Dewberry

Stormwater Management Report

Jersey Shore University Medical Center Parking Garage, Perioperative Expansion – East, & Critical Care Tower – West

Block 1201 Lots 1, 2, 4, & 5
1945 Corlies Avenue & 81 Davis Avenue
Township of Neptune
Monmouth County, NJ 07753

February 07, 2025

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Stormwater Management Report

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1. Project Summary

The subject site is located at 1945 Corlies Avenue, 19 Davis Avenue, & 81 Davis Avenue, Neptune Township, Monmouth County, New Jersey, also known as Block 1201 Lots 1, 2, 4, & 5 per a certified list of property owners provided by the Township's tax assessor (State Coord. (X)- 620519.45, (Y)- 501487.52). The subject properties are approximately 34.59± acres and have frontage to State Highway Route 33 to the South and Davis Avenue to the East, municipal and commercial buildings to the East, residential properties to the West, and school buildings and recreational fields to the North.

The existing site consists of the Jersey Shore University Medical Center campus which is made up of various medical buildings, associated parking and utility structures, and maintained landscaping. The site contains approximately 26.1± acres of impervious cover total. Based on a review of aerial imagery, the current improvements appear to have been completed sometime between 2017 and 2018 with the construction of Hope Tower on Lot 4. There is 15' wide drainage easement for a municipal storm culvert which enters the site from the West and ultimately discharges to Route 33 at the South of the campus.

An environmental review was conducted on the hospital campus by Dewberry Engineers, Inc., which identified no regulated environmental areas on the campus. There are no streams located within the immediate area of the hospital campus. Based on FEMA's National Flood Hazard Layer Viewer (FIRM panel 34025C0333G, 6/15/2022), JSUMC campus and adjacent parcels are not located within the 100-year floodplain. Runoff is directed to the hospital campus storm sewer system and directed offsite.

The applicant is seeking Preliminary and Final Site Plan Approval for a new parking garage, Central Utility Plant (CUP) expansion, and 4-story perioperative expansion (Phase 2). In general, the existing site features related to the medical office building in Lot 2 are proposed to be removed, including the building, surface parking, lighting, and select utilities. In addition, the perioperative expansion will be constructed above the existing loading dock on Lot 1 and maintain select utilities including existing drainage network. In addition, the applicant is seeking a Preliminary Site Plan Approval to construct a new 11-story critical care tower in Lot 1 and intends to submit a Final Site Plan Application in the future (Phase 3). In general, the existing site features related to the existing hospital wing "Rosa" and surrounding features are proposed to be removed, including the building, surface parking, lighting, and select utilities.

The stormwater management approach for this project allows for both the East and West additions to be analyzed independently of each other. The goal of this report is to show compliances of both Phase 2 and 3 with the Township's ordinance on Stormwater Management through hydrologic and hydrographic comparisons of the existing and full-buildout conditions of the site. Using this method, there will be a reduction to the peak stormwater flow and volume discharging from the site due to each addition at any point in time during the duration of the storm

As part of the proposed project, the applicant proposes a series of temporary enabling projects (Phase 1) to prepare the campus for these improvements. For the East Addition, a temporary loading dock and modified drop off area is proposed as the perioperative expansion (East Addition) is constructed.. At the conclusion of Phase 2 of this project, the temporary loading dock will be demolished and restored to its original, predevelopment, condition. Finally, within Neptune City parcel Block 115 Lot 2, the existing parking lot is proposed to be reconfigured to allow additional parking spaces for overflow hospital parking and will decrease the existing impervious coverage on this parcel while maintaining the existing drainage patterns. A formal application to the Borough of Neptune City will be submitted for the proposed improvements.

The proposed improvements are consistent with the permitted uses of the Neptune Township Civic Zone district. The proposed improvements are located within the limits of the existing disturbed/maintained areas. Access to the hospital campus will continue to be provided via Davis Ave and NJ Route 33 (Corlies Ave). This project, as

currently proposed, will result in a reduction in the overall and vehicular impervious cover and maintain existing drainage patterns. Where practical, portions of previously disturbed/maintained land areas within these study areas will be enhanced by planting dense native, non-invasive herbaceous and woody species. Refer to the associated Preliminary and Final Major Site Plan submitted in support of this application for additional information.

All elevations herein are based on the North American Vertical Datum of 1988 (NAVD 88) unless otherwise noted. For this site, to convert from NAVD88 to NGVD29, add approximately 1.177 feet. This property is located within the State Metropolitan Planning Area (PA-1).

2. East Addition and Garage (Phase 2) Design Overview

This section includes an analysis of the proposed development's effects on local stormwater drainage patterns as well as an overview of the stormwater BMP green infrastructure designs for the East Addition for JSUMC.. Dewberry has prepared this report in accordance with the requirements of the New Jersey Department of Environmental Protection (NJDEP) N.J.A.C. 7:8 for Stormwater Management, the NJDEP Stormwater Best Management Practices (BMP) Manual, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) National Engineering Handbook Part 630 for Hydrology (NEH630), and the Township of Neptune's ordinance § LDO – 528 Stormwater Management. Drainage maps have been prepared herein and a grading plan has been developed for the proposed site improvements with consideration to match the existing drainage patterns to the maximum extent practical. The existing conditions are based upon available survey and historic aerial information. Refer to the associated site plans for more details on this project.

Two points of analysis (POA) were utilized for the proposed addition, which are designated as DA-1 for the eastern portion of the proposed east addition, and DA-2 for the western portion of the proposed east addition.

Drainage area DA-1 consists primarily of vehicular surface area, it is generally flat and slopes south. Runoff is collected through a series of drainage catch basins located throughout the site and ultimately conveyed via underground storm piping to a 3'x10' box culvert that exits the site towards Route 33 to the South. Refer to the aerial and site figures attachments for additional information.

Drainage area DA-2 consists primarily of vehicular surface area and generally slopes from North to South with a POS in Davis Avenue where the runoff flows along the gutter line. Refer to the aerial and site figures attachments for additional information

The proposed development will result in the disturbance of more than one acre of land since February 2, 2004; therefore, this project is classified as a "major development" as defined in N.J.A.C. 7:8-1.2. Per N.J.A.C. 7:8-5, stormwater management measures for major developments shall be designed to address the design and performance standards for erosion control, groundwater recharge, stormwater runoff quantity control, and stormwater runoff quality treatment. The motor vehicle surface areas associated with these improvements will decrease by 0.66± acres and the overall impervious surface areas for the site will decrease by 0.27± acres, as compared from existing to proposed conditions.

This project addresses these through the following:

- Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction (proposed) runoff hydrographs for the 2-, 10-, and 100-year storm events do not exceed, at any point in time, the pre-construction (existing) runoff hydrographs for the same storm events [N.J.A.C. 7:8-5.6(b)1];
- Stormwater runoff quality standards are not applicable when the major development increases motor vehicle surface by less than a one-quarter acre [N.J.A.C. 7:8-5.5(a)];

- Stormwater recharge requirements do not apply to projects within the “urban redevelopment area” [N.J.A.C. 7:8-5.4(b)2;
- Design and performance standards for erosion control per the Soil Erosion and Sediment Control Act [N.J.S.A. 4:24-39 et seq.].

2.1 Existing Conditions

2.1.1 Land Cover

The proposed drainage area is currently developed and actively maintained. It mainly consists of a 1-story medical office building and a loading dock area for the main hospital campus along with associated vehicular parking area, driveways, pedestrian paths, and landscaped areas. Under existing conditions, there are 6.40± acres of impervious cover, including 4.48± acres of vehicular impervious cover. Additionally, there are 1.69± acres of pervious, vegetated cover. The vegetated cover primarily consists of maintained lawn and landscape areas. Refer to DA-01A East Existing Drainage Plan in Appendix IV for additional information.

2.1.2 Hydrologic Conditions

The existing conditions were analyzed as two separate drainage areas. The drainage area “EDA-1” is located along the eastern portion of the east addition and drainage area and “EDA-2” is located along the western portion of the east addition:

- **EDA-1:** This area is approximately 6.99± acres which includes 5.59± acres of impervious surface with a weighted CN of 98.00 and 1.40± acres of pervious surface with weighted CN of 54.35. The stormwater runoff in this drainage area primarily consists of impervious vehicular surface coverage which is collected into storm drains and discharged from the site by an existing 3’x10’ box culvert. For current storm events, a time of concentration of 0.11 hours has been calculated for impervious surfaces and 0.20 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.11 hours has been calculated for impervious surfaces and 0.19 hours for pervious surfaces.
- **EDA-2**: This area is approximately 1.10± acres which includes 0.81± acres of impervious surface with a weighted CN of 98.00 and 0.29± acres of pervious surface with weighted CN of 50.62. The stormwater runoff in this drainage area is overland flows that flow from the north of the medical office building towards the south to Davis Ave to the POA at the edge of the site. For the current storm events, a time of concentration of 0.05 hours has been calculated for impervious surfaces and 0.09 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.05 hours has been calculated for impervious surfaces and 0.08 hours for pervious surfaces

2.1.3 Upland Drainage

Based on topographic information and aerial photography, there are portions of the surrounding area that convey stormwater runoff through the analyzed drainage areas. In addition to the onsite runoff from the hospital campus, the municipal culvert conveys runoff from the surrounding residential and school properties to the North and West of the campus. These offsite drainage areas are outside the area of analysis for this report and are not proposed to be impacted due to the addition.

2.2 Proposed Conditions

2.2.1 Land Cover

The East Addition proposes a new parking garage, CUP expansion, and a 4-story perioperative expansion to the hospital building. The proposed improvements will include associated driveways, pedestrian paths, landscaped areas. Under proposed conditions there will be 6.12± acres of impervious surface, including 3.81± acres of vehicular impervious surface, and 1.97± acres of pervious, vegetated cover. The proposed improvements will result in an overall reduction of impervious surfaces by 0.28± acres. It also includes a reduction of motor vehicle surface by 0.67± acres compared to existing conditions.

The proposed stormwater management design serves to match the existing drainage patterns to the maximum extent practical when compared to existing conditions in accordance with N.J.A.C 7:8. As part of the proposed site improvements, low impact development was considered to mitigate the rate of stormwater runoff flows and volume. Additionally, the proposed design maintains the existing stormwater management devices that are onsite by matching the area flowing into the underground detention basin and matching or eliminating the vehicular surface area conveyed to onsite water quality structures. Refer to the DA-02A East Proposed Drainage Area Plan in Appendix IV for land cover identification, time of concentration (ToC) flow paths, and the POA locations.

2.2.2 Hydrologic Conditions

Similar to the existing conditions, the proposed conditions were analyzed as two separate drainage areas. The drainage area “PDA-1” is in the eastern portion of the east addition drainage area and “PDA-2” is located in the western portion of the east addition drainage area:

- **PDA-1**: This area is approximately 7.00± acres which includes 5.58± acres of impervious surface with a weighted CN of 98.00 and 1.42± acres of pervious surface with weighted CN of 48.03. For the POA, the stormwater runoff in this drainage area will be collected into storm drains and discharged from the site by the existing 3’x10’ box culvert. For current storm events, a time of concentration of 0.11 hours has been calculated for impervious surfaces and 0.19 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.11 hours has been calculated for impervious surfaces and 0.18 hours for pervious surfaces.
- **PDA-2**: This area is approximately 1.09± acres which includes 0.54± acres of impervious surface with a weighted CN of 98.00 and 0.55± acres of pervious surface with weighted CN of 50.09. The stormwater runoff in this drainage area is overland flows that flow from the north of the medical office building towards the south to Davis Ave to the POA at the edge of the site. For the current storm events, a time of concentration of 0.07 hours has been calculated for impervious surfaces and 0.10 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.07 hours has been calculated for impervious surfaces and 0.09 hours for pervious surfaces

2.2.3 Offsite Drainage

The proposed stormwater management approach has been designed to minimize the impact to the drainage characteristics of the subject property, receiving municipal system and the neighboring region. The project as proposed will have no adverse impact on the existing offsite drainage systems through the reduction of post construction stormwater runoff rates and peak volumes compared to the existing conditions for all the design storms. In addition, the proposed improvements will reduce the amount of motor vehicle surfaces which will improve water quality discharging from the site while also maintaining the existing water quality devices within the project limits.

2.3 Design Methodology

2.3.1 Calculation Methods

Hydrologic scenarios are modeled via Bentley PondPack computer software utilizing NRCS (Unit Hydrograph) methodology. The 2-, 10-, and 100-year storm events are based upon NOAA 24-hour rainfall frequency data for Neptune, New Jersey utilizing the NOAA Region D rainfall distribution and these values were adjusted based on the requirements of N.J.A.C. 7:8-5.7(c) and (d) as shown in Table 2.1 below. Runoff hydrographs have been generated using the SCS Dimensionless Unit Hydrograph, and pervious and impervious catchment areas have been modeled separately [N.J.A.C. 7:8-5.7(a)4.].

Table 2.1 Design Storm Precipitation Depths

DESIGN STORM PRECIPITATION DEPTHS			
STORM EVENT (24 HOUR)	DEPTH (NOAA ATLAS 14)	CURRENT ADJUSTMENT (PER N.J.A.C 7:8 TABLE 5-5)	FUTURE ADJUSTMENT (PER N.J.A.C. 7:8 TABLE 5-6)
2 year	3.48"	3.48" x 1.00 = **3.48"**	3.48" x 1.19 = **4.14"**
10 year	5.39"	5.39" x 1.01 = **5.44"**	5.39" x 1.19 = **6.41"**
100 year	9.22"	9.22" x 1.02 = **9.40"**	9.22" x 1.26 = **11.62"**

2.3.2 Hydrologic Soil Groups (HSG) and Curve Numbers (CN)

Soil classifications for use in establishing runoff curve numbers (CN) for each of the drainage areas have been determined based on data provided by the NRCS Web Soil Survey:

Table 2.2: On-site Hydrologic Soil Groups

ON-SITE HYDROLOGIC SOIL RATINGS		
SOIL TYPE	MAP UNIT NAME	HSG RATING
KkhB	Klej loamy sand-Urban land complex, 0 to 5 percent slopes	A/D
UdauB	Udorthents-Urban land complex, 0 to 8 percent slopes	D

Soil boring test at the project site found groundwater at a depth of 7 to 10 feet. These results were compared to historical geotechnical reports conducted on the site during the months of January to April, which corroborated the soil findings and found the SHWT at depths of 8 to 12 feet. Per these reports, the seasonal highwater table, SHWT, has consistently been found to be greater than 24 inches below the ground surface. Per the NJDEP Stormwater BMP Manual Chapter 12 "Soil Testing Criteria", dual hydrologic soil group, HSG, classes are classified as HSG "D" soil when the SHWT is within 24 inches of the ground surface. Thus, as part of this site development, the KkhB soil was modeled as HSG 'A' soil.

Runoff CN values for developing the unit hydrographs, per NEH 630 Chapter 9, are as follows:

Table 2.3: CN Values

CN VALUES	
GROUND COVERAGE CONDITION	CN VALUE
Buildings/Paved Areas – All Soils	98
Gravel – Good Conditions – A Soils	76
Gravel – Good Conditions – D Soils	91
Brush – Good Conditions – A Soils	30
Brush – Good Conditions – D Soils	73
Open Space – Good Conditions – A Soils	39
Open Space – Good Conditions – D Soils	80

The existing and proposed gravel surfaces within the drainage area are made up of uncompacted landscape stones in non-vehicular areas. These surfaces are either behind an elevated curb or bollards preventing vehicular traffic from affecting these areas.

2.3.3 Stormwater Conveyance

Manning's Equation was used to study the proposed pipe capacities and discharges based on the current 25-year storm event for the site. Inlet drainage areas for overland flow runoff have been identified for the new stormwater drainage system located along Davis Ave to the south of the proposed garage. These sub-catchment areas include the total contributory area and the impervious coverage percentage. Refer to Appendix II for SewerGEMS FlexTables and Pipe Profiles.

Channel Surface	Manning's 'n'
Reinforced Concrete	0.013

The proposed subsurface stormwater conveyance structures are reinforced concrete pipes (RCP) that will convey runoff from the site and buildings to existing stormwater infrastructure. The existing municipal culvert discharges into the system located in Route 33 to the south will not be modified nor will receive additional flow from the project.

Furthermore, the proposed design maintains the existing stormwater management devices that are onsite by matching the area flowing into the underground detention basin and matching or eliminating the vehicular surface area conveyed to onsite water quality structures. The stormwater conveyance model compares the existing, surveyed, drainage network to the proposed drainage area of the loading dock to demonstrated continued capacity of the system.

EAST ADDITION DA-1 OXYGEN TANKS STORMWATER CONVEYANCE					
	PIPE DESCRIPTION	DRAINAGE AREA (ACRES)	% IMPERVIOUS	FLOW (CFS)	FULL FLOW CAPACITY (CFS)
EXISTING	27LF 24" RCP @1.5%	0.79	61.7	3.72	27.88
PROPOSED	27LF 24" RCP @1.5%	0.79	65.0	4.25	27.88

EAST ADDITION DA-1 LOADING DOCK STORMWATER CONVEYANCE					
	PIPE DESCRIPTION	DRAINAGE AREA (ACRES)	% IMPERVIOUS	FLOW (CFS)	FULL FLOW CAPACITY (CFS)
EXISTING	36LF 42" RCP @1.0%	10.27	89.3	53.25	99.20
PROPOSED	36LF 42" RCP @1.0%	10.01	90.1	53.66	99.20

2.3.4 Time of Concentrations

Time of concentrations (ToC) to the POS have been calculated for all pervious and impervious catchment areas under existing and proposed conditions. Equations and assumptions are in accordance with NEH 630 Chapter 15 and the BMP Manual Chapter 5. The maximum Manning's Roughness Coefficient (n) for sheet flow is 0.40 and the maximum sheet flow length is 100 feet [BMP Chapter 5].

Sheet Flow Surface	Manning's 'n'
Asphalt/Rooftops/Gravel	0.011
Grass	0.15
Dense Grass	0.24

Refer to Appendix II for ToC calculations. Refer to Appendix IV for the Existing Drainage Area Map and Proposed Drainage Area Map that includes the hydraulic flow paths and groundcover types.

2.3.5 Water Quantity Requirements

Hydrological evaluations for existing and proposed conditions have been calculated for the NOAA 2-, 10-, and 100-year 24-hour storm events for Neptune, NJ utilizing the 'Current' and 'Future' precipitation adjustment factors [N.J.A.C. 7:8-5.7(c) and (d), respectively]. See Table 2.1 for precipitation values.

The east addition's stormwater quantity control standards have been addressed by demonstrating through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction (proposed) runoff hydrographs for the 2-, 10-, and 100-year storm events, as defined and determined pursuant to N.J.A.C. 7:8-5.7(c) and (d), respectively, do not exceed, at any point in time, the pre-construction (existing) runoff hydrographs for the same storm events [N.J.A.C. 7:8-5.6(b)1.].

Runoff quantity requirements are achieved through land cover management – restoring previously developed areas with native landscaping material, matching existing drainage patterns and reducing the overall impervious coverage of the site. Refer to Appendix II for the complete PondPack modeling summaries, runoff hydrographs in graphical and numerical form, and master network summary for the East Addition.

Table 2.4 East Peak Runoff Rates and Volumes to POS-1 - Current Storm

EAST PEAK RUNOFF RATES AND VOLUMES TO POS-1 - CURRENT STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	10.42	10.40	-0.02	1.497	1.474	-0.023
10 year	16.78	16.45	-0.33	2.475	2.425	-0.050
100 year	30.45	29.85	-0.60	4.548	4.452	-0.096

Table 2.5 East Peak Runoff Rates and Volumes to POS-1 - Future Storm

EAST PEAK RUNOFF RATES AND VOLUMES TO POS-1 -FUTURE STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	12.48	12.44	-0.04	1.820	1.792	-0.028
10 year	20.11	19.70	-0.41	2.973	2.917	-0.056
100 year	38.42	37.68	-0.74	5.741	5.636	-0.105

Table 2.6 East Peak Runoff Rates and Volumes to POS-2 - Current Storm

EAST PEAK RUNOFF RATES AND VOLUMES TO POS-2 - CURRENT STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	1.74	1.13	-0.61	0.216	0.150	-0.066
10 year	2.82	1.90	-0.92	0.360	0.265	-0.095
100 year	5.27	4.01	-1.26	0.672	0.537	-0.135

Table 2.7 East Peak Runoff Rates and Volumes to POS-2 - Future Storm

EAST PEAK RUNOFF RATES AND VOLUMES TO POS-2 - FUTURE STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	2.08	1.35	-0.73	0.264	0.187	-0.077
10 year	3.41	2.40	-1.01	0.434	0.328	-0.106
100 year	6.74	5.36	-1.38	0.853	0.702	-0.151

2.3.6 Runoff Quality and Groundwater Recharge Requirements

Per N.J.A.C 7:8-5.4, groundwater recharge standards do not apply to projects within the “urban redevelopment area”. The proposed project site was previously developed and is located within the State Metropolitan Planning Area (PA-1); therefore, the proposed development does not include any proposed groundwater recharge methods. Furthermore, per N.J.A.C. 7:8-5.4(b).1.ii, this project meets the standards for groundwater recharge by reducing the stormwater runoff volume from pre-construction to post-construction for the future 2-year storm event.

Per N.J.A.C 7:8-5.5(a), stormwater runoff quality standards are applicable when projects propose an increase of 0.25 acres or more of regulated motor vehicle surface. The proposed development will result in a decrease of motor vehicle surface by 0.65± acres. Furthermore, previously approved existing onsite water quality devices will be maintained and reset as necessary to maintain their current flows. The areas draining to these existing water quality units will be maintained to the relocated units thereby maintaining the same level of treatment as the approved condition. When you consider the reduction in vehicle surface and maintenance of the existing water quality devices, the project will result in a net improvement in water quality.

2.3.7 Nonstructural Stormwater Management Strategies

Since this project is a major development, it has been designed to incorporate nonstructural stormwater management strategies [NJAC 7:8-2.4(g); BMP Chapter 2]. The following nonstructural strategies for major developments have been considered in the design:

1. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;
2. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;
3. Maximize the protection of natural drainage features and vegetation;
4. Minimize the decrease in the “time of concentration” from pre-construction (existing) to post-construction (proposed);
5. Minimize land disturbance including clearing and grading;
6. Minimize soil compaction;
7. Provide low maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers, and pesticides;

The major goals for this redevelopment have been the reduction of the impervious (overall and vehicular) area from existing to proposed conditions and the restoration of actively disturbed lawn areas to its native, non-invasive vegetated cover. Additionally, other pervious surfaces within the site will be landscaped with shade trees, evergreens, shrubs, and groundcover.

3. West Addition Design (Phase 3) Overview

This section includes a preliminary analysis of the proposed development’s effects on local stormwater drainage patterns as well as an overview of the stormwater BMP green infrastructure designs for the West Addition for JSUMC. Dewberry has prepared this report in accordance with the requirements of the New Jersey Department of Environmental Protection (NJDEP) N.J.A.C. 7:8 for Stormwater Management, the NJDEP Stormwater Best Management Practices (BMP) Manual, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) National Engineering Handbook Part 630 for Hydrology (NEH630), and the Township of Neptune’s ordinance § LDO – 528 Stormwater Management. Drainage maps have been prepared herein and a grading plan has been developed for the proposed site improvements with consideration to match the existing drainage patterns to the maximum extent practical. The existing conditions are based upon available survey and historic aerial information. Refer to the associated site plans for more details on this project.

Two points of analysis (POA) were utilized for the proposed addition, which are designated as DA-1 for the southern portion of the proposed West Addition, and DA-2 for the northern portion of the proposed West Addition.

Drainage area DA-1 consists primarily of vehicular surface area, it is generally flat and slopes south. Runoff is collected through a series of drainage catch basins located throughout the site and ultimately conveyed via underground storm piping towards Route 33 to the South. Refer to the aerial and site figures attachments for additional information.

Drainage area DA-2 consists primarily of vehicular surface area and building coverage, it is generally flat and slopes east. Runoff is collected through a series of drainage catch basins located throughout the site and

ultimately conveyed via underground storm piping to an 18" RCP that runs underneath the main hospital building towards the loading dock at the east of the campus. Except for a small overhang area of the proposed West Addition (1,800± SF/0.04± acres), runoff from the proposed addition will be collected and discharged to the proposed collection system. The small amount of runoff from the overhang will drain to the gravel landscaped area below the overhang. This will allow this runoff to sheet flow over the landscape stone to the proposed landscaped area and ultimately be collected by area inlet within the planted area.

The proposed development will result in the disturbance of more than one acre of land since February 2, 2004; therefore, this project is classified as a "major development" as defined in N.J.A.C. 7:8-1.2. Per N.J.A.C. 7:8-5, stormwater management measures for major developments shall be designed to address the design and performance standards for erosion control, groundwater recharge, stormwater runoff quantity control, and stormwater runoff quality treatment. The motor vehicle surface areas associated with these improvements will decrease by 0.78± acres and the overall impervious surface areas for the site will decrease by 0.29± acres, as compared from existing to proposed conditions.

This project addresses these through the following:

- Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction (proposed) runoff hydrographs for the 2-, 10-, and 100-year storm events do not exceed, at any point in time, the pre-construction (existing) runoff hydrographs for the same storm events [N.J.A.C. 7:8-5.6(b)1];
- Stormwater runoff quality standards are not applicable when the major development increases motor vehicle surface by less than a one-quarter acre [N.J.A.C. 7:8-5.5(a)];
- Stormwater recharge requirements do not apply to projects within the "urban redevelopment area" [N.J.A.C. 7:8-5.4(b)2;
- Design and performance standards for erosion control per the Soil Erosion and Sediment Control Act [N.J.S.A. 4:24-39 et seq.].

3.1 Existing Conditions

3.1.1 Land Cover

The proposed West Addition project area is currently developed and mainly consists of the "Rosa" hospital building and associated vehicular parking surface, driveways, pedestrian paths, and landscaped areas. Under existing conditions, there are 3.27± acres of impervious cover, including 2.44± acres of vehicular impervious cover. Additionally, there are 1.47± acres of pervious, vegetated cover. The vegetated cover consists of maintained lawn and landscape areas. Refer to DA-01B West Existing Site Drainage Map for additional information.

3.1.2 Hydrologic Conditions

The existing conditions were analyzed as two separate drainage areas. The drainage area "EDA-1" is located along the southern portion of the side and drainage area "EDA-2" is located along the northern portion of the site:

- **EDA-1:** This area is approximately 3.22± acres which includes 2.17± acres of impervious surface with a weighted CN of 98.00 and 0.88± acres of pervious surface with weighted CN of 66.20. The stormwater runoff in this drainage area are primarily overland flows which is collected into storm drains and discharged from the site towards Route 33. For current storm events, a time of concentration of 0.08 hours has been calculated for impervious surfaces and 0.13 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.08 hours has been calculated for impervious surfaces and 0.12 hours for pervious surfaces.
- **EDA-2**: This area is approximately 1.51± acres which includes 0.93± acres of impervious surface with a weighted CN of 98.00 and 0.59± acres of pervious surface with weighted CN of 69.99. The stormwater

runoff in this drainage area primarily consists of impervious vehicular and building cover which is collected into storm drains and discharged towards the east of the site by an existing 18” reinforced concrete pipe. For current storm events, a time of concentration of 0.05 hours has been calculated for impervious surfaces and 0.18 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.05 hours has been calculated for impervious surfaces and 0.17 hours for pervious surfaces.

3.1.3 Upland Drainage

Based on topographic information and aerial photography, there are portions of the surrounding area that convey stormwater runoff through the analyzed drainage areas. In addition to the onsite runoff from the hospital campus, the municipal culvert conveys runoff from the surrounding residential and school properties to the North and West of the campus. These offsite drainage areas are outside the area of analysis for this report and are not proposed to be impacted due to the addition.

3.2 Proposed Conditions

3.2.1 Land Cover

The West Addition preliminarily proposes a new 11-story critical care tower. The proposed improvements will include associated driveways, surface parking, and pedestrian paths. Under proposed conditions there will be 2.98± acres of impervious surface, including 1.66± acres of vehicular impervious surface, and 1.75± acres of pervious, vegetated cover. The proposed improvements will result in an overall reduction of impervious surfaces by 0.29± acres. It also includes a reduction of motor vehicle surface by 0.78± acres compared to existing conditions.

The proposed stormwater management design serves to match the existing drainage patterns to the maximum extent practical when compared to existing conditions in accordance with N.J.A.C 7:8. As part of the proposed site improvements, low impact development was considered to mitigate the rate of stormwater runoff flows and volume. Additionally, the proposed design maintains the existing stormwater management devices that are onsite by matching the area flowing into the underground detention basin and matching or eliminating the vehicular surface area conveyed to onsite water quality structures. Refer to the DA-02B West Proposed Drainage Area Plan in Appendix IV for land cover identification, time of concentration (ToC) flow paths, and the POA locations.

3.2.2 Hydrologic Conditions

Similar to the existing conditions, the proposed conditions were analyzed as two separate drainage areas. The drainage area “PDA-1” is located along the southern portion of the studied drainage area “PDA-2” is located along the northern portion of the studied drainage area:

- PDA-1: This area is approximately 3.25± acres which includes 2.06± acres of impervious surface with a weighted CN of 98.00 and 1.19± acres of pervious surface with weighted CN of 65.12. For the POA, the stormwater runoff in this drainage area will be collected into storm drains and conveyed south towards Route 33. For current storm events, a time of concentration of 0.08 hours has been calculated for impervious surfaces and 0.13 hours for pervious surfaces. For the projected future storm events, a time of concentration of 0.08 hours has been calculated for impervious surfaces and 0.12 hours for pervious surfaces.
- PDA-2: This area is approximately 1.48± acres which includes 0.92± acres of impervious surface with a weighted CN of 98.00 and 0.56± acres of pervious surface with weighted CN of 70.96. The stormwater runoff in this drainage area primarily consists of impervious vehicular and building cover which is collected into storm drains and discharged towards the east of the site by an existing 18” reinforced concrete pipe. For current storm events, a time of concentration of 0.05 hours has been calculated for impervious surfaces and 0.17 hours for pervious surfaces. For the projected future storm events, a time of

concentration of 0.05 hours has been calculated for impervious surfaces and 0.16 hours for pervious surfaces.

3.2.3 Offsite Drainage

The proposed stormwater management approach has been designed to minimize the impact to the drainage characteristics of the subject property, receiving municipal system and the neighboring region. The project as proposed will have no adverse impact on the existing offsite drainage systems through the reduction of post construction stormwater runoff rates and peak volumes compared to the existing conditions for all the design storms. In addition, the proposed improvements will reduce the amount of motor vehicle surfaces which will improve water quality discharging from the site while also maintaining the existing water quality devices within the project limits.

3.3 Design Methodology

3.3.1 Calculation Methods

Hydrologic scenarios are modeled via Bentley PondPack computer software utilizing NRCS (Unit Hydrograph) methodology. The 2-, 10-, and 100-year storm events are based upon NOAA 24-hour rainfall frequency data for Neptune, NJ utilizing the NOAA Region D rainfall distribution and these values were adjusted based on the requirements of N.J.A.C. 7:8-5.7(c) and (d) as shown in Table 3.1. Runoff hydrographs have been generated using the SCS Dimensionless Unit Hydrograph, and pervious and impervious catchment areas have been modeled separately [N.J.A.C. 7:8-5.7(a)4.].

Table 3.1 Design Storm Precipitation Depths

DESIGN STORM PRECIPITATION DEPTHS			
STORM EVENT (24 HOUR)	DEPTH (NOAA ATLAS 14)	CURRENT ADJUSTMENT (PER N.J.A.C 7:8 TABLE 5-5)	FUTURE ADJUSTMENT (PER N.J.A.C. 7:8 TABLE 5-6)
2 year	3.48”	3.48” x 1.00 = **3.48”**	3.48” x 1.19 = **4.14”**
10 year	5.39”	5.39” x 1.01 = **5.44”**	5.39” x 1.19 = **6.41”**
100 year	9.22”	9.22” x 1.02 = **9.40”**	9.22” x 1.26 = **11.62”**

3.3.2 Hydrologic Soil Groups (HSG) and Curve Numbers (CN)

Soil classifications for use in establishing runoff curve numbers (CN) for each of the drainage areas have been determined based on data provided by the NRCS Web Soil Survey:

Table 3.2: On-site Hydrologic Soil Groups

ON-SITE HYDROLOGIC SOIL RATINGS		
SOIL TYPE	MAP UNIT NAME	HSG RATING
KkhB	Klej loamy sand-Urban land complex, 0 to 5 percent slopes	A/D
UdauB	Udorthents-Urban land complex, 0 to 8 percent slopes	D

Soil boring test at the project site found groundwater at a depth of 7 to 10 feet. These results were compared to historical geotechnical reports conducted on the site during the months of January to April, which corroborated the soil findings and found the SHWT at depths of 8 to 12 feet. Per these reports, the seasonal highwater table, SHWT, has consistently been found to be greater than 24 inches below the ground surface. Per the NJDEP

Stormwater BMP Manual Chapter 12 “Soil Testing Criteria”, dual hydrologic soil group, HSG, classes are classified as HSG “D” soil when the SHWT is within 24 inches of the ground surface. Thus, as part of this site development, the KkhB soil was modeled as HSG ‘A’ soil.

Runoff CN values for developing unit hydrographs, per NEH 630 Chapter 9, are as follows:

Table 3.3: CN Values

CN VALUES	
GROUND COVERAGE CONDITION	CN VALUE
Buildings/Paved Areas – All Soils	98
Gravel – Good Conditions – A Soils	76
Gravel – Good Conditions – D Soils	91
Brush – Good Conditions – A Soils	30
Brush – Good Conditions – D Soils	73
Open Space – Good Conditions – A Soils	39
Open Space – Good Conditions – D Soils	80

The existing and proposed gravel surfaces within the drainage area are made up of uncompacted landscape stones in non-vehicular areas. These surfaces are either behind an elevated curb or bollards preventing vehicular traffic from affecting these areas.

3.3.3 Stormwater Conveyance

Manning’s Equation was used to study the proposed pipe capacities and discharges based on the current 25-year storm event for the site. Preliminary drainage areas for overland flow runoff have been identified for the proposed stormwater drainage system, these catchment areas include the total contributory area and the impervious coverage percentage. Refer to Appendix III for SewerGEMS FlexTables and Pipe Profiles.

Channel Surface	Manning’s ‘n’
Reinforced Concrete	0.013

The proposed subsurface stormwater conveyance structures are reinforced concrete pipes (RCP) that will convey runoff from the site and buildings to existing stormwater infrastructure. As part of the proposed West Addition, the existing municipal culvert will not be modified nor receive additional flow from the project.

Furthermore, the proposed design maintains the existing stormwater management devices that are onsite by matching the area flowing into the underground detention basin and matching or eliminating the vehicular surface area conveyed to onsite water quality structures. The stormwater conveyance model compares the existing, surveyed, drainage network to the preliminary, proposed drainage area to demonstrated continued capacity of the system.

WEST ADDITION DA-1 30" RCP STORMWATER CONVEYANCE					
	PIPE DESCRIPTION	DRAINAGE AREA (ACRES)	% IMPERVIOUS	FLOW (CFS)	FULL FLOW CAPACITY (CFS)
EXISTING	124LF 30" RCP @ 0.7%	4.31	72.7	21.95	33.96
PROPOSED	124LF 30" RCP @ 0.7%	4.56	63.4	21.55	33.96

WEST ADDITION DA-2 18" RCP STORMWATER CONVEYANCE					
	PIPE DESCRIPTION	DRAINAGE AREA (ACRES)	% IMPERVIOUS	FLOW (CFS)	FULL FLOW CAPACITY (CFS)
EXISTING	263LF 18" RCP @ 1.0%	1.36	61.6	5.50	10.52
PROPOSED	263LF 18" RCP @ 1.0%	1.45	62.2	6.05	10.52

3.3.4 Time of Concentrations

Time of concentrations (ToC) to the POS have been calculated for all pervious and impervious catchment areas under existing and proposed conditions. Equations and assumptions are in accordance with NEH 630 Chapter 15 and the BMP Manual Chapter 5. The maximum Manning's Roughness Coefficient (n) for sheet flow is 0.40 and the maximum sheet flow length is 100 feet [BMP Chapter 5].

Sheet Flow Surface	Manning's 'n'
Asphalt/Rooftops	0.011
Grass	0.15
Dense Grass	0.24

Refer to Appendix III for ToC calculations. Refer to Appendix IV for the Existing Drainage Area Map and Proposed Drainage Area Map that includes the hydraulic flow paths and groundcover types.

3.3.5 Water Quantity Requirements

Hydrological evaluations for existing and proposed conditions have been calculated for the NOAA 2-, 10-, and 100-year 24-hour storm events for Parsippany utilizing the 'Current' and 'Future' precipitation adjustment factors [N.J.A.C. 7:8-5.7(c) and (d), respectively]. See Table 3.1 for precipitation values.

The site's stormwater quantity control standards have been addressed by demonstrating through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction (proposed) runoff hydrographs for the 2-, 10-, and 100-year storm events, as defined and determined pursuant to N.J.A.C. 7:8-5.7(c) and (d), respectively, do not exceed, at any point in time, the pre-construction (existing) runoff hydrographs for the same storm events [N.J.A.C. 7:8-5.6(b)1.].

Runoff quantity requirements are achieved through land cover management – restoring previously developed areas with native landscaping material, matching existing drainage patterns and reducing the overall impervious

coverage of the site. Refer to Appendix III for the complete PondPack modeling summaries, runoff hydrographs in graphical and numerical form, and master network summary.

Table 3.4 Peak Runoff Rates and Volumes to POS-1 - Current Storm

PEAK RUNOFF RATES AND VOLUMES TO POS-1 - CURRENT STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	5.02	4.51	-0.51	0.667	0.611	-0.056
10 year	8.40	7.77	-0.63	1.123	1.053	-0.070
100 year	15.56	14.84	-0.72	2.092	2.009	-0.083

Table 3.5 Peak Runoff Rates and Volumes to POS-1 - Future Storm

PEAK RUNOFF RATES AND VOLUMES TO POS-1 -FUTURE STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	6.14	5.61	-0.53	0.818	0.756	-0.062
10 year	10.13	9.53	-0.60	1.357	1.281	-0.076
100 year	19.66	19.10	-0.56	2.647	2.562	-0.085

Table 3.6 Peak Runoff Rates and Volumes to POS-2 - Current Storm

PEAK RUNOFF RATES AND VOLUMES TO POS-2 - CURRENT STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	2.19	2.19	-0.00	0.291	0.288	-0.003
10 year	3.74	3.72	-0.02	0.503	0.497	-0.006
100 year	7.01	6.97	-0.04	0.959	0.943	-0.016

Table 3.7 Peak Runoff Rates and Volumes to POS-2 - Future Storm

PEAK RUNOFF RATES AND VOLUMES TO POS-2 - FUTURE STORM						
	Existing Runoff Rate (CFS)	Proposed Runoff Rate (CFS)	Net Runoff Rate (CFS)	Existing Volume (AC-FT)	Proposed Volume (AC-FT)	Net Runoff Volume (AC-FT)
2 year	2.72	2.71	-0.01	0.360	0.356	-0.004
10 year	4.56	4.54	-0.02	0.612	0.603	-0.009
100 year	8.97	8.90	-0.07	1.221	1.198	-0.023

3.3.6 Runoff Quality and Groundwater Recharge Requirements

Per N.J.A.C 7:8-5.4, groundwater recharge standards do not apply to projects within the “urban redevelopment area”. The proposed project site was previously developed and is located within the State Metropolitan Planning Area (PA-1); therefore, the proposed development does not include any proposed groundwater recharge methods. Furthermore, per N.J.A.C. 7:8-5.4(b).1.ii, this project meets the standards for groundwater recharge by reducing the stormwater runoff volume from pre-construction to post-construction for the future 2-year storm event.

Per N.J.A.C 7:8-5.5(a), stormwater runoff quality standards are applicable when projects propose an increase of 0.25 acres or more of motor vehicle surface. The proposed development will result in a decrease of motor vehicle surface by 0.78± acres. Furthermore, previously approved existing onsite water quality devices will be maintained and reset as necessary to maintain their current flows. The areas draining to these existing water quality units will be maintained to the relocated units thereby maintaining the same level of treatment as the approved condition. When you consider the reduction in vehicle surface and maintenance of the existing water quality devices, the project will result in a net improvement in water quality.

3.3.7 Nonstructural Stormwater Management Strategies

Since this project is a major development, it has been designed to incorporate nonstructural stormwater management strategies [NJAC 7:8-2.4(g); BMP Chapter 2]. The following nonstructural strategies for major developments have been considered in the design:

1. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;
2. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;
3. Maximize the protection of natural drainage features and vegetation;
4. Minimize the decrease in the “time of concentration” from pre-construction (existing) to post-construction (proposed);
5. Minimize land disturbance including clearing and grading;
6. Minimize soil compaction;
7. Provide low maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers, and pesticides;

The major goals for this redevelopment have been the reduction of the impervious (overall and vehicular) area from existing to proposed conditions and the restoration of actively disturbed lawn areas to its native, non-invasive

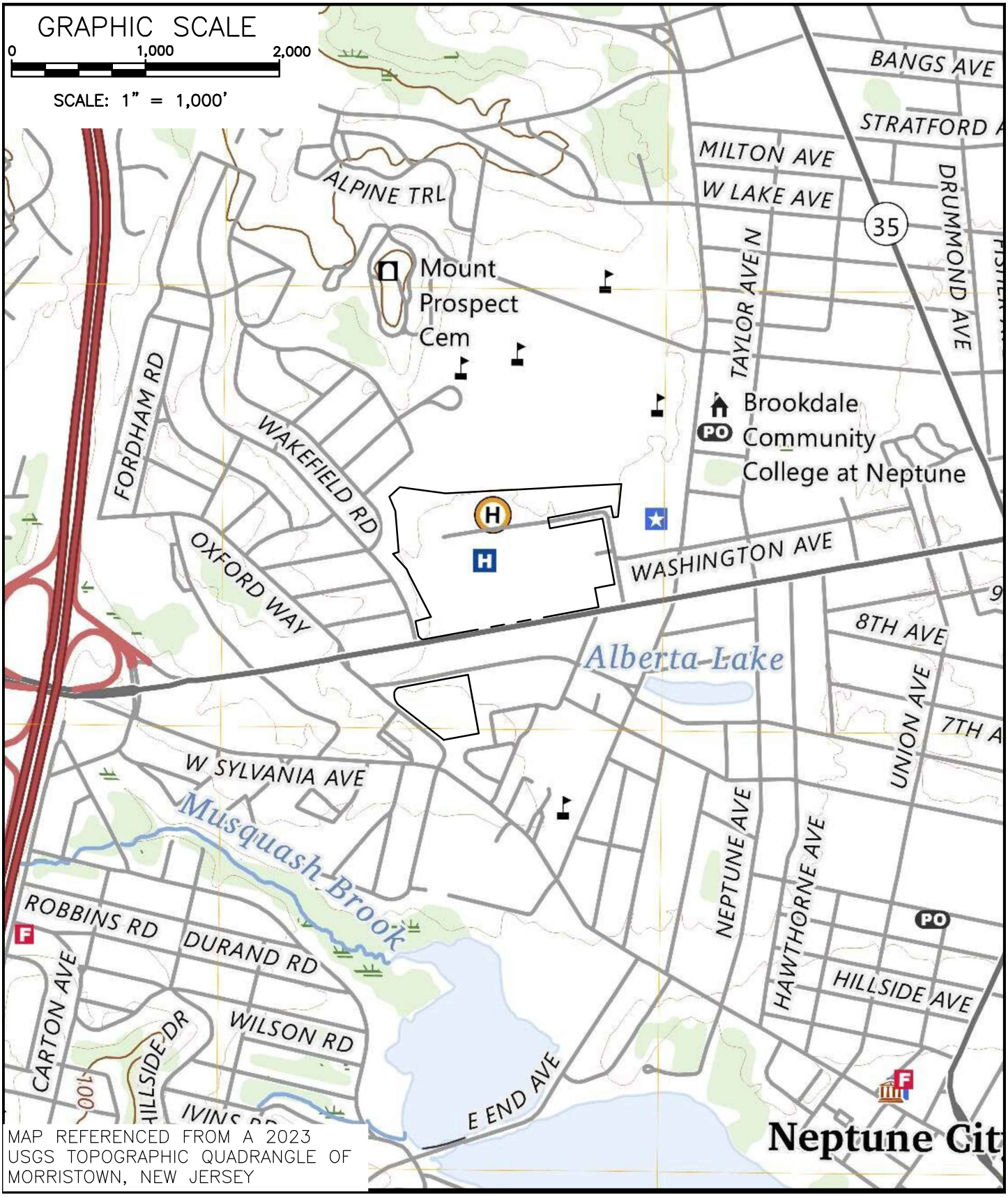
vegetated cover. The existing onsite wooded areas shall remain untouched and other pervious surfaces within the site will be landscaped with shade trees, evergreens, shrubs, and groundcover.

4. Conclusion

As described above, the stormwater management and conveyance system are designed in accordance with applicable state regulations and requirements. The proposed development has been designed with provisions for the safe and efficient control of stormwater runoff in a manner that will maintain the existing drainage patterns and not have adverse effect on adjacent roadways, properties, or natural habitats. Stormwater runoff quantity requirements, as set forth by the NJDEP, have been satisfied in this design, and stormwater runoff quality and groundwater recharge requirements are not applicable. This project aims to reduce the impact on land by reducing impervious areas and avoiding the need for structural stormwater detention measures.

APPENDIX I:

SK-1 USGS Location Map
SK-2 Site Soil Map
SK-3 Site Aerial Map
SK-4 State Planning Area
SK-5 Hydrologic Unit Code 14
SK-6 NOAA Atlas 14 Site Precipitation

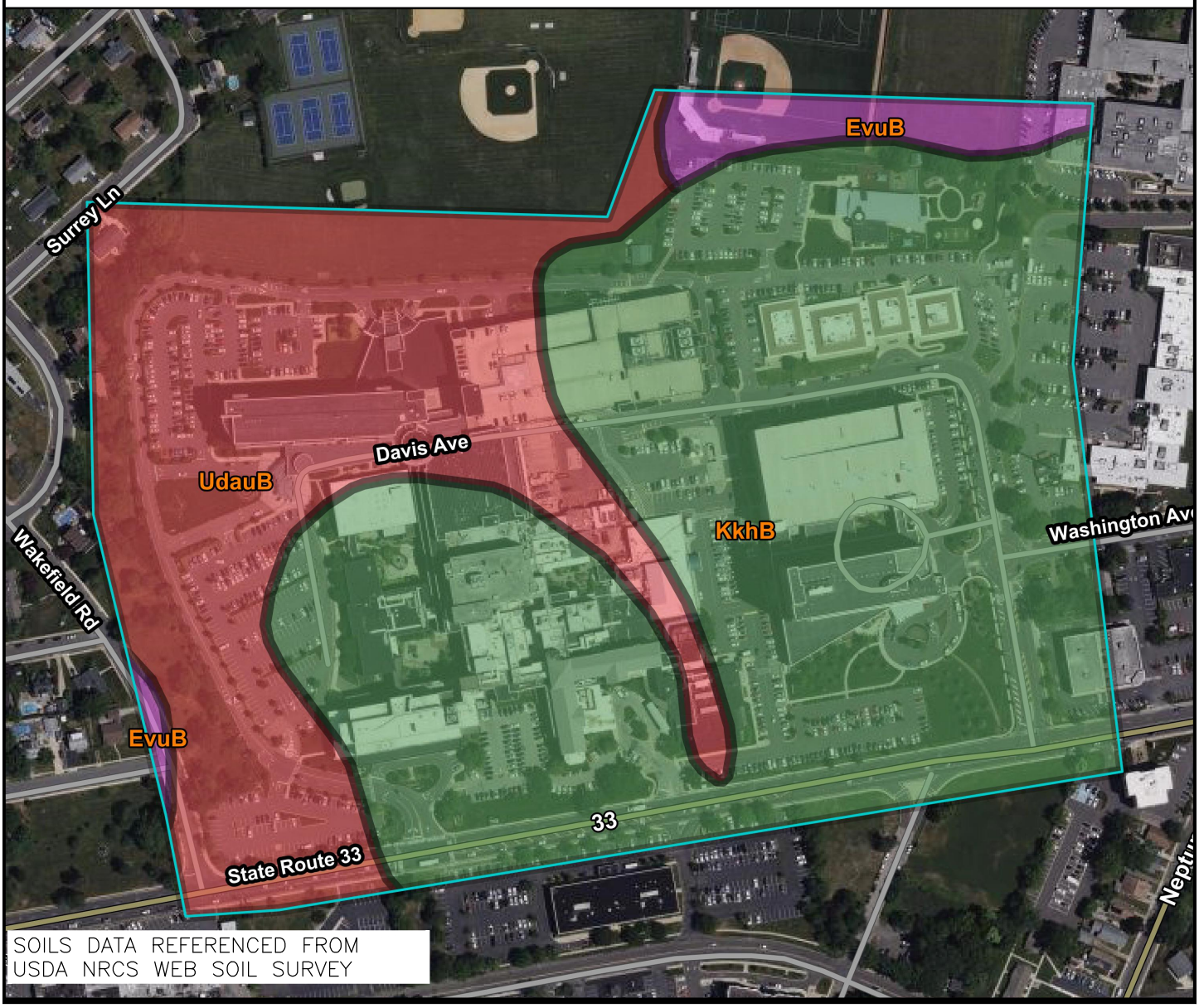


MAP REFERENCED FROM A 2023 USGS TOPOGRAPHIC QUADRANGLE OF MORRISTOWN, NEW JERSEY

Dewberry

DATE	TITLE	SHEET NO.
	USGS SITE LOCATION MAP	SK–01
PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EvuB	Evesboro-Urban land complex, 0 to 5 percent slopes	2.1	3.8%
KkhB	Klej loamy sand-Urban land complex, 0 to 5 percent slopes	34.0	63.1%
UdauB	Udorthents-Urban land complex, 0 to 8 percent slopes	17.8	33.1%
Totals for Area of Interest		**53.8**	**100.0%**



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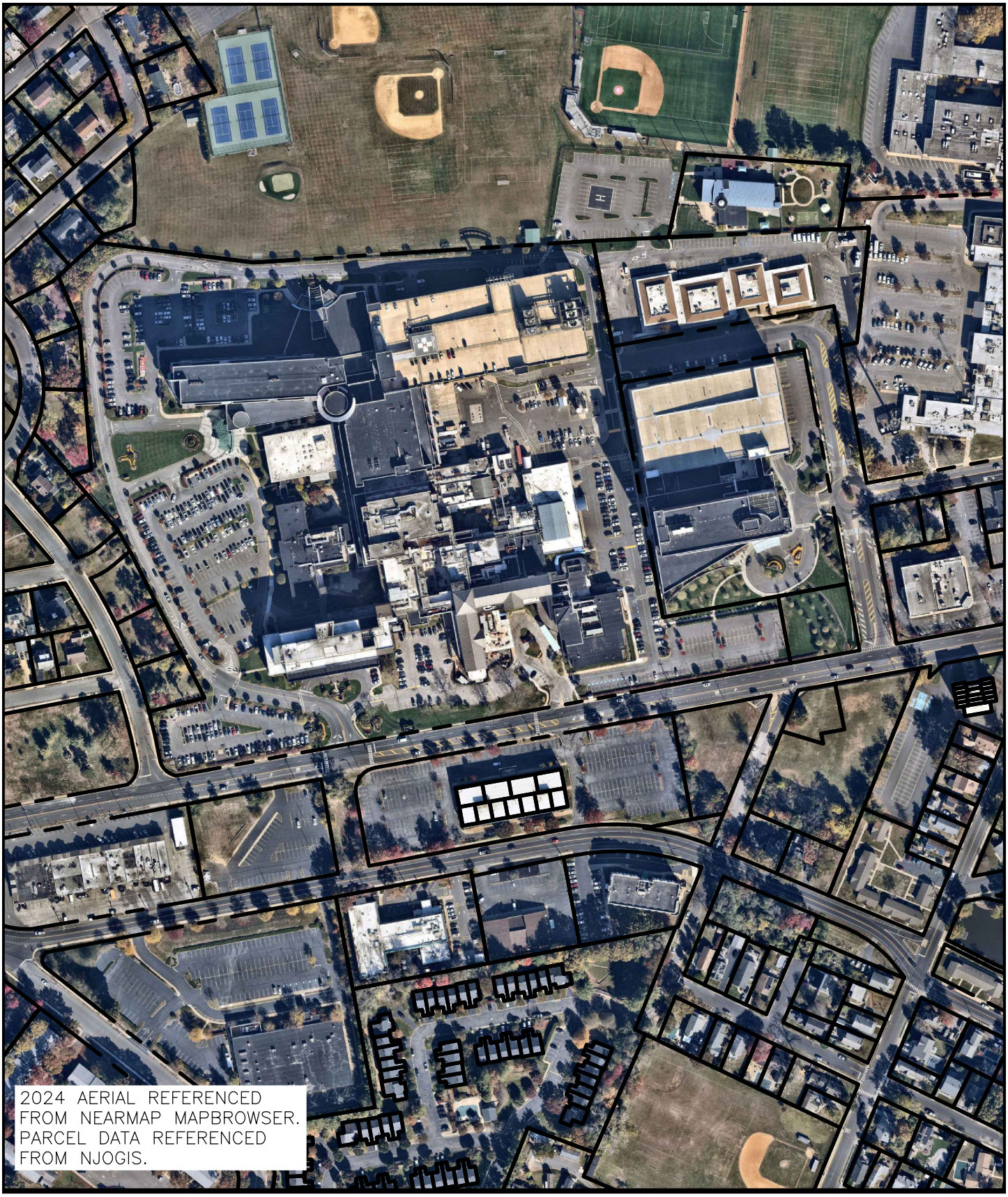
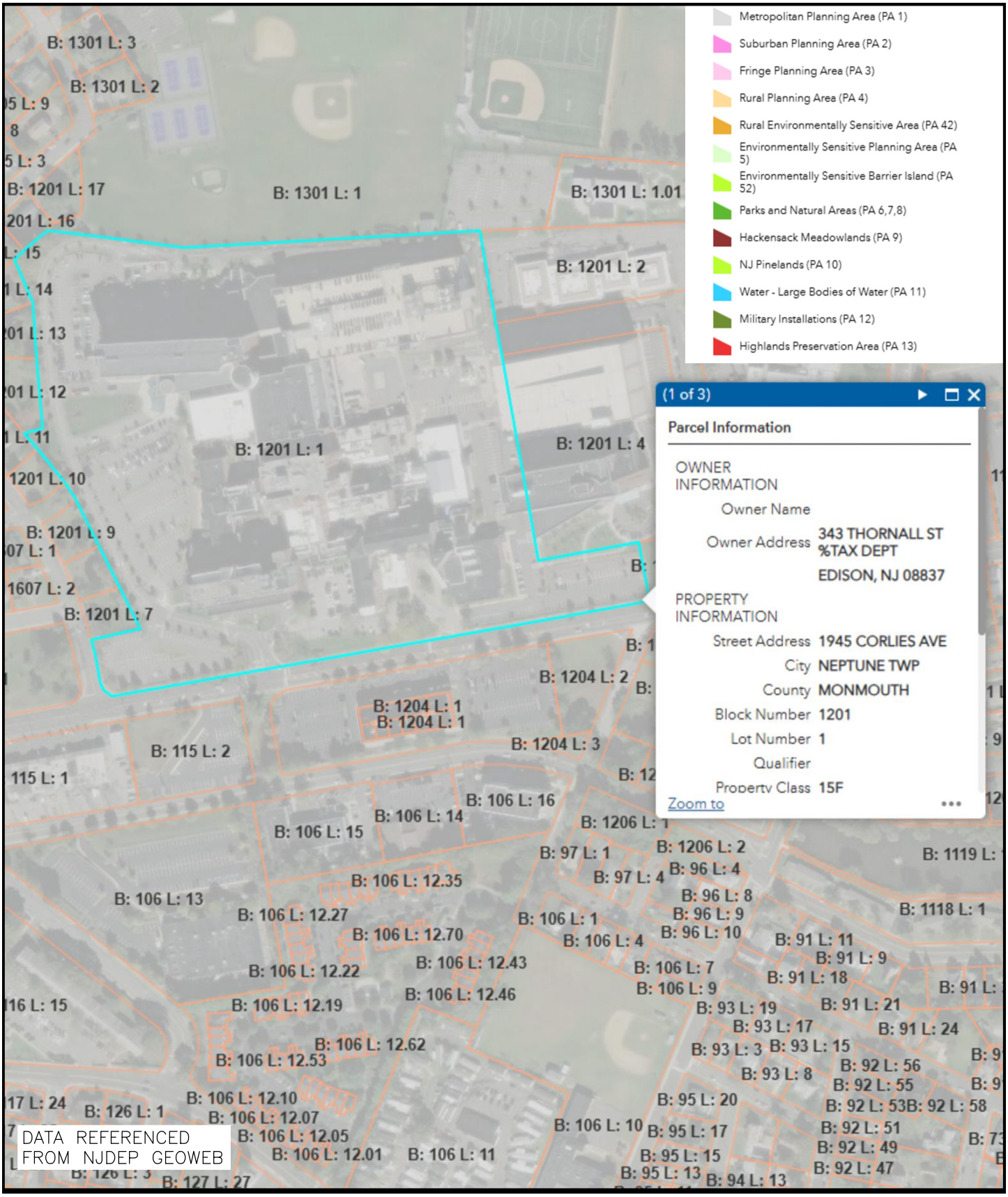
DATE	TITLE	SHEET NO.
	SITE SOIL SURVEY	SK–02
PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	

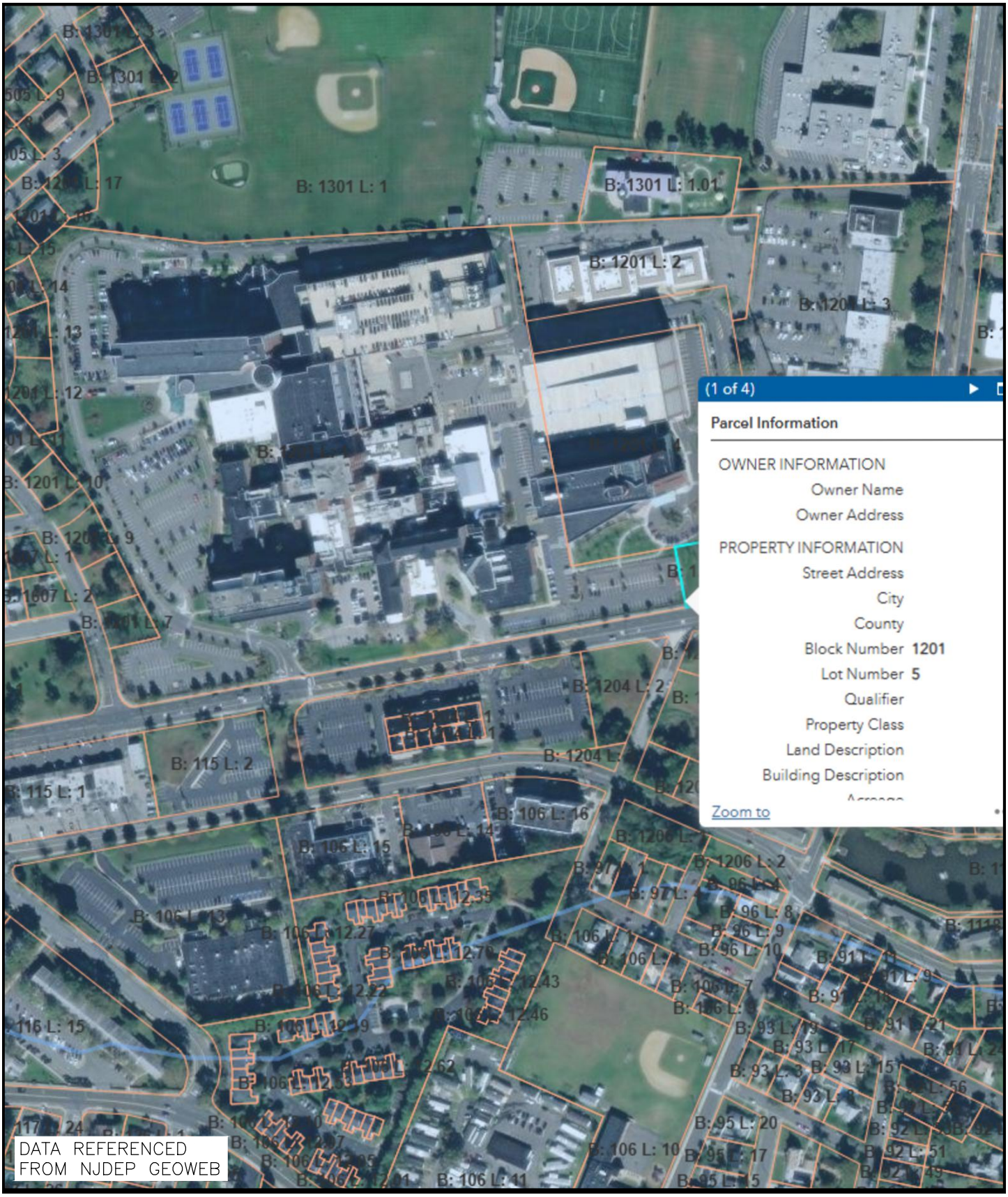


Dewberry

DATE	TITLE	SHEET NO.
	SITE AERIAL MAP	SK-03
PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	



Dewberry	DATE	TITLE	SHEET NO.
		STATE PLANNING AREA MAP	SK–04
	PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	



Dewberry	DATE	TITLE SITE HYDROLOGIC UNIT CODE 14	SHEET NO. SK–05
	PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	

NOAA Atlas 14, Volume 2, Version 3
Location name: Neptune, New Jersey, USA*
Latitude: 40.209°, Longitude: -74.041°
Elevation: 38 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

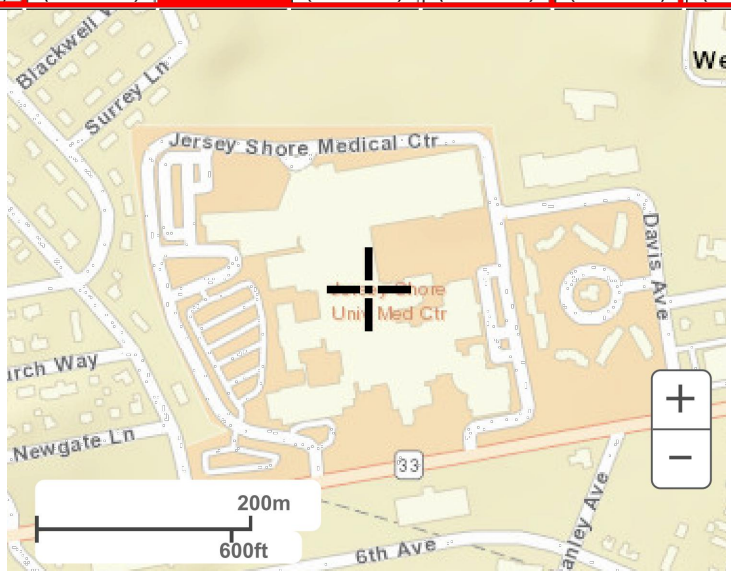
G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.341** (0.307-0.379)	**0.408** (0.368-0.453)	**0.483** (0.435-0.537)	**0.539** (0.484-0.598)	**0.608** (0.544-0.675)	**0.658** (0.585-0.729)	**0.708** (0.626-0.787)	**0.754** (0.663-0.841)	**0.813** (0.707-0.911)	**0.859** (0.740-0.967)
10-min	**0.545** (0.491-0.605)	**0.652** (0.588-0.724)	**0.774** (0.697-0.860)	**0.862** (0.775-0.957)	**0.969** (0.866-1.08)	**1.05** (0.931-1.16)	**1.12** (0.995-1.25)	**1.20** (1.05-1.33)	**1.29** (1.12-1.44)	**1.35** (1.16-1.52)
15-min	**0.681** (0.614-0.756)	**0.819** (0.740-0.910)	**0.979** (0.882-1.09)	**1.09** (0.980-1.21)	**1.23** (1.10-1.36)	**1.33** (1.18-1.47)	**1.42** (1.26-1.58)	**1.51** (1.33-1.68)	**1.62** (1.41-1.82)	**1.70** (1.46-1.91)
30-min	**0.934** (0.841-1.04)	**1.13** (1.02-1.26)	**1.39** (1.25-1.54)	**1.58** (1.42-1.75)	**1.82** (1.63-2.02)	**2.00** (1.78-2.22)	**2.18** (1.93-2.42)	**2.35** (2.06-2.62)	**2.58** (2.24-2.89)	**2.75** (2.37-3.10)
60-min	**1.16** (1.05-1.29)	**1.42** (1.28-1.58)	**1.78** (1.61-1.98)	**2.06** (1.85-2.28)	**2.42** (2.17-2.69)	**2.71** (2.41-3.00)	**3.00** (2.65-3.34)	**3.29** (2.90-3.67)	**3.70** (3.21-4.14)	**4.01** (3.46-4.52)
2-hr	**1.44** (1.29-1.60)	**1.76** (1.58-1.96)	**2.22** (2.00-2.48)	**2.58** (2.31-2.88)	**3.09** (2.74-3.43)	**3.49** (3.09-3.88)	**3.91** (3.44-4.36)	**4.35** (3.80-4.86)	**4.97** (4.28-5.58)	**5.47** (4.67-6.16)
3-hr	**1.59** (1.43-1.78)	**1.94** (1.76-2.17)	**2.47** (2.22-2.76)	**2.88** (2.58-3.21)	**3.45** (3.07-3.84)	**3.92** (3.47-4.37)	**4.41** (3.87-4.91)	**4.92** (4.28-5.50)	**5.65** (4.84-6.34)	**6.24** (5.29-7.04)
6-hr	**2.02** (1.82-2.27)	**2.47** (2.21-2.76)	**3.12** (2.79-3.48)	**3.65** (3.25-4.06)	**4.41** (3.89-4.91)	**5.04** (4.42-5.61)	**5.72** (4.96-6.37)	**6.45** (5.54-7.20)	**7.50** (6.35-8.42)	**8.38** (7.00-9.44)
12-hr	**2.46** (2.21-2.76)	**2.99** (2.68-3.35)	**3.81** (3.40-4.26)	**4.49** (4.00-5.01)	**5.50** (4.85-6.13)	**6.38** (5.58-7.10)	**7.33** (6.33-8.16)	**8.38** (7.14-9.36)	**9.95** (8.32-11.1)	**11.3** (9.29-12.7)
24-hr	**2.86** (2.62-3.14)	**3.48** (3.19-3.82)	**4.50** (4.13-4.94)	**5.39** (4.92-5.90)	**6.73** (6.10-7.33)	**7.90** (7.10-8.59)	**9.22** (8.22-10.0)	**10.7** (9.44-11.6)	**13.0** (11.2-14.1)	**15.0** (12.8-16.3)



Dewberry	DATE	TITLE NOAA ATLAS 14 SITE PRECIPITATION	SHEET NO. SK–06
	PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	

APPENDIX II:

East Addition Pondpack: Master Summary Report
East Addition PondPack: Rainfall Report
East Addition PondPack: Unit Hydrograph
East Addition PondPack: Routing Diagrams
East Addition Pondpack: Graphical & Numerical Hydrograph Comparisons
East Addition Time of Concentration Calculations
East Addition SewerGEMS: FlexTables
East Addition SewerGEMS: Pipe Profile

JSUMC East Addition: PondPack Report

Project Summary	
Title	JSUMC East Addition
Engineer	
Company	Dewberry Engineers Inc
Date	12/3/2024

Notes

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User Notifications

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.5 % is greater than 1.5 %. Computed peak flow= 18.10 ft³/s Interp. peak flow= 10.42 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 2.91 ft³/s Interp. peak flow= 1.74 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.5 % is greater than 1.5 %. Computed peak flow= 18.07 ft³/s Interp. peak flow= 10.40 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 1.89 ft³/s Interp. peak flow= 1.13 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 1.8 % is greater than 1.5 %. Computed peak flow= 0.02 ft³/s Interp. peak flow= 0.02 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 28.48 ft³/s Interp. peak flow= 16.42 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	32
Label	EDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 12.3 % is greater than 1.5 %. Computed peak flow= 1.31 ft³/s Interp. peak flow= 1.15 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 4.58 ft³/s Interp. peak flow= 2.74 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	34
Label	EDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 49.9 % is greater than 1.5 %. Computed peak flow= 0.26 ft³/s Interp. peak flow= 0.13 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 28.42 ft³/s Interp. peak flow= 16.39 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	36
Label	PDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 7.4 % is greater than 1.5 %. Computed peak flow= 0.67 ft³/s Interp. peak flow= 0.62 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 2.97 ft³/s Interp. peak flow= 1.78 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 45.5 % is greater than 1.5 %. Computed peak flow= 0.45 ft³/s Interp. peak flow= 0.25 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 49.36 ft³/s Interp. peak flow= 28.50 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	32
Label	EDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 16.9 % is greater than 1.5 %. Computed peak flow= 4.79 ft³/s Interp. peak flow= 3.98 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 7.94 ft³/s Interp. peak flow= 4.75 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	34
Label	EDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 53.0 % is greater than 1.5 %. Computed peak flow= 1.11 ft³/s Interp. peak flow= 0.52 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 49.27 ft³/s Interp. peak flow= 28.44 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	36
Label	PDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 18.1 % is greater than 1.5 %. Computed peak flow= 3.73 ft³/s Interp. peak flow= 3.05 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 5.15 ft³/s Interp. peak flow= 3.08 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 53.9 % is greater than 1.5 %. Computed peak flow= 2.01 ft³/s Interp. peak flow= 0.92 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.4 % is greater than 1.5 %. Computed peak flow= 21.60 ft³/s Interp. peak flow= 12.44 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 6.9 % is greater than 1.5 %. Computed peak flow= 0.47 ft³/s Interp. peak flow= 0.44 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 3.48 ft³/s Interp. peak flow= 2.08 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 34.5 % is greater than 1.5 %. Computed peak flow= 0.07 ft³/s Interp. peak flow= 0.04 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.4 % is greater than 1.5 %. Computed peak flow= 21.60 ft³/s Interp. peak flow= 12.44 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 2.25 ft³/s Interp. peak flow= 1.35 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 25.5 % is greater than 1.5 %. Computed peak flow= 0.11 ft³/s Interp. peak flow= 0.08 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 33.60 ft³/s Interp. peak flow= 19.38 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 17.1 % is greater than 1.5 %. Computed peak flow= 2.10 ft³/s Interp. peak flow= 1.74 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 5.40 ft³/s Interp. peak flow= 3.23 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 56.9 % is greater than 1.5 %. Computed peak flow= 0.45 ft³/s Interp. peak flow= 0.20 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 33.60 ft³/s Interp. peak flow= 19.38 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	40
Label	PDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 15.5 % is greater than 1.5 %. Computed peak flow= 1.21 ft³/s Interp. peak flow= 1.02 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 3.51 ft³/s Interp. peak flow= 2.10 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 53.2 % is greater than 1.5 %. Computed peak flow= 0.80 ft³/s Interp. peak flow= 0.37 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 61.05 ft³/s Interp. peak flow= 35.25 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 21.4 % is greater than 1.5 %. Computed peak flow= 7.22 ft³/s Interp. peak flow= 5.67 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 9.81 ft³/s Interp. peak flow= 5.88 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 49.7 % is greater than 1.5 %. Computed peak flow= 1.72 ft³/s Interp. peak flow= 0.86 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 42.3 % is greater than 1.5 %. Computed peak flow= 61.05 ft³/s Interp. peak flow= 35.25 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	40
Label	PDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 24.0 % is greater than 1.5 %. Computed peak flow= 5.79 ft³/s Interp. peak flow= 4.40 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 6.37 ft³/s Interp. peak flow= 3.81 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 50.6 % is greater than 1.5 %. Computed peak flow= 3.14 ft³/s Interp. peak flow= 1.55 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
EDA1 - Per - Cur	Current 2 year	2	0.037	12.25	0.16
EDA1 - Per - Cur	Current 10 year	10	0.134	12.25	1.15
EDA1 - Per - Cur	Current 100 year	100	0.425	12.25	3.98
EDA1 - Imp - Cur	Current 2 year	2	1.460	12.00	10.42
EDA1 - Imp - Cur	Current 10 year	10	2.341	12.00	16.42
EDA1 - Imp - Cur	Current 100 year	100	4.123	12.00	28.50
EDA2 - Per - Cur	Current 2 year	2	0.005	12.50	0.01
EDA2 - Per - Cur	Current 10 year	10	0.021	12.25	0.13
EDA2 - Per - Cur	Current 100 year	100	0.074	12.00	0.52
EDA2 - Imp - Cur	Current 2 year	2	0.211	12.00	1.74
EDA2 - Imp - Cur	Current 10 year	10	0.339	12.00	2.74
EDA2 - Imp - Cur	Current 100 year	100	0.597	12.00	4.75
PDA1 - Per - Cur	Current 2 year	2	0.017	13.00	0.03
PDA1 - Per - Cur	Current 10 year	10	0.088	12.25	0.62
PDA1 - Per - Cur	Current 100 year	100	0.336	12.25	3.05
PDA1 - Imp - Cur	Current 2 year	2	1.457	12.00	10.40
PDA1 - Imp - Cur	Current 10 year	10	2.336	12.00	16.39
PDA1 - Imp - Cur	Current 100 year	100	4.116	12.00	28.44
PDA2 - Per - Cur	Current 2 year	2	0.009	12.50	0.02
PDA2 - Per - Cur	Current 10 year	10	0.039	12.25	0.25
PDA2 - Per - Cur	Current 100 year	100	0.138	12.25	0.92
PDA2 - Imp - Cur	Current 2 year	2	0.141	12.00	1.13
PDA2 - Imp - Cur	Current 10 year	10	0.226	12.00	1.78
PDA2 - Imp - Cur	Current 100 year	100	0.398	12.00	3.08
PDA1 - Per - Fut	Future 2 year	2	0.032	12.50	0.09
PDA1 - Per - Fut	Future 10 year	10	0.130	12.25	1.02
PDA1 - Per - Fut	Future 100 year	100	0.490	12.25	4.40
EDA1 - Per - Fut	Future 2 year	2	0.064	12.25	0.44
EDA1 - Per - Fut	Future 10 year	10	0.196	12.25	1.74
EDA1 - Per - Fut	Future 100 year	100	0.618	12.25	5.67
PDA1 - Imp - Fut	Future 2 year	2	1.756	12.00	12.44
PDA1 - Imp - Fut	Future 10 year	10	2.777	12.00	19.38
PDA1 - Imp - Fut	Future 100 year	100	5.123	12.00	35.25
EDA1 - Imp - Fut	Future 2 year	2	1.756	12.00	12.44
EDA1 - Imp - Fut	Future 10 year	10	2.777	12.00	19.38
EDA1 - Imp - Fut	Future 100 year	100	5.123	12.00	35.25
PDA2 - Per - Fut	Future 2 year	2	0.017	12.25	0.08
PDA2 - Per - Fut	Future 10 year	10	0.060	12.25	0.37
PDA2 - Per - Fut	Future 100 year	100	0.207	12.00	1.55
EDA2 - Per - Fut	Future 2 year	2	0.009	12.25	0.04
EDA2 - Per - Fut	Future 10 year	10	0.032	12.25	0.20
EDA2 - Per - Fut	Future 100 year	100	0.111	12.00	0.86
PDA2 - Imp - Fut	Future 2 year	2	0.170	12.00	1.35
PDA2 - Imp - Fut	Future 10 year	10	0.268	12.00	2.10
PDA2 - Imp - Fut	Future 100 year	100	0.495	12.00	3.81
EDA2 - Imp - Fut	Future 2 year	2	0.254	12.00	2.08

JSUMC East Addition: PondPack Report

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
EDA2 - Imp - Fut	Future 10 year	10	0.402	12.00	3.23
EDA2 - Imp - Fut	Future 100 year	100	0.742	12.00	5.88

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
Pre - POS1	Current 2 year	2	1.497	12.00	10.42
Pre - POS1	Future 2 year	2	1.820	12.00	12.48
Pre - POS1	Current 10 year	10	2.475	12.00	16.78
Pre - POS1	Future 10 year	10	2.973	12.00	20.11
Pre - POS1	Current 100 year	100	4.548	12.00	30.45
Pre - POS1	Future 100 year	100	5.741	12.00	38.42
Post - POS1	Current 2 year	2	1.474	12.00	10.40
Post - POS1	Future 2 year	2	1.788	12.00	12.44
Post - POS1	Current 10 year	10	2.425	12.00	16.45
Post - POS1	Future 10 year	10	2.907	12.00	19.65
Post - POS1	Current 100 year	100	4.452	12.00	29.85
Post - POS1	Future 100 year	100	5.613	12.00	37.61
Pre - POS2	Current 2 year	2	0.216	12.00	1.74
Pre - POS2	Future 2 year	2	0.264	12.00	2.08
Pre - POS2	Current 10 year	10	0.360	12.00	2.82
Pre - POS2	Future 10 year	10	0.434	12.00	3.41
Pre - POS2	Current 100 year	100	0.672	12.00	5.27
Pre - POS2	Future 100 year	100	0.853	12.00	6.74
Post - POS2	Current 2 year	2	0.150	12.00	1.13
Post - POS2	Future 2 year	2	0.187	12.00	1.35
Post - POS2	Current 10 year	10	0.265	12.00	1.90
Post - POS2	Future 10 year	10	0.328	12.00	2.40
Post - POS2	Current 100 year	100	0.537	12.00	4.01
Post - POS2	Future 100 year	100	0.702	12.00	5.36

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Time-Depth Curve: Current 10	
Label	Current 10
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.01	0.02	0.02
0.50	0.03	0.04	0.04	0.05	0.06
1.00	0.06	0.07	0.08	0.08	0.09
1.50	0.10	0.10	0.11	0.12	0.12
2.00	0.13	0.14	0.14	0.15	0.16
2.50	0.17	0.17	0.18	0.19	0.20
3.00	0.20	0.21	0.22	0.23	0.24
3.50	0.24	0.25	0.26	0.27	0.28
4.00	0.29	0.29	0.30	0.31	0.32
4.50	0.33	0.34	0.35	0.35	0.36
5.00	0.37	0.38	0.39	0.40	0.41
5.50	0.42	0.43	0.44	0.45	0.45
6.00	0.46	0.47	0.48	0.49	0.50
6.50	0.52	0.53	0.54	0.55	0.56
7.00	0.57	0.59	0.60	0.61	0.62
7.50	0.64	0.65	0.66	0.68	0.69
8.00	0.71	0.72	0.74	0.75	0.77
8.50	0.78	0.80	0.81	0.83	0.85
9.00	0.86	0.88	0.90	0.92	0.94
9.50	0.96	0.98	1.00	1.03	1.05
10.00	1.08	1.10	1.13	1.16	1.19
10.50	1.22	1.25	1.29	1.33	1.37
11.00	1.41	1.47	1.52	1.58	1.65
11.50	1.72	1.82	1.93	2.07	2.27
12.00	2.61	3.17	3.37	3.51	3.62
12.50	3.72	3.79	3.86	3.92	3.97
13.00	4.03	4.07	4.11	4.15	4.19
13.50	4.22	4.25	4.28	4.31	4.34
14.00	4.36	4.39	4.41	4.44	4.46
14.50	4.48	4.50	4.52	4.54	4.56
15.00	4.58	4.59	4.61	4.63	4.64
15.50	4.66	4.67	4.69	4.70	4.72
16.00	4.73	4.75	4.76	4.78	4.79
16.50	4.80	4.82	4.83	4.84	4.85
17.00	4.87	4.88	4.89	4.90	4.91
17.50	4.92	4.94	4.95	4.96	4.97
18.00	4.98	4.99	4.99	5.00	5.01

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	5.02	5.03	5.04	5.05	5.06
19.00	5.07	5.08	5.09	5.09	5.10
19.50	5.11	5.12	5.13	5.14	5.15
20.00	5.15	5.16	5.17	5.18	5.19
20.50	5.20	5.20	5.21	5.22	5.23
21.00	5.24	5.24	5.25	5.26	5.27
21.50	5.27	5.28	5.29	5.30	5.30
22.00	5.31	5.32	5.32	5.33	5.34
22.50	5.34	5.35	5.36	5.36	5.37
23.00	5.38	5.38	5.39	5.40	5.40
23.50	5.41	5.42	5.42	5.43	5.43
24.00	5.44	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Time-Depth Curve: Current 100	
Label	Current 100
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.02	0.03	0.04
0.50	0.05	0.06	0.07	0.09	0.10
1.00	0.11	0.12	0.13	0.14	0.15
1.50	0.17	0.18	0.19	0.20	0.21
2.00	0.23	0.24	0.25	0.26	0.28
2.50	0.29	0.30	0.31	0.33	0.34
3.00	0.35	0.37	0.38	0.39	0.41
3.50	0.42	0.44	0.45	0.46	0.48
4.00	0.49	0.51	0.52	0.54	0.55
4.50	0.57	0.58	0.60	0.61	0.63
5.00	0.64	0.66	0.67	0.69	0.71
5.50	0.72	0.74	0.75	0.77	0.79
6.00	0.80	0.82	0.84	0.85	0.87
6.50	0.89	0.91	0.93	0.95	0.97
7.00	0.99	1.01	1.03	1.05	1.08
7.50	1.10	1.12	1.15	1.17	1.19
8.00	1.22	1.25	1.27	1.30	1.32
8.50	1.35	1.38	1.41	1.43	1.46
9.00	1.49	1.52	1.55	1.59	1.62
9.50	1.66	1.70	1.74	1.78	1.82
10.00	1.86	1.91	1.96	2.00	2.05
10.50	2.11	2.16	2.22	2.29	2.37
11.00	2.44	2.53	2.63	2.74	2.85
11.50	2.98	3.15	3.33	3.57	3.92
12.00	4.50	5.48	5.83	6.07	6.25
12.50	6.42	6.55	6.66	6.77	6.87
13.00	6.96	7.03	7.11	7.18	7.24
13.50	7.29	7.35	7.40	7.44	7.49
14.00	7.54	7.58	7.62	7.66	7.70
14.50	7.74	7.78	7.81	7.85	7.88
15.00	7.91	7.94	7.97	7.99	8.02
15.50	8.05	8.08	8.10	8.13	8.15
16.00	8.18	8.21	8.23	8.25	8.28
16.50	8.30	8.32	8.35	8.37	8.39
17.00	8.41	8.43	8.45	8.47	8.49
17.50	8.51	8.53	8.55	8.56	8.58
18.00	8.60	8.61	8.63	8.65	8.66

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	8.68	8.69	8.71	8.73	8.74
19.00	8.76	8.77	8.79	8.80	8.82
19.50	8.83	8.85	8.86	8.88	8.89
20.00	8.91	8.92	8.94	8.95	8.96
20.50	8.98	8.99	9.01	9.02	9.03
21.00	9.05	9.06	9.07	9.09	9.10
21.50	9.11	9.12	9.14	9.15	9.16
22.00	9.17	9.19	9.20	9.21	9.22
22.50	9.23	9.25	9.26	9.27	9.28
23.00	9.29	9.30	9.31	9.33	9.34
23.50	9.35	9.36	9.37	9.38	9.39
24.00	9.40	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Time-Depth Curve: Current 2 Year	
Label	Current 2 Year
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	2 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.00	0.01	0.01	0.02
0.50	0.02	0.02	0.03	0.03	0.04
1.00	0.04	0.04	0.05	0.05	0.06
1.50	0.06	0.07	0.07	0.07	0.08
2.00	0.08	0.09	0.09	0.10	0.10
2.50	0.11	0.11	0.12	0.12	0.13
3.00	0.13	0.14	0.14	0.15	0.15
3.50	0.16	0.16	0.17	0.17	0.18
4.00	0.18	0.19	0.19	0.20	0.20
4.50	0.21	0.22	0.22	0.23	0.23
5.00	0.24	0.24	0.25	0.26	0.26
5.50	0.27	0.27	0.28	0.28	0.29
6.00	0.30	0.30	0.31	0.32	0.32
6.50	0.33	0.34	0.34	0.35	0.36
7.00	0.37	0.37	0.38	0.39	0.40
7.50	0.41	0.42	0.42	0.43	0.44
8.00	0.45	0.46	0.47	0.48	0.49
8.50	0.50	0.51	0.52	0.53	0.54
9.00	0.55	0.56	0.58	0.59	0.60
9.50	0.61	0.63	0.64	0.66	0.67
10.00	0.69	0.71	0.72	0.74	0.76
10.50	0.78	0.80	0.82	0.85	0.88
11.00	0.90	0.94	0.97	1.01	1.06
11.50	1.10	1.17	1.23	1.32	1.45
12.00	1.67	2.03	2.16	2.25	2.31
12.50	2.38	2.42	2.47	2.51	2.54
13.00	2.58	2.60	2.63	2.66	2.68
13.50	2.70	2.72	2.74	2.76	2.77
14.00	2.79	2.81	2.82	2.84	2.85
14.50	2.87	2.88	2.89	2.90	2.92
15.00	2.93	2.94	2.95	2.96	2.97
15.50	2.98	2.99	3.00	3.01	3.02
16.00	3.03	3.04	3.05	3.06	3.06
16.50	3.07	3.08	3.09	3.10	3.11
17.00	3.11	3.12	3.13	3.14	3.14
17.50	3.15	3.16	3.16	3.17	3.18
18.00	3.18	3.19	3.20	3.20	3.21

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	3.21	3.22	3.22	3.23	3.24
19.00	3.24	3.25	3.25	3.26	3.26
19.50	3.27	3.28	3.28	3.29	3.29
20.00	3.30	3.30	3.31	3.31	3.32
20.50	3.32	3.33	3.33	3.34	3.34
21.00	3.35	3.35	3.36	3.36	3.37
21.50	3.37	3.38	3.38	3.39	3.39
22.00	3.40	3.40	3.41	3.41	3.41
22.50	3.42	3.42	3.43	3.43	3.44
23.00	3.44	3.44	3.45	3.45	3.46
23.50	3.46	3.46	3.47	3.47	3.48
24.00	3.48	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Time-Depth Curve: Future 10	
Label	Future 10
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.01	0.02	0.03
0.50	0.04	0.04	0.05	0.06	0.07
1.00	0.07	0.08	0.09	0.10	0.10
1.50	0.11	0.12	0.13	0.14	0.15
2.00	0.15	0.16	0.17	0.18	0.19
2.50	0.20	0.21	0.21	0.22	0.23
3.00	0.24	0.25	0.26	0.27	0.28
3.50	0.29	0.30	0.31	0.32	0.33
4.00	0.34	0.35	0.36	0.37	0.38
4.50	0.39	0.40	0.41	0.42	0.43
5.00	0.44	0.45	0.46	0.47	0.48
5.50	0.49	0.50	0.51	0.52	0.54
6.00	0.55	0.56	0.57	0.58	0.60
6.50	0.61	0.62	0.63	0.65	0.66
7.00	0.68	0.69	0.70	0.72	0.73
7.50	0.75	0.77	0.78	0.80	0.81
8.00	0.83	0.85	0.87	0.88	0.90
8.50	0.92	0.94	0.96	0.98	1.00
9.00	1.02	1.04	1.06	1.08	1.11
9.50	1.13	1.16	1.18	1.21	1.24
10.00	1.27	1.30	1.33	1.37	1.40
10.50	1.44	1.47	1.52	1.56	1.61
11.00	1.67	1.73	1.79	1.87	1.95
11.50	2.03	2.15	2.27	2.44	2.67
12.00	3.07	3.74	3.97	4.14	4.26
12.50	4.38	4.46	4.54	4.62	4.68
13.00	4.74	4.80	4.85	4.89	4.94
13.50	4.97	5.01	5.04	5.08	5.11
14.00	5.14	5.17	5.20	5.23	5.25
14.50	5.28	5.30	5.33	5.35	5.37
15.00	5.39	5.41	5.43	5.45	5.47
15.50	5.49	5.51	5.53	5.54	5.56
16.00	5.58	5.60	5.61	5.63	5.64
16.50	5.66	5.68	5.69	5.71	5.72
17.00	5.73	5.75	5.76	5.78	5.79
17.50	5.80	5.81	5.83	5.84	5.85
18.00	5.86	5.87	5.89	5.90	5.91

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	5.92	5.93	5.94	5.95	5.96
19.00	5.97	5.98	5.99	6.00	6.01
19.50	6.02	6.03	6.04	6.05	6.06
20.00	6.07	6.08	6.09	6.10	6.11
20.50	6.12	6.13	6.14	6.15	6.16
21.00	6.17	6.18	6.19	6.20	6.20
21.50	6.21	6.22	6.23	6.24	6.25
22.00	6.26	6.26	6.27	6.28	6.29
22.50	6.30	6.31	6.31	6.32	6.33
23.00	6.34	6.34	6.35	6.36	6.37
23.50	6.37	6.38	6.39	6.40	6.40
24.00	6.41	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Time-Depth Curve: Future 100	
Label	Future 100
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.03	0.04	0.05
0.50	0.06	0.08	0.09	0.11	0.12
1.00	0.13	0.15	0.16	0.18	0.19
1.50	0.20	0.22	0.23	0.25	0.26
2.00	0.28	0.29	0.31	0.33	0.34
2.50	0.36	0.37	0.39	0.40	0.42
3.00	0.44	0.45	0.47	0.49	0.50
3.50	0.52	0.54	0.56	0.57	0.59
4.00	0.61	0.63	0.65	0.66	0.68
4.50	0.70	0.72	0.74	0.76	0.78
5.00	0.79	0.81	0.83	0.85	0.87
5.50	0.89	0.91	0.93	0.95	0.97
6.00	0.99	1.01	1.03	1.06	1.08
6.50	1.10	1.13	1.15	1.17	1.20
7.00	1.22	1.25	1.28	1.30	1.33
7.50	1.36	1.39	1.42	1.45	1.48
8.00	1.51	1.54	1.57	1.60	1.64
8.50	1.67	1.70	1.74	1.77	1.81
9.00	1.84	1.88	1.92	1.96	2.01
9.50	2.05	2.10	2.15	2.20	2.25
10.00	2.30	2.36	2.42	2.48	2.54
10.50	2.60	2.67	2.75	2.83	2.92
11.00	3.02	3.13	3.25	3.38	3.53
11.50	3.68	3.89	4.12	4.42	4.84
12.00	5.57	6.78	7.20	7.50	7.73
12.50	7.94	8.09	8.24	8.37	8.49
13.00	8.60	8.70	8.79	8.87	8.95
13.50	9.02	9.08	9.14	9.20	9.26
14.00	9.32	9.37	9.42	9.47	9.52
14.50	9.57	9.61	9.66	9.70	9.74
15.00	9.78	9.81	9.85	9.88	9.92
15.50	9.95	9.98	10.02	10.05	10.08
16.00	10.11	10.14	10.17	10.20	10.23
16.50	10.26	10.29	10.32	10.34	10.37
17.00	10.40	10.42	10.45	10.47	10.49
17.50	10.52	10.54	10.56	10.59	10.61
18.00	10.63	10.65	10.67	10.69	10.71

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	10.73	10.75	10.77	10.79	10.81
19.00	10.83	10.84	10.86	10.88	10.90
19.50	10.92	10.94	10.96	10.97	10.99
20.00	11.01	11.03	11.05	11.06	11.08
20.50	11.10	11.12	11.13	11.15	11.17
21.00	11.18	11.20	11.22	11.23	11.25
21.50	11.26	11.28	11.29	11.31	11.33
22.00	11.34	11.36	11.37	11.39	11.40
22.50	11.42	11.43	11.44	11.46	11.47
23.00	11.49	11.50	11.51	11.53	11.54
23.50	11.56	11.57	11.58	11.59	11.61
24.00	11.62	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Time-Depth Curve: Future 2	
Label	Future 2
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	2 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.00	0.01	0.01	0.02
0.50	0.02	0.03	0.03	0.04	0.04
1.00	0.05	0.05	0.06	0.06	0.07
1.50	0.07	0.08	0.08	0.09	0.09
2.00	0.10	0.10	0.11	0.12	0.12
2.50	0.13	0.13	0.14	0.14	0.15
3.00	0.16	0.16	0.17	0.17	0.18
3.50	0.19	0.19	0.20	0.20	0.21
4.00	0.22	0.22	0.23	0.24	0.24
4.50	0.25	0.26	0.26	0.27	0.28
5.00	0.28	0.29	0.30	0.30	0.31
5.50	0.32	0.32	0.33	0.34	0.35
6.00	0.35	0.36	0.37	0.38	0.38
6.50	0.39	0.40	0.41	0.42	0.43
7.00	0.44	0.45	0.45	0.46	0.47
7.50	0.48	0.49	0.50	0.52	0.53
8.00	0.54	0.55	0.56	0.57	0.58
8.50	0.59	0.61	0.62	0.63	0.64
9.00	0.66	0.67	0.68	0.70	0.71
9.50	0.73	0.75	0.76	0.78	0.80
10.00	0.82	0.84	0.86	0.88	0.90
10.50	0.93	0.95	0.98	1.01	1.04
11.00	1.08	1.12	1.16	1.21	1.26
11.50	1.31	1.39	1.47	1.57	1.72
12.00	1.98	2.42	2.57	2.67	2.75
12.50	2.83	2.88	2.93	2.98	3.02
13.00	3.06	3.10	3.13	3.16	3.19
13.50	3.21	3.24	3.26	3.28	3.30
14.00	3.32	3.34	3.36	3.38	3.39
14.50	3.41	3.43	3.44	3.46	3.47
15.00	3.48	3.50	3.51	3.52	3.53
15.50	3.55	3.56	3.57	3.58	3.59
16.00	3.60	3.61	3.62	3.64	3.65
16.50	3.66	3.67	3.68	3.69	3.69
17.00	3.70	3.71	3.72	3.73	3.74
17.50	3.75	3.76	3.76	3.77	3.78
18.00	3.79	3.79	3.80	3.81	3.82

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.50	3.82	3.83	3.84	3.84	3.85
19.00	3.86	3.86	3.87	3.88	3.88
19.50	3.89	3.90	3.90	3.91	3.92
20.00	3.92	3.93	3.94	3.94	3.95
20.50	3.95	3.96	3.97	3.97	3.98
21.00	3.98	3.99	4.00	4.00	4.01
21.50	4.01	4.02	4.02	4.03	4.04
22.00	4.04	4.05	4.05	4.06	4.06
22.50	4.07	4.07	4.08	4.08	4.09
23.00	4.09	4.10	4.10	4.11	4.11
23.50	4.12	4.12	4.13	4.13	4.14
24.00	4.14	(N/A)	(N/A)	(N/A)	(N/A)

Unit Hydrograph Method (Computational Notes)

Definition of Terms

At	Total area (acres): At = Ai+Ap
Ai	Impervious area (acres)
Ap	Pervious area (acres)
CNi	Runoff curve number for impervious area
CNp	Runoff curve number for pervious area
fLoss	f loss constant infiltration (depth/time)
gKs	Saturated Hydraulic Conductivity (depth/time)
Md	Volumetric Moisture Deficit
Psi	Capillary Suction (length)
hK	Horton Infiltration Decay Rate (time^-1)
fo	Initial Infiltration Rate (depth/time)
fc	Ultimate(capacity)Infiltration Rate (depth/time)
Ia	Initial Abstraction (length)
dt	Computational increment (duration of unit excess rainfall) Default dt is smallest value of 0.1333Tc, rtm, and th (Smallest dt is then adjusted to match up with Tp)
UDdt	User specified override computational main time increment (only used if UDdt is => .1333Tc)
D(t)	Point on distribution curve (fraction of P) for time step t
K	2 / (1 + (Tr/Tp)): default K = 0.75: (for Tr/Tp = 1.67)
Ks	Hydrograph shape factor = Unit Conversions * K: = ((1hr/3600sec) * (1ft/12in) * ((5280ft)**2/sq.mi)) * K Default Ks = 645.333 * 0.75 = 484
Lag	Lag time from center of excess runoff (dt) to Tp: Lag = 0.6Tc
P	Total precipitation depth, inches
Pa(t)	Accumulated rainfall at time step t
Pi(t)	Incremental rainfall at time step t
qp	Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi. = (Ks * A * Q) / Tp (where Q = 1in. runoff, A=sq.mi.)
Qu(t)	Unit hydrograph ordinate (cfs) at time step t
Q(t)	Final hydrograph ordinate (cfs) at time step t
Rai(t)	Accumulated runoff (inches) at time step t for impervious area
Rap(t)	Accumulated runoff (inches) at time step t for pervious area
Rii(t)	Incremental runoff (inches) at time step t for impervious area
Rip(t)	Incremental runoff (inches) at time step t for pervious area
R(t)	Incremental weighted total runoff (inches)
Rtm	Time increment for rainfall table
Si	S for impervious area: Si = (1000/CNi) - 10
Sp	S for pervious area: Sp = (1000/CNp) - 10
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: Tb = Tp + Tr
Tp	Time (hrs) to peak of a unit hydrograph: Tp = (dt/2) + Lag
Tr	Time (hrs) of receding limb of unit hydrograph: Tr = ratio of Tp

Unit Hydrograph Method
Computational Notes
Precipitation

Column (1)	Time for time step t
Column (2)	D(t) = Point on distribution curve for time step t
Column (3)	Pi(t) = Pa(t) - Pa(t-1): Col.(4) - Preceding Col.(4)
Column (4)	Pa(t) = D(t) x P: Col.(2) x P

Pervious Area Runoff (using SCS Runoff CN Method)

Column (5)	Rap(t) = Accumulated pervious runoff for time step t
	If (Pa(t) is <= 0.2Sp) then use: Rap(t) = 0.0
	If (Pa(t) is > 0.2Sp) then use:
	
	Rap(t) = (Col.(4)-0.2Sp)**2 / (Col.(4)+0.8Sp)

Column (6)	Rip(t) = Incremental pervious runoff for time step t Rip(t) = Rap(t) - Rap(t-1) Rip(t) = Col.(5) for current row - Col.(5) for preceding row.

Impervious Area Runoff

Column (7 & 8)...	Did not specify to use impervious areas.

Incremental Weighted Runoff

Column (9)	R(t) = (Ap/At) x Rip(t) + (Ai/At) x Rii(t) R(t) = (Ap/At) x Col.(6) + (Ai/At) x Col.(8)

SCS Unit Hydrograph Method

Column (10)	Q(t) is computed with the SCS unit hydrograph method using R(t) and Qu(t).

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	18.10 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	10.42 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	1.512 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.460 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.01	0.04	0.06	0.07
2.25	0.09	0.11	0.13	0.14	0.15
3.50	0.17	0.18	0.19	0.20	0.21
4.75	0.22	0.24	0.25	0.26	0.26
6.00	0.27	0.29	0.32	0.34	0.36
7.25	0.39	0.41	0.43	0.46	0.48
8.50	0.50	0.53	0.55	0.62	0.70
9.75	0.77	0.85	0.93	1.01	1.25
11.00	1.54	1.99	2.50	3.92	10.42
12.25	7.89	3.63	2.41	1.90	1.51
13.50	1.22	1.03	0.95	0.88	0.80
14.75	0.72	0.65	0.59	0.57	0.55
16.00	0.53	0.51	0.48	0.46	0.44
17.25	0.42	0.40	0.38	0.35	0.34
18.50	0.33	0.33	0.32	0.32	0.31
19.75	0.31	0.30	0.30	0.29	0.29
21.00	0.28	0.27	0.27	0.26	0.26
22.25	0.25	0.25	0.24	0.24	0.23
23.50	0.23	0.22	0.21	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	28.48 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	16.42 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	2.424 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.341 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.05	0.09	0.13
1.75	0.17	0.20	0.23	0.25	0.27
3.00	0.29	0.31	0.33	0.35	0.37
4.25	0.38	0.40	0.41	0.43	0.44
5.50	0.45	0.47	0.48	0.51	0.54
6.75	0.58	0.62	0.65	0.69	0.72
8.00	0.76	0.79	0.83	0.87	0.90
9.25	1.01	1.13	1.25	1.38	1.49
10.50	1.62	2.01	2.46	3.17	3.96
11.75	6.21	16.42	12.40	5.70	3.78
13.00	2.98	2.36	1.91	1.62	1.49
14.25	1.38	1.25	1.13	1.01	0.93
15.50	0.90	0.86	0.83	0.79	0.76
16.75	0.73	0.69	0.66	0.62	0.59
18.00	0.56	0.53	0.52	0.51	0.51
19.25	0.50	0.49	0.48	0.47	0.46
20.50	0.46	0.45	0.44	0.43	0.42
21.75	0.41	0.41	0.40	0.39	0.38
23.00	0.37	0.36	0.35	0.35	0.34

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	49.36 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	28.50 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	4.267 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.123 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.02	0.14	0.25	0.32
1.50	0.39	0.44	0.49	0.53	0.56
2.75	0.60	0.63	0.65	0.68	0.70
4.00	0.73	0.75	0.77	0.79	0.81
5.25	0.83	0.85	0.87	0.88	0.94
6.50	1.00	1.06	1.12	1.18	1.24
7.75	1.30	1.36	1.42	1.48	1.54
9.00	1.60	1.79	2.00	2.20	2.42
10.25	2.62	2.84	3.51	4.29	5.53
11.50	6.90	10.80	28.50	21.48	9.87
12.75	6.54	5.15	4.09	3.31	2.80
14.00	2.59	2.38	2.17	1.96	1.75
15.25	1.61	1.55	1.49	1.43	1.37
16.50	1.31	1.26	1.20	1.14	1.08
17.75	1.02	0.96	0.92	0.90	0.89
19.00	0.88	0.86	0.85	0.83	0.82
20.25	0.80	0.79	0.77	0.76	0.74
21.50	0.73	0.71	0.70	0.69	0.67
22.75	0.66	0.64	0.62	0.61	0.60
24.00	0.58	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	21.60 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	12.44 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	1.819 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.756 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.01	0.04	0.06	0.09
2.00	0.11	0.14	0.15	0.17	0.19
3.25	0.21	0.22	0.24	0.25	0.26
4.50	0.28	0.29	0.30	0.31	0.32
5.75	0.33	0.34	0.37	0.39	0.42
7.00	0.45	0.48	0.50	0.53	0.56
8.25	0.59	0.62	0.64	0.67	0.75
9.50	0.84	0.93	1.03	1.12	1.22
10.75	1.51	1.85	2.39	2.99	4.69
12.00	12.44	9.41	4.33	2.87	2.26
13.25	1.80	1.45	1.23	1.14	1.05
14.50	0.95	0.86	0.77	0.71	0.68
15.75	0.66	0.63	0.60	0.58	0.55
17.00	0.53	0.50	0.47	0.45	0.42
18.25	0.40	0.40	0.39	0.38	0.38
19.50	0.37	0.37	0.36	0.35	0.35
20.75	0.34	0.33	0.33	0.32	0.31
22.00	0.31	0.30	0.29	0.29	0.28
23.25	0.27	0.27	0.26	0.26	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	33.60 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	19.38 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	2.875 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.777 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.03	0.09	0.15	0.19
1.75	0.23	0.27	0.30	0.33	0.35
3.00	0.37	0.40	0.42	0.44	0.46
4.25	0.47	0.49	0.50	0.52	0.54
5.50	0.55	0.56	0.58	0.61	0.66
6.75	0.70	0.74	0.78	0.82	0.87
8.00	0.91	0.95	0.99	1.03	1.08
9.25	1.20	1.35	1.49	1.63	1.77
10.50	1.92	2.38	2.91	3.75	4.69
11.75	7.33	19.38	14.63	6.72	4.46
13.00	3.51	2.79	2.25	1.91	1.76
14.25	1.62	1.48	1.34	1.19	1.10
15.50	1.06	1.02	0.98	0.93	0.89
16.75	0.86	0.81	0.77	0.73	0.70
18.00	0.65	0.63	0.62	0.61	0.60
19.25	0.59	0.58	0.57	0.56	0.55
20.50	0.54	0.53	0.52	0.51	0.50
21.75	0.49	0.48	0.47	0.46	0.45
23.00	0.44	0.43	0.42	0.41	0.40

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	61.05 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	35.25 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	5.301 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.123 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.08	0.25	0.38	0.47
1.50	0.55	0.61	0.66	0.71	0.74
2.75	0.78	0.81	0.84	0.88	0.90
4.00	0.93	0.95	0.97	1.00	1.02
5.25	1.04	1.07	1.09	1.11	1.17
6.50	1.25	1.32	1.40	1.47	1.55
7.75	1.62	1.70	1.77	1.84	1.92
9.00	1.99	2.22	2.48	2.74	3.00
10.25	3.25	3.52	4.35	5.31	6.85
11.50	8.55	13.36	35.25	26.57	12.21
12.75	8.09	6.37	5.06	4.09	3.46
14.00	3.20	2.94	2.68	2.43	2.16
15.25	1.99	1.92	1.85	1.77	1.70
16.50	1.62	1.55	1.48	1.41	1.33
17.75	1.26	1.19	1.14	1.12	1.10
19.00	1.08	1.07	1.05	1.03	1.01
20.25	0.99	0.97	0.96	0.94	0.92
21.50	0.90	0.88	0.87	0.85	0.83
22.75	0.81	0.79	0.77	0.76	0.74
24.00	0.72	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.27 hours
Flow (Peak, Computed)	0.16 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.16 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.32 in
Runoff Volume (Pervious)	0.037 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.037 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.20 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.93 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.53 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.67 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.16	0.13	0.10	0.09
13.25	0.08	0.07	0.06	0.05	0.05
14.50	0.05	0.04	0.04	0.04	0.04
15.75	0.04	0.03	0.03	0.03	0.03
17.00	0.03	0.03	0.03	0.03	0.03
18.25	0.02	0.02	0.02	0.02	0.02
19.50	0.02	0.02	0.02	0.02	0.02
20.75	0.02	0.02	0.02	0.02	0.02
22.00	0.02	0.02	0.02	0.02	0.02
23.25	0.02	0.02	0.02	0.02	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	1.31 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.15 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.16 in
Runoff Volume (Pervious)	0.136 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.134 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.20 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.93 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.53 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.67 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.50	0.00	0.05	0.36	1.15	0.55
12.75	0.37	0.30	0.25	0.21	0.17
14.00	0.16	0.15	0.14	0.13	0.12
15.25	0.11	0.10	0.10	0.10	0.09
16.50	0.09	0.09	0.08	0.08	0.08
17.75	0.07	0.07	0.07	0.06	0.06
19.00	0.06	0.06	0.06	0.06	0.06
20.25	0.06	0.06	0.06	0.06	0.05
21.50	0.05	0.05	0.05	0.05	0.05
22.75	0.05	0.05	0.05	0.05	0.05
24.00	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	4.79 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.98 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.70 in
Runoff Volume (Pervious)	0.431 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.425 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.20 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	7.93 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.53 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.67 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.20 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.50	0.00	0.00	0.02	0.03	0.05
10.75	0.09	0.14	0.23	0.36	0.68
12.00	1.95	3.98	1.68	1.08	0.85
13.25	0.68	0.56	0.47	0.43	0.40
14.50	0.37	0.34	0.30	0.28	0.27
15.75	0.26	0.25	0.24	0.23	0.22
17.00	0.21	0.20	0.19	0.18	0.17
18.25	0.16	0.16	0.16	0.16	0.15
19.50	0.15	0.15	0.15	0.14	0.14
20.75	0.14	0.14	0.13	0.13	0.13
22.00	0.13	0.12	0.12	0.12	0.12
23.25	0.11	0.11	0.11	0.11	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.21 hours
Flow (Peak, Computed)	0.47 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.44 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.56 in
Runoff Volume (Pervious)	0.065 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.064 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.35 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.75	0.00	0.04	0.44	0.25	0.18
13.00	0.15	0.13	0.11	0.09	0.09
14.25	0.08	0.08	0.07	0.06	0.06
15.50	0.06	0.06	0.05	0.05	0.05
16.75	0.05	0.05	0.04	0.04	0.04
18.00	0.04	0.04	0.04	0.04	0.04
19.25	0.04	0.03	0.03	0.03	0.03
20.50	0.03	0.03	0.03	0.03	0.03
21.75	0.03	0.03	0.03	0.03	0.03
23.00	0.03	0.03	0.03	0.03	0.03

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	2.10 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.74 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.70 in
Runoff Volume (Pervious)	0.199 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.196 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.35 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.00	0.00	0.01	0.06	0.18	0.73
12.25	1.74	0.79	0.53	0.43	0.34
13.50	0.29	0.24	0.22	0.21	0.19
14.75	0.18	0.16	0.15	0.14	0.14
16.00	0.13	0.13	0.12	0.12	0.11
17.25	0.11	0.10	0.10	0.09	0.09
18.50	0.09	0.09	0.08	0.08	0.08
19.75	0.08	0.08	0.08	0.08	0.08
21.00	0.07	0.07	0.07	0.07	0.07
22.25	0.07	0.07	0.07	0.06	0.06
23.50	0.06	0.06	0.06	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.16 hours
Flow (Peak, Computed)	7.22 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	5.67 ft³/s

Drainage Area	
SCS CN (Composite)	54.350
Area (User Defined)	1.400 acres
Maximum Retention (Pervious)	8.40 in
Maximum Retention (Pervious, 20 percent)	1.68 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.39 in
Runoff Volume (Pervious)	0.629 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.618 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.35 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.400 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
8.50	0.00	0.00	0.01	0.03	0.04
9.75	0.06	0.09	0.12	0.15	0.21
11.00	0.30	0.44	0.65	1.15	3.17
12.25	5.67	2.33	1.49	1.18	0.94
13.50	0.77	0.64	0.59	0.55	0.50
14.75	0.46	0.41	0.38	0.36	0.35
16.00	0.34	0.32	0.31	0.30	0.28
17.25	0.27	0.26	0.24	0.23	0.22
18.50	0.22	0.21	0.21	0.21	0.20
19.75	0.20	0.20	0.19	0.19	0.19
21.00	0.18	0.18	0.18	0.17	0.17
22.25	0.17	0.16	0.16	0.16	0.15
23.50	0.15	0.15	0.14	(N/A)	(N/A)

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	2.91 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.74 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.219 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.211 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.00	0.01	0.01	0.01
2.25	0.01	0.02	0.02	0.02	0.02
3.50	0.02	0.03	0.03	0.03	0.03
4.75	0.03	0.03	0.04	0.04	0.04
6.00	0.04	0.04	0.05	0.05	0.05
7.25	0.06	0.06	0.06	0.07	0.07
8.50	0.07	0.08	0.08	0.09	0.10
9.75	0.11	0.12	0.14	0.15	0.19
11.00	0.23	0.31	0.37	0.68	1.74
12.25	0.81	0.51	0.33	0.27	0.21
13.50	0.17	0.15	0.14	0.12	0.11
14.75	0.10	0.09	0.09	0.08	0.08
16.00	0.08	0.07	0.07	0.07	0.06
17.25	0.06	0.06	0.05	0.05	0.05
18.50	0.05	0.05	0.05	0.05	0.05
19.75	0.04	0.04	0.04	0.04	0.04
21.00	0.04	0.04	0.04	0.04	0.04
22.25	0.04	0.04	0.03	0.03	0.03
23.50	0.03	0.03	0.03	(N/A)	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	4.58 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.74 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.351 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.339 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.01	0.01	0.02
1.75	0.03	0.03	0.03	0.04	0.04
3.00	0.04	0.05	0.05	0.05	0.05
4.25	0.06	0.06	0.06	0.06	0.06
5.50	0.07	0.07	0.07	0.08	0.08
6.75	0.09	0.09	0.10	0.10	0.11
8.00	0.11	0.12	0.12	0.13	0.13
9.25	0.15	0.17	0.19	0.20	0.22
10.50	0.24	0.31	0.36	0.49	0.59
11.75	1.07	2.74	1.27	0.80	0.52
13.00	0.42	0.33	0.27	0.23	0.21
14.25	0.20	0.18	0.16	0.14	0.13
15.50	0.13	0.12	0.12	0.11	0.11
16.75	0.10	0.10	0.09	0.09	0.08
18.00	0.08	0.08	0.08	0.07	0.07
19.25	0.07	0.07	0.07	0.07	0.07
20.50	0.07	0.06	0.06	0.06	0.06
21.75	0.06	0.06	0.06	0.06	0.05
23.00	0.05	0.05	0.05	0.05	0.05

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	7.94 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.75 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.618 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.597 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA2 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.02	0.04	0.05
1.50	0.06	0.07	0.07	0.08	0.08
2.75	0.09	0.09	0.10	0.10	0.10
4.00	0.11	0.11	0.11	0.12	0.12
5.25	0.12	0.12	0.13	0.13	0.14
6.50	0.15	0.16	0.16	0.17	0.18
7.75	0.19	0.20	0.21	0.22	0.23
9.00	0.23	0.27	0.29	0.33	0.35
10.25	0.39	0.42	0.54	0.64	0.85
11.50	1.03	1.86	4.75	2.20	1.39
12.75	0.89	0.72	0.56	0.46	0.40
14.00	0.37	0.34	0.31	0.28	0.25
15.25	0.23	0.22	0.21	0.21	0.20
16.50	0.19	0.18	0.17	0.16	0.16
17.75	0.15	0.14	0.13	0.13	0.13
19.00	0.13	0.12	0.12	0.12	0.12
20.25	0.12	0.11	0.11	0.11	0.11
21.50	0.11	0.10	0.10	0.10	0.10
22.75	0.09	0.09	0.09	0.09	0.09
24.00	0.08	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	3.48 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.08 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.264 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.254 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.00	0.01	0.01	0.01
2.00	0.02	0.02	0.02	0.03	0.03
3.25	0.03	0.03	0.03	0.04	0.04
4.50	0.04	0.04	0.04	0.05	0.05
5.75	0.05	0.05	0.05	0.06	0.06
7.00	0.07	0.07	0.07	0.08	0.08
8.25	0.09	0.09	0.09	0.10	0.11
9.50	0.12	0.14	0.15	0.17	0.18
10.75	0.23	0.27	0.37	0.44	0.81
12.00	2.08	0.97	0.61	0.39	0.32
13.25	0.25	0.20	0.17	0.16	0.15
14.50	0.14	0.12	0.11	0.10	0.10
15.75	0.09	0.09	0.09	0.08	0.08
17.00	0.08	0.07	0.07	0.06	0.06
18.25	0.06	0.06	0.06	0.06	0.05
19.50	0.05	0.05	0.05	0.05	0.05
20.75	0.05	0.05	0.05	0.05	0.05
22.00	0.04	0.04	0.04	0.04	0.04
23.25	0.04	0.04	0.04	0.04	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	5.40 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.23 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	0.417 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.402 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft^3/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)
0.50	0.00	0.01	0.01	0.02	0.03
1.75	0.03	0.04	0.04	0.05	0.05
3.00	0.05	0.06	0.06	0.06	0.07
4.25	0.07	0.07	0.07	0.08	0.08
5.50	0.08	0.08	0.08	0.09	0.10
6.75	0.10	0.11	0.11	0.12	0.13
8.00	0.13	0.14	0.14	0.15	0.16
9.25	0.18	0.20	0.22	0.24	0.26
10.50	0.28	0.36	0.43	0.58	0.70
11.75	1.27	3.23	1.50	0.95	0.61
13.00	0.49	0.38	0.32	0.27	0.25
14.25	0.23	0.21	0.19	0.17	0.16
15.50	0.15	0.15	0.14	0.13	0.13
16.75	0.12	0.12	0.11	0.11	0.10
18.00	0.09	0.09	0.09	0.09	0.09
19.25	0.08	0.08	0.08	0.08	0.08
20.50	0.08	0.08	0.07	0.07	0.07
21.75	0.07	0.07	0.07	0.07	0.06
23.00	0.06	0.06	0.06	0.06	0.06

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	9.81 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.88 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.810 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.768 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.742 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.36 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.810 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.02	0.04	0.06	0.07
1.50	0.08	0.09	0.10	0.10	0.11
2.75	0.11	0.12	0.12	0.13	0.13
4.00	0.13	0.14	0.14	0.15	0.15
5.25	0.15	0.16	0.16	0.16	0.17
6.50	0.18	0.19	0.20	0.22	0.23
7.75	0.24	0.25	0.26	0.27	0.28
9.00	0.29	0.33	0.36	0.41	0.44
10.25	0.48	0.52	0.67	0.79	1.05
11.50	1.27	2.31	5.88	2.72	1.72
12.75	1.11	0.89	0.70	0.57	0.49
14.00	0.46	0.42	0.38	0.34	0.31
15.25	0.29	0.28	0.26	0.26	0.24
16.50	0.23	0.22	0.21	0.20	0.19
17.75	0.18	0.17	0.16	0.16	0.16
19.00	0.16	0.15	0.15	0.15	0.15
20.25	0.14	0.14	0.14	0.14	0.13
21.50	0.13	0.13	0.13	0.12	0.12
22.75	0.12	0.11	0.11	0.11	0.11
24.00	0.10	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.52 hours
Flow (Peak, Computed)	0.01 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.01 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.21 in
Runoff Volume (Pervious)	0.005 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.005 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.65 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.01	0.01	0.01	0.01
13.25	0.01	0.01	0.01	0.01	0.01
14.50	0.01	0.01	0.01	0.01	0.01
15.75	0.01	0.01	0.01	0.00	0.00
17.00	0.00	0.00	0.00	0.00	0.00
18.25	0.00	0.00	0.00	0.00	0.00
19.50	0.00	0.00	0.00	0.00	0.00
20.75	0.00	0.00	0.00	0.00	0.00
22.00	0.00	0.00	0.00	0.00	0.00
23.25	0.00	0.00	0.00	0.00	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	0.26 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.13 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.92 in
Runoff Volume (Pervious)	0.022 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.021 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.65 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.75	0.00	0.08	0.13	0.08	0.06
13.00	0.05	0.04	0.03	0.03	0.03
14.25	0.03	0.02	0.02	0.02	0.02
15.50	0.02	0.02	0.02	0.02	0.02
16.75	0.02	0.01	0.01	0.01	0.01
18.00	0.01	0.01	0.01	0.01	0.01
19.25	0.01	0.01	0.01	0.01	0.01
20.50	0.01	0.01	0.01	0.01	0.01
21.75	0.01	0.01	0.01	0.01	0.01
23.00	0.01	0.01	0.01	0.01	0.01

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	1.11 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	0.52 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.23 in
Runoff Volume (Pervious)	0.078 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.074 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	3.65 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.25	0.00	0.00	0.01	0.02	0.04
11.50	0.06	0.13	0.52	0.47	0.26
12.75	0.18	0.15	0.12	0.10	0.08
14.00	0.08	0.07	0.07	0.06	0.06
15.25	0.05	0.05	0.05	0.05	0.04
16.50	0.04	0.04	0.04	0.04	0.04
17.75	0.03	0.03	0.03	0.03	0.03
19.00	0.03	0.03	0.03	0.03	0.03
20.25	0.03	0.03	0.03	0.03	0.03
21.50	0.03	0.02	0.02	0.02	0.02
22.75	0.02	0.02	0.02	0.02	0.02
24.00	0.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.07 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.04 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.40 in
Runoff Volume (Pervious)	0.010 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.009 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	4.11 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.27 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.04	0.03	0.03	0.02
13.25	0.02	0.02	0.01	0.01	0.01
14.50	0.01	0.01	0.01	0.01	0.01
15.75	0.01	0.01	0.01	0.01	0.01
17.00	0.01	0.01	0.01	0.01	0.01
18.25	0.01	0.01	0.01	0.01	0.01
19.50	0.01	0.01	0.01	0.01	0.01
20.75	0.01	0.01	0.01	0.01	0.01
22.00	0.01	0.01	0.00	0.00	0.00
23.25	0.00	0.00	0.00	0.00	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	0.45 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.20 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.40 in
Runoff Volume (Pervious)	0.034 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.032 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	4.11 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.27 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.25	0.00	0.00	0.02	0.18	0.20
12.50	0.12	0.08	0.07	0.06	0.05
13.75	0.04	0.04	0.04	0.03	0.03
15.00	0.03	0.03	0.03	0.02	0.02
16.25	0.02	0.02	0.02	0.02	0.02
17.50	0.02	0.02	0.02	0.02	0.02
18.75	0.02	0.02	0.02	0.02	0.01
20.00	0.01	0.01	0.01	0.01	0.01
21.25	0.01	0.01	0.01	0.01	0.01
22.50	0.01	0.01	0.01	0.01	0.01
23.75	0.01	0.01	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	1.72 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	0.86 ft³/s

Drainage Area	
SCS CN (Composite)	50.620
Area (User Defined)	0.290 acres
Maximum Retention (Pervious)	9.76 in
Maximum Retention (Pervious, 20 percent)	1.95 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.81 in
Runoff Volume (Pervious)	0.116 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.111 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	4.11 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.27 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: EDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	0.290 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.25	0.00	0.00	0.01	0.01	0.02
10.50	0.02	0.03	0.05	0.08	0.12
11.75	0.24	0.86	0.66	0.38	0.26
13.00	0.21	0.17	0.14	0.12	0.11
14.25	0.10	0.09	0.09	0.08	0.07
15.50	0.07	0.07	0.06	0.06	0.06
16.75	0.06	0.05	0.05	0.05	0.05
18.00	0.04	0.04	0.04	0.04	0.04
19.25	0.04	0.04	0.04	0.04	0.04
20.50	0.04	0.04	0.04	0.04	0.03
21.75	0.03	0.03	0.03	0.03	0.03
23.00	0.03	0.03	0.03	0.03	0.03

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	18.07 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	10.40 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	1.510 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.457 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.48 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.01	0.04	0.06	0.07
2.25	0.09	0.11	0.13	0.14	0.15
3.50	0.17	0.18	0.19	0.20	0.21
4.75	0.22	0.24	0.25	0.26	0.26
6.00	0.27	0.29	0.32	0.34	0.36
7.25	0.39	0.41	0.43	0.46	0.48
8.50	0.50	0.53	0.55	0.62	0.70
9.75	0.77	0.85	0.93	1.01	1.25
11.00	1.53	1.99	2.49	3.92	10.40
12.25	7.88	3.63	2.41	1.90	1.50
13.50	1.22	1.03	0.95	0.88	0.80
14.75	0.72	0.64	0.59	0.57	0.55
16.00	0.53	0.51	0.48	0.46	0.44
17.25	0.42	0.40	0.38	0.35	0.34
18.50	0.33	0.33	0.32	0.32	0.31
19.75	0.31	0.30	0.30	0.29	0.28
21.00	0.28	0.27	0.27	0.26	0.26
22.25	0.25	0.25	0.24	0.24	0.23
23.50	0.23	0.22	0.21	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	28.42 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	16.39 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	2.419 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.336 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.48 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.05	0.09	0.13
1.75	0.17	0.20	0.23	0.25	0.27
3.00	0.29	0.31	0.33	0.35	0.37
4.25	0.38	0.40	0.41	0.43	0.44
5.50	0.45	0.46	0.48	0.51	0.54
6.75	0.58	0.62	0.65	0.69	0.72
8.00	0.76	0.79	0.83	0.87	0.90
9.25	1.01	1.13	1.25	1.37	1.49
10.50	1.62	2.00	2.45	3.17	3.96
11.75	6.20	16.39	12.38	5.69	3.77
13.00	2.97	2.36	1.91	1.62	1.49
14.25	1.37	1.25	1.13	1.01	0.93
15.50	0.89	0.86	0.83	0.79	0.76
16.75	0.73	0.69	0.66	0.62	0.59
18.00	0.55	0.53	0.52	0.51	0.51
19.25	0.50	0.49	0.48	0.47	0.46
20.50	0.45	0.45	0.44	0.43	0.42
21.75	0.41	0.40	0.40	0.39	0.38
23.00	0.37	0.36	0.35	0.34	0.34

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	49.27 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	28.44 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.580 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	4.259 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.116 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.48 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA1 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.580 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.02	0.14	0.25	0.32
1.50	0.39	0.44	0.49	0.53	0.56
2.75	0.60	0.62	0.65	0.68	0.70
4.00	0.73	0.75	0.77	0.79	0.81
5.25	0.83	0.85	0.86	0.88	0.94
6.50	0.99	1.05	1.12	1.18	1.24
7.75	1.30	1.36	1.42	1.48	1.54
9.00	1.60	1.78	2.00	2.20	2.41
10.25	2.62	2.83	3.51	4.28	5.52
11.50	6.89	10.78	28.44	21.44	9.85
12.75	6.53	5.15	4.08	3.30	2.80
14.00	2.58	2.38	2.16	1.96	1.75
15.25	1.61	1.55	1.49	1.43	1.37
16.50	1.31	1.25	1.19	1.13	1.08
17.75	1.02	0.96	0.92	0.90	0.89
19.00	0.87	0.86	0.85	0.83	0.82
20.25	0.80	0.79	0.77	0.76	0.74
21.50	0.73	0.71	0.70	0.69	0.67
22.75	0.65	0.64	0.62	0.61	0.60
24.00	0.58	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	21.60 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	12.44 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	1.819 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.756 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.01	0.04	0.06	0.09
2.00	0.11	0.14	0.15	0.17	0.19
3.25	0.21	0.22	0.24	0.25	0.26
4.50	0.28	0.29	0.30	0.31	0.32
5.75	0.33	0.34	0.37	0.39	0.42
7.00	0.45	0.48	0.50	0.53	0.56
8.25	0.59	0.62	0.64	0.67	0.75
9.50	0.84	0.93	1.03	1.12	1.22
10.75	1.51	1.85	2.39	2.99	4.69
12.00	12.44	9.41	4.33	2.87	2.26
13.25	1.80	1.45	1.23	1.14	1.05
14.50	0.95	0.86	0.77	0.71	0.68
15.75	0.66	0.63	0.60	0.58	0.55
17.00	0.53	0.50	0.47	0.45	0.42
18.25	0.40	0.40	0.39	0.38	0.38
19.50	0.37	0.37	0.36	0.35	0.35
20.75	0.34	0.33	0.33	0.32	0.31
22.00	0.31	0.30	0.29	0.29	0.28
23.25	0.27	0.27	0.26	0.26	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	33.60 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	19.38 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	2.875 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.777 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.03	0.09	0.15	0.19
1.75	0.23	0.27	0.30	0.33	0.35
3.00	0.37	0.40	0.42	0.44	0.46
4.25	0.47	0.49	0.50	0.52	0.54
5.50	0.55	0.56	0.58	0.61	0.66
6.75	0.70	0.74	0.78	0.82	0.87
8.00	0.91	0.95	0.99	1.03	1.08
9.25	1.20	1.35	1.49	1.63	1.77
10.50	1.92	2.38	2.91	3.75	4.69
11.75	7.33	19.38	14.63	6.72	4.46
13.00	3.51	2.79	2.25	1.91	1.76
14.25	1.62	1.48	1.34	1.19	1.10
15.50	1.06	1.02	0.98	0.93	0.89
16.75	0.86	0.81	0.77	0.73	0.70
18.00	0.65	0.63	0.62	0.61	0.60
19.25	0.59	0.58	0.57	0.56	0.55
20.50	0.54	0.53	0.52	0.51	0.50
21.75	0.49	0.48	0.47	0.46	0.45
23.00	0.44	0.43	0.42	0.41	0.40

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	61.05 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	35.25 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5.590 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	5.301 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.123 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	57.58 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.29 hours

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Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.37 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.11 hours
Area (User Defined)	5.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.08	0.25	0.38	0.47
1.50	0.55	0.61	0.66	0.71	0.74
2.75	0.78	0.81	0.84	0.88	0.90
4.00	0.93	0.95	0.97	1.00	1.02
5.25	1.04	1.07	1.09	1.11	1.17
6.50	1.25	1.32	1.40	1.47	1.55
7.75	1.62	1.70	1.77	1.84	1.92
9.00	1.99	2.22	2.48	2.74	3.00
10.25	3.25	3.52	4.35	5.31	6.85
11.50	8.55	13.36	35.25	26.57	12.21
12.75	8.09	6.37	5.06	4.09	3.46
14.00	3.20	2.94	2.68	2.43	2.16
15.25	1.99	1.92	1.85	1.77	1.70
16.50	1.62	1.55	1.48	1.41	1.33
17.75	1.26	1.19	1.14	1.12	1.10
19.00	1.08	1.07	1.05	1.03	1.01
20.25	0.99	0.97	0.96	0.94	0.92
21.50	0.90	0.88	0.87	0.85	0.83
22.75	0.81	0.79	0.77	0.76	0.74
24.00	0.72	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	13.00 hours
Flow (Peak, Computed)	0.03 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	13.00 hours
Flow (Peak Interpolated Output)	0.03 ft³/s

Drainage Area	
SCS CN (Composite)	47.960
Area (User Defined)	1.420 acres
Maximum Retention (Pervious)	10.85 in
Maximum Retention (Pervious, 20 percent)	2.17 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.14 in
Runoff Volume (Pervious)	0.017 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.017 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.47 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

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Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.25	0.00	0.02	0.03	0.03	0.03
13.50	0.03	0.03	0.03	0.02	0.02
14.75	0.02	0.02	0.02	0.02	0.02
16.00	0.02	0.02	0.02	0.02	0.02
17.25	0.02	0.02	0.02	0.01	0.01
18.50	0.01	0.01	0.01	0.01	0.01
19.75	0.01	0.01	0.01	0.01	0.01
21.00	0.01	0.01	0.01	0.01	0.01
22.25	0.01	0.01	0.01	0.01	0.01
23.50	0.01	0.01	0.01	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.21 hours
Flow (Peak, Computed)	0.67 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.62 ft³/s

Drainage Area	
SCS CN (Composite)	47.960
Area (User Defined)	1.420 acres
Maximum Retention (Pervious)	10.85 in
Maximum Retention (Pervious, 20 percent)	2.17 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.76 in
Runoff Volume (Pervious)	0.090 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.088 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.47 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.75	0.00	0.06	0.62	0.35	0.25
13.00	0.21	0.17	0.15	0.13	0.12
14.25	0.11	0.10	0.10	0.09	0.08
15.50	0.08	0.08	0.07	0.07	0.07
16.75	0.07	0.06	0.06	0.06	0.06
18.00	0.05	0.05	0.05	0.05	0.05
19.25	0.05	0.05	0.05	0.05	0.05
20.50	0.05	0.04	0.04	0.04	0.04
21.75	0.04	0.04	0.04	0.04	0.04
23.00	0.04	0.04	0.04	0.04	0.04

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	3.73 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.05 ft³/s

Drainage Area	
SCS CN (Composite)	47.960
Area (User Defined)	1.420 acres
Maximum Retention (Pervious)	10.85 in
Maximum Retention (Pervious, 20 percent)	2.17 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.89 in
Runoff Volume (Pervious)	0.342 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.336 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.47 ft³/s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	0.51 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.63 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.19 hours
Area (User Defined)	1.420 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.50	0.00	0.00	0.03	0.09	0.18
11.75	0.40	1.41	3.05	1.34	0.89
13.00	0.71	0.57	0.48	0.40	0.37
14.25	0.34	0.32	0.29	0.26	0.24
15.50	0.23	0.22	0.21	0.21	0.20
16.75	0.19	0.18	0.18	0.17	0.16
18.00	0.15	0.14	0.14	0.14	0.14
19.25	0.14	0.13	0.13	0.13	0.13
20.50	0.13	0.12	0.12	0.12	0.12
21.75	0.11	0.11	0.11	0.11	0.11
23.00	0.10	0.10	0.10	0.10	0.10

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.55 hours
Flow (Peak, Computed)	0.09 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.09 ft³/s

Drainage Area	
SCS CN (Composite)	47.080
Area (User Defined)	1.410 acres
Maximum Retention (Pervious)	11.24 in
Maximum Retention (Pervious, 20 percent)	2.25 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.27 in
Runoff Volume (Pervious)	0.032 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.032 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.88 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours

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Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.60 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.07	0.09	0.08	0.07
13.25	0.06	0.06	0.05	0.05	0.05
14.50	0.04	0.04	0.04	0.03	0.03
15.75	0.03	0.03	0.03	0.03	0.03
17.00	0.03	0.03	0.03	0.03	0.02
18.25	0.02	0.02	0.02	0.02	0.02
19.50	0.02	0.02	0.02	0.02	0.02
20.75	0.02	0.02	0.02	0.02	0.02
22.00	0.02	0.02	0.02	0.02	0.02
23.25	0.02	0.02	0.02	0.02	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	1.21 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.02 ft³/s

Drainage Area	
SCS CN (Composite)	47.080
Area (User Defined)	1.410 acres
Maximum Retention (Pervious)	11.24 in
Maximum Retention (Pervious, 20 percent)	2.25 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.12 in
Runoff Volume (Pervious)	0.132 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.130 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.88 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.60 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.50	0.00	0.00	0.26	1.02	0.52
12.75	0.36	0.30	0.25	0.21	0.18
14.00	0.16	0.15	0.14	0.13	0.12
15.25	0.11	0.11	0.10	0.10	0.10
16.50	0.09	0.09	0.09	0.08	0.08
17.75	0.08	0.07	0.07	0.07	0.07
19.00	0.07	0.07	0.06	0.06	0.06
20.25	0.06	0.06	0.06	0.06	0.06
21.50	0.06	0.06	0.06	0.05	0.05
22.75	0.05	0.05	0.05	0.05	0.05
24.00	0.05	(N/A)	(N/A)	(N/A)	(N/A)

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Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	5.79 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	4.40 ft³/s

Drainage Area	
SCS CN (Composite)	47.080
Area (User Defined)	1.410 acres
Maximum Retention (Pervious)	11.24 in
Maximum Retention (Pervious, 20 percent)	2.25 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.26 in
Runoff Volume (Pervious)	0.501 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.490 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.88 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.60 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	1.410 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.00	0.00	0.02	0.04	0.08	0.14
11.25	0.24	0.39	0.76	2.36	4.40
12.50	1.88	1.24	1.00	0.80	0.66
13.75	0.55	0.51	0.47	0.44	0.40
15.00	0.36	0.33	0.32	0.30	0.29
16.25	0.28	0.27	0.26	0.25	0.24
17.50	0.23	0.22	0.20	0.19	0.19
18.75	0.19	0.19	0.18	0.18	0.18
20.00	0.17	0.17	0.17	0.17	0.16
21.25	0.16	0.16	0.15	0.15	0.15
22.50	0.15	0.14	0.14	0.14	0.13
23.75	0.13	0.13	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	1.89 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.13 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.146 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.141 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.00	0.00	0.01	0.01
2.25	0.01	0.01	0.01	0.01	0.02
3.50	0.02	0.02	0.02	0.02	0.02
4.75	0.02	0.02	0.02	0.02	0.03
6.00	0.03	0.03	0.03	0.03	0.04
7.25	0.04	0.04	0.04	0.04	0.05
8.50	0.05	0.05	0.05	0.06	0.07
9.75	0.08	0.08	0.09	0.10	0.13
11.00	0.15	0.20	0.25	0.42	1.13
12.25	0.61	0.34	0.22	0.18	0.14
13.50	0.11	0.10	0.09	0.08	0.08
14.75	0.07	0.06	0.06	0.05	0.05
16.00	0.05	0.05	0.05	0.04	0.04
17.25	0.04	0.04	0.04	0.03	0.03
18.50	0.03	0.03	0.03	0.03	0.03
19.75	0.03	0.03	0.03	0.03	0.03
21.00	0.03	0.03	0.03	0.03	0.02
22.25	0.02	0.02	0.02	0.02	0.02
23.50	0.02	0.02	0.02	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	2.97 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.78 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.234 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.226 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.01	0.01	0.01	0.02
2.00	0.02	0.02	0.02	0.03	0.03
3.25	0.03	0.03	0.03	0.04	0.04
4.50	0.04	0.04	0.04	0.04	0.04
5.75	0.05	0.05	0.05	0.05	0.06
7.00	0.06	0.06	0.07	0.07	0.07
8.25	0.08	0.08	0.08	0.09	0.10
9.50	0.11	0.12	0.13	0.15	0.16
10.75	0.20	0.24	0.32	0.39	0.66
12.00	1.78	0.95	0.54	0.35	0.28
13.25	0.22	0.18	0.15	0.14	0.13
14.50	0.12	0.11	0.10	0.09	0.09
15.75	0.08	0.08	0.08	0.07	0.07
17.00	0.07	0.06	0.06	0.06	0.05
18.25	0.05	0.05	0.05	0.05	0.05
19.50	0.05	0.05	0.05	0.04	0.04
20.75	0.04	0.04	0.04	0.04	0.04
22.00	0.04	0.04	0.04	0.04	0.04
23.25	0.03	0.03	0.03	0.03	(N/A)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	5.15 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.08 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.412 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.398 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.00	0.02	0.02	0.03
1.50	0.04	0.04	0.05	0.05	0.05
2.75	0.06	0.06	0.06	0.07	0.07
4.00	0.07	0.07	0.07	0.08	0.08
5.25	0.08	0.08	0.08	0.09	0.09
6.50	0.10	0.10	0.11	0.11	0.12
7.75	0.13	0.13	0.14	0.14	0.15
9.00	0.16	0.18	0.20	0.22	0.24
10.25	0.26	0.28	0.35	0.42	0.55
11.50	0.68	1.15	3.08	1.65	0.93
12.75	0.61	0.48	0.38	0.31	0.27
14.00	0.25	0.23	0.21	0.19	0.17
15.25	0.15	0.15	0.14	0.14	0.13
16.50	0.13	0.12	0.11	0.11	0.10
17.75	0.10	0.09	0.09	0.09	0.09
19.00	0.08	0.08	0.08	0.08	0.08
20.25	0.08	0.08	0.07	0.07	0.07
21.50	0.07	0.07	0.07	0.07	0.06
22.75	0.06	0.06	0.06	0.06	0.06
24.00	0.06	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	2.25 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.35 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.176 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.170 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA2 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.00	0.01	0.01	0.01
2.25	0.01	0.02	0.02	0.02	0.02
3.50	0.02	0.02	0.02	0.03	0.03
4.75	0.03	0.03	0.03	0.03	0.03
6.00	0.03	0.04	0.04	0.04	0.04
7.25	0.05	0.05	0.05	0.05	0.06
8.50	0.06	0.06	0.07	0.07	0.08
9.75	0.09	0.10	0.11	0.12	0.15
11.00	0.18	0.24	0.30	0.50	1.35
12.25	0.72	0.41	0.27	0.21	0.17
13.50	0.14	0.12	0.11	0.10	0.09
14.75	0.08	0.07	0.07	0.07	0.06
16.00	0.06	0.06	0.06	0.05	0.05
17.25	0.05	0.05	0.04	0.04	0.04
18.50	0.04	0.04	0.04	0.04	0.04
19.75	0.04	0.03	0.03	0.03	0.03
21.00	0.03	0.03	0.03	0.03	0.03
22.25	0.03	0.03	0.03	0.03	0.03
23.50	0.03	0.03	0.02	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	3.51 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.10 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	0.278 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.268 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.01	0.01	0.02
1.75	0.02	0.03	0.03	0.03	0.03
3.00	0.04	0.04	0.04	0.04	0.04
4.25	0.05	0.05	0.05	0.05	0.05
5.50	0.05	0.05	0.06	0.06	0.06
6.75	0.07	0.07	0.08	0.08	0.08
8.00	0.09	0.09	0.10	0.10	0.10
9.25	0.12	0.13	0.15	0.16	0.17
10.50	0.19	0.24	0.29	0.38	0.46
11.75	0.78	2.10	1.12	0.63	0.42
13.00	0.33	0.26	0.21	0.18	0.17
14.25	0.15	0.14	0.13	0.11	0.11
15.50	0.10	0.10	0.09	0.09	0.09
16.75	0.08	0.08	0.07	0.07	0.07
18.00	0.06	0.06	0.06	0.06	0.06
19.25	0.06	0.06	0.05	0.05	0.05
20.50	0.05	0.05	0.05	0.05	0.05
21.75	0.05	0.05	0.04	0.04	0.04
23.00	0.04	0.04	0.04	0.04	0.04

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	6.37 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.81 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.540 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.512 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.495 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.74 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.19 hours

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.23 hours

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) | Return Event: 100 years
Label: PDA2 - Imp - Fut | Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.07 hours
Area (User Defined)	0.540 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.03	0.04	0.05
1.50	0.05	0.06	0.06	0.07	0.07
2.75	0.08	0.08	0.08	0.08	0.09
4.00	0.09	0.09	0.09	0.10	0.10
5.25	0.10	0.10	0.11	0.11	0.11
6.50	0.12	0.13	0.14	0.14	0.15
7.75	0.16	0.16	0.17	0.18	0.19
9.00	0.19	0.22	0.24	0.27	0.29
10.25	0.32	0.34	0.43	0.52	0.69
11.50	0.84	1.42	3.81	2.04	1.15
12.75	0.75	0.60	0.47	0.39	0.33
14.00	0.31	0.28	0.26	0.23	0.21
15.25	0.19	0.18	0.18	0.17	0.16
16.50	0.16	0.15	0.14	0.13	0.13
17.75	0.12	0.11	0.11	0.11	0.11
19.00	0.10	0.10	0.10	0.10	0.10
20.25	0.10	0.09	0.09	0.09	0.09
21.50	0.09	0.09	0.08	0.08	0.08
22.75	0.08	0.08	0.07	0.07	0.07
24.00	0.07	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.52 hours
Flow (Peak, Computed)	0.02 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.02 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.19 in
Runoff Volume (Pervious)	0.009 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.009 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.10 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.23 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.27 hours

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.33 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Storm Event	Current 2 Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.02	0.02	0.02	0.02
13.25	0.02	0.01	0.01	0.01	0.01
14.50	0.01	0.01	0.01	0.01	0.01
15.75	0.01	0.01	0.01	0.01	0.01
17.00	0.01	0.01	0.01	0.01	0.01
18.25	0.01	0.01	0.01	0.01	0.01
19.50	0.01	0.01	0.01	0.01	0.01
20.75	0.01	0.01	0.01	0.01	0.01
22.00	0.01	0.01	0.01	0.01	0.01
23.25	0.01	0.01	0.01	0.01	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.45 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.25 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.89 in
Runoff Volume (Pervious)	0.041 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.039 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.10 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.23 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.27 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.33 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft^3/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)	Flow (ft^3/s)
11.75	0.00	0.12	0.25	0.15	0.11
13.00	0.09	0.07	0.06	0.05	0.05
14.25	0.05	0.04	0.04	0.04	0.03
15.50	0.03	0.03	0.03	0.03	0.03
16.75	0.03	0.03	0.03	0.02	0.02
18.00	0.02	0.02	0.02	0.02	0.02
19.25	0.02	0.02	0.02	0.02	0.02
20.50	0.02	0.02	0.02	0.02	0.02
21.75	0.02	0.02	0.02	0.02	0.02
23.00	0.02	0.02	0.02	0.02	0.01

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	2.01 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.92 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.16 in
Runoff Volume (Pervious)	0.145 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.138 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.10 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.23 ft³/s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.27 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.33 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.10 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.25	0.00	0.00	0.01	0.03	0.06
11.50	0.11	0.24	0.92	0.92	0.49
12.75	0.34	0.28	0.22	0.18	0.16
14.00	0.15	0.14	0.13	0.12	0.10
15.25	0.10	0.09	0.09	0.09	0.08
16.50	0.08	0.08	0.07	0.07	0.07
17.75	0.06	0.06	0.06	0.06	0.06
19.00	0.06	0.05	0.05	0.05	0.05
20.25	0.05	0.05	0.05	0.05	0.05
21.50	0.05	0.05	0.05	0.04	0.04
22.75	0.04	0.04	0.04	0.04	0.04
24.00	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.14 hours
Flow (Peak, Computed)	0.11 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.08 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.38 in
Runoff Volume (Pervious)	0.017 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.017 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.92 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.00	0.00	0.08	0.06	0.05	0.04
13.25	0.03	0.03	0.03	0.02	0.02
14.50	0.02	0.02	0.02	0.02	0.02
15.75	0.02	0.02	0.02	0.02	0.01
17.00	0.01	0.01	0.01	0.01	0.01
18.25	0.01	0.01	0.01	0.01	0.01
19.50	0.01	0.01	0.01	0.01	0.01
20.75	0.01	0.01	0.01	0.01	0.01
22.00	0.01	0.01	0.01	0.01	0.01
23.25	0.01	0.01	0.01	0.01	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	0.80 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.37 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.36 in
Runoff Volume (Pervious)	0.062 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.060 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.92 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.50	0.00	0.04	0.30	0.37	0.22
12.75	0.16	0.13	0.11	0.09	0.08
14.00	0.07	0.07	0.06	0.06	0.05
15.25	0.05	0.05	0.05	0.04	0.04
16.50	0.04	0.04	0.04	0.04	0.03
17.75	0.03	0.03	0.03	0.03	0.03
19.00	0.03	0.03	0.03	0.03	0.03
20.25	0.03	0.03	0.03	0.03	0.03
21.50	0.02	0.02	0.02	0.02	0.02
22.75	0.02	0.02	0.02	0.02	0.02
24.00	0.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	3.14 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.55 ft³/s

Drainage Area	
SCS CN (Composite)	50.090
Area (User Defined)	0.550 acres
Maximum Retention (Pervious)	9.96 in
Maximum Retention (Pervious, 20 percent)	1.99 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.73 in
Runoff Volume (Pervious)	0.217 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.207 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	6.92 ft³/s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.24 hours

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Total unit time, Tb	0.30 hours

Subsection: Unit Hydrograph (Hydrograph Table)
Label: PDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.09 hours
Area (User Defined)	0.550 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.25	0.00	0.00	0.01	0.02	0.03
10.50	0.04	0.06	0.09	0.14	0.22
11.75	0.43	1.55	1.30	0.71	0.49
13.00	0.39	0.32	0.26	0.22	0.21
14.25	0.19	0.18	0.16	0.14	0.13
15.50	0.13	0.13	0.12	0.12	0.11
16.75	0.11	0.10	0.10	0.09	0.09
18.00	0.08	0.08	0.08	0.08	0.08
19.25	0.08	0.07	0.07	0.07	0.07
20.50	0.07	0.07	0.07	0.07	0.06
21.75	0.06	0.06	0.06	0.06	0.06
23.00	0.06	0.06	0.05	0.05	0.05

Subsection: Addition Summary
Label: Post - POS1
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Cur	1.457	12.00	10.40
Flow (From)	PDA1 - Per - Cur	0.017	13.00	0.03
Flow (In)	Post - POS1	1.474	12.00	10.40

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Fut	1.756	12.00	12.44
Flow (From)	PDA1 - Per - Fut	0.032	12.50	0.09
Flow (In)	Post - POS1	1.788	12.00	12.44

Subsection: Addition Summary
Label: Post - POS1
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Cur	2.336	12.00	16.39
Flow (From)	PDA1 - Per - Cur	0.088	12.25	0.62
Flow (In)	Post - POS1	2.425	12.00	16.45

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Post - POS1
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Fut	2.777	12.00	19.38
Flow (From)	PDA1 - Per - Fut	0.130	12.25	1.02
Flow (In)	Post - POS1	2.907	12.00	19.65

Subsection: Addition Summary
Label: Post - POS1
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Cur	4.116	12.00	28.44
Flow (From)	PDA1 - Per - Cur	0.336	12.25	3.05
Flow (In)	Post - POS1	4.452	12.00	29.85

Subsection: Addition Summary
Label: Post - POS1
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Fut	5.123	12.00	35.25
Flow (From)	PDA1 - Per - Fut	0.490	12.25	4.40
Flow (In)	Post - POS1	5.613	12.00	37.61

Subsection: Addition Summary
Label: Post - POS2
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Cur	0.141	12.00	1.13
Flow (From)	PDA2 - Per - Cur	0.009	12.50	0.02
Flow (In)	Post - POS2	0.150	12.00	1.13

Subsection: Addition Summary
Label: Post - POS2
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA2 - Imp - Fut	0.170	12.00	1.35
Flow (From)	PDA2 - Per - Fut	0.017	12.25	0.08
Flow (In)	Post - POS2	0.187	12.00	1.35

Subsection: Addition Summary
Label: Post - POS2
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA2 - Imp - Cur	0.226	12.00	1.78
Flow (From)	PDA2 - Per - Cur	0.039	12.25	0.25
Flow (In)	Post - POS2	0.265	12.00	1.90

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA2 - Imp - Fut	0.268	12.00	2.10
Flow (From)	PDA2 - Per - Fut	0.060	12.25	0.37
Flow (In)	Post - POS2	0.328	12.00	2.40

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Cur	0.398	12.00	3.08
Flow (From)	PDA2 - Per - Cur	0.138	12.25	0.92
Flow (In)	Post - POS2	0.537	12.00	4.01

Subsection: Addition Summary
Label: Post - POS2
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Fut	0.495	12.00	3.81
Flow (From)	PDA2 - Per - Fut	0.207	12.00	1.55
Flow (In)	Post - POS2	0.702	12.00	5.36

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Cur	1.460	12.00	10.42
Flow (From)	EDA1 - Per - Cur	0.037	12.25	0.16
Flow (In)	Pre - POS1	1.497	12.00	10.42

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Fut	1.756	12.00	12.44
Flow (From)	EDA1 - Per - Fut	0.064	12.25	0.44
Flow (In)	Pre - POS1	1.820	12.00	12.48

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA1 - Imp - Cur	2.341	12.00	16.42
Flow (From)	EDA1 - Per - Cur	0.134	12.25	1.15
Flow (In)	Pre - POS1	2.475	12.00	16.78

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Fut	2.777	12.00	19.38
Flow (From)	EDA1 - Per - Fut	0.196	12.25	1.74
Flow (In)	Pre - POS1	2.973	12.00	20.11

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA1 - Imp - Cur	4.123	12.00	28.50
Flow (From)	EDA1 - Per - Cur	0.425	12.25	3.98
Flow (In)	Pre - POS1	4.548	12.00	30.45

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS1
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA1 - Imp - Fut	5.123	12.00	35.25
Flow (From)	EDA1 - Per - Fut	0.618	12.25	5.67
Flow (In)	Pre - POS1	5.741	12.00	38.42

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2 Year

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Cur	0.211	12.00	1.74
Flow (From)	EDA2 - Per - Cur	0.005	12.50	0.01
Flow (In)	Pre - POS2	0.216	12.00	1.74

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Fut	0.254	12.00	2.08
Flow (From)	EDA2 - Per - Fut	0.009	12.25	0.04
Flow (In)	Pre - POS2	0.264	12.00	2.08

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Cur	0.339	12.00	2.74
Flow (From)	EDA2 - Per - Cur	0.021	12.25	0.13
Flow (In)	Pre - POS2	0.360	12.00	2.82

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Fut	0.402	12.00	3.23
Flow (From)	EDA2 - Per - Fut	0.032	12.25	0.20
Flow (In)	Pre - POS2	0.434	12.00	3.41

JSUMC East Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA2 - Imp - Cur	0.597	12.00	4.75
Flow (From)	EDA2 - Per - Cur	0.074	12.00	0.52
Flow (In)	Pre - POS2	0.672	12.00	5.27

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Fut	0.742	12.00	5.88
Flow (From)	EDA2 - Per - Fut	0.111	12.00	0.86
Flow (In)	Pre - POS2	0.853	12.00	6.74

JSUMC East Addition: PondPack Report

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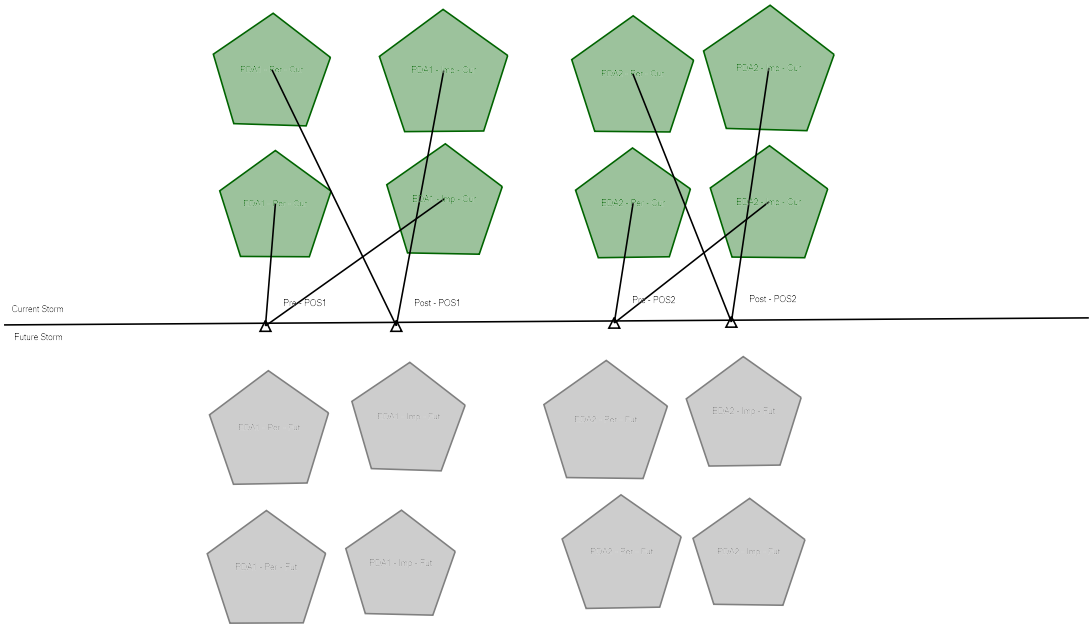
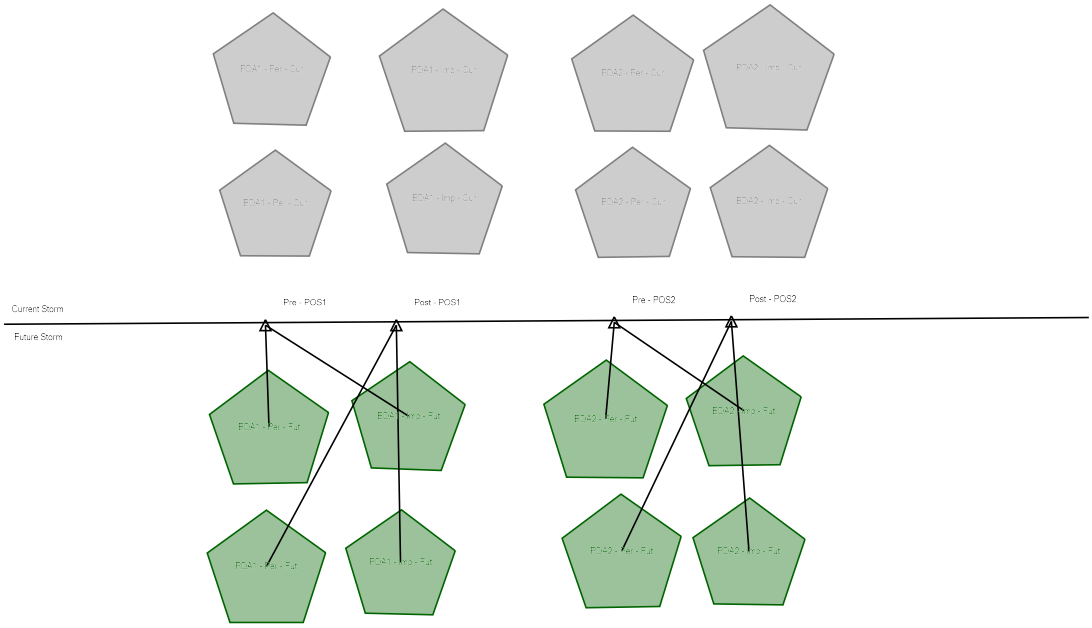
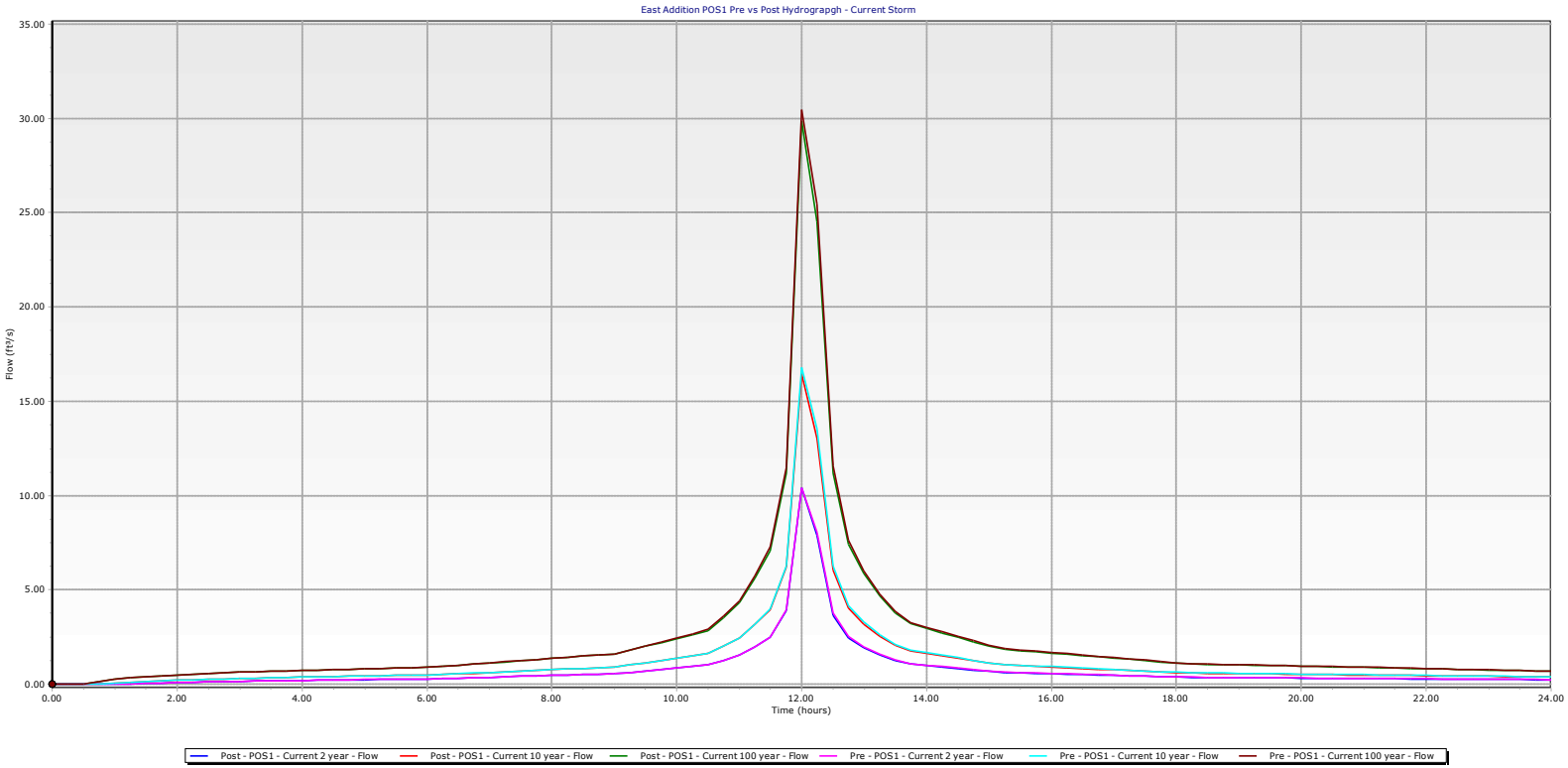
JSUMC East Addition: PondPack Report

Scenario: Current 2 year



Scenario: Future 2 year



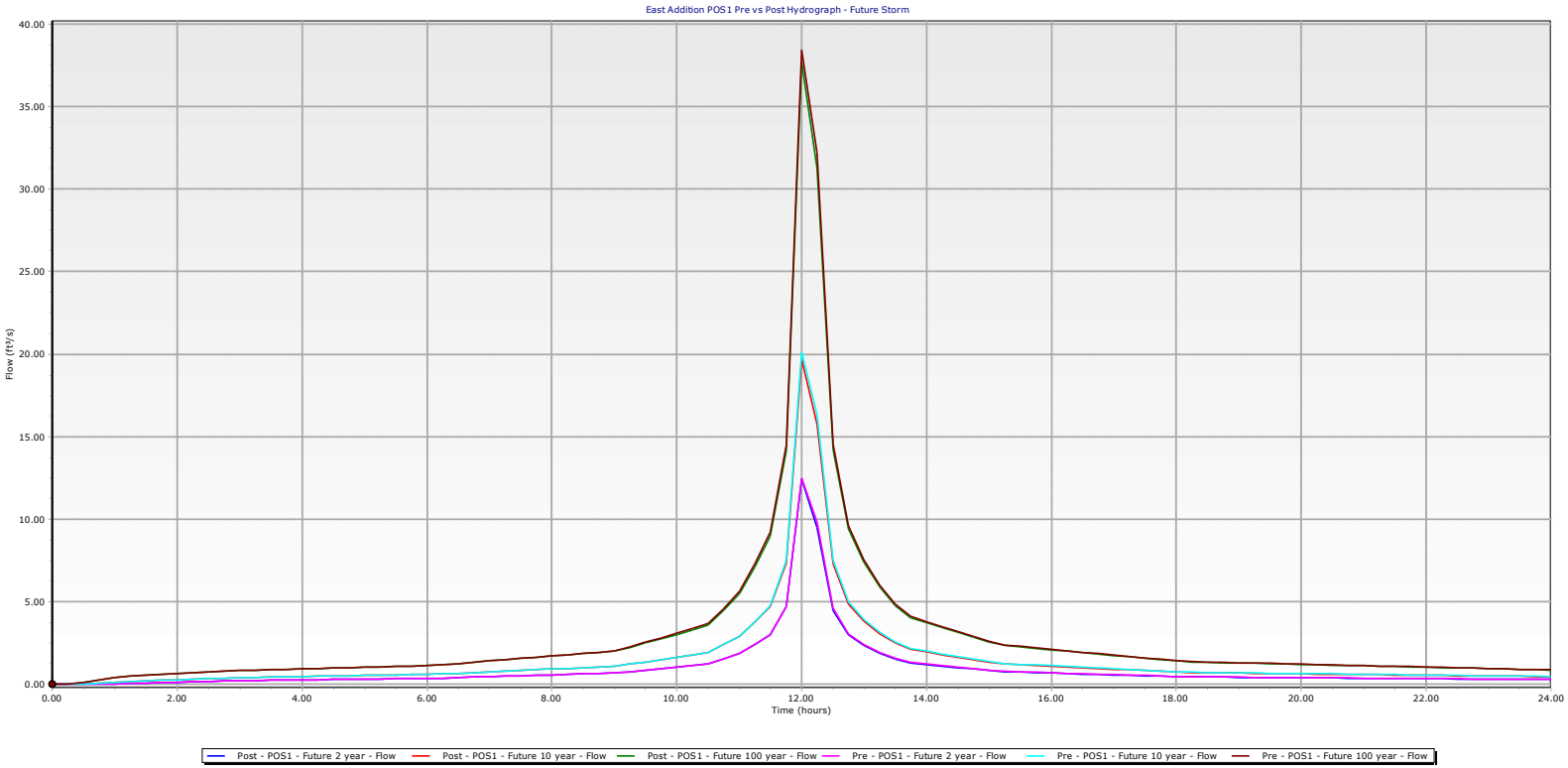

East Addition POS1 Pre vs Post Hydrograpgh - Current Storm
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS1 - Current 2 year - Flow
Post - POS1 - Current 10 year - Flow
Post - POS1 - Current 100 year - Flow
Pre - POS1 - Current 2 year - Flow
Pre - POS1 - Current 10 year - Flow
Pre - POS1 - Current 100 year - Flow

East Addition Current Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.00
1.00	0.00	0.00	0.00	0.05	0.05	0.00	0.25	0.25	0.00
1.25	0.01	0.01	0.00	0.09	0.09	0.00	0.32	0.32	0.00
1.50	0.04	0.04	0.00	0.13	0.13	0.00	0.39	0.39	0.00
1.75	0.06	0.06	0.00	0.17	0.17	0.00	0.44	0.44	0.00
2.00	0.07	0.07	0.00	0.20	0.20	0.00	0.49	0.49	0.00
2.25	0.09	0.09	0.00	0.23	0.23	0.00	0.53	0.53	0.00
2.50	0.11	0.11	0.00	0.25	0.25	0.00	0.56	0.56	0.00
2.75	0.13	0.13	0.00	0.27	0.27	0.00	0.60	0.60	0.00
3.00	0.14	0.14	0.00	0.29	0.29	0.00	0.63	0.62	0.01
3.25	0.15	0.15	0.00	0.31	0.31	0.00	0.65	0.65	0.00
3.50	0.17	0.17	0.00	0.33	0.33	0.00	0.68	0.68	0.00
3.75	0.18	0.18	0.00	0.35	0.35	0.00	0.70	0.70	0.00
4.00	0.19	0.19	0.00	0.37	0.37	0.00	0.73	0.73	0.00
4.25	0.20	0.20	0.00	0.38	0.38	0.00	0.75	0.75	0.00
4.50	0.21	0.21	0.00	0.40	0.40	0.00	0.77	0.77	0.00
4.75	0.22	0.22	0.00	0.41	0.41	0.00	0.79	0.79	0.00
5.00	0.24	0.24	0.00	0.43	0.43	0.00	0.81	0.81	0.00
5.25	0.25	0.25	0.00	0.44	0.44	0.00	0.83	0.83	0.00
5.50	0.26	0.26	0.00	0.45	0.45	0.00	0.85	0.85	0.00
5.75	0.26	0.26	0.00	0.47	0.46	0.01	0.87	0.86	0.01
6.00	0.27	0.27	0.00	0.48	0.48	0.00	0.88	0.88	0.00
6.25	0.29	0.29	0.00	0.51	0.51	0.00	0.94	0.94	0.00
6.50	0.32	0.32	0.00	0.54	0.54	0.00	1.00	0.99	0.01
6.75	0.34	0.34	0.00	0.58	0.58	0.00	1.06	1.05	0.01
7.00	0.36	0.36	0.00	0.62	0.62	0.00	1.12	1.12	0.00
7.25	0.39	0.39	0.00	0.65	0.65	0.00	1.18	1.18	0.00
7.50	0.41	0.41	0.00	0.69	0.69	0.00	1.24	1.24	0.00
7.75	0.43	0.43	0.00	0.72	0.72	0.00	1.30	1.30	0.00
8.00	0.46	0.46	0.00	0.76	0.76	0.00	1.36	1.36	0.00
8.25	0.48	0.48	0.00	0.79	0.79	0.00	1.42	1.42	0.00
8.50	0.50	0.50	0.00	0.83	0.83	0.00	1.48	1.48	0.00
8.75	0.53	0.53	0.00	0.87	0.87	0.00	1.54	1.54	0.00
9.00	0.55	0.55	0.00	0.90	0.90	0.00	1.60	1.60	0.00
9.25	0.62	0.62	0.00	1.01	1.01	0.00	1.79	1.78	0.01
9.50	0.70	0.70	0.00	1.13	1.13	0.00	2.00	2.00	0.00
9.75	0.77	0.77	0.00	1.25	1.25	0.00	2.21	2.20	0.01
10.00	0.85	0.85	0.00	1.38	1.37	0.01	2.44	2.41	0.03
10.25	0.93	0.93	0.00	1.49	1.49	0.00	2.66	2.62	0.04
10.50	1.01	1.01	0.00	1.62	1.62	0.00	2.89	2.83	0.06
10.75	1.25	1.25	0.00	2.01	2.00	0.01	3.60	3.51	0.09
11.00	1.54	1.53	0.01	2.46	2.45	0.01	4.43	4.31	0.12
11.25	1.99	1.99	0.00	3.17	3.17	0.00	5.76	5.61	0.15
11.50	2.50	2.49	0.01	3.96	3.96	0.00	7.27	7.07	0.20
11.75	3.92	3.92	0.00	6.26	6.20	0.06	11.47	11.18	0.29
12.00	10.42	10.40	0.02	16.78	16.46	0.32	30.45	29.86	0.59
12.25	8.06	7.88	0.18	13.55	13.01	0.54	25.46	24.50	0.96
12.50	3.76	3.65	0.11	6.26	6.04	0.22	11.55	11.20	0.35
12.75	2.51	2.43	0.08	4.15	4.03	0.12	7.62	7.42	0.20
13.00	1.99	1.93	0.06	3.28	3.19	0.09	6.01	5.86	0.15
13.25	1.58	1.54	0.04	2.61	2.53	0.08	4.77	4.66	0.11
13.50	1.28	1.24	0.04	2.12	2.06	0.06	3.87	3.78	0.09

13.75	1.09	1.06	0.03	1.79	1.74	0.05	3.27	3.19	0.08
14.00	1.01	0.98	0.03	1.66	1.61	0.05	3.02	2.95	0.07
14.25	0.93	0.90	0.03	1.53	1.48	0.05	2.78	2.72	0.06
14.50	0.85	0.82	0.03	1.39	1.35	0.04	2.54	2.48	0.06
14.75	0.77	0.74	0.03	1.26	1.23	0.03	2.30	2.25	0.05
15.00	0.69	0.67	0.02	1.13	1.10	0.03	2.05	2.01	0.04
15.25	0.63	0.61	0.02	1.04	1.01	0.03	1.88	1.84	0.04
15.50	0.61	0.59	0.02	1.00	0.97	0.03	1.82	1.78	0.04
15.75	0.59	0.57	0.02	0.96	0.94	0.02	1.75	1.71	0.04
16.00	0.56	0.55	0.01	0.92	0.90	0.02	1.68	1.64	0.04
16.25	0.54	0.52	0.02	0.89	0.86	0.03	1.61	1.58	0.03
16.50	0.52	0.50	0.02	0.85	0.83	0.02	1.54	1.51	0.03
16.75	0.50	0.48	0.02	0.81	0.79	0.02	1.48	1.45	0.03
17.00	0.47	0.46	0.01	0.77	0.75	0.02	1.41	1.38	0.03
17.25	0.45	0.44	0.01	0.74	0.72	0.02	1.34	1.31	0.03
17.50	0.43	0.41	0.02	0.70	0.68	0.02	1.27	1.24	0.03
17.75	0.40	0.39	0.01	0.66	0.64	0.02	1.20	1.18	0.02
18.00	0.38	0.37	0.01	0.62	0.61	0.01	1.13	1.11	0.02
18.25	0.36	0.35	0.01	0.60	0.58	0.02	1.08	1.06	0.02
18.50	0.36	0.35	0.01	0.59	0.57	0.02	1.06	1.04	0.02
18.75	0.35	0.34	0.01	0.58	0.56	0.02	1.05	1.03	0.02
19.00	0.35	0.34	0.01	0.57	0.55	0.02	1.03	1.01	0.02
19.25	0.34	0.33	0.01	0.56	0.55	0.01	1.02	1.00	0.02
19.50	0.34	0.33	0.01	0.55	0.54	0.01	1.00	0.98	0.02
19.75	0.33	0.32	0.01	0.54	0.53	0.01	0.98	0.96	0.02
20.00	0.32	0.32	0.00	0.53	0.52	0.01	0.96	0.95	0.01
20.25	0.32	0.31	0.01	0.52	0.51	0.01	0.95	0.93	0.02
20.50	0.31	0.30	0.01	0.51	0.50	0.01	0.93	0.91	0.02
20.75	0.31	0.30	0.01	0.50	0.49	0.01	0.91	0.90	0.01
21.00	0.30	0.29	0.01	0.49	0.48	0.01	0.90	0.88	0.02
21.25	0.30	0.29	0.01	0.49	0.47	0.02	0.88	0.86	0.02
21.50	0.29	0.28	0.01	0.48	0.46	0.02	0.86	0.84	0.02
21.75	0.28	0.28	0.00	0.47	0.45	0.02	0.84	0.83	0.01
22.00	0.28	0.27	0.01	0.46	0.45	0.01	0.83	0.81	0.02
22.25	0.27	0.27	0.00	0.45	0.44	0.01	0.81	0.80	0.01
22.50	0.27	0.26	0.01	0.44	0.43	0.01	0.79	0.78	0.01
22.75	0.26	0.25	0.01	0.43	0.42	0.01	0.78	0.76	0.02
23.00	0.25	0.25	0.00	0.42	0.41	0.01	0.76	0.74	0.02
23.25	0.25	0.24	0.01	0.41	0.40	0.01	0.74	0.73	0.01
23.50	0.24	0.24	0.00	0.40	0.39	0.01	0.72	0.71	0.01
23.75	0.24	0.23	0.01	0.39	0.38	0.01	0.71	0.69	0.02
24.00	0.23	0.23	0.00	0.38	0.37	0.01	0.69	0.68	0.01

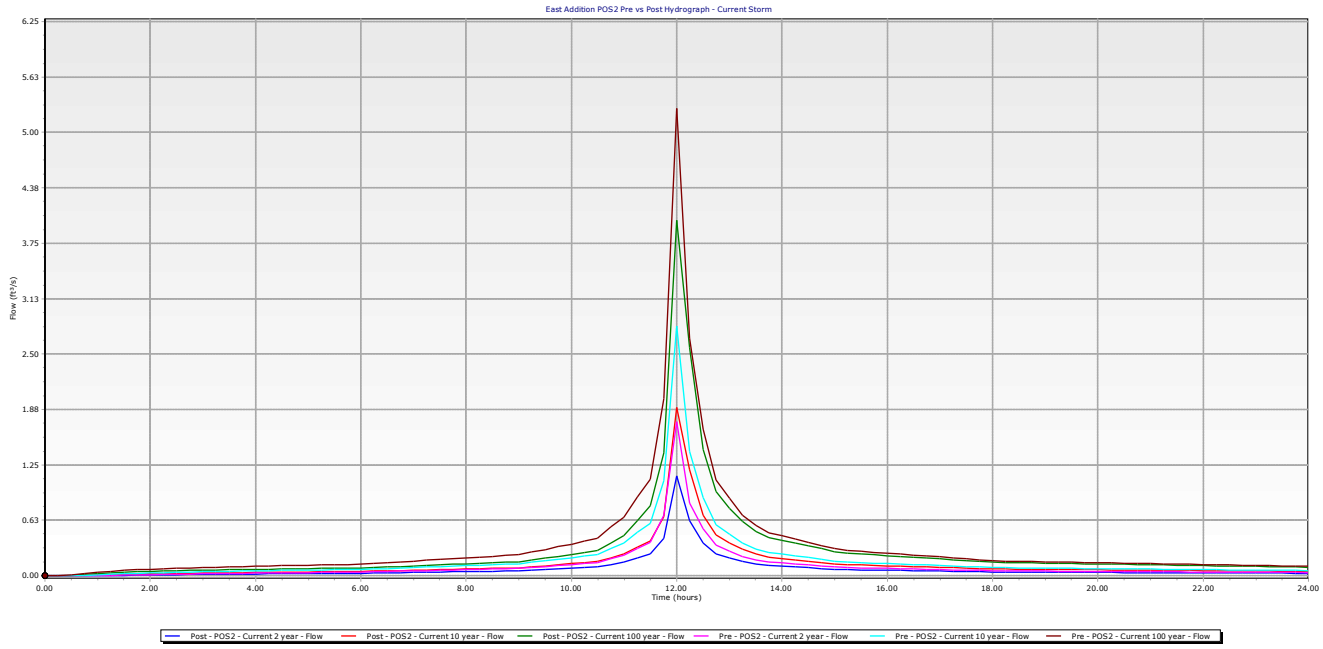

East Addition POS1 Pre vs Post Hydrograph - Future Storm
Flow (ft³/s)
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS1 - Future 2 year - Flow
Post - POS1 - Future 10 year - Flow
Post - POS1 - Future 100 year - Flow
Pre - POS1 - Future 2 year - Flow
Pre - POS1 - Future 10 year - Flow
Pre - POS1 - Future 100 year - Flow

East Addition Future Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00
0.75	0.00	0.00	0.00	0.03	0.03	0.00	0.25	0.25	0.00
1.00	0.01	0.01	0.00	0.09	0.09	0.00	0.38	0.38	0.00
1.25	0.04	0.04	0.00	0.15	0.15	0.00	0.47	0.47	0.00
1.50	0.06	0.06	0.00	0.19	0.19	0.00	0.55	0.55	0.00
1.75	0.09	0.09	0.00	0.23	0.23	0.00	0.61	0.61	0.00
2.00	0.11	0.11	0.00	0.27	0.27	0.00	0.66	0.66	0.00
2.25	0.14	0.14	0.00	0.30	0.30	0.00	0.71	0.71	0.00
2.50	0.15	0.15	0.00	0.33	0.33	0.00	0.74	0.74	0.00
2.75	0.17	0.17	0.00	0.35	0.35	0.00	0.78	0.78	0.00
3.00	0.19	0.19	0.00	0.37	0.37	0.00	0.81	0.81	0.00
3.25	0.21	0.21	0.00	0.40	0.40	0.00	0.84	0.84	0.00
3.50	0.22	0.22	0.00	0.42	0.42	0.00	0.88	0.88	0.00
3.75	0.24	0.24	0.00	0.44	0.44	0.00	0.90	0.90	0.00
4.00	0.25	0.25	0.00	0.46	0.46	0.00	0.93	0.93	0.00
4.25	0.26	0.26	0.00	0.47	0.47	0.00	0.95	0.95	0.00
4.50	0.28	0.28	0.00	0.49	0.49	0.00	0.97	0.97	0.00
4.75	0.29	0.29	0.00	0.50	0.50	0.00	1.00	1.00	0.00
5.00	0.30	0.30	0.00	0.52	0.52	0.00	1.02	1.02	0.00
5.25	0.31	0.31	0.00	0.54	0.54	0.00	1.04	1.04	0.00
5.50	0.32	0.32	0.00	0.55	0.55	0.00	1.07	1.07	0.00
5.75	0.33	0.33	0.00	0.56	0.56	0.00	1.09	1.09	0.00
6.00	0.34	0.34	0.00	0.58	0.58	0.00	1.11	1.11	0.00
6.25	0.37	0.37	0.00	0.61	0.61	0.00	1.17	1.17	0.00
6.50	0.39	0.39	0.00	0.66	0.66	0.00	1.25	1.25	0.00
6.75	0.42	0.42	0.00	0.70	0.70	0.00	1.32	1.32	0.00
7.00	0.45	0.45	0.00	0.74	0.74	0.00	1.40	1.40	0.00
7.25	0.48	0.48	0.00	0.78	0.78	0.00	1.47	1.47	0.00
7.50	0.50	0.50	0.00	0.82	0.82	0.00	1.55	1.55	0.00
7.75	0.53	0.53	0.00	0.87	0.87	0.00	1.62	1.62	0.00
8.00	0.56	0.56	0.00	0.91	0.91	0.00	1.70	1.70	0.00
8.25	0.59	0.59	0.00	0.95	0.95	0.00	1.77	1.77	0.00
8.50	0.62	0.62	0.00	0.99	0.99	0.00	1.84	1.84	0.00
8.75	0.64	0.64	0.00	1.03	1.03	0.00	1.92	1.92	0.00
9.00	0.67	0.67	0.00	1.08	1.08	0.00	2.00	1.99	0.01
9.25	0.75	0.75	0.00	1.20	1.20	0.00	2.24	2.22	0.02
9.50	0.84	0.84	0.00	1.35	1.35	0.00	2.52	2.48	0.04
9.75	0.93	0.93	0.00	1.49	1.49	0.00	2.80	2.74	0.06
10.00	1.03	1.03	0.00	1.63	1.63	0.00	3.09	3.01	0.08
10.25	1.12	1.12	0.00	1.77	1.77	0.00	3.37	3.28	0.09
10.50	1.22	1.22	0.00	1.92	1.92	0.00	3.67	3.57	0.10
10.75	1.51	1.51	0.00	2.38	2.38	0.00	4.56	4.45	0.11
11.00	1.85	1.85	0.00	2.91	2.91	0.00	5.61	5.47	0.14
11.25	2.39	2.39	0.00	3.76	3.75	0.01	7.30	7.11	0.19
11.50	2.99	2.99	0.00	4.74	4.69	0.05	9.20	8.97	0.23
11.75	4.69	4.69	0.00	7.51	7.35	0.16	14.51	14.16	0.35
12.00	12.48	12.44	0.04	20.11	19.70	0.41	38.42	37.68	0.74
12.25	9.86	9.52	0.34	16.37	15.77	0.60	32.24	31.28	0.96
12.50	4.58	4.44	0.14	7.51	7.29	0.22	14.54	14.21	0.33
12.75	3.05	2.97	0.08	4.98	4.85	0.13	9.58	9.39	0.19
13.00	2.42	2.35	0.07	3.94	3.83	0.11	7.56	7.41	0.15
13.25	1.92	1.87	0.05	3.13	3.05	0.08	5.99	5.88	0.11
13.50	1.56	1.52	0.04	2.54	2.47	0.07	4.86	4.77	0.09
13.75	1.32	1.29	0.03	2.15	2.09	0.06	4.10	4.03	0.07

14.00	1.22	1.19	0.03	1.98	1.94	0.04	3.79	3.72	0.07
14.25	1.13	1.10	0.03	1.83	1.79	0.04	3.49	3.43	0.06
14.50	1.03	1.00	0.03	1.67	1.63	0.04	3.18	3.13	0.05
14.75	0.93	0.91	0.02	1.51	1.48	0.03	2.88	2.84	0.04
15.00	0.83	0.81	0.02	1.35	1.32	0.03	2.58	2.53	0.05
15.25	0.77	0.74	0.03	1.24	1.21	0.03	2.36	2.33	0.03
15.50	0.74	0.72	0.02	1.20	1.17	0.03	2.28	2.24	0.04
15.75	0.71	0.69	0.02	1.15	1.13	0.02	2.20	2.16	0.04
16.00	0.68	0.66	0.02	1.11	1.08	0.03	2.11	2.07	0.04
16.25	0.65	0.64	0.01	1.06	1.04	0.02	2.02	1.99	0.03
16.50	0.63	0.61	0.02	1.02	0.99	0.03	1.93	1.90	0.03
16.75	0.60	0.58	0.02	0.97	0.95	0.02	1.85	1.82	0.03
17.00	0.57	0.56	0.01	0.93	0.91	0.02	1.76	1.74	0.02
17.25	0.54	0.53	0.01	0.88	0.86	0.02	1.68	1.65	0.03
17.50	0.52	0.50	0.02	0.84	0.82	0.02	1.59	1.57	0.02
17.75	0.49	0.48	0.01	0.79	0.77	0.02	1.51	1.48	0.03
18.00	0.46	0.45	0.01	0.75	0.73	0.02	1.42	1.40	0.02
18.25	0.44	0.43	0.01	0.72	0.70	0.02	1.36	1.34	0.02
18.50	0.43	0.42	0.01	0.70	0.69	0.01	1.33	1.31	0.02
18.75	0.43	0.42	0.01	0.69	0.68	0.01	1.31	1.29	0.02
19.00	0.42	0.41	0.01	0.68	0.67	0.01	1.29	1.27	0.02
19.25	0.41	0.40	0.01	0.67	0.66	0.01	1.27	1.25	0.02
19.50	0.41	0.40	0.01	0.66	0.64	0.02	1.25	1.23	0.02
19.75	0.40	0.39	0.01	0.65	0.64	0.01	1.23	1.21	0.02
20.00	0.39	0.38	0.01	0.64	0.62	0.02	1.21	1.19	0.02
20.25	0.39	0.38	0.01	0.63	0.61	0.02	1.19	1.17	0.02
20.50	0.38	0.37	0.01	0.61	0.60	0.01	1.16	1.15	0.01
20.75	0.37	0.36	0.01	0.60	0.59	0.01	1.14	1.13	0.01
21.00	0.37	0.36	0.01	0.59	0.58	0.01	1.12	1.11	0.01
21.25	0.36	0.35	0.01	0.58	0.57	0.01	1.10	1.09	0.01
21.50	0.35	0.34	0.01	0.57	0.56	0.01	1.08	1.06	0.02
21.75	0.34	0.34	0.00	0.56	0.55	0.01	1.06	1.04	0.02
22.00	0.34	0.33	0.01	0.55	0.54	0.01	1.04	1.02	0.02
22.25	0.33	0.32	0.01	0.54	0.52	0.02	1.02	1.00	0.02
22.50	0.32	0.31	0.01	0.52	0.51	0.01	0.99	0.98	0.01
22.75	0.32	0.31	0.01	0.51	0.50	0.01	0.97	0.96	0.01
23.00	0.31	0.30	0.01	0.50	0.49	0.01	0.95	0.93	0.02
23.25	0.30	0.29	0.01	0.49	0.48	0.01	0.93	0.91	0.02
23.50	0.30	0.29	0.01	0.48	0.47	0.01	0.91	0.89	0.02
23.75	0.29	0.28	0.01	0.47	0.46	0.01	0.88	0.87	0.01
24.00	0.28	0.27	0.01	0.46	0.45	0.01	0.86	0.85	0.01

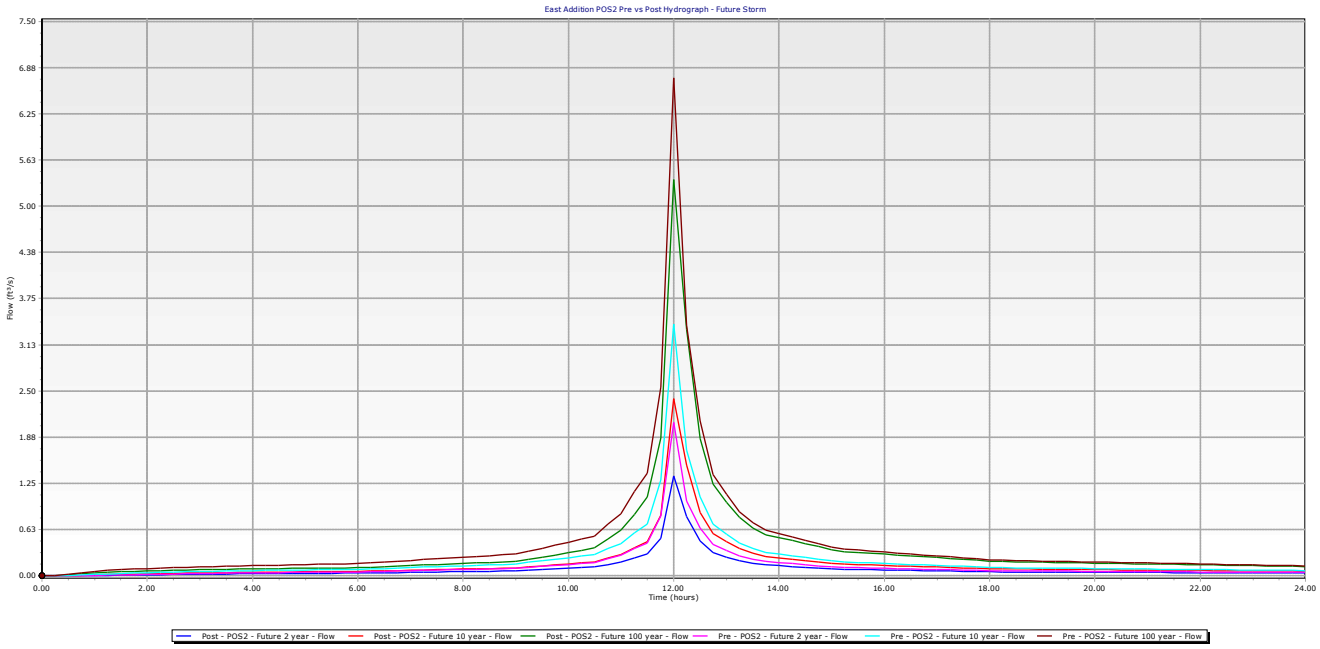

East Addition POS2 Pre vs Post Hydrograph - Current Storm
6.25
5.63
5.00
4.38
3.75
3.13
2.50
1.88
1.25
0.63
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS2 - Current 2 year - Flow
Post - POS2 - Current 10 year - Flow
Post - POS2 - Current 100 year - Flow
Pre - POS2 - Current 2 year - Flow
Pre - POS2 - Current 10 year - Flow
Pre - POS2 - Current 100 year - Flow

East Addition Current Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.00
1.00	0.00	0.00	0.00	0.05	0.05	0.00	0.25	0.25	0.00
1.25	0.01	0.01	0.00	0.09	0.09	0.00	0.32	0.32	0.00
1.50	0.04	0.04	0.00	0.13	0.13	0.00	0.39	0.39	0.00
1.75	0.06	0.06	0.00	0.17	0.17	0.00	0.44	0.44	0.00
2.00	0.07	0.07	0.00	0.20	0.20	0.00	0.49	0.49	0.00
2.25	0.09	0.09	0.00	0.23	0.23	0.00	0.53	0.53	0.00
2.50	0.11	0.11	0.00	0.25	0.25	0.00	0.56	0.56	0.00
2.75	0.13	0.13	0.00	0.27	0.27	0.00	0.60	0.60	0.00
3.00	0.14	0.14	0.00	0.29	0.29	0.00	0.63	0.62	0.01
3.25	0.15	0.15	0.00	0.31	0.31	0.00	0.65	0.65	0.00
3.50	0.17	0.17	0.00	0.33	0.33	0.00	0.68	0.68	0.00
3.75	0.18	0.18	0.00	0.35	0.35	0.00	0.70	0.70	0.00
4.00	0.19	0.19	0.00	0.37	0.37	0.00	0.73	0.73	0.00
4.25	0.20	0.20	0.00	0.38	0.38	0.00	0.75	0.75	0.00
4.50	0.21	0.21	0.00	0.40	0.40	0.00	0.77	0.77	0.00
4.75	0.22	0.22	0.00	0.41	0.41	0.00	0.79	0.79	0.00
5.00	0.24	0.24	0.00	0.43	0.43	0.00	0.81	0.81	0.00
5.25	0.25	0.25	0.00	0.44	0.44	0.00	0.83	0.83	0.00
5.50	0.26	0.26	0.00	0.45	0.45	0.00	0.85	0.85	0.00
5.75	0.26	0.26	0.00	0.47	0.46	0.01	0.87	0.86	0.01
6.00	0.27	0.27	0.00	0.48	0.48	0.00	0.88	0.88	0.00
6.25	0.29	0.29	0.00	0.51	0.51	0.00	0.94	0.94	0.00
6.50	0.32	0.32	0.00	0.54	0.54	0.00	1.00	0.99	0.01
6.75	0.34	0.34	0.00	0.58	0.58	0.00	1.06	1.05	0.01
7.00	0.36	0.36	0.00	0.62	0.62	0.00	1.12	1.12	0.00
7.25	0.39	0.39	0.00	0.65	0.65	0.00	1.18	1.18	0.00
7.50	0.41	0.41	0.00	0.69	0.69	0.00	1.24	1.24	0.00
7.75	0.43	0.43	0.00	0.72	0.72	0.00	1.30	1.30	0.00
8.00	0.46	0.46	0.00	0.76	0.76	0.00	1.36	1.36	0.00
8.25	0.48	0.48	0.00	0.79	0.79	0.00	1.42	1.42	0.00
8.50	0.50	0.50	0.00	0.83	0.83	0.00	1.48	1.48	0.00
8.75	0.53	0.53	0.00	0.87	0.87	0.00	1.54	1.54	0.00
9.00	0.55	0.55	0.00	0.90	0.90	0.00	1.60	1.60	0.00
9.25	0.62	0.62	0.00	1.01	1.01	0.00	1.79	1.78	0.01
9.50	0.70	0.70	0.00	1.13	1.13	0.00	2.00	2.00	0.00
9.75	0.77	0.77	0.00	1.25	1.25	0.00	2.21	2.20	0.01
10.00	0.85	0.85	0.00	1.38	1.37	0.01	2.44	2.41	0.03
10.25	0.93	0.93	0.00	1.49	1.49	0.00	2.66	2.62	0.04
10.50	1.01	1.01	0.00	1.62	1.62	0.00	2.89	2.83	0.06
10.75	1.25	1.25	0.00	2.01	2.00	0.01	3.60	3.51	0.09
11.00	1.54	1.53	0.01	2.46	2.45	0.01	4.43	4.31	0.12
11.25	1.99	1.99	0.00	3.17	3.17	0.00	5.76	5.61	0.15
11.50	2.50	2.49	0.01	3.96	3.96	0.00	7.27	7.07	0.20
11.75	3.92	3.92	0.00	6.26	6.20	0.06	11.47	11.18	0.29
12.00	10.42	10.40	0.02	16.78	16.46	0.32	30.45	29.86	0.59
12.25	8.06	7.88	0.18	13.55	13.01	0.54	25.46	24.50	0.96
12.50	3.76	3.65	0.11	6.26	6.04	0.22	11.55	11.20	0.35
12.75	2.51	2.43	0.08	4.15	4.03	0.12	7.62	7.42	0.20
13.00	1.99	1.93	0.06	3.28	3.19	0.09	6.01	5.86	0.15
13.25	1.58	1.54	0.04	2.61	2.53	0.08	4.77	4.66	0.11
13.50	1.28	1.24	0.04	2.12	2.06	0.06	3.87	3.78	0.09

13.75	1.09	1.06	0.03	1.79	1.74	0.05	3.27	3.19	0.08
14.00	1.01	0.98	0.03	1.66	1.61	0.05	3.02	2.95	0.07
14.25	0.93	0.90	0.03	1.53	1.48	0.05	2.78	2.72	0.06
14.50	0.85	0.82	0.03	1.39	1.35	0.04	2.54	2.48	0.06
14.75	0.77	0.74	0.03	1.26	1.23	0.03	2.30	2.25	0.05
15.00	0.69	0.67	0.02	1.13	1.10	0.03	2.05	2.01	0.04
15.25	0.63	0.61	0.02	1.04	1.01	0.03	1.88	1.84	0.04
15.50	0.61	0.59	0.02	1.00	0.97	0.03	1.82	1.78	0.04
15.75	0.59	0.57	0.02	0.96	0.94	0.02	1.75	1.71	0.04
16.00	0.56	0.55	0.01	0.92	0.90	0.02	1.68	1.64	0.04
16.25	0.54	0.52	0.02	0.89	0.86	0.03	1.61	1.58	0.03
16.50	0.52	0.50	0.02	0.85	0.83	0.02	1.54	1.51	0.03
16.75	0.50	0.48	0.02	0.81	0.79	0.02	1.48	1.45	0.03
17.00	0.47	0.46	0.01	0.77	0.75	0.02	1.41	1.38	0.03
17.25	0.45	0.44	0.01	0.74	0.72	0.02	1.34	1.31	0.03
17.50	0.43	0.41	0.02	0.70	0.68	0.02	1.27	1.24	0.03
17.75	0.40	0.39	0.01	0.66	0.64	0.02	1.20	1.18	0.02
18.00	0.38	0.37	0.01	0.62	0.61	0.01	1.13	1.11	0.02
18.25	0.36	0.35	0.01	0.60	0.58	0.02	1.08	1.06	0.02
18.50	0.36	0.35	0.01	0.59	0.57	0.02	1.06	1.04	0.02
18.75	0.35	0.34	0.01	0.58	0.56	0.02	1.05	1.03	0.02
19.00	0.35	0.34	0.01	0.57	0.55	0.02	1.03	1.01	0.02
19.25	0.34	0.33	0.01	0.56	0.55	0.01	1.02	1.00	0.02
19.50	0.34	0.33	0.01	0.55	0.54	0.01	1.00	0.98	0.02
19.75	0.33	0.32	0.01	0.54	0.53	0.01	0.98	0.96	0.02
20.00	0.32	0.32	0.00	0.53	0.52	0.01	0.96	0.95	0.01
20.25	0.32	0.31	0.01	0.52	0.51	0.01	0.95	0.93	0.02
20.50	0.31	0.30	0.01	0.51	0.50	0.01	0.93	0.91	0.02
20.75	0.31	0.30	0.01	0.50	0.49	0.01	0.91	0.90	0.01
21.00	0.30	0.29	0.01	0.49	0.48	0.01	0.90	0.88	0.02
21.25	0.30	0.29	0.01	0.49	0.47	0.02	0.88	0.86	0.02
21.50	0.29	0.28	0.01	0.48	0.46	0.02	0.86	0.84	0.02
21.75	0.28	0.28	0.00	0.47	0.45	0.02	0.84	0.83	0.01
22.00	0.28	0.27	0.01	0.46	0.45	0.01	0.83	0.81	0.02
22.25	0.27	0.27	0.00	0.45	0.44	0.01	0.81	0.80	0.01
22.50	0.27	0.26	0.01	0.44	0.43	0.01	0.79	0.78	0.01
22.75	0.26	0.25	0.01	0.43	0.42	0.01	0.78	0.76	0.02
23.00	0.25	0.25	0.00	0.42	0.41	0.01	0.76	0.74	0.02
23.25	0.25	0.24	0.01	0.41	0.40	0.01	0.74	0.73	0.01
23.50	0.24	0.24	0.00	0.40	0.39	0.01	0.72	0.71	0.01
23.75	0.24	0.23	0.01	0.39	0.38	0.01	0.71	0.69	0.02
24.00	0.23	0.23	0.00	0.38	0.37	0.01	0.69	0.68	0.01


East Addition POS2 Pre vs Post Hydrograph - Future Storm
Flow (ft³/s)
7.50
6.88
6.25
5.63
5.00
4.38
3.75
3.13
2.50
1.88
1.25
0.63
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS2 - Future 2 year - Flow
Post - POS2 - Future 10 year - Flow
Post - POS2 - Future 100 year - Flow
Pre - POS2 - Future 2 year - Flow
Pre - POS2 - Future 10 year - Flow
Pre - POS2 - Future 100 year - Flow

East Addition Future Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00
0.75	0.00	0.00	0.00	0.03	0.03	0.00	0.25	0.25	0.00
1.00	0.01	0.01	0.00	0.09	0.09	0.00	0.38	0.38	0.00
1.25	0.04	0.04	0.00	0.15	0.15	0.00	0.47	0.47	0.00
1.50	0.06	0.06	0.00	0.19	0.19	0.00	0.55	0.55	0.00
1.75	0.09	0.09	0.00	0.23	0.23	0.00	0.61	0.61	0.00
2.00	0.11	0.11	0.00	0.27	0.27	0.00	0.66	0.66	0.00
2.25	0.14	0.14	0.00	0.30	0.30	0.00	0.71	0.71	0.00
2.50	0.15	0.15	0.00	0.33	0.33	0.00	0.74	0.74	0.00
2.75	0.17	0.17	0.00	0.35	0.35	0.00	0.78	0.78	0.00
3.00	0.19	0.19	0.00	0.37	0.37	0.00	0.81	0.81	0.00
3.25	0.21	0.21	0.00	0.40	0.40	0.00	0.84	0.84	0.00
3.50	0.22	0.22	0.00	0.42	0.42	0.00	0.88	0.88	0.00
3.75	0.24	0.24	0.00	0.44	0.44	0.00	0.90	0.90	0.00
4.00	0.25	0.25	0.00	0.46	0.46	0.00	0.93	0.93	0.00
4.25	0.26	0.26	0.00	0.47	0.47	0.00	0.95	0.95	0.00
4.50	0.28	0.28	0.00	0.49	0.49	0.00	0.97	0.97	0.00
4.75	0.29	0.29	0.00	0.50	0.50	0.00	1.00	1.00	0.00
5.00	0.30	0.30	0.00	0.52	0.52	0.00	1.02	1.02	0.00
5.25	0.31	0.31	0.00	0.54	0.54	0.00	1.04	1.04	0.00
5.50	0.32	0.32	0.00	0.55	0.55	0.00	1.07	1.07	0.00
5.75	0.33	0.33	0.00	0.56	0.56	0.00	1.09	1.09	0.00
6.00	0.34	0.34	0.00	0.58	0.58	0.00	1.11	1.11	0.00
6.25	0.37	0.37	0.00	0.61	0.61	0.00	1.17	1.17	0.00
6.50	0.39	0.39	0.00	0.66	0.66	0.00	1.25	1.25	0.00
6.75	0.42	0.42	0.00	0.70	0.70	0.00	1.32	1.32	0.00
7.00	0.45	0.45	0.00	0.74	0.74	0.00	1.40	1.40	0.00
7.25	0.48	0.48	0.00	0.78	0.78	0.00	1.47	1.47	0.00
7.50	0.50	0.50	0.00	0.82	0.82	0.00	1.55	1.55	0.00
7.75	0.53	0.53	0.00	0.87	0.87	0.00	1.62	1.62	0.00
8.00	0.56	0.56	0.00	0.91	0.91	0.00	1.70	1.70	0.00
8.25	0.59	0.59	0.00	0.95	0.95	0.00	1.77	1.77	0.00
8.50	0.62	0.62	0.00	0.99	0.99	0.00	1.84	1.84	0.00
8.75	0.64	0.64	0.00	1.03	1.03	0.00	1.92	1.92	0.00
9.00	0.67	0.67	0.00	1.08	1.08	0.00	2.00	1.99	0.01
9.25	0.75	0.75	0.00	1.20	1.20	0.00	2.24	2.22	0.02
9.50	0.84	0.84	0.00	1.35	1.35	0.00	2.52	2.48	0.04
9.75	0.93	0.93	0.00	1.49	1.49	0.00	2.80	2.74	0.06
10.00	1.03	1.03	0.00	1.63	1.63	0.00	3.09	3.01	0.08
10.25	1.12	1.12	0.00	1.77	1.77	0.00	3.37	3.28	0.09
10.50	1.22	1.22	0.00	1.92	1.92	0.00	3.67	3.57	0.10
10.75	1.51	1.51	0.00	2.38	2.38	0.00	4.56	4.45	0.11
11.00	1.85	1.85	0.00	2.91	2.91	0.00	5.61	5.47	0.14
11.25	2.39	2.39	0.00	3.76	3.75	0.01	7.30	7.11	0.19
11.50	2.99	2.99	0.00	4.74	4.69	0.05	9.20	8.97	0.23
11.75	4.69	4.69	0.00	7.51	7.35	0.16	14.51	14.16	0.35
12.00	12.48	12.44	0.04	20.11	19.70	0.41	38.42	37.68	0.74
12.25	9.86	9.52	0.34	16.37	15.77	0.60	32.24	31.28	0.96
12.50	4.58	4.44	0.14	7.51	7.29	0.22	14.54	14.21	0.33
12.75	3.05	2.97	0.08	4.98	4.85	0.13	9.58	9.39	0.19
13.00	2.42	2.35	0.07	3.94	3.83	0.11	7.56	7.41	0.15
13.25	1.92	1.87	0.05	3.13	3.05	0.08	5.99	5.88	0.11
13.50	1.56	1.52	0.04	2.54	2.47	0.07	4.86	4.77	0.09
13.75	1.32	1.29	0.03	2.15	2.09	0.06	4.10	4.03	0.07

14.00	1.22	1.19	0.03	1.98	1.94	0.04	3.79	3.72	0.07
14.25	1.13	1.10	0.03	1.83	1.79	0.04	3.49	3.43	0.06
14.50	1.03	1.00	0.03	1.67	1.63	0.04	3.18	3.13	0.05
14.75	0.93	0.91	0.02	1.51	1.48	0.03	2.88	2.84	0.04
15.00	0.83	0.81	0.02	1.35	1.32	0.03	2.58	2.53	0.05
15.25	0.77	0.74	0.03	1.24	1.21	0.03	2.36	2.33	0.03
15.50	0.74	0.72	0.02	1.20	1.17	0.03	2.28	2.24	0.04
15.75	0.71	0.69	0.02	1.15	1.13	0.02	2.20	2.16	0.04
16.00	0.68	0.66	0.02	1.11	1.08	0.03	2.11	2.07	0.04
16.25	0.65	0.64	0.01	1.06	1.04	0.02	2.02	1.99	0.03
16.50	0.63	0.61	0.02	1.02	0.99	0.03	1.93	1.90	0.03
16.75	0.60	0.58	0.02	0.97	0.95	0.02	1.85	1.82	0.03
17.00	0.57	0.56	0.01	0.93	0.91	0.02	1.76	1.74	0.02
17.25	0.54	0.53	0.01	0.88	0.86	0.02	1.68	1.65	0.03
17.50	0.52	0.50	0.02	0.84	0.82	0.02	1.59	1.57	0.02
17.75	0.49	0.48	0.01	0.79	0.77	0.02	1.51	1.48	0.03
18.00	0.46	0.45	0.01	0.75	0.73	0.02	1.42	1.40	0.02
18.25	0.44	0.43	0.01	0.72	0.70	0.02	1.36	1.34	0.02
18.50	0.43	0.42	0.01	0.70	0.69	0.01	1.33	1.31	0.02
18.75	0.43	0.42	0.01	0.69	0.68	0.01	1.31	1.29	0.02
19.00	0.42	0.41	0.01	0.68	0.67	0.01	1.29	1.27	0.02
19.25	0.41	0.40	0.01	0.67	0.66	0.01	1.27	1.25	0.02
19.50	0.41	0.40	0.01	0.66	0.64	0.02	1.25	1.23	0.02
19.75	0.40	0.39	0.01	0.65	0.64	0.01	1.23	1.21	0.02
20.00	0.39	0.38	0.01	0.64	0.62	0.02	1.21	1.19	0.02
20.25	0.39	0.38	0.01	0.63	0.61	0.02	1.19	1.17	0.02
20.50	0.38	0.37	0.01	0.61	0.60	0.01	1.16	1.15	0.01
20.75	0.37	0.36	0.01	0.60	0.59	0.01	1.14	1.13	0.01
21.00	0.37	0.36	0.01	0.59	0.58	0.01	1.12	1.11	0.01
21.25	0.36	0.35	0.01	0.58	0.57	0.01	1.10	1.09	0.01
21.50	0.35	0.34	0.01	0.57	0.56	0.01	1.08	1.06	0.02
21.75	0.34	0.34	0.00	0.56	0.55	0.01	1.06	1.04	0.02
22.00	0.34	0.33	0.01	0.55	0.54	0.01	1.04	1.02	0.02
22.25	0.33	0.32	0.01	0.54	0.52	0.02	1.02	1.00	0.02
22.50	0.32	0.31	0.01	0.52	0.51	0.01	0.99	0.98	0.01
22.75	0.32	0.31	0.01	0.51	0.50	0.01	0.97	0.96	0.01
23.00	0.31	0.30	0.01	0.50	0.49	0.01	0.95	0.93	0.02
23.25	0.30	0.29	0.01	0.49	0.48	0.01	0.93	0.91	0.02
23.50	0.30	0.29	0.01	0.48	0.47	0.01	0.91	0.89	0.02
23.75	0.29	0.28	0.01	0.47	0.46	0.01	0.88	0.87	0.01
24.00	0.28	0.27	0.01	0.46	0.45	0.01	0.86	0.85	0.01

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1						
1.	Surface description (table 3-1)		Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)		0.011						
3.	Flow Length, L	ft	100						
4.	Two-yr 24-hr rainfall, P_2	in	3.48						
5.	Land slope, s	ft/ft	0.008						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.028	+		+		=	0.028

Shallow concentrated flow

		Segment ID	2						
7.	Surface description (paved or unpaved)		Paved						
8.	Flow length, L	ft	305						
9.	Watercourse slope, s	ft/ft	0.017						
10.	Average velocity, V (Figure 15-4)	ft/s	2.60						
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.033	+		+		=	0.033

Channel flow

		Segment ID	3	4	5	6			
12.	Cross sectional flow area, a	ft^2	1.22718	1.76715	4.90874	7.068583			
13.	Wetted perimeter, p_w	ft	3.92699	4.71239	7.85398	9.424778			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	0.31	0.38	0.63	0.75			
15.	Channel slope, s	ft/ft	0.012	0.015	0.016	0.005			
16.	Manning's roughness coeff., n		0.013	0.013	0.013	0.013			
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	5.68	7.35	10.60	6.69			
18.	Flow length, L	ft	81	376	31	12			
19.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.004	+ 0.014	0.001	+ 0.000		=	0.019

				Segment ID		7				
12.	Cross sectional flow area, a				ft^2	**9.62113**				
13.	Wetted perimeter, p_w				ft	**10.9956**				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft	**0.88**				
15.	Channel slope, s				ft/ft	**0.003**				
16.	Manning's roughness coeff., n					**0.013**				
17.	$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$		Compute V		ft/s	**5.74**				
18.	Flow length, L				ft	**612**				
19.	$T_t = \frac{L}{3600\, V}$		Compute T_t		hr	**0.030**	+		+		=	**0.030**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.11**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, N** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Asphalt			
2.	Manning's roughness coeff., n (Table 15-1)			0.011			
3.	Flow Length, L		ft	100			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.008			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$	Compute T_t	hr	0.026	+	+	= 0.026

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	305			
9.	Watercourse slope, s		ft/ft	0.017			
10.	Average velocity, V (Figure 15-4)		ft/s	2.6			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.033	+	+	= 0.033

Channel flow

			Segment ID	3	4	5	6
12.	Cross sectional flow area, a		ft^2	1.227185	1.76715	4.90874	7.06858
13.	Wetted perimeter, p_w		ft	3.926991	4.71239	7.85398	9.42478
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.31	0.38	0.63	0.75
15.	Channel slope, s		ft/ft	0.012	0.015	0.016	0.005
16.	Manning's roughness coeff., n			0.013	0.013	0.013	0.013
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s	5.68	7.35	10.60	6.69
18.	Flow length, L		ft	81	376	31	12
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.004	+ 0.014	0.001	+ 0.000 = 0.019

			Segment ID	7			
12.	Cross sectional flow area, a		ft^2	9.621128			
13.	Wetted perimeter, p_w		ft	10.99557			
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.88			
15.	Channel slope, s		ft/ft	0.003			

16. Manning's roughness coeff., n				**0.013**							
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s	**5.74**								
18. Flow length, L		ft	**612**								
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.030**	+			+		=	**0.030**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)	hr	**0.11**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

Segment ID		1						
1. Surface description (table 3-1)		Short Grass						
2. Manning's roughness coeff., n (Table 15-1)		0.150						
3. Flow Length, L	ft	63						
4. Two-yr 24-hr rainfall, P_2	in	3.48						
5. Land slope, s	ft/ft	0.012						
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.133	+			+	=	0.133

Shallow concentrated flow

Segment ID		2						
7. Surface description (paved or unpaved)		Paved						
8. Flow length, L	ft	20						
9. Watercourse slope, s	ft/ft	0.017						
10. Average velocity, V (Figure 15-4)	ft/s	2.60						
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.002	+			+	=	0.002

Channel flow

Segment ID		3	4	5	6			
12. Cross sectional flow area, a	ft^2	1.76715	3.14159	4.90874	20.5			
13. Wetted perimeter, p_w	ft	4.71239	6.28319	7.85398	16.68			
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	0.38	0.50	0.63	1.23			
15. Channel slope, s	ft/ft	0.010	0.015	0.005	0.003			
16. Manning's roughness coeff., n		0.013	0.013	0.013	0.013			
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	5.90	8.69	5.92	7.55			
18. Flow length, L	ft	140	139	27	576			
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.007	+ 0.004	0.001	+ 0.021		=	0.033

				Segment ID		7		8			
12.	Cross sectional flow area, a				ft^2	32		30			
13.	Wetted perimeter, p_w				ft	24		26			
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft	1.33		1.15			
15.	Channel slope, s				ft/ft	0.003		0.003			
16.	Manning's roughness coeff., n					0.013		0.013			
17.		$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$	Compute V		ft/s	7.60		6.91			
18.	Flow length, L				ft	160		708			
19.		$T_t = \frac{L}{3600\, V}$	Compute T_t		hr	0.006	+	0.028	+		= 0.034

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.20**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, N** Checked **MI** Date

Circle One: (Present) Developed

Circle One: (T_c) T_t through subarea **Existing DA-1, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1						
1.	Surface description (table 3-1)		Short Grass						
2.	Manning's roughness coeff., n (Table 15-1)		0.15						
3.	Flow Length, L	ft	63						
4.	Two-yr 24-hr rainfall, P_2	in	4.14						
5.	Land slope, s	ft/ft	0.012						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t	hr	0.122	+		+		=	0.122

Shallow concentrated flow

		Segment ID	2						
7.	Surface description (paved or unpaved)		Paved						
8.	Flow length, L	ft	20						
9.	Watercourse slope, s	ft/ft	0.017						
10.	Average velocity, V (Figure 15-4)	ft/s	2.6						
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.002	+		+		=	0.002

Channel flow

		Segment ID	3	4	5	6			
12.	Cross sectional flow area, a	ft^2	1.767146	3.14159	4.90874	20.5			
13.	Wetted perimeter, p_w	ft	4.712389	6.28319	7.85398	16.68			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	0.38	0.50	0.63	1.23			
15.	Channel slope, s	ft/ft	0.010	0.015	0.005	0.003			
16.	Manning's roughness coeff., n		0.013	0.013	0.013	0.013			
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s	5.90	8.69	5.92	7.55			
18.	Flow length, L	ft	140	139	27	576			
19.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.007	+ 0.004	0.001	+ 0.021		=	0.033

		Segment ID	7	8					
12.	Cross sectional flow area, a	ft^2	32	30					
13.	Wetted perimeter, p_w	ft	24	26					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	1.33	1.15					
15.	Channel slope, s	ft/ft	0.003	0.003					

16. Manning's roughness coeff., n					0.013		0.013					
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s	7.60		6.91							
18. Flow length, L		ft	160		708							
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.006	+	0.028			+		=	0.034	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.19**

Project	**JSMC East Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: (Present) Developed

Circle One: (T_c) T_t through subarea **Existing DA-2, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	**1**						
1.	Surface description (table 3-1)			**Asphalt**						
2.	Manning's roughness coeff., n (Table 15-1)			**0.011**						
3.	Flow Length, L		ft	**100**						
4.	Two-yr 24-hr rainfall, P_2		in	**3.48**						
5.	Land slope, s		ft/ft	**0.009**						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.027**	+		+		=	**0.027**

Shallow concentrated flow

			Segment ID	**2**						
7.	Surface description (paved or unpaved)			**Paved**						
8.	Flow length, L		ft	**241**						
9.	Watercourse slope, s		ft/ft	**0.013**						
10.	Average velocity, V (Figure 15-4)		ft/s	**2.41**						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.028**	+		+		=	**0.028**

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s							
18.	Flow length, L		ft							
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+	=	**0.000**

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)									hr **0.05**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-2, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Asphalt			
2.	Manning's roughness coeff., n (Table 15-1)			0.011			
3.	Flow Length, L		ft	100			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.009			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.024	+	+	= 0.024

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	241			
9.	Watercourse slope, s		ft/ft	0.013			
10.	Average velocity, V (Figure 15-4)		ft/s	2.41			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.028	+	+	= 0.028

Channel flow

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				
18.	Flow length, L		ft				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+	+	= 0.000

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.05**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-2, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1					
1.	Surface description (table 3-1)			Short Grass					
2.	Manning's roughness coeff., n (Table 15-1)			0.15					
3.	Flow Length, L		ft	20					
4.	Two-yr 24-hr rainfall, P_2		in	3.48					
5.	Land slope, s		ft/ft	0.010					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.06	+		+	=	0.06

Shallow concentrated flow

			Segment ID	2					
7.	Surface description (paved or unpaved)			Paved					
8.	Flow length, L		ft	274					
9.	Watercourse slope, s		ft/ft	0.013					
10.	Average velocity, V (Figure 15-4)		ft/s	2.40					
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.03	+		+	=	0.03

Channel flow

			Segment ID						
12.	Cross sectional flow area, a		ft^2						
13.	Wetted perimeter, p_w		ft						
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft						
15.	Channel slope, s		ft/ft						
16.	Manning's roughness coeff., n								
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s						
18.	Flow length, L		ft						
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		+	=	0.00

				Segment ID					
12.	Cross sectional flow area, a				ft^2				
13.	Wetted perimeter, p_w				ft				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft				
15.	Channel slope, s				ft/ft				
16.	Manning's roughness coeff., n								
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s				
18.	Flow length, L				ft				
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	=	**0.00**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)									hr	**0.09**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-2, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Short Grass			
2.	Manning's roughness coeff., n (Table 15-1)			0.15			
3.	Flow Length, L		ft	20			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.01			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.05	+	+	= 0.05

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	274			
9.	Watercourse slope, s		ft/ft	0.013			
10.	Average velocity, V (Figure 15-4)		ft/s	2.40			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.03	+	+	= 0.03

Channel flow

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				
18.	Flow length, L		ft				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+	+	= 0.00

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				

18. Flow length, L

19. $T_t = \frac{L}{3600\ V}$ Compute T_t

ft									
hr		+			+		=	**0.00**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.08**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Proposed DA-1, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1						
1.	Surface description (table 3-1)		Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)		0.011						
3.	Flow Length, L	ft	100						
4.	Two-yr 24-hr rainfall, P_2	in	3.48						
5.	Land slope, s	ft/ft	0.014						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.022	+		+		=	0.022

Shallow concentrated flow

		Segment ID	2						
7.	Surface description (paved or unpaved)		Paved						
8.	Flow length, L	ft	243						
9.	Watercourse slope, s	ft/ft	0.010						
10.	Average velocity, V (Figure 15-4)	ft/s	1.90						
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.036	+		+		=	0.036

Channel flow

	Segment ID	3	4	5	6	
12. Cross sectional flow area, a	ft^2	1.22718	1.76715	4.90874	7.068583	
13. Wetted perimeter, p_w	ft	3.92699	4.71239	7.85398	9.424778	
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	0.31	0.38	0.63	0.75	
15. Channel slope, s	ft/ft	0.012	0.015	0.016	0.005	
16. Manning's roughness coeff., n		0.013	0.013	0.013	0.013	
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	5.68	7.35	10.60	6.69	
18. Flow length, L	ft	81	376	31	12	
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.004	+ 0.014	0.001	+ 0.000	= 0.019

				Segment ID		7				
12.	Cross sectional flow area, a				ft^2	**9.62113**				
13.	Wetted perimeter, p_w				ft	**10.9956**				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft	**0.88**				
15.	Channel slope, s				ft/ft	**0.003**				
16.	Manning's roughness coeff., n					**0.013**				
17.	$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$		Compute V		ft/s	**5.74**				
18.	Flow length, L				ft	**612**				
19.	$T_t = \frac{L}{3600\, V}$		Compute T_t		hr	**0.030**	+		+		=	**0.030**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.11**

Project **JSMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Asphalt			
2.	Manning's roughness coeff., n (Table 15-1)			0.011			
3.	Flow Length, L		ft	100			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.014			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.020	+	+	= 0.020

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	243			
9.	Watercourse slope, s		ft/ft	0.010			
10.	Average velocity, V (Figure 15-4)		ft/s	1.9			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.036	+	+	= 0.036

Channel flow

			Segment ID	3	4	5	6
12.	Cross sectional flow area, a		ft^2	1.227185	1.76715	4.90874	7.06858
13.	Wetted perimeter, p_w		ft	3.926991	4.71239	7.85398	9.42478
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.31	0.38	0.63	0.75
15.	Channel slope, s		ft/ft	0.012	0.015	0.016	0.005
16.	Manning's roughness coeff., n			0.013	0.013	0.013	0.013
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.68	7.35	10.60	6.69
18.	Flow length, L		ft	81	376	31	12
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.004	+ 0.014	+ 0.001	+ 0.000 = 0.019

			Segment ID	7			
12.	Cross sectional flow area, a		ft^2	9.621128			
13.	Wetted perimeter, p_w		ft	10.99557			
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.88			
15.	Channel slope, s		ft/ft	0.003			
16.	Manning's roughness coeff., n			0.013			
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.74			

18. Flow length, L

19. $T_t = \frac{L}{3600\ V}$ Compute T_t

ft	**612**								
hr	**0.030**	+			+		=	**0.030**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.11**

Project	**JSMC East Addition**	By	**SPT**	Date	**1/6/2025**
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Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	**1**						
1.	Surface description (table 3-1)			**Short Grass**						
2.	Manning's roughness coeff., n (Table 15-1)			**0.240**						
3.	Flow Length, L		ft	**37**						
4.	Two-yr 24-hr rainfall, P_2		in	**3.48**						
5.	Land slope, s		ft/ft	**0.015**						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.116**	+		+		=	**0.116**

Shallow concentrated flow

			Segment ID	**2**						
7.	Surface description (paved or unpaved)			**Paved**						
8.	Flow length, L		ft	**109**						
9.	Watercourse slope, s		ft/ft	**0.003**						
10.	Average velocity, V (Figure 15-4)		ft/s	**1.11**						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.027**	+		+		=	**0.027**

Channel flow

			Segment ID	**3**	**4**	**5**	**6**			
12.	Cross sectional flow area, a		ft^2	**1.22718**	**1.76715**	**4.90874**	**7.068583**			
13.	Wetted perimeter, p_w		ft	**3.92699**	**4.71239**	**7.85398**	**9.424778**			
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	**0.31**	**0.38**	**0.63**	**0.75**			
15.	Channel slope, s		ft/ft	**0.012**	**0.015**	**0.016**	**0.005**			
16.	Manning's roughness coeff., n			**0.013**	**0.013**	**0.013**	**0.013**			
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	**5.68**	**7.35**	**10.60**	**6.69**			
18.	Flow length, L		ft	**81**	**376**	**31**	**12**			
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.004**	+ **0.014**	**0.001**	+ **0.000**		=	**0.019**

			Segment ID	7	8				
12.	Cross sectional flow area, a		ft^2	**9.62113**					
13.	Wetted perimeter, p_w		ft	**10.9956**					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	**0.88**					
15.	Channel slope, s		ft/ft	**0.003**					
16.	Manning's roughness coeff., n			**0.013**					
17.	$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$	Compute V	ft/s	**5.74**					
18.	Flow length, L		ft	**612**					
19.	$T_t = \frac{L}{3600\, V}$	Compute T_t	hr	**0.030**	+		+		= **0.030**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.19**

Project	**JSMC East Addition**	By	**SPT**	Date	**1/6/2025**
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	
Circle One:	Present (Developed)				
Circle One:	(T_c) T_t through subarea	**Proposed DA-1, Pervious, Future Storm**			

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1					
1. Surface description (table 3-1)			Short Grass					
2. Manning's roughness coeff., n (Table 15-1)			0.240					
3. Flow Length, L		ft	37					
4. Two-yr 24-hr rainfall, P_2		in	4.14					
5. Land slope, s		ft/ft	0.015					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.106	+		+	=	0.106

Shallow concentrated flow

		Segment ID	2					
7. Surface description (paved or unpaved)			Paved					
8. Flow length, L		ft	109					
9. Watercourse slope, s		ft/ft	0.003					
10. Average velocity, V (Figure 15-4)		ft/s	1.11					
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.027	+		+	=	0.027

Channel flow

		Segment ID	3	4	5	6		
12. Cross sectional flow area, a		ft^2	1.227185	1.76715	4.90874	7.06858		
13. Wetted perimeter, p_w		ft	3.926991	4.71239	7.85398	9.42478		
14. Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.31	0.38	0.63	0.75		
15. Channel slope, s		ft/ft	0.012	0.015	0.016	0.005		
16. Manning's roughness coeff., n			0.013	0.013	0.013	0.013		
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.68	7.35	10.60	6.69		
18. Flow length, L		ft	81	376	31	12		
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.004	+ 0.014	+ 0.001	+ 0.000	=	0.019

		Segment ID	7	8		
12. Cross sectional flow area, a		ft^2	9.621128			
13. Wetted perimeter, p_w		ft	10.99557			
14. Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.88			
15. Channel slope, s		ft/ft	0.003			
16. Manning's roughness coeff., n			0.013			
$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$						

17. $\frac{\quad}{n}$	Compute V	ft/s	**5.74**							
18. Flow length, L		ft	**612**							
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.030**	+			+		=	**0.030**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.18**

Project	**JSUMC East Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-2, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

				Segment ID	**1**						
1.	Surface description (table 3-1)				**Asphalt**						
2.	Manning's roughness coeff., n (Table 15-1)				**0.011**						
3.	Flow Length, L			ft	**100**						
4.	Two-yr 24-hr rainfall, P_2			in	**3.48**						
5.	Land slope, s			ft/ft	**0.008**						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$		Compute T_t	hr	**0.028**	+		+		=	**0.028**

Shallow concentrated flow

				Segment ID	**2**						
7.	Surface description (paved or unpaved)				**Paved**						
8.	Flow length, L			ft	**347**						
9.	Watercourse slope, s			ft/ft	**0.011**						
10.	Average velocity, V (Figure 15-4)			ft/s	**2.13**						
11.	$T_t = \frac{L}{3600\ V}$		Compute T_t	hr	**0.045**	+		+		=	**0.045**

Channel flow

				Segment ID							
12.	Cross sectional flow area, a			ft^2							
13.	Wetted perimeter, p_w			ft							
14.	Hydraulic radius, r	$r = \frac{a}{P_w}$	Compute r	ft							
15.	Channel slope, s			ft/ft							
16.	Manning's roughness coeff., n										
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V	ft/s							
18.	Flow length, L			ft							
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t	hr		+		+		=	**0.000**

	Segment ID								
12. Cross sectional flow area, a	ft^2								
13. Wetted perimeter, p_w	ft								
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft								
15. Channel slope, s	ft/ft								
16. Manning's roughness coeff., n									
17. $V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$ Compute V	ft/s								
18. Flow length, L	ft								
19. $T_t = \frac{L}{3600\, V}$ Compute T_t	hr		+			+		=	**0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)	hr	**0.07**

Project **JSUMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-2, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)			0.011						
3.	Flow Length, L		ft	100						
4.	Two-yr 24-hr rainfall, P_2		in	4.14						
5.	Land slope, s		ft/ft	0.008						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$	Compute T_t	hr	0.026	+			+		= 0.026

Shallow concentrated flow

			Segment ID	2						
7.	Surface description (paved or unpaved)			Paved						
8.	Flow length, L		ft	347						
9.	Watercourse slope, s		ft/ft	0.011						
10.	Average velocity, V (Figure 15-4)		ft/s	2.13						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.045	+			+		= 0.045

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s							
18.	Flow length, L		ft							
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+		= 0.000

			Segment ID							
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$									

17. $\frac{\quad}{n}$	Compute V	ft/s									
18. Flow length, L		ft									
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+		=	**0.000**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.07**

Project	**JSUMC East Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-2, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	**1**						
1.	Surface description (table 3-1)			**Short Grass**						
2.	Manning's roughness coeff., n (Table 15-1)			**0.150**						
3.	Flow Length, L		ft	**21**						
4.	Two-yr 24-hr rainfall, P_2		in	**3.48**						
5.	Land slope, s		ft/ft	**0.025**						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.041**	+				=	**0.041**

Shallow concentrated flow

			Segment ID	**2**						
7.	Surface description (paved or unpaved)			**Paved**						
8.	Flow length, L		ft	**434**						
9.	Watercourse slope, s		ft/ft	**0.011**						
10.	Average velocity, V (Figure 15-4)		ft/s	**2.13**						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.057**	+				=	**0.057**

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s							
18.	Flow length, L		ft							
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+	=	**0.000**

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= 0.000
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)								hr	0.10

Project **JSUMC East Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-2, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Short Grass						
2.	Manning's roughness coeff., n (Table 15-1)			0.15						
3.	Flow Length, L		ft	21						
4.	Two-yr 24-hr rainfall, P_2		in	4.14						
5.	Land slope, s		ft/ft	0.025						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.038	+		+		=	0.038

Shallow concentrated flow

			Segment ID	2						
7.	Surface description (paved or unpaved)			Paved						
8.	Flow length, L		ft	434						
9.	Watercourse slope, s		ft/ft	0.011						
10.	Average velocity, V (Figure 15-4)		ft/s	2.13						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.057	+		+		=	0.057

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s							
18.	Flow length, L		ft							
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		+		=	0.000

		Segment ID					
12.	Cross sectional flow area, a	ft^2					
13.	Wetted perimeter, p_w	ft					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft					
15.	Channel slope, s	ft/ft					
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$ Compute V	ft/s					

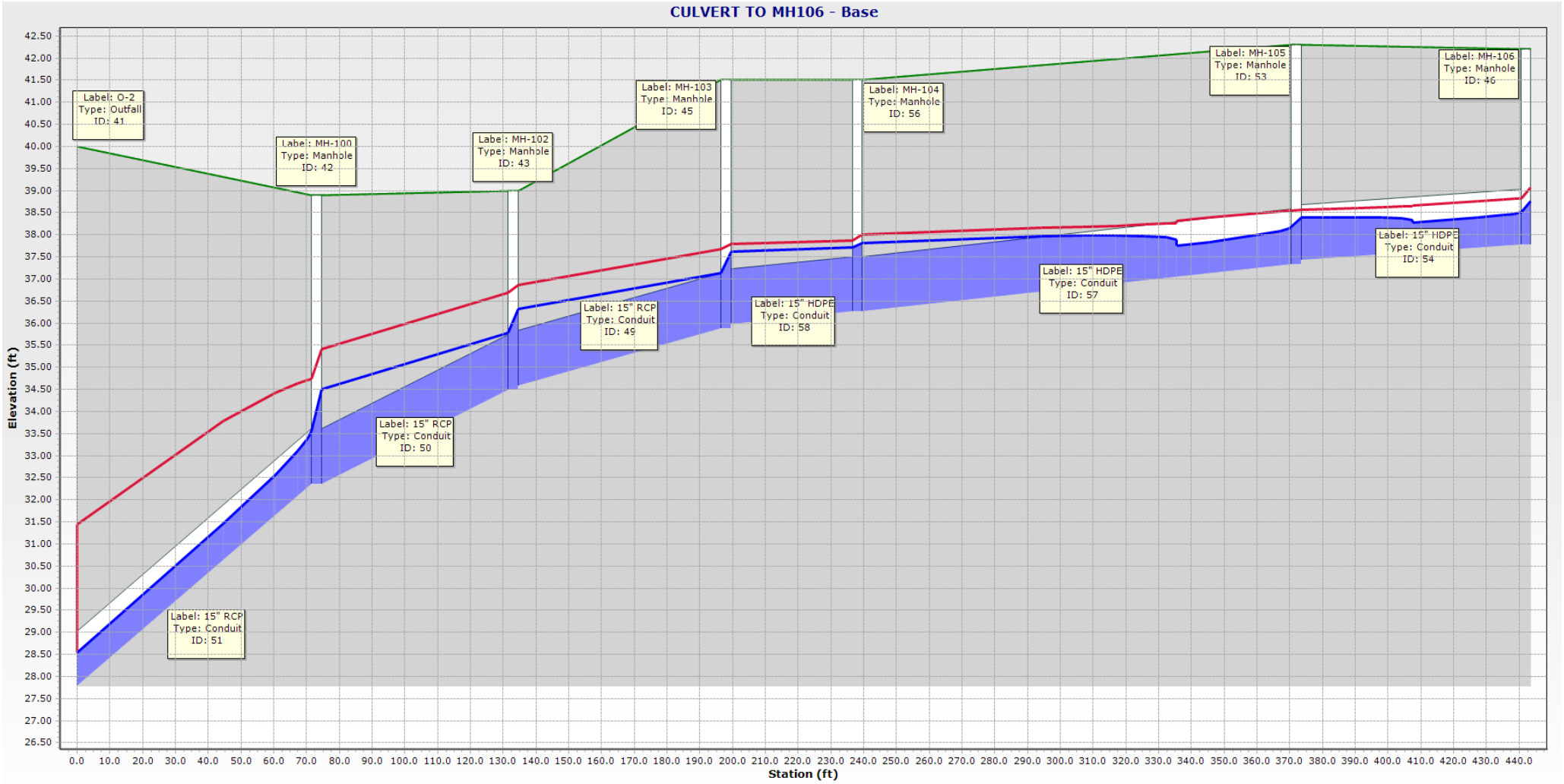
18. Flow length, L ft

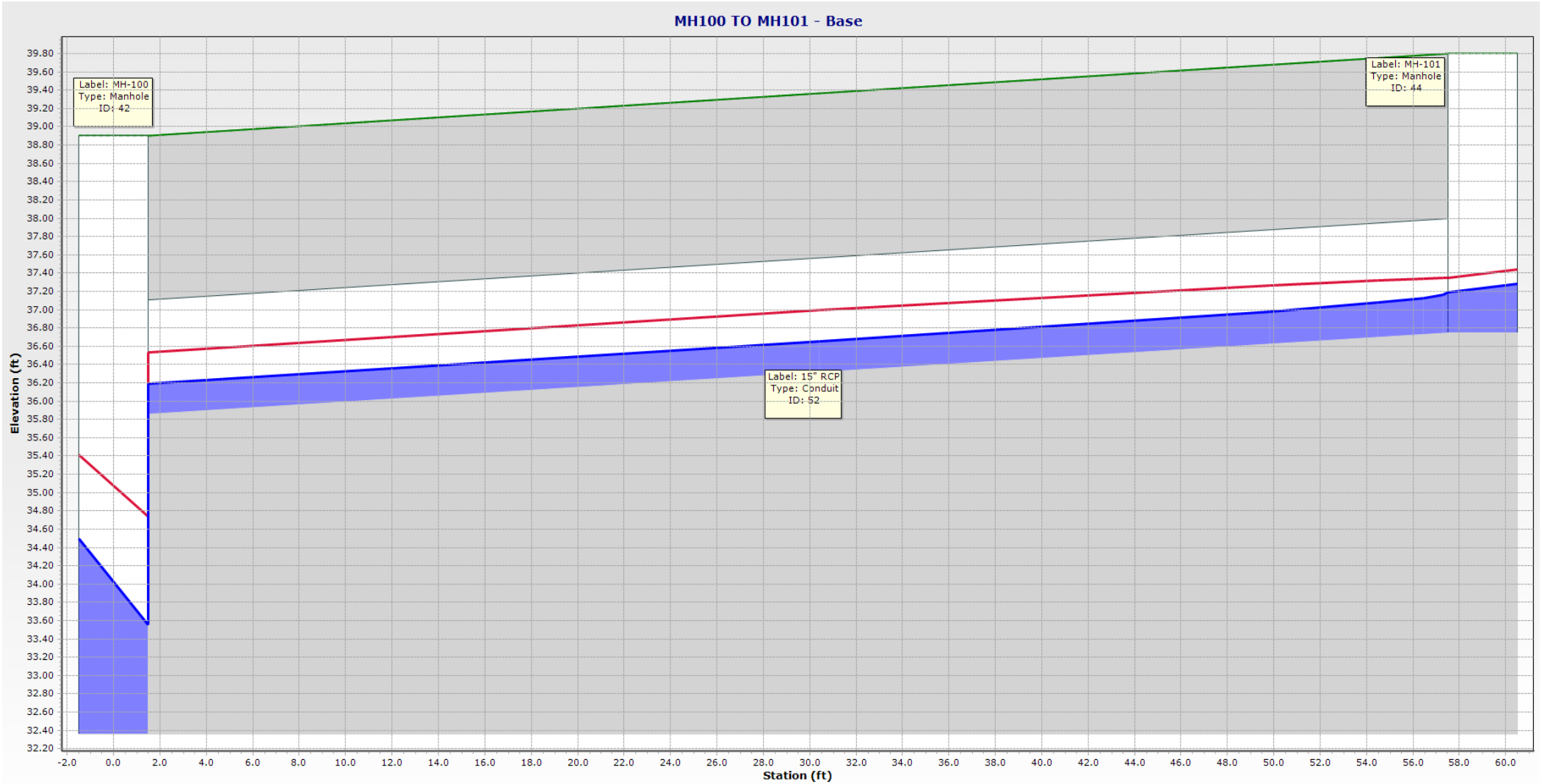
19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.09**

FlexTable: Conduit Table

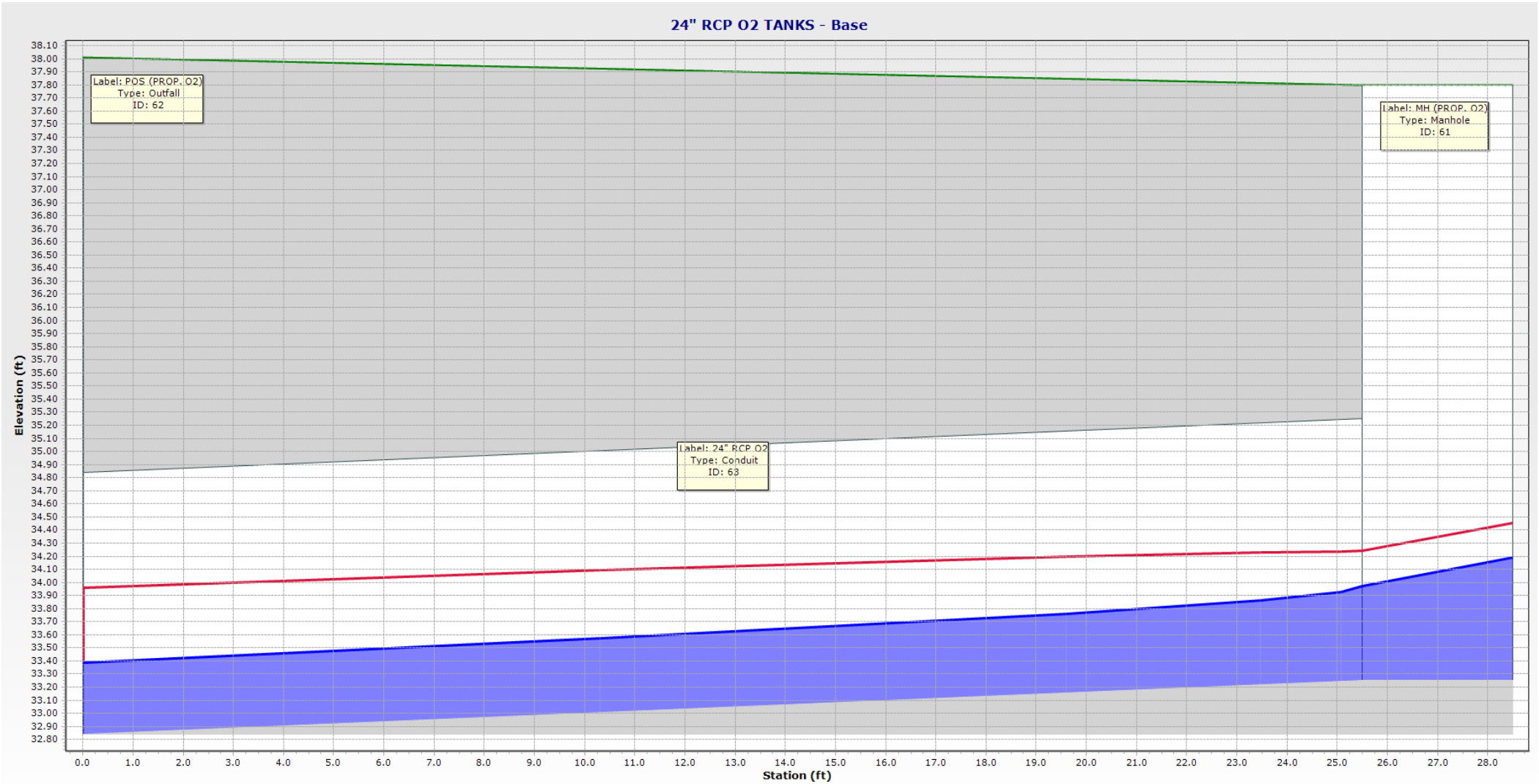
Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Flow (cfs)	Capacity (Full Flow) (cfs)
15" RCP	MH-103	MH-102	35.88	34.58	65.0	0.020	15.0	7.21	9.14
15" RCP	MH-102	MH-100	34.48	32.36	60.0	0.035	15.0	9.41	12.14
15" RCP	MH-100	O-2	32.36	27.78	73.0	0.063	15.0	10.53	16.18
15" RCP	MH-101	MH-100	36.75	35.86	59.0	0.015	15.0	1.22	7.93
15" HDPE	MH-106	MH-105	37.78	37.43	70.0	0.005	15.0	3.31	5.94
15" HDPE	MH-105	MH-104	37.33	36.26	134.0	0.008	15.0	4.32	7.50
15" HDPE	MH-104	MH-103	36.26	35.98	40.0	0.007	15.0	4.06	7.03

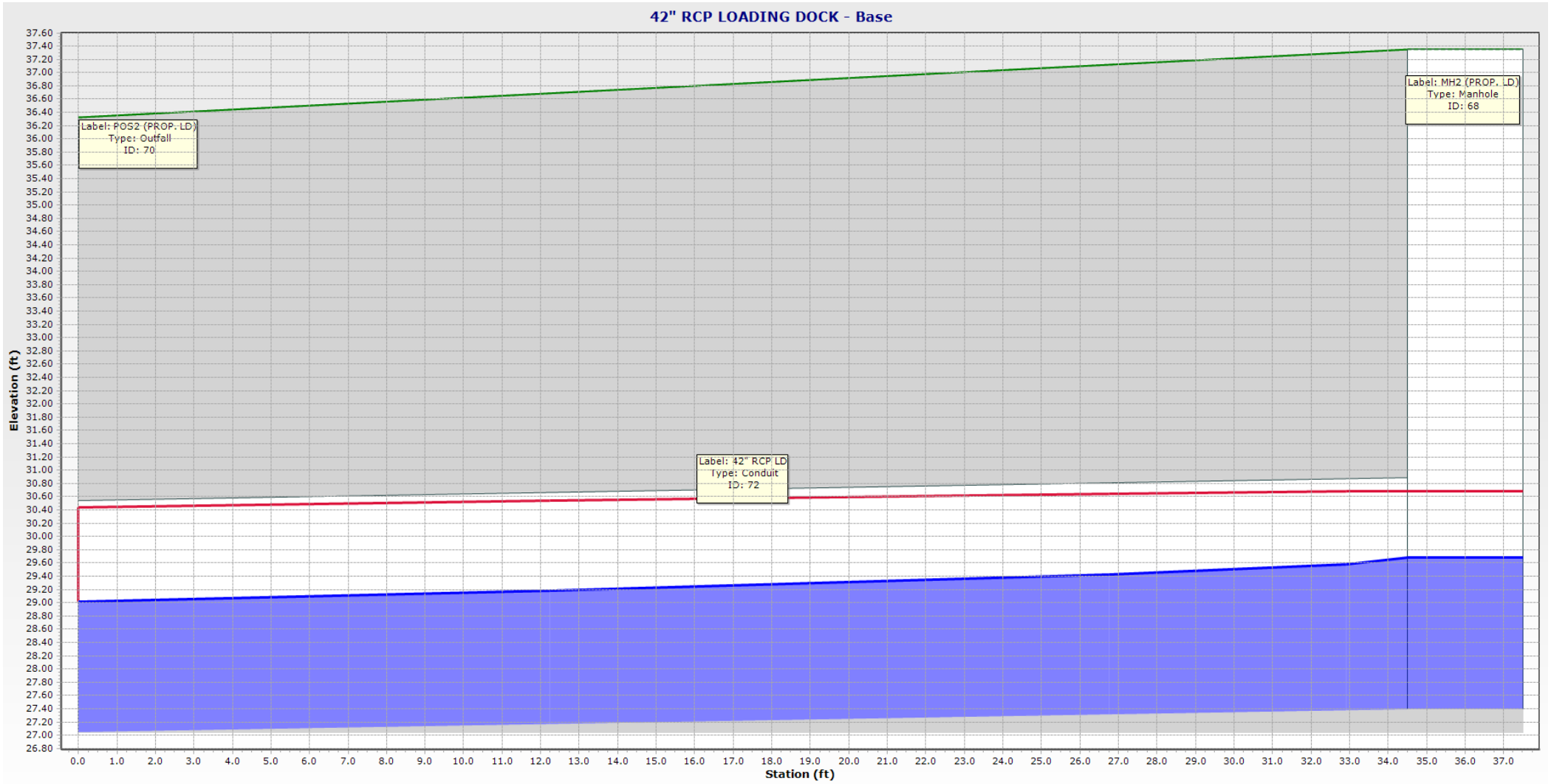

CULVERT TO MH106 - Base
Label: O-2
Type: Outfall
ID: 41
Label: MH-100
Type: Manhole
ID: 42
Label: MH-102
Type: Manhole
ID: 43
Label: MH-103
Type: Manhole
ID: 45
Label: MH-104
Type: Manhole
ID: 56
Label: MH-105
Type: Manhole
ID: 53
Label: MH-106
Type: Manhole
ID: 46
Label: 15" RCP
Type: Conduit
ID: 51
Label: 15" RCP
Type: Conduit
ID: 50
Label: 15" RCP
Type: Conduit
ID: 49
Label: 15" HDPE
Type: Conduit
ID: 58
Label: 15" HDPE
Type: Conduit
ID: 57
Label: 15" HDPE
Type: Conduit
ID: 54
Elevation (ft)
Station (ft)


MH100 TO MH101 - Base
Label: MH-100
Type: Manhole
ID: 42
Label: MH-101
Type: Manhole
ID: 44
Label: 15" RCP
Type: Conduit
ID: 52
Elevation (ft)
Station (ft)
39.80
39.60
39.40
39.20
39.00
38.80
38.60
38.40
38.20
38.00
37.80
37.60
37.40
37.20
37.00
36.80
36.60
36.40
36.20
36.00
35.80
35.60
35.40
35.20
35.00
34.80
34.60
34.40
34.20
34.00
33.80
33.60
33.40
33.20
33.00
32.80
32.60
32.40
32.20
-2.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
22.0
24.0
26.0
28.0
30.0
32.0
34.0
36.0
38.0
40.0
42.0
44.0
46.0
48.0
50.0
52.0
54.0
56.0
58.0
60.0

FlexTable: Conduit Table

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Flow (cfs)	Capacity (Full Flow) (cfs)
24" RCP O2	MH (EXIST. O2)	POS (EXIST. O2)	33.25	32.84	27.0	0.015	24.0	3.72	27.88
24" RCP O2	MH (PROP. O2)	POS (PROP. O2)	33.25	32.84	27.0	0.015	24.0	4.25	27.88
42" RCP LD	MH2 (EXIST. LD)	POS2 (EXIST. LD)	27.39	27.04	36.0	0.010	42.0	53.25	99.20
42" RCP LD	MH2 (PROP. LD)	POS2 (PROP. LD)	27.39	27.04	36.0	0.010	42.0	53.66	99.20


24" RCP O2 TANKS - Base
Label: POS (PROP. O2)
Type: Outfall
ID: 62
Label: MH (PROP. O2)
Type: Manhole
ID: 61
Label: 24" RCP O2
Type: Conduit
ID: 63
Elevation (ft)
Station (ft)


42" RCP LOADING DOCK - Base
Label: POS2 (PROP. LD)
Type: Outfall
ID: 70
Label: MH2 (PROP. LD)
Type: Manhole
ID: 68
Label: 42" RCP LD
Type: Conduit
ID: 72
Elevation (ft)
Station (ft)

APPENDIX III:

West Addition Pondpack: Master Summary Report
West Addition PondPack: Rainfall Report
West Addition PondPack: Unit Hydrograph
West Addition PondPack: Routing Diagrams
West Addition Pondpack: Graphical & Numerical Hydrograph Comparisons
West Addition Time of Concentration Calculations
West Addition SewerGEMS: FlexTables
West Addition SewerGEMS: Pipe Profile

JSUMC West Addition: PondPack Report

Project Summary	
Title	JSUMC West Addition
Engineer	
Company	Dewberry Engineers Inc
Date	12/3/2024

Notes

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JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.7 % is greater than 1.5 %. Computed peak flow= 8.05 ft³/s Interp. peak flow= 4.77 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	32
Label	EDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 39.2 % is greater than 1.5 %. Computed peak flow= 0.69 ft³/s Interp. peak flow= 0.42 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 3.34 ft³/s Interp. peak flow= 2.00 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	34
Label	EDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 22.0 % is greater than 1.5 %. Computed peak flow= 0.54 ft³/s Interp. peak flow= 0.42 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.7 % is greater than 1.5 %. Computed peak flow= 7.12 ft³/s Interp. peak flow= 4.22 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	36
Label	PDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 38.3 % is greater than 1.5 %. Computed peak flow= 0.85 ft³/s Interp. peak flow= 0.53 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 3.31 ft³/s Interp. peak flow= 1.97 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 2 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 25.6 % is greater than 1.5 %. Computed peak flow= 0.56 ft³/s Interp. peak flow= 0.41 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.6 % is greater than 1.5 %. Computed peak flow= 12.66 ft³/s Interp. peak flow= 7.52 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	32
Label	EDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 44.1 % is greater than 1.5 %. Computed peak flow= 1.96 ft³/s Interp. peak flow= 1.10 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 5.26 ft³/s Interp. peak flow= 3.14 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	34
Label	EDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 25.1 % is greater than 1.5 %. Computed peak flow= 1.37 ft³/s Interp. peak flow= 1.02 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.6 % is greater than 1.5 %. Computed peak flow= 11.20 ft³/s Interp. peak flow= 6.65 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	36
Label	PDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 43.8 % is greater than 1.5 %. Computed peak flow= 2.53 ft³/s Interp. peak flow= 1.42 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 5.20 ft³/s Interp. peak flow= 3.11 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Current 10 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 29.0 % is greater than 1.5 %. Computed peak flow= 1.37 ft³/s Interp. peak flow= 0.97 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.5 % is greater than 1.5 %. Computed peak flow= 21.93 ft³/s Interp. peak flow= 13.04 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	32
Label	EDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 46.7 % is greater than 1.5 %. Computed peak flow= 5.05 ft³/s Interp. peak flow= 2.69 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	35
Label	EDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 9.11 ft³/s Interp. peak flow= 5.45 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	34
Label	EDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 26.9 % is greater than 1.5 %. Computed peak flow= 3.27 ft³/s Interp. peak flow= 2.39 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	37
Label	PDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.5 % is greater than 1.5 %. Computed peak flow= 19.40 ft³/s Interp. peak flow= 11.54 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	36
Label	PDA1 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 46.5 % is greater than 1.5 %. Computed peak flow= 6.65 ft³/s Interp. peak flow= 3.56 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	39
Label	PDA2 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 9.01 ft³/s Interp. peak flow= 5.40 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Current 100 year
Element Type	Catchment
Element Id	38
Label	PDA2 - Per - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 31.2 % is greater than 1.5 %. Computed peak flow= 3.25 ft³/s Interp. peak flow= 2.23 ft³/s. Output increment for this catchment may be too large.
Source	Warning

User Notifications

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.7 % is greater than 1.5 %. Computed peak flow= 9.60 ft³/s Interp. peak flow= 5.70 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 41.7 % is greater than 1.5 %. Computed peak flow= 1.08 ft³/s Interp. peak flow= 0.63 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 3.99 ft³/s Interp. peak flow= 2.38 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 26.9 % is greater than 1.5 %. Computed peak flow= 0.82 ft³/s Interp. peak flow= 0.60 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.7 % is greater than 1.5 %. Computed peak flow= 8.49 ft³/s Interp. peak flow= 5.04 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	40
Label	PDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 44.8 % is greater than 1.5 %. Computed peak flow= 1.40 ft³/s Interp. peak flow= 0.77 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.3 % is greater than 1.5 %. Computed peak flow= 3.95 ft³/s Interp. peak flow= 2.36 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 2 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 31.4 % is greater than 1.5 %. Computed peak flow= 0.83 ft³/s Interp. peak flow= 0.57 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.6 % is greater than 1.5 %. Computed peak flow= 14.93 ft³/s Interp. peak flow= 8.87 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 45.1 % is greater than 1.5 %. Computed peak flow= 2.68 ft³/s Interp. peak flow= 1.47 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 6.20 ft³/s Interp. peak flow= 3.71 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 29.6 % is greater than 1.5 %. Computed peak flow= 1.85 ft³/s Interp. peak flow= 1.31 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.6 % is greater than 1.5 %. Computed peak flow= 13.21 ft³/s Interp. peak flow= 7.85 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	40
Label	PDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 48.4 % is greater than 1.5 %. Computed peak flow= 3.56 ft³/s Interp. peak flow= 1.84 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.2 % is greater than 1.5 %. Computed peak flow= 6.14 ft³/s Interp. peak flow= 3.67 ft³/s. Output increment for this catchment may be too large.
Source	Warning
Message Id	7
Scenario	Future 10 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 33.5 % is greater than 1.5 %. Computed peak flow= 1.84 ft³/s Interp. peak flow= 1.23 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	43
Label	EDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.5 % is greater than 1.5 %. Computed peak flow= 27.13 ft³/s Interp. peak flow= 16.13 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	41
Label	EDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 47.3 % is greater than 1.5 %. Computed peak flow= 6.88 ft³/s Interp. peak flow= 3.63 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	47
Label	EDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 11.27 ft³/s Interp. peak flow= 6.75 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	45
Label	EDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 31.6 % is greater than 1.5 %. Computed peak flow= 4.50 ft³/s Interp. peak flow= 3.07 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: User Notifications

User Notifications

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	42
Label	PDA1 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.5 % is greater than 1.5 %. Computed peak flow= 24.00 ft³/s Interp. peak flow= 14.27 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	40
Label	PDA1 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 48.2 % is greater than 1.5 %. Computed peak flow= 9.32 ft³/s Interp. peak flow= 4.83 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	46
Label	PDA2 - Imp - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 40.1 % is greater than 1.5 %. Computed peak flow= 11.15 ft³/s Interp. peak flow= 6.68 ft³/s. Output increment for this catchment may be too large.
Source	Warning

Message Id	7
Scenario	Future 100 year
Element Type	Catchment
Element Id	44
Label	PDA2 - Per - Fut
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 35.5 % is greater than 1.5 %. Computed peak flow= 4.41 ft³/s Interp. peak flow= 2.84 ft³/s. Output increment for this catchment may be too large.
Source	Warning

JSUMC West Addition: PondPack Report

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
EDA1 - Per - Cur	Current 2 year	2	0.056	12.25	0.42
EDA1 - Per - Cur	Current 10 year	10	0.145	12.25	1.10
EDA1 - Per - Cur	Current 100 year	100	0.367	12.25	2.69
EDA1 - Imp - Cur	Current 2 year	2	0.610	12.00	4.77
EDA1 - Imp - Cur	Current 10 year	10	0.979	12.00	7.52
EDA1 - Imp - Cur	Current 100 year	100	1.724	12.00	13.04
EDA2 - Per - Cur	Current 2 year	2	0.048	12.25	0.42
EDA2 - Per - Cur	Current 10 year	10	0.114	12.25	1.02
EDA2 - Per - Cur	Current 100 year	100	0.274	12.25	2.39
EDA2 - Imp - Cur	Current 2 year	2	0.243	12.00	2.00
EDA2 - Imp - Cur	Current 10 year	10	0.389	12.00	3.14
EDA2 - Imp - Cur	Current 100 year	100	0.686	12.00	5.45
PDA1 - Per - Cur	Current 2 year	2	0.071	12.25	0.53
PDA1 - Per - Cur	Current 10 year	10	0.187	12.25	1.42
PDA1 - Per - Cur	Current 100 year	100	0.483	12.25	3.56
PDA1 - Imp - Cur	Current 2 year	2	0.540	12.00	4.22
PDA1 - Imp - Cur	Current 10 year	10	0.866	12.00	6.65
PDA1 - Imp - Cur	Current 100 year	100	1.526	12.00	11.54
PDA2 - Per - Cur	Current 2 year	2	0.048	12.25	0.41
PDA2 - Per - Cur	Current 10 year	10	0.112	12.25	0.97
PDA2 - Per - Cur	Current 100 year	100	0.264	12.25	2.23
PDA2 - Imp - Cur	Current 2 year	2	0.240	12.00	1.97
PDA2 - Imp - Cur	Current 10 year	10	0.385	12.00	3.11
PDA2 - Imp - Cur	Current 100 year	100	0.678	12.00	5.40
PDA1 - Per - Fut	Future 2 year	2	0.106	12.25	0.77
PDA1 - Per - Fut	Future 10 year	10	0.254	12.25	1.84
PDA1 - Per - Fut	Future 100 year	100	0.666	12.00	4.83
EDA1 - Per - Fut	Future 2 year	2	0.083	12.25	0.63
EDA1 - Per - Fut	Future 10 year	10	0.195	12.25	1.47
EDA1 - Per - Fut	Future 100 year	100	0.505	12.25	3.63
PDA1 - Imp - Fut	Future 2 year	2	0.650	12.00	5.04
PDA1 - Imp - Fut	Future 10 year	10	1.027	12.00	7.85
PDA1 - Imp - Fut	Future 100 year	100	1.895	12.00	14.27
EDA1 - Imp - Fut	Future 2 year	2	0.734	12.00	5.70
EDA1 - Imp - Fut	Future 10 year	10	1.162	12.00	8.87
EDA1 - Imp - Fut	Future 100 year	100	2.143	12.00	16.13
PDA2 - Per - Fut	Future 2 year	2	0.067	12.25	0.57
PDA2 - Per - Fut	Future 10 year	10	0.146	12.25	1.23
PDA2 - Per - Fut	Future 100 year	100	0.355	12.25	2.84
EDA2 - Per - Fut	Future 2 year	2	0.068	12.25	0.60
EDA2 - Per - Fut	Future 10 year	10	0.150	12.25	1.31
EDA2 - Per - Fut	Future 100 year	100	0.369	12.25	3.07
PDA2 - Imp - Fut	Future 2 year	2	0.289	12.00	2.36

JSUMC West Addition: PondPack Report

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
PDA2 - Imp - Fut	Future 10 year	10	0.457	12.00	3.67
PDA2 - Imp - Fut	Future 100 year	100	0.843	12.00	6.68
EDA2 - Imp - Fut	Future 2 year	2	0.292	12.00	2.38
EDA2 - Imp - Fut	Future 10 year	10	0.462	12.00	3.71
EDA2 - Imp - Fut	Future 100 year	100	0.852	12.00	6.75

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Pre - POS1	Current 2 year	2	0.667	12.00	5.02
Pre - POS1	Future 2 year	2	0.818	12.00	6.14
Pre - POS1	Current 10 year	10	1.123	12.00	8.40
Pre - POS1	Future 10 year	10	1.357	12.00	10.13
Pre - POS1	Current 100 year	100	2.092	12.00	15.56
Pre - POS1	Future 100 year	100	2.647	12.00	19.66
Post - POS1	Current 2 year	2	0.611	12.00	4.51
Post - POS1	Future 2 year	2	0.756	12.00	5.61
Post - POS1	Current 10 year	10	1.053	12.00	7.77
Post - POS1	Future 10 year	10	1.281	12.00	9.53
Post - POS1	Current 100 year	100	2.009	12.00	14.84
Post - POS1	Future 100 year	100	2.562	12.00	19.10
Pre - POS2	Current 2 year	2	0.291	12.00	2.19
Pre - POS2	Future 2 year	2	0.360	12.00	2.72
Pre - POS2	Current 10 year	10	0.503	12.00	3.74
Pre - POS2	Future 10 year	10	0.612	12.00	4.56
Pre - POS2	Current 100 year	100	0.959	12.00	7.01
Pre - POS2	Future 100 year	100	1.221	12.00	8.97
Post - POS2	Current 2 year	2	0.288	12.00	2.19
Post - POS2	Future 2 year	2	0.356	12.00	2.71
Post - POS2	Current 10 year	10	0.497	12.00	3.72
Post - POS2	Future 10 year	10	0.603	12.00	4.54
Post - POS2	Current 100 year	100	0.943	12.00	6.97
Post - POS2	Future 100 year	100	1.198	12.00	8.90

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Time-Depth Curve: Current 10	
Label	Current 10
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.01	0.02	0.02
0.50	0.03	0.04	0.04	0.05	0.06
1.00	0.06	0.07	0.08	0.08	0.09
1.50	0.10	0.10	0.11	0.12	0.12
2.00	0.13	0.14	0.14	0.15	0.16
2.50	0.17	0.17	0.18	0.19	0.20
3.00	0.20	0.21	0.22	0.23	0.24
3.50	0.24	0.25	0.26	0.27	0.28
4.00	0.29	0.29	0.30	0.31	0.32
4.50	0.33	0.34	0.35	0.35	0.36
5.00	0.37	0.38	0.39	0.40	0.41
5.50	0.42	0.43	0.44	0.45	0.45
6.00	0.46	0.47	0.48	0.49	0.50
6.50	0.52	0.53	0.54	0.55	0.56
7.00	0.57	0.59	0.60	0.61	0.62
7.50	0.64	0.65	0.66	0.68	0.69
8.00	0.71	0.72	0.74	0.75	0.77
8.50	0.78	0.80	0.81	0.83	0.85
9.00	0.86	0.88	0.90	0.92	0.94
9.50	0.96	0.98	1.00	1.03	1.05
10.00	1.08	1.10	1.13	1.16	1.19
10.50	1.22	1.25	1.29	1.33	1.37
11.00	1.41	1.47	1.52	1.58	1.65
11.50	1.72	1.82	1.93	2.07	2.27
12.00	2.61	3.17	3.37	3.51	3.62
12.50	3.72	3.79	3.86	3.92	3.97
13.00	4.03	4.07	4.11	4.15	4.19
13.50	4.22	4.25	4.28	4.31	4.34
14.00	4.36	4.39	4.41	4.44	4.46
14.50	4.48	4.50	4.52	4.54	4.56
15.00	4.58	4.59	4.61	4.63	4.64
15.50	4.66	4.67	4.69	4.70	4.72
16.00	4.73	4.75	4.76	4.78	4.79
16.50	4.80	4.82	4.83	4.84	4.85

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	4.87	4.88	4.89	4.90	4.91
17.50	4.92	4.94	4.95	4.96	4.97
18.00	4.98	4.99	4.99	5.00	5.01
18.50	5.02	5.03	5.04	5.05	5.06
19.00	5.07	5.08	5.09	5.09	5.10
19.50	5.11	5.12	5.13	5.14	5.15
20.00	5.15	5.16	5.17	5.18	5.19
20.50	5.20	5.20	5.21	5.22	5.23
21.00	5.24	5.24	5.25	5.26	5.27
21.50	5.27	5.28	5.29	5.30	5.30
22.00	5.31	5.32	5.32	5.33	5.34
22.50	5.34	5.35	5.36	5.36	5.37
23.00	5.38	5.38	5.39	5.40	5.40
23.50	5.41	5.42	5.42	5.43	5.43
24.00	5.44	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Time-Depth Curve: Current 100	
Label	Current 100
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.02	0.03	0.04
0.50	0.05	0.06	0.07	0.09	0.10
1.00	0.11	0.12	0.13	0.14	0.15
1.50	0.17	0.18	0.19	0.20	0.21
2.00	0.23	0.24	0.25	0.26	0.28
2.50	0.29	0.30	0.31	0.33	0.34
3.00	0.35	0.37	0.38	0.39	0.41
3.50	0.42	0.44	0.45	0.46	0.48
4.00	0.49	0.51	0.52	0.54	0.55
4.50	0.57	0.58	0.60	0.61	0.63
5.00	0.64	0.66	0.67	0.69	0.71
5.50	0.72	0.74	0.75	0.77	0.79
6.00	0.80	0.82	0.84	0.85	0.87
6.50	0.89	0.91	0.93	0.95	0.97
7.00	0.99	1.01	1.03	1.05	1.08
7.50	1.10	1.12	1.15	1.17	1.19
8.00	1.22	1.25	1.27	1.30	1.32
8.50	1.35	1.38	1.41	1.43	1.46
9.00	1.49	1.52	1.55	1.59	1.62
9.50	1.66	1.70	1.74	1.78	1.82
10.00	1.86	1.91	1.96	2.00	2.05
10.50	2.11	2.16	2.22	2.29	2.37
11.00	2.44	2.53	2.63	2.74	2.85
11.50	2.98	3.15	3.33	3.57	3.92
12.00	4.50	5.48	5.83	6.07	6.25
12.50	6.42	6.55	6.66	6.77	6.87
13.00	6.96	7.03	7.11	7.18	7.24
13.50	7.29	7.35	7.40	7.44	7.49
14.00	7.54	7.58	7.62	7.66	7.70
14.50	7.74	7.78	7.81	7.85	7.88
15.00	7.91	7.94	7.97	7.99	8.02
15.50	8.05	8.08	8.10	8.13	8.15
16.00	8.18	8.21	8.23	8.25	8.28
16.50	8.30	8.32	8.35	8.37	8.39

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	8.41	8.43	8.45	8.47	8.49
17.50	8.51	8.53	8.55	8.56	8.58
18.00	8.60	8.61	8.63	8.65	8.66
18.50	8.68	8.69	8.71	8.73	8.74
19.00	8.76	8.77	8.79	8.80	8.82
19.50	8.83	8.85	8.86	8.88	8.89
20.00	8.91	8.92	8.94	8.95	8.96
20.50	8.98	8.99	9.01	9.02	9.03
21.00	9.05	9.06	9.07	9.09	9.10
21.50	9.11	9.12	9.14	9.15	9.16
22.00	9.17	9.19	9.20	9.21	9.22
22.50	9.23	9.25	9.26	9.27	9.28
23.00	9.29	9.30	9.31	9.33	9.34
23.50	9.35	9.36	9.37	9.38	9.39
24.00	9.40	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

Time-Depth Curve: Current 2-Year	
Label	Current 2-Year
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	2 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.00	0.01	0.01	0.02
0.50	0.02	0.02	0.03	0.03	0.04
1.00	0.04	0.04	0.05	0.05	0.06
1.50	0.06	0.07	0.07	0.07	0.08
2.00	0.08	0.09	0.09	0.10	0.10
2.50	0.11	0.11	0.12	0.12	0.13
3.00	0.13	0.14	0.14	0.15	0.15
3.50	0.16	0.16	0.17	0.17	0.18
4.00	0.18	0.19	0.19	0.20	0.20
4.50	0.21	0.22	0.22	0.23	0.23
5.00	0.24	0.24	0.25	0.26	0.26
5.50	0.27	0.27	0.28	0.28	0.29
6.00	0.30	0.30	0.31	0.32	0.32
6.50	0.33	0.34	0.34	0.35	0.36
7.00	0.37	0.37	0.38	0.39	0.40
7.50	0.41	0.42	0.42	0.43	0.44
8.00	0.45	0.46	0.47	0.48	0.49
8.50	0.50	0.51	0.52	0.53	0.54
9.00	0.55	0.56	0.58	0.59	0.60
9.50	0.61	0.63	0.64	0.66	0.67
10.00	0.69	0.71	0.72	0.74	0.76
10.50	0.78	0.80	0.82	0.85	0.88
11.00	0.90	0.94	0.97	1.01	1.06
11.50	1.10	1.17	1.23	1.32	1.45
12.00	1.67	2.03	2.16	2.25	2.31
12.50	2.38	2.42	2.47	2.51	2.54
13.00	2.58	2.60	2.63	2.66	2.68
13.50	2.70	2.72	2.74	2.76	2.77
14.00	2.79	2.81	2.82	2.84	2.85
14.50	2.87	2.88	2.89	2.90	2.92
15.00	2.93	2.94	2.95	2.96	2.97
15.50	2.98	2.99	3.00	3.01	3.02
16.00	3.03	3.04	3.05	3.06	3.06
16.50	3.07	3.08	3.09	3.10	3.11

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Current Storm
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	3.11	3.12	3.13	3.14	3.14
17.50	3.15	3.16	3.16	3.17	3.18
18.00	3.18	3.19	3.20	3.20	3.21
18.50	3.21	3.22	3.22	3.23	3.24
19.00	3.24	3.25	3.25	3.26	3.26
19.50	3.27	3.28	3.28	3.29	3.29
20.00	3.30	3.30	3.31	3.31	3.32
20.50	3.32	3.33	3.33	3.34	3.34
21.00	3.35	3.35	3.36	3.36	3.37
21.50	3.37	3.38	3.38	3.39	3.39
22.00	3.40	3.40	3.41	3.41	3.41
22.50	3.42	3.42	3.43	3.43	3.44
23.00	3.44	3.44	3.45	3.45	3.46
23.50	3.46	3.46	3.47	3.47	3.48
24.00	3.48	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Time-Depth Curve: Future 10	
Label	Future 10
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.01	0.02	0.03
0.50	0.04	0.04	0.05	0.06	0.07
1.00	0.07	0.08	0.09	0.10	0.10
1.50	0.11	0.12	0.13	0.14	0.15
2.00	0.15	0.16	0.17	0.18	0.19
2.50	0.20	0.21	0.21	0.22	0.23
3.00	0.24	0.25	0.26	0.27	0.28
3.50	0.29	0.30	0.31	0.32	0.33
4.00	0.34	0.35	0.36	0.37	0.38
4.50	0.39	0.40	0.41	0.42	0.43
5.00	0.44	0.45	0.46	0.47	0.48
5.50	0.49	0.50	0.51	0.52	0.54
6.00	0.55	0.56	0.57	0.58	0.60
6.50	0.61	0.62	0.63	0.65	0.66
7.00	0.68	0.69	0.70	0.72	0.73
7.50	0.75	0.77	0.78	0.80	0.81
8.00	0.83	0.85	0.87	0.88	0.90
8.50	0.92	0.94	0.96	0.98	1.00
9.00	1.02	1.04	1.06	1.08	1.11
9.50	1.13	1.16	1.18	1.21	1.24
10.00	1.27	1.30	1.33	1.37	1.40
10.50	1.44	1.47	1.52	1.56	1.61
11.00	1.67	1.73	1.79	1.87	1.95
11.50	2.03	2.15	2.27	2.44	2.67
12.00	3.07	3.74	3.97	4.14	4.26
12.50	4.38	4.46	4.54	4.62	4.68
13.00	4.74	4.80	4.85	4.89	4.94
13.50	4.97	5.01	5.04	5.08	5.11
14.00	5.14	5.17	5.20	5.23	5.25
14.50	5.28	5.30	5.33	5.35	5.37
15.00	5.39	5.41	5.43	5.45	5.47
15.50	5.49	5.51	5.53	5.54	5.56
16.00	5.58	5.60	5.61	5.63	5.64
16.50	5.66	5.68	5.69	5.71	5.72

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	5.73	5.75	5.76	5.78	5.79
17.50	5.80	5.81	5.83	5.84	5.85
18.00	5.86	5.87	5.89	5.90	5.91
18.50	5.92	5.93	5.94	5.95	5.96
19.00	5.97	5.98	5.99	6.00	6.01
19.50	6.02	6.03	6.04	6.05	6.06
20.00	6.07	6.08	6.09	6.10	6.11
20.50	6.12	6.13	6.14	6.15	6.16
21.00	6.17	6.18	6.19	6.20	6.20
21.50	6.21	6.22	6.23	6.24	6.25
22.00	6.26	6.26	6.27	6.28	6.29
22.50	6.30	6.31	6.31	6.32	6.33
23.00	6.34	6.34	6.35	6.36	6.37
23.50	6.37	6.38	6.39	6.40	6.40
24.00	6.41	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Time-Depth Curve: Future 100	
Label	Future 100
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.01	0.03	0.04	0.05
0.50	0.06	0.08	0.09	0.11	0.12
1.00	0.13	0.15	0.16	0.18	0.19
1.50	0.20	0.22	0.23	0.25	0.26
2.00	0.28	0.29	0.31	0.33	0.34
2.50	0.36	0.37	0.39	0.40	0.42
3.00	0.44	0.45	0.47	0.49	0.50
3.50	0.52	0.54	0.56	0.57	0.59
4.00	0.61	0.63	0.65	0.66	0.68
4.50	0.70	0.72	0.74	0.76	0.78
5.00	0.79	0.81	0.83	0.85	0.87
5.50	0.89	0.91	0.93	0.95	0.97
6.00	0.99	1.01	1.03	1.06	1.08
6.50	1.10	1.13	1.15	1.17	1.20
7.00	1.22	1.25	1.28	1.30	1.33
7.50	1.36	1.39	1.42	1.45	1.48
8.00	1.51	1.54	1.57	1.60	1.64
8.50	1.67	1.70	1.74	1.77	1.81
9.00	1.84	1.88	1.92	1.96	2.01
9.50	2.05	2.10	2.15	2.20	2.25
10.00	2.30	2.36	2.42	2.48	2.54
10.50	2.60	2.67	2.75	2.83	2.92
11.00	3.02	3.13	3.25	3.38	3.53
11.50	3.68	3.89	4.12	4.42	4.84
12.00	5.57	6.78	7.20	7.50	7.73
12.50	7.94	8.09	8.24	8.37	8.49
13.00	8.60	8.70	8.79	8.87	8.95
13.50	9.02	9.08	9.14	9.20	9.26
14.00	9.32	9.37	9.42	9.47	9.52
14.50	9.57	9.61	9.66	9.70	9.74
15.00	9.78	9.81	9.85	9.88	9.92
15.50	9.95	9.98	10.02	10.05	10.08
16.00	10.11	10.14	10.17	10.20	10.23
16.50	10.26	10.29	10.32	10.34	10.37

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	10.40	10.42	10.45	10.47	10.49
17.50	10.52	10.54	10.56	10.59	10.61
18.00	10.63	10.65	10.67	10.69	10.71
18.50	10.73	10.75	10.77	10.79	10.81
19.00	10.83	10.84	10.86	10.88	10.90
19.50	10.92	10.94	10.96	10.97	10.99
20.00	11.01	11.03	11.05	11.06	11.08
20.50	11.10	11.12	11.13	11.15	11.17
21.00	11.18	11.20	11.22	11.23	11.25
21.50	11.26	11.28	11.29	11.31	11.33
22.00	11.34	11.36	11.37	11.39	11.40
22.50	11.42	11.43	11.44	11.46	11.47
23.00	11.49	11.50	11.51	11.53	11.54
23.50	11.56	11.57	11.58	11.59	11.61
24.00	11.62	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Time-Depth Curve: Future 2	
Label	Future 2
Start Time	0.00 hours
Increment	0.10 hours
End Time	24.00 hours
Return Event	2 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.00	0.00	0.00	0.01	0.01	0.02
0.50	0.02	0.03	0.03	0.04	0.04
1.00	0.05	0.05	0.06	0.06	0.07
1.50	0.07	0.08	0.08	0.09	0.09
2.00	0.10	0.10	0.11	0.12	0.12
2.50	0.13	0.13	0.14	0.14	0.15
3.00	0.16	0.16	0.17	0.17	0.18
3.50	0.19	0.19	0.20	0.20	0.21
4.00	0.22	0.22	0.23	0.24	0.24
4.50	0.25	0.26	0.26	0.27	0.28
5.00	0.28	0.29	0.30	0.30	0.31
5.50	0.32	0.32	0.33	0.34	0.35
6.00	0.35	0.36	0.37	0.38	0.38
6.50	0.39	0.40	0.41	0.42	0.43
7.00	0.44	0.45	0.45	0.46	0.47
7.50	0.48	0.49	0.50	0.52	0.53
8.00	0.54	0.55	0.56	0.57	0.58
8.50	0.59	0.61	0.62	0.63	0.64
9.00	0.66	0.67	0.68	0.70	0.71
9.50	0.73	0.75	0.76	0.78	0.80
10.00	0.82	0.84	0.86	0.88	0.90
10.50	0.93	0.95	0.98	1.01	1.04
11.00	1.08	1.12	1.16	1.21	1.26
11.50	1.31	1.39	1.47	1.57	1.72
12.00	1.98	2.42	2.57	2.67	2.75
12.50	2.83	2.88	2.93	2.98	3.02
13.00	3.06	3.10	3.13	3.16	3.19
13.50	3.21	3.24	3.26	3.28	3.30
14.00	3.32	3.34	3.36	3.38	3.39
14.50	3.41	3.43	3.44	3.46	3.47
15.00	3.48	3.50	3.51	3.52	3.53
15.50	3.55	3.56	3.57	3.58	3.59
16.00	3.60	3.61	3.62	3.64	3.65
16.50	3.66	3.67	3.68	3.69	3.69

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve
Label: Future Storm
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.00	3.70	3.71	3.72	3.73	3.74
17.50	3.75	3.76	3.76	3.77	3.78
18.00	3.79	3.79	3.80	3.81	3.82
18.50	3.82	3.83	3.84	3.84	3.85
19.00	3.86	3.86	3.87	3.88	3.88
19.50	3.89	3.90	3.90	3.91	3.92
20.00	3.92	3.93	3.94	3.94	3.95
20.50	3.95	3.96	3.97	3.97	3.98
21.00	3.98	3.99	4.00	4.00	4.01
21.50	4.01	4.02	4.02	4.03	4.04
22.00	4.04	4.05	4.05	4.06	4.06
22.50	4.07	4.07	4.08	4.08	4.09
23.00	4.09	4.10	4.10	4.11	4.11
23.50	4.12	4.12	4.13	4.13	4.14
24.00	4.14	(N/A)	(N/A)	(N/A)	(N/A)

Unit Hydrograph Method (Computational Notes)

Definition of Terms

At	Total area (acres): At = Ai+Ap
Ai	Impervious area (acres)
Ap	Pervious area (acres)
CNi	Runoff curve number for impervious area
CNp	Runoff curve number for pervious area
fLoss	f loss constant infiltration (depth/time)
gKs	Saturated Hydraulic Conductivity (depth/time)
Md	Volumetric Moisture Deficit
Psi	Capillary Suction (length)
hK	Horton Infiltration Decay Rate (time^-1)
fo	Initial Infiltration Rate (depth/time)
fc	Ultimate(capacity)Infiltration Rate (depth/time)
Ia	Initial Abstraction (length)
dt	Computational increment (duration of unit excess rainfall) Default dt is smallest value of 0.1333Tc, rtm, and th (Smallest dt is then adjusted to match up with Tp)
UDdt	User specified override computational main time increment (only used if UDdt is => .1333Tc)
D(t)	Point on distribution curve (fraction of P) for time step t
K	2 / (1 + (Tr/Tp)): default K = 0.75: (for Tr/Tp = 1.67)
Ks	Hydrograph shape factor = Unit Conversions * K: = ((1hr/3600sec) * (1ft/12in) * ((5280ft)**2/sq.mi)) * K Default Ks = 645.333 * 0.75 = 484
Lag	Lag time from center of excess runoff (dt) to Tp: Lag = 0.6Tc
P	Total precipitation depth, inches
Pa(t)	Accumulated rainfall at time step t
Pi(t)	Incremental rainfall at time step t
qp	Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi. = (Ks * A * Q) / Tp (where Q = 1in. runoff, A=sq.mi.)
Qu(t)	Unit hydrograph ordinate (cfs) at time step t
Q(t)	Final hydrograph ordinate (cfs) at time step t
Rai(t)	Accumulated runoff (inches) at time step t for impervious area
Rap(t)	Accumulated runoff (inches) at time step t for pervious area
Rii(t)	Incremental runoff (inches) at time step t for impervious area
Rip(t)	Incremental runoff (inches) at time step t for pervious area
R(t)	Incremental weighted total runoff (inches)
Rtm	Time increment for rainfall table
Si	S for impervious area: Si = (1000/CNi) - 10
Sp	S for pervious area: Sp = (1000/CNp) - 10
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: Tb = Tp + Tr
Tp	Time (hrs) to peak of a unit hydrograph: Tp = (dt/2) + Lag
Tr	Time (hrs) of receding limb of unit hydrograph: Tr = ratio of Tp

Unit Hydrograph Method
Computational Notes
Precipitation

Column (1)	Time for time step t
Column (2)	D(t) = Point on distribution curve for time step t
Column (3)	Pi(t) = Pa(t) - Pa(t-1): Col.(4) - Preceding Col.(4)
Column (4)	Pa(t) = D(t) x P: Col.(2) x P

Pervious Area Runoff (using SCS Runoff CN Method)

Column (5)	Rap(t) = Accumulated pervious runoff for time step t
	If (Pa(t) is <= 0.2Sp) then use: Rap(t) = 0.0
	If (Pa(t) is > 0.2Sp) then use:
	
	Rap(t) = (Col.(4)-0.2Sp)**2 / (Col.(4)+0.8Sp)

Column (6)	Rip(t) = Incremental pervious runoff for time step t Rip(t) = Rap(t) - Rap(t-1) Rip(t) = Col.(5) for current row - Col.(5) for preceding row.

Impervious Area Runoff

Column (7 & 8)...	Did not specify to use impervious areas.

Incremental Weighted Runoff

Column (9)	R(t) = (Ap/At) x Rip(t) + (Ai/At) x Rii(t) R(t) = (Ap/At) x Col.(6) + (Ai/At) x Col.(8)

SCS Unit Hydrograph Method

Column (10)	Q(t) is computed with the SCS unit hydrograph method using R(t) and Qu(t).

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	8.05 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.77 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.633 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.610 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Subsection: Unit Hydrograph Summary
Return Event: 2 years
Label: EDA1 - Imp - Cur
Storm Event: Current 2-Year
Scenario: Current 2 year

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Imp - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.01	0.02	0.02	0.03
2.25	0.04	0.05	0.05	0.06	0.07
3.50	0.07	0.08	0.08	0.09	0.09
4.75	0.09	0.10	0.10	0.11	0.11
6.00	0.11	0.12	0.13	0.14	0.15
7.25	0.16	0.17	0.18	0.19	0.20
8.50	0.21	0.22	0.23	0.26	0.29
9.75	0.33	0.36	0.39	0.43	0.54
11.00	0.65	0.86	1.06	1.76	4.77
12.25	2.78	1.49	0.98	0.78	0.62
13.50	0.50	0.43	0.40	0.36	0.33
14.75	0.30	0.27	0.25	0.24	0.23
16.00	0.22	0.21	0.20	0.19	0.18
17.25	0.17	0.17	0.16	0.15	0.14
18.50	0.14	0.14	0.14	0.13	0.13
19.75	0.13	0.13	0.12	0.12	0.12
21.00	0.12	0.11	0.11	0.11	0.11
22.25	0.11	0.10	0.10	0.10	0.10
23.50	0.09	0.09	0.09	(N/A)	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	12.66 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	7.52 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	1.014 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.979 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA1 - Imp - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.02	0.04	0.06
1.75	0.07	0.08	0.10	0.11	0.12
3.00	0.12	0.13	0.14	0.15	0.15
4.25	0.16	0.17	0.17	0.18	0.18
5.50	0.19	0.20	0.20	0.21	0.23
6.75	0.24	0.26	0.27	0.29	0.30
8.00	0.32	0.33	0.35	0.37	0.38
9.25	0.43	0.48	0.53	0.58	0.63
10.50	0.68	0.86	1.04	1.36	1.69
11.75	2.78	7.52	4.37	2.34	1.54
13.00	1.22	0.97	0.78	0.67	0.62
14.25	0.57	0.52	0.47	0.42	0.39
15.50	0.37	0.36	0.35	0.33	0.32
16.75	0.30	0.29	0.27	0.26	0.25
18.00	0.23	0.22	0.22	0.22	0.21
19.25	0.21	0.21	0.20	0.20	0.19
20.50	0.19	0.19	0.18	0.18	0.18
21.75	0.17	0.17	0.17	0.16	0.16
23.00	0.15	0.15	0.15	0.14	0.14

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	21.93 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	13.04 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	1.786 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.724 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA1 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.07	0.11	0.14
1.50	0.17	0.19	0.21	0.22	0.24
2.75	0.25	0.26	0.27	0.29	0.30
4.00	0.31	0.31	0.32	0.33	0.34
5.25	0.35	0.36	0.36	0.37	0.40
6.50	0.42	0.44	0.47	0.50	0.52
7.75	0.55	0.57	0.60	0.62	0.65
9.00	0.67	0.76	0.84	0.93	1.02
10.25	1.11	1.20	1.51	1.82	2.38
11.50	2.94	4.83	13.04	7.56	4.05
12.75	2.67	2.11	1.68	1.36	1.16
14.00	1.08	0.99	0.90	0.81	0.72
15.25	0.67	0.65	0.62	0.60	0.57
16.50	0.55	0.52	0.50	0.47	0.45
17.75	0.42	0.40	0.38	0.38	0.37
19.00	0.37	0.36	0.35	0.35	0.34
20.25	0.34	0.33	0.32	0.32	0.31
21.50	0.30	0.30	0.29	0.29	0.28
22.75	0.27	0.27	0.26	0.26	0.25
24.00	0.24	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	9.60 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.70 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.761 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.734 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.00	0.02	0.03	0.04
2.00	0.05	0.06	0.07	0.07	0.08
3.25	0.09	0.09	0.10	0.11	0.11
4.50	0.12	0.12	0.13	0.13	0.14
5.75	0.14	0.14	0.15	0.17	0.18
7.00	0.19	0.20	0.21	0.22	0.24
8.25	0.25	0.26	0.27	0.28	0.32
9.50	0.36	0.40	0.43	0.47	0.51
10.75	0.65	0.79	1.03	1.27	2.10
12.00	5.70	3.32	1.78	1.17	0.93
13.25	0.74	0.60	0.51	0.47	0.43
14.50	0.40	0.36	0.32	0.29	0.28
15.75	0.27	0.26	0.25	0.24	0.23
17.00	0.22	0.21	0.20	0.19	0.18
18.25	0.17	0.17	0.16	0.16	0.16
19.50	0.16	0.15	0.15	0.15	0.14
20.75	0.14	0.14	0.14	0.13	0.13
22.00	0.13	0.13	0.12	0.12	0.12
23.25	0.11	0.11	0.11	0.11	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	14.93 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	8.87 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	1.203 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.162 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA1 - Imp - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.01	0.04	0.06	0.08
1.75	0.10	0.11	0.13	0.14	0.15
3.00	0.16	0.17	0.18	0.18	0.19
4.25	0.20	0.21	0.21	0.22	0.23
5.50	0.23	0.24	0.24	0.26	0.28
6.75	0.29	0.31	0.33	0.35	0.36
8.00	0.38	0.40	0.42	0.43	0.45
9.25	0.51	0.57	0.63	0.69	0.75
10.50	0.81	1.02	1.23	1.61	1.99
11.75	3.28	8.87	5.15	2.76	1.82
13.00	1.44	1.14	0.92	0.79	0.73
14.25	0.67	0.61	0.55	0.49	0.46
15.50	0.44	0.42	0.41	0.39	0.37
16.75	0.36	0.34	0.32	0.31	0.29
18.00	0.27	0.26	0.26	0.25	0.25
19.25	0.25	0.24	0.24	0.23	0.23
20.50	0.22	0.22	0.22	0.21	0.21
21.75	0.20	0.20	0.20	0.19	0.19
23.00	0.18	0.18	0.17	0.17	0.17

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	27.13 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	16.13 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.340 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	2.219 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.143 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	33.14 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) | Return Event: 100 years
Label: EDA1 - Imp - Fut | Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.340 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.04	0.11	0.16	0.20
1.50	0.23	0.26	0.28	0.30	0.31
2.75	0.33	0.34	0.35	0.37	0.38
4.00	0.39	0.40	0.41	0.42	0.43
5.25	0.44	0.45	0.46	0.46	0.49
6.50	0.52	0.56	0.59	0.62	0.65
7.75	0.68	0.71	0.74	0.77	0.81
9.00	0.84	0.94	1.05	1.16	1.27
10.25	1.37	1.48	1.87	2.26	2.94
11.50	3.64	5.98	16.13	9.35	5.00
12.75	3.30	2.61	2.07	1.68	1.44
14.00	1.33	1.22	1.11	1.00	0.90
15.25	0.83	0.80	0.77	0.74	0.71
16.50	0.68	0.65	0.62	0.59	0.56
17.75	0.52	0.49	0.48	0.47	0.46
19.00	0.45	0.45	0.44	0.43	0.42
20.25	0.41	0.41	0.40	0.39	0.38
21.50	0.38	0.37	0.36	0.35	0.35
22.75	0.34	0.33	0.32	0.32	0.31
24.00	0.30	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.69 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.42 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.80 in
Runoff Volume (Pervious)	0.059 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.056 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Per - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.25	0.00	0.01	0.04	0.25	0.42
12.50	0.21	0.15	0.12	0.10	0.08
13.75	0.07	0.07	0.06	0.06	0.05
15.00	0.05	0.04	0.04	0.04	0.04
16.25	0.04	0.04	0.04	0.03	0.03
17.50	0.03	0.03	0.03	0.03	0.03
18.75	0.03	0.03	0.03	0.03	0.03
20.00	0.02	0.02	0.02	0.02	0.02
21.25	0.02	0.02	0.02	0.02	0.02
22.50	0.02	0.02	0.02	0.02	0.02
23.75	0.02	0.02	(N/A)	(N/A)	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	1.96 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.10 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.05 in
Runoff Volume (Pervious)	0.150 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.145 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA1 - Per - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.75	0.00	0.00	0.01	0.02	0.03
11.00	0.05	0.08	0.13	0.26	0.88
12.25	1.10	0.52	0.35	0.29	0.23
13.50	0.19	0.16	0.15	0.14	0.13
14.75	0.12	0.10	0.10	0.09	0.09
16.00	0.09	0.08	0.08	0.08	0.07
17.25	0.07	0.07	0.06	0.06	0.06
18.50	0.06	0.06	0.06	0.05	0.05
19.75	0.05	0.05	0.05	0.05	0.05
21.00	0.05	0.05	0.05	0.05	0.05
22.25	0.04	0.04	0.04	0.04	0.04
23.50	0.04	0.04	0.04	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	5.05 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.69 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.21 in
Runoff Volume (Pervious)	0.382 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.367 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA1 - Per - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
7.25	0.00	0.00	0.01	0.01	0.02
8.50	0.03	0.03	0.04	0.05	0.06
9.75	0.08	0.10	0.12	0.14	0.19
11.00	0.25	0.36	0.49	0.85	2.52
12.25	2.69	1.20	0.81	0.65	0.52
13.50	0.42	0.36	0.33	0.30	0.28
14.75	0.25	0.23	0.21	0.20	0.19
16.00	0.19	0.18	0.17	0.16	0.16
17.25	0.15	0.14	0.13	0.13	0.12
18.50	0.12	0.12	0.12	0.11	0.11
19.75	0.11	0.11	0.11	0.11	0.10
21.00	0.10	0.10	0.10	0.10	0.09
22.25	0.09	0.09	0.09	0.09	0.08
23.50	0.08	0.08	0.08	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	1.08 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.63 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.18 in
Runoff Volume (Pervious)	0.087 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.083 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA1 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.75	0.00	0.00	0.02	0.04	0.10
12.00	0.44	0.63	0.31	0.22	0.18
13.25	0.14	0.12	0.10	0.09	0.09
14.50	0.08	0.07	0.07	0.06	0.06
15.75	0.06	0.06	0.05	0.05	0.05
17.00	0.05	0.05	0.04	0.04	0.04
18.25	0.04	0.04	0.04	0.04	0.04
19.50	0.03	0.03	0.03	0.03	0.03
20.75	0.03	0.03	0.03	0.03	0.03
22.00	0.03	0.03	0.03	0.03	0.03
23.25	0.03	0.03	0.03	0.02	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	2.68 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.47 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.77 in
Runoff Volume (Pervious)	0.203 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.195 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA1 - Per - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.00	0.00	0.00	0.01	0.01	0.02
10.25	0.03	0.04	0.06	0.09	0.14
11.50	0.21	0.39	1.25	1.47	0.68
12.75	0.46	0.37	0.30	0.24	0.21
14.00	0.19	0.18	0.16	0.15	0.13
15.25	0.12	0.12	0.12	0.11	0.11
16.50	0.10	0.10	0.09	0.09	0.09
17.75	0.08	0.08	0.07	0.07	0.07
19.00	0.07	0.07	0.07	0.07	0.07
20.25	0.06	0.06	0.06	0.06	0.06
21.50	0.06	0.06	0.06	0.06	0.05
22.75	0.05	0.05	0.05	0.05	0.05
24.00	0.05	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	6.88 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.63 ft³/s

Drainage Area	
SCS CN (Composite)	66.200
Area (User Defined)	0.880 acres
Maximum Retention (Pervious)	5.11 in
Maximum Retention (Pervious, 20 percent)	1.02 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.15 in
Runoff Volume (Pervious)	0.525 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.505 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	7.67 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA1 - Per - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	0.880 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.25	0.00	0.00	0.01	0.01	0.02
7.50	0.03	0.03	0.04	0.05	0.06
8.75	0.07	0.08	0.10	0.12	0.14
10.00	0.17	0.19	0.22	0.30	0.39
11.25	0.54	0.73	1.23	3.53	3.63
12.50	1.60	1.07	0.85	0.68	0.55
13.75	0.47	0.43	0.40	0.36	0.33
15.00	0.30	0.27	0.26	0.25	0.24
16.25	0.23	0.22	0.21	0.20	0.19
17.50	0.18	0.17	0.17	0.16	0.16
18.75	0.15	0.15	0.15	0.15	0.14
20.00	0.14	0.14	0.14	0.13	0.13
21.25	0.13	0.13	0.12	0.12	0.12
22.50	0.12	0.11	0.11	0.11	0.11
23.75	0.10	0.10	(N/A)	(N/A)	(N/A)

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	3.34 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.00 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.252 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.243 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Imp - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.00	0.01	0.01	0.01
2.25	0.02	0.02	0.02	0.02	0.03
3.50	0.03	0.03	0.03	0.03	0.04
4.75	0.04	0.04	0.04	0.04	0.04
6.00	0.05	0.05	0.05	0.06	0.06
7.25	0.07	0.07	0.07	0.08	0.08
8.50	0.08	0.09	0.09	0.11	0.12
9.75	0.13	0.14	0.16	0.17	0.22
11.00	0.26	0.35	0.43	0.78	2.00
12.25	0.93	0.59	0.38	0.31	0.24
13.50	0.20	0.17	0.16	0.14	0.13
14.75	0.12	0.11	0.10	0.09	0.09
16.00	0.09	0.08	0.08	0.08	0.07
17.25	0.07	0.07	0.06	0.06	0.06
18.50	0.06	0.05	0.05	0.05	0.05
19.75	0.05	0.05	0.05	0.05	0.05
21.00	0.05	0.05	0.04	0.04	0.04
22.25	0.04	0.04	0.04	0.04	0.04
23.50	0.04	0.04	0.04	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	5.26 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.14 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.403 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.389 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA2 - Imp - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.01	0.02	0.02
1.75	0.03	0.03	0.04	0.04	0.05
3.00	0.05	0.05	0.06	0.06	0.06
4.25	0.06	0.07	0.07	0.07	0.07
5.50	0.08	0.08	0.08	0.09	0.09
6.75	0.10	0.10	0.11	0.12	0.12
8.00	0.13	0.13	0.14	0.15	0.15
9.25	0.17	0.19	0.21	0.23	0.25
10.50	0.27	0.35	0.42	0.56	0.68
11.75	1.23	3.14	1.46	0.92	0.59
13.00	0.48	0.37	0.31	0.26	0.25
14.25	0.22	0.21	0.18	0.17	0.15
15.50	0.15	0.14	0.14	0.13	0.13
16.75	0.12	0.11	0.11	0.10	0.10
18.00	0.09	0.09	0.09	0.09	0.08
19.25	0.08	0.08	0.08	0.08	0.08
20.50	0.08	0.07	0.07	0.07	0.07
21.75	0.07	0.07	0.07	0.06	0.06
23.00	0.06	0.06	0.06	0.06	0.06

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	9.11 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.45 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.710 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.686 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA2 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.03	0.04	0.06
1.50	0.07	0.08	0.08	0.09	0.09
2.75	0.10	0.10	0.11	0.11	0.12
4.00	0.12	0.13	0.13	0.13	0.14
5.25	0.14	0.14	0.14	0.15	0.16
6.50	0.17	0.18	0.19	0.20	0.21
7.75	0.22	0.23	0.24	0.25	0.26
9.00	0.27	0.31	0.34	0.38	0.41
10.25	0.45	0.48	0.62	0.73	0.98
11.50	1.18	2.14	5.45	2.53	1.60
12.75	1.03	0.83	0.65	0.53	0.46
14.00	0.43	0.39	0.36	0.32	0.29
15.25	0.27	0.26	0.25	0.24	0.23
16.50	0.22	0.21	0.20	0.19	0.18
17.75	0.17	0.16	0.15	0.15	0.15
19.00	0.15	0.14	0.14	0.14	0.14
20.25	0.13	0.13	0.13	0.13	0.12
21.50	0.12	0.12	0.12	0.11	0.11
22.75	0.11	0.11	0.10	0.10	0.10
24.00	0.10	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	3.99 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.38 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.303 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.292 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.00	0.01	0.01	0.02
2.00	0.02	0.02	0.03	0.03	0.03
3.25	0.03	0.04	0.04	0.04	0.04
4.50	0.05	0.05	0.05	0.05	0.05
5.75	0.06	0.06	0.06	0.07	0.07
7.00	0.08	0.08	0.08	0.09	0.09
8.25	0.10	0.10	0.11	0.11	0.13
9.50	0.14	0.16	0.17	0.19	0.20
10.75	0.27	0.31	0.42	0.51	0.93
12.00	2.38	1.11	0.70	0.45	0.36
13.25	0.28	0.23	0.20	0.19	0.17
14.50	0.16	0.14	0.13	0.12	0.11
15.75	0.11	0.10	0.10	0.10	0.09
17.00	0.09	0.08	0.08	0.07	0.07
18.25	0.07	0.07	0.07	0.06	0.06
19.50	0.06	0.06	0.06	0.06	0.06
20.75	0.06	0.06	0.05	0.05	0.05
22.00	0.05	0.05	0.05	0.05	0.05
23.25	0.05	0.04	0.04	0.04	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	6.20 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.71 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	0.478 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.462 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA2 - Imp - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.01	0.02	0.03	0.03
1.75	0.04	0.05	0.05	0.05	0.06
3.00	0.06	0.07	0.07	0.07	0.08
4.25	0.08	0.08	0.08	0.09	0.09
5.50	0.09	0.09	0.10	0.10	0.11
6.75	0.12	0.12	0.13	0.14	0.15
8.00	0.15	0.16	0.17	0.17	0.18
9.25	0.21	0.23	0.25	0.27	0.30
10.50	0.32	0.42	0.49	0.66	0.80
11.75	1.45	3.71	1.72	1.09	0.70
13.00	0.56	0.44	0.36	0.31	0.29
14.25	0.26	0.24	0.22	0.20	0.18
15.50	0.17	0.17	0.16	0.15	0.15
16.75	0.14	0.13	0.13	0.12	0.11
18.00	0.11	0.10	0.10	0.10	0.10
19.25	0.10	0.10	0.09	0.09	0.09
20.50	0.09	0.09	0.09	0.08	0.08
21.75	0.08	0.08	0.08	0.08	0.07
23.00	0.07	0.07	0.07	0.07	0.07

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	11.27 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.75 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.930 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.882 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.852 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	21.07 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA2 - Imp - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.930 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.02	0.05	0.07	0.08
1.50	0.09	0.10	0.11	0.12	0.12
2.75	0.13	0.14	0.14	0.15	0.15
4.00	0.15	0.16	0.16	0.17	0.17
5.25	0.17	0.18	0.18	0.18	0.20
6.50	0.21	0.22	0.23	0.25	0.26
7.75	0.27	0.28	0.30	0.31	0.32
9.00	0.33	0.38	0.42	0.47	0.50
10.25	0.55	0.59	0.76	0.90	1.21
11.50	1.46	2.65	6.75	3.13	1.97
12.75	1.27	1.02	0.80	0.66	0.57
14.00	0.53	0.48	0.44	0.39	0.35
15.25	0.33	0.32	0.30	0.29	0.28
16.50	0.27	0.26	0.24	0.23	0.22
17.75	0.21	0.20	0.19	0.19	0.18
19.00	0.18	0.18	0.17	0.17	0.17
20.25	0.16	0.16	0.16	0.16	0.15
21.50	0.15	0.15	0.14	0.14	0.14
22.75	0.13	0.13	0.13	0.13	0.12
24.00	0.12	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	0.54 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.42 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.00 in
Runoff Volume (Pervious)	0.049 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.048 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.71 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours
Total unit time, Tb	0.60 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Per - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.00	0.00	0.01	0.02	0.05	0.20
12.25	0.42	0.19	0.13	0.10	0.08
13.50	0.07	0.06	0.05	0.05	0.05
14.75	0.04	0.04	0.03	0.03	0.03
16.00	0.03	0.03	0.03	0.03	0.03
17.25	0.03	0.02	0.02	0.02	0.02
18.50	0.02	0.02	0.02	0.02	0.02
19.75	0.02	0.02	0.02	0.02	0.02
21.00	0.02	0.02	0.02	0.02	0.02
22.25	0.02	0.02	0.02	0.02	0.02
23.50	0.01	0.01	0.01	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	1.37 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.02 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.37 in
Runoff Volume (Pervious)	0.116 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.114 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.71 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours
Total unit time, Tb	0.60 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA2 - Per - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.00	0.00	0.00	0.00	0.01	0.01
10.25	0.02	0.02	0.03	0.05	0.08
11.50	0.11	0.21	0.59	1.02	0.43
12.75	0.28	0.22	0.18	0.15	0.12
14.00	0.11	0.10	0.10	0.09	0.08
15.25	0.07	0.07	0.07	0.06	0.06
16.50	0.06	0.06	0.05	0.05	0.05
17.75	0.05	0.04	0.04	0.04	0.04
19.00	0.04	0.04	0.04	0.04	0.04
20.25	0.04	0.04	0.04	0.04	0.03
21.50	0.03	0.03	0.03	0.03	0.03
22.75	0.03	0.03	0.03	0.03	0.03
24.00	0.03	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	3.27 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.39 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.69 in
Runoff Volume (Pervious)	0.280 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.274 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.71 ft³/s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	0.48 hours
Total unit time, Tb	0.60 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA2 - Per - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.18 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.50	0.00	0.00	0.01	0.01	0.01
7.75	0.02	0.02	0.02	0.03	0.03
9.00	0.04	0.05	0.06	0.07	0.08
10.25	0.10	0.11	0.15	0.20	0.27
11.50	0.37	0.61	1.56	2.39	0.95
12.75	0.60	0.48	0.38	0.31	0.26
14.00	0.24	0.22	0.20	0.18	0.16
15.25	0.15	0.14	0.14	0.13	0.13
16.50	0.12	0.12	0.11	0.11	0.10
17.75	0.09	0.09	0.09	0.08	0.08
19.00	0.08	0.08	0.08	0.08	0.08
20.25	0.07	0.07	0.07	0.07	0.07
21.50	0.07	0.07	0.07	0.06	0.06
22.75	0.06	0.06	0.06	0.06	0.06
24.00	0.06	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	0.82 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.60 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.42 in
Runoff Volume (Pervious)	0.070 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.068 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.93 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: EDA2 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.25	0.00	0.00	0.01	0.01	0.03
11.50	0.05	0.10	0.33	0.60	0.26
12.75	0.17	0.14	0.11	0.09	0.08
14.00	0.07	0.07	0.06	0.06	0.05
15.25	0.05	0.05	0.04	0.04	0.04
16.50	0.04	0.04	0.04	0.03	0.03
17.75	0.03	0.03	0.03	0.03	0.03
19.00	0.03	0.03	0.03	0.03	0.03
20.25	0.02	0.02	0.02	0.02	0.02
21.50	0.02	0.02	0.02	0.02	0.02
22.75	0.02	0.02	0.02	0.02	0.02
24.00	0.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	1.85 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.31 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.13 in
Runoff Volume (Pervious)	0.154 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.150 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.93 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: EDA2 - Per - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
8.25	0.00	0.00	0.00	0.01	0.01
9.50	0.01	0.02	0.03	0.03	0.04
10.75	0.06	0.08	0.12	0.17	0.30
12.00	0.85	1.31	0.54	0.35	0.28
13.25	0.22	0.18	0.15	0.14	0.13
14.50	0.12	0.11	0.10	0.09	0.09
15.75	0.08	0.08	0.08	0.07	0.07
17.00	0.07	0.06	0.06	0.06	0.06
18.25	0.05	0.05	0.05	0.05	0.05
19.50	0.05	0.05	0.05	0.05	0.05
20.75	0.04	0.04	0.04	0.04	0.04
22.00	0.04	0.04	0.04	0.04	0.04
23.25	0.04	0.04	0.03	0.03	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	4.50 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.07 ft³/s

Drainage Area	
SCS CN (Composite)	69.990
Area (User Defined)	0.590 acres
Maximum Retention (Pervious)	4.29 in
Maximum Retention (Pervious, 20 percent)	0.86 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.70 in
Runoff Volume (Pervious)	0.378 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.369 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: EDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.93 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: EDA2 - Per - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.590 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
5.50	0.00	0.00	0.01	0.01	0.01
6.75	0.02	0.02	0.03	0.03	0.04
8.00	0.04	0.05	0.05	0.06	0.07
9.25	0.08	0.10	0.11	0.13	0.15
10.50	0.18	0.23	0.29	0.40	0.54
11.75	0.87	2.22	3.07	1.22	0.78
13.00	0.62	0.49	0.40	0.33	0.30
14.25	0.28	0.26	0.23	0.21	0.19
15.50	0.18	0.18	0.17	0.16	0.16
16.75	0.15	0.14	0.14	0.13	0.12
18.00	0.12	0.11	0.11	0.11	0.10
19.25	0.10	0.10	0.10	0.10	0.10
20.50	0.09	0.09	0.09	0.09	0.09
21.75	0.09	0.08	0.08	0.08	0.08
23.00	0.08	0.08	0.07	0.07	0.07

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	7.12 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.22 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.560 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.540 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Imp - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.01	0.01	0.02	0.03
2.25	0.04	0.04	0.05	0.05	0.06
3.50	0.06	0.07	0.07	0.08	0.08
4.75	0.08	0.09	0.09	0.10	0.10
6.00	0.10	0.11	0.12	0.13	0.14
7.25	0.14	0.15	0.16	0.17	0.18
8.50	0.19	0.20	0.21	0.23	0.26
9.75	0.29	0.32	0.35	0.38	0.48
11.00	0.58	0.76	0.94	1.55	4.22
12.25	2.46	1.32	0.87	0.69	0.55
13.50	0.44	0.38	0.35	0.32	0.29
14.75	0.26	0.24	0.22	0.21	0.20
16.00	0.19	0.19	0.18	0.17	0.16
17.25	0.15	0.15	0.14	0.13	0.13
18.50	0.12	0.12	0.12	0.12	0.12
19.75	0.11	0.11	0.11	0.11	0.11
21.00	0.10	0.10	0.10	0.10	0.10
22.25	0.09	0.09	0.09	0.09	0.09
23.50	0.08	0.08	0.08	(N/A)	(N/A)

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	11.20 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.65 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.897 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.866 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA1 - Imp - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.02	0.04	0.05
1.75	0.06	0.07	0.08	0.09	0.10
3.00	0.11	0.12	0.12	0.13	0.14
4.25	0.14	0.15	0.15	0.16	0.16
5.50	0.17	0.17	0.18	0.19	0.20
6.75	0.22	0.23	0.24	0.26	0.27
8.00	0.28	0.30	0.31	0.32	0.34
9.25	0.38	0.42	0.47	0.51	0.56
10.50	0.60	0.76	0.92	1.21	1.49
11.75	2.46	6.65	3.86	2.07	1.36
13.00	1.08	0.86	0.69	0.59	0.55
14.25	0.50	0.46	0.42	0.37	0.34
15.50	0.33	0.32	0.31	0.29	0.28
16.75	0.27	0.25	0.24	0.23	0.22
18.00	0.20	0.20	0.19	0.19	0.19
19.25	0.18	0.18	0.18	0.17	0.17
20.50	0.17	0.17	0.16	0.16	0.16
21.75	0.15	0.15	0.15	0.14	0.14
23.00	0.14	0.13	0.13	0.13	0.12

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	19.40 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	11.54 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	1.580 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.526 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA1 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.06	0.09	0.12
1.50	0.15	0.17	0.18	0.20	0.21
2.75	0.22	0.23	0.24	0.25	0.26
4.00	0.27	0.28	0.29	0.29	0.30
5.25	0.31	0.31	0.32	0.33	0.35
6.50	0.37	0.39	0.42	0.44	0.46
7.75	0.48	0.51	0.53	0.55	0.57
9.00	0.60	0.67	0.75	0.82	0.90
10.25	0.98	1.06	1.33	1.61	2.10
11.50	2.60	4.28	11.54	6.69	3.58
12.75	2.36	1.87	1.48	1.20	1.03
14.00	0.95	0.87	0.80	0.72	0.64
15.25	0.59	0.57	0.55	0.53	0.51
16.50	0.48	0.46	0.44	0.42	0.40
17.75	0.38	0.35	0.34	0.33	0.33
19.00	0.32	0.32	0.31	0.31	0.30
20.25	0.30	0.29	0.29	0.28	0.27
21.50	0.27	0.26	0.26	0.25	0.25
22.75	0.24	0.24	0.23	0.23	0.22
24.00	0.22	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	8.49 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.04 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.674 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.650 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.00	0.01	0.02	0.03
2.00	0.04	0.05	0.06	0.06	0.07
3.25	0.08	0.08	0.09	0.09	0.10
4.50	0.10	0.11	0.11	0.12	0.12
5.75	0.12	0.13	0.14	0.15	0.16
7.00	0.17	0.18	0.19	0.20	0.21
8.25	0.22	0.23	0.24	0.25	0.28
9.50	0.32	0.35	0.38	0.42	0.45
10.75	0.57	0.69	0.91	1.13	1.86
12.00	5.04	2.93	1.57	1.04	0.82
13.25	0.65	0.53	0.45	0.42	0.38
14.50	0.35	0.32	0.28	0.26	0.25
15.75	0.24	0.23	0.22	0.21	0.20
17.00	0.19	0.18	0.17	0.17	0.16
18.25	0.15	0.15	0.14	0.14	0.14
19.50	0.14	0.14	0.13	0.13	0.13
20.75	0.13	0.12	0.12	0.12	0.12
22.00	0.11	0.11	0.11	0.11	0.10
23.25	0.10	0.10	0.10	0.09	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	13.21 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	7.85 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	1.065 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.027 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA1 - Imp - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.01	0.04	0.06	0.07
1.75	0.09	0.10	0.11	0.12	0.13
3.00	0.14	0.15	0.16	0.16	0.17
4.25	0.18	0.18	0.19	0.19	0.20
5.50	0.20	0.21	0.21	0.23	0.24
6.75	0.26	0.28	0.29	0.31	0.32
8.00	0.34	0.35	0.37	0.38	0.40
9.25	0.45	0.50	0.56	0.61	0.66
10.50	0.72	0.90	1.09	1.43	1.76
11.75	2.91	7.85	4.56	2.44	1.61
13.00	1.27	1.01	0.82	0.70	0.65
14.25	0.60	0.54	0.49	0.44	0.40
15.50	0.39	0.38	0.36	0.34	0.33
16.75	0.32	0.30	0.29	0.27	0.26
18.00	0.24	0.23	0.23	0.22	0.22
19.25	0.22	0.21	0.21	0.21	0.20
20.50	0.20	0.19	0.19	0.19	0.18
21.75	0.18	0.18	0.17	0.17	0.17
23.00	0.16	0.16	0.15	0.15	0.15

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	24.00 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	14.27 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	2.070 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	1.963 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.895 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	29.32 ft³/s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.21 hours
Total unit time, Tb	0.27 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) | Return Event: 100 years
Label: PDA1 - Imp - Fut | Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.08 hours
Area (User Defined)	2.070 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.04	0.10	0.14	0.18
1.50	0.20	0.23	0.25	0.26	0.28
2.75	0.29	0.30	0.31	0.33	0.33
4.00	0.34	0.35	0.36	0.37	0.38
5.25	0.39	0.40	0.40	0.41	0.44
6.50	0.46	0.49	0.52	0.55	0.57
7.75	0.60	0.63	0.66	0.68	0.71
9.00	0.74	0.83	0.93	1.02	1.12
10.25	1.22	1.31	1.65	2.00	2.60
11.50	3.22	5.29	14.27	8.27	4.43
12.75	2.92	2.31	1.83	1.48	1.27
14.00	1.18	1.08	0.98	0.89	0.79
15.25	0.73	0.71	0.68	0.65	0.63
16.50	0.60	0.57	0.54	0.52	0.49
17.75	0.46	0.44	0.42	0.41	0.41
19.00	0.40	0.39	0.39	0.38	0.37
20.25	0.37	0.36	0.35	0.35	0.34
21.50	0.33	0.33	0.32	0.31	0.31
22.75	0.30	0.29	0.29	0.28	0.27
24.00	0.27	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	0.85 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.53 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.75 in
Runoff Volume (Pervious)	0.074 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.071 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	10.37 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Per - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.50	0.00	0.04	0.29	0.53	0.27
12.75	0.19	0.16	0.13	0.11	0.09
14.00	0.09	0.08	0.08	0.07	0.06
15.25	0.06	0.06	0.05	0.05	0.05
16.50	0.05	0.05	0.04	0.04	0.04
17.75	0.04	0.04	0.04	0.03	0.03
19.00	0.03	0.03	0.03	0.03	0.03
20.25	0.03	0.03	0.03	0.03	0.03
21.50	0.03	0.03	0.03	0.03	0.03
22.75	0.03	0.03	0.03	0.03	0.02
24.00	0.02	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	2.53 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.42 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.96 in
Runoff Volume (Pervious)	0.195 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.187 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	10.37 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA1 - Per - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.00	0.00	0.01	0.01	0.03	0.05
11.25	0.10	0.16	0.32	1.12	1.42
12.50	0.67	0.46	0.37	0.30	0.25
13.75	0.21	0.20	0.18	0.17	0.15
15.00	0.14	0.13	0.12	0.12	0.11
16.25	0.11	0.11	0.10	0.10	0.09
17.50	0.09	0.08	0.08	0.08	0.07
18.75	0.07	0.07	0.07	0.07	0.07
20.00	0.07	0.07	0.07	0.07	0.06
21.25	0.06	0.06	0.06	0.06	0.06
22.50	0.06	0.06	0.05	0.05	0.05
23.75	0.05	0.05	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	6.65 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.56 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.07 in
Runoff Volume (Pervious)	0.503 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.483 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	10.37 ft³/s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.43 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA1 - Per - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.13 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
7.50	0.00	0.01	0.01	0.02	0.03
8.75	0.04	0.05	0.06	0.08	0.10
10.00	0.12	0.14	0.17	0.24	0.32
11.25	0.46	0.64	1.10	3.30	3.56
12.50	1.59	1.07	0.86	0.69	0.56
13.75	0.47	0.44	0.41	0.37	0.34
15.00	0.30	0.28	0.27	0.26	0.25
16.25	0.24	0.23	0.22	0.21	0.20
17.50	0.19	0.18	0.17	0.16	0.16
18.75	0.16	0.16	0.15	0.15	0.15
20.00	0.15	0.14	0.14	0.14	0.14
21.25	0.13	0.13	0.13	0.13	0.12
22.50	0.12	0.12	0.12	0.11	0.11
23.75	0.11	0.11	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	1.40 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.77 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.12 in
Runoff Volume (Pervious)	0.111 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.106 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	11.24 ft³/s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.32 hours
Total unit time, Tb	0.40 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA1 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.00	0.00	0.01	0.04	0.12	0.57
12.25	0.77	0.39	0.28	0.23	0.18
13.50	0.15	0.13	0.12	0.11	0.10
14.75	0.10	0.09	0.08	0.08	0.07
16.00	0.07	0.07	0.07	0.06	0.06
17.25	0.06	0.06	0.05	0.05	0.05
18.50	0.05	0.05	0.05	0.05	0.05
19.75	0.04	0.04	0.04	0.04	0.04
21.00	0.04	0.04	0.04	0.04	0.04
22.25	0.04	0.04	0.04	0.04	0.03
23.50	0.03	0.03	0.03	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	3.56 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.84 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.67 in
Runoff Volume (Pervious)	0.264 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.254 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	11.24 ft³/s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.32 hours
Total unit time, Tb	0.40 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA1 - Per - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.25	0.00	0.00	0.01	0.02	0.03
10.50	0.05	0.07	0.11	0.17	0.26
11.75	0.50	1.68	1.84	0.88	0.60
13.00	0.49	0.39	0.32	0.27	0.25
14.25	0.24	0.22	0.20	0.18	0.16
15.50	0.16	0.15	0.15	0.14	0.14
16.75	0.13	0.12	0.12	0.11	0.11
18.00	0.10	0.10	0.10	0.09	0.09
19.25	0.09	0.09	0.09	0.09	0.09
20.50	0.08	0.08	0.08	0.08	0.08
21.75	0.08	0.08	0.07	0.07	0.07
23.00	0.07	0.07	0.07	0.06	0.06

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	9.32 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.83 ft³/s

Drainage Area	
SCS CN (Composite)	65.120
Area (User Defined)	1.190 acres
Maximum Retention (Pervious)	5.36 in
Maximum Retention (Pervious, 20 percent)	1.07 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.00 in
Runoff Volume (Pervious)	0.694 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.666 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA1 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	11.24 ft³/s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.32 hours
Total unit time, Tb	0.40 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA1 - Per - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.12 hours
Area (User Defined)	1.190 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.25	0.00	0.00	0.01	0.01	0.02
7.50	0.03	0.04	0.05	0.06	0.07
8.75	0.08	0.10	0.12	0.15	0.18
10.00	0.21	0.25	0.29	0.38	0.51
11.25	0.71	0.96	1.64	4.83	4.59
12.50	2.10	1.42	1.13	0.90	0.73
13.75	0.62	0.58	0.53	0.49	0.44
15.00	0.39	0.36	0.35	0.34	0.33
16.25	0.31	0.30	0.29	0.27	0.26
17.50	0.25	0.23	0.22	0.21	0.21
18.75	0.20	0.20	0.20	0.20	0.19
20.00	0.19	0.19	0.18	0.18	0.18
21.25	0.17	0.17	0.17	0.16	0.16
22.50	0.16	0.15	0.15	0.15	0.14
23.75	0.14	0.14	(N/A)	(N/A)	(N/A)

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	3.31 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.97 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.249 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.240 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA2 - Imp - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
1.00	0.00	0.00	0.01	0.01	0.01
2.25	0.02	0.02	0.02	0.02	0.03
3.50	0.03	0.03	0.03	0.03	0.04
4.75	0.04	0.04	0.04	0.04	0.04
6.00	0.05	0.05	0.05	0.06	0.06
7.25	0.06	0.07	0.07	0.08	0.08
8.50	0.08	0.09	0.09	0.11	0.12
9.75	0.13	0.14	0.16	0.17	0.22
11.00	0.26	0.35	0.42	0.77	1.97
12.25	0.92	0.58	0.37	0.30	0.24
13.50	0.19	0.17	0.16	0.14	0.13
14.75	0.12	0.10	0.10	0.09	0.09
16.00	0.09	0.08	0.08	0.08	0.07
17.25	0.07	0.06	0.06	0.06	0.06
18.50	0.05	0.05	0.05	0.05	0.05
19.75	0.05	0.05	0.05	0.05	0.05
21.00	0.05	0.04	0.04	0.04	0.04
22.25	0.04	0.04	0.04	0.04	0.04
23.50	0.04	0.04	0.04	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	5.20 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.11 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.399 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.385 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA2 - Imp - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.00	0.01	0.02	0.02
1.75	0.03	0.03	0.04	0.04	0.05
3.00	0.05	0.05	0.06	0.06	0.06
4.25	0.06	0.07	0.07	0.07	0.07
5.50	0.08	0.08	0.08	0.09	0.09
6.75	0.10	0.10	0.11	0.11	0.12
8.00	0.13	0.13	0.14	0.14	0.15
9.25	0.17	0.19	0.21	0.23	0.25
10.50	0.27	0.35	0.41	0.55	0.67
11.75	1.22	3.11	1.44	0.91	0.59
13.00	0.47	0.37	0.30	0.26	0.24
14.25	0.22	0.20	0.18	0.16	0.15
15.50	0.15	0.14	0.14	0.13	0.12
16.75	0.12	0.11	0.11	0.10	0.10
18.00	0.09	0.09	0.09	0.08	0.08
19.25	0.08	0.08	0.08	0.08	0.08
20.50	0.07	0.07	0.07	0.07	0.07
21.75	0.07	0.07	0.06	0.06	0.06
23.00	0.06	0.06	0.06	0.06	0.06

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	9.01 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.40 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.702 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.678 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA2 - Imp - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.01	0.03	0.04	0.06
1.50	0.07	0.07	0.08	0.09	0.09
2.75	0.10	0.10	0.11	0.11	0.12
4.00	0.12	0.12	0.13	0.13	0.13
5.25	0.14	0.14	0.14	0.15	0.16
6.50	0.17	0.18	0.19	0.20	0.21
7.75	0.22	0.23	0.24	0.24	0.26
9.00	0.27	0.30	0.33	0.37	0.40
10.25	0.44	0.47	0.61	0.72	0.97
11.50	1.17	2.12	5.40	2.50	1.58
12.75	1.02	0.82	0.64	0.53	0.45
14.00	0.42	0.38	0.35	0.31	0.28
15.25	0.26	0.25	0.24	0.23	0.22
16.50	0.21	0.20	0.20	0.18	0.18
17.75	0.17	0.16	0.15	0.15	0.15
19.00	0.14	0.14	0.14	0.14	0.13
20.25	0.13	0.13	0.13	0.12	0.12
21.50	0.12	0.12	0.12	0.11	0.11
22.75	0.11	0.10	0.10	0.10	0.10
24.00	0.10	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	3.95 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.36 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.299 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.289 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA2 - Imp - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.75	0.00	0.00	0.01	0.01	0.02
2.00	0.02	0.02	0.03	0.03	0.03
3.25	0.03	0.04	0.04	0.04	0.04
4.50	0.05	0.05	0.05	0.05	0.05
5.75	0.06	0.06	0.06	0.07	0.07
7.00	0.07	0.08	0.08	0.09	0.09
8.25	0.10	0.10	0.11	0.11	0.13
9.50	0.14	0.16	0.17	0.19	0.20
10.75	0.26	0.31	0.42	0.51	0.92
12.00	2.36	1.10	0.69	0.45	0.36
13.25	0.28	0.23	0.20	0.18	0.17
14.50	0.15	0.14	0.12	0.12	0.11
15.75	0.11	0.10	0.10	0.09	0.09
17.00	0.09	0.08	0.08	0.07	0.07
18.25	0.07	0.07	0.06	0.06	0.06
19.50	0.06	0.06	0.06	0.06	0.06
20.75	0.06	0.05	0.05	0.05	0.05
22.00	0.05	0.05	0.05	0.05	0.05
23.25	0.04	0.04	0.04	0.04	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	6.14 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.67 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	0.473 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.457 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA2 - Imp - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.50	0.00	0.01	0.02	0.03	0.03
1.75	0.04	0.04	0.05	0.05	0.06
3.00	0.06	0.07	0.07	0.07	0.08
4.25	0.08	0.08	0.08	0.09	0.09
5.50	0.09	0.09	0.10	0.10	0.11
6.75	0.12	0.12	0.13	0.14	0.14
8.00	0.15	0.16	0.16	0.17	0.18
9.25	0.20	0.22	0.25	0.27	0.30
10.50	0.32	0.41	0.49	0.66	0.79
11.75	1.44	3.67	1.70	1.08	0.69
13.00	0.56	0.44	0.36	0.31	0.29
14.25	0.26	0.24	0.21	0.19	0.18
15.50	0.17	0.17	0.16	0.15	0.15
16.75	0.14	0.13	0.13	0.12	0.11
18.00	0.11	0.10	0.10	0.10	0.10
19.25	0.10	0.10	0.09	0.09	0.09
20.50	0.09	0.09	0.08	0.08	0.08
21.75	0.08	0.08	0.08	0.07	0.07
23.00	0.07	0.07	0.07	0.07	0.07

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.10 hours
Flow (Peak, Computed)	11.15 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.68 ft³/s

Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.920 acres
Maximum Retention (Pervious)	0.20 in
Maximum Retention (Pervious, 20 percent)	0.04 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.872 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.843 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Imp - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	20.85 ft³/s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.13 hours
Total unit time, Tb	0.17 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA2 - Imp - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.05 hours
Area (User Defined)	0.920 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.25	0.00	0.02	0.05	0.07	0.08
1.50	0.09	0.10	0.11	0.12	0.12
2.75	0.13	0.13	0.14	0.15	0.15
4.00	0.15	0.16	0.16	0.17	0.17
5.25	0.17	0.18	0.18	0.18	0.20
6.50	0.21	0.22	0.23	0.25	0.26
7.75	0.27	0.28	0.29	0.30	0.32
9.00	0.33	0.38	0.41	0.46	0.50
10.25	0.55	0.58	0.76	0.90	1.20
11.50	1.44	2.62	6.68	3.09	1.95
12.75	1.26	1.01	0.79	0.65	0.56
14.00	0.52	0.47	0.44	0.39	0.35
15.25	0.32	0.31	0.30	0.29	0.28
16.50	0.27	0.25	0.24	0.23	0.22
17.75	0.20	0.19	0.19	0.18	0.18
19.00	0.18	0.17	0.17	0.17	0.17
20.25	0.16	0.16	0.16	0.15	0.15
21.50	0.15	0.14	0.14	0.14	0.14
22.75	0.13	0.13	0.13	0.12	0.12
24.00	0.12	(N/A)	(N/A)	(N/A)	(N/A)

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	0.56 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.41 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.05 in
Runoff Volume (Pervious)	0.049 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.048 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 2 year

Return Event: 2 years
Storm Event: Current 2-Year

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.73 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA2 - Per - Cur Storm Event: Current 2-Year
Scenario: Current 2 year

Storm Event	Current 2-Year
Return Event	2 years
Duration	24.00 hours
Depth	3.48 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.75	0.00	0.00	0.01	0.03	0.06
12.00	0.22	0.41	0.18	0.12	0.10
13.25	0.08	0.07	0.06	0.05	0.05
14.50	0.05	0.04	0.04	0.03	0.03
15.75	0.03	0.03	0.03	0.03	0.03
17.00	0.03	0.03	0.02	0.02	0.02
18.25	0.02	0.02	0.02	0.02	0.02
19.50	0.02	0.02	0.02	0.02	0.02
20.75	0.02	0.02	0.02	0.02	0.02
22.00	0.02	0.02	0.02	0.02	0.01
23.25	0.01	0.01	0.01	0.01	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	1.37 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.97 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.45 in
Runoff Volume (Pervious)	0.114 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.112 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 10 year

Return Event: 10 years
Storm Event: Current 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.73 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA2 - Per - Cur Storm Event: Current 10
Scenario: Current 10 year

Storm Event	Current 10
Return Event	10 years
Duration	24.00 hours
Depth	5.44 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.00	0.00	0.00	0.01	0.01	0.01
10.25	0.02	0.03	0.04	0.05	0.08
11.50	0.12	0.21	0.61	0.97	0.41
12.75	0.27	0.21	0.17	0.14	0.12
14.00	0.11	0.10	0.09	0.08	0.08
15.25	0.07	0.07	0.06	0.06	0.06
16.50	0.06	0.05	0.05	0.05	0.05
17.75	0.04	0.04	0.04	0.04	0.04
19.00	0.04	0.04	0.04	0.04	0.04
20.25	0.04	0.04	0.03	0.03	0.03
21.50	0.03	0.03	0.03	0.03	0.03
22.75	0.03	0.03	0.03	0.03	0.03
24.00	0.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	3.25 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.23 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.81 in
Runoff Volume (Pervious)	0.271 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.264 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Cur
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.73 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.45 hours
Total unit time, Tb	0.57 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA2 - Per - Cur Storm Event: Current 100
Scenario: Current 100 year

Storm Event	Current 100
Return Event	100 years
Duration	24.00 hours
Depth	9.40 in
Time of Concentration (Composite)	0.17 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
6.25	0.00	0.00	0.00	0.01	0.01
7.50	0.01	0.02	0.02	0.03	0.03
8.75	0.04	0.04	0.05	0.06	0.07
10.00	0.08	0.10	0.11	0.15	0.20
11.25	0.27	0.37	0.60	1.58	2.23
12.50	0.89	0.57	0.45	0.36	0.29
13.75	0.24	0.23	0.21	0.19	0.17
15.00	0.16	0.14	0.14	0.13	0.13
16.25	0.12	0.12	0.11	0.11	0.10
17.50	0.10	0.09	0.09	0.08	0.08
18.75	0.08	0.08	0.08	0.08	0.07
20.00	0.07	0.07	0.07	0.07	0.07
21.25	0.07	0.07	0.06	0.06	0.06
22.50	0.06	0.06	0.06	0.06	0.06
23.75	0.05	0.05	(N/A)	(N/A)	(N/A)

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.16 hours
Flow (Peak, Computed)	0.83 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.57 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.49 in
Runoff Volume (Pervious)	0.069 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.067 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 2 year

Return Event: 2 years
Storm Event: Future 2

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.97 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.43 hours
Total unit time, Tb	0.53 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 2 years
Label: PDA2 - Per - Fut Storm Event: Future 2
Scenario: Future 2 year

Storm Event	Future 2
Return Event	2 years
Duration	24.00 hours
Depth	4.14 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
10.00	0.00	0.00	0.00	0.01	0.02
11.25	0.03	0.05	0.11	0.35	0.57
12.50	0.25	0.17	0.14	0.11	0.09
13.75	0.08	0.07	0.07	0.06	0.06
15.00	0.05	0.05	0.04	0.04	0.04
16.25	0.04	0.04	0.04	0.03	0.03
17.50	0.03	0.03	0.03	0.03	0.03
18.75	0.03	0.03	0.03	0.03	0.02
20.00	0.02	0.02	0.02	0.02	0.02
21.25	0.02	0.02	0.02	0.02	0.02
22.50	0.02	0.02	0.02	0.02	0.02
23.75	0.02	0.02	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.14 hours
Flow (Peak, Computed)	1.84 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.23 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.23 in
Runoff Volume (Pervious)	0.151 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.146 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.97 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.43 hours
Total unit time, Tb	0.53 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 10 years
Label: PDA2 - Per - Fut Storm Event: Future 10
Scenario: Future 10 year

Storm Event	Future 10
Return Event	10 years
Duration	24.00 hours
Depth	6.41 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
8.00	0.00	0.00	0.00	0.01	0.01
9.25	0.01	0.02	0.02	0.03	0.04
10.50	0.04	0.06	0.08	0.12	0.17
11.75	0.30	0.87	1.23	0.51	0.34
13.00	0.27	0.21	0.18	0.15	0.14
14.25	0.13	0.12	0.11	0.09	0.09
15.50	0.08	0.08	0.08	0.07	0.07
16.75	0.07	0.07	0.06	0.06	0.06
18.00	0.05	0.05	0.05	0.05	0.05
19.25	0.05	0.05	0.05	0.05	0.04
20.50	0.04	0.04	0.04	0.04	0.04
21.75	0.04	0.04	0.04	0.04	0.04
23.00	0.04	0.04	0.03	0.03	0.03

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.14 hours
Flow (Peak, Computed)	4.41 ft³/s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.84 ft³/s

Drainage Area	
SCS CN (Composite)	70.960
Area (User Defined)	0.560 acres
Maximum Retention (Pervious)	4.09 in
Maximum Retention (Pervious, 20 percent)	0.82 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.83 in
Runoff Volume (Pervious)	0.366 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.355 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary
Label: PDA2 - Per - Fut
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

SCS Unit Hydrograph Parameters	
Unit peak, qp	3.97 ft³/s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.43 hours
Total unit time, Tb	0.53 hours

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph (Hydrograph Table) Return Event: 100 years
Label: PDA2 - Per - Fut Storm Event: Future 100
Scenario: Future 100 year

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.16 hours
Area (User Defined)	0.560 acres

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.25 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
5.25	0.00	0.00	0.01	0.01	0.01
6.50	0.01	0.02	0.02	0.03	0.03
7.75	0.04	0.04	0.05	0.06	0.06
9.00	0.07	0.08	0.10	0.11	0.13
10.25	0.15	0.18	0.22	0.29	0.40
11.50	0.53	0.86	2.22	2.84	1.14
12.75	0.74	0.59	0.46	0.38	0.31
14.00	0.29	0.27	0.24	0.22	0.20
15.25	0.18	0.17	0.17	0.16	0.16
16.50	0.15	0.14	0.14	0.13	0.12
17.75	0.12	0.11	0.10	0.10	0.10
19.00	0.10	0.10	0.10	0.10	0.09
20.25	0.09	0.09	0.09	0.09	0.09
21.50	0.08	0.08	0.08	0.08	0.08
22.75	0.08	0.07	0.07	0.07	0.07
24.00	0.07	(N/A)	(N/A)	(N/A)	(N/A)

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Cur	0.540	12.00	4.22
Flow (From)	PDA1 - Per - Cur	0.071	12.25	0.53
Flow (In)	Post - POS1	0.611	12.00	4.51

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Fut	0.650	12.00	5.04
Flow (From)	PDA1 - Per - Fut	0.106	12.25	0.77
Flow (In)	Post - POS1	0.756	12.00	5.61

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA1 - Imp - Cur	0.866	12.00	6.65
Flow (From)	PDA1 - Per - Cur	0.187	12.25	1.42
Flow (In)	Post - POS1	1.053	12.00	7.77

JSUMC West Addition: PondPack Report

Subsection: Addition Summary
Label: Post - POS1
Scenario: Future 10 year

Return Event: 10 years
Storm Event: Future 10

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Fut	1.027	12.00	7.85
Flow (From)	PDA1 - Per - Fut	0.254	12.25	1.84
Flow (In)	Post - POS1	1.281	12.00	9.53

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Cur
<Catchment to Outflow Node>	PDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Cur	1.525	12.00	11.54
Flow (From)	PDA1 - Per - Cur	0.483	12.25	3.56
Flow (In)	Post - POS1	2.009	12.00	14.84

JSUMC West Addition: PondPack Report

Subsection: Addition Summary
Label: Post - POS1
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Summary for Hydrograph Addition at 'Post - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA1 - Imp - Fut
<Catchment to Outflow Node>	PDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA1 - Imp - Fut	1.895	12.00	14.27
Flow (From)	PDA1 - Per - Fut	0.666	12.00	4.83
Flow (In)	Post - POS1	2.562	12.00	19.10

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Cur	0.240	12.00	1.97
Flow (From)	PDA2 - Per - Cur	0.048	12.25	0.41
Flow (In)	Post - POS2	0.288	12.00	2.19

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA2 - Imp - Fut	0.289	12.00	2.36
Flow (From)	PDA2 - Per - Fut	0.067	12.25	0.57
Flow (In)	Post - POS2	0.356	12.00	2.71

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Cur	0.385	12.00	3.11
Flow (From)	PDA2 - Per - Cur	0.112	12.25	0.97
Flow (In)	Post - POS2	0.497	12.00	3.72

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Fut	0.457	12.00	3.67
Flow (From)	PDA2 - Per - Fut	0.146	12.25	1.23
Flow (In)	Post - POS2	0.603	12.00	4.54

JSUMC West Addition: PondPack Report

Subsection: Addition Summary
Label: Post - POS2
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Cur
<Catchment to Outflow Node>	PDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	PDA2 - Imp - Cur	0.678	12.00	5.40
Flow (From)	PDA2 - Per - Cur	0.264	12.25	2.23
Flow (In)	Post - POS2	0.943	12.00	6.97

Summary for Hydrograph Addition at 'Post - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA2 - Imp - Fut
<Catchment to Outflow Node>	PDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	PDA2 - Imp - Fut	0.843	12.00	6.68
Flow (From)	PDA2 - Per - Fut	0.355	12.25	2.84
Flow (In)	Post - POS2	1.198	12.00	8.90

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA1 - Imp - Cur	0.610	12.00	4.77
Flow (From)	EDA1 - Per - Cur	0.056	12.25	0.42
Flow (In)	Pre - POS1	0.667	12.00	5.02

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA1 - Imp - Fut	0.734	12.00	5.70
Flow (From)	EDA1 - Per - Fut	0.083	12.25	0.63
Flow (In)	Pre - POS1	0.818	12.00	6.14

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Cur	0.979	12.00	7.52
Flow (From)	EDA1 - Per - Cur	0.145	12.25	1.10
Flow (In)	Pre - POS1	1.123	12.00	8.40

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Fut	1.161	12.00	8.87
Flow (From)	EDA1 - Per - Fut	0.195	12.25	1.47
Flow (In)	Pre - POS1	1.357	12.00	10.13

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Cur
<Catchment to Outflow Node>	EDA1 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Cur	1.724	12.00	13.04
Flow (From)	EDA1 - Per - Cur	0.367	12.25	2.69
Flow (In)	Pre - POS1	2.092	12.00	15.56

Summary for Hydrograph Addition at 'Pre - POS1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA1 - Imp - Fut
<Catchment to Outflow Node>	EDA1 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA1 - Imp - Fut	2.143	12.00	16.13
Flow (From)	EDA1 - Per - Fut	0.505	12.25	3.63
Flow (In)	Pre - POS1	2.647	12.00	19.66

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA2 - Imp - Cur	0.243	12.00	2.00
Flow (From)	EDA2 - Per - Cur	0.048	12.25	0.42
Flow (In)	Pre - POS2	0.291	12.00	2.19

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA2 - Imp - Fut	0.292	12.00	2.38
Flow (From)	EDA2 - Per - Fut	0.068	12.25	0.60
Flow (In)	Pre - POS2	0.360	12.00	2.72

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Cur	0.389	12.00	3.14
Flow (From)	EDA2 - Per - Cur	0.114	12.25	1.02
Flow (In)	Pre - POS2	0.503	12.00	3.74

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	EDA2 - Imp - Fut	0.462	12.00	3.71
Flow (From)	EDA2 - Per - Fut	0.150	12.25	1.31
Flow (In)	Pre - POS2	0.612	12.00	4.56

JSUMC West Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Current 100 year

Return Event: 100 years
Storm Event: Current 100

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Cur
<Catchment to Outflow Node>	EDA2 - Per - Cur

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Cur	0.686	12.00	5.45
Flow (From)	EDA2 - Per - Cur	0.274	12.25	2.39
Flow (In)	Pre - POS2	0.959	12.00	7.01

JSUMC West Addition: PondPack Report

Subsection: Addition Summary
Label: Pre - POS2
Scenario: Future 100 year

Return Event: 100 years
Storm Event: Future 100

Summary for Hydrograph Addition at 'Pre - POS2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA2 - Imp - Fut
<Catchment to Outflow Node>	EDA2 - Per - Fut

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	EDA2 - Imp - Fut	0.852	12.00	6.75
Flow (From)	EDA2 - Per - Fut	0.369	12.25	3.07
Flow (In)	Pre - POS2	1.221	12.00	8.97

JSUMC West Addition: PondPack Report

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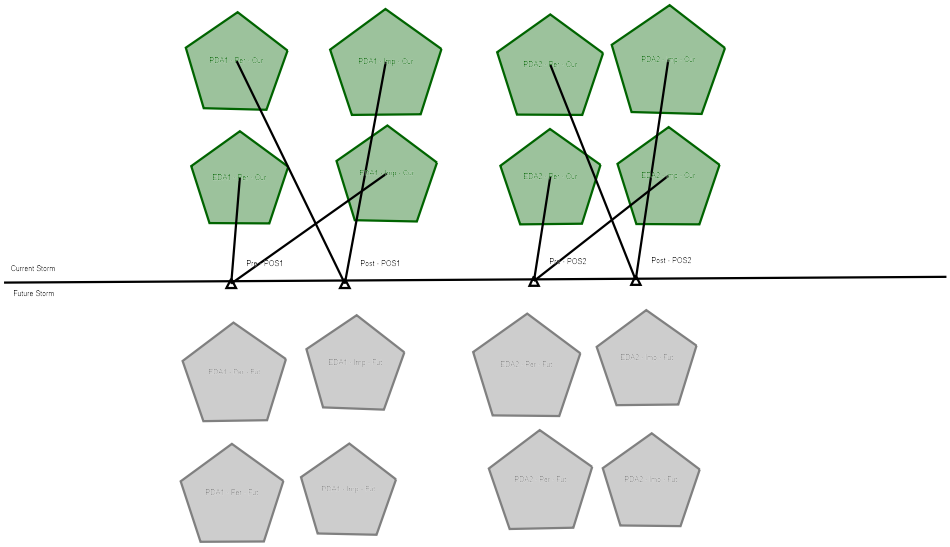
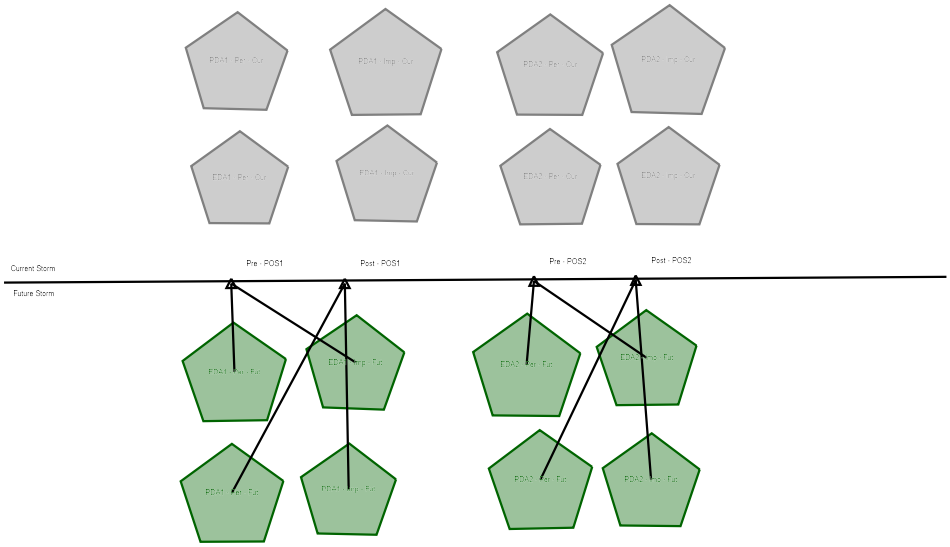
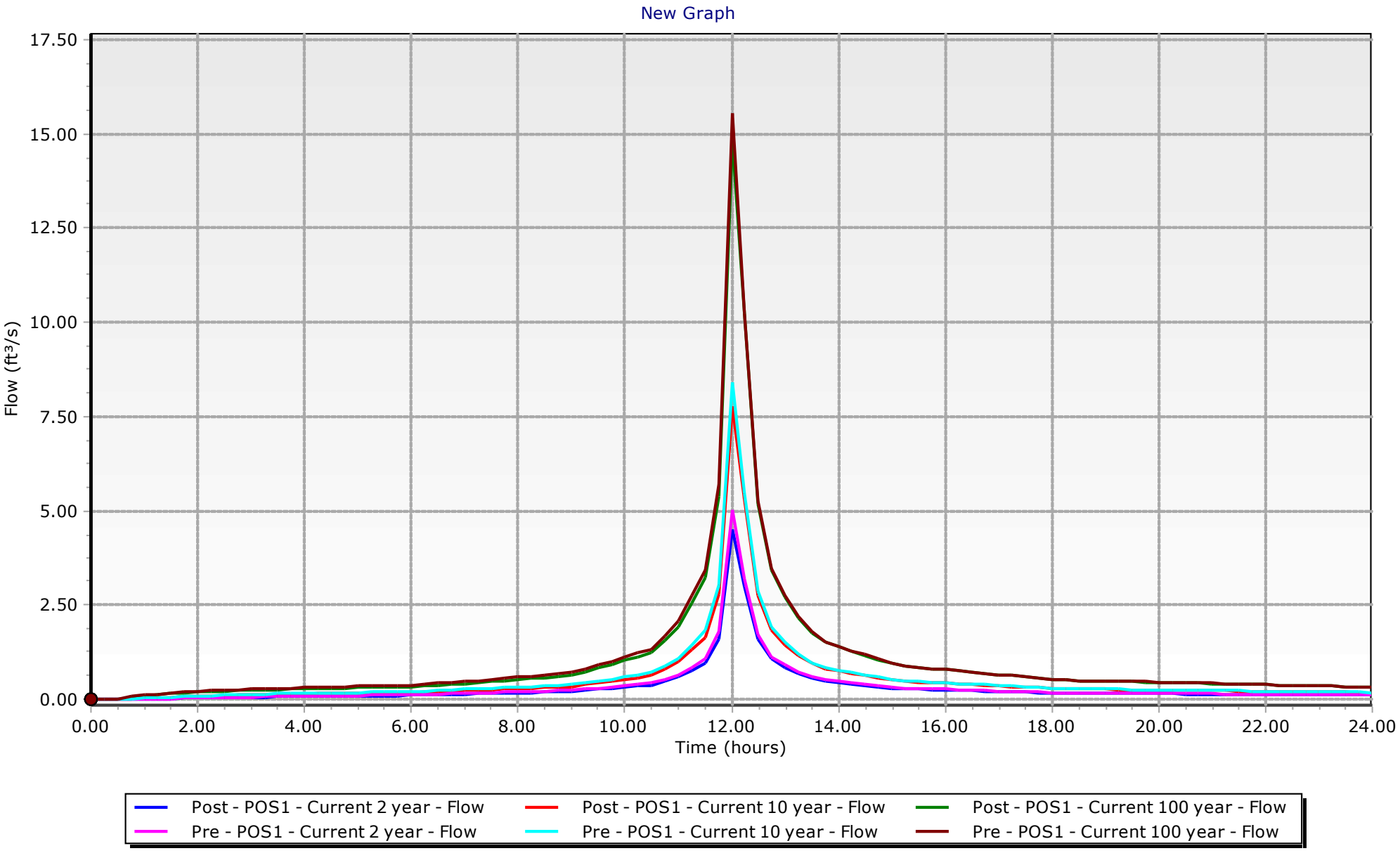
JSUMC West Addition: PondPack Report

Scenario: Current 2 year



Scenario: Future 2 year



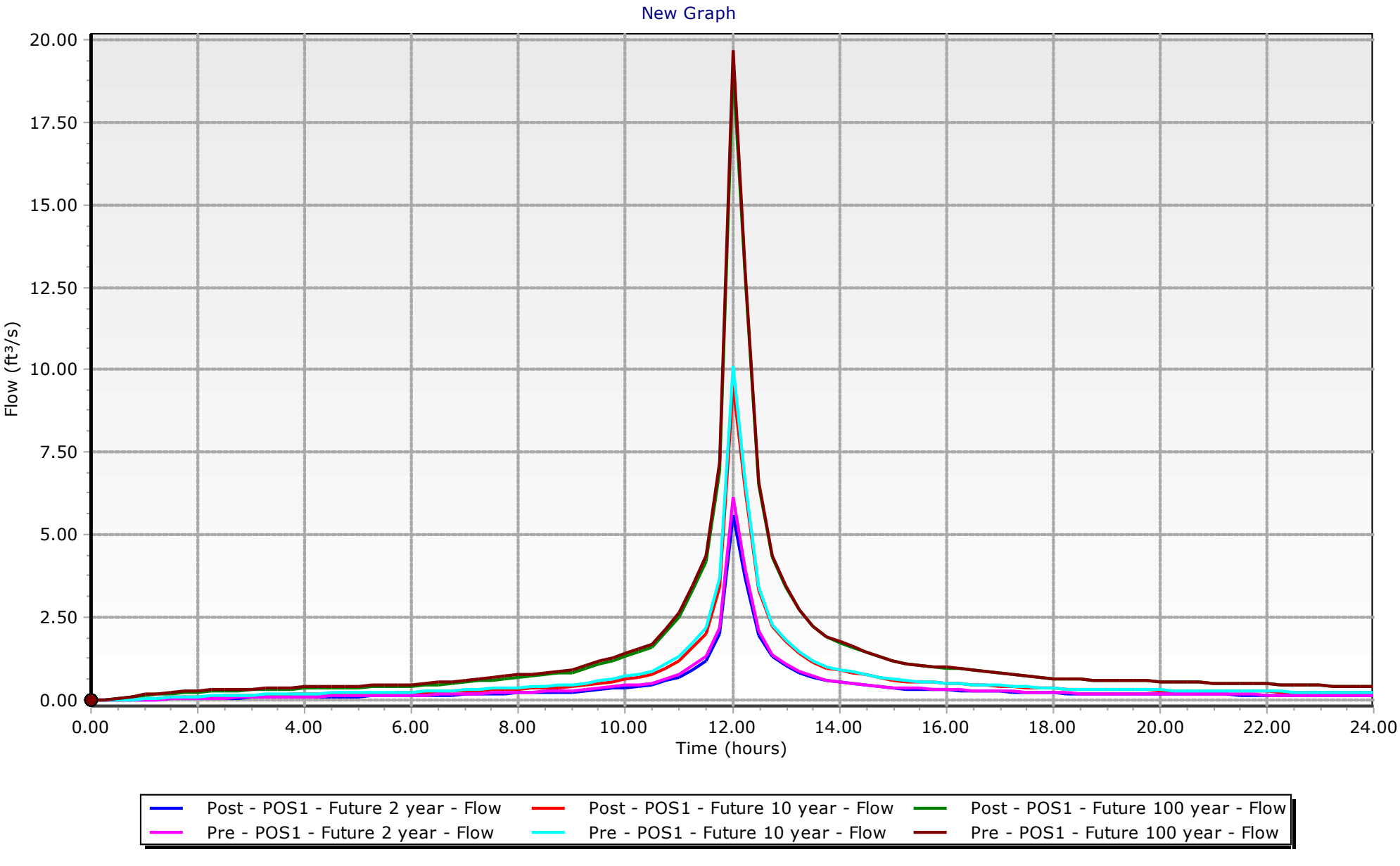

New Graph
17.50
15.00
12.50
10.00
7.50
5.00
2.50
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS1 - Current 2 year - Flow
Pre - POS1 - Current 2 year - Flow
Post - POS1 - Current 10 year - Flow
Pre - POS1 - Current 10 year - Flow
Post - POS1 - Current 100 year - Flow
Pre - POS1 - Current 100 year - Flow

West Addition Current Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06	0.01
1.00	0.00	0.00	0.00	0.02	0.02	0.00	0.11	0.09	0.02
1.25	0.01	0.01	0.00	0.04	0.04	0.00	0.14	0.12	0.02
1.50	0.02	0.01	0.01	0.06	0.05	0.01	0.17	0.15	0.02
1.75	0.02	0.02	0.00	0.07	0.06	0.01	0.19	0.17	0.02
2.00	0.03	0.03	0.00	0.08	0.07	0.01	0.21	0.18	0.03
2.25	0.04	0.04	0.00	0.10	0.08	0.02	0.22	0.20	0.02
2.50	0.05	0.04	0.01	0.11	0.09	0.02	0.24	0.21	0.03
2.75	0.05	0.05	0.00	0.12	0.10	0.02	0.25	0.22	0.03
3.00	0.06	0.05	0.01	0.12	0.11	0.01	0.26	0.23	0.03
3.25	0.07	0.06	0.01	0.13	0.12	0.01	0.27	0.24	0.03
3.50	0.07	0.06	0.01	0.14	0.12	0.02	0.29	0.25	0.04
3.75	0.08	0.07	0.01	0.15	0.13	0.02	0.30	0.26	0.04
4.00	0.08	0.07	0.01	0.15	0.14	0.01	0.31	0.27	0.04
4.25	0.09	0.08	0.01	0.16	0.14	0.02	0.31	0.28	0.03
4.50	0.09	0.08	0.01	0.17	0.15	0.02	0.32	0.29	0.03
4.75	0.09	0.08	0.01	0.17	0.15	0.02	0.33	0.29	0.04
5.00	0.10	0.09	0.01	0.18	0.16	0.02	0.34	0.30	0.04
5.25	0.10	0.09	0.01	0.18	0.16	0.02	0.35	0.31	0.04
5.50	0.11	0.10	0.01	0.19	0.17	0.02	0.36	0.31	0.05
5.75	0.11	0.10	0.01	0.20	0.17	0.03	0.36	0.32	0.04
6.00	0.11	0.10	0.01	0.20	0.18	0.02	0.37	0.33	0.04
6.25	0.12	0.11	0.01	0.21	0.19	0.02	0.40	0.35	0.05
6.50	0.13	0.12	0.01	0.23	0.20	0.03	0.42	0.37	0.05
6.75	0.14	0.13	0.01	0.24	0.22	0.02	0.44	0.39	0.05
7.00	0.15	0.14	0.01	0.26	0.23	0.03	0.47	0.42	0.05
7.25	0.16	0.14	0.02	0.27	0.24	0.03	0.50	0.44	0.06
7.50	0.17	0.15	0.02	0.29	0.26	0.03	0.53	0.46	0.07
7.75	0.18	0.16	0.02	0.30	0.27	0.03	0.56	0.49	0.07
8.00	0.19	0.17	0.02	0.32	0.28	0.04	0.59	0.52	0.07
8.25	0.20	0.18	0.02	0.33	0.30	0.03	0.62	0.55	0.07
8.50	0.21	0.19	0.02	0.35	0.31	0.04	0.65	0.58	0.07
8.75	0.22	0.20	0.02	0.37	0.32	0.05	0.68	0.61	0.07
9.00	0.23	0.21	0.02	0.38	0.34	0.04	0.71	0.64	0.07
9.25	0.26	0.23	0.03	0.43	0.38	0.05	0.81	0.73	0.08
9.50	0.29	0.26	0.03	0.48	0.42	0.06	0.91	0.82	0.09
9.75	0.33	0.29	0.04	0.53	0.47	0.06	1.01	0.92	0.09
10.00	0.36	0.32	0.04	0.58	0.51	0.07	1.12	1.02	0.10
10.25	0.39	0.35	0.04	0.64	0.56	0.08	1.22	1.13	0.09
10.50	0.43	0.38	0.05	0.70	0.62	0.08	1.33	1.23	0.10
10.75	0.54	0.48	0.06	0.89	0.79	0.10	1.69	1.57	0.12
11.00	0.65	0.58	0.07	1.09	0.98	0.11	2.07	1.93	0.14
11.25	0.86	0.76	0.10	1.44	1.30	0.14	2.73	2.56	0.17
11.50	1.07	0.94	0.13	1.82	1.65	0.17	3.43	3.24	0.19
11.75	1.80	1.59	0.21	3.04	2.78	0.26	5.68	5.38	0.30
12.00	5.02	4.51	0.51	8.40	7.77	0.63	15.56	14.84	0.72
12.25	3.20	2.99	0.21	5.46	5.29	0.17	10.26	10.25	0.01
12.50	1.70	1.59	0.11	2.85	2.74	0.11	5.25	5.17	0.08
12.75	1.13	1.06	0.07	1.90	1.83	0.07	3.48	3.44	0.04
13.00	0.90	0.85	0.05	1.51	1.45	0.06	2.76	2.73	0.03
13.25	0.72	0.68	0.04	1.20	1.16	0.04	2.19	2.17	0.02

13.50	0.58	0.55	0.03	0.97	0.94	0.03	1.78	1.76	0.02
13.75	0.50	0.47	0.03	0.83	0.81	0.02	1.52	1.50	0.02
14.00	0.46	0.44	0.02	0.77	0.75	0.02	1.40	1.39	0.01
14.25	0.43	0.40	0.03	0.71	0.69	0.02	1.29	1.28	0.01
14.50	0.39	0.37	0.02	0.65	0.63	0.02	1.18	1.17	0.01
14.75	0.35	0.33	0.02	0.59	0.57	0.02	1.07	1.06	0.01
15.00	0.32	0.30	0.02	0.52	0.51	0.01	0.95	0.94	0.01
15.25	0.29	0.28	0.01	0.48	0.47	0.01	0.88	0.87	0.01
15.50	0.28	0.27	0.01	0.47	0.45	0.02	0.85	0.84	0.01
15.75	0.27	0.26	0.01	0.45	0.44	0.01	0.82	0.81	0.01
16.00	0.26	0.25	0.01	0.43	0.42	0.01	0.78	0.78	0.00
16.25	0.25	0.24	0.01	0.41	0.40	0.01	0.75	0.74	0.01
16.50	0.24	0.23	0.01	0.40	0.39	0.01	0.72	0.71	0.01
16.75	0.23	0.22	0.01	0.38	0.37	0.01	0.69	0.68	0.01
17.00	0.22	0.21	0.01	0.36	0.35	0.01	0.66	0.65	0.01
17.25	0.21	0.20	0.01	0.34	0.33	0.01	0.62	0.62	0.00
17.50	0.20	0.19	0.01	0.33	0.32	0.01	0.59	0.59	0.00
17.75	0.19	0.18	0.01	0.31	0.30	0.01	0.56	0.56	0.00
18.00	0.18	0.17	0.01	0.29	0.28	0.01	0.53	0.52	0.01
18.25	0.17	0.16	0.01	0.28	0.27	0.01	0.51	0.50	0.01
18.50	0.17	0.16	0.01	0.27	0.27	0.00	0.50	0.49	0.01
18.75	0.16	0.16	0.00	0.27	0.26	0.01	0.49	0.49	0.00
19.00	0.16	0.15	0.01	0.27	0.26	0.01	0.48	0.48	0.00
19.25	0.16	0.15	0.01	0.26	0.26	0.00	0.48	0.47	0.01
19.50	0.16	0.15	0.01	0.26	0.25	0.01	0.47	0.46	0.01
19.75	0.15	0.15	0.00	0.25	0.25	0.00	0.46	0.46	0.00
20.00	0.15	0.14	0.01	0.25	0.24	0.01	0.45	0.45	0.00
20.25	0.15	0.14	0.01	0.24	0.24	0.00	0.44	0.44	0.00
20.50	0.15	0.14	0.01	0.24	0.23	0.01	0.43	0.43	0.00
20.75	0.14	0.14	0.00	0.24	0.23	0.01	0.43	0.42	0.01
21.00	0.14	0.13	0.01	0.23	0.23	0.00	0.42	0.42	0.00
21.25	0.14	0.13	0.01	0.23	0.22	0.01	0.41	0.41	0.00
21.50	0.13	0.13	0.00	0.22	0.22	0.00	0.40	0.40	0.00
21.75	0.13	0.13	0.00	0.22	0.21	0.01	0.39	0.39	0.00
22.00	0.13	0.12	0.01	0.21	0.21	0.00	0.39	0.38	0.01
22.25	0.13	0.12	0.01	0.21	0.20	0.01	0.38	0.38	0.00
22.50	0.12	0.12	0.00	0.20	0.20	0.00	0.37	0.37	0.00
22.75	0.12	0.12	0.00	0.20	0.20	0.00	0.36	0.36	0.00
23.00	0.12	0.11	0.01	0.20	0.19	0.01	0.35	0.35	0.00
23.25	0.12	0.11	0.01	0.19	0.19	0.00	0.35	0.34	0.01
23.50	0.11	0.11	0.00	0.19	0.18	0.01	0.34	0.34	0.00
23.75	0.11	0.11	0.00	0.18	0.18	0.00	0.33	0.33	0.00
24.00	0.11	0.10	0.01	0.18	0.17	0.01	0.32	0.32	0.00

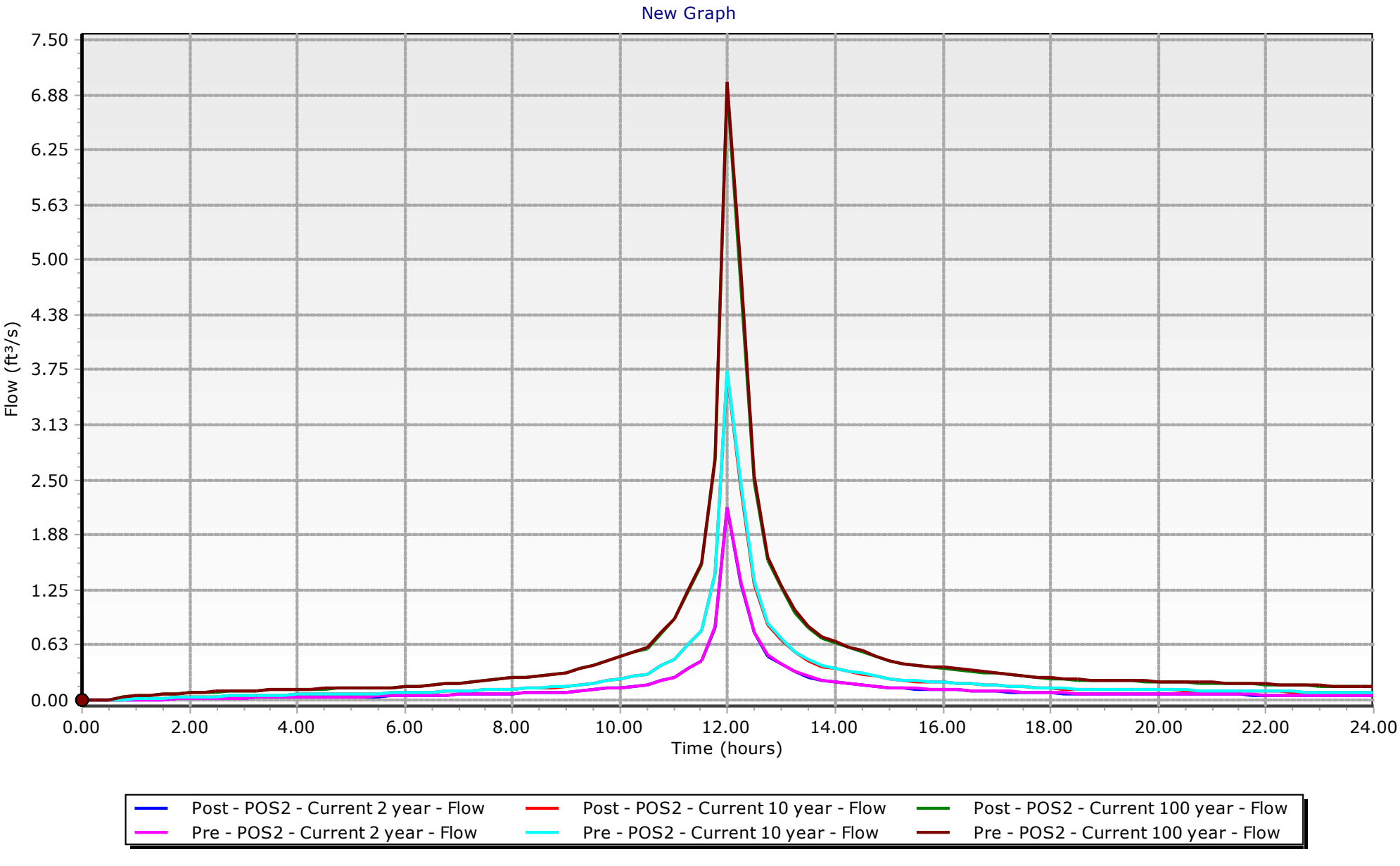

New Graph
20.00
17.50
15.00
12.50
10.00
7.50
5.00
2.50
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS1 - Future 2 year - Flow
Pre - POS1 - Future 2 year - Flow
Post - POS1 - Future 10 year - Flow
Pre - POS1 - Future 10 year - Flow
Post - POS1 - Future 100 year - Flow
Pre - POS1 - Future 100 year - Flow

West Addition Future Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00
0.75	0.00	0.00	0.00	0.01	0.01	0.00	0.11	0.10	0.01
1.00	0.00	0.00	0.00	0.04	0.04	0.00	0.16	0.14	0.02
1.25	0.02	0.01	0.01	0.06	0.06	0.00	0.20	0.18	0.02
1.50	0.03	0.02	0.01	0.08	0.07	0.01	0.23	0.20	0.03
1.75	0.04	0.03	0.01	0.10	0.09	0.01	0.26	0.23	0.03
2.00	0.05	0.04	0.01	0.11	0.10	0.01	0.28	0.25	0.03
2.25	0.06	0.05	0.01	0.13	0.11	0.02	0.30	0.26	0.04
2.50	0.07	0.06	0.01	0.14	0.12	0.02	0.31	0.28	0.03
2.75	0.07	0.06	0.01	0.15	0.13	0.02	0.33	0.29	0.04
3.00	0.08	0.07	0.01	0.16	0.14	0.02	0.34	0.30	0.04
3.25	0.09	0.08	0.01	0.17	0.15	0.02	0.35	0.31	0.04
3.50	0.09	0.08	0.01	0.18	0.16	0.02	0.37	0.33	0.04
3.75	0.10	0.09	0.01	0.18	0.16	0.02	0.38	0.33	0.05
4.00	0.11	0.09	0.02	0.19	0.17	0.02	0.39	0.34	0.05
4.25	0.11	0.10	0.01	0.20	0.18	0.02	0.40	0.35	0.05
4.50	0.12	0.10	0.02	0.21	0.18	0.03	0.41	0.36	0.05
4.75	0.12	0.11	0.01	0.21	0.19	0.02	0.42	0.37	0.05
5.00	0.13	0.11	0.02	0.22	0.19	0.03	0.43	0.38	0.05
5.25	0.13	0.12	0.01	0.23	0.20	0.03	0.44	0.39	0.05
5.50	0.14	0.12	0.02	0.23	0.20	0.03	0.45	0.40	0.05
5.75	0.14	0.12	0.02	0.24	0.21	0.03	0.46	0.40	0.06
6.00	0.14	0.13	0.01	0.24	0.21	0.03	0.46	0.41	0.05
6.25	0.15	0.14	0.01	0.26	0.23	0.03	0.50	0.44	0.06
6.50	0.17	0.15	0.02	0.28	0.24	0.04	0.53	0.46	0.07
6.75	0.18	0.16	0.02	0.29	0.26	0.03	0.57	0.50	0.07
7.00	0.19	0.17	0.02	0.31	0.28	0.03	0.60	0.53	0.07
7.25	0.20	0.18	0.02	0.33	0.29	0.04	0.64	0.57	0.07
7.50	0.21	0.19	0.02	0.35	0.31	0.04	0.68	0.61	0.07
7.75	0.22	0.20	0.02	0.36	0.32	0.04	0.72	0.64	0.08
8.00	0.24	0.21	0.03	0.38	0.34	0.04	0.76	0.68	0.08
8.25	0.25	0.22	0.03	0.40	0.35	0.05	0.79	0.72	0.07
8.50	0.26	0.23	0.03	0.42	0.37	0.05	0.83	0.76	0.07
8.75	0.27	0.24	0.03	0.43	0.38	0.05	0.88	0.80	0.08
9.00	0.28	0.25	0.03	0.45	0.40	0.05	0.92	0.84	0.08
9.25	0.32	0.28	0.04	0.51	0.45	0.06	1.04	0.95	0.09
9.50	0.36	0.32	0.04	0.58	0.51	0.07	1.16	1.07	0.09
9.75	0.40	0.35	0.05	0.64	0.57	0.07	1.30	1.20	0.10
10.00	0.43	0.38	0.05	0.71	0.63	0.08	1.43	1.33	0.10
10.25	0.47	0.42	0.05	0.78	0.70	0.08	1.57	1.46	0.11
10.50	0.51	0.45	0.06	0.85	0.76	0.09	1.71	1.60	0.11
10.75	0.65	0.57	0.08	1.08	0.97	0.11	2.16	2.03	0.13
11.00	0.79	0.69	0.10	1.33	1.20	0.13	2.65	2.51	0.14
11.25	1.04	0.92	0.12	1.75	1.60	0.15	3.48	3.31	0.17
11.50	1.31	1.17	0.14	2.20	2.03	0.17	4.37	4.18	0.19
11.75	2.21	1.98	0.23	3.67	3.41	0.26	7.21	6.94	0.27
12.00	6.14	5.61	0.53	10.13	9.53	0.60	19.66	19.10	0.56
12.25	3.95	3.71	0.24	6.62	6.39	0.23	12.98	12.87	0.11
12.50	2.08	1.96	0.12	3.43	3.32	0.11	6.60	6.53	0.07
12.75	1.39	1.31	0.08	2.28	2.21	0.07	4.37	4.34	0.03
13.00	1.10	1.05	0.05	1.81	1.76	0.05	3.46	3.44	0.02
13.25	0.88	0.83	0.05	1.44	1.40	0.04	2.75	2.73	0.02
13.50	0.71	0.68	0.03	1.17	1.14	0.03	2.23	2.22	0.01
13.75	0.61	0.58	0.03	1.00	0.97	0.03	1.90	1.89	0.01
14.00	0.57	0.54	0.03	0.93	0.90	0.03	1.76	1.75	0.01

14.25	0.52	0.50	0.02	0.85	0.83	0.02	1.62	1.61	0.01
14.50	0.48	0.45	0.03	0.78	0.76	0.02	1.48	1.47	0.01
14.75	0.43	0.41	0.02	0.70	0.69	0.01	1.34	1.33	0.01
15.00	0.38	0.37	0.01	0.63	0.61	0.02	1.19	1.19	0.00
15.25	0.36	0.34	0.02	0.58	0.57	0.01	1.10	1.10	0.00
15.50	0.34	0.33	0.01	0.56	0.55	0.01	1.06	1.06	0.00
15.75	0.33	0.32	0.01	0.54	0.53	0.01	1.02	1.02	0.00
16.00	0.32	0.30	0.02	0.52	0.51	0.01	0.98	0.98	0.00
16.25	0.30	0.29	0.01	0.50	0.49	0.01	0.94	0.94	0.00
16.50	0.29	0.28	0.01	0.48	0.46	0.02	0.90	0.90	0.00
16.75	0.28	0.27	0.01	0.46	0.45	0.01	0.86	0.86	0.00
17.00	0.27	0.26	0.01	0.43	0.42	0.01	0.82	0.82	0.00
17.25	0.25	0.24	0.01	0.41	0.40	0.01	0.78	0.78	0.00
17.50	0.24	0.23	0.01	0.39	0.38	0.01	0.74	0.74	0.00
17.75	0.23	0.22	0.01	0.37	0.36	0.01	0.70	0.70	0.00
18.00	0.21	0.21	0.00	0.35	0.34	0.01	0.66	0.66	0.00
18.25	0.21	0.20	0.01	0.34	0.33	0.01	0.63	0.63	0.00
18.50	0.20	0.19	0.01	0.33	0.32	0.01	0.62	0.62	0.00
18.75	0.20	0.19	0.01	0.32	0.32	0.00	0.61	0.61	0.00
19.00	0.20	0.19	0.01	0.32	0.31	0.01	0.60	0.60	0.00
19.25	0.19	0.19	0.00	0.31	0.31	0.00	0.59	0.59	0.00
19.50	0.19	0.18	0.01	0.31	0.30	0.01	0.58	0.58	0.00
19.75	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
20.00	0.18	0.18	0.00	0.30	0.29	0.01	0.56	0.56	0.00
20.25	0.18	0.17	0.01	0.29	0.29	0.00	0.55	0.55	0.00
20.50	0.18	0.17	0.01	0.29	0.28	0.01	0.54	0.54	0.00
20.75	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
21.00	0.17	0.16	0.01	0.28	0.27	0.01	0.52	0.52	0.00
21.25	0.17	0.16	0.01	0.27	0.27	0.00	0.51	0.51	0.00
21.50	0.16	0.16	0.00	0.27	0.26	0.01	0.50	0.50	0.00
21.75	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
22.00	0.16	0.15	0.01	0.26	0.25	0.01	0.48	0.48	0.00
22.25	0.15	0.15	0.00	0.25	0.25	0.00	0.47	0.47	0.00
22.50	0.15	0.15	0.00	0.25	0.24	0.01	0.46	0.46	0.00
22.75	0.15	0.14	0.01	0.24	0.24	0.00	0.45	0.45	0.00
23.00	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
23.25	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.43	0.00
23.50	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
23.75	0.13	0.13	0.00	0.22	0.21	0.01	0.41	0.41	0.00
24.00	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00

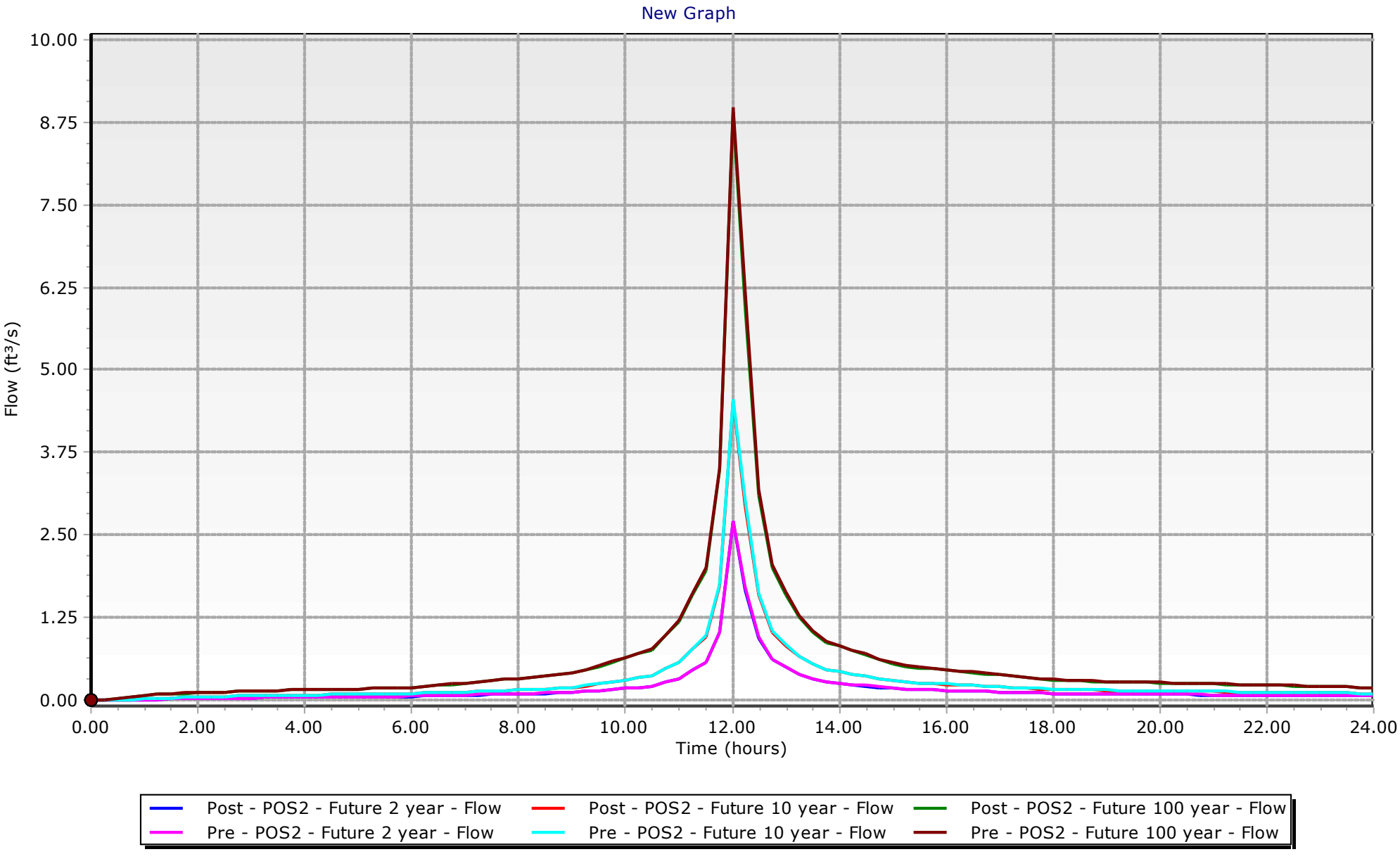

New Graph
7.50
6.88
6.25
5.63
5.00
4.38
3.75
3.13
2.50
1.88
1.25
0.63
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS2 - Current 2 year - Flow
Pre - POS2 - Current 2 year - Flow
Post - POS2 - Current 10 year - Flow
Pre - POS2 - Current 10 year - Flow
Post - POS2 - Current 100 year - Flow
Pre - POS2 - Current 100 year - Flow

West Addition Current Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06	0.01
1.00	0.00	0.00	0.00	0.02	0.02	0.00	0.11	0.09	0.02
1.25	0.01	0.01	0.00	0.04	0.04	0.00	0.14	0.12	0.02
1.50	0.02	0.01	0.01	0.06	0.05	0.01	0.17	0.15	0.02
1.75	0.02	0.02	0.00	0.07	0.06	0.01	0.19	0.17	0.02
2.00	0.03	0.03	0.00	0.08	0.07	0.01	0.21	0.18	0.03
2.25	0.04	0.04	0.00	0.10	0.08	0.02	0.22	0.20	0.02
2.50	0.05	0.04	0.01	0.11	0.09	0.02	0.24	0.21	0.03
2.75	0.05	0.05	0.00	0.12	0.10	0.02	0.25	0.22	0.03
3.00	0.06	0.05	0.01	0.12	0.11	0.01	0.26	0.23	0.03
3.25	0.07	0.06	0.01	0.13	0.12	0.01	0.27	0.24	0.03
3.50	0.07	0.06	0.01	0.14	0.12	0.02	0.29	0.25	0.04
3.75	0.08	0.07	0.01	0.15	0.13	0.02	0.30	0.26	0.04
4.00	0.08	0.07	0.01	0.15	0.14	0.01	0.31	0.27	0.04
4.25	0.09	0.08	0.01	0.16	0.14	0.02	0.31	0.28	0.03
4.50	0.09	0.08	0.01	0.17	0.15	0.02	0.32	0.29	0.03
4.75	0.09	0.08	0.01	0.17	0.15	0.02	0.33	0.29	0.04
5.00	0.10	0.09	0.01	0.18	0.16	0.02	0.34	0.30	0.04
5.25	0.10	0.09	0.01	0.18	0.16	0.02	0.35	0.31	0.04
5.50	0.11	0.10	0.01	0.19	0.17	0.02	0.36	0.31	0.05
5.75	0.11	0.10	0.01	0.20	0.17	0.03	0.36	0.32	0.04
6.00	0.11	0.10	0.01	0.20	0.18	0.02	0.37	0.33	0.04
6.25	0.12	0.11	0.01	0.21	0.19	0.02	0.40	0.35	0.05
6.50	0.13	0.12	0.01	0.23	0.20	0.03	0.42	0.37	0.05
6.75	0.14	0.13	0.01	0.24	0.22	0.02	0.44	0.39	0.05
7.00	0.15	0.14	0.01	0.26	0.23	0.03	0.47	0.42	0.05
7.25	0.16	0.14	0.02	0.27	0.24	0.03	0.50	0.44	0.06
7.50	0.17	0.15	0.02	0.29	0.26	0.03	0.53	0.46	0.07
7.75	0.18	0.16	0.02	0.30	0.27	0.03	0.56	0.49	0.07
8.00	0.19	0.17	0.02	0.32	0.28	0.04	0.59	0.52	0.07
8.25	0.20	0.18	0.02	0.33	0.30	0.03	0.62	0.55	0.07
8.50	0.21	0.19	0.02	0.35	0.31	0.04	0.65	0.58	0.07
8.75	0.22	0.20	0.02	0.37	0.32	0.05	0.68	0.61	0.07
9.00	0.23	0.21	0.02	0.38	0.34	0.04	0.71	0.64	0.07
9.25	0.26	0.23	0.03	0.43	0.38	0.05	0.81	0.73	0.08
9.50	0.29	0.26	0.03	0.48	0.42	0.06	0.91	0.82	0.09
9.75	0.33	0.29	0.04	0.53	0.47	0.06	1.01	0.92	0.09
10.00	0.36	0.32	0.04	0.58	0.51	0.07	1.12	1.02	0.10
10.25	0.39	0.35	0.04	0.64	0.56	0.08	1.22	1.13	0.09
10.50	0.43	0.38	0.05	0.70	0.62	0.08	1.33	1.23	0.10
10.75	0.54	0.48	0.06	0.89	0.79	0.10	1.69	1.57	0.12
11.00	0.65	0.58	0.07	1.09	0.98	0.11	2.07	1.93	0.14
11.25	0.86	0.76	0.10	1.44	1.30	0.14	2.73	2.56	0.17
11.50	1.07	0.94	0.13	1.82	1.65	0.17	3.43	3.24	0.19
11.75	1.80	1.59	0.21	3.04	2.78	0.26	5.68	5.38	0.30
12.00	5.02	4.51	0.51	8.40	7.77	0.63	15.56	14.84	0.72
12.25	3.20	2.99	0.21	5.46	5.29	0.17	10.26	10.25	0.01
12.50	1.70	1.59	0.11	2.85	2.74	0.11	5.25	5.17	0.08
12.75	1.13	1.06	0.07	1.90	1.83	0.07	3.48	3.44	0.04
13.00	0.90	0.85	0.05	1.51	1.45	0.06	2.76	2.73	0.03
13.25	0.72	0.68	0.04	1.20	1.16	0.04	2.19	2.17	0.02

13.50	0.58	0.55	0.03	0.97	0.94	0.03	1.78	1.76	0.02
13.75	0.50	0.47	0.03	0.83	0.81	0.02	1.52	1.50	0.02
14.00	0.46	0.44	0.02	0.77	0.75	0.02	1.40	1.39	0.01
14.25	0.43	0.40	0.03	0.71	0.69	0.02	1.29	1.28	0.01
14.50	0.39	0.37	0.02	0.65	0.63	0.02	1.18	1.17	0.01
14.75	0.35	0.33	0.02	0.59	0.57	0.02	1.07	1.06	0.01
15.00	0.32	0.30	0.02	0.52	0.51	0.01	0.95	0.94	0.01
15.25	0.29	0.28	0.01	0.48	0.47	0.01	0.88	0.87	0.01
15.50	0.28	0.27	0.01	0.47	0.45	0.02	0.85	0.84	0.01
15.75	0.27	0.26	0.01	0.45	0.44	0.01	0.82	0.81	0.01
16.00	0.26	0.25	0.01	0.43	0.42	0.01	0.78	0.78	0.00
16.25	0.25	0.24	0.01	0.41	0.40	0.01	0.75	0.74	0.01
16.50	0.24	0.23	0.01	0.40	0.39	0.01	0.72	0.71	0.01
16.75	0.23	0.22	0.01	0.38	0.37	0.01	0.69	0.68	0.01
17.00	0.22	0.21	0.01	0.36	0.35	0.01	0.66	0.65	0.01
17.25	0.21	0.20	0.01	0.34	0.33	0.01	0.62	0.62	0.00
17.50	0.20	0.19	0.01	0.33	0.32	0.01	0.59	0.59	0.00
17.75	0.19	0.18	0.01	0.31	0.30	0.01	0.56	0.56	0.00
18.00	0.18	0.17	0.01	0.29	0.28	0.01	0.53	0.52	0.01
18.25	0.17	0.16	0.01	0.28	0.27	0.01	0.51	0.50	0.01
18.50	0.17	0.16	0.01	0.27	0.27	0.00	0.50	0.49	0.01
18.75	0.16	0.16	0.00	0.27	0.26	0.01	0.49	0.49	0.00
19.00	0.16	0.15	0.01	0.27	0.26	0.01	0.48	0.48	0.00
19.25	0.16	0.15	0.01	0.26	0.26	0.00	0.48	0.47	0.01
19.50	0.16	0.15	0.01	0.26	0.25	0.01	0.47	0.46	0.01
19.75	0.15	0.15	0.00	0.25	0.25	0.00	0.46	0.46	0.00
20.00	0.15	0.14	0.01	0.25	0.24	0.01	0.45	0.45	0.00
20.25	0.15	0.14	0.01	0.24	0.24	0.00	0.44	0.44	0.00
20.50	0.15	0.14	0.01	0.24	0.23	0.01	0.43	0.43	0.00
20.75	0.14	0.14	0.00	0.24	0.23	0.01	0.43	0.42	0.01
21.00	0.14	0.13	0.01	0.23	0.23	0.00	0.42	0.42	0.00
21.25	0.14	0.13	0.01	0.23	0.22	0.01	0.41	0.41	0.00
21.50	0.13	0.13	0.00	0.22	0.22	0.00	0.40	0.40	0.00
21.75	0.13	0.13	0.00	0.22	0.21	0.01	0.39	0.39	0.00
22.00	0.13	0.12	0.01	0.21	0.21	0.00	0.39	0.38	0.01
22.25	0.13	0.12	0.01	0.21	0.20	0.01	0.38	0.38	0.00
22.50	0.12	0.12	0.00	0.20	0.20	0.00	0.37	0.37	0.00
22.75	0.12	0.12	0.00	0.20	0.20	0.00	0.36	0.36	0.00
23.00	0.12	0.11	0.01	0.20	0.19	0.01	0.35	0.35	0.00
23.25	0.12	0.11	0.01	0.19	0.19	0.00	0.35	0.34	0.01
23.50	0.11	0.11	0.00	0.19	0.18	0.01	0.34	0.34	0.00
23.75	0.11	0.11	0.00	0.18	0.18	0.00	0.33	0.33	0.00
24.00	0.11	0.10	0.01	0.18	0.17	0.01	0.32	0.32	0.00


New Graph
10.00
8.75
7.50
6.25
5.00
3.75
2.50
1.25
0.00
Flow (ft³/s)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
Time (hours)
Post - POS2 - Future 2 year - Flow
Pre - POS2 - Future 2 year - Flow
Post - POS2 - Future 10 year - Flow
Pre - POS2 - Future 10 year - Flow
Post - POS2 - Future 100 year - Flow
Pre - POS2 - Future 100 year - Flow

West Addition Future Precipitation

PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
Time (Hours)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)	Pre-Dev Flow (CFS)	Post-Dev Flow (CFS)	Reduction (CFS)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00
0.75	0.00	0.00	0.00	0.01	0.01	0.00	0.11	0.10	0.01
1.00	0.00	0.00	0.00	0.04	0.04	0.00	0.16	0.14	0.02
1.25	0.02	0.01	0.01	0.06	0.06	0.00	0.20	0.18	0.02
1.50	0.03	0.02	0.01	0.08	0.07	0.01	0.23	0.20	0.03
1.75	0.04	0.03	0.01	0.10	0.09	0.01	0.26	0.23	0.03
2.00	0.05	0.04	0.01	0.11	0.10	0.01	0.28	0.25	0.03
2.25	0.06	0.05	0.01	0.13	0.11	0.02	0.30	0.26	0.04
2.50	0.07	0.06	0.01	0.14	0.12	0.02	0.31	0.28	0.03
2.75	0.07	0.06	0.01	0.15	0.13	0.02	0.33	0.29	0.04
3.00	0.08	0.07	0.01	0.16	0.14	0.02	0.34	0.30	0.04
3.25	0.09	0.08	0.01	0.17	0.15	0.02	0.35	0.31	0.04
3.50	0.09	0.08	0.01	0.18	0.16	0.02	0.37	0.33	0.04
3.75	0.10	0.09	0.01	0.18	0.16	0.02	0.38	0.33	0.05
4.00	0.11	0.09	0.02	0.19	0.17	0.02	0.39	0.34	0.05
4.25	0.11	0.10	0.01	0.20	0.18	0.02	0.40	0.35	0.05
4.50	0.12	0.10	0.02	0.21	0.18	0.03	0.41	0.36	0.05
4.75	0.12	0.11	0.01	0.21	0.19	0.02	0.42	0.37	0.05
5.00	0.13	0.11	0.02	0.22	0.19	0.03	0.43	0.38	0.05
5.25	0.13	0.12	0.01	0.23	0.20	0.03	0.44	0.39	0.05
5.50	0.14	0.12	0.02	0.23	0.20	0.03	0.45	0.40	0.05
5.75	0.14	0.12	0.02	0.24	0.21	0.03	0.46	0.40	0.06
6.00	0.14	0.13	0.01	0.24	0.21	0.03	0.46	0.41	0.05
6.25	0.15	0.14	0.01	0.26	0.23	0.03	0.50	0.44	0.06
6.50	0.17	0.15	0.02	0.28	0.24	0.04	0.53	0.46	0.07
6.75	0.18	0.16	0.02	0.29	0.26	0.03	0.57	0.50	0.07
7.00	0.19	0.17	0.02	0.31	0.28	0.03	0.60	0.53	0.07
7.25	0.20	0.18	0.02	0.33	0.29	0.04	0.64	0.57	0.07
7.50	0.21	0.19	0.02	0.35	0.31	0.04	0.68	0.61	0.07
7.75	0.22	0.20	0.02	0.36	0.32	0.04	0.72	0.64	0.08
8.00	0.24	0.21	0.03	0.38	0.34	0.04	0.76	0.68	0.08
8.25	0.25	0.22	0.03	0.40	0.35	0.05	0.79	0.72	0.07
8.50	0.26	0.23	0.03	0.42	0.37	0.05	0.83	0.76	0.07
8.75	0.27	0.24	0.03	0.43	0.38	0.05	0.88	0.80	0.08
9.00	0.28	0.25	0.03	0.45	0.40	0.05	0.92	0.84	0.08
9.25	0.32	0.28	0.04	0.51	0.45	0.06	1.04	0.95	0.09
9.50	0.36	0.32	0.04	0.58	0.51	0.07	1.16	1.07	0.09
9.75	0.40	0.35	0.05	0.64	0.57	0.07	1.30	1.20	0.10
10.00	0.43	0.38	0.05	0.71	0.63	0.08	1.43	1.33	0.10
10.25	0.47	0.42	0.05	0.78	0.70	0.08	1.57	1.46	0.11
10.50	0.51	0.45	0.06	0.85	0.76	0.09	1.71	1.60	0.11
10.75	0.65	0.57	0.08	1.08	0.97	0.11	2.16	2.03	0.13
11.00	0.79	0.69	0.10	1.33	1.20	0.13	2.65	2.51	0.14
11.25	1.04	0.92	0.12	1.75	1.60	0.15	3.48	3.31	0.17
11.50	1.31	1.17	0.14	2.20	2.03	0.17	4.37	4.18	0.19
11.75	2.21	1.98	0.23	3.67	3.41	0.26	7.21	6.94	0.27
12.00	6.14	5.61	0.53	10.13	9.53	0.60	19.66	19.10	0.56
12.25	3.95	3.71	0.24	6.62	6.39	0.23	12.98	12.87	0.11
12.50	2.08	1.96	0.12	3.43	3.32	0.11	6.60	6.53	0.07
12.75	1.39	1.31	0.08	2.28	2.21	0.07	4.37	4.34	0.03
13.00	1.10	1.05	0.05	1.81	1.76	0.05	3.46	3.44	0.02
13.25	0.88	0.83	0.05	1.44	1.40	0.04	2.75	2.73	0.02
13.50	0.71	0.68	0.03	1.17	1.14	0.03	2.23	2.22	0.01
13.75	0.61	0.58	0.03	1.00	0.97	0.03	1.90	1.89	0.01
14.00	0.57	0.54	0.03	0.93	0.90	0.03	1.76	1.75	0.01

14.25	0.52	0.50	0.02	0.85	0.83	0.02	1.62	1.61	0.01
14.50	0.48	0.45	0.03	0.78	0.76	0.02	1.48	1.47	0.01
14.75	0.43	0.41	0.02	0.70	0.69	0.01	1.34	1.33	0.01
15.00	0.38	0.37	0.01	0.63	0.61	0.02	1.19	1.19	0.00
15.25	0.36	0.34	0.02	0.58	0.57	0.01	1.10	1.10	0.00
15.50	0.34	0.33	0.01	0.56	0.55	0.01	1.06	1.06	0.00
15.75	0.33	0.32	0.01	0.54	0.53	0.01	1.02	1.02	0.00
16.00	0.32	0.30	0.02	0.52	0.51	0.01	0.98	0.98	0.00
16.25	0.30	0.29	0.01	0.50	0.49	0.01	0.94	0.94	0.00
16.50	0.29	0.28	0.01	0.48	0.46	0.02	0.90	0.90	0.00
16.75	0.28	0.27	0.01	0.46	0.45	0.01	0.86	0.86	0.00
17.00	0.27	0.26	0.01	0.43	0.42	0.01	0.82	0.82	0.00
17.25	0.25	0.24	0.01	0.41	0.40	0.01	0.78	0.78	0.00
17.50	0.24	0.23	0.01	0.39	0.38	0.01	0.74	0.74	0.00
17.75	0.23	0.22	0.01	0.37	0.36	0.01	0.70	0.70	0.00
18.00	0.21	0.21	0.00	0.35	0.34	0.01	0.66	0.66	0.00
18.25	0.21	0.20	0.01	0.34	0.33	0.01	0.63	0.63	0.00
18.50	0.20	0.19	0.01	0.33	0.32	0.01	0.62	0.62	0.00
18.75	0.20	0.19	0.01	0.32	0.32	0.00	0.61	0.61	0.00
19.00	0.20	0.19	0.01	0.32	0.31	0.01	0.60	0.60	0.00
19.25	0.19	0.19	0.00	0.31	0.31	0.00	0.59	0.59	0.00
19.50	0.19	0.18	0.01	0.31	0.30	0.01	0.58	0.58	0.00
19.75	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
20.00	0.18	0.18	0.00	0.30	0.29	0.01	0.56	0.56	0.00
20.25	0.18	0.17	0.01	0.29	0.29	0.00	0.55	0.55	0.00
20.50	0.18	0.17	0.01	0.29	0.28	0.01	0.54	0.54	0.00
20.75	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
21.00	0.17	0.16	0.01	0.28	0.27	0.01	0.52	0.52	0.00
21.25	0.17	0.16	0.01	0.27	0.27	0.00	0.51	0.51	0.00
21.50	0.16	0.16	0.00	0.27	0.26	0.01	0.50	0.50	0.00
21.75	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
22.00	0.16	0.15	0.01	0.26	0.25	0.01	0.48	0.48	0.00
22.25	0.15	0.15	0.00	0.25	0.25	0.00	0.47	0.47	0.00
22.50	0.15	0.15	0.00	0.25	0.24	0.01	0.46	0.46	0.00
22.75	0.15	0.14	0.01	0.24	0.24	0.00	0.45	0.45	0.00
23.00	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
23.25	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.43	0.00
23.50	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
23.75	0.13	0.13	0.00	0.22	0.21	0.01	0.41	0.41	0.00
24.00	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1					
1.	Surface description (table 3-1)			Asphalt					
2.	Manning's roughness coeff., n (Table 15-1)			0.011					
3.	Flow Length, L		ft	100					
4.	Two-yr 24-hr rainfall, P_2		in	3.48					
5.	Land slope, s		ft/ft	0.016					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.021	+		+	=	0.021

Shallow concentrated flow

			Segment ID	2					
7.	Surface description (paved or unpaved)			Paved					
8.	Flow length, L		ft	260					
9.	Watercourse slope, s		ft/ft	0.010					
10.	Average velocity, V (Figure 15-4)		ft/s	2.00					
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.036	+		+	=	0.036

Channel flow

			Segment ID	3	4	5	6		
12.	Cross sectional flow area, a		ft^2	3.14159	4.90874				
13.	Wetted perimeter, p_w		ft	6.28319	7.85398				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.50	0.63				
15.	Channel slope, s		ft/ft	0.005	0.004				
16.	Manning's roughness coeff., n			0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.11	5.36				
18.	Flow length, L		ft	264	124				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.014	+ 0.006		+	=	0.021

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)									hr **0.08**

Project	**JSMC West Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Asphalt			
2.	Manning's roughness coeff., n (Table 15-1)			0.011			
3.	Flow Length, L		ft	100			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.016			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.019	+	+	= 0.019

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	260			
9.	Watercourse slope, s		ft/ft	0.01			
10.	Average velocity, V (Figure 15-4)		ft/s	2			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.036	+	+	= 0.036

Channel flow

			Segment ID	3			
12.	Cross sectional flow area, a		ft^2	3.141593	4.90874		
13.	Wetted perimeter, p_w		ft	6.283185	7.85398		
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.50	0.63		
15.	Channel slope, s		ft/ft	0.005	0.004		
16.	Manning's roughness coeff., n			0.013	0.013		
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.11	5.36		
18.	Flow length, L		ft	264	124		
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.014	+ 0.006	+	= 0.021

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
	$V = \frac{1.49\ r^{2/3} s^{1/2}}{}$						

17. $\frac{\sqrt{}}{n}$ Compute V ft/s

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.08**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1					
1. Surface description (table 3-1)			Short Grass					
2. Manning's roughness coeff., n (Table 15-1)			0.150					
3. Flow Length, L		ft	47					
4. Two-yr 24-hr rainfall, P_2		in	3.48					
5. Land slope, s		ft/ft	0.020					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.086	+			=	0.086

Shallow concentrated flow

		Segment ID	2					
7. Surface description (paved or unpaved)			Paved					
8. Flow length, L		ft	182					
9. Watercourse slope, s		ft/ft	0.010					
10. Average velocity, V (Figure 15-4)		ft/s	2.00					
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.025	+			=	0.025

Channel flow

		Segment ID	3	4	5	6		
12. Cross sectional flow area, a		ft^2	1.22718	3.14159	4.90874			
13. Wetted perimeter, p_w		ft	3.92699	6.28319	7.85398			
14. Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.31	0.50	0.63			
15. Channel slope, s		ft/ft	0.009	0.005	0.004			
16. Manning's roughness coeff., n			0.013	0.013	0.013			
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.01	5.11	5.36			
18. Flow length, L		ft	23	264	124			
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.001	+ 0.014	0.006	+	=	0.022

			Segment ID	7	8					
12.	Cross sectional flow area, a		ft^2							
13.	Wetted perimeter, p_w		ft							
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft							
15.	Channel slope, s		ft/ft							
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$	Compute V	ft/s							
18.	Flow length, L		ft							
19.	$T_t = \frac{L}{3600\, V}$	Compute T_t	hr		+			+	=	0.000

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.13**

Project	**JSMC West Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: (Present) Developed

Circle One: (T_c) T_t through subarea **Existing DA-1, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1				
1.	Surface description (table 3-1)			Short Grass				
2.	Manning's roughness coeff., n (Table 15-1)			0.15				
3.	Flow Length, L		ft	47				
4.	Two-yr 24-hr rainfall, P_2		in	4.14				
5.	Land slope, s		ft/ft	0.02				
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.078	+		+	= 0.078

Shallow concentrated flow

			Segment ID	2				
7.	Surface description (paved or unpaved)			Paved				
8.	Flow length, L		ft	182				
9.	Watercourse slope, s		ft/ft	0.01				
10.	Average velocity, V (Figure 15-4)		ft/s	2				
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.025	+		+	= 0.025

Channel flow

			Segment ID	3	4	5	6
12.	Cross sectional flow area, a		ft^2	1.227185	3.14159	4.90874	
13.	Wetted perimeter, p_w		ft	3.926991	6.28319	7.85398	
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.31	0.50	0.63	
15.	Channel slope, s		ft/ft	0.009	0.005	0.004	
16.	Manning's roughness coeff., n			0.013	0.013	0.013	
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.01	5.11	5.36	
18.	Flow length, L		ft	23	264	124	
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.001	+ 0.014	+ 0.006	+ = 0.022

			Segment ID	7	8		
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$						

17. $\frac{\sqrt{\quad}}{n}$	Compute V	ft/s									
18. Flow length, L		ft									
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+		=	**0.000**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.13**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-2, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID							
1.	Surface description (table 3-1)			**1**						
				Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)			**0.011**						
3.	Flow Length, L		ft	**100**						
4.	Two-yr 24-hr rainfall, P_2		in	**3.48**						
5.	Land slope, s		ft/ft	**0.024**						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.018**	+		+		=	**0.018**

Shallow concentrated flow

			Segment ID							
7.	Surface description (paved or unpaved)			**Paved**						
8.	Flow length, L		ft	**68**						
9.	Watercourse slope, s		ft/ft	**0.031**						
10.	Average velocity, V (Figure 15-4)		ft/s	**3.58**						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.005**	+		+		=	**0.005**

Channel flow

				Segment ID							
12.	Cross sectional flow area, a			ft^2	**0.7854**	**1.76715**					
13.	Wetted perimeter, p_w			ft	**3.14159**	**4.71239**					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r	ft	**0.25**	**0.38**					
15.	Channel slope, s			ft/ft	**0.005**	**0.010**					
16.	Manning's roughness coeff., n				**0.013**	**0.013**					
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$		Compute V	ft/s	**3.22**	**5.96**					
18.	Flow length, L			ft	**108**	**306**					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t	hr	**0.009**	+ **0.014**		+		=	**0.024**

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)									hr **0.05**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-2, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)			0.011						
3.	Flow Length, L		ft	100						
4.	Two-yr 24-hr rainfall, P_2		in	4.14						
5.	Land slope, s		ft/ft	0.024						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.017	+		+		=	0.017

Shallow concentrated flow

			Segment ID	2						
7.	Surface description (paved or unpaved)			Paved						
8.	Flow length, L		ft	68						
9.	Watercourse slope, s		ft/ft	0.031						
10.	Average velocity, V (Figure 15-4)		ft/s	3.58						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.005	+		+		=	0.005

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2	0.785398	1.76715					
13.	Wetted perimeter, p_w		ft	3.141593	4.71239					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.25	0.38					
15.	Channel slope, s		ft/ft	0.005	0.010					
16.	Manning's roughness coeff., n			0.013	0.013					
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	3.22	5.96					
18.	Flow length, L		ft	108	306					
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.009	+ 0.014		+		=	0.024

			Segment ID				
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.05**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1					
1.	Surface description (table 3-1)			Short Grass					
2.	Manning's roughness coeff., n (Table 15-1)			0.150					
3.	Flow Length, L		ft	75					
4.	Two-yr 24-hr rainfall, P_2		in	3.48					
5.	Land slope, s		ft/ft	0.012					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.153	+			=	0.153

Shallow concentrated flow

			Segment ID	2					
7.	Surface description (paved or unpaved)			Paved					
8.	Flow length, L		ft	57					
9.	Watercourse slope, s		ft/ft	0.023					
10.	Average velocity, V (Figure 15-4)		ft/s	3.00					
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.005	+			=	0.005

Channel flow

			Segment ID						
12.	Cross sectional flow area, a		ft^2	1.76715	1.76715				
13.	Wetted perimeter, p_w		ft	4.71239	4.71239				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.38	0.38				
15.	Channel slope, s		ft/ft	0.007	0.010				
16.	Manning's roughness coeff., n			0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	4.99	5.96				
18.	Flow length, L		ft	120	306				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.007	+ 0.014		+	=	0.021

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)									hr **0.18**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: (Present) Developed

Circle One: (T_c) T_t through subarea **Existing DA-1, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Short Grass						
2.	Manning's roughness coeff., n (Table 15-1)			0.15						
3.	Flow Length, L		ft	75						
4.	Two-yr 24-hr rainfall, P_2		in	4.14						
5.	Land slope, s		ft/ft	0.012						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$	Compute T_t	hr	0.140	+		+		=	0.140

Shallow concentrated flow

			Segment ID	2						
7.	Surface description (paved or unpaved)			Paved						
8.	Flow length, L		ft	57						
9.	Watercourse slope, s		ft/ft	0.023						
10.	Average velocity, V (Figure 15-4)		ft/s	3						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.005	+		+		=	0.005

Channel flow

			Segment ID							
12.	Cross sectional flow area, a		ft^2	1.767146	1.76715					
13.	Wetted perimeter, p_w		ft	4.712389	4.71239					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.38	0.38					
15.	Channel slope, s		ft/ft	0.007	0.010					
16.	Manning's roughness coeff., n			0.013	0.013					
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s	4.99	5.96					
18.	Flow length, L		ft	120	306					
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.007	+ 0.014		+		=	0.021

		Segment ID					
12.	Cross sectional flow area, a	ft^2					
13.	Wetted perimeter, p_w	ft					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft					
15.	Channel slope, s	ft/ft					
16.	Manning's roughness coeff., n						
	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{}$						

17. $\frac{\sqrt{}}{n}$ Compute V ft/s

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.17**

Project	**JSMC West Addition**	By	**SPT**	Date	
Location	**Township of Neptune, Monmouth County, NJ**	Checked	**MI**	Date	

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Asphalt						
2.	Manning's roughness coeff., n (Table 15-1)			0.011						
3.	Flow Length, L		ft	100						
4.	Two-yr 24-hr rainfall, P_2		in	3.48						
5.	Land slope, s		ft/ft	0.016						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.021	+		+		=	0.021

Shallow concentrated flow

			Segment ID	2						
7.	Surface description (paved or unpaved)			Paved						
8.	Flow length, L		ft	260						
9.	Watercourse slope, s		ft/ft	0.010						
10.	Average velocity, V (Figure 15-4)		ft/s	2.00						
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.036	+		+		=	0.036

Channel flow

			Segment ID	3	4	5	6			
12.	Cross sectional flow area, a		ft^2	3.14159	4.90874					
13.	Wetted perimeter, p_w		ft	6.28319	7.85398					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.50	0.63					
15.	Channel slope, s		ft/ft	0.005	0.004					
16.	Manning's roughness coeff., n			0.013	0.013					
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.11	5.36					
18.	Flow length, L		ft	264	124					
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.014	+ 0.006		+		=	0.021

			Segment ID	7							
12.	Cross sectional flow area, a		ft^2								
13.	Wetted perimeter, p_w		ft								
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft								
15.	Channel slope, s		ft/ft								
16.	Manning's roughness coeff., n										
17.	$V = \frac{1.49\, r^{2/3}\, s^{1/2}}{n}$	Compute V	ft/s								
18.	Flow length, L		ft								
19.	$T_t = \frac{L}{3600\, V}$	Compute T_t	hr		+			+		=	0.000

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.08**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1			
1.	Surface description (table 3-1)			Asphalt			
2.	Manning's roughness coeff., n (Table 15-1)			0.011			
3.	Flow Length, L		ft	100			
4.	Two-yr 24-hr rainfall, P_2		in	4.14			
5.	Land slope, s		ft/ft	0.016			
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.019	+	+	= 0.019

Shallow concentrated flow

			Segment ID	2			
7.	Surface description (paved or unpaved)			Paved			
8.	Flow length, L		ft	260			
9.	Watercourse slope, s		ft/ft	0.01			
10.	Average velocity, V (Figure 15-4)		ft/s	2			
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.036	+	+	= 0.036

Channel flow

			Segment ID	3			
12.	Cross sectional flow area, a		ft^2	3.141593	4.90874		
13.	Wetted perimeter, p_w		ft	6.283185	7.85398		
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.50	0.63		
15.	Channel slope, s		ft/ft	0.005	0.004		
16.	Manning's roughness coeff., n			0.013	0.013		
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	5.11	5.36		
18.	Flow length, L		ft	264	124		
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.014	+ 0.006	+	= 0.021

			Segment ID	4			
12.	Cross sectional flow area, a		ft^2				
13.	Wetted perimeter, p_w		ft				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft				
15.	Channel slope, s		ft/ft				
16.	Manning's roughness coeff., n						
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s				

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.08**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1						
1.	Surface description (table 3-1)			Short Grass						
2.	Manning's roughness coeff., n (Table 15-1)			0.150						
3.	Flow Length, L		ft	74						
4.	Two-yr 24-hr rainfall, P_2		in	3.48						
5.	Land slope, s		ft/ft	0.033						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.101	+			+	=	0.101

Shallow concentrated flow

			Segment ID							
7.	Surface description (paved or unpaved)									
8.	Flow length, L		ft							
9.	Watercourse slope, s		ft/ft							
10.	Average velocity, V (Figure 15-4)		ft/s							
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+				=	0.000

Channel flow

			Segment ID	2	3	4				
12.	Cross sectional flow area, a		ft^2	1.76715	3.14159	4.90874				
13.	Wetted perimeter, p_w		ft	4.71239	6.28319	7.85398				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft	0.38	0.50	0.63				
15.	Channel slope, s		ft/ft	0.005	0.005	0.004				
16.	Manning's roughness coeff., n			0.013	0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	4.21	5.11	5.36				
18.	Flow length, L		ft	138	198	124				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.009	+ 0.011	0.006	+		=	0.026

			Segment ID	4	5	6					
12.	Cross sectional flow area, a		ft^2								
13.	Wetted perimeter, p_w		ft								
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft								
15.	Channel slope, s		ft/ft								
16.	Manning's roughness coeff., n										
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s								
18.	Flow length, L		ft								
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+		=	0.000

20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)	hr	0.13

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID	1						
1.	Surface description (table 3-1)		Short Grass						
2.	Manning's roughness coeff., n (Table 15-1)		0.150						
3.	Flow Length, L	ft	74						
4.	Two-yr 24-hr rainfall, P_2	in	4.14						
5.	Land slope, s	ft/ft	0.033						
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.092	+		+		=	0.092

Shallow concentrated flow

		Segment ID							
7.	Surface description (paved or unpaved)								
8.	Flow length, L	ft							
9.	Watercourse slope, s	ft/ft							
10.	Average velocity, V (Figure 15-4)	ft/s							
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr		+		+		=	0.000

Channel flow

		Segment ID	3	4	5	6			
12.	Cross sectional flow area, a	ft^2	1.767146	3.14159	4.90874				
13.	Wetted perimeter, p_w	ft	4.712389	6.28319	7.85398				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft	0.38	0.50	0.63				
15.	Channel slope, s	ft/ft	0.005	0.005	0.004				
16.	Manning's roughness coeff., n		0.013	0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	4.21	5.11	5.36				
18.	Flow length, L	ft	138	198	124				
19.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.009	+ 0.011	0.006	+		=	0.026

		Segment ID	7	8					
12.	Cross sectional flow area, a	ft^2							
13.	Wetted perimeter, p_w	ft							
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft							
15.	Channel slope, s	ft/ft							
16.	Manning's roughness coeff., n								
	$V = \frac{1.49\ r^{2/3} s^{1/2}}{}$								

17. $\frac{\sqrt{\quad}}{n}$	Compute V	ft/s									
18. Flow length, L		ft									
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+			+		=	**0.000**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)	hr	**0.12**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-2, Impervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID		1					
1.	Surface description (table 3-1)				Asphalt					
2.	Manning's roughness coeff., n (Table 15-1)				0.011					
3.	Flow Length, L			ft	100					
4.	Two-yr 24-hr rainfall, P_2			in	3.48					
5.	Land slope, s			ft/ft	0.024					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$		Compute T_t	hr	0.018	+		+	=	0.018

Shallow concentrated flow

			Segment ID		2					
7.	Surface description (paved or unpaved)				Paved					
8.	Flow length, L			ft	54					
9.	Watercourse slope, s			ft/ft	0.190					
10.	Average velocity, V (Figure 15-4)			ft/s	2.80					
11.	$T_t = \frac{L}{3600\ V}$		Compute T_t	hr	0.005	+		+	=	0.005

Channel flow

			Segment ID							
12.	Cross sectional flow area, a			ft^2	0.7854	1.76715				
13.	Wetted perimeter, p_w			ft	3.14159	4.71239				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r	ft	0.25	0.38				
15.	Channel slope, s			ft/ft	0.005	0.010				
16.	Manning's roughness coeff., n				0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$		Compute V	ft/s	3.22	5.96				
18.	Flow length, L			ft	116	306				
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t	hr	0.010	+ 0.014		+	=	0.024

				Segment ID					
12.	Cross sectional flow area, a				ft^2				
13.	Wetted perimeter, p_w				ft				
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft				
15.	Channel slope, s				ft/ft				
16.	Manning's roughness coeff., n								
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s				
18.	Flow length, L				ft				
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	=	**0.000**

20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)	hr	**0.05**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Existing DA-2, Impervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1				
1.	Surface description (table 3-1)			Asphalt				
2.	Manning's roughness coeff., n (Table 15-1)			0.011				
3.	Flow Length, L		ft	100				
4.	Two-yr 24-hr rainfall, P_2		in	4.14				
5.	Land slope, s		ft/ft	0.024				
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.017	+		+	= 0.017

Shallow concentrated flow

			Segment ID	2				
7.	Surface description (paved or unpaved)			Paved				
8.	Flow length, L		ft	54				
9.	Watercourse slope, s		ft/ft	0.19				
10.	Average velocity, V (Figure 15-4)		ft/s	2.8				
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.005	+		+	= 0.005

Channel flow

			Segment ID					
12.	Cross sectional flow area, a		ft^2	0.785398	1.76715			
13.	Wetted perimeter, p_w		ft	3.141593	4.71239			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.25	0.38			
15.	Channel slope, s		ft/ft	0.005	0.010			
16.	Manning's roughness coeff., n			0.013	0.013			
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	3.22	5.96			
18.	Flow length, L		ft	116	306			
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.010	+ 0.014		+	= 0.024

			Segment ID					
12.	Cross sectional flow area, a		ft^2					
13.	Wetted perimeter, p_w		ft					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft					
15.	Channel slope, s		ft/ft					
16.	Manning's roughness coeff., n							
	$V = \frac{1.49\ r^{2/3} s^{1/2}}{}$							

17. $\frac{\sqrt{}}{n}$ Compute V ft/s

18. Flow length, L ft

19. $T_t = \frac{L}{3600\ V}$ Compute T_t hr + + = **0.000**

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.05**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present Developed

Circle One: T_c T_t through subarea **Proposed DA-1, Pervious, Current Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID		1					
1.	Surface description (table 3-1)			Short Grass					
2.	Manning's roughness coeff., n (Table 15-1)			0.240					
3.	Flow Length, L		ft	41					
4.	Two-yr 24-hr rainfall, P_2		in	3.48					
5.	Land slope, s		ft/ft	0.015					
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.125	+			=	0.125

Shallow concentrated flow

		Segment ID		2					
7.	Surface description (paved or unpaved)			Paved					
8.	Flow length, L		ft	67					
9.	Watercourse slope, s		ft/ft	0.007					
10.	Average velocity, V (Figure 15-4)		ft/s	1.70					
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.011	+			=	0.011

Channel flow

		Segment ID							
12.	Cross sectional flow area, a		ft^2	1.76715	1.76715				
13.	Wetted perimeter, p_w		ft	4.71239	4.71239				
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.38	0.38				
15.	Channel slope, s		ft/ft	0.005	0.010				
16.	Manning's roughness coeff., n			0.013	0.013				
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	4.21	5.96				
18.	Flow length, L		ft	228	306				
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.015	+ 0.014		+	=	0.029

				Segment ID						
12.	Cross sectional flow area, a				ft^2					
13.	Wetted perimeter, p_w				ft					
14.	Hydraulic radius, r	$r = \frac{a}{p_w}$	Compute r		ft					
15.	Channel slope, s				ft/ft					
16.	Manning's roughness coeff., n									
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$		Compute V		ft/s					
18.	Flow length, L				ft					
19.	$T_t = \frac{L}{3600\ V}$		Compute T_t		hr		+		+	= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)								hr	**0.17**

Project **JSMC West Addition** By **SPT** Date

Location **Township of Neptune, Monmouth County, NJ** Checked **MI** Date

Circle One: Present (Developed)

Circle One: (T_c) T_t through subarea **Proposed DA-1, Pervious, Future Storm**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

			Segment ID	1				
1.	Surface description (table 3-1)			Short Grass				
2.	Manning's roughness coeff., n (Table 15-1)			0.24				
3.	Flow Length, L		ft	41				
4.	Two-yr 24-hr rainfall, P_2		in	4.14				
5.	Land slope, s		ft/ft	0.015				
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.115	+		+	= 0.115

Shallow concentrated flow

			Segment ID	2				
7.	Surface description (paved or unpaved)			Paved				
8.	Flow length, L		ft	67				
9.	Watercourse slope, s		ft/ft	0.007				
10.	Average velocity, V (Figure 15-4)		ft/s	1.70				
11.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.011	+		+	= 0.011

Channel flow

			Segment ID					
12.	Cross sectional flow area, a		ft^2	1.767146	1.76715			
13.	Wetted perimeter, p_w		ft	4.712389	4.71239			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft	0.38	0.38			
15.	Channel slope, s		ft/ft	0.005	0.010			
16.	Manning's roughness coeff., n			0.013	0.013			
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s	4.21	5.96			
18.	Flow length, L		ft	228	306			
19.	$T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.015	+ 0.014		+	= 0.029

			Segment ID					
12.	Cross sectional flow area, a		ft^2					
13.	Wetted perimeter, p_w		ft					
14.	Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft					
15.	Channel slope, s		ft/ft					
16.	Manning's roughness coeff., n							
17.	$V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s					

18. Flow length, L

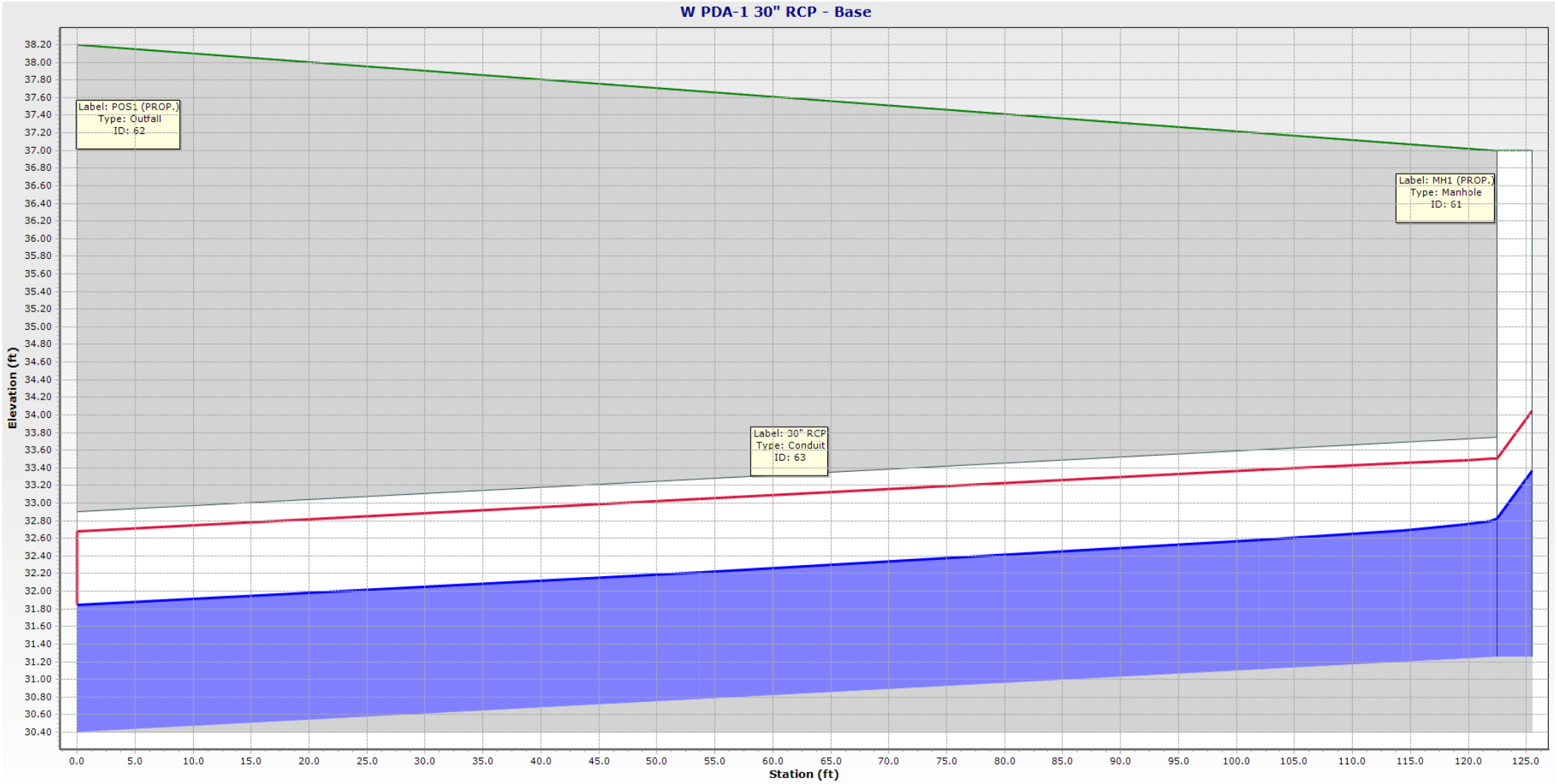
19. $T_t = \frac{L}{3600\ V}$ Compute T_t

ft									
hr		+			+		=	**0.000**	

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr **0.16**

FlexTable: Conduit Table

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Flow (cfs)	Capacity (Full Flow) (cfs)
30" RCP	MH1 (EXIST.)	POS1 (EXIST.)	31.25	30.40	124.0	0.007	30.0	21.95	33.96
30" RCP	MH1 (PROP.)	POS1 (PROP.)	31.25	30.40	124.0	0.007	30.0	21.55	33.96
18" RCP	MH2 (EXIST)	POS2 (EXIST)	33.31	30.67	263.0	0.010	18.0	5.50	10.52
18" RCP	MH2 (PROP)	POS2 (PROP)	33.31	30.67	263.0	0.010	18.0	6.05	10.52


W PDA-1 30" RCP - Base
Label: POS1 (PROP.)
Type: Outfall
ID: 62
Label: MH1 (PROP.)
Type: Manhole
ID: 61
Label: 30" RCP
Type: Conduit
ID: 63
Elevation (ft)
38.20
38.00
37.80
37.60
37.40
37.20
37.00
36.80
36.60
36.40
36.20
36.00
35.80
35.60
35.40
35.20
35.00
34.80
34.60
34.40
34.20
34.00
33.80
33.60
33.40
33.20
33.00
32.80
32.60
32.40
32.20
32.00
31.80
31.60
31.40
31.20
31.00
30.80
30.60
30.40
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0
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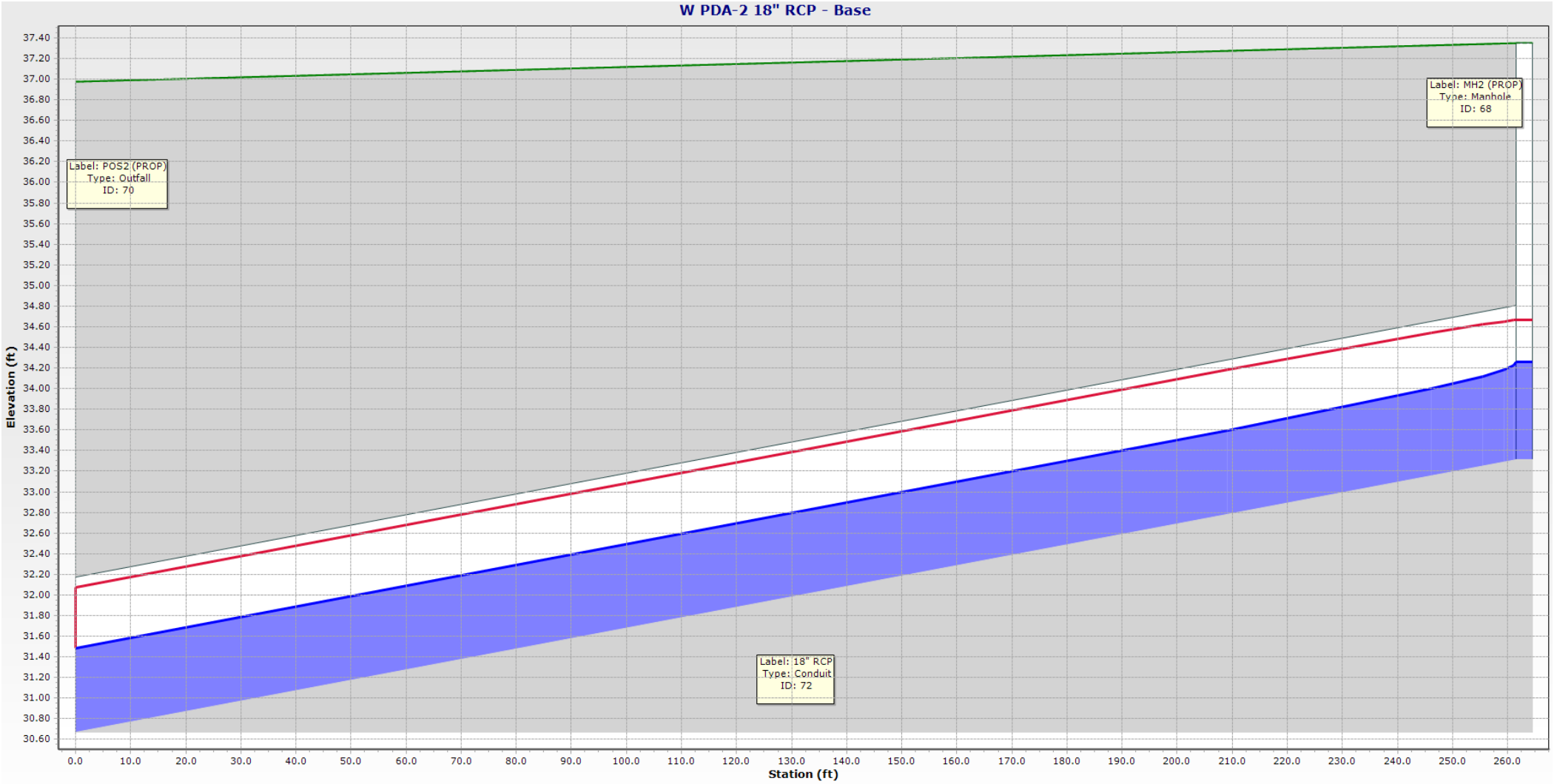
90.0
95.0
100.0
105.0
110.0
115.0
120.0
125.0
Station (ft)


W PDA-2 18" RCP - Base
Label: POS2 (PROP)
Type: Outfall
ID: 70
Label: MH2 (PROP)
Type: Manhole
ID: 68
Label: 18" RCP
Type: Conduit
ID: 72
Elevation (ft)
Station (ft)
37.40
37.20
37.00
36.80
36.60
36.40
36.20
36.00
35.80
35.60
35.40
35.20
35.00
34.80
34.60
34.40
34.20
34.00
33.80
33.60
33.40
33.20
33.00
32.80
32.60
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32.20
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30.60
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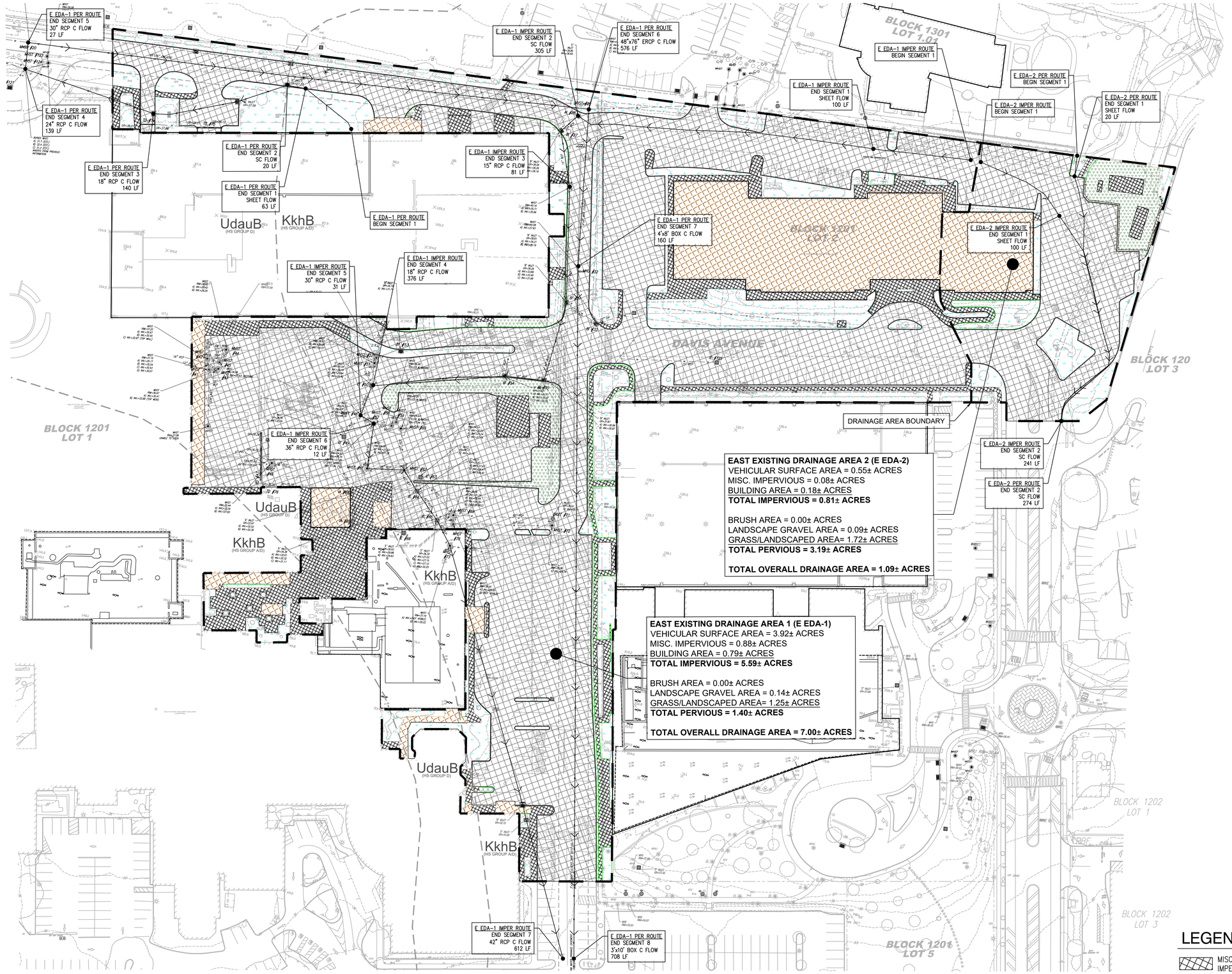
100.0
110.0
120.0
130.0
140.0
150.0
160.0
170.0
180.0
190.0
200.0
210.0
220.0
230.0
240.0
250.0
260.0

APPENDIX IV:

DA-01A East Existing Site Drainage Area Plan
DA-01B West Existing Site Drainage Area Plan
DA-02A East Proposed Site Drainage Area Plan
DA-02B West Proposed Site Drainage Area Plan
DA-03A East Proposed Inlet Area Area Plan
DA-03B West Proposed Inlet Area Area Plan



LEGEND

- MISCELLANEOUS IMPERVIOUS AREA
- BUILDING IMPERVIOUS AREA
- VEHICULAR IMPERVIOUS AREA
- GRASS/LANDSCAPING AREA
- BRUSH PLANTING AREA
- LANDSCAPE GRAVEL SURFACE AREA
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW PATH

Dewberry®

Dewberry Engineers Inc.
600 PARSIPPANY ROAD
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973.739.9710 Fax

Certificate of Authorization #24GA28047600

Hackensack Meridian *Health*
Jersey Shore University Medical Center

JERSEY SHORE UNIVERSITY MEDICAL CENTER

PRELIMINARY AND FINAL SITE PLAN-PERIOPERATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE CONSOLIDATION OF BLOCK 1201 LOT 1 & BLOCK 1202 LOT 1 (WEST ADDITION)
PRELIMINARY SITE PLAN-NEW CRITICAL CARE TOWER (WEST ADDITION)

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
BLOCK 1201, LOTS 1, 2, 4 & 5
TAX MAP SHEET 18 BOROUGH OF NEPTUNE CITY
BLOCK 115, LOT 2

1945 CORLIES AVENUE, 81 DAVIS AVENUE &
2020 CORLIES AVENUE — NEW JERSEY
TOWNSHIP OF NEPTUNE — MONMOUTH COUNTY

SEAL

Mario Iannelli, P.E.
New Jersey Professional Engineer License No. GE41749

SCALE

GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'

No.	DATE	BY	Description

REVISIONS

DRAWN BY	CFS/FD
APPROVED BY	MIA
CHECKED BY	CFS/MI
DATE	02/07/2025

TITLE

EAST EXISTING DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-01A

SHEET NO.

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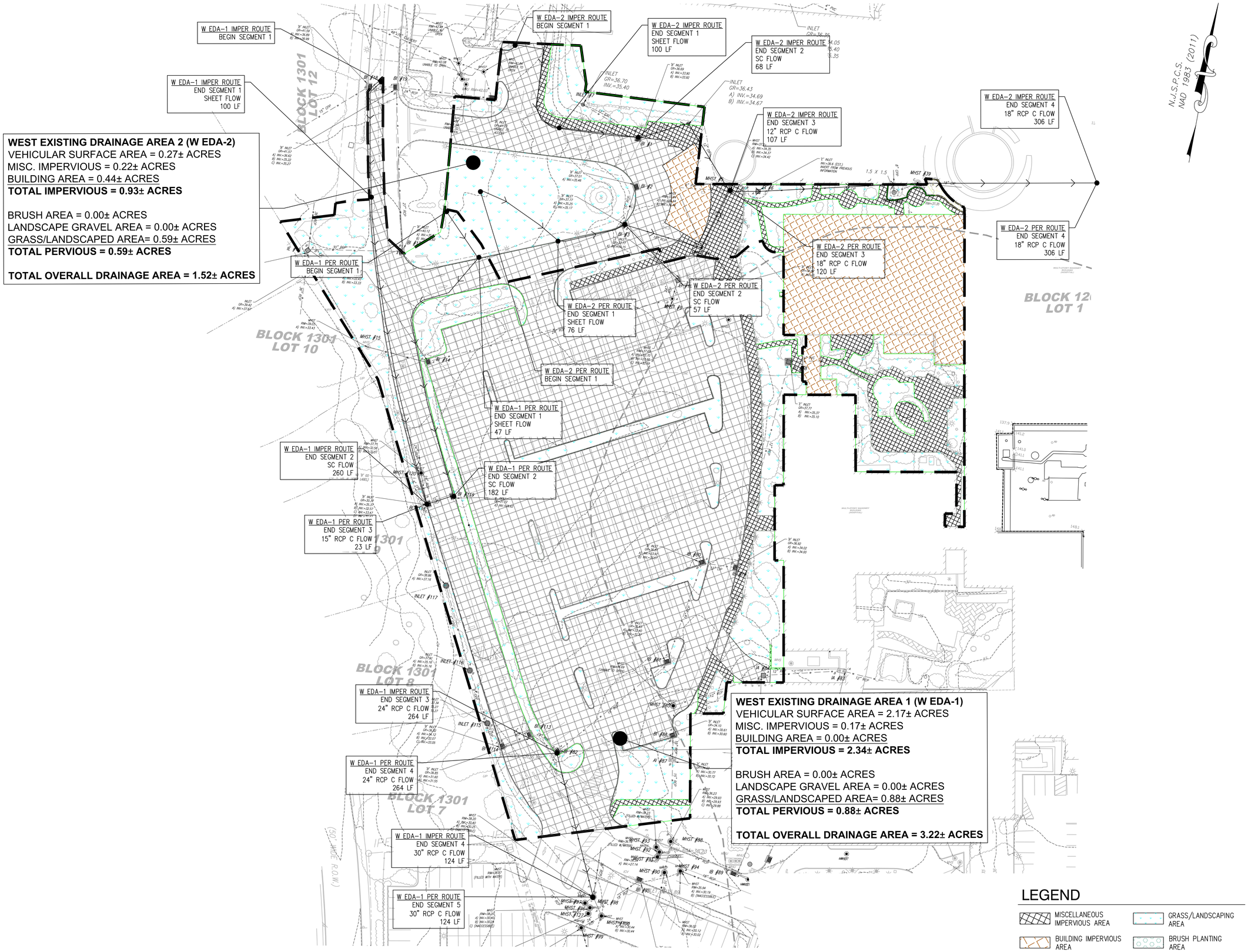

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PRELIMINARY SITE PLAN- NEW CRITICAL CARE TOWER (WEST ADDITION)

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
BLOCK 1201, LOTS 1, 2, 4 & 5
TAX MAP SHEET 18 BOROUGH OF NEPTUNE CITY
BLOCK 115, LOT 2

1945 CORLIES AVENUE; 81 DAVIS AVENUE &
2020 CORLIES AVENUE

TOWNSHIP OF NEPTUNE MONMOUTH COUNTY NEW JERSEY

SEAL

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SCALE

GRAPHIC SCALE
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SCALE: 1" = 20'

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REVISIONS

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CHECKED BY	CFS/MI
DATE	02/07/2025

TITLE

WEST EXISTING DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-01B

SHEET NO.

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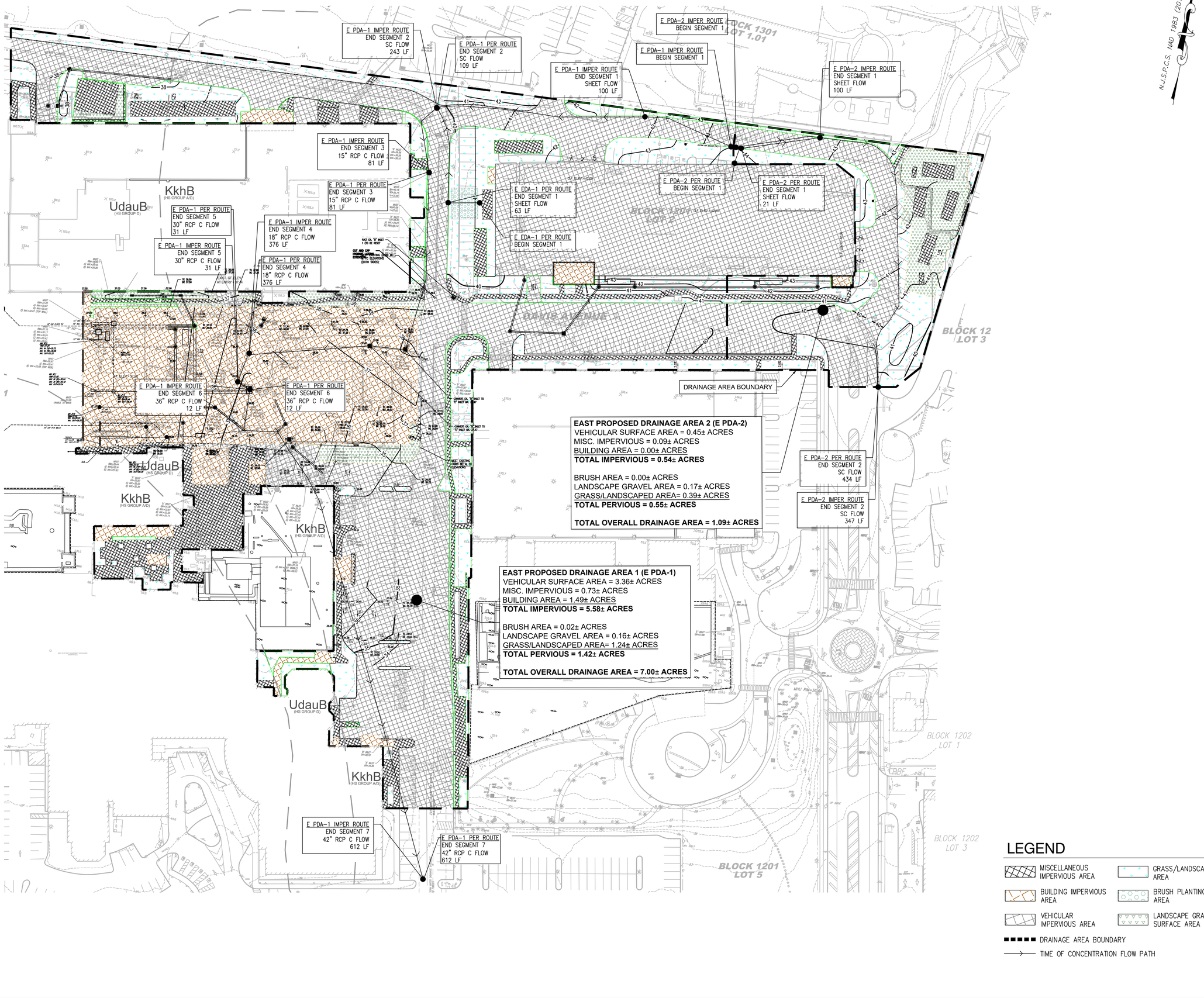

LEGEND

- MISCELLANEOUS IMPERVIOUS AREA
- BUILDING IMPERVIOUS AREA
- VEHICULAR IMPERVIOUS AREA
- GRASS/LANDSCAPING AREA
- BRUSH PLANTING AREA
- LANDSCAPE GRAVEL SURFACE AREA
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW PATH

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PRELIMINARY AND FINAL SITE PLAN-PERIOPERATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE
PRELIMINARY SITE PLAN- NEW CRITICAL CARE TOWER (WEST ADDITION)
CONSOLIDATION OF BLOCK 1201
LOT 1, BLOCK 1202, LOT 1 & BLOCK 1301, LOT 1.01

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
BLOCK 1201, LOTS 1, 2, 4 & 5
TAX MAP SHEET 18 BOROUGH OF NEPTUNE CITY
BLOCK 115, LOT 2

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2020 CORLIES AVENUE
TOWNSHIP OF NEPTUNE MONMOUTH COUNTY NEW JERSEY

SEAL

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SCALE

GRAPHIC SCALE
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SCALE: 1" = 40'

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REVISIONS

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APPROVED BY	MIA
CHECKED BY	CFS/MI
DATE	02/07/2025

TITLE

EAST PROPOSED DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-02A

SHEET NO.

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W PDA-1 IMPER ROUTE
BEGIN SEGMENT 1

W PDA-2 PER ROUTE
BEGIN SEGMENT 1

W PDA-2 IMPER ROUTE
END SEGMENT 2
SC FLOW
68 LF

W PDA-2 IMPER ROUTE
END SEGMENT 3
18" RCP C FLOW
116 LF

W PDA-2 IMPER ROUTE
END SEGMENT 4
18" RCP C FLOW
306 LF

W PDA-1 IMPER ROUTE
END SEGMENT 1
SHEET FLOW
100 LF

WEST PROPOSED DRAINAGE AREA 2 (W PDA-2)
VEHICULAR SURFACE AREA = 0.21± ACRES
MISC. IMPERVIOUS = 0.11± ACRES
BUILDING AREA = 0.60± ACRES
TOTAL IMPERVIOUS = 0.92± ACRES

BRUSH AREA = 0.20± ACRES
LANDSCAPE GRAVEL AREA = 0.04± ACRES
GRASS/LANDSCAPED AREA= 0.32± ACRES
TOTAL PERVIOUS = 0.56± ACRES

TOTAL OVERALL DRAINAGE AREA = 1.48± ACRES

W PDA-2 PER ROUTE
END SEGMENT 4
18" RCP C FLOW
306 LF

W PDA-2 PER ROUTE
END SEGMENT 3
18" RCP C FLOW
228 LF

W PDA-1 PER ROUTE
BEGIN SEGMENT 1

W PDA-2 PER ROUTE
END SEGMENT 2
SC FLOW
67 LF

W PDA-1 IMPER ROUTE
END SEGMENT 2
SC FLOW
260 LF

W PDA-1 PER ROUTE
END SEGMENT 1
SHEET FLOW
74 LF

W PDA-1 PER ROUTE
END SEGMENT 2
18" RCP C FLOW
138 LF

W PDA-1 IMPER ROUTE
END SEGMENT 3
24" RCP C FLOW
264 LF

W PDA-1 PER ROUTE
END SEGMENT 3
24" RCP C FLOW
198 LF

W PDA-1 IMPER ROUTE
END SEGMENT 4
30" RCP C FLOW
124 LF

W PDA-1 PER ROUTE
END SEGMENT 4
30" RCP C FLOW
124 LF

WEST PROPOSED DRAINAGE AREA 1 (W PDA-1)
VEHICULAR SURFACE AREA = 1.45± ACRES
MISC. IMPERVIOUS = 0.11± ACRES
BUILDING AREA = 0.49± ACRES
TOTAL IMPERVIOUS = 2.05± ACRES

BRUSH AREA = 0.14± ACRES
LANDSCAPE GRAVEL AREA = 0.00± ACRES
GRASS/LANDSCAPED AREA= 1.05± ACRES
TOTAL PERVIOUS = 1.19± ACRES

TOTAL OVERALL DRAINAGE AREA = 3.24± ACRES

BLOCK 1301 LOT 12
BLOCK 1304 LOT 10
BLOCK 1301 LOT 9
BLOCK 1301 LOT 8
BLOCK 1301 LOT 7
BLOCK 12 LOT 1

WEST ADDITION
(F.F. ELEV.=37.56)

UdauB (HS GROUP D)
KkhB (HS GROUP A/D)

(50' WIDE R.O.W.)

N.J.S.P.C.S. NAD 1983 (2011)

LEGEND

- MISCELLANEOUS IMPERVIOUS AREA
- BUILDING IMPERVIOUS AREA
- VEHICULAR IMPERVIOUS AREA
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- BRUSH PLANTING AREA
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Certificate of Authorization #24GA28047600

Hackensack Meridian *Health*
Jersey Shore University Medical Center

JERSEY SHORE UNIVERSITY MEDICAL CENTER

PRELIMINARY AND FINAL SITE PLAN-PERIOPERATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE
PRELIMINARY SITE PLAN- NEW CRITICAL CARE TOWER (WEST ADDITION)

1945 CORLIES AVENUE, 81 DAVIS AVENUE & 2020 CORLIES AVENUE
TOWNSHIP OF NEPTUNE MONMOUTH COUNTY NEW JERSEY

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
BLOCK 1201, LOTS 1, 2, 4 & 5
TAX MAP SHEET 18 BOROUGH OF NEPTUNE CITY
BLOCK 115, LOT 2

SEAL

Mario Iannelli, P.E.
New Jersey Professional Engineer License No. GE41749

SCALE

GRAPHIC SCALE
0 40 80
SCALE: 1" = 40'

No.	DATE	BY	Description

REVISIONS

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APPROVED BY	MIA
CHECKED BY	CFS/MI
DATE	02/07/2025

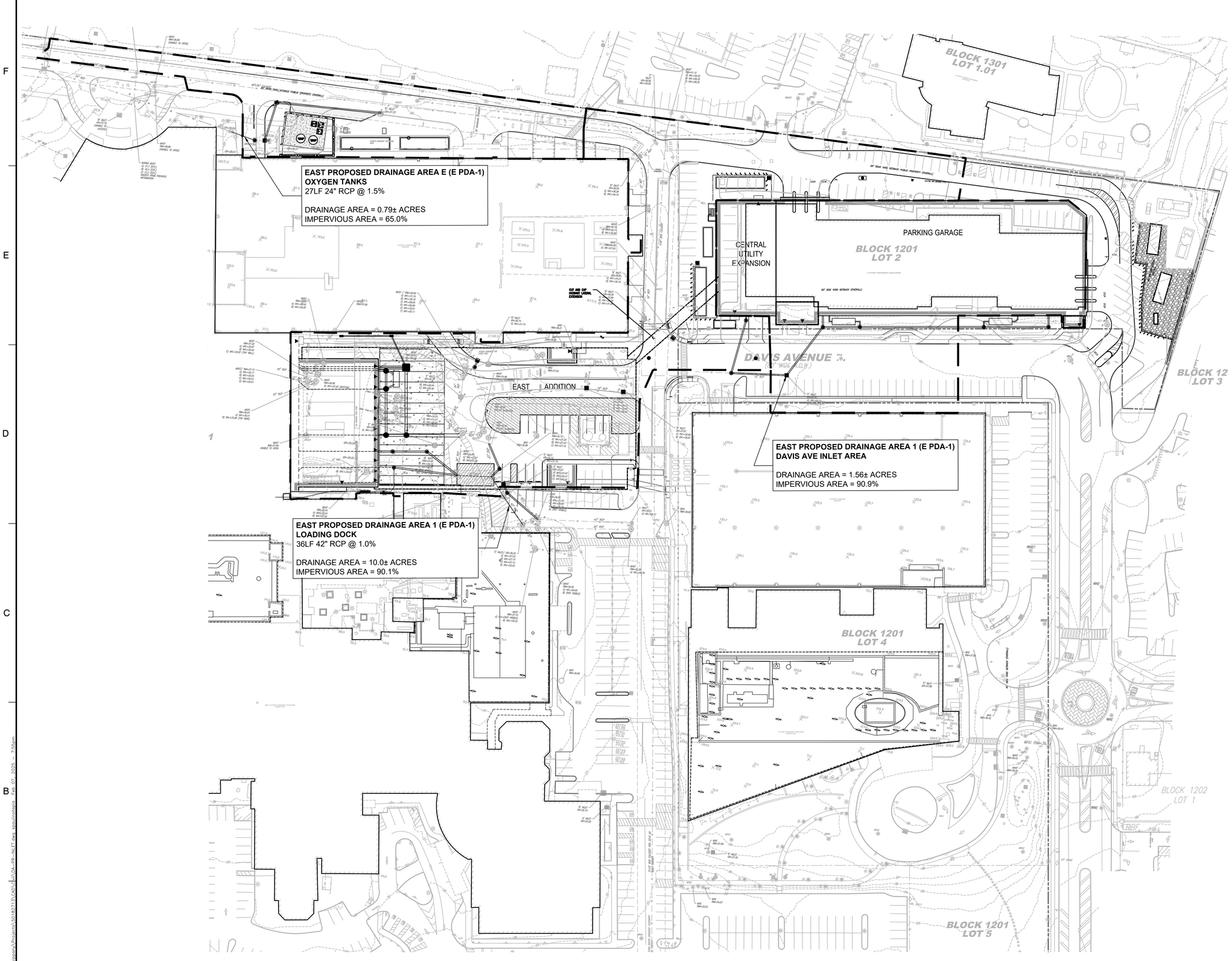
TITLE

WEST PROPOSED DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-02B

SHEET NO.



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Jersey Shore University Medical Center

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LOT CONSOLIDATION OF BLOCK 1201 LOTS 1 AND 2
PRELIMINARY SITE PLAN-NEW CRITICAL CARE TOWER (WEST ADDITION)

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
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1945 CORLIES AVENUE, 81 DAVIS AVENUE &
2020 CORLIES AVENUE — NEW JERSEY
TOWNSHIP OF NEPTUNE — MONMOUTH COUNTY

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DATE	02/07/2025

TITLE

EAST PROPOSED INLET DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-03A

SHEET NO.

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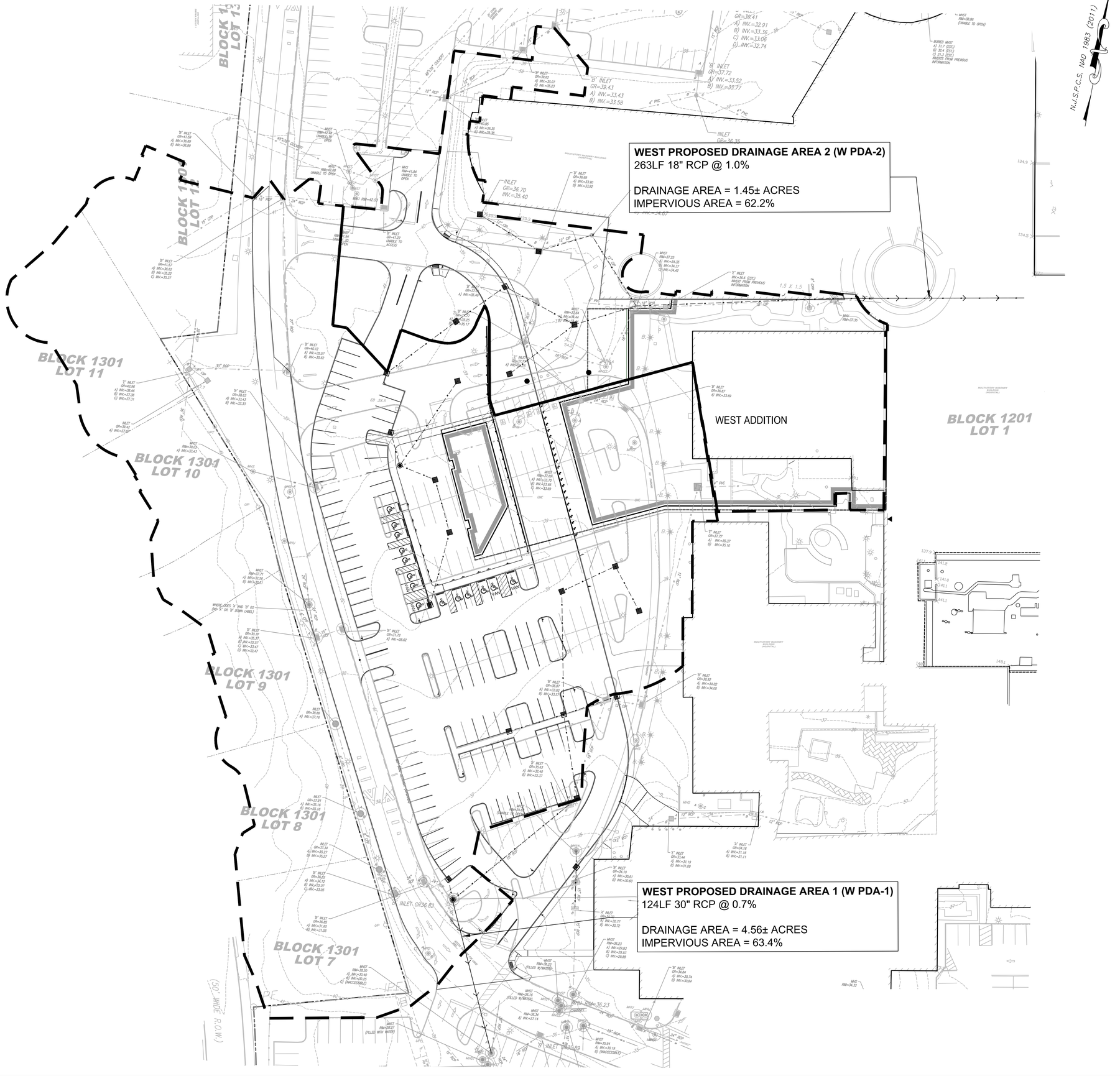

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LOT CONSOLIDATION OF BLOCK 1201 (LOTS 1 AND 2)
PRELIMINARY SITE PLAN-NEW CRITICAL CARE TOWER (WEST ADDITION)

TAX MAP SHEET 12 TOWNSHIP OF NEPTUNE
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1945 CORLIES AVENUE; 81 DAVIS AVENUE &
2020 CORLIES AVENUE

TOWNSHIP OF NEPTUNE MONMOUTH COUNTY NEW JERSEY

SEAL

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New Jersey Professional Engineer License No. GE41749

SCALE

GRAPHIC SCALE
0 40 80
SCALE: 1" = 40'

No.	DATE	BY	Description

REVISIONS

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APPROVED BY	MIA
CHECKED BY	CFS/MI
DATE	02/07/2025

TITLE

WEST PROPOSED INLET DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-03B

SHEET NO.

APPENDIX V:

Operations & Maintenance Manual

Dewberry

Operations & Maintenance Manual for Stormwater Management Facilities

Jersey Shore University Medical Center Parking Garage, Perioperative Expansion – East, & Critical Care Tower – West

Block 1201 Lots 1, 2, 4, & 5
1945 Corlies Avenue & 81 Davis Avenue
Township of Neptune
Monmouth County, NJ 07753

February 07, 2025

Prepared for:
Jersey Shore University Medical Center
1945 State Highway Route 33
Neptune, NJ 07753

Prepared by:
Dewberry Engineers Inc.
600 Parsippany Road Suite 301
Parsippany, NJ 07054
Certificate of Authorization
No. 24GA28047600
(973) 739-9400

TABLE OF CONTENTS

PART I: PROJECT DETAILS

A. INTRODUCTION

This Operations and Maintenance ("O&M") Manual has been prepared for Jersey Shore University Medical Center, applicant of the properties known as Lots 1, 2, 4 & 5 of Block 1202 in the Township of Neptune, Monmouth County, NJ. The drainage features and landcover are proposed to be maintained by the site owners. Failure to repair and maintain the drainage system may be cause for the Township of Neptune to undertake all reasonably necessary repairs or maintenance and to charge such to the owners as a municipal lien on those properties.

This Operations and Maintenance ("O&M") Manual has been prepared in accordance with the standards of the New Jersey Stormwater Best Management Practices (BMP) Manual, last revised March 2021. Chapter 8 of the BMP Manual outlines the necessity for regular inspections and maintenance of stormwater facilities:

> "Regular and thorough maintenance is necessary for stormwater management measures to perform effectively and reliably. They have also demonstrated that failure to perform such maintenance can lead to diminished performance, deterioration, and failure, in addition to a range of health and safety problems including mosquito breeding, vermin, and the potential for drowning. The potential for such problems to develop is accentuated by many of the very features and characteristics that allow stormwater management measures to do their job, including standing or slowing moving water, dense vegetation, forebays, trash racks, dams, and the need to continually function in all types of weather. As implied by their name, stormwater management measures are also expected to become the repositories for sediment, nutrients, trash, debris, and other pollutants targeted by the NJDEP Stormwater Management Rules. For this reason, stormwater management measures share maintenance requirements with more mundane items as vacuum cleaner bags, car motor filters, and floor mats, all of which require regular inspection and cleaning, sediment and debris removal, and periodic replacement.
>
> In recognition of these needs and potential problems, the NJDEP Stormwater Management Rules require that a maintenance plan be developed for all stormwater management measures incorporated into the design of a major development. This maintenance plan must contain specific preventative and corrective maintenance tasks, schedules, cost estimates, and the name, address, and telephone number of the person or persons responsible for the measures' maintenance."

B. DESCRIPTION OF FACILITIES

The applicant proposes a new parking garage, Central Utility Plant (CUP) expansion, and 4-story perioperative expansion. In addition, the perioperative expansion will be constructed above the existing loading dock on Lot 1 and maintain select utilities including existing drainage network. Furthermore, the applicant is preliminarily proposing the construction of a new 11-story critical care tower in Lot 1. Improvements will decrease the total onsite impervious surface areas and motor vehicle surface areas as compared from existing to proposed conditions. The proposed stormwater pipe network will connect to the existing onsite storm drainage system. No new stormwater outfalls are proposed. Runoff quantity standards are met through land cover management techniques and runoff quality and groundwater recharge standards are not applicable. No green infrastructure BMPs are proposed.

It is necessary that the inlets and pipes be regularly inspected for erosion and damage and cleared of any trash, sediment and/or debris that may collect. Failure to do so may result in blockage or clogging of outlet pipes and could cause excessive surface runoff and flooding. If outlet pipes do not operate properly the proposed management structures will not perform their intended function.

Rainfall events are random and inspection and maintenance of these facilities prior to them is impractical. Therefore the collection, detention and control structures must be consistently ready to function as designed. The maintenance required to accomplish this must, therefore, be performed thoroughly and on a regular basis, regardless of how often the facilities are called upon for stormwater management. The key to performing this level of maintenance lies in establishing and sustaining a comprehensive, regularly scheduled maintenance program. This manual is intended to provide guidance and instruction to project personnel for the proper operation and maintenance of the stormwater collection structures.

C. PROJECT CONTACTS:

Township Engineer:	William Schwarz, Jr., P.E Department of Engineering 2201 Heck Avenue Neptune, NJ 07756 Phone: 732-897-4162
Township Construction Official:	Joseph Ciccone Construction Department 25 Neptune Blvd Neptune, NJ 07753 Phone: 732-988-5200 ext. 266
NJDEP:	Bureau of Nonpoint Pollution Control 501 East State Street P.O. Box 419 Trenton, NJ 08625-0419 Phone: 609-633-7021 Fax: 609-984-2147 Emergency Hotline – 1-877-WARNDEP
Design Engineer:	Mario Iannelli, P.E. Dewberry Engineers Inc. 600 Parsippany Rd., Suite 301 Parsippany, NJ 07054 Phone: 973-576-9675
Project Applicant	Jersey Shore University Medical Center 1945 State Highway Route 33 Neptune, NJ 07753

PART II: ROUTINE INSPECTION AND MAINTENANCE

In discussing proper inspection and maintenance procedures, it is important to remember that there are two distinct reasons for proper inspection and maintenance of the facilities: to protect against loss of life and major property damage; and to ensure the proper functioning of the system to alleviate flooding. Proper inspection and maintenance procedures will include routine inspection and maintenance requirements for the outfall, inlets, and pipes.

A. PRE-CONSTRUCTION

During the construction activities, the vegetated areas must be protected from compaction by construction equipment, and no material shall be stockpiled in these areas.

B. STORMWATER MANAGEMENT FACILITIES

The stormwater management facilities have been designed to control stormwater flows and volumes. Without proper routine inspection and maintenance, they may lose their capability to function properly.

A consulting Professional Engineer should perform regularly scheduled maintenance inspection of the stormwater facilities for clogging and excessive debris and sediment accumulation at least four times annually as well as after every storm exceeding 1 inch of rainfall. Sediment removal should take place only when the system is thoroughly dry. Disposal of debris, trash, sediment, and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations. The primary purpose of these inspections is to ascertain the operational condition and safety of the facilities. Inspections will also provide information on the effectiveness of regularly scheduled Preventative and Corrective Maintenance procedures and identify where changes in the extent and scheduling of the procedures are warranted.

C. PREVENTIVE MAINTENANCE PROCEDURES:

The purpose of Preventive Maintenance is to maximize the effectiveness of the stormwater facilities. These procedures are as follows:

1. <u>Maintenance of Vegetated, Grass, and Landscaped Areas:</u>
   Vegetated areas must be inspected at least annually for erosion and scour. Biweekly inspections of vegetation health should be performed during the first growing season or until the vegetation is established. Once established, inspections of vegetation health, density, and diversity should be performed at least twice a year during both the growing and non-growing season. All vegetation deficiencies should be addressed without the use of fertilizers and pesticides whenever possible. All vegetated areas should be inspected at least once a year for

unwanted growth, which should be removed with minimum disruption to the remaining vegetation.

Grass, tree and shrub areas require periodic fertilizing, de-thatching, and soil conditioning in order to maintain healthy growth and to provide soil stabilization. Grading and landscaping around facility inlets should be mowed, trimmed and debris should be removed. The application of fertilizers should follow manufacturer's instructions to reduce run-off of these compounds into the stormwater collection system. Additionally, provisions should be made to re-seed and re-establish grass cover in areas damaged by sediment accumulation, soil erosion or other causes. These tasks should be performed or at least evaluated on a quarterly basis.

Lawn areas should be mowed at least once a month during the growing season and shall be mowed on a regular basis as necessary to maintain the lawn at a height of 2 to 3 inches. Any dead or bare lawn areas shall be re-seeded in accordance with the original procedures as outlined in the Soil Erosion and Sediment Control Plans using the same mix and seeding rates. No lawn areas should be mowed twice per growing season.

The trees and shrubs shall be maintained regularly to ensure good health and exhibit an attractive appearance. Their maintenance should include fertilization twice annually with one application in the spring and another in early fall. Trees and shrubs shall be pruned in the late winter or early spring. However, dead branches should be removed as soon as they are noticed. The structure must be inspected for unwanted tree growth annually.

D. CORRECTIVE MAINTENANCE PROCEDURES:

1. Structural Repairs:

   All structural components must be inspected for cracking, subsidence, spalling, erosion, and deterioration at least annually. Structural damage to outlets and inlet structures, access points and roadways as a result of flood events, settlement or other causes must be repaired promptly. The urgency of the repairs will depend upon the nature of the damage and its effects on the safety and operation of the facility. The analysis of the structural damage and the design and performance of structural repairs should only be undertaken by a consulting Professional Engineer.

2. Erosion Repair:

   Vegetative cover or other protective measures are necessary to prevent the loss of soil due to the forces of wind and water. Where a re-seeding program has not been effective in maintaining a non-erosive vegetative cover, other methods such as rip-rap, geotextile fabrics, sod or regrading shall be utilized.

3. Vegetative Cover Repair:
   Vegetative cover should be maintained at 85 percent. If vegetative cover has greater than 50 percent damage, the area should be re-established in accordance with original plan specifications.

4. Snow and Ice Removal:
   Accumulations of snow and ice can threaten the proper drainage of water to stormwater inlets. Provision of the equipment, material and personnel to monitor and remove snow and ice from critical areas will assure the proper drainage of stormwater during the winter months.

E. SUMMARY OF MAINTENANCE PROCEDURES:

Preventive Maintenance

1. Maintenance of Grass and Landscaped Areas

Corrective Maintenance

1. Structural Repairs
2. Erosion Repair
3. Vegetative Cover Repair
4. Snow and Ice Removal

PART III: MAINTENANCE EQUIPMENT & MATERIALS

1. Grass Maintenance Equipment
   - A. Riding Mowers
   - B. Hand Mower
   - C. Gas Powered Trimmer
   - D. Seed Spreaders
   - E. Fertilizer Spreaders
   - F. De-Thatching Equipment
   - G. Pesticide and Herbicide Application Equipment
   - H. Grass Clipping and Leaf Collection Equipment

2. Vegetative Equipment
   - A. Saws
   - B. Pruning Shears
   - C. Hedge Trimmers
   - D. Wood Chippers

3. Transportation Equipment
   - A. Trucks for Transportation of Material and Equipment
   - B. Vehicles for Transportation of Personnel

4. Debris, Trash, Snow, Sediment And Water Removal Equipment
    A. Loader/Backhoe
    B. Portable Pump for Dewatering

5. Miscellaneous Equipment
    A. Shovels
    B. Rakes
    C. Picks
    D. Wheel Barrows
    E. Brooms

6. Maintenance Materials
    A. Topsoil
    B. Fill
    C. Seed
    D. Lawn Treatment (Fertilizer, Lime, Pesticides, Herbicides, etc.)
    E. Mulch

PART IV: REPORTING

The reporting of all maintenance work and inspections provides valuable data on the facility condition. Review of this information will also help to establish more efficient and beneficial maintenance procedures and practices. All completed forms shall be directed to the Municipal Engineer for review and subsequent follow-up recommendation. From field personnel to the maintenance director, everyone should be encouraged to report any problems or suggest any changes to the site.

PART V: PERMITTING

The owner shall be responsible to obtain all permits (Federal, State, County and Municipal agencies) required to maintain the stormwater management facilities associated with this project and outlined in this operation and maintenance report. In addition, all maintenance and repair activities shall be done in accordance with all Federal, State and local requirements including, but not limited to, OSHA.

Inspection Checklist / Maintenance Actions

Pipe Network

Checklist (circle one)**:** Quarterly / Annual / Monthly / Special Event Inspection

Checklist No. _____ Inspection Date: _____

Date of most recent rain event: _____

Rain Condition (circle one):
Drizzle / Shower / Downpour / Other _____

Ground Condition (circle one):
Dry / Moist / Ponding / Submerged / Snow accumulation

Per the Township of Parsippany-Troy Hills, all inspection reports and maintenance records shall be submitted to the Township Engineer on an annual basis no later than March 1st of the following calendar year. Failure to do so will subject the owner to violation and penalties as set forth in the Township Ordinance.

The inspection items and preventative/corrective maintenance actions listed below represent general requirements. The design engineer and/or responsible party shall adjust the items and actions to better meet the conditions of the site, the specific design targets, and the requirements of regulatory authorities.

	For Inspector			For Maintenance Crew
Component No. Component Name	**Inspection Item and Inspection Item No.**		**Result**	**Preventative / Corrective Maintenance Actions**
A Inlets and Manholes	1	Missing or damaged rim or grate.	Y___ N___	Repair or replace Work Order # _____
	2	Damaged structures (subsidence, spalling, erosion, or deterioration) and/or reinforcing exposed.	Y___ N___	Repair structure Work Order # _____
	3	Standing water or debris.	Y___ N___	Determine reason for downstream clog and remove the debris.
B Outfall	1	Outlet components skewed, misaligned, or missing.	Y___ N___	Repair or replace Work Order # _____
	2	Cracked or damaged pipe.	Y___ N___	Repair Work Order # _____
C Vegetation	1	Erosion and/or sediment accumulation.	Y___ N___	Determine source of erosion and/or reason for sediment accumulation and address source.
	2	Dying vegetation and/or barren land where vegetation should be.	Y___ N___	Replant vegetation in-kind based on associated Landscaping Plan. Determine reason for barren land.
Note:				

Follow Up Items (Component No. / Inspection Item No.):

_____

Associated Work Orders: # _____, # _____, # _____, # _____, # _____

_____	_____	_____
Inspector Name	**Signature**	**Date**

Report issues to the local authority and mosquito commission as required by local ordinances and regulatory authorities.

File this checklist in the Maintenance Log after performing maintenance.

Preventative Maintenance Record

Corresponding Checklist No. _____
Component No._____, Inspection Item No._____

Work Logs

Activities	Components	Date Completed
Sediment/debris removal **Sediment removal should be taken place when the system is thoroughly dry**	A – Inlets and Manholes	
	B – Outfall	
Dying/dead vegetation replacement	C – Vegetation	

Vegetation is removed by _____ (type of equipment) with minimum disruption to the remaining vegetation.

All use of fertilizers, pesticides, mechanical treatments, and other means to ensure optimum vegetation health must not compromise the intended purpose of the stormwater management measure. The fertilizer applied is _____ (type), and _____ (quantity per usage) is applied _____ (frequency of use).

Debris, sediment, and trash are handled (onsite / by _____ (contractor name) to disposal site _____). (See Part I: Maintenance Plan – Disposal Plan Section)

Crew member:_____/_____ **Date:** _____
(name/ signature)

Supervisor:_____/_____ **Date:** _____
(name/ signature)

File this Preventative Maintenance Record in the Maintenance Log after performing maintenance.

Corrective Maintenance Record

1. **Work Order # _____ Date Issued _____**

2. **Issue to be resolved**:

3. The issue was from **Corresponding Checklist _____, Component No. Inspection Item No._____.**

4. **Required Actions**

Actions	Planned Date	Date Completed

5. **Responsible person(s):**
   _____

6. **Special requirements**
   - Time of the season or weather condition :_____
   - Tools/equipment:_____
   - Subcontractor (name or specific type):_____

Approved by _____/_____ Date _____
(name/signature)

Verification of completion by _____/_____ Date _____
(name/signature)

File this Corrective Maintenance Record in the Maintenance Log after performing maintenance.

BRUSH PLANTING MAINTENANCE GUIDELINES:

GENERAL NOTES:

1. After the first growing season, all planting areas shall be inspected for dying or dead plant material and such plant material shall be replaced as per the specified landscape guarantee time period of two years. All replacement plants should be of the same species as shown on the approved site plan.
2. Immediately during the first growing season and periodically throughout future years, the entire planting area shall be inspected for problem weeds and invasive species and should be hand pulled or spot spayed with an approved herbicide. To control competing vegetation, herbicides as a direct spray can be used around the hardwoods and shrubs in the spring and fall.
3. Erosion control measures should be strictly maintained during the first growing season so that All planted areas are properly stabilized,
4. After first and subsequent growing seasons, the following care should be administered to each specific plant group listed. It is important to note that each plant group listed below, has specific needs and their maintenance should be tailored to those needs as such. The primary goal of the brush planting area is to maintain a well kept natural planting area that is not overgrown. The design concept was to mimic nature by planting in layers- from planting tall canopy trees to understory shrubs, followed by herbaceous plants and ornamental grasses. This should create a dynamic textured landscape with multi season interest.
5. During the initial planting precautions should be undertaken to prevent and prohibit animals from grazing until plant material is well established. Such precautions could be fencing, animal trapping, eco friendly plant sprays, etc.
6. A monitoring plan should be developed to obtain data relevant to the design, survivability, maintenance and objectives of the planting plan. This plan shall measure the survival, growth and visual value of each plant to determine possible future plant replacement options.
7. The planting area shall be routinely inspected for different drainage patterns and ponding of water the might affect the survivability of the plants.
8. Periodic evaluations of the planting design shall be made to determine if changes to the design concept should be made in relation to species selection and planting design.
9. All plant material shall be planted in a naturalized pattern. Naturalized patterns shall result in a relatively even distribution of each species across the planting area at the specific density. Planting in uneven distribution of species shall not be accepted.
10. All planting areas shall be mulched. The mulch layer shall be standard landscape style, double or triple shredded hardwood mulch. The mulch layer should be well aged (stockpiled or stored for at least twelve (12) months, uniform in color and free of other materials such as weed seeds, soil, roots, etc. The mulch shall be applied to a maximum depth of three (3) inches. Grass clippings should not be used as a mulch material.
11. While the proposed plantings are mostly all native plants and will be highly drought tolerant once established, irrigation is recommended for the first 1-2 years during the months of July to September for newly planted native trees, shrubs, perennials and ornamental grasses.
12. The following are the individual plant types planted onsite and their specific maintenance guidelines.

SHADE /ORNAMENTAL TREES AND EVERGREENS.

Throughout the growing season, All plant material shall be inspected for dead branches, plant diseases, proper installation techniques, animal diseases, etc. and should be properly addressed as soon as possible, All sucker growth shall be removed from all plant material and light pruning is recommended on a yearly basis. Fertilizer shall be applied on a regular schedule as specified to all plant material. Weed and mulch all surface areas surrounding plant material as required. Remove all diseased fallen leaf material in planting area. All vegetation conflicts with adjacent plant material shall be removed as to not inhibit growth. All dead trees and evergreens are to be replaced with native species shown on landscape plan approved by the NJDEP

DECIDUOUS AND EVERGREEN SHRUBS:

Throughout the growing season, All shrubs shall also be inspected for dead branches, plant diseases, proper installation techniques, animal damage, etc. and should be properly addressed. Fertilizer shall be applied on a regular basis as specified. All plant material shall be pruned to maintain their specific growth characteristics of that plant. All spent flowers shall be removed (deadheading) to encourage more flowers to bloom and keep plants looking tidy. It will also prevent unwarranted self seeding. Each plant characteristic shall determine the level and amount of pruning for that specific plant The goal is to maintain a relatively ordered look to the landscape. All surrounding areas shall be weeded and mulched as required. All dead shrubs are to be replaced with native species shown on landscape plan approved by the NJDEP

PERENNIALS:

In early spring, all perennial beds shall be inspected for dead plant material and shall be replaced with new plant material. All beds should also be inspected for animal damage and plant diseases and be addressed as required. It is also at this time that all healthy plant material be cleared of all normal decaying leaves and spent flowers from the previous growing season, so that new growth can be encouraged to maintain a healthy plant. During the summer growing season, all plants shall be pruned to maintain their specific growth characteristic and not interfere with the growth of adjacent plant material. As time progresses in the life of the plant, each plant type should be evaluated to determine if overgrown plants should be divided or replaced with new plant material. All plant material shall be fertilized as specified and all beds shall be weeded and mulched as required. All dead plant material shall be replaced by similar species originally planted.

ORNAMENTAL GRASSES:

In early spring, all plant material shall be inspected for plant diseases , plant damage , etc. and should be properly addressed. All dead plant material shall be removed and replaced. To help keep ornamental grasses healthy and vibrant, cutting them back every year is essential, cutting back grasses permits the plant to put their energy into producing fresh vibrant foliage. The time of year for cutting can occur anytime from late fall to early spring. The time is based on the visual preference of the owner. As with perennials, overgrown grasses should be evaluated to determine if they should be divided or removed and replaced with new plant material. After the plant has been established a minimal amount of fertilizer should be needed as the plant matures. All dead plant material shall be replaced by similar species originally planted.