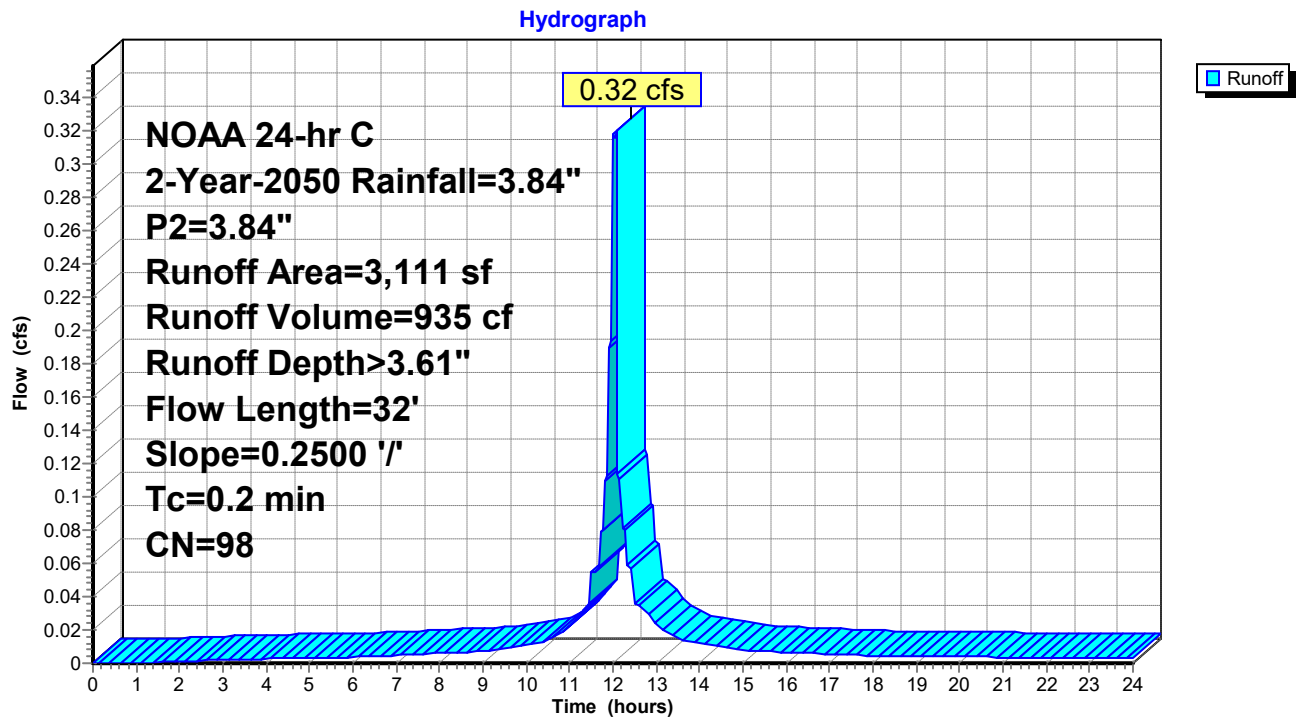
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.32 cfs @ 12.09 hrs, Volume= 935 cf, Depth> 3.61"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

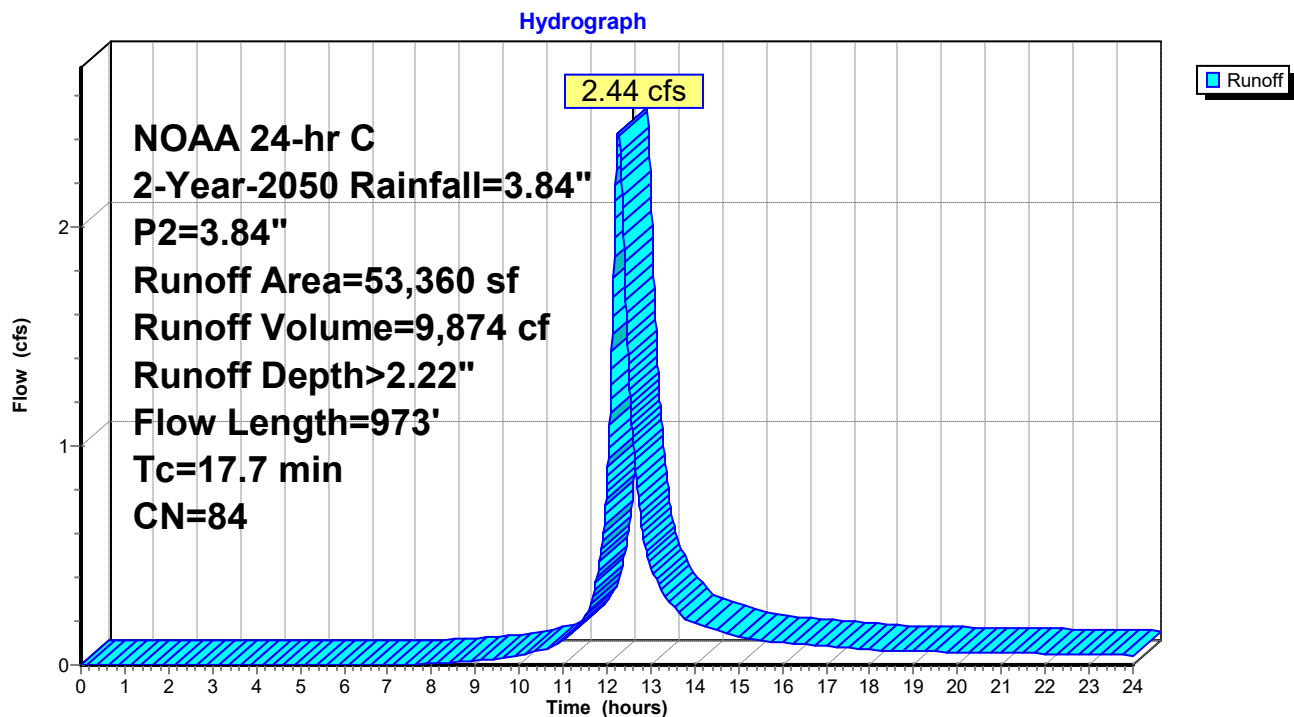
Runoff = 2.44 cfs @ 12.26 hrs, Volume= 9,874 cf, Depth> 2.22"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 17.7     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

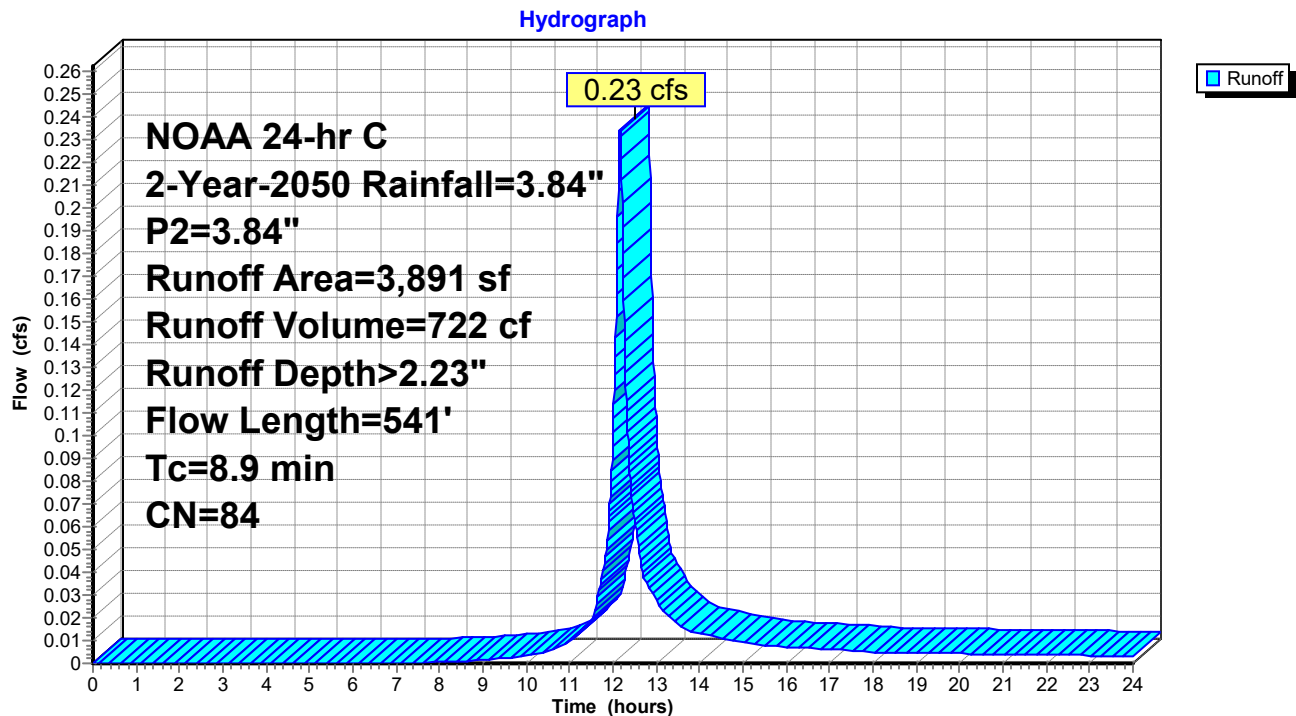
Runoff = 0.23 cfs @ 12.16 hrs, Volume= 722 cf, Depth> 2.23"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 8.9      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

Runoff = 1.57 cfs @ 12.21 hrs, Volume= 5,532 cf, Depth> 2.22"  
 Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 12.7     | 574           | Total         |                   |                |                                                                                        |

# EXISTING PEDDIE FOOTBALL

Prepared by Crest Engineering

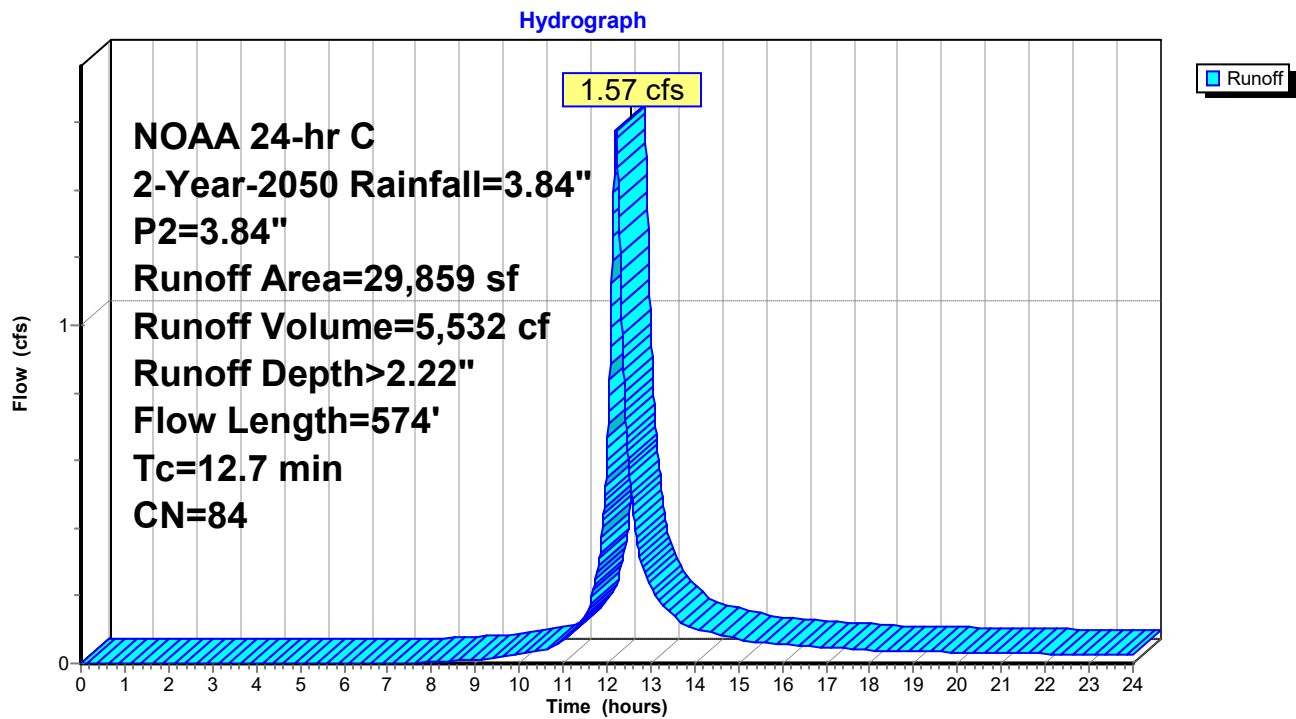
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 303E: Offsite to W Trench Drain



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

Runoff = 0.14 cfs @ 12.17 hrs, Volume= 438 cf, Depth> 2.23"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

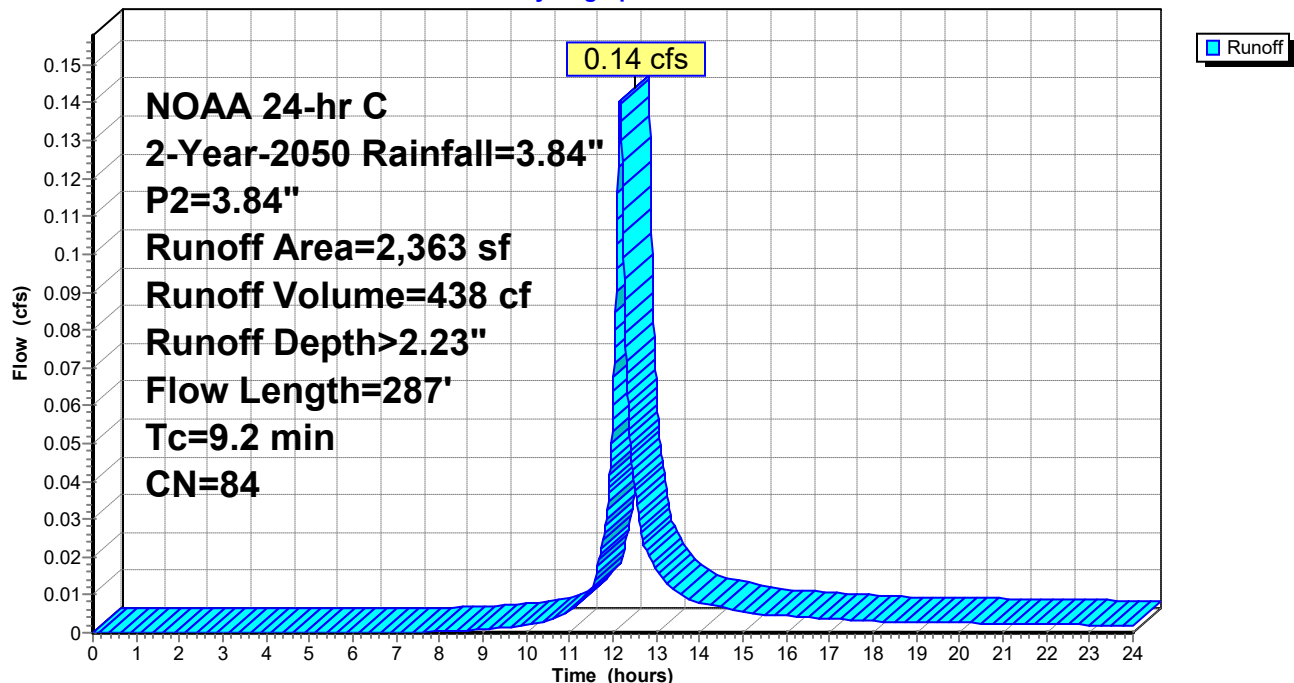
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.2      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**

Hydrograph





**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

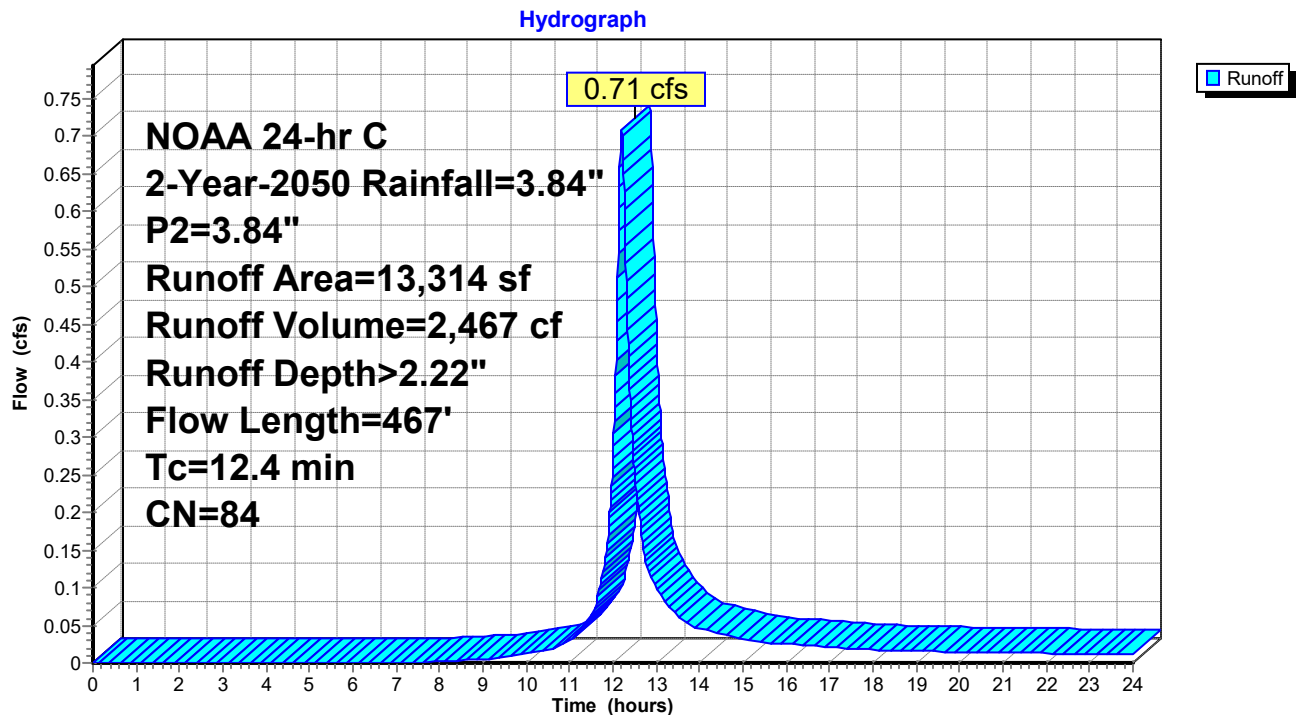
Runoff = 0.71 cfs @ 12.20 hrs, Volume= 2,467 cf, Depth> 2.22"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

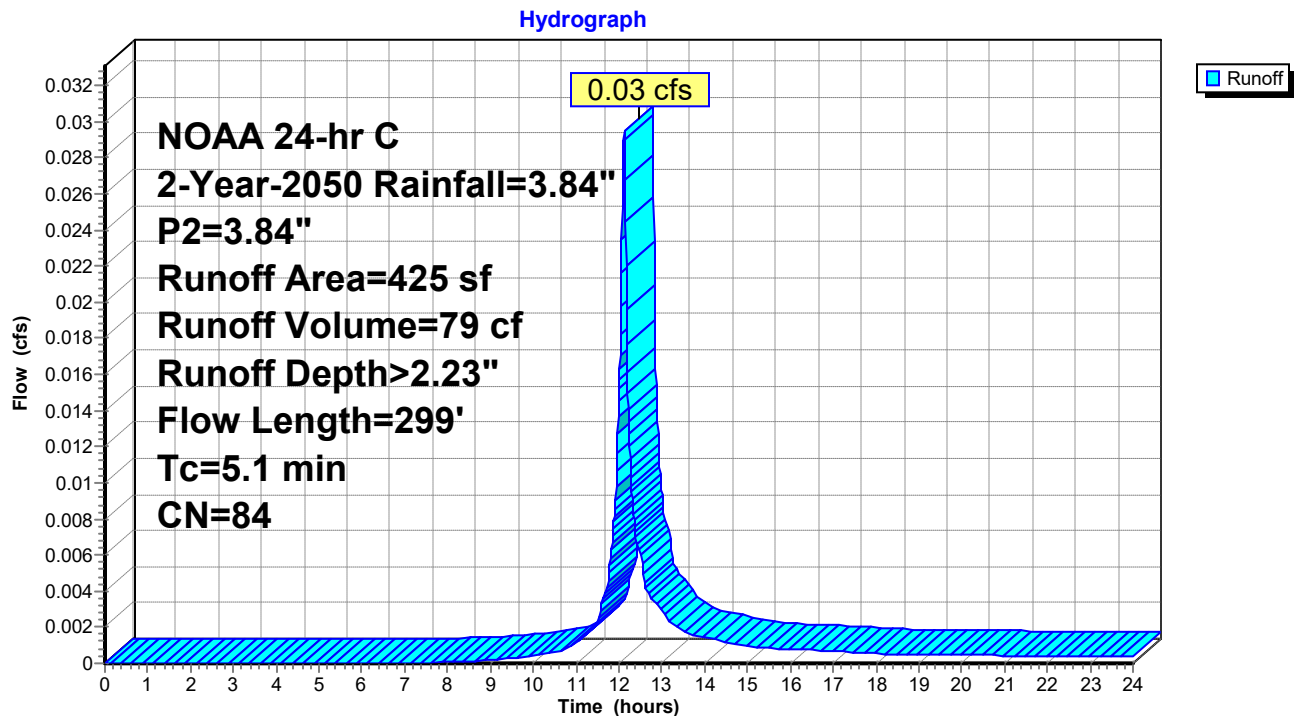
Runoff = 0.03 cfs @ 12.12 hrs, Volume= 79 cf, Depth> 2.23"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.1      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 308E: Offsite to Drain 4**

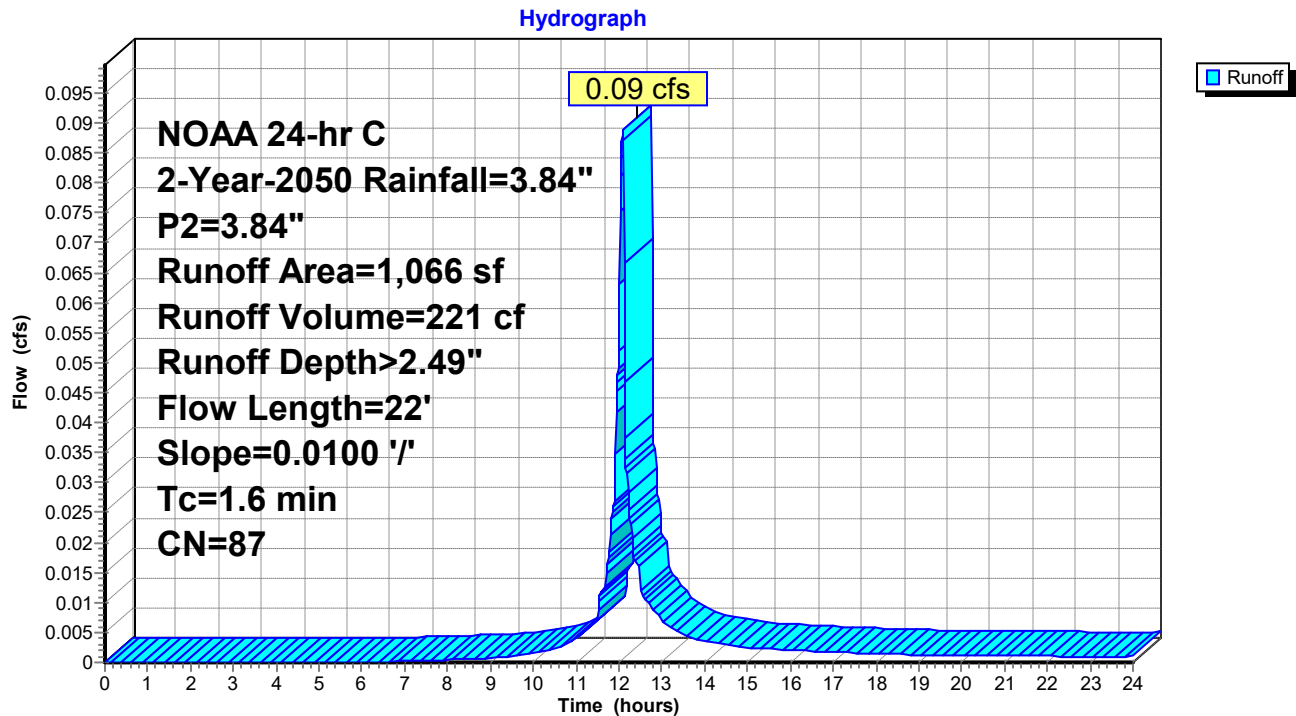
Runoff = 0.09 cfs @ 12.10 hrs, Volume= 221 cf, Depth> 2.49"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.6      | 22            | Total         |                   |                |                                       |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

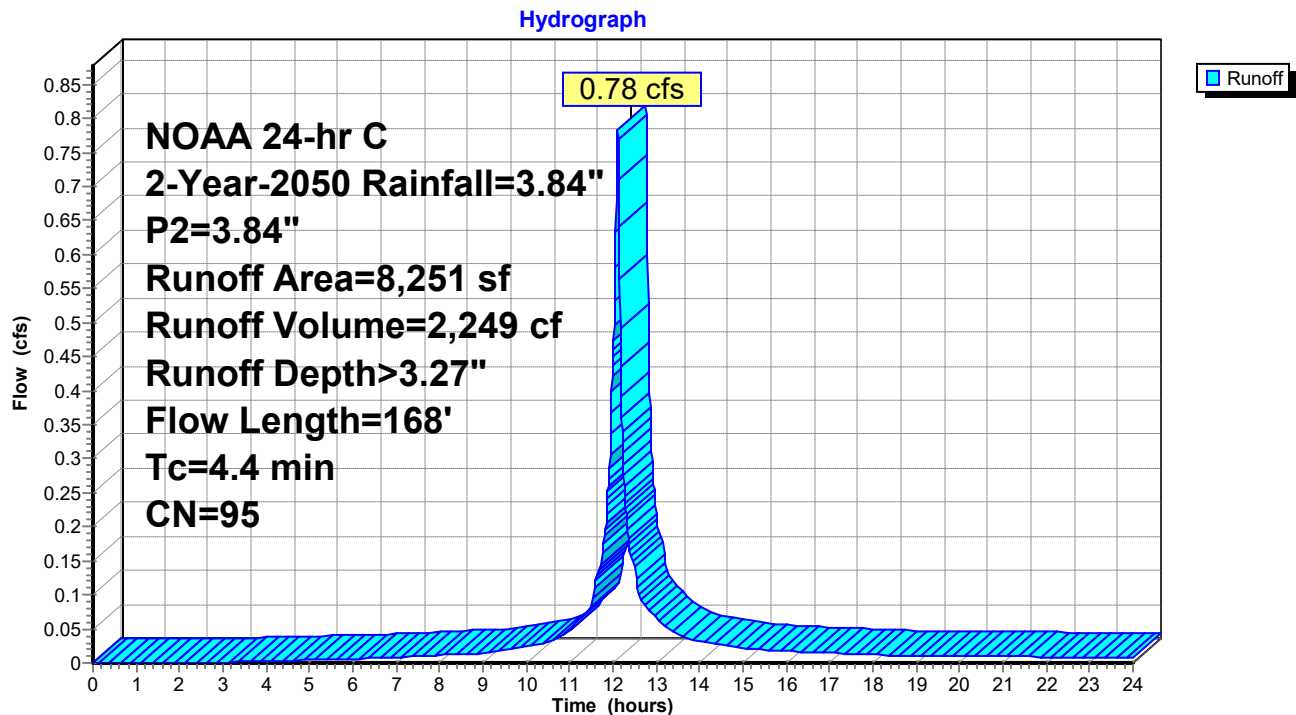
Runoff = 0.78 cfs @ 12.12 hrs, Volume= 2,249 cf, Depth> 3.27"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 310E: Pervious Stadium W**

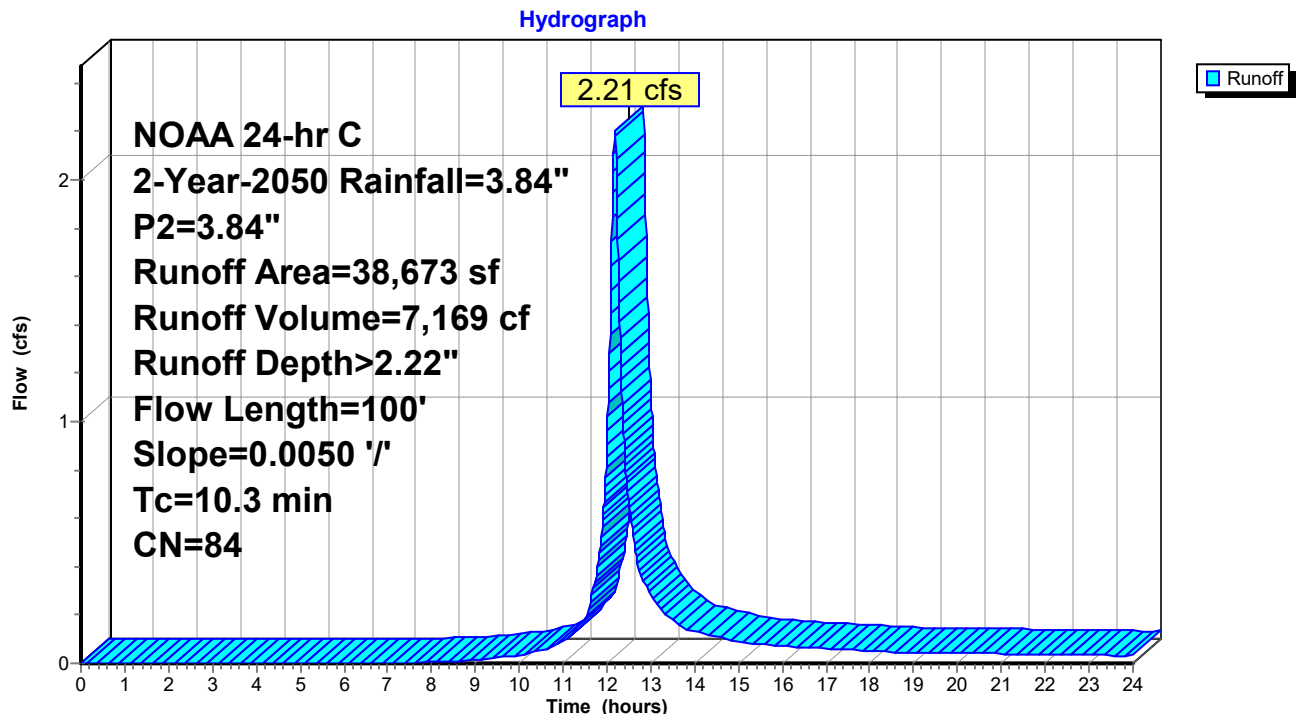
Runoff = 2.21 cfs @ 12.18 hrs, Volume= 7,169 cf, Depth> 2.22"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

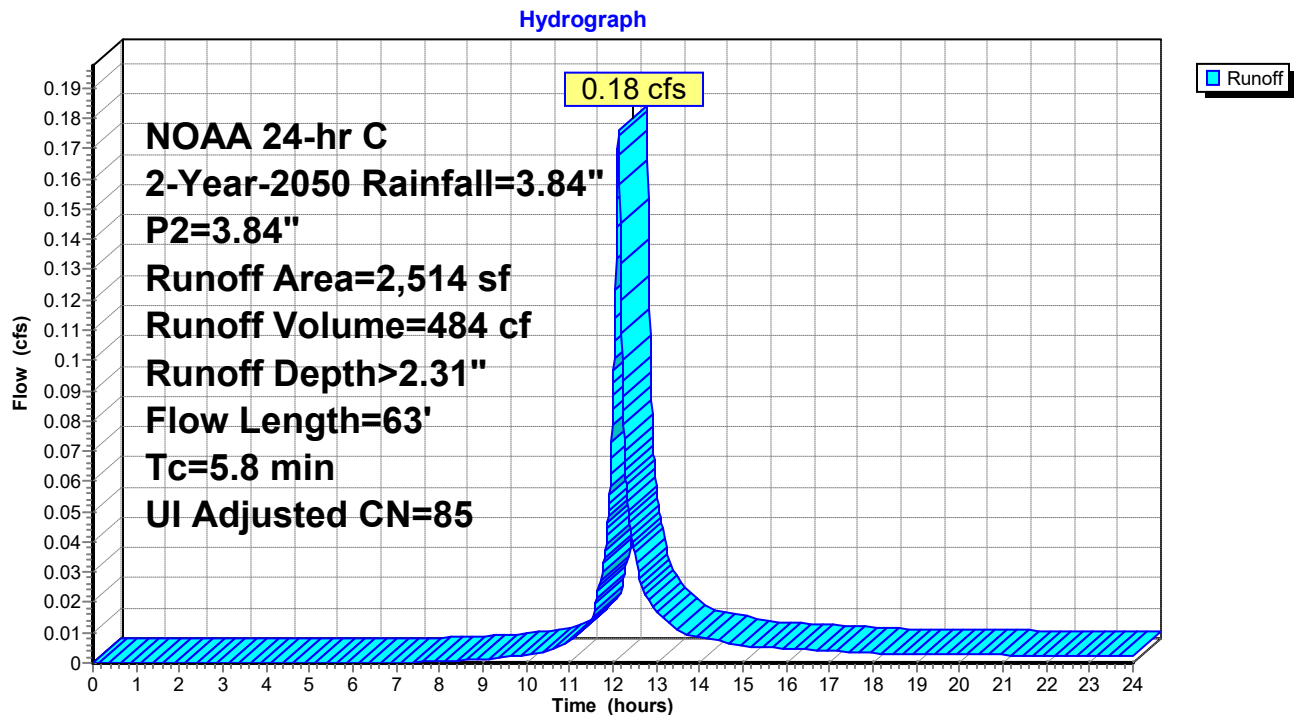
Runoff = 0.18 cfs @ 12.13 hrs, Volume= 484 cf, Depth> 2.31"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 5.6      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 5.8      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

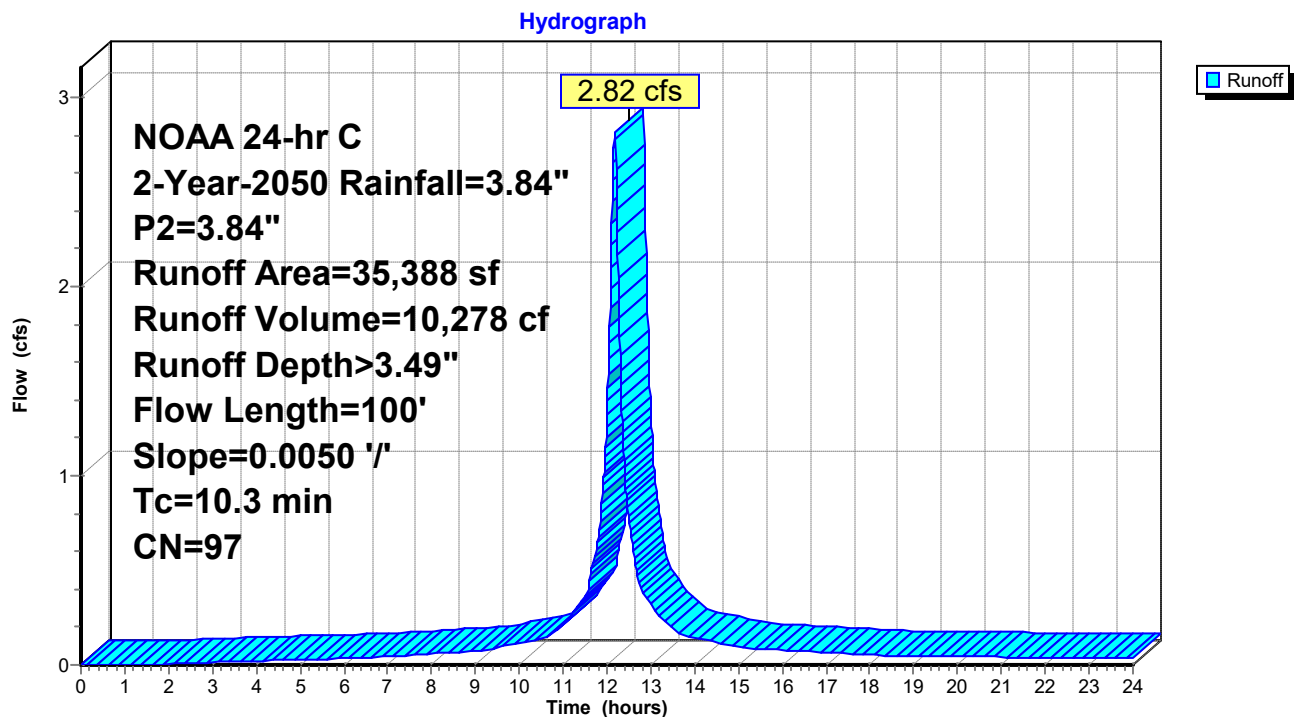
Runoff = 2.82 cfs @ 12.17 hrs, Volume= 10,278 cf, Depth> 3.49"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

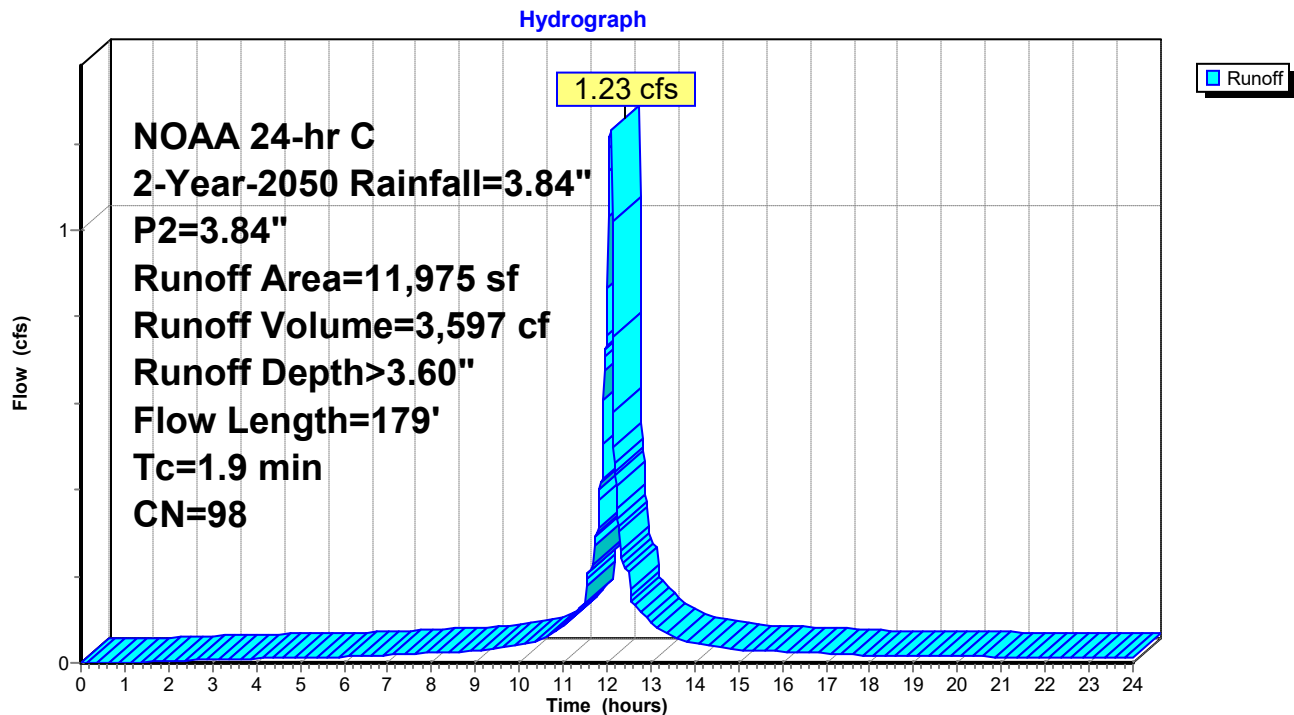
Runoff = 1.23 cfs @ 12.10 hrs, Volume= 3,597 cf, Depth> 3.60"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.67              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**



**EXISTING PEDDIE FOOTBALL**

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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

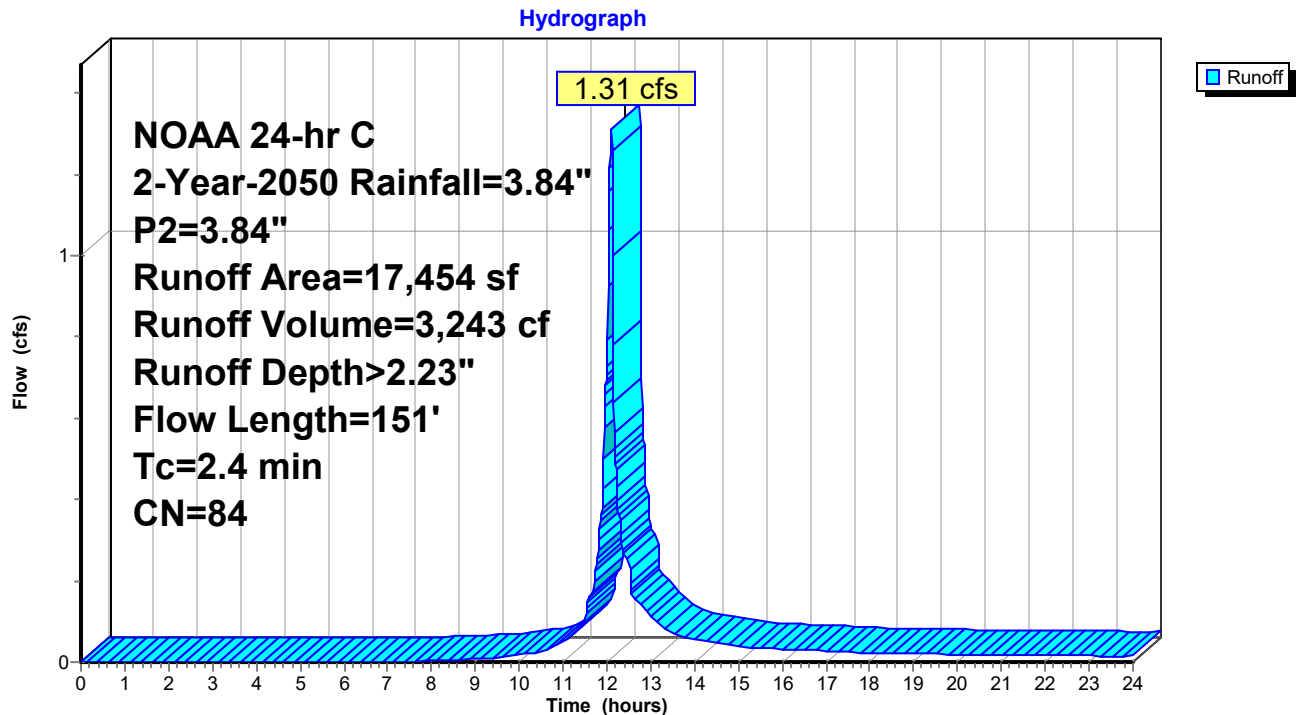
Runoff = 1.31 cfs @ 12.10 hrs, Volume= 3,243 cf, Depth> 2.23"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.4      | 35            | 0.2500        | 0.41              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.4      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.84"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 403E: Tennis Courts**

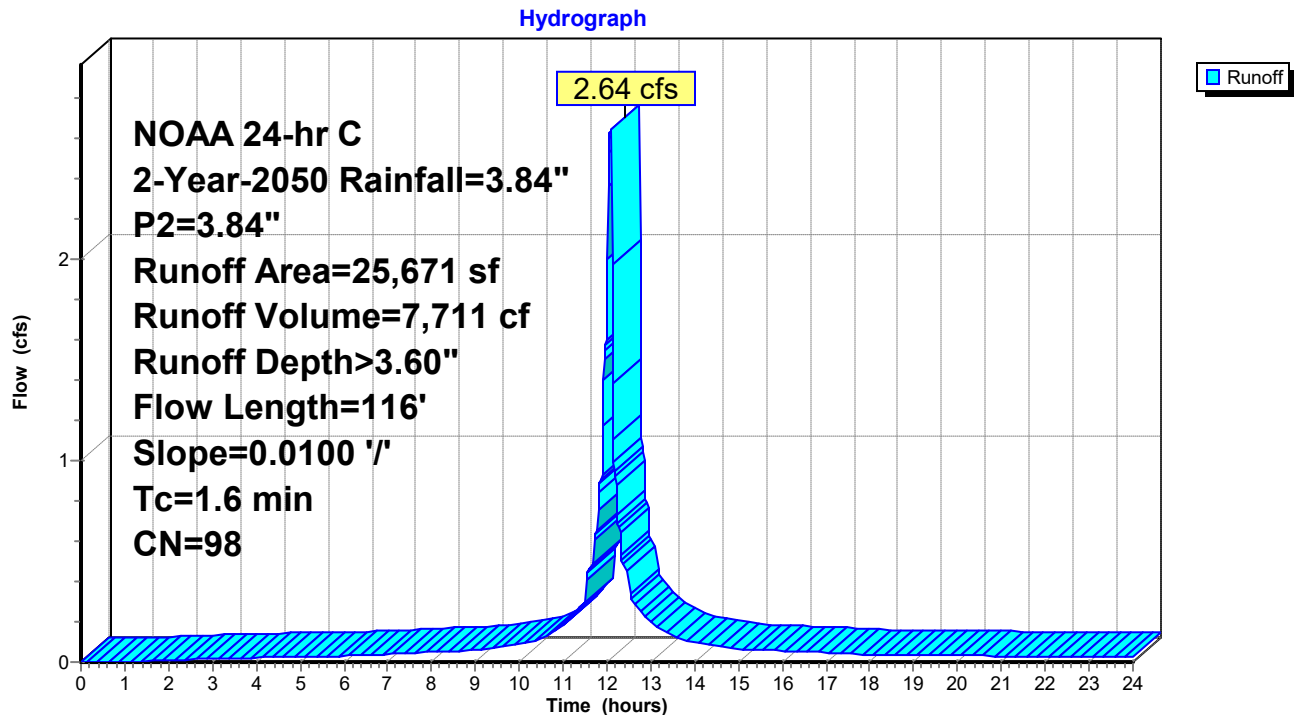
Runoff = 2.64 cfs @ 12.10 hrs, Volume= 7,711 cf, Depth> 3.60"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

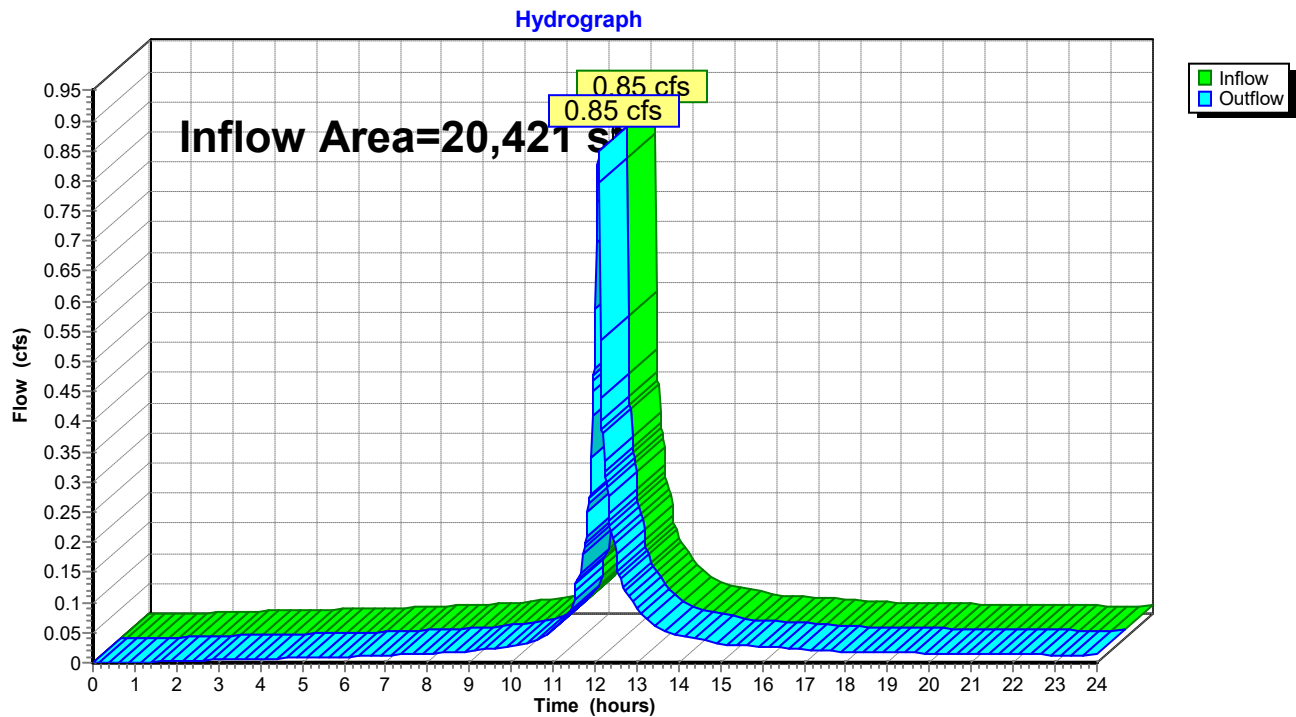
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 1.70" for 2-Year-2050 event  
 Inflow = 0.85 cfs @ 12.10 hrs, Volume= 2,889 cf  
 Outflow = 0.85 cfs @ 12.10 hrs, Volume= 2,889 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

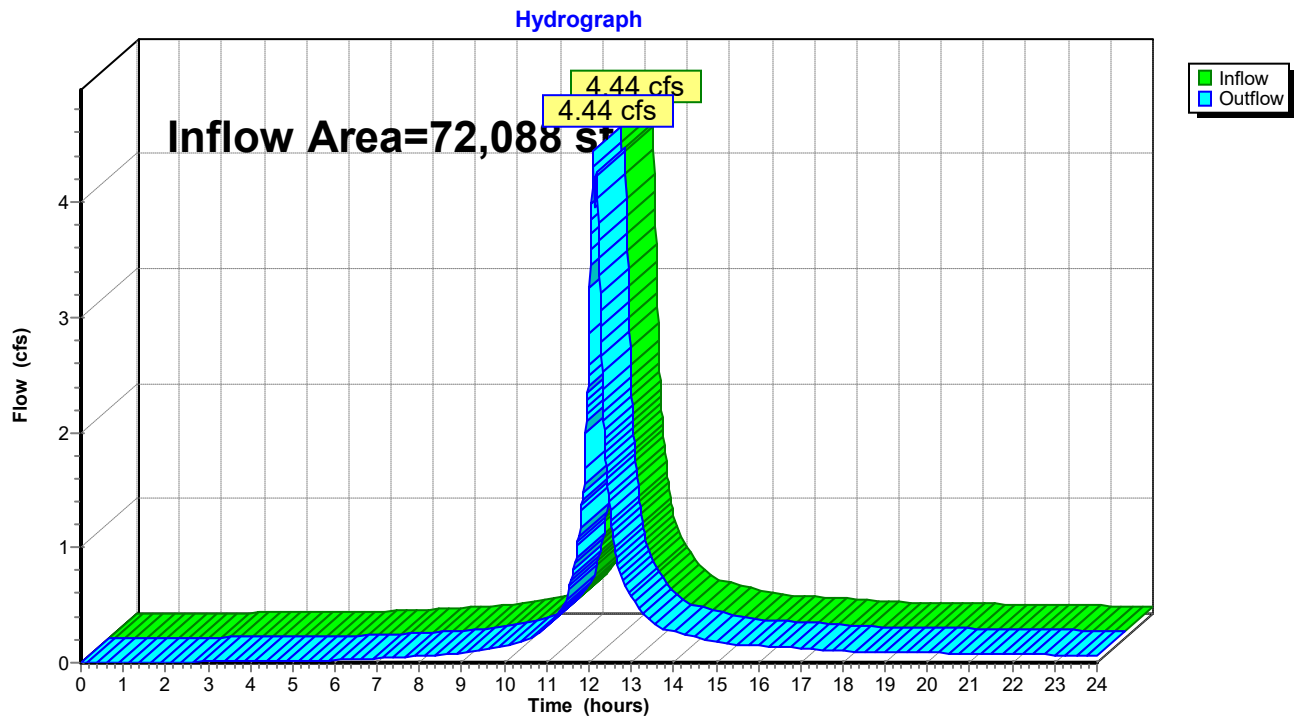


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 2.84" for 2-Year-2050 event  
 Inflow = 4.44 cfs @ 12.10 hrs, Volume= 17,058 cf  
 Outflow = 4.44 cfs @ 12.10 hrs, Volume= 17,058 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST

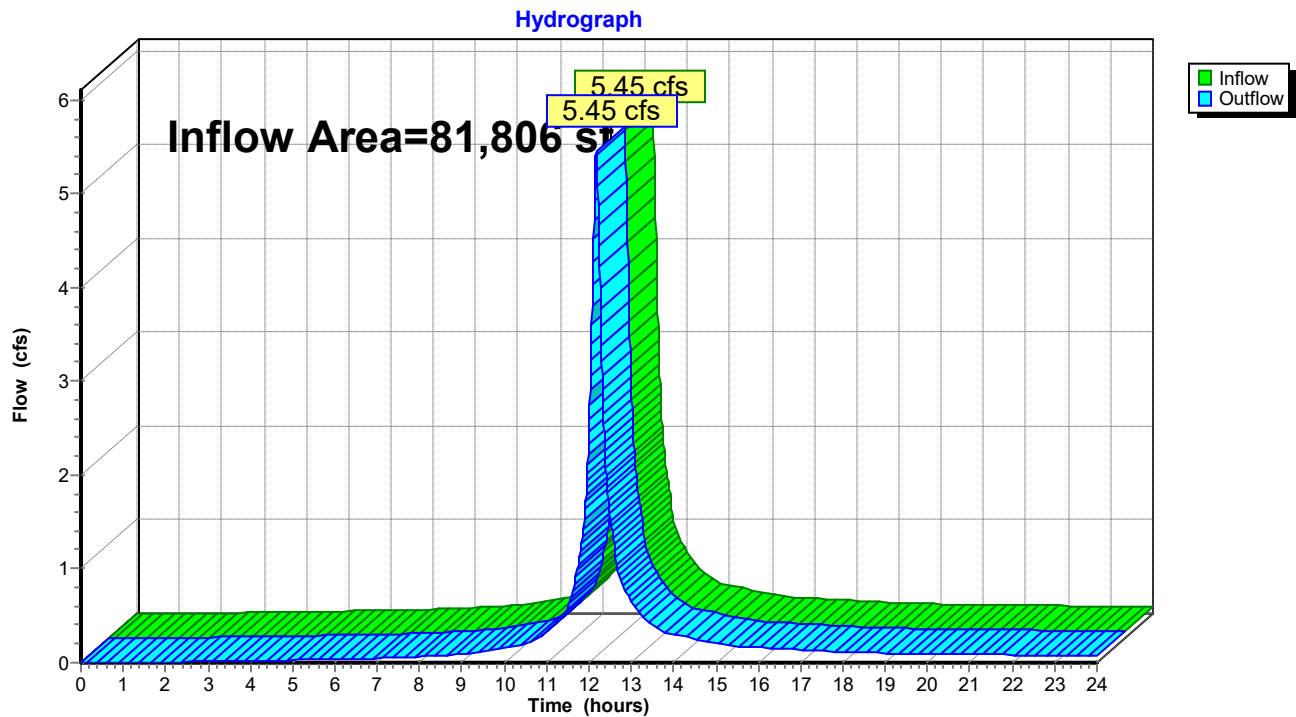


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 2.77" for 2-Year-2050 event  
 Inflow = 5.45 cfs @ 12.17 hrs, Volume= 18,907 cf  
 Outflow = 5.45 cfs @ 12.17 hrs, Volume= 18,907 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

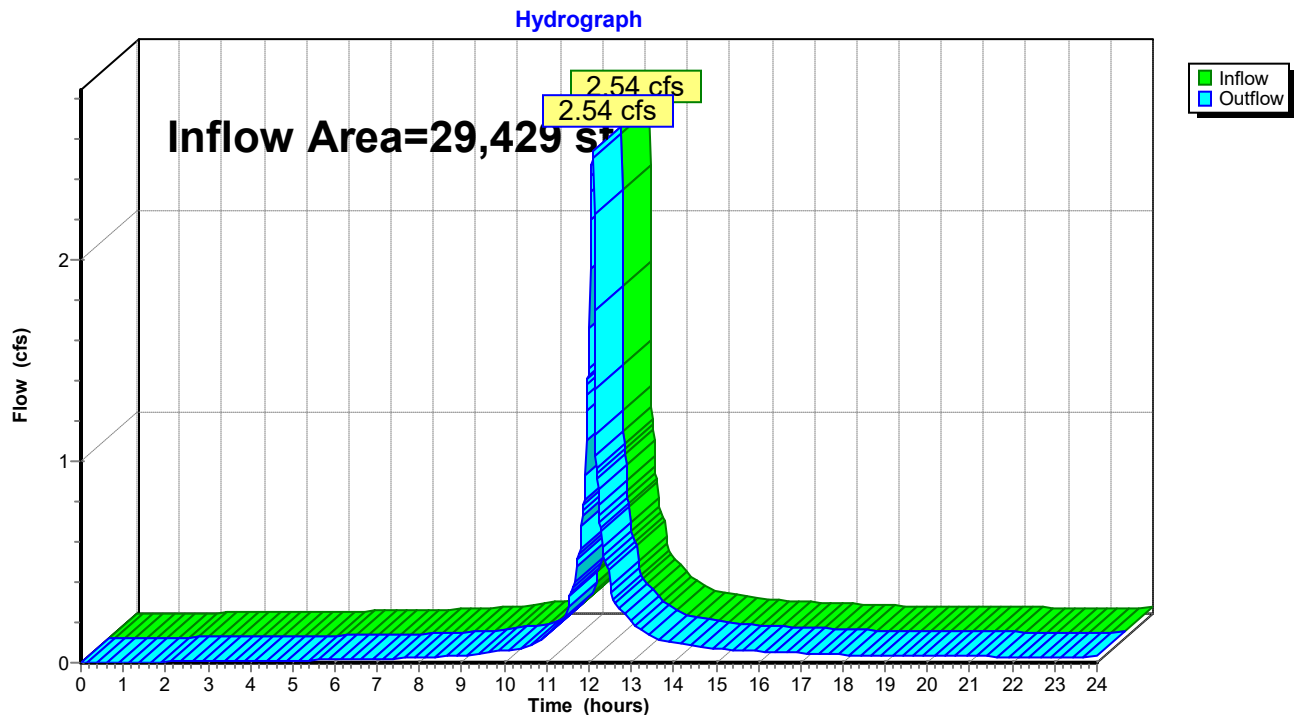


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 2.79" for 2-Year-2050 event  
 Inflow = 2.54 cfs @ 12.10 hrs, Volume= 6,839 cf  
 Outflow = 2.54 cfs @ 12.10 hrs, Volume= 6,839 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

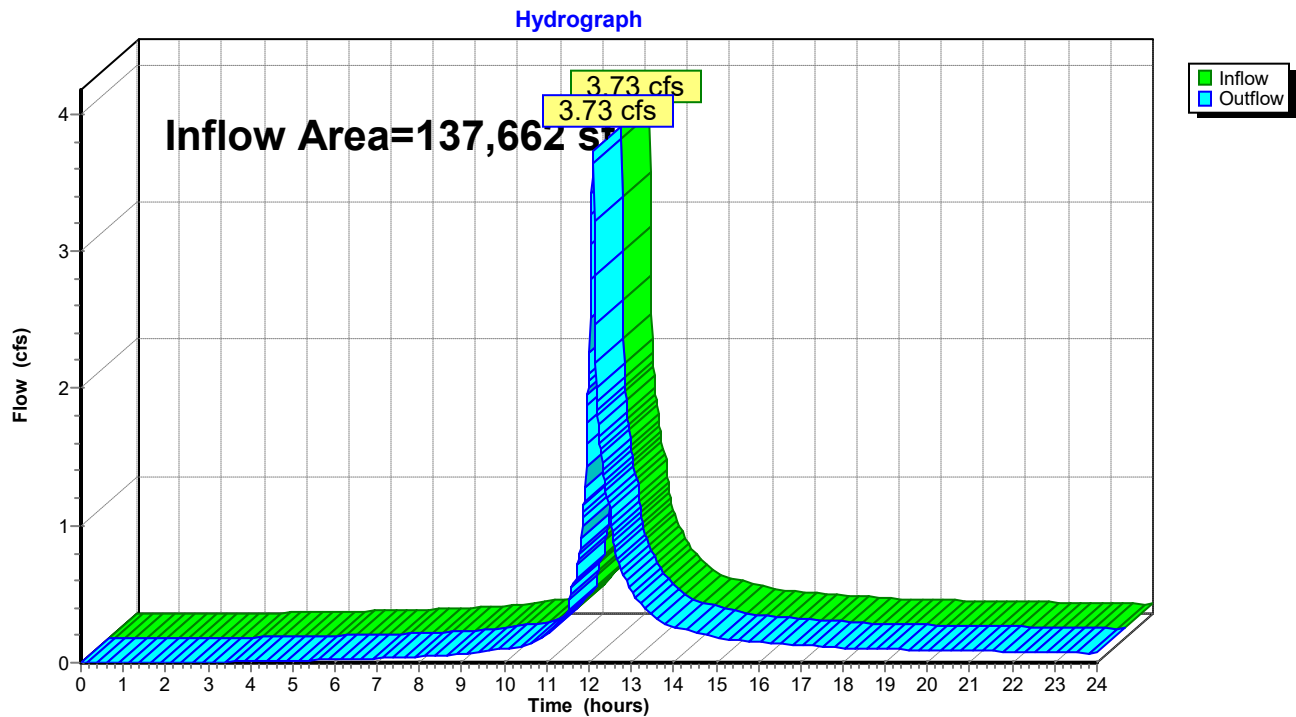


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 1.21" for 2-Year-2050 event  
 Inflow = 3.73 cfs @ 12.11 hrs, Volume= 13,846 cf  
 Outflow = 3.73 cfs @ 12.11 hrs, Volume= 13,846 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100E: EX INLET 1

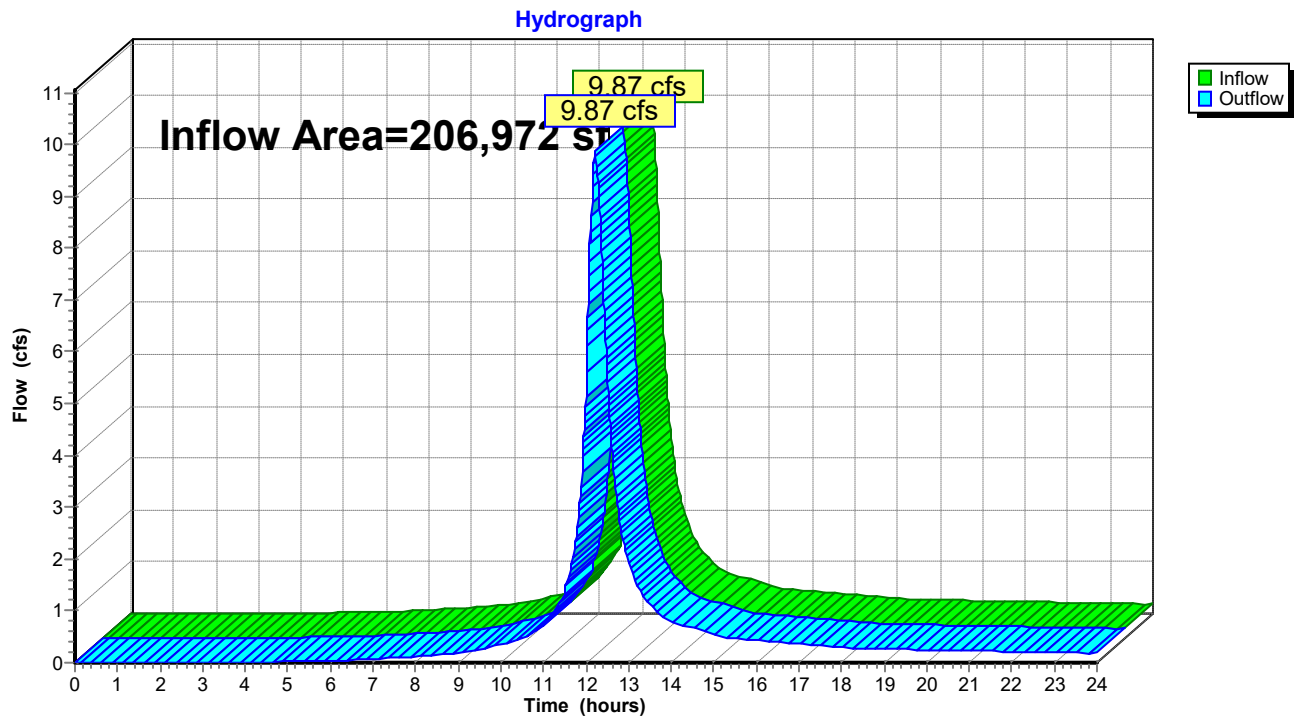


### Summary for Reach 200E: EX MANHOLE 2

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 2.71" for 2-Year-2050 event  
 Inflow = 9.87 cfs @ 12.20 hrs, Volume= 46,827 cf  
 Outflow = 9.87 cfs @ 12.20 hrs, Volume= 46,827 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200E: EX MANHOLE 2





## EXISTING PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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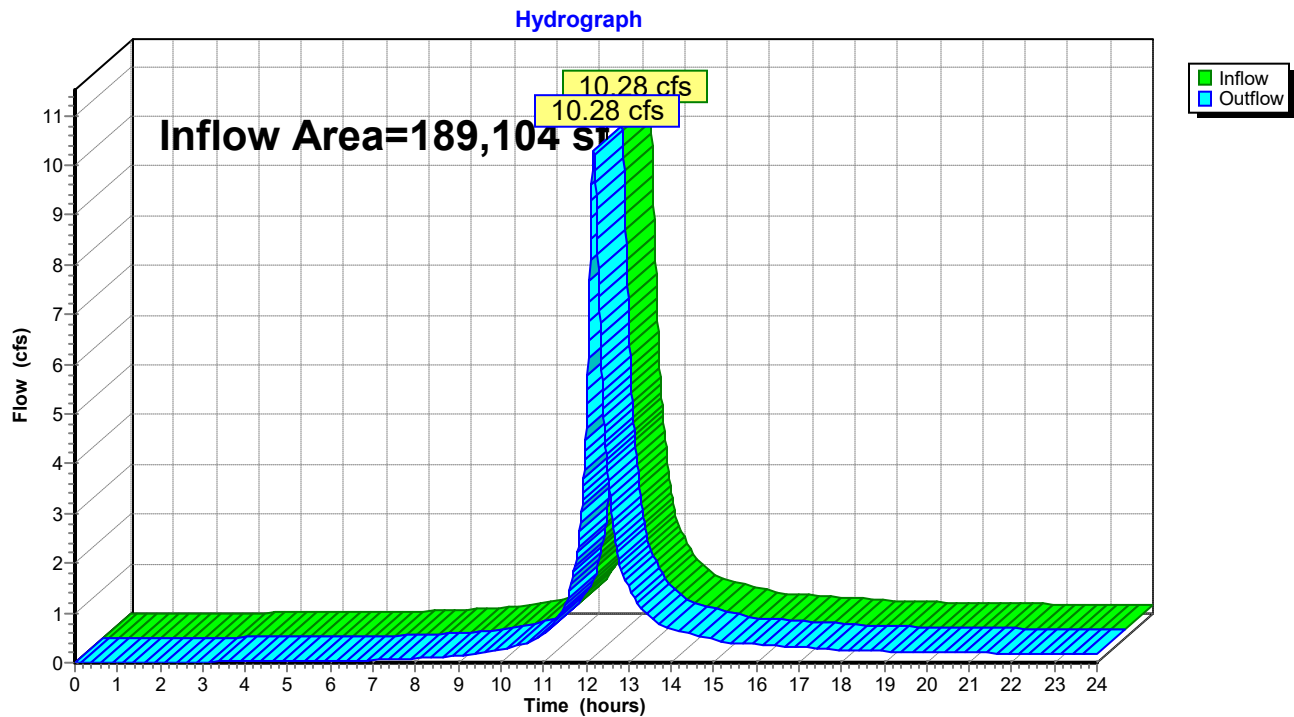
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### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 2.51" for 2-Year-2050 event  
Inflow = 10.28 cfs @ 12.18 hrs, Volume= 39,513 cf  
Outflow = 10.28 cfs @ 12.18 hrs, Volume= 39,513 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300E: EX INLET 3



## EXISTING PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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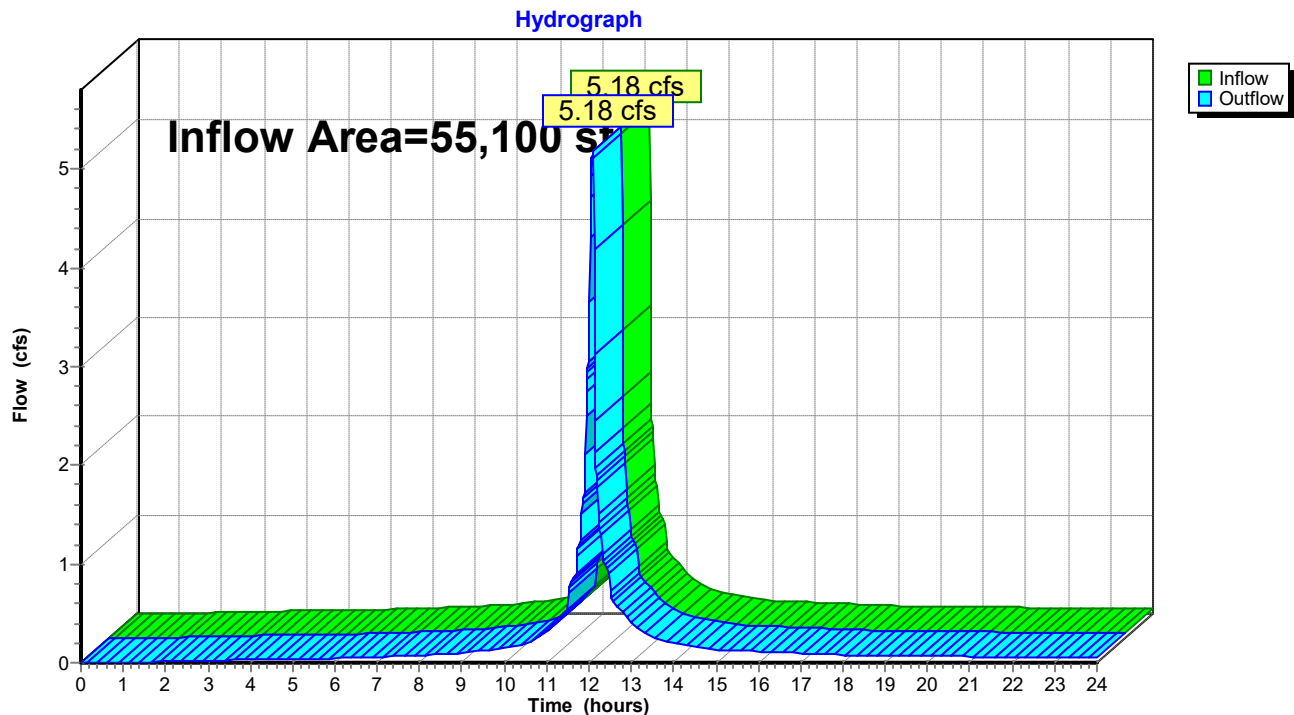
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### Summary for Reach 400E: TENNIS COURTS

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 3.17" for 2-Year-2050 event  
Inflow = 5.18 cfs @ 12.10 hrs, Volume= 14,550 cf  
Outflow = 5.18 cfs @ 12.10 hrs, Volume= 14,550 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

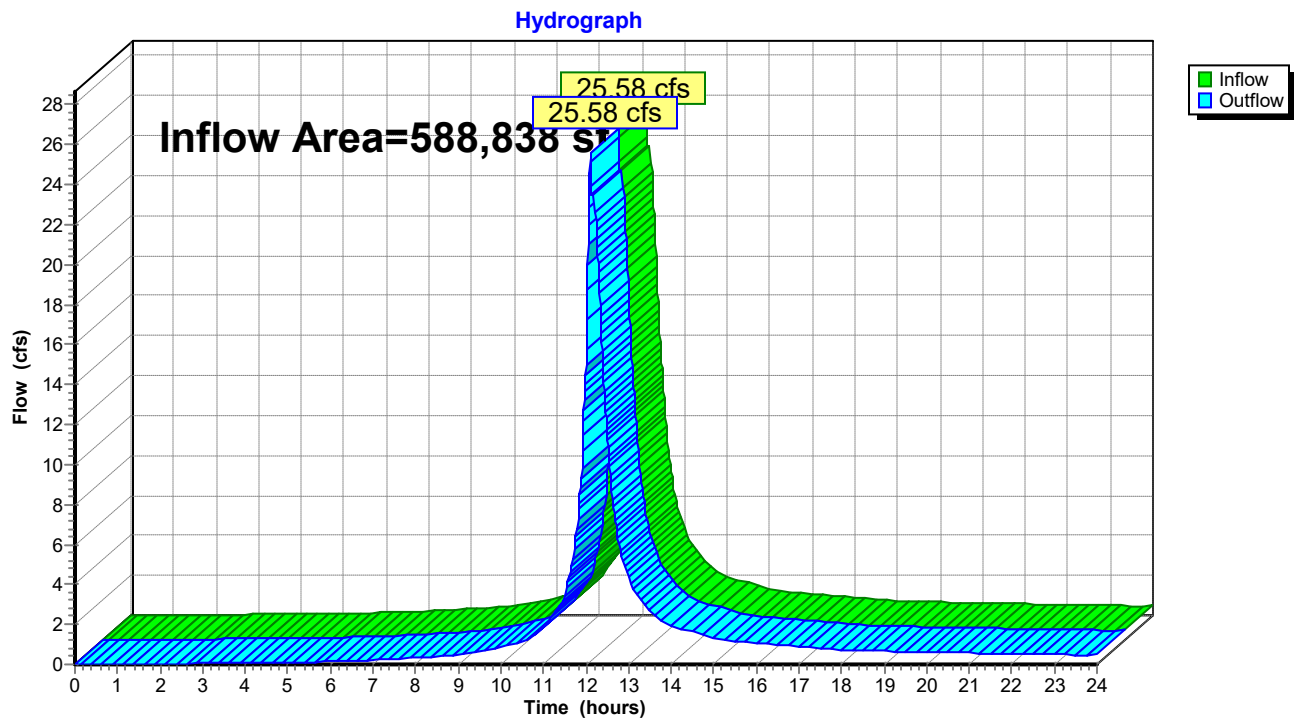
### Reach 400E: TENNIS COURTS



**Summary for Reach 500E: STUDY POINT**

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 2.34" for 2-Year-2050 event  
Inflow = 25.58 cfs @ 12.11 hrs, Volume= 114,737 cf  
Outflow = 25.58 cfs @ 12.11 hrs, Volume= 114,737 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 500E: STUDY POINT**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>1.50"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=1.95 cfs 8,818 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>1.51"  
Flow Length=476' Tc=10.1 min CN=56 Runoff=0.45 cfs 1,579 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>5.04"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=4.36 cfs 12,248 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>1.00"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.13 cfs 380 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>1.36"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=0.52 cfs 1,493 cf

**Subcatchment 106E: Onsite Impervious SE** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=1.24 cfs 3,679 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=1.11 cfs 3,535 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.29 cfs 736 cf

**Subcatchment 203E: Impervious Stadium** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=40' Slope=0.0050 '/' Tc=0.9 min CN=98 Runoff=2.26 cfs 6,701 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>4.59"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=89 Runoff=5.36 cfs 18,289 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>4.58"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=10.20 cfs 46,298 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>4.59"  
Flow Length=504' Tc=11.6 min CN=89 Runoff=0.84 cfs 2,979 cf

**Subcatchment 207E: Offsite Impervious to** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.49 cfs 1,458 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>4.05"  
Flow Length=973' Tc=17.7 min CN=84 Runoff=4.39 cfs 18,005 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=541' Tc=8.9 min CN=84 Runoff=0.42 cfs 1,315 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>4.05"  
Flow Length=574' Tc=12.7 min CN=84 Runoff=2.82 cfs 10,086 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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|                                                     |                                                                                                |                                                           |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Subcatchment 304E: Onsite to W Trench</b>        | Runoff Area=2,363 sf 2.75% Impervious<br>Flow Length=287' Tc=9.2 min CN=84                     | Runoff Depth>4.06"<br>Runoff=0.25 cfs 799 cf              |
| <b>Subcatchment 305E: Offsite to W Field</b>        | Runoff Area=13,314 sf 0.00% Impervious<br>Flow Length=467' Tc=12.4 min CN=84                   | Runoff Depth>4.05"<br>Runoff=1.27 cfs 4,498 cf            |
| <b>Subcatchment 306E: Onsite to W Field Drain 2</b> | Runoff Area=425 sf 0.00% Impervious<br>Flow Length=299' Tc=5.1 min CN=84                       | Runoff Depth>4.06"<br>Runoff=0.05 cfs 144 cf              |
| <b>Subcatchment 308E: Offsite to Drain 4</b>        | Runoff Area=1,066 sf 20.92% Impervious<br>Flow Length=22' Slope=0.0100 '/' Tc=1.6 min CN=87    | Runoff Depth>4.38"<br>Runoff=0.15 cfs 389 cf              |
| <b>Subcatchment 309E: Offsite Building to</b>       | Runoff Area=8,251 sf 81.26% Impervious<br>Flow Length=168' Tc=4.4 min CN=95                    | Runoff Depth>5.27"<br>Runoff=1.23 cfs 3,622 cf            |
| <b>Subcatchment 310E: Pervious Stadium W</b>        | Runoff Area=38,673 sf 0.00% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=84  | Runoff Depth>4.06"<br>Runoff=3.94 cfs 13,070 cf           |
| <b>Subcatchment 311E: Offsite to W Trench</b>       | Runoff Area=2,514 sf 20.92% Impervious<br>Flow Length=63' Tc=5.8 min UI Adjusted CN=85         | Runoff Depth>4.16"<br>Runoff=0.31 cfs 873 cf              |
| <b>Subcatchment 312E: Impervious Stadium</b>        | Runoff Area=35,388 sf 92.50% Impervious<br>Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=97 | Runoff Depth>5.49"<br>Runoff=4.35 cfs 16,201 cf           |
| <b>Subcatchment 401E: Onsite Impervious</b>         | Runoff Area=11,975 sf 100.00% Impervious<br>Flow Length=179' Tc=1.9 min CN=98                  | Runoff Depth>5.62"<br>Runoff=1.89 cfs 5,608 cf            |
| <b>Subcatchment 402E: Onsite Pervious to SP4</b>    | Runoff Area=17,454 sf 0.00% Impervious<br>Flow Length=151' Tc=2.4 min CN=84                    | Runoff Depth>4.06"<br>Runoff=2.31 cfs 5,910 cf            |
| <b>Subcatchment 403E: Tennis Courts</b>             | Runoff Area=25,671 sf 100.00% Impervious<br>Flow Length=116' Slope=0.0100 '/' Tc=1.6 min CN=98 | Runoff Depth>5.62"<br>Runoff=4.05 cfs 12,024 cf           |
| <b>Reach 1E: ONSITE UNRETAINED</b>                  |                                                                                                | Inflow=1.53 cfs 5,258 cf<br>Outflow=1.53 cfs 5,258 cf     |
| <b>Reach 2E: ONSITE EAST</b>                        |                                                                                                | Inflow=7.31 cfs 28,705 cf<br>Outflow=7.31 cfs 28,705 cf   |
| <b>Reach 3E: ONSITE WEST</b>                        |                                                                                                | Inflow=9.05 cfs 31,919 cf<br>Outflow=9.05 cfs 31,919 cf   |
| <b>Reach 4E: ONSITE TENNIS COURTS</b>               |                                                                                                | Inflow=4.20 cfs 11,519 cf<br>Outflow=4.20 cfs 11,519 cf   |
| <b>Reach 100E: EX INLET 1</b>                       |                                                                                                | Inflow=7.30 cfs 28,197 cf<br>Outflow=7.30 cfs 28,197 cf   |
| <b>Reach 200E: EX MANHOLE 2</b>                     |                                                                                                | Inflow=16.61 cfs 79,995 cf<br>Outflow=16.61 cfs 79,995 cf |

**EXISTING PEDDIE FOOTBALL***NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"*

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**Reach 300E: EX INLET 3**Inflow=17.68 cfs 69,003 cf  
Outflow=17.68 cfs 69,003 cf**Reach 400E: TENNIS COURTS**Inflow=8.25 cfs 23,542 cf  
Outflow=8.25 cfs 23,542 cf**Reach 500E: STUDY POINT**Inflow=44.11 cfs 200,737 cf  
Outflow=44.11 cfs 200,737 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 1.95 cfs @ 12.30 hrs, Volume= 8,818 cf, Depth> 1.50"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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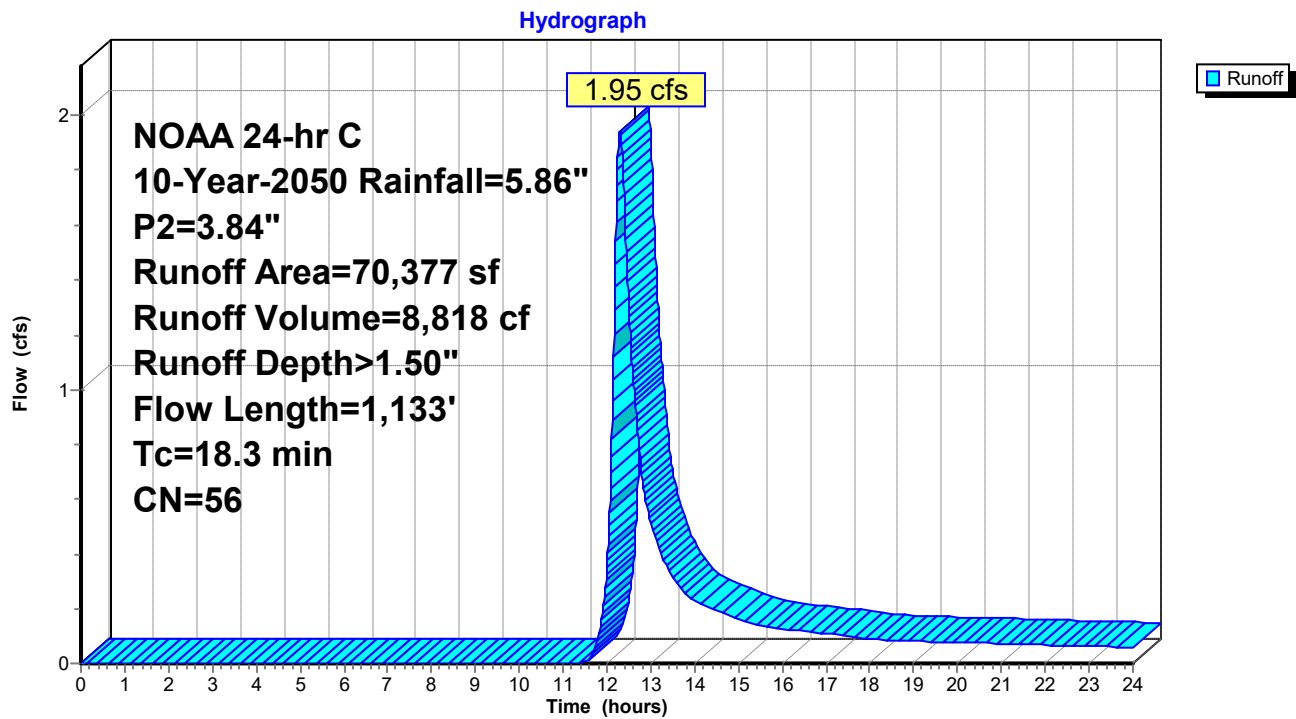
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 101E: Offsite Pervious SE





**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 0.45 cfs @ 12.18 hrs, Volume= 1,579 cf, Depth> 1.51"  
 Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.1     | 476           | Total         |                   |                |                                                                                                     |

# EXISTING PEDDIE FOOTBALL

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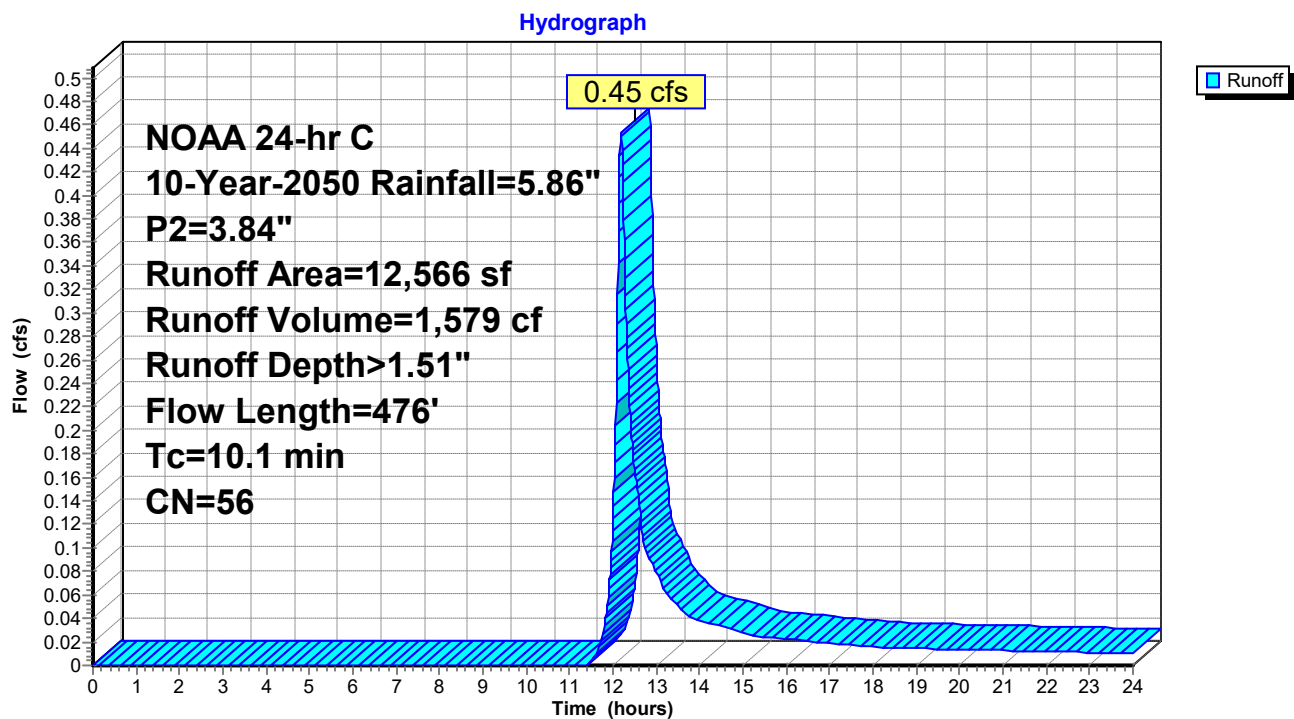
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## Subcatchment 102E: Onsite Pervious SE



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

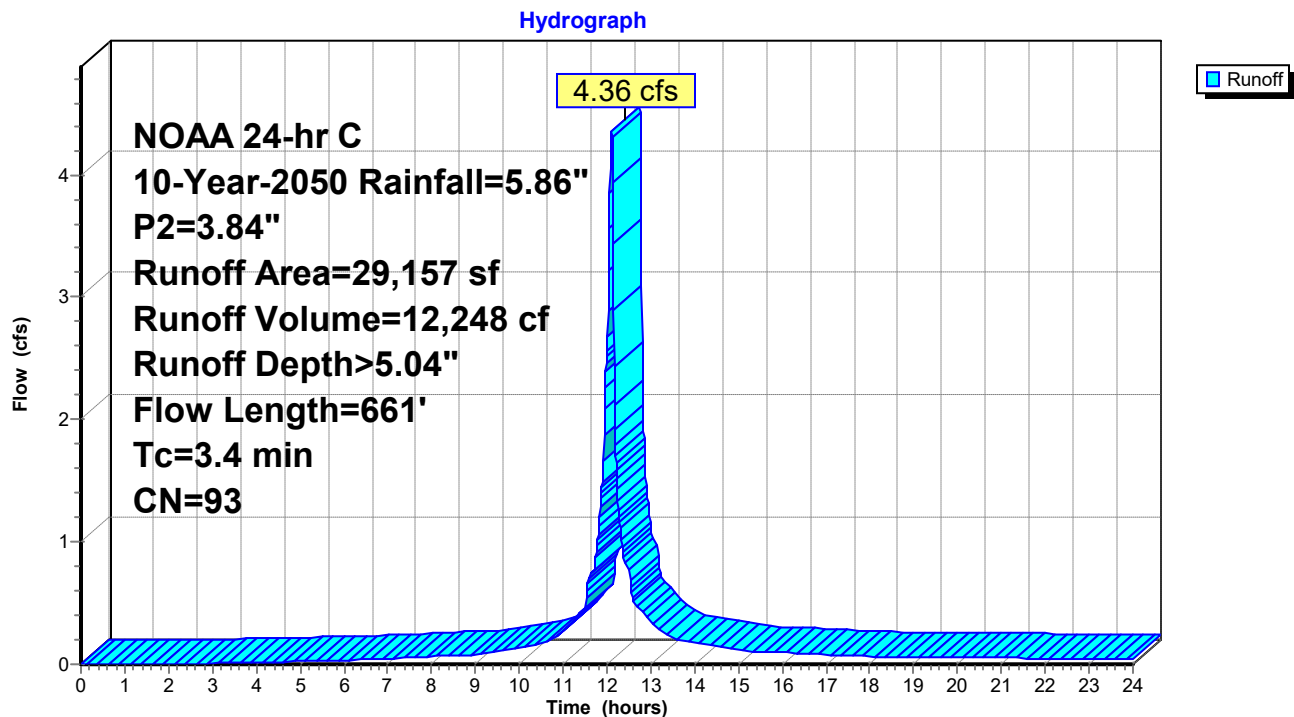
Runoff = 4.36 cfs @ 12.11 hrs, Volume= 12,248 cf, Depth> 5.04"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 104E: Yard Drains**

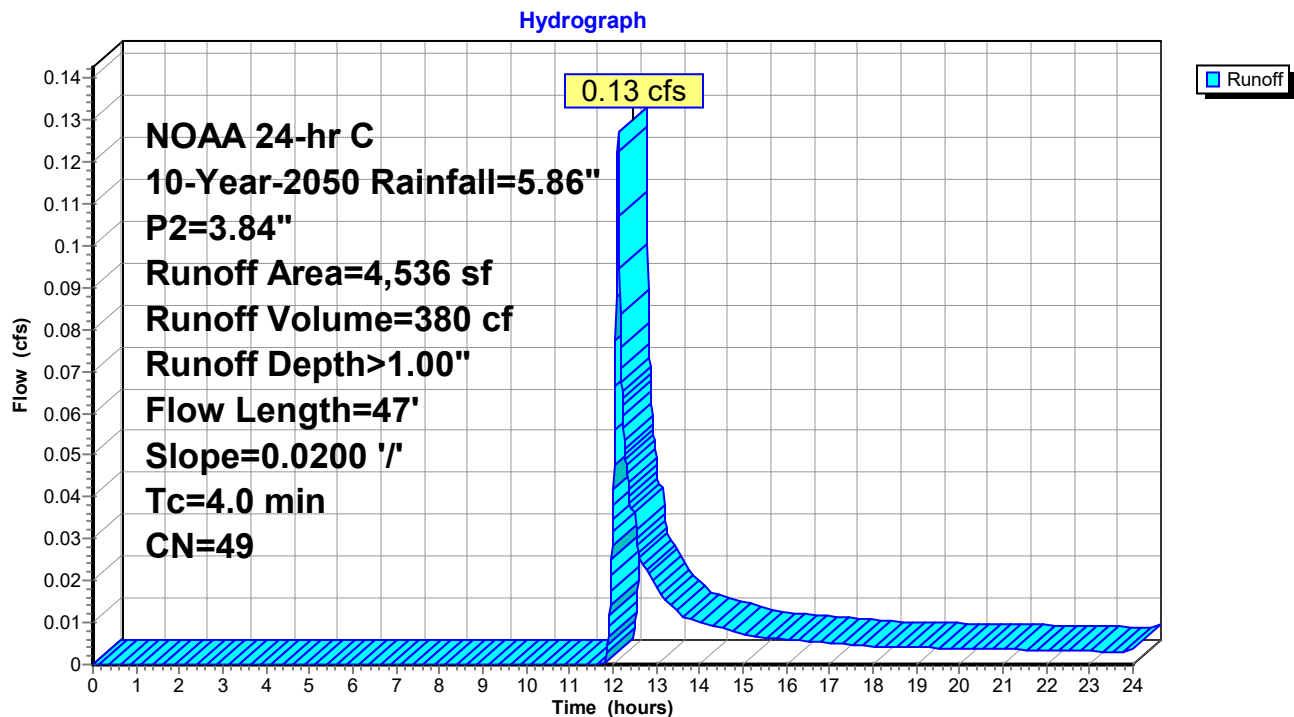
Runoff = 0.13 cfs @ 12.12 hrs, Volume= 380 cf, Depth> 1.00"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 0.52 cfs @ 12.13 hrs, Volume= 1,493 cf, Depth> 1.36"  
 Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |

# EXISTING PEDDIE FOOTBALL

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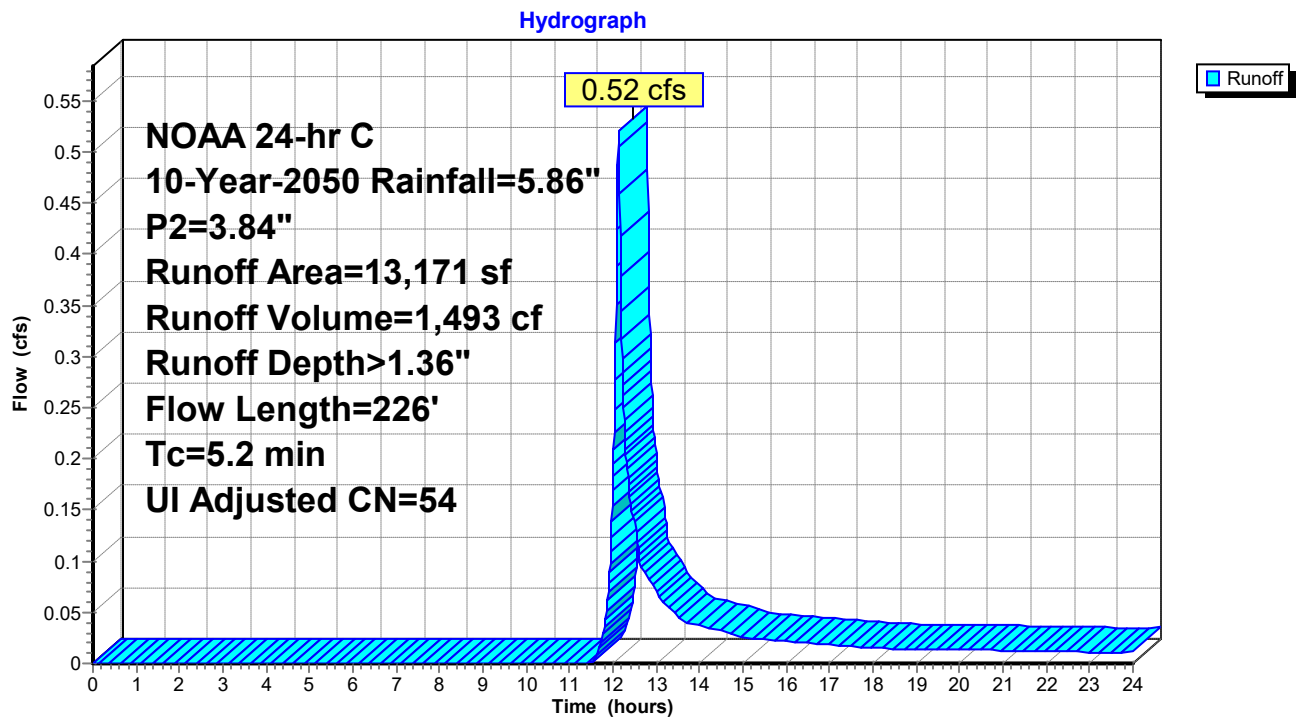
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 105E: Low Drains



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 106E: Onsite Impervious SE**

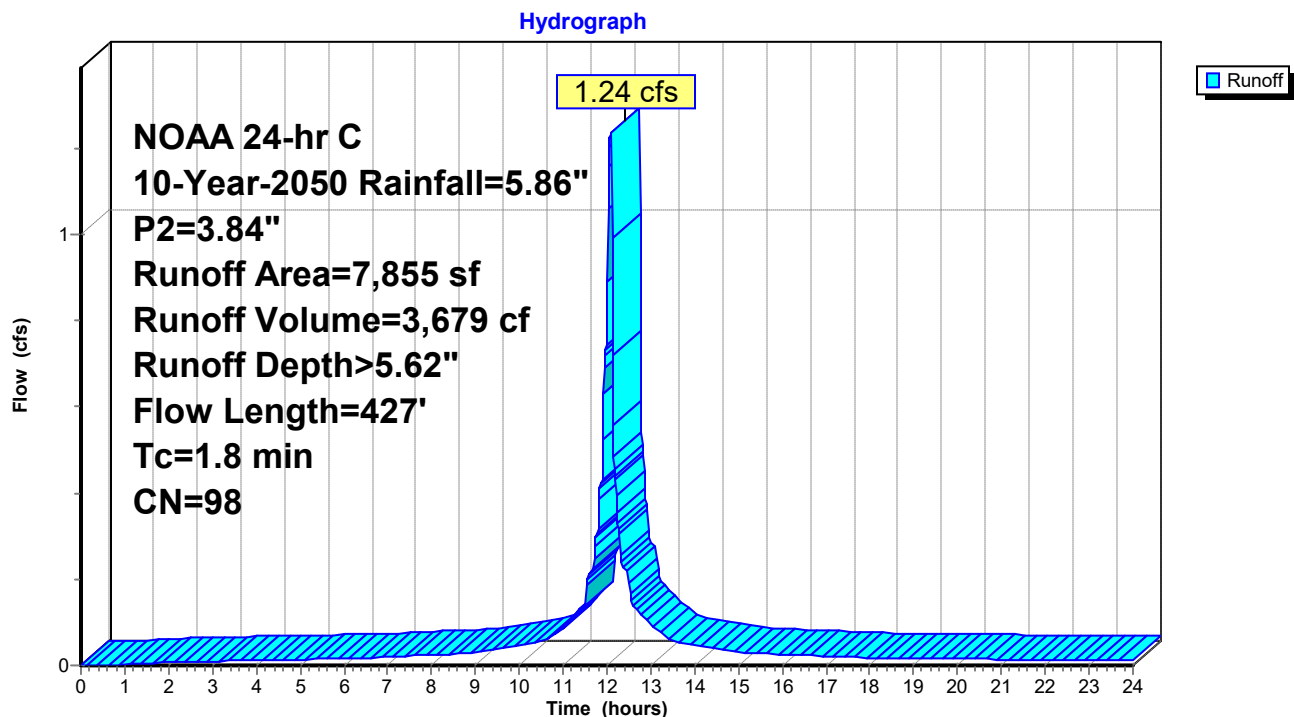
Runoff = 1.24 cfs @ 12.10 hrs, Volume= 3,679 cf, Depth> 5.62"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

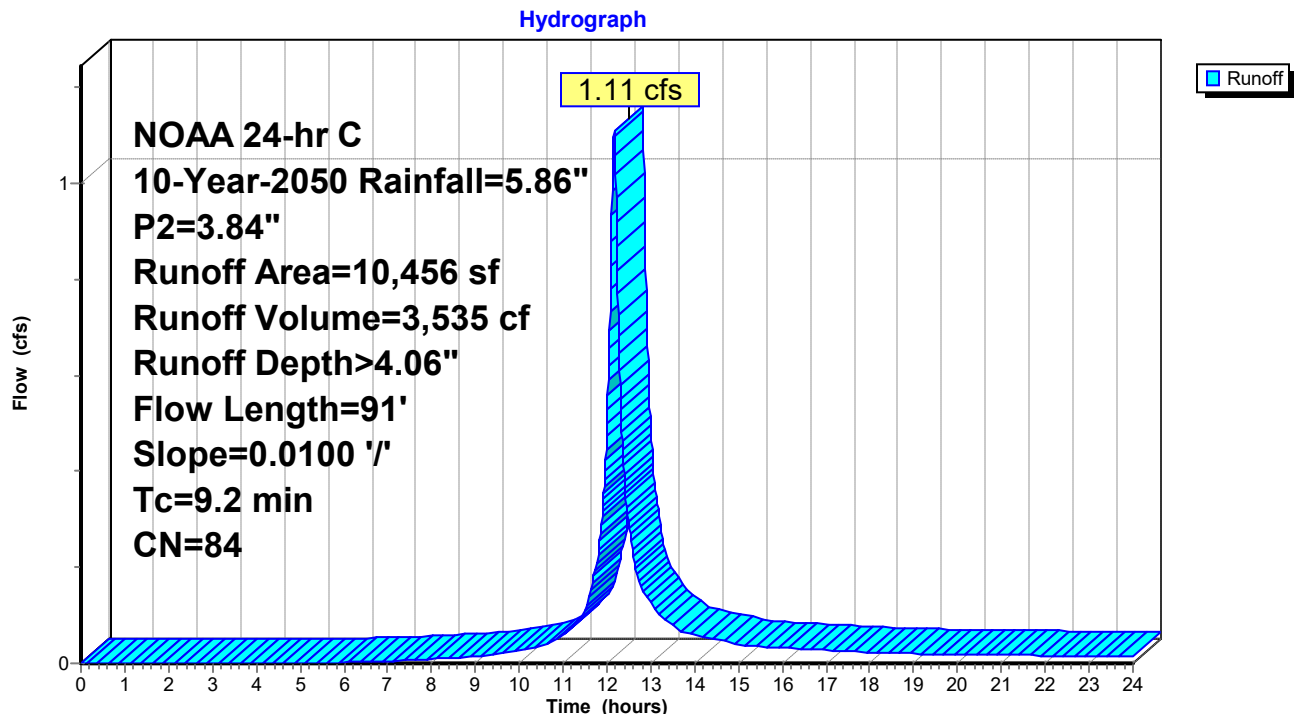
Runoff = 1.11 cfs @ 12.16 hrs, Volume= 3,535 cf, Depth> 4.06"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

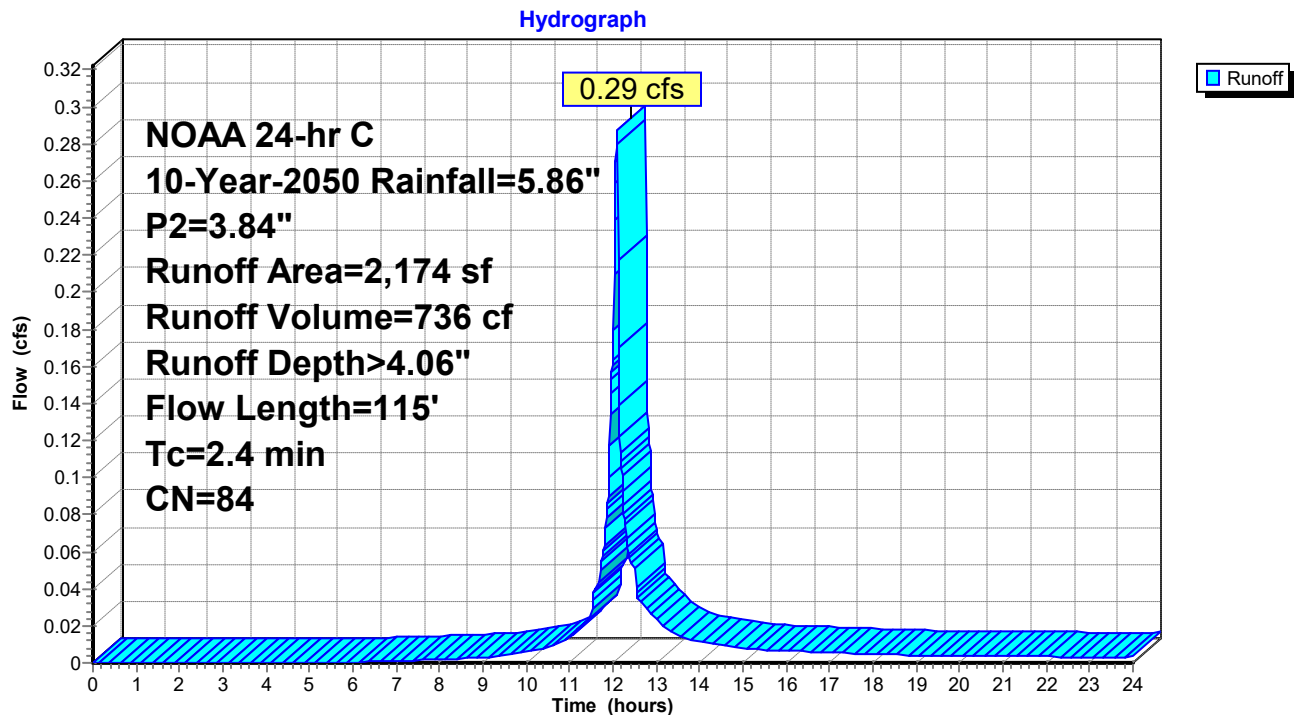
Runoff = 0.29 cfs @ 12.10 hrs, Volume= 736 cf, Depth> 4.06"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

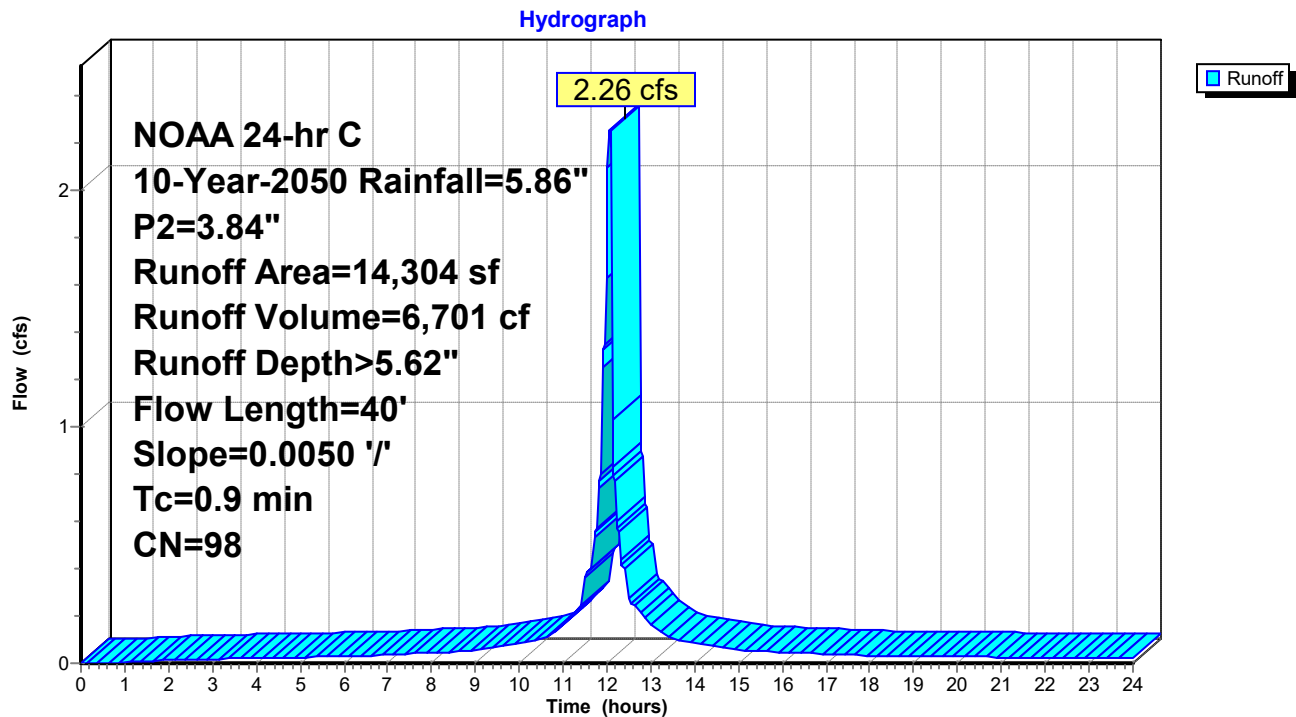
Runoff = 2.26 cfs @ 12.09 hrs, Volume= 6,701 cf, Depth&gt; 5.62"

Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                             |
|-------------|------------------|------------------|----------------------|-------------------|---------------------------------------------------------|
| 0.9         | 40               | 0.0050           | 0.72                 |                   | Sheet Flow, Sheet<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

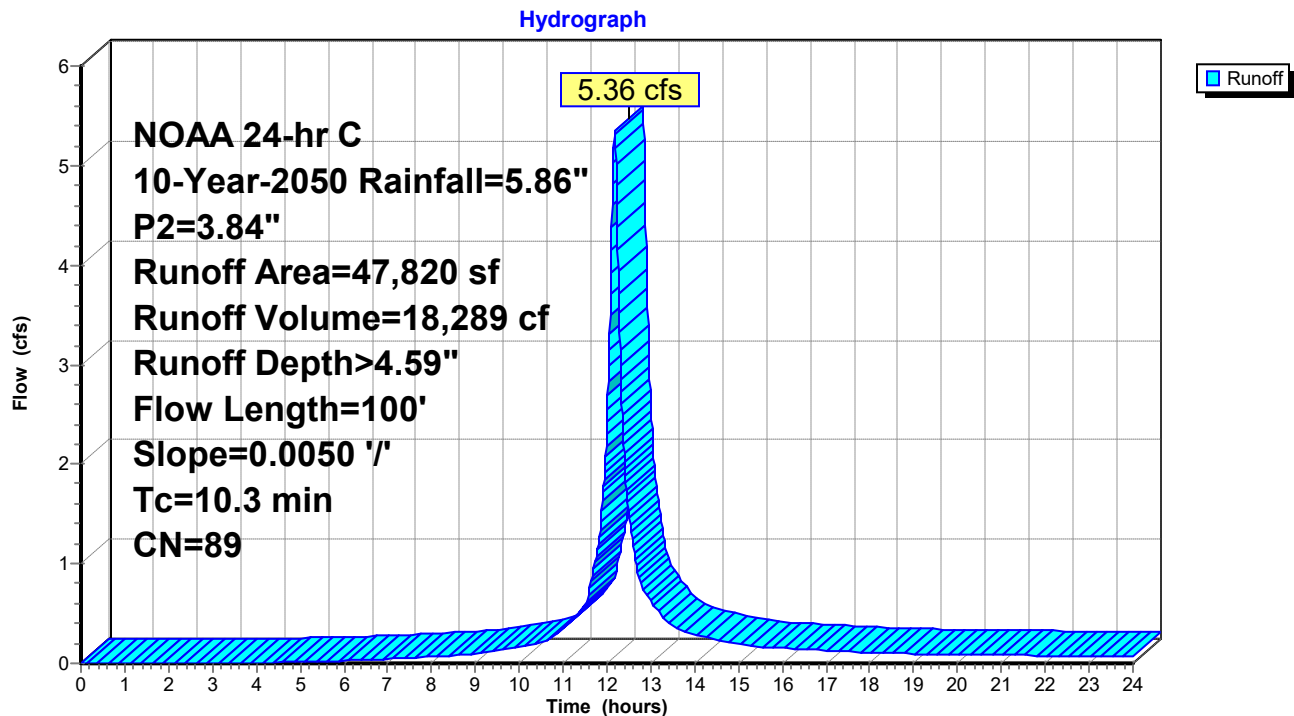
Runoff = 5.36 cfs @ 12.17 hrs, Volume= 18,289 cf, Depth> 4.59"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.3     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 10.20 cfs @ 12.30 hrs, Volume= 46,298 cf, Depth> 4.58"  
 Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                  |

# EXISTING PEDDIE FOOTBALL

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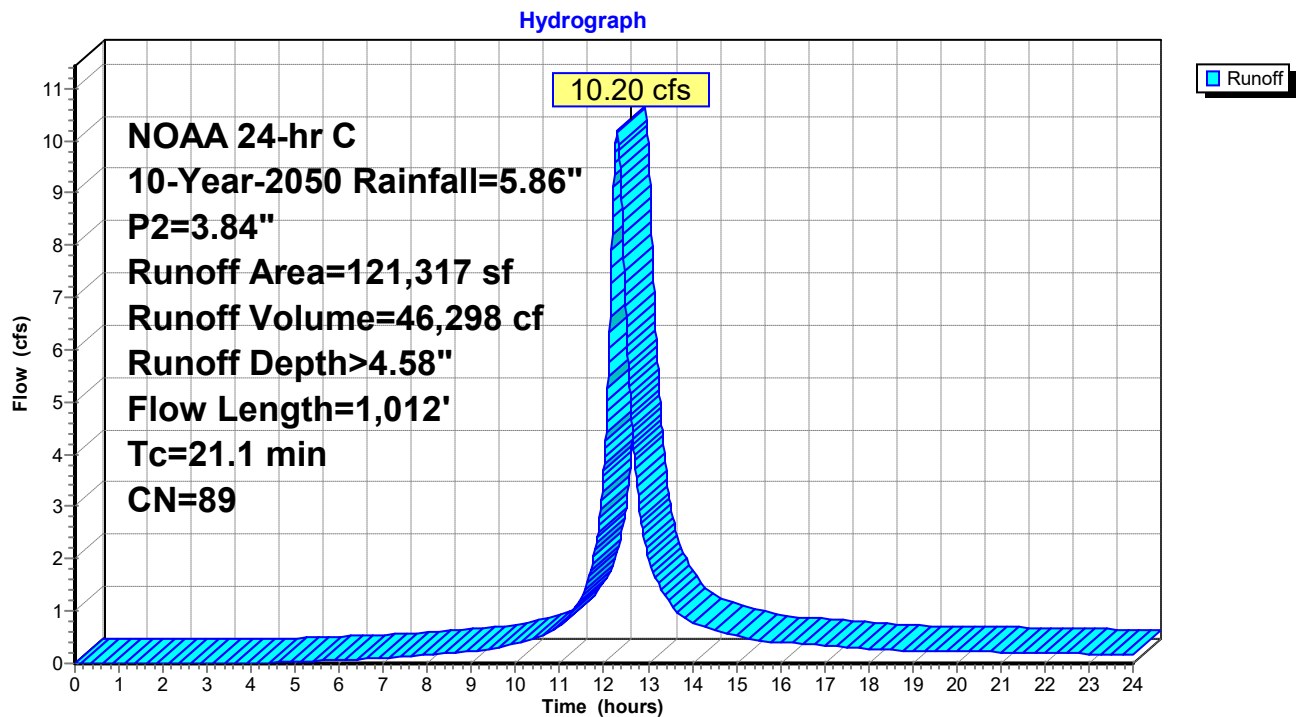
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 205E: Offsite to E Field Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

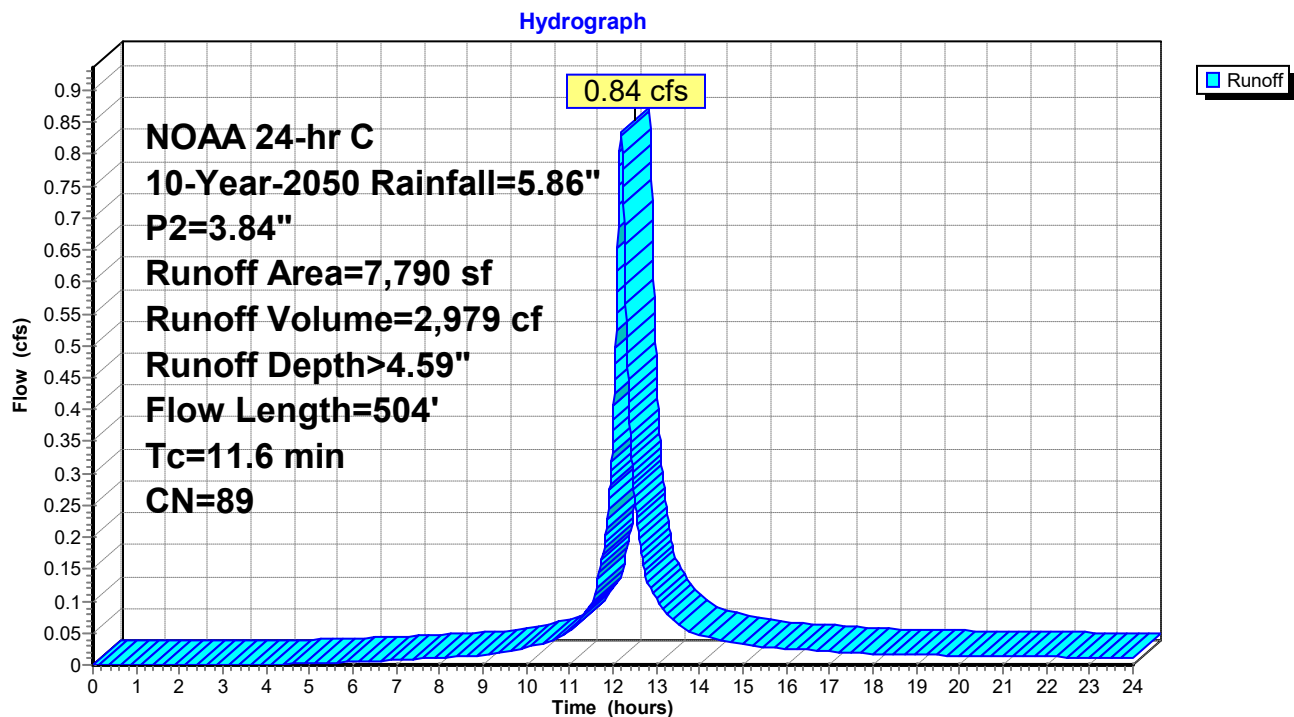
Runoff = 0.84 cfs @ 12.19 hrs, Volume= 2,979 cf, Depth> 4.59"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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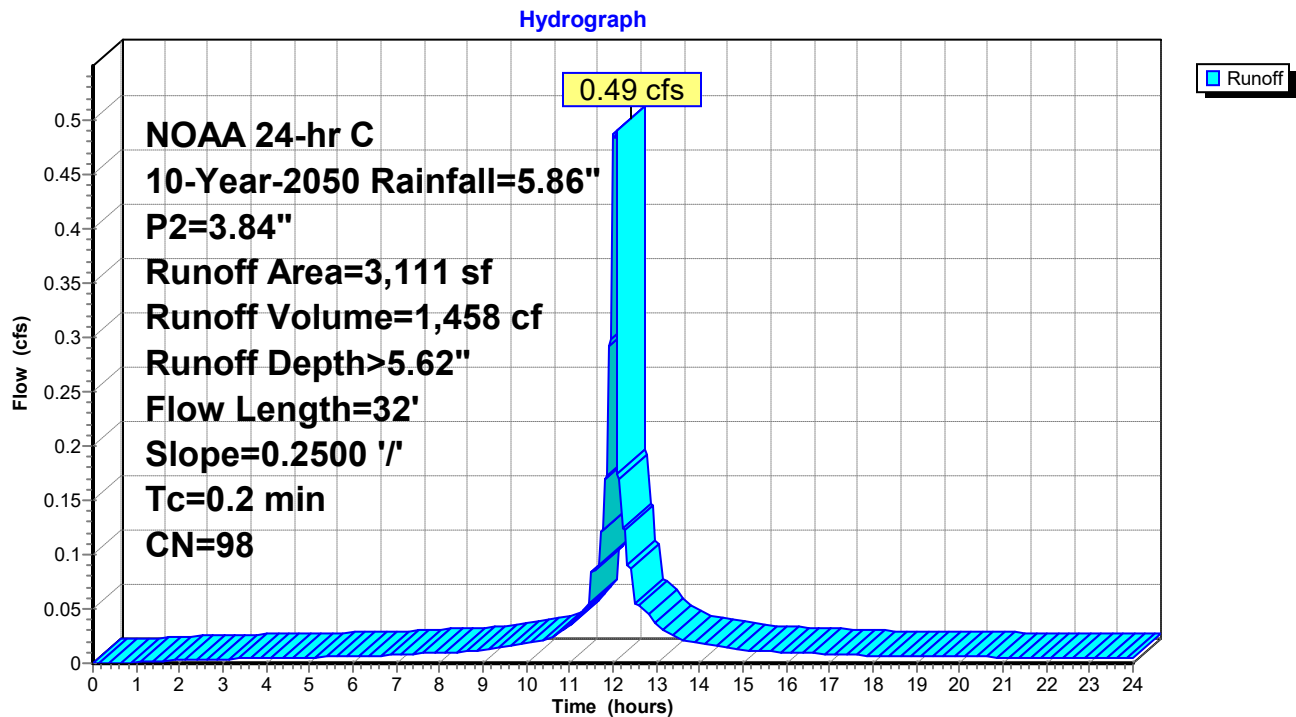
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.49 cfs @ 12.09 hrs, Volume= 1,458 cf, Depth> 5.62"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

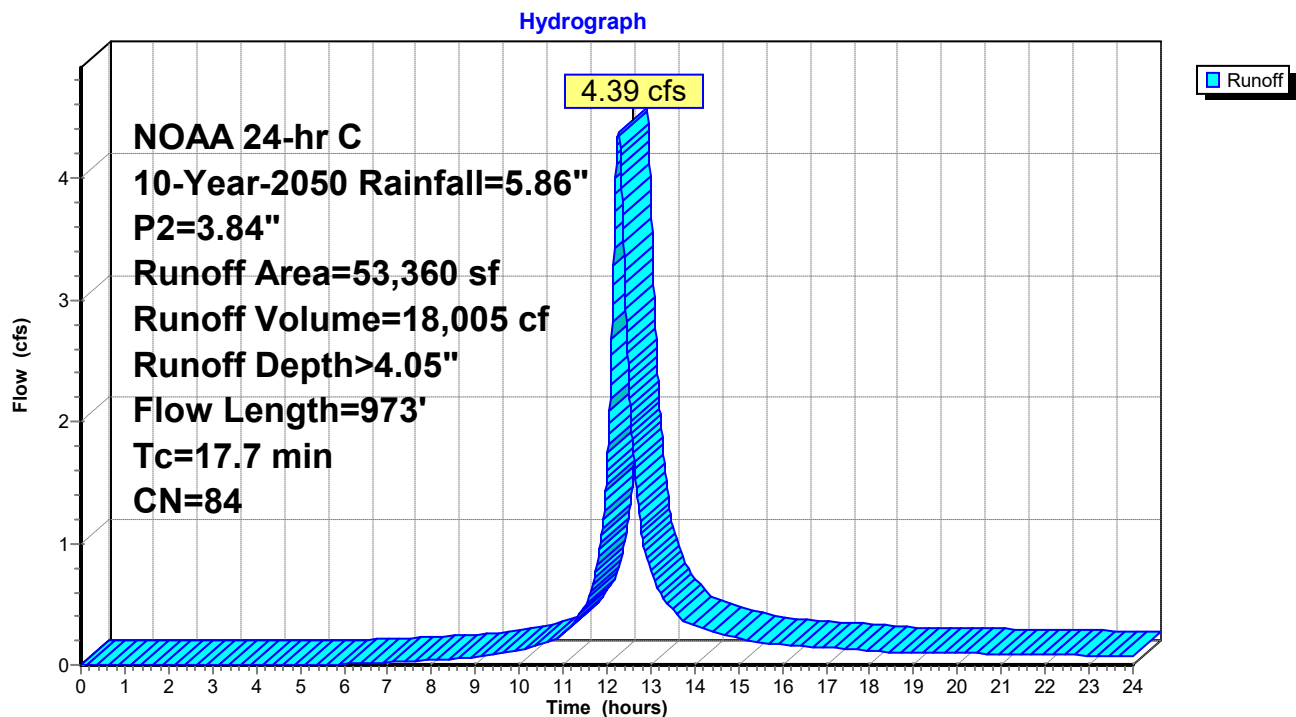
Runoff = 4.39 cfs @ 12.26 hrs, Volume= 18,005 cf, Depth> 4.05"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 17.7     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

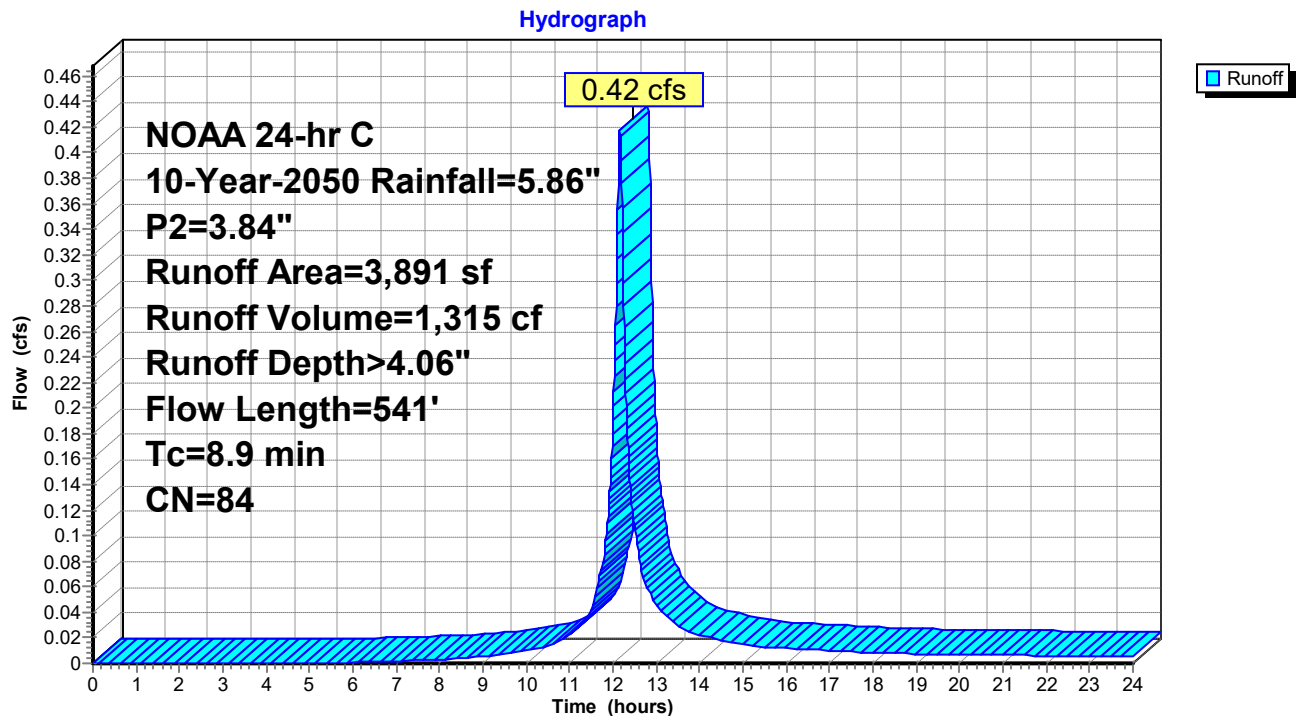
Runoff = 0.42 cfs @ 12.16 hrs, Volume= 1,315 cf, Depth> 4.06"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 8.9      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

Runoff = 2.82 cfs @ 12.20 hrs, Volume= 10,086 cf, Depth> 4.05"  
 Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 12.7     | 574           | Total         |                   |                |                                                                                        |

# EXISTING PEDDIE FOOTBALL

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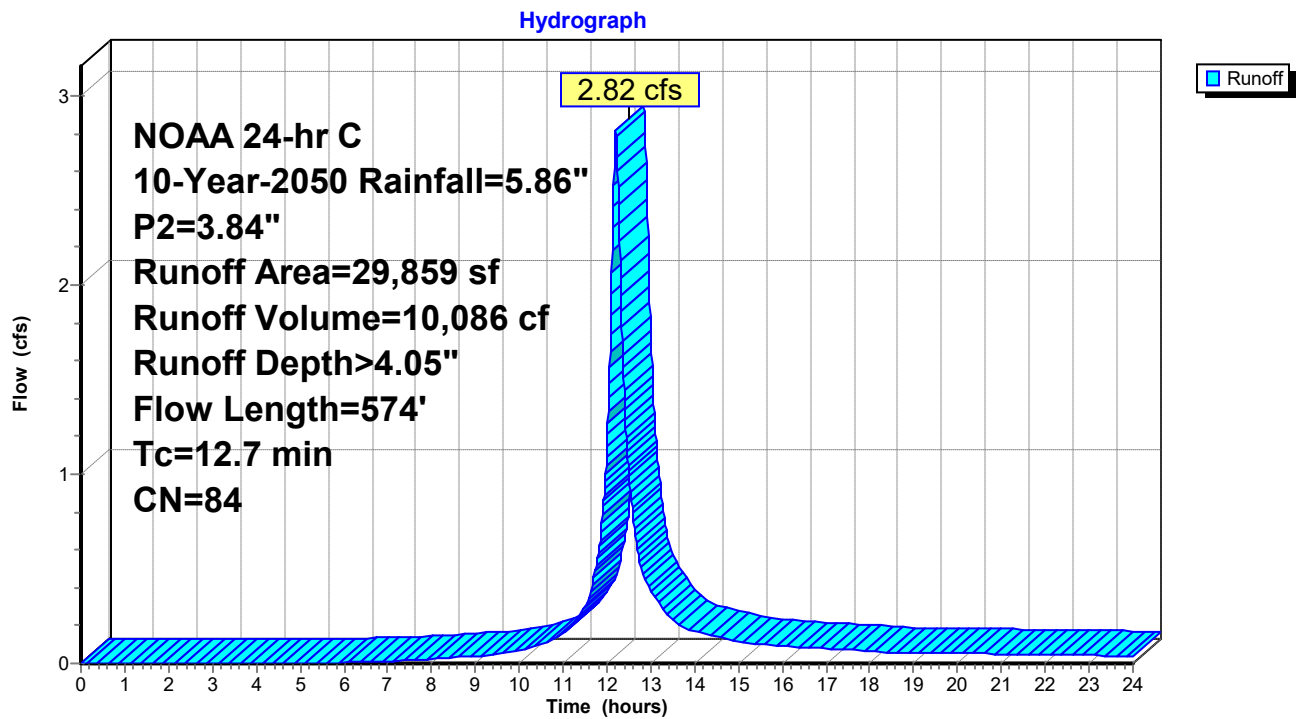
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 303E: Offsite to W Trench Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

Runoff = 0.25 cfs @ 12.16 hrs, Volume= 799 cf, Depth> 4.06"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

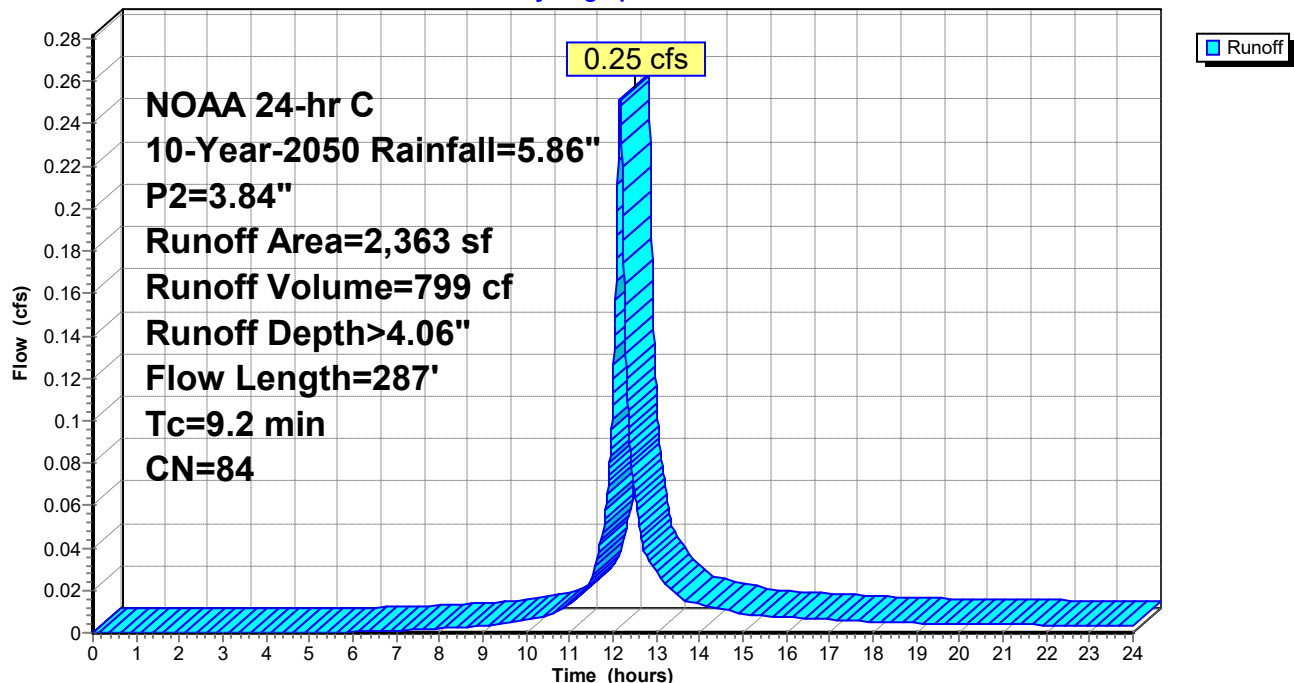
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.2      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**

Hydrograph



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

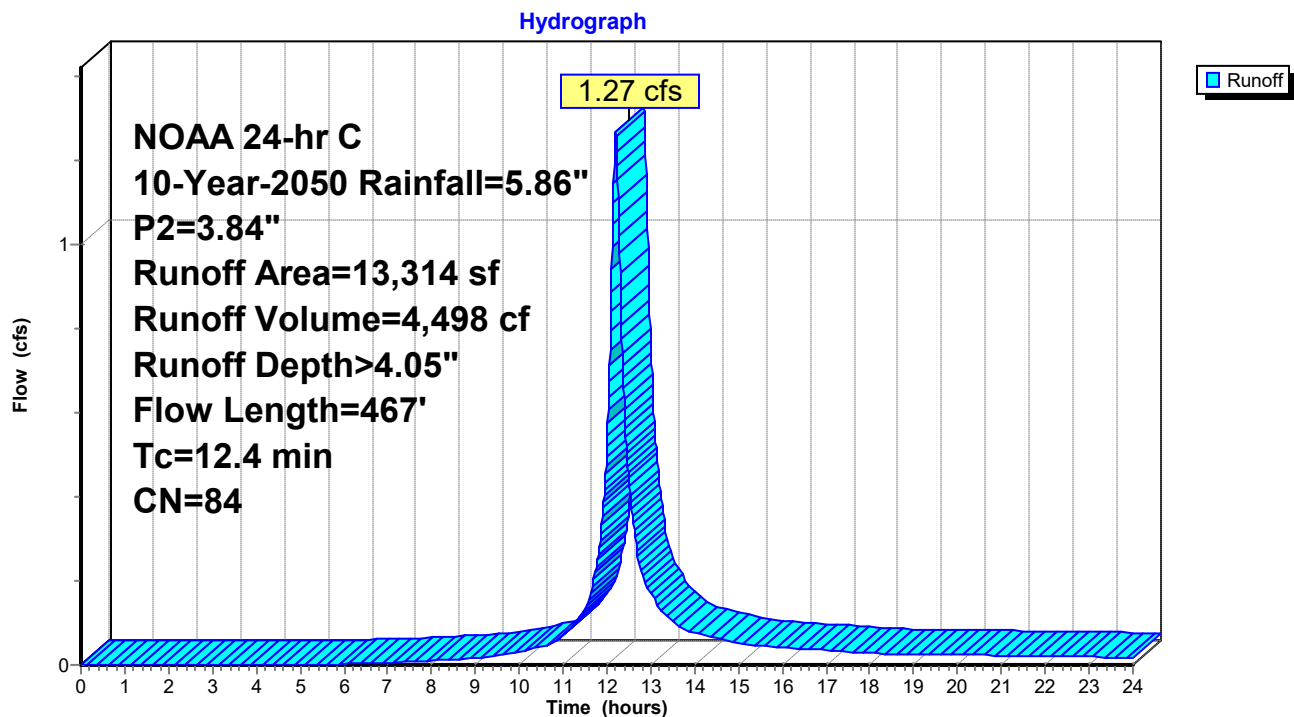
Runoff = 1.27 cfs @ 12.20 hrs, Volume= 4,498 cf, Depth> 4.05"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

Runoff = 0.05 cfs @ 12.12 hrs, Volume= 144 cf, Depth> 4.06"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

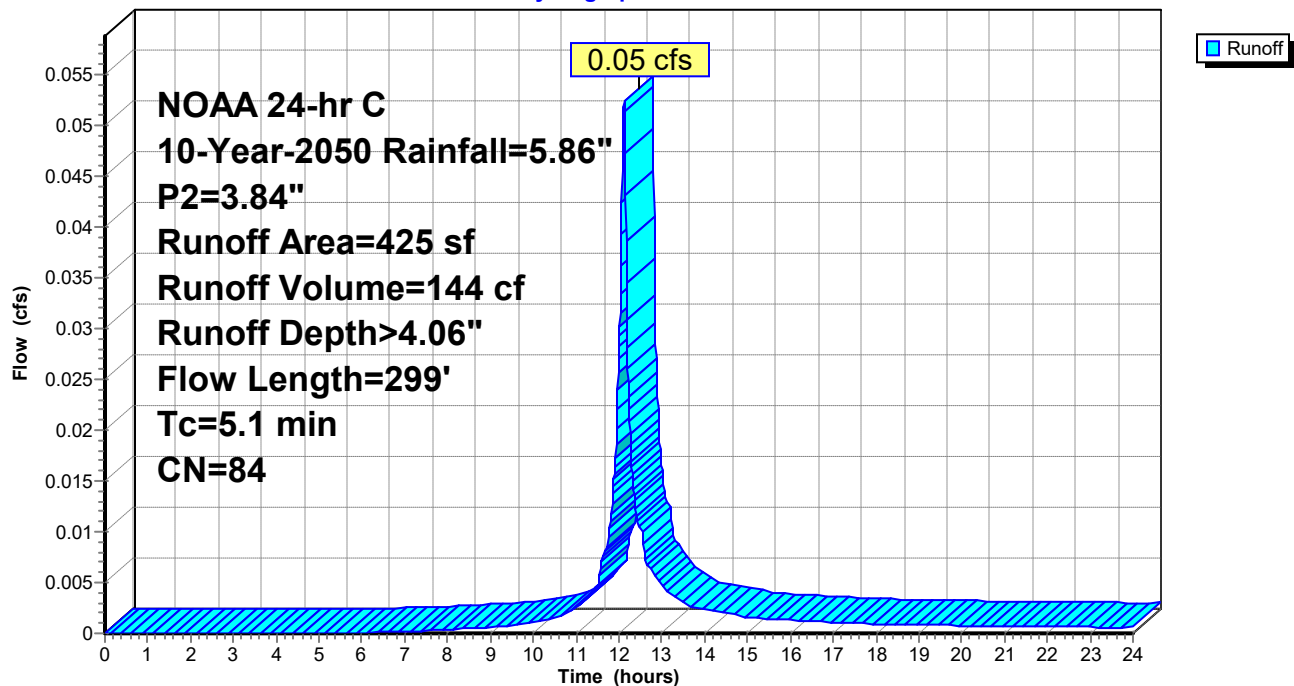
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.1      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

Hydrograph



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 308E: Offsite to Drain 4**

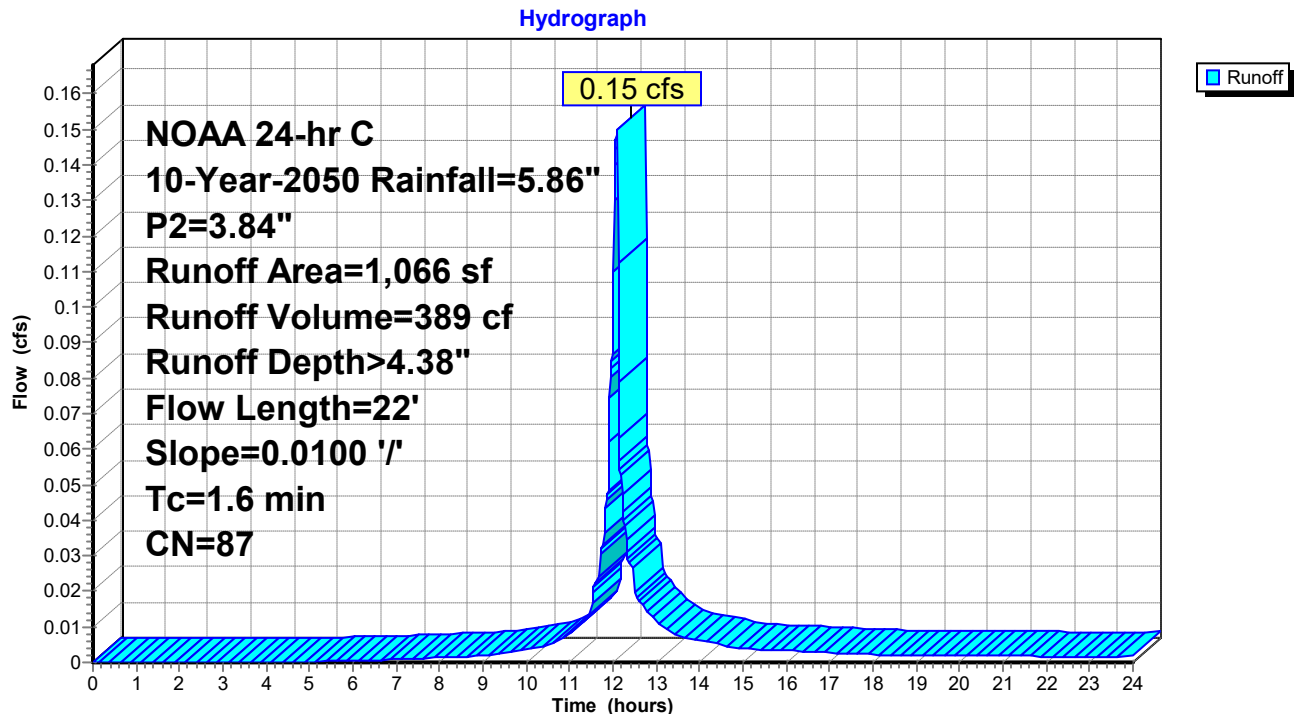
Runoff = 0.15 cfs @ 12.10 hrs, Volume= 389 cf, Depth> 4.38"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.6      | 22            | Total         |                   |                |                                       |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

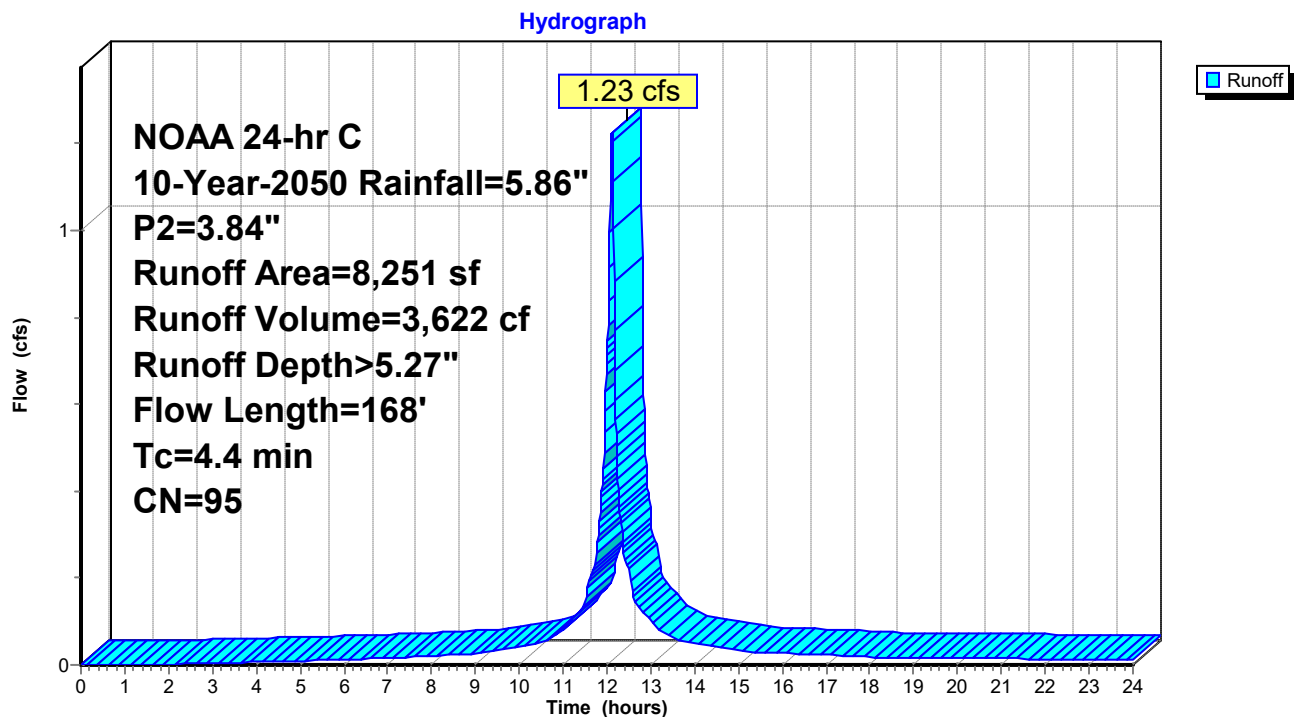
Runoff = 1.23 cfs @ 12.12 hrs, Volume= 3,622 cf, Depth> 5.27"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 310E: Pervious Stadium W**

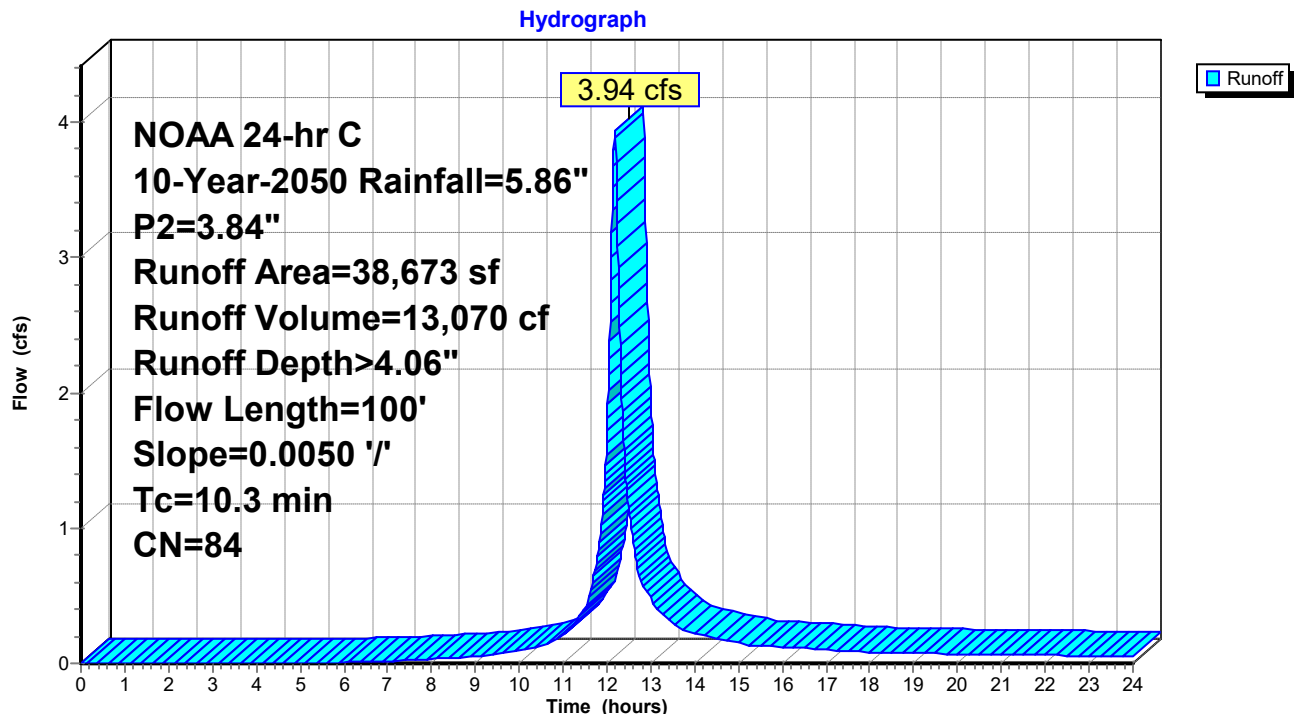
Runoff = 3.94 cfs @ 12.18 hrs, Volume= 13,070 cf, Depth> 4.06"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

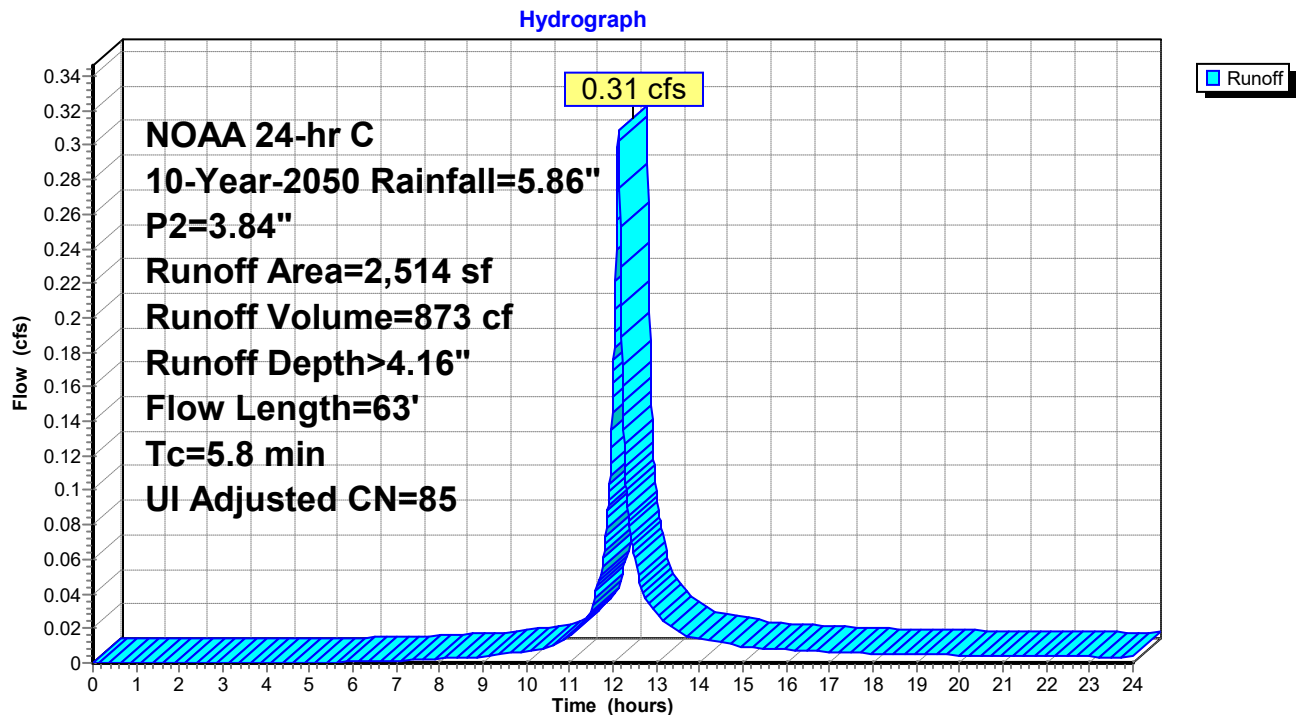
Runoff = 0.31 cfs @ 12.13 hrs, Volume= 873 cf, Depth> 4.16"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 5.6      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 5.8      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

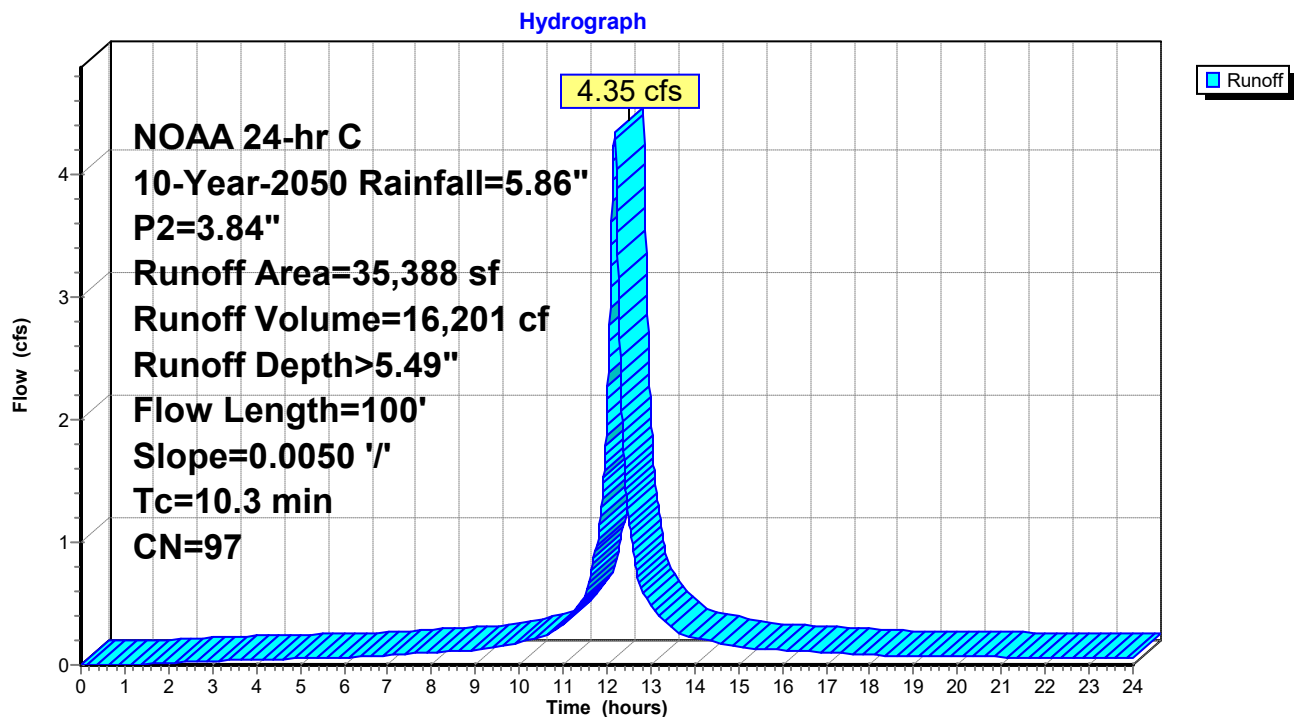
Runoff = 4.35 cfs @ 12.17 hrs, Volume= 16,201 cf, Depth> 5.49"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

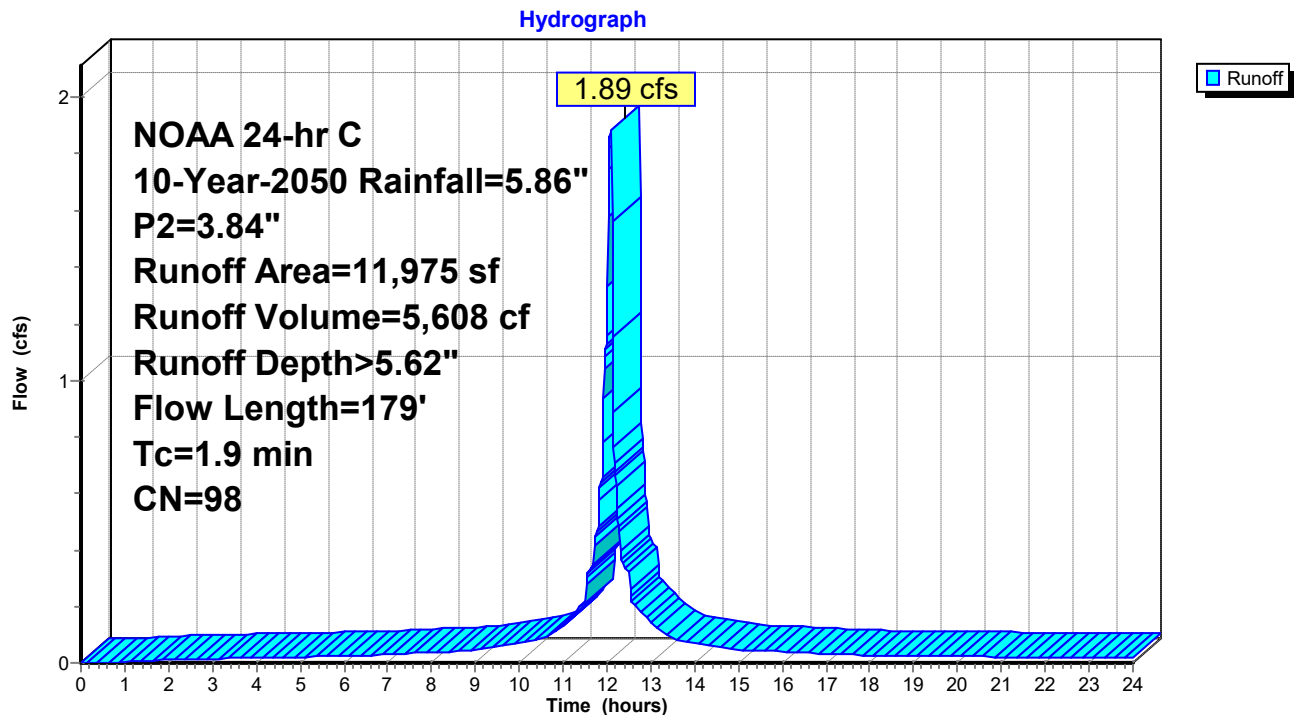
Runoff = 1.89 cfs @ 12.10 hrs, Volume= 5,608 cf, Depth> 5.62"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.67              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

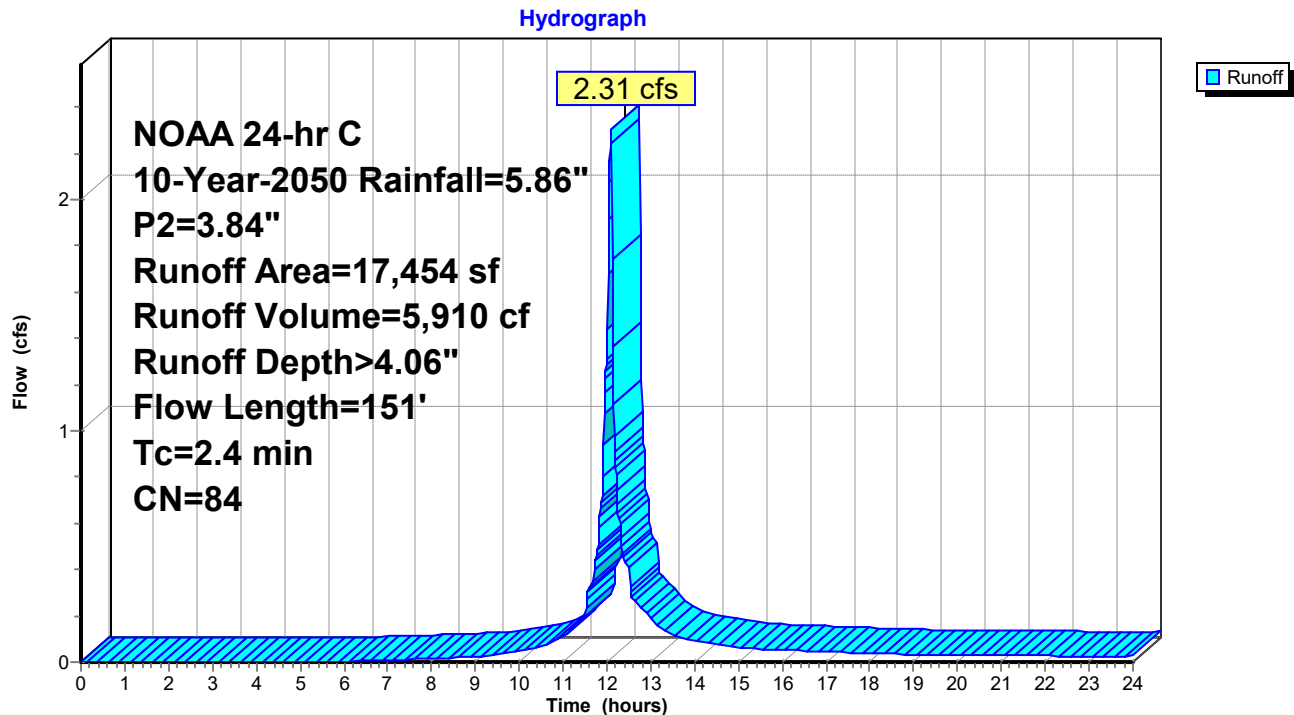
Runoff = 2.31 cfs @ 12.10 hrs, Volume= 5,910 cf, Depth> 4.06"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.4      | 35            | 0.2500        | 0.41              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.4      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.84"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 403E: Tennis Courts**

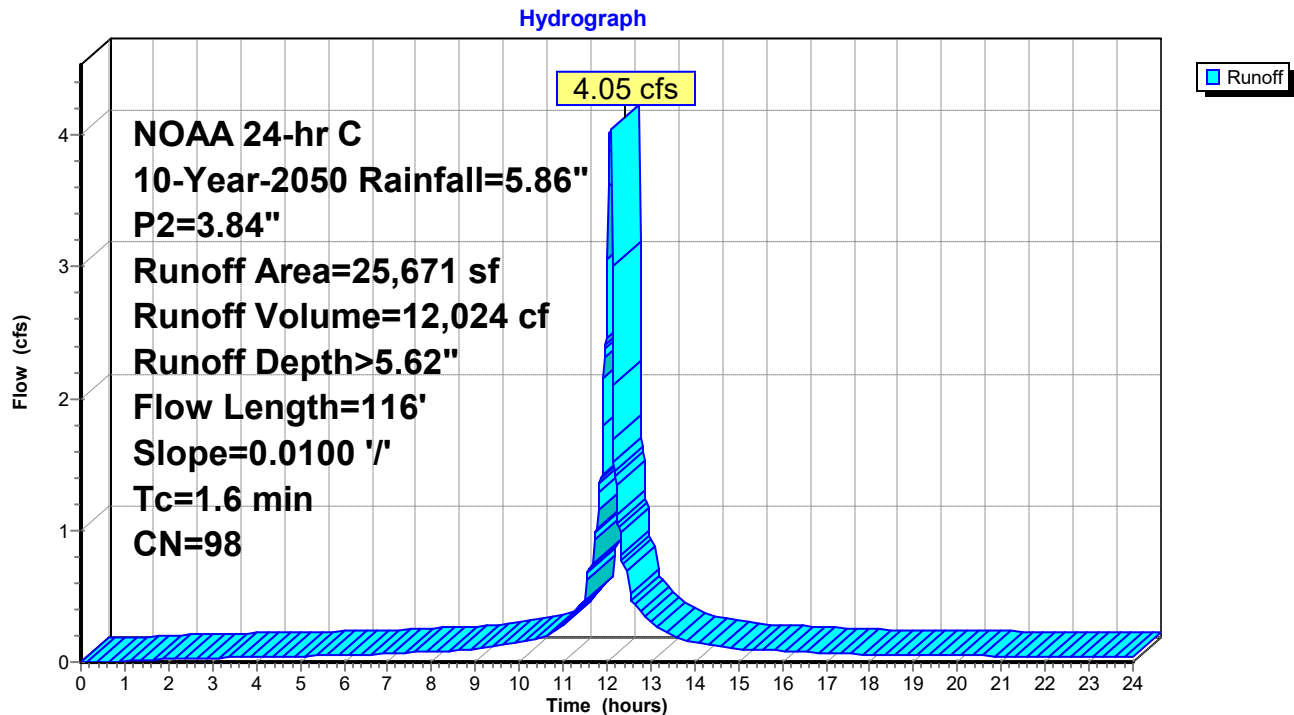
Runoff = 4.05 cfs @ 12.09 hrs, Volume= 12,024 cf, Depth> 5.62"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

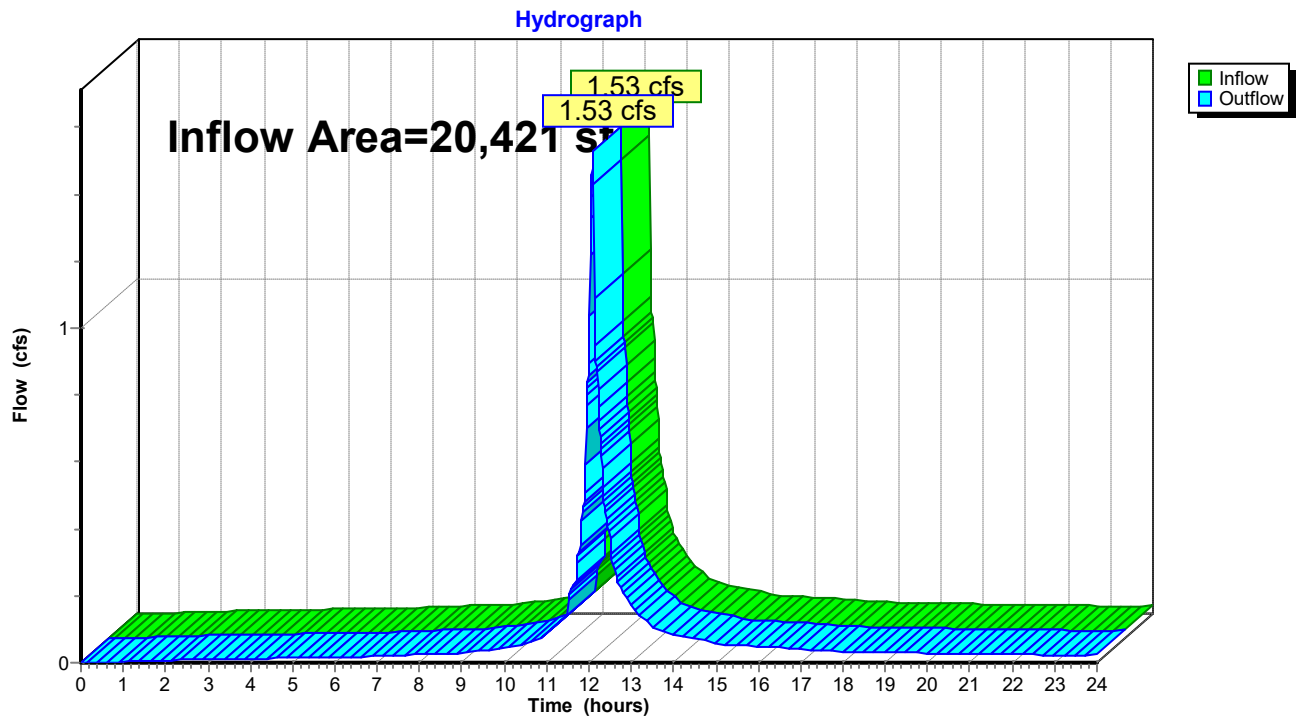
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 3.09" for 10-Year-2050 event  
 Inflow = 1.53 cfs @ 12.10 hrs, Volume= 5,258 cf  
 Outflow = 1.53 cfs @ 12.10 hrs, Volume= 5,258 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

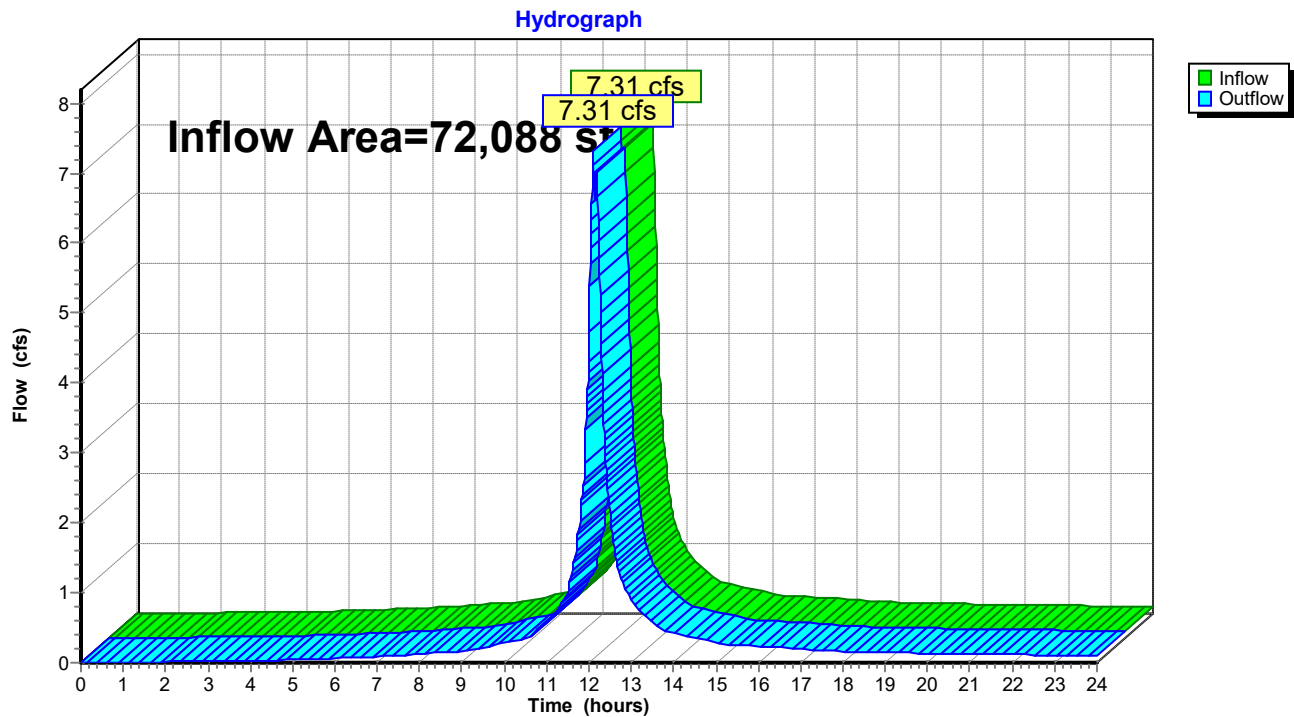


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 4.78" for 10-Year-2050 event  
 Inflow = 7.31 cfs @ 12.10 hrs, Volume= 28,705 cf  
 Outflow = 7.31 cfs @ 12.10 hrs, Volume= 28,705 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST



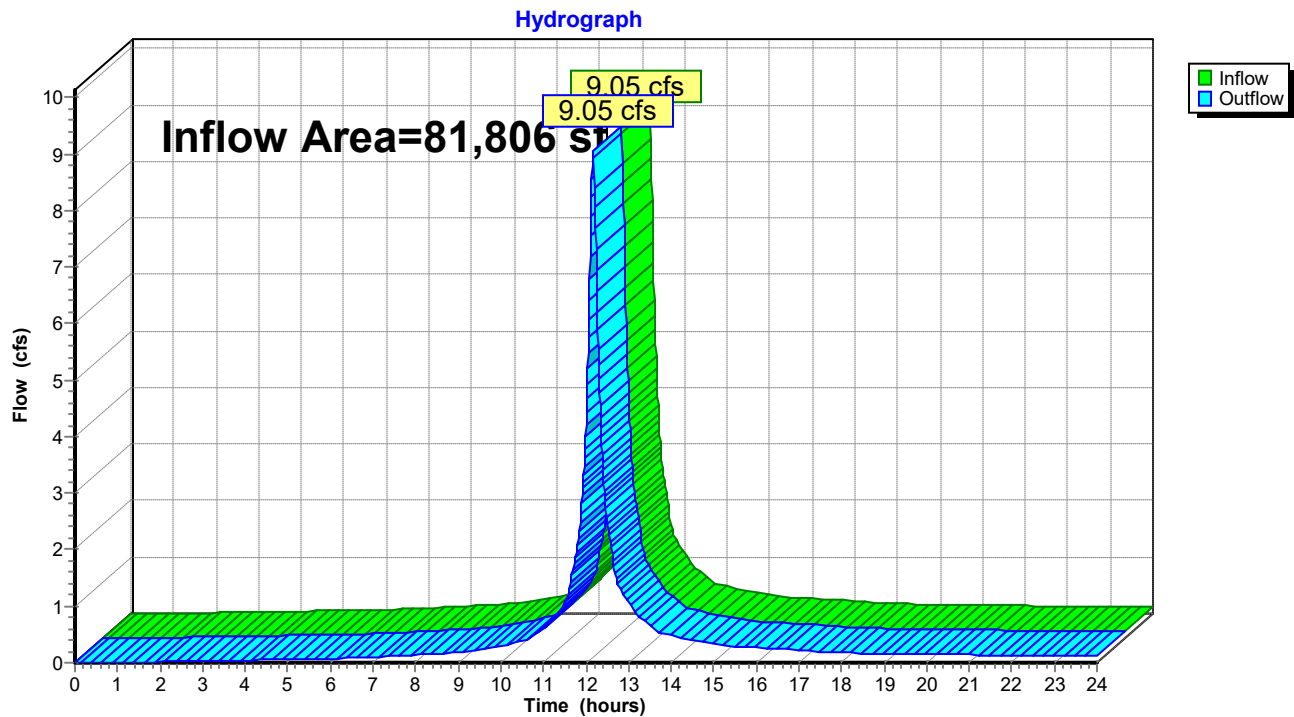


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 4.68" for 10-Year-2050 event  
 Inflow = 9.05 cfs @ 12.17 hrs, Volume= 31,919 cf  
 Outflow = 9.05 cfs @ 12.17 hrs, Volume= 31,919 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

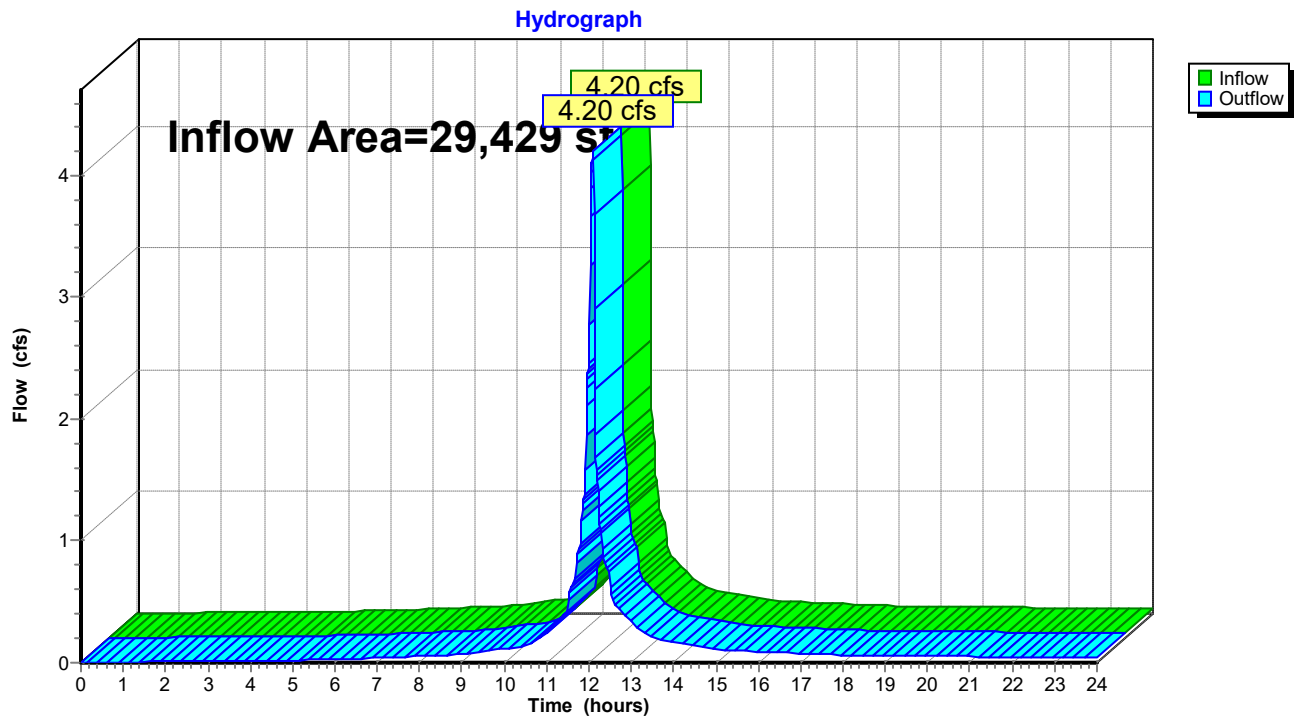


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 4.70" for 10-Year-2050 event  
 Inflow = 4.20 cfs @ 12.10 hrs, Volume= 11,519 cf  
 Outflow = 4.20 cfs @ 12.10 hrs, Volume= 11,519 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

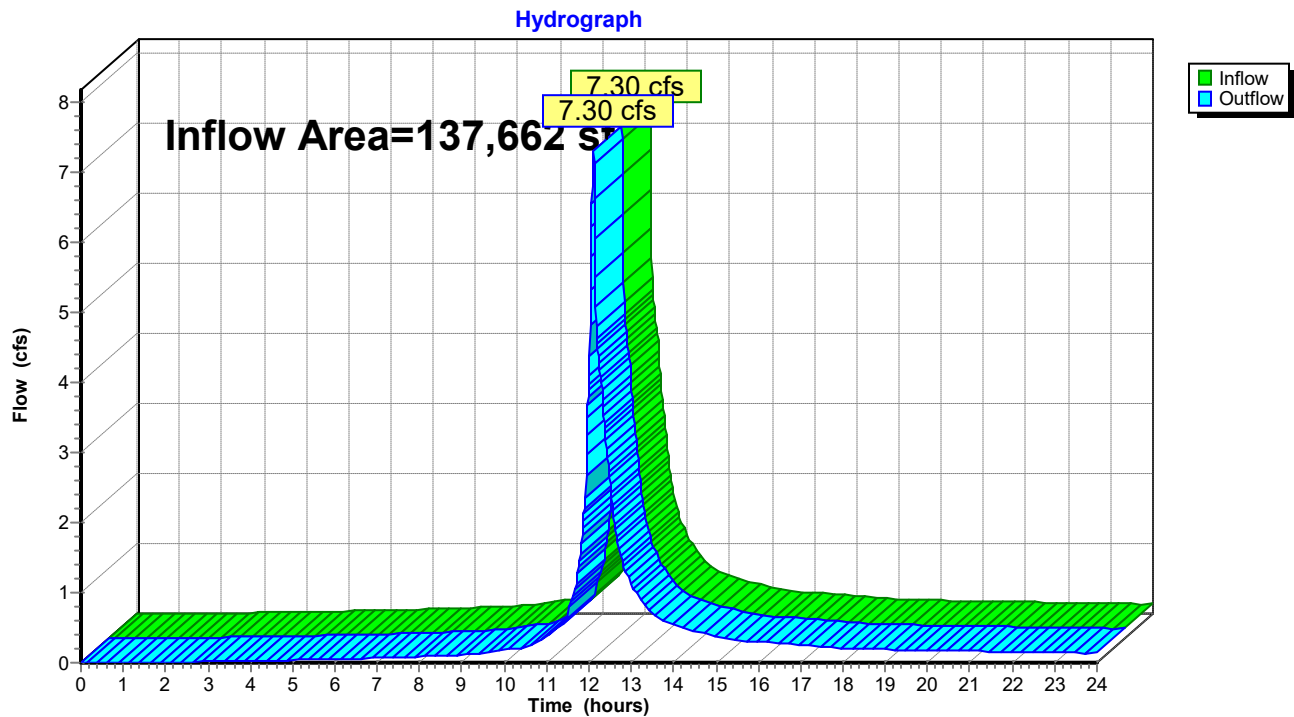


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 2.46" for 10-Year-2050 event  
 Inflow = 7.30 cfs @ 12.11 hrs, Volume= 28,197 cf  
 Outflow = 7.30 cfs @ 12.11 hrs, Volume= 28,197 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100E: EX INLET 1

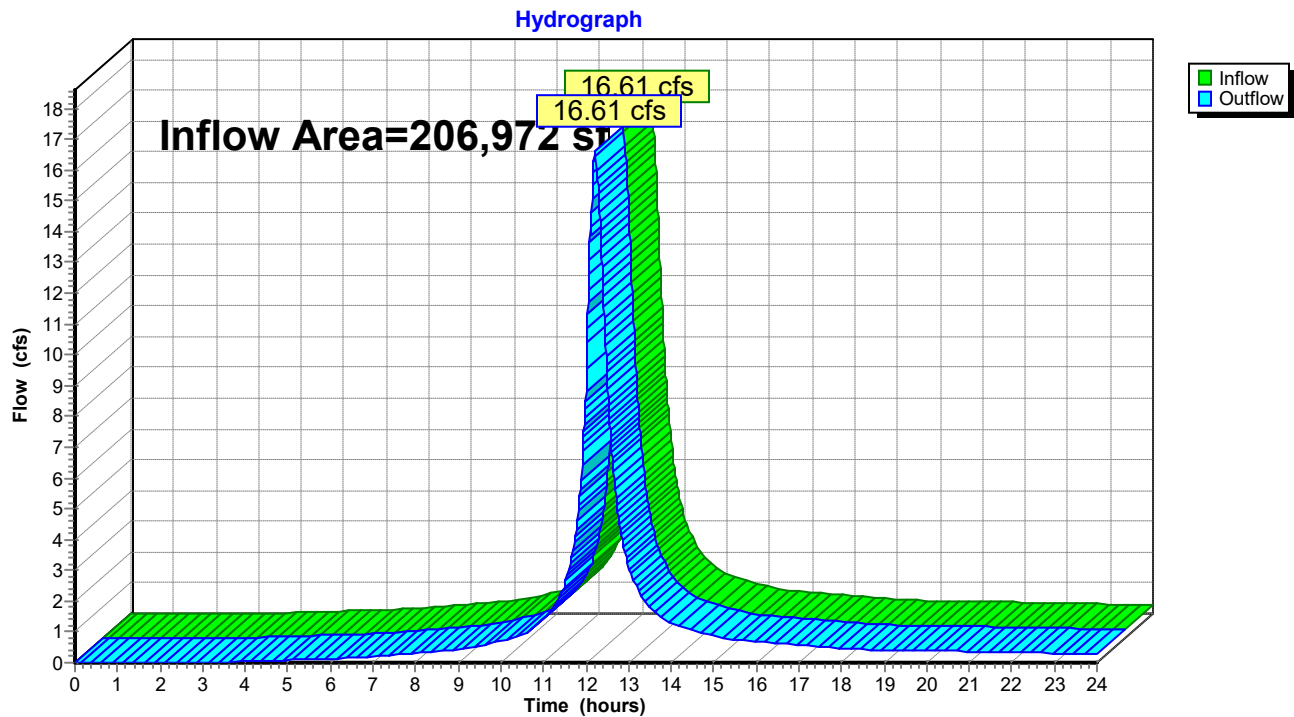


### Summary for Reach 200E: EX MANHOLE 2

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 4.64" for 10-Year-2050 event  
 Inflow = 16.61 cfs @ 12.20 hrs, Volume= 79,995 cf  
 Outflow = 16.61 cfs @ 12.20 hrs, Volume= 79,995 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200E: EX MANHOLE 2

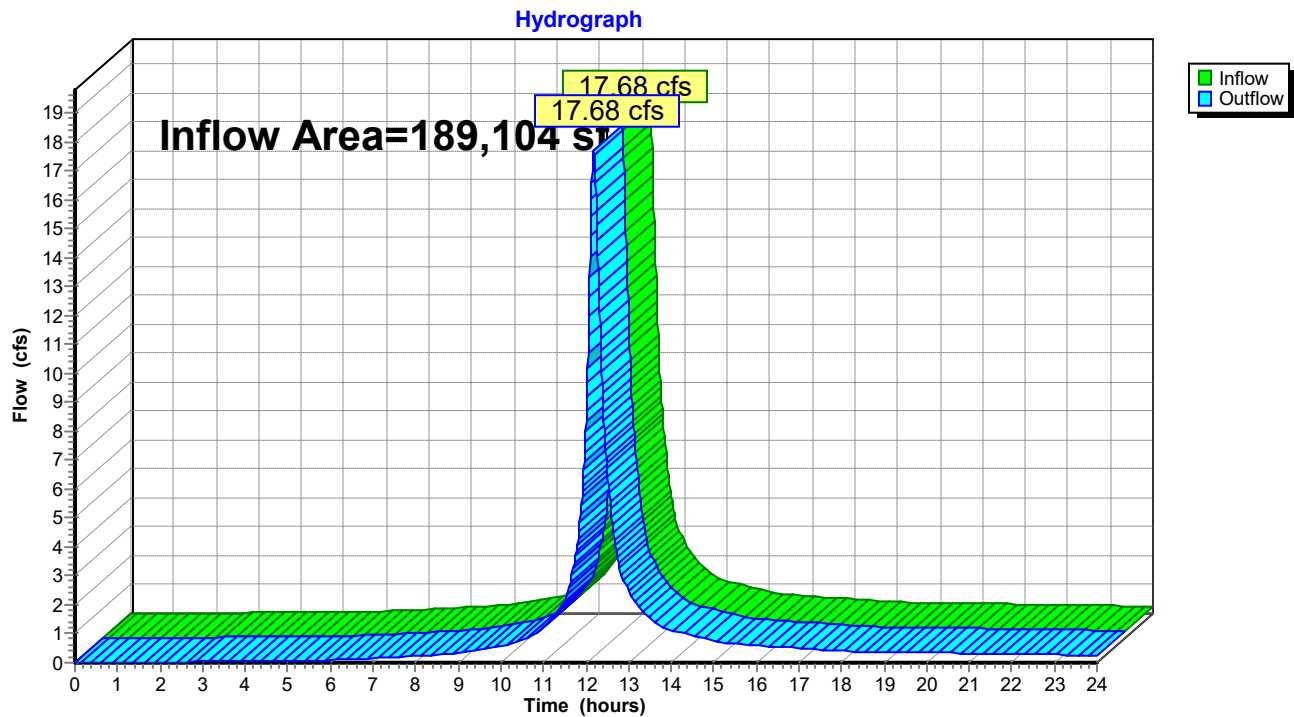


### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 4.38" for 10-Year-2050 event  
 Inflow = 17.68 cfs @ 12.18 hrs, Volume= 69,003 cf  
 Outflow = 17.68 cfs @ 12.18 hrs, Volume= 69,003 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300E: EX INLET 3

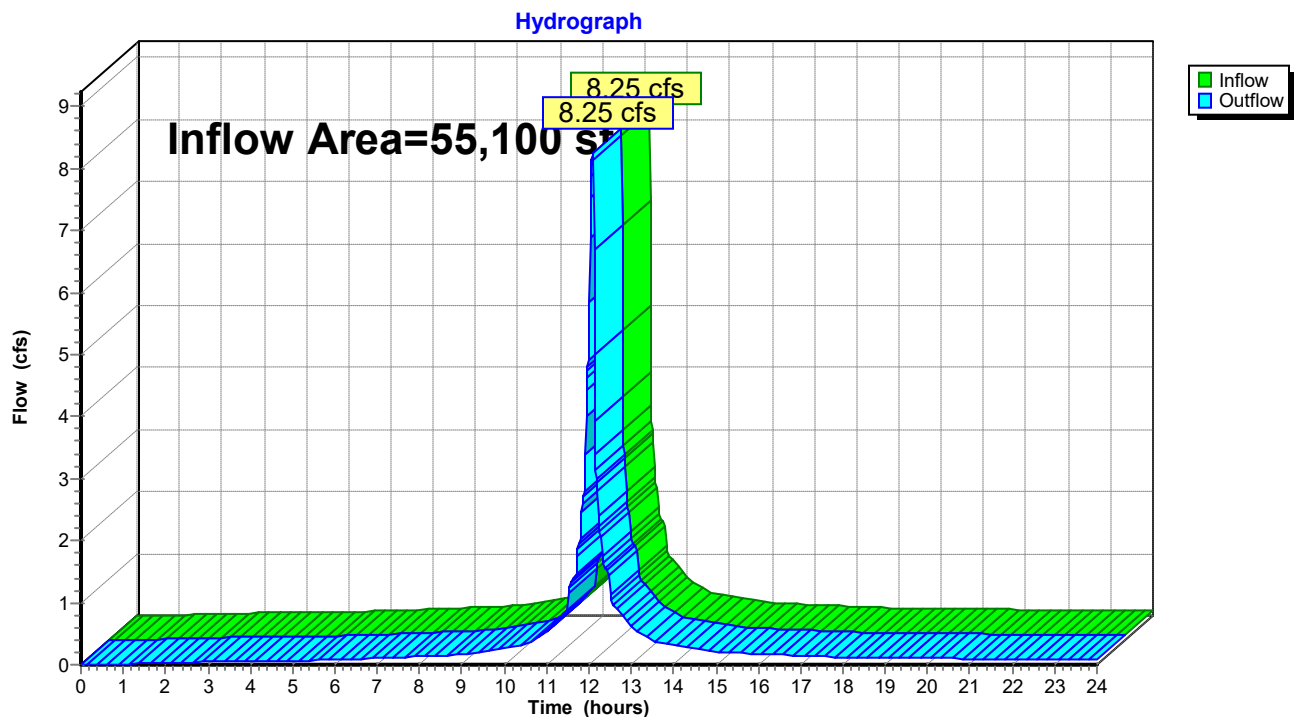


### Summary for Reach 400E: TENNIS COURTS

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 5.13" for 10-Year-2050 event  
 Inflow = 8.25 cfs @ 12.10 hrs, Volume= 23,542 cf  
 Outflow = 8.25 cfs @ 12.10 hrs, Volume= 23,542 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400E: TENNIS COURTS

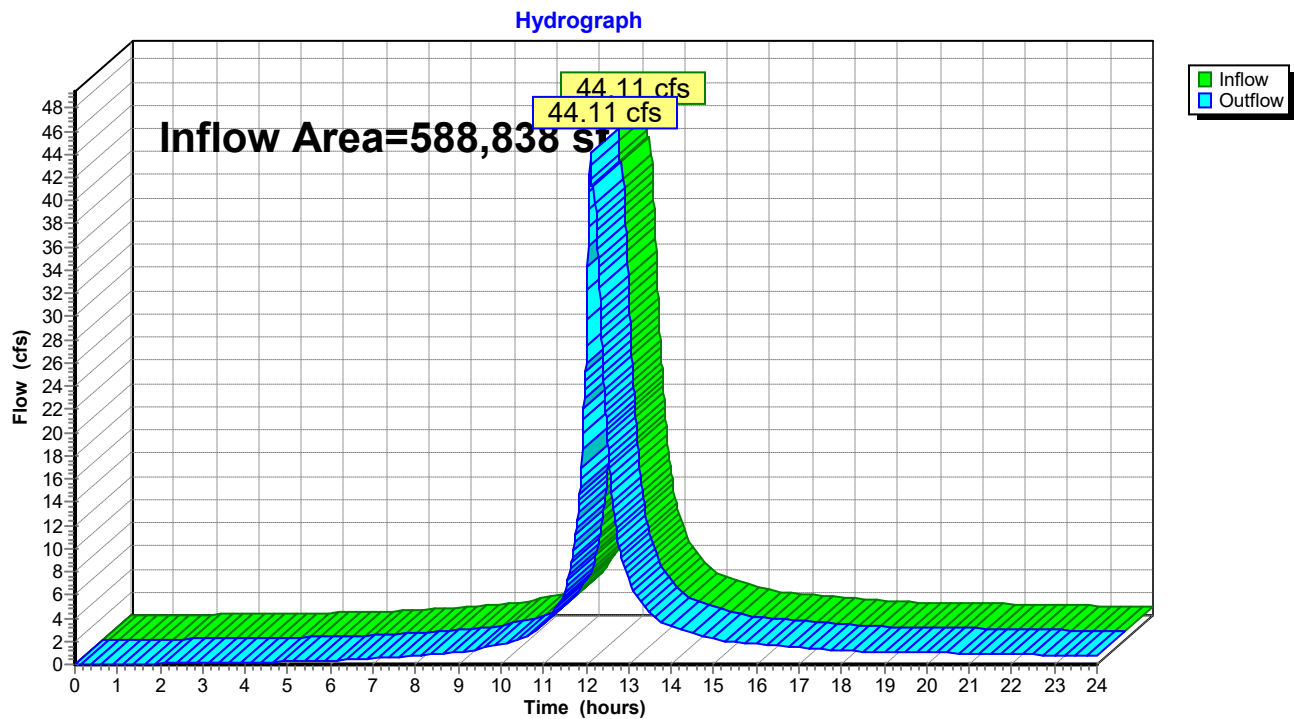


### Summary for Reach 500E: STUDY POINT

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 4.09" for 10-Year-2050 event  
 Inflow = 44.11 cfs @ 12.11 hrs, Volume= 200,737 cf  
 Outflow = 44.11 cfs @ 12.11 hrs, Volume= 200,737 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500E: STUDY POINT



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101E: Offsite Pervious SE** Runoff Area=70,377 sf 0.00% Impervious Runoff Depth>5.38"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=7.66 cfs 31,538 cf

**Subcatchment 102E: Onsite Pervious SE** Runoff Area=12,566 sf 0.00% Impervious Runoff Depth>5.39"  
Flow Length=476' Tc=10.1 min CN=56 Runoff=1.76 cfs 5,644 cf

**Subcatchment 103E: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>10.47"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=8.67 cfs 25,433 cf

**Subcatchment 104E: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>4.35"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.65 cfs 1,643 cf

**Subcatchment 105E: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>5.10"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=2.12 cfs 5,596 cf

**Subcatchment 106E: Onsite Impervious** Runoff Area=7,855 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=427' Tc=1.8 min CN=98 Runoff=2.40 cfs 7,256 cf

**Subcatchment 201E: Offsite to E Trench** Runoff Area=10,456 sf 0.00% Impervious Runoff Depth>9.31"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=2.44 cfs 8,111 cf

**Subcatchment 202E: Onsite to E Trench** Runoff Area=2,174 sf 0.00% Impervious Runoff Depth>9.32"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.62 cfs 1,689 cf

**Subcatchment 203E: Impervious** Runoff Area=14,304 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=40' Slope=0.0050 '/' Tc=0.9 min CN=98 Runoff=4.37 cfs 13,216 cf

**Subcatchment 204E: Pervious Stadium to** Runoff Area=47,820 sf 0.00% Impervious Runoff Depth>9.95"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=89 Runoff=11.09 cfs 39,652 cf

**Subcatchment 205E: Offsite to E Field** Runoff Area=121,317 sf 0.38% Impervious Runoff Depth>9.93"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=21.20 cfs 100,396 cf

**Subcatchment 206E: Onsite to E Field Drain** Runoff Area=7,790 sf 0.00% Impervious Runoff Depth>9.95"  
Flow Length=504' Tc=11.6 min CN=89 Runoff=1.73 cfs 6,458 cf

**Subcatchment 207E: Offsite Impervious** Runoff Area=3,111 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.95 cfs 2,875 cf

**Subcatchment 301E: Offsite to W Field** Runoff Area=53,360 sf 0.00% Impervious Runoff Depth>9.29"  
Flow Length=973' Tc=17.7 min CN=84 Runoff=9.67 cfs 41,323 cf

**Subcatchment 302E: Onsite to W Field Drain** Runoff Area=3,891 sf 0.00% Impervious Runoff Depth>9.31"  
Flow Length=541' Tc=8.9 min CN=84 Runoff=0.91 cfs 3,018 cf

**Subcatchment 303E: Offsite to W Trench** Runoff Area=29,859 sf 1.34% Impervious Runoff Depth>9.30"  
Flow Length=574' Tc=12.7 min CN=84 Runoff=6.19 cfs 23,146 cf



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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|                                                     |                                                                                               |                                                  |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Subcatchment 304E: Onsite to W Trench</b>        | Runoff Area=2,363 sf 2.75% Impervious<br>Flow Length=287' Tc=9.2 min CN=84                    | Runoff Depth>9.31"<br>Runoff=0.55 cfs 1,833 cf   |
| <b>Subcatchment 305E: Offsite to W Field</b>        | Runoff Area=13,314 sf 0.00% Impervious<br>Flow Length=467' Tc=12.4 min CN=84                  | Runoff Depth>9.30"<br>Runoff=2.79 cfs 10,321 cf  |
| <b>Subcatchment 306E: Onsite to W Field Drain 2</b> | Runoff Area=425 sf 0.00% Impervious<br>Flow Length=299' Tc=5.1 min CN=84                      | Runoff Depth>9.32"<br>Runoff=0.11 cfs 330 cf     |
| <b>Subcatchment 308E: Offsite to Drain 4</b>        | Runoff Area=1,066 sf 20.92% Impervious<br>Flow Length=22' Slope=0.0100 '/ Tc=1.6 min CN=87    | Runoff Depth>9.71"<br>Runoff=0.31 cfs 863 cf     |
| <b>Subcatchment 309E: Offsite Building to</b>       | Runoff Area=8,251 sf 81.26% Impervious<br>Flow Length=168' Tc=4.4 min CN=95                   | Runoff Depth>10.71"<br>Runoff=2.40 cfs 7,366 cf  |
| <b>Subcatchment 310E: Pervious Stadium W</b>        | Runoff Area=38,673 sf 0.00% Impervious<br>Flow Length=100' Slope=0.0050 '/ Tc=10.3 min CN=84  | Runoff Depth>9.31"<br>Runoff=8.65 cfs 29,992 cf  |
| <b>Subcatchment 311E: Offsite to W Trench</b>       | Runoff Area=2,514 sf 20.92% Impervious<br>Flow Length=63' Tc=5.8 min UI Adjusted CN=85        | Runoff Depth>9.45"<br>Runoff=0.67 cfs 1,979 cf   |
| <b>Subcatchment 312E: Impervious Stadium</b>        | Runoff Area=35,388 sf 92.50% Impervious<br>Flow Length=100' Slope=0.0050 '/ Tc=10.3 min CN=97 | Runoff Depth>10.95"<br>Runoff=8.47 cfs 32,281 cf |
| <b>Subcatchment 401E: Onsite Impervious</b>         | Runoff Area=11,975 sf 100.00% Impervious<br>Flow Length=179' Tc=1.9 min CN=98                 | Runoff Depth>11.09"<br>Runoff=3.66 cfs 11,062 cf |
| <b>Subcatchment 402E: Onsite Pervious to SP4</b>    | Runoff Area=17,454 sf 0.00% Impervious<br>Flow Length=151' Tc=2.4 min CN=84                   | Runoff Depth>9.32"<br>Runoff=5.00 cfs 13,559 cf  |
| <b>Subcatchment 403E: Tennis Courts</b>             | Runoff Area=25,671 sf 100.00% Impervious<br>Flow Length=116' Slope=0.0100 '/ Tc=1.6 min CN=98 | Runoff Depth>11.09"<br>Runoff=7.85 cfs 23,715 cf |
| <b>Reach 1E: ONSITE UNRETAINED</b>                  | Inflow=3.73 cfs 12,900 cf<br>Outflow=3.73 cfs 12,900 cf                                       |                                                  |
| <b>Reach 2E: ONSITE EAST</b>                        | Inflow=14.99 cfs 61,015 cf<br>Outflow=14.99 cfs 61,015 cf                                     |                                                  |
| <b>Reach 3E: ONSITE WEST</b>                        | Inflow=18.76 cfs 68,317 cf<br>Outflow=18.76 cfs 68,317 cf                                     |                                                  |
| <b>Reach 4E: ONSITE TENNIS COURTS</b>               | Inflow=8.67 cfs 24,621 cf<br>Outflow=8.67 cfs 24,621 cf                                       |                                                  |
| <b>Reach 100E: EX INLET 1</b>                       | Inflow=19.23 cfs 77,110 cf<br>Outflow=19.23 cfs 77,110 cf                                     |                                                  |
| <b>Reach 200E: EX MANHOLE 2</b>                     | Inflow=34.59 cfs 172,397 cf<br>Outflow=34.59 cfs 172,397 cf                                   |                                                  |

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Reach 300E: EX INLET 3**Inflow=37.73 cfs 152,452 cf  
Outflow=37.73 cfs 152,452 cf**Reach 400E: TENNIS COURTS**Inflow=16.51 cfs 48,336 cf  
Outflow=16.51 cfs 48,336 cf**Reach 500E: STUDY POINT**Inflow=96.39 cfs 450,295 cf  
Outflow=96.39 cfs 450,295 cf

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 101E: Offsite Pervious SE**

Runoff = 7.66 cfs @ 12.28 hrs, Volume= 31,538 cf, Depth> 5.38"  
 Routed to Reach 100E : EX INLET 1

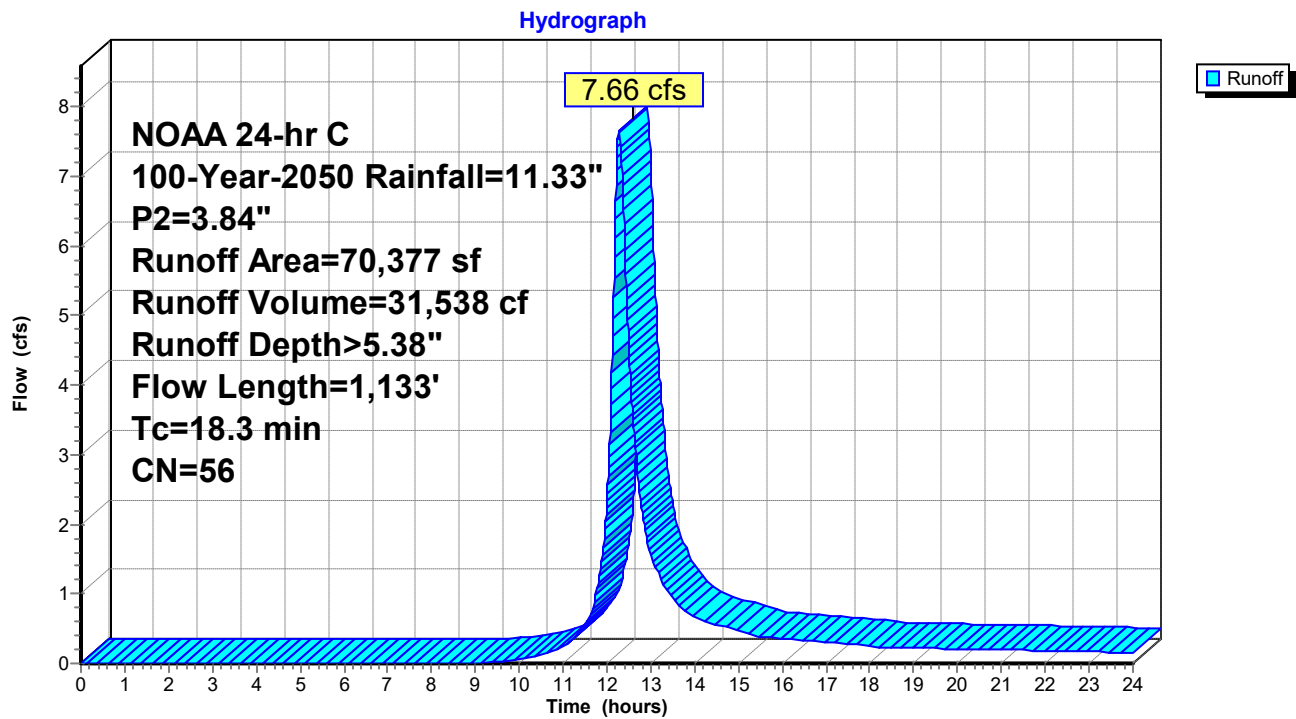
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,548    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 70,377    | 56 | Weighted Average                |
| 70,377    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

**Subcatchment 101E: Offsite Pervious SE**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 102E: Onsite Pervious SE**

Runoff = 1.76 cfs @ 12.18 hrs, Volume= 5,644 cf, Depth> 5.39"  
 Routed to Reach 1E : ONSITE UNRETAINED

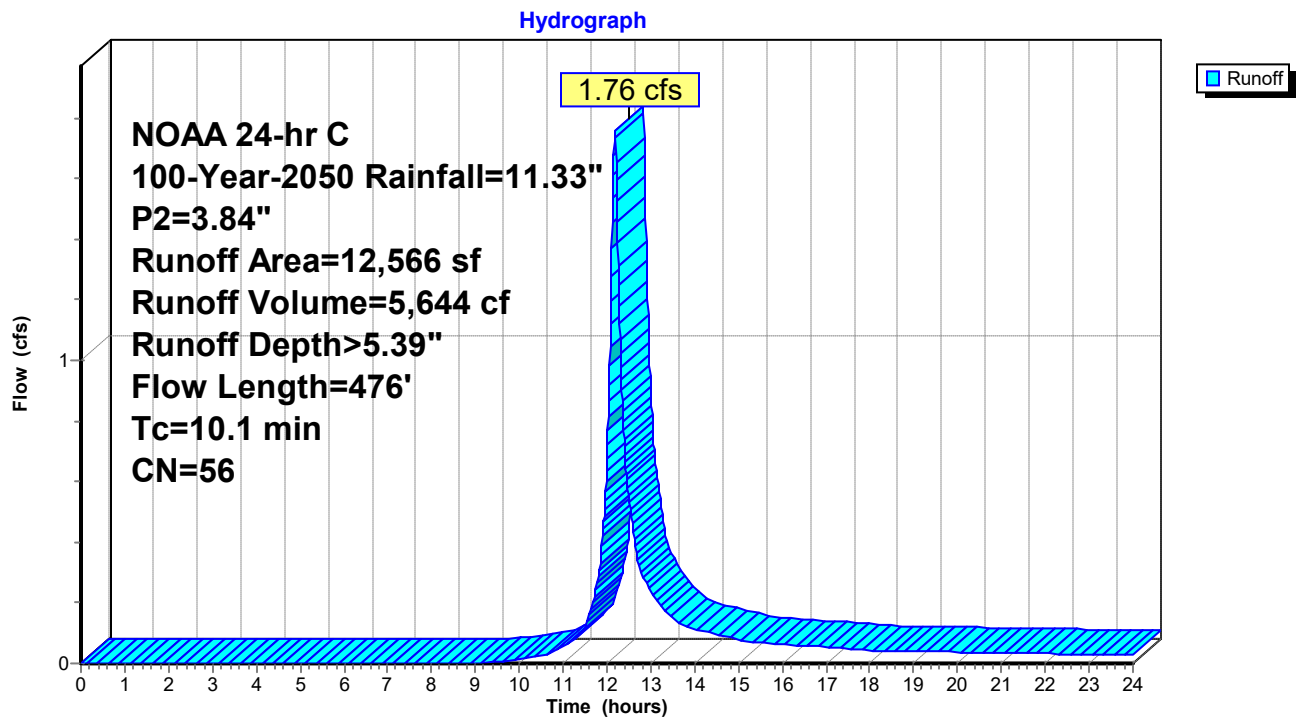
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,000    | 49 | 50-75% Grass cover, Fair, HSG A |
| 2,566     | 84 | 50-75% Grass cover, Fair, HSG D |
| 12,566    | 56 | Weighted Average                |
| 12,566    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 10.1     | 476           | Total         |                   |                |                                                                                                     |

**Subcatchment 102E: Onsite Pervious SE**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 103E: Access Road & Parking Lot**

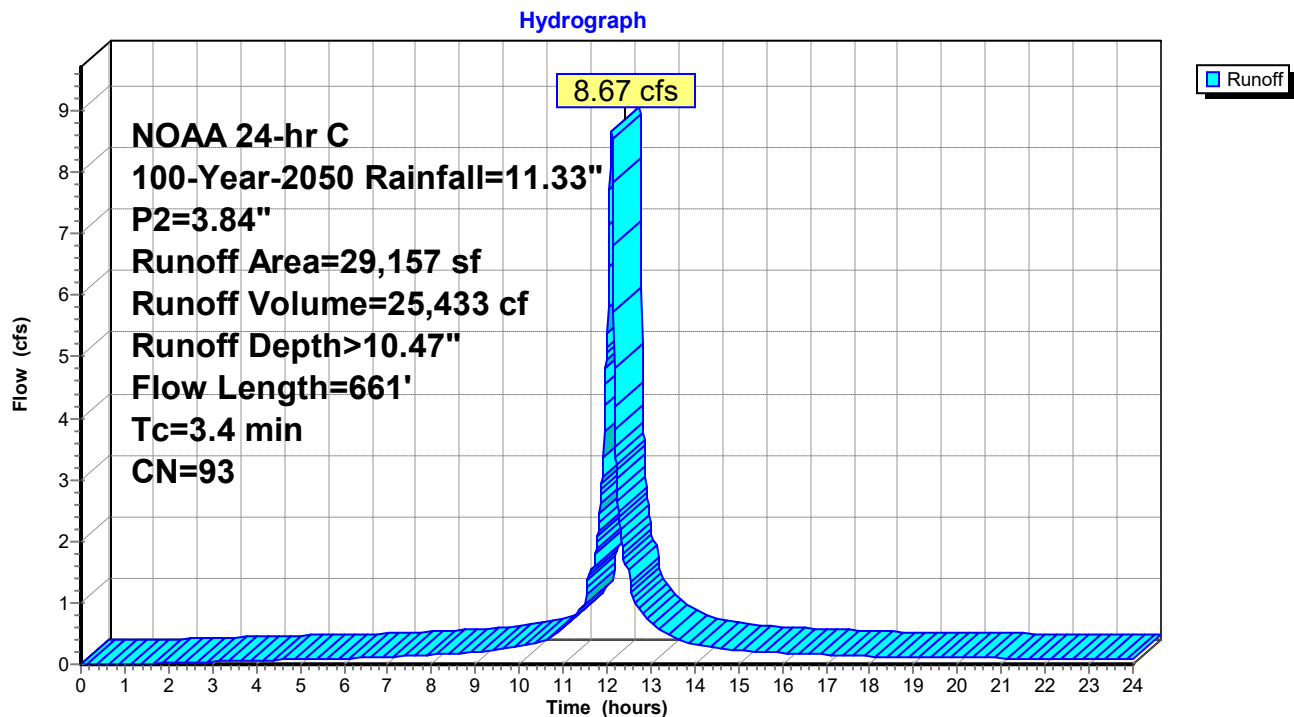
Runoff = 8.67 cfs @ 12.11 hrs, Volume= 25,433 cf, Depth>10.47"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103E: Access Road & Parking Lot**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 104E: Yard Drains**

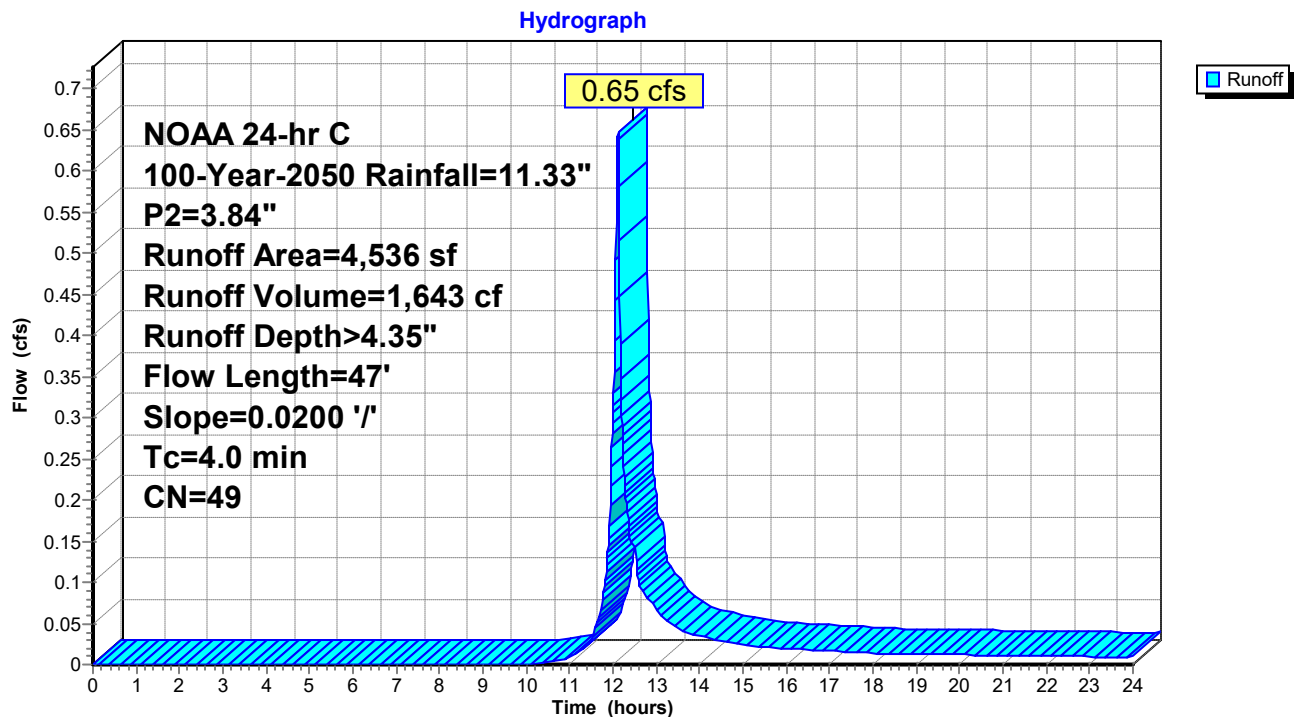
Runoff = 0.65 cfs @ 12.12 hrs, Volume= 1,643 cf, Depth> 4.35"  
Routed to Reach 100E : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103E</b>          |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104E: Yard Drains**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 105E: Low Drains**

Runoff = 2.12 cfs @ 12.13 hrs, Volume= 5,596 cf, Depth> 5.10"  
 Routed to Reach 100E : EX INLET 1

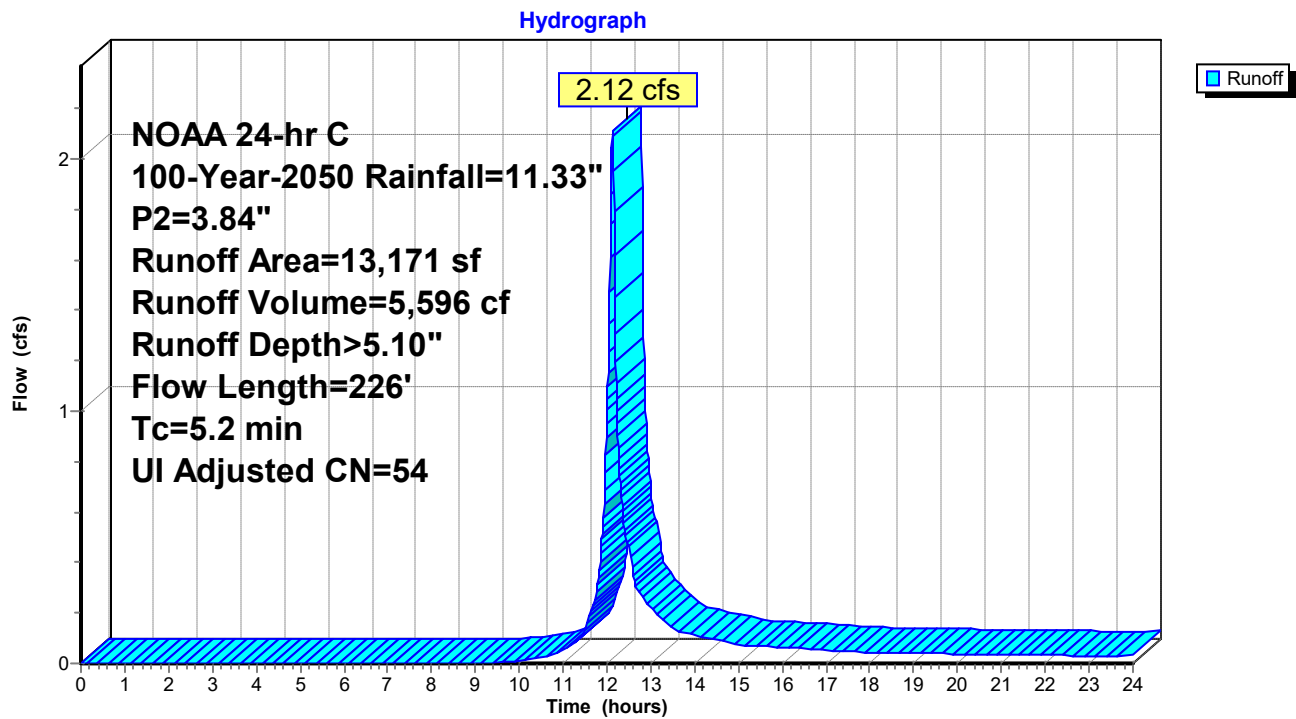
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |

**Subcatchment 105E: Low Drains**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 106E: Onsite Impervious SE**

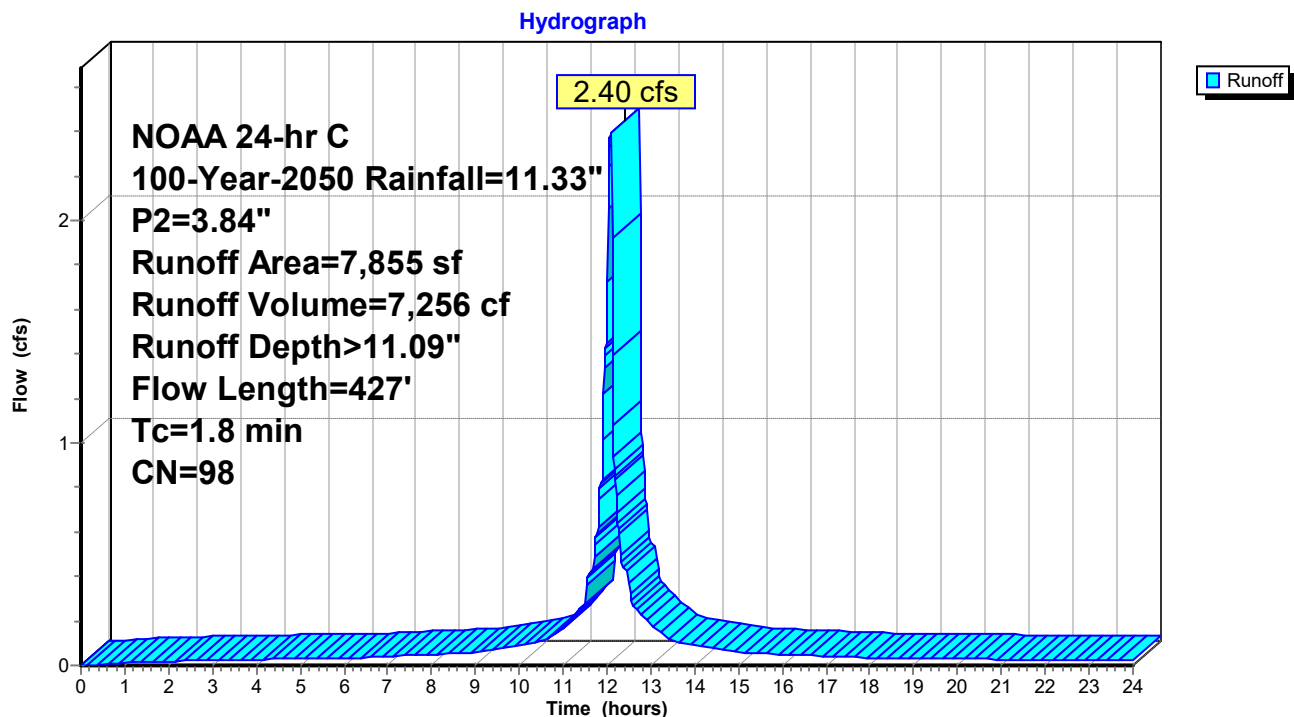
Runoff = 2.40 cfs @ 12.10 hrs, Volume= 7,256 cf, Depth>11.09"  
Routed to Reach 1E : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,855     | 98 | Paved parking, HSG A    |
| 7,855     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                            |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.8      | 427           | Total         |                   |                |                                                                                        |

**Subcatchment 106E: Onsite Impervious SE**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 201E: Offsite to E Trench Drain**

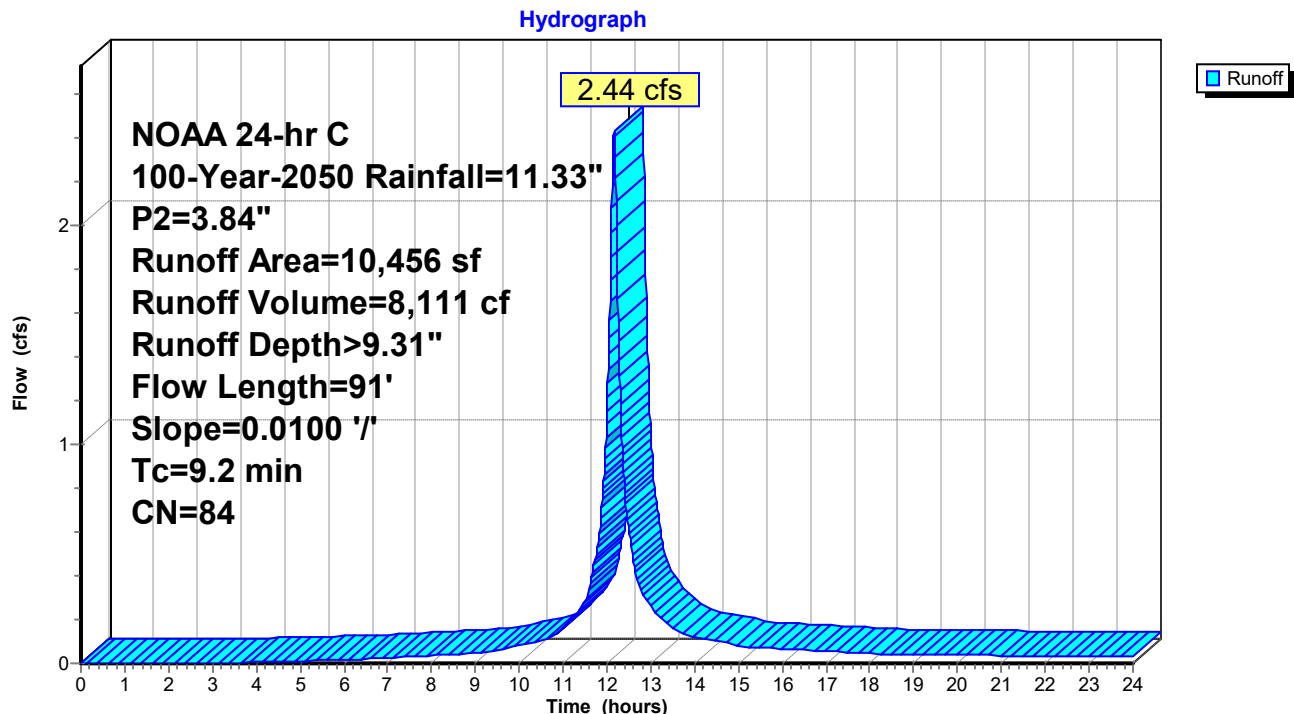
Runoff = 2.44 cfs @ 12.16 hrs, Volume= 8,111 cf, Depth> 9.31"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,456    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,456    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201E: Offsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 202E: Onsite to E Trench Drain**

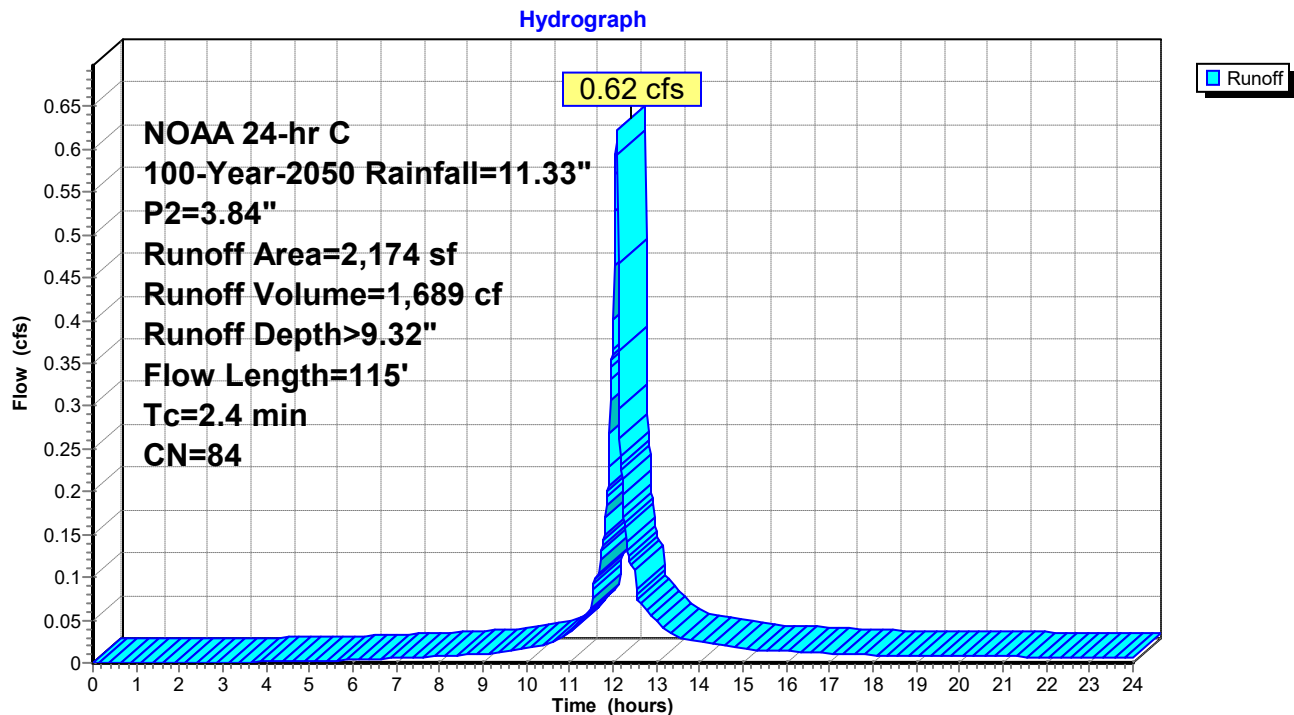
Runoff = 0.62 cfs @ 12.10 hrs, Volume= 1,689 cf, Depth> 9.32"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,174     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,174     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202E: Onsite to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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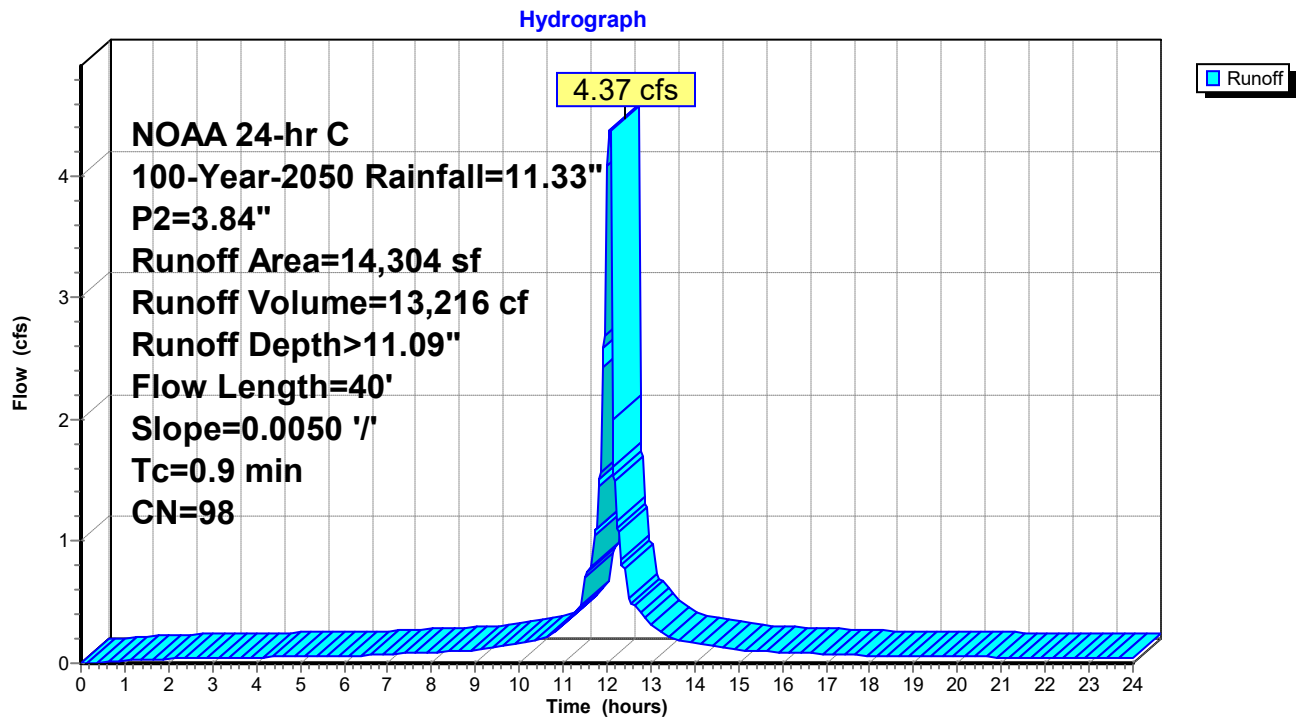
**Summary for Subcatchment 203E: Impervious Stadium to Trench Drains**

Runoff = 4.37 cfs @ 12.09 hrs, Volume= 13,216 cf, Depth>11.09"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 14,304    | 98 | Paved parking, HSG D    |
| 14,304    |    | 100.00% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                             |
|-------------|------------------|------------------|----------------------|-------------------|---------------------------------------------------------|
| 0.9         | 40               | 0.0050           | 0.72                 |                   | Sheet Flow, Sheet<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 203E: Impervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 204E: Pervious Stadium to Trench Drains**

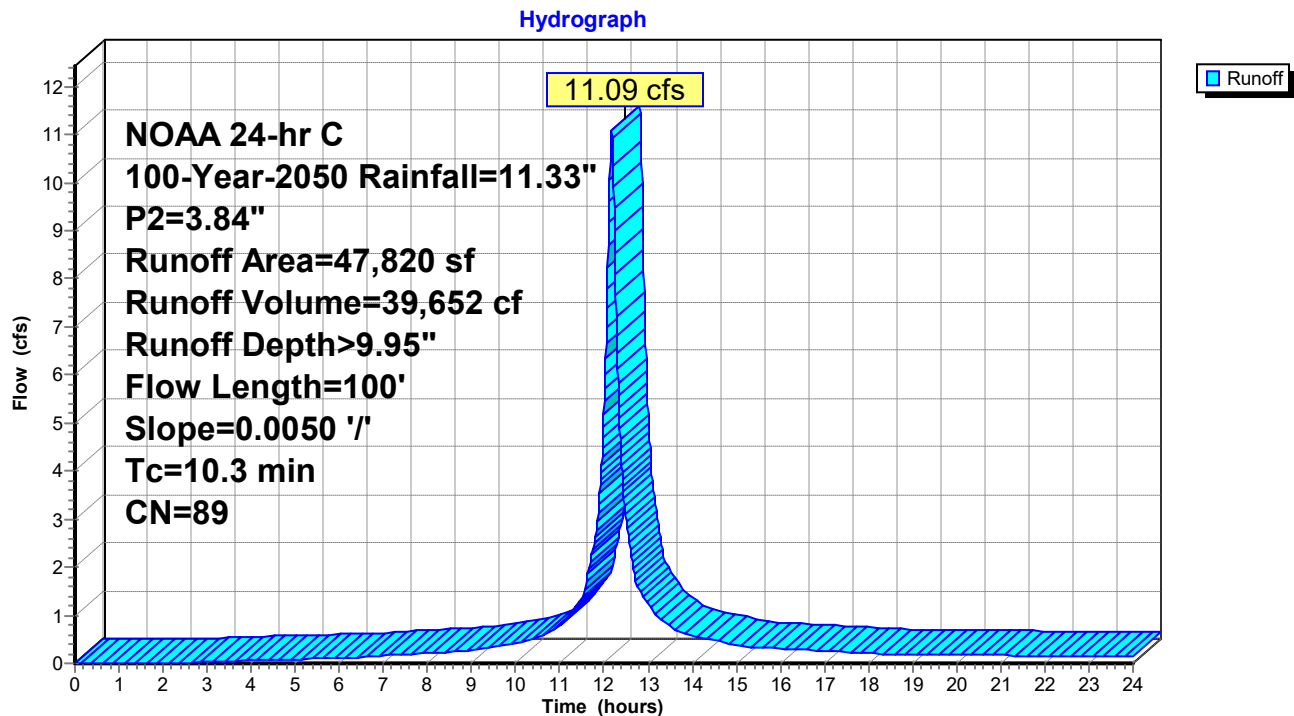
Runoff = 11.09 cfs @ 12.17 hrs, Volume= 39,652 cf, Depth> 9.95"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 47,820    | 89 | <50% Grass cover, Poor, HSG D |
| 47,820    |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 10.3     | 100           | Total         |                   |                |                                                                                                |

**Subcatchment 204E: Pervious Stadium to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 205E: Offsite to E Field Drain**

Runoff = 21.20 cfs @ 12.30 hrs, Volume= 100,396 cf, Depth> 9.93"  
 Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

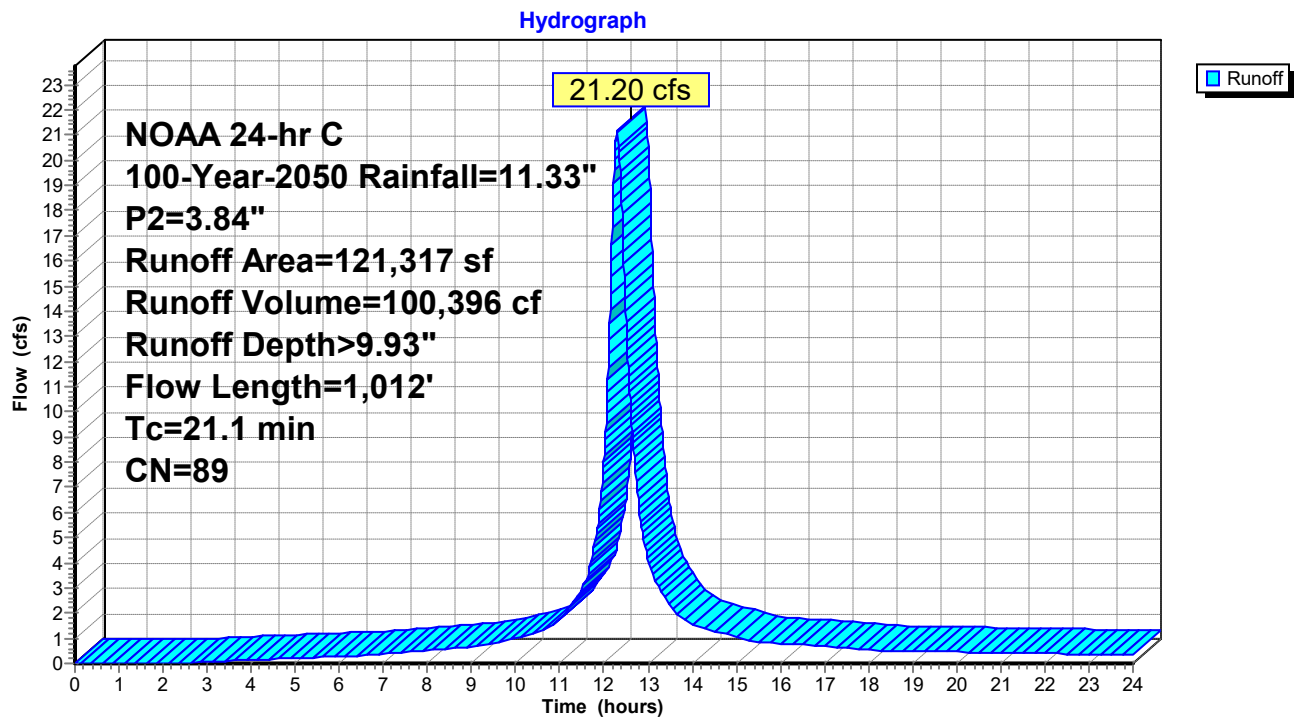
| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 120,850   | 89 | <50% Grass cover, Poor, HSG D |
| 467       | 98 | Unconnected roofs, HSG D      |
| 121,317   | 89 | Weighted Average              |
| 120,850   |    | 99.62% Pervious Area          |
| 467       |    | 0.38% Impervious Area         |
| 467       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                      |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length   |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                         |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                  |



## Subcatchment 205E: Offsite to E Field Drain



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 206E: Onsite to E Field Drain**

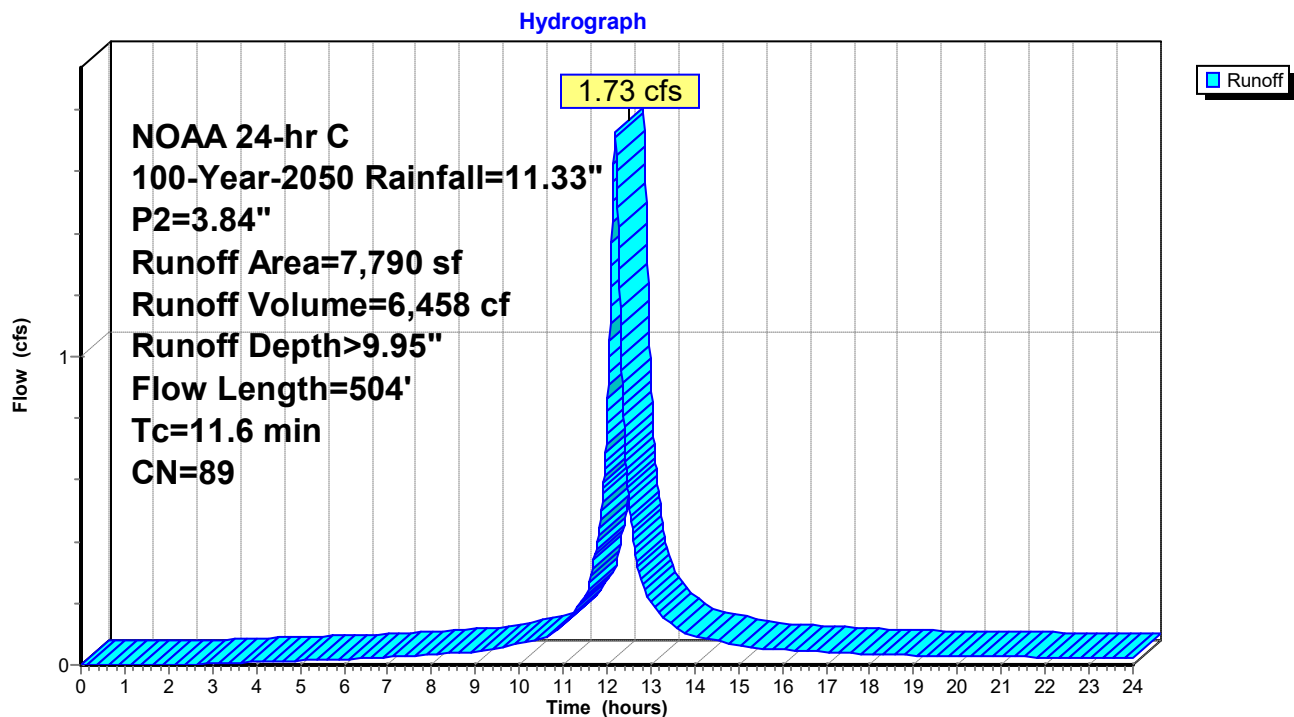
Runoff = 1.73 cfs @ 12.19 hrs, Volume= 6,458 cf, Depth> 9.95"  
Routed to Reach 2E : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 7,790     | 89 | <50% Grass cover, Poor, HSG D |
| 7,790     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |

**Subcatchment 206E: Onsite to E Field Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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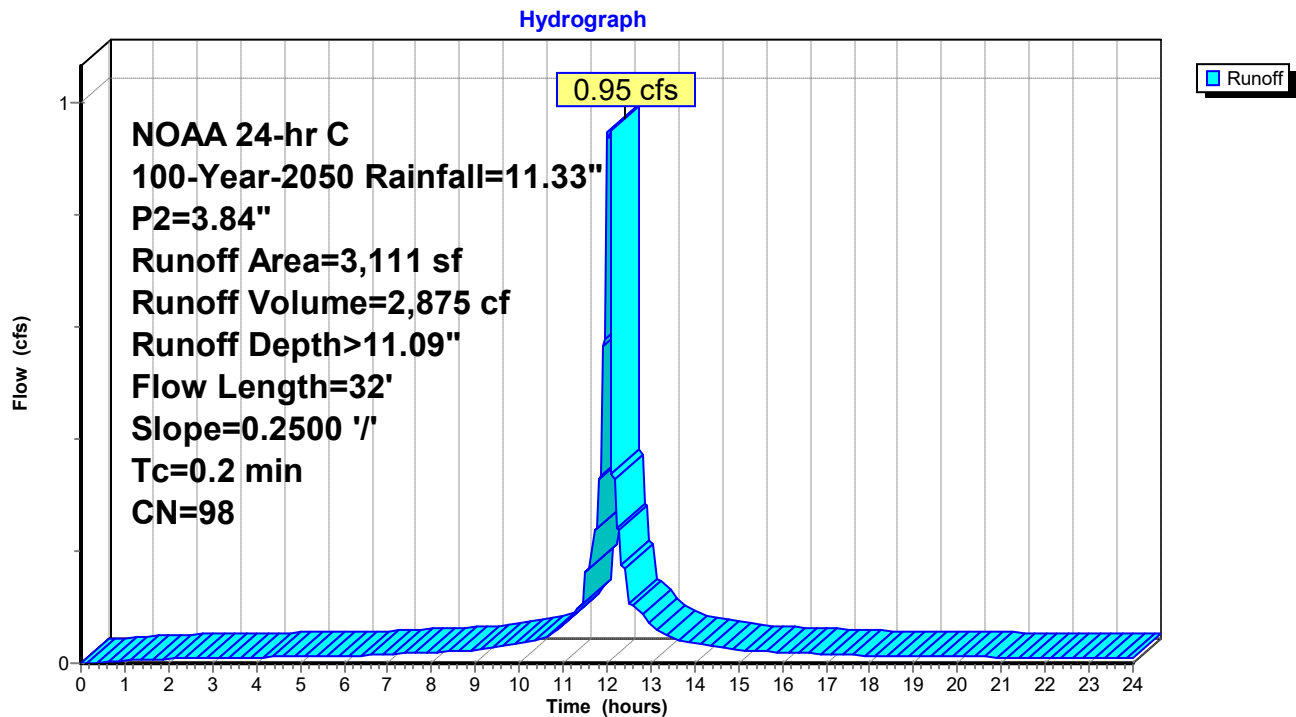
**Summary for Subcatchment 207E: Offsite Impervious to E Trench Drain**

Runoff = 0.95 cfs @ 12.09 hrs, Volume= 2,875 cf, Depth>11.09"  
Routed to Reach 200E : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,111     | 98 | Paved parking, HSG D    |
| 3,111     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 207E: Offsite Impervious to E Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 301E: Offsite to W Field Drain 1**

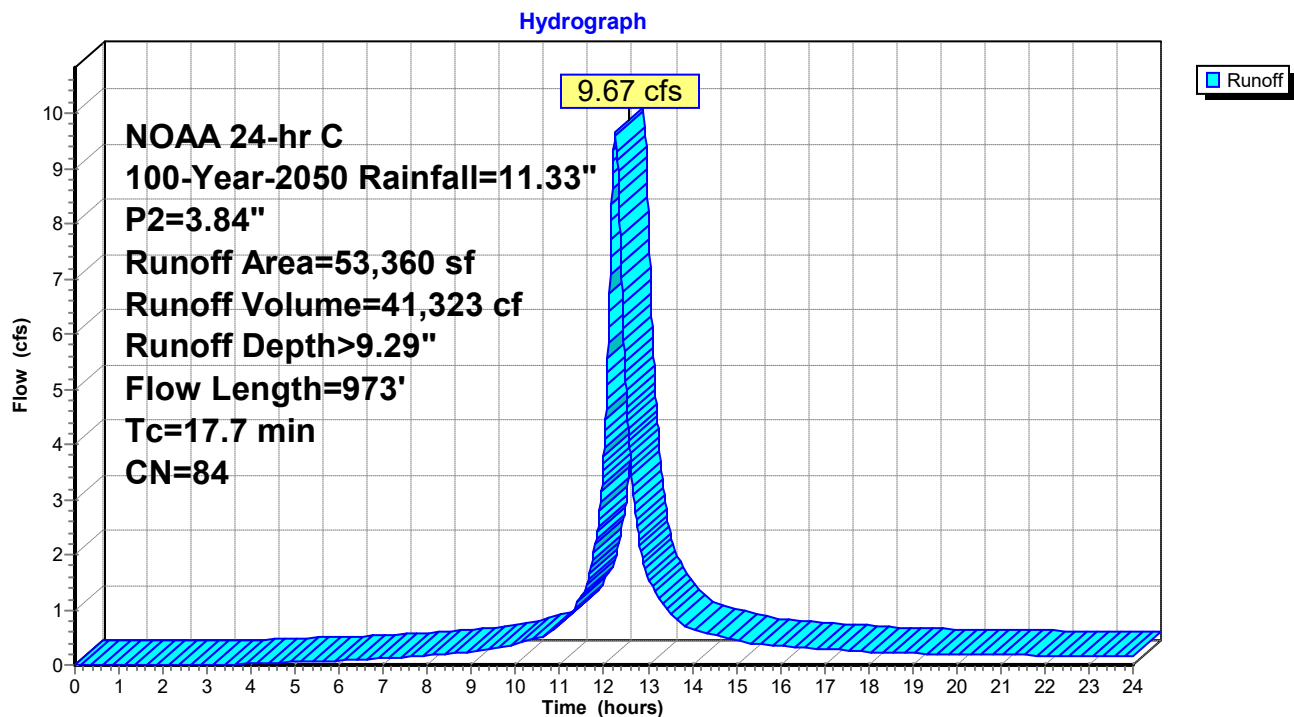
Runoff = 9.67 cfs @ 12.25 hrs, Volume= 41,323 cf, Depth> 9.29"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 53,360    | 84 | 50-75% Grass cover, Fair, HSG D |
| 53,360    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 17.7     | 973           | Total         |                   |                |                                                                                                     |

**Subcatchment 301E: Offsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 302E: Onsite to W Field Drain 1**

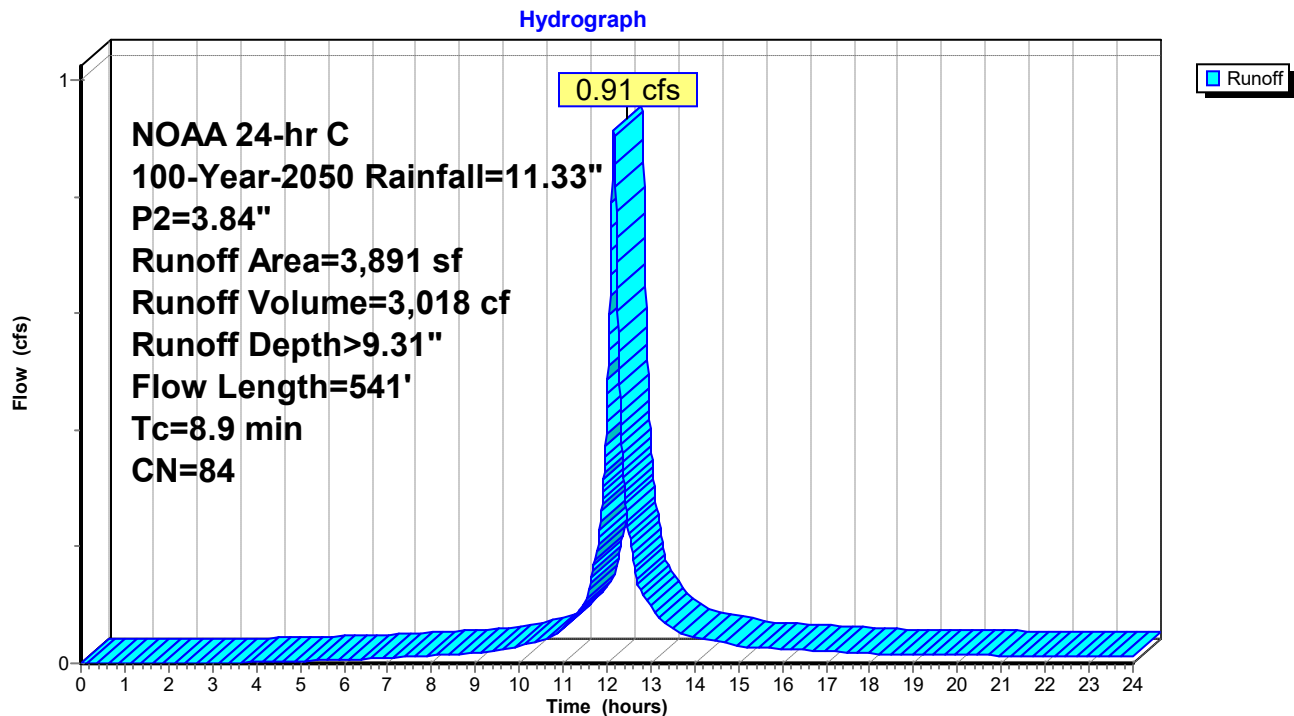
Runoff = 0.91 cfs @ 12.16 hrs, Volume= 3,018 cf, Depth> 9.31"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,891     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,891     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                  |
| 0.8      | 479           | 0.0230        | 9.99              | 24.03          | <b>Pipe Channel,</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 8.9      | 541           | Total         |                   |                |                                                                                   |

**Subcatchment 302E: Onsite to W Field Drain 1**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 303E: Offsite to W Trench Drain**

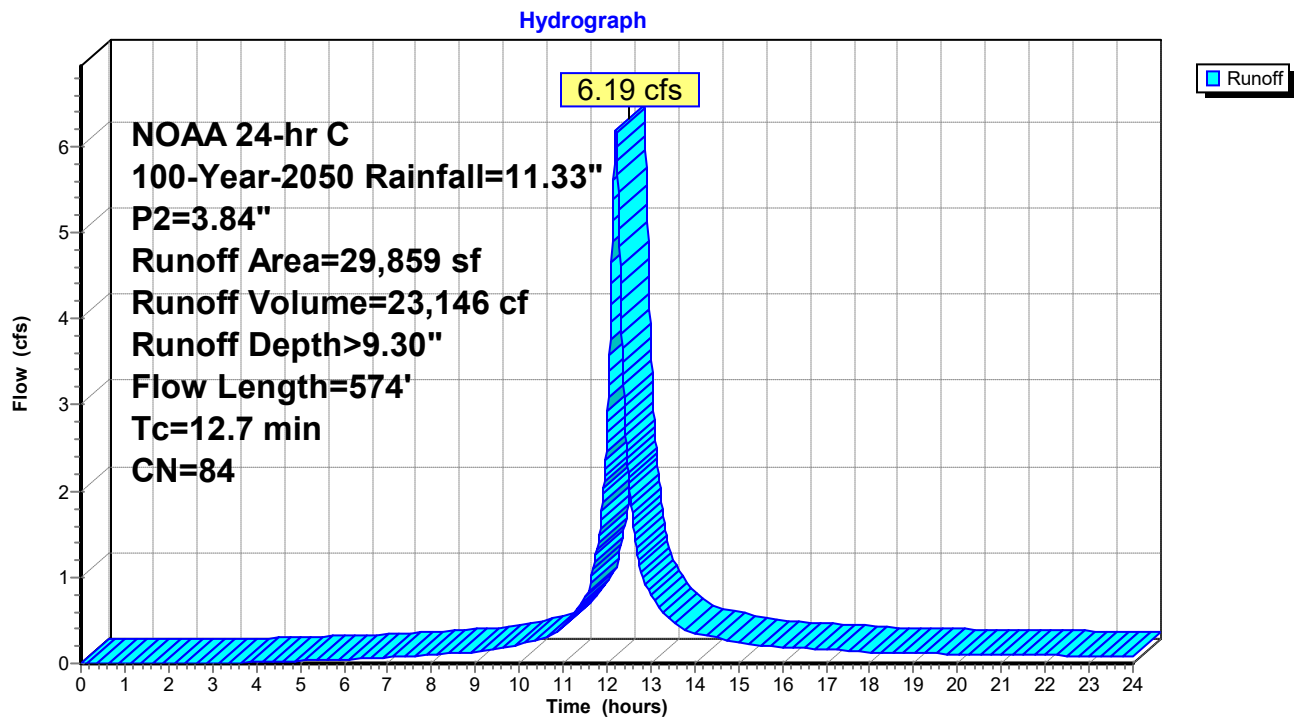
Runoff = 6.19 cfs @ 12.20 hrs, Volume= 23,146 cf, Depth> 9.30"  
 Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 29,458    | 84 | 50-75% Grass cover, Fair, HSG D |
| 401       | 98 | Unconnected pavement, HSG D     |
| 29,859    | 84 | Weighted Average                |
| 29,458    |    | 98.66% Pervious Area            |
| 401       |    | 1.34% Impervious Area           |
| 401       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.6      | 223           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013 |
| 12.7     | 574           | Total         |                   |                |                                                                                        |

**Subcatchment 303E: Offsite to W Trench Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 304E: Onsite to W Trench Drain**

Runoff = 0.55 cfs @ 12.16 hrs, Volume= 1,833 cf, Depth> 9.31"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

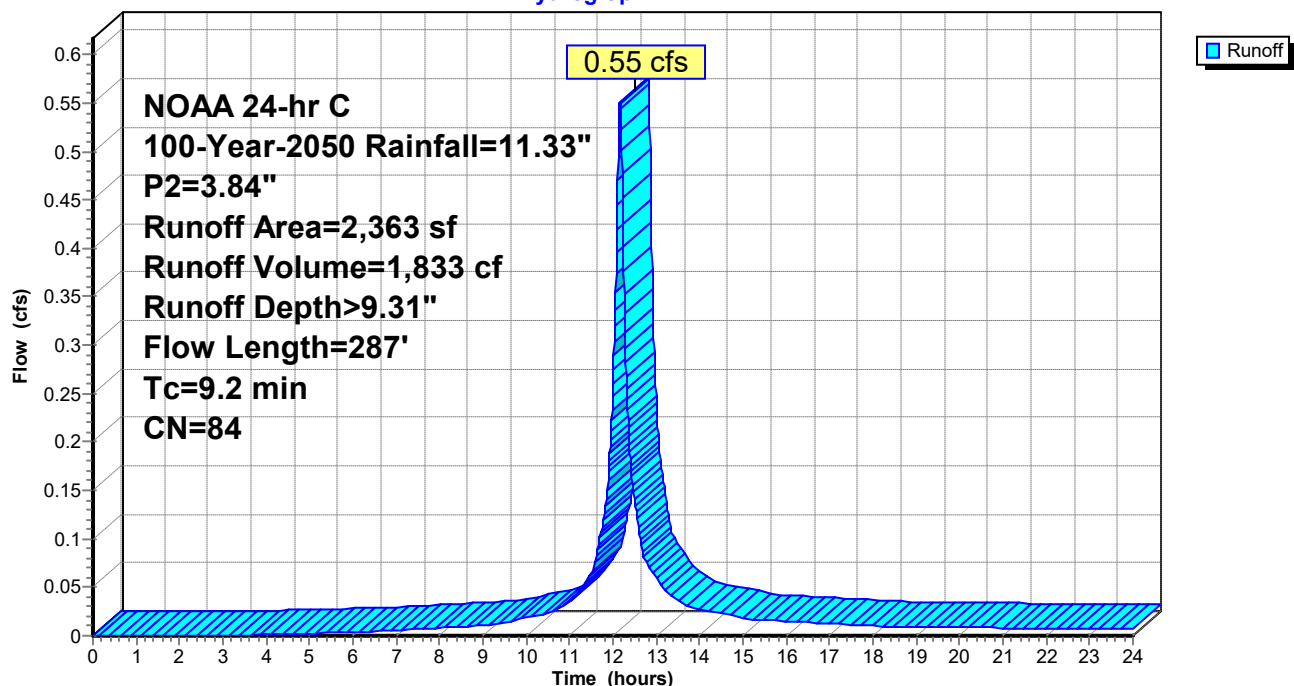
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,298     | 84 | 50-75% Grass cover, Fair, HSG D |
| 65        | 98 | Unconnected pavement, HSG D     |
| 2,363     | 84 | Weighted Average                |
| 2,298     |    | 97.25% Pervious Area            |
| 65        |    | 2.75% Impervious Area           |
| 65        |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 220           | 0.0200        | 6.42              | 5.04           | <b>Pipe Channel, Pipe</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.013              |
| 9.2      | 287           | Total         |                   |                |                                                                                                     |

**Subcatchment 304E: Onsite to W Trench Drain**

Hydrograph





**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 305E: Offsite to W Field Drain 2**

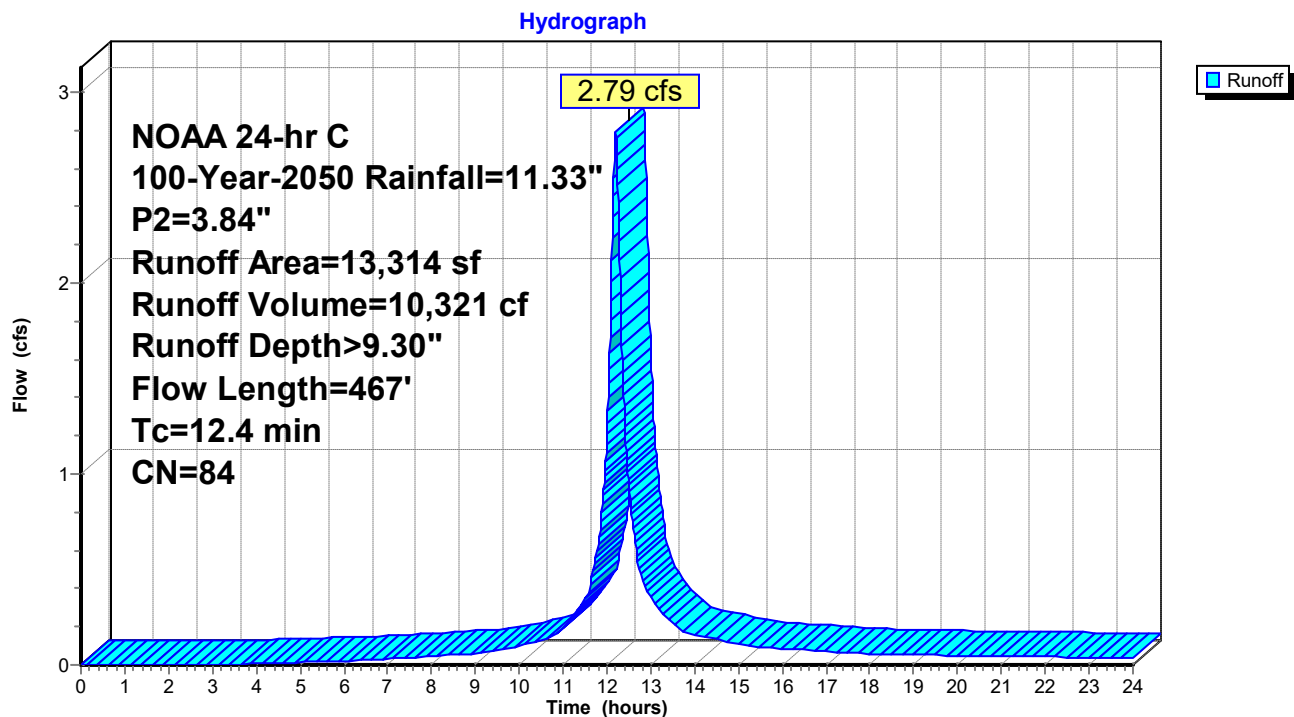
Runoff = 2.79 cfs @ 12.20 hrs, Volume= 10,321 cf, Depth> 9.30"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,314    | 84 | 50-75% Grass cover, Fair, HSG D |
| 13,314    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305E: Offsite to W Field Drain 2**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 306E: Onsite to W Field Drain 2**

Runoff = 0.11 cfs @ 12.12 hrs, Volume= 330 cf, Depth> 9.32"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

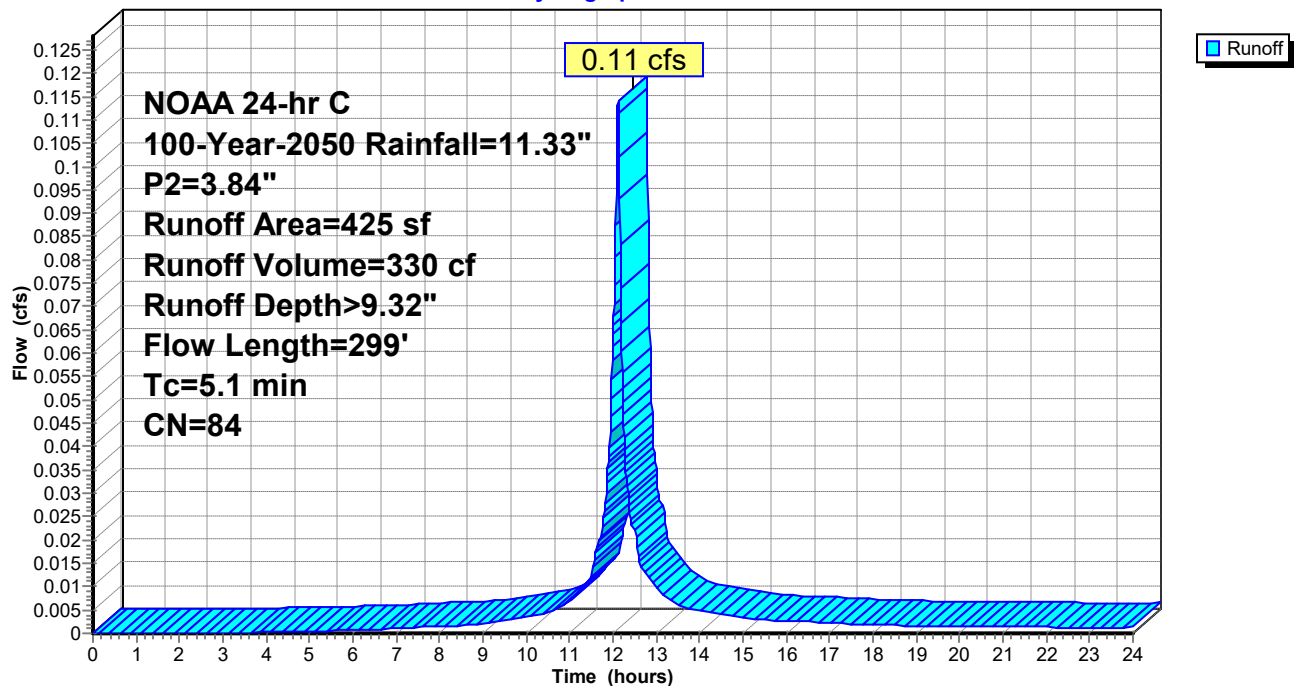
| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 5.1      | 299           | Total         |                   |                |                                                                                        |

**Subcatchment 306E: Onsite to W Field Drain 2**

Hydrograph



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 308E: Offsite to Drain 4**

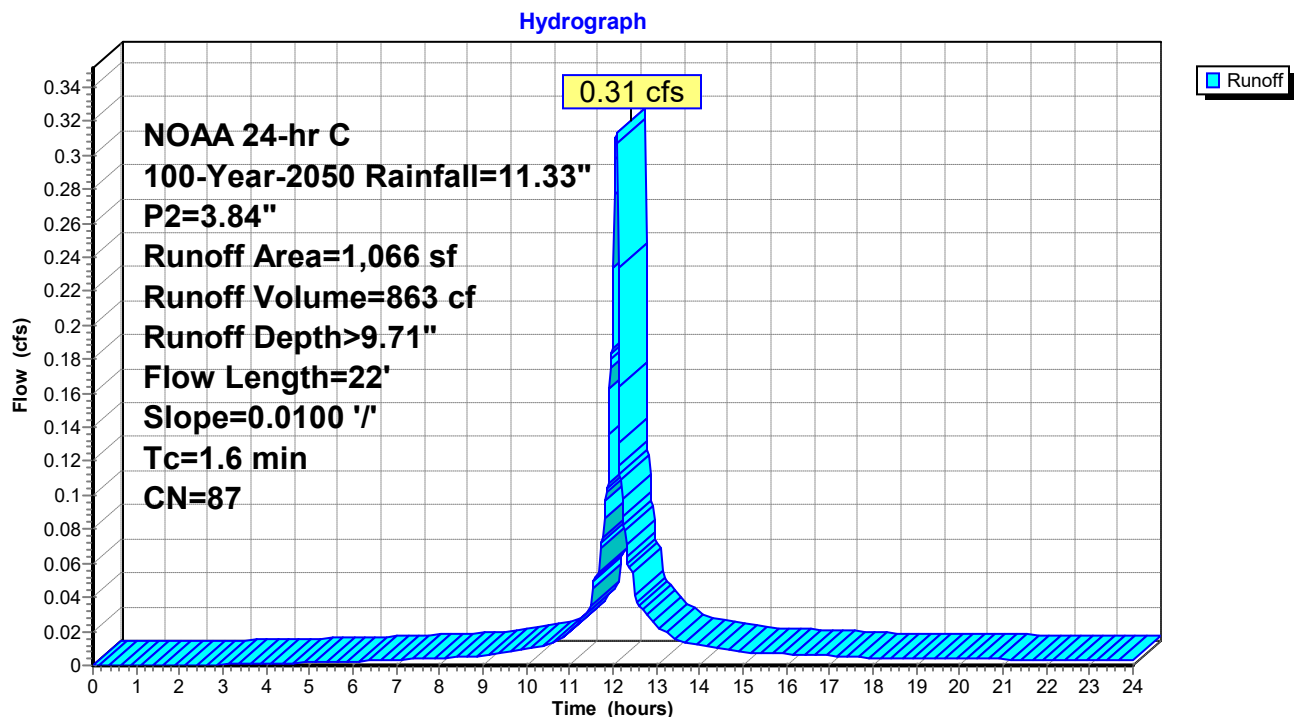
Runoff = 0.31 cfs @ 12.10 hrs, Volume= 863 cf, Depth> 9.71"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 843       | 84 | 50-75% Grass cover, Fair, HSG D |
| 223       | 98 | Paved parking, HSG D            |
| 1,066     | 87 | Weighted Average                |
| 843       |    | 79.08% Pervious Area            |
| 223       |    | 20.92% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"         |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 22            | Total         |                   |                |                                                                          |

**Subcatchment 308E: Offsite to Drain 4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 309E: Offsite Building to Drain**

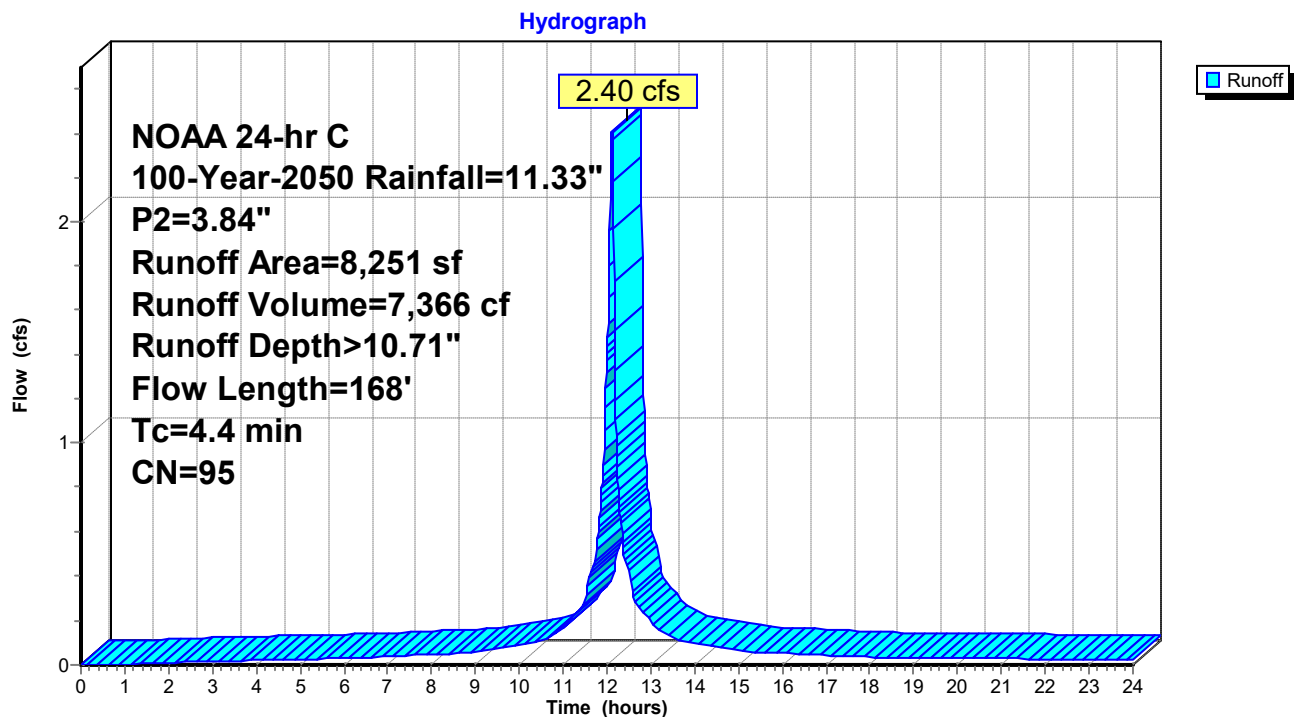
Runoff = 2.40 cfs @ 12.11 hrs, Volume= 7,366 cf, Depth>10.71"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309E: Offsite Building to Drain**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 310E: Pervious Stadium W**

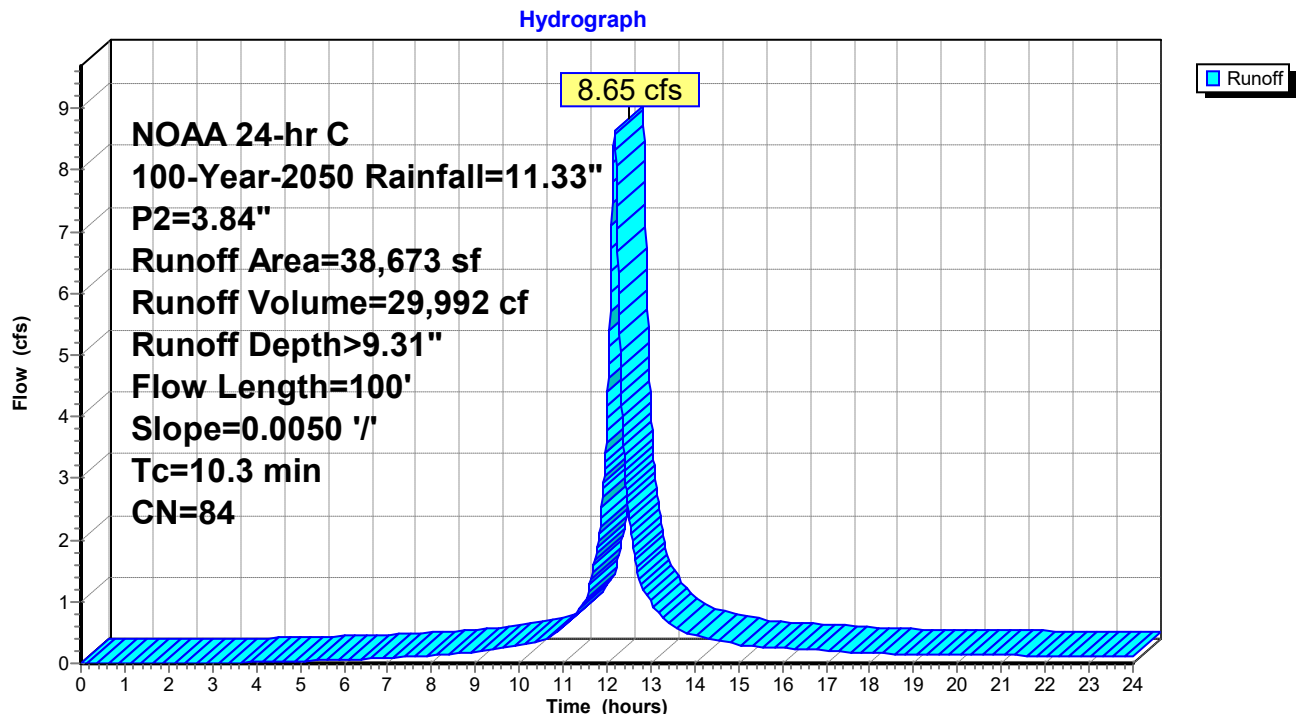
Runoff = 8.65 cfs @ 12.17 hrs, Volume= 29,992 cf, Depth> 9.31"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 38,673    | 84 | 50-75% Grass cover, Fair, HSG D |
| 38,673    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310E: Pervious Stadium W**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 311E: Offsite to W Trench Drains**

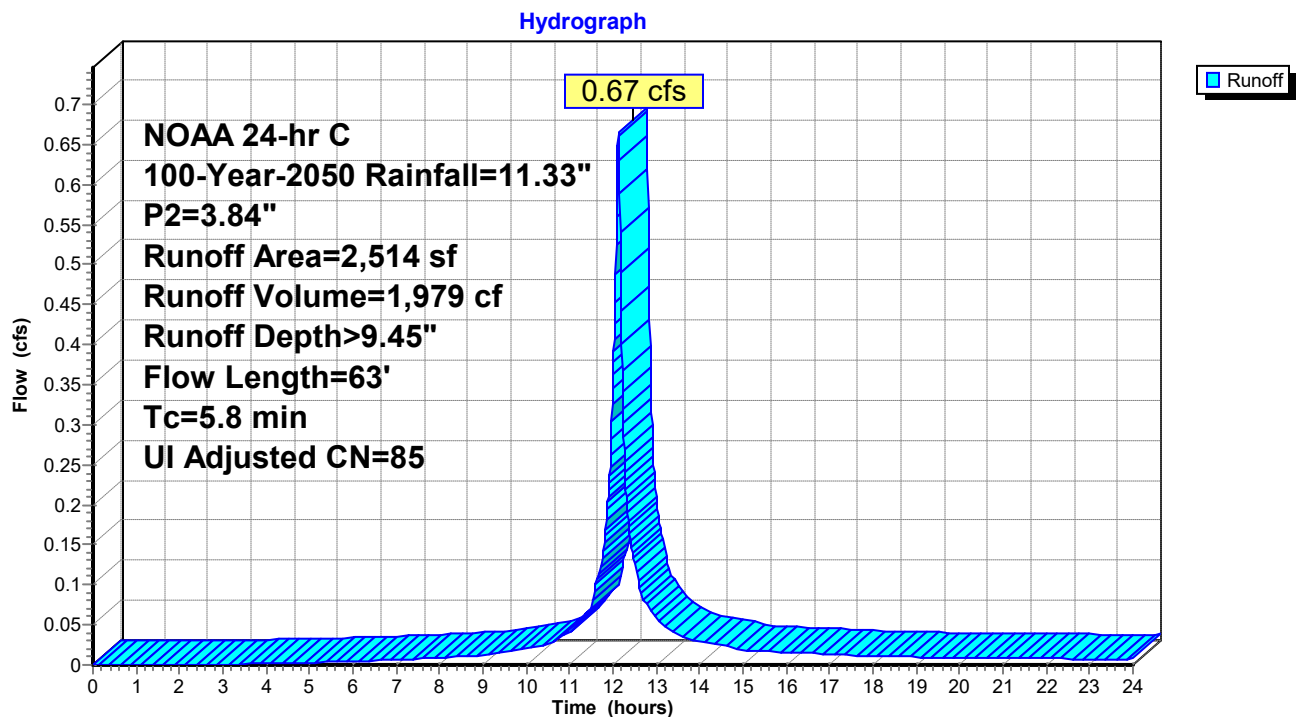
Runoff = 0.67 cfs @ 12.13 hrs, Volume= 1,979 cf, Depth> 9.45"  
Routed to Reach 300E : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 1,988     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 526       | 98 |     | Unconnected pavement, HSG D     |
| 2,514     | 87 | 85  | Weighted Average, UI Adjusted   |
| 1,988     |    |     | 79.08% Pervious Area            |
| 526       |    |     | 20.92% Impervious Area          |
| 526       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 5.6      | 28            | 0.0050        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 5.8      | 63            | Total         |                   |                |                                       |

**Subcatchment 311E: Offsite to W Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 312E: Impervious Stadium W to Trench Drains**

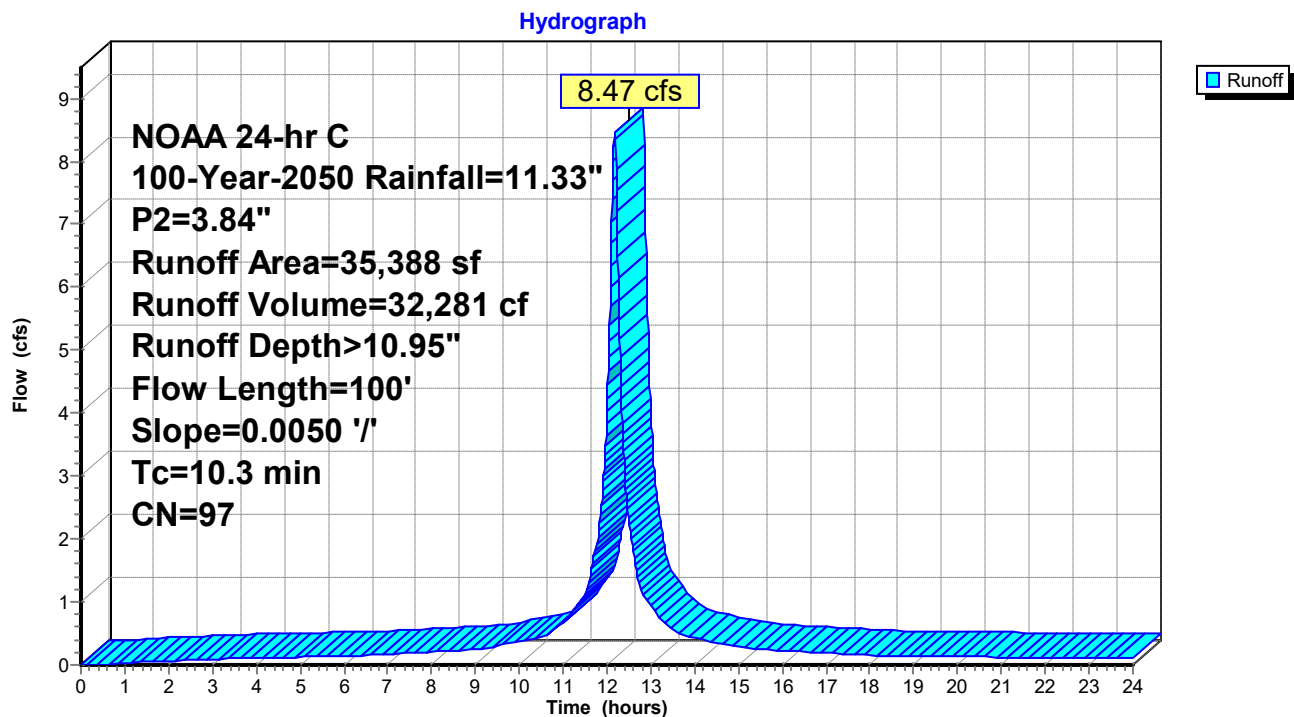
Runoff = 8.47 cfs @ 12.17 hrs, Volume= 32,281 cf, Depth>10.95"  
Routed to Reach 3E : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,653     | 84 | 50-75% Grass cover, Fair, HSG D |
| 32,735    | 98 | Paved parking, HSG D            |
| 35,388    | 97 | Weighted Average                |
| 2,653     |    | 7.50% Pervious Area             |
| 32,735    |    | 92.50% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 312E: Impervious Stadium W to Trench Drains**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 401E: Onsite Impervious to SP4**

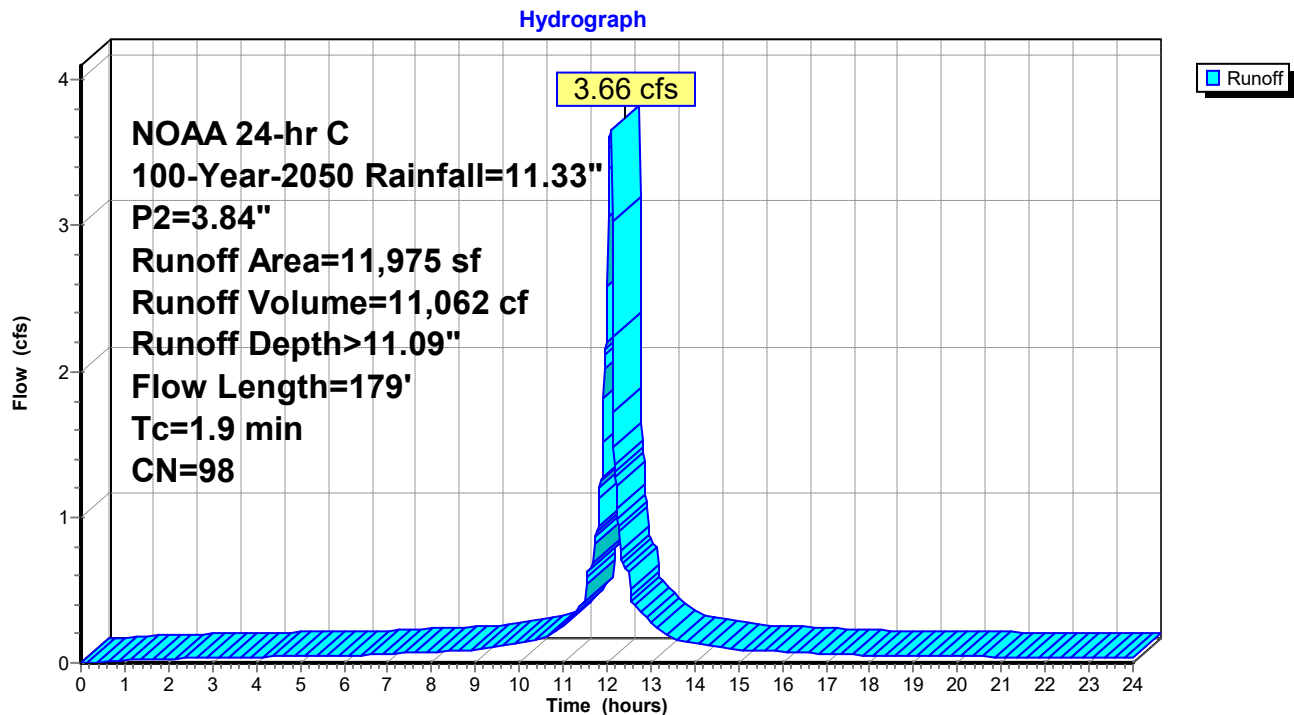
Runoff = 3.66 cfs @ 12.10 hrs, Volume= 11,062 cf, Depth>11.09"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 11,975    | 98 | Paved parking, HSG D    |
| 11,975    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 28            | 0.0050        | 0.67              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"      |
| 0.2      | 35            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps              |
| 1.9      | 179           | Total         |                   |                |                                                                          |

**Subcatchment 401E: Onsite Impervious to SP4**



**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 402E: Onsite Pervious to SP4**

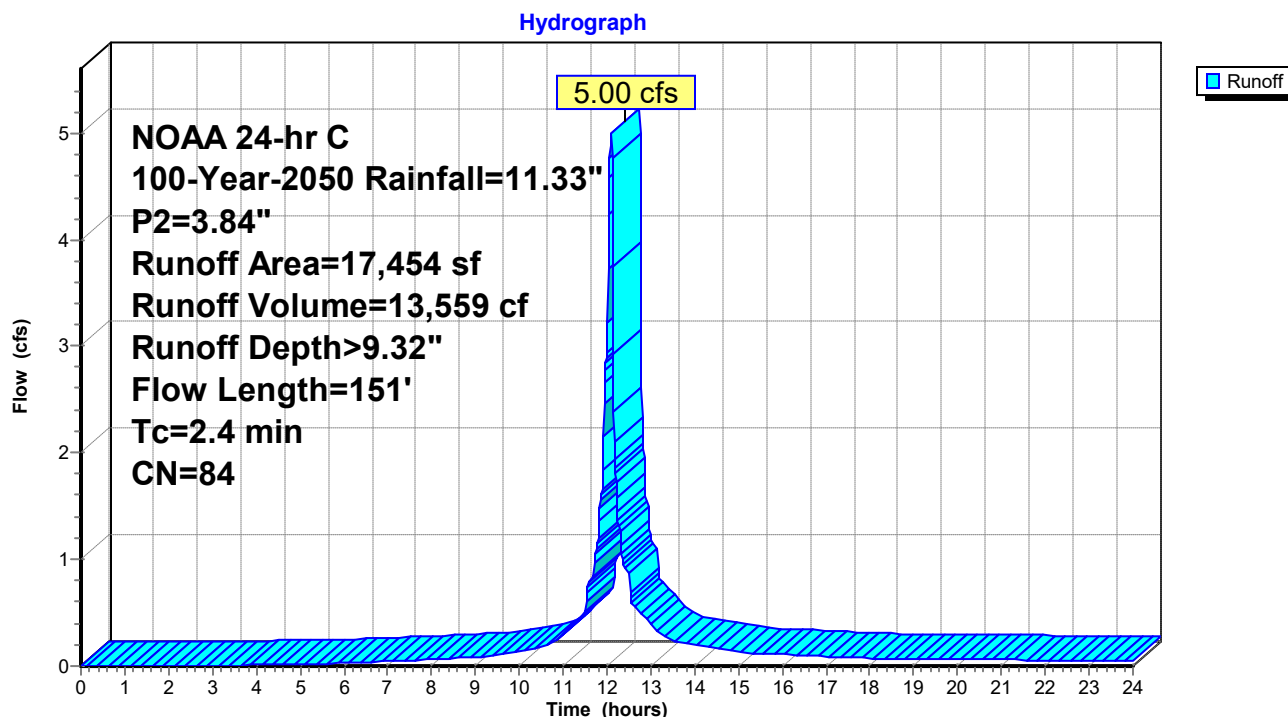
Runoff = 5.00 cfs @ 12.10 hrs, Volume= 13,559 cf, Depth> 9.32"  
Routed to Reach 4E : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 17,454    | 84 | 50-75% Grass cover, Fair, HSG D |
| 17,454    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------|
| 1.0      | 116           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b>               |
| 1.4      | 35            | 0.2500        | 0.41              |                | Paved Kv= 20.3 fps<br><b>Sheet Flow, Sheet Flow</b> |
| 2.4      | 151           | Total         |                   |                | Grass: Short n= 0.150 P2= 3.84"                     |

**Subcatchment 402E: Onsite Pervious to SP4**

**EXISTING PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 403E: Tennis Courts**

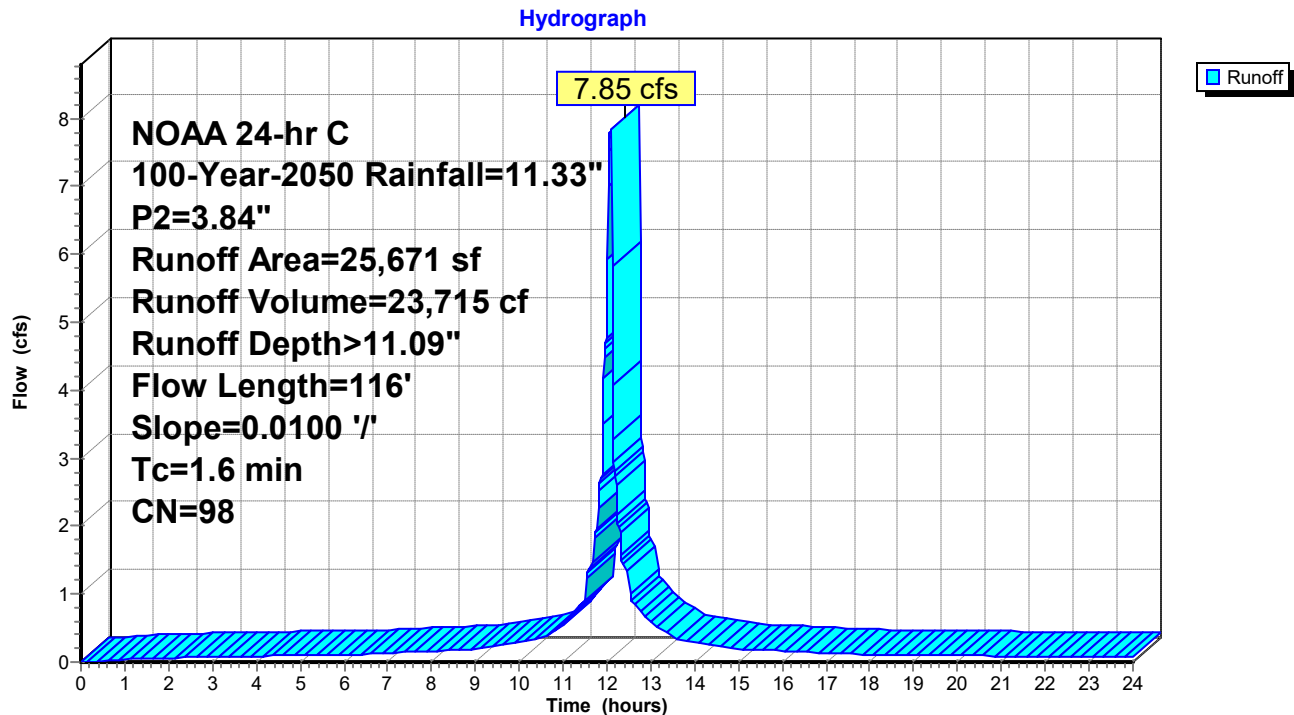
Runoff = 7.85 cfs @ 12.09 hrs, Volume= 23,715 cf, Depth>11.09"  
Routed to Reach 400E : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

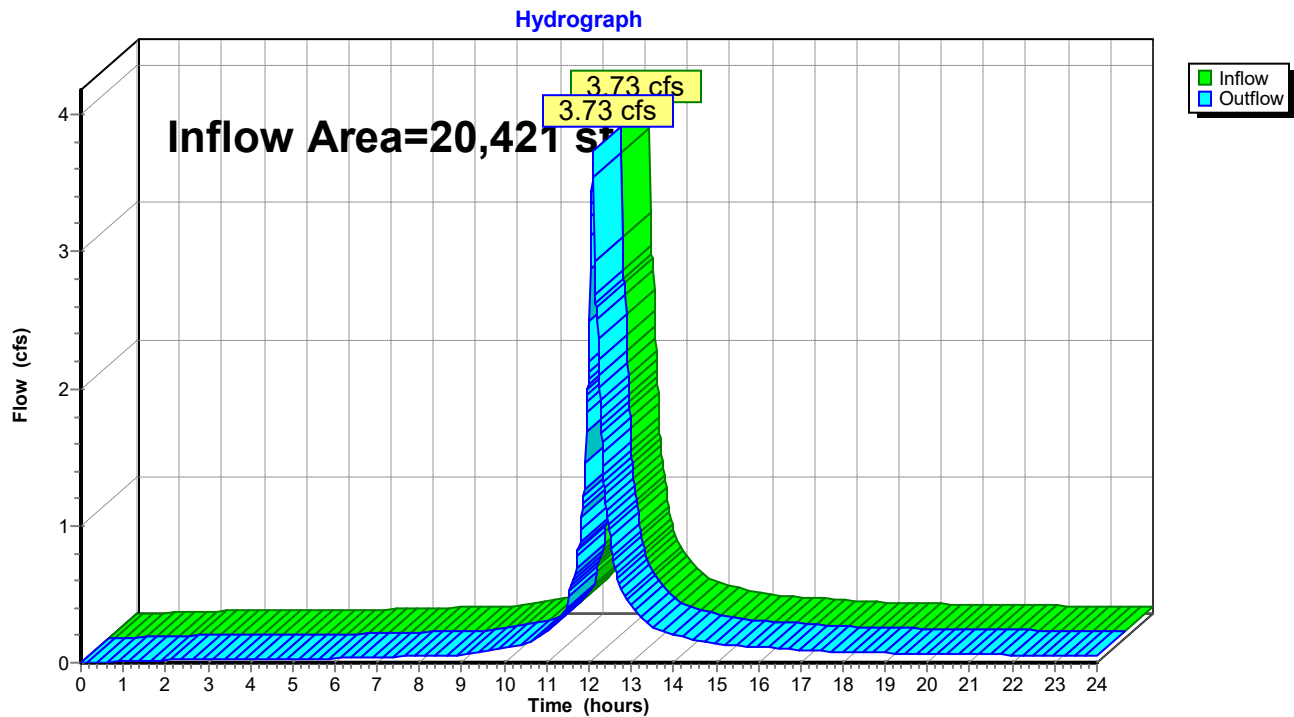
**Subcatchment 403E: Tennis Courts**

### Summary for Reach 1E: ONSITE UNRETAINED

Inflow Area = 20,421 sf, 38.47% Impervious, Inflow Depth > 7.58" for 100-Year-2050 event  
 Inflow = 3.73 cfs @ 12.11 hrs, Volume= 12,900 cf  
 Outflow = 3.73 cfs @ 12.11 hrs, Volume= 12,900 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100E : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1E: ONSITE UNRETAINED

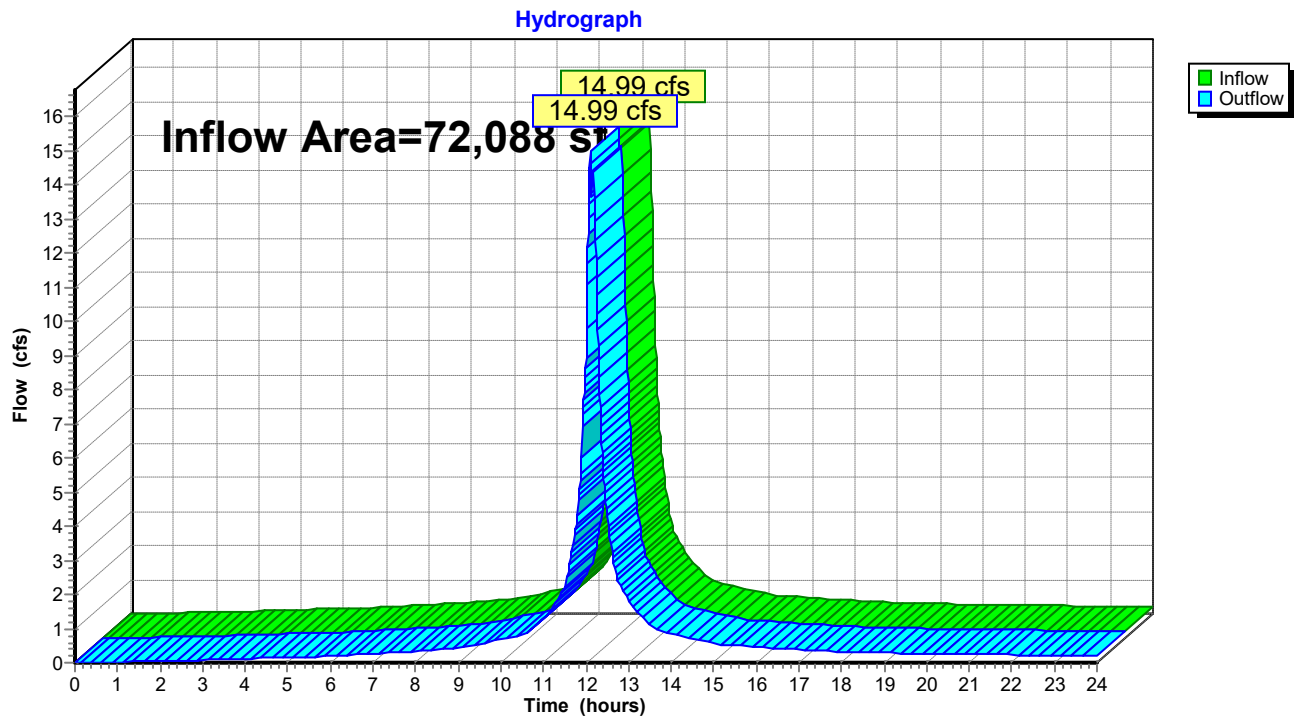


### Summary for Reach 2E: ONSITE EAST

Inflow Area = 72,088 sf, 19.84% Impervious, Inflow Depth > 10.16" for 100-Year-2050 event  
 Inflow = 14.99 cfs @ 12.10 hrs, Volume= 61,015 cf  
 Outflow = 14.99 cfs @ 12.10 hrs, Volume= 61,015 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200E : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2E: ONSITE EAST

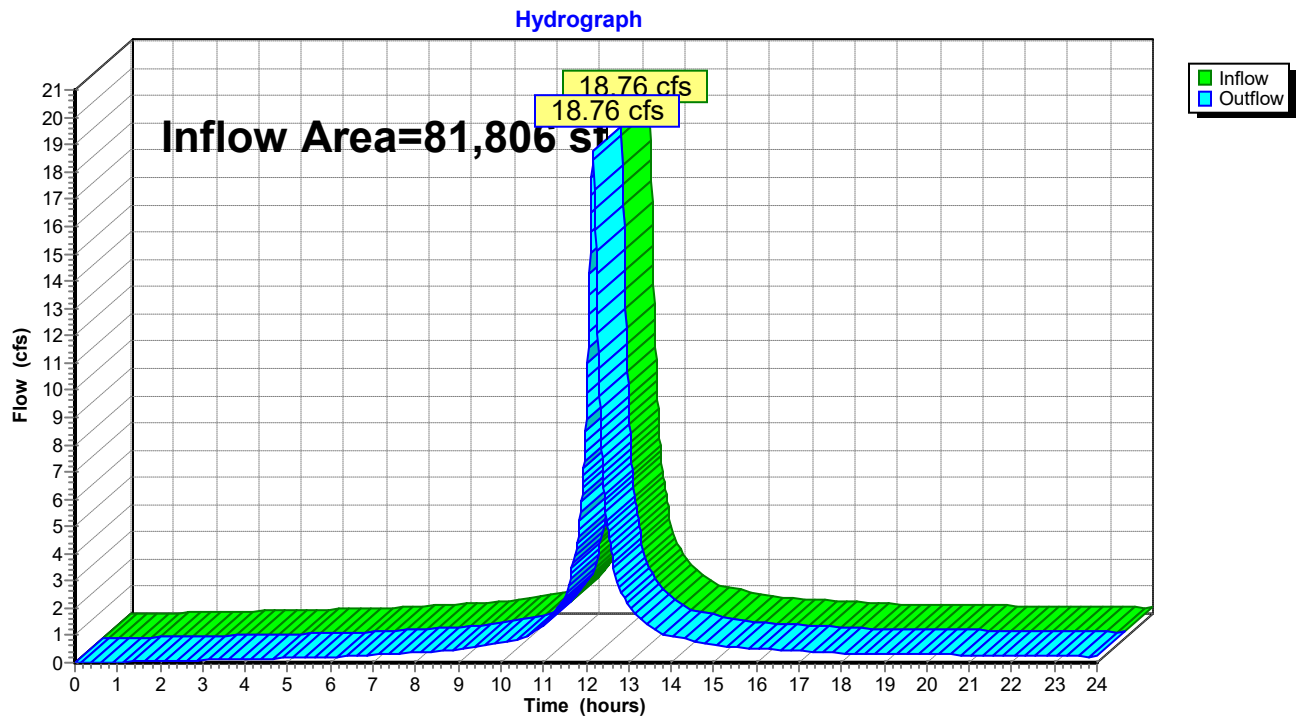


### Summary for Reach 3E: ONSITE WEST

Inflow Area = 81,806 sf, 40.37% Impervious, Inflow Depth > 10.02" for 100-Year-2050 event  
 Inflow = 18.76 cfs @ 12.17 hrs, Volume= 68,317 cf  
 Outflow = 18.76 cfs @ 12.17 hrs, Volume= 68,317 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300E : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3E: ONSITE WEST

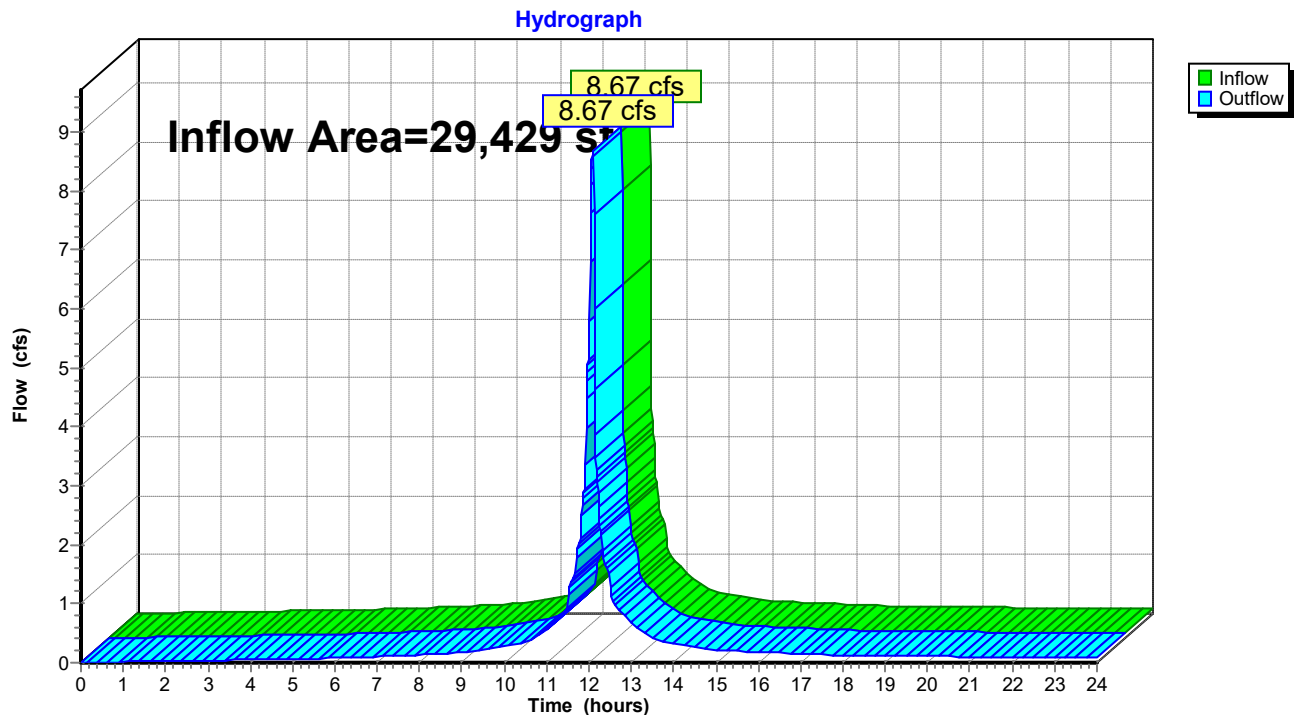


### Summary for Reach 4E: ONSITE TENNIS COURTS

Inflow Area = 29,429 sf, 40.69% Impervious, Inflow Depth > 10.04" for 100-Year-2050 event  
 Inflow = 8.67 cfs @ 12.10 hrs, Volume= 24,621 cf  
 Outflow = 8.67 cfs @ 12.10 hrs, Volume= 24,621 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400E : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4E: ONSITE TENNIS COURTS

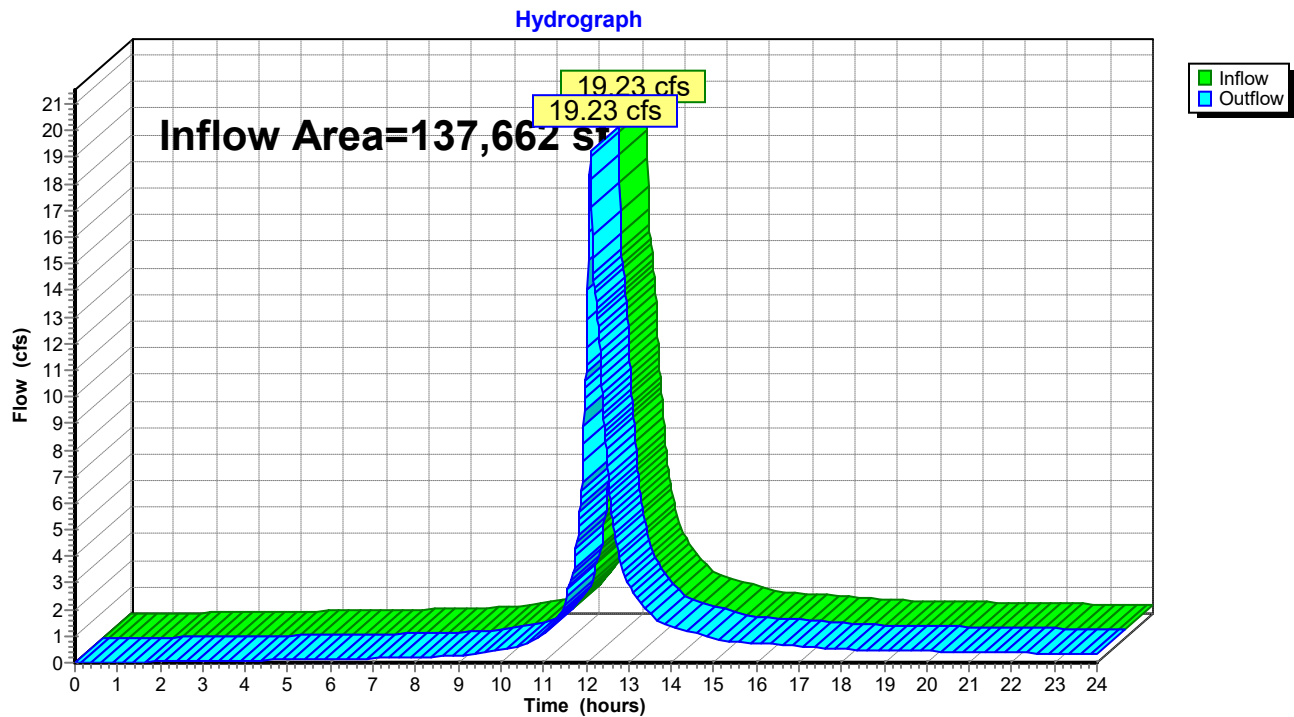


### Summary for Reach 100E: EX INLET 1

Inflow Area = 137,662 sf, 26.94% Impervious, Inflow Depth > 6.72" for 100-Year-2050 event  
 Inflow = 19.23 cfs @ 12.11 hrs, Volume= 77,110 cf  
 Outflow = 19.23 cfs @ 12.11 hrs, Volume= 77,110 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

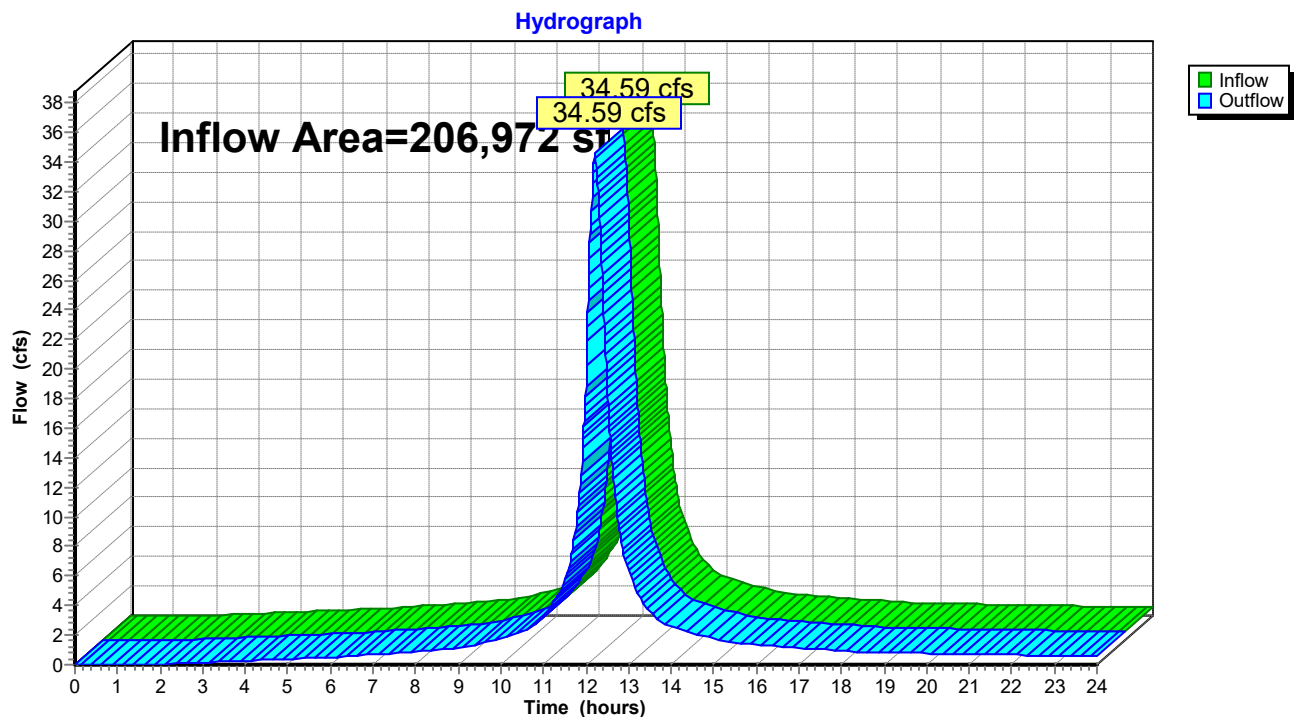
### Reach 100E: EX INLET 1



**Summary for Reach 200E: EX MANHOLE 2**

Inflow Area = 206,972 sf, 8.64% Impervious, Inflow Depth > 10.00" for 100-Year-2050 event  
Inflow = 34.59 cfs @ 12.20 hrs, Volume= 172,397 cf  
Outflow = 34.59 cfs @ 12.20 hrs, Volume= 172,397 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 200E: EX MANHOLE 2**

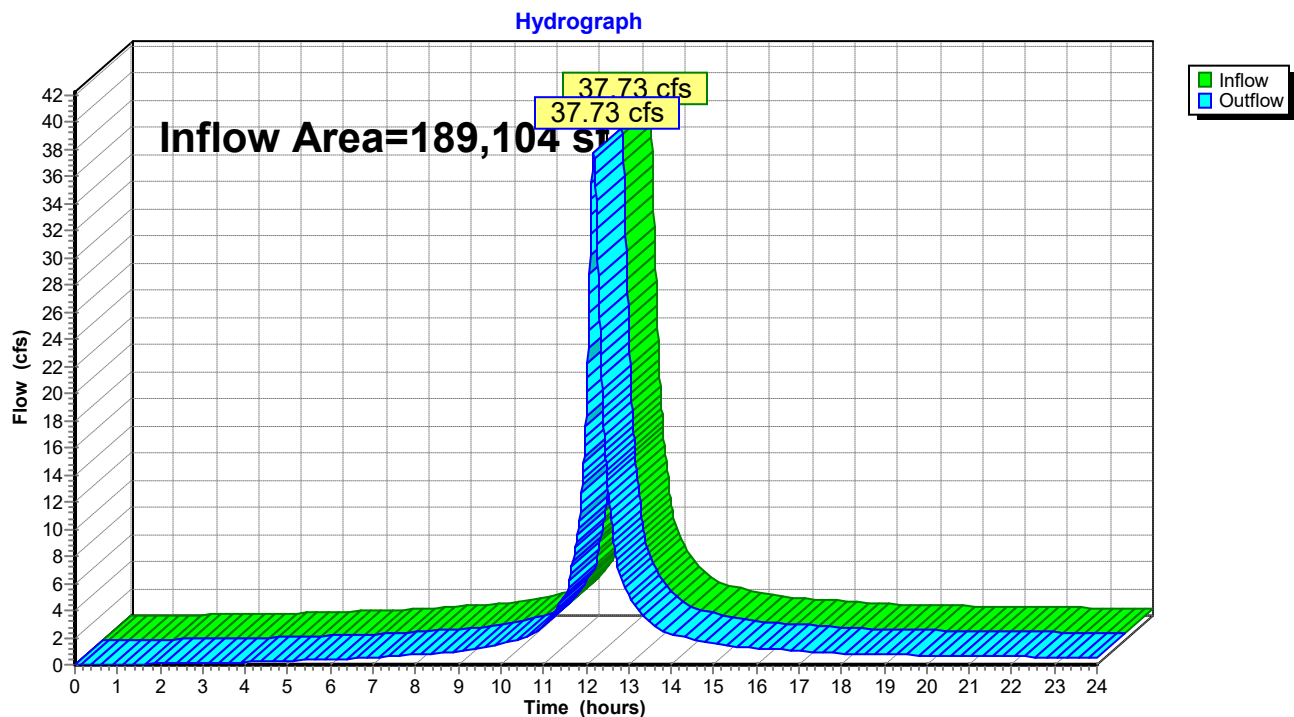


### Summary for Reach 300E: EX INLET 3

Inflow Area = 189,104 sf, 21.50% Impervious, Inflow Depth > 9.67" for 100-Year-2050 event  
 Inflow = 37.73 cfs @ 12.18 hrs, Volume= 152,452 cf  
 Outflow = 37.73 cfs @ 12.18 hrs, Volume= 152,452 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500E : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

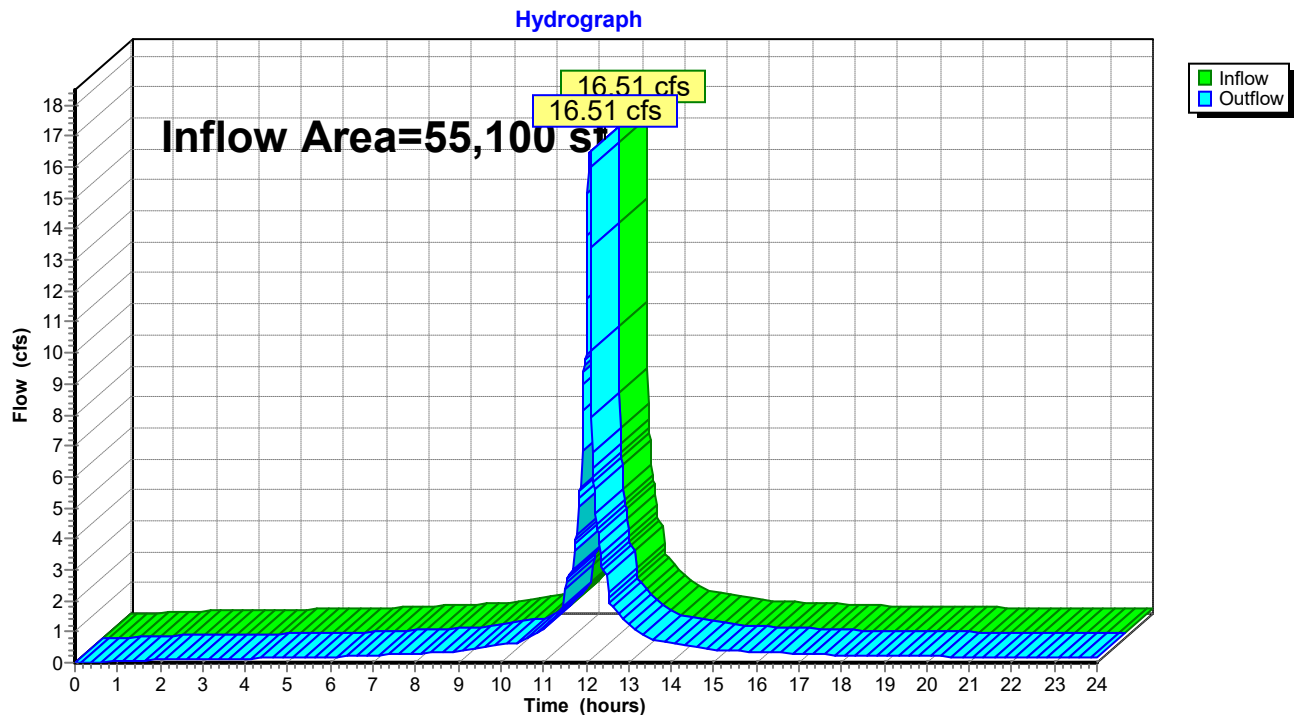
### Reach 300E: EX INLET 3



**Summary for Reach 400E: TENNIS COURTS**

Inflow Area = 55,100 sf, 68.32% Impervious, Inflow Depth > 10.53" for 100-Year-2050 event  
Inflow = 16.51 cfs @ 12.10 hrs, Volume= 48,336 cf  
Outflow = 16.51 cfs @ 12.10 hrs, Volume= 48,336 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500E : STUDY POINT

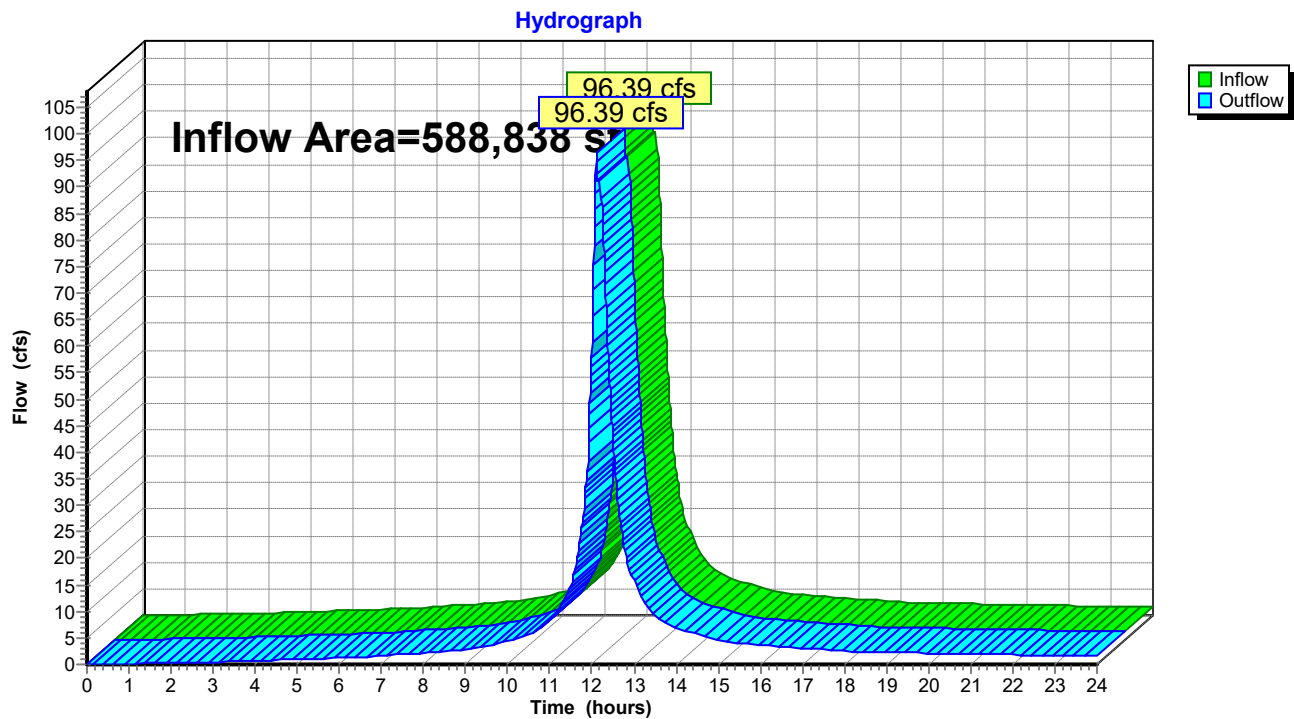
Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 400E: TENNIS COURTS**

**Summary for Reach 500E: STUDY POINT**

Inflow Area = 588,838 sf, 22.63% Impervious, Inflow Depth > 9.18" for 100-Year-2050 event  
Inflow = 96.39 cfs @ 12.11 hrs, Volume= 450,295 cf  
Outflow = 96.39 cfs @ 12.11 hrs, Volume= 450,295 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 500E: STUDY POINT**



## PROPOSED PEDDIE FOOTBALL

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### Rainfall Events Listing (selected events)

| Event# | Event Name    | Storm Type | Curve | Mode    | Duration (hours) | B/B | Depth (inches) | AMC | P2 (inches) |
|--------|---------------|------------|-------|---------|------------------|-----|----------------|-----|-------------|
| 1      | 2-Year-2050   | NOAA 24-hr | C     | Default | 24.00            | 1   | 3.84           | 2   | 3.84        |
| 2      | 10-Year-2050  | NOAA 24-hr | C     | Default | 24.00            | 1   | 5.86           | 2   | 3.84        |
| 3      | 100-Year-2050 | NOAA 24-hr | C     | Default | 24.00            | 1   | 11.33          | 2   | 3.84        |

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>0.50"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=0.46 cfs 2,952 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>0.51"  
Flow Length=186' Tc=9.5 min CN=56 Runoff=0.08 cfs 396 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>3.06"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=2.74 cfs 7,440 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>0.25"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.01 cfs 96 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>0.43"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=0.11 cfs 469 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>3.60"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=0.40 cfs 1,174 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=0.63 cfs 1,954 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.18 cfs 433 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>3.60"  
Flow Length=100' Slope=0.0050 '/' Tc=1.9 min CN=98 Runoff=8.30 cfs 24,234 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>2.66"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=5.99 cfs 26,508 cf

**Subcatchment 206P: Onsite to E Field Drain** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>2.76"  
Flow Length=504' Tc=11.6 min UI Adjusted CN=90 Runoff=0.45 cfs 1,582 cf

**Subcatchment 207P: Offsite Impervious to** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>3.61"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.31 cfs 916 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>2.22"  
Flow Length=686' Tc=17.3 min CN=84 Runoff=2.61 cfs 10,445 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>2.40"  
Flow Length=62' Slope=0.0100 '/' Tc=8.1 min UI Adjusted CN=86 Runoff=0.43 cfs 1,295 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>2.22"  
Flow Length=654' Tc=12.5 min CN=84 Runoff=1.38 cfs 4,819 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=370' Tc=9.0 min CN=84 Runoff=0.11 cfs 349 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Subcatchment 305P: Offsite to Existing W** Runoff Area=13,621 sf 2.35% Impervious Runoff Depth>2.22"  
Flow Length=467' Tc=12.4 min CN=84 Runoff=0.73 cfs 2,524 cf

**Subcatchment 306P: Onsite to W Existing** Runoff Area=425 sf 0.00% Impervious Runoff Depth>2.23"  
Flow Length=32' Slope=0.0100 '/' Tc=4.7 min CN=84 Runoff=0.03 cfs 79 cf

**Subcatchment 308P: Offsite to Drain 4** Runoff Area=1,297 sf 38.55% Impervious Runoff Depth>2.67"  
Flow Length=22' Slope=0.0100 '/' Tc=1.6 min CN=89 Runoff=0.11 cfs 289 cf

**Subcatchment 309P: Offsite Building to** Runoff Area=8,251 sf 81.26% Impervious Runoff Depth>3.27"  
Flow Length=168' Tc=4.4 min CN=95 Runoff=0.78 cfs 2,249 cf

**Subcatchment 310P: Impervious Stadium** Runoff Area=81,430 sf 98.43% Impervious Runoff Depth>3.60"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=98 Runoff=6.56 cfs 24,419 cf

**Subcatchment 311P: Onsite to New Inlet** Runoff Area=4,364 sf 24.15% Impervious Runoff Depth>2.40"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min UI Adjusted CN=86 Runoff=0.27 cfs 871 cf

**Subcatchment 312P: Offsite to Yard Inlet** Runoff Area=3,440 sf 20.73% Impervious Runoff Depth>2.31"  
Flow Length=48' Tc=5.2 min UI Adjusted CN=85 Runoff=0.25 cfs 663 cf

**Subcatchment 313P: Offsite to Yard Inlet** Runoff Area=7,395 sf 51.36% Impervious Runoff Depth>2.86"  
Flow Length=46' Tc=4.9 min CN=91 Runoff=0.64 cfs 1,763 cf

**Subcatchment 401P: Onsite to SP4** Runoff Area=3,978 sf 83.13% Impervious Runoff Depth>3.38"  
Flow Length=22' Slope=0.1100 '/' Tc=0.2 min CN=96 Runoff=0.40 cfs 1,121 cf

**Subcatchment 403P: Tennis Courts** Runoff Area=25,671 sf 100.00% Impervious Runoff Depth>3.60"  
Flow Length=116' Slope=0.0100 '/' Tc=1.6 min CN=98 Runoff=2.64 cfs 7,711 cf

**Reach 1P: ONSITE UNRETAINED** Inflow=0.44 cfs 1,570 cf  
Outflow=0.44 cfs 1,570 cf

**Reach 2P: ONSITE EAST** Inflow=3.68 cfs 28,082 cf  
Outflow=3.68 cfs 28,082 cf

**Reach 3P: ONSITE WEST** Inflow=4.13 cfs 40,152 cf  
Outflow=4.13 cfs 40,152 cf

**Reach 4P: ONSITE TENNIS COURTS** Inflow=0.40 cfs 1,121 cf  
Outflow=0.40 cfs 1,121 cf

**Reach 100P: EX INLET 1** Inflow=3.31 cfs 12,527 cf  
Outflow=3.31 cfs 12,527 cf

**Reach 200P: EX MANHOLE 2** Inflow=9.49 cfs 54,590 cf  
Outflow=9.49 cfs 54,590 cf

**Reach 300P: EX INLET 3** Inflow=6.26 cfs 49,743 cf  
Outflow=6.26 cfs 49,743 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Reach 400P: TENNIS COURTS**

Inflow=3.04 cfs 8,832 cf

Outflow=3.04 cfs 8,832 cf

**Reach 500P: STUDY POINT**

Inflow=18.37 cfs 125,693 cf

Outflow=18.37 cfs 125,693 cf

**Pond 204P: Cultec East**

Peak Elev=100.43' Storage=8,214 cf Inflow=9.24 cfs 27,537 cf

Outflow=3.23 cfs 26,500 cf

**Pond 208P: Cultec West**

Peak Elev=99.86' Storage=6,505 cf Inflow=10.01 cfs 39,456 cf

Outflow=4.07 cfs 39,436 cf



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 0.46 cfs @ 12.35 hrs, Volume= 2,952 cf, Depth> 0.50"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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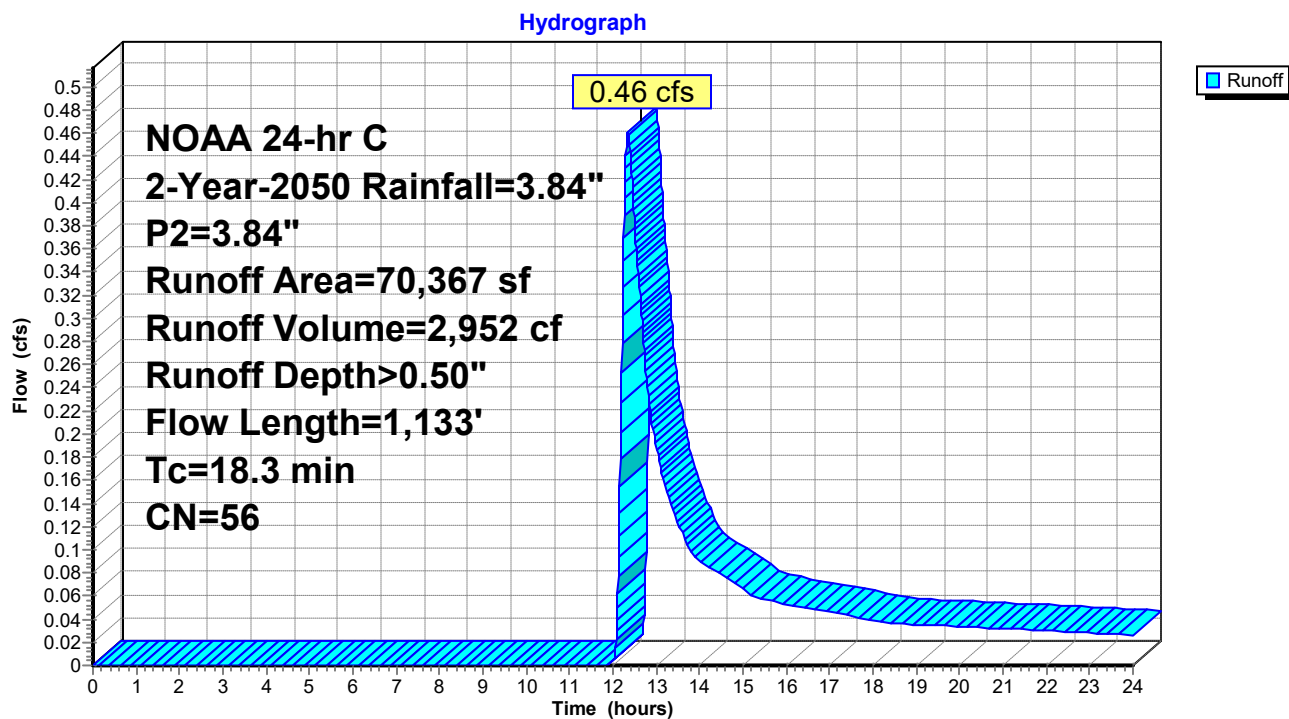
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 101P: Offsite Pervious SE



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

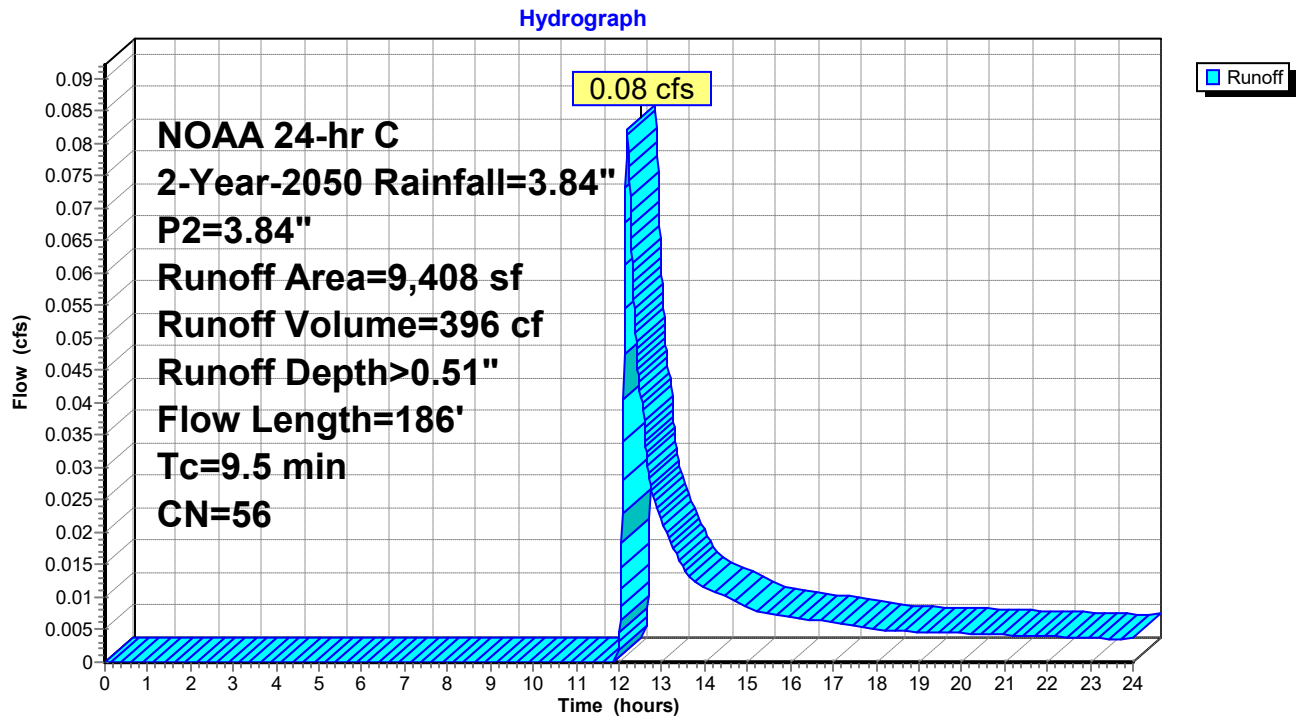
Runoff = 0.08 cfs @ 12.20 hrs, Volume= 396 cf, Depth> 0.51"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 9.5      | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

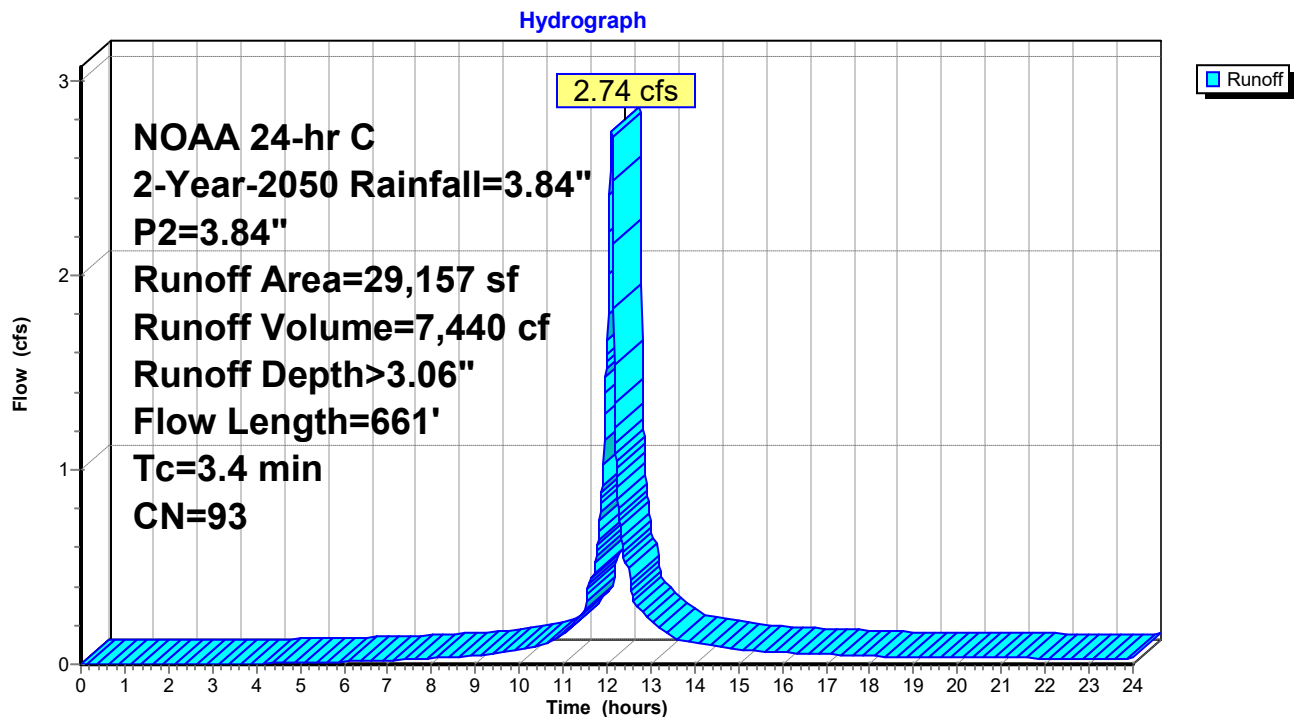
Runoff = 2.74 cfs @ 12.11 hrs, Volume= 7,440 cf, Depth> 3.06"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 104P: Yard Drains**

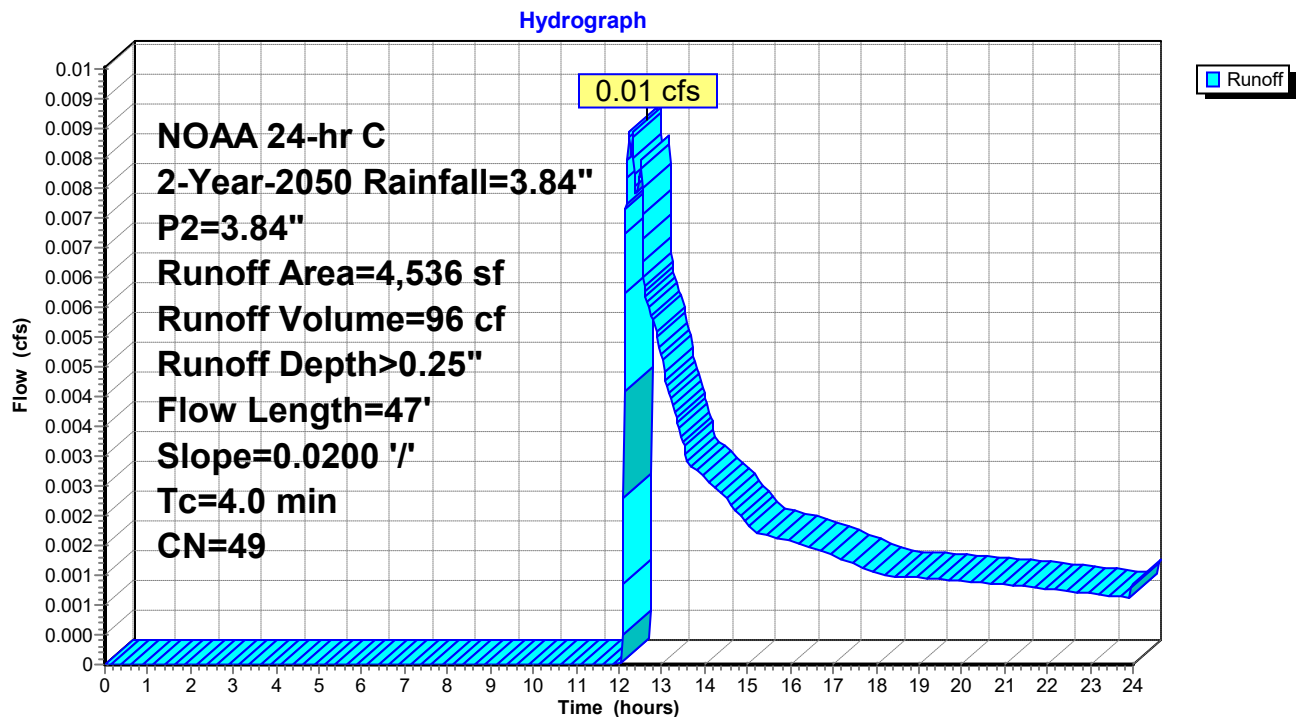
Runoff = 0.01 cfs @ 12.32 hrs, Volume= 96 cf, Depth> 0.25"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 0.11 cfs @ 12.14 hrs, Volume= 469 cf, Depth> 0.43"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |

# PROPOSED PEDDIE FOOTBALL

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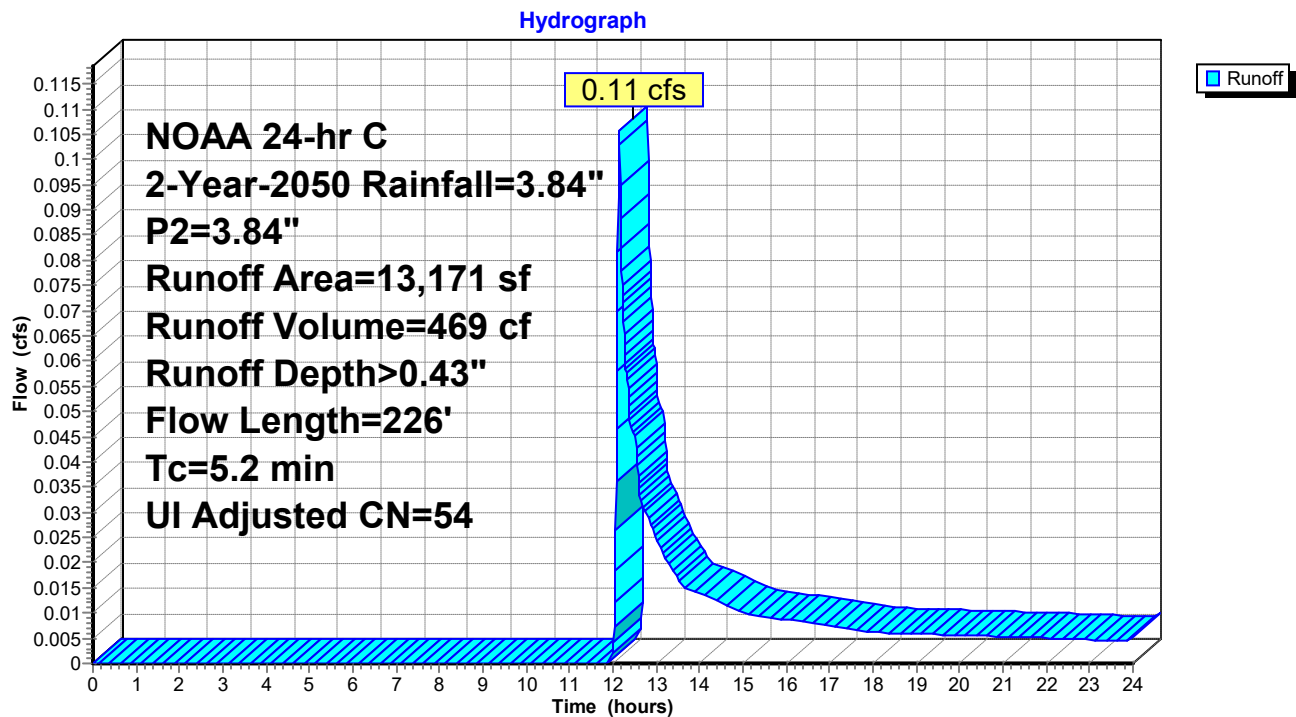
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 105P: Low Drains



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

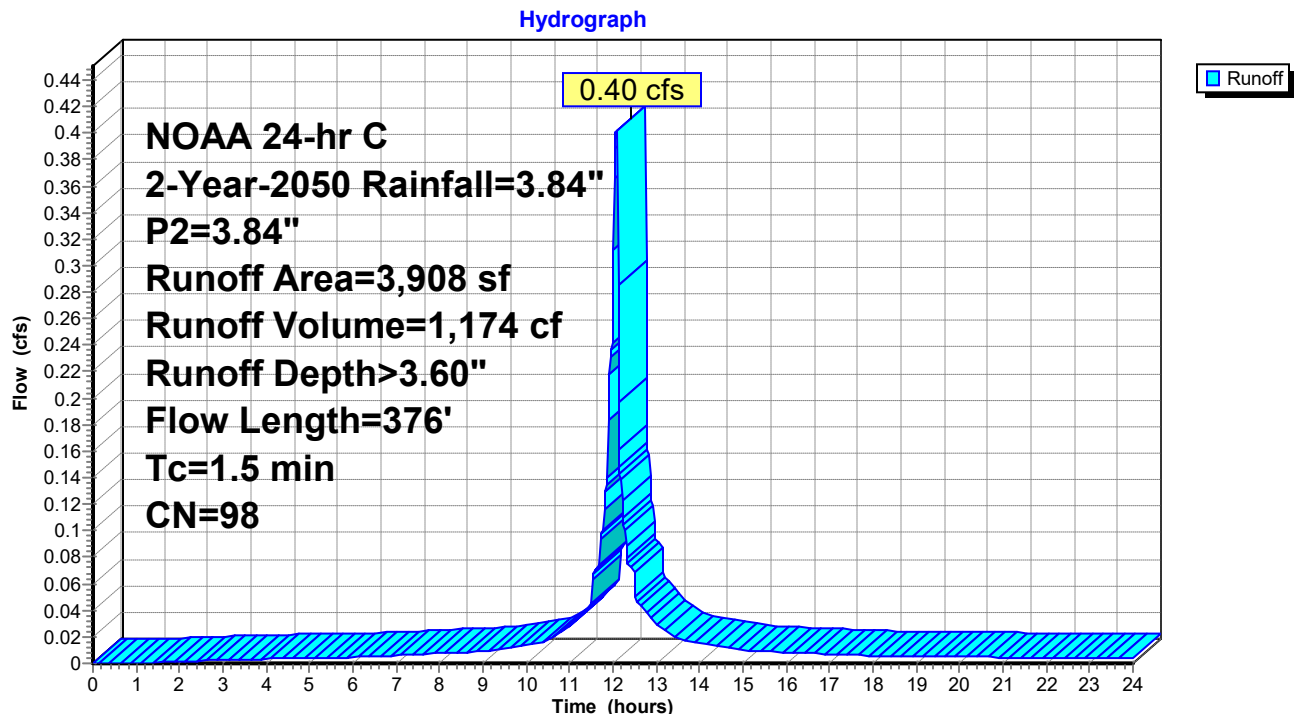
Runoff = 0.40 cfs @ 12.10 hrs, Volume= 1,174 cf, Depth> 3.60"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

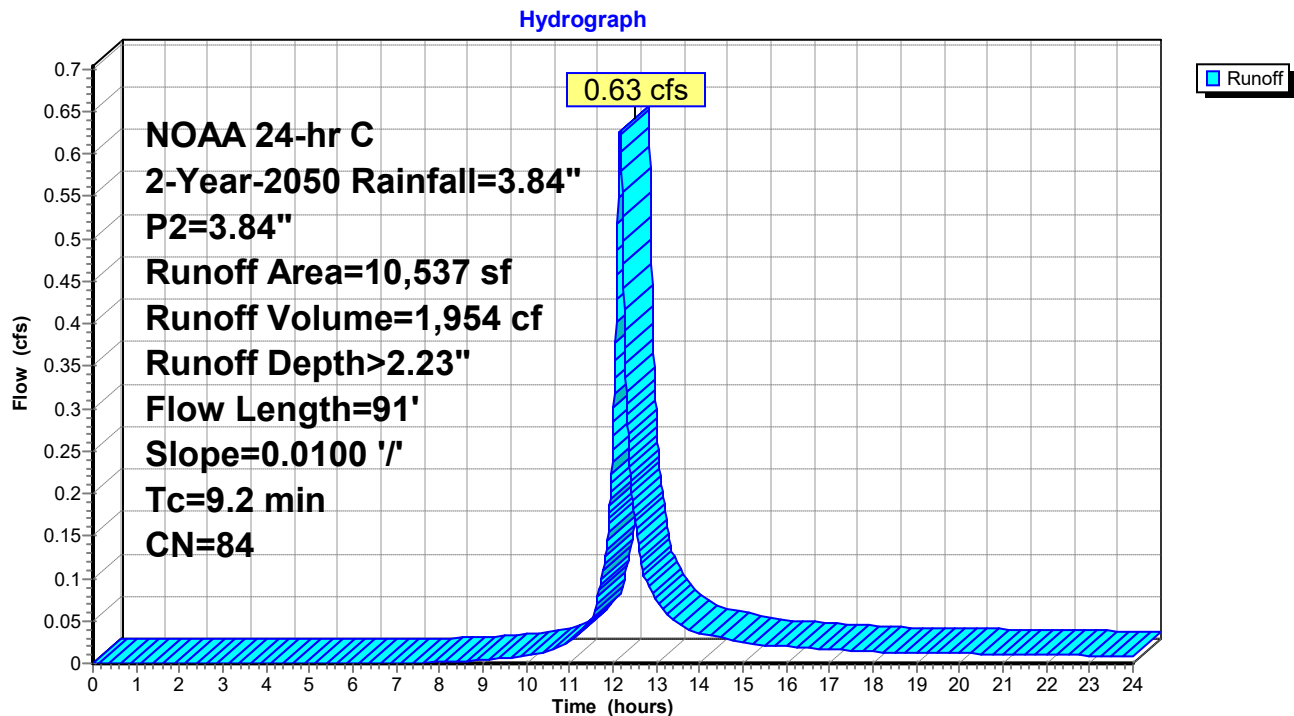
Runoff = 0.63 cfs @ 12.17 hrs, Volume= 1,954 cf, Depth> 2.23"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

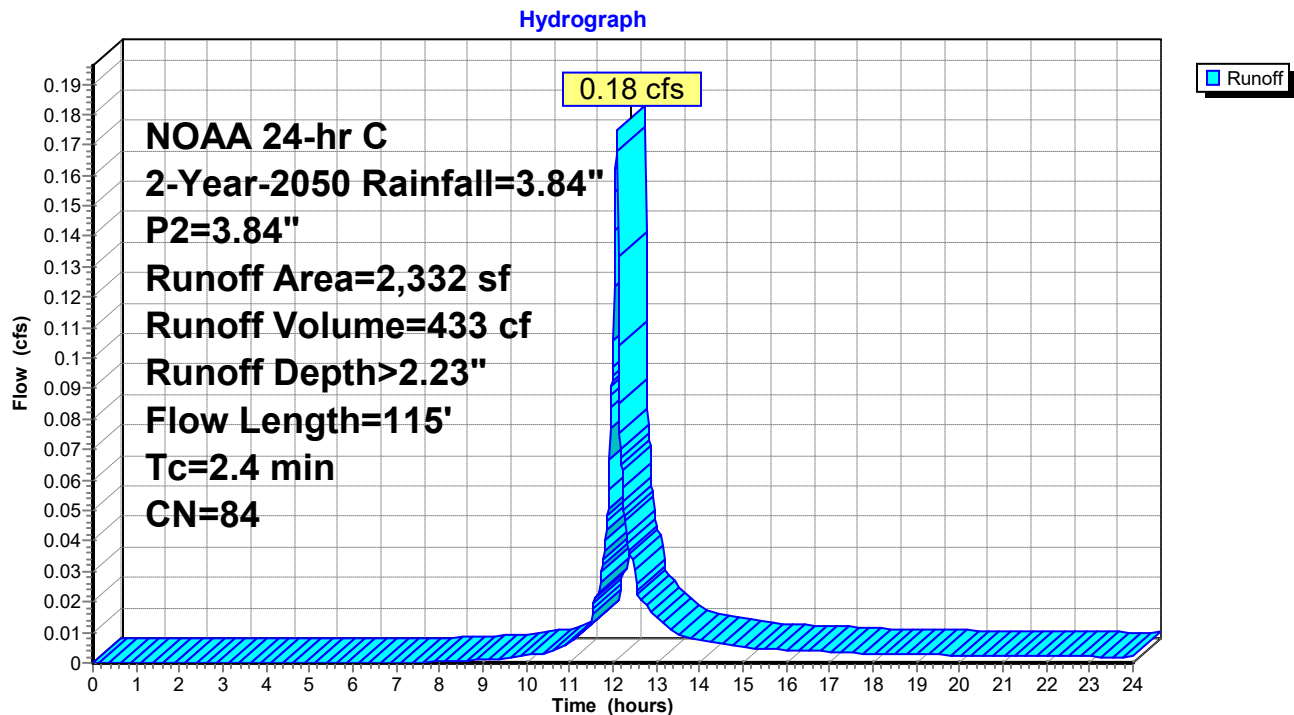
Runoff = 0.18 cfs @ 12.10 hrs, Volume= 433 cf, Depth> 2.23"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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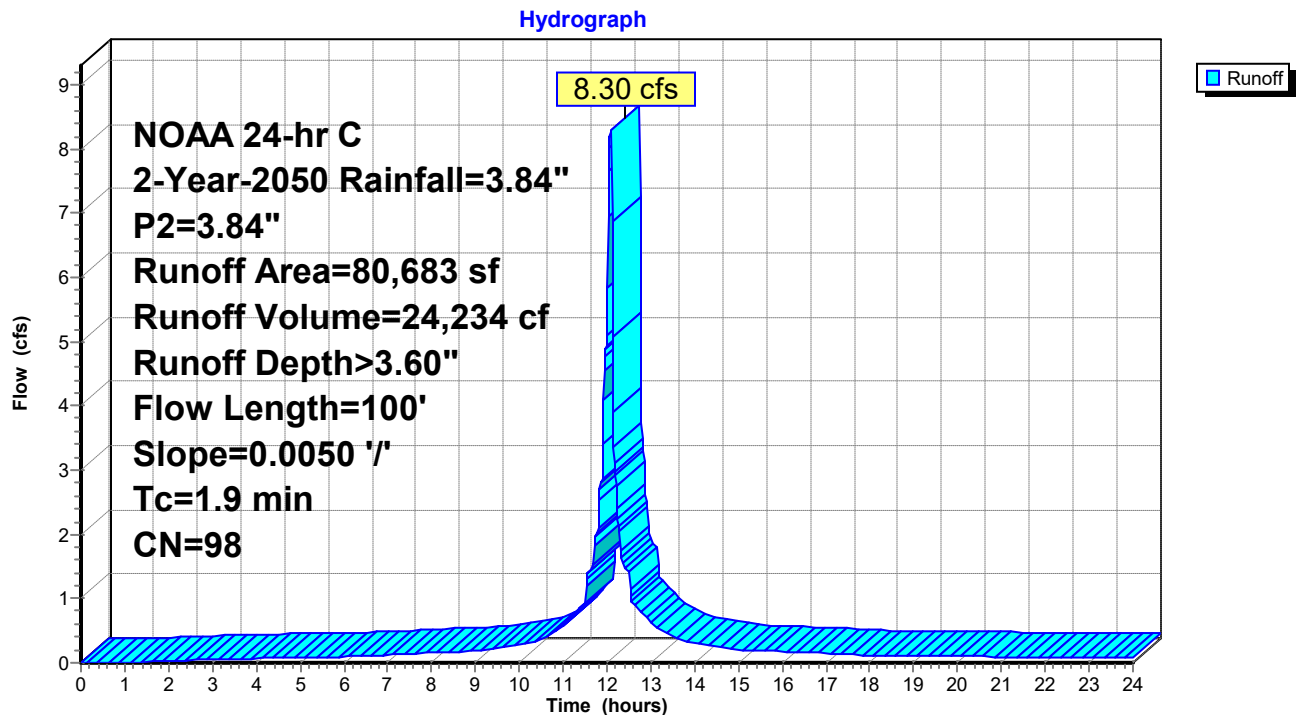
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 8.30 cfs @ 12.10 hrs, Volume= 24,234 cf, Depth> 3.60"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 1.9                                | 100           | 0.0050        | 0.87              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 5.99 cfs @ 12.31 hrs, Volume= 26,508 cf, Depth> 2.66"  
 Routed to Reach 200P : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

Prepared by Crest Engineering

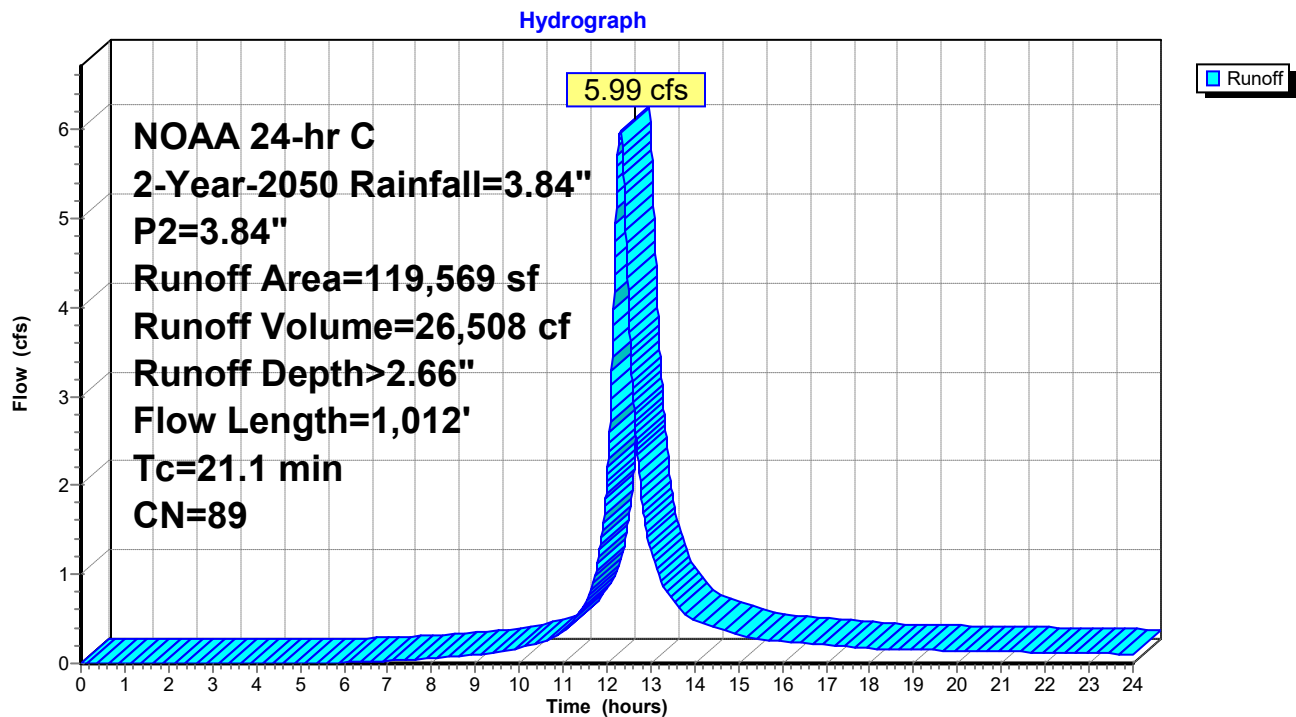
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 205P: Offsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 0.45 cfs @ 12.19 hrs, Volume= 1,582 cf, Depth> 2.76"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

Prepared by Crest Engineering

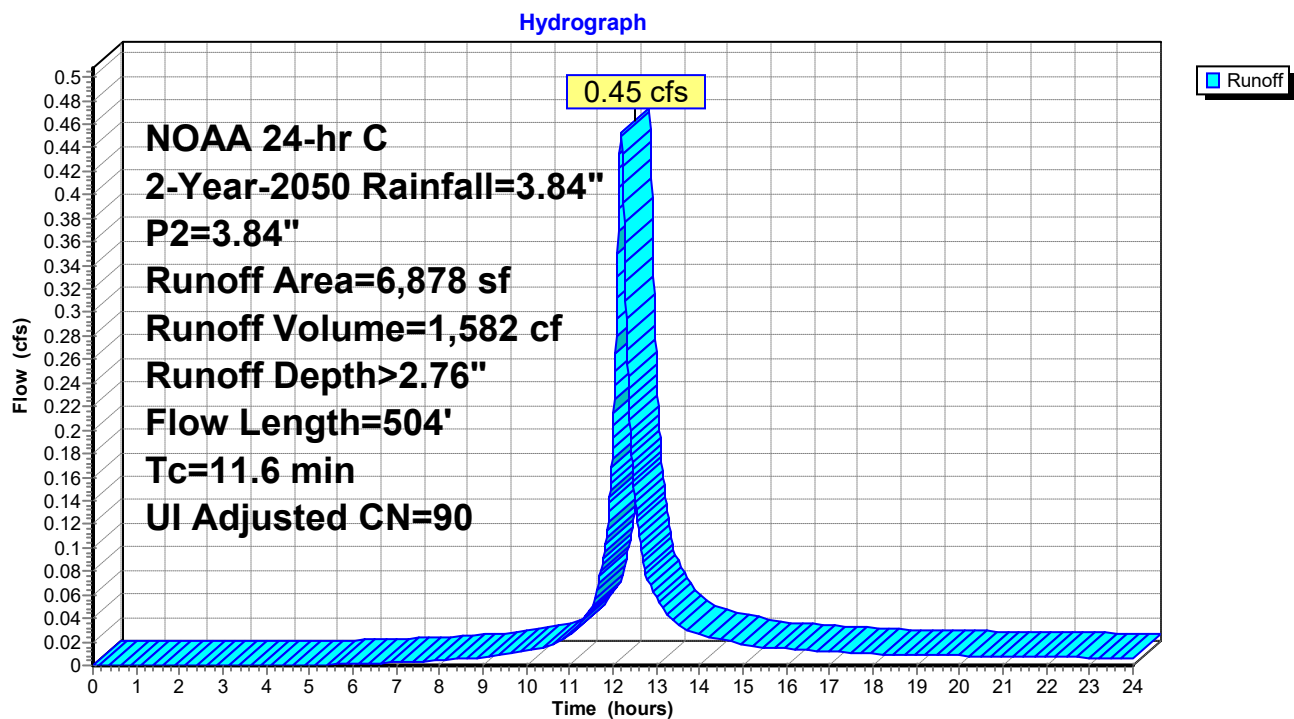
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 206P: Onsite to E Field Drain



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Summary for Subcatchment 207P: Offsite Impervious to Trench Drain

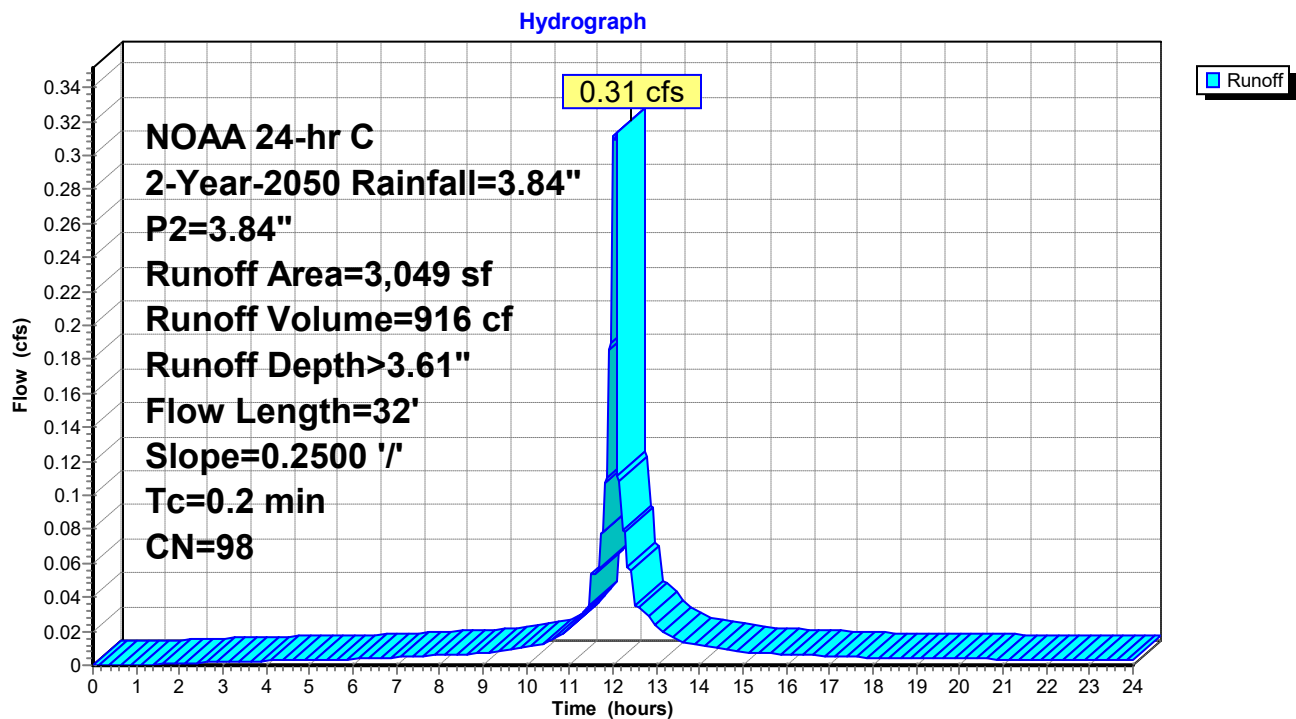
Runoff = 0.31 cfs @ 12.09 hrs, Volume= 916 cf, Depth> 3.61"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.2                                | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

## Subcatchment 207P: Offsite Impervious to Trench Drain





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 2.61 cfs @ 12.26 hrs, Volume= 10,445 cf, Depth> 2.22"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 17.3     | 686           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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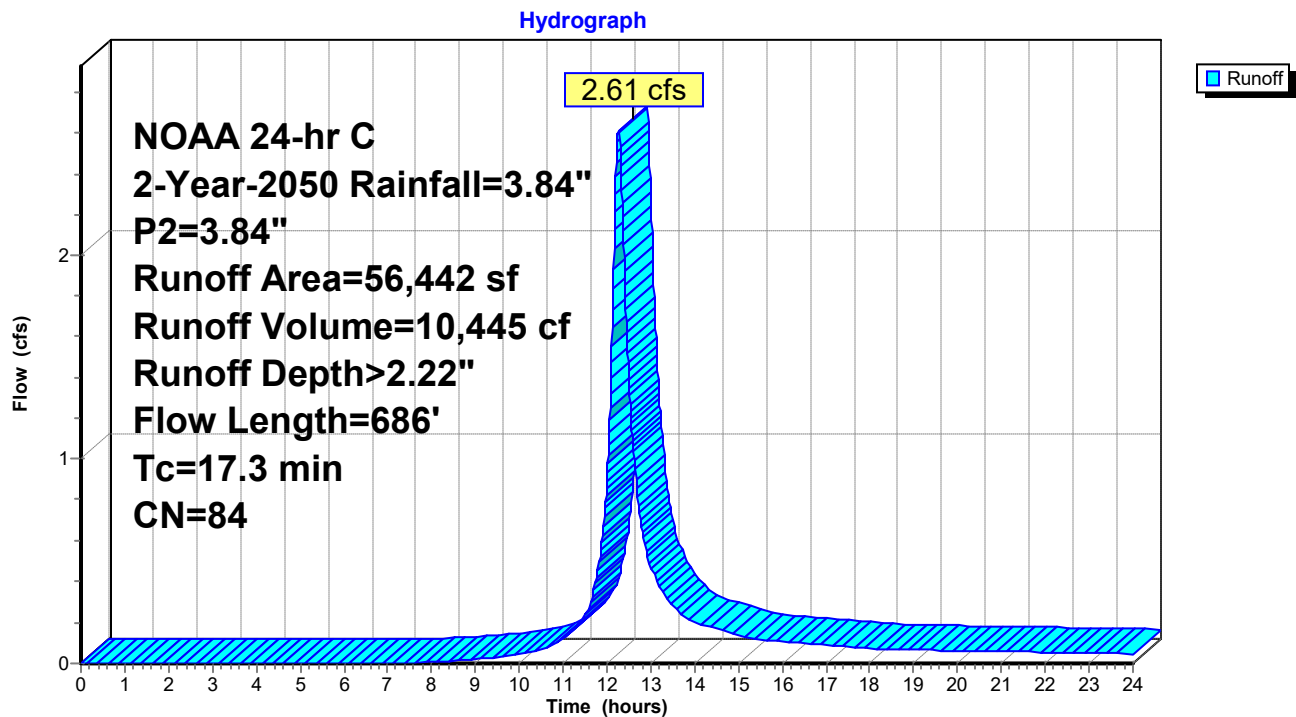
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 301P: Offsite to W Field Drain 1



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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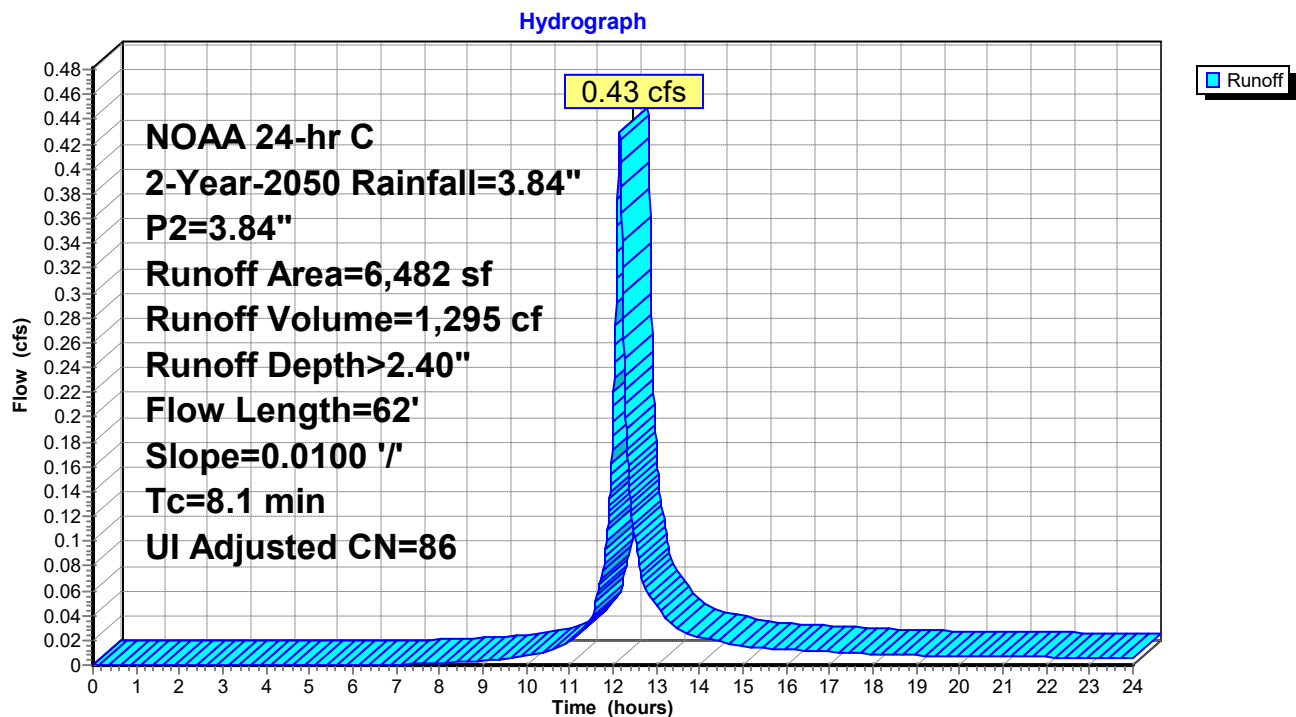
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 0.43 cfs @ 12.15 hrs, Volume= 1,295 cf, Depth> 2.40"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 302P: Onsite to W Field Drain 1**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 1.38 cfs @ 12.21 hrs, Volume= 4,819 cf, Depth> 2.22"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 12.5     | 654           | Total         |                   |                |                                                                                        |

# PROPOSED PEDDIE FOOTBALL

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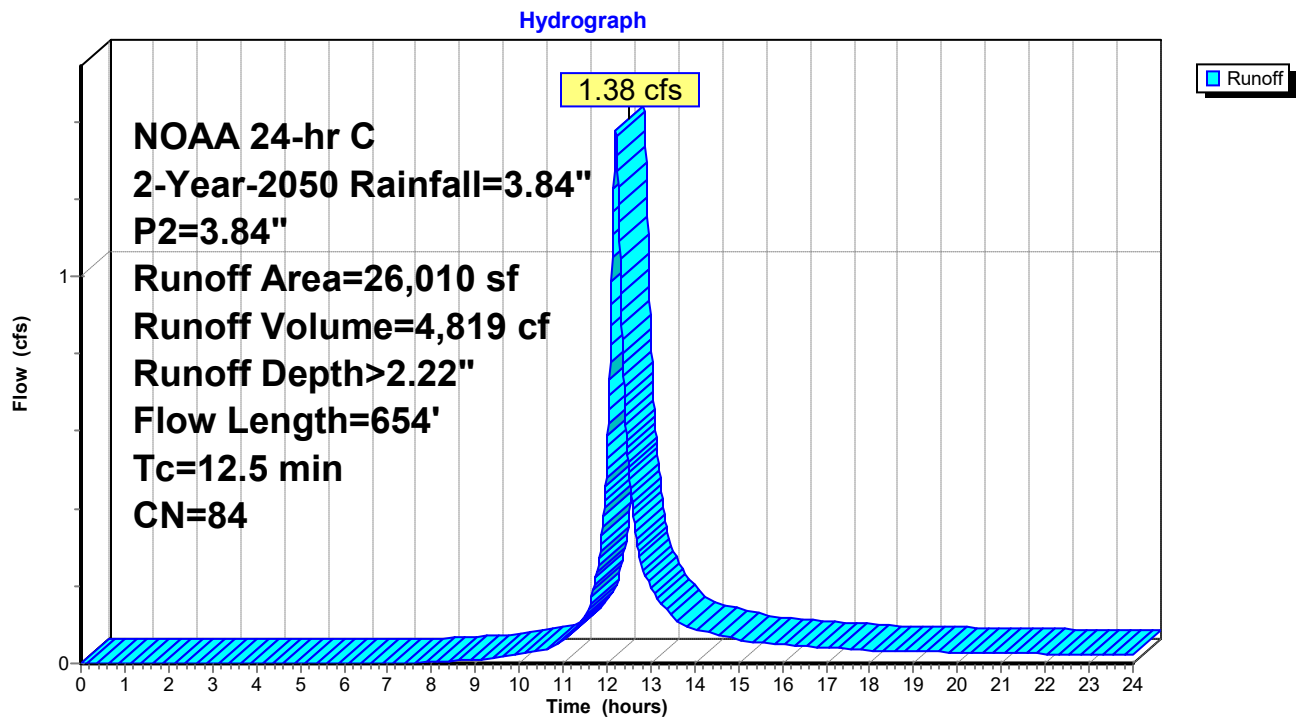
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 303P: Offsite to W New Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

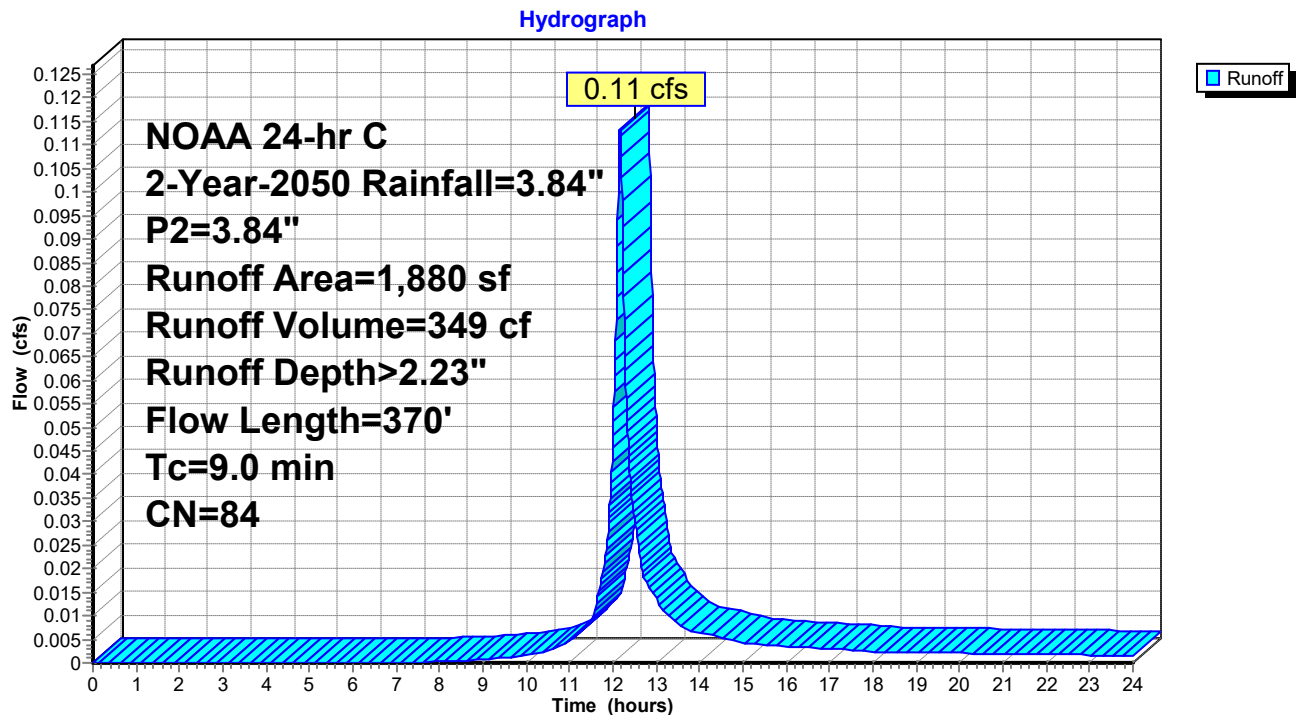
Runoff = 0.11 cfs @ 12.16 hrs, Volume= 349 cf, Depth> 2.23"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.0      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 0.73 cfs @ 12.20 hrs, Volume= 2,524 cf, Depth> 2.22"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

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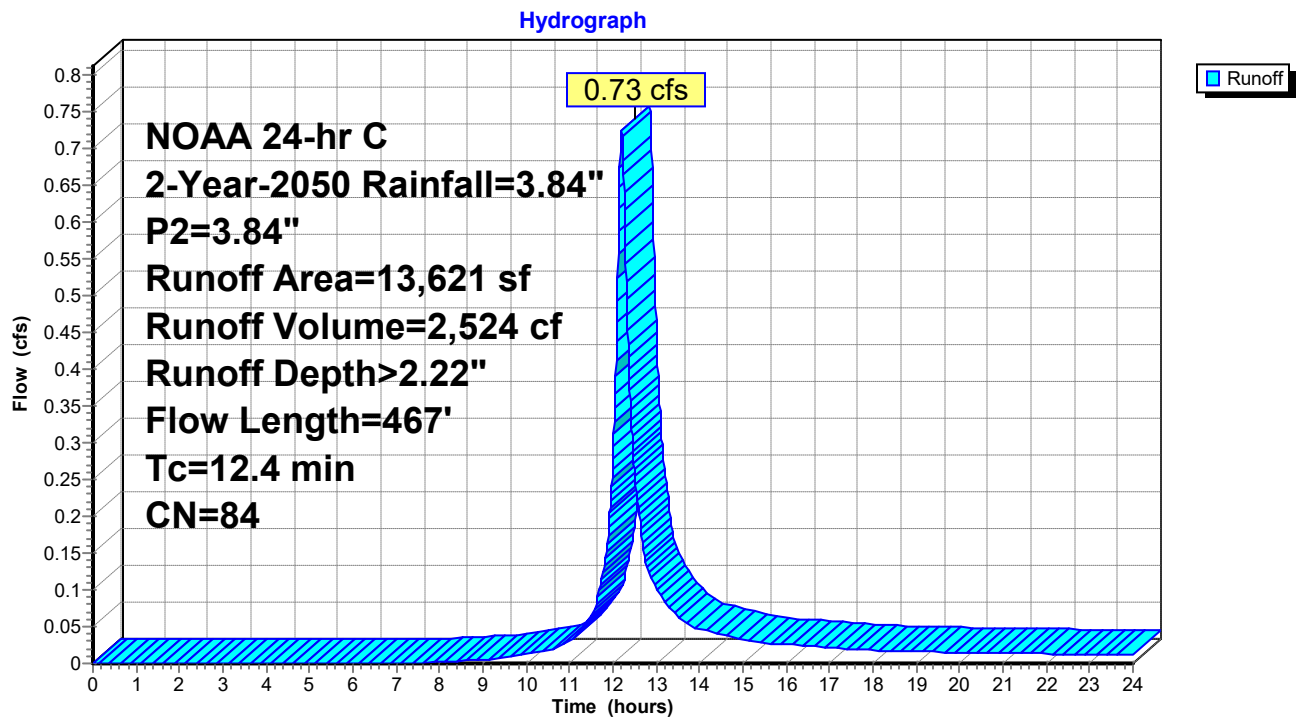
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NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Subcatchment 305P: Offsite to Existing W Field Drain





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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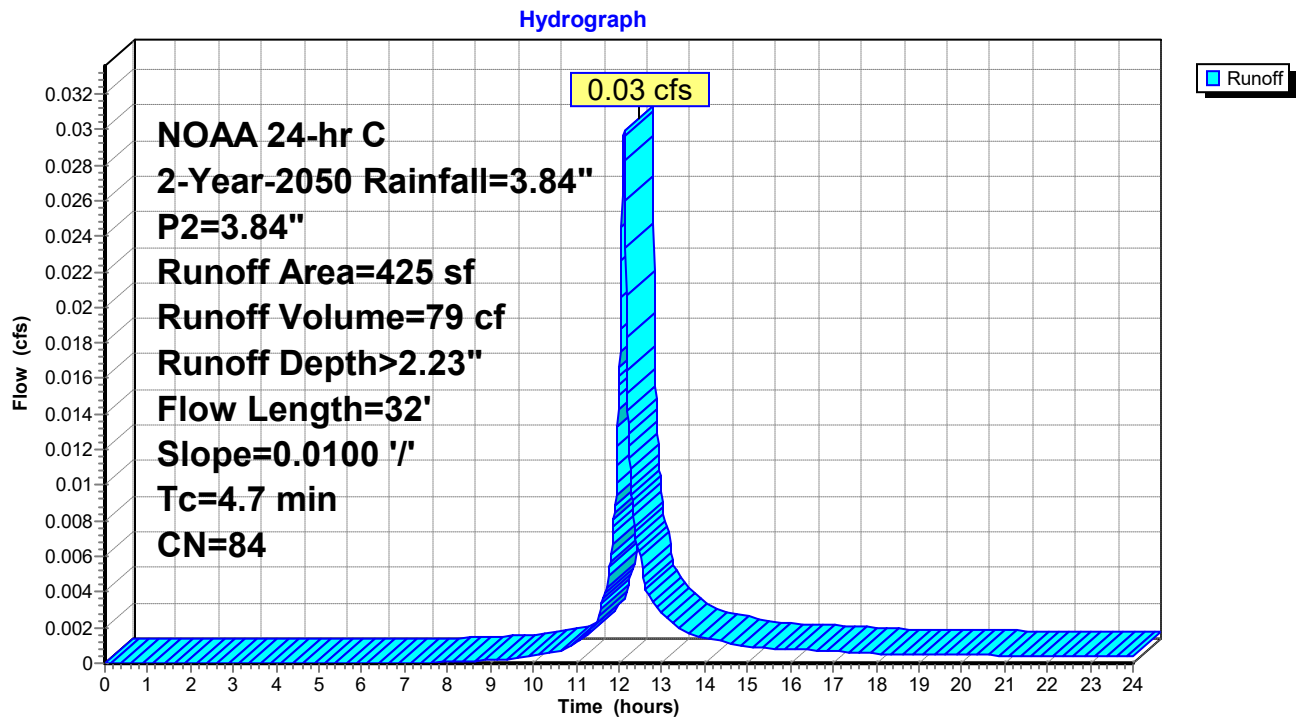
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.03 cfs @ 12.12 hrs, Volume= 79 cf, Depth> 2.23"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 308P: Offsite to Drain 4**

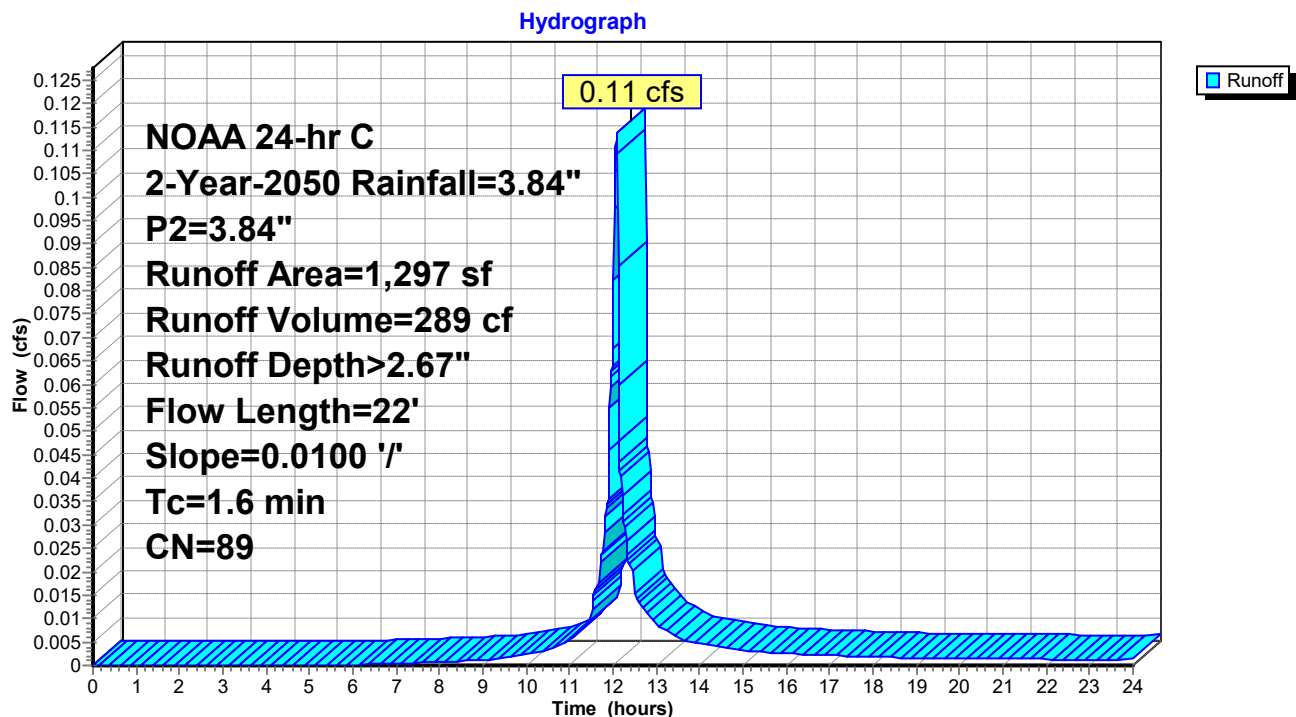
Runoff = 0.11 cfs @ 12.10 hrs, Volume= 289 cf, Depth> 2.67"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.6      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

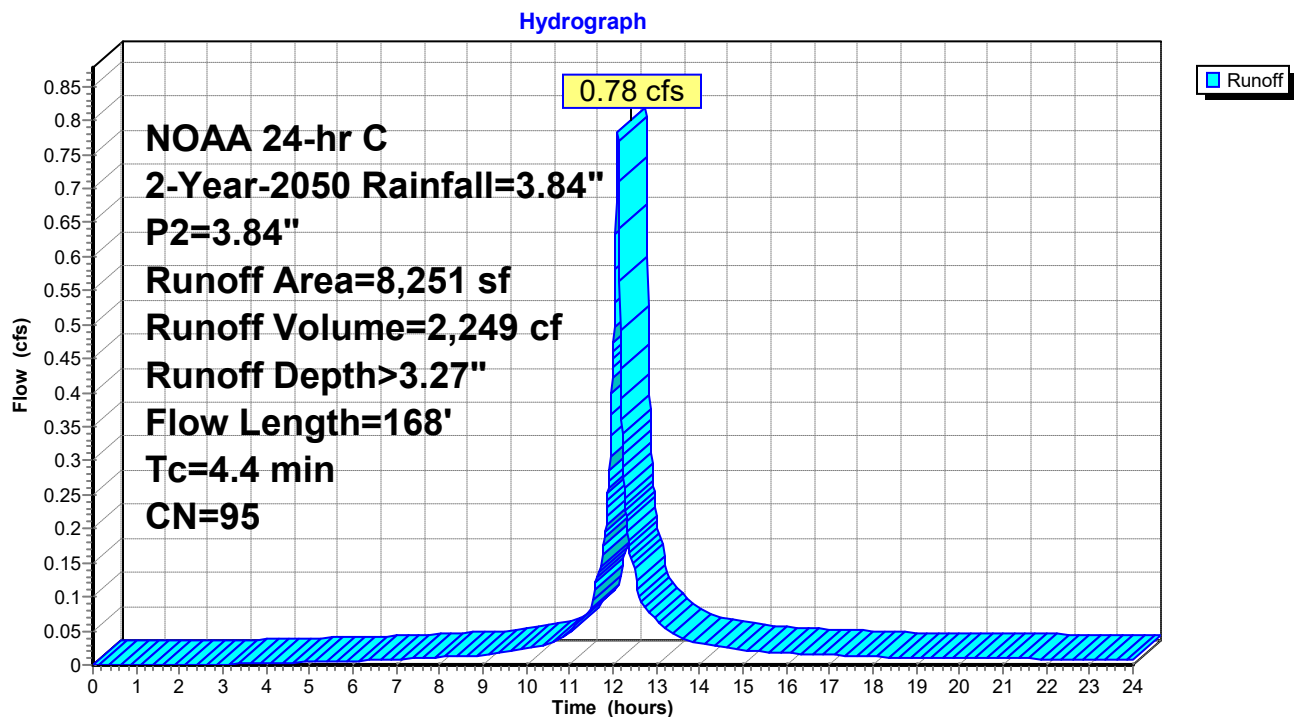
Runoff = 0.78 cfs @ 12.12 hrs, Volume= 2,249 cf, Depth> 3.27"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 310P: Impervious Stadium W**

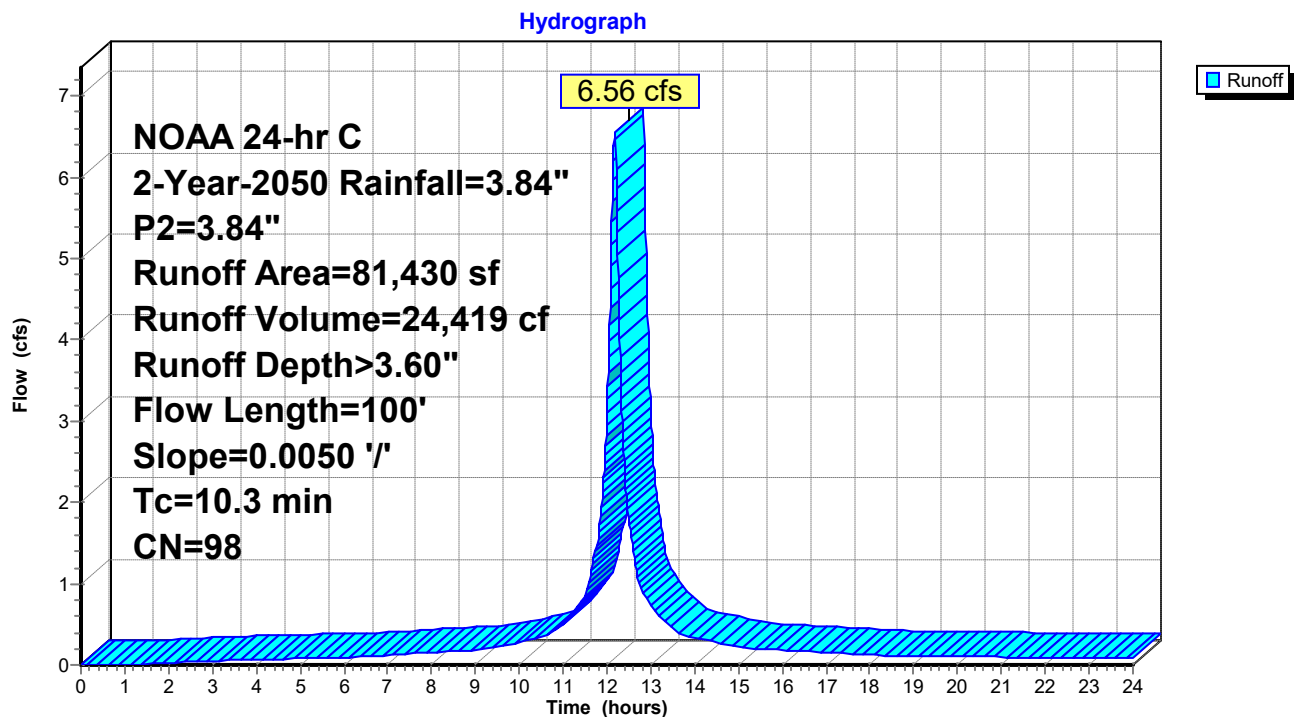
Runoff = 6.56 cfs @ 12.17 hrs, Volume= 24,419 cf, Depth> 3.60"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

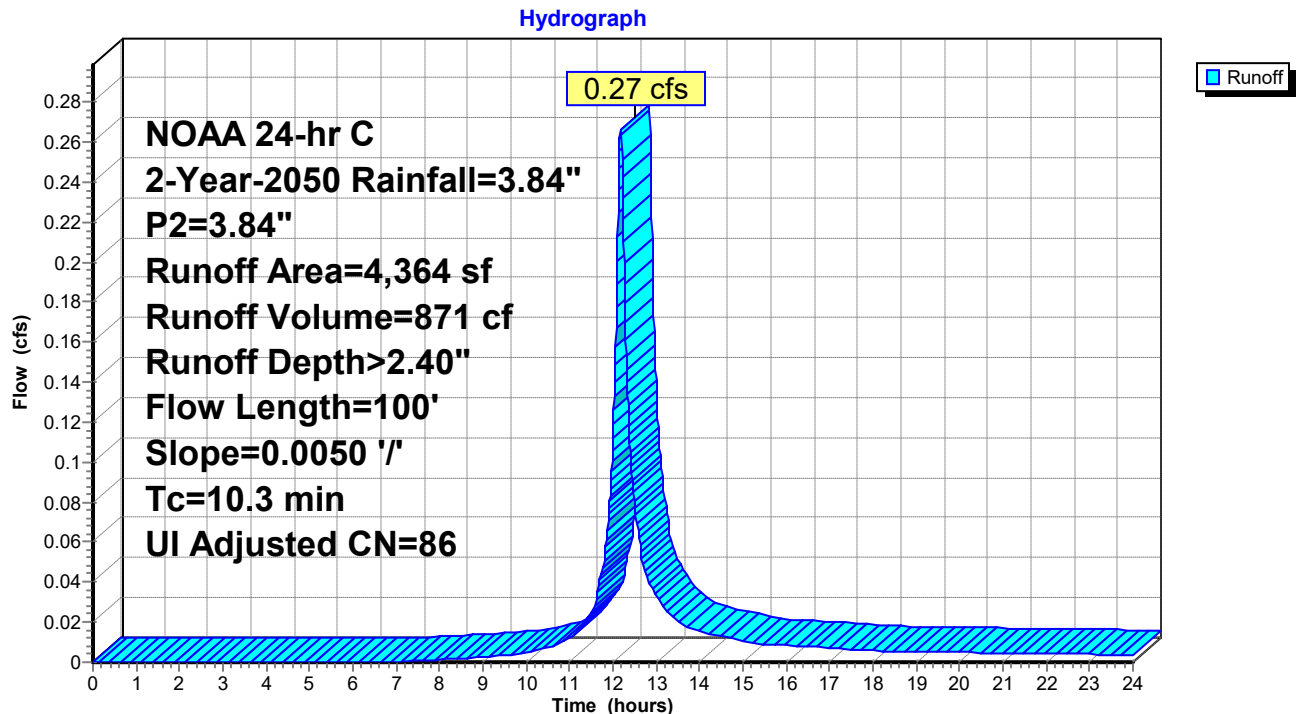
Runoff = 0.27 cfs @ 12.18 hrs, Volume= 871 cf, Depth> 2.40"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

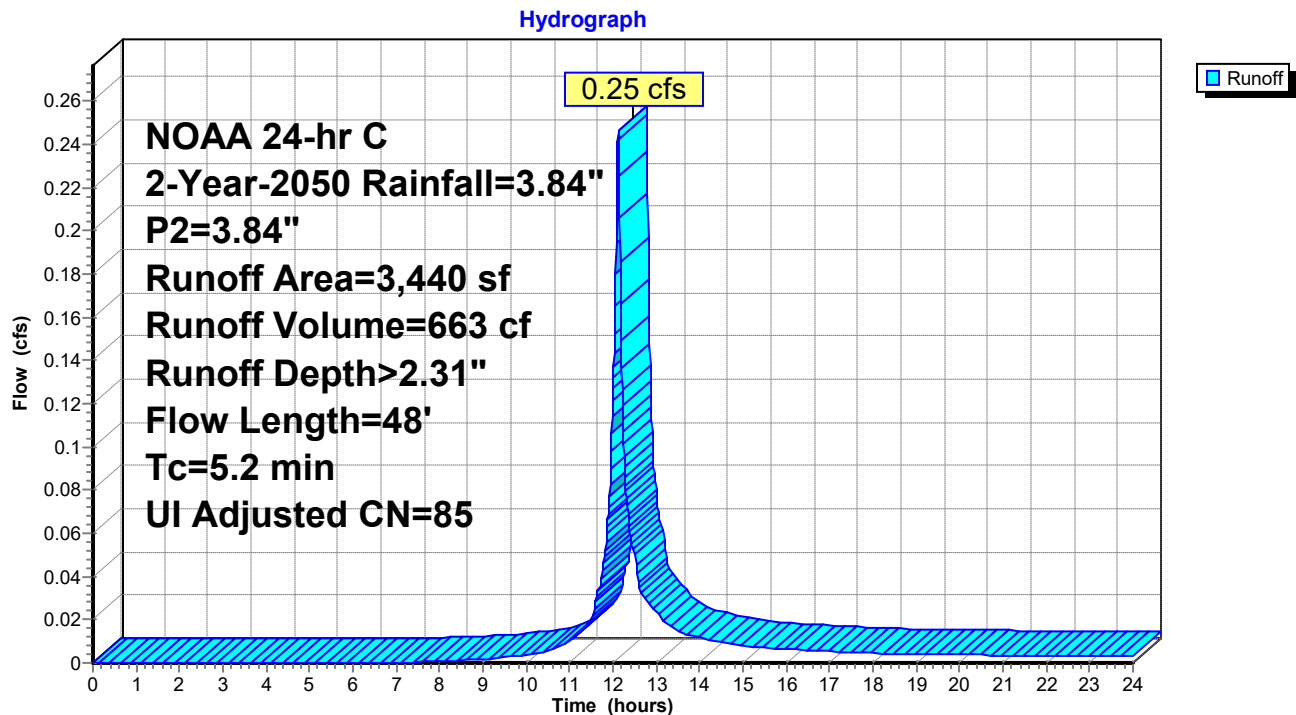
Runoff = 0.25 cfs @ 12.13 hrs, Volume= 663 cf, Depth> 2.31"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.3      | 28            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 5.2      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

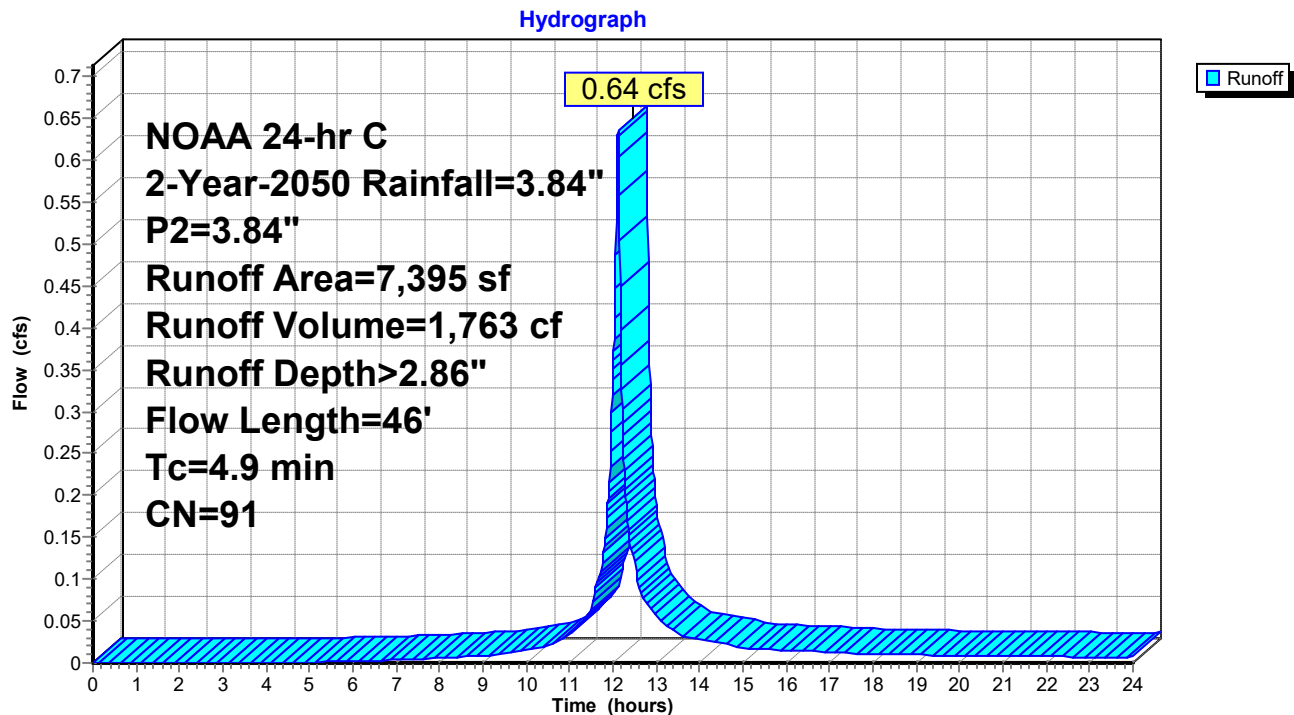
Runoff = 0.64 cfs @ 12.12 hrs, Volume= 1,763 cf, Depth> 2.86"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.0      | 26            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 4.9      | 46            | Total         |                   |                |                                 |

**Subcatchment 313P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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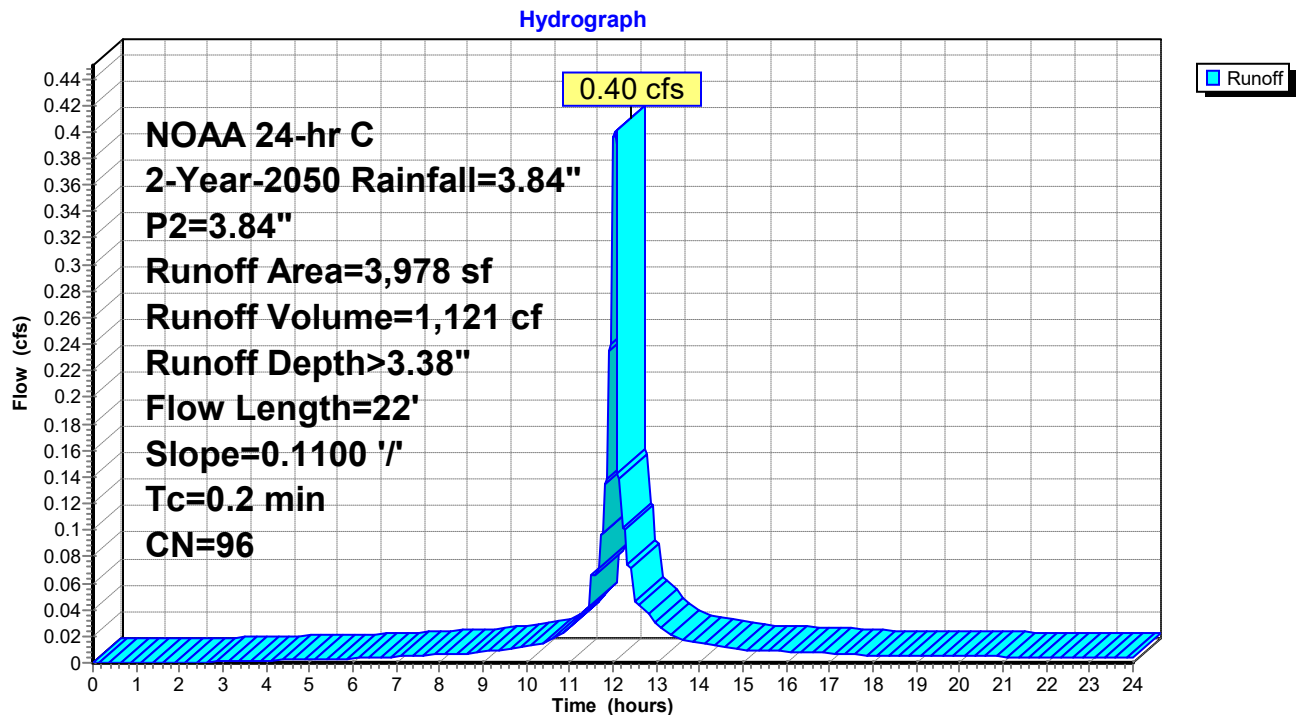
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 0.40 cfs @ 12.09 hrs, Volume= 1,121 cf, Depth> 3.38"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description            |
|------------------------------------|---------------|---------------|-------------------|----------------|------------------------|
| 0.2                                | 22            | 0.1100        | 2.20              |                | Sheet Flow, Sheet Flow |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                        |

**Subcatchment 401P: Onsite to SP4**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Subcatchment 403P: Tennis Courts**

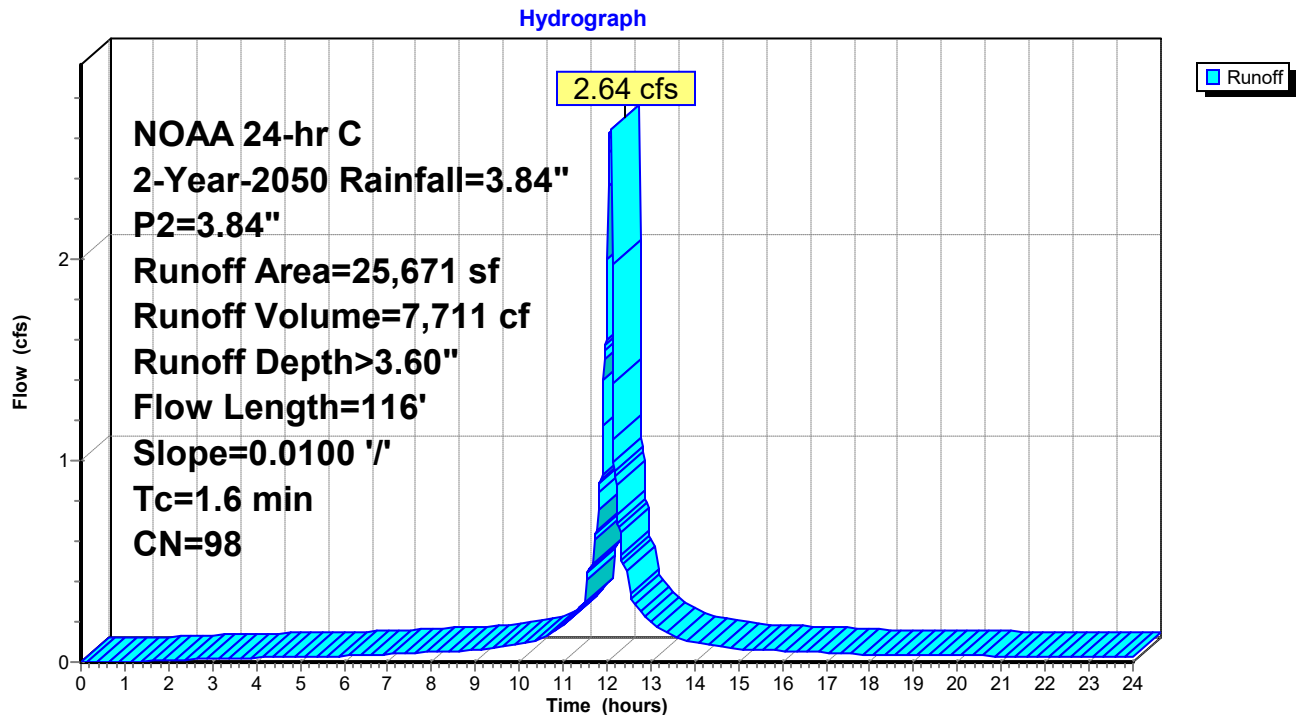
Runoff = 2.64 cfs @ 12.10 hrs, Volume= 7,711 cf, Depth> 3.60"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

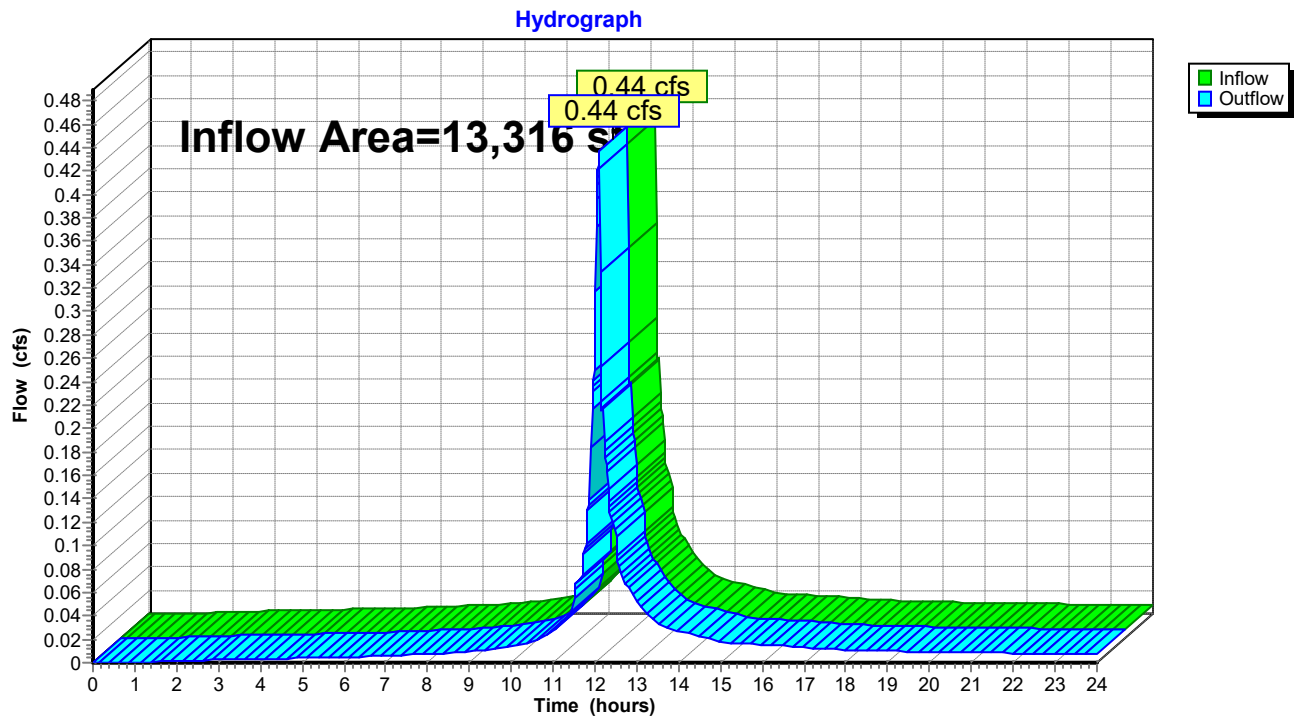
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 1.42" for 2-Year-2050 event  
 Inflow = 0.44 cfs @ 12.10 hrs, Volume= 1,570 cf  
 Outflow = 0.44 cfs @ 12.10 hrs, Volume= 1,570 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED



## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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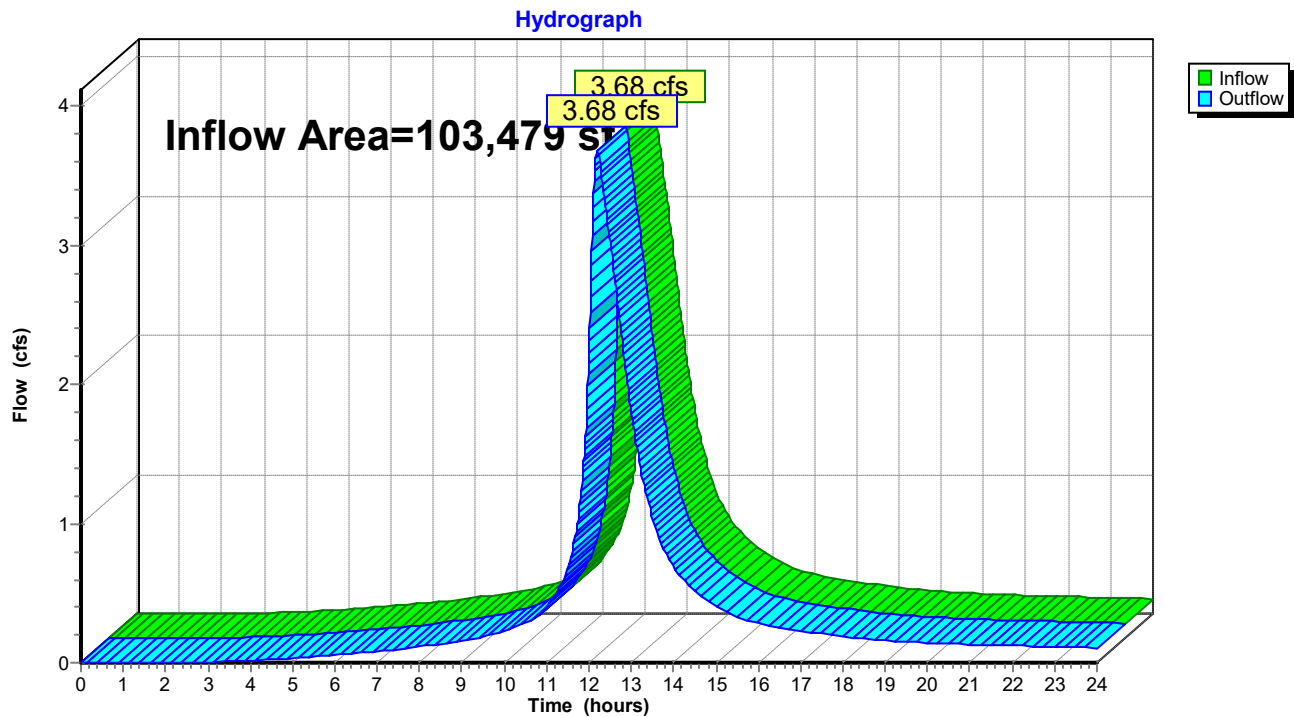
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### Summary for Reach 2P: ONSITE EAST

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 3.26" for 2-Year-2050 event  
Inflow = 3.68 cfs @ 12.20 hrs, Volume= 28,082 cf  
Outflow = 3.68 cfs @ 12.20 hrs, Volume= 28,082 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2P: ONSITE EAST



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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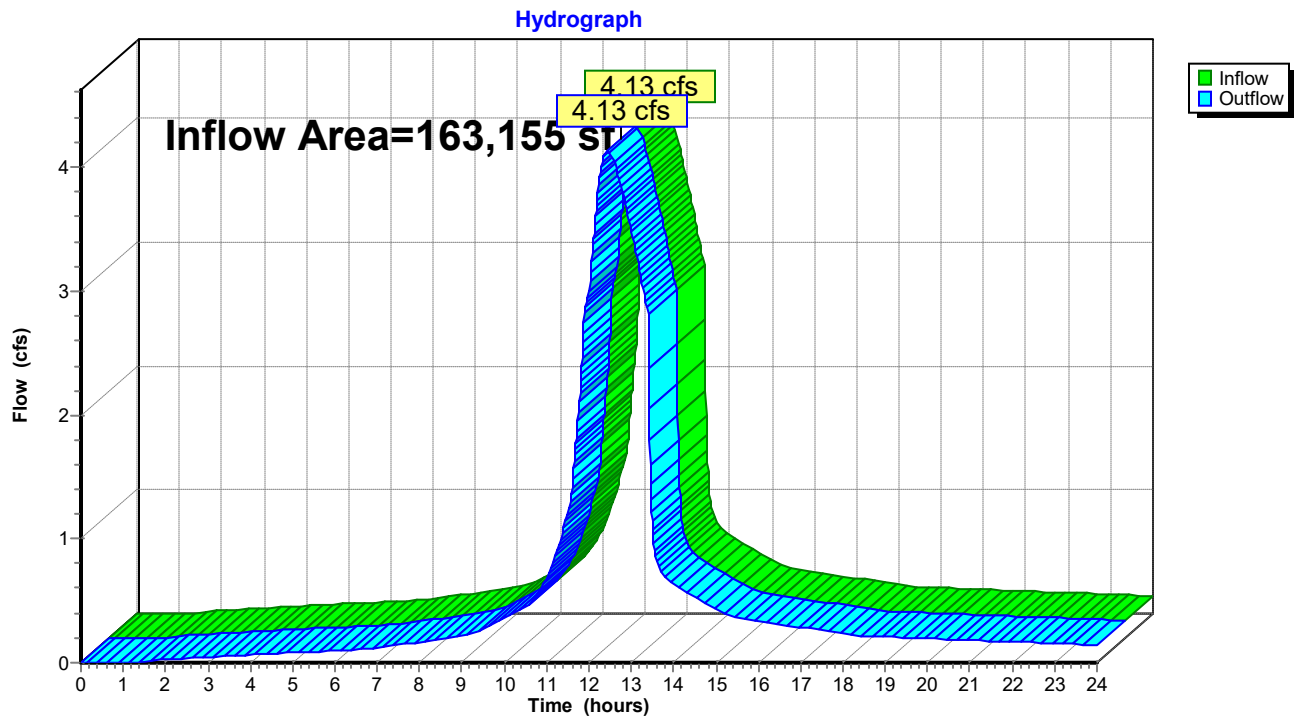
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## Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 2.95" for 2-Year-2050 event  
Inflow = 4.13 cfs @ 12.43 hrs, Volume= 40,152 cf  
Outflow = 4.13 cfs @ 12.43 hrs, Volume= 40,152 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 3P: ONSITE WEST

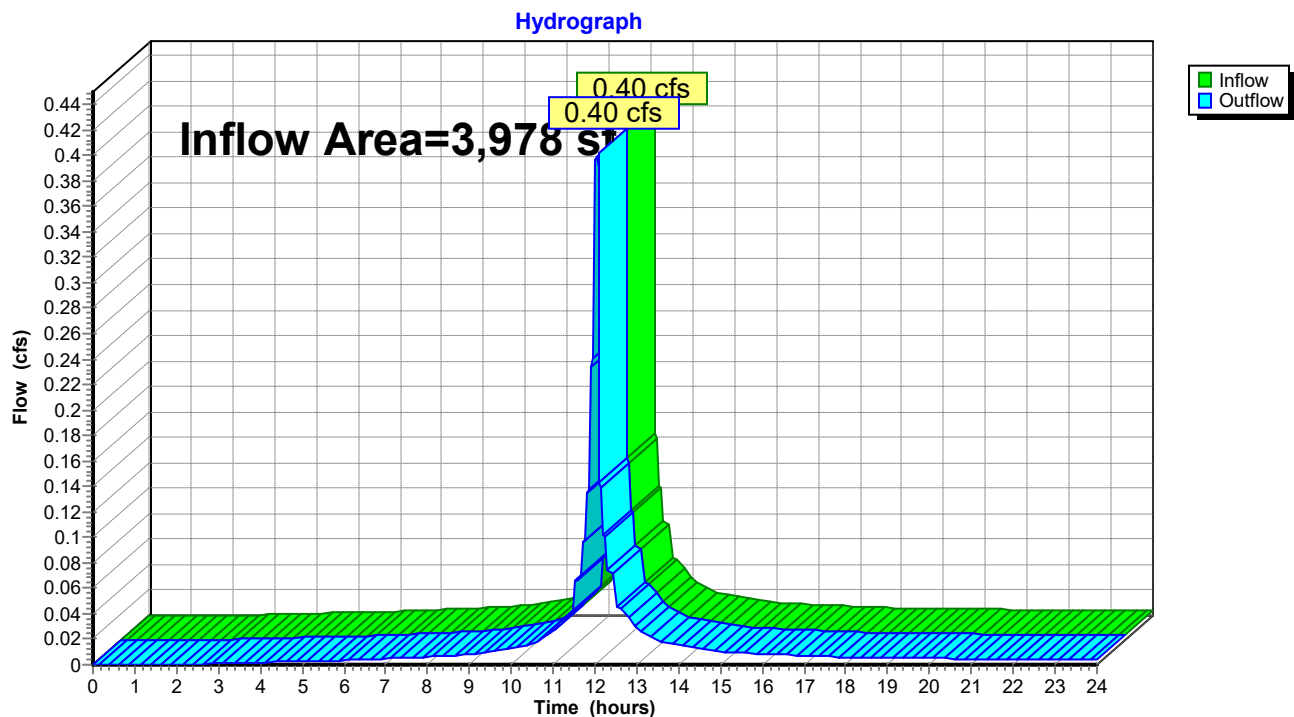


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 3.38" for 2-Year-2050 event  
 Inflow = 0.40 cfs @ 12.09 hrs, Volume= 1,121 cf  
 Outflow = 0.40 cfs @ 12.09 hrs, Volume= 1,121 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4P: ONSITE TENNIS COURTS



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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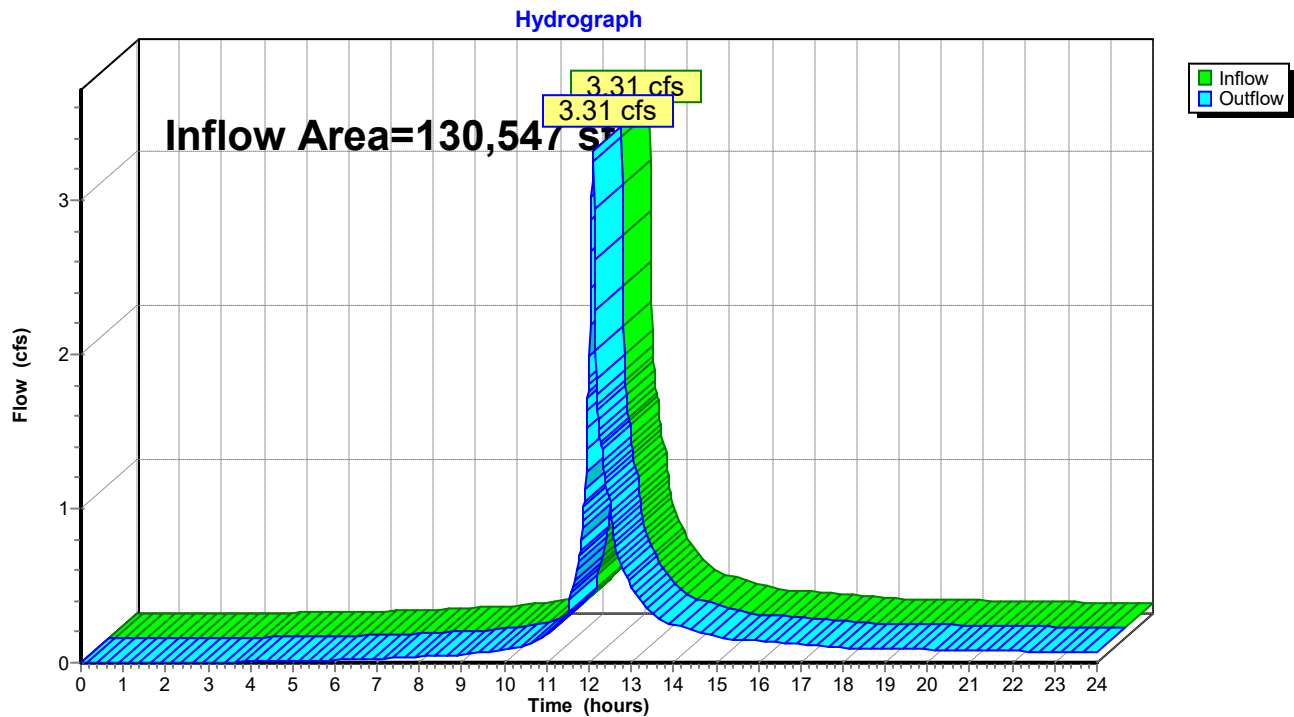
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## Summary for Reach 100P: EX INLET 1

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 1.15" for 2-Year-2050 event  
Inflow = 3.31 cfs @ 12.11 hrs, Volume= 12,527 cf  
Outflow = 3.31 cfs @ 12.11 hrs, Volume= 12,527 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 100P: EX INLET 1



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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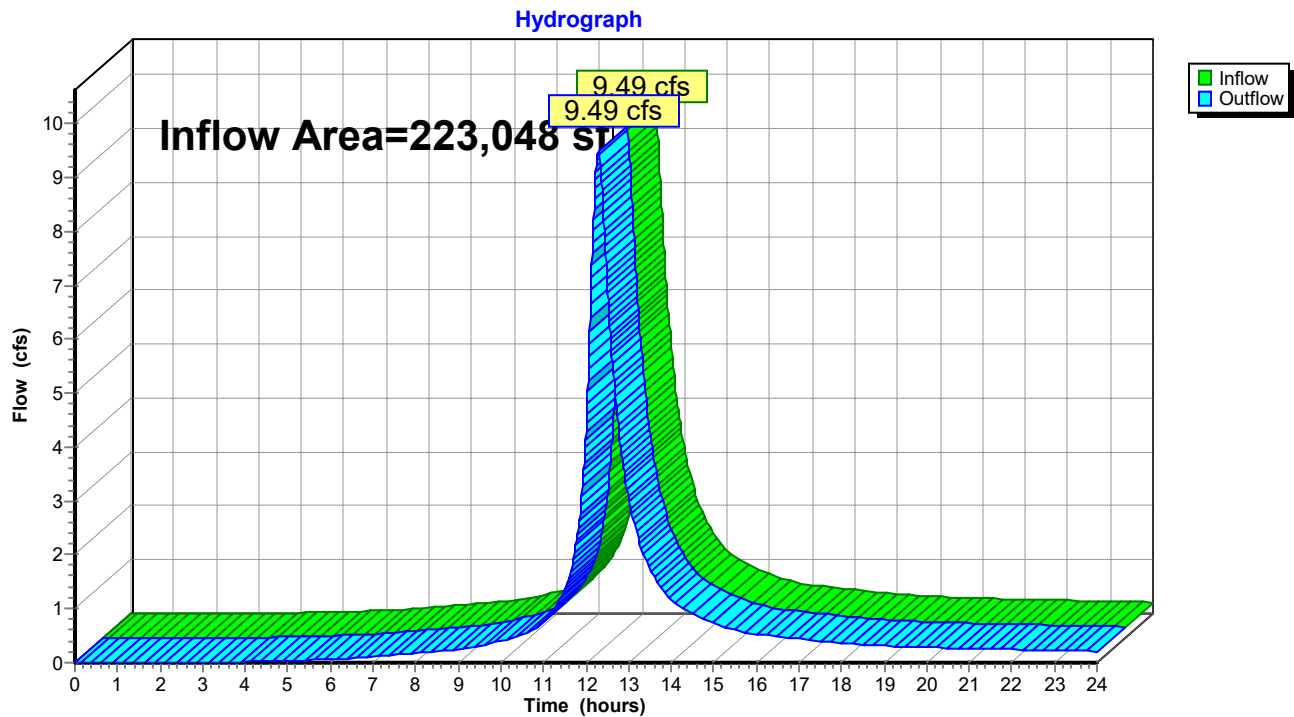
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## Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 2.94" for 2-Year-2050 event  
Inflow = 9.49 cfs @ 12.29 hrs, Volume= 54,590 cf  
Outflow = 9.49 cfs @ 12.29 hrs, Volume= 54,590 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 200P: EX MANHOLE 2

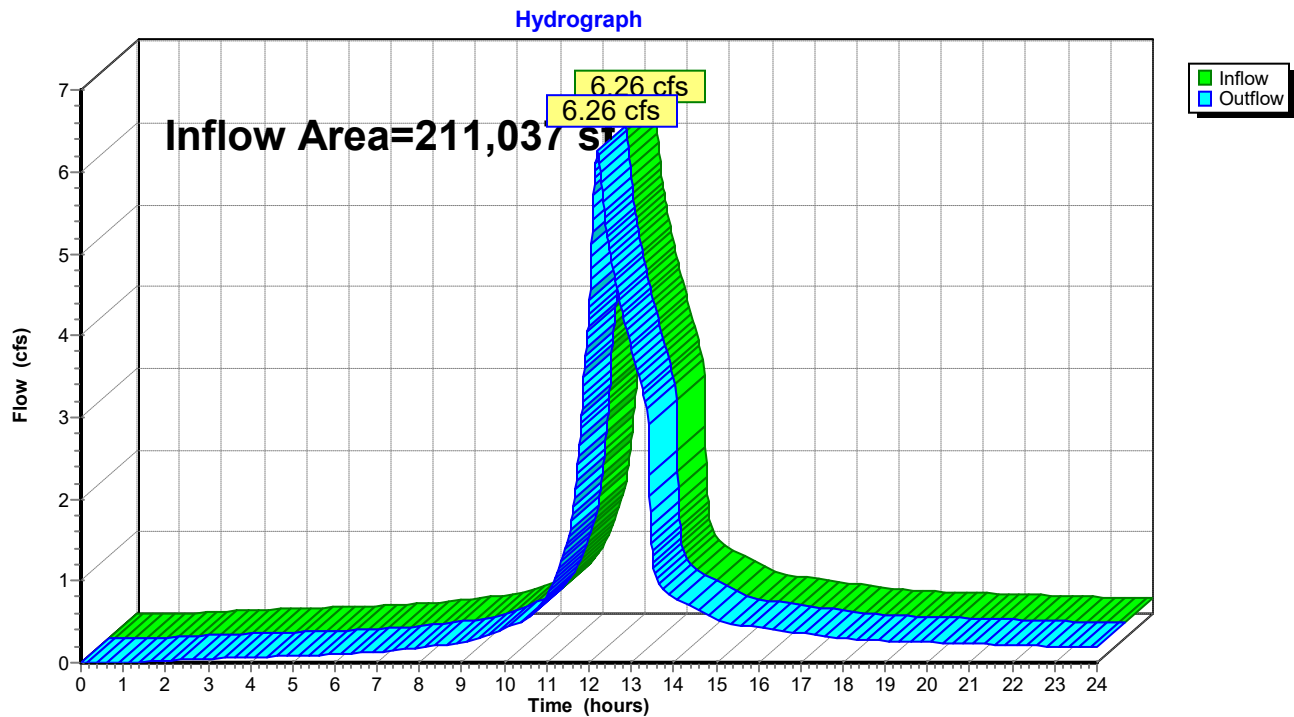


### Summary for Reach 300P: EX INLET 3

Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 2.83" for 2-Year-2050 event  
 Inflow = 6.26 cfs @ 12.21 hrs, Volume= 49,743 cf  
 Outflow = 6.26 cfs @ 12.21 hrs, Volume= 49,743 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300P: EX INLET 3





## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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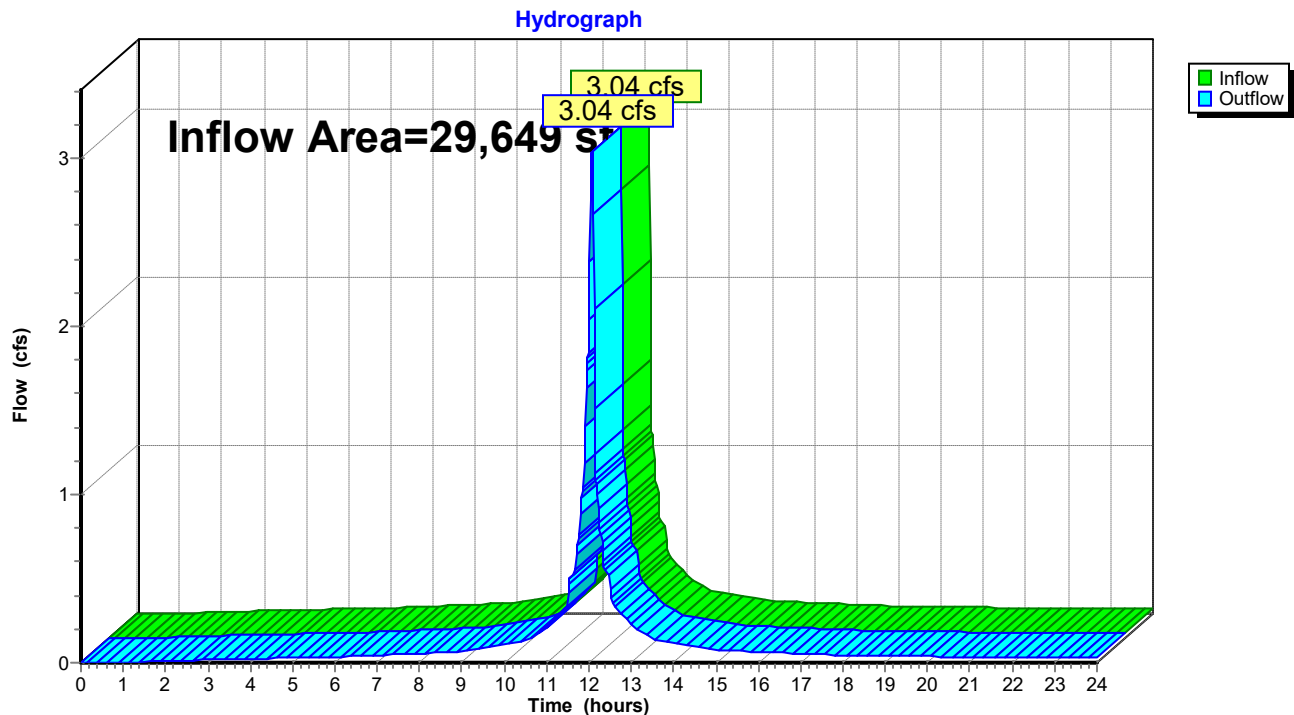
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### Summary for Reach 400P: TENNIS COURTS

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 3.57" for 2-Year-2050 event  
Inflow = 3.04 cfs @ 12.09 hrs, Volume= 8,832 cf  
Outflow = 3.04 cfs @ 12.09 hrs, Volume= 8,832 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 400P: TENNIS COURTS

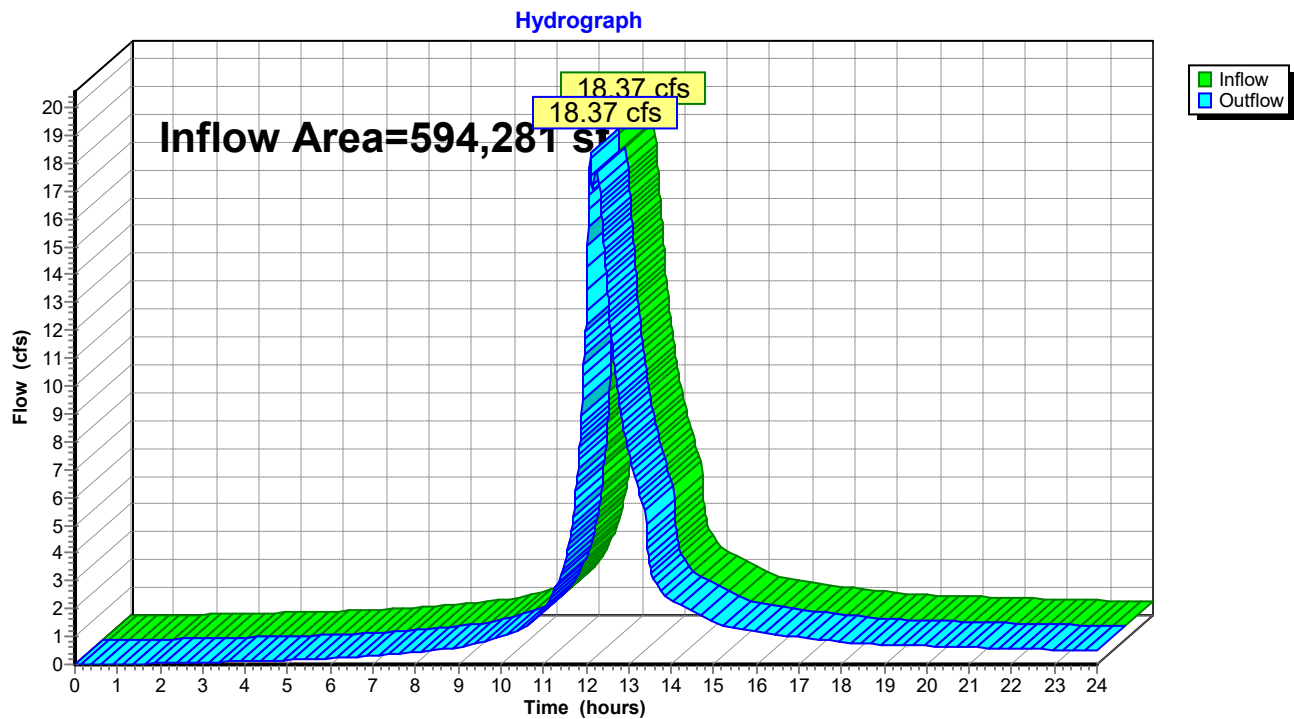


### Summary for Reach 500P: STUDY POINT

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 2.54" for 2-Year-2050 event  
 Inflow = 18.37 cfs @ 12.11 hrs, Volume= 125,693 cf  
 Outflow = 18.37 cfs @ 12.11 hrs, Volume= 125,693 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500P: STUDY POINT



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 3.42" for 2-Year-2050 event  
 Inflow = 9.24 cfs @ 12.09 hrs, Volume= 27,537 cf  
 Outflow = 3.23 cfs @ 12.22 hrs, Volume= 26,500 cf, Atten= 65%, Lag= 7.7 min  
 Primary = 3.23 cfs @ 12.22 hrs, Volume= 26,500 cf  
 Routed to Reach 2P : ONSITE EAST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 100.43' @ 12.22 hrs Surf.Area= 8,044 sf Storage= 8,214 cf

Plug-Flow detention time= 77.2 min calculated for 26,500 cf (96% of inflow)  
 Center-of-Mass det. time= 54.0 min ( 810.2 - 756.2 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=3.23 cfs @ 12.22 hrs HW=100.43' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 3.23 cfs @ 4.11 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

# PROPOSED PEDDIE FOOTBALL

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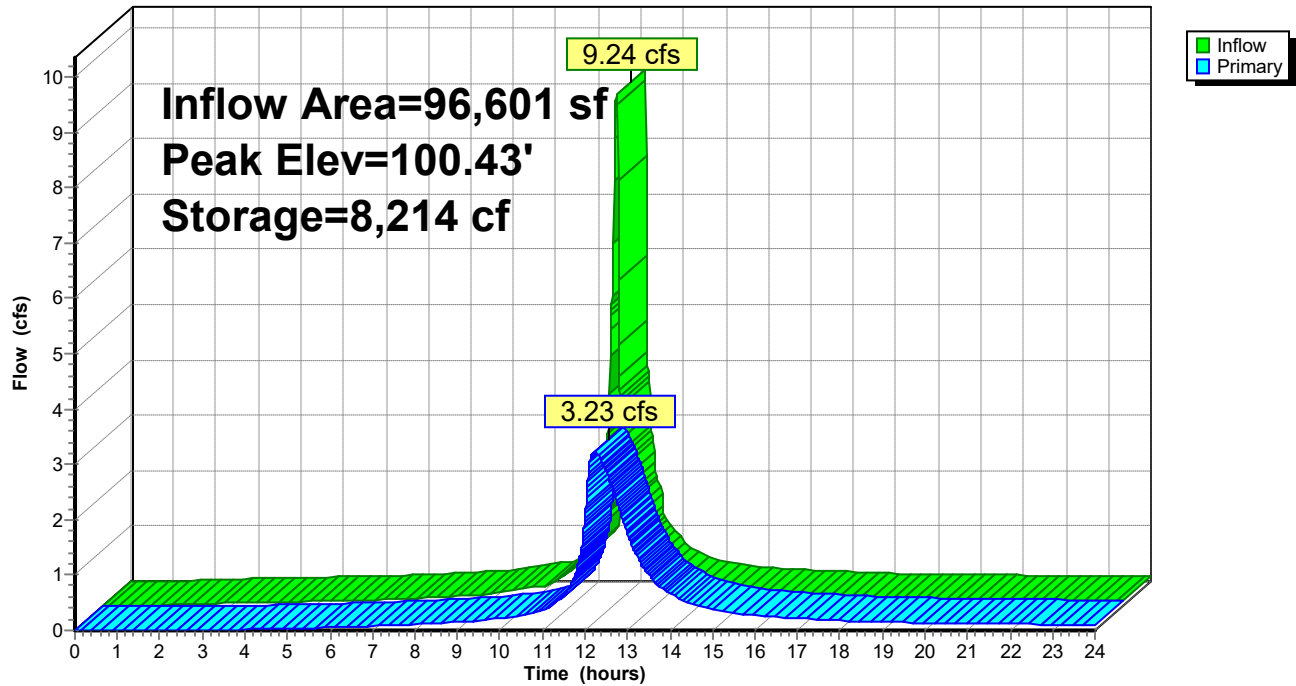
NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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## Pond 204P: Cultec East

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 2-Year-2050 Rainfall=3.84", P2=3.84"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 2.97" for 2-Year-2050 event  
 Inflow = 10.01 cfs @ 12.17 hrs, Volume= 39,456 cf  
 Outflow = 4.07 cfs @ 12.45 hrs, Volume= 39,436 cf, Atten= 59%, Lag= 16.3 min  
 Primary = 4.07 cfs @ 12.45 hrs, Volume= 39,436 cf  
 Routed to Reach 3P : ONSITE WEST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 99.86' @ 12.45 hrs Surf.Area= 11,650 sf Storage= 6,505 cf

Plug-Flow detention time= 9.7 min calculated for 39,436 cf (100% of inflow)  
 Center-of-Mass det. time= 9.4 min ( 792.2 - 782.8 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD x 528 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

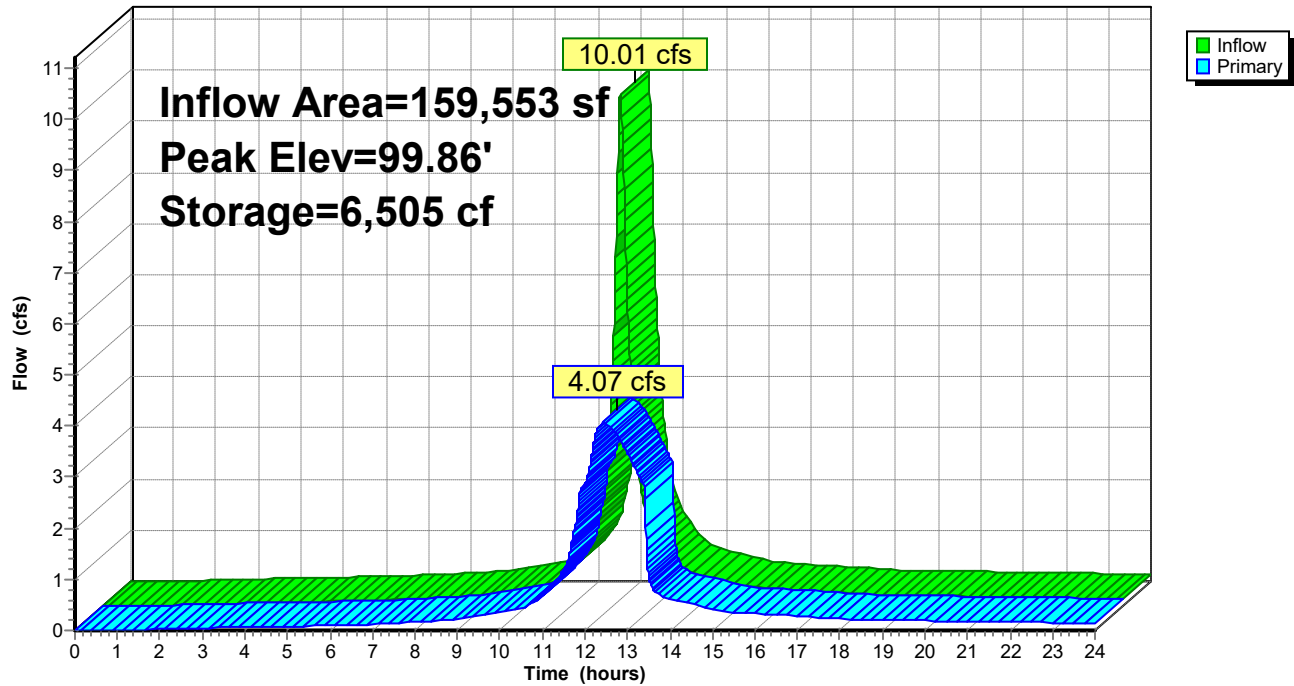
| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=4.07 cfs @ 12.45 hrs HW=99.86' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 4.07 cfs @ 5.18 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 208P: Cultec West**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>1.50"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=1.95 cfs 8,817 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>1.51"  
Flow Length=186' Tc=9.5 min CN=56 Runoff=0.35 cfs 1,183 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>5.04"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=4.36 cfs 12,248 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>1.00"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.13 cfs 380 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>1.36"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=0.52 cfs 1,493 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=0.62 cfs 1,830 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=1.12 cfs 3,562 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.31 cfs 790 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>5.62"  
Flow Length=100' Slope=0.0050 '/' Tc=1.9 min CN=98 Runoff=12.72 cfs 37,788 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>4.58"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=10.06 cfs 45,631 cf

**Subcatchment 206P: Onsite to E Field Drain** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>4.70"  
Flow Length=504' Tc=11.6 min UI Adjusted CN=90 Runoff=0.75 cfs 2,693 cf

**Subcatchment 207P: Offsite Impervious to** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.48 cfs 1,428 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>4.05"  
Flow Length=686' Tc=17.3 min CN=84 Runoff=4.69 cfs 19,046 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>4.27"  
Flow Length=62' Slope=0.0100 '/' Tc=8.1 min UI Adjusted CN=86 Runoff=0.75 cfs 2,306 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>4.05"  
Flow Length=654' Tc=12.5 min CN=84 Runoff=2.47 cfs 8,786 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=370' Tc=9.0 min CN=84 Runoff=0.20 cfs 636 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Subcatchment 305P: Offsite to Existing W** Runoff Area=13,621 sf 2.35% Impervious Runoff Depth>4.05"  
Flow Length=467' Tc=12.4 min CN=84 Runoff=1.30 cfs 4,601 cf

**Subcatchment 306P: Onsite to W Existing** Runoff Area=425 sf 0.00% Impervious Runoff Depth>4.06"  
Flow Length=32' Slope=0.0100 '/' Tc=4.7 min CN=84 Runoff=0.05 cfs 144 cf

**Subcatchment 308P: Offsite to Drain 4** Runoff Area=1,297 sf 38.55% Impervious Runoff Depth>4.60"  
Flow Length=22' Slope=0.0100 '/' Tc=1.6 min CN=89 Runoff=0.19 cfs 497 cf

**Subcatchment 309P: Offsite Building to** Runoff Area=8,251 sf 81.26% Impervious Runoff Depth>5.27"  
Flow Length=168' Tc=4.4 min CN=95 Runoff=1.23 cfs 3,622 cf

**Subcatchment 310P: Impervious Stadium** Runoff Area=81,430 sf 98.43% Impervious Runoff Depth>5.61"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=98 Runoff=10.07 cfs 38,078 cf

**Subcatchment 311P: Onsite to New Inlet** Runoff Area=4,364 sf 24.15% Impervious Runoff Depth>4.27"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min UI Adjusted CN=86 Runoff=0.46 cfs 1,552 cf

**Subcatchment 312P: Offsite to Yard Inlet** Runoff Area=3,440 sf 20.73% Impervious Runoff Depth>4.17"  
Flow Length=48' Tc=5.2 min UI Adjusted CN=85 Runoff=0.43 cfs 1,194 cf

**Subcatchment 313P: Offsite to Yard Inlet** Runoff Area=7,395 sf 51.36% Impervious Runoff Depth>4.82"  
Flow Length=46' Tc=4.9 min CN=91 Runoff=1.04 cfs 2,967 cf

**Subcatchment 401P: Onsite to SP4** Runoff Area=3,978 sf 83.13% Impervious Runoff Depth>5.39"  
Flow Length=22' Slope=0.1100 '/' Tc=0.2 min CN=96 Runoff=0.62 cfs 1,786 cf

**Subcatchment 403P: Tennis Courts** Runoff Area=25,671 sf 100.00% Impervious Runoff Depth>5.62"  
Flow Length=116' Slope=0.0100 '/' Tc=1.6 min CN=98 Runoff=4.05 cfs 12,024 cf

**Reach 1P: ONSITE UNRETAINED** Inflow=0.85 cfs 3,013 cf  
Outflow=0.85 cfs 3,013 cf

**Reach 2P: ONSITE EAST** Inflow=5.23 cfs 44,979 cf  
Outflow=5.23 cfs 44,979 cf

**Reach 3P: ONSITE WEST** Inflow=5.41 cfs 66,387 cf  
Outflow=5.41 cfs 66,387 cf

**Reach 4P: ONSITE TENNIS COURTS** Inflow=0.62 cfs 1,786 cf  
Outflow=0.62 cfs 1,786 cf

**Reach 100P: EX INLET 1** Inflow=6.62 cfs 25,951 cf  
Outflow=6.62 cfs 25,951 cf

**Reach 200P: EX MANHOLE 2** Inflow=15.06 cfs 90,610 cf  
Outflow=15.06 cfs 90,610 cf

**Reach 300P: EX INLET 3** Inflow=9.11 cfs 83,397 cf  
Outflow=9.11 cfs 83,397 cf



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Reach 400P: TENNIS COURTS**

Inflow=4.67 cfs 13,810 cf

Outflow=4.67 cfs 13,810 cf

**Reach 500P: STUDY POINT**

Inflow=29.42 cfs 213,768 cf

Outflow=29.42 cfs 213,768 cf

**Pond 204P: Cultec East**

Peak Elev=101.12' Storage=12,448 cf Inflow=14.35 cfs 43,568 cf

Outflow=4.51 cfs 42,286 cf

**Pond 208P: Cultec West**

Peak Elev=100.68' Storage=14,220 cf Inflow=16.20 cfs 65,143 cf

Outflow=5.32 cfs 65,110 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 1.95 cfs @ 12.30 hrs, Volume= 8,817 cf, Depth> 1.50"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

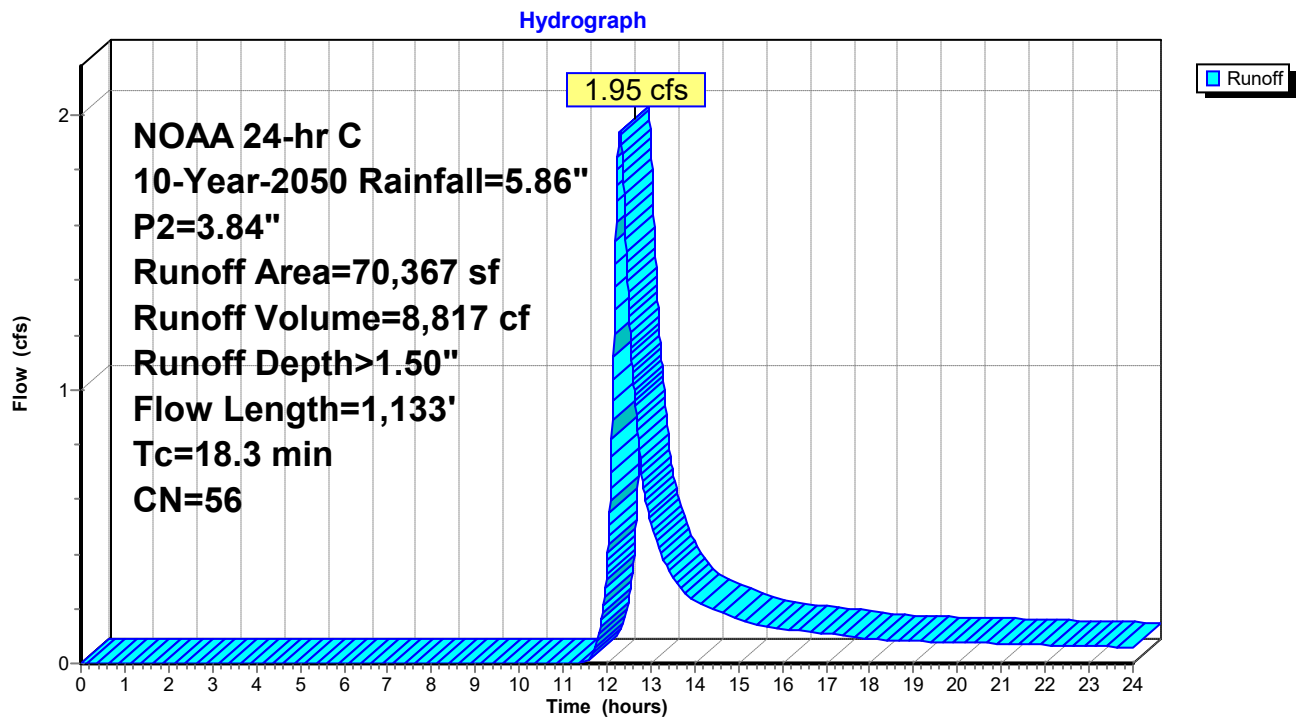
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## Subcatchment 101P: Offsite Pervious SE



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

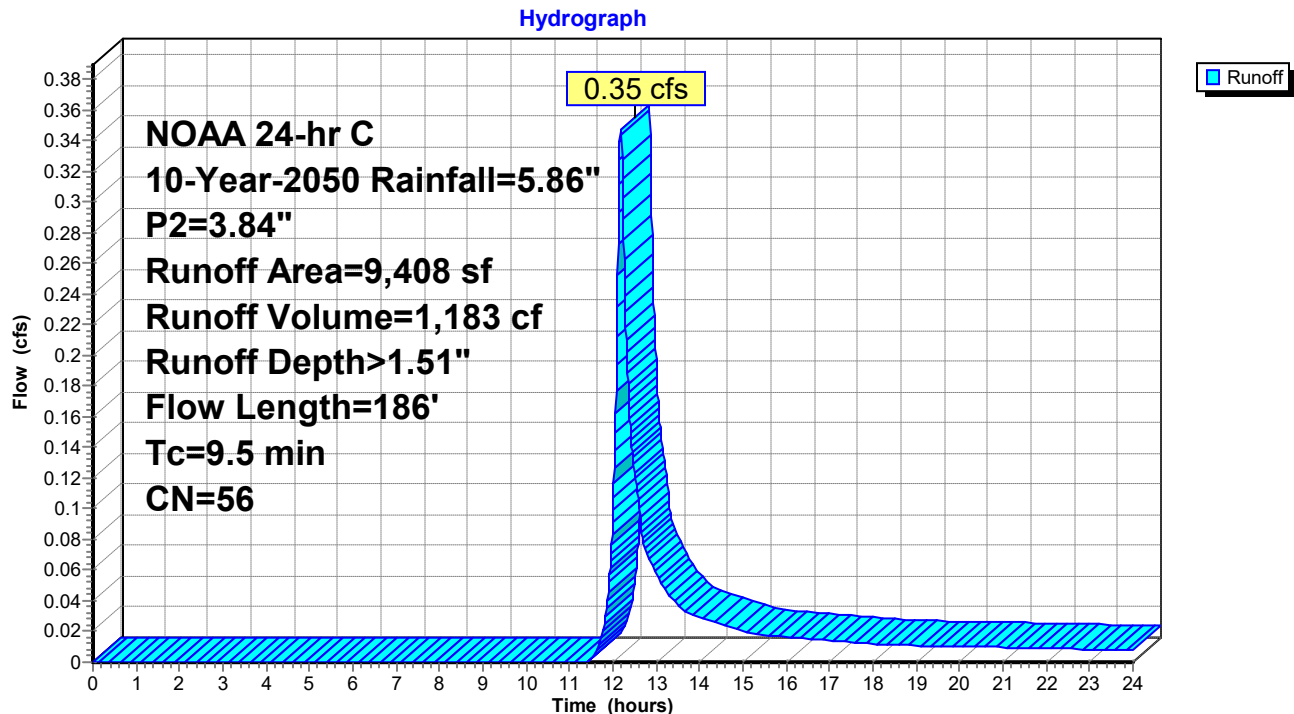
Runoff = 0.35 cfs @ 12.18 hrs, Volume= 1,183 cf, Depth> 1.51"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 9.5      | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

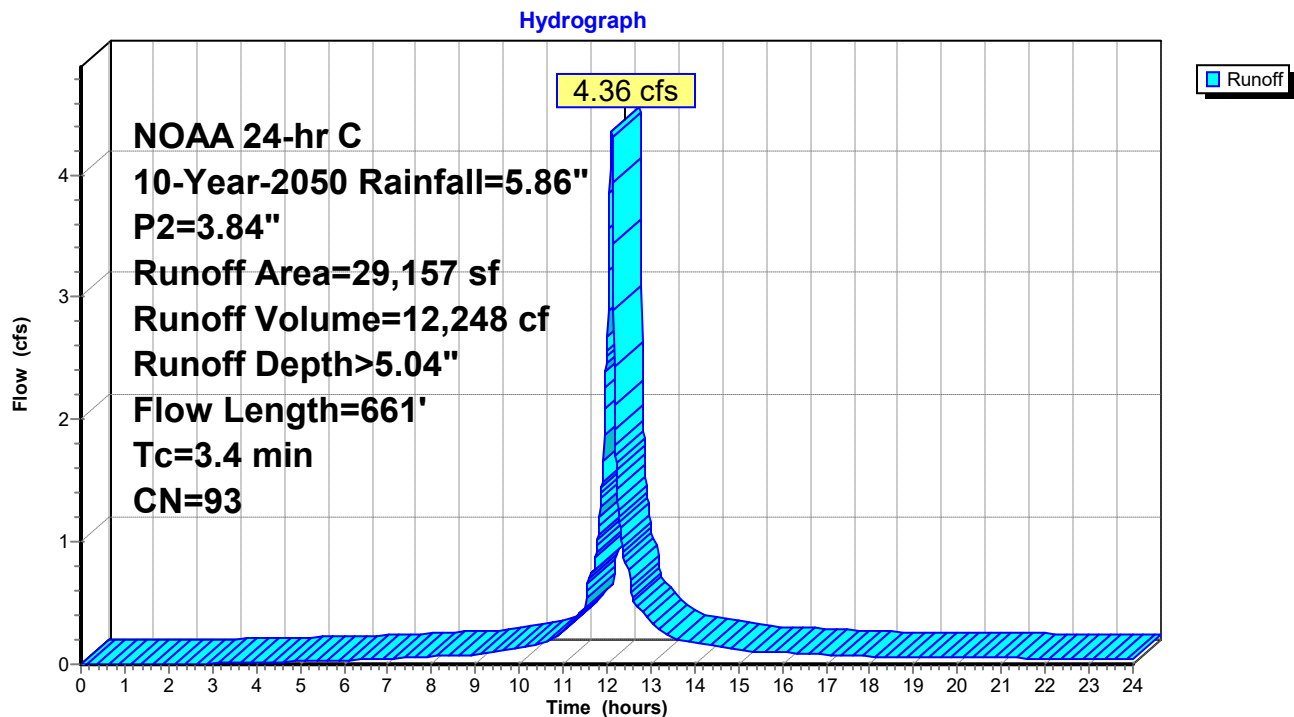
Runoff = 4.36 cfs @ 12.11 hrs, Volume= 12,248 cf, Depth> 5.04"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 104P: Yard Drains**

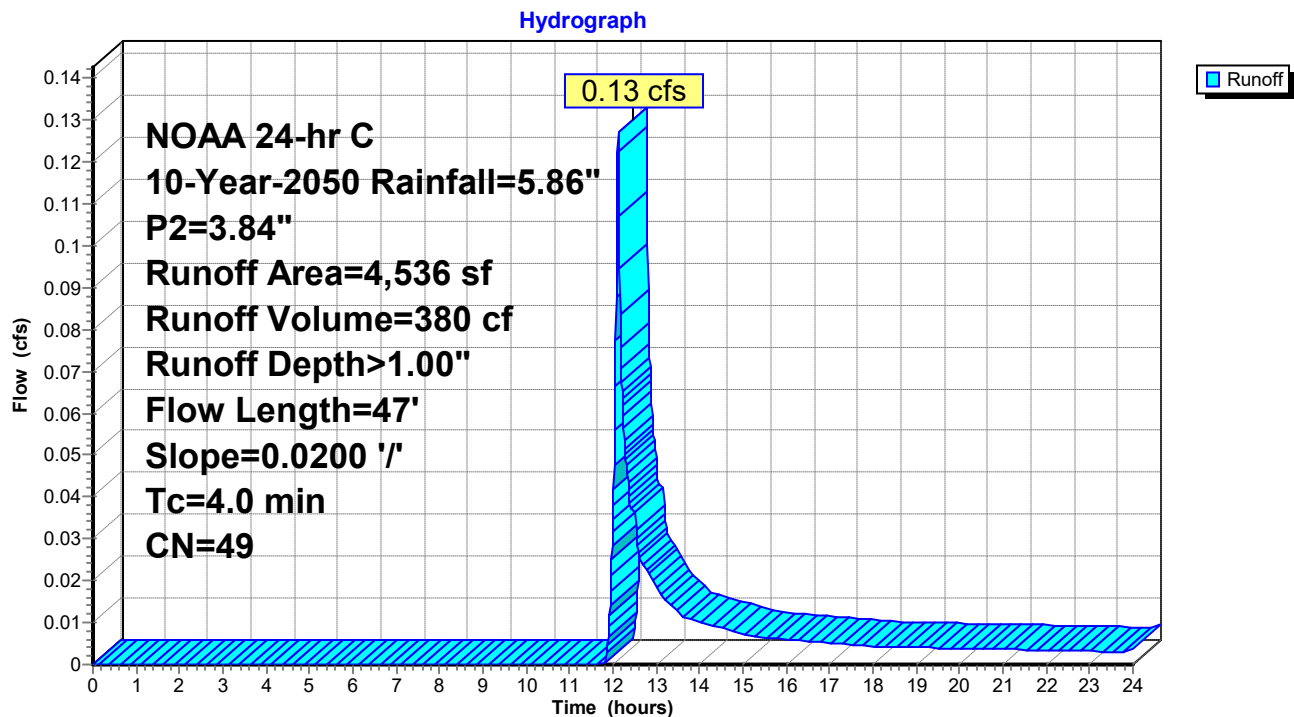
Runoff = 0.13 cfs @ 12.12 hrs, Volume= 380 cf, Depth> 1.00"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 0.52 cfs @ 12.13 hrs, Volume= 1,493 cf, Depth> 1.36"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

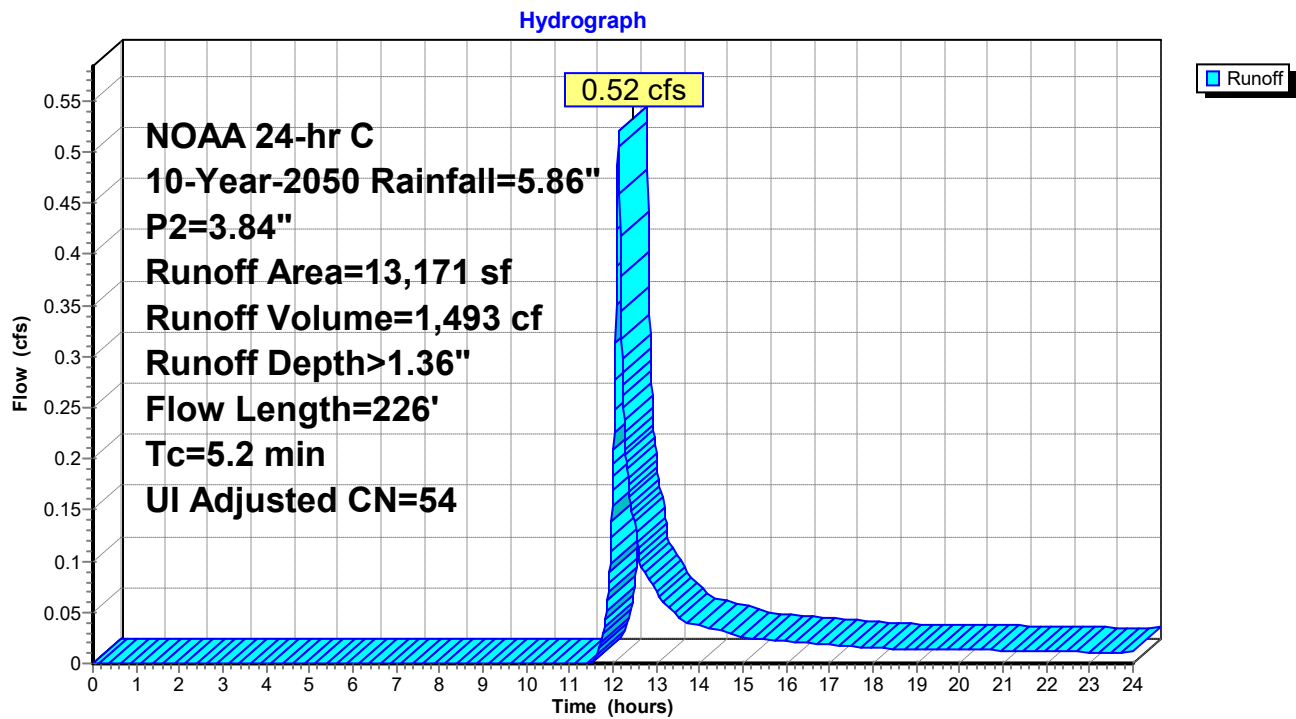
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## Subcatchment 105P: Low Drains





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

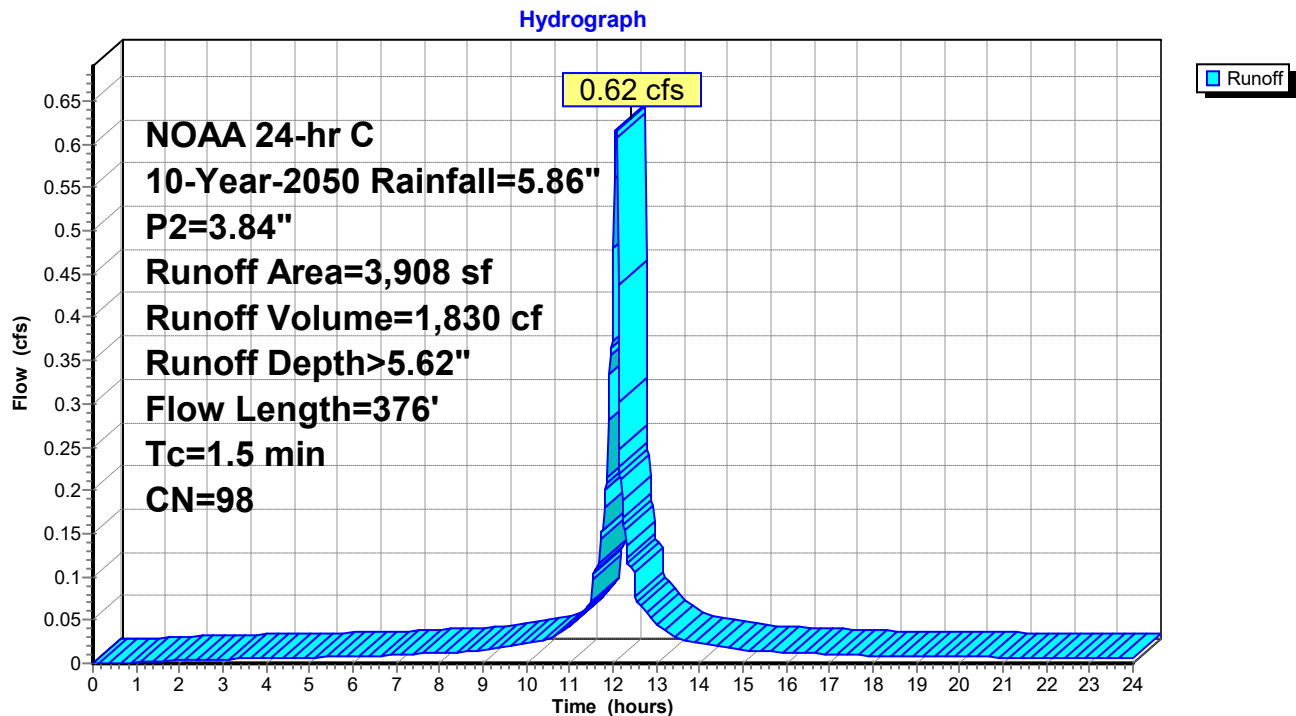
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 1,830 cf, Depth> 5.62"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

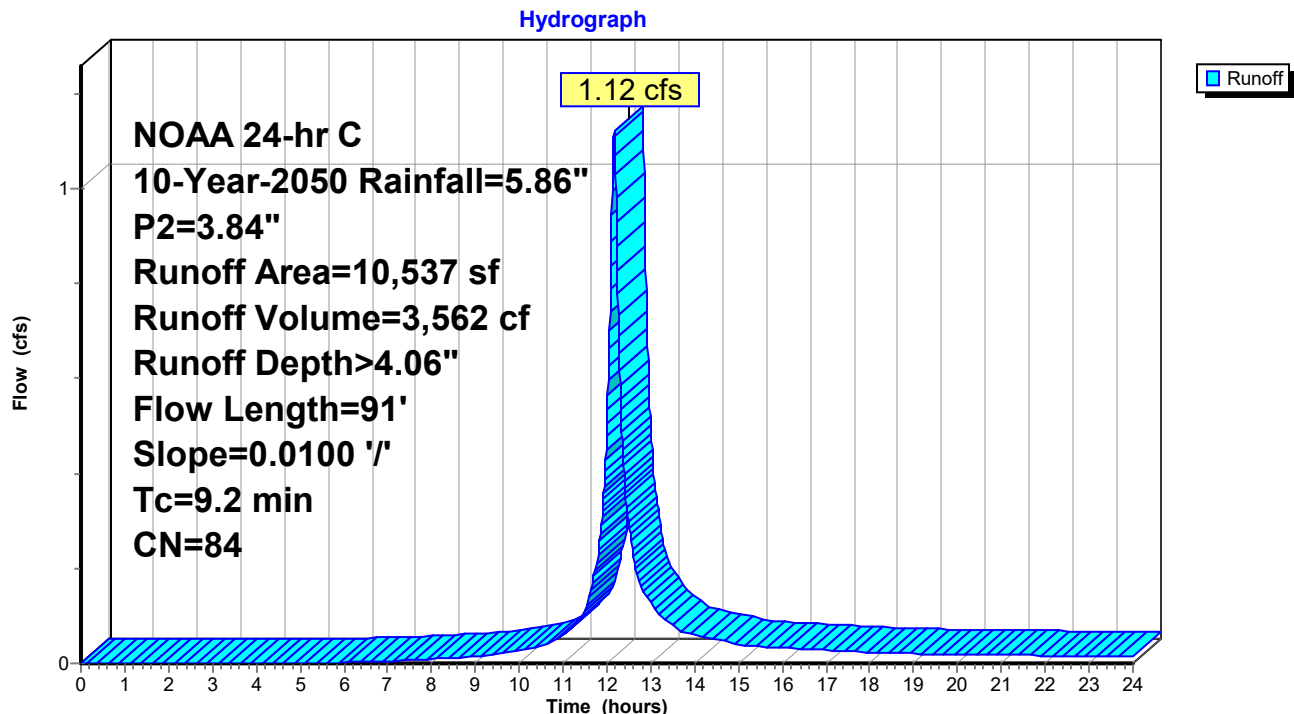
Runoff = 1.12 cfs @ 12.16 hrs, Volume= 3,562 cf, Depth> 4.06"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

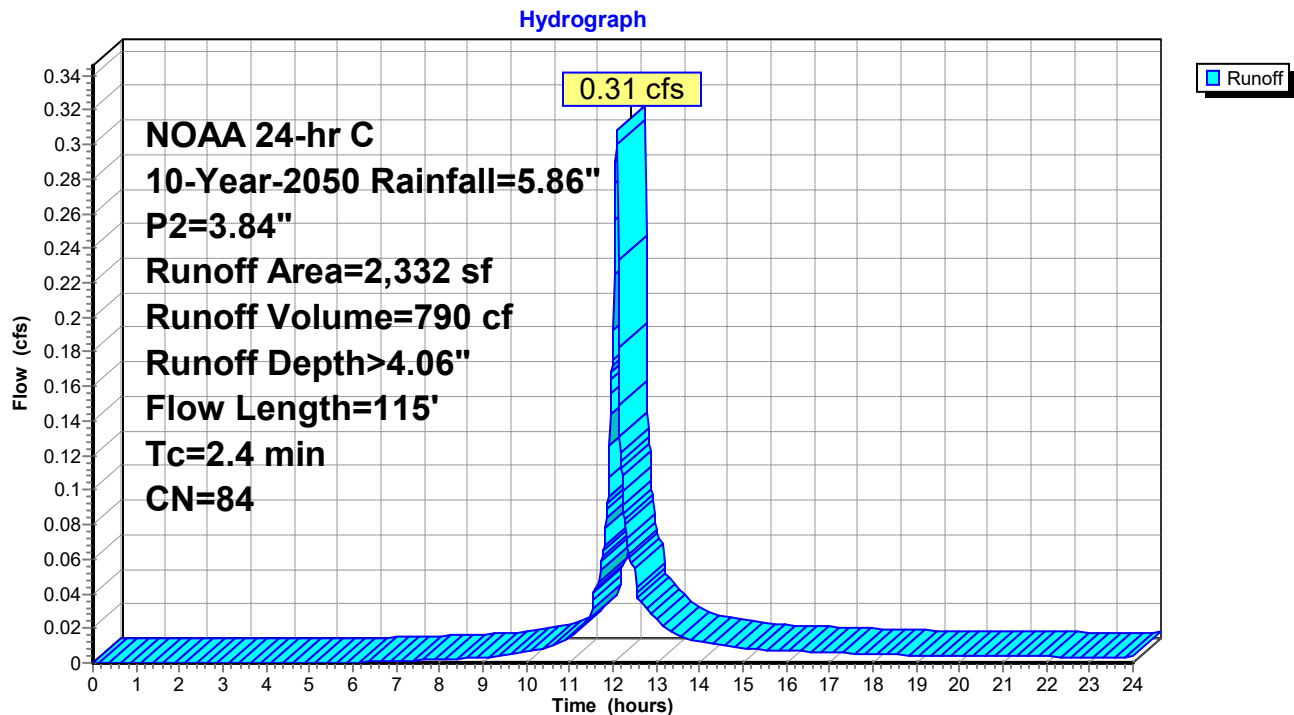
Runoff = 0.31 cfs @ 12.10 hrs, Volume= 790 cf, Depth> 4.06"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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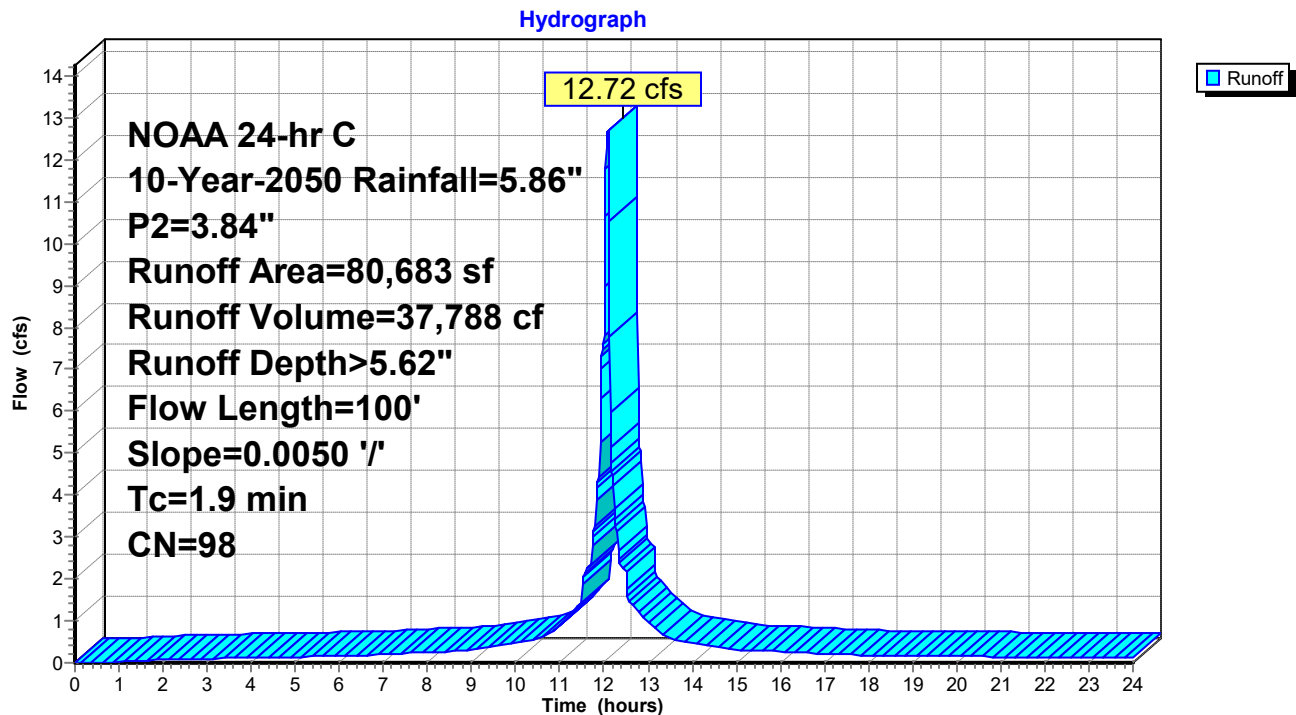
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 12.72 cfs @ 12.10 hrs, Volume= 37,788 cf, Depth> 5.62"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 1.9                                | 100           | 0.0050        | 0.87              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 10.06 cfs @ 12.30 hrs, Volume= 45,631 cf, Depth> 4.58"  
 Routed to Reach 200P : EX MANHOLE 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

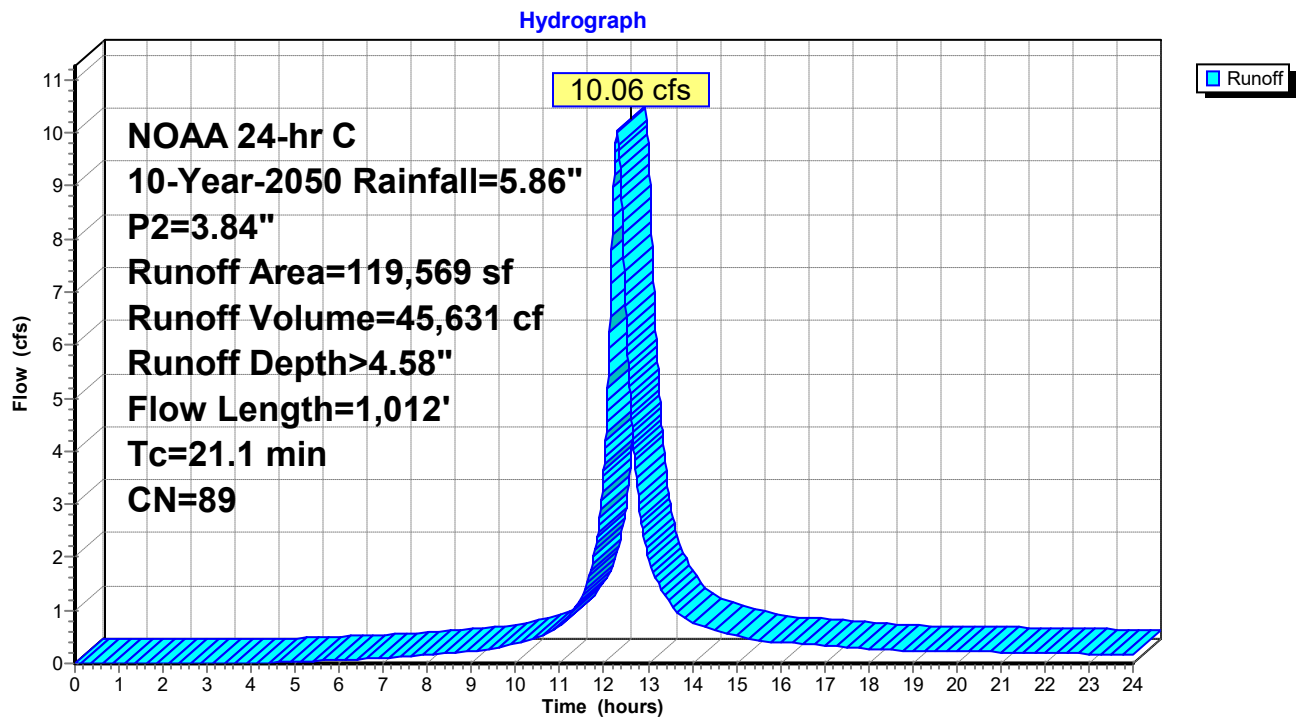
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## Subcatchment 205P: Offsite to E Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 0.75 cfs @ 12.19 hrs, Volume= 2,693 cf, Depth> 4.70"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |

# PROPOSED PEDDIE FOOTBALL

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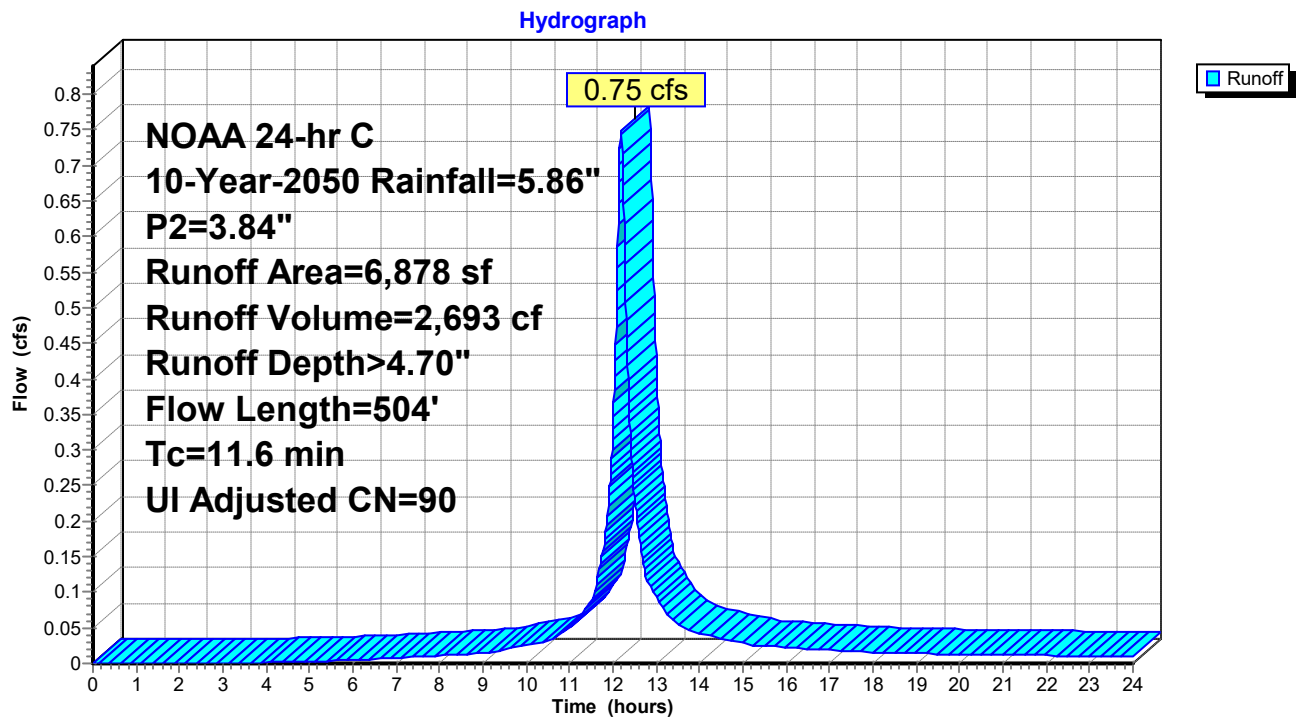
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 206P: Onsite to E Field Drain





**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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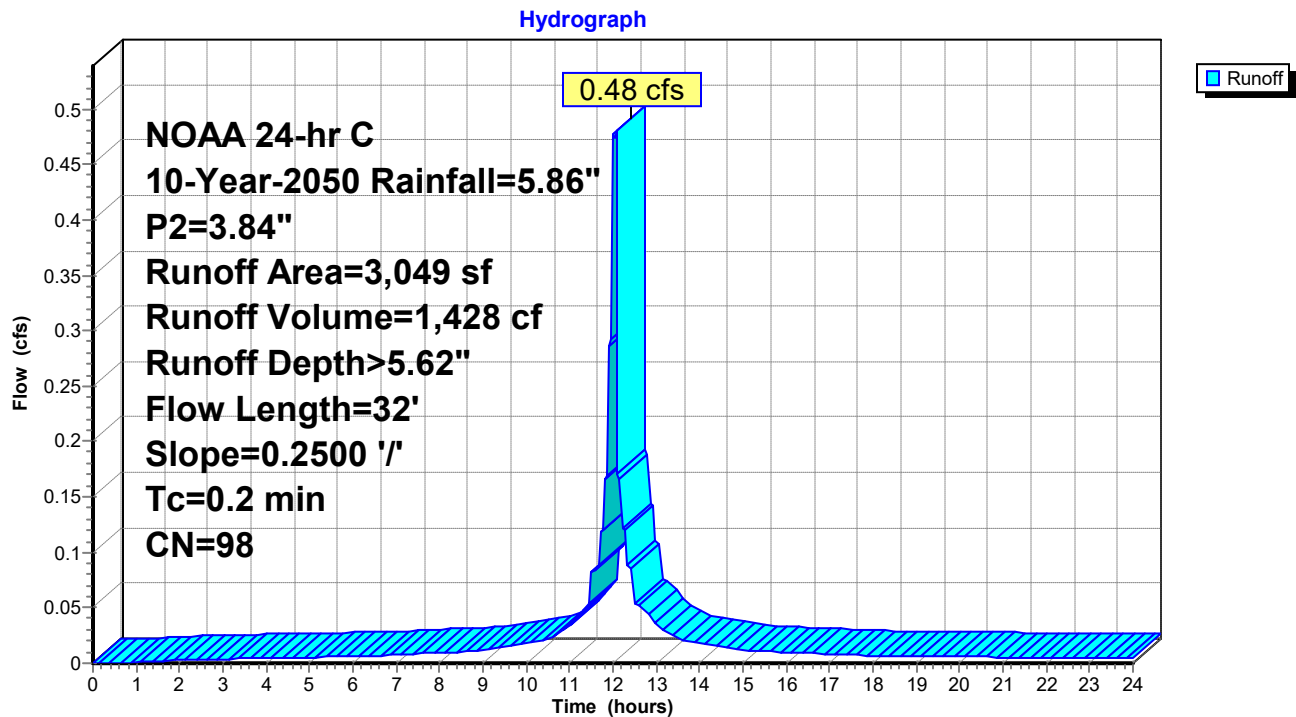
**Summary for Subcatchment 207P: Offsite Impervious to Trench Drain**

Runoff = 0.48 cfs @ 12.09 hrs, Volume= 1,428 cf, Depth> 5.62"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.2                                | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 207P: Offsite Impervious to Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 4.69 cfs @ 12.25 hrs, Volume= 19,046 cf, Depth> 4.05"  
 Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 17.3     | 686           | Total         |                   |                |                                                                                                     |

# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

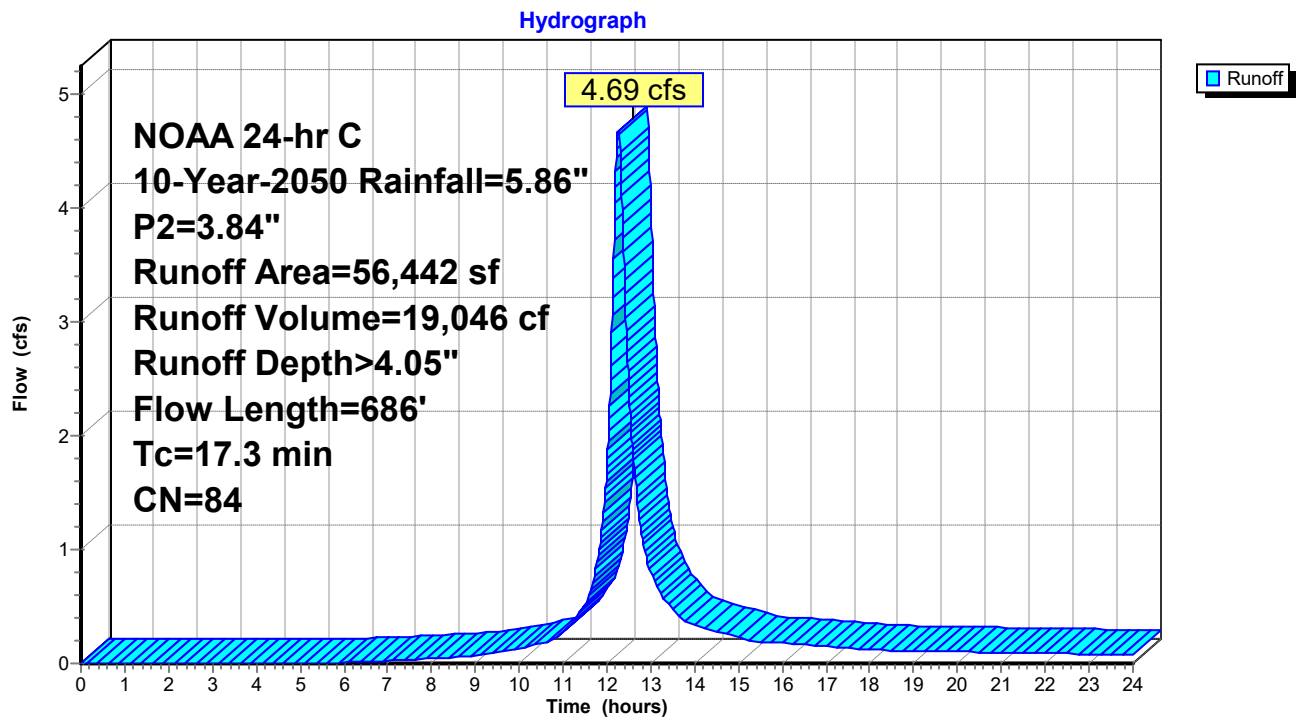
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## Subcatchment 301P: Offsite to W Field Drain 1



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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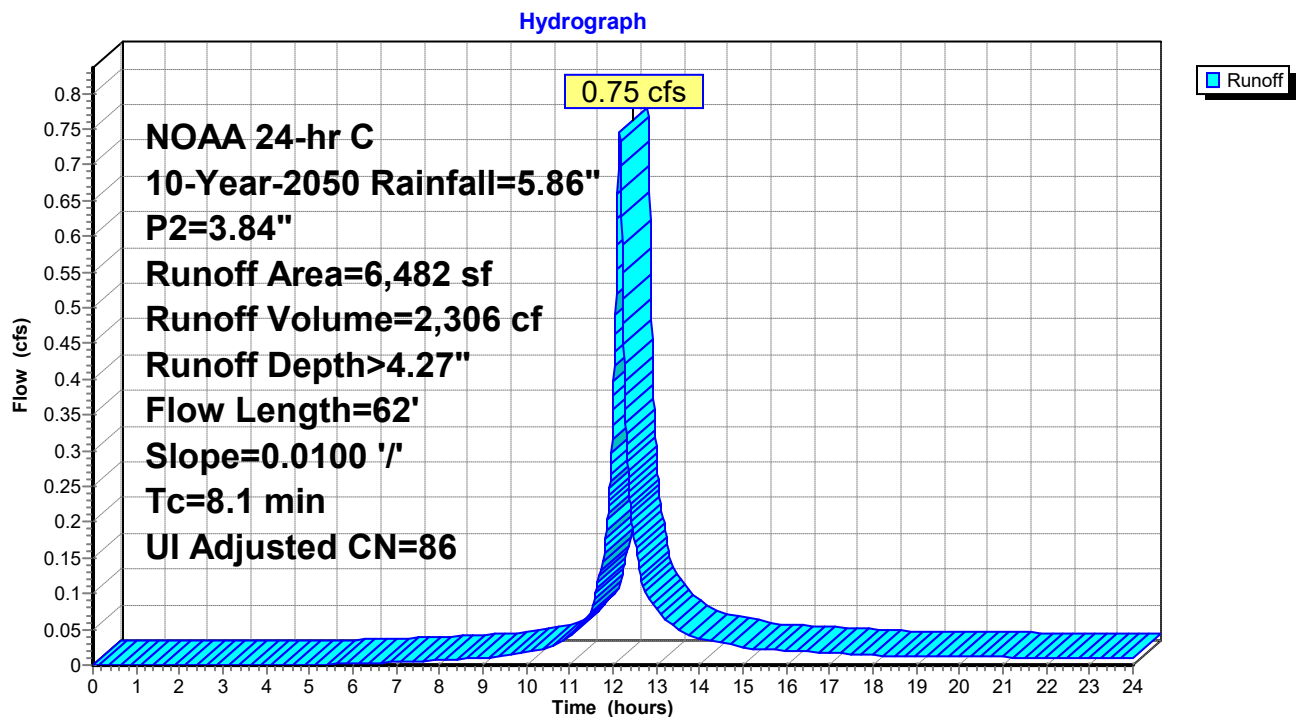
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 0.75 cfs @ 12.15 hrs, Volume= 2,306 cf, Depth> 4.27"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 302P: Onsite to W Field Drain 1**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 2.47 cfs @ 12.20 hrs, Volume= 8,786 cf, Depth> 4.05"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 12.5     | 654           | Total         |                   |                |                                                                                        |

# PROPOSED PEDDIE FOOTBALL

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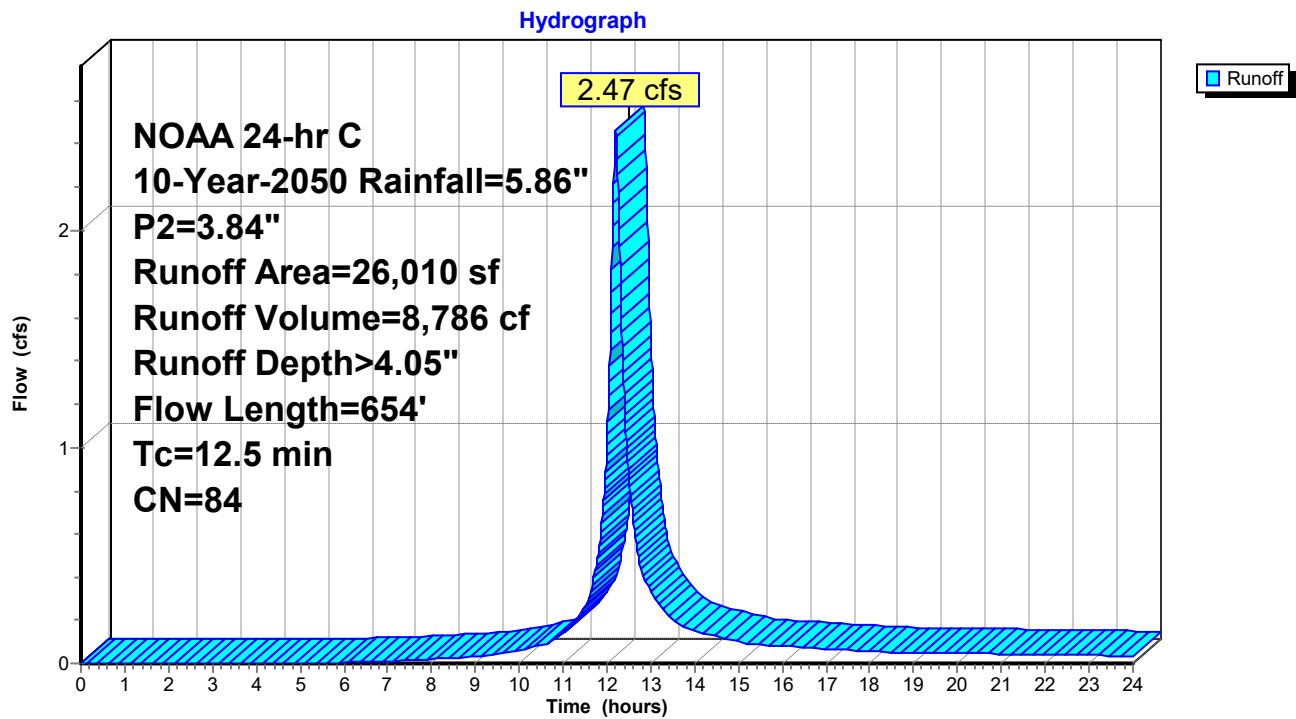
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NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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## Subcatchment 303P: Offsite to W New Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

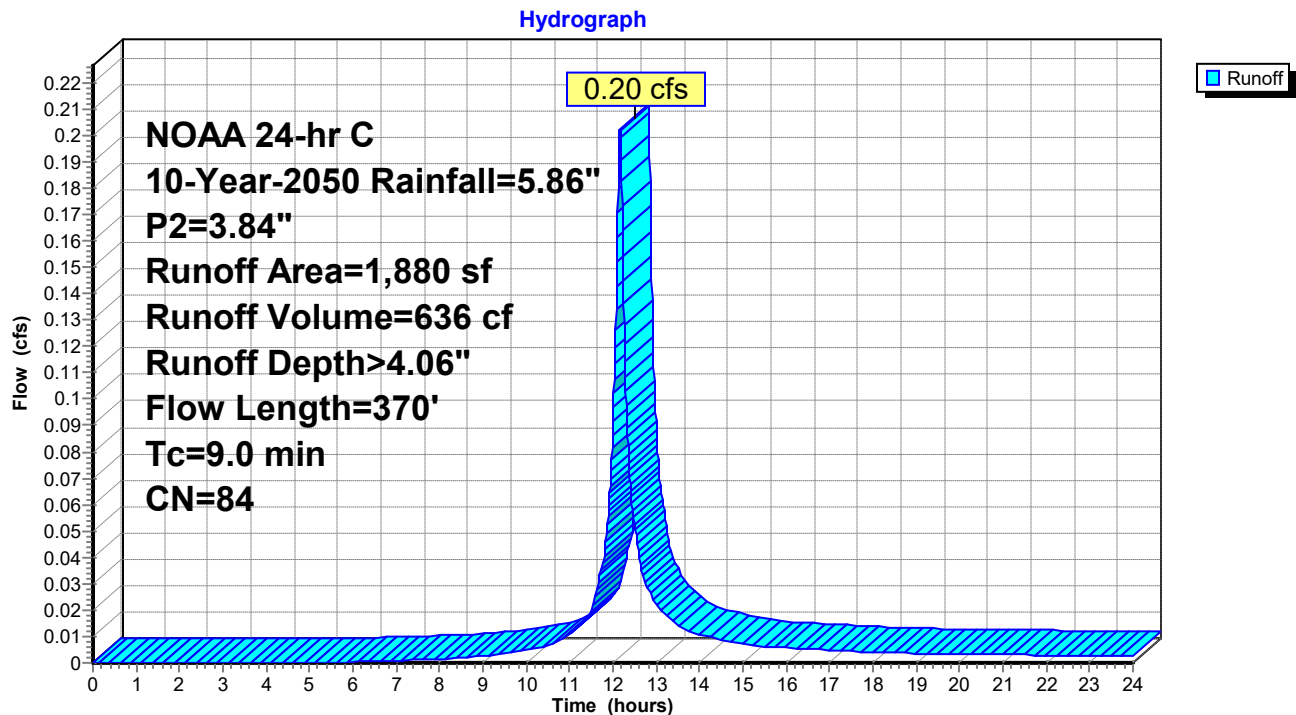
Runoff = 0.20 cfs @ 12.16 hrs, Volume= 636 cf, Depth> 4.06"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.0      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 1.30 cfs @ 12.20 hrs, Volume= 4,601 cf, Depth> 4.05"  
 Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |



# PROPOSED PEDDIE FOOTBALL

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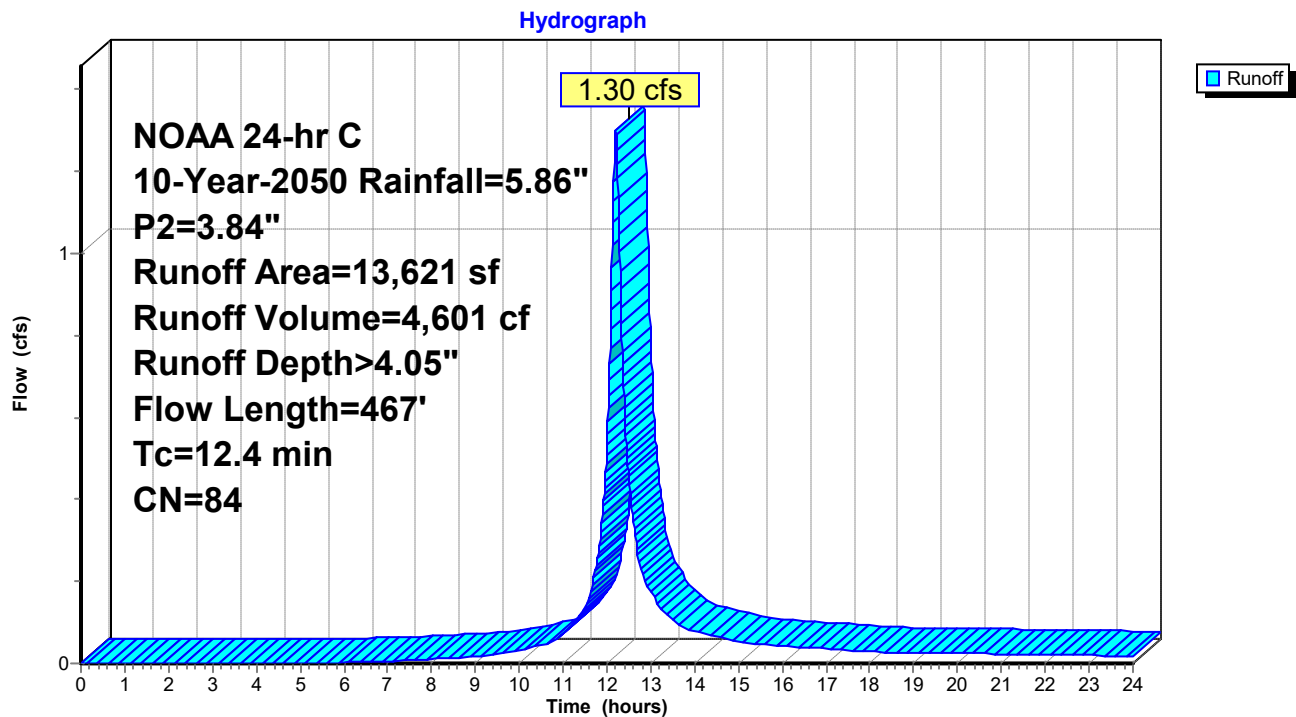
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## Subcatchment 305P: Offsite to Existing W Field Drain



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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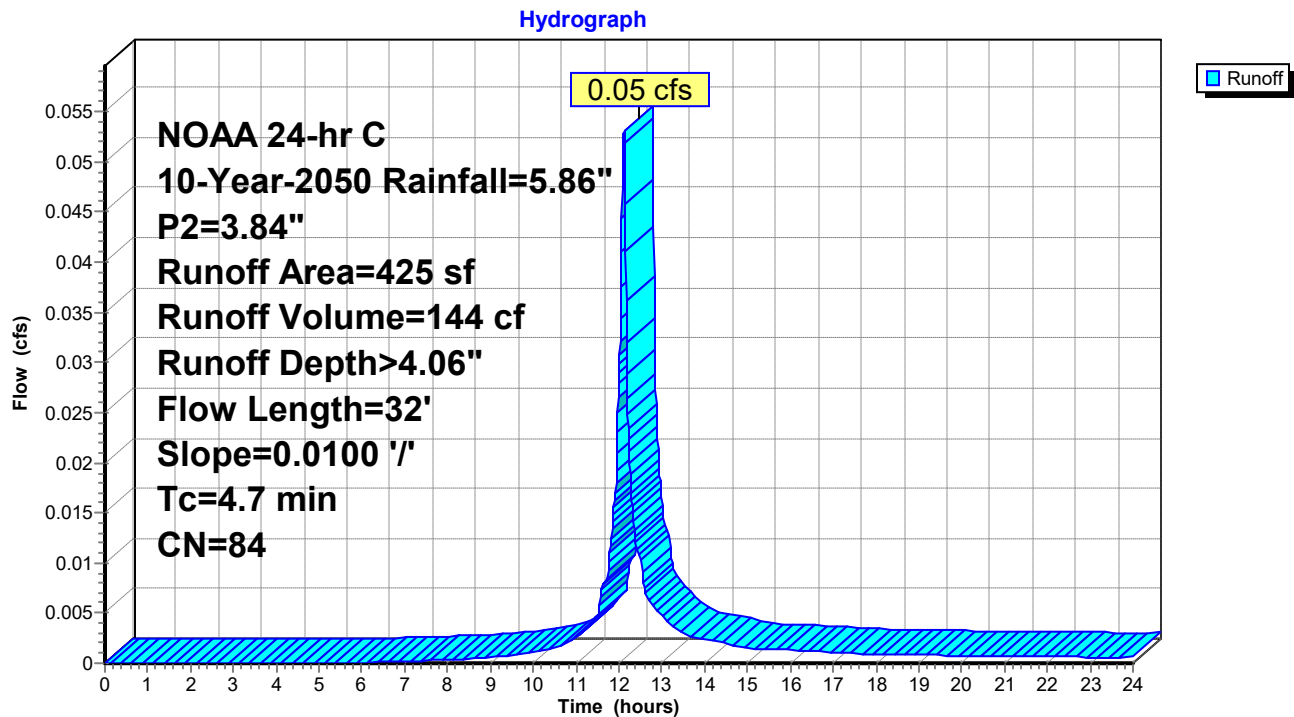
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.05 cfs @ 12.12 hrs, Volume= 144 cf, Depth> 4.06"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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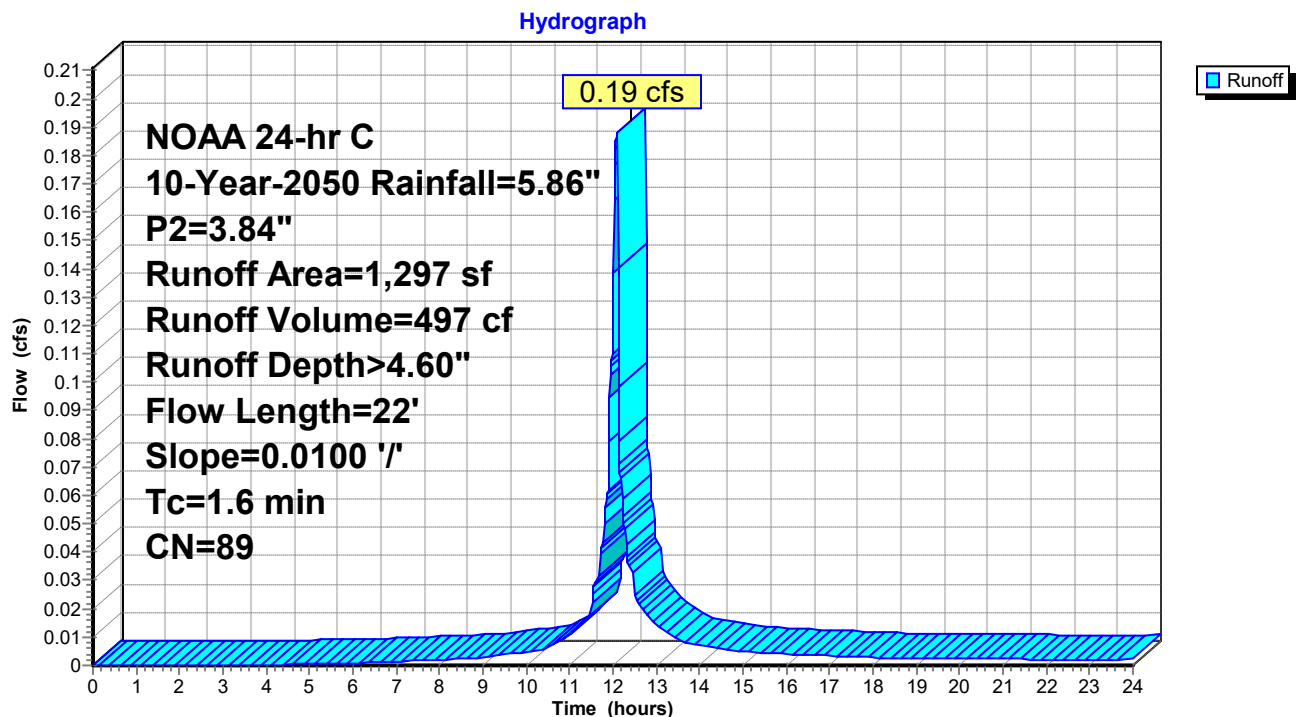
**Summary for Subcatchment 308P: Offsite to Drain 4**

Runoff = 0.19 cfs @ 12.10 hrs, Volume= 497 cf, Depth> 4.60"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.6      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

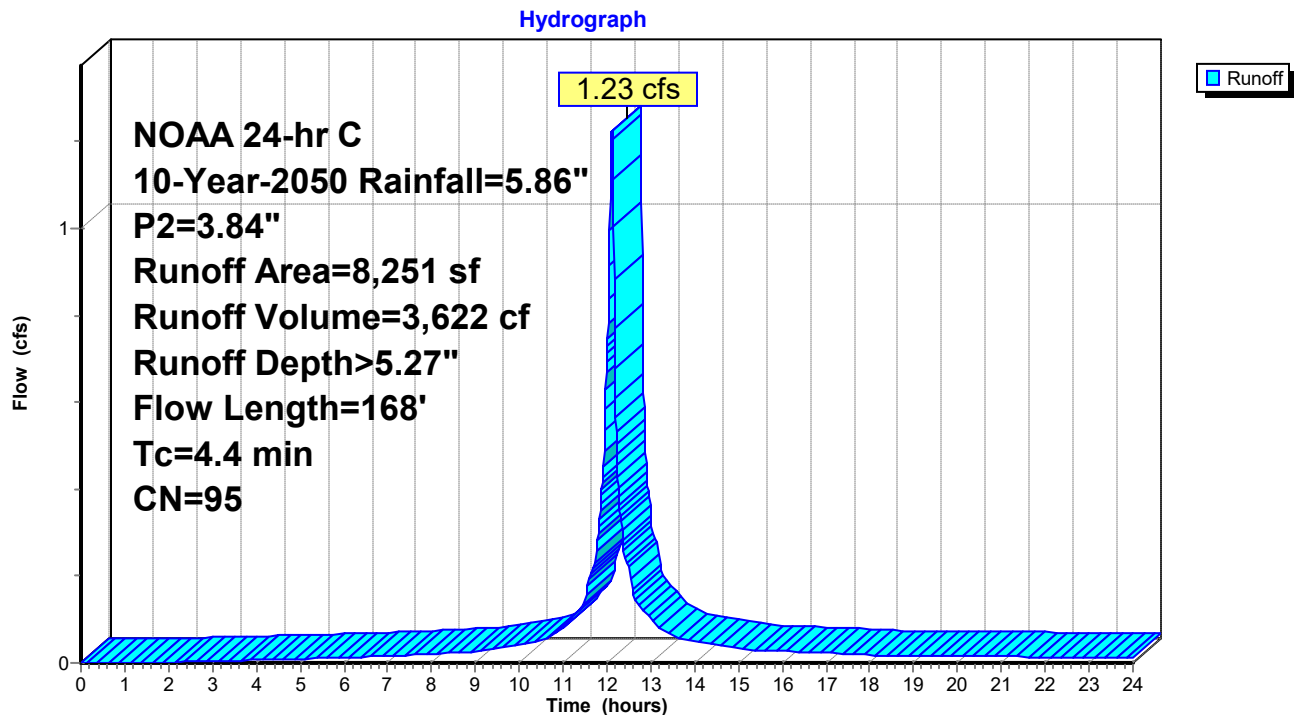
Runoff = 1.23 cfs @ 12.12 hrs, Volume= 3,622 cf, Depth> 5.27"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 310P: Impervious Stadium W**

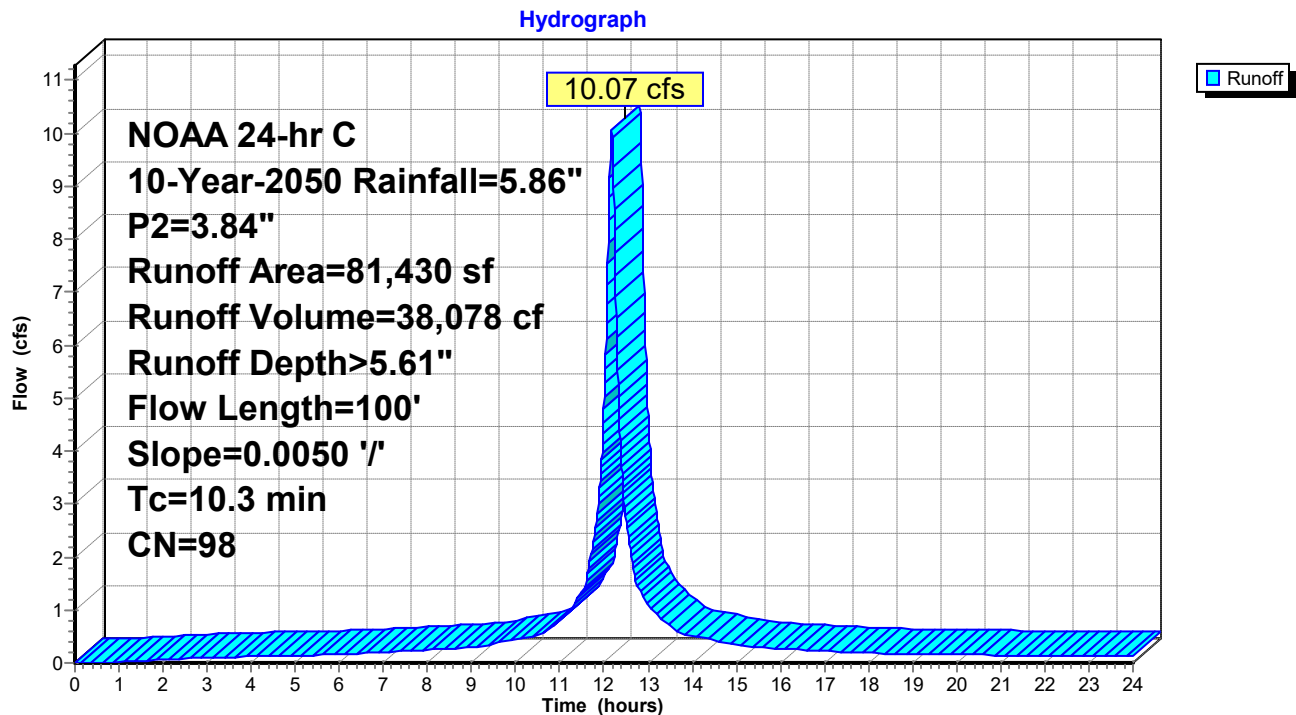
Runoff = 10.07 cfs @ 12.17 hrs, Volume= 38,078 cf, Depth> 5.61"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

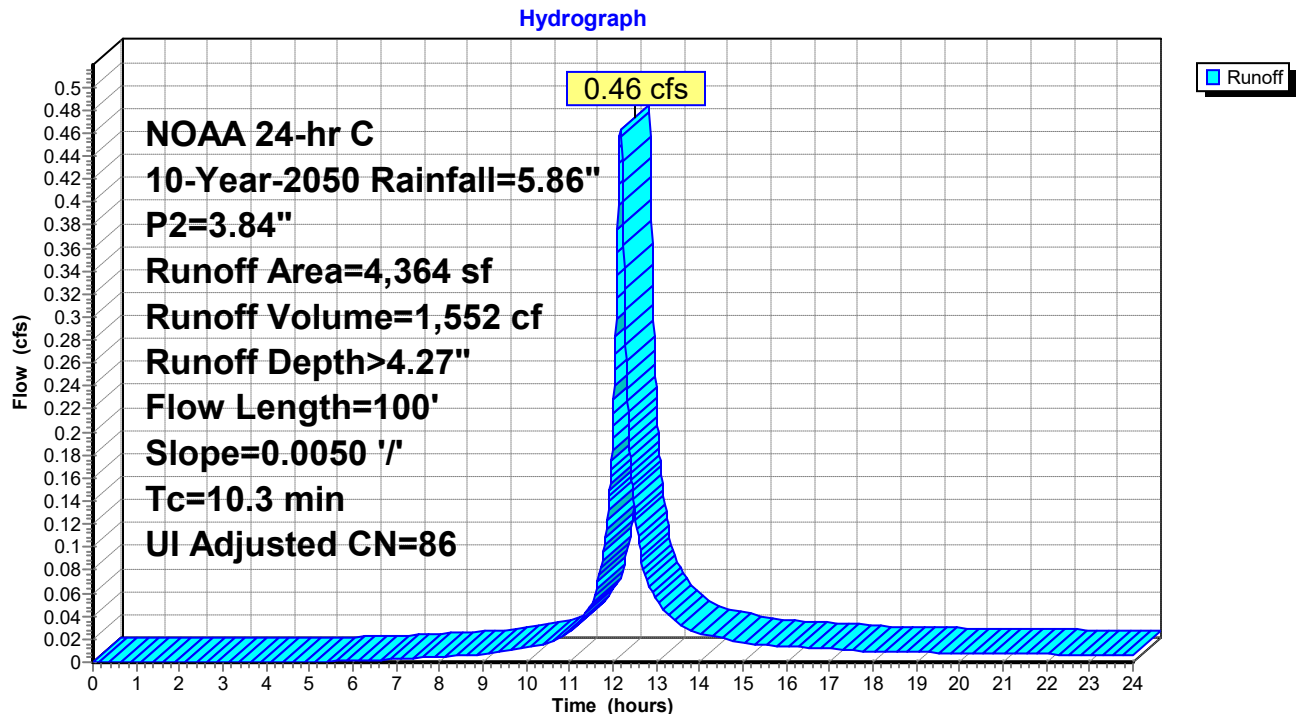
Runoff = 0.46 cfs @ 12.18 hrs, Volume= 1,552 cf, Depth> 4.27"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

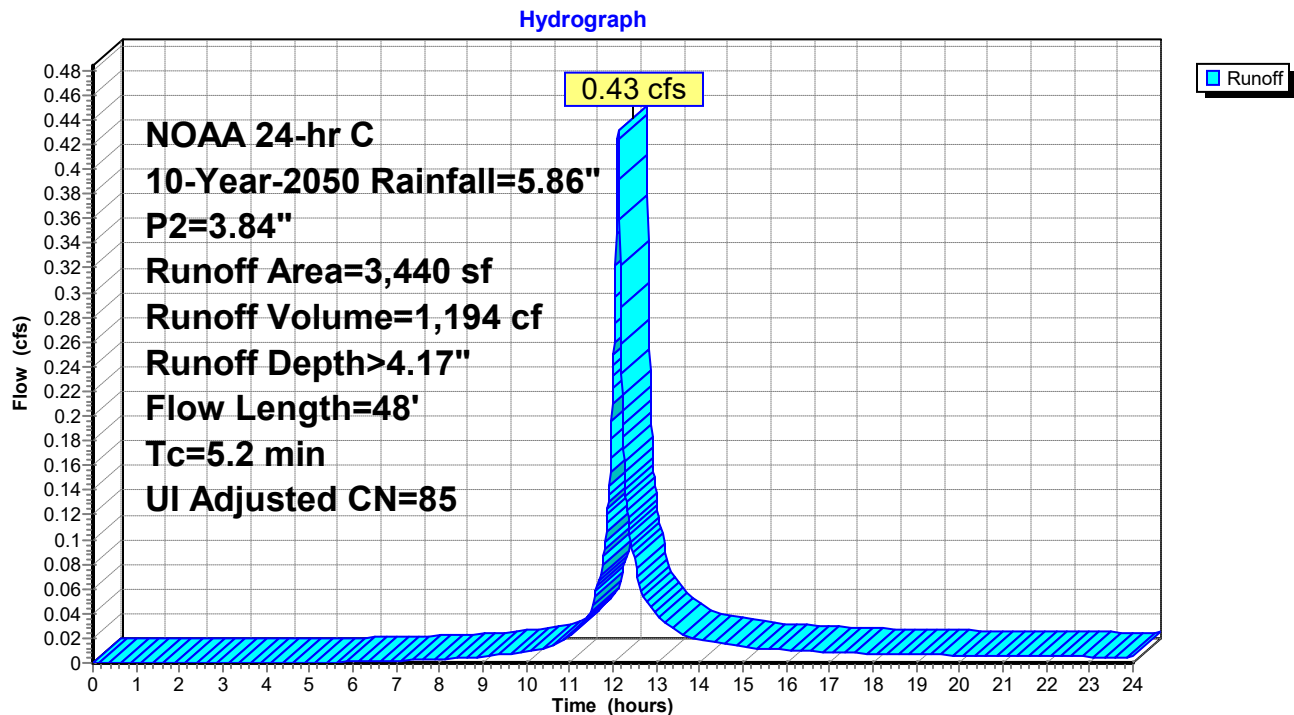
Runoff = 0.43 cfs @ 12.12 hrs, Volume= 1,194 cf, Depth> 4.17"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.3      | 28            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 5.2      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

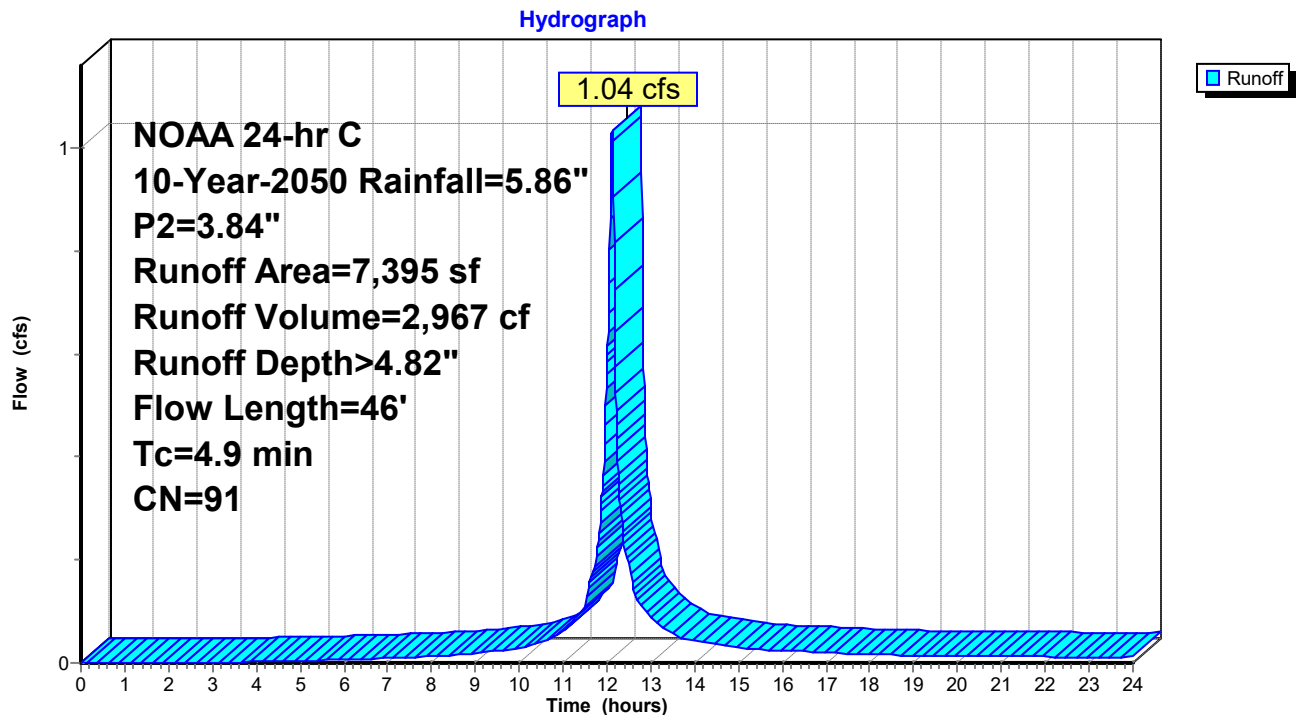
Runoff = 1.04 cfs @ 12.12 hrs, Volume= 2,967 cf, Depth> 4.82"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.0      | 26            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 4.9      | 46            | Total         |                   |                |                                 |

**Subcatchment 313P: Offsite to Yard Inlet**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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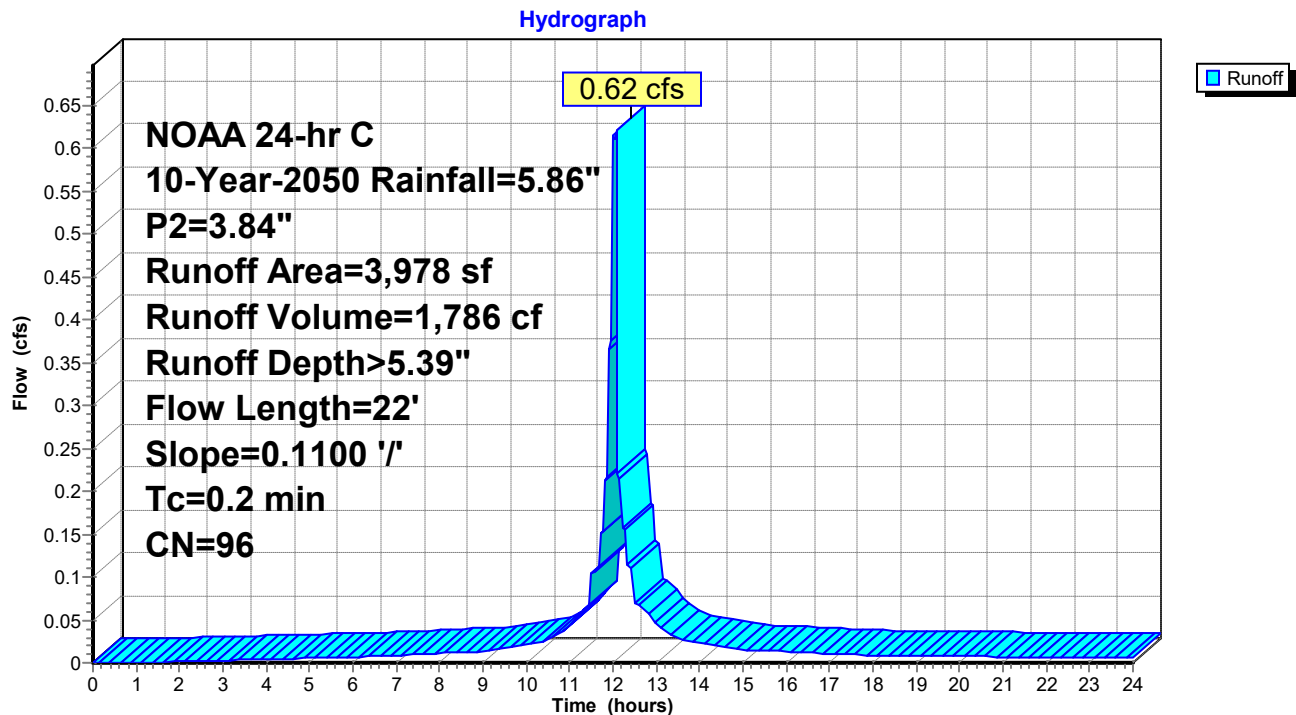
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 1,786 cf, Depth> 5.39"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                  |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------|
| 0.2      | 22            | 0.1100        | 2.20              |                | Sheet Flow, Sheet Flow<br>Smooth surfaces n= 0.011 P2= 3.84" |

**Subcatchment 401P: Onsite to SP4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Subcatchment 403P: Tennis Courts**

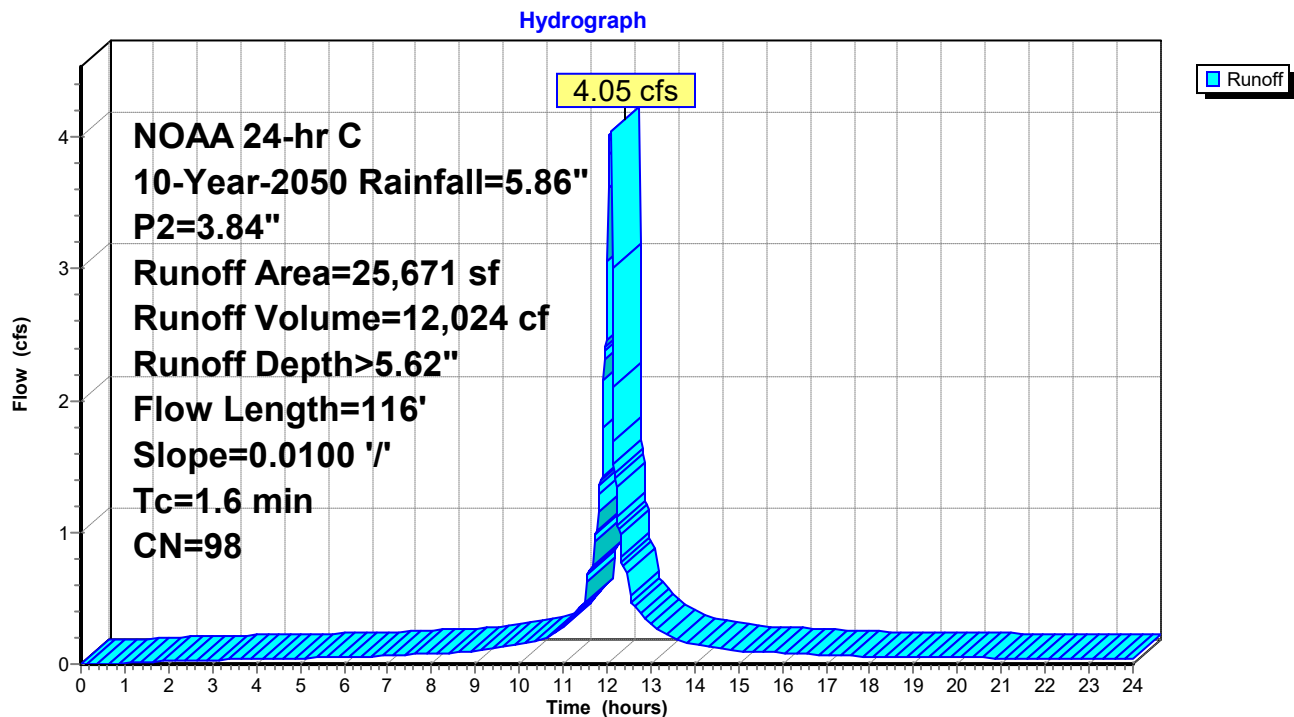
Runoff = 4.05 cfs @ 12.09 hrs, Volume= 12,024 cf, Depth> 5.62"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

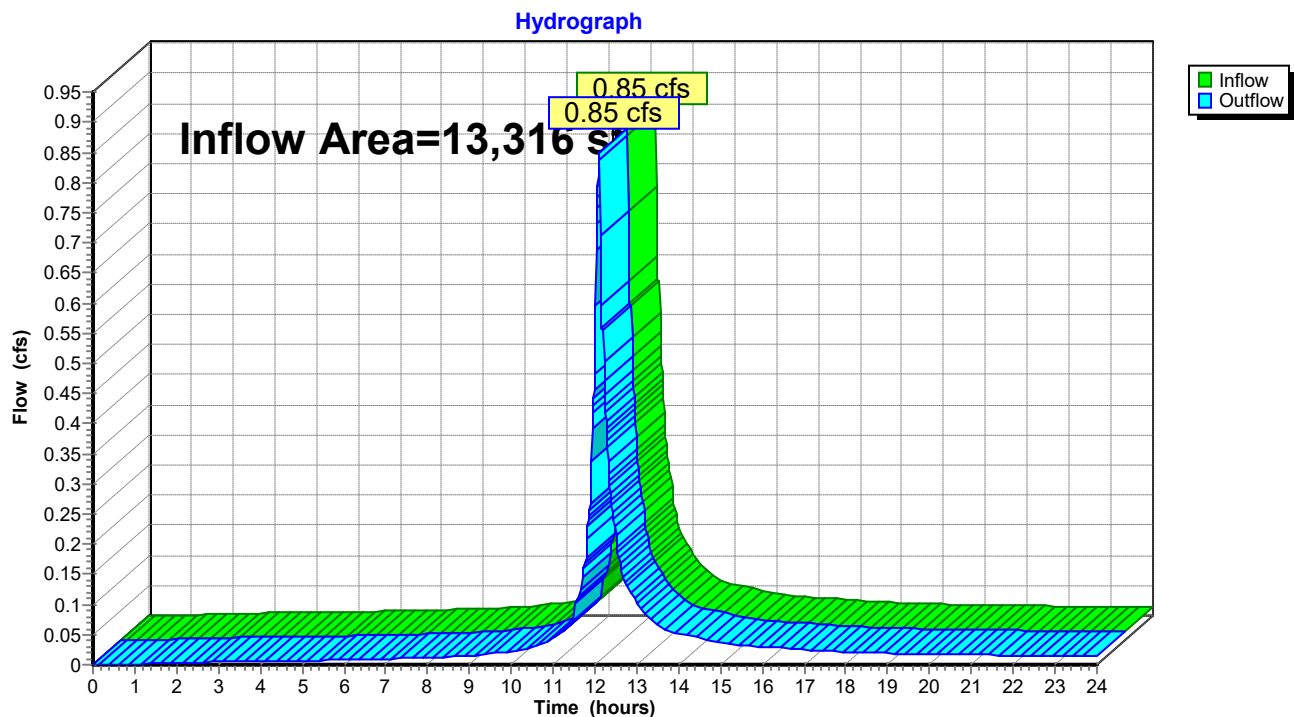
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 2.72" for 10-Year-2050 event  
 Inflow = 0.85 cfs @ 12.10 hrs, Volume= 3,013 cf  
 Outflow = 0.85 cfs @ 12.10 hrs, Volume= 3,013 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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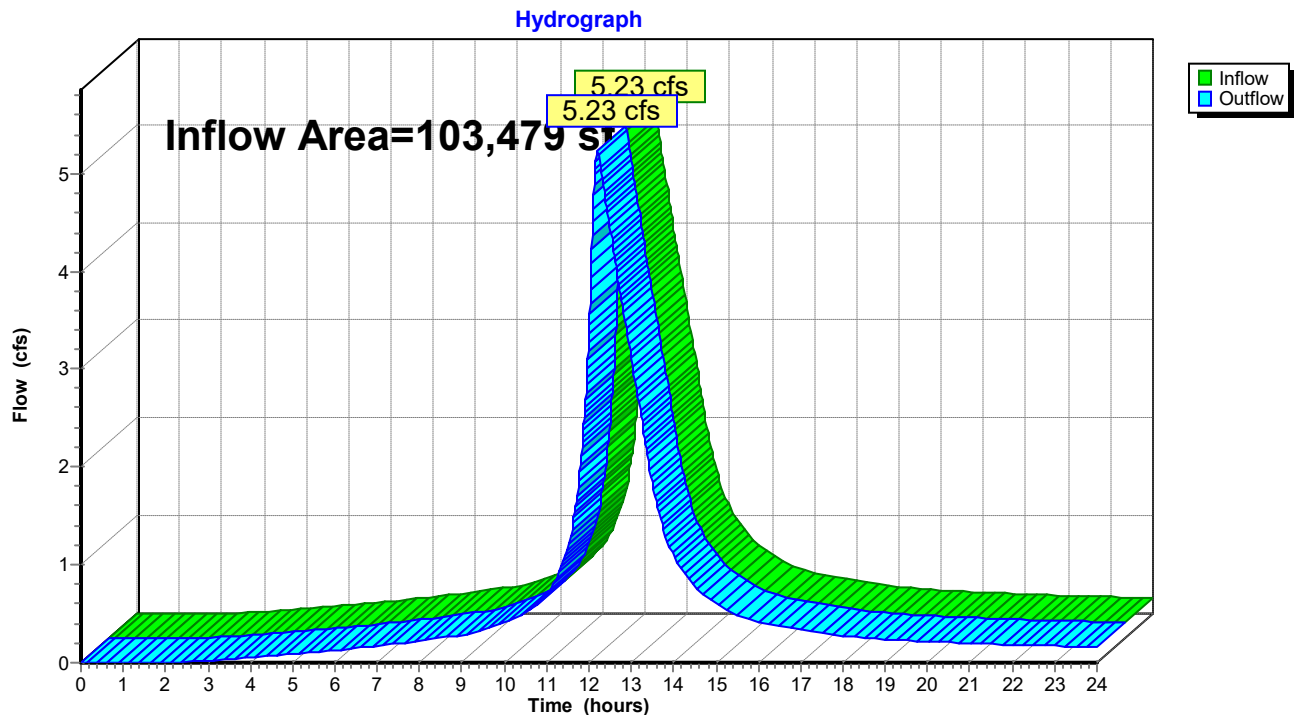
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## Summary for Reach 2P: ONSITE EAST

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 5.22" for 10-Year-2050 event  
Inflow = 5.23 cfs @ 12.21 hrs, Volume= 44,979 cf  
Outflow = 5.23 cfs @ 12.21 hrs, Volume= 44,979 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 2P: ONSITE EAST



## PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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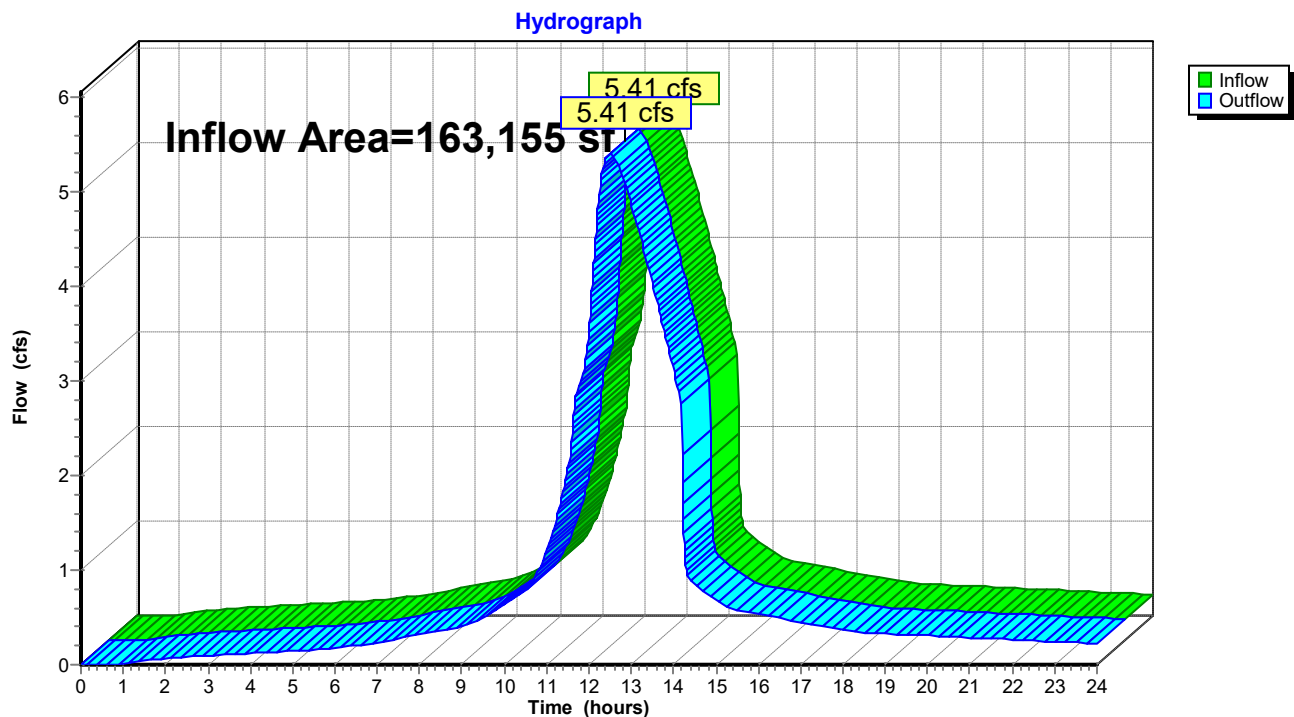
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### Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 4.88" for 10-Year-2050 event  
Inflow = 5.41 cfs @ 12.50 hrs, Volume= 66,387 cf  
Outflow = 5.41 cfs @ 12.50 hrs, Volume= 66,387 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3P: ONSITE WEST

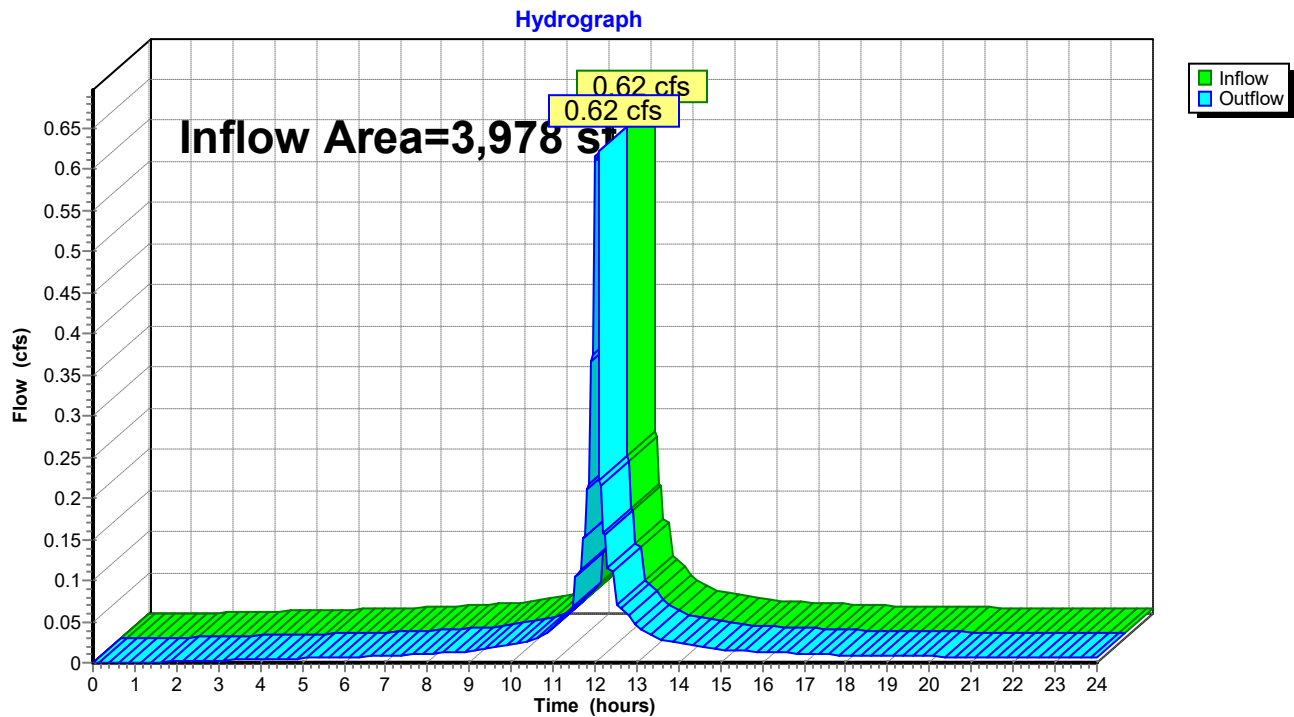


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 5.39" for 10-Year-2050 event  
 Inflow = 0.62 cfs @ 12.09 hrs, Volume= 1,786 cf  
 Outflow = 0.62 cfs @ 12.09 hrs, Volume= 1,786 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4P: ONSITE TENNIS COURTS

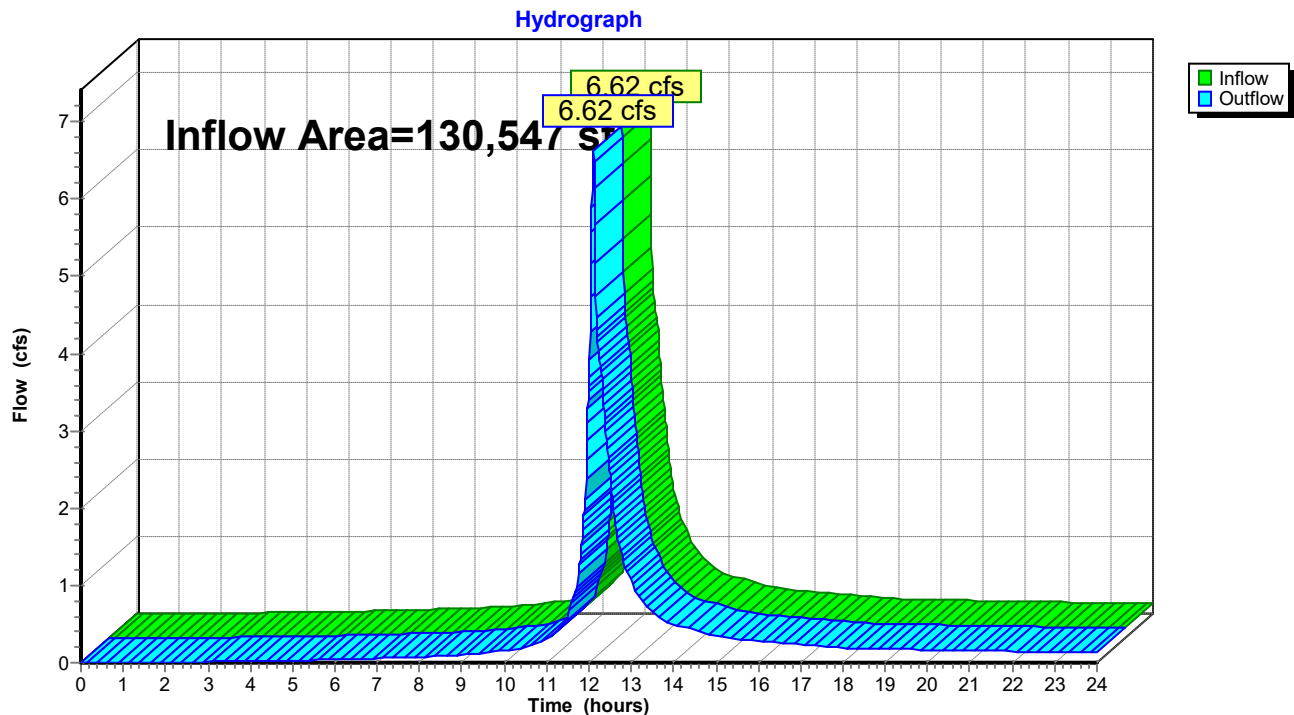


### Summary for Reach 100P: EX INLET 1

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 2.39" for 10-Year-2050 event  
 Inflow = 6.62 cfs @ 12.11 hrs, Volume= 25,951 cf  
 Outflow = 6.62 cfs @ 12.11 hrs, Volume= 25,951 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100P: EX INLET 1

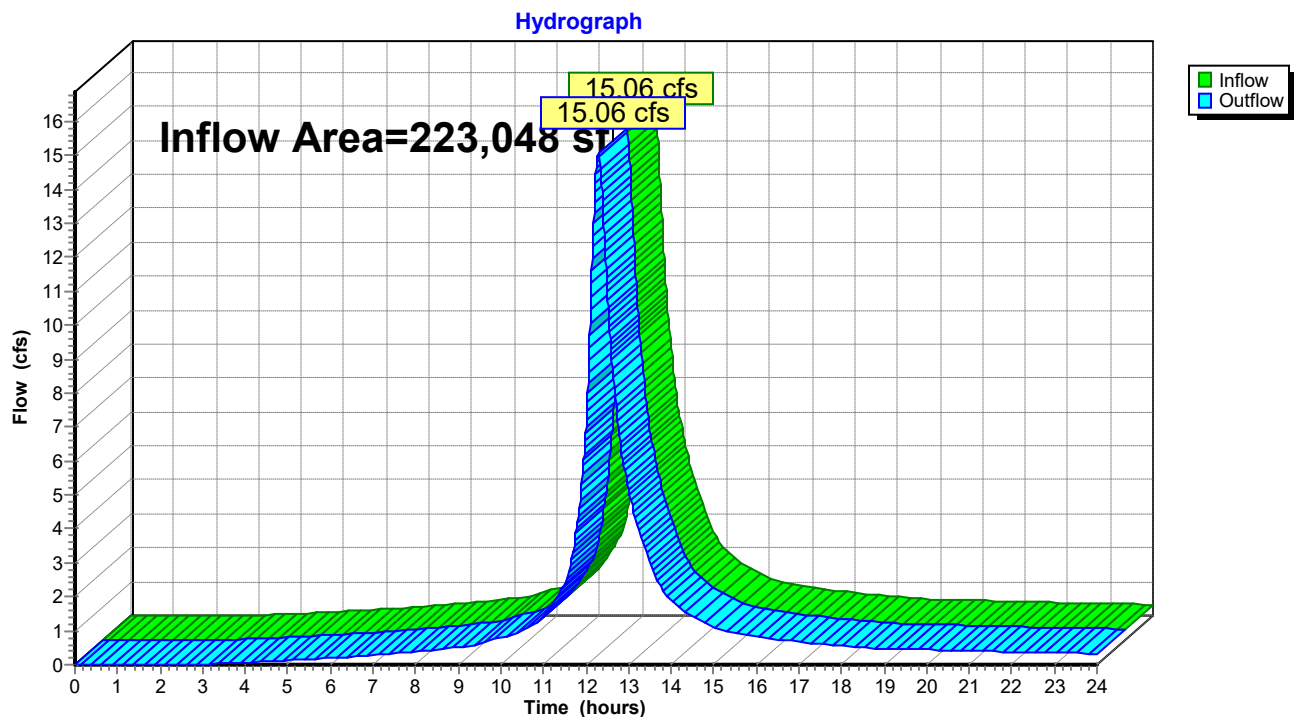


### Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 4.87" for 10-Year-2050 event  
 Inflow = 15.06 cfs @ 12.29 hrs, Volume= 90,610 cf  
 Outflow = 15.06 cfs @ 12.29 hrs, Volume= 90,610 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 200P: EX MANHOLE 2



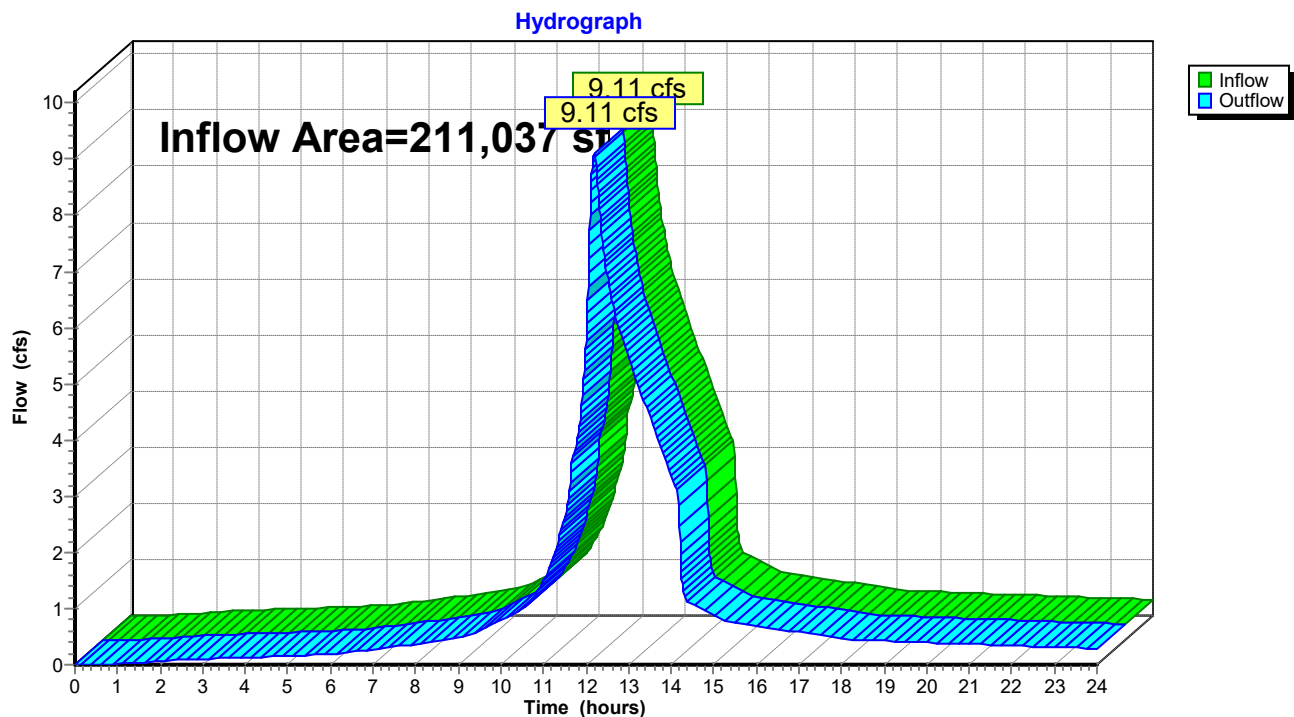


### Summary for Reach 300P: EX INLET 3

Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 4.74" for 10-Year-2050 event  
 Inflow = 9.11 cfs @ 12.21 hrs, Volume= 83,397 cf  
 Outflow = 9.11 cfs @ 12.21 hrs, Volume= 83,397 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 300P: EX INLET 3

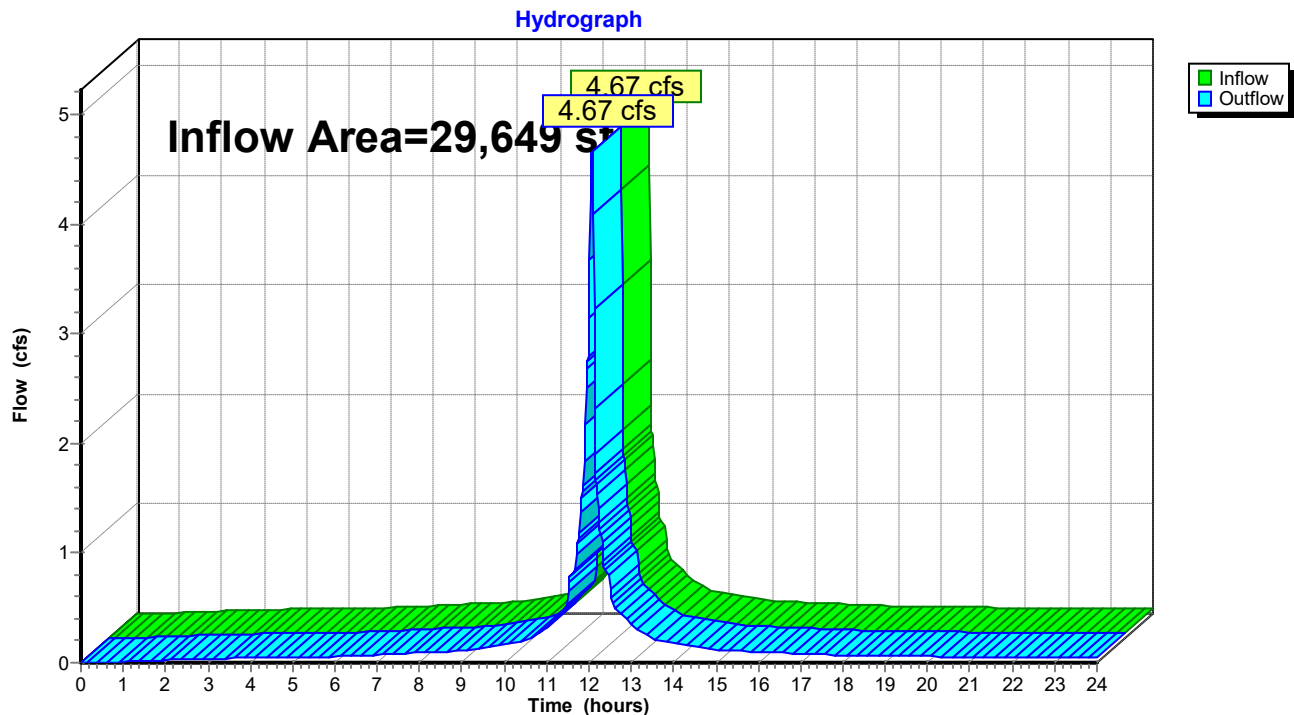


### Summary for Reach 400P: TENNIS COURTS

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 5.59" for 10-Year-2050 event  
 Inflow = 4.67 cfs @ 12.09 hrs, Volume= 13,810 cf  
 Outflow = 4.67 cfs @ 12.09 hrs, Volume= 13,810 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

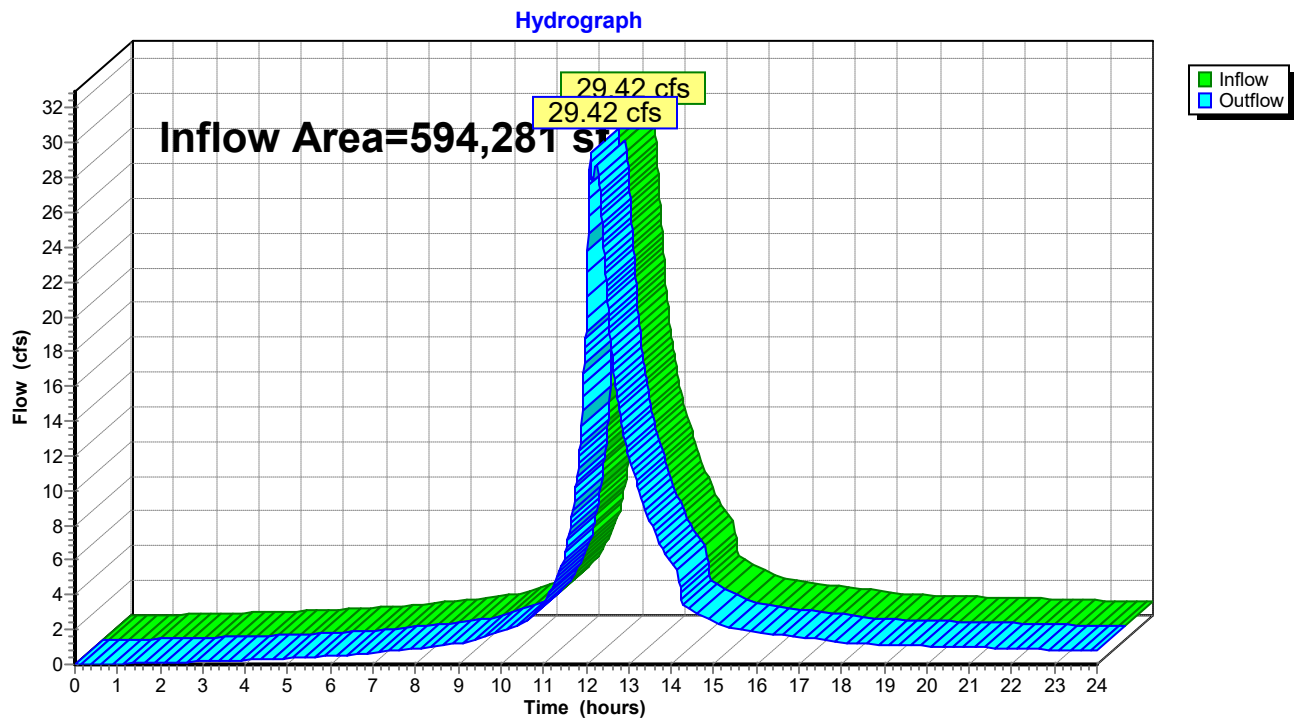
### Reach 400P: TENNIS COURTS



**Summary for Reach 500P: STUDY POINT**

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 4.32" for 10-Year-2050 event  
Inflow = 29.42 cfs @ 12.11 hrs, Volume= 213,768 cf  
Outflow = 29.42 cfs @ 12.11 hrs, Volume= 213,768 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 500P: STUDY POINT**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 5.41" for 10-Year-2050 event  
 Inflow = 14.35 cfs @ 12.09 hrs, Volume= 43,568 cf  
 Outflow = 4.51 cfs @ 12.24 hrs, Volume= 42,286 cf, Atten= 69%, Lag= 8.7 min  
 Primary = 4.51 cfs @ 12.24 hrs, Volume= 42,286 cf  
 Routed to Reach 2P : ONSITE EAST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 101.12' @ 12.24 hrs Surf.Area= 8,044 sf Storage= 12,448 cf

Plug-Flow detention time= 67.4 min calculated for 42,269 cf (97% of inflow)  
 Center-of-Mass det. time= 48.8 min ( 797.5 - 748.7 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

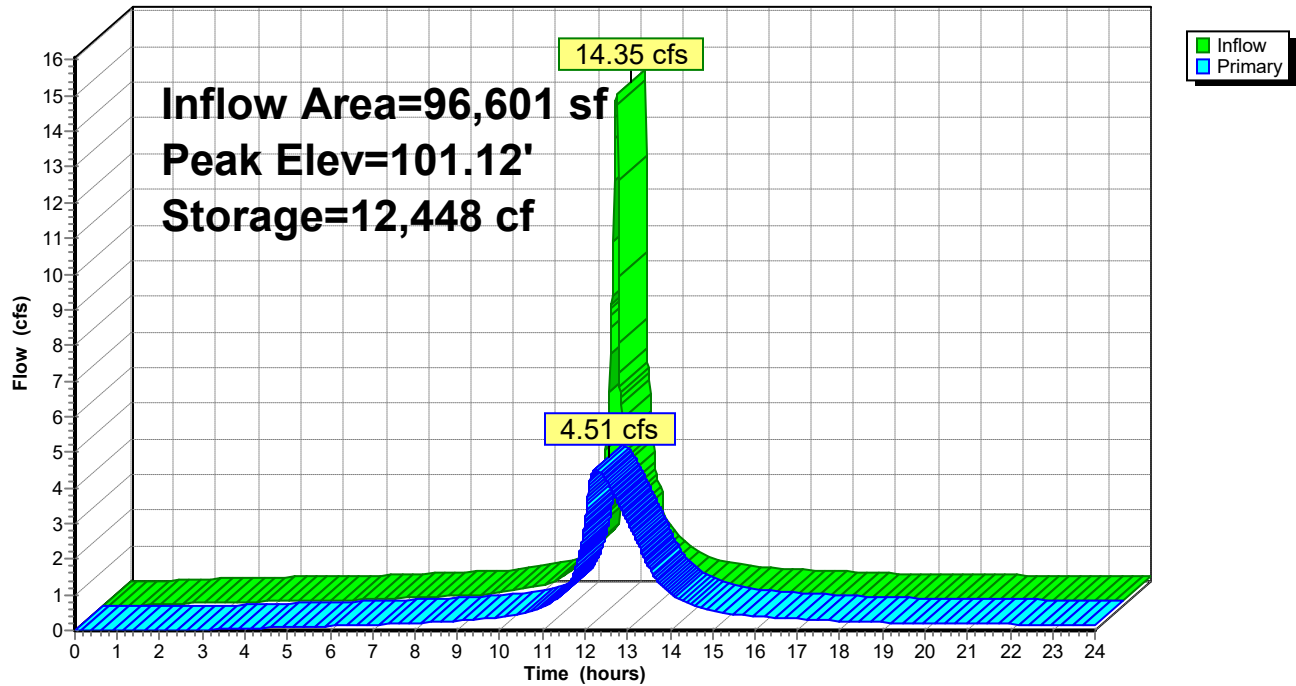
| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=4.51 cfs @ 12.24 hrs HW=101.12' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 4.51 cfs @ 5.74 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 204P: Cultec East**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 10-Year-2050 Rainfall=5.86", P2=3.84"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 4.90" for 10-Year-2050 event  
 Inflow = 16.20 cfs @ 12.17 hrs, Volume= 65,143 cf  
 Outflow = 5.32 cfs @ 12.53 hrs, Volume= 65,110 cf, Atten= 67%, Lag= 21.3 min  
 Primary = 5.32 cfs @ 12.53 hrs, Volume= 65,110 cf  
 Routed to Reach 3P : ONSITE WEST

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 100.68' @ 12.53 hrs Surf.Area= 11,650 sf Storage= 14,220 cf

Plug-Flow detention time= 17.7 min calculated for 65,110 cf (100% of inflow)  
 Center-of-Mass det. time= 17.4 min ( 791.4 - 774.0 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD</b> x 528 Inside #1<br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

Storage Group A created with Chamber Wizard

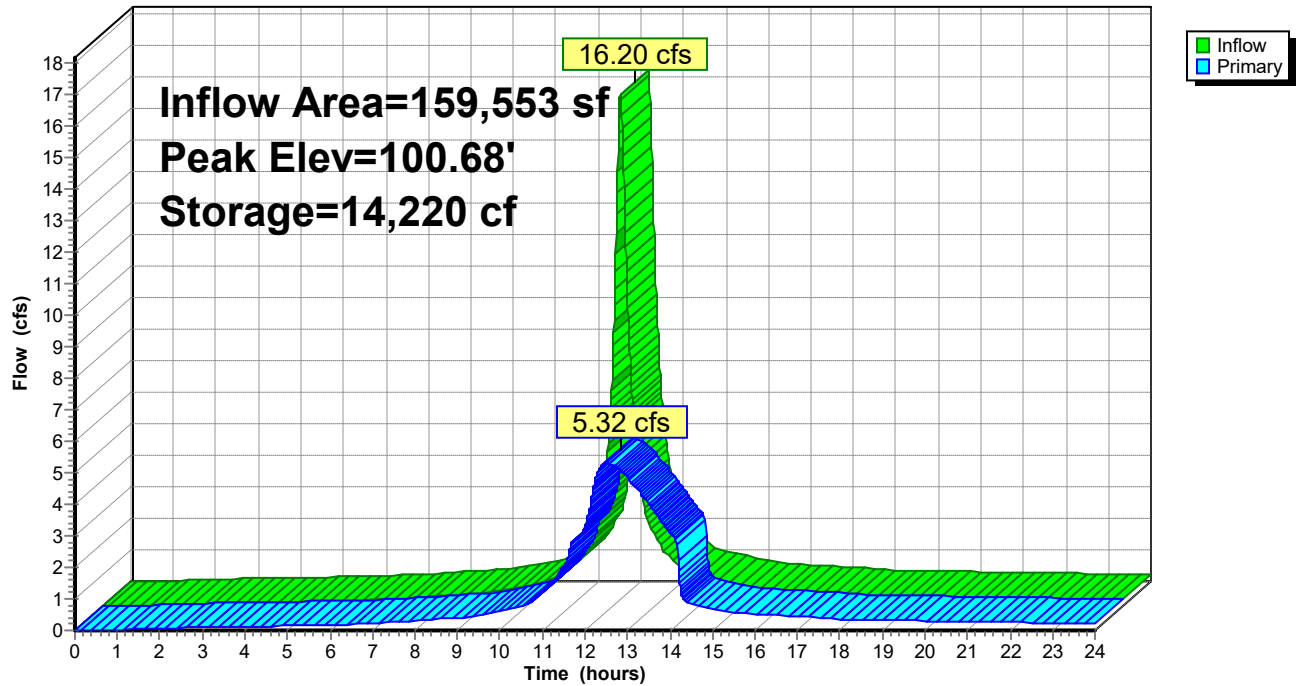
| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=5.32 cfs @ 12.53 hrs HW=100.68' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 5.32 cfs @ 6.77 fps)
- 2=Orifice/Grate ( Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 208P: Cultec West**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 101P: Offsite Pervious SE** Runoff Area=70,367 sf 0.44% Impervious Runoff Depth>5.38"  
Flow Length=1,133' Tc=18.3 min CN=56 Runoff=7.66 cfs 31,534 cf

**Subcatchment 102P: Onsite Pervious SE** Runoff Area=9,408 sf 0.00% Impervious Runoff Depth>5.39"  
Flow Length=186' Tc=9.5 min CN=56 Runoff=1.35 cfs 4,226 cf

**Subcatchment 103P: Access Road &** Runoff Area=29,157 sf 90.35% Impervious Runoff Depth>10.47"  
Flow Length=661' Tc=3.4 min CN=93 Runoff=8.67 cfs 25,433 cf

**Subcatchment 104P: Yard Drains** Runoff Area=4,536 sf 0.00% Impervious Runoff Depth>4.35"  
Flow Length=47' Slope=0.0200 '/' Tc=4.0 min CN=49 Runoff=0.65 cfs 1,643 cf

**Subcatchment 105P: Low Drains** Runoff Area=13,171 sf 21.89% Impervious Runoff Depth>5.10"  
Flow Length=226' Tc=5.2 min UI Adjusted CN=54 Runoff=2.12 cfs 5,596 cf

**Subcatchment 106P: Onsite Unretained** Runoff Area=3,908 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=376' Tc=1.5 min CN=98 Runoff=1.20 cfs 3,610 cf

**Subcatchment 201P: Offsite to E Trench** Runoff Area=10,537 sf 0.00% Impervious Runoff Depth>9.31"  
Flow Length=91' Slope=0.0100 '/' Tc=9.2 min CN=84 Runoff=2.46 cfs 8,173 cf

**Subcatchment 202P: Onsite to E Trench** Runoff Area=2,332 sf 0.00% Impervious Runoff Depth>9.32"  
Flow Length=115' Tc=2.4 min CN=84 Runoff=0.67 cfs 1,812 cf

**Subcatchment 203P: Impervious Stadium** Runoff Area=80,683 sf 99.36% Impervious Runoff Depth>11.09"  
Flow Length=100' Slope=0.0050 '/' Tc=1.9 min CN=98 Runoff=24.66 cfs 74,532 cf

**Subcatchment 205P: Offsite to E Field** Runoff Area=119,569 sf 0.70% Impervious Runoff Depth>9.93"  
Flow Length=1,012' Tc=21.1 min CN=89 Runoff=20.89 cfs 98,950 cf

**Subcatchment 206P: Onsite to E Field** Runoff Area=6,878 sf 18.32% Impervious Runoff Depth>10.07"  
Flow Length=504' Tc=11.6 min UI Adjusted CN=90 Runoff=1.54 cfs 5,775 cf

**Subcatchment 207P: Offsite Impervious** Runoff Area=3,049 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=32' Slope=0.2500 '/' Tc=0.2 min CN=98 Runoff=0.93 cfs 2,817 cf

**Subcatchment 301P: Offsite to W Field** Runoff Area=56,442 sf 0.42% Impervious Runoff Depth>9.29"  
Flow Length=686' Tc=17.3 min CN=84 Runoff=10.33 cfs 43,713 cf

**Subcatchment 302P: Onsite to W Field** Runoff Area=6,482 sf 25.92% Impervious Runoff Depth>9.57"  
Flow Length=62' Slope=0.0100 '/' Tc=8.1 min UI Adjusted CN=86 Runoff=1.59 cfs 5,169 cf

**Subcatchment 303P: Offsite to W New Drain** Runoff Area=26,010 sf 1.36% Impervious Runoff Depth>9.30"  
Flow Length=654' Tc=12.5 min CN=84 Runoff=5.42 cfs 20,163 cf

**Subcatchment 304P: Onsite to W Trench** Runoff Area=1,880 sf 0.00% Impervious Runoff Depth>9.31"  
Flow Length=370' Tc=9.0 min CN=84 Runoff=0.44 cfs 1,458 cf



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Subcatchment 305P: Offsite to Existing W** Runoff Area=13,621 sf 2.35% Impervious Runoff Depth>9.30"  
Flow Length=467' Tc=12.4 min CN=84 Runoff=2.85 cfs 10,559 cf

**Subcatchment 306P: Onsite to W Existing** Runoff Area=425 sf 0.00% Impervious Runoff Depth>9.32"  
Flow Length=32' Slope=0.0100 '/' Tc=4.7 min CN=84 Runoff=0.12 cfs 330 cf

**Subcatchment 308P: Offsite to Drain 4** Runoff Area=1,297 sf 38.55% Impervious Runoff Depth>9.97"  
Flow Length=22' Slope=0.0100 '/' Tc=1.6 min CN=89 Runoff=0.39 cfs 1,077 cf

**Subcatchment 309P: Offsite Building to** Runoff Area=8,251 sf 81.26% Impervious Runoff Depth>10.71"  
Flow Length=168' Tc=4.4 min CN=95 Runoff=2.40 cfs 7,366 cf

**Subcatchment 310P: Impervious Stadium** Runoff Area=81,430 sf 98.43% Impervious Runoff Depth>11.07"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min CN=98 Runoff=19.53 cfs 75,106 cf

**Subcatchment 311P: Onsite to New Inlet** Runoff Area=4,364 sf 24.15% Impervious Runoff Depth>9.57"  
Flow Length=100' Slope=0.0050 '/' Tc=10.3 min UI Adjusted CN=86 Runoff=0.99 cfs 3,479 cf

**Subcatchment 312P: Offsite to Yard Inlet** Runoff Area=3,440 sf 20.73% Impervious Runoff Depth>9.45"  
Flow Length=48' Tc=5.2 min UI Adjusted CN=85 Runoff=0.93 cfs 2,708 cf

**Subcatchment 313P: Offsite to Yard Inlet** Runoff Area=7,395 sf 51.36% Impervious Runoff Depth>10.21"  
Flow Length=46' Tc=4.9 min CN=91 Runoff=2.09 cfs 6,294 cf

**Subcatchment 401P: Onsite to SP4** Runoff Area=3,978 sf 83.13% Impervious Runoff Depth>10.84"  
Flow Length=22' Slope=0.1100 '/' Tc=0.2 min CN=96 Runoff=1.21 cfs 3,595 cf

**Subcatchment 403P: Tennis Courts** Runoff Area=25,671 sf 100.00% Impervious Runoff Depth>11.09"  
Flow Length=116' Slope=0.0100 '/' Tc=1.6 min CN=98 Runoff=7.85 cfs 23,715 cf

**Reach 1P: ONSITE UNRETAINED** Inflow=2.23 cfs 7,837 cf  
Outflow=2.23 cfs 7,837 cf

**Reach 2P: ONSITE EAST** Inflow=18.09 cfs 91,318 cf  
Outflow=18.09 cfs 91,318 cf

**Reach 3P: ONSITE WEST** Inflow=20.35 cfs 139,271 cf  
Outflow=20.35 cfs 139,271 cf

**Reach 4P: ONSITE TENNIS COURTS** Inflow=1.21 cfs 3,595 cf  
Outflow=1.21 cfs 3,595 cf

**Reach 100P: EX INLET 1** Inflow=17.75 cfs 72,042 cf  
Outflow=17.75 cfs 72,042 cf

**Reach 200P: EX MANHOLE 2** Inflow=33.92 cfs 190,268 cf  
Outflow=33.92 cfs 190,268 cf

**Reach 300P: EX INLET 3** Inflow=26.28 cfs 177,359 cf  
Outflow=26.28 cfs 177,359 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Reach 400P: TENNIS COURTS**

Inflow=9.06 cfs 27,311 cf

Outflow=9.06 cfs 27,311 cf

**Reach 500P: STUDY POINT**

Inflow=73.73 cfs 466,980 cf

Outflow=73.73 cfs 466,980 cf

**Pond 204P: Cultec East**

Peak Elev=103.16' Storage=20,760 cf Inflow=28.12 cfs 87,335 cf

Outflow=16.76 cfs 85,543 cf

**Pond 208P: Cultec West**

Peak Elev=102.99' Storage=29,352 cf Inflow=32.95 cfs 136,469 cf

Outflow=20.07 cfs 136,406 cf

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 101P: Offsite Pervious SE**

Runoff = 7.66 cfs @ 12.28 hrs, Volume= 31,534 cf, Depth> 5.38"  
 Routed to Reach 100P : EX INLET 1

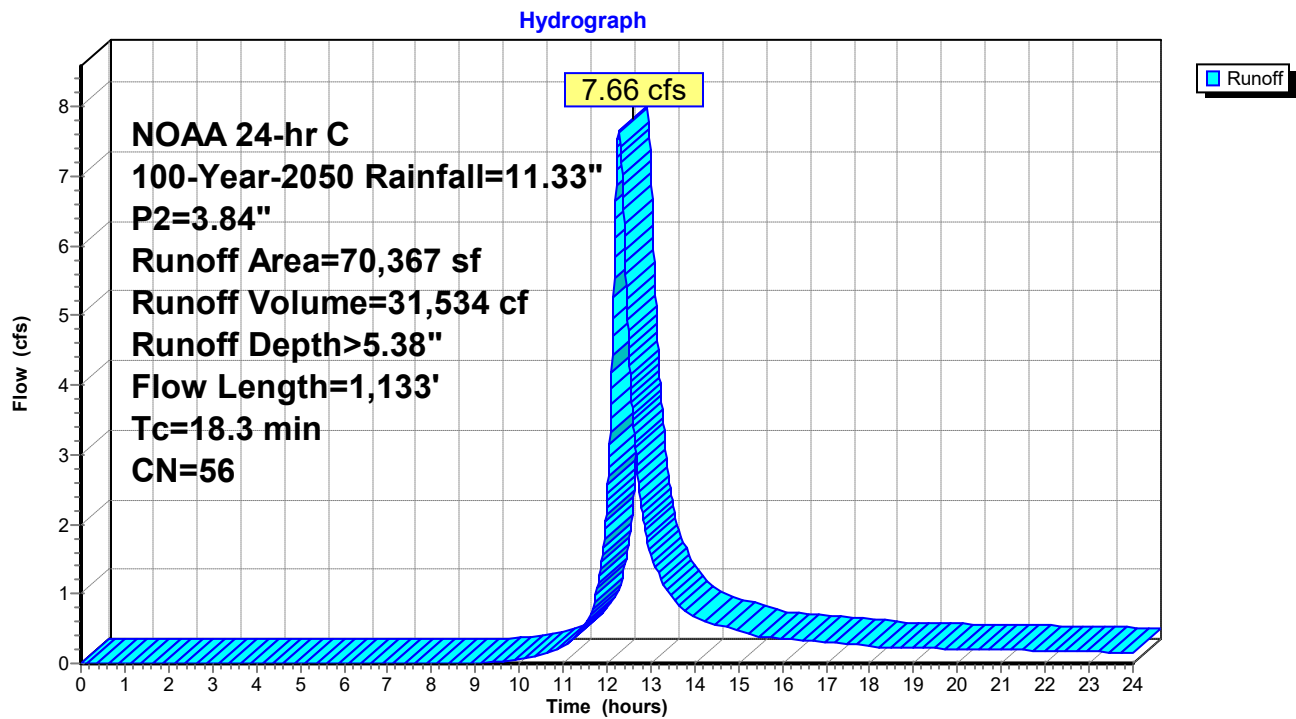
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,226    | 49 | 50-75% Grass cover, Fair, HSG A |
| 13,829    | 84 | 50-75% Grass cover, Fair, HSG D |
| 312       | 98 | Unconnected pavement, HSG D     |
| 70,367    | 56 | Weighted Average                |
| 70,055    |    | 99.56% Pervious Area            |
| 312       |    | 0.44% Impervious Area           |
| 312       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 76            | 0.0130        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 7.9      | 393           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.1      | 16            | 0.2000        | 3.13              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17' n= 0.013                           |
| 0.4      | 291           | 0.0240        | 11.16             | 35.05          | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013     |
| 18.3     | 1,133         | Total         |                   |                |                                                                                                     |

**Subcatchment 101P: Offsite Pervious SE**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 102P: Onsite Pervious SE**

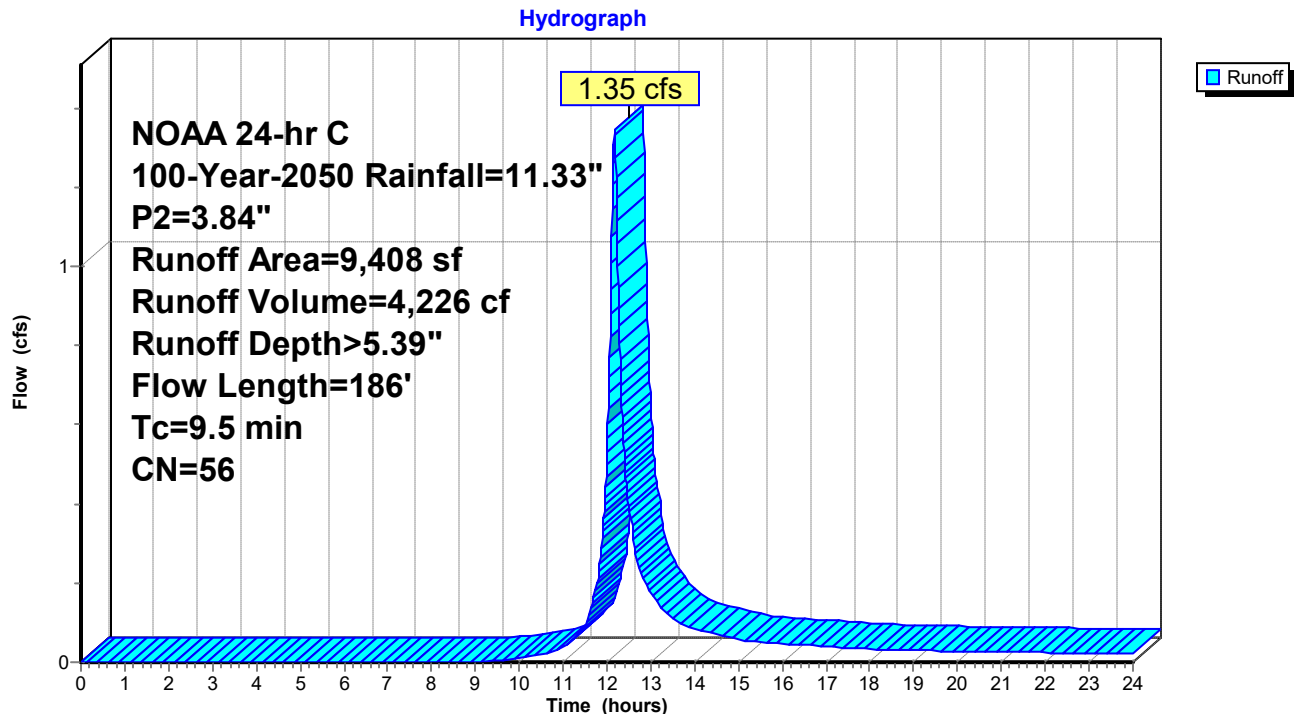
Runoff = 1.35 cfs @ 12.17 hrs, Volume= 4,226 cf, Depth> 5.39"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 7,483     | 49 | 50-75% Grass cover, Fair, HSG A |
| 1,925     | 84 | 50-75% Grass cover, Fair, HSG D |
| 9,408     | 56 | Weighted Average                |
| 9,408     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 68            | 0.0740        | 1.90              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.3      | 51            | 0.0270        | 3.34              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps                                         |
| 9.5      | 186           | Total         |                   |                |                                                                                                     |

**Subcatchment 102P: Onsite Pervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 103P: Access Road & Parking Lot**

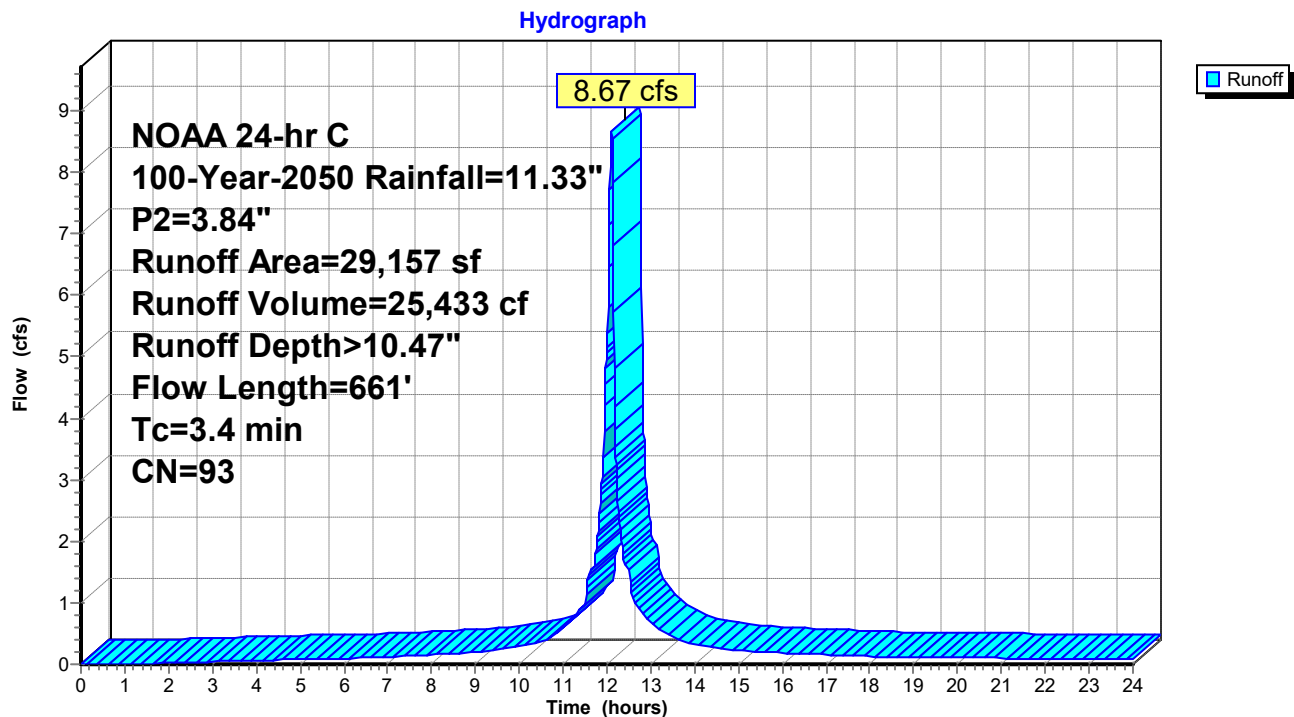
Runoff = 8.67 cfs @ 12.11 hrs, Volume= 25,433 cf, Depth>10.47"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 26,343    | 98 | Paved parking, HSG A            |
| 2,814     | 49 | 50-75% Grass cover, Fair, HSG A |
| 29,157    | 93 | Weighted Average                |
| 2,814     |    | 9.65% Pervious Area             |
| 26,343    |    | 90.35% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.3      | 13            | 0.0100        | 0.76              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                                                  |
| 1.4      | 357           | 0.0150        | 4.24              | 2.12           | <b>Channel Flow, Gutter</b><br>Area= 0.5 sf Perim= 3.0' r= 0.17'<br>n= 0.013 Concrete, trowel finish                                                 |
| 1.7      | 291           | 0.0220        | 2.89              | 0.36           | <b>Pipe Channel, RCP_Round 24"</b><br>24.0" Round w/ 22.0" inside fill Area= 0.1 sf Perim= 2.3' r= 0.05'<br>n= 0.011 Concrete pipe, straight & clean |
| 3.4      | 661           | Total         |                   |                |                                                                                                                                                      |

**Subcatchment 103P: Access Road & Parking Lot**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 104P: Yard Drains**

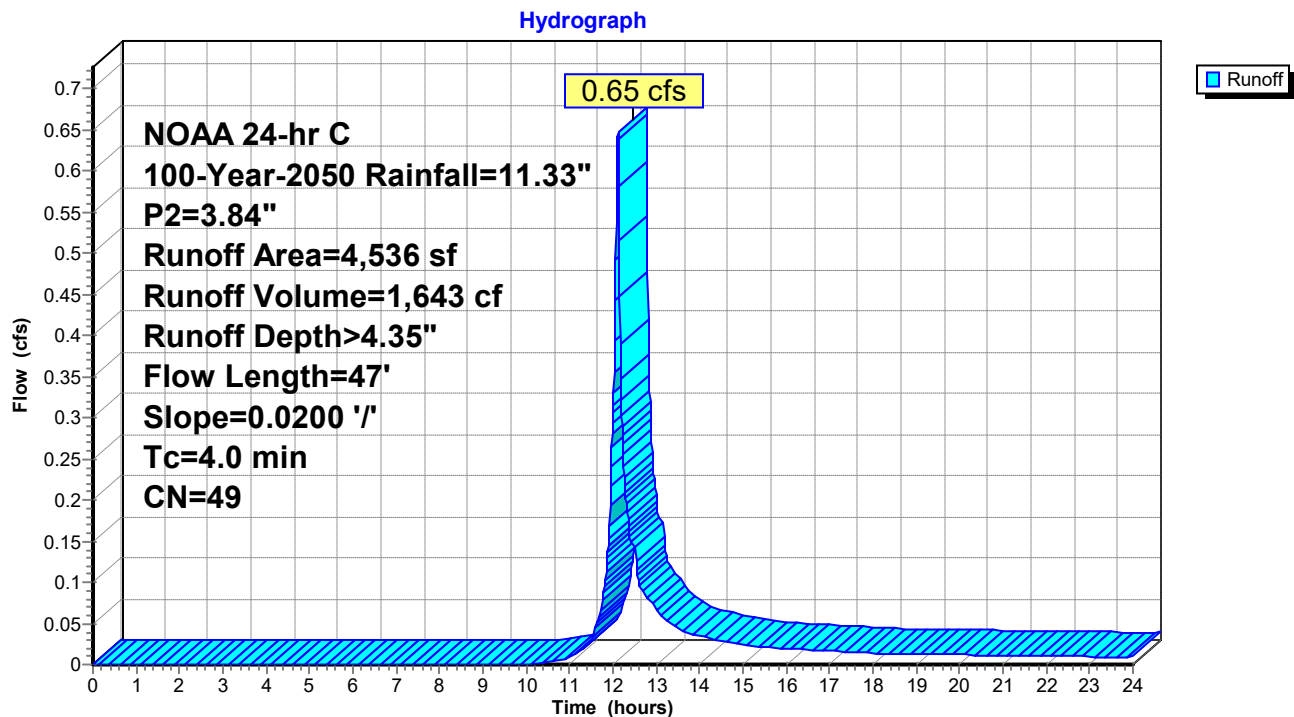
Runoff = 0.65 cfs @ 12.12 hrs, Volume= 1,643 cf, Depth> 4.35"  
Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 4,536     | 49 | 50-75% Grass cover, Fair, HSG A |
| 4,536     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                        |
|----------|---------------|---------------|-------------------|----------------|------------------------------------|
| 0.6      | 47            | 0.0200        | 1.30              |                | <b>Sheet Flow, Sheet Flow</b>      |
|          |               |               |                   |                | Smooth surfaces n= 0.011 P2= 3.84" |
| 3.4      |               |               |                   |                | <b>Direct Entry, 103</b>           |
| 4.0      | 47            | Total         |                   |                |                                    |

**Subcatchment 104P: Yard Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

Prepared by Crest Engineering

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**Summary for Subcatchment 105P: Low Drains**

Runoff = 2.12 cfs @ 12.13 hrs, Volume= 5,596 cf, Depth> 5.10"  
 Routed to Reach 100P : EX INLET 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,883     | 98 |     | Unconnected pavement, HSG A     |
| 10,288    | 49 |     | 50-75% Grass cover, Fair, HSG A |
| 13,171    | 60 | 54  | Weighted Average, UI Adjusted   |
| 10,288    |    |     | 78.11% Pervious Area            |
| 2,883     |    |     | 21.89% Impervious Area          |
| 2,883     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 0.5      | 28            | 0.0100        | 0.89              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                                                         |
| 3.5      | 22            | 0.0100        | 0.10              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                                                            |
| 0.9      | 118           | 0.1000        | 2.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                                                    |
| 0.3      | 58            | 0.0050        | 3.79              | 2.98           | <b>Pipe Channel, Pipe Flow</b><br>12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'<br>n= 0.011 Concrete pipe, straight & clean |
| 5.2      | 226           | Total         |                   |                |                                                                                                                             |



# PROPOSED PEDDIE FOOTBALL

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

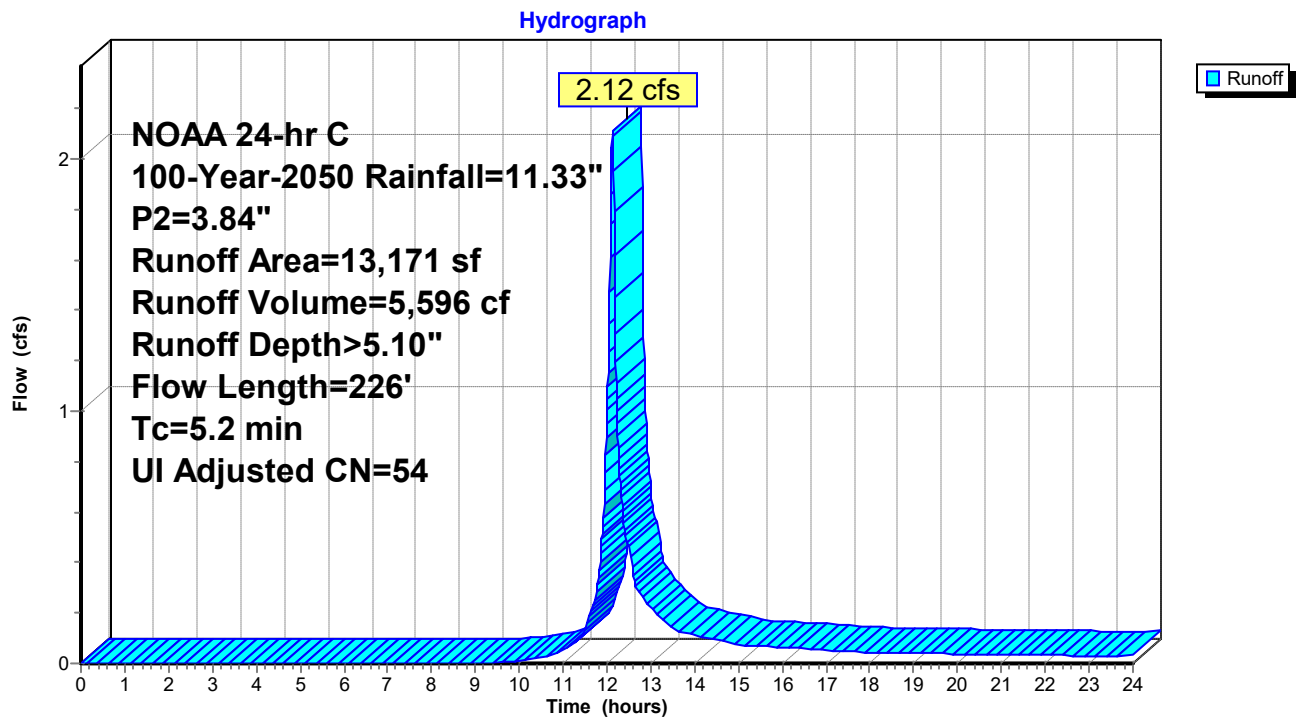
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## Subcatchment 105P: Low Drains



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 106P: Onsite Unretained Impervious SE**

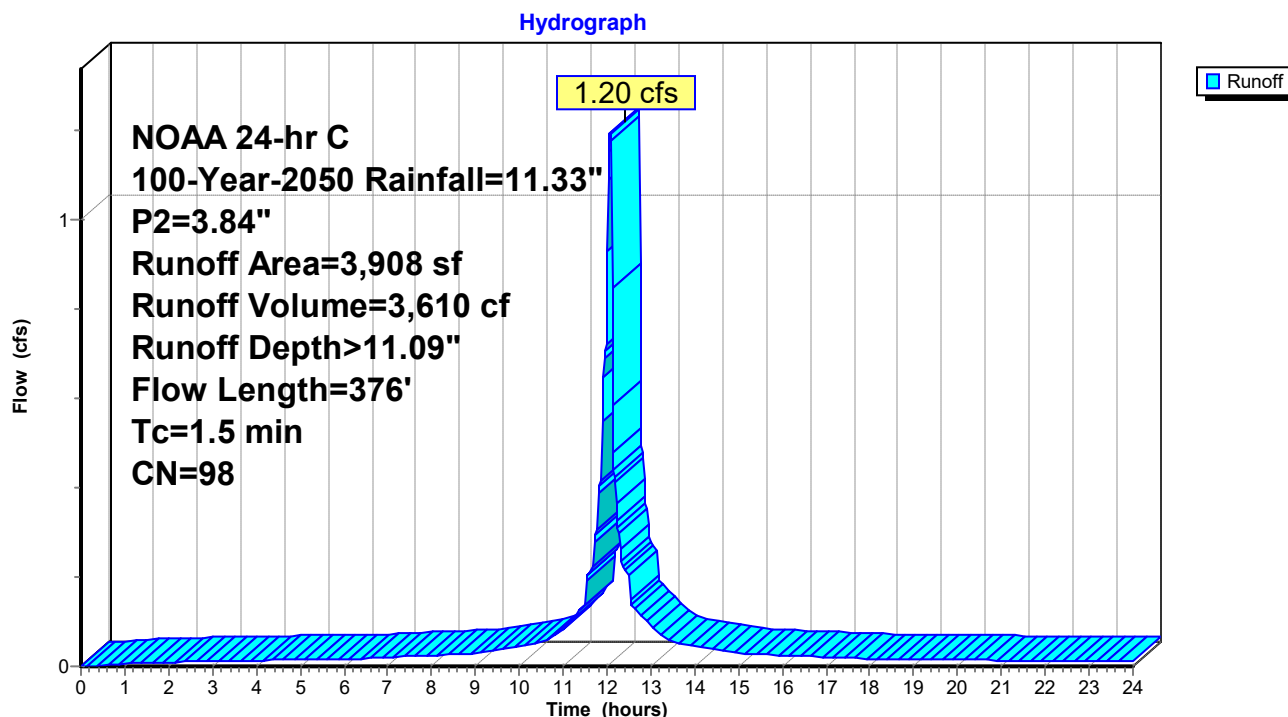
Runoff = 1.20 cfs @ 12.09 hrs, Volume= 3,610 cf, Depth>11.09"  
Routed to Reach 1P : ONSITE UNRETAINED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,908     | 98 | Paved parking, HSG A    |
| 3,908     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 0.9      | 86            | 0.0270        | 1.65              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84"                    |
| 0.6      | 290           | 0.0130        | 8.21              | 25.79          | <b>Pipe Channel, Pipe</b><br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 |
| 1.5      | 376           | Total         |                   |                |                                                                                        |

**Subcatchment 106P: Onsite Unretained Impervious SE**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 201P: Offsite to E Trench Drain**

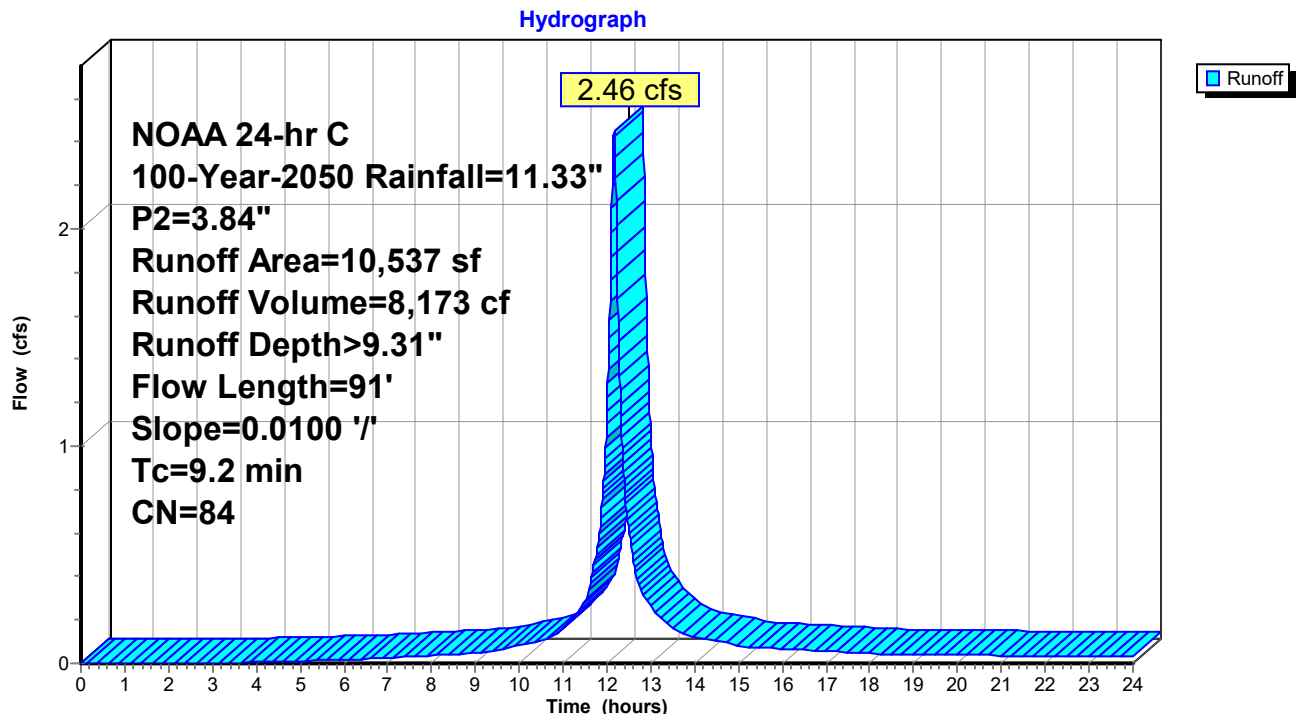
Runoff = 2.46 cfs @ 12.16 hrs, Volume= 8,173 cf, Depth> 9.31"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 10,537    | 84 | 50-75% Grass cover, Fair, HSG D |
| 10,537    |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.6      | 24            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 9.2      | 91            | Total         |                   |                |                                                                                                |

**Subcatchment 201P: Offsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 202P: Onsite to E Trench Drain**

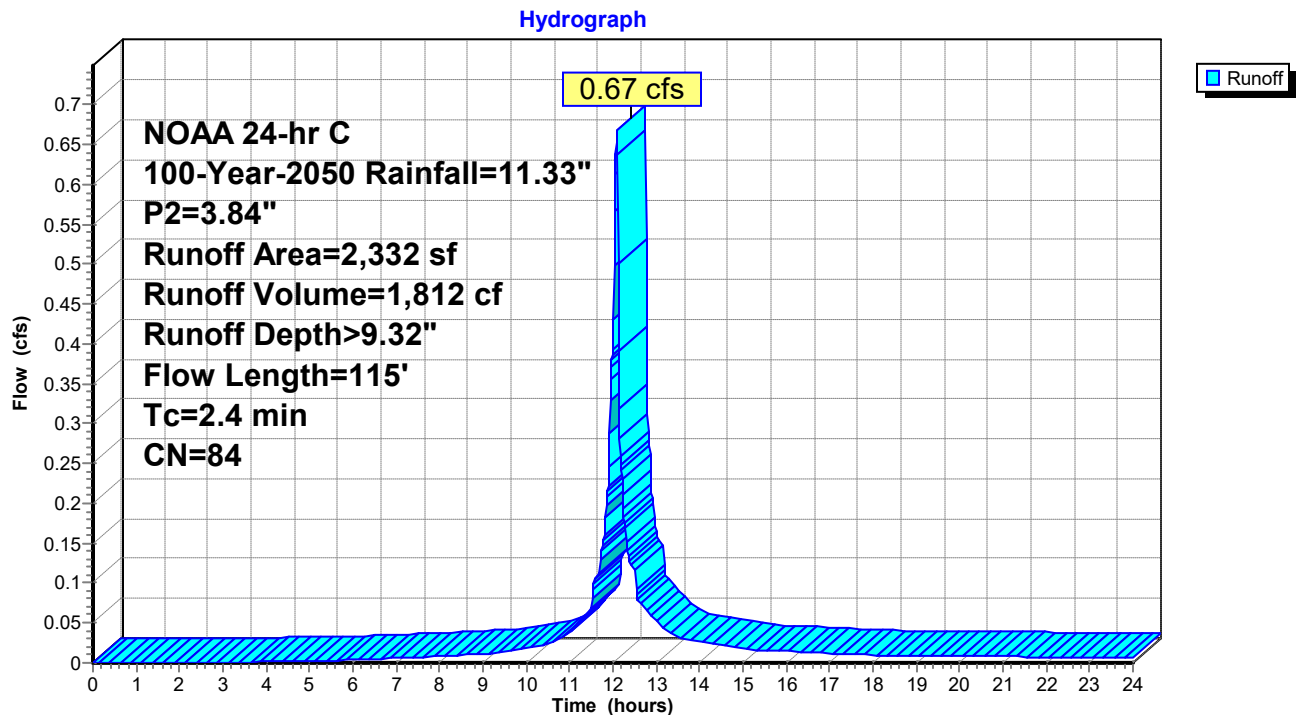
Runoff = 0.67 cfs @ 12.10 hrs, Volume= 1,812 cf, Depth> 9.32"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 2,332     | 84 | 50-75% Grass cover, Fair, HSG D |
| 2,332     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------|
| 0.7      | 29            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 0.1      | 19            | 0.2100        | 3.21              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 1.6      | 67            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps |
| 2.4      | 115           | Total         |                   |                |                                                                          |

**Subcatchment 202P: Onsite to E Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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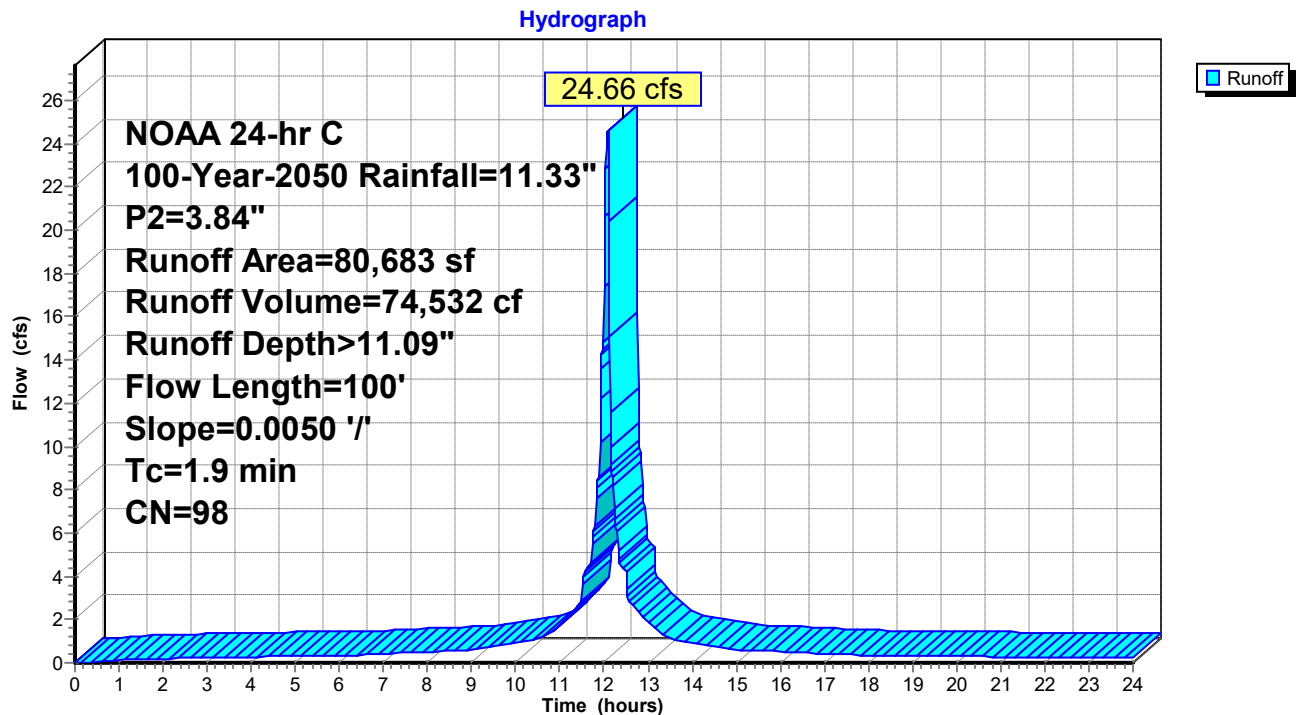
**Summary for Subcatchment 203P: Impervious Stadium to Trench Drains**

Runoff = 24.66 cfs @ 12.10 hrs, Volume= 74,532 cf, Depth>11.09"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,166    | 98 | Paved parking, HSG D            |
| 517       | 84 | 50-75% Grass cover, Fair, HSG D |
| 80,683    | 98 | Weighted Average                |
| 517       |    | 0.64% Pervious Area             |
| 80,166    |    | 99.36% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 1.9                                | 100           | 0.0050        | 0.87              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 203P: Impervious Stadium to Trench Drains**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 205P: Offsite to E Field Drain**

Runoff = 20.89 cfs @ 12.30 hrs, Volume= 98,950 cf, Depth> 9.93"  
 Routed to Reach 200P : EX MANHOLE 2

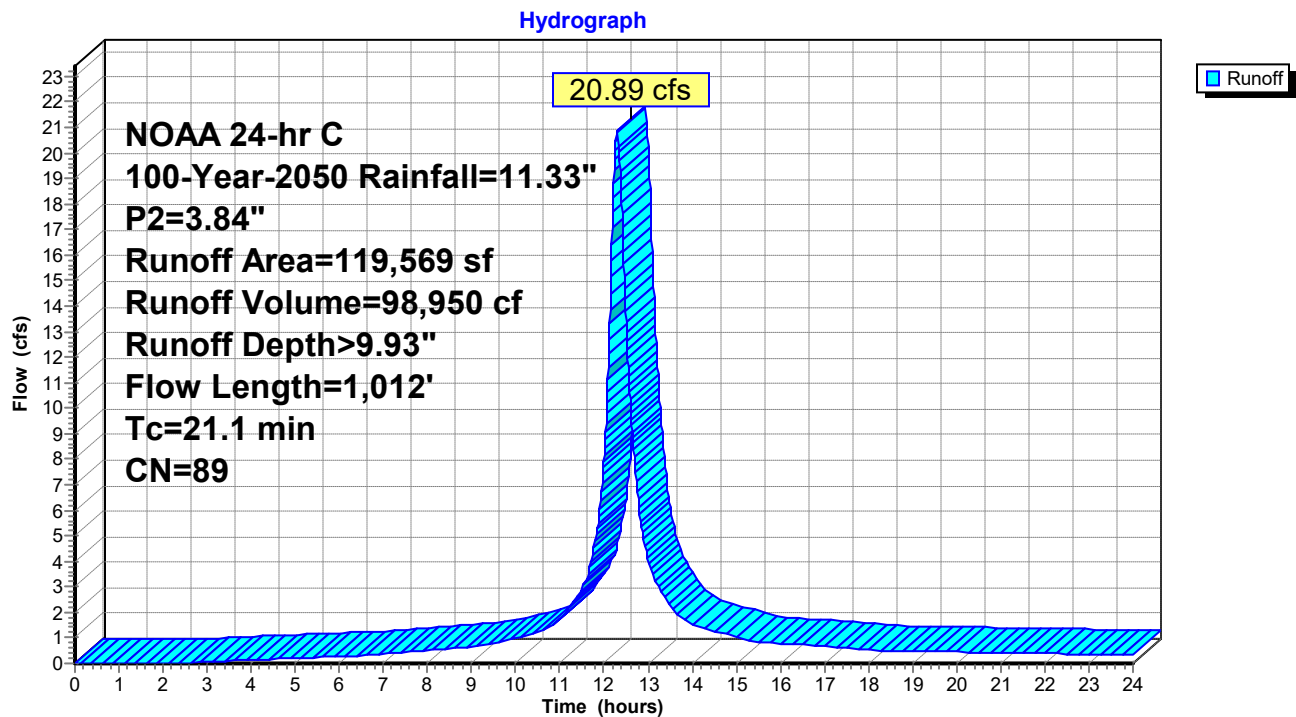
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 118,728   | 89 | <50% Grass cover, Poor, HSG D |
| 312       | 98 | Unconnected roofs, HSG D      |
| 529       | 98 | Unconnected pavement, HSG D   |
| 119,569   | 89 | Weighted Average              |
| 118,728   |    | 99.30% Pervious Area          |
| 841       |    | 0.70% Impervious Area         |
| 841       |    | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.5      | 84            | 0.0160        | 0.16              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 11.9     | 561           | 0.0125        | 0.78              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 21.1     | 1,012         | Total         |                   |                |                                                                                                |

**Subcatchment 205P: Offsite to E Field Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 206P: Onsite to E Field Drain**

Runoff = 1.54 cfs @ 12.19 hrs, Volume= 5,775 cf, Depth>10.07"  
 Routed to Reach 2P : ONSITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

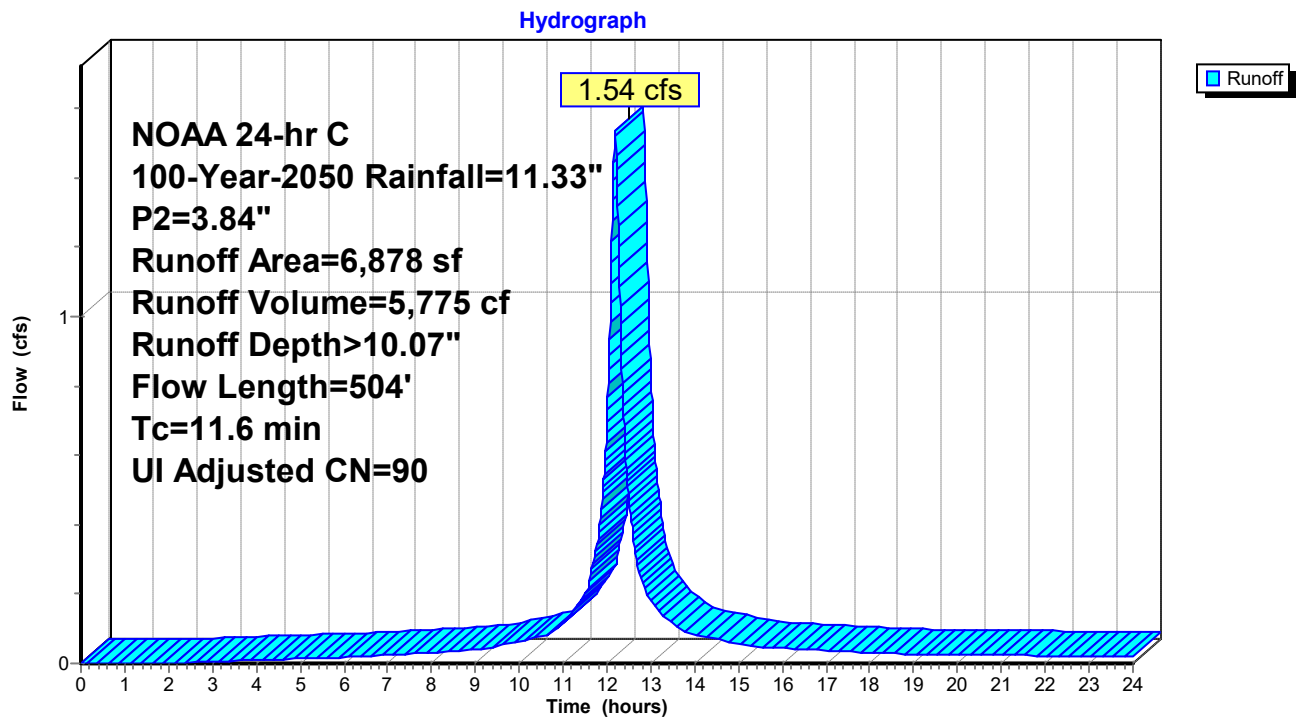
| Area (sf) | CN | Adj | Description                   |
|-----------|----|-----|-------------------------------|
| 5,618     | 89 |     | <50% Grass cover, Poor, HSG D |
| 1,260     | 98 |     | Unconnected pavement, HSG D   |
| 6,878     | 91 | 90  | Weighted Average, UI Adjusted |
| 5,618     |    |     | 81.68% Pervious Area          |
| 1,260     |    |     | 18.32% Impervious Area        |
| 1,260     |    |     | 100.00% Unconnected           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                    |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 2.3      | 81            | 0.0070        | 0.59              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                       |
| 0.7      | 367           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel,</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013 Clay tile    |
| 11.6     | 504           | Total         |                   |                |                                                                                                |



**Subcatchment 206P: Onsite to E Field Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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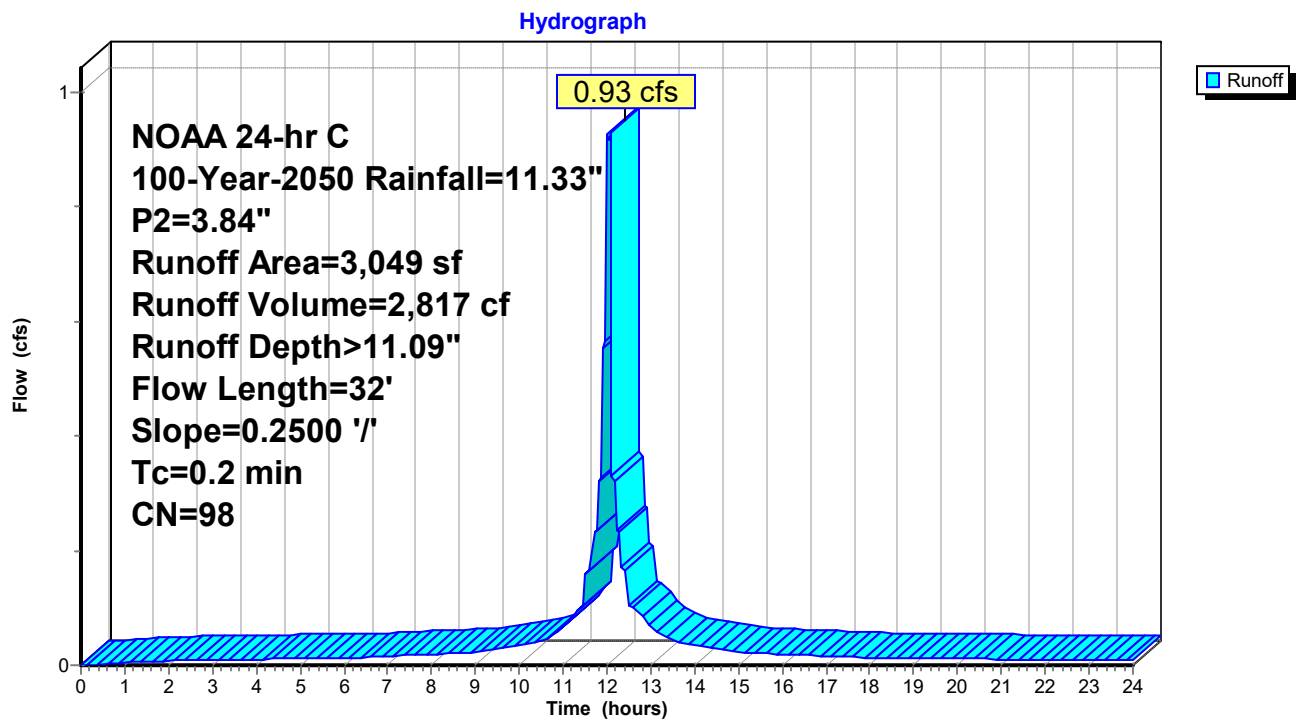
**Summary for Subcatchment 207P: Offsite Impervious to Trench Drain**

Runoff = 0.93 cfs @ 12.09 hrs, Volume= 2,817 cf, Depth>11.09"  
Routed to Pond 204P : Cultec East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 3,049     | 98 | Paved parking, HSG D    |
| 3,049     |    | 100.00% Impervious Area |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description       |
|------------------------------------|---------------|---------------|-------------------|----------------|-------------------|
| 0.2                                | 32            | 0.2500        | 3.30              |                | Sheet Flow, Sheet |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                   |

**Subcatchment 207P: Offsite Impervious to Trench Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 301P: Offsite to W Field Drain 1**

Runoff = 10.33 cfs @ 12.25 hrs, Volume= 43,713 cf, Depth> 9.29"  
 Routed to Pond 208P : Cultec West

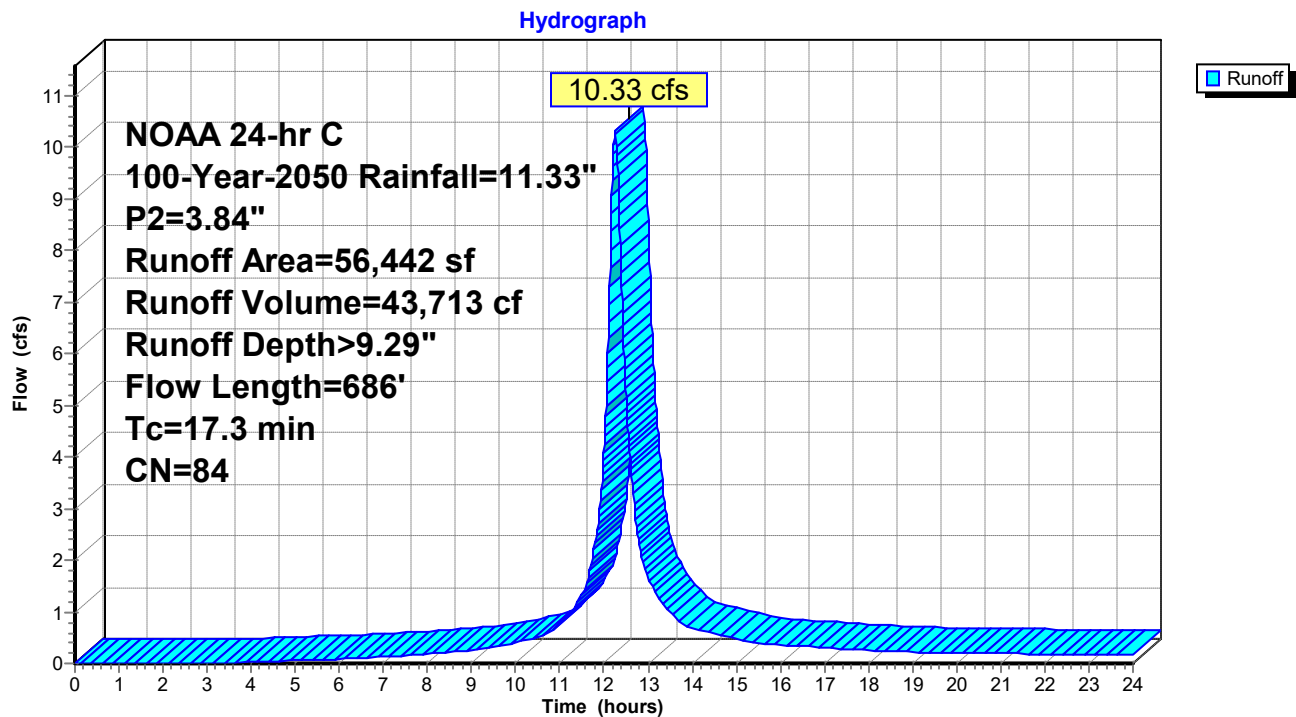
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 56,204    | 84 | 50-75% Grass cover, Fair, HSG D |
| 238       | 98 | Unconnected pavement, HSG D     |
| 56,442    | 84 | Weighted Average                |
| 56,204    |    | 99.58% Pervious Area            |
| 238       |    | 0.42% Impervious Area           |
| 238       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 79            | 0.0140        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 8.4      | 415           | 0.0140        | 0.83              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 192           | 0.0300        | 9.12              | 11.19          | <b>Pipe Channel, Pipe</b><br>15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'<br>n= 0.013              |
| 17.3     | 686           | Total         |                   |                |                                                                                                     |

**Subcatchment 301P: Offsite to W Field Drain 1**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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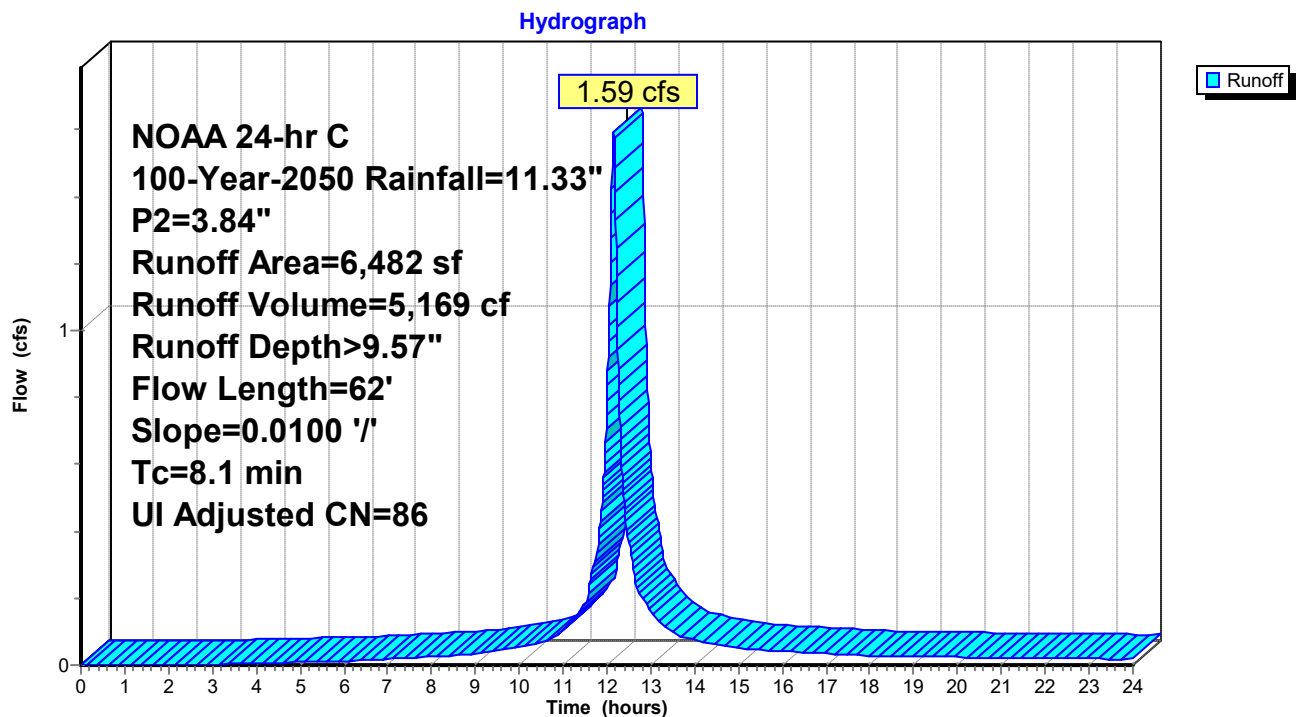
**Summary for Subcatchment 302P: Onsite to W Field Drain 1**

Runoff = 1.59 cfs @ 12.15 hrs, Volume= 5,169 cf, Depth> 9.57"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 4,802     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,680     | 98 |     | Unconnected pavement, HSG D     |
| 6,482     | 88 | 86  | Weighted Average, UI Adjusted   |
| 4,802     |    |     | 74.08% Pervious Area            |
| 1,680     |    |     | 25.92% Impervious Area          |
| 1,680     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                               |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------|
| 8.1      | 62            | 0.0100        | 0.13              |                | Sheet Flow, Sheet Flow<br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 302P: Onsite to W Field Drain 1**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 303P: Offsite to W New Drain**

Runoff = 5.42 cfs @ 12.20 hrs, Volume= 20,163 cf, Depth> 9.30"  
 Routed to Reach 300P : EX INLET 3

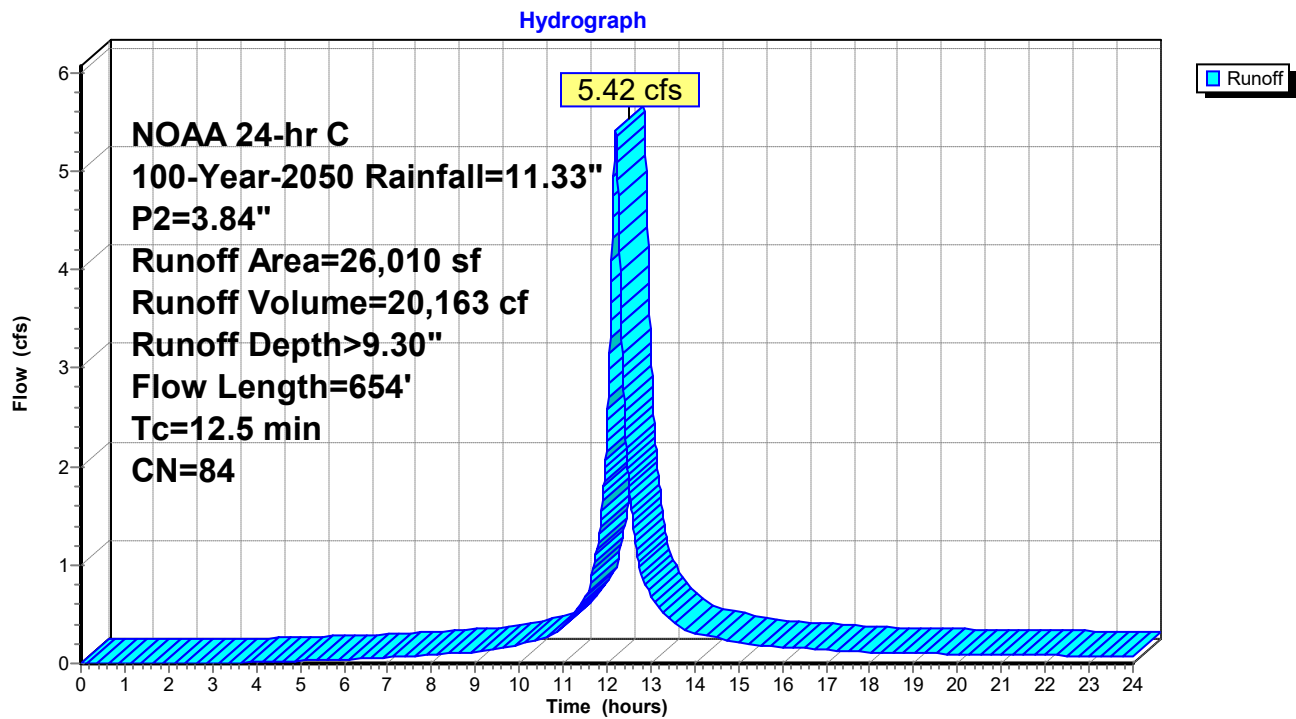
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 25,656    | 84 | 50-75% Grass cover, Fair, HSG D |
| 354       | 98 | Unconnected roofs, HSG D        |
| 26,010    | 84 | Weighted Average                |
| 25,656    |    | 98.64% Pervious Area            |
| 354       |    | 1.36% Impervious Area           |
| 354       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                            |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------|
| 6.8      | 62            | 0.0150        | 0.15              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"                       |
| 5.2      | 269           | 0.0150        | 0.86              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.1      | 20            | 0.2500        | 3.50              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps               |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013 |
| 12.5     | 654           | Total         |                   |                |                                                                                        |

**Subcatchment 303P: Offsite to W New Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 304P: Onsite to W Trench Drain**

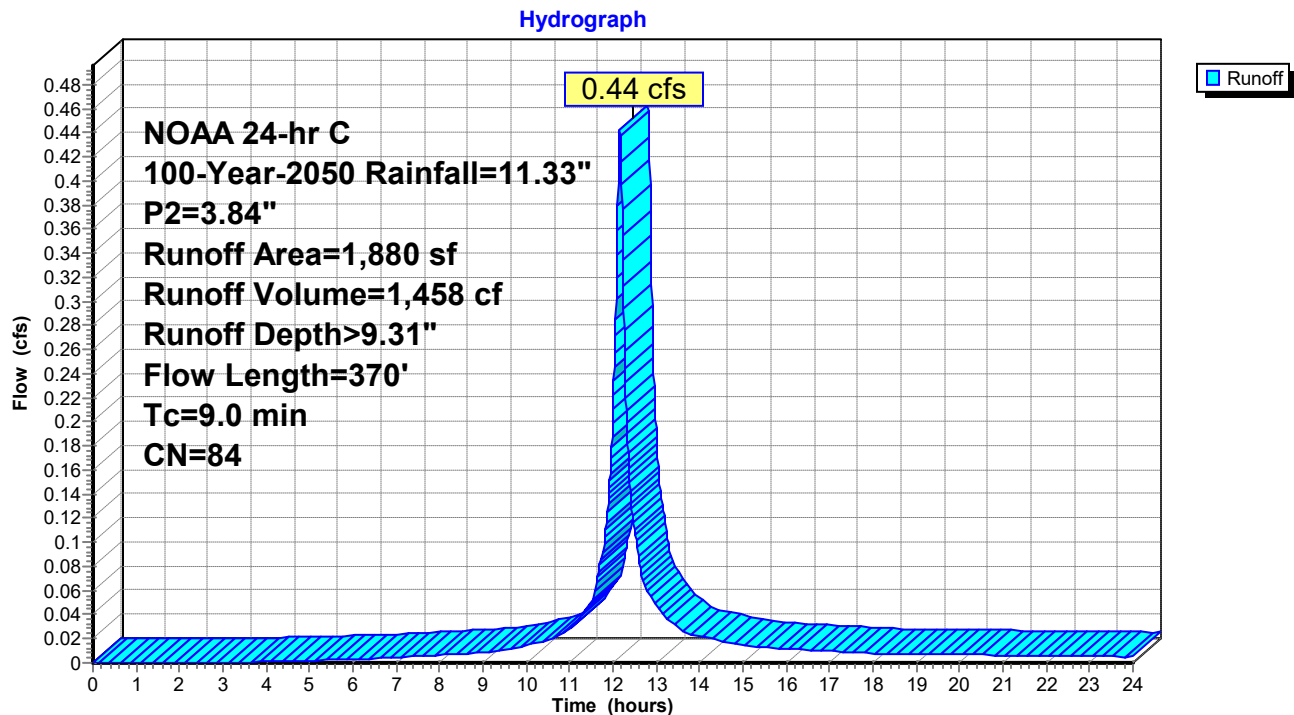
Runoff = 0.44 cfs @ 12.16 hrs, Volume= 1,458 cf, Depth> 9.31"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,880     | 84 | 50-75% Grass cover, Fair, HSG D |
| 1,880     |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 67            | 0.0100        | 0.13              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 0.4      | 303           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 9.0      | 370           | Total         |                   |                |                                                                                                     |

**Subcatchment 304P: Onsite to W Trench Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 305P: Offsite to Existing W Field Drain**

Runoff = 2.85 cfs @ 12.20 hrs, Volume= 10,559 cf, Depth> 9.30"  
 Routed to Reach 300P : EX INLET 3

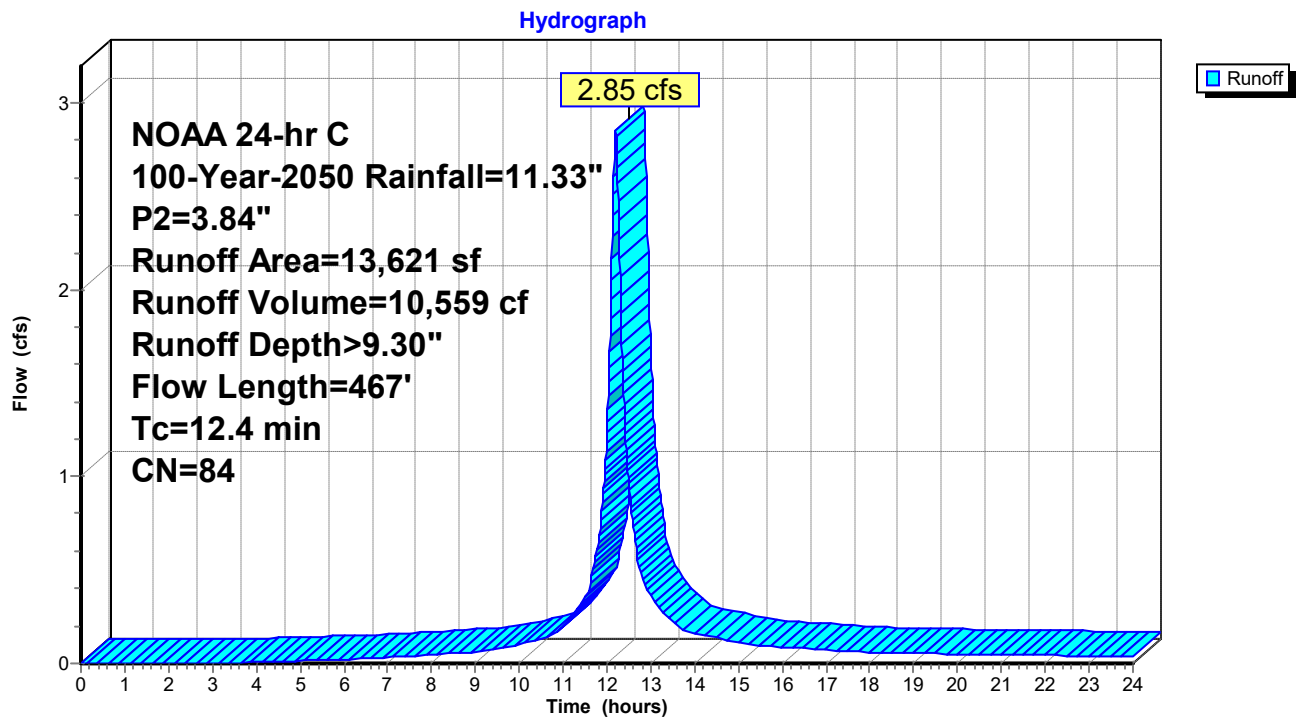
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 13,301    | 84 | 50-75% Grass cover, Fair, HSG D |
| 320       | 98 | Unconnected pavement, HSG D     |
| 13,621    | 84 | Weighted Average                |
| 13,301    |    | 97.65% Pervious Area            |
| 320       |    | 2.35% Impervious Area           |
| 320       |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.6      | 56            | 0.0070        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 3.4      | 144           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 0.4      | 267           | 0.0300        | 11.41             | 27.44          | <b>Pipe Channel, Pipe</b><br>21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44'<br>n= 0.013              |
| 12.4     | 467           | Total         |                   |                |                                                                                                     |

**Subcatchment 305P: Offsite to Existing W Field Drain**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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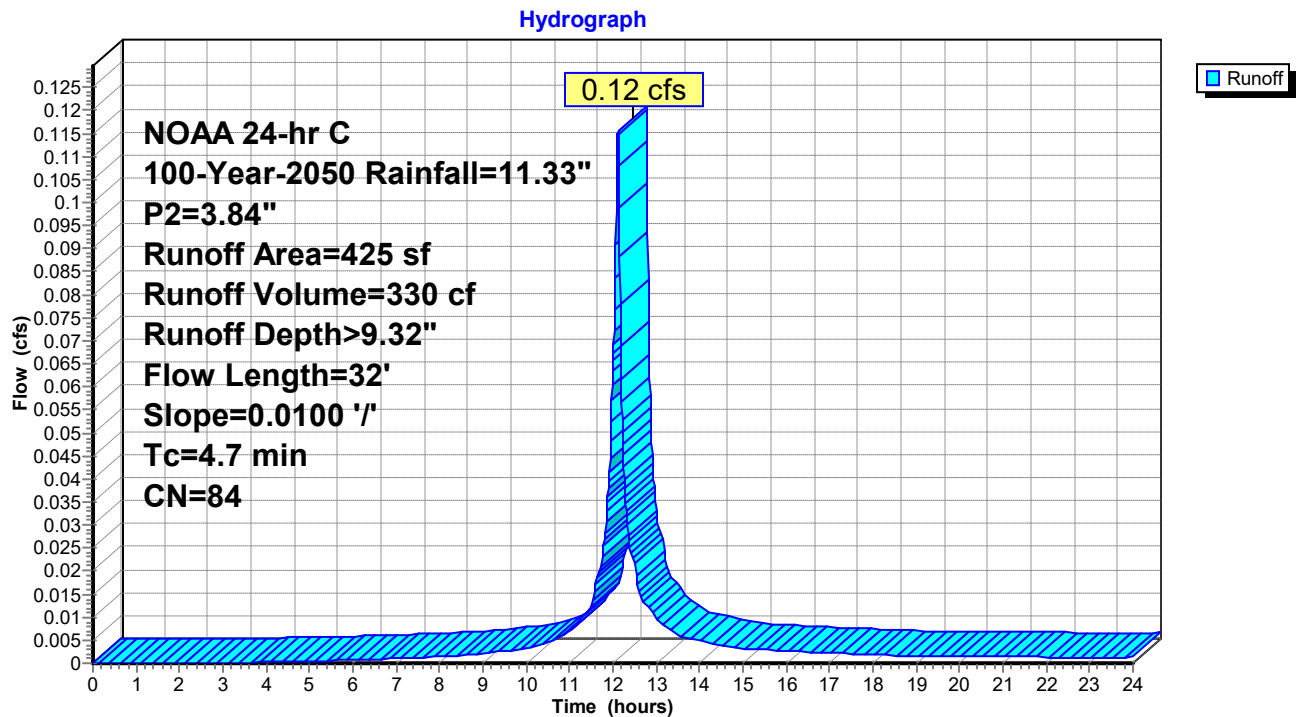
**Summary for Subcatchment 306P: Onsite to W Existing Field Drain**

Runoff = 0.12 cfs @ 12.12 hrs, Volume= 330 cf, Depth> 9.32"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 425       | 84 | 50-75% Grass cover, Fair, HSG D |
| 425       |    | 100.00% Pervious Area           |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                      |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------|
| 4.7      | 32            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84" |

**Subcatchment 306P: Onsite to W Existing Field Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 308P: Offsite to Drain 4**

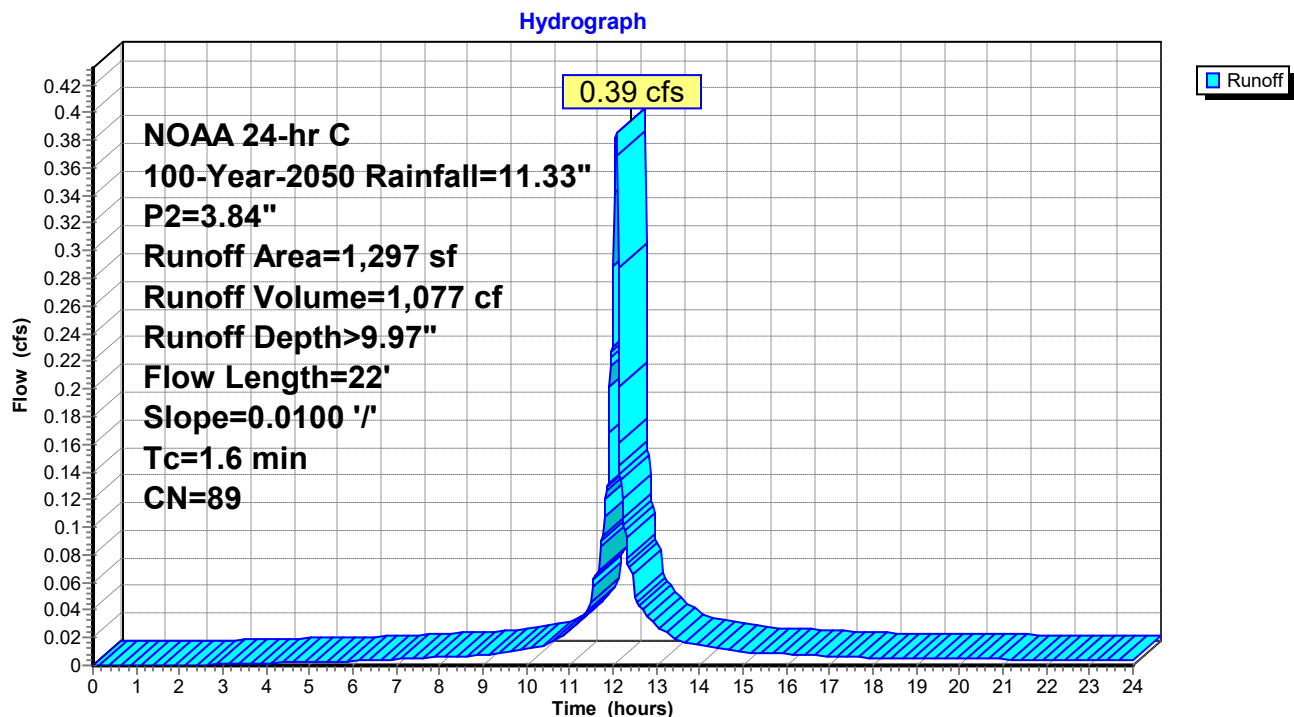
Runoff = 0.39 cfs @ 12.10 hrs, Volume= 1,077 cf, Depth> 9.97"  
Routed to Reach 3P : ONSITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 797       | 84 | 50-75% Grass cover, Fair, HSG D |
| 500       | 98 | Paved parking, HSG D            |
| 1,297     | 89 | Weighted Average                |
| 797       |    | 61.45% Pervious Area            |
| 500       |    | 38.55% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 1.2      | 6             | 0.0100        | 0.08              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 0.4      | 16            | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 1.6      | 22            | Total         |                   |                |                                       |

**Subcatchment 308P: Offsite to Drain 4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 309P: Offsite Building to Drain**

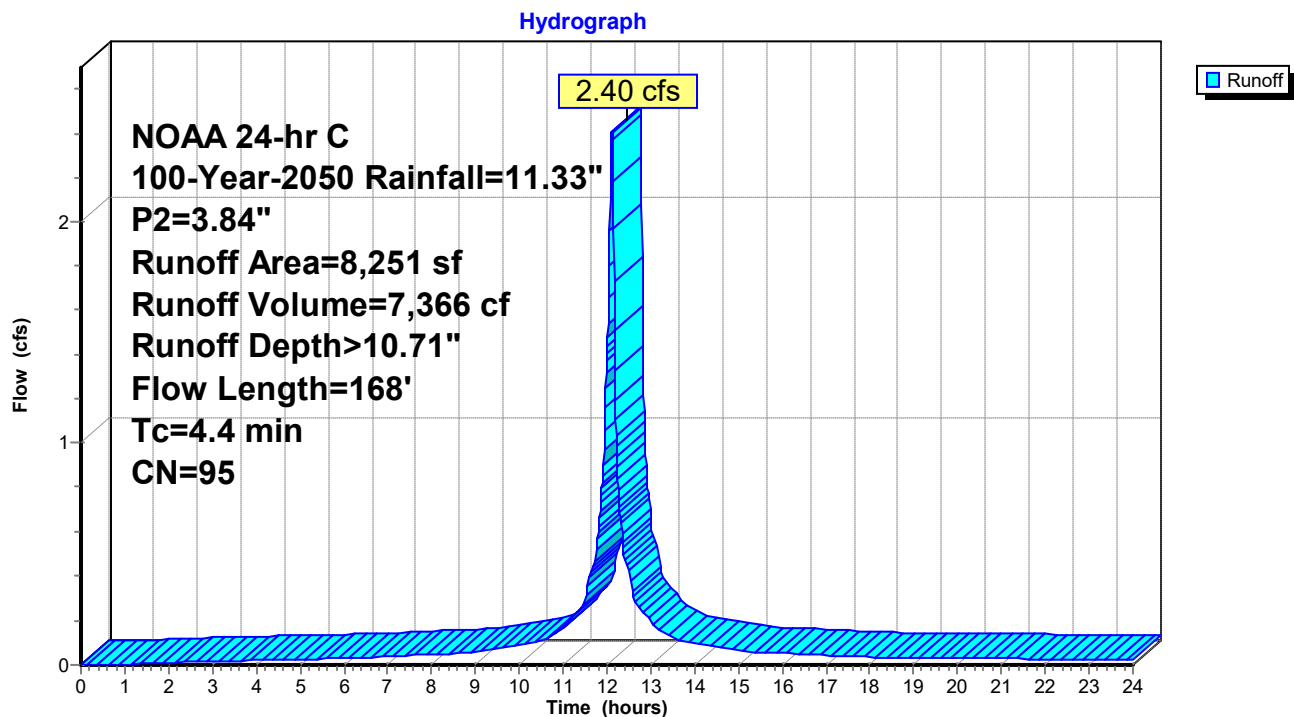
Runoff = 2.40 cfs @ 12.11 hrs, Volume= 7,366 cf, Depth>10.71"  
Routed to Reach 300P : EX INLET 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 1,546     | 84 | 50-75% Grass cover, Fair, HSG D |
| 6,705     | 98 | Unconnected roofs, HSG D        |
| 8,251     | 95 | Weighted Average                |
| 1,546     |    | 18.74% Pervious Area            |
| 6,705     |    | 81.26% Impervious Area          |
| 6,705     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 0.8      | 18            | 0.2500        | 0.36              |                | <b>Sheet Flow, Sheet Flow</b>         |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84"       |
| 3.6      | 150           | 0.0100        | 0.70              |                | <b>Shallow Concentrated Flow, SCF</b> |
|          |               |               |                   |                | Short Grass Pasture Kv= 7.0 fps       |
| 4.4      | 168           | Total         |                   |                |                                       |

**Subcatchment 309P: Offsite Building to Drain**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 310P: Impervious Stadium W**

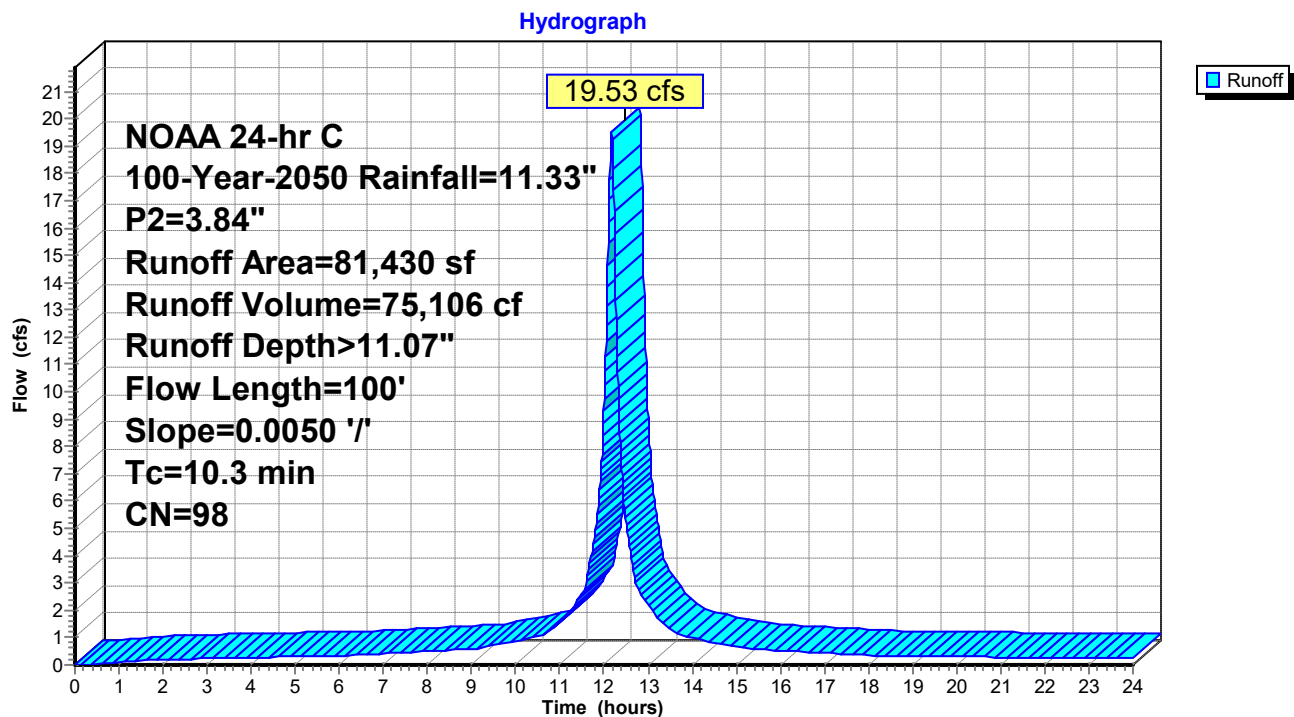
Runoff = 19.53 cfs @ 12.17 hrs, Volume= 75,106 cf, Depth>11.07"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 80,152    | 98 | Paved parking, HSG D            |
| 1,278     | 84 | 50-75% Grass cover, Fair, HSG D |
| 81,430    | 98 | Weighted Average                |
| 1,278     |    | 1.57% Pervious Area             |
| 80,152    |    | 98.43% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 310P: Impervious Stadium W**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 311P: Onsite to New Inlet**

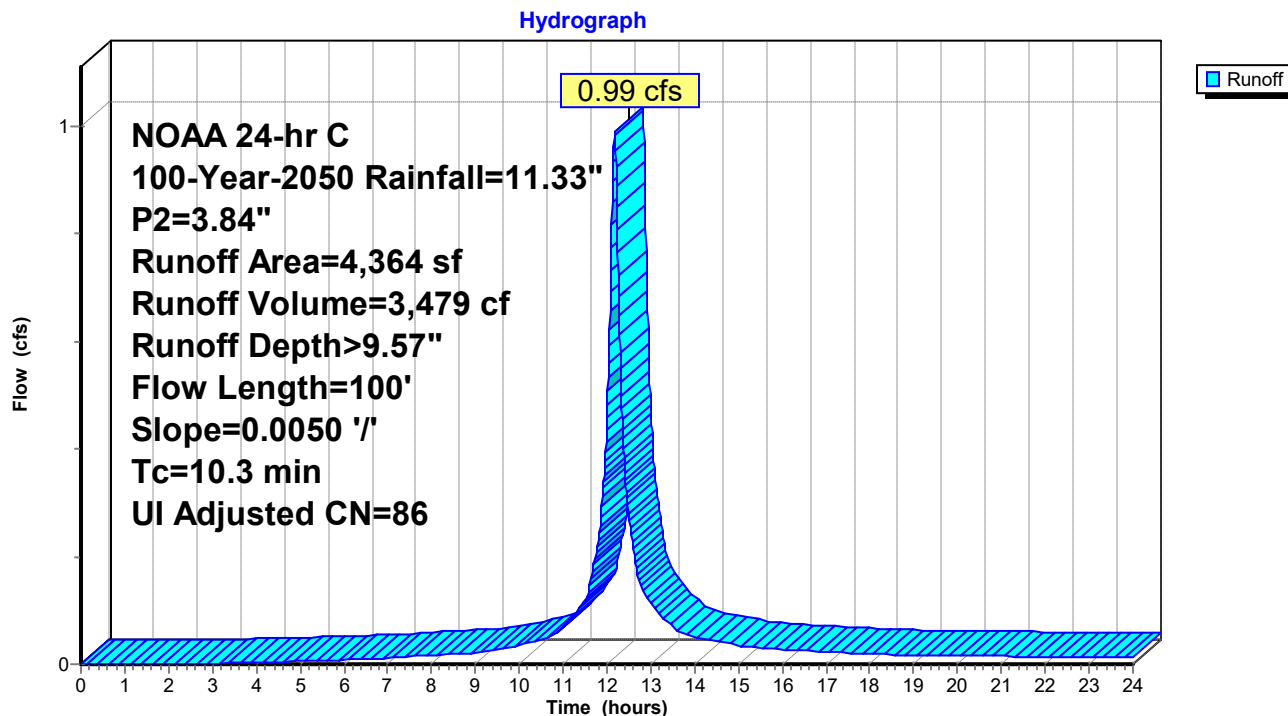
Runoff = 0.99 cfs @ 12.17 hrs, Volume= 3,479 cf, Depth> 9.57"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 3,310     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 1,054     | 98 |     | Unconnected pavement, HSG D     |
| 4,364     | 87 | 86  | Weighted Average, UI Adjusted   |
| 3,310     |    |     | 75.85% Pervious Area            |
| 1,054     |    |     | 24.15% Impervious Area          |
| 1,054     |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------------------------|
| 8.5      | 47            | 0.0050        | 0.09              |                | <b>Sheet Flow, Sheet Flow</b><br>Grass: Short n= 0.150 P2= 3.84"<br>Using McCuen-Spiess flow length |
| 1.8      | 53            | 0.0050        | 0.49              |                | <b>Shallow Concentrated Flow, SCF</b><br>Short Grass Pasture Kv= 7.0 fps                            |
| 10.3     | 100           | Total         |                   |                |                                                                                                     |

**Subcatchment 311P: Onsite to New Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 312P: Offsite to Yard Inlet**

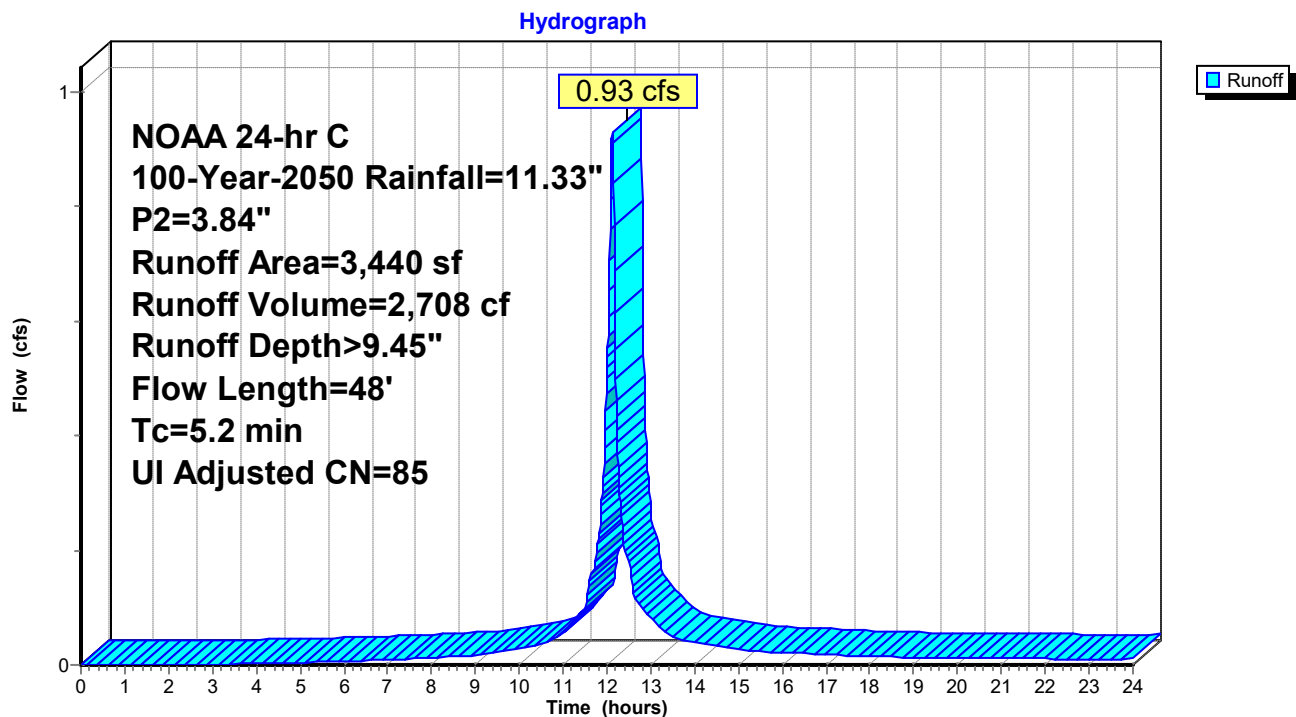
Runoff = 0.93 cfs @ 12.12 hrs, Volume= 2,708 cf, Depth> 9.45"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Adj | Description                     |
|-----------|----|-----|---------------------------------|
| 2,727     | 84 |     | 50-75% Grass cover, Fair, HSG D |
| 713       | 98 |     | Unconnected pavement, HSG D     |
| 3,440     | 87 | 85  | Weighted Average, UI Adjusted   |
| 2,727     |    |     | 79.27% Pervious Area            |
| 713       |    |     | 20.73% Impervious Area          |
| 713       |    |     | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.3      | 28            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 5.2      | 48            | Total         |                   |                |                                 |

**Subcatchment 312P: Offsite to Yard Inlet**



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 313P: Offsite to Yard Inlet**

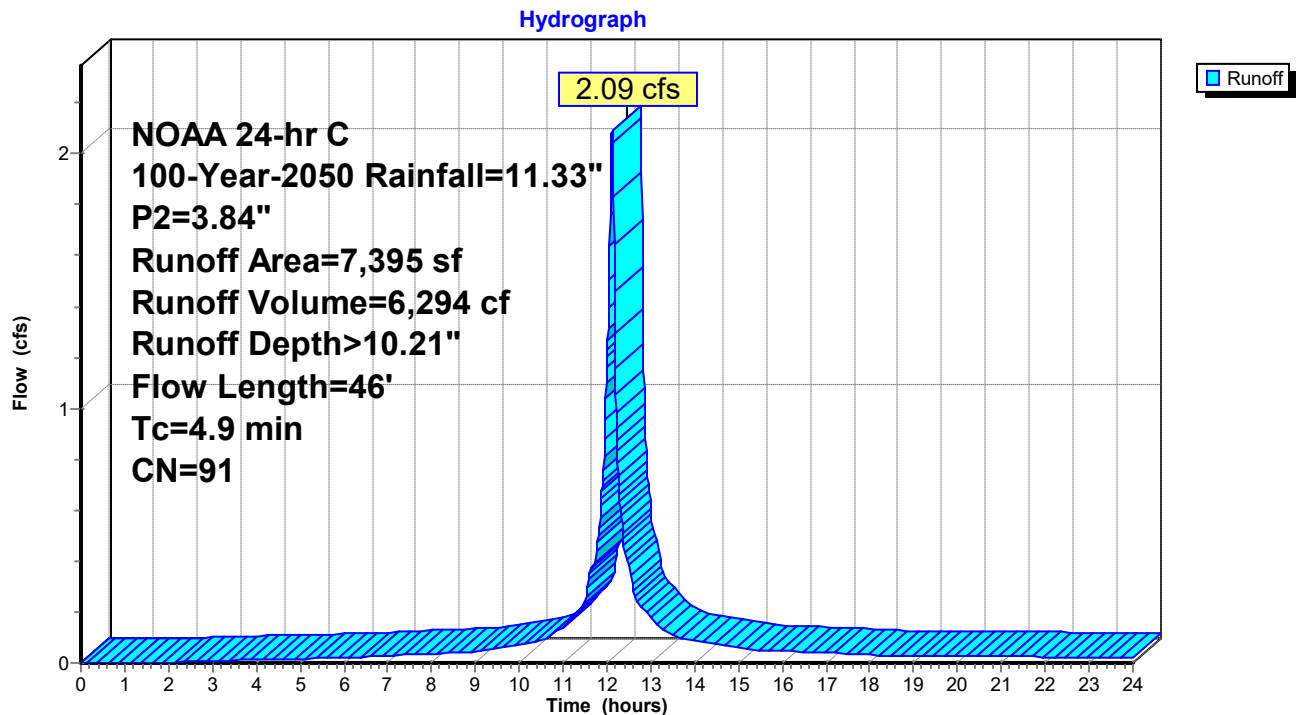
Runoff = 2.09 cfs @ 12.12 hrs, Volume= 6,294 cf, Depth>10.21"  
Routed to Pond 208P : Cultec West

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,597     | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,798     | 98 | Unconnected pavement, HSG D     |
| 7,395     | 91 | Weighted Average                |
| 3,597     |    | 48.64% Pervious Area            |
| 3,798     |    | 51.36% Impervious Area          |
| 3,798     |    | 100.00% Unconnected             |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 4.0      | 26            | 0.0100        | 0.11              |                | <b>Sheet Flow, Sheet Flow</b>   |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 0.9      | 20            | 0.2500        | 0.37              |                | <b>Sheet Flow, Sheet</b>        |
|          |               |               |                   |                | Grass: Short n= 0.150 P2= 3.84" |
| 4.9      | 46            | Total         |                   |                |                                 |

**Subcatchment 313P: Offsite to Yard Inlet**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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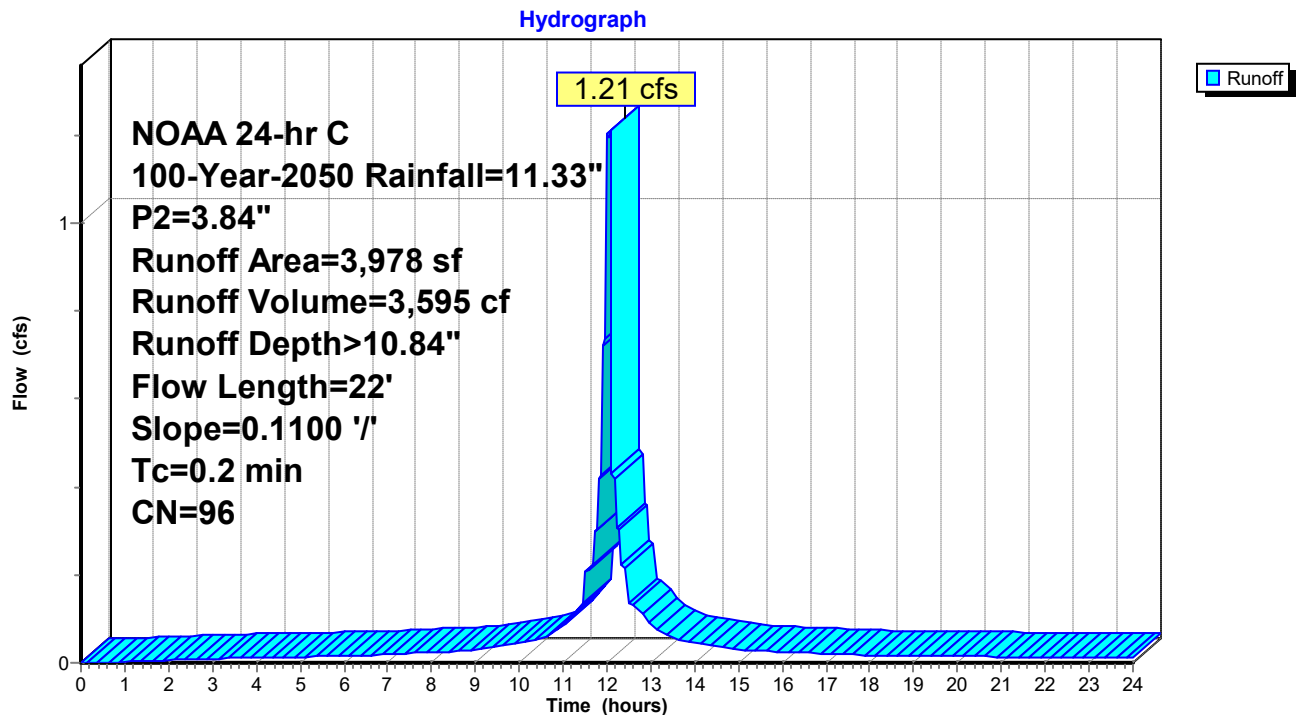
**Summary for Subcatchment 401P: Onsite to SP4**

Runoff = 1.21 cfs @ 12.09 hrs, Volume= 3,595 cf, Depth>10.84"  
Routed to Reach 4P : ONSITE TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 3,307     | 98 | Paved parking, HSG D            |
| 671       | 84 | 50-75% Grass cover, Fair, HSG D |
| 3,978     | 96 | Weighted Average                |
| 671       |    | 16.87% Pervious Area            |
| 3,307     |    | 83.13% Impervious Area          |

| Tc (min)                           | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description            |
|------------------------------------|---------------|---------------|-------------------|----------------|------------------------|
| 0.2                                | 22            | 0.1100        | 2.20              |                | Sheet Flow, Sheet Flow |
| Smooth surfaces n= 0.011 P2= 3.84" |               |               |                   |                |                        |

**Subcatchment 401P: Onsite to SP4**

**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Subcatchment 403P: Tennis Courts**

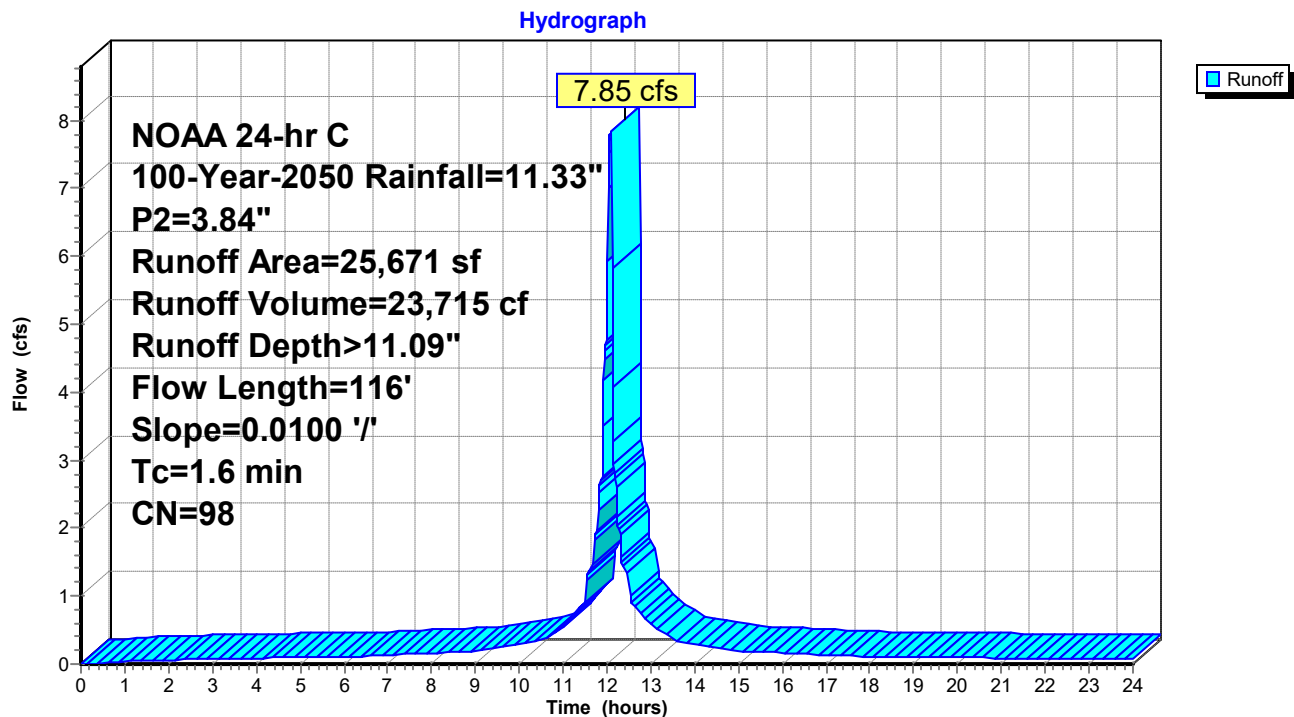
Runoff = 7.85 cfs @ 12.09 hrs, Volume= 23,715 cf, Depth>11.09"  
Routed to Reach 400P : TENNIS COURTS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,671    | 98 | Paved parking, HSG D    |
| 25,671    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                         |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------|
| 1.5      | 100           | 0.0100        | 1.14              |                | <b>Sheet Flow, Sheet Flow</b><br>Smooth surfaces n= 0.011 P2= 3.84" |
| 0.1      | 16            | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, SCF</b><br>Paved Kv= 20.3 fps         |
| 1.6      | 116           | Total         |                   |                |                                                                     |

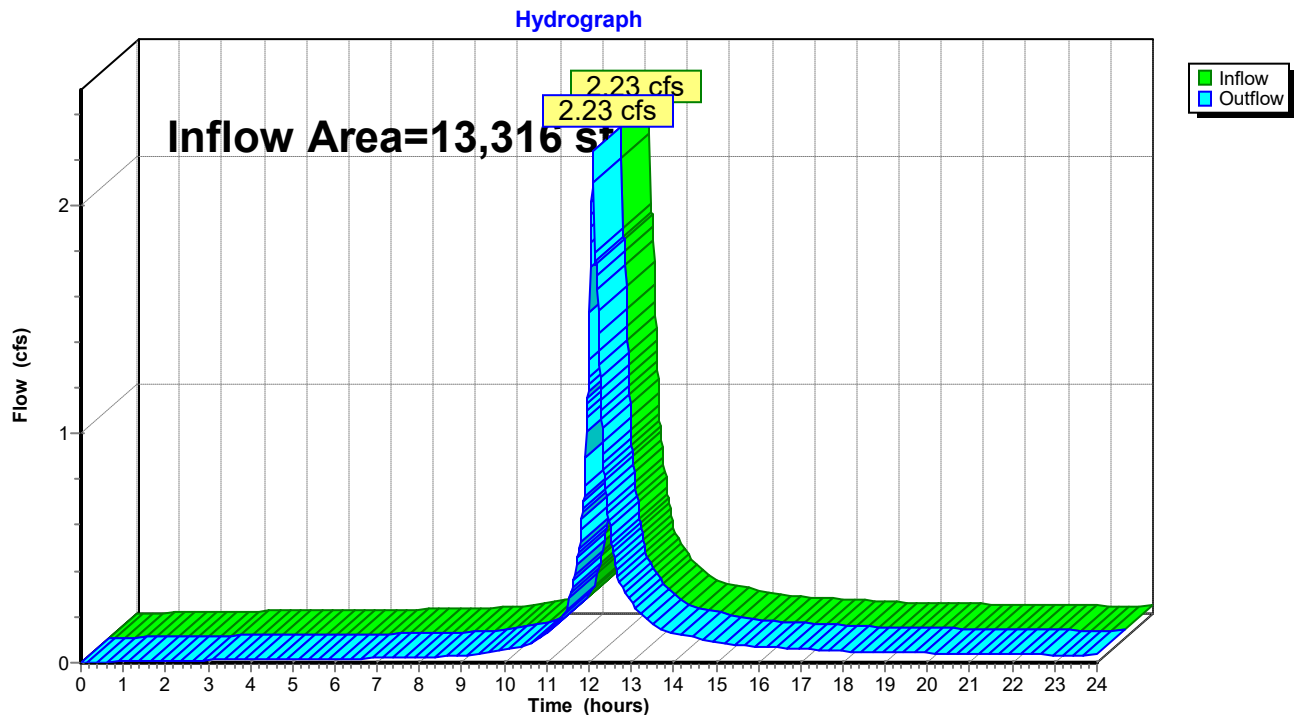
**Subcatchment 403P: Tennis Courts**

### Summary for Reach 1P: ONSITE UNRETAINED

Inflow Area = 13,316 sf, 29.35% Impervious, Inflow Depth > 7.06" for 100-Year-2050 event  
 Inflow = 2.23 cfs @ 12.11 hrs, Volume= 7,837 cf  
 Outflow = 2.23 cfs @ 12.11 hrs, Volume= 7,837 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 100P : EX INLET 1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 1P: ONSITE UNRETAINED

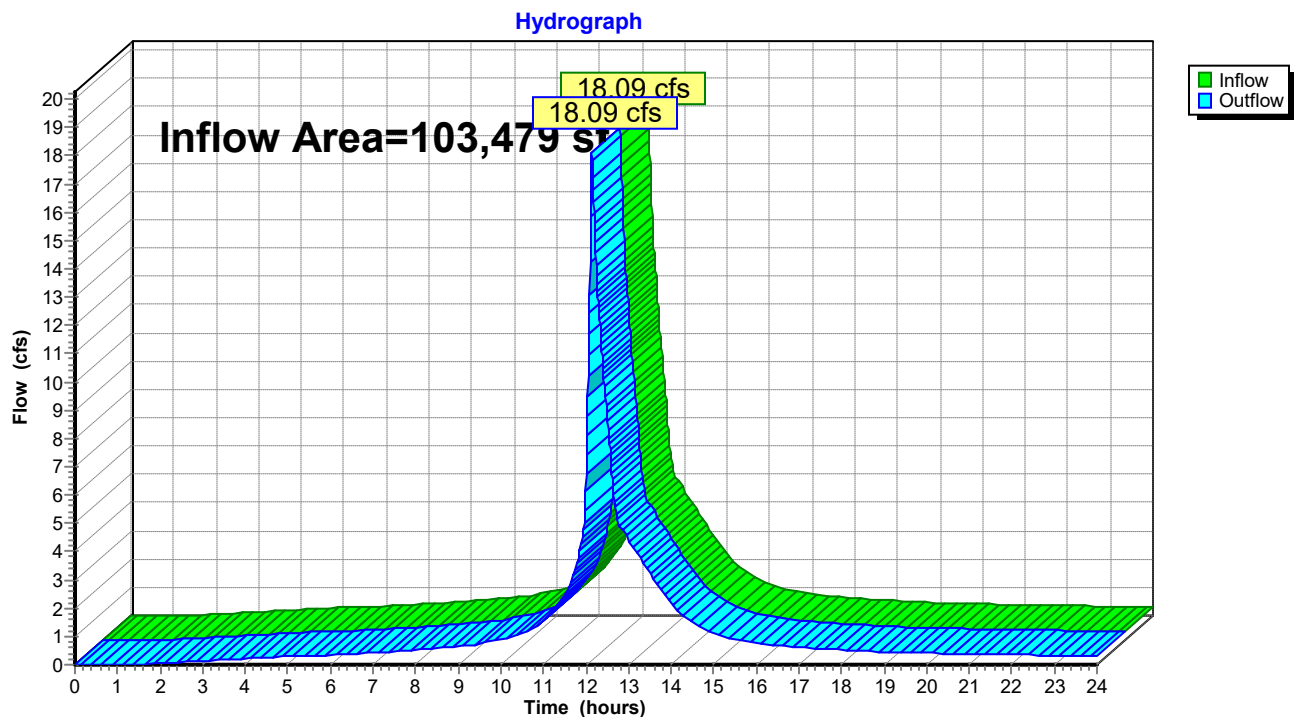


### Summary for Reach 2P: ONSITE EAST

Inflow Area = 103,479 sf, 81.63% Impervious, Inflow Depth > 10.59" for 100-Year-2050 event  
 Inflow = 18.09 cfs @ 12.14 hrs, Volume= 91,318 cf  
 Outflow = 18.09 cfs @ 12.14 hrs, Volume= 91,318 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 200P : EX MANHOLE 2

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 2P: ONSITE EAST

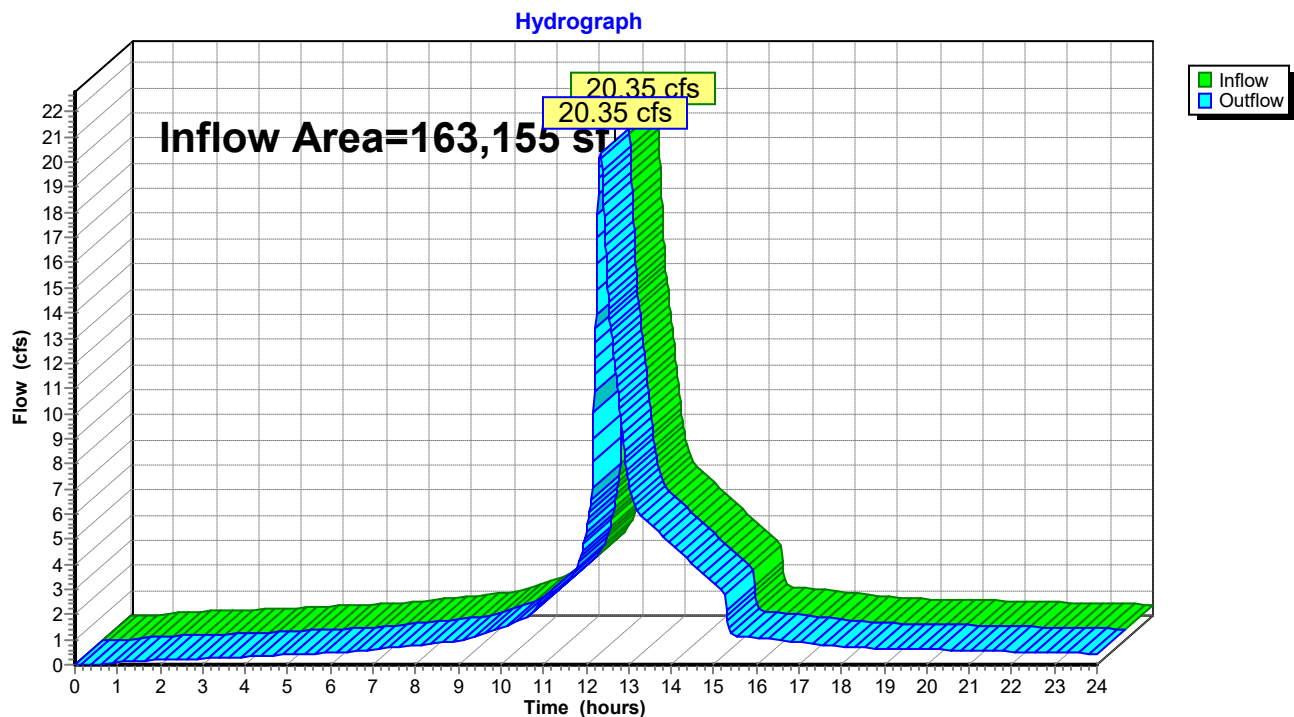


### Summary for Reach 3P: ONSITE WEST

Inflow Area = 163,155 sf, 54.02% Impervious, Inflow Depth > 10.24" for 100-Year-2050 event  
 Inflow = 20.35 cfs @ 12.34 hrs, Volume= 139,271 cf  
 Outflow = 20.35 cfs @ 12.34 hrs, Volume= 139,271 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 300P : EX INLET 3

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 3P: ONSITE WEST

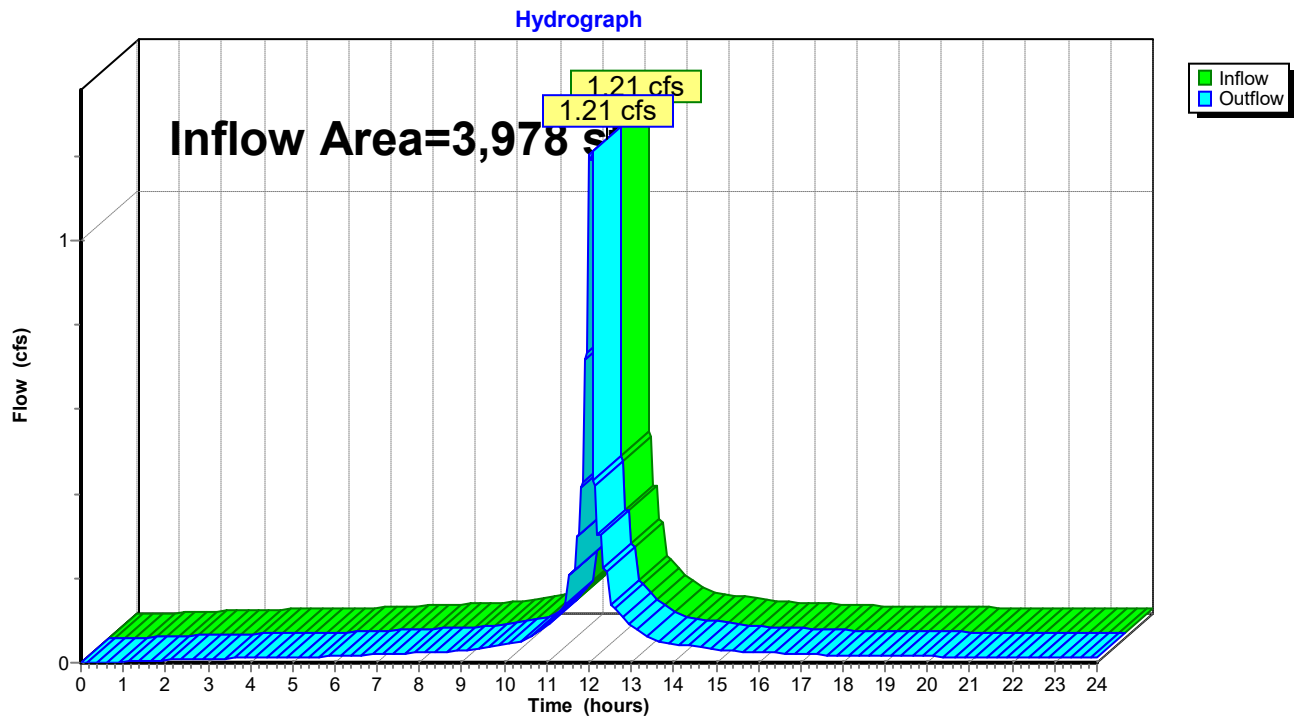


### Summary for Reach 4P: ONSITE TENNIS COURTS

Inflow Area = 3,978 sf, 83.13% Impervious, Inflow Depth > 10.84" for 100-Year-2050 event  
 Inflow = 1.21 cfs @ 12.09 hrs, Volume= 3,595 cf  
 Outflow = 1.21 cfs @ 12.09 hrs, Volume= 3,595 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 400P : TENNIS COURTS

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 4P: ONSITE TENNIS COURTS

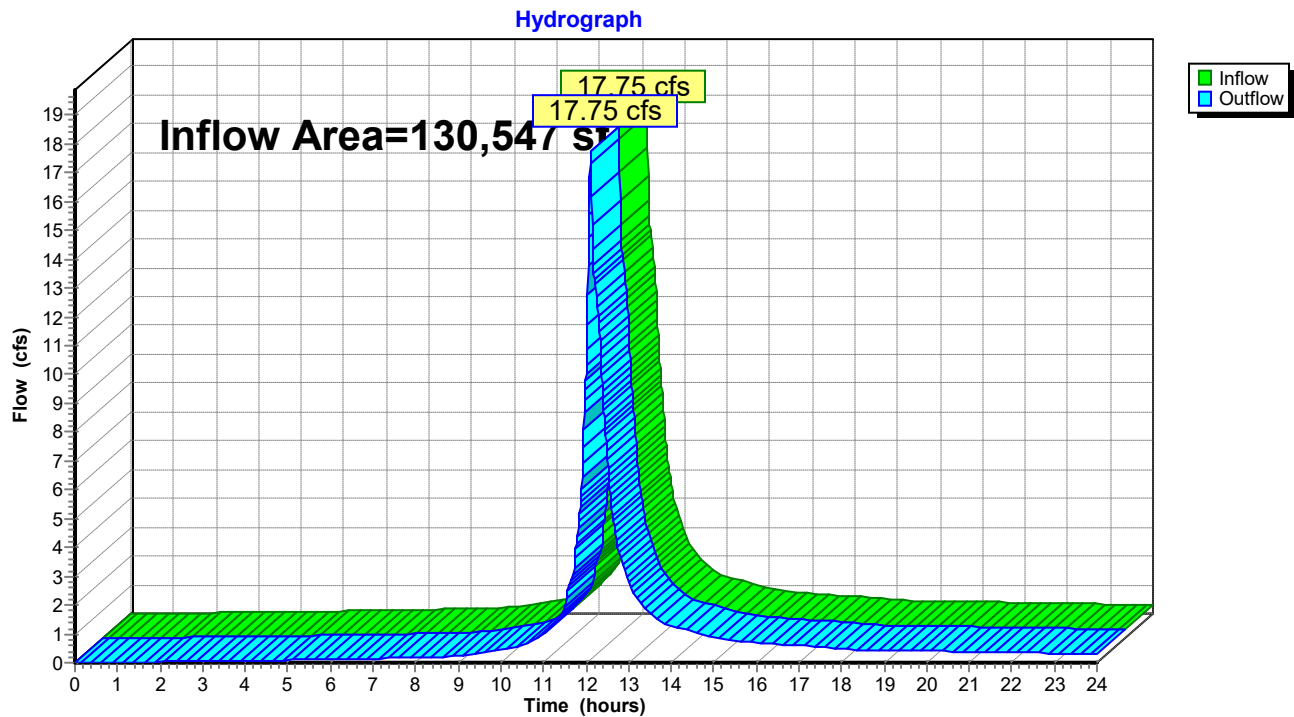


### Summary for Reach 100P: EX INLET 1

Inflow Area = 130,547 sf, 25.62% Impervious, Inflow Depth > 6.62" for 100-Year-2050 event  
 Inflow = 17.75 cfs @ 12.11 hrs, Volume= 72,042 cf  
 Outflow = 17.75 cfs @ 12.11 hrs, Volume= 72,042 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 100P: EX INLET 1



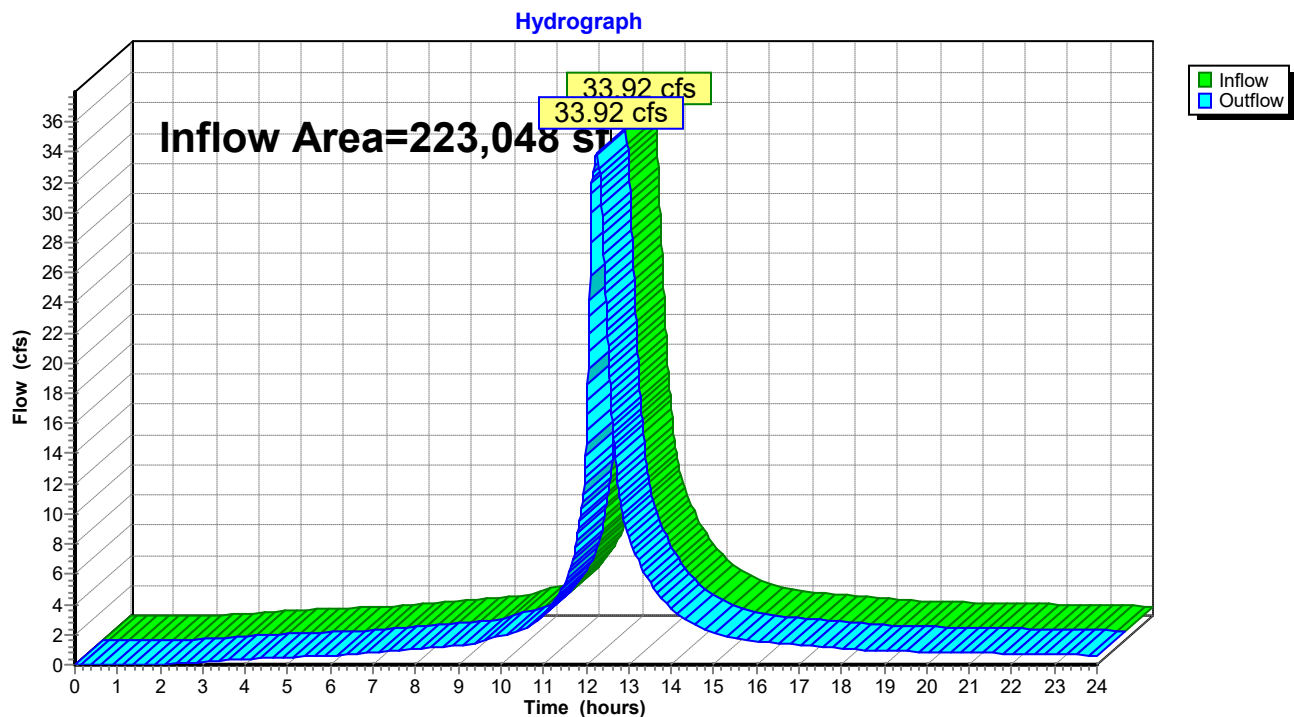


## Summary for Reach 200P: EX MANHOLE 2

Inflow Area = 223,048 sf, 38.25% Impervious, Inflow Depth > 10.24" for 100-Year-2050 event  
 Inflow = 33.92 cfs @ 12.26 hrs, Volume= 190,268 cf  
 Outflow = 33.92 cfs @ 12.26 hrs, Volume= 190,268 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Reach 200P: EX MANHOLE 2

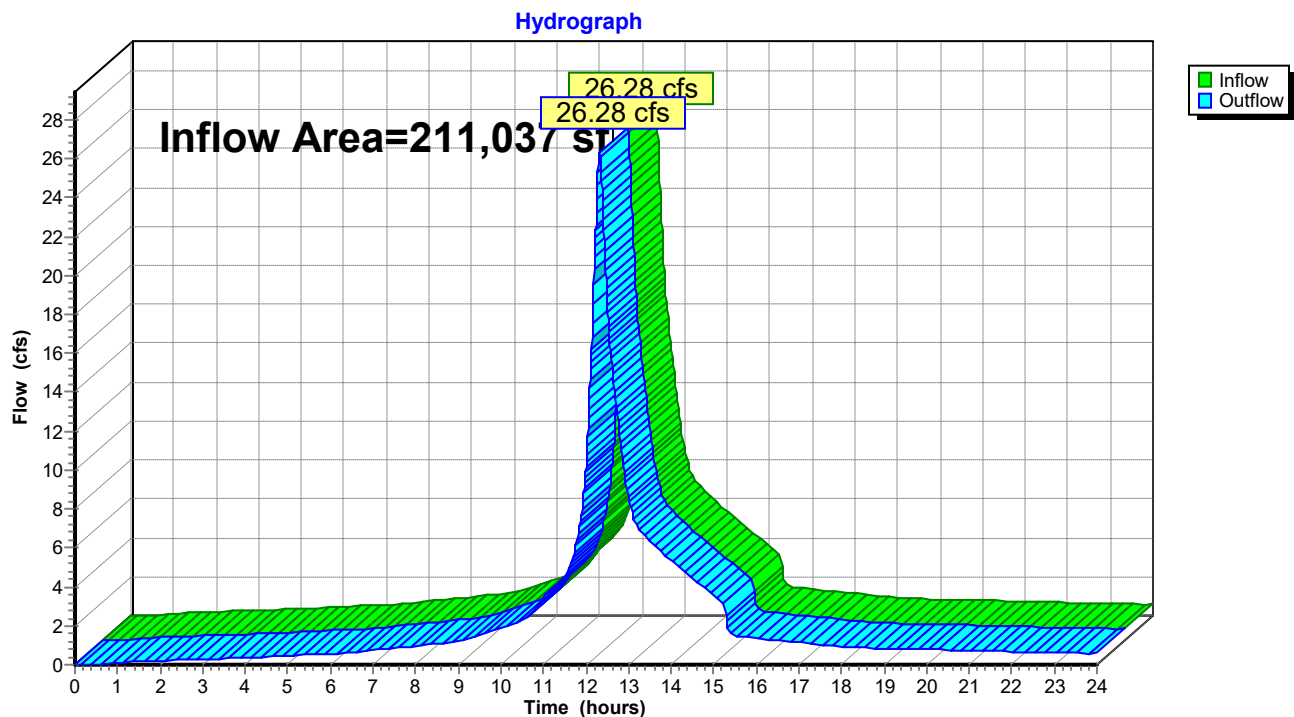


### Summary for Reach 300P: EX INLET 3

Inflow Area = 211,037 sf, 45.26% Impervious, Inflow Depth > 10.09" for 100-Year-2050 event  
 Inflow = 26.28 cfs @ 12.32 hrs, Volume= 177,359 cf  
 Outflow = 26.28 cfs @ 12.32 hrs, Volume= 177,359 cf, Atten= 0%, Lag= 0.0 min  
 Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

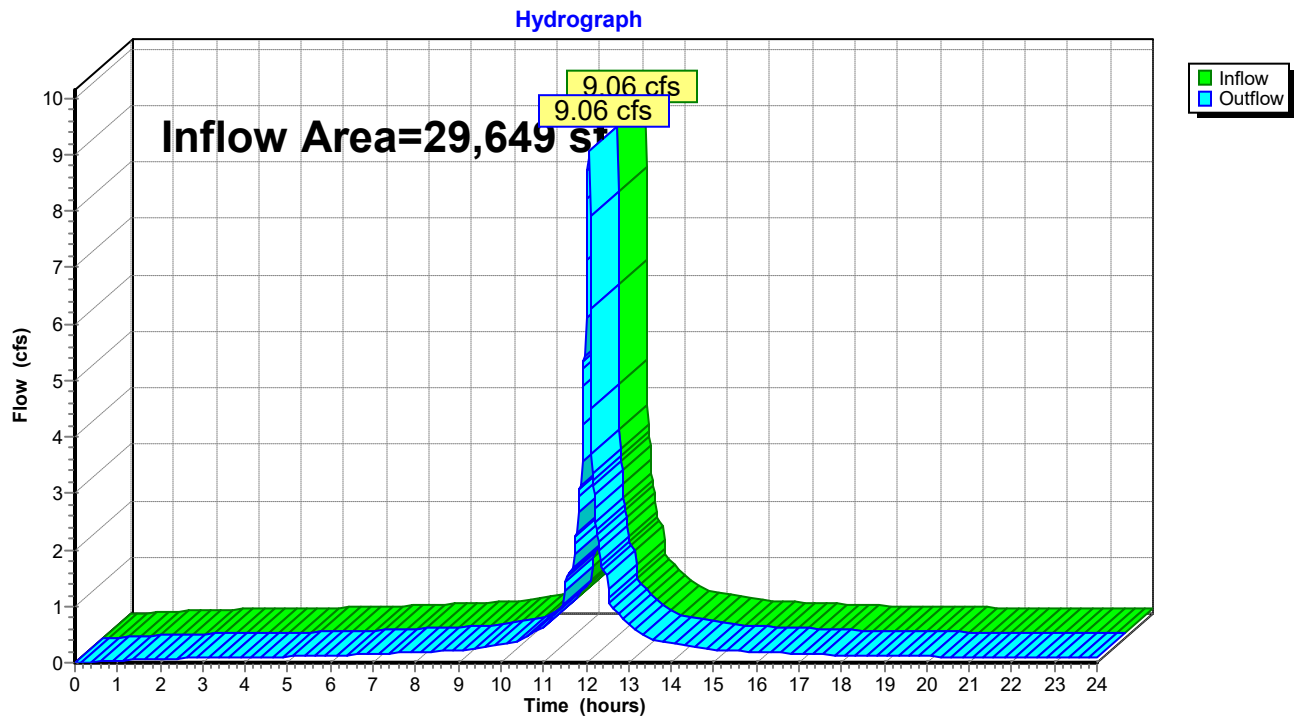
### Reach 300P: EX INLET 3



**Summary for Reach 400P: TENNIS COURTS**

Inflow Area = 29,649 sf, 97.74% Impervious, Inflow Depth > 11.05" for 100-Year-2050 event  
Inflow = 9.06 cfs @ 12.09 hrs, Volume= 27,311 cf  
Outflow = 9.06 cfs @ 12.09 hrs, Volume= 27,311 cf, Atten= 0%, Lag= 0.0 min  
Routed to Reach 500P : STUDY POINT

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

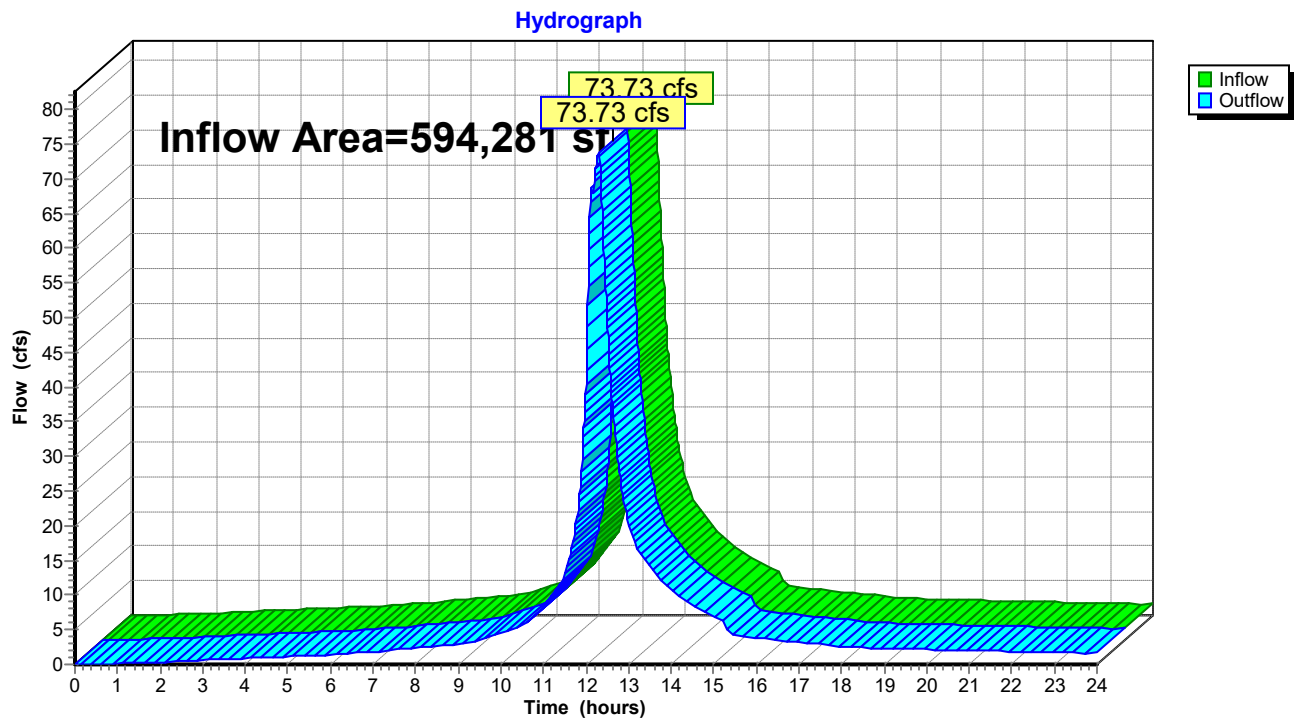
**Reach 400P: TENNIS COURTS**

### Summary for Reach 500P: STUDY POINT

Inflow Area = 594,281 sf, 40.93% Impervious, Inflow Depth > 9.43" for 100-Year-2050 event  
 Inflow = 73.73 cfs @ 12.30 hrs, Volume= 466,980 cf  
 Outflow = 73.73 cfs @ 12.30 hrs, Volume= 466,980 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Reach 500P: STUDY POINT



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Pond 204P: Cultec East**

Inflow Area = 96,601 sf, 86.14% Impervious, Inflow Depth > 10.85" for 100-Year-2050 event  
 Inflow = 28.12 cfs @ 12.10 hrs, Volume= 87,335 cf  
 Outflow = 16.76 cfs @ 12.13 hrs, Volume= 85,543 cf, Atten= 40%, Lag= 2.1 min  
 Primary = 16.76 cfs @ 12.13 hrs, Volume= 85,543 cf  
 Routed to Reach 2P : ONSITE EAST

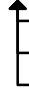
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 103.16' @ 12.13 hrs Surf.Area= 8,044 sf Storage= 20,760 cf

Plug-Flow detention time= 51.7 min calculated for 85,508 cf (98% of inflow)  
 Center-of-Mass det. time= 38.2 min ( 777.7 - 739.6 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 7,531 cf      | <b>70.25'W x 114.50'L x 4.00'H Field A</b><br>32,175 cf Overall - 13,347 cf Embedded = 18,827 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 13,347 cf     | <b>Cultec R-360HD x 360 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>360 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 20,878 cf     | Total Available Storage                                                                                                                                                                                                                        |

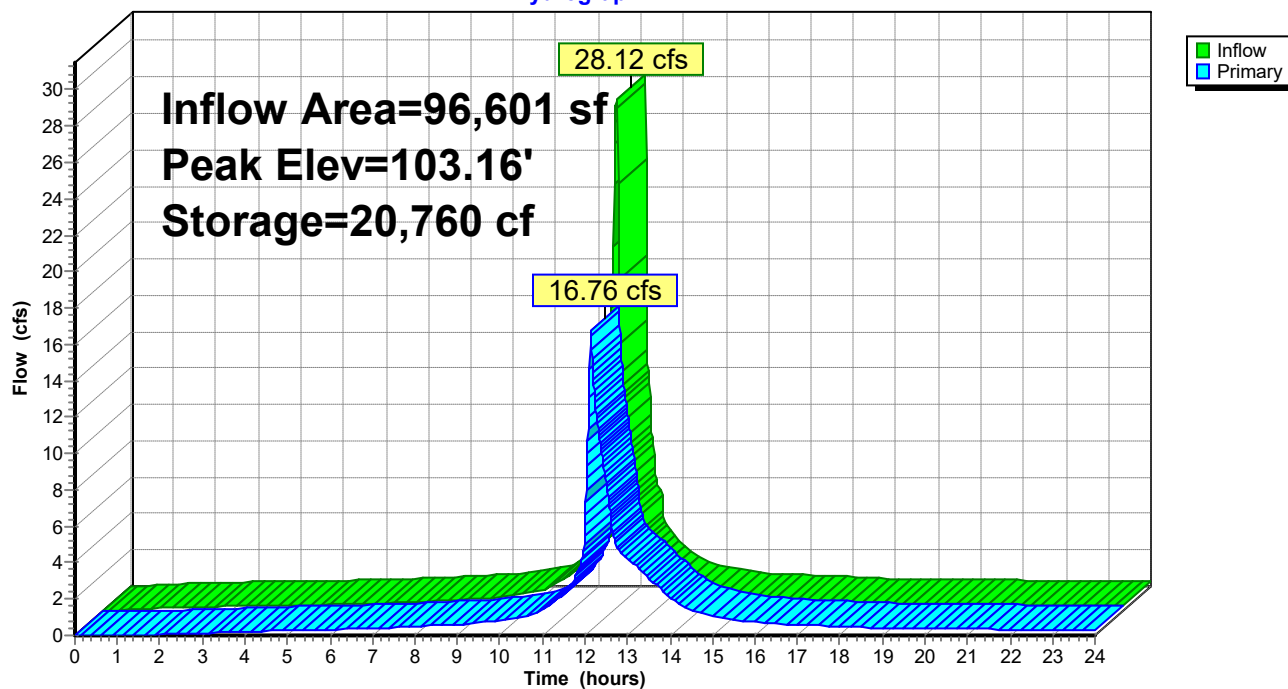
Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 99.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>36.0" W x 4.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.70' | <b>3.5' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=16.67 cfs @ 12.13 hrs HW=103.16' (Free Discharge)

**1=Orifice/Grate** (Orifice Controls 7.03 cfs @ 8.95 fps)
**2=Orifice/Grate** (Orifice Controls 6.44 cfs @ 6.44 fps)**3=Broad-Crested Rectangular Weir** (Weir Controls 3.20 cfs @ 2.00 fps)

**Pond 204P: Cultec East**

Hydrograph



**PROPOSED PEDDIE FOOTBALL**

NOAA 24-hr C 100-Year-2050 Rainfall=11.33", P2=3.84"

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**Summary for Pond 208P: Cultec West**

Inflow Area = 159,553 sf, 54.93% Impervious, Inflow Depth > 10.26" for 100-Year-2050 event  
 Inflow = 32.95 cfs @ 12.17 hrs, Volume= 136,469 cf  
 Outflow = 20.07 cfs @ 12.34 hrs, Volume= 136,406 cf, Atten= 39%, Lag= 10.0 min  
 Primary = 20.07 cfs @ 12.34 hrs, Volume= 136,406 cf  
 Routed to Reach 3P : ONSITE WEST

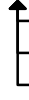
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 102.99' @ 12.34 hrs Surf.Area= 11,650 sf Storage= 29,352 cf

Plug-Flow detention time= 22.2 min calculated for 136,349 cf (100% of inflow)  
 Center-of-Mass det. time= 21.9 min ( 783.2 - 761.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                            |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A    | 99.20' | 10,838 cf     | <b>70.25'W x 165.83'L x 4.00'H Field A</b><br>46,599 cf Overall - 19,503 cf Embedded = 27,096 cf x 40.0% Voids                                                                                                                                 |
| #2A    | 99.20' | 19,503 cf     | <b>Cultec R-360HD x 528 Inside #1</b><br>Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf<br>Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap<br>528 Chambers in 12 Rows<br>Cap Storage= 6.5 cf x 2 x 12 rows = 155.0 cf |
|        |        | 30,342 cf     | Total Available Storage                                                                                                                                                                                                                        |

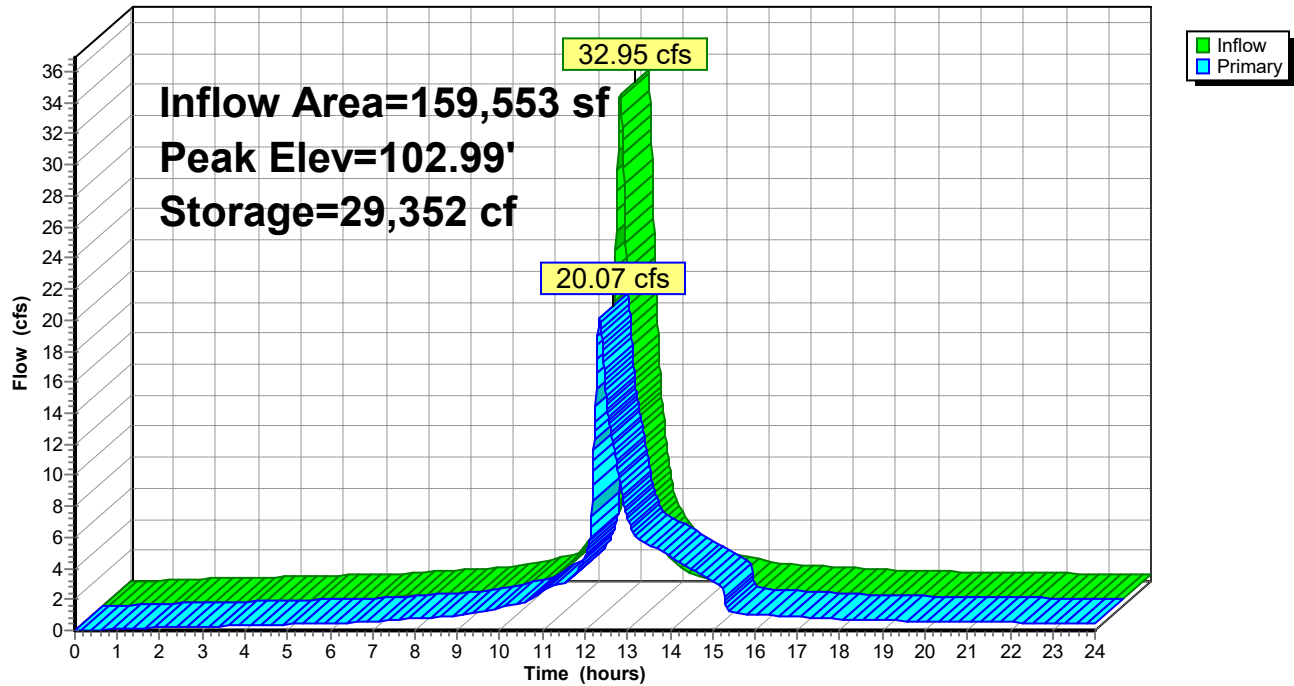
Storage Group A created with Chamber Wizard

| Device | Routing | Invert  | Outlet Devices                                                                                                                                     |
|--------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 98.20'  | <b>12.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads                                                                        |
| #2     | Primary | 101.20' | <b>30.0" W x 6.0" H Vert. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                          |
| #3     | Primary | 102.45' | <b>4.0' long x 0.5' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

**Primary OutFlow** Max=20.06 cfs @ 12.34 hrs HW=102.99' (Free Discharge)

**1=Orifice/Grate** (Orifice Controls 7.83 cfs @ 9.97 fps)
**2=Orifice/Grate** (Orifice Controls 7.45 cfs @ 5.96 fps)**3=Broad-Crested Rectangular Weir** (Weir Controls 4.77 cfs @ 2.22 fps)

**Pond 208P: Cultec West**

Hydrograph





- 8. DETENTION RELATED CALCULATIONS
  - 8A. Soil Boring Logs & Permeability Results
  - 8B. NJDEP Hantush Mounding

### SOIL TEST PITS RESULTS SUMMARY:

| Soil Test Pit ID     | SL-1  | SL-2  | SL-3  | SL-4  | SL-5  | SL-6  |
|----------------------|-------|-------|-------|-------|-------|-------|
| Ground Elev          | 103.3 | 103.4 | 103.9 | 104.0 | 103.5 | 103.9 |
| Soil Pit Depth (In)  | 120.0 | 120.0 | 120.0 | 144.0 | 144.0 | 120.0 |
| Bottom Of Pit Elev   | 94.4  | 95.4  | 93.9  | 91.9  | 91.5  | 93.9  |
| Mottling Depth (In)  | 54.0  | 70.0  | 64.0  | 70.0  | 54.0  | 74.0  |
| Mottling Elev        | 98.8  | 97.6  | 98.6  | 98.2  | 99.0  | 97.7  |
| Perm Depth (In)      | 40.0  | 41.0  | 49.0  | 40.0  | 53.0  | 46.0  |
| Perm Elev            | 100.0 | 100.0 | 99.8  | 100.7 | 99.1  | 100.1 |
| Perm Rate<br>(In/Hr) | 4.50  | 0.20  | 0.40  | 1.80  | 4.30  | 0.70  |

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

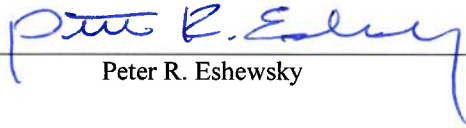
April 22, 2025  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: **SL-1 (Football Field)** (Check One): ☒ Profile Pit ☐ Boring ☐

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                                                                            |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                                                                               |
| 12" - 40"      | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                                                                             |
| 40" - 64"      | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN MOTTLES @ 54"; COMMON MEDIUM DISTINCT       |
| 64" - 74"      | 2.5YR 6/6 LIGHT RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN; COMMON MEDIUM DISTINCT MOTTLES |
| 74" - 120"     | 5YR 6/3 LIGHT REDDISH BROWN CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE                                                                                                                |
|                | TUBE SAMPLE @ SURFACE<br>BAG SAMPLE @ 40"                                                                                                                                                              |
|                | NO WATER ENCOUNTERED                                                                                                                                                                                   |

Signature of Site Evaluator  Date 4/22/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_  
Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

April 22, 2025  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: **SL-2 (Football Field)** (Check One): ☒ Profile Pit ☐ Boring ☐

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                                                                          |
| 12" - 41"      | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                                                                        |
| 41" - 77"      | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; 10YR 5/8 YELLOWISH BROWN MOTTLES @ 70"; COMMON MEDIUM DISTINCT |
| 77" - 120"     | 5YR 6/3 LIGHT REDDISH BROWN CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE                                                                                                           |
|                | TUBE SAMPLE @ SURFACE                                                                                                                                                                             |
|                | BAG SAMPLE @ 41"                                                                                                                                                                                  |
|                | NO WATER ENCOUNTERED                                                                                                                                                                              |

Signature of Site Evaluator Peter R. Eshewsky Date 4/22/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_  
Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

April 22, 2015  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: SL-3 (Football Field) (Check One): ☒ Profile Pit ☐ Boring ☐

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                                                      |
| 12" - 28"      | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                                                    |
| 28" - 49"      | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY;                                            |
| 49" - 70"      | 2.5YR 6/6 LIGHT RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN MOTTLES @ 64"; COMMON MEDIUM DISTINCT |
| 70" - 120"     | 5YR 6/3 LIGHT REDDISH BROWN CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE                                                                                       |

TUBE SAMPLE @ SURFACE  
BAG SAMPLE @ 49"

NO WATER ENCOUNTERED

Signature of Site Evaluator Peter R. Eshewsky Date 4/22/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_

Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

April 23, 2025  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: **SL-4 (Football Field)** (Check One): ☒ Profile Pit ☐ Boring ☐

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                                                                         |
| 12"- 40"       | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                                                                       |
| 40"- 60"       | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN MOTTLES @ 70"; COMMON MEDIUM DISTINCT |
| 60" - 120"     | 5YR 6/3 LIGHT REDDISH BROWN CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE                                                                                                          |
|                | TUBE SAMPLE @ SURFACE<br>BAG SAMPLE @ 40"                                                                                                                                                        |
|                | NO WATER ENCOUNTERED                                                                                                                                                                             |

Signature of Site Evaluator Peter R. Eshewsky Date 4/23/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_

Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

April 23, 2025  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: **SL-5 (Football Field)** (Check One): ☒ Profile Pit ☐ Boring ☐

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                                                                         |
| 12" - 36"      | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                                                                       |
| 36" - 53"      | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN MOTTLES @ 54"; COMMON MEDIUM DISTINCT |
| 53" - 84"      | 2.5YR 6/6 LIGHT RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE; CLEAR SMOOTH BOUNDARY; 10YR5/8 YELLOWISH BROWN; COMMON MEDIUM DISTINCT MOTTLES                          |
| 84" - 120"     | 5YR 6/3 LIGHT REDDISH BROWN CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE; ORANGEBURG CLAY PIPE ENCOUNTERED @ 96"                                                                  |
|                | TUBE SAMPLE @ SURFACE<br>BAG SAMPLE @ 53"                                                                                                                                                        |
|                | NO WATER ENCOUNTERED                                                                                                                                                                             |

Signature of Site Evaluator Peter R. Eshewsky Date 4/23/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_  
Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)

COUNTY: Mercer  
TOWNSHIP: Hightstown  
BLOCK: 53 LOT: 1.02

April 23, 2025  
File N-1900

STORMWATER SOIL LOG

1. LOG NUMBER: **SL-6 (Football Field)** (Check One): ☒ Profile Pit \_\_\_ Boring \_\_\_

2. SOIL LOG

| Depth (inches) | Description                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 0" - 12"       | TOP SOIL - 2.5 YR 4/3 REDDISH BROWN LOAM                                                                                                        |
| 12" - 28"      | 2.5YR 5/6 RED SANDY CLAY LOAM; MODERATE SUBANGULAR BLOCKY; MOIST; FRIABLE; NO ROOTS; CLEAR SMOOTH BOUNDARY                                      |
| 28" - 52"      | 2.5YR 5/8 RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FRIABLE; < 5% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY;              |
| 52" - 70"      | 2.5YR 6/6 LIGHT RED SANDY CLAY; MODERATE MEDIUM SUBANGULAR BLOCKY; MOIST; FIRM IN PLACE; < 10% GRAVEL WITH SOME COBBLES; CLEAR SMOOTH BOUNDARY; |
| 70" - 120"     | 5YR 7/2 PINKISH GRAY CLAY; STRONG MEDIUM SUBANGULAR BLOCKY; MOIST; COMMON MEDIUM DISTINCT 10YR 5/8 YELLOWISH BROWN MOTTLES @ 74"; FIRM IN PLACE |
|                | TUBE SAMPLE @ SURFACE<br>BAG SAMPLE @ 46"                                                                                                       |
|                | WATER ENCOUNTERED @ 86"                                                                                                                         |

Signature of Site Evaluator Peter R. Eshewsky Date 4/23/25  
Peter R. Eshewsky

Signature of Professional Engineer \_\_\_\_\_  
Lorali E. Totten, P.E., P.P., N.J. License # 28662 (Seal)



**Form 3b. Tube Permeameter Test Data**File # 1900W.O.# 1364

Name:

Peddie SchoolLot(s): 1.02Block: 53

Street:

S. Main St

Twp:

Hightstown

Date Run:

4/30/251. Test Number SL-1 Replicate (Letter) \_\_\_\_\_ Date Collected 4/22/252. Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 40"3. Type of Sample: \_\_\_\_\_ Undisturbed ☒ Disturbed4. Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8Length of Sample: L, in inches 3.0

5. Bulk Density Determination (Disturbed Samples Only):

Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 121.4 - 28.0 = 93.4Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$ Bulk Density (Sample Wt./Sample Volume), grams/cc  $93.4 / 77.5 = 1.21$ 6. Standpipe Used: ☒ No \_\_\_\_\_ Yes

– Indicate Internal Radius, cm \_\_\_\_\_

7. Height of Water Level Above Rim of Test Basin, in inches:

At the Beginning of Each test Interval,  $H_1$  5.0At the End of Each Test Interval,  $H_2$  4.5

8. Rate of Water Level Drop (Add additional lines if needed):

| Time, Start of Test<br>Interval, $T_1$ | Time, End of Test<br>Interval, $T_2$ | Length of Test<br>Interval T, minutes |
|----------------------------------------|--------------------------------------|---------------------------------------|
| <u>0</u>                               | <u>4:15</u>                          | <u>4.25</u>                           |
| <u>0</u>                               | <u>4:15</u>                          | <u>4.25</u>                           |
| _____                                  | _____                                | _____                                 |

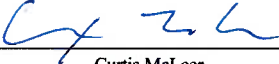
9. Calculation of Permeability:

$$K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2) \\ = 60 \text{ min/hr} \times ( \_ / \_ ) \times ( \underline{3.0} / \underline{4.25} ) \times \ln ( \underline{5.0} / \underline{4.5} ) = \underline{4.5} \text{ in/hr}$$

10. Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
\_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
\_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
\_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
\_\_\_\_\_ Other -- Specify \_\_\_\_\_

11. I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator  Date 5/13/25

Curtis McLeer

Signature of Engineer \_\_\_\_\_ NJ Professional Engineer. Lic.# 28662

Lorali E. Totten, P.E., P.P.

### Form 3b. Tube Permeameter Test Data

File # 1900

W.O.# 1364

Name:

Peddie School

Lot(s): 1.02

Block: 53

Street:

S. Main St

Twp:

Hightstown

Date Run:

4/30/25

1. Test Number SL-2 Replicate (Letter) \_\_\_\_\_ Date Collected 4/22/25

2. Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 41"

3. Type of Sample: ☒ Undisturbed \_\_\_\_\_ Disturbed

4. Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8

Length of Sample: L, in inches 3.0

5. Bulk Density Determination (Disturbed Samples Only):

Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 129.1 - 32.2 = 96.9

Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$

Bulk Density (Sample Wt./Sample Volume), grams/cc  $96.9 / 77.5 = 1.25$

6. Standpipe Used: ☒ No \_\_\_\_\_ Yes

– Indicate Internal Radius, cm \_\_\_\_\_

7. Height of Water Level Above Rim of Test Basin, in inches:

At the Beginning of Each test Interval,  $H_1$  5.0

At the End of Each Test Interval,  $H_2$  4.5

8. Rate of Water Level Drop (Add additional lines if needed):

| Time, Start of Test<br>Interval, $T_1$ | Time, End of Test<br>Interval, $T_2$ | Length of Test<br>Interval T, minutes |
|----------------------------------------|--------------------------------------|---------------------------------------|
| <u>0</u>                               | <u>&gt;180</u>                       | <u>&gt;180</u>                        |
| <u>0</u>                               | <u>&gt;180</u>                       | <u>&gt;180</u>                        |
| _____                                  | _____                                | _____                                 |

9. Calculation of Permeability:

$$K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2)$$

$$= 60 \text{ min/hr} \times ( \_ / \_ ) \times (4.5 / >180) \times \ln (5.0 / 4.5) = \underline{<0.2 \text{ in/hr}}$$

10. Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
 \_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
 \_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
 \_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
 \_\_\_\_\_ Other -- Specify \_\_\_\_\_

11. I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator

Curtis McLeer

Date

5/13/25

Signature of Engineer

NJ Professional Engineer. Lic.# 28662

Lorali E. Totten, P.E., P.P.

**Form 3b. Tube Permeameter Test Data**File # 1900W.O.# 1364

Name:

Peddie SchoolLot(s): 1.02Block: 53

Street:

S. Main St

Twp:

Hightstown

Date Run:

4/30/251. Test Number SL-3 Replicate (Letter) \_\_\_\_\_ Date Collected 4/22/252. Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 49"3. Type of Sample: \_\_\_\_\_ Undisturbed ☒ Disturbed4. Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8Length of Sample: L, in inches 3.0

5. Bulk Density Determination (Disturbed Samples Only):

Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 120.7 - 26.6 = 94.1Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$ Bulk Density (Sample Wt./Sample Volume), grams/cc  $94.1 / 77.5 = 1.21$ 6. Standpipe Used: ☒ No \_\_\_\_\_ Yes

– Indicate Internal Radius, cm \_\_\_\_\_

7. Height of Water Level Above Rim of Test Basin, in inches:

At the Beginning of Each test Interval,  $H_1$  5.0At the End of Each Test Interval,  $H_2$  4.5

8. Rate of Water Level Drop (Add additional lines if needed):

| Time, Start of Test<br>Interval, $T_1$ | Time, End of Test<br>Interval, $T_2$ | Length of Test<br>Interval T, minutes |
|----------------------------------------|--------------------------------------|---------------------------------------|
| <u>0</u>                               | <u>49:00</u>                         | <u>49.0</u>                           |
| <u>0</u>                               | <u>49:00</u>                         | <u>49.0</u>                           |
| _____                                  | _____                                | _____                                 |

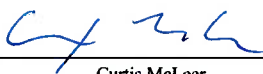
9. Calculation of Permeability:

$$K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2)$$
$$= 60 \text{ min/hr} \times ( \_ / \_ ) \times ( \underline{3.0} / \underline{49.0} ) \times \ln ( \underline{5.0} / \underline{4.5} ) = \underline{0.4} \text{ in/hr}$$

10. Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
\_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
\_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
\_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
\_\_\_\_\_ Other -- Specify \_\_\_\_\_

11. I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator  Date 5/13/25

Curtis McLeer

Signature of Engineer \_\_\_\_\_ NJ Professional Engineer. Lic.# 28662

Lorali E. Totten, P.E., P.P.

**Form 3b. Tube Permeameter Test Data**File # 1900W.O.# 1364

Name:

Peddie SchoolLot(s): 1.02Block: 53

Street:

S. Main St

Twp:

Hightstown

Date Run:

4/30/251. Test Number SL-4 Replicate (Letter) \_\_\_\_\_ Date Collected 4/23/252. Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 40"3. Type of Sample: \_\_\_\_\_ Undisturbed ☒ Disturbed4. Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8Length of Sample: L, in inches 3.0

5. Bulk Density Determination (Disturbed Samples Only):

Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 125.5 - 30.5 = 95.0Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$ Bulk Density (Sample Wt./Sample Volume), grams/cc  $95.0 / 77.5 = 1.23$ 6. Standpipe Used: ☒ No \_\_\_\_\_ Yes

– Indicate Internal Radius, cm \_\_\_\_\_

7. Height of Water Level Above Rim of Test Basin, in inches:

At the Beginning of Each test Interval,  $H_1$  5.0At the End of Each Test Interval,  $H_2$  4.5

8. Rate of Water Level Drop (Add additional lines if needed):

| Time, Start of Test<br>Interval, $T_1$ | Time, End of Test<br>Interval, $T_2$ | Length of Test<br>Interval T, minutes |
|----------------------------------------|--------------------------------------|---------------------------------------|
| <u>0</u>                               | <u>10:30</u>                         | <u>10.5</u>                           |
| <u>0</u>                               | <u>10:30</u>                         | <u>10.5</u>                           |
| _____                                  | _____                                | _____                                 |

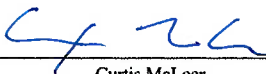
9. Calculation of Permeability:

$$K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2)$$
$$= 60 \text{ min/hr} \times ( \_ / \_ ) \times ( \underline{3.0} / \underline{10.5} ) \times \ln ( \underline{5.0} / \underline{4.5} ) = \underline{1.8} \text{ in/hr}$$

10. Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
\_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
\_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
\_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
\_\_\_\_\_ Other -- Specify \_\_\_\_\_

11. I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator  Date 5/13/25  
Curtis McLeerSignature of Engineer \_\_\_\_\_ NJ Professional Engineer. Lic.# 28662

Lorali E. Totten, P.E., P.P.

### Form 3b. Tube Permeameter Test Data

File # 1900  
 W.O.# 1364  
 Name: Peddie School  
 Lot(s): 1.02  
 Block: 53  
 Street: S. Main St  
 Twp: Hightstown  
 Date Run: 4/30/25

- Test Number SL-5 Replicate (Letter) \_\_\_\_\_ Date Collected 4/23/25
- Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 53"
- Type of Sample: \_\_\_\_\_ Undisturbed ☒ Disturbed
- Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8  
 Length of Sample: L, in inches 3.0
- Bulk Density Determination (Disturbed Samples Only):  
 Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 120.2 - 26.9 = 93.3  
 Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$   
 Bulk Density (Sample Wt./Sample Volume), grams/cc  $93.3 / 77.5 = 1.20$
- Standpipe Used: ☒ No \_\_\_\_\_ Yes  
 – Indicate Internal Radius, cm \_\_\_\_\_
- Height of Water Level Above Rim of Test Basin, in inches:  
 At the Beginning of Each test Interval,  $H_1$  5.0  
 At the End of Each Test Interval,  $H_2$  4.5
- Rate of Water Level Drop (Add additional lines if needed):

| Time, Start of Test Interval, $T_1$ | Time, End of Test Interval, $T_2$ | Length of Test Interval T, minutes |
|-------------------------------------|-----------------------------------|------------------------------------|
| <u>0</u>                            | <u>4:27</u>                       | <u>4.45</u>                        |
| <u>0</u>                            | <u>4:27</u>                       | <u>4.45</u>                        |
| _____                               | _____                             | _____                              |

- Calculation of Permeability:  

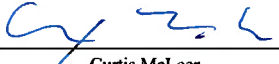
$$K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2)$$

$$= 60 \text{ min/hr} \times ( \_ / \_ ) \times ( \underline{3.0} / \underline{4.45} ) \times \ln ( \underline{5.0} / \underline{4.5} ) = \underline{4.3} \text{ in/hr}$$

- Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
 \_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
 \_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
 \_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
 \_\_\_\_\_ Other -- Specify \_\_\_\_\_

- I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator  Date 5/13/25  
 Curtis McLeer

Signature of Engineer \_\_\_\_\_ NJ Professional Engineer. Lic.# 28662  
 Lorali E. Totten, P.E., P.P.

### Form 3b. Tube Permeameter Test Data

**File #** 1900  
**W.O.#** 1364  
**Name:**  
Peddie School  
**Lot(s):** 1.02  
**Block:** 53  
**Street:**  
S. Main St  
**Twp:**  
Hightstown  
**Date Run:**  
4/30/25

- Test Number SL-6 Replicate (Letter) \_\_\_\_\_ Date Collected 4/23/25
- Material Tested: \_\_\_\_\_ Fill ☒ Test in Native Soil – Indicate Depth 46"
- Type of Sample: \_\_\_\_\_ Undisturbed ☒ Disturbed
- Sample Dimensions: Inside Radius of Sample Tube: R, in cm. 1.8  
Length of Sample: L, in inches 3.0
- Bulk Density Determination (Disturbed Samples Only):  
Sample Weight (Wt. Tube w/ Sample – Wt. of Empty Tube), grams 124.9 - 29.4 = 95.5  
Sample Volume ( $L \times 2.54 \text{ cm/inch} \times 3.14R^2$ ), cc  $3.0 \times 2.54 \times 3.14(1.8^2) = 77.5$   
Bulk Density (Sample Wt./Sample Volume), grams/cc  $95.5 / 77.5 = 1.23$
- Standpipe Used: ☒ No \_\_\_\_\_ Yes  
– Indicate Internal Radius, cm \_\_\_\_\_
- Height of Water Level Above Rim of Test Basin, in inches:  
At the Beginning of Each test Interval,  $H_1$  5.0  
At the End of Each Test Interval,  $H_2$  4.5
- Rate of Water Level Drop (Add additional lines if needed):

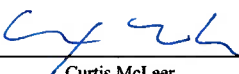
| Time, Start of Test Interval, $T_1$ | Time, End of Test Interval, $T_2$ | Length of Test Interval T, minutes |
|-------------------------------------|-----------------------------------|------------------------------------|
| <u>0</u>                            | <u>29:00</u>                      | <u>29.0</u>                        |
| <u>0</u>                            | <u>29:00</u>                      | <u>29.0</u>                        |
| _____                               | _____                             | _____                              |

- Calculation of Permeability:  
 $K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L (\text{in})/T (\text{min}) \times \ln (H_1/H_2)$   
 $= 60 \text{ min/hr} \times ( \_ / \_ ) \times ( \underline{3.0} / \underline{29.0} ) \times \ln ( \underline{5.0} / \underline{4.5} ) = \underline{0.7} \text{ in/hr}$

- Defects in the Sample (Check appropriate items):

☒ None \_\_\_\_\_ Cracks \_\_\_\_\_ Worm Channels  
\_\_\_\_\_ Root Channels \_\_\_\_\_ Soil/Tube Contact  
\_\_\_\_\_ Large Gravel \_\_\_\_\_ Large Roots  
\_\_\_\_\_ Dry Soil \_\_\_\_\_ Smearing \_\_\_\_\_ Compaction  
\_\_\_\_\_ Other -- Specify \_\_\_\_\_

- I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et. seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator  Date 5/13/25  
Curtis McLeer

Signature of Engineer \_\_\_\_\_ NJ Professional Engineer. Lic.# 28662  
Lorali E. Totten, P.E., P.P.

#### Input Values

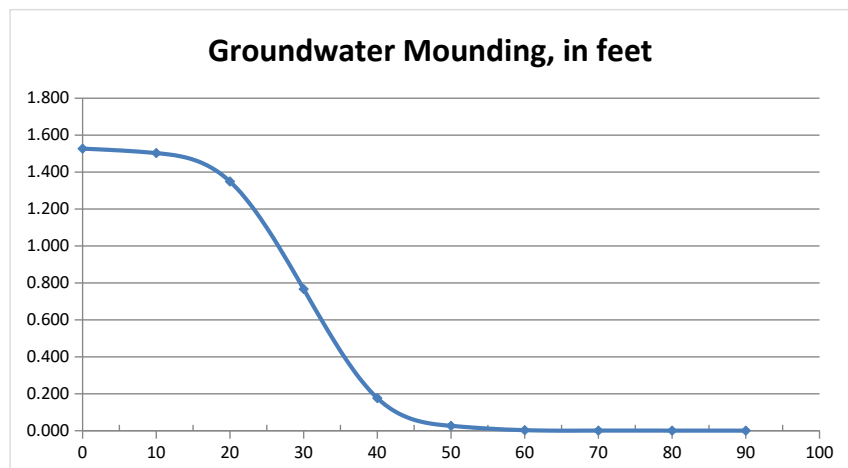
|        |         |                                                                                                                          |
|--------|---------|--------------------------------------------------------------------------------------------------------------------------|
| 0.20   | R       | Recharge rate (permeability rate) (in/hr)                                                                                |
| 0.150  | Sy      | Specific yield, Sy (dimensionless)<br>default value is 0.15; max value is 0.2 provided that a lab test data is submitted |
| 1.00   | Kh      | Horizontal hydraulic conductivity (in/hr) Kh = 5xRecharge Rate (R) in the coastal plain; Kh=R outside the coastal plain  |
| 30.000 | x       | 1/2 length of basin (x direction, in feet)                                                                               |
| 75.000 | y       | 1/2 width of basin (y direction, in feet)                                                                                |
| 13.80  | t       | Duration of infiltration period (hours)                                                                                  |
| 10.00  | hi(0)   | Initial thickness of saturated zone (feet)                                                                               |
| 11.527 | h(max)  | Maximum thickness of saturated zone (beneath center of basin at end of infiltration period)                              |
| 1.527  | Δh(max) | Maximum groundwater mounding (beneath center of basin at end of infiltration period)                                     |

Ground-water Mounding, in feet

| Ground-water Mounding, in feet | Distance from center of basin in x direction, in feet |
|--------------------------------|-------------------------------------------------------|
| 1.527                          | 0                                                     |
| 1.503                          | 10                                                    |
| 1.349                          | 20                                                    |
| 0.767                          | 30                                                    |
| 0.176                          | 40                                                    |
| 0.027                          | 50                                                    |
| 0.003                          | 60                                                    |
| 0.001                          | 70                                                    |
| 0.001                          | 80                                                    |
| 0.001                          | 90                                                    |



**Re-Calculate Now**



#### Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

## 9. GROUNDWATER RECHARGE CALCULATIONS



## **GROUNDWATER RECHARGE CALCULATIONS**

Per the NJ Stormwater Management Regulations (NJAC7:8), 100% of the site's average annual pre-developed groundwater recharge volume must be maintained after development.

Using GSR-32, Pre-developed and Post Developed conditions calculations were performed for the approximated disturbed area proposed for the project area/

The following values of total annual recharge were determined.

The soils are mostly "D" hydrologic group (poorly drained) with little to no infiltration with a small area of "A" hydrologic group (well drained) near the existing maintenance building. The proposed project creates a small ground water recharge deficit. The synthetic turf is the best management practice for ground water recharge. The cross section is similar to porous pavement and operates in a similar fashion. The top 2.5 inches consists of the turf and a cushion layer which are permeable, similar to porous pavement. The stormwater drains straight down through this layer into a minimum of 6 inches of stone. The stone is underlain by soil except where the underground Cultec structures are located. As the calculations indicate, only a very small area of the synthetic turf (155 SF) is required to meet the recharge. Therefore, more stormwater will be recharged than does under existing conditions.

For mounding analysis, an area in the middle of the field of 150 by 60 feet or 9000 sf is utilized

155 sf of the available 76342 sf of turf not overlaying Cultec systems is required, therefore significant ground water recharge is available.

## Annual Groundwater Recharge Analysis (based on GSR-32)

**Project Name:** Peddie School Stadium

**Description:**

**Analysis Date:** 09/18/25

| Select Township ↓           | Average Annual P (in) | Climatic Factor |
|-----------------------------|-----------------------|-----------------|
| MERCER CO., HIGHTSTOWN BORO | 44.9                  | 1.43            |

### Pre-Developed Conditions

| Land Segment | Area (acres) | TR-55 Land Cover | Soil       | Annual Recharge (in)       | Annual Recharge (cu.ft)       |
|--------------|--------------|------------------|------------|----------------------------|-------------------------------|
| 1            | 0.23         | Open space       | Woodstown  | 11.3                       | 9,430                         |
| 2            | 2.83         | Open space       | Udorthents | 0.0                        | -                             |
| 3            | 1.62         | Impervious areas | Udorthents | 0.0                        | -                             |
| 4            |              |                  |            |                            |                               |
| 5            |              |                  |            |                            |                               |
| 6            |              |                  |            |                            |                               |
| 7            |              |                  |            |                            |                               |
| 8            | 0            |                  |            |                            |                               |
| 9            | 0            |                  |            |                            |                               |
| 10           | 0            |                  |            |                            |                               |
| 11           | 0            |                  |            |                            |                               |
| 12           | 0            |                  |            |                            |                               |
| 13           | 0            |                  |            |                            |                               |
| 14           | 0            |                  |            |                            |                               |
| 15           | 0            |                  |            |                            |                               |
| Total =      | 4.7          |                  |            | Total Annual Recharge (in) | Total Annual Recharge (cu-ft) |
|              |              |                  |            | 0.6                        | 9,430                         |

### Post-Developed Conditions

| Land Segment | Area (acres) | TR-55 Land Cover | Soil       | Annual Recharge (in)       | Annual Recharge (cu.ft)       |
|--------------|--------------|------------------|------------|----------------------------|-------------------------------|
| 1            | 0.27         | Impervious areas | Woodstown  | 0.0                        | -                             |
| 2            | 3.86         | Impervious areas | Udorthents | 0.0                        | -                             |
| 3            | 0.38         | Open space       | Udorthents | 0.0                        | -                             |
| 4            | 0.17         | Open space       | Woodstown  | 11.3                       | 6,970                         |
| 5            | 0            |                  |            |                            |                               |
| 6            | 0            |                  |            |                            |                               |
| 7            | 0            |                  |            |                            |                               |
| 8            | 0            |                  |            |                            |                               |
| 9            | 0            |                  |            |                            |                               |
| 10           | 0            |                  |            |                            |                               |
| 11           | 0            |                  |            |                            |                               |
| 12           | 0            |                  |            |                            |                               |
| 13           | 0            |                  |            |                            |                               |
| 14           | 0            |                  |            |                            |                               |
| 15           | 0            |                  |            |                            |                               |
| Total =      | 4.7          |                  |            | Total Annual Recharge (in) | Total Annual Recharge (cu.ft) |
|              |              |                  |            | 0.4                        | 6,970                         |

### Procedure to fill the Pre-Development and Post-Development Conditions Tables

For each land segment, first enter the area, then select TR-55 Land Cover, then select Soil. Start from the top of the table and proceed downward. Don't leave blank rows (with A=0) in between your segment entries. Rows with A=0 will not be displayed or used in calculations. For impervious areas outside of standard lots select "Impervious Areas" as the Land Cover. Soil type for impervious areas are only required if an infiltration facility will be built within these areas.

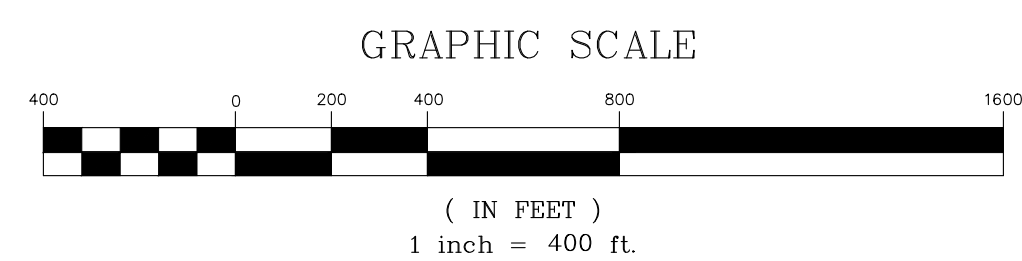
| Annual Recharge Requirements Calculation ↓                  |      |                               |                  |
|-------------------------------------------------------------|------|-------------------------------|------------------|
| % of Pre-Developed Annual Recharge to Preserve =            | 100% | Total Impervious Area (sq.ft) | 179,903          |
| Post-Development Annual Recharge Deficit=                   |      | 2,460                         | (cubic feet)     |
| Recharge Efficiency Parameters Calculations (area averages) |      |                               |                  |
| RWC=                                                        | 0.30 | (in)                          | DRWC= 0.25 (in)  |
| ERWC=                                                       | 0.09 | (in)                          | EDRWC= 0.07 (in) |

| Project Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          | Description |          | Analysis Date                                      |        | BMP or LID Type |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|----------|----------------------------------------------------|--------|-----------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|------|
| Peddie School Stadium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          | 0           |          | 09/18/25                                           |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Recharge BMP Input Parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |             |          | Root Zone Water capacity Calculated Parameters     |        |                 |                                     | Recharge Design Parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |       |      |
| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Symbol   | Value       | Unit     | Parameter                                          | Symbol | Value           | Unit                                | Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Symbol  | Value | Unit |
| BMP Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ABMP     | 155.0       | sq.ft    | Empty Portion of RWC under Post-D Natural Recharge | ERWC   | 0.00            | in                                  | Inches of Runoff to capture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qdesign | 0.04  | in   |
| BMP Effective Depth, this is the design variable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | dBMP     | 2.4         | in       | ERWC Modified to consider dEXC                     | EDRWC  | 0.00            | in                                  | Inches of Rainfall to capture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Pdesign | 0.09  | in   |
| Upper level of the BMP surface (negative if above ground)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | dBMPu    | 2.0         | in       | Empty Portion of RWC under Infiltr. BMP            | RERWC  | 0.00            | in                                  | Recharge Provided Avg. over Imp. Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         | 0.2   | in   |
| Depth of lower surface of BMP, must be >= dBMPu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | dEXC     | 8.0         | in       |                                                    |        |                 |                                     | Runoff Captured Avg. over imp. Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         | 0.2   | in   |
| Post-development Land Segment Location of BMP , Input Zero if Location is distributed or undetermined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SegBMP   | 2           | unitless |                                                    |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |             |          | BMP Calculated Size Parameters                     |        |                 |                                     | CALCULATION CHECK MESSAGES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |       |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |             |          | ABMP/Aimp                                          | Aratio | 0.00            | unitless                            | Volume Balance--> <b>OK</b><br>dBMP Check--> <b>OK</b><br>dEXC Check--> <b>OK</b><br><br>BMP Location--> <b>OK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |       |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |             |          | BMP Volume                                         | VBMP   | 31              | cu.ft                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |             |          |                                                    |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Parameters from Annual Recharge Worksheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |             |          | System Performance Calculated Parameters           |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Post-D Deficit Recharge (or desired recharge volume)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Vdef     | 2,460       | cu.ft    | Annual BMP Recharge Volume                         |        | 2,460           | cu.ft                               | <b>OTHER NOTES</b><br><br>Pdesign is accurate only after BMP dimensions are updated to make rech volume= deficit volume. The portion of BMP infiltration prior to filling and the area occupied by BMP are ignored in these calculations. Results are sensitive to dBMP, make sure dBMP selected is small enough for BMP to empty in less than 3 days. For land Segment Location of BMP if you select "impervious areas" RWC will be minimal but not zero as determined by the soil type and a shallow root zone for this Land Cover allowing consideration of lateral flow and other losses. |         |       |      |
| Post-D Impervious Area (or target Impervious Area)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Aimp     | 179,903     | sq.ft    | Avg BMP Recharge Efficiency                        |        | 100.0%          | Represents % Infiltration Recharged |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Root Zone Water Capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RWC      | 0.00        | in       | %Rainfall became Runoff                            |        | 77.7%           | %                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| RWC Modified to consider dEXC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DRWC     | 0.00        | in       | %Runoff Infiltrated                                |        | 0.5%            | %                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Climatic Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | C-factor | 1.43        | no units | %Runoff Recharged                                  |        | 0.5%            | %                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Average Annual P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pavg     | 44.9        | in       | %Rainfall Recharged                                |        | 0.4%            | %                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| Recharge Requirement over Imp. Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | dr       | 0.2         | in       |                                                    |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |
| <b>How to solve for different recharge volumes:</b> By default the spreadsheet assigns the values of total deficit recharge volume "Vdef" and total proposed impervious area "Aimp" from the "Annual Recharge" sheet to "Vdef" and "Aimp" on this page. This allows solution for a single BMP to handle the entire recharge requirement assuming the runoff from entire impervious area is available to the BMP. To solve for a smaller BMP or a LID-IMP to recharge only part of the recharge requirement, set Vdef to your target value and Aimp to impervious area directly connected to your infiltration facility and then solve for ABMP or dBMP. To go back to the default configuration click the "Default Vdef & Aimp" button. |          |             |          |                                                    |        |                 |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |       |      |

10. WATER QUALITY CALCULATIONS  
**NOT REQUIRED**

## 12. DRAINAGE AREA MAPS





# CREST

Engineering Associates Inc.

Civil • Environmental Engineers

Professional Planners • Surveyors • Landscape Architects

• CERTIFICATE OF AUTHORIZATION NO. 24GAT27989300 •

100 RIKE DRIVE  
MILLSSTONE TOWNSHIP, N.J. 08535  
PH:(609)448-3550

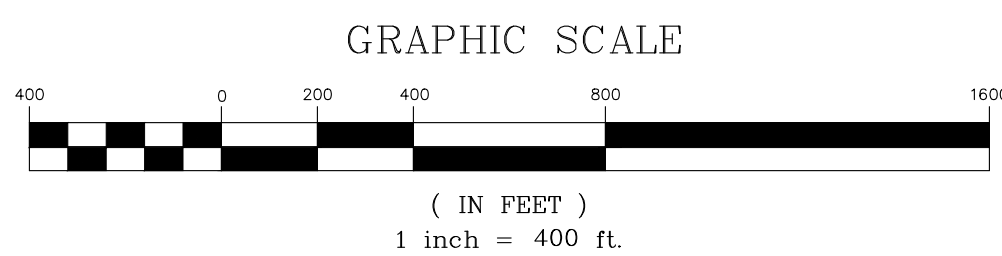
12 ROBBINS PKWY.  
AT WATER STREET  
TOWNS RIVER, N.J. 08753  
PH:(732)244-0888

**THE PEDDIE SCHOOL  
STADIUM RENOVATION PROJECT  
BLOCK 53, LOT 1.02**

( TAX MAP SHEET No. 8 )  
**BOROUGH OF HIGHTSTOWN  
MERCER COUNTY, NEW JERSEY**

***EXISTING DRAINAGE  
AREA MAP***





THE PEDDIE SCHOOL  
STADIUM RENOVATION PROJECT  
BLOCK 53, LOT 1.02  
( TAX MAP SHEET No. 8 )  
BOROUGH OF HIGHTSTOWN  
MERCER COUNTY, NEW JERSEY

FILE IN 1900

DWG. NO.