

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

For

**Ben Hur Brunswick, LLC
Proposed Warehouse Expansion**

**2400 U.S. Route 1
Block 148, Lots 5.03
Township of North Brunswick,
Middlesex County,
New Jersey**

Prepared by:



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TABLE OF CONTENTS

	<u>Page No.</u>
Executive Summary.....	1
I. Design Overview	1
II. Existing Site Conditions	2
III. Proposed Site Conditions.....	3
IV. Water Quantity	3
V. Water Quality.....	4
VI. Groundwater Recharge.....	4
VII. Conclusion	4

APPENDIX

- NRCS Web Soil Survey
- Existing Time of Concentration (TC) Calculations
- Runoff Curve Number (CN) Calculations – Existing
- Runoff Curve Number (CN) Calculations – Proposed
- Hydrograph Summary Reports – Existing and Proposed Conditions 2 yr. 10 yr. & 100 yr.
- Drainage Area Maps

EXECUTIVE SUMMARY

SITE DESCRIPTION

The project area consists of Block 148, Lot 5.03, as shown on the Township of North Brunswick Tax Map Sheet No. 34, located in the Township of North Brunswick, Middlesex County, New Jersey. The site is approximately 21.94 acres and contains an existing 246,049 SF warehouse building with accompanying site amenities. The proposed development includes an expansion to the existing warehouse for a total gross floor area of 280,650 SF.

The subject site is bordered to the north by wooded areas and commercial developments beyond, to the east by wooded areas and a residential development beyond, to the south by wooded areas with commercial buildings beyond, and to the west by US Highway Route 1 and commercial and residential development beyond.

The existing conditions of the tract have been verified by the Boundary and Topographic Survey as prepared by Dynamic Survey, LLC.

PROJECT DESCRIPTION

This project consists of the construction of a 46,641 SF proposed warehouse expansion. A small portion of the existing building will be demolished and existing utilities that are located within the area of the expansion will be relocated, however, the existing building will remain mostly undisturbed. In addition to the proposed expansion, a portion of the existing asphalt parking area at the southern corner of the site will be converted into open area. The open space area will feature four (4) proposed land-banked parking spaces. The amount of impervious coverage upon completion of the project will be 413,003 SF, and the proposed development will result in a net decrease in impervious coverage when compared to existing conditions.

I. DESIGN OVERVIEW

This report has been prepared to define and analyze the stormwater drainage conditions that would occur as a result of the redevelopment of Block 148, Lot 5.03, in the Township of North Brunswick, Middlesex County as discussed above.

This Stormwater Management Study identifies and describes the manner by which the design and performance measures set forth by NJAC 7:8 and the Township of North Brunswick Stormwater Management Ordinance are achieved to minimize the adverse impact of stormwater runoff quantity and quality in receiving water bodies and groundwater recharge into subsurface soils.

The scope of the study includes the proposed building expansion, existing parking area, existing stormwater collection system, and other associated improvements as shown on the accompanying engineering drawings.

Based upon the scope of the project, the development is classified as a major development as it disturbs more than one (1) acre of land. Therefore, the project is subject to the NJDEP Stormwater Management Rules of NJAC 7:8. Because the proposed development will result in a net decrease in impervious coverage, the project is not subject to the New Jersey Standards for Soil Erosion and Sediment Control runoff rate reduction requirements. It should be noted that due to the decrease in impervious coverage on site, the peak runoff rates will be reduced under proposed conditions and will therefore meet the runoff quantity standards set forth in NJAC 7:8-5.4.

As previously stated, the proposed development is decreasing the net impervious area to the entire site. As a result of the decreased impervious coverage, the development is increasing the amount of positive groundwater recharge which satisfies NJAC 7:8 groundwater recharge requirement. Additionally, because the project does not propose an increase of one-quarter acre or more of impervious surface, the stormwater runoff quality standards of NJAC 7:8 do not apply.

The primary design constraint is to demonstrate that the post development runoff hydrographs do not exceed at any point in time, the predevelopment runoff hydrographs for the 2, 10 and 100-year storms. Based on the reduction in impervious coverage, the proposed development promotes reduction of stormwater runoff volume and peak flow rates in the post development condition. It should be noted that there is an existing above ground basin with an outlet control structure that is currently being used to handle the quantity aspects of the 2, 10, and 100-year storms. As a result of the net decrease in impervious area to the site, no additional strain should occur on the existing stormwater infrastructure.

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

II. EXISTING SITE CONDITIONS

The existing conditions of the tract have been verified by the Boundary and Topographic Survey, dated 03/31/2020, last revised 11/03/2020, prepared by Dynamic Survey, LLC. This information has been utilized to establish an Existing Conditions Drainage Area Map which is included within the Appendix of this Report. The tract has been evaluated with the following drainage sub-watershed areas as depicted on the Existing Drainage Area Map:

Existing Study Area Northeast Wetlands: This study area consists of the northern half of the site. The tract consists of a portion of the existing building, the existing aboveground basin on-site and wooded wetlands areas. Stormwater runoff from this area is tributary to the existing aboveground basin which discharges to the wetlands offsite.

Existing Study Area Southwest Woods: This study area consists of the southern half of the site. The tract consists of the remainder of the existing building, parking areas and wooded areas. Stormwater runoff from this area is tributary to the existing stormwater conveyance system and ultimately discharges to a flared end section located in the wooded area offsite.

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

MIDDLESEX COUNTY SOIL SURVEY INFORMATION		
SOIL TYPE (SYMBOL)	SOIL TYPE (NAME)	HYDROLOGIC SOIL GROUP
NkrA	Nxon Moderately Well Drained Variant Loam	C
FavAr	Fallsington bedrock Variant Loam	D

III. PROPOSED SITE CONDITIONS

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

Proposed Study Area Northeast Wetlands: This study area consists of the northern half of the site. The tract consists of a portion of the existing building, the proposed building expansion area, the existing aboveground basin on-site and wooded wetlands areas. Stormwater runoff from this area is tributary to the existing aboveground basin which discharges to the wetlands offsite.

Proposed Study Area Southwest Woods: This study area consists of the southern half of the site. The tract consists the remainder of the existing building, parking areas, new open space area and wooded areas. Stormwater runoff from this area is tributary to the existing stormwater conveyance system and ultimately discharges to a flared end section located in the wooded area offsite.

IV. WATER QUANTITY

The proposed development has been designed to comply with NJAC 7:8-5.4(a)3.i, which states that “the post-construction runoff hydrographs for the 2, 10 and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events.” As a result of the project, the total amount of impervious surface will be reduced and thus will result in a reduction in runoff volume. Please refer to the Hydrograph Plots in the Appendix of this report for additional information.

V. WATER QUALITY

NJAC 7:8-5.5(a) states, “Stormwater runoff quality standards are applicable when the major development results in an increase of one-quarter acre or more of regulated motor vehicle surface”. A key aspect of the development includes reducing the amount of regulated motor vehicle surface on the site by converting a portion of the existing parking area into an open space area. As a result, the proposed development is not subject to NJAC 7:8 stormwater runoff quality standards.

VI. GROUNDWATER RECHARGE

As previously stated, the proposed development generates a net decrease in impervious area on site. The decreased impervious area allows the proposed development to maintain 100 percent of the average annual pre-construction groundwater recharge volume for the while promoting additional positive groundwater recharge. As a result, the development satisfies the groundwater recharge requirement set forth in NJAC 7:8-5.4(b)(1).

VII. CONCLUSION

The proposed development has been designed with provisions for the safe and efficient control of stormwater runoff in a manner that will not adversely impact the existing drainage patterns, adjacent roadways, or adjacent parcels.

Post-construction hydrographs will not exceed pre-construction hydrographs at any point for the 2, 10 and 100 yr. storm events for the entire site satisfying the stormwater runoff quantity aspect. The proposed development is exempt from stormwater runoff quality due to the reduction in regulated motor vehicle surface. The proposed development will generate a net decrease in impervious area and as a result will allow it to maintain 100 percent of the average annual pre-construction groundwater recharge, satisfying the groundwater recharge aspect.

With this stated, it is evident that the proposed development will not have a negative impact on the existing stormwater management system, water quality or groundwater recharge on site or within the vicinity of the subject parcel.

APPENDIX

NRCS WEB SOIL SURVEY

Hydrologic Soil Group—Middlesex County, New Jersey



Map Scale: 1:3,540 if printed on A landscape (11" x 8.5") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

Soil Rating Points

- A
- A/D
- B
- B/D

Soils

- C
- C/D
- D
- Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Middlesex County, New Jersey
 Survey Area Data: Version 16, Jun 1, 2020

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

Date(s) aerial images were photographed: Jun 22, 2019—Jul 13, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
FavAr	Fallsington bedrock substratum variant loam, 0 to 2 percent slopes, rarely flooded	B/D	3.6	13.8%
NkrA	Nixon moderately well drained variant loam, 0 to 2 percent slopes	C	22.4	86.2%
Totals for Area of Interest			25.9	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

**EXISTING TIME OF CONCENTRATION (TC)
CALCULATIONS**



1904 Main Street, Lake Como, NJ 07719
(732) 974-0198

Date: 9/29/2021
Project: Prop. Warehouse Expansion
Project No: 2246-99-001

Calculated By: TJB
Checked By: RDM

Worksheet 3: Time of Concentration (T_c) Calculations

Land Condition: Existing
Drainage Area: NE (Wetlands)

• **Sheet Flow:**

1. Surface Description
2. Manning's Roughness Coefficient, n
3. Flow Length, L { total $L \leq 100$ ft }
4. Two-Year 24-hour Rainfall, p_2 for Middlesex County
5. Land Slope, s (ft/ft)
6. Travel Time, $T_t = \frac{0.007 (n L)^{0.8}}{p_2^{0.5} s^{0.4}}$

AB				
Smooth Surfaces				
0.011				
100.0 ft				
3.35 in	3.35 in		3.35 in	
0.010 ft/ft				
0.026 hr	+	0.000 hr	+	0.000 hr
			=	
				0.026 hr

• **Shallow Concentrated Flow:**

7. Surface Description
8. Flow Length, L
9. Watercourse Slope, s
10. Average velocity, V { see Figure 3.1 }
11. Travel Time, $T_t = \frac{L}{3600 V}$

BC	DE			
Paved	Unpaved			
192.0 ft	74.3 ft			
0.010 ft/ft	0.005 ft/ft			
1.99 ft/s	1.18 ft/s			
0.027 hr	+	0.017 hr	+	0.000 hr
			=	
				0.044 hr

• **Channel Flow:**

12. Pipe Diameter, D
13. Cross-Sectional Flow Area, A
14. Wetted Perimeter, p_w
15. Hydraulic Radius, $r = A / p_w$
16. Channel Slope, s
17. Pipe Material
18. Manning's Roughness Coefficient, n
19. Velocity, $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
20. Flow Length, L
21. Travel Time, $T_t = \frac{L}{3600 V}$
22. Watershed or subarea Time of Concentration, T_c { add T_t in steps 6, 11 and 21 }

CD				
15 in				
1.227 sf				
3.9 ft				
0.3 ft				
0.006 ft/ft				
HDPE				
0.010				
5.21 ft/s				
489.3				
0.026 hr	+	0.000 hr	+	0.000 hr
			=	
				0.026 hr
				0.096 hr
				5.8 min



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Calculated By: TJB
Checked By: RDM

Worksheet 3: Time of Concentration (T_c) Calculations

Land Condition: Existing
Drainage Area: SW (Woods)

• **Sheet Flow:**

1. Surface Description
2. Manning's Roughness Coefficient, n
3. Flow Length, L { total $L \leq 100$ ft }
4. Two-Year 24-hour Rainfall, p_2 for Middlesex County
5. Land Slope, s (ft/ft)
6. Travel Time, $T_t = \frac{0.007 (n L)^{0.8}}{p_2^{0.5} s^{0.4}}$

AB				
Smooth Surfaces				
0.011				
100.0 ft				
3.35 in	3.35 in		3.35 in	
0.007 ft/ft				
0.031 hr	+	0.000 hr	+	0.000 hr
			=	
				0.031 hr

• **Shallow Concentrated Flow:**

7. Surface Description
8. Flow Length, L
9. Watercourse Slope, s
10. Average velocity, V { see Figure 3.1 }
11. Travel Time, $T_t = \frac{L}{3600 V}$

BC				
Paved				
249.9 ft				
0.010 ft/ft				
1.99 ft/s				
0.035 hr	+	0.000 hr	+	0.000 hr
			=	
				0.035 hr

• **Channel Flow:**

12. Pipe Diameter, D
13. Cross-Sectional Flow Area, A
14. Wetted Perimeter, p_w
15. Hydraulic Radius, $r = A / p_w$
16. Channel Slope, s
17. Pipe Material
18. Manning's Roughness Coefficient, n
19. Velocity, $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
20. Flow Length, L
21. Travel Time, $T_t = \frac{L}{3600 V}$
22. Watershed or subarea Time of Concentration, T_c { add T_t in steps 6, 11 and 21 }

CD	DE			
18 in	24 in			
1.767 sf	3.142 sf			
4.7 ft	6.3 ft			
0.4 ft	0.5 ft			
0.004 ft/ft	0.006 ft/ft			
RCP	RCP			
0.013	0.013			
3.53 ft/s	5.64 ft/s			
293.0	560.0			
0.023 hr	+	0.028 hr	+	0.000 hr
			=	
				0.051 hr
				0.117 hr
				7.0 min

**RUNOFF CURVE NUMBER (CN) CALCULATIONS
EXISTING**



EXISTING DRAINAGE AREA SUMMARY AND AVERAGE CURVE NUMBER(CN) CALCULATIONS

Project: Proposed Warehouse Expansion
 Job #: 2246-99-001
 Location: North Brunswick, NJ

Computed By: TJB
 Checked By: RDM
 Date: 1/7/2022

Drainage Area	Impervious Area (acre)	Impervious Area (sf)	Curve Number (CN) Used	HSG C - Open Space Area (acre)	HSG C - Open Space Area (sf)	Curve Number (CN) Used	HSG C - Wooded Area (acre)	HSG C - Wooded Area (sf)	HSG C - Curve Number (CN) Used	HSG D - Open Space Area (acre)	HSG D - Open Space Area (sf)	Curve Number (CN) Used	HSG D - Wooded Area (acre)	HSG D - Wooded Area (sf)	Curve Number (CN) Used	Avg. Perv. Curve Number	Total Pervious Area (acres)	Total Area (acres)	TC (Min.)
SA Northeast (Wetlands)	4.48	195,064	98	3.08	134,078	74	3.48	151,612	70	0.50	21,629	80	2.03	88,384	77	73	9.08	13.56	6
SA Southwest (Woods)	4.96	216,143	98	0.87	38,001	74	2.02	88,090	70	0.16	7,014	80	0.35	15,175	77	72	3.40	8.37	7
Total	9.44	412,027.00		3.95	172,080.40		5.50	239,702.00		0.66	28,643.00		2.38	103,559.00		12.49	12.49	21.93	

Per County Soil Survey -	FavAr	HSG C	Soil
Per County Soil Survey -	NkRA	HSG D	Soil

Description	Runoff Curve Number (CN) (HSG A)	Runoff Curve Number (CN) (HSG B)	Runoff Curve Number (CN) (HSG C)	Runoff Curve Number (CN) (HSG D)
Impervious Surface	98	98	98	98
Open Space (lawn) (good)	39	61	74	80
Woods (good)	30	55	70	77

Fallisington bedrock substratum variant loam
 Nixon moderately well drained variant loam

**RUNOFF CURVE NUMBER (CN) CALCULATIONS
PROPOSED**



PROPOSED DRAINAGE AREA SUMMARY AND AVERAGE CURVE NUMBER(CN) CALCULATIONS

Project: Prop. Warehouse Expansion
 Job #: 2246-99-001
 Location: North Brunswick

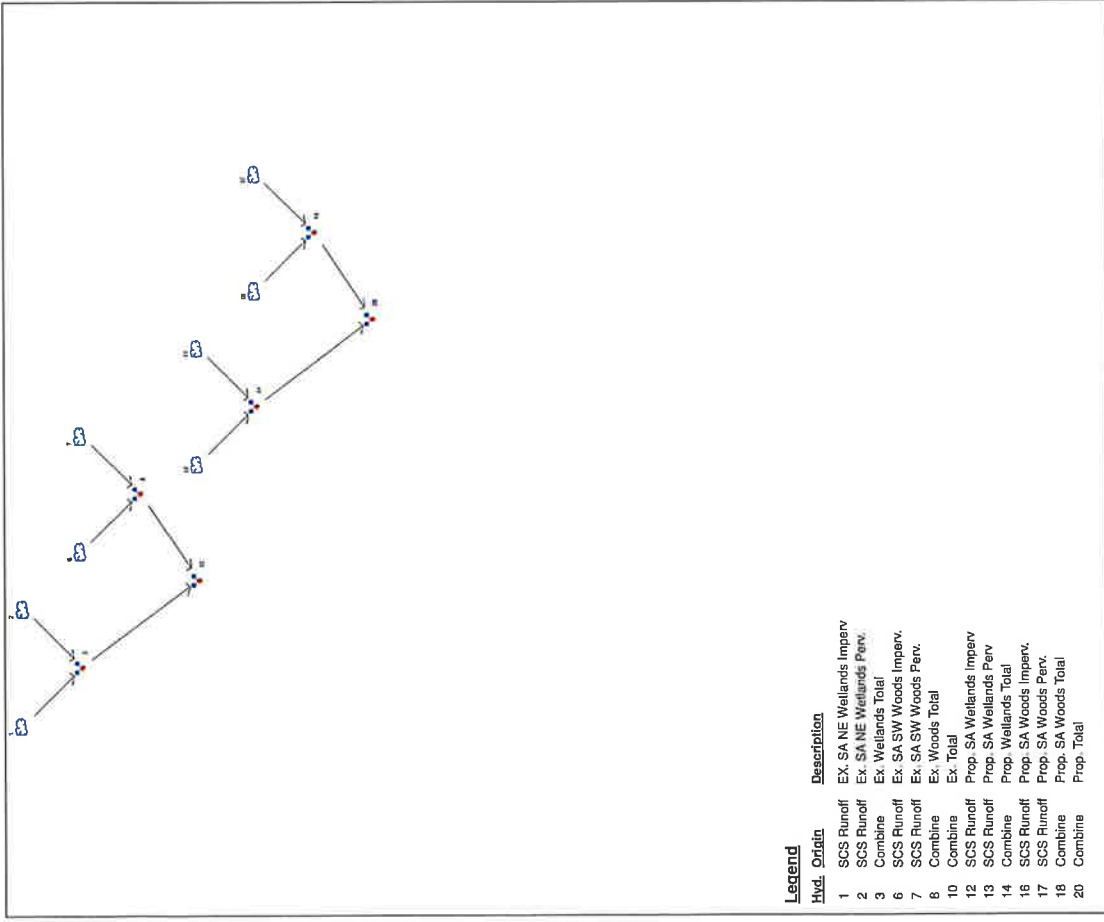
Computed By: TJB
 Checked By: RDM
 Date: 1/7/2021

Drainage Area	Impervious Area (acre)	Impervious Area (sf)	Curve Number (CN) Used	HSG C - Open Space Area (acre)	HSG C - Open Space Area (sf)	Curve Number (CN) Used	HSG C - Wooded Area (acre)	HSG C - Wooded Area (sf)	HSG C - Curve Number (CN) Used	HSG D - Open Space Area (acre)	HSG D - Open Space Area (sf)	Curve Number (CN) Used	HSG D - Wooded Area (acre)	HSG D - Wooded Area (sf)	HSG D - Curve Number (CN) Used	Avg. Periv. Curve Number	Total Pervious Area (acres)	Total Area (acres)	TC (Min.)
Prop. SA Wetlands	5.08	221,103	88	2.59	112,909	74	3.43	149,529	70	0.50	21,929	80	2.03	88,394	77	73	8.55	13.63	6
Prop. SA Woods	4.35	189,995	98	1.41	61,512	74	2.02	88,093	70	0.16	7,014	80	0.35	15,175	77	72	3.94	8.31	6
Total	9.44	411,098		4.00	174,421		5.45	237,619		0.66	28,943		2.38	103,569		12.49	21.93		
Per County Soil Survey - Favor			HSG C	Soil	Falington bedrock substratum variant loam														
Per County Soil Survey - NkrA			HSG D	Soil	Nixon moderately well drained variant loam														
Description	Runoff Curve Number (CN)																		
Impervious Surface	(HSG A)																		
Open Space (lawn) (good)	(HSG B)																		
Woods (good)	(HSG C)																		
	(HSG D)																		

**HYDROGRAPH SUMMARY REPORTS
EXISTING AND PROPOSED CONDITIONS
2YR, 10YR & 100YR STORMS**

Watershed Model Schematic

Hydralfow Hydrographs by Inletsolve v9.1



Legend

Hvd. Origin	Description
1	SCS Runoff
2	EX. SA NE Wellands Imperv
3	Combine
6	SCS Runoff
7	EX. SA SW Woods Imperv.
8	Combine
10	Ex. Total
12	SCS Runoff
13	Prop. SA Wellands Imperv
14	Combine
16	SCS Runoff
17	Prop. SA Woods Imperv.
18	Combine
20	Prop. Total

Project: ExpProp 2,10,25,100 yr - Min TC.gpw

Thursday, Sep 1, 2022

Hydrograph Return Period Recap

Hydralfow Hydrographs by Inletsolve v9.1

Hvd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)							Hydrograph description		
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr		100-Yr	
1	SCS Runoff	*****	10.19	*****	*****	*****	15.68	*****	*****	*****	26.52	EX. SA NE Wellands imperv
2	SCS Runoff	*****	7.537	*****	*****	*****	17.51	*****	*****	*****	39.77	Ex. SA NE Wellands Perv.
3	Combine	1, 2	17.72	*****	*****	*****	33.18	*****	*****	*****	66.30	Ex. Wellands Total
6	SCS Runoff	*****	11.28	*****	*****	*****	17.36	*****	*****	*****	29.37	Ex. SA SW Woods Imperv.
7	SCS Runoff	*****	2.642	*****	*****	*****	6.303	*****	*****	*****	14.58	EX. SA SW Woods Perv.
8	Combine	6, 7	13.92	*****	*****	*****	23.66	*****	*****	*****	43.94	Ex. Woods Total
10	Combine	3, 8,	31.64	*****	*****	*****	56.85	*****	*****	*****	110.24	Ex. Total
12	SCS Runoff	*****	11.55	*****	*****	*****	17.78	*****	*****	*****	30.08	Prop. SA Wellands Imperv
13	SCS Runoff	*****	7.097	*****	*****	*****	16.48	*****	*****	*****	37.45	Prop. SA Wellands Perv
14	Combine	12, 13	18.65	*****	*****	*****	34.26	*****	*****	*****	67.53	Prop. Wellands Total
16	SCS Runoff	*****	9.914	*****	*****	*****	15.26	*****	*****	*****	25.81	Prop. SA Woods Imperv.
17	SCS Runoff	*****	3.051	*****	*****	*****	7.304	*****	*****	*****	16.89	Prop. SA Woods Perv.
18	Combine	16, 17	12.98	*****	*****	*****	22.56	*****	*****	*****	42.71	Prop. SA Woods Total
20	Combine	14, 18,	31.62	*****	*****	*****	56.83	*****	*****	*****	110.24	Prop. Total

Proj. filer: ExpProp 2,10,25,100 yr - Min TC.gpw

Thursday, Sep 1, 2022

Hydrograph Summary Report

Hydroflow Hydrographs by Imielisolve v9.1

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time Interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total surge used (cuft)	Hydrograph description
1	SCS Runoff	10.19	3	729	50,368	---	-----	-----	EX. SA NE Wetlands Imperv
2	SCS Runoff	7.537	3	729	35,372	---	-----	-----	Ex. SA NE Wetlands Perv.
3	Combine	17.72	3	729	85,740	1, 2	-----	-----	Ex. Wetlands Total
6	SCS Runoff	11.28	3	729	55,785	---	-----	-----	Ex. SA SW Woods Imperv.
7	SCS Runoff	2.642	3	729	12,558	---	-----	-----	Ex. SA SW Woods Perv.
8	Combine	13.92	3	729	68,324	6, 7	-----	-----	Ex. Woods Total
10	Combine	31.64	3	729	154,064	3, 6,	-----	-----	Ex. Total
12	SCS Runoff	11.55	3	729	57,114	---	-----	-----	Prop. SA Wetlands Imperv
13	SCS Runoff	7.037	3	729	33,307	---	-----	-----	Prop. SA Wetlands Perv
14	Combine	18.65	3	729	90,421	12, 13	-----	-----	Prop. Wetlands Total
16	SCS Runoff	9.914	3	729	49,019	---	-----	-----	Prop. SA Woods Imperv.
17	SCS Runoff	3.061	3	729	14,553	---	-----	-----	Prop. SA Woods Perv.
18	Combine	12.98	3	729	63,572	16, 17	-----	-----	Prop. SA Woods Total
20	Combine	31.62	3	729	153,994	14, 18,	-----	-----	Prop. Total
ExpProp.2,10,25,100 yr - Min TC.gpw									Return Period: 2 Year
Thursday, Sep 1, 2022									Thursday, Sep 1, 2022

Hydrograph Report

Hydroflow Hydrographs by Imielisolve v9.1

Thursday, Sep 1, 2022

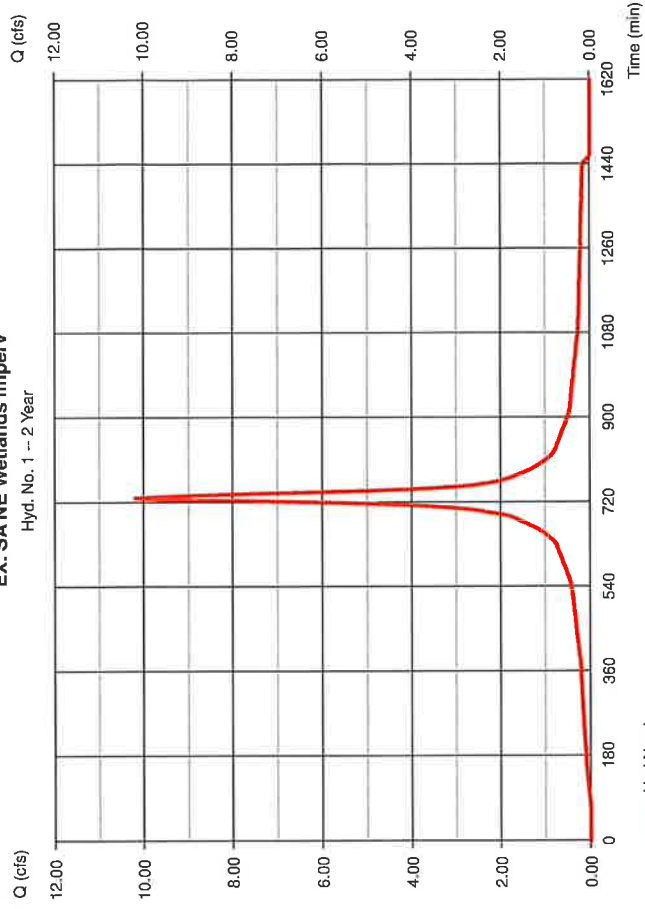
Hyd. No. 1

EX. SA NE Wetlands Imperv

Hydrograph type	= SCS Runoff	Peak discharge	= 10.19 cfs
Storm frequency	= 2 yrs	Time to peak	= 729 min
Time interval	= 3 min	Hyd. volume	= 50,368 cuft
Drainage area	= 4.480 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= USER	Time of conc. (Tc)	= 6.00 min
Total precip.	= 3.35 in	Distribution	= Custom
Storm duration	= NOAA Atlas 14 Type-D.cds	Shape factor	= 285

EX. SA NE Wetlands Imperv

Hyd. No. 1 -- 2 Year



Precipitation Report

Hydralflow Hydrographs by Intellisolve v8.1

Thursday, Sep 1, 2022

Hyd. No. 1

EX. SA NE Wetlands Imperv
 Storm Frequency = 2 yrs
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Time interval = 3 min
 Distribution = Custom

Hydrograph Report

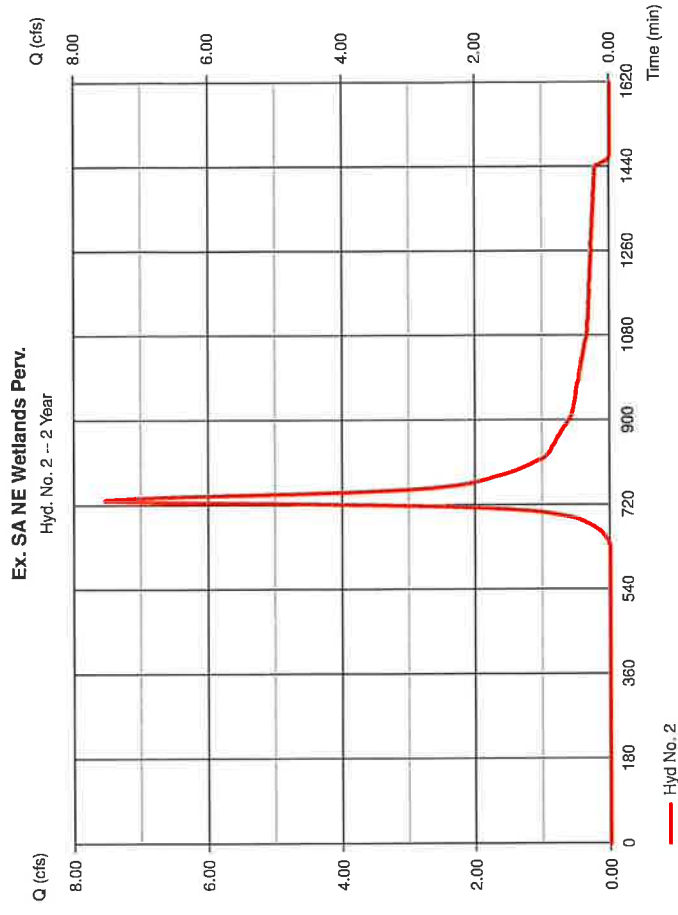
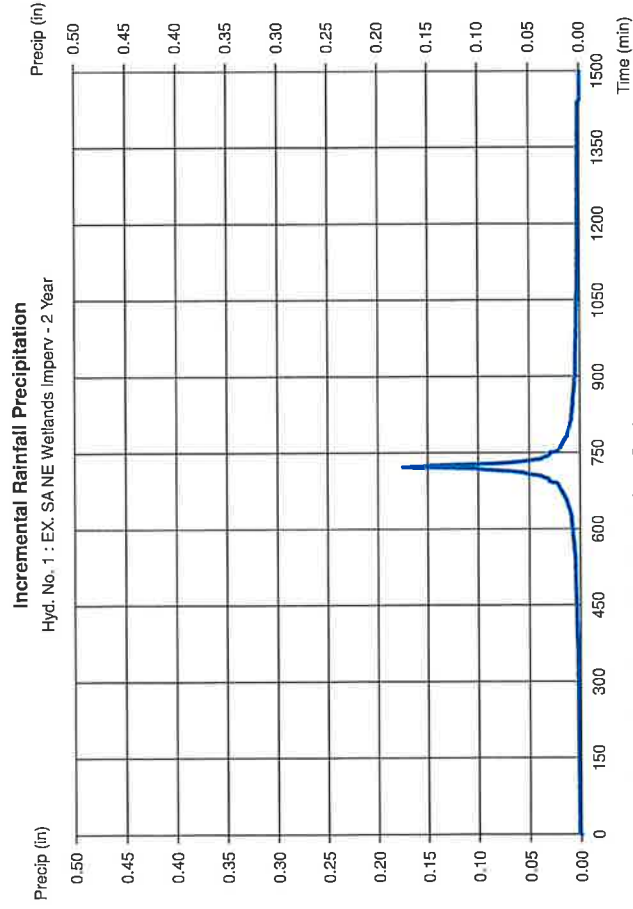
Hydralflow Hydrographs by Intellisolve v8.1

Thursday, Sep 1, 2022

Hyd. No. 2

EX. SA NE Wetlands Perv.
 Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 9.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 7.537 cfs
 Time to peak = 729 min
 Hyd. volume = 35,372 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



— Custom Design Storm -- NOAA Atlas 14 Type-D.cds

— Hyd No. 2

Precipitation Report

Hydrow Hydrographs by Inletsolve v3.1

Thursday, Sep 1, 2022

Hyd. No. 2

Ex. SA NE Wetlands Periv.
 Storm Frequency = 2 yrs
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Hydrograph Report

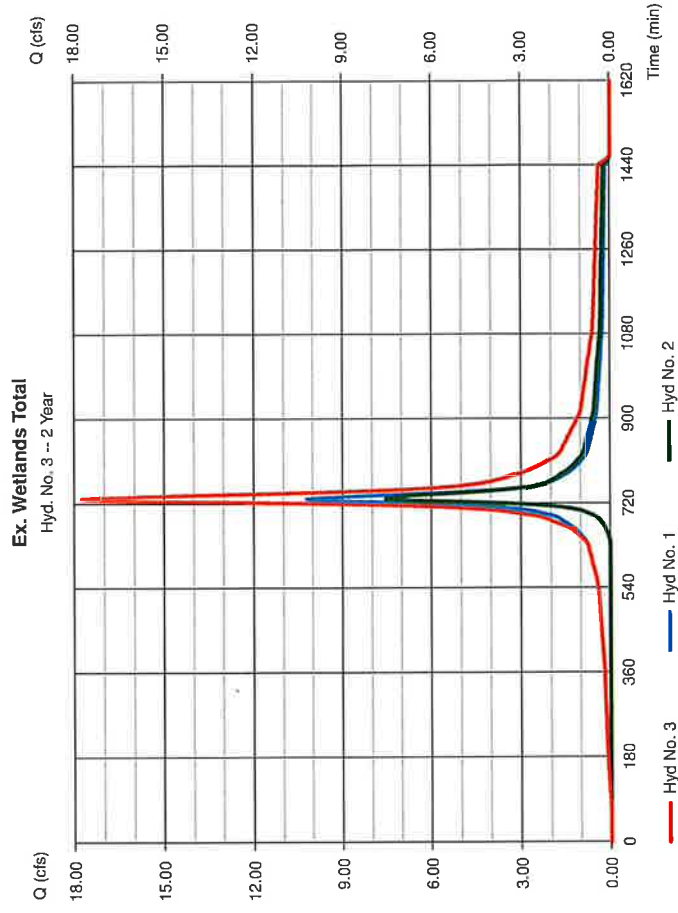
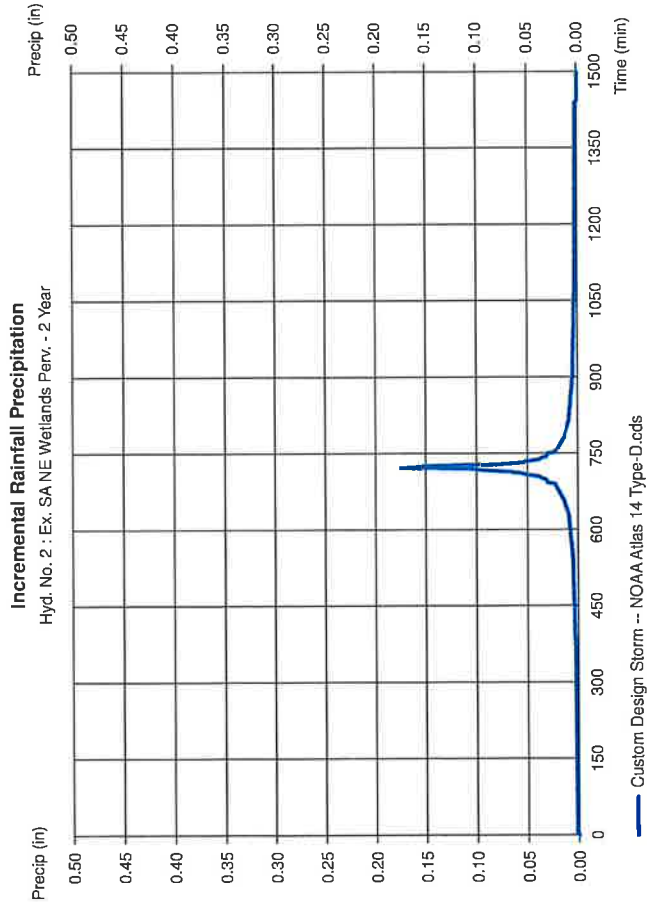
Hydrow Hydrographs by Inletsolve v3.1

Thursday, Sep 1, 2022

Hyd. No. 3

Ex. Wetlands Total
 Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hydys. = 1, 2

Peak discharge = 17.72 cfs
 Time to peak = 729 min
 Hyd. volume = 85,740 cuft
 Contrib. drain. area = 13,560 ac

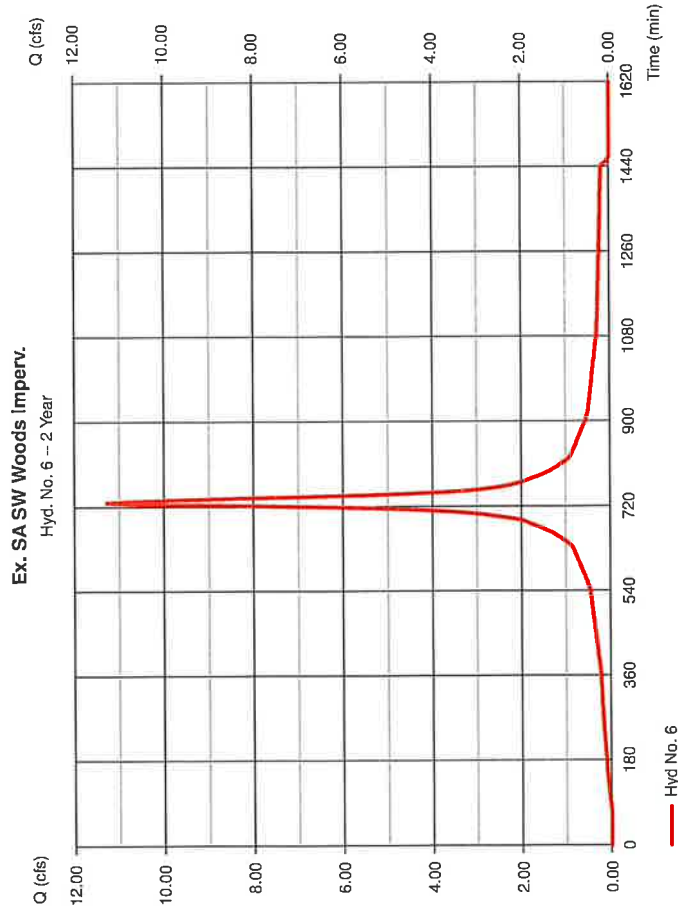


Hydrograph Report

Hydroflow Hydrographs by Inellicolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 6

Ex. SA SW Woods Imperv.
 Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 4.960 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Peak discharge = 11.28 cfs
 Time to peak = 729 min
 Hyd. volume = 55,765 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285

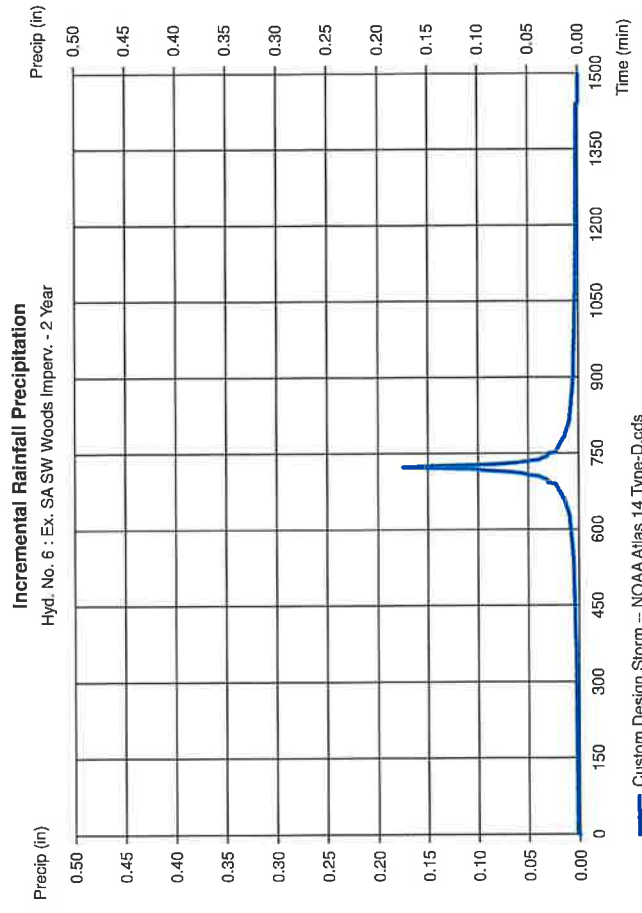


Precipitation Report

Hydroflow Hydrographs by Inellicolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 6

Ex. SA SW Woods Imperv.
 Storm Frequency = 2 yrs
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Time interval = 3 min
 Distribution = Custom



Hydrograph Report

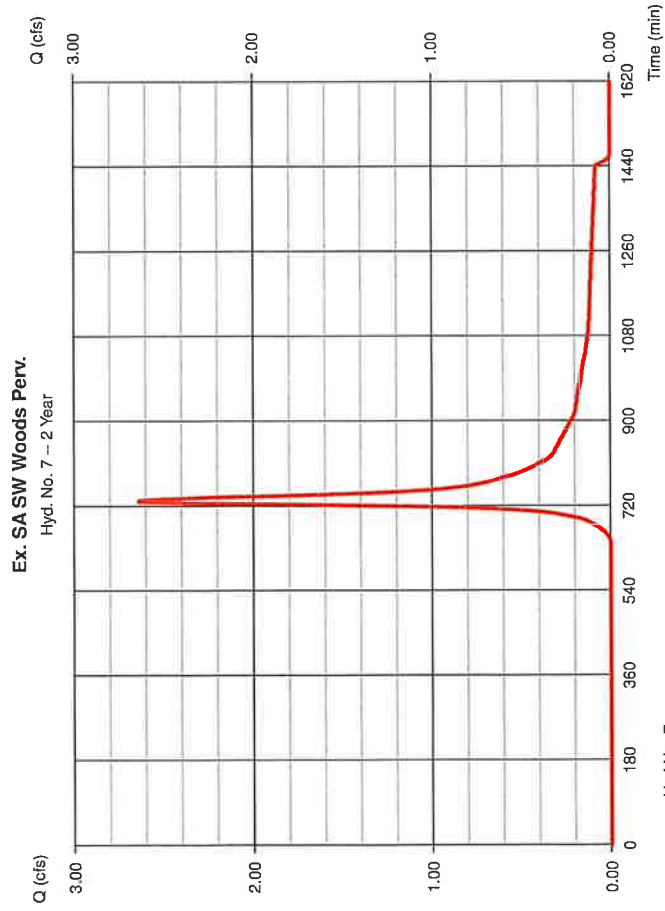
Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 3.400 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.ods

Peak discharge = 2.642 cfs
 Time to peak = 729 min
 Hyd. volume = 12,558 cuft
 Curve number = 72
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

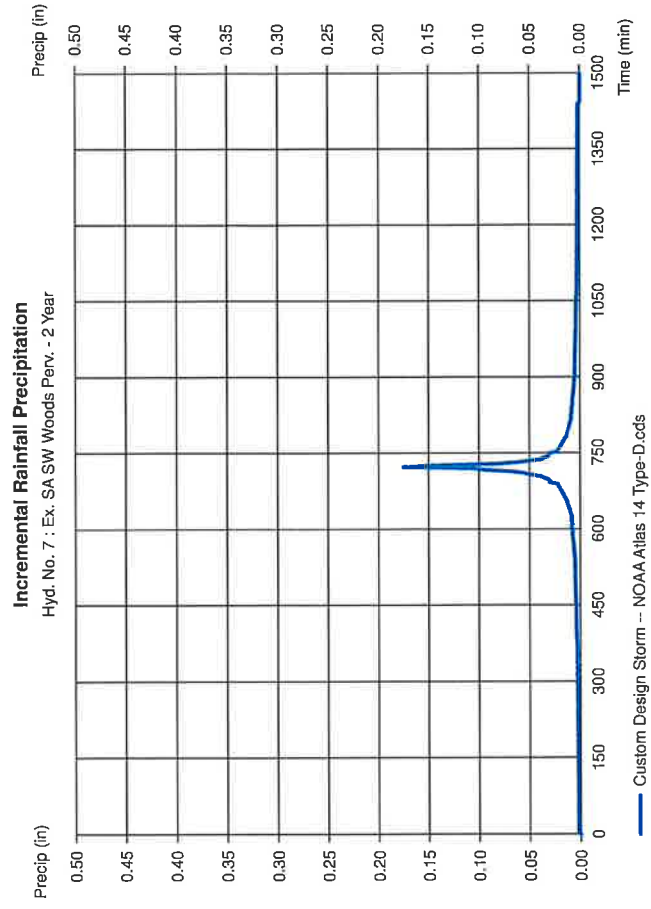
Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.

Storm Frequency = 2 yrs
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.ods

Time interval = 3 min
 Distribution = Custom



Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1

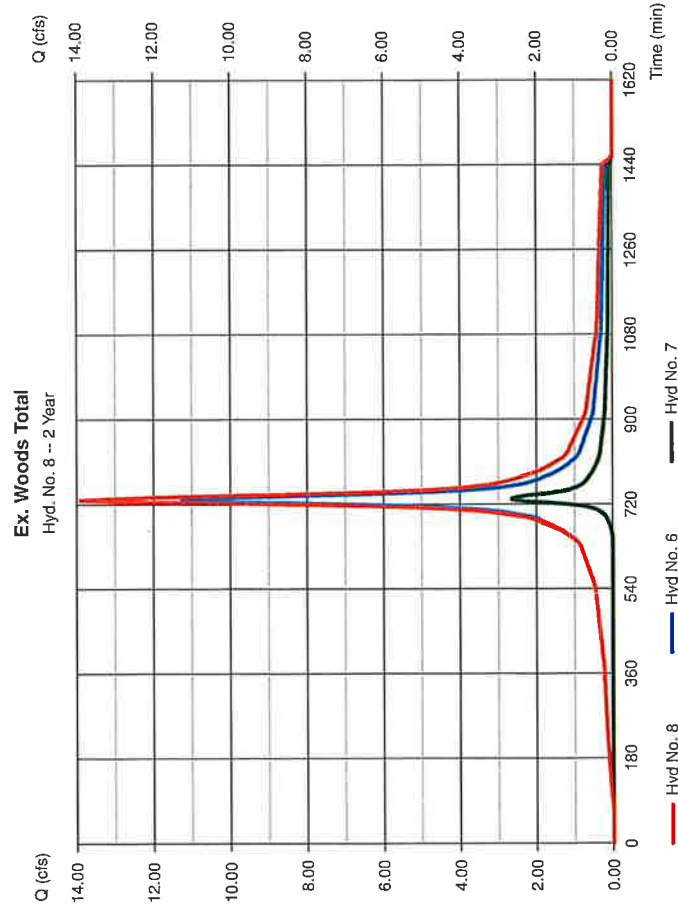
Thursday, Sep 1, 2022

Hyd. No. 8

Ex. Woods Total

Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hyds. = 6, 7

Peak discharge = 13.92 cfs
 Time to peak = 729 min
 Hyd. volume = 68,324 cuft
 Contrib. drain. area = 8.360 ac



Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1

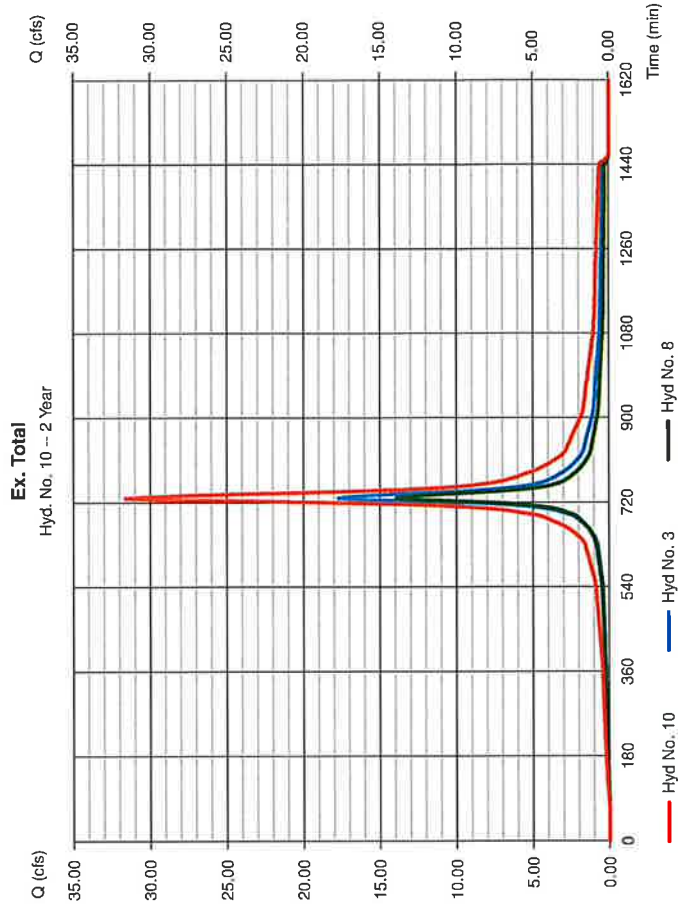
Thursday, Sep 1, 2022

Hyd. No. 10

Ex. Total

Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hyds. = 3, 8

Peak discharge = 31.64 cfs
 Time to peak = 729 min
 Hyd. volume = 154,064 cuft
 Contrib. drain. area = 0.000 ac



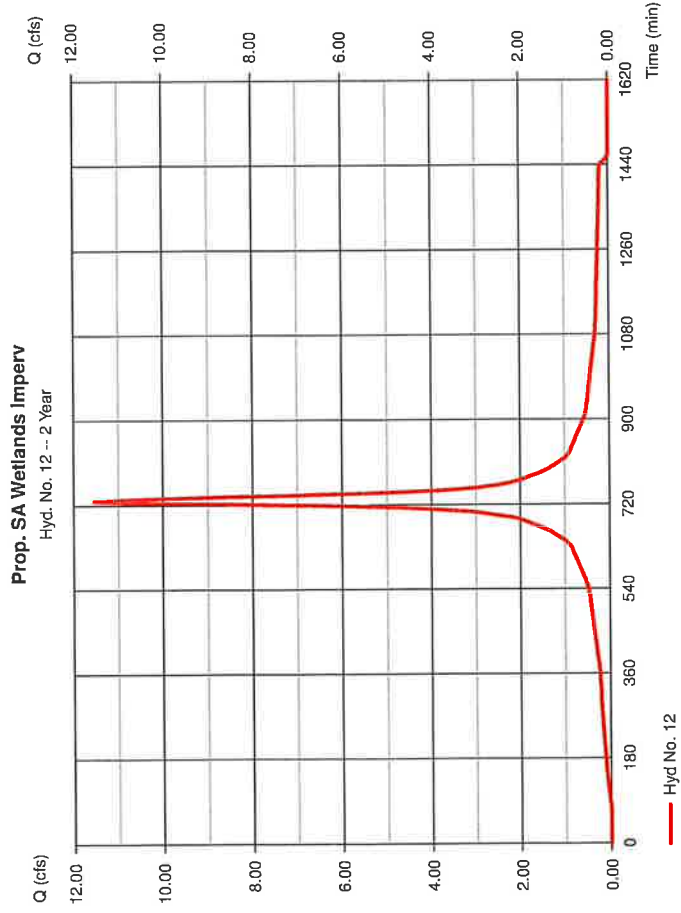
Hydrograph Report

Hydroflow Hydrographs by IntelliSolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 12

Prop. SA Wetlands Imperv
 Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 5.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.ods

Peak discharge = 11.55 cfs
 Time to peak = 729 min
 Hyd. volume = 57,114 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



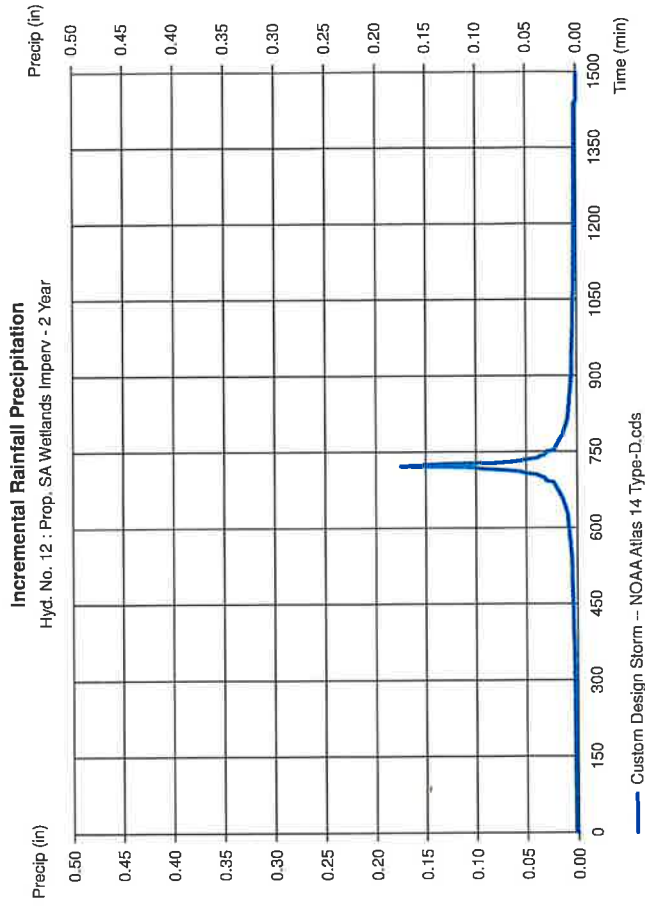
Precipitation Report

Hydroflow Hydrographs by IntelliSolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 12

Prop. SA Wetlands Imperv
 Storm Frequency = 2 yrs
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.ods

Time interval = 3 min
 Distribution = Custom



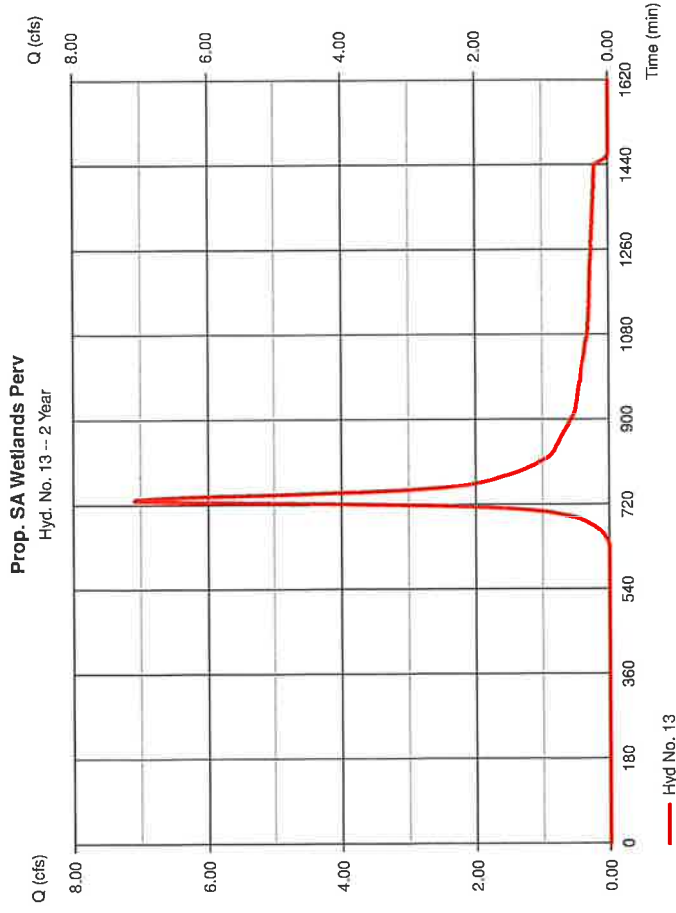
Hydrograph Report

Hydroflow Hydrographs by Inlitsolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 13

Prop. SA Wetlands Perv

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.097 cfs
Storm frequency	=	2 yrs	Time to peak	=	729 min
Time interval	=	3 min	Hyd. volume	=	33,307 cuft
Drainage area	=	8.550 ac	Curve number	=	73
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	USER	Time of conc. (Tc)	=	6.00 min
Total precip.	=	3.35 in	Distribution	=	Custom
Storm duration	=	NOAA Atlas 14 Type-D.cds	Shape factor	=	285



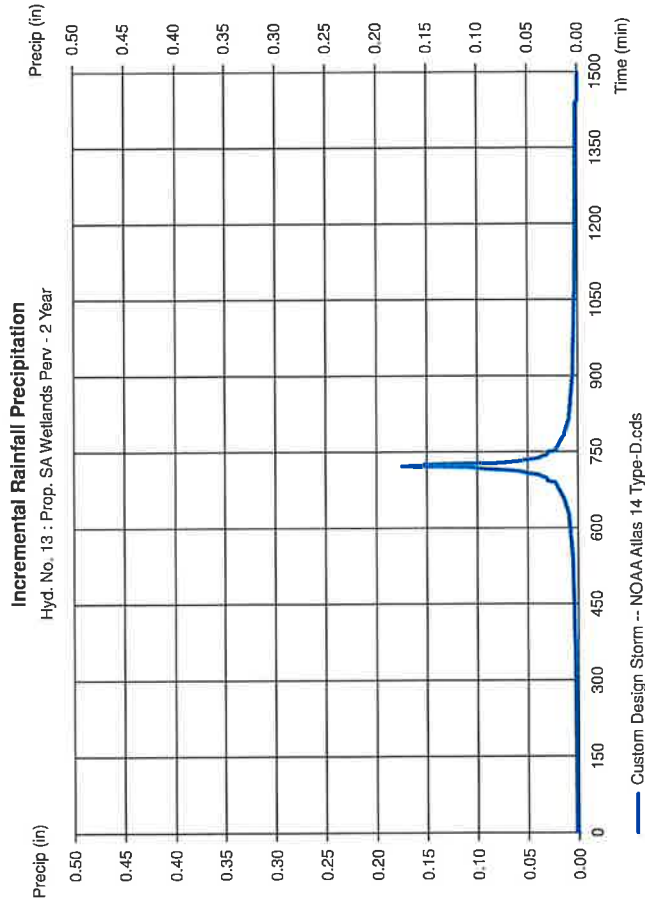
Precipitation Report

Hydroflow Hydrographs by Inlitsolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 13

Prop. SA Wetlands Perv

Storm Frequency	=	2 yrs	Time interval	=	3 min
Total precip.	=	3.3500 in	Distribution	=	Custom
Storm duration	=	NOAA Atlas 14 Type-D.cds			



Hydrograph Report

Hydrowall Hydrographs by Inlitsolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 14

Prop. Wetlands Total

Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hyds. = 12, 13

Peak discharge = 18.65 cfs
 Time to peak = 729 min
 Hyd. volume = 90,421 cuft
 Contrib. drain. area = 13,630 ac

Hydrograph Report

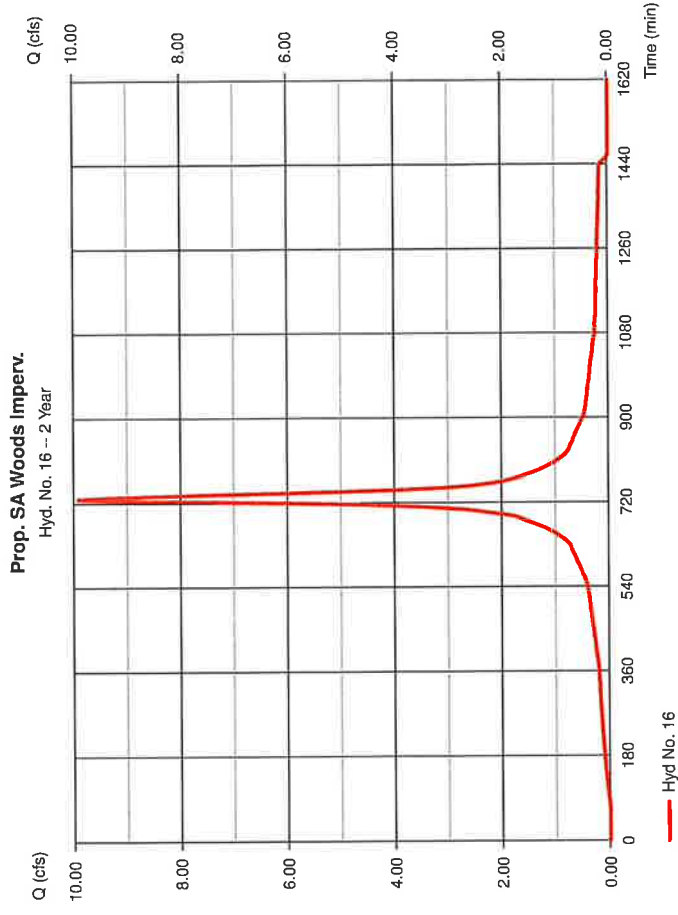
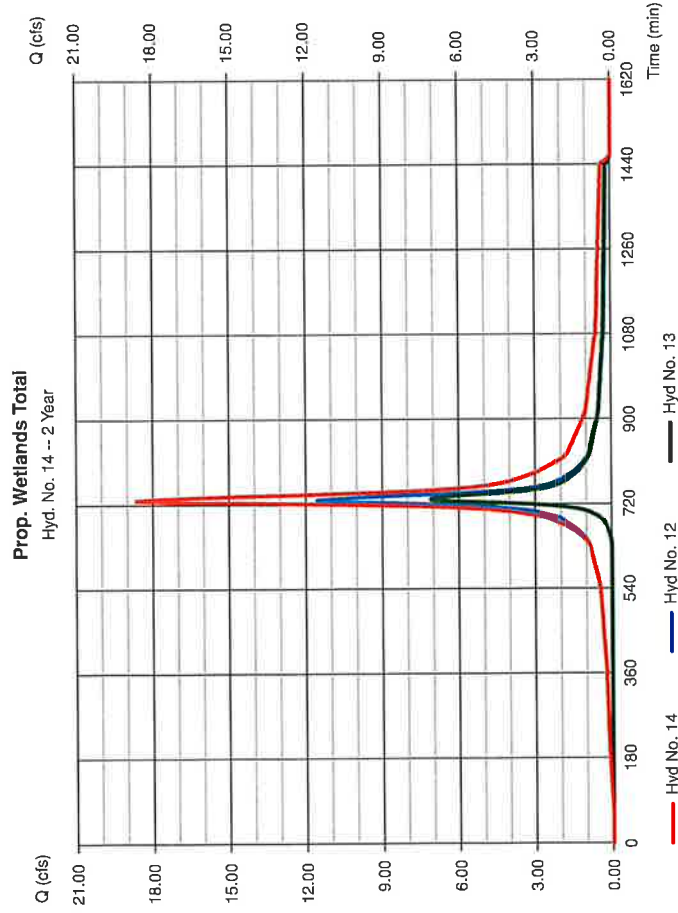
Hydrowall Hydrographs by Inlitsolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv.

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 4,360 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 9.914 cfs
 Time to peak = 729 min
 Hyd. volume = 49,019 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

Hydralow Hydrographs by Imelissolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv. = 3 min
 Storm Frequency = 2 yrs = Custom
 Total precip. = 3.3500 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval
 Distribution

Hydrograph Report

Hydralow Hydrographs by Imelissolve v8.1 Thursday, Sep 1, 2022

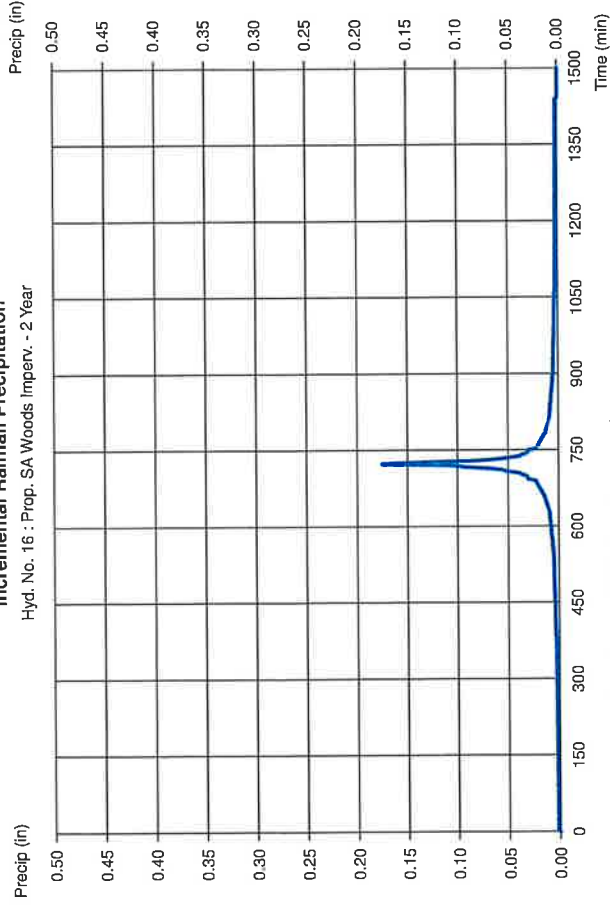
Hyd. No. 17

Prop. SA Woods Perv.
 Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Time interval = 3 min
 Drainage area = 3.940 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 3.35 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 3.061 cfs
 Time to peak = 729 min
 Hyd. volume = 14,559 cuft
 Curve number = 72
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285

Incremental Rainfall Precipitation

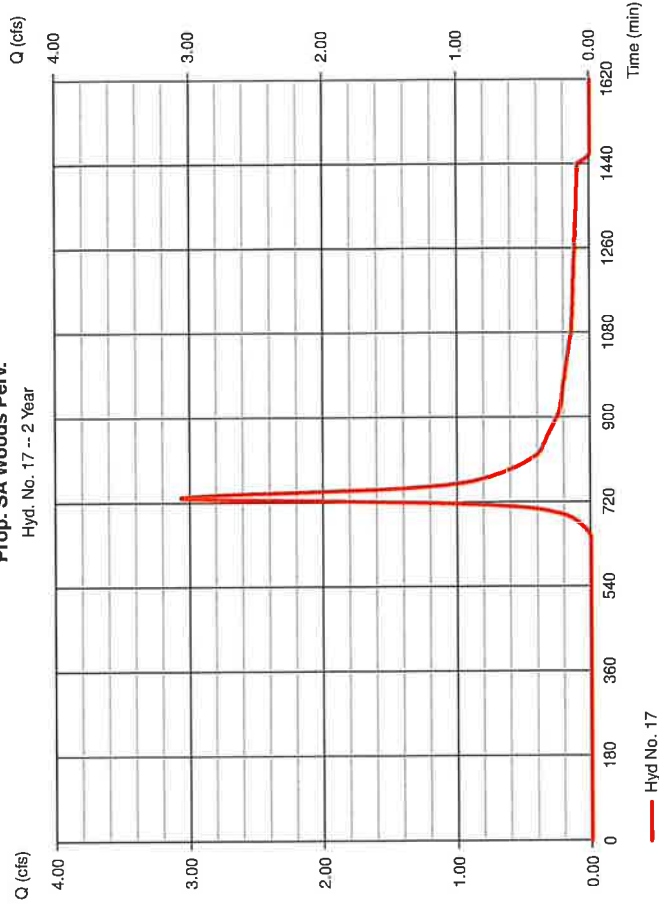
Hyd. No. 16 : Prop. SA Woods Imperv. - 2 Year



— Custom Design Storm -- NOAA Atlas 14 Type-D.cds

Prop. SA Woods Perv.

Hyd. No. 17 -- 2 Year

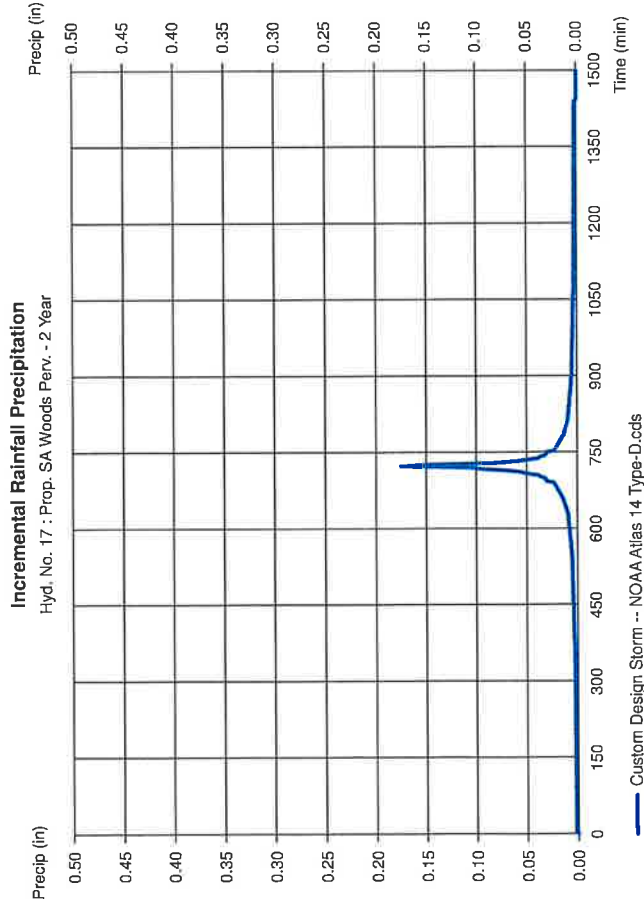


Precipitation Report

Hydralow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 17

Prop. SA Woods Perv. = 2 yrs
 Storm Frequency = 3.3500 in
 Total precip. = NOAA Atlas 14 Type-D.cds
 Storm duration = Custom
 Time interval = 3 min
 Distribution = Custom

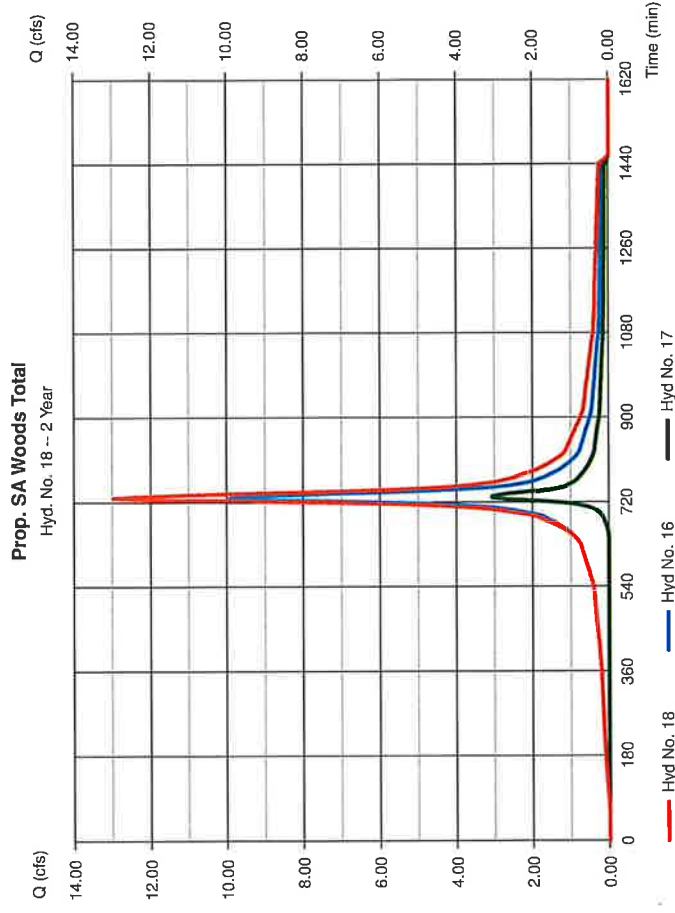


Hydrograph Report

Hydralow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 18

Prop. SA Woods Total
 Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hyds. = 16, 17
 Peak discharge = 12.98 cfs
 Time to peak = 729 min
 Hyd. volume = 63,572 cuft
 Contrib. drain. area = 8,300 ac



Hydrograph Report

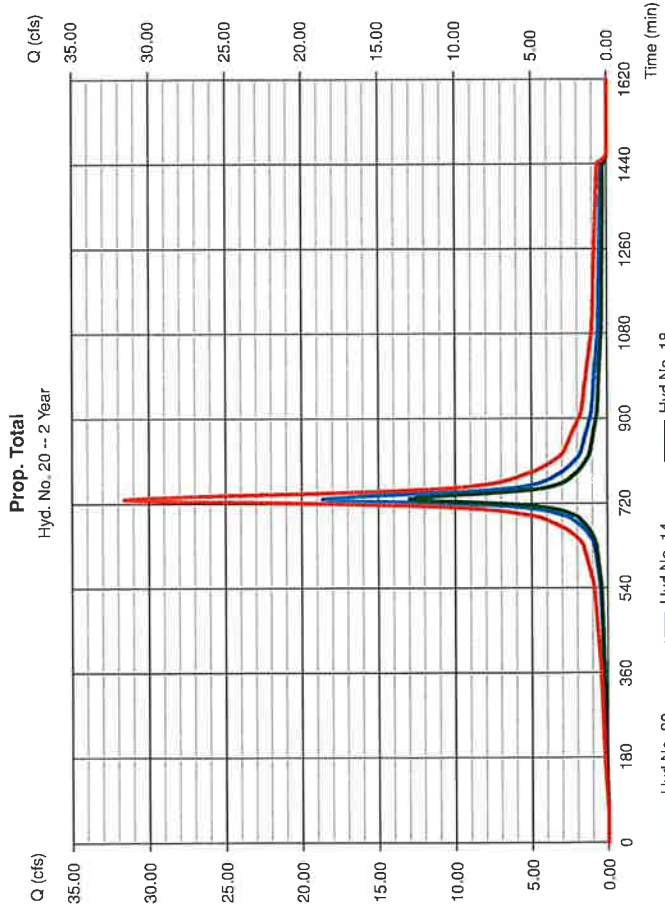
Hydroflow Hydrographs by Inelissolve v3.1 Thursday, Sep 1, 2022

Hyd. No. 20

Prop. Total

Hydrograph type = Combine
 Storm frequency = 2 yrs
 Time interval = 3 min
 Inflow hyds. = 14, 18

Peak discharge = 31.62 cfs
 Time to peak = 729 min
 Hyd. volume = 153,994 cuft
 Contrib. drain. area = 0.000 ac



Hydrograph Summary Report

Hydroflow Hydrographs by Inelissolve v3.1

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total surge used (cuft)	Hydrograph description
1	SCS Runoff	15.68	3	729	76,907	***	****	****	Ex. SA NE Wellands Imperv.
2	SCS Runoff	17.51	3	729	77,783	***	****	****	Ex. SA NE Wellands Perv.
3	Combine	33.18	3	729	156,690	1, 2	****	****	Ex. Wellands Total
6	SCS Runoff	17.36	3	729	87,361	***	****	****	Ex. SA SW Woods Imperv.
7	SCS Runoff	6.303	3	729	28,083	***	****	****	Ex. SA SW Woods Perv.
8	Combine	23.66	3	729	115,454	6, 7	****	****	Ex. Woods Total
10	Combine	56.85	3	729	272,143	3, 8,	****	****	Ex. Total
12	SCS Runoff	17.78	3	729	88,474	***	****	****	Prop. SA Wellands Imperv
13	SCS Runoff	16.48	3	729	73,243	***	****	****	Prop. SA Wellands Perv
14	Combine	34.26	3	729	162,717	12, 13	****	****	Prop. Wellands Total
16	SCS Runoff	15.26	3	729	76,793	***	****	****	Prop. SA Woods Imperv.
17	SCS Runoff	7.304	3	729	32,555	***	****	****	Prop. SA Woods Perv.
18	Combine	22.56	3	729	109,348	16, 17	****	****	Prop. SA Woods Total
20	Combine	56.83	3	729	272,065	14, 18,	****	****	Prop. Total

ExProp 2, 10, 25, 100 yr - Min TC.gpw

Return Period: 10 Year

Thursday, Sep 1, 2022

Hydrograph Report

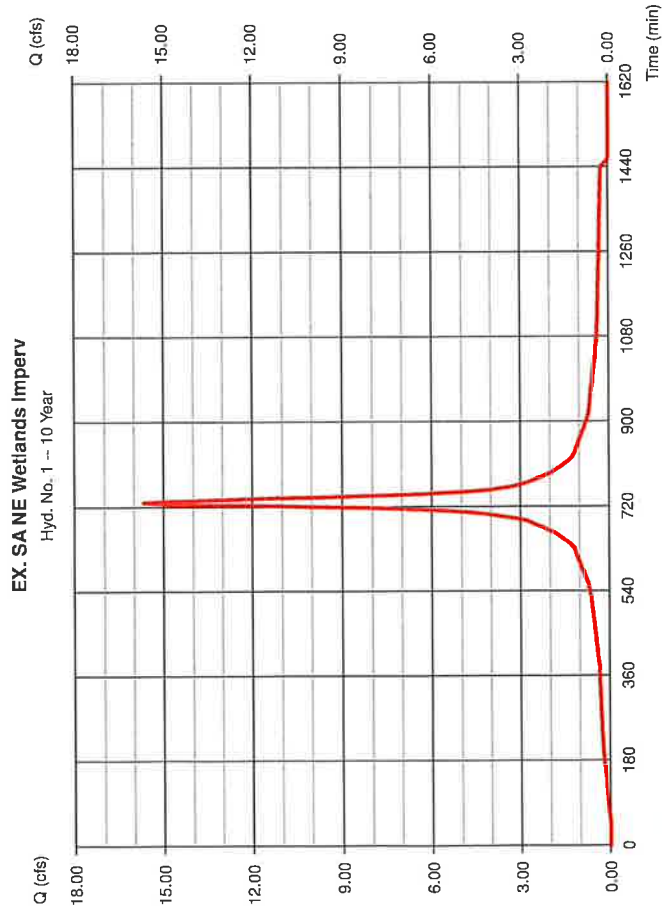
Hydratlow Hydrographs by Inellicolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 1

EX. SA NE Wetlands Imperv

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 4.480 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 15.68 cfs
 Time to peak = 729 min
 Hyd. volume = 78,907 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

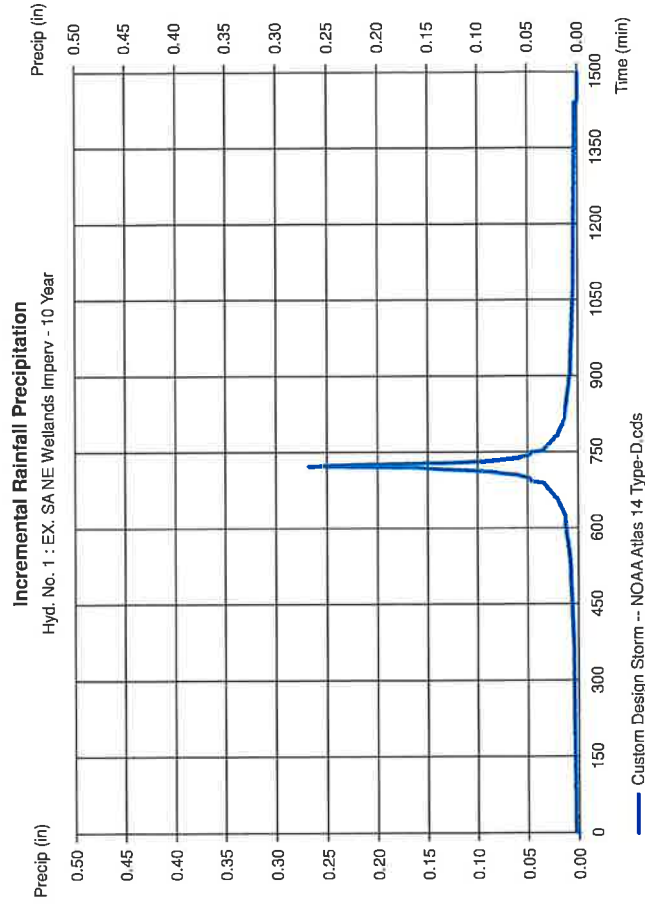
Hydratlow Hydrographs by Inellicolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 1

EX. SA NE Wetlands Imperv

Storm Frequency = 10 Yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds

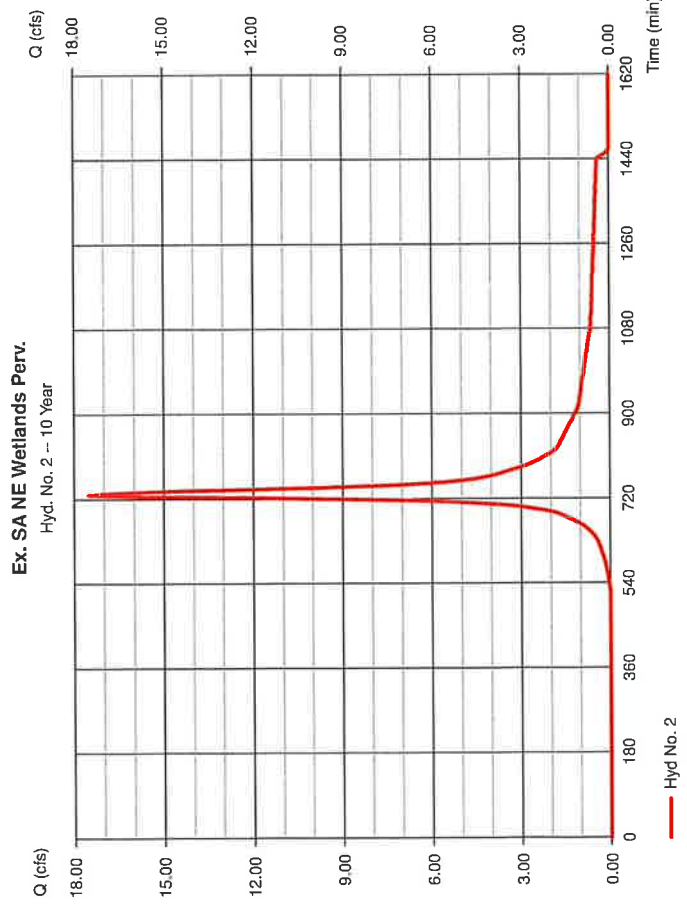
Time interval = 3 min
 Distribution = Custom



Hydrograph Report

Hydroflow Hydrographs by Inlitsolve v8.1
Thursday, Sep 1, 2022

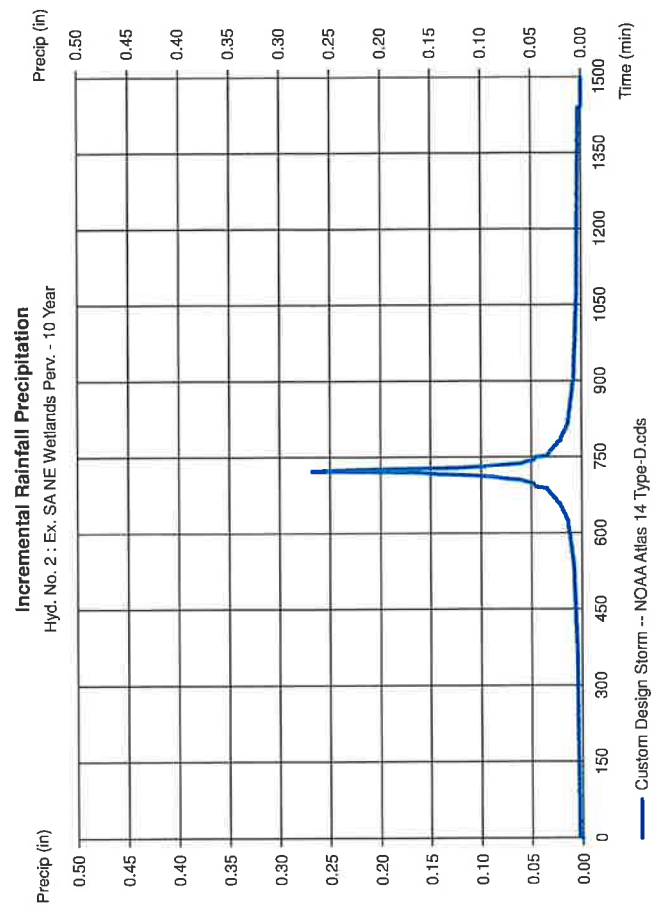
Hyd. No. 2
 Ex. SA NE Wetlands Perv.
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 9.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Peak discharge = 17.51 cfs
 Time to peak = 729 min
 Hyd. volume = 77,783 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

Hydroflow Hydrographs by Inlitsolve v8.1
Thursday, Sep 1, 2022

Hyd. No. 2
 Ex. SA NE Wetlands Perv.
 Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Time interval = 3 min
 Distribution = Custom



Hydrograph Report

Hydroflow Hydrographs by Intellisolve v8.1

Thursday, Sep 1, 2022

Hyd. No. 3

Ex. Wetlands Total

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 1, 2

Peak discharge = 33.18 cfs
 Time to peak = 729 min
 Hyd. volume = 156,690 cuft
 Contrib. drain. area = 13,560 ac

Hydrograph Report

Hydroflow Hydrographs by Intellisolve v8.1

Thursday, Sep 1, 2022

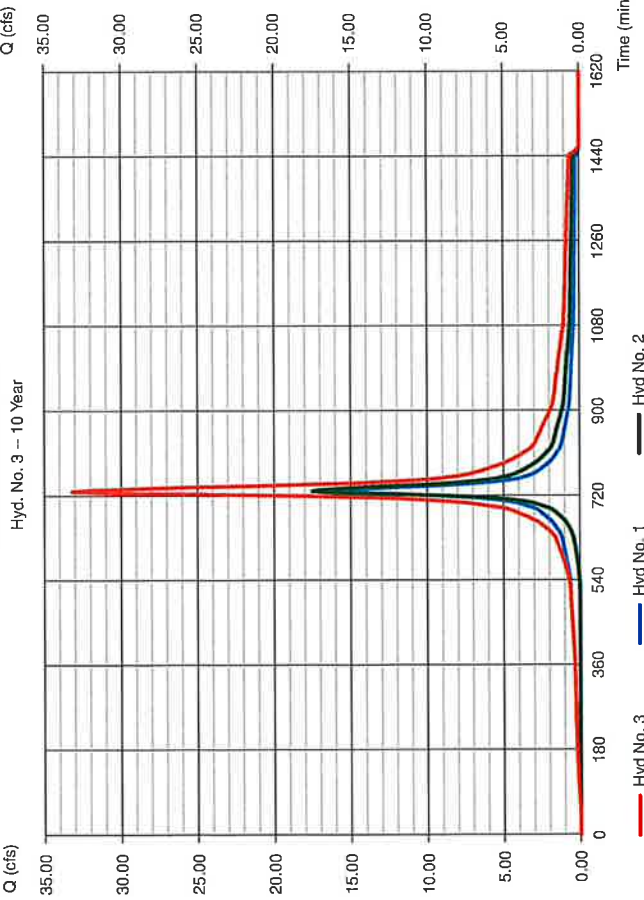
Hyd. No. 6

Ex. SA SW Woods Imperv.

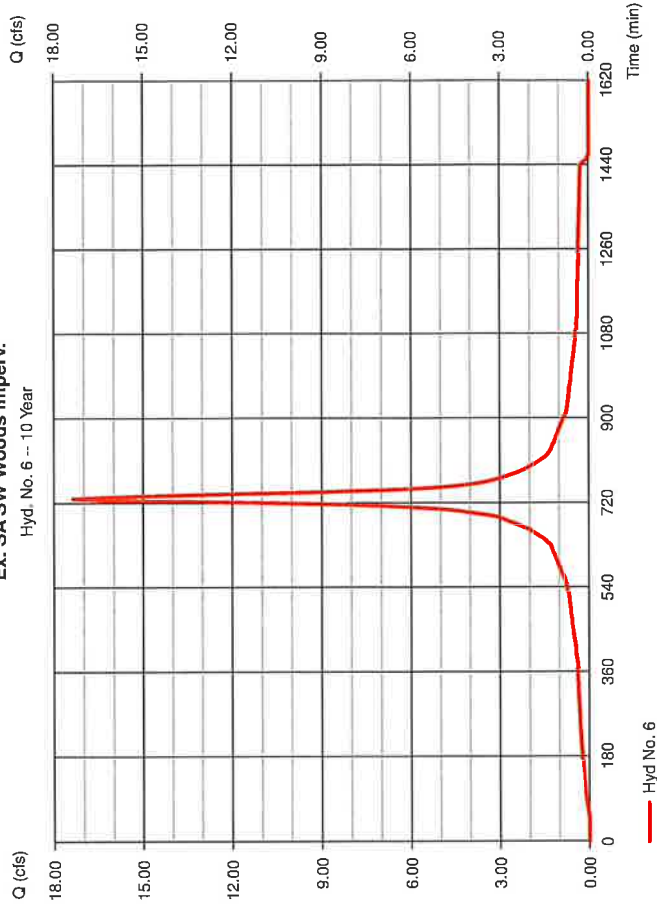
Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 4.960 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 17.36 cfs
 Time to peak = 729 min
 Hyd. volume = 87,361 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285

Ex. Wetlands Total



Ex. SA SW Woods Imperv.

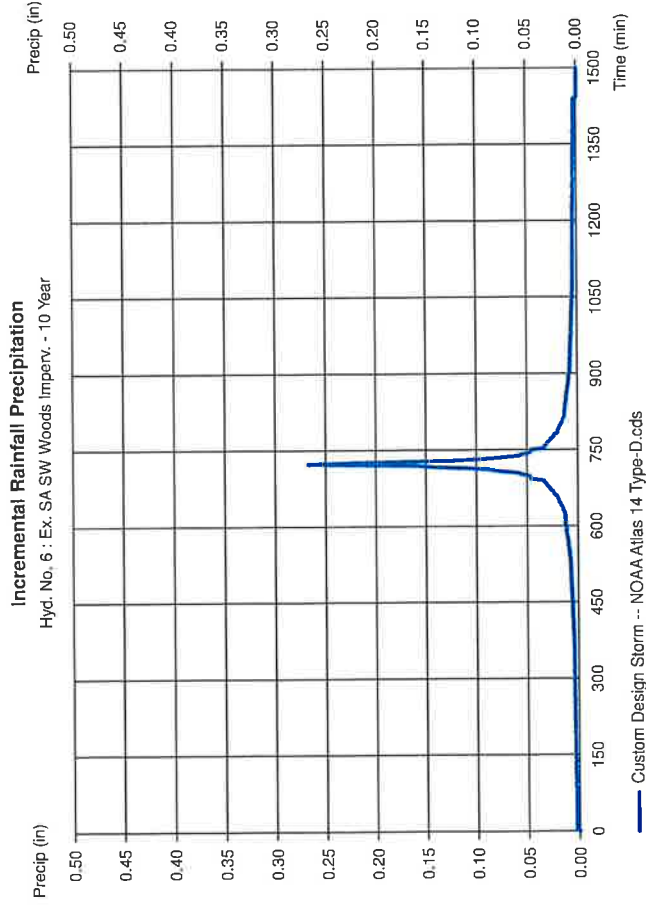


Precipitation Report

Hydrflow Hydrographs by Inelisolve v8.1
Thursday, Sep 1, 2022

Hyd. No. 6

Ex. SA SW Woods Imperv.
 Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Time interval = 3 min
 Distribution = Custom

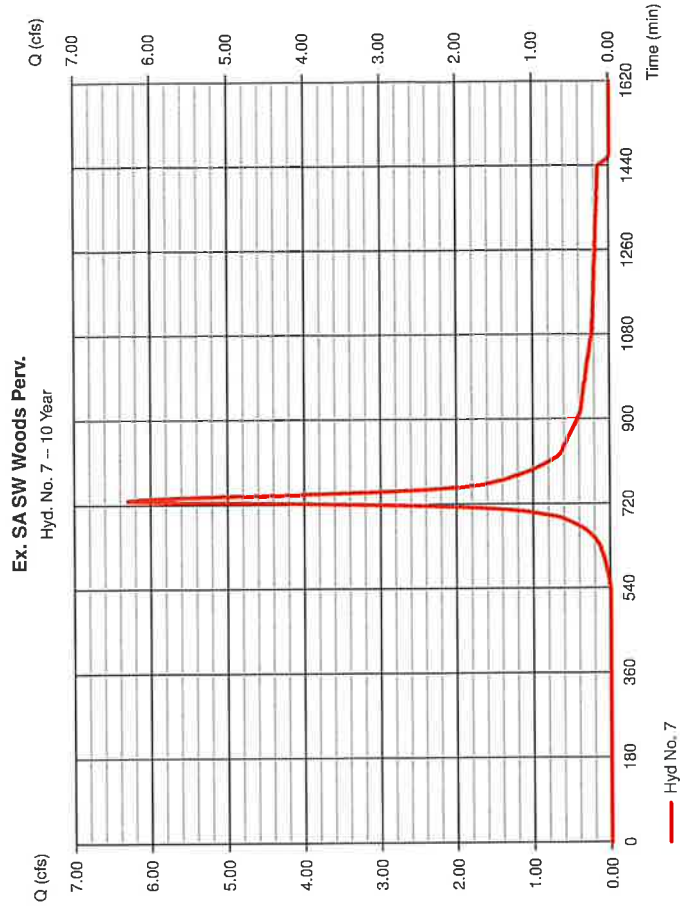


Hydrograph Report

Hydrflow Hydrographs by Inelisolve v8.1
Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 3.400 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds
 Peak discharge = 6.303 cfs
 Time to peak = 729 min
 Hyd. volume = 28,098 cuft
 Curve number = 72
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

Hydrow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.

Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Hydrograph Report

Hydrow Hydrographs by Intellisolve v9.1

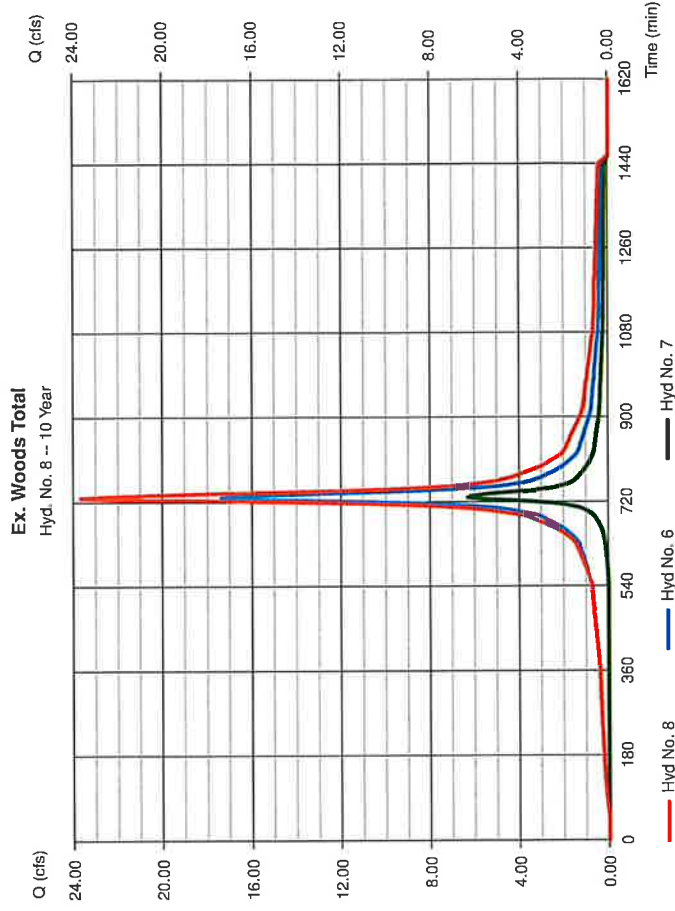
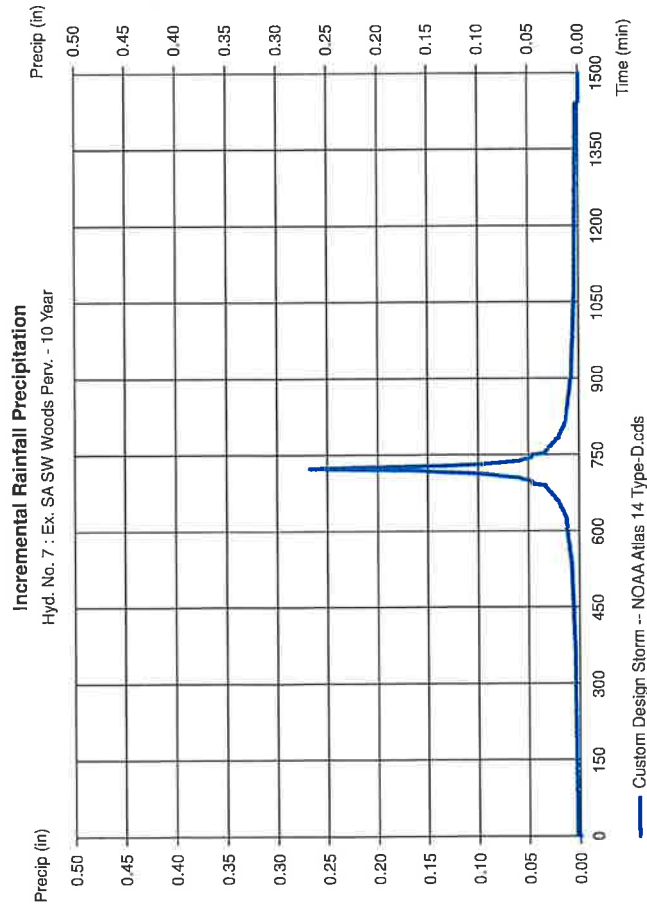
Thursday, Sep 1, 2022

Hyd. No. 8

Ex. Woods Total

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 6, 7

Peak discharge = 23.66 cfs
 Time to peak = 729 min
 Hyd. volume = 115,454 cuft
 Contrib. drain. area = 8.360 ac

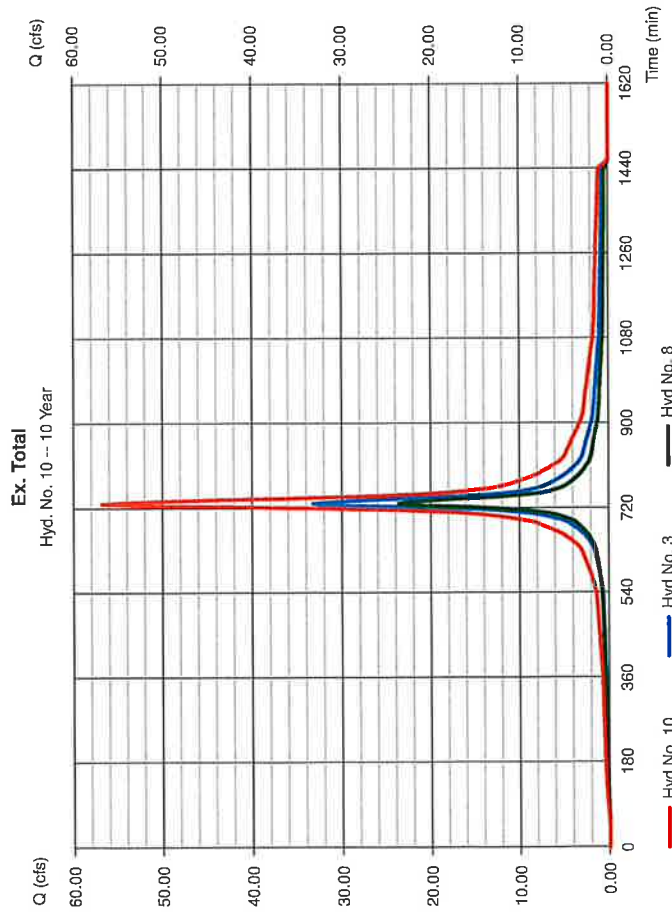


Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 10

Ex. Total
 Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 3, 8
 Peak discharge = 56.85 cfs
 Time to peak = 729 min
 Hyd. volume = 272,143 cuft
 Contrib. drain. area = 0.000 ac



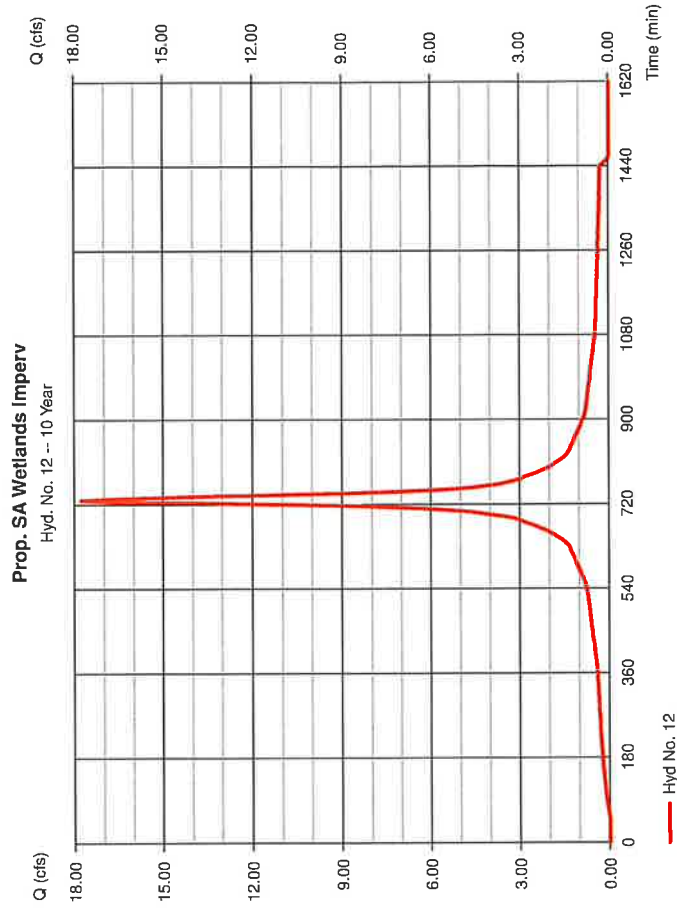
Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 12

Prop. SA Wetlands Imperv
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 5.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 17.78 cfs
 Time to peak = 729 min
 Hyd. volume = 89,474 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

Hydratlow Hydrographs by Inelissolve v8.1 Thursday, Sep 1, 2022

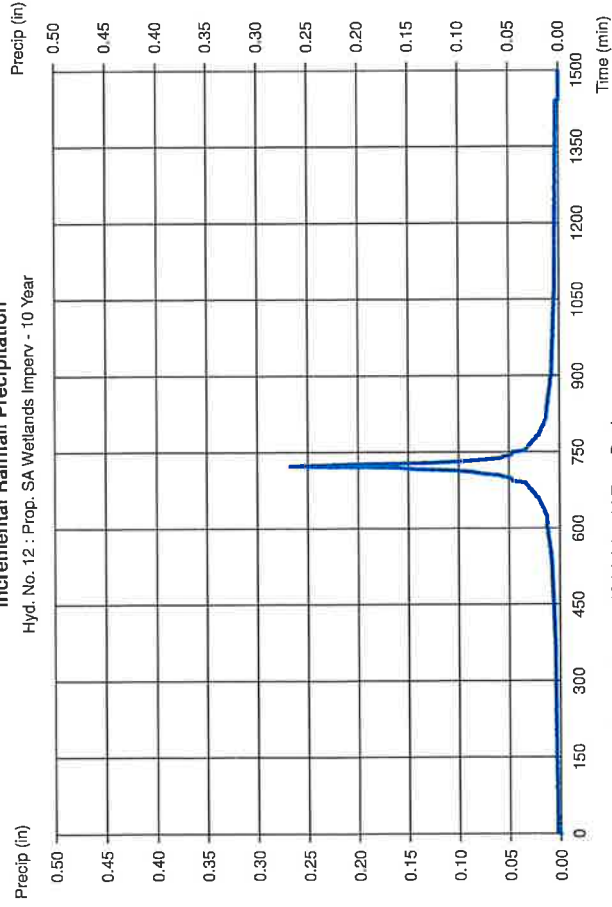
Hyd. No. 12

Prop. SA Wetlands Imperv = 10. yrs
 Storm Frequency = 5.1200 in
 Total precip. = 3 min
 Storm duration = Custom
 = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Incremental Rainfall Precipitation

Hyd. No. 12 : Prop. SA Wetlands Imperv - 10 Year



— Custom Design Storm -- NOAA Atlas 14 Type-D.cds

Hydrograph Report

Hydratlow Hydrographs by Inelissolve v8.1 Thursday, Sep 1, 2022

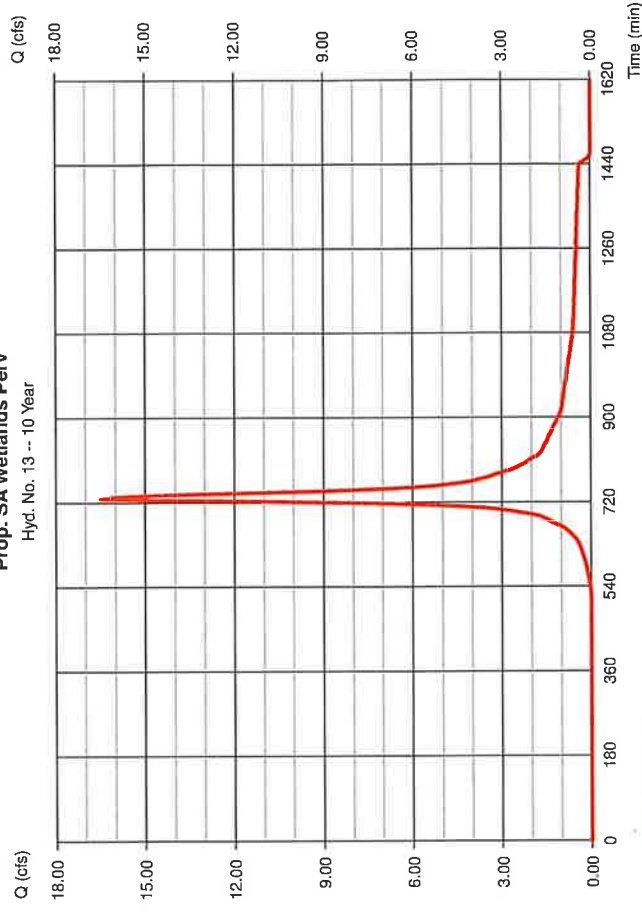
Hyd. No. 13

Prop. SA Wetlands Perv = 16.48 cfs
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 8.550 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 729 min
 Time to peak = 73,243 cuft
 Hyd. volume = 73
 Curve number = 0 ft
 Hydraulic length = 6.00 min
 Time of conc. (Tc) = Custom
 Distribution = Custom
 Shape factor = 285

Prop. SA Wetlands Perv

Hyd. No. 13 -- 10 Year



— Hyd No. 13

Precipitation Report

Hydrow Hydrographs by Inellicolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 13

Prop. SA Wetlands Perv

Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Hydrograph Report

Hydrow Hydrographs by Inellicolve v9.1

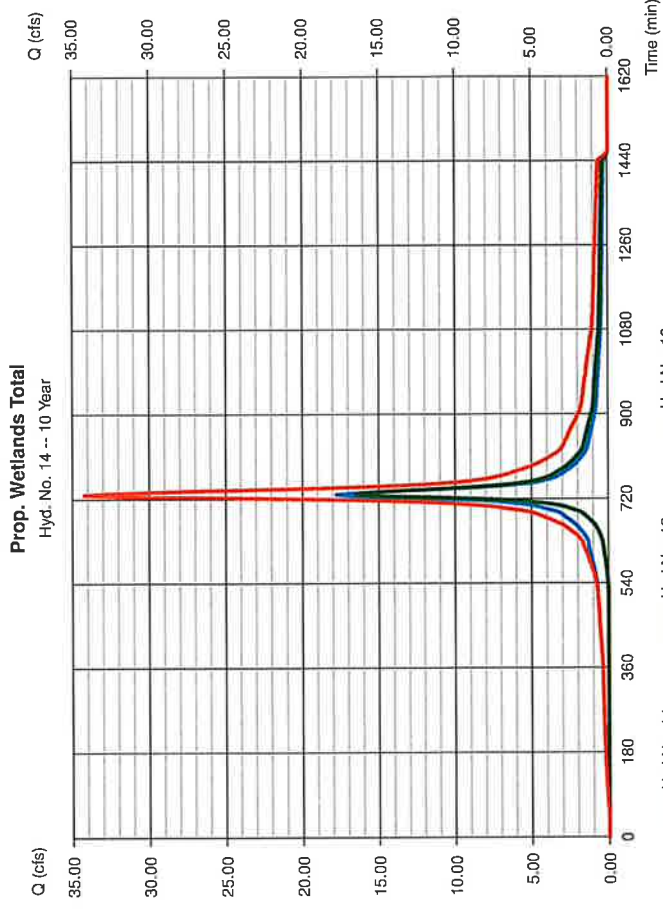
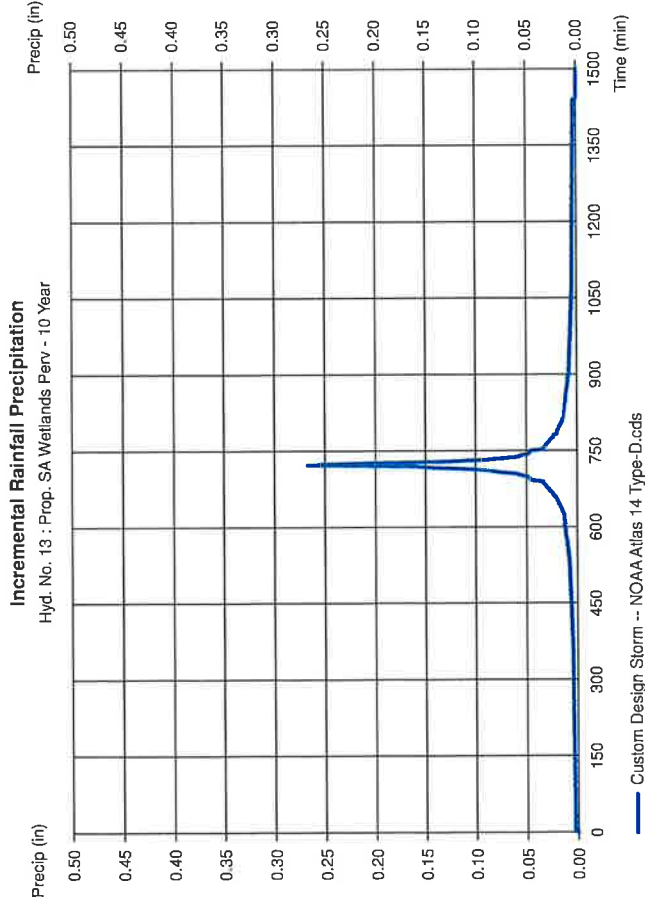
Thursday, Sep 1, 2022

Hyd. No. 14

Prop. Wetlands Total

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 12, 13

Peak discharge = 34.26 cfs
 Time to peak = 729 min
 Hyd. volume = 162,717 cuft
 Contrib. drain. area = 13,630 ac



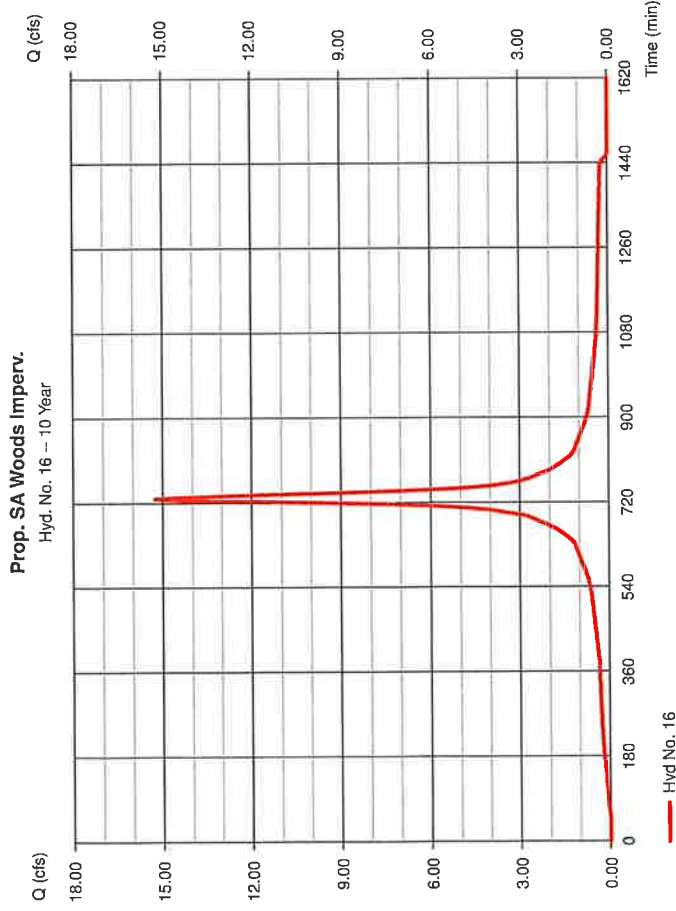
Hydrograph Report

Hydroflow Hydrographs by IntelliSolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv.
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 4.360 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 15.26 cfs
 Time to peak = 729 min
 Hyd. volume = 76,793 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



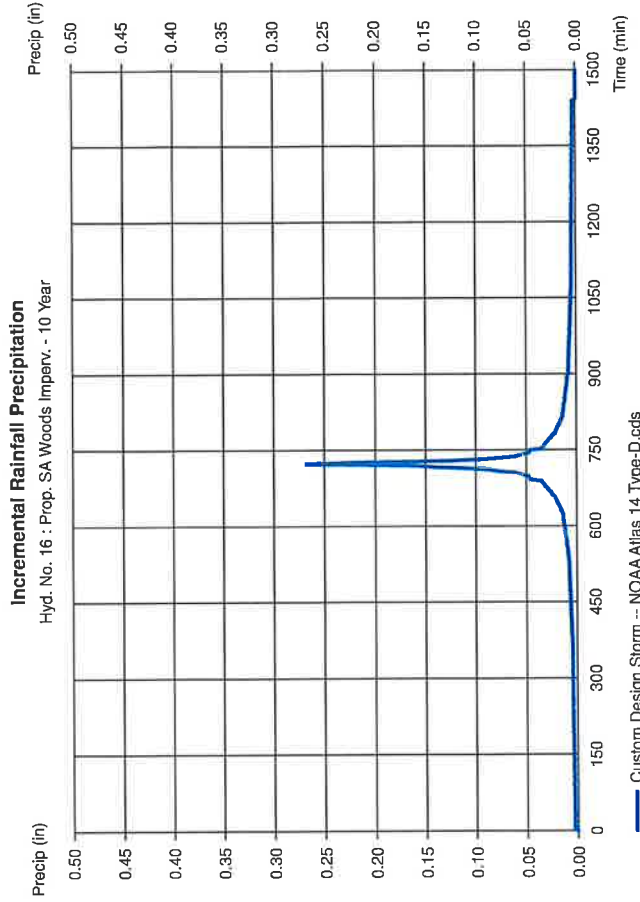
Precipitation Report

Hydroflow Hydrographs by IntelliSolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv.
 Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom



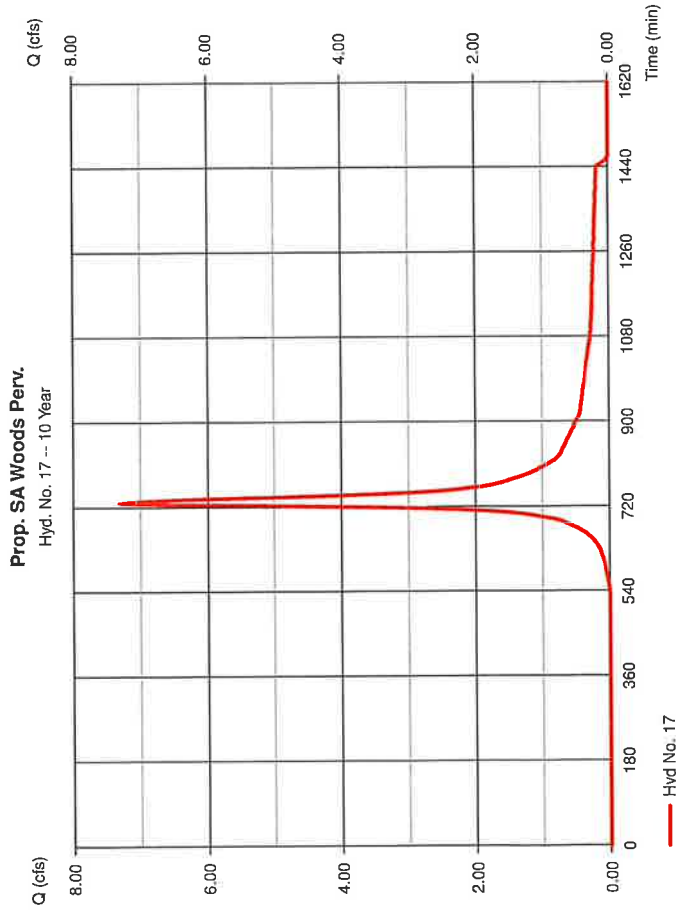
Hydrograph Report

Hydroflow Hydrographs by Inlitsolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 17

Prop. SA Woods Perv.
 Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Time interval = 3 min
 Drainage area = 3.940 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 5.12 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 7.304 cfs
 Time to peak = 729 min
 Hyd. volume = 32,555 cuft
 Curve number = 72
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



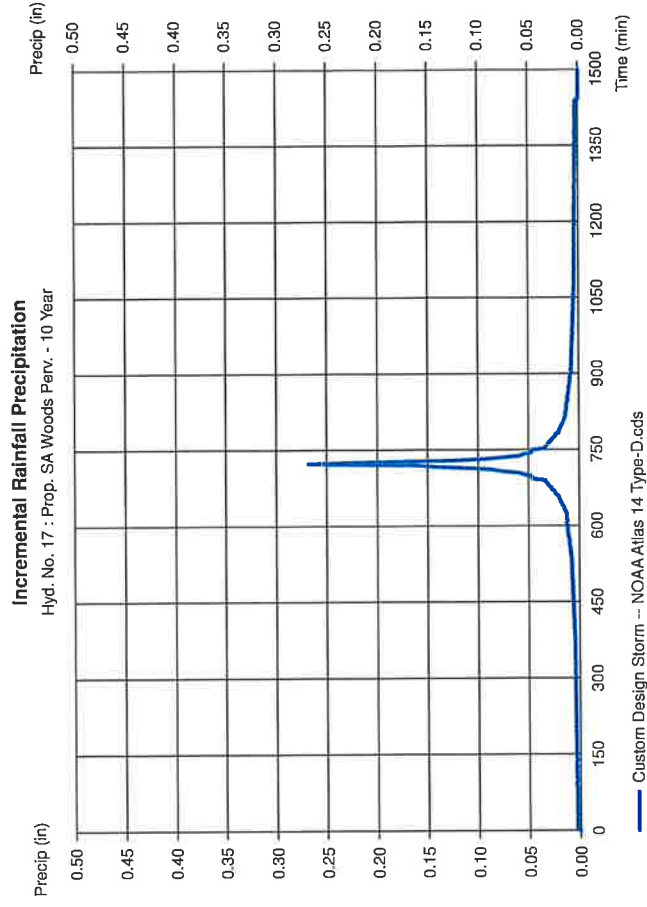
Precipitation Report

Hydroflow Hydrographs by Inlitsolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 17

Prop. SA Woods Perv.
 Storm Frequency = 10 yrs
 Total precip. = 5.1200 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom



Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 18

Prop. SA Woods Total

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 16, 17

Peak discharge = 22.56 cfs
 Time to peak = 729 min
 Hyd. volume = 109,348 cuft
 Contrib. drain. area = 8,300 ac

Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1

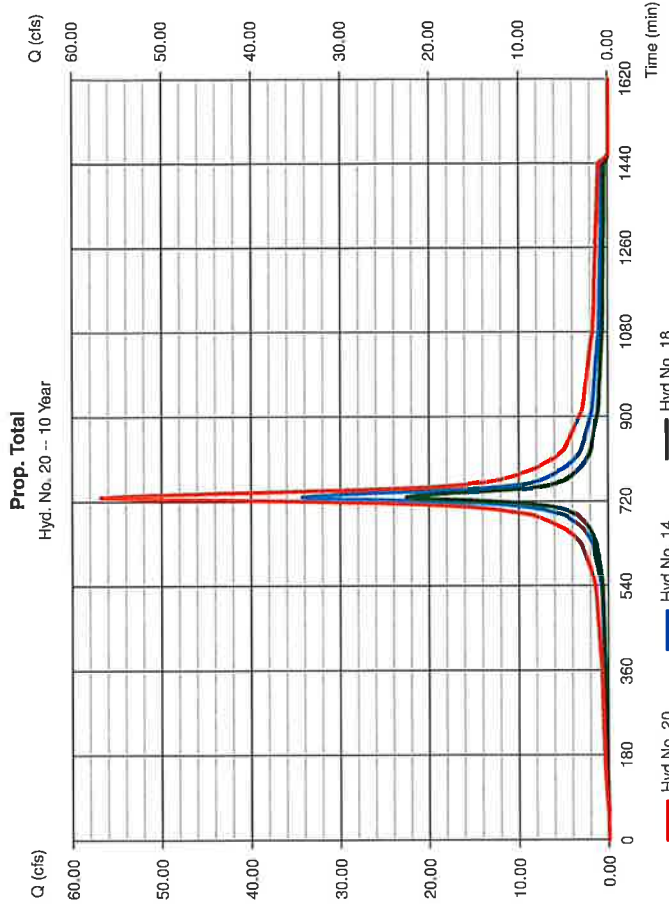
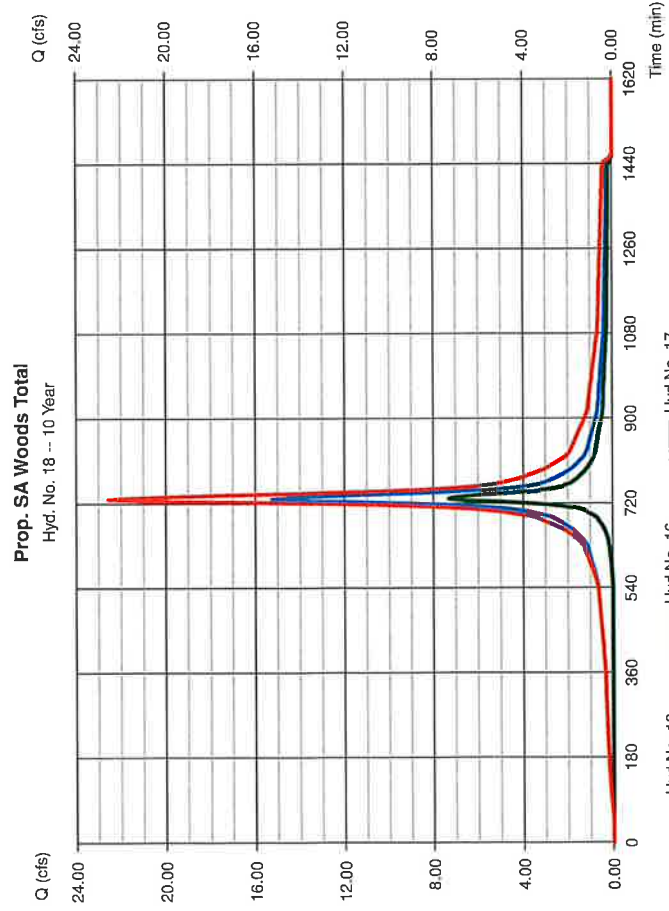
Thursday, Sep 1, 2022

Hyd. No. 20

Prop. Total

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 3 min
 Inflow hyds. = 14, 18

Peak discharge = 56.83 cfs
 Time to peak = 729 min
 Hyd. volume = 272,065 cuft
 Contrib. drain. area = 0.000 ac



Hydrograph Summary Report

Hydroflow hydrographs by /melissive v9.1

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total surge used (cuft)	Hydrograph description
1	SCS Runoff	26.52	3	729	135,575	3	*****	*****	EX. SA NE Wetlands Imperv
2	SCS Runoff	39.77	3	729	175,945	3	*****	*****	Ex. SA NE Wetlands Perv.
3	Combine	66.30	3	729	311,521	1, 2	*****	*****	Ex. Wetlands Total
6	SCS Runoff	29.37	3	729	150,101	3	*****	*****	Ex. SA SW Woods Imperv.
7	SCS Runoff	14.58	3	729	64,403	3	*****	*****	Ex. SA SW Woods Perv.
8	Combine	43.94	3	729	214,504	6, 7	*****	*****	Ex. Woods Total
10	Combine	110.24	3	729	526,024	3, 8,	*****	*****	Ex. Total
12	SCS Runoff	30.08	3	729	153,733	3	*****	*****	Prop. SA Wetlands Imperv
13	SCS Runoff	37.45	3	729	165,675	3	*****	*****	Prop. SA Wetlands Perv
14	Combine	67.53	3	729	319,408	12, 13	*****	*****	Prop. Wetlands Total
16	SCS Runoff	25.81	3	729	131,944	3	*****	*****	Prop. SA Woods Imperv.
17	SCS Runoff	16.89	3	729	74,631	3	*****	*****	Prop. SA Woods Perv.
18	Combine	42.71	3	729	206,575	16, 17	*****	*****	Prop. SA Woods Total
20	Combine	110.24	3	729	525,983	14, 18,	*****	*****	Prop. Total
ExProp 2,10,25,100 yr - Min TC.gpw									Return Period: 100 Year
Thursday, Sep 1, 2022									Thursday, Sep 1, 2022

Hydrograph Report

Hydroflow hydrographs by /melissive v9.1

Thursday, Sep 1, 2022

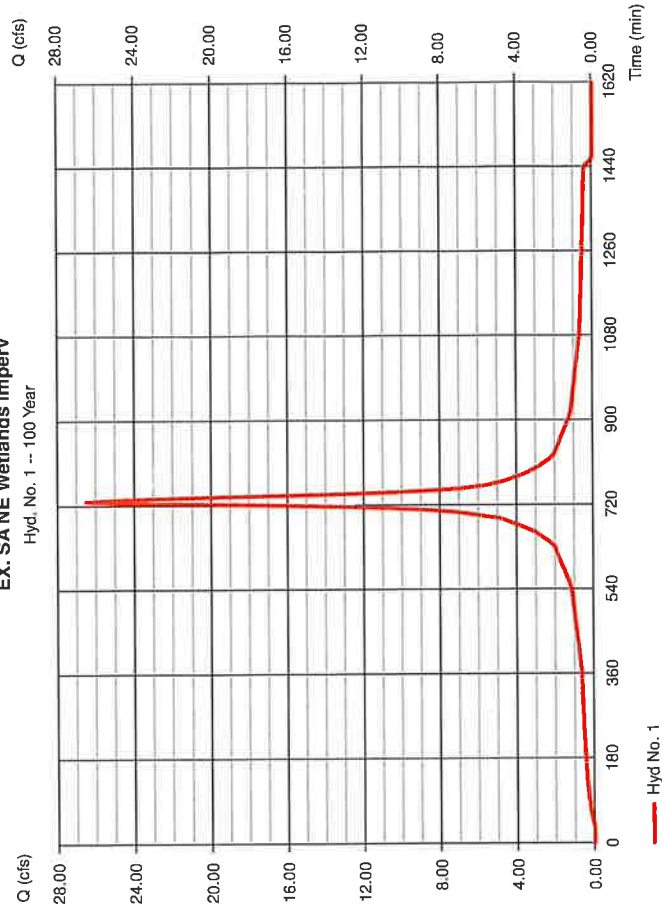
Hyd. No. 1

EX. SA NE Wetlands Imperv

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 4.480 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 26.52 cfs
 Time to peak = 729 min
 Hyd. volume = 135,575 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285

EX. SA NE Wetlands Imperv
Hyd. No. 1 -- 100 Year



Precipitation Report

Hydrflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 1

EX. SA NE Wetlands Imperv

Storm Frequency = 100 yrs
 Total precip. = 8.6300 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Hydrograph Report

Hydrflow Hydrographs by Intellisolve v9.1

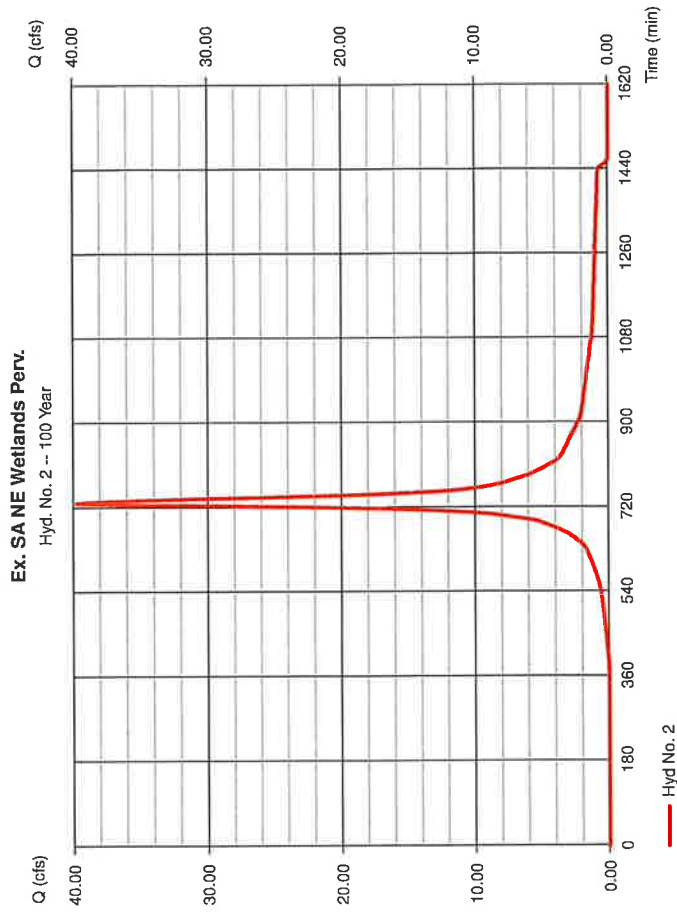
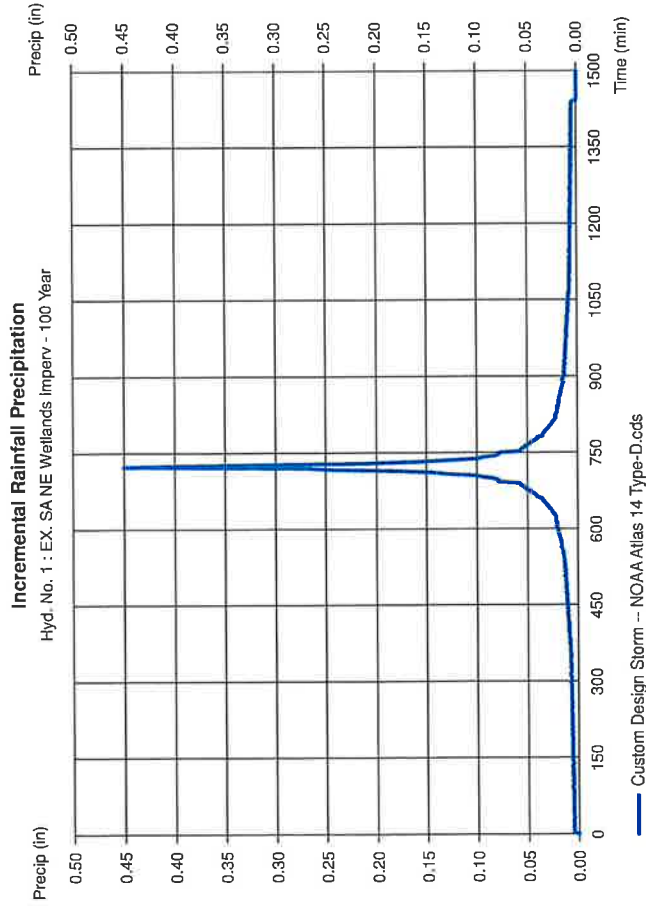
Thursday, Sep 1, 2022

Hyd. No. 2

EX. SA NE Wetlands Perv.

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 9.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 39.77 cfs
 Time to peak = 729 min
 Hyd. volume = 175,945 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

Hydrflow Hydrographs by Inellicolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 2

Ex. SANE Wetlands Penv.
 Storm Frequency = 100 yrs
 Total precip. = 8.6300 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Hydrograph Report

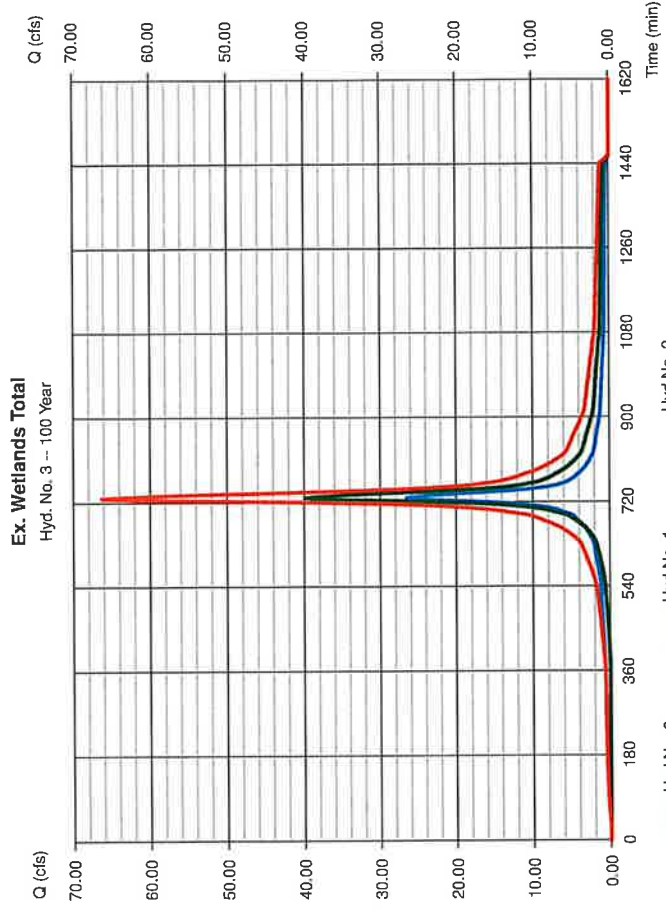
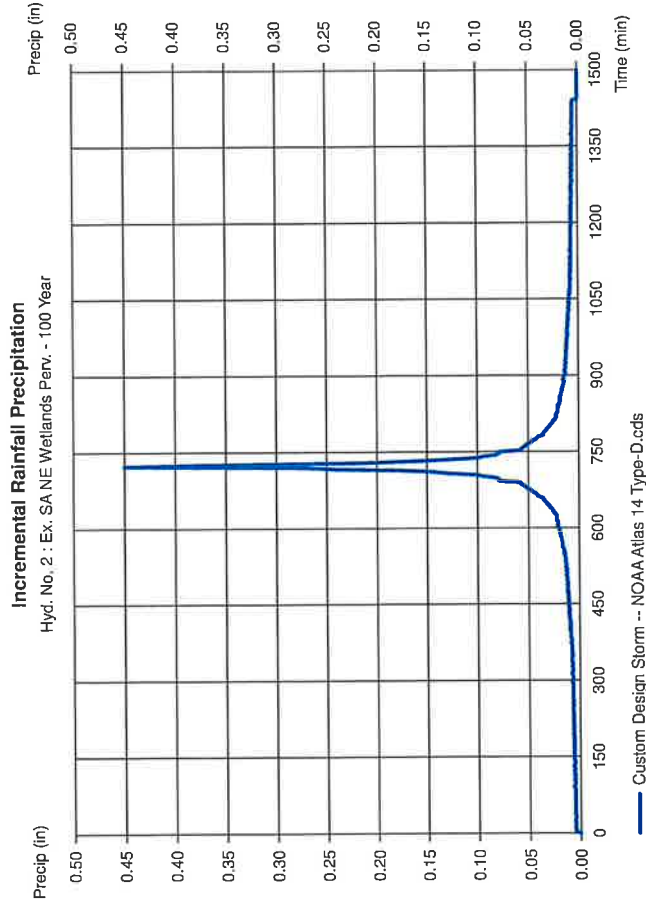
Hydrflow Hydrographs by Inellicolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 3

Ex. Wetlands Total
 Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 3 min
 Inflow hyd. = 1, 2

Peak discharge = 66.30 cfs
 Time to peak = 729 min
 Hyd. volume = 311,521 cuft
 Contrib. drain. area = 13.560 ac



Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 6

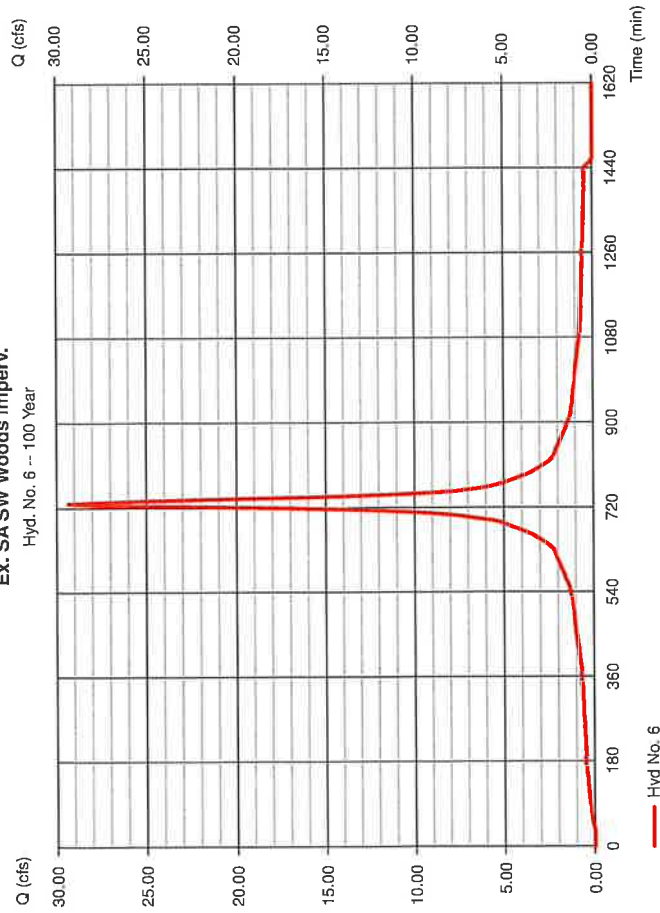
Ex. SA SW Woods Imperv.

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 4.960 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 29.37 cfs
 Time to peak = 729 min
 Hyd. volume = 150,101 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285

Ex. SA SW Woods Imperv.

Hyd. No. 6 -- 100 Year



Precipitation Report

Hydroflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 6

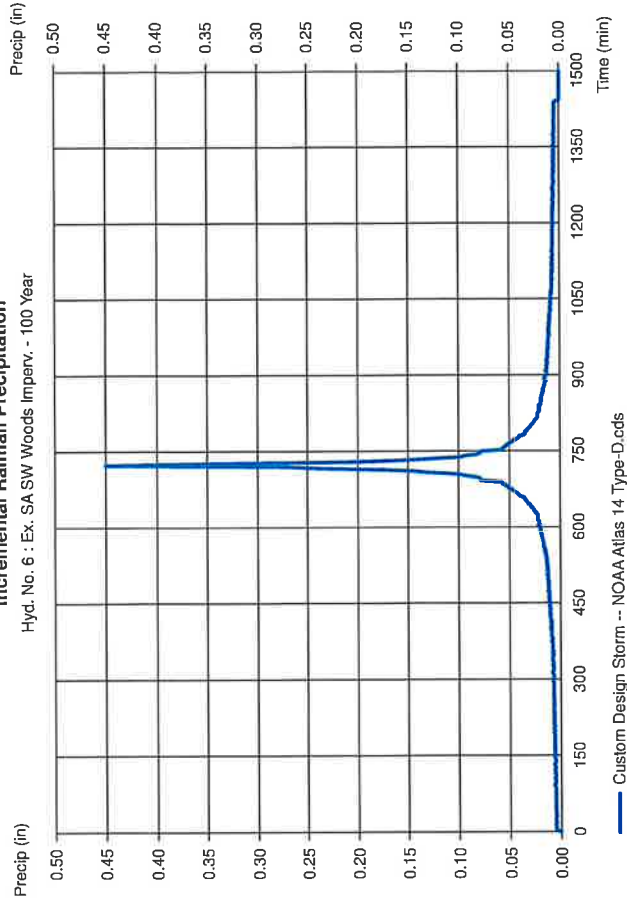
Ex. SA SW Woods Imperv.

Storm Frequency = 100 yrs
 Total precip. = 8.6300 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Incremental Rainfall Precipitation

Hyd. No. 6 : Ex. SA SW Woods Imperv. - 100 Year



Hydrograph Report

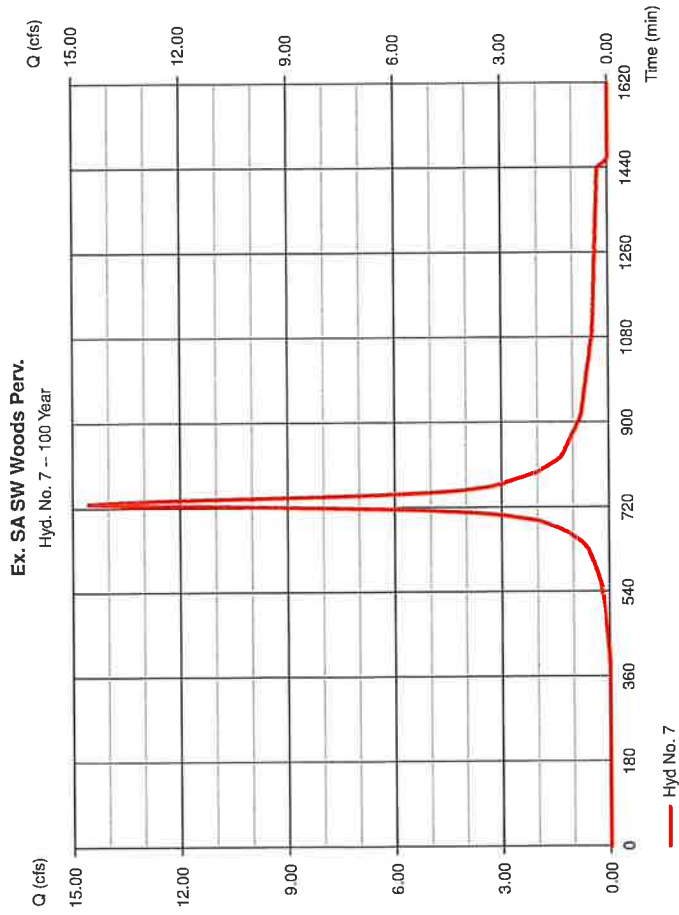
Hydralow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 3,400 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 14.58 cfs
 Time to peak = 729 min
 Hyd. volume = 64,403 cuft
 Curve number = 72
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 7.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

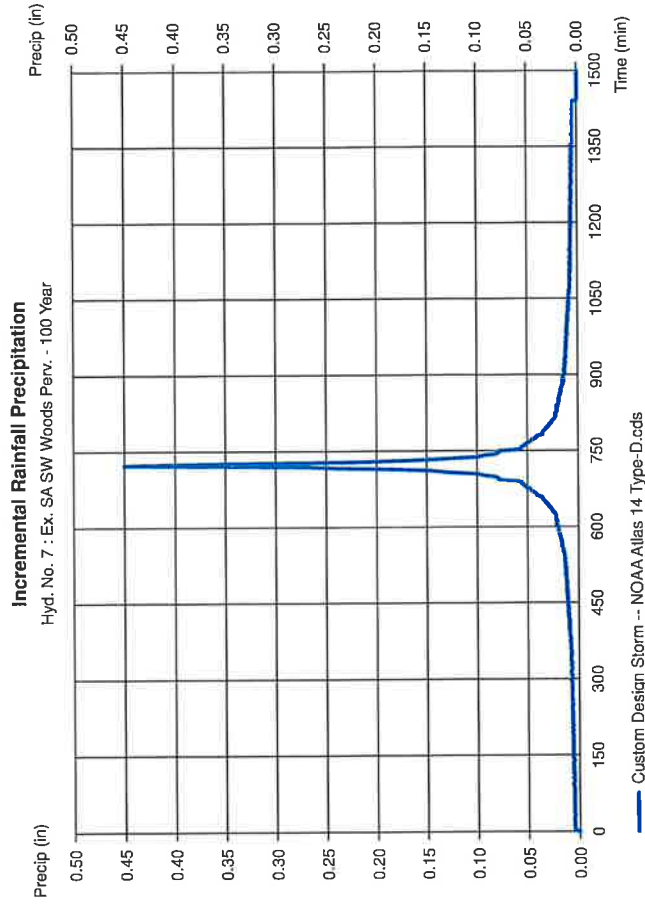
Hydralow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 7

Ex. SA SW Woods Perv.

Storm frequency = 100 yrs
 Total precip. = 8.6300 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom



Hydrograph Report

Hydratlow Hydrographs by Intellisolve v9.1

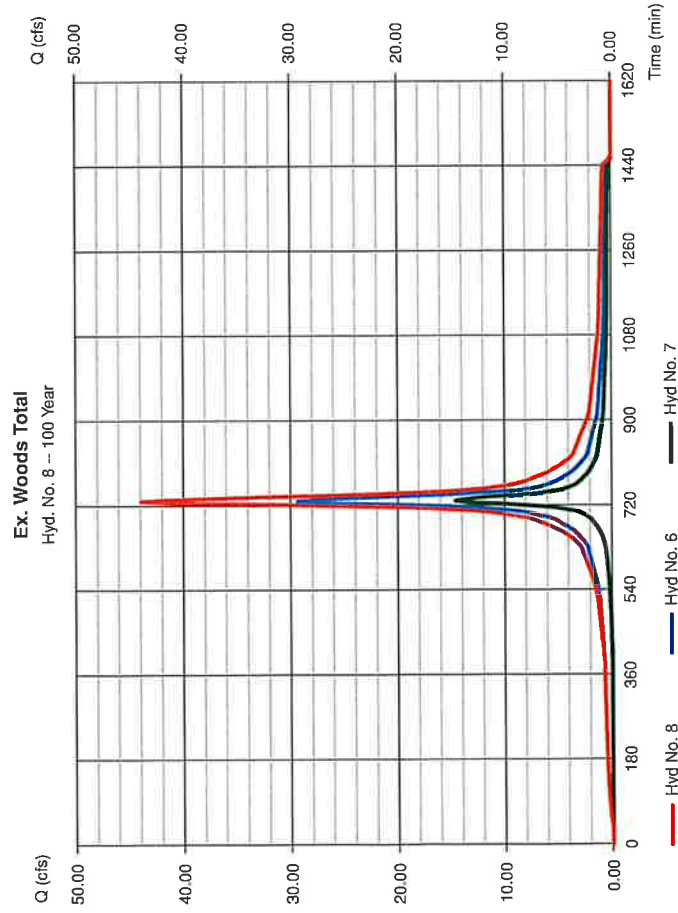
Thursday, Sep 1, 2022

Hyd. No. 8

Ex. Woods Total

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 3 min
 Inflow hyds. = 6, 7

Peak discharge = 43.94 cfs
 Time to peak = 729 min
 Hyd. volume = 214,504 cuft
 Contrib. drain. area = 8,360 ac



Hydrograph Report

Hydratlow Hydrographs by Intellisolve v9.1

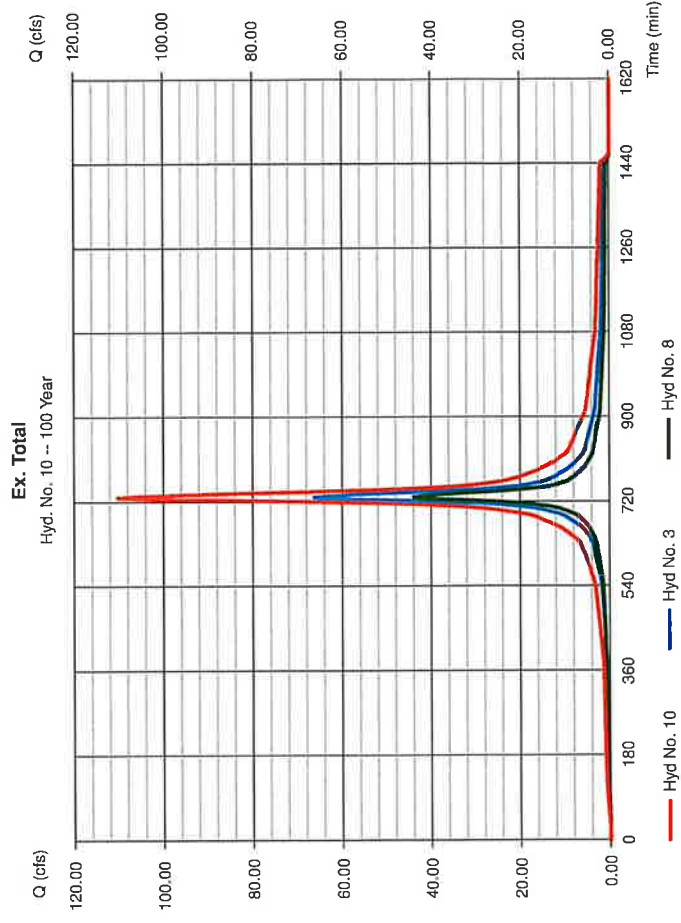
Thursday, Sep 1, 2022

Hyd. No. 10

Ex. Total

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 3 min
 Inflow hyds. = 3, 8

Peak discharge = 110.24 cfs
 Time to peak = 729 min
 Hyd. volume = 526,024 cuft
 Contrib. drain. area = 0,000 ac



Hydrograph Report

Hydralow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

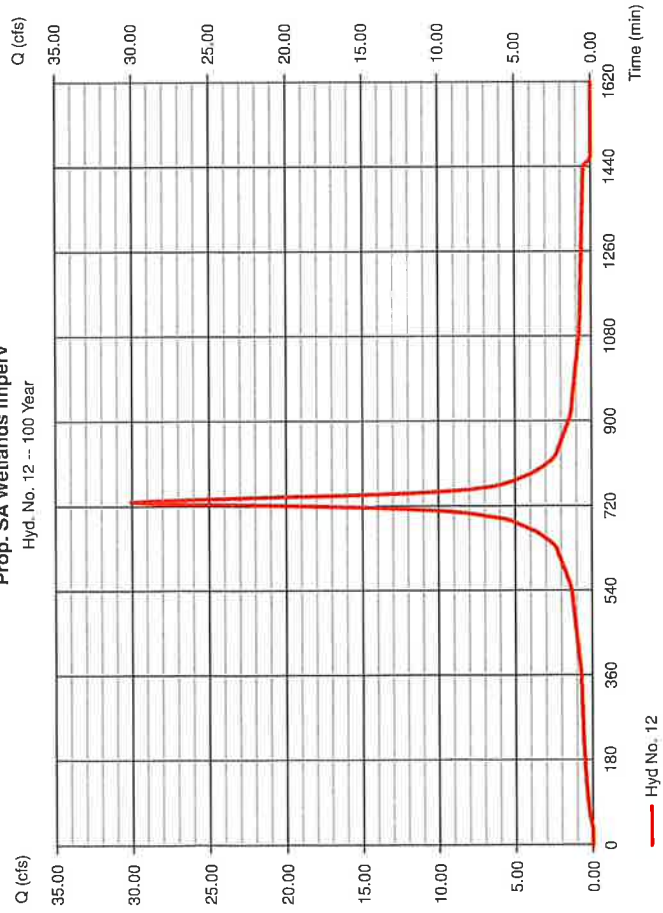
Hyd. No. 12

Prop. SA Wetlands Imperv
 Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 5.080 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 30.08 cfs
 Time to peak = 729 min
 Hyd. volume = 153,733 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285

Prop. SA Wetlands Imperv

Hyd. No. 12 -- 100 Year



Precipitation Report

Hydralow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

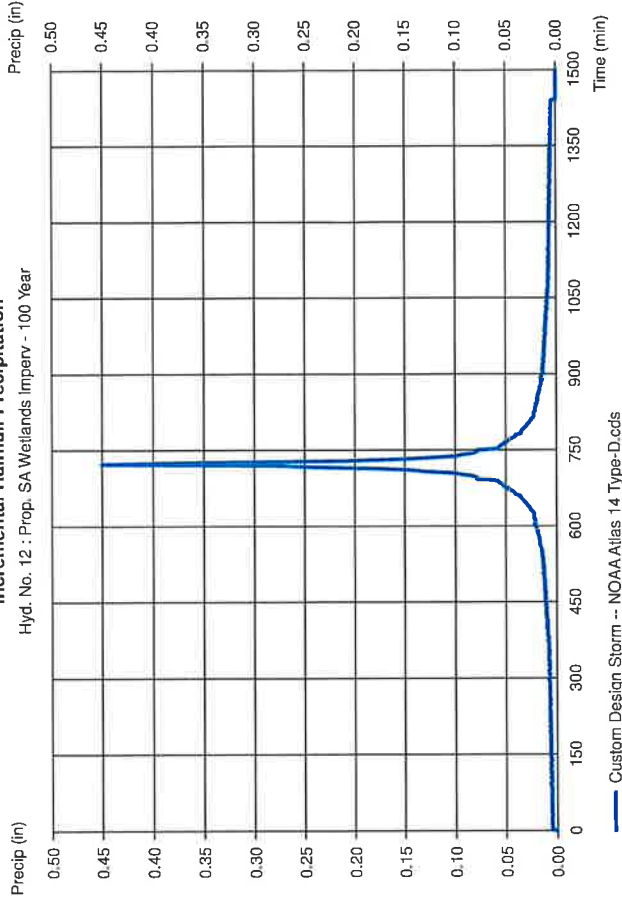
Hyd. No. 12

Prop. SA Wetlands Imperv
 Storm Frequency = 100 yrs
 Total precip. = 8.6300 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Time interval = 3 min
 Distribution = Custom

Incremental Rainfall Precipitation

Hyd. No. 12 ; Prop. SA Wetlands Imperv - 100 Year



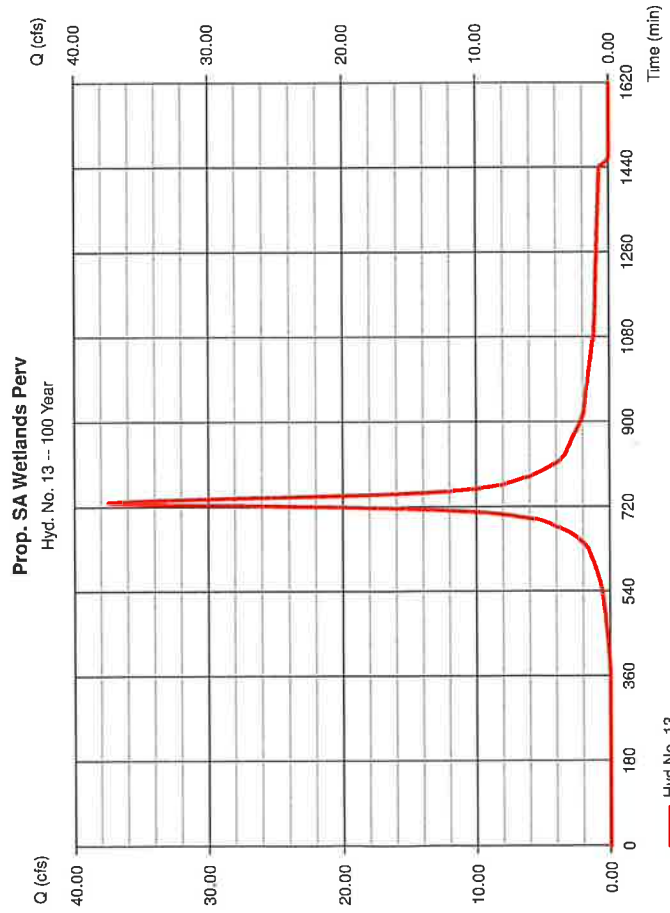
Hydrograph Report

Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 13

Prop. SA Wetlands Perv

Hydrograph type	=	SCS Runoff	Peak discharge	=	37.45 cfs
Storm frequency	=	100 yrs	Time to peak	=	729 min
Time interval	=	3 min	Hyd. volume	=	165,675 cuft
Drainage area	=	8.550 ac	Curve number	=	73
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	USER	Time of conc. (Tc)	=	6.00 min
Total precip.	=	8.63 in	Distribution	=	Custom
Storm duration	=	NOAA Atlas 14 Type-D.cds	Shape factor	=	285



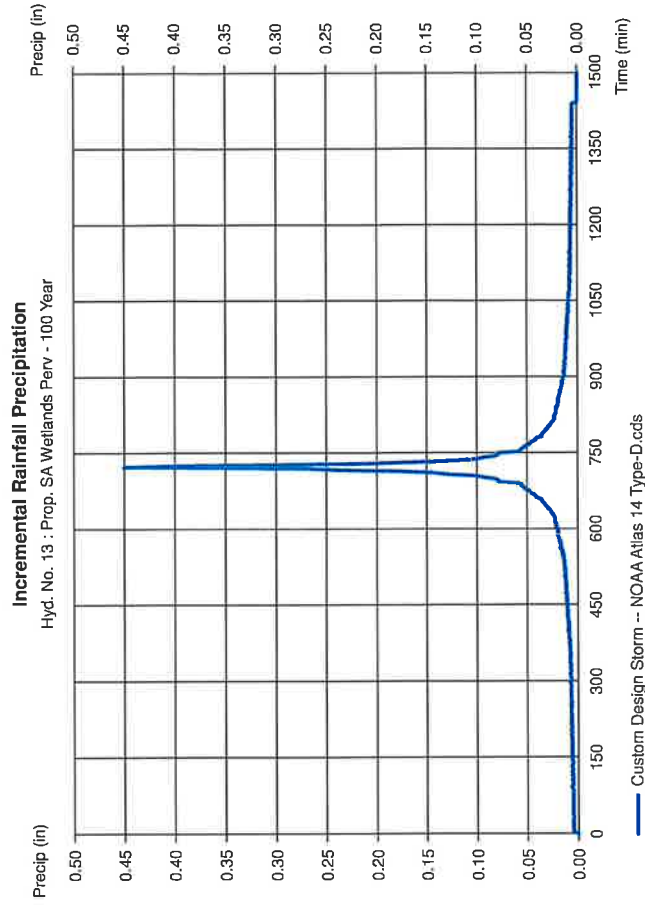
Precipitation Report

Hydroflow Hydrographs by Intellisolve v9.1 Thursday, Sep 1, 2022

Hyd. No. 13

Prop. SA Wetlands Perv

Storm Frequency	=	100 Yrs	Time interval	=	3 min
Total precip.	=	8.6300 in	Distribution	=	Custom
Storm duration	=	NOAA Atlas 14 Type-D.cds			



Hydrograph Report

Hydroflow Hydrographs by InletSolve v8.1 Thursday, Sep 1, 2022

Hyd. No. 14

Prop. Wetlands Total

Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 3 min
 Inflow hyds. = 12, 13

Peak discharge = 67.53 cfs
 Time to peak = 729 min
 Hyd. volume = 319,408 cuft
 Contrib. drain. area = 13,630 ac

Hydrograph Report

Hydroflow Hydrographs by InletSolve v8.1

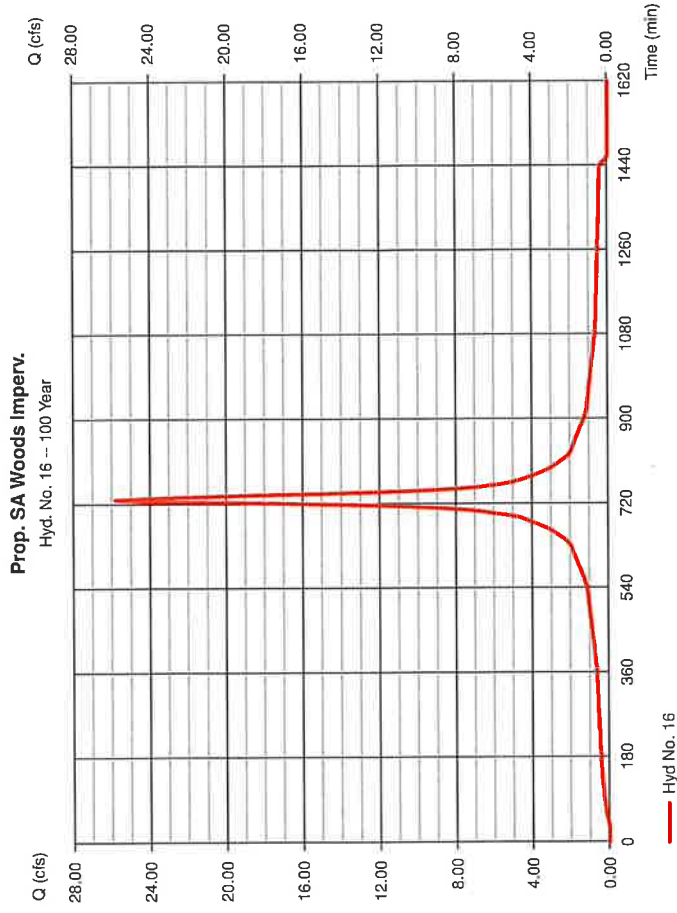
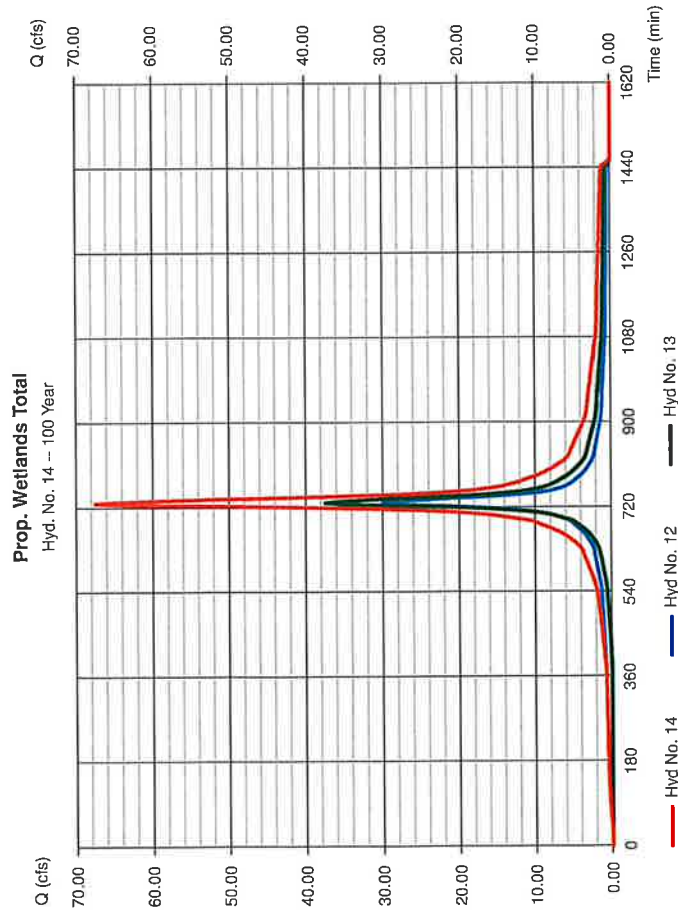
Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv.

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 3 min
 Drainage area = 4,360 ac
 Basin Slope = 0.0 %
 Tc method = USER
 Total precip. = 8.63 in
 Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 25.81 cfs
 Time to peak = 729 min
 Hyd. volume = 131,944 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Custom
 Shape factor = 285



Precipitation Report

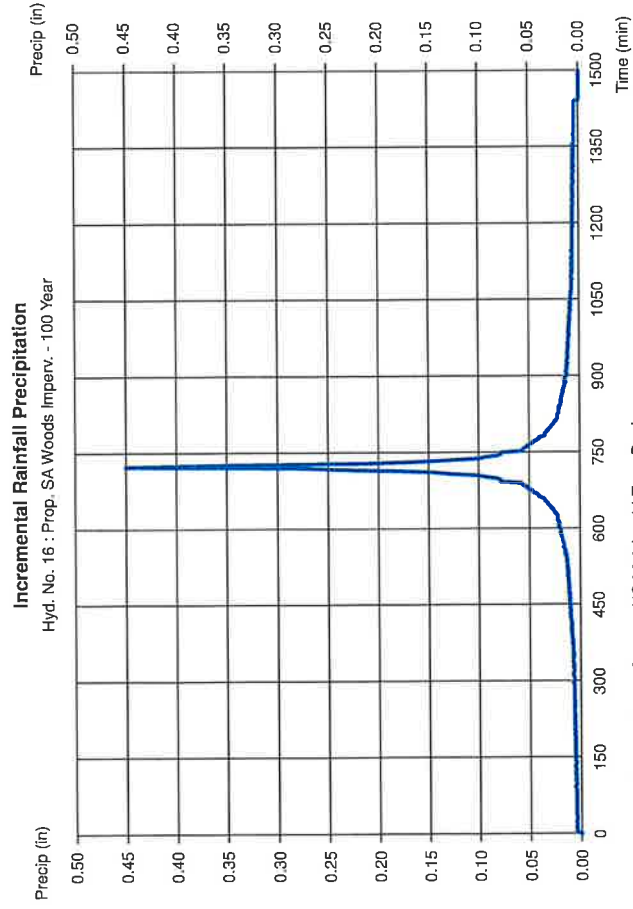
Hydratlow Hydrographs by Inellicolve v8.1
Thursday, Sep 1, 2022

Hyd. No. 16

Prop. SA Woods Imperv. = 100 yrs
Storm Frequency = 8.6300 in
Total precip. = 3 min
Storm duration = Custom
Distribution = Custom

Time interval = 3 min
Distribution = Custom

Storm duration = NOAA Atlas 14 Type-D.cds



— Custom Design Storm -- NOAA Atlas 14 Type-D.cds

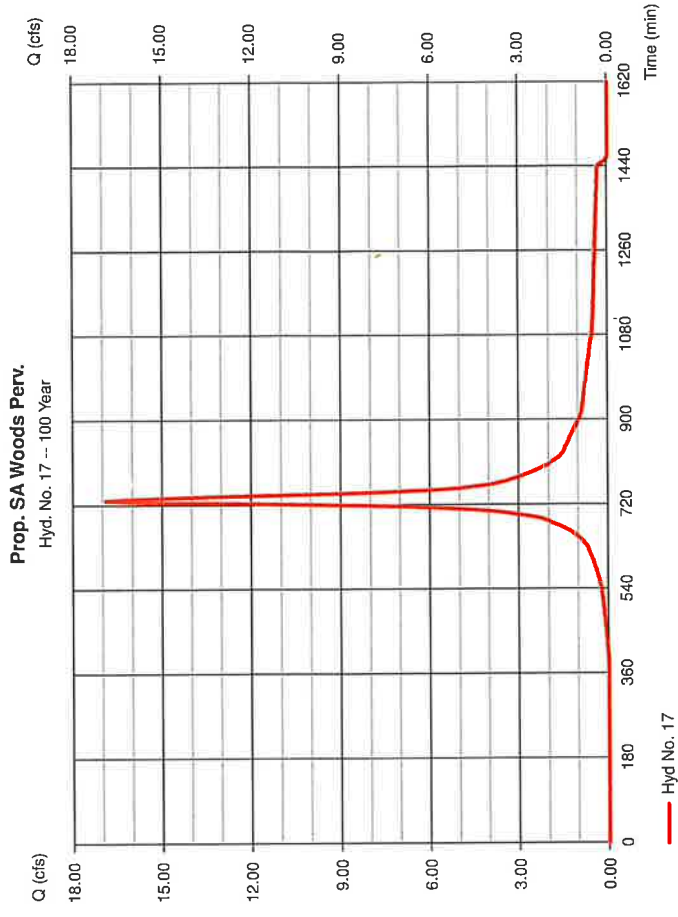
Hydrograph Report

Hydratlow Hydrographs by Inellicolve v8.1
Thursday, Sep 1, 2022

Hyd. No. 17

Prop. SA Woods Perv.
Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Time interval = 3 min
Drainage area = 3.940 ac
Basin Slope = 0.0 %
Tc method = USER
Total precip. = 8.63 in
Storm duration = NOAA Atlas 14 Type-D.cds

Peak discharge = 16.89 cfs
Time to peak = 729 min
Hyd. volume = 74,631 cuft
Curve number = 72
Hydraulic length = 0 ft
Time of conc. (Tc) = 6.00 min
Distribution = Custom
Shape factor = 285



— Hyd. No. 17

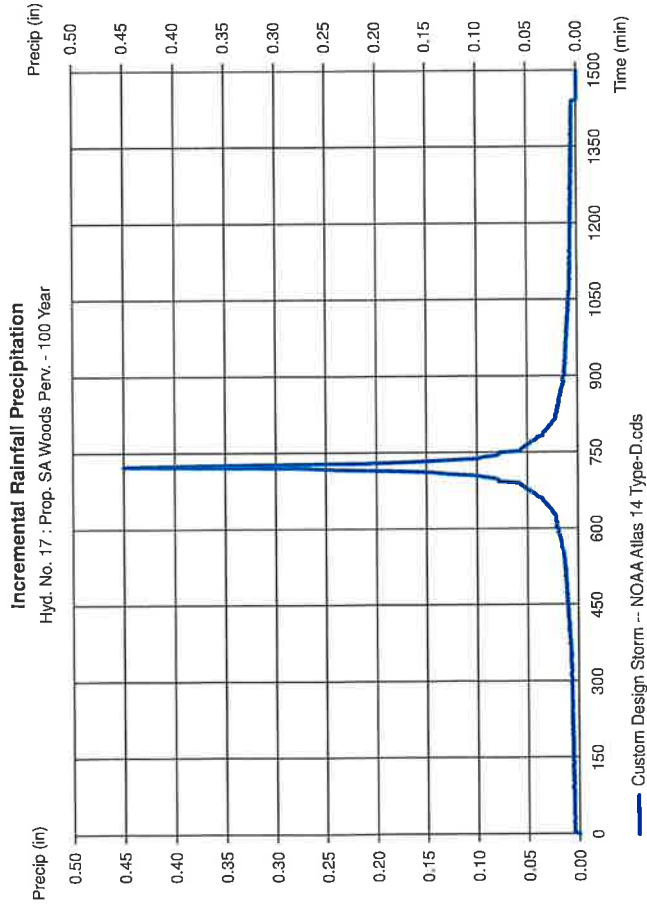
Precipitation Report

Hydratlow Hydrographs by Intellisolve v9.1
Thursday, Sep 1, 2022

Hyd. No. 17

Prop. SA Woods Perv. = 100 yrs
Storm Frequency = 8.6300 in
Total precip. = NOAA Atlas 14 Type-D.cds
Storm duration = 3 min
Distribution = Custom

Time interval = 100 yrs
Distribution = Custom



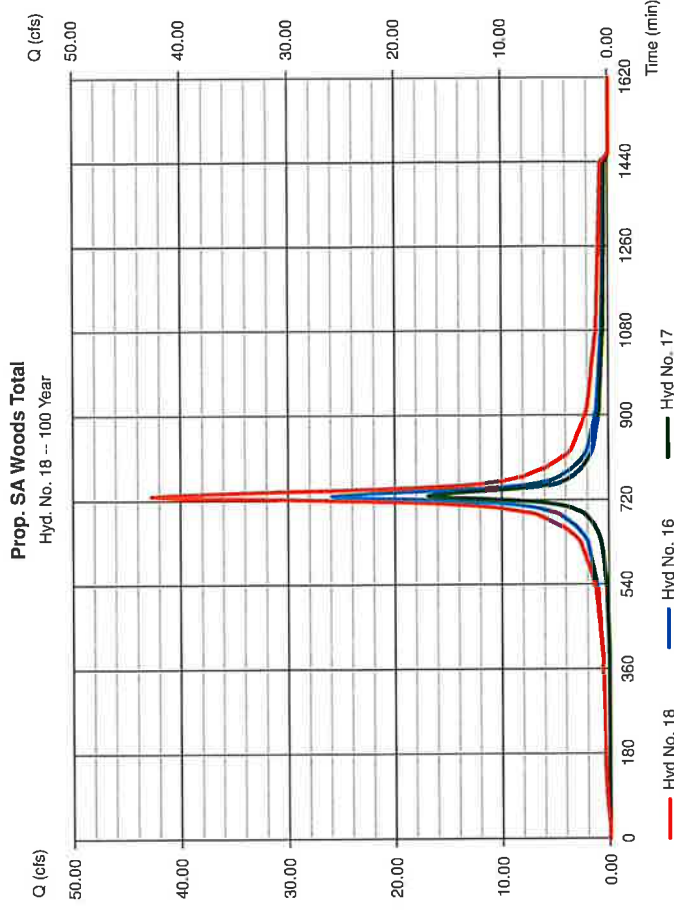
Hydrograph Report

Hydratlow Hydrographs by Intellisolve v9.1
Thursday, Sep 1, 2022

Hyd. No. 18

Prop. SA Woods Total
Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 3 min
Inflow hyds. = 16, 17

Peak discharge = 42.71 cfs
Time to peak = 729 min
Hyd. volume = 206,575 cuft
Contrib. drain. area = 8,300 ac



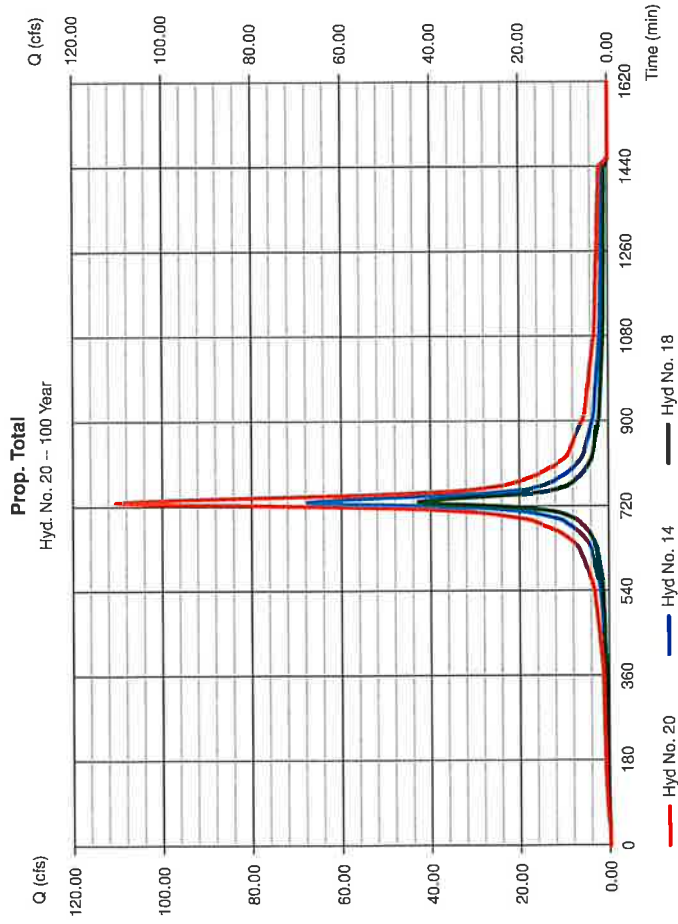
Hydrograph Report

Hydraflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Hyd. No. 20

Prop. Total
 Hydrograph type = Combine
 Storm frequency = 100 yrs
 Time interval = 3 min
 Inflow hyds. = 14, 18
 Peak discharge = 110.24 cfs
 Time to peak = 729 min
 Hyd. volume = 525,983 cuft
 Contrib. drain. area = 0.000 ac



Hydraflow Rainfall Report

Hydraflow Hydrographs by Intellisolve v9.1

Thursday, Sep 1, 2022

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHIA)				E	(N/A)
	B	D				
1	0.0000	0.0000			0.0000	
2	69.8703	13.1000			0.8658	
3	0.0000	0.0000			0.0000	
5	79.2597	14.6000			0.8369	
10	88.2351	15.5000			0.8279	
25	102.6072	16.5000			0.8217	
50	114.8193	17.2000			0.8199	
100	127.1596	17.8000			0.8186	

File name: SampleFHIA.tbl

$$\text{Intensity} = B / (T_c + D)^A E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5.69	4.61	3.89	3.38	2.99	2.69	2.44	2.24	2.07	1.93	1.81	1.70
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.57	5.43	4.65	4.08	3.65	3.30	3.02	2.79	2.59	2.42	2.27	2.15
10	7.24	6.04	5.21	4.59	4.12	3.74	3.43	3.17	2.95	2.77	2.60	2.46
25	8.25	6.95	6.03	5.34	4.80	4.38	4.02	3.73	3.49	3.26	3.07	2.91
50	9.04	7.65	6.66	5.92	5.34	4.87	4.49	4.16	3.88	3.65	3.44	3.25
100	9.83	8.36	7.30	6.50	5.87	5.36	4.94	4.59	4.29	4.03	3.80	3.60

Tc = time in minutes. Values may exceed 60.

Precip. file name: Middlesex County.pcp

Storm Distribution	Rainfall Precipitation Table (in)									
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr		
SCS 24-hour	0.00	3.35	0.00	0.00	5.12	6.36	0.00	8.63		
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Custom	1.25	3.35	0.00	0.00	5.12	6.36	0.00	8.63		

Hydraflow Table of Contents

Hydraflow Hydrographs by Inlet/serve v3.1

ExProp 2,10,25,100 Yr - Min TC.gpw

Thursday, Sep 1, 2022

Contents continued...

ExProp 2,10,25,100 Yr - Min TC.gpw

2 - Year

Watershed Model Schematic 1

Hydrograph Return Period Recap 2

2 - Year

Summary Report 3

Hydrograph Reports

Hydrograph No. 1, SCS Runoff, EX. SA NE Wetlands Imperv 4

Precipitation Report 4

Hydrograph No. 2, SCS Runoff, Ex. SA NE Wetlands Perv 5

Precipitation Report 5

Hydrograph No. 3, Combine, Ex. Wetlands Total 6

Hydrograph No. 6, SCS Runoff, Ex. SA SW Woods Imperv 7

Precipitation Report 7

Hydrograph No. 7, SCS Runoff, Ex. SA SW Woods Perv 8

Precipitation Report 8

Hydrograph No. 8, Combine, Ex. Woods Total 9

Hydrograph No. 10, Combine, Ex. Total 9

Hydrograph No. 12, SCS Runoff, Prop. SA Wetlands Imperv 10

Precipitation Report 10

Hydrograph No. 13, SCS Runoff, Prop. SA Wetlands Perv 11

Precipitation Report 11

Hydrograph No. 14, Combine, Prop. Wetlands Total 12

Hydrograph No. 16, SCS Runoff, Prop. SA Woods Imperv 13

Precipitation Report 13

Hydrograph No. 17, SCS Runoff, Prop. SA Woods Perv 14

Precipitation Report 14

Hydrograph No. 18, Combine, Prop. SA Woods Total 15

Hydrograph No. 20, Combine, Prop. Total 16

10 - Year

Summary Report 26

Hydrograph Reports

Hydrograph No. 1, SCS Runoff, EX. SA NE Wetlands Imperv 27

Precipitation Report 27

Hydrograph No. 2, SCS Runoff, Ex. SA NE Wetlands Perv 28

Precipitation Report 28

Hydrograph No. 3, Combine, Ex. Wetlands Total 29

Hydrograph No. 6, SCS Runoff, Ex. SA SW Woods Imperv 30

Precipitation Report 30

Hydrograph No. 7, SCS Runoff, Ex. SA SW Woods Perv 31

Precipitation Report 31

Hydrograph No. 8, Combine, Ex. Woods Total 32

Hydrograph No. 10, Combine, Ex. Total 32

Hydrograph No. 12, SCS Runoff, Prop. SA Wetlands Imperv 33

Precipitation Report 33

Hydrograph No. 13, SCS Runoff, Prop. SA Wetlands Perv 34

Precipitation Report 34

Hydrograph No. 14, Combine, Ex. Woods Total 35

Hydrograph No. 16, SCS Runoff, Prop. SA Woods Imperv 36

Precipitation Report 36

Hydrograph No. 17, SCS Runoff, Prop. SA Woods Perv 37

Precipitation Report 37

Hydrograph No. 18, Combine, Prop. SA Woods Total 38

Hydrograph No. 20, Combine, Prop. Total 38

Hydrograph No. 16, SCS Runoff, Prop. SA Woods Imperv 43

Precipitation Report 43

Hydrograph No. 17, SCS Runoff, Prop. SA Woods Perv 44

Precipitation Report 44

Hydrograph No. 18, Combine, Prop. SA Woods Total 45

Hydrograph No. 20, Combine, Prop. Total 47

100 - Year

Summary Report 49

Hydrograph Reports

Hydrograph No. 1, SCS Runoff, EX. SA NE Wetlands Imperv 50

Precipitation Report 50

Hydrograph No. 2, SCS Runoff, Ex. SA NE Wetlands Perv 51

Precipitation Report 51

Hydrograph No. 3, Combine, Ex. Wetlands Total 52

Hydrograph No. 6, SCS Runoff, Ex. SA SW Woods Imperv 53

Precipitation Report 53

Hydrograph No. 7, SCS Runoff, Ex. SA SW Woods Perv 54

Precipitation Report 54

Hydrograph No. 8, Combine, Ex. Woods Total 55

Hydrograph No. 10, Combine, Ex. Total 55

Hydrograph No. 12, SCS Runoff, Prop. SA Wetlands Imperv 56

Precipitation Report 56

Hydrograph No. 13, SCS Runoff, Prop. SA Wetlands Perv 57

Precipitation Report 57

Hydrograph No. 14, Combine, Prop. Wetlands Total 58

Hydrograph No. 16, SCS Runoff, Prop. SA Woods Imperv 59

Precipitation Report 59

Hydrograph No. 17, SCS Runoff, Prop. SA Woods Perv 60

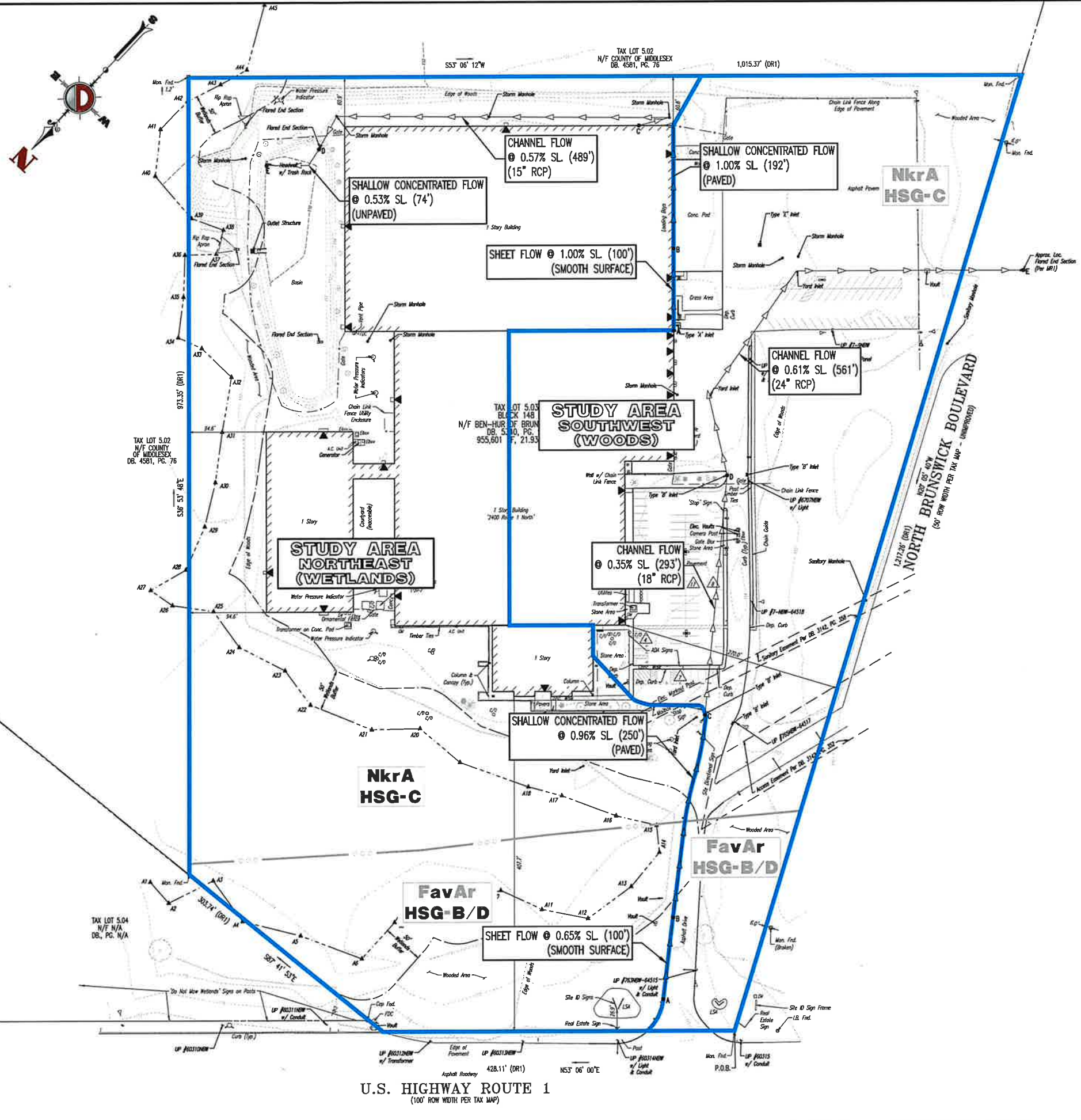
Precipitation Report 60

Hydrograph No. 18, Combine, Prop. SA Woods Total 61

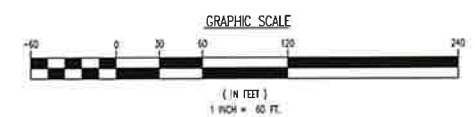
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IDF Report 72

DRAINAGE AREA MAPS



Product: Var. 24.14 (LMS Tech)
 Project: 2248 (Ben Hur)
 Date: 01/07/22
 File: \\server\projects\2248\Drawings\DWG\DA_Map\0224898001.DWG.dwg --> 01 - EXISTING DRAINAGE AREA MAP



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1504 Main Street
 Lake Como, NJ 07718
 T 973.216.2144
 F 973.216.2145
 www.dynamiceng.com

PROJECT: **BEN HUR BRUNSWICK, LLC**
PROPOSED WAREHOUSE EXPANSION
 BLOCK 148, LOT 5.03
 2400 U.S. ROUTE 1
 TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY

DATE: 01/06/2022
 SCALE: (H) 1"=60'
 SHEET NO: 1 OF 2

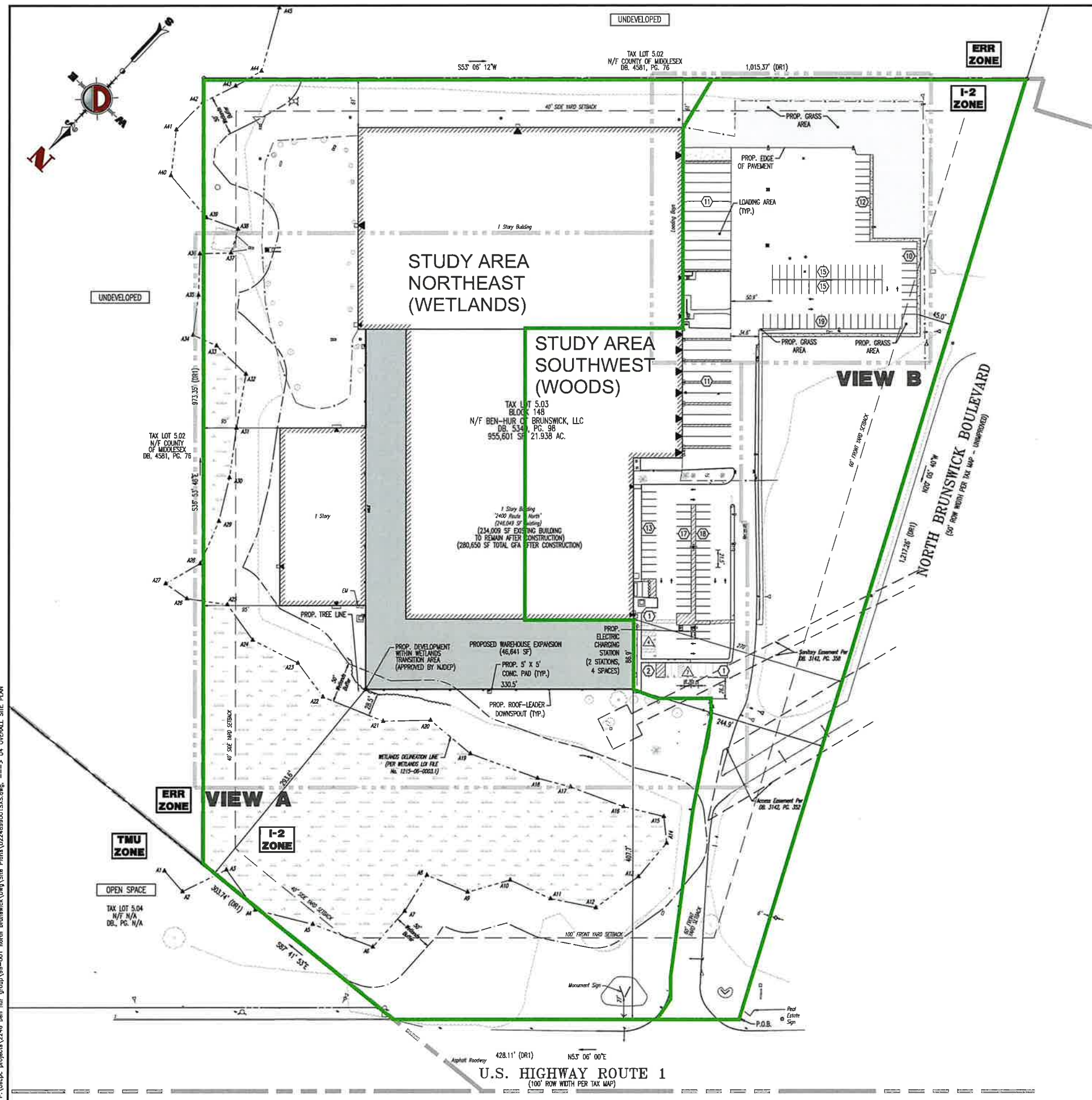
DESIGNED BY: ACC
 CHECKED BY: JAP
 DRAWN BY: NSR

RYAN MCDERMOTT
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 36559

JOHN A. PALUS
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 41975

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Plotter: 09/01/22 - 9:27 AM, Dr. kopov, Product Ver: 24.1.6 (LMS Tech)
File: P:\dpc\project\2246_ben_hur_group\98-001_north_brunswick\dwg\Site Plans\0224639001\SSS.dwg -> 04 OVERALL SITE PLAN



GENERAL NOTES

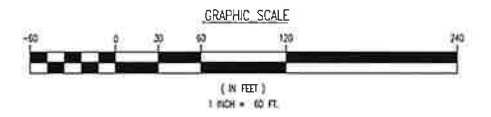
- 1. THIS PLAN HAS BEEN PREPARED BASED ON REFERENCES INCLUDING:
BOUNDARY AND TOPOGRAPHIC SURVEY
PREPARED BY DYNAMIC SURVEY, LLC
150 MAIN STREET
LAKE COHO, NJ 07719
SURVEY FILE NO. 2246-99-0015
DATED 03/17/2020, LAST REVISION 11/03/2020
- 2. OWNER/APPLICANT: BEN-HUR OF BRUNSWICK, LLC
483 7TH AVENUE
21ST FLOOR
NEW YORK, NY 10018
- 3. PARCEL DATA: BLOCK 148, LOT 5.03
2400 ROUTE 1
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NJ
- 4. ZONE: I-2 (INDUSTRIAL DISTRICT) ZONE
- 5. EXISTING USE: MULTIPURPOSE WAREHOUSE DISTRIBUTION FACILITY (PERMITTED USE)
- 6. PROPOSED USE: EXPANSION TO MULTIPURPOSE WAREHOUSE DISTRIBUTION FACILITY (PERMITTED USE)
- 7. SCHEDULE OF ZONING REQUIREMENTS (SEE ATTACHMENT 6)

ZONING REQUIREMENT	I-2 ZONE	EXISTING	PROPOSED
MINIMUM LOT AREA	3 AC	955,601 SF (21.94 AC)	955,601 SF (21.94 AC)
MINIMUM LOT WIDTH	350 FT	721.6 FT	721.6 FT
MINIMUM LOT FRONTAGE	N/A	428.1 FT	428.1 FT
MINIMUM LOT DEPTH	100 FT	973.3 FT	973.3 FT
MINIMUM FRONT YARD SETBACK (1)	100 FT	270.0 FT	244.9 FT
MINIMUM REAR YARD SETBACK	75 FT	N/A	N/A
MINIMUM SIDE YARD SETBACK	40 FT	61.0 FT	61.0 FT
MINIMUM COVERED SIDE YARD SETBACK (PRINCIPAL BUILDING)	80 FT	156.0 FT	156.0 FT
MAXIMUM BUILDING HEIGHT	3 STORES OR 40 FT	± 36 FT	± 36 FT (EXPANSION AREA= 40 FT)
MAXIMUM LOT COVERAGE (BY PRINCIPAL BUILDING)	40%	25.7% (246,049 SF)	29.4% (280,650 SF)
MAXIMUM IMPERVIOUS COVERAGE	80%	43.0% (411,243 SF)	43.0% (411,158 SF)

N/S: NO STANDARD N/A: NOT APPLICABLE (1) EXISTING NON-COMFORMANCE (V): VARIANCE

(1) MINIMUM FRONT YARD SETBACK: 100 FT FROM U.S. ROUTE 1 AND U.S. ROUTE 130, AND 60 FT FROM ALL OTHER STREETS. (§205-75A)

SEE SHEET 3 OF 17 FOR SITE PLAN NOTES



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TITLE: PROPOSED DRAINAGE AREA MAP

PROJECT: BEN-HUR OF BRUNSWICK, LLC
PROPOSED WAREHOUSE EXPANSION
BLOCK 148, LOT 5.03
2400 U.S. ROUTE 1
TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY

JOB No: 2246-99-001 DATE: 01/13/2022
DRAWN BY: KING SCALE: 1/4" = 60'
DESIGNED BY: ACC SHEET No:
CHECKED BY: JAP
CHECKED BY: RYAN MCDERMOTT

PROFESSIONAL ENGINEER JOHN A. PALUS
NEW JERSEY LICENSE No: 56559 NEW JERSEY LICENSE No: 41979

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2 OF 2
Rev: 1