

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

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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. As the site is located within the Coastal Plain Physiographic Province, runoff hydrographs have been generated using the DelMarVa 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.

<u>Channel Surface</u>	<u>Manning’s ‘n’</u>
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].

<u>Sheet Flow Surface</u>	<u>Manning's 'n'</u>
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

<u>EAST PEAK RUNOFF RATES AND VOLUMES TO POS-1 - CURRENT STORM</u>						
	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	10.31	10.19	-0.12	1.520	1.497	-0.023
10 year	16.93	16.47	-0.46	2.512	2.462	-0.050
100 year	31.11	30.31	-0.80	4.615	4.519	-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	12.49	12.22	-0.27	1.849	1.816	-0.033
10 year	20.36	19.74	-0.62	3.018	2.952	-0.066
100 year	39.33	38.29	-1.04	5.824	5.697	-0.127

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	1.58	0.96	-0.62	0.217	0.151	-0.066
10 year	2.54	1.60	-0.94	0.361	0.268	-0.093
100 year	4.72	3.40	-1.32	0.674	0.542	-0.132

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	1.88	1.20	-0.68	0.264	0.188	-0.076
10 year	3.07	2.09	-0.98	0.436	0.330	-0.106
100 year	6.03	4.63	-1.40	0.857	0.708	-0.149

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 site 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 DelMarVa 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.

<u>Channel Surface</u>	<u>Manning’s ‘n’</u>
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	4.30	3.96	-0.34	0.675	0.619	-0.056
10 year	7.28	6.94	-0.34	1.138	1.067	-0.071
100 year	13.60	13.37	-0.23	2.118	2.036	-0.082

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	5.29	4.94	-0.35	0.828	0.766	-0.062
10 year	8.81	8.47	-0.34	1.374	1.298	-0.076
100 year	17.20	17.03	-0.17	2.681	2.595	-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	1.95	1.95	-0.00	0.292	0.289	-0.003
10 year	3.30	3.28	-0.02	0.505	0.499	-0.006
100 year	6.14	6.11	-0.03	0.963	0.947	-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	2.41	2.40	-0.01	0.362	0.358	-0.004
10 year	4.01	3.99	-0.02	0.615	0.606	-0.009
100 year	7.84	7.78	-0.06	1.227	1.205	-0.022

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

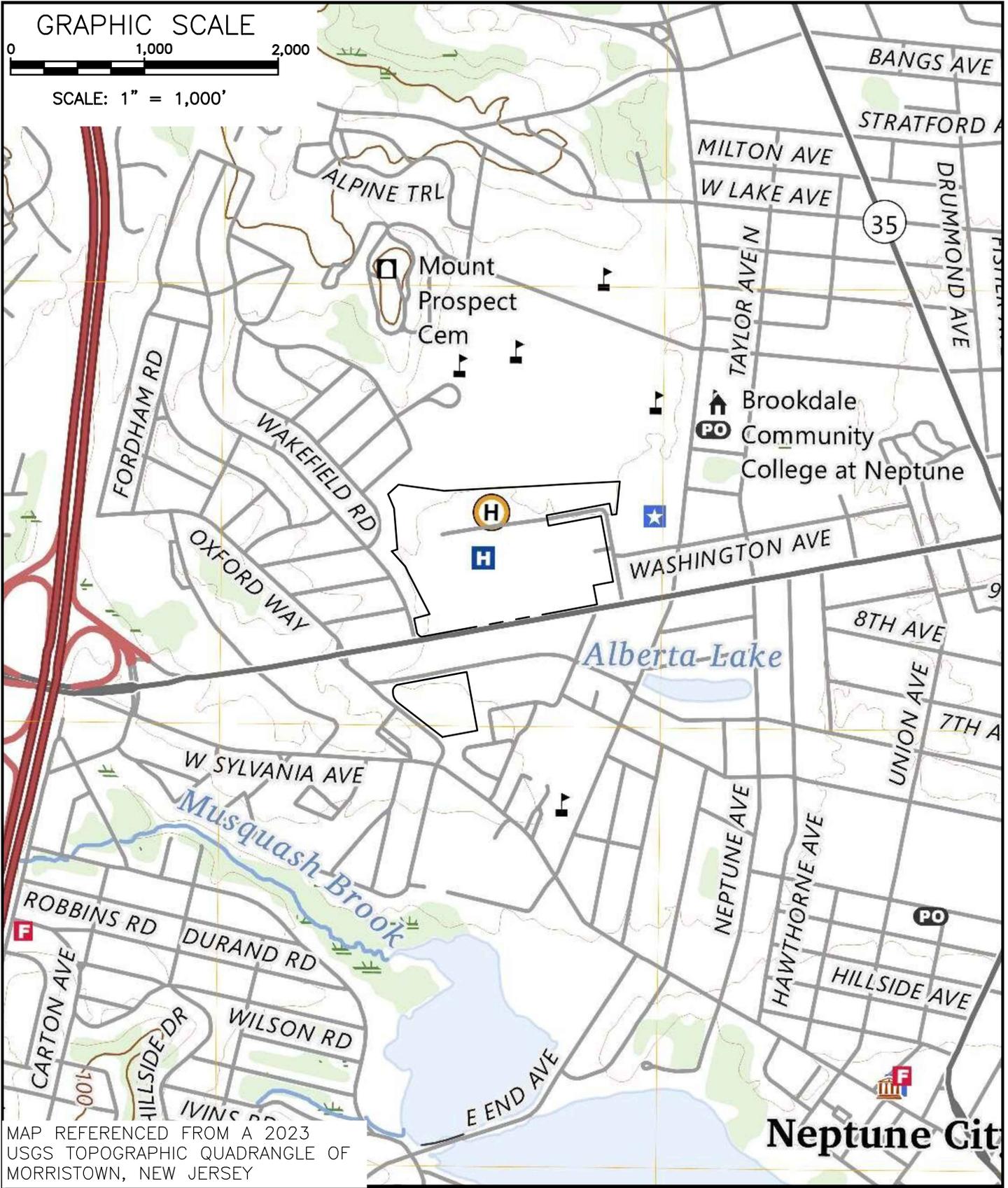
vegetated cover. The existing onsite wooded areas shall remain untouched and other pervious surfaces within the site will be landscaped with shade trees, evergreens, shrubs, and groundcover.

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:

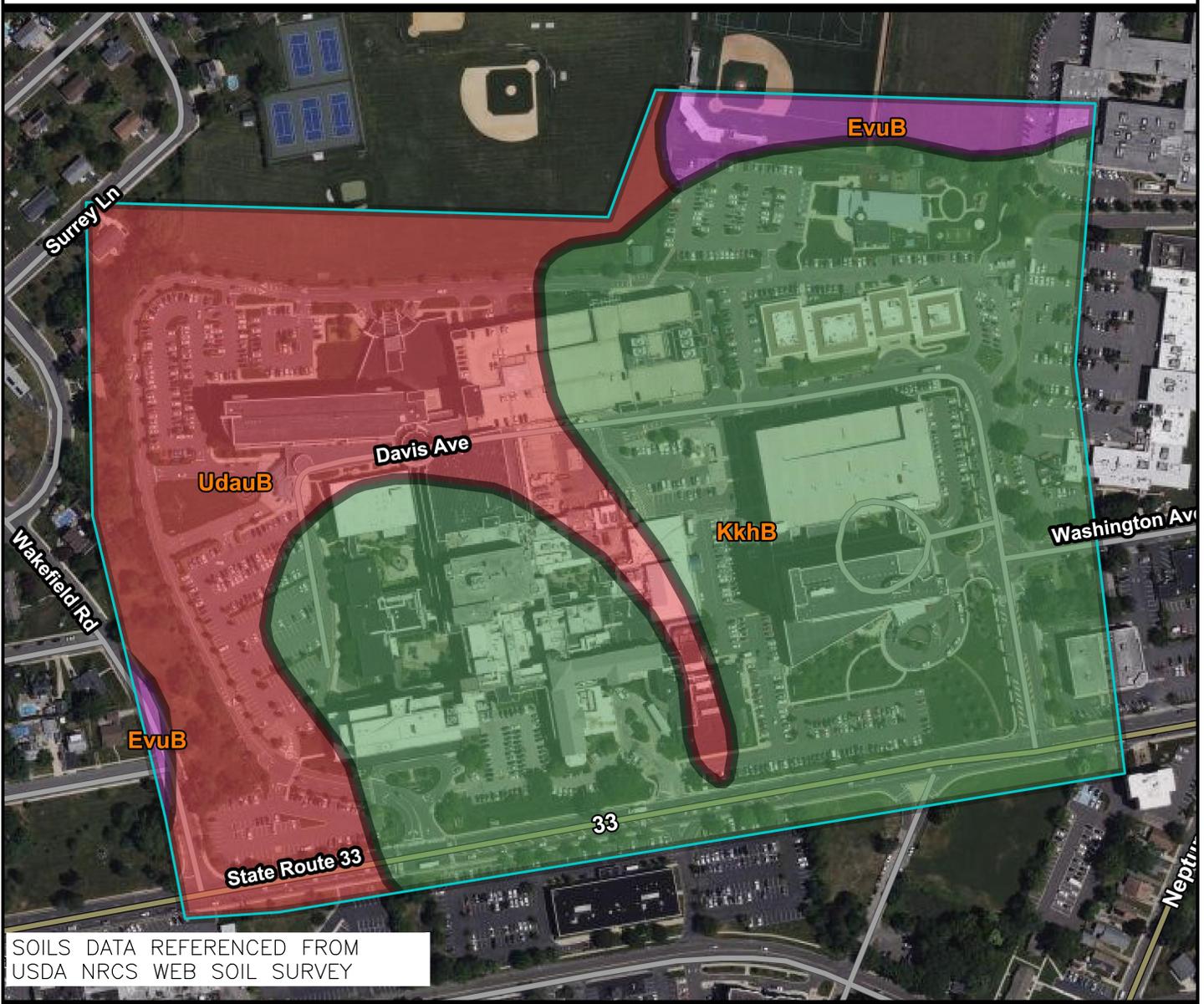
- SK-1 USGS Location Map
- SK-2 Site Soil Map
- SK-3 Site Aerial Map
- SK-4 State Planning Area
- SK-5 Hydrologic Unit Code 14
- SK-6 NOAA Atlas 14 Site Precipitation
- SK-7 Physiographic Province Map



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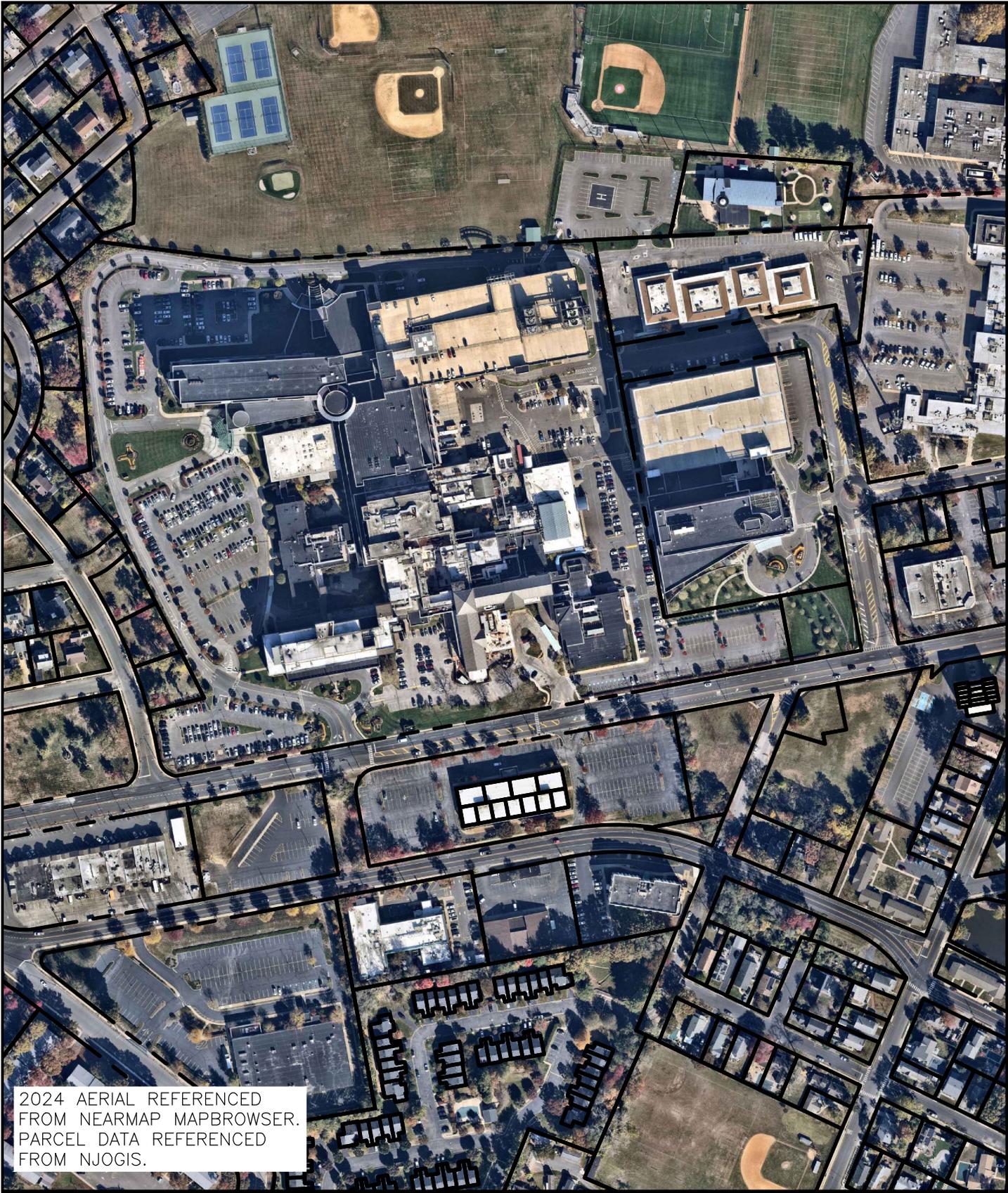
DATE	TITLE	SHEET NO.
	USGS SITE LOCATION MAP	
PROJ. NO.	PROJECT	SK-01
50182713	JERSEY SHORE UNIVERSITY MEDICAL CENTER	

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
EvuB	Evesboro-Urban land complex, 0 to 5 percent slopes	A	2.1	3.8%
KkhB	Klej loamy sand-Urban land complex, 0 to 5 percent slopes	A/D	34.0	63.1%
UdauB	Udorhents-Urban land complex, 0 to 8 percent slopes	D	17.8	33.1%
Totals for Area of Interest			53.8	100.0%



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

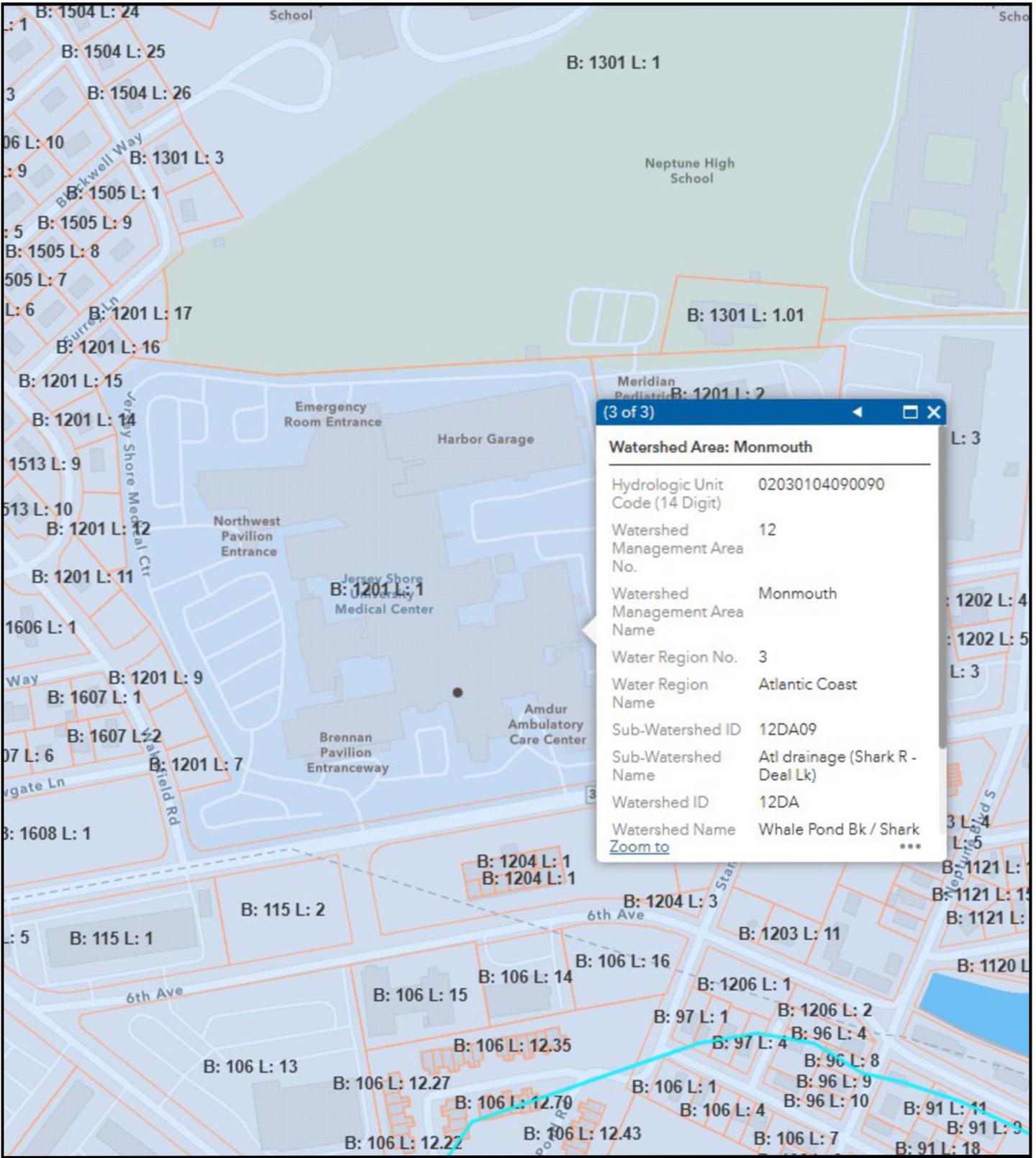


2024 AERIAL REFERENCED FROM NEARMAP MAPBROWSER. PARCEL DATA REFERENCED FROM NJOGIS.



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



DATA REFERENCED FROM NJDEP GEOWEB



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DATE	TITLE	SHEET NO. SK-05
PROJ. NO. 50182713	SITE HYDROLOGIC UNIT CODE 14 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

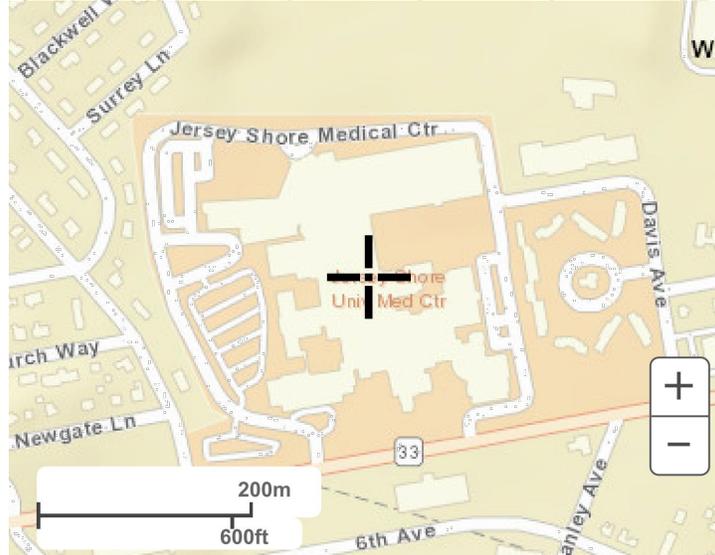
G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

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	SHEET NO.
PROJ. NO.	NOAA ATLAS 14 SITE PRECIPITATION	
50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	SK-06



Physiographic Provinces
 Coastal Plain
 Highlands
 Piedmont
 Valley and Ridge

DATA REFERENCED FROM NJDEP GEOWEB



DATE	TITLE PHYSIOGRAPHIC PROVINCE MAP	SHEET NO.
PROJ. NO. 50182713	PROJECT JERSEY SHORE UNIVERSITY MEDICAL CENTER	SK-04

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	2/10/2025

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JSUMC East 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 30.0 % is greater than 1.5 %. Computed peak flow= 14.59 ft ³ /s Interp. peak flow= 10.21 ft ³ /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 40.8 % is greater than 1.5 %. Computed peak flow= 2.66 ft ³ /s Interp. peak flow= 1.58 ft ³ /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 30.0 % is greater than 1.5 %. Computed peak flow= 14.56 ft ³ /s Interp. peak flow= 10.19 ft ³ /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 41.1 % is greater than 1.5 %. Computed peak flow= 1.63 ft ³ /s Interp. peak flow= 0.96 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East Addition: PondPack Report

Subsection: User Notifications

User Notifications

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 2.2 % is greater than 1.5 %. Computed peak flow= 0.02 ft ³ /s Interp. peak flow= 0.02 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

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 30.1 % is greater than 1.5 %. Computed peak flow= 22.95 ft ³ /s Interp. peak flow= 16.05 ft ³ /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 1.5 % is greater than 1.5 %. Computed peak flow= 0.89 ft ³ /s Interp. peak flow= 0.88 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 4.19 ft ³ /s Interp. peak flow= 2.49 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East Addition: PondPack Report

Subsection: User Notifications

User Notifications

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 22.5 % is greater than 1.5 %. Computed peak flow= 0.19 ft ³ /s Interp. peak flow= 0.15 ft ³ /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 30.1 % is greater than 1.5 %. Computed peak flow= 22.91 ft ³ /s Interp. peak flow= 16.02 ft ³ /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 40.9 % is greater than 1.5 %. Computed peak flow= 2.57 ft ³ /s Interp. peak flow= 1.52 ft ³ /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 21.6 % is greater than 1.5 %. Computed peak flow= 0.34 ft ³ /s Interp. peak flow= 0.27 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East 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 30.1 % is greater than 1.5 %. Computed peak flow= 39.80 ft ³ /s Interp. peak flow= 27.82 ft ³ /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 4.3 % is greater than 1.5 %. Computed peak flow= 3.44 ft ³ /s Interp. peak flow= 3.29 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 7.26 ft ³ /s Interp. peak flow= 4.31 ft ³ /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 31.9 % is greater than 1.5 %. Computed peak flow= 0.88 ft ³ /s Interp. peak flow= 0.60 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East 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 30.1 % is greater than 1.5 %. Computed peak flow= 39.72 ft ³ /s Interp. peak flow= 27.77 ft ³ /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 4.3 % is greater than 1.5 %. Computed peak flow= 2.66 ft ³ /s Interp. peak flow= 2.54 ft ³ /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 40.9 % is greater than 1.5 %. Computed peak flow= 4.45 ft ³ /s Interp. peak flow= 2.63 ft ³ /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 31.8 % is greater than 1.5 %. Computed peak flow= 1.63 ft ³ /s Interp. peak flow= 1.11 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East Addition: PondPack Report

Subsection: User Notifications

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 30.0 % is greater than 1.5 %. Computed peak flow= 17.41 ft ³ /s Interp. peak flow= 12.18 ft ³ /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 40.7 % is greater than 1.5 %. Computed peak flow= 3.18 ft ³ /s Interp. peak flow= 1.88 ft ³ /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 2.8 % is greater than 1.5 %. Computed peak flow= 0.05 ft ³ /s Interp. peak flow= 0.04 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

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 30.0 % is greater than 1.5 %. Computed peak flow= 17.41 ft ³ /s Interp. peak flow= 12.18 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East Addition: PondPack Report

Subsection: User Notifications

User Notifications

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 40.8 % is greater than 1.5 %. Computed peak flow= 2.03 ft ³ /s Interp. peak flow= 1.20 ft ³ /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 30.1 % is greater than 1.5 %. Computed peak flow= 27.08 ft ³ /s Interp. peak flow= 18.94 ft ³ /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 3.3 % is greater than 1.5 %. Computed peak flow= 1.47 ft ³ /s Interp. peak flow= 1.43 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 4.94 ft ³ /s Interp. peak flow= 2.93 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East Addition: PondPack Report

Subsection: User Notifications

User Notifications

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 32.3 % is greater than 1.5 %. Computed peak flow= 0.36 ft ³ /s Interp. peak flow= 0.24 ft ³ /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 30.1 % is greater than 1.5 %. Computed peak flow= 27.08 ft ³ /s Interp. peak flow= 18.94 ft ³ /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 40.7 % is greater than 1.5 %. Computed peak flow= 3.15 ft ³ /s Interp. peak flow= 1.87 ft ³ /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 26.8 % is greater than 1.5 %. Computed peak flow= 0.62 ft ³ /s Interp. peak flow= 0.45 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East 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 30.1 % is greater than 1.5 %. Computed peak flow= 49.22 ft ³ /s Interp. peak flow= 34.40 ft ³ /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 6.4 % is greater than 1.5 %. Computed peak flow= 5.26 ft ³ /s Interp. peak flow= 4.93 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 8.98 ft ³ /s Interp. peak flow= 5.34 ft ³ /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 38.4 % is greater than 1.5 %. Computed peak flow= 1.41 ft ³ /s Interp. peak flow= 0.87 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

JSUMC East 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 30.1 % is greater than 1.5 %. Computed peak flow= 49.22 ft ³ /s Interp. peak flow= 34.40 ft ³ /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 6.6 % is greater than 1.5 %. Computed peak flow= 4.16 ft ³ /s Interp. peak flow= 3.89 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 5.73 ft ³ /s Interp. peak flow= 3.40 ft ³ /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 33.2 % is greater than 1.5 %. Computed peak flow= 2.51 ft ³ /s Interp. peak flow= 1.67 ft ³ /s. Output increment for this catchment may be too large.
Source	Warning

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)
EDA1 - Per - Cur	Current 2 year	2	0.037	12.50	0.12
EDA1 - Per - Cur	Current 10 year	10	0.134	12.25	0.88
EDA1 - Per - Cur	Current 100 year	100	0.426	12.25	3.29
EDA1 - Imp - Cur	Current 2 year	2	1.484	12.25	10.21
EDA1 - Imp - Cur	Current 10 year	10	2.378	12.25	16.05
EDA1 - Imp - Cur	Current 100 year	100	4.188	12.25	27.82
EDA2 - Per - Cur	Current 2 year	2	0.005	12.50	0.01
EDA2 - Per - Cur	Current 10 year	10	0.022	12.25	0.15
EDA2 - Per - Cur	Current 100 year	100	0.076	12.25	0.60
EDA2 - Imp - Cur	Current 2 year	2	0.212	12.00	1.58
EDA2 - Imp - Cur	Current 10 year	10	0.340	12.00	2.49
EDA2 - Imp - Cur	Current 100 year	100	0.599	12.00	4.31
PDA1 - Per - Cur	Current 2 year	2	0.016	13.25	0.03
PDA1 - Per - Cur	Current 10 year	10	0.088	12.25	0.45
PDA1 - Per - Cur	Current 100 year	100	0.338	12.25	2.54
PDA1 - Imp - Cur	Current 2 year	2	1.481	12.25	10.19
PDA1 - Imp - Cur	Current 10 year	10	2.374	12.25	16.02
PDA1 - Imp - Cur	Current 100 year	100	4.181	12.25	27.77
PDA2 - Per - Cur	Current 2 year	2	0.009	12.50	0.02
PDA2 - Per - Cur	Current 10 year	10	0.040	12.25	0.27
PDA2 - Per - Cur	Current 100 year	100	0.141	12.25	1.11
PDA2 - Imp - Cur	Current 2 year	2	0.142	12.00	0.96
PDA2 - Imp - Cur	Current 10 year	10	0.228	12.00	1.52
PDA2 - Imp - Cur	Current 100 year	100	0.402	12.00	2.63
PDA1 - Per - Fut	Future 2 year	2	0.032	12.75	0.08
PDA1 - Per - Fut	Future 10 year	10	0.130	12.25	0.81
PDA1 - Per - Fut	Future 100 year	100	0.494	12.25	3.89
EDA1 - Per - Fut	Future 2 year	2	0.064	12.25	0.31
EDA1 - Per - Fut	Future 10 year	10	0.196	12.25	1.43
EDA1 - Per - Fut	Future 100 year	100	0.621	12.25	4.93
PDA1 - Imp - Fut	Future 2 year	2	1.785	12.25	12.18
PDA1 - Imp - Fut	Future 10 year	10	2.822	12.25	18.94
PDA1 - Imp - Fut	Future 100 year	100	5.204	12.25	34.40
EDA1 - Imp - Fut	Future 2 year	2	1.785	12.25	12.18
EDA1 - Imp - Fut	Future 10 year	10	2.822	12.25	18.94
EDA1 - Imp - Fut	Future 100 year	100	5.204	12.25	34.40
PDA2 - Per - Fut	Future 2 year	2	0.017	12.25	0.07
PDA2 - Per - Fut	Future 10 year	10	0.061	12.25	0.45
PDA2 - Per - Fut	Future 100 year	100	0.211	12.25	1.67
EDA2 - Per - Fut	Future 2 year	2	0.010	12.25	0.04
EDA2 - Per - Fut	Future 10 year	10	0.033	12.25	0.24
EDA2 - Per - Fut	Future 100 year	100	0.113	12.25	0.87
PDA2 - Imp - Fut	Future 2 year	2	0.171	12.00	1.20

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)
PDA2 - Imp - Fut	Future 10 year	10	0.270	12.00	1.87
PDA2 - Imp - Fut	Future 100 year	100	0.497	12.00	3.40
EDA2 - Imp - Fut	Future 2 year	2	0.255	12.00	1.88
EDA2 - Imp - Fut	Future 10 year	10	0.403	12.00	2.93
EDA2 - Imp - Fut	Future 100 year	100	0.744	12.00	5.34

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	1.520	12.25	10.31
Pre - POS1	Future 2 year	2	1.849	12.25	12.49
Pre - POS1	Current 10 year	10	2.512	12.25	16.93
Pre - POS1	Future 10 year	10	3.018	12.25	20.36
Pre - POS1	Current 100 year	100	4.615	12.25	31.11
Pre - POS1	Future 100 year	100	5.824	12.25	39.33
Post - POS1	Current 2 year	2	1.497	12.25	10.19
Post - POS1	Future 2 year	2	1.816	12.25	12.22
Post - POS1	Current 10 year	10	2.462	12.25	16.47
Post - POS1	Future 10 year	10	2.952	12.25	19.74
Post - POS1	Current 100 year	100	4.519	12.25	30.31
Post - POS1	Future 100 year	100	5.697	12.25	38.29
Pre - POS2	Current 2 year	2	0.217	12.00	1.58
Pre - POS2	Future 2 year	2	0.264	12.00	1.88
Pre - POS2	Current 10 year	10	0.361	12.00	2.54
Pre - POS2	Future 10 year	10	0.436	12.00	3.07
Pre - POS2	Current 100 year	100	0.674	12.00	4.72
Pre - POS2	Future 100 year	100	0.857	12.00	6.03
Post - POS2	Current 2 year	2	0.151	12.00	0.96
Post - POS2	Future 2 year	2	0.188	12.00	1.20
Post - POS2	Current 10 year	10	0.268	12.00	1.60
Post - POS2	Future 10 year	10	0.330	12.00	2.09
Post - POS2	Current 100 year	100	0.542	12.25	3.40
Post - POS2	Future 100 year	100	0.708	12.00	4.63

JSUMC East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 10 years

Label: Current Storm

Storm Event: Current 10

Scenario: Current 10 year

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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 10 years

Label: Current Storm

Storm Event: Current 10

Scenario: Current 10 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)				
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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 100 years

Label: Current Storm

Storm Event: Current 100

Scenario: Current 100 year

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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 100 years

Label: Current Storm

Storm Event: Current 100

Scenario: Current 100 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)				
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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 2 years

Label: Current Storm

Storm Event: Current 2 Year

Scenario: 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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 2 years

Label: Current Storm

Storm Event: Current 2 Year

Scenario: 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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 10 years

Label: Future Storm

Storm Event: Future 10

Scenario: Future 10 year

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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 10 years

Label: Future Storm

Storm Event: Future 10

Scenario: Future 10 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)				
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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 100 years

Label: Future Storm

Storm Event: Future 100

Scenario: Future 100 year

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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 100 years

Label: Future Storm

Storm Event: Future 100

Scenario: Future 100 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)				
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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 2 years

Label: Future Storm

Storm Event: Future 2

Scenario: Future 2 year

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 East Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 2 years

Label: Future Storm

Storm Event: Future 2

Scenario: Future 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)				
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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Equations

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 $0.1333Tc$, r_{tm} , and t_h (Smallest dt is then adjusted to match up with T_p)
UDdt	User specified override computational main time increment (only used if UDdt is $\Rightarrow .1333Tc$)
D(t)	Point on distribution curve (fraction of P) for time step t
K	$2 / (1 + (T_r/T_p))$: default $K = 0.75$: (for $T_r/T_p = 1.67$)
Ks	Hydrograph shape factor = Unit Conversions * $K = ((1\text{hr}/3600\text{sec}) * (1\text{ft}/12\text{in}) * ((5280\text{ft})^2/\text{sq.mi})) * K$ Default $K_s = 645.333 * 0.75 = 484$
Lag	Lag time from center of excess runoff (dt) to T_p : $\text{Lag} = 0.6T_c$
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. = $(K_s * A * Q) / T_p$ (where $Q = 1\text{in. runoff}$, $A = \text{sq.mi.}$)
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: $S_i = (1000/CN_i) - 10$
Sp	S for pervious area: $S_p = (1000/CN_p) - 10$
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: $T_b = T_p + T_r$
Tp	Time (hrs) to peak of a unit hydrograph: $T_p = (dt/2) + \text{Lag}$
Tr	Time (hrs) of receding limb of unit hydrograph: $T_r = \text{ratio of } T_p$

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Equations

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) $P_i(t) = P_a(t) - P_a(t-1)$: Col.(4) - Preceding Col.(4)
Column (4) $P_a(t) = D(t) \times P$: Col.(2) x P

Pervious Area Runoff (using SCS Runoff CN Method)

Column (5) $R_{ap}(t)$ = Accumulated pervious runoff for time step t
If $(P_a(t))$ is $\leq 0.2S_p$ then use: $R_{ap}(t) = 0.0$
If $(P_a(t))$ is $> 0.2S_p$ then use:
 $R_{ap}(t) = (Col.(4) - 0.2S_p) \times 2 / (Col.(4) + 0.8S_p)$
Column (6) $R_{ip}(t)$ = Incremental pervious runoff for time step t
 $R_{ip}(t) = R_{ap}(t) - R_{ap}(t-1)$
 $R_{ip}(t) = Col.(5)$ 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) $R(t) = (A_p/A_t) \times R_{ip}(t) + (A_i/A_t) \times R_{ii}(t)$
 $R(t) = (A_p/A_t) \times Col.(6) + (A_i/A_t) \times Col.(8)$

SCS Unit Hydrograph Method

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

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	14.59 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	10.21 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	1.512 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.484 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East Addition: PondPack Report

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

Unit peak, qp	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
1.00	0.00	0.01	0.03	0.05	0.07
2.25	0.09	0.10	0.12	0.14	0.15
3.50	0.16	0.18	0.19	0.20	0.21
4.75	0.22	0.23	0.24	0.25	0.26
6.00	0.27	0.29	0.31	0.33	0.36
7.25	0.38	0.40	0.43	0.45	0.47
8.50	0.50	0.52	0.55	0.60	0.68
9.75	0.75	0.83	0.91	0.99	1.19
11.00	1.46	1.87	2.36	3.58	8.36
12.25	10.21	4.66	2.72	2.04	1.60
13.50	1.30	1.08	0.98	0.90	0.82
14.75	0.74	0.67	0.61	0.58	0.56
16.00	0.53	0.51	0.49	0.47	0.45
17.25	0.43	0.40	0.38	0.36	0.34
18.50	0.34	0.33	0.32	0.32	0.31
19.75	0.31	0.30	0.30	0.29	0.29
21.00	0.28	0.28	0.27	0.27	0.26
22.25	0.25	0.25	0.24	0.24	0.23
23.50	0.23	0.22	0.22	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	12.13 hours
Flow (Peak, Computed)	22.95 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	16.05 ft ³ /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	2.378 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.50	0.00	0.00	0.04	0.08	0.12
1.75	0.16	0.19	0.22	0.24	0.27
3.00	0.29	0.31	0.33	0.35	0.36
4.25	0.38	0.39	0.41	0.42	0.44
5.50	0.45	0.46	0.47	0.50	0.53
6.75	0.57	0.61	0.64	0.68	0.71
8.00	0.75	0.79	0.82	0.86	0.89
9.25	0.98	1.10	1.22	1.34	1.46
10.50	1.59	1.91	2.33	2.98	3.75
11.75	5.66	13.18	16.05	7.31	4.27
13.00	3.21	2.52	2.03	1.69	1.53
14.25	1.41	1.29	1.17	1.04	0.95
15.50	0.91	0.87	0.84	0.80	0.77
16.75	0.74	0.70	0.67	0.63	0.60
18.00	0.56	0.54	0.53	0.52	0.51
19.25	0.50	0.49	0.48	0.47	0.47
20.50	0.46	0.45	0.44	0.43	0.42
21.75	0.42	0.41	0.40	0.39	0.38
23.00	0.37	0.36	0.36	0.35	0.34

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.11 hours
Area (User Defined)	5.590 acres
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	39.80 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	27.82 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	4.267 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.188 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.25	0.00	0.01	0.11	0.22	0.30
1.50	0.37	0.43	0.48	0.52	0.56
2.75	0.59	0.62	0.65	0.67	0.70
4.00	0.72	0.74	0.76	0.78	0.80
5.25	0.82	0.84	0.86	0.88	0.92
6.50	0.98	1.04	1.10	1.16	1.22
7.75	1.28	1.34	1.40	1.46	1.53
9.00	1.59	1.74	1.94	2.15	2.36
10.25	2.57	2.78	3.34	4.08	5.20
11.50	6.53	9.85	22.88	27.82	12.66
12.75	7.39	5.55	4.35	3.52	2.92
14.00	2.65	2.43	2.22	2.02	1.81
15.25	1.64	1.57	1.51	1.45	1.39
16.50	1.33	1.27	1.21	1.15	1.09
17.75	1.03	0.98	0.93	0.91	0.89
19.00	0.88	0.87	0.85	0.84	0.82
20.25	0.81	0.79	0.78	0.76	0.75
21.50	0.73	0.72	0.70	0.69	0.67
22.75	0.66	0.64	0.63	0.61	0.60
24.00	0.59	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	17.41 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	12.18 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	1.819 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.785 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.75	0.00	0.00	0.03	0.06	0.08
2.00	0.11	0.13	0.15	0.17	0.19
3.25	0.20	0.22	0.23	0.25	0.26
4.50	0.27	0.28	0.30	0.31	0.32
5.75	0.33	0.34	0.36	0.39	0.41
7.00	0.44	0.47	0.50	0.52	0.55
8.25	0.58	0.61	0.64	0.66	0.73
9.50	0.82	0.91	1.00	1.10	1.19
10.75	1.43	1.76	2.25	2.83	4.28
12.00	9.98	12.18	5.55	3.24	2.44
13.25	1.91	1.55	1.28	1.16	1.07
14.50	0.98	0.89	0.79	0.72	0.69
15.75	0.66	0.64	0.61	0.58	0.56
17.00	0.53	0.51	0.48	0.45	0.43
18.25	0.41	0.40	0.39	0.39	0.38
19.50	0.37	0.37	0.36	0.35	0.35
20.75	0.34	0.34	0.33	0.32	0.32
22.00	0.31	0.30	0.30	0.29	0.28
23.25	0.28	0.27	0.26	0.26	(N/A)

JSUMC East 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)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	27.08 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	18.94 ft ³ /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	2.822 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.50	0.00	0.02	0.07	0.13	0.18
1.75	0.22	0.26	0.29	0.32	0.35
3.00	0.37	0.39	0.41	0.43	0.45
4.25	0.47	0.49	0.50	0.52	0.53
5.50	0.55	0.56	0.57	0.61	0.65
6.75	0.69	0.73	0.77	0.81	0.85
8.00	0.90	0.94	0.98	1.02	1.06
9.25	1.17	1.31	1.45	1.59	1.74
10.50	1.88	2.26	2.76	3.53	4.43
11.75	6.69	15.56	18.94	8.62	5.04
13.00	3.78	2.97	2.40	1.99	1.80
14.25	1.66	1.52	1.37	1.23	1.12
15.50	1.07	1.03	0.99	0.95	0.91
16.75	0.87	0.83	0.79	0.75	0.71
18.00	0.67	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

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

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)	12.13 hours
Flow (Peak, Computed)	49.22 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	34.40 ft ³ /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	5.204 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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

Unit peak, qp	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.25	0.00	0.05	0.21	0.34	0.45
1.50	0.53	0.59	0.64	0.69	0.73
2.75	0.77	0.80	0.84	0.87	0.89
4.00	0.92	0.94	0.97	0.99	1.02
5.25	1.04	1.06	1.08	1.10	1.16
6.50	1.23	1.30	1.38	1.45	1.53
7.75	1.60	1.67	1.75	1.82	1.90
9.00	1.97	2.16	2.41	2.67	2.93
10.25	3.19	3.45	4.13	5.06	6.44
11.50	8.09	12.19	28.31	34.40	15.66
12.75	9.14	6.86	5.38	4.35	3.61
14.00	3.27	3.01	2.75	2.49	2.23
15.25	2.03	1.94	1.86	1.79	1.72
16.50	1.64	1.57	1.50	1.43	1.35
17.75	1.28	1.21	1.15	1.12	1.11
19.00	1.09	1.07	1.05	1.04	1.02
20.25	1.00	0.98	0.96	0.94	0.92
21.50	0.91	0.89	0.87	0.85	0.83
22.75	0.82	0.80	0.78	0.76	0.74
24.00	0.72	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	12.53 hours
Flow (Peak, Computed)	0.12 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.12 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.63 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.17 hours
Total unit time, Tb	1.31 hours

JSUMC East 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)	0.20 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 (ft ³ /s)				
12.00	0.00	0.10	0.12	0.11	0.10
13.25	0.08	0.07	0.06	0.06	0.05
14.50	0.05	0.05	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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
 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

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.21 hours
Flow (Peak, Computed)	0.89 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.88 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.63 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.17 hours
Total unit time, Tb	1.31 hours

JSUMC East 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)	0.20 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 (ft ³ /s)				
11.50	0.00	0.03	0.24	0.88	0.67
12.75	0.48	0.36	0.28	0.23	0.19
14.00	0.17	0.16	0.15	0.13	0.12
15.25	0.11	0.11	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	0.07	0.06
19.00	0.06	0.06	0.06	0.06	0.06
20.25	0.06	0.06	0.06	0.06	0.06
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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.20 hours
Area (User Defined)	1.400 acres
<hr/>	
Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	3.44 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.29 ft ³ /s
<hr/>	
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
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Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.70 in
Runoff Volume (Pervious)	0.431 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.426 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.20 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East Addition: PondPack Report

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	4.63 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.17 hours
Total unit time, Tb	1.31 hours

JSUMC East 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)	0.20 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 (ft ³ /s)				
9.50	0.00	0.00	0.01	0.03	0.04
10.75	0.07	0.12	0.19	0.30	0.55
12.00	1.43	3.29	2.22	1.48	1.04
13.25	0.79	0.63	0.52	0.46	0.42
14.50	0.38	0.35	0.32	0.29	0.27
15.75	0.26	0.25	0.24	0.23	0.22
17.00	0.21	0.20	0.20	0.19	0.18
18.25	0.17	0.16	0.16	0.16	0.15
19.50	0.15	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	0.12	0.11	0.11	0.11	(N/A)

JSUMC East Addition: PondPack Report

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)	12.29 hours
Flow (Peak, Computed)	0.32 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.31 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.87 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
11.75	0.00	0.02	0.31	0.28	0.22
13.00	0.17	0.14	0.12	0.10	0.09
14.25	0.08	0.08	0.07	0.07	0.06
15.50	0.06	0.06	0.05	0.05	0.05
16.75	0.05	0.05	0.05	0.04	0.04
18.00	0.04	0.04	0.04	0.04	0.04
19.25	0.04	0.04	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

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.19 hours
Area (User Defined)	1.400 acres
<hr/>	
Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.21 hours
Flow (Peak, Computed)	1.47 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.43 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.70 in
Runoff Volume (Pervious)	0.199 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.196 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.87 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
11.00	0.00	0.01	0.04	0.13	0.51
12.25	1.43	1.00	0.69	0.50	0.39
13.50	0.32	0.26	0.23	0.22	0.20
14.75	0.18	0.17	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	0.08	0.07	0.07	0.07	0.07
22.25	0.07	0.07	0.07	0.07	0.06
23.50	0.06	0.06	0.06	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	12.19 hours
Flow (Peak, Computed)	5.26 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	4.93 ft ³ /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	0.621 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.87 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
8.50	0.00	0.00	0.01	0.02	0.03
9.75	0.05	0.08	0.10	0.13	0.18
11.00	0.26	0.38	0.56	0.95	2.36
12.25	4.93	3.17	2.04	1.42	1.08
13.50	0.86	0.71	0.62	0.57	0.52
14.75	0.48	0.43	0.39	0.37	0.36
16.00	0.34	0.33	0.32	0.30	0.29
17.25	0.28	0.26	0.25	0.24	0.23
18.50	0.22	0.21	0.21	0.21	0.20
19.75	0.20	0.20	0.20	0.19	0.19
21.00	0.19	0.18	0.18	0.18	0.17
22.25	0.17	0.17	0.16	0.16	0.16
23.50	0.15	0.15	0.14	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary
 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

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	2.66 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.58 ft ³ /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	0.212 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East Addition: PondPack Report

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 (ft ³ /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	0.22	0.30	0.36	0.61	1.58
12.25	1.05	0.52	0.34	0.27	0.21
13.50	0.17	0.15	0.14	0.13	0.12
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	0.04	0.03	0.03
23.50	0.03	0.03	0.03	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	0.810 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	4.19 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.49 ft ³ /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	0.340 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East 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)	0.810 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 (ft ³ /s)				
0.75	0.00	0.01	0.01	0.02	0.02
2.00	0.03	0.03	0.04	0.04	0.04
3.25	0.05	0.05	0.05	0.05	0.06
4.50	0.06	0.06	0.06	0.06	0.07
5.75	0.07	0.07	0.07	0.08	0.08
7.00	0.09	0.09	0.10	0.11	0.11
8.25	0.12	0.12	0.13	0.13	0.15
9.50	0.16	0.18	0.20	0.22	0.24
10.75	0.30	0.36	0.47	0.58	0.97
12.00	2.49	1.65	0.82	0.54	0.43
13.25	0.34	0.27	0.23	0.22	0.20
14.50	0.18	0.16	0.15	0.13	0.13
15.75	0.12	0.12	0.11	0.11	0.10
17.00	0.10	0.09	0.09	0.08	0.08
18.25	0.08	0.08	0.07	0.07	0.07
19.50	0.07	0.07	0.07	0.07	0.07
20.75	0.06	0.06	0.06	0.06	0.06
22.00	0.06	0.06	0.06	0.05	0.05
23.25	0.05	0.05	0.05	0.05	(N/A)

JSUMC East Addition: PondPack Report

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)	12.11 hours
Flow (Peak, Computed)	7.26 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.31 ft ³ /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	0.599 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East 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)	0.810 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 (ft ³ /s)				
0.25	0.00	0.00	0.02	0.04	0.05
1.50	0.06	0.06	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	0.11	0.12
5.25	0.12	0.12	0.13	0.13	0.14
6.50	0.14	0.15	0.16	0.17	0.18
7.75	0.19	0.20	0.21	0.21	0.22
9.00	0.23	0.26	0.29	0.32	0.35
10.25	0.38	0.41	0.52	0.63	0.82
11.50	1.01	1.69	4.31	2.86	1.42
12.75	0.93	0.74	0.58	0.47	0.40
14.00	0.37	0.34	0.31	0.28	0.25
15.25	0.23	0.22	0.22	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)

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	3.18 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.88 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.90 in
Runoff Volume (Pervious)	0.264 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.255 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East 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)	0.810 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 (ft ³ /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	0.16	0.18
10.75	0.22	0.27	0.35	0.44	0.74
12.00	1.88	1.25	0.62	0.41	0.32
13.25	0.26	0.21	0.18	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)

JSUMC East Addition: PondPack Report

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)	12.11 hours
Flow (Peak, Computed)	4.94 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.93 ft ³ /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	0.403 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East Addition: PondPack Report

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)	0.810 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 (ft ³ /s)				
0.50	0.00	0.00	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	0.35	0.42	0.56	0.68
11.75	1.15	2.93	1.95	0.97	0.63
13.00	0.50	0.40	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	0.14	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	0.09	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

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	8.98 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.34 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.768 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.744 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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

Unit peak, qp	10.71 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC East 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)	0.810 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 (ft ³ /s)				
0.25	0.00	0.01	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	0.14	0.15
5.25	0.15	0.15	0.16	0.16	0.17
6.50	0.18	0.19	0.20	0.21	0.22
7.75	0.24	0.25	0.26	0.27	0.28
9.00	0.29	0.33	0.36	0.40	0.44
10.25	0.48	0.51	0.64	0.78	1.02
11.50	1.25	2.09	5.34	3.54	1.76
12.75	1.15	0.91	0.72	0.59	0.50
14.00	0.46	0.42	0.39	0.35	0.31
15.25	0.29	0.28	0.27	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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.53 hours
Flow (Peak, Computed)	0.01 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.01 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East Addition: PondPack Report

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	2.13 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East Addition: PondPack Report

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 (ft ³ /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)

JSUMC East 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)	0.09 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.19 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.15 ft ³ /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	0.022 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	2.13 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
11.75	0.00	0.05	0.15	0.09	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

JSUMC East Addition: PondPack Report

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)	12.13 hours
Flow (Peak, Computed)	0.88 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.60 ft ³ /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	0.076 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	2.13 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
10.25	0.00	0.00	0.01	0.02	0.03
11.50	0.06	0.12	0.41	0.60	0.30
12.75	0.19	0.16	0.12	0.10	0.09
14.00	0.08	0.07	0.07	0.06	0.06
15.25	0.05	0.05	0.05	0.05	0.05
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)

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.21 hours
Flow (Peak, Computed)	0.05 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.04 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.40 in
Runoff Volume (Pervious)	0.010 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.010 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	2.40 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 hours

JSUMC East 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)	0.08 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 (ft ³ /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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.08 hours
Area (User Defined)	0.290 acres
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.36 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.24 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.40 in
Runoff Volume (Pervious)	0.034 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.033 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	2.40 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 hours

JSUMC East 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)	0.08 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 (ft ³ /s)				
11.50	0.00	0.02	0.13	0.24	0.13
12.75	0.09	0.07	0.06	0.05	0.04
14.00	0.04	0.04	0.03	0.03	0.03
15.25	0.03	0.03	0.02	0.02	0.02
16.50	0.02	0.02	0.02	0.02	0.02
17.75	0.02	0.02	0.02	0.02	0.02
19.00	0.02	0.02	0.02	0.01	0.01
20.25	0.01	0.01	0.01	0.01	0.01
21.50	0.01	0.01	0.01	0.01	0.01
22.75	0.01	0.01	0.01	0.01	0.01
24.00	0.01	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC East 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)	0.08 hours
Area (User Defined)	0.290 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	1.41 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.87 ft ³ /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	0.113 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	2.40 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 hours

JSUMC East 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)	0.08 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 (ft ³ /s)				
9.25	0.00	0.00	0.00	0.01	0.01
10.50	0.02	0.03	0.05	0.07	0.11
11.75	0.22	0.70	0.87	0.42	0.27
13.00	0.22	0.17	0.14	0.12	0.11
14.25	0.10	0.10	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

JSUMC East Addition: PondPack Report

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)	12.13 hours
Flow (Peak, Computed)	14.56 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	10.19 ft ³ /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	1.481 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.53 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
1.00	0.00	0.01	0.03	0.05	0.07
2.25	0.09	0.10	0.12	0.14	0.15
3.50	0.16	0.18	0.19	0.20	0.21
4.75	0.22	0.23	0.24	0.25	0.26
6.00	0.27	0.29	0.31	0.33	0.36
7.25	0.38	0.40	0.43	0.45	0.47
8.50	0.50	0.52	0.54	0.60	0.67
9.75	0.75	0.83	0.91	0.99	1.19
11.00	1.46	1.87	2.36	3.57	8.34
12.25	10.19	4.65	2.72	2.04	1.60
13.50	1.30	1.07	0.97	0.90	0.82
14.75	0.74	0.67	0.60	0.58	0.56
16.00	0.53	0.51	0.49	0.47	0.45
17.25	0.42	0.40	0.38	0.36	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	0.28	0.27	0.26	0.26
22.25	0.25	0.25	0.24	0.24	0.23
23.50	0.23	0.22	0.22	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	22.91 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	16.02 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	2.419 ac-ft
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Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.374 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East Addition: PondPack Report

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	33.53 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.50	0.00	0.00	0.04	0.08	0.12
1.75	0.16	0.19	0.22	0.24	0.27
3.00	0.29	0.31	0.33	0.35	0.36
4.25	0.38	0.39	0.41	0.42	0.44
5.50	0.45	0.46	0.47	0.50	0.53
6.75	0.57	0.61	0.64	0.68	0.71
8.00	0.75	0.78	0.82	0.86	0.89
9.25	0.98	1.10	1.22	1.34	1.46
10.50	1.58	1.90	2.33	2.98	3.74
11.75	5.65	13.16	16.02	7.30	4.26
13.00	3.20	2.51	2.03	1.68	1.53
14.25	1.40	1.28	1.16	1.04	0.95
15.50	0.90	0.87	0.84	0.80	0.77
16.75	0.73	0.70	0.67	0.63	0.60
18.00	0.56	0.54	0.52	0.52	0.51
19.25	0.50	0.49	0.48	0.47	0.47
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

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	39.72 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	27.77 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	4.259 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4.181 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.53 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.25	0.00	0.01	0.11	0.22	0.30
1.50	0.37	0.43	0.48	0.52	0.55
2.75	0.59	0.62	0.65	0.67	0.70
4.00	0.72	0.74	0.76	0.78	0.80
5.25	0.82	0.84	0.86	0.88	0.92
6.50	0.98	1.04	1.10	1.16	1.22
7.75	1.28	1.34	1.40	1.46	1.52
9.00	1.58	1.73	1.94	2.15	2.36
10.25	2.57	2.78	3.33	4.07	5.19
11.50	6.52	9.84	22.84	27.77	12.64
12.75	7.38	5.54	4.34	3.51	2.91
14.00	2.64	2.43	2.22	2.01	1.80
15.25	1.64	1.56	1.51	1.44	1.39
16.50	1.33	1.27	1.21	1.15	1.09
17.75	1.03	0.97	0.93	0.91	0.89
19.00	0.88	0.86	0.85	0.84	0.82
20.25	0.81	0.79	0.78	0.76	0.75
21.50	0.73	0.72	0.70	0.69	0.67
22.75	0.66	0.64	0.63	0.61	0.60
24.00	0.58	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	12.13 hours
Flow (Peak, Computed)	17.41 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	12.18 ft ³ /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	1.785 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.75	0.00	0.00	0.03	0.06	0.08
2.00	0.11	0.13	0.15	0.17	0.19
3.25	0.20	0.22	0.23	0.25	0.26
4.50	0.27	0.28	0.30	0.31	0.32
5.75	0.33	0.34	0.36	0.39	0.41
7.00	0.44	0.47	0.50	0.52	0.55
8.25	0.58	0.61	0.64	0.66	0.73
9.50	0.82	0.91	1.00	1.10	1.19
10.75	1.43	1.76	2.25	2.83	4.28
12.00	9.98	12.18	5.55	3.24	2.44
13.25	1.91	1.55	1.28	1.16	1.07
14.50	0.98	0.89	0.79	0.72	0.69
15.75	0.66	0.64	0.61	0.58	0.56
17.00	0.53	0.51	0.48	0.45	0.43
18.25	0.41	0.40	0.39	0.39	0.38
19.50	0.37	0.37	0.36	0.35	0.35
20.75	0.34	0.34	0.33	0.32	0.32
22.00	0.31	0.30	0.30	0.29	0.28
23.25	0.28	0.27	0.26	0.26	(N/A)

JSUMC East 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)	0.11 hours
Area (User Defined)	5.590 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	27.08 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	18.94 ft ³ /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	2.822 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.50	0.00	0.02	0.07	0.13	0.18
1.75	0.22	0.26	0.29	0.32	0.35
3.00	0.37	0.39	0.41	0.43	0.45
4.25	0.47	0.49	0.50	0.52	0.53
5.50	0.55	0.56	0.57	0.61	0.65
6.75	0.69	0.73	0.77	0.81	0.85
8.00	0.90	0.94	0.98	1.02	1.06
9.25	1.17	1.31	1.45	1.59	1.74
10.50	1.88	2.26	2.76	3.53	4.43
11.75	6.69	15.56	18.94	8.62	5.04
13.00	3.78	2.97	2.40	1.99	1.80
14.25	1.66	1.52	1.37	1.23	1.12
15.50	1.07	1.03	0.99	0.95	0.91
16.75	0.87	0.83	0.79	0.75	0.71
18.00	0.67	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

JSUMC East Addition: PondPack Report

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)	12.13 hours
Flow (Peak, Computed)	49.22 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	34.40 ft ³ /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	5.204 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.11 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	33.59 ft ³ /s
Unit peak time, Tp	0.07 hours
Unit receding limb, Tr	0.65 hours
Total unit time, Tb	0.72 hours

JSUMC East 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)	0.11 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 (ft ³ /s)				
0.25	0.00	0.05	0.21	0.34	0.45
1.50	0.53	0.59	0.64	0.69	0.73
2.75	0.77	0.80	0.84	0.87	0.89
4.00	0.92	0.94	0.97	0.99	1.02
5.25	1.04	1.06	1.08	1.10	1.16
6.50	1.23	1.30	1.38	1.45	1.53
7.75	1.60	1.67	1.75	1.82	1.90
9.00	1.97	2.16	2.41	2.67	2.93
10.25	3.19	3.45	4.13	5.06	6.44
11.50	8.09	12.19	28.31	34.40	15.66
12.75	9.14	6.86	5.38	4.35	3.61
14.00	3.27	3.01	2.75	2.49	2.23
15.25	2.03	1.94	1.86	1.79	1.72
16.50	1.64	1.57	1.50	1.43	1.35
17.75	1.28	1.21	1.15	1.12	1.11
19.00	1.09	1.07	1.05	1.04	1.02
20.25	1.00	0.98	0.96	0.94	0.92
21.50	0.91	0.89	0.87	0.85	0.83
22.75	0.82	0.80	0.78	0.76	0.74
24.00	0.72	(N/A)	(N/A)	(N/A)	(N/A)

JSUMC East 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)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	13.17 hours
Flow (Peak, Computed)	0.03 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	13.25 hours
Flow (Peak Interpolated Output)	0.03 ft ³ /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	0.016 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.94 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
12.25	0.00	0.01	0.02	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	0.02	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)

JSUMC East 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)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.26 hours
Flow (Peak, Computed)	0.45 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.45 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.94 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
11.75	0.00	0.04	0.45	0.39	0.30
13.00	0.24	0.19	0.16	0.14	0.12
14.25	0.11	0.11	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

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.19 hours
Area (User Defined)	1.420 acres

Computational Time Increment	0.03 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	2.66 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.54 ft ³ /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	0.338 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.19 hours
Computational Time Increment	0.03 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.94 ft ³ /s
Unit peak time, Tp	0.13 hours
Unit receding limb, Tr	1.11 hours
Total unit time, Tb	1.24 hours

JSUMC East 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)	0.19 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 (ft ³ /s)				
10.50	0.00	0.00	0.02	0.06	0.14
11.75	0.31	1.01	2.54	1.74	1.17
13.00	0.84	0.65	0.53	0.44	0.39
14.25	0.36	0.33	0.30	0.27	0.25
15.50	0.24	0.23	0.22	0.21	0.20
16.75	0.20	0.19	0.18	0.17	0.16
18.00	0.15	0.15	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	0.12	0.11	0.11	0.11	0.11
23.00	0.11	0.10	0.10	0.10	0.10

JSUMC East 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)	0.18 hours
Area (User Defined)	1.410 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.60 hours
Flow (Peak, Computed)	0.08 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.75 hours
Flow (Peak Interpolated Output)	0.08 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.18 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 hours

JSUMC East 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)	0.18 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 (ft ³ /s)				
12.00	0.00	0.04	0.08	0.08	0.08
13.25	0.07	0.06	0.05	0.05	0.05
14.50	0.04	0.04	0.04	0.04	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)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.18 hours
Area (User Defined)	1.410 acres
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.22 hours
Flow (Peak, Computed)	0.82 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.81 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.12 in
Runoff Volume (Pervious)	0.132 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.130 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.18 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 hours

JSUMC East 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)	0.18 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 (ft ³ /s)				
11.50	0.00	0.00	0.16	0.81	0.62
12.75	0.45	0.34	0.27	0.23	0.19
14.00	0.17	0.16	0.15	0.14	0.12
15.25	0.11	0.11	0.10	0.10	0.10
16.50	0.10	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)

JSUMC East Addition: PondPack Report

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	4.16 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.89 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.26 in
Runoff Volume (Pervious)	0.501 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.494 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.18 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 hours

JSUMC East 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)	0.18 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 (ft ³ /s)				
10.00	0.00	0.01	0.03	0.06	0.11
11.25	0.20	0.33	0.62	1.73	3.89
12.50	2.52	1.63	1.17	0.89	0.73
13.75	0.60	0.53	0.49	0.45	0.41
15.00	0.38	0.34	0.32	0.31	0.30
16.25	0.29	0.28	0.27	0.25	0.24
17.50	0.23	0.22	0.21	0.20	0.19
18.75	0.19	0.19	0.18	0.18	0.18
20.00	0.18	0.17	0.17	0.17	0.17
21.25	0.16	0.16	0.16	0.15	0.15
22.50	0.15	0.14	0.14	0.14	0.14
23.75	0.13	0.13	(N/A)	(N/A)	(N/A)

JSUMC East Addition: PondPack Report

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)	1.63 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	0.96 ft ³ /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	0.142 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.41 hours
Total unit time, Tb	0.46 hours

JSUMC East Addition: PondPack Report

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 (ft ³ /s)				
1.00	0.00	0.00	0.00	0.01	0.01
2.25	0.01	0.01	0.01	0.01	0.01
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	0.03
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	0.07	0.08	0.09	0.10	0.12
11.00	0.15	0.19	0.24	0.38	0.96
12.25	0.84	0.37	0.24	0.19	0.15
13.50	0.12	0.10	0.09	0.08	0.08
14.75	0.07	0.06	0.06	0.06	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	0.03
22.25	0.02	0.02	0.02	0.02	0.02
23.50	0.02	0.02	0.02	(N/A)	(N/A)

JSUMC East 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)	0.07 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	2.57 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.52 ft ³ /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	0.228 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.41 hours
Total unit time, Tb	0.46 hours

JSUMC East 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)	0.07 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 (ft ³ /s)				
0.75	0.00	0.00	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	0.04	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	0.14	0.16
10.75	0.19	0.23	0.30	0.38	0.61
12.00	1.52	1.32	0.58	0.37	0.29
13.25	0.23	0.19	0.16	0.15	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)	4.45 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.63 ft ³ /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	0.402 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.07 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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

SCS Unit Hydrograph Parameters

Unit peak, qp	5.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.41 hours
Total unit time, Tb	0.46 hours

JSUMC East 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)	0.07 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 (ft ³ /s)				
0.25	0.00	0.00	0.01	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	0.15	0.17	0.19	0.21	0.23
10.25	0.25	0.27	0.34	0.41	0.53
11.50	0.66	1.06	2.63	2.29	1.00
12.75	0.64	0.51	0.40	0.32	0.27
14.00	0.25	0.23	0.21	0.19	0.17
15.25	0.16	0.15	0.14	0.14	0.13
16.50	0.13	0.12	0.12	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)

JSUMC East 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)	0.06 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	2.03 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.20 ft ³ /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	0.171 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.06 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.95 ft ³ /s
Unit peak time, Tp	0.04 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.39 hours

JSUMC East 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)	0.06 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 (ft ³ /s)				
1.00	0.00	0.00	0.01	0.01	0.01
2.25	0.01	0.01	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	0.06	0.07	0.08
9.75	0.09	0.10	0.11	0.12	0.15
11.00	0.18	0.23	0.29	0.47	1.20
12.25	0.93	0.42	0.28	0.22	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)

JSUMC East Addition: PondPack Report

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)	0.06 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	3.15 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.87 ft ³ /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	0.270 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.06 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	5.95 ft ³ /s
Unit peak time, Tp	0.04 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.39 hours

JSUMC East 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)	0.06 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 (ft ³ /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	0.14	0.16	0.17
10.50	0.19	0.23	0.28	0.37	0.45
11.75	0.74	1.87	1.44	0.66	0.43
13.00	0.34	0.27	0.22	0.18	0.17
14.25	0.16	0.14	0.13	0.12	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	0.05	0.04	0.04
23.00	0.04	0.04	0.04	0.04	0.04

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

Storm Event	Future 100
Return Event	100 years
Duration	24.00 hours
Depth	11.62 in
Time of Concentration (Composite)	0.06 hours
Area (User Defined)	0.540 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	5.73 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.40 ft ³ /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	0.497 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.06 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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

Unit peak, qp	5.95 ft ³ /s
Unit peak time, Tp	0.04 hours
Unit receding limb, Tr	0.35 hours
Total unit time, Tb	0.39 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)	0.06 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 (ft ³ /s)				
0.25	0.00	0.01	0.02	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	0.13	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	0.42	0.51	0.67
11.50	0.82	1.35	3.40	2.61	1.19
12.75	0.78	0.62	0.49	0.40	0.33
14.00	0.31	0.28	0.26	0.23	0.21
15.25	0.19	0.19	0.18	0.17	0.16
16.50	0.16	0.15	0.14	0.14	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)

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

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)	0.550 acres
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.53 hours
Flow (Peak, Computed)	0.02 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.50 hours
Flow (Peak Interpolated Output)	0.02 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.19 in
Runoff Volume (Pervious)	0.009 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.009 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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

Unit peak, qp	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East Addition: PondPack Report

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)	0.09 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 (ft ³ /s)				
12.00	0.00	0.01	0.02	0.02	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	0.01	0.01	0.01
23.25	0.01	0.01	0.01	0.01	(N/A)

JSUMC East Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.34 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.27 ft ³ /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	0.040 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
11.75	0.00	0.09	0.27	0.16	0.11
13.00	0.09	0.08	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

JSUMC East Addition: PondPack Report

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)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	1.63 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.11 ft ³ /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	0.141 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
10.25	0.00	0.00	0.01	0.03	0.06
11.50	0.10	0.21	0.75	1.11	0.55
12.75	0.36	0.29	0.23	0.19	0.16
14.00	0.15	0.14	0.13	0.12	0.11
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)

JSUMC East Addition: PondPack Report

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)	12.23 hours
Flow (Peak, Computed)	0.07 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.07 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
12.00	0.00	0.07	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)

JSUMC East 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)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	0.62 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.45 ft ³ /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	0.061 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
11.50	0.00	0.03	0.22	0.45	0.25
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	0.05	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)

JSUMC East 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)	0.09 hours
Area (User Defined)	0.550 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.13 hours
Flow (Peak, Computed)	2.51 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.67 ft ³ /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	0.211 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.09 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC East 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	4.04 ft ³ /s
Unit peak time, Tp	0.06 hours
Unit receding limb, Tr	0.53 hours
Total unit time, Tb	0.59 hours

JSUMC East 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)	0.09 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 (ft ³ /s)				
9.50	0.00	0.01	0.01	0.02	0.03
10.75	0.05	0.08	0.13	0.20	0.38
12.00	1.22	1.67	0.81	0.52	0.41
13.25	0.33	0.27	0.23	0.21	0.20
14.50	0.18	0.16	0.15	0.14	0.13
15.75	0.13	0.12	0.12	0.11	0.11
17.00	0.10	0.10	0.09	0.09	0.08
18.25	0.08	0.08	0.08	0.08	0.08
19.50	0.07	0.07	0.07	0.07	0.07
20.75	0.07	0.07	0.07	0.07	0.06
22.00	0.06	0.06	0.06	0.06	0.06
23.25	0.06	0.06	0.05	0.05	(N/A)

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA1 - Imp - Cur	1.481	12.25	10.19
Flow (From)	PDA1 - Per - Cur	0.016	13.25	0.03
Flow (In)	Post - POS1	1.497	12.25	10.19

JSUMC East Addition: PondPack Report

Subsection: Addition Summary

Label: Post - POS1

Scenario: Future 2 year

Return Event: 2 years

Storm Event: Future 2

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	1.785	12.25	12.18
Flow (From)	PDA1 - Per - Fut	0.032	12.75	0.08
Flow (In)	Post - POS1	1.816	12.25	12.22

JSUMC East Addition: PondPack Report

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	2.374	12.25	16.02
Flow (From)	PDA1 - Per - Cur	0.088	12.25	0.45
Flow (In)	Post - POS1	2.462	12.25	16.47

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	2.822	12.25	18.94
Flow (From)	PDA1 - Per - Fut	0.130	12.25	0.81
Flow (In)	Post - POS1	2.952	12.25	19.74

JSUMC East Addition: PondPack Report

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	4.181	12.25	27.77
Flow (From)	PDA1 - Per - Cur	0.338	12.25	2.54
Flow (In)	Post - POS1	4.519	12.25	30.31

JSUMC East 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) (ft ³ /s)
Flow (From)	PDA1 - Imp - Fut	5.204	12.25	34.40
Flow (From)	PDA1 - Per - Fut	0.494	12.25	3.89
Flow (In)	Post - POS1	5.697	12.25	38.29

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Cur	0.142	12.00	0.96
Flow (From)	PDA2 - Per - Cur	0.009	12.50	0.02
Flow (In)	Post - POS2	0.151	12.00	0.96

JSUMC East Addition: PondPack Report

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	0.171	12.00	1.20
Flow (From)	PDA2 - Per - Fut	0.017	12.25	0.07
Flow (In)	Post - POS2	0.188	12.00	1.20

JSUMC East Addition: PondPack Report

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	0.228	12.00	1.52
Flow (From)	PDA2 - Per - Cur	0.040	12.25	0.27
Flow (In)	Post - POS2	0.268	12.00	1.60

JSUMC East Addition: PondPack Report

Subsection: Addition Summary

Label: Post - POS2

Scenario: Future 10 year

Return Event: 10 years

Storm Event: Future 10

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	0.270	12.00	1.87
Flow (From)	PDA2 - Per - Fut	0.061	12.25	0.45
Flow (In)	Post - POS2	0.330	12.00	2.09

JSUMC East 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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Cur	0.402	12.00	2.63
Flow (From)	PDA2 - Per - Cur	0.141	12.25	1.11
Flow (In)	Post - POS2	0.542	12.25	3.40

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Fut	0.497	12.00	3.40
Flow (From)	PDA2 - Per - Fut	0.211	12.25	1.67
Flow (In)	Post - POS2	0.708	12.00	4.63

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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Cur	1.484	12.25	10.21
Flow (From)	EDA1 - Per - Cur	0.037	12.50	0.12
Flow (In)	Pre - POS1	1.520	12.25	10.31

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Fut	1.785	12.25	12.18
Flow (From)	EDA1 - Per - Fut	0.064	12.25	0.31
Flow (In)	Pre - POS1	1.849	12.25	12.49

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	2.378	12.25	16.05
Flow (From)	EDA1 - Per - Cur	0.134	12.25	0.88
Flow (In)	Pre - POS1	2.512	12.25	16.93

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Fut	2.822	12.25	18.94
Flow (From)	EDA1 - Per - Fut	0.196	12.25	1.43
Flow (In)	Pre - POS1	3.018	12.25	20.36

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	4.188	12.25	27.82
Flow (From)	EDA1 - Per - Cur	0.426	12.25	3.29
Flow (In)	Pre - POS1	4.615	12.25	31.11

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	5.204	12.25	34.40
Flow (From)	EDA1 - Per - Fut	0.621	12.25	4.93
Flow (In)	Pre - POS1	5.824	12.25	39.33

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Cur	0.212	12.00	1.58
Flow (From)	EDA2 - Per - Cur	0.005	12.50	0.01
Flow (In)	Pre - POS2	0.217	12.00	1.58

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.255	12.00	1.88
Flow (From)	EDA2 - Per - Fut	0.010	12.25	0.04
Flow (In)	Pre - POS2	0.264	12.00	1.88

JSUMC East Addition: PondPack Report

Subsection: Addition Summary

Label: Pre - POS2

Scenario: Current 10 year

Return Event: 10 years

Storm Event: Current 10

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	0.340	12.00	2.49
Flow (From)	EDA2 - Per - Cur	0.022	12.25	0.15
Flow (In)	Pre - POS2	0.361	12.00	2.54

JSUMC East Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.403	12.00	2.93
Flow (From)	EDA2 - Per - Fut	0.033	12.25	0.24
Flow (In)	Pre - POS2	0.436	12.00	3.07

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	0.599	12.00	4.31
Flow (From)	EDA2 - Per - Cur	0.076	12.25	0.60
Flow (In)	Pre - POS2	0.674	12.00	4.72

JSUMC East 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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.744	12.00	5.34
Flow (From)	EDA2 - Per - Fut	0.113	12.25	0.87
Flow (In)	Pre - POS2	0.857	12.00	6.03

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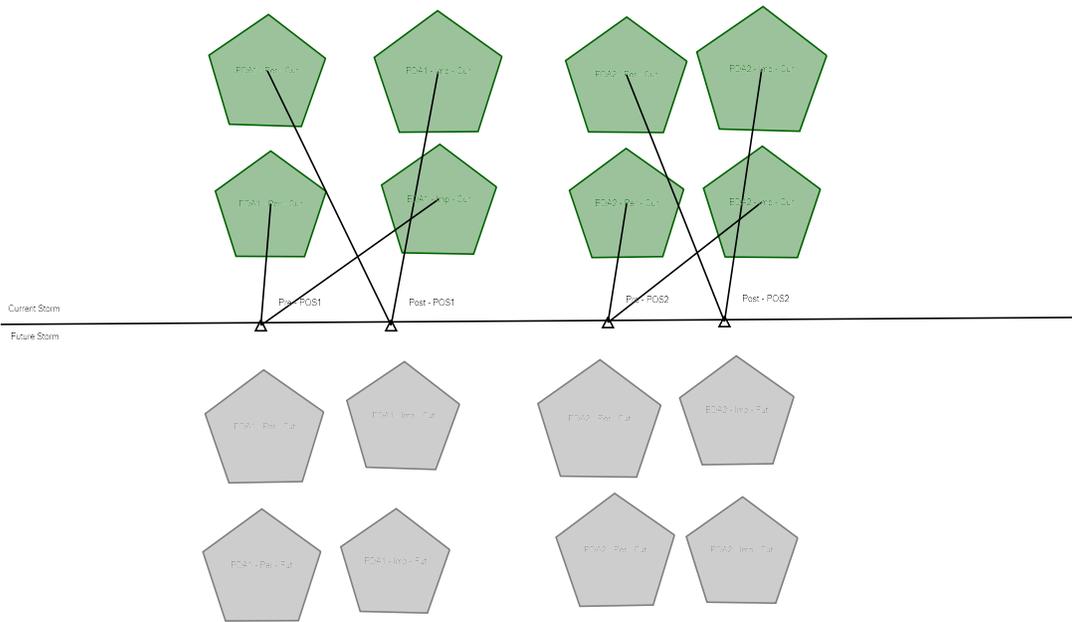
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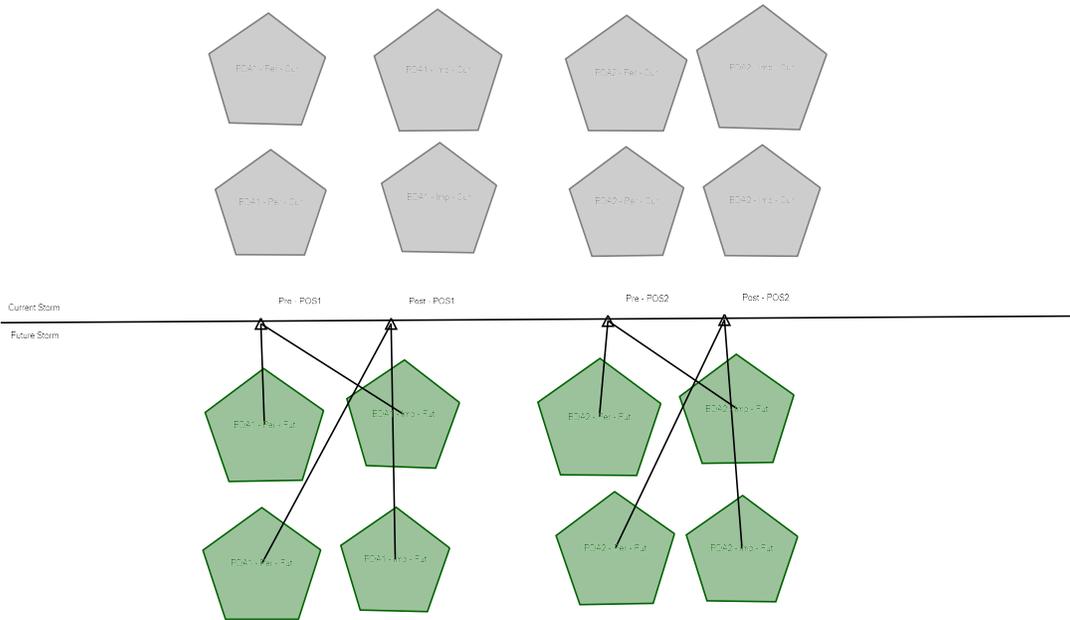
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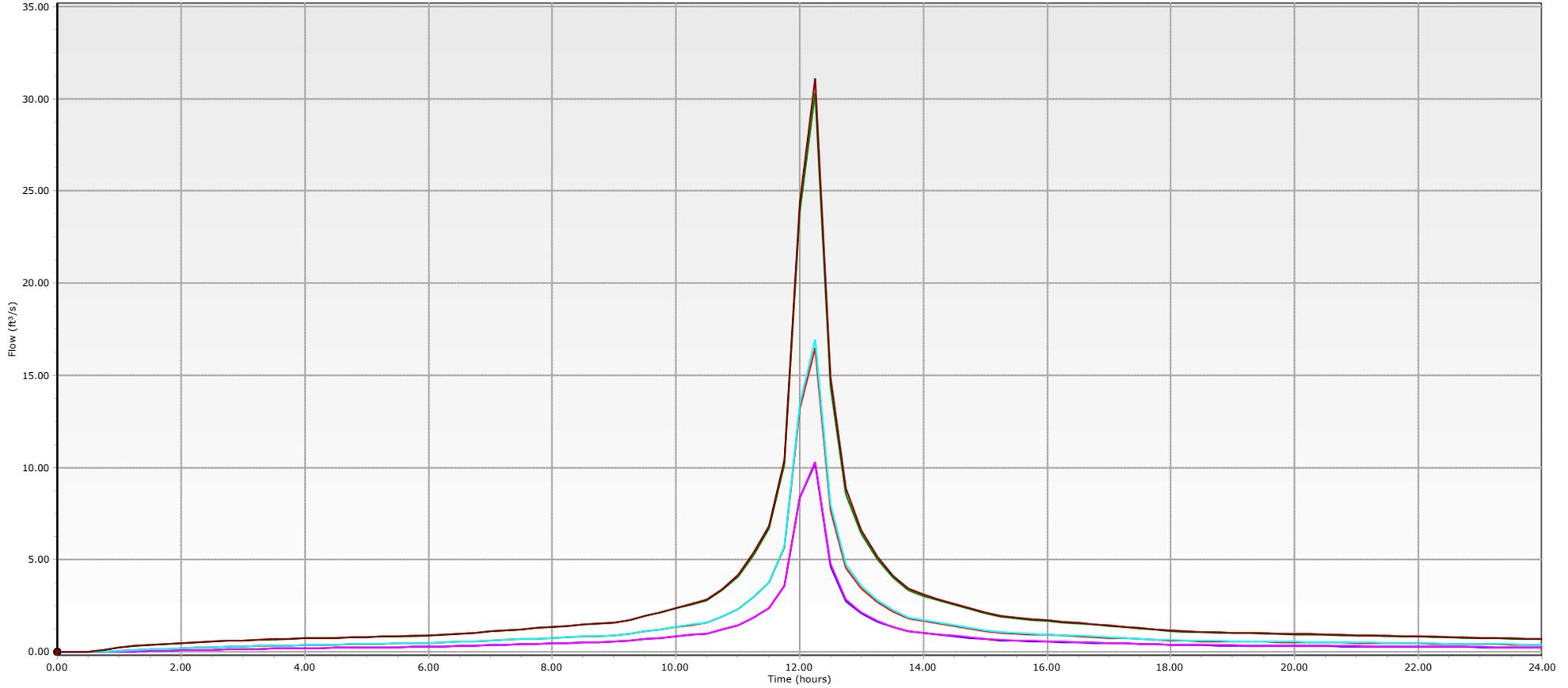
Scenario: Current 2 year



Scenario: Future 2 year



East Addition POS1 Pre vs Post Hydrograph - Current Storm

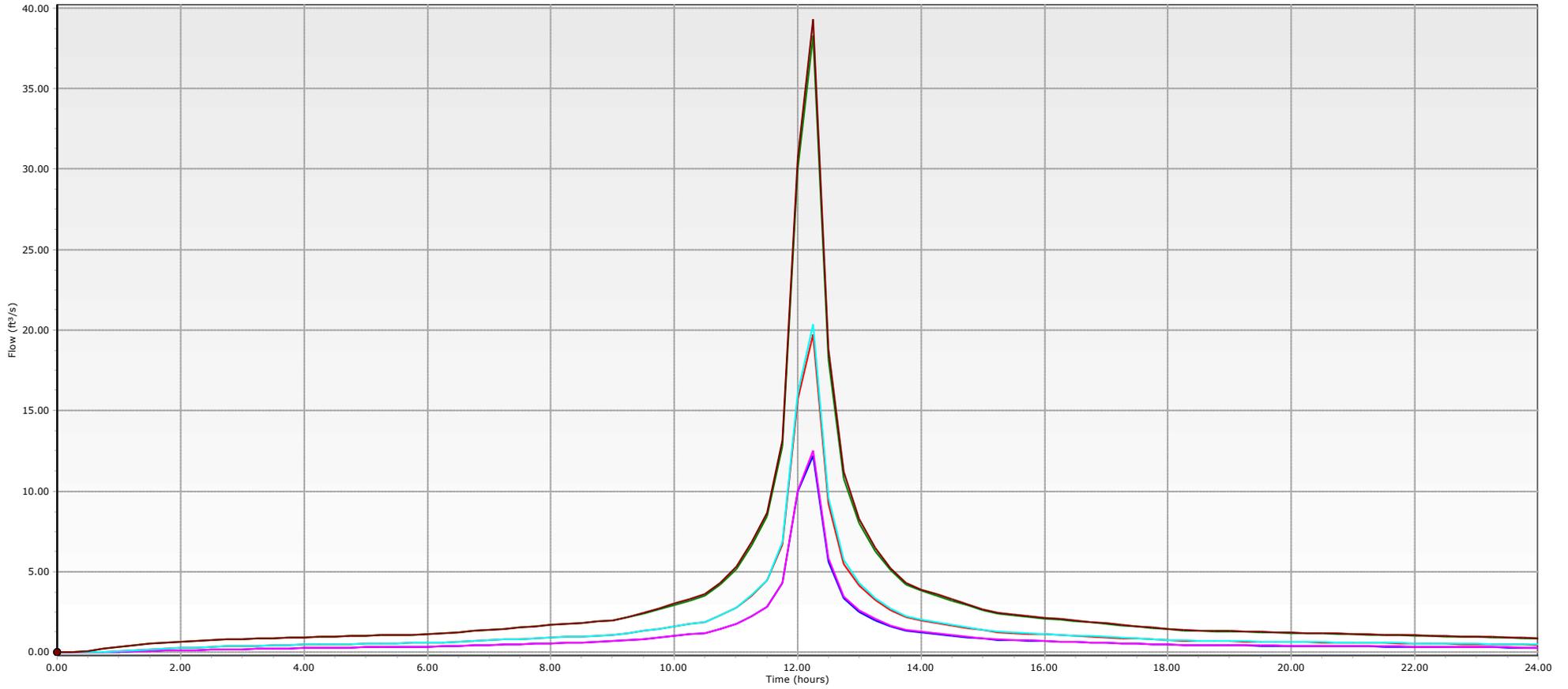


Post - POS1 - Current 2 year - Flow Post - POS1 - Current 10 year - Flow Post - POS1 - Current 100 year - Flow Pre - POS1 - Current 2 year - Flow Pre - POS1 - Current 10 year - Flow Pre - POS1 - Current 100 year - Flow

East Addition Current Precipitation									
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1									
Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.11	0.11	0.00
1.00	0.00	0.00	0.00	0.04	0.04	0.00	0.22	0.22	0.00
1.25	0.01	0.01	0.00	0.08	0.08	0.00	0.30	0.30	0.00
1.50	0.03	0.03	0.00	0.12	0.12	0.00	0.37	0.37	0.00
1.75	0.05	0.05	0.00	0.16	0.16	0.00	0.43	0.43	0.00
2.00	0.07	0.07	0.00	0.19	0.19	0.00	0.48	0.48	0.00
2.25	0.09	0.09	0.00	0.22	0.22	0.00	0.52	0.52	0.00
2.50	0.10	0.10	0.00	0.24	0.24	0.00	0.56	0.55	0.01
2.75	0.12	0.12	0.00	0.27	0.27	0.00	0.59	0.59	0.00
3.00	0.14	0.14	0.00	0.29	0.29	0.00	0.62	0.62	0.00
3.25	0.15	0.15	0.00	0.31	0.31	0.00	0.65	0.65	0.00
3.50	0.16	0.16	0.00	0.33	0.33	0.00	0.67	0.67	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	0.36	0.36	0.00	0.72	0.72	0.00
4.25	0.20	0.20	0.00	0.38	0.38	0.00	0.74	0.74	0.00
4.50	0.21	0.21	0.00	0.39	0.39	0.00	0.76	0.76	0.00
4.75	0.22	0.22	0.00	0.41	0.41	0.00	0.78	0.78	0.00
5.00	0.23	0.23	0.00	0.42	0.42	0.00	0.80	0.80	0.00
5.25	0.24	0.24	0.00	0.44	0.44	0.00	0.82	0.82	0.00
5.50	0.25	0.25	0.00	0.45	0.45	0.00	0.84	0.84	0.00
5.75	0.26	0.26	0.00	0.46	0.46	0.00	0.86	0.86	0.00
6.00	0.27	0.27	0.00	0.47	0.47	0.00	0.88	0.88	0.00
6.25	0.29	0.29	0.00	0.50	0.50	0.00	0.92	0.92	0.00
6.50	0.31	0.31	0.00	0.53	0.53	0.00	0.98	0.98	0.00
6.75	0.33	0.33	0.00	0.57	0.57	0.00	1.04	1.04	0.00
7.00	0.36	0.36	0.00	0.61	0.61	0.00	1.10	1.10	0.00
7.25	0.38	0.38	0.00	0.64	0.64	0.00	1.16	1.16	0.00
7.50	0.40	0.40	0.00	0.68	0.68	0.00	1.22	1.22	0.00
7.75	0.43	0.43	0.00	0.71	0.71	0.00	1.28	1.28	0.00
8.00	0.45	0.45	0.00	0.75	0.75	0.00	1.34	1.34	0.00
8.25	0.47	0.47	0.00	0.79	0.78	0.01	1.40	1.40	0.00
8.50	0.50	0.50	0.00	0.82	0.82	0.00	1.46	1.46	0.00
8.75	0.52	0.52	0.00	0.86	0.86	0.00	1.53	1.52	0.01
9.00	0.55	0.54	0.01	0.89	0.89	0.00	1.59	1.58	0.01
9.25	0.60	0.60	0.00	0.98	0.98	0.00	1.74	1.73	0.01
9.50	0.68	0.67	0.01	1.10	1.10	0.00	1.94	1.94	0.00
9.75	0.75	0.75	0.00	1.22	1.22	0.00	2.15	2.15	0.00
10.00	0.83	0.83	0.00	1.34	1.34	0.00	2.37	2.36	0.01
10.25	0.91	0.91	0.00	1.46	1.46	0.00	2.60	2.57	0.03
10.50	0.99	0.99	0.00	1.59	1.58	0.01	2.83	2.78	0.05
10.75	1.19	1.19	0.00	1.91	1.90	0.01	3.41	3.33	0.08
11.00	1.46	1.46	0.00	2.33	2.33	0.00	4.20	4.10	0.10
11.25	1.87	1.87	0.00	2.98	2.98	0.00	5.39	5.26	0.13
11.50	2.36	2.36	0.00	3.75	3.74	0.01	6.84	6.66	0.18
11.75	3.58	3.57	0.01	5.69	5.65	0.04	10.40	10.15	0.25
12.00	8.36	8.34	0.02	13.42	13.19	0.23	24.32	23.85	0.47
12.25	10.31	10.19	0.12	16.93	16.47	0.46	31.11	30.31	0.80
12.50	4.78	4.66	0.12	7.98	7.69	0.29	14.88	14.38	0.50
12.75	2.83	2.74	0.09	4.75	4.56	0.19	8.87	8.55	0.32
13.00	2.14	2.07	0.07	3.57	3.44	0.13	6.59	6.38	0.21
13.25	1.69	1.63	0.06	2.80	2.70	0.10	5.14	5.00	0.14
13.50	1.37	1.32	0.05	2.26	2.19	0.07	4.15	4.04	0.11

13.75	1.14	1.10	0.04	1.88	1.82	0.06	3.43	3.35	0.08
14.00	1.03	1.00	0.03	1.70	1.65	0.05	3.10	3.03	0.07
14.25	0.95	0.92	0.03	1.56	1.52	0.04	2.85	2.79	0.06
14.50	0.87	0.84	0.03	1.43	1.39	0.04	2.61	2.55	0.06
14.75	0.79	0.77	0.02	1.30	1.26	0.04	2.37	2.31	0.06
15.00	0.71	0.69	0.02	1.17	1.13	0.04	2.13	2.08	0.05
15.25	0.64	0.62	0.02	1.06	1.03	0.03	1.93	1.89	0.04
15.50	0.61	0.60	0.01	1.01	0.98	0.03	1.84	1.80	0.04
15.75	0.59	0.57	0.02	0.97	0.95	0.02	1.77	1.73	0.04
16.00	0.57	0.55	0.02	0.93	0.91	0.02	1.70	1.66	0.04
16.25	0.55	0.53	0.02	0.90	0.87	0.03	1.63	1.60	0.03
16.50	0.52	0.51	0.01	0.86	0.84	0.02	1.56	1.53	0.03
16.75	0.50	0.49	0.01	0.82	0.80	0.02	1.50	1.46	0.04
17.00	0.48	0.46	0.02	0.79	0.76	0.03	1.43	1.40	0.03
17.25	0.45	0.44	0.01	0.75	0.73	0.02	1.36	1.33	0.03
17.50	0.43	0.42	0.01	0.71	0.69	0.02	1.29	1.26	0.03
17.75	0.41	0.40	0.01	0.67	0.65	0.02	1.22	1.20	0.02
18.00	0.39	0.37	0.02	0.63	0.62	0.01	1.15	1.13	0.02
18.25	0.37	0.36	0.01	0.60	0.59	0.01	1.10	1.07	0.03
18.50	0.36	0.35	0.01	0.59	0.57	0.02	1.07	1.05	0.02
18.75	0.35	0.34	0.01	0.58	0.57	0.01	1.05	1.03	0.02
19.00	0.35	0.34	0.01	0.57	0.56	0.01	1.04	1.02	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	0.99	0.97	0.02
20.00	0.33	0.32	0.01	0.53	0.52	0.01	0.97	0.95	0.02
20.25	0.32	0.31	0.01	0.53	0.51	0.02	0.95	0.93	0.02
20.50	0.31	0.31	0.00	0.52	0.50	0.02	0.93	0.92	0.01
20.75	0.31	0.30	0.01	0.51	0.49	0.02	0.92	0.90	0.02
21.00	0.30	0.29	0.01	0.50	0.48	0.02	0.90	0.88	0.02
21.25	0.30	0.29	0.01	0.49	0.48	0.01	0.88	0.87	0.01
21.50	0.29	0.28	0.01	0.48	0.47	0.01	0.87	0.85	0.02
21.75	0.29	0.28	0.01	0.47	0.46	0.01	0.85	0.83	0.02
22.00	0.28	0.27	0.01	0.46	0.45	0.01	0.83	0.82	0.01
22.25	0.27	0.27	0.00	0.45	0.44	0.01	0.82	0.80	0.02
22.50	0.27	0.26	0.01	0.44	0.43	0.01	0.80	0.78	0.02
22.75	0.26	0.26	0.00	0.43	0.42	0.01	0.78	0.77	0.01
23.00	0.26	0.25	0.01	0.42	0.41	0.01	0.76	0.75	0.01
23.25	0.25	0.24	0.01	0.41	0.40	0.01	0.75	0.73	0.02
23.50	0.25	0.24	0.01	0.40	0.39	0.01	0.73	0.71	0.02
23.75	0.24	0.23	0.01	0.39	0.38	0.01	0.71	0.70	0.01
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

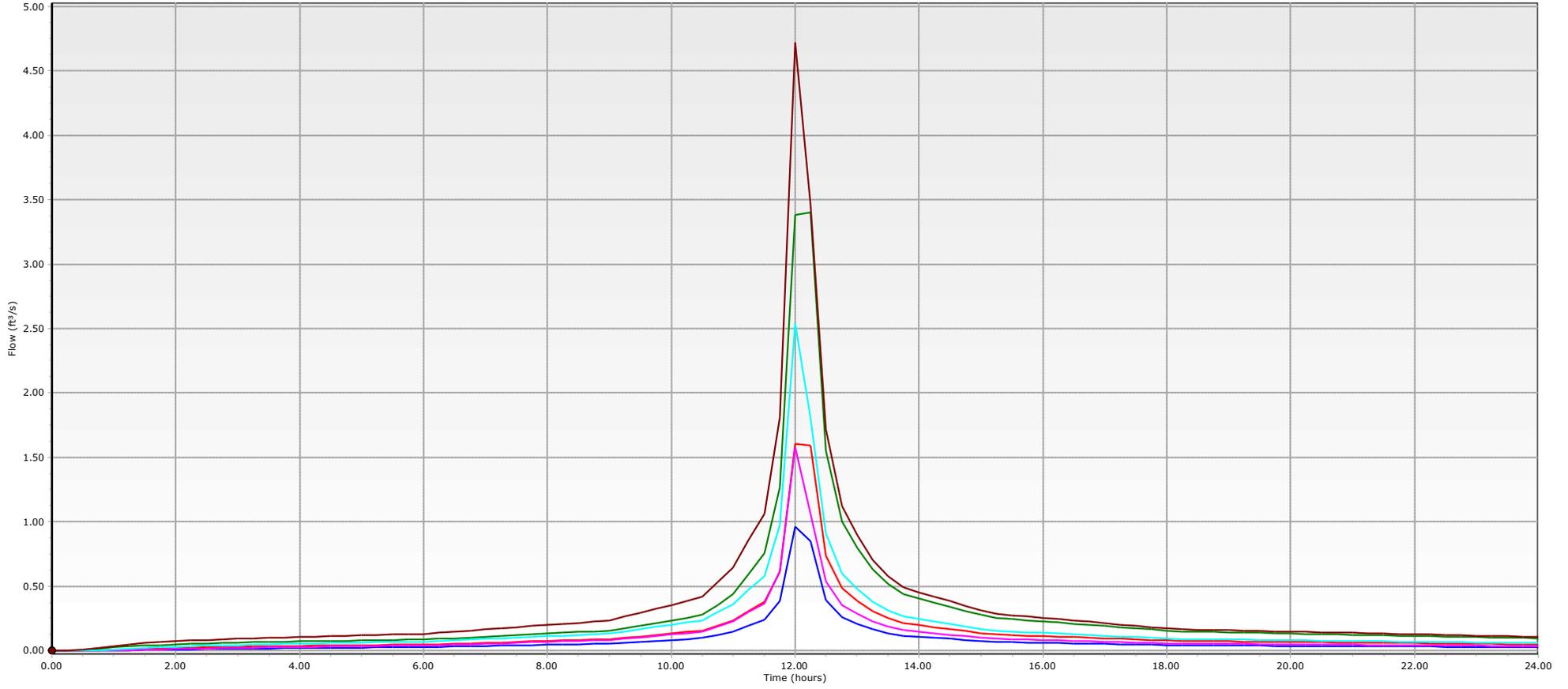


Post - POS1 - Future 2 year - Flow Post - POS1 - Future 10 year - Flow Post - POS1 - Future 100 year - Flow Pre - POS1 - Future 2 year - Flow Pre - POS1 - Future 10 year - Flow Pre - POS1 - Future 100 year - Flow

East Addition Future Precipitation									
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1									
Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.05	0.05	0.00
0.75	0.00	0.00	0.00	0.02	0.02	0.00	0.21	0.21	0.00
1.00	0.00	0.00	0.00	0.07	0.07	0.00	0.34	0.34	0.00
1.25	0.03	0.03	0.00	0.13	0.13	0.00	0.45	0.45	0.00
1.50	0.06	0.06	0.00	0.18	0.18	0.00	0.53	0.53	0.00
1.75	0.08	0.08	0.00	0.22	0.22	0.00	0.59	0.59	0.00
2.00	0.11	0.11	0.00	0.26	0.26	0.00	0.64	0.64	0.00
2.25	0.13	0.13	0.00	0.29	0.29	0.00	0.69	0.69	0.00
2.50	0.15	0.15	0.00	0.32	0.32	0.00	0.73	0.73	0.00
2.75	0.17	0.17	0.00	0.35	0.35	0.00	0.77	0.77	0.00
3.00	0.19	0.19	0.00	0.37	0.37	0.00	0.80	0.80	0.00
3.25	0.20	0.20	0.00	0.39	0.39	0.00	0.84	0.84	0.00
3.50	0.22	0.22	0.00	0.41	0.41	0.00	0.87	0.87	0.00
3.75	0.23	0.23	0.00	0.43	0.43	0.00	0.89	0.89	0.00
4.00	0.25	0.25	0.00	0.45	0.45	0.00	0.92	0.92	0.00
4.25	0.26	0.26	0.00	0.47	0.47	0.00	0.94	0.94	0.00
4.50	0.27	0.27	0.00	0.49	0.49	0.00	0.97	0.97	0.00
4.75	0.28	0.28	0.00	0.50	0.50	0.00	0.99	0.99	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	0.53	0.53	0.00	1.04	1.04	0.00
5.50	0.32	0.32	0.00	0.55	0.55	0.00	1.06	1.06	0.00
5.75	0.33	0.33	0.00	0.56	0.56	0.00	1.08	1.08	0.00
6.00	0.34	0.34	0.00	0.57	0.57	0.00	1.10	1.10	0.00
6.25	0.36	0.36	0.00	0.61	0.61	0.00	1.16	1.16	0.00
6.50	0.39	0.39	0.00	0.65	0.65	0.00	1.23	1.23	0.00
6.75	0.41	0.41	0.00	0.69	0.69	0.00	1.30	1.30	0.00
7.00	0.44	0.44	0.00	0.73	0.73	0.00	1.38	1.38	0.00
7.25	0.47	0.47	0.00	0.77	0.77	0.00	1.45	1.45	0.00
7.50	0.50	0.50	0.00	0.81	0.81	0.00	1.53	1.53	0.00
7.75	0.52	0.52	0.00	0.85	0.85	0.00	1.60	1.60	0.00
8.00	0.55	0.55	0.00	0.90	0.90	0.00	1.67	1.67	0.00
8.25	0.58	0.58	0.00	0.94	0.94	0.00	1.75	1.75	0.00
8.50	0.61	0.61	0.00	0.98	0.98	0.00	1.82	1.82	0.00
8.75	0.64	0.64	0.00	1.02	1.02	0.00	1.90	1.90	0.00
9.00	0.66	0.66	0.00	1.06	1.06	0.00	1.98	1.97	0.01
9.25	0.73	0.73	0.00	1.17	1.17	0.00	2.18	2.16	0.02
9.50	0.82	0.82	0.00	1.31	1.31	0.00	2.45	2.41	0.04
9.75	0.91	0.91	0.00	1.45	1.45	0.00	2.72	2.67	0.05
10.00	1.00	1.00	0.00	1.59	1.59	0.00	3.01	2.93	0.08
10.25	1.10	1.10	0.00	1.74	1.74	0.00	3.29	3.20	0.09
10.50	1.19	1.19	0.00	1.88	1.88	0.00	3.58	3.48	0.10
10.75	1.43	1.43	0.00	2.26	2.26	0.00	4.32	4.20	0.12
11.00	1.76	1.76	0.00	2.76	2.76	0.00	5.32	5.17	0.15
11.25	2.25	2.25	0.00	3.53	3.53	0.00	6.83	6.64	0.19
11.50	2.83	2.83	0.00	4.48	4.43	0.05	8.65	8.42	0.23
11.75	4.28	4.28	0.00	6.82	6.69	0.13	13.15	12.81	0.34
12.00	10.01	9.98	0.03	16.07	15.73	0.34	30.68	30.05	0.63
12.25	12.49	12.22	0.27	20.36	19.74	0.62	39.33	38.29	1.04
12.50	5.83	5.63	0.20	9.62	9.24	0.38	18.83	18.18	0.65
12.75	3.46	3.32	0.14	5.72	5.48	0.24	11.18	10.77	0.41
13.00	2.61	2.51	0.10	4.28	4.12	0.16	8.29	8.03	0.26
13.25	2.05	1.98	0.07	3.36	3.24	0.12	6.46	6.28	0.18
13.50	1.66	1.61	0.05	2.72	2.63	0.09	5.21	5.08	0.13

13.75	1.38	1.33	0.05	2.25	2.18	0.07	4.31	4.20	0.11
14.00	1.25	1.21	0.04	2.04	1.98	0.06	3.90	3.81	0.09
14.25	1.15	1.12	0.03	1.88	1.82	0.06	3.58	3.50	0.08
14.50	1.06	1.02	0.04	1.72	1.66	0.06	3.28	3.20	0.08
14.75	0.96	0.93	0.03	1.56	1.51	0.05	2.97	2.91	0.06
15.00	0.86	0.83	0.03	1.40	1.36	0.04	2.67	2.61	0.06
15.25	0.78	0.76	0.02	1.27	1.23	0.04	2.42	2.37	0.05
15.50	0.75	0.72	0.03	1.21	1.18	0.03	2.31	2.26	0.05
15.75	0.72	0.70	0.02	1.17	1.13	0.04	2.22	2.17	0.05
16.00	0.69	0.67	0.02	1.12	1.09	0.03	2.13	2.09	0.04
16.25	0.66	0.64	0.02	1.07	1.04	0.03	2.05	2.00	0.05
16.50	0.64	0.62	0.02	1.03	1.00	0.03	1.96	1.92	0.04
16.75	0.61	0.59	0.02	0.99	0.96	0.03	1.88	1.84	0.04
17.00	0.58	0.56	0.02	0.94	0.91	0.03	1.79	1.75	0.04
17.25	0.55	0.53	0.02	0.90	0.87	0.03	1.70	1.67	0.03
17.50	0.52	0.51	0.01	0.85	0.83	0.02	1.62	1.58	0.04
17.75	0.50	0.48	0.02	0.80	0.78	0.02	1.53	1.50	0.03
18.00	0.47	0.45	0.02	0.76	0.74	0.02	1.44	1.42	0.02
18.25	0.45	0.43	0.02	0.72	0.70	0.02	1.37	1.35	0.02
18.50	0.44	0.42	0.02	0.71	0.69	0.02	1.34	1.32	0.02
18.75	0.43	0.42	0.01	0.70	0.68	0.02	1.32	1.30	0.02
19.00	0.42	0.41	0.01	0.68	0.67	0.01	1.30	1.28	0.02
19.25	0.42	0.40	0.02	0.67	0.66	0.01	1.28	1.26	0.02
19.50	0.41	0.40	0.01	0.66	0.64	0.02	1.26	1.23	0.03
19.75	0.40	0.39	0.01	0.65	0.63	0.02	1.24	1.21	0.03
20.00	0.40	0.38	0.02	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	0.62	0.60	0.02	1.17	1.15	0.02
20.75	0.37	0.36	0.01	0.61	0.59	0.02	1.15	1.13	0.02
21.00	0.37	0.36	0.01	0.60	0.58	0.02	1.13	1.11	0.02
21.25	0.36	0.35	0.01	0.58	0.57	0.01	1.11	1.09	0.02
21.50	0.35	0.34	0.01	0.57	0.56	0.01	1.09	1.07	0.02
21.75	0.35	0.34	0.01	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	0.33	0.32	0.01	0.53	0.51	0.02	1.00	0.98	0.02
22.75	0.32	0.31	0.01	0.52	0.50	0.02	0.98	0.96	0.02
23.00	0.31	0.30	0.01	0.50	0.49	0.01	0.96	0.94	0.02
23.25	0.30	0.30	0.00	0.49	0.48	0.01	0.93	0.92	0.01
23.50	0.30	0.29	0.01	0.48	0.47	0.01	0.91	0.90	0.01
23.75	0.29	0.28	0.01	0.47	0.46	0.01	0.89	0.88	0.01
24.00	0.28	0.28	0.00	0.46	0.45	0.01	0.87	0.85	0.02

East Addition POS2 Pre vs Post Hydrograph - Current Storm



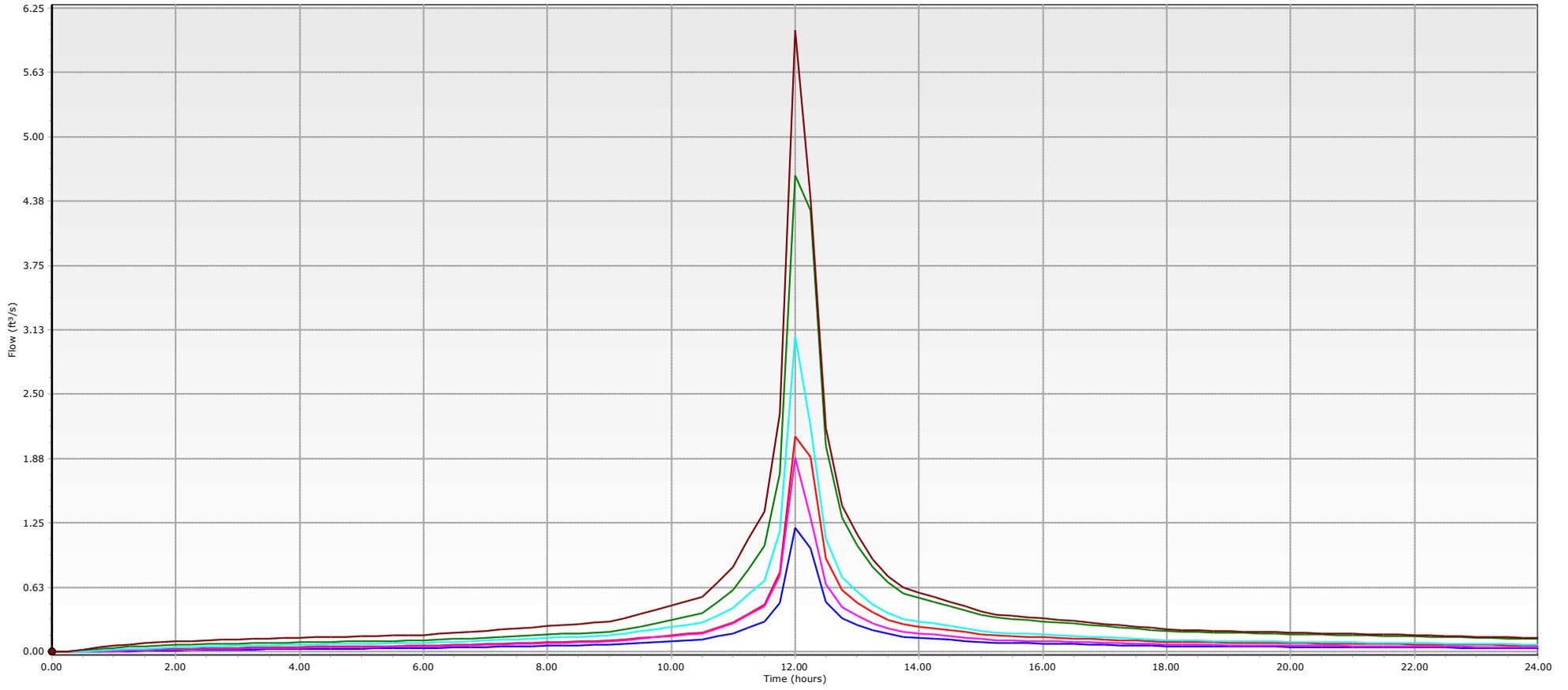
Post - POS2 - Current 2 year - Flow Post - POS2 - Current 10 year - Flow Post - POS2 - Current 100 year - Flow Pre - POS2 - Current 2 year - Flow Pre - POS2 - Current 10 year - Flow Pre - POS2 - Current 100 year - Flow

West AdditionFuture Precipitation
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-2

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.00	0.00	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00
1.00	0.00	0.00	0.00	0.01	0.01	0.00	0.04	0.04	0.00
1.25	0.00	0.00	0.00	0.02	0.02	0.00	0.05	0.05	0.00
1.50	0.01	0.01	0.00	0.02	0.02	0.00	0.07	0.06	0.01
1.75	0.01	0.01	0.00	0.03	0.03	0.00	0.07	0.07	0.00
2.00	0.01	0.01	0.00	0.03	0.03	0.00	0.08	0.08	0.00
2.25	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
2.50	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
2.75	0.02	0.02	0.00	0.05	0.05	0.00	0.10	0.10	0.00
3.00	0.02	0.02	0.00	0.05	0.05	0.00	0.10	0.10	0.00
3.25	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
3.50	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
3.75	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.00	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.25	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.50	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
4.75	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
5.00	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
5.25	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
5.50	0.04	0.04	0.00	0.08	0.07	0.01	0.14	0.14	0.00
5.75	0.04	0.04	0.00	0.08	0.08	0.00	0.14	0.14	0.00
6.00	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
6.25	0.05	0.05	0.00	0.09	0.08	0.01	0.16	0.16	0.00
6.50	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
6.75	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
7.00	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
7.25	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.20	0.00
7.50	0.07	0.07	0.00	0.11	0.11	0.00	0.22	0.22	0.00
7.75	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
8.00	0.08	0.08	0.00	0.13	0.13	0.00	0.25	0.24	0.01
8.25	0.08	0.08	0.00	0.13	0.13	0.00	0.26	0.26	0.00
8.50	0.08	0.08	0.00	0.14	0.14	0.00	0.27	0.27	0.00
8.75	0.09	0.09	0.00	0.15	0.14	0.01	0.29	0.29	0.00
9.00	0.09	0.09	0.00	0.15	0.15	0.00	0.30	0.30	0.00
9.25	0.10	0.10	0.00	0.17	0.17	0.00	0.34	0.34	0.00
9.50	0.12	0.12	0.00	0.19	0.19	0.00	0.39	0.39	0.00
9.75	0.13	0.13	0.00	0.22	0.22	0.00	0.43	0.43	0.00
10.00	0.14	0.14	0.00	0.24	0.24	0.00	0.48	0.48	0.00
10.25	0.16	0.15	0.01	0.27	0.27	0.00	0.53	0.53	0.00
10.50	0.17	0.17	0.00	0.29	0.29	0.00	0.58	0.58	0.00
10.75	0.21	0.21	0.00	0.37	0.37	0.00	0.73	0.73	0.00
11.00	0.26	0.26	0.00	0.45	0.45	0.00	0.89	0.89	0.00
11.25	0.34	0.34	0.00	0.61	0.60	0.01	1.18	1.17	0.01
11.50	0.43	0.43	0.00	0.76	0.76	0.00	1.49	1.47	0.02
11.75	0.75	0.74	0.01	1.29	1.28	0.01	2.46	2.44	0.02
12.00	1.95	1.95	0.00	3.30	3.28	0.02	6.14	6.11	0.03
12.25	1.57	1.57	0.00	2.81	2.79	0.02	5.49	5.40	0.09
12.50	0.85	0.84	0.01	1.52	1.49	0.03	2.97	2.88	0.09
12.75	0.56	0.55	0.01	0.98	0.96	0.02	1.89	1.82	0.07
13.00	0.43	0.43	0.00	0.75	0.73	0.02	1.42	1.37	0.05
13.25	0.34	0.33	0.01	0.58	0.57	0.01	1.09	1.06	0.03
13.50	0.28	0.27	0.01	0.48	0.47	0.01	0.89	0.86	0.03
13.75	0.23	0.23	0.00	0.40	0.39	0.01	0.74	0.72	0.02

14.00	0.21	0.21	0.00	0.37	0.36	0.01	0.68	0.66	0.02
14.25	0.20	0.19	0.01	0.33	0.33	0.00	0.62	0.60	0.02
14.50	0.18	0.18	0.00	0.31	0.30	0.01	0.57	0.55	0.02
14.75	0.16	0.16	0.00	0.28	0.27	0.01	0.51	0.50	0.01
15.00	0.15	0.14	0.01	0.25	0.24	0.01	0.46	0.45	0.01
15.25	0.13	0.13	0.00	0.23	0.22	0.01	0.42	0.41	0.01
15.50	0.13	0.13	0.00	0.22	0.21	0.01	0.40	0.39	0.01
15.75	0.12	0.12	0.00	0.21	0.21	0.00	0.39	0.38	0.01
16.00	0.12	0.12	0.00	0.20	0.20	0.00	0.37	0.36	0.01
16.25	0.11	0.11	0.00	0.19	0.19	0.00	0.36	0.35	0.01
16.50	0.11	0.11	0.00	0.19	0.18	0.01	0.34	0.33	0.01
16.75	0.11	0.10	0.01	0.18	0.17	0.01	0.33	0.32	0.01
17.00	0.10	0.10	0.00	0.17	0.17	0.00	0.31	0.30	0.01
17.25	0.10	0.09	0.01	0.16	0.16	0.00	0.30	0.29	0.01
17.50	0.09	0.09	0.00	0.15	0.15	0.00	0.28	0.27	0.01
17.75	0.09	0.08	0.01	0.15	0.14	0.01	0.27	0.26	0.01
18.00	0.08	0.08	0.00	0.14	0.13	0.01	0.25	0.25	0.00
18.25	0.08	0.08	0.00	0.13	0.13	0.00	0.24	0.23	0.01
18.50	0.08	0.08	0.00	0.13	0.13	0.00	0.24	0.23	0.01
18.75	0.08	0.07	0.01	0.13	0.12	0.01	0.23	0.23	0.00
19.00	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.22	0.01
19.25	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.22	0.00
19.50	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.22	0.00
19.75	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.21	0.01
20.00	0.07	0.07	0.00	0.12	0.11	0.01	0.21	0.21	0.00
20.25	0.07	0.07	0.00	0.11	0.11	0.00	0.21	0.20	0.01
20.50	0.07	0.07	0.00	0.11	0.11	0.00	0.20	0.20	0.00
20.75	0.07	0.06	0.01	0.11	0.11	0.00	0.20	0.20	0.00
21.00	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.19	0.01
21.25	0.06	0.06	0.00	0.11	0.10	0.01	0.19	0.19	0.00
21.50	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
21.75	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.18	0.01
22.00	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
22.25	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.17	0.01
22.50	0.06	0.06	0.00	0.10	0.09	0.01	0.17	0.17	0.00
22.75	0.06	0.06	0.00	0.09	0.09	0.00	0.17	0.17	0.00
23.00	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.16	0.01
23.25	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
23.50	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
23.75	0.05	0.05	0.00	0.09	0.08	0.01	0.16	0.15	0.01
24.00	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00

East Addition POS2 Pre vs Post Hydrograph - Future Storm



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-2

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.04	0.02	0.02
1.00	0.00	0.00	0.00	0.01	0.01	0.00	0.06	0.04	0.02
1.25	0.01	0.00	0.01	0.02	0.01	0.01	0.07	0.05	0.02
1.50	0.01	0.01	0.00	0.03	0.02	0.01	0.08	0.05	0.03
1.75	0.01	0.01	0.00	0.03	0.02	0.01	0.09	0.06	0.03
2.00	0.02	0.01	0.01	0.04	0.03	0.01	0.10	0.06	0.04
2.25	0.02	0.01	0.01	0.04	0.03	0.01	0.10	0.07	0.03
2.50	0.02	0.01	0.01	0.05	0.03	0.02	0.11	0.07	0.04
2.75	0.03	0.02	0.01	0.05	0.03	0.02	0.11	0.08	0.03
3.00	0.03	0.02	0.01	0.05	0.04	0.01	0.12	0.08	0.04
3.25	0.03	0.02	0.01	0.06	0.04	0.02	0.12	0.08	0.04
3.50	0.03	0.02	0.01	0.06	0.04	0.02	0.13	0.08	0.05
3.75	0.03	0.02	0.01	0.06	0.04	0.02	0.13	0.09	0.04
4.00	0.04	0.02	0.02	0.07	0.04	0.03	0.13	0.09	0.04
4.25	0.04	0.03	0.01	0.07	0.05	0.02	0.14	0.09	0.05
4.50	0.04	0.03	0.01	0.07	0.05	0.02	0.14	0.09	0.05
4.75	0.04	0.03	0.01	0.07	0.05	0.02	0.14	0.10	0.04
5.00	0.04	0.03	0.01	0.08	0.05	0.03	0.15	0.10	0.05
5.25	0.05	0.03	0.02	0.08	0.05	0.03	0.15	0.10	0.05
5.50	0.05	0.03	0.02	0.08	0.05	0.03	0.15	0.10	0.05
5.75	0.05	0.03	0.02	0.08	0.05	0.03	0.16	0.11	0.05
6.00	0.05	0.03	0.02	0.08	0.06	0.02	0.16	0.11	0.05
6.25	0.05	0.04	0.01	0.09	0.06	0.03	0.17	0.11	0.06
6.50	0.06	0.04	0.02	0.10	0.06	0.04	0.18	0.12	0.06
6.75	0.06	0.04	0.02	0.10	0.07	0.03	0.19	0.13	0.06
7.00	0.07	0.04	0.03	0.11	0.07	0.04	0.20	0.13	0.07
7.25	0.07	0.05	0.02	0.11	0.08	0.03	0.21	0.14	0.07
7.50	0.07	0.05	0.02	0.12	0.08	0.04	0.22	0.15	0.07
7.75	0.08	0.05	0.03	0.13	0.08	0.05	0.24	0.16	0.08
8.00	0.08	0.05	0.03	0.13	0.09	0.04	0.25	0.16	0.09
8.25	0.09	0.06	0.03	0.14	0.09	0.05	0.26	0.17	0.09
8.50	0.09	0.06	0.03	0.14	0.10	0.04	0.27	0.18	0.09
8.75	0.09	0.06	0.03	0.15	0.10	0.05	0.28	0.19	0.09
9.00	0.10	0.06	0.04	0.16	0.10	0.06	0.29	0.19	0.10
9.25	0.11	0.07	0.04	0.18	0.12	0.06	0.33	0.22	0.11
9.50	0.12	0.08	0.04	0.20	0.13	0.07	0.36	0.24	0.12
9.75	0.14	0.09	0.05	0.22	0.14	0.08	0.41	0.27	0.14
10.00	0.15	0.10	0.05	0.24	0.16	0.08	0.45	0.30	0.15
10.25	0.16	0.11	0.05	0.26	0.17	0.09	0.49	0.34	0.15
10.50	0.18	0.12	0.06	0.28	0.19	0.09	0.53	0.37	0.16
10.75	0.22	0.15	0.07	0.35	0.23	0.12	0.68	0.48	0.20
11.00	0.27	0.18	0.09	0.42	0.28	0.14	0.82	0.59	0.23
11.25	0.35	0.23	0.12	0.56	0.37	0.19	1.09	0.80	0.29
11.50	0.44	0.29	0.15	0.68	0.45	0.23	1.36	1.03	0.33
11.75	0.74	0.47	0.27	1.17	0.77	0.40	2.31	1.73	0.58
12.00	1.88	1.20	0.68	3.07	2.09	0.98	6.03	4.63	1.40
12.25	1.30	1.00	0.30	2.19	1.89	0.30	4.41	4.29	0.12
12.50	0.66	0.48	0.18	1.10	0.90	0.20	2.17	2.00	0.17
12.75	0.43	0.32	0.11	0.72	0.60	0.12	1.42	1.30	0.12
13.00	0.35	0.26	0.09	0.58	0.48	0.10	1.13	1.03	0.10
13.25	0.27	0.21	0.06	0.46	0.38	0.08	0.89	0.82	0.07
13.50	0.22	0.17	0.05	0.37	0.31	0.06	0.73	0.67	0.06

13.75	0.19	0.14	0.05	0.32	0.26	0.06	0.62	0.56	0.06
14.00	0.18	0.13	0.05	0.29	0.24	0.05	0.57	0.52	0.05
14.25	0.16	0.12	0.04	0.27	0.23	0.04	0.53	0.48	0.05
14.50	0.15	0.11	0.04	0.25	0.21	0.04	0.48	0.44	0.04
14.75	0.13	0.10	0.03	0.22	0.19	0.03	0.44	0.40	0.04
15.00	0.12	0.09	0.03	0.20	0.17	0.03	0.39	0.36	0.03
15.25	0.11	0.09	0.02	0.18	0.15	0.03	0.36	0.33	0.03
15.50	0.11	0.08	0.03	0.18	0.15	0.03	0.35	0.32	0.03
15.75	0.10	0.08	0.02	0.17	0.14	0.03	0.33	0.30	0.03
16.00	0.10	0.08	0.02	0.16	0.14	0.02	0.32	0.29	0.03
16.25	0.10	0.07	0.03	0.16	0.13	0.03	0.31	0.28	0.03
16.50	0.09	0.07	0.02	0.15	0.13	0.02	0.29	0.27	0.02
16.75	0.09	0.07	0.02	0.14	0.12	0.02	0.28	0.26	0.02
17.00	0.08	0.06	0.02	0.14	0.12	0.02	0.27	0.25	0.02
17.25	0.08	0.06	0.02	0.13	0.11	0.02	0.26	0.23	0.03
17.50	0.08	0.06	0.02	0.12	0.11	0.01	0.24	0.22	0.02
17.75	0.07	0.06	0.01	0.12	0.10	0.02	0.23	0.21	0.02
18.00	0.07	0.05	0.02	0.11	0.09	0.02	0.22	0.20	0.02
18.25	0.06	0.05	0.01	0.11	0.09	0.02	0.21	0.19	0.02
18.50	0.06	0.05	0.01	0.10	0.09	0.01	0.20	0.19	0.01
18.75	0.06	0.05	0.01	0.10	0.09	0.01	0.20	0.18	0.02
19.00	0.06	0.05	0.01	0.10	0.09	0.01	0.20	0.18	0.02
19.25	0.06	0.05	0.01	0.10	0.09	0.01	0.19	0.18	0.01
19.50	0.06	0.05	0.01	0.10	0.08	0.02	0.19	0.18	0.01
19.75	0.06	0.05	0.01	0.10	0.08	0.02	0.19	0.17	0.02
20.00	0.06	0.05	0.01	0.10	0.08	0.02	0.18	0.17	0.01
20.25	0.06	0.04	0.02	0.09	0.08	0.01	0.18	0.17	0.01
20.50	0.06	0.04	0.02	0.09	0.08	0.01	0.18	0.16	0.02
20.75	0.05	0.04	0.01	0.09	0.08	0.01	0.17	0.16	0.01
21.00	0.05	0.04	0.01	0.09	0.08	0.01	0.17	0.16	0.01
21.25	0.05	0.04	0.01	0.09	0.07	0.02	0.17	0.16	0.01
21.50	0.05	0.04	0.01	0.09	0.07	0.02	0.16	0.15	0.01
21.75	0.05	0.04	0.01	0.08	0.07	0.01	0.16	0.15	0.01
22.00	0.05	0.04	0.01	0.08	0.07	0.01	0.16	0.15	0.01
22.25	0.05	0.04	0.01	0.08	0.07	0.01	0.16	0.14	0.02
22.50	0.05	0.04	0.01	0.08	0.07	0.01	0.15	0.14	0.01
22.75	0.05	0.04	0.01	0.08	0.07	0.01	0.15	0.14	0.01
23.00	0.05	0.04	0.01	0.07	0.06	0.01	0.14	0.13	0.01
23.25	0.04	0.04	0.00	0.07	0.06	0.01	0.14	0.13	0.01
23.50	0.04	0.03	0.01	0.07	0.06	0.01	0.14	0.13	0.01
23.75	0.04	0.03	0.01	0.07	0.06	0.01	0.14	0.13	0.01
24.00	0.04	0.03	0.01	0.07	0.06	0.01	0.13	0.12	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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1						
	Asphalt						
	0.011						
ft	100						
in	3.48						
ft/ft	0.008						
hr	0.028	+		+		=	0.028

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2						
	Paved						
	305						
ft	305						
ft/ft	0.017						
ft/s	2.60						
hr	0.033	+		+		=	0.033

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6					
ft ²	1.22718	1.76715	4.90874	7.068583					
ft	3.92699	4.71239	7.85398	9.424778					
ft	0.31	0.38	0.63	0.75					
ft/ft	0.012	0.015	0.016	0.005					
	0.013	0.013	0.013	0.013					
ft/s	5.68	7.35	10.60	6.69					
ft	81	376	31	12					
hr	0.004	+	0.014	+	0.001	+	0.000	=	0.019

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID	7			
ft ²	9.62113			
ft	10.9956			
ft	0.88			
ft/ft	0.003			
	0.013			
ft/s	5.74			
ft	612			
hr	0.030	+		+
				= 0.030
				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, 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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	4.14			
ft/ft	0.008			
hr	0.026	+		+
				0.026

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
ft	305			
ft/ft	0.017			
ft/s	2.6			
hr	0.033	+		+
				0.033

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{P_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	3	4	5	6
ft ²	1.227185	1.76715	4.90874	7.06858
ft	3.926991	4.71239	7.85398	9.42478
ft	0.31	0.38	0.63	0.75
ft/ft	0.012	0.015	0.016	0.005
	0.013	0.013	0.013	0.013
ft/s	5.68	7.35	10.60	6.69
ft	81	376	31	12
hr	0.004	+	0.014	+
			0.001	+
				0.000
				0.019

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$r = \frac{a}{P_w}$ Compute r

14. Hydraulic radius, r

15. Channel slope, s

Segment ID	7			
ft ²	9.621128			
ft	10.99557			
ft	0.88			
ft/ft	0.003			

16. Manning's roughness coeff., n

17.
$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

Compute T_t

	0.013						
ft/s	5.74						
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 _____
 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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1			
	Short Grass			
	0.150			
ft	63			
in	3.48			
ft/ft	0.012			
hr	0.133	+		= 0.133

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
	20			
ft	20			
ft/ft	0.017			
ft/s	2.60			
hr	0.002	+		= 0.002

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6				
ft ²	1.76715	3.14159	4.90874	20.5				
ft	4.71239	6.28319	7.85398	16.68				
ft	0.38	0.50	0.63	1.23				
ft/ft	0.010	0.015	0.005	0.003				
	0.013	0.013	0.013	0.013				
ft/s	5.90	8.69	5.92	7.55				
ft	140	139	27	576				
hr	0.007	+	0.004	+	0.001	+	0.021	= 0.033

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID	7	8		
ft ²	32	30		
ft	24	26		
ft	1.33	1.15		
ft/ft	0.003	0.003		
	0.013	0.013		
ft/s	7.60	6.91		
ft	160	708		
hr	0.006	0.028		0.034

hr **0.20**

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, 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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Segment ID	1			
	Short Grass			
	0.15			
ft	63			
in	4.14			
ft/ft	0.012			
hr	0.122	+		+
Compute T _t				= 0.122

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)
11. $T_t = \frac{L}{3600 V}$

Segment ID	2			
	Paved			
ft	20			
ft/ft	0.017			
ft/s	2.6			
hr	0.002	+		+
Compute T _t				= 0.002

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
18. Flow length, L
19. $T_t = \frac{L}{3600 V}$

$r = \frac{a}{P_w}$ Compute r

Segment ID	3	4	5	6
ft ²	1.767146	3.14159	4.90874	20.5
ft	4.712389	6.28319	7.85398	16.68
ft	0.38	0.50	0.63	1.23
ft/ft	0.010	0.015	0.005	0.003
	0.013	0.013	0.013	0.013
ft/s	5.90	8.69	5.92	7.55
ft	140	139	27	576
hr	0.007	+	0.004	+
Compute T _t			0.001	+
				0.021
				= 0.033

$r = \frac{a}{P_w}$ Compute r

Segment ID	7	8		
ft ²	32	30		
ft	24	26		
ft	1.33	1.15		
ft/ft	0.003	0.003		

16. Manning's roughness coeff., n

17.
$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

Compute T_t

	0.013	0.013		
ft/s	7.60	6.91		
ft	160	708		
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	3.48			
ft/ft	0.009			
hr	0.027	+		+
				0.027

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2			
	Paved			
	241			
ft	241			
ft/ft	0.013			
ft/s	2.41			
hr	0.028	+		+
				0.028

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

18. Flow length, L

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				0.000

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	4.14			
ft/ft	0.009			
hr	0.024	+		+
				= 0.024

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
ft	241			
ft/ft	0.013			
ft/s	2.41			
hr	0.028	+		+
				= 0.028

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				= 0.000

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$r = \frac{a}{p_w}$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

Segment ID				
ft ²				
ft				
ft				
ft/ft				
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 **0.05**

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1						
	Short Grass						
	0.15						
ft	20						
in	3.48						
ft/ft	0.010						
hr	0.06	+		+		=	0.06

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2						
	Paved						
ft	274						
ft/ft	0.013						
ft/s	2.40						
hr	0.03	+		+		=	0.03

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID							
ft ²							
ft							
ft							
ft/ft							
ft/s							
ft							
hr		+		+		=	0.00

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.00
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$

Compute T_t

Segment ID	1			
	Short Grass			
	0.15			
ft	20			
in	4.14			
ft/ft	0.01			
hr	0.05	+		+
				= 0.05

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
ft	274			
ft/ft	0.013			
ft/s	2.40			
hr	0.03	+		+
				= 0.03

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				= 0.00

12. Cross sectional flow area, a
13. Wetted perimeter, p_w

$r = \frac{a}{p_w}$

Compute r

14. Hydraulic radius, r
15. Channel slope, s

16. Manning's roughness coeff., n
 17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

Segment ID				
ft ²				
ft				
ft				
ft/ft				
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1						
	Asphalt						
	0.011						
ft	100						
in	3.48						
ft/ft	0.014						
hr	0.022	+		+		=	0.022

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2						
	Paved						
	243						
ft	243						
ft/ft	0.010						
ft/s	1.90						
hr	0.036	+		+		=	0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6					
ft ²	1.22718	1.76715	4.90874	7.068583					
ft	3.92699	4.71239	7.85398	9.424778					
ft	0.31	0.38	0.63	0.75					
ft/ft	0.012	0.015	0.016	0.005					
	0.013	0.013	0.013	0.013					
ft/s	5.68	7.35	10.60	6.69					
ft	81	376	31	12					
hr	0.004	+	0.014	+	0.001	+	0.000	=	0.019

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$r = \frac{a}{p_w}$ Compute r

Compute V

Compute T_t

Segment ID	7			
ft ²	9.62113			
ft	10.9956			
ft	0.88			
ft/ft	0.003			
	0.013			
ft/s	5.74			
ft	612			
hr	0.030	+		+
				= 0.030
				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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$$

Compute T_t

Segment ID	1				
	Asphalt				
	0.011				
ft	100				
in	4.14				
ft/ft	0.014				
hr	0.020	+		+	0.020

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	243				
ft/ft	0.010				
ft/s	1.9				
hr	0.036	+		+	0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{P_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3	4	5	6					
ft ²	1.227185	1.76715	4.90874	7.06858					
ft	3.926991	4.71239	7.85398	9.42478					
ft	0.31	0.38	0.63	0.75					
ft/ft	0.012	0.015	0.016	0.005					
	0.013	0.013	0.013	0.013					
ft/s	5.68	7.35	10.60	6.69					
ft	81	376	31	12					
hr	0.004	+	0.014	+	0.001	+	0.000	=	0.019

12. Cross sectional flow area, a
13. Wetted perimeter, p_w

$$r = \frac{a}{P_w}$$

Compute r

14. Hydraulic radius, r
15. Channel slope, s

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

Segment ID	7				
ft ²	9.621128				
ft	10.99557				
ft	0.88				
ft/ft	0.003				
	0.013				
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
 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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1						
	Short Grass						
	0.240						
ft	37						
in	3.48						
ft/ft	0.015						
hr	0.116	+		+		=	0.116

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2						
	Paved						
ft	109						
ft/ft	0.003						
ft/s	1.11						
hr	0.027	+		+		=	0.027

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6					
ft ²	1.22718	1.76715	4.90874	7.068583					
ft	3.92699	4.71239	7.85398	9.424778					
ft	0.31	0.38	0.63	0.75					
ft/ft	0.012	0.015	0.016	0.005					
	0.013	0.013	0.013	0.013					
ft/s	5.68	7.35	10.60	6.69					
ft	81	376	31	12					
hr	0.004	+	0.014	+	0.001	+	0.000	=	0.019

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID	7	8		
ft ²	9.62113			
ft	10.9956			
ft	0.88			
ft/ft	0.003			
	0.013			
ft/s	5.74			
ft	612			
hr	0.030	+		+
				=
				0.030
				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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1			
	Short Grass			
	0.240			
ft	37			
in	4.14			
ft/ft	0.015			
hr	0.106	+		+
				= 0.106

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2			
	Paved			
ft	109			
ft/ft	0.003			
ft/s	1.11			
hr	0.027	+		+
				= 0.027

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3	4	5	6
ft ²	1.227185	1.76715	4.90874	7.06858
ft	3.926991	4.71239	7.85398	9.42478
ft	0.31	0.38	0.63	0.75
ft/ft	0.012	0.015	0.016	0.005
	0.013	0.013	0.013	0.013
ft/s	5.68	7.35	10.60	6.69
ft	81	376	31	12
hr	0.004	+	0.014	+
			0.001	+
				0.000
				= 0.019

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$$r = \frac{a}{p_w}$$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID	7	8		
ft ²	9.621128			
ft	10.99557			
ft	0.88			
ft/ft	0.003			
	0.013			

17.
$$V = \frac{C}{n}$$

Compute V

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

Compute T_t

ft/s	5.74				
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 **0.18**

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1				
	Asphalt				
	0.011				
ft	100				
in	3.48				
ft/ft	0.009				
hr	0.027	+		+	0.027

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	338				
ft/ft	0.013				
ft/s	2.32				
hr	0.040	+		+	0.040

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{P_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	0.000

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17.
$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w}$$
 Compute r

Compute V

Compute T_t

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				=
				0.000
				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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$$

Compute T_t

Segment ID	1				
	Asphalt				
	0.011				
ft	100				
in	4.14				
ft/ft	0.009				
hr	0.024	+		+	0.024

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	338				
ft/ft	0.013				
ft/s	2.32				
hr	0.040	+		+	0.040

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	0.000

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	

17. $v = \frac{C \sqrt{h}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

ft/s					
ft					
hr		+		+	
					= 0.000

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

hr **0.06**

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Compute T_t

Segment ID	1			
	Short Grass			
	0.150			
ft	21			
in	3.48			
ft/ft	0.025			
hr	0.041	+		= 0.041

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
	434			
ft	434			
ft/ft	0.013			
ft/s	2.32			
hr	0.052	+		= 0.052

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		= 0.000

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					hr 0.09

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$

Compute T_t

Segment ID	1				
	Short Grass				
	0.15				
ft	21				
in	4.14				
ft/ft	0.025				
hr	0.038	+		+	
					= 0.038

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2				
	Paved				
ft	434				
ft/ft	0.013				
ft/s	2.32				
hr	0.052	+		+	
					= 0.052

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					

18. Flow length, L

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

ft					
hr		+		+	
					= 0.000

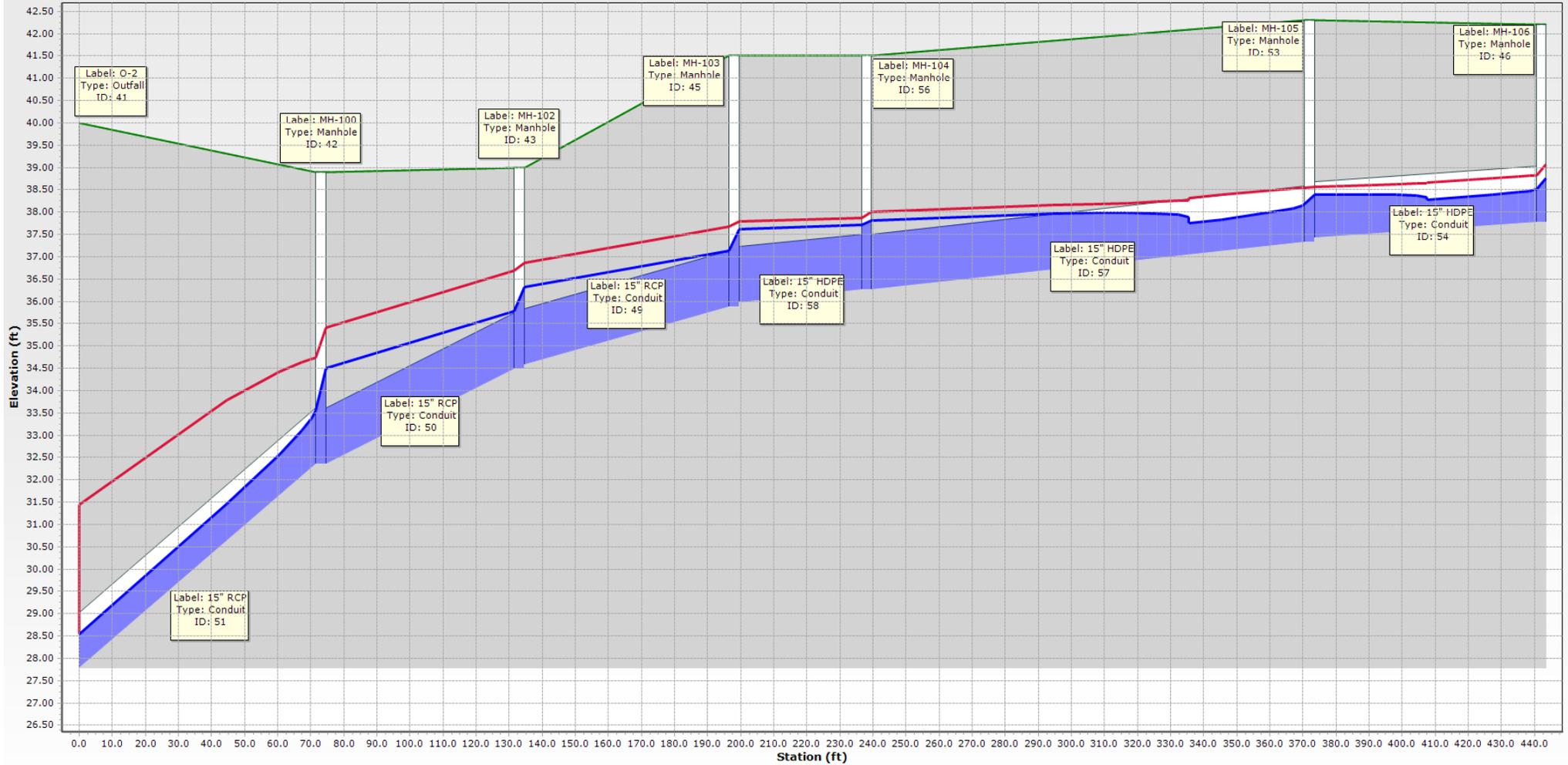
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

hr **0.09**

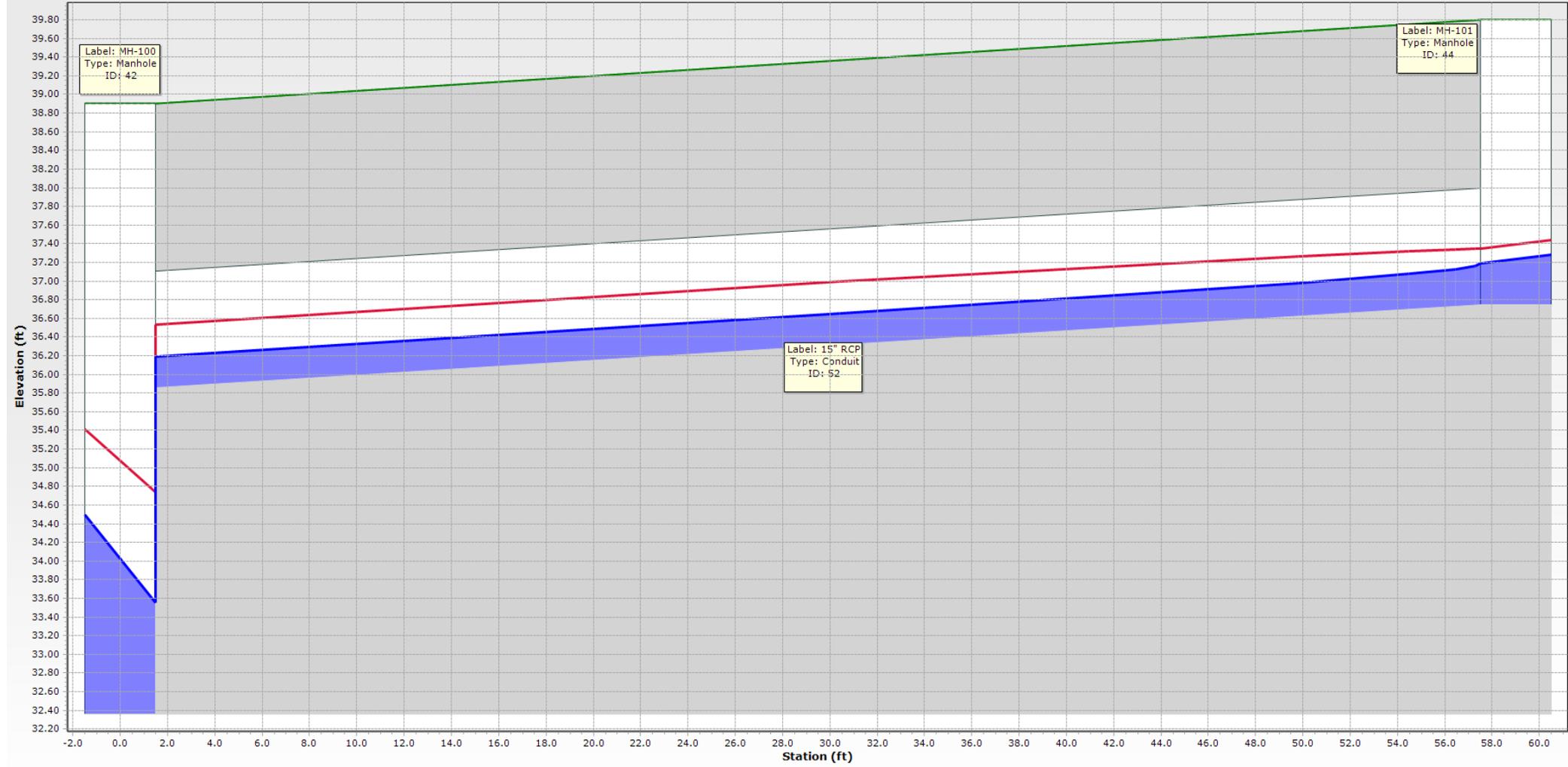
FlexTable: Conduit Table

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



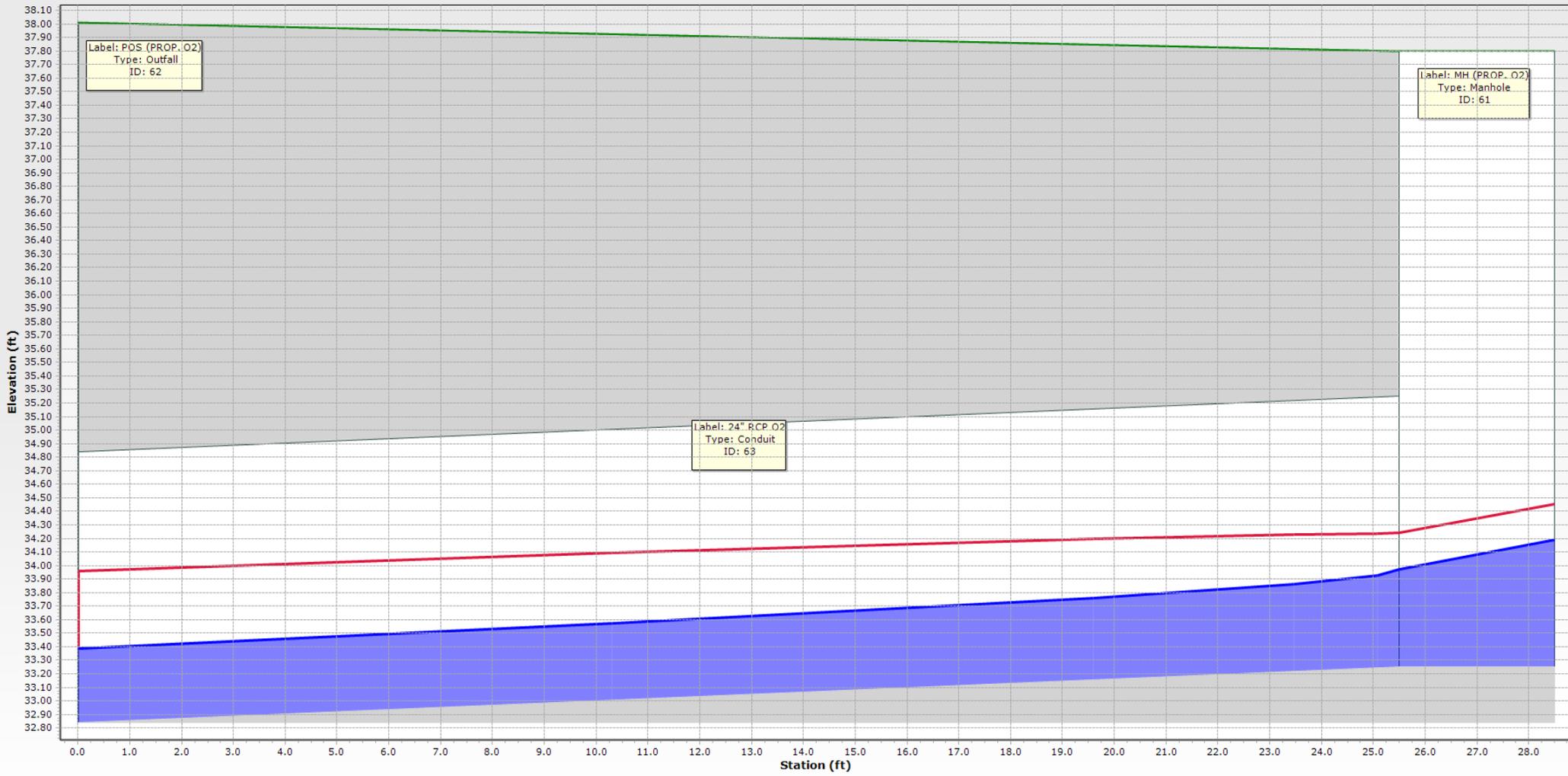
MH100 TO MH101 - Base



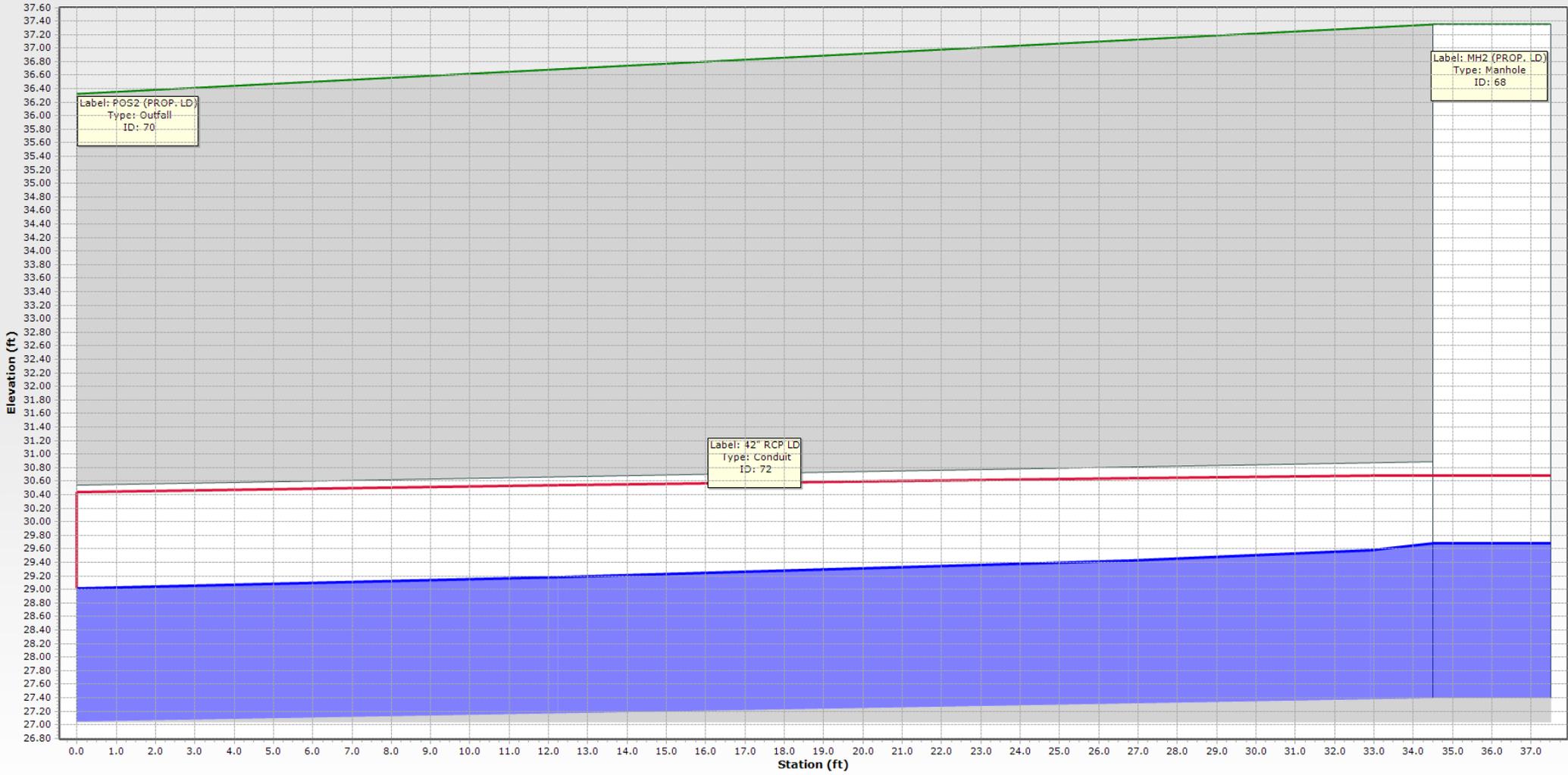
FlexTable: Conduit Table

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



42" RCP LOADING DOCK - Base



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	2/10/2025

Notes

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JSUMC West Addition: PondPack Report

Subsection: User Notifications

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 41.4 % is greater than 1.5 %. Computed peak flow= 8.12 ft ³ /s Interp. peak flow= 4.75 ft ³ /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 15.6 % is greater than 1.5 %. Computed peak flow= 0.80 ft ³ /s Interp. peak flow= 0.68 ft ³ /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 40.7 % is greater than 1.5 %. Computed peak flow= 3.65 ft ³ /s Interp. peak flow= 2.16 ft ³ /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 8.0 % is greater than 1.5 %. Computed peak flow= 0.59 ft ³ /s Interp. peak flow= 0.54 ft ³ /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 41.4 % is greater than 1.5 %. Computed peak flow= 7.18 ft ³ /s Interp. peak flow= 4.21 ft ³ /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 17.9 % is greater than 1.5 %. Computed peak flow= 1.05 ft ³ /s Interp. peak flow= 0.86 ft ³ /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 40.7 % is greater than 1.5 %. Computed peak flow= 3.61 ft ³ /s Interp. peak flow= 2.14 ft ³ /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 9.9 % is greater than 1.5 %. Computed peak flow= 0.61 ft ³ /s Interp. peak flow= 0.55 ft ³ /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	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 41.5 % is greater than 1.5 %. Computed peak flow= 6.80 ft ³ /s Interp. peak flow= 3.98 ft ³ /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 13.2 % is greater than 1.5 %. Computed peak flow= 0.50 ft ³ /s Interp. peak flow= 0.44 ft ³ /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 40.8 % is greater than 1.5 %. Computed peak flow= 3.06 ft ³ /s Interp. peak flow= 1.81 ft ³ /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 5.3 % is greater than 1.5 %. Computed peak flow= 0.38 ft ³ /s Interp. peak flow= 0.36 ft ³ /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 41.5 % is greater than 1.5 %. Computed peak flow= 6.02 ft ³ /s Interp. peak flow= 3.52 ft ³ /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 12.3 % is greater than 1.5 %. Computed peak flow= 0.62 ft ³ /s Interp. peak flow= 0.54 ft ³ /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 40.8 % is greater than 1.5 %. Computed peak flow= 3.03 ft ³ /s Interp. peak flow= 1.79 ft ³ /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 7.1 % is greater than 1.5 %. Computed peak flow= 0.40 ft ³ /s Interp. peak flow= 0.37 ft ³ /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	33
Label	EDA1 - Imp - Cur
Time	(N/A)
Message	The difference between calculated peak flow and interpolated peak flow 41.4 % is greater than 1.5 %. Computed peak flow= 10.70 ft ³ /s Interp. peak flow= 6.28 ft ³ /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 17.8 % is greater than 1.5 %. Computed peak flow= 1.48 ft ³ /s Interp. peak flow= 1.21 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 4.81 ft ³ /s Interp. peak flow= 2.85 ft ³ /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 7.4 % is greater than 1.5 %. Computed peak flow= 0.99 ft ³ /s Interp. peak flow= 0.92 ft ³ /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 41.4 % is greater than 1.5 %. Computed peak flow= 9.47 ft ³ /s Interp. peak flow= 5.55 ft ³ /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 17.5 % is greater than 1.5 %. Computed peak flow= 1.90 ft ³ /s Interp. peak flow= 1.56 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 4.76 ft ³ /s Interp. peak flow= 2.82 ft ³ /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 9.6 % is greater than 1.5 %. Computed peak flow= 1.01 ft ³ /s Interp. peak flow= 0.91 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 18.55 ft ³ /s Interp. peak flow= 10.89 ft ³ /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 20.2 % is greater than 1.5 %. Computed peak flow= 3.86 ft ³ /s Interp. peak flow= 3.08 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 8.34 ft ³ /s Interp. peak flow= 4.95 ft ³ /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 9.1 % is greater than 1.5 %. Computed peak flow= 2.43 ft ³ /s Interp. peak flow= 2.21 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 16.41 ft ³ /s Interp. peak flow= 9.63 ft ³ /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 20.0 % is greater than 1.5 %. Computed peak flow= 5.08 ft ³ /s Interp. peak flow= 4.06 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 8.25 ft ³ /s Interp. peak flow= 4.90 ft ³ /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 11.1 % is greater than 1.5 %. Computed peak flow= 2.42 ft ³ /s Interp. peak flow= 2.15 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 12.63 ft ³ /s Interp. peak flow= 7.41 ft ³ /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 18.7 % is greater than 1.5 %. Computed peak flow= 2.03 ft ³ /s Interp. peak flow= 1.65 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 5.67 ft ³ /s Interp. peak flow= 3.37 ft ³ /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 10.0 % is greater than 1.5 %. Computed peak flow= 1.37 ft ³ /s Interp. peak flow= 1.23 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 11.17 ft ³ /s Interp. peak flow= 6.55 ft ³ /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 21.5 % is greater than 1.5 %. Computed peak flow= 2.72 ft ³ /s Interp. peak flow= 2.14 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 5.61 ft ³ /s Interp. peak flow= 3.33 ft ³ /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 12.0 % is greater than 1.5 %. Computed peak flow= 1.38 ft ³ /s Interp. peak flow= 1.21 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 22.94 ft ³ /s Interp. peak flow= 13.47 ft ³ /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 20.8 % is greater than 1.5 %. Computed peak flow= 5.28 ft ³ /s Interp. peak flow= 4.19 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 10.31 ft ³ /s Interp. peak flow= 6.13 ft ³ /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 11.4 % is greater than 1.5 %. Computed peak flow= 3.36 ft ³ /s Interp. peak flow= 2.98 ft ³ /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 41.3 % is greater than 1.5 %. Computed peak flow= 20.30 ft ³ /s Interp. peak flow= 11.92 ft ³ /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 23.8 % is greater than 1.5 %. Computed peak flow= 7.24 ft ³ /s Interp. peak flow= 5.52 ft ³ /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 40.6 % is greater than 1.5 %. Computed peak flow= 10.20 ft ³ /s Interp. peak flow= 6.06 ft ³ /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 13.6 % is greater than 1.5 %. Computed peak flow= 3.34 ft ³ /s Interp. peak flow= 2.88 ft ³ /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	0.058	12.25	0.44
EDA1 - Per - Cur	Current 10 year	10	0.147	12.25	1.21
EDA1 - Per - Cur	Current 100 year	100	0.375	12.25	3.08
EDA1 - Imp - Cur	Current 2 year	2	0.618	12.00	3.98
EDA1 - Imp - Cur	Current 10 year	10	0.990	12.00	6.28
EDA1 - Imp - Cur	Current 100 year	100	1.744	12.00	10.89
EDA2 - Per - Cur	Current 2 year	2	0.048	12.25	0.36
EDA2 - Per - Cur	Current 10 year	10	0.115	12.25	0.92
EDA2 - Per - Cur	Current 100 year	100	0.276	12.25	2.21
EDA2 - Imp - Cur	Current 2 year	2	0.243	12.00	1.81
EDA2 - Imp - Cur	Current 10 year	10	0.390	12.00	2.85
EDA2 - Imp - Cur	Current 100 year	100	0.687	12.00	4.95
PDA1 - Per - Cur	Current 2 year	2	0.073	12.25	0.54
PDA1 - Per - Cur	Current 10 year	10	0.191	12.25	1.56
PDA1 - Per - Cur	Current 100 year	100	0.493	12.25	4.06
PDA1 - Imp - Cur	Current 2 year	2	0.546	12.00	3.52
PDA1 - Imp - Cur	Current 10 year	10	0.876	12.00	5.55
PDA1 - Imp - Cur	Current 100 year	100	1.543	12.00	9.63
PDA2 - Per - Cur	Current 2 year	2	0.048	12.25	0.37
PDA2 - Per - Cur	Current 10 year	10	0.113	12.25	0.91
PDA2 - Per - Cur	Current 100 year	100	0.267	12.25	2.15
PDA2 - Imp - Cur	Current 2 year	2	0.241	12.00	1.79
PDA2 - Imp - Cur	Current 10 year	10	0.386	12.00	2.82
PDA2 - Imp - Cur	Current 100 year	100	0.680	12.00	4.90
PDA1 - Per - Fut	Future 2 year	2	0.109	12.25	0.86
PDA1 - Per - Fut	Future 10 year	10	0.259	12.25	2.14
PDA1 - Per - Fut	Future 100 year	100	0.680	12.25	5.52
EDA1 - Per - Fut	Future 2 year	2	0.085	12.25	0.68
EDA1 - Per - Fut	Future 10 year	10	0.199	12.25	1.65
EDA1 - Per - Fut	Future 100 year	100	0.515	12.25	4.19
PDA1 - Imp - Fut	Future 2 year	2	0.657	12.00	4.21
PDA1 - Imp - Fut	Future 10 year	10	1.039	12.00	6.55
PDA1 - Imp - Fut	Future 100 year	100	1.917	12.00	11.92
EDA1 - Imp - Fut	Future 2 year	2	0.743	12.00	4.75
EDA1 - Imp - Fut	Future 10 year	10	1.175	12.00	7.41
EDA1 - Imp - Fut	Future 100 year	100	2.167	12.00	13.47
PDA2 - Per - Fut	Future 2 year	2	0.068	12.25	0.55
PDA2 - Per - Fut	Future 10 year	10	0.148	12.25	1.21
PDA2 - Per - Fut	Future 100 year	100	0.360	12.25	2.88
EDA2 - Per - Fut	Future 2 year	2	0.069	12.25	0.54
EDA2 - Per - Fut	Future 10 year	10	0.152	12.25	1.23
EDA2 - Per - Fut	Future 100 year	100	0.373	12.25	2.98
PDA2 - Imp - Fut	Future 2 year	2	0.290	12.00	2.14

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)
PDA2 - Imp - Fut	Future 10 year	10	0.458	12.00	3.33
PDA2 - Imp - Fut	Future 100 year	100	0.845	12.00	6.06
EDA2 - Imp - Fut	Future 2 year	2	0.293	12.00	2.16
EDA2 - Imp - Fut	Future 10 year	10	0.463	12.00	3.37
EDA2 - Imp - Fut	Future 100 year	100	0.854	12.00	6.13

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Pre - POS1	Future 2 year	2	0.828	12.25	5.29
Pre - POS1	Current 2 year	2	0.675	12.25	4.30
Pre - POS1	Current 10 year	10	1.138	12.25	7.28
Pre - POS1	Future 10 year	10	1.374	12.25	8.81
Pre - POS1	Current 100 year	100	2.118	12.25	13.60
Pre - POS1	Future 100 year	100	2.681	12.25	17.20
Post - POS1	Future 2 year	2	0.766	12.25	4.94
Post - POS1	Current 2 year	2	0.619	12.25	3.96
Post - POS1	Current 10 year	10	1.067	12.25	6.94
Post - POS1	Future 10 year	10	1.298	12.25	8.47
Post - POS1	Current 100 year	100	2.036	12.25	13.37
Post - POS1	Future 100 year	100	2.596	12.25	17.03
Pre - POS2	Future 2 year	2	0.362	12.00	2.41
Pre - POS2	Current 2 year	2	0.292	12.00	1.95
Pre - POS2	Current 10 year	10	0.505	12.00	3.30
Pre - POS2	Future 10 year	10	0.615	12.00	4.01
Pre - POS2	Current 100 year	100	0.963	12.00	6.14
Pre - POS2	Future 100 year	100	1.227	12.00	7.84
Post - POS2	Future 2 year	2	0.358	12.00	2.40
Post - POS2	Current 2 year	2	0.289	12.00	1.95
Post - POS2	Current 10 year	10	0.499	12.00	3.28
Post - POS2	Future 10 year	10	0.606	12.00	3.99
Post - POS2	Current 100 year	100	0.947	12.00	6.11
Post - POS2	Future 100 year	100	1.205	12.00	7.78

JSUMC West Addition: PondPack Report

Subsection: Time-Depth Curve

Return Event: 10 years

Label: Current Storm

Storm Event: Current 10

Scenario: Current 10 year

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)				
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

Return Event: 10 years

Label: Current Storm

Storm Event: Current 10

Scenario: Current 10 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)				
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

Return Event: 100 years

Label: Current Storm

Storm Event: Current 100

Scenario: Current 100 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)				
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

Return Event: 2 years

Label: Current Storm

Storm Event: Current 2-Year

Scenario: 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

Return Event: 2 years

Label: Current Storm

Storm Event: Current 2-Year

Scenario: 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

Return Event: 10 years

Label: Future Storm

Storm Event: Future 10

Scenario: Future 10 year

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

Return Event: 10 years

Label: Future Storm

Storm Event: Future 10

Scenario: Future 10 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)				
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

Return Event: 100 years

Label: Future Storm

Storm Event: Future 100

Scenario: Future 100 year

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

Return Event: 100 years

Label: Future Storm

Storm Event: Future 100

Scenario: Future 100 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)				
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)				
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

Return Event: 2 years

Label: Future Storm

Storm Event: Future 2

Scenario: Future 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)				
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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Equations

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 $0.1333Tc$, r_{tm} , and t_h (Smallest dt is then adjusted to match up with T_p)
UDdt	User specified override computational main time increment (only used if UDdt is $\Rightarrow .1333Tc$)
D(t)	Point on distribution curve (fraction of P) for time step t
K	$2 / (1 + (T_r/T_p))$: default $K = 0.75$: (for $T_r/T_p = 1.67$)
Ks	Hydrograph shape factor = Unit Conversions * $K = ((1\text{hr}/3600\text{sec}) * (1\text{ft}/12\text{in}) * ((5280\text{ft})^2/\text{sq.mi})) * K$ Default $K_s = 645.333 * 0.75 = 484$
Lag	Lag time from center of excess runoff (dt) to T_p : $\text{Lag} = 0.6T_c$
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. = $(K_s * A * Q) / T_p$ (where $Q = 1\text{in. runoff}$, $A = \text{sq.mi.}$)
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: $S_i = (1000/CNi) - 10$
Sp	S for pervious area: $S_p = (1000/CNp) - 10$
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: $T_b = T_p + T_r$
Tp	Time (hrs) to peak of a unit hydrograph: $T_p = (dt/2) + \text{Lag}$
Tr	Time (hrs) of receding limb of unit hydrograph: $T_r = \text{ratio of } T_p$

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Equations

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) $P_i(t) = P_a(t) - P_a(t-1)$: Col.(4) - Preceding Col.(4)
Column (4) $P_a(t) = D(t) \times P$: Col.(2) x P

Pervious Area Runoff (using SCS Runoff CN Method)

Column (5) $R_{ap}(t)$ = Accumulated pervious runoff for time step t
If $(P_a(t))$ is $\leq 0.2S_p$ then use: $R_{ap}(t) = 0.0$
If $(P_a(t))$ is $> 0.2S_p$ then use:
 $R_{ap}(t) = (Col.(4) - 0.2S_p) \times 2 / (Col.(4) + 0.8S_p)$
Column (6) $R_{ip}(t)$ = Incremental pervious runoff for time step t
 $R_{ip}(t) = R_{ap}(t) - R_{ap}(t-1)$
 $R_{ip}(t) = Col.(5)$ 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) $R(t) = (A_p/A_t) \times R_{ip}(t) + (A_i/A_t) \times R_{ii}(t)$
 $R(t) = (A_p/A_t) \times Col.(6) + (A_i/A_t) \times Col.(8)$

SCS Unit Hydrograph Method

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

JSUMC West Addition: PondPack Report

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)	0.08 hours
Area (User Defined)	2.340 acres

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	6.80 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.98 ft ³ /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	0.618 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC West Addition: PondPack Report

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

Unit peak, qp	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
1.00	0.00	0.00	0.01	0.02	0.03
2.25	0.04	0.05	0.05	0.06	0.06
3.50	0.07	0.07	0.08	0.08	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	0.32	0.35	0.39	0.42	0.52
11.00	0.63	0.82	1.02	1.61	3.98
12.25	3.86	1.66	1.05	0.82	0.64
13.50	0.52	0.44	0.40	0.37	0.34
14.75	0.31	0.27	0.25	0.24	0.23
16.00	0.22	0.21	0.20	0.19	0.19
17.25	0.18	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	0.12	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	10.70 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.28 ft ³ /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	0.990 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.50	0.00	0.00	0.02	0.04	0.05
1.75	0.07	0.08	0.09	0.10	0.11
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	0.19	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	0.36	0.38
9.25	0.42	0.47	0.52	0.57	0.62
10.50	0.67	0.83	1.01	1.30	1.62
11.75	2.55	6.28	6.07	2.61	1.64
13.00	1.28	1.01	0.82	0.69	0.63
14.25	0.58	0.53	0.48	0.43	0.39
15.50	0.38	0.36	0.35	0.33	0.32
16.75	0.31	0.29	0.28	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	0.16	0.15	0.15	0.14	0.14

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	18.55 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	10.89 ft ³ /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	1.744 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.25	0.00	0.01	0.06	0.10	0.13
1.50	0.16	0.18	0.20	0.22	0.23
2.75	0.25	0.26	0.27	0.28	0.29
4.00	0.30	0.31	0.32	0.33	0.34
5.25	0.35	0.35	0.36	0.37	0.39
6.50	0.41	0.44	0.47	0.49	0.52
7.75	0.54	0.57	0.59	0.62	0.64
9.00	0.67	0.74	0.83	0.92	1.00
10.25	1.09	1.18	1.44	1.76	2.27
11.50	2.83	4.44	10.89	10.52	4.52
12.75	2.85	2.22	1.75	1.42	1.19
14.00	1.09	1.00	0.92	0.83	0.74
15.25	0.68	0.65	0.63	0.60	0.58
16.50	0.55	0.53	0.50	0.48	0.45
17.75	0.43	0.40	0.39	0.38	0.37
19.00	0.37	0.36	0.36	0.35	0.34
20.25	0.34	0.33	0.32	0.32	0.31
21.50	0.31	0.30	0.29	0.29	0.28
22.75	0.28	0.27	0.26	0.26	0.25
24.00	0.25	(N/A)	(N/A)	(N/A)	(N/A)

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

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)	12.12 hours
Flow (Peak, Computed)	8.12 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.75 ft ³ /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	0.743 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.75	0.00	0.00	0.01	0.03	0.04
2.00	0.05	0.06	0.06	0.07	0.08
3.25	0.09	0.09	0.10	0.10	0.11
4.50	0.11	0.12	0.13	0.13	0.13
5.75	0.14	0.14	0.15	0.16	0.17
7.00	0.19	0.20	0.21	0.22	0.23
8.25	0.24	0.26	0.27	0.28	0.31
9.50	0.35	0.39	0.43	0.47	0.50
10.75	0.62	0.76	0.98	1.23	1.93
12.00	4.75	4.61	1.98	1.25	0.97
13.25	0.77	0.62	0.52	0.48	0.44
14.50	0.40	0.36	0.33	0.30	0.29
15.75	0.28	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	0.15
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	0.12	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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	12.63 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	7.41 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	1.203 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.175 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.50	0.00	0.01	0.04	0.06	0.08
1.75	0.09	0.11	0.12	0.14	0.15
3.00	0.16	0.17	0.17	0.18	0.19
4.25	0.20	0.20	0.21	0.22	0.22
5.50	0.23	0.24	0.24	0.26	0.27
6.75	0.29	0.31	0.33	0.34	0.36
8.00	0.38	0.40	0.41	0.43	0.45
9.25	0.50	0.56	0.62	0.68	0.74
10.50	0.80	0.98	1.19	1.54	1.92
11.75	3.02	7.41	7.16	3.08	1.94
13.00	1.51	1.19	0.97	0.81	0.74
14.25	0.68	0.62	0.56	0.51	0.46
15.50	0.44	0.43	0.41	0.39	0.38
16.75	0.36	0.34	0.33	0.31	0.29
18.00	0.28	0.26	0.26	0.25	0.25
19.25	0.25	0.24	0.24	0.23	0.23
20.50	0.23	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)	12.12 hours
Flow (Peak, Computed)	22.94 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	13.47 ft ³ /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	2.167 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	19.33 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.25	0.00	0.03	0.10	0.15	0.19
1.50	0.23	0.25	0.27	0.29	0.31
2.75	0.33	0.34	0.35	0.36	0.38
4.00	0.39	0.40	0.41	0.42	0.43
5.25	0.44	0.45	0.45	0.46	0.49
6.50	0.52	0.55	0.58	0.61	0.64
7.75	0.68	0.71	0.74	0.77	0.80
9.00	0.83	0.92	1.03	1.14	1.24
10.25	1.35	1.46	1.79	2.18	2.81
11.50	3.50	5.50	13.47	13.01	5.59
12.75	3.52	2.75	2.16	1.76	1.47
14.00	1.35	1.24	1.13	1.03	0.92
15.25	0.84	0.81	0.78	0.74	0.71
16.50	0.68	0.65	0.62	0.59	0.56
17.75	0.53	0.50	0.48	0.47	0.46
19.00	0.45	0.45	0.44	0.43	0.42
20.25	0.42	0.41	0.40	0.39	0.39
21.50	0.38	0.37	0.36	0.36	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)

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

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	0.50 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.44 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.80 in
Runoff Volume (Pervious)	0.059 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.058 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
11.25	0.00	0.00	0.03	0.18	0.44
12.50	0.27	0.17	0.13	0.11	0.09
13.75	0.08	0.07	0.06	0.06	0.05
15.00	0.05	0.05	0.04	0.04	0.04
16.25	0.04	0.04	0.04	0.04	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	1.48 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.21 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.05 in
Runoff Volume (Pervious)	0.150 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.147 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
9.75	0.00	0.00	0.01	0.01	0.02
11.00	0.04	0.07	0.11	0.22	0.67
12.25	1.21	0.67	0.41	0.31	0.25
13.50	0.20	0.17	0.15	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	0.06	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	3.86 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	3.08 ft ³ /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	0.375 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC West Addition: PondPack Report

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
7.25	0.00	0.00	0.01	0.01	0.02
8.50	0.02	0.03	0.04	0.05	0.06
9.75	0.07	0.09	0.11	0.13	0.17
11.00	0.23	0.32	0.45	0.75	1.95
12.25	3.08	1.61	0.96	0.71	0.56
13.50	0.45	0.37	0.34	0.31	0.29
14.75	0.26	0.24	0.21	0.20	0.20
16.00	0.19	0.18	0.17	0.17	0.16
17.25	0.15	0.14	0.14	0.13	0.12
18.50	0.12	0.12	0.12	0.12	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)

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

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)	12.15 hours
Flow (Peak, Computed)	0.80 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.68 ft ³ /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	0.085 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
10.75	0.00	0.00	0.01	0.03	0.08
12.00	0.32	0.68	0.39	0.25	0.19
13.25	0.15	0.13	0.11	0.10	0.09
14.50	0.08	0.08	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	0.03	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	2.03 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.65 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.77 in
Runoff Volume (Pervious)	0.203 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.199 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
9.00	0.00	0.00	0.01	0.01	0.02
10.25	0.03	0.04	0.05	0.08	0.12
11.50	0.19	0.33	0.96	1.65	0.89
12.75	0.54	0.40	0.32	0.26	0.22
14.00	0.20	0.18	0.17	0.15	0.14
15.25	0.13	0.12	0.12	0.11	0.11
16.50	0.10	0.10	0.10	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	5.28 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	4.19 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.15 in
Runoff Volume (Pervious)	0.525 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.515 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	4.47 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /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	0.09	0.11	0.13
10.00	0.16	0.18	0.22	0.27	0.36
11.25	0.49	0.67	1.09	2.75	4.19
12.50	2.16	1.27	0.93	0.73	0.59
13.75	0.49	0.44	0.41	0.38	0.34
15.00	0.31	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	0.15	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)

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

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)	12.11 hours
Flow (Peak, Computed)	3.06 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.81 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	12.29 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 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 (ft ³ /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	0.10	0.12
9.75	0.13	0.14	0.16	0.17	0.21
11.00	0.26	0.34	0.42	0.71	1.81
12.25	1.21	0.60	0.39	0.31	0.25
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)

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

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)	12.11 hours
Flow (Peak, Computed)	4.81 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.85 ft ³ /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	0.390 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.29 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /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	0.15	0.15
9.25	0.17	0.19	0.21	0.23	0.25
10.50	0.27	0.34	0.41	0.54	0.66
11.75	1.12	2.85	1.90	0.94	0.62
13.00	0.49	0.39	0.31	0.27	0.25
14.25	0.23	0.21	0.19	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

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	8.34 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.95 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.710 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.687 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.29 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /s)				
0.25	0.00	0.00	0.03	0.04	0.05
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	0.25	0.26
9.00	0.27	0.30	0.33	0.37	0.40
10.25	0.44	0.47	0.60	0.72	0.94
11.50	1.16	1.94	4.95	3.28	1.63
12.75	1.07	0.85	0.67	0.55	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)

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

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)	12.11 hours
Flow (Peak, Computed)	3.65 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.16 ft ³ /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	0.293 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	12.29 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 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 (ft ³ /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	0.41	0.50	0.84
12.00	2.16	1.44	0.72	0.47	0.37
13.25	0.29	0.24	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)

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	5.67 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.37 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	0.478 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.463 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	12.29 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 hours

JSUMC West Addition: PondPack Report

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 (ft ³ /s)				
0.50	0.00	0.01	0.02	0.02	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	0.17	0.17	0.18
9.25	0.20	0.22	0.25	0.27	0.30
10.50	0.32	0.40	0.49	0.64	0.79
11.75	1.32	3.37	2.24	1.11	0.73
13.00	0.58	0.45	0.37	0.32	0.29
14.25	0.27	0.24	0.22	0.20	0.18
15.50	0.18	0.17	0.16	0.16	0.15
16.75	0.14	0.14	0.13	0.12	0.12
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

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	10.31 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.13 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.882 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.854 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	12.29 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 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 (ft ³ /s)				
0.25	0.00	0.02	0.04	0.06	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	0.29	0.31	0.32
9.00	0.33	0.37	0.41	0.46	0.50
10.25	0.55	0.59	0.74	0.89	1.17
11.50	1.43	2.40	6.13	4.06	2.02
12.75	1.32	1.05	0.83	0.67	0.57
14.00	0.53	0.49	0.44	0.40	0.36
15.25	0.33	0.32	0.31	0.29	0.28
16.50	0.27	0.26	0.25	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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)	0.18 hours
Area (User Defined)	0.590 acres

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.19 hours
Flow (Peak, Computed)	0.38 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.36 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC West Addition: PondPack Report

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	2.17 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 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 (ft ³ /s)				
11.00	0.00	0.01	0.02	0.04	0.14
12.25	0.36	0.25	0.16	0.12	0.09
13.50	0.08	0.06	0.06	0.05	0.05
14.75	0.04	0.04	0.04	0.03	0.03
16.00	0.03	0.03	0.03	0.03	0.03
17.25	0.03	0.03	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)	0.99 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.92 ft ³ /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	0.115 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.17 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 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 (ft ³ /s)				
9.25	0.00	0.00	0.01	0.01	0.01
10.50	0.02	0.03	0.04	0.07	0.10
11.75	0.17	0.44	0.92	0.58	0.37
13.00	0.26	0.20	0.16	0.13	0.12
14.25	0.11	0.10	0.09	0.08	0.07
15.50	0.07	0.07	0.06	0.06	0.06
16.75	0.06	0.06	0.05	0.05	0.05
18.00	0.05	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	0.03	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

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	2.43 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.21 ft ³ /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	0.276 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.18 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.17 ft ³ /s
Unit peak time, Tp	0.12 hours
Unit receding limb, Tr	1.06 hours
Total unit time, Tb	1.18 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 (ft ³ /s)				
6.50	0.00	0.00	0.00	0.01	0.01
7.75	0.01	0.02	0.02	0.03	0.03
9.00	0.04	0.04	0.05	0.06	0.08
10.25	0.09	0.11	0.13	0.18	0.24
11.50	0.33	0.52	1.19	2.21	1.34
12.75	0.82	0.57	0.43	0.34	0.28
14.00	0.25	0.23	0.21	0.19	0.17
15.25	0.15	0.15	0.14	0.13	0.13
16.50	0.12	0.12	0.11	0.11	0.10
17.75	0.10	0.09	0.09	0.08	0.08
19.00	0.08	0.08	0.08	0.08	0.08
20.25	0.08	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)

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

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)	12.17 hours
Flow (Peak, Computed)	0.59 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.54 ft ³ /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	0.069 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.29 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
10.25	0.00	0.00	0.01	0.01	0.02
11.50	0.04	0.08	0.24	0.54	0.35
12.75	0.22	0.16	0.12	0.10	0.08
14.00	0.08	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)

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

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)	12.17 hours
Flow (Peak, Computed)	1.37 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.23 ft ³ /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	0.152 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.29 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
8.25	0.00	0.00	0.00	0.01	0.01
9.50	0.01	0.02	0.02	0.03	0.04
10.75	0.05	0.07	0.10	0.15	0.25
12.00	0.64	1.23	0.75	0.46	0.33
13.25	0.25	0.20	0.17	0.15	0.14
14.50	0.12	0.11	0.10	0.09	0.09
15.75	0.08	0.08	0.08	0.08	0.07
17.00	0.07	0.07	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	0.05	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	0.04	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)	12.17 hours
Flow (Peak, Computed)	3.36 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.98 ft ³ /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	0.373 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.29 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
5.50	0.00	0.00	0.00	0.01	0.01
6.75	0.01	0.02	0.02	0.03	0.03
8.00	0.04	0.05	0.05	0.06	0.07
9.25	0.08	0.09	0.11	0.13	0.15
10.50	0.17	0.21	0.27	0.36	0.48
11.75	0.75	1.71	2.98	1.74	1.04
13.00	0.72	0.54	0.44	0.36	0.32
14.25	0.29	0.27	0.24	0.22	0.20
15.50	0.19	0.18	0.17	0.17	0.16
16.75	0.15	0.15	0.14	0.13	0.12
18.00	0.12	0.11	0.11	0.11	0.11
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

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	6.02 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.52 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.560 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.546 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	17.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
1.00	0.00	0.00	0.01	0.02	0.03
2.25	0.03	0.04	0.05	0.05	0.06
3.50	0.06	0.07	0.07	0.07	0.08
4.75	0.08	0.09	0.09	0.09	0.10
6.00	0.10	0.11	0.12	0.12	0.13
7.25	0.14	0.15	0.16	0.17	0.18
8.50	0.19	0.19	0.20	0.23	0.25
9.75	0.28	0.31	0.34	0.37	0.46
11.00	0.56	0.72	0.90	1.43	3.52
12.25	3.42	1.47	0.93	0.72	0.57
13.50	0.46	0.39	0.36	0.33	0.30
14.75	0.27	0.24	0.22	0.21	0.20
16.00	0.20	0.19	0.18	0.17	0.16
17.25	0.16	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	9.47 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	5.55 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.897 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.876 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

JSUMC West Addition: PondPack Report

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	17.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /s)				
0.50	0.00	0.00	0.02	0.03	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	0.21	0.23	0.24	0.25	0.27
8.00	0.28	0.29	0.31	0.32	0.33
9.25	0.37	0.41	0.46	0.50	0.55
10.50	0.59	0.73	0.89	1.15	1.44
11.75	2.26	5.55	5.37	2.31	1.45
13.00	1.13	0.89	0.73	0.61	0.56
14.25	0.51	0.47	0.42	0.38	0.35
15.50	0.33	0.32	0.31	0.29	0.28
16.75	0.27	0.26	0.24	0.23	0.22
18.00	0.21	0.20	0.19	0.19	0.19
19.25	0.18	0.18	0.18	0.18	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	0.13

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

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)	12.12 hours
Flow (Peak, Computed)	16.41 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	9.63 ft ³ /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	1.543 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	17.10 ft ³ /s
Unit peak time, T_p	0.05 hours
Unit receding limb, T_r	0.47 hours
Total unit time, T_b	0.52 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 (ft ³ /s)				
0.25	0.00	0.01	0.05	0.09	0.12
1.50	0.14	0.16	0.18	0.19	0.21
2.75	0.22	0.23	0.24	0.25	0.26
4.00	0.27	0.28	0.28	0.29	0.30
5.25	0.31	0.31	0.32	0.33	0.35
6.50	0.37	0.39	0.41	0.43	0.46
7.75	0.48	0.50	0.52	0.55	0.57
9.00	0.59	0.66	0.73	0.81	0.89
10.25	0.97	1.04	1.28	1.56	2.01
11.50	2.50	3.93	9.63	9.31	4.00
12.75	2.52	1.96	1.55	1.26	1.05
14.00	0.97	0.89	0.81	0.73	0.66
15.25	0.60	0.58	0.55	0.53	0.51
16.50	0.49	0.47	0.45	0.42	0.40
17.75	0.38	0.36	0.34	0.34	0.33
19.00	0.33	0.32	0.31	0.31	0.30
20.25	0.30	0.29	0.29	0.28	0.28
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)

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

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)	12.12 hours
Flow (Peak, Computed)	7.18 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.21 ft ³ /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	0.657 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	17.10 ft ³ /s
Unit peak time, Tp	0.05 hours
Unit receding limb, Tr	0.47 hours
Total unit time, Tb	0.52 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 (ft ³ /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	0.11	0.12
5.75	0.12	0.13	0.13	0.14	0.15
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	0.31	0.34	0.38	0.41	0.45
10.75	0.55	0.67	0.87	1.08	1.71
12.00	4.21	4.08	1.76	1.10	0.86
13.25	0.68	0.55	0.46	0.42	0.39
14.50	0.36	0.32	0.29	0.26	0.25
15.75	0.24	0.23	0.22	0.21	0.21
17.00	0.20	0.19	0.18	0.17	0.16
18.25	0.15	0.15	0.15	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	0.10	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.12 hours
Flow (Peak, Computed)	11.17 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.55 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.17 in
Runoff Volume (Pervious)	1.065 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.039 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	17.10 ft ³ /s
Unit peak time, T_p	0.05 hours
Unit receding limb, T_r	0.47 hours
Total unit time, T_b	0.52 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 (ft ³ /s)				
0.50	0.00	0.01	0.03	0.05	0.07
1.75	0.08	0.10	0.11	0.12	0.13
3.00	0.14	0.15	0.15	0.16	0.17
4.25	0.17	0.18	0.19	0.19	0.20
5.50	0.20	0.21	0.21	0.23	0.24
6.75	0.26	0.27	0.29	0.30	0.32
8.00	0.33	0.35	0.37	0.38	0.40
9.25	0.44	0.49	0.55	0.60	0.65
10.50	0.71	0.86	1.05	1.36	1.70
11.75	2.67	6.55	6.34	2.73	1.71
13.00	1.34	1.05	0.86	0.72	0.66
14.25	0.61	0.55	0.50	0.45	0.41
15.50	0.39	0.38	0.36	0.35	0.33
16.75	0.32	0.30	0.29	0.27	0.26
18.00	0.24	0.23	0.23	0.23	0.22
19.25	0.22	0.21	0.21	0.21	0.20
20.50	0.20	0.20	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

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

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)	12.12 hours
Flow (Peak, Computed)	20.30 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	11.92 ft ³ /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	1.917 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.08 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	17.10 ft ³ /s
Unit peak time, T_p	0.05 hours
Unit receding limb, T_r	0.47 hours
Total unit time, T_b	0.52 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 (ft ³ /s)				
0.25	0.00	0.03	0.09	0.14	0.17
1.50	0.20	0.22	0.24	0.26	0.27
2.75	0.29	0.30	0.31	0.32	0.33
4.00	0.34	0.35	0.36	0.37	0.38
5.25	0.39	0.39	0.40	0.41	0.43
6.50	0.46	0.49	0.51	0.54	0.57
7.75	0.60	0.62	0.65	0.68	0.71
9.00	0.73	0.81	0.91	1.00	1.10
10.25	1.20	1.29	1.58	1.93	2.49
11.50	3.10	4.86	11.92	11.51	4.95
12.75	3.11	2.43	1.91	1.55	1.30
14.00	1.19	1.10	1.00	0.91	0.81
15.25	0.74	0.71	0.69	0.66	0.63
16.50	0.60	0.58	0.55	0.52	0.50
17.75	0.47	0.44	0.42	0.41	0.41
19.00	0.40	0.40	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)	0.62 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.54 ft ³ /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	0.073 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.05 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
11.50	0.00	0.03	0.20	0.54	0.33
12.75	0.22	0.17	0.14	0.12	0.10
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	0.05	0.04	0.04
17.75	0.04	0.04	0.04	0.04	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

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

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	1.90 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.56 ft ³ /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	0.191 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.05 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
10.00	0.00	0.00	0.01	0.03	0.05
11.25	0.08	0.14	0.27	0.85	1.56
12.50	0.87	0.54	0.41	0.32	0.27
13.75	0.22	0.20	0.19	0.17	0.16
15.00	0.14	0.13	0.12	0.12	0.12
16.25	0.11	0.11	0.10	0.10	0.09
17.50	0.09	0.08	0.08	0.08	0.08
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	0.06	0.05	0.05
23.75	0.05	0.05	(N/A)	(N/A)	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.15 hours
Flow (Peak, Computed)	5.08 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	4.06 ft ³ /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	0.493 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.13 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.05 ft ³ /s
Unit peak time, Tp	0.09 hours
Unit receding limb, Tr	0.76 hours
Total unit time, Tb	0.85 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 (ft ³ /s)				
7.50	0.00	0.00	0.01	0.02	0.03
8.75	0.03	0.04	0.05	0.07	0.09
10.00	0.11	0.14	0.16	0.22	0.29
11.25	0.41	0.58	0.97	2.55	4.06
12.50	2.13	1.27	0.94	0.74	0.60
13.75	0.50	0.45	0.42	0.38	0.35
15.00	0.31	0.29	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)	12.14 hours
Flow (Peak, Computed)	1.05 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.86 ft ³ /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	0.109 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.55 ft ³ /s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.70 hours
Total unit time, Tb	0.78 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 (ft ³ /s)				
11.00	0.00	0.01	0.03	0.10	0.42
12.25	0.86	0.49	0.31	0.24	0.20
13.50	0.16	0.14	0.12	0.12	0.11
14.75	0.10	0.09	0.08	0.08	0.08
16.00	0.07	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	0.04	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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.14 hours
Flow (Peak, Computed)	2.72 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.14 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.67 in
Runoff Volume (Pervious)	0.264 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.259 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.55 ft ³ /s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.70 hours
Total unit time, Tb	0.78 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 (ft ³ /s)				
9.25	0.00	0.00	0.01	0.02	0.03
10.50	0.04	0.07	0.10	0.15	0.24
11.75	0.43	1.29	2.14	1.12	0.69
13.00	0.52	0.42	0.34	0.29	0.26
14.25	0.24	0.22	0.20	0.18	0.17
15.50	0.16	0.15	0.15	0.14	0.14
16.75	0.13	0.13	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	0.07	0.06

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

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.14 hours
Flow (Peak, Computed)	7.24 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	5.52 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.00 in
Runoff Volume (Pervious)	0.694 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.680 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.12 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	6.55 ft ³ /s
Unit peak time, Tp	0.08 hours
Unit receding limb, Tr	0.70 hours
Total unit time, Tb	0.78 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 (ft ³ /s)				
6.50	0.00	0.01	0.01	0.02	0.03
7.75	0.04	0.05	0.06	0.07	0.08
9.00	0.09	0.11	0.14	0.17	0.20
10.25	0.24	0.28	0.36	0.47	0.65
11.50	0.89	1.46	3.78	5.52	2.75
12.75	1.63	1.22	0.96	0.78	0.65
14.00	0.59	0.54	0.50	0.45	0.41
15.25	0.37	0.35	0.34	0.33	0.32
16.50	0.30	0.29	0.28	0.26	0.25
17.75	0.24	0.22	0.21	0.21	0.21
19.00	0.20	0.20	0.20	0.19	0.19
20.25	0.19	0.18	0.18	0.18	0.17
21.50	0.17	0.17	0.16	0.16	0.16
22.75	0.15	0.15	0.15	0.14	0.14
24.00	0.14	(N/A)	(N/A)	(N/A)	(N/A)

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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	3.03 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	1.79 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.25 in
Runoff Volume (Pervious)	0.249 ac-ft
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Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.241 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.16 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /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	0.10	0.12
9.75	0.13	0.14	0.15	0.17	0.21
11.00	0.25	0.34	0.41	0.70	1.79
12.25	1.19	0.59	0.39	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	0.05	0.05	0.05	0.05	0.05
19.75	0.05	0.05	0.05	0.05	0.05
21.00	0.05	0.05	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)

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	4.76 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.82 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.20 in
Runoff Volume (Pervious)	0.399 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.386 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.16 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /s)				
0.75	0.00	0.01	0.02	0.02	0.03
2.00	0.03	0.04	0.04	0.05	0.05
3.25	0.05	0.06	0.06	0.06	0.06
4.50	0.07	0.07	0.07	0.07	0.07
5.75	0.08	0.08	0.08	0.09	0.10
7.00	0.10	0.11	0.11	0.12	0.13
8.25	0.13	0.14	0.14	0.15	0.17
9.50	0.19	0.21	0.23	0.25	0.27
10.75	0.34	0.41	0.53	0.66	1.11
12.00	2.82	1.88	0.93	0.61	0.49
13.25	0.38	0.31	0.26	0.25	0.22
14.50	0.21	0.18	0.17	0.15	0.15
15.75	0.14	0.14	0.13	0.12	0.12
17.00	0.11	0.11	0.10	0.10	0.09
18.25	0.09	0.09	0.08	0.08	0.08
19.50	0.08	0.08	0.08	0.08	0.07
20.75	0.07	0.07	0.07	0.07	0.07
22.00	0.07	0.07	0.06	0.06	0.06
23.25	0.06	0.06	0.06	0.06	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	8.25 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	4.90 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	9.16 in
Runoff Volume (Pervious)	0.702 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.680 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.16 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /s)				
0.25	0.00	0.00	0.03	0.04	0.05
1.50	0.06	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	0.16	0.17	0.18	0.19	0.20
7.75	0.22	0.22	0.23	0.24	0.25
9.00	0.26	0.30	0.33	0.37	0.40
10.25	0.44	0.47	0.59	0.71	0.93
11.50	1.14	1.92	4.90	3.25	1.61
12.75	1.05	0.84	0.66	0.54	0.46
14.00	0.42	0.39	0.36	0.32	0.29
15.25	0.26	0.25	0.24	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	0.14	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	0.11	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)	12.11 hours
Flow (Peak, Computed)	3.61 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	2.14 ft ³ /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	0.290 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.16 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /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	0.05	0.06	0.06	0.06	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	0.25	0.31	0.40	0.50	0.84
12.00	2.14	1.42	0.71	0.46	0.37
13.25	0.29	0.24	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	0.09	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	0.05	0.04	0.04	0.04	(N/A)

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

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)	12.11 hours
Flow (Peak, Computed)	5.61 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	3.33 ft ³ /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	0.458 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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, q_p	12.16 ft ³ /s
Unit peak time, T_p	0.03 hours
Unit receding limb, T_r	0.29 hours
Total unit time, T_b	0.33 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 (ft ³ /s)				
0.50	0.00	0.01	0.02	0.02	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	0.29
10.50	0.32	0.40	0.48	0.63	0.78
11.75	1.31	3.33	2.21	1.10	0.72
13.00	0.57	0.45	0.37	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

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
<hr/>	
Computational Time Increment	0.01 hours
Time to Peak (Computed)	12.11 hours
Flow (Peak, Computed)	10.20 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.00 hours
Flow (Peak Interpolated Output)	6.06 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	11.38 in
Runoff Volume (Pervious)	0.872 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.845 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.05 hours
Computational Time Increment	0.01 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	12.16 ft ³ /s
Unit peak time, Tp	0.03 hours
Unit receding limb, Tr	0.29 hours
Total unit time, Tb	0.33 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 (ft ³ /s)				
0.25	0.00	0.02	0.04	0.06	0.08
1.50	0.09	0.10	0.11	0.12	0.12
2.75	0.13	0.13	0.14	0.14	0.15
4.00	0.15	0.16	0.16	0.16	0.17
5.25	0.17	0.18	0.18	0.18	0.19
6.50	0.21	0.22	0.23	0.24	0.25
7.75	0.27	0.28	0.29	0.30	0.32
9.00	0.33	0.37	0.41	0.45	0.50
10.25	0.54	0.58	0.73	0.88	1.15
11.50	1.42	2.38	6.06	4.02	2.00
12.75	1.30	1.04	0.82	0.67	0.57
14.00	0.52	0.48	0.44	0.40	0.35
15.25	0.33	0.31	0.30	0.29	0.28
16.50	0.27	0.25	0.24	0.23	0.22
17.75	0.21	0.20	0.19	0.18	0.18
19.00	0.18	0.18	0.17	0.17	0.17
20.25	0.16	0.16	0.16	0.15	0.15
21.50	0.15	0.15	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)

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

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)	0.40 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.37 ft ³ /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	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.18 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
10.75	0.00	0.00	0.01	0.02	0.05
12.00	0.16	0.37	0.24	0.16	0.12
13.25	0.09	0.07	0.06	0.05	0.05
14.50	0.05	0.04	0.04	0.04	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	0.02
23.25	0.01	0.01	0.01	0.01	(N/A)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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
<hr/>	
Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	1.01 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.91 ft ³ /s
<hr/>	
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
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.45 in
Runoff Volume (Pervious)	0.114 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.113 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.18 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
9.00	0.00	0.00	0.01	0.01	0.01
10.25	0.02	0.02	0.03	0.05	0.07
11.50	0.10	0.18	0.46	0.91	0.56
12.75	0.35	0.25	0.19	0.15	0.13
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	0.03	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)

JSUMC West Addition: PondPack Report

Subsection: Unit Hydrograph Summary

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

Computational Time Increment	0.02 hours
Time to Peak (Computed)	12.17 hours
Flow (Peak, Computed)	2.42 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.15 ft ³ /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	0.267 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.17 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.18 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	1.00 hours
Total unit time, Tb	1.11 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 (ft ³ /s)				
6.25	0.00	0.00	0.00	0.01	0.01
7.50	0.01	0.02	0.02	0.02	0.03
8.75	0.03	0.04	0.05	0.06	0.07
10.00	0.08	0.09	0.11	0.14	0.18
11.25	0.24	0.33	0.52	1.21	2.15
12.50	1.27	0.76	0.53	0.40	0.32
13.75	0.27	0.24	0.22	0.20	0.18
15.00	0.16	0.15	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)

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

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)	0.61 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	0.55 ft ³ /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	0.068 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.31 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.94 hours
Total unit time, Tb	1.05 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 (ft ³ /s)				
10.25	0.00	0.00	0.01	0.02	0.03
11.50	0.05	0.09	0.26	0.55	0.34
12.75	0.21	0.16	0.12	0.10	0.08
14.00	0.07	0.07	0.06	0.06	0.05
15.25	0.05	0.04	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	0.02
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)

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)	12.16 hours
Flow (Peak, Computed)	1.38 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	1.21 ft ³ /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	0.148 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.31 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.94 hours
Total unit time, Tb	1.05 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 (ft ³ /s)				
8.00	0.00	0.00	0.00	0.01	0.01
9.25	0.01	0.02	0.02	0.03	0.03
10.50	0.04	0.06	0.08	0.11	0.16
11.75	0.26	0.66	1.21	0.71	0.43
13.00	0.31	0.24	0.19	0.16	0.14
14.25	0.13	0.12	0.11	0.10	0.09
15.50	0.08	0.08	0.08	0.08	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)	12.16 hours
Flow (Peak, Computed)	3.34 ft ³ /s
Output Increment	0.25 hours
Time to Flow (Peak Interpolated Output)	12.25 hours
Flow (Peak Interpolated Output)	2.88 ft ³ /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	0.360 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.16 hours
Computational Time Increment	0.02 hours
Unit Hydrograph Shape Factor	284.057
K Factor	0.440
Receding/Rising, Tr/Tp	3.544

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	2.31 ft ³ /s
Unit peak time, Tp	0.11 hours
Unit receding limb, Tr	0.94 hours
Total unit time, Tb	1.05 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 (ft ³ /s)				
5.25	0.00	0.00	0.00	0.01	0.01
6.50	0.01	0.02	0.02	0.03	0.03
7.75	0.04	0.04	0.05	0.05	0.06
9.00	0.07	0.08	0.09	0.11	0.13
10.25	0.15	0.17	0.21	0.27	0.36
11.50	0.48	0.74	1.72	2.88	1.63
12.75	0.96	0.67	0.51	0.41	0.34
14.00	0.30	0.28	0.25	0.23	0.21
15.25	0.19	0.18	0.17	0.16	0.16
16.50	0.15	0.15	0.14	0.13	0.13
17.75	0.12	0.11	0.11	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)

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA1 - Imp - Cur	0.546	12.00	3.52
Flow (From)	PDA1 - Per - Cur	0.073	12.25	0.54
Flow (In)	Post - POS1	0.619	12.25	3.96

JSUMC West Addition: PondPack Report

Subsection: Addition Summary

Label: Post - POS1

Scenario: Future 2 year

Return Event: 2 years

Storm Event: Future 2

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	0.657	12.00	4.21
Flow (From)	PDA1 - Per - Fut	0.109	12.25	0.86
Flow (In)	Post - POS1	0.766	12.25	4.94

JSUMC West Addition: PondPack Report

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	0.876	12.00	5.55
Flow (From)	PDA1 - Per - Cur	0.191	12.25	1.56
Flow (In)	Post - POS1	1.067	12.25	6.94

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) (ft ³ /s)
Flow (From)	PDA1 - Imp - Fut	1.039	12.00	6.55
Flow (From)	PDA1 - Per - Fut	0.259	12.25	2.14
Flow (In)	Post - POS1	1.298	12.25	8.47

JSUMC West Addition: PondPack Report

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	1.543	12.00	9.63
Flow (From)	PDA1 - Per - Cur	0.493	12.25	4.06
Flow (In)	Post - POS1	2.036	12.25	13.37

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) (ft ³ /s)
Flow (From)	PDA1 - Imp - Fut	1.917	12.00	11.92
Flow (From)	PDA1 - Per - Fut	0.680	12.25	5.52
Flow (In)	Post - POS1	2.596	12.25	17.03

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Cur	0.241	12.00	1.79
Flow (From)	PDA2 - Per - Cur	0.048	12.25	0.37
Flow (In)	Post - POS2	0.289	12.00	1.95

JSUMC West Addition: PondPack Report

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	0.290	12.00	2.14
Flow (From)	PDA2 - Per - Fut	0.068	12.25	0.55
Flow (In)	Post - POS2	0.358	12.00	2.40

JSUMC West Addition: PondPack Report

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	0.386	12.00	2.82
Flow (From)	PDA2 - Per - Cur	0.113	12.25	0.91
Flow (In)	Post - POS2	0.499	12.00	3.28

JSUMC West Addition: PondPack Report

Subsection: Addition Summary

Label: Post - POS2

Scenario: Future 10 year

Return Event: 10 years

Storm Event: Future 10

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	0.458	12.00	3.33
Flow (From)	PDA2 - Per - Fut	0.148	12.25	1.21
Flow (In)	Post - POS2	0.606	12.00	3.99

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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Cur	0.680	12.00	4.90
Flow (From)	PDA2 - Per - Cur	0.267	12.25	2.15
Flow (In)	Post - POS2	0.947	12.00	6.11

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	PDA2 - Imp - Fut	0.845	12.00	6.06
Flow (From)	PDA2 - Per - Fut	0.360	12.25	2.88
Flow (In)	Post - POS2	1.205	12.00	7.78

JSUMC West 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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Cur	0.618	12.00	3.98
Flow (From)	EDA1 - Per - Cur	0.058	12.25	0.44
Flow (In)	Pre - POS1	0.675	12.25	4.30

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Fut	0.743	12.00	4.75
Flow (From)	EDA1 - Per - Fut	0.085	12.25	0.68
Flow (In)	Pre - POS1	0.828	12.25	5.29

JSUMC West 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	0.990	12.00	6.28
Flow (From)	EDA1 - Per - Cur	0.147	12.25	1.21
Flow (In)	Pre - POS1	1.138	12.25	7.28

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA1 - Imp - Fut	1.175	12.00	7.41
Flow (From)	EDA1 - Per - Fut	0.199	12.25	1.65
Flow (In)	Pre - POS1	1.374	12.25	8.81

JSUMC West 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	1.744	12.00	10.89
Flow (From)	EDA1 - Per - Cur	0.375	12.25	3.08
Flow (In)	Pre - POS1	2.118	12.25	13.60

JSUMC West 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	2.167	12.00	13.47
Flow (From)	EDA1 - Per - Fut	0.515	12.25	4.19
Flow (In)	Pre - POS1	2.681	12.25	17.20

JSUMC West 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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Cur	0.243	12.00	1.81
Flow (From)	EDA2 - Per - Cur	0.048	12.25	0.36
Flow (In)	Pre - POS2	0.292	12.00	1.95

JSUMC West 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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.293	12.00	2.16
Flow (From)	EDA2 - Per - Fut	0.069	12.25	0.54
Flow (In)	Pre - POS2	0.362	12.00	2.41

JSUMC West Addition: PondPack Report

Subsection: Addition Summary

Label: Pre - POS2

Scenario: Current 10 year

Return Event: 10 years

Storm Event: Current 10

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	0.390	12.00	2.85
Flow (From)	EDA2 - Per - Cur	0.115	12.25	0.92
Flow (In)	Pre - POS2	0.505	12.00	3.30

JSUMC West Addition: PondPack Report

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.463	12.00	3.37
Flow (From)	EDA2 - Per - Fut	0.152	12.25	1.23
Flow (In)	Pre - POS2	0.615	12.00	4.01

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Cur	0.687	12.00	4.95
Flow (From)	EDA2 - Per - Cur	0.276	12.25	2.21
Flow (In)	Pre - POS2	0.963	12.00	6.14

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) (ft ³ /s)
Flow (From)	EDA2 - Imp - Fut	0.854	12.00	6.13
Flow (From)	EDA2 - Per - Fut	0.373	12.25	2.98
Flow (In)	Pre - POS2	1.227	12.00	7.84

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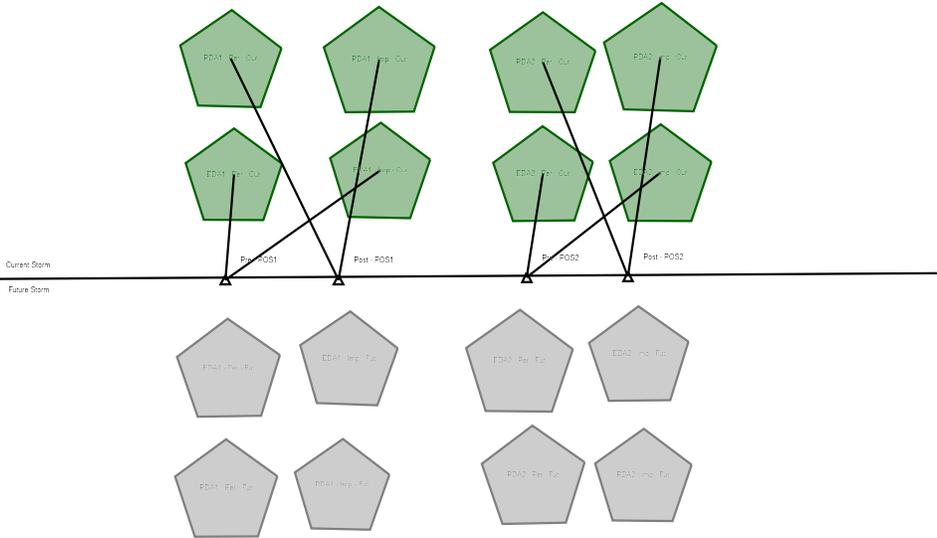
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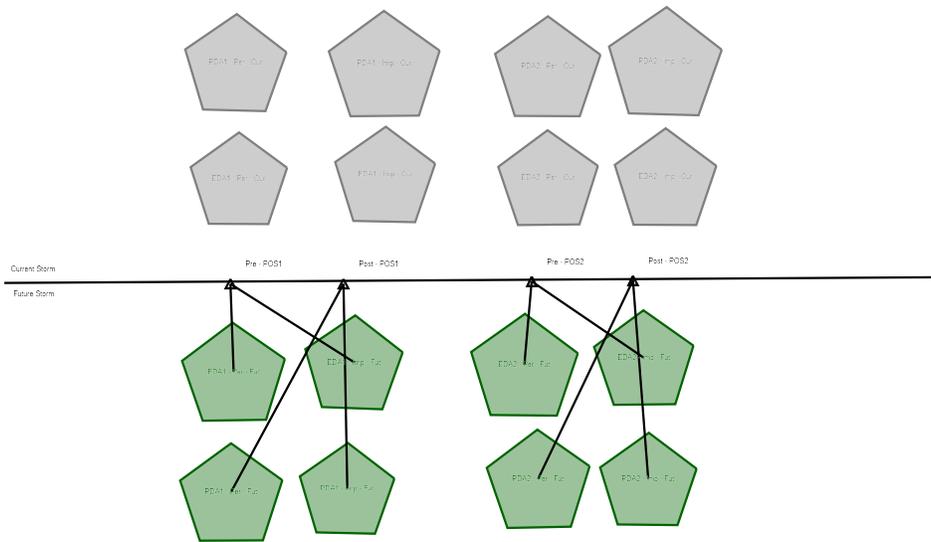
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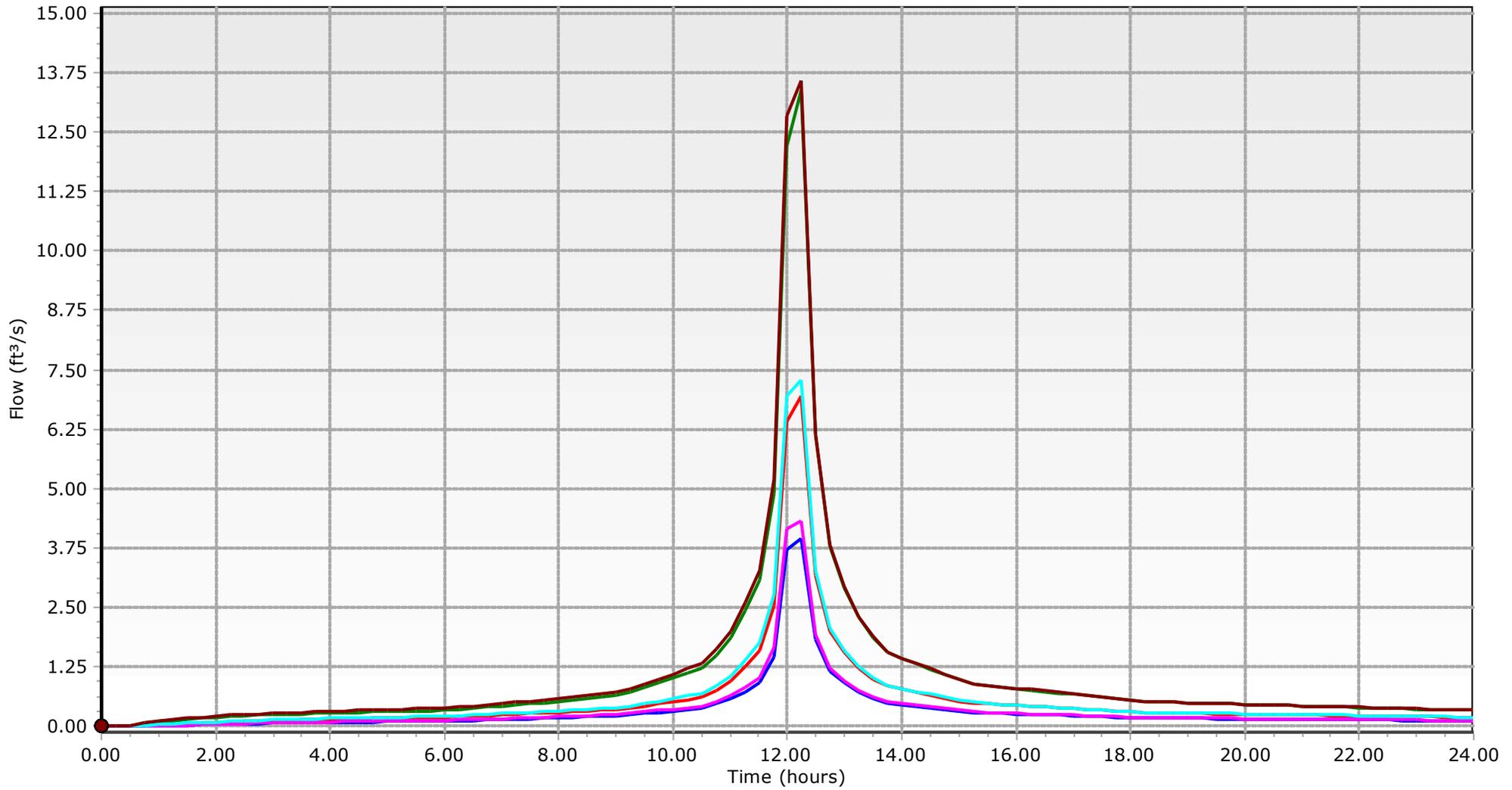
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Scenario: Future 2 year



West Addition POS1 Pre vs Post Hydrograph - Current Storm

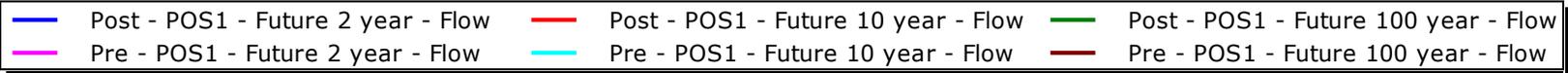
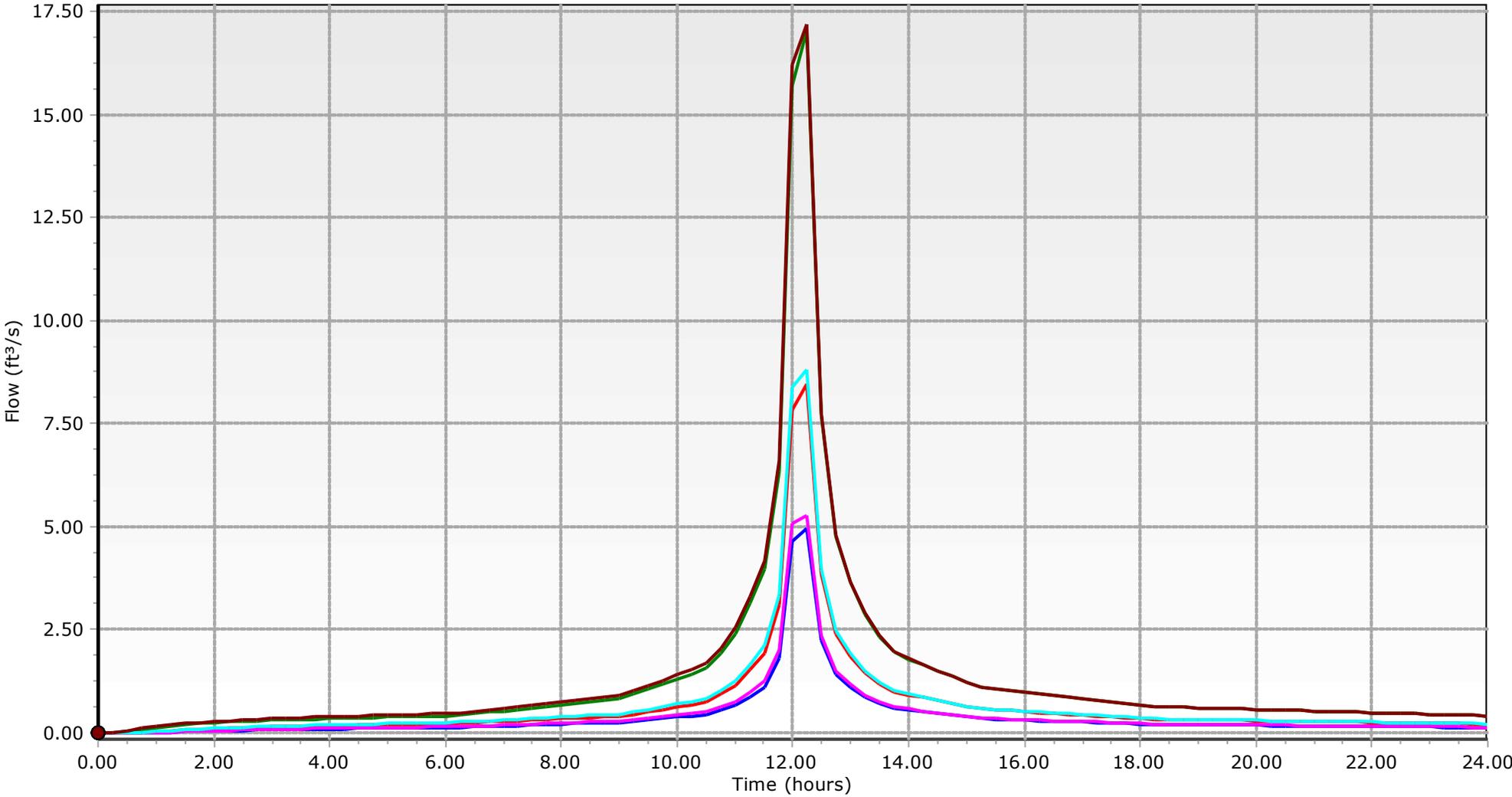


West Addition Current Precipitation
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.06	0.05	0.01
1.00	0.00	0.00	0.00	0.02	0.02	0.00	0.10	0.09	0.01
1.25	0.00	0.00	0.00	0.04	0.03	0.01	0.13	0.12	0.01
1.50	0.01	0.01	0.00	0.05	0.05	0.00	0.16	0.14	0.02
1.75	0.02	0.02	0.00	0.07	0.06	0.01	0.18	0.16	0.02
2.00	0.03	0.03	0.00	0.08	0.07	0.01	0.20	0.18	0.02
2.25	0.04	0.03	0.01	0.09	0.08	0.01	0.22	0.19	0.03
2.50	0.05	0.04	0.01	0.10	0.09	0.01	0.23	0.21	0.02
2.75	0.05	0.05	0.00	0.11	0.10	0.01	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	0.06	0.06	0.00	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	0.28	0.25	0.03
3.75	0.07	0.07	0.00	0.15	0.13	0.02	0.29	0.26	0.03
4.00	0.08	0.07	0.01	0.15	0.14	0.01	0.30	0.27	0.03
4.25	0.08	0.07	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	0.28	0.04
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	0.09	0.02	0.19	0.17	0.02	0.35	0.31	0.04
5.75	0.11	0.10	0.01	0.19	0.17	0.02	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	0.39	0.35	0.04
6.50	0.13	0.12	0.01	0.23	0.20	0.03	0.41	0.37	0.04
6.75	0.14	0.12	0.02	0.24	0.21	0.03	0.44	0.39	0.05
7.00	0.15	0.13	0.02	0.26	0.23	0.03	0.47	0.41	0.06
7.25	0.16	0.14	0.02	0.27	0.24	0.03	0.49	0.43	0.06
7.50	0.17	0.15	0.02	0.29	0.25	0.04	0.52	0.46	0.06
7.75	0.18	0.16	0.02	0.30	0.27	0.03	0.55	0.48	0.07
8.00	0.19	0.17	0.02	0.32	0.28	0.04	0.58	0.51	0.07
8.25	0.20	0.18	0.02	0.33	0.29	0.04	0.61	0.54	0.07
8.50	0.21	0.19	0.02	0.35	0.31	0.04	0.64	0.57	0.07
8.75	0.22	0.19	0.03	0.36	0.32	0.04	0.67	0.60	0.07
9.00	0.23	0.20	0.03	0.38	0.33	0.05	0.70	0.63	0.07
9.25	0.26	0.23	0.03	0.42	0.37	0.05	0.79	0.71	0.08
9.50	0.29	0.25	0.04	0.47	0.41	0.06	0.89	0.80	0.09
9.75	0.32	0.28	0.04	0.52	0.46	0.06	0.99	0.90	0.09
10.00	0.35	0.31	0.04	0.57	0.50	0.07	1.09	1.00	0.09
10.25	0.39	0.34	0.05	0.63	0.55	0.08	1.20	1.10	0.10
10.50	0.42	0.37	0.05	0.69	0.61	0.08	1.31	1.21	0.10
10.75	0.52	0.46	0.06	0.85	0.76	0.09	1.62	1.49	0.13
11.00	0.63	0.56	0.07	1.05	0.94	0.11	1.99	1.85	0.14
11.25	0.82	0.72	0.10	1.37	1.23	0.14	2.59	2.42	0.17
11.50	1.03	0.90	0.13	1.74	1.57	0.17	3.28	3.08	0.20
11.75	1.64	1.45	0.19	2.77	2.53	0.24	5.19	4.90	0.29
12.00	4.16	3.72	0.44	6.94	6.40	0.54	12.84	12.19	0.65
12.25	4.30	3.96	0.34	7.28	6.94	0.34	13.60	13.37	0.23
12.50	1.93	1.81	0.12	3.28	3.18	0.10	6.14	6.14	0.00
12.75	1.22	1.15	0.07	2.06	1.99	0.07	3.80	3.79	0.01
13.00	0.95	0.89	0.06	1.59	1.54	0.05	2.93	2.90	0.03
13.25	0.75	0.71	0.04	1.26	1.22	0.04	2.30	2.28	0.02
13.50	0.61	0.58	0.03	1.02	0.99	0.03	1.87	1.86	0.01
13.75	0.51	0.48	0.03	0.86	0.83	0.03	1.56	1.55	0.01
14.00	0.47	0.45	0.02	0.78	0.76	0.02	1.43	1.42	0.01

14.25	0.43	0.41	0.02	0.72	0.70	0.02	1.32	1.30	0.02
14.50	0.40	0.38	0.02	0.66	0.64	0.02	1.20	1.19	0.01
14.75	0.36	0.34	0.02	0.60	0.58	0.02	1.09	1.08	0.01
15.00	0.32	0.31	0.01	0.54	0.52	0.02	0.98	0.97	0.01
15.25	0.30	0.28	0.02	0.49	0.48	0.01	0.89	0.88	0.01
15.50	0.28	0.27	0.01	0.47	0.46	0.01	0.86	0.85	0.01
15.75	0.27	0.26	0.01	0.45	0.44	0.01	0.82	0.82	0.00
16.00	0.26	0.25	0.01	0.44	0.42	0.02	0.79	0.78	0.01
16.25	0.25	0.24	0.01	0.42	0.41	0.01	0.76	0.75	0.01
16.50	0.24	0.23	0.01	0.40	0.39	0.01	0.73	0.72	0.01
16.75	0.23	0.22	0.01	0.38	0.37	0.01	0.70	0.69	0.01
17.00	0.22	0.21	0.01	0.37	0.36	0.01	0.66	0.66	0.00
17.25	0.21	0.20	0.01	0.35	0.34	0.01	0.63	0.63	0.00
17.50	0.20	0.19	0.01	0.33	0.32	0.01	0.60	0.59	0.01
17.75	0.19	0.18	0.01	0.31	0.30	0.01	0.57	0.56	0.01
18.00	0.18	0.17	0.01	0.30	0.29	0.01	0.53	0.53	0.00
18.25	0.17	0.16	0.01	0.28	0.27	0.01	0.51	0.51	0.00
18.50	0.17	0.16	0.01	0.28	0.27	0.01	0.50	0.50	0.00
18.75	0.16	0.16	0.00	0.27	0.27	0.00	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	0.47	0.00
19.75	0.15	0.15	0.00	0.26	0.25	0.01	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	0.25	0.24	0.01	0.44	0.44	0.00
20.50	0.15	0.14	0.01	0.24	0.24	0.00	0.44	0.43	0.01
20.75	0.14	0.14	0.00	0.24	0.23	0.01	0.43	0.43	0.00
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	0.14	0.13	0.01	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	0.40	0.39	0.01
22.00	0.13	0.12	0.01	0.22	0.21	0.01	0.39	0.39	0.00
22.25	0.13	0.12	0.01	0.21	0.21	0.00	0.38	0.38	0.00
22.50	0.12	0.12	0.00	0.21	0.20	0.01	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	0.36	0.35	0.01
23.25	0.12	0.11	0.01	0.19	0.19	0.00	0.35	0.35	0.00
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	0.18	0.00	0.32	0.32	0.00

West Addition POS1 Pre vs Post Hydrograph - Future Storm

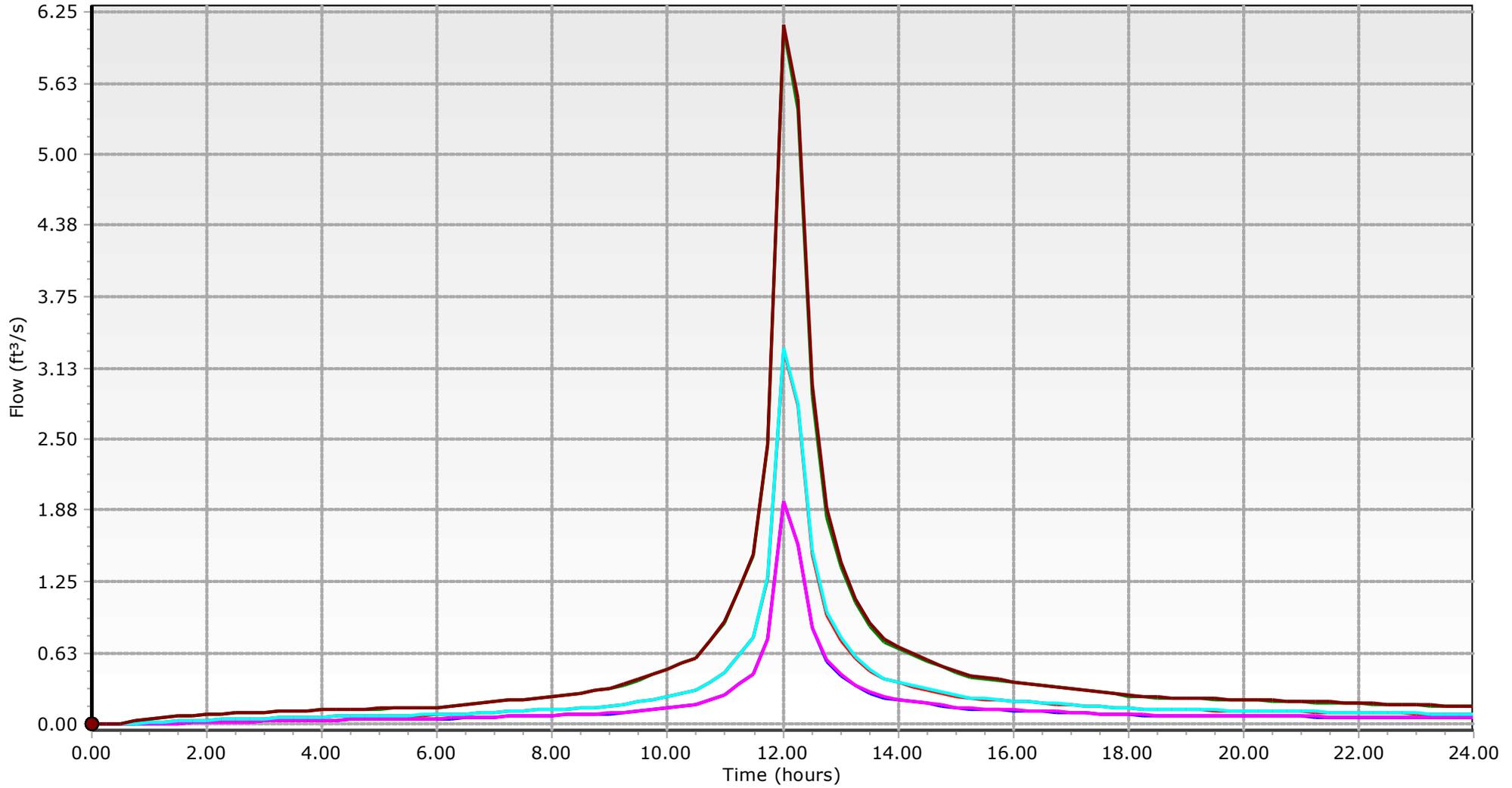


West Addition Future Precipitation
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-1

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.03	0.03	0.00
0.75	0.00	0.00	0.00	0.01	0.01	0.00	0.10	0.09	0.01
1.00	0.00	0.00	0.00	0.04	0.03	0.01	0.15	0.14	0.01
1.25	0.01	0.01	0.00	0.06	0.05	0.01	0.19	0.17	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	0.09	0.08	0.01	0.25	0.22	0.03
2.00	0.05	0.04	0.01	0.11	0.10	0.01	0.27	0.24	0.03
2.25	0.06	0.05	0.01	0.12	0.11	0.01	0.29	0.26	0.03
2.50	0.06	0.06	0.00	0.14	0.12	0.02	0.31	0.27	0.04
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	0.17	0.15	0.02	0.36	0.32	0.04
3.75	0.10	0.09	0.01	0.18	0.16	0.02	0.38	0.33	0.05
4.00	0.10	0.09	0.01	0.19	0.17	0.02	0.39	0.34	0.05
4.25	0.11	0.10	0.01	0.20	0.17	0.03	0.40	0.35	0.05
4.50	0.11	0.10	0.01	0.20	0.18	0.02	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	0.11	0.02	0.22	0.20	0.02	0.44	0.39	0.05
5.50	0.13	0.12	0.01	0.23	0.20	0.03	0.45	0.39	0.06
5.75	0.14	0.12	0.02	0.24	0.21	0.03	0.45	0.40	0.05
6.00	0.14	0.13	0.01	0.24	0.21	0.03	0.46	0.41	0.05
6.25	0.15	0.13	0.02	0.26	0.23	0.03	0.49	0.43	0.06
6.50	0.16	0.14	0.02	0.27	0.24	0.03	0.52	0.46	0.06
6.75	0.17	0.15	0.02	0.29	0.26	0.03	0.56	0.49	0.07
7.00	0.19	0.17	0.02	0.31	0.27	0.04	0.59	0.53	0.06
7.25	0.20	0.18	0.02	0.33	0.29	0.04	0.63	0.56	0.07
7.50	0.21	0.19	0.02	0.34	0.30	0.04	0.67	0.60	0.07
7.75	0.22	0.20	0.02	0.36	0.32	0.04	0.71	0.63	0.08
8.00	0.23	0.21	0.02	0.38	0.33	0.05	0.75	0.67	0.08
8.25	0.24	0.22	0.02	0.40	0.35	0.05	0.78	0.71	0.07
8.50	0.26	0.23	0.03	0.41	0.37	0.04	0.82	0.75	0.07
8.75	0.27	0.24	0.03	0.43	0.38	0.05	0.87	0.79	0.08
9.00	0.28	0.25	0.03	0.45	0.40	0.05	0.91	0.83	0.08
9.25	0.31	0.28	0.03	0.50	0.44	0.06	1.01	0.93	0.08
9.50	0.35	0.31	0.04	0.56	0.50	0.06	1.14	1.05	0.09
9.75	0.39	0.34	0.05	0.63	0.56	0.07	1.27	1.17	0.10
10.00	0.43	0.38	0.05	0.70	0.62	0.08	1.40	1.30	0.10
10.25	0.47	0.41	0.06	0.76	0.68	0.08	1.54	1.43	0.11
10.50	0.50	0.45	0.05	0.83	0.75	0.08	1.68	1.57	0.11
10.75	0.62	0.55	0.07	1.03	0.93	0.10	2.06	1.94	0.12
11.00	0.76	0.67	0.09	1.27	1.15	0.12	2.54	2.40	0.14
11.25	0.99	0.88	0.11	1.66	1.52	0.14	3.30	3.14	0.16
11.50	1.26	1.12	0.14	2.11	1.93	0.18	4.17	3.99	0.18
11.75	2.02	1.81	0.21	3.35	3.10	0.25	6.59	6.32	0.27
12.00	5.08	4.62	0.46	8.37	7.84	0.53	16.22	15.69	0.53
12.25	5.29	4.94	0.35	8.81	8.47	0.34	17.20	17.03	0.17
12.50	2.38	2.24	0.14	3.97	3.85	0.12	7.76	7.70	0.06
12.75	1.50	1.42	0.08	2.48	2.40	0.08	4.79	4.75	0.04
13.00	1.16	1.10	0.06	1.92	1.86	0.06	3.68	3.65	0.03
13.25	0.92	0.87	0.05	1.51	1.47	0.04	2.89	2.88	0.01
13.50	0.75	0.71	0.04	1.23	1.20	0.03	2.35	2.34	0.01
13.75	0.63	0.60	0.03	1.03	1.00	0.03	1.96	1.95	0.01
14.00	0.58	0.55	0.03	0.94	0.92	0.02	1.79	1.79	0.00

14.25	0.53	0.51	0.02	0.87	0.85	0.02	1.65	1.64	0.01
14.50	0.49	0.46	0.03	0.79	0.77	0.02	1.51	1.50	0.01
14.75	0.44	0.42	0.02	0.72	0.70	0.02	1.37	1.36	0.01
15.00	0.39	0.38	0.01	0.64	0.63	0.01	1.22	1.22	0.00
15.25	0.36	0.34	0.02	0.59	0.58	0.01	1.12	1.11	0.01
15.50	0.35	0.33	0.02	0.56	0.55	0.01	1.07	1.07	0.00
15.75	0.33	0.32	0.01	0.54	0.53	0.01	1.03	1.03	0.00
16.00	0.32	0.31	0.01	0.52	0.51	0.01	0.99	0.99	0.00
16.25	0.31	0.29	0.02	0.50	0.49	0.01	0.95	0.95	0.00
16.50	0.29	0.28	0.01	0.48	0.47	0.01	0.91	0.91	0.00
16.75	0.28	0.27	0.01	0.46	0.45	0.01	0.87	0.87	0.00
17.00	0.27	0.26	0.01	0.44	0.43	0.01	0.83	0.83	0.00
17.25	0.26	0.25	0.01	0.42	0.41	0.01	0.79	0.79	0.00
17.50	0.24	0.23	0.01	0.40	0.39	0.01	0.75	0.75	0.00
17.75	0.23	0.22	0.01	0.37	0.37	0.00	0.71	0.71	0.00
18.00	0.22	0.21	0.01	0.35	0.35	0.00	0.67	0.67	0.00
18.25	0.21	0.20	0.01	0.34	0.33	0.01	0.64	0.64	0.00
18.50	0.20	0.20	0.00	0.33	0.32	0.01	0.63	0.62	0.01
18.75	0.20	0.19	0.01	0.33	0.32	0.01	0.62	0.61	0.01
19.00	0.20	0.19	0.01	0.32	0.31	0.01	0.61	0.60	0.01
19.25	0.19	0.19	0.00	0.32	0.31	0.01	0.60	0.60	0.00
19.50	0.19	0.18	0.01	0.31	0.30	0.01	0.59	0.59	0.00
19.75	0.19	0.18	0.01	0.31	0.30	0.01	0.58	0.58	0.00
20.00	0.18	0.18	0.00	0.30	0.29	0.01	0.57	0.56	0.01
20.25	0.18	0.17	0.01	0.29	0.29	0.00	0.56	0.55	0.01
20.50	0.18	0.17	0.01	0.29	0.28	0.01	0.55	0.54	0.01
20.75	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.53	0.01
21.00	0.17	0.17	0.00	0.28	0.27	0.01	0.53	0.53	0.00
21.25	0.17	0.16	0.01	0.27	0.27	0.00	0.52	0.51	0.01
21.50	0.17	0.16	0.01	0.27	0.26	0.01	0.51	0.50	0.01
21.75	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.49	0.01
22.00	0.16	0.15	0.01	0.26	0.25	0.01	0.49	0.49	0.00
22.25	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.47	0.01
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	0.15	0.14	0.01	0.24	0.23	0.01	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	0.23	0.22	0.01	0.42	0.42	0.00
23.75	0.14	0.13	0.01	0.22	0.22	0.00	0.41	0.41	0.00
24.00	0.13	0.13	0.00	0.22	0.21	0.01	0.41	0.41	0.00

West Addition POS2 Pre vs Post Hydrograph - Current Storm

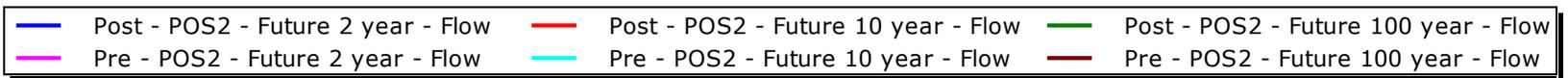
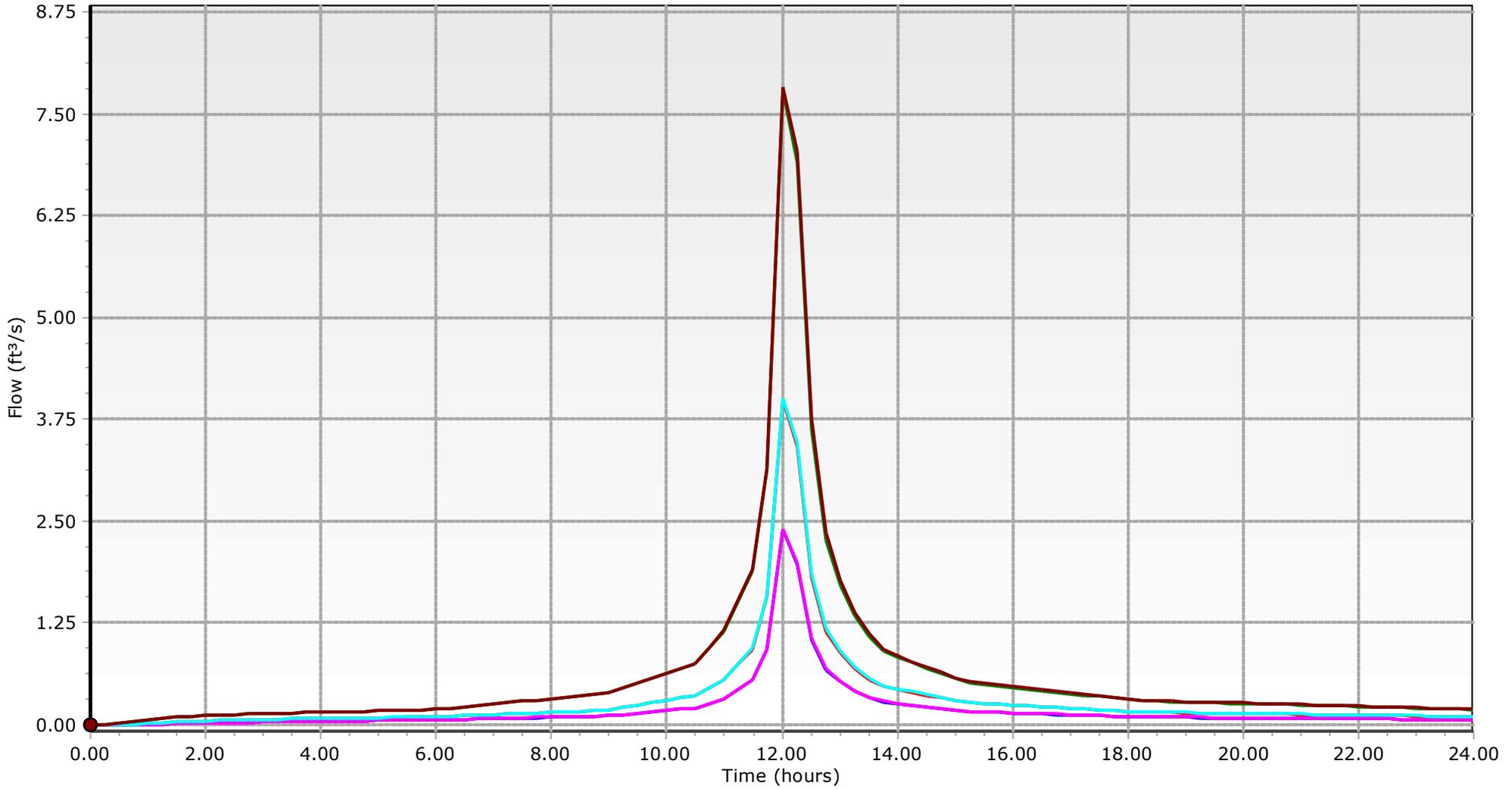


West Addition Current Precipitation
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-2

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.00	0.00	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00
1.00	0.00	0.00	0.00	0.01	0.01	0.00	0.04	0.04	0.00
1.25	0.00	0.00	0.00	0.02	0.02	0.00	0.05	0.05	0.00
1.50	0.01	0.01	0.00	0.02	0.02	0.00	0.07	0.06	0.01
1.75	0.01	0.01	0.00	0.03	0.03	0.00	0.07	0.07	0.00
2.00	0.01	0.01	0.00	0.03	0.03	0.00	0.08	0.08	0.00
2.25	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
2.50	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
2.75	0.02	0.02	0.00	0.05	0.05	0.00	0.10	0.10	0.00
3.00	0.02	0.02	0.00	0.05	0.05	0.00	0.10	0.10	0.00
3.25	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
3.50	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
3.75	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.00	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.25	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
4.50	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
4.75	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
5.00	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
5.25	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
5.50	0.04	0.04	0.00	0.08	0.07	0.01	0.14	0.14	0.00
5.75	0.04	0.04	0.00	0.08	0.08	0.00	0.14	0.14	0.00
6.00	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
6.25	0.05	0.05	0.00	0.09	0.08	0.01	0.16	0.16	0.00
6.50	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
6.75	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
7.00	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
7.25	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.20	0.00
7.50	0.07	0.07	0.00	0.11	0.11	0.00	0.22	0.22	0.00
7.75	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
8.00	0.08	0.08	0.00	0.13	0.13	0.00	0.25	0.24	0.01
8.25	0.08	0.08	0.00	0.13	0.13	0.00	0.26	0.26	0.00
8.50	0.08	0.08	0.00	0.14	0.14	0.00	0.27	0.27	0.00
8.75	0.09	0.09	0.00	0.15	0.14	0.01	0.29	0.29	0.00
9.00	0.09	0.09	0.00	0.15	0.15	0.00	0.30	0.30	0.00
9.25	0.10	0.10	0.00	0.17	0.17	0.00	0.34	0.34	0.00
9.50	0.12	0.12	0.00	0.19	0.19	0.00	0.39	0.39	0.00
9.75	0.13	0.13	0.00	0.22	0.22	0.00	0.43	0.43	0.00
10.00	0.14	0.14	0.00	0.24	0.24	0.00	0.48	0.48	0.00
10.25	0.16	0.15	0.01	0.27	0.27	0.00	0.53	0.53	0.00
10.50	0.17	0.17	0.00	0.29	0.29	0.00	0.58	0.58	0.00
10.75	0.21	0.21	0.00	0.37	0.37	0.00	0.73	0.73	0.00
11.00	0.26	0.26	0.00	0.45	0.45	0.00	0.89	0.89	0.00
11.25	0.34	0.34	0.00	0.61	0.60	0.01	1.18	1.17	0.01
11.50	0.43	0.43	0.00	0.76	0.76	0.00	1.49	1.47	0.02
11.75	0.75	0.74	0.01	1.29	1.28	0.01	2.46	2.44	0.02
12.00	1.95	1.95	0.00	3.30	3.28	0.02	6.14	6.11	0.03
12.25	1.57	1.57	0.00	2.81	2.79	0.02	5.49	5.40	0.09
12.50	0.85	0.84	0.01	1.52	1.49	0.03	2.97	2.88	0.09
12.75	0.56	0.55	0.01	0.98	0.96	0.02	1.89	1.82	0.07
13.00	0.43	0.43	0.00	0.75	0.73	0.02	1.42	1.37	0.05
13.25	0.34	0.33	0.01	0.58	0.57	0.01	1.09	1.06	0.03
13.50	0.28	0.27	0.01	0.48	0.47	0.01	0.89	0.86	0.03
13.75	0.23	0.23	0.00	0.40	0.39	0.01	0.74	0.72	0.02

14.00	0.21	0.21	0.00	0.37	0.36	0.01	0.68	0.66	0.02
14.25	0.20	0.19	0.01	0.33	0.33	0.00	0.62	0.60	0.02
14.50	0.18	0.18	0.00	0.31	0.30	0.01	0.57	0.55	0.02
14.75	0.16	0.16	0.00	0.28	0.27	0.01	0.51	0.50	0.01
15.00	0.15	0.14	0.01	0.25	0.24	0.01	0.46	0.45	0.01
15.25	0.13	0.13	0.00	0.23	0.22	0.01	0.42	0.41	0.01
15.50	0.13	0.13	0.00	0.22	0.21	0.01	0.40	0.39	0.01
15.75	0.12	0.12	0.00	0.21	0.21	0.00	0.39	0.38	0.01
16.00	0.12	0.12	0.00	0.20	0.20	0.00	0.37	0.36	0.01
16.25	0.11	0.11	0.00	0.19	0.19	0.00	0.36	0.35	0.01
16.50	0.11	0.11	0.00	0.19	0.18	0.01	0.34	0.33	0.01
16.75	0.11	0.10	0.01	0.18	0.17	0.01	0.33	0.32	0.01
17.00	0.10	0.10	0.00	0.17	0.17	0.00	0.31	0.30	0.01
17.25	0.10	0.09	0.01	0.16	0.16	0.00	0.30	0.29	0.01
17.50	0.09	0.09	0.00	0.15	0.15	0.00	0.28	0.27	0.01
17.75	0.09	0.08	0.01	0.15	0.14	0.01	0.27	0.26	0.01
18.00	0.08	0.08	0.00	0.14	0.13	0.01	0.25	0.25	0.00
18.25	0.08	0.08	0.00	0.13	0.13	0.00	0.24	0.23	0.01
18.50	0.08	0.08	0.00	0.13	0.13	0.00	0.24	0.23	0.01
18.75	0.08	0.07	0.01	0.13	0.12	0.01	0.23	0.23	0.00
19.00	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.22	0.01
19.25	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.22	0.00
19.50	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.22	0.00
19.75	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.21	0.01
20.00	0.07	0.07	0.00	0.12	0.11	0.01	0.21	0.21	0.00
20.25	0.07	0.07	0.00	0.11	0.11	0.00	0.21	0.20	0.01
20.50	0.07	0.07	0.00	0.11	0.11	0.00	0.20	0.20	0.00
20.75	0.07	0.06	0.01	0.11	0.11	0.00	0.20	0.20	0.00
21.00	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.19	0.01
21.25	0.06	0.06	0.00	0.11	0.10	0.01	0.19	0.19	0.00
21.50	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
21.75	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.18	0.01
22.00	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
22.25	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.17	0.01
22.50	0.06	0.06	0.00	0.10	0.09	0.01	0.17	0.17	0.00
22.75	0.06	0.06	0.00	0.09	0.09	0.00	0.17	0.17	0.00
23.00	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.16	0.01
23.25	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
23.50	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
23.75	0.05	0.05	0.00	0.09	0.08	0.01	0.16	0.15	0.01
24.00	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00

West Addition POS2 Pre vs Post Hydrograph - Future Storm



West Addition Future Precipitation
PRE- VS POST- HYDROGRAPH FLOW RATE COMPARISON FOR POS-2

Time (Hours)	2 Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	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	0.01	0.01	0.00	0.04	0.04	0.00
1.00	0.00	0.00	0.00	0.02	0.02	0.00	0.06	0.06	0.00
1.25	0.01	0.01	0.00	0.02	0.02	0.00	0.08	0.08	0.00
1.50	0.01	0.01	0.00	0.03	0.03	0.00	0.09	0.09	0.00
1.75	0.02	0.02	0.00	0.04	0.04	0.00	0.10	0.10	0.00
2.00	0.02	0.02	0.00	0.04	0.04	0.00	0.11	0.11	0.00
2.25	0.02	0.02	0.00	0.05	0.05	0.00	0.12	0.12	0.00
2.50	0.03	0.03	0.00	0.05	0.05	0.00	0.12	0.12	0.00
2.75	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00
3.00	0.03	0.03	0.00	0.06	0.06	0.00	0.14	0.13	0.01
3.25	0.03	0.03	0.00	0.07	0.07	0.00	0.14	0.14	0.00
3.50	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.14	0.01
3.75	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
4.00	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
4.25	0.04	0.04	0.00	0.08	0.08	0.00	0.16	0.16	0.00
4.50	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
4.75	0.05	0.05	0.00	0.08	0.08	0.00	0.17	0.16	0.01
5.00	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
5.25	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
5.50	0.05	0.05	0.00	0.09	0.09	0.00	0.18	0.18	0.00
5.75	0.06	0.05	0.01	0.09	0.09	0.00	0.18	0.18	0.00
6.00	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
6.25	0.06	0.06	0.00	0.10	0.10	0.00	0.20	0.20	0.00
6.50	0.07	0.06	0.01	0.11	0.11	0.00	0.22	0.22	0.00
6.75	0.07	0.07	0.00	0.12	0.12	0.00	0.24	0.24	0.00
7.00	0.07	0.07	0.00	0.12	0.12	0.00	0.25	0.25	0.00
7.25	0.08	0.08	0.00	0.13	0.13	0.00	0.27	0.27	0.00
7.50	0.08	0.08	0.00	0.14	0.14	0.00	0.29	0.29	0.00
7.75	0.09	0.09	0.00	0.14	0.14	0.00	0.30	0.30	0.00
8.00	0.09	0.09	0.00	0.15	0.15	0.00	0.32	0.32	0.00
8.25	0.10	0.10	0.00	0.16	0.16	0.00	0.34	0.34	0.00
8.50	0.10	0.10	0.00	0.17	0.17	0.00	0.36	0.36	0.00
8.75	0.11	0.11	0.00	0.18	0.18	0.00	0.38	0.38	0.00
9.00	0.11	0.11	0.00	0.19	0.19	0.00	0.40	0.40	0.00
9.25	0.13	0.13	0.00	0.21	0.21	0.00	0.45	0.45	0.00
9.50	0.14	0.14	0.00	0.24	0.24	0.00	0.51	0.50	0.01
9.75	0.16	0.16	0.00	0.27	0.27	0.00	0.57	0.56	0.01
10.00	0.17	0.17	0.00	0.30	0.30	0.00	0.63	0.62	0.01
10.25	0.19	0.19	0.00	0.33	0.33	0.00	0.69	0.69	0.00
10.50	0.20	0.20	0.00	0.36	0.36	0.00	0.76	0.75	0.01
10.75	0.26	0.26	0.00	0.46	0.45	0.01	0.95	0.94	0.01
11.00	0.32	0.32	0.00	0.56	0.56	0.00	1.16	1.15	0.01
11.25	0.43	0.43	0.00	0.74	0.74	0.00	1.53	1.51	0.02
11.50	0.54	0.54	0.00	0.94	0.93	0.01	1.91	1.89	0.02
11.75	0.93	0.92	0.01	1.57	1.57	0.00	3.15	3.12	0.03
12.00	2.41	2.40	0.01	4.01	3.99	0.02	7.84	7.78	0.06
12.25	1.98	1.97	0.01	3.47	3.43	0.04	7.04	6.90	0.14
12.50	1.06	1.05	0.01	1.86	1.81	0.05	3.76	3.62	0.14
12.75	0.69	0.67	0.02	1.19	1.15	0.04	2.36	2.26	0.10
13.00	0.53	0.52	0.01	0.91	0.88	0.03	1.77	1.71	0.06
13.25	0.42	0.41	0.01	0.70	0.69	0.01	1.37	1.33	0.04
13.50	0.34	0.34	0.00	0.57	0.56	0.01	1.11	1.08	0.03
13.75	0.29	0.28	0.01	0.48	0.47	0.01	0.93	0.90	0.03

14.00	0.26	0.26	0.00	0.44	0.43	0.01	0.85	0.83	0.02
14.25	0.24	0.24	0.00	0.40	0.40	0.00	0.78	0.76	0.02
14.50	0.22	0.22	0.00	0.37	0.36	0.01	0.71	0.69	0.02
14.75	0.20	0.20	0.00	0.33	0.33	0.00	0.64	0.63	0.01
15.00	0.18	0.18	0.00	0.30	0.29	0.01	0.58	0.56	0.02
15.25	0.17	0.16	0.01	0.27	0.27	0.00	0.53	0.51	0.02
15.50	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.49	0.02
15.75	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.47	0.01
16.00	0.15	0.14	0.01	0.24	0.24	0.00	0.47	0.46	0.01
16.25	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.44	0.01
16.50	0.14	0.13	0.01	0.22	0.22	0.00	0.43	0.42	0.01
16.75	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.40	0.01
17.00	0.12	0.12	0.00	0.20	0.20	0.00	0.39	0.38	0.01
17.25	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.36	0.01
17.50	0.11	0.11	0.00	0.18	0.18	0.00	0.35	0.34	0.01
17.75	0.11	0.10	0.01	0.17	0.17	0.00	0.33	0.33	0.00
18.00	0.10	0.10	0.00	0.17	0.16	0.01	0.32	0.31	0.01
18.25	0.10	0.09	0.01	0.16	0.15	0.01	0.30	0.29	0.01
18.50	0.09	0.09	0.00	0.15	0.15	0.00	0.29	0.29	0.00
18.75	0.09	0.09	0.00	0.15	0.15	0.00	0.29	0.28	0.01
19.00	0.09	0.09	0.00	0.15	0.15	0.00	0.29	0.28	0.01
19.25	0.09	0.09	0.00	0.15	0.14	0.01	0.28	0.27	0.01
19.50	0.09	0.09	0.00	0.14	0.14	0.00	0.28	0.27	0.01
19.75	0.09	0.09	0.00	0.14	0.14	0.00	0.27	0.26	0.01
20.00	0.09	0.08	0.01	0.14	0.14	0.00	0.27	0.26	0.01
20.25	0.08	0.08	0.00	0.14	0.13	0.01	0.26	0.26	0.00
20.50	0.08	0.08	0.00	0.13	0.13	0.00	0.26	0.25	0.01
20.75	0.08	0.08	0.00	0.13	0.13	0.00	0.25	0.25	0.00
21.00	0.08	0.08	0.00	0.13	0.13	0.00	0.25	0.24	0.01
21.25	0.08	0.08	0.00	0.13	0.12	0.01	0.24	0.24	0.00
21.50	0.08	0.07	0.01	0.13	0.12	0.01	0.24	0.23	0.01
21.75	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
22.00	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.22	0.01
22.25	0.07	0.07	0.00	0.12	0.12	0.00	0.22	0.22	0.00
22.50	0.07	0.07	0.00	0.12	0.11	0.01	0.22	0.21	0.01
22.75	0.07	0.07	0.00	0.11	0.11	0.00	0.21	0.21	0.00
23.00	0.07	0.07	0.00	0.11	0.11	0.00	0.21	0.20	0.01
23.25	0.07	0.06	0.01	0.11	0.11	0.00	0.20	0.20	0.00
23.50	0.06	0.06	0.00	0.11	0.10	0.01	0.20	0.20	0.00
23.75	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
24.00	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	3.48			
ft/ft	0.016			
hr	0.021	+		+
				0.021

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
	260			
ft	260			
ft/ft	0.010			
ft/s	2.00			
hr	0.036	+		+
				0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	3	4	5	6
ft ²	3.14159	4.90874		
ft	6.28319	7.85398		
ft	0.50	0.63		
ft/ft	0.005	0.004		
	0.013	0.013		
ft/s	5.11	5.36		
ft	264	124		
hr	0.014	0.006		
				0.021

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	4.14			
ft/ft	0.016			
hr	0.019	+		+
				= 0.019

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2			
	Paved			
ft	260			
ft/ft	0.01			
ft/s	2			
hr	0.036	+		+
				= 0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. \text{Flow length, L}$$

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3			
ft ²	3.141593	4.90874		
ft	6.283185	7.85398		
ft	0.50	0.63		
ft/ft	0.005	0.004		
	0.013	0.013		
ft/s	5.11	5.36		
ft	264	124		
hr	0.014	+	0.006	+
				= 0.021

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID				
ft ²				
ft				
ft				
ft/ft				

17. $\frac{V}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

ft/s					
ft					
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1			
	Short Grass			
	0.150			
ft	47			
in	3.48			
ft/ft	0.020			
hr	0.086	+		= 0.086

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
ft	182			
ft/ft	0.010			
ft/s	2.00			
hr	0.025	+		= 0.025

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6		
ft ²	1.22718	3.14159	4.90874			
ft	3.92699	6.28319	7.85398			
ft	0.31	0.50	0.63			
ft/ft	0.009	0.005	0.004			
	0.013	0.013	0.013			
ft/s	5.01	5.11	5.36			
ft	23	264	124			
hr	0.001	+	0.014	+	0.006	= 0.022

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID	7	8		
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				=
				0.000

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1				
	Short Grass				
	0.15				
ft	47				
in	4.14				
ft/ft	0.02				
hr	0.078	+		+	
					= 0.078

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	182				
ft/ft	0.01				
ft/s	2				
hr	0.025	+		+	
					= 0.025

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

18. Flow length, L

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3	4	5	6	
ft ²	1.227185	3.14159	4.90874		
ft	3.926991	6.28319	7.85398		
ft	0.31	0.50	0.63		
ft/ft	0.009	0.005	0.004		
	0.013	0.013	0.013		
ft/s	5.01	5.11	5.36		
ft	23	264	124		
hr	0.001	+	0.014	+	0.006
					= 0.022

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$$r = \frac{a}{p_w}$$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID	7	8			
ft ²					
ft					
ft					
ft/ft					

17.
$$V = \frac{Q}{nA}$$

Compute V

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

Compute T_t

ft/s				
ft				
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	3.48			
ft/ft	0.024			
hr	0.018	+		+
				0.018

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
	68			
ft	68			
ft/ft	0.031			
ft/s	3.58			
hr	0.005	+		+
				0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID				
ft ²	0.7854	1.76715		
ft	3.14159	4.71239		
ft	0.25	0.38		
ft/ft	0.005	0.010		
	0.013	0.013		
ft/s	3.22	5.96		
ft	108	306		
hr	0.009	0.014	+	+
				0.024

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	4.14			
ft/ft	0.024			
hr	0.017	+		+
				0.017

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
ft	68			
ft/ft	0.031			
ft/s	3.58			
hr	0.005	+		+
				0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID				
ft ²	0.785398	1.76715		
ft	3.141593	4.71239		
ft	0.25	0.38		
ft/ft	0.005	0.010		
	0.013	0.013		
ft/s	3.22	5.96		
ft	108	306		
hr	0.009	+	0.014	+
				0.024

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$r = \frac{a}{p_w}$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

Segment ID				
ft ²				
ft				
ft				
ft/ft				
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 **0.05**

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t

Segment ID	1			
	Short Grass			
	0.150			
ft	75			
in	3.48			
ft/ft	0.012			
hr	0.153	+		= 0.153

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
	57			
ft	0.023			
ft/ft	3.00			
ft/s	0.005	+		= 0.005
hr	0.005	+		= 0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L
 19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID					
ft ²	1.76715	1.76715			
ft	4.71239	4.71239			
ft	0.38	0.38			
ft/ft	0.007	0.010			
	0.013	0.013			
ft/s	4.99	5.96			
ft	120	306			
hr	0.007	+	0.014	+	= 0.021

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$$

Compute T_t

Segment ID	1				
	Short Grass				
	0.15				
ft	75				
in	4.14				
ft/ft	0.012				
hr	0.140	+		+	0.140

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	57				
ft/ft	0.023				
ft/s	3				
hr	0.005	+		+	0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

18. Flow length, L

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID					
ft ²	1.767146	1.76715			
ft	4.712389	4.71239			
ft	0.38	0.38			
ft/ft	0.007	0.010			
	0.013	0.013			
ft/s	4.99	5.96			
ft	120	306			
hr	0.007	0.014	+		0.021

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$$r = \frac{a}{p_w}$$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID					
ft ²					
ft					
ft					
ft/ft					

17. $v = \frac{C}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

ft/s					
ft					
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t

Segment ID	1						
	Asphalt						
	0.011						
ft	100						
in	3.48						
ft/ft	0.016						
hr	0.021	+		+		=	0.021

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2						
	Paved						
	0.010						
ft	260						
ft/ft	0.010						
ft/s	2.00						
hr	0.036	+		+		=	0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	3	4	5	6						
ft ²	3.14159	4.90874								
ft	6.28319	7.85398								
ft	0.50	0.63								
ft/ft	0.005	0.004								
	0.013	0.013								
ft/s	5.11	5.36								
ft	264	124								
hr	0.014	0.006			+		+		=	0.021

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID	7				
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$$

Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	4.14			
ft/ft	0.016			
hr	0.019	+		+
				= 0.019

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2			
	Paved			
ft	260			
ft/ft	0.01			
ft/s	2			
hr	0.036	+		+
				= 0.036

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3			
ft ²	3.141593	4.90874		
ft	6.283185	7.85398		
ft	0.50	0.63		
ft/ft	0.005	0.004		
	0.013	0.013		
ft/s	5.11	5.36		
ft	264	124		
hr	0.014	+	0.006	+
				= 0.021

12. Cross sectional flow area, a
13. Wetted perimeter, p_w

$$r = \frac{a}{p_w}$$

Compute r

14. Hydraulic radius, r
15. Channel slope, s

$$16. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

Segment ID	4			
ft ²				
ft				
ft				
ft/ft				
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 **0.08**

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17.
$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

19.
$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w}$$
 Compute r

Compute V

Compute T_t

Segment ID	4	5	6	
ft ²				
ft				
ft				
ft/ft				
ft/s				
ft				
hr		+		+
				=
				0.000
				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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$$

Compute T_t

Segment ID	1				
	Short Grass				
	0.150				
ft	74				
in	4.14				
ft/ft	0.033				
hr	0.092	+		+	
					= 0.092

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID					
ft					
ft/ft					
ft/s					
hr		+		+	
					= 0.000

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. \text{Flow length, L}$$

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	3	4	5	6	
ft ²	1.767146	3.14159	4.90874		
ft	4.712389	6.28319	7.85398		
ft	0.38	0.50	0.63		
ft/ft	0.005	0.005	0.004		
ft/s	4.21	5.11	5.36		
ft	138	198	124		
hr	0.009	+	0.011	+	0.006
					= 0.026

12. Cross sectional flow area, a
 13. Wetted perimeter, p_w
 14. Hydraulic radius, r
 15. Channel slope, s
 16. Manning's roughness coeff., n
- $$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

$$r = \frac{a}{p_w}$$

Compute r

Segment ID	7	8			
ft ²					
ft					
ft					
ft/ft					

17. $V = \frac{Q}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

ft/s					
ft					
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t

Segment ID	1			
	Asphalt			
	0.011			
ft	100			
in	3.48			
ft/ft	0.024			
hr	0.018	+		+
				0.018

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
	54			
ft	54			
ft/ft	0.190			
ft/s	2.80			
hr	0.005	+		+
				0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID				
ft ²	0.7854	1.76715		
ft	3.14159	4.71239		
ft	0.25	0.38		
ft/ft	0.005	0.010		
	0.013	0.013		
ft/s	3.22	5.96		
ft	116	306		
hr	0.010	0.014	+	+
				0.024

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

18. Flow length, L

$$T_t = \frac{L}{3600 V}$$

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

$$r = \frac{a}{p_w} \quad \text{Compute } r$$

Compute V

Compute T_t

Segment ID					
ft ²					
ft					
ft					
ft/ft					
ft/s					
ft					
hr		+		+	
					= 0.000
					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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

$$6. T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$$

Compute T_t

Segment ID	1				
	Asphalt				
	0.011				
ft	100				
in	4.14				
ft/ft	0.024				
hr	0.017	+		+	0.017

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

$$11. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID	2				
	Paved				
ft	54				
ft/ft	0.19				
ft/s	2.8				
hr	0.005	+		+	0.005

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Compute V

$$18. T_t = \frac{L}{3600 V}$$

Compute T_t

Segment ID					
ft ²	0.785398	1.76715			
ft	3.141593	4.71239			
ft	0.25	0.38			
ft/ft	0.005	0.010			
	0.013	0.013			
ft/s	3.22	5.96			
ft	116	306			
hr	0.010	0.014	+		0.024

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$$r = \frac{a}{p_w}$$

Compute r

$$17. V = \frac{1.49 r^{2/3} s^{1/2}}{n}$$

Segment ID					
ft ²					
ft					
ft					
ft/ft					

17. $v = \frac{C}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

ft/s					
ft					
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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t

Segment ID	1			
	Short Grass			
	0.240			
ft	41			
in	3.48			
ft/ft	0.015			
hr	0.125	+		= 0.125

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID	2			
	Paved			
ft	67			
ft/ft	0.007			
ft/s	1.70			
hr	0.011	+		= 0.011

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$ Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$ Compute T_t

Segment ID					
ft ²	1.76715	1.76715			
ft	4.71239	4.71239			
ft	0.38	0.38			
ft/ft	0.005	0.010			
	0.013	0.013			
ft/s	4.21	5.96			
ft	228	306			
hr	0.015	+	0.014	+	= 0.029

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)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (Table 15-1)
3. Flow Length, L
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s

6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$

Compute T_t

Segment ID	1			
	Short Grass			
	0.24			
ft	41			
in	4.14			
ft/ft	0.015			
hr	0.115	+		+
				= 0.115

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Figure 15-4)

11. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID	2			
	Paved			
ft	67			
ft/ft	0.007			
ft/s	1.70			
hr	0.011	+		+
				= 0.011

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r
15. Channel slope, s
16. Manning's roughness coeff., n

$r = \frac{a}{p_w}$

Compute r

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

18. Flow length, L

19. $T_t = \frac{L}{3600 V}$

Compute T_t

Segment ID				
ft ²	1.767146	1.76715		
ft	4.712389	4.71239		
ft	0.38	0.38		
ft/ft	0.005	0.010		
	0.013	0.013		
ft/s	4.21	5.96		
ft	228	306		
hr	0.015	+	0.014	+
				= 0.029

12. Cross sectional flow area, a

13. Wetted perimeter, p_w

$r = \frac{a}{p_w}$

Compute r

14. Hydraulic radius, r

15. Channel slope, s

16. Manning's roughness coeff., n

17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$

Compute V

Segment ID				
ft ²				
ft				
ft				
ft/ft				
ft/s				

18. Flow length, L

$$19. T_t = \frac{L}{3600 V}$$

Compute T_t

ft							
hr		+		+		=	0.000

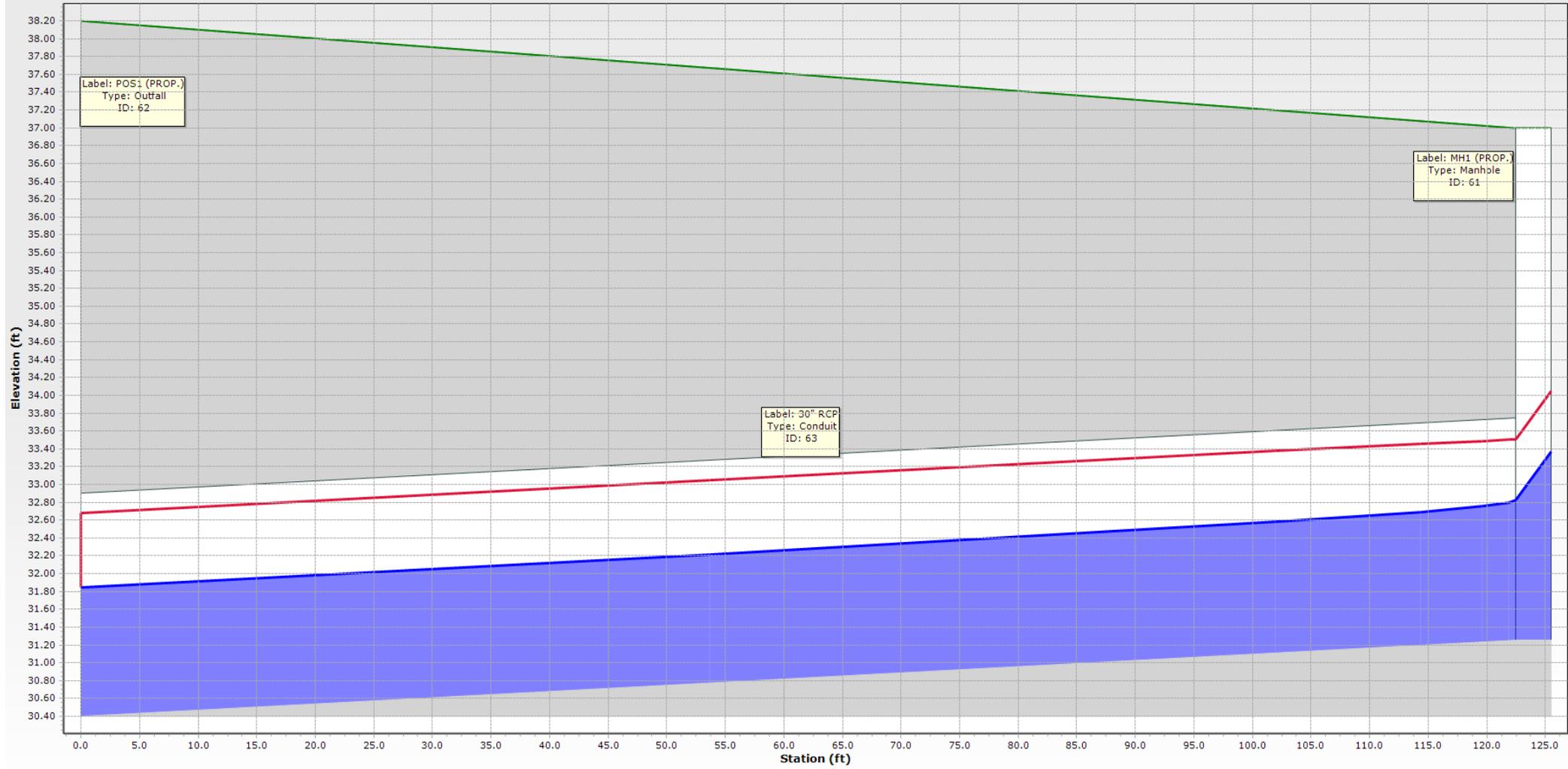
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

hr **0.16**

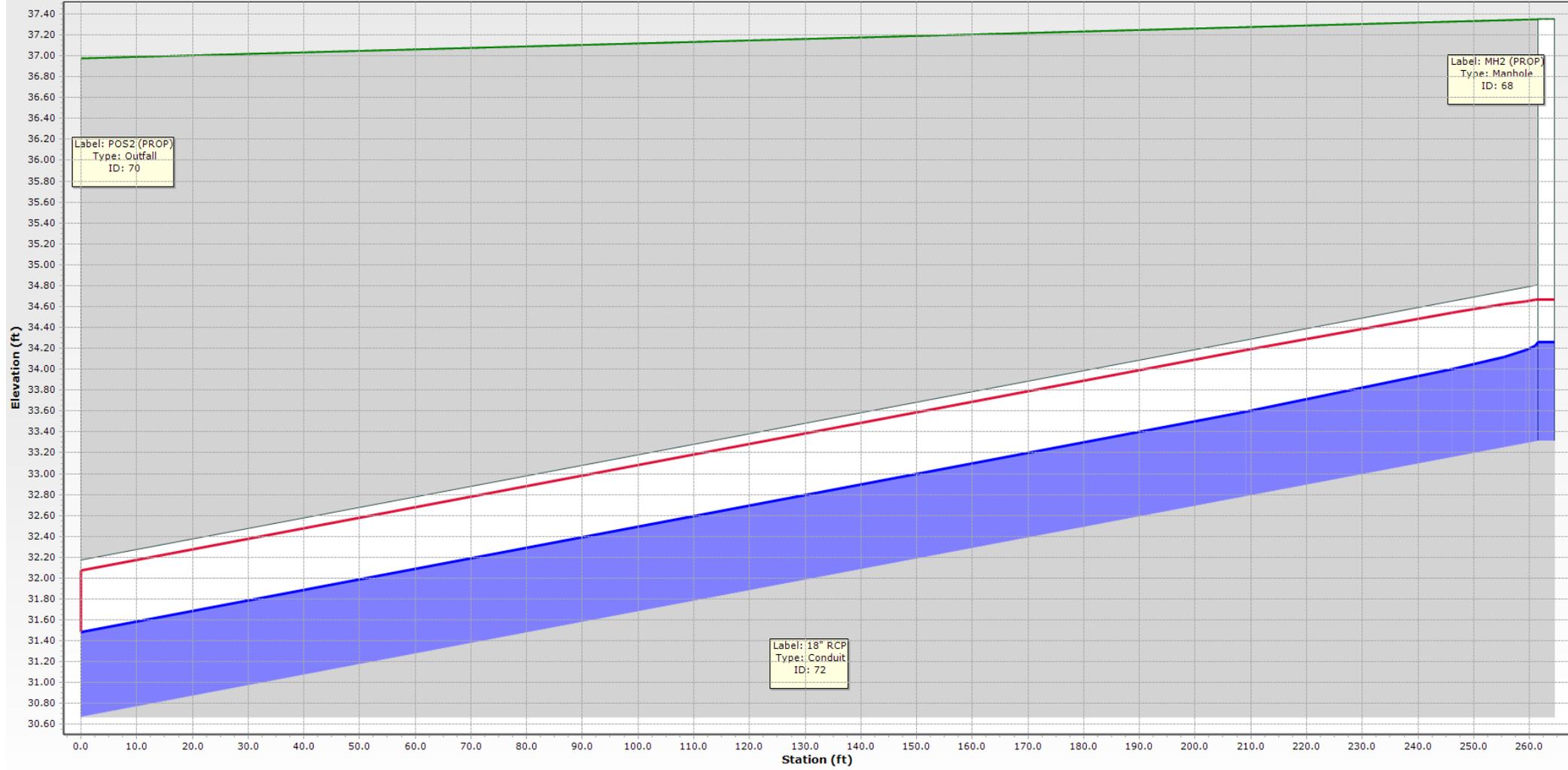
FlexTable: Conduit Table

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

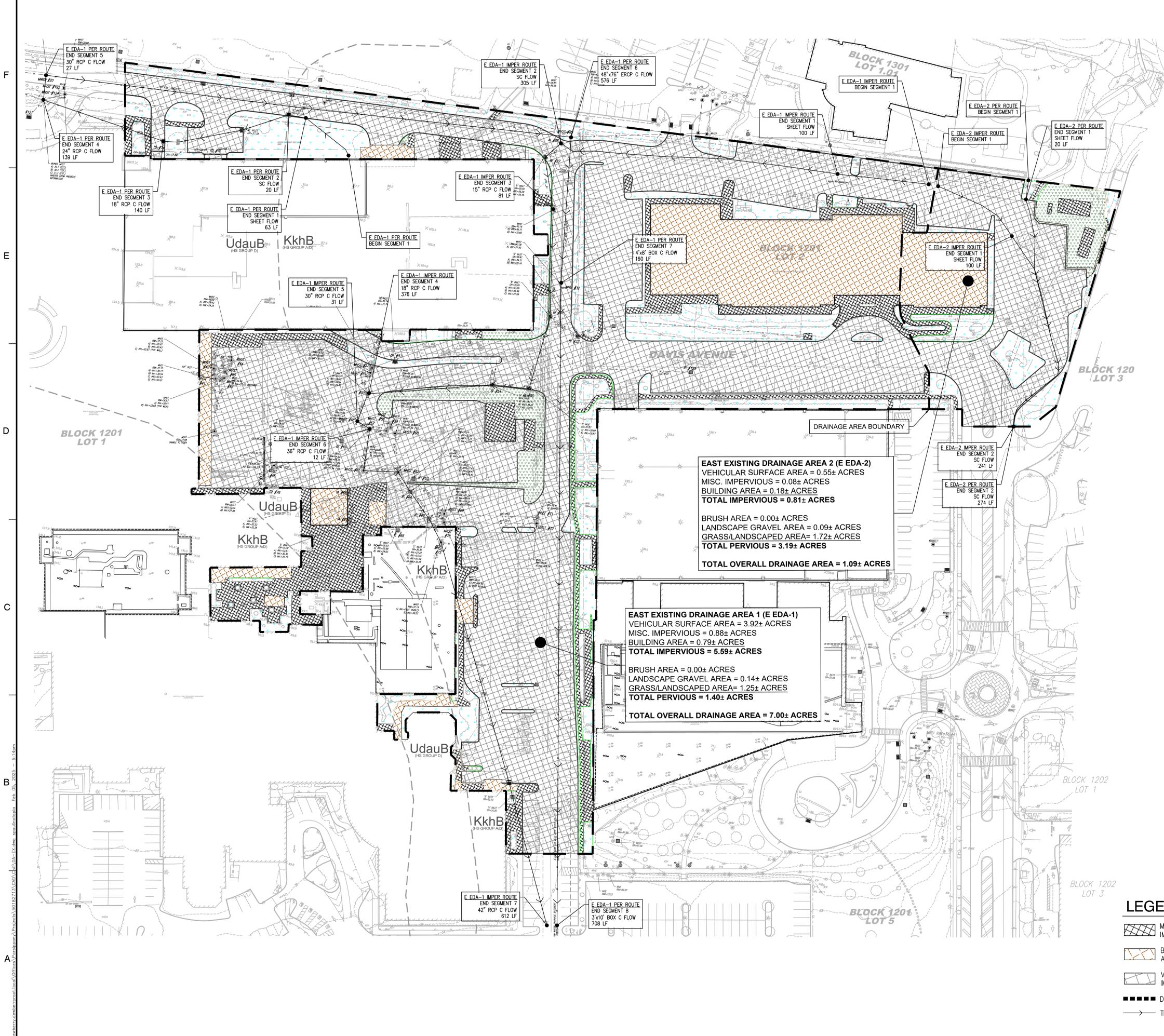


W PDA-2 18" RCP - Base



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



N.J.S.P.C.S.
MAD 1983 (2011)

EAST EXISTING DRAINAGE AREA 2 (E EDA-2)
 VEHICULAR SURFACE AREA = 0.55± ACRES
 MISC. IMPERVIOUS = 0.08± ACRES
 BUILDING AREA = 0.18± ACRES
 TOTAL IMPERVIOUS = 0.81± ACRES
 BRUSH AREA = 0.00± ACRES
 LANDSCAPE GRAVEL AREA = 0.09± ACRES
 GRASS/LANDSCAPED AREA = 1.72± ACRES
 TOTAL PERVIOUS = 3.19± ACRES
 TOTAL OVERALL DRAINAGE AREA = 1.09± ACRES

EAST EXISTING DRAINAGE AREA 1 (E EDA-1)
 VEHICULAR SURFACE AREA = 3.92± ACRES
 MISC. IMPERVIOUS = 0.88± ACRES
 BUILDING AREA = 0.79± ACRES
 TOTAL IMPERVIOUS = 5.59± ACRES
 BRUSH AREA = 0.00± ACRES
 LANDSCAPE GRAVEL AREA = 0.14± ACRES
 GRASS/LANDSCAPED AREA = 1.25± ACRES
 TOTAL PERVIOUS = 1.40± ACRES
 TOTAL OVERALL DRAINAGE AREA = 7.00± ACRES

LEGEND

- MISCELLANEOUS IMPERVIOUS AREA
- BUILDING IMPERVIOUS AREA
- VEHICULAR IMPERVIOUS AREA
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW PATH
- GRASS/LANDSCAPING AREA
- BRUSH PLANTING AREA
- LANDSCAPE GRAVEL SURFACE AREA



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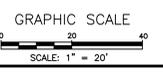
JERSEY SHORE UNIVERSITY MEDICAL CENTER
 PRELIMINARY AND FINAL SITE PLAN/PERIOPERATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE
 LOT CONSOLIDATION OF BLOCK 120

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

Mario Iannelli, P.E.
New Jersey Professional Engineer License No. GE41749

SCALE



No.	DATE	BY	Description
REVISIONS			
		CFS/FD	
		MA	
		CFS/MI	
	02/07/2025		

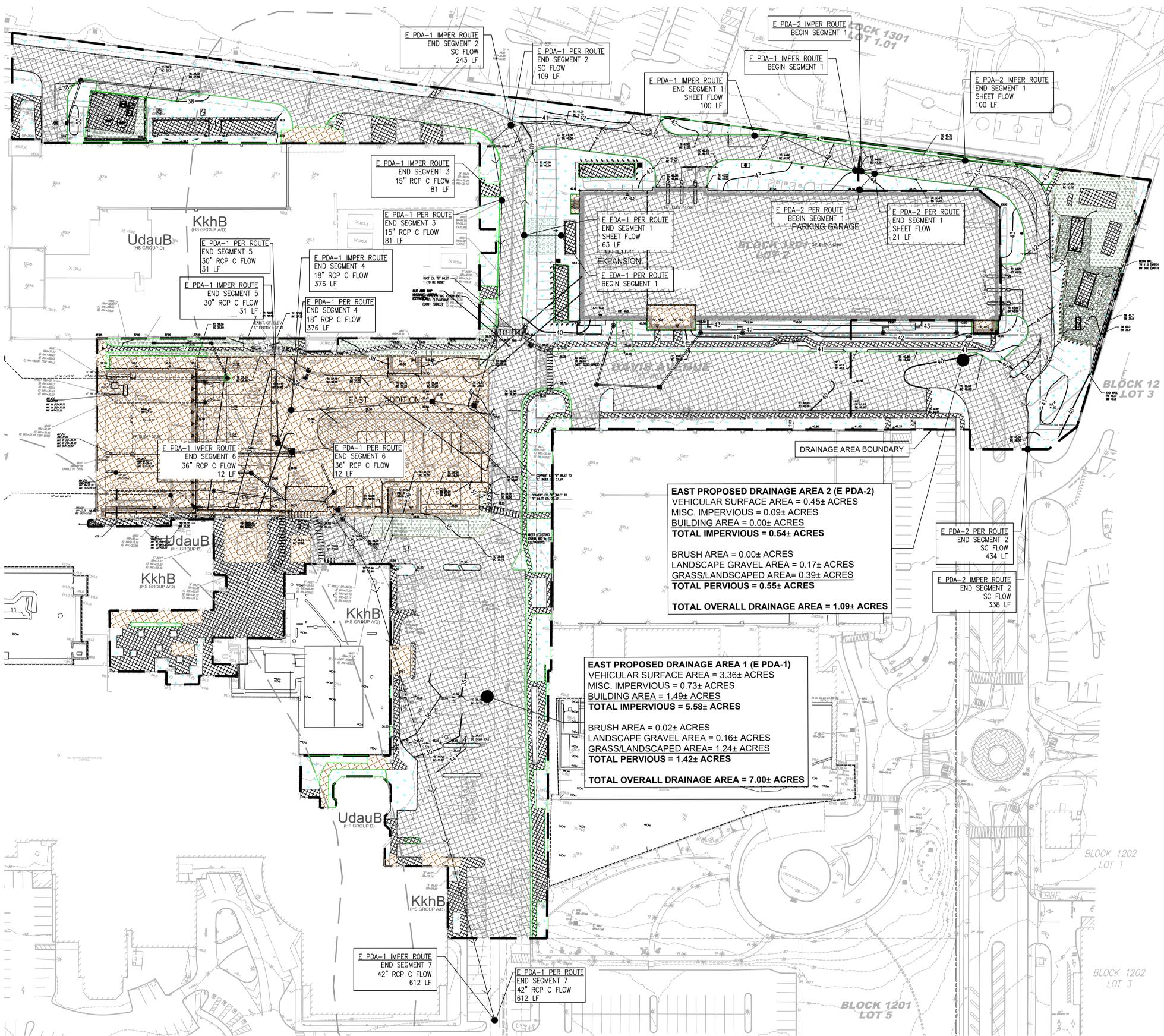
EAST EXISTING DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-01A

SHEET NO.

N.J.S.P.C.S. MAD 1983 (2011)



EAST PROPOSED DRAINAGE AREA 2 (E PDA-2)
 VEHICULAR SURFACE AREA = 0.45± ACRES
 MISC. IMPERVIOUS = 0.09± ACRES
 BUILDING AREA = 0.00± ACRES
TOTAL IMPERVIOUS = 0.54± ACRES
 BRUSH AREA = 0.00± ACRES
 LANDSCAPE GRAVEL AREA = 0.17± ACRES
 GRASS/LANDSCAPED AREA = 0.39± ACRES
TOTAL PERVIOUS = 0.55± ACRES
TOTAL OVERALL DRAINAGE AREA = 1.09± ACRES

EAST PROPOSED DRAINAGE AREA 1 (E PDA-1)
 VEHICULAR SURFACE AREA = 3.36± ACRES
 MISC. IMPERVIOUS = 0.73± ACRES
 BUILDING AREA = 1.49± ACRES
TOTAL IMPERVIOUS = 5.58± ACRES
 BRUSH AREA = 0.02± ACRES
 LANDSCAPE GRAVEL AREA = 0.16± ACRES
 GRASS/LANDSCAPED AREA = 1.24± ACRES
TOTAL PERVIOUS = 1.42± ACRES
TOTAL OVERALL DRAINAGE AREA = 7.00± ACRES

LEGEND

MISCELLANEOUS IMPERVIOUS AREA	GRASS/LANDSCAPING AREA
BUILDING IMPERVIOUS AREA	BRUSH PLANTING AREA
VEHICULAR IMPERVIOUS AREA	LANDSCAPE GRAVEL SURFACE AREA
DRAINAGE AREA BOUNDARY	
TIME OF CONCENTRATION FLOW PATH	

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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 PERIODIC EXPANSION (EAST ADDITION) AND PARKING GARAGE
 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
 BLOCK 1201, LOTS 1, 2, 4 & 5
 TAX MAP SHEET 18 BOROUGH OF NEPTUNE CITY
 BLOCK 115, LOT 2

1945 CORLIES AVENUE & 2020 CORLIES AVENUE
 MONMOUTH COUNTY NEW JERSEY

Mario Iannelli, P.E.
 New Jersey Professional Engineer License No. GE41749

SCALE
 GRAPHIC SCALE
 0 40 80
 SCALE: 1" = 40'

No.	DATE	BY	Description
01	02/10/25	SPT	SCD SUBMISSION

REVISIONS

DRAWN BY	CFS/FD
APPROVED BY	MA
CHECKED BY	CFS/MI
DATE	02/07/2025

EAST PROPOSED DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-02A

SHEET NO.

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

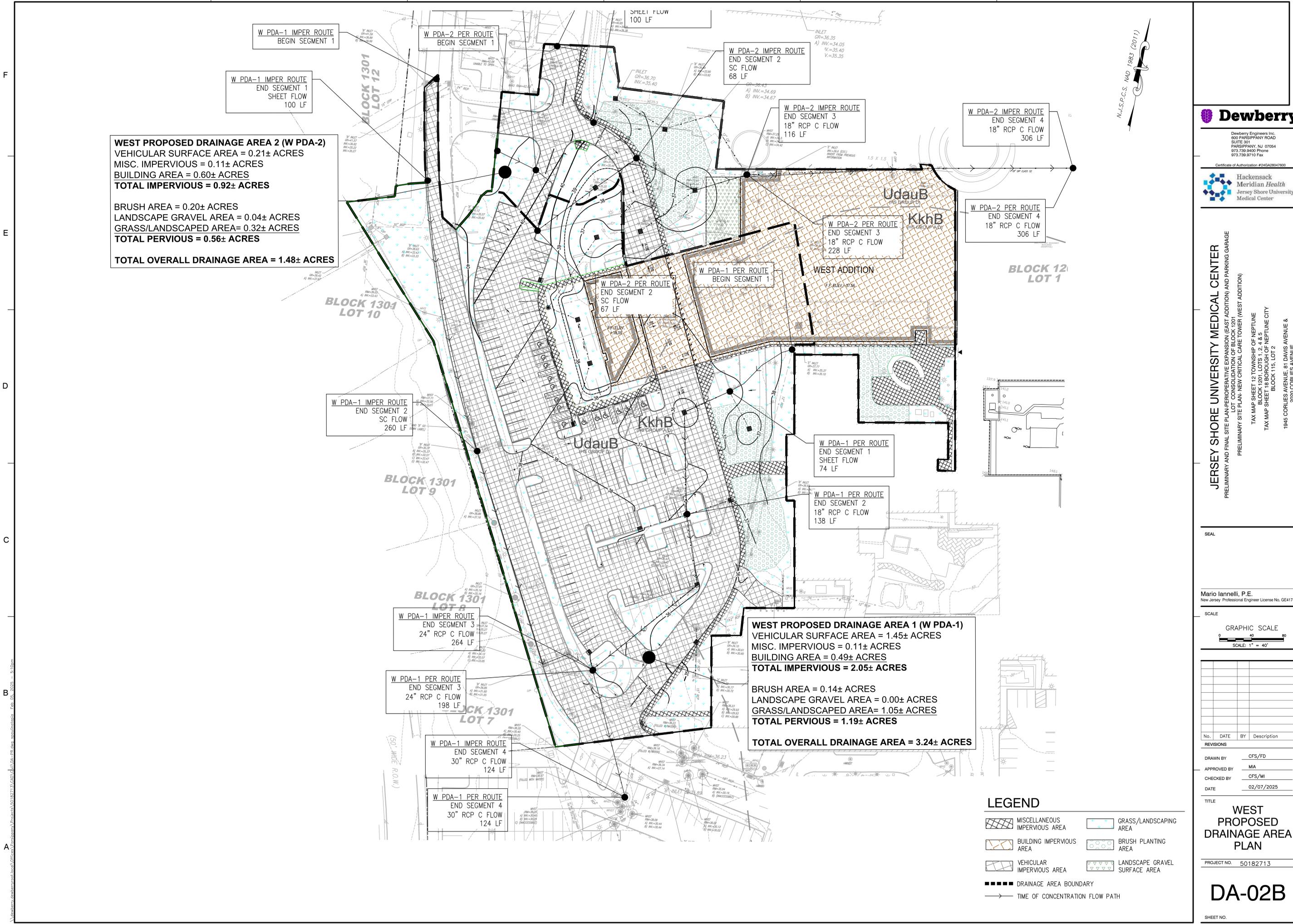
BRUSH AREA = 0.20± ACRES
 LANDSCAPE GRAVEL AREA = 0.04± ACRES
 GRASS/LANDSCAPED AREA = 0.32± ACRES
TOTAL PERVIOUS = 0.56± ACRES

TOTAL OVERALL DRAINAGE AREA = 1.48± ACRES

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



LEGEND

	MISCELLANEOUS IMPERVIOUS AREA		GRASS/LANDSCAPING AREA
	BUILDING IMPERVIOUS AREA		BRUSH PLANTING AREA
	VEHICULAR IMPERVIOUS AREA		LANDSCAPE GRAVEL SURFACE AREA
	DRAINAGE AREA BOUNDARY		
	TIME OF CONCENTRATION FLOW PATH		

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Hackensack Meridian Health
 Jersey Shore University Medical Center

JERSEY SHORE UNIVERSITY MEDICAL CENTER
 PRELIMINARY AND FINAL SITE PLAN PERIODICATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE LOT CONSOLIDATION OF BLOCK 1201
 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 & DAVIS AVENUE &
 2020 CORLIES AVENUE
 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'

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		MIA	APPROVED BY
		CFS/MI	CHECKED BY
	02/07/2025		DATE

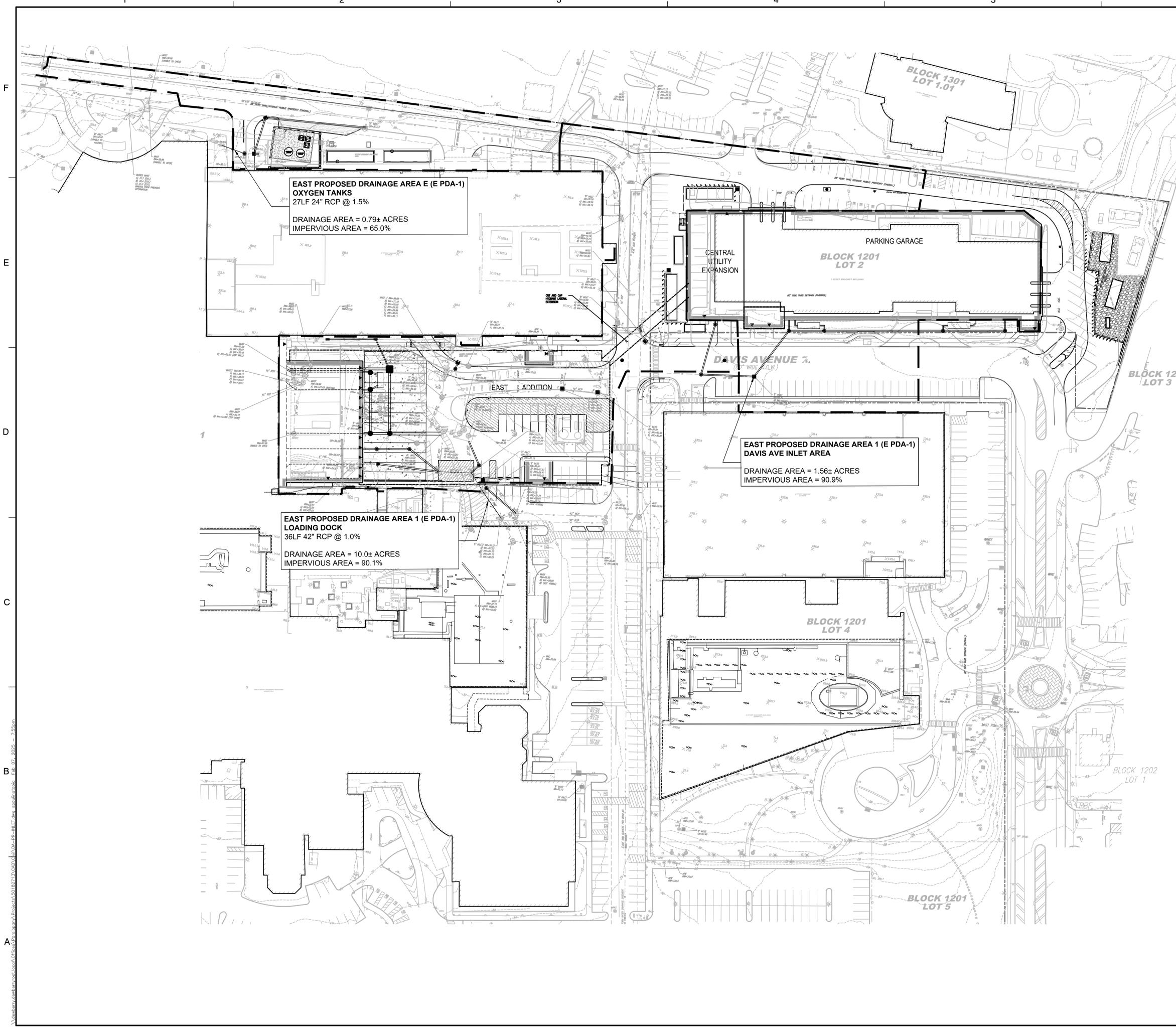
TITLE

WEST PROPOSED DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-02B

SHEET NO.



N.J.S.P.C.S. MAD 1983 (2011)



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JERSEY SHORE UNIVERSITY MEDICAL CENTER
PRELIMINARY AND FINAL SITE PLAN PER OPERATIVE EXPANSION (EAST ADDITION) AND PARKING GARAGE
LOT CONSOLIDATION OF BLOCK 1201 (LOTS 1 AND 2)
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BLOCK 115, LOT 2

1945 CORLIES AVENUE & DAVIS AVENUE &
2020 CORLIES AVENUE
MONMOUTH COUNTY NEW JERSEY
TOWNSHIP OF NEPTUNE

SEAL

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New Jersey Professional Engineer License No. GE41749

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SCALE: 1" = 40'

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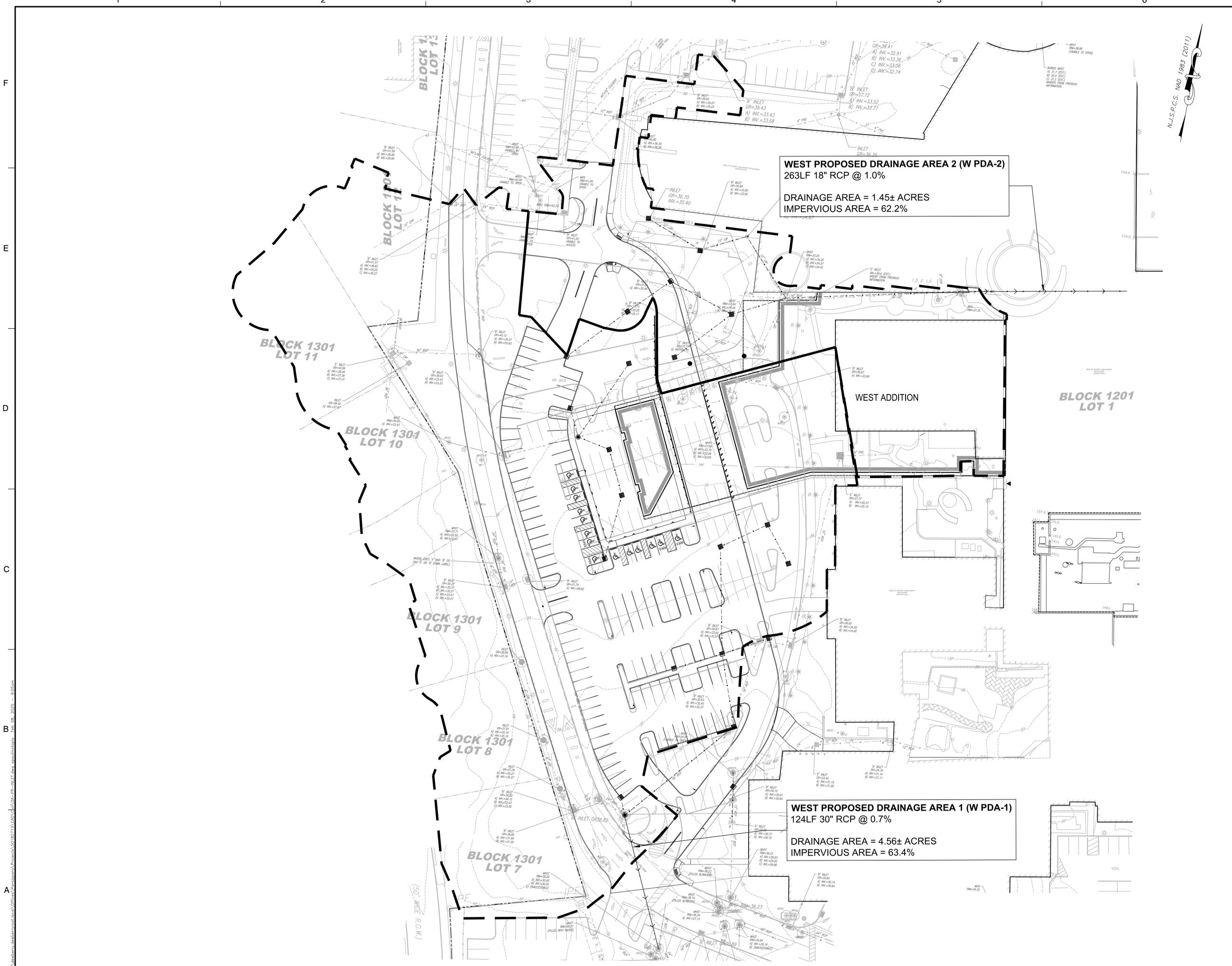
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CHECKED BY: CFS/MI
DATE: 02/07/2025

TITLE
EAST PROPOSED INLET DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-03A

SHEET NO.



WEST PROPOSED DRAINAGE AREA 2 (W PDA-2)
 263LF 18" RCP @ 1.0%
 DRAINAGE AREA = 1.45± ACRES
 IMPERVIOUS AREA = 62.2%

WEST PROPOSED DRAINAGE AREA 1 (W PDA-1)
 124LF 30" RCP @ 0.7%
 DRAINAGE AREA = 4.56± ACRES
 IMPERVIOUS AREA = 63.4%



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 973.739.9710 Fax



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 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'

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REVISIONS			
		CFS/FD	DRAWN BY
		MIA	APPROVED BY
		CFS/MI	CHECKED BY
	02/07/2025		DATE

TITLE
WEST PROPOSED INLET DRAINAGE AREA PLAN

PROJECT NO. 50182713

DA-03B

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 Feb 05, 2025 9:55am
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APPENDIX V:
Operations & Maintenance Manual



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

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- B. STORMWATER MANAGEMENT FACILITIES 4
- C. PREVENTATIVE MAINTENANCE PROCEDURES 4
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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. Maintenance of Vegetated, Grass, and Landscaped Areas:

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.

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 sprayed 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.

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.

Component No. Component Name	For Inspector		For Maintenance Crew
	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
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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.