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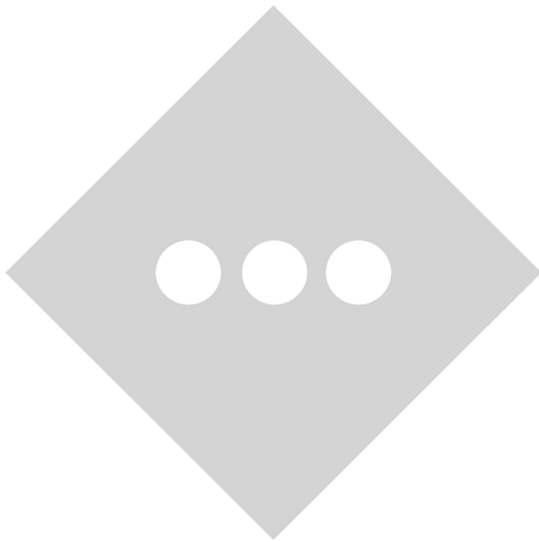
STORMWATER MANAGEMENT REPORT

**PROPOSED 7-STORY MIXED-USE BUILDING
& 8-STORY RESIDENTIAL BUILDING
BLOCK 48, LOTS 2, 2.01 & 2.02
101 SOUTH KING STREET
CITY OF GLOUCESTER CITY
CAMDEN COUNTY, NEW JERSEY**

**PREPARED FOR:
MERIDIA GLOUCESTER CITY 101, URBAN RENEWAL, LLC**

**PREPARED BY:
STONEFIELD ENGINEERING & DESIGN, LLC
92 PARK AVENUE
RUTHERFORD, NJ**

**REPORT DATE:
APRIL 28, 2023**



**ARTHUR KUYAN, PE, CME
NJ PE LICENSE #55741**

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1.0 PROJECT DESCRIPTION

Meridia Gloucester City 101, Urban Renewal, LLC is proposing to develop Block 48, Lots 2, 2.01, & 2.02 commonly known as 101 South King Street, Gloucester City, NJ (herein referred to as the “project site”) to accommodate a 7-story mixed-use building with up to 7,000 SF of restaurant and an 8-story multi-family building; the buildings will consist of 364 dwelling units. Additional improvements include parking garage facilities, surface parking, a driveway promenade with roundabout and arch features, connections to the Delaware River walk, utility services, stormwater conveyance system, lighting, and landscaping.

The property is located within the Freedom Pier Redevelopment Plan. The proposed development is bounded by the Delaware River to the west, industrial to the north, South King Street to the east, and a residential use to the south. The site will be accessed via one full movement driveway. Refer to **APPENDIX A** for project maps of the project site.

The project site is 429,936 SF (9.870 acres), the extent of land disturbance is 213,902 SF (4.911 acres), and 1,280 SF (0.294 acres) of new impervious surfaces will be created by the project. In addition, the project proposes the removal of 5,410 SF (0.124 acres) of motor vehicle surface area. The overall drainage area was modeled as less than the total project site area as a large portion of the site consists of the Delaware River and river walk which are to remain unchanged.

This Report has been prepared to analyze the potential stormwater runoff impacts of the proposed project site and outline proposed measures to conform to the stormwater management regulations set forth by the City of Gloucester, Camden Soil Conservation District, Camden County, the New Jersey Administrative Code (NJAC), and the New Jersey Department of Environmental Protection (NJDEP).

2.0 EXISTING CONDITIONS

EXISTING SITE DEVELOPMENT

The project site fronts South King Street to the east. The project site has been historically developed with one existing building and parking areas as well as a river walk along the Delaware River. The existing building is a four-story office building with a parking area. The remainder of the site contains asphalt parking areas in disrepair and concrete pavement in disrepair as well as open space lawn area. The proposed site will be subdivided and the existing building and parking area servicing the building will remain as part of the proposed development. An Aerial Map depicting the existing site conditions can be found in **APPENDIX A**.

EXISTING TOPOGRAPHY

The site topography ranges from 0% to 3% with the high point located at the center of the property near the existing circular monument. The eastern portion of the property sheet flows to the South King Street right-of-way and is collected by existing inlets and discharged into the stormwater conveyance system. The western portion of the property drains towards the Delaware River. Sheet flow within South King Street drains to the storm inlets situated near the driveway serving the project site. On-site topography slopes south and west toward the Delaware River or toward South King Street and neighboring properties that ultimately discharge toward South King Street. Grades on site generally range from 0% to 3% within the previously developed areas & open space and the slope differs throughout the project site as it approaches the Delaware River and South King Street.

PROJECT SITE SOILS

Soil mapping was obtained from the National Resource Conservation Service (NRCS) for the project site and immediate area. Generally, the project site on land is underlain with Upland Land while the rest of the project area is water from the Delaware River. Overall, the soils drain poorly, and runoff flows overland directly to the Delaware River or South King Street. The table below provides a summary of soils for the project site:

TABLE 1: NRCS SOIL MAPPING RESULTS

Soil Unit Code	Soil Description	Approximate Project Coverage	Drainage Class	Hydrologic Soil Group
UR	Urban Land	84.7%	Somewhat poorly drained	B/D*
Water	N/A	15.3%	N/A	N/A

***UR does not have a pre-determined hydraulic soil group due to high variability in the historic fill material utilized. As such, these soils are analyzed as HSG B under pre-existing conditions and HSG D under post-development conditions as outlined in Chapter 12 of the NJDEP BMP Manual.**

Additional information regarding the NRCS soil mapping can be found in **APPENDIX B**.

A Report of Supplemental Geotechnical Investigation was performed by JZN Engineering, PC (report dated March 2022), which consisted of 20 soil borings being performed on-site. The soils on-site primarily consisted of coarse to fine sand with varying amounts of silt ranging from depths of 0.0 to 25.0 feet below grade.

WATERSHED / RECEIVING WATERS – TMDL DESIGNATION

Under existing conditions, the site drains to the Delaware River or the conveyance system within County Route 631 that ultimately discharges to the Delaware River (State Waterbody ID: NJDelaware River 16). The watershed for the development is part of the Woodbury / Big Timber / Newton Creeks (State Waterbody ID: NJ02040202120090-01) as defined by the United States Environmental Protection Agency for Community Waterway Mapping.

EXISTING ENVIRONMENTAL INVENTORY

Based on the effective FEMA flood insurance rate mapping (FEMA Map #34007C0019F & #34007C0038F Issued 08/17/2016), the site is located within Zone AE and Zone X and has a design flood elevation of 10 feet. The FEMA Map can be found in **APPENDIX A** of this Report.

There are no federal (US Army Corps of Engineers) and/or state (NJDEP) regulated freshwater wetlands near the project site. Impacts on nearby freshwater wetlands are not anticipated with the proposed development. Per the NJDEP's NJ-GeoWeb, no endangered species reside within the site's land area. The Delaware River is a habitat for the following species: Shortnose Sturgeon, Atlantic Sturgeon, Great Blue Heron, and Peregrine Falcon.

The project will be constructed within the former Coast Guard Station site, considered a historic property per the NJDEP's NJ-GeoWeb service. An archeological Data Recovery Plan was performed by E2 Project Management LLC uncovering additional archaeological resources on the site relating to Native American human burials, the former Colonel Joseph Ellis homestead, and the former United States Immigration Station. Additional environmental information is included in the Environmental Impact Statement, dated April 25, 2023, prepared by this office.

3.0 PROPOSED CONDITIONS

PROPOSED SITE DEVELOPMENT

The proposed development will consist of a 7-story mixed-use building and 8-story residential building with 364 total dwelling units, 5,000 SF of restaurant spaces, and 5,000 SF of retail spaces. Additional improvements include parking garage facilities, surface parking, a driveway promenade with roundabout and arch features, connections to the Delaware River walk, utility services, stormwater conveyance system, lighting, and landscaping. The site will be accessed via one full movement driveway from South King Street. Refer to **APPENDIX A** for a half-size Overall Site Plan depicting the proposed project improvements.

PROPOSED TOPOGRAPHY

Project site topography and drainage patterns will generally remain similar to existing conditions; however, due to the need for more commercially / residentially friendly, ADA compliant grades (0.5% to 5.0%) are proposed on-site. Buildings at varying elevations and varying finished floors, ramps, and walls will be implemented through the project to provide safe changes in grades and elevate the project above the flood hazard elevation.

ANTICIPATED ENVIRONMENTAL INVENTORY IMPACTS

Soils on-site will be unaffected by the proposed development, and existing soil conditions have been considered when designing the stormwater management practices that will be utilized. Per NJDEP most of the site is located within an area of historic fill where site soils have been historically contaminated due to previous operations.

Existing vegetation to be removed on-site will predominantly be in the southern and western sections of the site. Vegetation will be undisturbed near the existing commercial building to the north. A landscaping plan has been designed for the proposed development inclusive of new grasses and street trees.

Archaeological resources within the site will be filled above the existing grade to preserve the site for possible future archaeological investigations. Special Areas of concern identified by the Archeological Data Recovery Plan by E2 Project Management LLC will be excavated and examined prior to construction.

4.0 STORMWATER MANAGEMENT METHODOLOGY & PARAMETERS

HYDROLOGIC METHODOLOGY

The analysis program “HydroCAD” Version 10.20-2g by HydroCAD Software Solutions was utilized to calculate and plot the runoff hydrographs. The program incorporates the time of concentration, C values, rainfall data, and project drainage areas to calculate the runoff characteristics. The existing and proposed drainage areas have been analyzed utilizing Intensity-Duration-Frequency data obtained from NOAA for the project area; specifics of the rainfall distribution can be found in **APPENDIX C**. Additional key variables utilized in the analysis include:

TABLE 2: HYDROCAD DESIGN VARIABLES

Variable	Input	Variable	Input
Runoff Calculation Method	SCS TR-20	NRCS Rainfall Frequency Data Set	Camden
Pervious/Impervious CN Calculations	Separate	Storm Intervals (Year Events)	2, 10, 100
Stage-Storage Relationship	Dynamic	Storm Duration	24 Hours
Storm Curve	NOAA C		

Additional information regarding the hydrologic calculations can be found in **APPENDIX C**.

5.0 STORMWATER ANALYSIS

EXISTING DRAINAGE AREAS

Under current conditions, the project site is subdivided into one drainage area per each point of interest (POI). POI-1 is an ultimate point of interest which is taken as the conveyance system within South King Street (County Route 631) located along the east of the property. POI-2 includes the remainder of the site that sheet flows towards the Delaware River or towards neighboring properties that directly discharge to the Delaware River. See below for a short summary of each area:

TABLE 3: SUMMARY OF EXISTING DRAINAGE AREAS

Drainage Area	Description	Area Extents	Impervious Area	Time of Concentration
E-1	Overland flow to South King Street	69,950 SF	13,153 SF	11.2 Minutes
POI (E-1)	Ultimate Point of Interest: South King Street	69,950 SF	13,153 SF	N/A
E-2	Overland Flow to Delaware River	219,269 SF	154,659 SF	2.1 Minutes
POI (E-2)	Ultimate Point of Interest: Delaware River	219,269 SF	154,659 SF	N/A

All existing drainage areas were delineated based on field surveying data performed by Stonefield Engineering & Design, LLC. Hydrologic calculations and parameters for each drainage area can be found in **APPENDIX C**; specific drainage area delineations and land cover can be found in **APPENDIX D**.

PROPOSED DRAINAGE AREAS

Under proposed conditions, the general drainage patterns and ultimate points of interest will be maintained. The intent behind the proposed delineations is to reduce the amount of direct runoff to the South King Street Point of Interest and increase the amount of direct runoff to the Delaware River Point of Interest. The diverted land from the drainage areas to POI-1 is proposed to meet the County requirements for stormwater management as outlined in the next Report section. See below for a short summary of each area:

TABLE 4: SUMMARY OF PROPOSED DRAINAGE AREAS

Drainage Area	Description	Area Extents	Impervious Area	Time of Concentration
P-1	Overland Flow to South King Street	18,833 SF	3,419 SF	12.8 Minutes
POI (P-1)	Ultimate Point of Interest: South King Street	18,833 SF	3,419 SF	N/A
P-2	Drainage to Delaware River	270,387 SF	223,455 SF	4.4 Minutes
POI (P-2)	Ultimate Point of Interest: Delaware River	270,387 SF	223,455 SF	N/A

All proposed drainage areas were delineated based on the proposed grading design overlain on field survey data performed by Stonefield Engineering & Design. Hydrologic calculations and parameters for each drainage area can be found in **APPENDIX C**; specific drainage area delineations and land cover can be found in **APPENDIX D**.

STORMWATER MANAGEMENT DESIGN PARAMETERS

The extent of development proposes to disturb more than one acre of land; as such, the project is considered a Major Development as defined in the City of Gloucester Ordinance and NJAC 7:8-1.2. A Major Development is subject to stormwater quantity, quality, and groundwater recharge requirements. See below for a summary of each design parameter and compliance requirements:

TABLE 5: STORMWATER MANAGEMENT DESIGN TARGET SUMMARY TABLE

Design Parameter	Design Target for Compliance
Stormwater Runoff Quantity	In tidal flood hazard areas, stormwater runoff quantity analysis, in accordance with (b)1, 2, and 3 above, is required unless the design engineer demonstrates through hydrologic and hydraulic analysis that the increased volume, change in timing, or increased rate of the stormwater runoff, or any combination of the three will not result in additional flood damage below the point of discharge of the major development. No analysis is required if the stormwater is discharged directly into any ocean, bay, inlet, or the reach of any watercourse between its confluence with an ocean, bay, or inlet and downstream of the first water control structure. Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the 2-, 10-, and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events.
Stormwater Runoff Quality	The project is exempt from water quality requirements as the project site does not increase impervious surfaces, motor vehicle surfaces, or a combination therefore by more than one-quarter acre.
Groundwater Recharge	The project is exempt from groundwater recharge requirements as the project site is located within State Planning Area PA-I (Metropolitan).

STORMWATER RUNOFF QUANTITY

Per discussions with Camden County Engineering staff, drainage to the County right-of-way, South King Street, must adhere to 'curve-under-curve' requirements as outlined in Table 5 above. The general drainage patterns will be maintained and a decrease in runoff to POI-1 is proposed in order to meet these requirements. The remainder of the site will be discharged to POI-2 as mentioned below.

As indicated in NJAC 7.8-5.4(a)(3)(iv): "in tidal flood hazard areas, the stormwater runoff quantity analysis in accordance with (a)3i, ii, and iii above shall only be applied if the increased volume of stormwater runoff could increase flood damages below the point of discharge." The point of discharge for POI-2 is direct to the Delaware River. The proposed runoff volume into the Delaware River is not anticipated to raise the flood elevation as the volume of runoff from the proposed development is minimal compared to the volume of the Delaware River. Therefore, the increase in runoff volume is not expected to increase flood damages below the point of discharge. The tables below summarize the various drainage areas in relation to flow rates and runoff volume during regulatory storm events:

TABLE 6: SUMMARY OF EXISTING DRAINAGE AREA FLOW RATES

Drainage Area	2-Year Flow Rate	10-Year Flow Rate	100-Year Flow Rate
E-1	1.35 CFS	3.21 CFS	7.73 CFS
POI (E-1)	1.35 CFS	3.21 CFS	7.73 CFS
E-2	14.58 CFS	24.12 CFS	44.14 CFS
POI (E-2)	14.58 CFS	24.12 CFS	44.14 CFS

TABLE 7: SUMMARY OF PROPOSED DRAINAGE AREA FLOW RATES

Drainage Area	2-Year Flow Rate	10-Year Flow Rate	100-Year Flow Rate
P-1	0.76 CFS	1.41 CFS	2.75 CFS
POI (P-1)	0.76 CFS	1.41 CFS	2.75 CFS
P-2	21.29 CFS	35.69 CFS	58.31 CFS
POI (P-2)	21.29 CFS	35.69 CFS	58.31 CFS

Under post-development conditions the runoff towards POI-1 is decreased in order to adhere to curve-under-curve requirements per Camden County standards. As mentioned above in this report, stormwater discharge toward POI-2 is not subject to runoff quantity requirements. The table below outlines the regulatory compliance parameters for runoff quantity on the project site:

TABLE 8: STORMWATER RUNOFF QUANTITY COMPLIANCE SUMMARY (E-1 / P-1)

Rainfall Event	Existing Flow Rate	Proposed Flow Rate	Proposed % Reduction
2-Year Storm	1.35 CFS	0.76 CFS	43.70%
10-Year Storm	3.21 CFS	1.41 CFS	56.08%
100-Year Storm	7.73 CFS	2.75 CFS	64.42%

TABLE 8: STORMWATER RUNOFF QUANTITY COMPLIANCE SUMMARY (E-2 / P-2)

Rainfall Event	Existing Flow Rate	Proposed Flow Rate	Proposed % Reduction
2-Year Storm	14.58 CFS	21.29 CFS	-
10-Year Storm	24.12 CFS	33.69 CFS	-
100-Year Storm	44.14 CFS	58.31 CFS	-

The decrease in runoff to POI-1 in proposed conditions provides sufficient flow rate attenuation to ensure that no adverse impacts are anticipated downstream of the project site. Detailed hydrologic calculations for each drainage area can be found in **APPENDIX C**.

STORMWATER RUNOFF QUALITY

As indicated in NJAC 7:8-5.5, the project site is **exempt** from water quality requirements as the site does not increase impervious surfaces, motor vehicle surfaces, or a combination thereof by more than one-quarter acre.

GROUNDWATER RECHARGE

As indicated in the City of Gloucester Ordinances and NJAC 7:8-5.4, the project site is **exempt** from groundwater recharge requirements as the site contains no wooded areas and is located within the Metropolitan Planning Area (PA-1) per the State Plan Policy Map and thus qualifies as an Urban Redevelopment Area (which is exempt from groundwater recharge requirements).

6.0 STORMWATER FACILITY OPERATIONS & MAINTENANCE

A Stormwater Operations & Maintenance Manual has been submitted for review to the Township and will be forwarded to the relevant jurisdictional agencies prior to obtaining final land use approvals and permits. Any necessary easements or covenants associated with the stormwater improvements will be recorded prior to the start of construction.

7.0 EROSION & SEDIMENT CONTROL

A Soil Erosion & Sediment Control Plan has been prepared in accordance with the latest edition of the Standards for Soil Erosion and Sediment Control in New Jersey. This plan can be found within the Preliminary & Final Major Site Plans prepared by Stonefield in conjunction with this Report. Proposed temporary measures during construction include silt fencing, stabilized construction entrances, inlet filters, street sweeping and riprap lining. No land disturbance will occur until certification and permits have been obtained from the Camden Soil Conservation District.

8.0 CONCLUSIONS

As demonstrated in this Report, the increase in runoff flow rate and volume generated by the proposed development will be satisfactorily mitigated by the introduction of more pervious coverage to each Point of Interest and an on-site stormwater conveyance system. The proposed project complies with all applicable stormwater management regulations and standards. As such, the project is not anticipated to have any adverse drainage impacts on neighboring properties, downstream watercourses, or adjoining conveyance systems.

9.0 REFERENCES

1. New Jersey Administrative Code Title 7, Chapter 8 Stormwater Management, last amended March 2, 2020
https://www.nj.gov/dep/rules/rules/njac7_8.pdf
2. New Jersey Stormwater Best Management Practices Manual, last revised March 2, 2020
https://www.njstormwater.org/bmp_manual2.htm
3. City of Gloucester Municipal Zoning Ordinance
<https://ecode360.com/35213270>
4. Report of Supplemental Geotechnical Investigation by JZN Engineering, PC dated March 2022

APPENDIX A

PROJECT FIGURES

INVENTORY

FIGURE 1: AERIAL MAP

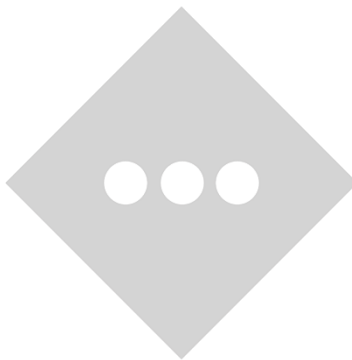
FIGURE 2: TAX & ZONING MAP

FIGURE 3: USGS QUADRANGLE MAP

FIGURE 4: FEMA FLOOD MAP

FIGURE 5: NJDEP GIS HISTORIC PROPERTIES MAP

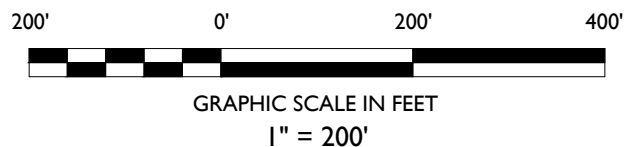
FIGURE 6: SITE PLAN (NOT TO SCALE)



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AERIAL MAP



SOURCE: GOOGLE EARTH PRO, IMAGE RETRIEVED 01/08/2021

MERIDIA CAPODAGLI PROPOSED MIXED-USE DEVELOPMENT

BLOCK 48, LOTS 2, 2.01, & 2.02
101 SOUTH KING STREET
CITY OF GLOUCESTER CITY, CAMDEN COUNTY, NEW JERSEY

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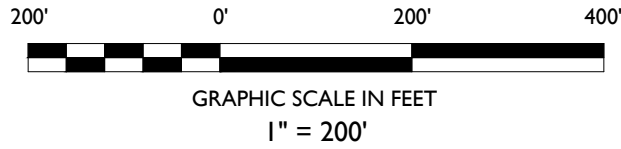
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TAX & ZONING MAP



SOURCE: CITY OF GLOUCESTER CITY TAX MAP, SHEET 2, AND GLOUCESTER CITY ZONING MAP

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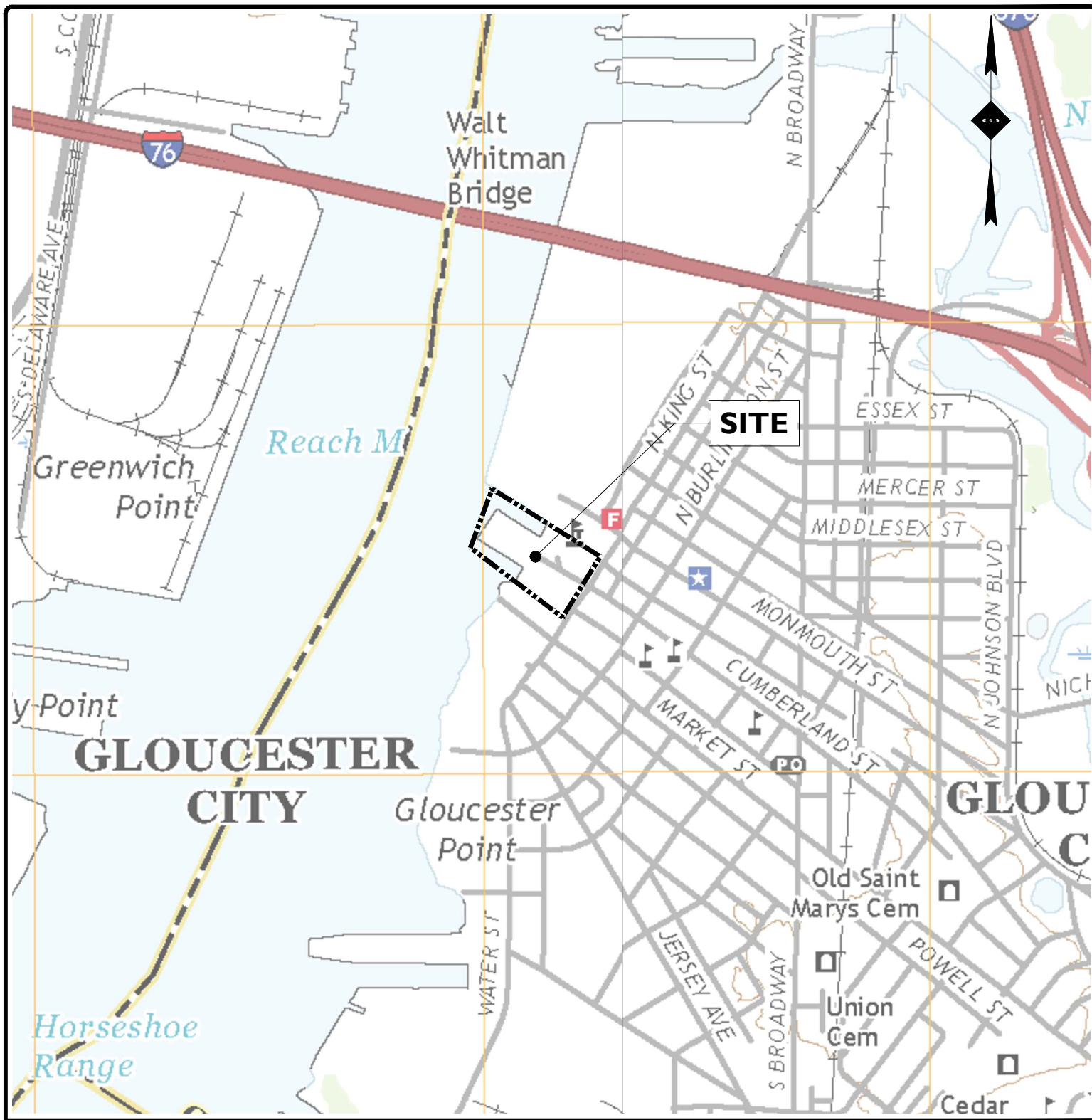


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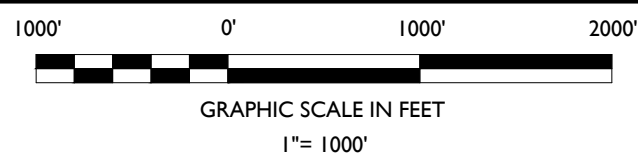
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USGS QUADRANGLE MAP



SOURCE: USGS 7.5 MINUTE SERIES, CAMDEN, NEW JERSEY QUADRANGLE MAP, DATED 2019, AND USGS 7.5 MINUTE SERIES, PHILADELPHIA, PENNSYLVANIA QUADRANGLE MAP, DATED 2019.

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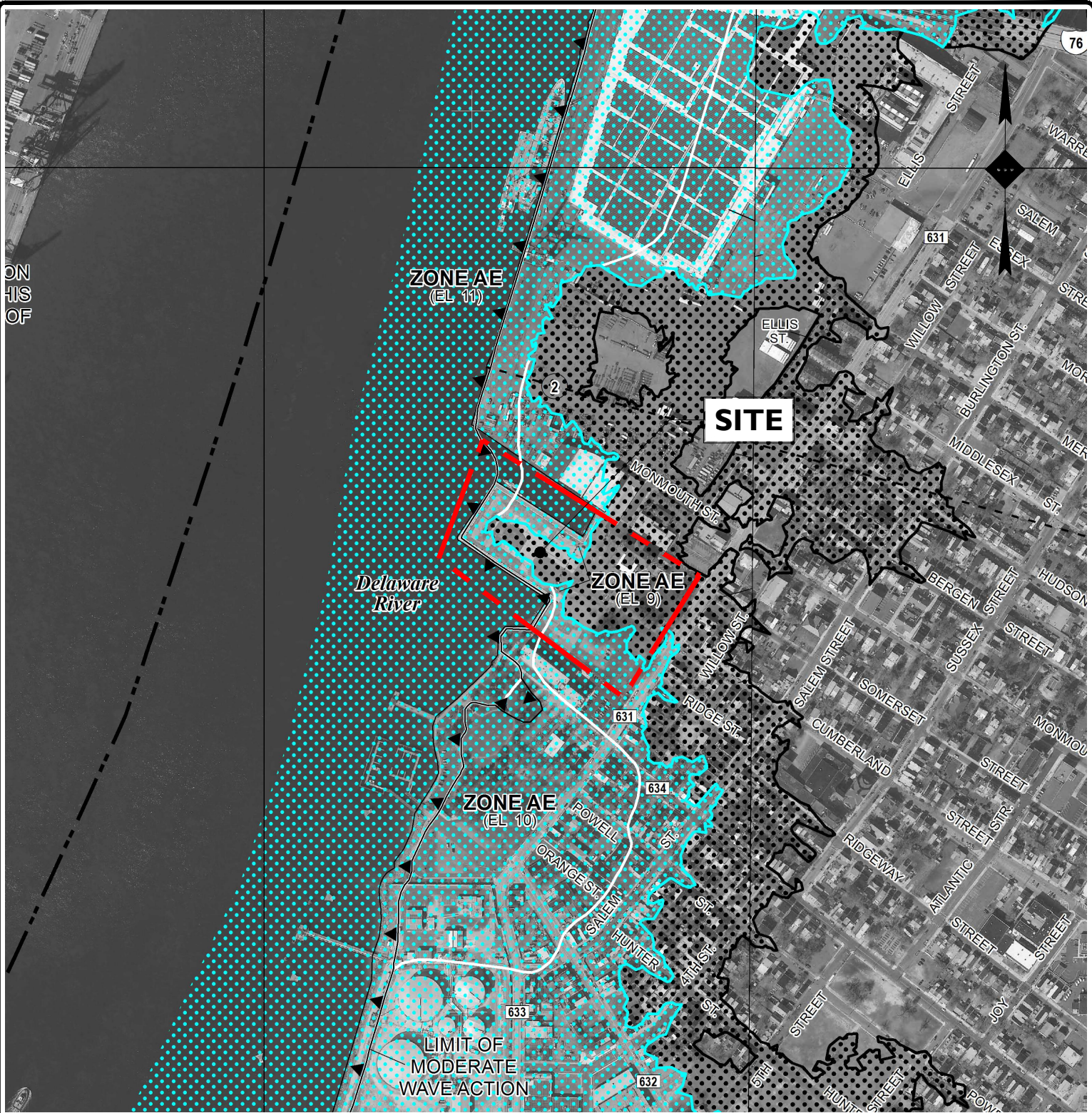
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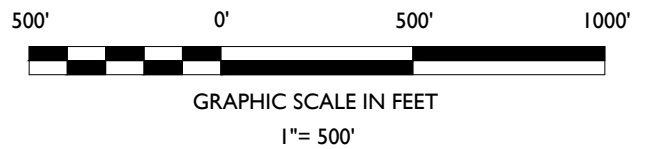
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FEMA FLOOD MAP



SOURCE: EFFECTIVE FEMA FIRM MAP 34007C0019F, AND EFFECTIVE FEMA FIRM MAP 34007C0038F, DATED 08/17/2016.

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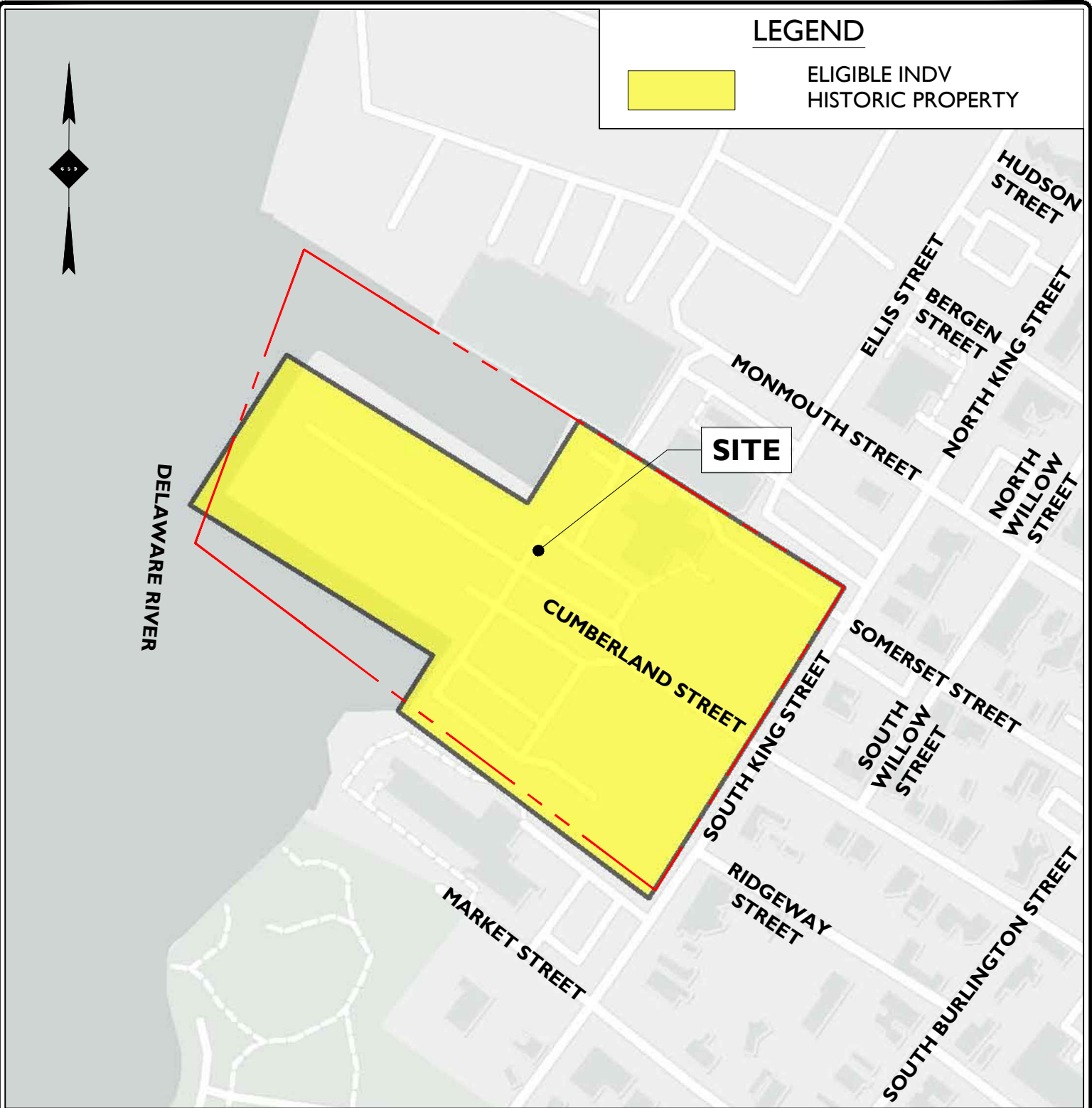
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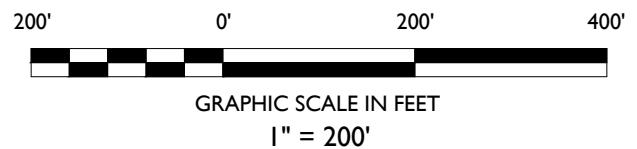
LEGEND



ELIGIBLE INDV
HISTORIC PROPERTY



NJDEP GIS HISTORIC PROPERTIES MAP



SOURCE: NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC
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DATE:	01/14/2021
SCALE:	1" = 200'
PROJECT ID:	RUT-200341



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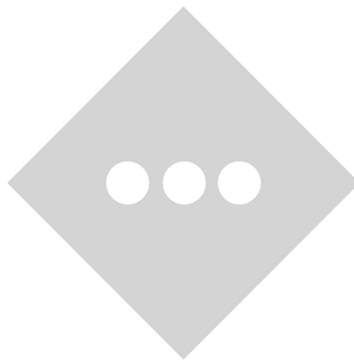
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APPENDIX B

PROJECT SOILS

INVENTORY

B-1: NRCS SOILS REPORT





United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Camden County, New Jersey



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Camden County, New Jersey
Survey Area Data: Version 16, Aug 29, 2022

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

Date(s) aerial images were photographed: Jun 5, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UR	Urban land	9.2	84.7%
WATER	Water	1.7	15.3%
Totals for Area of Interest		10.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Camden County, New Jersey

UR—Urban land

Map Unit Setting

National map unit symbol: rvrf
Elevation: 0 to 170 feet
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 5 percent
Landform: Low hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

WATER—Water

Map Unit Setting

National map unit symbol: rvrh
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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Custom Soil Resource Report

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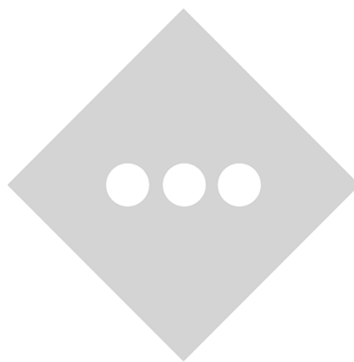
APPENDIX C

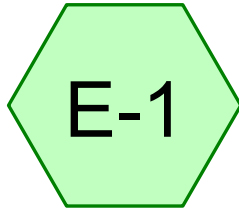
HYDROLOGIC & HYDRAULIC CALCULATIONS

INVENTORY

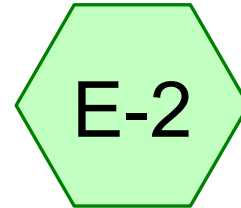
C-1: HYDROCAD NODE SCHEMATIC DIAGRAM

C-2: HYDROCAD HYDROLOGIC CALCULATIONS

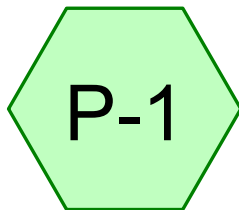




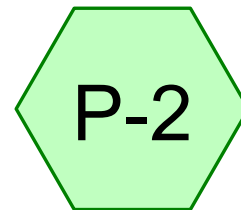
Overland flow to South
King Street



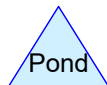
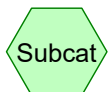
Overland flow to
Delaware River



Overland flow to South
King Street



Drainage to Delaware
River



Routing Diagram for 2023-04-28_HydroCAD

Prepared by Stonefield Engineering & Design, Printed 4/28/2023
HydroCAD® 10.20-2g s/n 10626 © 2022 HydroCAD Software Solutions LLC

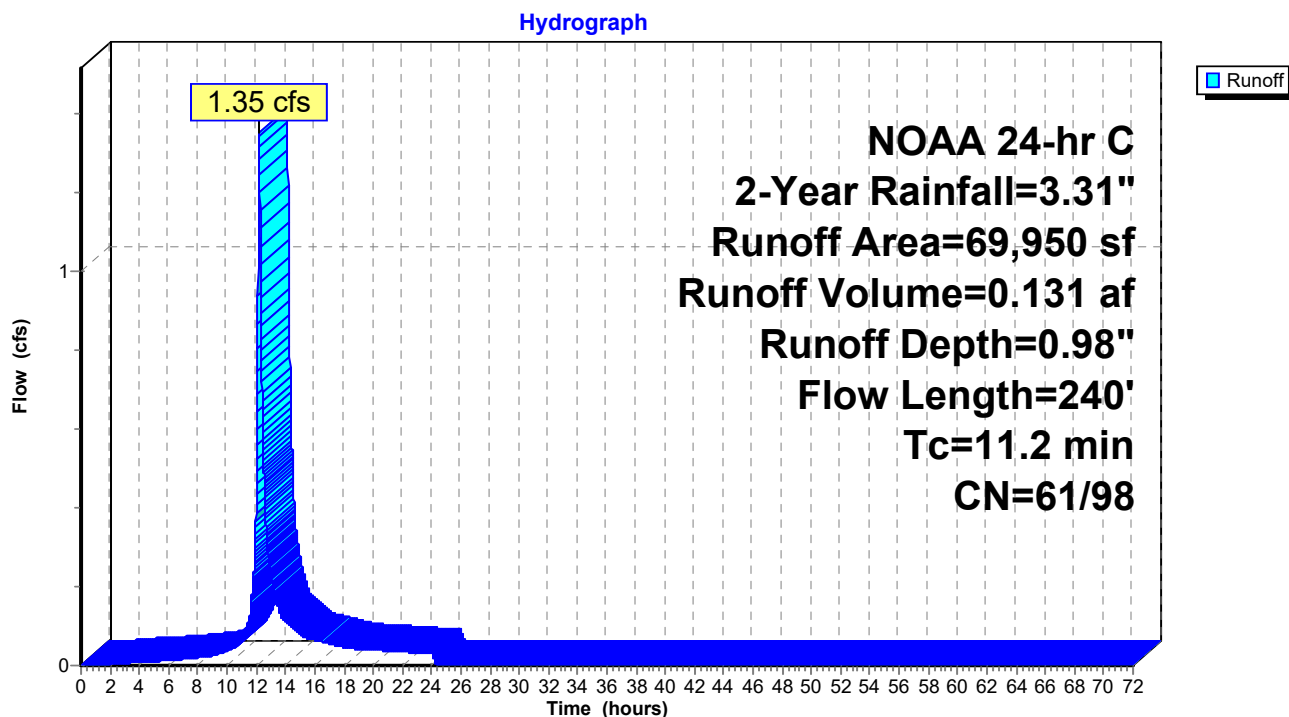
Summary for Subcatchment E-1: Overland flow to South King Street

Runoff = 1.35 cfs @ 12.20 hrs, Volume= 0.131 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	1,970	98	Impervious Areas
*	11,183	98	Motor Vehicle Surface Area
	56,797	61	>75% Grass cover, Good, HSG B
	69,950	68	Weighted Average
	56,797	61	81.20% Pervious Area
	13,153	98	18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	62	0.0100	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.1	69	0.0046	1.09		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	7	0.0160	2.57		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.2	12	0.0060	1.25		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	90	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
11.2	240	Total			

Subcatchment E-1: Overland flow to South King Street

Summary for Subcatchment E-2: Overland flow to Delaware River

Runoff = 14.58 cfs @ 12.10 hrs, Volume= 0.971 af, Depth= 2.31"

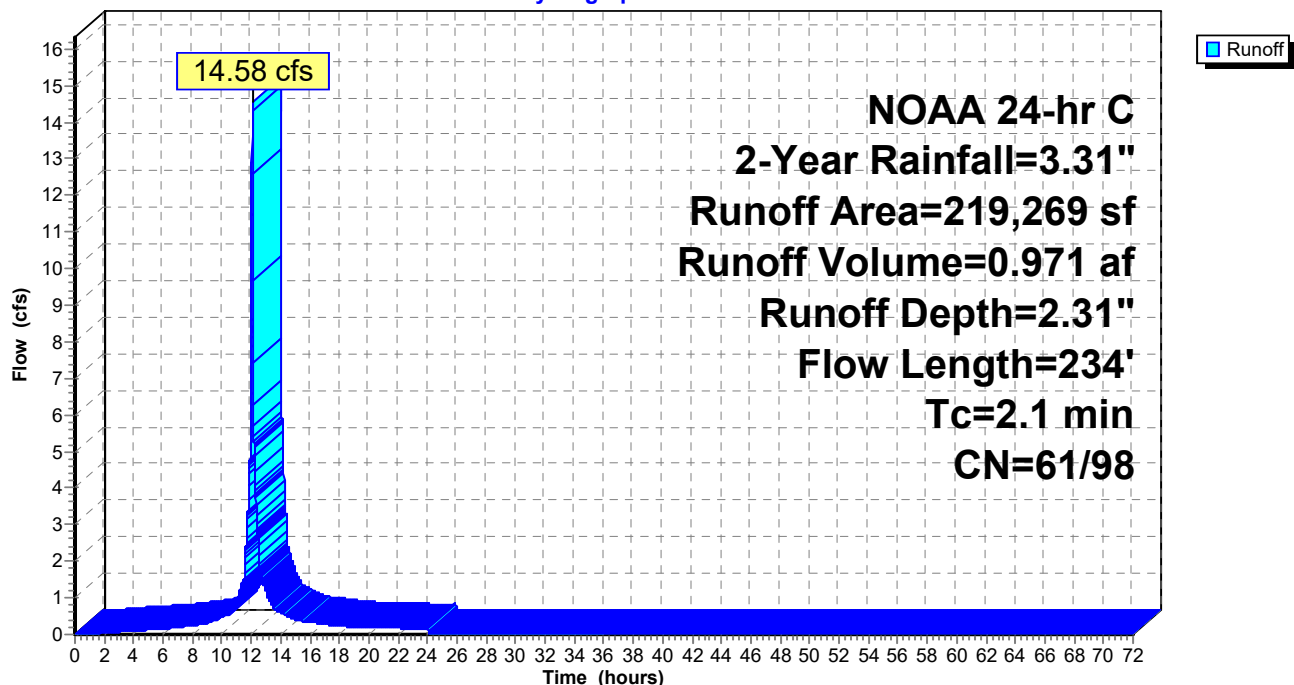
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	61,079	98	Impervious Areas
*	93,580	98	Motor Vehicle Surface Area
	64,610	61	>75% Grass cover, Good, HSG B
	219,269	87	Weighted Average
	64,610	61	29.47% Pervious Area
	154,659	98	70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	68	0.0258	1.44		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.5	76	0.0179	2.72		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.8	90	0.0083	1.85		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.1	234	Total			

Subcatchment E-2: Overland flow to Delaware River

Hydrograph



Summary for Subcatchment P-1: Overland flow to South King Street

Runoff = 0.76 cfs @ 12.20 hrs, Volume= 0.064 af, Depth= 1.78"

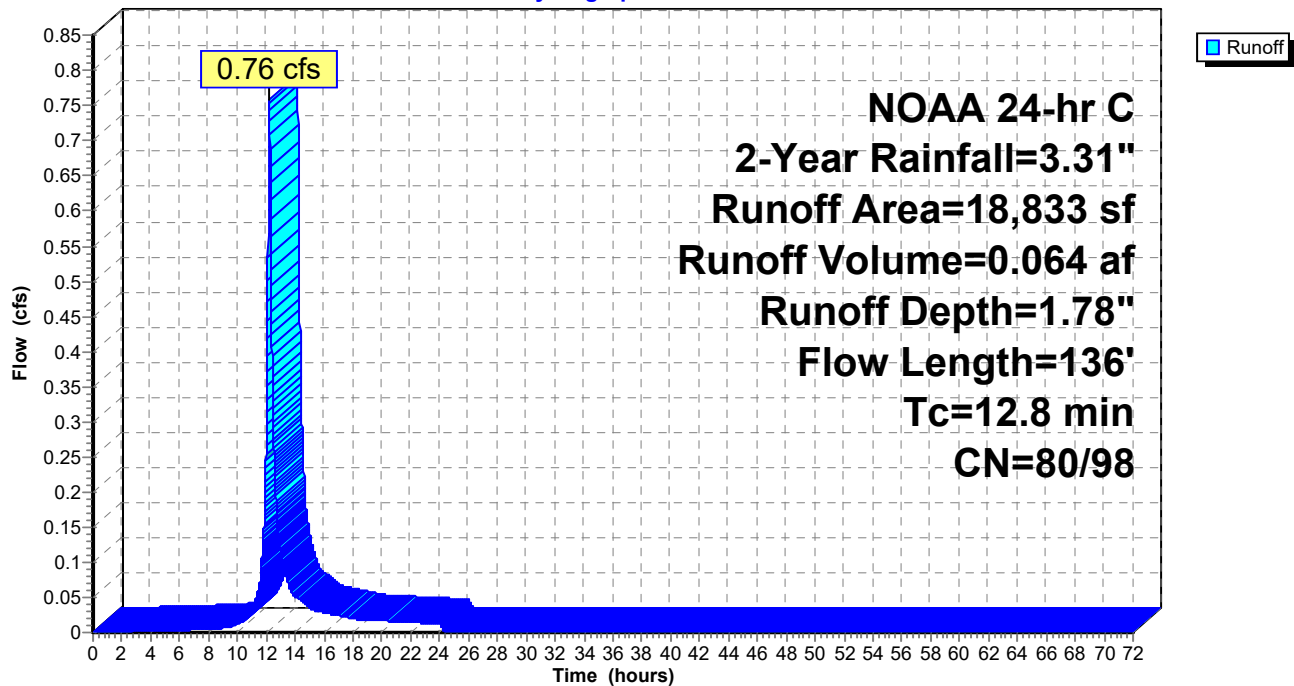
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	1,679	98	Impervious Areas
*	1,740	98	Motor Vehicle Surface Area
	15,414	80	>75% Grass cover, Good, HSG D
	18,833	83	Weighted Average
	15,414	80	81.85% Pervious Area
	3,419	98	18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	73	0.0068	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.2	42	0.0014	0.60		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	6	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	6	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	9	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.8	136	Total			

Subcatchment P-1: Overland flow to South King Street

Hydrograph



Summary for Subcatchment P-2: Drainage to Delaware River

[47] Hint: Peak is 330% of capacity of segment #3

[47] Hint: Peak is 557% of capacity of segment #4

[47] Hint: Peak is 343% of capacity of segment #5

[47] Hint: Peak is 159% of capacity of segment #6

Runoff = 21.29 cfs @ 12.11 hrs, Volume= 1.449 af, Depth= 2.80"

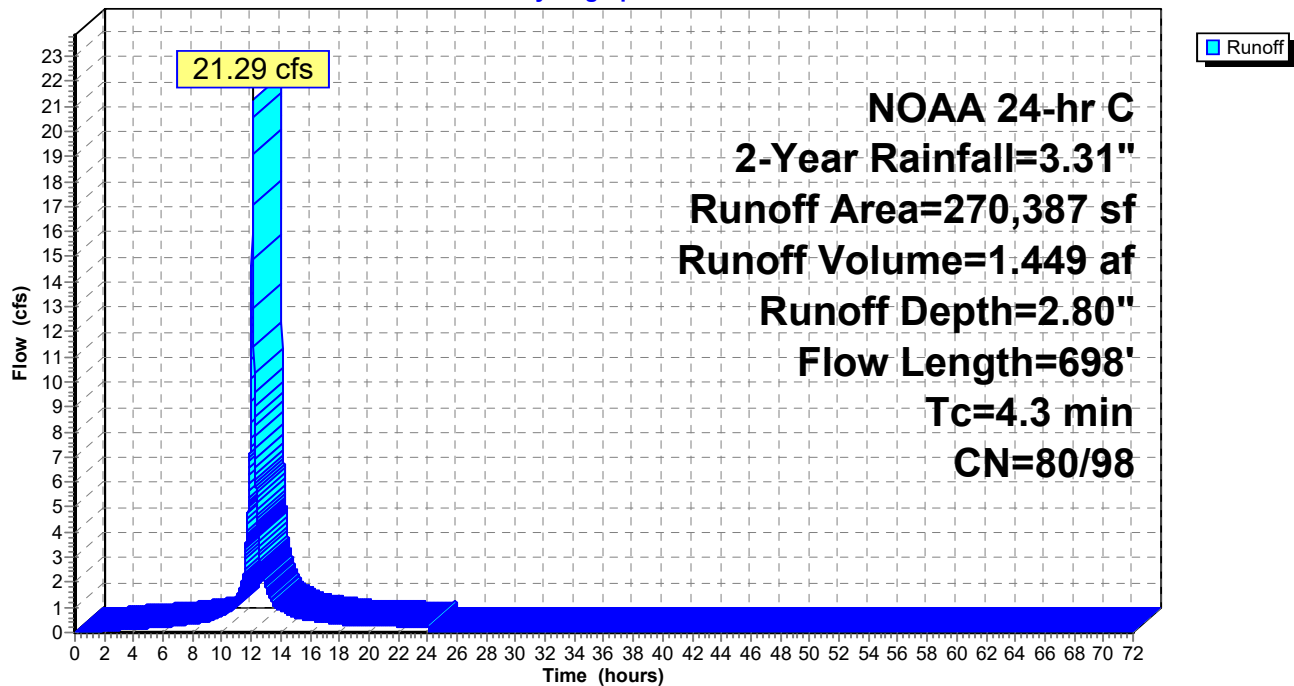
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-Year Rainfall=3.31"

	Area (sf)	CN	Description
*	125,842	98	Impervious Areas
*	97,613	98	Motor Vehicle Surface Area
	46,932	80	>75% Grass cover, Good, HSG D
	270,387	95	Weighted Average
	46,932	80	17.36% Pervious Area
	223,455	98	82.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	72	0.0150	1.18		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.9	116	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	18	0.0100	5.26	6.46	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.8	146	0.0035	3.11	3.82	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.1	229	0.0035	3.52	6.21	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.5	117	0.0035	4.26	13.38	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.3	698	Total			

Subcatchment P-2: Drainage to Delaware River

Hydrograph



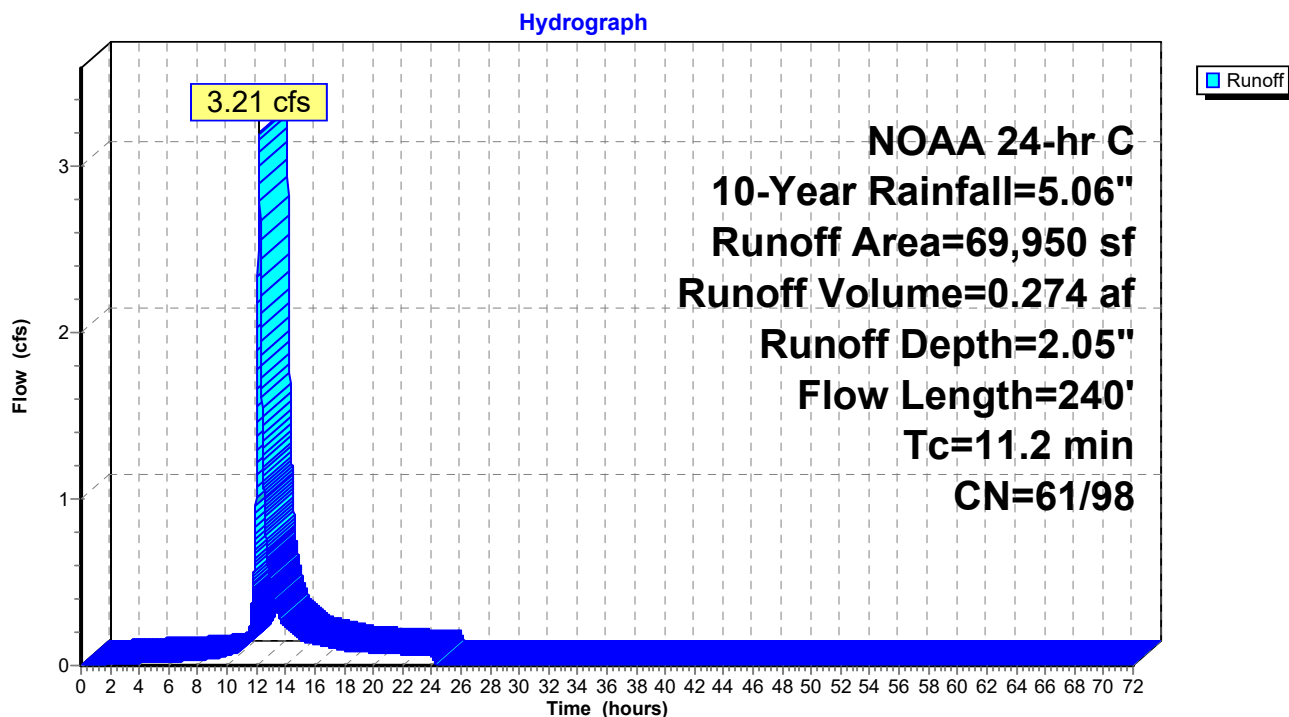
Summary for Subcatchment E-1: Overland flow to South King Street

Runoff = 3.21 cfs @ 12.19 hrs, Volume= 0.274 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-Year Rainfall=5.06"

	Area (sf)	CN	Description
*	1,970	98	Impervious Areas
*	11,183	98	Motor Vehicle Surface Area
	56,797	61	>75% Grass cover, Good, HSG B
	69,950	68	Weighted Average
	56,797	61	81.20% Pervious Area
	13,153	98	18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	62	0.0100	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.1	69	0.0046	1.09		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	7	0.0160	2.57		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.2	12	0.0060	1.25		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	90	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
11.2	240	Total			

Subcatchment E-1: Overland flow to South King Street

Summary for Subcatchment E-2: Overland flow to Delaware River

Runoff = 24.12 cfs @ 12.10 hrs, Volume= 1.601 af, Depth= 3.82"

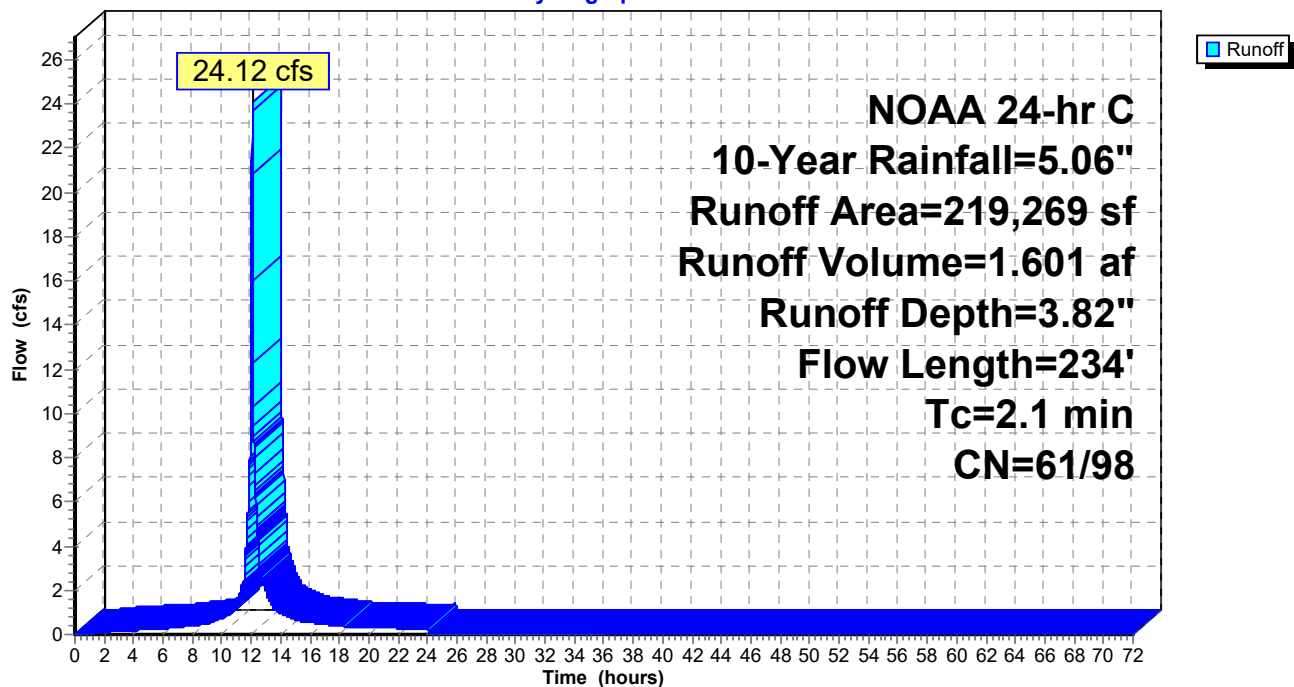
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-Year Rainfall=5.06"

	Area (sf)	CN	Description
*	61,079	98	Impervious Areas
*	93,580	98	Motor Vehicle Surface Area
	64,610	61	>75% Grass cover, Good, HSG B
	219,269	87	Weighted Average
	64,610	61	29.47% Pervious Area
	154,659	98	70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	68	0.0258	1.44		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.5	76	0.0179	2.72		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.8	90	0.0083	1.85		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.1	234	Total			

Subcatchment E-2: Overland flow to Delaware River

Hydrograph



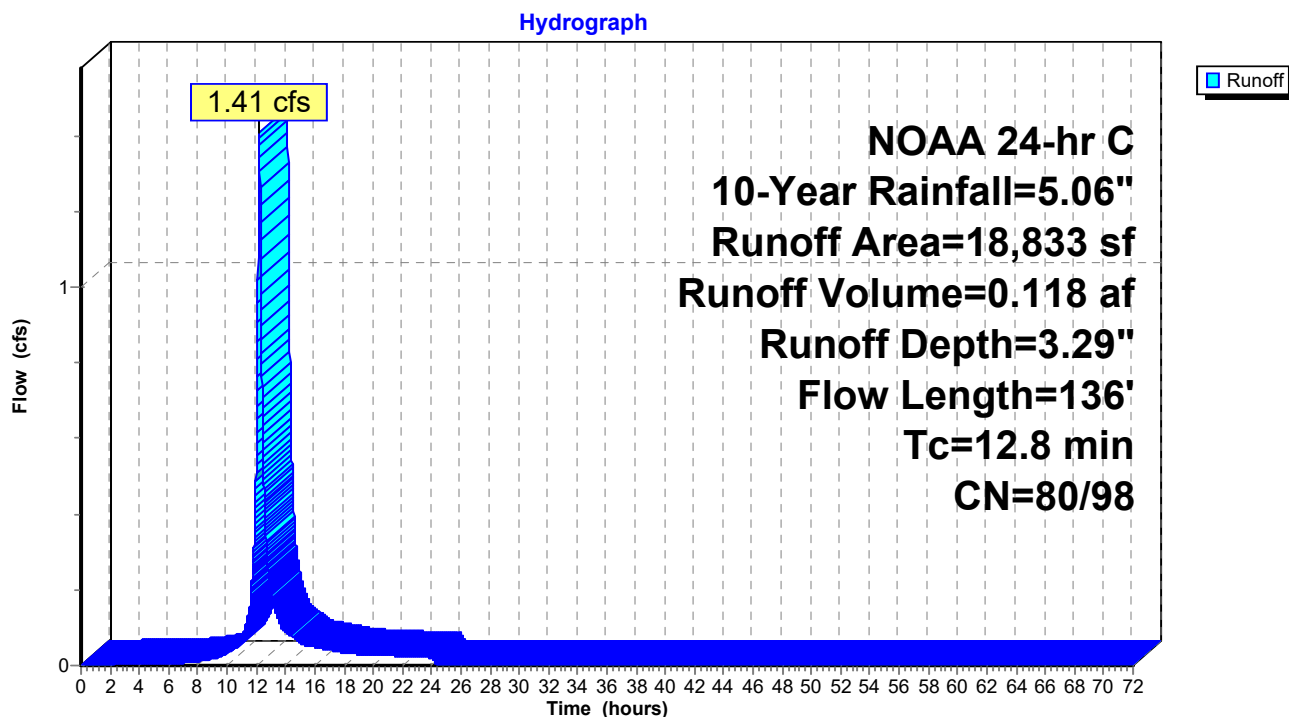
Summary for Subcatchment P-1: Overland flow to South King Street

Runoff = 1.41 cfs @ 12.20 hrs, Volume= 0.118 af, Depth= 3.29"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-Year Rainfall=5.06"

	Area (sf)	CN	Description
*	1,679	98	Impervious Areas
*	1,740	98	Motor Vehicle Surface Area
	15,414	80	>75% Grass cover, Good, HSG D
	18,833	83	Weighted Average
	15,414	80	81.85% Pervious Area
	3,419	98	18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	73	0.0068	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.2	42	0.0014	0.60		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	6	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	6	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	9	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.8	136	Total			

Subcatchment P-1: Overland flow to South King Street

Summary for Subcatchment P-2: Drainage to Delaware River

[47] Hint: Peak is 522% of capacity of segment #3

[47] Hint: Peak is 882% of capacity of segment #4

[47] Hint: Peak is 542% of capacity of segment #5

[47] Hint: Peak is 252% of capacity of segment #6

Runoff = 33.69 cfs @ 12.11 hrs, Volume= 2.326 af, Depth= 4.50"

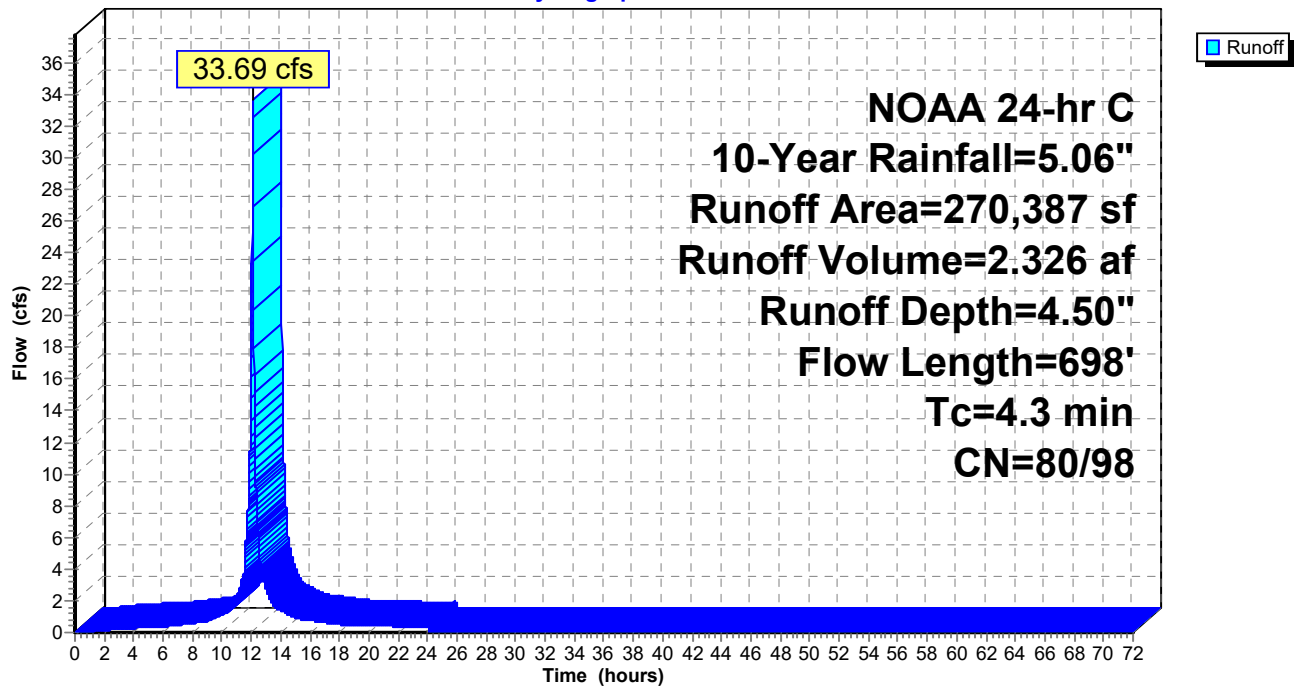
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-Year Rainfall=5.06"

	Area (sf)	CN	Description
*	125,842	98	Impervious Areas
*	97,613	98	Motor Vehicle Surface Area
	46,932	80	>75% Grass cover, Good, HSG D
	270,387	95	Weighted Average
	46,932	80	17.36% Pervious Area
	223,455	98	82.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	72	0.0150	1.18		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.9	116	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	18	0.0100	5.26	6.46	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.8	146	0.0035	3.11	3.82	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.1	229	0.0035	3.52	6.21	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.5	117	0.0035	4.26	13.38	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.3	698	Total			

Subcatchment P-2: Drainage to Delaware River

Hydrograph



Summary for Subcatchment E-1: Overland flow to South King Street

Runoff = 7.73 cfs @ 12.19 hrs, Volume= 0.626 af, Depth= 4.68"

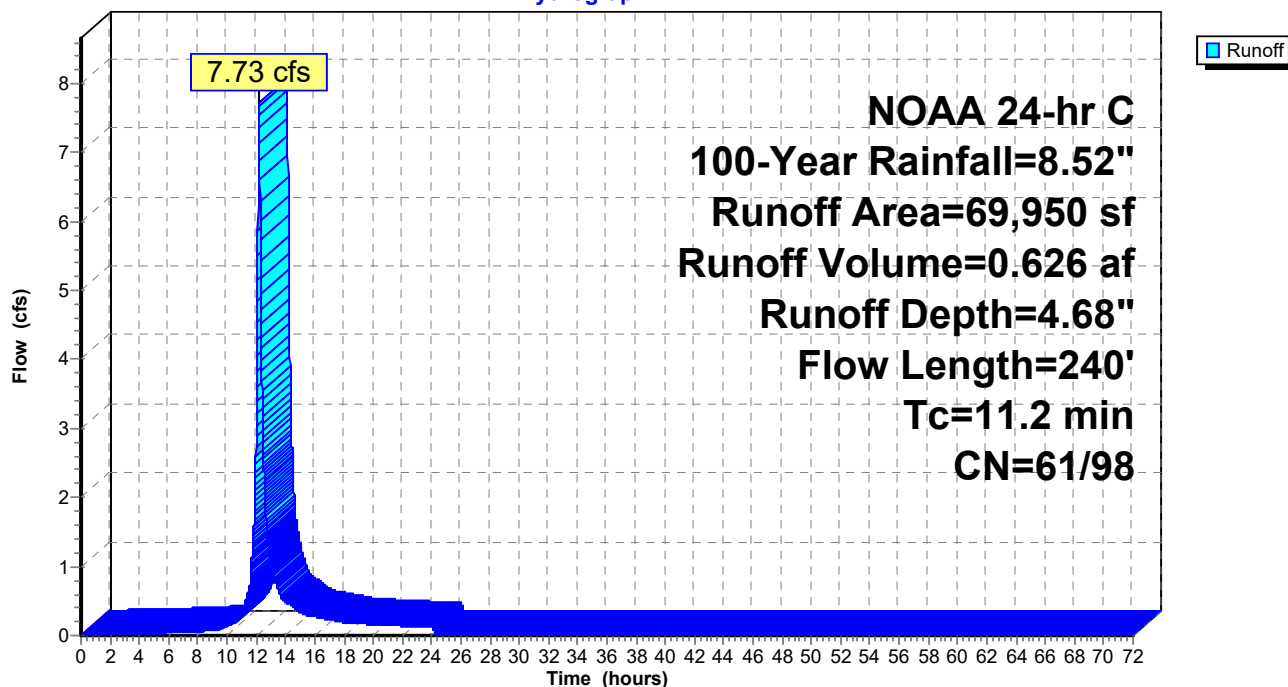
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-Year Rainfall=8.52"

	Area (sf)	CN	Description
*	1,970	98	Impervious Areas
*	11,183	98	Motor Vehicle Surface Area
	56,797	61	>75% Grass cover, Good, HSG B
	69,950	68	Weighted Average
	56,797	61	81.20% Pervious Area
	13,153	98	18.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	62	0.0100	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.1	69	0.0046	1.09		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	7	0.0160	2.57		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.2	12	0.0060	1.25		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	90	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
11.2	240	Total			

Subcatchment E-1: Overland flow to South King Street

Hydrograph



Summary for Subcatchment E-2: Overland flow to Delaware River

Runoff = 44.14 cfs @ 12.10 hrs, Volume= 2.925 af, Depth= 6.97"

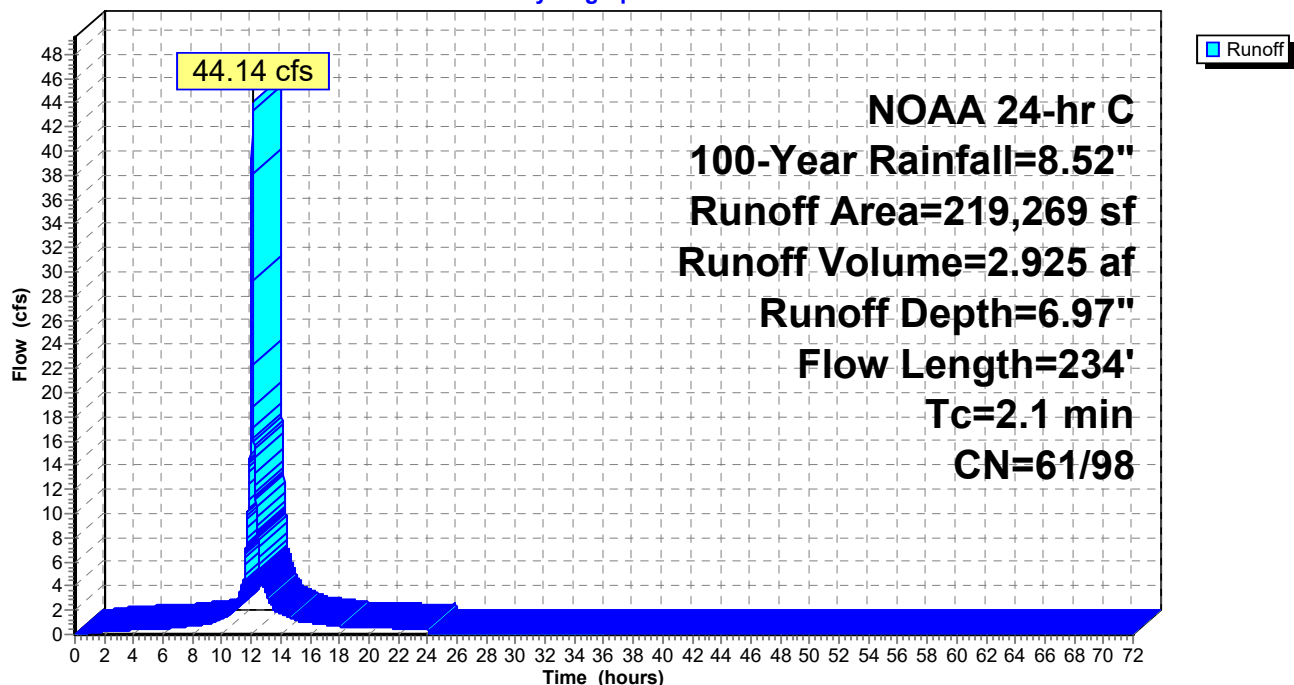
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-Year Rainfall=8.52"

	Area (sf)	CN	Description
*	61,079	98	Impervious Areas
*	93,580	98	Motor Vehicle Surface Area
	64,610	61	>75% Grass cover, Good, HSG B
	219,269	87	Weighted Average
	64,610	61	29.47% Pervious Area
	154,659	98	70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	68	0.0258	1.44		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.5	76	0.0179	2.72		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.8	90	0.0083	1.85		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.1	234	Total			

Subcatchment E-2: Overland flow to Delaware River

Hydrograph



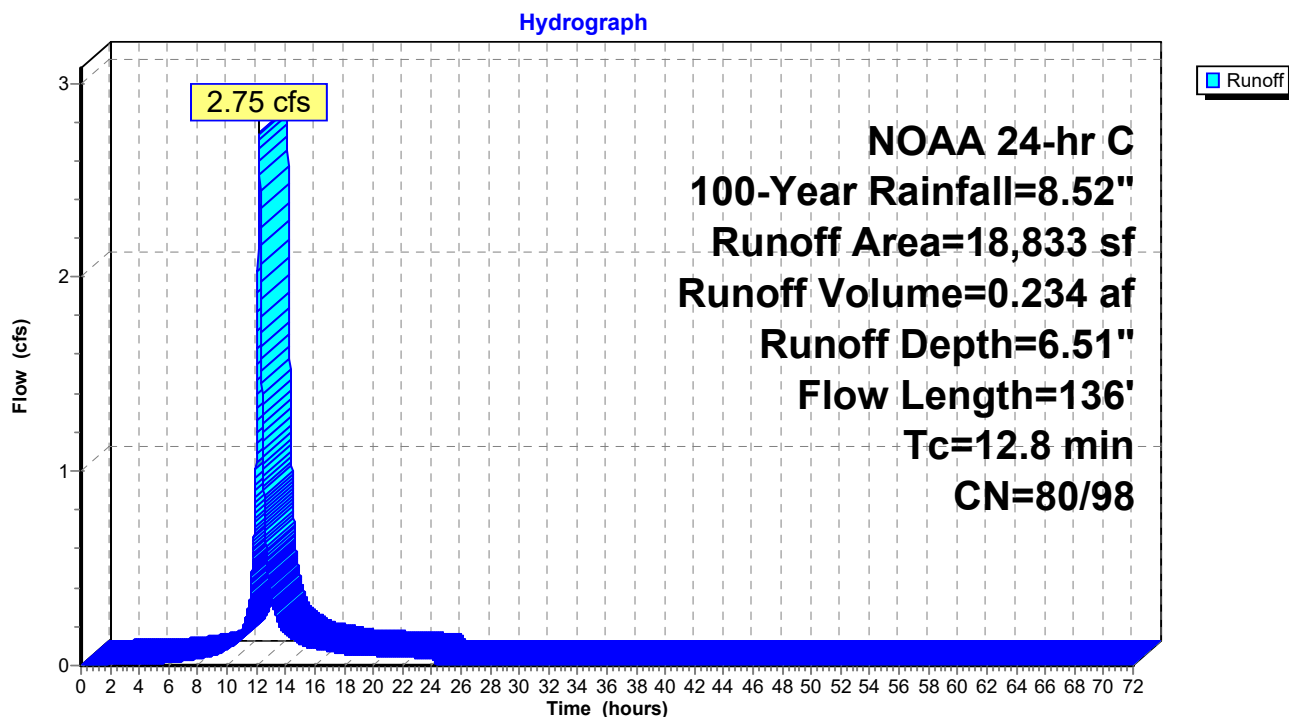
Summary for Subcatchment P-1: Overland flow to South King Street

Runoff = 2.75 cfs @ 12.20 hrs, Volume= 0.234 af, Depth= 6.51"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-Year Rainfall=8.52"

	Area (sf)	CN	Description
*	1,679	98	Impervious Areas
*	1,740	98	Motor Vehicle Surface Area
	15,414	80	>75% Grass cover, Good, HSG D
	18,833	83	Weighted Average
	15,414	80	81.85% Pervious Area
	3,419	98	18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	73	0.0068	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.36"
1.2	42	0.0014	0.60		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	6	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	6	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	9	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.8	136	Total			

Subcatchment P-1: Overland flow to South King Street

Summary for Subcatchment P-2: Drainage to Delaware River

[47] Hint: Peak is 903% of capacity of segment #3

[47] Hint: Peak is 1526% of capacity of segment #4

[47] Hint: Peak is 938% of capacity of segment #5

[47] Hint: Peak is 436% of capacity of segment #6

Runoff = 58.31 cfs @ 12.11 hrs, Volume= 4.088 af, Depth= 7.90"

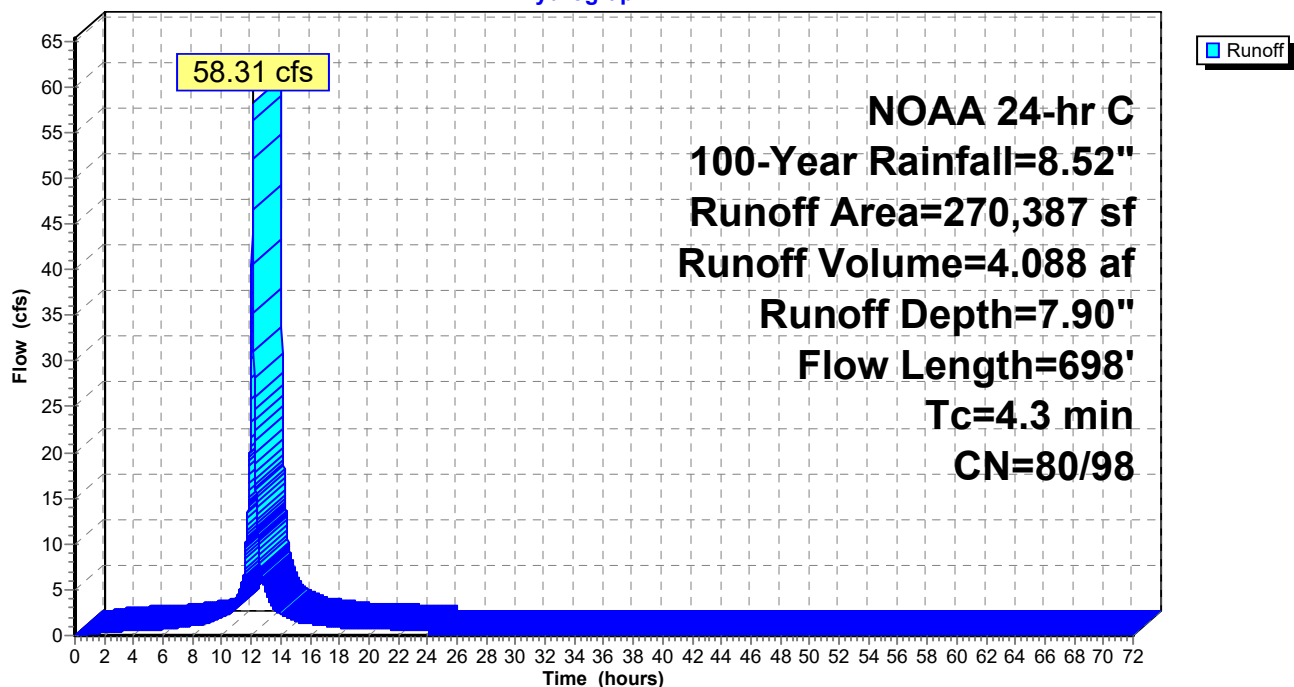
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-Year Rainfall=8.52"

	Area (sf)	CN	Description
*	125,842	98	Impervious Areas
*	97,613	98	Motor Vehicle Surface Area
	46,932	80	>75% Grass cover, Good, HSG D
	270,387	95	Weighted Average
	46,932	80	17.36% Pervious Area
	223,455	98	82.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	72	0.0150	1.18		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.36"
0.9	116	0.0125	2.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.1	18	0.0100	5.26	6.46	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.8	146	0.0035	3.11	3.82	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.1	229	0.0035	3.52	6.21	Pipe Channel, 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.5	117	0.0035	4.26	13.38	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
4.3	698	Total			

Subcatchment P-2: Drainage to Delaware River

Hydrograph



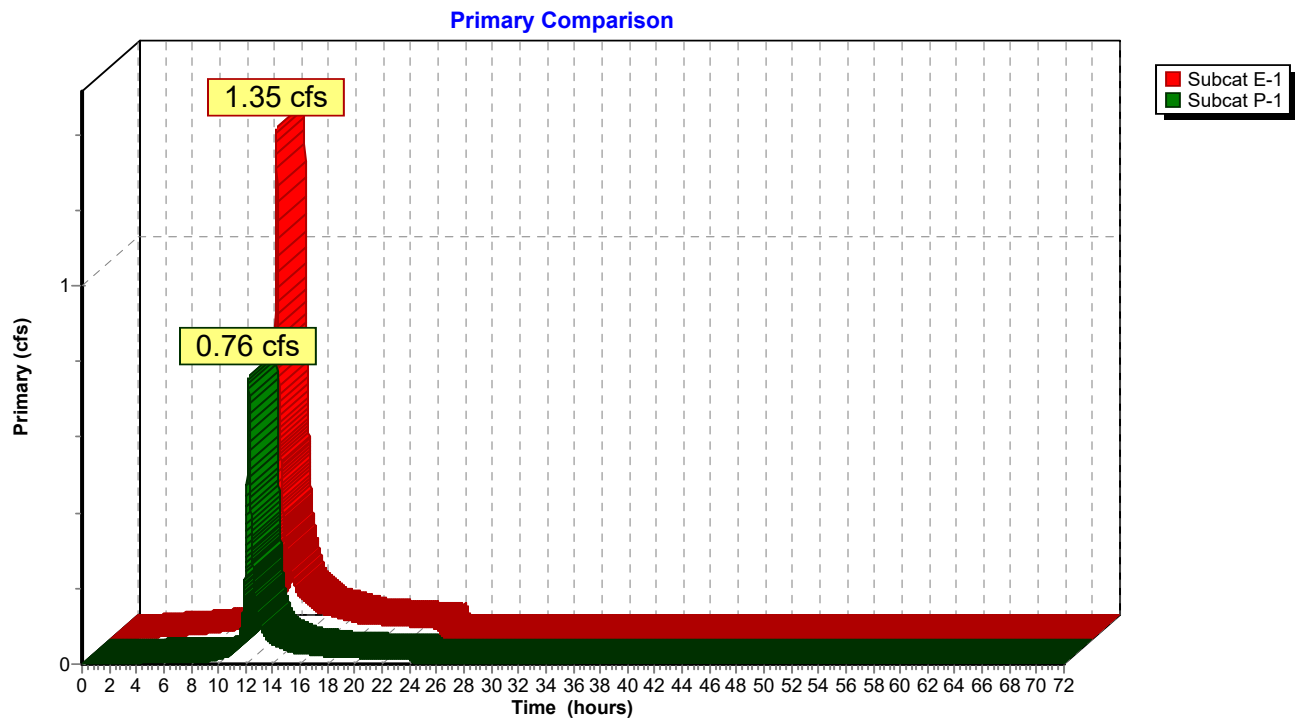
2023-04-28_HydroCAD

Prepared by Stonefield Engineering & Design

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NOAA 24-hr C 2-Year Rainfall=3.31"

Printed 4/28/2023



Primary Comparison

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
0.00	0.00	0.00	2.65	0.00	0.00	5.30	0.01	0.00
0.05	0.00	0.00	2.70	0.00	0.00	5.35	0.01	0.00
0.10	0.00	0.00	2.75	0.01	0.00	5.40	0.01	0.00
0.15	0.00	0.00	2.80	0.01	0.00	5.45	0.01	0.00
0.20	0.00	0.00	2.85	0.01	0.00	5.50	0.01	0.00
0.25	0.00	0.00	2.90	0.01	0.00	5.55	0.01	0.00
0.30	0.00	0.00	2.95	0.01	0.00	5.60	0.01	0.00
0.35	0.00	0.00	3.00	0.01	0.00	5.65	0.01	0.00
0.40	0.00	0.00	3.05	0.01	0.00	5.70	0.01	0.00
0.45	0.00	0.00	3.10	0.01	0.00	5.75	0.01	0.00
0.50	0.00	0.00	3.15	0.01	0.00	5.80	0.01	0.00
0.55	0.00	0.00	3.20	0.01	0.00	5.85	0.01	0.00
0.60	0.00	0.00	3.25	0.01	0.00	5.90	0.01	0.00
0.65	0.00	0.00	3.30	0.01	0.00	5.95	0.01	0.00
0.70	0.00	0.00	3.35	0.01	0.00	6.00	0.01	0.00
0.75	0.00	0.00	3.40	0.01	0.00	6.05	0.01	0.00
0.80	0.00	0.00	3.45	0.01	0.00	6.10	0.01	0.00
0.85	0.00	0.00	3.50	0.01	0.00	6.15	0.01	0.00
0.90	0.00	0.00	3.55	0.01	0.00	6.20	0.01	0.00
0.95	0.00	0.00	3.60	0.01	0.00	6.25	0.01	0.00
1.00	0.00	0.00	3.65	0.01	0.00	6.30	0.01	0.00
1.05	0.00	0.00	3.70	0.01	0.00	6.35	0.01	0.00
1.10	0.00	0.00	3.75	0.01	0.00	6.40	0.01	0.00
1.15	0.00	0.00	3.80	0.01	0.00	6.45	0.01	0.00
1.20	0.00	0.00	3.85	0.01	0.00	6.50	0.01	0.00
1.25	0.00	0.00	3.90	0.01	0.00	6.55	0.01	0.00
1.30	0.00	0.00	3.95	0.01	0.00	6.60	0.01	0.00
1.35	0.00	0.00	4.00	0.01	0.00	6.65	0.01	0.00
1.40	0.00	0.00	4.05	0.01	0.00	6.70	0.01	0.00
1.45	0.00	0.00	4.10	0.01	0.00	6.75	0.02	0.00
1.50	0.00	0.00	4.15	0.01	0.00	6.80	0.02	0.00
1.55	0.00	0.00	4.20	0.01	0.00	6.85	0.02	0.00
1.60	0.00	0.00	4.25	0.01	0.00	6.90	0.02	0.00
1.65	0.00	0.00	4.30	0.01	0.00	6.95	0.02	0.00
1.70	0.00	0.00	4.35	0.01	0.00	7.00	0.02	0.00
1.75	0.00	0.00	4.40	0.01	0.00	7.05	0.02	0.00
1.80	0.00	0.00	4.45	0.01	0.00	7.10	0.02	0.00
1.85	0.00	0.00	4.50	0.01	0.00	7.15	0.02	0.00
1.90	0.00	0.00	4.55	0.01	0.00	7.20	0.02	0.00
1.95	0.00	0.00	4.60	0.01	0.00	7.25	0.02	0.00
2.00	0.00	0.00	4.65	0.01	0.00	7.30	0.02	0.00
2.05	0.00	0.00	4.70	0.01	0.00	7.35	0.02	0.00
2.10	0.00	0.00	4.75	0.01	0.00	7.40	0.02	0.00
2.15	0.00	0.00	4.80	0.01	0.00	7.45	0.02	0.00
2.20	0.00	0.00	4.85	0.01	0.00	7.50	0.02	0.00
2.25	0.00	0.00	4.90	0.01	0.00	7.55	0.02	0.00
2.30	0.00	0.00	4.95	0.01	0.00	7.60	0.02	0.00
2.35	0.00	0.00	5.00	0.01	0.00	7.65	0.02	0.00
2.40	0.00	0.00	5.05	0.01	0.00	7.70	0.02	0.00
2.45	0.00	0.00	5.10	0.01	0.00	7.75	0.02	0.00
2.50	0.00	0.00	5.15	0.01	0.00	7.80	0.02	0.01
2.55	0.00	0.00	5.20	0.01	0.00	7.85	0.02	0.01
2.60	0.00	0.00	5.25	0.01	0.00	7.90	0.02	0.01

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
7.95	0.02	0.01	10.60	0.05	0.02	13.25	0.18	0.09
8.00	0.02	0.01	10.65	0.05	0.02	13.30	0.17	0.08
8.05	0.02	0.01	10.70	0.05	0.02	13.35	0.17	0.08
8.10	0.02	0.01	10.75	0.06	0.02	13.40	0.16	0.08
8.15	0.02	0.01	10.80	0.06	0.02	13.45	0.16	0.07
8.20	0.02	0.01	10.85	0.06	0.03	13.50	0.15	0.07
8.25	0.02	0.01	10.90	0.06	0.03	13.55	0.14	0.07
8.30	0.02	0.01	10.95	0.07	0.03	13.60	0.14	0.06
8.35	0.02	0.01	11.00	0.07	0.03	13.65	0.13	0.06
8.40	0.02	0.01	11.05	0.07	0.03	13.70	0.13	0.06
8.45	0.02	0.01	11.10	0.08	0.04	13.75	0.12	0.06
8.50	0.02	0.01	11.15	0.08	0.04	13.80	0.12	0.06
8.55	0.02	0.01	11.20	0.08	0.04	13.85	0.12	0.05
8.60	0.02	0.01	11.25	0.09	0.05	13.90	0.12	0.05
8.65	0.02	0.01	11.30	0.10	0.05	13.95	0.11	0.05
8.70	0.02	0.01	11.35	0.10	0.05	14.00	0.11	0.05
8.75	0.02	0.01	11.40	0.11	0.06	14.05	0.11	0.05
8.80	0.02	0.01	11.45	0.11	0.06	14.10	0.11	0.05
8.85	0.02	0.01	11.50	0.12	0.06	14.15	0.11	0.05
8.90	0.02	0.01	11.55	0.12	0.07	14.20	0.11	0.05
8.95	0.02	0.01	11.60	0.14	0.08	14.25	0.10	0.05
9.00	0.02	0.01	11.65	0.16	0.09	14.30	0.10	0.05
9.05	0.03	0.01	11.70	0.18	0.11	14.35	0.10	0.05
9.10	0.03	0.01	11.75	0.19	0.12	14.40	0.10	0.05
9.15	0.03	0.01	11.80	0.21	0.13	14.45	0.10	0.04
9.20	0.03	0.01	11.85	0.24	0.16	14.50	0.10	0.04
9.25	0.03	0.01	11.90	0.28	0.18	14.55	0.09	0.04
9.30	0.03	0.01	11.95	0.34	0.22	14.60	0.09	0.04
9.35	0.03	0.01	12.00	0.43	0.28	14.65	0.09	0.04
9.40	0.03	0.01	12.05	0.60	0.37	14.70	0.09	0.04
9.45	0.03	0.01	12.10	0.87	0.50	14.75	0.09	0.04
9.50	0.03	0.01	12.15	1.21	0.66	14.80	0.09	0.04
9.55	0.03	0.01	12.20	1.35	0.76	14.85	0.08	0.04
9.60	0.03	0.01	12.25	1.20	0.71	14.90	0.08	0.04
9.65	0.03	0.01	12.30	0.97	0.59	14.95	0.08	0.04
9.70	0.03	0.01	12.35	0.80	0.47	15.00	0.08	0.04
9.75	0.03	0.01	12.40	0.67	0.39	15.05	0.08	0.03
9.80	0.04	0.01	12.45	0.58	0.33	15.10	0.08	0.03
9.85	0.04	0.01	12.50	0.51	0.28	15.15	0.07	0.03
9.90	0.04	0.01	12.55	0.47	0.25	15.20	0.07	0.03
9.95	0.04	0.01	12.60	0.43	0.23	15.25	0.07	0.03
10.00	0.04	0.01	12.65	0.37	0.20	15.30	0.07	0.03
10.05	0.04	0.01	12.70	0.33	0.17	15.35	0.07	0.03
10.10	0.04	0.01	12.75	0.30	0.15	15.40	0.07	0.03
10.15	0.04	0.01	12.80	0.28	0.14	15.45	0.07	0.03
10.20	0.04	0.01	12.85	0.27	0.13	15.50	0.07	0.03
10.25	0.04	0.02	12.90	0.26	0.13	15.55	0.07	0.03
10.30	0.04	0.02	12.95	0.24	0.12	15.60	0.07	0.03
10.35	0.04	0.02	13.00	0.23	0.11	15.65	0.07	0.03
10.40	0.04	0.02	13.05	0.22	0.11	15.70	0.07	0.03
10.45	0.05	0.02	13.10	0.21	0.10	15.75	0.07	0.03
10.50	0.05	0.02	13.15	0.20	0.10	15.80	0.07	0.03
10.55	0.05	0.02	13.20	0.19	0.09	15.85	0.07	0.03

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
15.90	0.07	0.03	18.55	0.04	0.02	21.20	0.04	0.02
15.95	0.06	0.03	18.60	0.04	0.02	21.25	0.04	0.02
16.00	0.06	0.03	18.65	0.04	0.02	21.30	0.04	0.02
16.05	0.06	0.03	18.70	0.04	0.02	21.35	0.04	0.02
16.10	0.06	0.03	18.75	0.04	0.02	21.40	0.04	0.02
16.15	0.06	0.03	18.80	0.04	0.02	21.45	0.04	0.02
16.20	0.06	0.03	18.85	0.04	0.02	21.50	0.04	0.02
16.25	0.06	0.03	18.90	0.04	0.02	21.55	0.04	0.01
16.30	0.06	0.03	18.95	0.04	0.02	21.60	0.04	0.01
16.35	0.06	0.03	19.00	0.04	0.02	21.65	0.04	0.01
16.40	0.06	0.03	19.05	0.04	0.02	21.70	0.04	0.01
16.45	0.06	0.03	19.10	0.04	0.02	21.75	0.04	0.01
16.50	0.06	0.03	19.15	0.04	0.02	21.80	0.04	0.01
16.55	0.06	0.03	19.20	0.04	0.02	21.85	0.04	0.01
16.60	0.06	0.03	19.25	0.04	0.02	21.90	0.03	0.01
16.65	0.06	0.03	19.30	0.04	0.02	21.95	0.03	0.01
16.70	0.06	0.03	19.35	0.04	0.02	22.00	0.03	0.01
16.75	0.06	0.03	19.40	0.04	0.02	22.05	0.03	0.01
16.80	0.06	0.02	19.45	0.04	0.02	22.10	0.03	0.01
16.85	0.06	0.02	19.50	0.04	0.02	22.15	0.03	0.01
16.90	0.06	0.02	19.55	0.04	0.02	22.20	0.03	0.01
16.95	0.06	0.02	19.60	0.04	0.02	22.25	0.03	0.01
17.00	0.06	0.02	19.65	0.04	0.02	22.30	0.03	0.01
17.05	0.05	0.02	19.70	0.04	0.02	22.35	0.03	0.01
17.10	0.05	0.02	19.75	0.04	0.02	22.40	0.03	0.01
17.15	0.05	0.02	19.80	0.04	0.02	22.45	0.03	0.01
17.20	0.05	0.02	19.85	0.04	0.02	22.50	0.03	0.01
17.25	0.05	0.02	19.90	0.04	0.02	22.55	0.03	0.01
17.30	0.05	0.02	19.95	0.04	0.02	22.60	0.03	0.01
17.35	0.05	0.02	20.00	0.04	0.02	22.65	0.03	0.01
17.40	0.05	0.02	20.05	0.04	0.02	22.70	0.03	0.01
17.45	0.05	0.02	20.10	0.04	0.02	22.75	0.03	0.01
17.50	0.05	0.02	20.15	0.04	0.02	22.80	0.03	0.01
17.55	0.05	0.02	20.20	0.04	0.02	22.85	0.03	0.01
17.60	0.05	0.02	20.25	0.04	0.02	22.90	0.03	0.01
17.65	0.05	0.02	20.30	0.04	0.02	22.95	0.03	0.01
17.70	0.05	0.02	20.35	0.04	0.02	23.00	0.03	0.01
17.75	0.05	0.02	20.40	0.04	0.02	23.05	0.03	0.01
17.80	0.05	0.02	20.45	0.04	0.02	23.10	0.03	0.01
17.85	0.05	0.02	20.50	0.04	0.02	23.15	0.03	0.01
17.90	0.05	0.02	20.55	0.04	0.02	23.20	0.03	0.01
17.95	0.05	0.02	20.60	0.04	0.02	23.25	0.03	0.01
18.00	0.05	0.02	20.65	0.04	0.02	23.30	0.03	0.01
18.05	0.05	0.02	20.70	0.04	0.02	23.35	0.03	0.01
18.10	0.04	0.02	20.75	0.04	0.02	23.40	0.03	0.01
18.15	0.04	0.02	20.80	0.04	0.02	23.45	0.03	0.01
18.20	0.04	0.02	20.85	0.04	0.02	23.50	0.03	0.01
18.25	0.04	0.02	20.90	0.04	0.02	23.55	0.03	0.01
18.30	0.04	0.02	20.95	0.04	0.02	23.60	0.03	0.01
18.35	0.04	0.02	21.00	0.04	0.02	23.65	0.03	0.01
18.40	0.04	0.02	21.05	0.04	0.02	23.70	0.03	0.01
18.45	0.04	0.02	21.10	0.04	0.02	23.75	0.03	0.01
18.50	0.04	0.02	21.15	0.04	0.02	23.80	0.03	0.01

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
23.85	0.03	0.01	26.50	0.00	0.00	29.15	0.00	0.00
23.90	0.03	0.01	26.55	0.00	0.00	29.20	0.00	0.00
23.95	0.03	0.01	26.60	0.00	0.00	29.25	0.00	0.00
24.00	0.03	0.01	26.65	0.00	0.00	29.30	0.00	0.00
24.05	0.03	0.01	26.70	0.00	0.00	29.35	0.00	0.00
24.10	0.03	0.01	26.75	0.00	0.00	29.40	0.00	0.00
24.15	0.02	0.01	26.80	0.00	0.00	29.45	0.00	0.00
24.20	0.01	0.01	26.85	0.00	0.00	29.50	0.00	0.00
24.25	0.01	0.00	26.90	0.00	0.00	29.55	0.00	0.00
24.30	0.00	0.00	26.95	0.00	0.00	29.60	0.00	0.00
24.35	0.00	0.00	27.00	0.00	0.00	29.65	0.00	0.00
24.40	0.00	0.00	27.05	0.00	0.00	29.70	0.00	0.00
24.45	0.00	0.00	27.10	0.00	0.00	29.75	0.00	0.00
24.50	0.00	0.00	27.15	0.00	0.00	29.80	0.00	0.00
24.55	0.00	0.00	27.20	0.00	0.00	29.85	0.00	0.00
24.60	0.00	0.00	27.25	0.00	0.00	29.90	0.00	0.00
24.65	0.00	0.00	27.30	0.00	0.00	29.95	0.00	0.00
24.70	0.00	0.00	27.35	0.00	0.00	30.00	0.00	0.00
24.75	0.00	0.00	27.40	0.00	0.00	30.05	0.00	0.00
24.80	0.00	0.00	27.45	0.00	0.00	30.10	0.00	0.00
24.85	0.00	0.00	27.50	0.00	0.00	30.15	0.00	0.00
24.90	0.00	0.00	27.55	0.00	0.00	30.20	0.00	0.00
24.95	0.00	0.00	27.60	0.00	0.00	30.25	0.00	0.00
25.00	0.00	0.00	27.65	0.00	0.00	30.30	0.00	0.00
25.05	0.00	0.00	27.70	0.00	0.00	30.35	0.00	0.00
25.10	0.00	0.00	27.75	0.00	0.00	30.40	0.00	0.00
25.15	0.00	0.00	27.80	0.00	0.00	30.45	0.00	0.00
25.20	0.00	0.00	27.85	0.00	0.00	30.50	0.00	0.00
25.25	0.00	0.00	27.90	0.00	0.00	30.55	0.00	0.00
25.30	0.00	0.00	27.95	0.00	0.00	30.60	0.00	0.00
25.35	0.00	0.00	28.00	0.00	0.00	30.65	0.00	0.00
25.40	0.00	0.00	28.05	0.00	0.00	30.70	0.00	0.00
25.45	0.00	0.00	28.10	0.00	0.00	30.75	0.00	0.00
25.50	0.00	0.00	28.15	0.00	0.00	30.80	0.00	0.00
25.55	0.00	0.00	28.20	0.00	0.00	30.85	0.00	0.00
25.60	0.00	0.00	28.25	0.00	0.00	30.90	0.00	0.00
25.65	0.00	0.00	28.30	0.00	0.00	30.95	0.00	0.00
25.70	0.00	0.00	28.35	0.00	0.00	31.00	0.00	0.00
25.75	0.00	0.00	28.40	0.00	0.00	31.05	0.00	0.00
25.80	0.00	0.00	28.45	0.00	0.00	31.10	0.00	0.00
25.85	0.00	0.00	28.50	0.00	0.00	31.15	0.00	0.00
25.90	0.00	0.00	28.55	0.00	0.00	31.20	0.00	0.00
25.95	0.00	0.00	28.60	0.00	0.00	31.25	0.00	0.00
26.00	0.00	0.00	28.65	0.00	0.00	31.30	0.00	0.00
26.05	0.00	0.00	28.70	0.00	0.00	31.35	0.00	0.00
26.10	0.00	0.00	28.75	0.00	0.00	31.40	0.00	0.00
26.15	0.00	0.00	28.80	0.00	0.00	31.45	0.00	0.00
26.20	0.00	0.00	28.85	0.00	0.00	31.50	0.00	0.00
26.25	0.00	0.00	28.90	0.00	0.00	31.55	0.00	0.00
26.30	0.00	0.00	28.95	0.00	0.00	31.60	0.00	0.00
26.35	0.00	0.00	29.00	0.00	0.00	31.65	0.00	0.00
26.40	0.00	0.00	29.05	0.00	0.00	31.70	0.00	0.00
26.45	0.00	0.00	29.10	0.00	0.00	31.75	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
31.80	0.00	0.00	34.45	0.00	0.00	37.10	0.00	0.00
31.85	0.00	0.00	34.50	0.00	0.00	37.15	0.00	0.00
31.90	0.00	0.00	34.55	0.00	0.00	37.20	0.00	0.00
31.95	0.00	0.00	34.60	0.00	0.00	37.25	0.00	0.00
32.00	0.00	0.00	34.65	0.00	0.00	37.30	0.00	0.00
32.05	0.00	0.00	34.70	0.00	0.00	37.35	0.00	0.00
32.10	0.00	0.00	34.75	0.00	0.00	37.40	0.00	0.00
32.15	0.00	0.00	34.80	0.00	0.00	37.45	0.00	0.00
32.20	0.00	0.00	34.85	0.00	0.00	37.50	0.00	0.00
32.25	0.00	0.00	34.90	0.00	0.00	37.55	0.00	0.00
32.30	0.00	0.00	34.95	0.00	0.00	37.60	0.00	0.00
32.35	0.00	0.00	35.00	0.00	0.00	37.65	0.00	0.00
32.40	0.00	0.00	35.05	0.00	0.00	37.70	0.00	0.00
32.45	0.00	0.00	35.10	0.00	0.00	37.75	0.00	0.00
32.50	0.00	0.00	35.15	0.00	0.00	37.80	0.00	0.00
32.55	0.00	0.00	35.20	0.00	0.00	37.85	0.00	0.00
32.60	0.00	0.00	35.25	0.00	0.00	37.90	0.00	0.00
32.65	0.00	0.00	35.30	0.00	0.00	37.95	0.00	0.00
32.70	0.00	0.00	35.35	0.00	0.00	38.00	0.00	0.00
32.75	0.00	0.00	35.40	0.00	0.00	38.05	0.00	0.00
32.80	0.00	0.00	35.45	0.00	0.00	38.10	0.00	0.00
32.85	0.00	0.00	35.50	0.00	0.00	38.15	0.00	0.00
32.90	0.00	0.00	35.55	0.00	0.00	38.20	0.00	0.00
32.95	0.00	0.00	35.60	0.00	0.00	38.25	0.00	0.00
33.00	0.00	0.00	35.65	0.00	0.00	38.30	0.00	0.00
33.05	0.00	0.00	35.70	0.00	0.00	38.35	0.00	0.00
33.10	0.00	0.00	35.75	0.00	0.00	38.40	0.00	0.00
33.15	0.00	0.00	35.80	0.00	0.00	38.45	0.00	0.00
33.20	0.00	0.00	35.85	0.00	0.00	38.50	0.00	0.00
33.25	0.00	0.00	35.90	0.00	0.00	38.55	0.00	0.00
33.30	0.00	0.00	35.95	0.00	0.00	38.60	0.00	0.00
33.35	0.00	0.00	36.00	0.00	0.00	38.65	0.00	0.00
33.40	0.00	0.00	36.05	0.00	0.00	38.70	0.00	0.00
33.45	0.00	0.00	36.10	0.00	0.00	38.75	0.00	0.00
33.50	0.00	0.00	36.15	0.00	0.00	38.80	0.00	0.00
33.55	0.00	0.00	36.20	0.00	0.00	38.85	0.00	0.00
33.60	0.00	0.00	36.25	0.00	0.00	38.90	0.00	0.00
33.65	0.00	0.00	36.30	0.00	0.00	38.95	0.00	0.00
33.70	0.00	0.00	36.35	0.00	0.00	39.00	0.00	0.00
33.75	0.00	0.00	36.40	0.00	0.00	39.05	0.00	0.00
33.80	0.00	0.00	36.45	0.00	0.00	39.10	0.00	0.00
33.85	0.00	0.00	36.50	0.00	0.00	39.15	0.00	0.00
33.90	0.00	0.00	36.55	0.00	0.00	39.20	0.00	0.00
33.95	0.00	0.00	36.60	0.00	0.00	39.25	0.00	0.00
34.00	0.00	0.00	36.65	0.00	0.00	39.30	0.00	0.00
34.05	0.00	0.00	36.70	0.00	0.00	39.35	0.00	0.00
34.10	0.00	0.00	36.75	0.00	0.00	39.40	0.00	0.00
34.15	0.00	0.00	36.80	0.00	0.00	39.45	0.00	0.00
34.20	0.00	0.00	36.85	0.00	0.00	39.50	0.00	0.00
34.25	0.00	0.00	36.90	0.00	0.00	39.55	0.00	0.00
34.30	0.00	0.00	36.95	0.00	0.00	39.60	0.00	0.00
34.35	0.00	0.00	37.00	0.00	0.00	39.65	0.00	0.00
34.40	0.00	0.00	37.05	0.00	0.00	39.70	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
39.75	0.00	0.00	42.40	0.00	0.00	45.05	0.00	0.00
39.80	0.00	0.00	42.45	0.00	0.00	45.10	0.00	0.00
39.85	0.00	0.00	42.50	0.00	0.00	45.15	0.00	0.00
39.90	0.00	0.00	42.55	0.00	0.00	45.20	0.00	0.00
39.95	0.00	0.00	42.60	0.00	0.00	45.25	0.00	0.00
40.00	0.00	0.00	42.65	0.00	0.00	45.30	0.00	0.00
40.05	0.00	0.00	42.70	0.00	0.00	45.35	0.00	0.00
40.10	0.00	0.00	42.75	0.00	0.00	45.40	0.00	0.00
40.15	0.00	0.00	42.80	0.00	0.00	45.45	0.00	0.00
40.20	0.00	0.00	42.85	0.00	0.00	45.50	0.00	0.00
40.25	0.00	0.00	42.90	0.00	0.00	45.55	0.00	0.00
40.30	0.00	0.00	42.95	0.00	0.00	45.60	0.00	0.00
40.35	0.00	0.00	43.00	0.00	0.00	45.65	0.00	0.00
40.40	0.00	0.00	43.05	0.00	0.00	45.70	0.00	0.00
40.45	0.00	0.00	43.10	0.00	0.00	45.75	0.00	0.00
40.50	0.00	0.00	43.15	0.00	0.00	45.80	0.00	0.00
40.55	0.00	0.00	43.20	0.00	0.00	45.85	0.00	0.00
40.60	0.00	0.00	43.25	0.00	0.00	45.90	0.00	0.00
40.65	0.00	0.00	43.30	0.00	0.00	45.95	0.00	0.00
40.70	0.00	0.00	43.35	0.00	0.00	46.00	0.00	0.00
40.75	0.00	0.00	43.40	0.00	0.00	46.05	0.00	0.00
40.80	0.00	0.00	43.45	0.00	0.00	46.10	0.00	0.00
40.85	0.00	0.00	43.50	0.00	0.00	46.15	0.00	0.00
40.90	0.00	0.00	43.55	0.00	0.00	46.20	0.00	0.00
40.95	0.00	0.00	43.60	0.00	0.00	46.25	0.00	0.00
41.00	0.00	0.00	43.65	0.00	0.00	46.30	0.00	0.00
41.05	0.00	0.00	43.70	0.00	0.00	46.35	0.00	0.00
41.10	0.00	0.00	43.75	0.00	0.00	46.40	0.00	0.00
41.15	0.00	0.00	43.80	0.00	0.00	46.45	0.00	0.00
41.20	0.00	0.00	43.85	0.00	0.00	46.50	0.00	0.00
41.25	0.00	0.00	43.90	0.00	0.00	46.55	0.00	0.00
41.30	0.00	0.00	43.95	0.00	0.00	46.60	0.00	0.00
41.35	0.00	0.00	44.00	0.00	0.00	46.65	0.00	0.00
41.40	0.00	0.00	44.05	0.00	0.00	46.70	0.00	0.00
41.45	0.00	0.00	44.10	0.00	0.00	46.75	0.00	0.00
41.50	0.00	0.00	44.15	0.00	0.00	46.80	0.00	0.00
41.55	0.00	0.00	44.20	0.00	0.00	46.85	0.00	0.00
41.60	0.00	0.00	44.25	0.00	0.00	46.90	0.00	0.00
41.65	0.00	0.00	44.30	0.00	0.00	46.95	0.00	0.00
41.70	0.00	0.00	44.35	0.00	0.00	47.00	0.00	0.00
41.75	0.00	0.00	44.40	0.00	0.00	47.05	0.00	0.00
41.80	0.00	0.00	44.45	0.00	0.00	47.10	0.00	0.00
41.85	0.00	0.00	44.50	0.00	0.00	47.15	0.00	0.00
41.90	0.00	0.00	44.55	0.00	0.00	47.20	0.00	0.00
41.95	0.00	0.00	44.60	0.00	0.00	47.25	0.00	0.00
42.00	0.00	0.00	44.65	0.00	0.00	47.30	0.00	0.00
42.05	0.00	0.00	44.70	0.00	0.00	47.35	0.00	0.00
42.10	0.00	0.00	44.75	0.00	0.00	47.40	0.00	0.00
42.15	0.00	0.00	44.80	0.00	0.00	47.45	0.00	0.00
42.20	0.00	0.00	44.85	0.00	0.00	47.50	0.00	0.00
42.25	0.00	0.00	44.90	0.00	0.00	47.55	0.00	0.00
42.30	0.00	0.00	44.95	0.00	0.00	47.60	0.00	0.00
42.35	0.00	0.00	45.00	0.00	0.00	47.65	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
47.70	0.00	0.00	50.35	0.00	0.00	53.00	0.00	0.00
47.75	0.00	0.00	50.40	0.00	0.00	53.05	0.00	0.00
47.80	0.00	0.00	50.45	0.00	0.00	53.10	0.00	0.00
47.85	0.00	0.00	50.50	0.00	0.00	53.15	0.00	0.00
47.90	0.00	0.00	50.55	0.00	0.00	53.20	0.00	0.00
47.95	0.00	0.00	50.60	0.00	0.00	53.25	0.00	0.00
48.00	0.00	0.00	50.65	0.00	0.00	53.30	0.00	0.00
48.05	0.00	0.00	50.70	0.00	0.00	53.35	0.00	0.00
48.10	0.00	0.00	50.75	0.00	0.00	53.40	0.00	0.00
48.15	0.00	0.00	50.80	0.00	0.00	53.45	0.00	0.00
48.20	0.00	0.00	50.85	0.00	0.00	53.50	0.00	0.00
48.25	0.00	0.00	50.90	0.00	0.00	53.55	0.00	0.00
48.30	0.00	0.00	50.95	0.00	0.00	53.60	0.00	0.00
48.35	0.00	0.00	51.00	0.00	0.00	53.65	0.00	0.00
48.40	0.00	0.00	51.05	0.00	0.00	53.70	0.00	0.00
48.45	0.00	0.00	51.10	0.00	0.00	53.75	0.00	0.00
48.50	0.00	0.00	51.15	0.00	0.00	53.80	0.00	0.00
48.55	0.00	0.00	51.20	0.00	0.00	53.85	0.00	0.00
48.60	0.00	0.00	51.25	0.00	0.00	53.90	0.00	0.00
48.65	0.00	0.00	51.30	0.00	0.00	53.95	0.00	0.00
48.70	0.00	0.00	51.35	0.00	0.00	54.00	0.00	0.00
48.75	0.00	0.00	51.40	0.00	0.00	54.05	0.00	0.00
48.80	0.00	0.00	51.45	0.00	0.00	54.10	0.00	0.00
48.85	0.00	0.00	51.50	0.00	0.00	54.15	0.00	0.00
48.90	0.00	0.00	51.55	0.00	0.00	54.20	0.00	0.00
48.95	0.00	0.00	51.60	0.00	0.00	54.25	0.00	0.00
49.00	0.00	0.00	51.65	0.00	0.00	54.30	0.00	0.00
49.05	0.00	0.00	51.70	0.00	0.00	54.35	0.00	0.00
49.10	0.00	0.00	51.75	0.00	0.00	54.40	0.00	0.00
49.15	0.00	0.00	51.80	0.00	0.00	54.45	0.00	0.00
49.20	0.00	0.00	51.85	0.00	0.00	54.50	0.00	0.00
49.25	0.00	0.00	51.90	0.00	0.00	54.55	0.00	0.00
49.30	0.00	0.00	51.95	0.00	0.00	54.60	0.00	0.00
49.35	0.00	0.00	52.00	0.00	0.00	54.65	0.00	0.00
49.40	0.00	0.00	52.05	0.00	0.00	54.70	0.00	0.00
49.45	0.00	0.00	52.10	0.00	0.00	54.75	0.00	0.00
49.50	0.00	0.00	52.15	0.00	0.00	54.80	0.00	0.00
49.55	0.00	0.00	52.20	0.00	0.00	54.85	0.00	0.00
49.60	0.00	0.00	52.25	0.00	0.00	54.90	0.00	0.00
49.65	0.00	0.00	52.30	0.00	0.00	54.95	0.00	0.00
49.70	0.00	0.00	52.35	0.00	0.00	55.00	0.00	0.00
49.75	0.00	0.00	52.40	0.00	0.00	55.05	0.00	0.00
49.80	0.00	0.00	52.45	0.00	0.00	55.10	0.00	0.00
49.85	0.00	0.00	52.50	0.00	0.00	55.15	0.00	0.00
49.90	0.00	0.00	52.55	0.00	0.00	55.20	0.00	0.00
49.95	0.00	0.00	52.60	0.00	0.00	55.25	0.00	0.00
50.00	0.00	0.00	52.65	0.00	0.00	55.30	0.00	0.00
50.05	0.00	0.00	52.70	0.00	0.00	55.35	0.00	0.00
50.10	0.00	0.00	52.75	0.00	0.00	55.40	0.00	0.00
50.15	0.00	0.00	52.80	0.00	0.00	55.45	0.00	0.00
50.20	0.00	0.00	52.85	0.00	0.00	55.50	0.00	0.00
50.25	0.00	0.00	52.90	0.00	0.00	55.55	0.00	0.00
50.30	0.00	0.00	52.95	0.00	0.00	55.60	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
55.65	0.00	0.00	58.30	0.00	0.00	60.95	0.00	0.00
55.70	0.00	0.00	58.35	0.00	0.00	61.00	0.00	0.00
55.75	0.00	0.00	58.40	0.00	0.00	61.05	0.00	0.00
55.80	0.00	0.00	58.45	0.00	0.00	61.10	0.00	0.00
55.85	0.00	0.00	58.50	0.00	0.00	61.15	0.00	0.00
55.90	0.00	0.00	58.55	0.00	0.00	61.20	0.00	0.00
55.95	0.00	0.00	58.60	0.00	0.00	61.25	0.00	0.00
56.00	0.00	0.00	58.65	0.00	0.00	61.30	0.00	0.00
56.05	0.00	0.00	58.70	0.00	0.00	61.35	0.00	0.00
56.10	0.00	0.00	58.75	0.00	0.00	61.40	0.00	0.00
56.15	0.00	0.00	58.80	0.00	0.00	61.45	0.00	0.00
56.20	0.00	0.00	58.85	0.00	0.00	61.50	0.00	0.00
56.25	0.00	0.00	58.90	0.00	0.00	61.55	0.00	0.00
56.30	0.00	0.00	58.95	0.00	0.00	61.60	0.00	0.00
56.35	0.00	0.00	59.00	0.00	0.00	61.65	0.00	0.00
56.40	0.00	0.00	59.05	0.00	0.00	61.70	0.00	0.00
56.45	0.00	0.00	59.10	0.00	0.00	61.75	0.00	0.00
56.50	0.00	0.00	59.15	0.00	0.00	61.80	0.00	0.00
56.55	0.00	0.00	59.20	0.00	0.00	61.85	0.00	0.00
56.60	0.00	0.00	59.25	0.00	0.00	61.90	0.00	0.00
56.65	0.00	0.00	59.30	0.00	0.00	61.95	0.00	0.00
56.70	0.00	0.00	59.35	0.00	0.00	62.00	0.00	0.00
56.75	0.00	0.00	59.40	0.00	0.00	62.05	0.00	0.00
56.80	0.00	0.00	59.45	0.00	0.00	62.10	0.00	0.00
56.85	0.00	0.00	59.50	0.00	0.00	62.15	0.00	0.00
56.90	0.00	0.00	59.55	0.00	0.00	62.20	0.00	0.00
56.95	0.00	0.00	59.60	0.00	0.00	62.25	0.00	0.00
57.00	0.00	0.00	59.65	0.00	0.00	62.30	0.00	0.00
57.05	0.00	0.00	59.70	0.00	0.00	62.35	0.00	0.00
57.10	0.00	0.00	59.75	0.00	0.00	62.40	0.00	0.00
57.15	0.00	0.00	59.80	0.00	0.00	62.45	0.00	0.00
57.20	0.00	0.00	59.85	0.00	0.00	62.50	0.00	0.00
57.25	0.00	0.00	59.90	0.00	0.00	62.55	0.00	0.00
57.30	0.00	0.00	59.95	0.00	0.00	62.60	0.00	0.00
57.35	0.00	0.00	60.00	0.00	0.00	62.65	0.00	0.00
57.40	0.00	0.00	60.05	0.00	0.00	62.70	0.00	0.00
57.45	0.00	0.00	60.10	0.00	0.00	62.75	0.00	0.00
57.50	0.00	0.00	60.15	0.00	0.00	62.80	0.00	0.00
57.55	0.00	0.00	60.20	0.00	0.00	62.85	0.00	0.00
57.60	0.00	0.00	60.25	0.00	0.00	62.90	0.00	0.00
57.65	0.00	0.00	60.30	0.00	0.00	62.95	0.00	0.00
57.70	0.00	0.00	60.35	0.00	0.00	63.00	0.00	0.00
57.75	0.00	0.00	60.40	0.00	0.00	63.05	0.00	0.00
57.80	0.00	0.00	60.45	0.00	0.00	63.10	0.00	0.00
57.85	0.00	0.00	60.50	0.00	0.00	63.15	0.00	0.00
57.90	0.00	0.00	60.55	0.00	0.00	63.20	0.00	0.00
57.95	0.00	0.00	60.60	0.00	0.00	63.25	0.00	0.00
58.00	0.00	0.00	60.65	0.00	0.00	63.30	0.00	0.00
58.05	0.00	0.00	60.70	0.00	0.00	63.35	0.00	0.00
58.10	0.00	0.00	60.75	0.00	0.00	63.40	0.00	0.00
58.15	0.00	0.00	60.80	0.00	0.00	63.45	0.00	0.00
58.20	0.00	0.00	60.85	0.00	0.00	63.50	0.00	0.00
58.25	0.00	0.00	60.90	0.00	0.00	63.55	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
63.60	0.00	0.00	66.25	0.00	0.00	68.90	0.00	0.00
63.65	0.00	0.00	66.30	0.00	0.00	68.95	0.00	0.00
63.70	0.00	0.00	66.35	0.00	0.00	69.00	0.00	0.00
63.75	0.00	0.00	66.40	0.00	0.00	69.05	0.00	0.00
63.80	0.00	0.00	66.45	0.00	0.00	69.10	0.00	0.00
63.85	0.00	0.00	66.50	0.00	0.00	69.15	0.00	0.00
63.90	0.00	0.00	66.55	0.00	0.00	69.20	0.00	0.00
63.95	0.00	0.00	66.60	0.00	0.00	69.25	0.00	0.00
64.00	0.00	0.00	66.65	0.00	0.00	69.30	0.00	0.00
64.05	0.00	0.00	66.70	0.00	0.00	69.35	0.00	0.00
64.10	0.00	0.00	66.75	0.00	0.00	69.40	0.00	0.00
64.15	0.00	0.00	66.80	0.00	0.00	69.45	0.00	0.00
64.20	0.00	0.00	66.85	0.00	0.00	69.50	0.00	0.00
64.25	0.00	0.00	66.90	0.00	0.00	69.55	0.00	0.00
64.30	0.00	0.00	66.95	0.00	0.00	69.60	0.00	0.00
64.35	0.00	0.00	67.00	0.00	0.00	69.65	0.00	0.00
64.40	0.00	0.00	67.05	0.00	0.00	69.70	0.00	0.00
64.45	0.00	0.00	67.10	0.00	0.00	69.75	0.00	0.00
64.50	0.00	0.00	67.15	0.00	0.00	69.80	0.00	0.00
64.55	0.00	0.00	67.20	0.00	0.00	69.85	0.00	0.00
64.60	0.00	0.00	67.25	0.00	0.00	69.90	0.00	0.00
64.65	0.00	0.00	67.30	0.00	0.00	69.95	0.00	0.00
64.70	0.00	0.00	67.35	0.00	0.00	70.00	0.00	0.00
64.75	0.00	0.00	67.40	0.00	0.00	70.05	0.00	0.00
64.80	0.00	0.00	67.45	0.00	0.00	70.10	0.00	0.00
64.85	0.00	0.00	67.50	0.00	0.00	70.15	0.00	0.00
64.90	0.00	0.00	67.55	0.00	0.00	70.20	0.00	0.00
64.95	0.00	0.00	67.60	0.00	0.00	70.25	0.00	0.00
65.00	0.00	0.00	67.65	0.00	0.00	70.30	0.00	0.00
65.05	0.00	0.00	67.70	0.00	0.00	70.35	0.00	0.00
65.10	0.00	0.00	67.75	0.00	0.00	70.40	0.00	0.00
65.15	0.00	0.00	67.80	0.00	0.00	70.45	0.00	0.00
65.20	0.00	0.00	67.85	0.00	0.00	70.50	0.00	0.00
65.25	0.00	0.00	67.90	0.00	0.00	70.55	0.00	0.00
65.30	0.00	0.00	67.95	0.00	0.00	70.60	0.00	0.00
65.35	0.00	0.00	68.00	0.00	0.00	70.65	0.00	0.00
65.40	0.00	0.00	68.05	0.00	0.00	70.70	0.00	0.00
65.45	0.00	0.00	68.10	0.00	0.00	70.75	0.00	0.00
65.50	0.00	0.00	68.15	0.00	0.00	70.80	0.00	0.00
65.55	0.00	0.00	68.20	0.00	0.00	70.85	0.00	0.00
65.60	0.00	0.00	68.25	0.00	0.00	70.90	0.00	0.00
65.65	0.00	0.00	68.30	0.00	0.00	70.95	0.00	0.00
65.70	0.00	0.00	68.35	0.00	0.00	71.00	0.00	0.00
65.75	0.00	0.00	68.40	0.00	0.00	71.05	0.00	0.00
65.80	0.00	0.00	68.45	0.00	0.00	71.10	0.00	0.00
65.85	0.00	0.00	68.50	0.00	0.00	71.15	0.00	0.00
65.90	0.00	0.00	68.55	0.00	0.00	71.20	0.00	0.00
65.95	0.00	0.00	68.60	0.00	0.00	71.25	0.00	0.00
66.00	0.00	0.00	68.65	0.00	0.00	71.30	0.00	0.00
66.05	0.00	0.00	68.70	0.00	0.00	71.35	0.00	0.00
66.10	0.00	0.00	68.75	0.00	0.00	71.40	0.00	0.00
66.15	0.00	0.00	68.80	0.00	0.00	71.45	0.00	0.00
66.20	0.00	0.00	68.85	0.00	0.00	71.50	0.00	0.00

2023-04-28_HydroCAD

NOAA 24-hr C 2-Year Rainfall=3.31"

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Printed 4/28/2023

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Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
71.55	0.00	0.00
71.60	0.00	0.00
71.65	0.00	0.00
71.70	0.00	0.00
71.75	0.00	0.00
71.80	0.00	0.00
71.85	0.00	0.00
71.90	0.00	0.00
71.95	0.00	0.00
72.00	0.00	0.00

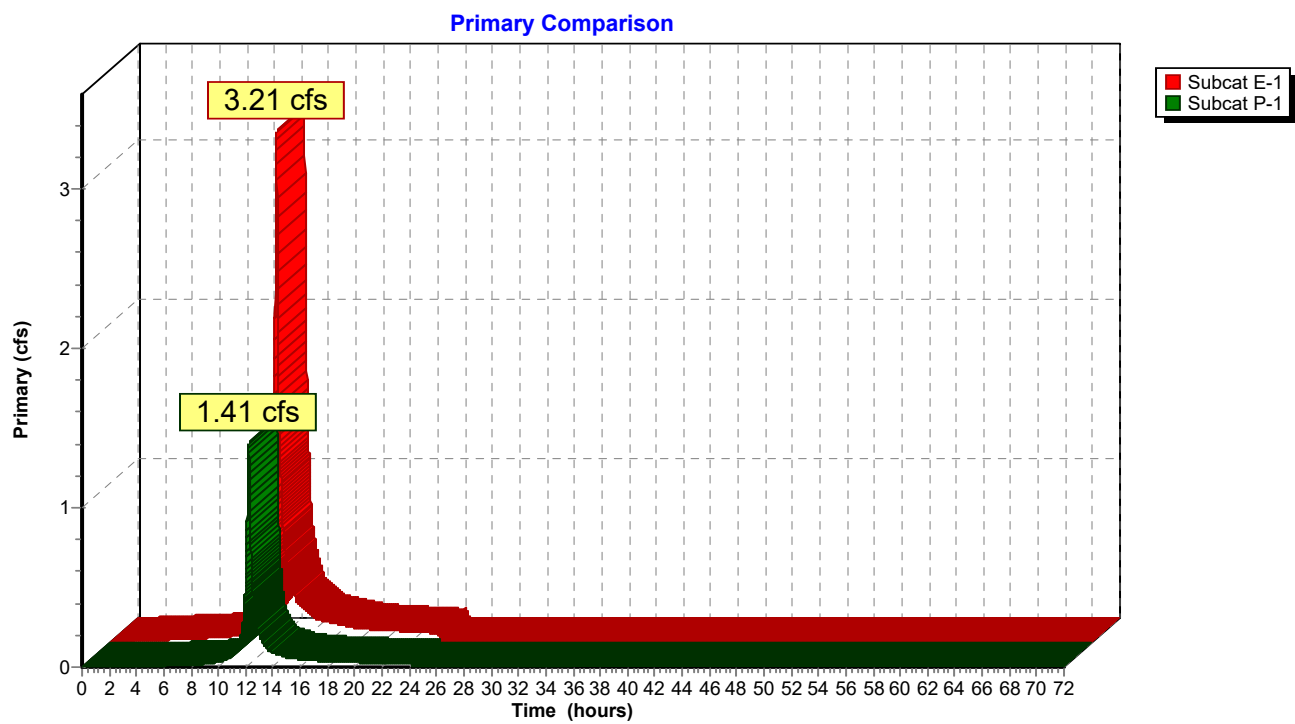
2023-04-28_HydroCAD

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NOAA 24-hr C 10-Year Rainfall=5.06"

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Primary Comparison

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
0.00	0.00	0.00	2.65	0.01	0.00	5.30	0.02	0.01
0.05	0.00	0.00	2.70	0.01	0.00	5.35	0.02	0.01
0.10	0.00	0.00	2.75	0.01	0.00	5.40	0.02	0.01
0.15	0.00	0.00	2.80	0.01	0.00	5.45	0.02	0.01
0.20	0.00	0.00	2.85	0.01	0.00	5.50	0.02	0.01
0.25	0.00	0.00	2.90	0.01	0.00	5.55	0.02	0.01
0.30	0.00	0.00	2.95	0.01	0.00	5.60	0.02	0.01
0.35	0.00	0.00	3.00	0.01	0.00	5.65	0.02	0.01
0.40	0.00	0.00	3.05	0.01	0.00	5.70	0.02	0.01
0.45	0.00	0.00	3.10	0.01	0.00	5.75	0.02	0.01
0.50	0.00	0.00	3.15	0.01	0.00	5.80	0.02	0.01
0.55	0.00	0.00	3.20	0.01	0.00	5.85	0.02	0.01
0.60	0.00	0.00	3.25	0.01	0.00	5.90	0.02	0.01
0.65	0.00	0.00	3.30	0.01	0.00	5.95	0.02	0.01
0.70	0.00	0.00	3.35	0.01	0.00	6.00	0.02	0.01
0.75	0.00	0.00	3.40	0.01	0.00	6.05	0.02	0.01
0.80	0.00	0.00	3.45	0.01	0.00	6.10	0.02	0.01
0.85	0.00	0.00	3.50	0.01	0.00	6.15	0.02	0.01
0.90	0.00	0.00	3.55	0.01	0.00	6.20	0.02	0.01
0.95	0.00	0.00	3.60	0.01	0.00	6.25	0.02	0.01
1.00	0.00	0.00	3.65	0.01	0.00	6.30	0.02	0.01
1.05	0.00	0.00	3.70	0.01	0.00	6.35	0.02	0.01
1.10	0.00	0.00	3.75	0.02	0.00	6.40	0.02	0.01
1.15	0.00	0.00	3.80	0.02	0.00	6.45	0.02	0.01
1.20	0.00	0.00	3.85	0.02	0.00	6.50	0.02	0.01
1.25	0.00	0.00	3.90	0.02	0.00	6.55	0.02	0.01
1.30	0.00	0.00	3.95	0.02	0.00	6.60	0.02	0.01
1.35	0.00	0.00	4.00	0.02	0.00	6.65	0.02	0.01
1.40	0.00	0.00	4.05	0.02	0.00	6.70	0.03	0.01
1.45	0.00	0.00	4.10	0.02	0.00	6.75	0.03	0.01
1.50	0.00	0.00	4.15	0.02	0.00	6.80	0.03	0.01
1.55	0.00	0.00	4.20	0.02	0.00	6.85	0.03	0.01
1.60	0.01	0.00	4.25	0.02	0.00	6.90	0.03	0.01
1.65	0.01	0.00	4.30	0.02	0.00	6.95	0.03	0.01
1.70	0.01	0.00	4.35	0.02	0.00	7.00	0.03	0.01
1.75	0.01	0.00	4.40	0.02	0.00	7.05	0.03	0.01
1.80	0.01	0.00	4.45	0.02	0.00	7.10	0.03	0.01
1.85	0.01	0.00	4.50	0.02	0.00	7.15	0.03	0.01
1.90	0.01	0.00	4.55	0.02	0.00	7.20	0.03	0.01
1.95	0.01	0.00	4.60	0.02	0.00	7.25	0.03	0.01
2.00	0.01	0.00	4.65	0.02	0.00	7.30	0.03	0.01
2.05	0.01	0.00	4.70	0.02	0.00	7.35	0.03	0.01
2.10	0.01	0.00	4.75	0.02	0.00	7.40	0.03	0.01
2.15	0.01	0.00	4.80	0.02	0.00	7.45	0.03	0.01
2.20	0.01	0.00	4.85	0.02	0.00	7.50	0.03	0.01
2.25	0.01	0.00	4.90	0.02	0.00	7.55	0.03	0.01
2.30	0.01	0.00	4.95	0.02	0.00	7.60	0.03	0.01
2.35	0.01	0.00	5.00	0.02	0.00	7.65	0.03	0.01
2.40	0.01	0.00	5.05	0.02	0.00	7.70	0.03	0.01
2.45	0.01	0.00	5.10	0.02	0.00	7.75	0.03	0.01
2.50	0.01	0.00	5.15	0.02	0.00	7.80	0.03	0.01
2.55	0.01	0.00	5.20	0.02	0.00	7.85	0.03	0.01
2.60	0.01	0.00	5.25	0.02	0.01	7.90	0.03	0.01

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
7.95	0.03	0.01	10.60	0.08	0.05	13.25	0.38	0.15
8.00	0.03	0.01	10.65	0.08	0.05	13.30	0.36	0.14
8.05	0.03	0.01	10.70	0.08	0.05	13.35	0.35	0.14
8.10	0.03	0.01	10.75	0.09	0.06	13.40	0.34	0.13
8.15	0.03	0.01	10.80	0.09	0.06	13.45	0.32	0.13
8.20	0.03	0.01	10.85	0.10	0.06	13.50	0.31	0.12
8.25	0.04	0.01	10.90	0.10	0.07	13.55	0.30	0.12
8.30	0.04	0.01	10.95	0.10	0.07	13.60	0.28	0.11
8.35	0.04	0.01	11.00	0.11	0.07	13.65	0.27	0.11
8.40	0.04	0.01	11.05	0.11	0.08	13.70	0.26	0.10
8.45	0.04	0.01	11.10	0.12	0.08	13.75	0.25	0.10
8.50	0.04	0.01	11.15	0.13	0.09	13.80	0.25	0.10
8.55	0.04	0.01	11.20	0.13	0.10	13.85	0.24	0.09
8.60	0.04	0.02	11.25	0.14	0.10	13.90	0.24	0.09
8.65	0.04	0.02	11.30	0.15	0.11	13.95	0.23	0.09
8.70	0.04	0.02	11.35	0.16	0.12	14.00	0.23	0.09
8.75	0.04	0.02	11.40	0.18	0.12	14.05	0.23	0.09
8.80	0.04	0.02	11.45	0.19	0.13	14.10	0.22	0.09
8.85	0.04	0.02	11.50	0.21	0.14	14.15	0.22	0.08
8.90	0.04	0.02	11.55	0.23	0.15	14.20	0.22	0.08
8.95	0.04	0.02	11.60	0.26	0.17	14.25	0.21	0.08
9.00	0.04	0.02	11.65	0.32	0.19	14.30	0.21	0.08
9.05	0.04	0.02	11.70	0.37	0.22	14.35	0.21	0.08
9.10	0.04	0.02	11.75	0.42	0.25	14.40	0.20	0.08
9.15	0.04	0.02	11.80	0.48	0.28	14.45	0.20	0.08
9.20	0.04	0.02	11.85	0.57	0.32	14.50	0.20	0.08
9.25	0.04	0.02	11.90	0.70	0.37	14.55	0.19	0.07
9.30	0.05	0.02	11.95	0.87	0.45	14.60	0.19	0.07
9.35	0.05	0.02	12.00	1.15	0.56	14.65	0.19	0.07
9.40	0.05	0.02	12.05	1.56	0.73	14.70	0.18	0.07
9.45	0.05	0.02	12.10	2.19	0.96	14.75	0.18	0.07
9.50	0.05	0.02	12.15	2.93	1.25	14.80	0.18	0.07
9.55	0.05	0.03	12.20	3.20	1.41	14.85	0.17	0.07
9.60	0.05	0.03	12.25	2.79	1.31	14.90	0.17	0.06
9.65	0.05	0.03	12.30	2.22	1.08	14.95	0.16	0.06
9.70	0.05	0.03	12.35	1.80	0.86	15.00	0.16	0.06
9.75	0.06	0.03	12.40	1.50	0.71	15.05	0.16	0.06
9.80	0.06	0.03	12.45	1.27	0.59	15.10	0.15	0.06
9.85	0.06	0.03	12.50	1.11	0.50	15.15	0.15	0.06
9.90	0.06	0.03	12.55	1.01	0.45	15.20	0.15	0.06
9.95	0.06	0.03	12.60	0.92	0.40	15.25	0.14	0.05
10.00	0.06	0.03	12.65	0.80	0.35	15.30	0.14	0.05
10.05	0.06	0.03	12.70	0.70	0.31	15.35	0.14	0.05
10.10	0.06	0.04	12.75	0.64	0.27	15.40	0.14	0.05
10.15	0.06	0.04	12.80	0.60	0.25	15.45	0.14	0.05
10.20	0.07	0.04	12.85	0.57	0.23	15.50	0.14	0.05
10.25	0.07	0.04	12.90	0.54	0.22	15.55	0.14	0.05
10.30	0.07	0.04	12.95	0.51	0.21	15.60	0.14	0.05
10.35	0.07	0.04	13.00	0.49	0.20	15.65	0.14	0.05
10.40	0.07	0.04	13.05	0.47	0.19	15.70	0.14	0.05
10.45	0.07	0.04	13.10	0.44	0.18	15.75	0.13	0.05
10.50	0.07	0.05	13.15	0.42	0.17	15.80	0.13	0.05
10.55	0.07	0.05	13.20	0.40	0.16	15.85	0.13	0.05

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
15.90	0.13	0.05	18.55	0.08	0.03	21.20	0.07	0.03
15.95	0.13	0.05	18.60	0.08	0.03	21.25	0.07	0.03
16.00	0.13	0.05	18.65	0.08	0.03	21.30	0.07	0.03
16.05	0.13	0.05	18.70	0.08	0.03	21.35	0.07	0.03
16.10	0.13	0.05	18.75	0.08	0.03	21.40	0.07	0.03
16.15	0.13	0.05	18.80	0.08	0.03	21.45	0.07	0.03
16.20	0.13	0.05	18.85	0.08	0.03	21.50	0.07	0.03
16.25	0.13	0.05	18.90	0.08	0.03	21.55	0.07	0.03
16.30	0.12	0.05	18.95	0.08	0.03	21.60	0.07	0.03
16.35	0.12	0.05	19.00	0.08	0.03	21.65	0.07	0.02
16.40	0.12	0.05	19.05	0.08	0.03	21.70	0.07	0.02
16.45	0.12	0.04	19.10	0.08	0.03	21.75	0.07	0.02
16.50	0.12	0.04	19.15	0.08	0.03	21.80	0.07	0.02
16.55	0.12	0.04	19.20	0.08	0.03	21.85	0.07	0.02
16.60	0.12	0.04	19.25	0.08	0.03	21.90	0.07	0.02
16.65	0.12	0.04	19.30	0.08	0.03	21.95	0.07	0.02
16.70	0.12	0.04	19.35	0.08	0.03	22.00	0.07	0.02
16.75	0.12	0.04	19.40	0.08	0.03	22.05	0.07	0.02
16.80	0.11	0.04	19.45	0.08	0.03	22.10	0.07	0.02
16.85	0.11	0.04	19.50	0.08	0.03	22.15	0.07	0.02
16.90	0.11	0.04	19.55	0.08	0.03	22.20	0.07	0.02
16.95	0.11	0.04	19.60	0.08	0.03	22.25	0.07	0.02
17.00	0.11	0.04	19.65	0.08	0.03	22.30	0.07	0.02
17.05	0.11	0.04	19.70	0.08	0.03	22.35	0.07	0.02
17.10	0.11	0.04	19.75	0.08	0.03	22.40	0.07	0.02
17.15	0.11	0.04	19.80	0.08	0.03	22.45	0.07	0.02
17.20	0.11	0.04	19.85	0.08	0.03	22.50	0.07	0.02
17.25	0.11	0.04	19.90	0.08	0.03	22.55	0.06	0.02
17.30	0.10	0.04	19.95	0.08	0.03	22.60	0.06	0.02
17.35	0.10	0.04	20.00	0.08	0.03	22.65	0.06	0.02
17.40	0.10	0.04	20.05	0.08	0.03	22.70	0.06	0.02
17.45	0.10	0.04	20.10	0.08	0.03	22.75	0.06	0.02
17.50	0.10	0.04	20.15	0.08	0.03	22.80	0.06	0.02
17.55	0.10	0.04	20.20	0.08	0.03	22.85	0.06	0.02
17.60	0.10	0.04	20.25	0.08	0.03	22.90	0.06	0.02
17.65	0.10	0.04	20.30	0.08	0.03	22.95	0.06	0.02
17.70	0.10	0.04	20.35	0.08	0.03	23.00	0.06	0.02
17.75	0.10	0.04	20.40	0.08	0.03	23.05	0.06	0.02
17.80	0.09	0.03	20.45	0.08	0.03	23.10	0.06	0.02
17.85	0.09	0.03	20.50	0.08	0.03	23.15	0.06	0.02
17.90	0.09	0.03	20.55	0.07	0.03	23.20	0.06	0.02
17.95	0.09	0.03	20.60	0.07	0.03	23.25	0.06	0.02
18.00	0.09	0.03	20.65	0.07	0.03	23.30	0.06	0.02
18.05	0.09	0.03	20.70	0.07	0.03	23.35	0.06	0.02
18.10	0.09	0.03	20.75	0.07	0.03	23.40	0.06	0.02
18.15	0.09	0.03	20.80	0.07	0.03	23.45	0.06	0.02
18.20	0.09	0.03	20.85	0.07	0.03	23.50	0.06	0.02
18.25	0.09	0.03	20.90	0.07	0.03	23.55	0.06	0.02
18.30	0.09	0.03	20.95	0.07	0.03	23.60	0.06	0.02
18.35	0.09	0.03	21.00	0.07	0.03	23.65	0.06	0.02
18.40	0.09	0.03	21.05	0.07	0.03	23.70	0.06	0.02
18.45	0.09	0.03	21.10	0.07	0.03	23.75	0.06	0.02
18.50	0.08	0.03	21.15	0.07	0.03	23.80	0.06	0.02

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
23.85	0.06	0.02	26.50	0.00	0.00	29.15	0.00	0.00
23.90	0.06	0.02	26.55	0.00	0.00	29.20	0.00	0.00
23.95	0.06	0.02	26.60	0.00	0.00	29.25	0.00	0.00
24.00	0.06	0.02	26.65	0.00	0.00	29.30	0.00	0.00
24.05	0.06	0.02	26.70	0.00	0.00	29.35	0.00	0.00
24.10	0.06	0.02	26.75	0.00	0.00	29.40	0.00	0.00
24.15	0.04	0.02	26.80	0.00	0.00	29.45	0.00	0.00
24.20	0.02	0.01	26.85	0.00	0.00	29.50	0.00	0.00
24.25	0.01	0.01	26.90	0.00	0.00	29.55	0.00	0.00
24.30	0.01	0.00	26.95	0.00	0.00	29.60	0.00	0.00
24.35	0.00	0.00	27.00	0.00	0.00	29.65	0.00	0.00
24.40	0.00	0.00	27.05	0.00	0.00	29.70	0.00	0.00
24.45	0.00	0.00	27.10	0.00	0.00	29.75	0.00	0.00
24.50	0.00	0.00	27.15	0.00	0.00	29.80	0.00	0.00
24.55	0.00	0.00	27.20	0.00	0.00	29.85	0.00	0.00
24.60	0.00	0.00	27.25	0.00	0.00	29.90	0.00	0.00
24.65	0.00	0.00	27.30	0.00	0.00	29.95	0.00	0.00
24.70	0.00	0.00	27.35	0.00	0.00	30.00	0.00	0.00
24.75	0.00	0.00	27.40	0.00	0.00	30.05	0.00	0.00
24.80	0.00	0.00	27.45	0.00	0.00	30.10	0.00	0.00
24.85	0.00	0.00	27.50	0.00	0.00	30.15	0.00	0.00
24.90	0.00	0.00	27.55	0.00	0.00	30.20	0.00	0.00
24.95	0.00	0.00	27.60	0.00	0.00	30.25	0.00	0.00
25.00	0.00	0.00	27.65	0.00	0.00	30.30	0.00	0.00
25.05	0.00	0.00	27.70	0.00	0.00	30.35	0.00	0.00
25.10	0.00	0.00	27.75	0.00	0.00	30.40	0.00	0.00
25.15	0.00	0.00	27.80	0.00	0.00	30.45	0.00	0.00
25.20	0.00	0.00	27.85	0.00	0.00	30.50	0.00	0.00
25.25	0.00	0.00	27.90	0.00	0.00	30.55	0.00	0.00
25.30	0.00	0.00	27.95	0.00	0.00	30.60	0.00	0.00
25.35	0.00	0.00	28.00	0.00	0.00	30.65	0.00	0.00
25.40	0.00	0.00	28.05	0.00	0.00	30.70	0.00	0.00
25.45	0.00	0.00	28.10	0.00	0.00	30.75	0.00	0.00
25.50	0.00	0.00	28.15	0.00	0.00	30.80	0.00	0.00
25.55	0.00	0.00	28.20	0.00	0.00	30.85	0.00	0.00
25.60	0.00	0.00	28.25	0.00	0.00	30.90	0.00	0.00
25.65	0.00	0.00	28.30	0.00	0.00	30.95	0.00	0.00
25.70	0.00	0.00	28.35	0.00	0.00	31.00	0.00	0.00
25.75	0.00	0.00	28.40	0.00	0.00	31.05	0.00	0.00
25.80	0.00	0.00	28.45	0.00	0.00	31.10	0.00	0.00
25.85	0.00	0.00	28.50	0.00	0.00	31.15	0.00	0.00
25.90	0.00	0.00	28.55	0.00	0.00	31.20	0.00	0.00
25.95	0.00	0.00	28.60	0.00	0.00	31.25	0.00	0.00
26.00	0.00	0.00	28.65	0.00	0.00	31.30	0.00	0.00
26.05	0.00	0.00	28.70	0.00	0.00	31.35	0.00	0.00
26.10	0.00	0.00	28.75	0.00	0.00	31.40	0.00	0.00
26.15	0.00	0.00	28.80	0.00	0.00	31.45	0.00	0.00
26.20	0.00	0.00	28.85	0.00	0.00	31.50	0.00	0.00
26.25	0.00	0.00	28.90	0.00	0.00	31.55	0.00	0.00
26.30	0.00	0.00	28.95	0.00	0.00	31.60	0.00	0.00
26.35	0.00	0.00	29.00	0.00	0.00	31.65	0.00	0.00
26.40	0.00	0.00	29.05	0.00	0.00	31.70	0.00	0.00
26.45	0.00	0.00	29.10	0.00	0.00	31.75	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
31.80	0.00	0.00	34.45	0.00	0.00	37.10	0.00	0.00
31.85	0.00	0.00	34.50	0.00	0.00	37.15	0.00	0.00
31.90	0.00	0.00	34.55	0.00	0.00	37.20	0.00	0.00
31.95	0.00	0.00	34.60	0.00	0.00	37.25	0.00	0.00
32.00	0.00	0.00	34.65	0.00	0.00	37.30	0.00	0.00
32.05	0.00	0.00	34.70	0.00	0.00	37.35	0.00	0.00
32.10	0.00	0.00	34.75	0.00	0.00	37.40	0.00	0.00
32.15	0.00	0.00	34.80	0.00	0.00	37.45	0.00	0.00
32.20	0.00	0.00	34.85	0.00	0.00	37.50	0.00	0.00
32.25	0.00	0.00	34.90	0.00	0.00	37.55	0.00	0.00
32.30	0.00	0.00	34.95	0.00	0.00	37.60	0.00	0.00
32.35	0.00	0.00	35.00	0.00	0.00	37.65	0.00	0.00
32.40	0.00	0.00	35.05	0.00	0.00	37.70	0.00	0.00
32.45	0.00	0.00	35.10	0.00	0.00	37.75	0.00	0.00
32.50	0.00	0.00	35.15	0.00	0.00	37.80	0.00	0.00
32.55	0.00	0.00	35.20	0.00	0.00	37.85	0.00	0.00
32.60	0.00	0.00	35.25	0.00	0.00	37.90	0.00	0.00
32.65	0.00	0.00	35.30	0.00	0.00	37.95	0.00	0.00
32.70	0.00	0.00	35.35	0.00	0.00	38.00	0.00	0.00
32.75	0.00	0.00	35.40	0.00	0.00	38.05	0.00	0.00
32.80	0.00	0.00	35.45	0.00	0.00	38.10	0.00	0.00
32.85	0.00	0.00	35.50	0.00	0.00	38.15	0.00	0.00
32.90	0.00	0.00	35.55	0.00	0.00	38.20	0.00	0.00
32.95	0.00	0.00	35.60	0.00	0.00	38.25	0.00	0.00
33.00	0.00	0.00	35.65	0.00	0.00	38.30	0.00	0.00
33.05	0.00	0.00	35.70	0.00	0.00	38.35	0.00	0.00
33.10	0.00	0.00	35.75	0.00	0.00	38.40	0.00	0.00
33.15	0.00	0.00	35.80	0.00	0.00	38.45	0.00	0.00
33.20	0.00	0.00	35.85	0.00	0.00	38.50	0.00	0.00
33.25	0.00	0.00	35.90	0.00	0.00	38.55	0.00	0.00
33.30	0.00	0.00	35.95	0.00	0.00	38.60	0.00	0.00
33.35	0.00	0.00	36.00	0.00	0.00	38.65	0.00	0.00
33.40	0.00	0.00	36.05	0.00	0.00	38.70	0.00	0.00
33.45	0.00	0.00	36.10	0.00	0.00	38.75	0.00	0.00
33.50	0.00	0.00	36.15	0.00	0.00	38.80	0.00	0.00
33.55	0.00	0.00	36.20	0.00	0.00	38.85	0.00	0.00
33.60	0.00	0.00	36.25	0.00	0.00	38.90	0.00	0.00
33.65	0.00	0.00	36.30	0.00	0.00	38.95	0.00	0.00
33.70	0.00	0.00	36.35	0.00	0.00	39.00	0.00	0.00
33.75	0.00	0.00	36.40	0.00	0.00	39.05	0.00	0.00
33.80	0.00	0.00	36.45	0.00	0.00	39.10	0.00	0.00
33.85	0.00	0.00	36.50	0.00	0.00	39.15	0.00	0.00
33.90	0.00	0.00	36.55	0.00	0.00	39.20	0.00	0.00
33.95	0.00	0.00	36.60	0.00	0.00	39.25	0.00	0.00
34.00	0.00	0.00	36.65	0.00	0.00	39.30	0.00	0.00
34.05	0.00	0.00	36.70	0.00	0.00	39.35	0.00	0.00
34.10	0.00	0.00	36.75	0.00	0.00	39.40	0.00	0.00
34.15	0.00	0.00	36.80	0.00	0.00	39.45	0.00	0.00
34.20	0.00	0.00	36.85	0.00	0.00	39.50	0.00	0.00
34.25	0.00	0.00	36.90	0.00	0.00	39.55	0.00	0.00
34.30	0.00	0.00	36.95	0.00	0.00	39.60	0.00	0.00
34.35	0.00	0.00	37.00	0.00	0.00	39.65	0.00	0.00
34.40	0.00	0.00	37.05	0.00	0.00	39.70	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
39.75	0.00	0.00	42.40	0.00	0.00	45.05	0.00	0.00
39.80	0.00	0.00	42.45	0.00	0.00	45.10	0.00	0.00
39.85	0.00	0.00	42.50	0.00	0.00	45.15	0.00	0.00
39.90	0.00	0.00	42.55	0.00	0.00	45.20	0.00	0.00
39.95	0.00	0.00	42.60	0.00	0.00	45.25	0.00	0.00
40.00	0.00	0.00	42.65	0.00	0.00	45.30	0.00	0.00
40.05	0.00	0.00	42.70	0.00	0.00	45.35	0.00	0.00
40.10	0.00	0.00	42.75	0.00	0.00	45.40	0.00	0.00
40.15	0.00	0.00	42.80	0.00	0.00	45.45	0.00	0.00
40.20	0.00	0.00	42.85	0.00	0.00	45.50	0.00	0.00
40.25	0.00	0.00	42.90	0.00	0.00	45.55	0.00	0.00
40.30	0.00	0.00	42.95	0.00	0.00	45.60	0.00	0.00
40.35	0.00	0.00	43.00	0.00	0.00	45.65	0.00	0.00
40.40	0.00	0.00	43.05	0.00	0.00	45.70	0.00	0.00
40.45	0.00	0.00	43.10	0.00	0.00	45.75	0.00	0.00
40.50	0.00	0.00	43.15	0.00	0.00	45.80	0.00	0.00
40.55	0.00	0.00	43.20	0.00	0.00	45.85	0.00	0.00
40.60	0.00	0.00	43.25	0.00	0.00	45.90	0.00	0.00
40.65	0.00	0.00	43.30	0.00	0.00	45.95	0.00	0.00
40.70	0.00	0.00	43.35	0.00	0.00	46.00	0.00	0.00
40.75	0.00	0.00	43.40	0.00	0.00	46.05	0.00	0.00
40.80	0.00	0.00	43.45	0.00	0.00	46.10	0.00	0.00
40.85	0.00	0.00	43.50	0.00	0.00	46.15	0.00	0.00
40.90	0.00	0.00	43.55	0.00	0.00	46.20	0.00	0.00
40.95	0.00	0.00	43.60	0.00	0.00	46.25	0.00	0.00
41.00	0.00	0.00	43.65	0.00	0.00	46.30	0.00	0.00
41.05	0.00	0.00	43.70	0.00	0.00	46.35	0.00	0.00
41.10	0.00	0.00	43.75	0.00	0.00	46.40	0.00	0.00
41.15	0.00	0.00	43.80	0.00	0.00	46.45	0.00	0.00
41.20	0.00	0.00	43.85	0.00	0.00	46.50	0.00	0.00
41.25	0.00	0.00	43.90	0.00	0.00	46.55	0.00	0.00
41.30	0.00	0.00	43.95	0.00	0.00	46.60	0.00	0.00
41.35	0.00	0.00	44.00	0.00	0.00	46.65	0.00	0.00
41.40	0.00	0.00	44.05	0.00	0.00	46.70	0.00	0.00
41.45	0.00	0.00	44.10	0.00	0.00	46.75	0.00	0.00
41.50	0.00	0.00	44.15	0.00	0.00	46.80	0.00	0.00
41.55	0.00	0.00	44.20	0.00	0.00	46.85	0.00	0.00
41.60	0.00	0.00	44.25	0.00	0.00	46.90	0.00	0.00
41.65	0.00	0.00	44.30	0.00	0.00	46.95	0.00	0.00
41.70	0.00	0.00	44.35	0.00	0.00	47.00	0.00	0.00
41.75	0.00	0.00	44.40	0.00	0.00	47.05	0.00	0.00
41.80	0.00	0.00	44.45	0.00	0.00	47.10	0.00	0.00
41.85	0.00	0.00	44.50	0.00	0.00	47.15	0.00	0.00
41.90	0.00	0.00	44.55	0.00	0.00	47.20	0.00	0.00
41.95	0.00	0.00	44.60	0.00	0.00	47.25	0.00	0.00
42.00	0.00	0.00	44.65	0.00	0.00	47.30	0.00	0.00
42.05	0.00	0.00	44.70	0.00	0.00	47.35	0.00	0.00
42.10	0.00	0.00	44.75	0.00	0.00	47.40	0.00	0.00
42.15	0.00	0.00	44.80	0.00	0.00	47.45	0.00	0.00
42.20	0.00	0.00	44.85	0.00	0.00	47.50	0.00	0.00
42.25	0.00	0.00	44.90	0.00	0.00	47.55	0.00	0.00
42.30	0.00	0.00	44.95	0.00	0.00	47.60	0.00	0.00
42.35	0.00	0.00	45.00	0.00	0.00	47.65	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
47.70	0.00	0.00	50.35	0.00	0.00	53.00	0.00	0.00
47.75	0.00	0.00	50.40	0.00	0.00	53.05	0.00	0.00
47.80	0.00	0.00	50.45	0.00	0.00	53.10	0.00	0.00
47.85	0.00	0.00	50.50	0.00	0.00	53.15	0.00	0.00
47.90	0.00	0.00	50.55	0.00	0.00	53.20	0.00	0.00
47.95	0.00	0.00	50.60	0.00	0.00	53.25	0.00	0.00
48.00	0.00	0.00	50.65	0.00	0.00	53.30	0.00	0.00
48.05	0.00	0.00	50.70	0.00	0.00	53.35	0.00	0.00
48.10	0.00	0.00	50.75	0.00	0.00	53.40	0.00	0.00
48.15	0.00	0.00	50.80	0.00	0.00	53.45	0.00	0.00
48.20	0.00	0.00	50.85	0.00	0.00	53.50	0.00	0.00
48.25	0.00	0.00	50.90	0.00	0.00	53.55	0.00	0.00
48.30	0.00	0.00	50.95	0.00	0.00	53.60	0.00	0.00
48.35	0.00	0.00	51.00	0.00	0.00	53.65	0.00	0.00
48.40	0.00	0.00	51.05	0.00	0.00	53.70	0.00	0.00
48.45	0.00	0.00	51.10	0.00	0.00	53.75	0.00	0.00
48.50	0.00	0.00	51.15	0.00	0.00	53.80	0.00	0.00
48.55	0.00	0.00	51.20	0.00	0.00	53.85	0.00	0.00
48.60	0.00	0.00	51.25	0.00	0.00	53.90	0.00	0.00
48.65	0.00	0.00	51.30	0.00	0.00	53.95	0.00	0.00
48.70	0.00	0.00	51.35	0.00	0.00	54.00	0.00	0.00
48.75	0.00	0.00	51.40	0.00	0.00	54.05	0.00	0.00
48.80	0.00	0.00	51.45	0.00	0.00	54.10	0.00	0.00
48.85	0.00	0.00	51.50	0.00	0.00	54.15	0.00	0.00
48.90	0.00	0.00	51.55	0.00	0.00	54.20	0.00	0.00
48.95	0.00	0.00	51.60	0.00	0.00	54.25	0.00	0.00
49.00	0.00	0.00	51.65	0.00	0.00	54.30	0.00	0.00
49.05	0.00	0.00	51.70	0.00	0.00	54.35	0.00	0.00
49.10	0.00	0.00	51.75	0.00	0.00	54.40	0.00	0.00
49.15	0.00	0.00	51.80	0.00	0.00	54.45	0.00	0.00
49.20	0.00	0.00	51.85	0.00	0.00	54.50	0.00	0.00
49.25	0.00	0.00	51.90	0.00	0.00	54.55	0.00	0.00
49.30	0.00	0.00	51.95	0.00	0.00	54.60	0.00	0.00
49.35	0.00	0.00	52.00	0.00	0.00	54.65	0.00	0.00
49.40	0.00	0.00	52.05	0.00	0.00	54.70	0.00	0.00
49.45	0.00	0.00	52.10	0.00	0.00	54.75	0.00	0.00
49.50	0.00	0.00	52.15	0.00	0.00	54.80	0.00	0.00
49.55	0.00	0.00	52.20	0.00	0.00	54.85	0.00	0.00
49.60	0.00	0.00	52.25	0.00	0.00	54.90	0.00	0.00
49.65	0.00	0.00	52.30	0.00	0.00	54.95	0.00	0.00
49.70	0.00	0.00	52.35	0.00	0.00	55.00	0.00	0.00
49.75	0.00	0.00	52.40	0.00	0.00	55.05	0.00	0.00
49.80	0.00	0.00	52.45	0.00	0.00	55.10	0.00	0.00
49.85	0.00	0.00	52.50	0.00	0.00	55.15	0.00	0.00
49.90	0.00	0.00	52.55	0.00	0.00	55.20	0.00	0.00
49.95	0.00	0.00	52.60	0.00	0.00	55.25	0.00	0.00
50.00	0.00	0.00	52.65	0.00	0.00	55.30	0.00	0.00
50.05	0.00	0.00	52.70	0.00	0.00	55.35	0.00	0.00
50.10	0.00	0.00	52.75	0.00	0.00	55.40	0.00	0.00
50.15	0.00	0.00	52.80	0.00	0.00	55.45	0.00	0.00
50.20	0.00	0.00	52.85	0.00	0.00	55.50	0.00	0.00
50.25	0.00	0.00	52.90	0.00	0.00	55.55	0.00	0.00
50.30	0.00	0.00	52.95	0.00	0.00	55.60	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
55.65	0.00	0.00	58.30	0.00	0.00	60.95	0.00	0.00
55.70	0.00	0.00	58.35	0.00	0.00	61.00	0.00	0.00
55.75	0.00	0.00	58.40	0.00	0.00	61.05	0.00	0.00
55.80	0.00	0.00	58.45	0.00	0.00	61.10	0.00	0.00
55.85	0.00	0.00	58.50	0.00	0.00	61.15	0.00	0.00
55.90	0.00	0.00	58.55	0.00	0.00	61.20	0.00	0.00
55.95	0.00	0.00	58.60	0.00	0.00	61.25	0.00	0.00
56.00	0.00	0.00	58.65	0.00	0.00	61.30	0.00	0.00
56.05	0.00	0.00	58.70	0.00	0.00	61.35	0.00	0.00
56.10	0.00	0.00	58.75	0.00	0.00	61.40	0.00	0.00
56.15	0.00	0.00	58.80	0.00	0.00	61.45	0.00	0.00
56.20	0.00	0.00	58.85	0.00	0.00	61.50	0.00	0.00
56.25	0.00	0.00	58.90	0.00	0.00	61.55	0.00	0.00
56.30	0.00	0.00	58.95	0.00	0.00	61.60	0.00	0.00
56.35	0.00	0.00	59.00	0.00	0.00	61.65	0.00	0.00
56.40	0.00	0.00	59.05	0.00	0.00	61.70	0.00	0.00
56.45	0.00	0.00	59.10	0.00	0.00	61.75	0.00	0.00
56.50	0.00	0.00	59.15	0.00	0.00	61.80	0.00	0.00
56.55	0.00	0.00	59.20	0.00	0.00	61.85	0.00	0.00
56.60	0.00	0.00	59.25	0.00	0.00	61.90	0.00	0.00
56.65	0.00	0.00	59.30	0.00	0.00	61.95	0.00	0.00
56.70	0.00	0.00	59.35	0.00	0.00	62.00	0.00	0.00
56.75	0.00	0.00	59.40	0.00	0.00	62.05	0.00	0.00
56.80	0.00	0.00	59.45	0.00	0.00	62.10	0.00	0.00
56.85	0.00	0.00	59.50	0.00	0.00	62.15	0.00	0.00
56.90	0.00	0.00	59.55	0.00	0.00	62.20	0.00	0.00
56.95	0.00	0.00	59.60	0.00	0.00	62.25	0.00	0.00
57.00	0.00	0.00	59.65	0.00	0.00	62.30	0.00	0.00
57.05	0.00	0.00	59.70	0.00	0.00	62.35	0.00	0.00
57.10	0.00	0.00	59.75	0.00	0.00	62.40	0.00	0.00
57.15	0.00	0.00	59.80	0.00	0.00	62.45	0.00	0.00
57.20	0.00	0.00	59.85	0.00	0.00	62.50	0.00	0.00
57.25	0.00	0.00	59.90	0.00	0.00	62.55	0.00	0.00
57.30	0.00	0.00	59.95	0.00	0.00	62.60	0.00	0.00
57.35	0.00	0.00	60.00	0.00	0.00	62.65	0.00	0.00
57.40	0.00	0.00	60.05	0.00	0.00	62.70	0.00	0.00
57.45	0.00	0.00	60.10	0.00	0.00	62.75	0.00	0.00
57.50	0.00	0.00	60.15	0.00	0.00	62.80	0.00	0.00
57.55	0.00	0.00	60.20	0.00	0.00	62.85	0.00	0.00
57.60	0.00	0.00	60.25	0.00	0.00	62.90	0.00	0.00
57.65	0.00	0.00	60.30	0.00	0.00	62.95	0.00	0.00
57.70	0.00	0.00	60.35	0.00	0.00	63.00	0.00	0.00
57.75	0.00	0.00	60.40	0.00	0.00	63.05	0.00	0.00
57.80	0.00	0.00	60.45	0.00	0.00	63.10	0.00	0.00
57.85	0.00	0.00	60.50	0.00	0.00	63.15	0.00	0.00
57.90	0.00	0.00	60.55	0.00	0.00	63.20	0.00	0.00
57.95	0.00	0.00	60.60	0.00	0.00	63.25	0.00	0.00
58.00	0.00	0.00	60.65	0.00	0.00	63.30	0.00	0.00
58.05	0.00	0.00	60.70	0.00	0.00	63.35	0.00	0.00
58.10	0.00	0.00	60.75	0.00	0.00	63.40	0.00	0.00
58.15	0.00	0.00	60.80	0.00	0.00	63.45	0.00	0.00
58.20	0.00	0.00	60.85	0.00	0.00	63.50	0.00	0.00
58.25	0.00	0.00	60.90	0.00	0.00	63.55	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
63.60	0.00	0.00	66.25	0.00	0.00	68.90	0.00	0.00
63.65	0.00	0.00	66.30	0.00	0.00	68.95	0.00	0.00
63.70	0.00	0.00	66.35	0.00	0.00	69.00	0.00	0.00
63.75	0.00	0.00	66.40	0.00	0.00	69.05	0.00	0.00
63.80	0.00	0.00	66.45	0.00	0.00	69.10	0.00	0.00
63.85	0.00	0.00	66.50	0.00	0.00	69.15	0.00	0.00
63.90	0.00	0.00	66.55	0.00	0.00	69.20	0.00	0.00
63.95	0.00	0.00	66.60	0.00	0.00	69.25	0.00	0.00
64.00	0.00	0.00	66.65	0.00	0.00	69.30	0.00	0.00
64.05	0.00	0.00	66.70	0.00	0.00	69.35	0.00	0.00
64.10	0.00	0.00	66.75	0.00	0.00	69.40	0.00	0.00
64.15	0.00	0.00	66.80	0.00	0.00	69.45	0.00	0.00
64.20	0.00	0.00	66.85	0.00	0.00	69.50	0.00	0.00
64.25	0.00	0.00	66.90	0.00	0.00	69.55	0.00	0.00
64.30	0.00	0.00	66.95	0.00	0.00	69.60	0.00	0.00
64.35	0.00	0.00	67.00	0.00	0.00	69.65	0.00	0.00
64.40	0.00	0.00	67.05	0.00	0.00	69.70	0.00	0.00
64.45	0.00	0.00	67.10	0.00	0.00	69.75	0.00	0.00
64.50	0.00	0.00	67.15	0.00	0.00	69.80	0.00	0.00
64.55	0.00	0.00	67.20	0.00	0.00	69.85	0.00	0.00
64.60	0.00	0.00	67.25	0.00	0.00	69.90	0.00	0.00
64.65	0.00	0.00	67.30	0.00	0.00	69.95	0.00	0.00
64.70	0.00	0.00	67.35	0.00	0.00	70.00	0.00	0.00
64.75	0.00	0.00	67.40	0.00	0.00	70.05	0.00	0.00
64.80	0.00	0.00	67.45	0.00	0.00	70.10	0.00	0.00
64.85	0.00	0.00	67.50	0.00	0.00	70.15	0.00	0.00
64.90	0.00	0.00	67.55	0.00	0.00	70.20	0.00	0.00
64.95	0.00	0.00	67.60	0.00	0.00	70.25	0.00	0.00
65.00	0.00	0.00	67.65	0.00	0.00	70.30	0.00	0.00
65.05	0.00	0.00	67.70	0.00	0.00	70.35	0.00	0.00
65.10	0.00	0.00	67.75	0.00	0.00	70.40	0.00	0.00
65.15	0.00	0.00	67.80	0.00	0.00	70.45	0.00	0.00
65.20	0.00	0.00	67.85	0.00	0.00	70.50	0.00	0.00
65.25	0.00	0.00	67.90	0.00	0.00	70.55	0.00	0.00
65.30	0.00	0.00	67.95	0.00	0.00	70.60	0.00	0.00
65.35	0.00	0.00	68.00	0.00	0.00	70.65	0.00	0.00
65.40	0.00	0.00	68.05	0.00	0.00	70.70	0.00	0.00
65.45	0.00	0.00	68.10	0.00	0.00	70.75	0.00	0.00
65.50	0.00	0.00	68.15	0.00	0.00	70.80	0.00	0.00
65.55	0.00	0.00	68.20	0.00	0.00	70.85	0.00	0.00
65.60	0.00	0.00	68.25	0.00	0.00	70.90	0.00	0.00
65.65	0.00	0.00	68.30	0.00	0.00	70.95	0.00	0.00
65.70	0.00	0.00	68.35	0.00	0.00	71.00	0.00	0.00
65.75	0.00	0.00	68.40	0.00	0.00	71.05	0.00	0.00
65.80	0.00	0.00	68.45	0.00	0.00	71.10	0.00	0.00
65.85	0.00	0.00	68.50	0.00	0.00	71.15	0.00	0.00
65.90	0.00	0.00	68.55	0.00	0.00	71.20	0.00	0.00
65.95	0.00	0.00	68.60	0.00	0.00	71.25	0.00	0.00
66.00	0.00	0.00	68.65	0.00	0.00	71.30	0.00	0.00
66.05	0.00	0.00	68.70	0.00	0.00	71.35	0.00	0.00
66.10	0.00	0.00	68.75	0.00	0.00	71.40	0.00	0.00
66.15	0.00	0.00	68.80	0.00	0.00	71.45	0.00	0.00
66.20	0.00	0.00	68.85	0.00	0.00	71.50	0.00	0.00

2023-04-28_HydroCAD

NOAA 24-hr C 10-Year Rainfall=5.06"

Prepared by Stonefield Engineering & Design

Printed 4/28/2023

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Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
71.55	0.00	0.00
71.60	0.00	0.00
71.65	0.00	0.00
71.70	0.00	0.00
71.75	0.00	0.00
71.80	0.00	0.00
71.85	0.00	0.00
71.90	0.00	0.00
71.95	0.00	0.00
72.00	0.00	0.00

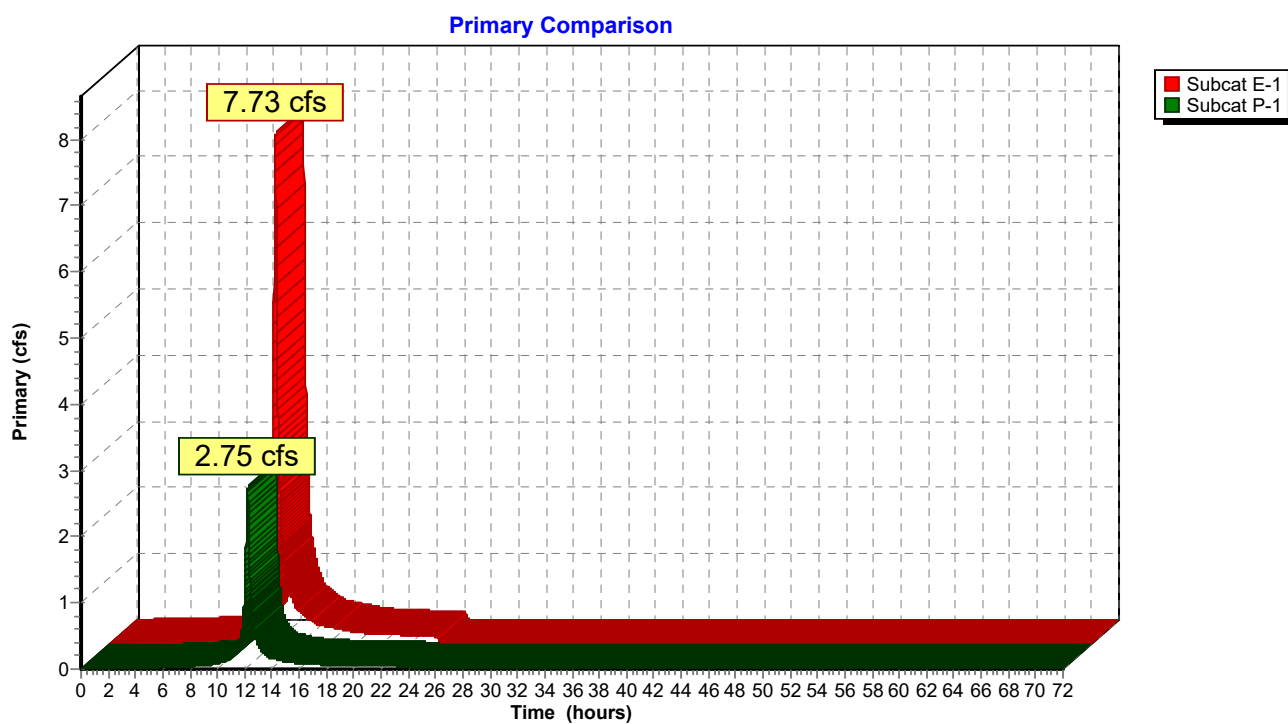
2023-04-28_HydroCAD

Prepared by Stonefield Engineering & Design

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NOAA 24-hr C 100-Year Rainfall=8.52"

Printed 4/28/2023



Primary Comparison

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
0.00	0.00	0.00	2.65	0.02	0.01	5.30	0.04	0.01
0.05	0.00	0.00	2.70	0.02	0.01	5.35	0.04	0.01
0.10	0.00	0.00	2.75	0.03	0.01	5.40	0.04	0.01
0.15	0.00	0.00	2.80	0.03	0.01	5.45	0.04	0.01
0.20	0.00	0.00	2.85	0.03	0.01	5.50	0.04	0.01
0.25	0.00	0.00	2.90	0.03	0.01	5.55	0.04	0.01
0.30	0.00	0.00	2.95	0.03	0.01	5.60	0.04	0.01
0.35	0.00	0.00	3.00	0.03	0.01	5.65	0.04	0.01
0.40	0.00	0.00	3.05	0.03	0.01	5.70	0.04	0.01
0.45	0.00	0.00	3.10	0.03	0.01	5.75	0.04	0.01
0.50	0.00	0.00	3.15	0.03	0.01	5.80	0.04	0.01
0.55	0.00	0.00	3.20	0.03	0.01	5.85	0.04	0.01
0.60	0.00	0.00	3.25	0.03	0.01	5.90	0.04	0.01
0.65	0.00	0.00	3.30	0.03	0.01	5.95	0.04	0.02
0.70	0.00	0.00	3.35	0.03	0.01	6.00	0.04	0.02
0.75	0.00	0.00	3.40	0.03	0.01	6.05	0.04	0.02
0.80	0.00	0.00	3.45	0.03	0.01	6.10	0.04	0.02
0.85	0.01	0.00	3.50	0.03	0.01	6.15	0.04	0.02
0.90	0.01	0.00	3.55	0.03	0.01	6.20	0.04	0.02
0.95	0.01	0.00	3.60	0.03	0.01	6.25	0.04	0.02
1.00	0.01	0.00	3.65	0.03	0.01	6.30	0.04	0.02
1.05	0.01	0.00	3.70	0.03	0.01	6.35	0.04	0.02
1.10	0.01	0.00	3.75	0.03	0.01	6.40	0.04	0.02
1.15	0.01	0.00	3.80	0.03	0.01	6.45	0.04	0.02
1.20	0.01	0.00	3.85	0.03	0.01	6.50	0.04	0.02
1.25	0.01	0.00	3.90	0.03	0.01	6.55	0.04	0.02
1.30	0.01	0.00	3.95	0.03	0.01	6.60	0.04	0.02
1.35	0.01	0.00	4.00	0.03	0.01	6.65	0.04	0.02
1.40	0.01	0.00	4.05	0.03	0.01	6.70	0.05	0.02
1.45	0.01	0.00	4.10	0.03	0.01	6.75	0.05	0.02
1.50	0.01	0.00	4.15	0.03	0.01	6.80	0.05	0.02
1.55	0.02	0.00	4.20	0.03	0.01	6.85	0.05	0.02
1.60	0.02	0.00	4.25	0.03	0.01	6.90	0.05	0.02
1.65	0.02	0.00	4.30	0.03	0.01	6.95	0.05	0.02
1.70	0.02	0.00	4.35	0.03	0.01	7.00	0.05	0.02
1.75	0.02	0.00	4.40	0.03	0.01	7.05	0.05	0.03
1.80	0.02	0.00	4.45	0.03	0.01	7.10	0.05	0.03
1.85	0.02	0.00	4.50	0.03	0.01	7.15	0.05	0.03
1.90	0.02	0.00	4.55	0.03	0.01	7.20	0.05	0.03
1.95	0.02	0.00	4.60	0.03	0.01	7.25	0.05	0.03
2.00	0.02	0.01	4.65	0.03	0.01	7.30	0.05	0.03
2.05	0.02	0.01	4.70	0.03	0.01	7.35	0.05	0.03
2.10	0.02	0.01	4.75	0.03	0.01	7.40	0.05	0.03
2.15	0.02	0.01	4.80	0.03	0.01	7.45	0.05	0.03
2.20	0.02	0.01	4.85	0.03	0.01	7.50	0.05	0.03
2.25	0.02	0.01	4.90	0.04	0.01	7.55	0.05	0.03
2.30	0.02	0.01	4.95	0.04	0.01	7.60	0.05	0.03
2.35	0.02	0.01	5.00	0.04	0.01	7.65	0.06	0.03
2.40	0.02	0.01	5.05	0.04	0.01	7.70	0.06	0.03
2.45	0.02	0.01	5.10	0.04	0.01	7.75	0.06	0.03
2.50	0.02	0.01	5.15	0.04	0.01	7.80	0.06	0.03
2.55	0.02	0.01	5.20	0.04	0.01	7.85	0.06	0.03
2.60	0.02	0.01	5.25	0.04	0.01	7.90	0.06	0.04

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
7.95	0.06	0.04	10.60	0.20	0.12	13.25	0.82	0.28
8.00	0.06	0.04	10.65	0.21	0.12	13.30	0.79	0.27
8.05	0.06	0.04	10.70	0.23	0.13	13.35	0.75	0.26
8.10	0.06	0.04	10.75	0.24	0.14	13.40	0.72	0.24
8.15	0.06	0.04	10.80	0.26	0.14	13.45	0.69	0.23
8.20	0.06	0.04	10.85	0.28	0.15	13.50	0.66	0.22
8.25	0.06	0.04	10.90	0.29	0.16	13.55	0.64	0.21
8.30	0.06	0.04	10.95	0.31	0.17	13.60	0.61	0.20
8.35	0.06	0.04	11.00	0.33	0.17	13.65	0.58	0.19
8.40	0.06	0.04	11.05	0.35	0.18	13.70	0.55	0.19
8.45	0.06	0.04	11.10	0.37	0.19	13.75	0.54	0.18
8.50	0.06	0.04	11.15	0.40	0.21	13.80	0.53	0.18
8.55	0.07	0.04	11.20	0.43	0.22	13.85	0.52	0.17
8.60	0.07	0.04	11.25	0.47	0.23	13.90	0.51	0.17
8.65	0.07	0.05	11.30	0.50	0.25	13.95	0.50	0.17
8.70	0.07	0.05	11.35	0.54	0.27	14.00	0.49	0.16
8.75	0.07	0.05	11.40	0.58	0.28	14.05	0.48	0.16
8.80	0.07	0.05	11.45	0.62	0.30	14.10	0.48	0.16
8.85	0.07	0.05	11.50	0.66	0.31	14.15	0.47	0.15
8.90	0.07	0.05	11.55	0.71	0.33	14.20	0.46	0.15
8.95	0.07	0.05	11.60	0.80	0.36	14.25	0.45	0.15
9.00	0.07	0.05	11.65	0.96	0.42	14.30	0.45	0.15
9.05	0.07	0.05	11.70	1.11	0.48	14.35	0.44	0.14
9.10	0.07	0.05	11.75	1.23	0.54	14.40	0.43	0.14
9.15	0.07	0.05	11.80	1.39	0.59	14.45	0.42	0.14
9.20	0.07	0.06	11.85	1.63	0.68	14.50	0.42	0.14
9.25	0.08	0.06	11.90	1.95	0.79	14.55	0.41	0.13
9.30	0.08	0.06	11.95	2.37	0.93	14.60	0.40	0.13
9.35	0.08	0.06	12.00	3.05	1.15	14.65	0.39	0.13
9.40	0.09	0.06	12.05	4.05	1.47	14.70	0.39	0.13
9.45	0.09	0.06	12.10	5.50	1.92	14.75	0.38	0.12
9.50	0.09	0.07	12.15	7.18	2.47	14.80	0.37	0.12
9.55	0.10	0.07	12.20	7.67	2.75	14.85	0.36	0.12
9.60	0.10	0.07	12.25	6.59	2.53	14.90	0.35	0.12
9.65	0.10	0.07	12.30	5.18	2.07	14.95	0.35	0.11
9.70	0.11	0.07	12.35	4.15	1.64	15.00	0.34	0.11
9.75	0.11	0.08	12.40	3.42	1.35	15.05	0.33	0.11
9.80	0.12	0.08	12.45	2.87	1.11	15.10	0.32	0.11
9.85	0.12	0.08	12.50	2.50	0.95	15.15	0.32	0.10
9.90	0.13	0.08	12.55	2.26	0.84	15.20	0.31	0.10
9.95	0.13	0.09	12.60	2.04	0.75	15.25	0.30	0.10
10.00	0.13	0.09	12.65	1.77	0.65	15.30	0.30	0.10
10.05	0.14	0.09	12.70	1.54	0.57	15.35	0.30	0.10
10.10	0.14	0.09	12.75	1.40	0.50	15.40	0.30	0.10
10.15	0.15	0.09	12.80	1.31	0.46	15.45	0.29	0.10
10.20	0.15	0.10	12.85	1.24	0.43	15.50	0.29	0.09
10.25	0.16	0.10	12.90	1.18	0.41	15.55	0.29	0.09
10.30	0.17	0.10	12.95	1.12	0.39	15.60	0.29	0.09
10.35	0.17	0.10	13.00	1.06	0.37	15.65	0.29	0.09
10.40	0.18	0.11	13.05	1.01	0.35	15.70	0.28	0.09
10.45	0.18	0.11	13.10	0.96	0.33	15.75	0.28	0.09
10.50	0.19	0.11	13.15	0.90	0.31	15.80	0.28	0.09
10.55	0.19	0.11	13.20	0.86	0.29	15.85	0.28	0.09

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
15.90	0.28	0.09	18.55	0.17	0.06	21.20	0.15	0.05
15.95	0.27	0.09	18.60	0.17	0.06	21.25	0.15	0.05
16.00	0.27	0.09	18.65	0.17	0.06	21.30	0.15	0.05
16.05	0.27	0.09	18.70	0.17	0.06	21.35	0.15	0.05
16.10	0.27	0.09	18.75	0.17	0.05	21.40	0.15	0.05
16.15	0.27	0.09	18.80	0.17	0.05	21.45	0.15	0.05
16.20	0.26	0.08	18.85	0.17	0.05	21.50	0.14	0.05
16.25	0.26	0.08	18.90	0.17	0.05	21.55	0.14	0.05
16.30	0.26	0.08	18.95	0.17	0.05	21.60	0.14	0.05
16.35	0.26	0.08	19.00	0.17	0.05	21.65	0.14	0.04
16.40	0.26	0.08	19.05	0.17	0.05	21.70	0.14	0.04
16.45	0.25	0.08	19.10	0.17	0.05	21.75	0.14	0.04
16.50	0.25	0.08	19.15	0.17	0.05	21.80	0.14	0.04
16.55	0.25	0.08	19.20	0.17	0.05	21.85	0.14	0.04
16.60	0.25	0.08	19.25	0.17	0.05	21.90	0.14	0.04
16.65	0.24	0.08	19.30	0.17	0.05	21.95	0.14	0.04
16.70	0.24	0.08	19.35	0.17	0.05	22.00	0.14	0.04
16.75	0.24	0.08	19.40	0.17	0.05	22.05	0.14	0.04
16.80	0.24	0.08	19.45	0.17	0.05	22.10	0.14	0.04
16.85	0.24	0.08	19.50	0.17	0.05	22.15	0.14	0.04
16.90	0.23	0.08	19.55	0.16	0.05	22.20	0.14	0.04
16.95	0.23	0.07	19.60	0.16	0.05	22.25	0.14	0.04
17.00	0.23	0.07	19.65	0.16	0.05	22.30	0.14	0.04
17.05	0.23	0.07	19.70	0.16	0.05	22.35	0.14	0.04
17.10	0.23	0.07	19.75	0.16	0.05	22.40	0.13	0.04
17.15	0.22	0.07	19.80	0.16	0.05	22.45	0.13	0.04
17.20	0.22	0.07	19.85	0.16	0.05	22.50	0.13	0.04
17.25	0.22	0.07	19.90	0.16	0.05	22.55	0.13	0.04
17.30	0.22	0.07	19.95	0.16	0.05	22.60	0.13	0.04
17.35	0.22	0.07	20.00	0.16	0.05	22.65	0.13	0.04
17.40	0.21	0.07	20.05	0.16	0.05	22.70	0.13	0.04
17.45	0.21	0.07	20.10	0.16	0.05	22.75	0.13	0.04
17.50	0.21	0.07	20.15	0.16	0.05	22.80	0.13	0.04
17.55	0.21	0.07	20.20	0.16	0.05	22.85	0.13	0.04
17.60	0.20	0.07	20.25	0.16	0.05	22.90	0.13	0.04
17.65	0.20	0.06	20.30	0.16	0.05	22.95	0.13	0.04
17.70	0.20	0.06	20.35	0.16	0.05	23.00	0.13	0.04
17.75	0.20	0.06	20.40	0.16	0.05	23.05	0.13	0.04
17.80	0.20	0.06	20.45	0.16	0.05	23.10	0.13	0.04
17.85	0.19	0.06	20.50	0.15	0.05	23.15	0.13	0.04
17.90	0.19	0.06	20.55	0.15	0.05	23.20	0.13	0.04
17.95	0.19	0.06	20.60	0.15	0.05	23.25	0.13	0.04
18.00	0.19	0.06	20.65	0.15	0.05	23.30	0.12	0.04
18.05	0.19	0.06	20.70	0.15	0.05	23.35	0.12	0.04
18.10	0.18	0.06	20.75	0.15	0.05	23.40	0.12	0.04
18.15	0.18	0.06	20.80	0.15	0.05	23.45	0.12	0.04
18.20	0.18	0.06	20.85	0.15	0.05	23.50	0.12	0.04
18.25	0.18	0.06	20.90	0.15	0.05	23.55	0.12	0.04
18.30	0.18	0.06	20.95	0.15	0.05	23.60	0.12	0.04
18.35	0.18	0.06	21.00	0.15	0.05	23.65	0.12	0.04
18.40	0.18	0.06	21.05	0.15	0.05	23.70	0.12	0.04
18.45	0.18	0.06	21.10	0.15	0.05	23.75	0.12	0.04
18.50	0.18	0.06	21.15	0.15	0.05	23.80	0.12	0.04

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
23.85	0.12	0.04	26.50	0.00	0.00	29.15	0.00	0.00
23.90	0.12	0.04	26.55	0.00	0.00	29.20	0.00	0.00
23.95	0.12	0.04	26.60	0.00	0.00	29.25	0.00	0.00
24.00	0.12	0.04	26.65	0.00	0.00	29.30	0.00	0.00
24.05	0.13	0.04	26.70	0.00	0.00	29.35	0.00	0.00
24.10	0.11	0.04	26.75	0.00	0.00	29.40	0.00	0.00
24.15	0.07	0.03	26.80	0.00	0.00	29.45	0.00	0.00
24.20	0.04	0.02	26.85	0.00	0.00	29.50	0.00	0.00
24.25	0.02	0.01	26.90	0.00	0.00	29.55	0.00	0.00
24.30	0.01	0.01	26.95	0.00	0.00	29.60	0.00	0.00
24.35	0.01	0.00	27.00	0.00	0.00	29.65	0.00	0.00
24.40	0.00	0.00	27.05	0.00	0.00	29.70	0.00	0.00
24.45	0.00	0.00	27.10	0.00	0.00	29.75	0.00	0.00
24.50	0.00	0.00	27.15	0.00	0.00	29.80	0.00	0.00
24.55	0.00	0.00	27.20	0.00	0.00	29.85	0.00	0.00
24.60	0.00	0.00	27.25	0.00	0.00	29.90	0.00	0.00
24.65	0.00	0.00	27.30	0.00	0.00	29.95	0.00	0.00
24.70	0.00	0.00	27.35	0.00	0.00	30.00	0.00	0.00
24.75	0.00	0.00	27.40	0.00	0.00	30.05	0.00	0.00
24.80	0.00	0.00	27.45	0.00	0.00	30.10	0.00	0.00
24.85	0.00	0.00	27.50	0.00	0.00	30.15	0.00	0.00
24.90	0.00	0.00	27.55	0.00	0.00	30.20	0.00	0.00
24.95	0.00	0.00	27.60	0.00	0.00	30.25	0.00	0.00
25.00	0.00	0.00	27.65	0.00	0.00	30.30	0.00	0.00
25.05	0.00	0.00	27.70	0.00	0.00	30.35	0.00	0.00
25.10	0.00	0.00	27.75	0.00	0.00	30.40	0.00	0.00
25.15	0.00	0.00	27.80	0.00	0.00	30.45	0.00	0.00
25.20	0.00	0.00	27.85	0.00	0.00	30.50	0.00	0.00
25.25	0.00	0.00	27.90	0.00	0.00	30.55	0.00	0.00
25.30	0.00	0.00	27.95	0.00	0.00	30.60	0.00	0.00
25.35	0.00	0.00	28.00	0.00	0.00	30.65	0.00	0.00
25.40	0.00	0.00	28.05	0.00	0.00	30.70	0.00	0.00
25.45	0.00	0.00	28.10	0.00	0.00	30.75	0.00	0.00
25.50	0.00	0.00	28.15	0.00	0.00	30.80	0.00	0.00
25.55	0.00	0.00	28.20	0.00	0.00	30.85	0.00	0.00
25.60	0.00	0.00	28.25	0.00	0.00	30.90	0.00	0.00
25.65	0.00	0.00	28.30	0.00	0.00	30.95	0.00	0.00
25.70	0.00	0.00	28.35	0.00	0.00	31.00	0.00	0.00
25.75	0.00	0.00	28.40	0.00	0.00	31.05	0.00	0.00
25.80	0.00	0.00	28.45	0.00	0.00	31.10	0.00	0.00
25.85	0.00	0.00	28.50	0.00	0.00	31.15	0.00	0.00
25.90	0.00	0.00	28.55	0.00	0.00	31.20	0.00	0.00
25.95	0.00	0.00	28.60	0.00	0.00	31.25	0.00	0.00
26.00	0.00	0.00	28.65	0.00	0.00	31.30	0.00	0.00
26.05	0.00	0.00	28.70	0.00	0.00	31.35	0.00	0.00
26.10	0.00	0.00	28.75	0.00	0.00	31.40	0.00	0.00
26.15	0.00	0.00	28.80	0.00	0.00	31.45	0.00	0.00
26.20	0.00	0.00	28.85	0.00	0.00	31.50	0.00	0.00
26.25	0.00	0.00	28.90	0.00	0.00	31.55	0.00	0.00
26.30	0.00	0.00	28.95	0.00	0.00	31.60	0.00	0.00
26.35	0.00	0.00	29.00	0.00	0.00	31.65	0.00	0.00
26.40	0.00	0.00	29.05	0.00	0.00	31.70	0.00	0.00
26.45	0.00	0.00	29.10	0.00	0.00	31.75	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
31.80	0.00	0.00	34.45	0.00	0.00	37.10	0.00	0.00
31.85	0.00	0.00	34.50	0.00	0.00	37.15	0.00	0.00
31.90	0.00	0.00	34.55	0.00	0.00	37.20	0.00	0.00
31.95	0.00	0.00	34.60	0.00	0.00	37.25	0.00	0.00
32.00	0.00	0.00	34.65	0.00	0.00	37.30	0.00	0.00
32.05	0.00	0.00	34.70	0.00	0.00	37.35	0.00	0.00
32.10	0.00	0.00	34.75	0.00	0.00	37.40	0.00	0.00
32.15	0.00	0.00	34.80	0.00	0.00	37.45	0.00	0.00
32.20	0.00	0.00	34.85	0.00	0.00	37.50	0.00	0.00
32.25	0.00	0.00	34.90	0.00	0.00	37.55	0.00	0.00
32.30	0.00	0.00	34.95	0.00	0.00	37.60	0.00	0.00
32.35	0.00	0.00	35.00	0.00	0.00	37.65	0.00	0.00
32.40	0.00	0.00	35.05	0.00	0.00	37.70	0.00	0.00
32.45	0.00	0.00	35.10	0.00	0.00	37.75	0.00	0.00
32.50	0.00	0.00	35.15	0.00	0.00	37.80	0.00	0.00
32.55	0.00	0.00	35.20	0.00	0.00	37.85	0.00	0.00
32.60	0.00	0.00	35.25	0.00	0.00	37.90	0.00	0.00
32.65	0.00	0.00	35.30	0.00	0.00	37.95	0.00	0.00
32.70	0.00	0.00	35.35	0.00	0.00	38.00	0.00	0.00
32.75	0.00	0.00	35.40	0.00	0.00	38.05	0.00	0.00
32.80	0.00	0.00	35.45	0.00	0.00	38.10	0.00	0.00
32.85	0.00	0.00	35.50	0.00	0.00	38.15	0.00	0.00
32.90	0.00	0.00	35.55	0.00	0.00	38.20	0.00	0.00
32.95	0.00	0.00	35.60	0.00	0.00	38.25	0.00	0.00
33.00	0.00	0.00	35.65	0.00	0.00	38.30	0.00	0.00
33.05	0.00	0.00	35.70	0.00	0.00	38.35	0.00	0.00
33.10	0.00	0.00	35.75	0.00	0.00	38.40	0.00	0.00
33.15	0.00	0.00	35.80	0.00	0.00	38.45	0.00	0.00
33.20	0.00	0.00	35.85	0.00	0.00	38.50	0.00	0.00
33.25	0.00	0.00	35.90	0.00	0.00	38.55	0.00	0.00
33.30	0.00	0.00	35.95	0.00	0.00	38.60	0.00	0.00
33.35	0.00	0.00	36.00	0.00	0.00	38.65	0.00	0.00
33.40	0.00	0.00	36.05	0.00	0.00	38.70	0.00	0.00
33.45	0.00	0.00	36.10	0.00	0.00	38.75	0.00	0.00
33.50	0.00	0.00	36.15	0.00	0.00	38.80	0.00	0.00
33.55	0.00	0.00	36.20	0.00	0.00	38.85	0.00	0.00
33.60	0.00	0.00	36.25	0.00	0.00	38.90	0.00	0.00
33.65	0.00	0.00	36.30	0.00	0.00	38.95	0.00	0.00
33.70	0.00	0.00	36.35	0.00	0.00	39.00	0.00	0.00
33.75	0.00	0.00	36.40	0.00	0.00	39.05	0.00	0.00
33.80	0.00	0.00	36.45	0.00	0.00	39.10	0.00	0.00
33.85	0.00	0.00	36.50	0.00	0.00	39.15	0.00	0.00
33.90	0.00	0.00	36.55	0.00	0.00	39.20	0.00	0.00
33.95	0.00	0.00	36.60	0.00	0.00	39.25	0.00	0.00
34.00	0.00	0.00	36.65	0.00	0.00	39.30	0.00	0.00
34.05	0.00	0.00	36.70	0.00	0.00	39.35	0.00	0.00
34.10	0.00	0.00	36.75	0.00	0.00	39.40	0.00	0.00
34.15	0.00	0.00	36.80	0.00	0.00	39.45	0.00	0.00
34.20	0.00	0.00	36.85	0.00	0.00	39.50	0.00	0.00
34.25	0.00	0.00	36.90	0.00	0.00	39.55	0.00	0.00
34.30	0.00	0.00	36.95	0.00	0.00	39.60	0.00	0.00
34.35	0.00	0.00	37.00	0.00	0.00	39.65	0.00	0.00
34.40	0.00	0.00	37.05	0.00	0.00	39.70	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
39.75	0.00	0.00	42.40	0.00	0.00	45.05	0.00	0.00
39.80	0.00	0.00	42.45	0.00	0.00	45.10	0.00	0.00
39.85	0.00	0.00	42.50	0.00	0.00	45.15	0.00	0.00
39.90	0.00	0.00	42.55	0.00	0.00	45.20	0.00	0.00
39.95	0.00	0.00	42.60	0.00	0.00	45.25	0.00	0.00
40.00	0.00	0.00	42.65	0.00	0.00	45.30	0.00	0.00
40.05	0.00	0.00	42.70	0.00	0.00	45.35	0.00	0.00
40.10	0.00	0.00	42.75	0.00	0.00	45.40	0.00	0.00
40.15	0.00	0.00	42.80	0.00	0.00	45.45	0.00	0.00
40.20	0.00	0.00	42.85	0.00	0.00	45.50	0.00	0.00
40.25	0.00	0.00	42.90	0.00	0.00	45.55	0.00	0.00
40.30	0.00	0.00	42.95	0.00	0.00	45.60	0.00	0.00
40.35	0.00	0.00	43.00	0.00	0.00	45.65	0.00	0.00
40.40	0.00	0.00	43.05	0.00	0.00	45.70	0.00	0.00
40.45	0.00	0.00	43.10	0.00	0.00	45.75	0.00	0.00
40.50	0.00	0.00	43.15	0.00	0.00	45.80	0.00	0.00
40.55	0.00	0.00	43.20	0.00	0.00	45.85	0.00	0.00
40.60	0.00	0.00	43.25	0.00	0.00	45.90	0.00	0.00
40.65	0.00	0.00	43.30	0.00	0.00	45.95	0.00	0.00
40.70	0.00	0.00	43.35	0.00	0.00	46.00	0.00	0.00
40.75	0.00	0.00	43.40	0.00	0.00	46.05	0.00	0.00
40.80	0.00	0.00	43.45	0.00	0.00	46.10	0.00	0.00
40.85	0.00	0.00	43.50	0.00	0.00	46.15	0.00	0.00
40.90	0.00	0.00	43.55	0.00	0.00	46.20	0.00	0.00
40.95	0.00	0.00	43.60	0.00	0.00	46.25	0.00	0.00
41.00	0.00	0.00	43.65	0.00	0.00	46.30	0.00	0.00
41.05	0.00	0.00	43.70	0.00	0.00	46.35	0.00	0.00
41.10	0.00	0.00	43.75	0.00	0.00	46.40	0.00	0.00
41.15	0.00	0.00	43.80	0.00	0.00	46.45	0.00	0.00
41.20	0.00	0.00	43.85	0.00	0.00	46.50	0.00	0.00
41.25	0.00	0.00	43.90	0.00	0.00	46.55	0.00	0.00
41.30	0.00	0.00	43.95	0.00	0.00	46.60	0.00	0.00
41.35	0.00	0.00	44.00	0.00	0.00	46.65	0.00	0.00
41.40	0.00	0.00	44.05	0.00	0.00	46.70	0.00	0.00
41.45	0.00	0.00	44.10	0.00	0.00	46.75	0.00	0.00
41.50	0.00	0.00	44.15	0.00	0.00	46.80	0.00	0.00
41.55	0.00	0.00	44.20	0.00	0.00	46.85	0.00	0.00
41.60	0.00	0.00	44.25	0.00	0.00	46.90	0.00	0.00
41.65	0.00	0.00	44.30	0.00	0.00	46.95	0.00	0.00
41.70	0.00	0.00	44.35	0.00	0.00	47.00	0.00	0.00
41.75	0.00	0.00	44.40	0.00	0.00	47.05	0.00	0.00
41.80	0.00	0.00	44.45	0.00	0.00	47.10	0.00	0.00
41.85	0.00	0.00	44.50	0.00	0.00	47.15	0.00	0.00
41.90	0.00	0.00	44.55	0.00	0.00	47.20	0.00	0.00
41.95	0.00	0.00	44.60	0.00	0.00	47.25	0.00	0.00
42.00	0.00	0.00	44.65	0.00	0.00	47.30	0.00	0.00
42.05	0.00	0.00	44.70	0.00	0.00	47.35	0.00	0.00
42.10	0.00	0.00	44.75	0.00	0.00	47.40	0.00	0.00
42.15	0.00	0.00	44.80	0.00	0.00	47.45	0.00	0.00
42.20	0.00	0.00	44.85	0.00	0.00	47.50	0.00	0.00
42.25	0.00	0.00	44.90	0.00	0.00	47.55	0.00	0.00
42.30	0.00	0.00	44.95	0.00	0.00	47.60	0.00	0.00
42.35	0.00	0.00	45.00	0.00	0.00	47.65	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
47.70	0.00	0.00	50.35	0.00	0.00	53.00	0.00	0.00
47.75	0.00	0.00	50.40	0.00	0.00	53.05	0.00	0.00
47.80	0.00	0.00	50.45	0.00	0.00	53.10	0.00	0.00
47.85	0.00	0.00	50.50	0.00	0.00	53.15	0.00	0.00
47.90	0.00	0.00	50.55	0.00	0.00	53.20	0.00	0.00
47.95	0.00	0.00	50.60	0.00	0.00	53.25	0.00	0.00
48.00	0.00	0.00	50.65	0.00	0.00	53.30	0.00	0.00
48.05	0.00	0.00	50.70	0.00	0.00	53.35	0.00	0.00
48.10	0.00	0.00	50.75	0.00	0.00	53.40	0.00	0.00
48.15	0.00	0.00	50.80	0.00	0.00	53.45	0.00	0.00
48.20	0.00	0.00	50.85	0.00	0.00	53.50	0.00	0.00
48.25	0.00	0.00	50.90	0.00	0.00	53.55	0.00	0.00
48.30	0.00	0.00	50.95	0.00	0.00	53.60	0.00	0.00
48.35	0.00	0.00	51.00	0.00	0.00	53.65	0.00	0.00
48.40	0.00	0.00	51.05	0.00	0.00	53.70	0.00	0.00
48.45	0.00	0.00	51.10	0.00	0.00	53.75	0.00	0.00
48.50	0.00	0.00	51.15	0.00	0.00	53.80	0.00	0.00
48.55	0.00	0.00	51.20	0.00	0.00	53.85	0.00	0.00
48.60	0.00	0.00	51.25	0.00	0.00	53.90	0.00	0.00
48.65	0.00	0.00	51.30	0.00	0.00	53.95	0.00	0.00
48.70	0.00	0.00	51.35	0.00	0.00	54.00	0.00	0.00
48.75	0.00	0.00	51.40	0.00	0.00	54.05	0.00	0.00
48.80	0.00	0.00	51.45	0.00	0.00	54.10	0.00	0.00
48.85	0.00	0.00	51.50	0.00	0.00	54.15	0.00	0.00
48.90	0.00	0.00	51.55	0.00	0.00	54.20	0.00	0.00
48.95	0.00	0.00	51.60	0.00	0.00	54.25	0.00	0.00
49.00	0.00	0.00	51.65	0.00	0.00	54.30	0.00	0.00
49.05	0.00	0.00	51.70	0.00	0.00	54.35	0.00	0.00
49.10	0.00	0.00	51.75	0.00	0.00	54.40	0.00	0.00
49.15	0.00	0.00	51.80	0.00	0.00	54.45	0.00	0.00
49.20	0.00	0.00	51.85	0.00	0.00	54.50	0.00	0.00
49.25	0.00	0.00	51.90	0.00	0.00	54.55	0.00	0.00
49.30	0.00	0.00	51.95	0.00	0.00	54.60	0.00	0.00
49.35	0.00	0.00	52.00	0.00	0.00	54.65	0.00	0.00
49.40	0.00	0.00	52.05	0.00	0.00	54.70	0.00	0.00
49.45	0.00	0.00	52.10	0.00	0.00	54.75	0.00	0.00
49.50	0.00	0.00	52.15	0.00	0.00	54.80	0.00	0.00
49.55	0.00	0.00	52.20	0.00	0.00	54.85	0.00	0.00
49.60	0.00	0.00	52.25	0.00	0.00	54.90	0.00	0.00
49.65	0.00	0.00	52.30	0.00	0.00	54.95	0.00	0.00
49.70	0.00	0.00	52.35	0.00	0.00	55.00	0.00	0.00
49.75	0.00	0.00	52.40	0.00	0.00	55.05	0.00	0.00
49.80	0.00	0.00	52.45	0.00	0.00	55.10	0.00	0.00
49.85	0.00	0.00	52.50	0.00	0.00	55.15	0.00	0.00
49.90	0.00	0.00	52.55	0.00	0.00	55.20	0.00	0.00
49.95	0.00	0.00	52.60	0.00	0.00	55.25	0.00	0.00
50.00	0.00	0.00	52.65	0.00	0.00	55.30	0.00	0.00
50.05	0.00	0.00	52.70	0.00	0.00	55.35	0.00	0.00
50.10	0.00	0.00	52.75	0.00	0.00	55.40	0.00	0.00
50.15	0.00	0.00	52.80	0.00	0.00	55.45	0.00	0.00
50.20	0.00	0.00	52.85	0.00	0.00	55.50	0.00	0.00
50.25	0.00	0.00	52.90	0.00	0.00	55.55	0.00	0.00
50.30	0.00	0.00	52.95	0.00	0.00	55.60	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
55.65	0.00	0.00	58.30	0.00	0.00	60.95	0.00	0.00
55.70	0.00	0.00	58.35	0.00	0.00	61.00	0.00	0.00
55.75	0.00	0.00	58.40	0.00	0.00	61.05	0.00	0.00
55.80	0.00	0.00	58.45	0.00	0.00	61.10	0.00	0.00
55.85	0.00	0.00	58.50	0.00	0.00	61.15	0.00	0.00
55.90	0.00	0.00	58.55	0.00	0.00	61.20	0.00	0.00
55.95	0.00	0.00	58.60	0.00	0.00	61.25	0.00	0.00
56.00	0.00	0.00	58.65	0.00	0.00	61.30	0.00	0.00
56.05	0.00	0.00	58.70	0.00	0.00	61.35	0.00	0.00
56.10	0.00	0.00	58.75	0.00	0.00	61.40	0.00	0.00
56.15	0.00	0.00	58.80	0.00	0.00	61.45	0.00	0.00
56.20	0.00	0.00	58.85	0.00	0.00	61.50	0.00	0.00
56.25	0.00	0.00	58.90	0.00	0.00	61.55	0.00	0.00
56.30	0.00	0.00	58.95	0.00	0.00	61.60	0.00	0.00
56.35	0.00	0.00	59.00	0.00	0.00	61.65	0.00	0.00
56.40	0.00	0.00	59.05	0.00	0.00	61.70	0.00	0.00
56.45	0.00	0.00	59.10	0.00	0.00	61.75	0.00	0.00
56.50	0.00	0.00	59.15	0.00	0.00	61.80	0.00	0.00
56.55	0.00	0.00	59.20	0.00	0.00	61.85	0.00	0.00
56.60	0.00	0.00	59.25	0.00	0.00	61.90	0.00	0.00
56.65	0.00	0.00	59.30	0.00	0.00	61.95	0.00	0.00
56.70	0.00	0.00	59.35	0.00	0.00	62.00	0.00	0.00
56.75	0.00	0.00	59.40	0.00	0.00	62.05	0.00	0.00
56.80	0.00	0.00	59.45	0.00	0.00	62.10	0.00	0.00
56.85	0.00	0.00	59.50	0.00	0.00	62.15	0.00	0.00
56.90	0.00	0.00	59.55	0.00	0.00	62.20	0.00	0.00
56.95	0.00	0.00	59.60	0.00	0.00	62.25	0.00	0.00
57.00	0.00	0.00	59.65	0.00	0.00	62.30	0.00	0.00
57.05	0.00	0.00	59.70	0.00	0.00	62.35	0.00	0.00
57.10	0.00	0.00	59.75	0.00	0.00	62.40	0.00	0.00
57.15	0.00	0.00	59.80	0.00	0.00	62.45	0.00	0.00
57.20	0.00	0.00	59.85	0.00	0.00	62.50	0.00	0.00
57.25	0.00	0.00	59.90	0.00	0.00	62.55	0.00	0.00
57.30	0.00	0.00	59.95	0.00	0.00	62.60	0.00	0.00
57.35	0.00	0.00	60.00	0.00	0.00	62.65	0.00	0.00
57.40	0.00	0.00	60.05	0.00	0.00	62.70	0.00	0.00
57.45	0.00	0.00	60.10	0.00	0.00	62.75	0.00	0.00
57.50	0.00	0.00	60.15	0.00	0.00	62.80	0.00	0.00
57.55	0.00	0.00	60.20	0.00	0.00	62.85	0.00	0.00
57.60	0.00	0.00	60.25	0.00	0.00	62.90	0.00	0.00
57.65	0.00	0.00	60.30	0.00	0.00	62.95	0.00	0.00
57.70	0.00	0.00	60.35	0.00	0.00	63.00	0.00	0.00
57.75	0.00	0.00	60.40	0.00	0.00	63.05	0.00	0.00
57.80	0.00	0.00	60.45	0.00	0.00	63.10	0.00	0.00
57.85	0.00	0.00	60.50	0.00	0.00	63.15	0.00	0.00
57.90	0.00	0.00	60.55	0.00	0.00	63.20	0.00	0.00
57.95	0.00	0.00	60.60	0.00	0.00	63.25	0.00	0.00
58.00	0.00	0.00	60.65	0.00	0.00	63.30	0.00	0.00
58.05	0.00	0.00	60.70	0.00	0.00	63.35	0.00	0.00
58.10	0.00	0.00	60.75	0.00	0.00	63.40	0.00	0.00
58.15	0.00	0.00	60.80	0.00	0.00	63.45	0.00	0.00
58.20	0.00	0.00	60.85	0.00	0.00	63.50	0.00	0.00
58.25	0.00	0.00	60.90	0.00	0.00	63.55	0.00	0.00

Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)	Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
63.60	0.00	0.00	66.25	0.00	0.00	68.90	0.00	0.00
63.65	0.00	0.00	66.30	0.00	0.00	68.95	0.00	0.00
63.70	0.00	0.00	66.35	0.00	0.00	69.00	0.00	0.00
63.75	0.00	0.00	66.40	0.00	0.00	69.05	0.00	0.00
63.80	0.00	0.00	66.45	0.00	0.00	69.10	0.00	0.00
63.85	0.00	0.00	66.50	0.00	0.00	69.15	0.00	0.00
63.90	0.00	0.00	66.55	0.00	0.00	69.20	0.00	0.00
63.95	0.00	0.00	66.60	0.00	0.00	69.25	0.00	0.00
64.00	0.00	0.00	66.65	0.00	0.00	69.30	0.00	0.00
64.05	0.00	0.00	66.70	0.00	0.00	69.35	0.00	0.00
64.10	0.00	0.00	66.75	0.00	0.00	69.40	0.00	0.00
64.15	0.00	0.00	66.80	0.00	0.00	69.45	0.00	0.00
64.20	0.00	0.00	66.85	0.00	0.00	69.50	0.00	0.00
64.25	0.00	0.00	66.90	0.00	0.00	69.55	0.00	0.00
64.30	0.00	0.00	66.95	0.00	0.00	69.60	0.00	0.00
64.35	0.00	0.00	67.00	0.00	0.00	69.65	0.00	0.00
64.40	0.00	0.00	67.05	0.00	0.00	69.70	0.00	0.00
64.45	0.00	0.00	67.10	0.00	0.00	69.75	0.00	0.00
64.50	0.00	0.00	67.15	0.00	0.00	69.80	0.00	0.00
64.55	0.00	0.00	67.20	0.00	0.00	69.85	0.00	0.00
64.60	0.00	0.00	67.25	0.00	0.00	69.90	0.00	0.00
64.65	0.00	0.00	67.30	0.00	0.00	69.95	0.00	0.00
64.70	0.00	0.00	67.35	0.00	0.00	70.00	0.00	0.00
64.75	0.00	0.00	67.40	0.00	0.00	70.05	0.00	0.00
64.80	0.00	0.00	67.45	0.00	0.00	70.10	0.00	0.00
64.85	0.00	0.00	67.50	0.00	0.00	70.15	0.00	0.00
64.90	0.00	0.00	67.55	0.00	0.00	70.20	0.00	0.00
64.95	0.00	0.00	67.60	0.00	0.00	70.25	0.00	0.00
65.00	0.00	0.00	67.65	0.00	0.00	70.30	0.00	0.00
65.05	0.00	0.00	67.70	0.00	0.00	70.35	0.00	0.00
65.10	0.00	0.00	67.75	0.00	0.00	70.40	0.00	0.00
65.15	0.00	0.00	67.80	0.00	0.00	70.45	0.00	0.00
65.20	0.00	0.00	67.85	0.00	0.00	70.50	0.00	0.00
65.25	0.00	0.00	67.90	0.00	0.00	70.55	0.00	0.00
65.30	0.00	0.00	67.95	0.00	0.00	70.60	0.00	0.00
65.35	0.00	0.00	68.00	0.00	0.00	70.65	0.00	0.00
65.40	0.00	0.00	68.05	0.00	0.00	70.70	0.00	0.00
65.45	0.00	0.00	68.10	0.00	0.00	70.75	0.00	0.00
65.50	0.00	0.00	68.15	0.00	0.00	70.80	0.00	0.00
65.55	0.00	0.00	68.20	0.00	0.00	70.85	0.00	0.00
65.60	0.00	0.00	68.25	0.00	0.00	70.90	0.00	0.00
65.65	0.00	0.00	68.30	0.00	0.00	70.95	0.00	0.00
65.70	0.00	0.00	68.35	0.00	0.00	71.00	0.00	0.00
65.75	0.00	0.00	68.40	0.00	0.00	71.05	0.00	0.00
65.80	0.00	0.00	68.45	0.00	0.00	71.10	0.00	0.00
65.85	0.00	0.00	68.50	0.00	0.00	71.15	0.00	0.00
65.90	0.00	0.00	68.55	0.00	0.00	71.20	0.00	0.00
65.95	0.00	0.00	68.60	0.00	0.00	71.25	0.00	0.00
66.00	0.00	0.00	68.65	0.00	0.00	71.30	0.00	0.00
66.05	0.00	0.00	68.70	0.00	0.00	71.35	0.00	0.00
66.10	0.00	0.00	68.75	0.00	0.00	71.40	0.00	0.00
66.15	0.00	0.00	68.80	0.00	0.00	71.45	0.00	0.00
66.20	0.00	0.00	68.85	0.00	0.00	71.50	0.00	0.00

2023-04-28_HydroCAD

NOAA 24-hr C 100-Year Rainfall=8.52"

Prepared by Stonefield Engineering & Design

Printed 4/28/2023

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Primary Comparison (continued)

Time (hours)	Subcat E-1 (cfs)	Subcat P-1 (cfs)
71.55	0.00	0.00
71.60	0.00	0.00
71.65	0.00	0.00
71.70	0.00	0.00
71.75	0.00	0.00
71.80	0.00	0.00
71.85	0.00	0.00
71.90	0.00	0.00
71.95	0.00	0.00
72.00	0.00	0.00

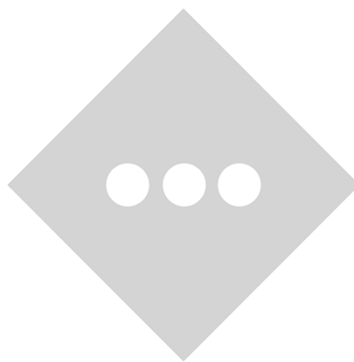
APPENDIX D

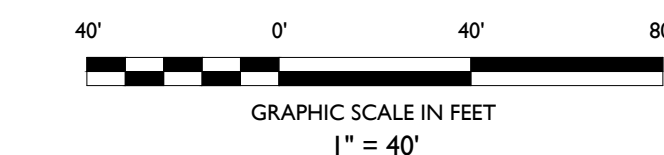
DRAINAGE AREA MAPS

INVENTORY

SHEET 1 OF 2: EXISTING DRAINAGE AREA MAP

SHEET 2 OF 2: PROPOSED DRAINAGE AREA MAP





PROPERTY LINE

EXISTING DRAINAGE AREA

EXISTING PERVIOUS AREA

TYPE OF SOIL	URBAN LAND (UR)
PERCENT OF SITE COVERAGE	84.8%
HYDROLOGIC SOIL GROUP	B
TYPE OF SOIL	WATER
PERCENT OF SITE COVERAGE	15.2%

EXISTING CONDITIONS		PROPOSED CONDITIONS	
TYPE	AREA (SF)	SURFACE TYPE	AREA (SF)
MOTOR SURFACE	106,662	REGULATED MOTOR VEHICLE SURFACE	97,756
REGULATED PERVIOUS	87,252	REGULATED IMPERVIOUS	150,960
PERVIOUS	133,277	PERVIOUS	78,475
TOTAL:	327,191	TOTAL:	327,191

NET IMPROVEMENT: 8,906

DESCRIPTION

PROPERTY LINE

EXISTING DRAINAGE AREA

EXISTING PERVIOUS AREA

SOIL CHARACTERISTICS CHART

TYPE OF SOIL	URBAN LAND (UR)
PERCENT OF SITE COVERAGE	84.8%
HYDROLOGIC SOIL GROUP	B
TYPE OF SOIL	WATER
PERCENT OF SITE COVERAGE	15.2%

SURFACE AREA BREAKDOWN

EXISTING CONDITIONS		PROPOSED CONDITIONS	
TYPE	AREA (SF)	SURFACE TYPE	AREA (SF)
REGULATED MOTOR SURFACE	106,662	REGULATED MOTOR VEHICLE SURFACE	97,756
REGULATED IMPERVIOUS	87,252	REGULATED IMPERVIOUS	150,960
PERVIOUS	133,277	PERVIOUS	78,475
TOTAL:	327,191	TOTAL:	327,191
NET IMPROVEMENT: 8,906			

NET IMPROVEMENT: 8,906

DRAINAGE AREA MAPS

**MERIDIA GLOUCESTER CITY I01,
URBAN RENEWAL, LLC**

**PROPOSED 7-STORY MIXED USE BUILDING
& 8-STORY RESIDENTIAL BUILDING**

**BLOCK 48, LOTS 2, 2.01 & 2.02
101 SOUTH KING STREET
CITY OF GLOUCESTER CITY
CAMDEN COUNTY, NEW JERSEY**

ARTHUR KUYAN, P.E.
NEW JERSEY LICENSE No. 55741
LICENSED PROFESSIONAL ENGINEER



SCALE:	1" = 40'	PROJECT ID: RUT-200341
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TITLE:

EXISTING DRAINAGE AREA MAP

DRAWING:

1 OF 2

STONEFIELD
engineering & design

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