

***STORMWATER MANAGEMENT,
GROUNDWATER RECHARGE AND
WATER QUALITY ANALYSIS***

For

Arny Associates, LLC

Proposed Warehouse Redevelopment

**322 & 326 Cranbury – Half Acre Road
Block 8, Lots 1.02 & 1.03
Township of Cranbury,
Middlesex County,
New Jersey**

Prepared by:



**DYNAMIC
ENGINEERING**

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A handwritten signature in black ink, appearing to read 'J. Henry', is positioned above a horizontal line.

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I. SITE DESCRIPTION

The project area is comprised of Block 8, Lots 1.02 & 1.03 in the Township of Cranbury, Middlesex County, New Jersey. The subject site is located at 322 & 326 Cranbury - Half Acre Road and is comprised of Lot 1.02 containing 337,167 SF (7.740 acres) and Lot 1.03 containing 613,921 SF (14.093 acres). The site is located within the LI (Light Industrial) Zoning District as indicated on the Township of Cranbury Zoning Map (included in the enclosed Environmental Impact Statement appendix). Lot 1.03 is presently developed as a warehouse and Lot 1.02 as an industrial building, both with associated site elements including driveways, parking areas, landscaping, lighting and utilities. The existing conditions of the tract have been verified by the ALTA/ACSM Boundary and Topographic Survey as prepared by Dynamic Survey, LLC, dated 08/31/2020, last revised 02/03/21.

II. DESIGN OVERVIEW

This report has been prepared to define and analyze the stormwater drainage conditions that would occur as a result of the development of Block 8, Lots 1.02 & 1.03, in the Township of Cranbury, Middlesex County, New Jersey.

The scope of the study includes the proposed 85,053 SF (94,287 SF GFA) warehouse building footprint on Lot 1.02, and the associated driveways, parking areas, landscaping and other related site improvements as shown on the accompanying engineering drawings. Overall, the development proposes a limit of disturbance of 220,688 SF (5.066 AC), an increase of impervious surface on Lot 1.02 by approximately 15.9%, primarily due to the proposed building, and no change to impervious surface on Lot 1.03. It should also be noted, the subject project results in a net decrease of regulated motor vehicle surface onsite by approximately 3,394 SF.

Based upon the fact that the proposed improvements will result in more than one (1) acre of land disturbance, this project is classified as a “major development”; and therefore, has been designed to meet the stormwater runoff quantity, quality and groundwater recharge standards, set forth by the Township of Cranbury Land Use Ordinance and NJAC 7:8. Accordingly, the following items are addressed within this report:

- Erosion control, groundwater recharge and runoff quantity standards (7:8-5.4)
- Stormwater runoff quality standards (7:8-5.5)
- Calculation of stormwater runoff and groundwater recharge (7:8-5.6)
- Standards for structural stormwater management measures (7:8-5.7)

A hydrological evaluation is provided for the NJDEP Water Quality, 2-, 10-, and 100-year storm events utilizing the Urban Hydrology for Small Watershed TR55 method.

The Cranbury Township and NJDEP flow reduction requirements are as follows:

| | |
|-----------|---------------|
| 2-year: | 50% reduction |
| 10-year: | 25% reduction |
| 100-year: | 20% reduction |

It is the intention of the design of this facility to comply with the Stormwater Management Best Management Practices.

III. EXISTING DRAINAGE CONDITIONS

The tract has been evaluated with the following drainage sub-watershed areas as depicted on the Existing Drainage Area Map:

Existing Study Area South: This portion of the tract consists of an asphalt walkway and open space associated with the southwestern portion of the subject parcel. Stormwater runoff from this area is tributary to the existing wetland areas located in the south portion of the subject parcel via overland flow.

Existing Study Area East: This portion of the tract consists of impervious area from the existing building, drive aisles, and parking areas. There are also portions of open space and landscaping associated with the eastern portion of the subject parcel. Stormwater runoff from this area is ultimately tributary to an existing stormwater basin and wet pond to the south of the adjacent parcel (Lot 1.03) via the existing onsite stormwater conveyance system and overland flow.

Existing Study Area West: This portion of the tract consists primarily of impervious area from the existing building, drive aisles, and parking areas. There are also portions of open space and landscaping islands associated with the western portion of the subject parcel. Stormwater runoff from this area is ultimately tributary to the existing stormwater basin and wet pond to the west of the subject parcel via the existing onsite stormwater conveyance system.

Based on the Middlesex County soils survey information, the soil types native to the site include:

| MIDDLESEX COUNTY SOIL SURVEY INFORMATION | | |
|---|--|------------------------------|
| SOIL TYPE (SYMBOL) | SOIL TYPE (NAME) | HYDROLOGIC SOIL GROUP |
| FapA* | Fallsington Loams, 0 to 2 percent slopes | C/D |
| UR** | Urban Land | D |
| WogA | Woodstown Loam, 0 to 2 percent slopes | C |

*FapA is a dual hydrological soil group and has been considered a D soil indicating an undrained condition given its proximity to the adjacent onsite wetlands

**UR is urban land and does not have a soil group designation. Therefore, UR land has been considered a D soil indicating an undrained condition given its similarity to FapA soil characteristics

IV. PROPOSED DRAINAGE CONDITIONS

The tract has been evaluated with the following sub-watershed areas as depicted on the Proposed Drainage Area Map:

Study Area Basin 'A': This portion of the tract consists primarily of half of the newly proposed parking area adjacent to the proposed building and approximately 1/4 of the overall proposed building roof area. Runoff from this area will be collected via proposed onsite inlets and roof leaders and conveyed to proposed stormwater management Basin 'A' located adjacent to the northern end of the proposed building. Basin 'A' is ultimately tributary to the existing stormwater basin and wet pond to the west of the subject parcel via a combination of existing and proposed onsite stormwater conveyance systems.

Study Area Basin 'B': This portion of the tract consists primarily of half of the newly proposed parking area adjacent to the proposed building and approximately 1/2 of the overall building roof area. Runoff from this area will be collected via proposed onsite inlets and roof leaders and conveyed to proposed stormwater management Basin 'B' located adjacent to the southwestern corner of the proposed building. Basin 'B' is ultimately tributary to the existing stormwater basin and wet pond to the southwest of the subject parcel via existing and proposed onsite stormwater conveyance systems.

Study Area Basin 'C': This portion of the tract consists primarily of the newly proposed loading area adjacent to the proposed building and approximately 1/4 of the overall building roof area. Runoff from this area will be collected via proposed onsite inlets and roof leaders and conveyed to proposed stormwater management Basin 'C' located adjacent to the southeastern corner of the proposed building. Basin 'C' is ultimately tributary to the

existing stormwater basin and wet pond to the southeast of the adjacent parcel (Lot 1.03)l via existing and proposed onsite stormwater conveyance systems.

Study Area East Undetained: This study area consists mostly of the proposed loading area adjacent to the building and parking area on the adjacent parcel (Lot 1.03) Stormwater runoff from this area is tributary to the existing onsite inlets and is ultimately conveyed to the existing stormwater basin and wet pond areas to the south of the adjacent parcel (Lot 1.03).

Study Area West Undetained: This study area consists mostly of the open space adjacent to the proposed parking area to the west of the proposed building. Stormwater runoff from this area is tributary to the existing wet pond areas to the west of the subject parcel via overland flow.

V. DESIGN METHODOLOGY

The intention of the design of the proposed stormwater management facilities for this project is to provide measures as required to address applicable aspects of the Township of Cranbury Land Use Ordinance and NJAC 7:8. In order to prepare the stormwater calculations for the subject project, extensive initial investigation of the property and topography was performed. On-site review of the tract was performed by Dynamic Engineering Consultants, PC to verify existing site conditions and land cover characteristics. Dynamic Survey, LLC was contracted to prepare the Boundary and Topographic Survey with topography for the existing site and surrounding basin, wet pond and watershed areas.

Based on our review of the existing site conditions and the Topographic Survey, the Drainage Area Maps for the existing and proposed site conditions as defined within this report were established. A grading plan was developed for the proposed site improvements with consideration to the existing drainage patterns. The plan was designed to ensure runoff from the proposed development could be directed to stormwater management facilities in order to address the applicable sections of the Township of Cranbury Land Use Ordinance and NJAC 7:8.

Furthermore, Dynamic Earth, LLC performed test pits within the site to establish seasonal high-water table and soil permeability rates. The results of the infield soil testing are not consistent with the Hydrologic Soil Group mapped within the subject site. Per the report, the depth of the restrictive layers varies from 70 inches to 40 inches in depth. Furthermore, the permeability of the soil tested returned a value lesser than 1 inch/hour. For these reasons, the soils were treated as Hydrologic Soil Group D rather than the published Hydrologic Soil Group C from the NRCS Web Soil Survey. Please refer to the accompanying Stormwater Basin Area Investigation and Hydrologic Soil Group Review, prepared by Dynamic Earth, LLC, for additional information.

Per prior discussions with the Township Engineer, our office has prepared the basin design to comply with the minimum seasonal high water table separation requirements to the maximum extent feasible with the aforementioned soil testing results considered. However, in efforts to reduce the amount of non-native fill necessary to be imported for construction, the proposed basin bottoms have been designed with less than the minimum seasonal high water table elevation separation. Impermeable liners are proposed at the bottom and sides of all three (3) aboveground bioretention basins to prevent groundwater intrusion into the proposed basin systems. Due to the existing conditions onsite, including adjacent wetlands areas, basins and building, the grading design has been prepared to minimize the impact to the existing features onsite and within the immediate vicinity to the maximum extent feasible while providing an efficient drainage design generally compliant with the NJ BMP Manual. Due to the limited permeability available onsite, the project has not been designed to satisfy groundwater recharge standards set forth in the Township of Cranbury Land Use Ordinance nor NJAC 7:8.

Per the Township of Cranbury Land Use Ordinance, Stormwater Management requirements for calculating runoff coefficients and groundwater recharge are provided. The Ordinance states there is a presumption that the preconstruction condition of a site or portion thereof should be considered wooded land use with good hydrologic condition. However, the Ordinance also states that a runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site for at least five years without interruption prior to the time of application. Per review of historic aerial imagery available online and per confirmation with the Applicant, there has not been disturbance onsite within 5 years. Therefore, the proposed stormwater management design has assumed that the runoff coefficients are consistent with the existing land cover.

Based upon the soils conditions encountered at the site, it was determined that underdrains are to be used in areas of poor infiltration testing. This would be the appropriate structural Best Management Practices technique for the treatment and storage of stormwater runoff in areas generated by the proposed improvements. Outlet control structures have been implemented in each proposed basin to release stormwater runoff at a controlled rate to satisfy the stormwater quantity requirements of the Township of Cranbury Land Use Ordinance and N.J.A.C. 7:8.

The Stormwater Management Rules in NJAC 7:8-5.5 require stormwater management measures that are designed to reduce the post-construction load of TSS in stormwater generated from the NJDEP water quality storm by 80% of the anticipated load from the developed site for sites that increase the amount of impervious coverage by one-quarter (0.25) acre. The proposed development does not increase motor vehicle impervious surface by over a quarter acre and, therefore, is not subject to the Stormwater Quality Requirements set forth within N.J.A.C 7:8-5.5. It should be noted, however, that while the project is not subject to NJDEP water

quality requirements, the proposed bioretention basins have been designed to satisfy the criteria necessary to achieve 80% TSS removal per the NJ BMP Manual. Additionally, per the Stormwater Management, Conveyance, and Water Quality Report, prepared by Langan Engineering and included in the Appendix of this report, the existing stormwater management basin which the proposed stormwater management facilities are discharging to was originally designed as an Extended Detention Wetlands with a 90% TSS removal rate. As such, the stormwater runoff, specifically in Study Area East Undetained, is designed to be captured by the proposed stormwater conveyance system and treated for water quality through the existing basin.

VI. ABOVEGROUND BIORETENTION BASIN DESIGN

In order to meet the stormwater runoff quantity, quality and groundwater recharge requirements set forth by the Township of Cranbury Land Use Ordinance and NJAC 7:8 for the proposed development, the site design incorporates three (3) aboveground bioretention basins. The bioretention basins accept stormwater runoff from the proposed parking areas and roof areas. The runoff is conveyed to the basins via overland flow as well as the proposed stormwater conveyance system. In accordance with the New Jersey Stormwater Best Management Practices Manual, the following design considerations have been satisfied:

- Maximum contributory drainage area: 2.5 acres
- Basin must fully drain basin volume within 72 hours.
- Depth of Soil Bed 18" – 24".
- Construction of basin must be done to avoid compaction of sub-grade soils.
- Maximum depth of 12" for WQDS.
- Minimum design permeability rate of 0.5 inches/hour. Soil replacement may be necessary to achieve this requirement.
- Basin must be designed to safely convey overflow volume.
- Basin must have minimum 18" soil bed in order to achieve 80% TSS removal rate.
- Basin may not be used where there is risk of basement flooding, etc.

VII. RUNOFF RATE REDUCTION PERFORMANCE

**Pre- and Post-Development Peak Runoff Results
Summary for Each Point of Analysis**

| PRE VS. POST SUMMARY CHART (STUDY AREA WEST) | | | |
|---|---|--|--------------------------------|
| DESIGN STORM | PRE-DEVELOPMENT CONDITIONS (CFS) | POST-DEVELOPMENT CONDITIONS (CFS) | REDUCTION IN FLOW (CFS) |
| 2 YR | 3.15 | 1.00 | 2.15 |
| 10 YR | 5.10 | 2.80 | 2.30 |
| 100 YR | 9.03 | 5.45 | 3.58 |

| PRE VS. POST SUMMARY CHART (STUDY AREA SOUTH) | | | |
|--|---|--|--------------------------------|
| DESIGN STORM | PRE-DEVELOPMENT CONDITIONS (CFS) | POST-DEVELOPMENT CONDITIONS (CFS) | REDUCTION IN FLOW (CFS) |
| 2 YR | 1.29 | 0.66 | 0.63 |
| 10 YR | 2.59 | 2.44 | 0.15 |
| 100 YR | 5.33 | 5.21 | 0.12 |

| PRE VS. POST SUMMARY CHART (STUDY AREA EAST) | | | |
|---|---|--|--------------------------------|
| DESIGN STORM | PRE-DEVELOPMENT CONDITIONS (CFS) | POST-DEVELOPMENT CONDITIONS (CFS) | REDUCTION IN FLOW (CFS) |
| 2 YR | 3.60 | 2.17 | 1.43 |
| 10 YR | 5.94 | 4.52 | 1.42 |
| 100 YR | 10.68 | 8.73 | 1.95 |

Pre- and Post-Development Peak Runoff Results Summary for Total Tract

| DESIGN STORM | EXISTING DISTURBED PEAK FLOW | REQUIRED REDUCTION | ALLOWABLE DISTURBED PEAK FLOW | TOTAL UNDISTURBED PEAK FLOW | TOTAL ALLOWABLE PEAK FLOW | PROPOSED RUNOFF RATE |
|---------------------|-------------------------------------|---------------------------|--------------------------------------|------------------------------------|----------------------------------|-----------------------------|
| 2-Year | 8.04 CFS | 50% | 4.02 CFS | 0 CFS | 4.02 CFS | 2.91 CFS |
| 10-Year | 13.64 CFS | 25% | 10.23 CFS | 0 CFS | 10.23 CFS | 9.23 CFS |
| 100-Year | 25.04 CFS | 20% | 20.03 CFS | 0 CFS | 20.03 CFS | 18.94 CFS |

IX. WATER QUALITY

As noted previously in this report, the proposed development does not increase motor vehicle impervious surface by over a quarter acre and, therefore, is not subject to the Stormwater Quality Requirements set forth within N.J.A.C 7:8-5.5. It should be noted, however, that while the project is not subject to NJDEP water quality requirements, the proposed bioretention basins have been designed to satisfy the criteria necessary to achieve 80% TSS removal per the NJ BMP Manual.

X. GROUNDWATER RECHARGE

As noted previously in this report, the Hydrologic Soil Group listed in the Middlesex County soils survey reflect group C. Due to the shallow depth of the restrictive layer and the results of the permeability testing in accompanying Stormwater Basin Area Investigation, prepared by Dynamic Earth, LLC, the soil strata tested closely reflects the Hydraulic Soil Group D rather than the Hydraulic Soil Group C and, therefore, have been considered as such. The site will not fall under the groundwater recharge standards set forth in the Township of Cranbury Land Use Ordinance nor NJAC 7:8.

XI. CONCLUSION

The proposed overall development has been designed with provisions for the safe and efficient control of stormwater runoff in a manner that will not adversely impact the existing drainage patterns, adjacent roadways, or adjacent parcels. The three (3) aboveground bioretention basin systems design shall reduce peak flow rates for the proposed development area and meets the minimum peak flow reduction for the 2, 10 and 100-year storm frequencies as dictated by the Township of Cranbury Land Use Ordinance and NJAC 7:8. With this stated, it is evident that the proposed development will not have a negative impact on the existing drainage pattern, water quality, or groundwater recharge on site or within the vicinity of the subject parcel.

APPENDIX

**HYDROGRAPH SUMMARY REPORTS –
EXISTING & PROPOSED CONDITIONS 2 YR. 10 YR.
& 100 YR.**

Existing

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- 42 Link 8L: Ex. South Total
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- 48 Link 15L: Ex. Total

100-Year Event

- 50 Node Listing
- 51 Subcat 5S: Ex. South Imp
- 53 Subcat 6S: Ex. South Perv
- 55 Subcat 9S: Ex. East Imp
- 57 Subcat 10S: Ex. East Perv
- 59 Subcat 12S: Ex. West Imp
- 61 Subcat 13S: Ex. West Perv
- 63 Link 8L: Ex. South Total
- 65 Link 11L: Ex. East Total
- 67 Link 14L: Ex. West Total

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- 69 Link 15L: Ex. Total

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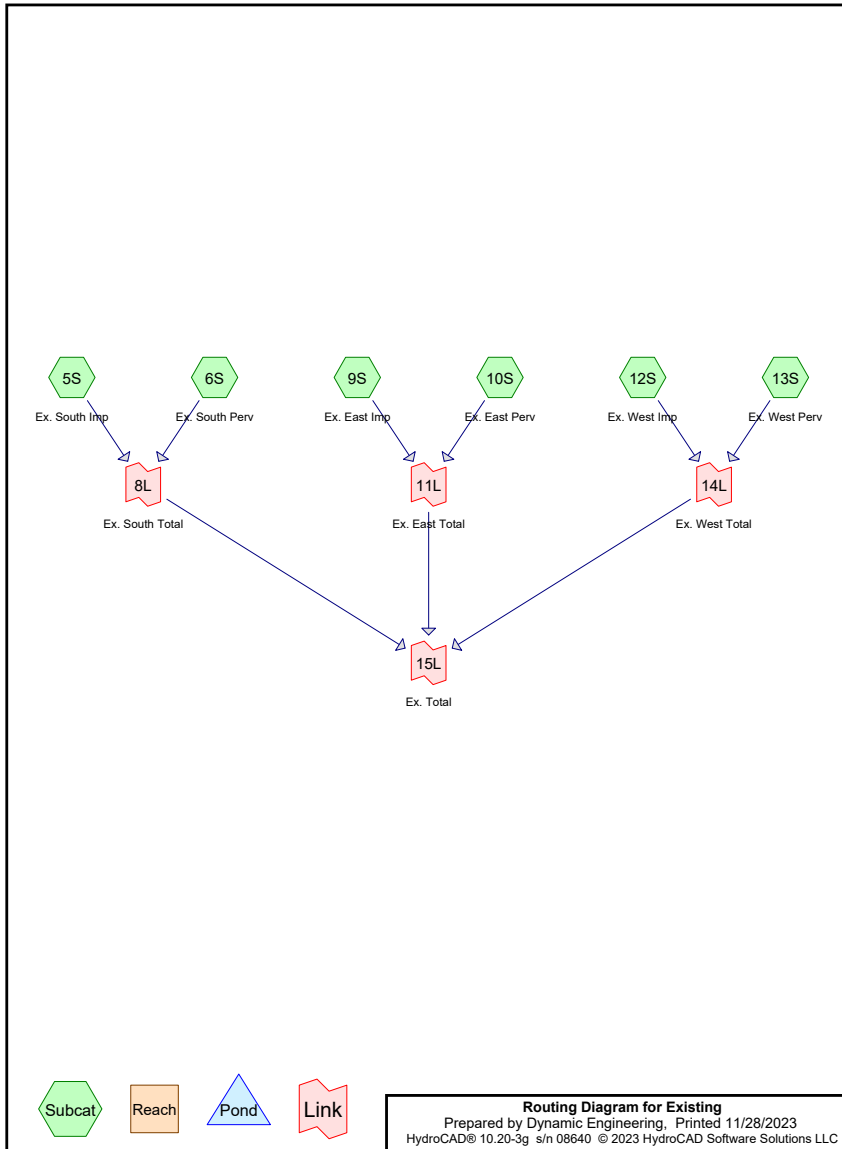
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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D



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Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|------------|-------|---------|------------------|-----|----------------|-----|
| 1 | 2-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 3.35 | 2 |
| 2 | 10-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 5.12 | 2 |
| 3 | 100-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 8.63 | 2 |

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Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|--------------|-----------|--|
| 0.635 | 74 | >75% Grass cover, Good, HSG C (6S, 10S, 13S) |
| 1.679 | 80 | >75% Grass cover, Good, HSG D (6S, 10S, 13S) |
| 2.681 | 98 | Paved parking, HSG D (5S, 9S, 12S) |
| 4.996 | 89 | TOTAL AREA |

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Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|---------------------------|
| 0.000 | HSG A | |
| 0.000 | HSG B | |
| 0.635 | HSG C | 6S, 10S, 13S |
| 4.360 | HSG D | 5S, 6S, 9S, 10S, 12S, 13S |
| 0.000 | Other | |
| 4.996 | | TOTAL AREA |

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Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|-------------------------|
| 0.000 | 0.000 | 0.635 | 1.679 | 0.000 | 2.315 | >75% Grass cover, Good | 6S, 10S, 13S |
| 0.000 | 0.000 | 0.000 | 2.681 | 0.000 | 2.681 | Paved parking | 5S, 9S, 12S |
| 0.000 | 0.000 | 0.635 | 4.360 | 0.000 | 4.996 | TOTAL AREA | |

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Notes Listing (all nodes)

| Line# | Node Number | Notes |
|-------|-------------|---|
| 1 | Project | Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|---|---|
| Subcatchment5S: Ex. South Imp | Runoff Area=1,453 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=0.07 cfs 0.009 af |
| Subcatchment6S: Ex. South Perv | Runoff Area=49,675 sf 0.00% Impervious Runoff Depth=1.45" Tc=10.0 min CN=79 Runoff=1.22 cfs 0.138 af |
| Subcatchment9S: Ex. East Imp | Runoff Area=59,569 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=2.88 cfs 0.355 af |
| Subcatchment10S: Ex. East Perv | Runoff Area=31,350 sf 0.00% Impervious Runoff Depth=1.38" Tc=10.0 min CN=78 Runoff=0.73 cfs 0.083 af |
| Subcatchment12S: Ex. West Imp | Runoff Area=55,780 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=2.69 cfs 0.333 af |
| Subcatchment13S: Ex. West Perv | Runoff Area=19,795 sf 0.00% Impervious Runoff Depth=1.38" Tc=10.0 min CN=78 Runoff=0.46 cfs 0.052 af |
| Link 8L: Ex. South Total | Inflow=1.29 cfs 0.146 af Primary=1.29 cfs 0.146 af |
| Link 11L: Ex. East Total | Inflow=3.60 cfs 0.438 af Primary=3.60 cfs 0.438 af |
| Link 14L: Ex. West Total | Inflow=3.15 cfs 0.385 af Primary=3.15 cfs 0.385 af |
| Link 15L: Ex. Total | Inflow=8.04 cfs 0.970 af Primary=8.04 cfs 0.970 af |
| Total Runoff Area = 4.996 ac Runoff Volume = 0.970 af Average Runoff Depth = 2.33" | |
| 46.33% Pervious = 2.315 ac 53.67% Impervious = 2.681 ac | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 5S: Ex. South Imp

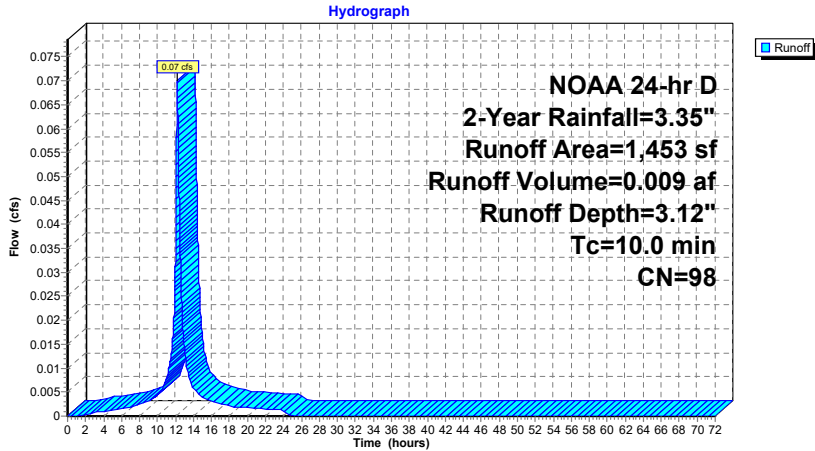
Runoff = 0.07 cfs @ 12.18 hrs, Volume= 0.009 af, Depth= 3.12"
Routed to Link 8L : Ex. South Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 1,453 | 98 | Paved parking, HSG D |
| 1,453 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Ex. South Imp



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 5S: Ex. South Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.00 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.00 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.00 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.00 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.00 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.00 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.00 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.00 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.00 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.01 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 0.04 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.01 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.01 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.00 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.00 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.00 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.00 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.00 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.00 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.00 | | | | |
| 22.00 | 3.27 | 3.04 | 0.00 | | | | |
| 23.00 | 3.31 | 3.08 | 0.00 | | | | |
| 24.00 | 3.35 | 3.12 | 0.00 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 6S: Ex. South Perv

Runoff = 1.22 cfs @ 12.20 hrs, Volume= 0.138 af, Depth= 1.45"
Routed to Link 8L : Ex. South Total

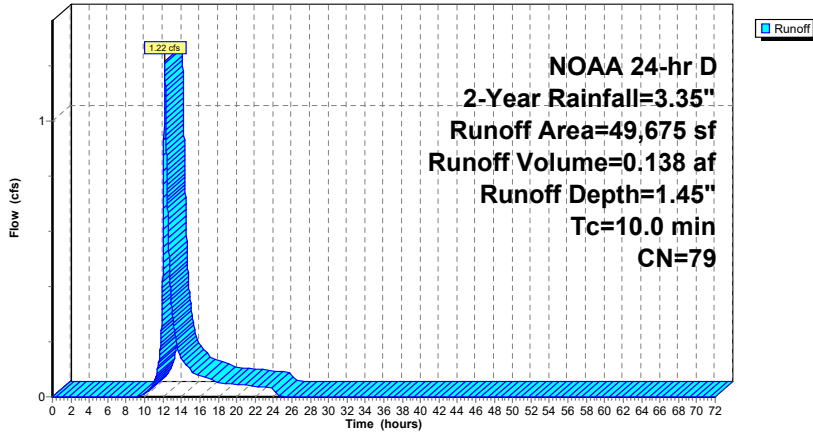
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 9,901 | 74 | >75% Grass cover, Good, HSG C |
| 39,774 | 80 | >75% Grass cover, Good, HSG D |
| 49,675 | 79 | Weighted Average |
| 49,675 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Ex. South Perv

Hydrograph



Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 6S: Ex. South Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.45 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.45 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.45 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.45 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.45 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.45 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.45 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.45 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.45 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.45 | 0.00 |
| 10.00 | 0.66 | 0.01 | 0.01 | 62.00 | 3.35 | 1.45 | 0.00 |
| 11.00 | 0.87 | 0.04 | 0.05 | 63.00 | 3.35 | 1.45 | 0.00 |
| 12.00 | 1.60 | 0.31 | 0.49 | 64.00 | 3.35 | 1.45 | 0.00 |
| 13.00 | 2.48 | 0.82 | 0.31 | 65.00 | 3.35 | 1.45 | 0.00 |
| 14.00 | 2.69 | 0.96 | 0.14 | 66.00 | 3.35 | 1.45 | 0.00 |
| 15.00 | 2.82 | 1.06 | 0.10 | 67.00 | 3.35 | 1.45 | 0.00 |
| 16.00 | 2.92 | 1.13 | 0.08 | 68.00 | 3.35 | 1.45 | 0.00 |
| 17.00 | 3.00 | 1.19 | 0.07 | 69.00 | 3.35 | 1.45 | 0.00 |
| 18.00 | 3.06 | 1.24 | 0.05 | 70.00 | 3.35 | 1.45 | 0.00 |
| 19.00 | 3.12 | 1.28 | 0.05 | 71.00 | 3.35 | 1.45 | 0.00 |
| 20.00 | 3.17 | 1.32 | 0.04 | 72.00 | 3.35 | 1.45 | 0.00 |
| 21.00 | 3.22 | 1.35 | 0.04 | | | | |
| 22.00 | 3.27 | 1.39 | 0.04 | | | | |
| 23.00 | 3.31 | 1.42 | 0.04 | | | | |
| 24.00 | 3.35 | 1.45 | 0.03 | | | | |
| 25.00 | 3.35 | 1.45 | 0.00 | | | | |
| 26.00 | 3.35 | 1.45 | 0.00 | | | | |
| 27.00 | 3.35 | 1.45 | 0.00 | | | | |
| 28.00 | 3.35 | 1.45 | 0.00 | | | | |
| 29.00 | 3.35 | 1.45 | 0.00 | | | | |
| 30.00 | 3.35 | 1.45 | 0.00 | | | | |
| 31.00 | 3.35 | 1.45 | 0.00 | | | | |
| 32.00 | 3.35 | 1.45 | 0.00 | | | | |
| 33.00 | 3.35 | 1.45 | 0.00 | | | | |
| 34.00 | 3.35 | 1.45 | 0.00 | | | | |
| 35.00 | 3.35 | 1.45 | 0.00 | | | | |
| 36.00 | 3.35 | 1.45 | 0.00 | | | | |
| 37.00 | 3.35 | 1.45 | 0.00 | | | | |
| 38.00 | 3.35 | 1.45 | 0.00 | | | | |
| 39.00 | 3.35 | 1.45 | 0.00 | | | | |
| 40.00 | 3.35 | 1.45 | 0.00 | | | | |
| 41.00 | 3.35 | 1.45 | 0.00 | | | | |
| 42.00 | 3.35 | 1.45 | 0.00 | | | | |
| 43.00 | 3.35 | 1.45 | 0.00 | | | | |
| 44.00 | 3.35 | 1.45 | 0.00 | | | | |
| 45.00 | 3.35 | 1.45 | 0.00 | | | | |
| 46.00 | 3.35 | 1.45 | 0.00 | | | | |
| 47.00 | 3.35 | 1.45 | 0.00 | | | | |
| 48.00 | 3.35 | 1.45 | 0.00 | | | | |
| 49.00 | 3.35 | 1.45 | 0.00 | | | | |
| 50.00 | 3.35 | 1.45 | 0.00 | | | | |
| 51.00 | 3.35 | 1.45 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 9S: Ex. East Imp

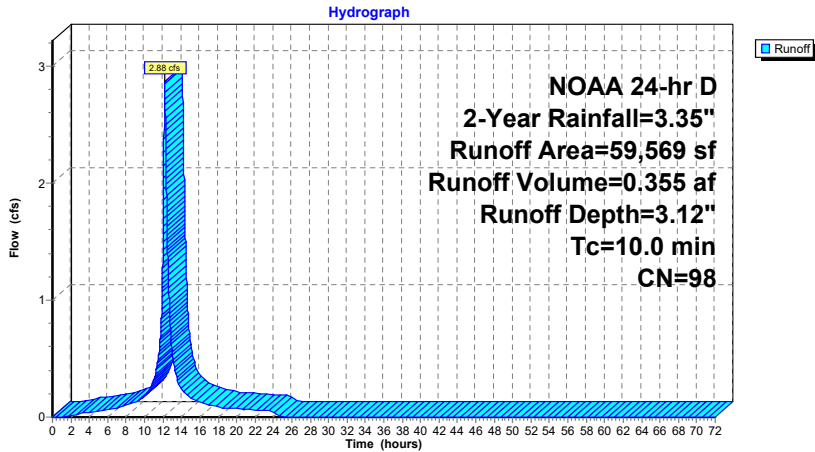
Runoff = 2.88 cfs @ 12.18 hrs, Volume= 0.355 af, Depth= 3.12"
Routed to Link 11L : Ex. East Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 59,569 | 98 | Paved parking, HSG D |
| 59,569 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Ex. East Imp



Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 9S: Ex. East Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.03 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.04 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.05 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.06 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.08 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.10 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.13 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.19 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.32 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 1.44 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.57 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.24 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.16 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.13 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.11 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.09 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.08 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.07 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.07 | | | | |
| 22.00 | 3.27 | 3.04 | 0.06 | | | | |
| 23.00 | 3.31 | 3.08 | 0.06 | | | | |
| 24.00 | 3.35 | 3.12 | 0.05 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 10S: Ex. East Perv

Runoff = 0.73 cfs @ 12.20 hrs, Volume= 0.083 af, Depth= 1.38"
Routed to Link 11L : Ex. East Total

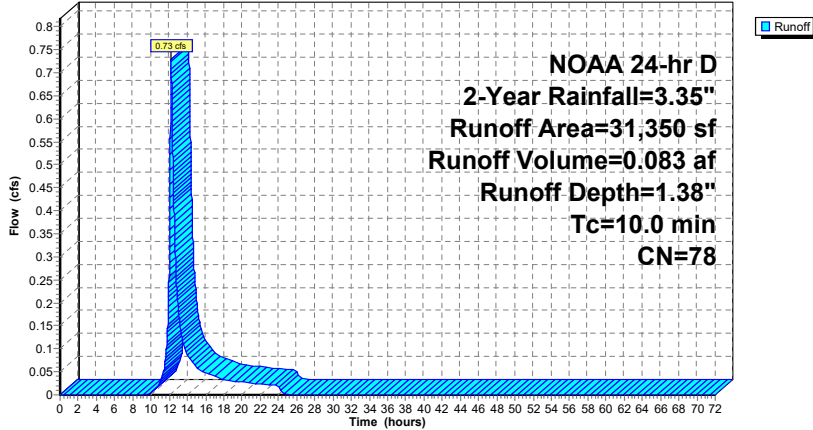
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 10,259 | 74 | >75% Grass cover, Good, HSG C |
| 21,091 | 80 | >75% Grass cover, Good, HSG D |
| 31,350 | 78 | Weighted Average |
| 31,350 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Ex. East Perv

Hydrograph



Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 10S: Ex. East Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.38 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.38 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.38 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.38 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.38 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.38 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.38 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.38 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.38 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.38 | 0.00 |
| 10.00 | 0.66 | 0.00 | 0.00 | 62.00 | 3.35 | 1.38 | 0.00 |
| 11.00 | 0.87 | 0.03 | 0.03 | 63.00 | 3.35 | 1.38 | 0.00 |
| 12.00 | 1.60 | 0.28 | 0.29 | 64.00 | 3.35 | 1.38 | 0.00 |
| 13.00 | 2.48 | 0.77 | 0.19 | 65.00 | 3.35 | 1.38 | 0.00 |
| 14.00 | 2.69 | 0.91 | 0.09 | 66.00 | 3.35 | 1.38 | 0.00 |
| 15.00 | 2.82 | 1.00 | 0.06 | 67.00 | 3.35 | 1.38 | 0.00 |
| 16.00 | 2.92 | 1.07 | 0.05 | 68.00 | 3.35 | 1.38 | 0.00 |
| 17.00 | 3.00 | 1.13 | 0.04 | 69.00 | 3.35 | 1.38 | 0.00 |
| 18.00 | 3.06 | 1.17 | 0.03 | 70.00 | 3.35 | 1.38 | 0.00 |
| 19.00 | 3.12 | 1.22 | 0.03 | 71.00 | 3.35 | 1.38 | 0.00 |
| 20.00 | 3.17 | 1.25 | 0.03 | 72.00 | 3.35 | 1.38 | 0.00 |
| 21.00 | 3.22 | 1.29 | 0.03 | | | | |
| 22.00 | 3.27 | 1.32 | 0.02 | | | | |
| 23.00 | 3.31 | 1.36 | 0.02 | | | | |
| 24.00 | 3.35 | 1.38 | 0.02 | | | | |
| 25.00 | 3.35 | 1.38 | 0.00 | | | | |
| 26.00 | 3.35 | 1.38 | 0.00 | | | | |
| 27.00 | 3.35 | 1.38 | 0.00 | | | | |
| 28.00 | 3.35 | 1.38 | 0.00 | | | | |
| 29.00 | 3.35 | 1.38 | 0.00 | | | | |
| 30.00 | 3.35 | 1.38 | 0.00 | | | | |
| 31.00 | 3.35 | 1.38 | 0.00 | | | | |
| 32.00 | 3.35 | 1.38 | 0.00 | | | | |
| 33.00 | 3.35 | 1.38 | 0.00 | | | | |
| 34.00 | 3.35 | 1.38 | 0.00 | | | | |
| 35.00 | 3.35 | 1.38 | 0.00 | | | | |
| 36.00 | 3.35 | 1.38 | 0.00 | | | | |
| 37.00 | 3.35 | 1.38 | 0.00 | | | | |
| 38.00 | 3.35 | 1.38 | 0.00 | | | | |
| 39.00 | 3.35 | 1.38 | 0.00 | | | | |
| 40.00 | 3.35 | 1.38 | 0.00 | | | | |
| 41.00 | 3.35 | 1.38 | 0.00 | | | | |
| 42.00 | 3.35 | 1.38 | 0.00 | | | | |
| 43.00 | 3.35 | 1.38 | 0.00 | | | | |
| 44.00 | 3.35 | 1.38 | 0.00 | | | | |
| 45.00 | 3.35 | 1.38 | 0.00 | | | | |
| 46.00 | 3.35 | 1.38 | 0.00 | | | | |
| 47.00 | 3.35 | 1.38 | 0.00 | | | | |
| 48.00 | 3.35 | 1.38 | 0.00 | | | | |
| 49.00 | 3.35 | 1.38 | 0.00 | | | | |
| 50.00 | 3.35 | 1.38 | 0.00 | | | | |
| 51.00 | 3.35 | 1.38 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 12S: Ex. West Imp

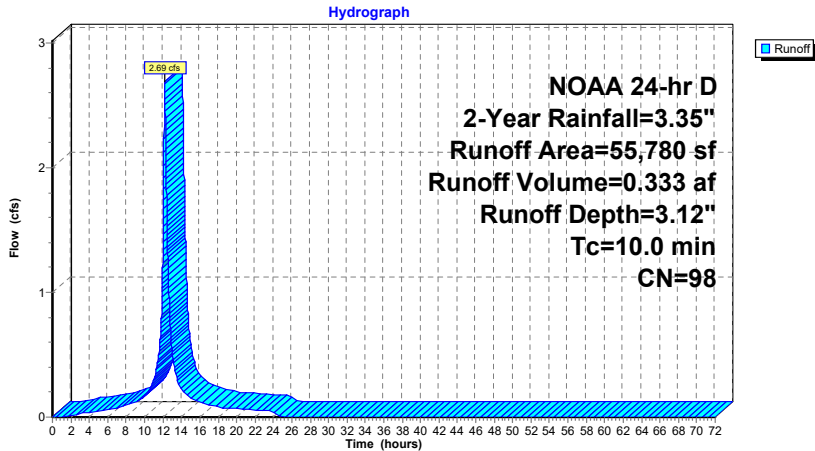
Runoff = 2.69 cfs @ 12.18 hrs, Volume= 0.333 af, Depth= 3.12"
Routed to Link 14L : Ex. West Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 55,780 | 98 | Paved parking, HSG D |
| 55,780 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 12S: Ex. West Imp



Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 12S: Ex. West Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.03 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.04 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.05 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.06 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.08 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.10 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.12 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.18 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.30 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 1.35 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.53 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.23 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.15 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.12 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.10 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.08 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.07 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.07 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.06 | | | | |
| 22.00 | 3.27 | 3.04 | 0.06 | | | | |
| 23.00 | 3.31 | 3.08 | 0.05 | | | | |
| 24.00 | 3.35 | 3.12 | 0.05 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 13S: Ex. West Perv

Runoff = 0.46 cfs @ 12.20 hrs, Volume= 0.052 af, Depth= 1.38"
Routed to Link 14L : Ex. West Total

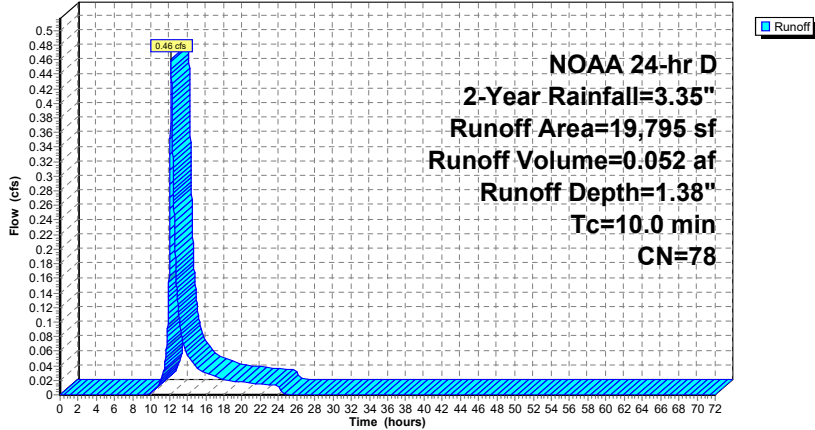
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 7,521 | 74 | >75% Grass cover, Good, HSG C |
| 12,274 | 80 | >75% Grass cover, Good, HSG D |
| 19,795 | 78 | Weighted Average |
| 19,795 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Ex. West Perv

Hydrograph



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Hydrograph for Subcatchment 13S: Ex. West Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.38 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.38 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.38 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.38 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.38 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.38 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.38 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.38 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.38 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.38 | 0.00 |
| 10.00 | 0.66 | 0.00 | 0.00 | 62.00 | 3.35 | 1.38 | 0.00 |
| 11.00 | 0.87 | 0.03 | 0.02 | 63.00 | 3.35 | 1.38 | 0.00 |
| 12.00 | 1.60 | 0.28 | 0.18 | 64.00 | 3.35 | 1.38 | 0.00 |
| 13.00 | 2.48 | 0.77 | 0.12 | 65.00 | 3.35 | 1.38 | 0.00 |
| 14.00 | 2.69 | 0.91 | 0.05 | 66.00 | 3.35 | 1.38 | 0.00 |
| 15.00 | 2.82 | 1.00 | 0.04 | 67.00 | 3.35 | 1.38 | 0.00 |
| 16.00 | 2.92 | 1.07 | 0.03 | 68.00 | 3.35 | 1.38 | 0.00 |
| 17.00 | 3.00 | 1.13 | 0.03 | 69.00 | 3.35 | 1.38 | 0.00 |
| 18.00 | 3.06 | 1.17 | 0.02 | 70.00 | 3.35 | 1.38 | 0.00 |
| 19.00 | 3.12 | 1.22 | 0.02 | 71.00 | 3.35 | 1.38 | 0.00 |
| 20.00 | 3.17 | 1.25 | 0.02 | 72.00 | 3.35 | 1.38 | 0.00 |
| 21.00 | 3.22 | 1.29 | 0.02 | | | | |
| 22.00 | 3.27 | 1.32 | 0.02 | | | | |
| 23.00 | 3.31 | 1.36 | 0.01 | | | | |
| 24.00 | 3.35 | 1.38 | 0.01 | | | | |
| 25.00 | 3.35 | 1.38 | 0.00 | | | | |
| 26.00 | 3.35 | 1.38 | 0.00 | | | | |
| 27.00 | 3.35 | 1.38 | 0.00 | | | | |
| 28.00 | 3.35 | 1.38 | 0.00 | | | | |
| 29.00 | 3.35 | 1.38 | 0.00 | | | | |
| 30.00 | 3.35 | 1.38 | 0.00 | | | | |
| 31.00 | 3.35 | 1.38 | 0.00 | | | | |
| 32.00 | 3.35 | 1.38 | 0.00 | | | | |
| 33.00 | 3.35 | 1.38 | 0.00 | | | | |
| 34.00 | 3.35 | 1.38 | 0.00 | | | | |
| 35.00 | 3.35 | 1.38 | 0.00 | | | | |
| 36.00 | 3.35 | 1.38 | 0.00 | | | | |
| 37.00 | 3.35 | 1.38 | 0.00 | | | | |
| 38.00 | 3.35 | 1.38 | 0.00 | | | | |
| 39.00 | 3.35 | 1.38 | 0.00 | | | | |
| 40.00 | 3.35 | 1.38 | 0.00 | | | | |
| 41.00 | 3.35 | 1.38 | 0.00 | | | | |
| 42.00 | 3.35 | 1.38 | 0.00 | | | | |
| 43.00 | 3.35 | 1.38 | 0.00 | | | | |
| 44.00 | 3.35 | 1.38 | 0.00 | | | | |
| 45.00 | 3.35 | 1.38 | 0.00 | | | | |
| 46.00 | 3.35 | 1.38 | 0.00 | | | | |
| 47.00 | 3.35 | 1.38 | 0.00 | | | | |
| 48.00 | 3.35 | 1.38 | 0.00 | | | | |
| 49.00 | 3.35 | 1.38 | 0.00 | | | | |
| 50.00 | 3.35 | 1.38 | 0.00 | | | | |
| 51.00 | 3.35 | 1.38 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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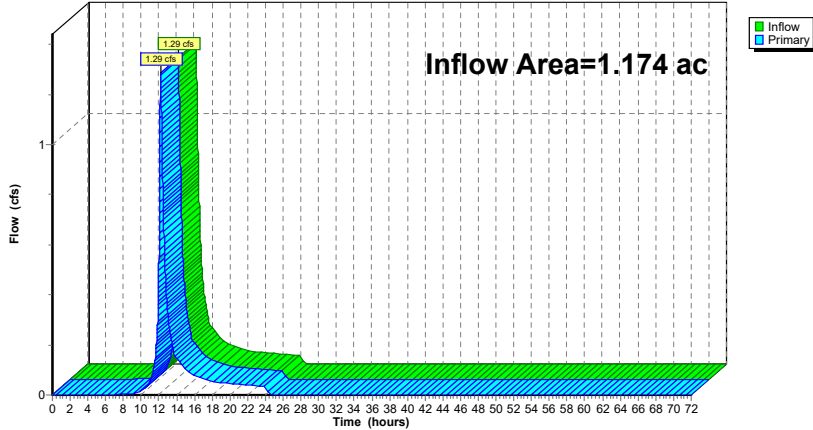
Summary for Link 8L: Ex. South Total

Inflow Area = 1.174 ac, 2.84% Impervious, Inflow Depth = 1.50" for 2-Year event
 Inflow = 1.29 cfs @ 12.20 hrs, Volume= 0.146 af
 Primary = 1.29 cfs @ 12.20 hrs, Volume= 0.146 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 8L: Ex. South Total

Hydrograph



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Hydrograph for Link 8L: Ex. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.02 | 0.00 | 0.02 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.06 | 0.00 | 0.06 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.52 | 0.00 | 0.52 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.32 | 0.00 | 0.32 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.14 | 0.00 | 0.14 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.10 | 0.00 | 0.10 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.08 | 0.00 | 0.08 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.07 | 0.00 | 0.07 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.06 | 0.00 | 0.06 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.05 | 0.00 | 0.05 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.05 | 0.00 | 0.05 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.04 | 0.00 | 0.04 | | | | |
| 22.00 | 0.04 | 0.00 | 0.04 | | | | |
| 23.00 | 0.04 | 0.00 | 0.04 | | | | |
| 24.00 | 0.03 | 0.00 | 0.03 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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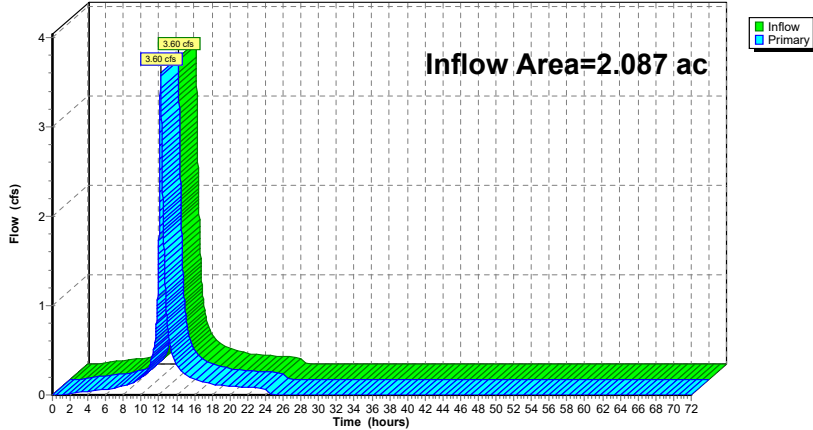
Summary for Link 11L: Ex. East Total

Inflow Area = 2.087 ac, 65.52% Impervious, Inflow Depth = 2.52" for 2-Year event
 Inflow = 3.60 cfs @ 12.18 hrs, Volume= 0.438 af
 Primary = 3.60 cfs @ 12.18 hrs, Volume= 0.438 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 11L: Ex. East Total

Hydrograph



Existing

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Hydrograph for Link 11L: Ex. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.01 | 0.00 | 0.01 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.03 | 0.00 | 0.03 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.04 | 0.00 | 0.04 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.05 | 0.00 | 0.05 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.06 | 0.00 | 0.06 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.08 | 0.00 | 0.08 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.10 | 0.00 | 0.10 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.13 | 0.00 | 0.13 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.19 | 0.00 | 0.19 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.35 | 0.00 | 0.35 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.73 | 0.00 | 1.73 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.76 | 0.00 | 0.76 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.33 | 0.00 | 0.33 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.22 | 0.00 | 0.22 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.18 | 0.00 | 0.18 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.15 | 0.00 | 0.15 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.12 | 0.00 | 0.12 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.11 | 0.00 | 0.11 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.10 | 0.00 | 0.10 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.09 | 0.00 | 0.09 | | | | |
| 22.00 | 0.09 | 0.00 | 0.09 | | | | |
| 23.00 | 0.08 | 0.00 | 0.08 | | | | |
| 24.00 | 0.07 | 0.00 | 0.07 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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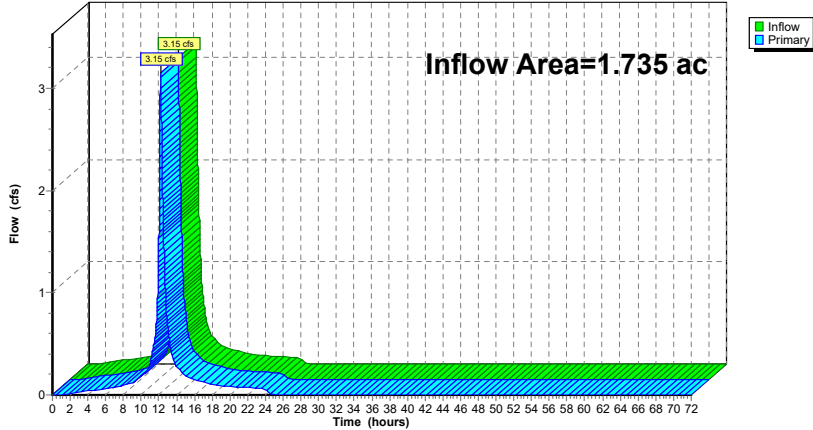
Summary for Link 14L: Ex. West Total

Inflow Area = 1.735 ac, 73.81% Impervious, Inflow Depth = 2.66" for 2-Year event
 Inflow = 3.15 cfs @ 12.18 hrs, Volume= 0.385 af
 Primary = 3.15 cfs @ 12.18 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 14L: Ex. West Total

Hydrograph



Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Link 14L: Ex. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.01 | 0.00 | 0.01 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.03 | 0.00 | 0.03 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.04 | 0.00 | 0.04 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.05 | 0.00 | 0.05 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.06 | 0.00 | 0.06 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.08 | 0.00 | 0.08 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.10 | 0.00 | 0.10 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.12 | 0.00 | 0.12 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.18 | 0.00 | 0.18 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.31 | 0.00 | 0.31 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.53 | 0.00 | 1.53 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.65 | 0.00 | 0.65 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.28 | 0.00 | 0.28 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.19 | 0.00 | 0.19 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.15 | 0.00 | 0.15 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.13 | 0.00 | 0.13 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.10 | 0.00 | 0.10 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.09 | 0.00 | 0.09 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.08 | 0.00 | 0.08 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.08 | 0.00 | 0.08 | | | | |
| 22.00 | 0.07 | 0.00 | 0.07 | | | | |
| 23.00 | 0.07 | 0.00 | 0.07 | | | | |
| 24.00 | 0.06 | 0.00 | 0.06 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 2-Year Rainfall=3.35"

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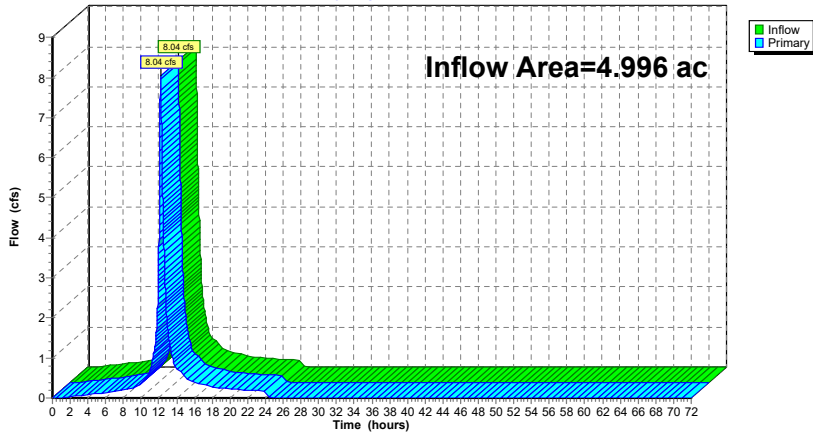
Summary for Link 15L: Ex. Total

Inflow Area = 4.996 ac, 53.67% Impervious, Inflow Depth = 2.33" for 2-Year event
 Inflow = 8.04 cfs @ 12.18 hrs, Volume= 0.970 af
 Primary = 8.04 cfs @ 12.18 hrs, Volume= 0.970 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 15L: Ex. Total

Hydrograph



Existing

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Hydrograph for Link 15L: Ex. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.03 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.06 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.08 | 0.00 | 0.08 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.10 | 0.00 | 0.10 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.12 | 0.00 | 0.12 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.16 | 0.00 | 0.16 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.20 | 0.00 | 0.20 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.25 | 0.00 | 0.25 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.39 | 0.00 | 0.39 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.72 | 0.00 | 0.72 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 3.78 | 0.00 | 3.78 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.73 | 0.00 | 1.73 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.75 | 0.00 | 0.75 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.52 | 0.00 | 0.52 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.40 | 0.00 | 0.40 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.34 | 0.00 | 0.34 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.28 | 0.00 | 0.28 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.25 | 0.00 | 0.25 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.23 | 0.00 | 0.23 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.22 | 0.00 | 0.22 | | | | |
| 22.00 | 0.20 | 0.00 | 0.20 | | | | |
| 23.00 | 0.18 | 0.00 | 0.18 | | | | |
| 24.00 | 0.17 | 0.00 | 0.17 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|---------------------------------------|---|
| Subcatchment5S: Ex. South Imp | Runoff Area=1,453 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=0.11 cfs 0.014 af |
| Subcatchment6S: Ex. South Perv | Runoff Area=49,675 sf 0.00% Impervious Runoff Depth=2.91" Tc=10.0 min CN=79 Runoff=2.48 cfs 0.276 af |
| Subcatchment9S: Ex. East Imp | Runoff Area=59,569 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=4.43 cfs 0.556 af |
| Subcatchment10S: Ex. East Perv | Runoff Area=31,350 sf 0.00% Impervious Runoff Depth=2.81" Tc=10.0 min CN=78 Runoff=1.52 cfs 0.169 af |
| Subcatchment12S: Ex. West Imp | Runoff Area=55,780 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=4.15 cfs 0.521 af |
| Subcatchment13S: Ex. West Perv | Runoff Area=19,795 sf 0.00% Impervious Runoff Depth=2.81" Tc=10.0 min CN=78 Runoff=0.96 cfs 0.107 af |
| Link 8L: Ex. South Total | Inflow=2.59 cfs 0.290 af Primary=2.59 cfs 0.290 af |
| Link 11L: Ex. East Total | Inflow=5.94 cfs 0.725 af Primary=5.94 cfs 0.725 af |
| Link 14L: Ex. West Total | Inflow=5.10 cfs 0.628 af Primary=5.10 cfs 0.628 af |
| Link 15L: Ex. Total | Inflow=13.64 cfs 1.643 af Primary=13.64 cfs 1.643 af |

Total Runoff Area = 4.996 ac Runoff Volume = 1.643 af Average Runoff Depth = 3.95"
46.33% Pervious = 2.315 ac 53.67% Impervious = 2.681 ac

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 5S: Ex. South Imp

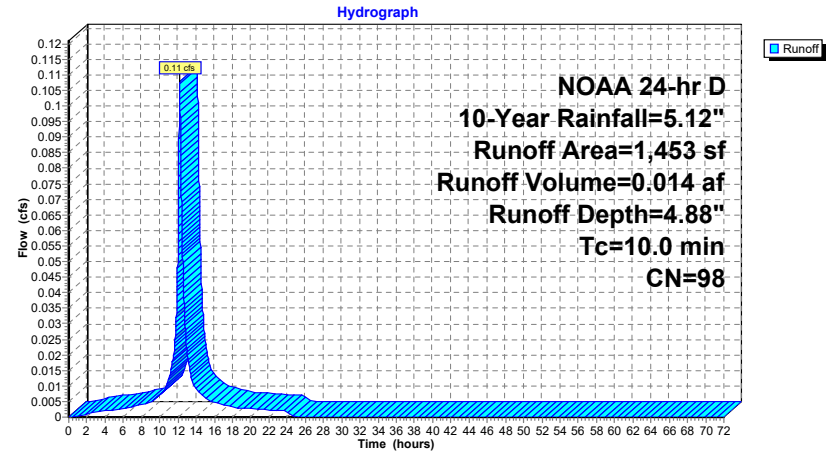
Runoff = 0.11 cfs @ 12.18 hrs, Volume= 0.014 af, Depth= 4.88"
Routed to Link 8L : Ex. South Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 1,453 | 98 | Paved parking, HSG D |
| 1,453 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Ex. South Imp



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 5S: Ex. South Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.00 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.00 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.00 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.00 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.00 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.00 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.00 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.00 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.01 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.01 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 0.05 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.02 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.01 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.01 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.00 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.00 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.00 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.00 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.00 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.00 | | | | |
| 22.00 | 5.00 | 4.76 | 0.00 | | | | |
| 23.00 | 5.06 | 4.82 | 0.00 | | | | |
| 24.00 | 5.12 | 4.88 | 0.00 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 6S: Ex. South Perv

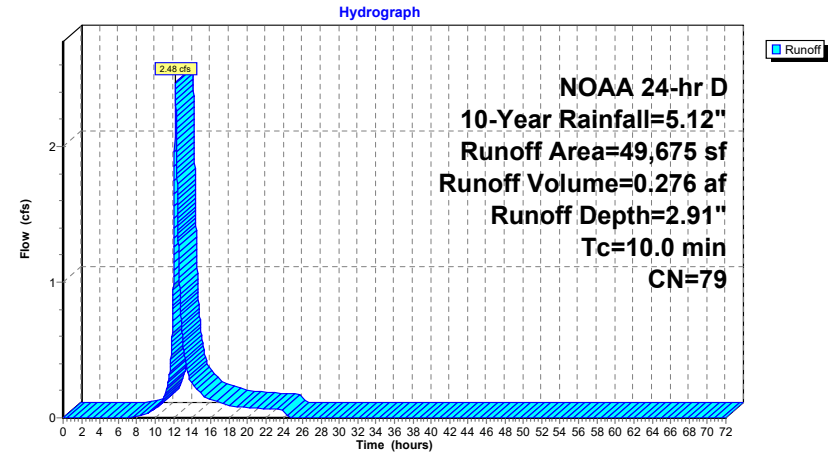
Runoff = 2.48 cfs @ 12.19 hrs, Volume= 0.276 af, Depth= 2.91"
Routed to Link 8L : Ex. South Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 9,901 | 74 | >75% Grass cover, Good, HSG C |
| 39,774 | 80 | >75% Grass cover, Good, HSG D |
| 49,675 | 79 | Weighted Average |
| 49,675 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Ex. South Perv



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 6S: Ex. South Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.91 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.91 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.91 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.91 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.91 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.91 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.91 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.91 | 0.00 |
| 8.00 | 0.66 | 0.01 | 0.01 | 60.00 | 5.12 | 2.91 | 0.00 |
| 9.00 | 0.81 | 0.03 | 0.03 | 61.00 | 5.12 | 2.91 | 0.00 |
| 10.00 | 1.01 | 0.07 | 0.07 | 62.00 | 5.12 | 2.91 | 0.00 |
| 11.00 | 1.33 | 0.18 | 0.16 | 63.00 | 5.12 | 2.91 | 0.00 |
| 12.00 | 2.45 | 0.81 | 1.09 | 64.00 | 5.12 | 2.91 | 0.00 |
| 13.00 | 3.79 | 1.79 | 0.57 | 65.00 | 5.12 | 2.91 | 0.00 |
| 14.00 | 4.11 | 2.05 | 0.25 | 66.00 | 5.12 | 2.91 | 0.00 |
| 15.00 | 4.31 | 2.22 | 0.17 | 67.00 | 5.12 | 2.91 | 0.00 |
| 16.00 | 4.46 | 2.34 | 0.14 | 68.00 | 5.12 | 2.91 | 0.00 |
| 17.00 | 4.58 | 2.44 | 0.12 | 69.00 | 5.12 | 2.91 | 0.00 |
| 18.00 | 4.68 | 2.53 | 0.09 | 70.00 | 5.12 | 2.91 | 0.00 |
| 19.00 | 4.77 | 2.60 | 0.08 | 71.00 | 5.12 | 2.91 | 0.00 |
| 20.00 | 4.85 | 2.67 | 0.08 | 72.00 | 5.12 | 2.91 | 0.00 |
| 21.00 | 4.93 | 2.74 | 0.07 | | | | |
| 22.00 | 5.00 | 2.80 | 0.07 | | | | |
| 23.00 | 5.06 | 2.85 | 0.06 | | | | |
| 24.00 | 5.12 | 2.91 | 0.06 | | | | |
| 25.00 | 5.12 | 2.91 | 0.00 | | | | |
| 26.00 | 5.12 | 2.91 | 0.00 | | | | |
| 27.00 | 5.12 | 2.91 | 0.00 | | | | |
| 28.00 | 5.12 | 2.91 | 0.00 | | | | |
| 29.00 | 5.12 | 2.91 | 0.00 | | | | |
| 30.00 | 5.12 | 2.91 | 0.00 | | | | |
| 31.00 | 5.12 | 2.91 | 0.00 | | | | |
| 32.00 | 5.12 | 2.91 | 0.00 | | | | |
| 33.00 | 5.12 | 2.91 | 0.00 | | | | |
| 34.00 | 5.12 | 2.91 | 0.00 | | | | |
| 35.00 | 5.12 | 2.91 | 0.00 | | | | |
| 36.00 | 5.12 | 2.91 | 0.00 | | | | |
| 37.00 | 5.12 | 2.91 | 0.00 | | | | |
| 38.00 | 5.12 | 2.91 | 0.00 | | | | |
| 39.00 | 5.12 | 2.91 | 0.00 | | | | |
| 40.00 | 5.12 | 2.91 | 0.00 | | | | |
| 41.00 | 5.12 | 2.91 | 0.00 | | | | |
| 42.00 | 5.12 | 2.91 | 0.00 | | | | |
| 43.00 | 5.12 | 2.91 | 0.00 | | | | |
| 44.00 | 5.12 | 2.91 | 0.00 | | | | |
| 45.00 | 5.12 | 2.91 | 0.00 | | | | |
| 46.00 | 5.12 | 2.91 | 0.00 | | | | |
| 47.00 | 5.12 | 2.91 | 0.00 | | | | |
| 48.00 | 5.12 | 2.91 | 0.00 | | | | |
| 49.00 | 5.12 | 2.91 | 0.00 | | | | |
| 50.00 | 5.12 | 2.91 | 0.00 | | | | |
| 51.00 | 5.12 | 2.91 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 9S: Ex. East Imp

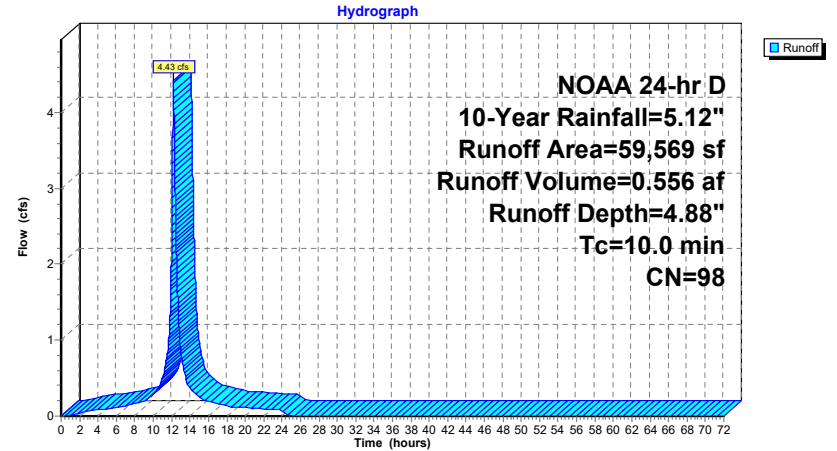
Runoff = 4.43 cfs @ 12.18 hrs, Volume= 0.556 af, Depth= 4.88"
Routed to Link 11L : Ex. East Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 59,569 | 98 | Paved parking, HSG D |
| 59,569 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Ex. East Imp



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 9S: Ex. East Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.04 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.06 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.08 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.09 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.11 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.13 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.17 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.20 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.30 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.50 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 2.22 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.87 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.37 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.25 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.20 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.16 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.13 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.12 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.11 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.10 | | | | |
| 22.00 | 5.00 | 4.76 | 0.09 | | | | |
| 23.00 | 5.06 | 4.82 | 0.09 | | | | |
| 24.00 | 5.12 | 4.88 | 0.08 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

Existing

Prepared by Dynamic Engineering
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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 10S: Ex. East Perv

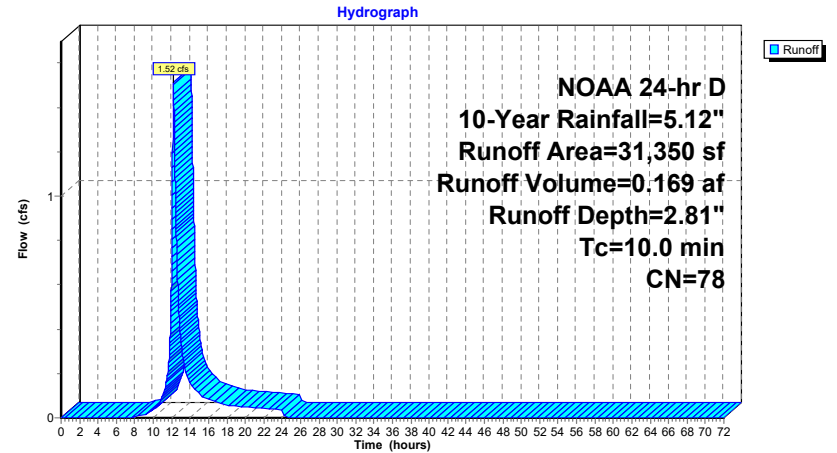
Runoff = 1.52 cfs @ 12.19 hrs, Volume= 0.169 af, Depth= 2.81"
Routed to Link 11L : Ex. East Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 10,259 | 74 | >75% Grass cover, Good, HSG C |
| 21,091 | 80 | >75% Grass cover, Good, HSG D |
| 31,350 | 78 | Weighted Average |
| 31,350 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Ex. East Perv



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 10S: Ex. East Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.81 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.81 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.81 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.81 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.81 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.81 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.81 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.81 | 0.00 |
| 8.00 | 0.66 | 0.00 | 0.00 | 60.00 | 5.12 | 2.81 | 0.00 |
| 9.00 | 0.81 | 0.02 | 0.01 | 61.00 | 5.12 | 2.81 | 0.00 |
| 10.00 | 1.01 | 0.06 | 0.04 | 62.00 | 5.12 | 2.81 | 0.00 |
| 11.00 | 1.33 | 0.16 | 0.09 | 63.00 | 5.12 | 2.81 | 0.00 |
| 12.00 | 2.45 | 0.76 | 0.66 | 64.00 | 5.12 | 2.81 | 0.00 |
| 13.00 | 3.79 | 1.72 | 0.35 | 65.00 | 5.12 | 2.81 | 0.00 |
| 14.00 | 4.11 | 1.97 | 0.16 | 66.00 | 5.12 | 2.81 | 0.00 |
| 15.00 | 4.31 | 2.14 | 0.11 | 67.00 | 5.12 | 2.81 | 0.00 |
| 16.00 | 4.46 | 2.26 | 0.08 | 68.00 | 5.12 | 2.81 | 0.00 |
| 17.00 | 4.58 | 2.36 | 0.07 | 69.00 | 5.12 | 2.81 | 0.00 |
| 18.00 | 4.68 | 2.44 | 0.06 | 70.00 | 5.12 | 2.81 | 0.00 |
| 19.00 | 4.77 | 2.52 | 0.05 | 71.00 | 5.12 | 2.81 | 0.00 |
| 20.00 | 4.85 | 2.59 | 0.05 | 72.00 | 5.12 | 2.81 | 0.00 |
| 21.00 | 4.93 | 2.65 | 0.05 | | | | |
| 22.00 | 5.00 | 2.71 | 0.04 | | | | |
| 23.00 | 5.06 | 2.76 | 0.04 | | | | |
| 24.00 | 5.12 | 2.81 | 0.04 | | | | |
| 25.00 | 5.12 | 2.81 | 0.00 | | | | |
| 26.00 | 5.12 | 2.81 | 0.00 | | | | |
| 27.00 | 5.12 | 2.81 | 0.00 | | | | |
| 28.00 | 5.12 | 2.81 | 0.00 | | | | |
| 29.00 | 5.12 | 2.81 | 0.00 | | | | |
| 30.00 | 5.12 | 2.81 | 0.00 | | | | |
| 31.00 | 5.12 | 2.81 | 0.00 | | | | |
| 32.00 | 5.12 | 2.81 | 0.00 | | | | |
| 33.00 | 5.12 | 2.81 | 0.00 | | | | |
| 34.00 | 5.12 | 2.81 | 0.00 | | | | |
| 35.00 | 5.12 | 2.81 | 0.00 | | | | |
| 36.00 | 5.12 | 2.81 | 0.00 | | | | |
| 37.00 | 5.12 | 2.81 | 0.00 | | | | |
| 38.00 | 5.12 | 2.81 | 0.00 | | | | |
| 39.00 | 5.12 | 2.81 | 0.00 | | | | |
| 40.00 | 5.12 | 2.81 | 0.00 | | | | |
| 41.00 | 5.12 | 2.81 | 0.00 | | | | |
| 42.00 | 5.12 | 2.81 | 0.00 | | | | |
| 43.00 | 5.12 | 2.81 | 0.00 | | | | |
| 44.00 | 5.12 | 2.81 | 0.00 | | | | |
| 45.00 | 5.12 | 2.81 | 0.00 | | | | |
| 46.00 | 5.12 | 2.81 | 0.00 | | | | |
| 47.00 | 5.12 | 2.81 | 0.00 | | | | |
| 48.00 | 5.12 | 2.81 | 0.00 | | | | |
| 49.00 | 5.12 | 2.81 | 0.00 | | | | |
| 50.00 | 5.12 | 2.81 | 0.00 | | | | |
| 51.00 | 5.12 | 2.81 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 12S: Ex. West Imp

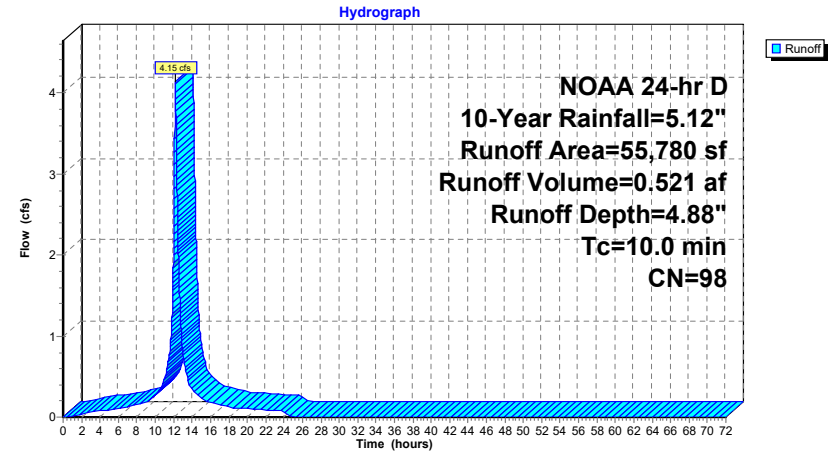
Runoff = 4.15 cfs @ 12.18 hrs, Volume= 0.521 af, Depth= 4.88"
Routed to Link 14L : Ex. West Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 55,780 | 98 | Paved parking, HSG D |
| 55,780 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 12S: Ex. West Imp



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 12S: Ex. West Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.04 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.06 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.08 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.09 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.10 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.13 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.16 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.19 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.28 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.47 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 2.08 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.82 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.35 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.24 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.18 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.15 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.12 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.11 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.10 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.10 | | | | |
| 22.00 | 5.00 | 4.76 | 0.09 | | | | |
| 23.00 | 5.06 | 4.82 | 0.08 | | | | |
| 24.00 | 5.12 | 4.88 | 0.07 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

Printed 11/28/2023

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Summary for Subcatchment 13S: Ex. West Perv

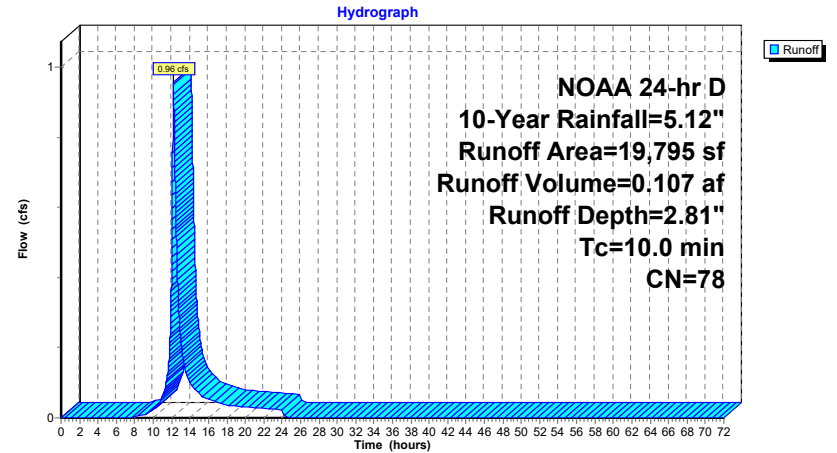
Runoff = 0.96 cfs @ 12.19 hrs, Volume= 0.107 af, Depth= 2.81"
Routed to Link 14L : Ex. West Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 7,521 | 74 | >75% Grass cover, Good, HSG C |
| 12,274 | 80 | >75% Grass cover, Good, HSG D |
| 19,795 | 78 | Weighted Average |
| 19,795 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Ex. West Perv



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 13S: Ex. West Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.81 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.81 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.81 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.81 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.81 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.81 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.81 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.81 | 0.00 |
| 8.00 | 0.66 | 0.00 | 0.00 | 60.00 | 5.12 | 2.81 | 0.00 |
| 9.00 | 0.81 | 0.02 | 0.01 | 61.00 | 5.12 | 2.81 | 0.00 |
| 10.00 | 1.01 | 0.06 | 0.02 | 62.00 | 5.12 | 2.81 | 0.00 |
| 11.00 | 1.33 | 0.16 | 0.06 | 63.00 | 5.12 | 2.81 | 0.00 |
| 12.00 | 2.45 | 0.76 | 0.42 | 64.00 | 5.12 | 2.81 | 0.00 |
| 13.00 | 3.79 | 1.72 | 0.22 | 65.00 | 5.12 | 2.81 | 0.00 |
| 14.00 | 4.11 | 1.97 | 0.10 | 66.00 | 5.12 | 2.81 | 0.00 |
| 15.00 | 4.31 | 2.14 | 0.07 | 67.00 | 5.12 | 2.81 | 0.00 |
| 16.00 | 4.46 | 2.26 | 0.05 | 68.00 | 5.12 | 2.81 | 0.00 |
| 17.00 | 4.58 | 2.36 | 0.05 | 69.00 | 5.12 | 2.81 | 0.00 |
| 18.00 | 4.68 | 2.44 | 0.04 | 70.00 | 5.12 | 2.81 | 0.00 |
| 19.00 | 4.77 | 2.52 | 0.03 | 71.00 | 5.12 | 2.81 | 0.00 |
| 20.00 | 4.85 | 2.59 | 0.03 | 72.00 | 5.12 | 2.81 | 0.00 |
| 21.00 | 4.93 | 2.65 | 0.03 | | | | |
| 22.00 | 5.00 | 2.71 | 0.03 | | | | |
| 23.00 | 5.06 | 2.76 | 0.02 | | | | |
| 24.00 | 5.12 | 2.81 | 0.02 | | | | |
| 25.00 | 5.12 | 2.81 | 0.00 | | | | |
| 26.00 | 5.12 | 2.81 | 0.00 | | | | |
| 27.00 | 5.12 | 2.81 | 0.00 | | | | |
| 28.00 | 5.12 | 2.81 | 0.00 | | | | |
| 29.00 | 5.12 | 2.81 | 0.00 | | | | |
| 30.00 | 5.12 | 2.81 | 0.00 | | | | |
| 31.00 | 5.12 | 2.81 | 0.00 | | | | |
| 32.00 | 5.12 | 2.81 | 0.00 | | | | |
| 33.00 | 5.12 | 2.81 | 0.00 | | | | |
| 34.00 | 5.12 | 2.81 | 0.00 | | | | |
| 35.00 | 5.12 | 2.81 | 0.00 | | | | |
| 36.00 | 5.12 | 2.81 | 0.00 | | | | |
| 37.00 | 5.12 | 2.81 | 0.00 | | | | |
| 38.00 | 5.12 | 2.81 | 0.00 | | | | |
| 39.00 | 5.12 | 2.81 | 0.00 | | | | |
| 40.00 | 5.12 | 2.81 | 0.00 | | | | |
| 41.00 | 5.12 | 2.81 | 0.00 | | | | |
| 42.00 | 5.12 | 2.81 | 0.00 | | | | |
| 43.00 | 5.12 | 2.81 | 0.00 | | | | |
| 44.00 | 5.12 | 2.81 | 0.00 | | | | |
| 45.00 | 5.12 | 2.81 | 0.00 | | | | |
| 46.00 | 5.12 | 2.81 | 0.00 | | | | |
| 47.00 | 5.12 | 2.81 | 0.00 | | | | |
| 48.00 | 5.12 | 2.81 | 0.00 | | | | |
| 49.00 | 5.12 | 2.81 | 0.00 | | | | |
| 50.00 | 5.12 | 2.81 | 0.00 | | | | |
| 51.00 | 5.12 | 2.81 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

Printed 11/28/2023

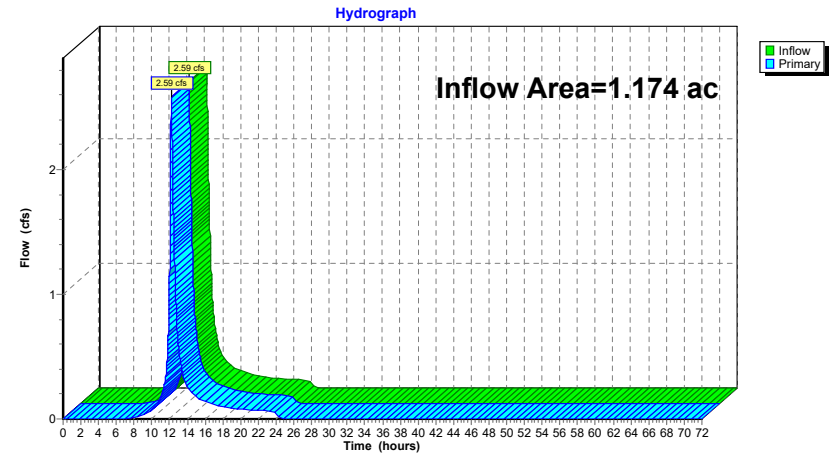
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Summary for Link 8L: Ex. South Total

Inflow Area = 1.174 ac, 2.84% Impervious, Inflow Depth = 2.96" for 10-Year event
 Inflow = 2.59 cfs @ 12.19 hrs, Volume= 0.290 af
 Primary = 2.59 cfs @ 12.19 hrs, Volume= 0.290 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 8L: Ex. South Total



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

Printed 11/28/2023
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Hydrograph for Link 8L: Ex. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.01 | 0.00 | 0.01 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.03 | 0.00 | 0.03 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.07 | 0.00 | 0.07 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.17 | 0.00 | 0.17 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.14 | 0.00 | 1.14 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.59 | 0.00 | 0.59 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.26 | 0.00 | 0.26 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.18 | 0.00 | 0.18 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.14 | 0.00 | 0.14 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.12 | 0.00 | 0.12 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.10 | 0.00 | 0.10 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.09 | 0.00 | 0.09 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.08 | 0.00 | 0.08 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.08 | 0.00 | 0.08 | | | | |
| 22.00 | 0.07 | 0.00 | 0.07 | | | | |
| 23.00 | 0.06 | 0.00 | 0.06 | | | | |
| 24.00 | 0.06 | 0.00 | 0.06 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

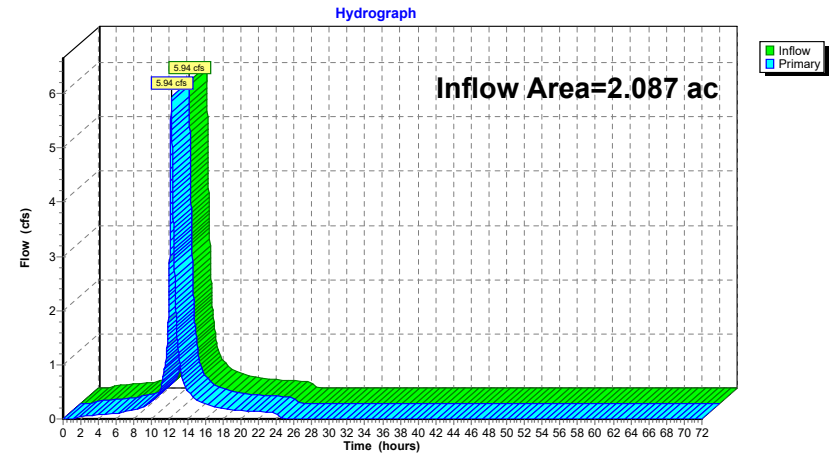
Printed 11/28/2023
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Summary for Link 11L: Ex. East Total

Inflow Area = 2.087 ac, 65.52% Impervious, Inflow Depth = 4.17" for 10-Year event
 Inflow = 5.94 cfs @ 12.18 hrs, Volume= 0.725 af
 Primary = 5.94 cfs @ 12.18 hrs, Volume= 0.725 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 11L: Ex. East Total



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Link 11L: Ex. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.04 | 0.00 | 0.04 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.06 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.08 | 0.00 | 0.08 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.09 | 0.00 | 0.09 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.11 | 0.00 | 0.11 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.13 | 0.00 | 0.13 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.17 | 0.00 | 0.17 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.22 | 0.00 | 0.22 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.33 | 0.00 | 0.33 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.59 | 0.00 | 0.59 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.88 | 0.00 | 2.88 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.22 | 0.00 | 1.22 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.52 | 0.00 | 0.52 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.36 | 0.00 | 0.36 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.28 | 0.00 | 0.28 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.24 | 0.00 | 0.24 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.19 | 0.00 | 0.19 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.17 | 0.00 | 0.17 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.16 | 0.00 | 0.16 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.15 | 0.00 | 0.15 | | | | |
| 22.00 | 0.14 | 0.00 | 0.14 | | | | |
| 23.00 | 0.13 | 0.00 | 0.13 | | | | |
| 24.00 | 0.11 | 0.00 | 0.11 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

Prepared by Dynamic Engineering
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NOAA 24-hr D 10-Year Rainfall=5.12"

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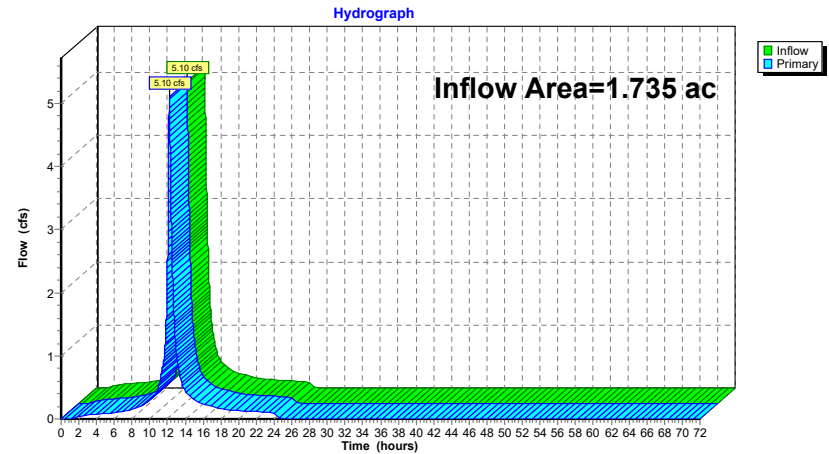
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Summary for Link 14L: Ex. West Total

Inflow Area = 1.735 ac, 73.81% Impervious, Inflow Depth = 4.34" for 10-Year event
 Inflow = 5.10 cfs @ 12.18 hrs, Volume= 0.628 af
 Primary = 5.10 cfs @ 12.18 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 14L: Ex. West Total



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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Link 14L: Ex. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.04 | 0.00 | 0.04 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.06 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.08 | 0.00 | 0.08 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.09 | 0.00 | 0.09 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.10 | 0.00 | 0.10 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.13 | 0.00 | 0.13 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.16 | 0.00 | 0.16 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.20 | 0.00 | 0.20 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.30 | 0.00 | 0.30 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.53 | 0.00 | 0.53 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.50 | 0.00 | 2.50 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.04 | 0.00 | 1.04 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.44 | 0.00 | 0.44 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.30 | 0.00 | 0.30 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.24 | 0.00 | 0.24 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.20 | 0.00 | 0.20 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.16 | 0.00 | 0.16 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.14 | 0.00 | 0.14 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.13 | 0.00 | 0.13 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.12 | 0.00 | 0.12 | | | | |
| 22.00 | 0.12 | 0.00 | 0.12 | | | | |
| 23.00 | 0.11 | 0.00 | 0.11 | | | | |
| 24.00 | 0.10 | 0.00 | 0.10 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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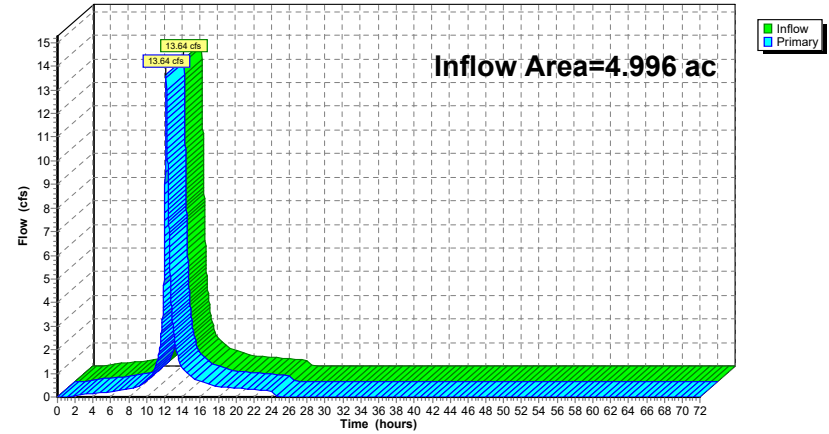
Summary for Link 15L: Ex. Total

Inflow Area = 4.996 ac, 53.67% Impervious, Inflow Depth = 3.95" for 10-Year event
 Inflow = 13.64 cfs @ 12.18 hrs, Volume= 1.643 af
 Primary = 13.64 cfs @ 12.18 hrs, Volume= 1.643 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 15L: Ex. Total

Hydrograph



Existing

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Link 15L: Ex. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.01 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.08 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.12 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.16 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.19 | 0.00 | 0.19 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.21 | 0.00 | 0.21 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.26 | 0.00 | 0.26 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.35 | 0.00 | 0.35 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.45 | 0.00 | 0.45 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.71 | 0.00 | 0.71 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 1.29 | 0.00 | 1.29 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 6.52 | 0.00 | 6.52 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 2.85 | 0.00 | 2.85 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 1.23 | 0.00 | 1.23 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.84 | 0.00 | 0.84 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.66 | 0.00 | 0.66 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.56 | 0.00 | 0.56 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.45 | 0.00 | 0.45 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.40 | 0.00 | 0.40 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.37 | 0.00 | 0.37 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.35 | 0.00 | 0.35 | | | | |
| 22.00 | 0.32 | 0.00 | 0.32 | | | | |
| 23.00 | 0.30 | 0.00 | 0.30 | | | | |
| 24.00 | 0.27 | 0.00 | 0.27 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|---------------------------------------|---|
| Subcatchment5S: Ex. South Imp | Runoff Area=1,453 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=0.18 cfs 0.023 af |
| Subcatchment6S: Ex. South Perv | Runoff Area=49,675 sf 0.00% Impervious Runoff Depth=6.10" Tc=10.0 min CN=79 Runoff=5.15 cfs 0.579 af |
| Subcatchment9S: Ex. East Imp | Runoff Area=59,569 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=7.49 cfs 0.956 af |
| Subcatchment10S: Ex. East Perv | Runoff Area=31,350 sf 0.00% Impervious Runoff Depth=5.98" Tc=10.0 min CN=78 Runoff=3.19 cfs 0.358 af |
| Subcatchment12S: Ex. West Imp | Runoff Area=55,780 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=7.02 cfs 0.895 af |
| Subcatchment13S: Ex. West Perv | Runoff Area=19,795 sf 0.00% Impervious Runoff Depth=5.98" Tc=10.0 min CN=78 Runoff=2.02 cfs 0.226 af |
| Link 8L: Ex. South Total | Inflow=5.33 cfs 0.603 af Primary=5.33 cfs 0.603 af |
| Link 11L: Ex. East Total | Inflow=10.68 cfs 1.315 af Primary=10.68 cfs 1.315 af |
| Link 14L: Ex. West Total | Inflow=9.03 cfs 1.122 af Primary=9.03 cfs 1.122 af |
| Link 15L: Ex. Total | Inflow=25.04 cfs 3.039 af Primary=25.04 cfs 3.039 af |

Total Runoff Area = 4.996 ac Runoff Volume = 3.039 af Average Runoff Depth = 7.30"
46.33% Pervious = 2.315 ac 53.67% Impervious = 2.681 ac

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 5S: Ex. South Imp

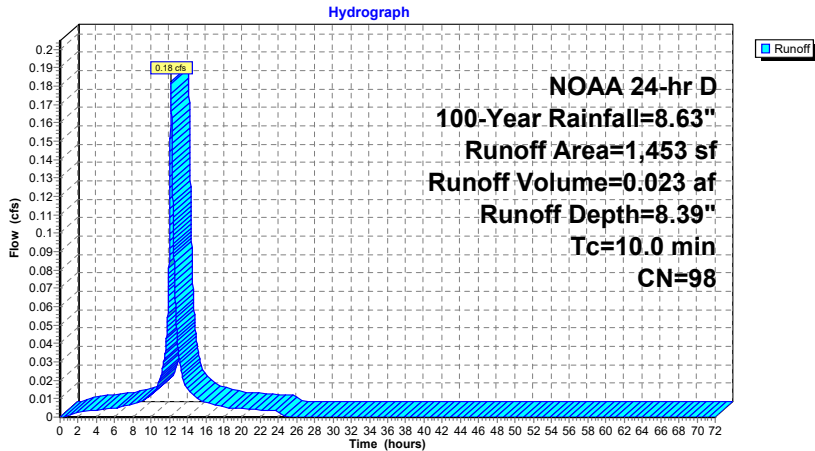
Runoff = 0.18 cfs @ 12.18 hrs, Volume= 0.023 af, Depth= 8.39"
Routed to Link 8L : Ex. South Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 1,453 | 98 | Paved parking, HSG D |
| 1,453 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Ex. South Imp



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 5S: Ex. South Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.00 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.00 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.00 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.00 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.00 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.00 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.01 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.01 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.01 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.01 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.02 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 0.09 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 0.04 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.02 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.01 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.01 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.01 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.01 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.00 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.00 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.00 | | | | |
| 22.00 | 8.42 | 8.18 | 0.00 | | | | |
| 23.00 | 8.53 | 8.29 | 0.00 | | | | |
| 24.00 | 8.63 | 8.39 | 0.00 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 6S: Ex. South Perv

Runoff = 5.15 cfs @ 12.18 hrs, Volume= 0.579 af, Depth= 6.10"
Routed to Link 8L : Ex. South Total

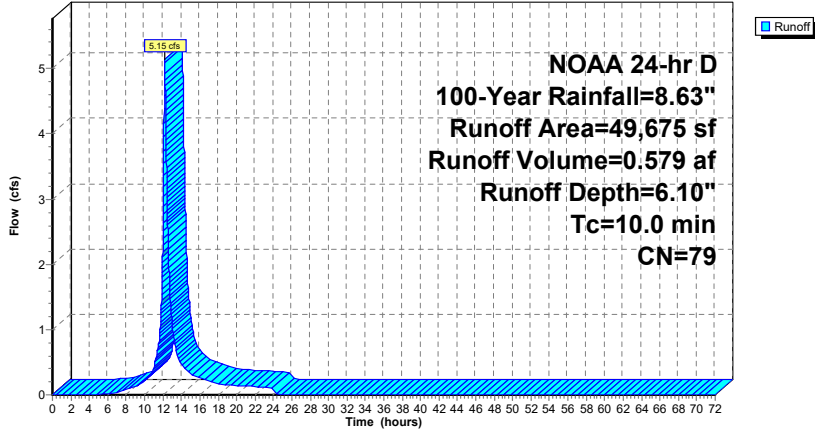
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 9,901 | 74 | >75% Grass cover, Good, HSG C |
| 39,774 | 80 | >75% Grass cover, Good, HSG D |
| 49,675 | 79 | Weighted Average |
| 49,675 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Ex. South Perv

Hydrograph



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 6S: Ex. South Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 6.10 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 6.10 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 6.10 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 6.10 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 6.10 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 6.10 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.02 | 58.00 | 8.63 | 6.10 | 0.00 |
| 7.00 | 0.91 | 0.05 | 0.04 | 59.00 | 8.63 | 6.10 | 0.00 |
| 8.00 | 1.12 | 0.11 | 0.08 | 60.00 | 8.63 | 6.10 | 0.00 |
| 9.00 | 1.37 | 0.20 | 0.12 | 61.00 | 8.63 | 6.10 | 0.00 |
| 10.00 | 1.71 | 0.36 | 0.21 | 62.00 | 8.63 | 6.10 | 0.00 |
| 11.00 | 2.24 | 0.67 | 0.43 | 63.00 | 8.63 | 6.10 | 0.00 |
| 12.00 | 4.13 | 2.07 | 2.41 | 64.00 | 8.63 | 6.10 | 0.00 |
| 13.00 | 6.39 | 4.03 | 1.10 | 65.00 | 8.63 | 6.10 | 0.00 |
| 14.00 | 6.92 | 4.51 | 0.47 | 66.00 | 8.63 | 6.10 | 0.00 |
| 15.00 | 7.26 | 4.82 | 0.33 | 67.00 | 8.63 | 6.10 | 0.00 |
| 16.00 | 7.51 | 5.05 | 0.25 | 68.00 | 8.63 | 6.10 | 0.00 |
| 17.00 | 7.72 | 5.25 | 0.21 | 69.00 | 8.63 | 6.10 | 0.00 |
| 18.00 | 7.89 | 5.41 | 0.17 | 70.00 | 8.63 | 6.10 | 0.00 |
| 19.00 | 8.04 | 5.55 | 0.15 | 71.00 | 8.63 | 6.10 | 0.00 |
| 20.00 | 8.18 | 5.67 | 0.14 | 72.00 | 8.63 | 6.10 | 0.00 |
| 21.00 | 8.30 | 5.79 | 0.13 | | | | |
| 22.00 | 8.42 | 5.90 | 0.12 | | | | |
| 23.00 | 8.53 | 6.00 | 0.11 | | | | |
| 24.00 | 8.63 | 6.10 | 0.10 | | | | |
| 25.00 | 8.63 | 6.10 | 0.00 | | | | |
| 26.00 | 8.63 | 6.10 | 0.00 | | | | |
| 27.00 | 8.63 | 6.10 | 0.00 | | | | |
| 28.00 | 8.63 | 6.10 | 0.00 | | | | |
| 29.00 | 8.63 | 6.10 | 0.00 | | | | |
| 30.00 | 8.63 | 6.10 | 0.00 | | | | |
| 31.00 | 8.63 | 6.10 | 0.00 | | | | |
| 32.00 | 8.63 | 6.10 | 0.00 | | | | |
| 33.00 | 8.63 | 6.10 | 0.00 | | | | |
| 34.00 | 8.63 | 6.10 | 0.00 | | | | |
| 35.00 | 8.63 | 6.10 | 0.00 | | | | |
| 36.00 | 8.63 | 6.10 | 0.00 | | | | |
| 37.00 | 8.63 | 6.10 | 0.00 | | | | |
| 38.00 | 8.63 | 6.10 | 0.00 | | | | |
| 39.00 | 8.63 | 6.10 | 0.00 | | | | |
| 40.00 | 8.63 | 6.10 | 0.00 | | | | |
| 41.00 | 8.63 | 6.10 | 0.00 | | | | |
| 42.00 | 8.63 | 6.10 | 0.00 | | | | |
| 43.00 | 8.63 | 6.10 | 0.00 | | | | |
| 44.00 | 8.63 | 6.10 | 0.00 | | | | |
| 45.00 | 8.63 | 6.10 | 0.00 | | | | |
| 46.00 | 8.63 | 6.10 | 0.00 | | | | |
| 47.00 | 8.63 | 6.10 | 0.00 | | | | |
| 48.00 | 8.63 | 6.10 | 0.00 | | | | |
| 49.00 | 8.63 | 6.10 | 0.00 | | | | |
| 50.00 | 8.63 | 6.10 | 0.00 | | | | |
| 51.00 | 8.63 | 6.10 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 9S: Ex. East Imp

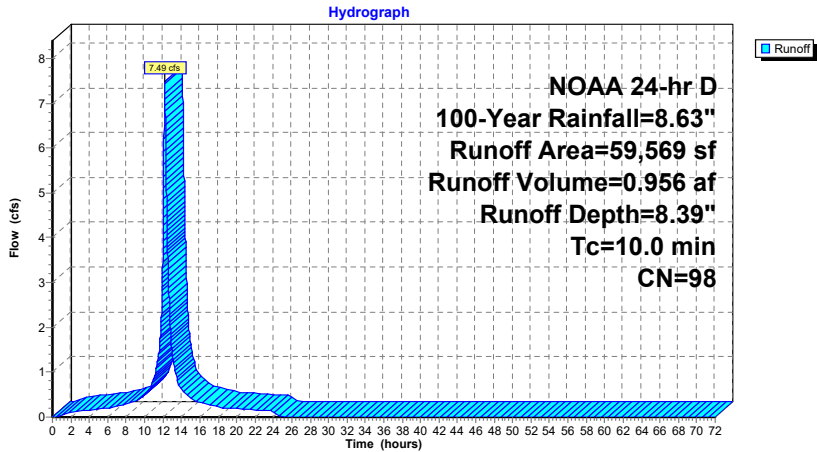
Runoff = 7.49 cfs @ 12.18 hrs, Volume= 0.956 af, Depth= 8.39"
Routed to Link 11L : Ex. East Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 59,569 | 98 | Paved parking, HSG D |
| 59,569 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Ex. East Imp



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 9S: Ex. East Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.03 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.10 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.13 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.16 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.18 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.19 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.24 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.30 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.35 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.51 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.85 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 3.76 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 1.47 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.62 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.42 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.33 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.28 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.22 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.20 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.19 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.17 | | | | |
| 22.00 | 8.42 | 8.18 | 0.16 | | | | |
| 23.00 | 8.53 | 8.29 | 0.15 | | | | |
| 24.00 | 8.63 | 8.39 | 0.13 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 10S: Ex. East Perv

Runoff = 3.19 cfs @ 12.18 hrs, Volume= 0.358 af, Depth= 5.98"
Routed to Link 11L : Ex. East Total

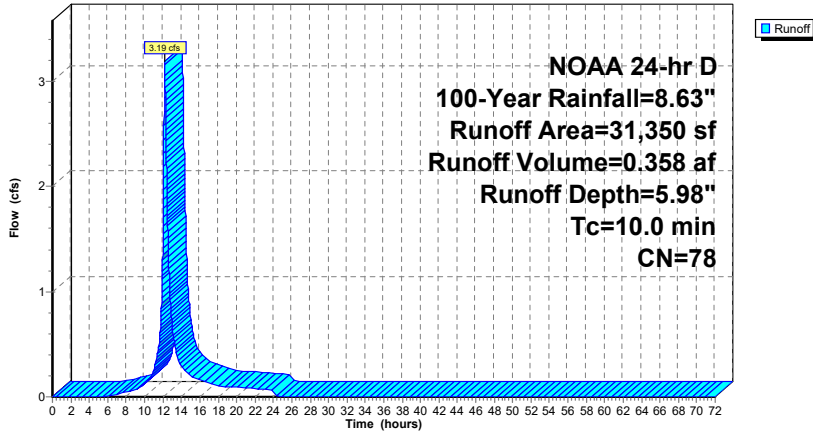
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 10,259 | 74 | >75% Grass cover, Good, HSG C |
| 21,091 | 80 | >75% Grass cover, Good, HSG D |
| 31,350 | 78 | Weighted Average |
| 31,350 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Ex. East Perv

Hydrograph



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

Printed 11/28/2023

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Hydrograph for Subcatchment 10S: Ex. East Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 5.98 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 5.98 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 5.98 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 5.98 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 5.98 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 5.98 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.01 | 58.00 | 8.63 | 5.98 | 0.00 |
| 7.00 | 0.91 | 0.04 | 0.02 | 59.00 | 8.63 | 5.98 | 0.00 |
| 8.00 | 1.12 | 0.09 | 0.04 | 60.00 | 8.63 | 5.98 | 0.00 |
| 9.00 | 1.37 | 0.18 | 0.07 | 61.00 | 8.63 | 5.98 | 0.00 |
| 10.00 | 1.71 | 0.33 | 0.13 | 62.00 | 8.63 | 5.98 | 0.00 |
| 11.00 | 2.24 | 0.63 | 0.26 | 63.00 | 8.63 | 5.98 | 0.00 |
| 12.00 | 4.13 | 1.99 | 1.49 | 64.00 | 8.63 | 5.98 | 0.00 |
| 13.00 | 6.39 | 3.92 | 0.68 | 65.00 | 8.63 | 5.98 | 0.00 |
| 14.00 | 6.92 | 4.40 | 0.30 | 66.00 | 8.63 | 5.98 | 0.00 |
| 15.00 | 7.26 | 4.71 | 0.20 | 67.00 | 8.63 | 5.98 | 0.00 |
| 16.00 | 7.51 | 4.94 | 0.16 | 68.00 | 8.63 | 5.98 | 0.00 |
| 17.00 | 7.72 | 5.13 | 0.13 | 69.00 | 8.63 | 5.98 | 0.00 |
| 18.00 | 7.89 | 5.29 | 0.11 | 70.00 | 8.63 | 5.98 | 0.00 |
| 19.00 | 8.04 | 5.43 | 0.10 | 71.00 | 8.63 | 5.98 | 0.00 |
| 20.00 | 8.18 | 5.56 | 0.09 | 72.00 | 8.63 | 5.98 | 0.00 |
| 21.00 | 8.30 | 5.67 | 0.08 | | | | |
| 22.00 | 8.42 | 5.78 | 0.08 | | | | |
| 23.00 | 8.53 | 5.88 | 0.07 | | | | |
| 24.00 | 8.63 | 5.98 | 0.07 | | | | |
| 25.00 | 8.63 | 5.98 | 0.00 | | | | |
| 26.00 | 8.63 | 5.98 | 0.00 | | | | |
| 27.00 | 8.63 | 5.98 | 0.00 | | | | |
| 28.00 | 8.63 | 5.98 | 0.00 | | | | |
| 29.00 | 8.63 | 5.98 | 0.00 | | | | |
| 30.00 | 8.63 | 5.98 | 0.00 | | | | |
| 31.00 | 8.63 | 5.98 | 0.00 | | | | |
| 32.00 | 8.63 | 5.98 | 0.00 | | | | |
| 33.00 | 8.63 | 5.98 | 0.00 | | | | |
| 34.00 | 8.63 | 5.98 | 0.00 | | | | |
| 35.00 | 8.63 | 5.98 | 0.00 | | | | |
| 36.00 | 8.63 | 5.98 | 0.00 | | | | |
| 37.00 | 8.63 | 5.98 | 0.00 | | | | |
| 38.00 | 8.63 | 5.98 | 0.00 | | | | |
| 39.00 | 8.63 | 5.98 | 0.00 | | | | |
| 40.00 | 8.63 | 5.98 | 0.00 | | | | |
| 41.00 | 8.63 | 5.98 | 0.00 | | | | |
| 42.00 | 8.63 | 5.98 | 0.00 | | | | |
| 43.00 | 8.63 | 5.98 | 0.00 | | | | |
| 44.00 | 8.63 | 5.98 | 0.00 | | | | |
| 45.00 | 8.63 | 5.98 | 0.00 | | | | |
| 46.00 | 8.63 | 5.98 | 0.00 | | | | |
| 47.00 | 8.63 | 5.98 | 0.00 | | | | |
| 48.00 | 8.63 | 5.98 | 0.00 | | | | |
| 49.00 | 8.63 | 5.98 | 0.00 | | | | |
| 50.00 | 8.63 | 5.98 | 0.00 | | | | |
| 51.00 | 8.63 | 5.98 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 12S: Ex. West Imp

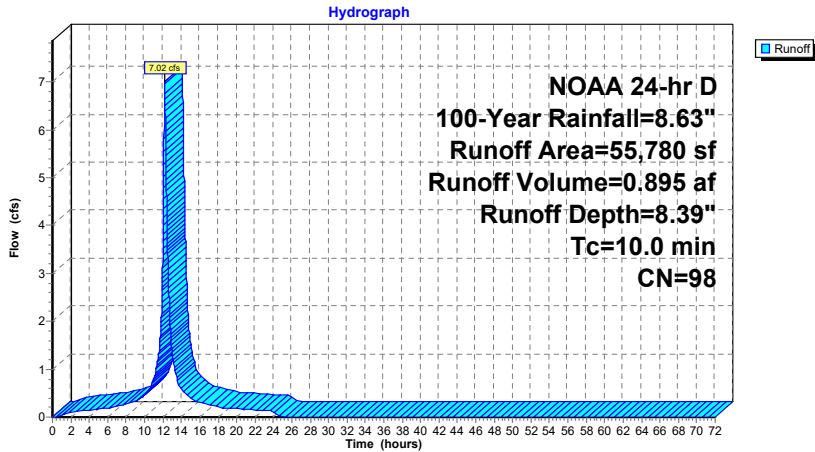
Runoff = 7.02 cfs @ 12.18 hrs, Volume= 0.895 af, Depth= 8.39"
Routed to Link 14L : Ex. West Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 55,780 | 98 | Paved parking, HSG D |
| 55,780 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 12S: Ex. West Imp



Existing

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Hydrograph for Subcatchment 12S: Ex. West Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.03 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.09 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.12 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.15 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.17 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.18 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.23 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.28 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.33 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.48 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.80 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 3.52 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 1.38 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.58 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.40 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.31 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.26 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.21 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.19 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.17 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.16 | | | | |
| 22.00 | 8.42 | 8.18 | 0.15 | | | | |
| 23.00 | 8.53 | 8.29 | 0.14 | | | | |
| 24.00 | 8.63 | 8.39 | 0.12 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

Existing

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Summary for Subcatchment 13S: Ex. West Perv

Runoff = 2.02 cfs @ 12.18 hrs, Volume= 0.226 af, Depth= 5.98"
Routed to Link 14L : Ex. West Total

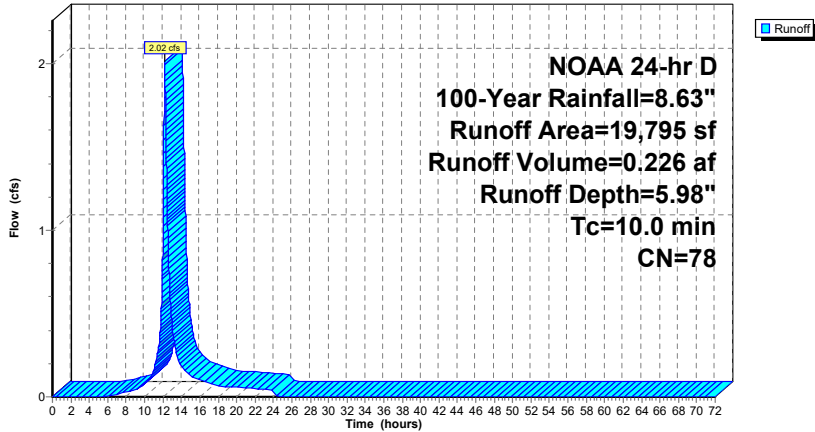
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 7,521 | 74 | >75% Grass cover, Good, HSG C |
| 12,274 | 80 | >75% Grass cover, Good, HSG D |
| 19,795 | 78 | Weighted Average |
| 19,795 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Ex. West Perv

Hydrograph



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Hydrograph for Subcatchment 13S: Ex. West Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 5.98 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 5.98 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 5.98 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 5.98 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 5.98 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 5.98 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.01 | 58.00 | 8.63 | 5.98 | 0.00 |
| 7.00 | 0.91 | 0.04 | 0.02 | 59.00 | 8.63 | 5.98 | 0.00 |
| 8.00 | 1.12 | 0.09 | 0.03 | 60.00 | 8.63 | 5.98 | 0.00 |
| 9.00 | 1.37 | 0.18 | 0.04 | 61.00 | 8.63 | 5.98 | 0.00 |
| 10.00 | 1.71 | 0.33 | 0.08 | 62.00 | 8.63 | 5.98 | 0.00 |
| 11.00 | 2.24 | 0.63 | 0.16 | 63.00 | 8.63 | 5.98 | 0.00 |
| 12.00 | 4.13 | 1.99 | 0.94 | 64.00 | 8.63 | 5.98 | 0.00 |
| 13.00 | 6.39 | 3.92 | 0.43 | 65.00 | 8.63 | 5.98 | 0.00 |
| 14.00 | 6.92 | 4.40 | 0.19 | 66.00 | 8.63 | 5.98 | 0.00 |
| 15.00 | 7.26 | 4.71 | 0.13 | 67.00 | 8.63 | 5.98 | 0.00 |
| 16.00 | 7.51 | 4.94 | 0.10 | 68.00 | 8.63 | 5.98 | 0.00 |
| 17.00 | 7.72 | 5.13 | 0.08 | 69.00 | 8.63 | 5.98 | 0.00 |
| 18.00 | 7.89 | 5.29 | 0.07 | 70.00 | 8.63 | 5.98 | 0.00 |
| 19.00 | 8.04 | 5.43 | 0.06 | 71.00 | 8.63 | 5.98 | 0.00 |
| 20.00 | 8.18 | 5.56 | 0.06 | 72.00 | 8.63 | 5.98 | 0.00 |
| 21.00 | 8.30 | 5.67 | 0.05 | | | | |
| 22.00 | 8.42 | 5.78 | 0.05 | | | | |
| 23.00 | 8.53 | 5.88 | 0.05 | | | | |
| 24.00 | 8.63 | 5.98 | 0.04 | | | | |
| 25.00 | 8.63 | 5.98 | 0.00 | | | | |
| 26.00 | 8.63 | 5.98 | 0.00 | | | | |
| 27.00 | 8.63 | 5.98 | 0.00 | | | | |
| 28.00 | 8.63 | 5.98 | 0.00 | | | | |
| 29.00 | 8.63 | 5.98 | 0.00 | | | | |
| 30.00 | 8.63 | 5.98 | 0.00 | | | | |
| 31.00 | 8.63 | 5.98 | 0.00 | | | | |
| 32.00 | 8.63 | 5.98 | 0.00 | | | | |
| 33.00 | 8.63 | 5.98 | 0.00 | | | | |
| 34.00 | 8.63 | 5.98 | 0.00 | | | | |
| 35.00 | 8.63 | 5.98 | 0.00 | | | | |
| 36.00 | 8.63 | 5.98 | 0.00 | | | | |
| 37.00 | 8.63 | 5.98 | 0.00 | | | | |
| 38.00 | 8.63 | 5.98 | 0.00 | | | | |
| 39.00 | 8.63 | 5.98 | 0.00 | | | | |
| 40.00 | 8.63 | 5.98 | 0.00 | | | | |
| 41.00 | 8.63 | 5.98 | 0.00 | | | | |
| 42.00 | 8.63 | 5.98 | 0.00 | | | | |
| 43.00 | 8.63 | 5.98 | 0.00 | | | | |
| 44.00 | 8.63 | 5.98 | 0.00 | | | | |
| 45.00 | 8.63 | 5.98 | 0.00 | | | | |
| 46.00 | 8.63 | 5.98 | 0.00 | | | | |
| 47.00 | 8.63 | 5.98 | 0.00 | | | | |
| 48.00 | 8.63 | 5.98 | 0.00 | | | | |
| 49.00 | 8.63 | 5.98 | 0.00 | | | | |
| 50.00 | 8.63 | 5.98 | 0.00 | | | | |
| 51.00 | 8.63 | 5.98 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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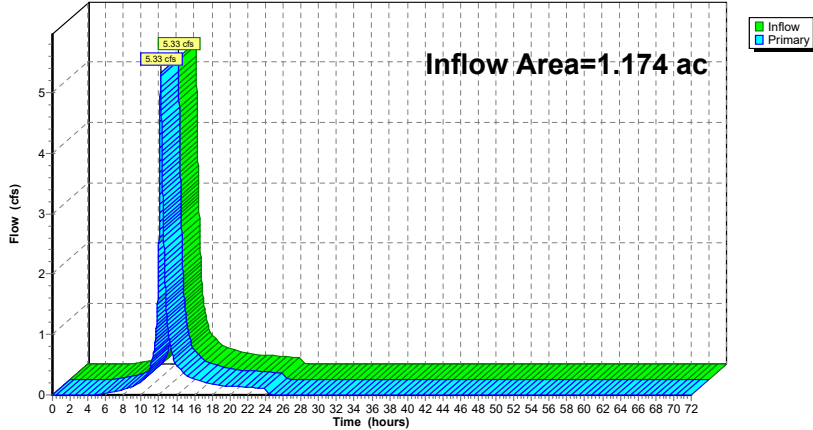
Summary for Link 8L: Ex. South Total

Inflow Area = 1.174 ac, 2.84% Impervious, Inflow Depth = 6.16" for 100-Year event
Inflow = 5.33 cfs @ 12.18 hrs, Volume= 0.603 af
Primary = 5.33 cfs @ 12.18 hrs, Volume= 0.603 af, Atten= 0%, Lag= 0.0 min
Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 8L: Ex. South Total

Hydrograph



Existing

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Hydrograph for Link 8L: Ex. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.01 | 0.00 | 0.01 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.02 | 0.00 | 0.02 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.05 | 0.00 | 0.05 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.08 | 0.00 | 0.08 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.13 | 0.00 | 0.13 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.23 | 0.00 | 0.23 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.45 | 0.00 | 0.45 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.50 | 0.00 | 2.50 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.13 | 0.00 | 1.13 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.49 | 0.00 | 0.49 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.34 | 0.00 | 0.34 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.26 | 0.00 | 0.26 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.22 | 0.00 | 0.22 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.18 | 0.00 | 0.18 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.16 | 0.00 | 0.16 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.15 | 0.00 | 0.15 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.14 | 0.00 | 0.14 | | | | |
| 22.00 | 0.13 | 0.00 | 0.13 | | | | |
| 23.00 | 0.12 | 0.00 | 0.12 | | | | |
| 24.00 | 0.11 | 0.00 | 0.11 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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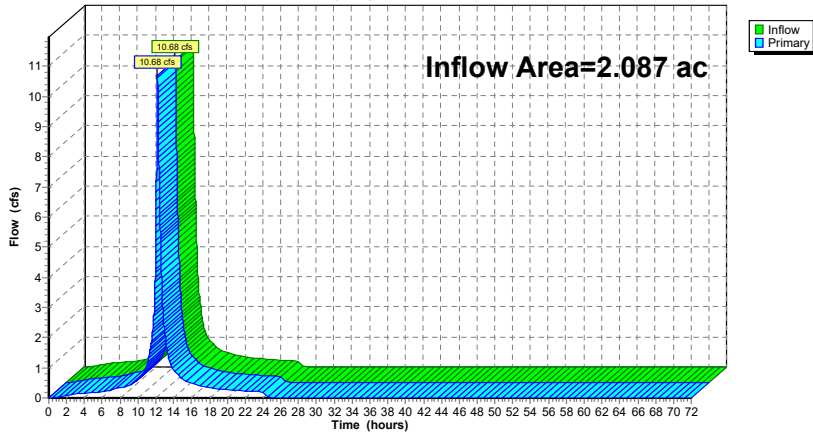
Summary for Link 11L: Ex. East Total

Inflow Area = 2.087 ac, 65.52% Impervious, Inflow Depth = 7.56" for 100-Year event
Inflow = 10.68 cfs @ 12.18 hrs, Volume= 1.315 af
Primary = 10.68 cfs @ 12.18 hrs, Volume= 1.315 af, Atten= 0%, Lag= 0.0 min
Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 11L: Ex. East Total

Hydrograph



Existing

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Hydrograph for Link 11L: Ex. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.03 | 0.00 | 0.03 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.10 | 0.00 | 0.10 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.13 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.16 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.18 | 0.00 | 0.18 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.20 | 0.00 | 0.20 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.26 | 0.00 | 0.26 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.34 | 0.00 | 0.34 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.42 | 0.00 | 0.42 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.64 | 0.00 | 0.64 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 1.11 | 0.00 | 1.11 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 5.25 | 0.00 | 5.25 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 2.16 | 0.00 | 2.16 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.92 | 0.00 | 0.92 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.63 | 0.00 | 0.63 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.49 | 0.00 | 0.49 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.41 | 0.00 | 0.41 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.33 | 0.00 | 0.33 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.30 | 0.00 | 0.30 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.28 | 0.00 | 0.28 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.26 | 0.00 | 0.26 | | | | |
| 22.00 | 0.24 | 0.00 | 0.24 | | | | |
| 23.00 | 0.22 | 0.00 | 0.22 | | | | |
| 24.00 | 0.20 | 0.00 | 0.20 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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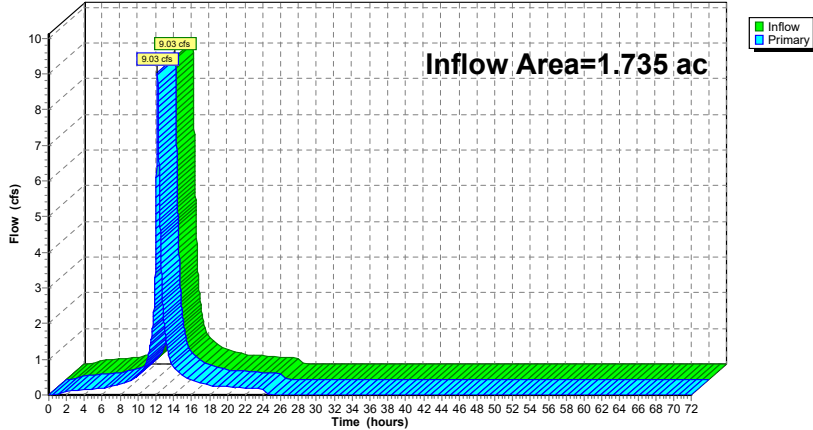
Summary for Link 14L: Ex. West Total

Inflow Area = 1.735 ac, 73.81% Impervious, Inflow Depth = 7.76" for 100-Year event
Inflow = 9.03 cfs @ 12.18 hrs, Volume= 1.122 af
Primary = 9.03 cfs @ 12.18 hrs, Volume= 1.122 af, Atten= 0%, Lag= 0.0 min
Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 14L: Ex. West Total

Hydrograph



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Link 14L: Ex. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.03 | 0.00 | 0.03 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.09 | 0.00 | 0.09 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.12 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.15 | 0.00 | 0.15 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.17 | 0.00 | 0.17 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.19 | 0.00 | 0.19 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.24 | 0.00 | 0.24 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.30 | 0.00 | 0.30 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.37 | 0.00 | 0.37 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.56 | 0.00 | 0.56 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.96 | 0.00 | 0.96 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 4.46 | 0.00 | 4.46 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.81 | 0.00 | 1.81 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.77 | 0.00 | 0.77 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.53 | 0.00 | 0.53 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.41 | 0.00 | 0.41 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.34 | 0.00 | 0.34 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.28 | 0.00 | 0.28 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.25 | 0.00 | 0.25 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.23 | 0.00 | 0.23 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.21 | 0.00 | 0.21 | | | | |
| 22.00 | 0.20 | 0.00 | 0.20 | | | | |
| 23.00 | 0.18 | 0.00 | 0.18 | | | | |
| 24.00 | 0.17 | 0.00 | 0.17 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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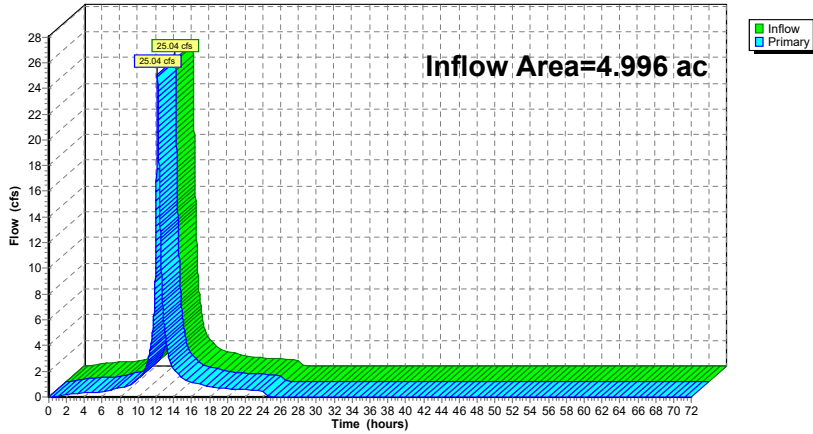
Summary for Link 15L: Ex. Total

Inflow Area = 4.996 ac, 53.67% Impervious, Inflow Depth = 7.30" for 100-Year event
Inflow = 25.04 cfs @ 12.18 hrs, Volume= 3.039 af
Primary = 25.04 cfs @ 12.18 hrs, Volume= 3.039 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 15L: Ex. Total

Hydrograph



Existing

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Link 15L: Ex. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.07 | 0.00 | 0.07 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.19 | 0.00 | 0.19 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.26 | 0.00 | 0.26 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.31 | 0.00 | 0.31 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.35 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.42 | 0.00 | 0.42 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.55 | 0.00 | 0.55 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.73 | 0.00 | 0.73 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.92 | 0.00 | 0.92 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 1.42 | 0.00 | 1.42 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 2.52 | 0.00 | 2.52 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 12.21 | 0.00 | 12.21 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 5.10 | 0.00 | 5.10 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 2.18 | 0.00 | 2.18 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 1.49 | 0.00 | 1.49 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 1.16 | 0.00 | 1.16 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.98 | 0.00 | 0.98 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.79 | 0.00 | 0.79 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.70 | 0.00 | 0.70 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.66 | 0.00 | 0.66 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.61 | 0.00 | 0.61 | | | | |
| 22.00 | 0.56 | 0.00 | 0.56 | | | | |
| 23.00 | 0.52 | 0.00 | 0.52 | | | | |
| 24.00 | 0.47 | 0.00 | 0.47 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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- 111 Link 34L: Prop. Total

100-Year Event

- 113 Node Listing
- 115 Subcat 5S: Basin A Imp
- 117 Subcat 6S: Basin A Perv
- 119 Subcat 9S: Basin B Imp
- 121 Subcat 10S: Basin B Perv
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- 147 Pond 21P: Basin C
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- 161 Link 33L: Prop. East Total
- 163 Link 34L: Prop. Total

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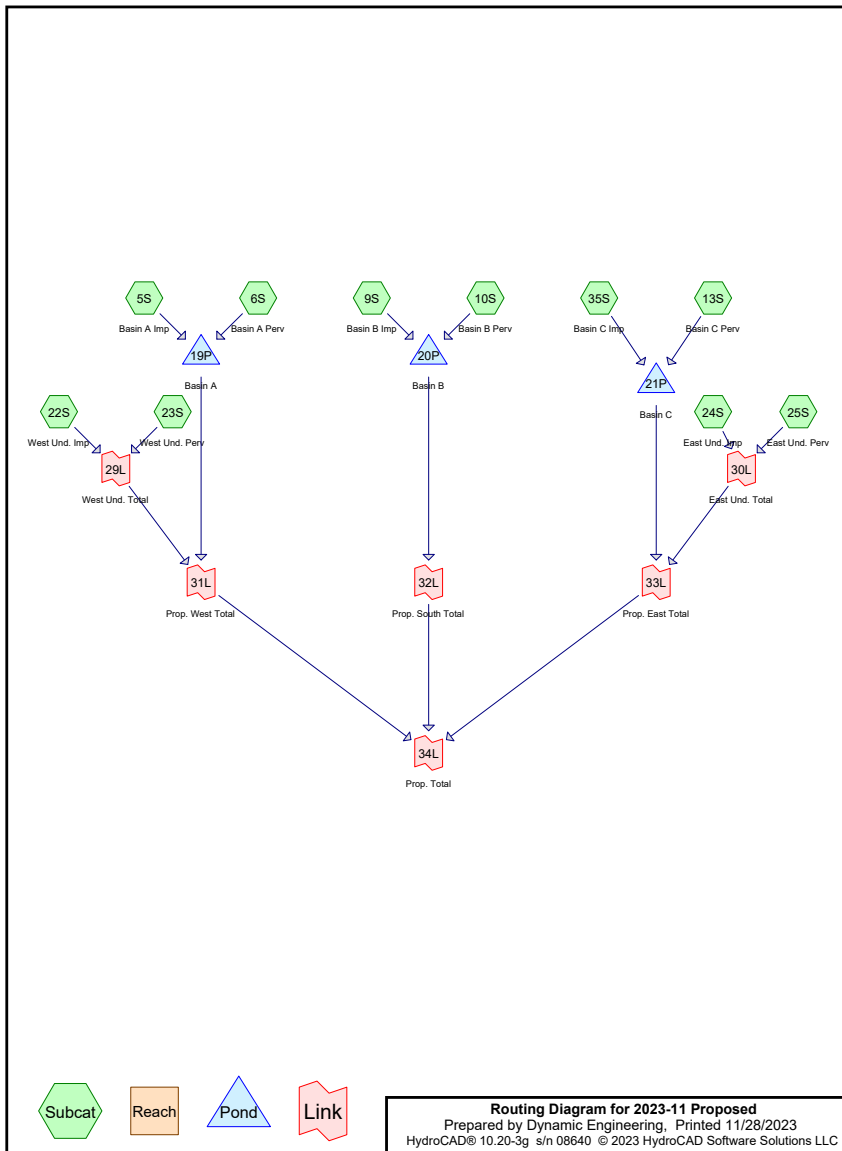
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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D



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Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|------------|-------|---------|------------------|-----|----------------|-----|
| 1 | 2-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 3.35 | 2 |
| 2 | 10-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 5.12 | 2 |
| 3 | 100-Year | NOAA 24-hr | D | Default | 24.00 | 1 | 8.63 | 2 |

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Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|--------------|-----------|--|
| 0.155 | 74 | >75% Grass cover, Good, HSG C (6S, 10S, 13S, 23S, 25S) |
| 0.934 | 80 | >75% Grass cover, Good, HSG D (6S, 10S, 13S, 23S, 25S) |
| 3.907 | 98 | Paved parking, HSG D (5S, 9S, 22S, 24S, 35S) |
| 4.996 | 94 | TOTAL AREA |

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Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|---|
| 0.000 | HSG A | |
| 0.000 | HSG B | |
| 0.155 | HSG C | 6S, 10S, 13S, 23S, 25S |
| 4.841 | HSG D | 5S, 6S, 9S, 10S, 13S, 22S, 23S, 24S, 25S, 35S |
| 0.000 | Other | |
| 4.996 | | TOTAL AREA |

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Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|------------------------------------|
| 0.000 | 0.000 | 0.155 | 0.934 | 0.000 | 1.089 | >75% Grass cover, Good | 6S, 10S, 13S, 23S, 25S |
| 0.000 | 0.000 | 0.000 | 3.907 | 0.000 | 3.907 | Paved parking | 5S, 9S, 22S, 24S, 35S |
| 0.000 | 0.000 | 0.155 | 4.841 | 0.000 | 4.996 | TOTAL AREA | |

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Pipe Listing (all nodes)

| Line# | Node Number | In-Invert (feet) | Out-Invert (feet) | Length (feet) | Slope (ft/ft) | n | Width (inches) | Diam/Height (inches) | Inside-Fill (inches) | Node Name |
|-------|-------------|------------------|-------------------|---------------|---------------|-------|----------------|----------------------|----------------------|-----------|
| 1 | 19P | 99.75 | 99.75 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |
| 2 | 20P | 98.50 | 98.50 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |
| 3 | 21P | 96.50 | 96.50 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |

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Notes Listing (all nodes)

| Line# | Node Number | Notes |
|-------|-------------|---|
| 1 | Project | Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|--|---|
| Subcatchment5S: Basin A Imp | Runoff Area=37,763 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=1.82 cfs 0.225 af |
| Subcatchment6S: Basin A Perv | Runoff Area=11,243 sf 0.00% Impervious Runoff Depth=1.45" Tc=10.0 min CN=79 Runoff=0.28 cfs 0.031 af |
| Subcatchment9S: Basin B Imp | Runoff Area=54,598 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=2.64 cfs 0.326 af |
| Subcatchment10S: Basin B Perv | Runoff Area=6,549 sf 0.00% Impervious Runoff Depth=1.52" Tc=10.0 min CN=80 Runoff=0.17 cfs 0.019 af |
| Subcatchment13S: Basin C Perv | Runoff Area=9,708 sf 0.00% Impervious Runoff Depth=1.45" Tc=10.0 min CN=79 Runoff=0.24 cfs 0.027 af |
| Subcatchment22S: West Und. Imp | Runoff Area=222 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=0.01 cfs 0.001 af |
| Subcatchment23S: West Und. Perv | Runoff Area=9,505 sf 0.00% Impervious Runoff Depth=1.38" Tc=10.0 min CN=78 Runoff=0.22 cfs 0.025 af |
| Subcatchment24S: East Und. Imp | Runoff Area=39,415 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=1.90 cfs 0.235 af |
| Subcatchment25S: East Und. Perv | Runoff Area=10,428 sf 0.00% Impervious Runoff Depth=1.52" Tc=10.0 min CN=80 Runoff=0.27 cfs 0.030 af |
| Subcatchment35S: Basin C Imp | Runoff Area=38,191 sf 100.00% Impervious Runoff Depth=3.12" Tc=10.0 min CN=98 Runoff=1.84 cfs 0.228 af |
| Pond 19P: Basin A | Peak Elev=103.67' Storage=5,830 cf Inflow=2.10 cfs 0.256 af Outflow=0.88 cfs 0.148 af |
| Pond 20P: Basin B | Peak Elev=103.31' Storage=9,143 cf Inflow=2.80 cfs 0.345 af Outflow=0.66 cfs 0.173 af |
| Pond 21P: Basin C | Peak Elev=100.71' Storage=6,316 cf Inflow=2.08 cfs 0.255 af Outflow=0.58 cfs 0.150 af |
| Link 29L: West Und. Total | Inflow=0.23 cfs 0.026 af Primary=0.23 cfs 0.026 af |
| Link 30L: East Und. Total | Inflow=2.17 cfs 0.265 af Primary=2.17 cfs 0.265 af |
| Link 31L: Prop. West Total | Inflow=1.00 cfs 0.174 af Primary=1.00 cfs 0.174 af |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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| | |
|---|---|
| Link 32L: Prop. South Total | Inflow=0.66 cfs 0.173 af Primary=0.66 cfs 0.173 af |
| Link 33L: Prop. East Total | Inflow=2.17 cfs 0.415 af Primary=2.17 cfs 0.415 af |
| Link 34L: Prop. Total | Inflow=2.91 cfs 0.762 af Primary=2.91 cfs 0.762 af |
| Total Runoff Area = 4.996 ac Runoff Volume = 1.147 af Average Runoff Depth = 2.76" | |
| 21.80% Pervious = 1.089 ac 78.20% Impervious = 3.907 ac | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 5S: Basin A Imp

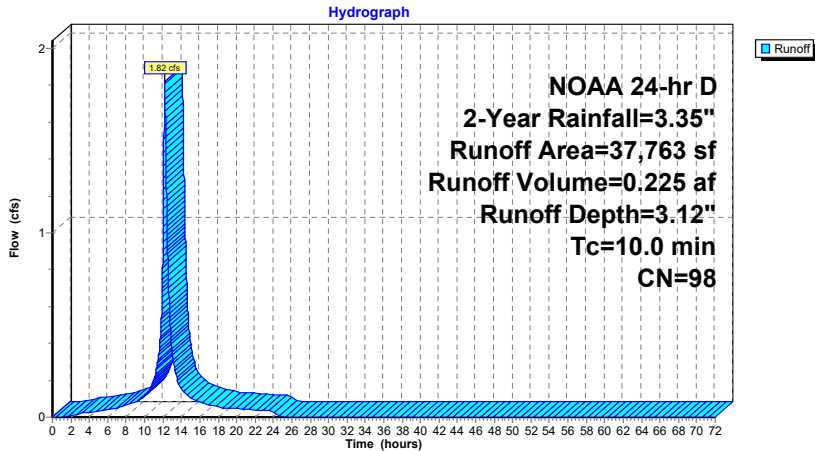
Runoff = 1.82 cfs @ 12.18 hrs, Volume= 0.225 af, Depth= 3.12"
Routed to Pond 19P : Basin A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 37,763 | 98 | Paved parking, HSG D |
| 37,763 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Basin A Imp



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 5S: Basin A Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.02 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.03 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.03 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.04 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.05 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.07 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.08 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.12 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.20 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 0.91 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.36 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.15 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.10 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.08 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.07 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.06 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.05 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.05 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.04 | | | | |
| 22.00 | 3.27 | 3.04 | 0.04 | | | | |
| 23.00 | 3.31 | 3.08 | 0.04 | | | | |
| 24.00 | 3.35 | 3.12 | 0.03 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 6S: Basin A Perv

Runoff = 0.28 cfs @ 12.20 hrs, Volume= 0.031 af, Depth= 1.45"
Routed to Pond 19P : Basin A

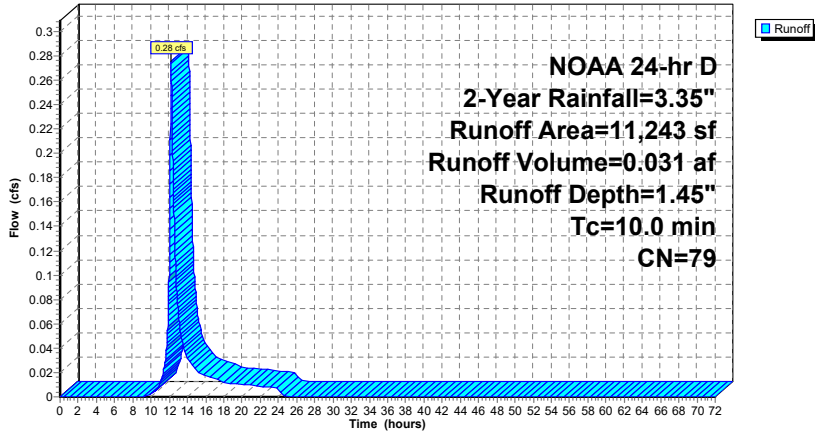
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,616 | 74 | >75% Grass cover, Good, HSG C |
| 9,627 | 80 | >75% Grass cover, Good, HSG D |
| 11,243 | 79 | Weighted Average |
| 11,243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Basin A Perv

Hydrograph



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 6S: Basin A Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.45 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.45 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.45 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.45 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.45 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.45 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.45 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.45 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.45 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.45 | 0.00 |
| 10.00 | 0.66 | 0.01 | 0.00 | 62.00 | 3.35 | 1.45 | 0.00 |
| 11.00 | 0.87 | 0.04 | 0.01 | 63.00 | 3.35 | 1.45 | 0.00 |
| 12.00 | 1.60 | 0.31 | 0.11 | 64.00 | 3.35 | 1.45 | 0.00 |
| 13.00 | 2.48 | 0.82 | 0.07 | 65.00 | 3.35 | 1.45 | 0.00 |
| 14.00 | 2.69 | 0.96 | 0.03 | 66.00 | 3.35 | 1.45 | 0.00 |
| 15.00 | 2.82 | 1.06 | 0.02 | 67.00 | 3.35 | 1.45 | 0.00 |
| 16.00 | 2.92 | 1.13 | 0.02 | 68.00 | 3.35 | 1.45 | 0.00 |
| 17.00 | 3.00 | 1.19 | 0.01 | 69.00 | 3.35 | 1.45 | 0.00 |
| 18.00 | 3.06 | 1.24 | 0.01 | 70.00 | 3.35 | 1.45 | 0.00 |
| 19.00 | 3.12 | 1.28 | 0.01 | 71.00 | 3.35 | 1.45 | 0.00 |
| 20.00 | 3.17 | 1.32 | 0.01 | 72.00 | 3.35 | 1.45 | 0.00 |
| 21.00 | 3.22 | 1.35 | 0.01 | | | | |
| 22.00 | 3.27 | 1.39 | 0.01 | | | | |
| 23.00 | 3.31 | 1.42 | 0.01 | | | | |
| 24.00 | 3.35 | 1.45 | 0.01 | | | | |
| 25.00 | 3.35 | 1.45 | 0.00 | | | | |
| 26.00 | 3.35 | 1.45 | 0.00 | | | | |
| 27.00 | 3.35 | 1.45 | 0.00 | | | | |
| 28.00 | 3.35 | 1.45 | 0.00 | | | | |
| 29.00 | 3.35 | 1.45 | 0.00 | | | | |
| 30.00 | 3.35 | 1.45 | 0.00 | | | | |
| 31.00 | 3.35 | 1.45 | 0.00 | | | | |
| 32.00 | 3.35 | 1.45 | 0.00 | | | | |
| 33.00 | 3.35 | 1.45 | 0.00 | | | | |
| 34.00 | 3.35 | 1.45 | 0.00 | | | | |
| 35.00 | 3.35 | 1.45 | 0.00 | | | | |
| 36.00 | 3.35 | 1.45 | 0.00 | | | | |
| 37.00 | 3.35 | 1.45 | 0.00 | | | | |
| 38.00 | 3.35 | 1.45 | 0.00 | | | | |
| 39.00 | 3.35 | 1.45 | 0.00 | | | | |
| 40.00 | 3.35 | 1.45 | 0.00 | | | | |
| 41.00 | 3.35 | 1.45 | 0.00 | | | | |
| 42.00 | 3.35 | 1.45 | 0.00 | | | | |
| 43.00 | 3.35 | 1.45 | 0.00 | | | | |
| 44.00 | 3.35 | 1.45 | 0.00 | | | | |
| 45.00 | 3.35 | 1.45 | 0.00 | | | | |
| 46.00 | 3.35 | 1.45 | 0.00 | | | | |
| 47.00 | 3.35 | 1.45 | 0.00 | | | | |
| 48.00 | 3.35 | 1.45 | 0.00 | | | | |
| 49.00 | 3.35 | 1.45 | 0.00 | | | | |
| 50.00 | 3.35 | 1.45 | 0.00 | | | | |
| 51.00 | 3.35 | 1.45 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 9S: Basin B Imp

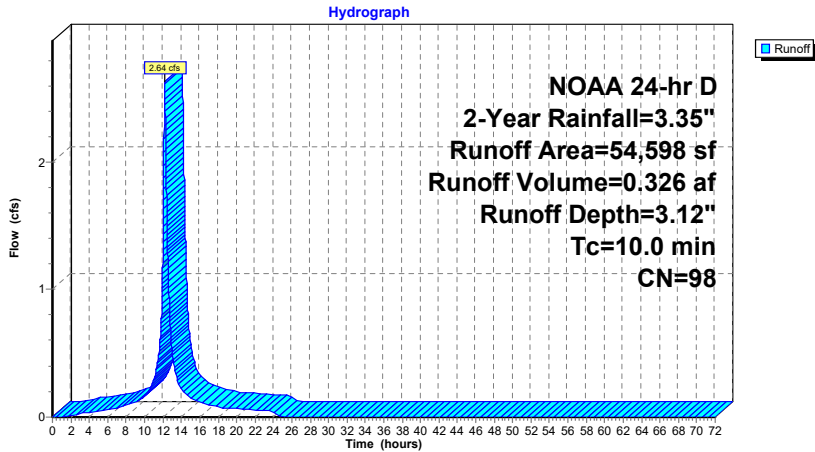
Runoff = 2.64 cfs @ 12.18 hrs, Volume= 0.326 af, Depth= 3.12"
Routed to Pond 20P : Basin B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 54,598 | 98 | Paved parking, HSG D |
| 54,598 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Basin B Imp



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 9S: Basin B Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.03 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.04 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.05 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.06 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.07 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.09 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.12 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.17 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.29 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 1.32 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.52 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.22 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.15 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.12 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.10 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.08 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.07 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.07 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.06 | | | | |
| 22.00 | 3.27 | 3.04 | 0.06 | | | | |
| 23.00 | 3.31 | 3.08 | 0.05 | | | | |
| 24.00 | 3.35 | 3.12 | 0.05 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 10S: Basin B Perv

Runoff = 0.17 cfs @ 12.20 hrs, Volume= 0.019 af, Depth= 1.52"
Routed to Pond 20P : Basin B

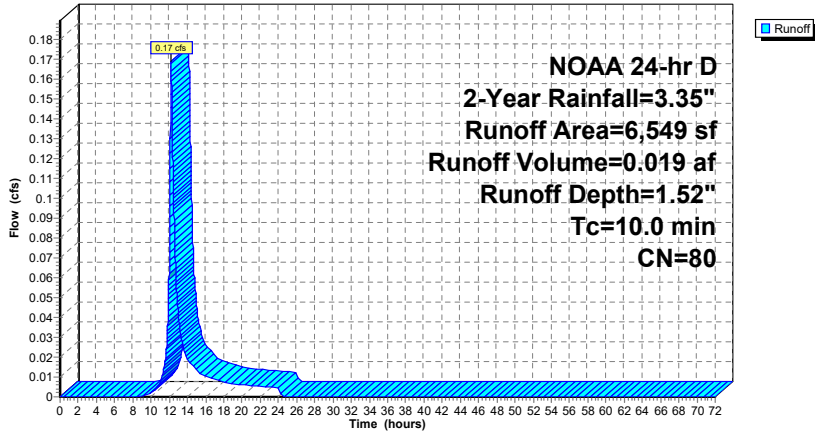
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 433 | 74 | >75% Grass cover, Good, HSG C |
| 6,116 | 80 | >75% Grass cover, Good, HSG D |
| 6,549 | 80 | Weighted Average |
| 6,549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Basin B Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 10S: Basin B Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.52 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.52 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.52 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.52 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.52 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.52 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.52 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.52 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.52 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.52 | 0.00 |
| 10.00 | 0.66 | 0.01 | 0.00 | 62.00 | 3.35 | 1.52 | 0.00 |
| 11.00 | 0.87 | 0.05 | 0.01 | 63.00 | 3.35 | 1.52 | 0.00 |
| 12.00 | 1.60 | 0.34 | 0.07 | 64.00 | 3.35 | 1.52 | 0.00 |
| 13.00 | 2.48 | 0.87 | 0.04 | 65.00 | 3.35 | 1.52 | 0.00 |
| 14.00 | 2.69 | 1.02 | 0.02 | 66.00 | 3.35 | 1.52 | 0.00 |
| 15.00 | 2.82 | 1.12 | 0.01 | 67.00 | 3.35 | 1.52 | 0.00 |
| 16.00 | 2.92 | 1.19 | 0.01 | 68.00 | 3.35 | 1.52 | 0.00 |
| 17.00 | 3.00 | 1.25 | 0.01 | 69.00 | 3.35 | 1.52 | 0.00 |
| 18.00 | 3.06 | 1.30 | 0.01 | 70.00 | 3.35 | 1.52 | 0.00 |
| 19.00 | 3.12 | 1.34 | 0.01 | 71.00 | 3.35 | 1.52 | 0.00 |
| 20.00 | 3.17 | 1.38 | 0.01 | 72.00 | 3.35 | 1.52 | 0.00 |
| 21.00 | 3.22 | 1.42 | 0.01 | | | | |
| 22.00 | 3.27 | 1.46 | 0.01 | | | | |
| 23.00 | 3.31 | 1.49 | 0.00 | | | | |
| 24.00 | 3.35 | 1.52 | 0.00 | | | | |
| 25.00 | 3.35 | 1.52 | 0.00 | | | | |
| 26.00 | 3.35 | 1.52 | 0.00 | | | | |
| 27.00 | 3.35 | 1.52 | 0.00 | | | | |
| 28.00 | 3.35 | 1.52 | 0.00 | | | | |
| 29.00 | 3.35 | 1.52 | 0.00 | | | | |
| 30.00 | 3.35 | 1.52 | 0.00 | | | | |
| 31.00 | 3.35 | 1.52 | 0.00 | | | | |
| 32.00 | 3.35 | 1.52 | 0.00 | | | | |
| 33.00 | 3.35 | 1.52 | 0.00 | | | | |
| 34.00 | 3.35 | 1.52 | 0.00 | | | | |
| 35.00 | 3.35 | 1.52 | 0.00 | | | | |
| 36.00 | 3.35 | 1.52 | 0.00 | | | | |
| 37.00 | 3.35 | 1.52 | 0.00 | | | | |
| 38.00 | 3.35 | 1.52 | 0.00 | | | | |
| 39.00 | 3.35 | 1.52 | 0.00 | | | | |
| 40.00 | 3.35 | 1.52 | 0.00 | | | | |
| 41.00 | 3.35 | 1.52 | 0.00 | | | | |
| 42.00 | 3.35 | 1.52 | 0.00 | | | | |
| 43.00 | 3.35 | 1.52 | 0.00 | | | | |
| 44.00 | 3.35 | 1.52 | 0.00 | | | | |
| 45.00 | 3.35 | 1.52 | 0.00 | | | | |
| 46.00 | 3.35 | 1.52 | 0.00 | | | | |
| 47.00 | 3.35 | 1.52 | 0.00 | | | | |
| 48.00 | 3.35 | 1.52 | 0.00 | | | | |
| 49.00 | 3.35 | 1.52 | 0.00 | | | | |
| 50.00 | 3.35 | 1.52 | 0.00 | | | | |
| 51.00 | 3.35 | 1.52 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 13S: Basin C Perv

Runoff = 0.24 cfs @ 12.20 hrs, Volume= 0.027 af, Depth= 1.45"
Routed to Pond 21P : Basin C

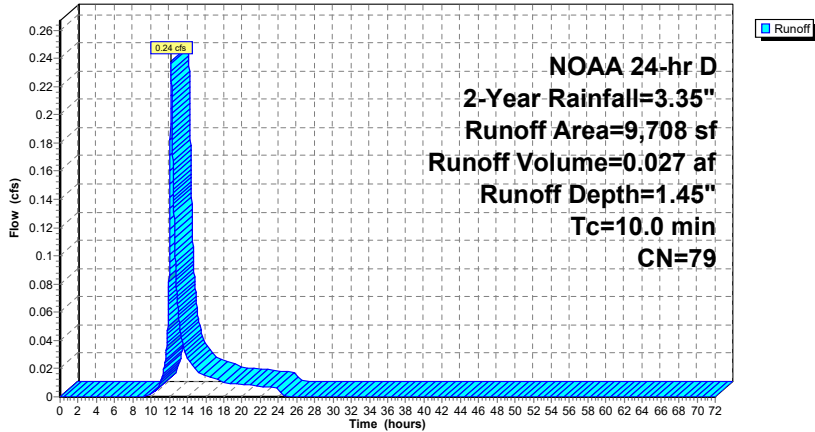
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,568 | 74 | >75% Grass cover, Good, HSG C |
| 8,140 | 80 | >75% Grass cover, Good, HSG D |
| 9,708 | 79 | Weighted Average |
| 9,708 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Basin C Perv

Hydrograph



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 13S: Basin C Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.45 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.45 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.45 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.45 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.45 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.45 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.45 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.45 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.45 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.45 | 0.00 |
| 10.00 | 0.66 | 0.01 | 0.00 | 62.00 | 3.35 | 1.45 | 0.00 |
| 11.00 | 0.87 | 0.04 | 0.01 | 63.00 | 3.35 | 1.45 | 0.00 |
| 12.00 | 1.60 | 0.31 | 0.10 | 64.00 | 3.35 | 1.45 | 0.00 |
| 13.00 | 2.48 | 0.82 | 0.06 | 65.00 | 3.35 | 1.45 | 0.00 |
| 14.00 | 2.69 | 0.96 | 0.03 | 66.00 | 3.35 | 1.45 | 0.00 |
| 15.00 | 2.82 | 1.06 | 0.02 | 67.00 | 3.35 | 1.45 | 0.00 |
| 16.00 | 2.92 | 1.13 | 0.02 | 68.00 | 3.35 | 1.45 | 0.00 |
| 17.00 | 3.00 | 1.19 | 0.01 | 69.00 | 3.35 | 1.45 | 0.00 |
| 18.00 | 3.06 | 1.24 | 0.01 | 70.00 | 3.35 | 1.45 | 0.00 |
| 19.00 | 3.12 | 1.28 | 0.01 | 71.00 | 3.35 | 1.45 | 0.00 |
| 20.00 | 3.17 | 1.32 | 0.01 | 72.00 | 3.35 | 1.45 | 0.00 |
| 21.00 | 3.22 | 1.35 | 0.01 | | | | |
| 22.00 | 3.27 | 1.39 | 0.01 | | | | |
| 23.00 | 3.31 | 1.42 | 0.01 | | | | |
| 24.00 | 3.35 | 1.45 | 0.01 | | | | |
| 25.00 | 3.35 | 1.45 | 0.00 | | | | |
| 26.00 | 3.35 | 1.45 | 0.00 | | | | |
| 27.00 | 3.35 | 1.45 | 0.00 | | | | |
| 28.00 | 3.35 | 1.45 | 0.00 | | | | |
| 29.00 | 3.35 | 1.45 | 0.00 | | | | |
| 30.00 | 3.35 | 1.45 | 0.00 | | | | |
| 31.00 | 3.35 | 1.45 | 0.00 | | | | |
| 32.00 | 3.35 | 1.45 | 0.00 | | | | |
| 33.00 | 3.35 | 1.45 | 0.00 | | | | |
| 34.00 | 3.35 | 1.45 | 0.00 | | | | |
| 35.00 | 3.35 | 1.45 | 0.00 | | | | |
| 36.00 | 3.35 | 1.45 | 0.00 | | | | |
| 37.00 | 3.35 | 1.45 | 0.00 | | | | |
| 38.00 | 3.35 | 1.45 | 0.00 | | | | |
| 39.00 | 3.35 | 1.45 | 0.00 | | | | |
| 40.00 | 3.35 | 1.45 | 0.00 | | | | |
| 41.00 | 3.35 | 1.45 | 0.00 | | | | |
| 42.00 | 3.35 | 1.45 | 0.00 | | | | |
| 43.00 | 3.35 | 1.45 | 0.00 | | | | |
| 44.00 | 3.35 | 1.45 | 0.00 | | | | |
| 45.00 | 3.35 | 1.45 | 0.00 | | | | |
| 46.00 | 3.35 | 1.45 | 0.00 | | | | |
| 47.00 | 3.35 | 1.45 | 0.00 | | | | |
| 48.00 | 3.35 | 1.45 | 0.00 | | | | |
| 49.00 | 3.35 | 1.45 | 0.00 | | | | |
| 50.00 | 3.35 | 1.45 | 0.00 | | | | |
| 51.00 | 3.35 | 1.45 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 22S: West Und. Imp

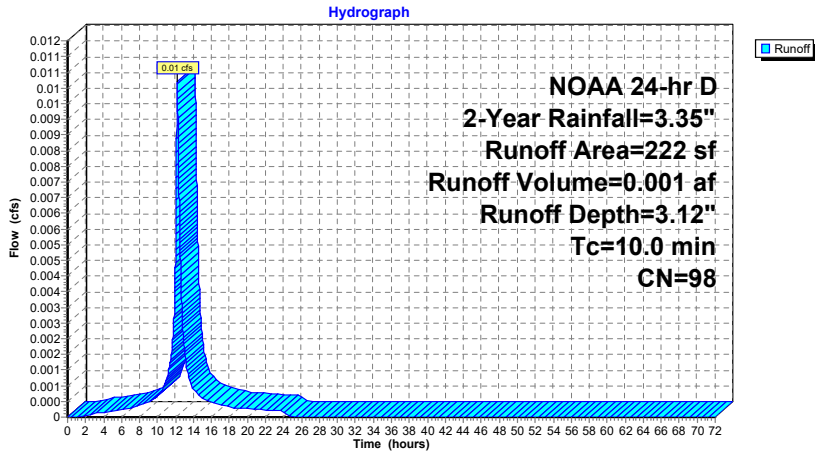
Runoff = 0.01 cfs @ 12.18 hrs, Volume= 0.001 af, Depth= 3.12"
 Routed to Link 29L : West Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 222 | 98 | Paved parking, HSG D |
| 222 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 22S: West Und. Imp



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 22S: West Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.00 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.00 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.00 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.00 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.00 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.00 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.00 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.00 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.00 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.00 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 0.01 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.00 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.00 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.00 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.00 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.00 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.00 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.00 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.00 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.00 | | | | |
| 22.00 | 3.27 | 3.04 | 0.00 | | | | |
| 23.00 | 3.31 | 3.08 | 0.00 | | | | |
| 24.00 | 3.35 | 3.12 | 0.00 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 23S: West Und. Perv

Runoff = 0.22 cfs @ 12.20 hrs, Volume= 0.025 af, Depth= 1.38"
 Routed to Link 29L : West Und. Total

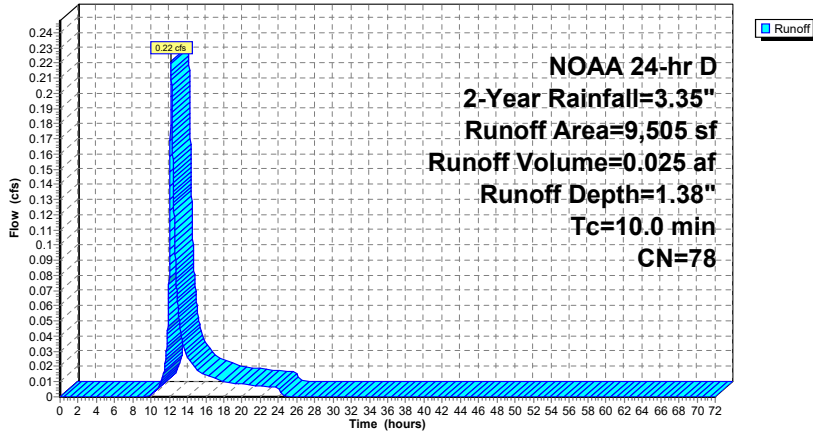
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,838 | 74 | >75% Grass cover, Good, HSG C |
| 6,667 | 80 | >75% Grass cover, Good, HSG D |
| 9,505 | 78 | Weighted Average |
| 9,505 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 23S: West Und. Perv

Hydrograph



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 23S: West Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.38 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.38 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.38 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.38 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.38 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.38 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.38 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.38 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.38 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.38 | 0.00 |
| 10.00 | 0.66 | 0.00 | 0.00 | 62.00 | 3.35 | 1.38 | 0.00 |
| 11.00 | 0.87 | 0.03 | 0.01 | 63.00 | 3.35 | 1.38 | 0.00 |
| 12.00 | 1.60 | 0.28 | 0.09 | 64.00 | 3.35 | 1.38 | 0.00 |
| 13.00 | 2.48 | 0.77 | 0.06 | 65.00 | 3.35 | 1.38 | 0.00 |
| 14.00 | 2.69 | 0.91 | 0.03 | 66.00 | 3.35 | 1.38 | 0.00 |
| 15.00 | 2.82 | 1.00 | 0.02 | 67.00 | 3.35 | 1.38 | 0.00 |
| 16.00 | 2.92 | 1.07 | 0.01 | 68.00 | 3.35 | 1.38 | 0.00 |
| 17.00 | 3.00 | 1.13 | 0.01 | 69.00 | 3.35 | 1.38 | 0.00 |
| 18.00 | 3.06 | 1.17 | 0.01 | 70.00 | 3.35 | 1.38 | 0.00 |
| 19.00 | 3.12 | 1.22 | 0.01 | 71.00 | 3.35 | 1.38 | 0.00 |
| 20.00 | 3.17 | 1.25 | 0.01 | 72.00 | 3.35 | 1.38 | 0.00 |
| 21.00 | 3.22 | 1.29 | 0.01 | | | | |
| 22.00 | 3.27 | 1.32 | 0.01 | | | | |
| 23.00 | 3.31 | 1.36 | 0.01 | | | | |
| 24.00 | 3.35 | 1.38 | 0.01 | | | | |
| 25.00 | 3.35 | 1.38 | 0.00 | | | | |
| 26.00 | 3.35 | 1.38 | 0.00 | | | | |
| 27.00 | 3.35 | 1.38 | 0.00 | | | | |
| 28.00 | 3.35 | 1.38 | 0.00 | | | | |
| 29.00 | 3.35 | 1.38 | 0.00 | | | | |
| 30.00 | 3.35 | 1.38 | 0.00 | | | | |
| 31.00 | 3.35 | 1.38 | 0.00 | | | | |
| 32.00 | 3.35 | 1.38 | 0.00 | | | | |
| 33.00 | 3.35 | 1.38 | 0.00 | | | | |
| 34.00 | 3.35 | 1.38 | 0.00 | | | | |
| 35.00 | 3.35 | 1.38 | 0.00 | | | | |
| 36.00 | 3.35 | 1.38 | 0.00 | | | | |
| 37.00 | 3.35 | 1.38 | 0.00 | | | | |
| 38.00 | 3.35 | 1.38 | 0.00 | | | | |
| 39.00 | 3.35 | 1.38 | 0.00 | | | | |
| 40.00 | 3.35 | 1.38 | 0.00 | | | | |
| 41.00 | 3.35 | 1.38 | 0.00 | | | | |
| 42.00 | 3.35 | 1.38 | 0.00 | | | | |
| 43.00 | 3.35 | 1.38 | 0.00 | | | | |
| 44.00 | 3.35 | 1.38 | 0.00 | | | | |
| 45.00 | 3.35 | 1.38 | 0.00 | | | | |
| 46.00 | 3.35 | 1.38 | 0.00 | | | | |
| 47.00 | 3.35 | 1.38 | 0.00 | | | | |
| 48.00 | 3.35 | 1.38 | 0.00 | | | | |
| 49.00 | 3.35 | 1.38 | 0.00 | | | | |
| 50.00 | 3.35 | 1.38 | 0.00 | | | | |
| 51.00 | 3.35 | 1.38 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 24S: East Und. Imp

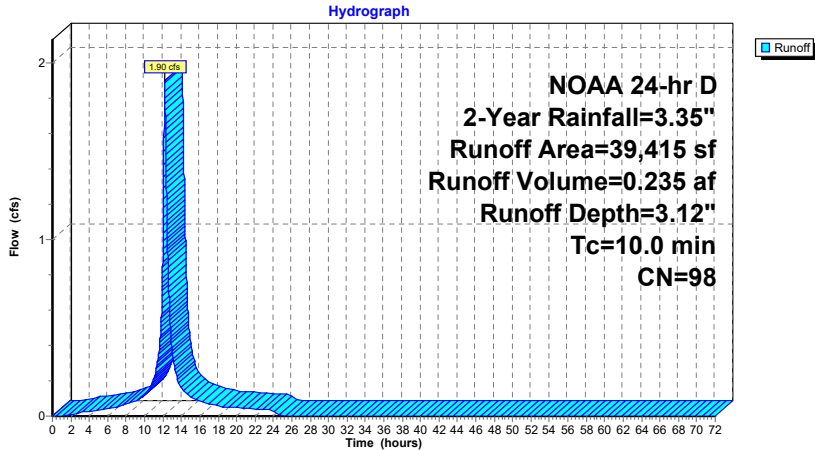
Runoff = 1.90 cfs @ 12.18 hrs, Volume= 0.235 af, Depth= 3.12"
Routed to Link 30L : East Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 39,415 | 98 | Paved parking, HSG D |
| 39,415 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 24S: East Und. Imp



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 24S: East Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.02 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.03 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.04 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.04 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.05 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.07 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.08 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.12 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.21 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 0.95 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.38 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.16 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.11 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.08 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.07 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.06 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.05 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.05 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.04 | | | | |
| 22.00 | 3.27 | 3.04 | 0.04 | | | | |
| 23.00 | 3.31 | 3.08 | 0.04 | | | | |
| 24.00 | 3.35 | 3.12 | 0.03 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

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Summary for Subcatchment 25S: East Und. Perv

Runoff = 0.27 cfs @ 12.20 hrs, Volume= 0.030 af, Depth= 1.52"
Routed to Link 30L : East Und. Total

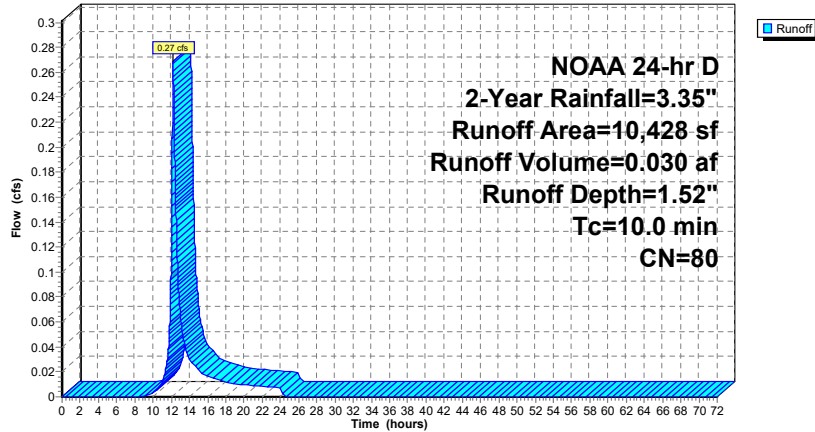
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 307 | 74 | >75% Grass cover, Good, HSG C |
| 10,121 | 80 | >75% Grass cover, Good, HSG D |
| 10,428 | 80 | Weighted Average |
| 10,428 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 25S: East Und. Perv

Hydrograph



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NOAA 24-hr D 2-Year Rainfall=3.35"

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Hydrograph for Subcatchment 25S: East Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 1.52 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 1.52 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 | 54.00 | 3.35 | 1.52 | 0.00 |
| 3.00 | 0.13 | 0.00 | 0.00 | 55.00 | 3.35 | 1.52 | 0.00 |
| 4.00 | 0.18 | 0.00 | 0.00 | 56.00 | 3.35 | 1.52 | 0.00 |
| 5.00 | 0.23 | 0.00 | 0.00 | 57.00 | 3.35 | 1.52 | 0.00 |
| 6.00 | 0.29 | 0.00 | 0.00 | 58.00 | 3.35 | 1.52 | 0.00 |
| 7.00 | 0.35 | 0.00 | 0.00 | 59.00 | 3.35 | 1.52 | 0.00 |
| 8.00 | 0.43 | 0.00 | 0.00 | 60.00 | 3.35 | 1.52 | 0.00 |
| 9.00 | 0.53 | 0.00 | 0.00 | 61.00 | 3.35 | 1.52 | 0.00 |
| 10.00 | 0.66 | 0.01 | 0.00 | 62.00 | 3.35 | 1.52 | 0.00 |
| 11.00 | 0.87 | 0.05 | 0.01 | 63.00 | 3.35 | 1.52 | 0.00 |
| 12.00 | 1.60 | 0.34 | 0.11 | 64.00 | 3.35 | 1.52 | 0.00 |
| 13.00 | 2.48 | 0.87 | 0.07 | 65.00 | 3.35 | 1.52 | 0.00 |
| 14.00 | 2.69 | 1.02 | 0.03 | 66.00 | 3.35 | 1.52 | 0.00 |
| 15.00 | 2.82 | 1.12 | 0.02 | 67.00 | 3.35 | 1.52 | 0.00 |
| 16.00 | 2.92 | 1.19 | 0.02 | 68.00 | 3.35 | 1.52 | 0.00 |
| 17.00 | 3.00 | 1.25 | 0.01 | 69.00 | 3.35 | 1.52 | 0.00 |
| 18.00 | 3.06 | 1.30 | 0.01 | 70.00 | 3.35 | 1.52 | 0.00 |
| 19.00 | 3.12 | 1.34 | 0.01 | 71.00 | 3.35 | 1.52 | 0.00 |
| 20.00 | 3.17 | 1.38 | 0.01 | 72.00 | 3.35 | 1.52 | 0.00 |
| 21.00 | 3.22 | 1.42 | 0.01 | | | | |
| 22.00 | 3.27 | 1.46 | 0.01 | | | | |
| 23.00 | 3.31 | 1.49 | 0.01 | | | | |
| 24.00 | 3.35 | 1.52 | 0.01 | | | | |
| 25.00 | 3.35 | 1.52 | 0.00 | | | | |
| 26.00 | 3.35 | 1.52 | 0.00 | | | | |
| 27.00 | 3.35 | 1.52 | 0.00 | | | | |
| 28.00 | 3.35 | 1.52 | 0.00 | | | | |
| 29.00 | 3.35 | 1.52 | 0.00 | | | | |
| 30.00 | 3.35 | 1.52 | 0.00 | | | | |
| 31.00 | 3.35 | 1.52 | 0.00 | | | | |
| 32.00 | 3.35 | 1.52 | 0.00 | | | | |
| 33.00 | 3.35 | 1.52 | 0.00 | | | | |
| 34.00 | 3.35 | 1.52 | 0.00 | | | | |
| 35.00 | 3.35 | 1.52 | 0.00 | | | | |
| 36.00 | 3.35 | 1.52 | 0.00 | | | | |
| 37.00 | 3.35 | 1.52 | 0.00 | | | | |
| 38.00 | 3.35 | 1.52 | 0.00 | | | | |
| 39.00 | 3.35 | 1.52 | 0.00 | | | | |
| 40.00 | 3.35 | 1.52 | 0.00 | | | | |
| 41.00 | 3.35 | 1.52 | 0.00 | | | | |
| 42.00 | 3.35 | 1.52 | 0.00 | | | | |
| 43.00 | 3.35 | 1.52 | 0.00 | | | | |
| 44.00 | 3.35 | 1.52 | 0.00 | | | | |
| 45.00 | 3.35 | 1.52 | 0.00 | | | | |
| 46.00 | 3.35 | 1.52 | 0.00 | | | | |
| 47.00 | 3.35 | 1.52 | 0.00 | | | | |
| 48.00 | 3.35 | 1.52 | 0.00 | | | | |
| 49.00 | 3.35 | 1.52 | 0.00 | | | | |
| 50.00 | 3.35 | 1.52 | 0.00 | | | | |
| 51.00 | 3.35 | 1.52 | 0.00 | | | | |

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NOAA 24-hr D 2-Year Rainfall=3.35"

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Summary for Subcatchment 35S: Basin C Imp

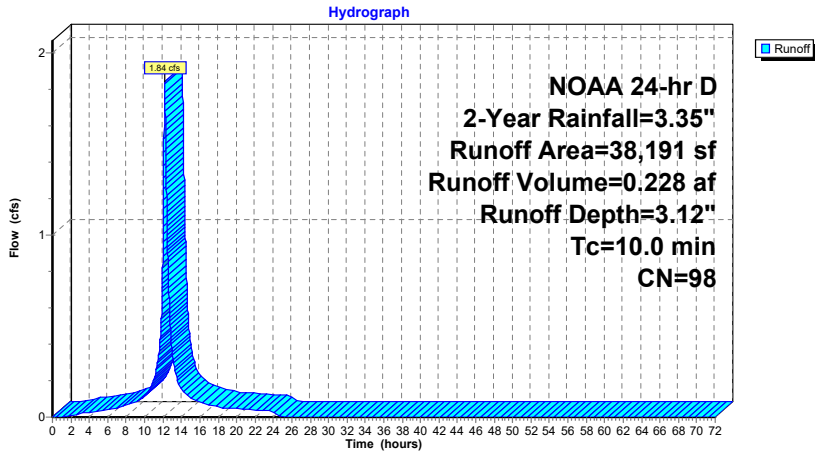
Runoff = 1.84 cfs @ 12.18 hrs, Volume= 0.228 af, Depth= 3.12"
 Routed to Pond 21P : Basin C

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 2-Year Rainfall=3.35"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 38,191 | 98 | Paved parking, HSG D |
| 38,191 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 35S: Basin C Imp



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Hydrograph for Subcatchment 35S: Basin C Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 3.35 | 3.12 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 | 53.00 | 3.35 | 3.12 | 0.00 |
| 2.00 | 0.08 | 0.01 | 0.01 | 54.00 | 3.35 | 3.12 | 0.00 |
| 3.00 | 0.13 | 0.03 | 0.02 | 55.00 | 3.35 | 3.12 | 0.00 |
| 4.00 | 0.18 | 0.05 | 0.03 | 56.00 | 3.35 | 3.12 | 0.00 |
| 5.00 | 0.23 | 0.09 | 0.03 | 57.00 | 3.35 | 3.12 | 0.00 |
| 6.00 | 0.29 | 0.13 | 0.04 | 58.00 | 3.35 | 3.12 | 0.00 |
| 7.00 | 0.35 | 0.19 | 0.05 | 59.00 | 3.35 | 3.12 | 0.00 |
| 8.00 | 0.43 | 0.26 | 0.07 | 60.00 | 3.35 | 3.12 | 0.00 |
| 9.00 | 0.53 | 0.35 | 0.08 | 61.00 | 3.35 | 3.12 | 0.00 |
| 10.00 | 0.66 | 0.47 | 0.12 | 62.00 | 3.35 | 3.12 | 0.00 |
| 11.00 | 0.87 | 0.67 | 0.20 | 63.00 | 3.35 | 3.12 | 0.00 |
| 12.00 | 1.60 | 1.38 | 0.92 | 64.00 | 3.35 | 3.12 | 0.00 |
| 13.00 | 2.48 | 2.25 | 0.36 | 65.00 | 3.35 | 3.12 | 0.00 |
| 14.00 | 2.69 | 2.46 | 0.15 | 66.00 | 3.35 | 3.12 | 0.00 |
| 15.00 | 2.82 | 2.59 | 0.11 | 67.00 | 3.35 | 3.12 | 0.00 |
| 16.00 | 2.92 | 2.68 | 0.08 | 68.00 | 3.35 | 3.12 | 0.00 |
| 17.00 | 3.00 | 2.77 | 0.07 | 69.00 | 3.35 | 3.12 | 0.00 |
| 18.00 | 3.06 | 2.83 | 0.06 | 70.00 | 3.35 | 3.12 | 0.00 |
| 19.00 | 3.12 | 2.89 | 0.05 | 71.00 | 3.35 | 3.12 | 0.00 |
| 20.00 | 3.17 | 2.94 | 0.05 | 72.00 | 3.35 | 3.12 | 0.00 |
| 21.00 | 3.22 | 2.99 | 0.04 | | | | |
| 22.00 | 3.27 | 3.04 | 0.04 | | | | |
| 23.00 | 3.31 | 3.08 | 0.04 | | | | |
| 24.00 | 3.35 | 3.12 | 0.03 | | | | |
| 25.00 | 3.35 | 3.12 | 0.00 | | | | |
| 26.00 | 3.35 | 3.12 | 0.00 | | | | |
| 27.00 | 3.35 | 3.12 | 0.00 | | | | |
| 28.00 | 3.35 | 3.12 | 0.00 | | | | |
| 29.00 | 3.35 | 3.12 | 0.00 | | | | |
| 30.00 | 3.35 | 3.12 | 0.00 | | | | |
| 31.00 | 3.35 | 3.12 | 0.00 | | | | |
| 32.00 | 3.35 | 3.12 | 0.00 | | | | |
| 33.00 | 3.35 | 3.12 | 0.00 | | | | |
| 34.00 | 3.35 | 3.12 | 0.00 | | | | |
| 35.00 | 3.35 | 3.12 | 0.00 | | | | |
| 36.00 | 3.35 | 3.12 | 0.00 | | | | |
| 37.00 | 3.35 | 3.12 | 0.00 | | | | |
| 38.00 | 3.35 | 3.12 | 0.00 | | | | |
| 39.00 | 3.35 | 3.12 | 0.00 | | | | |
| 40.00 | 3.35 | 3.12 | 0.00 | | | | |
| 41.00 | 3.35 | 3.12 | 0.00 | | | | |
| 42.00 | 3.35 | 3.12 | 0.00 | | | | |
| 43.00 | 3.35 | 3.12 | 0.00 | | | | |
| 44.00 | 3.35 | 3.12 | 0.00 | | | | |
| 45.00 | 3.35 | 3.12 | 0.00 | | | | |
| 46.00 | 3.35 | 3.12 | 0.00 | | | | |
| 47.00 | 3.35 | 3.12 | 0.00 | | | | |
| 48.00 | 3.35 | 3.12 | 0.00 | | | | |
| 49.00 | 3.35 | 3.12 | 0.00 | | | | |
| 50.00 | 3.35 | 3.12 | 0.00 | | | | |
| 51.00 | 3.35 | 3.12 | 0.00 | | | | |

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Summary for Pond 19P: Basin A

Inflow Area = 1.125 ac, 77.06% Impervious, Inflow Depth = 2.73" for 2-Year event
 Inflow = 2.10 cfs @ 12.18 hrs, Volume= 0.256 af
 Outflow = 0.88 cfs @ 12.60 hrs, Volume= 0.148 af, Atten= 58%, Lag= 24.9 min
 Primary = 0.88 cfs @ 12.60 hrs, Volume= 0.148 af
 Routed to Link 31L : Prop. West Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 103.67' @ 12.60 hrs Surf.Area= 4,263 sf Storage= 5,830 cf

Plug-Flow detention time= 275.7 min calculated for 0.148 af (58% of inflow)
 Center-of-Mass det. time= 150.0 min (929.0 - 779.0)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 102.00' | 12,392 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|------------------|-------------------|------------------------|------------------------|
| 102.00 | 2,770 | 0 | 0 |
| 103.00 | 3,632 | 3,201 | 3,201 |
| 104.00 | 4,579 | 4,106 | 7,307 |
| 105.00 | 5,592 | 5,086 | 12,392 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 99.75' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 99.75' / 99.75' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 103.40' | 24.0" W x 10.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Primary | 104.25' | 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.88 cfs @ 12.60 hrs HW=103.67' (Free Discharge)

- 1=Culvert (Passes 0.88 cfs of 13.40 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.88 cfs @ 1.66 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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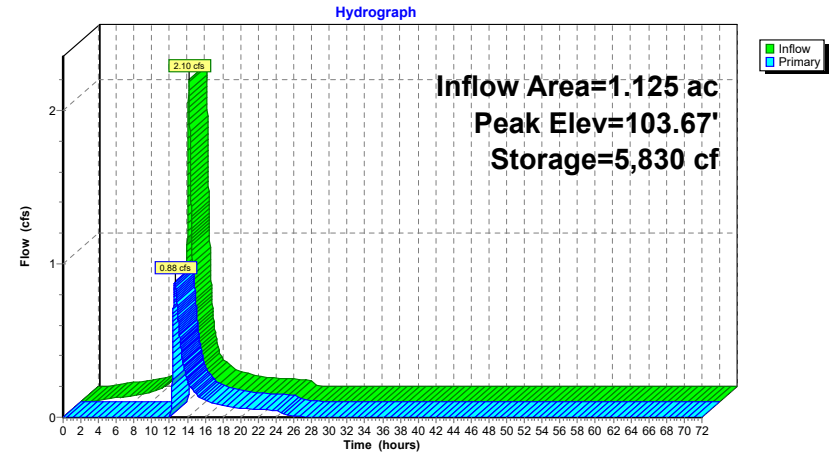
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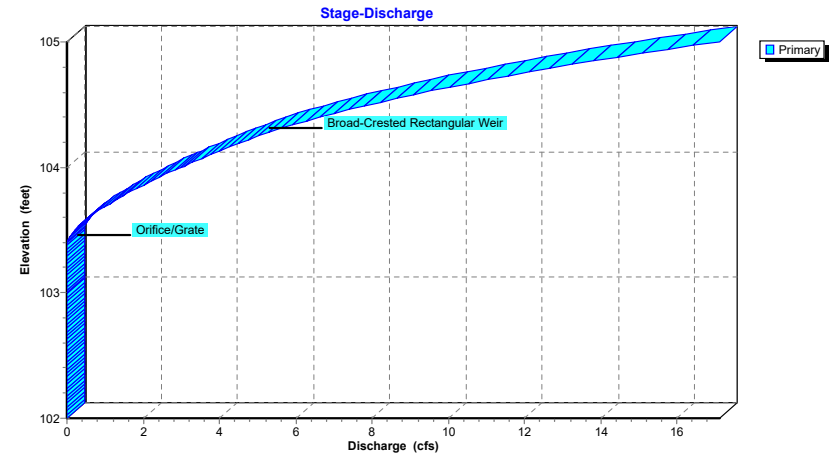
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Pond 19P: Basin A

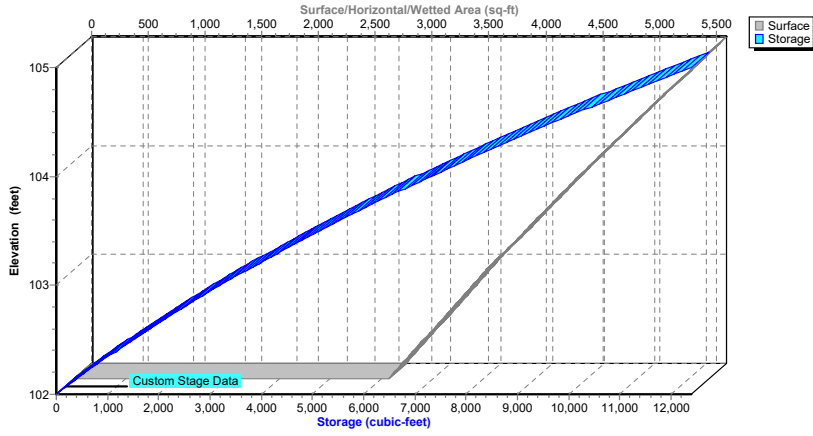


Pond 19P: Basin A



Pond 19P: Basin A

Stage-Area-Storage



Hydrograph for Pond 19P: Basin A

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 102.00 | 0.00 |
| 2.00 | 0.01 | 12 | 102.00 | 0.00 |
| 4.00 | 0.03 | 144 | 102.05 | 0.00 |
| 6.00 | 0.04 | 384 | 102.14 | 0.00 |
| 8.00 | 0.07 | 755 | 102.26 | 0.00 |
| 10.00 | 0.12 | 1,368 | 102.46 | 0.00 |
| 12.00 | 1.02 | 3,423 | 103.06 | 0.00 |
| 14.00 | 0.18 | 5,183 | 103.51 | 0.24 |
| 16.00 | 0.10 | 4,996 | 103.47 | 0.11 |
| 18.00 | 0.07 | 4,934 | 103.45 | 0.08 |
| 20.00 | 0.06 | 4,903 | 103.44 | 0.06 |
| 22.00 | 0.05 | 4,888 | 103.44 | 0.05 |
| 24.00 | 0.04 | 4,868 | 103.43 | 0.04 |
| 26.00 | 0.00 | 4,763 | 103.41 | 0.01 |
| 28.00 | 0.00 | 4,740 | 103.40 | 0.00 |
| 30.00 | 0.00 | 4,733 | 103.40 | 0.00 |
| 32.00 | 0.00 | 4,731 | 103.40 | 0.00 |
| 34.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 36.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 38.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 40.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 42.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 44.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 46.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 48.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 50.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 52.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 54.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 56.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 58.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 60.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 62.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 64.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 66.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 68.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 70.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 72.00 | 0.00 | 4,730 | 103.40 | 0.00 |

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Stage-Discharge for Pond 19P: Basin A

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|
| 102.00 | 0.00 | 103.04 | 0.00 | 104.08 | 3.60 |
| 102.02 | 0.00 | 103.06 | 0.00 | 104.10 | 3.76 |
| 102.04 | 0.00 | 103.08 | 0.00 | 104.12 | 3.92 |
| 102.06 | 0.00 | 103.10 | 0.00 | 104.14 | 4.09 |
| 102.08 | 0.00 | 103.12 | 0.00 | 104.16 | 4.25 |
| 102.10 | 0.00 | 103.14 | 0.00 | 104.18 | 4.42 |
| 102.12 | 0.00 | 103.16 | 0.00 | 104.20 | 4.59 |
| 102.14 | 0.00 | 103.18 | 0.00 | 104.22 | 4.77 |
| 102.16 | 0.00 | 103.20 | 0.00 | 104.24 | 4.94 |
| 102.18 | 0.00 | 103.22 | 0.00 | 104.26 | 5.10 |
| 102.20 | 0.00 | 103.24 | 0.00 | 104.28 | 5.29 |
| 102.22 | 0.00 | 103.26 | 0.00 | 104.30 | 5.50 |
| 102.24 | 0.00 | 103.28 | 0.00 | 104.32 | 5.71 |
| 102.26 | 0.00 | 103.30 | 0.00 | 104.34 | 5.93 |
| 102.28 | 0.00 | 103.32 | 0.00 | 104.36 | 6.16 |
| 102.30 | 0.00 | 103.34 | 0.00 | 104.38 | 6.39 |
| 102.32 | 0.00 | 103.36 | 0.00 | 104.40 | 6.63 |
| 102.34 | 0.00 | 103.38 | 0.00 | 104.42 | 6.88 |
| 102.36 | 0.00 | 103.40 | 0.00 | 104.44 | 7.13 |
| 102.38 | 0.00 | 103.42 | 0.02 | 104.46 | 7.39 |
| 102.40 | 0.00 | 103.44 | 0.05 | 104.48 | 7.66 |
| 102.42 | 0.00 | 103.46 | 0.09 | 104.50 | 7.94 |
| 102.44 | 0.00 | 103.48 | 0.15 | 104.52 | 8.22 |
| 102.46 | 0.00 | 103.50 | 0.20 | 104.54 | 8.51 |
| 102.48 | 0.00 | 103.52 | 0.27 | 104.56 | 8.80 |
| 102.50 | 0.00 | 103.54 | 0.34 | 104.58 | 9.10 |
| 102.52 | 0.00 | 103.56 | 0.41 | 104.60 | 9.41 |
| 102.54 | 0.00 | 103.58 | 0.49 | 104.62 | 9.72 |
| 102.56 | 0.00 | 103.60 | 0.57 | 104.64 | 10.04 |
| 102.58 | 0.00 | 103.62 | 0.66 | 104.66 | 10.37 |
| 102.60 | 0.00 | 103.64 | 0.75 | 104.68 | 10.70 |
| 102.62 | 0.00 | 103.66 | 0.85 | 104.70 | 11.04 |
| 102.64 | 0.00 | 103.68 | 0.95 | 104.72 | 11.39 |
| 102.66 | 0.00 | 103.70 | 1.05 | 104.74 | 11.75 |
| 102.68 | 0.00 | 103.72 | 1.16 | 104.76 | 12.11 |
| 102.70 | 0.00 | 103.74 | 1.27 | 104.78 | 12.48 |
| 102.72 | 0.00 | 103.76 | 1.39 | 104.80 | 12.86 |
| 102.74 | 0.00 | 103.78 | 1.50 | 104.82 | 13.24 |
| 102.76 | 0.00 | 103.80 | 1.62 | 104.84 | 13.63 |
| 102.78 | 0.00 | 103.82 | 1.75 | 104.86 | 14.03 |
| 102.80 | 0.00 | 103.84 | 1.87 | 104.88 | 14.45 |
| 102.82 | 0.00 | 103.86 | 2.00 | 104.90 | 14.87 |
| 102.84 | 0.00 | 103.88 | 2.13 | 104.92 | 15.30 |
| 102.86 | 0.00 | 103.90 | 2.27 | 104.94 | 15.74 |
| 102.88 | 0.00 | 103.92 | 2.41 | 104.96 | 16.19 |
| 102.90 | 0.00 | 103.94 | 2.55 | 104.98 | 16.65 |
| 102.92 | 0.00 | 103.96 | 2.69 | 105.00 | 17.11 |
| 102.94 | 0.00 | 103.98 | 2.84 | | |
| 102.96 | 0.00 | 104.00 | 2.98 | | |
| 102.98 | 0.00 | 104.02 | 3.13 | | |
| 103.00 | 0.00 | 104.04 | 3.29 | | |
| 103.02 | 0.00 | 104.06 | 3.44 | | |

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Stage-Area-Storage for Pond 19P: Basin A

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 102.00 | 2,770 | 0 | 104.60 | 5,187 | 10,236 |
| 102.05 | 2,813 | 140 | 104.65 | 5,237 | 10,497 |
| 102.10 | 2,856 | 281 | 104.70 | 5,288 | 10,760 |
| 102.15 | 2,899 | 425 | 104.75 | 5,339 | 11,026 |
| 102.20 | 2,942 | 571 | 104.80 | 5,389 | 11,294 |
| 102.25 | 2,986 | 719 | 104.85 | 5,440 | 11,565 |
| 102.30 | 3,029 | 870 | 104.90 | 5,491 | 11,838 |
| 102.35 | 3,072 | 1,022 | 104.95 | 5,541 | 12,114 |
| 102.40 | 3,115 | 1,177 | 105.00 | 5,592 | 12,392 |
| 102.45 | 3,158 | 1,334 | | | |
| 102.50 | 3,201 | 1,493 | | | |
| 102.55 | 3,244 | 1,654 | | | |
| 102.60 | 3,287 | 1,817 | | | |
| 102.65 | 3,330 | 1,983 | | | |
| 102.70 | 3,373 | 2,150 | | | |
| 102.75 | 3,417 | 2,320 | | | |
| 102.80 | 3,460 | 2,492 | | | |
| 102.85 | 3,503 | 2,666 | | | |
| 102.90 | 3,546 | 2,842 | | | |
| 102.95 | 3,589 | 3,020 | | | |
| 103.00 | 3,632 | 3,201 | | | |
| 103.05 | 3,679 | 3,384 | | | |
| 103.10 | 3,727 | 3,569 | | | |
| 103.15 | 3,774 | 3,756 | | | |
| 103.20 | 3,821 | 3,946 | | | |
| 103.25 | 3,869 | 4,139 | | | |
| 103.30 | 3,916 | 4,333 | | | |
| 103.35 | 3,963 | 4,530 | | | |
| 103.40 | 4,011 | 4,730 | | | |
| 103.45 | 4,058 | 4,931 | | | |
| 103.50 | 4,106 | 5,135 | | | |
| 103.55 | 4,153 | 5,342 | | | |
| 103.60 | 4,200 | 5,551 | | | |
| 103.65 | 4,248 | 5,762 | | | |
| 103.70 | 4,295 | 5,975 | | | |
| 103.75 | 4,342 | 6,191 | | | |
| 103.80 | 4,390 | 6,410 | | | |
| 103.85 | 4,437 | 6,630 | | | |
| 103.90 | 4,484 | 6,853 | | | |
| 103.95 | 4,532 | 7,079 | | | |
| 104.00 | 4,579 | 7,307 | | | |
| 104.05 | 4,630 | 7,537 | | | |
| 104.10 | 4,680 | 7,769 | | | |
| 104.15 | 4,731 | 8,005 | | | |
| 104.20 | 4,782 | 8,243 | | | |
| 104.25 | 4,832 | 8,483 | | | |
| 104.30 | 4,883 | 8,726 | | | |
| 104.35 | 4,934 | 8,971 | | | |
| 104.40 | 4,984 | 9,219 | | | |
| 104.45 | 5,035 | 9,470 | | | |
| 104.50 | 5,086 | 9,723 | | | |
| 104.55 | 5,136 | 9,978 | | | |

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Summary for Pond 20P: Basin B

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 2.95" for 2-Year event
 Inflow = 2.80 cfs @ 12.18 hrs, Volume= 0.345 af
 Outflow = 0.66 cfs @ 12.88 hrs, Volume= 0.173 af, Atten= 76%, Lag= 41.8 min
 Primary = 0.66 cfs @ 12.88 hrs, Volume= 0.173 af
 Routed to Link 32L : Prop. South Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 103.31' @ 12.88 hrs Surf.Area= 4,072 sf Storage= 9,143 cf

Plug-Flow detention time= 366.5 min calculated for 0.173 af (50% of inflow)
 Center-of-Mass det. time= 227.5 min (999.8 - 772.3)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 101.00' | 16,194 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 101.00 | 3,841 | 0 | 0 |
| 102.00 | 3,941 | 3,891 | 3,891 |
| 103.00 | 4,041 | 3,991 | 7,882 |
| 104.00 | 4,141 | 4,091 | 11,973 |
| 105.00 | 4,301 | 4,221 | 16,194 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 98.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 98.50' / 98.50' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 102.90' | 12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 104.30' | 4.0" long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.66 cfs @ 12.88 hrs HW=103.31' (Free Discharge)

- 1=Culvert (Passes 0.66 cfs of 15.11 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.66 cfs @ 2.18 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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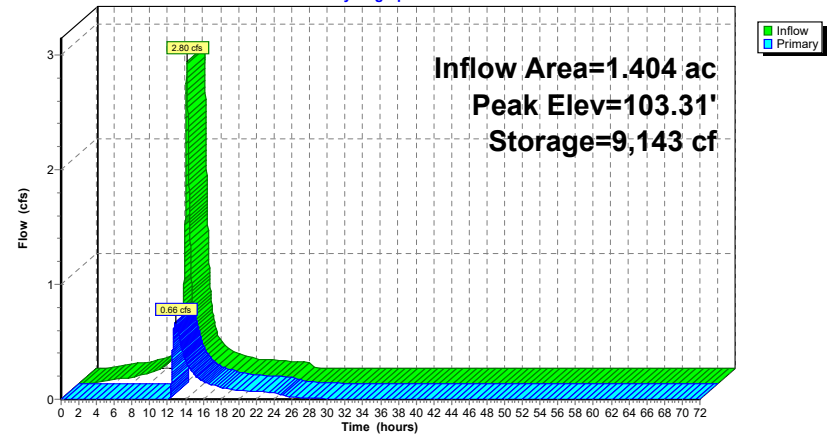
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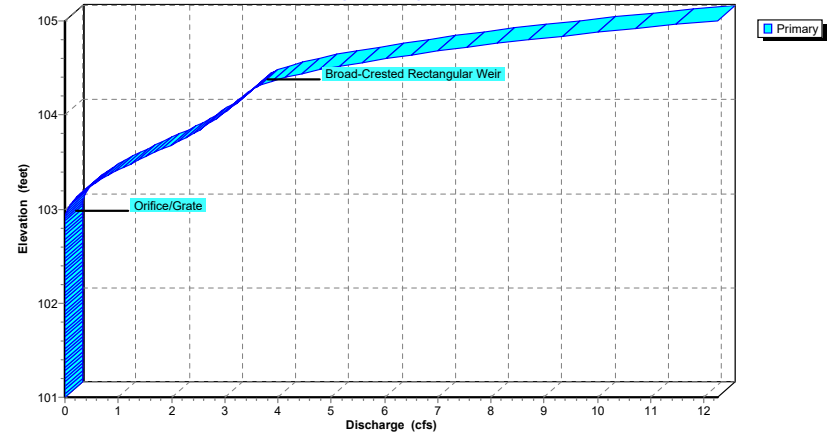
Pond 20P: Basin B

Hydrograph



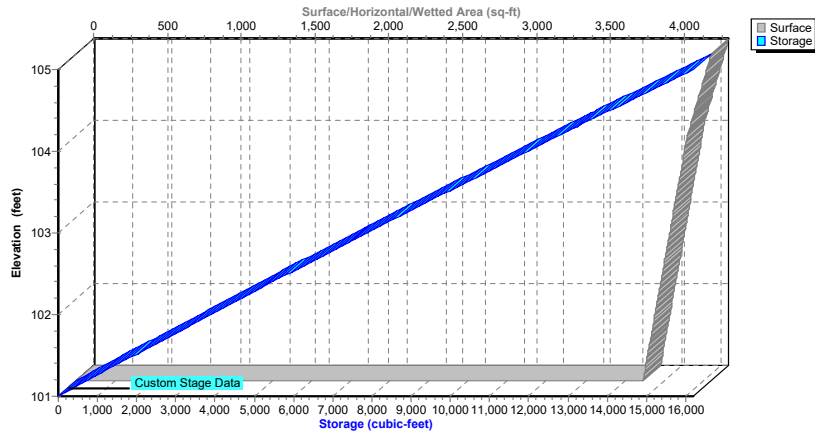
Pond 20P: Basin B

Stage-Discharge



Pond 20P: Basin B

Stage-Area-Storage



Hydrograph for Pond 20P: Basin B

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 101.00 | 0.00 |
| 2.00 | 0.01 | 17 | 101.00 | 0.00 |
| 4.00 | 0.04 | 208 | 101.05 | 0.00 |
| 6.00 | 0.06 | 556 | 101.14 | 0.00 |
| 8.00 | 0.09 | 1,092 | 101.28 | 0.00 |
| 10.00 | 0.17 | 1,977 | 101.51 | 0.00 |
| 12.00 | 1.39 | 4,832 | 102.24 | 0.00 |
| 14.00 | 0.24 | 8,642 | 103.19 | 0.34 |
| 16.00 | 0.13 | 8,245 | 103.09 | 0.16 |
| 18.00 | 0.09 | 8,102 | 103.05 | 0.10 |
| 20.00 | 0.07 | 8,020 | 103.03 | 0.08 |
| 22.00 | 0.06 | 7,975 | 103.02 | 0.07 |
| 24.00 | 0.05 | 7,934 | 103.01 | 0.06 |
| 26.00 | 0.00 | 7,730 | 102.96 | 0.02 |
| 28.00 | 0.00 | 7,640 | 102.94 | 0.01 |
| 30.00 | 0.00 | 7,592 | 102.93 | 0.00 |
| 32.00 | 0.00 | 7,567 | 102.92 | 0.00 |
| 34.00 | 0.00 | 7,553 | 102.92 | 0.00 |
| 36.00 | 0.00 | 7,542 | 102.92 | 0.00 |
| 38.00 | 0.00 | 7,532 | 102.91 | 0.00 |
| 40.00 | 0.00 | 7,524 | 102.91 | 0.00 |
| 42.00 | 0.00 | 7,518 | 102.91 | 0.00 |
| 44.00 | 0.00 | 7,512 | 102.91 | 0.00 |
| 46.00 | 0.00 | 7,507 | 102.91 | 0.00 |
| 48.00 | 0.00 | 7,503 | 102.91 | 0.00 |
| 50.00 | 0.00 | 7,499 | 102.91 | 0.00 |
| 52.00 | 0.00 | 7,496 | 102.90 | 0.00 |
| 54.00 | 0.00 | 7,493 | 102.90 | 0.00 |
| 56.00 | 0.00 | 7,491 | 102.90 | 0.00 |
| 58.00 | 0.00 | 7,489 | 102.90 | 0.00 |
| 60.00 | 0.00 | 7,488 | 102.90 | 0.00 |
| 62.00 | 0.00 | 7,486 | 102.90 | 0.00 |
| 64.00 | 0.00 | 7,485 | 102.90 | 0.00 |
| 66.00 | 0.00 | 7,484 | 102.90 | 0.00 |
| 68.00 | 0.00 | 7,483 | 102.90 | 0.00 |
| 70.00 | 0.00 | 7,483 | 102.90 | 0.00 |
| 72.00 | 0.00 | 7,482 | 102.90 | 0.00 |

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Stage-Discharge for Pond 20P: Basin B

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| 101.00 | 0.00 | 102.04 | 0.00 | 103.08 | 0.14 | 104.12 | 3.21 |
| 101.02 | 0.00 | 102.06 | 0.00 | 103.10 | 0.17 | 104.14 | 3.25 |
| 101.04 | 0.00 | 102.08 | 0.00 | 103.12 | 0.20 | 104.16 | 3.30 |
| 101.06 | 0.00 | 102.10 | 0.00 | 103.14 | 0.24 | 104.18 | 3.34 |
| 101.08 | 0.00 | 102.12 | 0.00 | 103.16 | 0.28 | 104.20 | 3.38 |
| 101.10 | 0.00 | 102.14 | 0.00 | 103.18 | 0.32 | 104.22 | 3.42 |
| 101.12 | 0.00 | 102.16 | 0.00 | 103.20 | 0.37 | 104.24 | 3.47 |
| 101.14 | 0.00 | 102.18 | 0.00 | 103.22 | 0.42 | 104.26 | 3.51 |
| 101.16 | 0.00 | 102.20 | 0.00 | 103.24 | 0.47 | 104.28 | 3.55 |
| 101.18 | 0.00 | 102.22 | 0.00 | 103.26 | 0.52 | 104.30 | 3.59 |
| 101.20 | 0.00 | 102.24 | 0.00 | 103.28 | 0.57 | 104.32 | 3.66 |
| 101.22 | 0.00 | 102.26 | 0.00 | 103.30 | 0.63 | 104.34 | 3.76 |
| 101.24 | 0.00 | 102.28 | 0.00 | 103.32 | 0.69 | 104.36 | 3.87 |
| 101.26 | 0.00 | 102.30 | 0.00 | 103.34 | 0.75 | 104.38 | 4.00 |
| 101.28 | 0.00 | 102.32 | 0.00 | 103.36 | 0.81 | 104.40 | 4.14 |
| 101.30 | 0.00 | 102.34 | 0.00 | 103.38 | 0.88 | 104.42 | 4.28 |
| 101.32 | 0.00 | 102.36 | 0.00 | 103.40 | 0.95 | 104.44 | 4.44 |
| 101.34 | 0.00 | 102.38 | 0.00 | 103.42 | 1.01 | 104.46 | 4.61 |
| 101.36 | 0.00 | 102.40 | 0.00 | 103.44 | 1.08 | 104.48 | 4.79 |
| 101.38 | 0.00 | 102.42 | 0.00 | 103.46 | 1.15 | 104.50 | 4.97 |
| 101.40 | 0.00 | 102.44 | 0.00 | 103.48 | 1.22 | 104.52 | 5.16 |
| 101.42 | 0.00 | 102.46 | 0.00 | 103.50 | 1.30 | 104.54 | 5.37 |
| 101.44 | 0.00 | 102.48 | 0.00 | 103.52 | 1.37 | 104.56 | 5.58 |
| 101.46 | 0.00 | 102.50 | 0.00 | 103.54 | 1.45 | 104.58 | 5.80 |
| 101.48 | 0.00 | 102.52 | 0.00 | 103.56 | 1.52 | 104.60 | 6.02 |
| 101.50 | 0.00 | 102.54 | 0.00 | 103.58 | 1.60 | 104.62 | 6.26 |
| 101.52 | 0.00 | 102.56 | 0.00 | 103.60 | 1.67 | 104.64 | 6.50 |
| 101.54 | 0.00 | 102.58 | 0.00 | 103.62 | 1.75 | 104.66 | 6.75 |
| 101.56 | 0.00 | 102.60 | 0.00 | 103.64 | 1.83 | 104.68 | 7.00 |
| 101.58 | 0.00 | 102.62 | 0.00 | 103.66 | 1.90 | 104.70 | 7.27 |
| 101.60 | 0.00 | 102.64 | 0.00 | 103.68 | 1.98 | 104.72 | 7.54 |
| 101.62 | 0.00 | 102.66 | 0.00 | 103.70 | 2.05 | 104.74 | 7.82 |
| 101.64 | 0.00 | 102.68 | 0.00 | 103.72 | 2.13 | 104.76 | 8.11 |
| 101.66 | 0.00 | 102.70 | 0.00 | 103.74 | 2.20 | 104.78 | 8.41 |
| 101.68 | 0.00 | 102.72 | 0.00 | 103.76 | 2.27 | 104.80 | 8.72 |
| 101.70 | 0.00 | 102.74 | 0.00 | 103.78 | 2.34 | 104.82 | 9.03 |
| 101.72 | 0.00 | 102.76 | 0.00 | 103.80 | 2.40 | 104.84 | 9.35 |
| 101.74 | 0.00 | 102.78 | 0.00 | 103.82 | 2.47 | 104.86 | 9.68 |
| 101.76 | 0.00 | 102.80 | 0.00 | 103.84 | 2.53 | 104.88 | 10.01 |
| 101.78 | 0.00 | 102.82 | 0.00 | 103.86 | 2.58 | 104.90 | 10.36 |
| 101.80 | 0.00 | 102.84 | 0.00 | 103.88 | 2.63 | 104.92 | 10.72 |
| 101.82 | 0.00 | 102.86 | 0.00 | 103.90 | 2.67 | 104.94 | 11.09 |
| 101.84 | 0.00 | 102.88 | 0.00 | 103.92 | 2.73 | 104.96 | 11.47 |
| 101.86 | 0.00 | 102.90 | 0.00 | 103.94 | 2.78 | 104.98 | 11.86 |
| 101.88 | 0.00 | 102.92 | 0.00 | 103.96 | 2.83 | 105.00 | 12.26 |
| 101.90 | 0.00 | 102.94 | 0.01 | 103.98 | 2.88 | | |
| 101.92 | 0.00 | 102.96 | 0.02 | 104.00 | 2.93 | | |
| 101.94 | 0.00 | 102.98 | 0.03 | 104.02 | 2.98 | | |
| 101.96 | 0.00 | 103.00 | 0.04 | 104.04 | 3.03 | | |
| 101.98 | 0.00 | 103.02 | 0.06 | 104.06 | 3.07 | | |
| 102.00 | 0.00 | 103.04 | 0.09 | 104.08 | 3.12 | | |
| 102.02 | 0.00 | 103.06 | 0.11 | 104.10 | 3.16 | | |

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Stage-Area-Storage for Pond 20P: Basin B

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 101.00 | 3,841 | 0 | 103.60 | 4,101 | 10,325 |
| 101.05 | 3,846 | 192 | 103.65 | 4,106 | 10,530 |
| 101.10 | 3,851 | 385 | 103.70 | 4,111 | 10,735 |
| 101.15 | 3,856 | 577 | 103.75 | 4,116 | 10,941 |
| 101.20 | 3,861 | 770 | 103.80 | 4,121 | 11,147 |
| 101.25 | 3,866 | 963 | 103.85 | 4,126 | 11,353 |
| 101.30 | 3,871 | 1,157 | 103.90 | 4,131 | 11,559 |
| 101.35 | 3,876 | 1,350 | 103.95 | 4,136 | 11,766 |
| 101.40 | 3,881 | 1,544 | 104.00 | 4,141 | 11,973 |
| 101.45 | 3,886 | 1,739 | 104.05 | 4,149 | 12,180 |
| 101.50 | 3,891 | 1,933 | 104.10 | 4,157 | 12,388 |
| 101.55 | 3,896 | 2,128 | 104.15 | 4,165 | 12,596 |
| 101.60 | 3,901 | 2,323 | 104.20 | 4,173 | 12,804 |
| 101.65 | 3,906 | 2,518 | 104.25 | 4,181 | 13,013 |
| 101.70 | 3,911 | 2,713 | 104.30 | 4,189 | 13,222 |
| 101.75 | 3,916 | 2,909 | 104.35 | 4,197 | 13,432 |
| 101.80 | 3,921 | 3,105 | 104.40 | 4,205 | 13,642 |
| 101.85 | 3,926 | 3,301 | 104.45 | 4,213 | 13,853 |
| 101.90 | 3,931 | 3,497 | 104.50 | 4,221 | 14,064 |
| 101.95 | 3,936 | 3,694 | 104.55 | 4,229 | 14,275 |
| 102.00 | 3,941 | 3,891 | 104.60 | 4,237 | 14,486 |
| 102.05 | 3,946 | 4,088 | 104.65 | 4,245 | 14,698 |
| 102.10 | 3,951 | 4,286 | 104.70 | 4,253 | 14,911 |
| 102.15 | 3,956 | 4,483 | 104.75 | 4,261 | 15,124 |
| 102.20 | 3,961 | 4,681 | 104.80 | 4,269 | 15,337 |
| 102.25 | 3,966 | 4,879 | 104.85 | 4,277 | 15,551 |
| 102.30 | 3,971 | 5,078 | 104.90 | 4,285 | 15,765 |
| 102.35 | 3,976 | 5,276 | 104.95 | 4,293 | 15,979 |
| 102.40 | 3,981 | 5,475 | 105.00 | 4,301 | 16,194 |
| 102.45 | 3,986 | 5,675 | | | |
| 102.50 | 3,991 | 5,874 | | | |
| 102.55 | 3,996 | 6,074 | | | |
| 102.60 | 4,001 | 6,274 | | | |
| 102.65 | 4,006 | 6,474 | | | |
| 102.70 | 4,011 | 6,674 | | | |
| 102.75 | 4,016 | 6,875 | | | |
| 102.80 | 4,021 | 7,076 | | | |
| 102.85 | 4,026 | 7,277 | | | |
| 102.90 | 4,031 | 7,478 | | | |
| 102.95 | 4,036 | 7,680 | | | |
| 103.00 | 4,041 | 7,882 | | | |
| 103.05 | 4,046 | 8,084 | | | |
| 103.10 | 4,051 | 8,287 | | | |
| 103.15 | 4,056 | 8,489 | | | |
| 103.20 | 4,061 | 8,692 | | | |
| 103.25 | 4,066 | 8,895 | | | |
| 103.30 | 4,071 | 9,099 | | | |
| 103.35 | 4,076 | 9,302 | | | |
| 103.40 | 4,081 | 9,506 | | | |
| 103.45 | 4,086 | 9,711 | | | |
| 103.50 | 4,091 | 9,915 | | | |
| 103.55 | 4,096 | 10,120 | | | |

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Summary for Pond 21P: Basin C

Inflow Area = 1.100 ac, 79.73% Impervious, Inflow Depth = 2.78" for 2-Year event
 Inflow = 2.08 cfs @ 12.18 hrs, Volume= 0.255 af
 Outflow = 0.58 cfs @ 12.79 hrs, Volume= 0.150 af, Atten= 72%, Lag= 36.2 min
 Primary = 0.58 cfs @ 12.79 hrs, Volume= 0.150 af
 Routed to Link 33L : Prop. East Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 100.71' @ 12.79 hrs Surf.Area= 4,434 sf Storage= 6,316 cf

Plug-Flow detention time= 340.1 min calculated for 0.150 af (59% of inflow)
 Center-of-Mass det. time= 217.0 min (994.4 - 777.4)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 99.00' | 13,101 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 99.00 | 2,973 | 0 | 0 |
| 100.00 | 3,805 | 3,389 | 3,389 |
| 101.00 | 4,690 | 4,248 | 7,637 |
| 102.00 | 6,238 | 5,464 | 13,101 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 96.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 96.50' / 96.50' S= 0.0000 ' / ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 100.30' | 10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 101.25' | 3.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.58 cfs @ 12.79 hrs HW=100.71' (Free Discharge)

- 1=Culvert (Passes 0.58 cfs of 13.99 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.58 cfs @ 2.18 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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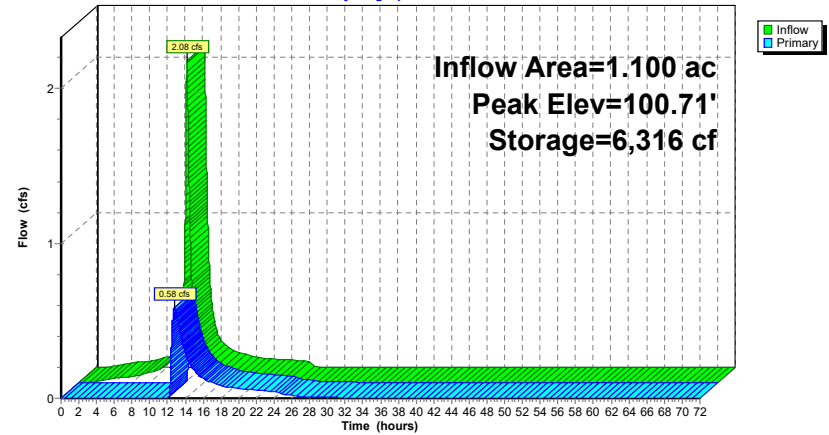
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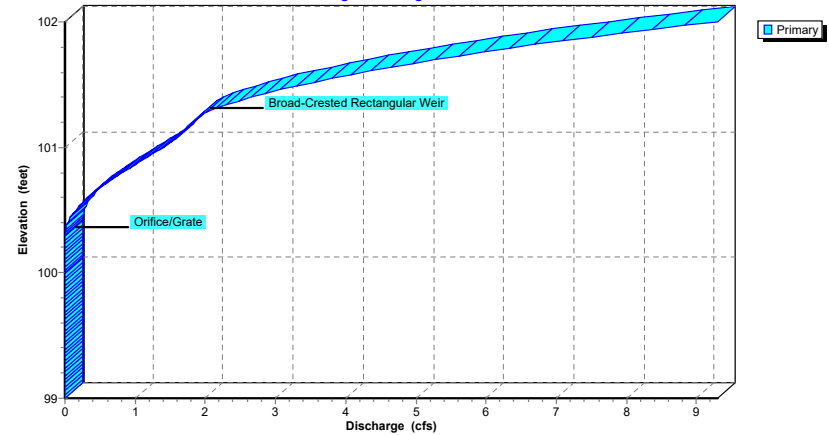
Pond 21P: Basin C

Hydrograph



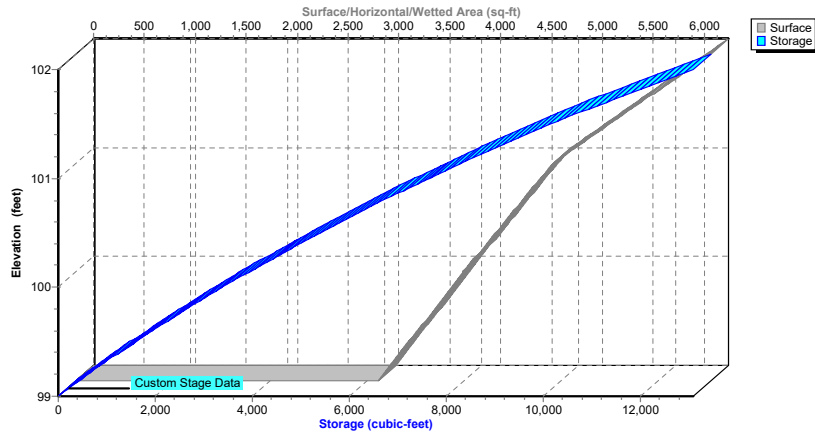
Pond 21P: Basin C

Stage-Discharge



Pond 21P: Basin C

Stage-Area-Storage



Hydrograph for Pond 21P: Basin C

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 99.00 | 0.00 |
| 2.00 | 0.01 | 12 | 99.00 | 0.00 |
| 4.00 | 0.03 | 145 | 99.05 | 0.00 |
| 6.00 | 0.04 | 389 | 99.13 | 0.00 |
| 8.00 | 0.07 | 764 | 99.25 | 0.00 |
| 10.00 | 0.12 | 1,384 | 99.44 | 0.00 |
| 12.00 | 1.02 | 3,440 | 100.01 | 0.00 |
| 14.00 | 0.18 | 5,743 | 100.58 | 0.29 |
| 16.00 | 0.10 | 5,321 | 100.48 | 0.13 |
| 18.00 | 0.07 | 5,171 | 100.45 | 0.08 |
| 20.00 | 0.05 | 5,086 | 100.42 | 0.06 |
| 22.00 | 0.05 | 5,042 | 100.41 | 0.05 |
| 24.00 | 0.04 | 5,005 | 100.41 | 0.04 |
| 26.00 | 0.00 | 4,830 | 100.36 | 0.02 |
| 28.00 | 0.00 | 4,747 | 100.34 | 0.01 |
| 30.00 | 0.00 | 4,700 | 100.33 | 0.00 |
| 32.00 | 0.00 | 4,672 | 100.32 | 0.00 |
| 34.00 | 0.00 | 4,655 | 100.32 | 0.00 |
| 36.00 | 0.00 | 4,643 | 100.32 | 0.00 |
| 38.00 | 0.00 | 4,633 | 100.32 | 0.00 |
| 40.00 | 0.00 | 4,625 | 100.31 | 0.00 |
| 42.00 | 0.00 | 4,617 | 100.31 | 0.00 |
| 44.00 | 0.00 | 4,611 | 100.31 | 0.00 |
| 46.00 | 0.00 | 4,606 | 100.31 | 0.00 |
| 48.00 | 0.00 | 4,601 | 100.31 | 0.00 |
| 50.00 | 0.00 | 4,597 | 100.31 | 0.00 |
| 52.00 | 0.00 | 4,593 | 100.31 | 0.00 |
| 54.00 | 0.00 | 4,590 | 100.30 | 0.00 |
| 56.00 | 0.00 | 4,587 | 100.30 | 0.00 |
| 58.00 | 0.00 | 4,585 | 100.30 | 0.00 |
| 60.00 | 0.00 | 4,583 | 100.30 | 0.00 |
| 62.00 | 0.00 | 4,581 | 100.30 | 0.00 |
| 64.00 | 0.00 | 4,580 | 100.30 | 0.00 |
| 66.00 | 0.00 | 4,579 | 100.30 | 0.00 |
| 68.00 | 0.00 | 4,577 | 100.30 | 0.00 |
| 70.00 | 0.00 | 4,576 | 100.30 | 0.00 |
| 72.00 | 0.00 | 4,576 | 100.30 | 0.00 |

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Stage-Discharge for Pond 21P: Basin C

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|
| 99.00 | 0.00 | 100.04 | 0.00 | 101.08 | 1.60 |
| 99.02 | 0.00 | 100.06 | 0.00 | 101.10 | 1.64 |
| 99.04 | 0.00 | 100.08 | 0.00 | 101.12 | 1.68 |
| 99.06 | 0.00 | 100.10 | 0.00 | 101.14 | 1.71 |
| 99.08 | 0.00 | 100.12 | 0.00 | 101.16 | 1.75 |
| 99.10 | 0.00 | 100.14 | 0.00 | 101.18 | 1.79 |
| 99.12 | 0.00 | 100.16 | 0.00 | 101.20 | 1.83 |
| 99.14 | 0.00 | 100.18 | 0.00 | 101.22 | 1.86 |
| 99.16 | 0.00 | 100.20 | 0.00 | 101.24 | 1.90 |
| 99.18 | 0.00 | 100.22 | 0.00 | 101.26 | 1.94 |
| 99.20 | 0.00 | 100.24 | 0.00 | 101.28 | 2.01 |
| 99.22 | 0.00 | 100.26 | 0.00 | 101.30 | 2.10 |
| 99.24 | 0.00 | 100.28 | 0.00 | 101.32 | 2.20 |
| 99.26 | 0.00 | 100.30 | 0.00 | 101.34 | 2.30 |
| 99.28 | 0.00 | 100.32 | 0.00 | 101.36 | 2.41 |
| 99.30 | 0.00 | 100.34 | 0.01 | 101.38 | 2.53 |
| 99.32 | 0.00 | 100.36 | 0.01 | 101.40 | 2.66 |
| 99.34 | 0.00 | 100.38 | 0.03 | 101.42 | 2.79 |
| 99.36 | 0.00 | 100.40 | 0.04 | 101.44 | 2.93 |
| 99.38 | 0.00 | 100.42 | 0.06 | 101.46 | 3.07 |
| 99.40 | 0.00 | 100.44 | 0.08 | 101.48 | 3.23 |
| 99.42 | 0.00 | 100.46 | 0.10 | 101.50 | 3.39 |
| 99.44 | 0.00 | 100.48 | 0.13 | 101.52 | 3.55 |
| 99.46 | 0.00 | 100.50 | 0.15 | 101.54 | 3.72 |
| 99.48 | 0.00 | 100.52 | 0.18 | 101.56 | 3.90 |
| 99.50 | 0.00 | 100.54 | 0.22 | 101.58 | 4.08 |
| 99.52 | 0.00 | 100.56 | 0.25 | 101.60 | 4.26 |
| 99.54 | 0.00 | 100.58 | 0.29 | 101.62 | 4.46 |
| 99.56 | 0.00 | 100.60 | 0.33 | 101.64 | 4.65 |
| 99.58 | 0.00 | 100.62 | 0.37 | 101.66 | 4.86 |
| 99.60 | 0.00 | 100.64 | 0.42 | 101.68 | 5.07 |
| 99.62 | 0.00 | 100.66 | 0.46 | 101.70 | 5.28 |
| 99.64 | 0.00 | 100.68 | 0.51 | 101.72 | 5.51 |
| 99.66 | 0.00 | 100.70 | 0.56 | 101.74 | 5.74 |
| 99.68 | 0.00 | 100.72 | 0.61 | 101.76 | 5.97 |
| 99.70 | 0.00 | 100.74 | 0.66 | 101.78 | 6.21 |
| 99.72 | 0.00 | 100.76 | 0.71 | 101.80 | 6.45 |
| 99.74 | 0.00 | 100.78 | 0.77 | 101.82 | 6.70 |
| 99.76 | 0.00 | 100.80 | 0.82 | 101.84 | 6.96 |
| 99.78 | 0.00 | 100.82 | 0.88 | 101.86 | 7.23 |
| 99.80 | 0.00 | 100.84 | 0.94 | 101.88 | 7.50 |
| 99.82 | 0.00 | 100.86 | 0.99 | 101.90 | 7.79 |
| 99.84 | 0.00 | 100.88 | 1.05 | 101.92 | 8.07 |
| 99.86 | 0.00 | 100.90 | 1.11 | 101.94 | 8.37 |
| 99.88 | 0.00 | 100.92 | 1.17 | 101.96 | 8.67 |
| 99.90 | 0.00 | 100.94 | 1.22 | 101.98 | 8.98 |
| 99.92 | 0.00 | 100.96 | 1.28 | 102.00 | 9.30 |
| 99.94 | 0.00 | 100.98 | 1.34 | | |
| 99.96 | 0.00 | 101.00 | 1.39 | | |
| 99.98 | 0.00 | 101.02 | 1.45 | | |
| 100.00 | 0.00 | 101.04 | 1.50 | | |
| 100.02 | 0.00 | 101.06 | 1.55 | | |

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Stage-Area-Storage for Pond 21P: Basin C

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 99.00 | 2,973 | 0 | 101.60 | 5,619 | 10,729 |
| 99.05 | 3,015 | 150 | 101.65 | 5,696 | 11,012 |
| 99.10 | 3,056 | 301 | 101.70 | 5,774 | 11,299 |
| 99.15 | 3,098 | 455 | 101.75 | 5,851 | 11,589 |
| 99.20 | 3,139 | 611 | 101.80 | 5,928 | 11,884 |
| 99.25 | 3,181 | 769 | 101.85 | 6,006 | 12,182 |
| 99.30 | 3,223 | 929 | 101.90 | 6,083 | 12,484 |
| 99.35 | 3,264 | 1,092 | 101.95 | 6,161 | 12,791 |
| 99.40 | 3,306 | 1,256 | 102.00 | 6,238 | 13,101 |
| 99.45 | 3,347 | 1,422 | | | |
| 99.50 | 3,389 | 1,591 | | | |
| 99.55 | 3,431 | 1,761 | | | |
| 99.60 | 3,472 | 1,934 | | | |
| 99.65 | 3,514 | 2,108 | | | |
| 99.70 | 3,555 | 2,285 | | | |
| 99.75 | 3,597 | 2,464 | | | |
| 99.80 | 3,639 | 2,645 | | | |
| 99.85 | 3,680 | 2,828 | | | |
| 99.90 | 3,722 | 3,013 | | | |
| 99.95 | 3,763 | 3,200 | | | |
| 100.00 | 3,805 | 3,389 | | | |
| 100.05 | 3,849 | 3,580 | | | |
| 100.10 | 3,893 | 3,774 | | | |
| 100.15 | 3,938 | 3,970 | | | |
| 100.20 | 3,982 | 4,168 | | | |
| 100.25 | 4,026 | 4,368 | | | |
| 100.30 | 4,070 | 4,570 | | | |
| 100.35 | 4,115 | 4,775 | | | |
| 100.40 | 4,159 | 4,982 | | | |
| 100.45 | 4,203 | 5,191 | | | |
| 100.50 | 4,248 | 5,402 | | | |
| 100.55 | 4,292 | 5,616 | | | |
| 100.60 | 4,336 | 5,831 | | | |
| 100.65 | 4,380 | 6,049 | | | |
| 100.70 | 4,425 | 6,269 | | | |
| 100.75 | 4,469 | 6,492 | | | |
| 100.80 | 4,513 | 6,716 | | | |
| 100.85 | 4,557 | 6,943 | | | |
| 100.90 | 4,602 | 7,172 | | | |
| 100.95 | 4,646 | 7,403 | | | |
| 101.00 | 4,690 | 7,637 | | | |
| 101.05 | 4,767 | 7,873 | | | |
| 101.10 | 4,845 | 8,113 | | | |
| 101.15 | 4,922 | 8,357 | | | |
| 101.20 | 5,000 | 8,605 | | | |
| 101.25 | 5,077 | 8,857 | | | |
| 101.30 | 5,154 | 9,113 | | | |
| 101.35 | 5,232 | 9,373 | | | |
| 101.40 | 5,309 | 9,636 | | | |
| 101.45 | 5,387 | 9,904 | | | |
| 101.50 | 5,464 | 10,175 | | | |
| 101.55 | 5,541 | 10,450 | | | |

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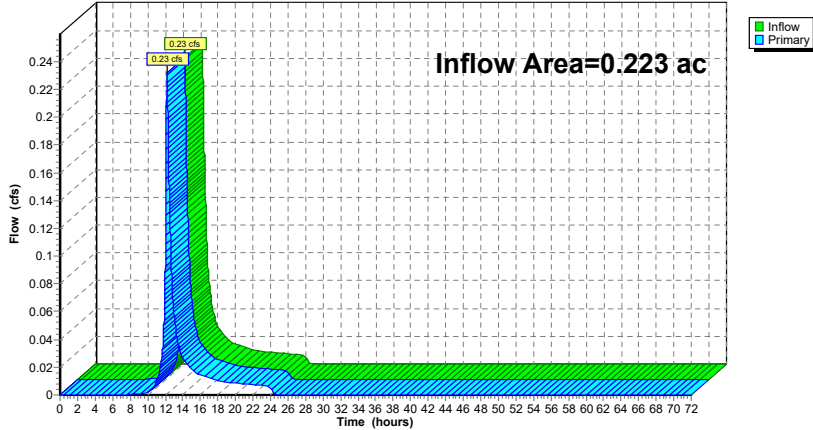
Summary for Link 29L: West Und. Total

Inflow Area = 0.223 ac, 2.28% Impervious, Inflow Depth = 1.42" for 2-Year event
 Inflow = 0.23 cfs @ 12.20 hrs, Volume= 0.026 af
 Primary = 0.23 cfs @ 12.20 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 31L : Prop. West Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 29L: West Und. Total

Hydrograph



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Hydrograph for Link 29L: West Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.01 | 0.00 | 0.01 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.09 | 0.00 | 0.09 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.06 | 0.00 | 0.06 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.03 | 0.00 | 0.03 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.02 | 0.00 | 0.02 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.01 | 0.00 | 0.01 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.01 | 0.00 | 0.01 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.01 | 0.00 | 0.01 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.01 | 0.00 | 0.01 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.01 | 0.00 | 0.01 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.01 | 0.00 | 0.01 | | | | |
| 22.00 | 0.01 | 0.00 | 0.01 | | | | |
| 23.00 | 0.01 | 0.00 | 0.01 | | | | |
| 24.00 | 0.01 | 0.00 | 0.01 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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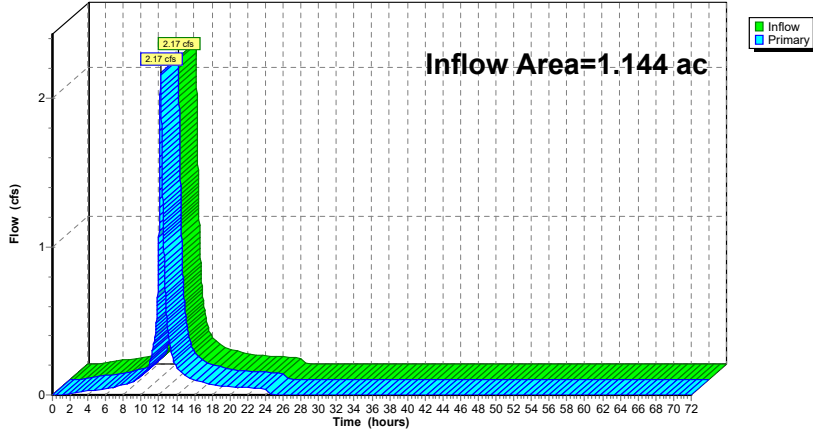
Summary for Link 30L: East Und. Total

Inflow Area = 1.144 ac, 79.08% Impervious, Inflow Depth = 2.78" for 2-Year event
 Inflow = 2.17 cfs @ 12.18 hrs, Volume= 0.265 af
 Primary = 2.17 cfs @ 12.18 hrs, Volume= 0.265 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 33L : Prop. East Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 30L: East Und. Total

Hydrograph



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Hydrograph for Link 30L: East Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.01 | 0.00 | 0.01 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.02 | 0.00 | 0.02 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.03 | 0.00 | 0.03 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.04 | 0.00 | 0.04 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.04 | 0.00 | 0.04 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.05 | 0.00 | 0.05 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.07 | 0.00 | 0.07 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.08 | 0.00 | 0.08 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.13 | 0.00 | 0.13 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.22 | 0.00 | 0.22 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.06 | 0.00 | 1.06 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.44 | 0.00 | 0.44 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.19 | 0.00 | 0.19 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.13 | 0.00 | 0.13 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.10 | 0.00 | 0.10 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.09 | 0.00 | 0.09 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.07 | 0.00 | 0.07 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.06 | 0.00 | 0.06 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.06 | 0.00 | 0.06 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.05 | 0.00 | 0.05 | | | | |
| 22.00 | 0.05 | 0.00 | 0.05 | | | | |
| 23.00 | 0.05 | 0.00 | 0.05 | | | | |
| 24.00 | 0.04 | 0.00 | 0.04 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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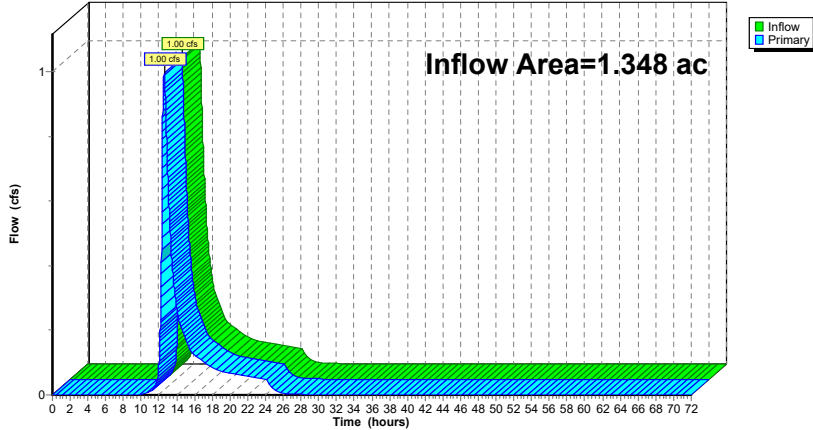
Summary for Link 31L: Prop. West Total

Inflow Area = 1.348 ac, 64.67% Impervious, Inflow Depth = 1.55" for 2-Year event
 Inflow = 1.00 cfs @ 12.57 hrs, Volume= 0.174 af
 Primary = 1.00 cfs @ 12.57 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 31L: Prop. West Total

Hydrograph



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Hydrograph for Link 31L: Prop. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.01 | 0.00 | 0.01 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.09 | 0.00 | 0.09 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.68 | 0.00 | 0.68 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.27 | 0.00 | 0.27 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.17 | 0.00 | 0.17 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.12 | 0.00 | 0.12 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.10 | 0.00 | 0.10 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.09 | 0.00 | 0.09 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.07 | 0.00 | 0.07 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.07 | 0.00 | 0.07 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.06 | 0.00 | 0.06 | | | | |
| 22.00 | 0.06 | 0.00 | 0.06 | | | | |
| 23.00 | 0.05 | 0.00 | 0.05 | | | | |
| 24.00 | 0.05 | 0.00 | 0.05 | | | | |
| 25.00 | 0.02 | 0.00 | 0.02 | | | | |
| 26.00 | 0.01 | 0.00 | 0.01 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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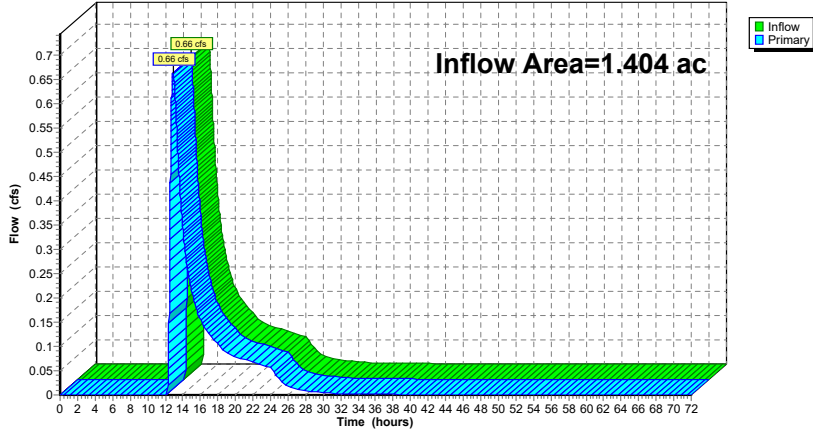
Summary for Link 32L: Prop. South Total

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth > 1.48" for 2-Year event
 Inflow = 0.66 cfs @ 12.88 hrs, Volume= 0.173 af
 Primary = 0.66 cfs @ 12.88 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 32L: Prop. South Total

Hydrograph



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Hydrograph for Link 32L: Prop. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.65 | 0.00 | 0.65 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.34 | 0.00 | 0.34 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.22 | 0.00 | 0.22 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.16 | 0.00 | 0.16 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.13 | 0.00 | 0.13 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.10 | 0.00 | 0.10 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.09 | 0.00 | 0.09 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.08 | 0.00 | 0.08 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.07 | 0.00 | 0.07 | | | | |
| 22.00 | 0.07 | 0.00 | 0.07 | | | | |
| 23.00 | 0.06 | 0.00 | 0.06 | | | | |
| 24.00 | 0.06 | 0.00 | 0.06 | | | | |
| 25.00 | 0.03 | 0.00 | 0.03 | | | | |
| 26.00 | 0.02 | 0.00 | 0.02 | | | | |
| 27.00 | 0.01 | 0.00 | 0.01 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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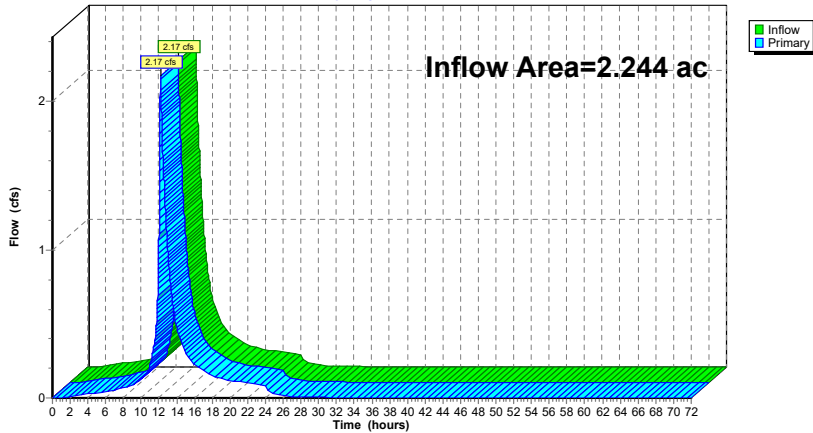
Summary for Link 33L: Prop. East Total

Inflow Area = 2.244 ac, 79.40% Impervious, Inflow Depth = 2.22" for 2-Year event
 Inflow = 2.17 cfs @ 12.18 hrs, Volume= 0.415 af
 Primary = 2.17 cfs @ 12.18 hrs, Volume= 0.415 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 33L: Prop. East Total

Hydrograph



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Hydrograph for Link 33L: Prop. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.01 | 0.00 | 0.01 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.02 | 0.00 | 0.02 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.03 | 0.00 | 0.03 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.04 | 0.00 | 0.04 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.04 | 0.00 | 0.04 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.05 | 0.00 | 0.05 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.07 | 0.00 | 0.07 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.08 | 0.00 | 0.08 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.13 | 0.00 | 0.13 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.22 | 0.00 | 0.22 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.06 | 0.00 | 1.06 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.99 | 0.00 | 0.99 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.48 | 0.00 | 0.48 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.31 | 0.00 | 0.31 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.23 | 0.00 | 0.23 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.19 | 0.00 | 0.19 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.15 | 0.00 | 0.15 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.13 | 0.00 | 0.13 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.12 | 0.00 | 0.12 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.11 | 0.00 | 0.11 | | | | |
| 22.00 | 0.10 | 0.00 | 0.10 | | | | |
| 23.00 | 0.09 | 0.00 | 0.09 | | | | |
| 24.00 | 0.09 | 0.00 | 0.09 | | | | |
| 25.00 | 0.03 | 0.00 | 0.03 | | | | |
| 26.00 | 0.02 | 0.00 | 0.02 | | | | |
| 27.00 | 0.01 | 0.00 | 0.01 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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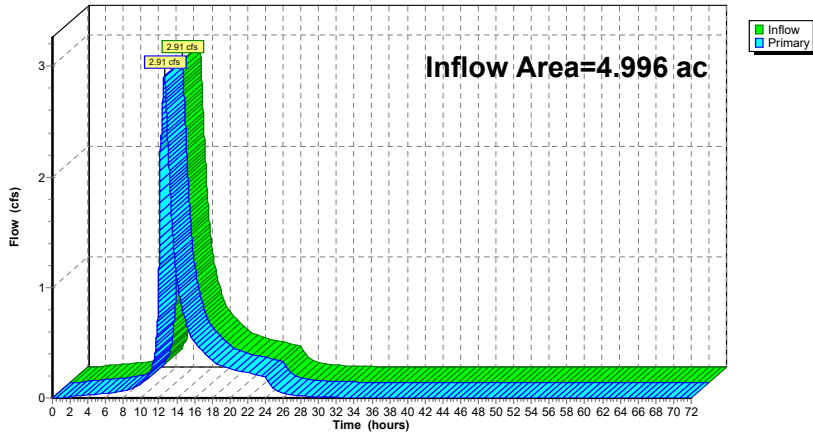
Summary for Link 34L: Prop. Total

Inflow Area = 4.996 ac, 78.20% Impervious, Inflow Depth = 1.83" for 2-Year event
 Inflow = 2.91 cfs @ 12.60 hrs, Volume= 0.762 af
 Primary = 2.91 cfs @ 12.60 hrs, Volume= 0.762 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 34L: Prop. Total

Hydrograph



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Hydrograph for Link 34L: Prop. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.01 | 0.00 | 0.01 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.02 | 0.00 | 0.02 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.03 | 0.00 | 0.03 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.04 | 0.00 | 0.04 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.04 | 0.00 | 0.04 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.05 | 0.00 | 0.05 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.07 | 0.00 | 0.07 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.08 | 0.00 | 0.08 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.13 | 0.00 | 0.13 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.23 | 0.00 | 0.23 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.15 | 0.00 | 1.15 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 2.32 | 0.00 | 2.32 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 1.09 | 0.00 | 1.09 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.70 | 0.00 | 0.70 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.51 | 0.00 | 0.51 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.42 | 0.00 | 0.42 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.34 | 0.00 | 0.34 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.29 | 0.00 | 0.29 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.27 | 0.00 | 0.27 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.25 | 0.00 | 0.25 | | | | |
| 22.00 | 0.23 | 0.00 | 0.23 | | | | |
| 23.00 | 0.21 | 0.00 | 0.21 | | | | |
| 24.00 | 0.19 | 0.00 | 0.19 | | | | |
| 25.00 | 0.08 | 0.00 | 0.08 | | | | |
| 26.00 | 0.04 | 0.00 | 0.04 | | | | |
| 27.00 | 0.03 | 0.00 | 0.03 | | | | |
| 28.00 | 0.02 | 0.00 | 0.02 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.01 | 0.00 | 0.01 | | | | |
| 32.00 | 0.01 | 0.00 | 0.01 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|--|---|
| Subcatchment5S: Basin A Imp | Runoff Area=37,763 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=2.81 cfs 0.353 af |
| Subcatchment6S: Basin A Perv | Runoff Area=11,243 sf 0.00% Impervious Runoff Depth=2.91" Tc=10.0 min CN=79 Runoff=0.56 cfs 0.062 af |
| Subcatchment9S: Basin B Imp | Runoff Area=54,598 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=4.06 cfs 0.510 af |
| Subcatchment10S: Basin B Perv | Runoff Area=6,549 sf 0.00% Impervious Runoff Depth=3.00" Tc=10.0 min CN=80 Runoff=0.34 cfs 0.038 af |
| Subcatchment13S: Basin C Perv | Runoff Area=9,708 sf 0.00% Impervious Runoff Depth=2.91" Tc=10.0 min CN=79 Runoff=0.48 cfs 0.054 af |
| Subcatchment22S: West Und. Imp | Runoff Area=222 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=0.02 cfs 0.002 af |
| Subcatchment23S: West Und. Perv | Runoff Area=9,505 sf 0.00% Impervious Runoff Depth=2.81" Tc=10.0 min CN=78 Runoff=0.46 cfs 0.051 af |
| Subcatchment24S: East Und. Imp | Runoff Area=39,415 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=2.93 cfs 0.368 af |
| Subcatchment25S: East Und. Perv | Runoff Area=10,428 sf 0.00% Impervious Runoff Depth=3.00" Tc=10.0 min CN=80 Runoff=0.54 cfs 0.060 af |
| Subcatchment35S: Basin C Imp | Runoff Area=38,191 sf 100.00% Impervious Runoff Depth=4.88" Tc=10.0 min CN=98 Runoff=2.84 cfs 0.357 af |
| Pond 19P: Basin A | Peak Elev=103.92' Storage=6,961 cf Inflow=3.37 cfs 0.415 af Outflow=2.44 cfs 0.307 af |
| Pond 20P: Basin B | Peak Elev=103.81' Storage=11,194 cf Inflow=4.40 cfs 0.548 af Outflow=2.44 cfs 0.376 af |
| Pond 21P: Basin C | Peak Elev=101.11' Storage=8,157 cf Inflow=3.32 cfs 0.411 af Outflow=1.65 cfs 0.306 af |
| Link 29L: West Und. Total | Inflow=0.48 cfs 0.053 af Primary=0.48 cfs 0.053 af |
| Link 30L: East Und. Total | Inflow=3.47 cfs 0.428 af Primary=3.47 cfs 0.428 af |
| Link 31L: Prop. West Total | Inflow=2.80 cfs 0.360 af Primary=2.80 cfs 0.360 af |

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| | |
|------------------------------------|---|
| Link 32L: Prop. South Total | Inflow=2.44 cfs 0.376 af Primary=2.44 cfs 0.376 af |
| Link 33L: Prop. East Total | Inflow=4.52 cfs 0.734 af Primary=4.52 cfs 0.734 af |
| Link 34L: Prop. Total | Inflow=9.23 cfs 1.469 af Primary=9.23 cfs 1.469 af |

Total Runoff Area = 4.996 ac Runoff Volume = 1.855 af Average Runoff Depth = 4.46"
21.80% Pervious = 1.089 ac 78.20% Impervious = 3.907 ac

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Summary for Subcatchment 5S: Basin A Imp

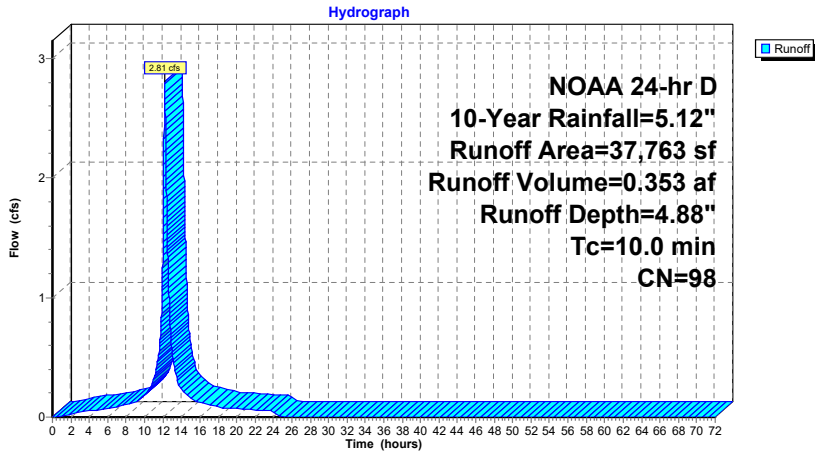
Runoff = 2.81 cfs @ 12.18 hrs, Volume= 0.353 af, Depth= 4.88"
Routed to Pond 19P : Basin A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 37,763 | 98 | Paved parking, HSG D |
| 37,763 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Basin A Imp



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Hydrograph for Subcatchment 5S: Basin A Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.02 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.04 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.05 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.06 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.07 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.09 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.11 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.13 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.19 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.32 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 1.41 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.55 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.23 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.16 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.12 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.10 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.08 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.07 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.07 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.06 | | | | |
| 22.00 | 5.00 | 4.76 | 0.06 | | | | |
| 23.00 | 5.06 | 4.82 | 0.05 | | | | |
| 24.00 | 5.12 | 4.88 | 0.05 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 6S: Basin A Perv

Runoff = 0.56 cfs @ 12.19 hrs, Volume= 0.062 af, Depth= 2.91"
Routed to Pond 19P : Basin A

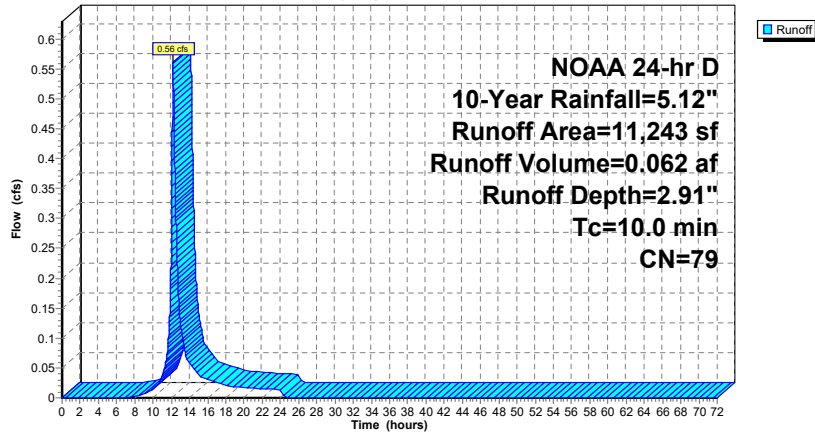
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,616 | 74 | >75% Grass cover, Good, HSG C |
| 9,627 | 80 | >75% Grass cover, Good, HSG D |
| 11,243 | 79 | Weighted Average |
| 11,243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Basin A Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 6S: Basin A Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.91 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.91 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.91 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.91 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.91 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.91 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.91 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.91 | 0.00 |
| 8.00 | 0.66 | 0.01 | 0.00 | 60.00 | 5.12 | 2.91 | 0.00 |
| 9.00 | 0.81 | 0.03 | 0.01 | 61.00 | 5.12 | 2.91 | 0.00 |
| 10.00 | 1.01 | 0.07 | 0.01 | 62.00 | 5.12 | 2.91 | 0.00 |
| 11.00 | 1.33 | 0.18 | 0.04 | 63.00 | 5.12 | 2.91 | 0.00 |
| 12.00 | 2.45 | 0.81 | 0.25 | 64.00 | 5.12 | 2.91 | 0.00 |
| 13.00 | 3.79 | 1.79 | 0.13 | 65.00 | 5.12 | 2.91 | 0.00 |
| 14.00 | 4.11 | 2.05 | 0.06 | 66.00 | 5.12 | 2.91 | 0.00 |
| 15.00 | 4.31 | 2.22 | 0.04 | 67.00 | 5.12 | 2.91 | 0.00 |
| 16.00 | 4.46 | 2.34 | 0.03 | 68.00 | 5.12 | 2.91 | 0.00 |
| 17.00 | 4.58 | 2.44 | 0.03 | 69.00 | 5.12 | 2.91 | 0.00 |
| 18.00 | 4.68 | 2.53 | 0.02 | 70.00 | 5.12 | 2.91 | 0.00 |
| 19.00 | 4.77 | 2.60 | 0.02 | 71.00 | 5.12 | 2.91 | 0.00 |
| 20.00 | 4.85 | 2.67 | 0.02 | 72.00 | 5.12 | 2.91 | 0.00 |
| 21.00 | 4.93 | 2.74 | 0.02 | | | | |
| 22.00 | 5.00 | 2.80 | 0.02 | | | | |
| 23.00 | 5.06 | 2.85 | 0.01 | | | | |
| 24.00 | 5.12 | 2.91 | 0.01 | | | | |
| 25.00 | 5.12 | 2.91 | 0.00 | | | | |
| 26.00 | 5.12 | 2.91 | 0.00 | | | | |
| 27.00 | 5.12 | 2.91 | 0.00 | | | | |
| 28.00 | 5.12 | 2.91 | 0.00 | | | | |
| 29.00 | 5.12 | 2.91 | 0.00 | | | | |
| 30.00 | 5.12 | 2.91 | 0.00 | | | | |
| 31.00 | 5.12 | 2.91 | 0.00 | | | | |
| 32.00 | 5.12 | 2.91 | 0.00 | | | | |
| 33.00 | 5.12 | 2.91 | 0.00 | | | | |
| 34.00 | 5.12 | 2.91 | 0.00 | | | | |
| 35.00 | 5.12 | 2.91 | 0.00 | | | | |
| 36.00 | 5.12 | 2.91 | 0.00 | | | | |
| 37.00 | 5.12 | 2.91 | 0.00 | | | | |
| 38.00 | 5.12 | 2.91 | 0.00 | | | | |
| 39.00 | 5.12 | 2.91 | 0.00 | | | | |
| 40.00 | 5.12 | 2.91 | 0.00 | | | | |
| 41.00 | 5.12 | 2.91 | 0.00 | | | | |
| 42.00 | 5.12 | 2.91 | 0.00 | | | | |
| 43.00 | 5.12 | 2.91 | 0.00 | | | | |
| 44.00 | 5.12 | 2.91 | 0.00 | | | | |
| 45.00 | 5.12 | 2.91 | 0.00 | | | | |
| 46.00 | 5.12 | 2.91 | 0.00 | | | | |
| 47.00 | 5.12 | 2.91 | 0.00 | | | | |
| 48.00 | 5.12 | 2.91 | 0.00 | | | | |
| 49.00 | 5.12 | 2.91 | 0.00 | | | | |
| 50.00 | 5.12 | 2.91 | 0.00 | | | | |
| 51.00 | 5.12 | 2.91 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 9S: Basin B Imp

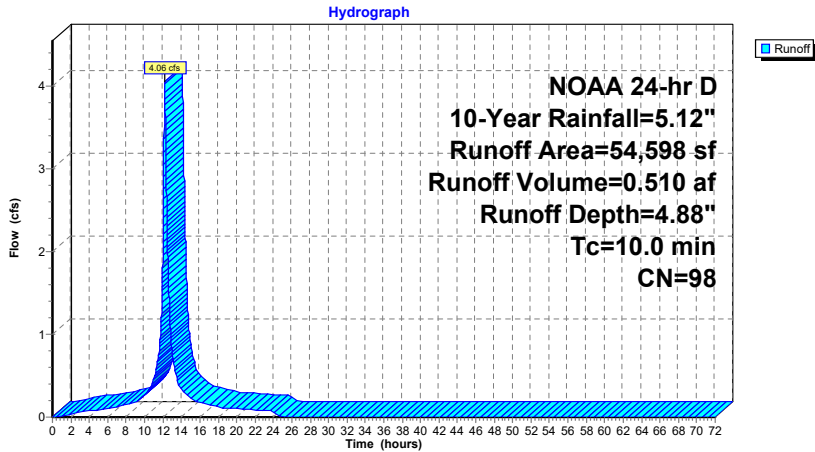
Runoff = 4.06 cfs @ 12.18 hrs, Volume= 0.510 af, Depth= 4.88"
 Routed to Pond 20P : Basin B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 54,598 | 98 | Paved parking, HSG D |
| 54,598 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Basin B Imp



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Hydrograph for Subcatchment 9S: Basin B Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.04 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.06 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.07 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.09 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.10 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.12 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.15 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.18 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.27 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.46 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 2.04 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.80 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.34 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.23 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.18 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.15 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.12 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.11 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.10 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.09 | | | | |
| 22.00 | 5.00 | 4.76 | 0.09 | | | | |
| 23.00 | 5.06 | 4.82 | 0.08 | | | | |
| 24.00 | 5.12 | 4.88 | 0.07 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 10S: Basin B Perv

Runoff = 0.34 cfs @ 12.19 hrs, Volume= 0.038 af, Depth= 3.00"
Routed to Pond 20P : Basin B

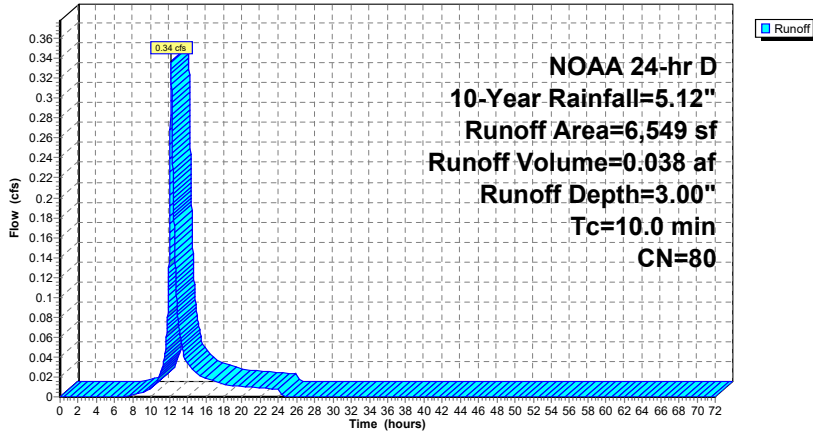
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 433 | 74 | >75% Grass cover, Good, HSG C |
| 6,116 | 80 | >75% Grass cover, Good, HSG D |
| 6,549 | 80 | Weighted Average |
| 6,549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Basin B Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 10S: Basin B Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 3.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 3.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 3.00 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 3.00 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 3.00 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 3.00 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 3.00 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 3.00 | 0.00 |
| 8.00 | 0.66 | 0.01 | 0.00 | 60.00 | 5.12 | 3.00 | 0.00 |
| 9.00 | 0.81 | 0.03 | 0.00 | 61.00 | 5.12 | 3.00 | 0.00 |
| 10.00 | 1.01 | 0.09 | 0.01 | 62.00 | 5.12 | 3.00 | 0.00 |
| 11.00 | 1.33 | 0.21 | 0.02 | 63.00 | 5.12 | 3.00 | 0.00 |
| 12.00 | 2.45 | 0.86 | 0.15 | 64.00 | 5.12 | 3.00 | 0.00 |
| 13.00 | 3.79 | 1.87 | 0.08 | 65.00 | 5.12 | 3.00 | 0.00 |
| 14.00 | 4.11 | 2.13 | 0.03 | 66.00 | 5.12 | 3.00 | 0.00 |
| 15.00 | 4.31 | 2.30 | 0.02 | 67.00 | 5.12 | 3.00 | 0.00 |
| 16.00 | 4.46 | 2.42 | 0.02 | 68.00 | 5.12 | 3.00 | 0.00 |
| 17.00 | 4.58 | 2.53 | 0.02 | 69.00 | 5.12 | 3.00 | 0.00 |
| 18.00 | 4.68 | 2.62 | 0.01 | 70.00 | 5.12 | 3.00 | 0.00 |
| 19.00 | 4.77 | 2.69 | 0.01 | 71.00 | 5.12 | 3.00 | 0.00 |
| 20.00 | 4.85 | 2.76 | 0.01 | 72.00 | 5.12 | 3.00 | 0.00 |
| 21.00 | 4.93 | 2.83 | 0.01 | | | | |
| 22.00 | 5.00 | 2.89 | 0.01 | | | | |
| 23.00 | 5.06 | 2.95 | 0.01 | | | | |
| 24.00 | 5.12 | 3.00 | 0.01 | | | | |
| 25.00 | 5.12 | 3.00 | 0.00 | | | | |
| 26.00 | 5.12 | 3.00 | 0.00 | | | | |
| 27.00 | 5.12 | 3.00 | 0.00 | | | | |
| 28.00 | 5.12 | 3.00 | 0.00 | | | | |
| 29.00 | 5.12 | 3.00 | 0.00 | | | | |
| 30.00 | 5.12 | 3.00 | 0.00 | | | | |
| 31.00 | 5.12 | 3.00 | 0.00 | | | | |
| 32.00 | 5.12 | 3.00 | 0.00 | | | | |
| 33.00 | 5.12 | 3.00 | 0.00 | | | | |
| 34.00 | 5.12 | 3.00 | 0.00 | | | | |
| 35.00 | 5.12 | 3.00 | 0.00 | | | | |
| 36.00 | 5.12 | 3.00 | 0.00 | | | | |
| 37.00 | 5.12 | 3.00 | 0.00 | | | | |
| 38.00 | 5.12 | 3.00 | 0.00 | | | | |
| 39.00 | 5.12 | 3.00 | 0.00 | | | | |
| 40.00 | 5.12 | 3.00 | 0.00 | | | | |
| 41.00 | 5.12 | 3.00 | 0.00 | | | | |
| 42.00 | 5.12 | 3.00 | 0.00 | | | | |
| 43.00 | 5.12 | 3.00 | 0.00 | | | | |
| 44.00 | 5.12 | 3.00 | 0.00 | | | | |
| 45.00 | 5.12 | 3.00 | 0.00 | | | | |
| 46.00 | 5.12 | 3.00 | 0.00 | | | | |
| 47.00 | 5.12 | 3.00 | 0.00 | | | | |
| 48.00 | 5.12 | 3.00 | 0.00 | | | | |
| 49.00 | 5.12 | 3.00 | 0.00 | | | | |
| 50.00 | 5.12 | 3.00 | 0.00 | | | | |
| 51.00 | 5.12 | 3.00 | 0.00 | | | | |

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 13S: Basin C Perv

Runoff = 0.48 cfs @ 12.19 hrs, Volume= 0.054 af, Depth= 2.91"
Routed to Pond 21P : Basin C

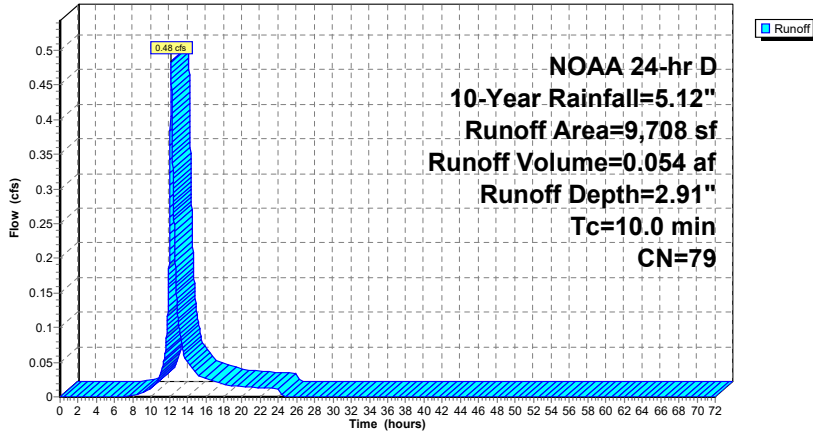
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,568 | 74 | >75% Grass cover, Good, HSG C |
| 8,140 | 80 | >75% Grass cover, Good, HSG D |
| 9,708 | 79 | Weighted Average |
| 9,708 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Basin C Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 13S: Basin C Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.91 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.91 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.91 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.91 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.91 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.91 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.91 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.91 | 0.00 |
| 8.00 | 0.66 | 0.01 | 0.00 | 60.00 | 5.12 | 2.91 | 0.00 |
| 9.00 | 0.81 | 0.03 | 0.01 | 61.00 | 5.12 | 2.91 | 0.00 |
| 10.00 | 1.01 | 0.07 | 0.01 | 62.00 | 5.12 | 2.91 | 0.00 |
| 11.00 | 1.33 | 0.18 | 0.03 | 63.00 | 5.12 | 2.91 | 0.00 |
| 12.00 | 2.45 | 0.81 | 0.21 | 64.00 | 5.12 | 2.91 | 0.00 |
| 13.00 | 3.79 | 1.79 | 0.11 | 65.00 | 5.12 | 2.91 | 0.00 |
| 14.00 | 4.11 | 2.05 | 0.05 | 66.00 | 5.12 | 2.91 | 0.00 |
| 15.00 | 4.31 | 2.22 | 0.03 | 67.00 | 5.12 | 2.91 | 0.00 |
| 16.00 | 4.46 | 2.34 | 0.03 | 68.00 | 5.12 | 2.91 | 0.00 |
| 17.00 | 4.58 | 2.44 | 0.02 | 69.00 | 5.12 | 2.91 | 0.00 |
| 18.00 | 4.68 | 2.53 | 0.02 | 70.00 | 5.12 | 2.91 | 0.00 |
| 19.00 | 4.77 | 2.60 | 0.02 | 71.00 | 5.12 | 2.91 | 0.00 |
| 20.00 | 4.85 | 2.67 | 0.02 | 72.00 | 5.12 | 2.91 | 0.00 |
| 21.00 | 4.93 | 2.74 | 0.01 | | | | |
| 22.00 | 5.00 | 2.80 | 0.01 | | | | |
| 23.00 | 5.06 | 2.85 | 0.01 | | | | |
| 24.00 | 5.12 | 2.91 | 0.01 | | | | |
| 25.00 | 5.12 | 2.91 | 0.00 | | | | |
| 26.00 | 5.12 | 2.91 | 0.00 | | | | |
| 27.00 | 5.12 | 2.91 | 0.00 | | | | |
| 28.00 | 5.12 | 2.91 | 0.00 | | | | |
| 29.00 | 5.12 | 2.91 | 0.00 | | | | |
| 30.00 | 5.12 | 2.91 | 0.00 | | | | |
| 31.00 | 5.12 | 2.91 | 0.00 | | | | |
| 32.00 | 5.12 | 2.91 | 0.00 | | | | |
| 33.00 | 5.12 | 2.91 | 0.00 | | | | |
| 34.00 | 5.12 | 2.91 | 0.00 | | | | |
| 35.00 | 5.12 | 2.91 | 0.00 | | | | |
| 36.00 | 5.12 | 2.91 | 0.00 | | | | |
| 37.00 | 5.12 | 2.91 | 0.00 | | | | |
| 38.00 | 5.12 | 2.91 | 0.00 | | | | |
| 39.00 | 5.12 | 2.91 | 0.00 | | | | |
| 40.00 | 5.12 | 2.91 | 0.00 | | | | |
| 41.00 | 5.12 | 2.91 | 0.00 | | | | |
| 42.00 | 5.12 | 2.91 | 0.00 | | | | |
| 43.00 | 5.12 | 2.91 | 0.00 | | | | |
| 44.00 | 5.12 | 2.91 | 0.00 | | | | |
| 45.00 | 5.12 | 2.91 | 0.00 | | | | |
| 46.00 | 5.12 | 2.91 | 0.00 | | | | |
| 47.00 | 5.12 | 2.91 | 0.00 | | | | |
| 48.00 | 5.12 | 2.91 | 0.00 | | | | |
| 49.00 | 5.12 | 2.91 | 0.00 | | | | |
| 50.00 | 5.12 | 2.91 | 0.00 | | | | |
| 51.00 | 5.12 | 2.91 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 22S: West Und. Imp

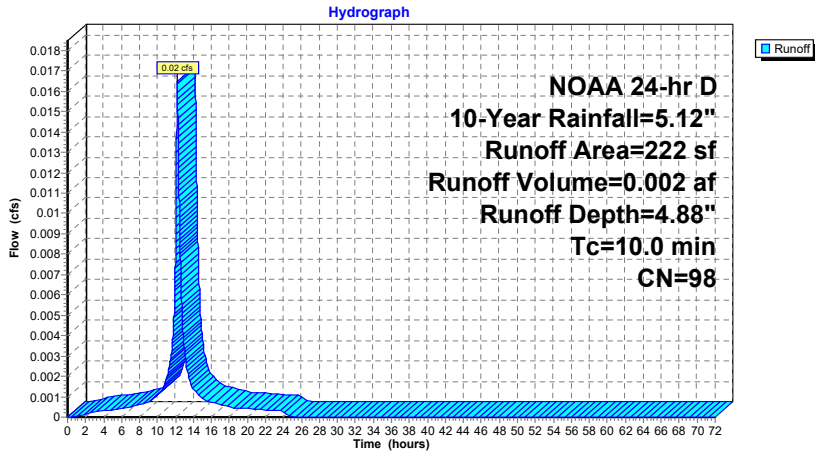
Runoff = 0.02 cfs @ 12.18 hrs, Volume= 0.002 af, Depth= 4.88"
 Routed to Link 29L : West Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 222 | 98 | Paved parking, HSG D |
| 222 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 22S: West Und. Imp



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 22S: West Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.00 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.00 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.00 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.00 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.00 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.00 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.00 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.00 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.00 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.00 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 0.01 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.00 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.00 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.00 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.00 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.00 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.00 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.00 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.00 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.00 | | | | |
| 22.00 | 5.00 | 4.76 | 0.00 | | | | |
| 23.00 | 5.06 | 4.82 | 0.00 | | | | |
| 24.00 | 5.12 | 4.88 | 0.00 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 23S: West Und. Perv

Runoff = 0.46 cfs @ 12.19 hrs, Volume= 0.051 af, Depth= 2.81"
Routed to Link 29L : West Und. Total

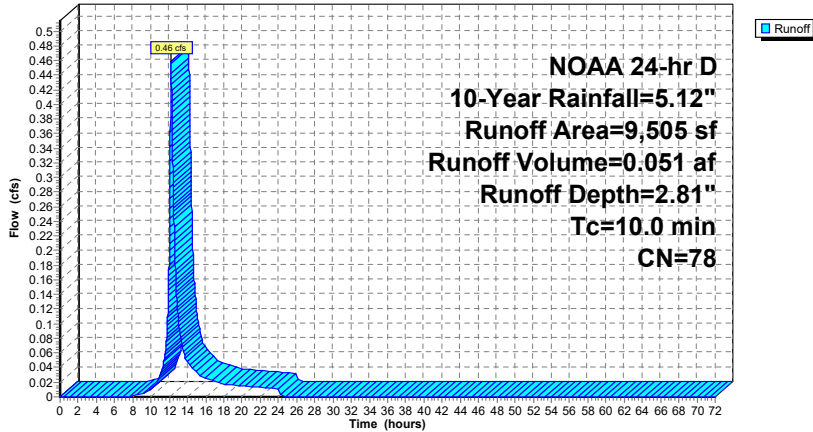
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,838 | 74 | >75% Grass cover, Good, HSG C |
| 6,667 | 80 | >75% Grass cover, Good, HSG D |
| 9,505 | 78 | Weighted Average |
| 9,505 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 23S: West Und. Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 23S: West Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 2.81 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 2.81 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 2.81 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 2.81 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 2.81 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 2.81 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 2.81 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 2.81 | 0.00 |
| 8.00 | 0.66 | 0.00 | 0.00 | 60.00 | 5.12 | 2.81 | 0.00 |
| 9.00 | 0.81 | 0.02 | 0.00 | 61.00 | 5.12 | 2.81 | 0.00 |
| 10.00 | 1.01 | 0.06 | 0.01 | 62.00 | 5.12 | 2.81 | 0.00 |
| 11.00 | 1.33 | 0.16 | 0.03 | 63.00 | 5.12 | 2.81 | 0.00 |
| 12.00 | 2.45 | 0.76 | 0.20 | 64.00 | 5.12 | 2.81 | 0.00 |
| 13.00 | 3.79 | 1.72 | 0.11 | 65.00 | 5.12 | 2.81 | 0.00 |
| 14.00 | 4.11 | 1.97 | 0.05 | 66.00 | 5.12 | 2.81 | 0.00 |
| 15.00 | 4.31 | 2.14 | 0.03 | 67.00 | 5.12 | 2.81 | 0.00 |
| 16.00 | 4.46 | 2.26 | 0.03 | 68.00 | 5.12 | 2.81 | 0.00 |
| 17.00 | 4.58 | 2.36 | 0.02 | 69.00 | 5.12 | 2.81 | 0.00 |
| 18.00 | 4.68 | 2.44 | 0.02 | 70.00 | 5.12 | 2.81 | 0.00 |
| 19.00 | 4.77 | 2.52 | 0.02 | 71.00 | 5.12 | 2.81 | 0.00 |
| 20.00 | 4.85 | 2.59 | 0.01 | 72.00 | 5.12 | 2.81 | 0.00 |
| 21.00 | 4.93 | 2.65 | 0.01 | | | | |
| 22.00 | 5.00 | 2.71 | 0.01 | | | | |
| 23.00 | 5.06 | 2.76 | 0.01 | | | | |
| 24.00 | 5.12 | 2.81 | 0.01 | | | | |
| 25.00 | 5.12 | 2.81 | 0.00 | | | | |
| 26.00 | 5.12 | 2.81 | 0.00 | | | | |
| 27.00 | 5.12 | 2.81 | 0.00 | | | | |
| 28.00 | 5.12 | 2.81 | 0.00 | | | | |
| 29.00 | 5.12 | 2.81 | 0.00 | | | | |
| 30.00 | 5.12 | 2.81 | 0.00 | | | | |
| 31.00 | 5.12 | 2.81 | 0.00 | | | | |
| 32.00 | 5.12 | 2.81 | 0.00 | | | | |
| 33.00 | 5.12 | 2.81 | 0.00 | | | | |
| 34.00 | 5.12 | 2.81 | 0.00 | | | | |
| 35.00 | 5.12 | 2.81 | 0.00 | | | | |
| 36.00 | 5.12 | 2.81 | 0.00 | | | | |
| 37.00 | 5.12 | 2.81 | 0.00 | | | | |
| 38.00 | 5.12 | 2.81 | 0.00 | | | | |
| 39.00 | 5.12 | 2.81 | 0.00 | | | | |
| 40.00 | 5.12 | 2.81 | 0.00 | | | | |
| 41.00 | 5.12 | 2.81 | 0.00 | | | | |
| 42.00 | 5.12 | 2.81 | 0.00 | | | | |
| 43.00 | 5.12 | 2.81 | 0.00 | | | | |
| 44.00 | 5.12 | 2.81 | 0.00 | | | | |
| 45.00 | 5.12 | 2.81 | 0.00 | | | | |
| 46.00 | 5.12 | 2.81 | 0.00 | | | | |
| 47.00 | 5.12 | 2.81 | 0.00 | | | | |
| 48.00 | 5.12 | 2.81 | 0.00 | | | | |
| 49.00 | 5.12 | 2.81 | 0.00 | | | | |
| 50.00 | 5.12 | 2.81 | 0.00 | | | | |
| 51.00 | 5.12 | 2.81 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 24S: East Und. Imp

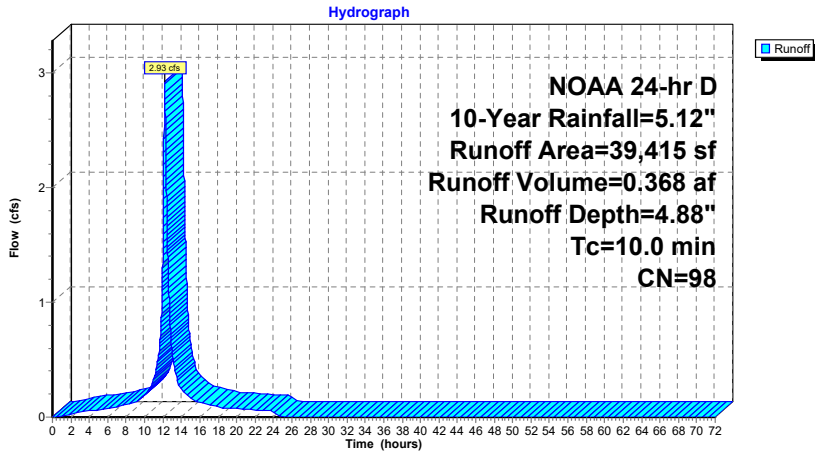
Runoff = 2.93 cfs @ 12.18 hrs, Volume= 0.368 af, Depth= 4.88"
 Routed to Link 30L : East Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 39,415 | 98 | Paved parking, HSG D |
| 39,415 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 24S: East Und. Imp



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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 24S: East Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.03 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.04 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.05 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.06 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.07 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.09 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.11 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.13 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.20 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.33 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 1.47 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.58 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.24 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.17 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.13 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.11 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.09 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.08 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.07 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.07 | | | | |
| 22.00 | 5.00 | 4.76 | 0.06 | | | | |
| 23.00 | 5.06 | 4.82 | 0.06 | | | | |
| 24.00 | 5.12 | 4.88 | 0.05 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Summary for Subcatchment 25S: East Und. Perv

Runoff = 0.54 cfs @ 12.19 hrs, Volume= 0.060 af, Depth= 3.00"
Routed to Link 30L : East Und. Total

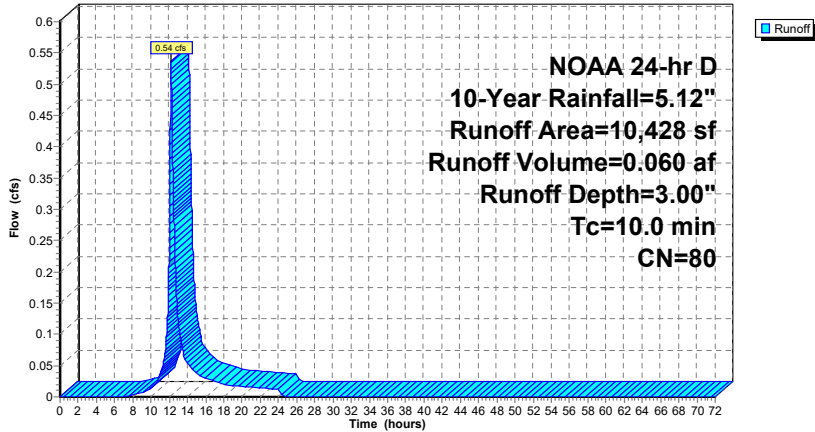
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 307 | 74 | >75% Grass cover, Good, HSG C |
| 10,121 | 80 | >75% Grass cover, Good, HSG D |
| 10,428 | 80 | Weighted Average |
| 10,428 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 25S: East Und. Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 10-Year Rainfall=5.12"

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Hydrograph for Subcatchment 25S: East Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 3.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 3.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 | 54.00 | 5.12 | 3.00 | 0.00 |
| 3.00 | 0.19 | 0.00 | 0.00 | 55.00 | 5.12 | 3.00 | 0.00 |
| 4.00 | 0.27 | 0.00 | 0.00 | 56.00 | 5.12 | 3.00 | 0.00 |
| 5.00 | 0.35 | 0.00 | 0.00 | 57.00 | 5.12 | 3.00 | 0.00 |
| 6.00 | 0.44 | 0.00 | 0.00 | 58.00 | 5.12 | 3.00 | 0.00 |
| 7.00 | 0.54 | 0.00 | 0.00 | 59.00 | 5.12 | 3.00 | 0.00 |
| 8.00 | 0.66 | 0.01 | 0.00 | 60.00 | 5.12 | 3.00 | 0.00 |
| 9.00 | 0.81 | 0.03 | 0.01 | 61.00 | 5.12 | 3.00 | 0.00 |
| 10.00 | 1.01 | 0.09 | 0.02 | 62.00 | 5.12 | 3.00 | 0.00 |
| 11.00 | 1.33 | 0.21 | 0.04 | 63.00 | 5.12 | 3.00 | 0.00 |
| 12.00 | 2.45 | 0.86 | 0.24 | 64.00 | 5.12 | 3.00 | 0.00 |
| 13.00 | 3.79 | 1.87 | 0.12 | 65.00 | 5.12 | 3.00 | 0.00 |
| 14.00 | 4.11 | 2.13 | 0.05 | 66.00 | 5.12 | 3.00 | 0.00 |
| 15.00 | 4.31 | 2.30 | 0.04 | 67.00 | 5.12 | 3.00 | 0.00 |
| 16.00 | 4.46 | 2.42 | 0.03 | 68.00 | 5.12 | 3.00 | 0.00 |
| 17.00 | 4.58 | 2.53 | 0.02 | 69.00 | 5.12 | 3.00 | 0.00 |
| 18.00 | 4.68 | 2.62 | 0.02 | 70.00 | 5.12 | 3.00 | 0.00 |
| 19.00 | 4.77 | 2.69 | 0.02 | 71.00 | 5.12 | 3.00 | 0.00 |
| 20.00 | 4.85 | 2.76 | 0.02 | 72.00 | 5.12 | 3.00 | 0.00 |
| 21.00 | 4.93 | 2.83 | 0.02 | | | | |
| 22.00 | 5.00 | 2.89 | 0.01 | | | | |
| 23.00 | 5.06 | 2.95 | 0.01 | | | | |
| 24.00 | 5.12 | 3.00 | 0.01 | | | | |
| 25.00 | 5.12 | 3.00 | 0.00 | | | | |
| 26.00 | 5.12 | 3.00 | 0.00 | | | | |
| 27.00 | 5.12 | 3.00 | 0.00 | | | | |
| 28.00 | 5.12 | 3.00 | 0.00 | | | | |
| 29.00 | 5.12 | 3.00 | 0.00 | | | | |
| 30.00 | 5.12 | 3.00 | 0.00 | | | | |
| 31.00 | 5.12 | 3.00 | 0.00 | | | | |
| 32.00 | 5.12 | 3.00 | 0.00 | | | | |
| 33.00 | 5.12 | 3.00 | 0.00 | | | | |
| 34.00 | 5.12 | 3.00 | 0.00 | | | | |
| 35.00 | 5.12 | 3.00 | 0.00 | | | | |
| 36.00 | 5.12 | 3.00 | 0.00 | | | | |
| 37.00 | 5.12 | 3.00 | 0.00 | | | | |
| 38.00 | 5.12 | 3.00 | 0.00 | | | | |
| 39.00 | 5.12 | 3.00 | 0.00 | | | | |
| 40.00 | 5.12 | 3.00 | 0.00 | | | | |
| 41.00 | 5.12 | 3.00 | 0.00 | | | | |
| 42.00 | 5.12 | 3.00 | 0.00 | | | | |
| 43.00 | 5.12 | 3.00 | 0.00 | | | | |
| 44.00 | 5.12 | 3.00 | 0.00 | | | | |
| 45.00 | 5.12 | 3.00 | 0.00 | | | | |
| 46.00 | 5.12 | 3.00 | 0.00 | | | | |
| 47.00 | 5.12 | 3.00 | 0.00 | | | | |
| 48.00 | 5.12 | 3.00 | 0.00 | | | | |
| 49.00 | 5.12 | 3.00 | 0.00 | | | | |
| 50.00 | 5.12 | 3.00 | 0.00 | | | | |
| 51.00 | 5.12 | 3.00 | 0.00 | | | | |

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Summary for Subcatchment 35S: Basin C Imp

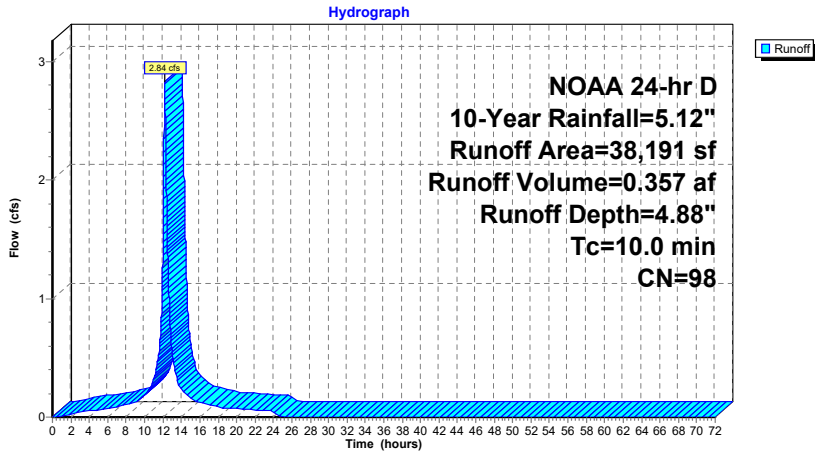
Runoff = 2.84 cfs @ 12.18 hrs, Volume= 0.357 af, Depth= 4.88"
Routed to Pond 21P : Basin C

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 10-Year Rainfall=5.12"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 38,191 | 98 | Paved parking, HSG D |
| 38,191 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 35S: Basin C Imp



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Hydrograph for Subcatchment 35S: Basin C Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 5.12 | 4.88 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 | 53.00 | 5.12 | 4.88 | 0.00 |
| 2.00 | 0.12 | 0.02 | 0.02 | 54.00 | 5.12 | 4.88 | 0.00 |
| 3.00 | 0.19 | 0.06 | 0.04 | 55.00 | 5.12 | 4.88 | 0.00 |
| 4.00 | 0.27 | 0.12 | 0.05 | 56.00 | 5.12 | 4.88 | 0.00 |
| 5.00 | 0.35 | 0.19 | 0.06 | 57.00 | 5.12 | 4.88 | 0.00 |
| 6.00 | 0.44 | 0.26 | 0.07 | 58.00 | 5.12 | 4.88 | 0.00 |
| 7.00 | 0.54 | 0.35 | 0.09 | 59.00 | 5.12 | 4.88 | 0.00 |
| 8.00 | 0.66 | 0.47 | 0.11 | 60.00 | 5.12 | 4.88 | 0.00 |
| 9.00 | 0.81 | 0.61 | 0.13 | 61.00 | 5.12 | 4.88 | 0.00 |
| 10.00 | 1.01 | 0.81 | 0.19 | 62.00 | 5.12 | 4.88 | 0.00 |
| 11.00 | 1.33 | 1.11 | 0.32 | 63.00 | 5.12 | 4.88 | 0.00 |
| 12.00 | 2.45 | 2.22 | 1.42 | 64.00 | 5.12 | 4.88 | 0.00 |
| 13.00 | 3.79 | 3.55 | 0.56 | 65.00 | 5.12 | 4.88 | 0.00 |
| 14.00 | 4.11 | 3.87 | 0.24 | 66.00 | 5.12 | 4.88 | 0.00 |
| 15.00 | 4.31 | 4.07 | 0.16 | 67.00 | 5.12 | 4.88 | 0.00 |
| 16.00 | 4.46 | 4.22 | 0.13 | 68.00 | 5.12 | 4.88 | 0.00 |
| 17.00 | 4.58 | 4.34 | 0.11 | 69.00 | 5.12 | 4.88 | 0.00 |
| 18.00 | 4.68 | 4.45 | 0.09 | 70.00 | 5.12 | 4.88 | 0.00 |
| 19.00 | 4.77 | 4.53 | 0.08 | 71.00 | 5.12 | 4.88 | 0.00 |
| 20.00 | 4.85 | 4.61 | 0.07 | 72.00 | 5.12 | 4.88 | 0.00 |
| 21.00 | 4.93 | 4.69 | 0.07 | | | | |
| 22.00 | 5.00 | 4.76 | 0.06 | | | | |
| 23.00 | 5.06 | 4.82 | 0.06 | | | | |
| 24.00 | 5.12 | 4.88 | 0.05 | | | | |
| 25.00 | 5.12 | 4.88 | 0.00 | | | | |
| 26.00 | 5.12 | 4.88 | 0.00 | | | | |
| 27.00 | 5.12 | 4.88 | 0.00 | | | | |
| 28.00 | 5.12 | 4.88 | 0.00 | | | | |
| 29.00 | 5.12 | 4.88 | 0.00 | | | | |
| 30.00 | 5.12 | 4.88 | 0.00 | | | | |
| 31.00 | 5.12 | 4.88 | 0.00 | | | | |
| 32.00 | 5.12 | 4.88 | 0.00 | | | | |
| 33.00 | 5.12 | 4.88 | 0.00 | | | | |
| 34.00 | 5.12 | 4.88 | 0.00 | | | | |
| 35.00 | 5.12 | 4.88 | 0.00 | | | | |
| 36.00 | 5.12 | 4.88 | 0.00 | | | | |
| 37.00 | 5.12 | 4.88 | 0.00 | | | | |
| 38.00 | 5.12 | 4.88 | 0.00 | | | | |
| 39.00 | 5.12 | 4.88 | 0.00 | | | | |
| 40.00 | 5.12 | 4.88 | 0.00 | | | | |
| 41.00 | 5.12 | 4.88 | 0.00 | | | | |
| 42.00 | 5.12 | 4.88 | 0.00 | | | | |
| 43.00 | 5.12 | 4.88 | 0.00 | | | | |
| 44.00 | 5.12 | 4.88 | 0.00 | | | | |
| 45.00 | 5.12 | 4.88 | 0.00 | | | | |
| 46.00 | 5.12 | 4.88 | 0.00 | | | | |
| 47.00 | 5.12 | 4.88 | 0.00 | | | | |
| 48.00 | 5.12 | 4.88 | 0.00 | | | | |
| 49.00 | 5.12 | 4.88 | 0.00 | | | | |
| 50.00 | 5.12 | 4.88 | 0.00 | | | | |
| 51.00 | 5.12 | 4.88 | 0.00 | | | | |

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Summary for Pond 19P: Basin A

Inflow Area = 1.125 ac, 77.06% Impervious, Inflow Depth = 4.43" for 10-Year event
 Inflow = 3.37 cfs @ 12.18 hrs, Volume= 0.415 af
 Outflow = 2.44 cfs @ 12.35 hrs, Volume= 0.307 af, Atten= 28%, Lag= 10.3 min
 Primary = 2.44 cfs @ 12.35 hrs, Volume= 0.307 af
 Routed to Link 31L : Prop. West Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 103.92' @ 12.35 hrs Surf.Area= 4,507 sf Storage= 6,961 cf

Plug-Flow detention time= 206.2 min calculated for 0.307 af (74% of inflow)
 Center-of-Mass det. time= 108.0 min (879.3 - 771.3)

| Volume #1 | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| | 102.00' | 12,392 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 102.00 | 2,770 | 0 | 0 |
| 103.00 | 3,632 | 3,201 | 3,201 |
| 104.00 | 4,579 | 4,106 | 7,307 |
| 105.00 | 5,592 | 5,086 | 12,392 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 99.75' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 99.75' / 99.75' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 103.40' | 24.0" W x 10.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Primary | 104.25' | 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=2.43 cfs @ 12.35 hrs HW=103.92' (Free Discharge)

- 1=Culvert (Passes 2.43 cfs of 13.91 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 2.43 cfs @ 2.32 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

2023-11 Proposed

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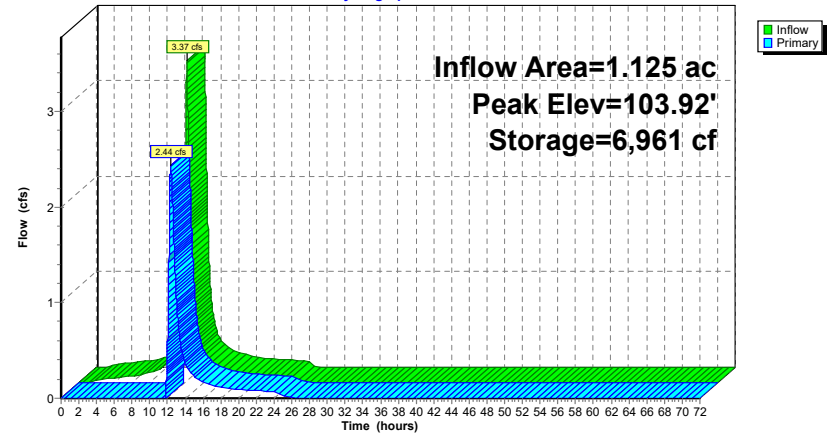
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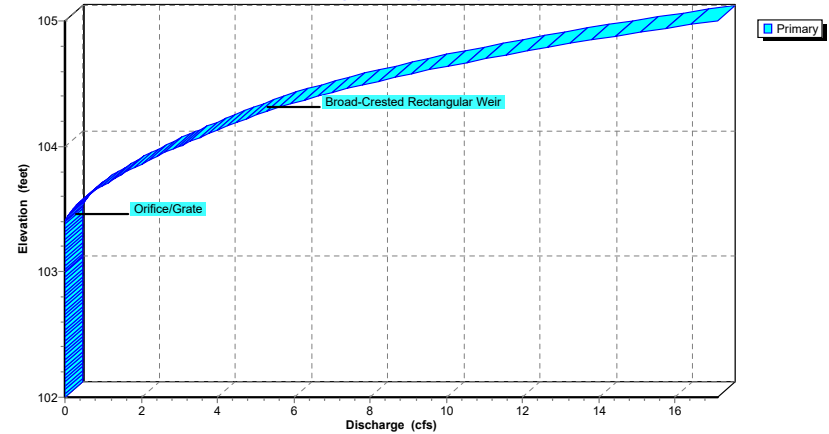
Pond 19P: Basin A

Hydrograph

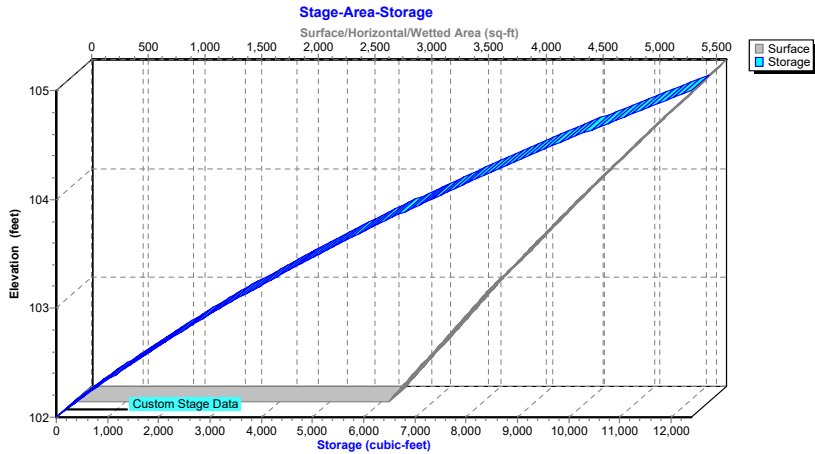


Pond 19P: Basin A

Stage-Discharge



Pond 19P: Basin A



Hydrograph for Pond 19P: Basin A

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 102.00 | 0.00 |
| 2.00 | 0.02 | 51 | 102.02 | 0.00 |
| 4.00 | 0.05 | 331 | 102.12 | 0.00 |
| 6.00 | 0.07 | 760 | 102.26 | 0.00 |
| 8.00 | 0.11 | 1,382 | 102.47 | 0.00 |
| 10.00 | 0.20 | 2,412 | 102.78 | 0.00 |
| 12.00 | 1.65 | 5,567 | 103.60 | 0.59 |
| 14.00 | 0.29 | 5,332 | 103.55 | 0.37 |
| 16.00 | 0.16 | 5,086 | 103.49 | 0.17 |
| 18.00 | 0.11 | 5,008 | 103.47 | 0.12 |
| 20.00 | 0.09 | 4,962 | 103.46 | 0.09 |
| 22.00 | 0.08 | 4,939 | 103.45 | 0.08 |
| 24.00 | 0.06 | 4,917 | 103.45 | 0.07 |
| 26.00 | 0.00 | 4,769 | 103.41 | 0.01 |
| 28.00 | 0.00 | 4,742 | 103.40 | 0.00 |
| 30.00 | 0.00 | 4,733 | 103.40 | 0.00 |
| 32.00 | 0.00 | 4,731 | 103.40 | 0.00 |
| 34.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 36.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 38.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 40.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 42.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 44.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 46.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 48.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 50.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 52.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 54.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 56.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 58.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 60.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 62.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 64.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 66.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 68.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 70.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 72.00 | 0.00 | 4,730 | 103.40 | 0.00 |

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Stage-Discharge for Pond 19P: Basin A

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---------------------|------------------|---------------------|------------------|---------------------|------------------|
| 102.00 | 0.00 | 103.04 | 0.00 | 104.08 | 3.60 |
| 102.02 | 0.00 | 103.06 | 0.00 | 104.10 | 3.76 |
| 102.04 | 0.00 | 103.08 | 0.00 | 104.12 | 3.92 |
| 102.06 | 0.00 | 103.10 | 0.00 | 104.14 | 4.09 |
| 102.08 | 0.00 | 103.12 | 0.00 | 104.16 | 4.25 |
| 102.10 | 0.00 | 103.14 | 0.00 | 104.18 | 4.42 |
| 102.12 | 0.00 | 103.16 | 0.00 | 104.20 | 4.59 |
| 102.14 | 0.00 | 103.18 | 0.00 | 104.22 | 4.77 |
| 102.16 | 0.00 | 103.20 | 0.00 | 104.24 | 4.94 |
| 102.18 | 0.00 | 103.22 | 0.00 | 104.26 | 5.10 |
| 102.20 | 0.00 | 103.24 | 0.00 | 104.28 | 5.29 |
| 102.22 | 0.00 | 103.26 | 0.00 | 104.30 | 5.50 |
| 102.24 | 0.00 | 103.28 | 0.00 | 104.32 | 5.71 |
| 102.26 | 0.00 | 103.30 | 0.00 | 104.34 | 5.93 |
| 102.28 | 0.00 | 103.32 | 0.00 | 104.36 | 6.16 |
| 102.30 | 0.00 | 103.34 | 0.00 | 104.38 | 6.39 |
| 102.32 | 0.00 | 103.36 | 0.00 | 104.40 | 6.63 |
| 102.34 | 0.00 | 103.38 | 0.00 | 104.42 | 6.88 |
| 102.36 | 0.00 | 103.40 | 0.00 | 104.44 | 7.13 |
| 102.38 | 0.00 | 103.42 | 0.02 | 104.46 | 7.39 |
| 102.40 | 0.00 | 103.44 | 0.05 | 104.48 | 7.66 |
| 102.42 | 0.00 | 103.46 | 0.09 | 104.50 | 7.94 |
| 102.44 | 0.00 | 103.48 | 0.15 | 104.52 | 8.22 |
| 102.46 | 0.00 | 103.50 | 0.20 | 104.54 | 8.51 |
| 102.48 | 0.00 | 103.52 | 0.27 | 104.56 | 8.80 |
| 102.50 | 0.00 | 103.54 | 0.34 | 104.58 | 9.10 |
| 102.52 | 0.00 | 103.56 | 0.41 | 104.60 | 9.41 |
| 102.54 | 0.00 | 103.58 | 0.49 | 104.62 | 9.72 |
| 102.56 | 0.00 | 103.60 | 0.57 | 104.64 | 10.04 |
| 102.58 | 0.00 | 103.62 | 0.66 | 104.66 | 10.37 |
| 102.60 | 0.00 | 103.64 | 0.75 | 104.68 | 10.70 |
| 102.62 | 0.00 | 103.66 | 0.85 | 104.70 | 11.04 |
| 102.64 | 0.00 | 103.68 | 0.95 | 104.72 | 11.39 |
| 102.66 | 0.00 | 103.70 | 1.05 | 104.74 | 11.75 |
| 102.68 | 0.00 | 103.72 | 1.16 | 104.76 | 12.11 |
| 102.70 | 0.00 | 103.74 | 1.27 | 104.78 | 12.48 |
| 102.72 | 0.00 | 103.76 | 1.39 | 104.80 | 12.86 |
| 102.74 | 0.00 | 103.78 | 1.50 | 104.82 | 13.24 |
| 102.76 | 0.00 | 103.80 | 1.62 | 104.84 | 13.63 |
| 102.78 | 0.00 | 103.82 | 1.75 | 104.86 | 14.03 |
| 102.80 | 0.00 | 103.84 | 1.87 | 104.88 | 14.45 |
| 102.82 | 0.00 | 103.86 | 2.00 | 104.90 | 14.87 |
| 102.84 | 0.00 | 103.88 | 2.13 | 104.92 | 15.30 |
| 102.86 | 0.00 | 103.90 | 2.27 | 104.94 | 15.74 |
| 102.88 | 0.00 | 103.92 | 2.41 | 104.96 | 16.19 |
| 102.90 | 0.00 | 103.94 | 2.55 | 104.98 | 16.65 |
| 102.92 | 0.00 | 103.96 | 2.69 | 105.00 | 17.11 |
| 102.94 | 0.00 | 103.98 | 2.84 | | |
| 102.96 | 0.00 | 104.00 | 2.98 | | |
| 102.98 | 0.00 | 104.02 | 3.13 | | |
| 103.00 | 0.00 | 104.04 | 3.29 | | |
| 103.02 | 0.00 | 104.06 | 3.44 | | |

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Stage-Area-Storage for Pond 19P: Basin A

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 102.00 | 2,770 | 0 | 104.60 | 5,187 | 10,236 |
| 102.05 | 2,813 | 140 | 104.65 | 5,237 | 10,497 |
| 102.10 | 2,856 | 281 | 104.70 | 5,288 | 10,760 |
| 102.15 | 2,899 | 425 | 104.75 | 5,339 | 11,026 |
| 102.20 | 2,942 | 571 | 104.80 | 5,389 | 11,294 |
| 102.25 | 2,986 | 719 | 104.85 | 5,440 | 11,565 |
| 102.30 | 3,029 | 870 | 104.90 | 5,491 | 11,838 |
| 102.35 | 3,072 | 1,022 | 104.95 | 5,541 | 12,114 |
| 102.40 | 3,115 | 1,177 | 105.00 | 5,592 | 12,392 |
| 102.45 | 3,158 | 1,334 | | | |
| 102.50 | 3,201 | 1,493 | | | |
| 102.55 | 3,244 | 1,654 | | | |
| 102.60 | 3,287 | 1,817 | | | |
| 102.65 | 3,330 | 1,983 | | | |
| 102.70 | 3,373 | 2,150 | | | |
| 102.75 | 3,417 | 2,320 | | | |
| 102.80 | 3,460 | 2,492 | | | |
| 102.85 | 3,503 | 2,666 | | | |
| 102.90 | 3,546 | 2,842 | | | |
| 102.95 | 3,589 | 3,020 | | | |
| 103.00 | 3,632 | 3,201 | | | |
| 103.05 | 3,679 | 3,384 | | | |
| 103.10 | 3,727 | 3,569 | | | |
| 103.15 | 3,774 | 3,756 | | | |
| 103.20 | 3,821 | 3,946 | | | |
| 103.25 | 3,869 | 4,139 | | | |
| 103.30 | 3,916 | 4,333 | | | |
| 103.35 | 3,963 | 4,530 | | | |
| 103.40 | 4,011 | 4,730 | | | |
| 103.45 | 4,058 | 4,931 | | | |
| 103.50 | 4,106 | 5,135 | | | |
| 103.55 | 4,153 | 5,342 | | | |
| 103.60 | 4,200 | 5,551 | | | |
| 103.65 | 4,248 | 5,762 | | | |
| 103.70 | 4,295 | 5,975 | | | |
| 103.75 | 4,342 | 6,191 | | | |
| 103.80 | 4,390 | 6,410 | | | |
| 103.85 | 4,437 | 6,630 | | | |
| 103.90 | 4,484 | 6,853 | | | |
| 103.95 | 4,532 | 7,079 | | | |
| 104.00 | 4,579 | 7,307 | | | |
| 104.05 | 4,630 | 7,537 | | | |
| 104.10 | 4,680 | 7,769 | | | |
| 104.15 | 4,731 | 8,005 | | | |
| 104.20 | 4,782 | 8,243 | | | |
| 104.25 | 4,832 | 8,483 | | | |
| 104.30 | 4,883 | 8,726 | | | |
| 104.35 | 4,934 | 8,971 | | | |
| 104.40 | 4,984 | 9,219 | | | |
| 104.45 | 5,035 | 9,470 | | | |
| 104.50 | 5,086 | 9,723 | | | |
| 104.55 | 5,136 | 9,978 | | | |

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Summary for Pond 20P: Basin B

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 4.68" for 10-Year event
 Inflow = 4.40 cfs @ 12.18 hrs, Volume= 0.548 af
 Outflow = 2.44 cfs @ 12.46 hrs, Volume= 0.376 af, Atten= 44%, Lag= 16.8 min
 Primary = 2.44 cfs @ 12.46 hrs, Volume= 0.376 af
 Routed to Link 32L : Prop. South Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 103.81' @ 12.46 hrs Surf.Area= 4,122 sf Storage= 11,194 cf

Plug-Flow detention time= 258.8 min calculated for 0.376 af (69% of inflow)
 Center-of-Mass det. time= 151.3 min (915.6 - 764.2)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 101.00' | 16,194 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|------------------|-------------------|------------------------|------------------------|
| 101.00 | 3,841 | 0 | 0 |
| 102.00 | 3,941 | 3,891 | 3,891 |
| 103.00 | 4,041 | 3,991 | 7,882 |
| 104.00 | 4,141 | 4,091 | 11,973 |
| 105.00 | 4,301 | 4,221 | 16,194 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 98.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 98.50' / 98.50' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 102.90' | 12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 104.30' | 4.0" long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=2.44 cfs @ 12.46 hrs HW=103.81' (Free Discharge)

- 1=Culvert (Passes 2.44 cfs of 15.99 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 2.44 cfs @ 3.25 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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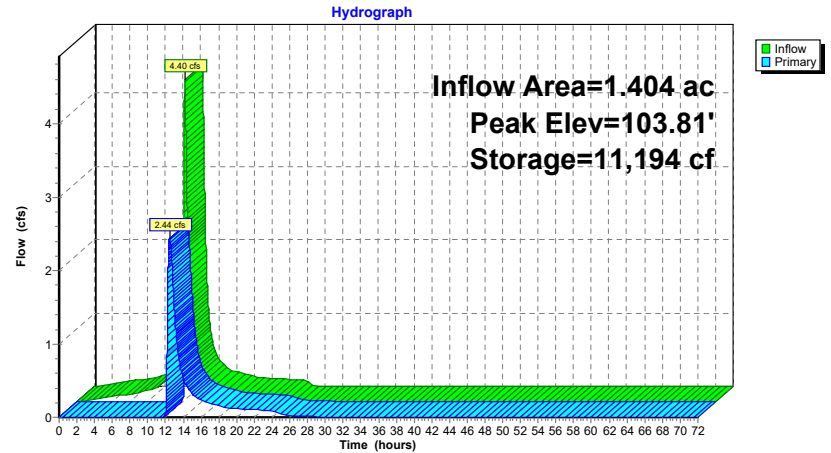
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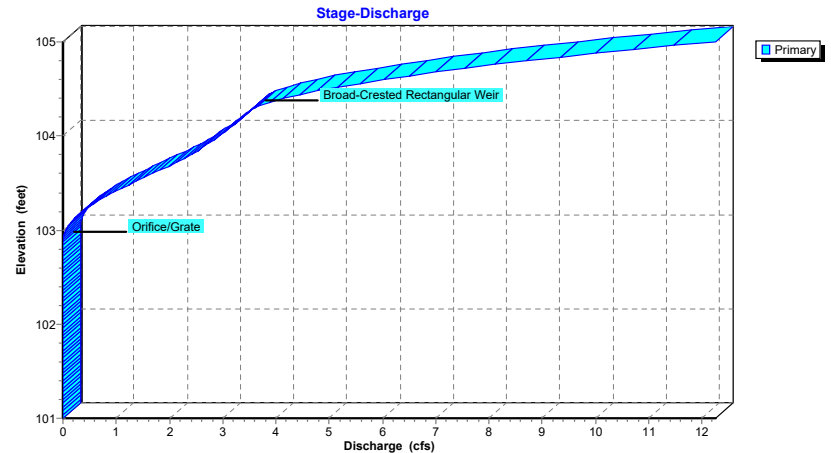
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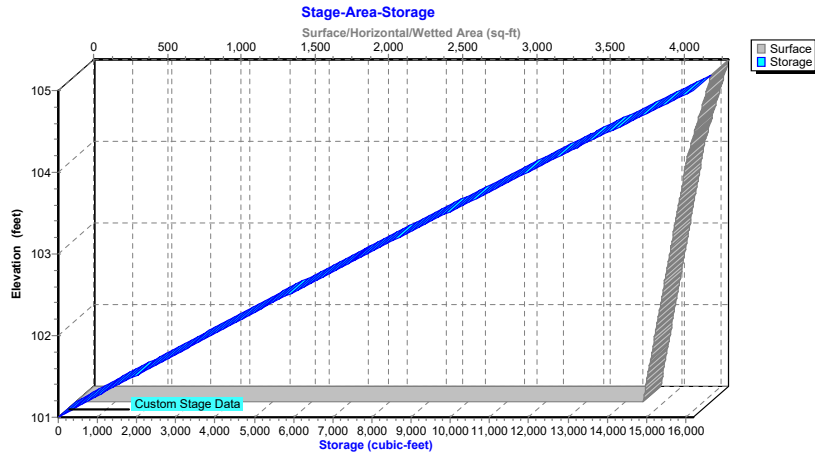
Pond 20P: Basin B



Pond 20P: Basin B



Pond 20P: Basin B



Hydrograph for Pond 20P: Basin B

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 101.00 | 0.00 |
| 2.00 | 0.04 | 73 | 101.02 | 0.00 |
| 4.00 | 0.07 | 478 | 101.12 | 0.00 |
| 6.00 | 0.10 | 1,099 | 101.29 | 0.00 |
| 8.00 | 0.16 | 1,997 | 101.52 | 0.00 |
| 10.00 | 0.28 | 3,446 | 101.89 | 0.00 |
| 12.00 | 2.19 | 7,987 | 103.03 | 0.07 |
| 14.00 | 0.37 | 8,943 | 103.26 | 0.53 |
| 16.00 | 0.20 | 8,422 | 103.13 | 0.23 |
| 18.00 | 0.13 | 8,249 | 103.09 | 0.16 |
| 20.00 | 0.11 | 8,149 | 103.07 | 0.12 |
| 22.00 | 0.10 | 8,096 | 103.05 | 0.10 |
| 24.00 | 0.08 | 8,048 | 103.04 | 0.09 |
| 26.00 | 0.00 | 7,763 | 102.97 | 0.02 |
| 28.00 | 0.00 | 7,655 | 102.94 | 0.01 |
| 30.00 | 0.00 | 7,600 | 102.93 | 0.01 |
| 32.00 | 0.00 | 7,571 | 102.92 | 0.00 |
| 34.00 | 0.00 | 7,556 | 102.92 | 0.00 |
| 36.00 | 0.00 | 7,544 | 102.92 | 0.00 |
| 38.00 | 0.00 | 7,534 | 102.91 | 0.00 |
| 40.00 | 0.00 | 7,526 | 102.91 | 0.00 |
| 42.00 | 0.00 | 7,519 | 102.91 | 0.00 |
| 44.00 | 0.00 | 7,513 | 102.91 | 0.00 |
| 46.00 | 0.00 | 7,508 | 102.91 | 0.00 |
| 48.00 | 0.00 | 7,503 | 102.91 | 0.00 |
| 50.00 | 0.00 | 7,500 | 102.91 | 0.00 |
| 52.00 | 0.00 | 7,497 | 102.90 | 0.00 |
| 54.00 | 0.00 | 7,494 | 102.90 | 0.00 |
| 56.00 | 0.00 | 7,492 | 102.90 | 0.00 |
| 58.00 | 0.00 | 7,490 | 102.90 | 0.00 |
| 60.00 | 0.00 | 7,488 | 102.90 | 0.00 |
| 62.00 | 0.00 | 7,487 | 102.90 | 0.00 |
| 64.00 | 0.00 | 7,485 | 102.90 | 0.00 |
| 66.00 | 0.00 | 7,484 | 102.90 | 0.00 |
| 68.00 | 0.00 | 7,483 | 102.90 | 0.00 |
| 70.00 | 0.00 | 7,483 | 102.90 | 0.00 |
| 72.00 | 0.00 | 7,482 | 102.90 | 0.00 |

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Stage-Discharge for Pond 20P: Basin B

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| 101.00 | 0.00 | 102.04 | 0.00 | 103.08 | 0.14 | 104.12 | 3.21 |
| 101.02 | 0.00 | 102.06 | 0.00 | 103.10 | 0.17 | 104.14 | 3.25 |
| 101.04 | 0.00 | 102.08 | 0.00 | 103.12 | 0.20 | 104.16 | 3.30 |
| 101.06 | 0.00 | 102.10 | 0.00 | 103.14 | 0.24 | 104.18 | 3.34 |
| 101.08 | 0.00 | 102.12 | 0.00 | 103.16 | 0.28 | 104.20 | 3.38 |
| 101.10 | 0.00 | 102.14 | 0.00 | 103.18 | 0.32 | 104.22 | 3.42 |
| 101.12 | 0.00 | 102.16 | 0.00 | 103.20 | 0.37 | 104.24 | 3.47 |
| 101.14 | 0.00 | 102.18 | 0.00 | 103.22 | 0.42 | 104.26 | 3.51 |
| 101.16 | 0.00 | 102.20 | 0.00 | 103.24 | 0.47 | 104.28 | 3.55 |
| 101.18 | 0.00 | 102.22 | 0.00 | 103.26 | 0.52 | 104.30 | 3.59 |
| 101.20 | 0.00 | 102.24 | 0.00 | 103.28 | 0.57 | 104.32 | 3.66 |
| 101.22 | 0.00 | 102.26 | 0.00 | 103.30 | 0.63 | 104.34 | 3.76 |
| 101.24 | 0.00 | 102.28 | 0.00 | 103.32 | 0.69 | 104.36 | 3.87 |
| 101.26 | 0.00 | 102.30 | 0.00 | 103.34 | 0.75 | 104.38 | 4.00 |
| 101.28 | 0.00 | 102.32 | 0.00 | 103.36 | 0.81 | 104.40 | 4.14 |
| 101.30 | 0.00 | 102.34 | 0.00 | 103.38 | 0.88 | 104.42 | 4.28 |
| 101.32 | 0.00 | 102.36 | 0.00 | 103.40 | 0.95 | 104.44 | 4.44 |
| 101.34 | 0.00 | 102.38 | 0.00 | 103.42 | 1.01 | 104.46 | 4.61 |
| 101.36 | 0.00 | 102.40 | 0.00 | 103.44 | 1.08 | 104.48 | 4.79 |
| 101.38 | 0.00 | 102.42 | 0.00 | 103.46 | 1.15 | 104.50 | 4.97 |
| 101.40 | 0.00 | 102.44 | 0.00 | 103.48 | 1.22 | 104.52 | 5.16 |
| 101.42 | 0.00 | 102.46 | 0.00 | 103.50 | 1.30 | 104.54 | 5.37 |
| 101.44 | 0.00 | 102.48 | 0.00 | 103.52 | 1.37 | 104.56 | 5.58 |
| 101.46 | 0.00 | 102.50 | 0.00 | 103.54 | 1.45 | 104.58 | 5.80 |
| 101.48 | 0.00 | 102.52 | 0.00 | 103.56 | 1.52 | 104.60 | 6.02 |
| 101.50 | 0.00 | 102.54 | 0.00 | 103.58 | 1.60 | 104.62 | 6.26 |
| 101.52 | 0.00 | 102.56 | 0.00 | 103.60 | 1.67 | 104.64 | 6.50 |
| 101.54 | 0.00 | 102.58 | 0.00 | 103.62 | 1.75 | 104.66 | 6.75 |
| 101.56 | 0.00 | 102.60 | 0.00 | 103.64 | 1.83 | 104.68 | 7.00 |
| 101.58 | 0.00 | 102.62 | 0.00 | 103.66 | 1.90 | 104.70 | 7.27 |
| 101.60 | 0.00 | 102.64 | 0.00 | 103.68 | 1.98 | 104.72 | 7.54 |
| 101.62 | 0.00 | 102.66 | 0.00 | 103.70 | 2.05 | 104.74 | 7.82 |
| 101.64 | 0.00 | 102.68 | 0.00 | 103.72 | 2.13 | 104.76 | 8.11 |
| 101.66 | 0.00 | 102.70 | 0.00 | 103.74 | 2.20 | 104.78 | 8.41 |
| 101.68 | 0.00 | 102.72 | 0.00 | 103.76 | 2.27 | 104.80 | 8.72 |
| 101.70 | 0.00 | 102.74 | 0.00 | 103.78 | 2.34 | 104.82 | 9.03 |
| 101.72 | 0.00 | 102.76 | 0.00 | 103.80 | 2.40 | 104.84 | 9.35 |
| 101.74 | 0.00 | 102.78 | 0.00 | 103.82 | 2.47 | 104.86 | 9.68 |
| 101.76 | 0.00 | 102.80 | 0.00 | 103.84 | 2.53 | 104.88 | 10.01 |
| 101.78 | 0.00 | 102.82 | 0.00 | 103.86 | 2.58 | 104.90 | 10.36 |
| 101.80 | 0.00 | 102.84 | 0.00 | 103.88 | 2.63 | 104.92 | 10.72 |
| 101.82 | 0.00 | 102.86 | 0.00 | 103.90 | 2.67 | 104.94 | 11.09 |
| 101.84 | 0.00 | 102.88 | 0.00 | 103.92 | 2.73 | 104.96 | 11.47 |
| 101.86 | 0.00 | 102.90 | 0.00 | 103.94 | 2.78 | 104.98 | 11.86 |
| 101.88 | 0.00 | 102.92 | 0.00 | 103.96 | 2.83 | 105.00 | 12.26 |
| 101.90 | 0.00 | 102.94 | 0.01 | 103.98 | 2.88 | | |
| 101.92 | 0.00 | 102.96 | 0.02 | 104.00 | 2.93 | | |
| 101.94 | 0.00 | 102.98 | 0.03 | 104.02 | 2.98 | | |
| 101.96 | 0.00 | 103.00 | 0.04 | 104.04 | 3.03 | | |
| 101.98 | 0.00 | 103.02 | 0.06 | 104.06 | 3.07 | | |
| 102.00 | 0.00 | 103.04 | 0.09 | 104.08 | 3.12 | | |
| 102.02 | 0.00 | 103.06 | 0.11 | 104.10 | 3.16 | | |

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Stage-Area-Storage for Pond 20P: Basin B

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 101.00 | 3,841 | 0 | 103.60 | 4,101 | 10,325 |
| 101.05 | 3,846 | 192 | 103.65 | 4,106 | 10,530 |
| 101.10 | 3,851 | 385 | 103.70 | 4,111 | 10,735 |
| 101.15 | 3,856 | 577 | 103.75 | 4,116 | 10,941 |
| 101.20 | 3,861 | 770 | 103.80 | 4,121 | 11,147 |
| 101.25 | 3,866 | 963 | 103.85 | 4,126 | 11,353 |
| 101.30 | 3,871 | 1,157 | 103.90 | 4,131 | 11,559 |
| 101.35 | 3,876 | 1,350 | 103.95 | 4,136 | 11,766 |
| 101.40 | 3,881 | 1,544 | 104.00 | 4,141 | 11,973 |
| 101.45 | 3,886 | 1,739 | 104.05 | 4,149 | 12,180 |
| 101.50 | 3,891 | 1,933 | 104.10 | 4,157 | 12,388 |
| 101.55 | 3,896 | 2,128 | 104.15 | 4,165 | 12,596 |
| 101.60 | 3,901 | 2,323 | 104.20 | 4,173 | 12,804 |
| 101.65 | 3,906 | 2,518 | 104.25 | 4,181 | 13,013 |
| 101.70 | 3,911 | 2,713 | 104.30 | 4,189 | 13,222 |
| 101.75 | 3,916 | 2,909 | 104.35 | 4,197 | 13,432 |
| 101.80 | 3,921 | 3,105 | 104.40 | 4,205 | 13,642 |
| 101.85 | 3,926 | 3,301 | 104.45 | 4,213 | 13,853 |
| 101.90 | 3,931 | 3,497 | 104.50 | 4,221 | 14,064 |
| 101.95 | 3,936 | 3,694 | 104.55 | 4,229 | 14,275 |
| 102.00 | 3,941 | 3,891 | 104.60 | 4,237 | 14,486 |
| 102.05 | 3,946 | 4,088 | 104.65 | 4,245 | 14,698 |
| 102.10 | 3,951 | 4,286 | 104.70 | 4,253 | 14,911 |
| 102.15 | 3,956 | 4,483 | 104.75 | 4,261 | 15,124 |
| 102.20 | 3,961 | 4,681 | 104.80 | 4,269 | 15,337 |
| 102.25 | 3,966 | 4,879 | 104.85 | 4,277 | 15,551 |
| 102.30 | 3,971 | 5,078 | 104.90 | 4,285 | 15,765 |
| 102.35 | 3,976 | 5,276 | 104.95 | 4,293 | 15,979 |
| 102.40 | 3,981 | 5,475 | 105.00 | 4,301 | 16,194 |
| 102.45 | 3,986 | 5,675 | | | |
| 102.50 | 3,991 | 5,874 | | | |
| 102.55 | 3,996 | 6,074 | | | |
| 102.60 | 4,001 | 6,274 | | | |
| 102.65 | 4,006 | 6,474 | | | |
| 102.70 | 4,011 | 6,674 | | | |
| 102.75 | 4,016 | 6,875 | | | |
| 102.80 | 4,021 | 7,076 | | | |
| 102.85 | 4,026 | 7,277 | | | |
| 102.90 | 4,031 | 7,478 | | | |
| 102.95 | 4,036 | 7,680 | | | |
| 103.00 | 4,041 | 7,882 | | | |
| 103.05 | 4,046 | 8,084 | | | |
| 103.10 | 4,051 | 8,287 | | | |
| 103.15 | 4,056 | 8,489 | | | |
| 103.20 | 4,061 | 8,692 | | | |
| 103.25 | 4,066 | 8,895 | | | |
| 103.30 | 4,071 | 9,099 | | | |
| 103.35 | 4,076 | 9,302 | | | |
| 103.40 | 4,081 | 9,506 | | | |
| 103.45 | 4,086 | 9,711 | | | |
| 103.50 | 4,091 | 9,915 | | | |
| 103.55 | 4,096 | 10,120 | | | |

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Summary for Pond 21P: Basin C

Inflow Area = 1.100 ac, 79.73% Impervious, Inflow Depth = 4.48" for 10-Year event
 Inflow = 3.32 cfs @ 12.18 hrs, Volume= 0.411 af
 Outflow = 1.65 cfs @ 12.51 hrs, Volume= 0.306 af, Atten= 50%, Lag= 19.9 min
 Primary = 1.65 cfs @ 12.51 hrs, Volume= 0.306 af
 Routed to Link 33L : Prop. East Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 101.11' @ 12.51 hrs Surf.Area= 4,859 sf Storage= 8,157 cf

Plug-Flow detention time= 249.1 min calculated for 0.306 af (74% of inflow)
 Center-of-Mass det. time= 152.4 min (922.0 - 769.7)

| Volume #1 | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| | 99.00' | 13,101 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 99.00 | 2,973 | 0 | 0 |
| 100.00 | 3,805 | 3,389 | 3,389 |
| 101.00 | 4,690 | 4,248 | 7,637 |
| 102.00 | 6,238 | 5,464 | 13,101 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|---|
| #1 | Primary | 96.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 96.50' / 96.50' S= 0.0000 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 100.30' | 10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 101.25' | 3.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=1.66 cfs @ 12.51 hrs HW=101.11' (Free Discharge)

- 1=Culvert (Passes 1.66 cfs of 14.74 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 1.66 cfs @ 3.06 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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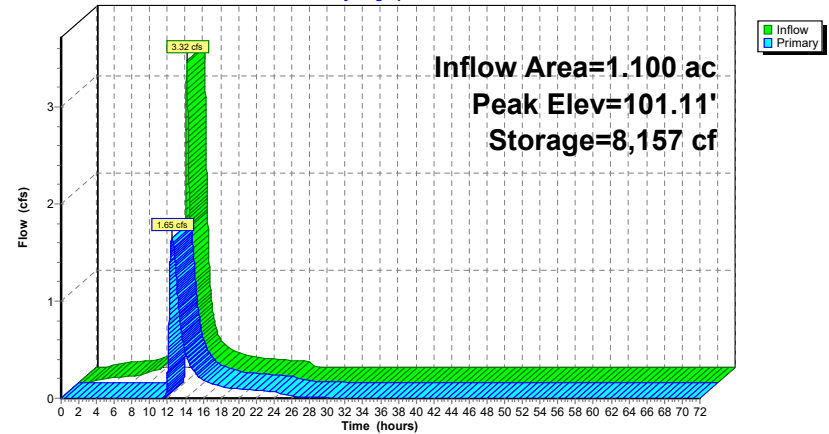
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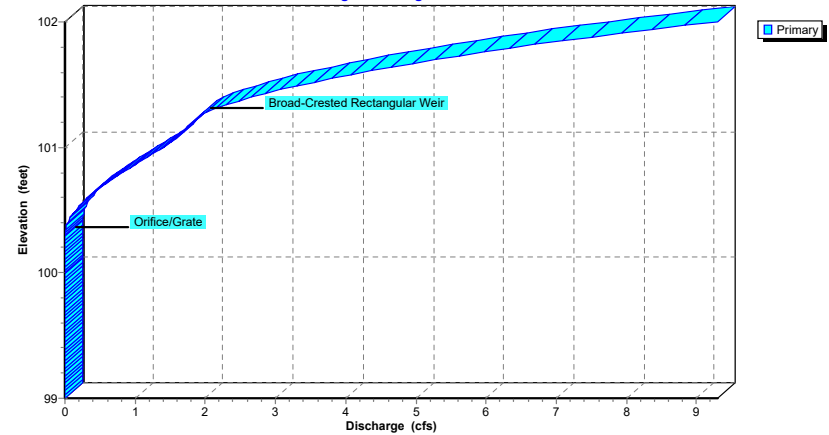
Pond 21P: Basin C

Hydrograph



Pond 21P: Basin C

Stage-Discharge



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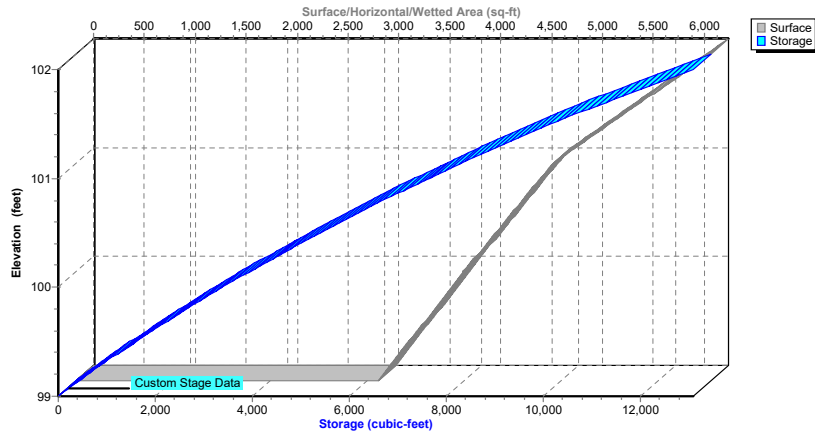
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Pond 21P: Basin C

Stage-Area-Storage



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Hydrograph for Pond 21P: Basin C

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 99.00 | 0.00 |
| 2.00 | 0.02 | 51 | 99.02 | 0.00 |
| 4.00 | 0.05 | 334 | 99.11 | 0.00 |
| 6.00 | 0.07 | 769 | 99.25 | 0.00 |
| 8.00 | 0.11 | 1,398 | 99.44 | 0.00 |
| 10.00 | 0.20 | 2,431 | 99.74 | 0.00 |
| 12.00 | 1.64 | 5,690 | 100.57 | 0.27 |
| 14.00 | 0.29 | 6,107 | 100.66 | 0.47 |
| 16.00 | 0.15 | 5,500 | 100.52 | 0.19 |
| 18.00 | 0.10 | 5,316 | 100.48 | 0.13 |
| 20.00 | 0.09 | 5,213 | 100.46 | 0.09 |
| 22.00 | 0.07 | 5,161 | 100.44 | 0.08 |
| 24.00 | 0.06 | 5,113 | 100.43 | 0.07 |
| 26.00 | 0.00 | 4,868 | 100.37 | 0.02 |
| 28.00 | 0.00 | 4,764 | 100.35 | 0.01 |
| 30.00 | 0.00 | 4,711 | 100.33 | 0.01 |
| 32.00 | 0.00 | 4,678 | 100.33 | 0.00 |
| 34.00 | 0.00 | 4,659 | 100.32 | 0.00 |
| 36.00 | 0.00 | 4,646 | 100.32 | 0.00 |
| 38.00 | 0.00 | 4,636 | 100.32 | 0.00 |
| 40.00 | 0.00 | 4,627 | 100.31 | 0.00 |
| 42.00 | 0.00 | 4,619 | 100.31 | 0.00 |
| 44.00 | 0.00 | 4,613 | 100.31 | 0.00 |
| 46.00 | 0.00 | 4,607 | 100.31 | 0.00 |
| 48.00 | 0.00 | 4,602 | 100.31 | 0.00 |
| 50.00 | 0.00 | 4,598 | 100.31 | 0.00 |
| 52.00 | 0.00 | 4,594 | 100.31 | 0.00 |
| 54.00 | 0.00 | 4,591 | 100.31 | 0.00 |
| 56.00 | 0.00 | 4,588 | 100.30 | 0.00 |
| 58.00 | 0.00 | 4,586 | 100.30 | 0.00 |
| 60.00 | 0.00 | 4,584 | 100.30 | 0.00 |
| 62.00 | 0.00 | 4,582 | 100.30 | 0.00 |
| 64.00 | 0.00 | 4,580 | 100.30 | 0.00 |
| 66.00 | 0.00 | 4,579 | 100.30 | 0.00 |
| 68.00 | 0.00 | 4,578 | 100.30 | 0.00 |
| 70.00 | 0.00 | 4,577 | 100.30 | 0.00 |
| 72.00 | 0.00 | 4,576 | 100.30 | 0.00 |

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Stage-Discharge for Pond 21P: Basin C

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---------------------|------------------|---------------------|------------------|---------------------|------------------|
| 99.00 | 0.00 | 100.04 | 0.00 | 101.08 | 1.60 |
| 99.02 | 0.00 | 100.06 | 0.00 | 101.10 | 1.64 |
| 99.04 | 0.00 | 100.08 | 0.00 | 101.12 | 1.68 |
| 99.06 | 0.00 | 100.10 | 0.00 | 101.14 | 1.71 |
| 99.08 | 0.00 | 100.12 | 0.00 | 101.16 | 1.75 |
| 99.10 | 0.00 | 100.14 | 0.00 | 101.18 | 1.79 |
| 99.12 | 0.00 | 100.16 | 0.00 | 101.20 | 1.83 |
| 99.14 | 0.00 | 100.18 | 0.00 | 101.22 | 1.86 |
| 99.16 | 0.00 | 100.20 | 0.00 | 101.24 | 1.90 |
| 99.18 | 0.00 | 100.22 | 0.00 | 101.26 | 1.94 |
| 99.20 | 0.00 | 100.24 | 0.00 | 101.28 | 2.01 |
| 99.22 | 0.00 | 100.26 | 0.00 | 101.30 | 2.10 |
| 99.24 | 0.00 | 100.28 | 0.00 | 101.32 | 2.20 |
| 99.26 | 0.00 | 100.30 | 0.00 | 101.34 | 2.30 |
| 99.28 | 0.00 | 100.32 | 0.00 | 101.36 | 2.41 |
| 99.30 | 0.00 | 100.34 | 0.01 | 101.38 | 2.53 |
| 99.32 | 0.00 | 100.36 | 0.01 | 101.40 | 2.66 |
| 99.34 | 0.00 | 100.38 | 0.03 | 101.42 | 2.79 |
| 99.36 | 0.00 | 100.40 | 0.04 | 101.44 | 2.93 |
| 99.38 | 0.00 | 100.42 | 0.06 | 101.46 | 3.07 |
| 99.40 | 0.00 | 100.44 | 0.08 | 101.48 | 3.23 |
| 99.42 | 0.00 | 100.46 | 0.10 | 101.50 | 3.39 |
| 99.44 | 0.00 | 100.48 | 0.13 | 101.52 | 3.55 |
| 99.46 | 0.00 | 100.50 | 0.15 | 101.54 | 3.72 |
| 99.48 | 0.00 | 100.52 | 0.18 | 101.56 | 3.90 |
| 99.50 | 0.00 | 100.54 | 0.22 | 101.58 | 4.08 |
| 99.52 | 0.00 | 100.56 | 0.25 | 101.60 | 4.26 |
| 99.54 | 0.00 | 100.58 | 0.29 | 101.62 | 4.46 |
| 99.56 | 0.00 | 100.60 | 0.33 | 101.64 | 4.65 |
| 99.58 | 0.00 | 100.62 | 0.37 | 101.66 | 4.86 |
| 99.60 | 0.00 | 100.64 | 0.42 | 101.68 | 5.07 |
| 99.62 | 0.00 | 100.66 | 0.46 | 101.70 | 5.28 |
| 99.64 | 0.00 | 100.68 | 0.51 | 101.72 | 5.51 |
| 99.66 | 0.00 | 100.70 | 0.56 | 101.74 | 5.74 |
| 99.68 | 0.00 | 100.72 | 0.61 | 101.76 | 5.97 |
| 99.70 | 0.00 | 100.74 | 0.66 | 101.78 | 6.21 |
| 99.72 | 0.00 | 100.76 | 0.71 | 101.80 | 6.45 |
| 99.74 | 0.00 | 100.78 | 0.77 | 101.82 | 6.70 |
| 99.76 | 0.00 | 100.80 | 0.82 | 101.84 | 6.96 |
| 99.78 | 0.00 | 100.82 | 0.88 | 101.86 | 7.23 |
| 99.80 | 0.00 | 100.84 | 0.94 | 101.88 | 7.50 |
| 99.82 | 0.00 | 100.86 | 0.99 | 101.90 | 7.79 |
| 99.84 | 0.00 | 100.88 | 1.05 | 101.92 | 8.07 |
| 99.86 | 0.00 | 100.90 | 1.11 | 101.94 | 8.37 |
| 99.88 | 0.00 | 100.92 | 1.17 | 101.96 | 8.67 |
| 99.90 | 0.00 | 100.94 | 1.22 | 101.98 | 8.98 |
| 99.92 | 0.00 | 100.96 | 1.28 | 102.00 | 9.30 |
| 99.94 | 0.00 | 100.98 | 1.34 | | |
| 99.96 | 0.00 | 101.00 | 1.39 | | |
| 99.98 | 0.00 | 101.02 | 1.45 | | |
| 100.00 | 0.00 | 101.04 | 1.50 | | |
| 100.02 | 0.00 | 101.06 | 1.55 | | |

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Stage-Area-Storage for Pond 21P: Basin C

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 99.00 | 2,973 | 0 | 101.60 | 5,619 | 10,729 |
| 99.05 | 3,015 | 150 | 101.65 | 5,696 | 11,012 |
| 99.10 | 3,056 | 301 | 101.70 | 5,774 | 11,299 |
| 99.15 | 3,098 | 455 | 101.75 | 5,851 | 11,589 |
| 99.20 | 3,139 | 611 | 101.80 | 5,928 | 11,884 |
| 99.25 | 3,181 | 769 | 101.85 | 6,006 | 12,182 |
| 99.30 | 3,223 | 929 | 101.90 | 6,083 | 12,484 |
| 99.35 | 3,264 | 1,092 | 101.95 | 6,161 | 12,791 |
| 99.40 | 3,306 | 1,256 | 102.00 | 6,238 | 13,101 |
| 99.45 | 3,347 | 1,422 | | | |
| 99.50 | 3,389 | 1,591 | | | |
| 99.55 | 3,431 | 1,761 | | | |
| 99.60 | 3,472 | 1,934 | | | |
| 99.65 | 3,514 | 2,108 | | | |
| 99.70 | 3,555 | 2,285 | | | |
| 99.75 | 3,597 | 2,464 | | | |
| 99.80 | 3,639 | 2,645 | | | |
| 99.85 | 3,680 | 2,828 | | | |
| 99.90 | 3,722 | 3,013 | | | |
| 99.95 | 3,763 | 3,200 | | | |
| 100.00 | 3,805 | 3,389 | | | |
| 100.05 | 3,849 | 3,580 | | | |
| 100.10 | 3,893 | 3,774 | | | |
| 100.15 | 3,938 | 3,970 | | | |
| 100.20 | 3,982 | 4,168 | | | |
| 100.25 | 4,026 | 4,368 | | | |
| 100.30 | 4,070 | 4,570 | | | |
| 100.35 | 4,115 | 4,775 | | | |
| 100.40 | 4,159 | 4,982 | | | |
| 100.45 | 4,203 | 5,191 | | | |
| 100.50 | 4,248 | 5,402 | | | |
| 100.55 | 4,292 | 5,616 | | | |
| 100.60 | 4,336 | 5,831 | | | |
| 100.65 | 4,380 | 6,049 | | | |
| 100.70 | 4,425 | 6,269 | | | |
| 100.75 | 4,469 | 6,492 | | | |
| 100.80 | 4,513 | 6,716 | | | |
| 100.85 | 4,557 | 6,943 | | | |
| 100.90 | 4,602 | 7,172 | | | |
| 100.95 | 4,646 | 7,403 | | | |
| 101.00 | 4,690 | 7,637 | | | |
| 101.05 | 4,767 | 7,873 | | | |
| 101.10 | 4,845 | 8,113 | | | |
| 101.15 | 4,922 | 8,357 | | | |
| 101.20 | 5,000 | 8,605 | | | |
| 101.25 | 5,077 | 8,857 | | | |
| 101.30 | 5,154 | 9,113 | | | |
| 101.35 | 5,232 | 9,373 | | | |
| 101.40 | 5,309 | 9,636 | | | |
| 101.45 | 5,387 | 9,904 | | | |
| 101.50 | 5,464 | 10,175 | | | |
| 101.55 | 5,541 | 10,450 | | | |

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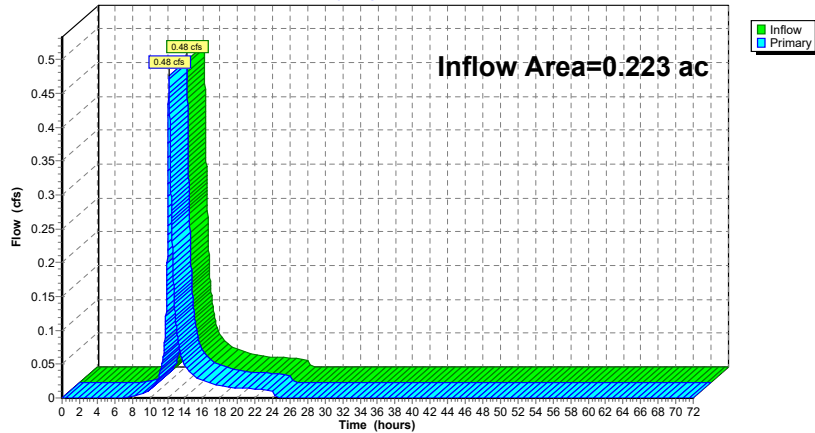
Summary for Link 29L: West Und. Total

Inflow Area = 0.223 ac, 2.28% Impervious, Inflow Depth = 2.86" for 10-Year event
 Inflow = 0.48 cfs @ 12.19 hrs, Volume= 0.053 af
 Primary = 0.48 cfs @ 12.19 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 31L : Prop. West Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 29L: West Und. Total

Hydrograph



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Hydrograph for Link 29L: West Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.01 | 0.00 | 0.01 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.01 | 0.00 | 0.01 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.03 | 0.00 | 0.03 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.21 | 0.00 | 0.21 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.11 | 0.00 | 0.11 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.05 | 0.00 | 0.05 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.03 | 0.00 | 0.03 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.03 | 0.00 | 0.03 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.02 | 0.00 | 0.02 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.02 | 0.00 | 0.02 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.02 | 0.00 | 0.02 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.02 | 0.00 | 0.02 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.01 | 0.00 | 0.01 | | | | |
| 22.00 | 0.01 | 0.00 | 0.01 | | | | |
| 23.00 | 0.01 | 0.00 | 0.01 | | | | |
| 24.00 | 0.01 | 0.00 | 0.01 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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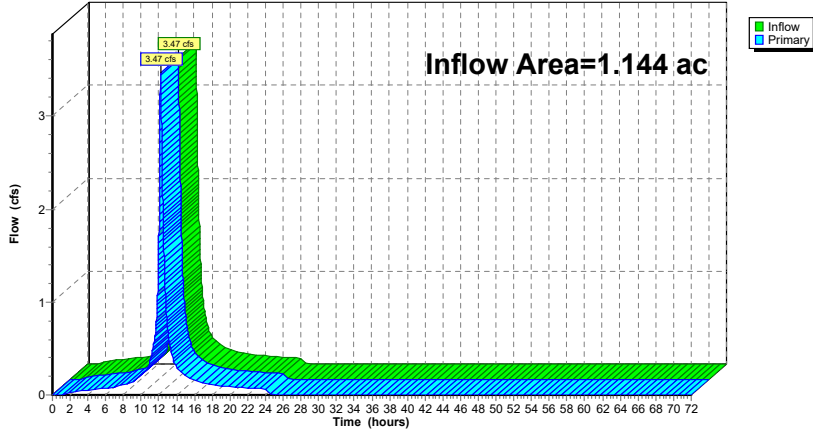
Summary for Link 30L: East Und. Total

Inflow Area = 1.144 ac, 79.08% Impervious, Inflow Depth = 4.49" for 10-Year event
 Inflow = 3.47 cfs @ 12.18 hrs, Volume= 0.428 af
 Primary = 3.47 cfs @ 12.18 hrs, Volume= 0.428 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 33L : Prop. East Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 30L: East Und. Total

Hydrograph



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Hydrograph for Link 30L: East Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.03 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.04 | 0.00 | 0.04 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.05 | 0.00 | 0.05 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.06 | 0.00 | 0.06 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.07 | 0.00 | 0.07 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.09 | 0.00 | 0.09 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.11 | 0.00 | 0.11 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.14 | 0.00 | 0.14 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.21 | 0.00 | 0.21 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.37 | 0.00 | 0.37 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.71 | 0.00 | 1.71 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.70 | 0.00 | 0.70 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.30 | 0.00 | 0.30 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.20 | 0.00 | 0.20 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.16 | 0.00 | 0.16 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.13 | 0.00 | 0.13 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.11 | 0.00 | 0.11 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.10 | 0.00 | 0.10 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.09 | 0.00 | 0.09 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.08 | 0.00 | 0.08 | | | | |
| 22.00 | 0.08 | 0.00 | 0.08 | | | | |
| 23.00 | 0.07 | 0.00 | 0.07 | | | | |
| 24.00 | 0.06 | 0.00 | 0.06 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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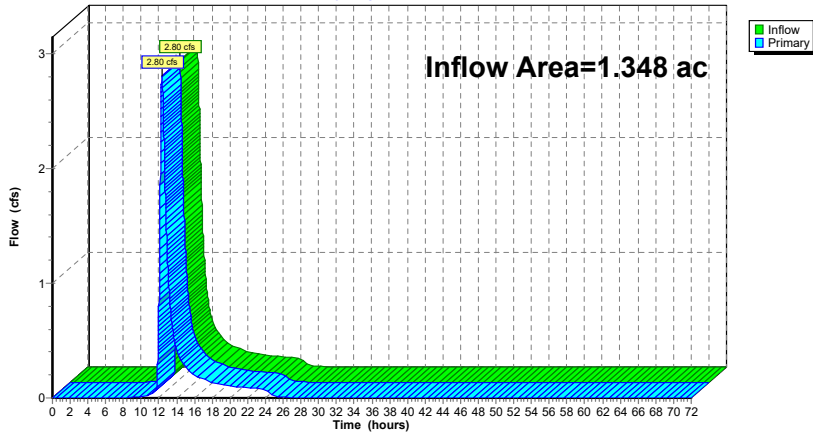
Summary for Link 31L: Prop. West Total

Inflow Area = 1.348 ac, 64.67% Impervious, Inflow Depth = 3.20" for 10-Year event
 Inflow = 2.80 cfs @ 12.33 hrs, Volume= 0.360 af
 Primary = 2.80 cfs @ 12.33 hrs, Volume= 0.360 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 31L: Prop. West Total

Hydrograph



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Hydrograph for Link 31L: Prop. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.01 | 0.00 | 0.01 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.01 | 0.00 | 0.01 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.03 | 0.00 | 0.03 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.80 | 0.00 | 0.80 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.13 | 0.00 | 1.13 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.41 | 0.00 | 0.41 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.27 | 0.00 | 0.27 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.20 | 0.00 | 0.20 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.16 | 0.00 | 0.16 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.13 | 0.00 | 0.13 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.12 | 0.00 | 0.12 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.11 | 0.00 | 0.11 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.10 | 0.00 | 0.10 | | | | |
| 22.00 | 0.09 | 0.00 | 0.09 | | | | |
| 23.00 | 0.08 | 0.00 | 0.08 | | | | |
| 24.00 | 0.08 | 0.00 | 0.08 | | | | |
| 25.00 | 0.02 | 0.00 | 0.02 | | | | |
| 26.00 | 0.01 | 0.00 | 0.01 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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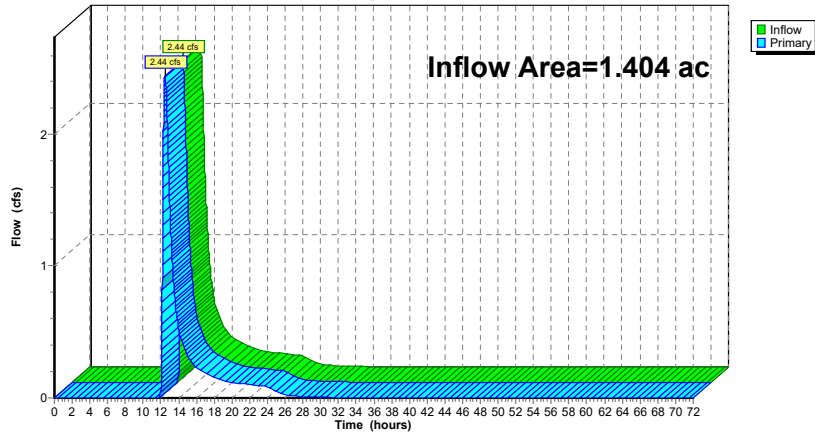
Summary for Link 32L: Prop. South Total

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 3.21" for 10-Year event
 Inflow = 2.44 cfs @ 12.46 hrs, Volume= 0.376 af
 Primary = 2.44 cfs @ 12.46 hrs, Volume= 0.376 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 32L: Prop. South Total

Hydrograph



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Hydrograph for Link 32L: Prop. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.07 | 0.00 | 0.07 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.46 | 0.00 | 1.46 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.53 | 0.00 | 0.53 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.32 | 0.00 | 0.32 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.23 | 0.00 | 0.23 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.19 | 0.00 | 0.19 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.16 | 0.00 | 0.16 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.13 | 0.00 | 0.13 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.12 | 0.00 | 0.12 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.11 | 0.00 | 0.11 | | | | |
| 22.00 | 0.10 | 0.00 | 0.10 | | | | |
| 23.00 | 0.09 | 0.00 | 0.09 | | | | |
| 24.00 | 0.09 | 0.00 | 0.09 | | | | |
| 25.00 | 0.04 | 0.00 | 0.04 | | | | |
| 26.00 | 0.02 | 0.00 | 0.02 | | | | |
| 27.00 | 0.01 | 0.00 | 0.01 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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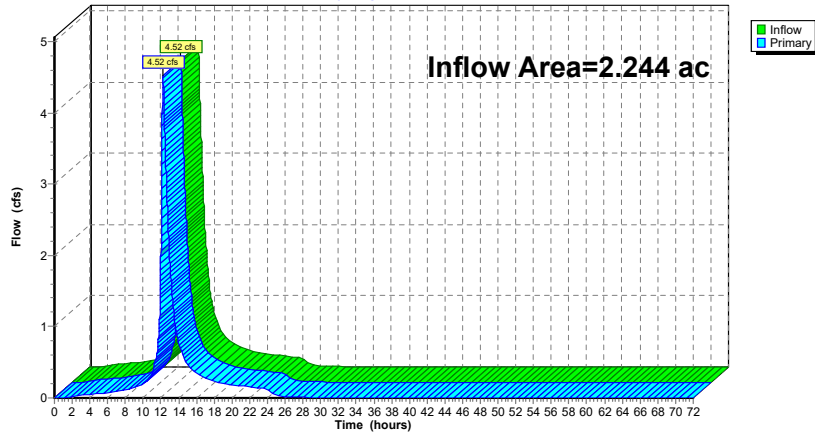
Summary for Link 33L: Prop. East Total

Inflow Area = 2.244 ac, 79.40% Impervious, Inflow Depth = 3.92" for 10-Year event
 Inflow = 4.52 cfs @ 12.21 hrs, Volume= 0.734 af
 Primary = 4.52 cfs @ 12.21 hrs, Volume= 0.734 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 33L: Prop. East Total

Hydrograph



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Hydrograph for Link 33L: Prop. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.03 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.04 | 0.00 | 0.04 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.05 | 0.00 | 0.05 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.06 | 0.00 | 0.06 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.07 | 0.00 | 0.07 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.09 | 0.00 | 0.09 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.11 | 0.00 | 0.11 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.14 | 0.00 | 0.14 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.21 | 0.00 | 0.21 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.37 | 0.00 | 0.37 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 1.97 | 0.00 | 1.97 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.93 | 0.00 | 1.93 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.77 | 0.00 | 0.77 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.47 | 0.00 | 0.47 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.35 | 0.00 | 0.35 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.29 | 0.00 | 0.29 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.23 | 0.00 | 0.23 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.20 | 0.00 | 0.20 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.18 | 0.00 | 0.18 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.17 | 0.00 | 0.17 | | | | |
| 22.00 | 0.16 | 0.00 | 0.16 | | | | |
| 23.00 | 0.14 | 0.00 | 0.14 | | | | |
| 24.00 | 0.13 | 0.00 | 0.13 | | | | |
| 25.00 | 0.04 | 0.00 | 0.04 | | | | |
| 26.00 | 0.02 | 0.00 | 0.02 | | | | |
| 27.00 | 0.01 | 0.00 | 0.01 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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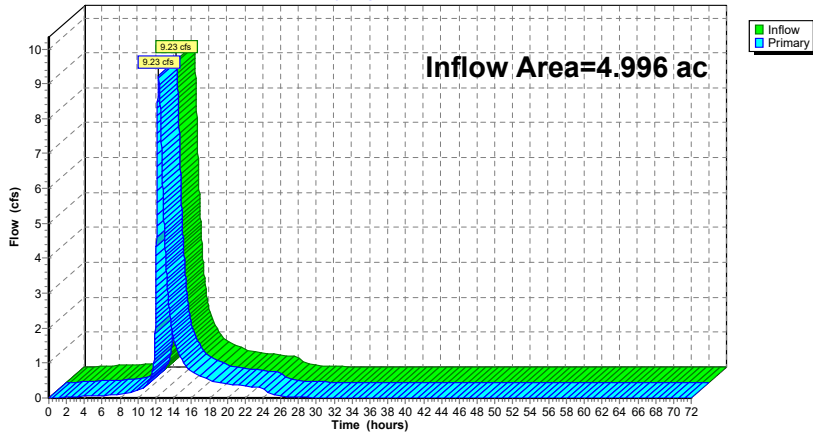
Summary for Link 34L: Prop. Total

Inflow Area = 4.996 ac, 78.20% Impervious, Inflow Depth = 3.53" for 10-Year event
 Inflow = 9.23 cfs @ 12.32 hrs, Volume= 1.469 af
 Primary = 9.23 cfs @ 12.32 hrs, Volume= 1.469 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 34L: Prop. Total

Hydrograph



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Hydrograph for Link 34L: Prop. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.03 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.04 | 0.00 | 0.04 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.05 | 0.00 | 0.05 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.06 | 0.00 | 0.06 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.07 | 0.00 | 0.07 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.09 | 0.00 | 0.09 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.12 | 0.00 | 0.12 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.15 | 0.00 | 0.15 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.22 | 0.00 | 0.22 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.40 | 0.00 | 0.40 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.85 | 0.00 | 2.85 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 4.52 | 0.00 | 4.52 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 1.71 | 0.00 | 1.71 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 1.06 | 0.00 | 1.06 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.77 | 0.00 | 0.77 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.64 | 0.00 | 0.64 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.52 | 0.00 | 0.52 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.45 | 0.00 | 0.45 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.41 | 0.00 | 0.41 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.38 | 0.00 | 0.38 | | | | |
| 22.00 | 0.35 | 0.00 | 0.35 | | | | |
| 23.00 | 0.32 | 0.00 | 0.32 | | | | |
| 24.00 | 0.30 | 0.00 | 0.30 | | | | |
| 25.00 | 0.11 | 0.00 | 0.11 | | | | |
| 26.00 | 0.05 | 0.00 | 0.05 | | | | |
| 27.00 | 0.03 | 0.00 | 0.03 | | | | |
| 28.00 | 0.02 | 0.00 | 0.02 | | | | |
| 29.00 | 0.02 | 0.00 | 0.02 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.01 | 0.00 | 0.01 | | | | |
| 32.00 | 0.01 | 0.00 | 0.01 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
 Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|--|---|
| Subcatchment5S: Basin A Imp | Runoff Area=37,763 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=4.75 cfs 0.606 af |
| Subcatchment6S: Basin A Perv | Runoff Area=11,243 sf 0.00% Impervious Runoff Depth=6.10" Tc=10.0 min CN=79 Runoff=1.17 cfs 0.131 af |
| Subcatchment9S: Basin B Imp | Runoff Area=54,598 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=6.87 cfs 0.876 af |
| Subcatchment10S: Basin B Perv | Runoff Area=6,549 sf 0.00% Impervious Runoff Depth=6.22" Tc=10.0 min CN=80 Runoff=0.69 cfs 0.078 af |
| Subcatchment13S: Basin C Perv | Runoff Area=9,708 sf 0.00% Impervious Runoff Depth=6.10" Tc=10.0 min CN=79 Runoff=1.01 cfs 0.113 af |
| Subcatchment22S: West Und. Imp | Runoff Area=222 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=0.03 cfs 0.004 af |
| Subcatchment23S: West Und. Perv | Runoff Area=9,505 sf 0.00% Impervious Runoff Depth=5.98" Tc=10.0 min CN=78 Runoff=0.97 cfs 0.109 af |
| Subcatchment24S: East Und. Imp | Runoff Area=39,415 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=4.96 cfs 0.633 af |
| Subcatchment25S: East Und. Perv | Runoff Area=10,428 sf 0.00% Impervious Runoff Depth=6.22" Tc=10.0 min CN=80 Runoff=1.10 cfs 0.124 af |
| Subcatchment35S: Basin C Imp | Runoff Area=38,191 sf 100.00% Impervious Runoff Depth=8.39" Tc=10.0 min CN=98 Runoff=4.80 cfs 0.613 af |
| Pond 19P: Basin A | Peak Elev=104.20' Storage=8,263 cf Inflow=5.91 cfs 0.737 af Outflow=4.63 cfs 0.629 af |
| Pond 20P: Basin B | Peak Elev=104.52' Storage=14,167 cf Inflow=7.56 cfs 0.954 af Outflow=5.21 cfs 0.782 af |
| Pond 21P: Basin C | Peak Elev=101.56' Storage=10,494 cf Inflow=5.81 cfs 0.726 af Outflow=3.88 cfs 0.621 af |
| Link 29L: West Und. Total | Inflow=1.00 cfs 0.112 af Primary=1.00 cfs 0.112 af |
| Link 30L: East Und. Total | Inflow=6.06 cfs 0.757 af Primary=6.06 cfs 0.757 af |
| Link 31L: Prop. West Total | Inflow=5.45 cfs 0.741 af Primary=5.45 cfs 0.741 af |

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| | |
|---|---|
| Link 32L: Prop. South Total | Inflow=5.21 cfs 0.782 af Primary=5.21 cfs 0.782 af |
| Link 33L: Prop. East Total | Inflow=8.73 cfs 1.378 af Primary=8.73 cfs 1.378 af |
| Link 34L: Prop. Total | Inflow=18.94 cfs 2.901 af Primary=18.94 cfs 2.901 af |
| Total Runoff Area = 4.996 ac Runoff Volume = 3.287 af Average Runoff Depth = 7.89" | |
| 21.80% Pervious = 1.089 ac 78.20% Impervious = 3.907 ac | |

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Summary for Subcatchment 5S: Basin A Imp

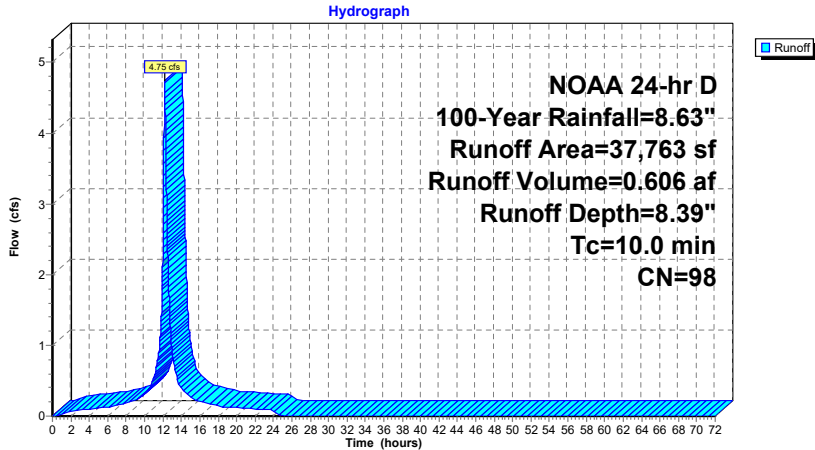
Runoff = 4.75 cfs @ 12.18 hrs, Volume= 0.606 af, Depth= 8.39"
Routed to Pond 19P : Basin A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 37,763 | 98 | Paved parking, HSG D |
| 37,763 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Basin A Imp



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Hydrograph for Subcatchment 5S: Basin A Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.02 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.06 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.08 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.10 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.11 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.12 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.15 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.19 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.22 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.32 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.54 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 2.39 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 0.93 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.39 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.27 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.21 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.18 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.14 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.13 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.12 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.11 | | | | |
| 22.00 | 8.42 | 8.18 | 0.10 | | | | |
| 23.00 | 8.53 | 8.29 | 0.09 | | | | |
| 24.00 | 8.63 | 8.39 | 0.08 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

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Summary for Subcatchment 6S: Basin A Perv

Runoff = 1.17 cfs @ 12.18 hrs, Volume= 0.131 af, Depth= 6.10"
Routed to Pond 19P : Basin A

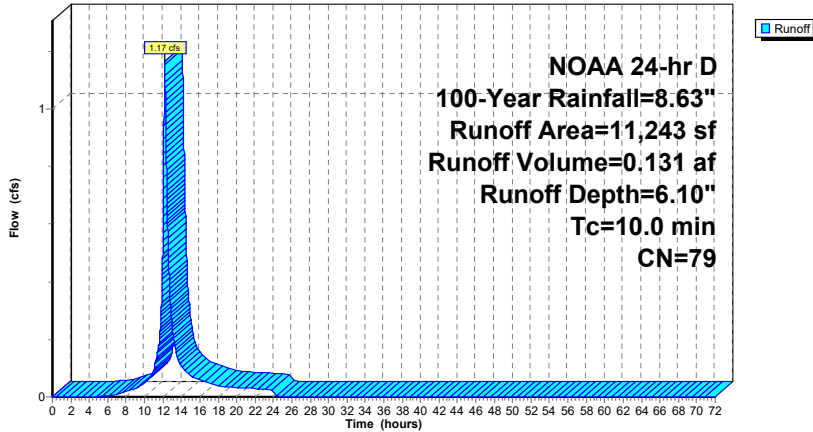
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,616 | 74 | >75% Grass cover, Good, HSG C |
| 9,627 | 80 | >75% Grass cover, Good, HSG D |
| 11,243 | 79 | Weighted Average |
| 11,243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Basin A Perv

Hydrograph



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Hydrograph for Subcatchment 6S: Basin A Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 6.10 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 6.10 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 6.10 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 6.10 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 6.10 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 6.10 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.00 | 58.00 | 8.63 | 6.10 | 0.00 |
| 7.00 | 0.91 | 0.05 | 0.01 | 59.00 | 8.63 | 6.10 | 0.00 |
| 8.00 | 1.12 | 0.11 | 0.02 | 60.00 | 8.63 | 6.10 | 0.00 |
| 9.00 | 1.37 | 0.20 | 0.03 | 61.00 | 8.63 | 6.10 | 0.00 |
| 10.00 | 1.71 | 0.36 | 0.05 | 62.00 | 8.63 | 6.10 | 0.00 |
| 11.00 | 2.24 | 0.67 | 0.10 | 63.00 | 8.63 | 6.10 | 0.00 |
| 12.00 | 4.13 | 2.07 | 0.55 | 64.00 | 8.63 | 6.10 | 0.00 |
| 13.00 | 6.39 | 4.03 | 0.25 | 65.00 | 8.63 | 6.10 | 0.00 |
| 14.00 | 6.92 | 4.51 | 0.11 | 66.00 | 8.63 | 6.10 | 0.00 |
| 15.00 | 7.26 | 4.82 | 0.07 | 67.00 | 8.63 | 6.10 | 0.00 |
| 16.00 | 7.51 | 5.05 | 0.06 | 68.00 | 8.63 | 6.10 | 0.00 |
| 17.00 | 7.72 | 5.25 | 0.05 | 69.00 | 8.63 | 6.10 | 0.00 |
| 18.00 | 7.89 | 5.41 | 0.04 | 70.00 | 8.63 | 6.10 | 0.00 |
| 19.00 | 8.04 | 5.55 | 0.04 | 71.00 | 8.63 | 6.10 | 0.00 |
| 20.00 | 8.18 | 5.67 | 0.03 | 72.00 | 8.63 | 6.10 | 0.00 |
| 21.00 | 8.30 | 5.79 | 0.03 | | | | |
| 22.00 | 8.42 | 5.90 | 0.03 | | | | |
| 23.00 | 8.53 | 6.00 | 0.03 | | | | |
| 24.00 | 8.63 | 6.10 | 0.02 | | | | |
| 25.00 | 8.63 | 6.10 | 0.00 | | | | |
| 26.00 | 8.63 | 6.10 | 0.00 | | | | |
| 27.00 | 8.63 | 6.10 | 0.00 | | | | |
| 28.00 | 8.63 | 6.10 | 0.00 | | | | |
| 29.00 | 8.63 | 6.10 | 0.00 | | | | |
| 30.00 | 8.63 | 6.10 | 0.00 | | | | |
| 31.00 | 8.63 | 6.10 | 0.00 | | | | |
| 32.00 | 8.63 | 6.10 | 0.00 | | | | |
| 33.00 | 8.63 | 6.10 | 0.00 | | | | |
| 34.00 | 8.63 | 6.10 | 0.00 | | | | |
| 35.00 | 8.63 | 6.10 | 0.00 | | | | |
| 36.00 | 8.63 | 6.10 | 0.00 | | | | |
| 37.00 | 8.63 | 6.10 | 0.00 | | | | |
| 38.00 | 8.63 | 6.10 | 0.00 | | | | |
| 39.00 | 8.63 | 6.10 | 0.00 | | | | |
| 40.00 | 8.63 | 6.10 | 0.00 | | | | |
| 41.00 | 8.63 | 6.10 | 0.00 | | | | |
| 42.00 | 8.63 | 6.10 | 0.00 | | | | |
| 43.00 | 8.63 | 6.10 | 0.00 | | | | |
| 44.00 | 8.63 | 6.10 | 0.00 | | | | |
| 45.00 | 8.63 | 6.10 | 0.00 | | | | |
| 46.00 | 8.63 | 6.10 | 0.00 | | | | |
| 47.00 | 8.63 | 6.10 | 0.00 | | | | |
| 48.00 | 8.63 | 6.10 | 0.00 | | | | |
| 49.00 | 8.63 | 6.10 | 0.00 | | | | |
| 50.00 | 8.63 | 6.10 | 0.00 | | | | |
| 51.00 | 8.63 | 6.10 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 9S: Basin B Imp

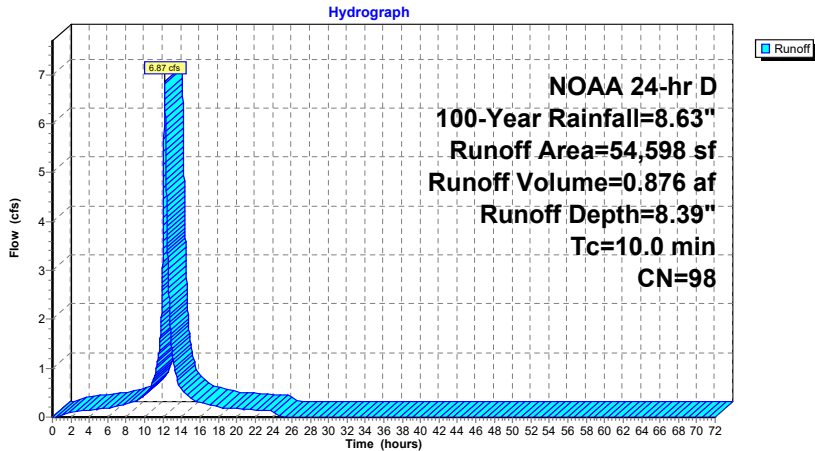
Runoff = 6.87 cfs @ 12.18 hrs, Volume= 0.876 af, Depth= 8.39"
 Routed to Pond 20P : Basin B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 54,598 | 98 | Paved parking, HSG D |
| 54,598 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Basin B Imp



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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 9S: Basin B Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.03 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.09 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.12 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.14 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.16 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.18 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.22 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.27 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.32 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.47 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.78 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 3.45 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 1.35 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.57 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.39 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.30 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.25 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.21 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.18 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.17 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.16 | | | | |
| 22.00 | 8.42 | 8.18 | 0.15 | | | | |
| 23.00 | 8.53 | 8.29 | 0.13 | | | | |
| 24.00 | 8.63 | 8.39 | 0.12 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 10S: Basin B Perv

Runoff = 0.69 cfs @ 12.18 hrs, Volume= 0.078 af, Depth= 6.22"
Routed to Pond 20P : Basin B

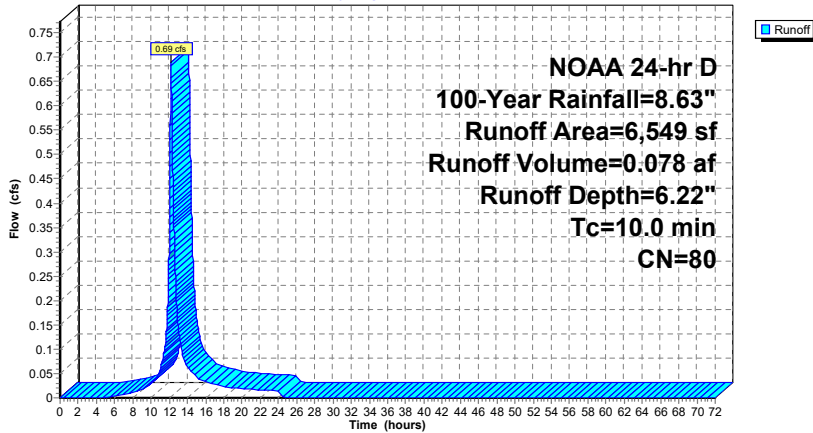
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 433 | 74 | >75% Grass cover, Good, HSG C |
| 6,116 | 80 | >75% Grass cover, Good, HSG D |
| 6,549 | 80 | Weighted Average |
| 6,549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Basin B Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 10S: Basin B Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 6.22 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 6.22 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 6.22 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 6.22 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 6.22 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 6.22 | 0.00 |
| 6.00 | 0.74 | 0.02 | 0.00 | 58.00 | 8.63 | 6.22 | 0.00 |
| 7.00 | 0.91 | 0.06 | 0.01 | 59.00 | 8.63 | 6.22 | 0.00 |
| 8.00 | 1.12 | 0.12 | 0.01 | 60.00 | 8.63 | 6.22 | 0.00 |
| 9.00 | 1.37 | 0.22 | 0.02 | 61.00 | 8.63 | 6.22 | 0.00 |
| 10.00 | 1.71 | 0.40 | 0.03 | 62.00 | 8.63 | 6.22 | 0.00 |
| 11.00 | 2.24 | 0.72 | 0.06 | 63.00 | 8.63 | 6.22 | 0.00 |
| 12.00 | 4.13 | 2.15 | 0.32 | 64.00 | 8.63 | 6.22 | 0.00 |
| 13.00 | 6.39 | 4.13 | 0.15 | 65.00 | 8.63 | 6.22 | 0.00 |
| 14.00 | 6.92 | 4.62 | 0.06 | 66.00 | 8.63 | 6.22 | 0.00 |
| 15.00 | 7.26 | 4.94 | 0.04 | 67.00 | 8.63 | 6.22 | 0.00 |
| 16.00 | 7.51 | 5.17 | 0.03 | 68.00 | 8.63 | 6.22 | 0.00 |
| 17.00 | 7.72 | 5.36 | 0.03 | 69.00 | 8.63 | 6.22 | 0.00 |
| 18.00 | 7.89 | 5.53 | 0.02 | 70.00 | 8.63 | 6.22 | 0.00 |
| 19.00 | 8.04 | 5.66 | 0.02 | 71.00 | 8.63 | 6.22 | 0.00 |
| 20.00 | 8.18 | 5.79 | 0.02 | 72.00 | 8.63 | 6.22 | 0.00 |
| 21.00 | 8.30 | 5.91 | 0.02 | | | | |
| 22.00 | 8.42 | 6.02 | 0.02 | | | | |
| 23.00 | 8.53 | 6.12 | 0.02 | | | | |
| 24.00 | 8.63 | 6.22 | 0.01 | | | | |
| 25.00 | 8.63 | 6.22 | 0.00 | | | | |
| 26.00 | 8.63 | 6.22 | 0.00 | | | | |
| 27.00 | 8.63 | 6.22 | 0.00 | | | | |
| 28.00 | 8.63 | 6.22 | 0.00 | | | | |
| 29.00 | 8.63 | 6.22 | 0.00 | | | | |
| 30.00 | 8.63 | 6.22 | 0.00 | | | | |
| 31.00 | 8.63 | 6.22 | 0.00 | | | | |
| 32.00 | 8.63 | 6.22 | 0.00 | | | | |
| 33.00 | 8.63 | 6.22 | 0.00 | | | | |
| 34.00 | 8.63 | 6.22 | 0.00 | | | | |
| 35.00 | 8.63 | 6.22 | 0.00 | | | | |
| 36.00 | 8.63 | 6.22 | 0.00 | | | | |
| 37.00 | 8.63 | 6.22 | 0.00 | | | | |
| 38.00 | 8.63 | 6.22 | 0.00 | | | | |
| 39.00 | 8.63 | 6.22 | 0.00 | | | | |
| 40.00 | 8.63 | 6.22 | 0.00 | | | | |
| 41.00 | 8.63 | 6.22 | 0.00 | | | | |
| 42.00 | 8.63 | 6.22 | 0.00 | | | | |
| 43.00 | 8.63 | 6.22 | 0.00 | | | | |
| 44.00 | 8.63 | 6.22 | 0.00 | | | | |
| 45.00 | 8.63 | 6.22 | 0.00 | | | | |
| 46.00 | 8.63 | 6.22 | 0.00 | | | | |
| 47.00 | 8.63 | 6.22 | 0.00 | | | | |
| 48.00 | 8.63 | 6.22 | 0.00 | | | | |
| 49.00 | 8.63 | 6.22 | 0.00 | | | | |
| 50.00 | 8.63 | 6.22 | 0.00 | | | | |
| 51.00 | 8.63 | 6.22 | 0.00 | | | | |

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 13S: Basin C Perv

Runoff = 1.01 cfs @ 12.18 hrs, Volume= 0.113 af, Depth= 6.10"
Routed to Pond 21P : Basin C

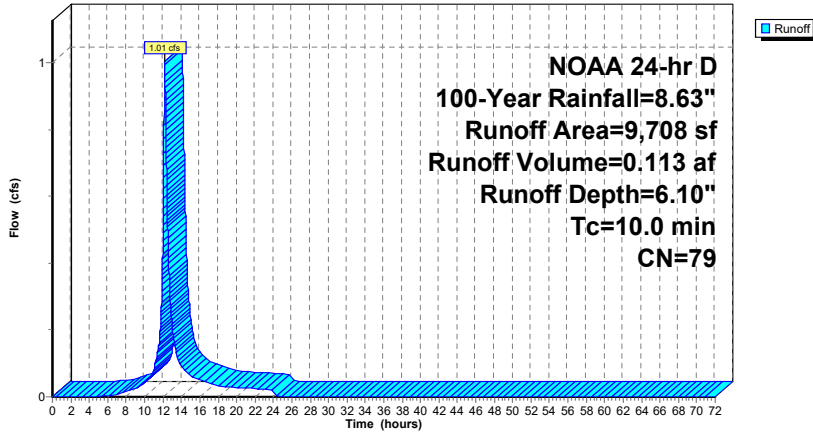
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,568 | 74 | >75% Grass cover, Good, HSG C |
| 8,140 | 80 | >75% Grass cover, Good, HSG D |
| 9,708 | 79 | Weighted Average |
| 9,708 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Basin C Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 13S: Basin C Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 6.10 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 6.10 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 6.10 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 6.10 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 6.10 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 6.10 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.00 | 58.00 | 8.63 | 6.10 | 0.00 |
| 7.00 | 0.91 | 0.05 | 0.01 | 59.00 | 8.63 | 6.10 | 0.00 |
| 8.00 | 1.12 | 0.11 | 0.02 | 60.00 | 8.63 | 6.10 | 0.00 |
| 9.00 | 1.37 | 0.20 | 0.02 | 61.00 | 8.63 | 6.10 | 0.00 |
| 10.00 | 1.71 | 0.36 | 0.04 | 62.00 | 8.63 | 6.10 | 0.00 |
| 11.00 | 2.24 | 0.67 | 0.08 | 63.00 | 8.63 | 6.10 | 0.00 |
| 12.00 | 4.13 | 2.07 | 0.47 | 64.00 | 8.63 | 6.10 | 0.00 |
| 13.00 | 6.39 | 4.03 | 0.21 | 65.00 | 8.63 | 6.10 | 0.00 |
| 14.00 | 6.92 | 4.51 | 0.09 | 66.00 | 8.63 | 6.10 | 0.00 |
| 15.00 | 7.26 | 4.82 | 0.06 | 67.00 | 8.63 | 6.10 | 0.00 |
| 16.00 | 7.51 | 5.05 | 0.05 | 68.00 | 8.63 | 6.10 | 0.00 |
| 17.00 | 7.72 | 5.25 | 0.04 | 69.00 | 8.63 | 6.10 | 0.00 |
| 18.00 | 7.89 | 5.41 | 0.03 | 70.00 | 8.63 | 6.10 | 0.00 |
| 19.00 | 8.04 | 5.55 | 0.03 | 71.00 | 8.63 | 6.10 | 0.00 |
| 20.00 | 8.18 | 5.67 | 0.03 | 72.00 | 8.63 | 6.10 | 0.00 |
| 21.00 | 8.30 | 5.79 | 0.03 | | | | |
| 22.00 | 8.42 | 5.90 | 0.02 | | | | |
| 23.00 | 8.53 | 6.00 | 0.02 | | | | |
| 24.00 | 8.63 | 6.10 | 0.02 | | | | |
| 25.00 | 8.63 | 6.10 | 0.00 | | | | |
| 26.00 | 8.63 | 6.10 | 0.00 | | | | |
| 27.00 | 8.63 | 6.10 | 0.00 | | | | |
| 28.00 | 8.63 | 6.10 | 0.00 | | | | |
| 29.00 | 8.63 | 6.10 | 0.00 | | | | |
| 30.00 | 8.63 | 6.10 | 0.00 | | | | |
| 31.00 | 8.63 | 6.10 | 0.00 | | | | |
| 32.00 | 8.63 | 6.10 | 0.00 | | | | |
| 33.00 | 8.63 | 6.10 | 0.00 | | | | |
| 34.00 | 8.63 | 6.10 | 0.00 | | | | |
| 35.00 | 8.63 | 6.10 | 0.00 | | | | |
| 36.00 | 8.63 | 6.10 | 0.00 | | | | |
| 37.00 | 8.63 | 6.10 | 0.00 | | | | |
| 38.00 | 8.63 | 6.10 | 0.00 | | | | |
| 39.00 | 8.63 | 6.10 | 0.00 | | | | |
| 40.00 | 8.63 | 6.10 | 0.00 | | | | |
| 41.00 | 8.63 | 6.10 | 0.00 | | | | |
| 42.00 | 8.63 | 6.10 | 0.00 | | | | |
| 43.00 | 8.63 | 6.10 | 0.00 | | | | |
| 44.00 | 8.63 | 6.10 | 0.00 | | | | |
| 45.00 | 8.63 | 6.10 | 0.00 | | | | |
| 46.00 | 8.63 | 6.10 | 0.00 | | | | |
| 47.00 | 8.63 | 6.10 | 0.00 | | | | |
| 48.00 | 8.63 | 6.10 | 0.00 | | | | |
| 49.00 | 8.63 | 6.10 | 0.00 | | | | |
| 50.00 | 8.63 | 6.10 | 0.00 | | | | |
| 51.00 | 8.63 | 6.10 | 0.00 | | | | |

2023-11 Proposed

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Summary for Subcatchment 22S: West Und. Imp

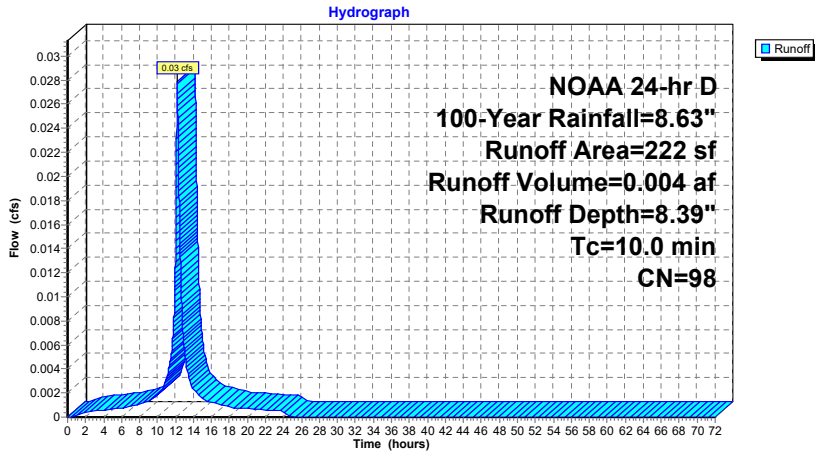
Runoff = 0.03 cfs @ 12.18 hrs, Volume= 0.004 af, Depth= 8.39"
 Routed to Link 29L : West Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 222 | 98 | Paved parking, HSG D |
| 222 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 22S: West Und. Imp



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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 22S: West Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.00 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.00 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.00 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.00 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.00 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.00 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.00 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.00 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.00 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.00 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.00 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 0.01 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 0.01 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.00 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.00 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.00 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.00 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.00 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.00 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.00 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.00 | | | | |
| 22.00 | 8.42 | 8.18 | 0.00 | | | | |
| 23.00 | 8.53 | 8.29 | 0.00 | | | | |
| 24.00 | 8.63 | 8.39 | 0.00 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 23S: West Und. Perv

Runoff = 0.97 cfs @ 12.18 hrs, Volume= 0.109 af, Depth= 5.98"
Routed to Link 29L : West Und. Total

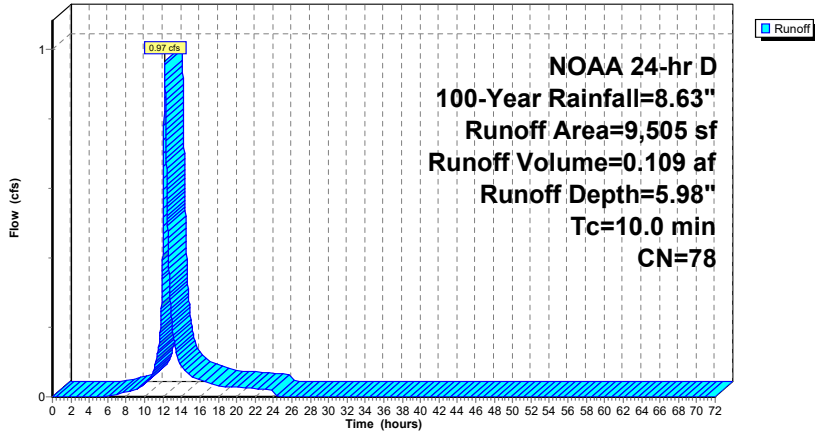
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,838 | 74 | >75% Grass cover, Good, HSG C |
| 6,667 | 80 | >75% Grass cover, Good, HSG D |
| 9,505 | 78 | Weighted Average |
| 9,505 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 23S: West Und. Perv

Hydrograph



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Hydrograph for Subcatchment 23S: West Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 5.98 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 5.98 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 5.98 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 5.98 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 5.98 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 5.98 | 0.00 |
| 6.00 | 0.74 | 0.01 | 0.00 | 58.00 | 8.63 | 5.98 | 0.00 |
| 7.00 | 0.91 | 0.04 | 0.01 | 59.00 | 8.63 | 5.98 | 0.00 |
| 8.00 | 1.12 | 0.09 | 0.01 | 60.00 | 8.63 | 5.98 | 0.00 |
| 9.00 | 1.37 | 0.18 | 0.02 | 61.00 | 8.63 | 5.98 | 0.00 |
| 10.00 | 1.71 | 0.33 | 0.04 | 62.00 | 8.63 | 5.98 | 0.00 |
| 11.00 | 2.24 | 0.63 | 0.08 | 63.00 | 8.63 | 5.98 | 0.00 |
| 12.00 | 4.13 | 1.99 | 0.45 | 64.00 | 8.63 | 5.98 | 0.00 |
| 13.00 | 6.39 | 3.92 | 0.21 | 65.00 | 8.63 | 5.98 | 0.00 |
| 14.00 | 6.92 | 4.40 | 0.09 | 66.00 | 8.63 | 5.98 | 0.00 |
| 15.00 | 7.26 | 4.71 | 0.06 | 67.00 | 8.63 | 5.98 | 0.00 |
| 16.00 | 7.51 | 4.94 | 0.05 | 68.00 | 8.63 | 5.98 | 0.00 |
| 17.00 | 7.72 | 5.13 | 0.04 | 69.00 | 8.63 | 5.98 | 0.00 |
| 18.00 | 7.89 | 5.29 | 0.03 | 70.00 | 8.63 | 5.98 | 0.00 |
| 19.00 | 8.04 | 5.43 | 0.03 | 71.00 | 8.63 | 5.98 | 0.00 |
| 20.00 | 8.18 | 5.56 | 0.03 | 72.00 | 8.63 | 5.98 | 0.00 |
| 21.00 | 8.30 | 5.67 | 0.03 | | | | |
| 22.00 | 8.42 | 5.78 | 0.02 | | | | |
| 23.00 | 8.53 | 5.88 | 0.02 | | | | |
| 24.00 | 8.63 | 5.98 | 0.02 | | | | |
| 25.00 | 8.63 | 5.98 | 0.00 | | | | |
| 26.00 | 8.63 | 5.98 | 0.00 | | | | |
| 27.00 | 8.63 | 5.98 | 0.00 | | | | |
| 28.00 | 8.63 | 5.98 | 0.00 | | | | |
| 29.00 | 8.63 | 5.98 | 0.00 | | | | |
| 30.00 | 8.63 | 5.98 | 0.00 | | | | |
| 31.00 | 8.63 | 5.98 | 0.00 | | | | |
| 32.00 | 8.63 | 5.98 | 0.00 | | | | |
| 33.00 | 8.63 | 5.98 | 0.00 | | | | |
| 34.00 | 8.63 | 5.98 | 0.00 | | | | |
| 35.00 | 8.63 | 5.98 | 0.00 | | | | |
| 36.00 | 8.63 | 5.98 | 0.00 | | | | |
| 37.00 | 8.63 | 5.98 | 0.00 | | | | |
| 38.00 | 8.63 | 5.98 | 0.00 | | | | |
| 39.00 | 8.63 | 5.98 | 0.00 | | | | |
| 40.00 | 8.63 | 5.98 | 0.00 | | | | |
| 41.00 | 8.63 | 5.98 | 0.00 | | | | |
| 42.00 | 8.63 | 5.98 | 0.00 | | | | |
| 43.00 | 8.63 | 5.98 | 0.00 | | | | |
| 44.00 | 8.63 | 5.98 | 0.00 | | | | |
| 45.00 | 8.63 | 5.98 | 0.00 | | | | |
| 46.00 | 8.63 | 5.98 | 0.00 | | | | |
| 47.00 | 8.63 | 5.98 | 0.00 | | | | |
| 48.00 | 8.63 | 5.98 | 0.00 | | | | |
| 49.00 | 8.63 | 5.98 | 0.00 | | | | |
| 50.00 | 8.63 | 5.98 | 0.00 | | | | |
| 51.00 | 8.63 | 5.98 | 0.00 | | | | |

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 24S: East Und. Imp

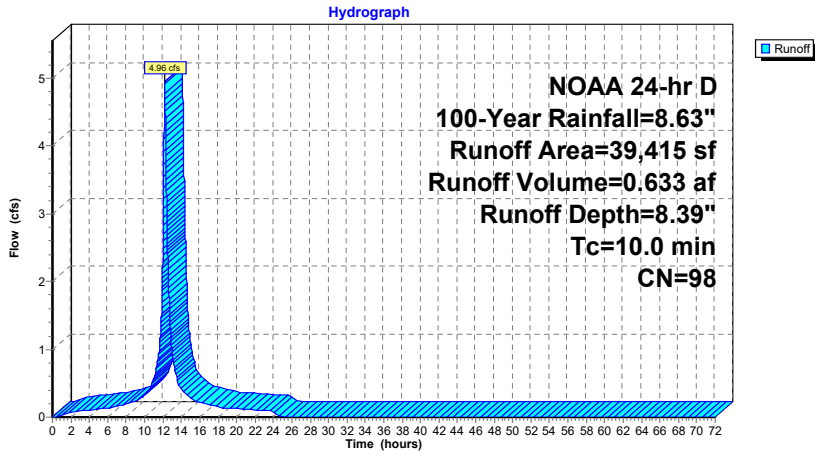
Runoff = 4.96 cfs @ 12.18 hrs, Volume= 0.633 af, Depth= 8.39"
 Routed to Link 30L : East Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 39,415 | 98 | Paved parking, HSG D |
| 39,415 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 24S: East Und. Imp



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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 24S: East Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.02 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.06 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.09 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.10 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.12 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.13 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.16 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.20 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.23 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.34 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.56 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 2.49 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 0.97 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.41 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.28 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.22 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.18 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.15 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.13 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.12 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.11 | | | | |
| 22.00 | 8.42 | 8.18 | 0.11 | | | | |
| 23.00 | 8.53 | 8.29 | 0.10 | | | | |
| 24.00 | 8.63 | 8.39 | 0.09 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Subcatchment 25S: East Und. Perv

Runoff = 1.10 cfs @ 12.18 hrs, Volume= 0.124 af, Depth= 6.22"
Routed to Link 30L : East Und. Total

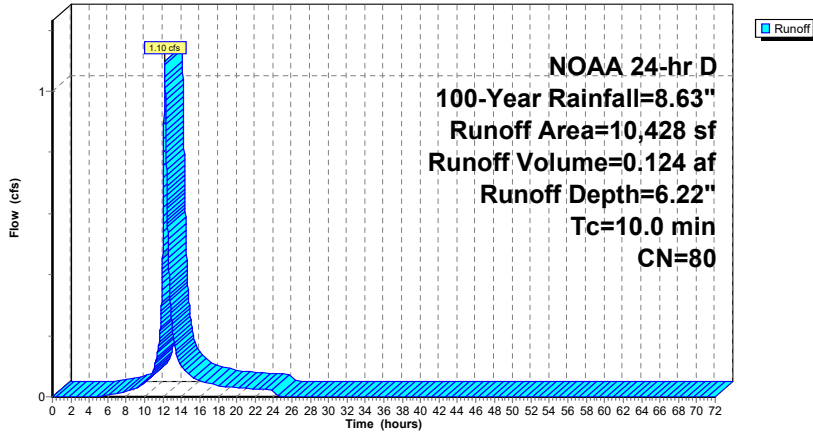
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 307 | 74 | >75% Grass cover, Good, HSG C |
| 10,121 | 80 | >75% Grass cover, Good, HSG D |
| 10,428 | 80 | Weighted Average |
| 10,428 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 25S: East Und. Perv

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 25S: East Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 6.22 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 | 53.00 | 8.63 | 6.22 | 0.00 |
| 2.00 | 0.21 | 0.00 | 0.00 | 54.00 | 8.63 | 6.22 | 0.00 |
| 3.00 | 0.33 | 0.00 | 0.00 | 55.00 | 8.63 | 6.22 | 0.00 |
| 4.00 | 0.45 | 0.00 | 0.00 | 56.00 | 8.63 | 6.22 | 0.00 |
| 5.00 | 0.59 | 0.00 | 0.00 | 57.00 | 8.63 | 6.22 | 0.00 |
| 6.00 | 0.74 | 0.02 | 0.01 | 58.00 | 8.63 | 6.22 | 0.00 |
| 7.00 | 0.91 | 0.06 | 0.01 | 59.00 | 8.63 | 6.22 | 0.00 |
| 8.00 | 1.12 | 0.12 | 0.02 | 60.00 | 8.63 | 6.22 | 0.00 |
| 9.00 | 1.37 | 0.22 | 0.03 | 61.00 | 8.63 | 6.22 | 0.00 |
| 10.00 | 1.71 | 0.40 | 0.05 | 62.00 | 8.63 | 6.22 | 0.00 |
| 11.00 | 2.24 | 0.72 | 0.09 | 63.00 | 8.63 | 6.22 | 0.00 |
| 12.00 | 4.13 | 2.15 | 0.52 | 64.00 | 8.63 | 6.22 | 0.00 |
| 13.00 | 6.39 | 4.13 | 0.23 | 65.00 | 8.63 | 6.22 | 0.00 |
| 14.00 | 6.92 | 4.62 | 0.10 | 66.00 | 8.63 | 6.22 | 0.00 |
| 15.00 | 7.26 | 4.94 | 0.07 | 67.00 | 8.63 | 6.22 | 0.00 |
| 16.00 | 7.51 | 5.17 | 0.05 | 68.00 | 8.63 | 6.22 | 0.00 |
| 17.00 | 7.72 | 5.36 | 0.05 | 69.00 | 8.63 | 6.22 | 0.00 |
| 18.00 | 7.89 | 5.53 | 0.04 | 70.00 | 8.63 | 6.22 | 0.00 |
| 19.00 | 8.04 | 5.66 | 0.03 | 71.00 | 8.63 | 6.22 | 0.00 |
| 20.00 | 8.18 | 5.79 | 0.03 | 72.00 | 8.63 | 6.22 | 0.00 |
| 21.00 | 8.30 | 5.91 | 0.03 | | | | |
| 22.00 | 8.42 | 6.02 | 0.03 | | | | |
| 23.00 | 8.53 | 6.12 | 0.02 | | | | |
| 24.00 | 8.63 | 6.22 | 0.02 | | | | |
| 25.00 | 8.63 | 6.22 | 0.00 | | | | |
| 26.00 | 8.63 | 6.22 | 0.00 | | | | |
| 27.00 | 8.63 | 6.22 | 0.00 | | | | |
| 28.00 | 8.63 | 6.22 | 0.00 | | | | |
| 29.00 | 8.63 | 6.22 | 0.00 | | | | |
| 30.00 | 8.63 | 6.22 | 0.00 | | | | |
| 31.00 | 8.63 | 6.22 | 0.00 | | | | |
| 32.00 | 8.63 | 6.22 | 0.00 | | | | |
| 33.00 | 8.63 | 6.22 | 0.00 | | | | |
| 34.00 | 8.63 | 6.22 | 0.00 | | | | |
| 35.00 | 8.63 | 6.22 | 0.00 | | | | |
| 36.00 | 8.63 | 6.22 | 0.00 | | | | |
| 37.00 | 8.63 | 6.22 | 0.00 | | | | |
| 38.00 | 8.63 | 6.22 | 0.00 | | | | |
| 39.00 | 8.63 | 6.22 | 0.00 | | | | |
| 40.00 | 8.63 | 6.22 | 0.00 | | | | |
| 41.00 | 8.63 | 6.22 | 0.00 | | | | |
| 42.00 | 8.63 | 6.22 | 0.00 | | | | |
| 43.00 | 8.63 | 6.22 | 0.00 | | | | |
| 44.00 | 8.63 | 6.22 | 0.00 | | | | |
| 45.00 | 8.63 | 6.22 | 0.00 | | | | |
| 46.00 | 8.63 | 6.22 | 0.00 | | | | |
| 47.00 | 8.63 | 6.22 | 0.00 | | | | |
| 48.00 | 8.63 | 6.22 | 0.00 | | | | |
| 49.00 | 8.63 | 6.22 | 0.00 | | | | |
| 50.00 | 8.63 | 6.22 | 0.00 | | | | |
| 51.00 | 8.63 | 6.22 | 0.00 | | | | |

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Summary for Subcatchment 35S: Basin C Imp

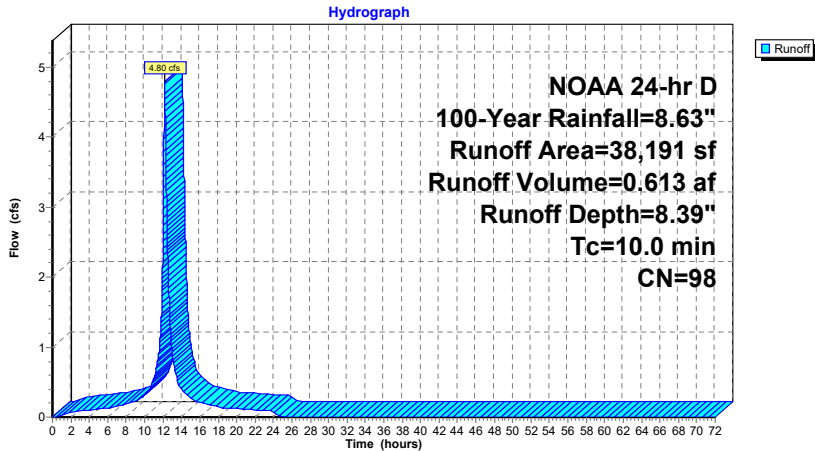
Runoff = 4.80 cfs @ 12.18 hrs, Volume= 0.613 af, Depth= 8.39"
 Routed to Pond 21P : Basin C

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NOAA 24-hr D 100-Year Rainfall=8.63"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 38,191 | 98 | Paved parking, HSG D |
| 38,191 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 35S: Basin C Imp



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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Subcatchment 35S: Basin C Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 8.63 | 8.39 | 0.00 |
| 1.00 | 0.10 | 0.01 | 0.02 | 53.00 | 8.63 | 8.39 | 0.00 |
| 2.00 | 0.21 | 0.07 | 0.06 | 54.00 | 8.63 | 8.39 | 0.00 |
| 3.00 | 0.33 | 0.17 | 0.09 | 55.00 | 8.63 | 8.39 | 0.00 |
| 4.00 | 0.45 | 0.28 | 0.10 | 56.00 | 8.63 | 8.39 | 0.00 |
| 5.00 | 0.59 | 0.40 | 0.11 | 57.00 | 8.63 | 8.39 | 0.00 |
| 6.00 | 0.74 | 0.54 | 0.12 | 58.00 | 8.63 | 8.39 | 0.00 |
| 7.00 | 0.91 | 0.70 | 0.15 | 59.00 | 8.63 | 8.39 | 0.00 |
| 8.00 | 1.12 | 0.91 | 0.19 | 60.00 | 8.63 | 8.39 | 0.00 |
| 9.00 | 1.37 | 1.15 | 0.22 | 61.00 | 8.63 | 8.39 | 0.00 |
| 10.00 | 1.71 | 1.49 | 0.33 | 62.00 | 8.63 | 8.39 | 0.00 |
| 11.00 | 2.24 | 2.02 | 0.55 | 63.00 | 8.63 | 8.39 | 0.00 |
| 12.00 | 4.13 | 3.90 | 2.41 | 64.00 | 8.63 | 8.39 | 0.00 |
| 13.00 | 6.39 | 6.15 | 0.94 | 65.00 | 8.63 | 8.39 | 0.00 |
| 14.00 | 6.92 | 6.68 | 0.40 | 66.00 | 8.63 | 8.39 | 0.00 |
| 15.00 | 7.26 | 7.02 | 0.27 | 67.00 | 8.63 | 8.39 | 0.00 |
| 16.00 | 7.51 | 7.27 | 0.21 | 68.00 | 8.63 | 8.39 | 0.00 |
| 17.00 | 7.72 | 7.48 | 0.18 | 69.00 | 8.63 | 8.39 | 0.00 |
| 18.00 | 7.89 | 7.65 | 0.14 | 70.00 | 8.63 | 8.39 | 0.00 |
| 19.00 | 8.04 | 7.80 | 0.13 | 71.00 | 8.63 | 8.39 | 0.00 |
| 20.00 | 8.18 | 7.94 | 0.12 | 72.00 | 8.63 | 8.39 | 0.00 |
| 21.00 | 8.30 | 8.06 | 0.11 | | | | |
| 22.00 | 8.42 | 8.18 | 0.10 | | | | |
| 23.00 | 8.53 | 8.29 | 0.09 | | | | |
| 24.00 | 8.63 | 8.39 | 0.09 | | | | |
| 25.00 | 8.63 | 8.39 | 0.00 | | | | |
| 26.00 | 8.63 | 8.39 | 0.00 | | | | |
| 27.00 | 8.63 | 8.39 | 0.00 | | | | |
| 28.00 | 8.63 | 8.39 | 0.00 | | | | |
| 29.00 | 8.63 | 8.39 | 0.00 | | | | |
| 30.00 | 8.63 | 8.39 | 0.00 | | | | |
| 31.00 | 8.63 | 8.39 | 0.00 | | | | |
| 32.00 | 8.63 | 8.39 | 0.00 | | | | |
| 33.00 | 8.63 | 8.39 | 0.00 | | | | |
| 34.00 | 8.63 | 8.39 | 0.00 | | | | |
| 35.00 | 8.63 | 8.39 | 0.00 | | | | |
| 36.00 | 8.63 | 8.39 | 0.00 | | | | |
| 37.00 | 8.63 | 8.39 | 0.00 | | | | |
| 38.00 | 8.63 | 8.39 | 0.00 | | | | |
| 39.00 | 8.63 | 8.39 | 0.00 | | | | |
| 40.00 | 8.63 | 8.39 | 0.00 | | | | |
| 41.00 | 8.63 | 8.39 | 0.00 | | | | |
| 42.00 | 8.63 | 8.39 | 0.00 | | | | |
| 43.00 | 8.63 | 8.39 | 0.00 | | | | |
| 44.00 | 8.63 | 8.39 | 0.00 | | | | |
| 45.00 | 8.63 | 8.39 | 0.00 | | | | |
| 46.00 | 8.63 | 8.39 | 0.00 | | | | |
| 47.00 | 8.63 | 8.39 | 0.00 | | | | |
| 48.00 | 8.63 | 8.39 | 0.00 | | | | |
| 49.00 | 8.63 | 8.39 | 0.00 | | | | |
| 50.00 | 8.63 | 8.39 | 0.00 | | | | |
| 51.00 | 8.63 | 8.39 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Summary for Pond 19P: Basin A

Inflow Area = 1.125 ac, 77.06% Impervious, Inflow Depth = 7.86" for 100-Year event
 Inflow = 5.91 cfs @ 12.18 hrs, Volume= 0.737 af
 Outflow = 4.63 cfs @ 12.32 hrs, Volume= 0.629 af, Atten= 22%, Lag= 8.2 min
 Primary = 4.63 cfs @ 12.32 hrs, Volume= 0.629 af
 Routed to Link 31L : Prop. West Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 104.20' @ 12.32 hrs Surf.Area= 4,786 sf Storage= 8,263 cf

Plug-Flow detention time= 153.1 min calculated for 0.629 af (85% of inflow)
 Center-of-Mass det. time= 82.3 min (845.2 - 763.0)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 102.00' | 12,392 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 102.00 | 2,770 | 0 | 0 |
| 103.00 | 3,632 | 3,201 | 3,201 |
| 104.00 | 4,579 | 4,106 | 7,307 |
| 105.00 | 5,592 | 5,086 | 12,392 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|---|
| #1 | Primary | 99.75' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 99.75' / 99.75' S= 0.0000 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 103.40' | 24.0" W x 10.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Primary | 104.25' | 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=4.63 cfs @ 12.32 hrs HW=104.20' (Free Discharge)

- 1=Culvert (Passes 4.63 cfs of 14.45 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 4.63 cfs @ 2.88 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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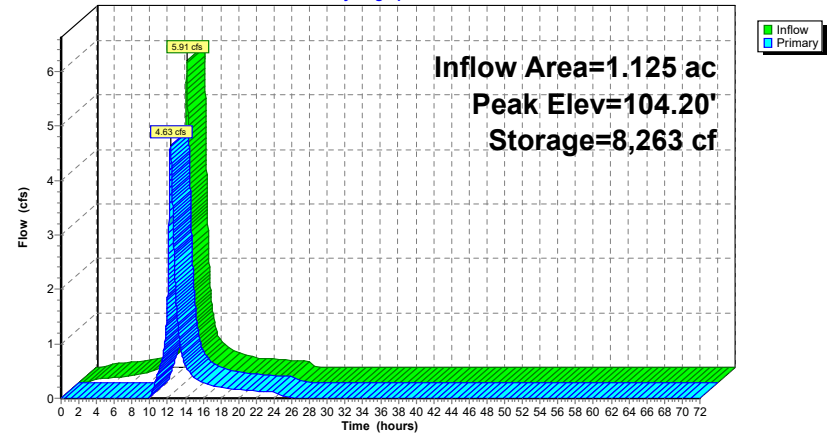
NOAA 24-hr D 100-Year Rainfall=8.63"

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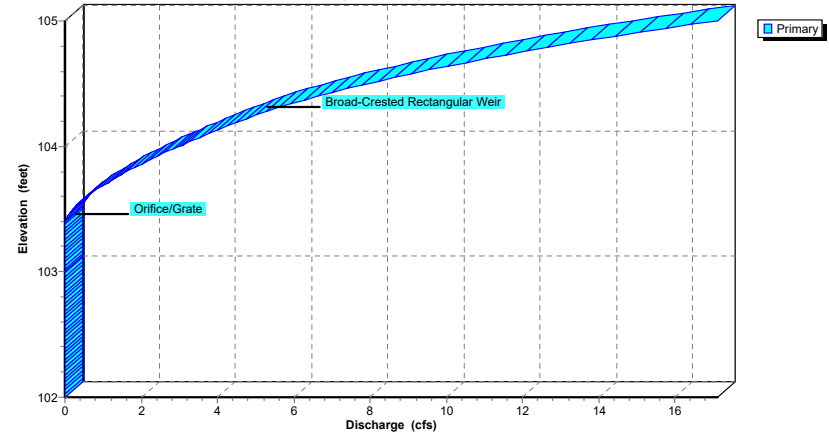
Pond 19P: Basin A

Hydrograph

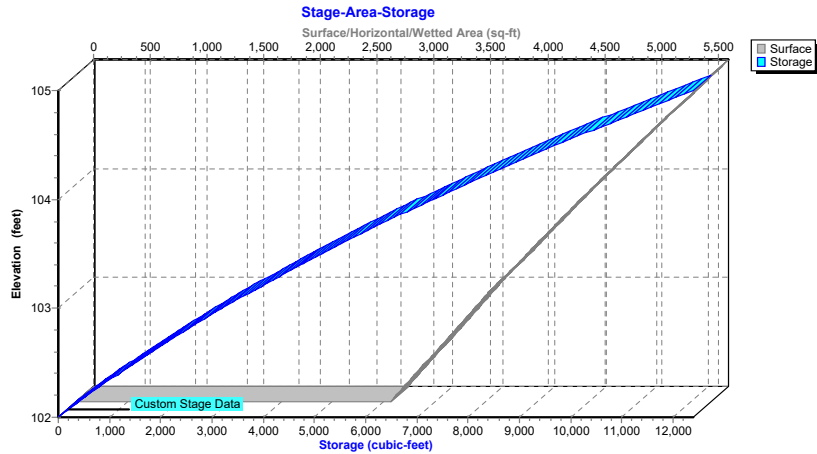


Pond 19P: Basin A

Stage-Discharge



Pond 19P: Basin A



Hydrograph for Pond 19P: Basin A

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 102.00 | 0.00 |
| 2.00 | 0.06 | 176 | 102.06 | 0.00 |
| 4.00 | 0.10 | 774 | 102.27 | 0.00 |
| 6.00 | 0.13 | 1,589 | 102.53 | 0.00 |
| 8.00 | 0.20 | 2,764 | 102.88 | 0.00 |
| 10.00 | 0.37 | 4,671 | 103.39 | 0.00 |
| 12.00 | 2.93 | 6,569 | 103.84 | 1.85 |
| 14.00 | 0.50 | 5,578 | 103.61 | 0.60 |
| 16.00 | 0.27 | 5,240 | 103.53 | 0.29 |
| 18.00 | 0.18 | 5,127 | 103.50 | 0.20 |
| 20.00 | 0.15 | 5,065 | 103.48 | 0.16 |
| 22.00 | 0.13 | 5,034 | 103.48 | 0.13 |
| 24.00 | 0.11 | 5,002 | 103.47 | 0.11 |
| 26.00 | 0.00 | 4,776 | 103.41 | 0.01 |
| 28.00 | 0.00 | 4,744 | 103.40 | 0.00 |
| 30.00 | 0.00 | 4,734 | 103.40 | 0.00 |
| 32.00 | 0.00 | 4,731 | 103.40 | 0.00 |
| 34.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 36.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 38.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 40.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 42.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 44.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 46.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 48.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 50.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 52.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 54.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 56.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 58.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 60.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 62.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 64.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 66.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 68.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 70.00 | 0.00 | 4,730 | 103.40 | 0.00 |
| 72.00 | 0.00 | 4,730 | 103.40 | 0.00 |

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Stage-Discharge for Pond 19P: Basin A

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---------------------|------------------|---------------------|------------------|---------------------|------------------|
| 102.00 | 0.00 | 103.04 | 0.00 | 104.08 | 3.60 |
| 102.02 | 0.00 | 103.06 | 0.00 | 104.10 | 3.76 |
| 102.04 | 0.00 | 103.08 | 0.00 | 104.12 | 3.92 |
| 102.06 | 0.00 | 103.10 | 0.00 | 104.14 | 4.09 |
| 102.08 | 0.00 | 103.12 | 0.00 | 104.16 | 4.25 |
| 102.10 | 0.00 | 103.14 | 0.00 | 104.18 | 4.42 |
| 102.12 | 0.00 | 103.16 | 0.00 | 104.20 | 4.59 |
| 102.14 | 0.00 | 103.18 | 0.00 | 104.22 | 4.77 |
| 102.16 | 0.00 | 103.20 | 0.00 | 104.24 | 4.94 |
| 102.18 | 0.00 | 103.22 | 0.00 | 104.26 | 5.10 |
| 102.20 | 0.00 | 103.24 | 0.00 | 104.28 | 5.29 |
| 102.22 | 0.00 | 103.26 | 0.00 | 104.30 | 5.50 |
| 102.24 | 0.00 | 103.28 | 0.00 | 104.32 | 5.71 |
| 102.26 | 0.00 | 103.30 | 0.00 | 104.34 | 5.93 |
| 102.28 | 0.00 | 103.32 | 0.00 | 104.36 | 6.16 |
| 102.30 | 0.00 | 103.34 | 0.00 | 104.38 | 6.39 |
| 102.32 | 0.00 | 103.36 | 0.00 | 104.40 | 6.63 |
| 102.34 | 0.00 | 103.38 | 0.00 | 104.42 | 6.88 |
| 102.36 | 0.00 | 103.40 | 0.00 | 104.44 | 7.13 |
| 102.38 | 0.00 | 103.42 | 0.02 | 104.46 | 7.39 |
| 102.40 | 0.00 | 103.44 | 0.05 | 104.48 | 7.66 |
| 102.42 | 0.00 | 103.46 | 0.09 | 104.50 | 7.94 |
| 102.44 | 0.00 | 103.48 | 0.15 | 104.52 | 8.22 |
| 102.46 | 0.00 | 103.50 | 0.20 | 104.54 | 8.51 |
| 102.48 | 0.00 | 103.52 | 0.27 | 104.56 | 8.80 |
| 102.50 | 0.00 | 103.54 | 0.34 | 104.58 | 9.10 |
| 102.52 | 0.00 | 103.56 | 0.41 | 104.60 | 9.41 |
| 102.54 | 0.00 | 103.58 | 0.49 | 104.62 | 9.72 |
| 102.56 | 0.00 | 103.60 | 0.57 | 104.64 | 10.04 |
| 102.58 | 0.00 | 103.62 | 0.66 | 104.66 | 10.37 |
| 102.60 | 0.00 | 103.64 | 0.75 | 104.68 | 10.70 |
| 102.62 | 0.00 | 103.66 | 0.85 | 104.70 | 11.04 |
| 102.64 | 0.00 | 103.68 | 0.95 | 104.72 | 11.39 |
| 102.66 | 0.00 | 103.70 | 1.05 | 104.74 | 11.75 |
| 102.68 | 0.00 | 103.72 | 1.16 | 104.76 | 12.11 |
| 102.70 | 0.00 | 103.74 | 1.27 | 104.78 | 12.48 |
| 102.72 | 0.00 | 103.76 | 1.39 | 104.80 | 12.86 |
| 102.74 | 0.00 | 103.78 | 1.50 | 104.82 | 13.24 |
| 102.76 | 0.00 | 103.80 | 1.62 | 104.84 | 13.63 |
| 102.78 | 0.00 | 103.82 | 1.75 | 104.86 | 14.03 |
| 102.80 | 0.00 | 103.84 | 1.87 | 104.88 | 14.45 |
| 102.82 | 0.00 | 103.86 | 2.00 | 104.90 | 14.87 |
| 102.84 | 0.00 | 103.88 | 2.13 | 104.92 | 15.30 |
| 102.86 | 0.00 | 103.90 | 2.27 | 104.94 | 15.74 |
| 102.88 | 0.00 | 103.92 | 2.41 | 104.96 | 16.19 |
| 102.90 | 0.00 | 103.94 | 2.55 | 104.98 | 16.65 |
| 102.92 | 0.00 | 103.96 | 2.69 | 105.00 | 17.11 |
| 102.94 | 0.00 | 103.98 | 2.84 | | |
| 102.96 | 0.00 | 104.00 | 2.98 | | |
| 102.98 | 0.00 | 104.02 | 3.13 | | |
| 103.00 | 0.00 | 104.04 | 3.29 | | |
| 103.02 | 0.00 | 104.06 | 3.44 | | |

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Stage-Area-Storage for Pond 19P: Basin A

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 102.00 | 2,770 | 0 | 104.60 | 5,187 | 10,236 |
| 102.05 | 2,813 | 140 | 104.65 | 5,237 | 10,497 |
| 102.10 | 2,856 | 281 | 104.70 | 5,288 | 10,760 |
| 102.15 | 2,899 | 425 | 104.75 | 5,339 | 11,026 |
| 102.20 | 2,942 | 571 | 104.80 | 5,389 | 11,294 |
| 102.25 | 2,986 | 719 | 104.85 | 5,440 | 11,565 |
| 102.30 | 3,029 | 870 | 104.90 | 5,491 | 11,838 |
| 102.35 | 3,072 | 1,022 | 104.95 | 5,541 | 12,114 |
| 102.40 | 3,115 | 1,177 | 105.00 | 5,592 | 12,392 |
| 102.45 | 3,158 | 1,334 | | | |
| 102.50 | 3,201 | 1,493 | | | |
| 102.55 | 3,244 | 1,654 | | | |
| 102.60 | 3,287 | 1,817 | | | |
| 102.65 | 3,330 | 1,983 | | | |
| 102.70 | 3,373 | 2,150 | | | |
| 102.75 | 3,417 | 2,320 | | | |
| 102.80 | 3,460 | 2,492 | | | |
| 102.85 | 3,503 | 2,666 | | | |
| 102.90 | 3,546 | 2,842 | | | |
| 102.95 | 3,589 | 3,020 | | | |
| 103.00 | 3,632 | 3,201 | | | |
| 103.05 | 3,679 | 3,384 | | | |
| 103.10 | 3,727 | 3,569 | | | |
| 103.15 | 3,774 | 3,756 | | | |
| 103.20 | 3,821 | 3,946 | | | |
| 103.25 | 3,869 | 4,139 | | | |
| 103.30 | 3,916 | 4,333 | | | |
| 103.35 | 3,963 | 4,530 | | | |
| 103.40 | 4,011 | 4,730 | | | |
| 103.45 | 4,058 | 4,931 | | | |
| 103.50 | 4,106 | 5,135 | | | |
| 103.55 | 4,153 | 5,342 | | | |
| 103.60 | 4,200 | 5,551 | | | |
| 103.65 | 4,248 | 5,762 | | | |
| 103.70 | 4,295 | 5,975 | | | |
| 103.75 | 4,342 | 6,191 | | | |
| 103.80 | 4,390 | 6,410 | | | |
| 103.85 | 4,437 | 6,630 | | | |
| 103.90 | 4,484 | 6,853 | | | |
| 103.95 | 4,532 | 7,079 | | | |
| 104.00 | 4,579 | 7,307 | | | |
| 104.05 | 4,630 | 7,537 | | | |
| 104.10 | 4,680 | 7,769 | | | |
| 104.15 | 4,731 | 8,005 | | | |
| 104.20 | 4,782 | 8,243 | | | |
| 104.25 | 4,832 | 8,483 | | | |
| 104.30 | 4,883 | 8,726 | | | |
| 104.35 | 4,934 | 8,971 | | | |
| 104.40 | 4,984 | 9,219 | | | |
| 104.45 | 5,035 | 9,470 | | | |
| 104.50 | 5,086 | 9,723 | | | |
| 104.55 | 5,136 | 9,978 | | | |

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Summary for Pond 20P: Basin B

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 8.16" for 100-Year event
 Inflow = 7.56 cfs @ 12.18 hrs, Volume= 0.954 af
 Outflow = 5.21 cfs @ 12.37 hrs, Volume= 0.782 af, Atten= 31%, Lag= 11.4 min
 Primary = 5.21 cfs @ 12.37 hrs, Volume= 0.782 af
 Routed to Link 32L : Prop. South Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 104.52' @ 12.37 hrs Surf.Area= 4,225 sf Storage= 14,167 cf

Plug-Flow detention time= 193.2 min calculated for 0.782 af (82% of inflow)
 Center-of-Mass det. time= 112.9 min (869.2 - 756.2)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 101.00' | 16,194 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 101.00 | 3,841 | 0 | 0 |
| 102.00 | 3,941 | 3,891 | 3,891 |
| 103.00 | 4,041 | 3,991 | 7,882 |
| 104.00 | 4,141 | 4,091 | 11,973 |
| 105.00 | 4,301 | 4,221 | 16,194 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|---|
| #1 | Primary | 98.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 98.50' / 98.50' S= 0.0000 ' / n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 102.90' | 12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 104.30' | 4.0" long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=5.21 cfs @ 12.37 hrs HW=104.52' (Free Discharge)
 1=Culvert (Passes 5.21 cfs of 17.16 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 4.01 cfs @ 5.11 fps)
 3=Broad-Crested Rectangular Weir (Weir Controls 1.20 cfs @ 1.33 fps)

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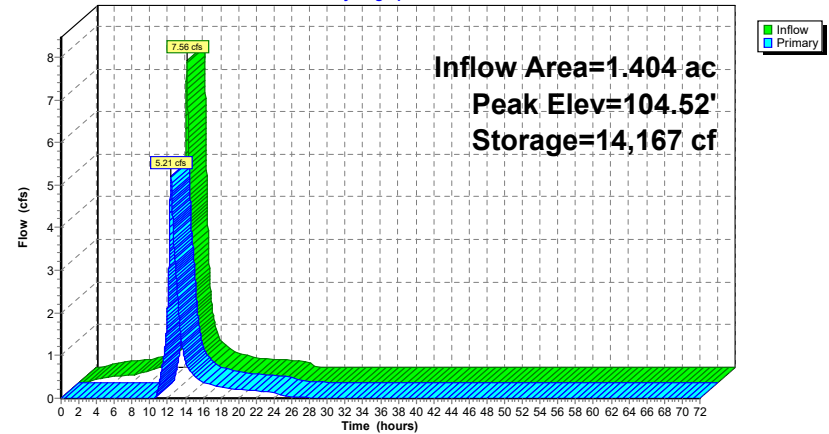
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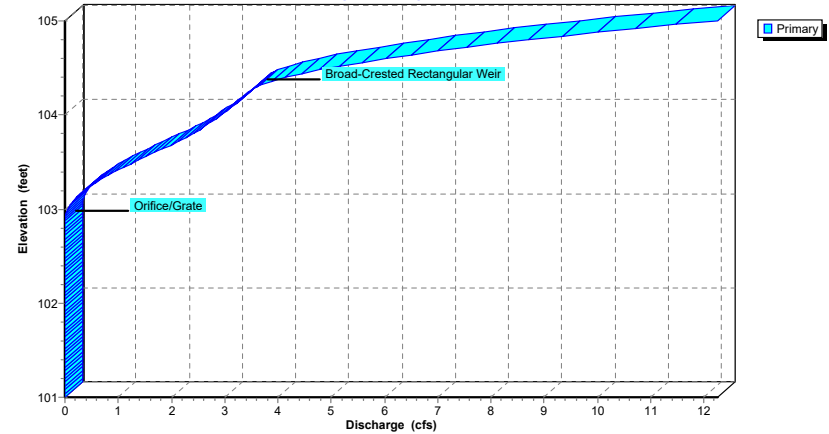
Pond 20P: Basin B

Hydrograph



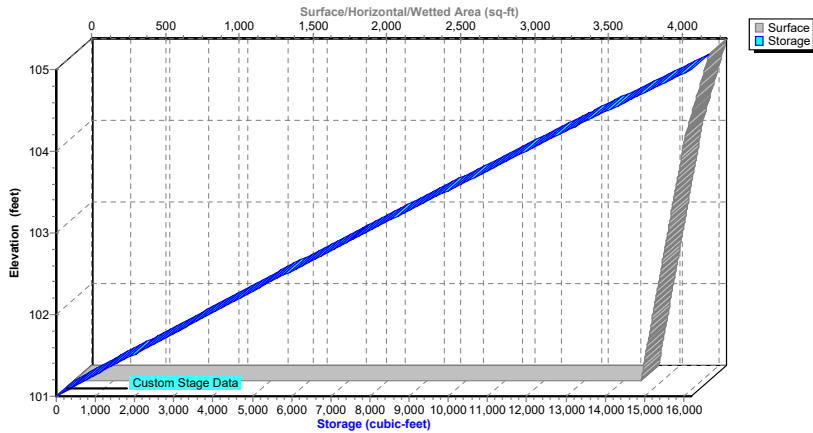
Pond 20P: Basin B

Stage-Discharge



Pond 20P: Basin B

Stage-Area-Storage



Hydrograph for Pond 20P: Basin B

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 101.00 | 0.00 |
| 2.00 | 0.09 | 255 | 101.07 | 0.00 |
| 4.00 | 0.14 | 1,119 | 101.29 | 0.00 |
| 6.00 | 0.18 | 2,291 | 101.59 | 0.00 |
| 8.00 | 0.28 | 3,933 | 102.01 | 0.00 |
| 10.00 | 0.50 | 6,516 | 102.66 | 0.00 |
| 12.00 | 3.77 | 10,783 | 103.71 | 2.09 |
| 14.00 | 0.63 | 9,406 | 103.38 | 0.87 |
| 16.00 | 0.34 | 8,703 | 103.20 | 0.38 |
| 18.00 | 0.23 | 8,482 | 103.15 | 0.26 |
| 20.00 | 0.19 | 8,355 | 103.12 | 0.20 |
| 22.00 | 0.16 | 8,287 | 103.10 | 0.17 |
| 24.00 | 0.14 | 8,220 | 103.08 | 0.14 |
| 26.00 | 0.00 | 7,805 | 102.98 | 0.03 |
| 28.00 | 0.00 | 7,673 | 102.95 | 0.01 |
| 30.00 | 0.00 | 7,610 | 102.93 | 0.01 |
| 32.00 | 0.00 | 7,576 | 102.92 | 0.00 |
| 34.00 | 0.00 | 7,559 | 102.92 | 0.00 |
| 36.00 | 0.00 | 7,547 | 102.92 | 0.00 |
| 38.00 | 0.00 | 7,536 | 102.91 | 0.00 |
| 40.00 | 0.00 | 7,528 | 102.91 | 0.00 |
| 42.00 | 0.00 | 7,520 | 102.91 | 0.00 |
| 44.00 | 0.00 | 7,514 | 102.91 | 0.00 |
| 46.00 | 0.00 | 7,509 | 102.91 | 0.00 |
| 48.00 | 0.00 | 7,504 | 102.91 | 0.00 |
| 50.00 | 0.00 | 7,500 | 102.91 | 0.00 |
| 52.00 | 0.00 | 7,497 | 102.90 | 0.00 |
| 54.00 | 0.00 | 7,494 | 102.90 | 0.00 |
| 56.00 | 0.00 | 7,492 | 102.90 | 0.00 |
| 58.00 | 0.00 | 7,490 | 102.90 | 0.00 |
| 60.00 | 0.00 | 7,488 | 102.90 | 0.00 |
| 62.00 | 0.00 | 7,487 | 102.90 | 0.00 |
| 64.00 | 0.00 | 7,486 | 102.90 | 0.00 |
| 66.00 | 0.00 | 7,484 | 102.90 | 0.00 |
| 68.00 | 0.00 | 7,484 | 102.90 | 0.00 |
| 70.00 | 0.00 | 7,483 | 102.90 | 0.00 |
| 72.00 | 0.00 | 7,482 | 102.90 | 0.00 |

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Stage-Discharge for Pond 20P: Basin B

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| 101.00 | 0.00 | 102.04 | 0.00 | 103.08 | 0.14 | 104.12 | 3.21 |
| 101.02 | 0.00 | 102.06 | 0.00 | 103.10 | 0.17 | 104.14 | 3.25 |
| 101.04 | 0.00 | 102.08 | 0.00 | 103.12 | 0.20 | 104.16 | 3.30 |
| 101.06 | 0.00 | 102.10 | 0.00 | 103.14 | 0.24 | 104.18 | 3.34 |
| 101.08 | 0.00 | 102.12 | 0.00 | 103.16 | 0.28 | 104.20 | 3.38 |
| 101.10 | 0.00 | 102.14 | 0.00 | 103.18 | 0.32 | 104.22 | 3.42 |
| 101.12 | 0.00 | 102.16 | 0.00 | 103.20 | 0.37 | 104.24 | 3.47 |
| 101.14 | 0.00 | 102.18 | 0.00 | 103.22 | 0.42 | 104.26 | 3.51 |
| 101.16 | 0.00 | 102.20 | 0.00 | 103.24 | 0.47 | 104.28 | 3.55 |
| 101.18 | 0.00 | 102.22 | 0.00 | 103.26 | 0.52 | 104.30 | 3.59 |
| 101.20 | 0.00 | 102.24 | 0.00 | 103.28 | 0.57 | 104.32 | 3.66 |
| 101.22 | 0.00 | 102.26 | 0.00 | 103.30 | 0.63 | 104.34 | 3.76 |
| 101.24 | 0.00 | 102.28 | 0.00 | 103.32 | 0.69 | 104.36 | 3.87 |
| 101.26 | 0.00 | 102.30 | 0.00 | 103.34 | 0.75 | 104.38 | 4.00 |
| 101.28 | 0.00 | 102.32 | 0.00 | 103.36 | 0.81 | 104.40 | 4.14 |
| 101.30 | 0.00 | 102.34 | 0.00 | 103.38 | 0.88 | 104.42 | 4.28 |
| 101.32 | 0.00 | 102.36 | 0.00 | 103.40 | 0.95 | 104.44 | 4.44 |
| 101.34 | 0.00 | 102.38 | 0.00 | 103.42 | 1.01 | 104.46 | 4.61 |
| 101.36 | 0.00 | 102.40 | 0.00 | 103.44 | 1.08 | 104.48 | 4.79 |
| 101.38 | 0.00 | 102.42 | 0.00 | 103.46 | 1.15 | 104.50 | 4.97 |
| 101.40 | 0.00 | 102.44 | 0.00 | 103.48 | 1.22 | 104.52 | 5.16 |
| 101.42 | 0.00 | 102.46 | 0.00 | 103.50 | 1.30 | 104.54 | 5.37 |
| 101.44 | 0.00 | 102.48 | 0.00 | 103.52 | 1.37 | 104.56 | 5.58 |
| 101.46 | 0.00 | 102.50 | 0.00 | 103.54 | 1.45 | 104.58 | 5.80 |
| 101.48 | 0.00 | 102.52 | 0.00 | 103.56 | 1.52 | 104.60 | 6.02 |
| 101.50 | 0.00 | 102.54 | 0.00 | 103.58 | 1.60 | 104.62 | 6.26 |
| 101.52 | 0.00 | 102.56 | 0.00 | 103.60 | 1.67 | 104.64 | 6.50 |
| 101.54 | 0.00 | 102.58 | 0.00 | 103.62 | 1.75 | 104.66 | 6.75 |
| 101.56 | 0.00 | 102.60 | 0.00 | 103.64 | 1.83 | 104.68 | 7.00 |
| 101.58 | 0.00 | 102.62 | 0.00 | 103.66 | 1.90 | 104.70 | 7.27 |
| 101.60 | 0.00 | 102.64 | 0.00 | 103.68 | 1.98 | 104.72 | 7.54 |
| 101.62 | 0.00 | 102.66 | 0.00 | 103.70 | 2.05 | 104.74 | 7.82 |
| 101.64 | 0.00 | 102.68 | 0.00 | 103.72 | 2.13 | 104.76 | 8.11 |
| 101.66 | 0.00 | 102.70 | 0.00 | 103.74 | 2.20 | 104.78 | 8.41 |
| 101.68 | 0.00 | 102.72 | 0.00 | 103.76 | 2.27 | 104.80 | 8.72 |
| 101.70 | 0.00 | 102.74 | 0.00 | 103.78 | 2.34 | 104.82 | 9.03 |
| 101.72 | 0.00 | 102.76 | 0.00 | 103.80 | 2.40 | 104.84 | 9.35 |
| 101.74 | 0.00 | 102.78 | 0.00 | 103.82 | 2.47 | 104.86 | 9.68 |
| 101.76 | 0.00 | 102.80 | 0.00 | 103.84 | 2.53 | 104.88 | 10.01 |
| 101.78 | 0.00 | 102.82 | 0.00 | 103.86 | 2.58 | 104.90 | 10.36 |
| 101.80 | 0.00 | 102.84 | 0.00 | 103.88 | 2.63 | 104.92 | 10.72 |
| 101.82 | 0.00 | 102.86 | 0.00 | 103.90 | 2.67 | 104.94 | 11.09 |
| 101.84 | 0.00 | 102.88 | 0.00 | 103.92 | 2.73 | 104.96 | 11.47 |
| 101.86 | 0.00 | 102.90 | 0.00 | 103.94 | 2.78 | 104.98 | 11.86 |
| 101.88 | 0.00 | 102.92 | 0.00 | 103.96 | 2.83 | 105.00 | 12.26 |
| 101.90 | 0.00 | 102.94 | 0.01 | 103.98 | 2.88 | | |
| 101.92 | 0.00 | 102.96 | 0.02 | 104.00 | 2.93 | | |
| 101.94 | 0.00 | 102.98 | 0.03 | 104.02 | 2.98 | | |
| 101.96 | 0.00 | 103.00 | 0.04 | 104.04 | 3.03 | | |
| 101.98 | 0.00 | 103.02 | 0.06 | 104.06 | 3.07 | | |
| 102.00 | 0.00 | 103.04 | 0.09 | 104.08 | 3.12 | | |
| 102.02 | 0.00 | 103.06 | 0.11 | 104.10 | 3.16 | | |

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Stage-Area-Storage for Pond 20P: Basin B

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 101.00 | 3,841 | 0 | 103.60 | 4,101 | 10,325 |
| 101.05 | 3,846 | 192 | 103.65 | 4,106 | 10,530 |
| 101.10 | 3,851 | 385 | 103.70 | 4,111 | 10,735 |
| 101.15 | 3,856 | 577 | 103.75 | 4,116 | 10,941 |
| 101.20 | 3,861 | 770 | 103.80 | 4,121 | 11,147 |
| 101.25 | 3,866 | 963 | 103.85 | 4,126 | 11,353 |
| 101.30 | 3,871 | 1,157 | 103.90 | 4,131 | 11,559 |
| 101.35 | 3,876 | 1,350 | 103.95 | 4,136 | 11,766 |
| 101.40 | 3,881 | 1,544 | 104.00 | 4,141 | 11,973 |
| 101.45 | 3,886 | 1,739 | 104.05 | 4,149 | 12,180 |
| 101.50 | 3,891 | 1,933 | 104.10 | 4,157 | 12,388 |
| 101.55 | 3,896 | 2,128 | 104.15 | 4,165 | 12,596 |
| 101.60 | 3,901 | 2,323 | 104.20 | 4,173 | 12,804 |
| 101.65 | 3,906 | 2,518 | 104.25 | 4,181 | 13,013 |
| 101.70 | 3,911 | 2,713 | 104.30 | 4,189 | 13,222 |
| 101.75 | 3,916 | 2,909 | 104.35 | 4,197 | 13,432 |
| 101.80 | 3,921 | 3,105 | 104.40 | 4,205 | 13,642 |
| 101.85 | 3,926 | 3,301 | 104.45 | 4,213 | 13,853 |
| 101.90 | 3,931 | 3,497 | 104.50 | 4,221 | 14,064 |
| 101.95 | 3,936 | 3,694 | 104.55 | 4,229 | 14,275 |
| 102.00 | 3,941 | 3,891 | 104.60 | 4,237 | 14,486 |
| 102.05 | 3,946 | 4,088 | 104.65 | 4,245 | 14,698 |
| 102.10 | 3,951 | 4,286 | 104.70 | 4,253 | 14,911 |
| 102.15 | 3,956 | 4,483 | 104.75 | 4,261 | 15,124 |
| 102.20 | 3,961 | 4,681 | 104.80 | 4,269 | 15,337 |
| 102.25 | 3,966 | 4,879 | 104.85 | 4,277 | 15,551 |
| 102.30 | 3,971 | 5,078 | 104.90 | 4,285 | 15,765 |
| 102.35 | 3,976 | 5,276 | 104.95 | 4,293 | 15,979 |
| 102.40 | 3,981 | 5,475 | 105.00 | 4,301 | 16,194 |
| 102.45 | 3,986 | 5,675 | | | |
| 102.50 | 3,991 | 5,874 | | | |
| 102.55 | 3,996 | 6,074 | | | |
| 102.60 | 4,001 | 6,274 | | | |
| 102.65 | 4,006 | 6,474 | | | |
| 102.70 | 4,011 | 6,674 | | | |
| 102.75 | 4,016 | 6,875 | | | |
| 102.80 | 4,021 | 7,076 | | | |
| 102.85 | 4,026 | 7,277 | | | |
| 102.90 | 4,031 | 7,478 | | | |
| 102.95 | 4,036 | 7,680 | | | |
| 103.00 | 4,041 | 7,882 | | | |
| 103.05 | 4,046 | 8,084 | | | |
| 103.10 | 4,051 | 8,287 | | | |
| 103.15 | 4,056 | 8,489 | | | |
| 103.20 | 4,061 | 8,692 | | | |
| 103.25 | 4,066 | 8,895 | | | |
| 103.30 | 4,071 | 9,099 | | | |
| 103.35 | 4,076 | 9,302 | | | |
| 103.40 | 4,081 | 9,506 | | | |
| 103.45 | 4,086 | 9,711 | | | |
| 103.50 | 4,091 | 9,915 | | | |
| 103.55 | 4,096 | 10,120 | | | |

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Summary for Pond 21P: Basin C

Inflow Area = 1.100 ac, 79.73% Impervious, Inflow Depth = 7.93" for 100-Year event
 Inflow = 5.81 cfs @ 12.18 hrs, Volume= 0.726 af
 Outflow = 3.88 cfs @ 12.39 hrs, Volume= 0.621 af, Atten= 33%, Lag= 12.2 min
 Primary = 3.88 cfs @ 12.39 hrs, Volume= 0.621 af
 Routed to Link 33L : Prop. East Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 101.56' @ 12.39 hrs Surf.Area= 5,554 sf Storage= 10,494 cf

Plug-Flow detention time= 183.3 min calculated for 0.621 af (86% of inflow)
 Center-of-Mass det. time= 113.8 min (875.3 - 761.5)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 99.00' | 13,101 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 99.00 | 2,973 | 0 | 0 |
| 100.00 | 3,805 | 3,389 | 3,389 |
| 101.00 | 4,690 | 4,248 | 7,637 |
| 102.00 | 6,238 | 5,464 | 13,101 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|---|
| #1 | Primary | 96.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 96.50' / 96.50' S= 0.0000 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 100.30' | 10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 101.25' | 3.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=3.88 cfs @ 12.39 hrs HW=101.56' (Free Discharge)
 1=Culvert (Passes 3.88 cfs of 15.55 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.41 cfs @ 4.42 fps)
 3=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 1.59 fps)

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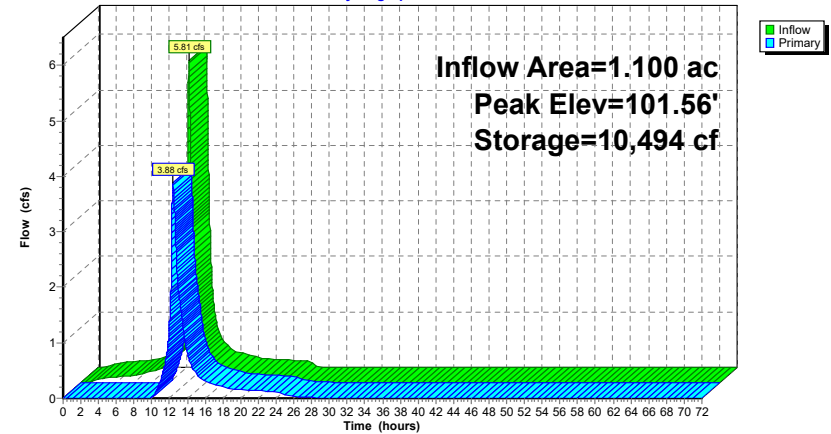
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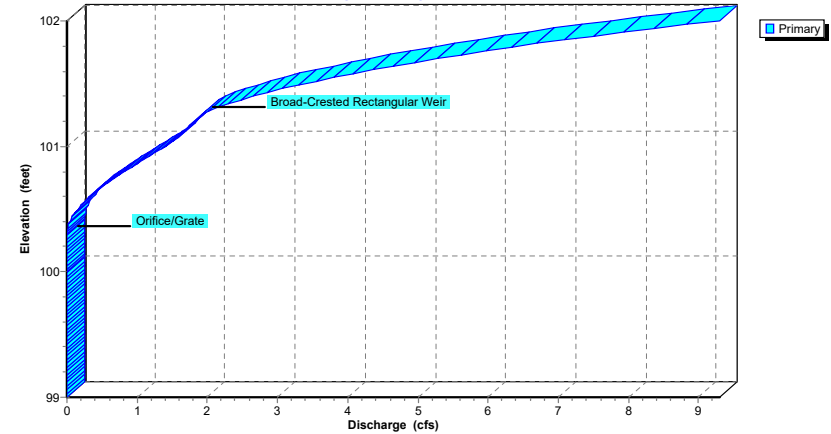
Pond 21P: Basin C

Hydrograph



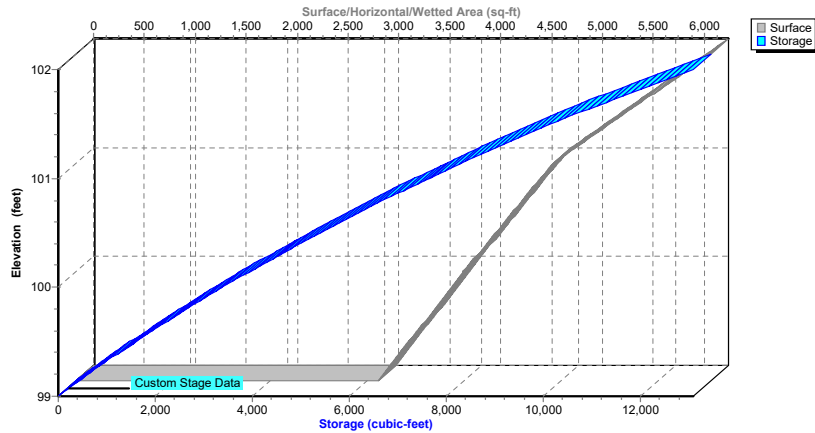
Pond 21P: Basin C

Stage-Discharge



Pond 21P: Basin C

Stage-Area-Storage



Hydrograph for Pond 21P: Basin C

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 99.00 | 0.00 |
| 2.00 | 0.06 | 178 | 99.06 | 0.00 |
| 4.00 | 0.10 | 783 | 99.25 | 0.00 |
| 6.00 | 0.13 | 1,605 | 99.50 | 0.00 |
| 8.00 | 0.20 | 2,783 | 99.84 | 0.00 |
| 10.00 | 0.37 | 4,680 | 100.33 | 0.00 |
| 12.00 | 2.88 | 7,623 | 101.00 | 1.38 |
| 14.00 | 0.49 | 6,678 | 100.79 | 0.80 |
| 16.00 | 0.26 | 5,785 | 100.59 | 0.31 |
| 18.00 | 0.18 | 5,547 | 100.53 | 0.21 |
| 20.00 | 0.15 | 5,414 | 100.50 | 0.16 |
| 22.00 | 0.13 | 5,347 | 100.49 | 0.14 |
| 24.00 | 0.11 | 5,282 | 100.47 | 0.11 |
| 26.00 | 0.00 | 4,917 | 100.38 | 0.03 |
| 28.00 | 0.00 | 4,784 | 100.35 | 0.01 |
| 30.00 | 0.00 | 4,723 | 100.34 | 0.01 |
| 32.00 | 0.00 | 4,686 | 100.33 | 0.00 |
| 34.00 | 0.00 | 4,663 | 100.32 | 0.00 |
| 36.00 | 0.00 | 4,649 | 100.32 | 0.00 |
| 38.00 | 0.00 | 4,639 | 100.32 | 0.00 |
| 40.00 | 0.00 | 4,629 | 100.31 | 0.00 |
| 42.00 | 0.00 | 4,621 | 100.31 | 0.00 |
| 44.00 | 0.00 | 4,614 | 100.31 | 0.00 |
| 46.00 | 0.00 | 4,608 | 100.31 | 0.00 |
| 48.00 | 0.00 | 4,603 | 100.31 | 0.00 |
| 50.00 | 0.00 | 4,599 | 100.31 | 0.00 |
| 52.00 | 0.00 | 4,595 | 100.31 | 0.00 |
| 54.00 | 0.00 | 4,592 | 100.31 | 0.00 |
| 56.00 | 0.00 | 4,589 | 100.30 | 0.00 |
| 58.00 | 0.00 | 4,586 | 100.30 | 0.00 |
| 60.00 | 0.00 | 4,584 | 100.30 | 0.00 |
| 62.00 | 0.00 | 4,582 | 100.30 | 0.00 |
| 64.00 | 0.00 | 4,581 | 100.30 | 0.00 |
| 66.00 | 0.00 | 4,579 | 100.30 | 0.00 |
| 68.00 | 0.00 | 4,578 | 100.30 | 0.00 |
| 70.00 | 0.00 | 4,577 | 100.30 | 0.00 |
| 72.00 | 0.00 | 4,576 | 100.30 | 0.00 |

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Stage-Discharge for Pond 21P: Basin C

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---------------------|------------------|---------------------|------------------|---------------------|------------------|
| 99.00 | 0.00 | 100.04 | 0.00 | 101.08 | 1.60 |
| 99.02 | 0.00 | 100.06 | 0.00 | 101.10 | 1.64 |
| 99.04 | 0.00 | 100.08 | 0.00 | 101.12 | 1.68 |
| 99.06 | 0.00 | 100.10 | 0.00 | 101.14 | 1.71 |
| 99.08 | 0.00 | 100.12 | 0.00 | 101.16 | 1.75 |
| 99.10 | 0.00 | 100.14 | 0.00 | 101.18 | 1.79 |
| 99.12 | 0.00 | 100.16 | 0.00 | 101.20 | 1.83 |
| 99.14 | 0.00 | 100.18 | 0.00 | 101.22 | 1.86 |
| 99.16 | 0.00 | 100.20 | 0.00 | 101.24 | 1.90 |
| 99.18 | 0.00 | 100.22 | 0.00 | 101.26 | 1.94 |
| 99.20 | 0.00 | 100.24 | 0.00 | 101.28 | 2.01 |
| 99.22 | 0.00 | 100.26 | 0.00 | 101.30 | 2.10 |
| 99.24 | 0.00 | 100.28 | 0.00 | 101.32 | 2.20 |
| 99.26 | 0.00 | 100.30 | 0.00 | 101.34 | 2.30 |
| 99.28 | 0.00 | 100.32 | 0.00 | 101.36 | 2.41 |
| 99.30 | 0.00 | 100.34 | 0.01 | 101.38 | 2.53 |
| 99.32 | 0.00 | 100.36 | 0.01 | 101.40 | 2.66 |
| 99.34 | 0.00 | 100.38 | 0.03 | 101.42 | 2.79 |
| 99.36 | 0.00 | 100.40 | 0.04 | 101.44 | 2.93 |
| 99.38 | 0.00 | 100.42 | 0.06 | 101.46 | 3.07 |
| 99.40 | 0.00 | 100.44 | 0.08 | 101.48 | 3.23 |
| 99.42 | 0.00 | 100.46 | 0.10 | 101.50 | 3.39 |
| 99.44 | 0.00 | 100.48 | 0.13 | 101.52 | 3.55 |
| 99.46 | 0.00 | 100.50 | 0.15 | 101.54 | 3.72 |
| 99.48 | 0.00 | 100.52 | 0.18 | 101.56 | 3.90 |
| 99.50 | 0.00 | 100.54 | 0.22 | 101.58 | 4.08 |
| 99.52 | 0.00 | 100.56 | 0.25 | 101.60 | 4.26 |
| 99.54 | 0.00 | 100.58 | 0.29 | 101.62 | 4.46 |
| 99.56 | 0.00 | 100.60 | 0.33 | 101.64 | 4.65 |
| 99.58 | 0.00 | 100.62 | 0.37 | 101.66 | 4.86 |
| 99.60 | 0.00 | 100.64 | 0.42 | 101.68 | 5.07 |
| 99.62 | 0.00 | 100.66 | 0.46 | 101.70 | 5.28 |
| 99.64 | 0.00 | 100.68 | 0.51 | 101.72 | 5.51 |
| 99.66 | 0.00 | 100.70 | 0.56 | 101.74 | 5.74 |
| 99.68 | 0.00 | 100.72 | 0.61 | 101.76 | 5.97 |
| 99.70 | 0.00 | 100.74 | 0.66 | 101.78 | 6.21 |
| 99.72 | 0.00 | 100.76 | 0.71 | 101.80 | 6.45 |
| 99.74 | 0.00 | 100.78 | 0.77 | 101.82 | 6.70 |
| 99.76 | 0.00 | 100.80 | 0.82 | 101.84 | 6.96 |
| 99.78 | 0.00 | 100.82 | 0.88 | 101.86 | 7.23 |
| 99.80 | 0.00 | 100.84 | 0.94 | 101.88 | 7.50 |
| 99.82 | 0.00 | 100.86 | 0.99 | 101.90 | 7.79 |
| 99.84 | 0.00 | 100.88 | 1.05 | 101.92 | 8.07 |
| 99.86 | 0.00 | 100.90 | 1.11 | 101.94 | 8.37 |
| 99.88 | 0.00 | 100.92 | 1.17 | 101.96 | 8.67 |
| 99.90 | 0.00 | 100.94 | 1.22 | 101.98 | 8.98 |
| 99.92 | 0.00 | 100.96 | 1.28 | 102.00 | 9.30 |
| 99.94 | 0.00 | 100.98 | 1.34 | | |
| 99.96 | 0.00 | 101.00 | 1.39 | | |
| 99.98 | 0.00 | 101.02 | 1.45 | | |
| 100.00 | 0.00 | 101.04 | 1.50 | | |
| 100.02 | 0.00 | 101.06 | 1.55 | | |

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Stage-Area-Storage for Pond 21P: Basin C

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 99.00 | 2,973 | 0 | 101.60 | 5,619 | 10,729 |
| 99.05 | 3,015 | 150 | 101.65 | 5,696 | 11,012 |
| 99.10 | 3,056 | 301 | 101.70 | 5,774 | 11,299 |
| 99.15 | 3,098 | 455 | 101.75 | 5,851 | 11,589 |
| 99.20 | 3,139 | 611 | 101.80 | 5,928 | 11,884 |
| 99.25 | 3,181 | 769 | 101.85 | 6,006 | 12,182 |
| 99.30 | 3,223 | 929 | 101.90 | 6,083 | 12,484 |
| 99.35 | 3,264 | 1,092 | 101.95 | 6,161 | 12,791 |
| 99.40 | 3,306 | 1,256 | 102.00 | 6,238 | 13,101 |
| 99.45 | 3,347 | 1,422 | | | |
| 99.50 | 3,389 | 1,591 | | | |
| 99.55 | 3,431 | 1,761 | | | |
| 99.60 | 3,472 | 1,934 | | | |
| 99.65 | 3,514 | 2,108 | | | |
| 99.70 | 3,555 | 2,285 | | | |
| 99.75 | 3,597 | 2,464 | | | |
| 99.80 | 3,639 | 2,645 | | | |
| 99.85 | 3,680 | 2,828 | | | |
| 99.90 | 3,722 | 3,013 | | | |
| 99.95 | 3,763 | 3,200 | | | |
| 100.00 | 3,805 | 3,389 | | | |
| 100.05 | 3,849 | 3,580 | | | |
| 100.10 | 3,893 | 3,774 | | | |
| 100.15 | 3,938 | 3,970 | | | |
| 100.20 | 3,982 | 4,168 | | | |
| 100.25 | 4,026 | 4,368 | | | |
| 100.30 | 4,070 | 4,570 | | | |
| 100.35 | 4,115 | 4,775 | | | |
| 100.40 | 4,159 | 4,982 | | | |
| 100.45 | 4,203 | 5,191 | | | |
| 100.50 | 4,248 | 5,402 | | | |
| 100.55 | 4,292 | 5,616 | | | |
| 100.60 | 4,336 | 5,831 | | | |
| 100.65 | 4,380 | 6,049 | | | |
| 100.70 | 4,425 | 6,269 | | | |
| 100.75 | 4,469 | 6,492 | | | |
| 100.80 | 4,513 | 6,716 | | | |
| 100.85 | 4,557 | 6,943 | | | |
| 100.90 | 4,602 | 7,172 | | | |
| 100.95 | 4,646 | 7,403 | | | |
| 101.00 | 4,690 | 7,637 | | | |
| 101.05 | 4,767 | 7,873 | | | |
| 101.10 | 4,845 | 8,113 | | | |
| 101.15 | 4,922 | 8,357 | | | |
| 101.20 | 5,000 | 8,605 | | | |
| 101.25 | 5,077 | 8,857 | | | |
| 101.30 | 5,154 | 9,113 | | | |
| 101.35 | 5,232 | 9,373 | | | |
| 101.40 | 5,309 | 9,636 | | | |
| 101.45 | 5,387 | 9,904 | | | |
| 101.50 | 5,464 | 10,175 | | | |
| 101.55 | 5,541 | 10,450 | | | |

2023-11 Proposed

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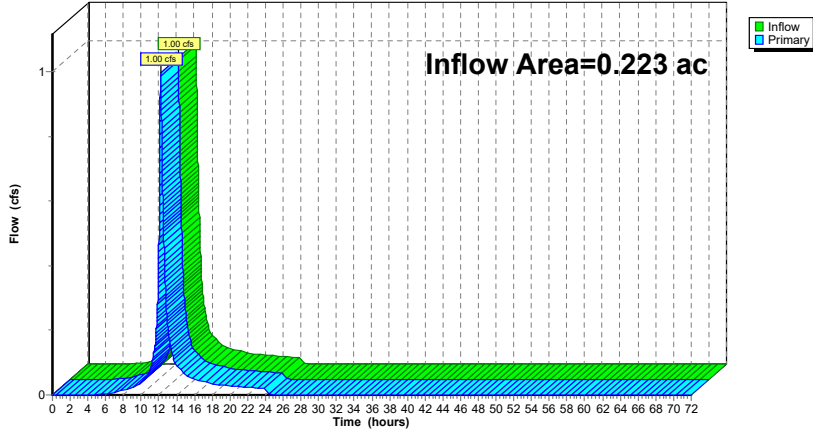
Summary for Link 29L: West Und. Total

Inflow Area = 0.223 ac, 2.28% Impervious, Inflow Depth = 6.03" for 100-Year event
 Inflow = 1.00 cfs @ 12.18 hrs, Volume= 0.112 af
 Primary = 1.00 cfs @ 12.18 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 31L : Prop. West Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 29L: West Und. Total

Hydrograph



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Hydrograph for Link 29L: West Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.01 | 0.00 | 0.01 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.01 | 0.00 | 0.01 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.02 | 0.00 | 0.02 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.04 | 0.00 | 0.04 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.08 | 0.00 | 0.08 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.46 | 0.00 | 0.46 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.21 | 0.00 | 0.21 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.09 | 0.00 | 0.09 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.06 | 0.00 | 0.06 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.05 | 0.00 | 0.05 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.04 | 0.00 | 0.04 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.03 | 0.00 | 0.03 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.03 | 0.00 | 0.03 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.03 | 0.00 | 0.03 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.03 | 0.00 | 0.03 | | | | |
| 22.00 | 0.02 | 0.00 | 0.02 | | | | |
| 23.00 | 0.02 | 0.00 | 0.02 | | | | |
| 24.00 | 0.02 | 0.00 | 0.02 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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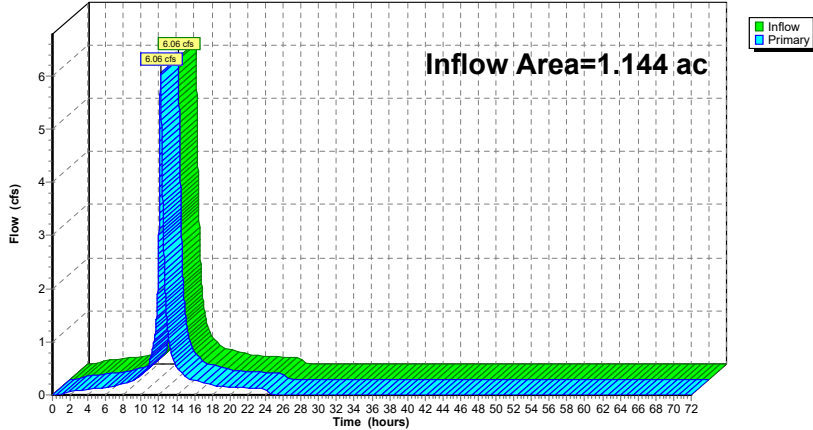
Summary for Link 30L: East Und. Total

Inflow Area = 1.144 ac, 79.08% Impervious, Inflow Depth = 7.94" for 100-Year event
 Inflow = 6.06 cfs @ 12.18 hrs, Volume= 0.757 af
 Primary = 6.06 cfs @ 12.18 hrs, Volume= 0.757 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 33L : Prop. East Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 30L: East Und. Total

Hydrograph



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Hydrograph for Link 30L: East Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.02 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.06 | 0.00 | 0.06 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.09 | 0.00 | 0.09 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.10 | 0.00 | 0.10 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.12 | 0.00 | 0.12 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.13 | 0.00 | 0.13 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.17 | 0.00 | 0.17 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.21 | 0.00 | 0.21 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.26 | 0.00 | 0.26 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.38 | 0.00 | 0.38 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.66 | 0.00 | 0.66 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 3.01 | 0.00 | 3.01 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.21 | 0.00 | 1.21 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.51 | 0.00 | 0.51 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.35 | 0.00 | 0.35 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.27 | 0.00 | 0.27 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.23 | 0.00 | 0.23 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.19 | 0.00 | 0.19 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.16 | 0.00 | 0.16 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.15 | 0.00 | 0.15 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.14 | 0.00 | 0.14 | | | | |
| 22.00 | 0.13 | 0.00 | 0.13 | | | | |
| 23.00 | 0.12 | 0.00 | 0.12 | | | | |
| 24.00 | 0.11 | 0.00 | 0.11 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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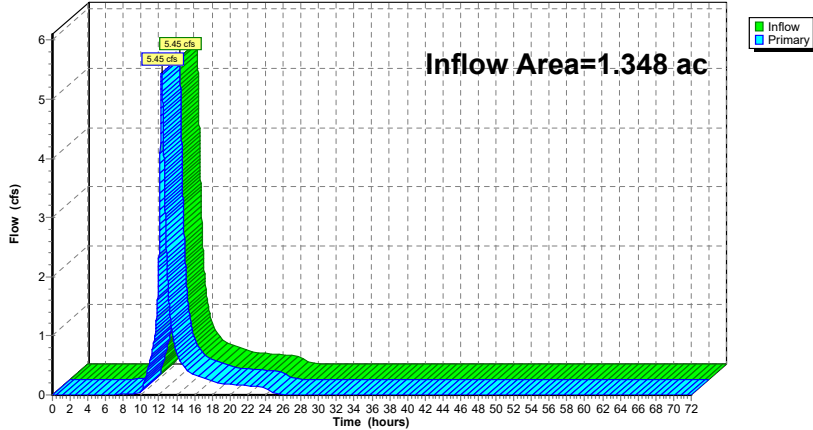
Summary for Link 31L: Prop. West Total

Inflow Area = 1.348 ac, 64.67% Impervious, Inflow Depth = 6.59" for 100-Year event
 Inflow = 5.45 cfs @ 12.30 hrs, Volume= 0.741 af
 Primary = 5.45 cfs @ 12.30 hrs, Volume= 0.741 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 31L: Prop. West Total

Hydrograph



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Hydrograph for Link 31L: Prop. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.01 | 0.00 | 0.01 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.01 | 0.00 | 0.01 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.02 | 0.00 | 0.02 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.04 | 0.00 | 0.04 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.58 | 0.00 | 0.58 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.31 | 0.00 | 2.31 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 1.90 | 0.00 | 1.90 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.70 | 0.00 | 0.70 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.45 | 0.00 | 0.45 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.34 | 0.00 | 0.34 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.28 | 0.00 | 0.28 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.23 | 0.00 | 0.23 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.20 | 0.00 | 0.20 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.18 | 0.00 | 0.18 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.17 | 0.00 | 0.17 | | | | |
| 22.00 | 0.16 | 0.00 | 0.16 | | | | |
| 23.00 | 0.15 | 0.00 | 0.15 | | | | |
| 24.00 | 0.13 | 0.00 | 0.13 | | | | |
| 25.00 | 0.03 | 0.00 | 0.03 | | | | |
| 26.00 | 0.01 | 0.00 | 0.01 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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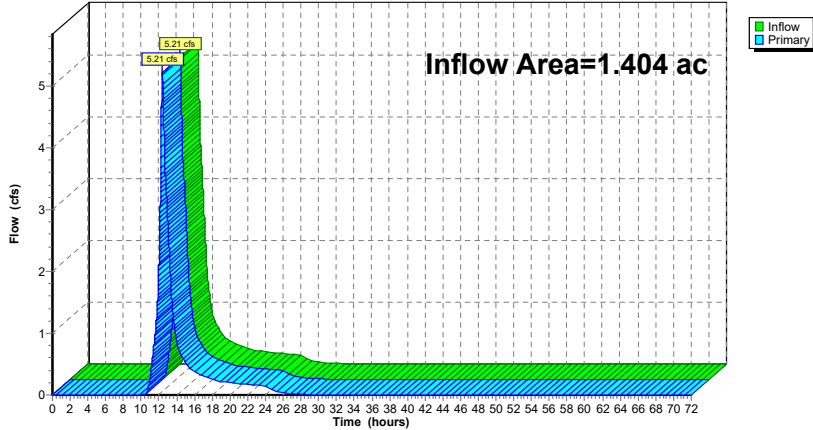
Summary for Link 32L: Prop. South Total

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 6.69" for 100-Year event
 Inflow = 5.21 cfs @ 12.37 hrs, Volume= 0.782 af
 Primary = 5.21 cfs @ 12.37 hrs, Volume= 0.782 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 32L: Prop. South Total

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Link 32L: Prop. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.30 | 0.00 | 0.30 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 2.09 | 0.00 | 2.09 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 2.81 | 0.00 | 2.81 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.87 | 0.00 | 0.87 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.52 | 0.00 | 0.52 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.38 | 0.00 | 0.38 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.31 | 0.00 | 0.31 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.26 | 0.00 | 0.26 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.22 | 0.00 | 0.22 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.20 | 0.00 | 0.20 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.19 | 0.00 | 0.19 | | | | |
| 22.00 | 0.17 | 0.00 | 0.17 | | | | |
| 23.00 | 0.16 | 0.00 | 0.16 | | | | |
| 24.00 | 0.14 | 0.00 | 0.14 | | | | |
| 25.00 | 0.06 | 0.00 | 0.06 | | | | |
| 26.00 | 0.03 | 0.00 | 0.03 | | | | |
| 27.00 | 0.02 | 0.00 | 0.02 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

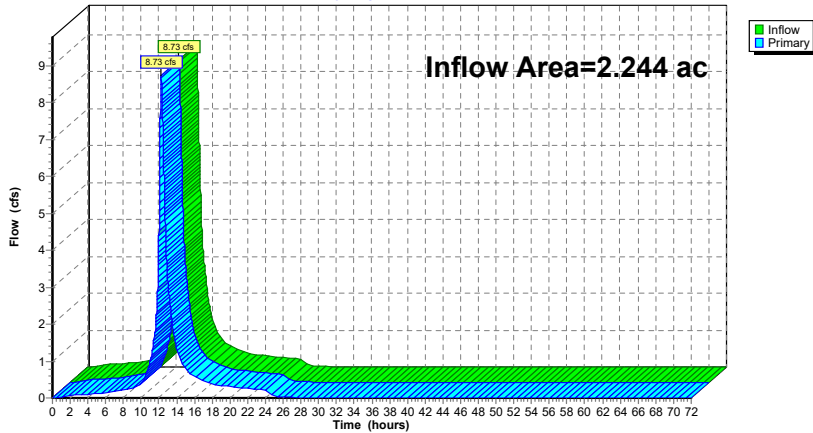
Summary for Link 33L: Prop. East Total

Inflow Area = 2.244 ac, 79.40% Impervious, Inflow Depth = 7.37" for 100-Year event
 Inflow = 8.73 cfs @ 12.24 hrs, Volume= 1.378 af
 Primary = 8.73 cfs @ 12.24 hrs, Volume= 1.378 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 33L: Prop. East Total

Hydrograph



Hydrograph for Link 33L: Prop. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.02 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.06 | 0.00 | 0.06 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.09 | 0.00 | 0.09 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.10 | 0.00 | 0.10 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.12 | 0.00 | 0.12 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.13 | 0.00 | 0.13 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.17 | 0.00 | 0.17 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.21 | 0.00 | 0.21 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.26 | 0.00 | 0.26 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.39 | 0.00 | 0.39 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.99 | 0.00 | 0.99 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 4.39 | 0.00 | 4.39 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 3.12 | 0.00 | 3.12 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 1.31 | 0.00 | 1.31 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.79 | 0.00 | 0.79 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.58 | 0.00 | 0.58 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.48 | 0.00 | 0.48 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.39 | 0.00 | 0.39 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.34 | 0.00 | 0.34 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.31 | 0.00 | 0.31 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.29 | 0.00 | 0.29 | | | | |
| 22.00 | 0.27 | 0.00 | 0.27 | | | | |
| 23.00 | 0.25 | 0.00 | 0.25 | | | | |
| 24.00 | 0.22 | 0.00 | 0.22 | | | | |
| 25.00 | 0.06 | 0.00 | 0.06 | | | | |
| 26.00 | 0.03 | 0.00 | 0.03 | | | | |
| 27.00 | 0.02 | 0.00 | 0.02 | | | | |
| 28.00 | 0.01 | 0.00 | 0.01 | | | | |
| 29.00 | 0.01 | 0.00 | 0.01 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.01 | 0.00 | 0.01 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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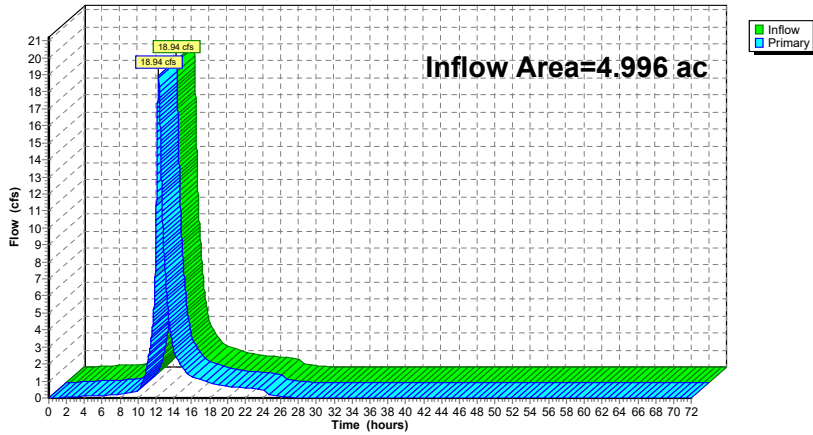
Summary for Link 34L: Prop. Total

Inflow Area = 4.996 ac, 78.20% Impervious, Inflow Depth = 6.97" for 100-Year event
 Inflow = 18.94 cfs @ 12.31 hrs, Volume= 2.901 af
 Primary = 18.94 cfs @ 12.31 hrs, Volume= 2.901 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 34L: Prop. Total

Hydrograph



2023-11 Proposed

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NOAA 24-hr D 100-Year Rainfall=8.63"

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Hydrograph for Link 34L: Prop. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.02 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.07 | 0.00 | 0.07 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.09 | 0.00 | 0.09 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.10 | 0.00 | 0.10 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.12 | 0.00 | 0.12 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.14 | 0.00 | 0.14 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.18 | 0.00 | 0.18 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.23 | 0.00 | 0.23 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.28 | 0.00 | 0.28 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.43 | 0.00 | 0.43 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 1.87 | 0.00 | 1.87 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 8.80 | 0.00 | 8.80 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 7.84 | 0.00 | 7.84 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 2.87 | 0.00 | 2.87 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 1.77 | 0.00 | 1.77 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 1.29 | 0.00 | 1.29 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 1.07 | 0.00 | 1.07 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.88 | 0.00 | 0.88 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.76 | 0.00 | 0.76 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.69 | 0.00 | 0.69 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.64 | 0.00 | 0.64 | | | | |
| 22.00 | 0.60 | 0.00 | 0.60 | | | | |
| 23.00 | 0.55 | 0.00 | 0.55 | | | | |
| 24.00 | 0.50 | 0.00 | 0.50 | | | | |
| 25.00 | 0.16 | 0.00 | 0.16 | | | | |
| 26.00 | 0.07 | 0.00 | 0.07 | | | | |
| 27.00 | 0.04 | 0.00 | 0.04 | | | | |
| 28.00 | 0.03 | 0.00 | 0.03 | | | | |
| 29.00 | 0.02 | 0.00 | 0.02 | | | | |
| 30.00 | 0.01 | 0.00 | 0.01 | | | | |
| 31.00 | 0.01 | 0.00 | 0.01 | | | | |
| 32.00 | 0.01 | 0.00 | 0.01 | | | | |
| 33.00 | 0.01 | 0.00 | 0.01 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

**HYDROGRAPH SUMMARY REPORTS – WATER
QUALITY STORM**

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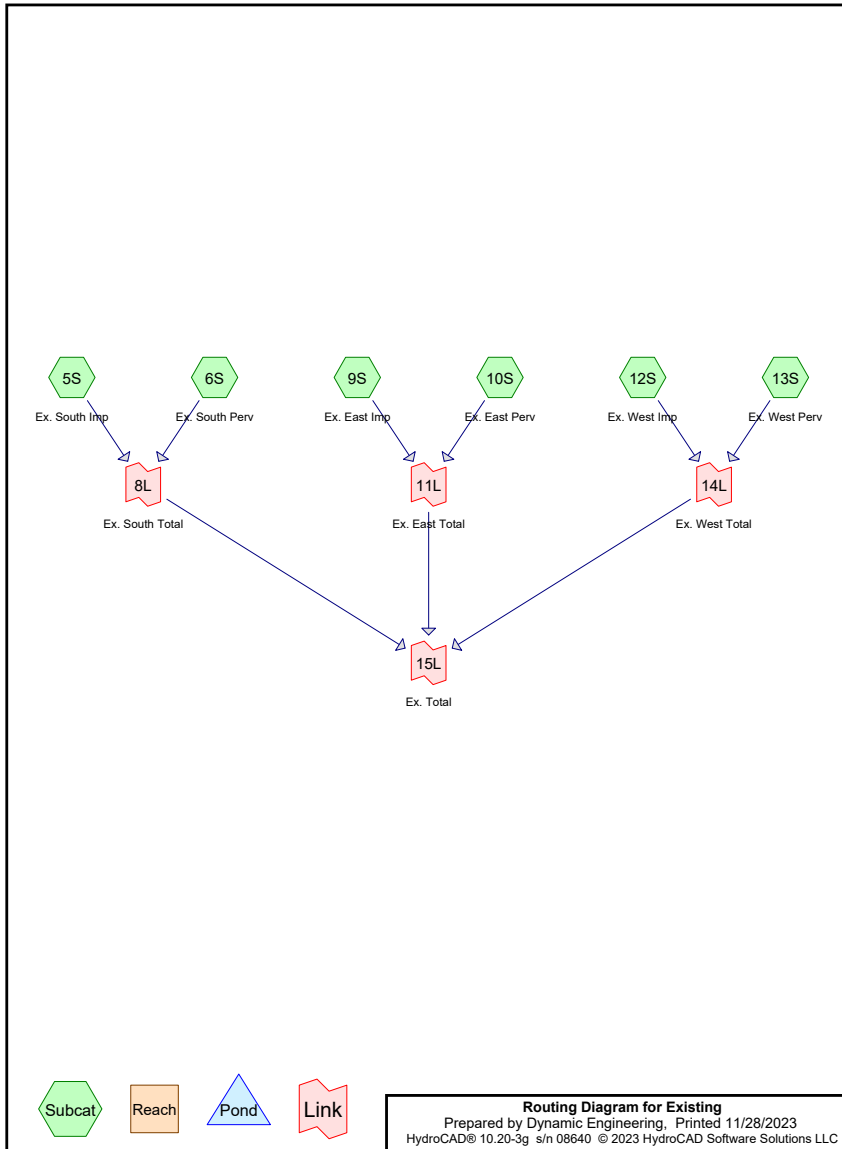
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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D



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Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|-------------|-------|---------|------------------|-----|----------------|-----|
| 1 | WQ | NJ DEP 2-hr | | Default | 2.00 | 1 | 1.25 | 2 |

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Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|--------------|-----------|--|
| 0.635 | 74 | >75% Grass cover, Good, HSG C (6S, 10S, 13S) |
| 1.679 | 80 | >75% Grass cover, Good, HSG D (6S, 10S, 13S) |
| 2.681 | 98 | Paved parking, HSG D (5S, 9S, 12S) |
| 4.996 | 89 | TOTAL AREA |

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Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|---------------------------|
| 0.000 | HSG A | |
| 0.000 | HSG B | |
| 0.635 | HSG C | 6S, 10S, 13S |
| 4.360 | HSG D | 5S, 6S, 9S, 10S, 12S, 13S |
| 0.000 | Other | |
| 4.996 | | TOTAL AREA |

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Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|-------------------------|
| 0.000 | 0.000 | 0.635 | 1.679 | 0.000 | 2.315 | >75% Grass cover, Good | 6S, 10S, 13S |
| 0.000 | 0.000 | 0.000 | 2.681 | 0.000 | 2.681 | Paved parking | 5S, 9S, 12S |
| 0.000 | 0.000 | 0.635 | 4.360 | 0.000 | 4.996 | TOTAL AREA | |

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Notes Listing (all nodes)

| Line# | Node Number | Notes |
|-------|-------------|---|
| 1 | Project | Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|---|---|
| Subcatchment5S: Ex. South Imp | Runoff Area=1,453 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=0.06 cfs 0.003 af |
| Subcatchment6S: Ex. South Perv | Runoff Area=49,675 sf 0.00% Impervious Runoff Depth=0.15" Tc=10.0 min CN=79 Runoff=0.25 cfs 0.015 af |
| Subcatchment9S: Ex. East Imp | Runoff Area=59,569 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=2.55 cfs 0.118 af |
| Subcatchment10S: Ex. East Perv | Runoff Area=31,350 sf 0.00% Impervious Runoff Depth=0.13" Tc=10.0 min CN=78 Runoff=0.14 cfs 0.008 af |
| Subcatchment12S: Ex. West Imp | Runoff Area=55,780 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=2.39 cfs 0.110 af |
| Subcatchment13S: Ex. West Perv | Runoff Area=19,795 sf 0.00% Impervious Runoff Depth=0.13" Tc=10.0 min CN=78 Runoff=0.09 cfs 0.005 af |
| Link 8L: Ex. South Total | Inflow=0.31 cfs 0.017 af Primary=0.31 cfs 0.017 af |
| Link 11L: Ex. East Total | Inflow=2.66 cfs 0.126 af Primary=2.66 cfs 0.126 af |
| Link 14L: Ex. West Total | Inflow=2.46 cfs 0.115 af Primary=2.46 cfs 0.115 af |
| Link 15L: Ex. Total | Inflow=5.40 cfs 0.259 af Primary=5.40 cfs 0.259 af |
| Total Runoff Area = 4.996 ac Runoff Volume = 0.259 af Average Runoff Depth = 0.62" | |
| 46.33% Pervious = 2.315 ac 53.67% Impervious = 2.681 ac | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 5S: Ex. South Imp

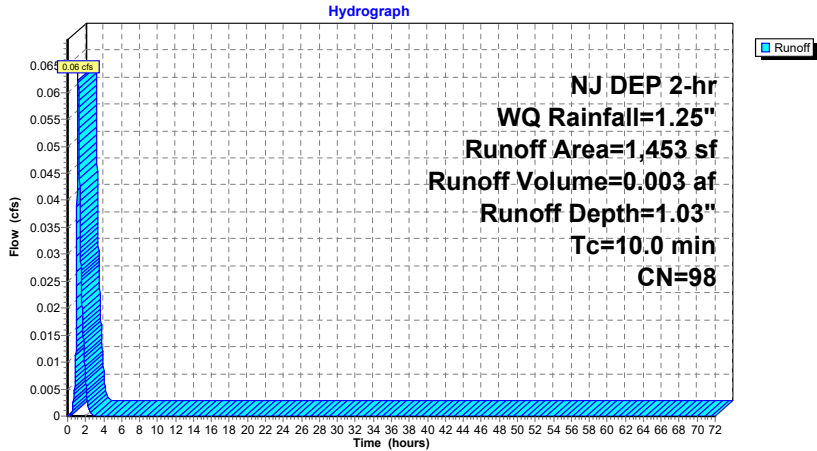
Runoff = 0.06 cfs @ 1.17 hrs, Volume= 0.003 af, Depth= 1.03"
Routed to Link 8L : Ex. South Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 1,453 | 98 | Paved parking, HSG D |
| 1,453 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Ex. South Imp



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 5S: Ex. South Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.02 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.01 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 6S: Ex. South Perv

Runoff = 0.25 cfs @ 1.27 hrs, Volume= 0.015 af, Depth= 0.15"
Routed to Link 8L : Ex. South Total

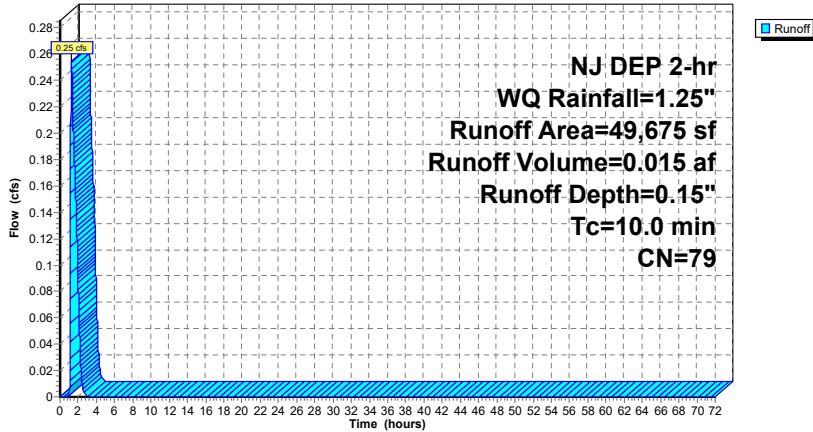
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 9,901 | 74 | >75% Grass cover, Good, HSG C |
| 39,774 | 80 | >75% Grass cover, Good, HSG D |
| 49,675 | 79 | Weighted Average |
| 49,675 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Ex. South Perv

Hydrograph



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 6S: Ex. South Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.15 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.15 | 0.00 |
| 2.00 | 1.25 | 0.15 | 0.08 | 54.00 | 1.25 | 0.15 | 0.00 |
| 3.00 | 1.25 | 0.15 | 0.00 | 55.00 | 1.25 | 0.15 | 0.00 |
| 4.00 | 1.25 | 0.15 | 0.00 | 56.00 | 1.25 | 0.15 | 0.00 |
| 5.00 | 1.25 | 0.15 | 0.00 | 57.00 | 1.25 | 0.15 | 0.00 |
| 6.00 | 1.25 | 0.15 | 0.00 | 58.00 | 1.25 | 0.15 | 0.00 |
| 7.00 | 1.25 | 0.15 | 0.00 | 59.00 | 1.25 | 0.15 | 0.00 |
| 8.00 | 1.25 | 0.15 | 0.00 | 60.00 | 1.25 | 0.15 | 0.00 |
| 9.00 | 1.25 | 0.15 | 0.00 | 61.00 | 1.25 | 0.15 | 0.00 |
| 10.00 | 1.25 | 0.15 | 0.00 | 62.00 | 1.25 | 0.15 | 0.00 |
| 11.00 | 1.25 | 0.15 | 0.00 | 63.00 | 1.25 | 0.15 | 0.00 |
| 12.00 | 1.25 | 0.15 | 0.00 | 64.00 | 1.25 | 0.15 | 0.00 |
| 13.00 | 1.25 | 0.15 | 0.00 | 65.00 | 1.25 | 0.15 | 0.00 |
| 14.00 | 1.25 | 0.15 | 0.00 | 66.00 | 1.25 | 0.15 | 0.00 |
| 15.00 | 1.25 | 0.15 | 0.00 | 67.00 | 1.25 | 0.15 | 0.00 |
| 16.00 | 1.25 | 0.15 | 0.00 | 68.00 | 1.25 | 0.15 | 0.00 |
| 17.00 | 1.25 | 0.15 | 0.00 | 69.00 | 1.25 | 0.15 | 0.00 |
| 18.00 | 1.25 | 0.15 | 0.00 | 70.00 | 1.25 | 0.15 | 0.00 |
| 19.00 | 1.25 | 0.15 | 0.00 | 71.00 | 1.25 | 0.15 | 0.00 |
| 20.00 | 1.25 | 0.15 | 0.00 | 72.00 | 1.25 | 0.15 | 0.00 |
| 21.00 | 1.25 | 0.15 | 0.00 | | | | |
| 22.00 | 1.25 | 0.15 | 0.00 | | | | |
| 23.00 | 1.25 | 0.15 | 0.00 | | | | |
| 24.00 | 1.25 | 0.15 | 0.00 | | | | |
| 25.00 | 1.25 | 0.15 | 0.00 | | | | |
| 26.00 | 1.25 | 0.15 | 0.00 | | | | |
| 27.00 | 1.25 | 0.15 | 0.00 | | | | |
| 28.00 | 1.25 | 0.15 | 0.00 | | | | |
| 29.00 | 1.25 | 0.15 | 0.00 | | | | |
| 30.00 | 1.25 | 0.15 | 0.00 | | | | |
| 31.00 | 1.25 | 0.15 | 0.00 | | | | |
| 32.00 | 1.25 | 0.15 | 0.00 | | | | |
| 33.00 | 1.25 | 0.15 | 0.00 | | | | |
| 34.00 | 1.25 | 0.15 | 0.00 | | | | |
| 35.00 | 1.25 | 0.15 | 0.00 | | | | |
| 36.00 | 1.25 | 0.15 | 0.00 | | | | |
| 37.00 | 1.25 | 0.15 | 0.00 | | | | |
| 38.00 | 1.25 | 0.15 | 0.00 | | | | |
| 39.00 | 1.25 | 0.15 | 0.00 | | | | |
| 40.00 | 1.25 | 0.15 | 0.00 | | | | |
| 41.00 | 1.25 | 0.15 | 0.00 | | | | |
| 42.00 | 1.25 | 0.15 | 0.00 | | | | |
| 43.00 | 1.25 | 0.15 | 0.00 | | | | |
| 44.00 | 1.25 | 0.15 | 0.00 | | | | |
| 45.00 | 1.25 | 0.15 | 0.00 | | | | |
| 46.00 | 1.25 | 0.15 | 0.00 | | | | |
| 47.00 | 1.25 | 0.15 | 0.00 | | | | |
| 48.00 | 1.25 | 0.15 | 0.00 | | | | |
| 49.00 | 1.25 | 0.15 | 0.00 | | | | |
| 50.00 | 1.25 | 0.15 | 0.00 | | | | |
| 51.00 | 1.25 | 0.15 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 9S: Ex. East Imp

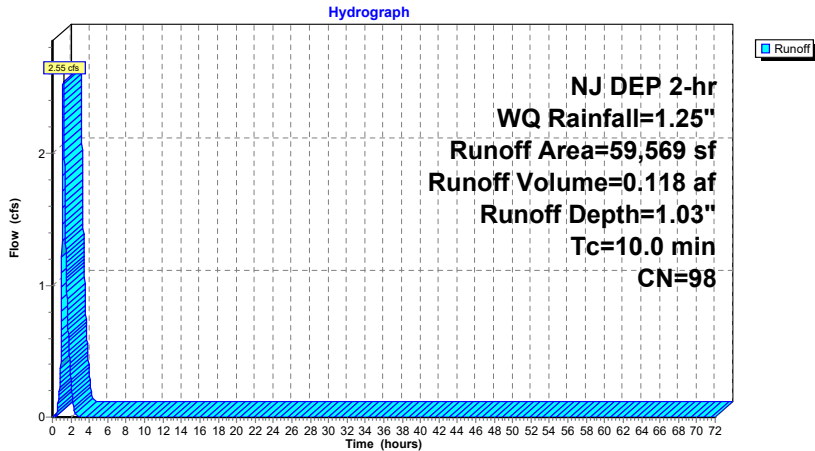
Runoff = 2.55 cfs @ 1.17 hrs, Volume= 0.118 af, Depth= 1.03"
Routed to Link 11L : Ex. East Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 59,569 | 98 | Paved parking, HSG D |
| 59,569 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Ex. East Imp



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 9S: Ex. East Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.99 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.28 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 10S: Ex. East Perv

Runoff = 0.14 cfs @ 1.28 hrs, Volume= 0.008 af, Depth= 0.13"
Routed to Link 11L : Ex. East Total

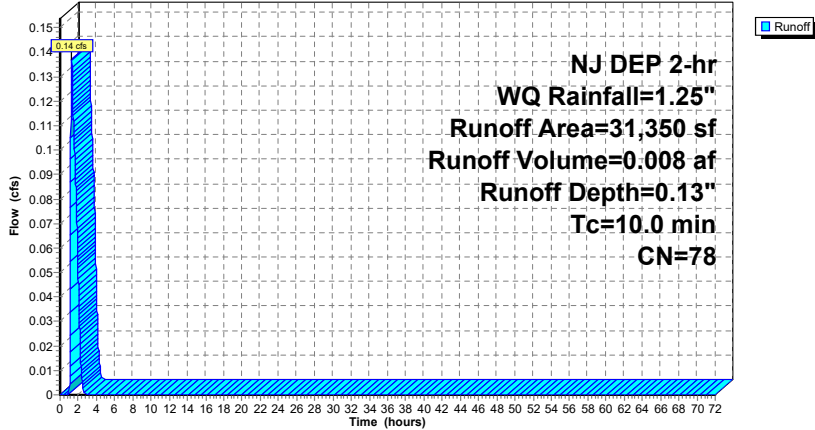
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 10,259 | 74 | >75% Grass cover, Good, HSG C |
| 21,091 | 80 | >75% Grass cover, Good, HSG D |
| 31,350 | 78 | Weighted Average |
| 31,350 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Ex. East Perv

Hydrograph



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 10S: Ex. East Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.13 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.13 | 0.00 |
| 2.00 | 1.25 | 0.13 | 0.05 | 54.00 | 1.25 | 0.13 | 0.00 |
| 3.00 | 1.25 | 0.13 | 0.00 | 55.00 | 1.25 | 0.13 | 0.00 |
| 4.00 | 1.25 | 0.13 | 0.00 | 56.00 | 1.25 | 0.13 | 0.00 |
| 5.00 | 1.25 | 0.13 | 0.00 | 57.00 | 1.25 | 0.13 | 0.00 |
| 6.00 | 1.25 | 0.13 | 0.00 | 58.00 | 1.25 | 0.13 | 0.00 |
| 7.00 | 1.25 | 0.13 | 0.00 | 59.00 | 1.25 | 0.13 | 0.00 |
| 8.00 | 1.25 | 0.13 | 0.00 | 60.00 | 1.25 | 0.13 | 0.00 |
| 9.00 | 1.25 | 0.13 | 0.00 | 61.00 | 1.25 | 0.13 | 0.00 |
| 10.00 | 1.25 | 0.13 | 0.00 | 62.00 | 1.25 | 0.13 | 0.00 |
| 11.00 | 1.25 | 0.13 | 0.00 | 63.00 | 1.25 | 0.13 | 0.00 |
| 12.00 | 1.25 | 0.13 | 0.00 | 64.00 | 1.25 | 0.13 | 0.00 |
| 13.00 | 1.25 | 0.13 | 0.00 | 65.00 | 1.25 | 0.13 | 0.00 |
| 14.00 | 1.25 | 0.13 | 0.00 | 66.00 | 1.25 | 0.13 | 0.00 |
| 15.00 | 1.25 | 0.13 | 0.00 | 67.00 | 1.25 | 0.13 | 0.00 |
| 16.00 | 1.25 | 0.13 | 0.00 | 68.00 | 1.25 | 0.13 | 0.00 |
| 17.00 | 1.25 | 0.13 | 0.00 | 69.00 | 1.25 | 0.13 | 0.00 |
| 18.00 | 1.25 | 0.13 | 0.00 | 70.00 | 1.25 | 0.13 | 0.00 |
| 19.00 | 1.25 | 0.13 | 0.00 | 71.00 | 1.25 | 0.13 | 0.00 |
| 20.00 | 1.25 | 0.13 | 0.00 | 72.00 | 1.25 | 0.13 | 0.00 |
| 21.00 | 1.25 | 0.13 | 0.00 | | | | |
| 22.00 | 1.25 | 0.13 | 0.00 | | | | |
| 23.00 | 1.25 | 0.13 | 0.00 | | | | |
| 24.00 | 1.25 | 0.13 | 0.00 | | | | |
| 25.00 | 1.25 | 0.13 | 0.00 | | | | |
| 26.00 | 1.25 | 0.13 | 0.00 | | | | |
| 27.00 | 1.25 | 0.13 | 0.00 | | | | |
| 28.00 | 1.25 | 0.13 | 0.00 | | | | |
| 29.00 | 1.25 | 0.13 | 0.00 | | | | |
| 30.00 | 1.25 | 0.13 | 0.00 | | | | |
| 31.00 | 1.25 | 0.13 | 0.00 | | | | |
| 32.00 | 1.25 | 0.13 | 0.00 | | | | |
| 33.00 | 1.25 | 0.13 | 0.00 | | | | |
| 34.00 | 1.25 | 0.13 | 0.00 | | | | |
| 35.00 | 1.25 | 0.13 | 0.00 | | | | |
| 36.00 | 1.25 | 0.13 | 0.00 | | | | |
| 37.00 | 1.25 | 0.13 | 0.00 | | | | |
| 38.00 | 1.25 | 0.13 | 0.00 | | | | |
| 39.00 | 1.25 | 0.13 | 0.00 | | | | |
| 40.00 | 1.25 | 0.13 | 0.00 | | | | |
| 41.00 | 1.25 | 0.13 | 0.00 | | | | |
| 42.00 | 1.25 | 0.13 | 0.00 | | | | |
| 43.00 | 1.25 | 0.13 | 0.00 | | | | |
| 44.00 | 1.25 | 0.13 | 0.00 | | | | |
| 45.00 | 1.25 | 0.13 | 0.00 | | | | |
| 46.00 | 1.25 | 0.13 | 0.00 | | | | |
| 47.00 | 1.25 | 0.13 | 0.00 | | | | |
| 48.00 | 1.25 | 0.13 | 0.00 | | | | |
| 49.00 | 1.25 | 0.13 | 0.00 | | | | |
| 50.00 | 1.25 | 0.13 | 0.00 | | | | |
| 51.00 | 1.25 | 0.13 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 12S: Ex. West Imp

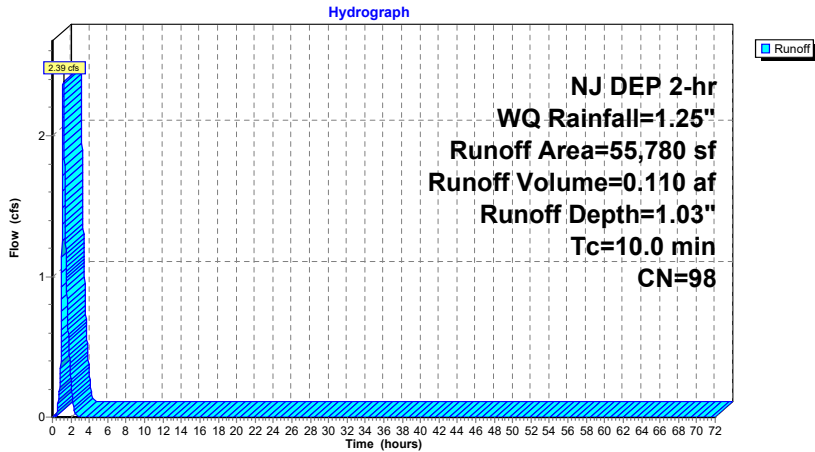
Runoff = 2.39 cfs @ 1.17 hrs, Volume= 0.110 af, Depth= 1.03"
Routed to Link 14L : Ex. West Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 55,780 | 98 | Paved parking, HSG D |
| 55,780 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 12S: Ex. West Imp



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 12S: Ex. West Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.92 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.26 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 13S: Ex. West Perv

Runoff = 0.09 cfs @ 1.28 hrs, Volume= 0.005 af, Depth= 0.13"
Routed to Link 14L : Ex. West Total

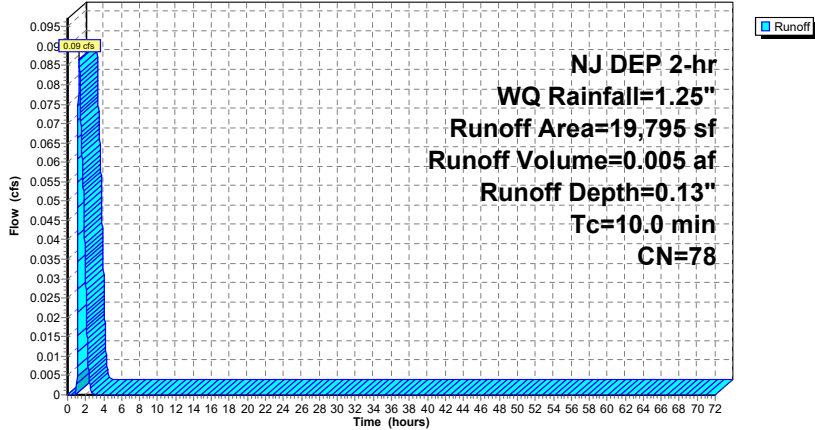
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 7,521 | 74 | >75% Grass cover, Good, HSG C |
| 12,274 | 80 | >75% Grass cover, Good, HSG D |
| 19,795 | 78 | Weighted Average |
| 19,795 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Ex. West Perv

Hydrograph



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 13S: Ex. West Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.13 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.13 | 0.00 |
| 2.00 | 1.25 | 0.13 | 0.03 | 54.00 | 1.25 | 0.13 | 0.00 |
| 3.00 | 1.25 | 0.13 | 0.00 | 55.00 | 1.25 | 0.13 | 0.00 |
| 4.00 | 1.25 | 0.13 | 0.00 | 56.00 | 1.25 | 0.13 | 0.00 |
| 5.00 | 1.25 | 0.13 | 0.00 | 57.00 | 1.25 | 0.13 | 0.00 |
| 6.00 | 1.25 | 0.13 | 0.00 | 58.00 | 1.25 | 0.13 | 0.00 |
| 7.00 | 1.25 | 0.13 | 0.00 | 59.00 | 1.25 | 0.13 | 0.00 |
| 8.00 | 1.25 | 0.13 | 0.00 | 60.00 | 1.25 | 0.13 | 0.00 |
| 9.00 | 1.25 | 0.13 | 0.00 | 61.00 | 1.25 | 0.13 | 0.00 |
| 10.00 | 1.25 | 0.13 | 0.00 | 62.00 | 1.25 | 0.13 | 0.00 |
| 11.00 | 1.25 | 0.13 | 0.00 | 63.00 | 1.25 | 0.13 | 0.00 |
| 12.00 | 1.25 | 0.13 | 0.00 | 64.00 | 1.25 | 0.13 | 0.00 |
| 13.00 | 1.25 | 0.13 | 0.00 | 65.00 | 1.25 | 0.13 | 0.00 |
| 14.00 | 1.25 | 0.13 | 0.00 | 66.00 | 1.25 | 0.13 | 0.00 |
| 15.00 | 1.25 | 0.13 | 0.00 | 67.00 | 1.25 | 0.13 | 0.00 |
| 16.00 | 1.25 | 0.13 | 0.00 | 68.00 | 1.25 | 0.13 | 0.00 |
| 17.00 | 1.25 | 0.13 | 0.00 | 69.00 | 1.25 | 0.13 | 0.00 |
| 18.00 | 1.25 | 0.13 | 0.00 | 70.00 | 1.25 | 0.13 | 0.00 |
| 19.00 | 1.25 | 0.13 | 0.00 | 71.00 | 1.25 | 0.13 | 0.00 |
| 20.00 | 1.25 | 0.13 | 0.00 | 72.00 | 1.25 | 0.13 | 0.00 |
| 21.00 | 1.25 | 0.13 | 0.00 | | | | |
| 22.00 | 1.25 | 0.13 | 0.00 | | | | |
| 23.00 | 1.25 | 0.13 | 0.00 | | | | |
| 24.00 | 1.25 | 0.13 | 0.00 | | | | |
| 25.00 | 1.25 | 0.13 | 0.00 | | | | |
| 26.00 | 1.25 | 0.13 | 0.00 | | | | |
| 27.00 | 1.25 | 0.13 | 0.00 | | | | |
| 28.00 | 1.25 | 0.13 | 0.00 | | | | |
| 29.00 | 1.25 | 0.13 | 0.00 | | | | |
| 30.00 | 1.25 | 0.13 | 0.00 | | | | |
| 31.00 | 1.25 | 0.13 | 0.00 | | | | |
| 32.00 | 1.25 | 0.13 | 0.00 | | | | |
| 33.00 | 1.25 | 0.13 | 0.00 | | | | |
| 34.00 | 1.25 | 0.13 | 0.00 | | | | |
| 35.00 | 1.25 | 0.13 | 0.00 | | | | |
| 36.00 | 1.25 | 0.13 | 0.00 | | | | |
| 37.00 | 1.25 | 0.13 | 0.00 | | | | |
| 38.00 | 1.25 | 0.13 | 0.00 | | | | |
| 39.00 | 1.25 | 0.13 | 0.00 | | | | |
| 40.00 | 1.25 | 0.13 | 0.00 | | | | |
| 41.00 | 1.25 | 0.13 | 0.00 | | | | |
| 42.00 | 1.25 | 0.13 | 0.00 | | | | |
| 43.00 | 1.25 | 0.13 | 0.00 | | | | |
| 44.00 | 1.25 | 0.13 | 0.00 | | | | |
| 45.00 | 1.25 | 0.13 | 0.00 | | | | |
| 46.00 | 1.25 | 0.13 | 0.00 | | | | |
| 47.00 | 1.25 | 0.13 | 0.00 | | | | |
| 48.00 | 1.25 | 0.13 | 0.00 | | | | |
| 49.00 | 1.25 | 0.13 | 0.00 | | | | |
| 50.00 | 1.25 | 0.13 | 0.00 | | | | |
| 51.00 | 1.25 | 0.13 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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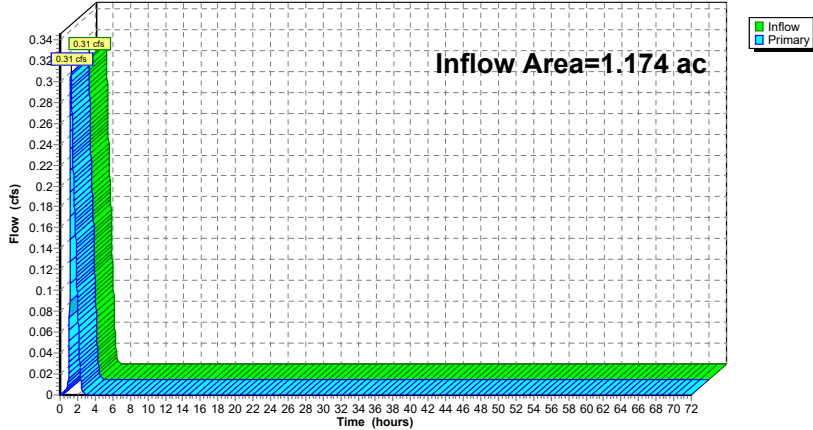
Summary for Link 8L: Ex. South Total

Inflow Area = 1.174 ac, 2.84% Impervious, Inflow Depth = 0.18" for WQ event
 Inflow = 0.31 cfs @ 1.25 hrs, Volume= 0.017 af
 Primary = 0.31 cfs @ 1.25 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 8L: Ex. South Total

Hydrograph



Existing

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Hydrograph for Link 8L: Ex. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.02 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.09 | 0.00 | 0.09 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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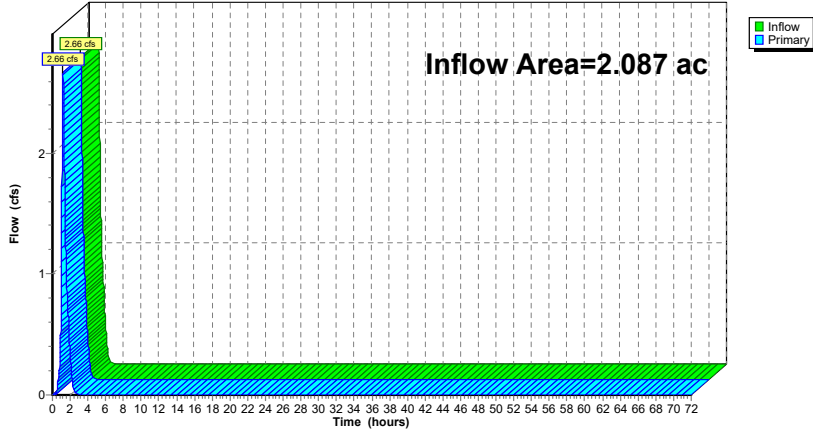
Summary for Link 11L: Ex. East Total

Inflow Area = 2.087 ac, 65.52% Impervious, Inflow Depth = 0.72" for WQ event
 Inflow = 2.66 cfs @ 1.18 hrs, Volume= 0.126 af
 Primary = 2.66 cfs @ 1.18 hrs, Volume= 0.126 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 11L: Ex. East Total

Hydrograph



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Link 11L: Ex. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.99 | 0.00 | 0.99 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.33 | 0.00 | 0.33 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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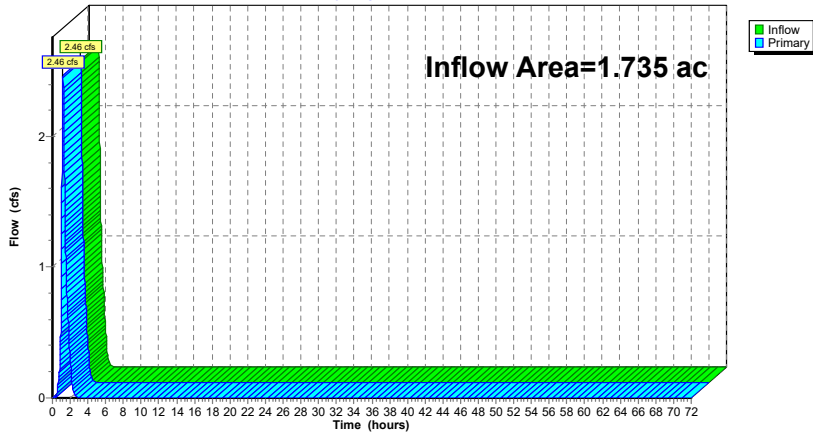
Summary for Link 14L: Ex. West Total

Inflow Area = 1.735 ac, 73.81% Impervious, Inflow Depth = 0.80" for WQ event
 Inflow = 2.46 cfs @ 1.18 hrs, Volume= 0.115 af
 Primary = 2.46 cfs @ 1.18 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 15L : Ex. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 14L: Ex. West Total

Hydrograph



Existing

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Link 14L: Ex. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.92 | 0.00 | 0.92 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.29 | 0.00 | 0.29 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

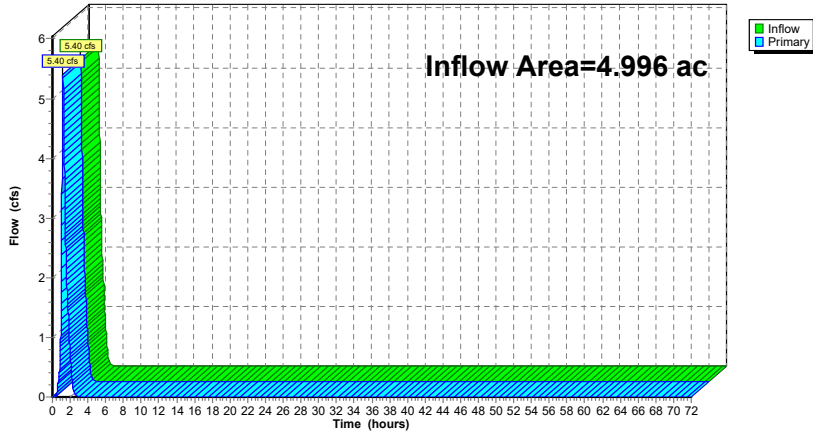
Summary for Link 15L: Ex. Total

Inflow Area = 4.996 ac, 53.67% Impervious, Inflow Depth = 0.62" for WQ event
 Inflow = 5.40 cfs @ 1.18 hrs, Volume= 0.259 af
 Primary = 5.40 cfs @ 1.18 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 15L: Ex. Total

Hydrograph



Hydrograph for Link 15L: Ex. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 1.94 | 0.00 | 1.94 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.71 | 0.00 | 0.71 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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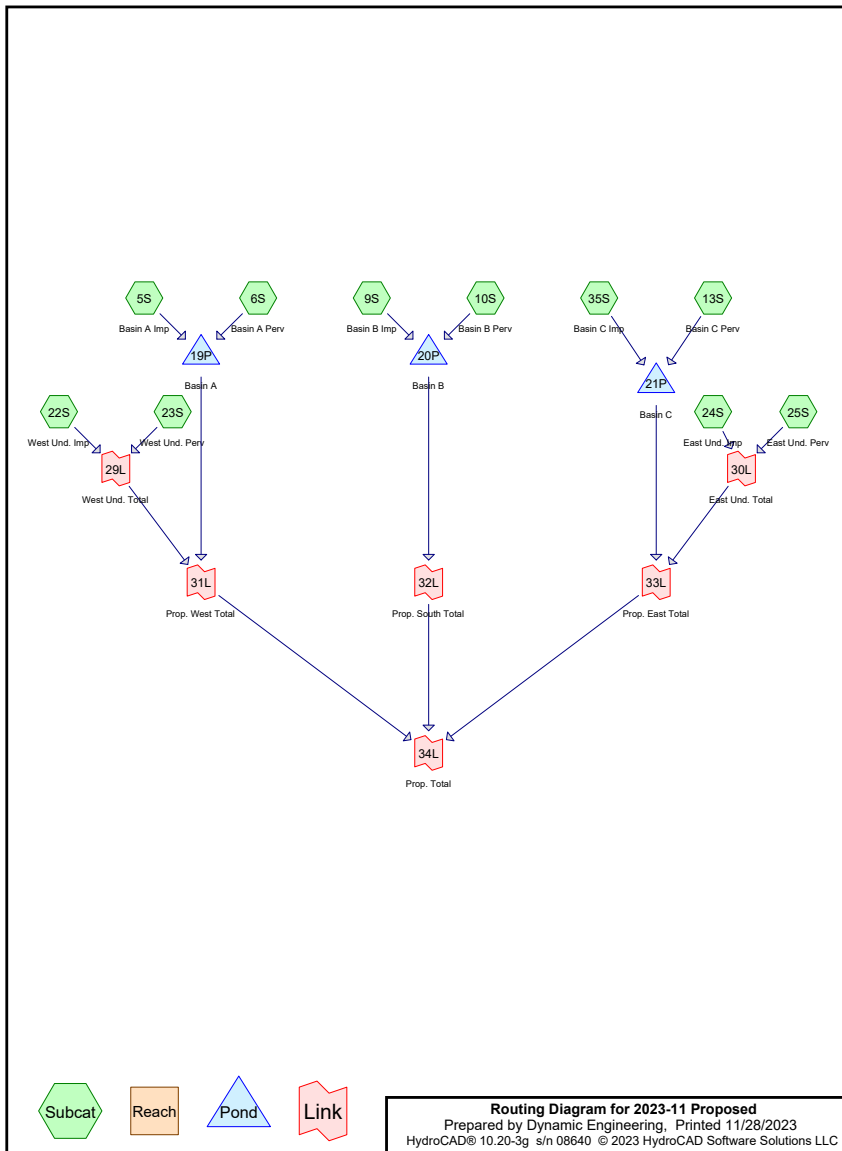
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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D



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Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|--------|------------|-------------|-------|---------|------------------|-----|----------------|-----|
| 1 | WQ | NJ DEP 2-hr | | Default | 2.00 | 1 | 1.25 | 2 |

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Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|--------------|-----------|--|
| 0.155 | 74 | >75% Grass cover, Good, HSG C (6S, 10S, 13S, 23S, 25S) |
| 0.934 | 80 | >75% Grass cover, Good, HSG D (6S, 10S, 13S, 23S, 25S) |
| 3.907 | 98 | Paved parking, HSG D (5S, 9S, 22S, 24S, 35S) |
| 4.996 | 94 | TOTAL AREA |

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Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|---|
| 0.000 | HSG A | |
| 0.000 | HSG B | |
| 0.155 | HSG C | 6S, 10S, 13S, 23S, 25S |
| 4.841 | HSG D | 5S, 6S, 9S, 10S, 13S, 22S, 23S, 24S, 25S, 35S |
| 0.000 | Other | |
| 4.996 | | TOTAL AREA |

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Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|------------------------------------|
| 0.000 | 0.000 | 0.155 | 0.934 | 0.000 | 1.089 | >75% Grass cover, Good | 6S, 10S, 13S, 23S, 25S |
| 0.000 | 0.000 | 0.000 | 3.907 | 0.000 | 3.907 | Paved parking | 5S, 9S, 22S, 24S, 35S |
| 0.000 | 0.000 | 0.155 | 4.841 | 0.000 | 4.996 | TOTAL AREA | |

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Pipe Listing (all nodes)

| Line# | Node Number | In-Invert (feet) | Out-Invert (feet) | Length (feet) | Slope (ft/ft) | n | Width (inches) | Diam/Height (inches) | Inside-Fill (inches) | Node Name |
|-------|-------------|------------------|-------------------|---------------|---------------|-------|----------------|----------------------|----------------------|-----------|
| 1 | 19P | 99.75 | 99.75 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |
| 2 | 20P | 98.50 | 98.50 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |
| 3 | 21P | 96.50 | 96.50 | 10.0 | 0.0000 | 0.013 | 0.0 | 15.0 | 0.0 | |

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Notes Listing (all nodes)

| Line# | Node Number | Notes |
|-------|-------------|---|
| 1 | Project | Rainfall events imported from "NRCS-Rain.txt" for 6611 NJ Middlesex-D |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Time span=0.00-72.00 hrs, dt=0.010 hrs, 7201 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

| | |
|--|---|
| Subcatchment5S: Basin A Imp | Runoff Area=37,763 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=1.62 cfs 0.075 af |
| Subcatchment6S: Basin A Perv | Runoff Area=11,243 sf 0.00% Impervious Runoff Depth=0.15" Tc=10.0 min CN=79 Runoff=0.06 cfs 0.003 af |
| Subcatchment9S: Basin B Imp | Runoff Area=54,598 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=2.34 cfs 0.108 af |
| Subcatchment10S: Basin B Perv | Runoff Area=6,549 sf 0.00% Impervious Runoff Depth=0.17" Tc=10.0 min CN=80 Runoff=0.04 cfs 0.002 af |
| Subcatchment13S: Basin C Perv | Runoff Area=9,708 sf 0.00% Impervious Runoff Depth=0.15" Tc=10.0 min CN=79 Runoff=0.05 cfs 0.003 af |
| Subcatchment22S: West Und. Imp | Runoff Area=222 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=0.01 cfs 0.000 af |
| Subcatchment23S: West Und. Perv | Runoff Area=9,505 sf 0.00% Impervious Runoff Depth=0.13" Tc=10.0 min CN=78 Runoff=0.04 cfs 0.002 af |
| Subcatchment24S: East Und. Imp | Runoff Area=39,415 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=1.69 cfs 0.078 af |
| Subcatchment25S: East Und. Perv | Runoff Area=10,428 sf 0.00% Impervious Runoff Depth=0.17" Tc=10.0 min CN=80 Runoff=0.06 cfs 0.003 af |
| Subcatchment35S: Basin C Imp | Runoff Area=38,191 sf 100.00% Impervious Runoff Depth=1.03" Tc=10.0 min CN=98 Runoff=1.64 cfs 0.076 af |
| Pond 19P: Basin A | Peak Elev=103.05' Storage=3,399 cf Inflow=1.67 cfs 0.078 af Outflow=0.00 cfs 0.000 af |
| Pond 20P: Basin B | Peak Elev=102.23' Storage=4,802 cf Inflow=2.37 cfs 0.110 af Outflow=0.00 cfs 0.000 af |
| Pond 21P: Basin C | Peak Elev=100.01' Storage=3,416 cf Inflow=1.68 cfs 0.078 af Outflow=0.00 cfs 0.000 af |
| Link 29L: West Und. Total | Inflow=0.05 cfs 0.003 af Primary=0.05 cfs 0.003 af |
| Link 30L: East Und. Total | Inflow=1.74 cfs 0.081 af Primary=1.74 cfs 0.081 af |
| Link 31L: Prop. West Total | Inflow=0.05 cfs 0.003 af Primary=0.05 cfs 0.003 af |

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NJ DEP 2-hr WQ Rainfall=1.25"

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| | |
|------------------------------------|---|
| Link 32L: Prop. South Total | Inflow=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af |
| Link 33L: Prop. East Total | Inflow=1.74 cfs 0.081 af Primary=1.74 cfs 0.081 af |
| Link 34L: Prop. Total | Inflow=1.79 cfs 0.084 af Primary=1.79 cfs 0.084 af |

Total Runoff Area = 4.996 ac Runoff Volume = 0.351 af Average Runoff Depth = 0.84"
21.80% Pervious = 1.089 ac 78.20% Impervious = 3.907 ac

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 5S: Basin A Imp

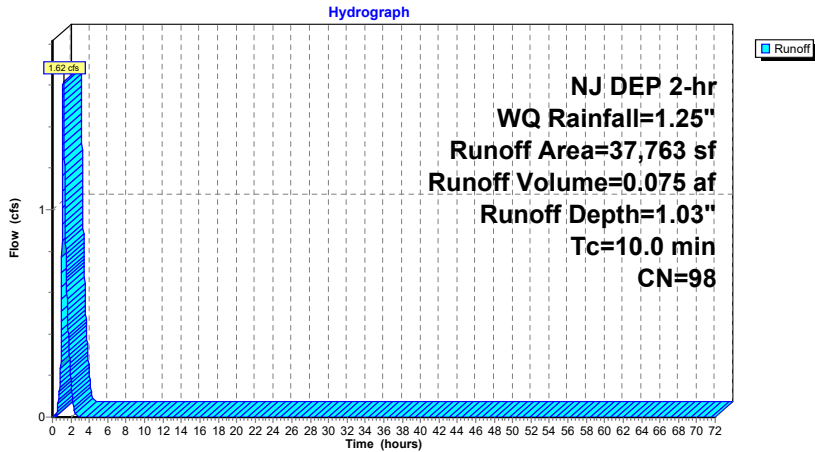
Runoff = 1.62 cfs @ 1.17 hrs, Volume= 0.075 af, Depth= 1.03"
Routed to Pond 19P : Basin A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 37,763 | 98 | Paved parking, HSG D |
| 37,763 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 5S: Basin A Imp



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 5S: Basin A Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.63 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 1.18 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 6S: Basin A Perv

Runoff = 0.06 cfs @ 1.27 hrs, Volume= 0.003 af, Depth= 0.15"
Routed to Pond 19P : Basin A

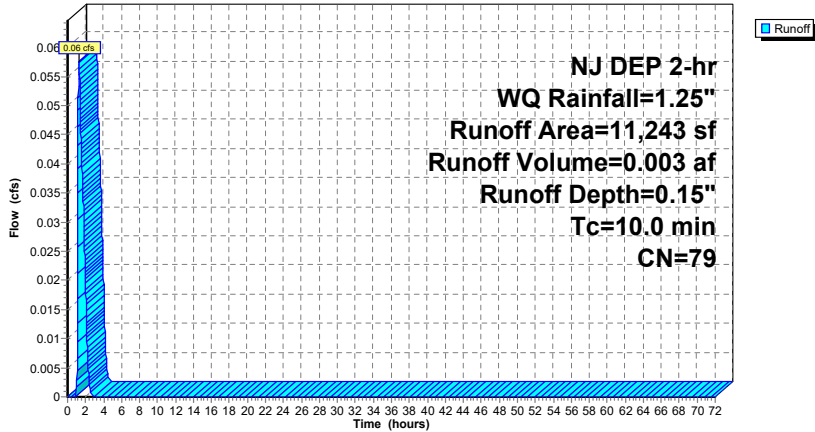
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,616 | 74 | >75% Grass cover, Good, HSG C |
| 9,627 | 80 | >75% Grass cover, Good, HSG D |
| 11,243 | 79 | Weighted Average |
| 11,243 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 6S: Basin A Perv

Hydrograph



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Hydrograph for Subcatchment 6S: Basin A Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.15 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.15 | 0.00 |
| 2.00 | 1.25 | 0.15 | 0.02 | 54.00 | 1.25 | 0.15 | 0.00 |
| 3.00 | 1.25 | 0.15 | 0.00 | 55.00 | 1.25 | 0.15 | 0.00 |
| 4.00 | 1.25 | 0.15 | 0.00 | 56.00 | 1.25 | 0.15 | 0.00 |
| 5.00 | 1.25 | 0.15 | 0.00 | 57.00 | 1.25 | 0.15 | 0.00 |
| 6.00 | 1.25 | 0.15 | 0.00 | 58.00 | 1.25 | 0.15 | 0.00 |
| 7.00 | 1.25 | 0.15 | 0.00 | 59.00 | 1.25 | 0.15 | 0.00 |
| 8.00 | 1.25 | 0.15 | 0.00 | 60.00 | 1.25 | 0.15 | 0.00 |
| 9.00 | 1.25 | 0.15 | 0.00 | 61.00 | 1.25 | 0.15 | 0.00 |
| 10.00 | 1.25 | 0.15 | 0.00 | 62.00 | 1.25 | 0.15 | 0.00 |
| 11.00 | 1.25 | 0.15 | 0.00 | 63.00 | 1.25 | 0.15 | 0.00 |
| 12.00 | 1.25 | 0.15 | 0.00 | 64.00 | 1.25 | 0.15 | 0.00 |
| 13.00 | 1.25 | 0.15 | 0.00 | 65.00 | 1.25 | 0.15 | 0.00 |
| 14.00 | 1.25 | 0.15 | 0.00 | 66.00 | 1.25 | 0.15 | 0.00 |
| 15.00 | 1.25 | 0.15 | 0.00 | 67.00 | 1.25 | 0.15 | 0.00 |
| 16.00 | 1.25 | 0.15 | 0.00 | 68.00 | 1.25 | 0.15 | 0.00 |
| 17.00 | 1.25 | 0.15 | 0.00 | 69.00 | 1.25 | 0.15 | 0.00 |
| 18.00 | 1.25 | 0.15 | 0.00 | 70.00 | 1.25 | 0.15 | 0.00 |
| 19.00 | 1.25 | 0.15 | 0.00 | 71.00 | 1.25 | 0.15 | 0.00 |
| 20.00 | 1.25 | 0.15 | 0.00 | 72.00 | 1.25 | 0.15 | 0.00 |
| 21.00 | 1.25 | 0.15 | 0.00 | | | | |
| 22.00 | 1.25 | 0.15 | 0.00 | | | | |
| 23.00 | 1.25 | 0.15 | 0.00 | | | | |
| 24.00 | 1.25 | 0.15 | 0.00 | | | | |
| 25.00 | 1.25 | 0.15 | 0.00 | | | | |
| 26.00 | 1.25 | 0.15 | 0.00 | | | | |
| 27.00 | 1.25 | 0.15 | 0.00 | | | | |
| 28.00 | 1.25 | 0.15 | 0.00 | | | | |
| 29.00 | 1.25 | 0.15 | 0.00 | | | | |
| 30.00 | 1.25 | 0.15 | 0.00 | | | | |
| 31.00 | 1.25 | 0.15 | 0.00 | | | | |
| 32.00 | 1.25 | 0.15 | 0.00 | | | | |
| 33.00 | 1.25 | 0.15 | 0.00 | | | | |
| 34.00 | 1.25 | 0.15 | 0.00 | | | | |
| 35.00 | 1.25 | 0.15 | 0.00 | | | | |
| 36.00 | 1.25 | 0.15 | 0.00 | | | | |
| 37.00 | 1.25 | 0.15 | 0.00 | | | | |
| 38.00 | 1.25 | 0.15 | 0.00 | | | | |
| 39.00 | 1.25 | 0.15 | 0.00 | | | | |
| 40.00 | 1.25 | 0.15 | 0.00 | | | | |
| 41.00 | 1.25 | 0.15 | 0.00 | | | | |
| 42.00 | 1.25 | 0.15 | 0.00 | | | | |
| 43.00 | 1.25 | 0.15 | 0.00 | | | | |
| 44.00 | 1.25 | 0.15 | 0.00 | | | | |
| 45.00 | 1.25 | 0.15 | 0.00 | | | | |
| 46.00 | 1.25 | 0.15 | 0.00 | | | | |
| 47.00 | 1.25 | 0.15 | 0.00 | | | | |
| 48.00 | 1.25 | 0.15 | 0.00 | | | | |
| 49.00 | 1.25 | 0.15 | 0.00 | | | | |
| 50.00 | 1.25 | 0.15 | 0.00 | | | | |
| 51.00 | 1.25 | 0.15 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 9S: Basin B Imp

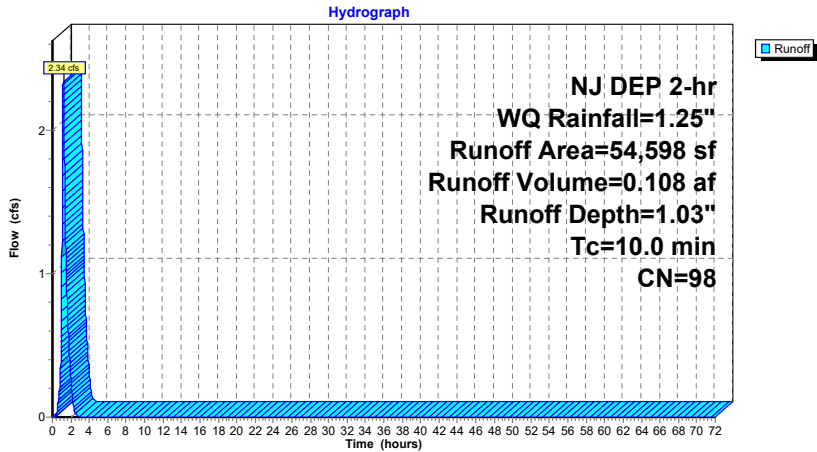
Runoff = 2.34 cfs @ 1.17 hrs, Volume= 0.108 af, Depth= 1.03"
Routed to Pond 20P : Basin B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 54,598 | 98 | Paved parking, HSG D |
| 54,598 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 9S: Basin B Imp



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 9S: Basin B Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.90 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.26 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 10S: Basin B Perv

Runoff = 0.04 cfs @ 1.26 hrs, Volume= 0.002 af, Depth= 0.17"
Routed to Pond 20P : Basin B

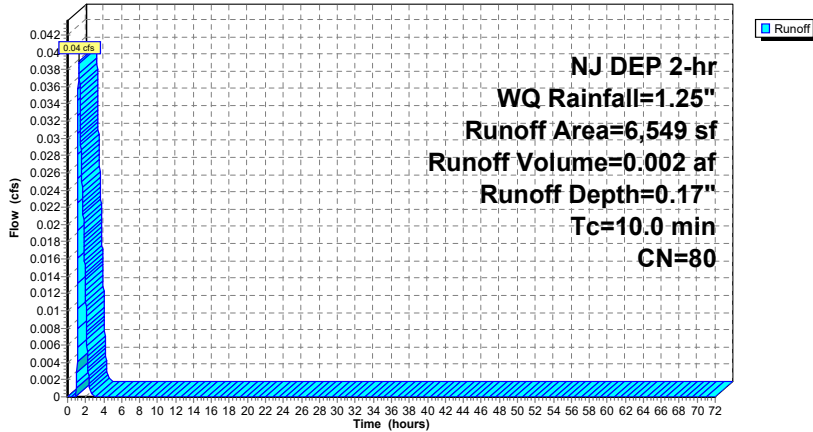
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 433 | 74 | >75% Grass cover, Good, HSG C |
| 6,116 | 80 | >75% Grass cover, Good, HSG D |
| 6,549 | 80 | Weighted Average |
| 6,549 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 10S: Basin B Perv

Hydrograph



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 10S: Basin B Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.17 | 0.00 |
| 1.00 | 0.63 | 0.01 | 0.00 | 53.00 | 1.25 | 0.17 | 0.00 |
| 2.00 | 1.25 | 0.17 | 0.01 | 54.00 | 1.25 | 0.17 | 0.00 |
| 3.00 | 1.25 | 0.17 | 0.00 | 55.00 | 1.25 | 0.17 | 0.00 |
| 4.00 | 1.25 | 0.17 | 0.00 | 56.00 | 1.25 | 0.17 | 0.00 |
| 5.00 | 1.25 | 0.17 | 0.00 | 57.00 | 1.25 | 0.17 | 0.00 |
| 6.00 | 1.25 | 0.17 | 0.00 | 58.00 | 1.25 | 0.17 | 0.00 |
| 7.00 | 1.25 | 0.17 | 0.00 | 59.00 | 1.25 | 0.17 | 0.00 |
| 8.00 | 1.25 | 0.17 | 0.00 | 60.00 | 1.25 | 0.17 | 0.00 |
| 9.00 | 1.25 | 0.17 | 0.00 | 61.00 | 1.25 | 0.17 | 0.00 |
| 10.00 | 1.25 | 0.17 | 0.00 | 62.00 | 1.25 | 0.17 | 0.00 |
| 11.00 | 1.25 | 0.17 | 0.00 | 63.00 | 1.25 | 0.17 | 0.00 |
| 12.00 | 1.25 | 0.17 | 0.00 | 64.00 | 1.25 | 0.17 | 0.00 |
| 13.00 | 1.25 | 0.17 | 0.00 | 65.00 | 1.25 | 0.17 | 0.00 |
| 14.00 | 1.25 | 0.17 | 0.00 | 66.00 | 1.25 | 0.17 | 0.00 |
| 15.00 | 1.25 | 0.17 | 0.00 | 67.00 | 1.25 | 0.17 | 0.00 |
| 16.00 | 1.25 | 0.17 | 0.00 | 68.00 | 1.25 | 0.17 | 0.00 |
| 17.00 | 1.25 | 0.17 | 0.00 | 69.00 | 1.25 | 0.17 | 0.00 |
| 18.00 | 1.25 | 0.17 | 0.00 | 70.00 | 1.25 | 0.17 | 0.00 |
| 19.00 | 1.25 | 0.17 | 0.00 | 71.00 | 1.25 | 0.17 | 0.00 |
| 20.00 | 1.25 | 0.17 | 0.00 | 72.00 | 1.25 | 0.17 | 0.00 |
| 21.00 | 1.25 | 0.17 | 0.00 | | | | |
| 22.00 | 1.25 | 0.17 | 0.00 | | | | |
| 23.00 | 1.25 | 0.17 | 0.00 | | | | |
| 24.00 | 1.25 | 0.17 | 0.00 | | | | |
| 25.00 | 1.25 | 0.17 | 0.00 | | | | |
| 26.00 | 1.25 | 0.17 | 0.00 | | | | |
| 27.00 | 1.25 | 0.17 | 0.00 | | | | |
| 28.00 | 1.25 | 0.17 | 0.00 | | | | |
| 29.00 | 1.25 | 0.17 | 0.00 | | | | |
| 30.00 | 1.25 | 0.17 | 0.00 | | | | |
| 31.00 | 1.25 | 0.17 | 0.00 | | | | |
| 32.00 | 1.25 | 0.17 | 0.00 | | | | |
| 33.00 | 1.25 | 0.17 | 0.00 | | | | |
| 34.00 | 1.25 | 0.17 | 0.00 | | | | |
| 35.00 | 1.25 | 0.17 | 0.00 | | | | |
| 36.00 | 1.25 | 0.17 | 0.00 | | | | |
| 37.00 | 1.25 | 0.17 | 0.00 | | | | |
| 38.00 | 1.25 | 0.17 | 0.00 | | | | |
| 39.00 | 1.25 | 0.17 | 0.00 | | | | |
| 40.00 | 1.25 | 0.17 | 0.00 | | | | |
| 41.00 | 1.25 | 0.17 | 0.00 | | | | |
| 42.00 | 1.25 | 0.17 | 0.00 | | | | |
| 43.00 | 1.25 | 0.17 | 0.00 | | | | |
| 44.00 | 1.25 | 0.17 | 0.00 | | | | |
| 45.00 | 1.25 | 0.17 | 0.00 | | | | |
| 46.00 | 1.25 | 0.17 | 0.00 | | | | |
| 47.00 | 1.25 | 0.17 | 0.00 | | | | |
| 48.00 | 1.25 | 0.17 | 0.00 | | | | |
| 49.00 | 1.25 | 0.17 | 0.00 | | | | |
| 50.00 | 1.25 | 0.17 | 0.00 | | | | |
| 51.00 | 1.25 | 0.17 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 13S: Basin C Perv

Runoff = 0.05 cfs @ 1.27 hrs, Volume= 0.003 af, Depth= 0.15"
Routed to Pond 21P : Basin C

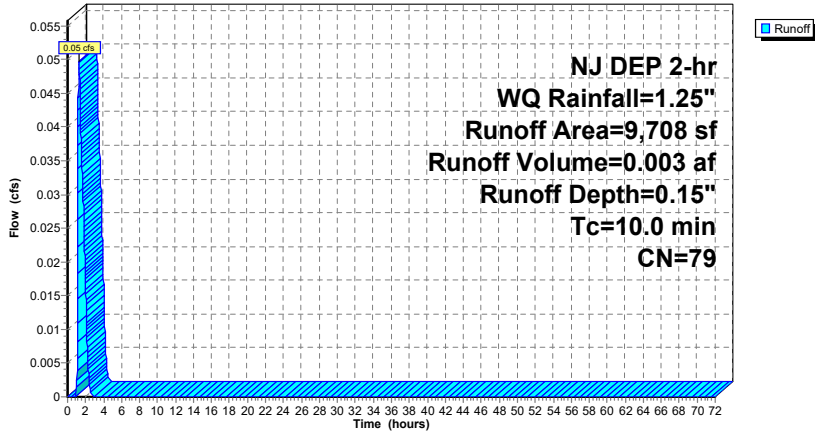
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 1,568 | 74 | >75% Grass cover, Good, HSG C |
| 8,140 | 80 | >75% Grass cover, Good, HSG D |
| 9,708 | 79 | Weighted Average |
| 9,708 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 13S: Basin C Perv

Hydrograph



2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 13S: Basin C Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.15 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.15 | 0.00 |
| 2.00 | 1.25 | 0.15 | 0.02 | 54.00 | 1.25 | 0.15 | 0.00 |
| 3.00 | 1.25 | 0.15 | 0.00 | 55.00 | 1.25 | 0.15 | 0.00 |
| 4.00 | 1.25 | 0.15 | 0.00 | 56.00 | 1.25 | 0.15 | 0.00 |
| 5.00 | 1.25 | 0.15 | 0.00 | 57.00 | 1.25 | 0.15 | 0.00 |
| 6.00 | 1.25 | 0.15 | 0.00 | 58.00 | 1.25 | 0.15 | 0.00 |
| 7.00 | 1.25 | 0.15 | 0.00 | 59.00 | 1.25 | 0.15 | 0.00 |
| 8.00 | 1.25 | 0.15 | 0.00 | 60.00 | 1.25 | 0.15 | 0.00 |
| 9.00 | 1.25 | 0.15 | 0.00 | 61.00 | 1.25 | 0.15 | 0.00 |
| 10.00 | 1.25 | 0.15 | 0.00 | 62.00 | 1.25 | 0.15 | 0.00 |
| 11.00 | 1.25 | 0.15 | 0.00 | 63.00 | 1.25 | 0.15 | 0.00 |
| 12.00 | 1.25 | 0.15 | 0.00 | 64.00 | 1.25 | 0.15 | 0.00 |
| 13.00 | 1.25 | 0.15 | 0.00 | 65.00 | 1.25 | 0.15 | 0.00 |
| 14.00 | 1.25 | 0.15 | 0.00 | 66.00 | 1.25 | 0.15 | 0.00 |
| 15.00 | 1.25 | 0.15 | 0.00 | 67.00 | 1.25 | 0.15 | 0.00 |
| 16.00 | 1.25 | 0.15 | 0.00 | 68.00 | 1.25 | 0.15 | 0.00 |
| 17.00 | 1.25 | 0.15 | 0.00 | 69.00 | 1.25 | 0.15 | 0.00 |
| 18.00 | 1.25 | 0.15 | 0.00 | 70.00 | 1.25 | 0.15 | 0.00 |
| 19.00 | 1.25 | 0.15 | 0.00 | 71.00 | 1.25 | 0.15 | 0.00 |
| 20.00 | 1.25 | 0.15 | 0.00 | 72.00 | 1.25 | 0.15 | 0.00 |
| 21.00 | 1.25 | 0.15 | 0.00 | | | | |
| 22.00 | 1.25 | 0.15 | 0.00 | | | | |
| 23.00 | 1.25 | 0.15 | 0.00 | | | | |
| 24.00 | 1.25 | 0.15 | 0.00 | | | | |
| 25.00 | 1.25 | 0.15 | 0.00 | | | | |
| 26.00 | 1.25 | 0.15 | 0.00 | | | | |
| 27.00 | 1.25 | 0.15 | 0.00 | | | | |
| 28.00 | 1.25 | 0.15 | 0.00 | | | | |
| 29.00 | 1.25 | 0.15 | 0.00 | | | | |
| 30.00 | 1.25 | 0.15 | 0.00 | | | | |
| 31.00 | 1.25 | 0.15 | 0.00 | | | | |
| 32.00 | 1.25 | 0.15 | 0.00 | | | | |
| 33.00 | 1.25 | 0.15 | 0.00 | | | | |
| 34.00 | 1.25 | 0.15 | 0.00 | | | | |
| 35.00 | 1.25 | 0.15 | 0.00 | | | | |
| 36.00 | 1.25 | 0.15 | 0.00 | | | | |
| 37.00 | 1.25 | 0.15 | 0.00 | | | | |
| 38.00 | 1.25 | 0.15 | 0.00 | | | | |
| 39.00 | 1.25 | 0.15 | 0.00 | | | | |
| 40.00 | 1.25 | 0.15 | 0.00 | | | | |
| 41.00 | 1.25 | 0.15 | 0.00 | | | | |
| 42.00 | 1.25 | 0.15 | 0.00 | | | | |
| 43.00 | 1.25 | 0.15 | 0.00 | | | | |
| 44.00 | 1.25 | 0.15 | 0.00 | | | | |
| 45.00 | 1.25 | 0.15 | 0.00 | | | | |
| 46.00 | 1.25 | 0.15 | 0.00 | | | | |
| 47.00 | 1.25 | 0.15 | 0.00 | | | | |
| 48.00 | 1.25 | 0.15 | 0.00 | | | | |
| 49.00 | 1.25 | 0.15 | 0.00 | | | | |
| 50.00 | 1.25 | 0.15 | 0.00 | | | | |
| 51.00 | 1.25 | 0.15 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 22S: West Und. Imp

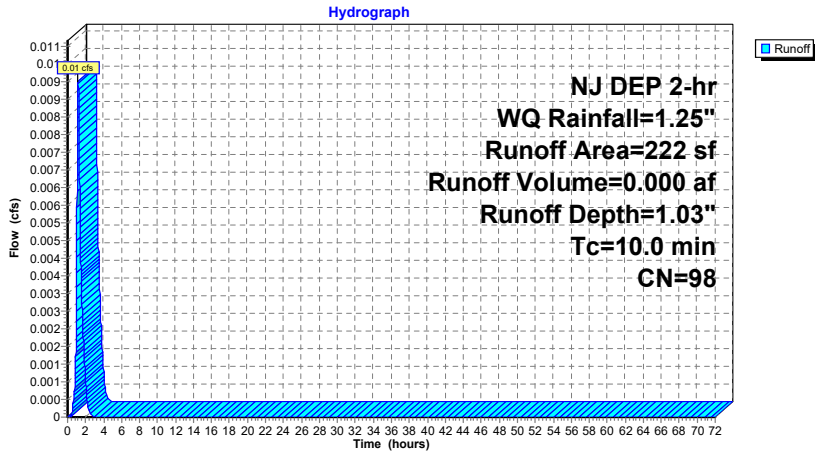
Runoff = 0.01 cfs @ 1.17 hrs, Volume= 0.000 af, Depth= 1.03"
 Routed to Link 29L : West Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 222 | 98 | Paved parking, HSG D |
| 222 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 22S: West Und. Imp



2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 22S: West Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.00 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.00 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 23S: West Und. Perv

Runoff = 0.04 cfs @ 1.28 hrs, Volume= 0.002 af, Depth= 0.13"
Routed to Link 29L : West Und. Total

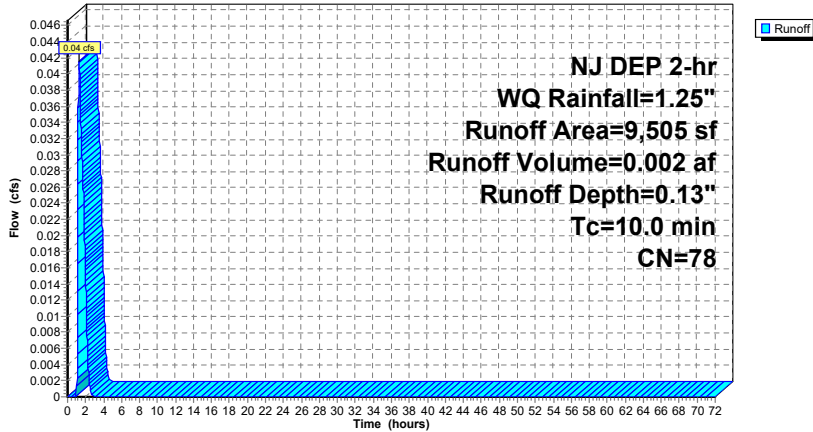
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 2,838 | 74 | >75% Grass cover, Good, HSG C |
| 6,667 | 80 | >75% Grass cover, Good, HSG D |
| 9,505 | 78 | Weighted Average |
| 9,505 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 23S: West Und. Perv

Hydrograph



2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 23S: West Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.13 | 0.00 |
| 1.00 | 0.63 | 0.00 | 0.00 | 53.00 | 1.25 | 0.13 | 0.00 |
| 2.00 | 1.25 | 0.13 | 0.01 | 54.00 | 1.25 | 0.13 | 0.00 |
| 3.00 | 1.25 | 0.13 | 0.00 | 55.00 | 1.25 | 0.13 | 0.00 |
| 4.00 | 1.25 | 0.13 | 0.00 | 56.00 | 1.25 | 0.13 | 0.00 |
| 5.00 | 1.25 | 0.13 | 0.00 | 57.00 | 1.25 | 0.13 | 0.00 |
| 6.00 | 1.25 | 0.13 | 0.00 | 58.00 | 1.25 | 0.13 | 0.00 |
| 7.00 | 1.25 | 0.13 | 0.00 | 59.00 | 1.25 | 0.13 | 0.00 |
| 8.00 | 1.25 | 0.13 | 0.00 | 60.00 | 1.25 | 0.13 | 0.00 |
| 9.00 | 1.25 | 0.13 | 0.00 | 61.00 | 1.25 | 0.13 | 0.00 |
| 10.00 | 1.25 | 0.13 | 0.00 | 62.00 | 1.25 | 0.13 | 0.00 |
| 11.00 | 1.25 | 0.13 | 0.00 | 63.00 | 1.25 | 0.13 | 0.00 |
| 12.00 | 1.25 | 0.13 | 0.00 | 64.00 | 1.25 | 0.13 | 0.00 |
| 13.00 | 1.25 | 0.13 | 0.00 | 65.00 | 1.25 | 0.13 | 0.00 |
| 14.00 | 1.25 | 0.13 | 0.00 | 66.00 | 1.25 | 0.13 | 0.00 |
| 15.00 | 1.25 | 0.13 | 0.00 | 67.00 | 1.25 | 0.13 | 0.00 |
| 16.00 | 1.25 | 0.13 | 0.00 | 68.00 | 1.25 | 0.13 | 0.00 |
| 17.00 | 1.25 | 0.13 | 0.00 | 69.00 | 1.25 | 0.13 | 0.00 |
| 18.00 | 1.25 | 0.13 | 0.00 | 70.00 | 1.25 | 0.13 | 0.00 |
| 19.00 | 1.25 | 0.13 | 0.00 | 71.00 | 1.25 | 0.13 | 0.00 |
| 20.00 | 1.25 | 0.13 | 0.00 | 72.00 | 1.25 | 0.13 | 0.00 |
| 21.00 | 1.25 | 0.13 | 0.00 | | | | |
| 22.00 | 1.25 | 0.13 | 0.00 | | | | |
| 23.00 | 1.25 | 0.13 | 0.00 | | | | |
| 24.00 | 1.25 | 0.13 | 0.00 | | | | |
| 25.00 | 1.25 | 0.13 | 0.00 | | | | |
| 26.00 | 1.25 | 0.13 | 0.00 | | | | |
| 27.00 | 1.25 | 0.13 | 0.00 | | | | |
| 28.00 | 1.25 | 0.13 | 0.00 | | | | |
| 29.00 | 1.25 | 0.13 | 0.00 | | | | |
| 30.00 | 1.25 | 0.13 | 0.00 | | | | |
| 31.00 | 1.25 | 0.13 | 0.00 | | | | |
| 32.00 | 1.25 | 0.13 | 0.00 | | | | |
| 33.00 | 1.25 | 0.13 | 0.00 | | | | |
| 34.00 | 1.25 | 0.13 | 0.00 | | | | |
| 35.00 | 1.25 | 0.13 | 0.00 | | | | |
| 36.00 | 1.25 | 0.13 | 0.00 | | | | |
| 37.00 | 1.25 | 0.13 | 0.00 | | | | |
| 38.00 | 1.25 | 0.13 | 0.00 | | | | |
| 39.00 | 1.25 | 0.13 | 0.00 | | | | |
| 40.00 | 1.25 | 0.13 | 0.00 | | | | |
| 41.00 | 1.25 | 0.13 | 0.00 | | | | |
| 42.00 | 1.25 | 0.13 | 0.00 | | | | |
| 43.00 | 1.25 | 0.13 | 0.00 | | | | |
| 44.00 | 1.25 | 0.13 | 0.00 | | | | |
| 45.00 | 1.25 | 0.13 | 0.00 | | | | |
| 46.00 | 1.25 | 0.13 | 0.00 | | | | |
| 47.00 | 1.25 | 0.13 | 0.00 | | | | |
| 48.00 | 1.25 | 0.13 | 0.00 | | | | |
| 49.00 | 1.25 | 0.13 | 0.00 | | | | |
| 50.00 | 1.25 | 0.13 | 0.00 | | | | |
| 51.00 | 1.25 | 0.13 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 24S: East Und. Imp

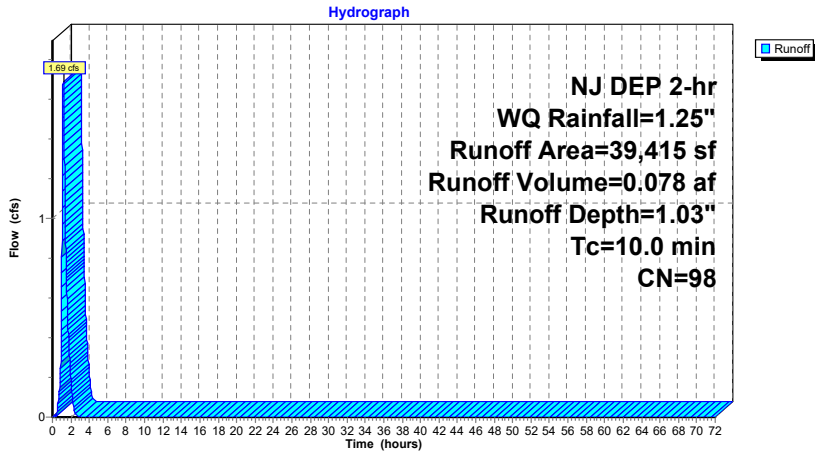
Runoff = 1.69 cfs @ 1.17 hrs, Volume= 0.078 af, Depth= 1.03"
Routed to Link 30L : East Und. Total

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 39,415 | 98 | Paved parking, HSG D |
| 39,415 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 24S: East Und. Imp



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 24S: East Und. Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.65 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 0.19 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 25S: East Und. Perv

Runoff = 0.06 cfs @ 1.26 hrs, Volume= 0.003 af, Depth= 0.17"
Routed to Link 30L : East Und. Total

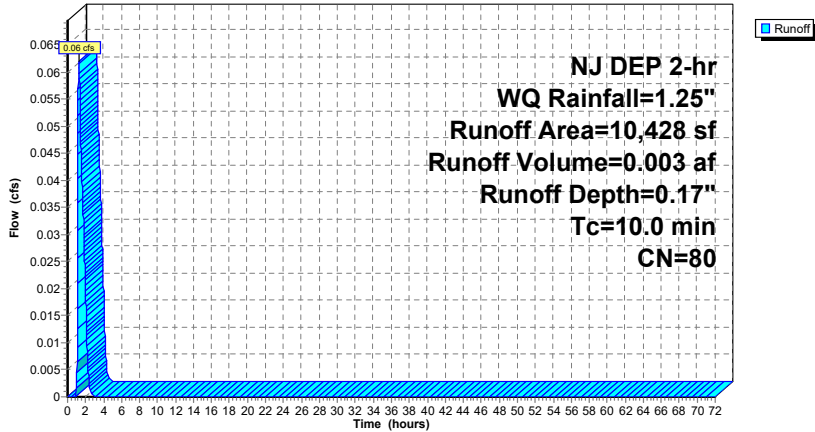
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------------|
| 307 | 74 | >75% Grass cover, Good, HSG C |
| 10,121 | 80 | >75% Grass cover, Good, HSG D |
| 10,428 | 80 | Weighted Average |
| 10,428 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 25S: East Und. Perv

Hydrograph



2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 25S: East Und. Perv

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 0.17 | 0.00 |
| 1.00 | 0.63 | 0.01 | 0.00 | 53.00 | 1.25 | 0.17 | 0.00 |
| 2.00 | 1.25 | 0.17 | 0.02 | 54.00 | 1.25 | 0.17 | 0.00 |
| 3.00 | 1.25 | 0.17 | 0.00 | 55.00 | 1.25 | 0.17 | 0.00 |
| 4.00 | 1.25 | 0.17 | 0.00 | 56.00 | 1.25 | 0.17 | 0.00 |
| 5.00 | 1.25 | 0.17 | 0.00 | 57.00 | 1.25 | 0.17 | 0.00 |
| 6.00 | 1.25 | 0.17 | 0.00 | 58.00 | 1.25 | 0.17 | 0.00 |
| 7.00 | 1.25 | 0.17 | 0.00 | 59.00 | 1.25 | 0.17 | 0.00 |
| 8.00 | 1.25 | 0.17 | 0.00 | 60.00 | 1.25 | 0.17 | 0.00 |
| 9.00 | 1.25 | 0.17 | 0.00 | 61.00 | 1.25 | 0.17 | 0.00 |
| 10.00 | 1.25 | 0.17 | 0.00 | 62.00 | 1.25 | 0.17 | 0.00 |
| 11.00 | 1.25 | 0.17 | 0.00 | 63.00 | 1.25 | 0.17 | 0.00 |
| 12.00 | 1.25 | 0.17 | 0.00 | 64.00 | 1.25 | 0.17 | 0.00 |
| 13.00 | 1.25 | 0.17 | 0.00 | 65.00 | 1.25 | 0.17 | 0.00 |
| 14.00 | 1.25 | 0.17 | 0.00 | 66.00 | 1.25 | 0.17 | 0.00 |
| 15.00 | 1.25 | 0.17 | 0.00 | 67.00 | 1.25 | 0.17 | 0.00 |
| 16.00 | 1.25 | 0.17 | 0.00 | 68.00 | 1.25 | 0.17 | 0.00 |
| 17.00 | 1.25 | 0.17 | 0.00 | 69.00 | 1.25 | 0.17 | 0.00 |
| 18.00 | 1.25 | 0.17 | 0.00 | 70.00 | 1.25 | 0.17 | 0.00 |
| 19.00 | 1.25 | 0.17 | 0.00 | 71.00 | 1.25 | 0.17 | 0.00 |
| 20.00 | 1.25 | 0.17 | 0.00 | 72.00 | 1.25 | 0.17 | 0.00 |
| 21.00 | 1.25 | 0.17 | 0.00 | | | | |
| 22.00 | 1.25 | 0.17 | 0.00 | | | | |
| 23.00 | 1.25 | 0.17 | 0.00 | | | | |
| 24.00 | 1.25 | 0.17 | 0.00 | | | | |
| 25.00 | 1.25 | 0.17 | 0.00 | | | | |
| 26.00 | 1.25 | 0.17 | 0.00 | | | | |
| 27.00 | 1.25 | 0.17 | 0.00 | | | | |
| 28.00 | 1.25 | 0.17 | 0.00 | | | | |
| 29.00 | 1.25 | 0.17 | 0.00 | | | | |
| 30.00 | 1.25 | 0.17 | 0.00 | | | | |
| 31.00 | 1.25 | 0.17 | 0.00 | | | | |
| 32.00 | 1.25 | 0.17 | 0.00 | | | | |
| 33.00 | 1.25 | 0.17 | 0.00 | | | | |
| 34.00 | 1.25 | 0.17 | 0.00 | | | | |
| 35.00 | 1.25 | 0.17 | 0.00 | | | | |
| 36.00 | 1.25 | 0.17 | 0.00 | | | | |
| 37.00 | 1.25 | 0.17 | 0.00 | | | | |
| 38.00 | 1.25 | 0.17 | 0.00 | | | | |
| 39.00 | 1.25 | 0.17 | 0.00 | | | | |
| 40.00 | 1.25 | 0.17 | 0.00 | | | | |
| 41.00 | 1.25 | 0.17 | 0.00 | | | | |
| 42.00 | 1.25 | 0.17 | 0.00 | | | | |
| 43.00 | 1.25 | 0.17 | 0.00 | | | | |
| 44.00 | 1.25 | 0.17 | 0.00 | | | | |
| 45.00 | 1.25 | 0.17 | 0.00 | | | | |
| 46.00 | 1.25 | 0.17 | 0.00 | | | | |
| 47.00 | 1.25 | 0.17 | 0.00 | | | | |
| 48.00 | 1.25 | 0.17 | 0.00 | | | | |
| 49.00 | 1.25 | 0.17 | 0.00 | | | | |
| 50.00 | 1.25 | 0.17 | 0.00 | | | | |
| 51.00 | 1.25 | 0.17 | 0.00 | | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Subcatchment 35S: Basin C Imp

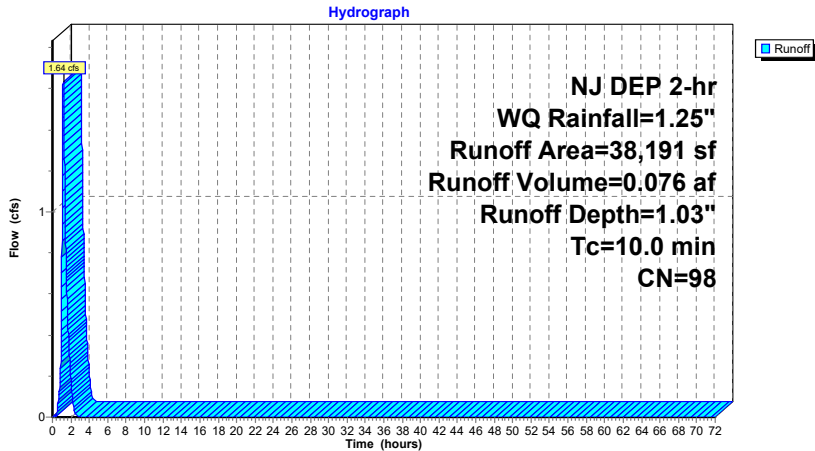
Runoff = 1.64 cfs @ 1.17 hrs, Volume= 0.076 af, Depth= 1.03"
Routed to Pond 21P : Basin C

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 38,191 | 98 | Paved parking, HSG D |
| 38,191 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Subcatchment 35S: Basin C Imp



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Subcatchment 35S: Basin C Imp

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 1.25 | 1.03 | 0.00 |
| 1.00 | 0.63 | 0.43 | 0.63 | 53.00 | 1.25 | 1.03 | 0.00 |
| 2.00 | 1.25 | 1.03 | 1.18 | 54.00 | 1.25 | 1.03 | 0.00 |
| 3.00 | 1.25 | 1.03 | 0.00 | 55.00 | 1.25 | 1.03 | 0.00 |
| 4.00 | 1.25 | 1.03 | 0.00 | 56.00 | 1.25 | 1.03 | 0.00 |
| 5.00 | 1.25 | 1.03 | 0.00 | 57.00 | 1.25 | 1.03 | 0.00 |
| 6.00 | 1.25 | 1.03 | 0.00 | 58.00 | 1.25 | 1.03 | 0.00 |
| 7.00 | 1.25 | 1.03 | 0.00 | 59.00 | 1.25 | 1.03 | 0.00 |
| 8.00 | 1.25 | 1.03 | 0.00 | 60.00 | 1.25 | 1.03 | 0.00 |
| 9.00 | 1.25 | 1.03 | 0.00 | 61.00 | 1.25 | 1.03 | 0.00 |
| 10.00 | 1.25 | 1.03 | 0.00 | 62.00 | 1.25 | 1.03 | 0.00 |
| 11.00 | 1.25 | 1.03 | 0.00 | 63.00 | 1.25 | 1.03 | 0.00 |
| 12.00 | 1.25 | 1.03 | 0.00 | 64.00 | 1.25 | 1.03 | 0.00 |
| 13.00 | 1.25 | 1.03 | 0.00 | 65.00 | 1.25 | 1.03 | 0.00 |
| 14.00 | 1.25 | 1.03 | 0.00 | 66.00 | 1.25 | 1.03 | 0.00 |
| 15.00 | 1.25 | 1.03 | 0.00 | 67.00 | 1.25 | 1.03 | 0.00 |
| 16.00 | 1.25 | 1.03 | 0.00 | 68.00 | 1.25 | 1.03 | 0.00 |
| 17.00 | 1.25 | 1.03 | 0.00 | 69.00 | 1.25 | 1.03 | 0.00 |
| 18.00 | 1.25 | 1.03 | 0.00 | 70.00 | 1.25 | 1.03 | 0.00 |
| 19.00 | 1.25 | 1.03 | 0.00 | 71.00 | 1.25 | 1.03 | 0.00 |
| 20.00 | 1.25 | 1.03 | 0.00 | 72.00 | 1.25 | 1.03 | 0.00 |
| 21.00 | 1.25 | 1.03 | 0.00 | | | | |
| 22.00 | 1.25 | 1.03 | 0.00 | | | | |
| 23.00 | 1.25 | 1.03 | 0.00 | | | | |
| 24.00 | 1.25 | 1.03 | 0.00 | | | | |
| 25.00 | 1.25 | 1.03 | 0.00 | | | | |
| 26.00 | 1.25 | 1.03 | 0.00 | | | | |
| 27.00 | 1.25 | 1.03 | 0.00 | | | | |
| 28.00 | 1.25 | 1.03 | 0.00 | | | | |
| 29.00 | 1.25 | 1.03 | 0.00 | | | | |
| 30.00 | 1.25 | 1.03 | 0.00 | | | | |
| 31.00 | 1.25 | 1.03 | 0.00 | | | | |
| 32.00 | 1.25 | 1.03 | 0.00 | | | | |
| 33.00 | 1.25 | 1.03 | 0.00 | | | | |
| 34.00 | 1.25 | 1.03 | 0.00 | | | | |
| 35.00 | 1.25 | 1.03 | 0.00 | | | | |
| 36.00 | 1.25 | 1.03 | 0.00 | | | | |
| 37.00 | 1.25 | 1.03 | 0.00 | | | | |
| 38.00 | 1.25 | 1.03 | 0.00 | | | | |
| 39.00 | 1.25 | 1.03 | 0.00 | | | | |
| 40.00 | 1.25 | 1.03 | 0.00 | | | | |
| 41.00 | 1.25 | 1.03 | 0.00 | | | | |
| 42.00 | 1.25 | 1.03 | 0.00 | | | | |
| 43.00 | 1.25 | 1.03 | 0.00 | | | | |
| 44.00 | 1.25 | 1.03 | 0.00 | | | | |
| 45.00 | 1.25 | 1.03 | 0.00 | | | | |
| 46.00 | 1.25 | 1.03 | 0.00 | | | | |
| 47.00 | 1.25 | 1.03 | 0.00 | | | | |
| 48.00 | 1.25 | 1.03 | 0.00 | | | | |
| 49.00 | 1.25 | 1.03 | 0.00 | | | | |
| 50.00 | 1.25 | 1.03 | 0.00 | | | | |
| 51.00 | 1.25 | 1.03 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Pond 19P: Basin A

Inflow Area = 1.125 ac, 77.06% Impervious, Inflow Depth = 0.83" for WQ event
 Inflow = 1.67 cfs @ 1.17 hrs, Volume= 0.078 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 31L : Prop. West Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 103.05' @ 3.10 hrs Surf.Area= 3,683 sf Storage= 3,399 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 102.00' | 12,392 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|------------------|-------------------|------------------------|------------------------|
| 102.00 | 2,770 | 0 | 0 |
| 103.00 | 3,632 | 3,201 | 3,201 |
| 104.00 | 4,579 | 4,106 | 7,307 |
| 105.00 | 5,592 | 5,086 | 12,392 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 99.75' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 99.75' / 99.75' S= 0.0000 ' / ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 103.40' | 24.0" W x 10.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Primary | 104.25' | 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)

- 1=Culvert (Passes 0.00 cfs of 8.23 cfs potential flow)
- 2=Orifice/Grate (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

2023-11 Proposed

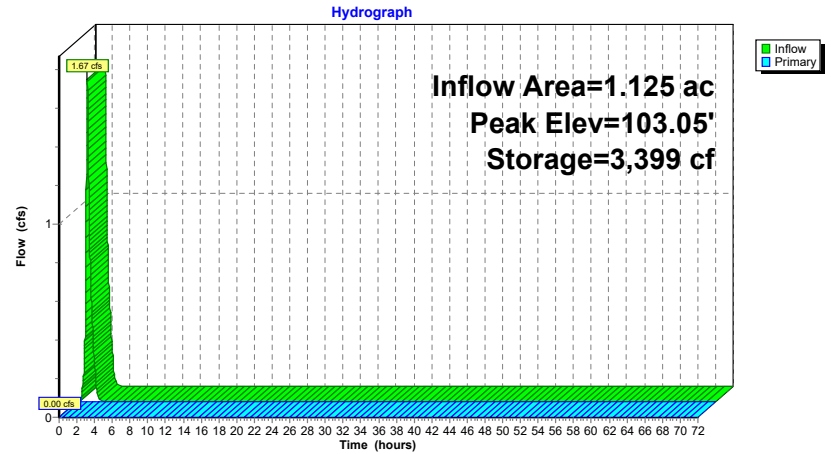
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NJ DEP 2-hr WQ Rainfall=1.25"

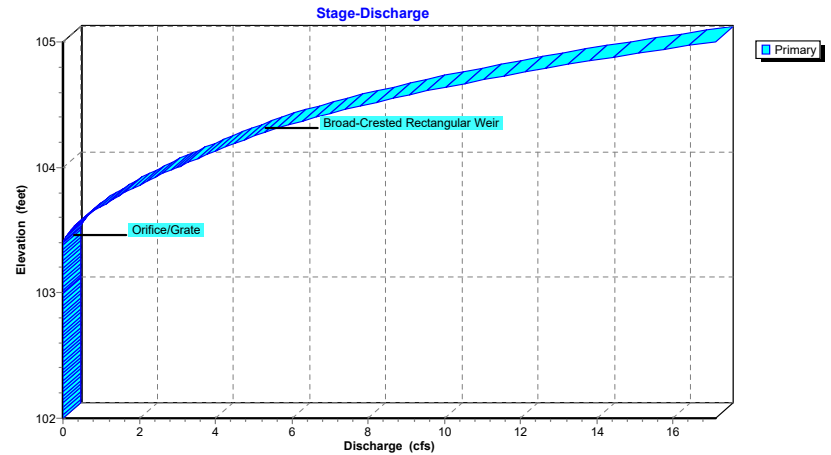
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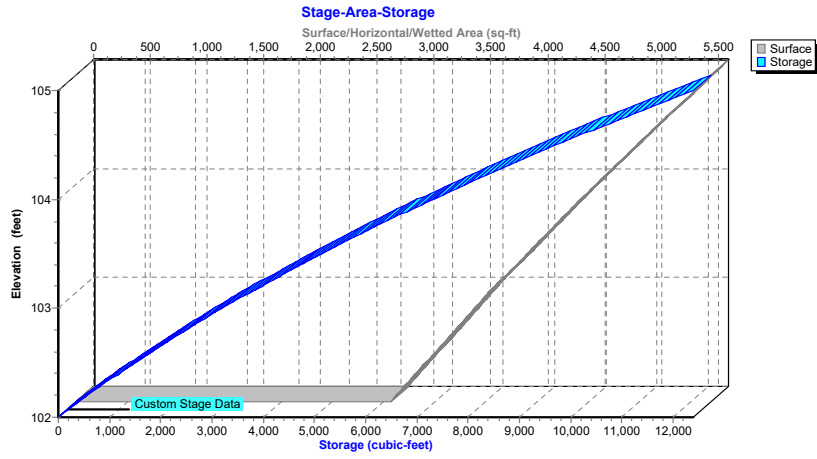
Pond 19P: Basin A



Pond 19P: Basin A



Pond 19P: Basin A



Hydrograph for Pond 19P: Basin A

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 102.00 | 0.00 |
| 2.00 | 0.20 | 3,254 | 103.01 | 0.00 |
| 4.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 6.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 8.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 10.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 12.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 14.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 16.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 18.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 20.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 22.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 24.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 26.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 28.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 30.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 32.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 34.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 36.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 38.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 40.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 42.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 44.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 46.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 48.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 50.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 52.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 54.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 56.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 58.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 60.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 62.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 64.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 66.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 68.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 70.00 | 0.00 | 3,399 | 103.05 | 0.00 |
| 72.00 | 0.00 | 3,399 | 103.05 | 0.00 |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Stage-Discharge for Pond 19P: Basin A

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---------------------|------------------|---------------------|------------------|---------------------|------------------|
| 102.00 | 0.00 | 103.04 | 0.00 | 104.08 | 3.60 |
| 102.02 | 0.00 | 103.06 | 0.00 | 104.10 | 3.76 |
| 102.04 | 0.00 | 103.08 | 0.00 | 104.12 | 3.92 |
| 102.06 | 0.00 | 103.10 | 0.00 | 104.14 | 4.09 |
| 102.08 | 0.00 | 103.12 | 0.00 | 104.16 | 4.25 |
| 102.10 | 0.00 | 103.14 | 0.00 | 104.18 | 4.42 |
| 102.12 | 0.00 | 103.16 | 0.00 | 104.20 | 4.59 |
| 102.14 | 0.00 | 103.18 | 0.00 | 104.22 | 4.77 |
| 102.16 | 0.00 | 103.20 | 0.00 | 104.24 | 4.94 |
| 102.18 | 0.00 | 103.22 | 0.00 | 104.26 | 5.10 |
| 102.20 | 0.00 | 103.24 | 0.00 | 104.28 | 5.29 |
| 102.22 | 0.00 | 103.26 | 0.00 | 104.30 | 5.50 |
| 102.24 | 0.00 | 103.28 | 0.00 | 104.32 | 5.71 |
| 102.26 | 0.00 | 103.30 | 0.00 | 104.34 | 5.93 |
| 102.28 | 0.00 | 103.32 | 0.00 | 104.36 | 6.16 |
| 102.30 | 0.00 | 103.34 | 0.00 | 104.38 | 6.39 |
| 102.32 | 0.00 | 103.36 | 0.00 | 104.40 | 6.63 |
| 102.34 | 0.00 | 103.38 | 0.00 | 104.42 | 6.88 |
| 102.36 | 0.00 | 103.40 | 0.00 | 104.44 | 7.13 |
| 102.38 | 0.00 | 103.42 | 0.02 | 104.46 | 7.39 |
| 102.40 | 0.00 | 103.44 | 0.05 | 104.48 | 7.66 |
| 102.42 | 0.00 | 103.46 | 0.09 | 104.50 | 7.94 |
| 102.44 | 0.00 | 103.48 | 0.15 | 104.52 | 8.22 |
| 102.46 | 0.00 | 103.50 | 0.20 | 104.54 | 8.51 |
| 102.48 | 0.00 | 103.52 | 0.27 | 104.56 | 8.80 |
| 102.50 | 0.00 | 103.54 | 0.34 | 104.58 | 9.10 |
| 102.52 | 0.00 | 103.56 | 0.41 | 104.60 | 9.41 |
| 102.54 | 0.00 | 103.58 | 0.49 | 104.62 | 9.72 |
| 102.56 | 0.00 | 103.60 | 0.57 | 104.64 | 10.04 |
| 102.58 | 0.00 | 103.62 | 0.66 | 104.66 | 10.37 |
| 102.60 | 0.00 | 103.64 | 0.75 | 104.68 | 10.70 |
| 102.62 | 0.00 | 103.66 | 0.85 | 104.70 | 11.04 |
| 102.64 | 0.00 | 103.68 | 0.95 | 104.72 | 11.39 |
| 102.66 | 0.00 | 103.70 | 1.05 | 104.74 | 11.75 |
| 102.68 | 0.00 | 103.72 | 1.16 | 104.76 | 12.11 |
| 102.70 | 0.00 | 103.74 | 1.27 | 104.78 | 12.48 |
| 102.72 | 0.00 | 103.76 | 1.39 | 104.80 | 12.86 |
| 102.74 | 0.00 | 103.78 | 1.50 | 104.82 | 13.24 |
| 102.76 | 0.00 | 103.80 | 1.62 | 104.84 | 13.63 |
| 102.78 | 0.00 | 103.82 | 1.75 | 104.86 | 14.03 |
| 102.80 | 0.00 | 103.84 | 1.87 | 104.88 | 14.45 |
| 102.82 | 0.00 | 103.86 | 2.00 | 104.90 | 14.87 |
| 102.84 | 0.00 | 103.88 | 2.13 | 104.92 | 15.30 |
| 102.86 | 0.00 | 103.90 | 2.27 | 104.94 | 15.74 |
| 102.88 | 0.00 | 103.92 | 2.41 | 104.96 | 16.19 |
| 102.90 | 0.00 | 103.94 | 2.55 | 104.98 | 16.65 |
| 102.92 | 0.00 | 103.96 | 2.69 | 105.00 | 17.11 |
| 102.94 | 0.00 | 103.98 | 2.84 | | |
| 102.96 | 0.00 | 104.00 | 2.98 | | |
| 102.98 | 0.00 | 104.02 | 3.13 | | |
| 103.00 | 0.00 | 104.04 | 3.29 | | |
| 103.02 | 0.00 | 104.06 | 3.44 | | |

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Stage-Area-Storage for Pond 19P: Basin A

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---------------------|--------------------|-------------------------|---------------------|--------------------|-------------------------|
| 102.00 | 2,770 | 0 | 104.60 | 5,187 | 10,236 |
| 102.05 | 2,813 | 140 | 104.65 | 5,237 | 10,497 |
| 102.10 | 2,856 | 281 | 104.70 | 5,288 | 10,760 |
| 102.15 | 2,899 | 425 | 104.75 | 5,339 | 11,026 |
| 102.20 | 2,942 | 571 | 104.80 | 5,389 | 11,294 |
| 102.25 | 2,986 | 719 | 104.85 | 5,440 | 11,565 |
| 102.30 | 3,029 | 870 | 104.90 | 5,491 | 11,838 |
| 102.35 | 3,072 | 1,022 | 104.95 | 5,541 | 12,114 |
| 102.40 | 3,115 | 1,177 | 105.00 | 5,592 | 12,392 |
| 102.45 | 3,158 | 1,334 | | | |
| 102.50 | 3,201 | 1,493 | | | |
| 102.55 | 3,244 | 1,654 | | | |
| 102.60 | 3,287 | 1,817 | | | |
| 102.65 | 3,330 | 1,983 | | | |
| 102.70 | 3,373 | 2,150 | | | |
| 102.75 | 3,417 | 2,320 | | | |
| 102.80 | 3,460 | 2,492 | | | |
| 102.85 | 3,503 | 2,666 | | | |
| 102.90 | 3,546 | 2,842 | | | |
| 102.95 | 3,589 | 3,020 | | | |
| 103.00 | 3,632 | 3,201 | | | |
| 103.05 | 3,679 | 3,384 | | | |
| 103.10 | 3,727 | 3,569 | | | |
| 103.15 | 3,774 | 3,756 | | | |
| 103.20 | 3,821 | 3,946 | | | |
| 103.25 | 3,869 | 4,139 | | | |
| 103.30 | 3,916 | 4,333 | | | |
| 103.35 | 3,963 | 4,530 | | | |
| 103.40 | 4,011 | 4,730 | | | |
| 103.45 | 4,058 | 4,931 | | | |
| 103.50 | 4,106 | 5,135 | | | |
| 103.55 | 4,153 | 5,342 | | | |
| 103.60 | 4,200 | 5,551 | | | |
| 103.65 | 4,248 | 5,762 | | | |
| 103.70 | 4,295 | 5,975 | | | |
| 103.75 | 4,342 | 6,191 | | | |
| 103.80 | 4,390 | 6,410 | | | |
| 103.85 | 4,437 | 6,630 | | | |
| 103.90 | 4,484 | 6,853 | | | |
| 103.95 | 4,532 | 7,079 | | | |
| 104.00 | 4,579 | 7,307 | | | |
| 104.05 | 4,630 | 7,537 | | | |
| 104.10 | 4,680 | 7,769 | | | |
| 104.15 | 4,731 | 8,005 | | | |
| 104.20 | 4,782 | 8,243 | | | |
| 104.25 | 4,832 | 8,483 | | | |
| 104.30 | 4,883 | 8,726 | | | |
| 104.35 | 4,934 | 8,971 | | | |
| 104.40 | 4,984 | 9,219 | | | |
| 104.45 | 5,035 | 9,470 | | | |
| 104.50 | 5,086 | 9,723 | | | |
| 104.55 | 5,136 | 9,978 | | | |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Pond 20P: Basin B

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 0.94" for WQ event
 Inflow = 2.37 cfs @ 1.17 hrs, Volume= 0.110 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 32L : Prop. South Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 102.23' @ 3.10 hrs Surf.Area= 3,964 sf Storage= 4,802 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|---------|---------------|--|
| #1 | 101.00' | 16,194 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|------------------|-------------------|------------------------|------------------------|
| 101.00 | 3,841 | 0 | 0 |
| 102.00 | 3,941 | 3,891 | 3,891 |
| 103.00 | 4,041 | 3,991 | 7,882 |
| 104.00 | 4,141 | 4,091 | 11,973 |
| 105.00 | 4,301 | 4,221 | 16,194 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|--|
| #1 | Primary | 98.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 98.50' / 98.50' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 102.90' | 12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 104.30' | 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.00' (Free Discharge)

- 1=Culvert (Passes 0.00 cfs of 9.20 cfs potential flow)
- 2=Orifice/Grate (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir(Controls 0.00 cfs)

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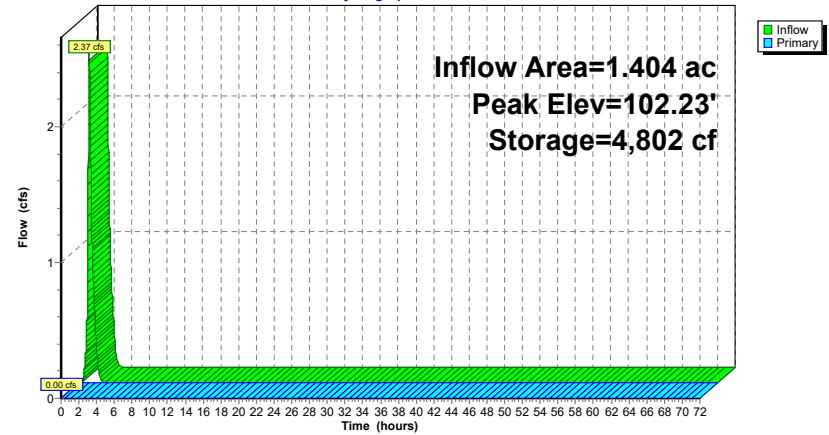
NJ DEP 2-hr WQ Rainfall=1.25"

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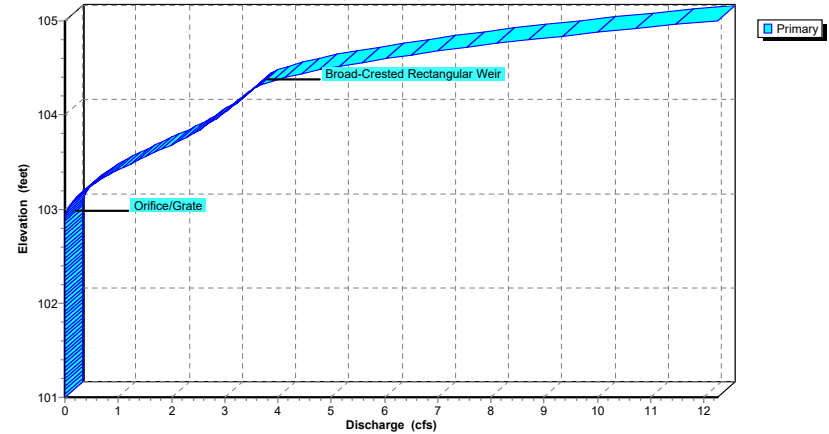
Pond 20P: Basin B

Hydrograph



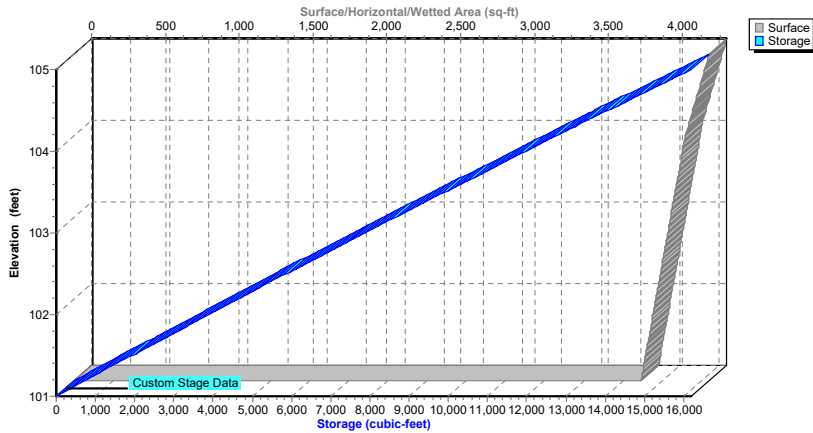
Pond 20P: Basin B

Stage-Discharge



Pond 20P: Basin B

Stage-Area-Storage



Hydrograph for Pond 20P: Basin B

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 101.00 | 0.00 |
| 2.00 | 0.27 | 4,604 | 102.18 | 0.00 |
| 4.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 6.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 8.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 10.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 12.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 14.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 16.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 18.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 20.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 22.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 24.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 26.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 28.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 30.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 32.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 34.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 36.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 38.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 40.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 42.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 44.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 46.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 48.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 50.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 52.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 54.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 56.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 58.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 60.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 62.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 64.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 66.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 68.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 70.00 | 0.00 | 4,802 | 102.23 | 0.00 |
| 72.00 | 0.00 | 4,802 | 102.23 | 0.00 |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Stage-Discharge for Pond 20P: Basin B

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| 101.00 | 0.00 | 102.04 | 0.00 | 103.08 | 0.14 | 104.12 | 3.21 |
| 101.02 | 0.00 | 102.06 | 0.00 | 103.10 | 0.17 | 104.14 | 3.25 |
| 101.04 | 0.00 | 102.08 | 0.00 | 103.12 | 0.20 | 104.16 | 3.30 |
| 101.06 | 0.00 | 102.10 | 0.00 | 103.14 | 0.24 | 104.18 | 3.34 |
| 101.08 | 0.00 | 102.12 | 0.00 | 103.16 | 0.28 | 104.20 | 3.38 |
| 101.10 | 0.00 | 102.14 | 0.00 | 103.18 | 0.32 | 104.22 | 3.42 |
| 101.12 | 0.00 | 102.16 | 0.00 | 103.20 | 0.37 | 104.24 | 3.47 |
| 101.14 | 0.00 | 102.18 | 0.00 | 103.22 | 0.42 | 104.26 | 3.51 |
| 101.16 | 0.00 | 102.20 | 0.00 | 103.24 | 0.47 | 104.28 | 3.55 |
| 101.18 | 0.00 | 102.22 | 0.00 | 103.26 | 0.52 | 104.30 | 3.59 |
| 101.20 | 0.00 | 102.24 | 0.00 | 103.28 | 0.57 | 104.32 | 3.66 |
| 101.22 | 0.00 | 102.26 | 0.00 | 103.30 | 0.63 | 104.34 | 3.76 |
| 101.24 | 0.00 | 102.28 | 0.00 | 103.32 | 0.69 | 104.36 | 3.87 |
| 101.26 | 0.00 | 102.30 | 0.00 | 103.34 | 0.75 | 104.38 | 4.00 |
| 101.28 | 0.00 | 102.32 | 0.00 | 103.36 | 0.81 | 104.40 | 4.14 |
| 101.30 | 0.00 | 102.34 | 0.00 | 103.38 | 0.88 | 104.42 | 4.28 |
| 101.32 | 0.00 | 102.36 | 0.00 | 103.40 | 0.95 | 104.44 | 4.44 |
| 101.34 | 0.00 | 102.38 | 0.00 | 103.42 | 1.01 | 104.46 | 4.61 |
| 101.36 | 0.00 | 102.40 | 0.00 | 103.44 | 1.08 | 104.48 | 4.79 |
| 101.38 | 0.00 | 102.42 | 0.00 | 103.46 | 1.15 | 104.50 | 4.97 |
| 101.40 | 0.00 | 102.44 | 0.00 | 103.48 | 1.22 | 104.52 | 5.16 |
| 101.42 | 0.00 | 102.46 | 0.00 | 103.50 | 1.30 | 104.54 | 5.37 |
| 101.44 | 0.00 | 102.48 | 0.00 | 103.52 | 1.37 | 104.56 | 5.58 |
| 101.46 | 0.00 | 102.50 | 0.00 | 103.54 | 1.45 | 104.58 | 5.80 |
| 101.48 | 0.00 | 102.52 | 0.00 | 103.56 | 1.52 | 104.60 | 6.02 |
| 101.50 | 0.00 | 102.54 | 0.00 | 103.58 | 1.60 | 104.62 | 6.26 |
| 101.52 | 0.00 | 102.56 | 0.00 | 103.60 | 1.67 | 104.64 | 6.50 |
| 101.54 | 0.00 | 102.58 | 0.00 | 103.62 | 1.75 | 104.66 | 6.75 |
| 101.56 | 0.00 | 102.60 | 0.00 | 103.64 | 1.83 | 104.68 | 7.00 |
| 101.58 | 0.00 | 102.62 | 0.00 | 103.66 | 1.90 | 104.70 | 7.27 |
| 101.60 | 0.00 | 102.64 | 0.00 | 103.68 | 1.98 | 104.72 | 7.54 |
| 101.62 | 0.00 | 102.66 | 0.00 | 103.70 | 2.05 | 104.74 | 7.82 |
| 101.64 | 0.00 | 102.68 | 0.00 | 103.72 | 2.13 | 104.76 | 8.11 |
| 101.66 | 0.00 | 102.70 | 0.00 | 103.74 | 2.20 | 104.78 | 8.41 |
| 101.68 | 0.00 | 102.72 | 0.00 | 103.76 | 2.27 | 104.80 | 8.72 |
| 101.70 | 0.00 | 102.74 | 0.00 | 103.78 | 2.34 | 104.82 | 9.03 |
| 101.72 | 0.00 | 102.76 | 0.00 | 103.80 | 2.40 | 104.84 | 9.35 |
| 101.74 | 0.00 | 102.78 | 0.00 | 103.82 | 2.47 | 104.86 | 9.68 |
| 101.76 | 0.00 | 102.80 | 0.00 | 103.84 | 2.53 | 104.88 | 10.01 |
| 101.78 | 0.00 | 102.82 | 0.00 | 103.86 | 2.58 | 104.90 | 10.36 |
| 101.80 | 0.00 | 102.84 | 0.00 | 103.88 | 2.63 | 104.92 | 10.72 |
| 101.82 | 0.00 | 102.86 | 0.00 | 103.90 | 2.67 | 104.94 | 11.09 |
| 101.84 | 0.00 | 102.88 | 0.00 | 103.92 | 2.73 | 104.96 | 11.47 |
| 101.86 | 0.00 | 102.90 | 0.00 | 103.94 | 2.78 | 104.98 | 11.86 |
| 101.88 | 0.00 | 102.92 | 0.00 | 103.96 | 2.83 | 105.00 | 12.26 |
| 101.90 | 0.00 | 102.94 | 0.01 | 103.98 | 2.88 | | |
| 101.92 | 0.00 | 102.96 | 0.02 | 104.00 | 2.93 | | |
| 101.94 | 0.00 | 102.98 | 0.03 | 104.02 | 2.98 | | |
| 101.96 | 0.00 | 103.00 | 0.04 | 104.04 | 3.03 | | |
| 101.98 | 0.00 | 103.02 | 0.06 | 104.06 | 3.07 | | |
| 102.00 | 0.00 | 103.04 | 0.09 | 104.08 | 3.12 | | |
| 102.02 | 0.00 | 103.06 | 0.11 | 104.10 | 3.16 | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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Stage-Area-Storage for Pond 20P: Basin B

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 101.00 | 3,841 | 0 | 103.60 | 4,101 | 10,325 |
| 101.05 | 3,846 | 192 | 103.65 | 4,106 | 10,530 |
| 101.10 | 3,851 | 385 | 103.70 | 4,111 | 10,735 |
| 101.15 | 3,856 | 577 | 103.75 | 4,116 | 10,941 |
| 101.20 | 3,861 | 770 | 103.80 | 4,121 | 11,147 |
| 101.25 | 3,866 | 963 | 103.85 | 4,126 | 11,353 |
| 101.30 | 3,871 | 1,157 | 103.90 | 4,131 | 11,559 |
| 101.35 | 3,876 | 1,350 | 103.95 | 4,136 | 11,766 |
| 101.40 | 3,881 | 1,544 | 104.00 | 4,141 | 11,973 |
| 101.45 | 3,886 | 1,739 | 104.05 | 4,149 | 12,180 |
| 101.50 | 3,891 | 1,933 | 104.10 | 4,157 | 12,388 |
| 101.55 | 3,896 | 2,128 | 104.15 | 4,165 | 12,596 |
| 101.60 | 3,901 | 2,323 | 104.20 | 4,173 | 12,804 |
| 101.65 | 3,906 | 2,518 | 104.25 | 4,181 | 13,013 |
| 101.70 | 3,911 | 2,713 | 104.30 | 4,189 | 13,222 |
| 101.75 | 3,916 | 2,909 | 104.35 | 4,197 | 13,432 |
| 101.80 | 3,921 | 3,105 | 104.40 | 4,205 | 13,642 |
| 101.85 | 3,926 | 3,301 | 104.45 | 4,213 | 13,853 |
| 101.90 | 3,931 | 3,497 | 104.50 | 4,221 | 14,064 |
| 101.95 | 3,936 | 3,694 | 104.55 | 4,229 | 14,275 |
| 102.00 | 3,941 | 3,891 | 104.60 | 4,237 | 14,486 |
| 102.05 | 3,946 | 4,088 | 104.65 | 4,245 | 14,698 |
| 102.10 | 3,951 | 4,286 | 104.70 | 4,253 | 14,911 |
| 102.15 | 3,956 | 4,483 | 104.75 | 4,261 | 15,124 |
| 102.20 | 3,961 | 4,681 | 104.80 | 4,269 | 15,337 |
| 102.25 | 3,966 | 4,879 | 104.85 | 4,277 | 15,551 |
| 102.30 | 3,971 | 5,078 | 104.90 | 4,285 | 15,765 |
| 102.35 | 3,976 | 5,276 | 104.95 | 4,293 | 15,979 |
| 102.40 | 3,981 | 5,475 | 105.00 | 4,301 | 16,194 |
| 102.45 | 3,986 | 5,675 | | | |
| 102.50 | 3,991 | 5,874 | | | |
| 102.55 | 3,996 | 6,074 | | | |
| 102.60 | 4,001 | 6,274 | | | |
| 102.65 | 4,006 | 6,474 | | | |
| 102.70 | 4,011 | 6,674 | | | |
| 102.75 | 4,016 | 6,875 | | | |
| 102.80 | 4,021 | 7,076 | | | |
| 102.85 | 4,026 | 7,277 | | | |
| 102.90 | 4,031 | 7,478 | | | |
| 102.95 | 4,036 | 7,680 | | | |
| 103.00 | 4,041 | 7,882 | | | |
| 103.05 | 4,046 | 8,084 | | | |
| 103.10 | 4,051 | 8,287 | | | |
| 103.15 | 4,056 | 8,489 | | | |
| 103.20 | 4,061 | 8,692 | | | |
| 103.25 | 4,066 | 8,895 | | | |
| 103.30 | 4,071 | 9,099 | | | |
| 103.35 | 4,076 | 9,302 | | | |
| 103.40 | 4,081 | 9,506 | | | |
| 103.45 | 4,086 | 9,711 | | | |
| 103.50 | 4,091 | 9,915 | | | |
| 103.55 | 4,096 | 10,120 | | | |

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Summary for Pond 21P: Basin C

Inflow Area = 1.100 ac, 79.73% Impervious, Inflow Depth = 0.86" for WQ event
 Inflow = 1.68 cfs @ 1.17 hrs, Volume= 0.078 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 33L : Prop. East Total

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs
 Peak Elev= 100.01' @ 3.10 hrs Surf.Area= 3,811 sf Storage= 3,416 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|------------------|-------------------|------------------------|--|
| #1 | 99.00' | 13,101 cf | Custom Stage Data (Prismatic) Listed below (Recalc) |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
| 99.00 | 2,973 | 0 | 0 |
| 100.00 | 3,805 | 3,389 | 3,389 |
| 101.00 | 4,690 | 4,248 | 7,637 |
| 102.00 | 6,238 | 5,464 | 13,101 |

| Device | Routing | Invert | Outlet Devices |
|--------|----------|---------|---|
| #1 | Primary | 96.50' | 15.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 96.50' / 96.50' S= 0.0000 ' /' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 100.30' | 10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Device 1 | 101.25' | 3.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 |

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=99.00' (Free Discharge)

- 1=Culvert (Passes 0.00 cfs of 9.20 cfs potential flow)
- 2=Orifice/Grate (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir(Controls 0.00 cfs)

2023-11 Proposed

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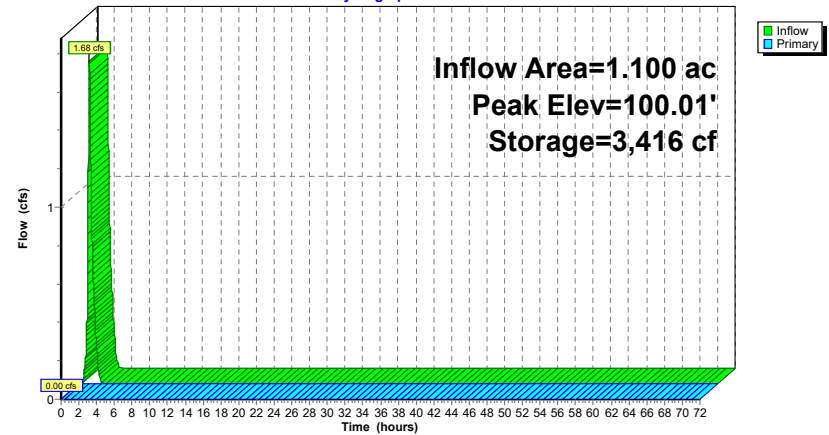
NJ DEP 2-hr WQ Rainfall=1.25"

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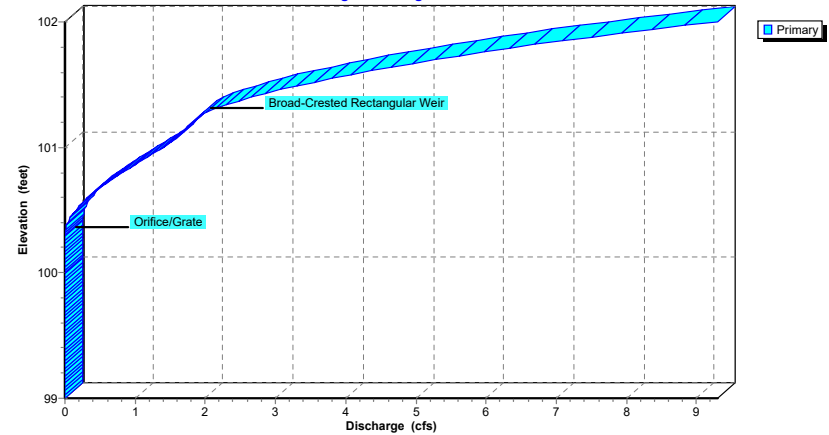
Pond 21P: Basin C

Hydrograph

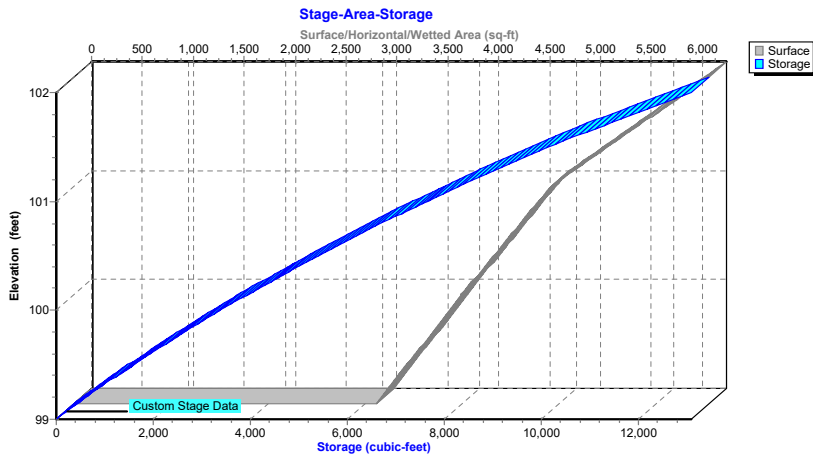


Pond 21P: Basin C

Stage-Discharge



Pond 21P: Basin C



Hydrograph for Pond 21P: Basin C

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|
| 0.00 | 0.00 | 0 | 99.00 | 0.00 |
| 2.00 | 0.20 | 3,272 | 99.97 | 0.00 |
| 4.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 6.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 8.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 10.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 12.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 14.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 16.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 18.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 20.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 22.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 24.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 26.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 28.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 30.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 32.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 34.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 36.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 38.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 40.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 42.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 44.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 46.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 48.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 50.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 52.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 54.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 56.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 58.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 60.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 62.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 64.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 66.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 68.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 70.00 | 0.00 | 3,416 | 100.01 | 0.00 |
| 72.00 | 0.00 | 3,416 | 100.01 | 0.00 |

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NJ DEP 2-hr WQ Rainfall=1.25"

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Stage-Discharge for Pond 21P: Basin C

| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|------------------|---------------|------------------|---------------|------------------|---------------|
| 99.00 | 0.00 | 100.04 | 0.00 | 101.08 | 1.60 |
| 99.02 | 0.00 | 100.06 | 0.00 | 101.10 | 1.64 |
| 99.04 | 0.00 | 100.08 | 0.00 | 101.12 | 1.68 |
| 99.06 | 0.00 | 100.10 | 0.00 | 101.14 | 1.71 |
| 99.08 | 0.00 | 100.12 | 0.00 | 101.16 | 1.75 |
| 99.10 | 0.00 | 100.14 | 0.00 | 101.18 | 1.79 |
| 99.12 | 0.00 | 100.16 | 0.00 | 101.20 | 1.83 |
| 99.14 | 0.00 | 100.18 | 0.00 | 101.22 | 1.86 |
| 99.16 | 0.00 | 100.20 | 0.00 | 101.24 | 1.90 |
| 99.18 | 0.00 | 100.22 | 0.00 | 101.26 | 1.94 |
| 99.20 | 0.00 | 100.24 | 0.00 | 101.28 | 2.01 |
| 99.22 | 0.00 | 100.26 | 0.00 | 101.30 | 2.10 |
| 99.24 | 0.00 | 100.28 | 0.00 | 101.32 | 2.20 |
| 99.26 | 0.00 | 100.30 | 0.00 | 101.34 | 2.30 |
| 99.28 | 0.00 | 100.32 | 0.00 | 101.36 | 2.41 |
| 99.30 | 0.00 | 100.34 | 0.01 | 101.38 | 2.53 |
| 99.32 | 0.00 | 100.36 | 0.01 | 101.40 | 2.66 |
| 99.34 | 0.00 | 100.38 | 0.03 | 101.42 | 2.79 |
| 99.36 | 0.00 | 100.40 | 0.04 | 101.44 | 2.93 |
| 99.38 | 0.00 | 100.42 | 0.06 | 101.46 | 3.07 |
| 99.40 | 0.00 | 100.44 | 0.08 | 101.48 | 3.23 |
| 99.42 | 0.00 | 100.46 | 0.10 | 101.50 | 3.39 |
| 99.44 | 0.00 | 100.48 | 0.13 | 101.52 | 3.55 |
| 99.46 | 0.00 | 100.50 | 0.15 | 101.54 | 3.72 |
| 99.48 | 0.00 | 100.52 | 0.18 | 101.56 | 3.90 |
| 99.50 | 0.00 | 100.54 | 0.22 | 101.58 | 4.08 |
| 99.52 | 0.00 | 100.56 | 0.25 | 101.60 | 4.26 |
| 99.54 | 0.00 | 100.58 | 0.29 | 101.62 | 4.46 |
| 99.56 | 0.00 | 100.60 | 0.33 | 101.64 | 4.65 |
| 99.58 | 0.00 | 100.62 | 0.37 | 101.66 | 4.86 |
| 99.60 | 0.00 | 100.64 | 0.42 | 101.68 | 5.07 |
| 99.62 | 0.00 | 100.66 | 0.46 | 101.70 | 5.28 |
| 99.64 | 0.00 | 100.68 | 0.51 | 101.72 | 5.51 |
| 99.66 | 0.00 | 100.70 | 0.56 | 101.74 | 5.74 |
| 99.68 | 0.00 | 100.72 | 0.61 | 101.76 | 5.97 |
| 99.70 | 0.00 | 100.74 | 0.66 | 101.78 | 6.21 |
| 99.72 | 0.00 | 100.76 | 0.71 | 101.80 | 6.45 |
| 99.74 | 0.00 | 100.78 | 0.77 | 101.82 | 6.70 |
| 99.76 | 0.00 | 100.80 | 0.82 | 101.84 | 6.96 |
| 99.78 | 0.00 | 100.82 | 0.88 | 101.86 | 7.23 |
| 99.80 | 0.00 | 100.84 | 0.94 | 101.88 | 7.50 |
| 99.82 | 0.00 | 100.86 | 0.99 | 101.90 | 7.79 |
| 99.84 | 0.00 | 100.88 | 1.05 | 101.92 | 8.07 |
| 99.86 | 0.00 | 100.90 | 1.11 | 101.94 | 8.37 |
| 99.88 | 0.00 | 100.92 | 1.17 | 101.96 | 8.67 |
| 99.90 | 0.00 | 100.94 | 1.22 | 101.98 | 8.98 |
| 99.92 | 0.00 | 100.96 | 1.28 | 102.00 | 9.30 |
| 99.94 | 0.00 | 100.98 | 1.34 | | |
| 99.96 | 0.00 | 101.00 | 1.39 | | |
| 99.98 | 0.00 | 101.02 | 1.45 | | |
| 100.00 | 0.00 | 101.04 | 1.50 | | |
| 100.02 | 0.00 | 101.06 | 1.55 | | |

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Stage-Area-Storage for Pond 21P: Basin C

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) | Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|------------------|-----------------|----------------------|------------------|-----------------|----------------------|
| 99.00 | 2,973 | 0 | 101.60 | 5,619 | 10,729 |
| 99.05 | 3,015 | 150 | 101.65 | 5,696 | 11,012 |
| 99.10 | 3,056 | 301 | 101.70 | 5,774 | 11,299 |
| 99.15 | 3,098 | 455 | 101.75 | 5,851 | 11,589 |
| 99.20 | 3,139 | 611 | 101.80 | 5,928 | 11,884 |
| 99.25 | 3,181 | 769 | 101.85 | 6,006 | 12,182 |
| 99.30 | 3,223 | 929 | 101.90 | 6,083 | 12,484 |
| 99.35 | 3,264 | 1,092 | 101.95 | 6,161 | 12,791 |
| 99.40 | 3,306 | 1,256 | 102.00 | 6,238 | 13,101 |
| 99.45 | 3,347 | 1,422 | | | |
| 99.50 | 3,389 | 1,591 | | | |
| 99.55 | 3,431 | 1,761 | | | |
| 99.60 | 3,472 | 1,934 | | | |
| 99.65 | 3,514 | 2,108 | | | |
| 99.70 | 3,555 | 2,285 | | | |
| 99.75 | 3,597 | 2,464 | | | |
| 99.80 | 3,639 | 2,645 | | | |
| 99.85 | 3,680 | 2,828 | | | |
| 99.90 | 3,722 | 3,013 | | | |
| 99.95 | 3,763 | 3,200 | | | |
| 100.00 | 3,805 | 3,389 | | | |
| 100.05 | 3,849 | 3,580 | | | |
| 100.10 | 3,893 | 3,774 | | | |
| 100.15 | 3,938 | 3,970 | | | |
| 100.20 | 3,982 | 4,168 | | | |
| 100.25 | 4,026 | 4,368 | | | |
| 100.30 | 4,070 | 4,570 | | | |
| 100.35 | 4,115 | 4,775 | | | |
| 100.40 | 4,159 | 4,982 | | | |
| 100.45 | 4,203 | 5,191 | | | |
| 100.50 | 4,248 | 5,402 | | | |
| 100.55 | 4,292 | 5,616 | | | |
| 100.60 | 4,336 | 5,831 | | | |
| 100.65 | 4,380 | 6,049 | | | |
| 100.70 | 4,425 | 6,269 | | | |
| 100.75 | 4,469 | 6,492 | | | |
| 100.80 | 4,513 | 6,716 | | | |
| 100.85 | 4,557 | 6,943 | | | |
| 100.90 | 4,602 | 7,172 | | | |
| 100.95 | 4,646 | 7,403 | | | |
| 101.00 | 4,690 | 7,637 | | | |
| 101.05 | 4,767 | 7,873 | | | |
| 101.10 | 4,845 | 8,113 | | | |
| 101.15 | 4,922 | 8,357 | | | |
| 101.20 | 5,000 | 8,605 | | | |
| 101.25 | 5,077 | 8,857 | | | |
| 101.30 | 5,154 | 9,113 | | | |
| 101.35 | 5,232 | 9,373 | | | |
| 101.40 | 5,309 | 9,636 | | | |
| 101.45 | 5,387 | 9,904 | | | |
| 101.50 | 5,464 | 10,175 | | | |
| 101.55 | 5,541 | 10,450 | | | |

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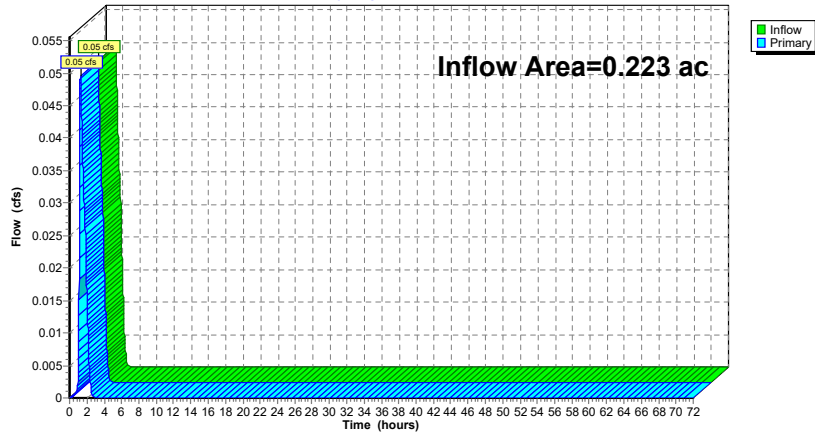
Summary for Link 29L: West Und. Total

Inflow Area = 0.223 ac, 2.28% Impervious, Inflow Depth = 0.15" for WQ event
 Inflow = 0.05 cfs @ 1.26 hrs, Volume= 0.003 af
 Primary = 0.05 cfs @ 1.26 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 31L : Prop. West Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 29L: West Und. Total

Hydrograph



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Hydrograph for Link 29L: West Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.02 | 0.00 | 0.02 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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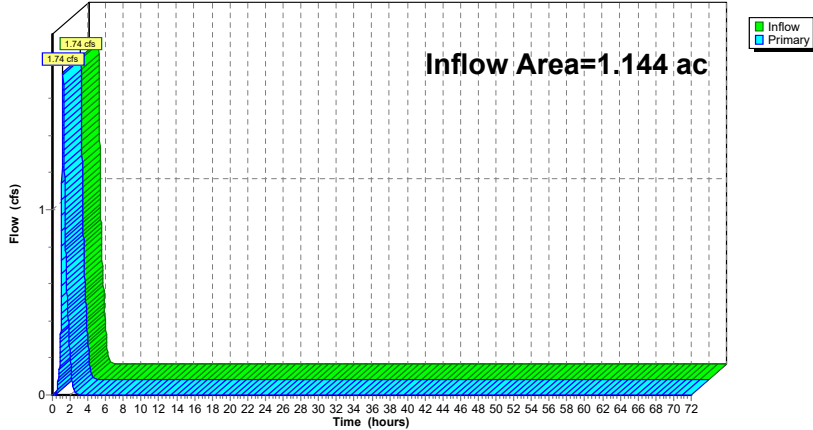
Summary for Link 30L: East Und. Total

Inflow Area = 1.144 ac, 79.08% Impervious, Inflow Depth = 0.85" for WQ event
 Inflow = 1.74 cfs @ 1.17 hrs, Volume= 0.081 af
 Primary = 1.74 cfs @ 1.17 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 33L : Prop. East Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 30L: East Und. Total

Hydrograph



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Link 30L: East Und. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.65 | 0.00 | 0.65 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.20 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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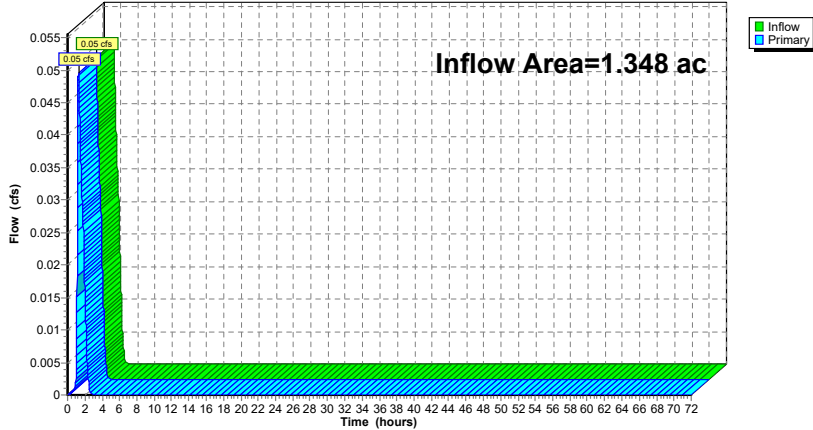
Summary for Link 31L: Prop. West Total

Inflow Area = 1.348 ac, 64.67% Impervious, Inflow Depth = 0.03" for WQ event
 Inflow = 0.05 cfs @ 1.26 hrs, Volume= 0.003 af
 Primary = 0.05 cfs @ 1.26 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 31L: Prop. West Total

Hydrograph



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Hydrograph for Link 31L: Prop. West Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.02 | 0.00 | 0.02 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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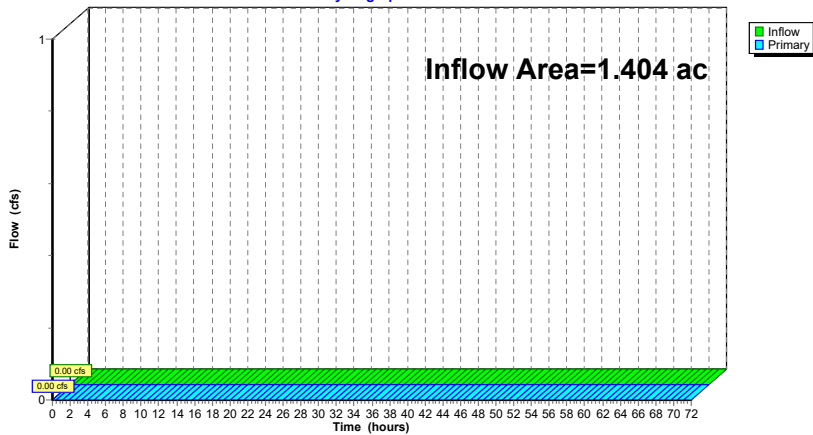
Summary for Link 32L: Prop. South Total

Inflow Area = 1.404 ac, 89.29% Impervious, Inflow Depth = 0.00" for WQ event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 32L: Prop. South Total

Hydrograph



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Hydrograph for Link 32L: Prop. South Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

2023-11 Proposed

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NJ DEP 2-hr WQ Rainfall=1.25"

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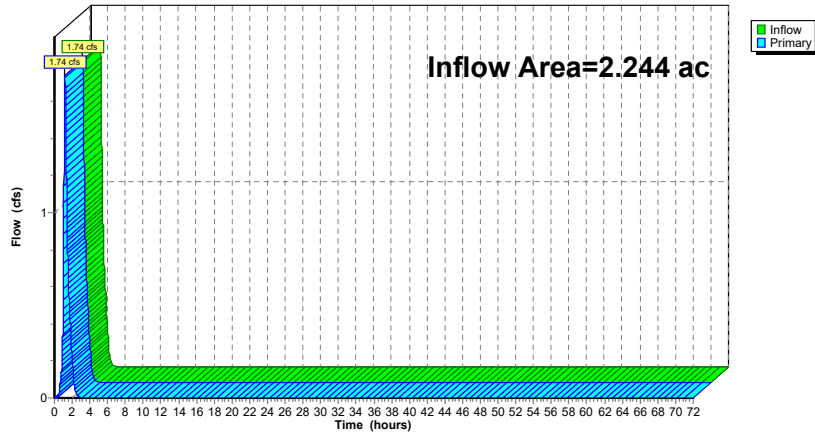
Summary for Link 33L: Prop. East Total

Inflow Area = 2.244 ac, 79.40% Impervious, Inflow Depth = 0.44" for WQ event
 Inflow = 1.74 cfs @ 1.17 hrs, Volume= 0.081 af
 Primary = 1.74 cfs @ 1.17 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min
 Routed to Link 34L : Prop. Total

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 33L: Prop. East Total

Hydrograph



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NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Link 33L: Prop. East Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.65 | 0.00 | 0.65 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.20 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

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Prepared by Dynamic Engineering

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NJ DEP 2-hr WQ Rainfall=1.25"

Printed 11/28/2023

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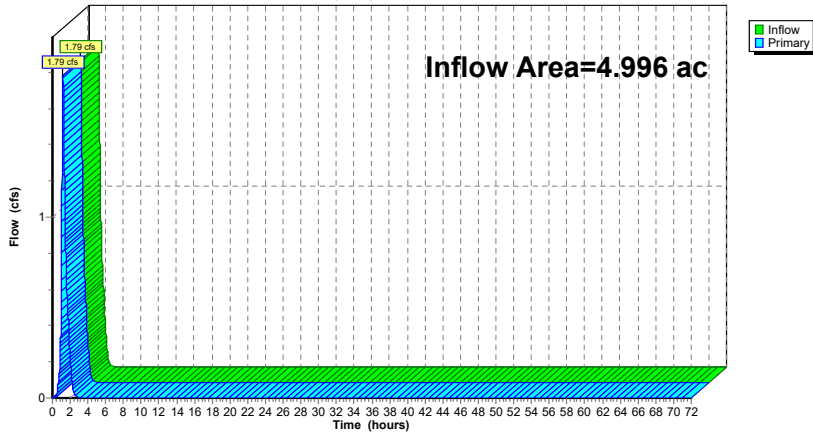
Summary for Link 34L: Prop. Total

Inflow Area = 4.996 ac, 78.20% Impervious, Inflow Depth = 0.20" for WQ event
 Inflow = 1.79 cfs @ 1.18 hrs, Volume= 0.084 af
 Primary = 1.79 cfs @ 1.18 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.010 hrs

Link 34L: Prop. Total

Hydrograph



2023-11 Proposed

Prepared by Dynamic Engineering

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NJ DEP 2-hr WQ Rainfall=1.25"

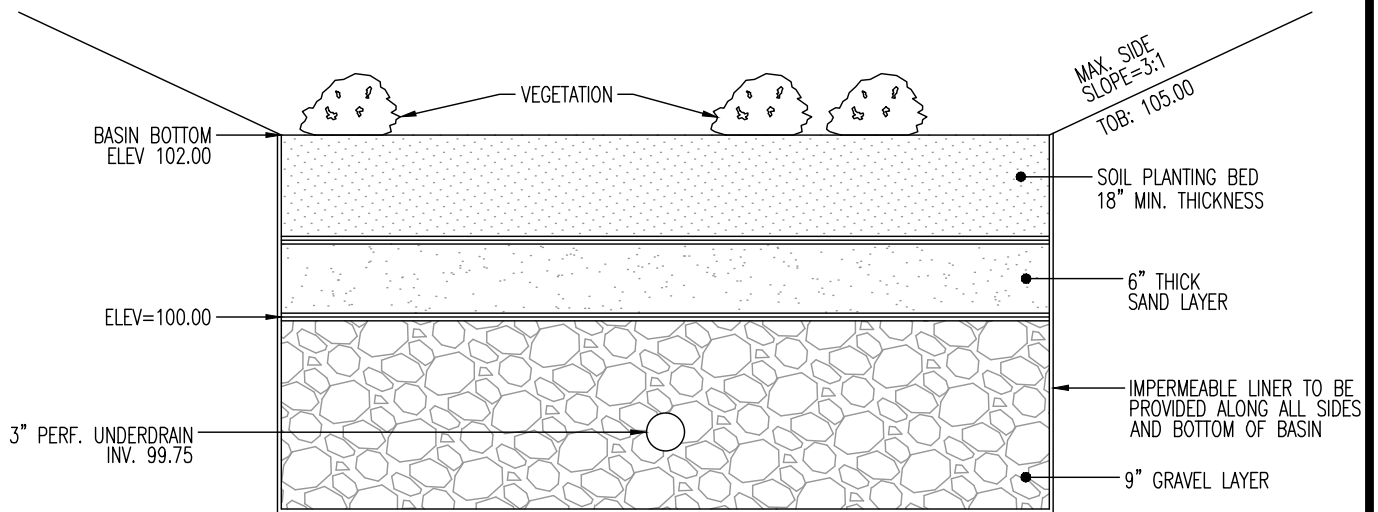
Printed 11/28/2023

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Hydrograph for Link 34L: Prop. Total

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|--------------|--------------|------------------|---------------|--------------|--------------|------------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.66 | 0.00 | 0.66 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.22 | 0.00 | 0.22 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

BASIN SCHEMATIC DETAILS

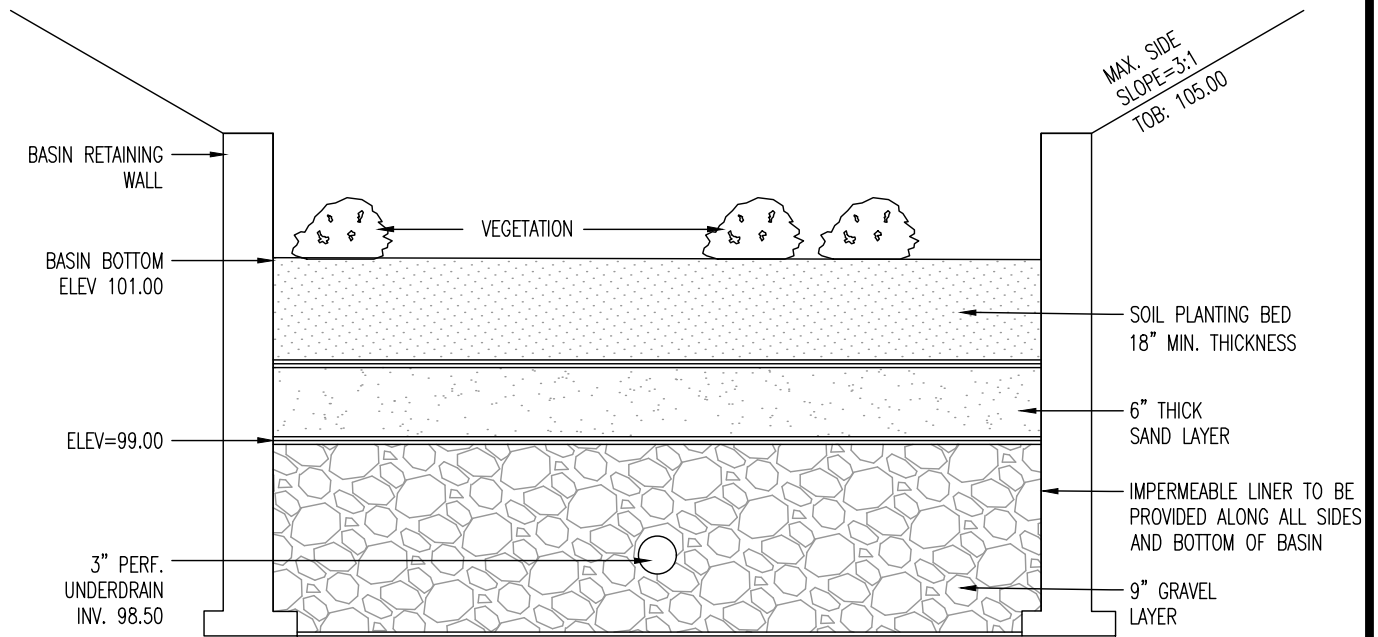


NOTES:

1. THE VEGETATION IN A BIORETENTION SYSTEM REMOVES SOME OF THE NUTRIENTS AND OTHER POLLUTANTS IN THE STORMWATER INFLOW. THE ENVIRONMENT AROUND THE ROOT SYSTEM BREAKS DOWN SOME POLLUTANTS AND CONVERTS OTHERS TO LESS HARMFUL COMPOUNDS. THE USE OF NATIVE PLANT MATERIAL IS RECOMMENDED FOR BIORETENTION SYSTEMS WHENEVER POSSIBLE. THE GOAL OF THE PLANTING PLAN SHOULD BE TO SIMULATE A FOREST - SHRUB COMMUNITY OF PRIMARILY UPLAND TYPE. AS THERE WILL BE VARIOUS WETNESS ZONES WITHIN A WELL DESIGNED AND CONSTRUCTED BIORETENTION SYSTEM, PLANTS MUST BE SELECTED AND PLACES APPROPRIATELY. IN GENERAL, TREES SHOULD DOMINATE THE PERIMETER ZONE THAT IS SUBJECT TO LESS FREQUENT INUNDATION. SHRUBS AND HERBACEOUS SPECIES THAT ARE ADAPTED TO MOISTER CONDITIONS AND EXPECTED POLLUTANT LOADS SHOULD BE SELECTED FOR THE WETTER ZONES. THE NUMBER OF STEMS PER ACRE SHOULD AVERAGE 1,000, WITH TREE SPACING OF 12 FEET AND SHRUB SPACING OF 8 FEET.
2. THE SAND LAYER SERVES AS A TRANSITION BETWEEN THE PLANTING SOIL BED AND THE GRAVEL LAYER AND UNDERDRAIN PIPES. IT MUST HAVE A MINIMUM THICKNESS OF 12 INCHES AND CONSIST OF CLEAN MEDIUM AGGREGATE CONCRETE SAND (AASHTO M-6/ASTM C-33). TO ENSURE PROPER SYSTEM OPERATION, THE SAND LAYER MUST HAVE A PERMEABILITY RATE AT LEAST TWICE AS FAST AS THE DESIGN PERMEABILITY RATE OF THE PLANTING SOIL BED.

BIORETENTION SYSTEM DETAIL - BASIN A

NOT TO SCALE

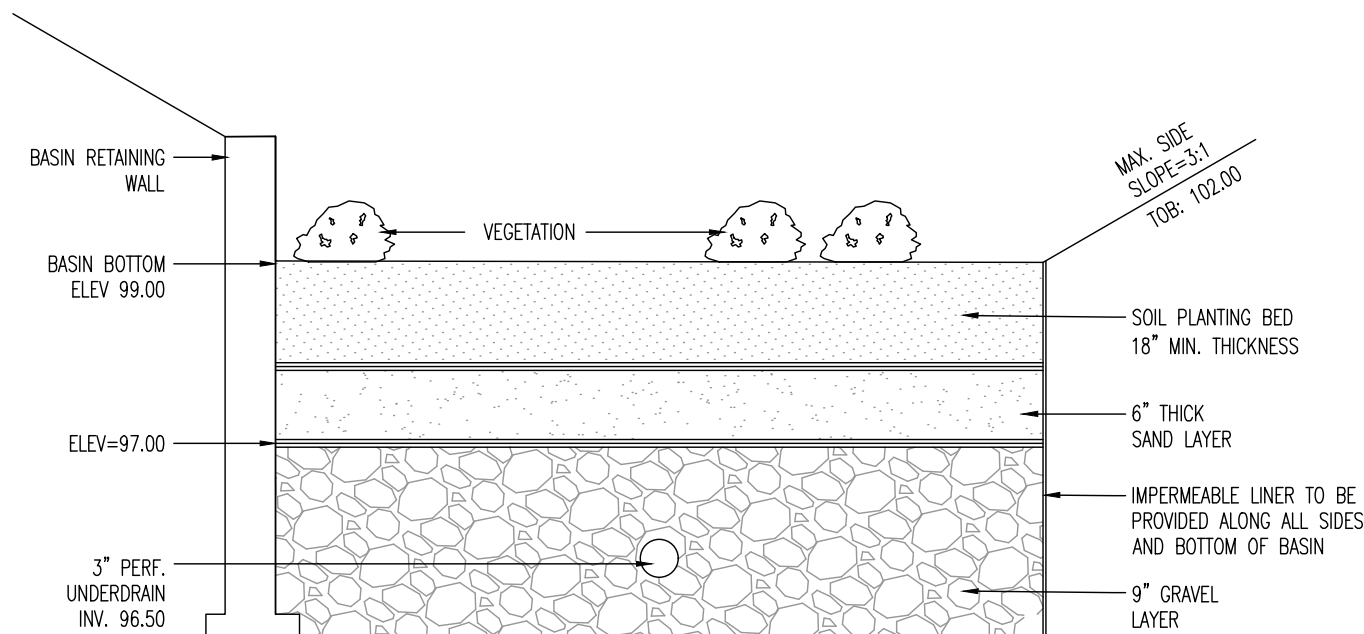


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BIORETENTION WALLED BASIN DETAIL - BASIN B

NOT TO SCALE

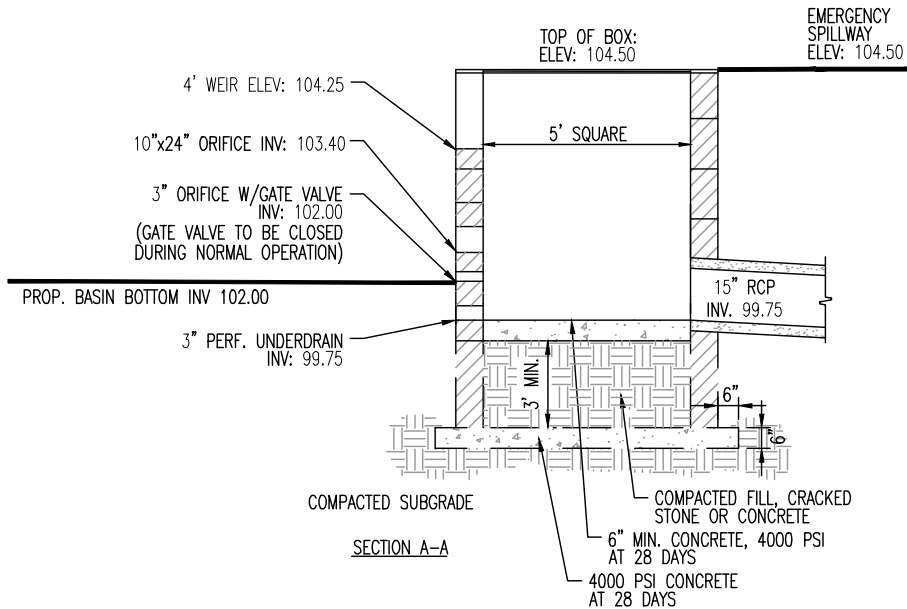
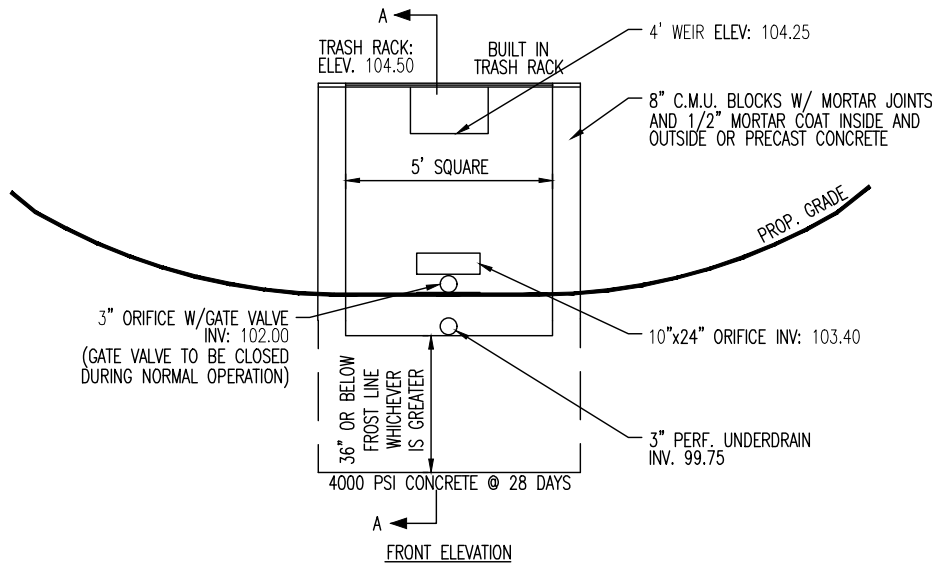
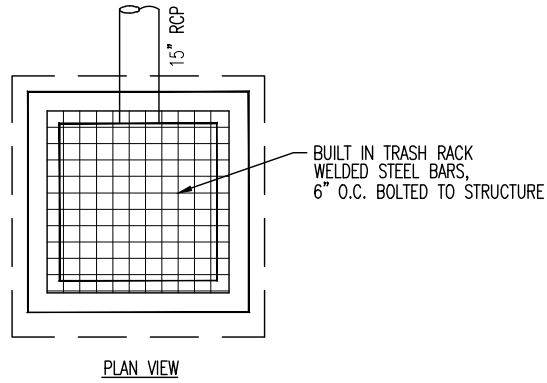


NOTES:

1. THE VEGETATION IN A BIORETENTION SYSTEM REMOVES SOME OF THE NUTRIENTS AND OTHER POLLUTANTS IN THE STORMWATER INFLOW. THE ENVIRONMENT AROUND THE ROOT SYSTEM BREAKS DOWN SOME POLLUTANTS AND CONVERTS OTHERS TO LESS HARMFUL COMPOUNDS. THE USE OF NATIVE PLANT MATERIAL IS RECOMMENDED FOR BIORETENTION SYSTEMS WHENEVER POSSIBLE. THE GOAL OF THE PLANTING PLAN SHOULD BE TO SIMULATE A FOREST - SHRUB COMMUNITY OF PRIMARILY UPLAND TYPE. AS THERE WILL BE VARIOUS WETNESS ZONES WITHIN A WELL DESIGNED AND CONSTRUCTED BIORETENTION SYSTEM, PLANTS MUST BE SELECTED AND PLACES APPROPRIATELY. IN GENERAL, TREES SHOULD DOMINATE THE PERIMETER ZONE THAT IS SUBJECT TO LESS FREQUENT INUNDATION. SHRUBS AND HERBACEOUS SPECIES THAT ARE ADAPTED TO MOISTER CONDITIONS AND EXPECTED POLLUTANT LOADS SHOULD BE SELECTED FOR THE WETTER ZONES. THE NUMBER OF STEMS PER ACRE SHOULD AVERAGE 1,000, WITH TREE SPACING OF 12 FEET AND SHRUB SPACING OF 8 FEET.
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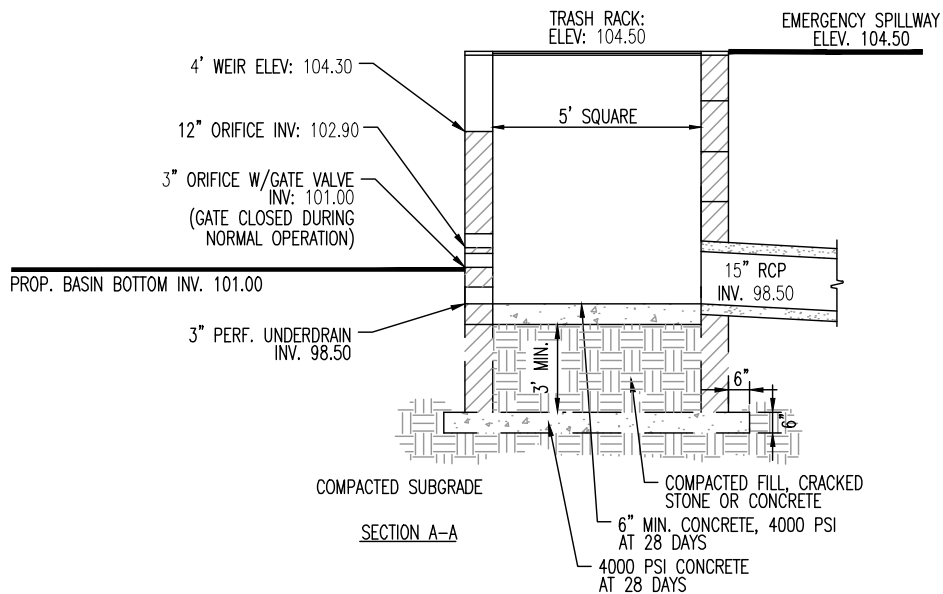
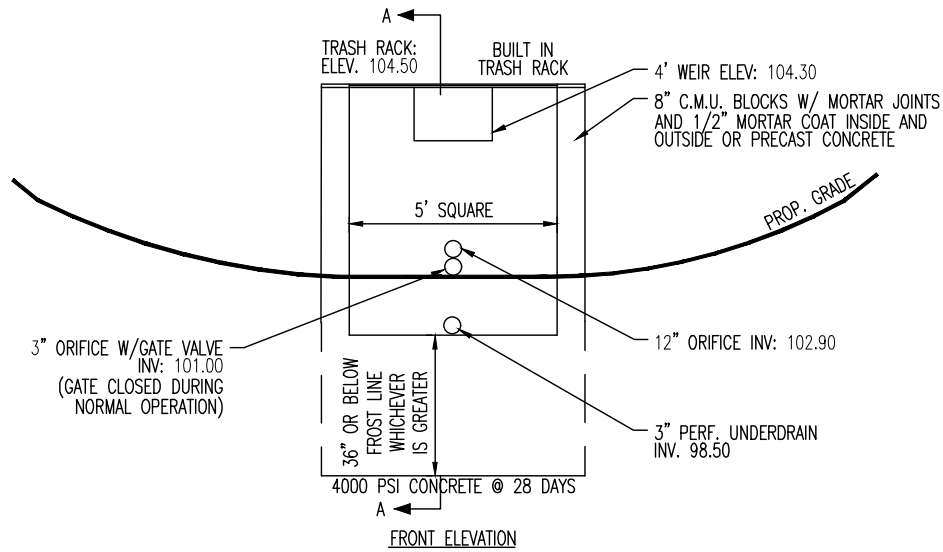
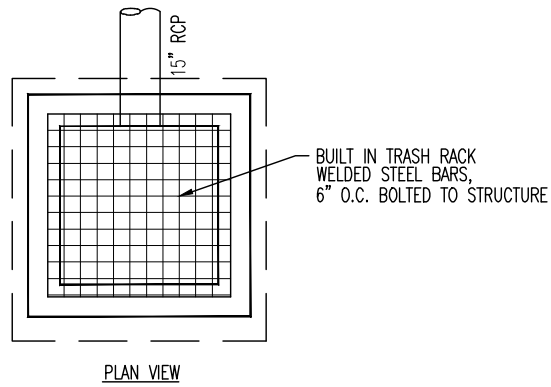
BIORETENTION WALLED BASIN DETAIL - BASIN C

NOT TO SCALE



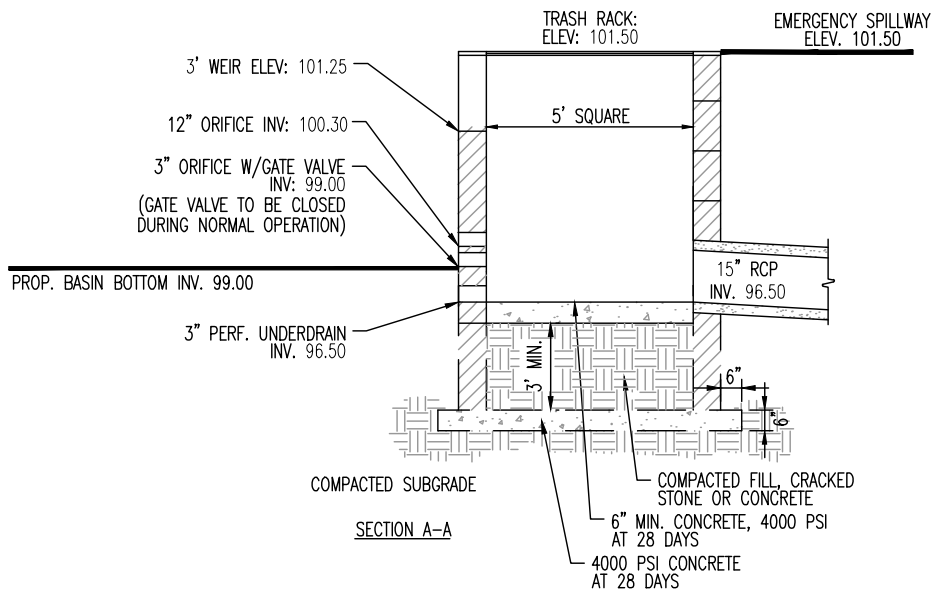
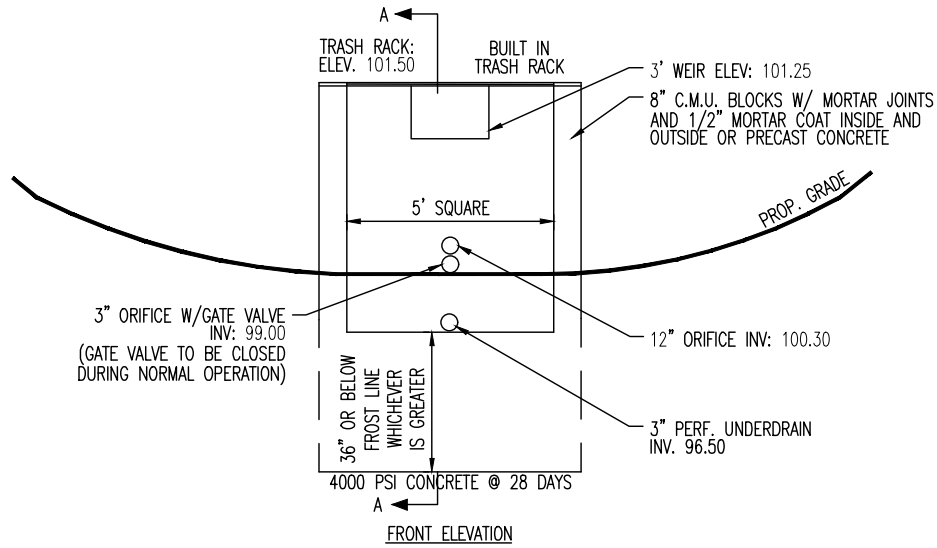
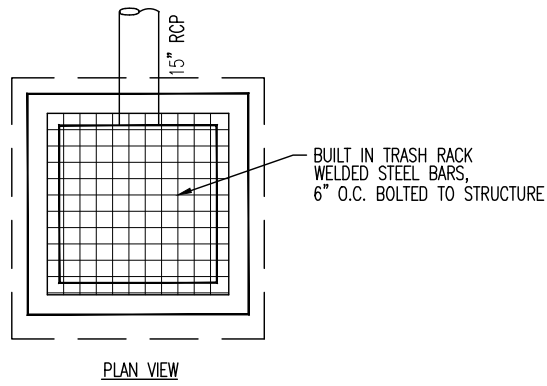
OUTLET CONTROL STRUCTURE DETAIL - BASIN A

NOT TO SCALE



OUTLET CONTROL STRUCTURE DETAIL - BASIN B

NOT TO SCALE



OUTLET CONTROL STRUCTURE DETAIL - BASIN C
NOT TO SCALE

EMERGENCY SPILLWAY CALCULATIONS



Overflow Spillway Calculations

Project: Proposed Warehouse Redevelopment
Job #: 3529-99-001
Location: Township of Cranbury
 Computed By: AG
 Checked By: RO
 Date: 5/9/2023

BIORETENTION BASIN 'A'

To Size Spillway:

- Assume complete blockage of the outlet control structure and no infiltration
- Route 2 & 10 year storm through basin assuming that the basin is filled with water up to the Emergency Spillway Elevation

| | 2 Year | 10 Year |
|---------------------------------|-------------|-------------|
| Spillway Width (ft.) | 20.00 | 20.00 |
| Spillway Elevation (ft.) | 104.50 | 104.50 |
| Flow through Spillway (Q) (cfs) | 1.940 | 3.170 |
| Water Surface Elevation (ft) | 104.61 | 104.66 |
| Depth of Flow (ft) | 0.11 | 0.16 |
| Area of Flow (A) (sf)* | 2.21 | 3.23 |

Velocity (V) = Q / A (ft/sec) **0.88** **0.98**

** V = < 2.0 FPS ** Stability Achieved



Overflow Spillway Calculations

Project: Proposed Warehouse Redevelopment
Job #: 3529-99-001
Location: Township of Cranbury
 Computed By: AG
 Checked By: RO
 Date: 5/9/2023

BIORETENTION BASIN 'B'

To Size Spillway:

- Assume complete blockage of the outlet control structure and no infiltration
- Route 2 & 10 year storm through basin assuming that the basin is filled with water up to the Emergency Spillway Elevation

| | 2 Year | 10 Year |
|---------------------------------|-------------|-------------|
| Spillway Width (ft.) | 20.00 | 20.00 |
| Spillway Elevation (ft.) | 104.50 | 104.50 |
| Flow through Spillway (Q) (cfs) | 2.670 | 4.230 |
| Water Surface Elevation (ft) | 104.64 | 104.69 |
| Depth of Flow (ft) | 0.14 | 0.19 |
| Area of Flow (A) (sf)* | 2.82 | 3.84 |

Velocity (V) = Q / A (ft/sec) **0.95** **1.10**

** V = < 2.0 FPS ** Stability Achieved



Overflow Spillway Calculations

Project: Proposed Warehouse Redevelopment
Job #: 3529-99-001
Location: Township of Cranbury
 Computed By: AG
 Checked By: RO
 Date: 5/9/2023

BIORETENTION BASIN 'C'

To Size Spillway:

- Assume complete blockage of the outlet control structure and no infiltration
- Route 2 & 10 year storm through basin assuming that the basin is filled with water up to the Emergency Spillway Elevation

| | 2 Year | 10 Year |
|---------------------------------|-------------|-------------|
| Spillway Width (ft.) | 20.00 | 20.00 |
| Spillway Elevation (ft.) | 101.50 | 101.50 |
| Flow through Spillway (Q) (cfs) | 1.910 | 3.100 |
| Water Surface Elevation (ft) | 101.61 | 101.66 |
| Depth of Flow (ft) | 0.11 | 0.16 |
| Area of Flow (A) (sf)* | 2.21 | 3.23 |

Velocity (V) = Q / A (ft/sec) **0.86** **0.96**

** V = < 2.0 FPS ** Stability Achieved

**STORMWATER COLLECTION SYSTEM
CALCULATIONS (PIPE SIZING)**



DYNAMIC ENGINEERING

Stormwater Collection System Calculations

Project: Proposed Warehouse Redevelopment

Job #: 3529-99-001

Location: 322 Cranbury Half Acre Road, Cranbury, NJ

Design Storm: 25 Year

Computed By: AMG

Checked By: RTO

Date: 11/28/2023

NOTES:

1) Design method used is Rational Method, unless otherwise noted.

2) Refer to Weighted Runoff Coefficient table for calculation of incremental areas and C values

| PIPE SECTION | | SUBCATCHMENT AREA | INCREMENTAL | | CUMULATIVE | TIME OF CONCENTRATION | | | I | PEAK RUNOFF | | PIPING INPUT | | | PIPING DATA | | |
|----------------|----------------|-------------------|-------------|----------|---------------|-----------------------|-------------------|----------------|---------|------------------|-----------------------|--------------|-------------|----------|---------------|---------------------|---------------------|
| FROM | TO | Area (Acres) | "C" | A x C Ac | A x C (acres) | Tc to Inlet (min) | Tc in Pipe (min.) | Final Tc (min) | (In/Hr) | Q to Inlet (CFS) | Q cum. for Pipe (CFS) | Dia. (In) | Length (Ft) | Man. "n" | Slope (ft/ft) | Pipe Capacity (cfs) | Pipe Velocity (fps) |
| Inlet 1 | Inlet 2 | 0.16 | 0.90 | 0.14 | 0.14 | 10.00 | 0.60 | 10.00 | 6.80 | 0.95 | 0.95 | 15 | 112.0 | 0.013 | 0.0035 | 3.82 | 3.11 |
| Inlet 2 | Inlet 3 | 0.16 | 0.90 | 0.14 | 0.28 | 10.00 | 0.73 | 10.60 | 6.68 | 0.94 | 1.87 | 15 | 136.0 | 0.013 | 0.0035 | 3.82 | 3.11 |
| Inlet 3 | MH 3A | 0.07 | 0.83 | 0.06 | 0.34 | 10.00 | 0.16 | 11.33 | 6.56 | 0.39 | 2.23 | 15 | 29.0 | 0.013 | 0.0035 | 3.82 | 3.11 |
| Roof Area A | MH 3A | 0.49 | 0.95 | 0.47 | 0.47 | 10.00 | 0.42 | 10.00 | 6.80 | 3.20 | 3.20 | 12 | 147.0 | 0.010 | 0.0100 | 4.63 | 5.90 |
| MH 3A | FES 4 | 0.00 | 0.00 | 0.00 | 0.81 | 10.00 | 0.06 | 11.49 | 6.56 | 0.00 | 5.31 | 18 | 12.0 | 0.013 | 0.0035 | 6.21 | 3.52 |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.0 | 0.000 | 0.0000 | 0.00 | 0.00 |
| Inlet 10 | Inlet 11 | 0.16 | 0.90 | 0.14 | 0.14 | 10.00 | 0.36 | 10.00 | 6.80 | 0.95 | 0.95 | 15 | 81.0 | 0.013 | 0.0050 | 4.57 | 3.73 |
| Roof Area B | Inlet 11 | 0.98 | 0.95 | 0.93 | 0.93 | 10.00 | 0.67 | 10.00 | 6.80 | 6.32 | 6.32 | 15 | 275.0 | 0.010 | 0.0100 | 8.39 | 6.84 |
| Inlet 11 | HW 12 | 0.09 | 0.87 | 0.08 | 1.15 | 10.00 | 0.10 | 10.67 | 6.68 | 0.53 | 7.68 | 24 | 30.0 | 0.013 | 0.0050 | 15.99 | 5.09 |
| 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.0 | 0.000 | 0.0000 | 0.00 | 0.00 |
| Ex B Inlet C1 | Inlet 31 | 0.12 | 0.95 | 0.11 | 0.11 | 10.00 | 0.21 | 10.00 | 6.80 | 0.75 | 0.75 | 18 | 64.0 | 0.013 | 0.0070 | 8.79 | 4.98 |
| Inlet 31 | Inlet 32 | 0.39 | 0.95 | 0.37 | 0.48 | 10.00 | 0.32 | 10.21 | 6.80 | 2.52 | 3.26 | 18 | 95.0 | 0.013 | 0.0070 | 8.79 | 4.98 |
| Inlet 32 | Inlet 33 | 0.22 | 0.95 | 0.21 | 0.69 | 10.00 | 0.25 | 10.53 | 6.68 | 1.40 | 4.61 | 18 | 76.0 | 0.013 | 0.0072 | 8.91 | 5.04 |
| Ex. B Inlet C2 | Inlet 33 | 0.23 | 0.95 | 0.22 | 0.22 | 10.00 | 0.20 | 10.00 | 6.80 | 1.50 | 1.50 | 18 | 80.0 | 0.012 | 0.0106 | 11.71 | 6.63 |
| Inlet 33 | Ex. B Inlet C3 | 0.22 | 0.95 | 0.21 | 1.12 | 10.00 | 0.38 | 10.78 | 6.68 | 1.40 | 7.48 | 18 | 114.0 | 0.013 | 0.0072 | 8.91 | 5.04 |
| Inlet 21 | HW 22 | 0.15 | 0.95 | 0.14 | 0.14 | 10.00 | 0.50 | 10.00 | 6.80 | 0.95 | 0.95 | 15 | 94.0 | 0.013 | 0.0035 | 3.82 | 3.11 |
| Roof Area C | FES 35 | 0.49 | 0.95 | 0.47 | 0.47 | 10.00 | 0.15 | 10.00 | 6.80 | 3.20 | 3.20 | 12 | 53.0 | 0.010 | 0.0100 | 4.63 | 5.90 |
| OCS 3 | Ex B Inlet C3 | 0.24 | 0.39 | 0.09 | 0.09 | 10.00 | 0.25 | 10.00 | 6.80 | 0.61 | 0.61 | 15 | 80.0 | 0.013 | 0.0100 | 6.46 | 5.27 |

RIP-RAP DESIGN CALCULATIONS

1904 Main Street, Lake Como, NJ 07719
 (732) 974-0198

Calculated By: AG
 Checked By: RTO

Conduit Outlet Protection Calculations

Rip Rap Pad # A

Design Parameters:

| | |
|--|----------|
| Design Storm Flow for 25 Year, Q | 5.31 cfs |
| Vertical Dimension of Outlet Pipe, D_o | 18 in |
| Horizontal Dimension of Outlet Pipe, W_o | 18 in |
| Tailwater Depth, TW^1 | 1.67 ft |

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 3.54$ cfs per foot

• **Case I: $TW < 1/2 D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$

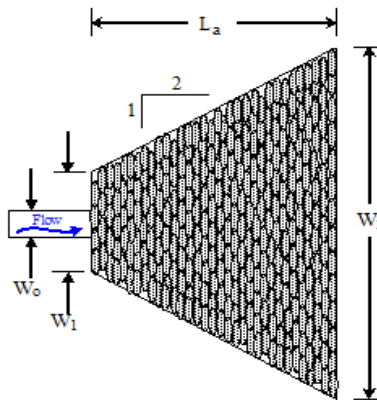
$L_a =$

Width, $W_1 = 3W_o =$

$W_1 =$

Width, $W_2 = 3W_o + L_a =$

$W_2 =$



• **Case II: $TW \geq 1/2 D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}} = 8.67$ ft

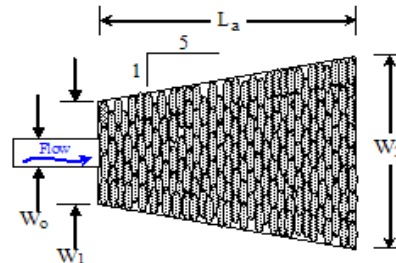
or $L_a = 9$ ft

Width, $W_1 = 3W_o = 4.5$ ft

or $W_1 = 5$ ft

Width, $W_2 = 3W_o + 0.4L_a = 7.97$ ft

or $W_2 = 8$ ft



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW} = 0.77$ in

$d_{50} = 6$ in

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

1904 Main Street, Lake Como, NJ 07719
 (732) 974-0198

Calculated By: AG
 Checked By: RTO

Conduit Outlet Protection Calculations

Rip Rap Pad # B

Design Parameters:

| | |
|--|----------|
| Design Storm Flow for 25 Year, Q | 7.68 cfs |
| Vertical Dimension of Outlet Pipe, D_o | 24 in |
| Horizontal Dimension of Outlet Pipe, W_o | 24 in |
| Tailwater Depth, TW^1 | 2.31 ft |

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 3.84$ cfs per foot

• **Case I: $TW < 1/2 D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$

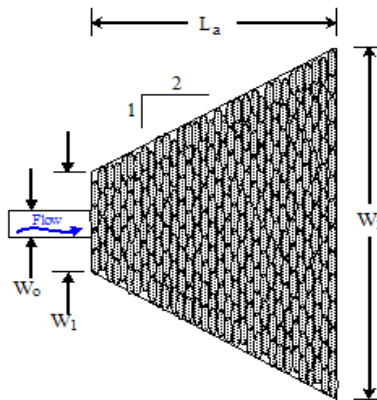
$L_a =$

Width, $W_1 = 3W_o =$

$W_1 =$

Width, $W_2 = 3W_o + L_a =$

$W_2 =$



• **Case II: $TW \geq 1/2 D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}} = 8.15$ ft

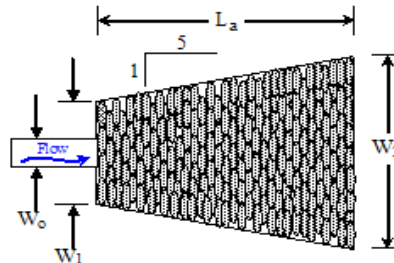
or $L_a = 9$ ft

Width, $W_1 = 3W_o = 6$ ft

or $W_1 = 6$ ft

Width, $W_2 = 3W_o + 0.4L_a = 9.26$ ft

or $W_2 = 10$ ft



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW} = 0.62$ in

$d_{50} = 6$ in

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

1904 Main Street, Lake Como, NJ 07719
 (732) 974-0198

Calculated By: AG
 Checked By: RTO

Conduit Outlet Protection Calculations

Rip Rap Pad # C

Design Parameters:

| | |
|--|----------|
| Design Storm Flow for 25 Year, Q | 0.95 cfs |
| Vertical Dimension of Outlet Pipe, D_o | 15 in |
| Horizontal Dimension of Outlet Pipe, W_o | 15 in |
| Tailwater Depth, TW^1 | 1.71 ft |

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 0.76$ cfs per foot

• **Case I: $TW < 1/2 D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$

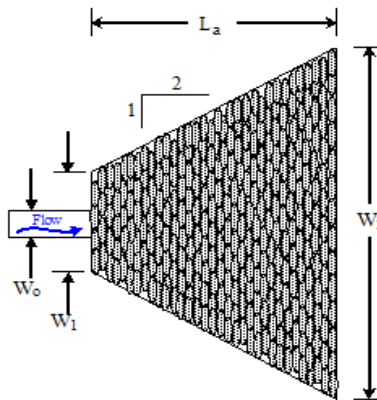
$L_a =$

Width, $W_1 = 3W_o =$

$W_1 =$

Width, $W_2 = 3W_o + L_a =$

$W_2 =$



• **Case II: $TW \geq 1/2 D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}} = 2.04$ ft

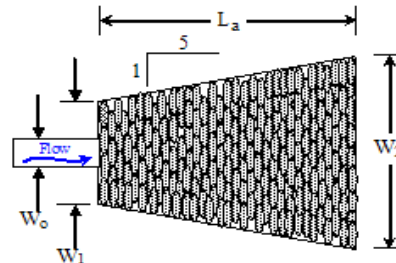
or $L_a = 6$ ft

Width, $W_1 = 3W_o = 3.75$ ft

or $W_1 = 4$ ft

Width, $W_2 = 3W_o + 0.4L_a = 4.57$ ft

or $W_2 = 6$ ft



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW} = 0.10$ in

$d_{50} = 6$ in

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

1904 Main Street, Lake Como, NJ 07719
 (732) 974-0198

Calculated By: AG
 Checked By: RTO

Conduit Outlet Protection Calculations
 Rip Rap Pad # (Roof)

Design Parameters:

| | |
|--|----------|
| Design Storm Flow for 25 Year, Q | 3.20 cfs |
| Vertical Dimension of Outlet Pipe, D_o | 12 in |
| Horizontal Dimension of Outlet Pipe, W_o | 12 in |
| Tailwater Depth, TW^1 | 1.71 ft |

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 3.20$ cfs per foot

• **Case I: $TW < 1/2 D_o$**

Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$

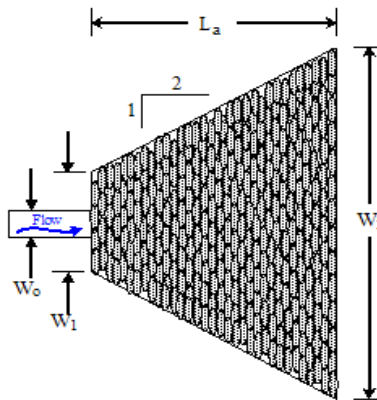
$L_a =$

Width, $W_1 = 3W_o =$

$W_1 =$

Width, $W_2 = 3W_o + L_a =$

$W_2 =$



• **Case II: $TW \geq 1/2 D_o$**

Apron Length, $L_a = \frac{3q}{D_o^{1/2}} = 9.6$ ft

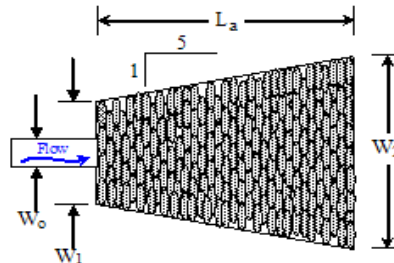
or $L_a = 10$ ft

Width, $W_1 = 3W_o = 3$ ft

or $W_1 = 3$ ft

Width, $W_2 = 3W_o + 0.4L_a = 6.84$ ft

or $W_2 = 7$ ft



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW} = 0.66$ in

$d_{50} = 6$ in

Notes:

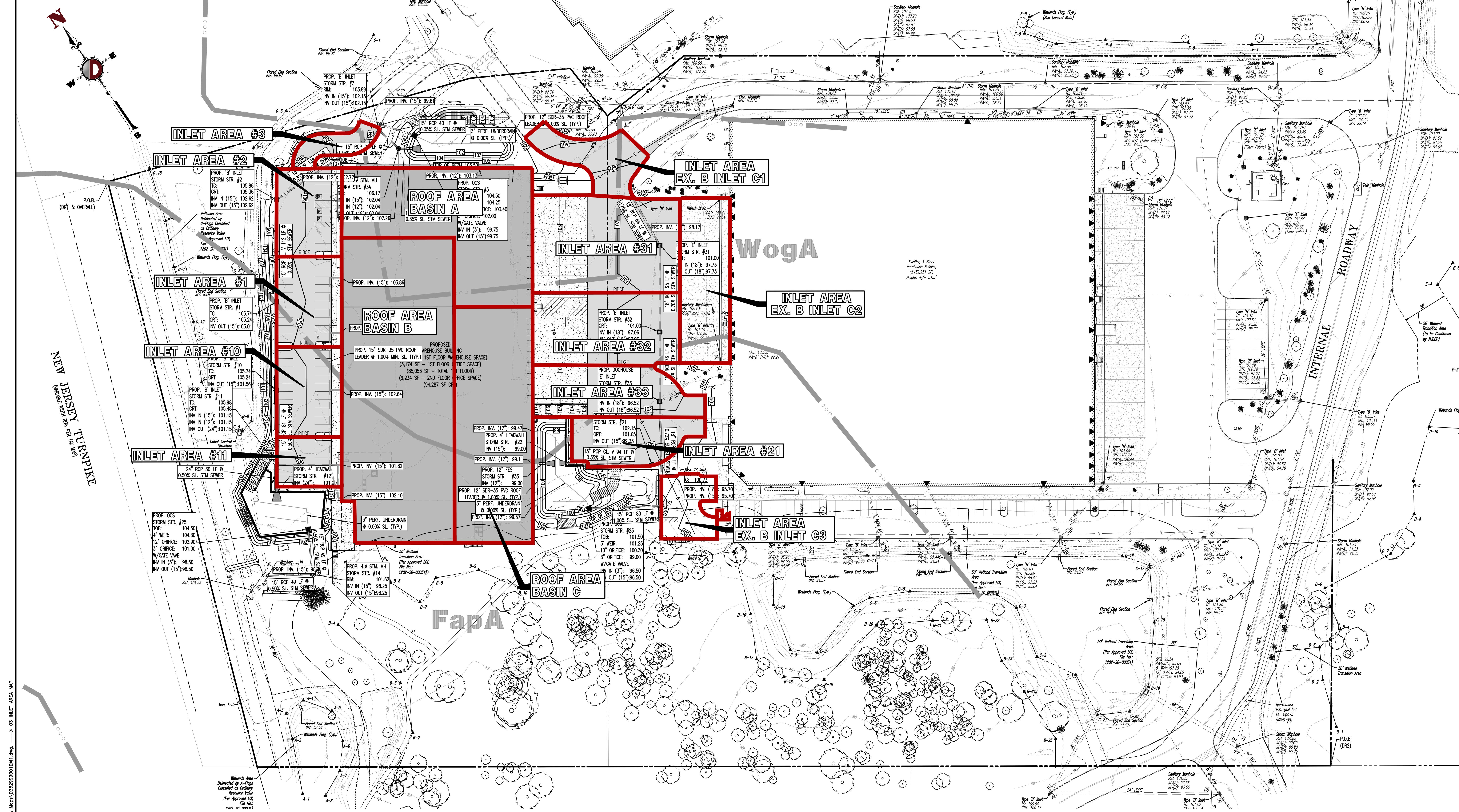
- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

**STORMWATER BASIN AREA INVESTIGATION
PREPARED BY DYNAMIC EARTH, LLC
(UNDER SEPARATE COVER)**

DRAINAGE AREA MAPS



Project: 11/29/23 - 436 PM, By: dbyoung, Product: Ver: 24.2a (LMS Tech) - 11/29/23, Location: C:\Users\dbyoung\OneDrive\Documents\Projects\3529 Army Associates, Inc\3529-01, cransbury\DWG\01_Maps\035290001\DWG.dwg, Date: 03. INLET AREA MAP
 Copyright © 2023 - DYNAMIC ENGINEERING CONSULTANTS, PC - ALL RIGHTS RESERVED

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DYNAMIC ENGINEERING
 LAND DEVELOPMENT CONSULTING • PERMITTING • GEOTECHNICAL • ENVIRONMENTAL • SURVEY • PLANNING & ZONING

1904 Main Street
 Lakewood, CO 80401
 Phone: 303.974.1118
 Fax: 303.974.1119
 www.dynamiceng.com

| | | |
|--|---|--|
| INLET AREA MAP PROJECT: ARNY ASSOCIATES, LLC PROPOSED WAREHOUSE REDEVELOPMENT BLOCK 8, LOTS 1.02 & 1.03 322 CRANBURY HALF ACRE ROAD TOWNSHIP OF CRANBURY, MIDDLESEX COUNTY, NEW JERSEY | | JOB No: 3529-99-001 DATE: 04/27/2023 SCALE: (H) 1"=40' (V) 1"=40' SHEET No: 3 OF 3 |
| DRAWN BY: DJB DESIGNED BY: CTD CHECKED BY: JEH | JAMES E. HENRY PROFESSIONAL ENGINEER NEW JERSEY LICENSE No. 49266 | JOSHUA M. SEWALD PROFESSIONAL ENGINEER NEW JERSEY LICENSE No. 52908 |



**STORMWATER MANAGEMENT, CONVEYANCE
AND WATER QUALITY REPORT, PREPARED BY
LANGAN ENGINEERING**

STORMWATER MANAGEMENT, CONVEYANCE, AND WATER QUALITY REPORT

Half Acre Road
Block 8, Lot 1.03
Cranbury, Middlesex County
New Jersey

Prepared For:

JERC Partners IV, LLC
Mancran Building, LLC
Woodmont Half Acre, LLC
Tenants-in-Common
c/o J.G. Petrucci Co., Inc.
171 Route 173, Suite 201
Asbury, NJ 08802

Prepared By:

Langan Engineering and Environmental Services, Inc.
River Drive Center 1
Elmwood Park, NJ 07407
NJ Certificate of Authorization No: 24GA27996400



Richard Burrow, P.E.
New Jersey License No. 24GE04459300

Revised 18 November 2005
17 August 2005
1957601



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INTRODUCTION

This report presents the results of the stormwater management and conveyance system design for Block 8, Lot 1.03 at the Cranbury Middle Campus. The Cranbury Middle Campus is located on Half Acre Road in the Township of Cranbury, New Jersey. The proposed stormwater system was designed in accordance with the following:

- Land Development Ordinance of the Township of Cranbury,
- Delaware and Raritan Canal Commission "Storm Drainage and Water Quality Impact Review" Criteria,
- NJDEP Technical Standards for Stream Encroachment,
- N.J.A.C. 7:8 and the New Jersey Stormwater Best Management Practices Manual, and
- Standards for Soil Erosion and Sediment Control in New Jersey.

DESIGN METHODOLOGY

Stormwater Management Design

The stormwater management system design was prepared using the USDA Soil Conservation Service (SCS) Publication TR-55 "Urban Hydrology for Small Watersheds" for calculating runoff and peak discharges.

Values for area, curve number (CN), and time of concentration (Tc) were calculated for each watershed. The curve number is a land sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. The time of concentration is defined as the time for runoff to travel from the hydraulically most distant point of the watershed to a point of interest.

The design storm used for calculations is the 24-hour SCS Type III cumulative rainfall distribution. The Cranbury Township Land Development Ordinance requires analysis of the 2, 10, and 100-year storms.

Rainfall hydrographs developed from the SCS TR-55 method for proposed conditions were routed through the stormwater management basins using level pool routing techniques.

Stormwater Conveyance Design

The storm sewer conveyance system was analyzed using the Rational Method for estimating runoff for a 25-year design storm. The pipe sizes determined to be adequate for the runoff computed have been increased by one standard pipe size for all pipes less than 30 inches in diameter.

The site was divided into sub-areas, each contributing runoff to an individual catch basin inlet or roof drain. A value for area, time of concentration, and a runoff coefficient was calculated for each contributing sub-area. Values of time of concentration were chosen based on land cover and slope of the flow path from the hydraulically most distant point in the sub-area to the appropriate inlet. An average runoff coefficient was chosen based on the percentage of each type of land cover using the following coefficients:

| LAND COVER | C |
|--------------------|----------|
| Grass / Landscaped | 0.25 |
| Paved | 0.99 |
| Roof | 0.99 |

Rainfall intensities were taken from the New Jersey Department of Environmental Protection Division of Water Resources "Rainfall Intensity Curves" for Trenton, NJ. Storm drainage pipes were then sized based on calculated flows using Manning's Equation and were verified by solving for the hydraulic grade line.

Water Quality Design

Stormwater management measures for the site have been designed using the pollutant removal requirements set forth in the NJDEP Stormwater Management Rules (N.J.A.C. 7:8, Subchapter 5). The NJDEP rules call for an 80% reduction of the post-construction load of total suspended solids (TSS) in stormwater runoff generated from the water quality design storm as compared to the pre-construction load. The water quality design storm consists of 1.25 inches of rainfall in two hours having a variable distribution as shown in Figure 4.

EXISTING CONDITIONS

Existing Site Description

The Block 8, Lot 1.03 site is zoned Light Industrial. The site is located within the Cranbury

Middle Campus and is surrounded by Lots 1.01, 1.02 and 1.03. Prior to a subdivision in 2004, Lot 1.03 was part of Block 8, Lots 1 and 2. Lot 1.03 encompasses 14.097 acres within the larger Cranbury Middle Campus tract of 115.486 acres. The Cranbury Middle Campus is bound by the New Jersey Turnpike to the west, Cranbury Brook to the south, Conrail railroad tracks to the east, and Half Acre Road to the north.

The topography of Lot 1.03 is relatively flat, as shown on the Existing Drainage Area Plan (Drawing 29.01). The overall Cranbury Middle Campus site elevations slope from approximately el. 110 adjacent to Half Acre Road on the north side of the site to el. 90 along the Cranbury Brook watercourse on the south side of the site.

Lot 1.03 is occupied by an existing 160,185 sq ft warehouse building with loading docks on the east and west sides of the building and a loop road around the southern side. A 680,747 sq ft warehouse is under construction on Lot 1.01. The existing 36,000 sq ft Carter Research Building occupies Lot 1.02.

The majority of Lot 1.03 is developed including the building, loading docks and driveways. The southern 1/3 of the lot is wooded.

Existing Drainage

The Cranbury Middle Campus consists of 3 main watersheds. Pre-Development Watershed A is located on the western side of the Campus and drains to Cranbury Brook through a man-made ditch. Watershed A contains 24.32 acres having a weighted Curve Number (CN) of 71 and a time of concentration (Tc) of 15 minutes. Pre-Development Watershed B is located on the central part of the site and drains to Cranbury Brook via a 48" pipe. Watershed B contains 31.18 acres having a weighted CN of 74 and a Tc of 30 minutes. Pre-Development Watershed C is located on the eastern side of the site and drains via a small stream to Cranbury Brook. Watershed C contains 32.71 acres having a weighted CN of 67 and a Tc of 50 minutes.

The SCS TR-55 method was used to determine existing runoff hydrographs for the 2, 10 and 100 year, 24-hour storms for the watersheds. A pre-existing site condition of woods and agricultural areas was considered for the calculation of peak discharges. The land cover for the pre-existing condition was determined from the 1953 USGS topographic map. Wooded areas were considered to be in good condition, while agricultural areas were considered to be contoured and terraced and in good condition. The peak discharges are summarized below. Calculations are provided in Appendix A.

PRE-EXISTING PEAK DISCHARGES

| Storm Frequency (year) | Pre-Existing Watershed A (cfs) | Pre-Existing Watershed B (cfs) | Pre-Existing Watershed C (cfs) | Pre-Existing Combined* (cfs) |
|------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------------|
| 2 | 17.56 | 24.31 | 11.04 | 47.67 |
| 10 | 46.99 | 59.87 | 34.27 | 128.20 |
| 100 | 84.48 | 103.65 | 64.90 | 229.36 |

*Calculated by the method of hydrograph addition from Watersheds A, B and C.

PROPOSED CONDITIONS

Proposed Development

The Lot 1.03 improvements include adding loading docks, car parking and driveways. A new stormwater conveyance system and a constructed stormwater wetland basin will be constructed to serve the development.

A 680,747 sq ft warehouse is under construction on Lot 1.01. A new parking lot is proposed for the Carter Research Building on Lot 1.02. A 131,448 sq ft warehouse building is proposed on Lot 1.04. The Lot 1.01 and 1.02 improvements are anticipated to be completed before the stormwater conveyance system and detention basin are constructed on Lot 1.03. The Lot 1.03 improvements are expected to be completed before any construction on Lot 1.04.

Proposed Watershed Description

The points of analysis for the three proposed watersheds are shown on Drawing 29.02. Point of Analysis A includes the outflow from Stormwater Management Basins 3 and 5 and an undetained area. Point of Analysis B includes the outflow from Stormwater Management Basins 1, 2 and 4. Point of Analysis C includes an undetained area. Calculations are provided in Appendix B.

Proposed Stormwater Management

The SCS TR-55 method was used to determine peak discharges for the 2, 10 and 100 year, 24-hour storms for the proposed watersheds. The runoff from the developed areas will be conveyed to 5 stormwater basins via the underground stormwater conveyance system. Basins 1, 2 and 3

will be constructed as part of the Lot 1.01 and 1.02 development. Basin 4 will be constructed to serve the Lot 1.03 improvements. Basin 5 will be constructed when the building on Lot 1.04 is constructed. The following summarizes the proposed peak discharges to the basins:

SUMMARY OF PROPOSED PEAK DISCHARGES TO DETENTION BASINS

| Storm Frequency (year) | Detention Basin 1 (cfs) | Detention Basin 2 (cfs) | Detention Basin 3 (cfs) | Detention Basin 4 (cfs) | Detention Basin 5 (cfs) |
|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 2 | 7.34 | 42.92 | 34.53 | 35.40 | 15.34 |
| 10 | 14.28 | 73.54 | 67.82 | 63.31 | 25.56 |
| 100 | 21.98 | 106.74 | 104.94 | 93.65 | 36.66 |

The detention basin routings through Basins 1, 2, 3 and 5 remain unchanged from the previous approvals for Lots 1.01, 1.02 and 1.04. A summary of the new detention basin routing for Basin 4 is provided below. Calculations are provided in Appendix C.

Detention Basin 4

The 15.54 acre drainage area for Basin 4 has a composite CN of 90 and a time of concentration of 9 minutes. The outlet structure consists of a 3 inch diameter orifice and a 5 ft wide overflow weir. The following provides a summary of the routing through Basin 4.

STORMWATER MANAGEMENT BASIN 4 ROUTING

| Storm Frequency (year) | Peak Outflow (cfs) | Maximum Elevation (ft) | Peak Storage (cf) |
|------------------------|--------------------|------------------------|-------------------|
| 2 | 0.63 | 98.61 | 117,751 |
| 10 | 9.71 | 99.34 | 146,690 |
| 100 | 30.54 | 100.28 | 187,134 |

Per the Delaware and Raritan Canal Commission "Storm Drainage and Water Quality Impact Review" criteria the peak discharge from the site (not including off-site areas draining through the site) for the 2, 10 and 100 year storm events must be reduced by 50, 25 and 20 percent respectively from pre-existing to post-development conditions. The Canal Commission criteria is more stringent than the Township of Cranbury standards, which require the post-development peak rate of runoff to be no greater than the pre-development peak rate of runoff.

The outflow hydrograph for Point of Analysis A was created by summing the outflow hydrographs for Basins 3 and 5 and Undetained Watershed A. They were summed by hydrograph addition, which accounts for varying times to peak for each hydrograph. The inflow hydrograph for the off-site area that drains to Basin 3 has not been subtracted from the total outflow hydrograph because required peak reductions can be met without this allowance. The outflow hydrograph for Point of Analysis B was created by summing the outflow hydrographs for Basins 1, 2 and 4. The outflow hydrograph for Point of Analysis C is from Undetained Watershed C. The peak flows for the 2, 10 and 100 year storm events have been reduced at each of the analysis points.

Due to the close proximity of the three analysis points on Cranbury Brook, the peak discharge reductions have been calculated for the combined hydrograph. The table below shows the comparison of peak discharges for the pre-existing condition and the proposed developed condition.

SUMMARY OF PEAK DISCHARGE REDUCTIONS

| Storm Frequency (year) | Pre-Existing Peak Discharge (cfs) | Proposed Peak Discharge (cfs) | Allowable Peak Discharge (cfs) | Percent Reduction |
|-------------------------------|--|--------------------------------------|---------------------------------------|--------------------------|
| 2 | 47.67 | 17.81 | 23.83 | 62% |
| 10 | 128.20 | 57.77 | 96.15 | 54% |
| 100 | 229.36 | 125.83 | 183.49 | 45% |

The proposed peak discharges from the site for the 2, 10 and 100 year storm events are less than the allowable peak discharges, therefore the Delaware and Raritan Canal Commission "Storm Drainage and Water Quality Impact Review" criteria have been met.

Proposed Water Quality

The water quality standards set forth in the NJDEP Stormwater Management Rules (NJAC 7:8, Subchapter 5) and related Best Management Practices provide the basis for the water quality design. Basin 4 has been designed using the variable intensity water quality storm shown in Figure 4.

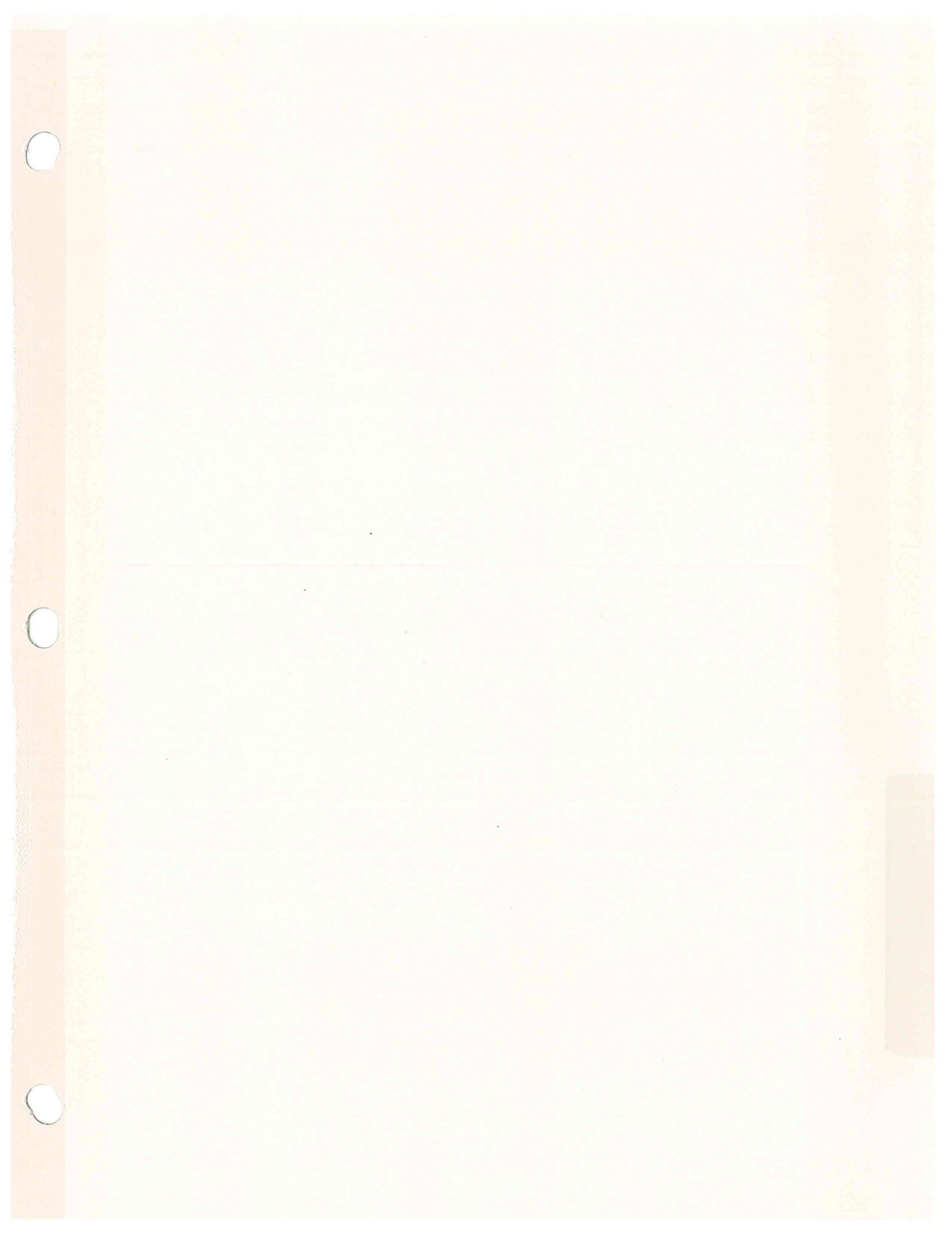
Detention Basin 4 Subwatershed

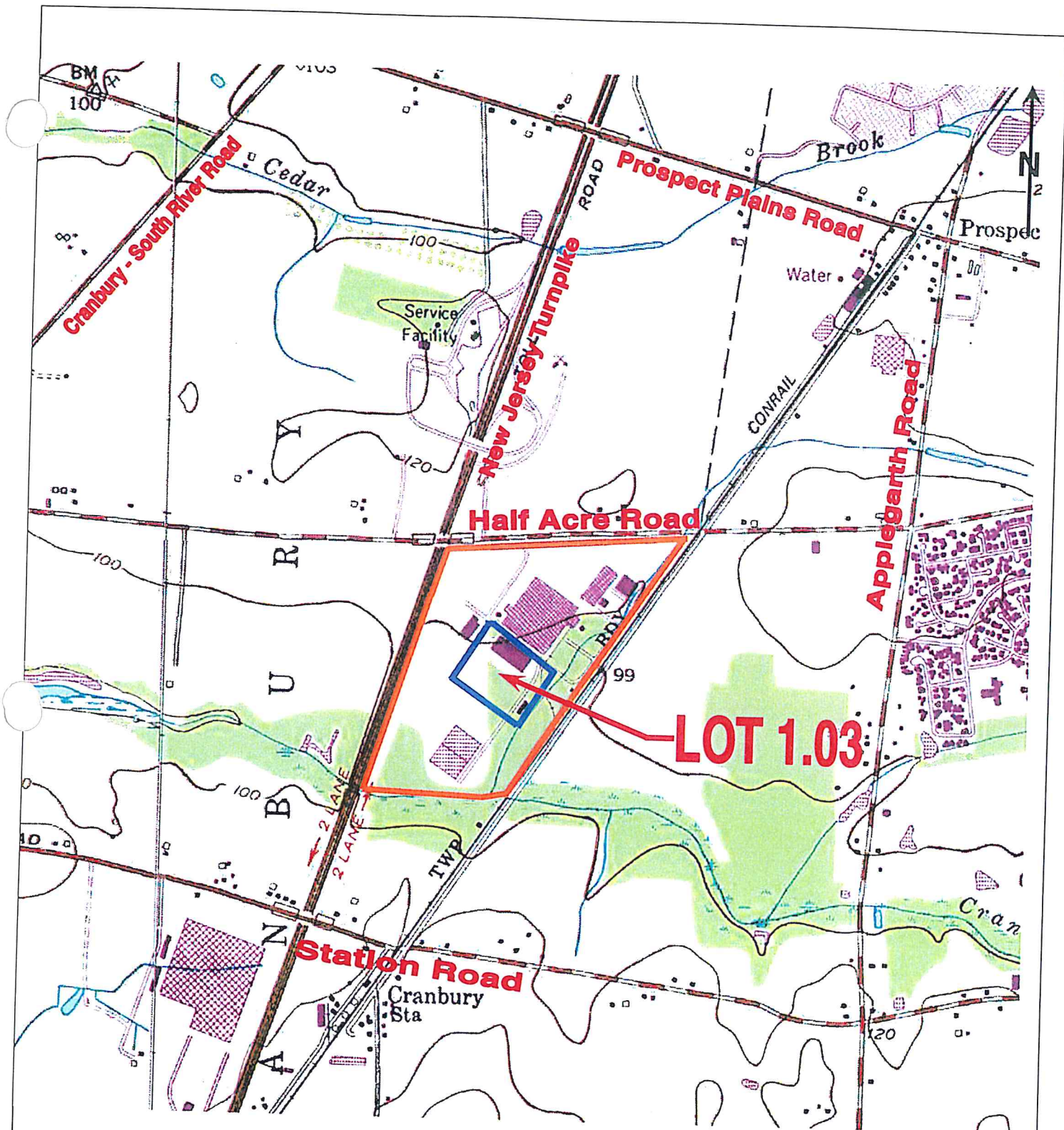
Detention Basin 4 will be constructed as an Extended Detention Wetland. The design criteria given in the New Jersey Best Management Practice Manual Standard for Constructed Stormwater Wetlands have been followed in the design of the wetland basin. The basin has been designed so that at least 10% of the water quality storm volume remains 24 hours after the peak basin water surface and runoff storage volume have occurred.

The Extended Detention Wetland will provide 90% TSS removal. Basins 1, 2 and 4 share a common outfall pipe. The weighted average for TSS removal for the outfall point is 85%. Calculations are provided in Appendix D.

Proposed Stormwater Conveyance

Stormwater pipes flowing to the Detention Basin 4 have been designed to convey the flows resulting from a 25-year storm event. In accordance with the Township of Cranbury Land Development Ordinance, all proposed stormwater pipes less than 30 inches in diameter have been oversized by one standard pipe size. Hydraulic calculations are provided in Appendix E. The drainage sub-areas are shown on Drawing 29.03.





MAP REF: HIGHTSTOWN AND JAMESBURG, N.J. USGS QUADRANGLE MAPS, 1981



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Engineering and Environmental Services, Inc.

- ELMWOOD PARK, NJ - NEW YORK, NY - MIAMI, FL - PHILADELPHIA, PA -
- DOYLESTOWN, PA - NEW HAVEN, CT -

SITE LOCATION MAP

BLOCK 8, LOT 1.03

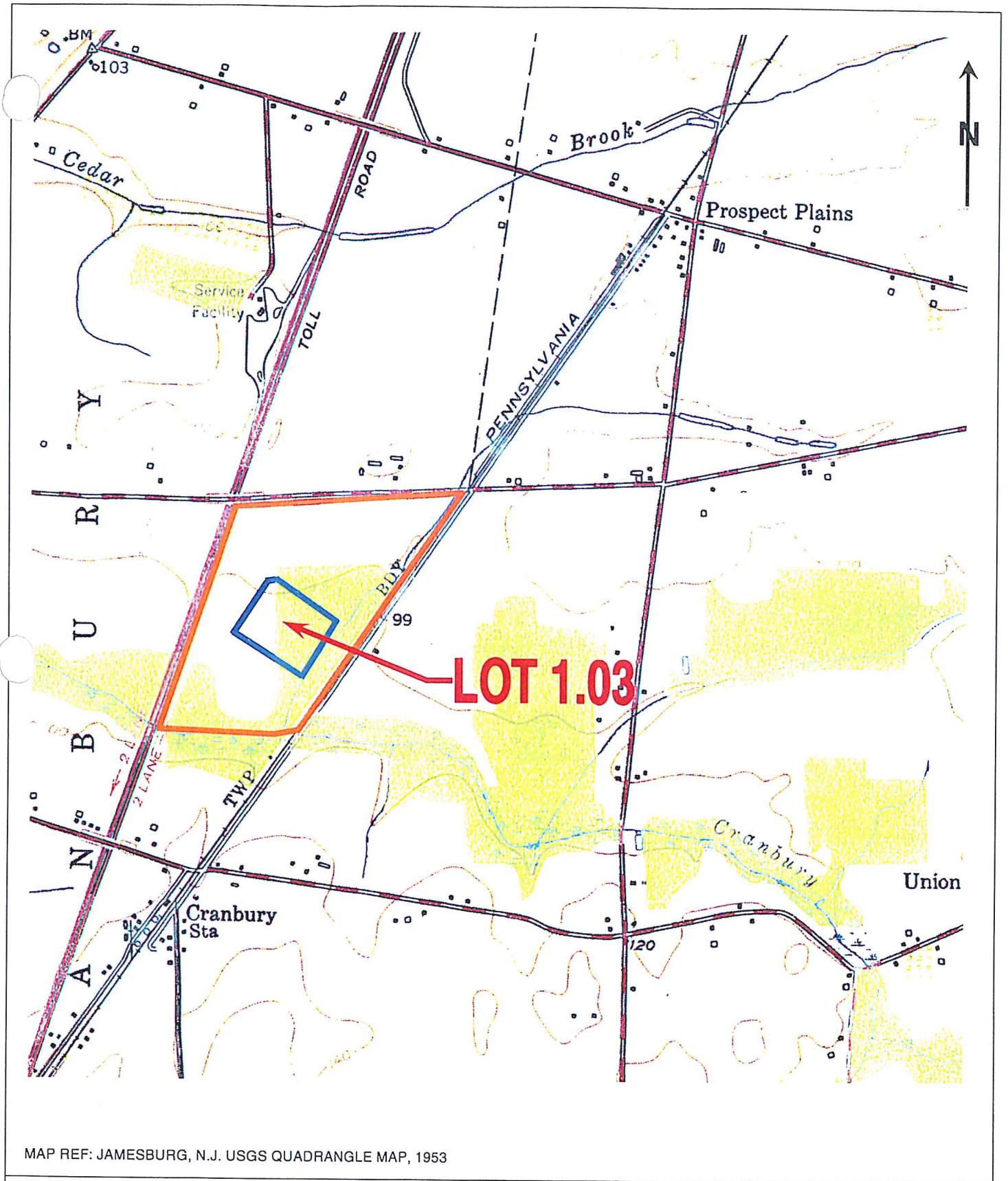
CRANBURY

NEW JERSEY

Project
1957601

SCALE
1"=1400'

FIGURE NO.
1



MAP REF: JAMESBURG, N.J. USGS QUADRANGLE MAP, 1953

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 - ELMWOOD PARK, NJ - NEW YORK, NY - MIAMI, FL - PHILADELPHIA, PA -
 - DOYLESTOWN, PA - NEW HAVEN, CT -

| | | |
|-----------------------------------|------------|------------|
| HISTORICAL USGS MAP (1953) | | |
| BLOCK 8, LOT 1.03 | | |
| CRANBURY | NEW JERSEY | |
| Project | SCALE | FIGURE NO. |
| 1957601 | 1"=1400' | 3 |

NJDEP Water Quality Design Storm Distribution

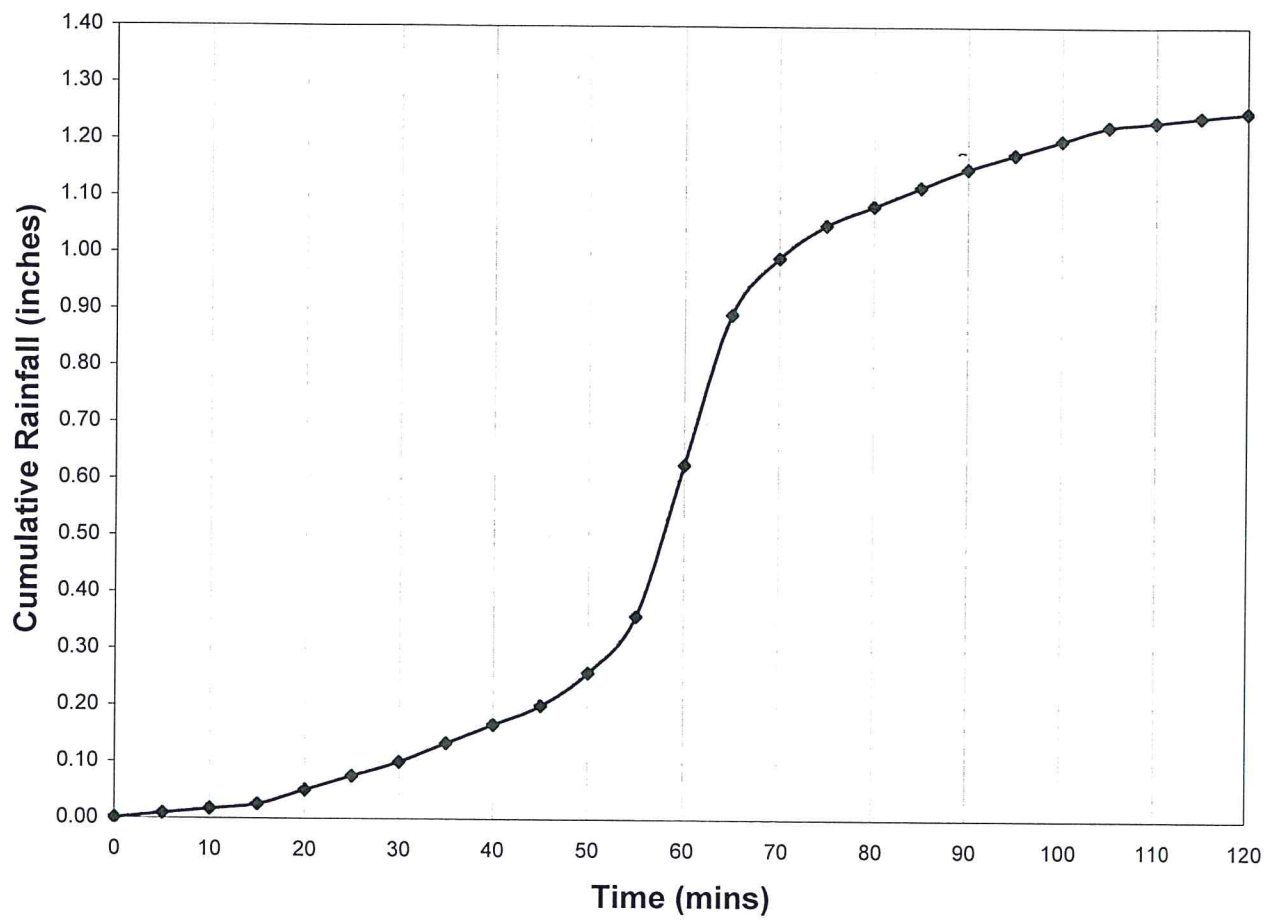
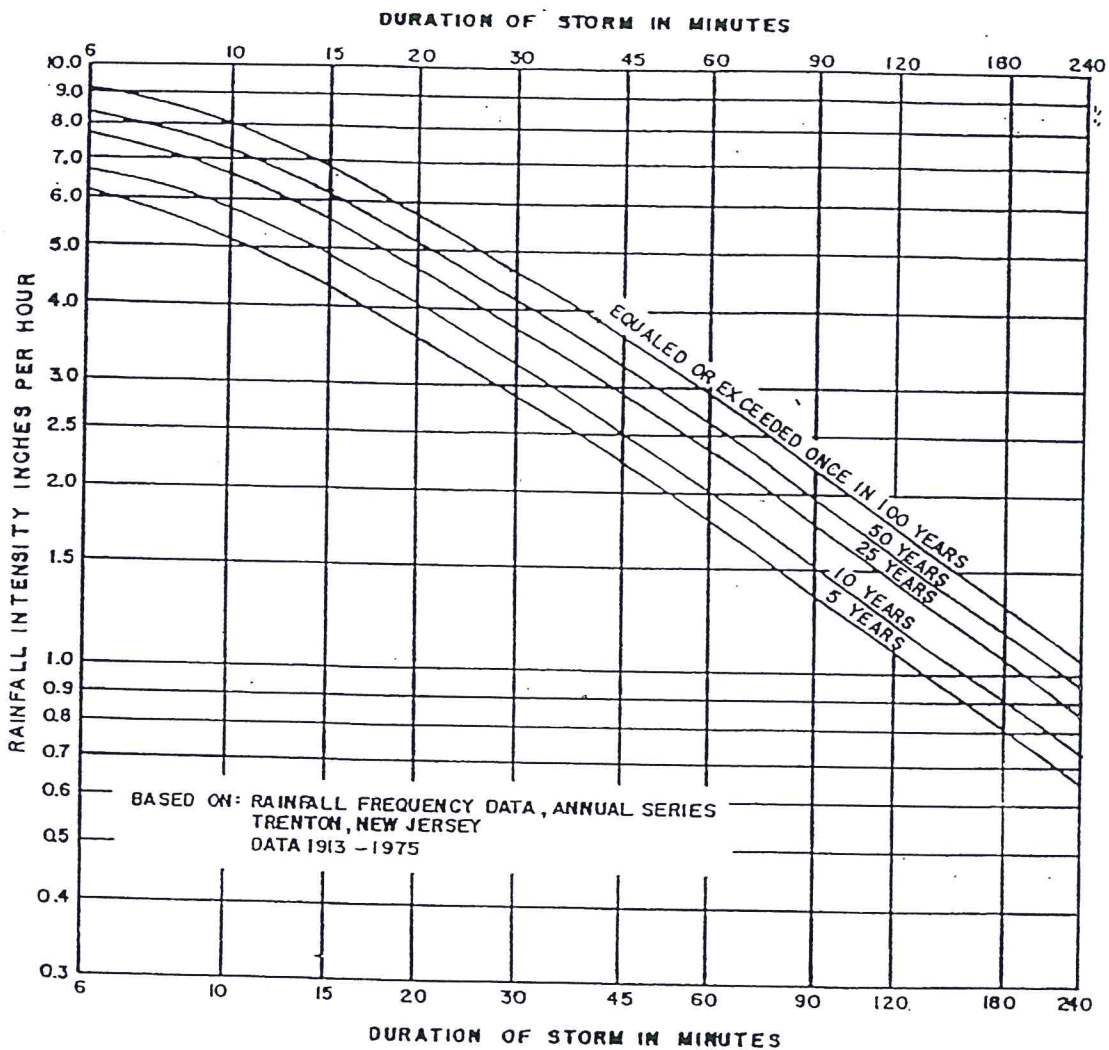


FIGURE 4

RAINFALL INTENSITY CURVES



STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
FLOOD PLAIN MANAGEMENT 1976

FIGURE 5

MIDDLESEX COUNTY 24-HOUR RAINFALL
(inches)

| <u>1 yr</u> | <u>2 yr</u> | <u>5 yr</u> | <u>10 yr</u> | <u>25 yr</u> | <u>50 yr</u> | <u>100 yr</u> |
|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| 2.7 | 3.3 | 4.3 | 5.2 | 5.9 | 6.4 | 7.5 |

FIGURE 6